



County of Fairfax, Virginia

Route 28 Widening

Prince William County/ Fairfax County Line to Route 29

Public Information Meeting

March 12, 2019

Centre Ridge Elementary School

W. Todd Minnix, PE
James Beall, PE

Fairfax County Department of Transportation





Introductions

- District Supervisors' and Staff
 - Sully District – Supervisor Kathy Smith
 - Springfield District – Supervisor Pat Herrity
- Fairfax County Department of Transportation (FCDOT)
- Fairfax County Department of Public Works & Environmental Services (DPWES)
- Consultants
- Prince William County
- VDOT
- Northern Virginia Transportation Authority (NVTA)
- Others



Purpose

To update project status, provide information to, and solicit feedback, comments, and suggestions from the community on the proposed widening of Route 28 from the Prince William/Fairfax County Line to Route 29 including:

1. Scope and Design Elements of the project
2. Environmental Impacts/Issues
3. Method of Project Delivery/Schedule
4. Any other items of community importance and/or concern related to the Project

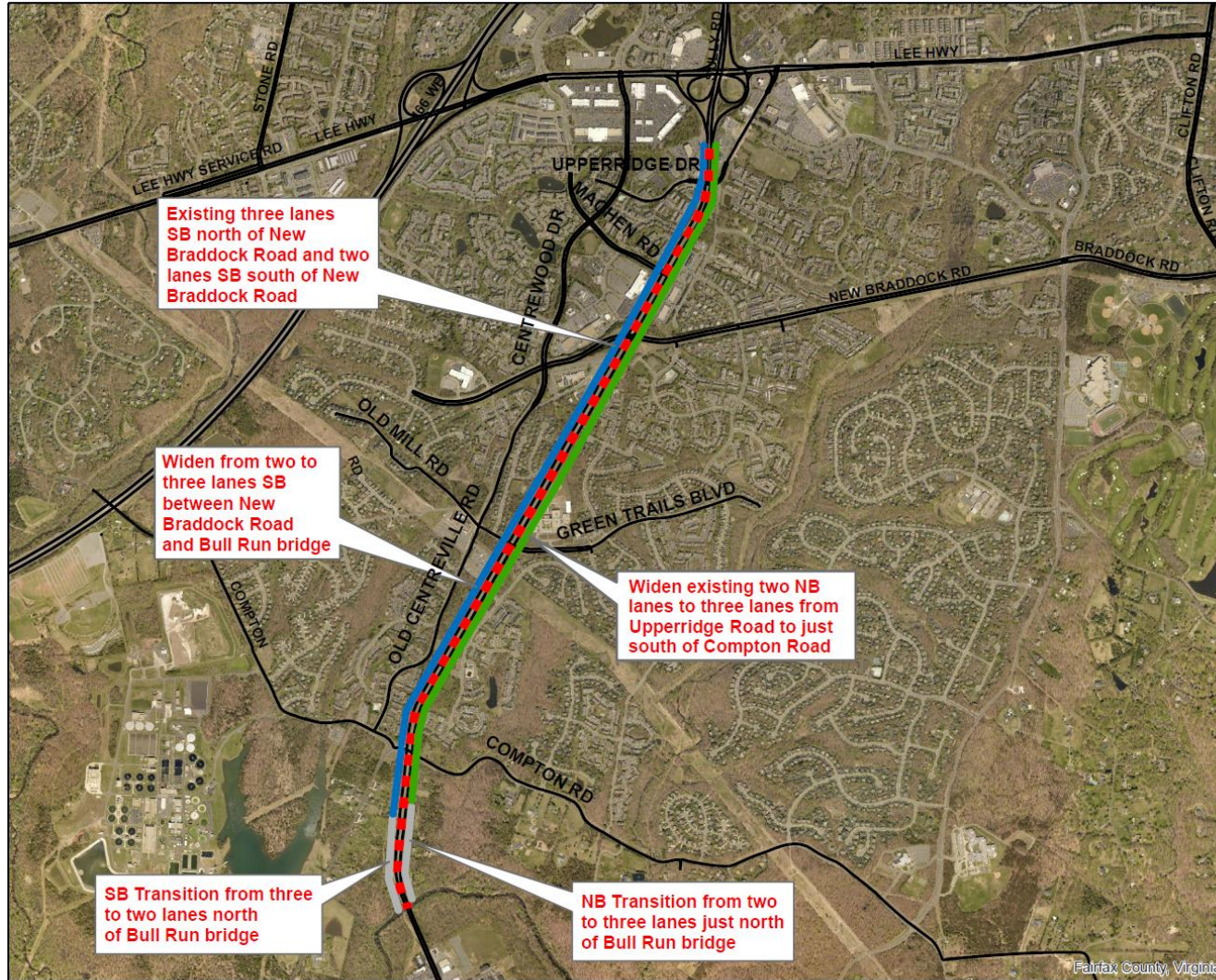




Agenda

- Location and Background
- Current Tasks Completed/Underway
- Traffic Analysis
- Right-of-Way Requirements
- Noise Barriers 101
- Funding
- Project Schedule/Delivery Method
- Next Steps
- Feedback and Questions





6 Lane “Preferred Option”

ROUTE 28 WIDENING PRINCE WILLIAM COUNTY LINE TO ROUTE 29



Background

- Original Scope called for widening Route 28 to 6-Lanes from the bridge over Bull Run to the Route 28/29 Interchange
- Endorsed by Fairfax County Board of Supervisors as part of the County's Transportation Priorities Plan (TPP) on January 28, 2014 (TPP ID#62)
- Initial Work on project began in 2016
- County's Comprehensive Transportation Plan describes Route 28 as 8 lanes with High Occupancy Vehicle (HOV) lanes, and a future interchange at New Braddock Road
- Project as proposed does not preclude future HOV or a future interchange at New Braddock Road
- Route 28, from Compton Road northward, is designated as a Limited Access Highway





