

Prepared for:
Delaware River Joint Toll Bridge Commission

In cooperation with:
Federal Highway Administration
Pennsylvania Department of Transportation
New Jersey Department of Transportation



I-95/Scudder Falls Bridge Improvement Project

Technical Memorandum No.29 Preliminary Engineering Noise Analysis

Contract C-393A,
Capital Project No. CP0301A,
Account No. 7161-06-012

Prepared by:
Gannett Fleming, Inc.
Valley Forge, PA

In Association with:
HNTB Corporation
DMJM+HARRIS, Inc.

November, 2009

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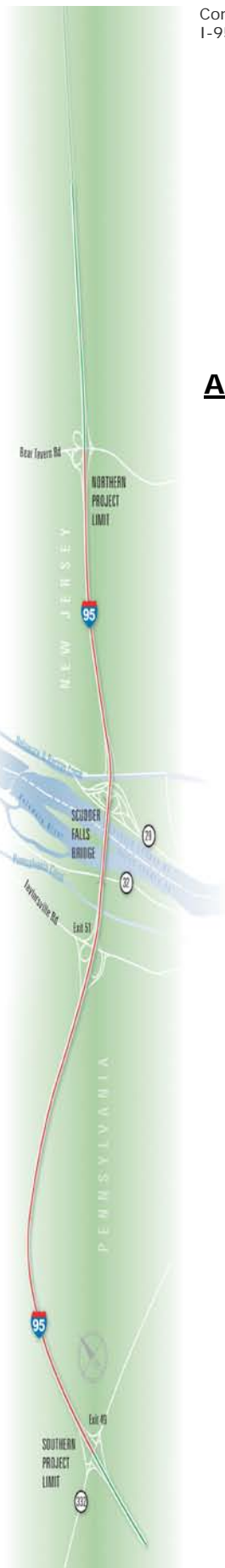


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NOISE ANALYSES

Background

The Delaware River Joint Toll Bridge Commission (DRJTBC) proposes improvements to the I-95/Scudder Falls Bridge over the Delaware River and 4.4 miles of the adjoining I-95 mainline to alleviate traffic congestion and improve operational and safety conditions. The I-95/Scudder Falls Bridge, which was constructed in 1959 and is operating well over available highway capacity during peak travel periods. The bridge carries Interstate 95 (I-95) over the Delaware River, between Lower Makefield Township in Bucks County, Pennsylvania and Ewing Township, a suburb of Trenton, in Mercer County, New Jersey.

Introduction

Improvements are being evaluated to a total of approximately 4.4 miles of I-95 extending from the Bear Tavern Road (County Route 579) Interchange in New Jersey to the PA Route 332 (Newtown-Yardley Road) Interchange in Pennsylvania (defined as the Project Area in Figure 1). For purposes of identifying communities and activities that may be affected by the proposed improvements along I-95/Scudder Falls Bridge, the study area is defined as 4.4 miles long and approximately one thousand feet wide centered on I-95. The study area defined for the consideration of noise in this report includes portions of Lower Makefield Township and Ewing Township.

The purpose of the project is to alleviate recurring current and future traffic congestion and upgrade safety and traffic operational conditions on the I-95/Scudder Falls Bridge and adjoining highway segments in Pennsylvania and New Jersey. The overarching goal of the project is to improve mobility on this segment of I-95 to support continued economic development and provide for interstate commerce, by accommodating the movement of people and goods between Pennsylvania and New Jersey.

From west to east, I-95 in the project area consists of two lanes in each direction between PA Route 332 and NJ Route 29 and three lanes in each direction east of NJ Route 29 to Bear Tavern Road. This highway segment is projected to be operating well over capacity in 2030. The goal for the improvements in this segment of I-95 is to achieve a traffic level of service of LOS D, generally considered to represent an acceptable traffic operating level in an urban environment, in the future year 2030. The project involves adding a travel lane and adequate outside and inside shoulders in each direction with additional auxiliary lanes on the I-95/Scudder Falls Bridge to meet this LOS goal. Additional transitional engineering necessary to achieve the LOS D goal will be made along the approximately 1.5-mile section of I-95 extending east to the Bear Tavern Road (County Route 579) Interchange.

The project includes improvements to the Taylorsville Road Interchange in Pennsylvania and the NJ Route 29 Interchange in New Jersey to meet current highway and geometric design standards. Interchange improvements include reconfiguration, the addition/modification of acceleration and deceleration lanes and providing adequate spacing of ramp merges.

The project is being undertaken to continue to provide a safe and reliable river crossing between Pennsylvania and New Jersey. This interstate crossing is also needed to provide continued critical access for community facilities and emergency services.





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The purpose of this report is to assess the effects of the 2030 traffic noise from the proposed project, and to determine if and where consideration of noise abatement is warranted, reasonable and feasible.

Methodology

Pennsylvania Department of Transportation (PennDOT) and New Jersey Department of Transportation (NJDOT) Noise Abatement Criteria (NAC) for specific land use activities were used in the evaluation of traffic noise impacts. These criteria are based on Federal Highway Administration (FHWA) noise abatement criteria established in "Procedures for Abatement of Highway Traffic Noise and Construction Noise" (Title 23 Code of Federal Regulations, Part 772), and guidelines for "substantial increase over existing" noise levels as set forth in PennDOT Publication #24 (Project Level Traffic Noise Handbook) and NJDOT Traffic Noise Management Policy and Noise Wall Design Guidelines. Predicted noise levels were determined using Version 2.5 of the FHWA Traffic Noise Model (FHWA TNM).

Traffic noise is the sound generated by automobile and truck operations on streets and highways. The sound generated is composed of tire, engine, and exhaust noise. People respond differently to acoustic energy in varying frequency ranges. Frequencies are airborne vibrations described in cycles/second (cps), or Hertz (Hz) - the faster the vibration, the higher the frequency. The normal range of healthy hearing is from 30 Hz (very low) to 16,000 Hz (very high). The human ear is most efficient in the mid and high range frequencies and has increasingly reduced efficiency below approximately 250 Hz.

Because the range of energy found throughout the spectrum of normal hearing is so wide (whispers to jet engines) the numbers necessary to define these levels must be able to represent huge variations in energy. To compensate for this wide range of numbers, a base 10 logarithmic scale is used to make the numbers more "normal", with the values on this logarithmic scale termed decibels (abbreviated as dB).

Sounds heard in the environment usually consist of a range of frequencies, each at a different level. The method of correlating human response to equivalent sound pressure levels at different frequencies is called "weighting". The weighting system used to correlate human hearing to frequency response is the "A-weighting" scale and the resultant sound pressure level is called the "A-weighted sound pressure level", identifiable by the abbreviated descriptor dBA. Traffic noise levels are presented in decibels on the A-weighting scale, or dBA. The noise level descriptor used for this project is the hourly equivalent sound level ($L_{eq}(h)$). $L_{eq}(h)$ is the steady state, A-weighted sound level, which contains the same amount of acoustic energy as the actual time-varying A-weighted sound level over a one-hour period.

The FHWA, PennDOT, and NJDOT define noise impact based upon five activity categories, as identified in Table 1. The study area includes a variety of Category B (residential and institutional), Category C (other developed land such as commercial and industrial uses), Category D (undeveloped land) uses. Category B land uses which exist within the study area include residences, motels/hotels, schools, churches, active sports areas, parks, picnic areas, recreation areas, and playgrounds. For analysis purposes, the study area was divided into thirteen separate Noise Study Areas (NSAs) as depicted in Figures 2A and 2B. Within each NSA, individual noise sensitive sites evaluated in the noise study process are termed receptors.

In this report, the vast majority of exterior receptors evaluated are categorized as Activity Category B with the applicable noise level defining an impact as a noise level approaching or exceeding 67 dBA as per PennDOT and NJDOT criteria. Several receptors were located on currently undeveloped land (Activity Category D) where the potential for development to an Activity Category B land use has been indicated. Examples of Activity Category C land uses within the study area include the Lower Makefield Corporate Center and the New Jersey State Police Headquarters.

Noise impact is also evaluated by comparing the predicted noise levels with existing noise levels. Both states interpret the FHWA "approaching" criteria as being one dBA less than the criteria level. Thus, for Activity Category B sites, both States interpret "approaching 67 dBA" as a noise level of 66 dBA and define a "substantial increase over existing level" as 10 dBA or greater. Thus, in Activity Category B areas within this project where the future (year 2030) noise levels are predicted to equal or exceed 66 dBA or where the project is predicted to cause a substantial noise increase (≥ 10 dBA) in the future as compared to existing noise levels, noise abatement must be considered.

The analyses performed at this stage in the project are based on the current alignment configurations. As the project progresses through the final design phase, more specific details related to the project plans, profiles, cross-sections, drainage features, right-of-way requirements, and structures will be available. These factors will be refined throughout the final design phase, resulting in the final configuration of noise mitigation features.

Noise Study Areas

For noise analysis purposes, the project study area was divided into the following noise study areas (NSAs) as shown on Figures 2A and 2B:

- **NSA 1:** Several residences on two large farms south of I-95, east and west of PA Route 332 (Newtown-Yardley Road), including the Patterson Farm owned by Lower Makefield Township
- **NSA 2:** Properties north of I-95 including the Hampton Inn west of PA Route 332 (Newtown-Yardley Road), the Breezyvale Farms complex and residences on Surrey Lane east of Newtown-Yardley Road
- **NSA 3:** Residences along Clydesdale Circle and Shetland Court within the Ridings subdivision, plus residences and two elementary school properties along Quarry Road, all south of I-95
- **NSA 4:** The residence at the end of Patterson Lane and residences in the Devonshire subdivision on Jockeys Way, Ascot Court, and Colts Lane north of I-95
- **NSA 5:** Residences north of I-95 within the Makefield Brook I and II and Fairfield at Farmview subdivisions along Jacob Drive, Brentwood Road, and Wheatsheaf Road
- **NSA 6:** Residences along the north side of Quarry Road, Lower Makefield Township athletic field on the Snipe Tract, west of Dolington Road, and Makefield Chase residences along Miller Place and Heller Drive, all south of I-95
- **NSA 7:** Longshore Estates subdivision residences north of I-95 along Pownal Drive, Merrick Road, and Bartlett Court behind the I-95 rest area and truck weigh station plus homes along Upper Hilltop Road north of I-95
- **NSA 8:** Residences south of I-95 along Lower Hilltop Road, plus Hillwood Terrace subdivision residences on Highland Drive, Upton Lane, and Concord Lane



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- **NSA 9:** Residences along Taylorsville Road, Woodside Road, and North River Road (PA Route 32) and the Delaware Canal State Park, all north of I-95
- **NSA 10:** Maplevale subdivision residents along Taylorsville Road and Maplevue Drive, residences along North River Road (PA Route 32), Robinson Place, and DeSantis Place, and the Delaware Canal State Park, all south of I-95
- **NSA 11:** Residences and the Delaware and Raritan Canal State Park along NJ Route 175 (Upper River Road), residences along State Police Drive, and the Villa Victoria Academy property along NJ Route 29, all south of I-95
- **NSA 12:** Residences and NJ Route 175 (River Road), and Maddock Drive and Scudder Drive, plus the Delaware and Raritan Canal State Park, all north of I-95
- **NSA 13:** Bernard Drive residences near the west end of the Tamar Commons subdivision north of I-95 (other properties east of Bernard Drive are currently protected by a noise barrier), and the New Jersey State property south of I-95.
- **NSA 14:** The future retirement community west of Bear Tavern Road, all north of I-95.

Noise Measurements and Model Validation

Ambient noise measurements were conducted throughout the project area. Within each of the above noise study areas, short-term (typically 20 minutes in length) noise readings were taken along with concurrent traffic counts at 51 different sites using ANSI Type I noise meters. Calibration certificates related to noise meters are contained in Appendix A.

It should be noted that measurements were taken at various times of the day and did not necessarily represent the noisiest condition at the measurement site, because these noise measurements were used strictly for purposes of noise model validation. In addition, measurement sites were positioned in order to enable validation of the noise prediction model. As such, in certain locations, noise measurement sites do not exactly correspond with noise analysis sites. For example, noise analysis is typically performed at a location which represents the actual residence. Noise measurements are typically performed at locations away from a residence in order to avoid sound reflections off of a building surface. Measurements were used strictly for purposes of noise model validation, with existing peak hour traffic volumes obtained from the Delaware Valley Regional Planning Commission (DVRPC) used as the basis of the prediction of worst-case existing noise levels.

Measurement data was used as the basis for validation of the noise prediction model at sites throughout the corridor. Using the concurrent traffic data, noise levels were modeled and compared to measured noise levels. Existing short-term measured noise levels are summarized in Table 2, with field measurement sheets contained in Appendix B. Validation results are shown in Table 3, with FHWA TNM calibration data files included on the CD-ROM which accompanies this report. Measured versus modeled noise levels were within acceptable 3 dBA for all sites evaluated, except where influenced by unique circumstances (see comments column in Table 3). Measured existing L_{eq} noise levels at measurement sites ranged from 46 to 77 dBA.

In addition to the short-term noise measurement program, continuous 24-hour noise measurements were taken at six (6) sites within the study area. This data is summarized in Figures A through F, included in Appendix C. These measurements were useful in defining the fluctuation of noise throughout the daytime and nighttime hours as well as defining the



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noisiest period of the day for analysis purposes. Noisiest periods are listed in Table 2 and are generally consistent with the peak hour traffic periods.

Noise Modeling

The model used to predict worst-case existing and future noise levels and to evaluate noise abatement options was the FHWA's Traffic Noise Model (FHWA TNM), Version 2.5 (released in April 2004). The FHWA TNM predicts noise levels at selected locations based on traffic data, roadway design, topographic features, and the relationship of the analysis site to the roadway. Traffic data used for prediction of existing and future (year 2030) noise levels for both the Build and No-Build alternatives is contained in Appendix D. Traffic data for existing and future no-build conditions plus information from the short-term and 24-hour measurement process were reviewed.

The following procedure for estimating worst-case traffic conditions was used to model highway traffic noise. Based on the review of the 24-hour noise measurement data, it was determined that the noisiest hour generally coincided with either the AM and/or PM peak traffic period. Thus, the AM and PM peak hour traffic volumes provided by the DVRPC were used to predict hourly worst-case noise levels. On certain I-95 roadway sections where the magnitude of these volumes precludes the relatively free flow of vehicles (such as on the Scudder Falls Bridge), a limiting value of 2000 vehicles per hour per lane (vphpl) was assumed. This value was determined based upon discussions with the DMJM+HARRIS project traffic engineer and review of traffic volumes and flow characteristics observed during the noise monitoring process. The value of 2000 vphpl represents a conservative estimate of the maximum volume of vehicles capable of operating under relatively free-flow conditions at a speed controlled by the physical geometry of the particular highway section. This value corresponded well with an observed volume of 3960 vehicles per hour on two lanes under relatively free-flow conditions shortly before the volume increased and speeds began to be affected.

Evaluation of Noise Impacts and Mitigation Potential

In most NSAs, the predicted increases in noise for the future No-Build Alternative as compared to existing conditions are the result of normal traffic growth projected to occur between now and the year 2030 and range from 0 to 2 dBA for the worst-case noise conditions.

Compared to existing noise levels, changes in noise levels resulting from the Build Alternative are predicted to range from 0 to 3 dBA for the majority of activity category B sites. Exceptions to this range are predicted to occur at 18 locations where increases in the 4 to 5 dBA range are predicted compared to existing conditions. These increases are the result of predicted traffic growth between now and the year 2030, traffic redistribution, proposed roadways or ramps moved closer to or farther from the analysis site or existing fences assumed to be removed to allow for construction of the Build Alternative.

For all receivers meeting the warrants for consideration of noise abatement, mitigation measures were evaluated for feasibility and, if feasible, for reasonableness. Feasible noise barriers are those that provide at least 5 dBA of noise reduction to the majority of impacted noise-sensitive receivers and pose no safety, engineering, or access restrictions. For a barrier to be reasonable based on PennDOT criteria, it must be cost-effective (not cost more than



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\$50,000 per benefited residence); and the maintenance, constructability, drainage, and utility impacts, as well as the desires of the affected residents must be considered. Impacted receivers are considered to be benefited if they receive 3 dBA or more noise reduction (insertion loss) from a barrier. Under the current PennDOT criteria, impacted receivers must receive insertion losses of 3 dBA or greater to be considered benefited receivers and 5 dBA or greater for non-impacted receptors. For a barrier to be reasonable based on NJDOT criteria, it must be cost-effective (not cost more than \$50,000 per benefited residence); and the maintenance, constructability, drainage, and utility impacts, as well as the desires of the affected residents must be considered. Impacted receivers are considered to be benefited if they receive 5 dBA or more noise reduction (insertion loss) from a barrier, and the number of non-impacted receivers will be counted as half if they receive 5 dBA. Factors involved in consideration and evaluation of noise mitigation for PennDOT and NJDOT criteria are presented in Table 4.

When applying the PennDOT and NJDOT criteria, several NSA did not meet the warranted, feasible and reasonable criteria. Based on public comments expressed at the community meetings, the DRJBTC has decided to offer noise abatement to noise sensitive areas which were not warranted, feasible and reasonable under PennDOT and NJDOT criteria. The DRJBTC has established criteria for this project that provide 5 dBA noise reduction for the majority of first row impacted receivers, and noise barrier height not to exceed 18 feet which the maximum wall heights allowable by NJDOT.

This report discusses noise analyses performed related to noise abatement considerations to date for the project area. These analyses were performed using year 2030 peak hour traffic volumes for the Build condition. AM or PM peak hour volumes were used based upon which condition resulted in the highest noise level for the particular Noise Study Area (NSA) being evaluated. Thus, AM peak hour volumes were used for NSAs adjacent to the northbound I-95 roadway and PM peak hour volumes used for NSAs adjacent to the southbound I-95 roadway. The following alignment configurations were used:

- Inside Widening of I-95 within Pennsylvania
- Taylorville Road Interchange Design Option 2
- Scudder Falls Bridge Standard Lane Additions on Upstream Alignment
- NJ 29 Interchange Design Option 1c modified

A discussion of noise impacts and mitigation considerations within each NSA follows.

NSA 1 (Figure 2A): Development within this NSA is sufficiently removed from the proposed alignment that predicted noise levels for the year 2030 do not warrant the consideration of noise abatement for receptors in this NSA.

NSA 2 (Figure 2A): This area contains a Hampton Inn hotel, and the predicted exterior noise levels at the Hampton Inn exceed the Noise Abatement Criteria (NAC) level of 66 dBA for the year 2030. However, the only exterior use area is the outside pool, which is shielded from I-95 by three sides of the building. Noise levels at the pool are therefore predicted to be below the NAC level. In addition, the building is air-conditioned with sealed windows. Thus, interior noise levels can be expected to be 25 to 30 dBA below exterior levels, indicating interior levels below the 52 dBA NAC. No other sites within NSA 2 are predicted to exceed NAC levels. Therefore, no consideration of noise abatement is deemed warranted for this NSA.



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NSA 3 & NSA 6 (Figure 3 and Table 5): This area includes The Ridings Community in NSA 3 and Residences on Quarry Road in NSA 6. The majority of properties evaluated within these NSAs are predicted to have noise levels at or above 66 dBA with the Build alternative for the year 2030. Therefore, consideration of noise abatement was warranted. When PennDOT feasibility criteria are applied, the noise barrier system was determined to be feasible and reasonable. The wall is approximately 2249 feet long with an average height of 9.7 feet.

When DRJTBC project criteria are applied, the recommended noise barrier system was determined to be feasible, the cost would be (\$70,225 per benefited residential unit). The recommended wall is approximately 3039 feet long with an average height of 11.1 feet.

NSA 4 (Figure 3 and Table 6): This area includes The Devonshire Community. The majority of properties evaluated within these NSAs are predicted to have noise levels at or above 66 dBA with the Build alternative for the year 2030. Therefore, consideration of noise abatement was warranted. In order to find a system which would meet criteria, a small length of barrier protecting R4-4 and a longer length of barrier protecting the Devonshire community sites were incorporated, separated by a 50" raised Jersey barrier along the fill section of I-95. For cost purposes, the 50" raised Jersey barrier is assumed to be a highway design element, not a noise barrier. The recommended noise barrier system was determined to be feasible and reasonable based on PennDOT criteria. The wall is approximately 1235 feet long with an average height of 13.1 feet.

NSA 5 (Figure 2A): The Makefield Brook, Makefield Brook II, and Fairfield at Farmview communities within this NSA are sufficiently removed from the proposed alignment that predicted noise levels for the year 2030 do not warrant the consideration of noise abatement for receptors in this NSA.

NSA 6 and NSA 8 (Figure 4 and Table 7): This area includes the Makefield Chase community in NSA 6 and the Lower Hilltop Road and Hillwood Terrace communities in NSA 8. Several properties evaluated within these NSAs are predicted to have noise levels at or above 66 dBA with the Build alternative for the year 2030. Therefore, consideration of noise abatement was warranted. In order to find a system which would meet PennDOT criteria, the barrier had to be shortened on both its southern and northern ends, resulting in no abatement being provided for the one impacted residence (R8-2) on Concord Lane in the Hillwood Terrace community in NSA 8. When PennDOT criteria are applied, the noise barrier system was determined to be feasible and reasonable. The wall is approximately 2600 feet long with an average height of 11.2 feet.

When DRJTBC project criteria are applied, the recommended noise barrier system was determined to be feasible, the cost would be (\$79,957 per benefited residential unit). The recommended wall is approximately 5225 feet long with an average height of 15.3 feet. It extends from Dollington road to Taylorsville Road.

NSA 7 (Figure 4 and Table 8): This area includes the Longshore Estates community and homes along Upper Hilltop Road. Several properties evaluated within these NSAs are predicted to have noise levels at or above 66 dBA with the Build alternative for the year 2030. Therefore, consideration of noise abatement was warranted. The recommended noise barrier system was determined to be feasible and reasonable based on PennDOT criteria. The wall is approximately 2469 feet long with an average height of 10.5 feet. The system consists of two barrier segments, one on each side of the rest area.



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NSA 9 (Figure 5 and Table 9): This area includes the Woodside Road, River Road, and Delaware Canal Area. Several properties evaluated within these NSAs are predicted to have noise levels at or above 66 dBA with the Build alternative for the year 2030. Therefore, consideration of noise abatement was warranted. A noise barrier system could not be determined to be feasible (≥ 5 dBA provided for 43% of impacted properties) based on PennDOT criteria.

When DRJTBC project criteria are applied, the recommended noise barrier system was determined to be feasible, the cost would be (\$63,333 per benefited residential unit). The recommended wall is approximately 1086 feet long with an average height of 14.0 feet.

NSA 10 (Figure 5 and Table 10): This area includes the Maplevue Road, Robinson Place, River Road, and Delaware Canal Area. Several properties evaluated within these NSAs are predicted to have noise levels at or above 66 dBA with the Build alternative for the year 2030. Therefore, consideration of noise abatement was warranted. A noise barrier system was determined to be feasible, but could not be determined to be reasonable ($\geq \$50,000$ per benefited residential unit) based on PennDOT criteria.

When DRJTBC project criteria are applied, the recommended noise barrier system was determined to be feasible, the cost would be (\$66,742 per benefited residential unit). The recommended wall is approximately 801 feet long with an average height of 10.0 feet.

NSA 11 (Figure 6 and Table 11): This area includes Trooper Drive, State Police Drive, and Delaware and Raritan Canal Area. The only receptors within this NSA which are predicted to be impacted are portions of the Delaware and Raritan Canal tow path adjacent to the bridge and the municipal building identified as Site R11-6. Site R11-6 is a commercial property within Activity Category C (NAC = 72 dBA, exterior) that has no areas of frequent exterior activities. Its building construction (air conditioned, closed window operation) indicates that interior noise levels can be expected to be 25 to 30 dBA below exterior levels, indicating interior levels below the 52 dBA NAC. Thus, noise abatement would not be recommended for site R11-6. A noise barrier system for a receptor along the Delaware and Raritan Canal tow path was determined to be feasible (≥ 5 dBA provided for 100% of impacted properties), but could not be determined to be reasonable ($\geq \$50,000$ per benefited residential unit) based on NJDOT criteria. Therefore, no consideration of noise abatement would be recommended for this NSA.

NSA 12 (Figure 6 and Table 12): This area includes the community north of I-95 along Upper River Road and Delaware and Raritan Canal area. Several properties evaluated within these NSAs are predicted to have noise levels at or above 66 dBA with the Build alternative for the year 2030. Therefore, consideration of noise abatement was warranted. A noise barrier system was determined to be feasible, but could not be determined to be reasonable ($\geq \$50,000$ per benefited residential unit) based on NJDOT criteria.

When DRJTBC project criteria are applied, the recommended noise barrier system was determined to be feasible, the cost would be (\$128,920 per benefited residential unit). The recommended wall is approximately 1124 feet long with an average height of 11.5 feet.

NSA 13 (Figure 2B): This area is comprised of commercial properties (NJ State Police and NJ Department of Correction facilities, vacant land, and the Tamar Commons residential area (already protected by a noise barrier). Site 13-4 represents the NJ State Police Headquarters, the closest of all existing or proposed buildings on the NJ State Police property. It is a Land



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Use Category C property (NAC=72 dBA, exterior). While exterior levels at this site exceed the NAC, there are no areas of frequent exterior activities. Its building construction (air conditioned, closed window operation) indicates that interior noise levels can be expected to be 25 to 30 dBA below exterior levels, indicating interior levels below the 52 dBA NAC. Therefore, no consideration of noise abatement is deemed warranted for this NSA.

NSA 14 (Figure 7 and Table 13): This area includes the future retirement community west of Bear Tavern Road, located north of I-95. Several properties evaluated within these NSAs are predicted to have noise levels at or above 66 dBA with the Build alternative for the year 2030. Therefore, consideration of noise abatement was warranted. A noise barrier system was determined to be feasible, but could not be determined to be reasonable (\geq \$50,000 per benefited residential unit) based on NJDOT criteria.

When DRJTBC project criteria are applied, the recommended noise barrier system was determined to be feasible, the cost would be (\$79,351 per benefited residential unit). The recommended wall is approximately 1543 feet long with an average height of 18.0 feet.

Construction Noise Considerations

It is recognized that construction, while temporary in nature, will result in increased noise levels during certain periods and at certain locations. During further project development, consideration of factors such as construction time periods, duration of construction activities, types of construction equipment, and equipment noise levels will be evaluated.

Construction of the project will result in noise within adjacent communities generated by the following activities:

- Clearing of the land in advance of construction
- Demolition of several buildings
- Construction of new roadways and related features (drainage, utilities, retaining walls, cover sections, etc.)
- Construction of noise abatement features determined to be feasible and reasonable based on final design analyses

It is expected that the vast majority of these construction activities will occur during daylight hours over several construction seasons. It is important to note that construction will not be continuous at any one location during the entire term of the project.

During the project's final design process, more details related to the type and duration of construction activities will be available. The recently-released FHWA Roadway Construction Noise Model (FHWA RCNM) and the soon-to-be-released FHWA Highway Construction Noise Handbook provide tools for assessing construction-related noise levels from various activities and may be used if more refined evaluations of construction noise impacts are determined to be necessary during the final design process.

The contractor will be directed to maintain and operate his equipment in a manner that assures the quietest practicable operation. All equipment will be operated with approved muffler systems. Other construction-related noise abatement measures which may be considered during the final design process include work hour limits, location of haul routes, elimination of tail gate "banging", reduction of back-up alarm usage, community complaint response mechanisms, etc.



Conclusions

Details related to these considerations and the analyses of barriers considered during this preliminary engineering phase are contained in Tables 5 through 13. Locations of barriers evaluated in this analysis are indicated in Figures 2 through 7.

Based on the analysis of noise during this preliminary engineering phase, and when PennDOT and NJDOT criteria are applied, only noise barriers appear to be warranted, feasible, and reasonable in NSAs 3, 4, 6, 7 and 8. However, when DRJTBC criteria are applied noise barriers appear to be warranted, feasible, and reasonable in NSAs 3, 4, 6, 7, 8, 9, 10, 12 and 14. With such barriers, noise levels can be decreased to levels at or below existing levels at most locations.

During the final design phase, a detailed optimization of barrier lengths, heights, costs and locations will be coordinated with the final design engineering process to insure compatibility and the most cost-effective and efficient barrier design. This process may result in barrier heights, lengths, and locations changing from those discussed in this document.

DRJTBC is committed to offer construction of the feasible and reasonable noise abatement measures discussed above contingent upon the following conditions:

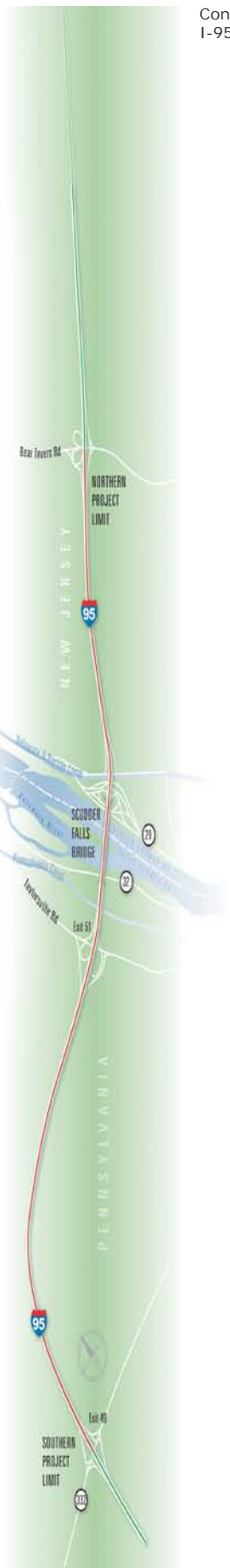
- Detailed noise analyses during the final design process;
- Analysis and determination of the feasibility and reasonableness of noise abatement measures, methodology, and criteria;
- Community input regarding desires, types, heights, and locations, as well as aesthetic considerations;
- Preferences regarding compatibility with adjacent land uses, particularly as addressed by officials having jurisdiction over such land uses;
- Safety and engineering aspects as related to the roadway user and the adjacent property owner

It is likely that noise abatement measures for the identified noise impacted areas will be constructed if found to be feasible and reasonable based on the contingencies listed above.



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FIGURES



November 2009

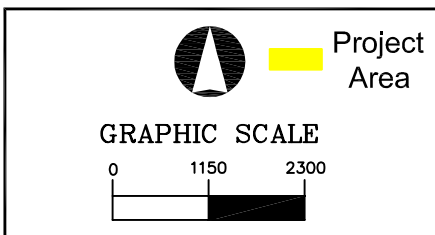
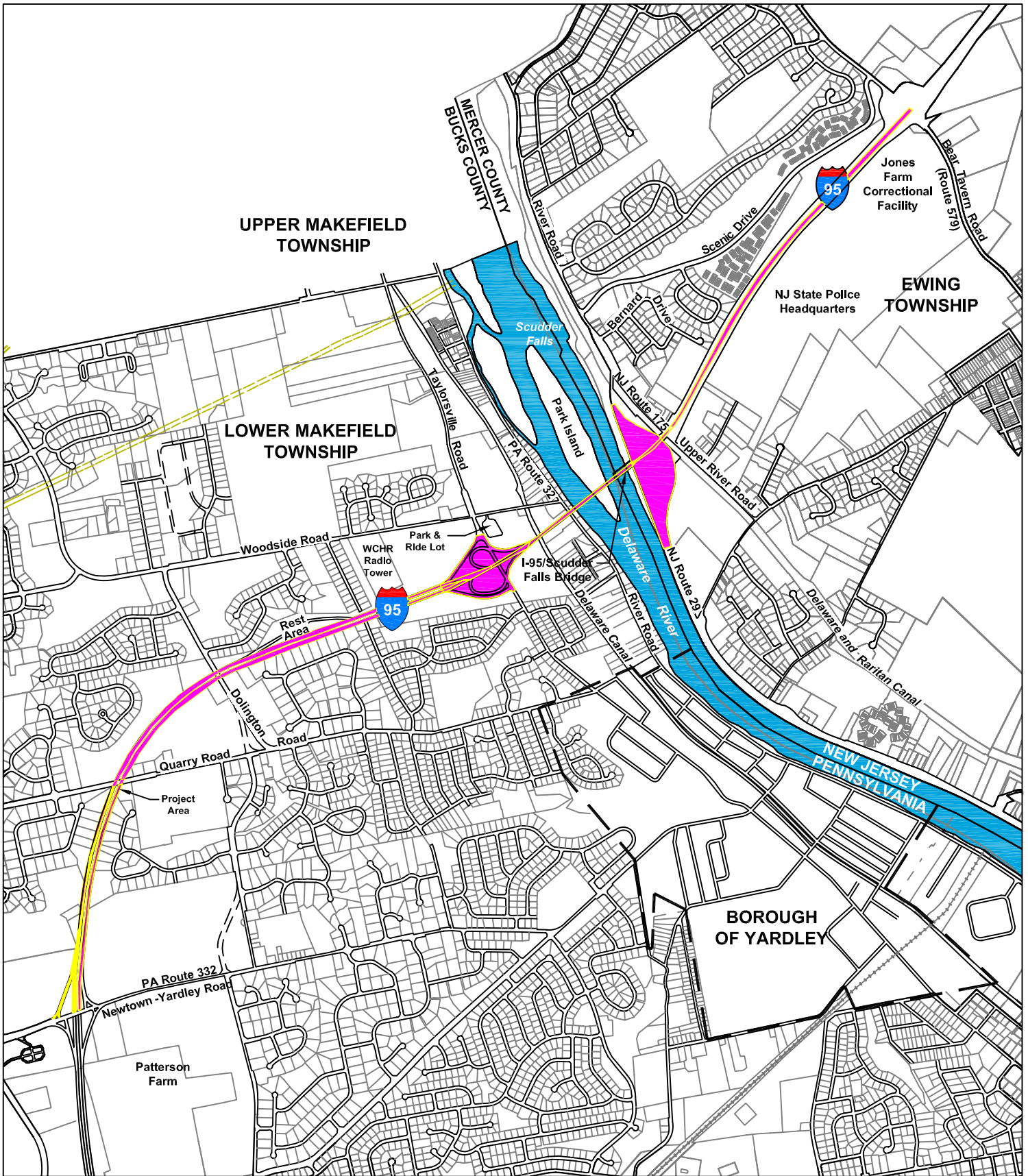


FIGURE 1
VICINITY MAP
Project I-95 Scudder Falls Bridge Improvement Project

Figure 2A

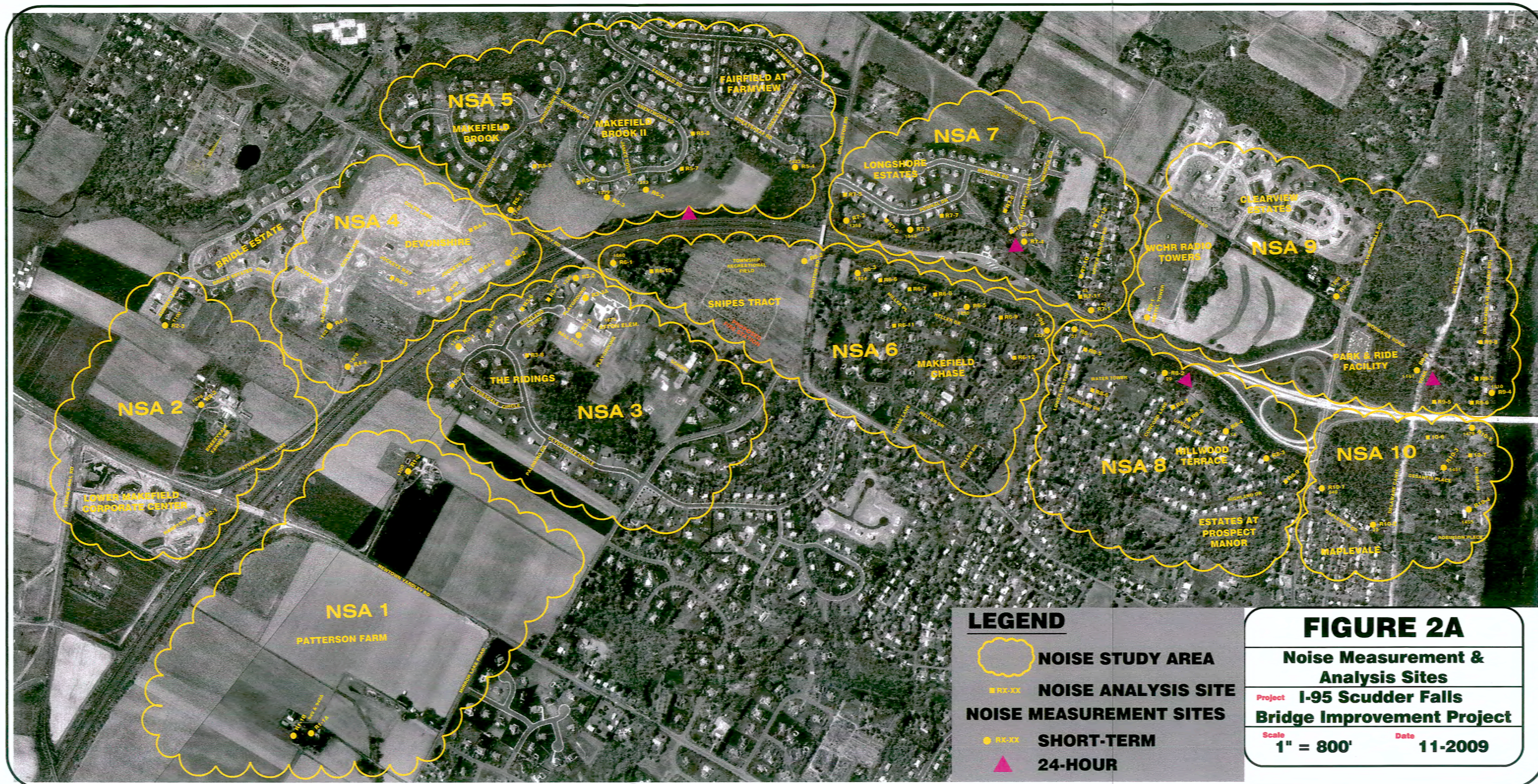


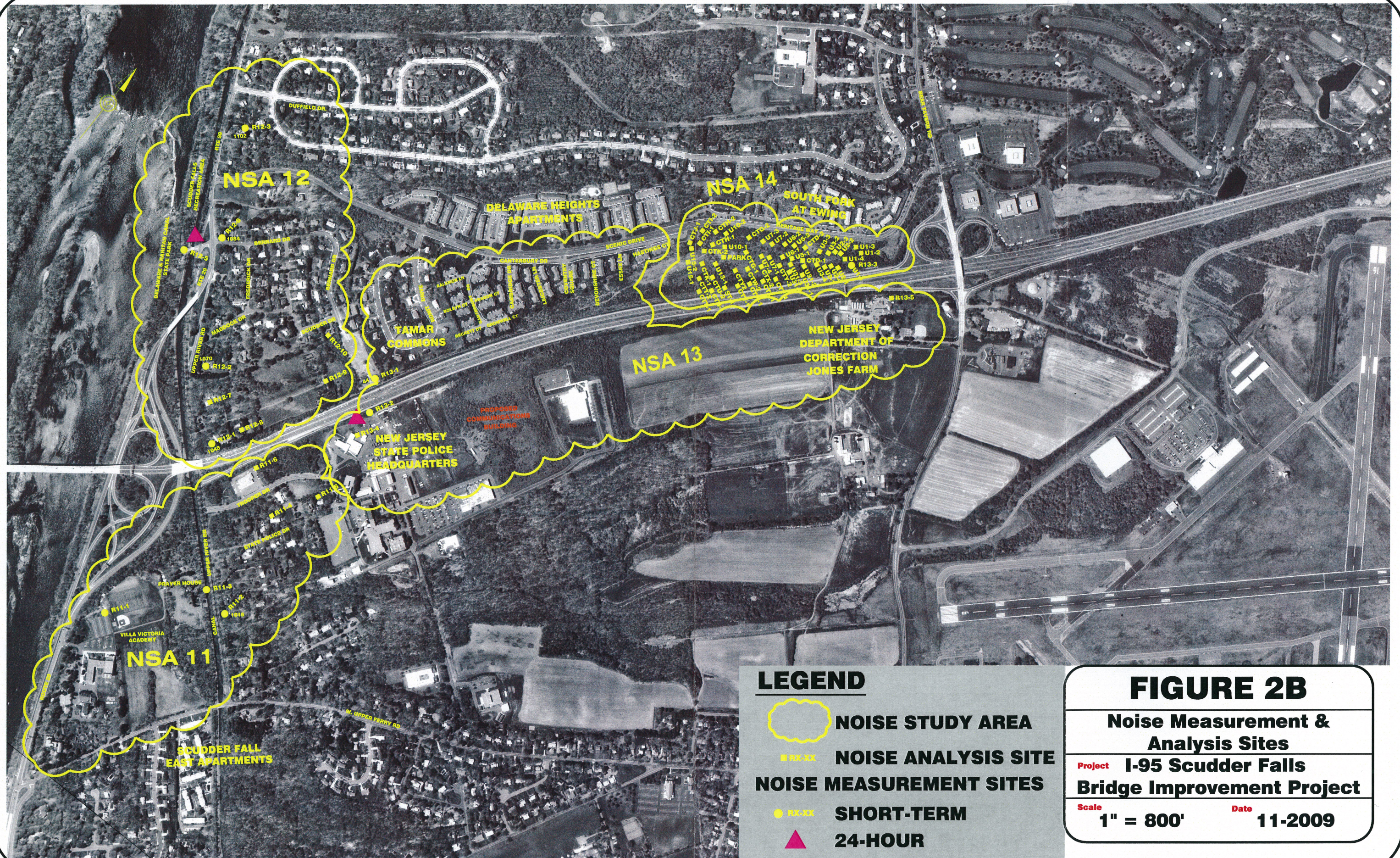
FIGURE 2A

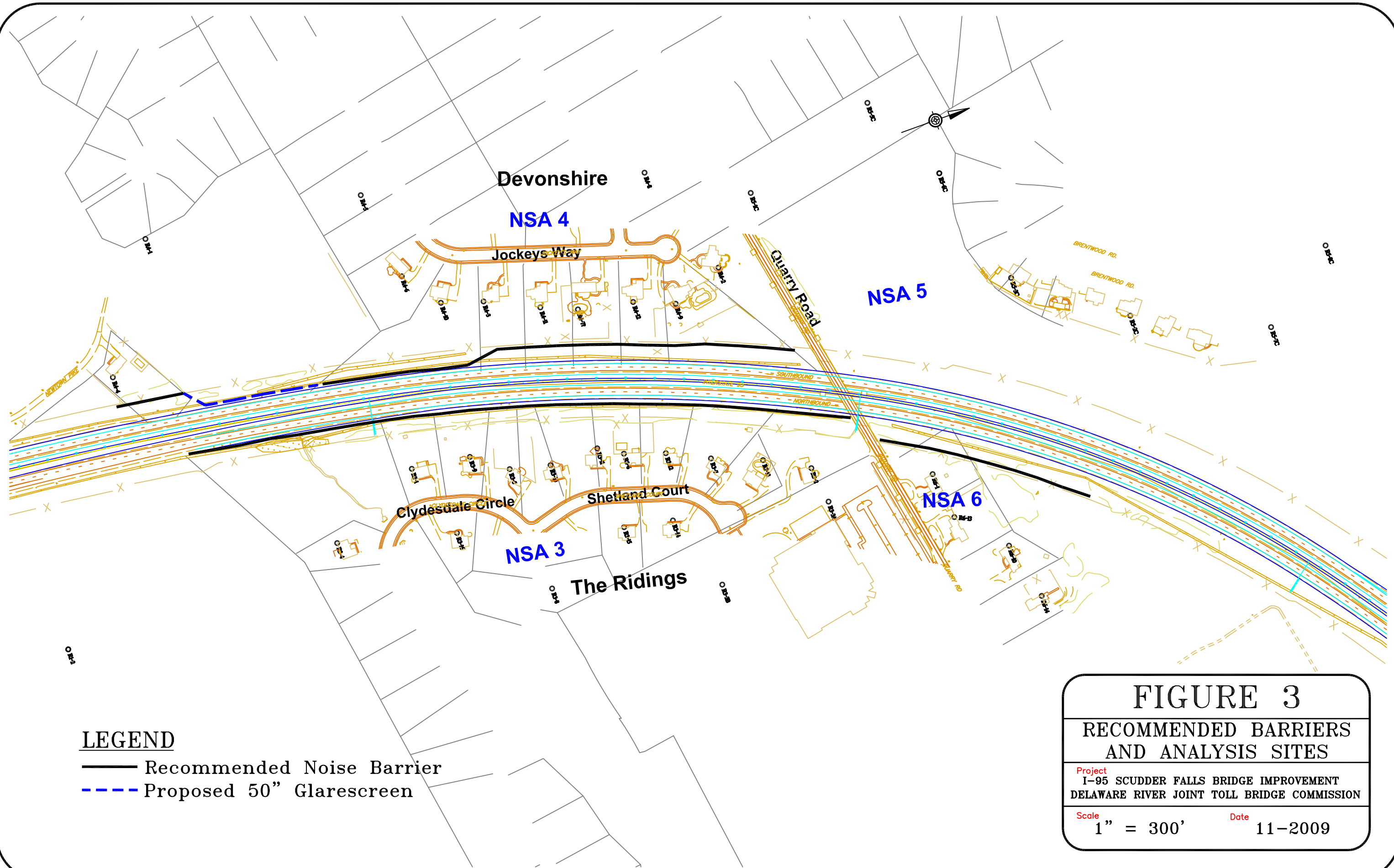
Noise Measurement & Analysis Sites

Project I-95 Scudder Falls Bridge Improvement Project

Scale 1" = 800' **Date 11-2009**

Figure 2B





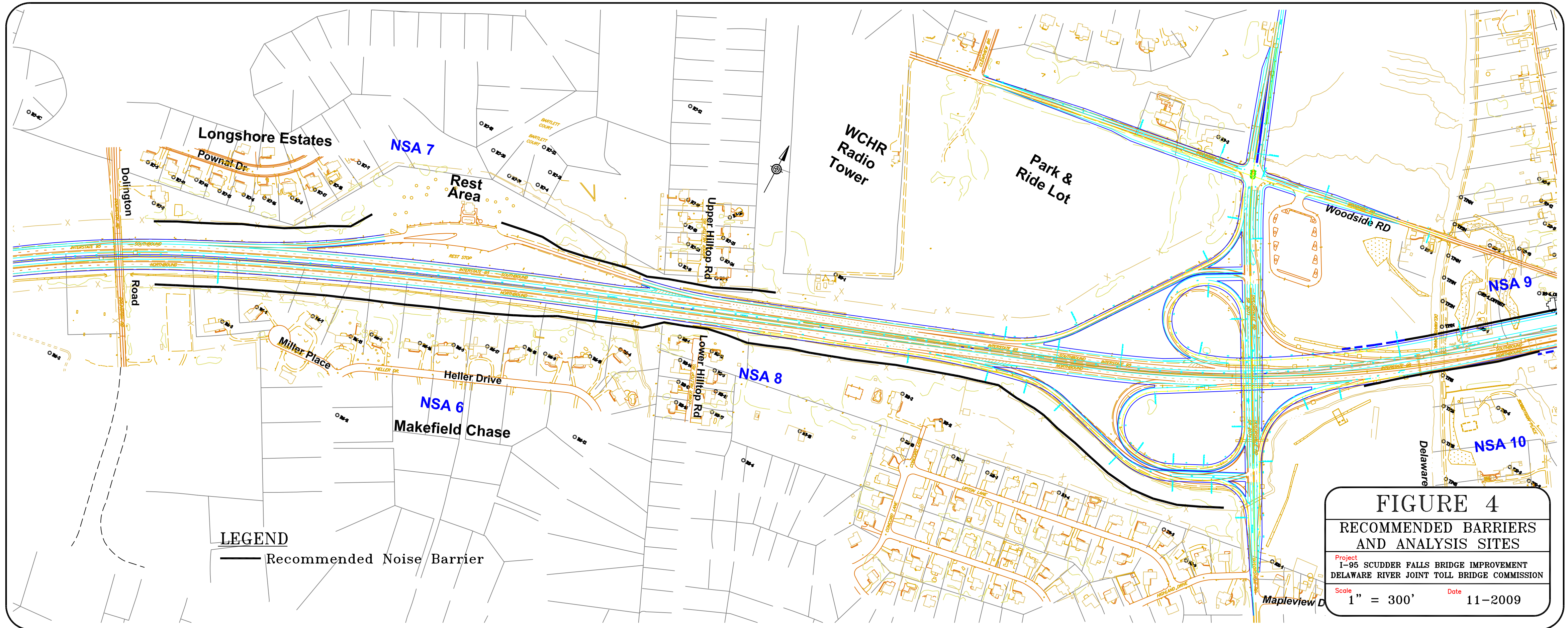


FIGURE 4
**RECOMMENDED BARRIERS
AND ANALYSIS SITES**

Project	I-95 SCUDDER FALLS BRIDGE IMPROVEMENT DELAWARE RIVER JOINT TOLL BRIDGE COMMISSION	
Scale	1" = 300'	Date 11-2009

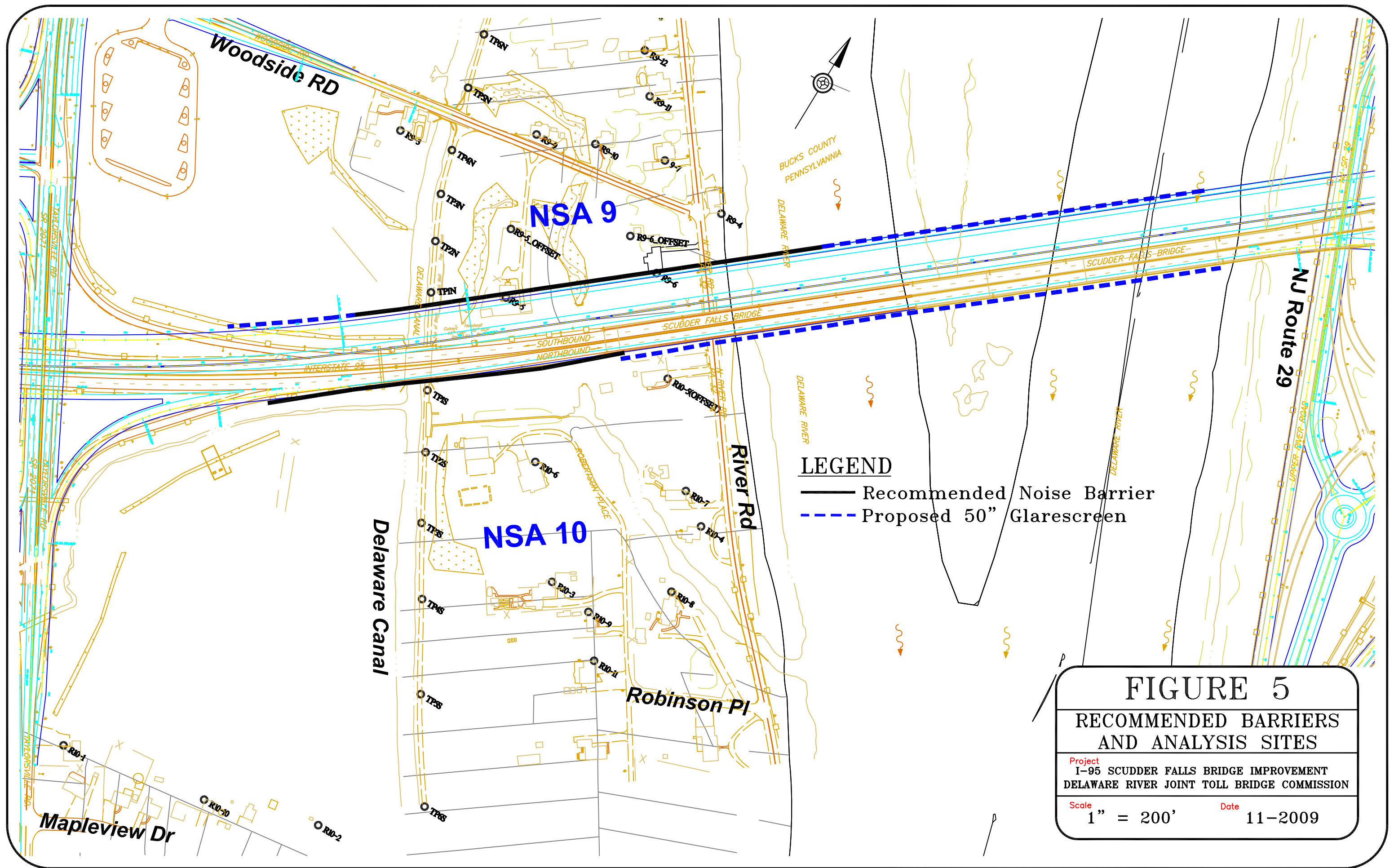


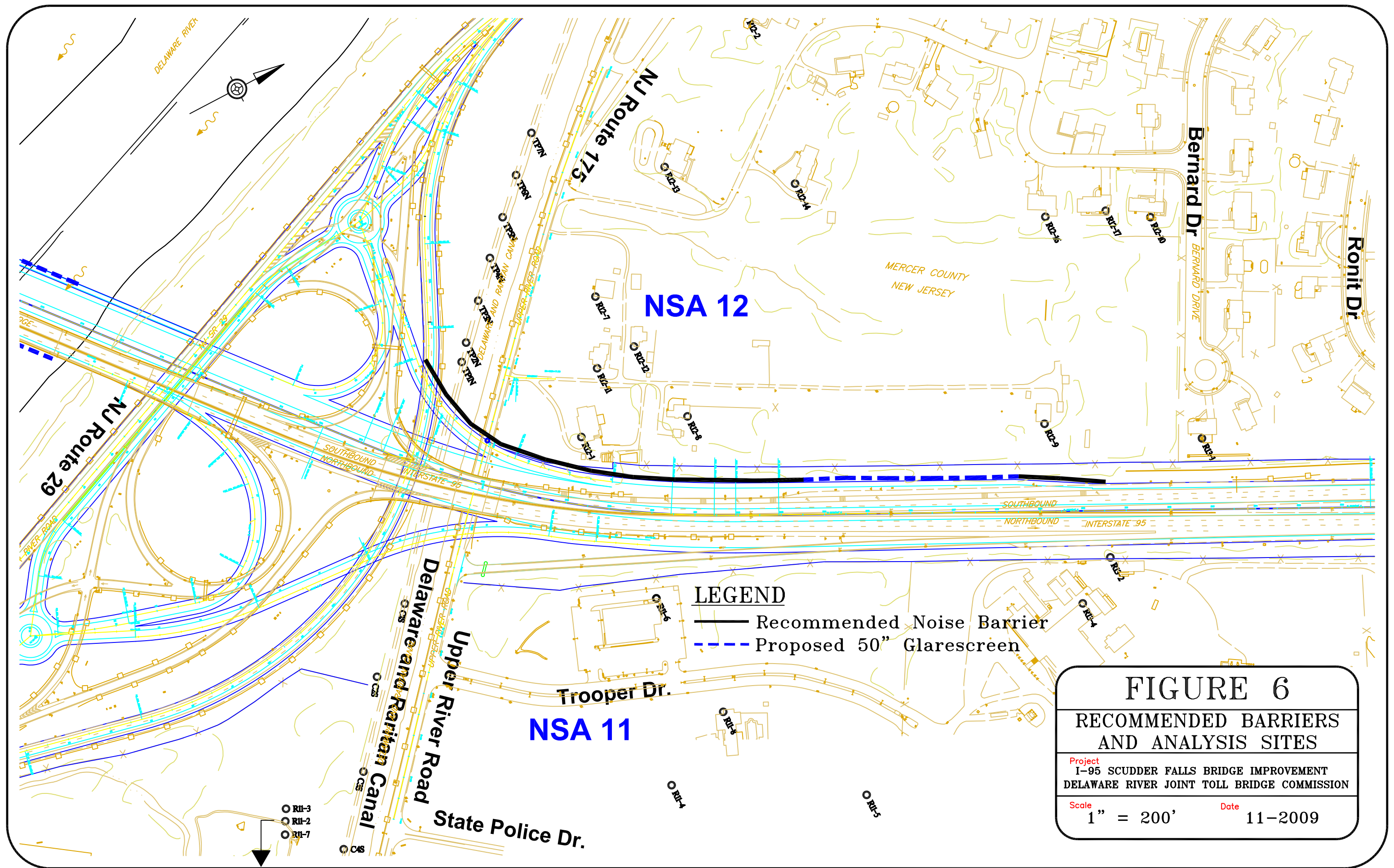
FIGURE 5

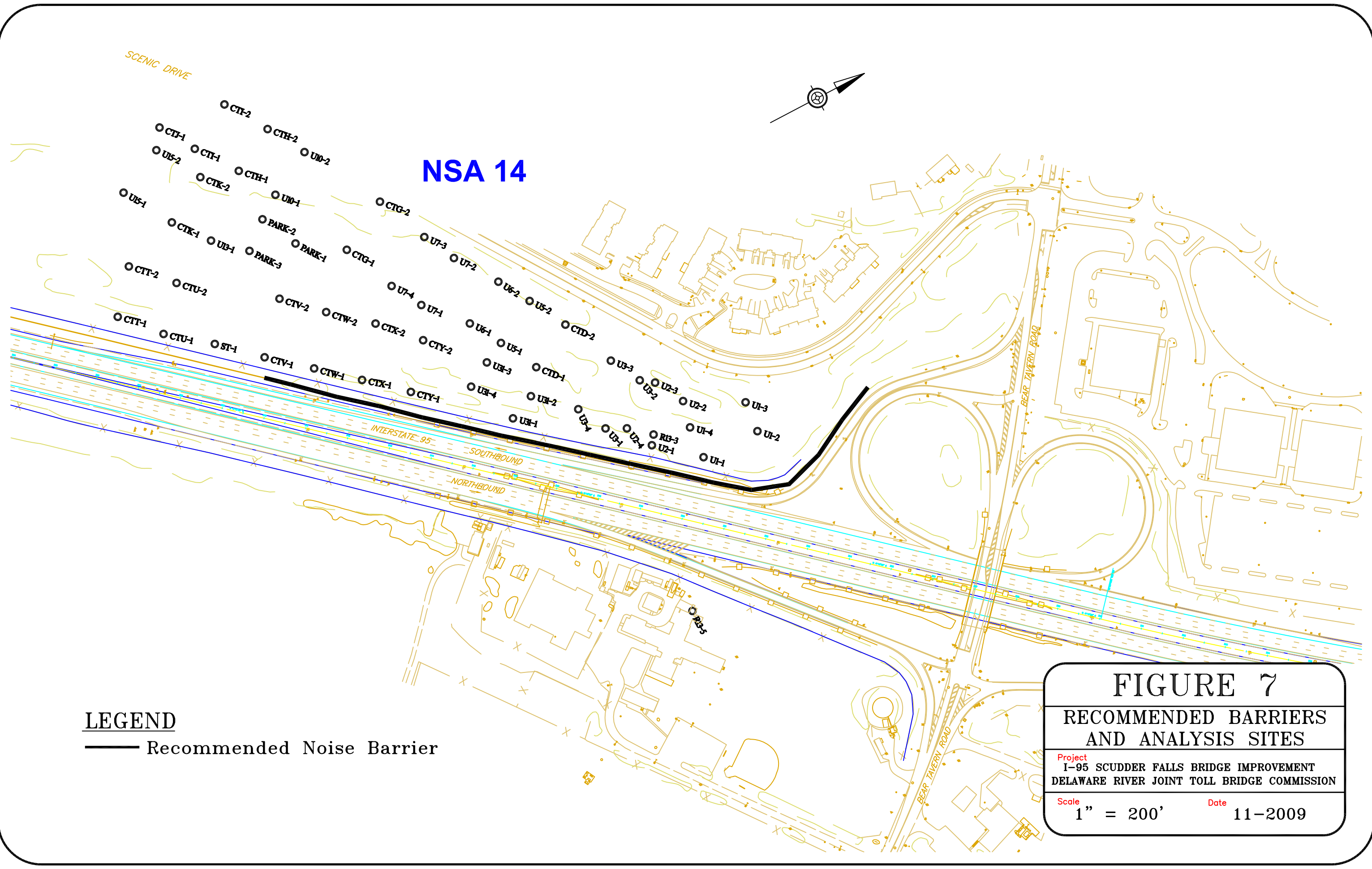
**RECOMMENDED BARRIERS
AND ANALYSIS SITES**

Project
I-95 SCUDDER FALLS BRIDGE IMPROVEMENT
DELAWARE RIVER JOINT TOLL BRIDGE COMMISSION

Scale
1" = 200'

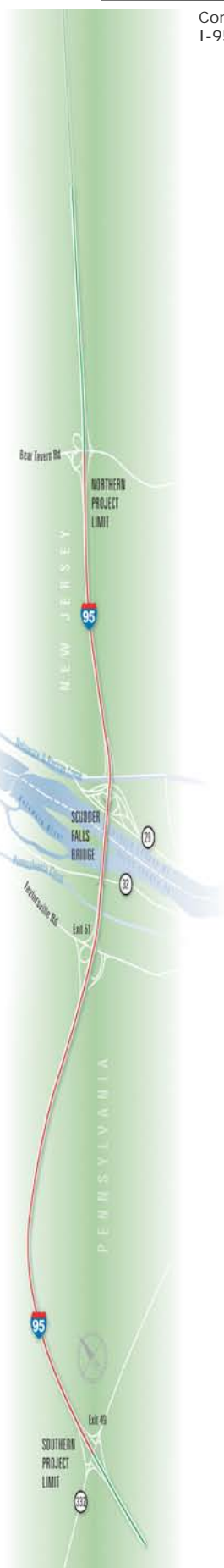
Date
11-2009





Contract C-393A, Capital Project No. CP0301A, Account No. 7161-06-012
I-95/Scudder Falls Bridge Improvement Project

TABLES



November 2009

TABLE 1
FEDERAL HIGHWAY ADMINISTRATION
NOISE ABATEMENT CRITERIA
HOURLY A-WEIGHTED SOUND LEVELS - DECIBELS (dBA)

Activity Category	L _{eq} (h)	Description of Activity Category
A	57 (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	67 (Exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries and hospitals.
C	72 (Exterior)	Developed lands, properties or, activities not included in Categories A or B above.
D	--	Undeveloped lands.
E	52 (Interior)	Residences, motels, hotels, public, meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

Source: PROCEDURES FOR ABATEMENT OF HIGHWAY TRAFFIC NOISE AND CONSTRUCTION NOISE, 23 CODE OF FEDERAL REGULATIONS (CFR) PART 772; December 1991.

