

Welcome

US Route 4 Corridor Study
Public Meeting #2
Tuesday, January 30, 2024 at 6:00pm
962 Luther Rd, East Greenbush & Via Zoom

The meeting will begin shortly....



CAPITAL REGION
**Transportation
Council**



Agenda

- 1. Welcome**
- 2. Study Overview**
- 3. Existing Conditions Highlights**
- 4. Concept Overview**
- 5. Corridor Improvement Phases**
- 6. Next Steps**
- 7. Comments & Feedback**

Introductions

Study Sponsors

Town of East Greenbush / Town of North Greenbush / Capital Region Transportation Council

Grant Program

Community and Transportation Linkage Program (Capital Region Transportation Council)

Consultant

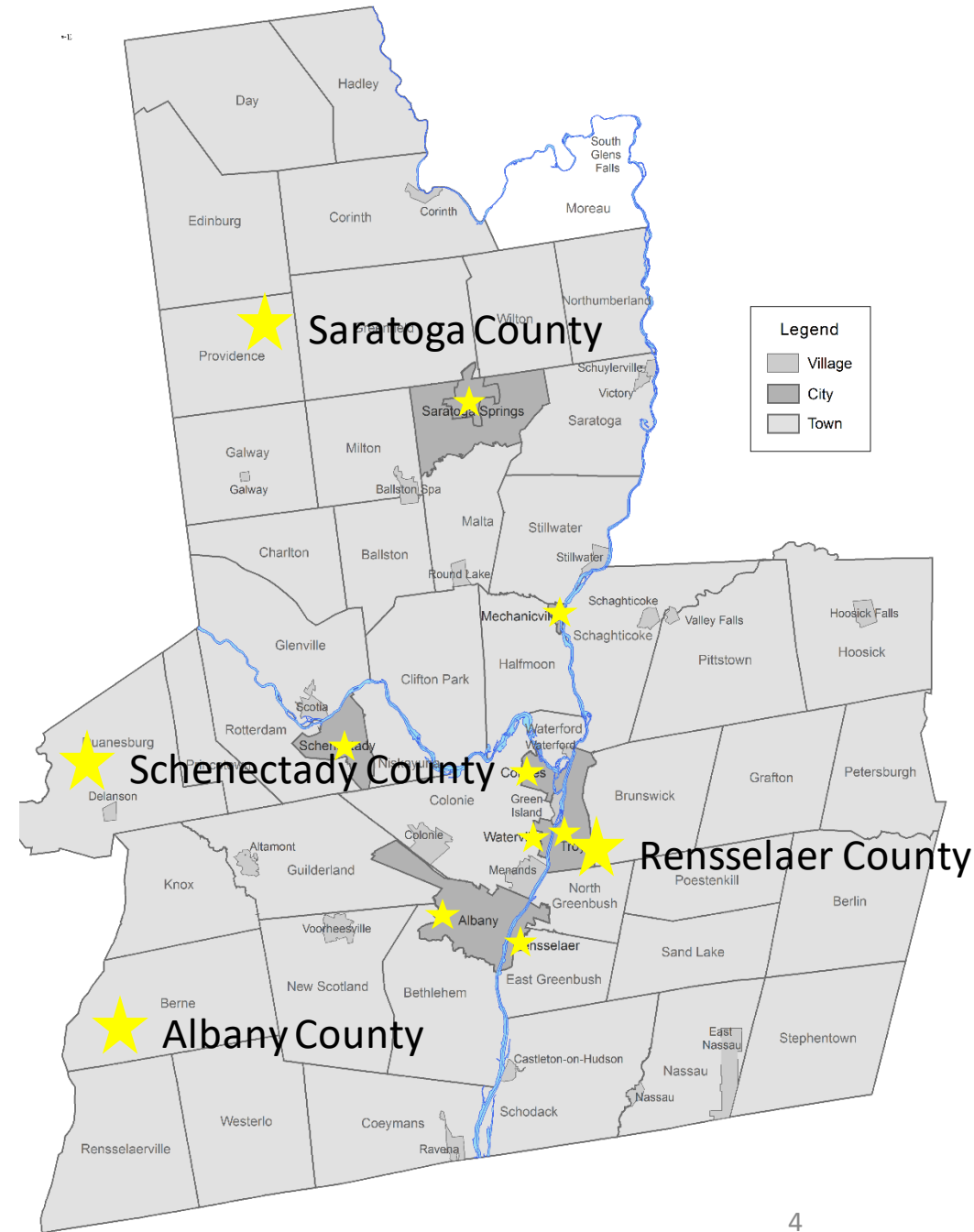
MJ Engineering & Land Surveying, P.C.





CAPITAL REGION Transportation Council

- Metropolitan Planning Organization (MPO)
 - A transportation policy-making and planning organization
 - Allocates federal transportation funding resources
- Members include:



Introductions

Study Advisory Committee (SAC)

Joshua Giller (Town of East Greenbush)

Dan Fiacco (Town of East Greenbush)

Colleen Lallier (Town of East Greenbush)

Joe Bott (Town of North Greenbush)

Mark Lacivita (Town of North Greenbush)

Linda VonDerHeide (Rensselaer County)

Mark Saunders (NYSDOT Rens. Co Residency)

Kelley Kircher (NYSDOT Region 1)

Brian Kirch (NYSDOT Region 1)

Chris Bauer (Capital Region Transportation Council)

Chaim Simon (Capital Region Transportation Council)

Ethan Warren (CDTA)



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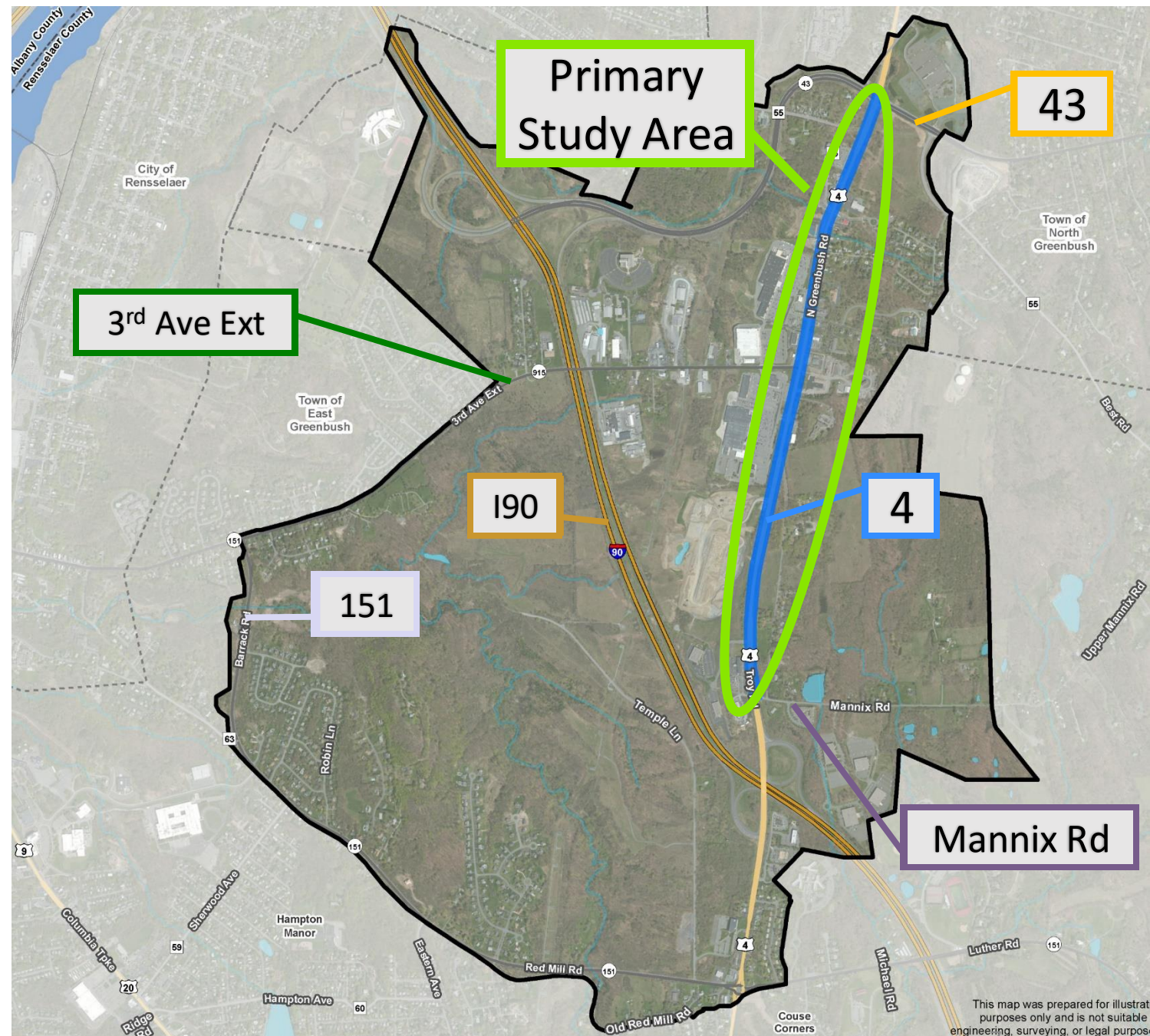
Study Area

