



North High Street Extension Facility Planning Study, Briefing by the Montgomery County Department of Transportation



Stephen Aldrich, Master Planner, CP&P, Stephen.Aldrich@montgomeryplanning.org, 301-495-4528



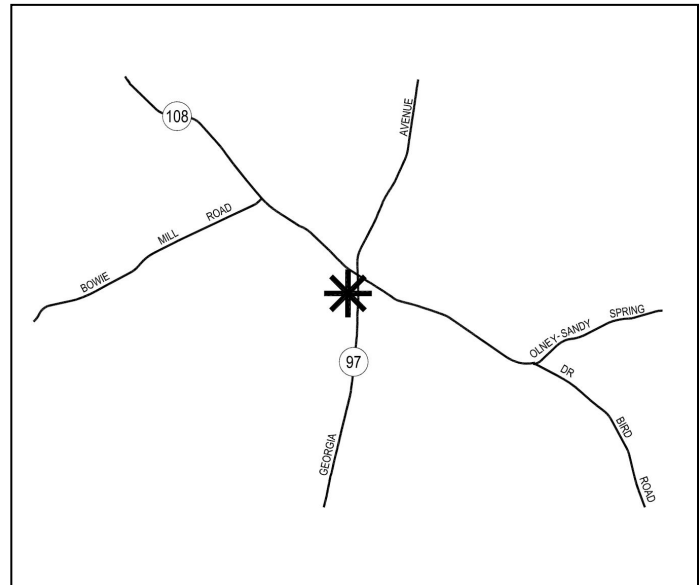
Jason Sartori, Chief, CP&P, Jason.Sartori@montgomeryplanning.org, 301-495-2172

Completed: 10-21-21

Description

The Montgomery County Department of Transportation (MCDOT) will present a briefing to the Planning Board on this facility planning study to extend North High Street in Olney, Maryland to connect with Morningwood Drive. The project elements are a new road connection with a three-leg intersection, on-street parking accommodations, and sidewalk and sidepath improvements within the project limits.

- Applicant: Montgomery County Department of Transportation
- Olney Master Plan (2005), Bicycle Master Plan (2018)



Staff Recommendation: Approval to Transmit Planning Board comments including selection of a preferred design alternative

Summary

The Montgomery County Department of Transportation (MCDOT) is conducting a facility planning study for North High Street in Olney, Maryland. The project involves the extension of this two-lane business district street to connect to Morningwood Drive at a three-leg intersection, and the project elements include one travel lane in each direction, on-street parking, and sidewalks and sidepath improvements along North High Street between Georgia Avenue (MD 97) and Morningwood Drive. MCDOT will provide a presentation to the Planning Board on the study to-date, including the development of two alternative design concepts. MCDOT is looking for Planning Board feedback on the design alternatives.

The project location is depicted in Figure 1. The North High Street project is being funded through the Transportation – Facility Planning program (P509337), and this project is funded for facility planning only.

The concept plan presentation drawings are provided as Attachment A to this report.

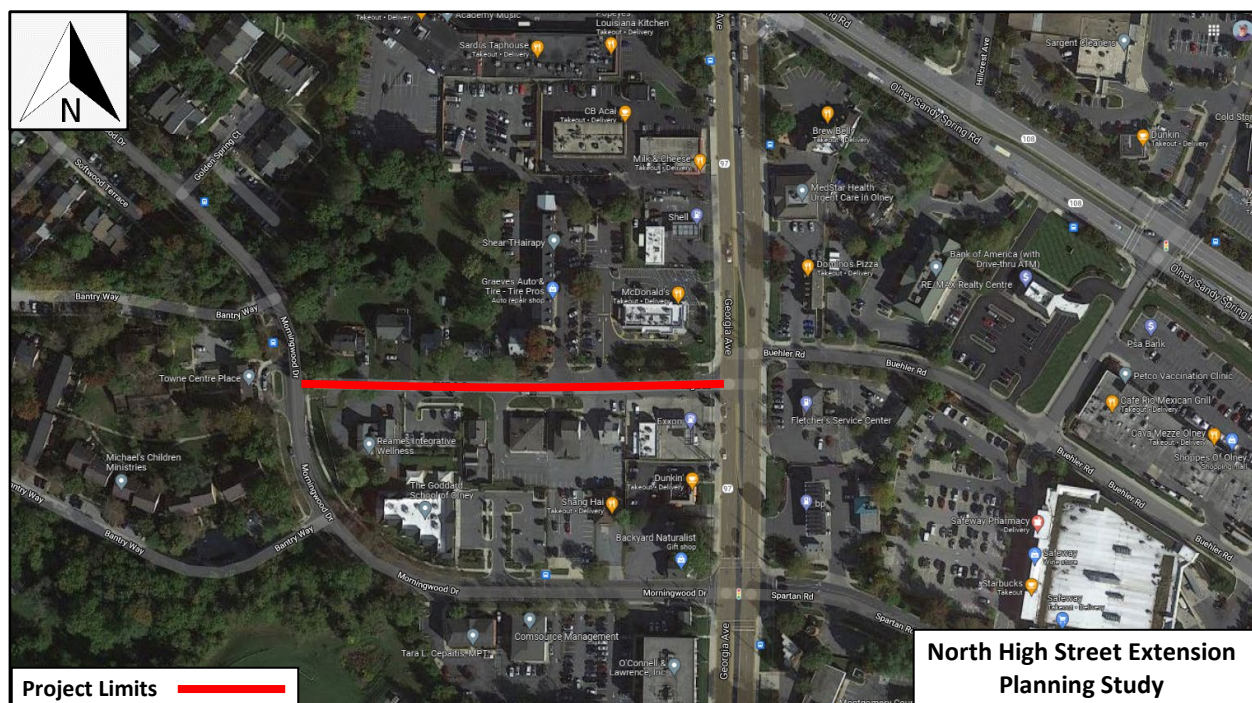


Figure 1: Project Limits and Site Vicinity

Recommendations

Staff recommends **approval** to transmit the following comments to the Montgomery County Department of Transportation:

- 1) Consider the development of a new third Alternative that is similar to Alternative #2, except the sidepath is moved to the south side of North High Street and the sidewalk is moved to the north side of North High Street.
- 2) The north side sidewalk (in new Alternative #3) should only be built through redevelopment, not as a CIP project. Swapping the sidepath to the south side (compared to Alternative #2) ensures that the south side improvement constructed by MCDOT will accommodate both pedestrians and bicyclists.
- 3) Alternative #1 is not preferred, as it does not provide a protected bicycle facility on North High Street.
- 4) Alternative #2 is not preferred, as it creates severe property impacts to the five residential properties along the north side of North High Street.
- 5) MCDOT should continue to explore the best intersection configuration and operations for the intersection of Morningwood Drive with North High Street. Options include lower posted speed limits, physical measures, and all-way stop control. This location should be a protected crossing consistent with the Complete Streets Design Guidelines.

Proposed Study

Project Description

The Montgomery County Department of Transportation (MCDOT) is conducting a facility planning study for the extension of North High Street in Olney, Maryland. North High Street currently starts at Georgia Avenue (MD 97) and dead ends just before connecting to Morningwood Drive. This extension was identified in the Olney Master Plan (2005). MCDOT initiated this study to explore how this road should be connected to Morningwood Drive to improve vehicular, bicycle and pedestrian connectivity.

