



Northridge Community

May 20, 2019

I4Beyond.com



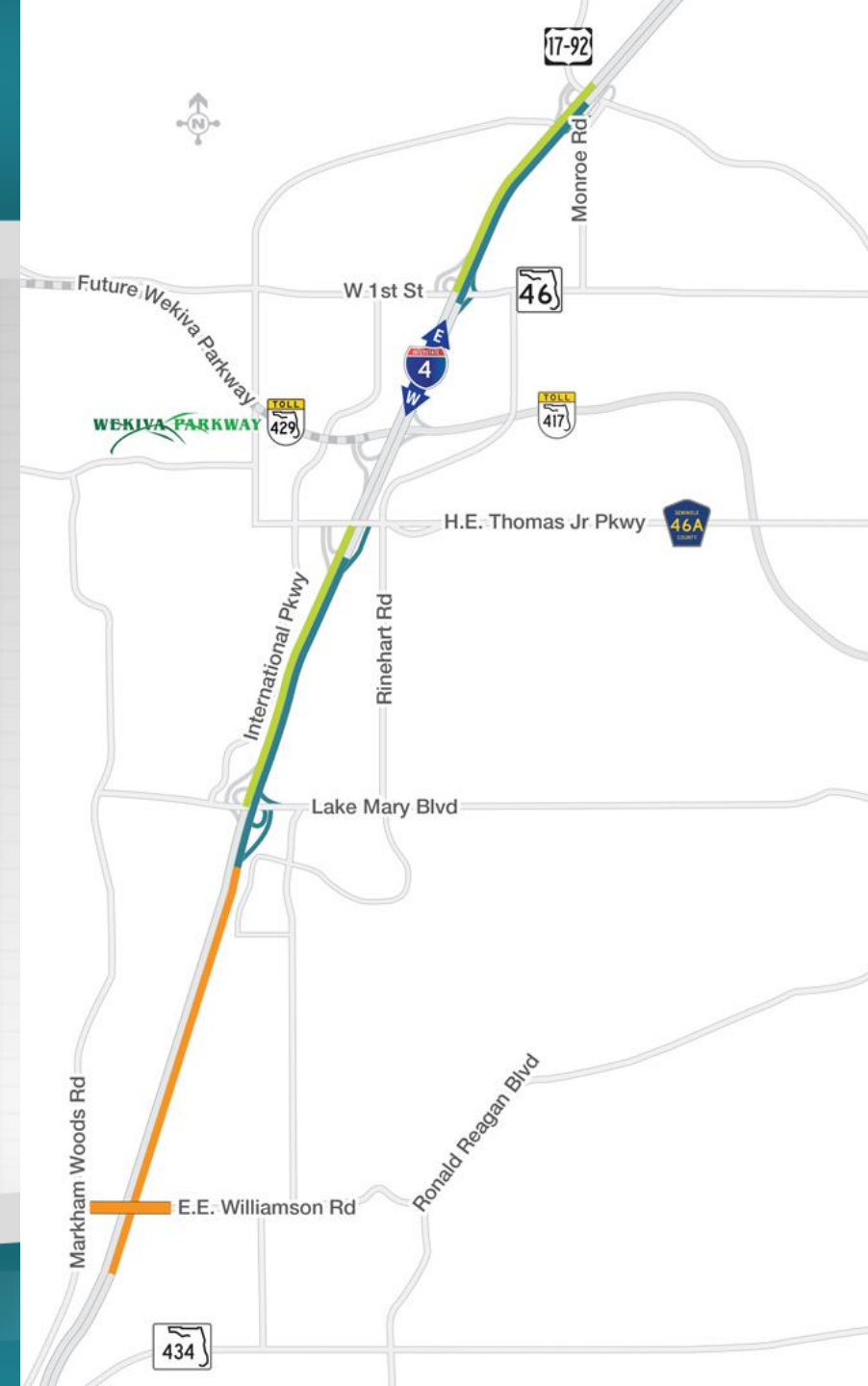
Tonight's Agenda

- Update on Planned Construction
- Sound Barrier Walls
- Perimeter Walls
- Landscaping
- Truck Parking Study



I-4 Beyond the Ultimate, North Interim Projects

- Improve the flow of traffic on I-4 between the end of the I-4 Ultimate project and Lake Mary Boulevard
- A new wider bridge on E.E. Williamson Road over I-4
- Extend pavement life on several sections of I-4 in Seminole County



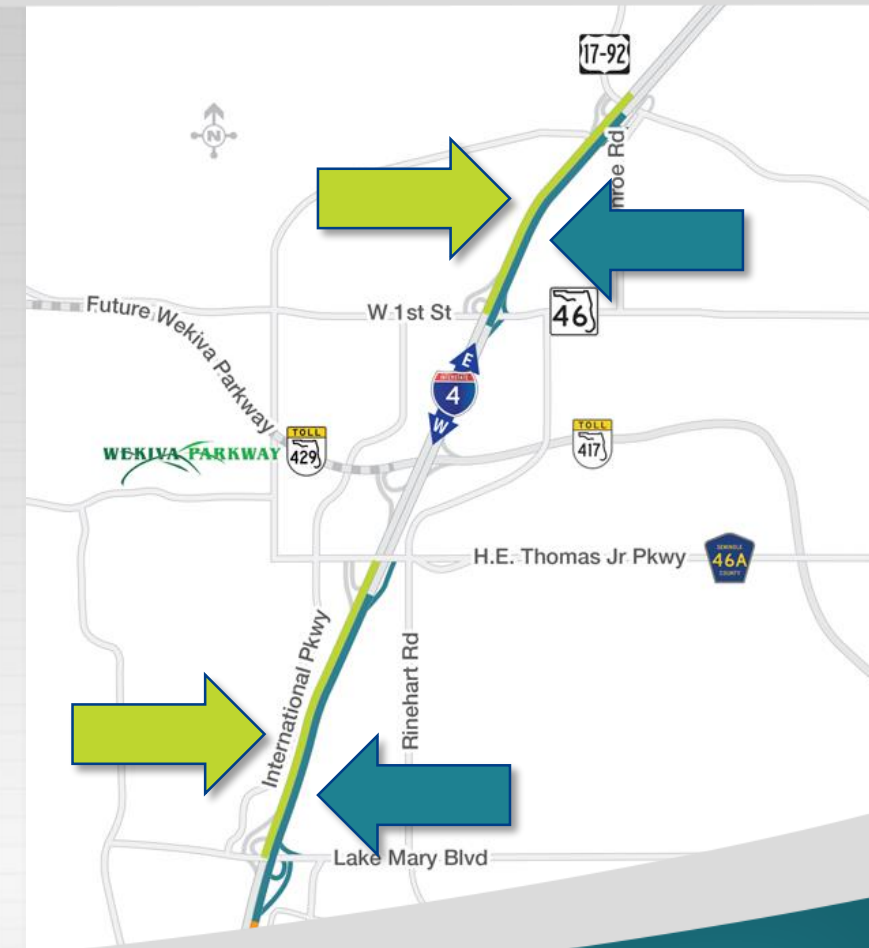


I-4 Beyond the Ultimate, North Interim Projects

Traffic Operation and Capacity Improvement Projects

Milling and resurfacing projects:

Project #	Limits	Construction
439682-1	I-4 WB from Lake Mary Blvd to Seminole / Volusia County line	Summer 2020
439682-2	I-4 EB from Lake Mary Blvd to C.R. 46A	Summer 2019
439682-5	I-4 EB from S.R. 46 to the Seminole/Volusia County line	Summer 2019



