

# I-84 Danbury Project

## Project Advisory Committee (PAC) Meeting No. 7

November 16, 2021





# Welcome / Providing Feedback

## Presenters



**Yolanda Antoniak**  
**CTDOT**  
Project Engineer



**Sharat K. Kalluri**  
**CDM Smith**  
Project Manager



**Jeanine Armstrong Gouin**  
**SLR Consulting**  
Environmental Documentation



**Andy Fesenmeyer**  
**CTDOT**  
Project Manager

## Moderator



**Marcy Miller, AICP (FHI)**

# Housekeeping Items

- Meeting is live and recorded
- Meeting presentation is posted to the project website at [http://www.i84danbury.com/course\\_cat/public-advisory-committee/](http://www.i84danbury.com/course_cat/public-advisory-committee/)
- Participants can video conference in or call in via phone and follow along to presentation posted on web
- Participants should mute themselves when not speaking
- At select times during meeting, moderator will read questions / comments out loud for speaker to answer or will ask interested participants to unmute and provide comments
- Meeting recording will be posted to project website after meeting





07:47

Request control

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Patrick Gallagher

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Doyle, Thomas H. Murphy, Lynn D. Sousa, David Fesenmeyer, Andy A. Jeanine Gouin Kallun, Sharat K. Calabrese, Michael N.



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Project

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## I-84 Danbury Project



07:47

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Turn on participant list

I-84 Danbury Project

Project Advisory Committee Meeting No. 5

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Patrick Gallagher

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Doyle, Thomas H. J. McMillan, Mark J. J. Murphy, Lynn D. J. Sousa, David Fesenmeyer, Andy A. Jeanine Gouin Kalluri, Sharat K. Calabrese, Michael N.



I-84 Danbury  
Project

# Providing Feedback



08:39

request controls

Turn on participant list

**I-84 Danbury Project**  
Project Advisory Committee Meeting No. 5  
November 16, 2020

Participants

Invite someone or dial a number

In this meeting (11)

Mute all

- Marcy Miller
- Calabrese, Michael N  
Outside your organization
- Doyle, Thomas H  
Outside your organization
- Fesenmeyer, Andy A.  
Outside your organization
- Gaffey, Timothy J.  
Outside your organization
- Jeanine Gouin  
Outside your organization
- Kalluri, Sharat K  
Organizer  
Outside your organization
- McMillan, Mark J.  
Outside your organization
- Murphy, Lynn D.  
Outside your organization
- Patrick Gallagher  
Outside your organization
- Sousa, David  
Outside your organization

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Murphy, Lynn D. Sousa, David Fesenmeyer, Andy A. Jeanine Gouin Kalluri, Sharat K Calabrese, Michael N.

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9:08 AM 10/22/2020





07:47

Request control

Turn on chat pane

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07:47

Request control

80

Leave

Turn on chat pane

I-84 Danbury Project

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November 16, 2020

Type your question/comment here

Submit here

That's a really great comment!

Patrick Gallagher

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PG TG TD MM LM DS AF JG SK MC

Doyle, Thomas H. J.

McMillan, Mark J.

Murphy, Lynn D.

Sousa, David

Fesenmeyer, Andy A.

Jeanine Gouin

Kalluri, Sharat K.

Calabrese, Michael N.



07:47

Request control

Raise your hand

I-84 Danbury Project

Project Advisory Committee Meeting No. 5

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I-84 Danbury  
Project

# Providing Feedback



10:24

Request control

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Leave

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I-84 Danbury Project

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Edit story

## I-84 Danbury Project

Project Advisory Committee Meeting No. 5

November 16, 2020

Patrick Gallagher

Participants

Invite someone or dial a number

In this meeting (11)

Mute all

- Marcy Miller
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- Murphy, Lynn D.  
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- Sousa, David  
Outside your organization

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Murphy, Lynn D. Sousa, David Fesenmeyer, Andy A. Jeanine Gouin Kalluri, Sharat K Calabrese, Michael N.

Raise your hand





07:47

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Other functions

I-84 Danbury Project

Project Advisory Committee Meeting No. 5

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I-84 Danbury  
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# Providing Feedback



10:24

Request control

Other functions

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Project Advisory Committee Meeting No. 5

November 16, 2020

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9:15 AM 10/22/2020

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# Questions



# Agenda

- PAC Update
- Concept Evaluation
  - Concepts #3 and #13 – Hospital Access
  - Concept #4 – Non-Highway Concept
- Next Steps
- Discussion / Questions





# PAC Update

## Since Our Last Meeting

- Attended meeting with Danbury mayor
- Published Summer 2021 newsletter
- Added more concepts to website
- Updated FAQs section on website
- Attended pop-up events in Danbury
- Continue to create social media content



[www.i84danbury.com](http://www.i84danbury.com)



I-84 Danbury Project



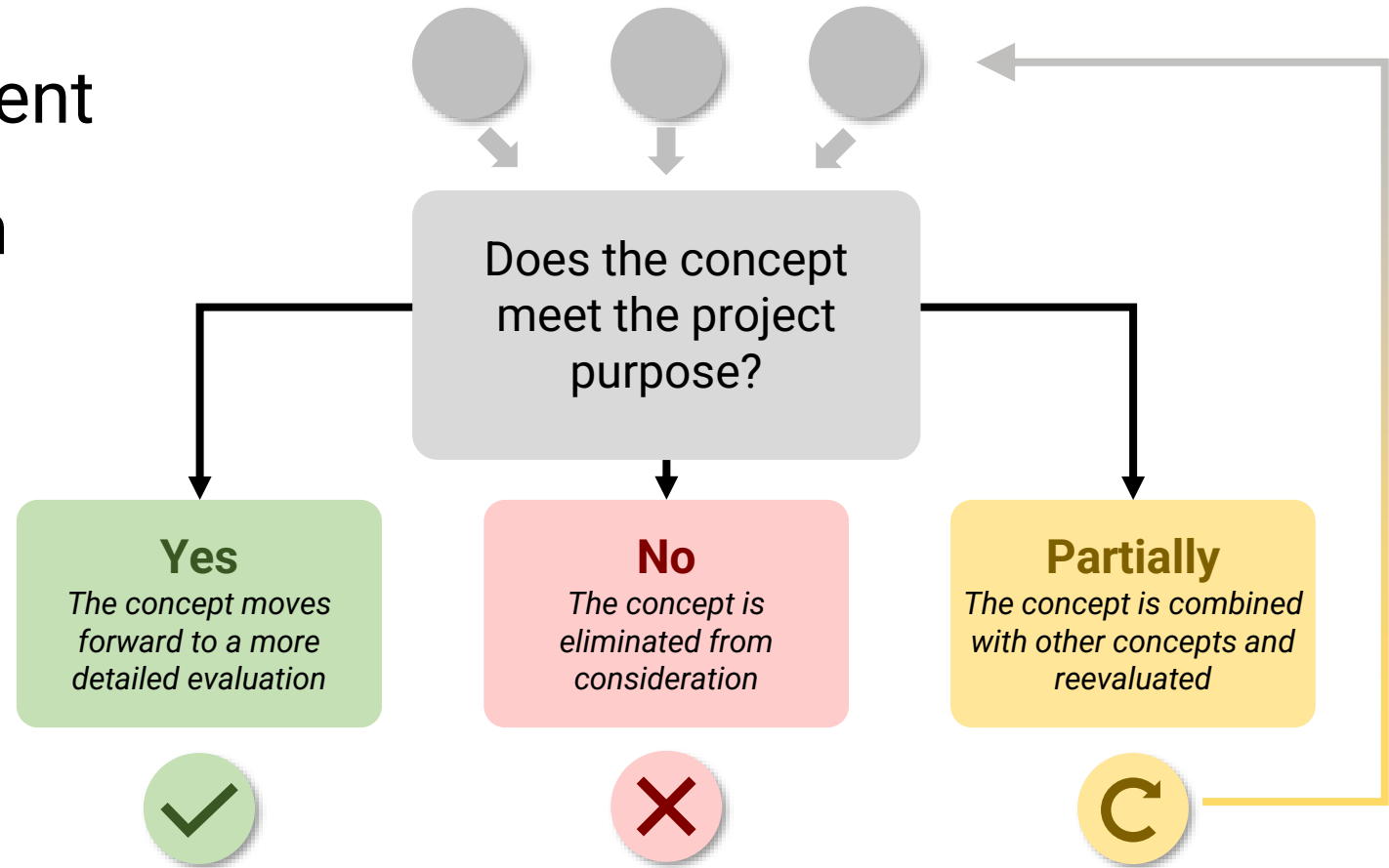
@i84danbury

## Draft Purpose Statement

The purpose of the I-84 Danbury Project is to reduce **congestion** and improve the **mobility** of people and goods in the I-84 corridor in greater Danbury.

