

<i>Client / Agreement / #</i>	CTDOT
<i>Project / #</i>	Sigourney Street & Farmington Avenue Bicycle Facilities / Project #128726
<i>Date / Time / Location</i>	March 16, 2016 / 4:00pm / The Lyceum, 227 Lawrence Street, Hartford
<i>Attendees/ Representing</i>	<u>CTDOT</u> : Rich Armstrong, Paul O’Keefe, Randal Davis
	<u>Baker</u> : Tom Strand, Pete Maiorana
	<u>Toole</u> : Jeremy Chrzan
<i>Distribution</i>	Rich Armstrong, Paul O’Keefe, Randal Davis, Jeremy Chrzan, Tom Strand, Chris Fowlds, David Liebgold, Jim Yeager, Pete Maiorana, Scott Delesdernier

Purpose: Sigourney Street & Farmington Avenue Bicycle Facilities
 Public Informational Meeting – Open House & Presentation
 (see attached meeting notice, sign-in sheet, presentation & handouts)

DISCUSSION ITEMS	ACTION ITEMS
<p>The open house portion of the meeting began at 4:00pm during which participants viewed the conceptual plans displayed on presentation boards and discussed the proposed improvements with representatives from the Connecticut Department of Transportation (CTDOT) and their Consultants, Michael Baker International and Toole Design Group.</p> <p>Following the open house portion of the meeting, at 5:30pm Richard Armstrong of the Connecticut Department of Transportation (CTDOT) began the presentation portion of the meeting. He briefly described the purpose of the project, reviewed the overall project limits, and provided some background regarding progress to date. Rich indicated that CTDOT has engaged Michael Baker International as prime designer and their subconsultant, Toole Design Group, who specializes in bicycle facilities design. Rich then introduced Jeremy Chrzan of Toole Design Group, who presented the proposed bicycle facilities in detail.</p>	

Using a Powerpoint slide presentation, Jeremy explained the proposed two-way cycle track on Sigourney Street between Capitol and Farmington Avenues, bike lanes via a road diet on Farmington Avenue between South Marshall and Broad Streets, and sharrows on Sigourney Street between Farmington and Asylum Avenues. He highlighted how the proposed bicycle facilities would interface with the City of Hartford's proposed roundabout project on Park Terrace/Russ Street/Sigourney Street, and the Hawthorn Street and Farmington Avenue intersections, including bicycle/pedestrian signalization. Jeremy explained two-way cycle tracks and protected intersection in detail, which included summarizing the decision factors associated with the refined conceptual plans. (see attached presentation & handouts)

Following the presentation portion, the meeting transitioned to questions/answers and comments:

Q1: What choices are available for creating a means of separation between bicycle and vehicles?

A1: Combinations of horizontal and vertical; level, intermediate, sidewalk. Level is where bicycle path and roadway are on the same level with a horizontal buffer of two feet or greater. Intermediate is where the bicycle path is raised up higher than the roadway but lower than the adjacent sidewalk. Sidewalk is where the bicycle path and sidewalk are on the same level and both are raised up higher than the roadway.

Q2: What are various advantages of vertical elevation options?

A2: Full and intermediate curb heights create visual textural and physical buffers. However, full curb heights have the potential for undesirable pedal strikes. Level option lends itself to existing drainage conditions, and oftentimes do not require any modifications to the roadway cross section.

Q3: How is snow plowing addressed?

A3: Typically snow plowing is done with some special equipment that fits the width of the path. It was noted that the City of Hartford currently utilizes special equipment for paths in Bushnell Park. It was also noted that a consideration might be to utilize the State owned property at the Hawthorn intersection as a snow dump during large snowfall occurrences.

Q4: What will happen at Sigourney Street southbound lanes to help alleviate the confusion caused by the current lane configuration condition.

A4: The conceptual design shows altering the lane configuration and improves the lane alignments which should help to alleviate potential confusion.

Q5: Will traffic queue issues result with vehicles having to wait for bicyclists?

A5: The traffic volumes will be evaluated in detail and the signalization designed to be efficient for bicycle, pedestrian, and vehicular traffic. Signalization specific to bicyclists is being planned for and will include advance detection technology to enhance the overall traffic signalization.

Q6: How will the proposed bicycle facility interface with the roundabout?

A6: CTDOT is currently coordinating with the City to ensure that the designs interface properly and has requested that the City wait on their roundabout construction contract, with an intent to possibly incorporate both projects into one construction contract administered by the City.

Q7: How will the parking on Park Terrace be affected?

A7: The conceptual design provides for a lane of additional parking along the west side of Park Terrace as well as the possibility of additional parking on north side of Russ Street. The existing parking on the east side of Park Terrace would be reduced by approximately three spaces per the current concept plans. The existing southbound travel/turning lane would be eliminated to create space for the additional parking on the west side.

Q8: What's the best way to connect with the Park Terrace resident group to discuss parking?

A8: The resident group is known as the Keller District and Joe Barber who resides at #14 Park Terrace would be a good contact.

C9: The proposed additional vehicle parking lot on the north side of Russ Street will not be well received because this area is being planned as a recreational park area for Park Terrace residences.

CTDOT/Baker/Toole and the City to continue to coordinate the design and construction of the two projects.

CTDOT/Baker/Toole to coordinate design with the Greater Hartford Transit District project on Capitol Avenue.

CTDOT/Baker/Toole to meet with the Keller District and discuss proposed bicycle facilities and potential parking alternatives.

C10: The Father from the Catholic Church on Farmington Avenue expressed concerns regarding how the proposed bicycle lanes affect the funeral home driveway at the northeast corner of Farmington/Sigourney intersection.

C11: The Church expressed concerns regarding the proposed bike lanes on Farmington Avenue and how it may affect the parking in front of the Cathedral during functions such as weddings and funerals.

Q12: Has Aetna weighed in and how does this process move forward?

A12: Yes, CTDOT has been coordinating with Aetna, who is a proponent of the two-way cycle track proposed on the west side of Sigourney.

C13: The Church expressed concerns regarding the proposed bike lanes on Farmington Avenue and how it may affect the Cathedral improvements currently underway, particularly with regards to ADA accessible access.

Q14: What is purpose of bicycle lanes on Farmington, as there does not appear to be much bicycle activity usually?

A14: Overall system connectivity. A detailed discussion transpired with City input regarding future plans to connect West Hartford to Downtown.

Q15: Will people use it?

A15: Yes, it is very likely that people will use this provided that is safe and efficient for a wide range of comfort levels.

Q16: How wide is the cycle track?

A16: The cycle track is ten feet wide with a two feet wide buffer.

Q17: What is happening at Culinary Institute?

A17: The concept plans indicate shifting the sidewalk west to allow the cycle track to fit. CTDOT will be coordinate the details with the stakeholder with regards to right of way, driveway entrances and landscaping.

Q18: Is there a way to prevent people from driving in the bike lanes?

A18: The concept plans incorporate curbing that serves as a vertical barrier, plus green painted markings in the driveways for visual indication.

CTDOT/Baker/Toole to meet with the Church and discuss proposed bicycle facilities concept plans and potential impacts.

CTDOT/Baker/Toole to meet with the Lincoln Center & Culinary Institute to discuss proposed bicycle facilities concept plans and potential impacts.

Q19: What dictates the color green, as it appears that it is used in some places but not others? Is it a federal requirement?

A19: No it is not a federal requirement to use green paint, however, it is a recommend best practice to use in particular situations, notable at vehicle/bicycle conflict points such as intersections and driveways. The color is a federal specification.

Q20: Who will maintain green color?

A20: The City will be responsible for maintaining the bicycle facilities being that these are City streets.

Q21: Are flexible type barriers being used, and if so, how does this affect the snow removal operation?

A21: The concept plans do not propose using flexible barriers to delineate the bicycle facilities.

Q22: Are there any other locations within the City that two-way cycle tracks are planned?

A22: No, not two-way cycle tracks specifically. However, there is an intent by the City to incorporate more bicycle facilities with roadway reconstruction projects in future projects.

Q23: What are some of the reasons for using a two-way cycle track?

A23: Generally, the two-way cycle tracks can be used to minimize conflict points and located in most concentrated destination areas to prevent crossings.

Q24: Will the proposed bicycle lanes via the road diet on Farmington Avenue exacerbate the traffic issues, particularly when the I-84 Viaduct reconstruction project takes place.

A24: Currently, the lane configuration functions similarly because the roadway essentially becomes a defacto two lane (one in each direction) when the left turn lanes are occupied by vehicles waiting to turn.

Q25: Will this bicycle facility project be finished before I-84 Viaduct reconstruction project starts?

A25: Yes.

Q26: When is the bicycle facility project construction planned to occur?