Current Tasks Completed/Underway:

- Topographic Survey and Utility Designation (above and below ground)
- Soils Investigations
- Initial Environmental Investigations:
 - Preliminary Environmental Inventory (PEI)
 - National Environmental Policy Act (NEPA) Document Concurrence from VDOT and FHWA (Documented Categorical Exclusion (CE))
 - Wetland and Stream Delineation
 - Cultural Resources – Archeology, Architectural and Historic Resources
 - Threatened and Endangered Species
 - Noise and Air Quality
 - DRAFT NEPA (CE) submitted to VDOT February 25, 2019
- Traffic Analysis (Existing 2016; No-Build 2040; Six lanes 2023 and 2040; Hybrid 6-7-8 2040)



Current Tasks Completed/Underway:

- Finding of Public Interest (FOPI) approved September 16, 2018 to proceed with Design Build project delivery
- Preliminary Design (30% Plans)
 - 4 Options for Ordway Rd./Compton Rd./Old Centreville Rd./Route 28
 - Current Configuration with Added Lanes
 - Realign Ordway Road to align with Old Centreville Road, w/Traffic Signal
 - Realign Ordway Road to align with Old Centreville Road, w/Roundabout
 - Realign Old Centreville Road to “T” intersection w/Ordway Road, w/Traffic Signal
 - 8-Lane configuration on Route 28 – “worst case”
 - 6- Lane not to preclude future widening
 - Will be revised based upon final traffic analysis and optimized lane configuration on final approval by VDOT (see Traffic Analysis)



Bifurcated Profiles

- Elevation difference between northbound (NB) and southbound (SB) roadway profiles will require median retaining walls with ultimate 8 lane section
- SB roadway does not meet current sight distance criteria; two possible solutions:
 - Overlay pavement on either side of crest vertical curves
 - Regrade and lower existing roadway
- Final design could affect utility relocations and Maintenance of Traffic which could require additional easements beyond those shown on the plans.



Traffic Analyses:

Detailed final analysis submitted to VDOT January 2019

Prepared for several options to determine optimal lane configuration on Route 28 based upon projected traffic volumes in 2040:

- Existing conditions (based on 2016 traffic counts)
- 6-Lanes (3 lanes in each direction) at opening year 2023
- 6-Lanes (3 lanes in each direction) at design year 2040
- Ultimate 8-Lanes (4 lanes in each direction) at design year 2040
- 6-7-8-Lane Hybrid (3 NB lanes from Bull Run Bridge to just south of New Braddock Road, 4-lanes from there northward; 4-lanes SB from Route 29 to Compton Road, 3-lanes SB tapering to 2-lanes at Bull Run Bridge) at design year 2040



Traffic Analyses:

Due to Funding Constraints, **this project will widen Route 28 to 6-lanes.**

As the traffic analysis has indicated, future widening of Route 28 will be required to accommodate the estimated traffic demand prior to the design year, 2040. i.e. it is understood that additional widening of Route 28 will be needed prior to 2040.

As such, the widening of Route 28 to 6-lanes will be designed and constructed to permit the addition of one lane in each direction with as minimal impact to the community and environment as possible.

Current design plans have been developed such that the additional lane(s) can be constructed in the median.



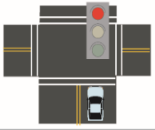
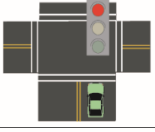
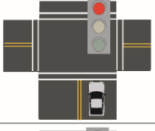
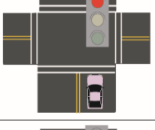
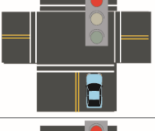
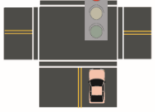
Traffic Analyses (cont.)

- Improvements at ALL existing signalized intersections by adding turn lanes and/or one or more additional lanes on side streets to eliminate split-phase signal operations and improve overall intersection operations. (Examples)
 - Dual Left turn lanes on NB Route 28 at New Braddock (may not be needed/required)
 - Dual Left turn lanes on NB Route 28 at Machen Road
 - Triple Left turns from Westbound (WB) New Braddock to SB Route 28
 - Adding one lane on WB Compton Road
 - Adding one lane on EB Compton Road
 - Adding one lane on EB Old Mill Road
 - Adding one lane on WB Old Centreville Road (north end of project)
- Proposed removal of selected existing median crossovers (unsignalized)



LEVELS OF SERVICE

for Intersections with Traffic Signals

Level of Service	Delay per Vehicle (seconds)
A	 ≤10
B	 11-20
C	 21-35
D	 36-55
E	 56-80
F	 >80

Factors Affecting LOS of Signalized Intersections

Traffic Signal Conditions:

- Signal Coordination
- Cycle Length
- Protected left turn
- Timing
- Pre-timed or traffic activated signal
- Etc.

Geometric Conditions:

- Left- and right-turn lanes
- Number of lanes
- Etc.

Traffic Conditions:

- Percent of truck traffic
- Number of pedestrians
- Etc.