# How will the project Purpose Statement be used?

1. Concept development
2. Concept evaluation





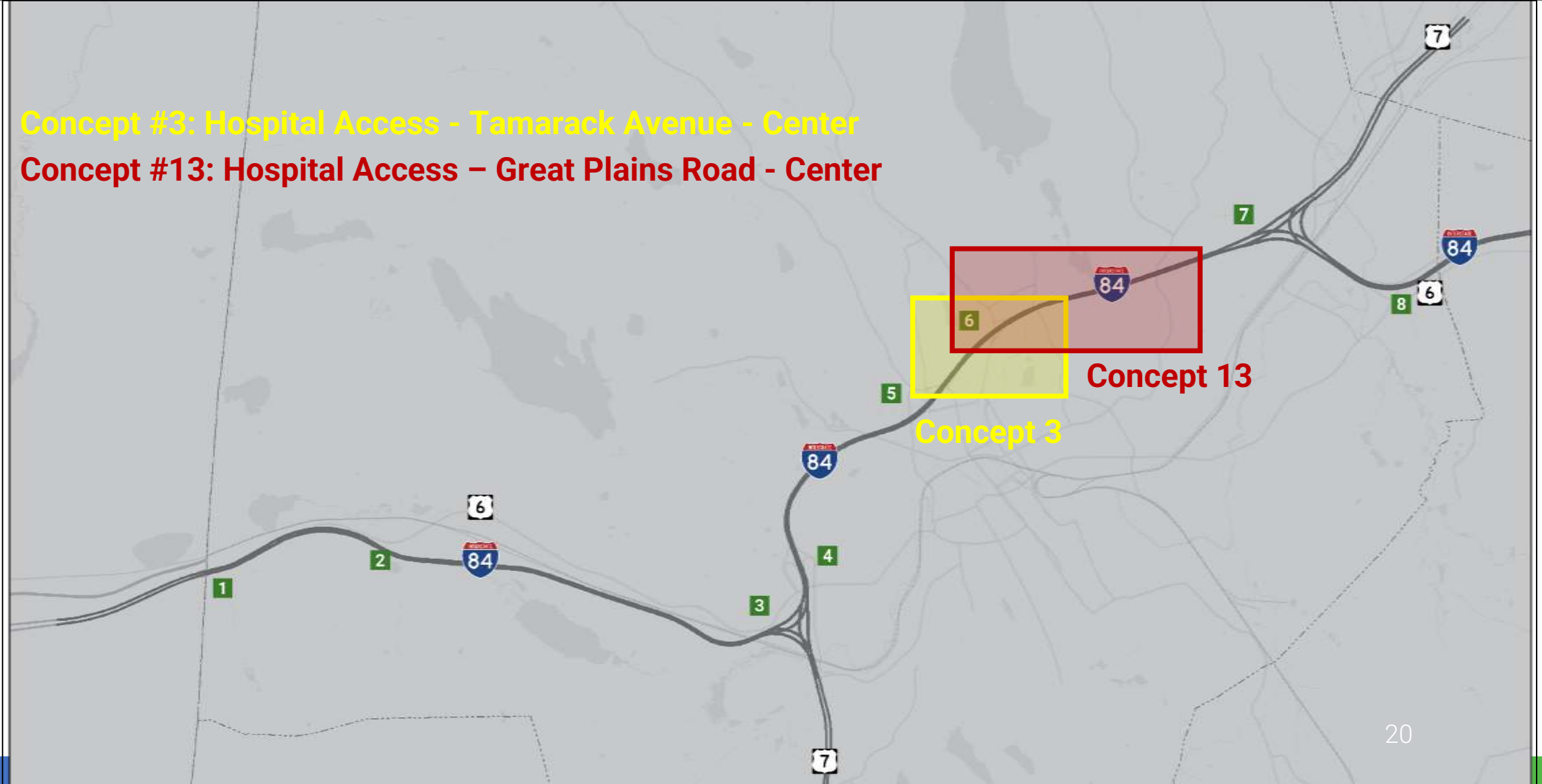


# Hospital Access Concepts



**Concept #3: Hospital Access - Tamarack Avenue - Center**

**Concept #13: Hospital Access – Great Plains Road - Center**





# Concept 4: Non-Highway Option





# Concept Evaluation



# Evaluating the Concept

- Traffic operations
- Effects to mainline I-84
- Key constructability elements
- Environmental resource analysis
- Construction cost estimate



# Concepts 3 and 13: Hospital Access Concepts

# Access to Danbury Hospital is Important

- Serves as region's only trauma center
- Provides emergency medical services to points north (e.g., New Milford)
- No direct access from I-84
- Main St provides access to / from west
- North St provides access to / from east