A26: Planned to start summer of 2017 and finish fall of 2018.

Following the questions/answers and comments session, at 6:30pm the open house resumed and participants engaged in further individual discussions regarding the project. The open house adjourned at 7:30pm.

Public Informational Meeting

Sigourney Street and Farmington Avenue
Bicycle Facilities
Hartford
March 16, 2016

Agenda

Time: 4:00pm - 7:30pm

Location: The Lyceum - 227 Lawrence Street, Hartford, CT

Purpose of Meeting: Public forum providing the community an opportunity to review concept plans and speak to designers on the proposed bicycle facilities on Sigourney Street and Farmington Avenue.

4:00-5:30pm Open House - Concept plans on display for public review and questions/discussions with design team

5:30-6:30pm Presentation followed by public comment/Q&A

6:30-7:30pm Open House - Design team available for further questions/discussions on design concepts



Michael Baker

INTERNATIONAL

Meeting Sign-in Sheet

Meeting Purpose: **Public Informational Meeting for proposed bicycle facilities on Sigourney St. and Farmington Ave., Hartford, CT**

Date: **March 16, 2016**

Time: **4:00pm-7:30m**

Location: **The Lyceum, Hartford, CT**

Attendee Name	Organization/Representing	Phone Number	E-mail Address
TOM STRAND	BAKER	594-2125	TSTRAND@MBAKERINTL.COM
PETER MAIORANA	BAKER	860 231-0461	petemaiorana@mbakerintl.com
Paul R O'Keefe	CT-DOT	860 594-3483	PAUL.OKEEFE@CT.GOV
Andrew McHugh	HARTFORD DPW		Andrew.mchugh@hartford.gov
Toni Gold	WECA	860-232-9018	toniagold@gmail.com
Bernie Michel	ATTNA	860-944-6614	bernemichel@snet.net
Chris Brown	Resident and Bicyclist	860 560 9299	interstatement@gmail.com
Kim Rudy	TransSystems	860 477 4581	KARUDY@transystems.com
Sandy Fry	GHTD	800 247 5324 x3090	sfry@ghtd.org
MARY COCHRAN	Resident	860 525 3353	mary.j.cochran@gmail.com
DAVE CORRIGAN	RESIDENT		
KEN KRAYESKE	BICYCLIST		



SHT 1/2

Meeting Sign-in Sheet

Meeting Purpose: **Public Informational Meeting for proposed bicycle facilities on Sigourney St. and Farmington Ave., Hartford, CT**

Date: **March 16, 2016**

Time: **4:00pm-7:30m**

Location: **The Lyceum, Hartford, CT**

Attendee Name	Organization/Representing	Phone Number	E-mail Address
JEREMY CHEZAN	TOOLE DESIGN	301-927-1900	jchezan@tooledesign.com
Raul Irizarry	Center for Latin Progress	860 247 3227	raul-irizarry@ctprf.org
David Tanner	Department of Public Works		david.tanner@hartford.gov
JIM FORD	HARTFORD DPW	860 757-6986	JIM.FORD@HARTFORD.GOV
Rev. James Shanley	St. Joseph Church	860-712-6170	Fr. Shanley@AONCT.ORG
JAKE CORBETT	RESIDENT	860-304-2374	JAKE.A.CORBETT@GMAIL.COM
John Bergoni	BETA Ave. Hotel Preservation	860-513-6883	JBergoni@BetaAve.com
Frank Hughes	Hotel Preservation	860-513-0321	Frank@HartfordPreservation.org
Kevin McKeenan	Resident	860-214-8730	Kevin.mckeenan@gmail.com
TIM COURTNEY	RESIDENT	030-890-2347	ACCOUNTS@TIMCOURTNEY.NET
RANDAL DAVIS	CTDOT		
RICHARD ARMSTRONG	CTDOT		



KEVIN TEDESCO CTDOT

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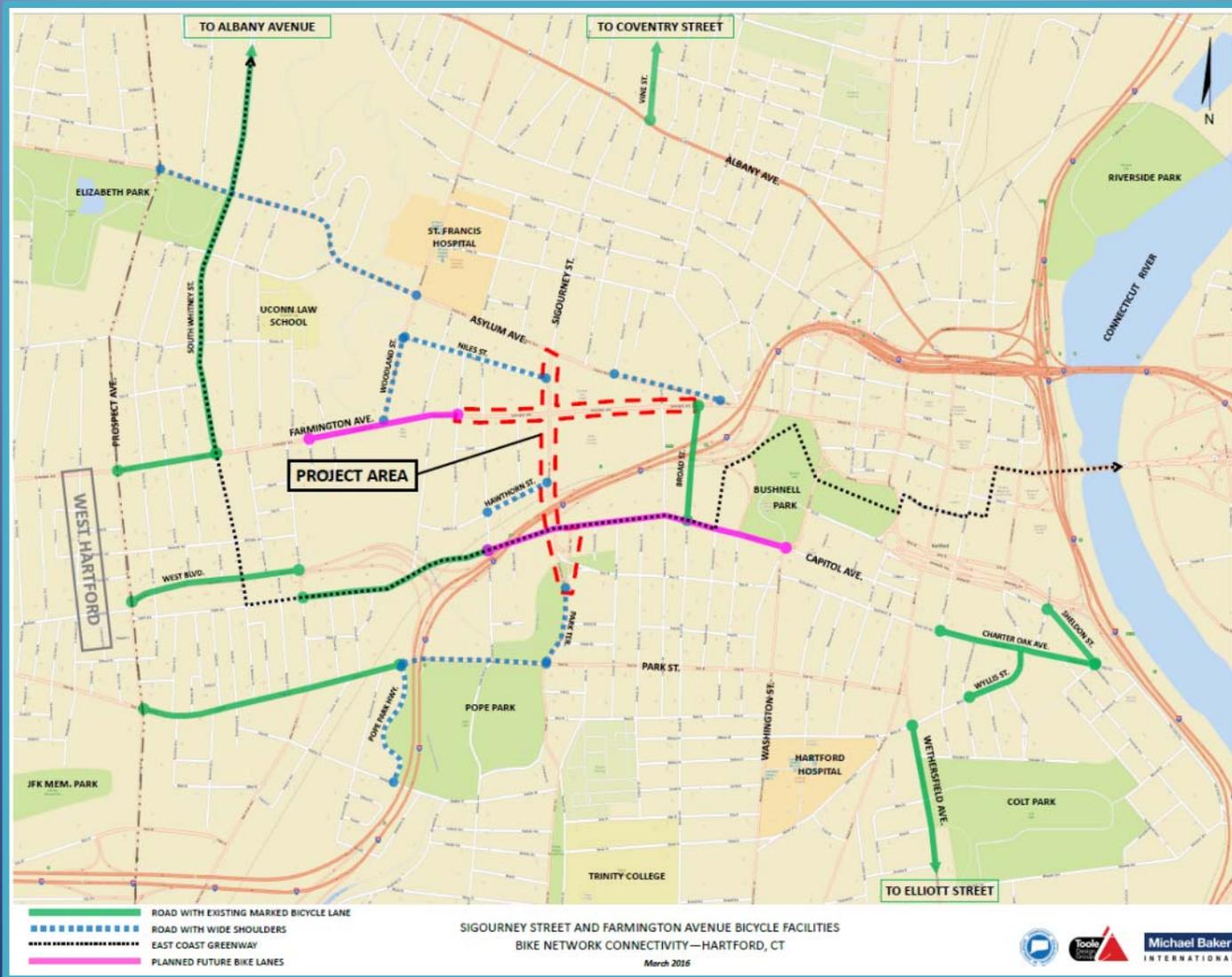
Public Informational Meeting