Alternatives Developed

The North High Street Extension Facility Planning study developed two concept alternatives, which were presented at the September 30, 2020 virtual public meeting. The Alternatives are as follows:

- Alternative 1: Sidewalk on South Side
- Alternative 2: Sidewalk on South Side, Sidepath on North Side

MCDOT prepared concept layout and developed cost estimates and a summary of project impacts for each alternative. Concept layouts for the two alternatives are presented in Figures 3 through 6. Currently the elevations of North High Street and Morningwood Drive differ by about seven to eight feet. This can be seen in Figure 2 below.



Figure 2: Morningwood Drive at North High Street – Looking East

Alternative #1

Alternative #1 as shown below in Figure 3 proposes to construct a six-foot-wide sidewalk along the south side of North High Street between Georgia Avenue (MD 97) and Morningwood Drive. No bicycle facilities

are proposed in this alternative, so bicycle travel will be provided on the travel lanes as shared use lanes (sharrows).

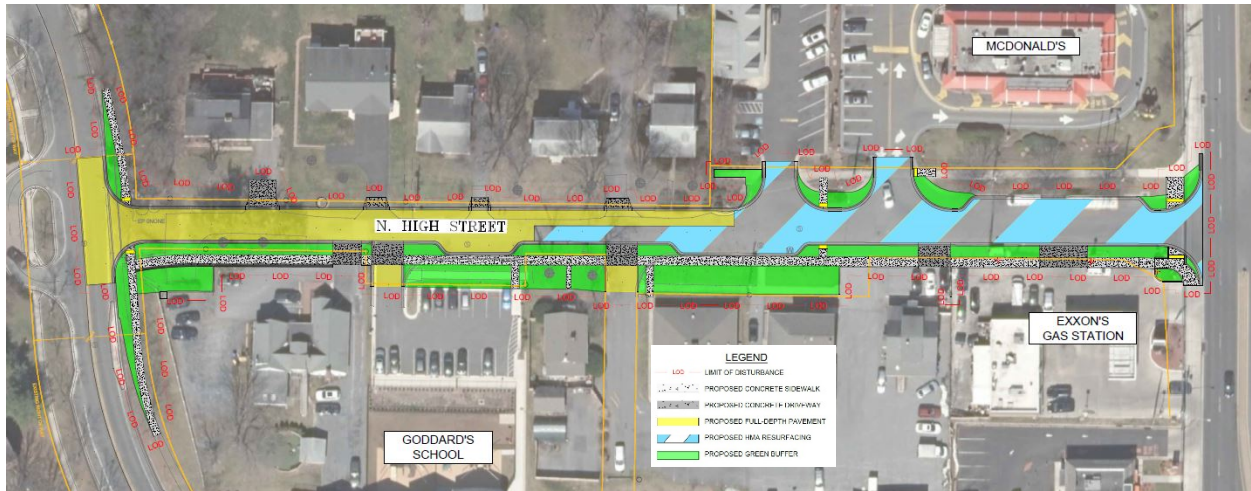


Figure 3: North High Street Extension – Alternative 1

The proposed cross section on the western side of North High Street for Alternative 1 is shown below in Figure 4.

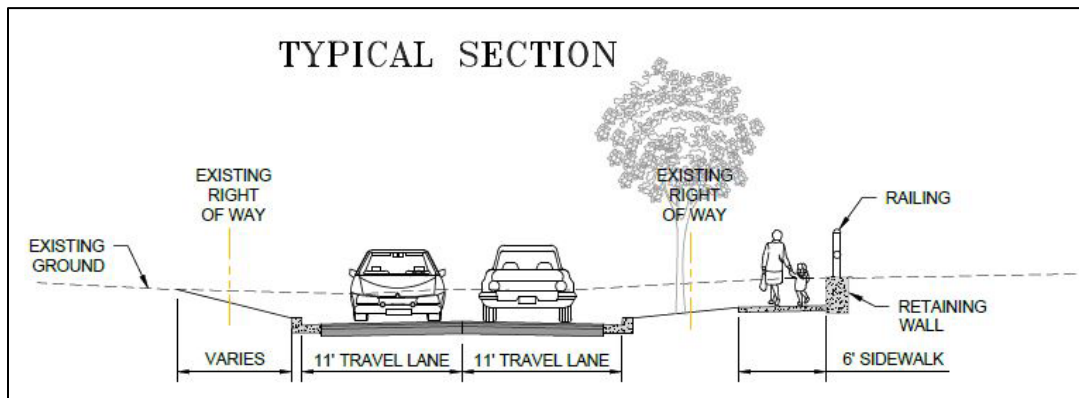


Figure 4: North High Street Extension Alternative 1 – Cross Section west of McDonalds

The proposed cross section on the eastern side of North High Street for Alternative 1 is shown below in Figure 5.

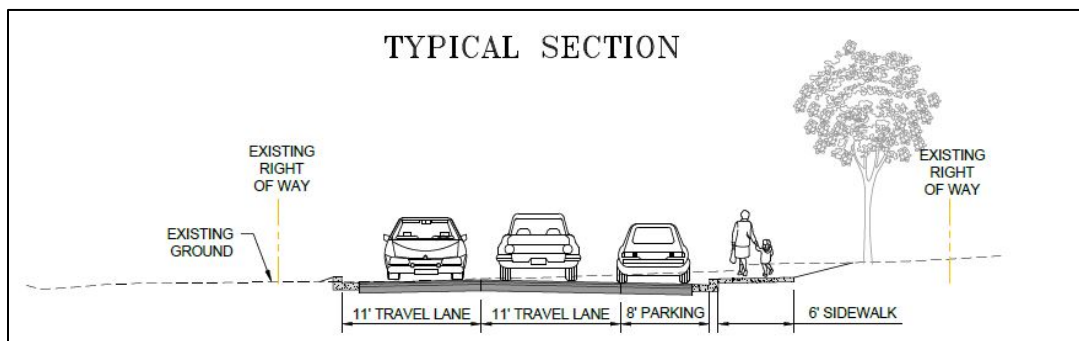


Figure 5: North High Street Extension Alternative 1 – Cross Section for eastern section

Alternative #2

Alternative #2 as shown below in Figure 6 is more extensive than Alternative #1. This concept provides a six-foot-wide sidewalk along the south side of North High Street and a ten-foot-wide sidepath on the north side. In addition, this alternative provides on-street parking on both sides of the street.



Figure 6: North High Street Extension – Alternative 2

The proposed cross section on the western side of North High Street for Alternative 2 is shown below in Figure 7.