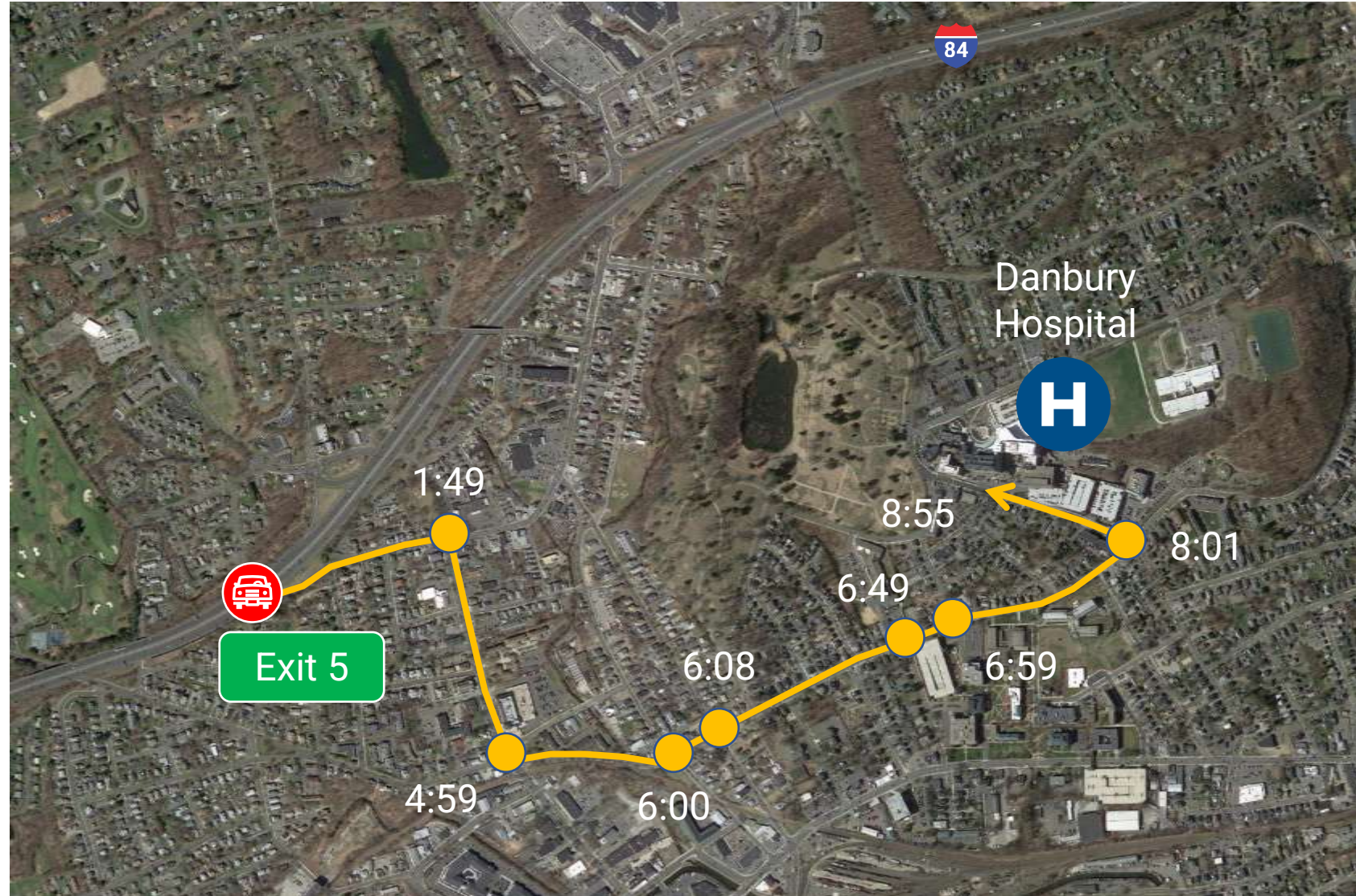




# Travel Time

*I-84 Exit 5 to Danbury Hospital*

**8:55  
minutes**

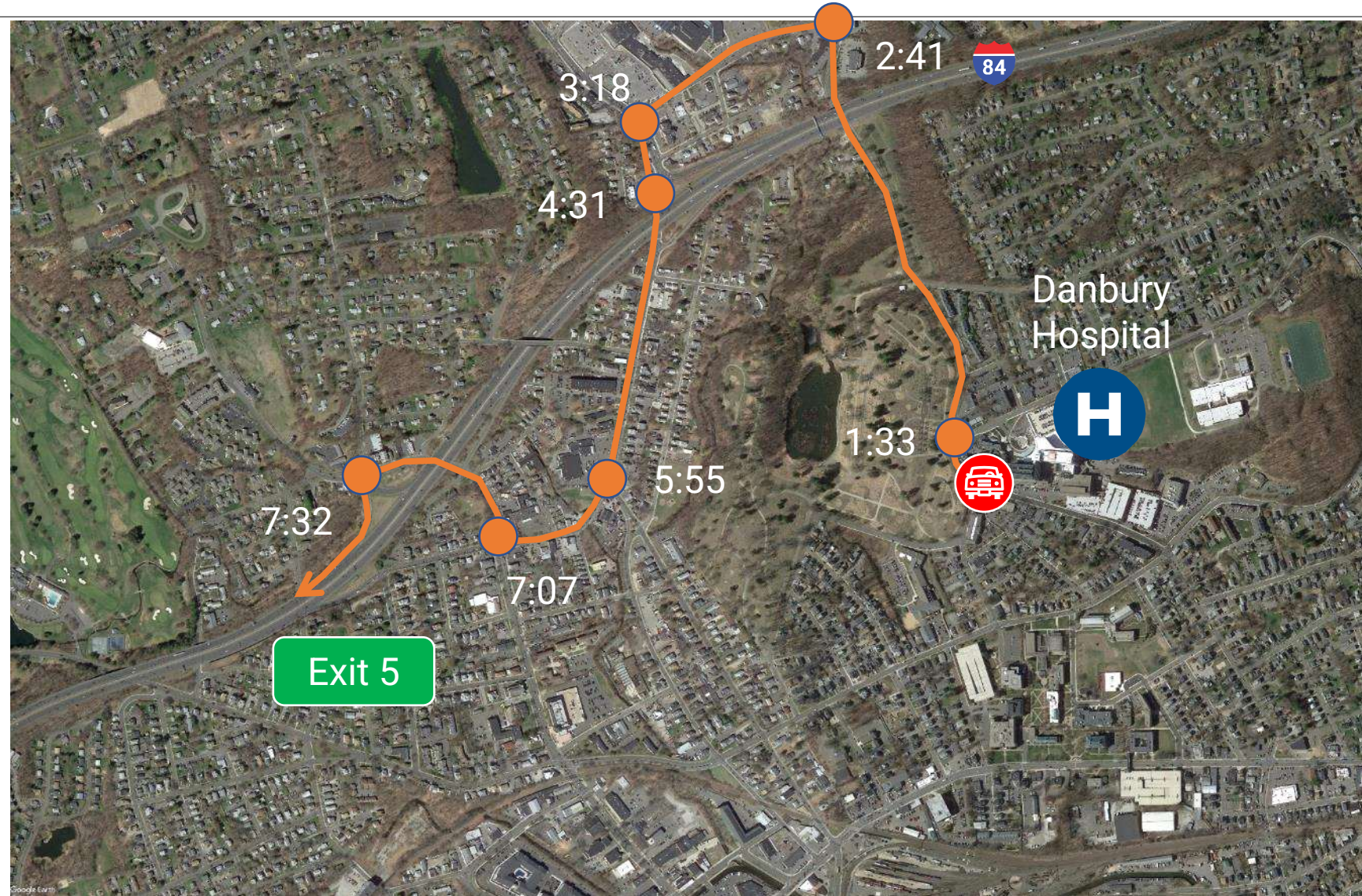




# Travel Time

*Danbury Hospital to I-84*

**7:32  
minutes**



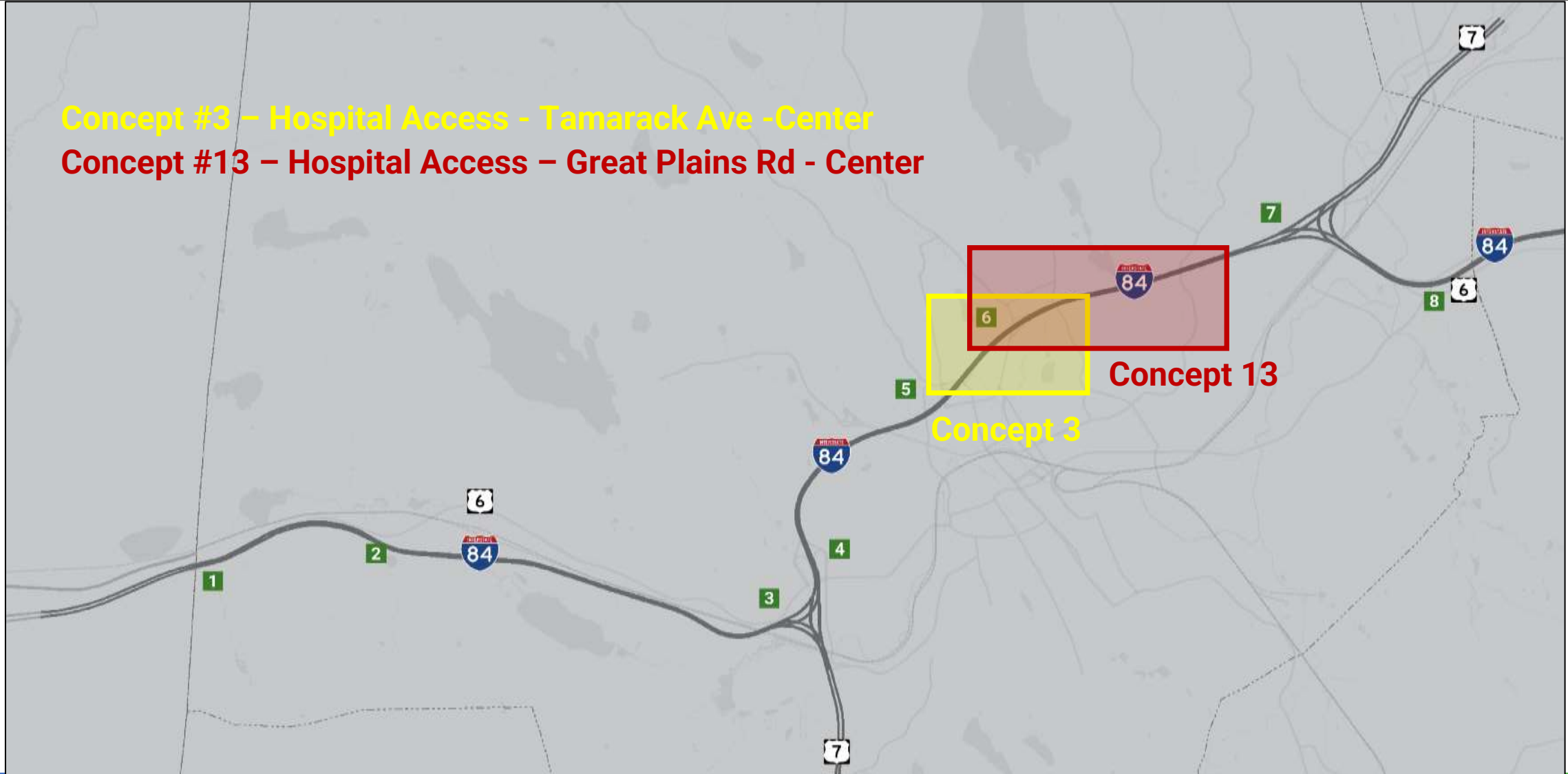




# Hospital Access Concepts



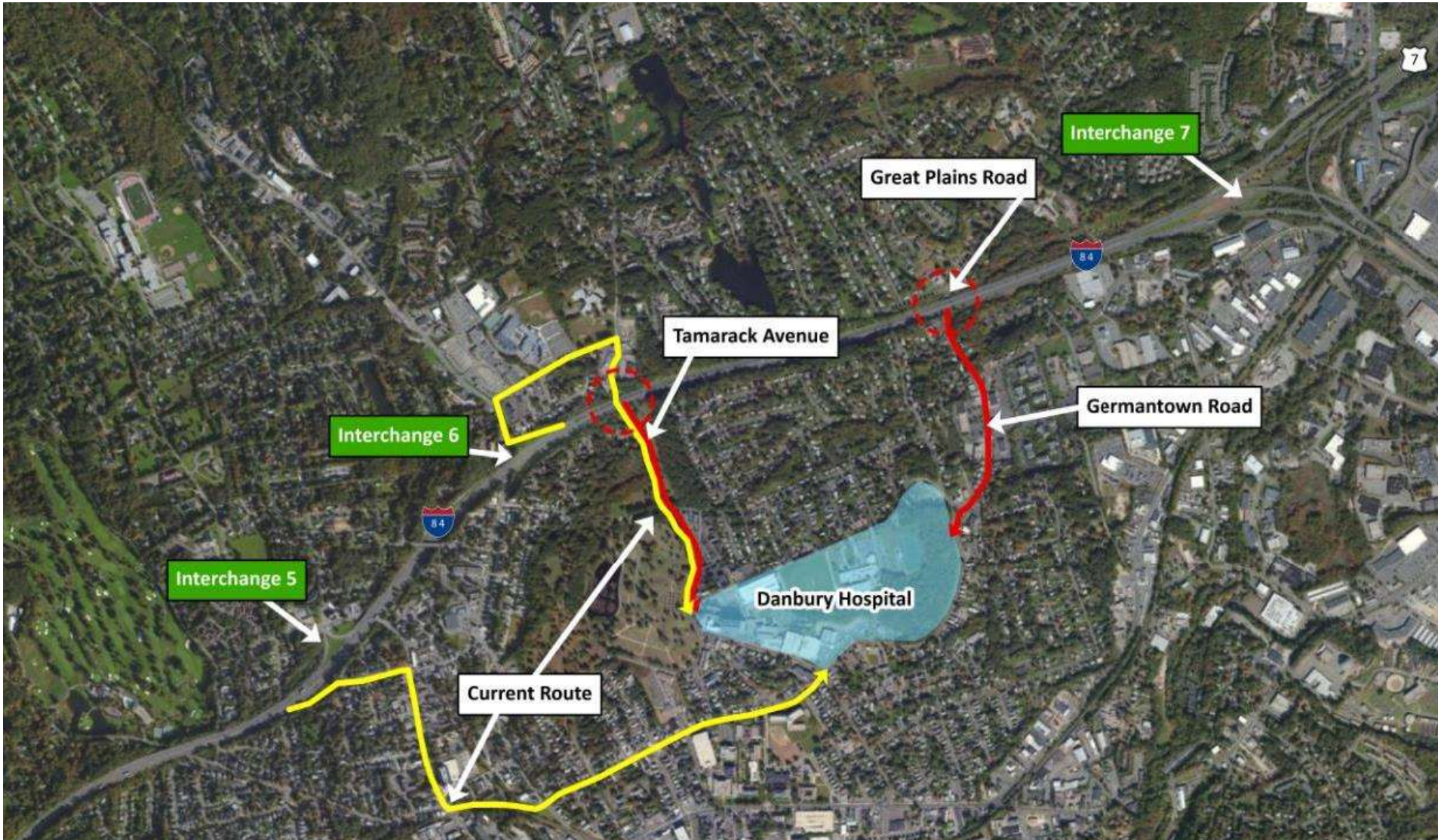
**Concept #3 – Hospital Access - Tamarack Ave -Center**  
**Concept #13 – Hospital Access – Great Plains Rd - Center**





I-84 Danbury  
Project

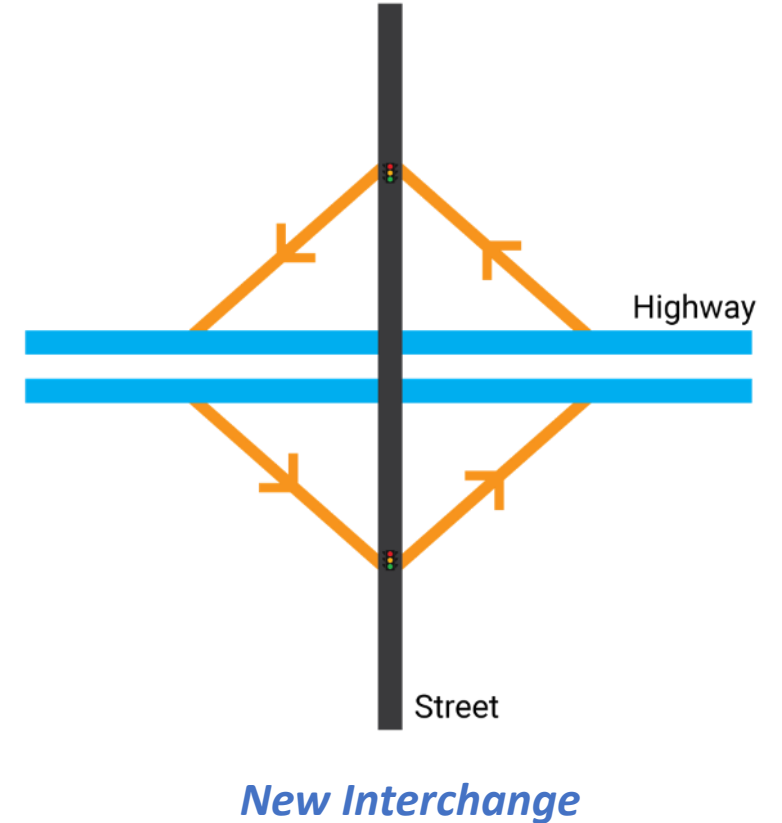
# Hospital Access Concepts





## Concept 3 Overview

- Hospital access provided via Tamarack Ave
- Full access to / from I-84
- North St interchange eliminated
- Access to downtown points
- Opportunities to enhance pedestrian and bicycle use





## General Conditions

- Tamarack Avenue is **constrained on both sides**
- On the east by the Immanuel Lutheran Cemetery
- On the west by single family residential homes and
- An extensive floodplain and floodway



# Cemetery Constraints / Potential Impacts

- Established, active cemetery for over 100 years
- Burial sites near Tamarack Ave





# Potential Neighborhood Impacts

- Homes located near roadway
- Widening will further encroach on properties
- Ford Ave neighborhood is an Environmental Justice Community



# Alignment Alternatives

- Iterations aimed at reducing impacts
- Shifting to the east impacts the burial plots
- Shifting to the west impacts residential, commercial, and other properties
- Current alignment minimizes property impacts on the west, with no impact on burial plots