The primary study area is the US Route 4 Corridor, from Mannix Rd in the Town of East Greenbush, to NY 43 in the Town of North Greenbush.

LEGEND

- █ Primary Study Area
- Secondary Study Area
- County Boundary
- City/Town Boundary
- Railroad
- ~ Interstates
- ~ US Routes
- ~ State Routes
- ~ County Routes
- █ Water Body
- ~ River/Stream

Areas of Interest	Estimated Acreage
Primary Study Area	32.95
Secondary Study Area	2410.38



This map was prepared for illustrative purposes only and is not suitable for engineering, surveying, or legal purposes.

Study Area

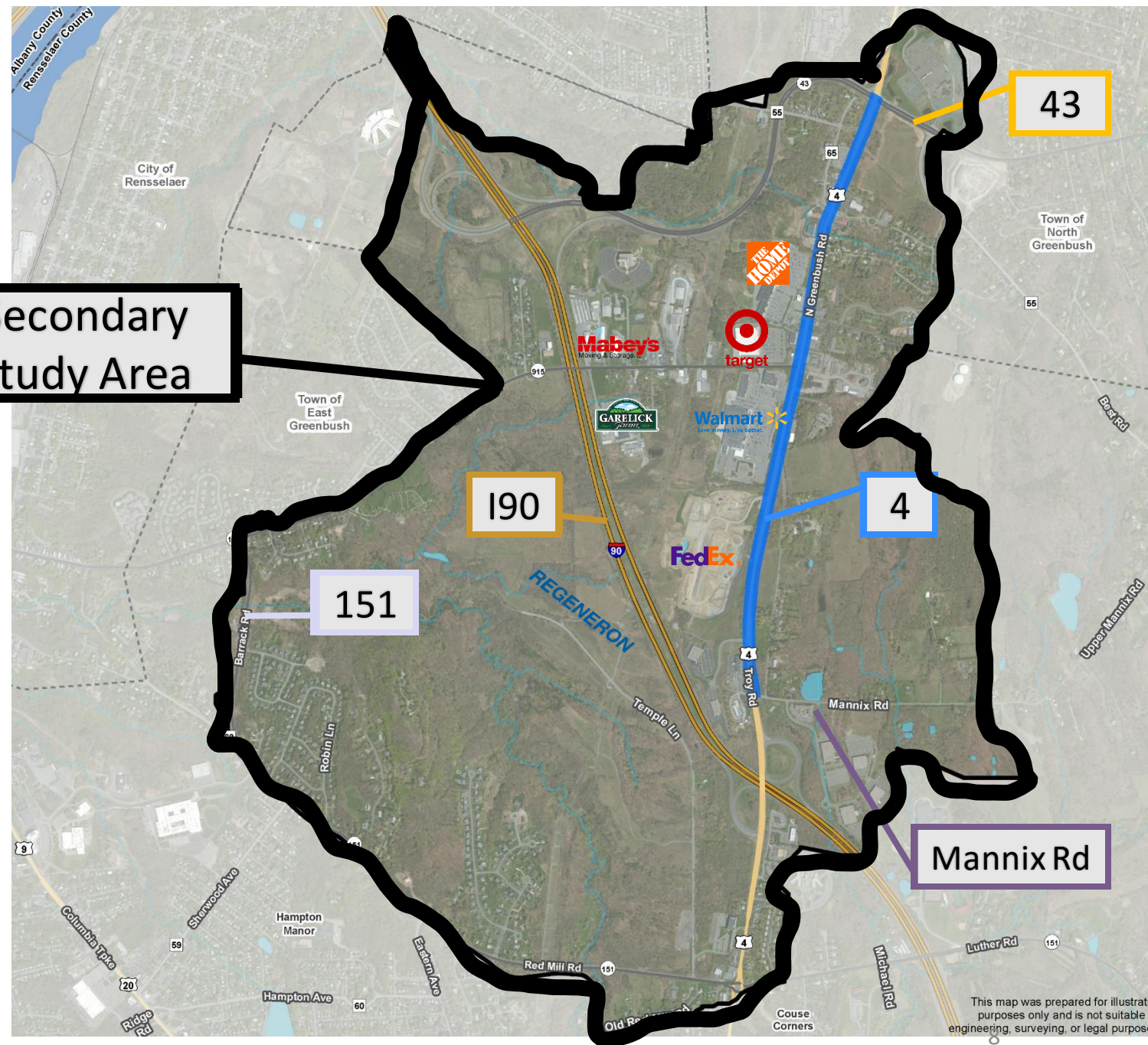
The secondary study area is the larger area of consideration and includes the areas where the impacts of current and future land uses need to be considered.

LEGEND

- █ Primary Study Area
- █ Secondary Study Area
- County Boundary
- City/Town Boundary
- Railroad
- █ Interstates
- █ US Routes
- █ State Routes
- █ County Routes
- █ Water Body
- ~ River/Stream

Areas of Interest	Estimated Acreage
Primary Study Area	32.95
Secondary Study Area	2410.38

Secondary Study Area



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Study Overview: Objectives

Objectives

- Address current traffic operational deficiencies
- Identify improvements needed to accommodate future anticipated growth
- Make recommendations to improve the transportation systems along the corridor
- Examine alternative corridor profiles and develop a preferred Corridor Concept Plan for the US Route 4



Study Overview: Objectives

Objectives

- Assist the Towns to pursue goals of enhancing the US Route 4 corridor
 - Improve mobility
 - Reduce traffic congestion
 - Promote economic development
 - Improve safety
 - Create a connected and integrated multi-modal transportation network



Study Overview: Milestones

KEY MILESTONES:

Notes:

- **Task 3** – Public Input occurs throughout effort
- SAC Meetings at key milestones