Source: 2000 HCM, Exhibit 16-2, Level of Service Criteria for Signalized Intersections





Traffic Alternatives Comparison

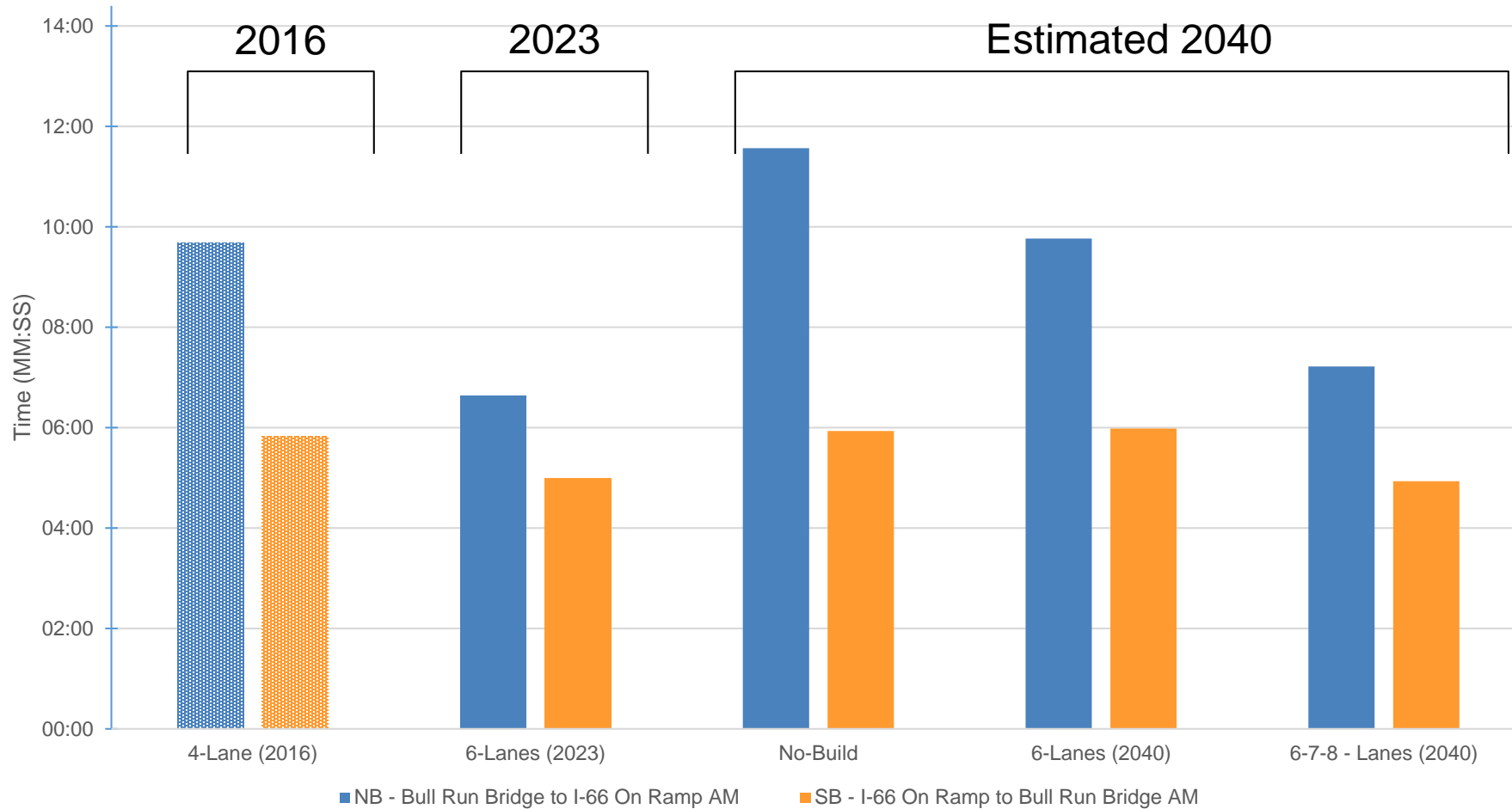
Route 28 Widening - PWC to Route 29 Alternatives Comparison Matrix Intersection Operations and Travel Times											
Intersection	Existing Conditions		6 - Lanes		No-Build		6 - Lanes		6 - 7 - 8 - Lanes		
	2016		2023		2040		2040		2040		
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	
Rte 28 / Upperridge Dr / Old Centerville Rd											
Average Intersection Delay	51	100	25	49	42	212	37	79	30	45	
Level of Service (LOS)	D	F	C	D	D	F	D	E	C	D	
Rte 28 / Machen Rd											
Average Intersection Delay	33	104	16	27	31	130	30	27	21	26	
Level of Service (LOS)	C	F	B	C	C	F	C	C	C	C	
Rte 28 / New Braddock Rd											
Average Intersection Delay	94	97	60	39	137	159	107	37	64	51	
Level of Service (LOS)	F	F	E	D	F	F	F	D	E	D	
Rte 28 / Old Mill Rd / Green Trails Blvd											
Average Intersection Delay	22	50	23	32	29	105	34	27	24	20	
Level of Service (LOS)	C	D	C	C	C	F	C	C	C	C	
Rte 28 / Compton Rd / Ordway Rd											
Average Intersection Delay	51	69	40	34	86	62	47	59	39	34	
Level of Service (LOS)	D	E	D	C	F	E	D	E	D	C	
Travel Time (Min:Sec/MPH)											
Northbound - Bull Run Bridge to I-66 On Ramp	(min:sec)	9:41	7:43	6:38	6:24	11:34	11:17	9:46	6:56	7:13	6:19
	(mph)	19.4	24.3	28.3	29.3	16.2	16.6	19.2	27.0	26.0	29.7
Southbound - I-66 On Ramp to Bull Run Bridge	(min:sec)	5:50	13:31	5:00	6:03	5:56	21:06	5:59	6:10	4:56	6:33
	(mph)	31.0	13.4	36.2	29.9	30.5	8.6	30.2	29.3	36.6	27.6

Note: Levels of service and travel times are based on traffic analysis for both existing and proposed conditions and are subject to change as the traffic modeling is finalized.