Image shows an iterative process of optimizing the Tamarack Avenue alignment



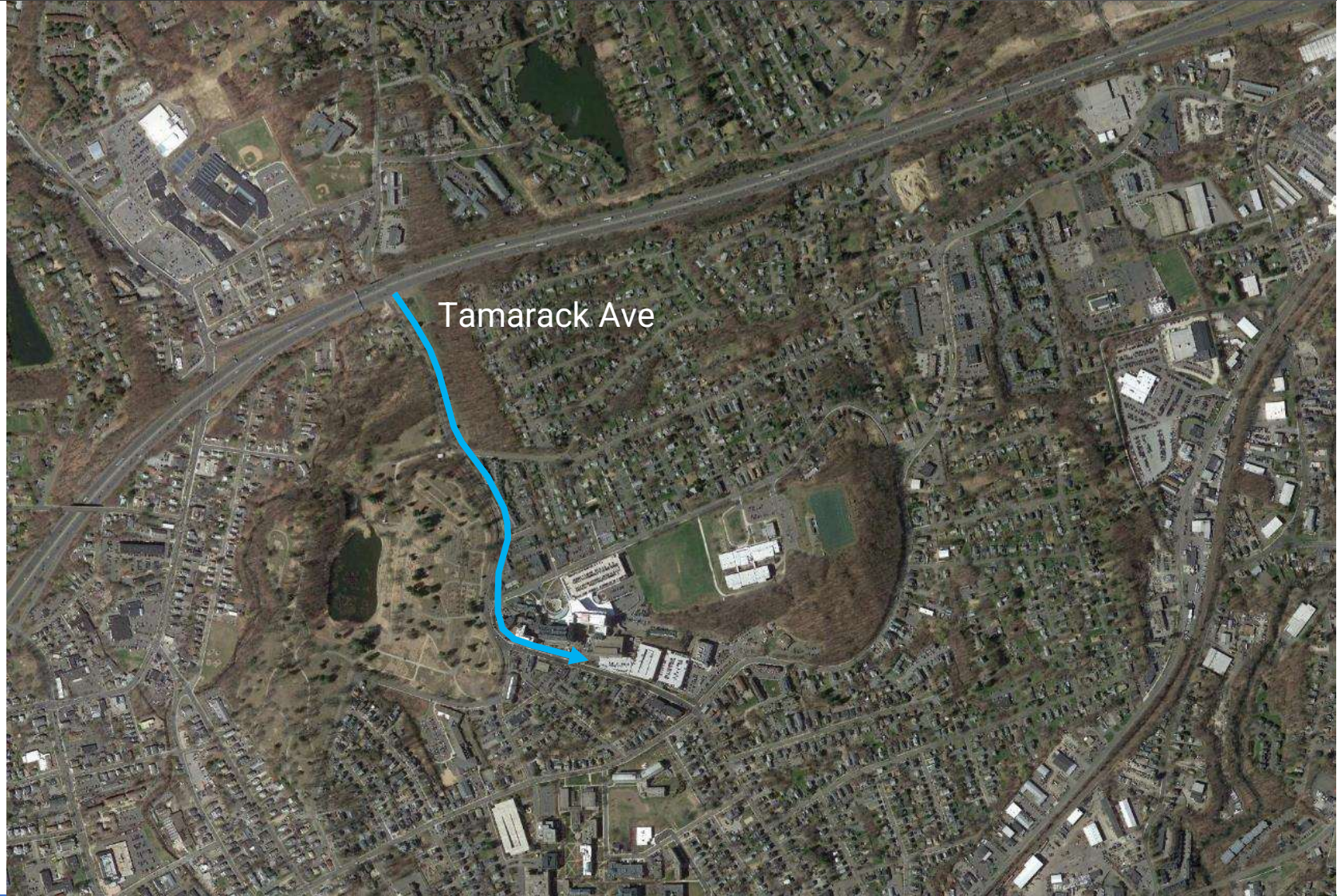




# Travel Time

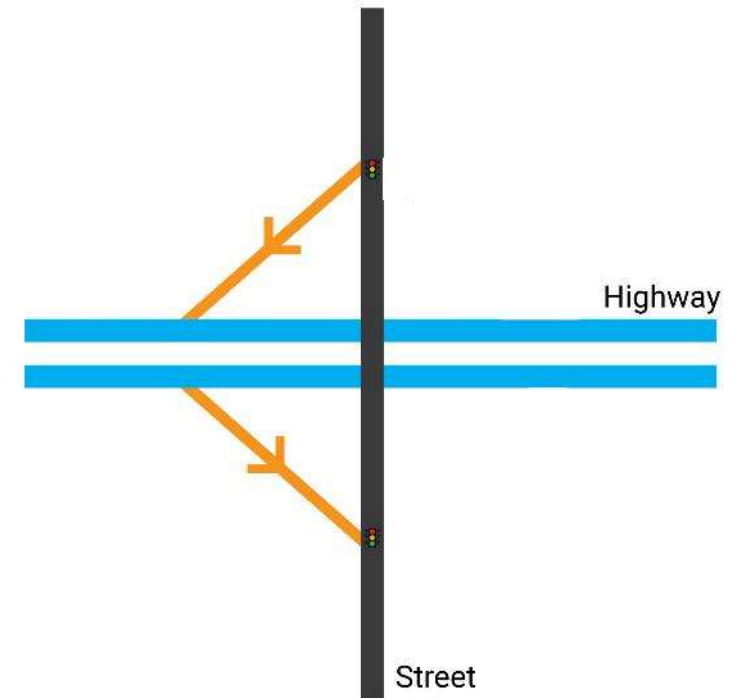
*I-84 to Danbury Hospital  
via Tamarack Ave*

  
**2:00**  
**minutes**



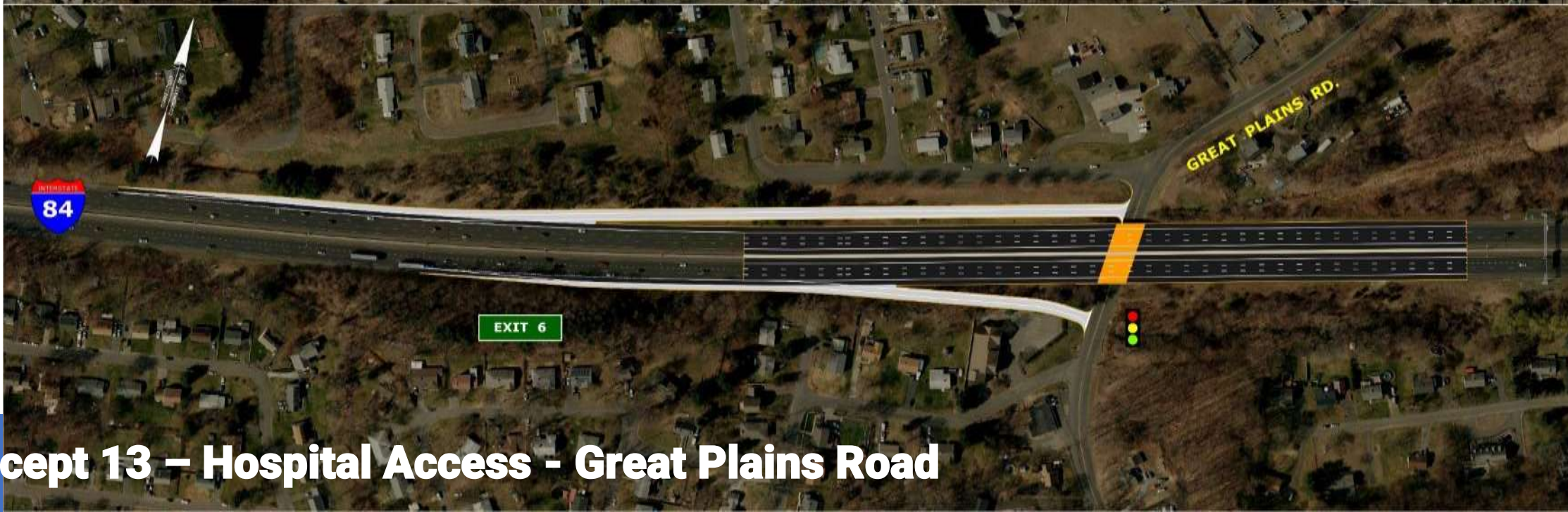
## Concept 13 Overview

- Hospital access provided via Great Plains Rd
- Access to / from the west on I-84
- North St interchange remains
- Access to downtown points
- Opportunities to enhance pedestrian and bicycle use



*New Interchange*





## Concept 13 – Hospital Access - Great Plains Road



# Travel Time

*I-84 to Danbury Hospital  
via Great Plains Rd*

**3:00**   
**minutes**



# Pros and Cons

Description	Concept 3	Concept 13
Improves connection to Danbury Hospital and downtown	●	●
Enables typical construction methods ( <i>easier to build</i> )	●	●
Meets driver expectation ( <i>full highway access at one location</i> )	●	○
Minimizes number of property impacts	○	●
North St ramps remain ( <i>access to businesses</i> )	○	●
Reduces congestion and improves mobility on I-84 and Rt 7	○	○

● = Concept has positive effect (pro)  
○ = Concept has negative effect (con)





## Construction Cost Estimate\*

Cost Range	Rating
Less than \$0.5 billion	\$
\$0.5 billion to \$1 billion	\$\$
\$1 billion to \$3 billion	\$\$\$
\$3 billion to \$5 billion	\$\$\$\$
Greater than \$5 billion	\$\$\$\$\$

\*Inflated to mid-point of construction, not including right-of-way and engineering costs



## Recommendation

These concepts have merit for improving access to the hospital and should be combined with a concept that addresses congestion and mobility on highway.



# Discussion / Questions



# Concept 4: Non-highway Options



# Why consider non-highway options?

- **Reduce vehicular congestion on highway and local roads**
- **Improve mobility along the corridor and in the region**
- Provide better access to work for transit dependent communities
- Complement existing transit services
- Support economic and transit-oriented development opportunities



*Travel Demand Management*

# Purpose of High-Level Transit Analysis

- Identify potential transit improvements after studying regional demand
- Define modes, routes, and other service factors
- Potential ridership levels and impact on traffic
- High-level benefit, cost, and impact analysis

## *Transit Modes Considered*

- ✓ *Express bus*
- ✓ *Shuttle / micro-shuttle*
- ✓ *Local bus*
- ✓ *Commuter rail / rail shuttle*



Source: Wikipedia

# Data Sources

- U.S. Census data
- HART & Metro North service and ridership
- CTDOT travel demand model
- Origin-destination survey
- GIS data
- Previous transit studies and sources