Tasks Completed

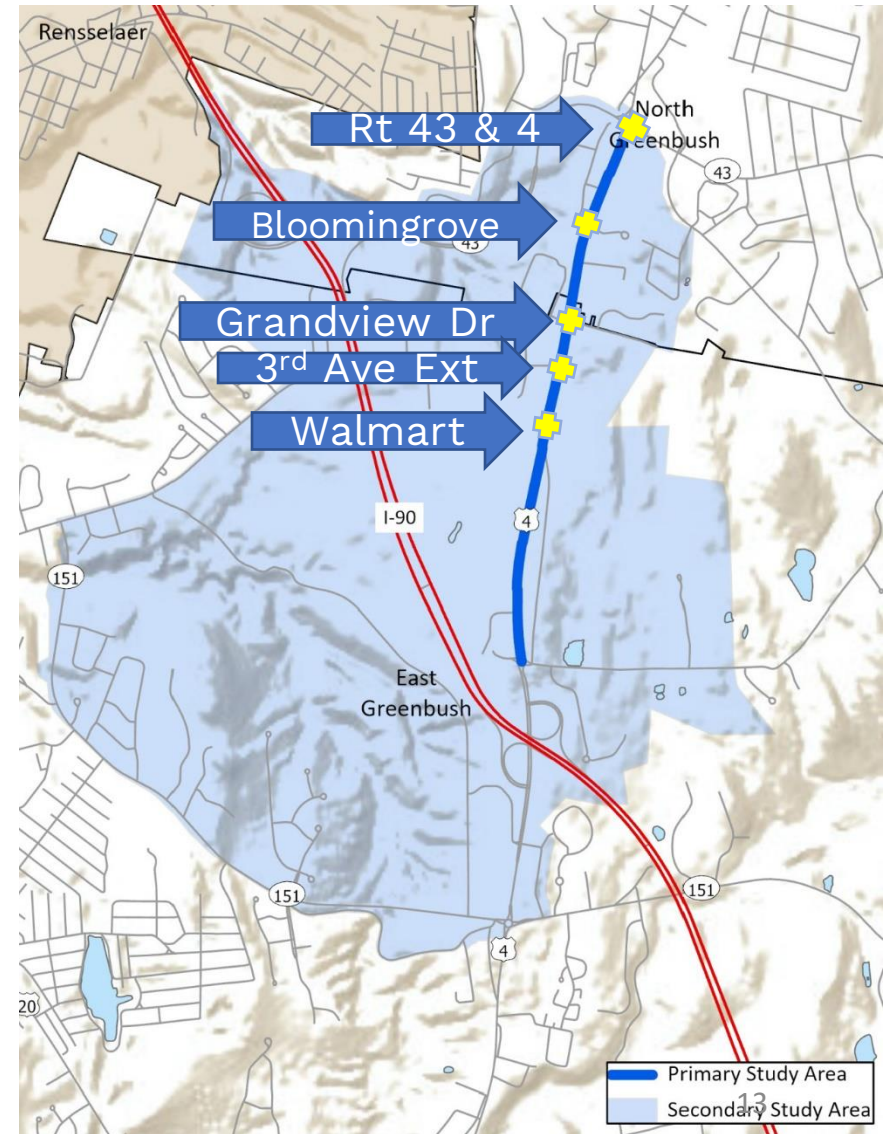
Establishment of SAC

- Kick off SAC #1 (August 3, 2022)
- SAC #2 & Field walk (October 26, 2022)
- SAC Meeting #3 (May 19, 2023)
- SAC Meeting #4 (September 11, 2023)



Tasks Completed

- Turning movement counts conducted
 - May 24, 2022
 - June 1, 2022
 - 5 Intersections
 - Collected Turning Movements, Pedestrian Movements & Traffic Signal Timing
- Existing data collection
 - Relevant studies or reports
 - GIS mapping data
 - Traffic data
- Existing Conditions Memo
- Future Operational Analysis
- Report Preparation (in progress)



Public Engagement #1 Overview

Public Meeting #1

- Monday, March 27, 2023, 6:30 PM
- In-person at Defreestville Fire Department and via Zoom.
 - ~100 in person
 - 84 via Zoom
- Discussion items
 - Project Schedule Overview
 - Highlights of Existing Conditions Memo
 - Previous Plans/Relevant Documents
 - Mini-Visioning Session
 - Next Steps
 - Q&A

US Route 4 Corridor Study



Due to weather, postponed to
Monday, March 27, 2023 at 6:30pm



East Greenbush – The Town of East Greenbush and Town of North Greenbush, in partnership with the Capital District Transportation Committee (CDTC), invite the public to participate in the first public meeting for the US Route 4 Corridor Study. The first meeting will take place on **Monday, March 27, 2023 at 6:30pm**, and will be held both in-person at the Defreestville Fire Department (350 N Greenbush Rd, Troy, NY 12180) and via Zoom. *If you registered for Zoom prior to postponing, no need to re-register!*

Public Meeting #1
March 27, 2023 at 6:30pm, Defreestville Fire
Department with Zoom option
350 N Greenbush Rd, Troy, NY 12180



Scan the QR code to visit the project website to register for the Zoom meeting and to take the online survey.

Can't make the meeting? Take the online survey to share your thoughts and ideas!

Project website www.nyroute4study.com



Public Engagement #1 Overview

Public Meeting #1

- Materials available on the project website (nyroute4study.com)
 - Agenda
 - Recording
 - PowerPoint
 - Summary



Public Meetings

Public Meeting #1

Date:
Monday, March 27, 2023 at 6:30pm

Time:
6:30pm

Location:
In-person at Defreestville Fire Department @ 350 N Greenbush Rd, Troy, NY 12180

Meeting Recording:
[Zoom Recording Here](#)

Meeting Agenda:
[PDF Agenda HERE](#)

Meeting PowerPoint:
[PDF PowerPoint HERE](#)

Meeting Summary:
[PDF Summary HERE](#)



Public Survey Highlights

Public Survey

- February 03, 2023 to April 25, 2023
- Publicized through survey cards, email blasts, project and town websites, and Facebook
- **784** responses received!



The survey card features a green header with icons for a truck, bus, car, bicycle, wheelchair, and pedestrian. Below the icons, the text reads: "US Route 4 Corridor Study", "Is traffic an issue? How is your walking experience? Could Route 4 work better for you? We need your input!", and "Take the survey: Research.net/r/Route4study". Logos for the Town of East Greenbush, CDTC (Capital District Transportation Committee), and North Greenbush are at the bottom.

Scan the QR code
to access the
survey on your
mobile device.



For more information:
www.nyroute4study.com

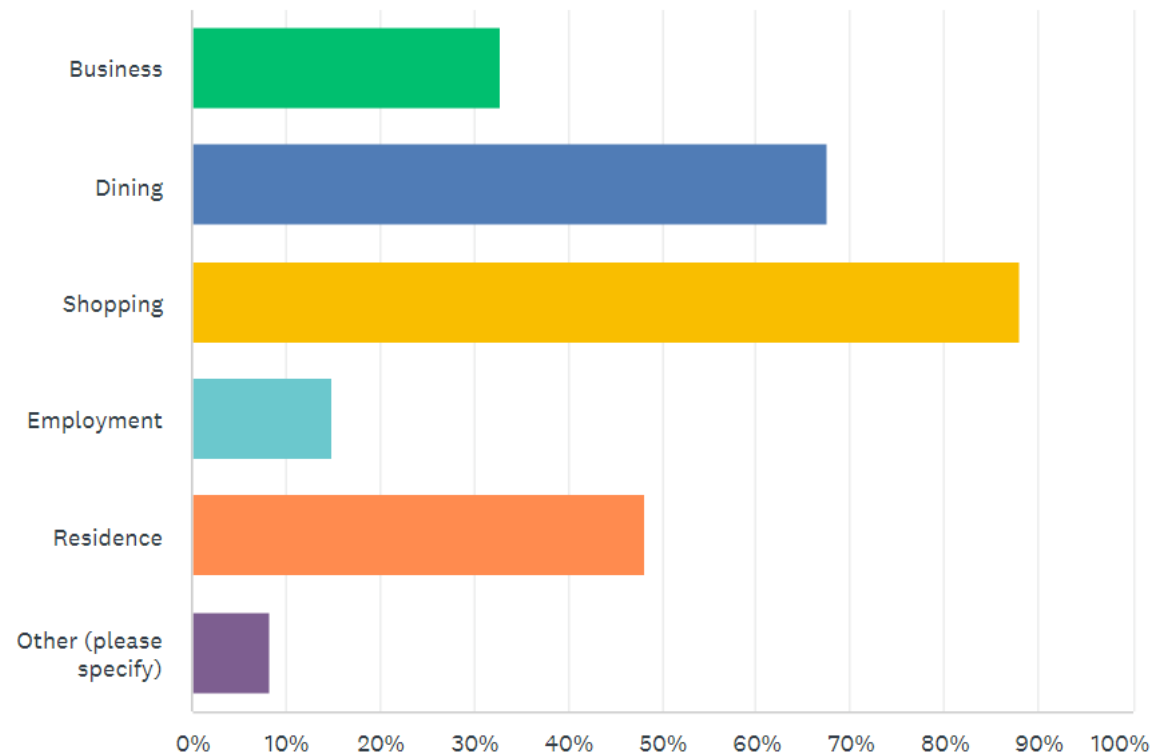
Public Survey Highlights

What typically brings you to the study area?