Level of Service (LOS) is a measure of the relative quality of traffic congestion, based on performance measures such as traffic speed and density.
LOS "A" is free flow of traffic; LOS "F" is a breakdown flow or gridlock

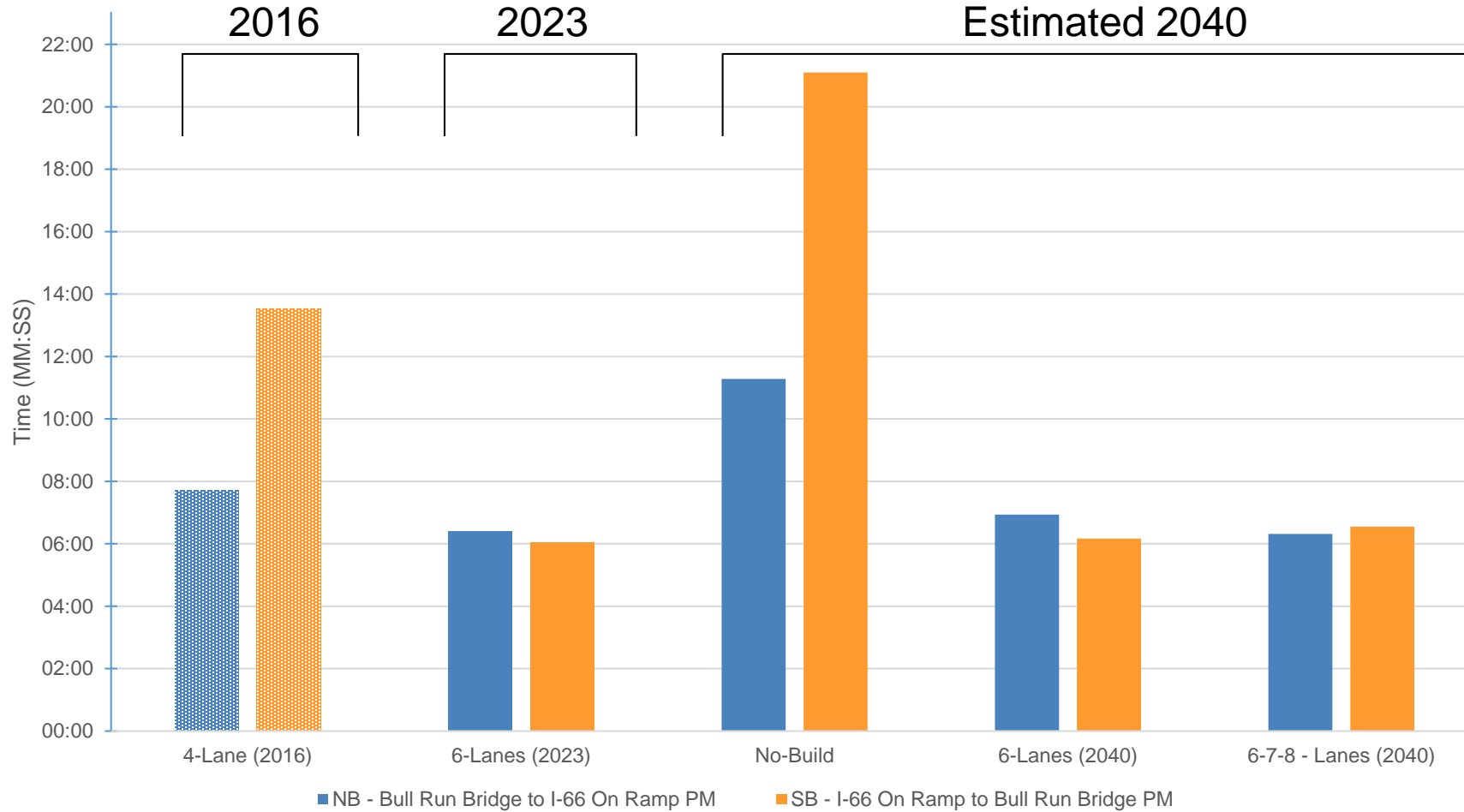


AM Travel Time Comparison



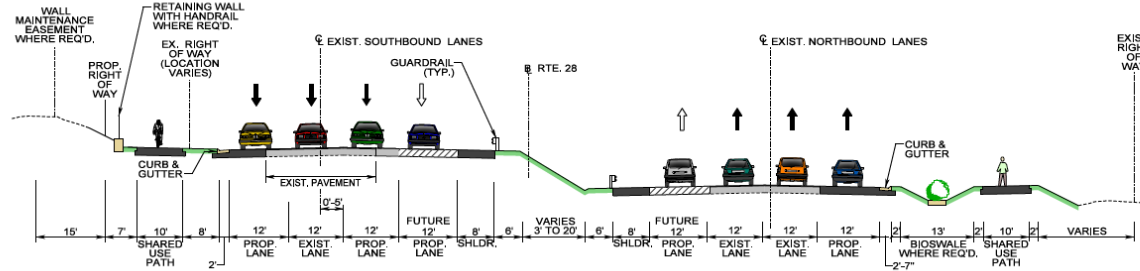


PM Travel Time Comparison

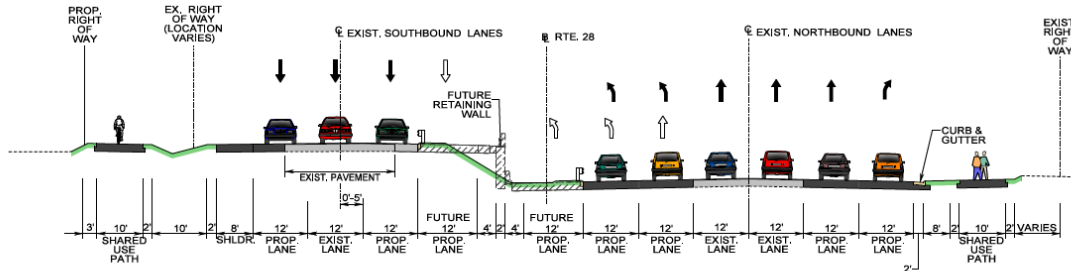




Typical Sections Route 28 Widening Prince William County Line to Route 29



TYPICAL 6 LANE SECTION (WITH OUTSIDE CURB AND GUTTER)
(100' SOUTH OF DARKWOOD DRIVE TO ROUTE 29)