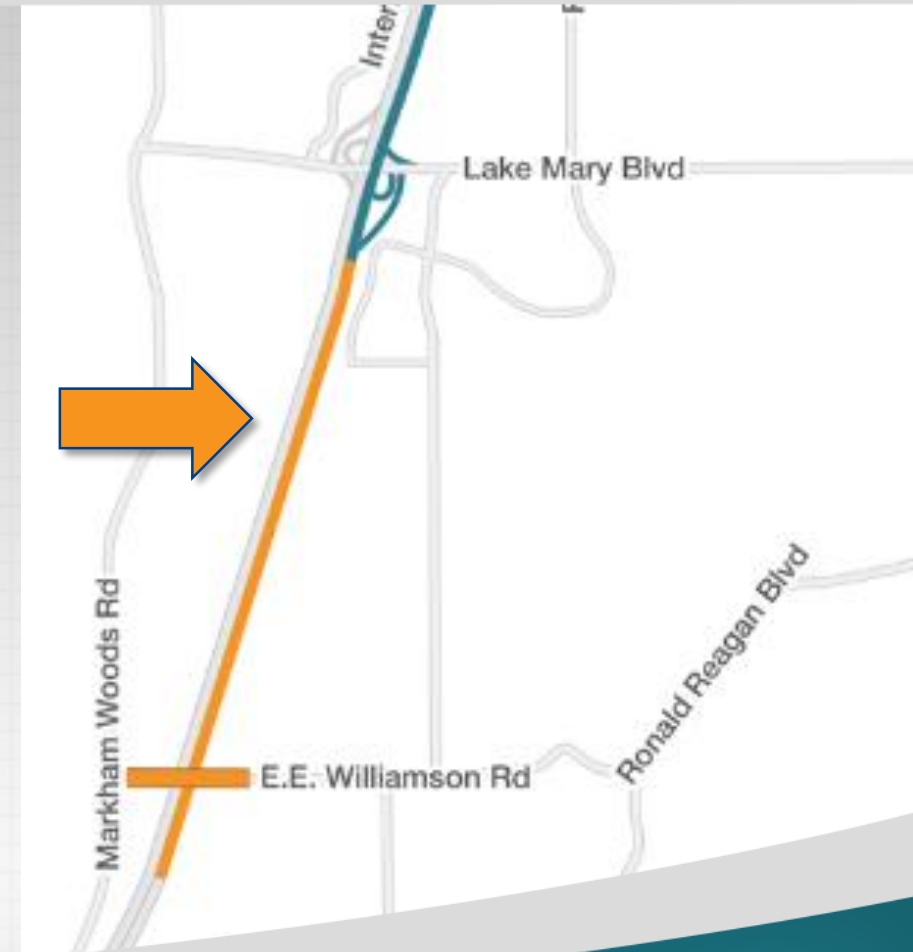


I-4 Beyond the Ultimate, North

Traffic Operation and Capacity Improvement Projects

Capacity and bridge replacement projects:

Project #	Limits	Construction
439682-3	Add EB I-4 auxiliary lane from end of I-4 Ultimate to Lake Mary Blvd	Summer 2019
439682-4	EE Williamson Bridge Replacement over I-4	Summer 2019



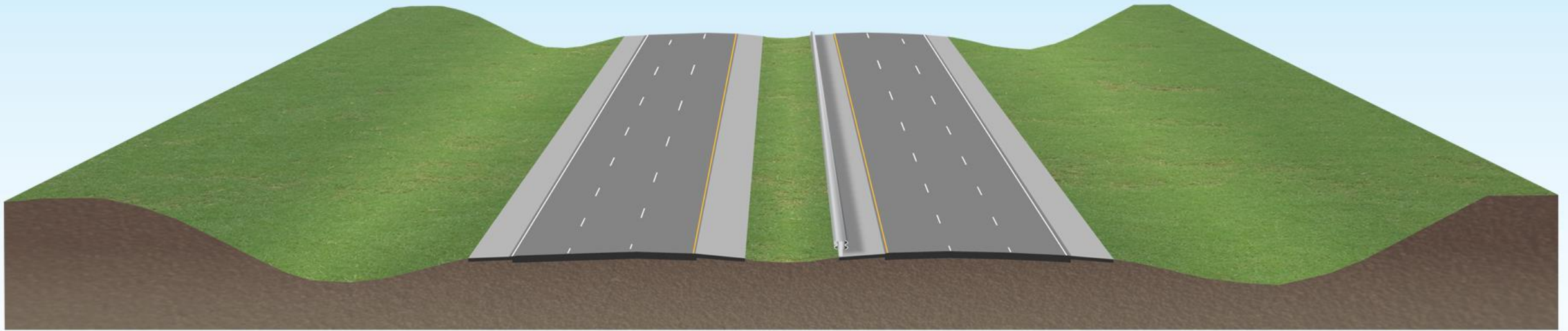
Interim I-4 Construction: New eastbound I-4 auxiliary lane from end of I-4 Ultimate to Lake Mary Boulevard

