


 June 19 - 20, 2025
 Hollywood, FL

**TRANSPORTATION
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FDOT Noise Walls: Process, Challenges, and Real-World Navigation

Kevin Lopez & Sebastian Ruiz
FDOT District 6


Transportation Symposium
Website

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Introduction



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Project Manager



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Introduction

- Why Noise Walls Matter
- FDOT Noise Wall Overview
- Noise Wall Considerations
- Project Spotlight: Capacity Improvements with limited ROW



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Florida's Growth & FDOT's Mission

Reducing the Sounds of Growth While Supporting
Florida's Future



- Florida is one of the fastest-growing states in population and jobs.
- Increased residents and visitors demand a robust transportation system.
- FDOT is committed to mobility, safety, economic prosperity, and quality of life.

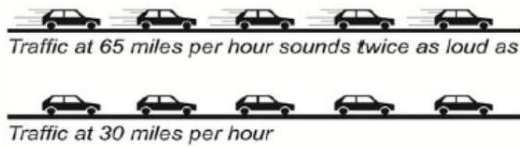
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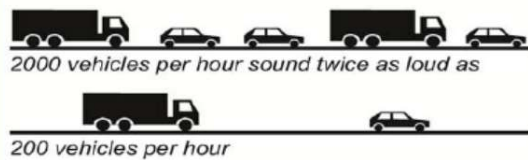
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Traffic Noise

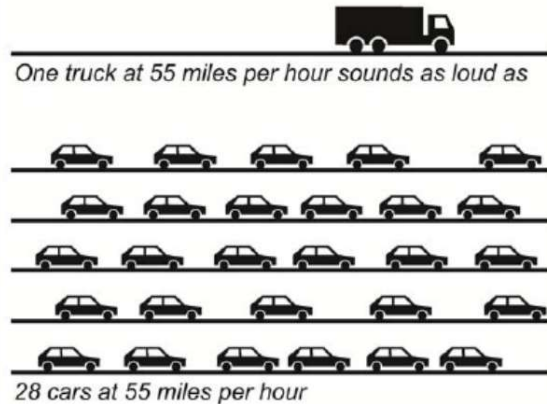
How Speed Affects Traffic Noise



How Traffic Volume Affects Noise



How Trucks Affect Traffic Noise



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FDOT's Noise Evaluation Process

NOISE ABATEMENT CRITERIA (NAC) [Hourly A-Weighted Sound Level-decibels (dB(A))]				
Activity Category	Activity Leq(h) ¹		Evaluation location	Description of activity category
	FHWA	FDOT		
A	57	56	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 ²	67	66	Exterior	Residential
C ²	67	66	Exterior	Active sports areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, recreational areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	62	51	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E ²	72	71	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D or F.
F	–	–	–	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing.
G	–	–	–	Undeveloped lands that are not permitted.

(Based on Table 1 of 23 CFR Part 772)

¹ The Leq(h) Activity Criteria values are for impact determination only, and are not design standards for noise abatement measures.

² Includes undeveloped lands permitted for this activity category.

Note: FDOT defines that a substantial noise increase occurs when the existing noise level is predicted to be exceeded by 15 decibels or more as a result of the transportation improvement project. When this occurs, the requirement for abatement consideration will be followed.

- FDOT considers noise impacts early in project development.
- Standardized federal and state-approved noise analysis used.
- Noise studies done when new roads or major changes are planned.

- Widening
- Horizontal alignment
- New roadways

- Activity Category A – Extremely Noise Sensitive (Exterior)
- Activity Category B – Residential (Exterior)
- Activity Category C – Recreational (Exterior)
- Activity Category D – Institutional (Interior)
- Activity Category E – Sensitive Commercial (Exterior)
- Activity Category F – Not Noise Sensitive Development
- Activity Category G – Undeveloped Lands Not Permitted

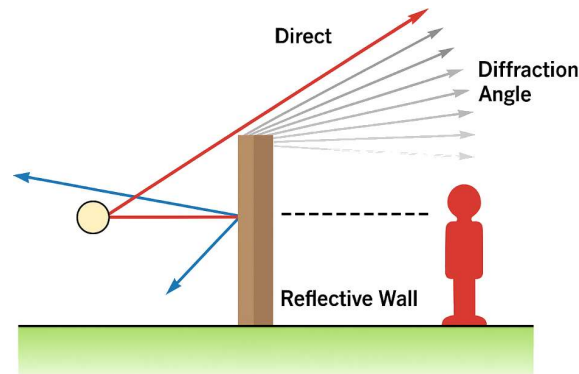
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Limitations and Policy

- Construction noise is not included in the noise study.
- Noise walls mainly benefit areas directly behind them.
- New developments after date of public knowledge are not considered.