TABLE 2
Summary of Noise Measurements

Noise Study Area		Site I.D.	Address	Short-Term Measurements						24-Hour Measurements	
				Date	Start Time	Measured Noise Levels (dBA)				Dates	Noisiest Hourly Period(s)
						L _{eq}	L _{max}	L _{min}	SEL		
Pennsylvania	1	R1-1A	949 Mirror Lake Road (Main house)	3/1/2004	3:23 PM	46.3	62.8	31.9	77.1		
		R1-1B	949A Mirror Lake Road (Guest house)	3/1/2004	3:23 PM	46.9	61.3	41.4	77.1		
		R1-2	1700 Newtown Yardley Road	4/8/2004	7:06 AM	58.2	74.7	53.3	89.0		
	2	R2-1	Newtown Yardley and Stoney Hill Roads (Hampton Inn)	3/1/2004	4:05 PM	66.6		57.3	97.4		
		R2-2	1878 Newtown Yardley Road (Breezyvale Farm)	4/8/2004	11:17 AM	51.3	67.0	42.4	82.1		
		R2-3	1100 or 1101 Surrey Lane	4/6/2004	9:18 AM	48.7	70.1	39.0	79.5		
	3	R3-1	1710 Clydesdale Circle	2/11/2004	10:03 AM	63.9	73.8	47.3	94.7		
		R3-2	1225 Shetland Court	2/20/2004	7:35 AM	60.8	68.1	56.6	91.6		
		R3-3A	1673 Quarry Road (Playground)	3/1/2004	4:48 PM	50.9	66.6	47.3	81.7		
		R3-3	1673 Quarry Road (Ballfield)	2/20/2004	7:35AM	53.8	66.5	50.3	84.6		
	4	R4-1	1162 Ascot Court	2/20/2004	12:15 PM	60.1	68.6	52.7	90.9		
		R4-2	1720 Jockeys Lane	4/7/2004	7:24 AM	58.8	74.0	53.1	89.3		
		R4-3	1759 Jockeys Lane	2/11/2004	10:40 AM	60.4	70.7	47.5	91.2		
		R4-4	1878 Patterson Lane	2/20/2004	12:15 PM	62.3	70.0	55.5	93.0		
	5	R5-1	1746 Quarry Road	4/7/2004	8:43 AM	57.1	71.0	50.8	87.8		
		R5-2	1373 Brentwood Drive	2/11/2004	11:19 AM	49.7	69.6	42.4	80.5	4/28/04 to 4/29/04	6 to 7AM; 10 to 11 AM; 2 to 6 PM; 7 to 8PM
		R5-3	1379 Brentwood Drive	4/6/2004	7:58 AM	55.1	78.1	50.7	85.8		
		R5-4	1423 Wheatshaeaf Road	2/20/2004	11:25 AM	53.3	61.3	48.2	84.1		
	6	R6-1	1660 Quarry Road	4/6/2004	4:50 PM	65.5	73.1	56.8	96.3		
		R6-2	Lower Makefield Township Recreational Field on Dolington Road	4/8/2004	10:22 AM	59.3	67.4	50.4	90.1		
		R6-3	1524 Miller Place	4/7/2004	11:12 AM	60.7	69.5	52.5	91.5		
		R6-4	1330 Heller Drive	2/20/2004	8:30 AM	64.5	72.4	55.9	95.3		
		R6-5	1350 Heller Drive	2/20/2004	8:30 AM	57.2	67.3	52.7	88.0		
	7	R7-1	42 Upper Hilltop Road	4/6/2004	4:12 PM	70.3	81.9	56.6	101.0		
		R7-2	1398 Dolington Road	2/19/2004	12:18 PM	62.5	73.4	53.3	93.3		
		R7-3	1513 Pownal Drive	2/19/2004	12:15 PM	58.1	70.3	49.7	88.9		
		R7-4	1445 Bartlett Court	4/6/2004	3:27 PM	56.6	66.6	51.1	87.4	2/19/04 to 2/20/04	3 PM to 4 PM
	8	R8-1	37 Lower Hilltop Road	4/6/2004	11:07 AM	68.6	84.5	50.5	99.4		
		R8-2	29 Concord Lane	2/20/2004	9:15 AM	59.6	70.5	50.9	90.3	4/28/04 to 4/29/04	6 AM to 7 AM
		R8-3	4 Upton Lane	4/6/2004	11:50 AM	56.4	63.7	49.2	87.2		
		R8-4	14 Upton Lane	2/20/2004	9:15 AM	56.6	66.5	51.4	87.4		
	9	R9-1	Woodside Road Nextel Towers (ID # PA0016)	4/6/2004	2:45 PM	57.5	66.2	50.5	88.3		
		R9-2	1208 Woodside Road	4/6/2004	1:19 PM	55.9	70.4	44.8	86.7		
		R9-3	1187 Woodside Road	4/6/2004	2:00 PM	56.4	68.6	50.3	87.2	2/19/04 to 2/20/04	3 PM to 4 PM
		R9-4	1510 North River Road (or Delaware Avenue)	2/20/2004	10:10 AM	64.1	75.7	53.8	94.9		
	10	R10-1	240 Taylorsville Road	2/19/2004	4:02 PM	66.8	86.1	54.1	97.6		
R10-2		32 Mapleview Drive	2/19/2004	4:05 PM	64.2	90.5	52.8	95.0			
R10-3		1451 DeSantis Place	2/20/2004	10:10 AM	55.2	68.7	47.4	86.0			
R10-4		1455 Robinson Place	4/7/2004	10:23 AM	59.1	75.2	50.6	89.9			
R10-5		1479 River Road	4/7/2004	9:55 AM	65.1	82.7	55.7	95.9			
New Jersey	11	R11-1	Villa Victoria Academy on Route 29	3/1/2004	2:33 PM	55.1	67.7	42.5	85.9		
		R11-2	1016 Upper River Road	4/8/2004	8:34 AM	61.8	77.1	48.6	92.6		
		R11-3	Delaware and Raritan Canal State Park	4/8/2004	7:52 AM	59.0	74.5	51.5	89.8		
	12	R12-1	1048 Upper River Road	4/7/2004	3:30 PM	68.5	80.0	59.7	99.3		
		R12-2	1070 Upper River Road	4/7/2004	2:18 PM	61.5	80.8	50.0	92.2		
		R12-3	1102 River Road	4/7/2004	2:59 PM	62.0	73.4	48.6	92.8		
		R12-5	Delaware and Raritan Canal State Park	3/1/2004	11:55 AM	59.4	75.2	48.7	90.2	4/15/04 to 4/16/04	7 AM to 8 AM
		R12-6	1084 Corner of River Road & Bernard Street	3/1/2004	12:28 PM	70.5	82.7	48.6	101.2		
	13	R13-1	44 Bernard Drive	4/7/2004	1:39 PM	63.8	74.6	56.2	94.6		
		R13-2	New Jersey State Police Property	4/16/2004	2:20 PM	76.6	87.9	57.5	107.3	4/15/04 to 4/16/04	7 AM to 9 AM
		R13-3	Scenic Drive South of Bear Tavern Road	3/1/2004	1:30 PM	67.0	80.1	54.0	97.8		

NOTES:
dBA = Decibels on the A-weighted scale
L_{eq} = Equivalent noise leve
L_{max} = Maximum noise level
L_{min} = Minimum noise level
SEL = Sound exposure level

TABLE 3
I-95 / Scudder Falls Bridge Improvement Project
Summary of FHWA TNM Validation

Noise Study Area		Site I.D.	Address	Date	Start Time of Measurement	Roadway	Estimated Speeds (mph)	Hourly Traffic Based on Concurrent Traffic Counts					Modeled L _{eq} (h) (dBA)	Measured L _{eq} (dBA)	Difference (dBA)	Comments
								Autos	Medium Trucks	Heavy Trucks	Buses	Motorcycles				
Pennsylvania	1	R1-1A	949 Mirror Lake Road (Main house)	3/1/2004	3:23 PM	I-95 NB	65	1962	48	108	18	24	47.2	46.3	0.9	
						I-95 SB	55	2772	54	198	6	18				
		R1-1B	949A Mirror Lake Road (Guest house)	3/1/2004	3:23 PM	I-95 NB		1962	48	108	18	24	47.6	46.9	0.7	
						I-95 SB	55	2772	54	198	6	18				
		R1-2	1700 Newtown Yardley Road	4/8/2004	7:06 AM	I-95 NB	65	2028	30	66	0	0	53.0	58.2	-5.2	Dog barking near meter ; mowing behind house
						I-95 SB	65	876	0	78	0	0				
						NB On-ramp	0-65	1196	38	38	0	0				
						SB Off-ramp	65-0	860	27	27	0	0				
	2	R2-1	Newtown Yardley and Stoney Hill Roads (Hampton Inn)	3/1/2004	4:05 PM	I-95 NB	65	1134	30	60	6	0	66.2	66.6	-0.4	
						I-95 SB	65	1806	36	138	12	0				
						NB Off-ramp	65-20	912	0	0	0	0				
						SB On-ramp	0-65	1014	0	0	0	0				
						Newtown-Yardley Road EB	50-35	1710	55	55	0	0				
						Newtown-Yardley Road WB	0-50	2024	65	65	0	0				
		R2-2	1878 Newtown Yardley Road (Seltzville Farm)	4/8/2004	11:17 AM	I-95 NB	65	1000	30	60	0	0	52.7	51.3	1.4	
						I-95 SB	65	1000	30	60	0	0				
						Newtown-Yardley Road WB	45	753	45	72	3	0				
						Newtown-Yardley Road EB	45	1215	60	54	0	0				
		R2-3	1100 OR 1101 Surrey Lane	4/6/2004	9:18 AM	I-95 NB	65	1000	30	60	0	0	47.0	48.7	1.4	
						I-95 SB	65	1000	30	60	0	0				
						Newtown-Yardley Road WB	45	1155	24	105	0	0				
						Newtown-Yardley Road EB	45	1125	45	45	0	0				
	3	R3-1	1710 Clydesdale Circle	2/11/2004	10:03 AM	I-95 NB	60	903	57	54	0	3	65.9	63.9	2.0	
						I-95 SB	55	1008	51	105	0	0				
		R3-2	1225 Shetland Court	2/20/2004	7:35 AM	I-95 NB	60	2607	60	51	6	0	60.8	60.8	0.0	
						I-95 SB	55	1647	18	123	6	0				
						Quarry Rd WB	30	162	6	0	6	0				
						Quarry Rd EB	30	162	6	0	6	0				
		R3-3A	1673 Quarry Road Playground (Elem. School)	3/1/2004	4:48 PM	I-95 NB	60	1224	6	24	6	6	52.0	50.9	1.1	
						I-95 SB	45	3870	36	51	0	12				
						Quarry Rd WB	30	108	0	0	0	0				
						Quarry Rd EB	30	108	0	0	0	0				
		R3-3	1673 Quarry Road Ballfield (Elem. School)	2/20/2004	7:35AM	I-95 NB	60	2607	60	51	6	0	53.0	53.8	-0.8	
						I-95 SB	55	1647	18	123	18	0				
						Quarry Rd WB	30	162	6	0	6	0				
						Quarry Rd EB	30	162	6	0	6	0				
	4	R4-1	1162 Ascot Court	2/20/2004	12:15 PM	I-95 NB	60	1155	39	57	0	0	58.0	60.1	-2.1	
						I-95 SB	55	1320	66	195	0	3				
		R4-2	1720 Jockeys Lane	4/7/2004	7:24 AM	I-95 NB	60	3180	54	108	0	0	58.4	58.8	-0.4	
						I-95 SB	60	1608	24	96	0	0				
R4-3		1759 Jockeys Lane	2/11/2004	10:40 AM	Quarry Rd EB & WB	30	225	6	0	9	0	63.3	60.4	2.9		
					I-95 NB	60	930	36	78	0	3					
R4-4		1878 Patterson Lane	2/20/2004	12:15PM	I-95 SB	55	960	42	159	0	3	64.9	62.3	2.6		
					I-95 NB	60	1155	39	117	0	0					
5	R5-1	1746 Quarry Road	4/7/2004	8:43 AM	I-95 NB	60	2208	84	84	0	0	55.6	57.1	-1.5		
					I-95 SB	55	1410	54	120	12	0					
					Quarry Rd EB & WB	30	435	15	0	12	0					
					I-95 NB	60	957	36	90	0	0					
	R5-2	1373 Brentwood Drive	2/11/2004	11:19 AM	I-95 SB	55	1011	48	174	0	0	48.5	49.7	-1.2		
					I-95 NB	60	3066	84	72	0	0					
	R5-3	1379 Brentwood Drive	4/6/2004	7:58 AM	I-95 SB	60	1824	24	84	0	0	55.8	55.1	0.7		
					I-95 NB	60	1179	42	90	0	0					
R5-4	1425 Wheatsheaf Road	2/20/2004	11:25 AM	I-95 SB	55	1002	57	162	0	0	53.7	53.3	0.4			
				I-95 NB	60	1179	42	90	0	0						

NOTES:

dBA = Decibels on the A-weighted scale
L_{eq} = Equivalent noise level
L_{eq}(h) = Hourly equivalent noise level

Since measured noise levels from noise meters and the FHWA TNM program both report noise levels to the tenth of a dBA, values in this table report tenths of a dBA. Using tenths also provides a better comparison of measured and modeled values for calibration purposes.

TABLE 3 (Continued)
I-95 / Scudder Falls Bridge Improvement Project
Summary of FHWA TNM Validation

Noise Study Area		Site I.D.	Address	Date	Start Time of Measurement	Roadway	Estimated Speeds (mph)	Hourly Traffic Based on Concurrent Traffic Counts					Modeled L _{eq} (h) (dBA)	Measured L _{eq} (dBA)	Difference (dBA)	Comments
								Autos	Medium Trucks	Heavy Trucks	Buses	Motor-cycles				
Pennsylvania	6	R6-1	1660 Quarry Road	4/6/2004	4:50 PM	I-95 NB	55	1728	18	42	0	6	64.8	65.5	-0.7	
						I-95 SB	45	3804	48	108	0	0				
		R6-2	Lower Makefield Township Recreational Field on Dolington Road	4/8/2004	10:22 AM	I-95 NB	55	1440	60	120	6	0	60.8	59.3	1.5	
						I-95 SB	55	1272	22	156	0	0				
						Dolington EB	30	57	3	3	0	0				
						Dolington WB	30	54	3	0	0	0				
		R6-3	1524 Miller Place	4/7/2004	11:12 AM	I-95 NB	55	948	69	93	0	0	60.3	60.7	-0.4	
						I-95 SB	55	1239	69	294	3	0				
		R6-4	1330 Heller Drive	2/20/2004	8:30 AM	I-95 NB	55	2688	54	84	0	0	68.0	64.5	3.5	Open slat fence at property line provides minimal abatement
						I-95 SB	55	1236	30	84	6	0				
	R6-5	1350 Heller Drive	2/20/2004	8:30 AM	I-95 NB	55	2688	54	84	0	0	57.1	57.2	-0.1		
					I-95 SB	55	1236	30	84	6	0					
	7	R7-1	42 Upper Hilltop Road	4/6/2004	4:12 PM	I-95 NB	55	1590	18	57	0	0	71.0	70.3	0.7	
						I-95 SB	45	2736	42	84	0	0				
		R7-2	1398 Dolington Road	2/19/2004	12:18 PM	I-95 NB	55	1275	57	141	0	3	65.3	62.5	2.8	
						I-95 SB	55	993	45	96	0	3				
						Dolington Rd WB	30	18	0	2	0	0				
						Dolington Rd EB	30	18	0	1	0	0				
		R7-3	1513 Pownal Drive	2/19/2004	12:15 PM	I-95 NB	55	1275	57	141	0	3	59.8	58.1	1.7	
						I-95 SB	55	993	45	96	0	3				
						Dolington Rd WB	30	18	0	2	0	0				
						Dolington Rd EB	30	18	0	1	0	0				
	R7-4	1445 Bartlett Circle	4/6/2004	3:27 PM	I-95 NB	55	1635	36	60	6	6	57.9	56.6	1.3		
					I-95 SB	55	2343	72	171	0	9					
	8	R8-1	37 Lower Hilltop Road	4/6/2004	11:07 AM	I-95 NB	55	882	21	102	0	0	70.8	68.6	2.2	
						I-95 SB	55	1122	48	201	0	0				
		R8-2	29 Concord Lane	2/20/2004	9:15 AM	I-95 NB	55	1440	42	72	6	0	61.3	59.6	1.7	
						I-95 SB	55	1374	48	120	0	0				
		R8-3	4 Upton Lane	4/6/2004	11:50 AM	I-95 NB	55	1068	66	138	0	0	54.7	56.4	-1.7	
						I-95 SB	55	1218	66	180	0	6				
		R8-4	14 Upton Lane	2/20/2004	9:15 AM	I-95 NB	55	1440	42	72	6	0	54.0	56.6	-2.6	
						I-95 SB	55	1374	48	120	0	0				
	9	R9-1	Woodside Road (west of Taylorsville Road)	4/6/2004	2:45 PM	I-95 NB	45	1347	36	81	0	15	60.4	57.5	2.9	
						I-95 SB	45	1344	69	168	0	0				
		R9-2	1208 Woodside Road	4/6/2004	1:19 PM	Taylorsville EB	35	342	15	6	0	0	57.1	55.9	1.2	
						Taylorsville WB	35	267	15	30	0	0				
						Woodside NB	35	720	0	3	0	0				
						Woodside SB	35	75	3	0	0	0				
		R9-3	1187 Woodside Road	4/6/2004	2:00 PM	I-95 NB	45	1089	24	102	9	0	58.1	56.4	1.7	
						I-95 SB	45	1245	63	144	3	0				
	R9-4	1510 North River Road (or Delaware Avenue)	2/20/2004	10:10 AM	I-95 NB	45	930	42	96	0	0	61.5	64.1	-2.6		
					I-95 SB	45	1152	48	168	0	0					
River Rd WB					35	76	3	0	0	0						
River Rd EB					35	77	3	0	0	0						
10	R10-1	240 Taylorsville Road	2/19/2004	4:02 PM	I-95 NB	45	1440	30	48	0	0	60.7	66.8	-6.1	Low jet flyover	
					I-95 SB	45	3708	54	84	6	0					
					Taylorsville Rd WB	35	330	6	12	0	0					
					Taylorsville Rd EB	35	330	6	12	0	0					
	R10-2	32 Mapleview Drive	2/19/2004	4:05 PM	I-95 NB	45	1440	30	48	0	0	51.3	64.2	-12.9	Jet flyover; 2 helicopter flyovers	
					I-95 SB	45	3708	54	84	6	0					
					Taylorsville Rd WB	35	330	6	12	0	0					
					Taylorsville Rd EB	35	330	6	12	0	0					
	R10-3	1451 DeSantis Place	2/20/2004	10:10 AM	I-95 NB	45	930	42	96	0	0	57.5	55.2	2.3		
					I-95 SB	45	1152	48	168	0	0					
					River Rd WB	30	76	3	0	0	0					
					River Rd EB	30	77	3	0	0	0					
	R10-4	1455 River Road	4/7/2004	10:23 AM	I-95 NB	40	2412	108	342	0	0	61.4	59.1	2.3		
					I-95 SB	45	2412	102	216	6	30					
					River Rd WB & EB	30	114	3	3	0	0					
	R10-5	1479 River Road	4/7/2004	9:55 AM	I-95 NB	45	1392	66	132	6	0	62.3	65.1	-2.8		
					I-95 SB	45	834	30	132	0	0					
					River Rd WB & EB	30	129	3	0	0	0					

NOTES:
dBA = Decibels on the A-weighted scale
L_{eq} = Equivalent noise level
L_{eq}(h) = Hourly equivalent noise level
Since measured noise levels from noise meters and the FHWA TNM program both report noise levels to the tenth of a dBA, values in this table report tenths of a dBA. Using tenths also provides a better comparison of measured and modeled values for calibration curve.

TABLE 3 (Continued)
I-95 / Scudder Falls Bridge Improvement Project
Summary of FHWA TNM Validation

Noise Study Area		Site I.D.	Address	Date	Start Time of Measurement	Roadway	Estimated Speeds (mph)	Hourly Traffic Based on Concurrent Traffic Counts					Modeled L _{eq} (h) (dBA)	Measured L _{eq} (dBA)	Difference (dBA)	Comments
								Autos	Medium Trucks	Heavy Trucks	Buses	Motor-cycles				
New Jersey	11	R11-1	Villa Victoria Academy on Route 29	3/1/2004	2:33 PM	I-95 NB	55	1107	30	78	0	0	54.4	55.1	-0.7	
						I-95 SB		1263	60	240	39	0				
						SR 29 WB	45	279	54	12	0	0				
						SR 29 EB		534	18	15	0	3				
		R11-2	1016 Upper River Road	4/8/2004	8:34 AM	I-95 NB	55	3108	42	108	0	0	60.1	61.8	-1.7	
						I-95 SB		1434	60	168	0	0				
						Rvier Rd WB	35	171	3	0	12	0				
						River Rd EB		93	3	3	3	0				
		R11-3	Delaware and Raritan Canal State Park behind Victoria Academy Prayer House	4/8/2004	7:52 AM	I-95 NB	55	3660	54	108	0	0	57.8	59.0	-1.2	
						I-95 SB		1446	48	102	6	0				
						Rvier Rd WB	35	129	6	0	9	0				
						River Rd EB		126	9	0	12	0				
	12	R12-1	1048 Upper River Road	4/7/2004	3:30 PM	I-95 NB	45	1500	30	72	0	0	67.7	68.5	-0.8	
						I-95 SB	45	2928	42	144	0	6				
						Rvier Rd WB & EB	35	246	0	36	24	0				
						Rte. 29 Ramp	45	354	6	6	0	12				
		R12-2	1070 Upper River Road	4/7/2004	2:18 PM	I-95 NB	45	1032	72	96	18	0	59.7	61.5	-1.8	
						I-95 SB	45	1518	30	144	0	0				
						Rte. 29 WB	45	519	18	6	0	0				
						Rte. 29 EB	45	273	24	15	5	10				
						Rvier Rd WB & EB	35	123	9	36	0	6				
						River Rd Ramp	35	69	3	0	0	0				
		R12-3	1102 Upper River Road	4/7/2004	2:59 PM	Rte. 29 WB	45	438	3	0	6	3	No Mapping	62.0		
						Rte. 29 EB	45	366	15	12	15	12				
		R12-4	1064 River Road (Access from Maddock)	Access to Property Denied												
		R12-5	Delaware and Raritan Canal State Park	3/1/2004	11:55 AM	I-95 NB	55	945	39	132	3	0	59.9	59.4	0.5	
						I-95 SB	55	1038	72	204	9	3				
						SR 29 WB	45	237	3	51	0	0				
						SR 29 EB	45	297	21	48	0	0				
						River Road	25	150	6	15	0	0				
		R12-6	1084 Corner of River Road (Rte 29) & Bernard Street	3/1/2004	12:28 PM	I-95 NB	55	882	21	99	3	3	67.2	70.5	-3.3	Heavy dump trucks during measurements
						I-95 SB	55	1140	54	201	0	3				
	SR 29 WB					45	261	12	42	3	6					
	SR 29 EB					45	306	12	33	0	3					
	13	R13-1	42 Bernard Drive	4/7/2004	1:30 PM	I-95 NB	65	1032	72	96	18	0	61.9	63.8	-1.9	
						I-95 SB	65	1518	30	144	0	0				
R13-2		New Jersey State Police Property	4/16/2004	2:20 PM	I-95 NB	65	1173	27	75	0	3	75.5	76.6	-1.1		
					I-95 SB	65	2082	63	174	0	9					
R13-3		Scenic Drive South of Bear Tavern Road	3/1/2004	1:30 PM	I-95 NB	65	927	18	135	12	3	69.8	67.0	2.8		
					I-95 SB	65	810	84	168	24	0					
					NB Off-ramp	65-10	168	0	0	0	0					
					SB On-ramp	0-65	63	0	3	0	0					

NOTES:

dBA = Decibels on the A-weighted scale

L_{eq} = Equivalent noise level

L_{eq}(h) = Hourly equivalent noise level

Since measured noise levels from noise meters and the FHWA TNM program both report noise levels to the tenth of a dBA, values in this table report tenths of a dBA. Using tenths also provides a better comparison of measured and modeled values for calibration purposes.

TABLE 4
FACTORS INVOLVED IN CONSIDERATION AND EVALUATION OF NOISE BARRIERS

NOISE ABATEMENT CRITERIA FOR RESIDENTIAL AREAS	PENNSYLVANIA DOT ¹	NEW JERSEY DOT ²
Consideration of noise abatement is warranted if EITHER of the following criteria are met for $L_{eq}(h)$: Absolute Noise Level Approaches or Exceeds Increase Over Existing Noise Level Equals or Exceeds	67 dBA 10 dBA	67 dBA 10 dBA
Some factors considered in evaluating the feasibility and reasonableness of noise barriers include: Noise Abatement (Insertion Loss) Design Goals: Range of Noise Reduction for Majority of Impacted Residences Reduce Noise Levels to Minimum Noise Reduction for Barrier to be Considered Feasible Minimum Noise Reduction for a Barrier to be Considered Reasonable Achieve noise reductions with average wall height of Maximum wall heights of	7 to 10 dBA Low 60 dBA range or existing levels, if possible 5 dBA for majority of impacted receptors 3 dBA for impacted receptors; 5 dBA for non-impacted receptors	5 to 10 dBA 5 dBA 16 feet (4.88 meters) 18 feet (5.49 meters) ³
Some factors considered in evaluating cost-effectiveness of noise barriers include: Maximum Barrier Cost per Impacted Residential Dwelling Unit Maximum Barrier Cost per Non-Impacted Residential Dwelling Unit Cost per Square Foot of Barrier Used in Calculations ⁵	\$50,000 \$50,000 \$25.00	\$50,000 ⁴ \$25,000 \$50.00

NOTES:

1 - Pennsylvania Department of Transportation, Project Level Highway Traffic Noise Handbook, Publication No. 24, February 2, 2002.

2 - New Jersey Department of Transportation, Traffic Noise Management Policy and Noise Map Design Guidelines, 2003.

3 - Wall heights of greater than 18 feet must be approved by the Director of Design Services

4 - \$55,000 for sites with absolute noise levels above 76 dBA or with a 20 dBA increase over existing noise level

5 - See State policies for items considered in cost

TABLE 5
NOISE ABATEMENT CONSIDERATIONS
NSAs 3 and 6

Noise Study Area (NSA)		Site I.D.	Address	Modeled Hourly L _{eq} Noise Levels in dBA									
				Maximum of AM and PM Values ¹			Future Build (No Barrier) ³			Recommended Barrier System (PennDOT Criteria)		Recommended Barrier System (DRJTBC Criteria)	
				Noise Level	Increase Over Existing ⁴	Noise Level	Increase Over Existing	Increase Over No-Build	Noise Level	I.L.	Noise Level	I.L.	
NSA 3 Barrier and NSA 6 Barrier 1	3	R3-1	1710 Clydesdale Circle	70	70	0	73	3	3	66	7	64	9
		R3-2	1225 Shetland Court	64	64	0	66	2	2	65	1	64	2
		R3-3A	1673 Quarry Road (Playground)	57	57	0	58	1	1	59	0	58	0
		R3-3B	1673 Quarry Road (Ballfield)	55	55	0	56	0	0	54	1	54	2
		R3-4	1728 Clydesdale Circle	63	63	0	66	3	3	62	4	61	5
		R3-5	1702 Clydesdale Circle	68	68	0	69	1	1	63	6	63	6
		R3-6	1209 Shetland Court	64	64	0	66	2	2	62	4	61	5
		R3-7	1217 Shetland Court	66	66	0	67	1	1	61	6	61	6
		R3-8	1686 Clydesdale Circle	58	59	1	60	2	2	56	4	56	4
		R3-9	Clydesdale Circle				73			65	8	64	9
		R3-10	Shetland Court				69			62	7	62	7
		R3-11	Shetland Court				70			63	7	62	8
		R3-12	Shetland Court				68			62	6	62	6
		R3-13	Shetland Court				66			62	4	61	5
		R3-14	Shetland Court				61			57	4	57	4
		R3-15	Shetland Court				61			57	4	57	4
	R3-16	Clydesdale Circle				65			60	5	60	5	
	6	R6-1	1660 Quarry Road	66	67	0	69	3	2	64	5	64	5
		R6-10	1660 Quarry Road	63	60	0	61	-1	1	58	3	59	2
		R6-13	Quarry Road				62			60	2	60	2
		R6-14	Quarry Road				59			56	3	58	1
FHWA TNM Data File Names				AM Existing 1r HSK (7/2/04)	HK No-Build AM1 3.2.05	NSA 3and6 Bar am 11.20.09							
						No Barrier Values			\$50,000/br System		Discretionary Barrier		
RECOMMENDED NOISE ABATEMENT SYSTEM DETAILS:													
Barrier Area (ft ²)										21714		33708	
Cost at \$25 per square foot										\$542,850		\$842,700	
Total Residential Units Impacted										12		12	
Impacted Residential Units Receiving > 5 dBA I.L.										8		11	
Percent of Impacted Units Receiving > 5 dBA I.L.										67%		92%	
Barrier Feasible Based on 5 dBA Reduction Criteria?										Yes		Yes	
Impacted Receptors Receiving I.L.> 3 dBA but < 5 dBA										3		0	
Non-Impacted Residences Benefited (I.L.>5 dBA)										1		1	
Total Number of Benefited Residences										12		12	
Cost per Residence Benefited										\$45,238		\$70,225	
Average Noise Reduction for Benefited Residence in dBA										5.6		6.1	
Cost per Residence Benefited per dBA of I.L.										\$8,054		\$11,465	
Barrier Reasonable from a Cost/Residence Standpoint?										Yes		Yes	
Total Barrier Length (ft)										2249		3039	
Barrier Height Range (ft)										8 to 10		6 to 14	
Average Barrier Height (ft)										9.7		11.1	
												RECOMMENDED	

NOTES:

dBA = Decibels on the A-weighted scale

Leq = Equivalent noise level

- Values represent the highest of the modeled values from AM and PM peak hour traffic periods assuming free flow traffic speeds.
All noise levels are calculated to the tenth of a dBA and rounded for presentation purposes to the nearest whole number.
- Modeled noise levels assuming no modification of project area roadways
- Modeled noise levels based on proposed modification of project area roadways
- All "Increase Over Existing" and "Increase Over No-Build" numbers represent the difference between the rounded whole numbers

	Impacted Receptors (Build noise levels equal to or exceeding 66 dBA)
	Impacted Receptors Receiving I.L. > 5 dBA
	Impacted Receptors Receiving I.L.> 3 dBA but < 5 dBA
	Non-Impacted Receptors Receiving ≥ 5 dBA

TABLE 6
NOISE ABATEMENT CONSIDERATIONS
NSA 4

Noise Study Area (NSA)		Site I.D.	Address	Modeled Hourly L _{eq} Noise Levels in dBA							
				Maximum of AM and PM Values ¹			Future Build (No Barrier) ³			Recommended Barrier System	
				Existing ²	Future No-Build ²		Noise Level	Increase Over Existing ⁴	Noise Level	Increase Over Existing	Increase Over No-Build
NSA4 Barrier System	4	R4-1	1162 Ascot Court	61	62	1	64	3	2	63	1
		R4-2	1720 Jockeys Way	60	60	0	61	1	1	58	3
		R4-3	Jockeys Way	67	68	1	70	3	2	63	7
		R4-4	1878 Patterson Lane	67	69	2	71	4	2	67	5
		R4-5	1791 Jockeys Way	58	59	1	61	3	2	58	3
		R4-6	1775 Jockeys Way	64	65	1	68	4	3	64	4
		R4-7	1727 Jockeys Way	61	63	2	66	5	3	61	5
		R4-8	1298 Colts Lane	56	56	0	57	1	1	54	3
		R4-9	Jockeys Way				64			58	6
		R4-10	1759 Jockeys Way				70			64	6
		R4-11	Jockeys Way				67			62	5
		R4-12	Jockeys Way				65			60	5
FHWA TNM Data File Names				PM Existing 1r HSK (7/2/04)	HK No-Build PM1 3.2.05		NSA 4 Final Bar 11.20.09				
							No Barrier Values			With Barrier Values	
RECOMMENDED NOISE ABATEMENT SYSTEM DETAILS:											
Barrier Area (ft ²)										18964	
Cost at \$25 per square foot										\$474,100	
Total Residential Units Impacted										6	
Impacted Residential Units Receiving > 5 dBA I.L.										5	
Percent of Impacted Units Receiving > 5 dBA I.L.										83%	
Barrier Feasible Based on 5 dBA Reduction Criteria?										Yes	
Impacted Receptors Receiving I.L.> 3 dBA but < 5 dBA										1	
Non-Impacted Residences Benefited (I.L.>5 dBA)										2	
Total Number of Benefited Residences										8	
Cost per Residence Benefited										\$59,263	
Average Noise Reduction for Benefited Residence in dBA										5.2	
Cost per Residence Benefited per dBA of I.L.										\$11,369	
Barrier Reasonable from a Cost/Residence Standpoint?										Yes	
Total Barrier Length (ft)										1535	
Barrier Height Range (ft)										6 to 14	
Average Barrier Height (ft)										12.8	
										RECOMMENDED	

- NOTES:**
dBA = Decibels on the A-weighted scale
Leq = Equivalent noise level
- Values represent the highest of the modeled values from AM and PM peak hour traffic periods assuming free flow traffic speeds.
All noise levels are calculated to the tenth of a dBA and rounded for presentation purposes to the nearest whole number.
 - Modeled noise levels assuming no modification of project area roadways
 - Modeled noise levels based on proposed modification of project area roadways
 - All "Increase Over Existing" and "Increase Over No-Build" numbers represent the difference between the rounded whole numbers

	Impacted Receptors (Build noise levels equal to or exceeding 66 dBA)
	Impacted Receptors Receiving I.L. > 5 dBA
	Impacted Receptors Receiving I.L.> 3 dBA but < 5 dBA
	Non-Impacted Receptors Receiving ≥ 5 dBA

TABLE 7
NOISE ABATEMENT CONSIDERATIONS
NSAs 6 and 8

Noise Study Area (NSA)		Site I.D.	Address	Modeled Hourly L _{eq} Noise Levels in dBA									
				Maximum of AM and PM Values ¹			Future Build (No Barrier) ³			Recommended Barrier System (PennDOT Criteria)		Recommended Barrier System (DRJTBC Criteria)	
				Noise Level	Increase Over Existing ⁴	Noise Level	Increase Over Existing	Increase Over No-Build	Noise Level	I.L.	Noise Level	I.L.	
NSA 6 Barrier 2 and NSA 8 Barrier	6	R6-3	1524 Miller Place	61	61	0	61	0	0	60	1	57	5
		R6-4	1330 Heller Drive	74	75	1	73	-1	-2	65	8	62	11
		R6-5	1350 Heller Drive	59	60	1	62	3	2	59	3	57	4
		R6-6	1512 Miller Place	66	67	1	67	1	0	63	4	59	8
		R6-7	1506 Miller Place	65	66	1	68	3	2	61	7	59	9
		R6-8	1358 Heller Drive	60	60	0	62	2	2	58	3	57	5
		R6-9	1342 Heller Drive	64	65	1	68	4	3	61	7	59	9
		R6-11	1368 Heller Drive	54	55	1	55	1	0	52	3	51	4
		R6-12	1327 Heller Drive	56	57	1	60	4	3	56	4	54	6
		R6-15	Miller Place				62			58	4	57	5
		R6-16	Heller Drive				60			58	2	56	4
		R6-17	Heller Drive				65			60	5	58	7
		R6-18	Heller Drive				68			61	7	59	9
		R6-19	Heller Drive				71			64	7	61	10
	8	R8-1	37 Lower Hilltop Road	74	75	1	77	3	2	66	11	65	12
		R8-2	29 Concord Lane	64	64	0	67	3	3	66	1	60	7
		R8-3	4 Upton Lane	62	63	1	62	0	-1	62	0	58	5
		R8-4	14 Upton Lane	58	59	1	62	4	3	62	0	56	6
		R8-5	32 Lower Hilltop Road	65	66	1	70	5	4	63	7	62	8
		R8-6	46 Highland Drive	55	56	1	59	4	3	56	3	54	5
		R8-7	26 Upton Lane	56	57	1	58	2	1	57	1	55	3
		R8-8	22 Upton Lane	55	56	1	58	3	2	57	1	54	4
		R8-9	6 Highland Drive	59	60	1	63	4	3	63	0	61	2
		R8-10	Concord Lane				60			60	1	56	4
		R8-11	Concord Lane				64			64	0	58	6
		R8-12	34 Lower Hilltop Road				74			64	10	64	10
		R8-13	33 Lower Hilltop Road				68			61	7	60	8
		R8-14	35 Lower Hilltop Road				72			64	8	62	10
		R8-15	30 Lower Hilltop Road				67			61	6	60	7
		R8-16	31 Lower Hilltop Road				65			59	6	58	7
		R8-17	28 Lower Hilltop Road				64			59	5	58	6
		R8-18	Highland Drive				61			58	3	56	5
FHWA TNM Data File Names				AM Existing 2r HSK (7/2/04)	HK No-Build AM2 3.2.05	NSA 6and8 Bar am 11.20.09							
						No Barrier Values			10'-12' Barrier (884 910)		Discretionary Barrier		
RECOMMENDED NOISE ABATEMENT SYSTEM DETAILS:													
Barrier Area (ft ²)										29214		80035	
Cost at \$25 per square foot										\$730,350		\$2,000,875	
Total Residential Units Impacted										13		13	
Impacted Residential Units Receiving > 5 dBA I.L.										11		13	
Percent of Impacted Units Receiving > 5 dBA I.L.										85%		100%	
Barrier Feasible Based on 5 dBA Reduction Criteria?										Yes		Yes	
Impacted Receptors Receiving I.L.> 3 dBA but < 5 dBA										1		0	
Non-Impacted Residences Benefited (I.L.>5 dBA)										3		13	
Total Number of Benefited Residences										15		26	
Cost per Residence Benefited										\$48,690		\$76,957	
Average Noise Reduction for Benefited Residence in dBA										7.0		7.2	
Cost per Residence Benefited per dBA of I.L.										\$6,949		\$10,620	
Barrier Reasonable from a Cost/Residence Standpoint?										Yes		Yes	
Total Barrier Length (ft)										2600		5225	
Barrier Height Range (ft)										10 to 12		12 to 18	
Average Barrier Height (ft)										11.2		15.3	
												RECOMMENDED	

NOTES:

dBA = Decibels on the A-weighted scale

Leq = Equivalent noise level

1. Values represent the highest of the modeled values from AM and PM peak hour traffic periods assuming free flow traffic speeds.

All noise levels are calculated to the tenth of a dBA and rounded for presentation purposes to the nearest whole number.

2. Modeled noise levels assuming no modification of project area roadways

3. Modeled noise levels based on proposed modification of project area roadways

4. All "Increase Over Existing" and "Increase Over No-Build" numbers represent the difference between the rounded whole numbers

Impacted Receptors (Build noise levels equal to or exceeding 66 dBA)

Impacted Receptors Receiving I.L. > 5 dBA

Impacted Receptors Receiving I.L.> 3 dBA but < 5 dBA

Non-Impacted Receptors Receiving ≥ 5 dBA

TABLE 8
NOISE ABATEMENT CONSIDERATIONS
NSA 7

Noise Study Area (NSA)		Site I.D.	Address	Modeled Hourly L _{eq} Noise Levels in dBA							
				Maximum of AM and PM Values ¹			Future Build (No Barrier) ³			Recommended Barrier System	
				Noise Level	Increase Over Existing ⁴	Noise Level	Increase Over Existing	Increase Over No-Build	Noise Level	I.L.	
NSA 7 Barrier System	7	R7-1	42 Upper Hilltop Road	72	73	1	77	5	4	65	12
		R7-2	1398 Dolington Road	67	68	1	68	1	0	61	8
		R7-3	1513 Pownal Drive	63	64	1	64	1	0	60	4
		R7-4	1445 Bartlett Court	61	62	1	62	1	0	59	3
		R7-5	1525 Pownal Drive	61	62	1	59	-2	-3	57	2
		R7-6	1517 Pownal Drive	63	64	1	65	2	1	60	5
		R7-7	1507 Pownal Drive	58	58	0	56	-2	-2	56	0
		R7-8	1451 Bartlett Court	57	58	1	58	1	0	57	1
		R7-9	1447 Bartlett Court	54	55	1	57	3	2	55	2
		R7-10	49 Upper Hilltop Road	63	64	1	68	5	4	62	6
		R7-11	45 Upper Hilltop Road	71	72	0	75	4	3	66	9
		R7-12	59 Upper Hilltop Road	54	56	2	56	2	0	53	3
		R7-13	Pownal Drive				63			58	5
		R7-14	Pownal Drive				62			58	4
		R7-15	Pownal Drive				66			60	6
		R7-16	Pownal Drive				65			60	5
		R7-17	Pownal Drive				64			61	3
		R7-18	Pownal Drive				64			62	2
		R7-19	Upper Hilltop Road				65			60	5
		R7-20	Bartlett Court				60			59	1
		R7-21	Bartlett Court				61			58	3
		R7-22	Bartlett Court				59			56	3
		R7-23	Upper Hilltop Road				71			64	7
		R7-24	Upper Hilltop Road				71			63	8
		R7-25	Upper Hilltop Road				68			62	6
		R7-26	Upper Hilltop Road				65			60	5
FHWA TNM Data File Names				PM Existing 2r HSK (7/2/04)	HK No-Build PM2 3.2.05		NSA 7 Bar 11.20.09				
							No Barrier Values			\$50,000/BR Bar System	
RECOMMENDED NOISE ABATEMENT SYSTEM DETAILS:											
Barrier Area (ft ²)										25905	
Cost at \$25 per square foot										\$647,625	
Total Residential Units Impacted										8	
Impacted Residential Units Receiving > 5 dBA I.L.										8	
Percent of Impacted Units Receiving > 5 dBA I.L.										100%	
Barrier Feasible Based on 5 dBA Reduction Criteria?										Yes	
Impacted Receptors Receiving I.L.> 3 dBA but < 5 dBA										0	
Non-Impacted Residences Benefited (I.L.>5 dBA)										5	
Total Number of Benefited Residences										13	
Cost per Residence Benefited										\$49,817	
Average Noise Reduction for Benefited Residence in dBA										6.6	
Cost per Residence Benefited per dBA of I.L.										\$7,592	
Barrier Reasonable from a Cost/Residence Standpoint?										Yes	
Total Barrier Length (ft)										2469	
Barrier Height Range (ft)										10 to 14	
Average Barrier Height (ft)										10.5	
										RECOMMENDED	

NOTES:

dBA = Decibels on the A-weighted scale

Leq = Equivalent noise level

- Values represent the highest of the modeled values from AM and PM peak hour traffic periods assuming free flow traffic speeds.
All noise levels are calculated to the tenth of a dBA and rounded for presentation purposes to the nearest whole number.
- Modeled noise levels assuming no modification of project area roadways
- Modeled noise levels based on proposed modification of project area roadways
- All "Increase Over Existing" and "Increase Over No-Build" numbers represent the difference between the rounded whole numbers

	Impacted Receptors (Build noise levels equal to or exceeding 66 dBA)
	Impacted Receptors Receiving I.L. > 5 dBA
	Impacted Receptors Receiving I.L.> 3 dBA but < 5 dBA
	Non-Impacted Receptors Receiving ≥ 5 dBA

TABLE 9
NOISES ABATEMENT CONSIDERATIONS
NSA 9

Noise Study Area (NSA)		Site I.D.	Address	Modeled Hourly L _{eq} Noise Levels in dBA										
				Maximum of AM and PM Values ¹			Future Build (No Barrier) ³			Barrier System (PennDOT Criteria)		Recommended Barrier System (DRJTBC Criteria)		
				Existing ²	Future No-Build ²									
Noise Level	Increase Over Existing ⁴	Noise Level	Increase Over Existing		Increase Over No-Build	Noise Level	I.L.	Noise Level	I.L.					
NSA 9 Barrier System	9	R9-3	1167 Woodside Road	64	64	0	66	2	2	63	3	63	3	
		R9-4	1510 North River Road (or Delaware Avenue)	66	66	0	69	3	3	64	5	63	5	
		R9-5	1149 Woodside Road (center of property)	It could be acquired for preferred alternative										
		R9-6	1509 North River Road (center of property)	Owned by DRJTBC										
		R9-7	1525 North River Road	65	65	0	68	3	3	63	5	63	5	
		R9-8	North River Road	62	62	0	64	2	2	61	3	61	3	
		R9-9	Woodside Road East of Canal	65	65	0	67	2	2	65	2	65	2	
		R9-10	Woodside Road East of Canal				66			62	4	62	4	
		R9-11	North River Road				66			62	4	61	5	
		R9-12	North River Road				65			61	4	61	4	
		TP1N	Canal Tow Path at 100'				69			62	7	62	7	
		TP2N	Canal Tow Path at 200' *				69			63	6	62	7	
		TP3N	Canal Tow Path at 300'				67			62	5	62	5	
		TP4N	Canal Tow Path at 400'				66			63	4	63	4	
		TP5N	Canal Tow Path at 600'				65			62	3	62	3	
		TP6N	Canal Tow Path at 700'				64			59	4	59	4	
FHWA TNM Data File Names			PM Existing 1r HSK (7/2/04)	HK No-Build PM1 3.2.05	NSA 9 Bar 11.20.09									
					No Barrier Values			With Barrier Values		Optimized Barrier 1				
RECOMMENDED NOISE ABATEMENT SYSTEM DETAILS:														
Barrier Area (ft ²)										13028		15200		
Cost at \$25 per square foot										\$325,700		\$380,000		
Total Residential Units Impacted										7		7		
Impacted Residential Units Receiving > 5 dBA I.L.										3		4		
Percent of Impacted Units Receiving > 5 dBA I.L.										43%		57%		
Barrier Feasible Based on 5 dBA Reduction Criteria?										No		Yes		
Impacted Receptors Receiving I.L.> 3 dBA but < 5 dBA												2		
Non-Impacted Residences Benefited (I.L.>5 dBA)												0		
Total Number of Benefited Residences												6		
Cost per Residence Benefited												\$63,333		
Average Noise Reduction for Benefited Residence in dBA												4.7		
Cost per Residence Benefited per dBA of I.L.												\$13,380		
Barrier Reasonable from a Cost/Residence Standpoint?												Yes		
Total Barrier Length (ft)												1086		
Barrier Height Range (ft)												14		
Average Barrier Height (ft)												14.0		
												RECOMMENDED		

NOTES:

dBA = Decibels on the A-weighted scale

Leq = Equivalent noise level

1. Values represent the highest of the modeled values from AM and PM peak hour traffic periods assuming free flow traffic speeds.

 All noise levels are calculated to the tenth of a dBA and rounded for presentation purposes to the nearest whole number.

2. Modeled noise levels assuming no modification of project area roadways

3. Modeled noise levels based on proposed modification of project area roadways

4. All "Increase Over Existing" and "Increase Over No-Build" numbers represent the difference between the rounded whole numbers

* Site assumed as representative of Canal property in reasonableness consideration

- Impacted Receptors (Build noise levels equal to or exceeding 66 dBA)
- Impacted Receptors Receiving I.L. > 5 dBA
- Impacted Receptors Receiving I.L.> 3 dBA but < 5 dBA
- Non-Impacted Receptors Receiving ≥ 5 dBA

TABLE 10
NOISE ABATEMENT CONSIDERATIONS
NSA 10

Noise Study Area (NSA)		Site I.D.	Address	Modeled Hourly L _{eq} Noise Levels in dBA									
				Maximum of AM and PM Values ¹			Future Build (No Barrier) ³			Barrier System (PennDOT Criteria)		Recommended Barrier System (DRJTBC Criteria)	
				Noise Level	Increase Over Existing ⁴	Noise Level	Increase Over Existing	Increase Over No-Build	Noise Level	I.L.	Noise Level	I.L.	
NSA 10 Barrier System	10	R10-1	240 Taylorsville Road*	66	67	1	68	2	1	68	0	67.7	0
		R10-2	32 Mapleview Drive	56	57	1	60	4	3	59	1	58.5	1
		R10-3	1451 DeSantis Place	60	61	1	64	4	3	60	4	60.2	4
		R10-4	1455 Robinson Place	62	63	1	65	3	2	62	3	61.7	3
		R10-5	1479 River Road	67	67	0	65	-2	-2	62	3	61.9	3
		R10-6	End of Robinson Place	65	65	0	68	3	3	62	6	61.9	6
		R10-7	1473 River Road	63	63	0	66	3	3	62	4	62.0	4
		R10-8	Robinson Place	62	62	0	65	3	3	62	3	62.3	3
		R10-9	Robinson Place	59	60	1	63	4	3	60	3	59.7	3
		R10-10	Mapleview Drive	58	59	1	61	3	2	60	1	60.2	1
		R10-11	Robinson Place	58	59	1	62	4	3	59	3	58.8	3
		TPS1	Canal Tow Path at 100'	70	71	1	64	-7	-7	61	3	60.6	3
		TPS2	Canal Tow Path at 250'**	66	67	1	68	2	1	63	5	62.8	5
		TPS3	Canal Tow Path at 400'	63	64	1	66	3	2	62	4	62.3	4
		TPS4	Canal Tow Path at 600'	60	61	1	63	3	2	61	2	61.1	2
		TPS5	Canal Tow Path at 800'	57	58	1	61	3	3	60	1	59.5	1
		TPS6	Canal Tow Path at 1100'	55	56	1	59	4	3	58	1	57.6	1
FHWA TNM Data File Names				AM Existing 2r HSK (7/2/04)	HK No-Build AM2 3.2.05	NSA 10 Final Bar 11.20.09							
						No Barrier Values			With Barrier Values		With Barrier Values		
RECOMMENDED NOISE ABATEMENT SYSTEM DETAILS:													
Barrier Area (ft ²)										8009		8009	
Cost at \$25 per square foot										\$200,225		\$200,225	
Total Residential Units Impacted										3		3	
Impacted Residential Units Receiving > 5 dBA I.L.										2		2	
Percent of Impacted Units Receiving > 5 dBA I.L.										67%		67%	
Barrier Feasible Based on 5 dBA Reduction Criteria?										Yes		Yes	
Impacted Receptors Receiving I.L.> 3 dBA but < 5 dBA										1		1	
Non-Impacted Residences Benefited (I.L.>5 dBA)										0		0	
Total Number of Benefited Residences										3		3	
Cost per Residence Benefited										\$66,742		\$66,742	
Average Noise Reduction for Benefited Residence in dBA										5.1		4.9	
Cost per Residence Benefited per dBA of I.L.										\$13,087		\$13,529	
Barrier Reasonable from a Cost/Residence Standpoint?										No		Yes	
Total Barrier Length (ft)												801	
Barrier Height Range (ft)												10	
Average Barrier Height (ft)												10.0	
												RECOMMENDED	

NOTES:

dBA = Decibels on the A-weighted scale

Leq = Equivalent noise level

1. Values represent the highest of the modeled values from AM and PM peak hour traffic periods assuming free flow traffic speeds.

All noise levels are calculated to the tenth of a dBA and rounded for presentation purposes to the nearest whole number.

2. Modeled noise levels assuming no modification of project area roadways

3. Modeled noise levels based on proposed modification of project area roadways

4. All "Increase Over Existing" and "Increase Over No-Build" numbers represent the difference between the rounded whole numbers

* Site note included in reasonableness considerations

** Site assumed as representative of Canal property in reasonableness consideration

	Impacted Receptors (Build noise levels equal to or exceeding 66 dBA)
	Impacted Receptors Receiving I.L. > 5 dBA
	Impacted Receptors Receiving I.L.> 3 dBA but < 5 dBA
	Non-Impacted Receptors Receiving ≥ 5 dBA

TABLE 11
NOISE ABATEMENT CONSIDERATIONS
NSA 11

Noise Study Area (NSA)		Site I.D.	Address	Modeled Hourly L _{eq} Noise Levels in dBA									
				Maximum of AM and PM Values ¹			Future Build (No Barrier) ³			10 ' Base Barriers		All 50'' Raised Jersey Barrier	
				Existing ²	Future No-Build ²		Noise Level	Increase Over Existing	Increase Over No-Build	Noise Level	I.L.	Noise Level	I.L.
Noise Level	Increase Over Existing ⁴												
NSA 11 Barrier System	11	R11-1	Villa Victoria Academy on Route 29	58	58	0	62	4	4	62	0	62	0
		R11-2	1016 Upper River Road	60	62	2	63	3	1	63	0	63	0
		R11-3	Delaware and Raritan Canal State Park	59	61	2	63	4	2	62	1	63	0
		R11-4	9 State Police Drive	61	62	1	64	3	2	62	2	63	1
		R11-5	17 State Police Drive	60	61	1	61	1	0	60	1	61	1
		R11-6	Municipal Building on Trooper Drive	71	72	1	75	4	3	74	1	75	0
		R11-7	Residence Adjacent to Tow Path	63	63	0	60	-3	-3	60	0	60	0
		R11-8	State Police Drive	63	64	1	65	2	2	65	0	65	0
		C1S	Canal Tow Path*	66	67	1	67	1	0	62	5	64	3
		C2S	Canal Tow Path	63	64	1	66	3	2	62	4	63	3
		C3S	Canal Tow Path	61	62	1	64	3	2	62	2	63	1
		C4S	Canal Tow Path	60	61	1	63	3	2	62	1	63	0
FHWA TNM Data File Names				AM Existing 2r HSK (7/2/04)	HK No-Build AM2 3.2.05	NSA 11am 10.28.05			NSA 11 Bar 10.28.05				
									Base Run		All Glarecreens Run		
RECOMMENDED NOISE ABATEMENT SYSTEM DETAILS:													
Barrier Area (ft²)										18484			
Cost at \$50 per square foot										\$924,200		\$0	
Total Residential Units Impacted										1		1	
Impacted Residential Units Receiving > 5 dBA I.L.										1		0	
Percent of Impacted Units Receiving > 5 dBA I.L.										100%		0%	
Barrier Feasible Based on 5 dBA Reduction Criteria?										Yes		No	
Non-Impacted Residences Benefited (I.L.>5 dBA)										0			
One-half of Non-Impacted Residences Benefited (I.L.>5 dBA)										0			
Total Number of Benefited Residences										1			
Cost per Residence Benefited										\$924,200			
Average Noise Reduction for Benefited Residence in dBA										5.0			
Cost per Residence Benefited per dBA of I.L.										\$184,840			
Barrier Reasonable from a Cost/Residence Standpoint?										No			
Total Barrier Length (ft)													
Barrier Height Range (ft)													
Average Barrier Height (ft)													

NOTES:

dBA = Decibels on the A-weighted scale

Leq = Equivalent noise level

1. Values represent the highest of the modeled values from AM and PM peak hour traffic periods assuming free flow traffic speeds.

All noise levels are calculated to the tenth of a dBA and rounded for presentation purposes to the nearest whole number.

2. Modeled noise levels assuming no modification of project area roadways

3. Modeled noise levels based on proposed modification of project area roadways

4. All "Increase Over Existing" and "Increase Over No-Build" numbers represent the difference between the rounded whole numbers

*Site assumed as representative of Canal property in reasonableness consideration

Impacted Receptors (Build noise levels equal to or exceeding 66 dBA)

Impacted Receptors Receiving I.L. > 5 dBA

Non-Impacted Receptors Receiving ≥ 5 dBA

TABLE 12
NOISE ABATEMENT CONSIDERATIONS
NSA 12

Noise Study Area (NSA)		Site I.D.	Address	Modeled Hourly L _{eq} Noise Levels in dBA									
				Maximum of AM and PM Values ¹			Future Build (No Barrier) ³			Barrier System (NJDOT Criteria)		Recommended Barrier System (DRJ/TBC Criteria)	
				Noise Level	Increase Over Existing ⁴	Noise Level	Increase Over Existing	Increase Over No-Build	Noise Level	I.L.	Noise Level	I.L.	
NSA 12 Barrier System	12	R12-1	1048 River Road	72	72	1	75	4	3	65	10	65	10
		R12-2	1070 River Road	61	62	1	63	2	1	62	1	62	1
		R12-7	1064 River Road	65	66	1	68	3	2	65	3	65	3
		R12-8	River Road	71	71	1	73	3	2	68	5	66	7
		R12-9	River Road	71	72	1	74	3	2	69	5	66	8
		R12-10	19 Scudder Drive	58	59	1	61	3	3	59	2	59	2
		R12-11		67	68	1	71	3	2	66	5	65	6
		R12-12		66	67	1	69	3	2	65	4	65	5
		R12-13		62	63	1	65	3	2	64	1	64	1
		R12-14		61	61	1	63	2	1	62	1	62	1
		R12-15		58	59	1	61	3	2	60	1	60	1
		R12-16		61	61	1	63	3	2	61	2	60	3
		R12-17		60	61	1	63	3	2	60	3	60	3
		TP1N		67	68	1	60	-7	-8				
		TP2N		66	67	1	62	-4	-5				
		TP3N		64	66	1	63	-1	-2				
		TP4N		63	65	1	64	1	-1				
		TP5N		63	64	1	64	1	0				
		TP6N		62	63	1	63	1	0				
		TP7N		62	63	1	63	1	0				
FHWA TNM Data File Names				AM Existing 2r HSK (7/2/04)	HK No-Build AM2 3.2.05	NSA 12 50G Bar no perts 10.31.05			NSA12 Bar 11.20.09				
						No Barrier Values			With Barrier Values		Discretionary Barrier		
RECOMMENDED NOISE ABATEMENT SYSTEM DETAILS:													
Barrier Area (ft ²)										6018		14898	
Cost at \$50 per square foot										\$300,900		\$744,900	
Total Residential Units Impacted										6		6	
Impacted Residential Units Receiving > 5 dBA I.L.										4		5	
Percent of Impacted Units Receiving > 5 dBA I.L.										67%		83%	
Barrier Feasible Based on 5 dBA Reduction Criteria?										Yes		Yes	
Non Impacted Residences Benefited (IL ≥ 5dBA)										0		0	
One-half of Non Impacted Residences Benefited (IL ≥ 5dBA)										0		0	
Total Number of Benefited Residences										4		5	
Cost per Residence Benefited										\$75,225		\$148,980	
Average Noise Reduction for Benefited Residence in dBA										6.4		7.1	
Cost per Residence Benefited per dBA of I.L.										\$11,800		\$20,924	
Barrier Reasonable from a Cost/Residence Standpoint?										No		Yes	
Total Barrier Length (ft)												1626	
Barrier Height Range (ft)												4 to 12	
Average Barrier Height (ft)												9.2	
												RECOMMENDED	

NOTES:

dBA = Decibels on the A-weighted scale

Leq = Equivalent noise level

- Values represent the highest of the modeled values from AM and PM peak hour traffic periods assuming free flow traffic speeds.
All noise levels are calculated to the tenth of a dBA and rounded for presentation purposes to the nearest whole number.
- Modeled noise levels assuming no modification of project area roadways
- Modeled noise levels based on proposed modification of project area roadways
- All "Increase Over Existing" and "Increase Over No-Build" numbers represent the difference between the rounded whole numbers

- Impacted Receptors (Build noise levels equal to or exceeding 66 dBA)
- Impacted Receptors Receiving I.L. > 5 dBA
- Non-Impacted Receptors Receiving ≥ 5 dBA

TABLE 13
NOISE ABATEMENT CONSIDERATIONS
NSA 14

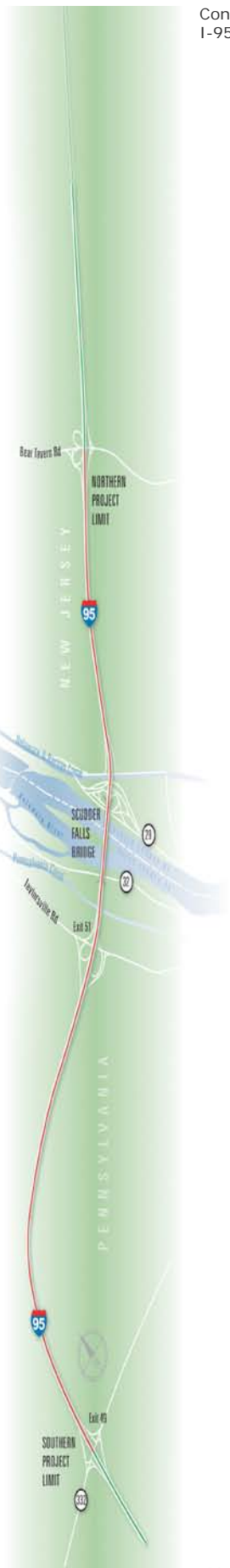
Noise Study Area (NSA)		Site I.D.	Address	Modeled Hourly L _{eq} Noise Levels in dBA									
				Maximum of AM and PM Values ¹			Future Build (No Barrier) ³			Barrier System (NJDOT Criteria)		Recommended Barrier System (DRJTBC Criteria)	
				Noise Level	Increase Over Existing ⁴	Noise Level	Increase Over Existing	Increase Over No-Build	Noise Level	I.L.	Noise Level	I.L.	
NSA 14 Barrier System	14	R14-1	U1-1	70	71	1	73	2	1	71	2	68	5
		R14-2	U1-2	69	70	1	71	2	1	67	4	65	7
		R14-3	U1-3	67	68	1	69	2	1	64	5	63	6
		R14-4	U1-4	66	67	1	68	2	1	65	3	64	4
		R14-5	U2-1	69	70	1	71	2	1	67	4	66	5
		R14-6	U2-2	64	65	1	67	2	1	63	4	63	4
		R14-7	U2-3	64	65	1	66	2	1	62	4	62	4
		R14-8	U2-4	68	69	1	70	2	1	66	4	65	5
		R14-9	U3-1	68	68	1	70	2	1	66	4	65	5
		R14-10	U3-2	63	64	1	65	2	1	62	3	61	4
		R14-11	U3-3	63	63	1	65	2	1	61	4	61	4
		R14-12	U3-4	66	67	1	69	2	1	65	4	63	6
		R14-13	CTD-1	62	64	2	65	2	1	61	4	60	5
		R14-14	CTD-2	61	62	1	63	2	1	59	4	59	4
		R14-15	U5-1	61	63	2	63	2	0	59	4	59	4
		R14-16	U5-2	59	60	1	61	2	1	58	3	57	4
		R14-17	U6-1	60	62	2	62	2	0	58	4	58	4
		R14-18	U6-2	59	60	1	61	2	1	58	3	57	4
		R14-19	U7-1	60	62	2	63	2	0	59	4	59	4
		R14-20	U7-2	59	60	1	61	2	1	58	3	57	4
		R14-21	U7-3	59	59	1	61	2	1	58	3	57	4
		R14-22	U7-4	61	62	1	63	2	1	59	4	58	4
		R14-23	CTG-1	59	60	1	61	2	1	58	3	57	4
		R14-24	CTG-2	57	58	1	59	2	1	56	3	56	3
		R14-25	U10-1	57	57	1	59	2	1	57	2	56	3
		R14-26	U10-2	56	57	1	57	2	1	55	2	55	2
		R14-27	CTH-1	55	56	1	57	2	1	55	2	55	2
		R14-28	CTH-2	55	56	1	57	2	1	55	2	55	2
		R14-29	CTI-1	54	56	1	56	2	1	55	1	54	2
		R14-30	CTI-2	55	56	1	56	2	1	55	1	55	2
		R14-31	CTJ-1	54	55	1	56	2	0	55	1	54	1
		R14-32	U13-1	59	60	1	61	2	1	59	2	59	2
		R14-33	CTK-1	58	59	1	60	2	1	59	1	59	1
		R14-34	CTK-2	54	56	1	56	2	1	54	2	54	2
		R14-35	U15-1	58	59	1	60	2	1	60	0	59	0
		R14-36	U15-2	54	56	2	56	2	0	55	1	55	1
		R14-37	CTT-1	62	63	1	63	1	1	63	0	63	0
		R14-38	CTT-2	58	61	3	60	2	-2	59	1	59	1
		R14-39	CTU-1	63	64	1	65	1	1	63	2	63	2
		R14-40	CTU-2	59	61	2	61	2	0	60	1	60	1
		R14-41	ST-1	66	67	1	68	2	1	63	5	63	5
		R14-42	CTV-1	73	74	1	75	2	1	65	10	65	10
		R14-43	CTV-2	62	63	2	64	3	1	60	4	60	4
		R14-44	CTW-1	76	77	1	78	2	1	66	12	65	13
		R14-45	CTW-2	62	65	3	65	3	0	61	4	60	5
		R14-46	CTX-1	77	77	1	78	2	1	66	12	65	13
		R14-47	CTX-2	62	65	3	65	3	0	60	5	60	5
		R14-48	CTY-1	70	71	1	73	3	2	65	8	63	8
		R14-49	CTY-2	62	65	3	65	3	0	60	5	59	6
		R14-50	U31-1	71	72	1	74	2	1	65	9	64	10
		R14-51	U31-2	66	67	1	68	2	1	63	5	61	7
		R14-52	U31-3	62	65	3	64	3	-1	59	5	59	6
		R14-53	U31-4	67	67	1	69	3	2	63	6	62	7
FHWA TNM Data File Names				Existing PM NJ	PM No-Build NJ 6-18-07		No-Bar Build NJ			Build NJ			
										NJ New Community		NJ New Community (18 ft)	
RECOMMENDED NOISE ABATEMENT SYSTEM DETAILS:													
Barrier Area (ft ²)										24687		27773	
Cost at \$50 per square foot										\$1,234,350		\$1,388,650	
Total Residential Units Impacted										18		18	
Impacted Residential Units Receiving > 5 dBA I.L.										9		15	
Percent of Impacted Units Receiving > 5 dBA I.L.										50%		83%	
Barrier Feasible Based on 5 dBA Reduction Criteria?										Yes		Yes	
Non Impacted Residences Benefited (IL ≥ 5dBA)										3		5	
One-half of Non Impacted Residences Benefited (IL ≥ 5dBA)										1.5		2.5	
Total Number of Benefited Residences										10.5		17.5	
Cost per Residence Benefited										\$117,557		\$79,351	
Average Noise Reduction for Benefited Residence in dBA										8.1		7.8	
Cost per Residence Benefited per dBA of I.L.										\$14,556		\$10,151	
Barrier Reasonable from a Cost/Residence Standpoint?										No		Yes	
Total Barrier Length (ft)												1543	
Barrier Height Range (ft)												18.0	
Average Barrier Height (ft)												18.0	
												RECOMMENDED	

NOTES:
dBA = Decibels on the A-weighted scale
Leq = Equivalent noise level
1. Values represent the highest of the modeled values from AM and PM peak hour traffic periods assuming free flow traffic speeds.
All noise levels are calculated to the tenth of a dBA and rounded for presentation purposes to the nearest whole number.
2. Modeled noise levels assuming no modification of project area roadways
3. Modeled noise levels based on proposed modification of project area roadways
4. All "Increase Over Existing" and "Increase Over No-Build" numbers represent the difference between the rounded whole numbers

	Impacted Receptors (Build noise levels equal to or exceeding 66 dBA)
	Impacted Receptors Receiving I.L. > 5 dBA
	Non-Impacted Receptors Receiving ≥ 5 dBA

Contract C-393A, Capital Project No. CP0301A, Account No. 7161-06-012
I-95/Scudder Falls Bridge Improvement Project

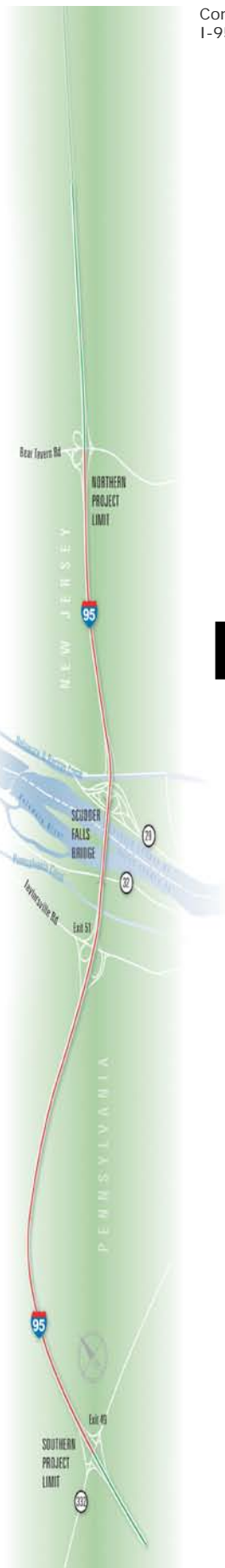
APPENDICES



November 2009

Appendix A

Noise Meter Calibration Certificates



West Caldwell Calibration Laboratories Inc.