Clump of three
trees that need
to be removed

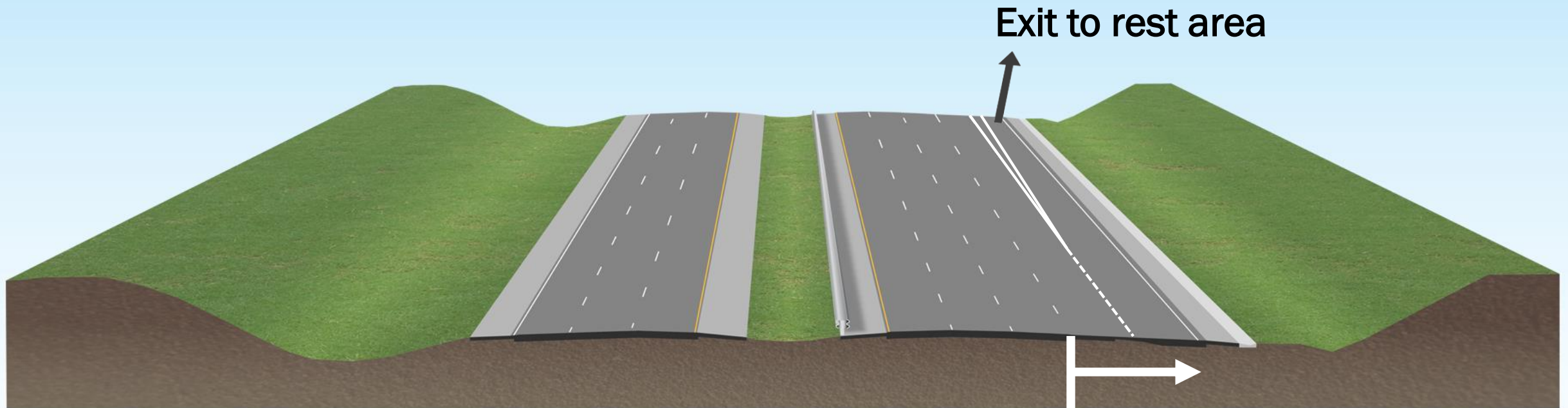
Edge of the new
interim travel lane

Edge of the new
interim shoulder

Current Configuration



Interim Configuration



24' of new pavement



Capacity of existing pond to be increased for interim construction



Right-of-way line

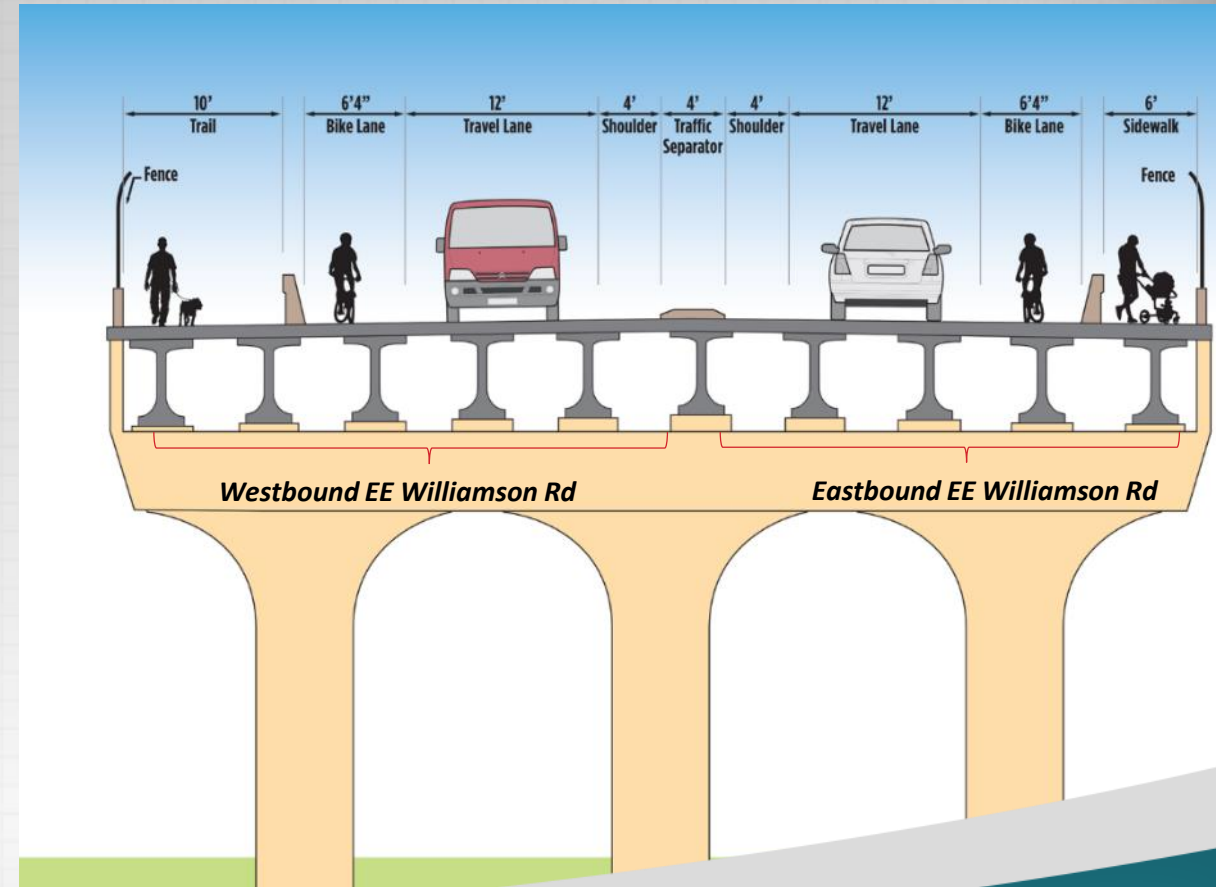
Pond E





New E.E. Williamson Bridge

- Wider bridge that includes
 - Two bike lanes
 - Pedestrian sidewalk
 - Accommodations for the E.E. Williamson Road Trail Connector (a Seminole County project)
- Longer bridge to accommodate ultimate buildout of I-4





Questions



Sound Barrier Walls



Sound Barriers

- Reduce the loudness of traffic noise, but do not completely block all traffic noise
- Must be tall and long with no openings
- Are most effective for homes adjacent to the sound barrier
- Must be designed to be visually appealing, and to preserve aesthetic values and scenic vistas

Source: FHWA, *Keeping The Noise Down, Highway Traffic Noise Barriers*





Sound Barrier Walls

Advantages

- Sound barriers, when designed at the proper height and length, can reduce the loudness of traffic noise by as much as half.
- Sound barriers can be visually pleasing in order to preserve aesthetic values and scenic vistas.
- Sound barriers provide privacy from passing motorists.
- Sound barrier construction is at no additional cost to residents, and only proceeds if it is cost-effective.

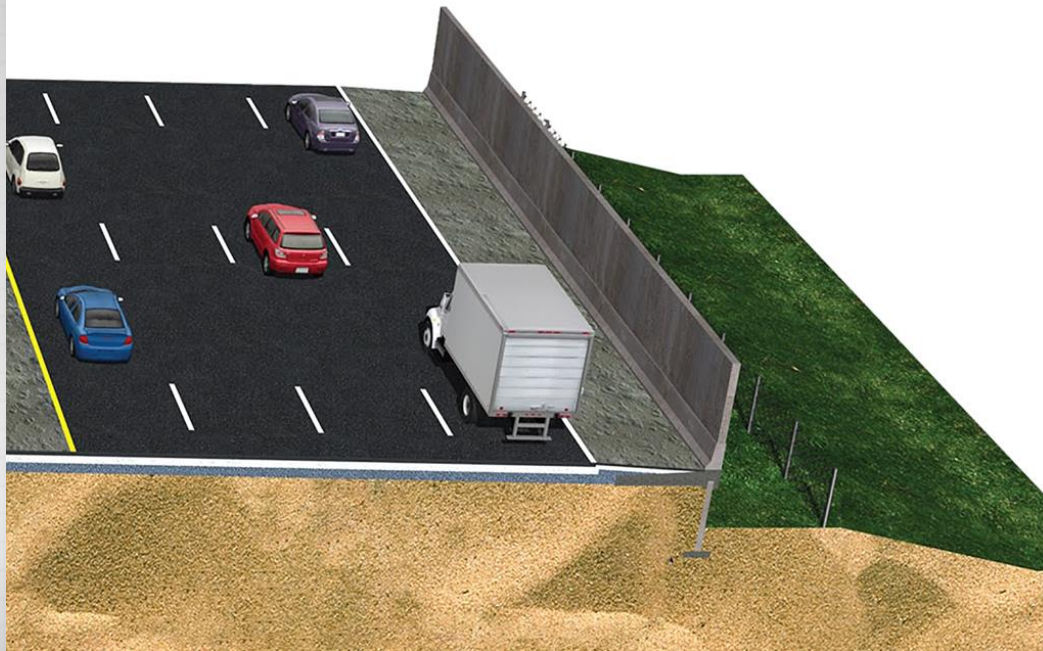
Disadvantages

- Sound barriers will reduce, but cannot fully eliminate, traffic noise.
- Sound barriers cast fairly large shadows, permanently shading some areas which may adversely impact nearby vegetation.
- Existing trees within the right-of-way must be removed to construct a sound barrier.
- Motorists' view of commercial or landmark signs may be blocked.