Sigourney Street and Farmington Avenue Bicycle Facilities

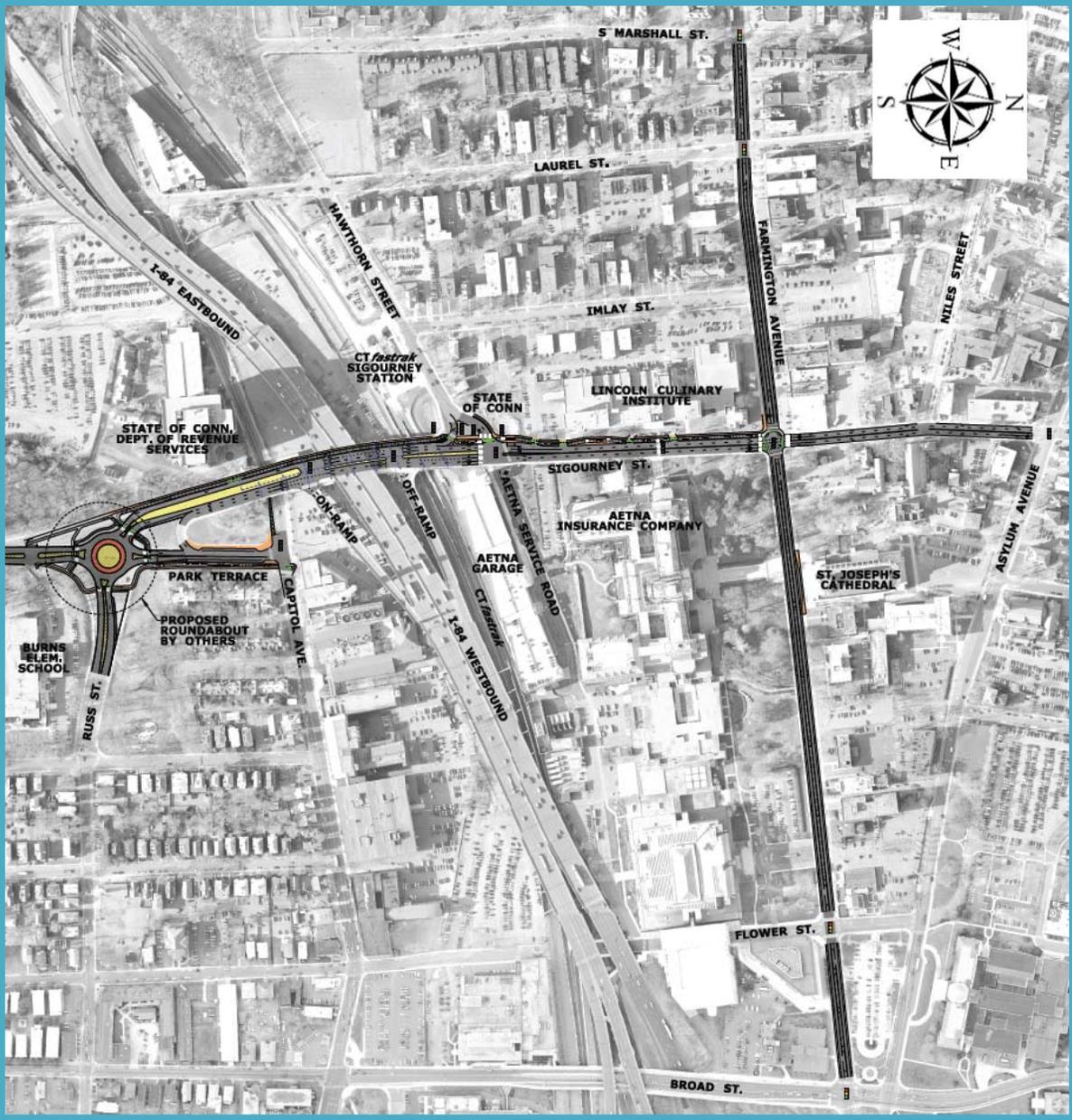
March 16, 2016

The Lyceum, Hartford, CT

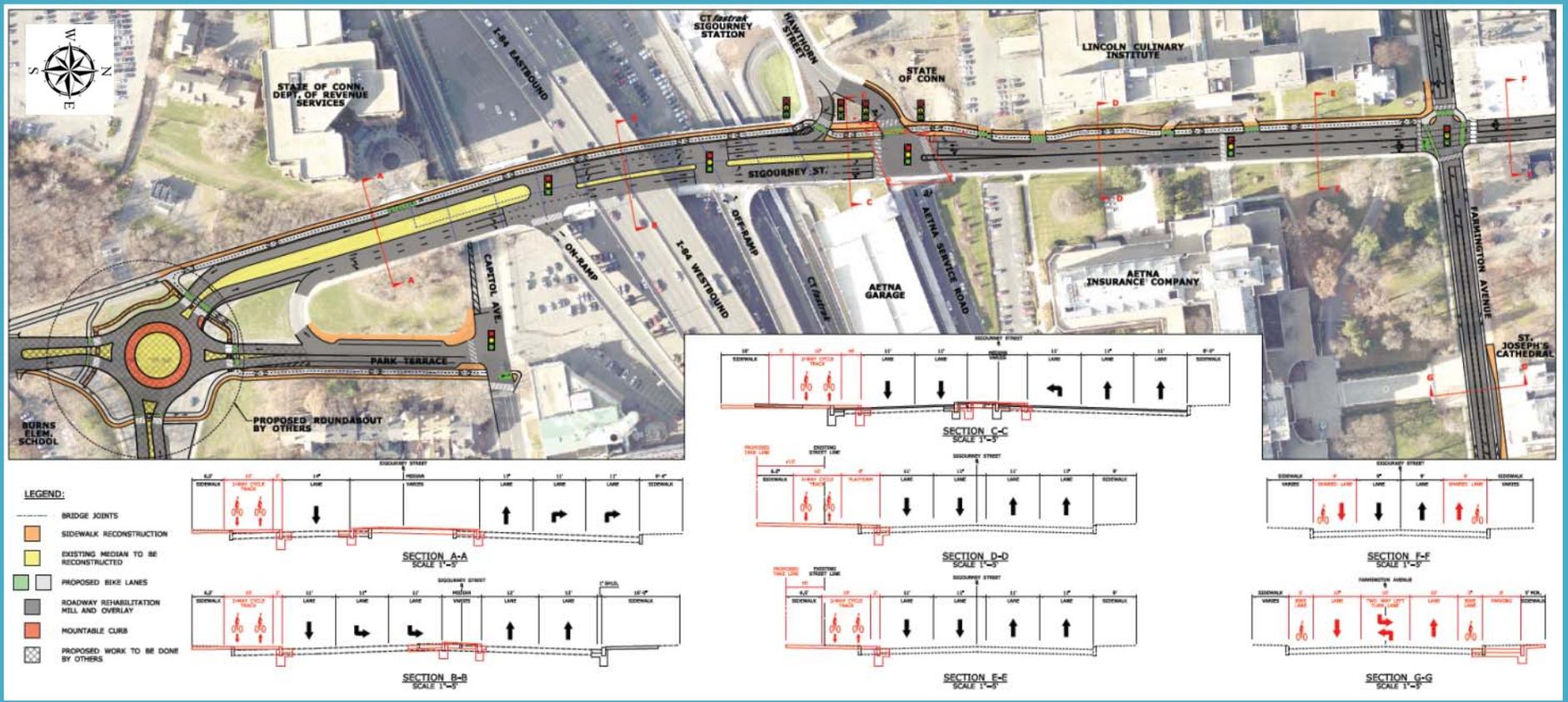
Bike Network Connectivity



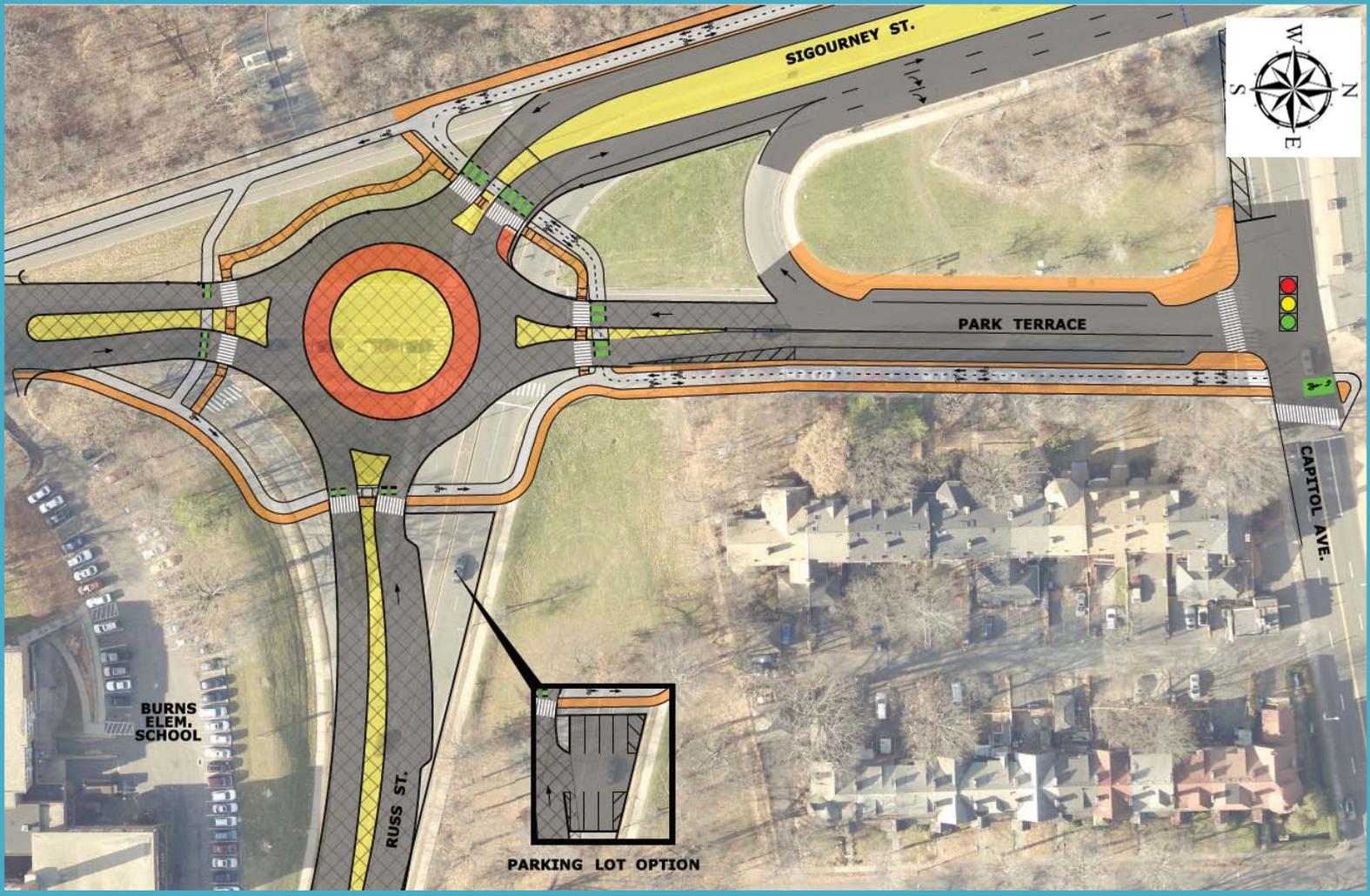
Overall Project Limits



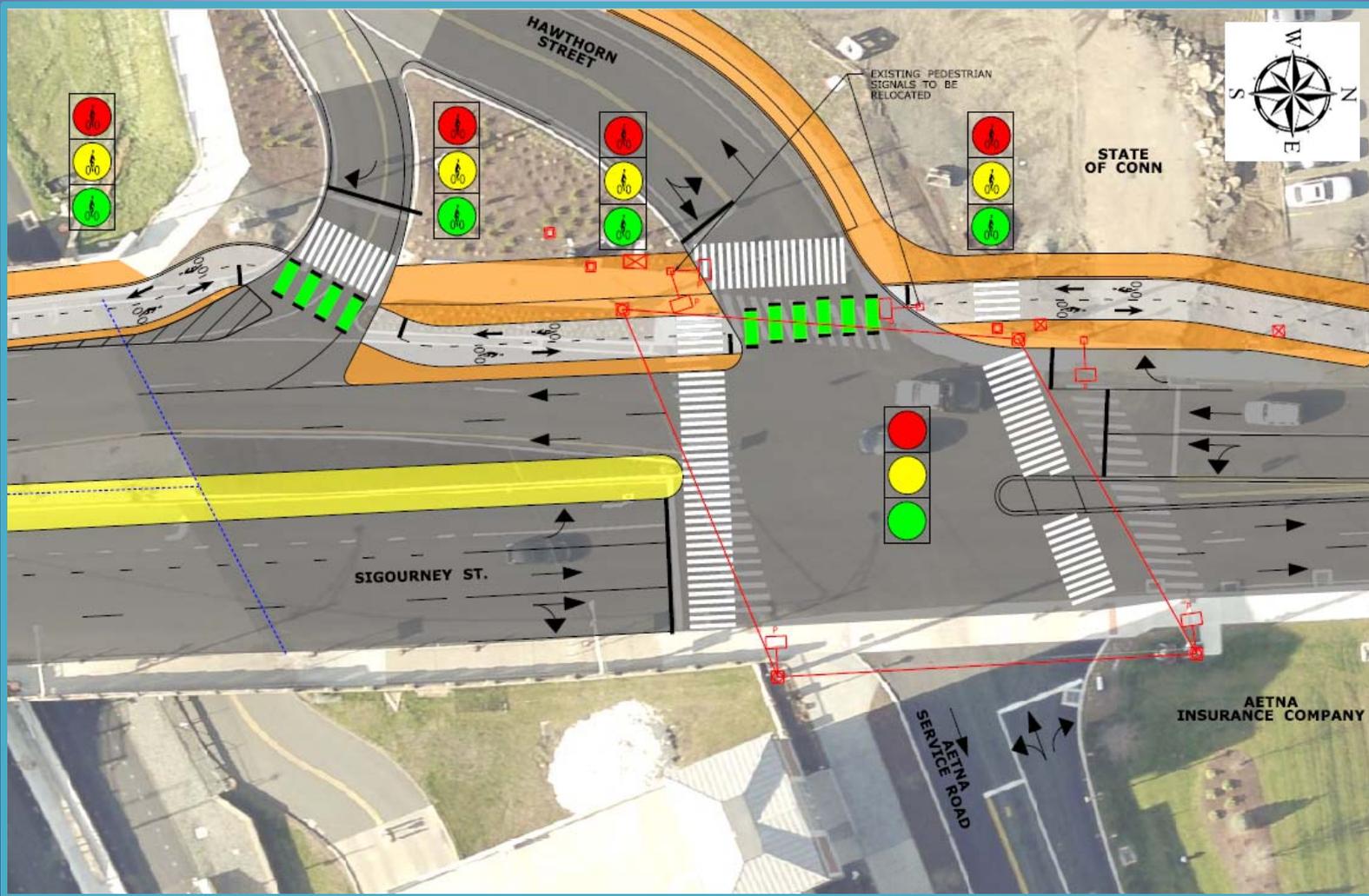
Cycle Track on Sigourney Street



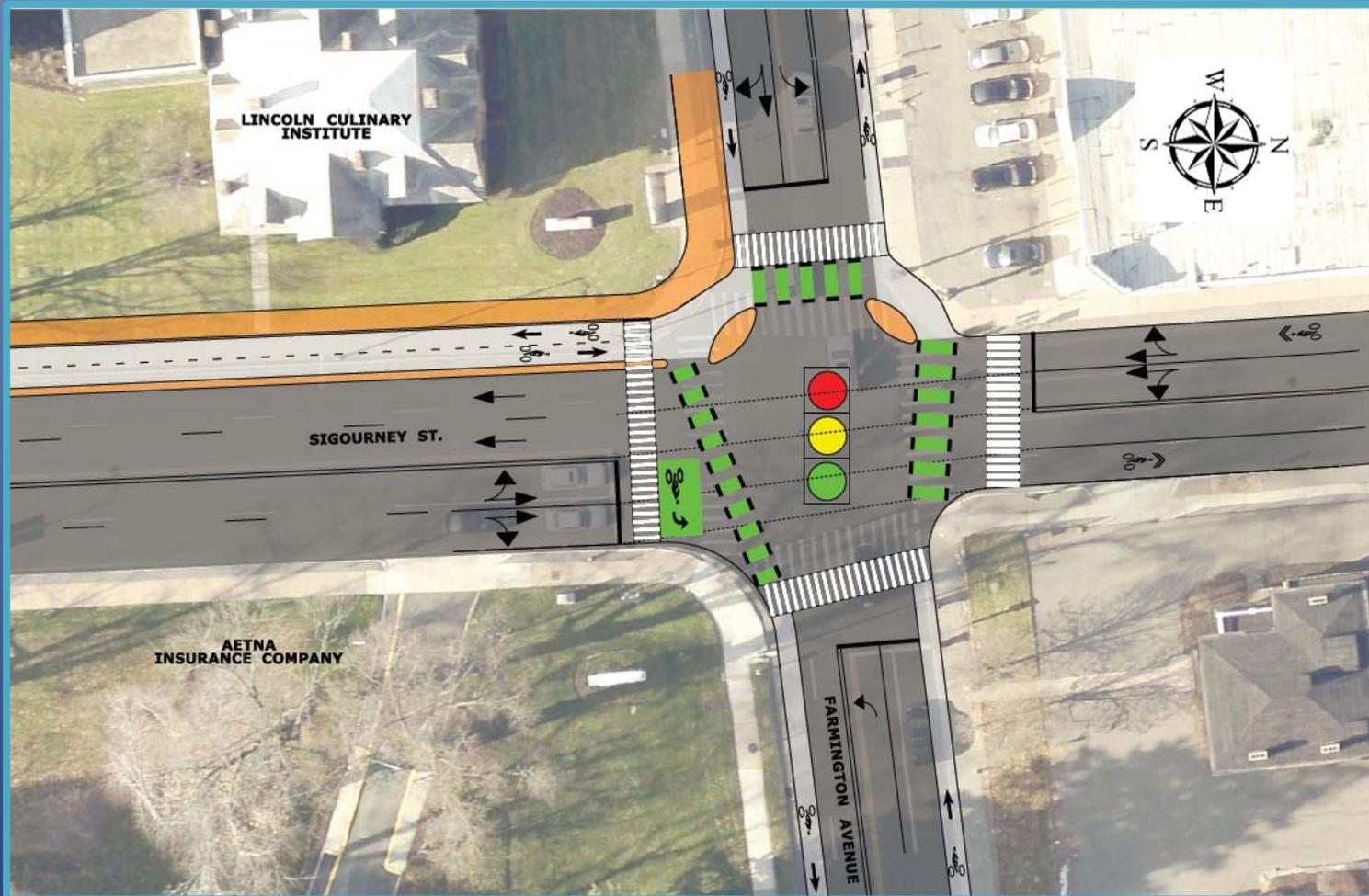
Cycle Track Treatment at Roundabout



Cycle Track Treatment at Hawthorn Street

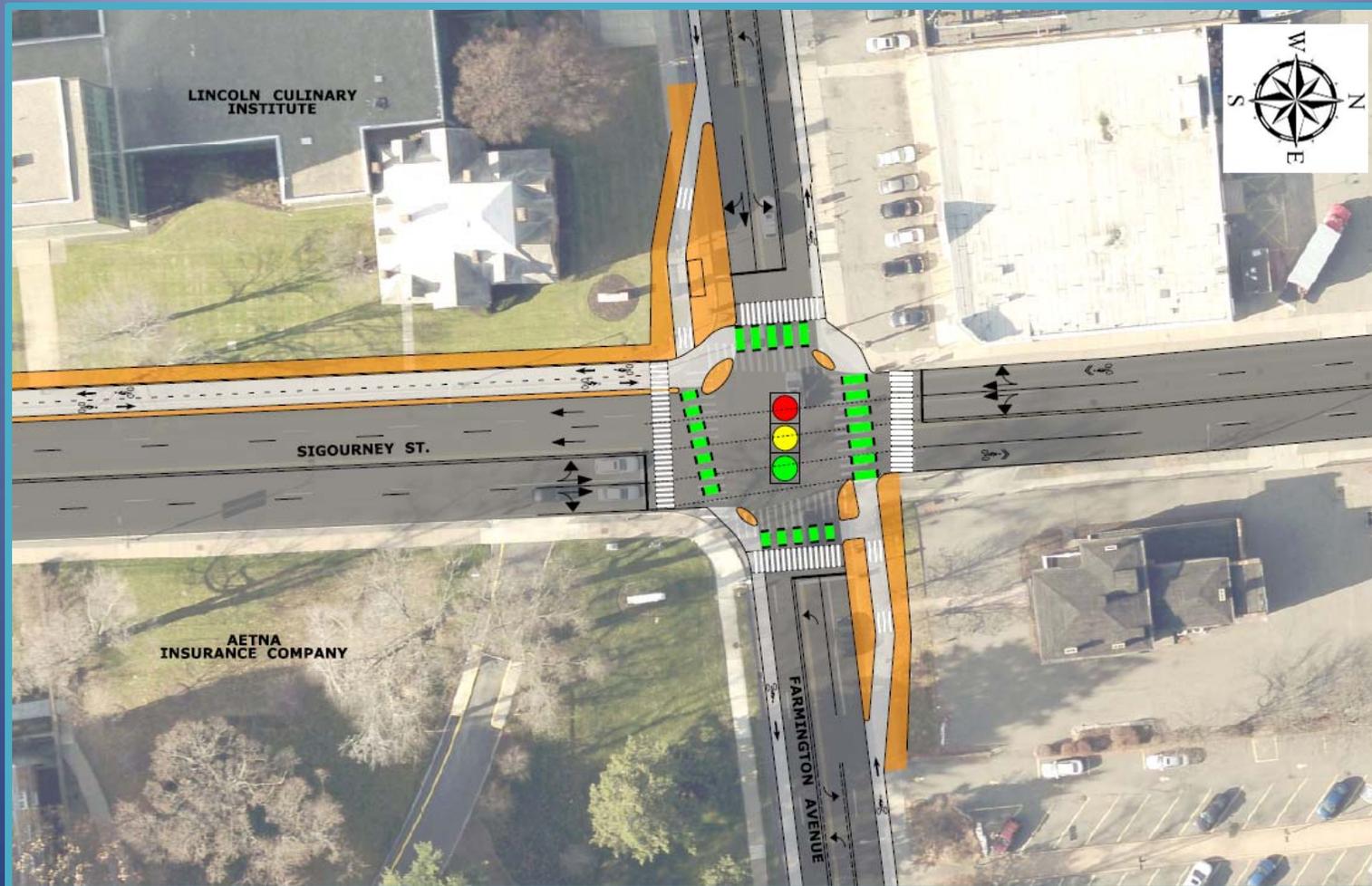


Cycle Track Treatment at Sigourney/Farmington (Option 1)



Partially Protected Intersection with Sharrows

Cycle Track Treatment at Sigourney/Farmington (Option 2)



Fully Protected Intersection with Sharrows

Bicycle Facility Decision Matrix

SIGOURNEY STREET BICYCLE FACILITY DECISION MATRIX