Certificate of Calibration

for

PRECISION SLM 1/3 OCTAVE BAND ANALYZER

Manufactured by: RION
Model No: NA-27/NH-20
Serial No: 00790996/94404
Calibration Recall No: 12104

Submitted By:

Customer: JEFF WHITE
Company: ENVIRONMENTAL ACOUSTICS, INC.
Address: 5801 GRAYSON ROAD
HARRISBURG PA 17111

The subject instrument was calibrated to the indicated specification using standards traceable to the National Institute of Standards and Technology or to accepted values of natural physical constants. This document certifies that the instrument met the following specification upon its return to the submitter.

West Caldwell Calibration Laboratories Procedure No. NA-27/NH- RION

Upon receipt for Calibration, the instrument was found to be:

Within (X) see attached Report of Calibration.

the tolerance of the indicated specification.

West Caldwell Calibration Laboratories' calibration control system meets the requirements, MIL-STD-45662A, ANSI/NCSL Z540-1, IEC Guide 25, ISO 9002 and ISO 17025.

Note: With this Certificate, Report of Calibration is included.

Approved by:

Calibration Date: 04-Dec-03

FC

Certificate No: 12104 - 1

Felix Christopher
Quality Manager

QA Doc. #1051 Rev. 2.0 10/1/01

Certificate Page 1 of 1

**West Caldwell
Calibration
Laboratories, Inc.**
uncompromised calibration
1575 State Route 96, Victor, NY 14564, U.S.A.



ISO / IEC 17025

ANSI/NCSL Z540-1-1994
MIL-STD-45662A
CALIBRATION TRACEABLE
TO N. I. S. T.



ISO 9002

Phone: (585) 586 - 3900

Fax: (585) 586 - 4327

West Caldwell Calibration Laboratories Inc.

Certificate of Calibration

for

MICROPHONE

Manufactured by: RION
Model No: UC-53A
Serial No: 88861
Calibration Recall No: 12104

Submitted By:

Customer: JEFF WHITE
Company: ENVIRONMENTAL ACOUSTICS, INC
Address: 5801 GRAYSON ROAD
HARRISBURG PA 17111

The subject instrument was calibrated to the indicated specification using standards traceable to the National Institute of Standards and Technology or to accepted values of natural physical constants. This document certifies that the instrument met the following specification upon its return to the submitter.

West Caldwell Calibration Laboratories Procedure No. UC-53A RION

Upon receipt for Calibration, the instrument was found to be:

Within (X) see attached Report of Calibration.

the tolerance of the indicated specification.

West Caldwell Calibration Laboratories' calibration control system meets the requirements, MIL-STD-45662A, ANSI/NCSL Z540-1, IEC Guide 25, ISO 9002 and ISO 17025.

Note: With this Certificate, Report of Calibration is included.

Approved by:

Calibration Date: 05-Dec-03

FC

Certificate No: 12104 - 2

Felix Christopher
Quality Manager

QA Doc. #1051 Rev. 2.0 10/1/01

Certificate Page 1 of 1

**West Caldwell
Calibration
Laboratories, Inc.**
uncompromised calibration
1575 State Route 96, Victor, NY 14564, U.S.A.



Phone: (585) 586 - 3900

ANSI/NCSL Z540-1-1994
MIL-STD-45662A
CALIBRATION TRACEABLE
TO N.I.S.T.



Fax: (585) 586 - 4327

West Caldwell Calibration Laboratories Inc.

Certificate of Calibration

for

PRECISION ACOUSTIC CALIBRATOR

Manufactured by: **LARSON DAVIS**
Model No: **CA250**
Serial No: **1092**
Calibration Recall No: **12436**

Submitted By:

Customer: **JEFF WHITE**
Company: **ENVIRONMENTAL ACOUSTICS, INC**
Address: **5801 GRAYSON ROAD**
HARRISBURG PA 17111

The subject instrument was calibrated to the indicated specification using standards traceable to the National Institute of Standards and Technology or to accepted values of natural physical constants. This document certifies that the instrument met the following specification upon its return to the submitter.

West Caldwell Calibration Laboratories Procedure No. **CA250 LARS**

Upon receipt for Calibration, the instrument was found to be:

Within **(X)** see attached Report of Calibration.

the tolerance of the indicated specification.

West Caldwell Calibration Laboratories' calibration control system meets the requirements, MIL-STD-45662A, ANSI/NCSL Z540-1, IEC Guide 25, ISO 9002 and ISO 17025.

Note: With this Certificate, Report of Calibration is included.

Approved by:

Calibration Date: **17-Mar-04**

Certificate No: **12436 - 2**

Felix Christopher
Quality Manager

QA Doc. #1051 Rev. 2.0 10/1/01

Certificate Page 1 of 1

West Caldwell Calibration Laboratories, Inc.
uncompromised calibration
1575 State Route 96, Victor, NY 14564, U.S.A.



ANSI/NCSL Z540-1-1994
MIL-STD-45662A
CALIBRATION TRACEABLE
TO N. I. S. T.



Phone: (565) 586 - 3900 Fax: (585) 586 - 4327

West Caldwell Calibration Laboratories Inc.

Certificate of Calibration

for

NOISE DOSIMETER

Manufactured by: LARSON DAVIS
Model No: 700
Serial No: 4086B1398
Calibration Recall No: 12436

Submitted By:

Customer: JEFF WHITE
Company: ENVIRONMENTAL ACOUSTICS, INC
Address: 5801 GRAYSON ROAD
HARRISBURG PA 17111

The subject instrument was calibrated to the indicated specification using standards traceable to the National Institute of Standards and Technology or to accepted values of natural physical constants. This document certifies that the instrument met the following specification upon its return to the submitter.

West Caldwell Calibration Laboratories Procedure No. 700 LARS

Upon receipt for Calibration, the instrument was found to be:

Within (X) see attached Report of Calibration.

the tolerance of the indicated specification.

West Caldwell Calibration Laboratories' calibration control system meets the requirements, MIL-STD-45662A, ANSI/NCSL Z540-1, IEC Guide 25, ISO 9002 and ISO 17025.

Note: With this Certificate, Report of Calibration is included.

Approved by:

Calibration Date: 17-Mar-04

Certificate No: 12436 - 1

QA Doc. #1051 Rev. 2.0 10/1/01

Certificate Page 1 of 1

Felix Christopher
Quality Manager

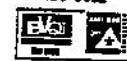
West Caldwell
Calibration
Laboratories, Inc.
uncompromised calibration
1575 State Route 96, Victor, NY 14564, U.S.A.

ISO / IEC 17025



ANSI/NCSL Z540-1-1994
MIL-STD-45662A
CALIBRATION TRACEABLE
TO N. I. B. I.

ISO 9002



Phone: (585) 586 - 3900 Fax: (585) 586 - 4327

West Caldwell Calibration Laboratories Inc.

Certificate of Calibration

for

SOUND CALIBRATOR

Manufactured by: NORSONICS
Model No: 1251
Serial No: 24627
Calibration Recall No: 12104

Submitted By:

Customer: JEFF WHITE
Company: ENVIRONMENTAL ACOUSTICS, INC
Address: 5801 GRAYSON ROAD
HARRISBURG PA 17111

The subject instrument was calibrated to the indicated specification using standards traceable to the National Institute of Standards and Technology or to accepted values of natural physical constants. This document certifies that the instrument met the following specification upon its return to the submitter.

West Caldwell Calibration Laboratories Procedure No. 1251 NORS

Upon receipt for Calibration, the instrument was found to be:

Within (X) see attached Report of Calibration.

the tolerance of the indicated specification.

West Caldwell Calibration Laboratories' calibration control system meets the requirements, MIL-STD-45662A, ANSI/NCCL Z540-1, IEC Guide 25, ISO 9002 and ISO 17025.

Note: With this Certificate, Report of Calibration is included.

Approved by:

Calibration Date: 09-Dec-03

Certificate No: 12104 - 3

QA Doc. #1251 Rev. 2.0 10/1/01

Certificate Page 1 of 1

FC
Felix Christopher
Quality Manager

**West Caldwell
Calibration
Laboratories, Inc.**
uncompromised calibration
1575 State Route 96, Victor, NY 14564, U.S.A.



ANSI/NCCL Z540-1-1994
MIL-STD-45662A
CALIBRATION TRACEABLE
TO N. I. S. T.



Phone: (585) 586 - 3900 Fax: (585) 586 - 4327

West Caldwell Calibration Laboratories Inc.

Certificate of Calibration

for

PRECISION INTEGRATING SOUND LEVEL METER

Manufactured by: BRUEL & KJAER
Model No: 2230
Serial No: 1133727
Calibration Recall No: 12317

Submitted By:

Customer: JEFF WHITE
Company: ENVIRONMENTAL ACOUSTICS, INC
Address: 5801 GRAYSON ROAD
HARRISBURG PA 17111

The subject instrument was calibrated by
National Ins
This document is the property of the
submitter.

West Caldwell
Upon receipt

the tolerance of

West Caldwell
STD-45662A, A

Note: With this Cert

Calibration Date

Certificate No:

QA Doc. #1051 Rev. 2.0 10/

BRUEL & KJAER 4189 B/N 2305547
Sensitivity 250 Hz to 25.6 kHz re. 1V/Pa 52.42 mV/Pa.
Calibration Due: February 11, 2004
By: J.C. 12/17/03
West Caldwell Calibration Labs, Inc.

REPORT OF CALIBRATION

Model No: 4189
Company: Environmental Acoustics, Inc.

Serial No: 2305547
L.D. No: XXXX

ification using standards traceable to the
red values of natural physical constants.
g specification upon its return to the

2230 BRUE

alibration.

ystem meets the requirements, MIL-
id ISO 17025.

Approved by:

Felix Christopher
Quality Manager

uncompromised calibration
Laboratories, Inc.
1575 State Route 96, Victor, NY 14564, U.S.A.



ANSI/ISO 9001-1:1994
MIL-STD-45662A
CALIBRATION TRACEABLE
TO N. I. E. T.



Phone: (585) 586 - 3900 Fax: (585) 586 - 4327

West Caldwell Calibration Laboratories Inc.

Certificate of Calibration

for

MICROPHONE

Manufactured by: BRUEL & KJAER
Model No: 4189
Serial No: 2305547
Calibration Recall No: 12317

Submitted By:

Customer: JEFF WHITE
Company: ENVIRONMENTAL ACOUSTICS, INC
Address: 5801 GRAYSON ROAD
HARRISBURG PA 17111

The subject instrument was calibrated to the indicated specification using standards traceable to the National Institute of Standards and Technology or to accepted values of natural physical constants. This document certifies that the instrument met the following specification upon its return to the submitter.

West Caldwell Calibration Laboratories Procedure No. 4189 BRUE

Upon receipt for Calibration, the instrument was found to be:

Within (X) see attached Report of Calibration.

the tolerance of the indicated specification.

West Caldwell Calibration Laboratories' calibration control system meets the requirements, MIL-STD-45662A, ANSI/NCCL Z540-1, IEC Guide 25, ISO 9002 and ISO 17025.

Note: With this Certificate, Report of Calibration is included.

Approved by:

Calibration Date: 11-Feb-04

Certificate No: 12317 -2

QA Doc. #1051 Rev. 2.0 10/1/01

Certificate Page 1 of 1

Felix Christopher
Quality Manager

**West Caldwell
Calibration
Laboratories, Inc.**
uncompromised calibration
1575 State Route 98, Victor, NY 14564, U.S.A.



ANSI/NCCL Z540-1-1994
MIL-STD-45662A
CALIBRATION TRACEABLE
TO N.I.S.T.



Phone: (585) 586 - 3900 Fax: (585) 586 - 4327

West Caldwell Calibration Laboratories Inc.

Certificate of Calibration

for

ACOUSTICAL CALIBRATOR

Manufactured by: BRUEL & KJAER
Model No: 4231
Serial No: 2115527
Calibration Recall No: 12317

Submitted By:

Customer: JEFF WHITE
Company: ENVIRONMENTAL ACOUSTICS, INC
Address: 5801 GRAYSON ROAD
HARRISBURG PA 17111

The subject instrument was calibrated to the indicated specification using standards traceable to the National Institute of Standards and Technology or to accepted values of natural physical constants. This document certifies that the instrument met the following specification upon its return to the submitter.

West Caldwell Calibration Laboratories Procedure No. 4231 BRUE

Upon receipt for Calibration, the instrument was found to be:

Within (X) see attached Report of Calibration.

the tolerance of the indicated specification.

West Caldwell Calibration Laboratories' calibration control system meets the requirements, MIL-STD-45662A, ANSI/NCSL Z540-1, IEC Guide 25, ISO 9002 and ISO 17025.

Note: With this Certificate, Report of Calibration is included.

Calibration Date: 11-Feb-04

Certificate No: 12317 -3

QA Doc. #1051 Rev. 2.0 10/1/01

Certificate Page 1 of 1

Approved by:



Felix Christopher
Quality Manager

**West Caldwell
Calibration
Laboratories, Inc.**
uncompromised calibration
1575 State Route 96, Victor, NY 14564, U.S.A.

ISO / IEC 17025



ANSI/NCSL Z540-1-1994
MIL-STD-45662A

CALIBRATION TRACEABLE
TO N. I. S. T.

ISO 9002



Phone: (585) 586 - 3900 Fax: (585) 586 - 4327

West Caldwell Calibration Laboratories Inc.

Certificate of Calibration

for

MICROPHONE

Manufactured by: RION
Model No: UC-53A
Serial No: 100546
Calibration Recall No: 12166

Submitted By:

Customer: JEFF WHITE
Company: ENVIRONMENTAL ACOUSTICS, INC
Address: 5801 GRAYSON ROAD
HARRISBURG PA 17111

The subject instrument was calibrated to the indicated specification using standards traceable to the National Institute of Standards and Technology or to accepted values of natural physical constants. This document certifies that the instrument met the following specification upon its return to the submitter.

West Caldwell Calibration Laboratories Procedure No. UC-53A RION

Upon receipt for Calibration, the instrument was found to be:

Within (X) see attached Report of Calibration.

the tolerance of the indicated specification.

West Caldwell Calibration Laboratories' calibration control system meets the requirements, MIL-STD-45662A, ANSI/NC SL Z540-1, IEC Guide 25, ISO 9002 and ISO 17025.

Note: With this Certificate, Report of Calibration is included.

Calibration Date: 29-Dec-03

Certificate No: 12166 - 2

QA Doc. #1051 Rev. 2.0 10/1/01

Certificate Page 1 of 1

Approved by:



Felix Christopher
Quality Manager

**West Caldwell
Calibration
Laboratories, Inc.**
uncompromised calibration
1575 State Route 96, Victor, NY 14554, U.S.A.



ISO / IEC 17025

ANSI/NC SL Z540-1-1994
MIL-STD-45662A
CALIBRATION TRACEABLE
TO N. I. S. T.



Phone: (585) 586 - 3900 Fax: (585) 586 - 4327

West Caldwell Calibration Laboratories Inc.

Certificate of Calibration

for

SOUND CALIBRATOR

Manufactured by: RION
Model No: NC-74
Serial No: 01200033
Calibration Recall No: 12166

Submitted By:

Customer: JEFF WHITE
Company: ENVIRONMENTAL ACOUSTICS, INC
Address: 5801 GRAYSON ROAD
HARRISBURG PA 17111

The subject instrument was calibrated to the indicated specification using standards traceable to the National Institute of Standards and Technology or to accepted values of natural physical constants. This document certifies that the instrument met the following specification upon its return to the submitter.

West Caldwell Calibration Laboratories Procedure No. NC-74 RION

Upon receipt for Calibration, the instrument was found to be:

Within (X) see attached Report of Calibration.

the tolerance of the indicated specification.

West Caldwell Calibration Laboratories' calibration control system meets the requirements, MIL-STD-45662A, ANSI/NCCL Z540-1, IEC Guide 25, ISO 9002 and ISO 17025.

Note: With this Certificate, Report of Calibration is Included.

Approved by:

Calibration Date: 29-Dec-03

Certificate No: 12166 - 3

QA Doc. #1051 Rev. 2.0 10/1/01

Certificate Page 1 of 1

Felix Christopher
Quality Manager

**West Caldwell
Calibration
Laboratories, Inc.**
uncompromised calibration
1575 State Route 96, Victor, NY 14564, U.S.A.

ISO / IEC 17025



ANSI/NCCL Z540-1-1994
MIL-STD-45662A
CALIBRATION TRACEABLE
TO N.I.S.T.

ISO 9002



Phone: (585) 586 - 3900 Fax: (585) 586 - 4327

West Caldwell Calibration Laboratories Inc.

Certificate of Calibration

for

SLM 1/3 OCTAVE BAND ANALYZER / PREAMPLIFIER

Manufactured by: RION
Model No: NA-27 / NH-20
Serial No: 00111483 / 05153
Calibration Recall No: 12166

Submitted By:

Customer: JEFF WHITE
Company: ENVIRONMENTAL ACOUSTICS, INC
Address: 5801 GRAYSON ROAD
HARRISBURG PA 17111

The subject instrument was calibrated to the indicated specification using standards traceable to the National Institute of Standards and Technology or to accepted values of natural physical constants. This document certifies that the instrument met the following specification upon its return to the submitter.

West Caldwell Calibration Laboratories Procedure No. NA-27 / NH RION

Upon receipt for Calibration, the instrument was found to be:

Within (X) see attached Report of Calibration.

the tolerance of the indicated specification.

West Caldwell Calibration Laboratories' calibration control system meets the requirements, MIL-STD-45662A, ANSI/NCCL Z540-1, IEC Guide 25, ISO 9002 and ISO 17025.

Note: With this Certificate, Report of Calibration is included.

Approved by:

Calibration Date: 24-Dec-03

Certificate No: 12166 - 1

QA Doc. #1051 Rev. 2.0 10/1/01

Certificate Page 1 of 1

Felix Christopher
Quality Manager

West Caldwell Calibration Laboratories, Inc.
uncompromised calibration
1575 State Route 96, Victor, NY 14564, U.S.A.



ANSI/NCCL Z540-1-1994
MIL-STD-45662A
CALIBRATION TRACEABLE
TO N. I. S. T.



Phone: (585) 586 - 3900 Fax: (585) 586 - 4327

West Caldwell Calibration Laboratories Inc.

Certificate of Calibration

for

INTEGRATING SOUND LEVEL METER

Manufactured by: **LARSON DAVIS**
Model No: **700**
Serial No: **4086B1397**
Calibration Recall No: **12060**

Submitted By:

Customer: **JEFF WHITE**
Company: **ENVIRONMENTAL ACOUSTICS, INC**
Address: **5801 GRAYSON ROAD**
HARRISBURG PA 17111

The subject instrument was calibrated to the indicated specification using standards traceable to the National Institute of Standards and Technology or to accepted values of natural physical constants. This document certifies that the instrument met the following specification upon its return to the submitter.

West Caldwell Calibration Laboratories Procedure No. **700** **LARS**

Upon receipt for Calibration, the instrument was found to be:

Within **(X)** see attached Report of Calibration.

the tolerance of the indicated specification.

West Caldwell Calibration Laboratories' calibration control system meets the requirements, MIL-STD-45662A, ANSI/NC SL Z540-1, IEC Guide 25, ISO 9002 and ISO 17025.

Note: With this Certificate, Report of Calibration is included.

Calibration Date: **09-Dec-03**

Certificate No: **12060 - 1**

QA Doc. #1051 Rev. 2.0 10/1/01

Certificate Page 1 of 1

Approved by:


Felix Christopher
Quality Manager


West Caldwell Calibration Laboratories, Inc.
uncompromised calibration
1575 State Route 96, Victor, NY 14564, U.S.A.



ANSI/NC SL Z540-1-1994
MIL-STD-45662A
CALIBRATION TRACEABLE
TO N. I. S. T.

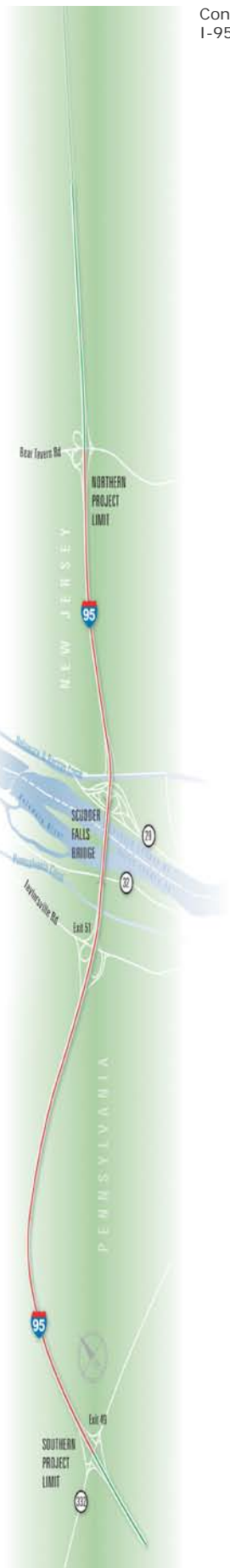


Phone: (585) 586 - 3900 Fax: (585) 586 - 4327

Contract C-393A, Capital Project No. CP0301A, Account No. 7161-06-012
I-95/Scudder Falls Bridge Improvement Project

Appendix B

Noise Measurement Field Data Sheets



November 2009

Highway Noise Monitoring Sheet

DATE: 3-1-04
 PROJECT: Scudder Falls
 JOB #: 42444.001
 SITE ID: R1-1 A/B



ADDRESS: 949-949A
MIRRORE LAKE RD
 Meter Storage #: 5/1

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☒ Other Farm

Measurement Data

SLM Calibration before 94.0 after 94.0
 Weather: temperature 52° wind speed 0-5 cloud cover 25%
 Time: 1st start 3:23 stop 3:43 total 20
 2nd start 3:23 stop 3:43 total 20
 Data: 1st 1B Leq 46.9 Lmax 61.3 Lmin 41.4 SEL 77.7
 2nd 1A Leq 46.3 Lmax 62.8 Lmin 31.9 SEL 77.1

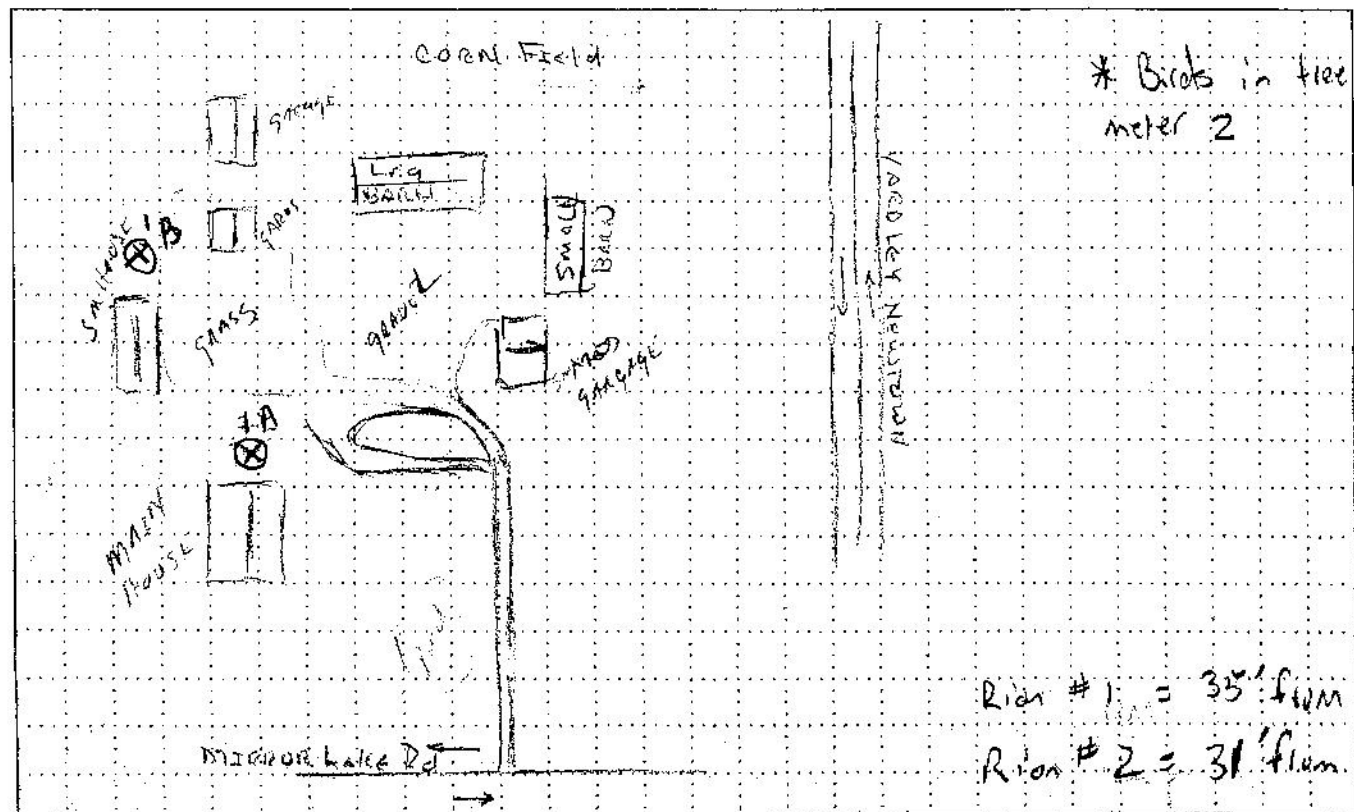
Traffic Data

Roadway#1 95N * 10 min * Roadway#2 95S Roadway#3 _____ Roadway#4 _____
 Direction _____ Direction _____ Direction _____ Direction _____
 auto 1st 327 2nd _____ auto 1st 442 2nd _____ auto 1st _____ 2nd _____
 med. trk. 1st 8 2nd _____ med. trk. 1st 9 2nd _____ med. trk. 1st _____ 2nd _____
 hvy trk. 1st 18 2nd _____ hvy trk. 1st 33 2nd _____ hvy trk. 1st _____ 2nd _____
 bus 1st 3 2nd _____ bus 1st 1 2nd _____ bus 1st _____ 2nd _____
 motorcycle 1st 4 2nd _____ motorcycle 1st 3 2nd _____ motorcycle 1st _____ 2nd _____

NOTES: wind chimes No crops - L.O.S to road.
Birds 95 ← S

95 → N

SITE SKETCH



Highway Noise Monitoring Sheet

DATE: 4-8-04

PROJECT: SCODDER FALL DTBC

JOB # 42444.001

SITE ID R1-2



Gannett
Fleming, Inc.

ADDRESS: _____

1700 NEWTOWN YARLEY RD

Meter Storage # 20

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☒ Other FARM

Measurement Data

Photograph #'s _____

SLM Calibration before 114.1 after _____

Weather: temperature 40° wind speed 0-3 cloud cover 10%

Time: 1st start 7:06 stop 7:26 total 20

2nd start _____ stop _____ total _____

Data: 1st Leq 58.2 Lmax 74.7 Lmin 53.3 SEL 89.0

2nd Leq _____ Lmax _____ Lmin _____ SEL _____

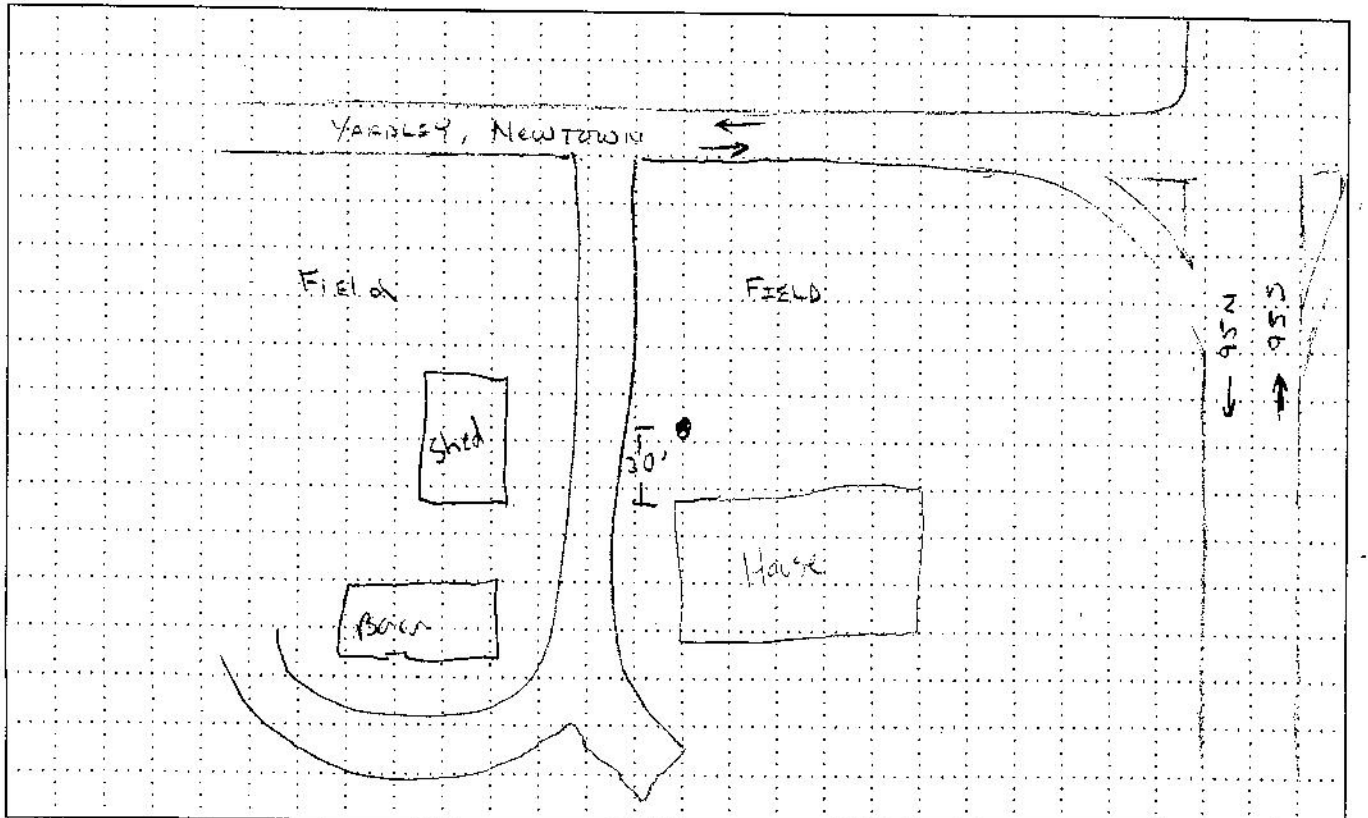
Traffic Data

10 min

Roadway#1	Direction	1st	2nd	Roadway#2	Direction	1st	2nd	Roadway#3	Direction	1st	2nd	Roadway#4	Direction	1st	2nd
<u>NB 95</u>				<u>SB 95</u>											
auto		<u>338</u>		auto		<u>146</u>		auto				auto			
med. trk.		<u>5</u>		med. trk.		<u>-</u>		med. trk.				med. trk.			
hvy trk.		<u>11</u>		hvy trk.		<u>13</u>		hvy trk.				hvy trk.			
bus				bus		<u>-</u>		bus				bus			
motorcycle				motorcycle				motorcycle				motorcycle			

NOTES: Dog Barking - Mowing behind house

SITE SKETCH



Highway Noise Monitoring Sheet

DATE: 3-1-04
 PROJECT: Scudder Falls
 JOB #: 42444.001
 SITE ID: B2-1



ADDRESS: Hampton Inn
1000 Stony Hill Rd
 Meter Storage # 6

TYPE ☐ Residential ☒ Commercial ☐ Religion ☐ Educational ☐ Other None

Measurement Data

SLM Calibration before 114.1 after 114.1
 Weather: temperature 52° wind speed 0-5 cloud cover 75%
 Time: 1st start 4:05 stop 4:25 total _____
 2nd start _____ stop _____ total _____
 Data: 1st Leq 66.6 Lmax _____ Lmin 57.3 SEL 97.4
 2nd Leq _____ Lmax _____ Lmin _____ SEL _____

Traffic Data

* 10 min * * 10 min *

Roadway#1	Direction	1st	2nd	auto	med. trk.	hvy trk.	bus	motorcycle
<u>95 NB</u>	<u>←</u>	<u>189</u>		<u>5</u>	<u>10</u>	<u>1</u>		

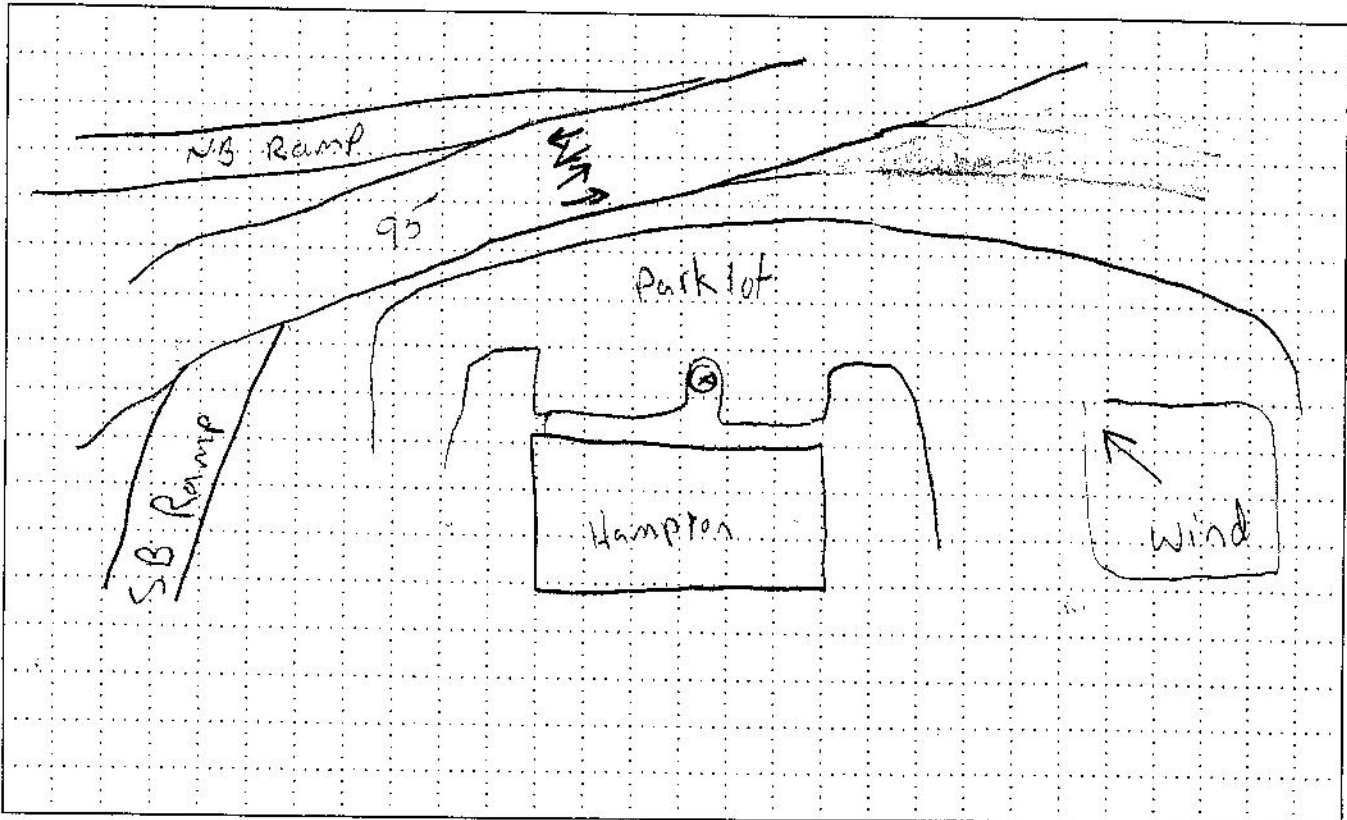
Roadway#2	Direction	1st	2nd	auto	med. trk.	hvy trk.	bus	motorcycle
<u>95 SB</u>	<u>→</u>	<u>301</u>		<u>6</u>	<u>23</u>	<u>2</u>		

Roadway#3	Direction	1st	2nd	auto	med. trk.	hvy trk.	bus	motorcycle
<u>SB Ramp</u>		<u>169</u>		<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

Roadway#4	Direction	1st	2nd	auto	med. trk.	hvy trk.	bus	motorcycle
<u>NB Ramp</u>		<u>152</u>						

NOTES: 28' from middle of Hotel freelaw on 95 (55-75 mph)
Parking lot is mostly empty
Max is truck jakes

SITE SKETCH



Highway Noise Monitoring Sheet

DATE: 4-8-04
 PROJECT: SCUDDER FALL DJTBC
 JOB #: 42444.001
 SITE ID: B2-2



ADDRESS: 1378 NEWTON YARDLEY Rd
BREEZYVALE FARM
 Meter Storage # 21

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other FARM

Measurement Data

Photograph #'s _____

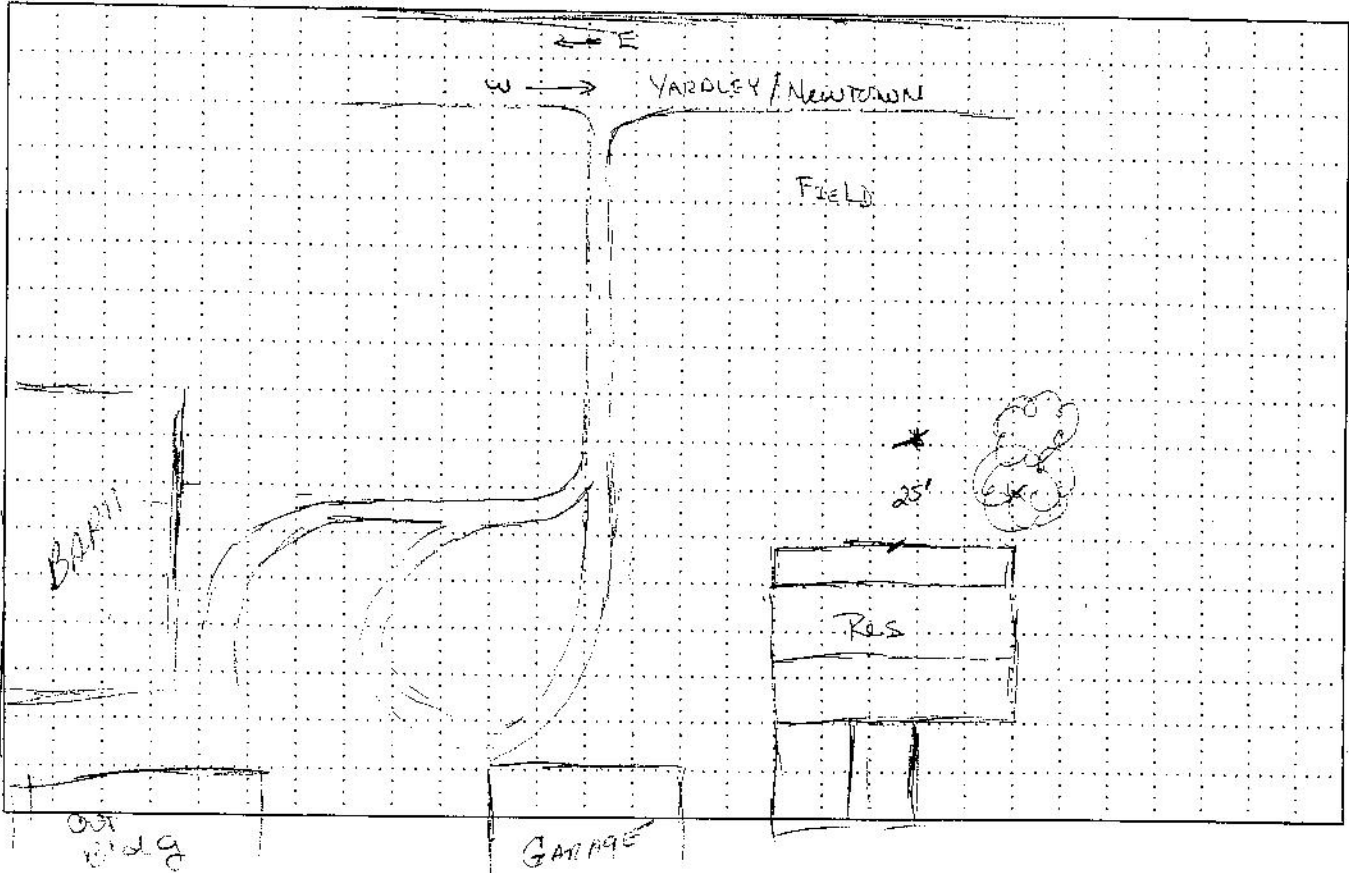
SLM Calibration before 114.0 after 114.0
 Weather: temperature 56° wind speed 0-3 cloud cover 10%
 Time: 1st start 11:17 stop 11:37 total 20
 2nd start _____ stop _____ total _____
 Data: 1st Leq 51.3 Lmax 67.0 Lmin 42.4 SEL 82.1
 2nd Leq _____ Lmax _____ Lmin _____ SEL _____

Traffic Data

Roadway#1	Roadway#2	Roadway#3	Roadway#4
Yardley	Yardley		
Direction <u>WB</u> →	Direction <u>EB</u> ←	Direction _____	Direction _____
1st 2nd	1st 2nd	1st 2nd	1st 2nd
auto <u>251</u>	auto <u>405</u>	auto _____	auto _____
med. trk. <u>15</u>	med. trk. <u>20</u>	med. trk. _____	med. trk. _____
hvy trk. <u>24</u>	hvy trk. <u>18</u>	hvy trk. _____	hvy trk. _____
bus <u>1</u>	bus _____	bus _____	bus _____
motorcycle _____	motorcycle _____	motorcycle _____	motorcycle _____

NOTES: TRUCK IDLING - TAKE BRAKE

SITE SKETCH



Highway Noise Monitoring Sheet

DATE: 4-6-04
 PROJECT: SCODDER FALLS
 JOB # 42444.001
 SITE ID R2-3



ADDRESS: 1100 SURREY LANE
 Meter Storage # #1

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other

Measurement Data

Photograph #'s _____

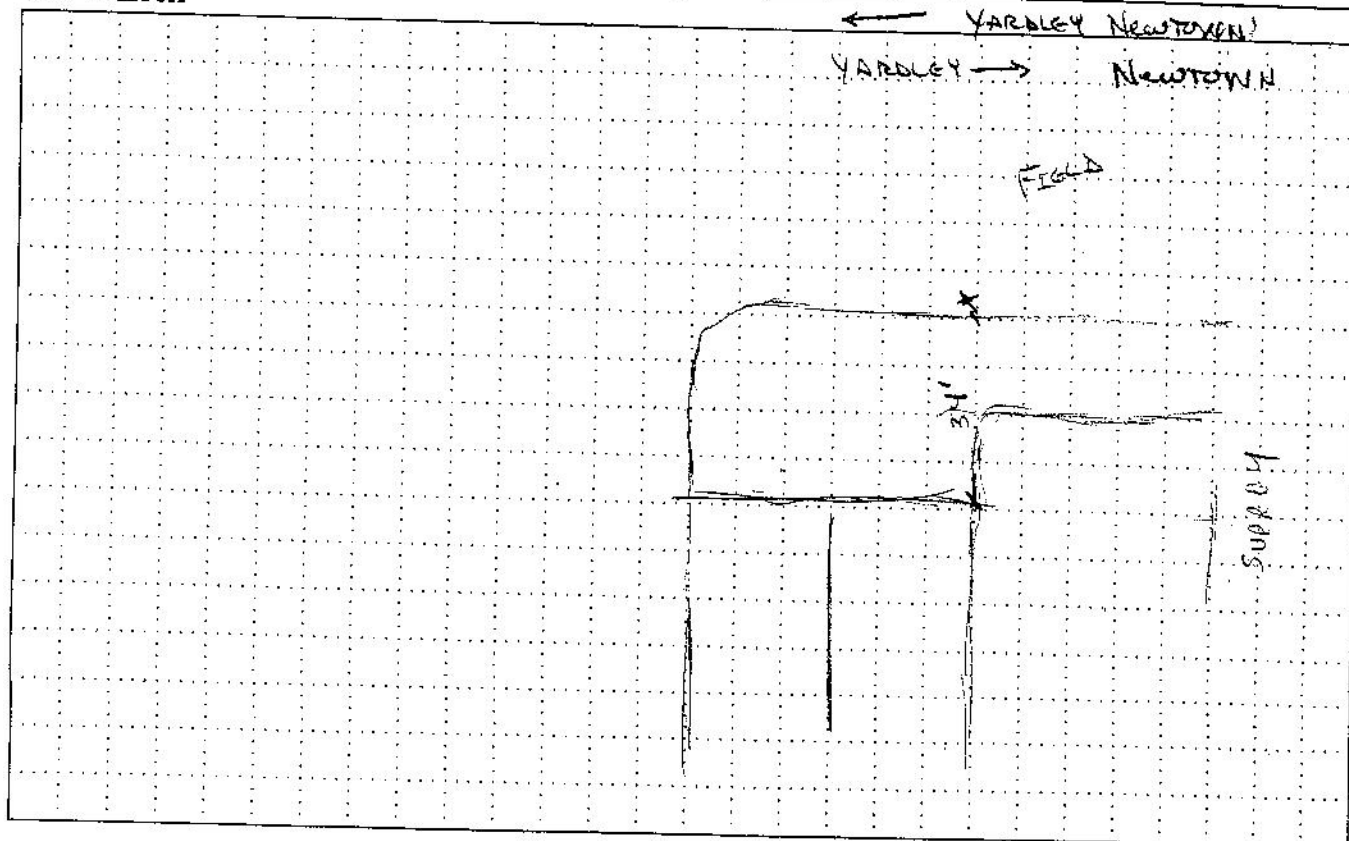
SLM Calibration before 114.1 after 114.1
 Weather: temperature _____ wind speed 5-8 gusts cloud cover 0
 Time: 1st start 9:18 stop 9:38 total _____
 2nd start _____ stop _____ total _____
 Data: 1st Leq 48.7 Lmax 70.1 Lmin 39 SEL 79.5
 2nd Leq _____ Lmax _____ Lmin _____ SEL _____

Traffic Data

Roadway#1	Roadway#2	Roadway#3	Roadway#4
Direction <u>→</u>	Direction <u>←</u>	Direction _____	Direction _____
1st	1st	1st	1st
2nd	2nd	2nd	2nd
auto <u>385</u>	auto <u>275</u>	auto _____	auto _____
med. trk. <u>8</u>	med. trk. <u>15</u>	med. trk. _____	med. trk. _____
hvy trk. <u>35</u>	hvy trk. <u>15</u>	hvy trk. _____	hvy trk. _____
bus _____	bus _____	bus _____	bus _____
motorcycle _____	motorcycle _____	motorcycle _____	motorcycle _____

NOTES:

SITE SKETCH



Highway Noise Monitoring Sheet

DATE: 2-11-24

PROJECT: SCUDDER FALLS BRIDGE

JOB # 12444-001

SITE ID B3-1



ADDRESS: _____

1710 Clyde Spate Circle

Meter Storage # 21

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other _____

Measurement Data

Photograph #'s _____

SLM Calibration before 94.0 after 93.8

Weather: temperature 28° wind speed 4-6 mph cloud cover 50%

Time: 1st start 10:03 AM stop 10:23 AM total 20 min

2nd start _____ stop _____ total _____

Data: 1st Leq 63.9 Lmax 73.8 Lmin 47.3 SEL _____

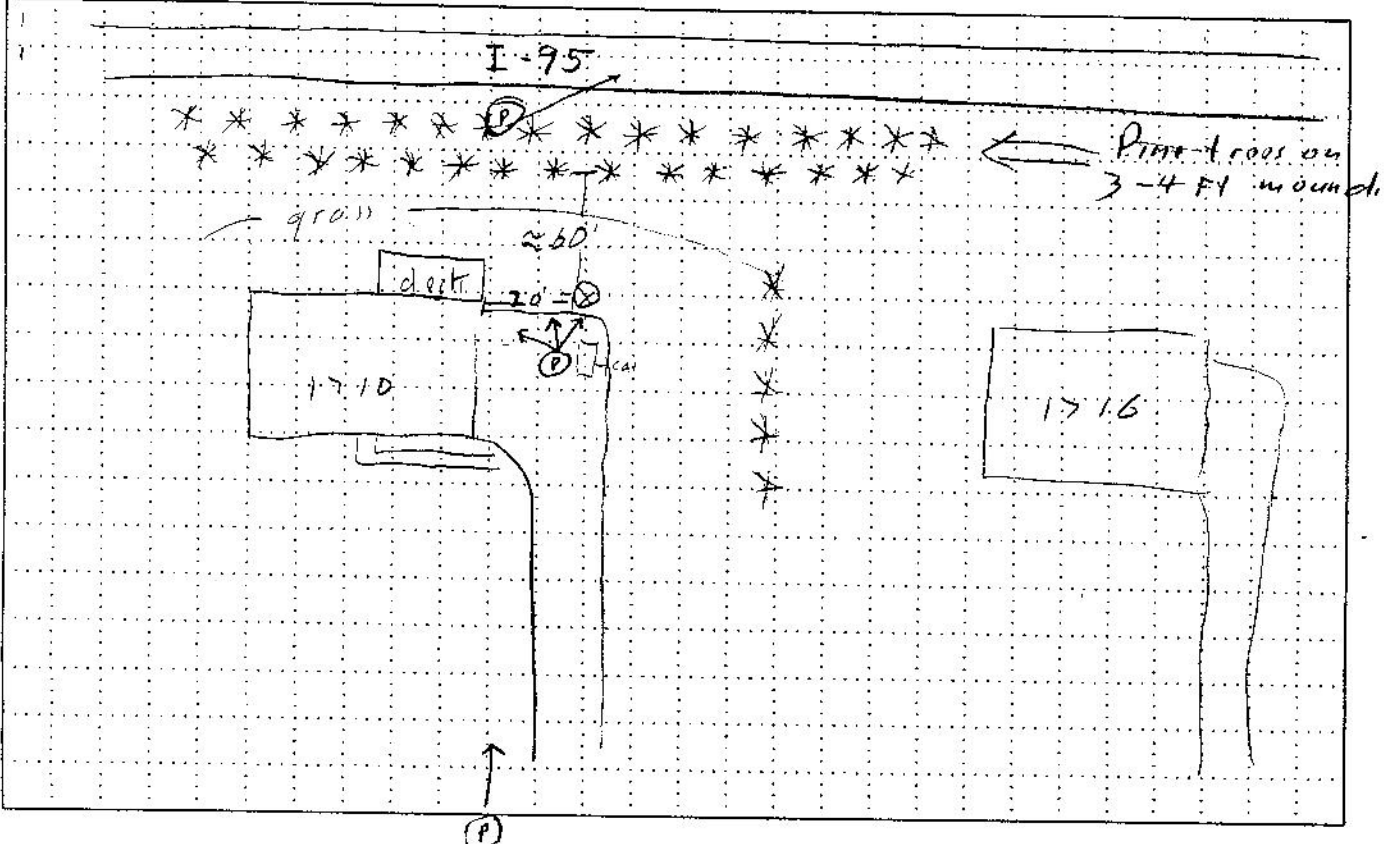
2nd Leq _____ Lmax _____ Lmin _____ SEL _____

Traffic Data

Roadway#1	Roadway#2	Roadway#3	Roadway#4
<u>I-95</u>	<u>I-95</u>	_____	_____
Direction <u>NB</u>	Direction <u>SB</u>	Direction _____	Direction _____
1st	1st	1st	1st
2nd	2nd	2nd	2nd
auto	auto	auto	auto
med. trk.	med. trk.	med. trk.	med. trk.
hvy trk.	hvy trk.	hvy trk.	hvy trk.
bus	bus	bus	bus
motorcycle	motorcycle	motorcycle	motorcycle

NOTES:

SITE SKETCH



Highway Noise Monitoring Sheet

DATE: 2-20-04

PROJECT: SCODDER FALLS BRIDGE

JOB # 42444-001

SITE ID R3-2



ADDRESS: 1225 Shetland Ct.