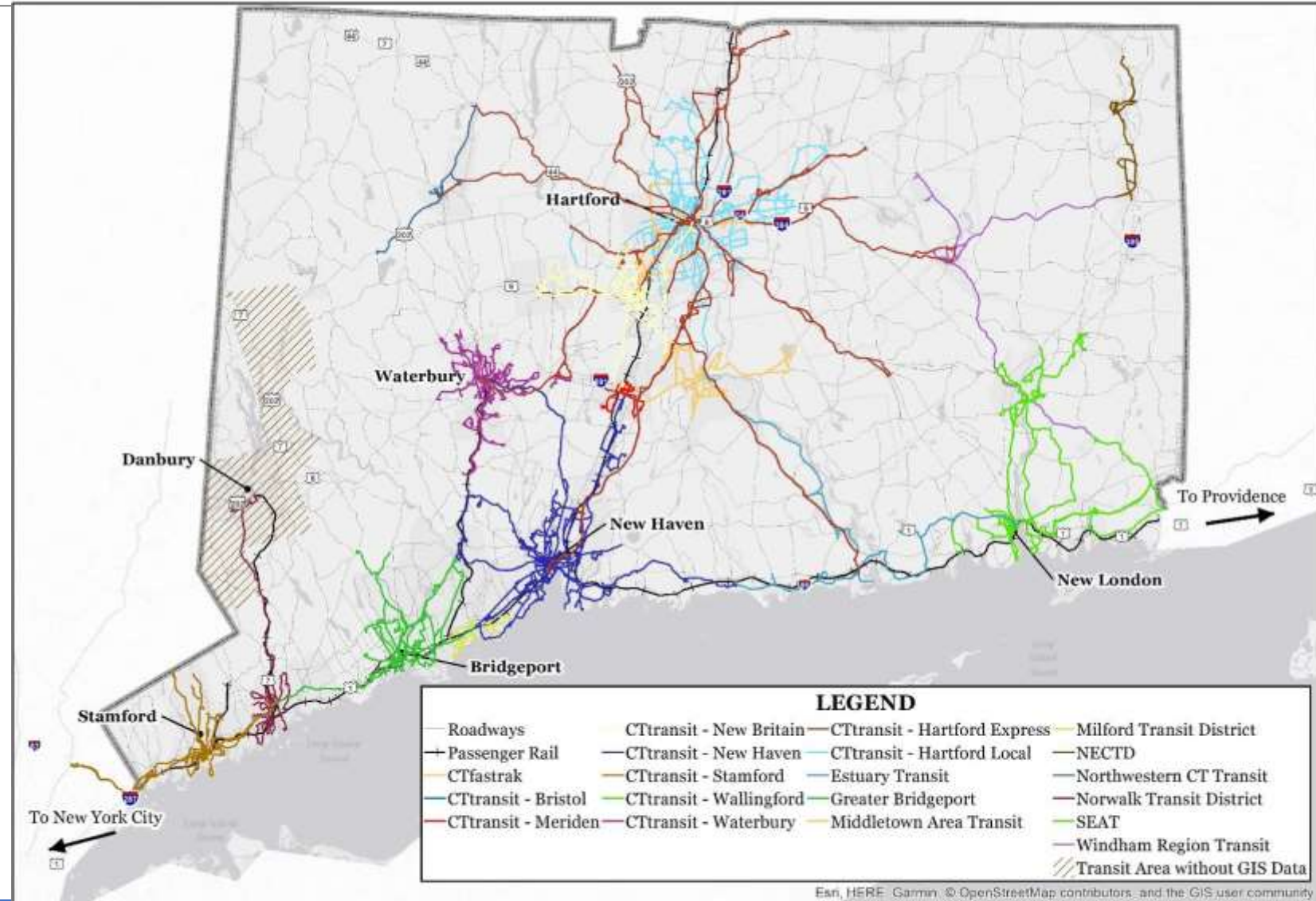






# Existing Transit Services

*Danbury and Beyond*

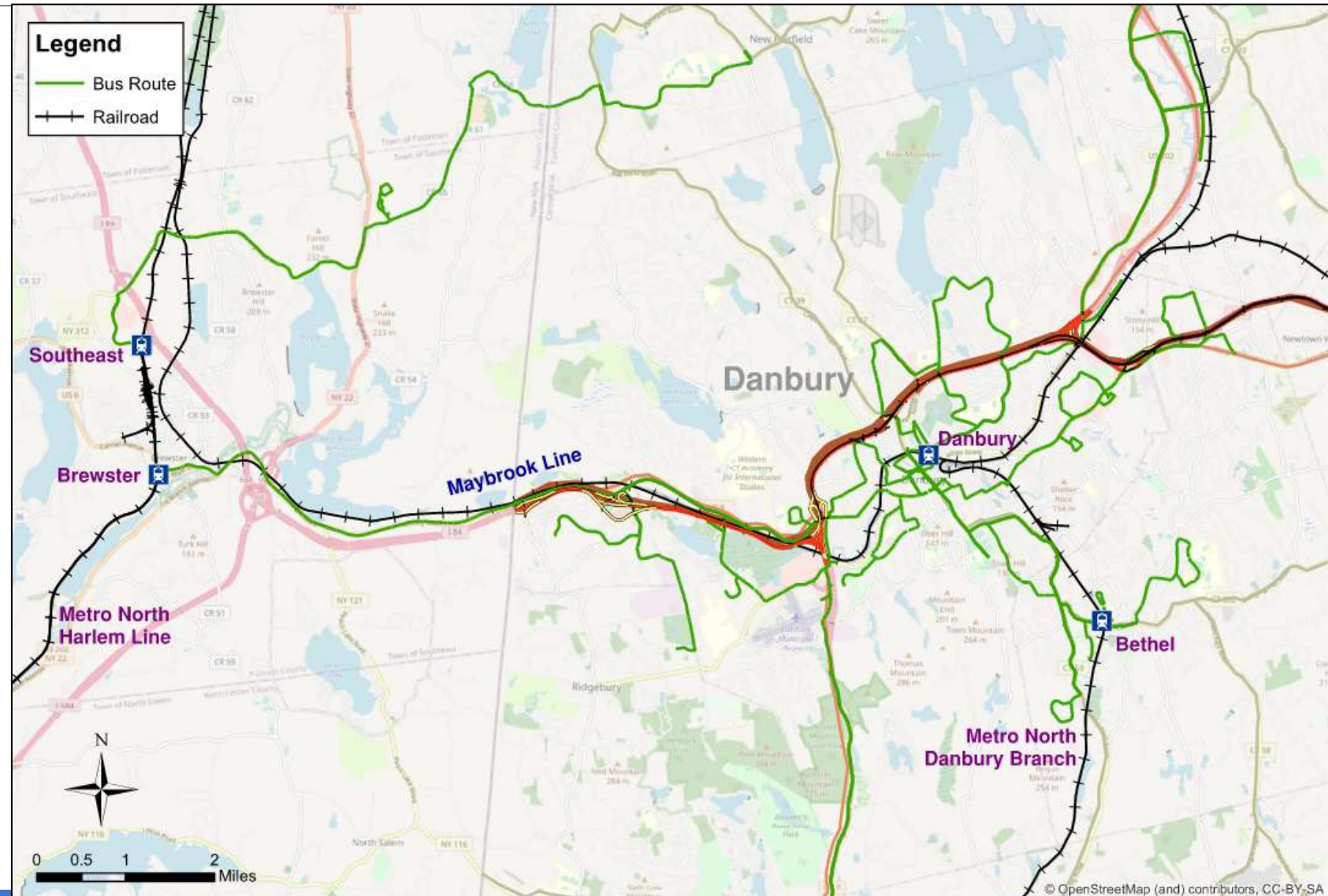


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# Existing Transit Services

*Danbury and Beyond*

- HART - local bus service
- Metro North Railroad - Danbury Branch and Harlem Line

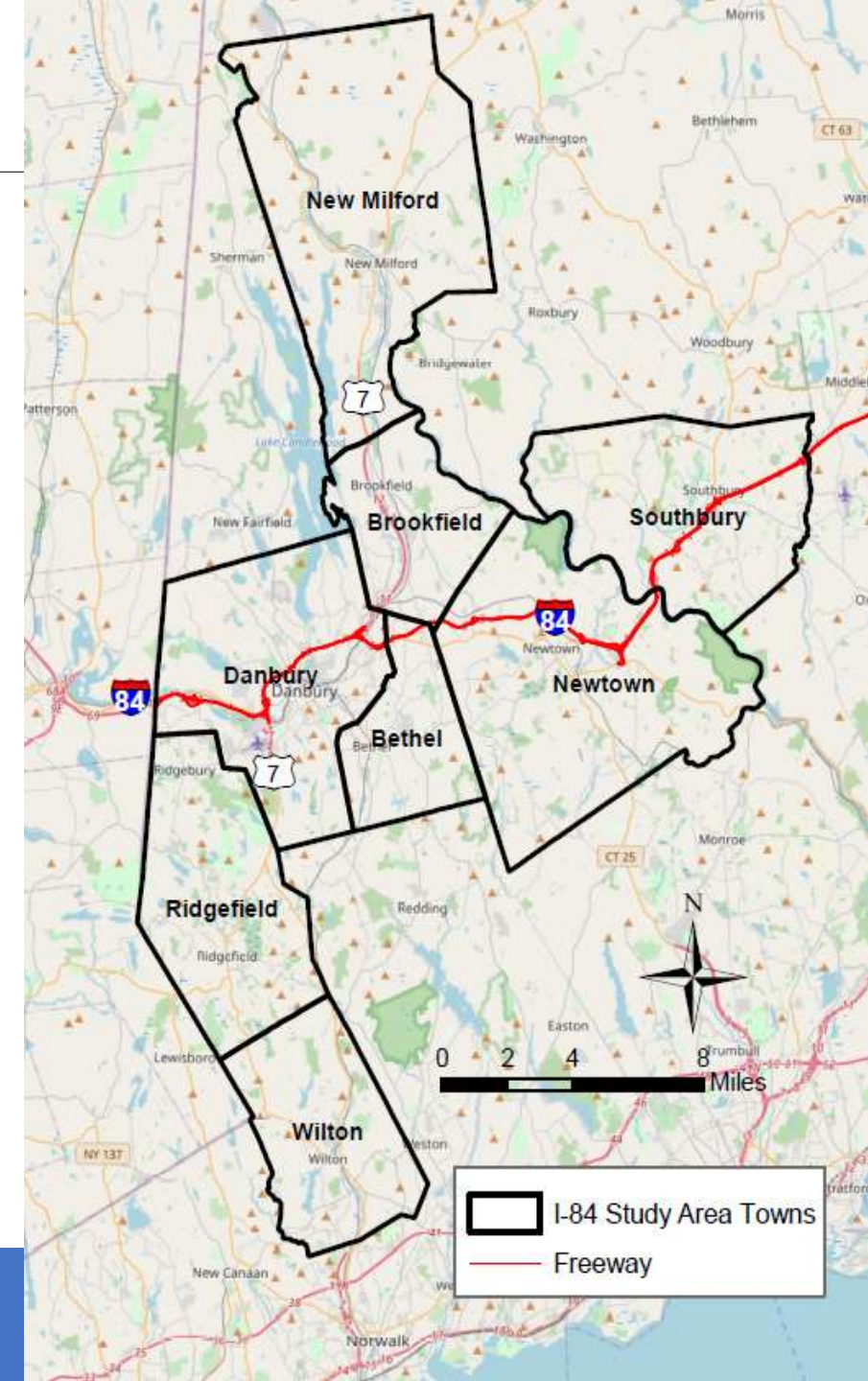


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# Travel in the Danbury Area