 EVALUATION CRITERIA NEIGHBORHOOD/BICYCLE FACILITY CONNECTIVITY Connections to existing bicycle facilities and neighborhoods		BIKE LANES	ONE-WAY CYCLE TRACK	TWO-WAY CYCLE TRACK
		NEIGHBORHOOD/BICYCLE FACILITY CONNECTIVITY Connections to existing bicycle facilities and neighborhoods	MEDIUM	MEDIUM
Farmington turning movements require two-stage turns or use of travel lanes. Park Terrace facilities not provided.		Hawthorn & Farmington turning movements require two-stage turns or use of travel lanes. Park Terrace facilities not provided.	Neighborhoods are located along the west side of Sigourney. Farmington turning movements occur at a protected intersection. Connections at Hawthorn would benefit from bike lane installation.	
NEIGHBORHOOD/BICYCLE FACILITY CONNECTIVITY Connections to existing bicycle facilities and neighborhoods	MEDIUM	MEDIUM	HIGH	
Northbound lanes provide direct access to Aetna. Southbound lanes provide direct access to west side destinations.		Northbound lanes provide direct access to Aetna. Southbound lanes provide direct access to west side destinations.	Provides direct access to the majority of destinations along Sigourney located along the west side, including the CTfastrak Station, Culinary Arts Academy / Lincoln Education Center, Department of Revenue Services.	
NOTES:				
	GOOD			
	FAIR			
	POOR			

Options

- Bike Lanes
- One-Way Cycle Track
- Two-Way Cycle Track

Evaluation Criteria

- Neighborhood Connectivity
- Micro Connectivity
- Level of Comfort
- Transit Conflicts
- Traffic Conflicts

Why a Cycle Track?