- Business 33%
- Dining 67%
- Shopping 88%
- Employment 15%
- Residence 48%
- Other 8%

What typically brings you to the study area? (Select all that apply)

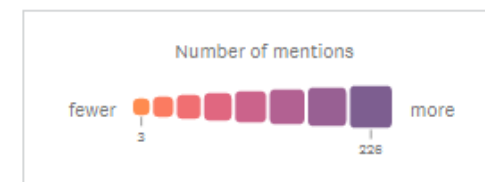
Answered: 772 Skipped: 12



Public Survey Highlights

Survey Common Themes: **Challenges**

- Traffic 42%
- Traffic congestion 11%
- Traffic flow 7%
- Congestion 4%
- Much traffic 4%



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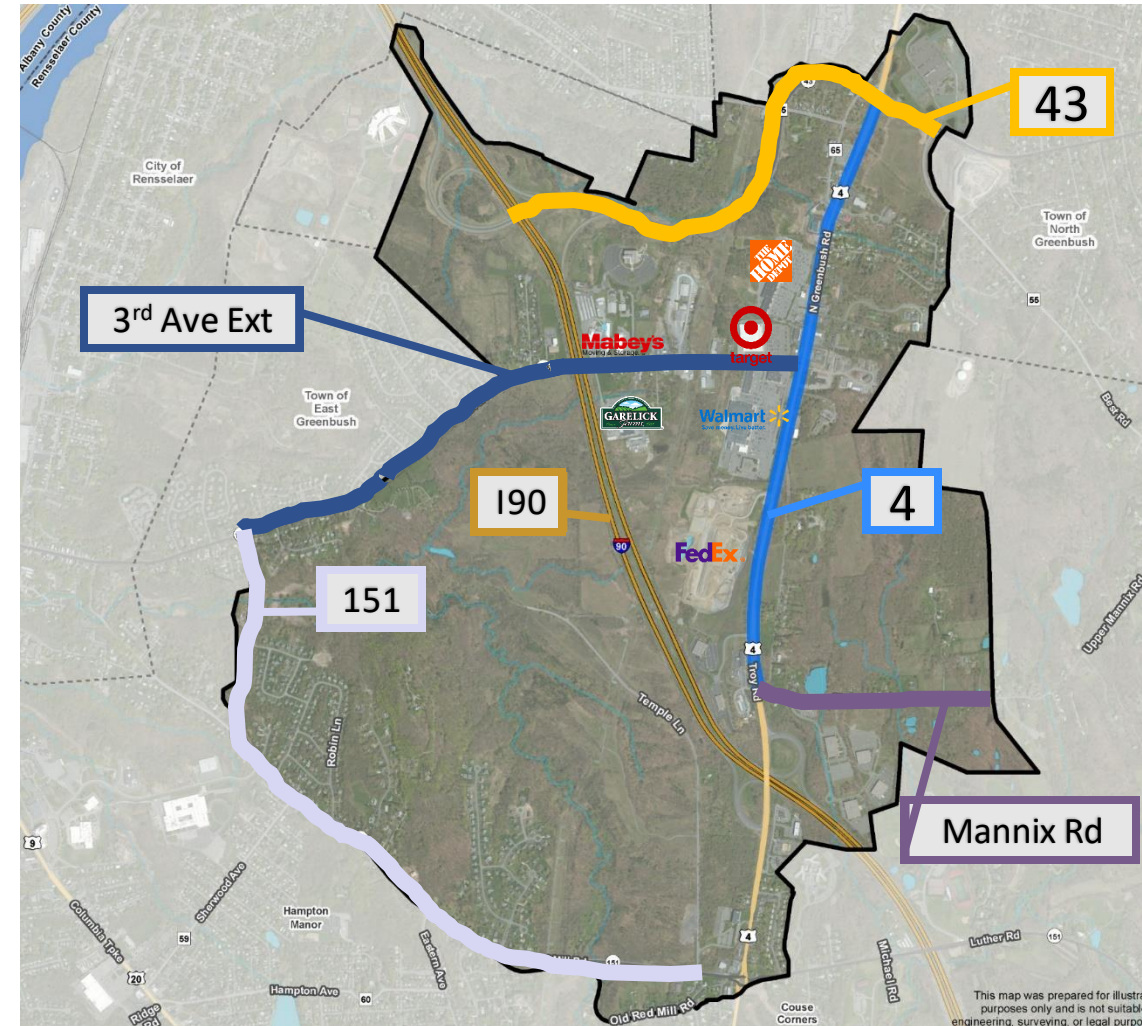
7. Comments & Feedback

Existing Conditions Highlights

Existing Conditions

(Shared at public meeting #1)

- Identifies the Study Area
- Previous Plans/Relevant Documents
- Existing Conditions Memo
 - Land Use & Zoning
 - Pedestrian Accommodations
 - Traffic Data/Crash History
 - Traffic Conditions



Existing Conditions Highlights

Traffic Data / Crash History

LEGEND

Sparse



Dense

Existing Conditions Highlights

Corridor - Intersections

- Most recent five years of available data June 6, 2017 to May 30, 2022
- During this five-year period, **237 of 428** crashes occurred at intersections.

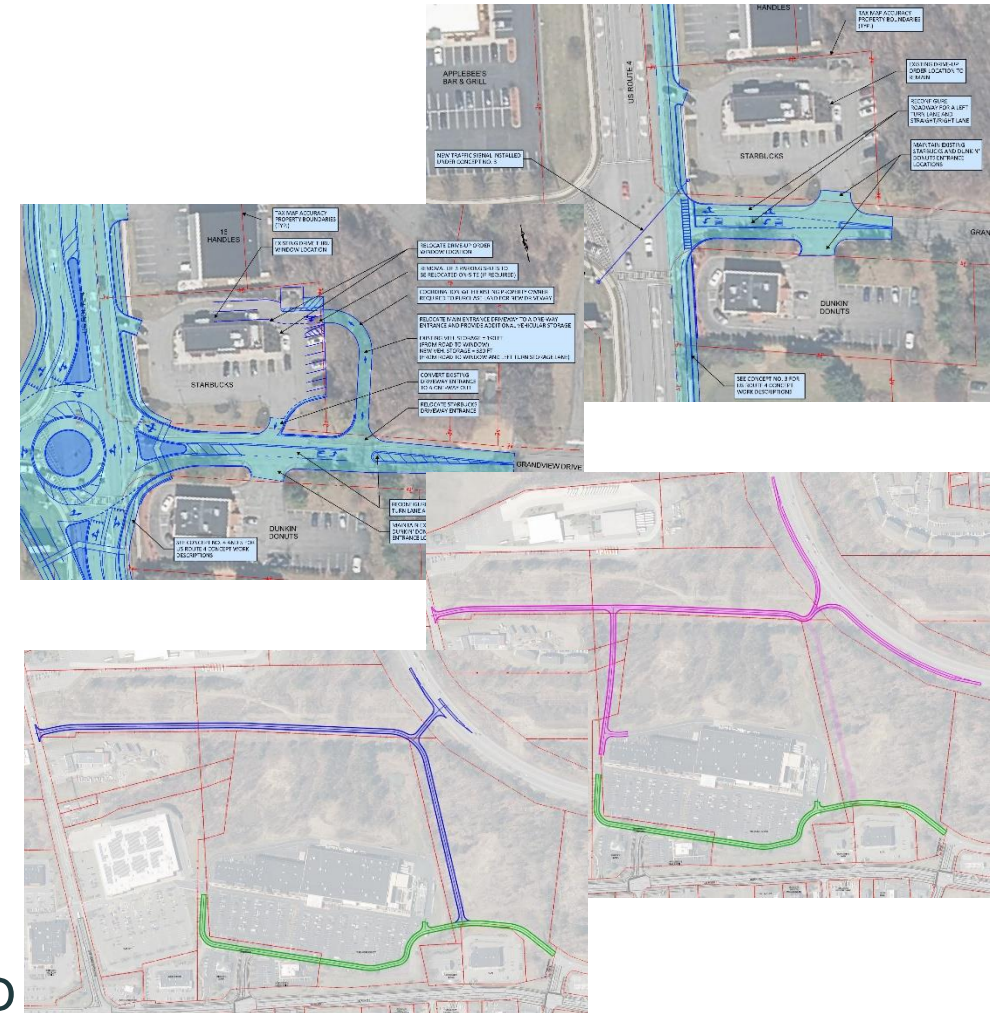
Collision Type Summary	
Intersecting Roadway	Quantity
Mannix Road	2
Empire Drive	4
Thompson Hill Road	11
North Greenbush Square & Rensselaer County Plaza (Walmart Plaza)	73
3 rd Avenue Extension	49
Grandview Drive & Greenbush Commons (Home Depot/Target Plaza)	24
Thompson Court	10
Bloomington Drive & Agway Drive (Stewart's/CVS)	27
NY Route 43	37
Total	237