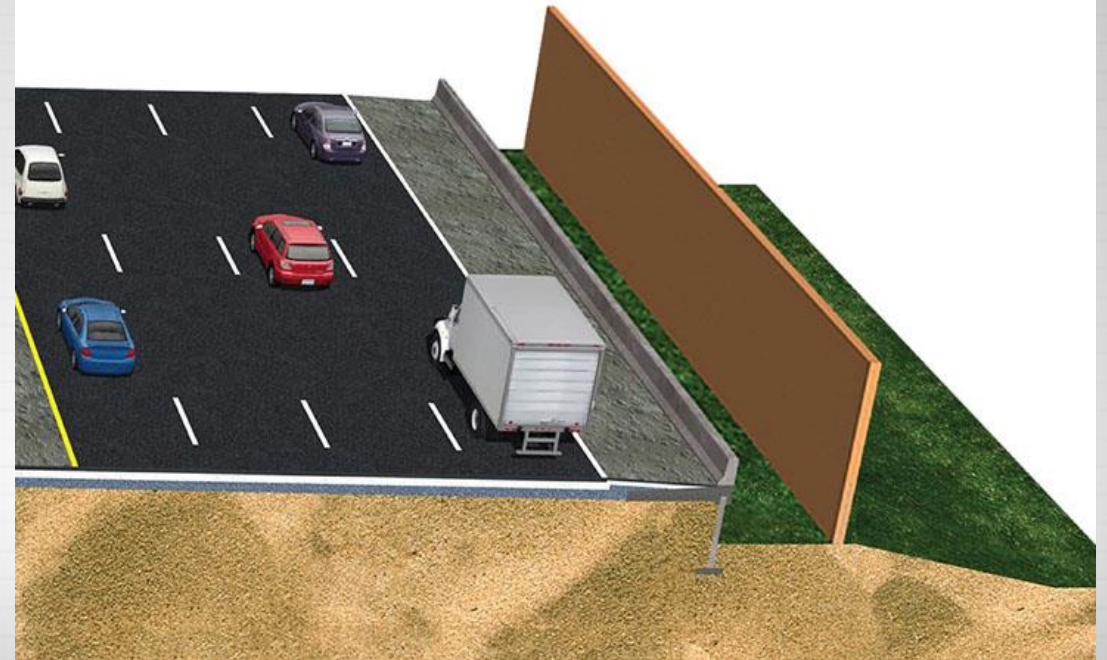


Sound Barrier Wall Types

Barrier Mounted Sound Barrier

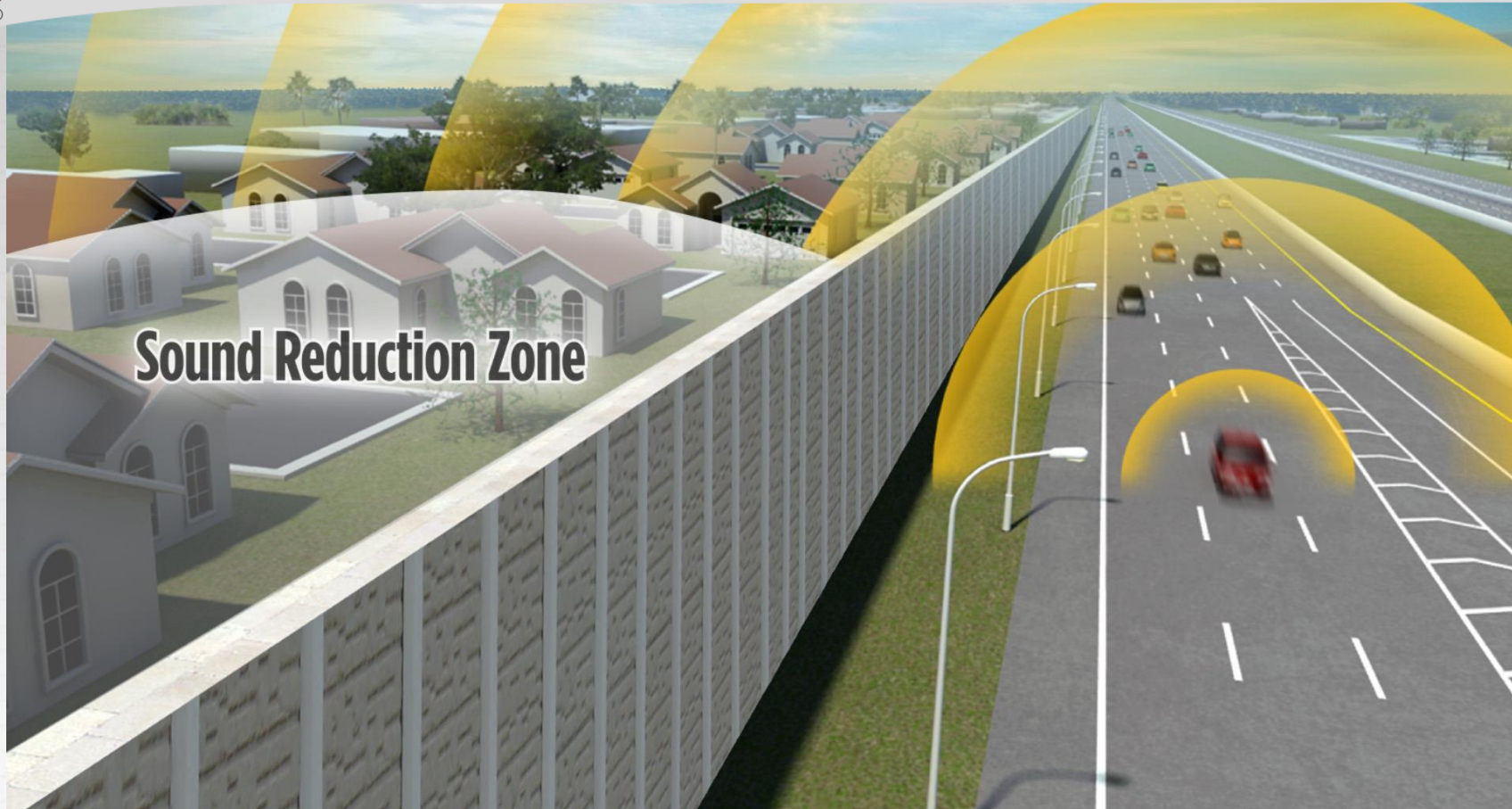


Ground Mounted Sound Barrier





Who Benefits?



Usually only homes adjacent to the sound barrier receive a noticeable sound reduction.

Sound Reduction Zone: Northridge Community

★ = houses and
structures within the
sound reduction
zone

Structures to be developed here were not
permitted before the date of approval of the
environmental document (August 2017)



Sound Barrier Evaluation

The Federal Highway Administration (FHWA) mandates that sound abatement must be considered if predicted sound levels:

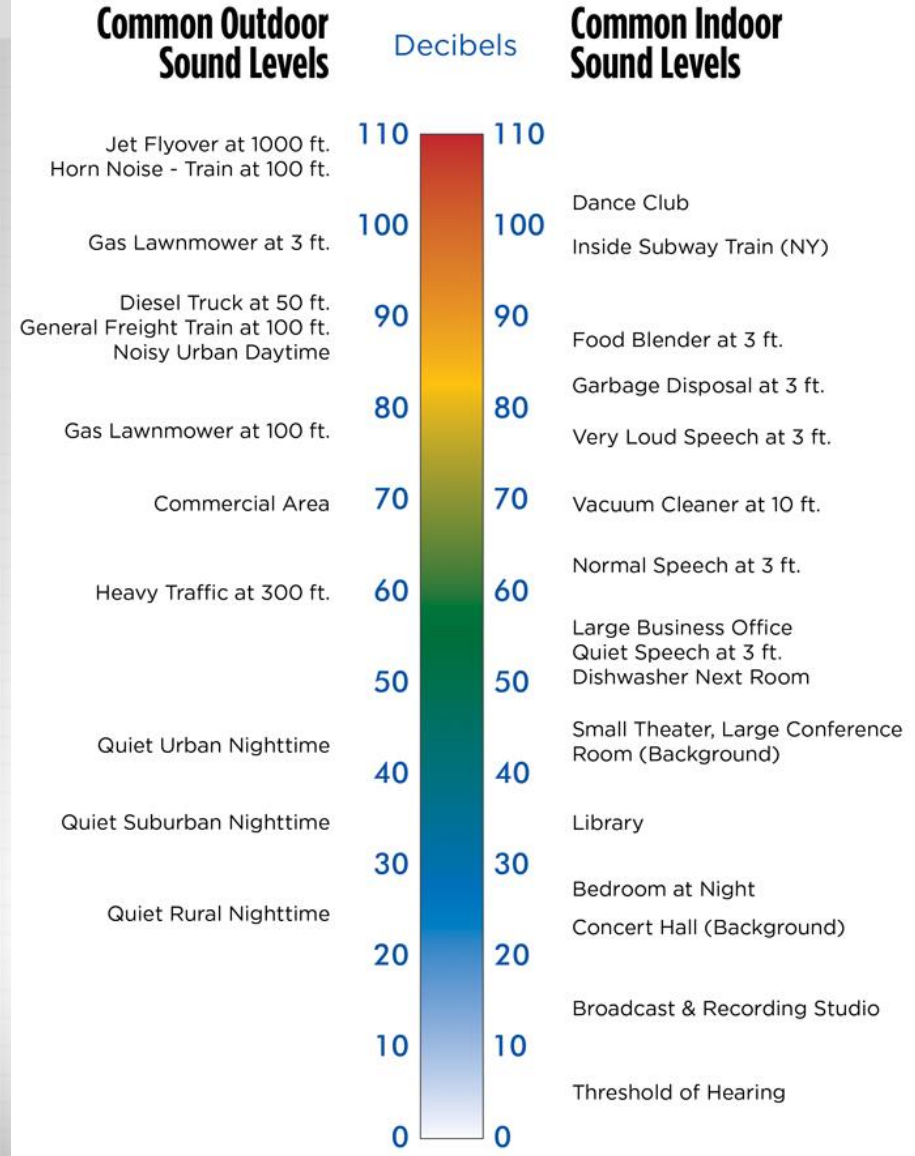
- Approach or exceed FHWA Noise Abatement Criteria for the Land Use Category, or
- Are expected to exceed existing sound levels by 15 decibels or more





Northridge Community Sound Study

- Northridge is in land use **Category B: Residential Area**
- Noise Abatement Criteria for Category B is **66 decibels**
- **8 properties** (including the tennis courts) in Northridge are expected to meet or exceed 66 decibels at peak hours when I-4 Beyond the Ultimate is built



Property	Max Sound Level: I-4 Beyond the Ultimate (dB)
1334 Grace View Ct.	59.9
1335 Grace View Ct.	60.4
1339 Grace View Ct.	62.2
1347 Grace View Cir.	63.4
1465 Northridge Dr.	65.3
1473 Northridge Dr.	67.7
1477 Northridge Dr.	69.9
1485 Northridge Dr.	68.1
1489 Northridge Dr.	66.0
1493 Northridge Dr.	65.0
1497 Northridge Dr.	65.0
1486 Northridge Dr.	76.7
1476 Northridge Dr.	70.3
1472 Northridge Dr.	67.3
1484 Northridge Dr.	75.0

★ = Properties that meet or exceed the federal noise abatement criteria for I-4 Beyond the Ultimate — at the maximum level to be experienced during peak sound-generating hours



Sound Barrier Evaluation

- FDOT considers building a sound barrier when:
 - Property owners or residents within the area will **receive at least 5 decibels of sound reduction** as a result
 - Building the sound barrier will **cost no more than \$42,000 per benefitted site**
 - A majority of the residents/owners who will benefit approve the barrier





Northridge Community Noise Study

FDOT studied many different sound barrier walls adjacent to Northridge & North Cove

Mount	Height	Length	Total Feet ²	Total Cost (\$30/Ft ²)	Benefited Receptors	Cost/ Benefited Receptor*	... including 7 New Homes**
Ground	22'	1,767'	38,874	\$1,166,035	11	\$106,610	\$64,780
Shoulder	14'	1,212'	16,968	\$508,892	2	\$254,446	\$56,544
Ground	20'	3,370'	67,400	\$2,021,637	17	\$118,919	\$84,235
Ground	18'	3,370'	60,660	\$1,819,473	15	\$121,298	\$82,703
Ground	22'	1,552' + 962'	55,308	\$1,658,697	14	\$118,478	\$78,985
Ground	22'	1,603'	35,266	\$1,057,687	8	\$132,210	\$70,512
Ground	22'	1,767'	38,874	\$1,166,114	11	\$106,010	\$64,784
Barrier	14'	3,231'	45,234	\$1,357,061	18	\$75,392	\$54,282

*FDOT maximum of \$42,000 per benefited receptor

**According to federal regulations, FDOT is unable to include these 7 houses in the study because they weren't permitted by the August 2017 date of record for I-4 Beyond the Ultimate

Approximate location of
studied/preferred option:
Sound Barrier Wall BW-D5

- Barrier mounted
- 3,231 feet long
- 14 feet tall
- 18 benefited receptors

Right-of-way line

Northridge

North Cove

Studied sound barrier wall

E.E. Williamson Road



Property	Calculated Sound Level: I-4 Beyond the Ultimate	Calculated Sound Level with Preferred Barrier	Anticipated Sound Reduction (5dB min. to qualify)
1334 Grace View Ct.	59.9	56.7	3.2
1335 Grace View Ct.	60.4	56.9	3.5
1339 Grace View Ct.	62.2	58.7	3.5
1347 Grace View Cir.	63.4	59.0	4.4
1465 Northridge Dr.	65.3	61.8	3.5
1473 Northridge Dr.	67.7	63.7	4.0
1477 Northridge Dr.	69.9	65.5	4.4
1485 Northridge Dr.	68.1	63.8	4.3
1489 Northridge Dr.	66.0	61.9	4.1
1493 Northridge Dr.	65.0	61.0	4.0
1497 Northridge Dr.	65.0	60.9	4.1
1486 Northridge Dr.	76.7	73.2	3.5
1476 Northridge Dr.	70.3	65.1	5.2
1472 Northridge Dr.	67.3	63.1	4.2
1484 Northridge Dr.	75.0	66.2	8.8