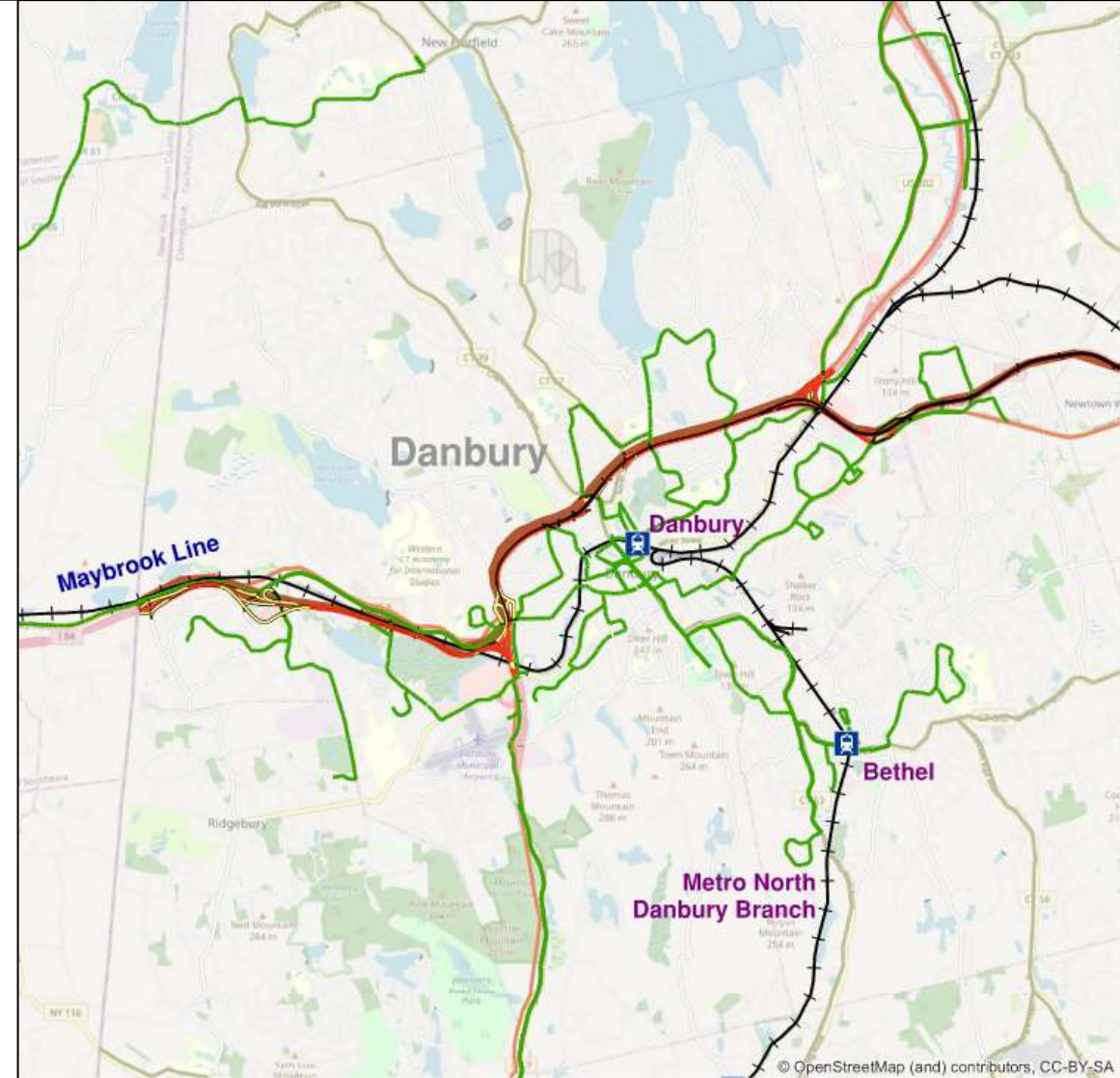
- Most people traveling within 8-town region use I-84 and Route 7
- Trips affect traffic congestion on I-84, Route 7, and local roads in Danbury
- Improved regional transit service could provide mobility options to meet travel needs
- ~10% trips made to / from all New York counties
- ~ 3% trips made to / from NYC





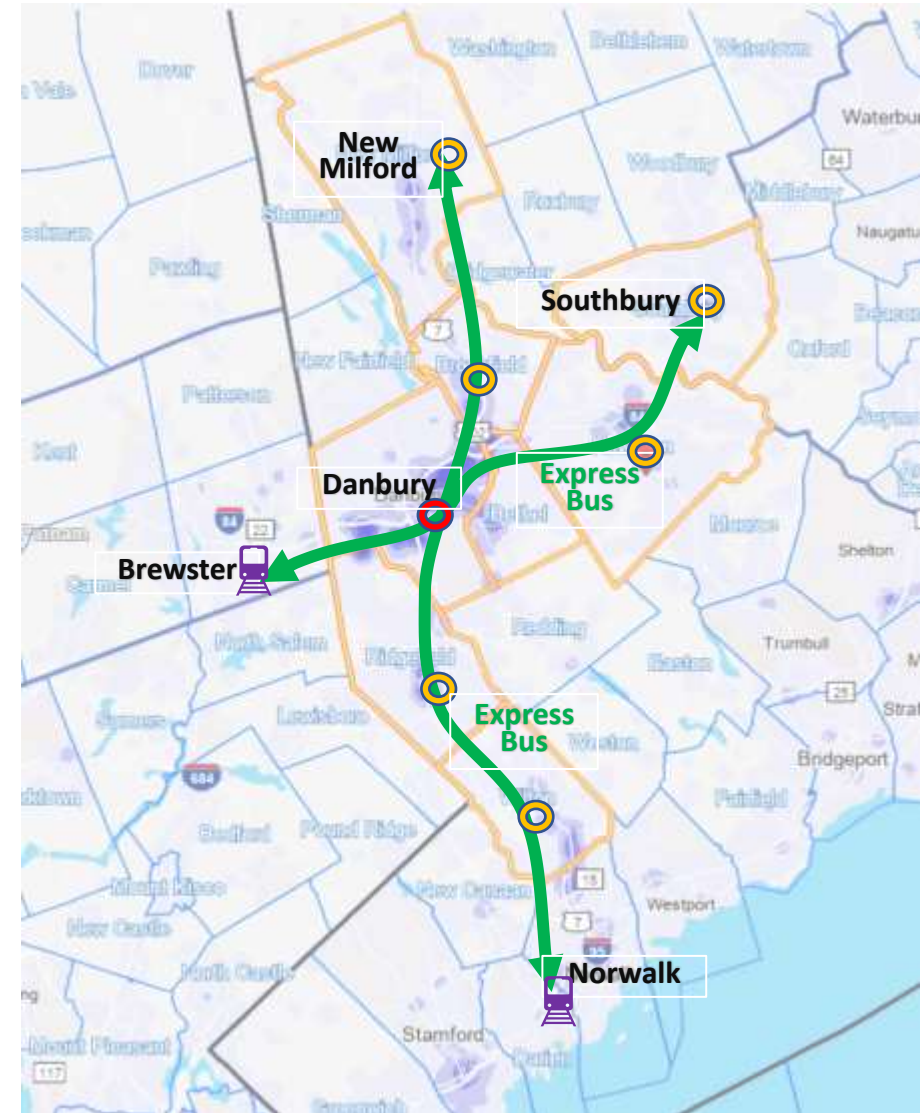
## Auto Ownership

- Danbury has most zero- /one-car households in study area
- Zero- / one-car households more likely to be transit dependent
- Improved regional and local transit could provide mobility options for users



## Potential Regional Transit Service

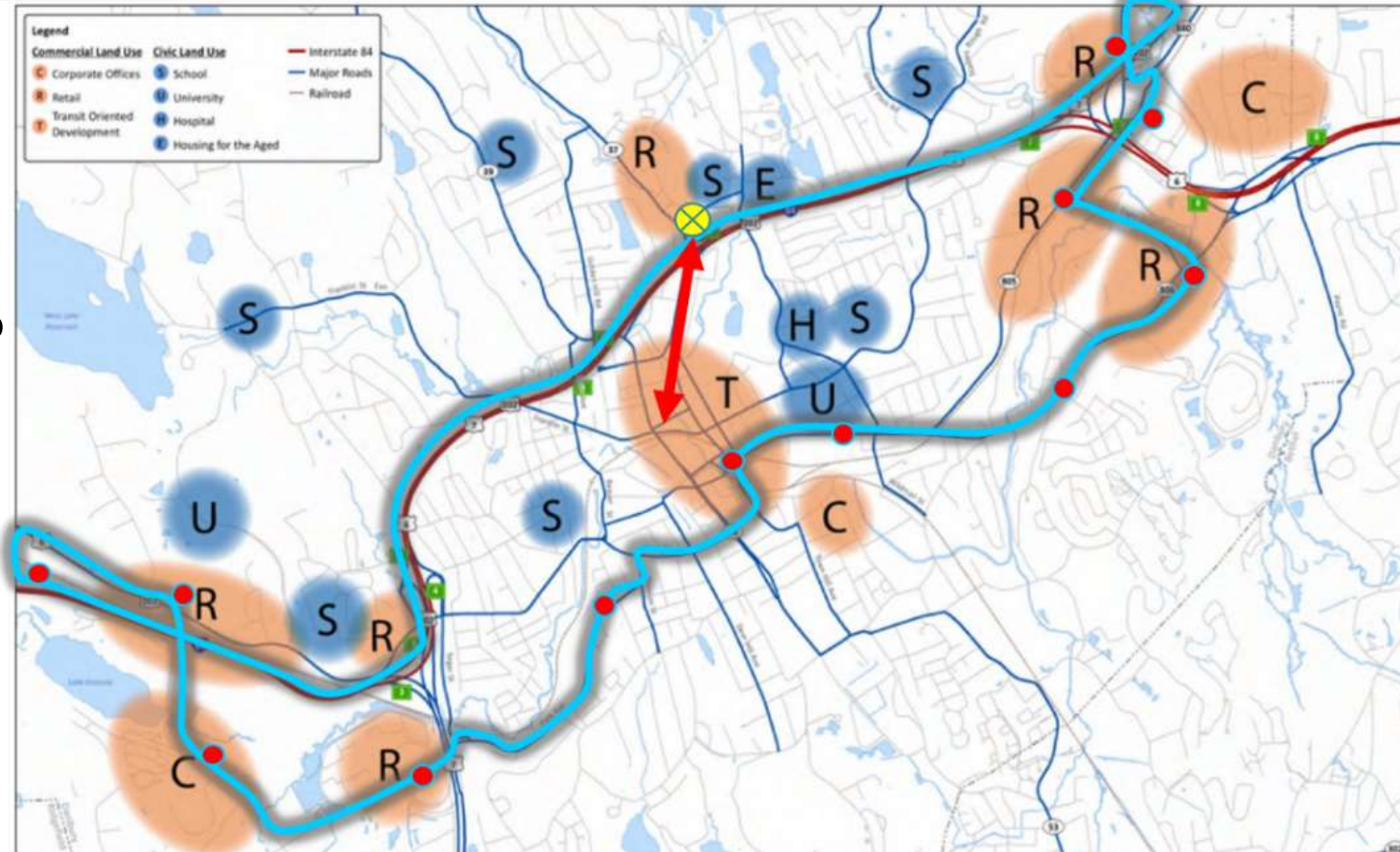
- New express bus routes could provide regional connectivity through Danbury
- Improved express bus routes could provide better regional access to commuter rail stations