Meter Storage # _____

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other _____

Measurement Data

SILM Calibration before 114.1 after 114.1 Photograph #'s _____

Weather: temperature 30 wind speed 0-3 cloud cover overcast

Time: 1st start 0735 stop 0755 total 20

2nd start _____ stop _____ total _____

Data: 1st Leq 60.8 Lmax 68.1 Lmin 56.6 SEL 91.6

2nd Leq _____ Lmax _____ Lmin _____ SEL _____

Traffic Data

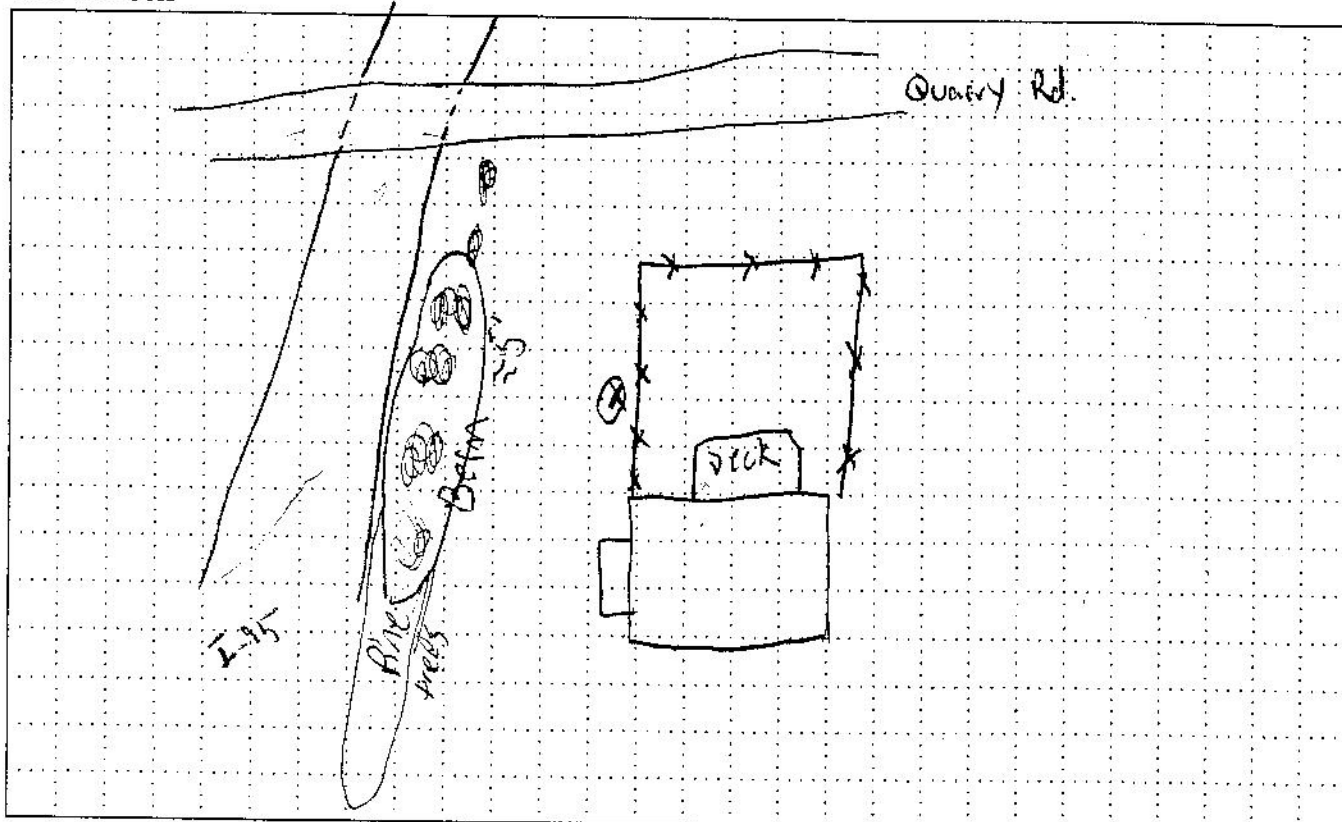
Traffic = R3-3

Roadway#1	Direction	1st	2nd	Roadway#2	Direction	1st	2nd	Roadway#3	Direction	1st	2nd	Roadway#4	Direction	1st	2nd
<u>I-95</u>	<u>NE</u>	<u>869</u>		<u>I-95</u>	<u>SB</u>	<u>549</u>						<u>5-MIN</u>	<u>QUARRY</u>		
auto				auto				auto				auto			
med. trk.				med. trk.				med. trk.				med. trk.			
hvy trk.				hvy trk.				hvy trk.				hvy trk.			
bus				bus				bus				bus			
motorcycle				motorcycle				motorcycle				motorcycle			

NOTES: L.O.S to Quarry Rd. Small Belm 5-6' from fence or down

Dog in background

SITE SKETCH



30

Highway Noise Monitoring Sheet

DATE: 2/20/04

PROJECT: Scudder Falls

JOB #: 42444-001

SITE ID: R3-3



ADDRESS:

Athletic Field
School

Meter Storage # 24

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☒ Other

Measurement Data

Photograph #'s

SLM Calibration before 93.9 after _____

Weather: temperature _____ wind speed _____ cloud cover 100%

Time: 1st start 7:35 stop 7:55 total 20 min

2nd start _____ stop _____ total _____

Data: 1st Leq 53.6 Lmax 66.5* Lmin 50.3 SEL 84.6

2nd Leq _____ Lmax _____ Lmin _____ SEL _____

Traffic Data

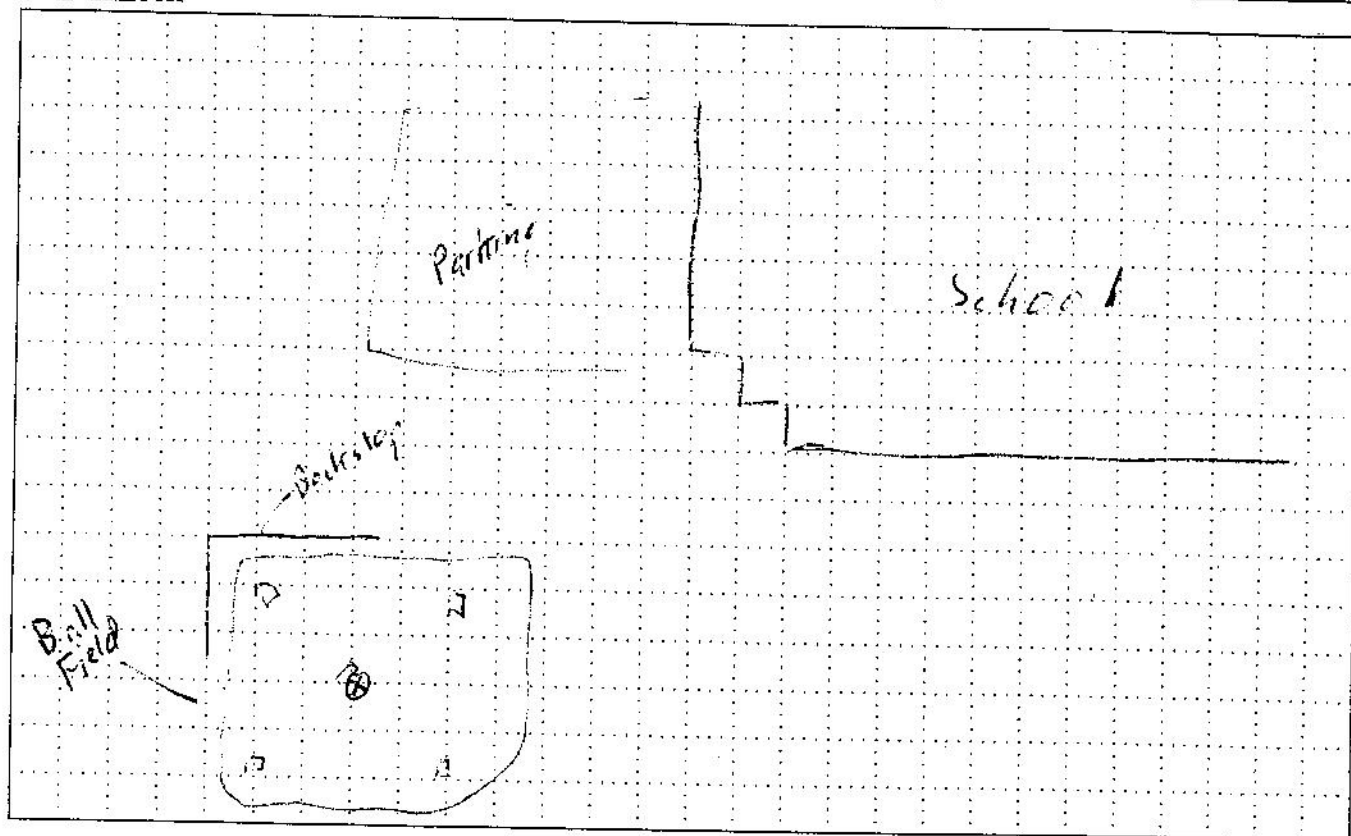
Roadway#1	Direction	1st	2nd	Roadway#2	Direction	1st	2nd	Roadway#3	Direction	1st	2nd	Roadway#4	Direction	1st	2nd
<u>I-95</u>	<u>NB</u>	<u>869</u>		<u>I-95</u>	<u>SB</u>	<u>549</u>						<u>Quarry</u>	<u>Both</u>	<u>27</u>	
auto				auto				auto				auto			
med. trk.		<u>20</u>		med. trk.		<u>6</u>		med. trk.				med. trk.		<u>1</u>	
hvy trk.		<u>17</u>		hvy trk.		<u>41</u>		hvy trk.				hvy trk.			
bus		<u>2</u>		bus		<u>6</u>		bus				bus		<u>1</u>	
motorcycle				motorcycle				motorcycle				motorcycle			

NOTES: Can't see I-95 traffic - can hear steady flow

Traffic noise not very loud - but constant

* Geese - Lmax was 59 dBA before geese flew over.

SITE SKETCH



Highway Noise Monitoring Sheet

DATE: 3/1/04
 PROJECT: Scudder Falls
 JOB #: 42444.001
 SITE ID: R3-3A



ADDRESS: _____
Elem. School
Play ground
 Meter Storage # 7

TYPE ☐ Residential ☐ Commercial ☐ Religion ☒ Educational ☒ Other School

Measurement Data

Photograph #'s _____

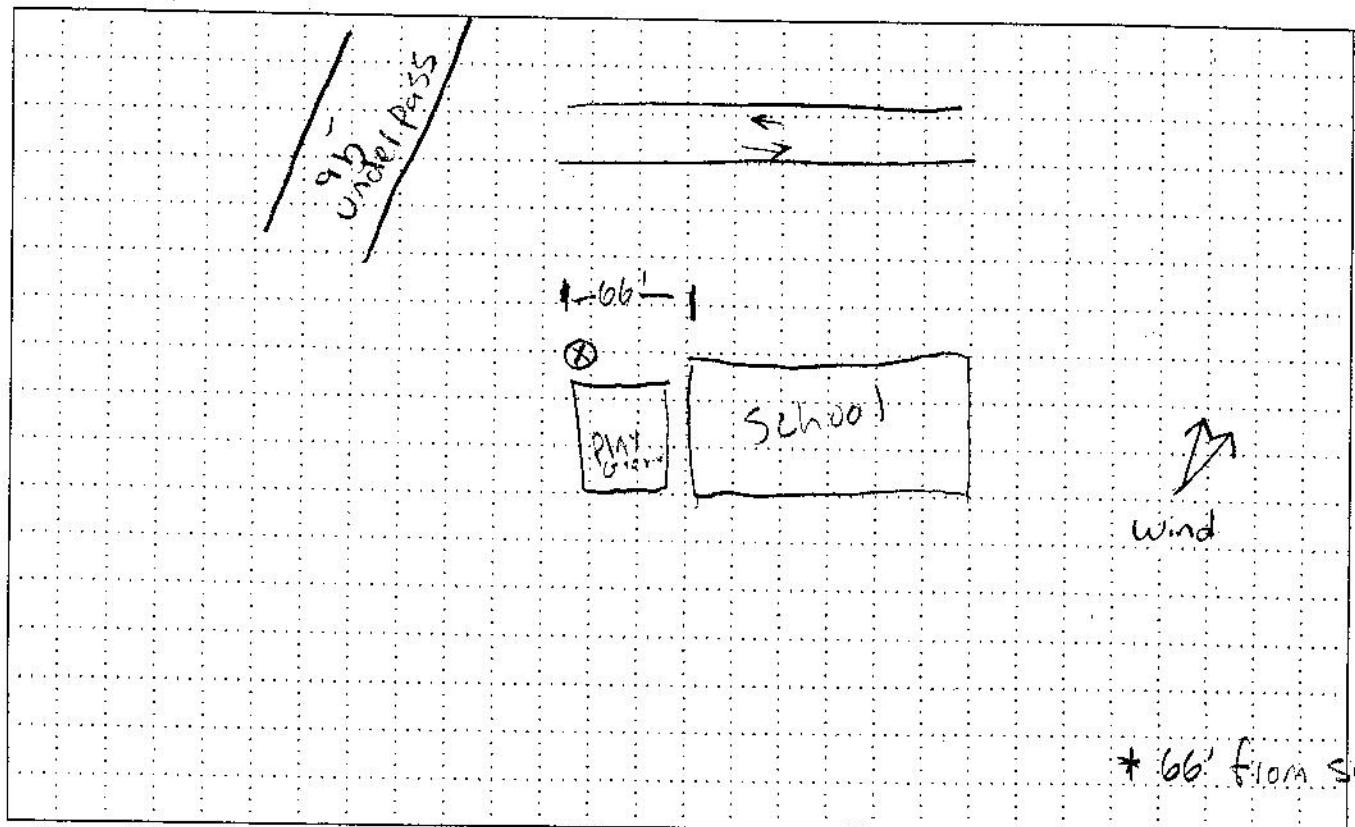
SLM Calibration before 114.1 after 114.1
 Weather: temperature 50° wind speed 5-10 cloud cover 75%
 Time: 1st start 4:48 stop 5:08 total 20
 2nd start _____ stop _____ total _____
 Data: 1st Leq 50.9 Lmax 66.6 Lmin 47.3 SEL 81.7
 2nd Leq _____ Lmax _____ Lmin _____ SEL _____

Traffic Data

Roadway#1	Direction	1st	2nd	Roadway#2	Direction	1st	2nd	Roadway#3	Direction	1st	2nd	Roadway#4	Direction	1st	2nd
<u>95</u>	<u>NR</u>	<u>204</u>		<u>95</u>	<u>SB</u>	<u>645</u>		<u>Gurney Rd</u>		<u>18</u>					
auto				auto				auto				auto			
med. trk.		<u>1</u>		med. trk.		<u>12</u>		med. trk.				med. trk.			
hvy trk.		<u>4</u>		hvy trk.		<u>17</u>		hvy trk.				hvy trk.			
bus		<u>1</u>		bus		<u>0</u>		bus				bus			
motorcycle		<u>1</u>		motorcycle		<u>2</u>		motorcycle				motorcycle			

NOTES: Kids playing at playground first 9 min

SITE SKETCH



Highway Noise Monitoring Sheet

DATE: 2-20-04

PROJECT: SCUDDER FALLS BRIDGE

JOB # 42444-001

SITE ID R4-1



Gannett
Fleming, Inc.

ADDRESS: 1162 Ascot

Historic

Meter Storage # 9

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other

Measurement Data

Photograph #'s

SLM Calibration before 114.0 after 114.0

Weather: temperature 40° wind speed 0-3 cloud cover 0/c

Time: 1st start 12:15 stop 12:35 total 20min

2nd start stop total

Data: 1st Leq 60.1 Lmax 68.6 Lmin 52.7 SEL 90.9

2nd Leq Lmax Lmin SEL

*measured
10 R4-4*

Traffic Data

Roadway#1	Direction	1st	2nd	auto	med. trk.	hvy trk.	bus	motorcycle
<u>95</u>	<u>NB</u>			<u>38.5</u>	<u>13</u>	<u>19</u>		

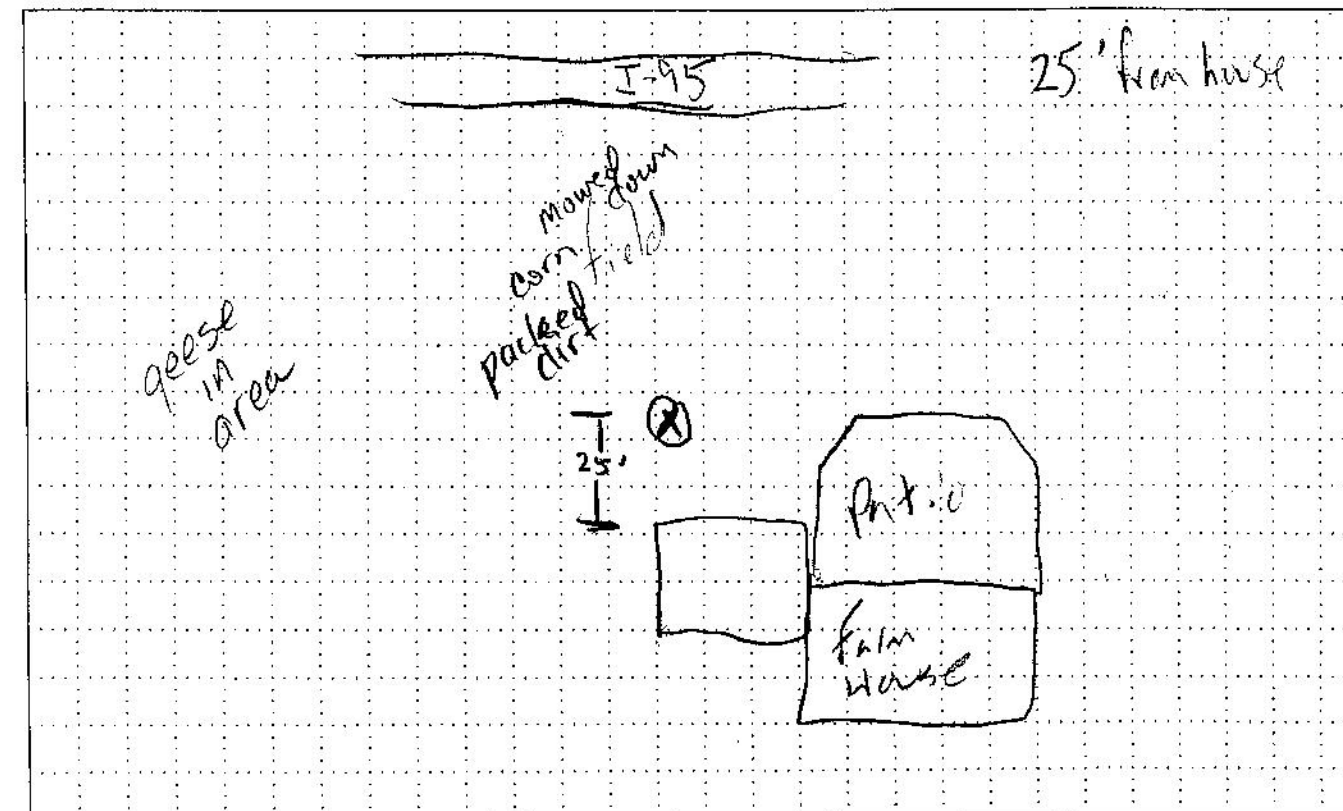
Roadway#2	Direction	1st	2nd	auto	med. trk.	hvy trk.	bus	motorcycle
<u>95</u>	<u>SB</u>			<u>44.0</u>	<u>22</u>	<u>65</u>	<u>0</u>	<u>1</u>

Roadway#3	Direction	1st	2nd	auto	med. trk.	hvy trk.	bus	motorcycle

Roadway#4	Direction	1st	2nd	auto	med. trk.	hvy trk.	bus	motorcycle

NOTES: L.O.S 4, 95. Constant Drive.

SITE SKETCH



Highway Noise Monitoring Sheet

DATE: 4/7/04
 PROJECT: Scop
 JOB #: 42444.001
 SITE ID: R4-2



ADDRESS: 1720 Jockey's Lane Real
 Meter Storage # 10

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other

Measurement Data

Photograph #'s

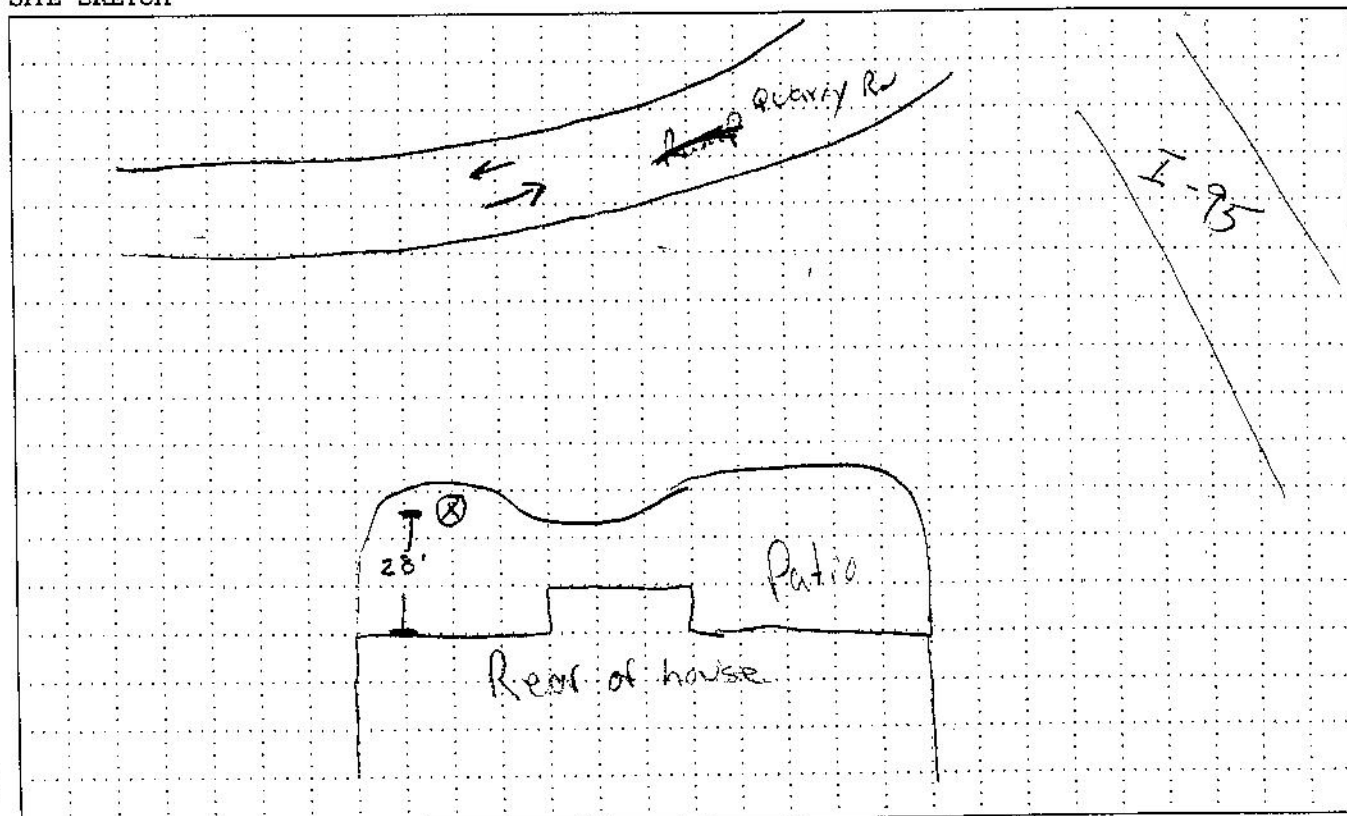
SLM Calibration before 114.2 after
 Weather: temperature 45° wind speed 0-3 cloud cover 100%
 Time: 1st start 7:24 stop 7:44 total 20
 2nd start stop total
 Data: 1st Leq 58.5 Lmax 74.0 Lmin 53.1 SEL 89.3
 2nd Leq Lmax Lmin SEL

Traffic Data * 10 min *

Roadway#1	Direction	1st	2nd	Roadway#2	Direction	1st	2nd	Roadway#3	Direction	1st	2nd	Roadway#4	Direction	1st	2nd
<u>95 N</u>	<u>→</u>			<u>95 S</u>				<u>Ramp</u>	<u>↔</u>						
auto		<u>530</u>		auto		<u>268</u>		auto		<u>75</u>		auto			
med. trk.		<u>9</u>		med. trk.		<u>4</u>		med. trk.		<u>2</u>		med. trk.			
hvy trk.		<u>18</u>		hvy trk.		<u>16</u>		hvy trk.		<u>0</u>		hvy trk.			
bus				bus				bus		<u>3</u>		bus			
motorcycle				motorcycle				motorcycle				motorcycle			

NOTES: Ramp speed ≈ 30-35 mph Birds chirping Airplane - high 50's
Siren - 5 sec

SITE SKETCH



1-5

HHH LHH HHH

11

111

Highway Noise Monitoring Sheet

DATE: 2-18-04
 PROJECT: SANDBAR FALLS BRIDGE
 JOB #: 42444-001
 SITE ID: R4-3



ADDRESS: 1759 Jockey Lane
 Meter Storage # 22

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other

Measurement Data

SLM Calibration before 94.0 after 93.9 Photograph #'s _____
 Weather: temperature 25° wind speed variable gusting 7-10 cloud cover 50%
 Time: 1st start 10:40AM stop 11:00AM total 20 min
 2nd start _____ stop _____ total _____
 Data: 1st Leq 60.4 Lmax 70.7 Lmin 47.5 SEL 91.2
 2nd Leq _____ Lmax _____ Lmin _____ SEL _____

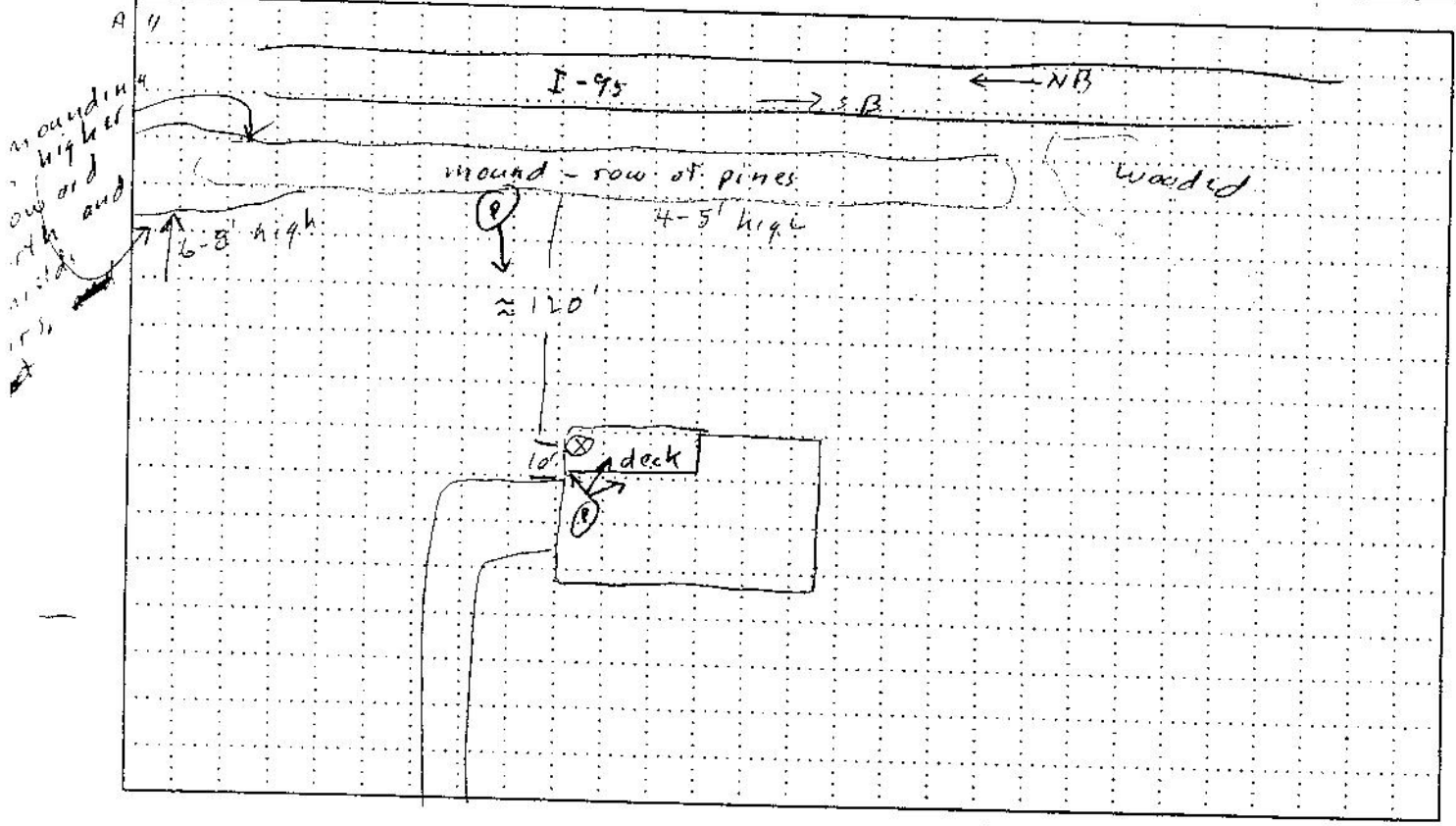
some times from north from west - gusting 10-15 toward end of meter. From 40 or 46

Traffic Data

Roadway#1	I-95	Roadway#2	I-95	Roadway#3		Roadway#4	
Direction	NB	Direction	SB	Direction		Direction	
auto	1st 2nd	auto	1st 2nd	auto	1st 2nd	auto	1st 2nd
med. trk.	310 12	med. trk.	320 14	med. trk.		med. trk.	
hvy trk.	26	hvy trk.	53	hvy trk.		hvy trk.	
bus		bus		bus		bus	
motorcycle	1	motorcycle	1	motorcycle		motorcycle	

NOTES: meter on deck \approx 8' above ground level, 10' from house
 helicopter 67.9

SITE SKETCH



Highway Noise Monitoring Sheet

DATE: 2/20/04
 PROJECT: Scudder Falls
 JOB #: 42444-001
 SITE ID: B4-4



ADDRESS: 1878
Patterson
 Meter Storage # 27

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other

Measurement Data

Photograph #'s 8888

SLM Calibration before 94.1 after 94.0

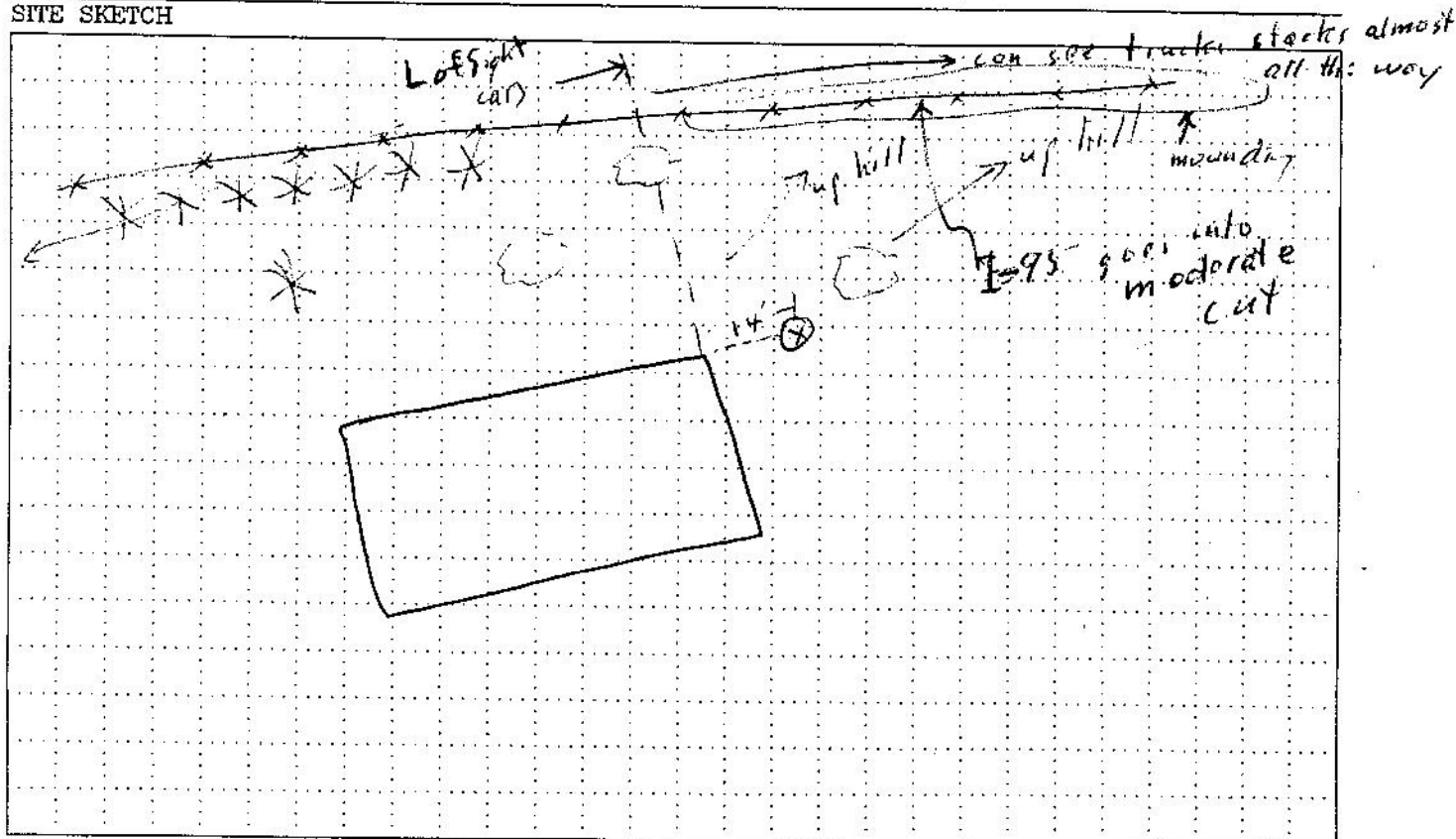
Weather: temperature _____ wind speed _____ cloud cover 80%
 Time: 1st start 12:15 PM stop 12:45 PM total 2.0 min
 2nd start _____ stop _____ total _____
 Data: 1st Leq 62.3 Lmax 70.6 Lmin 55.5 SEL 93.0
 2nd Leq _____ Lmax _____ Lmin _____ SEL _____

Traffic Data

Roadway#1	I-95	Roadway#2	I-95	Roadway#3		Roadway#4	
Direction	NB	Direction	SB	Direction		Direction	
auto	1st 2nd	auto	1st 2nd	auto	1st 2nd	auto	1st 2nd
med. trk.	<u>38.5</u>	med. trk.	<u>440</u>	med. trk.		med. trk.	
hvy trk.	<u>13</u>	hvy trk.	<u>22</u>	hvy trk.		hvy trk.	
bus	<u>39</u>	bus	<u>65</u>	bus		bus	
motorcycle		motorcycle	<u>0</u>	motorcycle		motorcycle	
			<u>1</u>				

NOTES:

SITE SKETCH



Highway Noise Monitoring Sheet

DATE: 4/7/04
 PROJECT: Scudder
 JOB #: 42444.001
 SITE ID: R5-1



ADDRESS: 1746 Quarry Rd.
 Meter Storage # _____

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other _____

Measurement Data

Photograph #'s _____

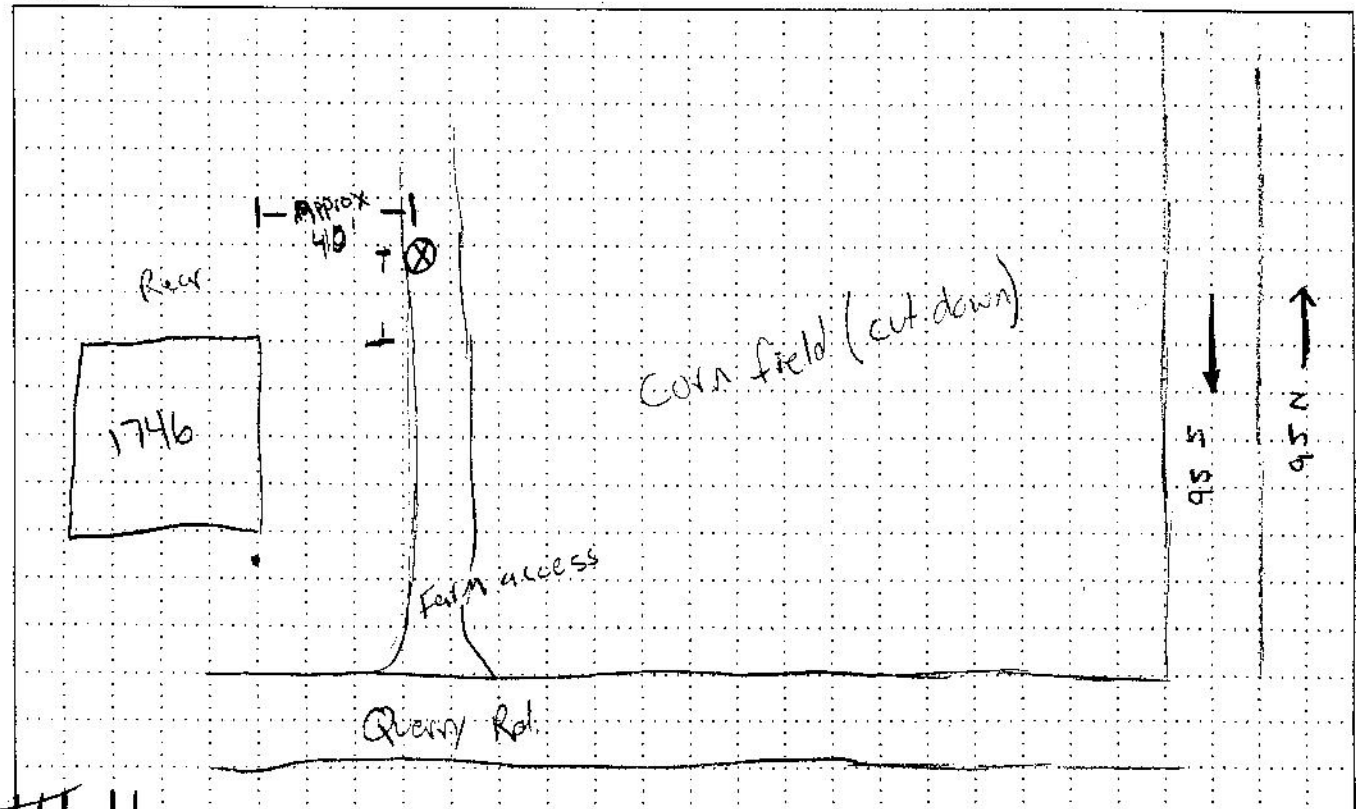
SLM Calibration before 114.1 after 114.1
 Weather: temperature 50 wind speed 0-5 cloud cover 5%
 Time: 1st start 8:43 stop 8:53 total 20 min
 2nd start _____ stop _____ total _____
 Data: 1st Leq 57.1 Lmax 71.0 Lmin 50.8 SEL 87.8
 2nd Leq _____ Lmax _____ Lmin _____ SEL _____

Traffic Data

* 10 min *
 Roadway#1 95 Roadway#2 95 Roadway#3 Quarry Rd Roadway#4 _____
 Direction NB Direction SB Direction ↔ Direction _____
 auto 1st 368 2nd _____ auto 1st 235 2nd _____ auto 1st 145 2nd _____
 med. trk. 1st 14 2nd _____ med. trk. 1st 9 2nd _____ med. trk. 1st 5 2nd _____
 hvy trk. 1st 14 2nd _____ hvy trk. 1st 20 2nd _____ hvy trk. 1st 0 2nd _____
 bus 1st _____ 2nd _____ bus 1st 2 2nd _____ bus 1st 4 2nd _____
 motorcycle 1st _____ 2nd _____ motorcycle 1st 0 2nd _____ motorcycle 1st _____ 2nd _____

NOTES: Dog Barking at #1746 Quarry Rd = 30-40 mph
Barking for approx 8 mins

SITE SKETCH



|||||
 ||||| ||||| ||||| |||||

|||||

DATE: 2-11-04PROJECT: SCHUBER FALLS BRIDGEJOB # 42444-001SITE ID B5-2Gannett
Fleming, Inc.

ADDRESS: _____

1373 BRENTWOODMeter Storage # 23TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other _____

Measurement Data

Photograph #'s _____

SLM Calibration before 94.0 after 94.0Weather: temperature 27° wind speed 25 cloud cover 30%Time: 1st start 11:19 AM stop 11:39 AM total 20 min

2nd start _____ stop _____ total _____

Data: 1st Leq 49.7 Lmax 69.6 Lmin 42.4 SEL 80.5

2nd Leq _____ Lmax _____ Lmin _____ SEL _____

Traffic Data

Roadway#1 I-95Direction NB

1st 2nd

auto 319med. trk. 12hvy trk. 30

bus _____

motorcycle _____

Roadway#2 I-95Direction SB

1st 2nd

auto 337med. trk. 16hvy trk. 58

bus _____

motorcycle _____

Roadway#3 _____

Direction _____

1st 2nd

auto _____

med. trk. _____

hvy trk. _____

bus _____

motorcycle _____

Roadway#4 _____

Direction _____

1st 2nd

auto _____

med. trk. _____

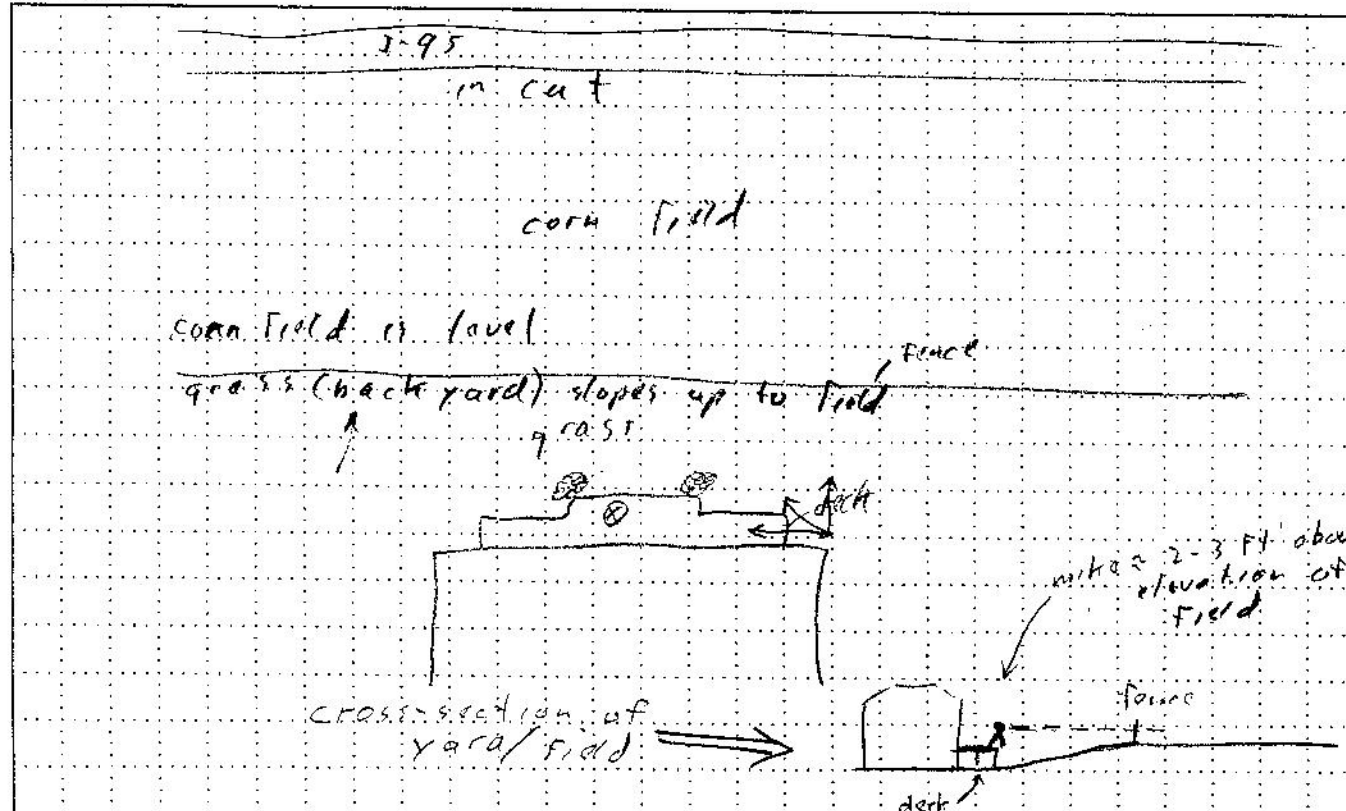
hvy trk. _____

bus _____

motorcycle _____

NOTES: small plane ≈ 59 meter on deck - make $\approx 8'$ above ground level - site is sheltered from wind
can't see traffic from this site

SITE SKETCH



Highway Noise Monitoring Sheet

DATE: 4-6-04
 PROJECT: SCODDER FALLS
 JOB #: 42444.001
 SITE ID: RS-3



ADDRESS: 1379 BRENWOOD DR
 Meter Storage #

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other

Measurement Data

Photograph #'s

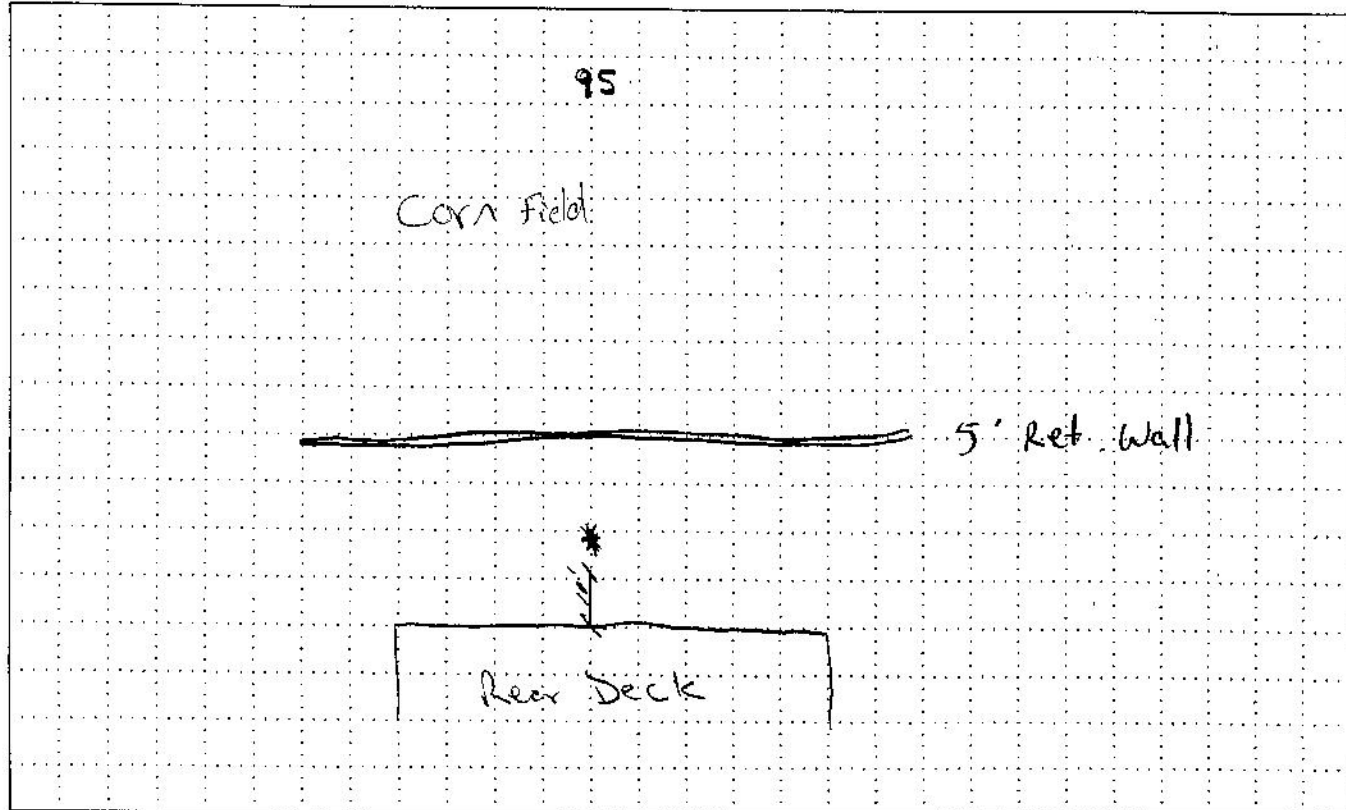
SLM Calibration before 114.2 after
 Weather: temperature wind speed 0-5 cloud cover 95%
 Time: 1st start 7:58 AM stop 8:18 total 20
 2nd start stop total
 Data: 1st Leq 55.1 Lmax 78.1 Lmin 50.7 SEL 85.8
 2nd Leq Lmax Lmin SEL

Traffic Data

Roadway#1 <u>95 N</u>	Roadway#2 <u>95 S</u>	Roadway#3 <u> </u>	Roadway#4 <u> </u>
Direction <u>←</u>	Direction <u>→</u>	Direction <u> </u>	Direction <u> </u>
1st 2nd	1st 2nd	1st 2nd	1st 2nd
auto <u>511</u>	auto <u>304</u>	auto <u> </u>	auto <u> </u>
med. trk. <u>14</u>	med. trk. <u>4</u>	med. trk. <u> </u>	med. trk. <u> </u>
hvy trk. <u>12</u>	hvy trk. <u>14</u>	hvy trk. <u> </u>	hvy trk. <u> </u>
bus <u> </u>	bus <u> </u>	bus <u> </u>	bus <u> </u>
motorcycle <u> </u>	motorcycle <u> </u>	motorcycle <u> </u>	motorcycle <u> </u>

NOTES: Can't see 95. Dog barking 30 sec. (MAX)

SITE SKETCH



Highway Noise Monitoring Sheet

DATE: 2-20-04

PROJECT: SCANDER FALLS BRIDGE

JOB # 42444-001

SITE ID R5-4



ADDRESS: 1423 wheelshunt

Meter Storage # 8

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other

Measurement Data

SLM Calibration before 114.1 after 114.1 Photograph #'s _____

Weather: temperature 40° wind speed 0-3 cloud cover 0/c

Time: 1st start _____ stop _____ total _____

2nd start 11:25 stop 11:45 total 20

Data: 1st Leq 53.3 Lmax 61.3 Lmin 48.2 SEL 84.1

2nd Leq _____ Lmax _____ Lmin _____ SEL _____

Traffic Data

Roadway#1 20 mph Direction NB

	1st	2nd
auto	<u>393</u>	
med. trk.	<u>14</u>	
hvy trk.	<u>30</u>	
bus		
motorcycle		

Roadway#2 Direction SB

	1st	2nd
auto	<u>334</u>	
med. trk.	<u>19</u>	
hvy trk.	<u>54</u>	
bus		
motorcycle		

Roadway#3 Direction _____

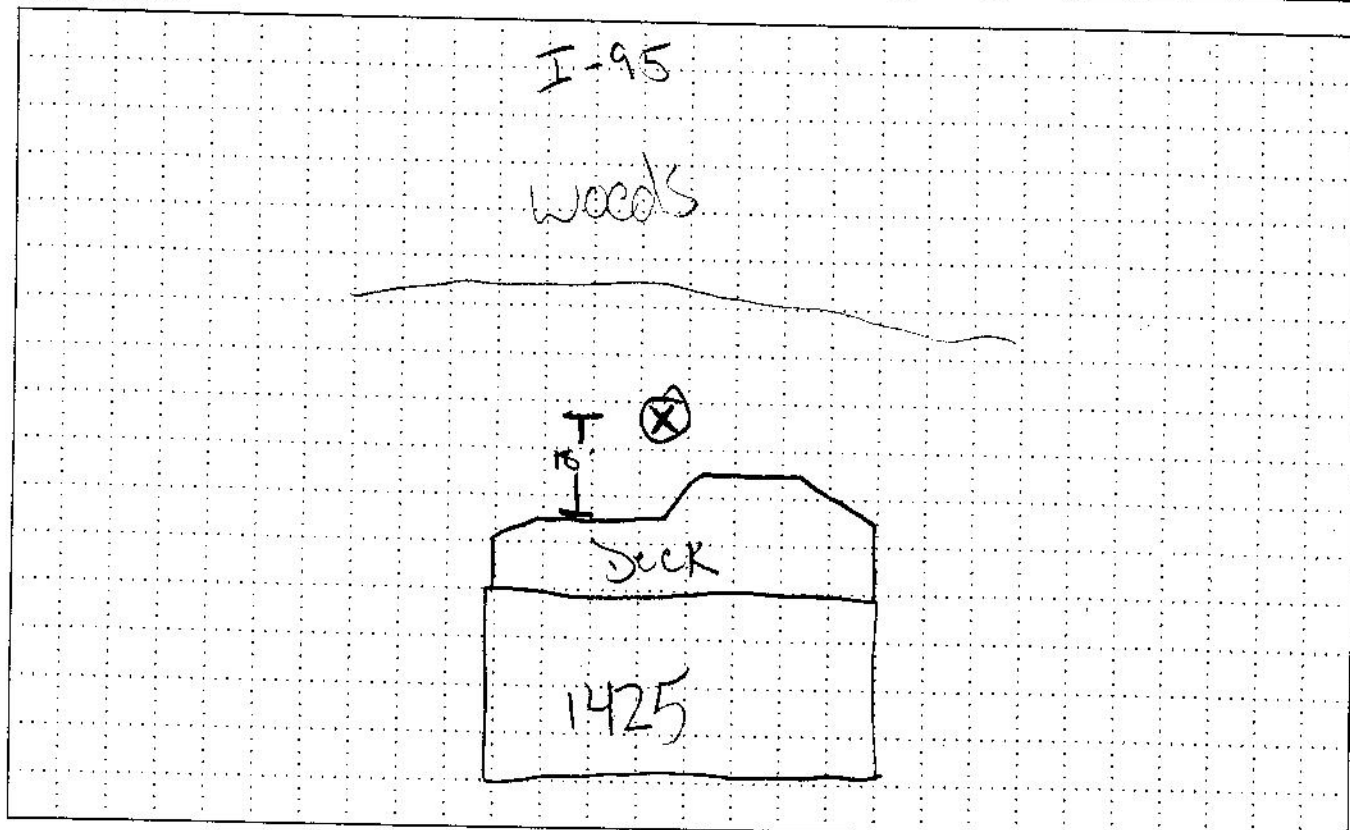
	1st	2nd
auto		
med. trk.		
hvy trk.		
bus		
motorcycle		

Roadway#4 Direction _____

	1st	2nd
auto		
med. trk.		
hvy trk.		
bus		
motorcycle		

NOTES:

SITE SKETCH



Highway Noise Monitoring Sheet

DATE: 4-6-04
 PROJECT: Saddle Falls
 JOB #: 42444.001
 SITE ID: 26-1



ADDRESS: 1660
Quarry Rd
 Meter Storage # 9

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other

Measurement Data

Photograph #'s _____

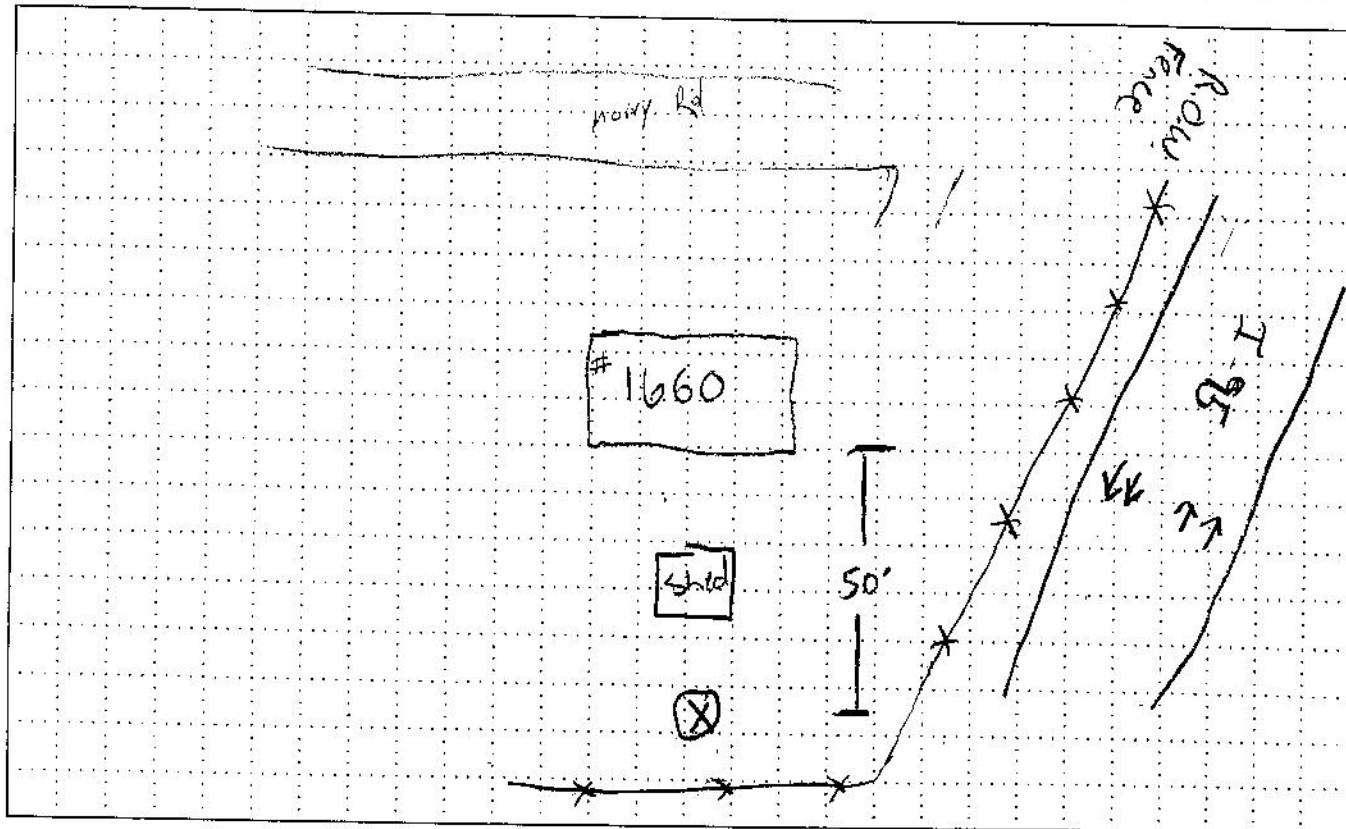
SLM Calibration before 114.1 after 114.1
 Weather: temperature 47 wind speed 5-15 cloud cover 0%
 Time: 1st start 4:50 stop 5:10 total 20 mins.
 2nd start _____ stop _____ total _____
 Data: 1st Leq 65.5 Lmax 73.1 Lmin 56.8 SEL 96.3
 2nd Leq _____ Lmax _____ Lmin _____ SEL _____

Traffic Data

95 * 10 min *
 Roadway#1 Direction ← SB
 auto 1st 634 2nd _____
 med. trk. 1st 8 2nd _____
 hvy trk. 1st 18 2nd _____
 bus 1st _____ 2nd _____
 motorcycle 1st _____ 2nd _____
 Roadway#2 Direction → NB
 auto 1st 288 2nd _____
 med. trk. 1st 3 2nd _____
 hvy trk. 1st 7 2nd _____
 bus 1st 0 2nd _____
 motorcycle 1st 1 2nd _____
 Roadway#3 Direction _____
 auto 1st _____ 2nd _____
 med. trk. 1st _____ 2nd _____
 hvy trk. 1st _____ 2nd _____
 bus 1st _____ 2nd _____
 motorcycle 1st _____ 2nd _____
 Roadway#4 Direction _____
 auto 1st _____ 2nd _____
 med. trk. 1st _____ 2nd _____
 hvy trk. 1st _____ 2nd _____
 bus 1st _____ 2nd _____
 motorcycle 1st _____ 2nd _____

NOTES: Wind gusts. Can see SB traffic, NB trucks

SITE SKETCH



Highway Noise Monitoring Sheet

DATE: 4/8/04
 PROJECT: Scudder
 JOB #: 42444.001
 SITE ID: R6-2



ADDRESS: Lower Mayfield
TWSD Rec Park

Meter Storage # 23

TYPE ☐ Residential ☐ Commercial ☐ Religion ☐ Educational ☒ Other field

Measurement Data

Photograph #'s _____

SLM Calibration before 114.0 after _____
 Weather: temperature 50° wind speed 0-3 cloud cover 10%
 Time: 1st start 10:22 stop 10:42 total 20
 2nd start _____ stop _____ total _____
 Data: 1st Leq 59.3 Lmax 67.4 Lmin 50.4 SEL 90.1
 2nd Leq _____ Lmax _____ Lmin _____ SEL _____

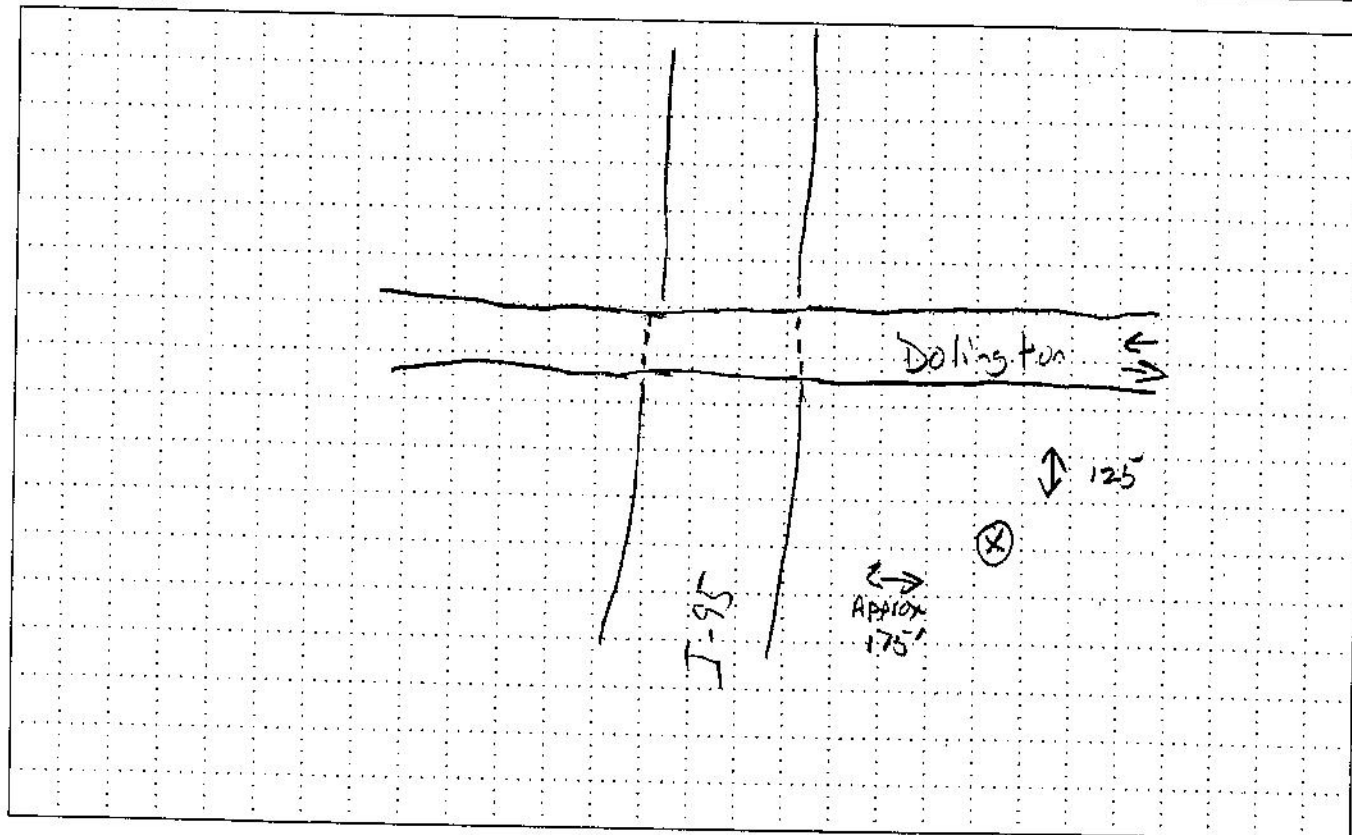
Traffic Data

* 10 min *				* 20 min *			
Roadway#1	Direction	1st	2nd	Roadway#2	Direction	1st	2nd
<u>95</u>	<u>→ NG</u>			<u>95</u>	<u>← SB</u>		
auto		<u>240</u>		auto		<u>212</u>	
med. trk.		<u>10</u>		med. trk.		<u>11</u>	
hvy trk.		<u>20</u>		hvy trk.		<u>26</u>	
bus		<u>1</u>		bus			
motorcycle				motorcycle			

Roadway#3	Direction	1st	2nd	Roadway#4	Direction	1st	2nd
<u>Dollington</u>	<u>←</u>			<u>Dollington</u>	<u>→</u>		
auto		<u>19</u>		auto		<u>18</u>	
med. trk.		<u>1</u>		med. trk.		<u>1</u>	
hvy trk.		<u>1</u>		hvy trk.		<u>0</u>	
bus				bus			
motorcycle				motorcycle			

NOTES: Can see tops of HT's on 95.