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FDOT's Continued Commitment

- FDOT follows established policy to ensure fair, informed decisions.
- Balancing transportation needs with environmental and community quality.
- Ongoing efforts to reduce the sounds of growth.

- PD&E Manual – Chapter 18 Highway Traffic Noise, (FDOT, July 2024)
- Highway Traffic Noise: Analysis and Abatement Guidance (FHWA, 2011)
- Traffic Noise Modeling and Analysis Practitioners Handbook (FDOT, 2018)
- Methodology to Evaluate Highway Traffic Noise at Special Land Uses (FDOT, 2023)
- FHWA Traffic Noise Model (TNM)
- FDOT District Six Environmental Impact Review Handbook – Section 6.2.11: Noise

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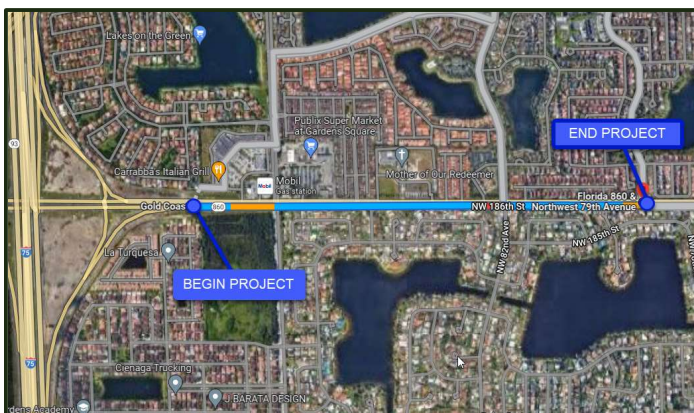
Understanding Highway Traffic Noise Policy & Procedure

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Project Spotlight: Miami Gardens Drive



438864-2: SR 860/Miami Gardens Drive
From E of I-75 to NW 79th Place

Purpose & Need:

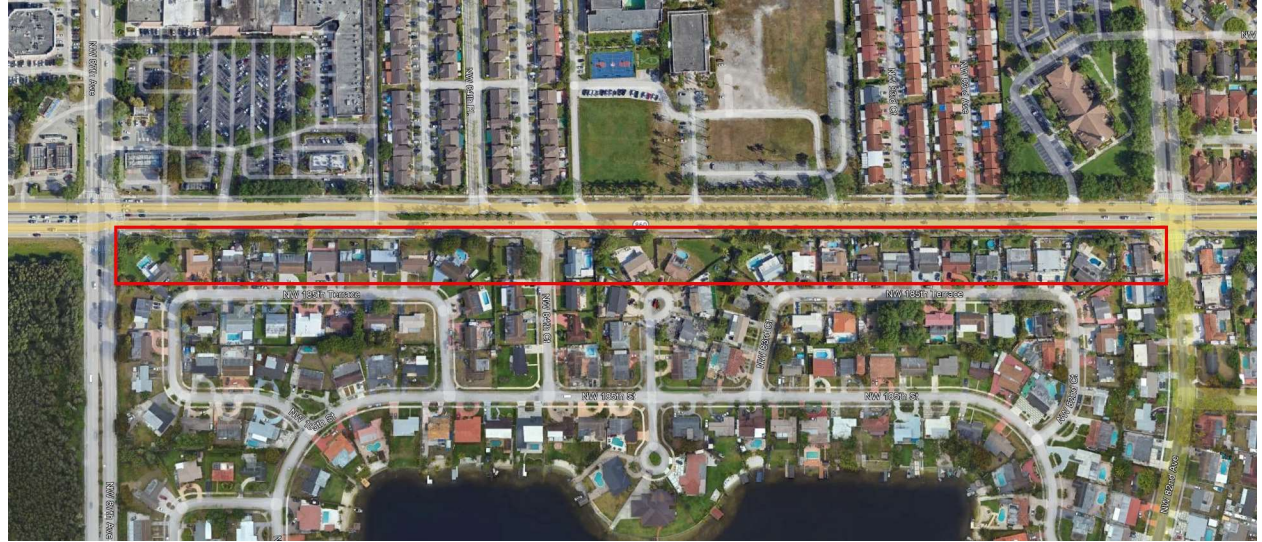
- Capacity Improvement project to relieve congestion
- Improve pedestrian and bicyclist safety
- Access Management improvements