TYPICAL SECTION
(WITH RETAINING WALL AND RIGHT AND LEFT TURN LANES)

**2 of 3
30% DESIGN**

ALL INFORMATION PRESENTED AT THIS PUBLIC INFORMATION MEETING FOR THE ROUTE 28 CORRIDOR IMPROVEMENTS PROJECT IS CONCEPTUAL AND PRELIMINARY IN NATURE. ITEMS SHOWN ARE SUBJECT TO CHANGE BASED ON COMMENTS RECEIVED AND INFORMATION OBTAINED AS THE PROJECT PROGRESSES. ITEMS UNKNOWN AND/OR UNAVAILABLE AT THIS TIME AND THEREFORE NOT DEPICTED ON THIS DISPLAY INCLUDE UTILITY AND/OR MAINTENANCE EASEMENTS, AND OTHER DESIGN ELEMENTS TO BE INCORPORATED AS THE PROJECT FURTHER DEVELOPS. ADDITIONAL EASEMENTS MAY BE NEEDED FOR UTILITY RELOCATION, POTENTIAL SOUND BARRIERS AND WALLS & LOCATIONS OF POTENTIAL SOUND BARRIERS HAVE NOT YET BEEN DETERMINED. THIS CONCEPTUAL LAYOUT IS UNAPPROVED AND IS NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.





Estimated ROW Requirements

Based Upon Preliminary 8-Lane Plans (worst case)

	Number of Parcels		
	Total parcels affected	ROW and Easement	Easement only
RT 28 Roadway	36	13	23
SWM	6 (5 total acquisitions)	6	0
Compton Ordway			
Option 1	2	0	2
Option 4	9 (1 total acquisitions)	3	6
Total	44 to 51	19 to 22	25 to 29
No demolition or removal of residential or commercial structures.			
Utility relocations may require additional easements			



Noise Barriers 101

- Per federal law, noise impact analysis required. Noise analysis conducted per VDOT Noise Policy.
- Where project noise levels are projected to exceed established criteria, FCDOT is *required to propose noise mitigation*
- Sound Barriers will be constructed *only* if the people who are directly benefitted vote for them
- Noise Analysis
 - Computer model calibrated to existing conditions
 - Based on design year traffic volumes (2040) with future 8-lanes
 - Loudest hour – AM or PM on Route 28





Summary of Preliminary Noise Analysis and Results

- Currently, 26 noise-sensitive receptors (e.g., residences, etc.) experience “noise impacts” defined as approaching (within 1 dBA) or exceeding the Noise Abatement Criteria (67 dBA (Leq)) during the loudest hour of the day.
- In 2040, impacted receptors will increase to 68.
- 10 Sound Barriers were evaluated based on criteria of feasibility and reasonableness:
 1. Acoustically effective by reducing levels at impacted receptors by at least 5 dBA
 2. Possible to design and construct the barrier
 3. Face of barrier cannot be larger than 1600 sq. ft. per benefited receptor
 4. At least one receptor achieves a 7 dBA reduction
 5. Most owners or residents of benefited receptors favor the barrier



Summary of Preliminary Noise Analysis and Results

- 2 barriers found to meet first 4 criteria and will undergo further evaluation:
 1. Barrier D1 - East side of Route 28 between New Braddock Road and Darkwood Drive
 2. Barrier I - West side of Route 28 north of Compton Road
- Final Design of the Barriers, including exact location, length, height, architectural treatment, etc., will be determined later in the process