Interested but Concerned



LOWER STRESS
TOLERANCE

Casual and Somewhat Confident



Experienced and Confident



HIGHER STRESS
TOLERANCE

The 1.0%



The 1.0%



The 60%



The 60%



The 60%



Photo By: Michael S. Mellbin

AGES 8 TO 80



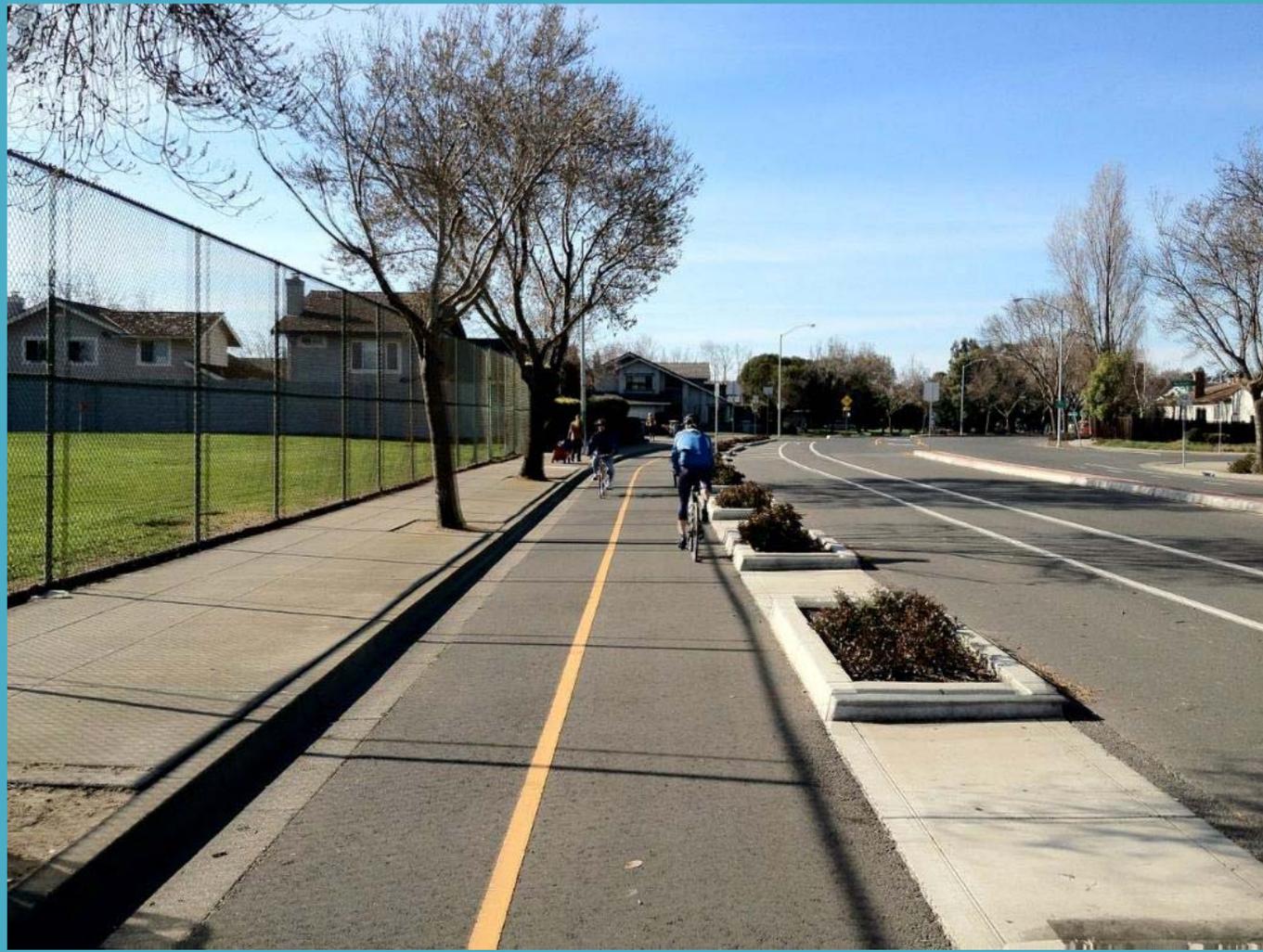
Design Principle: Maximize Comfort, Separate Mass, Volume, and Speed

Allowed per
Public Act 15-41
July 1, 2015

Cycle Track



Alameda, CA



Indianapolis, IN



Washington, DC



Washington, DC



Cambridge, MA



Philadelphia, PA



Seattle, WA



Seattle, WA

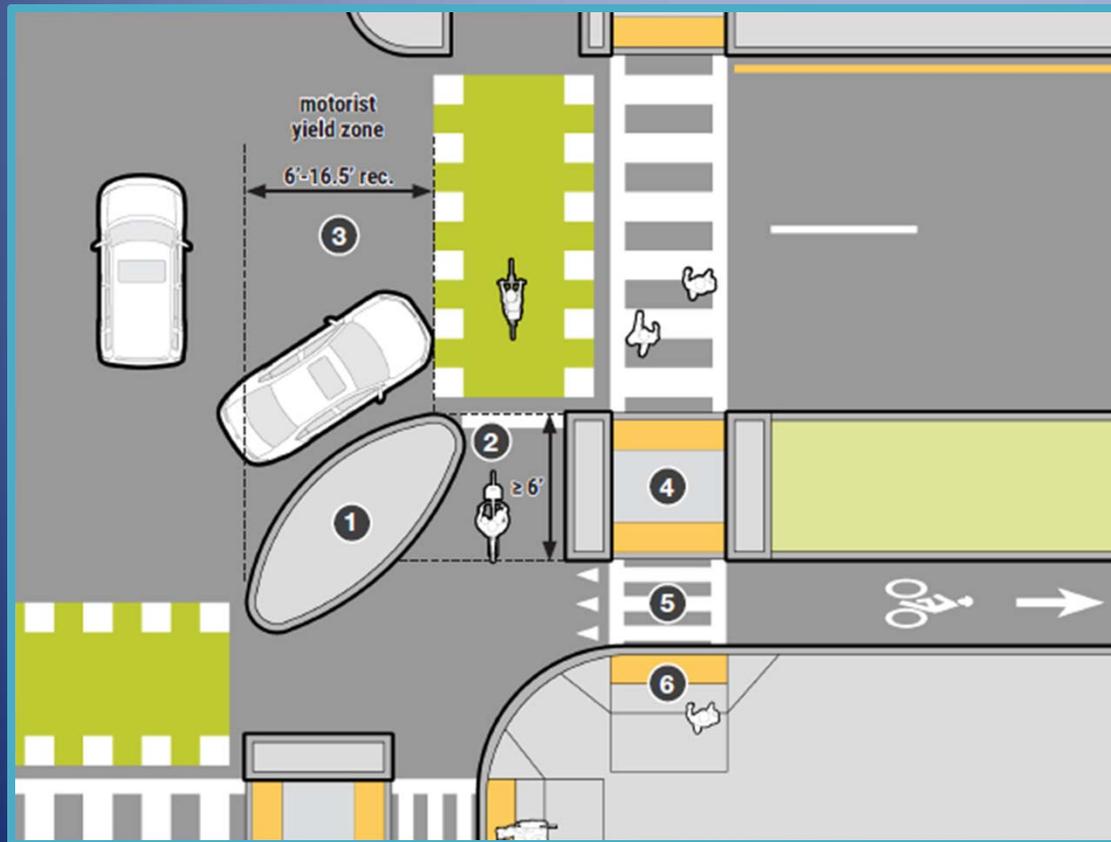


Montreal, Canada



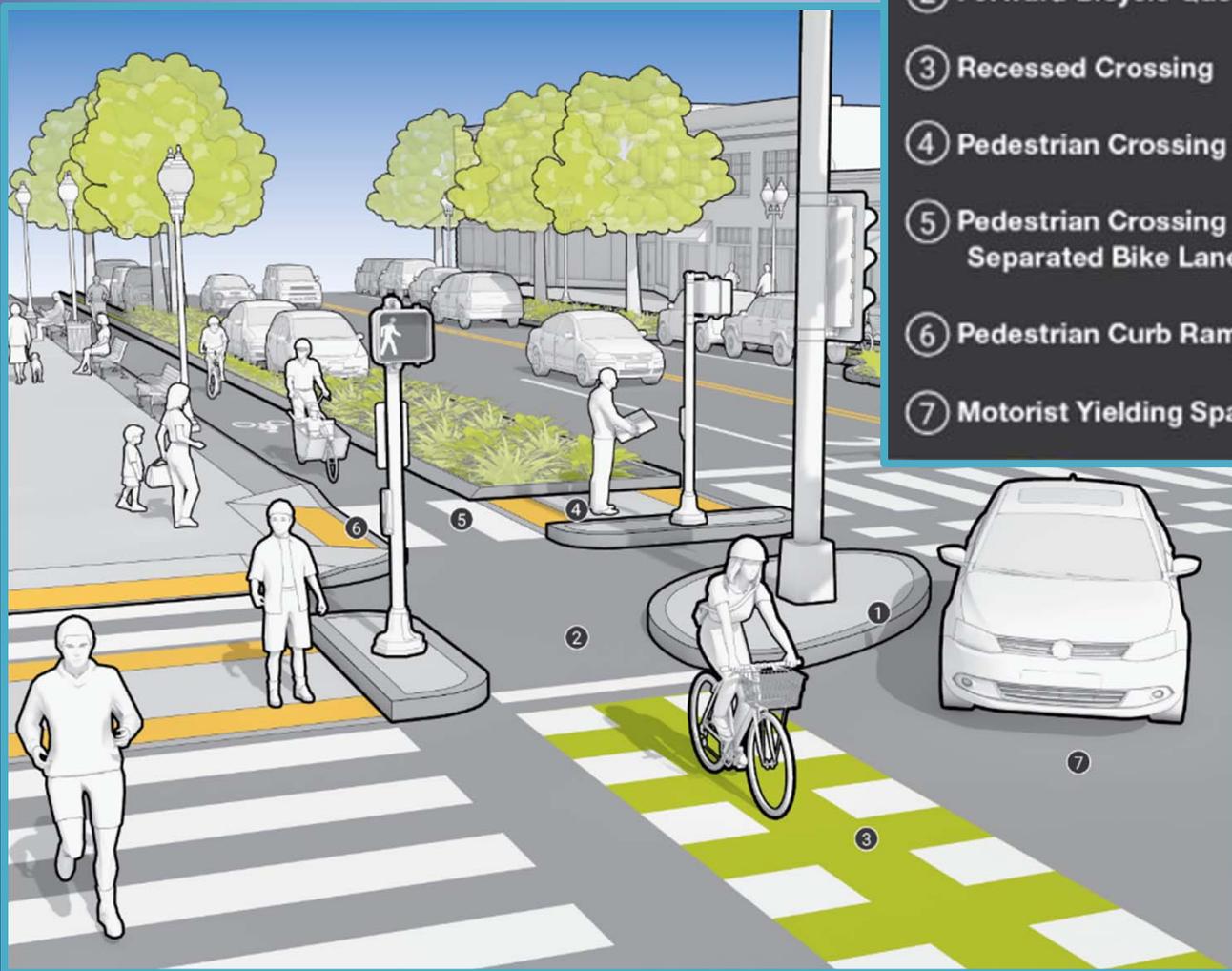
What is a Protected Intersection?