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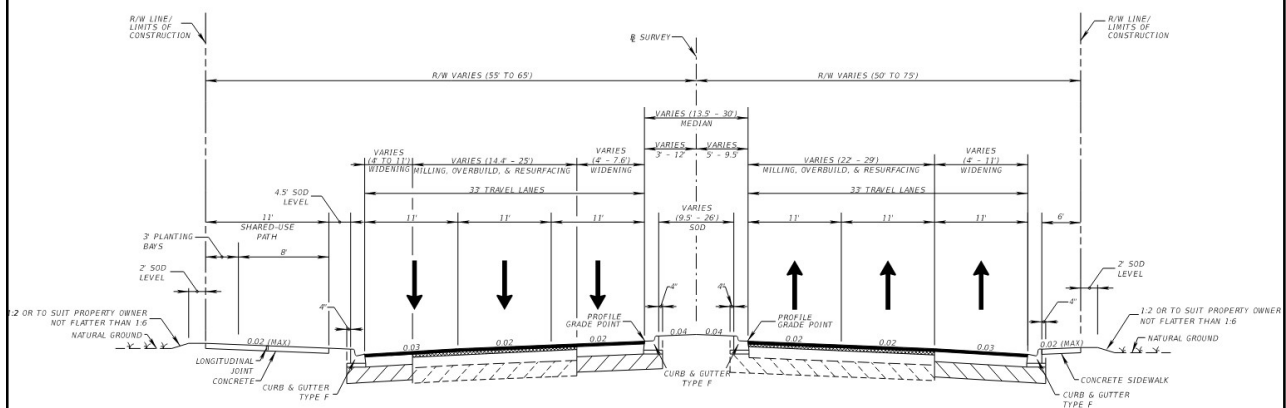
Project Spotlight: Miami Gardens Drive



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Project Spotlight: Miami Gardens Drive



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Project Spotlight: Miami Gardens Drive

Design Variation required for the project:

- Lane Width
 - 10 ft Left Turn Lanes
- Median Width
 - 13.5 ft
- Traffic Separator Width
 - 2 ft
- SUP Clearance
 - Horizontal Clearance only provided at the front of path
 - No clearance at the back of path



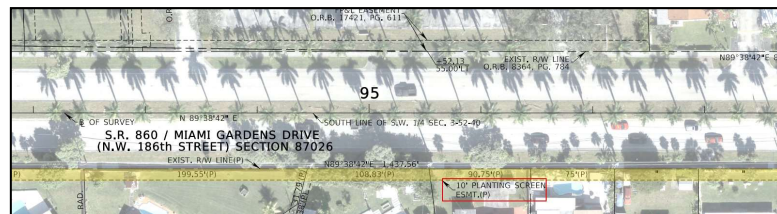
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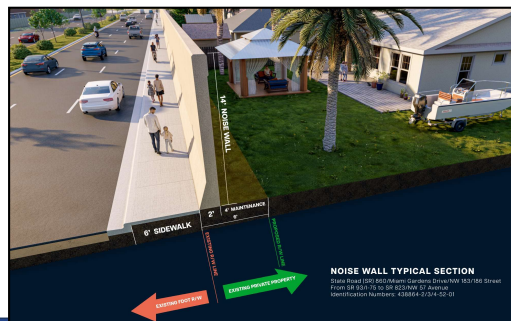
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Project Spotlight: Miami Gardens Drive

- Planting Screen Easement



- Noise Wall ROW needs
 - Maintenance Access



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Project Spotlight: Miami Gardens Drive