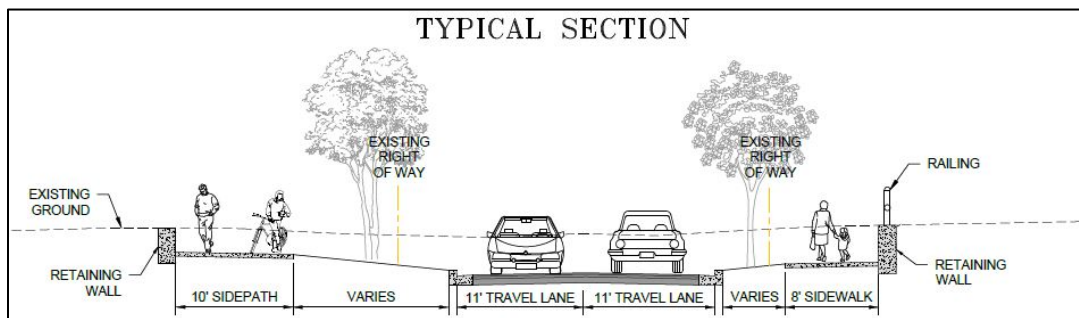


Figure 7: North High Street Extension Alternative 2 – Cross Section west of McDonalds

The proposed cross section on the eastern side of North High Street for Alternative 2 is shown below in Figure 8.

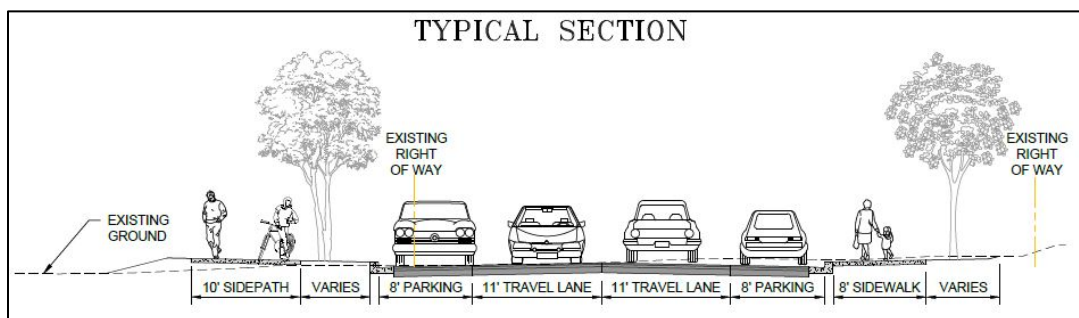


Figure 8: North High Street Extension Alternative 2 – Cross Section for eastern section

Comparison of Impacts – North High Street Extension Alternatives

Table 1 presented below provides a summary of the applicant's anticipated effects/impacts of the two alternatives studied in comparison to each other and the existing (No-Build) condition. In general, Alternative #2 has higher estimated construction cost; impacts more properties, trees, and utility poles; but provides more on-street parking spaces. It also provides both a sidewalk (pedestrians only) and a sidepath (shared facility for pedestrians and bicycles) while Alternative #1 only provides a sidewalk (pedestrians only). What this summary does not show well is the severity of the potential residential property impacts, which are greater with Alternative #2. It appears that with Alternative #2, the sidepath on the north side of the street impacts all five residential properties and gets as close as five feet to two of the residential home front porches. Compared to existing conditions, Alternative #1 provides less on-street parking and Alternative #2 provides more on-street parking.

	No-Build (Existing Conditions)	Alternative 1	Alternative 2
Description	Intermittent sidewalk on the south side, non-ADA compliant; no vehicular connection to Morningwood Drive.	11-foot travel lane in both directions which extends through to Morningwood Drive. A continuous sidewalk on the south side of the street.	11-foot travel lane in both directions which extends through to Morningwood Drive. Pedestrian facilities and parking spaces on both sides of the street.
Utility Impacts	None	8 Electric poles 3 Light poles	11 Electric Poles 3 Light poles
On-Street Parking	Approx. 11 spaces	9 spaces	16 spaces
Tree Impacts	None	5 Trees	15 Trees
Number of Properties with Potential Impacts	None	7 Properties	12 Properties
Construction Easement Cost (Estimated)	\$0	\$287k	\$557k
Construction Cost (Estimated)	\$0	\$593k	\$986k

Table 1: North High Street Extension – Project Impacts

Traffic Operations and Safety Evaluations

MCDOT conducted traffic operations, sight distance and traffic safety assessments as part of this work, which will be presented during the briefing. A key concern identified through this work is providing a safe intersection on Morningwood Drive at North High Street when this connection is made. The intersection sight distance is now deficient per Federal standards. The design team will continue to explore how to make this intersection safer, looking at potentially reducing the posted speed limit, installing warning signage, and traffic control measures, including all-way stop control. This latter technique would also help to provide a protected crossing for bicycles and pedestrians at this proposed intersection. It should be noted that the distance on Morningwood Drive between Georgia Avenue and this intersection is approximately 900 feet. The Complete Streets Design Guidelines calls for protected crossings at a distance of 600 to 1,200 feet, so this location is perfectly suited for a protected crossing for bicyclist and pedestrian safety. The technical traffic operations and traffic safety information prepared by MCDOT is available through the following links:

[Morningwood Drive Safety Assessment Report – July 2021](#)

[Traffic Analysis Report – October 2020](#)

Traffic Analysis Report Appendices – October 2020

September 2020 Public Meeting

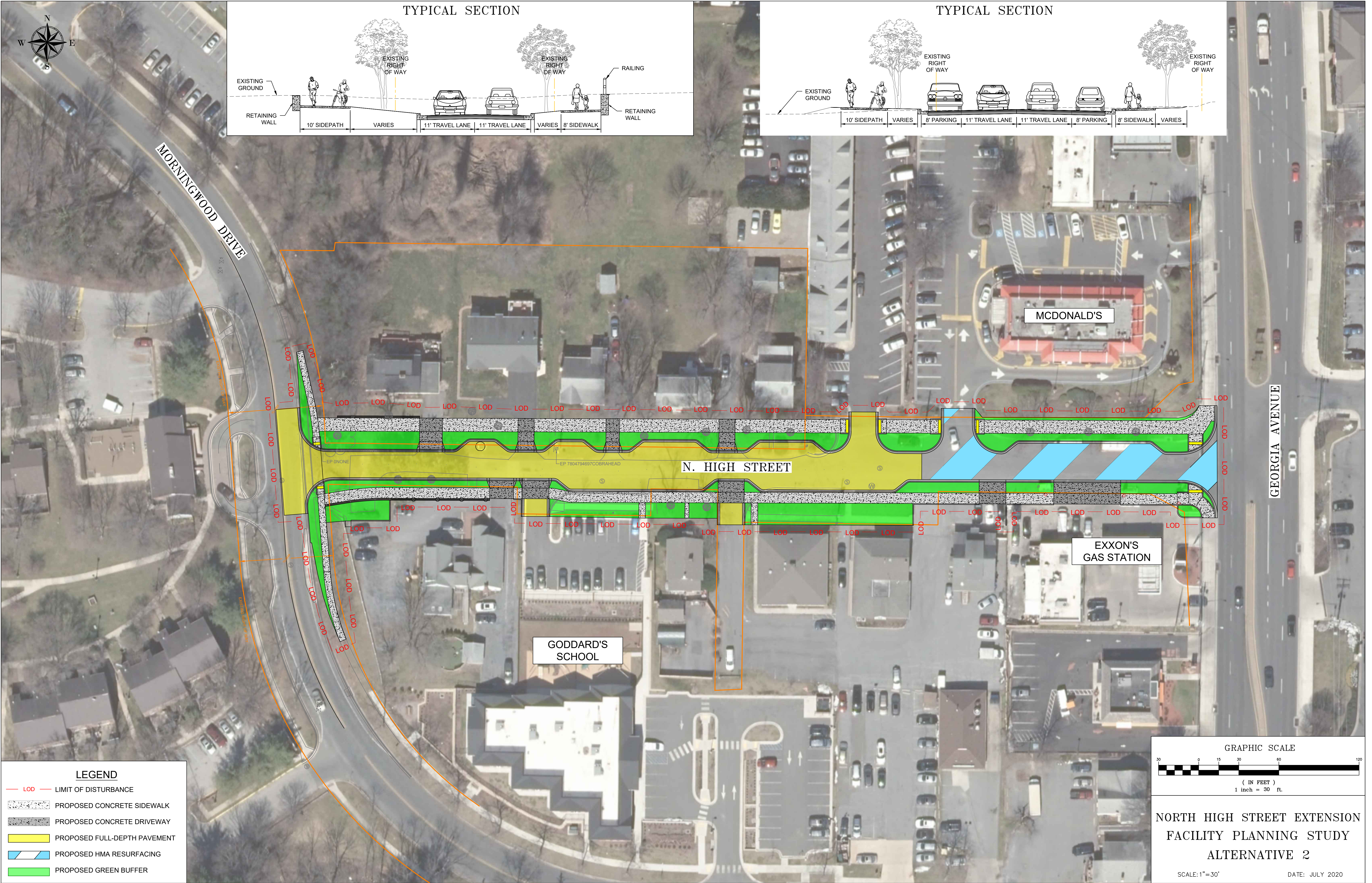
MCDOT held a virtual public meeting on September 30, 2020. A copy of the presentation is included in this submission as Attachment B. The meeting was recorded and can be viewed from the following link:

[Watch Video](#)

Attachments

- A. Proposed Project Plans
- B. Slides from Virtual Public Meeting, September 30, 2020





NORTH HIGH STREET EXTENSION – FACILITY PLANNING STUDY

VIRTUAL PUBLIC MEETING

SEPTEMBER 30, 2020





Welcome to the virtual public meeting!

- We are all learning how to conduct virtual community meetings, please bear with us
- We are going to go over some basic controls to help you use the Zoom meeting format before we start the presentation.
- Please note that this meeting is being recorded.
 - The video will be posted on the project website after the meeting
 - If you do not wish to have your voice or likeness recorded, please keep your camera off, and refrain from asking questions using the audio option. Instead, you can send your questions via the chat option.



Using Zoom

➤ Muting

- Everyone is on mute. You cannot unmute yourself. We can unmute you during the Q&A time.
- To request to speak, you will need to use the **raise hand** feature. Once we unmute you, you may still need to click a pop-up menu to unmute yourself.
- If you have called in by phone, you can unmute yourself by dialing *6 once we unmute you.



Using Zoom

➤ Video

- Your camera is off by default. To ensure adequate bandwidth for this meeting, we request that you please keep your camera off during the meeting.



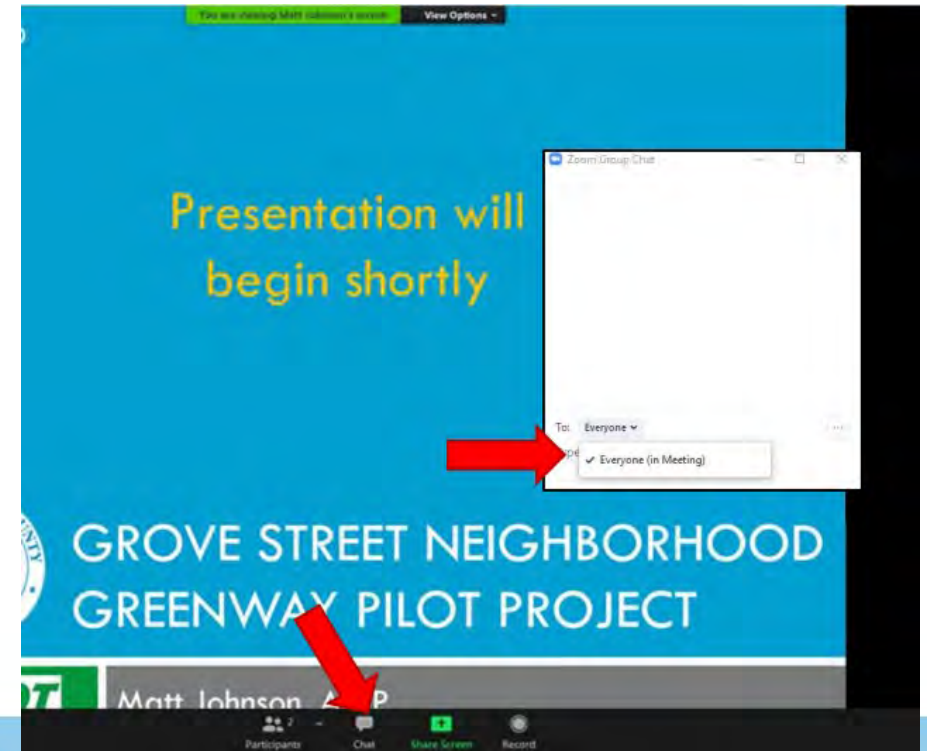
Using Zoom

➤ Ask a question (text)

- If you have a questions during the presentation, please sent it via **chat**.

To send a chat:

- ❑ Click “chat” at the bottom of the menu
- ❑ In the “to” field, change the drop down to “Corey Pitts”
- ❑ Type your question and send it





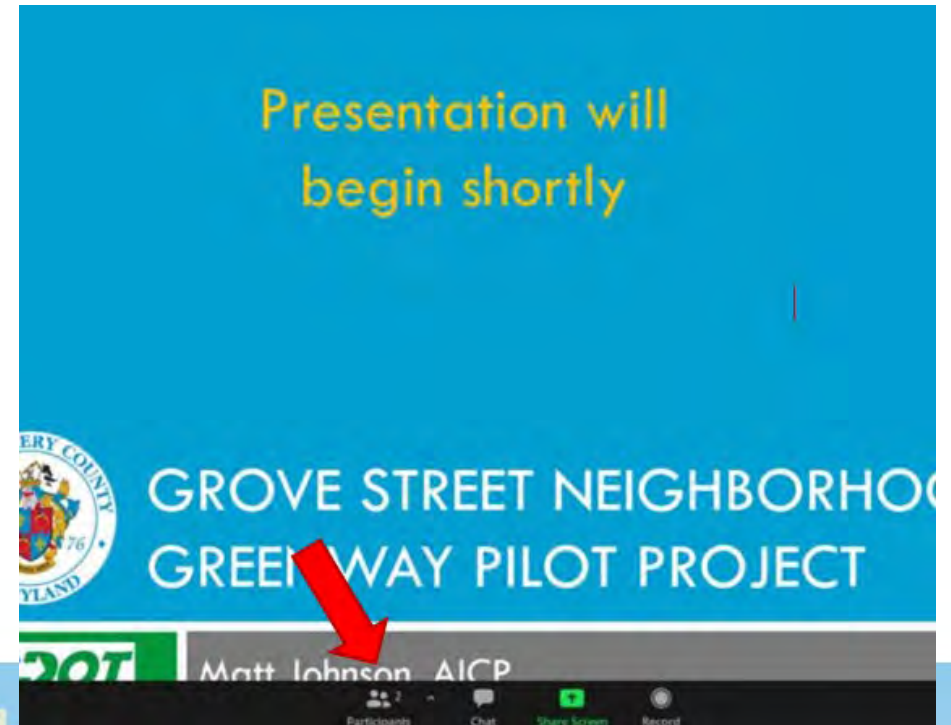
Using Zoom

➤ Ask a question (raise your hand)

- If you'd like to speak to ask a question or make a comment, please **raise your hand**.