SITE SKETCH



Highway Noise Monitoring Sheet

DATE: 4/7/04
 PROJECT: Sudden Falls
 JOB #: 42444.001
 SITE ID: R6-3



ADDRESS: 1524 Miller Place (Rear)

Meter Storage # 15

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other

Measurement Data

Photograph #'s _____

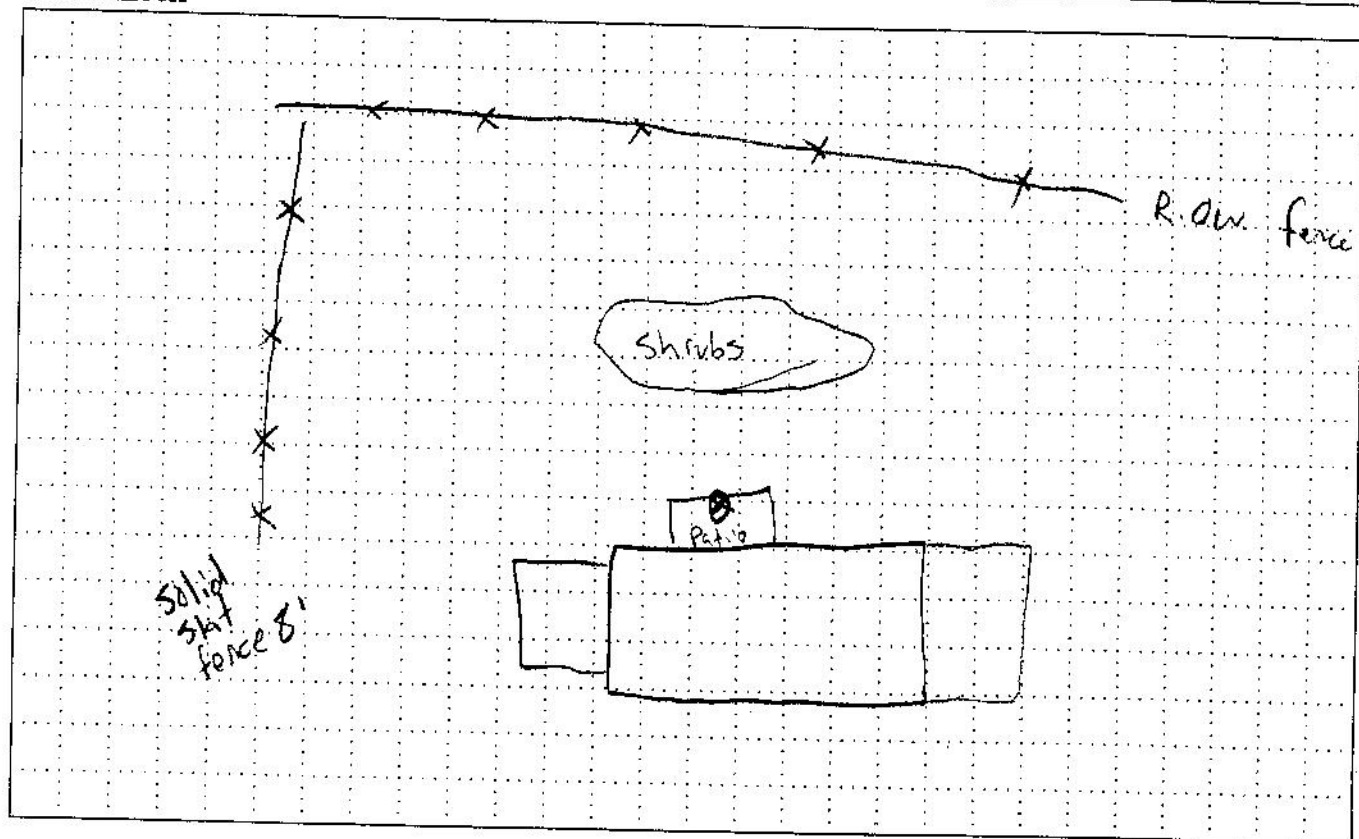
SLM Calibration before 114.1 after _____
 Weather: temperature 52° wind speed 0-7 cloud cover 10%
 Time: 1st start 11:12 stop 11:32 total 20 min
 2nd start _____ stop _____ total _____
 Data: 1st Leq 60.7 Lmax 69.5 Lmin 52.5 SEL 91.5
 2nd Leq _____ Lmax _____ Lmin _____ SEL _____

Traffic Data

Roadway#1	Direction	1st	2nd	Roadway#2	Direction	1st	2nd	Roadway#3	Direction	1st	2nd	Roadway#4	Direction	1st	2nd
<u>95</u>	<u>NB</u>			<u>95</u>	<u>SB</u>										
auto		<u>316</u>		auto		<u>413</u>		auto				auto			
med. trk.		<u>23</u>		med. trk.		<u>23</u>		med. trk.				med. trk.			
hvy trk.		<u>31</u>		hvy trk.		<u>98</u>		hvy trk.				hvy trk.			
bus				bus		<u>1</u>		bus				bus			
motorcycle				motorcycle				motorcycle				motorcycle			

NOTES: 12' mph Gusts - meter is 25' from structure on patio. Truck banging.

SITE SKETCH



Highway Noise Monitoring Sheet

DATE: 2/20/04
 PROJECT: Scudder Falls
 JOB #: 42444-001
 SITE ID: B6-4



ADDRESS: 1330 Heller Dr.

Meter Storage # 25

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other

Measurement Data

Photograph #'s

SLM Calibration before 94.0 after

Weather: temperature wind speed cloud cover 100%

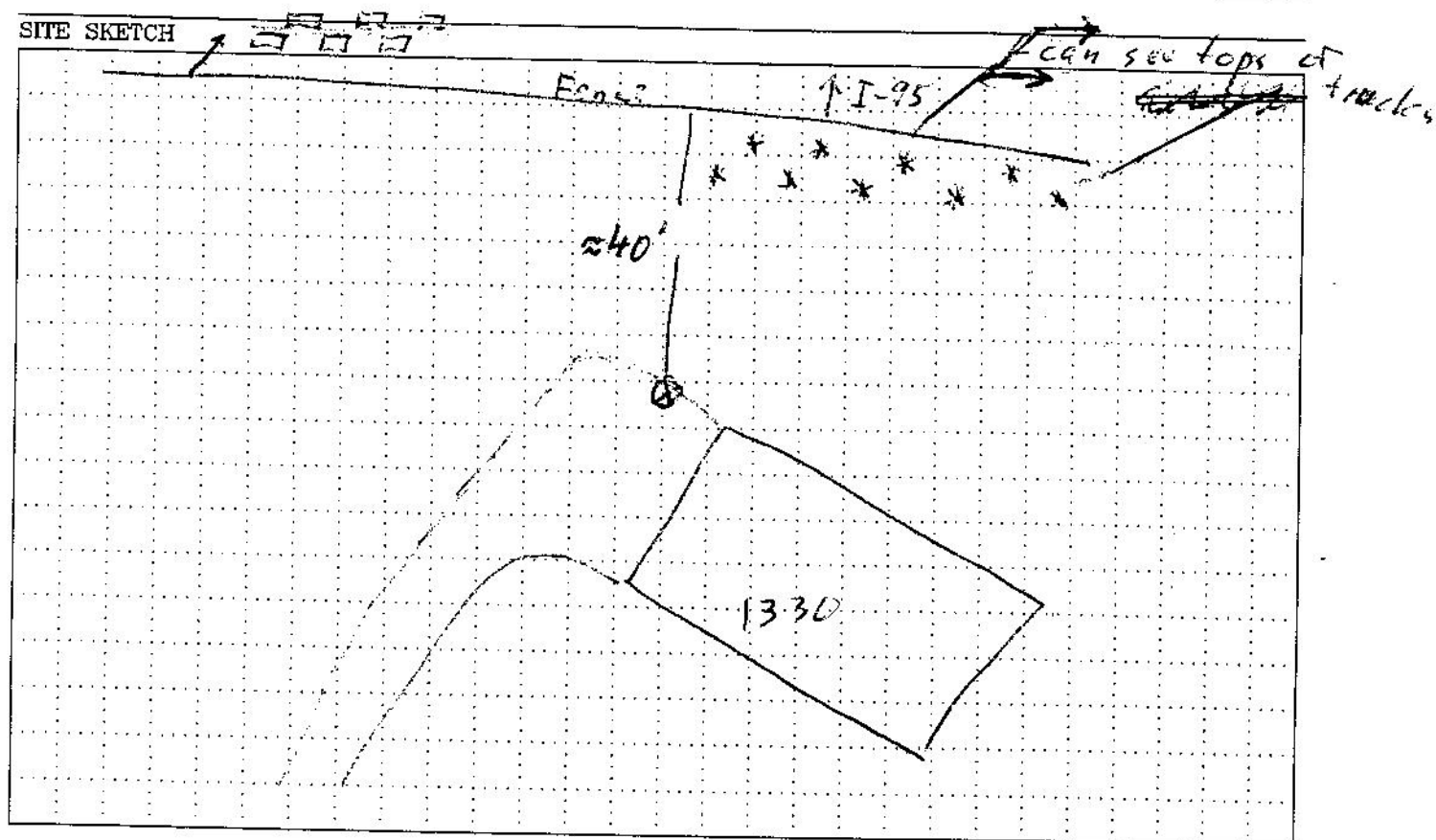
Time: 1st start 8:30 AM stop 8:50 AM total
 2nd start stop total
 Data: 1st Leq 64.5 Lmax 72.4 Lmin 55.9 SEL 95.3
 2nd Leq Lmax Lmin SEL

Traffic Data (10min)

Roadway#1	Direction	1st	2nd	auto	med. trk.	hvy trk.	bus	motorcycle
<u>I-95</u>	<u>NB</u>	<u>748</u>		<u>9</u>		<u>14</u>		
Roadway#2	Direction	1st	2nd	auto	med. trk.	hvy trk.	bus	motorcycle
<u>I-95</u>	<u>SB</u>	<u>206</u>		<u>5</u>		<u>14</u>	<u>1</u>	
Roadway#3	Direction	1st	2nd	auto	med. trk.	hvy trk.	bus	motorcycle
Roadway#4	Direction	1st	2nd	auto	med. trk.	hvy trk.	bus	motorcycle

NOTES: Slatted Fence 10' high along back of property - noise comes through. Trees/wooded area between Fence & I-95. Fence breaks L of S.

SITE SKETCH



Highway Noise Monitoring Sheet

DATE: 8-20-04

ADDRESS: 1350 Heller

PROJECT: SWANER FALLS BRIDGE

JOB # 42444-001

SITE ID R6-5



Meter Storage # 5

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other

Measurement Data

Photograph #'s _____

SLM Calibration before 114.0 after _____
 Weather: temperature 34° wind speed 0.3 cloud cover overcast
 Time: 1st start 0830 stop 0850 total 20
 2nd start _____ stop _____ total _____
 Data: 1st Leq 57.2 Lmax 67.3 Lmin 52.7 SEL 88.0
 2nd Leq _____ Lmax _____ Lmin _____ SEL _____

Traffic Data

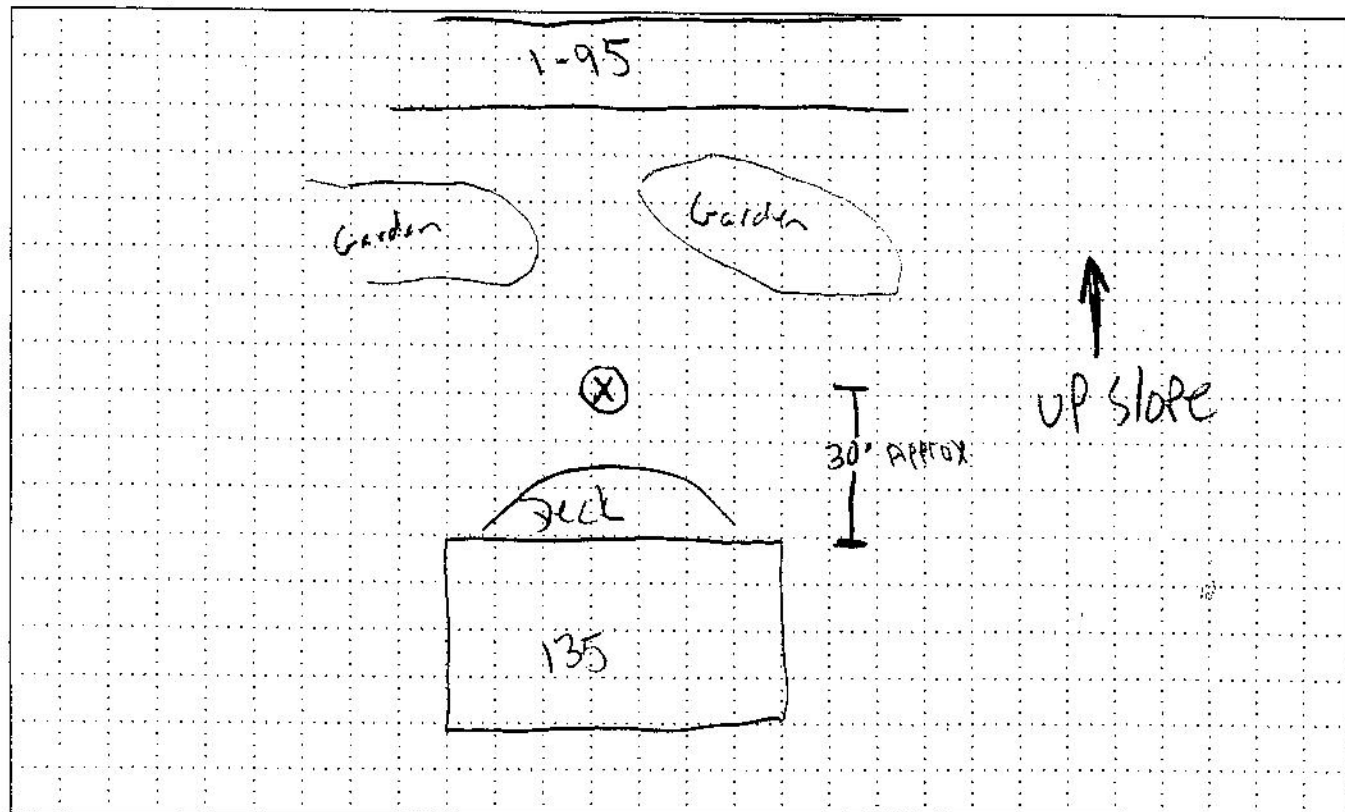
(10 min)

(10 min)

Roadway#1	Direction	1st	2nd	Roadway#2	Direction	1st	2nd	Roadway#3	Direction	1st	2nd	Roadway#4	Direction	1st	2nd
<u>I-95</u>	<u>NB</u>			<u>I-95</u>	<u>SB</u>										
auto		<u>448</u>		auto		<u>206</u>		auto				auto			
med. trk.		<u>9</u>		med. trk.		<u>5</u>		med. trk.				med. trk.			
hvy trk.		<u>14</u>		hvy trk.		<u>14</u>		hvy trk.				hvy trk.			
bus				bus		<u>1</u>		bus				bus			
motorcycle				motorcycle				motorcycle				motorcycle			

NOTES: 8' Wood slat fence w 4x4 hole at end of properties
D.O.T check point or rest stop on other side of land

SITE SKETCH



Highway Noise Monitoring Sheet

DATE: 4-6-04

PROJECT: Southern Falls DTBC

JOB # 42444-001

SITE ID B7-1



Gannett
Fleming, Inc.

ADDRESS: _____

42- Hilltop Rd (N)

Meter Storage # 8

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other _____

Measurement Data

Photograph #'s _____

SLM Calibration before 114.1 after _____

Weather: temperature 45° wind speed 10-20 cloud cover 0

Time: 1st start 4:12 stop 4:32 total 20

2nd start _____ stop _____ total _____

Data: 1st Leq 70.3 Lmax 81.9 Lmin 56.6 SEL 101.

2nd Leq _____ Lmax _____ Lmin _____ SEL _____

Traffic Data

Roadway#1 95 N

Direction ←

	1st	2nd
auto	<u>530</u>	
med. trk.	<u>6</u>	
hvy trk.	<u>19</u>	
bus		
motorcycle		

Roadway#2 95 S

Direction →

	1st	2nd
auto	<u>912</u>	
med. trk.	<u>14</u>	
hvy trk.	<u>28</u>	
bus		
motorcycle		

Roadway#3 _____

Direction _____

	1st	2nd
auto		
med. trk.		
hvy trk.		
bus		
motorcycle		

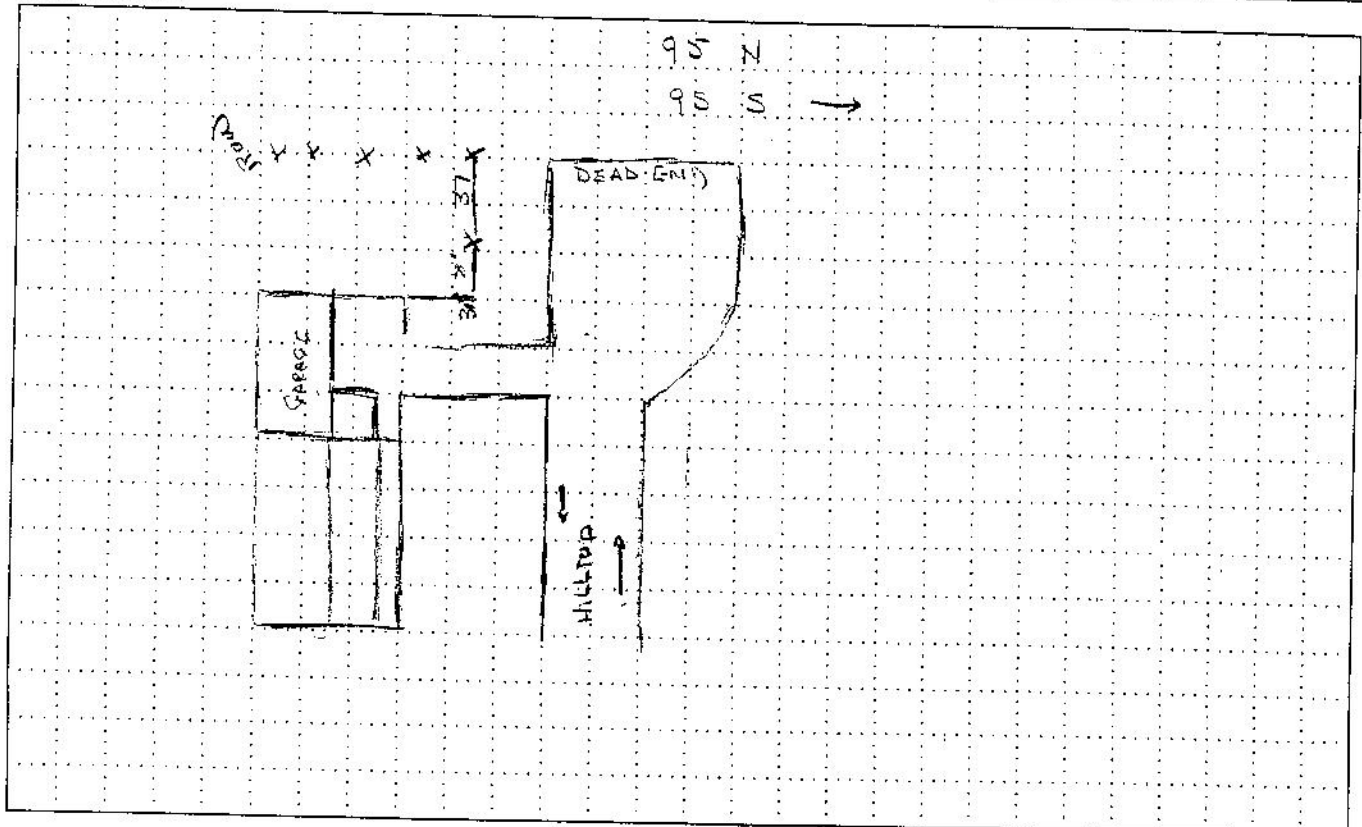
Roadway#4 _____

Direction _____

	1st	2nd
auto		
med. trk.		
hvy trk.		
bus		
motorcycle		

NOTES: _____

SITE SKETCH



Highway Noise Monitoring Sheet

DATE: 2-19-04
 PROJECT: BUDDER FALLS
 JOB #: 42144
 SITE ID: B7-2



ADDRESS: 1398 DOLLINGTON
 Meter Storage # _____

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other _____

Measurement Data

Photograph #'s _____

SLM Calibration before 114.1 after _____
 Weather: temperature 32° wind speed 4 mph 8-10 gusts cloud cover 50%
 Time: 1st start 12:18 stop 12:38 total 20 min Rion #1
 2nd start _____ stop _____ total _____
 Data: 1st Leq 62.5 Lmax 73.4 Lmin 53.3 SEL ? mem #1
 2nd Leq _____ Lmax _____ Lmin _____ SEL _____

Traffic Data

Roadway#1	Direction	1st	2nd	auto	med. trk.	hvy trk.	bus	motorcycle
95	NB	425		19	47	0	1	

Roadway#2	Direction	1st	2nd	auto	med. trk.	hvy trk.	bus	motorcycle
95	SB	331	15	32	0	1		

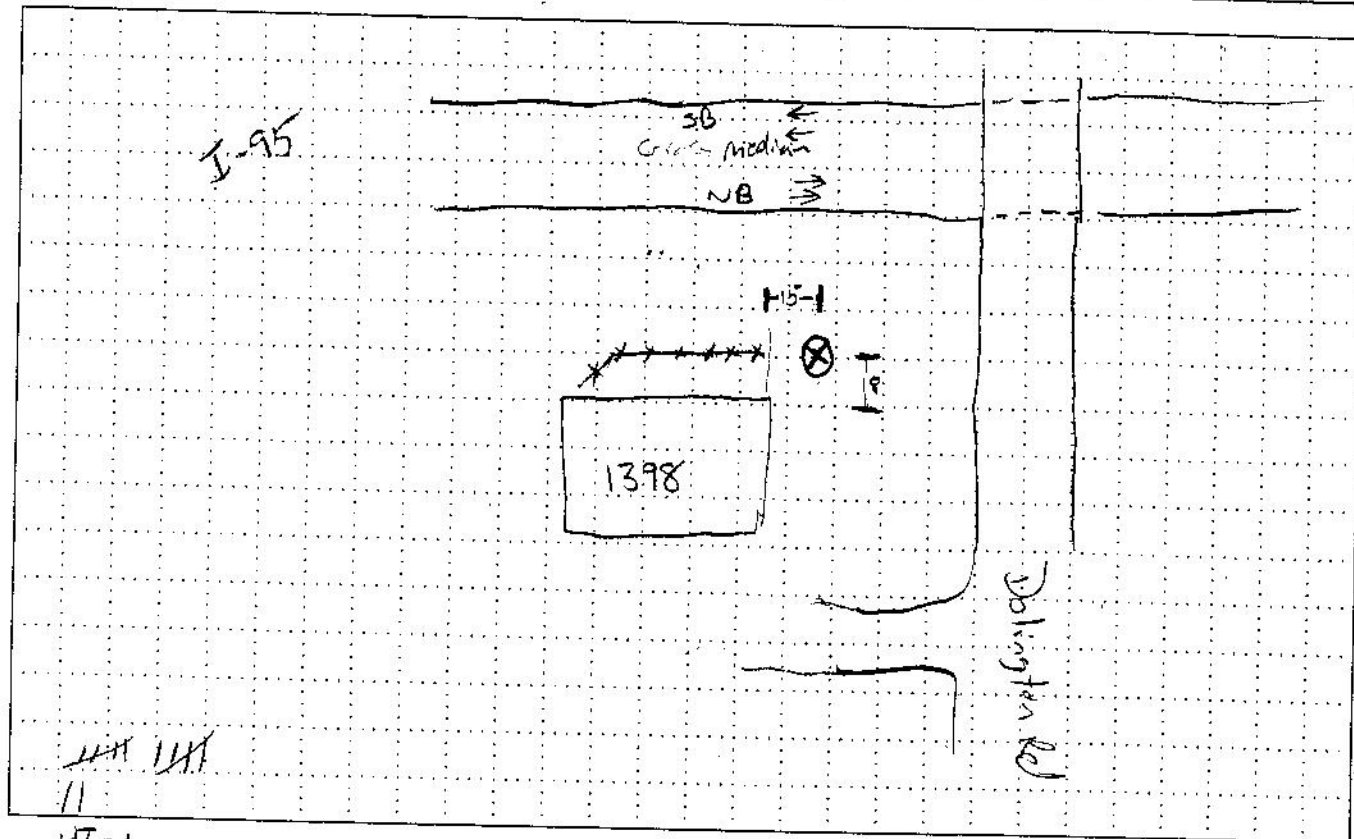
Roadway#3	Direction	1st	2nd	auto	med. trk.	hvy trk.	bus	motorcycle
Dollington	Both	12		0	1	0	0	

Roadway#4	Direction	1st	2nd	auto	med. trk.	hvy trk.	bus	motorcycle

NOTES: HT Passes = 66-68

Airplane - 1

SITE SKETCH



DATE: 2/19/04
 PROJECT: Scudder Falls
 JOB #: 42444-001
 SITE ID: B7-3



ADDRESS: 1513 Pownall Drive

Meter Storage # _____

TYPE ☐ Residential ☒ Commercial ☐ Religion ☐ Educational ☐ Other _____

Measurement Data

SLM Calibration before 94.0 after _____
 Weather: temperature _____ wind speed _____ cloud cover 50%
 Time: 1st start 12:15 PM stop 12:35 PM total 20 min
 2nd start _____ stop _____ total _____
 Data: 1st Leq 58.1 Lmax 70.3 Lmin 49.7 SEL 88.9
 2nd Leq _____ Lmax _____ Lmin _____ SEL _____

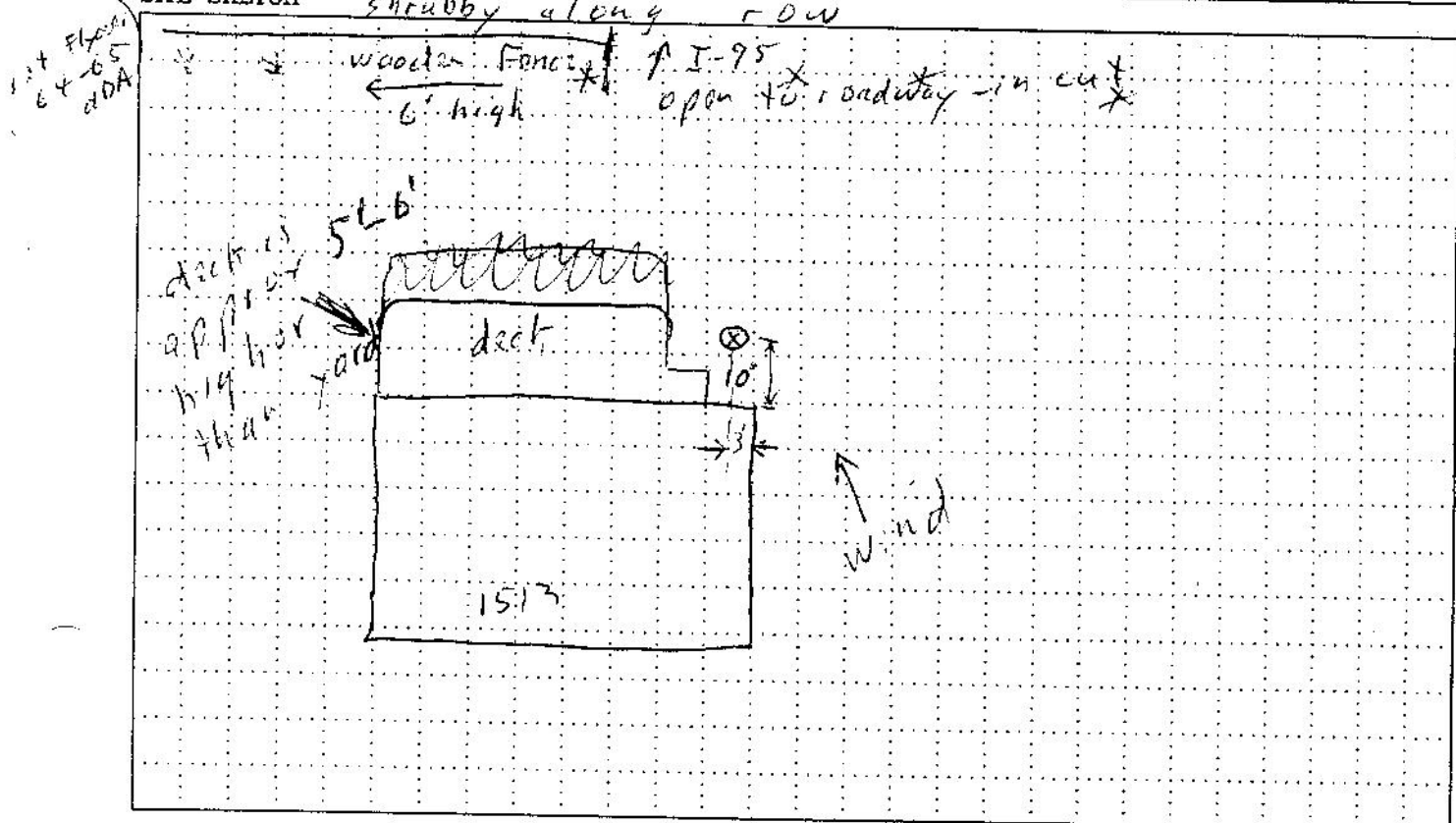
Traffic Data

Roadway#1	Roadway#2	Roadway#3	Roadway#4
<u>I-95</u>	<u>I-95</u>	<u>Dollington</u>	
Direction <u>NB</u>	Direction <u>SB</u>	Direction <u>Both</u>	Direction _____
1st 2nd	1st 2nd	1st 2nd	1st 2nd
auto <u>425</u>	auto <u>331</u>	auto <u>12</u>	auto _____
med. trk. <u>19</u>	med. trk. <u>15</u>	med. trk. <u>0</u>	med. trk. _____
hvy trk. <u>47</u>	hvy trk. <u>32</u>	hvy trk. <u>1</u>	hvy trk. _____
bus <u>0</u>	bus <u>0</u>	bus <u>0</u>	bus _____
motorcycle <u>1</u>	motorcycle <u>1</u>	motorcycle <u>0</u>	motorcycle _____

SEE B7-2 TRAFFIC

NOTES: This site is at merge lane to s.b. I-95 from rail area. Can't see traffic from yard. From 1/2 way up steps to deck, the N.B. lanes traffic can be seen. From deck can see trucker S.B.

SITE SKETCH shrubby along row



Highway Noise Monitoring Sheet

DATE: 2/20/04
 PROJECT: Scudder Falls
 JOB #: 42444-001
 SITE ID: B7-4



ADDRESS: 1445
BARTLETT CIRCLE
 Meter Storage # _____

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other _____

Measurement Data

Photograph #'s _____

SILM Calibration before 94.0 after _____

Weather: temperature _____ wind speed _____ cloud cover 90% hazy

Time:	1st	start	<u>11:25 AM</u>	stop	_____	total	_____
	2nd	start	_____	stop	_____	total	_____
Data:	1st	Leq	_____	Lmax	_____	Lmin	_____ SEL _____
	2nd	Leq	_____	Lmax	_____	Lmin	_____ SEL _____

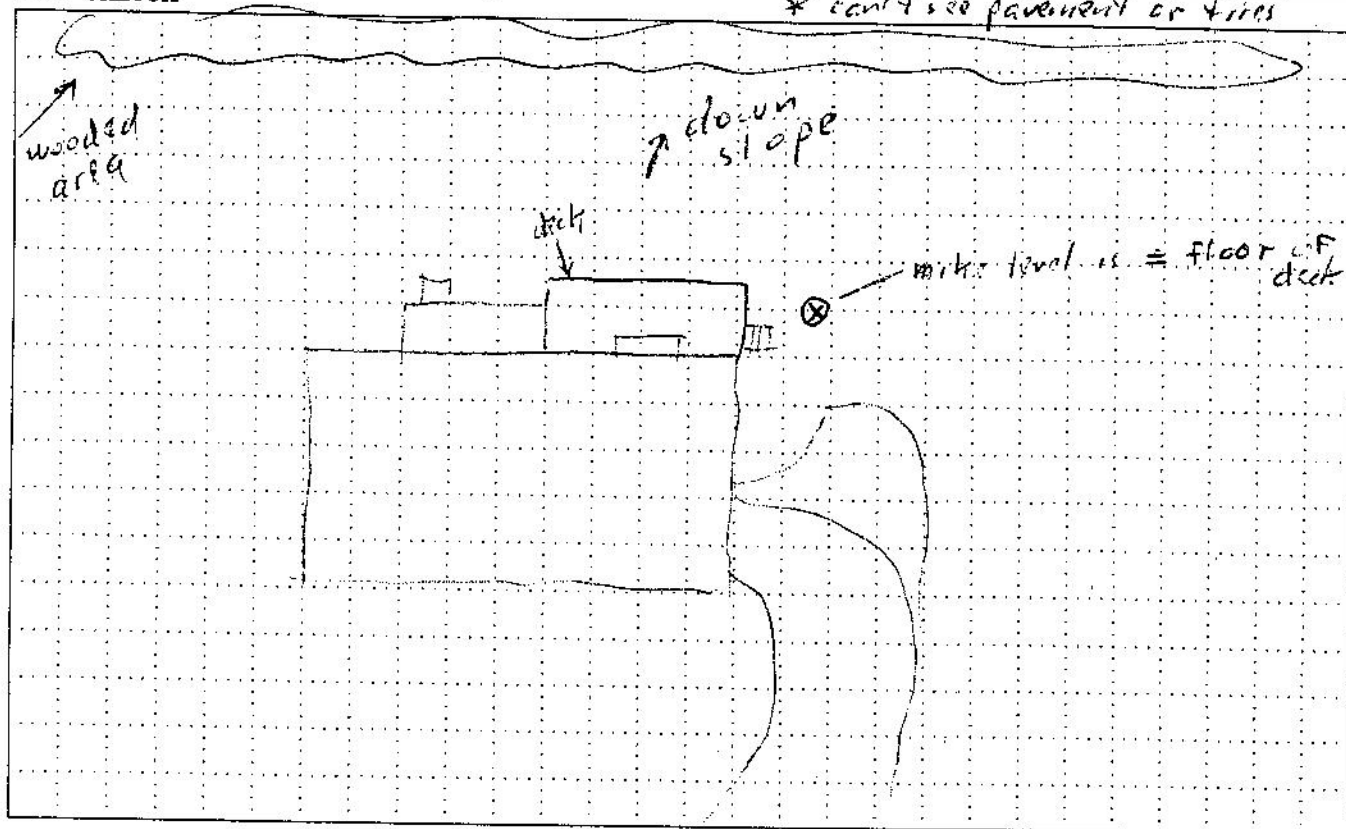
Traffic Data

Roadway#1	Roadway#2	Roadway#3	Roadway#4
Direction	Direction	Direction	Direction
1st	2nd	1st	2nd
auto		auto	
med. trk.		med. trk.	
hvy trk.		hvy trk.	
bus		bus	
motorcycle		motorcycle	

NOTES: Full view of rest area - several trucks parked - can't hear idling - noise is from I-95 traffic - Full view of N.B. traffic* - parked trucks block ± 10-15% of viewing angle.

SITE SKETCH

* can't see pavement or tires



Highway Noise Monitoring Sheet

DATE: 4/6/04
 PROJECT: Scudder Falls I-95
 JOB #: 42444-001
 SITE ID: R7-4



ADDRESS: 1445
BARLETT CIRCLE
 Meter Storage # _____

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other _____

Measurement Data

Photograph #'s _____

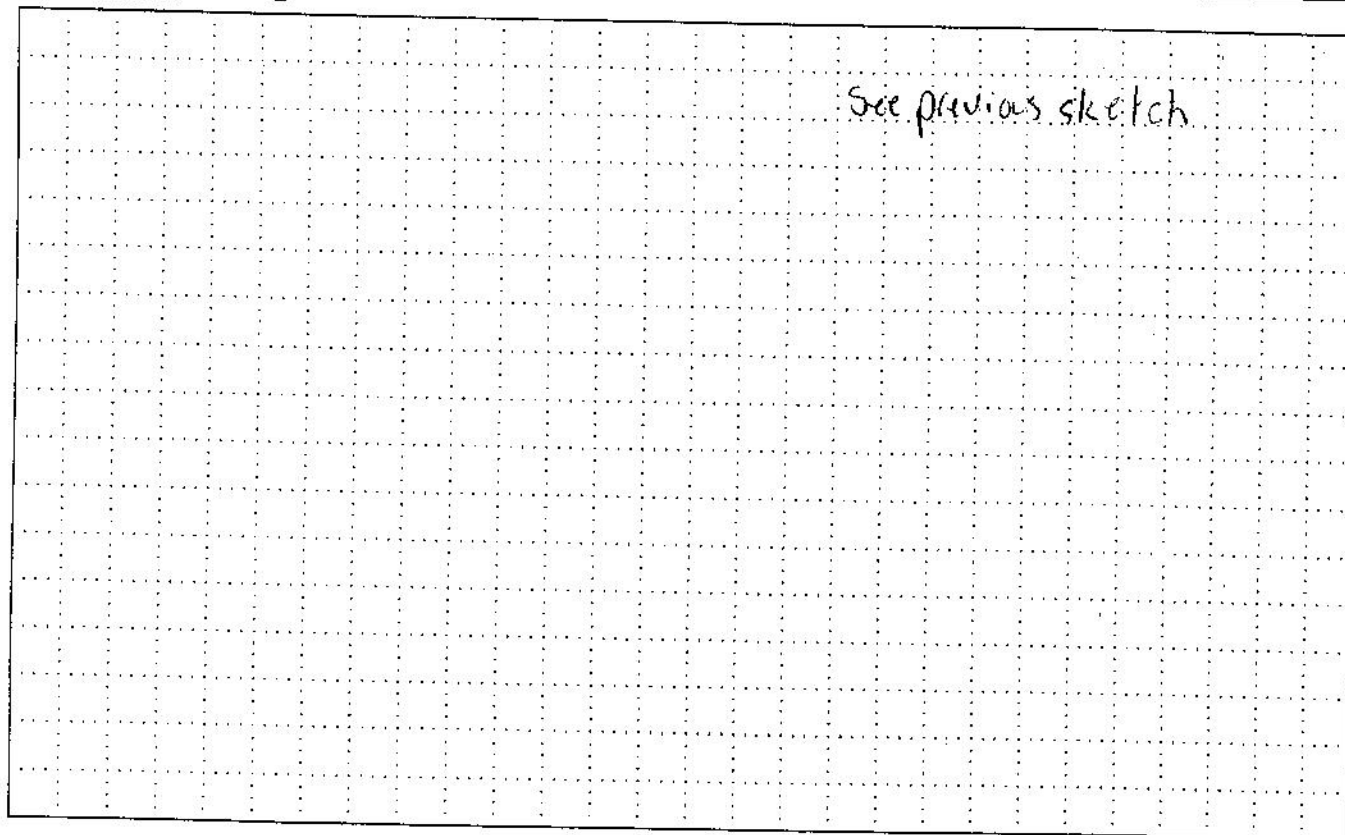
SLM Calibration before 114.1 after _____
 Weather: temperature 41.2 wind speed 0-20 cloud cover 0%
 Time: 1st start 3:27 stop 3:47 total 20
 2nd start _____ stop _____ total _____
 Data: 1st Leq 56.6 Lmax 66.6 Lmin 51.1 SEL 87.4
 2nd Leq _____ Lmax _____ Lmin _____ SEL _____

Traffic Data

Roadway#1	Direction	1st	2nd	Roadway#2	Direction	1st	2nd	Roadway#3	Direction	1st	2nd	Roadway#4	Direction	1st	2nd
<u>NB</u>	<u>←</u>			<u>SB</u>	<u>→</u>										
auto		<u>545</u>		auto		<u>781</u>		auto				auto			
med. trk.		<u>12</u>		med. trk.		<u>24</u>		med. trk.				med. trk.			
hvy trk.		<u>20</u>		hvy trk.		<u>37</u>		hvy trk.				hvy trk.			
bus				bus		<u>0</u>		bus				bus			
motorcycle		<u>2</u>		motorcycle		<u>3</u>		motorcycle				motorcycle			

NOTES: Truck check point across from house. - Air brake tests making noise.
High wind gusts.
Tree grinder in distance - Low freq.

SITE SKETCH



Highway Noise Monitoring Sheet

DATE: 4-6-04

PROJECT: SCODDER FALLS-DJTB

JOB # 42444.001

SITE ID B8-1



ADDRESS: _____

37 UPPER HILLTOP LN

Meter Storage # #2

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other _____

Measurement Data

Photograph #'s _____

SLM Calibration before 114 after _____

Weather: temperature 37.0 wind speed 5-15 MPH cloud cover 0

Time: 1st start 11:07 stop 11:27 total 20

2nd start _____ stop _____ total _____

Data: 1st Leq 68.6 Lmax 84.5 Lmin 50.5 SEL 99.4

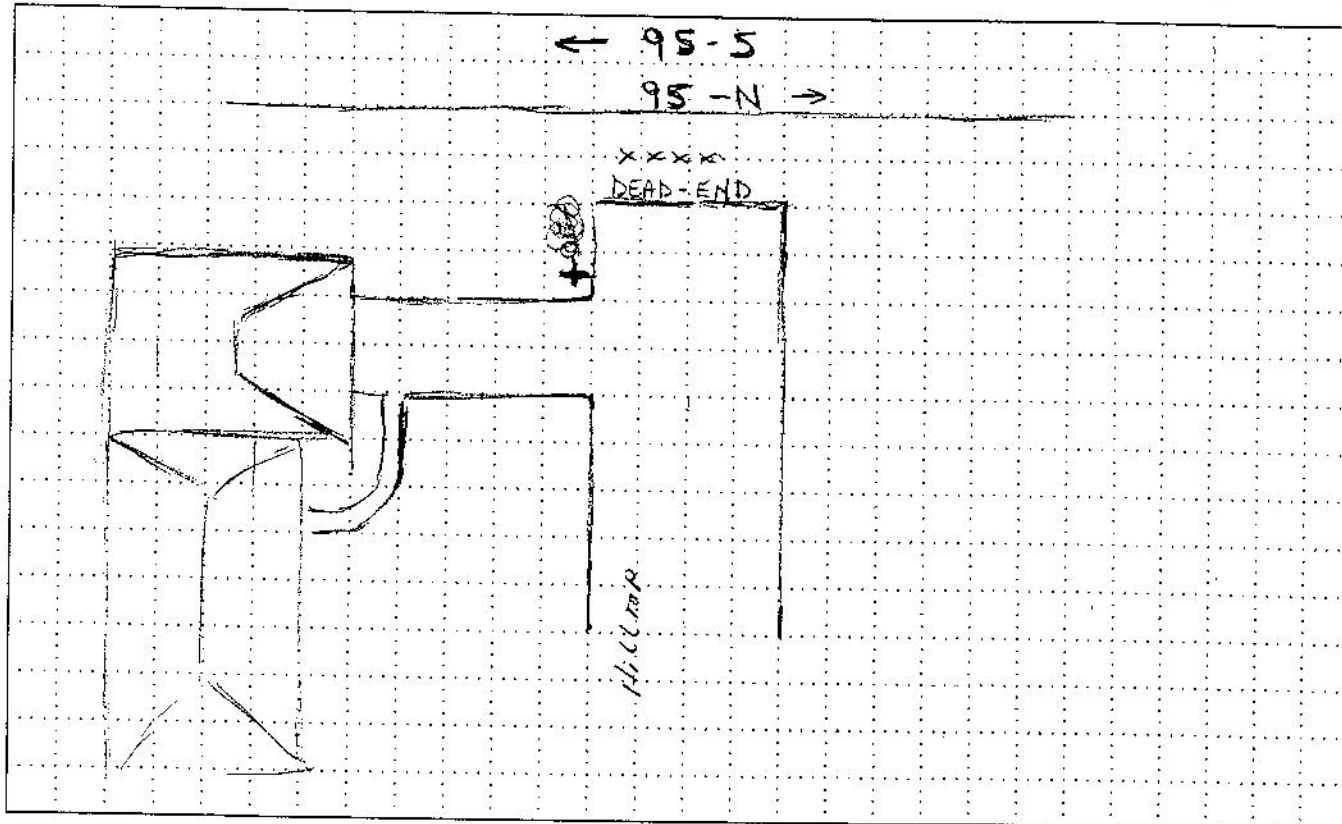
2nd Leq _____ Lmax _____ Lmin _____ SEL _____

Traffic Data

Roadway#1	Direction	1st	2nd	Roadway#2	Direction	1st	2nd	Roadway#3	Direction	1st	2nd	Roadway#4	Direction	1st	2nd
	<u>NORTH</u>				<u>SOUTH</u>										
auto		<u>294</u>		auto		<u>374</u>		auto				auto			
med. trk.		<u>7</u>		med. trk.		<u>16</u>		med. trk.				med. trk.			
hvy trk.		<u>34</u>		hvy trk.		<u>67</u>		hvy trk.				hvy trk.			
bus				bus				bus				bus			
motorcycle				motorcycle				motorcycle				motorcycle			

NOTES:

SITE SKETCH



Highway Noise Monitoring Sheet

DATE: 2-20-04

PROJECT: SCUDDER FALLS BRIDGE

JOB # 42444-001

SITE ID B8-2



ADDRESS: _____

29 Concord

Meter Storage # 6

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other _____

Measurement Data

SLM Calibration before 114.0 after 114.0 Photograph #'s _____

Weather: temperature 38° wind speed 0-3 cloud cover 0/c

Time: 1st start 09:15 stop 09:35 total 20

2nd start _____ stop _____ total _____

Data: 1st Leq 59.6 Lmax 70.5 Lmin 50.9 SEL 90.3

2nd Leq _____ Lmax _____ Lmin _____ SEL _____

Traffic Data

Roadway#1 I-95 10 min Roadway#2 10 min I-95 Roadway#3 10 min Ramp SB on Roadway#4 _____

Direction ND Direction SB Direction _____ Direction _____

	1st	2nd		1st	2nd		1st	2nd		1st	2nd
auto	<u>240</u>		auto	<u>75</u>		auto	<u>54</u>		auto		
med. trk.	<u>7</u>		med. trk.	<u>8</u>		med. trk.			med. trk.		
hvy trk.	<u>12</u>		hvy trk.	<u>20</u>		hvy trk.			hvy trk.		
bus	<u>1</u>		bus			bus			bus		
motorcycle			motorcycle			motorcycle			motorcycle		

med. trk. 7 med. trk. 8 med. trk. _____ med. trk. _____

hvy trk. 12 hvy trk. 20 hvy trk. _____ hvy trk. _____

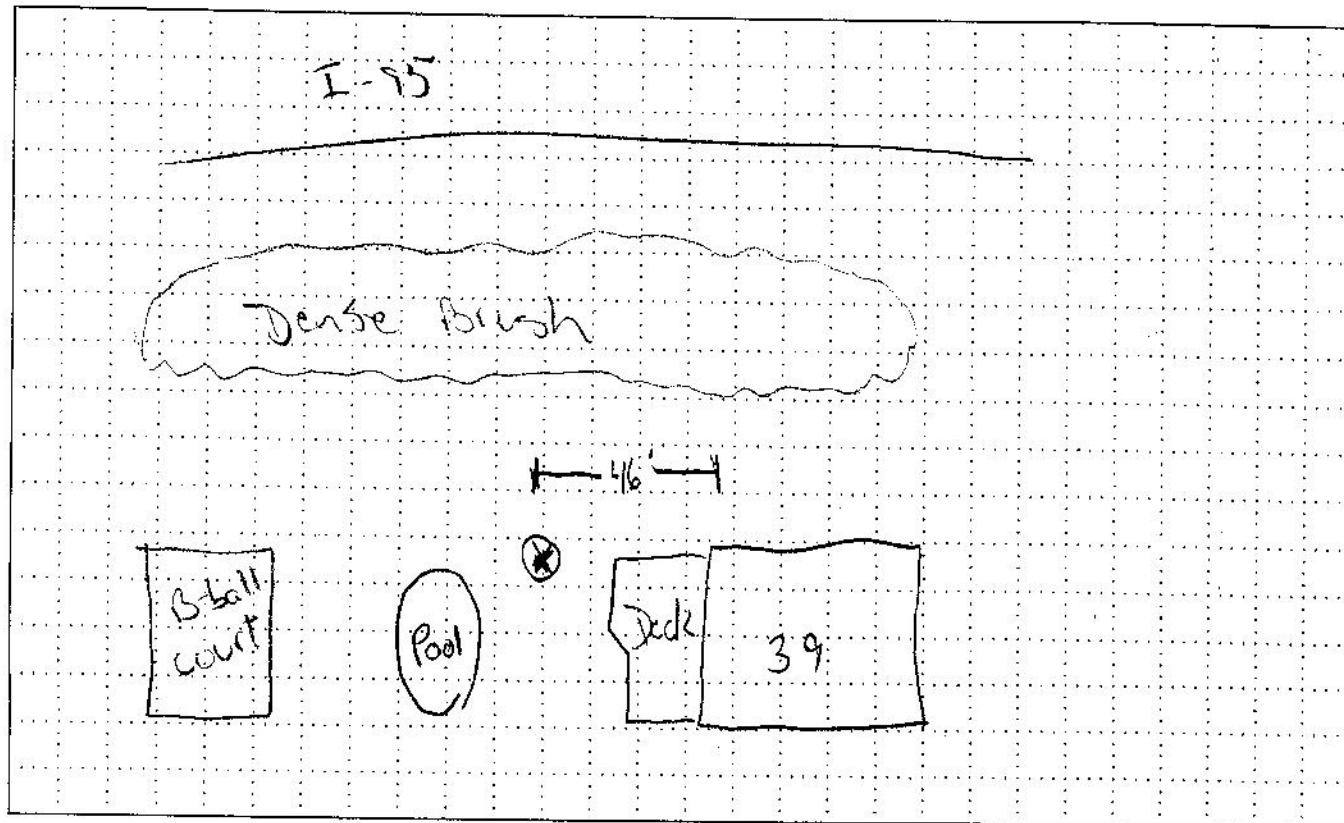
bus 1 bus _____ bus _____ bus _____

motorcycle _____ motorcycle _____ motorcycle _____ motorcycle _____

NOTES: Can't get to I-95. Its about 150-200' away?

HT Passes 61-64

SITE SKETCH



Highway Noise Monitoring Sheet

DATE: 4-6-04
 PROJECT: Sounder Fall DITBC
 JOB #: 42444.001
 SITE ID: B8-3



ADDRESS: 6 UPTON LANE (4) Real
 Meter Storage # _____

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other _____

Measurement Data

SLM Calibration before 114.2 after 114.2 Photograph #'s _____
 Weather: temperature 40 wind speed 0-7 cloud cover 0
 Time: 1st start 11:50 stop 12:10 total 20
 2nd start _____ stop _____ total _____
 Data: 1st Leq 56.4 Lmax 63.7 Lmin 49.2 SEL 50.1 87.2
 2nd Leq _____ Lmax _____ Lmin _____ SEL _____

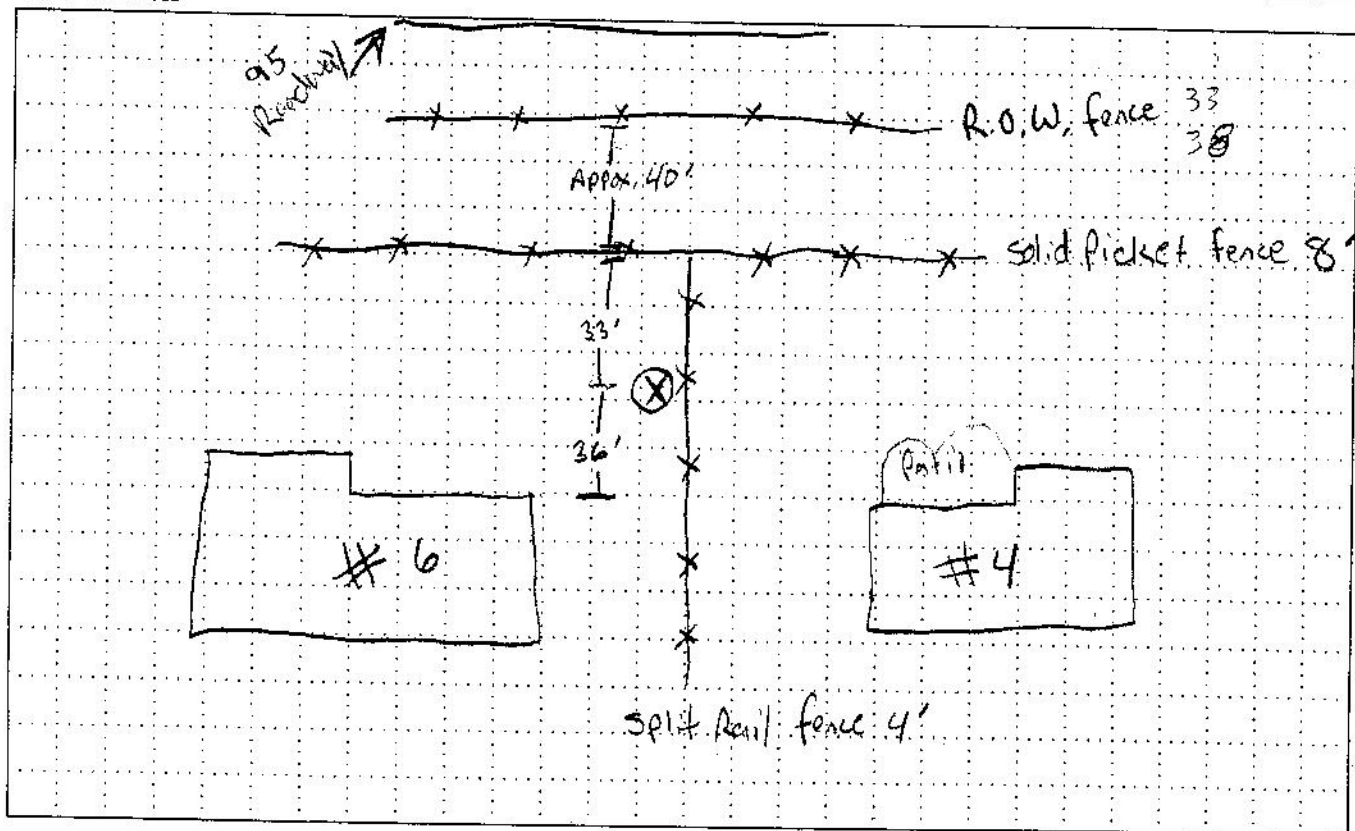
Traffic Data

* 10 min *

Roadway#1	Direction	1st	2nd	Roadway#2	Direction	1st	2nd	Roadway#3	Direction	1st	2nd	Roadway#4	Direction	1st	2nd
95	S ←	203		95	N →	178									
auto				auto				auto				auto			
med. trk.		11		med. trk.		11		med. trk.				med. trk.			
hvy trk.		30		hvy trk.		23		hvy trk.				hvy trk.			
bus				bus				bus				bus			
motorcycle		1		motorcycle				motorcycle				motorcycle			

NOTES: Sounds like an off ramp is nearby. Can't see road. - Jakes.

SITE SKETCH



Highway Noise Monitoring Sheet

DATE: 2/20/04
 PROJECT: Scudder Falls
 JOB #: 42444-001
 SITE ID: 78-4



ADDRESS: 14 Upton
 Meter Storage # _____

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other _____

Measurement Data

Photograph #'s _____

SLM Calibration before 94.1 after _____

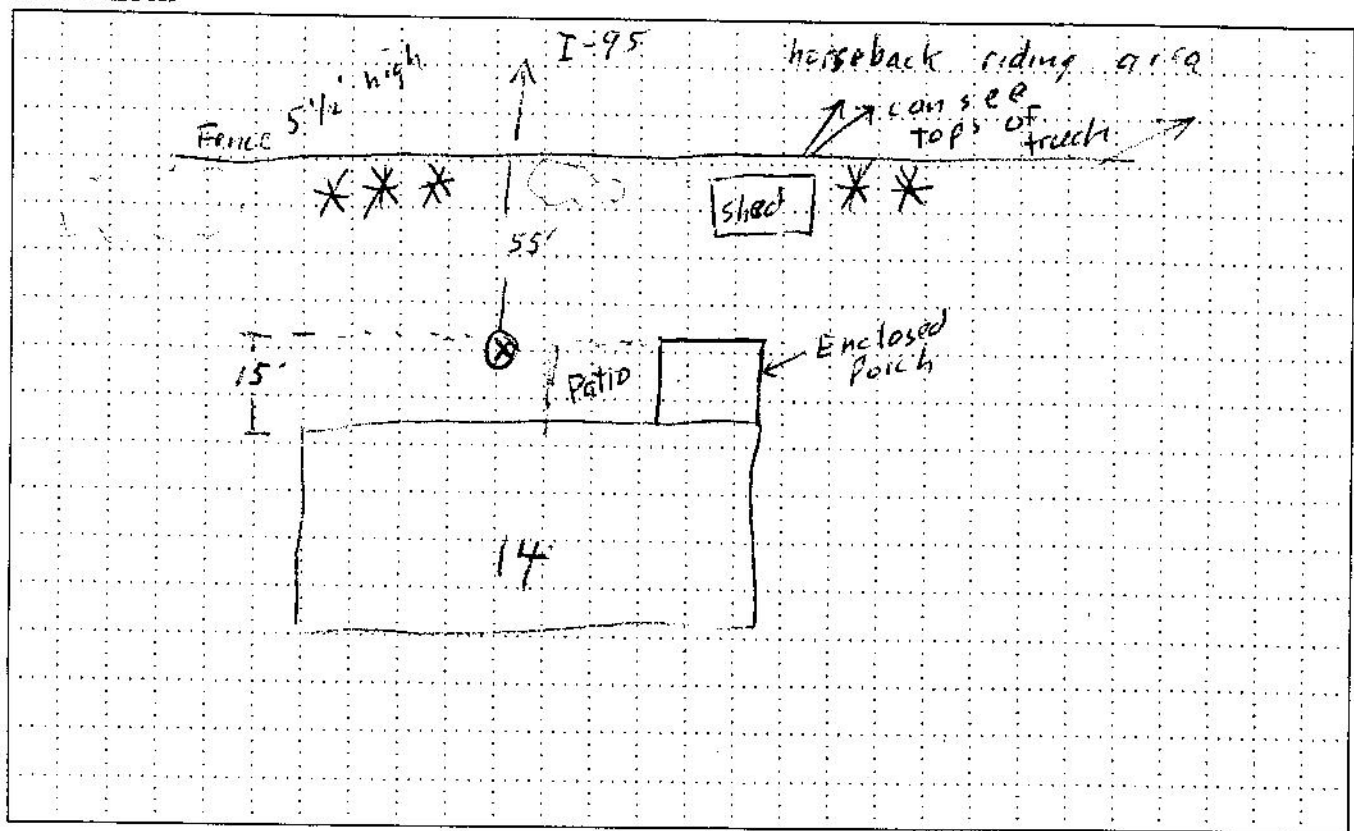
Weather: temperature _____ wind speed _____ cloud cover 100%
 Time: 1st start 9:15 AM stop 9:35 AM total 20 min
 2nd start _____ stop _____ total _____
 Data: 1st Leq 56.6 Lmax 66.5 Lmin 51.4 SEL 87.4
 2nd Leq _____ Lmax _____ Lmin _____ SEL _____

Traffic Data

10 MIN			10 MIN			10 MIN			10 MIN		
Roadway#1	<u>I-95</u>		Roadway#2	<u>I-95</u>		Roadway#3	<u>SB ON RAMP</u>		Roadway#4		
Direction	<u>NB</u>		Direction	<u>SB</u>		Direction			Direction		
auto	1st <u>240</u>	2nd	auto	1st <u>175</u>	2nd	auto	1st <u>54</u>	2nd	auto	1st	2nd
med. trk.	<u>7</u>		med. trk.	<u>8</u>		med. trk.			med. trk.		
hvy trk.	<u>12</u>		hvy trk.	<u>20</u>		hvy trk.			hvy trk.		
bus	<u>1</u>		bus			bus			bus		
motorcycle			motorcycle			motorcycle			motorcycle		

NOTES: I-95 not visible from fence - tops of s.b. trucks can be seen toward the N.E.