- Survey Results for Palm Springs North**
 Overall support for the 1st & 2nd row residents and tenants (58%)
 - Without unanimous support by 1st row property owners for acquisition of land needed for constructing noise barriers, they cannot be built
 - 13 of the 16 of 1st row respondents (81%) declined to allow FDOT to acquire their land
 - Additional costs to acquire needed land factor into the noise barrier decision, including easements, appraisal and legal fees, cost to cure, etc.
 - Noise barriers not recommended for design and construction, does not meet FDOT cost reasonable criteria

FDOT NOISE BARRIER SURVEY FORM (Example)
 Palm Springs North Community
 SR 868/Miami Gardens Drive from East of the I-75 Ramps
 to SR 523/NE 47th Avenue/Red Road
 Financial Project Number: 438864-1-22-41438864-2-32-41
 March 1, 2022

PARCEL NO. XXXXXXXXXXXX

PROPERTY OWNER
 XXXXXXXX
 XXXXXXXXXXXX
 XXXXXXXXXXXX

NOISE BARRIER OPTIONS
 Please place an X in the box next to your response regarding which noise abatement option you would prefer:

☐ 1. Noise Abatement (FDOT Recommended Noise Barrier)
 This option consists of two segments of 8' or 14-foot tall ground-mounted noise barriers. The two segments would be constructed behind the subject along the Palm Springs North Community as follows: the first segment is between 100 87th Avenue and 100 84th Court, and the second segment is between 100 84th Court and 100 81st Avenue. The location of the recommended noise barriers are identified in the attached Recommended Noise Barrier Map for the Palm Springs North Community.

☐ 2. No Noise Abatement (No Noise Barrier)
 No noise wall or noise abatement measure between SR 868/Miami Gardens Drive and your property will be included as part of this project.

Note: If you are a tenant/owner, or a property owner selecting Option No. 2 above, stop here and do not respond to the right-of-way commitment below.

RIGHT-OF-WAY COMMITMENT (Property Owners Adjacent to Miami Gardens Drive)
 Please place an X in the box next to your response regarding your right-of-way commitment:

☐ R1. I consent to allow the FDOT to acquire a 10-foot wide strip of right-of-way from the planting screen easement for the purpose of constructing the noise barrier.

☐ R2. I do not consent to allow the FDOT to acquire a 10-foot wide strip of right-of-way from the planting screen easement for the purpose of constructing the noise barrier.

Note: A 100% commitment from the adjacent property owners, to allow the FDOT to acquire a 10-foot wide strip of right-of-way from the planting screen easement, is required in order to construct the noise barrier.

SURVEY DOCUMENTATION (ALL MUST COMPLETE)
 Name of Person(s) Completing this Survey (Print): _____

Status of Person(s) Completing this Survey (Check One):
 Property Owner(s) _____ Legal Representative _____ Tenant/Member _____

Mailing Address: _____

Telephone Number: _____

Signature(s): _____ Date: _____

Please complete and return this survey form to the Florida Department of Transportation in the enclosed stamped envelope by March 1, 2022. Your prompt reply would be greatly appreciated. If you have any questions, please contact Robert G. McKim at (205) 875-5168 or by e-mail at robert.mckim@fdot.state.fl.us

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Project Spotlight: Miami Gardens Drive

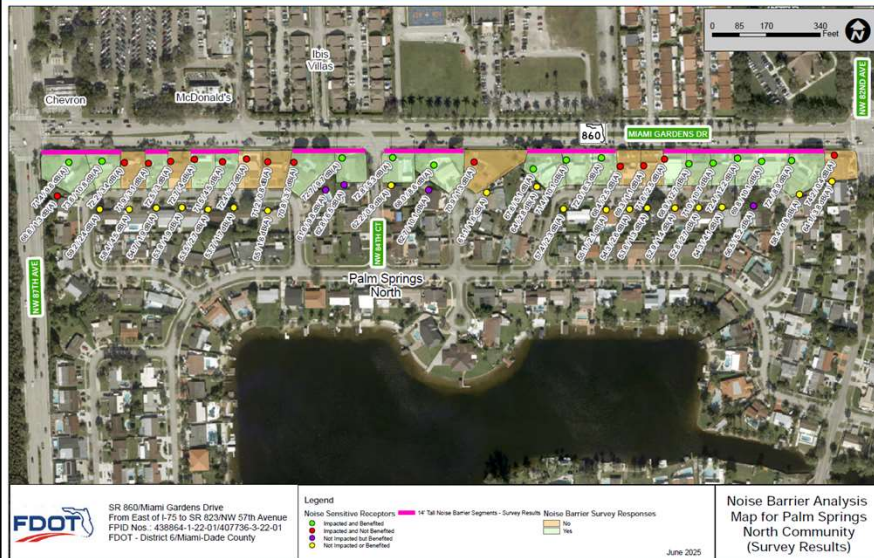


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Project Spotlight: Miami Gardens Drive