## Potential Local Circulator / Connector Service

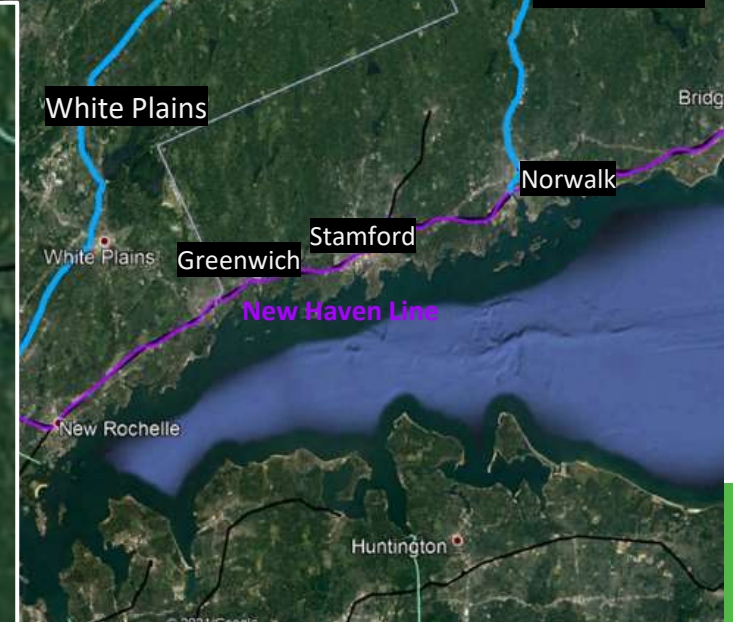
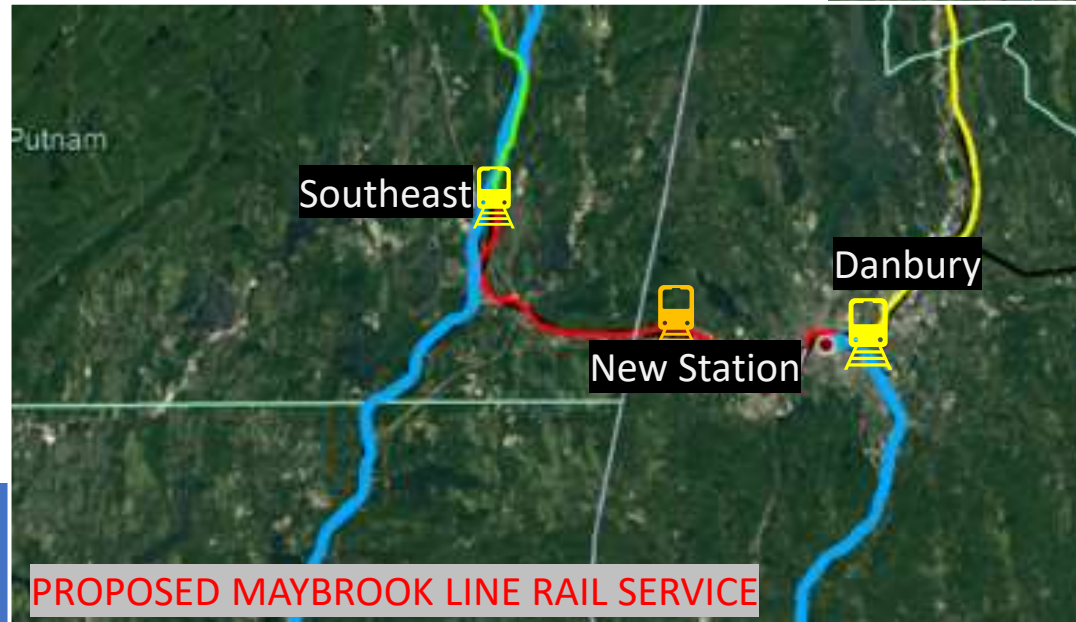
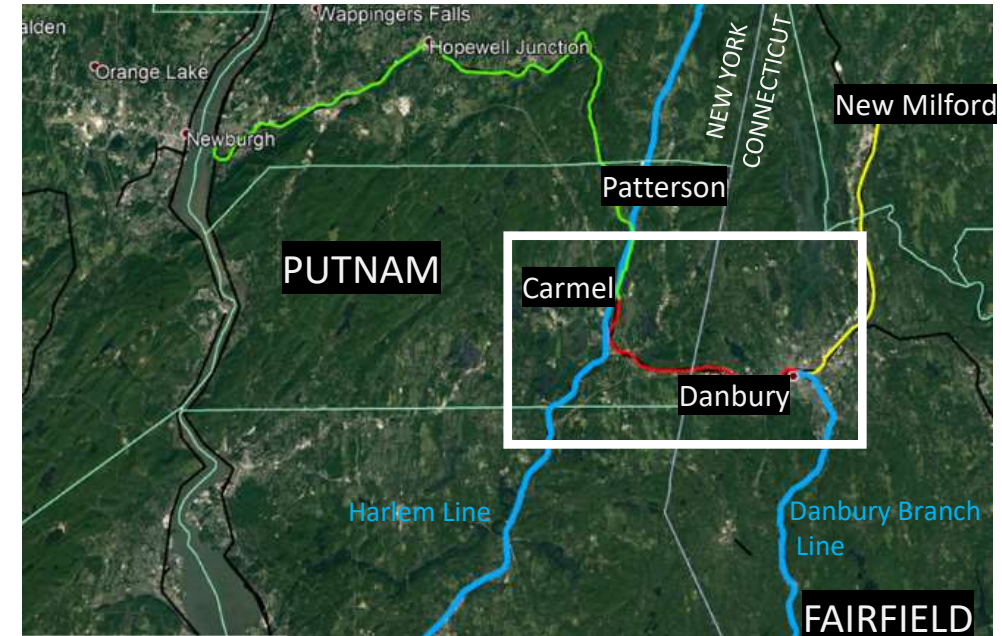
- New circulator route could enhance access to work and shopping destinations
- New circulator route could provide transfers between HART and the new express services





# Rail Transit Analysis

- Proposed Maybrook Line rail service
- Analysis assumptions:
  - New station
  - One-way travel time of **20** minutes between Danbury and Southeast stations
  - Peak service only



# Effect of Bus & Rail Ridership on Highway Traffic

- There are 7,000 auto trips on I-84 during the peak hour
- About 410 or 6 percent of the auto trips on I-84 could be shifted to transit during peak hour
- **Bus and Rail options alone do not significantly improve congestion levels on the highways**



## Draft Purpose Statement

The purpose of the I-84 Danbury Project is to reduce **congestion** and improve the **mobility** of people and goods in the I-84 corridor in greater Danbury.



# Findings and Conclusions

## Non-highway options:

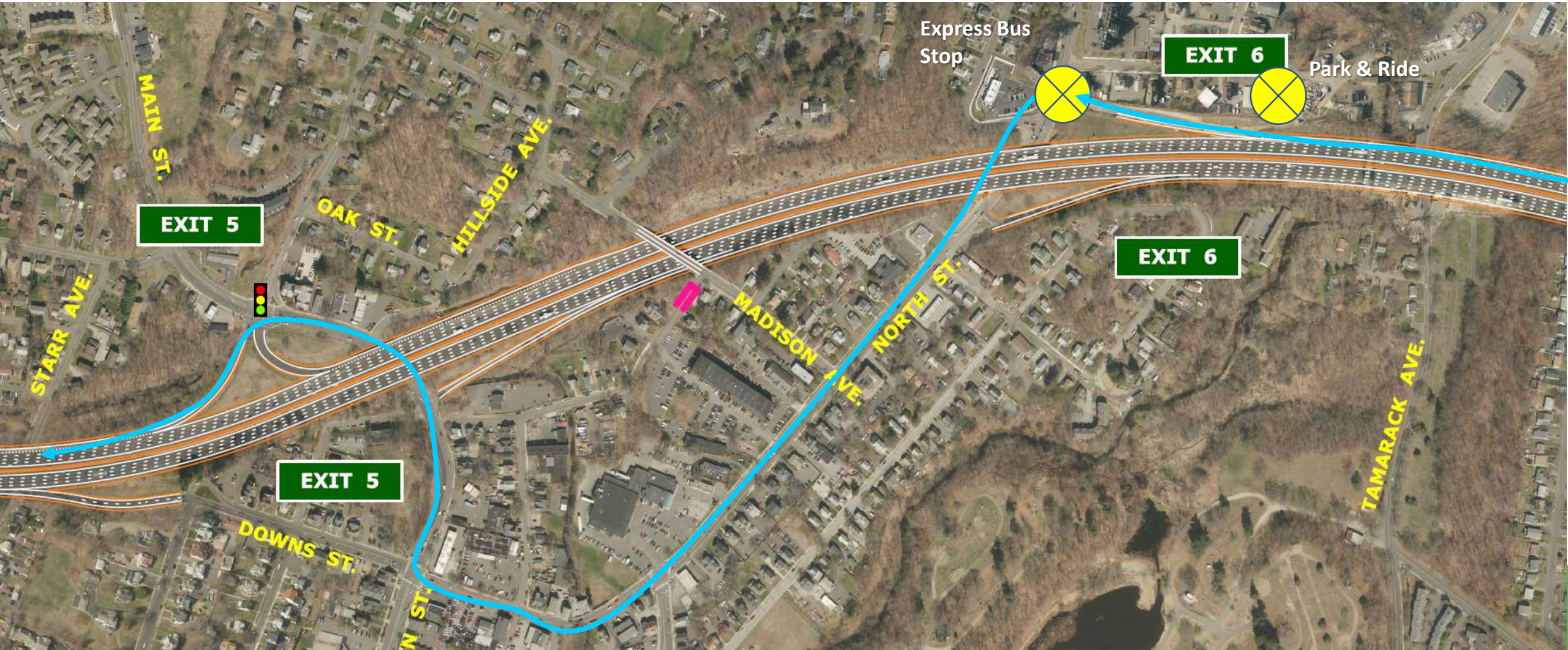
- Would not significantly reduce the congestion on highway
- Could provide benefits to improve regional and local mobility
- Could address needs of transit dependent users
- Could complement any highway option; not a standalone solution