To raise your hand:

- ❑ Click “participants” at the bottom menu
- ❑ Click the blue “raise hand” button
- ❑ If you’ve dialed in by phone, dial *9

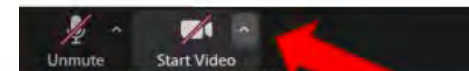
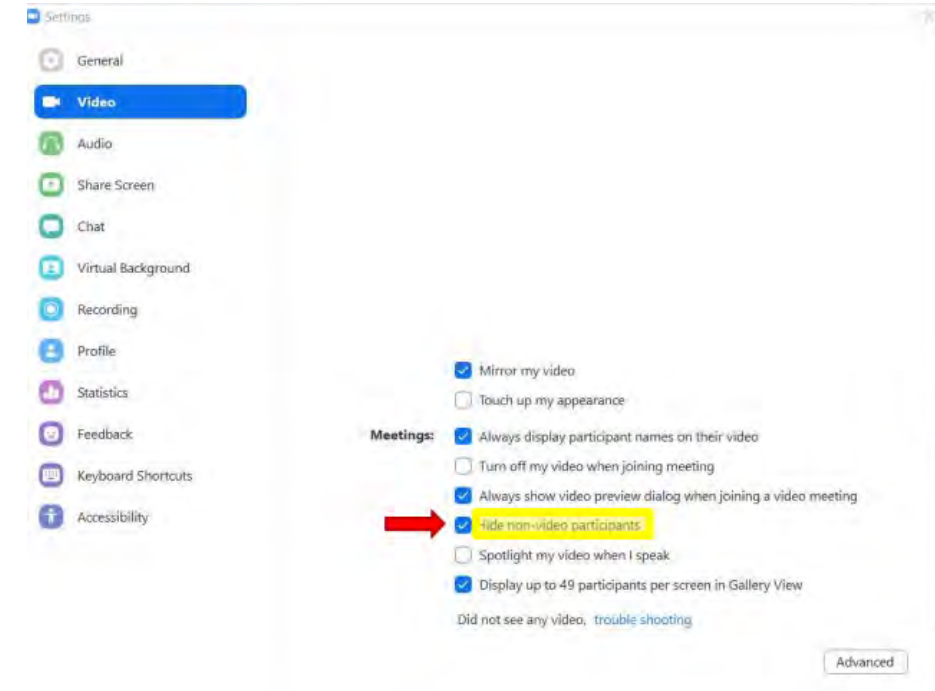


Using Zoom

➤ View

To change your view so that you only see people with cameras on:

- ❑ Click the up arrow next to “start video”
- ❑ Select “video settings”
- ❑ Make sure “Hide non-video participants” is checked





Introduction



Outline

- Project Overview
- Design Considerations
- Conceptual Alternatives
- Alternative Analysis
- Next Steps
- Questions / Comments



Meeting Outcomes

- Share the conceptual alternatives with the community
- Collect feedback from the community
- Answer questions from the community



Project Overview

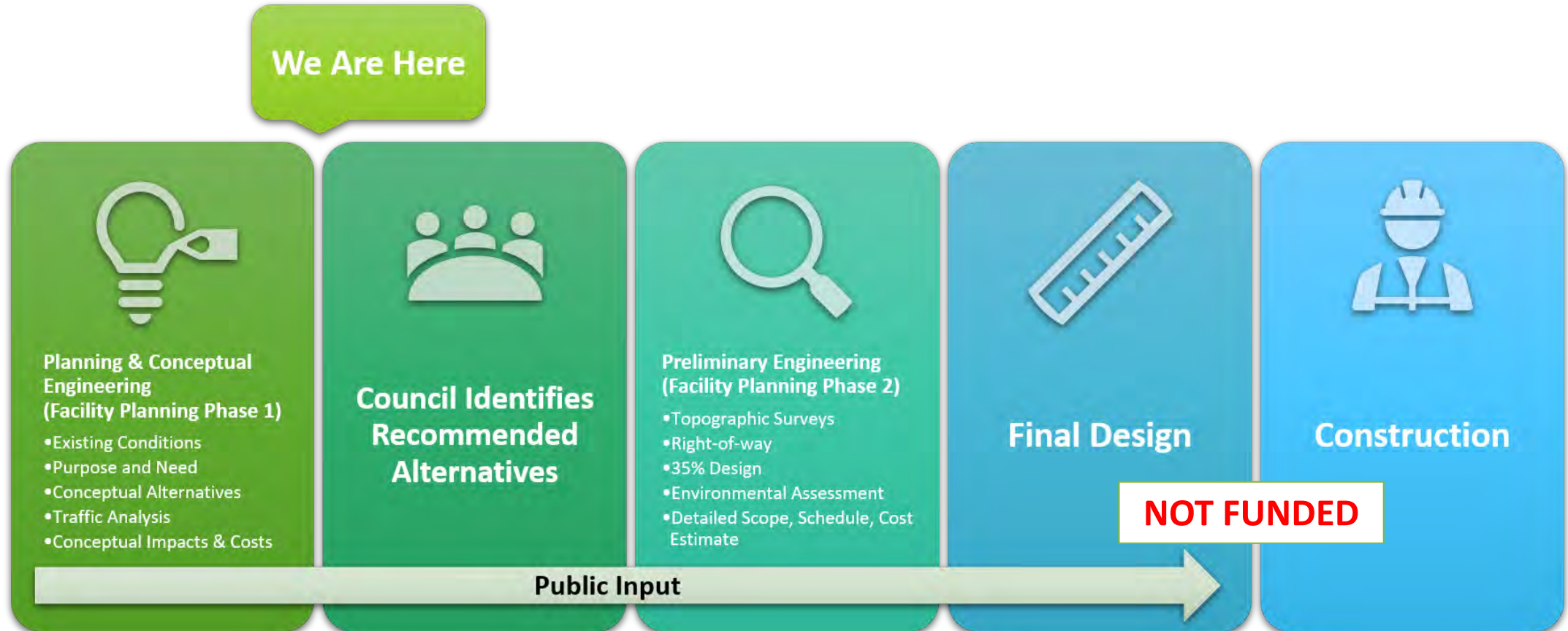
Project Limit – North High Street from Morningwood Drive to Georgia Avenue

- Scope of study:
 - Extending North High Street to Morningwood Drive
 - Provide pedestrians & cyclists access from Morningwood Drive
 - Identify additional safety improvement needs
- Master Plan recommendation – Olney Master Plan (2005)
- FY20 MCDOT Facility Planning Program
- NOT funded for final design or construction