Airplanes - landing - overhead 11 65
 SITE SKETCH



Highway Noise Monitoring Sheet

DATE: 4-6-84
 PROJECT: SCODDER FALLS
 JOB #: 42444-1
 SITE ID: B9-1



ADDRESS: _____
NEXTEL TOWERS ID PA0016
205 TAYLORSVILLE RD
 Meter Storage # 46

TYPE ☐ Residential ☐ Commercial ☐ Religion ☐ Educational ☒ Other Field

Measurement Data

Photograph #'s _____

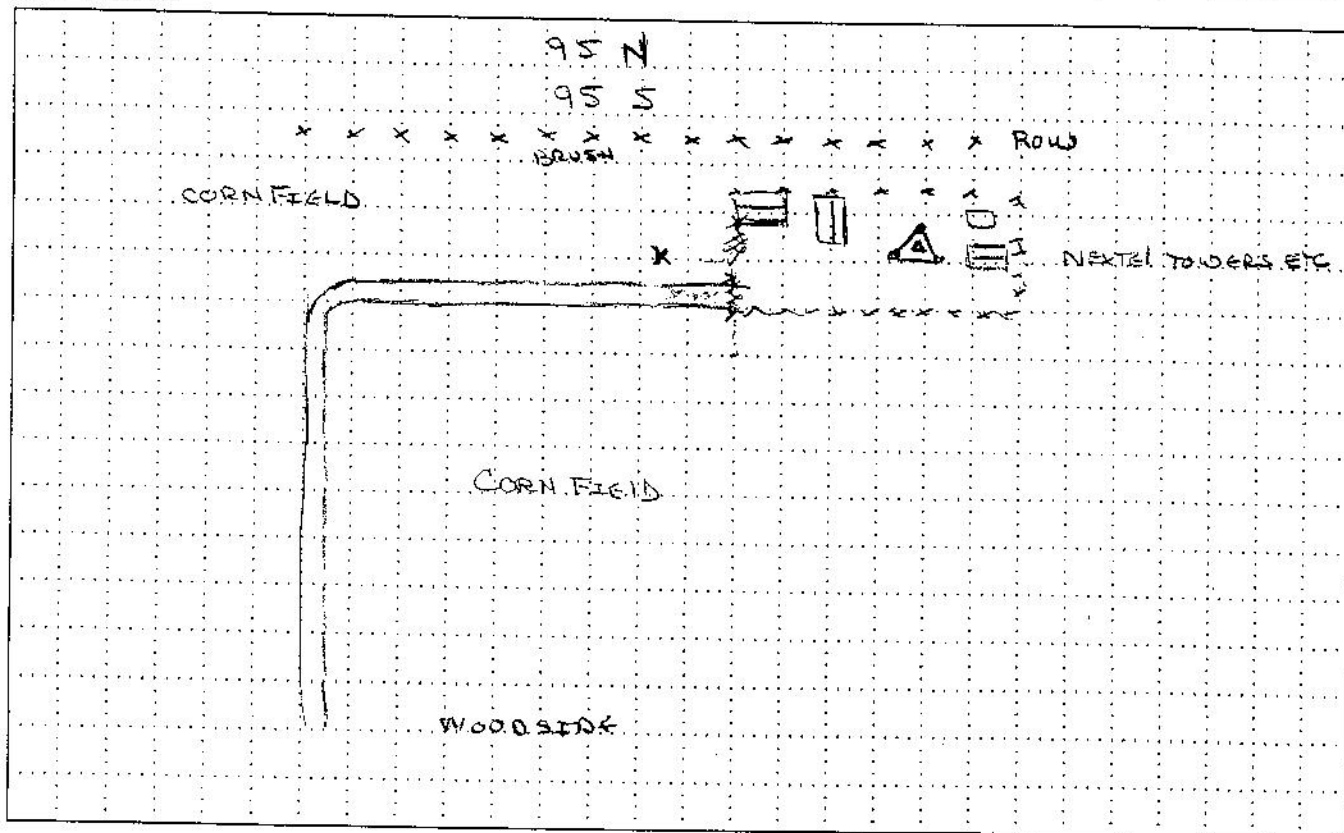
SLM Calibration before 114.1 after _____
 Weather: temperature 44° wind speed 15-20 cloud cover 0
 Time: 1st start 2:45 stop 3:05 total 20
 2nd start _____ stop _____ total _____
 Data: 1st Leq 57.5 Lmax 66.2 Lmin 50.5 SEL 88.3
 2nd Leq _____ Lmax _____ Lmin _____ SEL _____

Traffic Data

Roadway#1	95	Roadway#2	95	Roadway#3		Roadway#4	
Direction	← North	Direction	→ South	Direction		Direction	
	1st 2nd		1st 2nd		1st 2nd		1st 2nd
auto	449	auto	448	auto		auto	
med. trk.	12	med. trk.	23	med. trk.		med. trk.	
hvy trk.	27	hvy trk.	56	hvy trk.		hvy trk.	
bus	0	bus	0	bus		bus	
motorcycle	5	motorcycle	0	motorcycle		motorcycle	

NOTES: _____

SITE SKETCH



Highway Noise Monitoring Sheet

DATE: 4-6-04
 PROJECT: SCODDER FALLS -
 JOB # 42444.001
 SITE ID R9-2



ADDRESS: 1208 WOODSIDE RD
 Meter Storage # 4

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other

Measurement Data

Photograph #'s _____

SILM Calibration before 114.1 after _____
 Weather: temperature 46 wind speed 5-? cloud cover 0
 Time: 1st start _____ stop _____ total _____
 2nd start 1:19 stop 1:39 total 20
 Data: 1st Leq 55.9 Lmax 70.4 Lmin 44.8 SEL 86.7
 2nd Leq _____ Lmax _____ Lmin _____ SEL _____

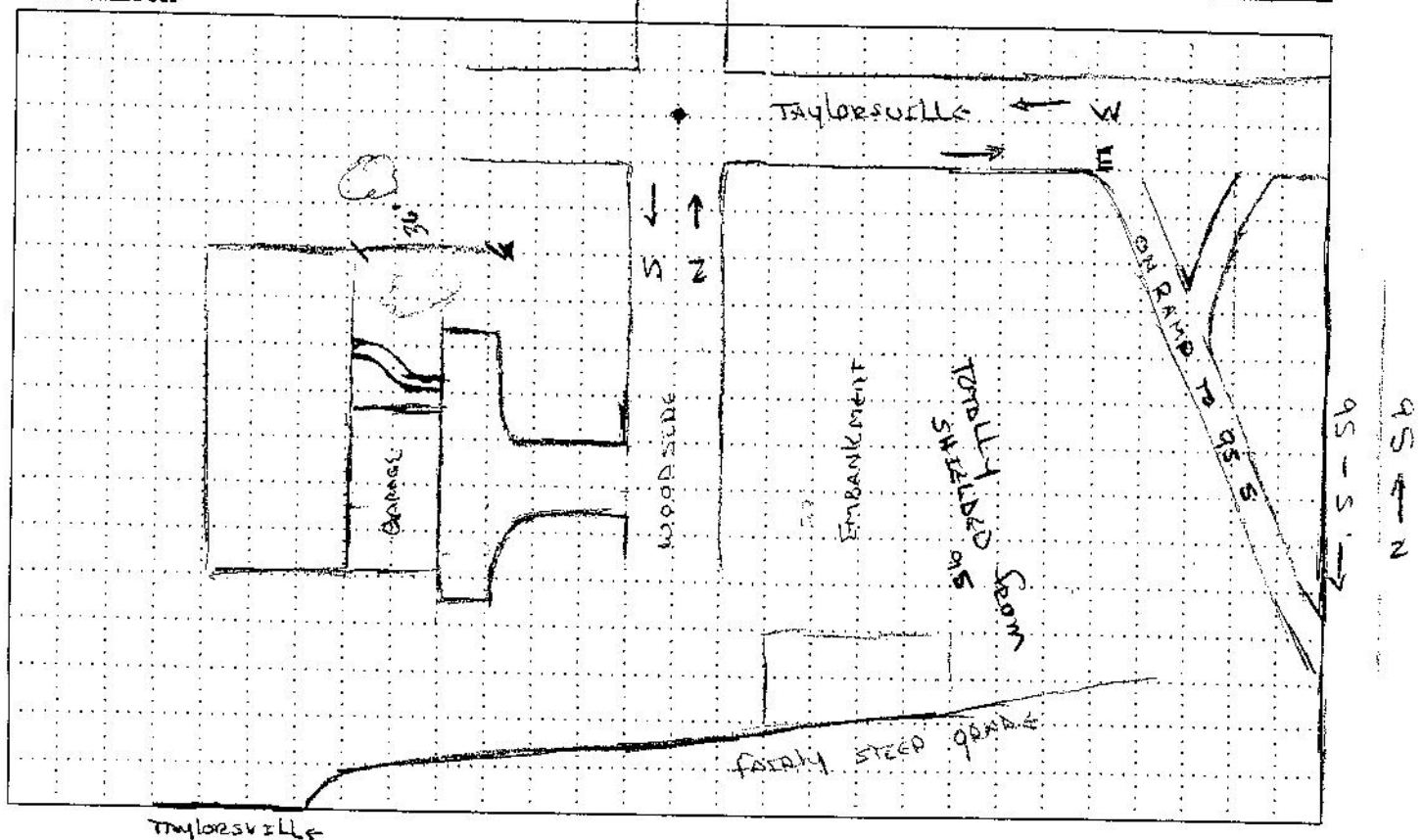
Traffic Data

Roadway#1 <u>Taylorville</u>	Roadway#2 <u>Taylorville</u>	Roadway#3 <u>WOODSIDE</u>	Roadway#4 <u>WOODSIDE</u>
Direction <u>→ E</u>	Direction <u>← W</u>	Direction <u>S →</u>	Direction <u>← N</u>
1st 114	1st 89	1st 24	1st 25
2nd	2nd	2nd	2nd
auto	auto	auto	auto
med. trk. 5	med. trk. 5	med. trk. -	med. trk. 1
hvy trk. 2	hvy trk. 10	hvy trk. 1	hvy trk.
bus	bus	bus	bus
motorcycle	motorcycle	motorcycle	motorcycle

NOTES: Leaves blowing VEHICLE ACCELERATION NOISE GOING UP WOODSIDE
BANK ALONG TAYLORVILLE. SHIELDED TREE NOISE.

SIGNALIZED INTERSECTION - LOTS OF TREES & SCRUBS

SITE SKETCH



Highway Noise Monitoring Sheet

DATE: 4-6-04

PROJECT: SCUDDER FALLS DITBC

JOB # 42444-001

SITE ID TR9-3



Gannett
Fleming, Inc.

ADDRESS: _____

1087 WOODSIDE RD

Meter Storage # 5

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other _____

Measurement Data

Photograph #'s _____

SIM Calibration before 114.0 after _____

Weather: temperature 42° wind speed 0-10 ^{bush} cloud cover 0%

Time: 1st start 2:00 stop 2:20 total 20

2nd start _____ stop _____ total _____

Data: 1st Leq 56.4 Lmax 48.6 Lmin 50.3 SEL 87.2

2nd Leq _____ Lmax _____ Lmin _____ SEL _____

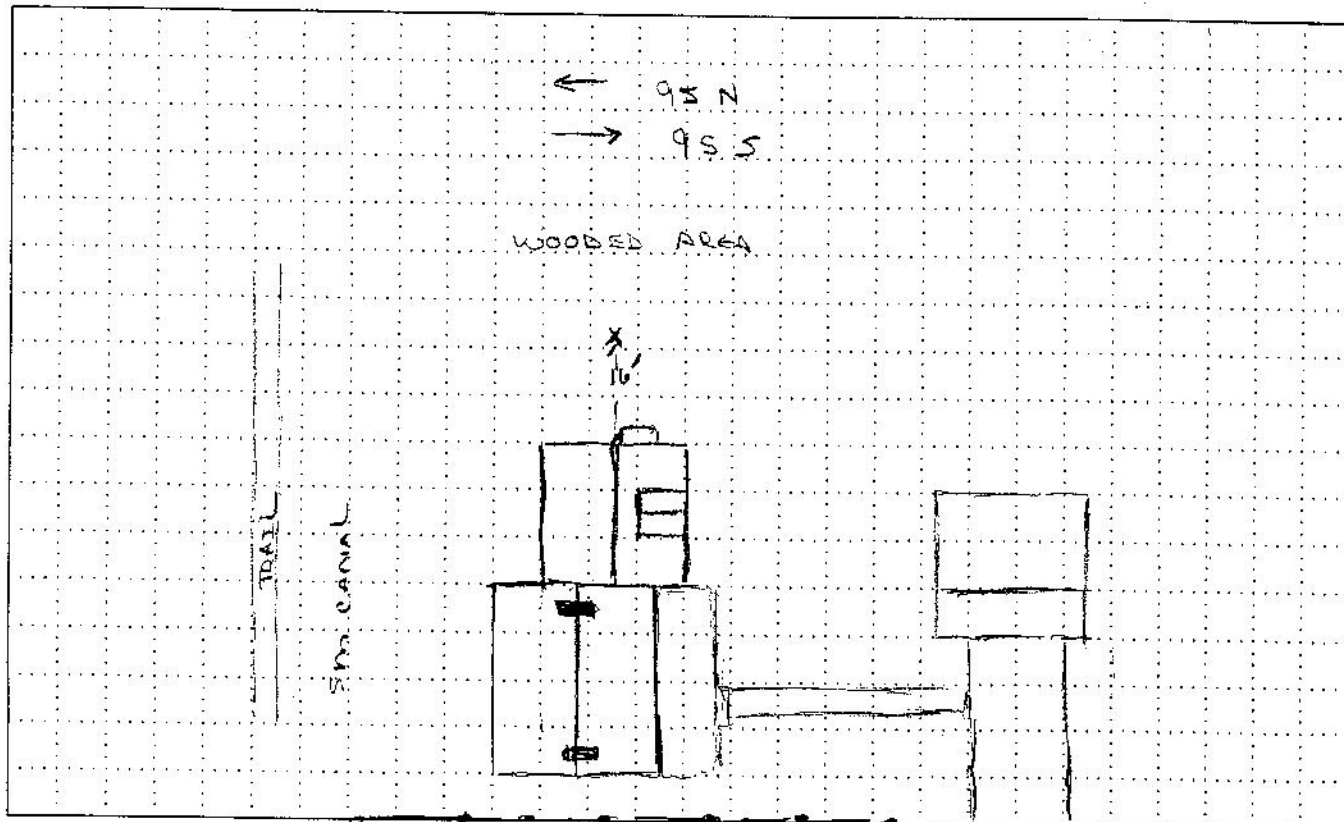
Traffic Data

Roadway#1	Direction	1st	2nd	Roadway#2	Direction	1st	2nd	Roadway#3	Direction	1st	2nd	Roadway#4	Direction	1st	2nd
95	South	415		95	North	363									
auto				auto				auto				auto			
med. trk.		21		med. trk.		8		med. trk.				med. trk.			
hvy trk.		48		hvy trk.		34		hvy trk.				hvy trk.			
bus		1		bus		3		bus				bus			
motorcycle				motorcycle				motorcycle				motorcycle			

NOTES: ON HISTORICAL REGISTRY

95 ELEVATED 10-15' CROSSES OVER TRAIL

SITE SKETCH



Highway Noise Monitoring Sheet

DATE: 2/20/04
 PROJECT: Scudder Falls
 JOB #: 42444-001
 SITE ID: B9-4



ADDRESS: 1510 River Road
 Meter Storage #: 26

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other

Measurement Data

Photograph #'s _____

SLM Calibration before 114.0 after 114.0

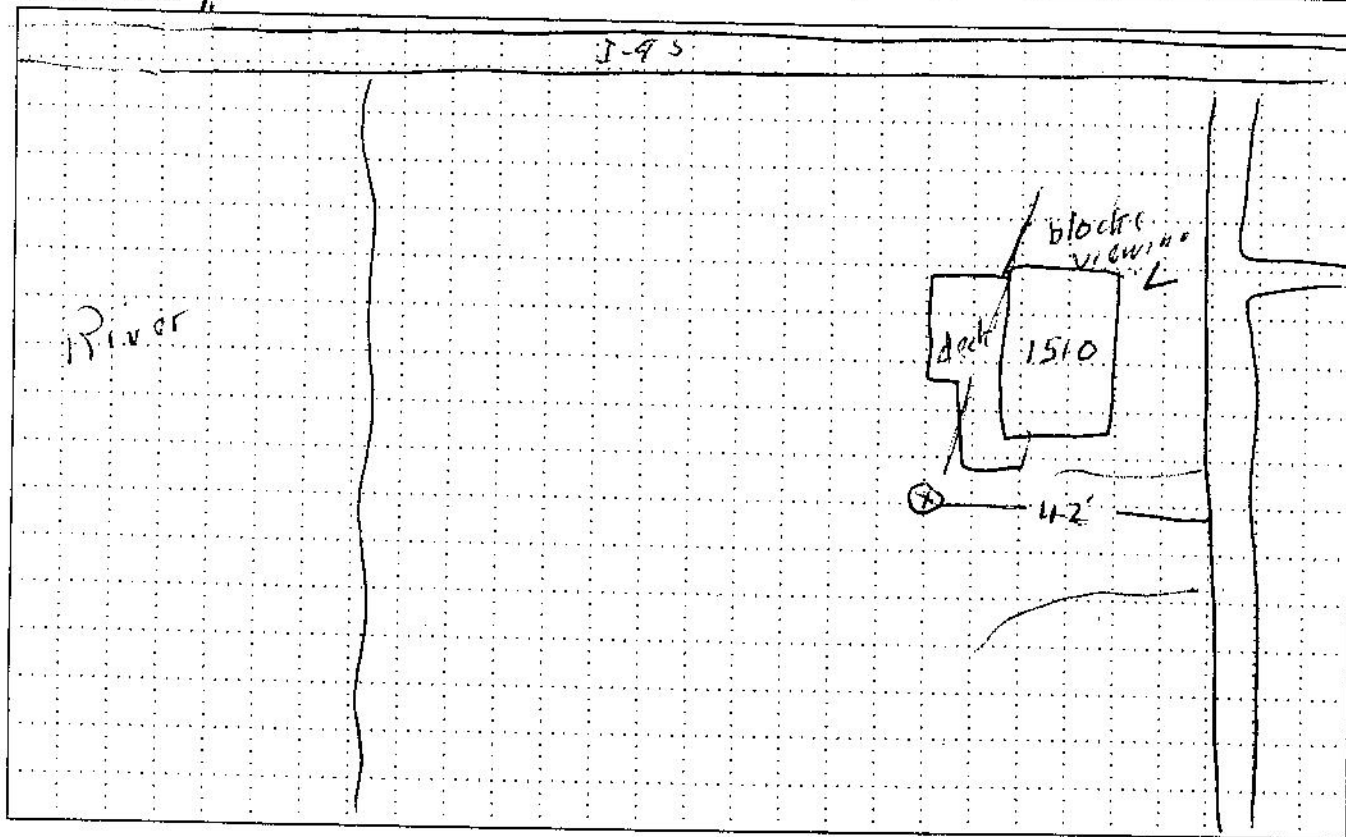
Weather: temperature _____ wind speed _____ cloud cover hazy
 Time: 1st start 10:10 AM stop 10:30 AM total 20 min
 2nd start _____ stop _____ total _____
 Data: 1st Leq 64.1 Lmax 75.7 Lmin 53.8 SEL 94.9
 2nd Leq _____ Lmax _____ Lmin _____ SEL _____

Traffic Data

(10 min)			(10 min)			(20 min)		
Roadway#1	1st	2nd	Roadway#2	1st	2nd	Roadway#3	1st	2nd
Direction <u>I-95</u>			Direction <u>I-95</u>			Direction _____		
auto <u>155</u>			auto <u>142</u>			auto _____		
med. trk. <u>7</u>			med. trk. <u>8</u>			med. trk. _____		
hvy trk. <u>16</u>			hvy trk. <u>28</u>			hvy trk. _____		
bus _____			bus _____			bus _____		
motorcycle _____			motorcycle _____			motorcycle _____		

NOTES: Speed posted on River Rd 40 mph - Avg may be less because of turns onto west side

SITE SKETCH



523 1854

Highway Noise Monitoring Sheet

DATE: 2-19-04

PROJECT: SCUDDER FALLS BRIDGE

JOB # 42444-001

SITE ID R10-1



ADDRESS: 240 Taylorsville

Meter Storage # _____

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other _____

Measurement Data

Photograph #'s _____

SLM Calibration before 114.1 after 114.1

Weather: temperature 40 wind speed windy cloud cover 50%

Time: 1st start 4:02 stop 4:22 total 20

2nd start _____ stop _____ total _____

Data: 1st Leq 66.9 Lmax 86.1 Lmin 54.1 SEL ?

2nd Leq _____ Lmax _____ Lmin _____ SEL _____

Traffic Data

Roadway#1 95NB

Direction 10 min

	1st	2nd
auto	<u>240</u>	
med. trk.	<u>5</u>	
hvy trk.	<u>8</u>	
bus		
motorcycle		

Roadway#2 95SB

Direction 10 min

	1st	2nd
auto	<u>508</u>	
med. trk.	<u>9</u>	
hvy trk.	<u>14</u>	
bus	<u>1</u>	
motorcycle		

Roadway#3 Taylorsville

Direction Both (5 min)

	1st	2nd
auto	<u>55</u>	
med. trk.	<u>1</u>	
hvy trk.	<u>2</u>	
bus	<u>0</u>	
motorcycle	<u>0</u>	

Roadway#4 SB off

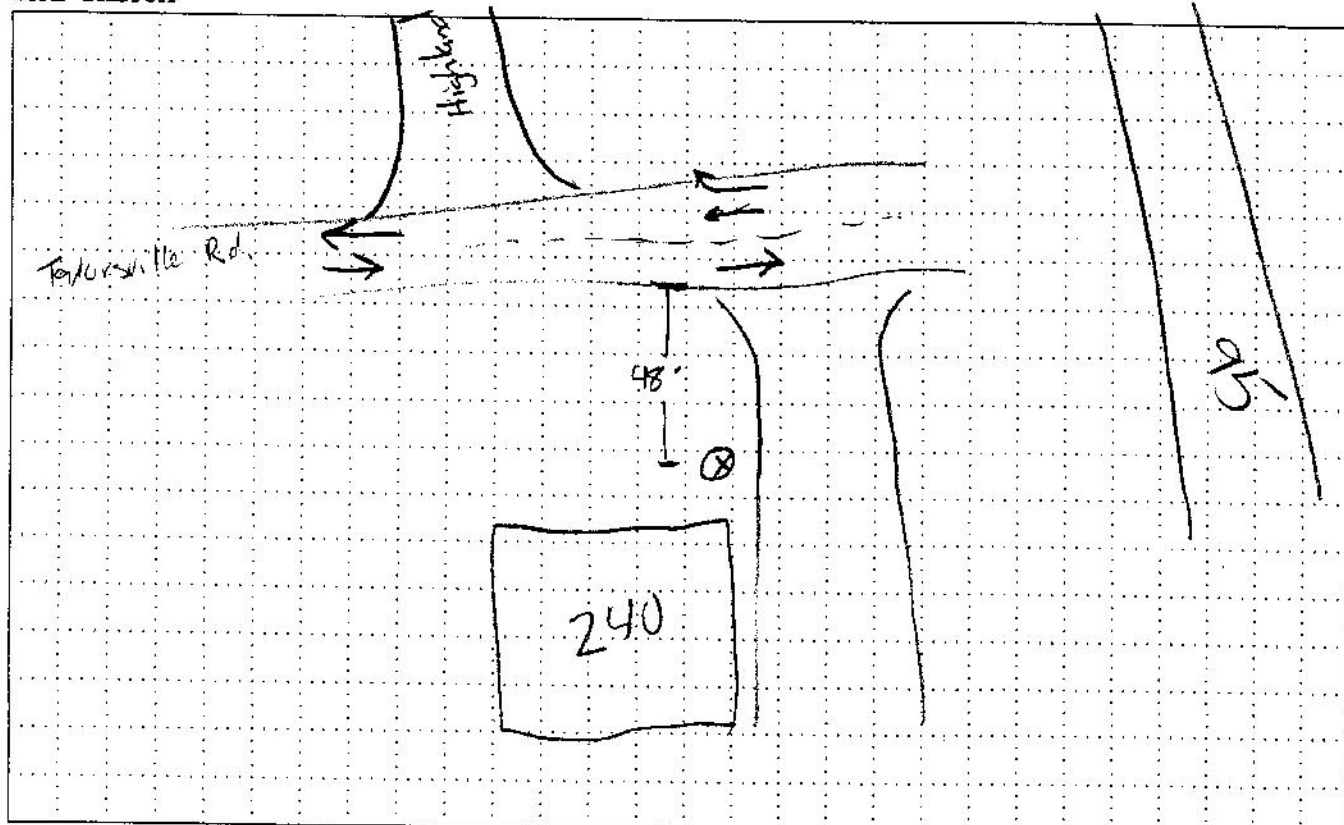
Direction 5 min

	1st	2nd
auto	<u>55</u>	
med. trk.		
hvy trk.		
bus		
motorcycle		

NOTES:

Low Jet = 83+

SITE SKETCH



* Same time WK/10-2

Highway Noise Monitoring Sheet

DATE: 2/19/04
 PROJECT: Scudder Falls
 JOB #: 42444-001
 SITE ID: R10-2



ADDRESS: 32 Maplevale

Meter Storage # _____

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other _____

Measurement Data

Photograph #'s _____

SLM Calibration before 94.0 after 93.8

Weather: temperature _____ wind speed _____ cloud cover 20%
 Time: 1st start 4:05 PM stop 4:25 PM total 20 min
 2nd start _____ stop _____ total _____
 Data: 1st Leq 64.2 Lmax 90.5 Lmin 52.8 SEL 95.0
 2nd Leq _____ Lmax _____ Lmin _____ SEL _____

same as R10-1

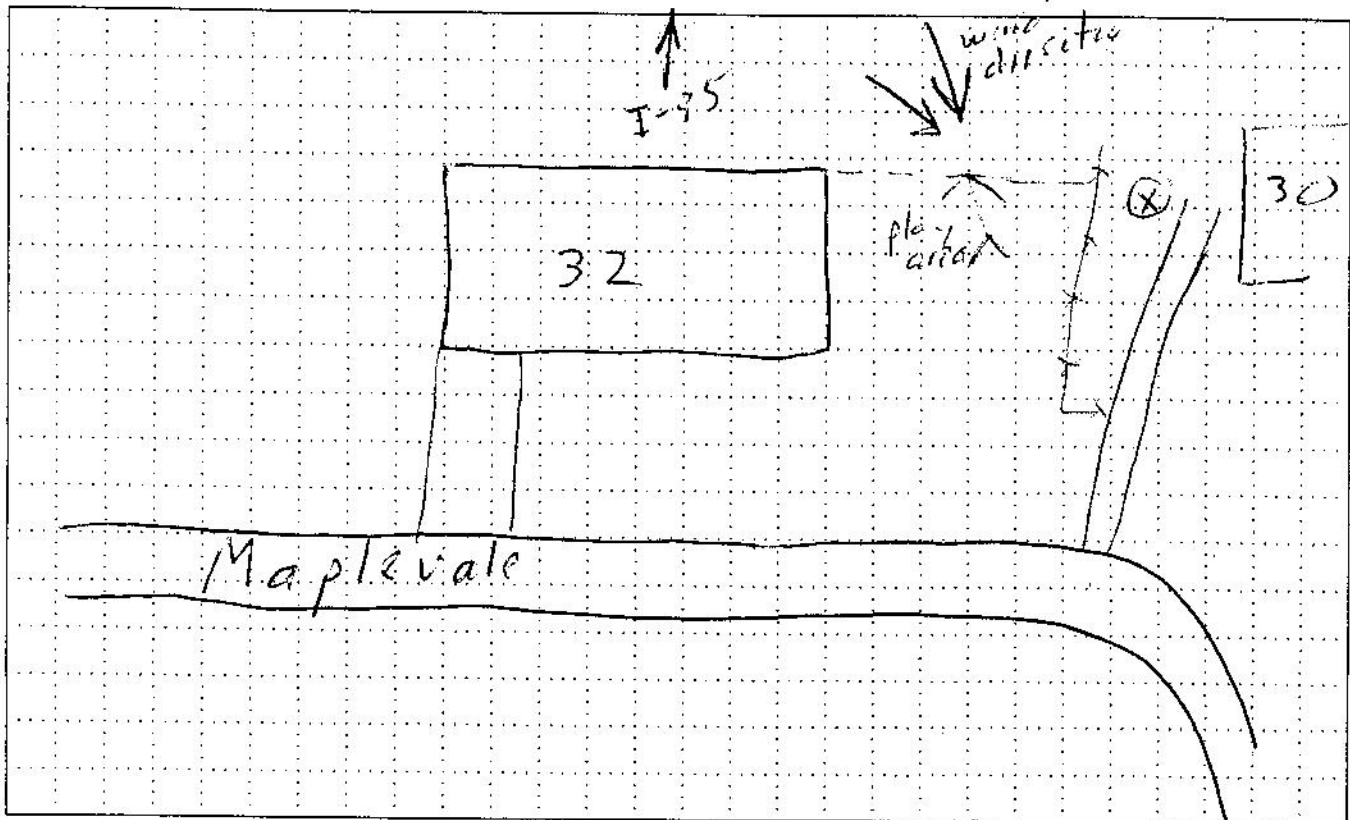
Traffic Data

Roadway#1 <u>I-95 (10 min)</u>		Roadway#2 <u>I-95 SB (10 min)</u>		Roadway#3 <u>SB (5 min)</u>		Roadway#4 _____	
Direction <u>NE</u>		Direction _____		Direction <u>off ramp</u>		Direction _____	
auto	<u>240</u>	auto	<u>508</u>	auto	<u>55</u>	auto	
med. trk.	<u>5</u>	med. trk.	<u>9</u>	med. trk.		med. trk.	
hvy trk.	<u>8</u>	hvy trk.	<u>14</u>	hvy trk.		hvy trk.	
bus		bus	<u>1</u>	bus		bus	
motorcycle		motorcycle		motorcycle		motorcycle	

NOTES: Instrument along fence line at setback of #32

Jet Flyover 4:14 - From Mercer -
 2 helicopters - high 60' - low 70'

SITE SKETCH



Highway Noise Monitoring Sheet

DATE: 2-20-04

PROJECT: SCODDER FALLS BRIDGE

JOB # 42444-001

SITE ID R10-3



ADDRESS: 1451 Desanti's Place

Meter Storage # 07

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other

Measurement Data

Photograph #'s _____

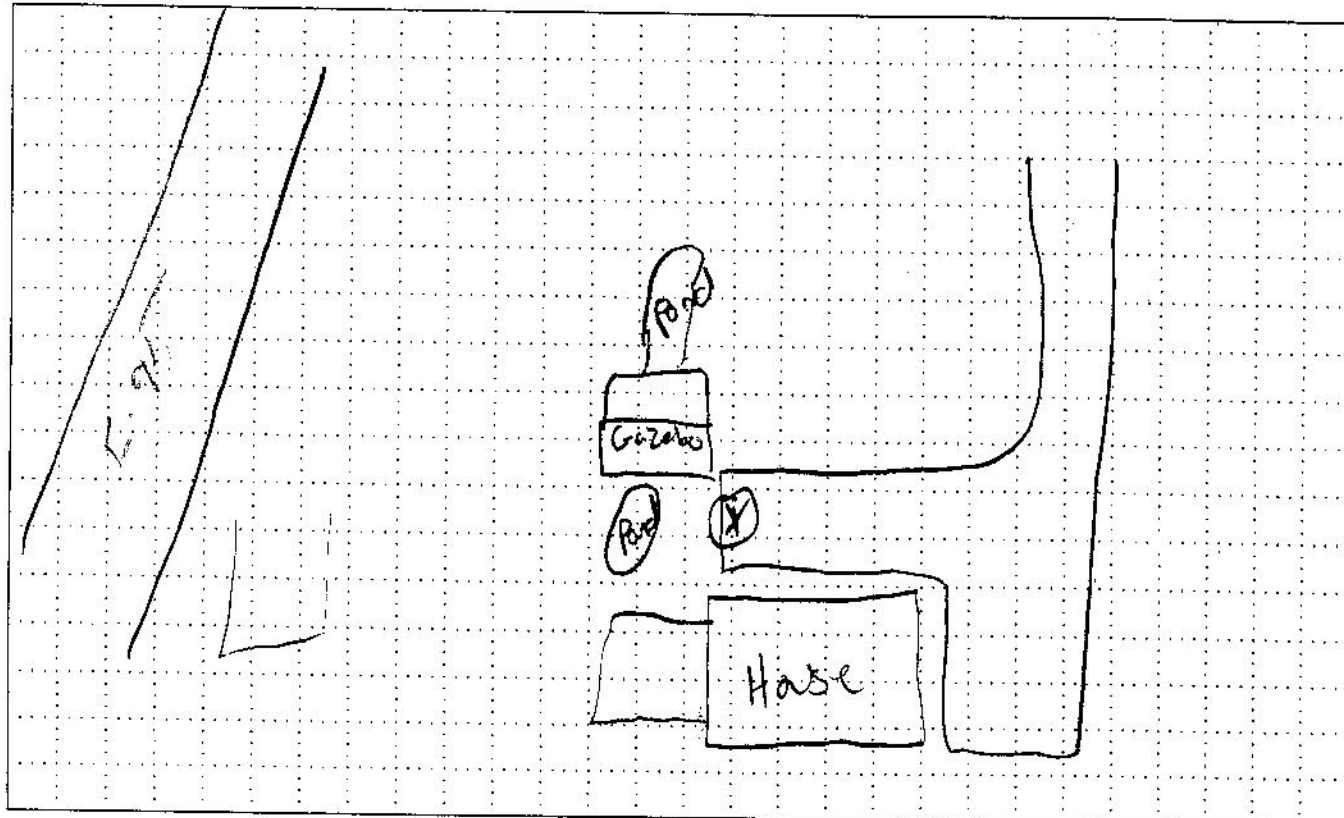
SLM Calibration before 114.0 after _____
 Weather: temperature 40° wind speed 0-3 cloud cover o/c
 Time: 1st start 10:10 stop 10:30 total 20
 2nd start _____ stop _____ total _____
 Data: 1st Leq 55.2 Lmax 68.7 Lmin 47.4 SEL 86.0
 2nd Leq _____ Lmax _____ Lmin _____ SEL _____

Traffic Data

Roadway#1	Direction	1st	2nd	Roadway#2	Direction	1st	2nd	Roadway#3	Direction	1st	2nd	Roadway#4	Direction	1st	2nd
<u>2-95 (10 min)</u>	<u>113</u>			<u>2-95 (10 min)</u>	<u>523</u>							<u>River Rd</u>	<u>730TH 20 min</u>		
auto				auto				auto				auto			
med. trk.				med. trk.				med. trk.				med. trk.			
hvy trk.				hvy trk.				hvy trk.				hvy trk.			
bus				bus				bus				bus			
motorcycle				motorcycle				motorcycle				motorcycle			

NOTES: 6' from house HT Passes ≈ 57 Air Horns @ 10:15

SITE SKETCH



Highway Noise Monitoring Sheet

DATE: 4/7/04
 PROJECT: Scudder Falls
 JOB #: _____
 SITE ID: R10-4



ADDRESS: 1455
1455 River Rd
 Meter Storage #: 14

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other _____

Measurement Data

Photograph #'s _____

SLM Calibration before 114.1 after _____
 Weather: temperature 48° wind speed 0-5 cloud cover 75%
 Time: 1st start 10:23 stop 10:43 total 20
 2nd start _____ stop _____ total _____
 Data: 1st Leq 59.1 Lmax 75.2 Lmin 50.6 SEL 89.9
 2nd Leq _____ Lmax _____ Lmin _____ SEL _____

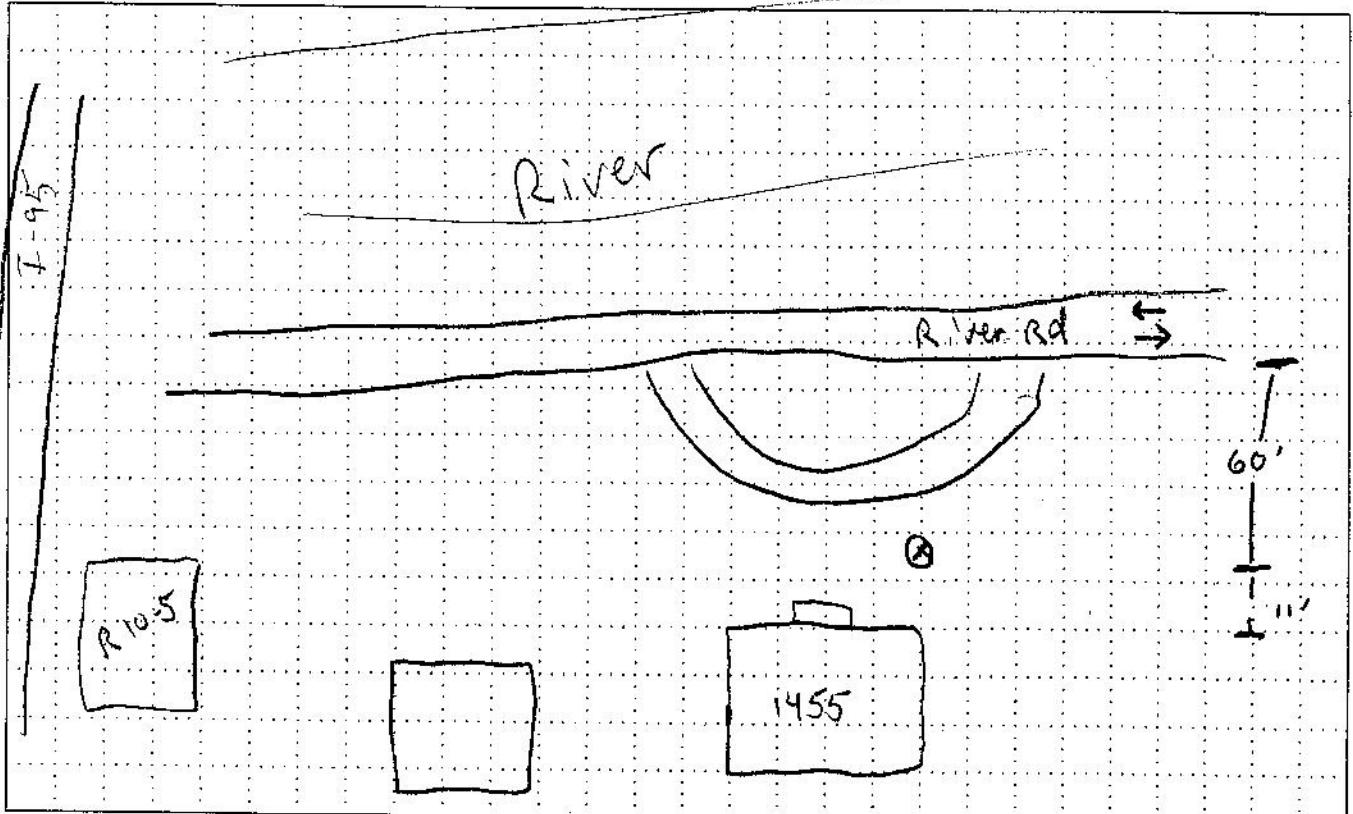
Traffic Data

10 min

Roadway#1	95	Roadway#2	95	Roadway#3	River	Roadway#4	
Direction	NO	Direction	SB	Direction	↔	Direction	
auto	1st 402, 2nd	auto	1st 402, 2nd	auto	1st 38, 2nd	auto	1st, 2nd
med. trk.	18	med. trk.	17	med. trk.	1	med. trk.	
hvy trk.	57	hvy trk.	36	hvy trk.	1	hvy trk.	
bus	0	bus	1	bus		bus	
motorcycle		motorcycle	5	motorcycle		motorcycle	

NOTES: NO Pic. Ran out of film. Most noise from 95's HT's. Very low freq. deck rumble
 River Rd is main noise source.

SITE SKETCH



1111

Highway Noise Monitoring Sheet

DATE: 4-7-04

PROJECT: SCUDGER FALLS DITBC

JOB # 42444.001

SITE ID R10-5



ADDRESS: _____

1479 RIVER RD

Meter Storage # 13

TYPE ☐ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other _____

Measurement Data

Photograph #'s _____

SLM Calibration before 114.1 after _____

Weather: temperature 48° wind speed 0-10 cloud cover 75%

Time: 1st start 9:55 stop 10:15 total 20 min

2nd start _____ stop _____ total _____

Data: 1st Leq 65.1 Lmax 82.7 Lmin 55.7 SEL 95.9

2nd Leq _____ Lmax _____ Lmin _____ SEL _____

Traffic Data

* 10 min *			* 20 min *		
Roadway#1	<u>95</u>		Roadway#2	<u>95</u>	
Direction	<u>NB</u>		Direction	<u>SB</u>	
auto	<u>232</u>	2nd	auto	<u>139</u>	2nd
med. trk.	<u>11</u>		med. trk.	<u>5</u>	
hvy trk.	<u>22</u>		hvy trk.	<u>22</u>	
bus	<u>1</u>		bus		
motorcycle			motorcycle		

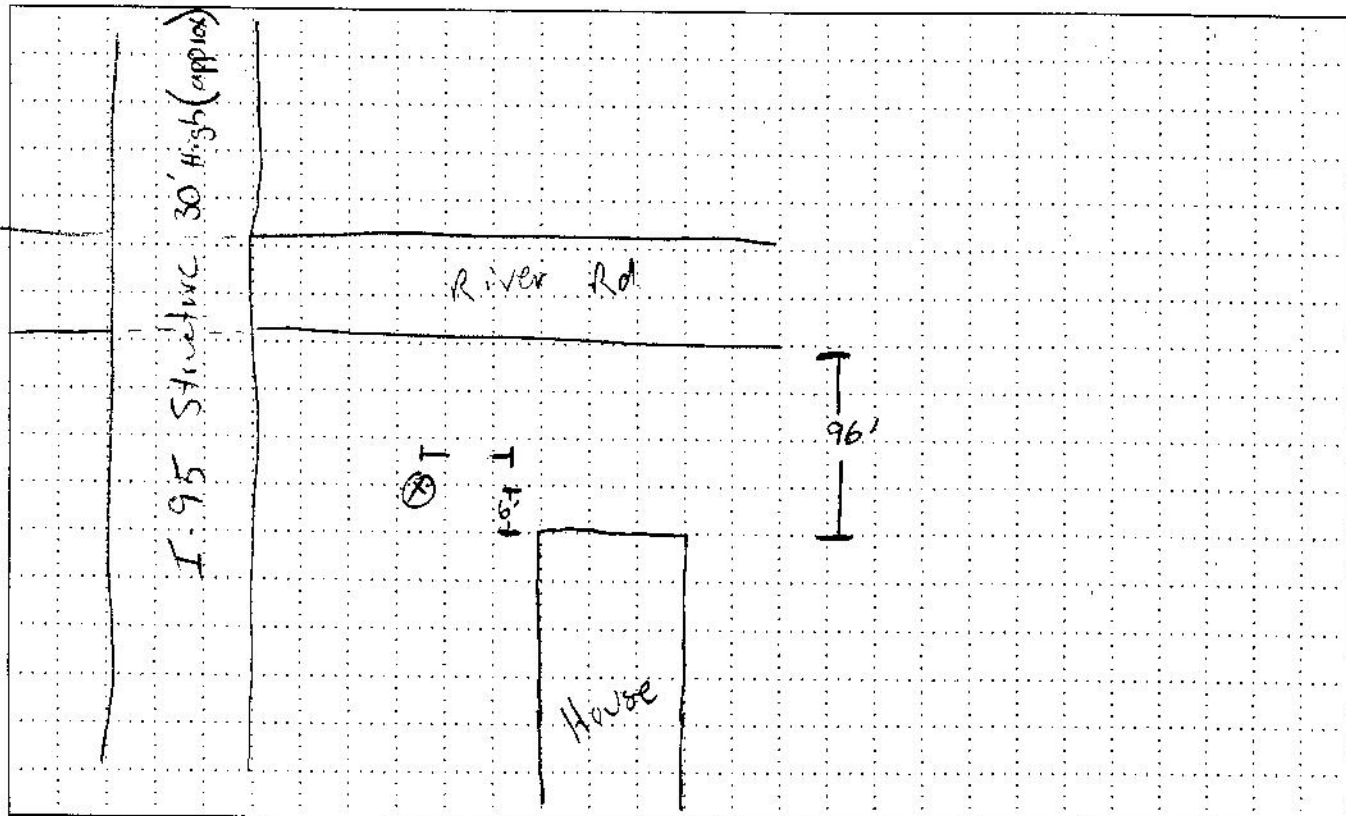
* 20 min *		
Roadway#3	<u>River Rd</u>	
Direction	<u>↔</u>	
auto	<u>43</u>	2nd
med. trk.	<u>1</u>	
hvy trk.	<u>0</u>	
bus		
motorcycle		

NOTES: Low freq deck rumble. Parapet blocks sight of all 95 traffic except HT's. Airplane - upper 60's

10 min → I-95 NB down to 40-45 mph River Rd 35-45 mph

Expansion joints slapping - Tires screeching - Jakes

SITE SKETCH



Highway Noise Monitoring Sheet

DATE: 3-1-04

PROJECT: SCUDLER FALLS BRIDGE

JOB # 12444

SITE ID R11-1



ADDRESS: Victoria

Academy

RTE 29

Meter Storage # 4

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☒ Other School

Measurement Data

SLM Calibration before 94.0 after 94.0 Photograph #'s _____

Weather: temperature 63° wind speed 0-3 cloud cover 10%

Time: 1st start _____ stop _____ total _____

2nd start 2:33 stop 2:53 total 20

Data: 1st Leq 55.1 Lmax 67.7 Lmin 42.5 SEL 85.9

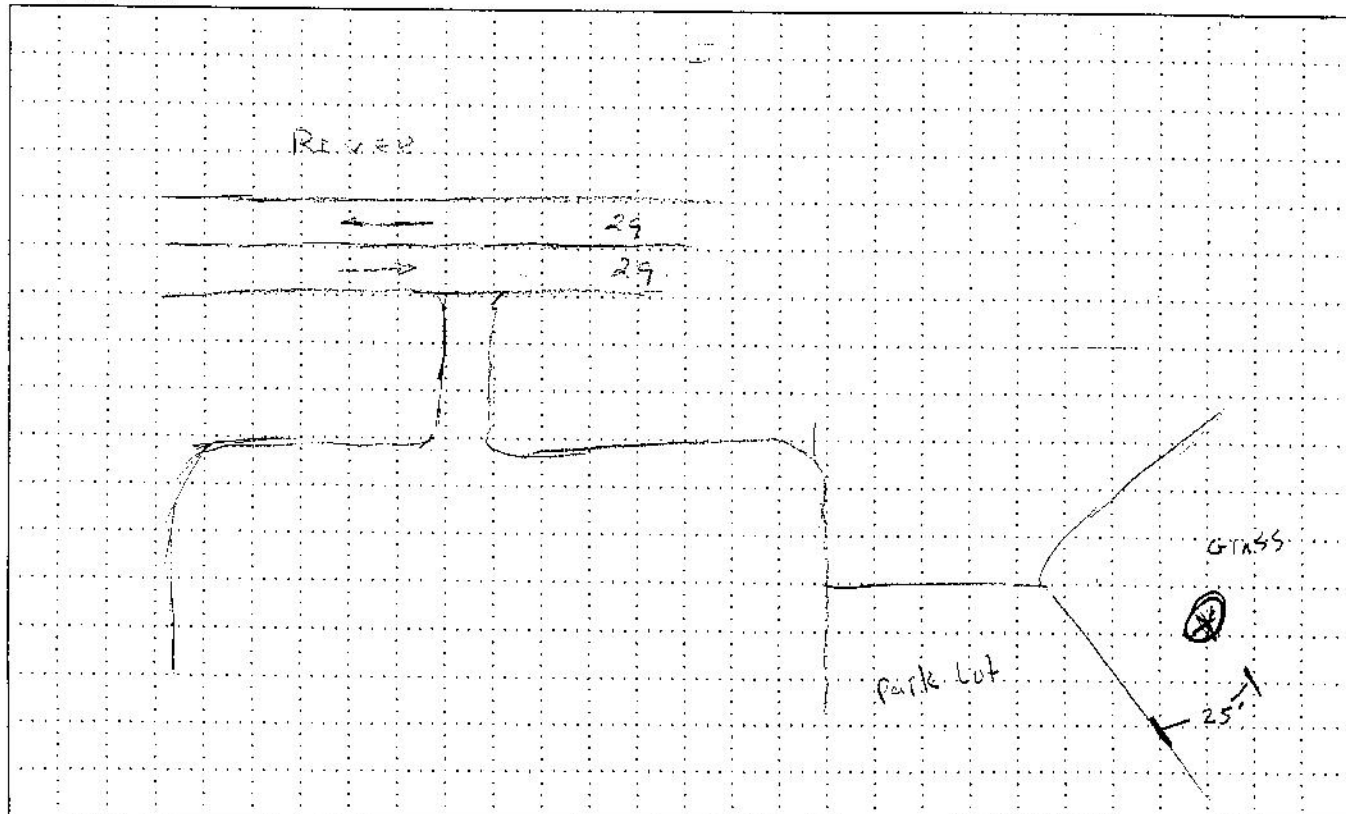
2nd Leq _____ Lmax _____ Lmin _____ SEL _____

Traffic Data

Roadway#1	Direction	1st	2nd	Roadway#2	Direction	1st	2nd	Roadway#3	Direction	1st	2nd	Roadway#4	Direction	1st	2nd
<u>29</u>	<u>E →</u>			<u>29</u>	<u>W ←</u>			<u>95</u>	<u>NB</u>			<u>95</u>	<u>SB</u>		
auto		<u>178</u>		auto		<u>93</u>		auto		<u>369</u>		auto		<u>421</u>	
med. trk.		<u>6</u>		med. trk.		<u>18</u>		med. trk.		<u>10</u>		med. trk.		<u>20</u>	
hvy trk.		<u>5</u>		hvy trk.		<u>4</u>		hvy trk.		<u>26</u>		hvy trk.		<u>80</u>	
bus		<u>0</u>		bus		<u>0</u>		bus				bus		<u>13</u>	
motorcycle		<u>1</u>		motorcycle		<u>0</u>		motorcycle				motorcycle			

NOTES: maybe missing 95 SB Motorcycles

SITE SKETCH



Highway Noise Monitoring Sheet

DATE: 4-8-04
 PROJECT: SCUDDER FALLS
 JOB #: 42444.001
 SITE ID: B11-2



ADDRESS: 1016 RIVER RD.
 Meter Storage # 22

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other _____

Measurement Data

Photograph #'s _____

SLM Calibration before 114.0 after _____
 Weather: temperature 44° wind speed 0.3 cloud cover 10%
 Time: 1st start 8:34 stop 8:54 total 20
 2nd start _____ stop _____ total _____
 Data: 1st Leq 61.8 Lmax 77.1 Lmin 48.6 SEL _____
 2nd Leq _____ Lmax _____ Lmin _____ SEL _____

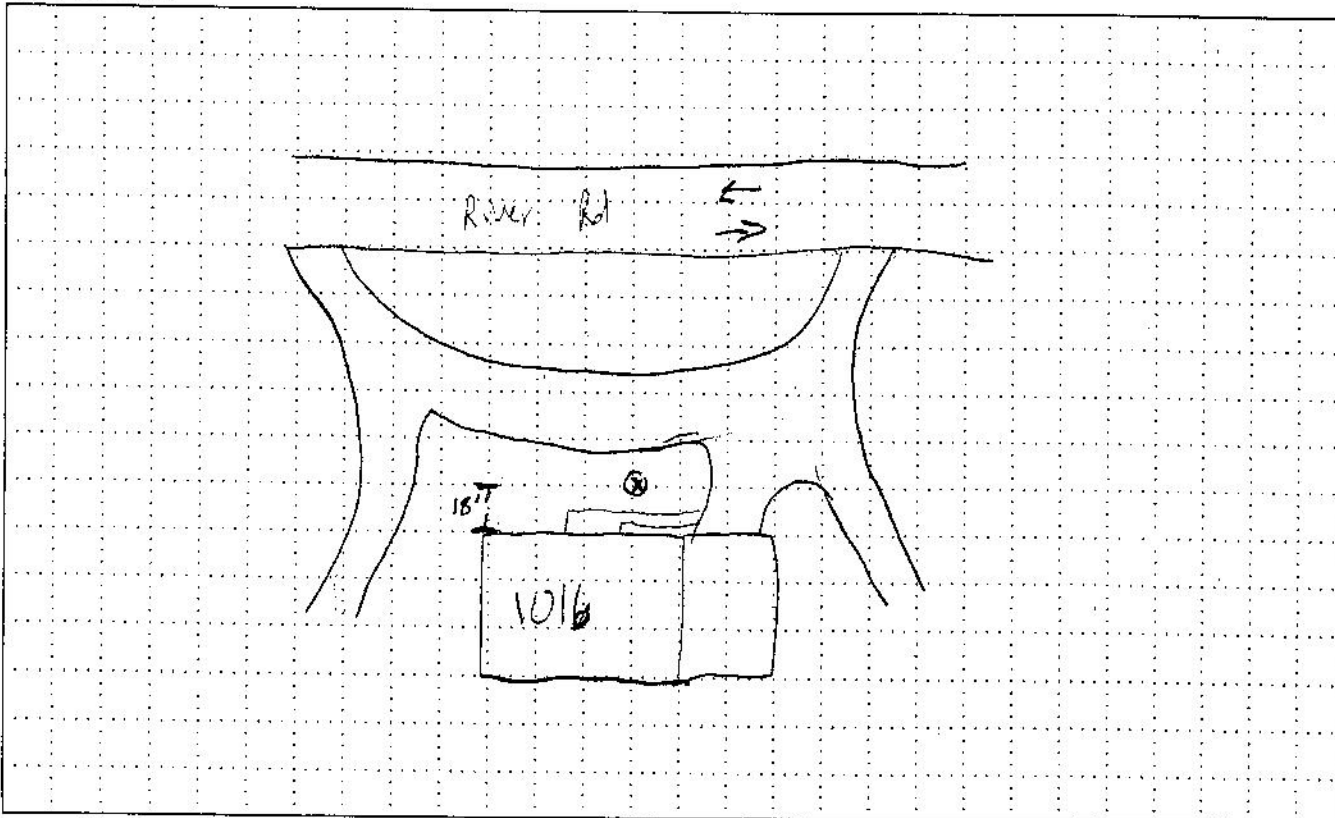
Traffic Data

10 MIN			20 MIN		
Roadway#1 <u>95 N</u>	Roadway#2 <u>95S</u>	Roadway#3 <u>RIVER R</u>	Roadway#4 <u>RIVER R</u>		
Direction _____	Direction _____	Direction <u>W</u>	Direction <u>E</u>		
1st auto <u>518</u>	1st auto <u>239</u>	1st auto <u>57</u>	1st auto <u>31</u>		
2nd _____	2nd _____	2nd _____	2nd _____		
med. trk. <u>7</u>	med. trk. <u>10</u>	med. trk. <u>1</u>	med. trk. <u>1</u>		
hvy trk. <u>18</u>	hvy trk. <u>28</u>	hvy trk. <u>0</u>	hvy trk. <u>1</u>		
bus _____	bus _____	bus <u>4</u>	bus <u>1</u>		
motorcycle _____	motorcycle _____	motorcycle _____	motorcycle _____		

NOTES:

max is airplane pass = 11

SITE SKETCH



Highway Noise Monitoring Sheet

DATE: 4-8-04

PROJECT: SCUDDER FALLS

JOB # 42444.001

SITE ID R11-3



ADDRESS: _____

BACK of
PRAYER HOUSE.