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Concept Overview

- Collected data from
 - Existing Conditions/Past Studies
 - Public meeting #1
 - SAC
 - NYSDOT
 - Community Survey
- A total of 5 concepts were developed
 - 10 variations of service road options
- Intent to address issues and challenges to greatest extent possible



Concept Overview

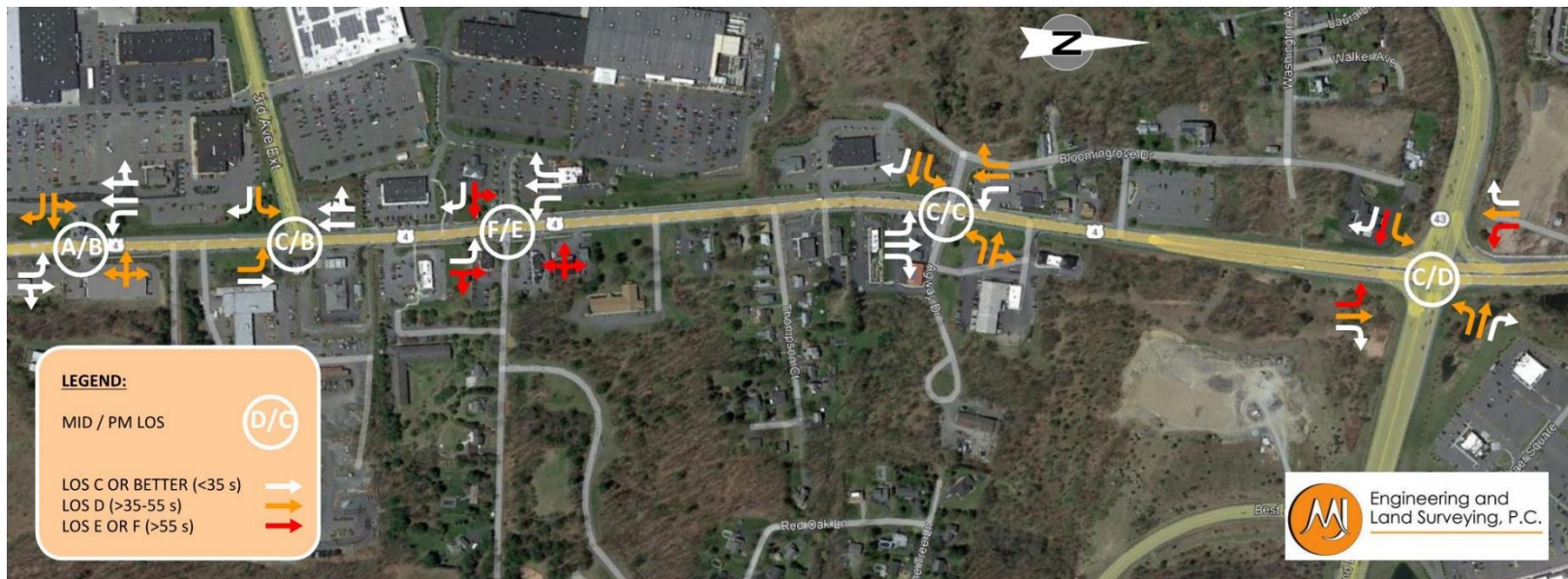
Draft Concepts

- Signal Improvements (Concept No. 1)
- Signal Improvements with Additional Northbound Lane (Concept No. 3)
 - with Left Turn Lane added to Grandview Drive (Concept No. 3A)
- Roundabout Intersections (Concept No. 4)
- Combination of Signalized and Roundabout Intersections (Concept No. 5)
 - with Left Turn Lane on Grandview Dr. into Starbucks (Concept No. 4A/5A)
- Service Roads (Concept No. 2)

Signal Improvements (Concept No. 1)

Optimized Signal Timing & Improved System Coordination

- Maintains the Existing Geometry
- Signal Timings Modified
 - Coordinated from Agway/Bloominggrove to Walmart Plaza
 - Improves progression through corridor
 - Reduces queue spilling over to other intersections (3rd Ave Left Turns)
 - Possible Adaptive Signal Control System application



Estimated Cost
2023 - \$400,000
2028 - \$464,000

Signal Improvements with Additional Northbound Lane (Concept No. 3)

Optimized Signal Timing & Improved System Coordination with Additional US Route 4 Northbound Lane

- Coordinated from Agway/Bloomington to Walmart Plaza
- Improves progression through corridor
- Additional Northbound Lane from Thompson Hill Road to 625 feet south of NY Route 43
- Added Capacity
- Possible Adaptive Signal Control System application

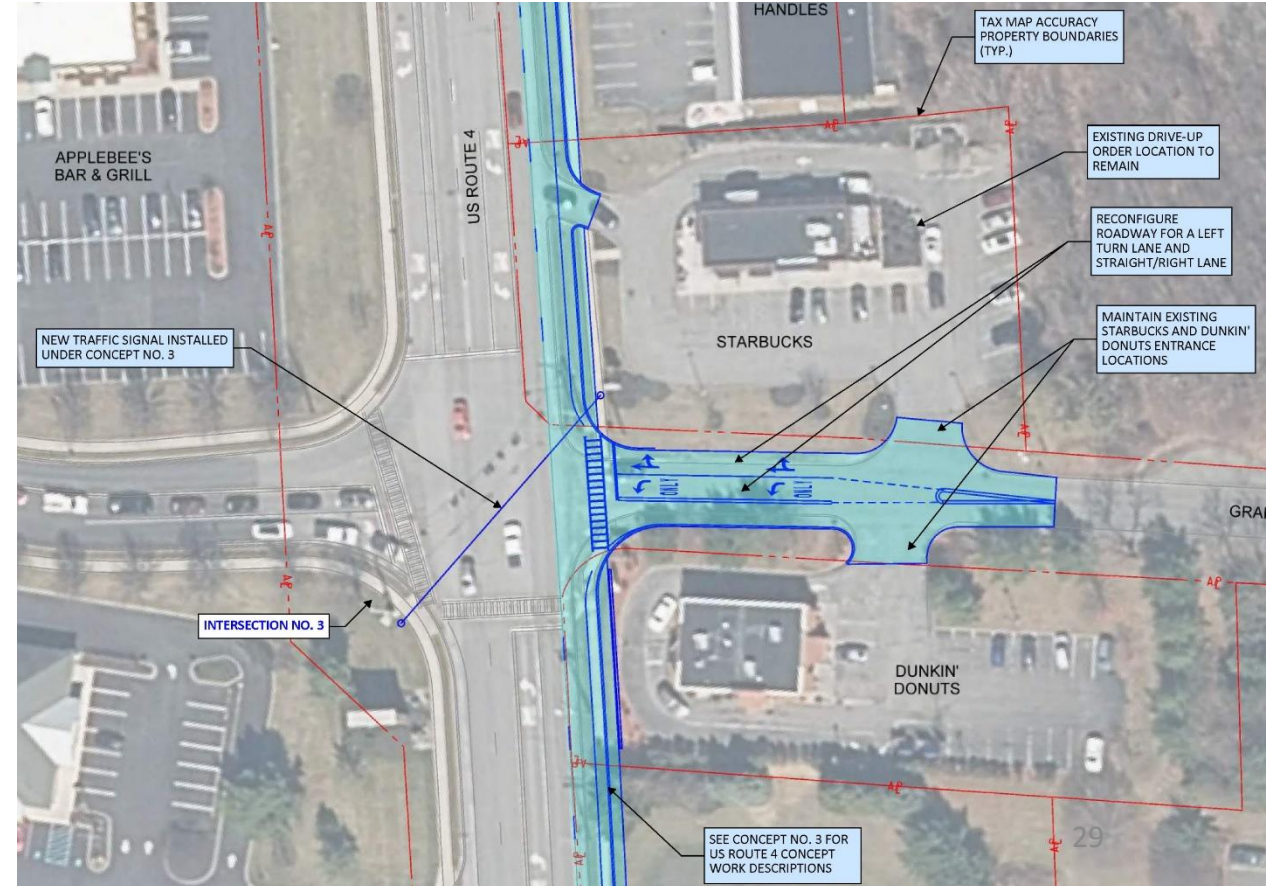
Estimated Cost
2023 - \$6,254,000
2028 - \$7,251,000



with Left Turn Lane added to Grandview Drive (Concept No. 3A)