Project Overview

Current Project Milestone Schedule



Design Considerations

- Safety – All users (Peds, cyclists, drivers)
- Right of Way
- Traffic patterns
- Utility poles and fire hydrant
- Trees
- Drainage & Stormwater Management
- Pavement usage (parking)
- Additional spot improvements within the vicinity of North High Street



Traffic Impact Analysis

- Existing traffic patterns
 - Traffic movement counts & volume
 - Peak hours: 8-9am and 4-5pm
 - Level of Services (LOS) analysis
- Projected traffic patterns with extension
 - Local network reviews on trip destinations
 - Avg. of 50 vehicles to be diverted onto North High Street during peak hours
 - Minor reduction on turning volume at MD 97/Morningwood intersection
 - No change to volume at MD 97/MD 108 intersection

Intersections	Approach	Existing			
		AM		PM	
		LOS	Delay	LOS	Delay
MD 97 & MD 108	Overall	D	48.7	D	52.2
	EB	D	44.1	D	47.2
	WB	D	37.9	D	51.0
	NB	D	54.4	D	54.1
	Signalized SB	E	59.4	E	59.2
MD 97 & N High Street/ Beuhler Road	Overall	-	-	-	-
	EB	D	25.4	B	12.8
	WB	B	10.6	B	12.5
	NB	A	1.3	A	0.4
	Unsignalized SB	A	0.0	A	0.1
MD 97 & Morningwood Drive/ Spartan Road	Overall	C	33.2	D	49.7
	EB	F	80.8	F	80.9
	WB	E	67.4	E	79.9
	NB	C	21.2	D	44.7
	Signalized SB	C	25.8	D	35.3

Left: Existing LOS Analysis Summary

Right: Projected LOS Analysis Summary

Intersections	Approach	Existing with Diversion			
		AM		PM	
		LOS	Delay	LOS	Delay
MD 97 & MD 108	Overall	D	48.8	D	52.1
	EB	D	44.1	D	47.2
	WB	D	37.9	D	51.0
	NB	D	54.6	D	53.8
	Signalized SB	E	59.4	E	59.2
MD 97 & N High Street/ Beuhler Road	Overall	-	-	-	-
	EB	D	26.7	B	13.5
	WB	B	10.6	B	12.6
	NB	A	1.4	A	0.4
	Unsignalized SB	A	0.0	A	0.1
MD 97 & Morningwood Drive/ Spartan Road	Overall	C	32.0	D	49.9
	EB	E	79.6	F	80.8
	WB	E	67.4	E	79.0
	NB	C	20.8	D	45.7
	Signalized SB	C	24.7	C	34.9
Morningwood Drive & N High Street	Overall	-	-	-	-
	EB	-	-	-	-
	WB	A	10.0	B	10.3
	NB	A	0.0	A	0.0
	Unsignalized SB	A	0.5	A	1.0

Traffic Impact Analysis

- Crash Analysis
 - 28 reported crashes in 5 years on Georgia Avenue within project limits
 - 25% of crashes at the intersection with North High Street/Buehler Road
- Sight Distance Analysis
 - Lower speed limits to 25mph
 - Narrower lanes on Morningwood Dr
 - Right-in, right-out control
 - Stop control



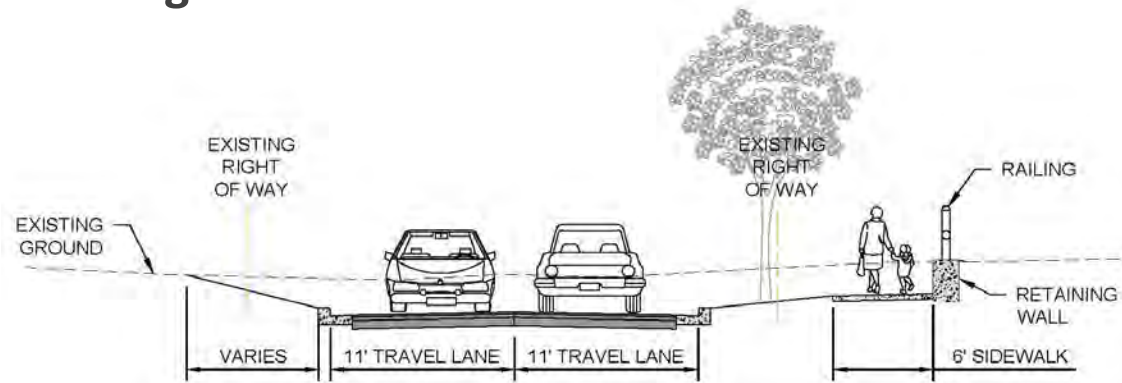
Existing Conditions

- Roadway width: varies 12' to 40'
- Right of Way width: varies 30' to 80'
- Access from Morningwood Drive
 - Pedestrians – stairs, not ADA-compliant
 - Cyclists – none
 - Drivers – none
- Street parking on both side
- Intermittent sidewalk on south side
- Zoning: Mixed use