Meter Storage # 21

TYPE ☐ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other _____

Measurement Data

Photograph #'s _____

SLM Calibration before 114.0 after _____

Weather: temperature 40° wind speed 0-3 cloud cover 10%

Time: 1st start 7:52 am stop 8:12 total _____

2nd start _____ stop _____ total _____

Data: 1st Leq 59.0 Lmax 74.5 Lmin 51.5 SEL 89.8

2nd Leq _____ Lmax _____ Lmin _____ SEL _____

Traffic Data

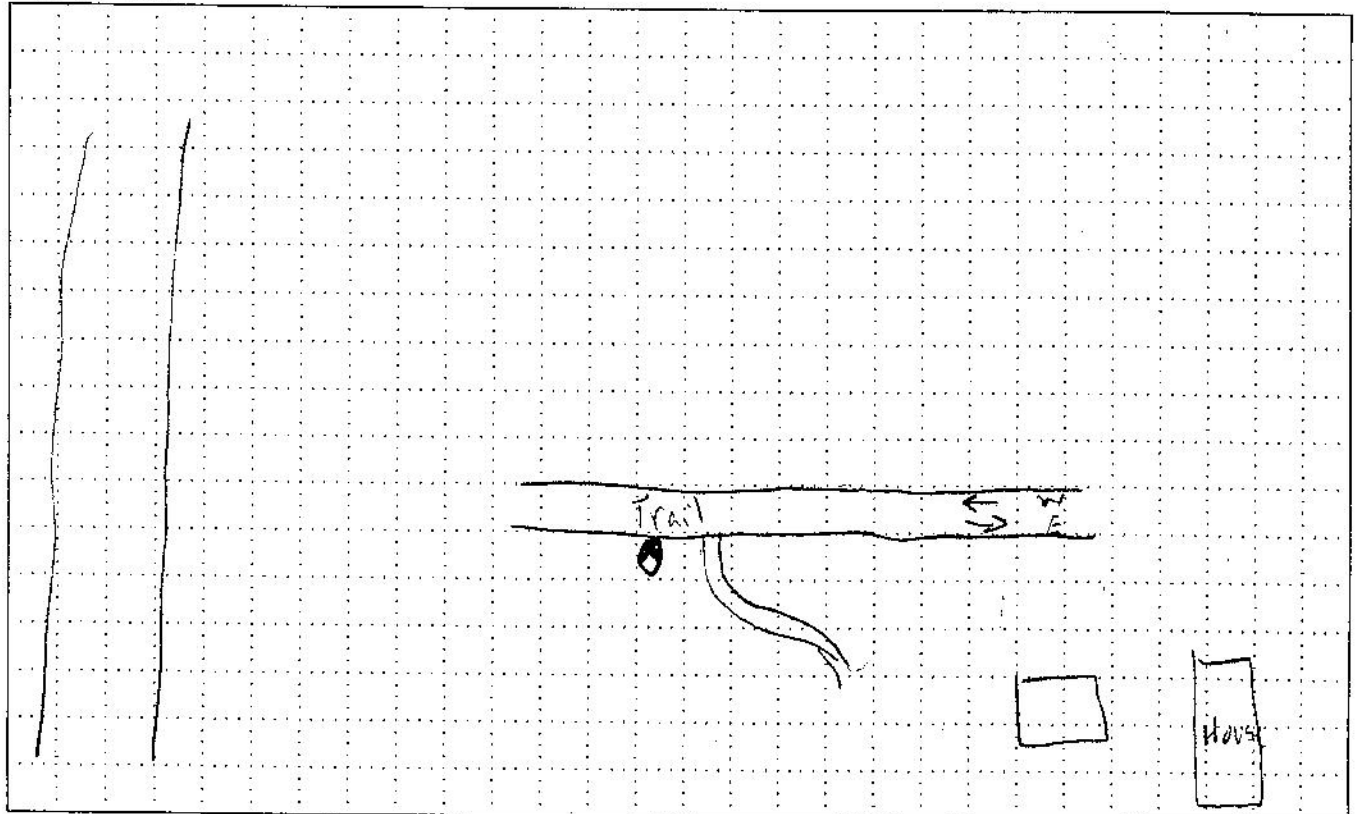
10 MIN

- 20 min -

Roadway#1	Direction	1st	2nd	Roadway#2	Direction	1st	2nd	Roadway#3	Direction	1st	2nd	Roadway#4	Direction	1st	2nd
<u>95 N</u>				<u>95 S</u>				<u>River Rd</u>				<u>River Rd</u>			
auto		<u>410</u>		auto		<u>241</u>		auto		<u>43</u>		auto		<u>42</u>	
med. trk.		<u>9</u>		med. trk.		<u>8</u>		med. trk.		<u>2</u>		med. trk.		<u>3</u>	
hvy trk.		<u>18</u>		hvy trk.		<u>17</u>		hvy trk.		<u>0</u>		hvy trk.		<u>0</u>	
bus		<u>0</u>		bus		<u>1</u>		bus		<u>3</u>		bus		<u>4</u>	
motorcycle		<u>0</u>		motorcycle				motorcycle				motorcycle			

NOTES: _____ Airplane: 74.0

SITE SKETCH



Highway Noise Monitoring Sheet

DATE: 4/7/04
 PROJECT: Scully Falls
 JOB #: 42444.001
 SITE ID: B12-1



ADDRESS: 1048 River
 Meter Storage # 19

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other

Measurement Data

SLM Calibration before 114.0 after 114.0 Photograph #'s _____
 Weather: temperature 60° wind speed 0-10 cloud cover 25%
 Time: 1st start 3:30 stop 3:50 total 20min
 2nd start _____ stop _____ total _____
 Data: 1st Leq 68.5 Lmax 80.0 Lmin 59.7 SEL 99.3
 2nd Leq _____ Lmax _____ Lmin _____ SEL _____

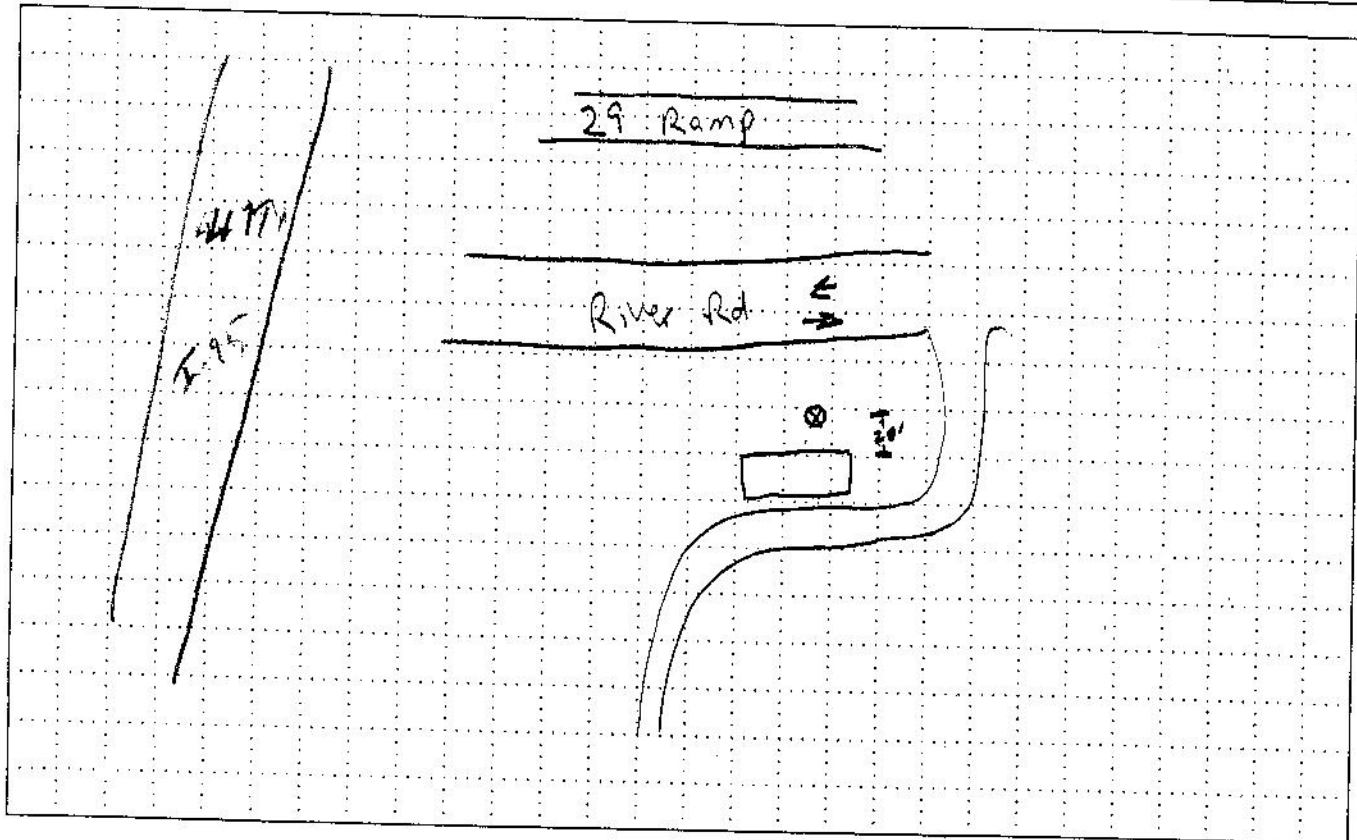
Traffic Data

* 10 min All *

Roadway#1	Direction	1st	2nd	Roadway#2	Direction	1st	2nd	Roadway#3	Direction	1st	2nd	Roadway#4	Direction	1st	2nd
95	NB	250		95	SB	488		River	↔	41		29 Ramp		59	
auto		6		auto		7		auto		0		auto		1	
med. trk.		12		med. trk.		24		med. trk.		6		med. trk.		1	
hvy trk.				hvy trk.		0		hvy trk.		4		hvy trk.		0	
bus				bus		1		bus		0		bus		2	
motorcycle				motorcycle				motorcycle				motorcycle			

NOTES: SB Jakes - Bridge Expansion Joint Slapping

SITE SKETCH



Highway Noise Monitoring Sheet

DATE: 4/7/04
 PROJECT: Scudarc Falls
 JOB #: 42444.001
 SITE ID: R12-2



ADDRESS: 1070 River Rd
 Meter Storage #: 17

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other

Measurement Data

Photograph #'s _____

SLM Calibration before 114.1 after _____
 Weather: temperature 56° wind speed 0-10 cloud cover 25°
 Time: 1st start 2:18 stop 2:38 total 20 min
 2nd start _____ stop _____ total _____
 Data: 1st Leq 61.5 Lmax 80.8 Lmin 50.0 SEL 92.2
 2nd Leq _____ Lmax _____ Lmin _____ SEL _____

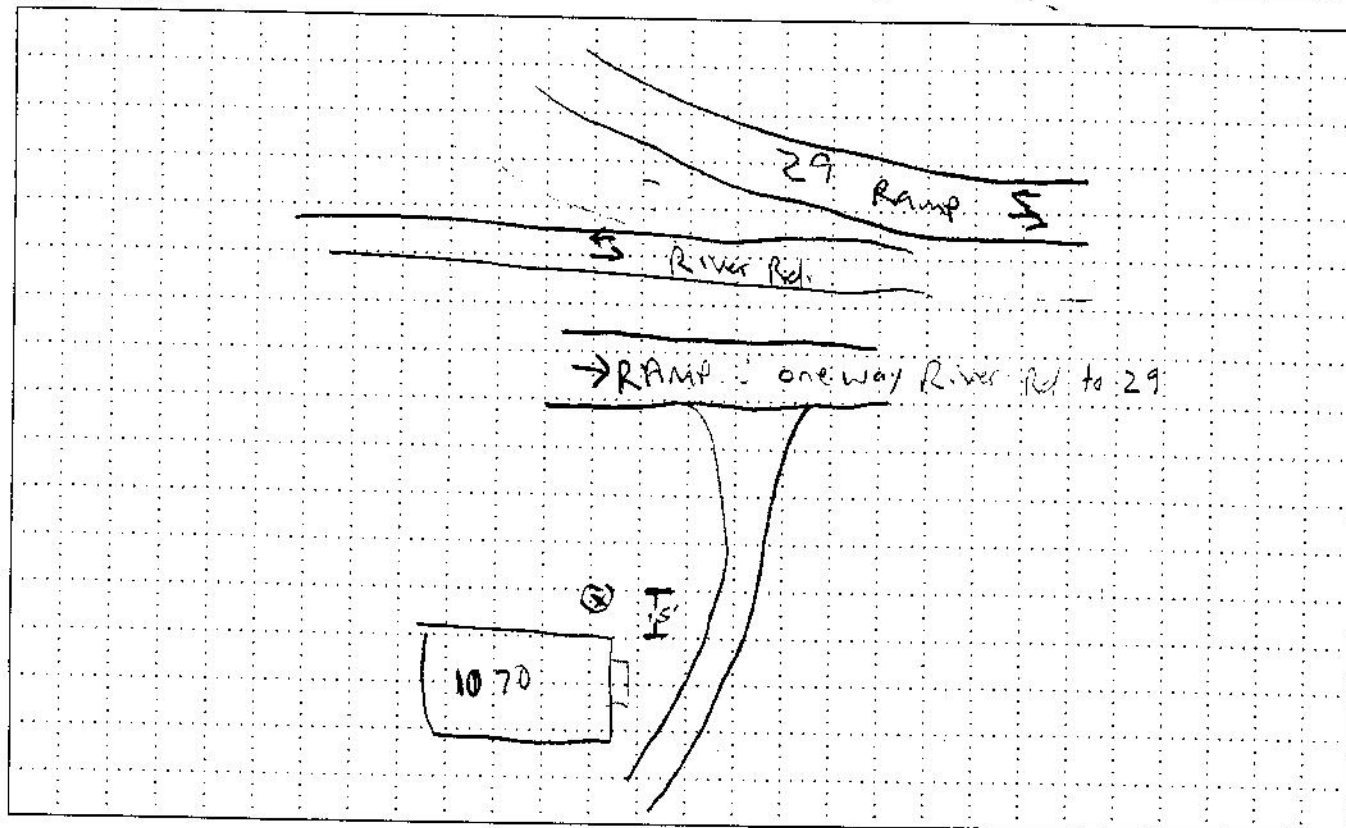
Traffic Data

Roadway#1	29 Ramp	Roadway#2	29 Ramp	Roadway#3	River Rd	Roadway#4	Ramp
Direction	West →	Direction	East ←	Direction	↔	Direction	→
1st	173	1st	91	1st	41	1st	23
2nd		2nd		2nd		2nd	
auto	173	auto	91	auto	41	auto	23
med. trk.	6	med. trk.	8	med. trk.	3	med. trk.	1
hvy trk.	2	hvy trk.	5	hvy trk.	12	hvy trk.	0
bus		bus	1	bus	0	bus	
motorcycle		motorcycle	2	motorcycle	2	motorcycle	

NOTES:

Helicopter 80 (max)

SITE SKETCH



Highway Noise Monitoring Sheet

DATE: 4-7-04
 PROJECT: SO02062 Fall DTBC
 JOB # 42444.001
 SITE ID R12-3



ADDRESS: 1102 RIVER RD
 Meter Storage # 18

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other

Measurement Data

Photograph #'s _____

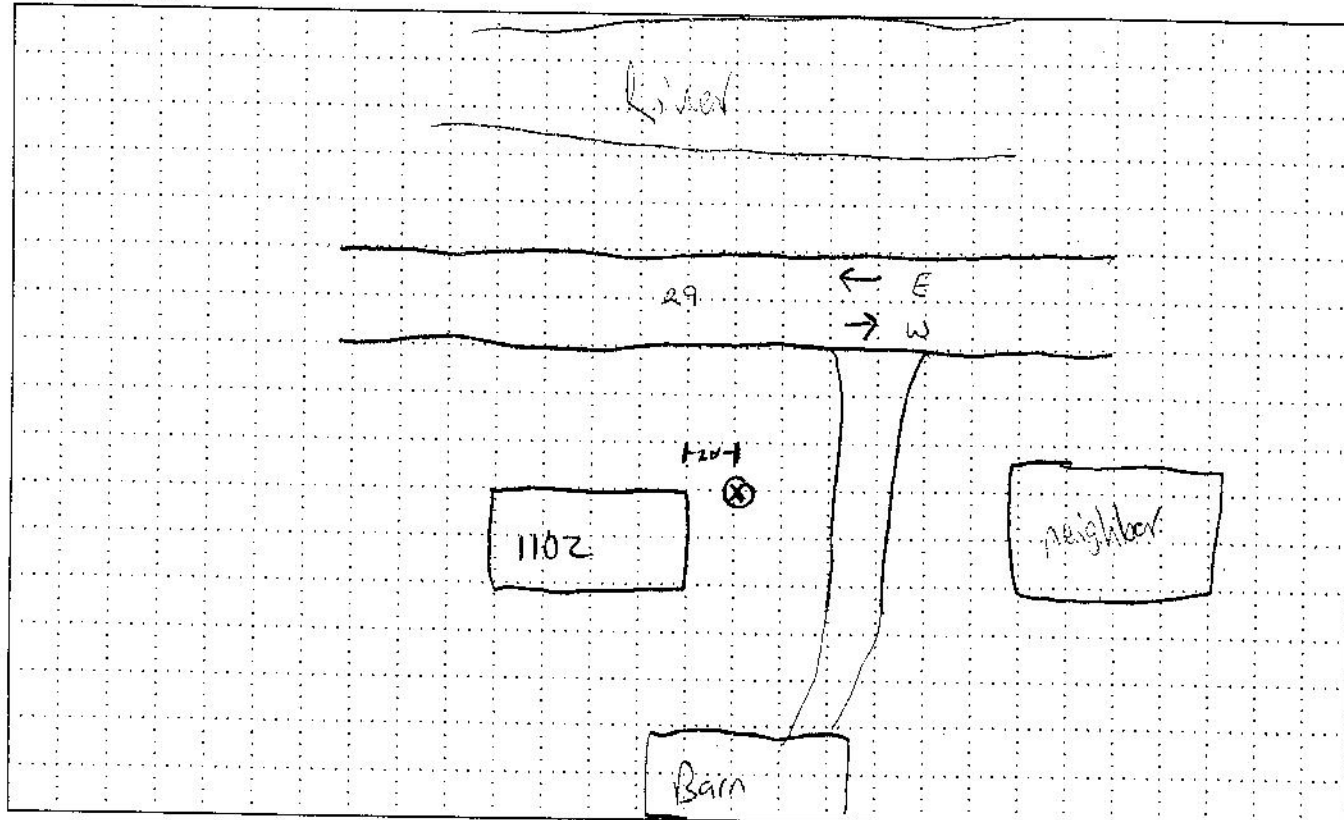
SLM Calibration before 114.0 after _____
 Weather: temperature 60° wind speed 0-10 15 mph gusts cloud cover 50%
 Time: 1st start 2:59 stop 3:19 total 20 min
 2nd start _____ stop _____ total _____
 Data: 1st Leq 62.0 Lmax 73.4 Lmin 48.6 SEL 92.8
 2nd Leq _____ Lmax _____ Lmin _____ SEL _____

Traffic Data

Roadway#1	Direction	1st	2nd	Roadway#2	Direction	1st	2nd	Roadway#3	Direction	1st	2nd	Roadway#4	Direction	1st	2nd
RT 29	→ W			RT 29	← E										
auto		146		auto		122		auto				auto			
med. trk.		1		med. trk.		5		med. trk.				med. trk.			
hvy trk.		0		hvy trk.		4		hvy trk.				hvy trk.			
bus		2		bus		5		bus				bus			
motorcycle		1		motorcycle		4		motorcycle				motorcycle			

NOTES: 35-45 mph

SITE SKETCH



Highway Noise Monitoring Sheet

DATE: 3-1-04

PROJECT: SCUDDER FALLS BRIDGE

JOB #: 12444-001

SITE ID: R12-5



Gannett
Fleming, Inc.

ADDRESS: Park
Del & Karibun St. Park

Meter Storage # _____

TYPE ☐ Residential ☐ Commercial ☐ Religion ☐ Educational ☒ Other Park

Measurement Data

Photograph #'s _____

SLM Calibration before 94.0 after 94.0

Weather: temperature 50° wind speed 0-3 cloud cover 0-3%

Time: 1st start 11:55 stop 12:15 total 20 min

2nd start _____ stop _____ total _____

Data: 1st Leq 59.4 Lmax 75.2 Lmin 48.7 SEL 90.2

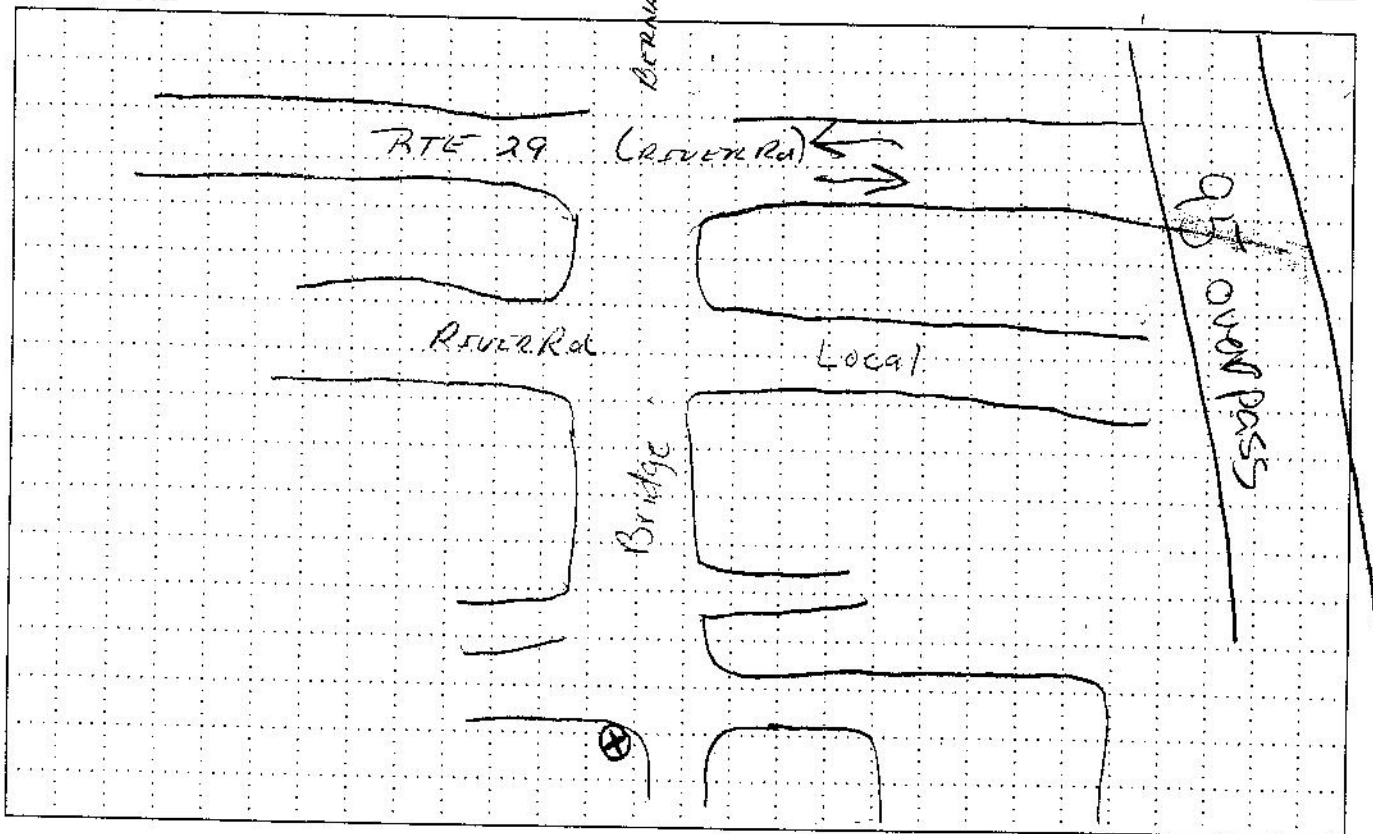
2nd Leq _____ Lmax _____ Lmin _____ SEL _____

Traffic Data

Roadway#1	Roadway#2	Roadway#3	Roadway#4
<u>Rever Rd</u>	<u>Rte 29</u>	<u>95</u>	<u>95 SB</u>
Direction <u>Both</u>	Direction <u>← →</u>	Direction <u>NB</u>	Direction _____
1st 2nd	1st 2nd	1st 2nd	1st 2nd
auto <u>50</u>	auto <u>94</u> <u>79</u>	auto <u>315</u>	auto <u>346</u>
med. trk. <u>2</u>	med. trk. <u>7</u> <u>1</u>	med. trk. <u>13</u>	med. trk. <u>24</u>
hvy trk. <u>5</u>	hvy trk. <u>16</u> <u>17</u>	hvy trk. <u>44</u>	hvy trk. <u>68</u>
bus _____	bus <u>0</u>	bus <u>1</u>	bus <u>3</u>
motorcycle _____	motorcycle <u>0</u>	motorcycle <u>0</u>	motorcycle <u>1</u>

NOTES: More than people in park

SITE SKETCH



Highway Noise Monitoring Sheet

DATE: 3/1/04
 PROJECT: Scudder Falls
 JOB #: 42444-001
 SITE ID: R12-6



ADDRESS: 1084 Bernard & River

Meter Storage # 2

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other

Measurement Data

Photograph #'s

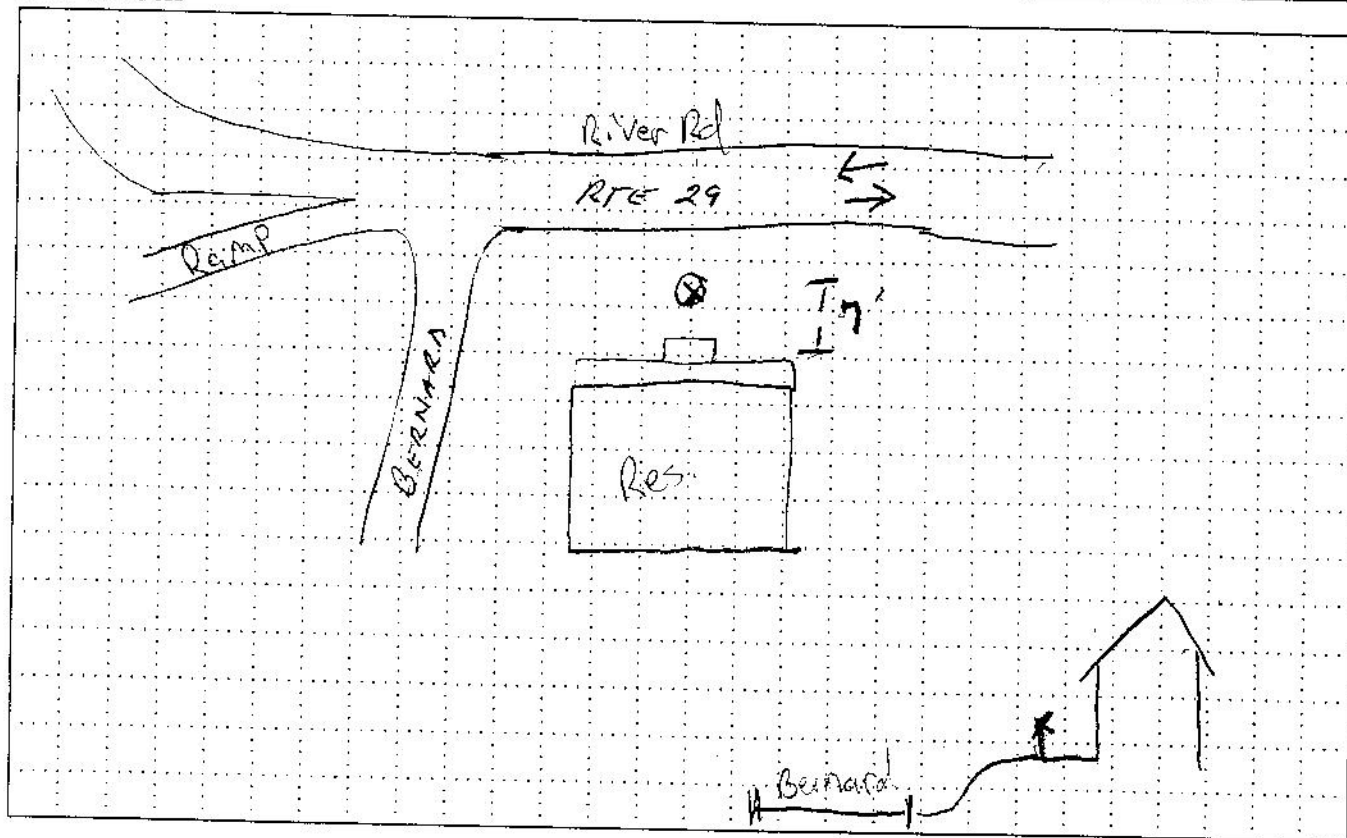
SLM Calibration before 94.0 after 94.0
 Weather: temperature 50° wind speed 0-3 cloud cover 0-3%
 Time: 1st start 12:28 stop 12:48 total
 2nd start stop total
 Data: 1st Leq 70.5 Lmax 82.7 Lmin 48.6 SEL 101.2
 2nd Leq Lmax Lmin SEL

Traffic Data

Roadway#1	Direction	1st	2nd	auto	med. trk.	hvy trk.	bus	motorcycle
<u>RTE 29</u>	<u>→</u>	<u>102</u>		<u>4</u>	<u>11</u>	<u>0</u>	<u>1</u>	
Roadway#2	Direction	1st	2nd	auto	med. trk.	hvy trk.	bus	motorcycle
<u>RTE 29</u>	<u>←</u>	<u>87</u>		<u>4</u>	<u>14</u>	<u>1</u>	<u>2</u>	
Roadway#3	Direction	1st	2nd	auto	med. trk.	hvy trk.	bus	motorcycle
<u>95 NB</u>		<u>394</u>		<u>7</u>	<u>33</u>	<u>1</u>	<u>1</u>	
Roadway#4	Direction	1st	2nd	auto	med. trk.	hvy trk.	bus	motorcycle
<u>95 SB</u>		<u>380</u>		<u>18</u>	<u>67</u>	<u>0</u>	<u>1</u>	

NOTES: A lot of tri-axle dump trucks

SITE SKETCH



Highway Noise Monitoring Sheet

DATE: 4-7-03

ADDRESS: 44 Bernard Dr.

PROJECT: Scudder Falls - DJTBC

JOB # 42444.001

SITE ID B13-1



Meter Storage # 16

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other

Measurement Data

Photograph #'s _____

SLM Calibration before 114.1 after _____
 Weather: temperature 60° wind speed 0-10 cloud cover 25%
 Time: 1st start 1:39 stop 1:59 total 20
 2nd start _____ stop _____ total _____
 Data: 1st Leq 63.8 Lmax 74.6 Lmin 56.2 SEL 94.6
 2nd Leq _____ Lmax _____ Lmin _____ SEL _____

Traffic Data

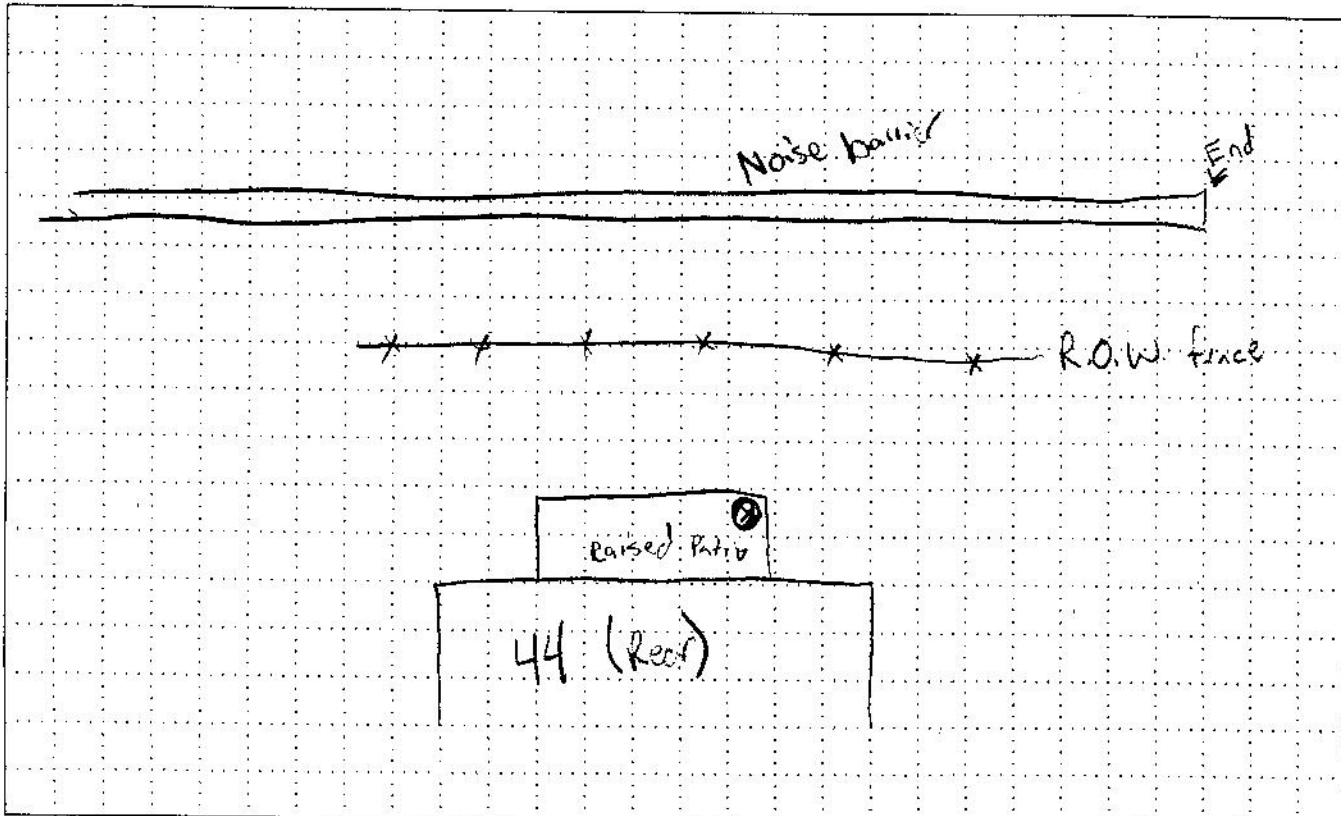
* 10 min *

Roadway#1	Direction	1st	2nd	Roadway#2	Direction	1st	2nd	Roadway#3	Direction	1st	2nd	Roadway#4	Direction	1st	2nd
<u>95</u>	<u>NB</u>			<u>95</u>	<u>SB</u>										
auto		<u>172</u>		auto		<u>253</u>		auto				auto			
med. trk.		<u>12</u>		med. trk.		<u>5</u>		med. trk.				med. trk.			
hvy trk.		<u>16</u>		hvy trk.		<u>24</u>		hvy trk.				hvy trk.			
bus		<u>3</u>		bus				bus				bus			
motorcycle				motorcycle				motorcycle				motorcycle			

NOTES: meter is 14' from house on corner of deck, 10' above ground level

Speed = 65 3 lanes + Ramp Both ways

SITE SKETCH



Highway Noise Monitoring Sheet

DATE: 4/16/04
 PROJECT: _____
 JOB #: _____
 SITE ID: R13-2



ADDRESS: Adj. to Police Facility

Meter Storage # BTK 2230

TYPE ☐ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other Highway Row

Measurement Data

Photograph #'s _____

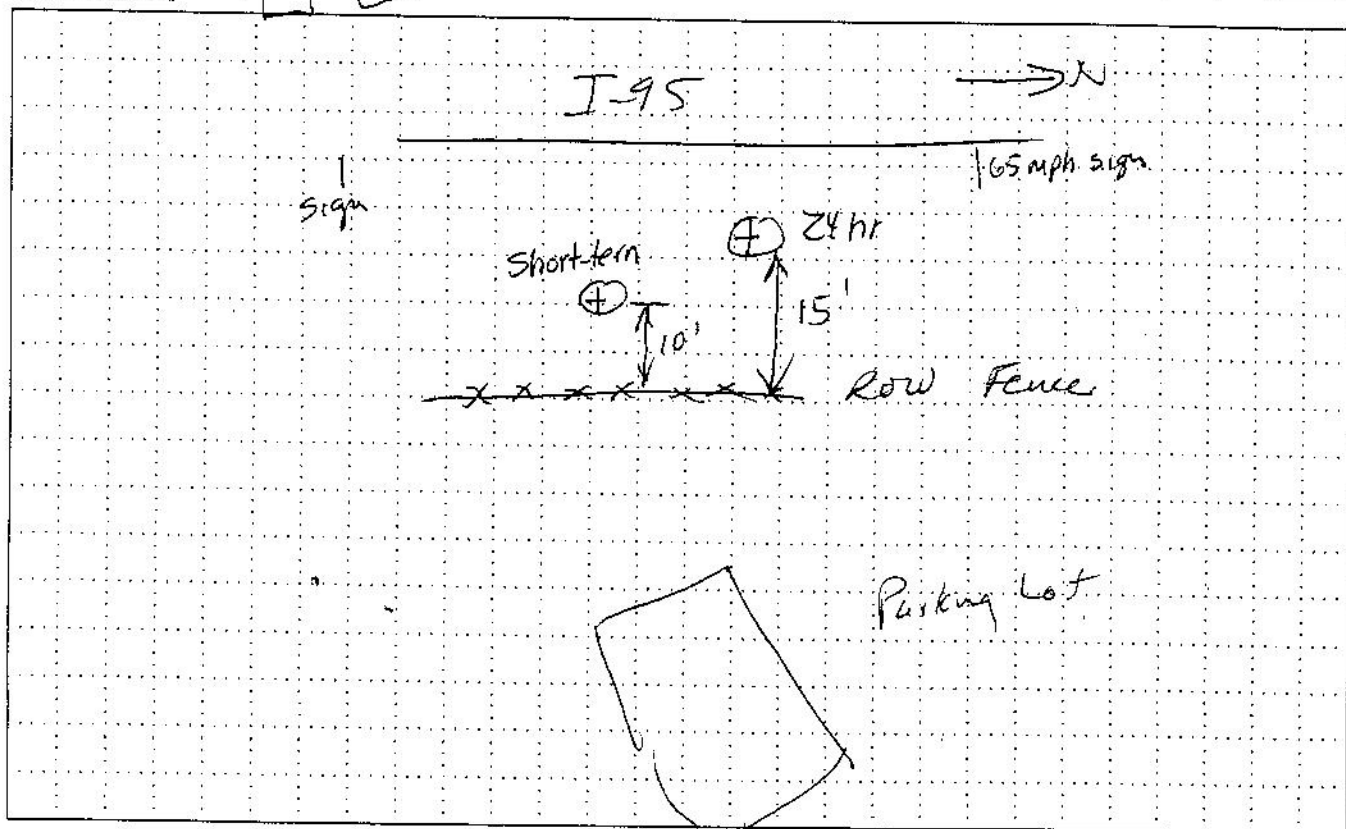
SILM Calibration before 94.0 after 94.0
 Weather: temperature 65° wind speed Calm cloud cover Clear
 Time: 1st start 2:20 PM stop 3:00 PM total 20 min
 2nd start _____ stop _____ total _____
 Data: 1st Leq 76.6 Lmax 87.9 Lmin 57.5 SEL 107.3
 2nd Leq _____ Lmax _____ Lmin _____ SEL _____

Traffic Data

Roadway#1	Direction	1st	2nd	Roadway#2	Direction	1st	2nd	Roadway#3	Direction	1st	2nd	Roadway#4	Direction	1st	2nd
<u>I-95 NB</u>	<u>Near</u>			<u>I-95 SB</u>	<u>Far</u>										
auto		<u>391</u>		auto		<u>694</u>		auto				auto			
med. trk.		<u>9</u>		med. trk.		<u>21</u>		med. trk.				med. trk.			
hvy trk.		<u>25</u>		hvy trk.		<u>58</u>		hvy trk.				hvy trk.			
bus		<u>0</u>		bus		<u>0</u>		bus				bus			
motorcycle		<u>1</u>		motorcycle		<u>3</u>		motorcycle				motorcycle			

NOTES:

SITE SKETCH



Highway Noise Monitoring Sheet

DATE: 3-1-04
 PROJECT: Truckee Falls
 JOB #: 42444-001
 SITE ID: R13-3



ADDRESS: Scenic Dr. Lot
 Meter Storage # 3

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☒ Other Future Development

Measurement Data

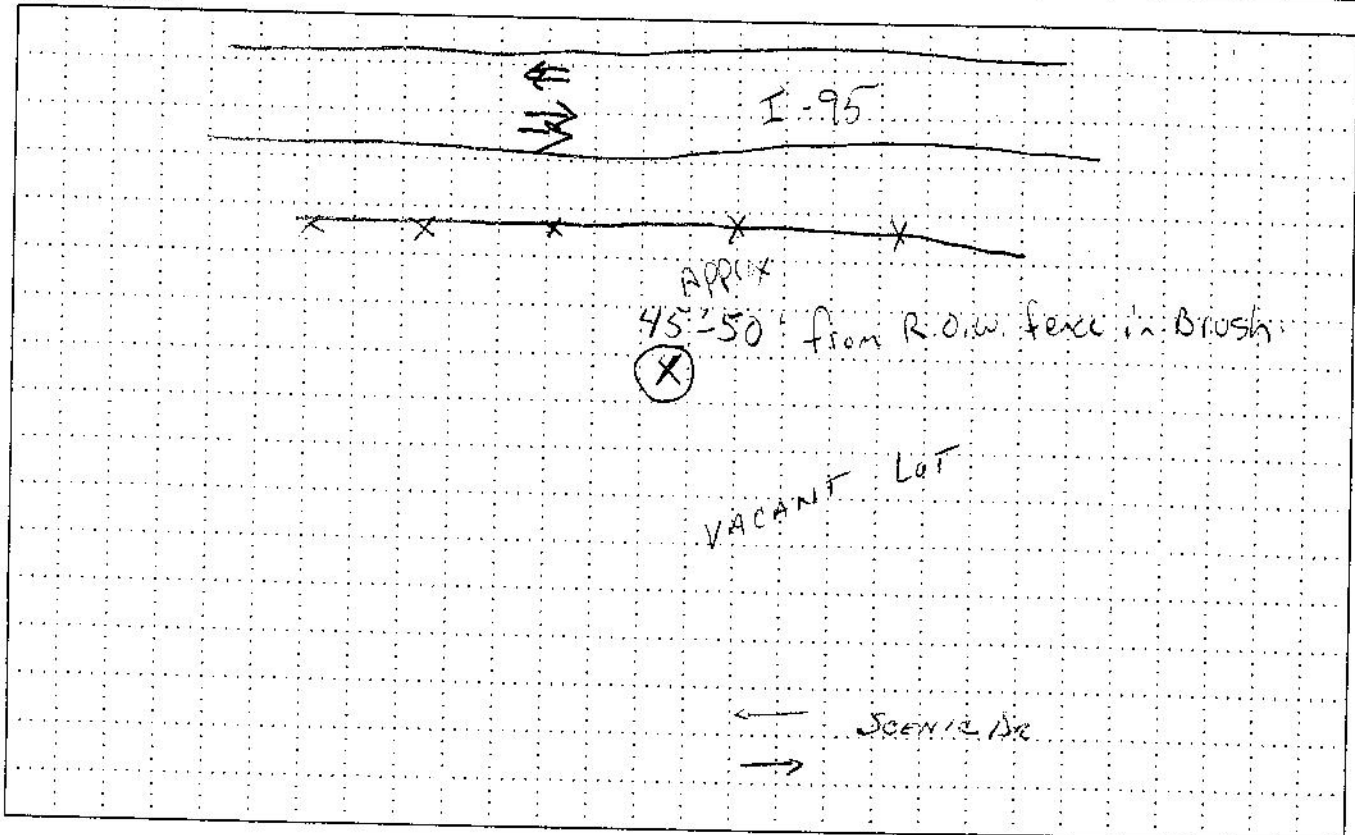
SLM Calibration before 94.0 after _____ Photograph #'s _____
 Weather: temperature 55° wind speed 0-3 cloud cover 5%
 Time: 1st start 1:30 stop 1:50 total 20
 2nd start _____ stop _____ total _____
 Data: 1st Leq 67.0 Lmax 80.1 Lmin 54.0 SEL 97.8
 2nd Leq _____ Lmax _____ Lmin _____ SEL _____

Traffic Data

Roadway#1	Direction	1st	2nd	Roadway#2	Direction	1st	2nd	Roadway#3	Direction	1st	2nd	Roadway#4	Direction	1st	2nd
<u>95 NB</u>				<u>95 SB</u>				<u>SB RAMP</u>				<u>NB off</u>			
auto		<u>309</u>		auto		<u>270</u>		auto		<u>21</u>		auto		<u>56</u>	
med. trk.		<u>6</u>		med. trk.		<u>28</u>		med. trk.				med. trk.			
hvy trk.		<u>45</u>		hvy trk.		<u>56</u>		hvy trk.		<u>1</u>		hvy trk.			
bus		<u>4</u>		bus		<u>8</u>		bus				bus			
motorcycle		<u>1</u>		motorcycle				motorcycle				motorcycle			

NOTES: Meter on survey pin # B2AJ

SITE SKETCH



Highway Noise Monitoring Sheet

DATE: 5-30-07
 PROJECT: ADTBC
 JOB #: 17961.001
 SITE ID: 12-1



ADDRESS: _____
 Meter Storage # 187

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other _____

Measurement Data

Photograph #'s _____

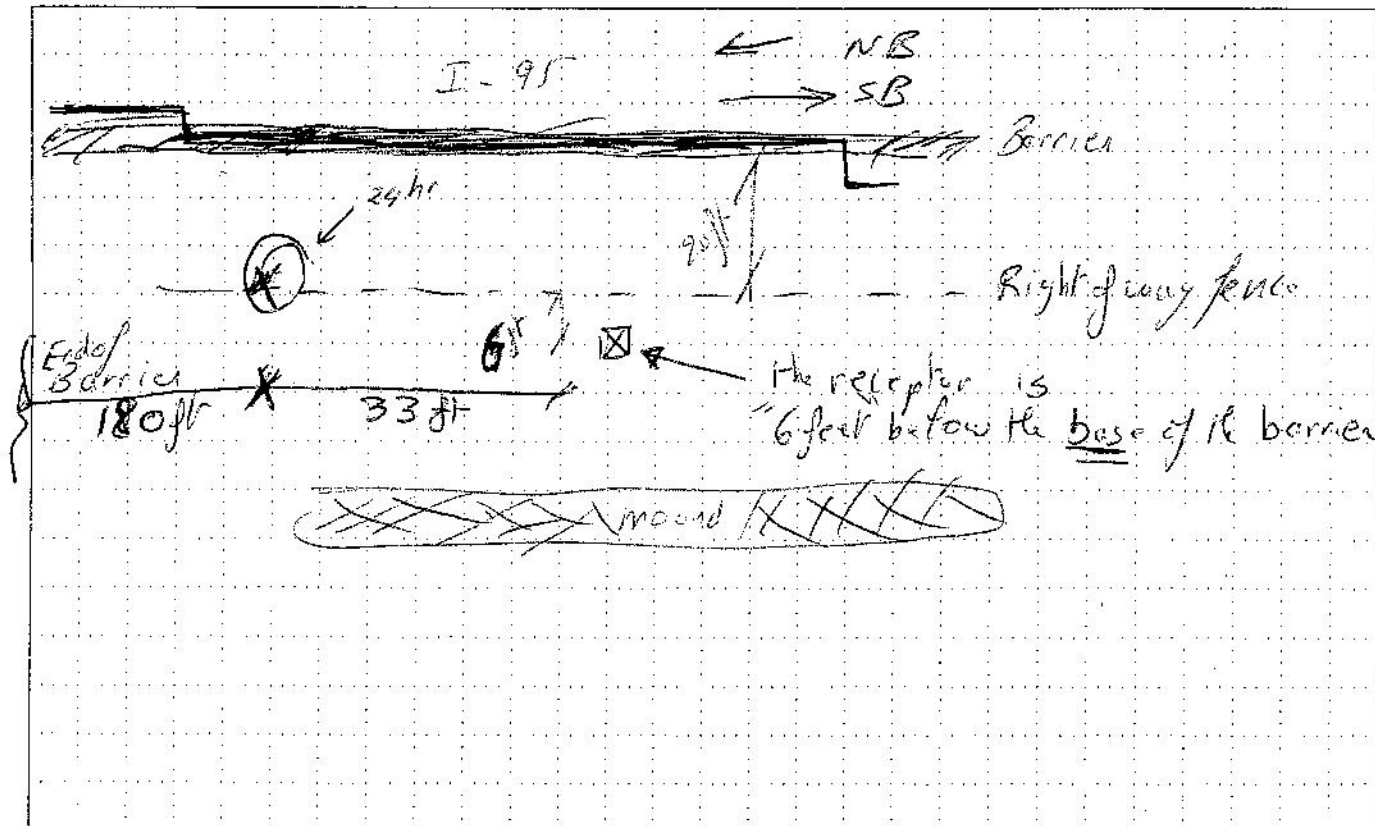
SLM Calibration before 114 after 114
 Weather: temperature 86 wind speed 0-3 mph cloud cover at 100%
 Time: 1st start 2:17 pm stop 3:07 pm total 20 min
 2nd start 8:05 am stop 8:25 am total 20 min
 Data: 1st Leq 56.8 Lmax 66.6 Lmin 46.8 SEL 87.6
 2nd Leq 58.6 Lmax 69.7 Lmin 51.3 SEL 89.4

Traffic Data

Roadway#1	Roadway#2	Roadway#3	Roadway#4
Direction	Direction	Direction	Direction
1st 2nd	1st 2nd	1st 2nd	1st 2nd
auto	auto	auto	auto
med. trk.	med. trk.	med. trk.	med. trk.
hvy trk.	hvy trk.	hvy trk.	hvy trk.
bus	bus	bus	bus
motorcycle	motorcycle	motorcycle	motorcycle

NOTES: 2:59 Bird chirping

SITE SKETCH



Highway Noise Monitoring Sheet

DATE: 5.30.07
 PROJECT: BRJTC
 JOB #: _____
 SITE ID: R.2



ADDRESS: _____
 Meter Storage # 2

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other _____

Measurement Data

Photograph #'s _____

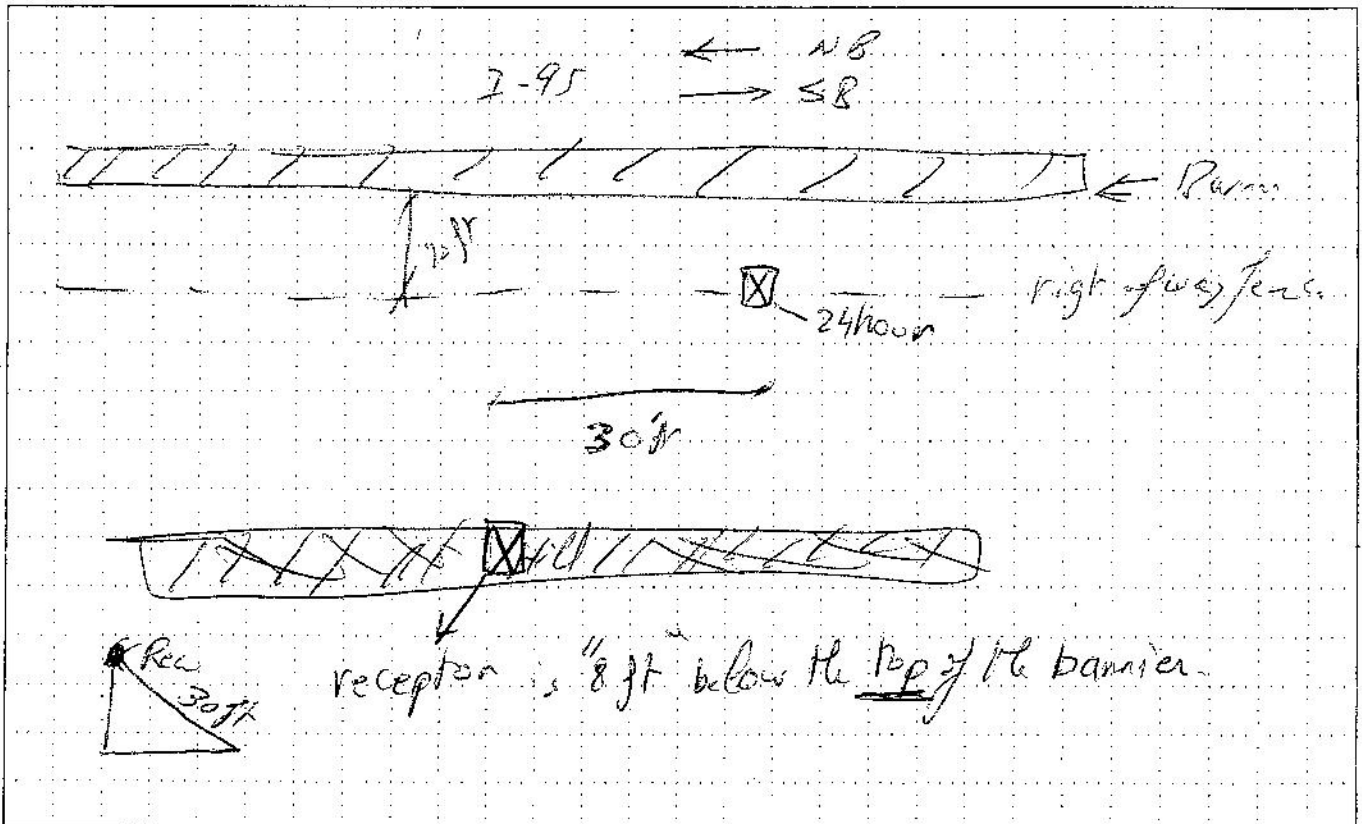
SLM Calibration before 114 after 114
 Weather: temperature 87 wind speed 0-1 mph cloud cover 2-2
 Time: 1st start 7:10 pm stop 7:30 total 20 min
 2nd start _____ stop _____ total _____
 Data: 1st Leq 60.6 Lmax 70.9 Lmin 51.3 SEL 70.7
 2nd Leq _____ Lmax _____ Lmin _____ SEL _____

Traffic Data

Roadway#1	Roadway#2	Roadway#3	Roadway#4
Direction	Direction	Direction	Direction
1st 2nd	1st 2nd	1st 2nd	1st 2nd
auto	auto	auto	auto
med. trk.	med. trk.	med. trk.	med. trk.
hvy trk.	hvy trk.	hvy trk.	hvy trk.
bus	bus	bus	bus
motorcycle	motorcycle	motorcycle	motorcycle

NOTES:

SITE SKETCH



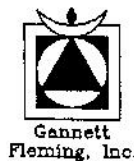
Highway Noise Monitoring Sheet

DATE: 5-30-67

PROJECT: BRB, etc

JOB #

SITE ID R.3



ADDRESS:

Meter Storage # 326

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other

Measurement Data

Photograph #'s

SLM Calibration before 114 after 114

Weather: temperature 72 wind speed 0-T.MPH cloud cover NRU

Time: 1st start 7:35 pm stop 3:55 pm total 20 mi

2nd start 7:40 a.m stop 8:00 a.m total 20 mi

Data: 1st Leq 71.9 Lmax 83.3 Lmin 57.4 SEL 102.7

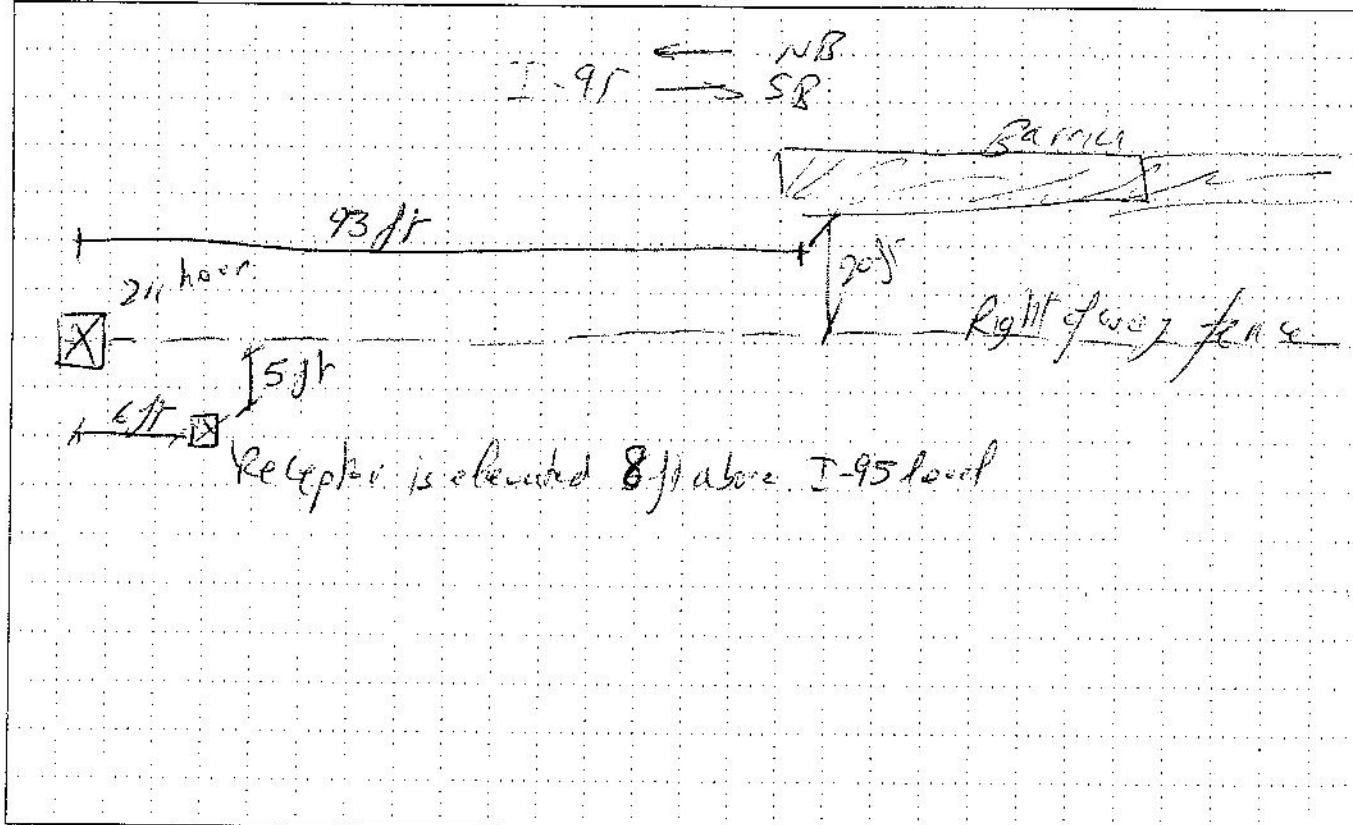
2nd Leq 72.4 Lmax 82.1 Lmin 62.3 SEL 103.2

Traffic Data

Roadway#1	Roadway#2	Roadway#3	Roadway#4
Direction	Direction	Direction	Direction
1st 2nd	1st 2nd	1st 2nd	1st 2nd
auto	auto	auto	auto
med. trk.	med. trk.	med. trk.	med. trk.
hvy trk.	hvy trk.	hvy trk.	hvy trk.
bus	bus	bus	bus
motorcycle	motorcycle	motorcycle	motorcycle

NOTES:

SITE SKETCH



Highway Noise Monitoring Sheet

DATE: 5-30-87

PROJECT: _____

JOB #: _____

SITE ID R-4



ADDRESS: _____

Meter Storage # 4

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other _____

Measurement Data

Photograph #'s _____

SLM Calibration before 114 after 114

Weather: temperature 87 wind speed 0-5 mph cloud cover none

Time: 1st start 4:05 pm stop 4:25 pm total 20 min

2nd start 7:40 am stop 8:00 am total 20 min

Data: 1st Leq 71.4 Lmax 80.7 Lmin 59.1 SEL 107.7

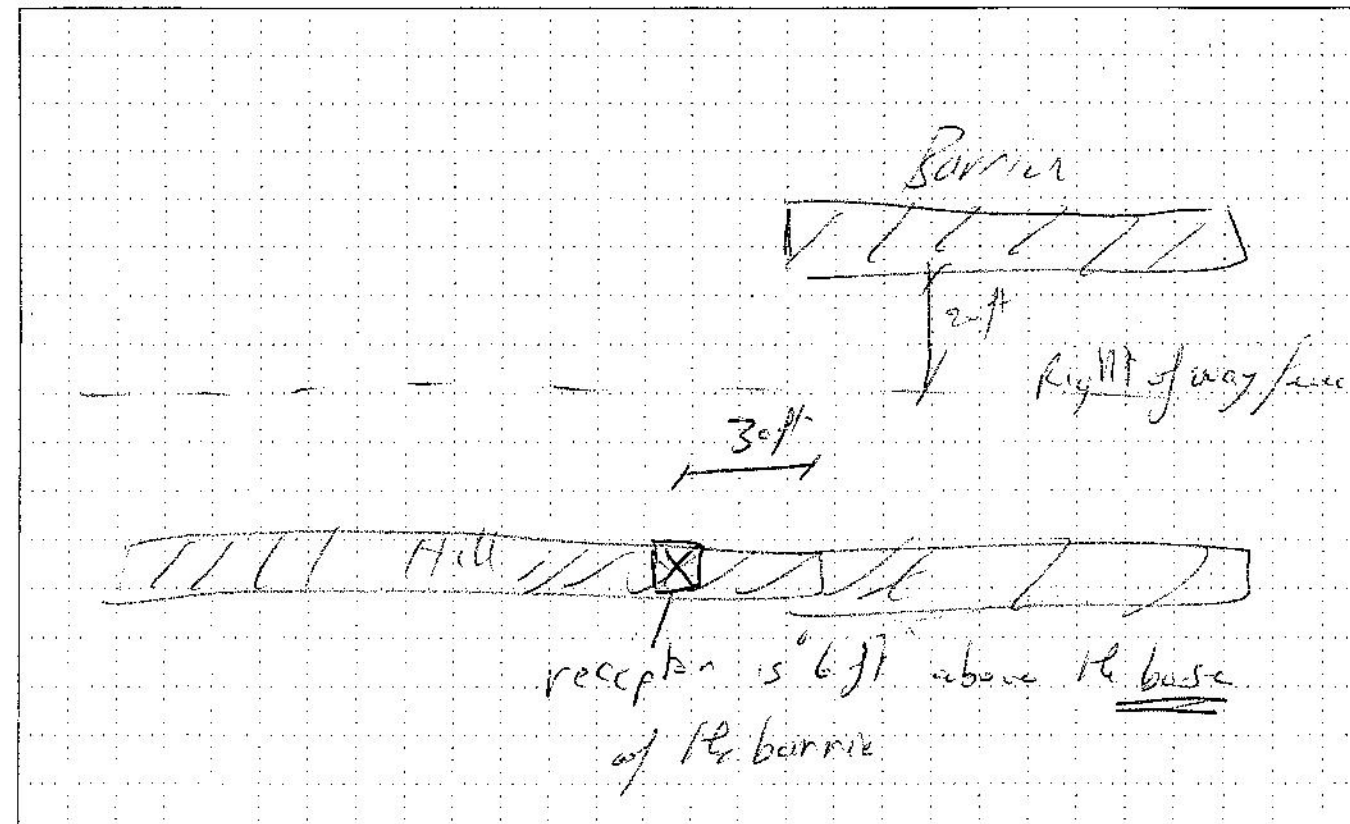
2nd Leq _____ Lmax _____ Lmin _____ SEL _____

Traffic Data

Roadway#1	Roadway#2	Roadway#3	Roadway#4
Direction	Direction	Direction	Direction
1st 2nd	1st 2nd	1st 2nd	1st 2nd
auto	auto	auto	auto
med. trk.	med. trk.	med. trk.	med. trk.
hvy trk.	hvy trk.	hvy trk.	hvy trk.
bus	bus	bus	bus
motorcycle	motorcycle	motorcycle	motorcycle

NOTES: _____

SITE SKETCH



Highway Noise Monitoring Sheet

DATE: 5.30.67

PROJECT: _____

JOB # _____

SITE ID R-5



ADDRESS: _____

Meter Storage # 5

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other _____

Measurement Data

Photograph #'s _____

SLM Calibration before 114 after 114

Weather: temperature 87 wind speed 5 mph cloud cover none

Time: 1st start 6:40 pm stop 5:00 pm total 2 min

2nd start _____ stop _____ total _____

Data: 1st Leq 72 Lmax 88.3 Lmin 64.4 SEL 1.78

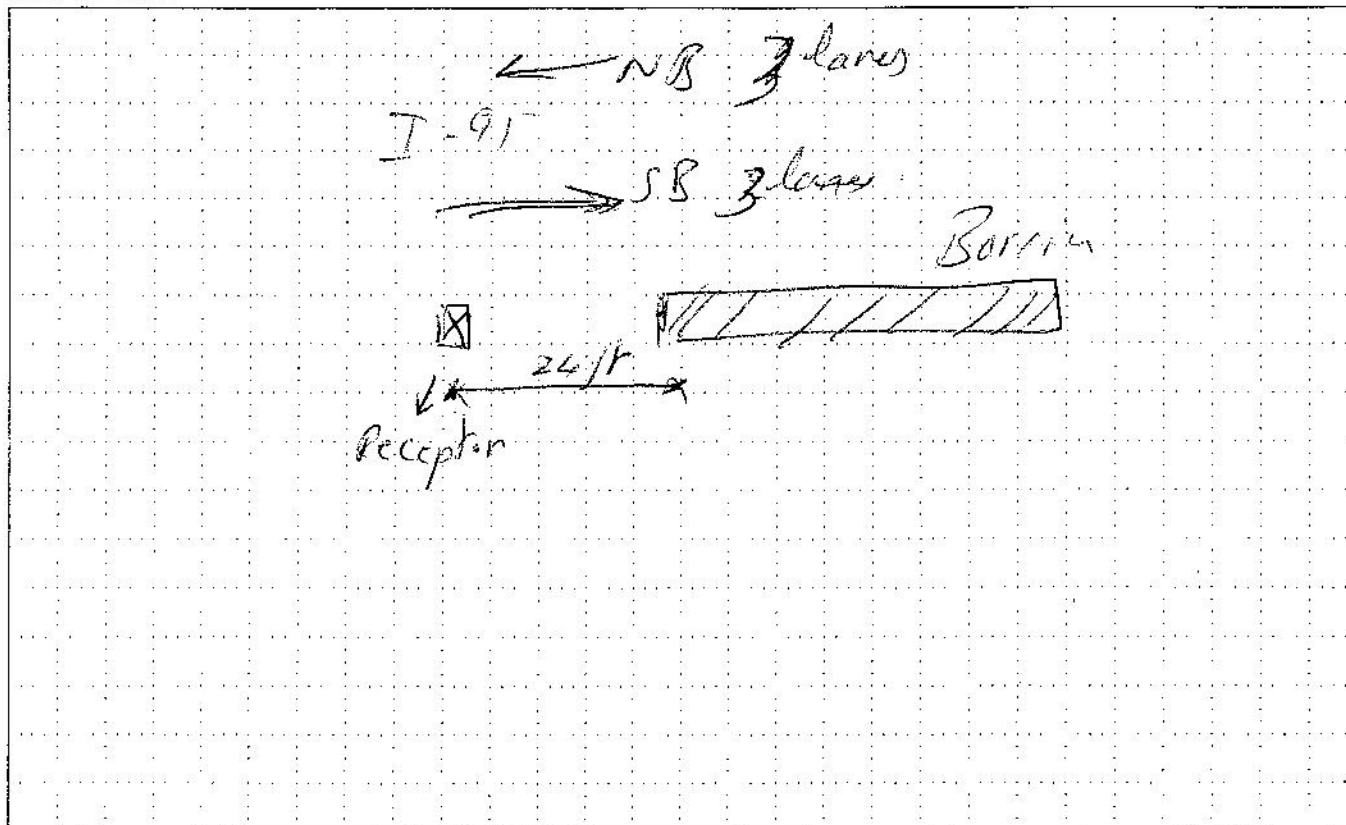
2nd Leq _____ Lmax _____ Lmin _____ SEL _____

Traffic Data

Roadway#1	Roadway#2	Roadway#3	Roadway#4
Direction	Direction	Direction	Direction
1st 2nd	1st 2nd	1st 2nd	1st 2nd
auto	auto	auto	auto
med. trk.	med. trk.	med. trk.	med. trk.
hvy trk.	hvy trk.	hvy trk.	hvy trk.
bus	bus	bus	bus
motorcycle	motorcycle	motorcycle	motorcycle

NOTES: _____

SITE SKETCH



Highway Noise Monitoring Sheet

DATE: 5-30-07
 PROJECT: 47961.001
 JOB #: DJTBC
 SITE ID: A



ADDRESS: At Unit Cul-de-sac
Near Row Fence
North End of Development
 Meter Storage # B&K