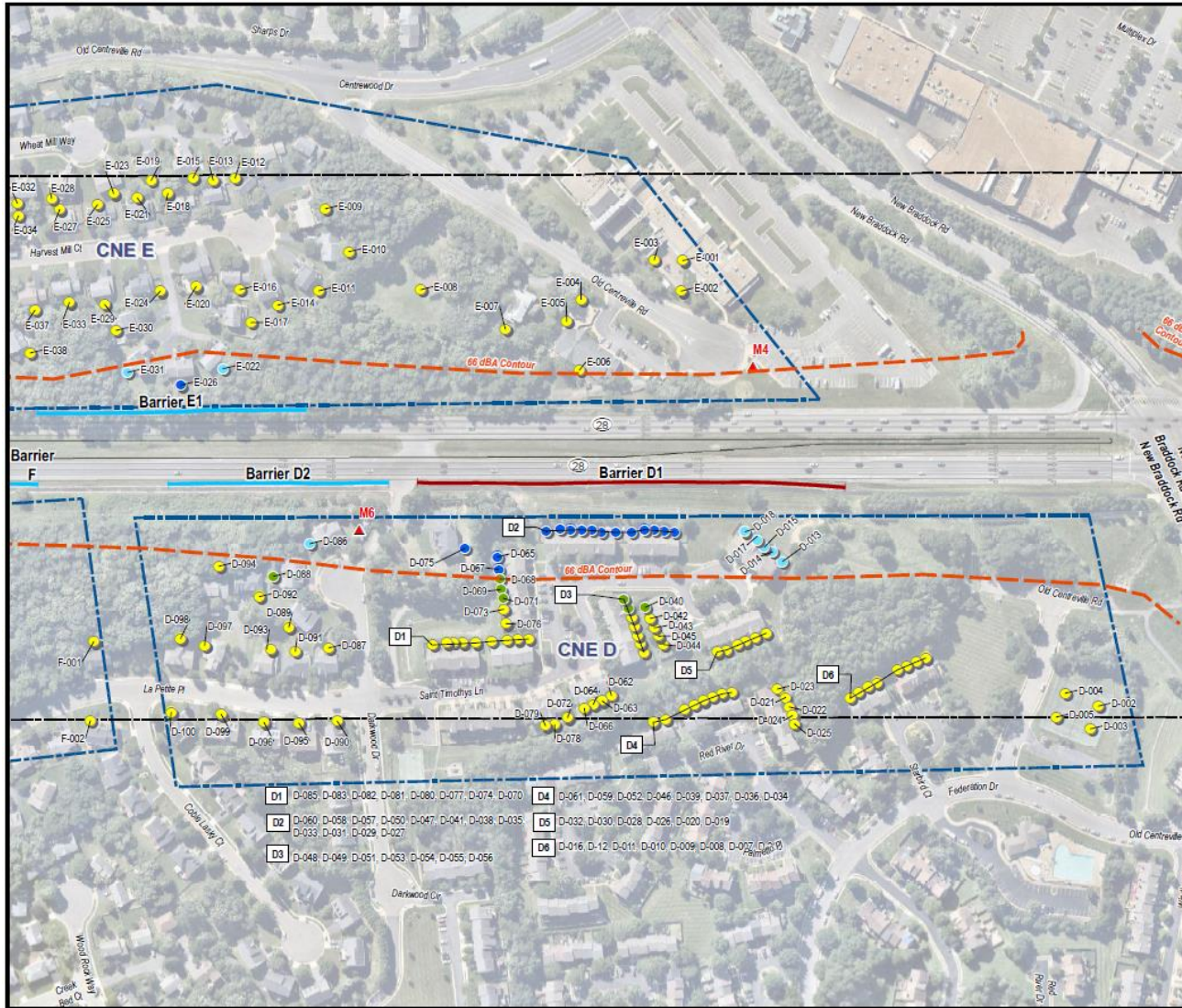


Figure 2
Location Map for Common Noise
Environments, Receptors,
Build Contours and Barriers

Route 28 Widening, Fairfax County Noise Analysis

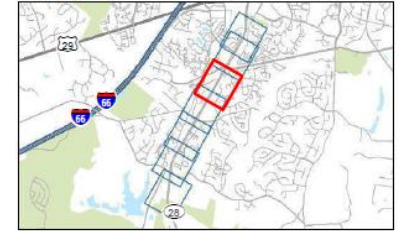
FCDOT Project 2G40-100-000 VDOT UPC 108720

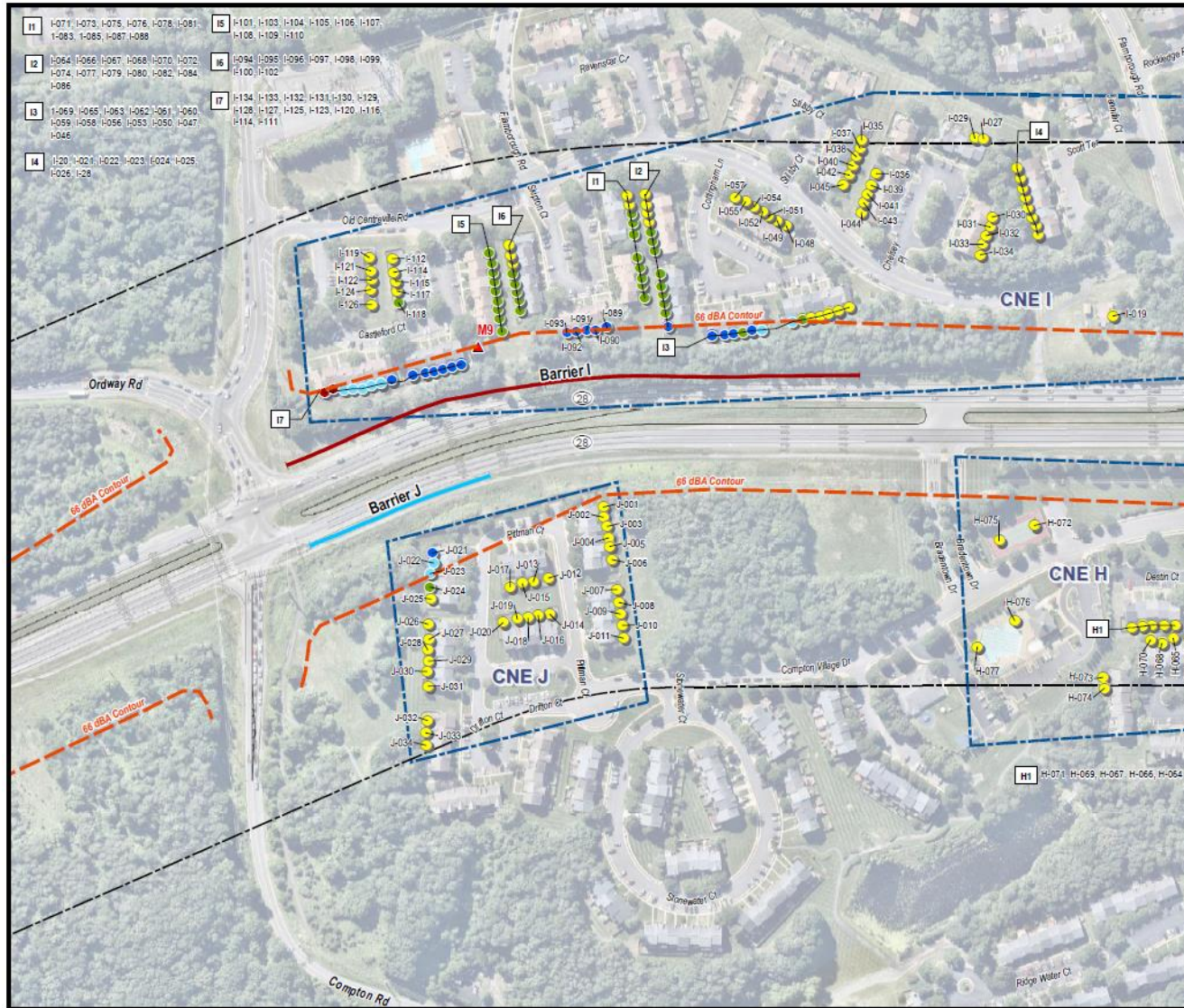
- Receiver Site and Number
- Impacted and 5 or 6 dBA Insertion Loss
 - Impacted and 7 dBA or more Insertion Loss
 - Impacted but Not Benefited
 - Benefited but Not Impacted
 - Not Benefited or Impacted