These gaps present several challenges:

- 1.Reduced effectiveness
- 2.Safety hazards
- 3.Aesthetic impacts

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Key Takeaways

✓ Noise Walls Involve More Than Just Acoustics

They require coordination between design, policy, public engagement, and right-of-way considerations.

✓ Reasonableness and Feasibility Are Key

FDOT's criteria ensure that noise walls are both technically feasible and cost-effective — and that public funds are used responsibly.

✓ ROW Limitations Can Be a Major Barrier

Even when walls are warranted, insufficient space can make construction unviable without additional property acquisition.

✓ Early Public Communication Is Critical

Clear, transparent messaging helps manage community expectations and build trust — especially when the wall doesn't meet criteria.

✓ Documentation and Collaboration Matter

Internal coordination with FDOT leadership, legal, and environmental staff is essential when navigating gray areas or high-profile community concerns.

✓ Each Project Is Unique — Be Prepared to Adapt

There's no one-size-fits-all solution. Design flexibility, creative problem-solving, and consistent stakeholder engagement are essential.

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Contact Us

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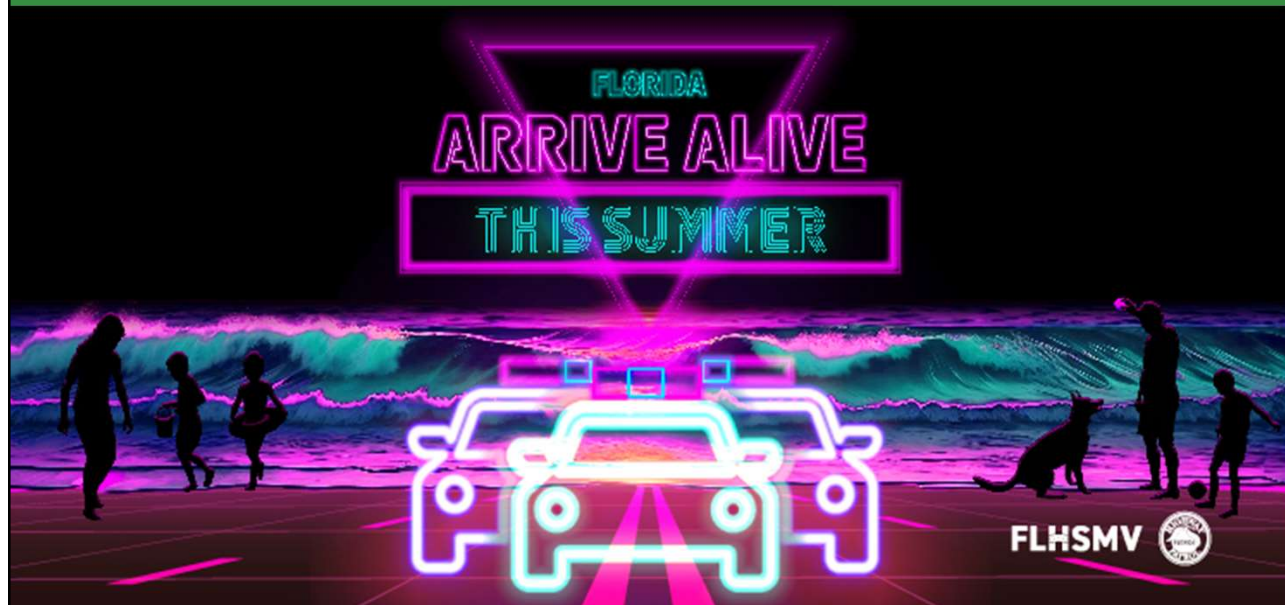
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Safety Message



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Please be sure to **certify your attendance** before leaving this event or no later than **Monday, June 30**, in order to receive PDH/CEC. Detailed instructions are available on the Transportation Symposium website.

Transportation Symposium Website



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