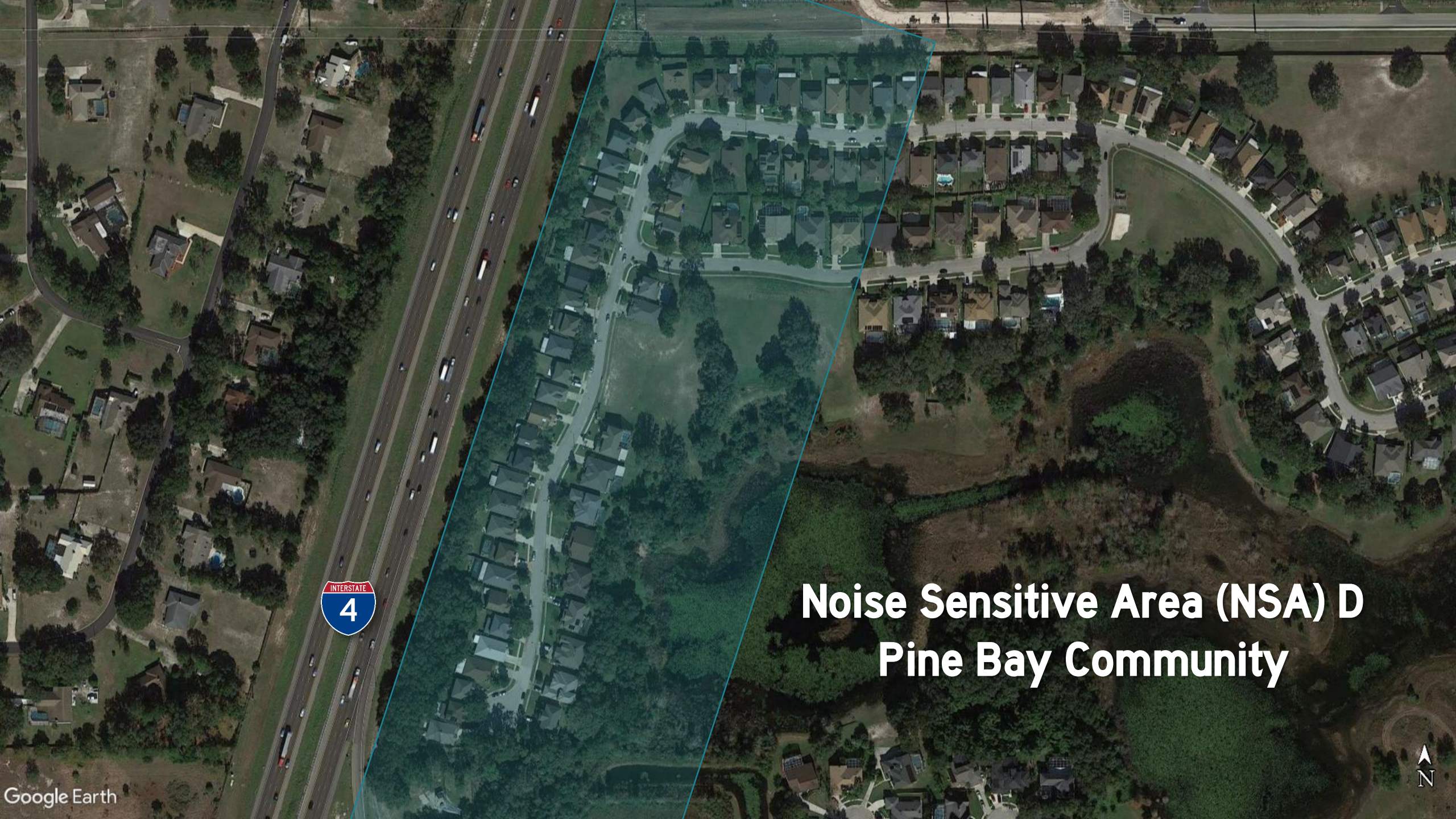
Noise Sensitive Area (NSA) D Northridge Community

Area studied by FDOT

★ = Properties that meet or exceed the federal noise abatement criteria for I-4 Beyond the Ultimate — at the maximum level experienced during peak hours

★ = Properties that would benefit from a sound barrier





Noise Sensitive Area (NSA) D Pine Bay Community



Pine Bay Community Sound Barrier Wall

• Sound barrier wall at:

- Mount
- Height
- Length
- Total square feet
- Total cost (\$30/sq ft)
- Benefited receptors
- Cost per benefited receptor

	<u>Pine Bay</u>	<u>North Cove & Northridge</u>
	Ground	Barrier
	12´	14´
	1,802´	3,231´
	21,624	45,234
	\$648,709	\$1,357,061
	25	18
	\$25,948	\$75,392