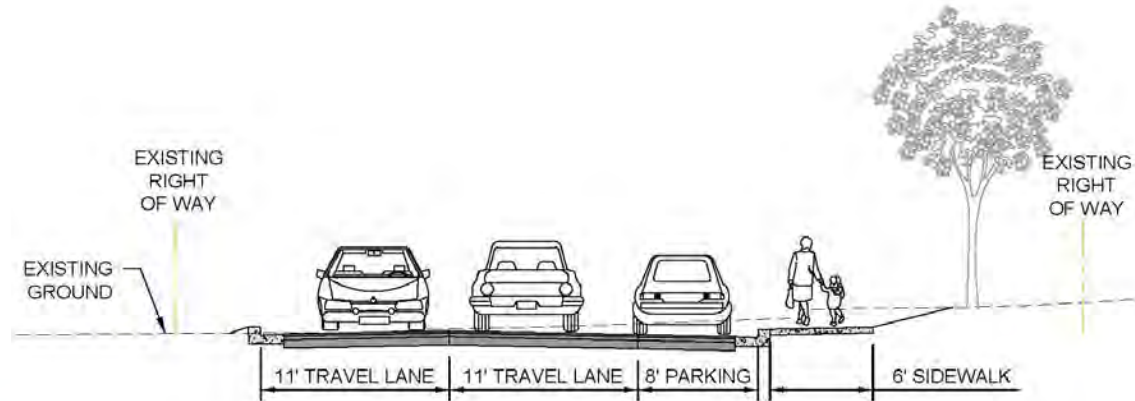


Conceptual Alternative 1

Typical Sections on North High Street

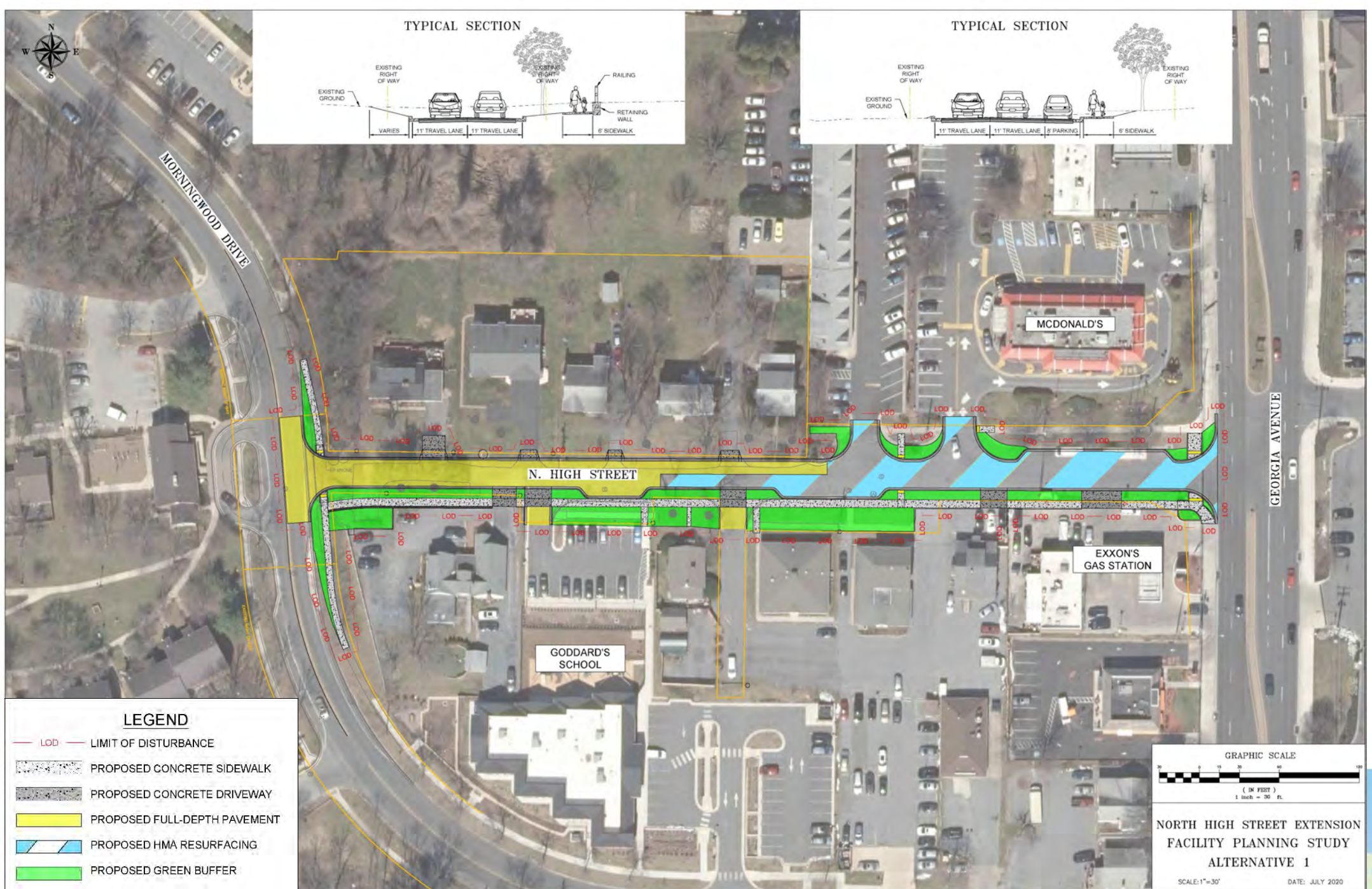


North High Street near Morningwood Drive



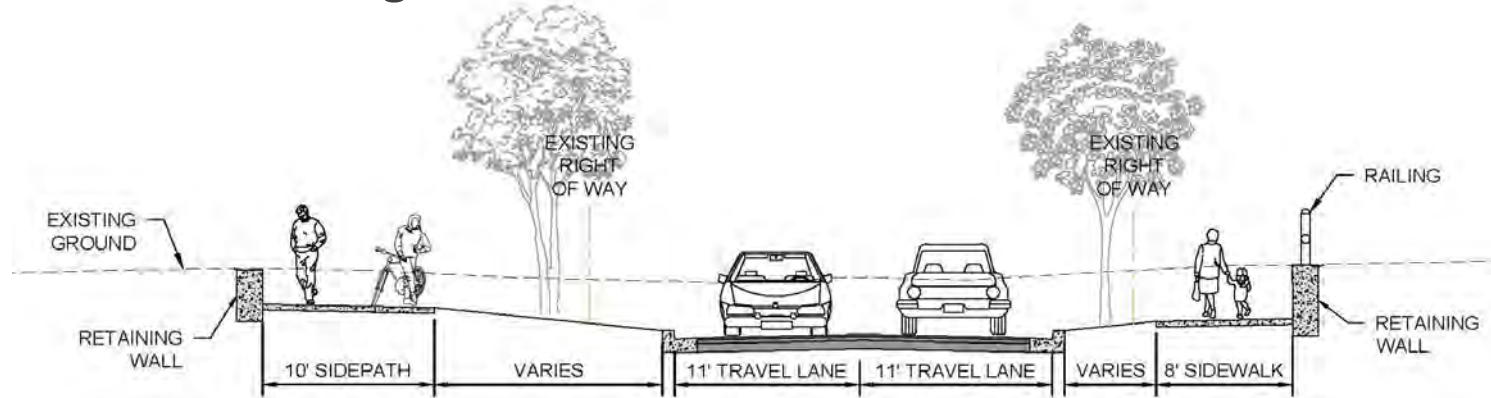
North High Street near Olney Center



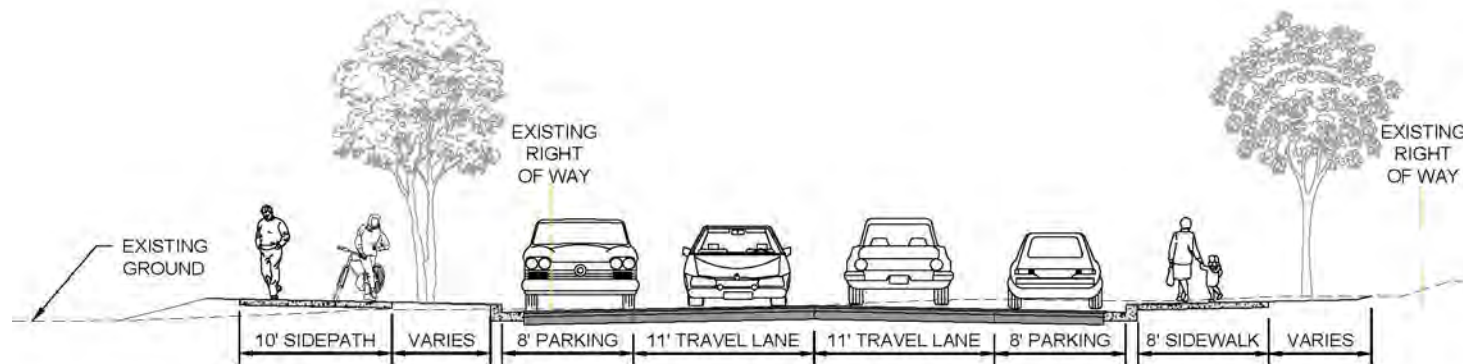


Conceptual Alternative 2

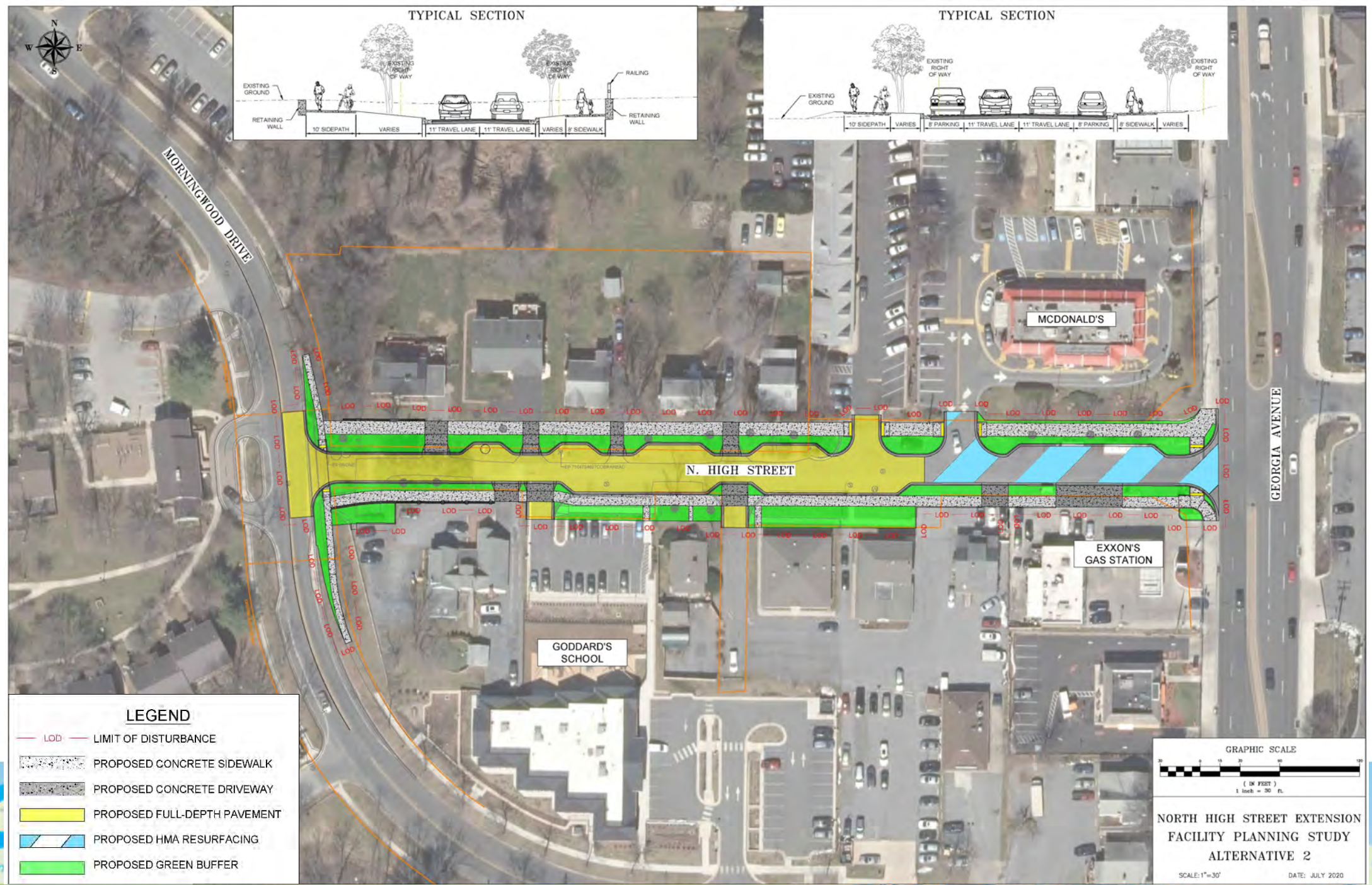
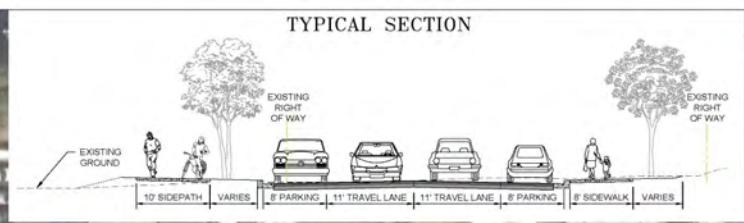
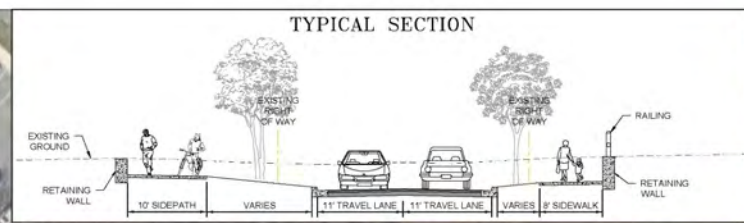
Typical Sections on North High Street



North High Street near Morningwood Drive

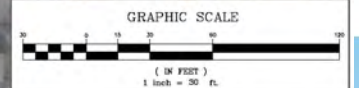


North High Street near Olney Center



LEGEND

- LOD — LIMIT OF DISTURBANCE
- PROPOSED CONCRETE SIDEWALK
- PROPOSED CONCRETE DRIVEWAY
- PROPOSED FULL-DEPTH PAVEMENT
- PROPOSED HMA RESURFACING
- PROPOSED GREEN BUFFER



**NORTH HIGH STREET EXTENSION
FACILITY PLANNING STUDY
ALTERNATIVE 2**

SCALE: 1"=30' DATE: JULY 2020



Alternative Analysis Summary

	No-Build (Existing Conditions)	Alternative 1	Alternative 2
Description	Intermittent sidewalk on the south side, non-ADA compliant; no vehicular connection to Morningwood Drive.	11-foot travel lane in both directions which extends through to Morningwood Drive. A continuous sidewalk on the south side of the street.	11-foot travel lane in both directions which extends through to Morningwood Drive. Pedestrian facilities and parking spaces on both sides of the street.
Utility Impacts	None	8 Electric poles 3 Light poles	11 Electric Poles 3 Light poles
On-Street Parking	Approx. 11 spaces	9 spaces	16 spaces
Tree Impacts	None	5 Trees	15 Trees
Number of Properties with Potential Impacts	None	7 Properties	12 Properties
Construction Easement Cost (Estimated)	\$0	\$287k	\$557k
Construction Cost (Estimated)	\$0	\$593k	\$986k

Next Steps

- Collect feedback from the community through 10/31/20
 - Online comment form
 - Email to: angel.cheng@montgomerycountymd.gov
 - Traditional mail to:
MCDOT – Division of Transportation Engineering
100 Edison Park Drive, 4th Floor
Gaithersburg, MD 20878
- Planning Board Briefing
- T&E Committee Briefing
- Additional design pending feedback



Contact Information



Angel Cheng, P.E.
Project Manager



240-777-7274*



angel.cheng@montgomerycountymd.gov



<https://montgomerycountymd.gov/dot-dte/projects/NorthHighSt/Index.html>

* Due to COVID-19, County staff has been teleworking from home, and email would be the preferred form of communication.





Questions / Comments