Optimized Signal Timing & Improved System Coordination with Additional US Route 4 Northbound Lane

- US Route 4 Same as Concept No. 3
- Add Left Turn Lane on Grandview
- Add Capacity for Heavy Left Turn Volume



Roundabout Intersections (Concept No. 4)

Roundabout Intersections

- Five (5) Study Intersections converted to Roundabouts
- Modified 2-Lane Roundabouts
- Varying Approach Lane Configurations
- Two-way Left-turn Lane between NY Route 43 and Grandview Drive
- Raised Median between Grandview Drive and Walmart Plaza
- Volume distribution at NY Route 43 does not support a Roundabout



Estimated Cost
2023 - \$19,619,000
2028 - \$22,744,000

Combination of Signalized and Roundabout Intersections (Concept No. 5)

Combination of Signalized and Roundabout Intersections

- Combines Concept Nos. 3 and 4
- Signals at NY Route 43 and Bloomingrove Drive
- Roundabouts at Grandview Drive, 3rd Avenue Extension, and Walmart Plaza
 - These three (3) intersections spaced close – All Roundabouts

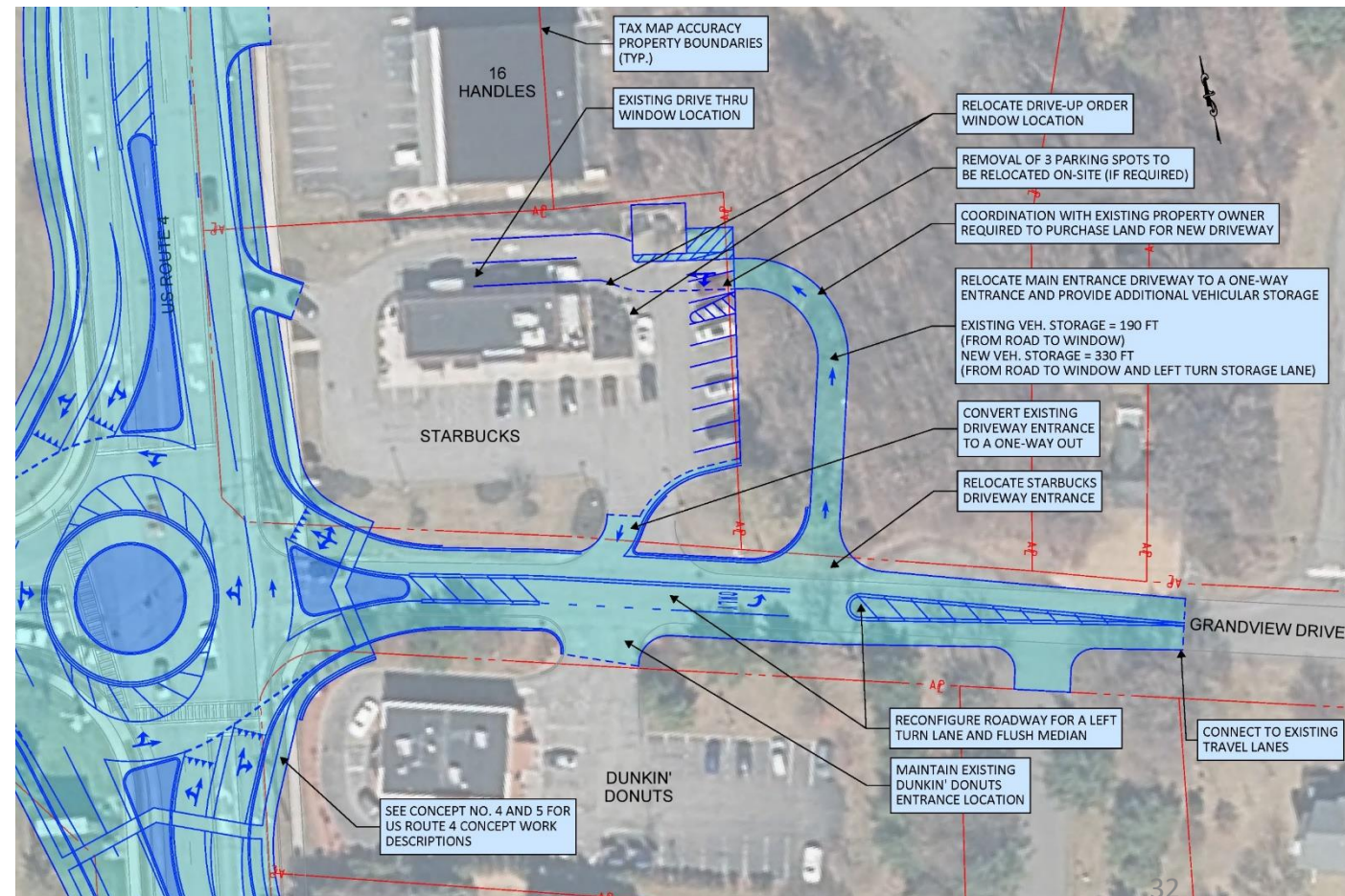


Estimated Cost
2023 - \$13,582,000
2028 - \$15,746,000

with Left Turn Lane on Grandview Dr. into Starbucks (Concept No. 4A/5A)

Combination of Signalized and Roundabout Intersections

- US Route 4 Same as Concept Nos. 4/5
- Add Left Turn Lane into Starbucks
- Reduce Spilling of Drive-Thru Traffic onto US Route 4
- Reduce blocking of Grandview Drive