- Noise Barriers
- ▬ Feasible and Reasonable
 - ▬ Feasible and Not Reasonable
 - ▬ Not Feasible

- ▲ M# Measurement Site
- ▬ CNE Boundary
- ▬ 66 dBA Noise Contour
- ▬ 500' Noise Study Area

D1	D-085, D-083, D-082, D-081, D-080, D-077, D-074, D-070	D4	D-061, D-059, D-052, D-046, D-039, D-037, D-036, D-034
D2	D-060, D-058, D-057, D-050, D-047, D-041, D-038, D-035	D5	D-032, D-030, D-028, D-026, D-020, D-019
D3	D-033, D-031, D-029, D-027	D6	D-016, D-12, D-011, D-010, D-009, D-008, D-007, D-006





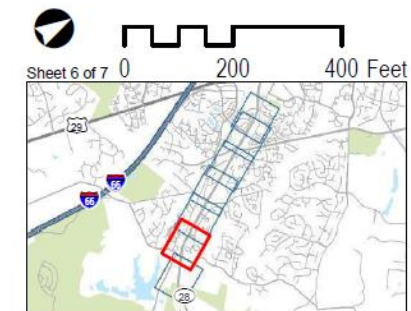
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- 12 I-054, I-056, I-067, I-068, I-070, I-072, I-074, I-077, I-079, I-080, I-082, I-084, I-086
- 13 I-069, I-065, I-063, I-062, I-061, I-060, I-059, I-058, I-056, I-053, I-050, I-047, I-046
- 14 I-120, I-021, I-022, I-023, I-024, I-025, I-026, I-028
- 15 I-101, I-103, I-104, I-105, I-106, I-107, I-108, I-109, I-110
- 16 I-094, I-095, I-096, I-097, I-098, I-099, I-100, I-102
- 17 I-134, I-133, I-132, I-131, I-130, I-129, I-128, I-127, I-125, I-123, I-120, I-116, I-114, I-111



Figure 2
Location Map for Common Noise Environments, Receptors, Build Contours and Barriers

Route 28 Widening, Fairfax County
Noise Analysis
FCDOT Project 2G40-100-000 VDOT UPC 108720