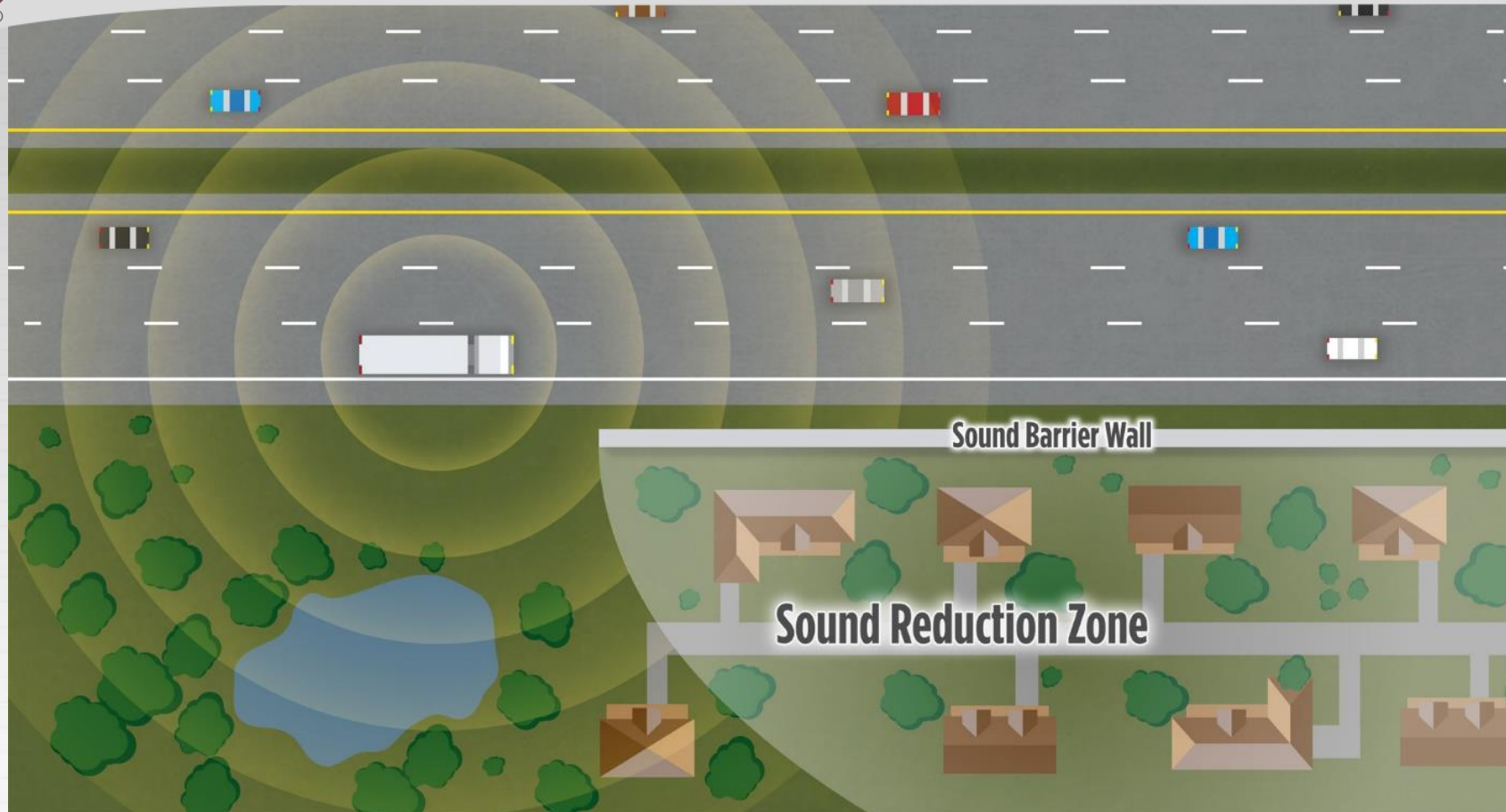


Wymore Road





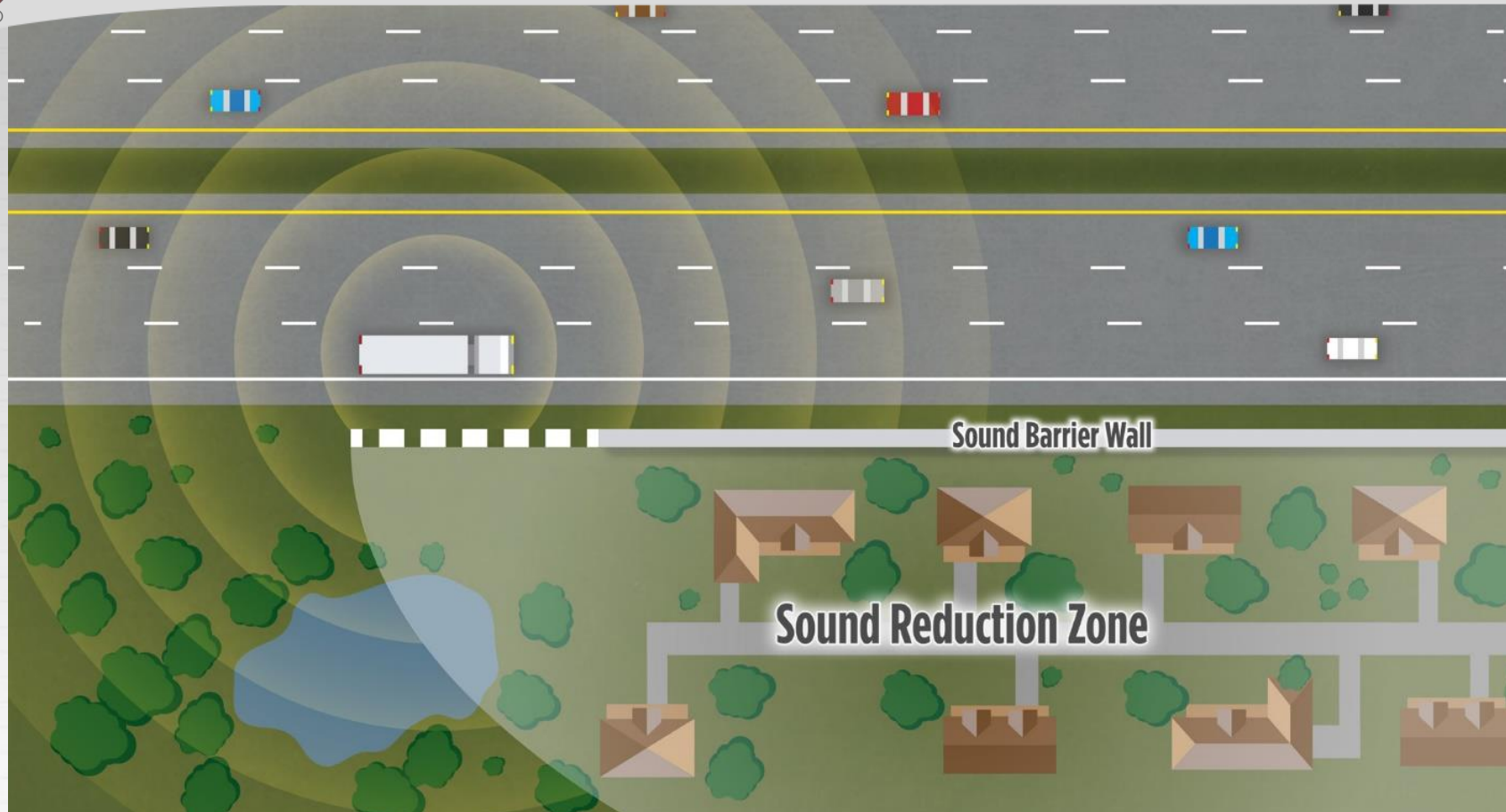
Who Benefits?



Usually only homes adjacent to the sound barrier receive a noticeable sound reduction.



Who Benefits?



Usually only homes adjacent to the sound barrier receive a noticeable sound reduction.



Sound Barrier Wall at S.R. 436

• Sound barrier wall at:

- Mount
- Height
- Length
- Total square feet
- Total cost (\$30/sq ft)
- Benefited receptors
- Cost per benefited receptor

S.R. 436

Barrier
14'
6,160'
86,240
\$2,587,200
519
\$4,985

North Cove & Northridge

Barrier
14'
3,231'
45,234
\$1,357,061
18
\$75,392





Questions



Perimeter Walls



★ = Structures which are eligible for consideration for a Perimeter Wall based on the design for I-4 Beyond the Ultimate interim construction





Cost for a Perimeter Wall

- FDOT explored the cost feasibility of a 3,000' perimeter wall for North Cove and Northridge.
 - 3,000' long * 9' tall = 27,000 ft²
 - 27,000 ft² * \$28/ft² = \$756,000
 - Cost of utility relocation + drainage = \$75,600
 - Total cost of Perimeter Wall = \$831,600
 - Total qualified structures (within 150') = 4
(2 in Northridge, 2 in North Cove)
 - Cost per benefited structure = \$207,900
 - Cost-feasible maximum per structure \$25,000

★ = Structures which qualify for a Perimeter Wall based on the design for I-4 Beyond the Ultimate interim construction

1,000' long Perimeter Wall



Cost for a Northridge Perimeter Wall

- **Cost feasibility of a 1,000' perimeter wall for Northridge.**
 - 1,000' long * 9' tall = 9,000 ft²
 - 9,000 ft² * \$28/ ft² = \$252,000
 - Cost of utility relocation + drainage = \$25,200
 - Total cost of Perimeter Wall = \$277,200
 - Total qualified structures (within 150') = 2
 - Cost per qualified structure = \$138,600
 - Cost-feasible maximum per structure \$25,000



Questions



Landscaping



Construction and Landscaping Timeline

Project	
I-4 Interim Construction	Begins Summer 2019
I-4 Interim Landscaping	
I-4 Beyond the Ultimate Construction	Not Programmed for Construction
I-4 Beyond the Ultimate Landscaping	

**FDOT is reviewing
landscaping
options for pond
located here**





Questions



Truck Parking



I-4 Truck Parking Study: Phase 1

- For the safety of truck drivers and other motorists, FDOT provides parking for truck drivers who have reached their hours-of-service limit.
- FDOT District 5 is studying the adequacy of truck parking availability on interstate highways:
 - I-4 lacking more than 450 spaces
 - I-75 sufficient truck parking
 - I-95 sufficient truck parking
- Truck Parking Study Phase 2 will look at locations for additional public and private truck parking along I-4.