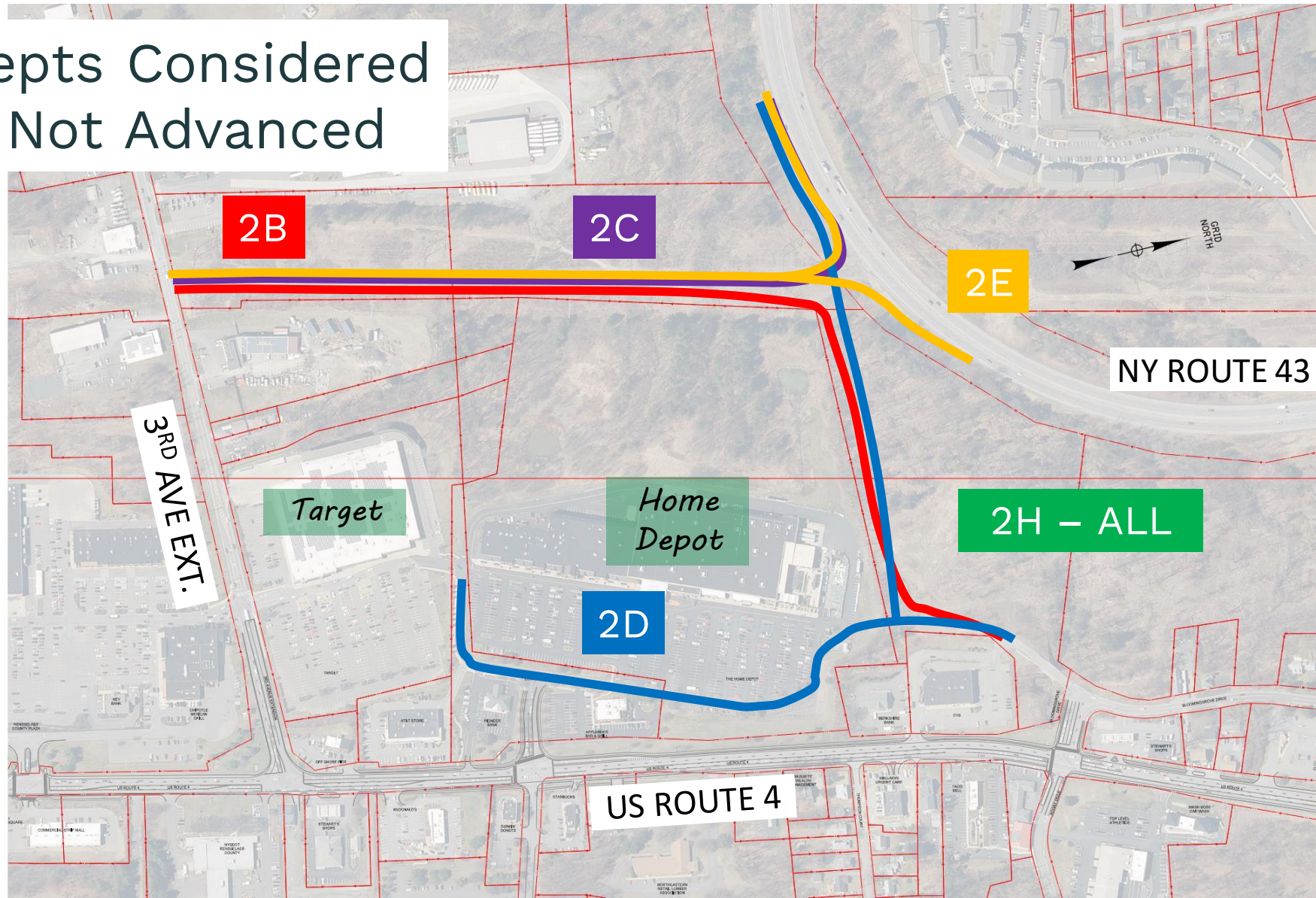
Service Roads (Concept No. 2)

Service Road (Concept No. 2)

- Initial Options
 - Four (4) configurations with six (6) total concepts
 - Additional two (2) concepts include 2-way travel
- Additional Options
 - List modified to remove some initial options and add new
 - Resulting in ten (10) total concepts
- Parallel Access Road Reduces Vehicle Load on US Route 4
- Analyzed as part of all other concepts

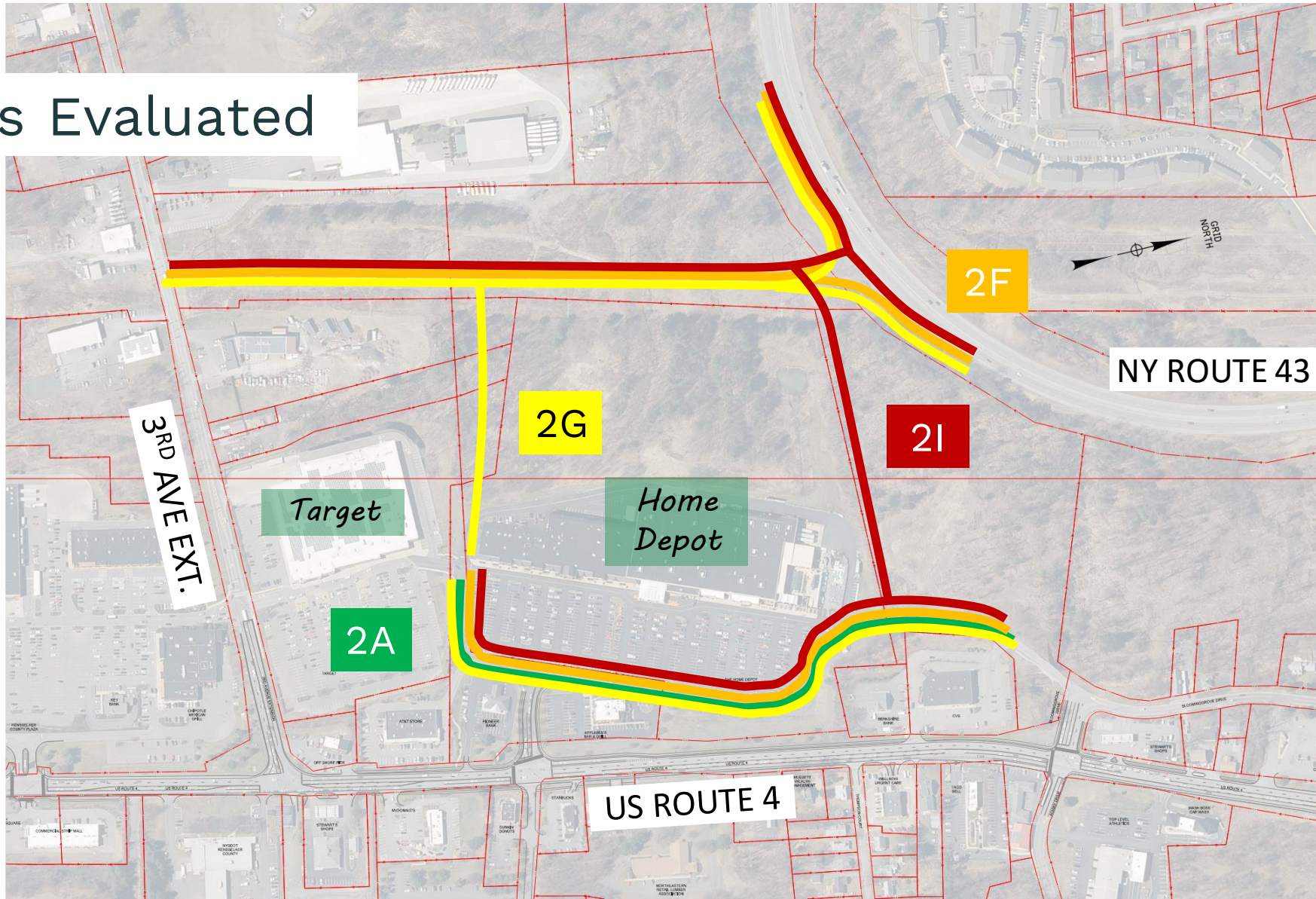
Service Roads (Concept No. 2)

Concepts Considered
but Not Advanced



Service Roads (Concept No. 2)

Concepts Evaluated



Service Roads (Concept No. 2)

Traffic Pattern Impact

- Transportation Council utilized the Systematic Transportation Evaluation and Planning (STEP) Model, the regional travel demand model
- Analyze PM peak hour impacts and benefits
- Percent reduction in traffic on US Route 4

SERVICE ROAD VOLUME ADJUSTMENTS				
Concept No.	US Route 4 Northbound		US Route 4 Southbound	
	3 rd Ave to Bloomingrove	Bloomingrove to NY-43	NY-43 to Bloomingrove	Bloomingrove to 3 rd Ave
2A	25%	15%	25%	49%
2F	24%	14%	23%	48%
2G	23%	13%	27%	53%
2I	23%	12%	27%	54%

Service Roads (Concept No. 2)

Results

- Percent (%) reduction of PM peak hour volumes
- All concepts reduced vehicle load on US Route 4 to some degree
- To account for variation, top four (4) service road options chosen
- Lowest percentages utilized to be conservative
- US Route 4 volumes were adjusted based on lowest percent (%) reduction

Concept	Est. 2024 Cost	Est. 2028 Cost
A	\$2,294,000	\$2,660,000
F	\$4,291,000	\$4,975,000
G	\$4,704,000	\$5,454,000
I	\$4,093,000	\$4,745,000

Level of Service

Measure of Effectiveness

- Assess changes in a system – Roadway Network
- Letter Grades from A to F
- A is best with minimal delay
- F is worst and represents oversaturated or gridlock conditions