# Working with Highway Concepts

## Highway Concept 1: Lane Add - Mainline







# Discussion / Questions

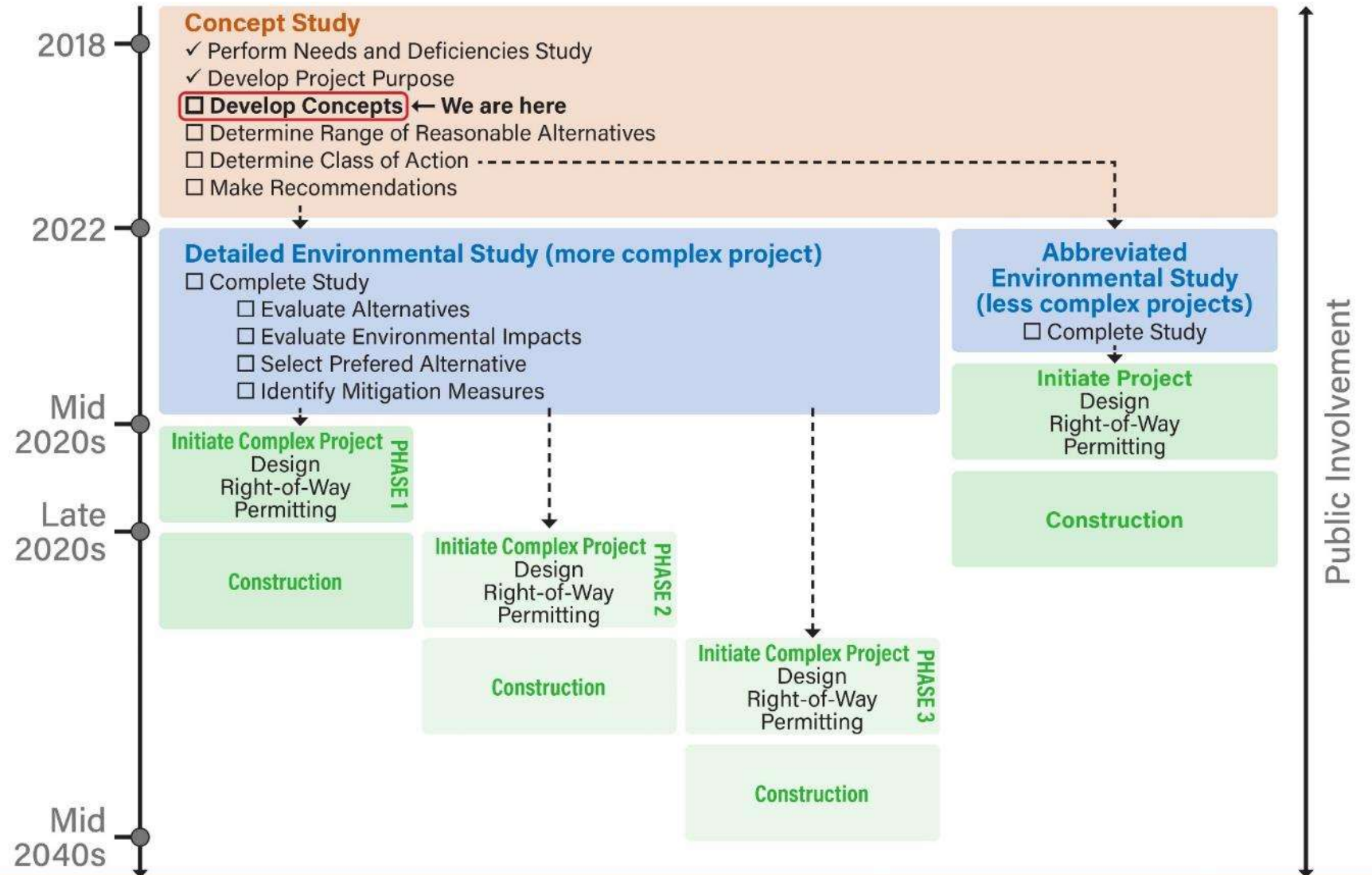




# Next Steps



# Process and Timeline





## Next Steps

- Complete concept development end of 2021
- Begin combining concepts
- Establish screening criteria and performance measures
- Next PAC Meeting – Winter 2021-22
  - ☐ Concept 14
  - ☐ Transportation System Management and Operations (TSMO)
- Develop a range of reasonable alternatives to move forward into the environmental study phase



# Discussion / Questions



# Project Contacts

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Yolanda Antoniak, P.E.  
Project Engineer, Consultant Design  
[Yolanda.Antoniak@ct.gov](mailto:Yolanda.Antoniak@ct.gov)



# Thank You!

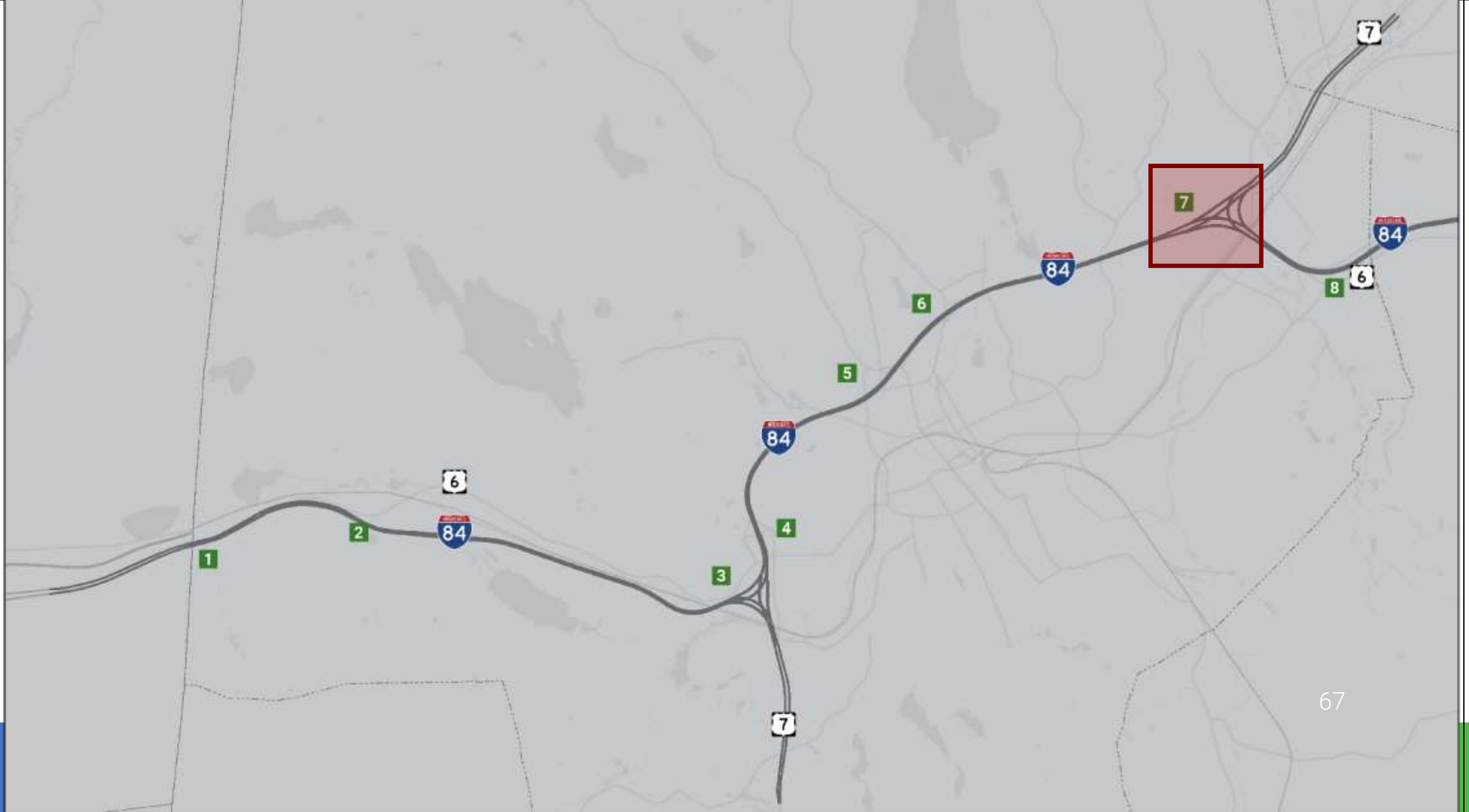




# Concept 10: Interchange 7 Route 7 Ramp - Westbound

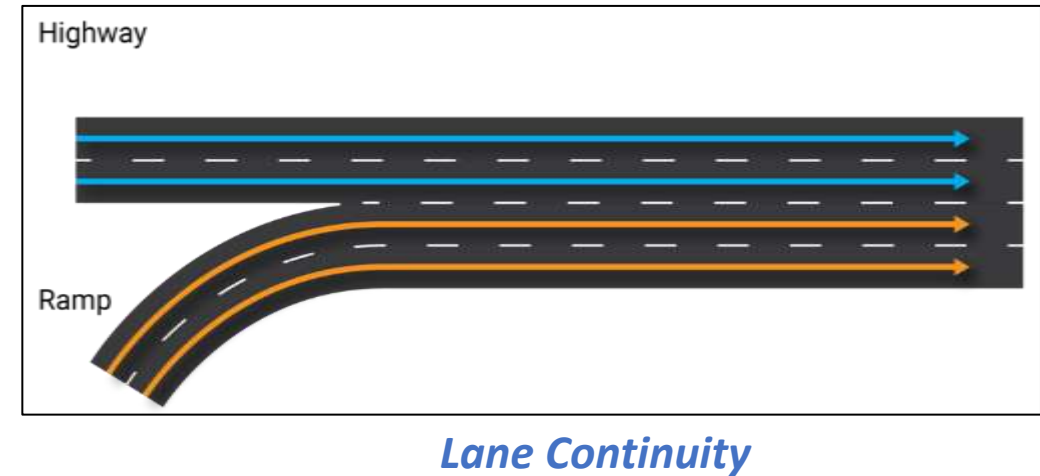


# Concept Location



## Concept 10 Overview

- Eliminates lane drop on Route 7 southbound
- Improves merge from Route 7 southbound to I-84 westbound
- Provides lane continuity on Route 7

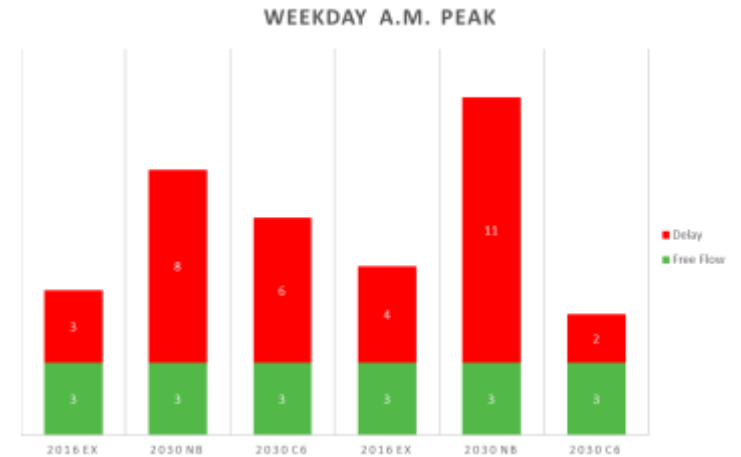






# Pros

- + Reduces congestion on I-84 and Route 7
- + Eliminates vehicle queuing on Route 7 southbound
- + Occurs mostly within existing CTDOT right-of-way
- + Requires typical construction methods
- + Minimal environmental impacts





## Construction Cost Estimate\*

Cost Range	Rating
Less than \$0.5 billion	\$
\$0.5 billion to \$1 billion	\$\$
\$1 billion to \$3 billion	\$\$\$
\$3 billion to \$5 billion	\$\$\$\$
Greater than \$5 billion	\$\$\$\$\$

\*Inflated to mid-point of construction, not including right-of-way and engineering costs



## Recommendation

This concept has merit for reducing congestion and improving mobility on the highway at Interchange 7 and should be evaluated further in the next phase.



# Discussion / Questions