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other Future

Measurement Data

Photograph #'s _____

SLM Calibration before 94.0 after _____

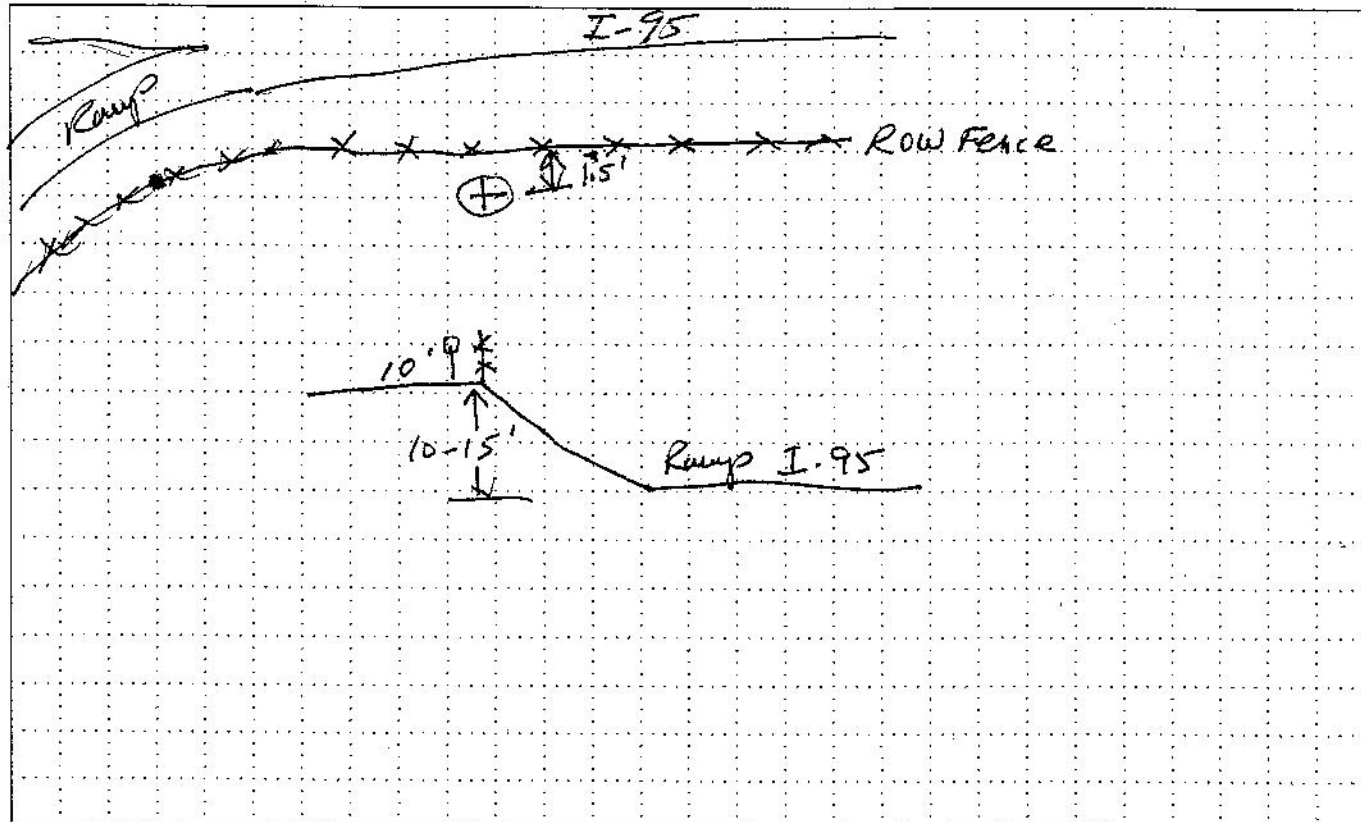
Weather: temperature _____ wind speed calm cloud cover clear
 Time: 1st start 2:15 PM stop 2:25 PM total 20 min
 2nd start 4:24 PM stop 4:44 PM total 20 min
 Data: 1st Leq 74.2 Lmax 88.4 Lmin 55.2 SEL 104.8
 2nd Leq 74.7 Lmax 85.9 Lmin 64.5 SEL 105.4

Traffic Data

Roadway#1	Roadway#2	Roadway#3	Roadway#4
Direction	Direction	Direction	Direction
1st 2nd	1st 2nd	1st 2nd	1st 2nd
auto	auto	auto	auto
med. trk.	med. trk.	med. trk.	med. trk.
hvy trk.	hvy trk.	hvy trk.	hvy trk.
bus	bus	bus	bus
motorcycle	motorcycle	motorcycle	motorcycle

NOTES: Ramp & mainline traffic travelling at same speed past meter

SITE SKETCH



Highway Noise Monitoring Sheet

DATE: 5/30/07
 PROJECT: _____
 JOB #: _____
 SITE ID B



ADDRESS: Vicinity of Unit 1 Patio
(north end of bldg)
 Meter Storage # B&K

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other _____

Future
 Measurement Data

Photograph #'s _____

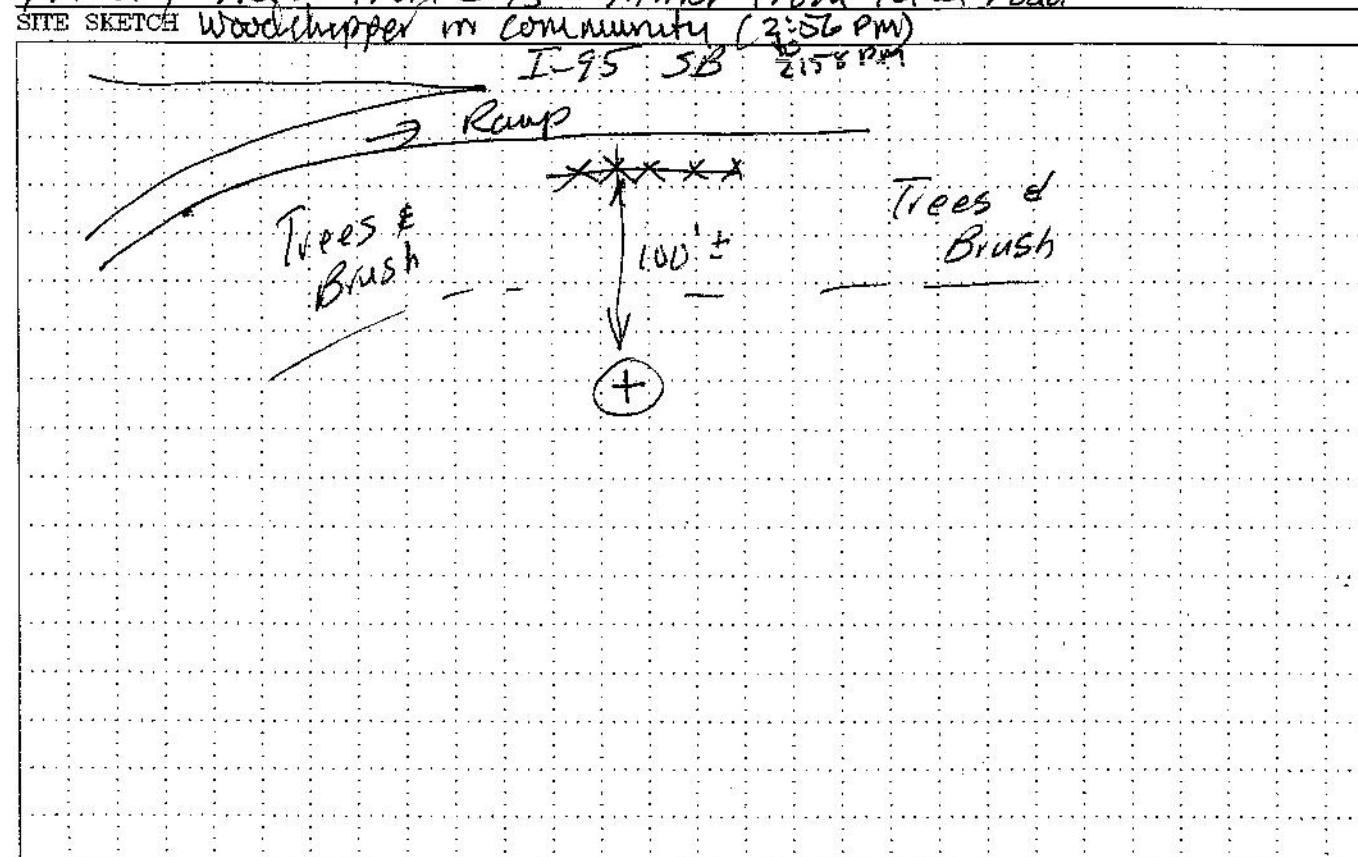
SIM Calibration before _____ after _____

Weather: temperature _____ wind speed calm cloud cover clear
 Time: 1st start 2:38 PM stop 2:56 PM total 18 min (stopped due to wood chipper in community)
 2nd start 4:47 PM stop 5:07 PM total 20 min
 Data: 1st Leq 58.8 Lmax 73.4 Lmin — SEL 88.8
 2nd Leq 57.9 Lmax 66.7 Lmin 51.5 SEL 88.5

Traffic Data

Roadway#1	Roadway#2	Roadway#3	Roadway#4
Direction	Direction	Direction	Direction
1st 2nd	1st 2nd	1st 2nd	1st 2nd
auto	auto	auto	auto
med. trk.	med. trk.	med. trk.	med. trk.
hvy trk.	hvy trk.	hvy trk.	hvy trk.
bus	bus	bus	bus
motorcycle	motorcycle	motorcycle	motorcycle

NOTES: Ground approx. level with ground at Row Fence
Pause for helicopter flyover (2:43), single engine (2:45), helicopter (2:48)
Primary noise from I-95 minor from local road
Woodchipper in community (2:56 PM)



Highway Noise Monitoring Sheet

DATE: 5/30/06

PROJECT: _____

JOB # _____

SITE ID C



ADDRESS: Unit 1 Pato (South)

Meter Storage # B4K

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other _____

Future

Measurement Data

Photograph #'s _____

SLM Calibration before _____ after _____

Weather: temperature _____ wind speed calm cloud cover clear

Time: 1st start 3:02 PM stop 3:22 PM total 20 min

2nd start 5:11 PM stop 5:31 PM total 20 min

Data: 1st Leq 63.0 Lmax 72.1 Lmin 54.3 SEL 93.6

2nd Leq 63.5 Lmax 74.0 Lmin 57.2 SEL 94.1

Traffic Data

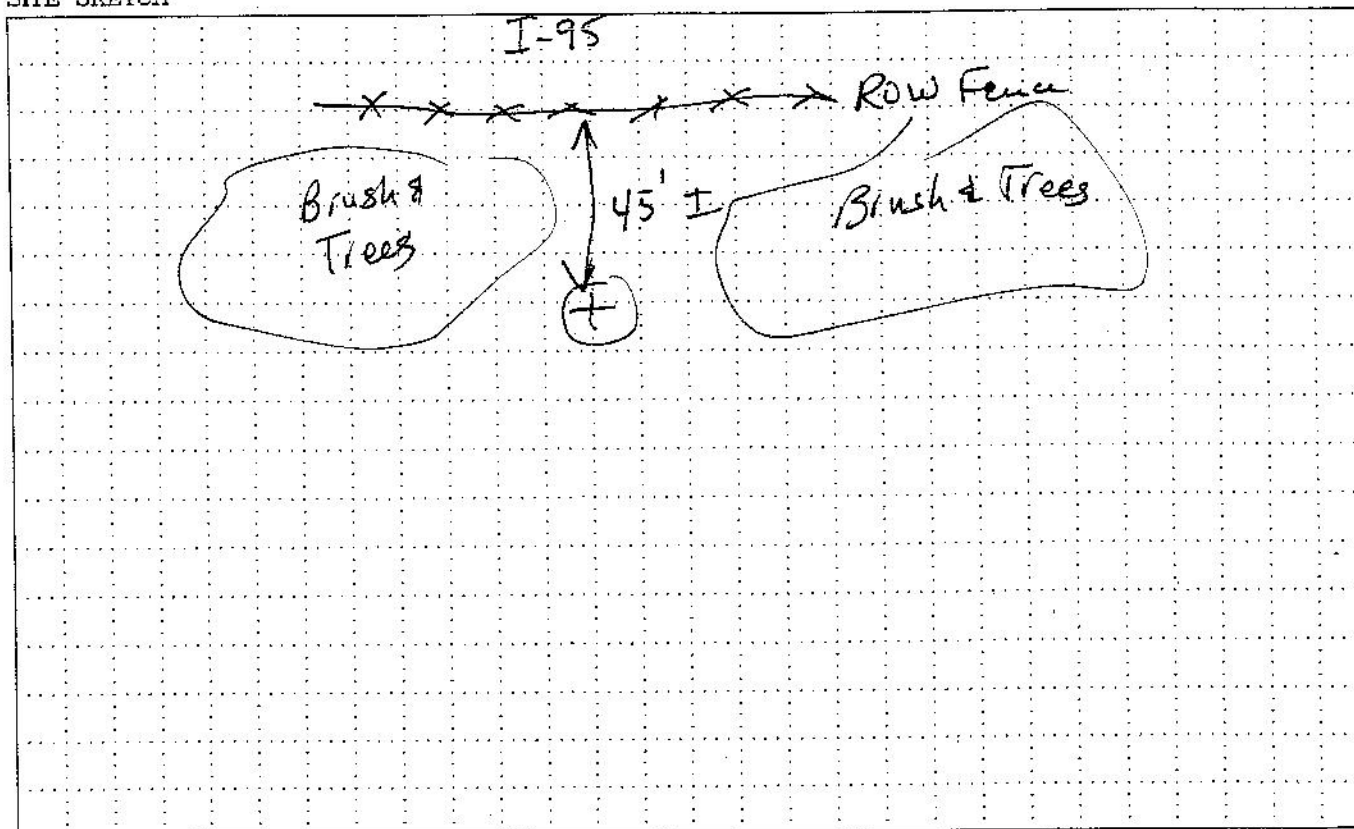
Roadway#1	Roadway#2	Roadway#3	Roadway#4
Direction	Direction	Direction	Direction
1st 2nd	1st 2nd	1st 2nd	1st 2nd
auto	auto	auto	auto
med. trk.	med. trk.	med. trk.	med. trk.
hvy trk.	hvy trk.	hvy trk.	hvy trk.
bus	bus	bus	bus
motorcycle	motorcycle	motorcycle	motorcycle

NOTES: Pauses: Airplane takeoff (305) 5:30 (helicopter)

Ground 1-2' lower than at ROW Fence

I-95 noise dominant

SITE SKETCH



Highway Noise Monitoring Sheet

DATE: _____
 PROJECT: _____
 JOB #: _____
 SITE ID D



ADDRESS: _____
Court C
 Meter Storage # _____

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other _____

Measurement Data

Photograph #'s _____

SLM Calibration before _____ after _____

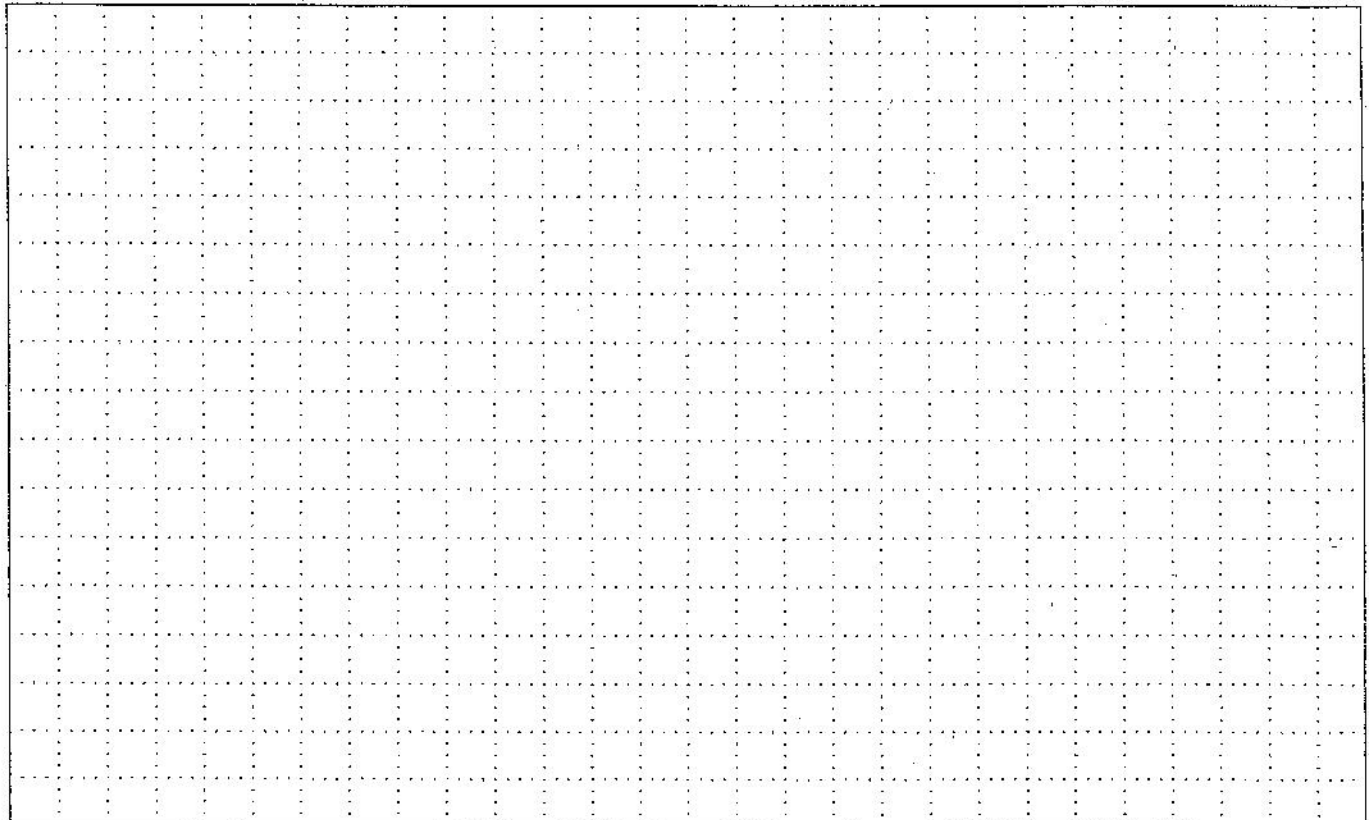
Weather: temperature _____ wind speed _____ cloud cover _____
 Time: 1st start 3:34 PM stop 3:54 PM total 20 min
 2nd start 3:55 PM stop 4:15 PM total 20 min
 Data: 1st Leq 53.9 Lmax 69.7 Lmin 48.5 SEL 84.4
 2nd Leq 55.2 Lmax 66.1 Lmin 47.1 SEL 85.1

Traffic Data

Roadway#1	SB Scenic View	Roadway#2	WB Scenic View	Roadway#3		Roadway#4	
Direction	Far Lane	Direction	Near Lane	Direction		Direction	
auto	1st 40 2nd 30	auto	1st 20 2nd 22	auto	1st 2nd	auto	1st 2nd
med. trk.	0 2(50)	med. trk.	0 2(50, UPS)	med. trk.		med. trk.	
hvy trk.	0 0	hvy trk.	0 0	hvy trk.		hvy trk.	
bus	0 0	bus	0 0	bus		bus	
motorcycle	0 0	motorcycle	0 0	motorcycle		motorcycle	

NOTES: Pauses: Arrivals 3:34; 3:39; 3:49; 4:02; 4:07;
 I-95 Noise #1 52-54 SPL Ground @ meter 10-15 higher than local road
 Birds 25-36

SITE SKETCH



Highway Noise Monitoring Sheet

DATE: 5-31-07

PROJECT: _____

JOB #: _____

SITE ID: A



ADDRESS: _____

Meter Storage # 8

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other _____

Measurement Data

Photograph #'s _____

SLM Calibration before 114 after _____

Weather: temperature _____ wind speed _____ cloud cover _____

Time:	1st	start	<u>8:59am</u>	stop	<u>9:19am</u>	total	<u>20 min</u>	
	2nd	start	_____	stop	_____	total	_____	
Data:	1st	Leq	<u>73.2</u>	Lmax	<u>85.6</u>	Lmin	<u>57.2</u>	SEL <u>104.6</u>
	2nd	Leq	_____	Lmax	_____	Lmin	_____	SEL _____

Traffic Data

Roadway#1	Direction	1st	2nd	Roadway#2	Direction	1st	2nd	Roadway#3	Direction	1st	2nd	Roadway#4	Direction	1st	2nd
auto				auto				auto				auto			
med. trk.				med. trk.				med. trk.				med. trk.			
hvy trk.				hvy trk.				hvy trk.				hvy trk.			
bus				bus				bus				bus			
motorcycle				motorcycle				motorcycle				motorcycle			

NOTES: Harvey site sketches

SITE SKETCH

Highway Noise Monitoring Sheet

DATE: 5-31-07

PROJECT: _____

JOB # _____

SITE ID B



ADDRESS: _____

Meter Storage # 9

TYPE ☒ Residential ☐ Commercial ☐ Religion ☐ Educational ☐ Other _____

Measurement Data

Photograph #'s _____

SLM Calibration before 114 after _____

Weather: temperature _____ wind speed _____ cloud cover _____

Time: 1st start 9:26 stop 9:44 total 20 min

2nd start _____ stop _____ total _____

Data: 1st Leq 63.0 Lmax 75.5 Lmin 54.0 SEL 93.8

2nd Leq _____ Lmax _____ Lmin _____ SEL _____

Traffic Data

Roadway#1	Roadway#2		Roadway#3		Roadway#4
Direction	Direction		Direction		Direction
1st 2nd	1st 2nd		1st 2nd		1st 2nd
auto	auto		auto		auto
med. trk.	med. trk.		med. trk.		med. trk.
hvy trk.	hvy trk.		hvy trk.		hvy trk.
bus	bus		bus		bus
motorcycle	motorcycle		motorcycle		motorcycle

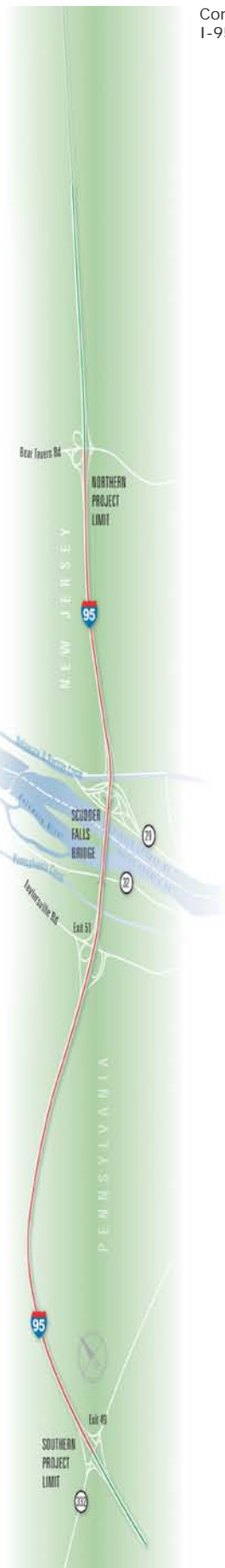
NOTES: _____

SITE SKETCH

Contract C-393A, Capital Project No. CP0301A, Account No. 7161-06-012
I-95/Scudder Falls Bridge Improvement Project

Appendix C

Summary of 24-hour Measurement



November 2009

FIGURE A
NSA 5
24 Hour Noise Measurements
Brentwood Circle
4/28/04 - 4/29/04

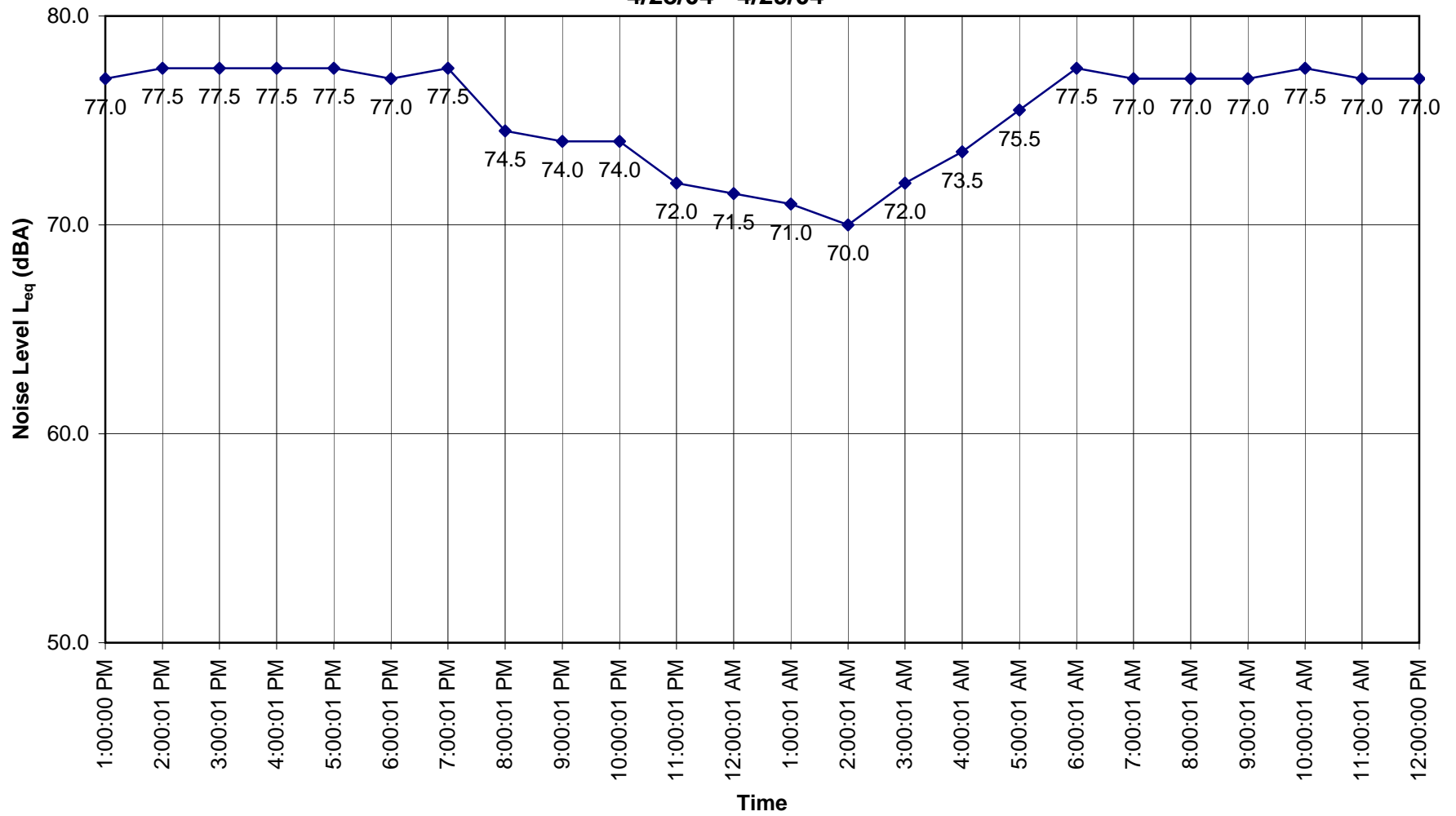


FIGURE B
NSA 7
24-Hour Noise Measurements
1445 Bartlett Circle
2/19/04 - 2/20/04

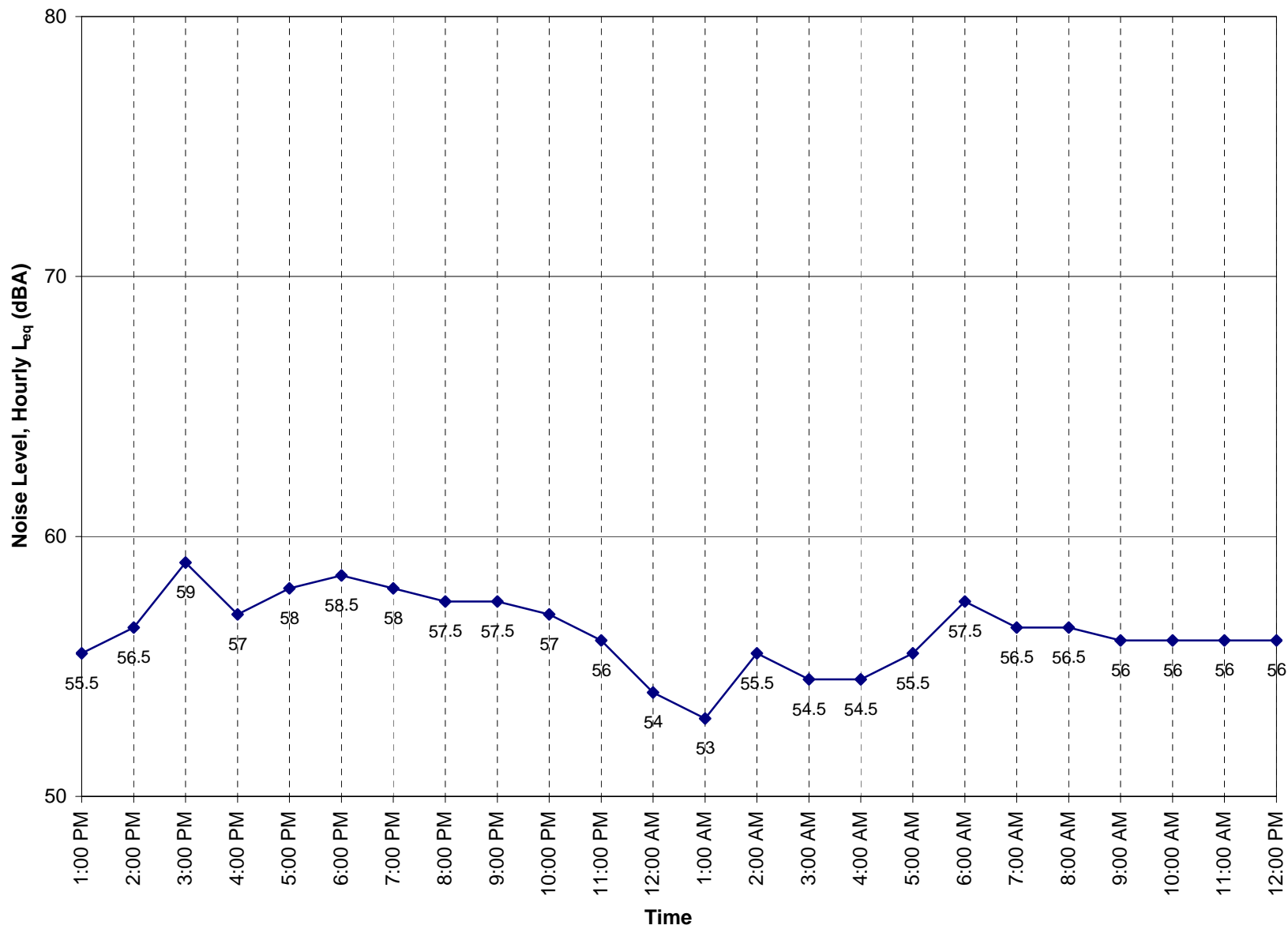


FIGURE C
NSA 8
24 Hour Noise Measurements
Concord Lane
4/28/04 - 4/29/04

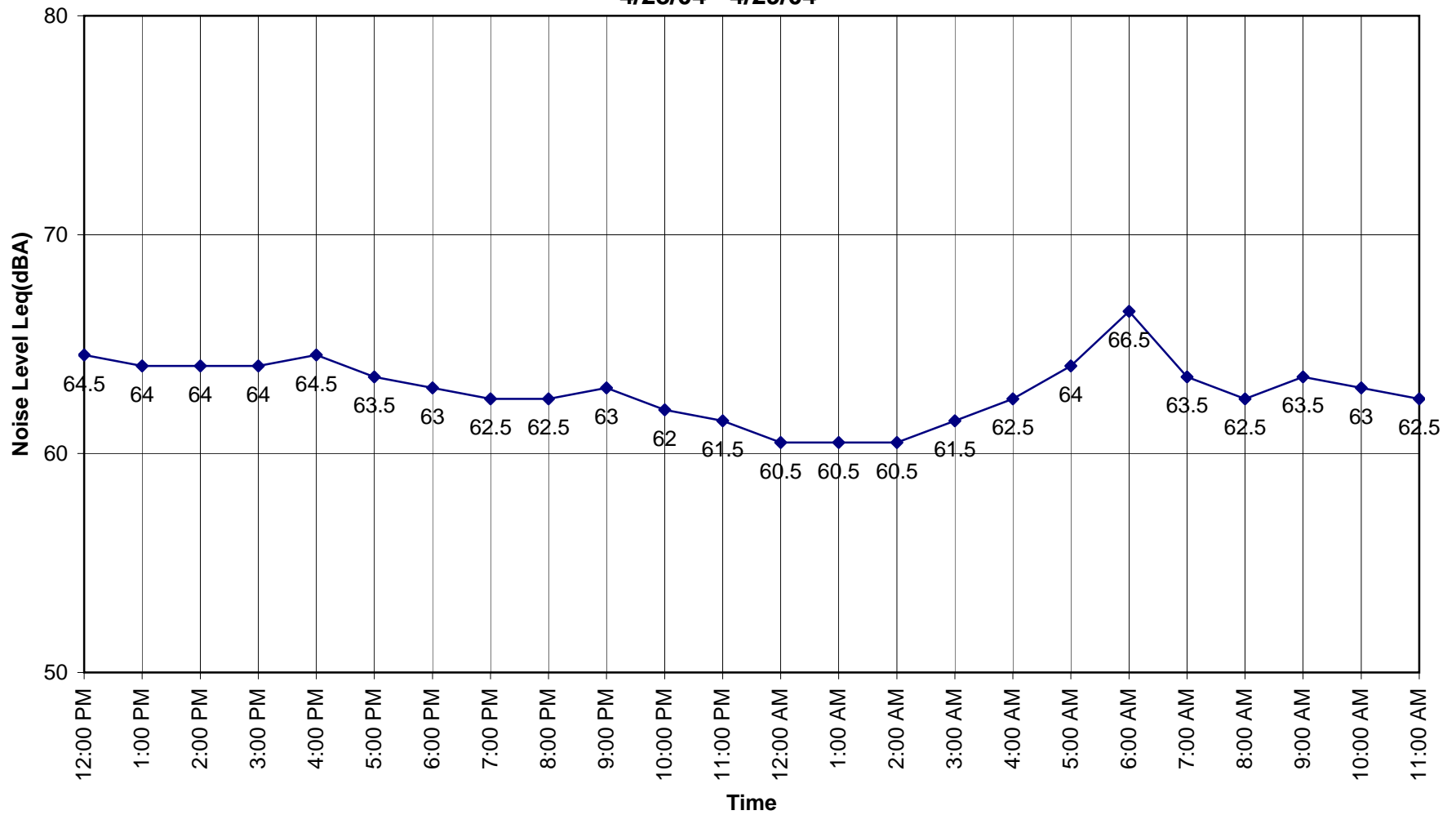


FIGURE D
NSA 9
24-Hour Noise Measurements
1187 Woodside Road
2/19/04 - 2/20/04

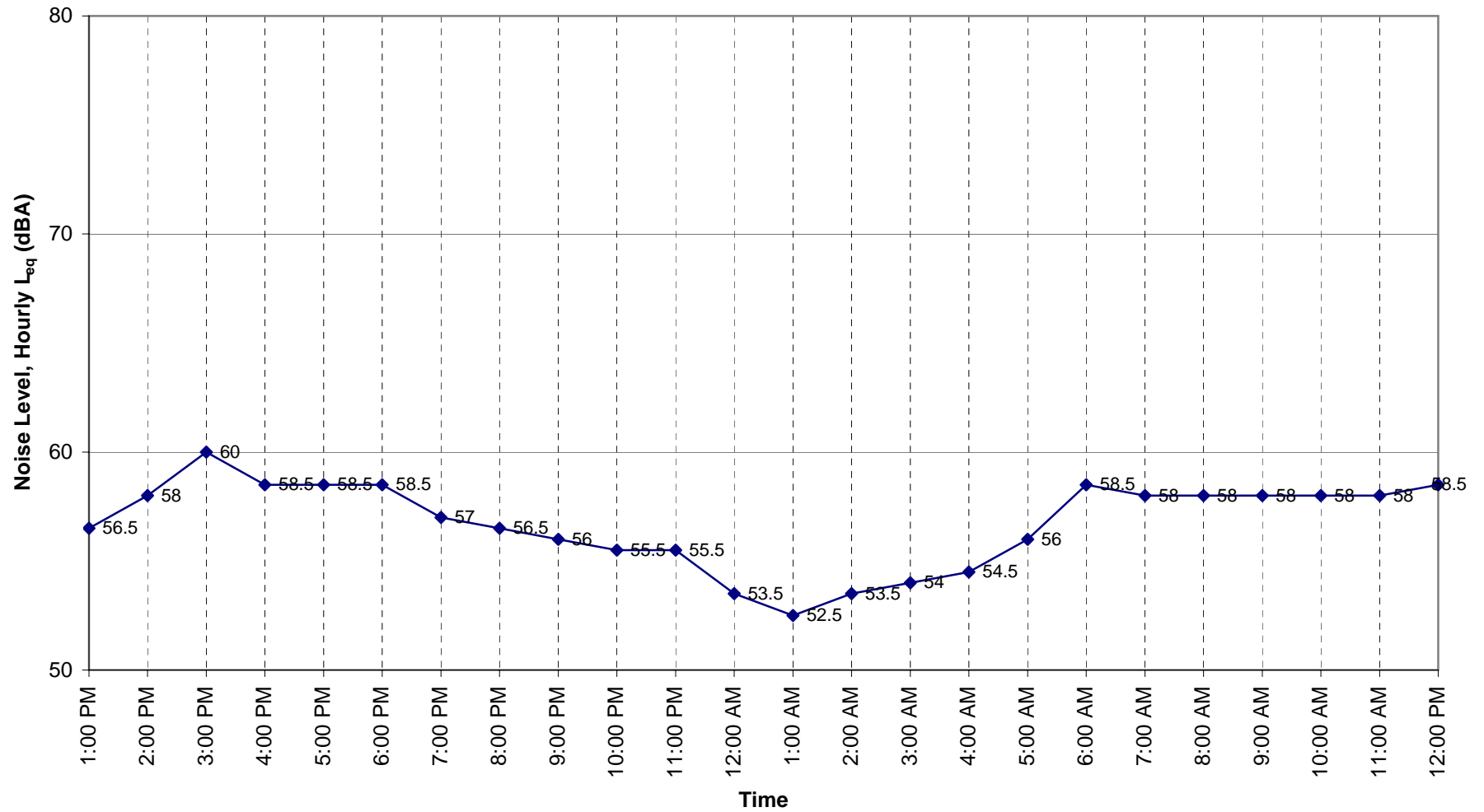


FIGURE E
NSA 12
24-Hour Noise Measurements
Delaware and Rariton Canal State Park
4/15/04 - 4/16/04

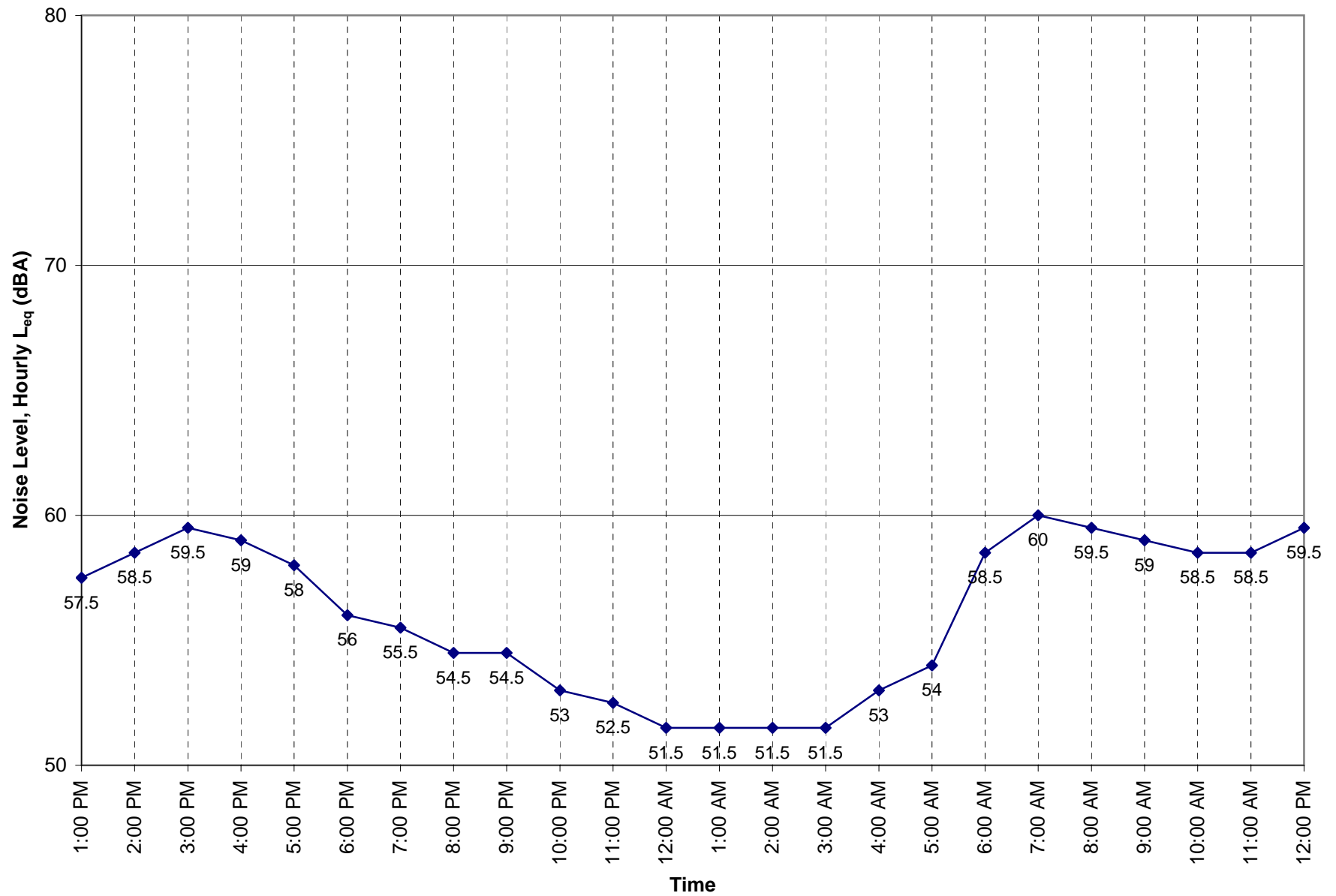
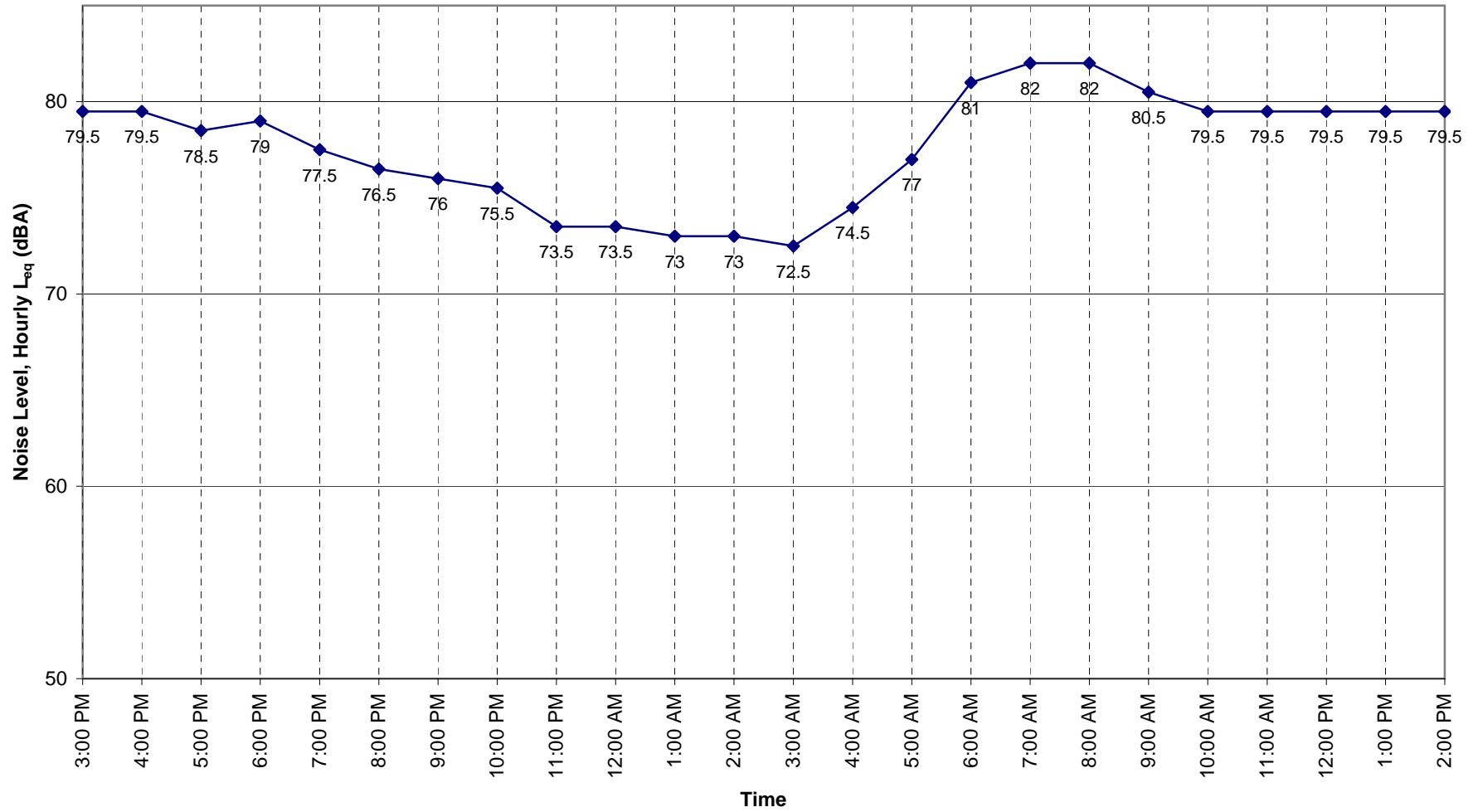
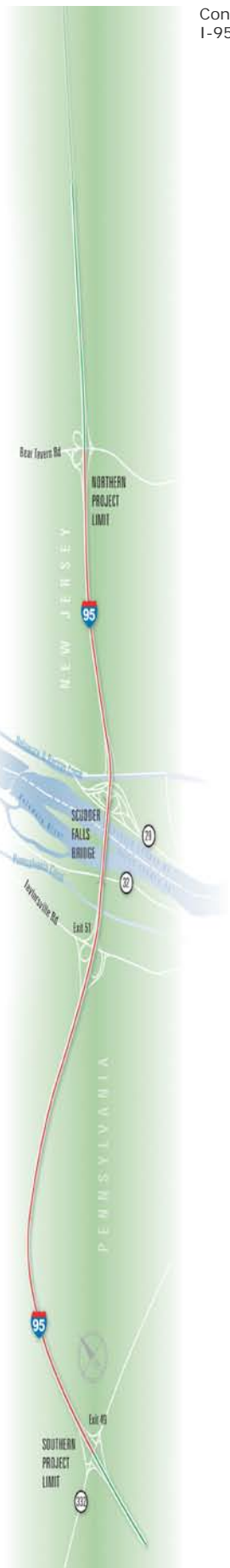


FIGURE F
NSA 13
24-Hour Noise Measurements
New Jersey State Police
4/15/04 - 4/16/04



Appendix D

Traffic Data



**Scudder Fall Bridge Improvement Project
Existing Traffic Summary**

Roadway	Decription	Vehicles			
		Auto	MT	HT	Total
I-95 Mainline					
I-95 NB	US 1 (Exit 46) to PA 332 (Exit 49)	2061	68	136	2265
I-95 SB	US 1 (Exit 46) to PA 332 (Exit 49)	3206	106	211	3523
I-95 NB	PA 332 (Exit 49) to Taylorsville Rd (Exit 51)	1451	48	96	1594
I-95 SB	PA 332 (Exit 49) to Taylorsville Rd (Exit 51)	3096	102	204	3402
I-95 NB/Scudder Falls Bridge	Taylorsville Rd (Exit 51) to NJ 29 (Exit 1)	1429	47	94	1570
I-95 SB/Scudder Falls Bridge	Taylorsville Rd (Exit 51) to NJ 29 (Exit 1)	3807	125	251	4183
I-95 NB	NJ 29 (Exit 1) to Bear Tavern Rd (Exit 2)	1291	43	85	1419
I-95 SB	NJ 29 (Exit 1) to Bear Tavern Rd (Exit 2)	3707	122	244	4074
I-95 NB	Bear Tavern Rd (Exit 2) to Scotch Rd (Exit 3)	1588	52	105	1745
I-95 SB	Bear Tavern Rd (Exit 2) to Scotch Rd (Exit 3)	3281	108	216	3605
PA 332 Interchange					
NB off-ramp	I-95 to PA 332	1072	35	71	1178
NB on-ramp	PA 332 to I-95	461	15	30	507
SB off-ramp	I-95 to PA 332	1033	34	68	1135
SB on-ramp	PA 332 to I-95	1143	38	75	1256
Taylorsville Road Interchange					
NB off-ramp	I-95 to Taylorsville Rd	280	9	18	308
NB on-ramp	Taylorsville Rd EB to I-95	153	5	10	168
NB on-ramp	Taylorsvile WB to I-95	107	4	7	118
SB on-ramp	Taylorsville Rd to I-95	223	7	15	245
SB off-ramp	I-95 to Taylorsville Rd EB	402	13	27	442
SB off-ramp	I-95 to Taylorsville Rd WB	531	18	35	584
NJ Route 29/ NJ Route 175 Interchange					
NB off-ramp	I-95 to NJ 29 (River Road)	322	11	21	354
NB on-ramp	NJ 29 (River Road) to I-95	56	2	4	62
NB on-ramp	NJ 175 (Upper River Road) to I-95	128	4	8	141
SB on-ramp	NJ 29 (River Road) to I-95	329	11	22	361
SB off-ramp	I-95 to NJ 29 (River Road)	229	8	15	252
Bear Tavern Road (Rte 579) Interchange					
NB off-ramp	I-95 to Bear Tavern Rd	206	7	14	226
NB on-ramp	Bear Tavern Rd To I-95	502	17	33	552
SB on-ramp	Bear Tavern Rd EB to I-95	370	12	24	407
SB on-ramp	Bear Tavern Rd WB to I-95	298	10	20	327
SB off-ramp	I-95 to Bear Tavern Rd	241	8	16	265
PA 332 Interchange					
WB PA 332	West of I-95 Interchange	1950	64	129	2143
EB PA 332	West of I-95 Interchange	1655	55	109	1819
WB PA 332	East of I-95 Interchange	363	12	24	399
EB PA 332	East of I-95 Interchange	560	18	37	615
Taylorsville Road Interchange					
WB Taylorsville Rd	North of I-95 Interchange	1023	34	67	1124
EB Taylorsville Rd	North of I-95 Interchange	463	15	31	509
WB Taylorsville Rd	South of I-95 Interchange	374	12	25	411
EB Taylorsville Rd	South of I-95 Interchange	565	19	37	621
NB Woodside Rd	West of Taylorsville Rd	207	7	14	228
SB Woodside Rd	West of Taylorsville Rd	492	16	32	541
NB Woodside Rd	East of Taylorsville Rd	240	8	16	264
SB Woodside Rd	East of Taylorsville Rd	147	5	10	161
NJ Route 29/ NJ Route 175 Interchange					
WB NJ 29 (River Rd)	North of I-95 Interchange	741	24	49	814
EB NJ 29 (River Rd)	North of I-95 Interchange	339	11	22	372
WB NJ 175 (Upper River Rd)	North of I-95 Interchange	81	3	5	89
EB NJ 175 (Upper River Rd)	North of I-95 Interchange	116	4	8	128
WB NJ 175 (Upper River Rd)	South of I-95 Interchange	175	6	12	192
EB NJ 175 (Upper River Rd)	South of I-95 Interchange	118	4	8	130
Bear Tavern Road (Rte 579) Interchange					
WB Bear Tavern Rd	North of I-95 Interchange	589	19	39	647
EB Bear Tavern Rd	North of I-95 Interchange	1012	33	67	1112
WB Bear Tavern Rd	South of I-95 Interchange	513	17	34	564
EB Bear Tavern Rd	South of I-95 Interchange	815	27	54	896
NB Scenic Drive	NJ 29 (River Rd) to Rte 529 (Bear Tavern Rd)	148	5	10	163
SB Scenic Drive	NJ 29 (River Rd) to Rte 579 (Bear Tavern Rd)	225	7	15	247

**Scudder Fall Bridge Improvement Project
No-Build Traffic Summary**

Roadway	Decription	Vehicles			
		Auto	MT	HT	Total
I-95 Mainline					
I-95 NB	US 1 (Exit 46) to PA 332 (Exit 49)	2066	77	122	2265
I-95 SB	US 1 (Exit 46) to PA 332 (Exit 49)	3213	120	190	3523
I-95 NB	PA 332 (Exit 49) to Taylorsville Rd (Exit 51)	1454	54	86	1594
I-95 SB	PA 332 (Exit 49) to Taylorsville Rd (Exit 51)	3362	15	25	3402
I-95 NB/Scudder Falls Bridge	Taylorsville Rd (Exit 51) to NJ 29 (Exit 1)	1432	53	85	1570
I-95 SB/Scudder Falls Bridge	Taylorsville Rd (Exit 51) to NJ 29 (Exit 1)	4142	16	25	4183
I-95 NB	NJ 29 (Exit 1) to Bear Tavern Rd (Exit 2)	1294	48	77	1419
I-95 SB	NJ 29 (Exit 1) to Bear Tavern Rd (Exit 2)	3927	49	98	4074
I-95 NB	Bear Tavern Rd (Exit 2) to Scotch Rd (Exit 3)	1733	4	8	1745
I-95 SB	Bear Tavern Rd (Exit 2) to Scotch Rd (Exit 3)	3668	46	91	3805
PA 332 Interchange					
NB off-ramp	I-95 to PA 332	1170	3	5	1178
NB on-ramp	PA 332 to I-95	489	6	12	507
SB off-ramp	I-95 to PA 332	1096	18	21	1135
SB on-ramp	PA 332 to I-95	1226	9	21	1256
Taylorsville Road Interchange					
NB off-ramp	I-95 to Taylorsville Rd	281	10	17	308
NB on-ramp	Taylorsville Rd EB to I-95	129	15	24	168
NB on-ramp	Taylorsvile WB to I-95	108	4	6	118
SB on-ramp	Taylorsville Rd to I-95	236	3	6	245
SB off-ramp	I-95 to Taylorsville Rd EB	436	3	3	442
SB off-ramp	I-95 to Taylorsville Rd WB	551	21	12	584
NJ Route 29/ NJ Route 175 Interchange					
NB off-ramp	I-95 to NJ 29 (River Road)	323	12	19	354
NB on-ramp	NJ 29 (River Road) to I-95	23	15	24	62
NB on-ramp	NJ 175 (Upper River Road) to I-95	129	5	8	141
SB on-ramp	NJ 29 (River Road) to I-95	348	4	9	361
SB off-ramp	I-95 to NJ 29 (River Road)	219	21	12	252
Bear Tavern Road (Rte 579) Interchange					
NB off-ramp	I-95 to Bear Tavern Rd	206	8	12	226
NB on-ramp	Bear Tavern Rd To I-95	513	15	24	552
SB on-ramp	Bear Tavern Rd EB to I-95	371	14	22	407
SB on-ramp	Bear Tavern Rd WB to I-95	315	4	8	327
SB off-ramp	I-95 to Bear Tavern Rd	232	21	12	265
PA 332 Interchange					
WB PA 332	West of I-95 Interchange	1512	3	5	1520
EB PA 332	West of I-95 Interchange	2333	3	5	2341
WB PA 332	East of I-95 Interchange	697	3	5	705
EB PA 332	East of I-95 Interchange	239	9	21	269
Taylorsville Road Interchange					
WB Taylorsville Rd	North of I-95 Interchange	306	11	18	336
EB Taylorsville Rd	North of I-95 Interchange	1148	43	68	1259
WB Taylorsville Rd	South of I-95 Interchange	1067	15	24	1106
EB Taylorsville Rd	South of I-95 Interchange	208	15	24	247
NB Woodside Rd	West of Taylorsville Rd	603	22	36	661
SB Woodside Rd	West of Taylorsville Rd	97	4	6	106
NB Woodside Rd	East of Taylorsville Rd	170	6	10	186
SB Woodside Rd	East of Taylorsville Rd	130	21	12	163
NJ Route 29/ NJ Route 175 Interchange					
WB NJ 29 (River Rd)	North of I-95 Interchange	529	20	31	580
EB NJ 29 (River Rd)	North of I-95 Interchange	659	25	39	723
WB NJ 175 (Upper River Rd)	North of I-95 Interchange	1	15	24	40
EB NJ 175 (Upper River Rd)	North of I-95 Interchange	367	15	24	406
WB NJ 175 (Upper River Rd)	South of I-95 Interchange	31	15	24	70
EB NJ 175 (Upper River Rd)	South of I-95 Interchange	434	16	26	476
Bear Tavern Road (Rte 579) Interchange					
WB Bear Tavern Rd	North of I-95 Interchange	658	25	39	722
EB Bear Tavern Rd	North of I-95 Interchange	994	15	24	1033
WB Bear Tavern Rd	South of I-95 Interchange	474	15	24	513
EB Bear Tavern Rd	South of I-95 Interchange	1201	15	24	1240
NB Scenic Drive	NJ 29 (River Rd) to Rte 529 (Bear Tavern Rd)	255	15	24	294
SB Scenic Drive	NJ 29 (River Rd) to Rte 579 (Bear Tavern Rd)	1	21	12	34

Scudder Fall Bridge Improvement Project **Build Alternative Traffic Summary**

Roadway	FHWA TNM Roadway Width (feet)	Between	Speed (mph)	AM Vehicles				PM Vehicles			
				Total	Auto	MT	HT	Total	Auto	MT	HT
I-95 Northbound					91%	3%	6%		91%	3%	6%
NB1 to NB 4	50	Stations 783 to 792	65	3900	3549	117	234	3140	2857	94	188
NB4 to NB 19	50	Stations 792 to 829	65	2720	2475	82	163	1850	1684	56	111
NB19 to NB28	62	Stations 829 to 853	65	4210	3831	126	253	2590	2357	78	155
NB28 to NB55	62	Stations 853 to 908	65	4210	3831	126	253	2590	2357	78	155
NB55 to NB68	62	Stations 908 and 930	60	3900	3549	117	234	2200	2002	66	132
NB68 to NB72	84	Stations 930 to 938	60	6470	5888	194	388	2800	2548	84	168
NB72 to NB82	84	Stations 938 to 960	60	6470	5888	194	388	2800	2548	84	168
I-95 Southbound					91%	3%	6%		91%	3%	6%
SB35 to SB39	74	Stations 960 to 938	60	2730	2484	82	164	5510	5014	165	331
SB39 to SB 44	74	Stations 938 to 930	60	2240	2038	67	134	4030	3667	121	242
SB44 to SB57	74	Stations 930 to 907	60	2660	2421	80	160	4340	3949	130	260
SB57 to SB83	62	Stations 907 to 851	65	2660	2421	80	160	4340	3949	130	260
SB83 to SB94	62	Stations 851 to 828	65	2660	2421	80	160	4340	3949	130	260
SB94 to SB108	50	Stations 828 to 795	65	1900	1729	57	114	2920	2657	88	175
SB108 to SB111	50	Stations 795 to 783	65	3360	3058	101	202	4320	3931	130	259
Newtown-Yardley Road Ramps					91%	3%	6%		91%	3%	6%
I-95 NB Off-Ramp	22	nyn off1 to off 9	65 to 20	1180	1074	35	71	1290	1174	39	77
I-95 NB On-Ramp	22	nyn on1 to on10	0 to 65	1490	1356	45	89	740	673	22	44
I-95 SB Off-Ramp	22	nys off1 to off6	65 to 20	760	692	23	46	1420	1292	43	85
I-95 SB On-Ramp	22	nys on1 to on7	0 to 65	1460	1329	44	88	1400	1274	42	84
Taylorsville Road Ramps					91%	3%	6%		91%	3%	6%
Taylorsville EB On-Ramp to I-95 NB	22	tve on1 to on12	0 to 60	2570	2339	77	154	600	546	18	36
Taylorsville WB On-Ramp to I-95 NB	22	twv on1 to on7	0 to 45	0	0	0	0	0	0	0	0
I-95 SB Off-Ramp to Taylorsville WB	22	sb off twv1 to twv8	45 to 15	0	0	0	0	0	0	0	0
I-95 SB Off-Ramp to Taylorsville EB	22	sb off tve1 to tve9	60 to 25	490	446	15	29	1480	1347	44	89
Taylorsville WB On-Ramp to I-95 SB	22	twv on1 to on12	0 to 65	420	382	13	25	310	282	9	19
I-95 NB Off-Ramp to Taylorsville	22	tnv off1 to off12	65 to 10	310	282	9	19	390	355	12	23
Newtown-Yardley Road					91%	3%	6%		91%	3%	6%
Newtown-Yardley WB1	30	ntwa to ntw5	35	800	728	24	48	490	446	15	29
Newtown-Yardley WB2	30	point732 to ntw7	25	1450	1320	44	87	1390	1265	42	83
Newtown-Yardley WB3	30	point731 to ntw8b	35 to 40	1740	1583	52	104	2360	2148	71	142
Newtown-Yardley EB1	30	nte1 to 1b	40 to 35	2540	2311	76	152	1990	1811	60	119
Newtown-Yardley EB2	30	nt2 to nte5	25	860	783	26	52	1030	937	31	62
Newtown-Yardley EB3	30	nte5 to nte9	35	380	346	11	23	720	655	22	43
Quarry Road					94%	6%	0%		94%	6%	0%
Quarry Road WB	15	qw1 to qw9b	30	300	282	18	0	300	282	18	0
Quarry Road EB	15	qe1 to qe9b	30	300	282	18	0	300	282	18	0
Dolington Road					94%	6%	0%		94%	6%	0%
Dolington Road EB	15	dole1 to dole8	30	300	282	18	0	300	282	18	0
Dolington Road WB	15	dolw1 to dolw8b	30	300	282	18	0	300	282	18	0
Taylorsville Road					91%	3%	6%		91%	3%	6%
Taylorsville Road WB	30	wtva t wtv12	35	520	473	16	31	1360	1238	41	82
Taylorsville Road EB	30	tve1 to tve14	35	350	319	11	21	800	728	24	48
Woodside Road					94%	6%	0%		94%	6%	0%
Woodside Road SB	15	sws1 to sws19	35	150	141	9	0	620	583	37	0
Woodside Road NB	15	nwsa to nws18	35	810	761	49	0	310	291	19	0
Woodside Road SB-2	15	wssa to wsse	30	270	254	16	0	190	179	11	0
Woodside Road NB-2	15	nws19 to nws23	30	110	103	7	0	350	329	21	0
River Road (two-way)					94%	6%	0%		94%	6%	0%
River Road (two-way)	30	rr1 to rr8	30	530	498	32	0	700	658	42	0
River Road (two-way) -2	30	rr9a to rr18	30	560	526	34	0	630	592	38	0