Intersection Level of Service (LOS) Ranges			
Level of Service	Unsignalized Intersection Delay (sec/veh)	Signalized Intersection Delay (sec/veh)	Description
A	≤ 10	≤ 10	Excellent
B	$> 10 \ \& \ \leq 15$	$> 10 \ \& \ \leq 20$	Very Good
C	$> 15 \ \& \ \leq 25$	$> 20 \ \& \ \leq 35$	Good
D	$> 25 \ \& \ \leq 35$	$> 35 \ \& \ \leq 55$	Acceptable
E	$> 35 \ \& \ \leq 50$	$> 55 \ \& \ \leq 80$	Poor
F	> 50	> 80	Failing

Level of Service Summary

FUTURE 2045 - OVERALL INTERSECTION

LEVEL OF SERVICE

	INT	EXISTING GEOMETRY	PROPOSED GEOMETRY	P.G. W/ SERVICE RDS
		PM	PM	PM
		1	E (70.3)	C (29.5)
2	C (27.2)	C (27.5)	C (22.6)	
3	E (64.7)	F (80.7)	E (56.0)	
4	C (22.2)	C (22.6)	C (26.0)	
5	B (14.3)	B (10.1)	B (10.1)	

CONCEPT 3 NEW SIGNALS	INT	EXISTING GEOMETRY	PROPOSED GEOMETRY	P.G. W/ SERVICE RDS
		PM	PM	PM
		1	E (70.3)	C (29.5)
2	C (27.2)	C (23.4)	C (20.8)	
3	E (64.7)	C (31.0)	C (30.5)	
4	C (22.2)	C (23.2)	C (26.9)	
5	B (14.3)	B (10.4)	B (12.0)	

FUTURE 2045 - OVERALL INTERSECTION

LEVEL OF SERVICE

CONCEPT 4 RA'S	INT	EXISTING GEOMETRY	PROPOSED GEOMETRY	P.G. W/ SERVICE RDS
		PM	PM	PM
		1	E (70.3)	C (23.6)
2	C (27.2)	A (5.3)	A (5.5)	
3	E (64.7)	B (10.3)	A (4.4)	
4	C (22.2)	A (5.5)	A (5.5)	
5	B (14.3)	A (4.7)	A (4.0)	

CONCEPT 5 RA'S & SIGNALS	INT	EXISTING GEOMETRY	PROPOSED GEOMETRY	P.G. W/ SERVICE RDS
		PM	PM	PM
		1	E (70.3)	D (39.8)
2	C (27.2)	C (24.1)	C (21.3)	
3	E (64.7)	B (10.1)	A (4.3)	
4	C (22.2)	A (5.1)	A (5.2)	
5	B (14.3)	A (4.1)	A (5.9)	

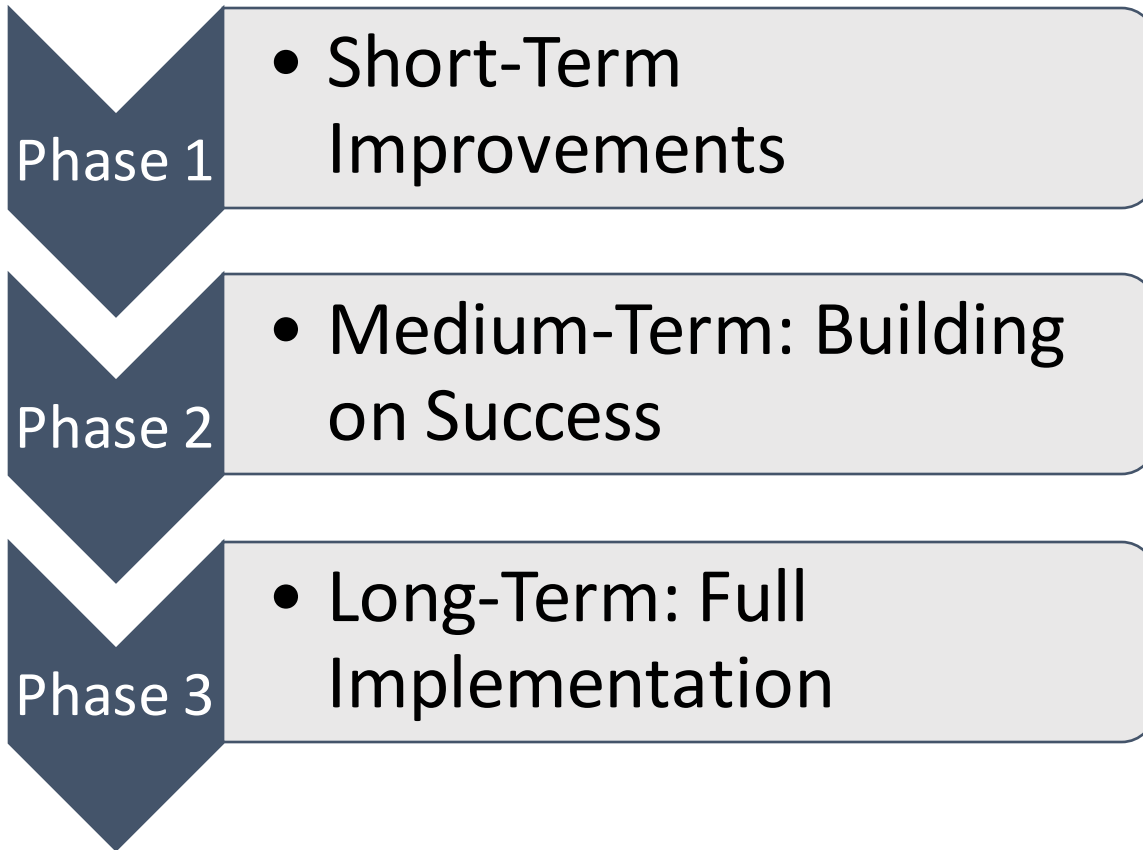
Level of Service Summary

- Phased approach
- Tailor to Conditions as they Progress
- Signals provide improved LOS and decreased delay
 - Does not address all safety concerns
- Combo Signals and Roundabouts best option
 - Operations and safety
 - Roundabouts reduce conflict points and reduce speeds
 - Reduced speeds = reduced crash severity

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Corridor Improvement Phases



- Due to scale and estimated cost, phasing of improvements would be the best approach
- Would allow Towns to build on each previous phase
- Full implementation without previous steps would be difficult to fund

Short-Term Improvements

Optimized Signal Timing & Improved System Coordination

- Maintains the Existing Geometry
- Lowest cost to implement
- Signal Timings Modified
 - Coordinated from Agway/Bloomingrove to Walmart Plaza
 - Improves progression through corridor
 - Reduces queue spilling over to other intersections (3rd Ave Left Turns)
 - Possible Adaptive Signal Control System application
- Coordinate with local property owners as redevelopment occurs for sidewalk inclusion



Medium-Term: Building on Success

Additional US Route 4 Northbound Lane with possible parallel Service Road

- Additional Northbound Lane from Thompson Hill Road to 625 feet south of NY Route 43
- Update signal timings to further improves progression through corridor
- Additional Northbound Capacity
- Fill any gaps in sidewalk network
- Possible Adaptive Signal Control System application
- Analysis during design phase to determine Service Road needs



Long-Term: Full Implementation

Concept with Parallel Service Roads

- Three (3) Study Intersections converted to Modified 2-Lane Roundabouts with Varying Approach Lane Geometry
- Two Updated/New Traffic Signals
- Two-way Left-turn Lane between NY Route 43 and Grandview Drive
- Raised Median between Grandview Drive and Walmart Plaza
- Analysis during design phase to determine Service Road needs



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Next Steps

- Draft Report Submission
- Final Report Submission
- Seek funding and partnerships to implement
- Incorporate final report findings into future planning efforts



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Zoom Webinar “How To”

- **To ask a question live, use the “Raise Hand” feature**
 - If on a telephone:
 - *9 to raise hand
 - *6 to mute/unmute
- **OR submit your questions and feedback through the Q&A!**



- Following the meeting, written comments can be submitted on: **nyroute4study.com**
- A recording of the meeting will be posted on the Project page at **nyroute4study.com/meetings**



Thank you!

**Comments,
questions
or
feedback?**

**Project website
www.nyroute4study.com**