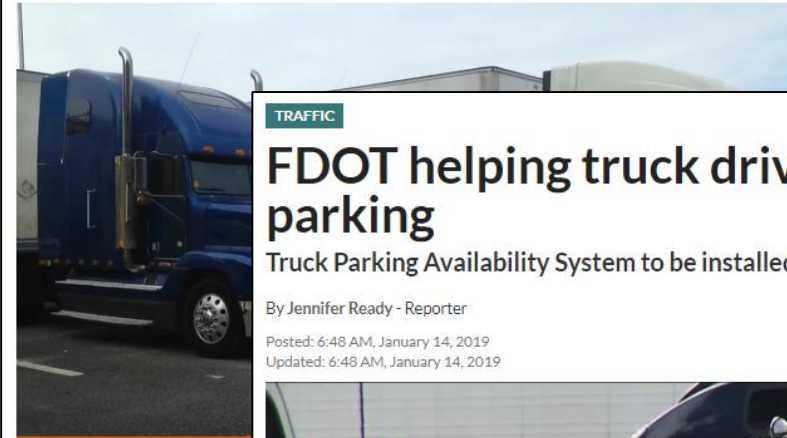




Truck Parking Availability System

- **FDOT's Truck Parking Availability System**
 - Lets drivers know how many spaces are available
 - Signs along I-4 and in-cab information systems
- Intended to address driver and motorist safety, overcrowding at rest areas

High-tech sensors will alert truckers of open spaces at I-4 rest stop



DOT rest stops truck technology



By **Martin E. Combs**
Orlando Sentinel

TRAFFIC

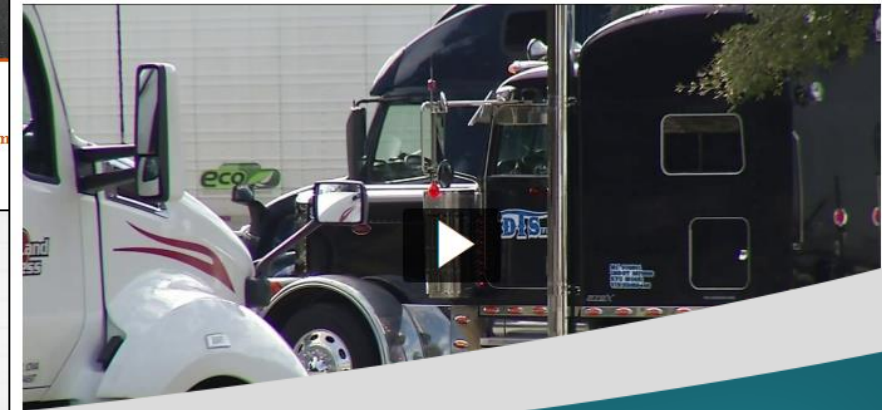
FDOT helping truck drivers find safe parking

Truck Parking Availability System to be installed on I-10, I-75, and I-95

By Jennifer Ready - Reporter

Posted: 6:48 AM, January 14, 2019

Updated: 6:48 AM, January 14, 2019



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REST AREA
TRUCK PARKING
7
SPACES AVAILABLE

LANE ENDS
MERGE
LEFT



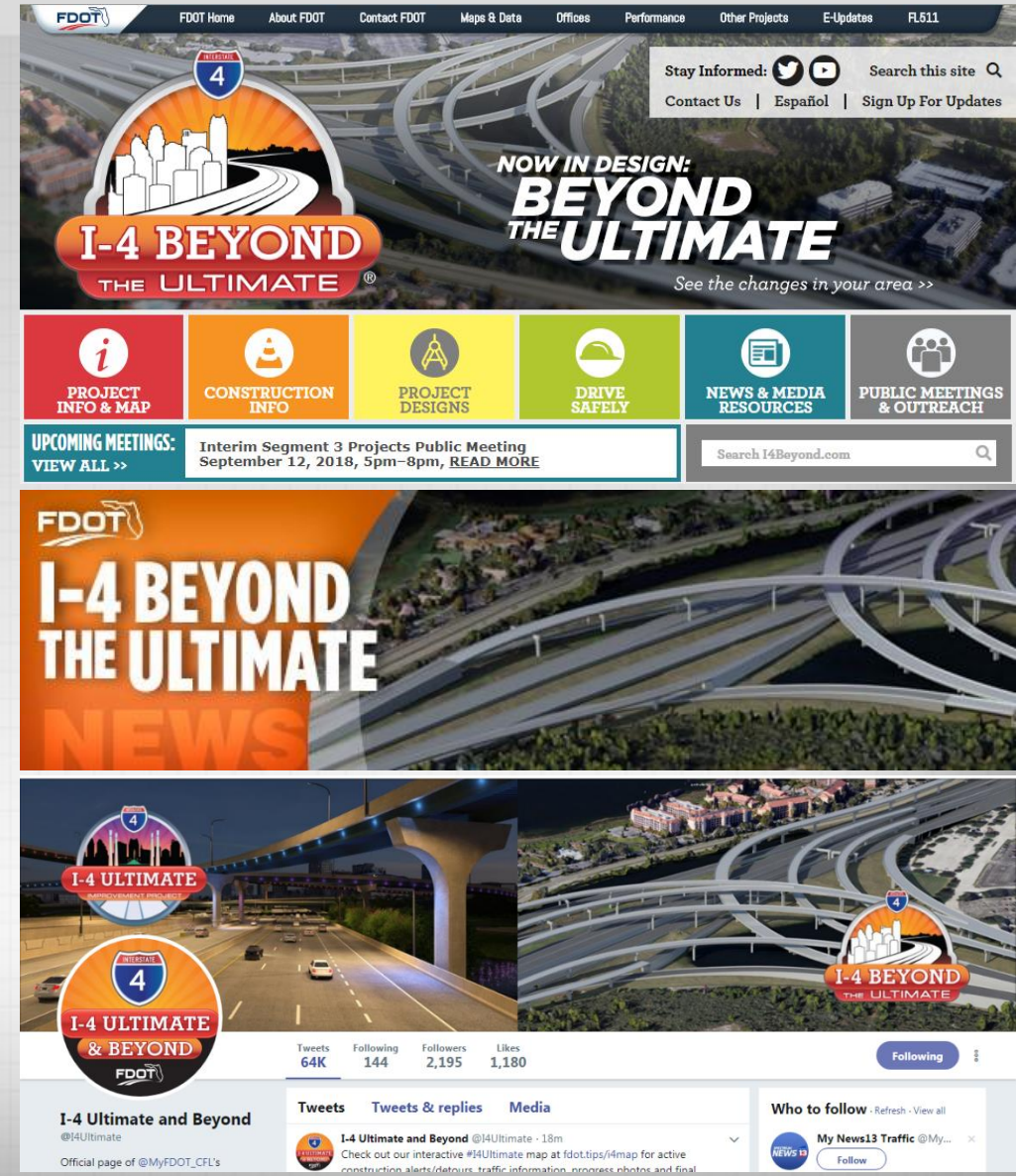


Questions



Get Connected and Stay Informed

- Visit i4Beyond.com for project documents, design plans and more
- Sign up for the I-4 Ultimate and I-4 Beyond the Ultimate monthly e-newsletters
- Get advance construction alerts on the parts of I-4 you drive
- Follow [@I4Ultimate](https://twitter.com/I4Ultimate) on Twitter for regular I-4 construction updates





Tonight's Presentation

You can download tonight's presentation and the
Segment 3 Noise Study Report from:
www.I4Beyond.com/Northridge





For More Information



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