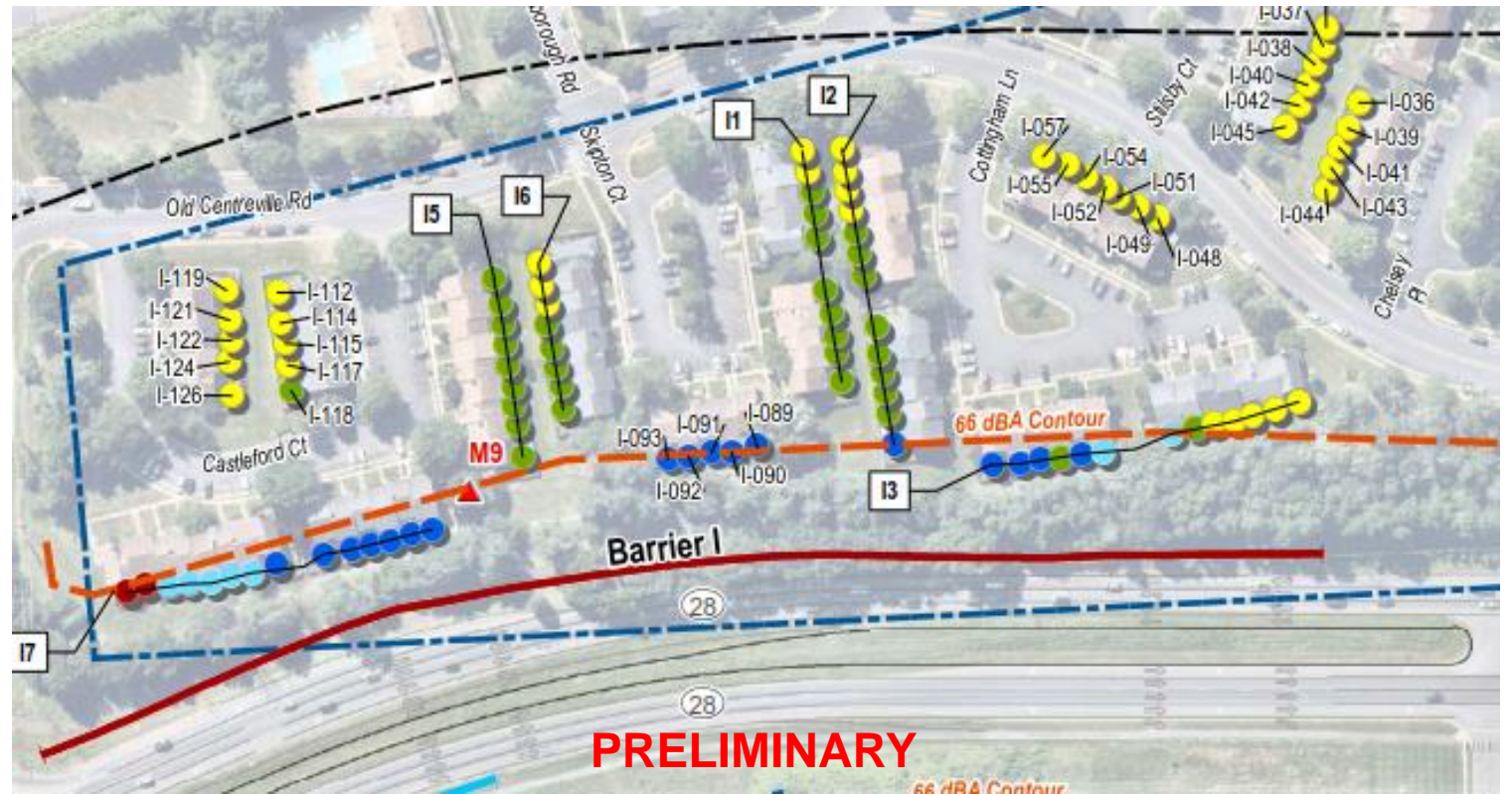
- Receptor Site and Number**
 - Impacted and 5 or 6 dBA Insertion Loss
 - Impacted and 7 dBA or more Insertion Loss
 - Impacted but Not Benefited
 - Benefited but Not Impacted
 - Not Benefited or Impacted
- Noise Barriers**
 - ▬ Feasible and Reasonable
 - ▬ Feasible and Not Reasonable
 - ▬ Not Feasible
- ▲ M# Measurement Site
- ▬ CNE Boundary
- ▬ 66 dBA Noise Contour
- ▬ 500' Noise Study Area





Criterion 5: Noise Barrier Voting – Barrier I

Color	No. of Benefited Receptors
Blue	24
Green	33



Blue receptor – impacted and benefited: each vote weighted as 5

Green receptor – not impacted and benefited: each vote weighted as 3

Yellow receptor – Not impacted and not benefited: do not vote

Both owners and renters can vote



Current Project Funding

• NVT A Regional Funds -		\$26,000,000
• State Revenue Sharing Funds -		\$10,000,000
• State SmartScale Funds -		\$23,422,583
• Federal Demonstration Funds -		\$ 9,407,418
• Local Funds -		\$ 7,794,999
• Total Funding to Date	=	\$76,625,000
• Cost Estimate	=	<u>\$76,625,000</u>



Project Schedule

Design-Build – FCDOT’s selected delivery method for this project.

1. Allows for more rapid implementation of projects by combining and overlapping the Design, ROW, Utility relocation and Construction phases.
2. Many tasks are completed concurrently, rather than in the standard linear process.





Preliminary **Design-Build** Schedule (6 Lane Design)

- “Final” 30% Plans – Spring 2019
- Advertise Request for Qualifications (D-B Contract) – Spring 2019
- Final Environmental (NEPA) Document – Spring 2019
- Advertise Request for Proposals (D-B Contract) – June 2019
- **Notice to Proceed to D-B Contractor – Winter/Spring 2020**
- **Design Public Hearing – Summer/Fall 2020**
- **60% Plans – Summer/Fall 2020**
- **Start ROW Acquisition – Fall 2020**
- **Start Construction – Fall 2020**
- **Substantial Construction Completion – December 31, 2022**
- **Final Construction Completion – Spring 2023**



Land Acquisition Process

- Will begin after Design Public Hearing and approval of Final NEPA Document. (Fall 2020)
- Plats will be prepared showing easements and/or right-of-way needed.
- Land Acquisition Agent from Design Build Team will contact property owners to negotiate.
- Land Acquisition must be completed in accordance with FHWA, VDOT, and Fairfax County procedures.
- Land Acquisition Agents from Fairfax County are here tonight to answer any questions you may have about the process.





Construction

- County and Contractor will coordinate with property owners well in advance.
- Work hours are set by VDOT and Fairfax County
 - **Night work is likely**
- Contractor must maintain pedestrian and vehicular traffic and signals during construction.
- No lane closures will be allowed during peak travel hours.



Project Website

<https://www.fairfaxcounty.gov/transportation/projects/route28-widening>

Website will be updated monthly or as more information/data becomes available.

How Do I submit Comments/Concerns regarding the project:

1. Email via Project Website
2. Email to Project Manager – James.Beall@fairfaxcounty.gov
3. Mail Comment Sheet via US Mail
4. Fill out comment sheet and hand it in tonight

FCDOT is requesting comments related to tonight's meeting be submitted by April 15, 2019.





Specific Items of the project that we are soliciting comments from the Community include, but are not limited to:

1. Design Elements

- a) Existing Median Breaks – Proposed closures south of Compton and at Darkwood
- b) Compton Rd/Ordway Road Intersection Options 1 and 4

2. Pedestrian/Bicycle Facilities- maintain existing Shared Use Path and full pedestrian access during construction?

3. Landscaping/Tree Preservation

4. Street Lights

5. Environmental Issues/Items

6. Right-of-Way Impacts/Issues



Questions?