Protected Intersection



- ① Corner Refuge Island
- ② Forward Bicycle Queuing Area
- ③ Motorist Yield Zone
- ④ Pedestrian Crossing Island
- ⑤ Pedestrian Crossing of Separated Bike Lane
- ⑥ Pedestrian Curb Ramp

Protected Intersection



- ① Corner Refuge Island
- ② Forward Bicycle Queuing Area
- ③ Recessed Crossing
- ④ Pedestrian Crossing Island
- ⑤ Pedestrian Crossing of Separated Bike Lane
- ⑥ Pedestrian Curb Ramp
- ⑦ Motorist Yielding Space

Davis, California



Photo By: City of Davis

Austin, TX



Flickr: GregPGriffin

Salt Lake City, UT

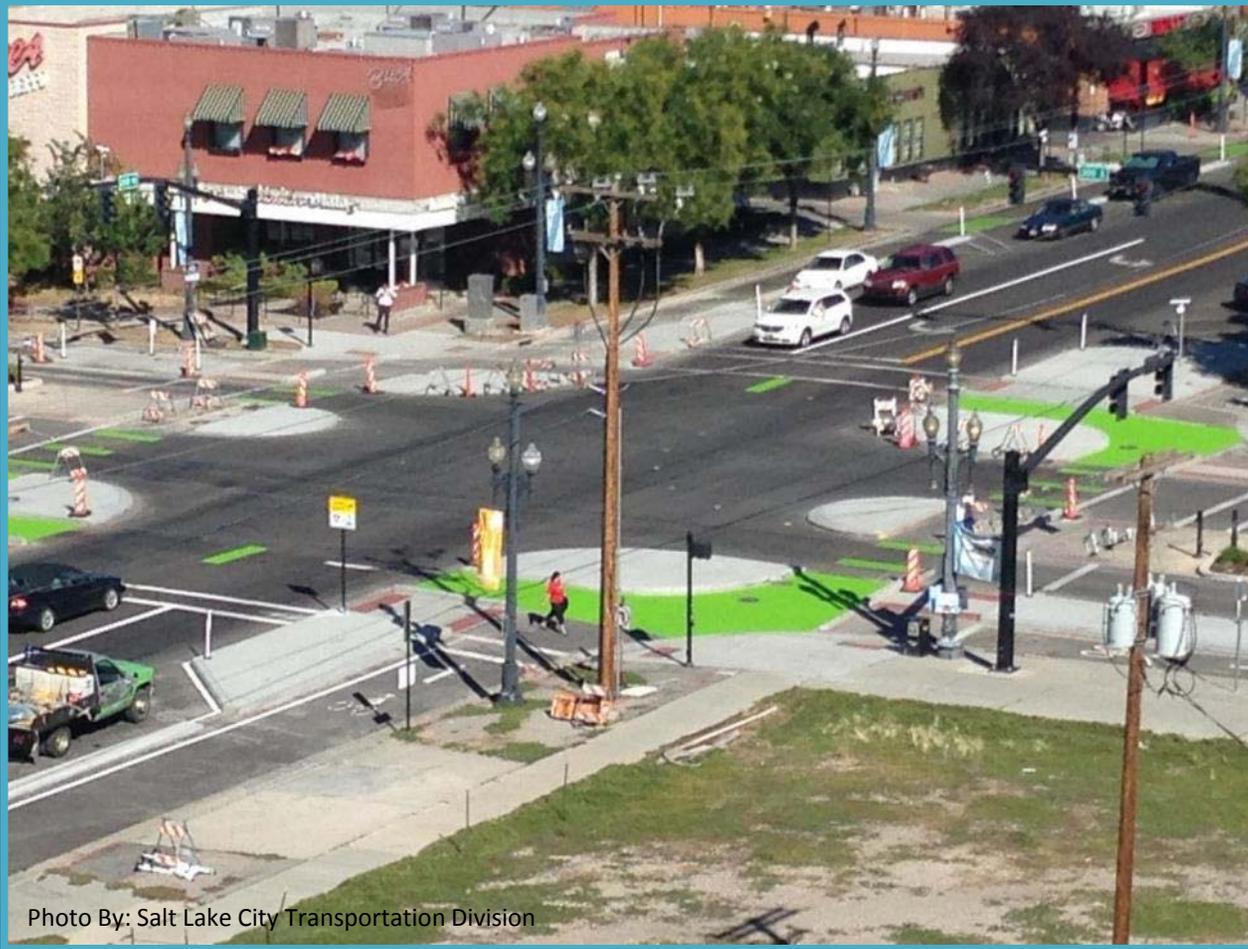


Photo By: Salt Lake City Transportation Division

Chicago, IL



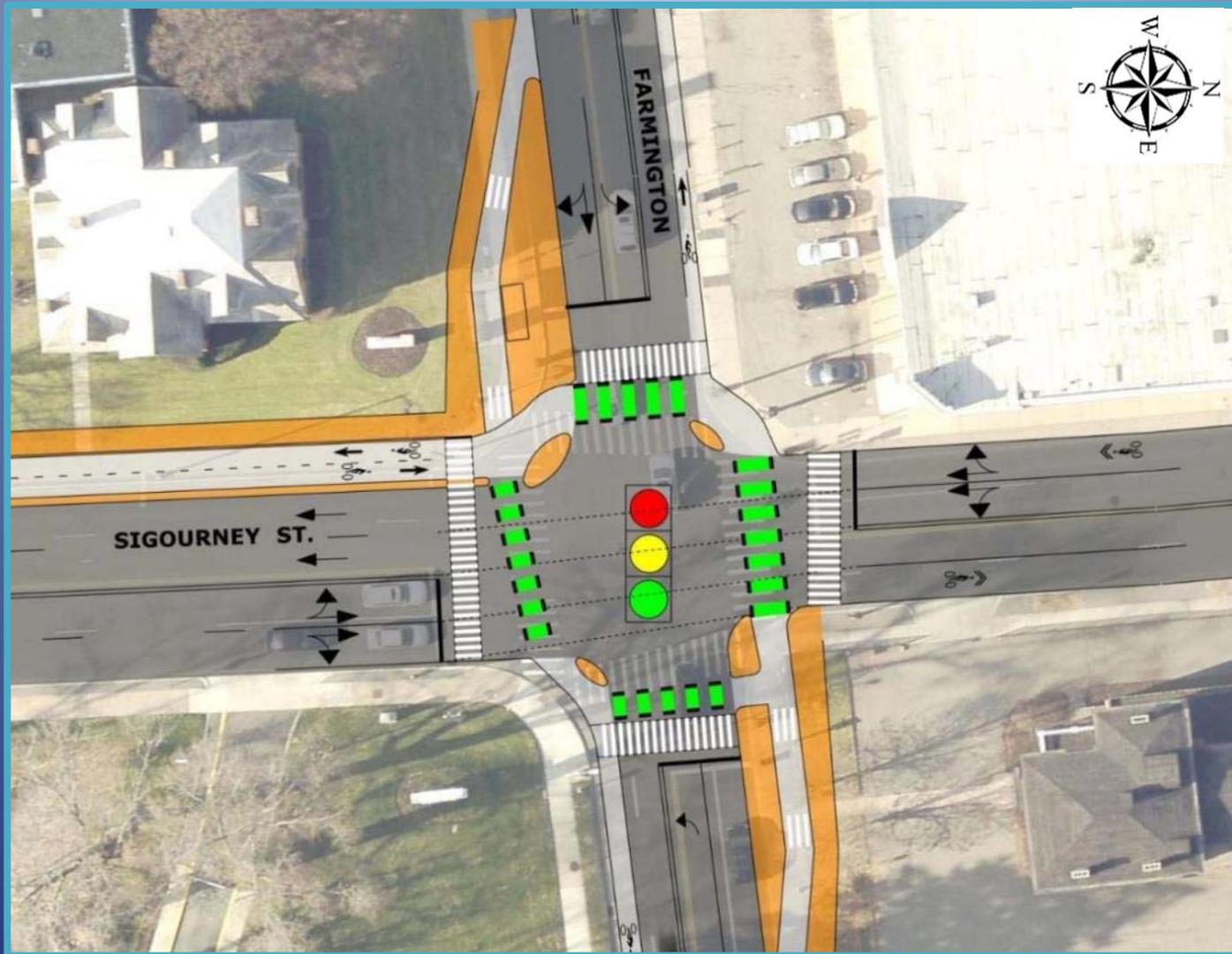
Photo by: John Greenfield

Rotterdam, Netherlands

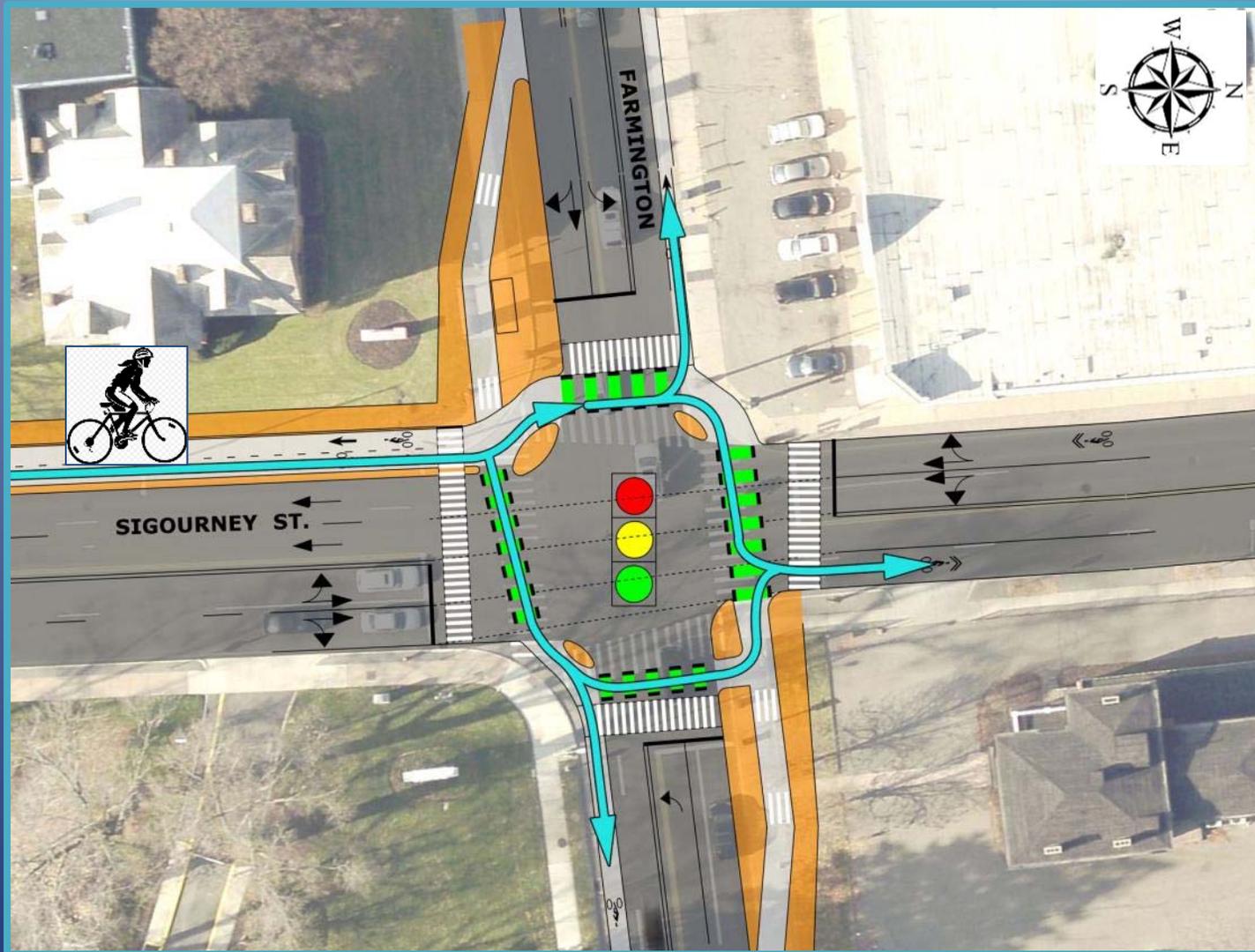


Yielding, Slow Speed Conflict Designs

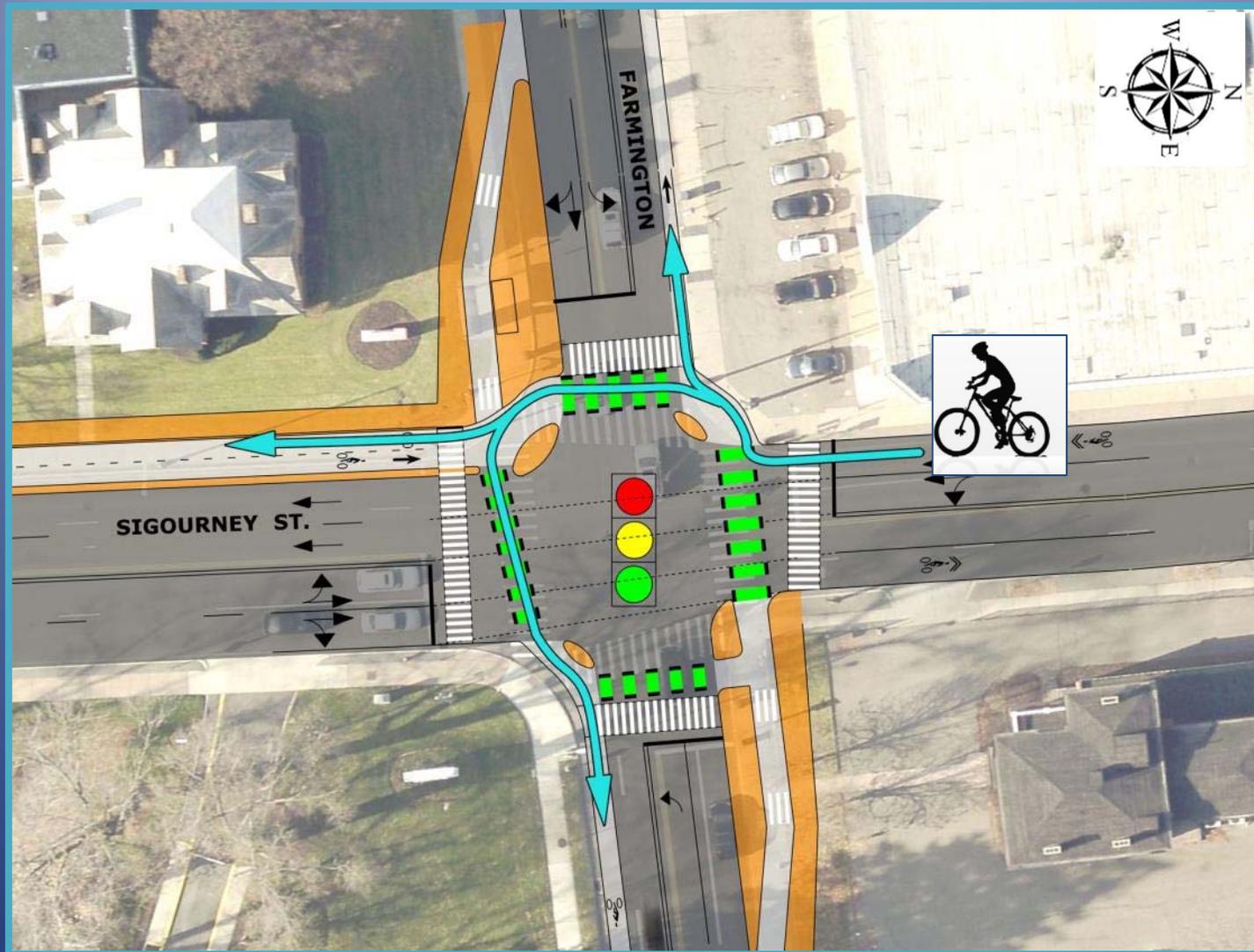
Sigourney/Farmington Intersection (Fully Protected)



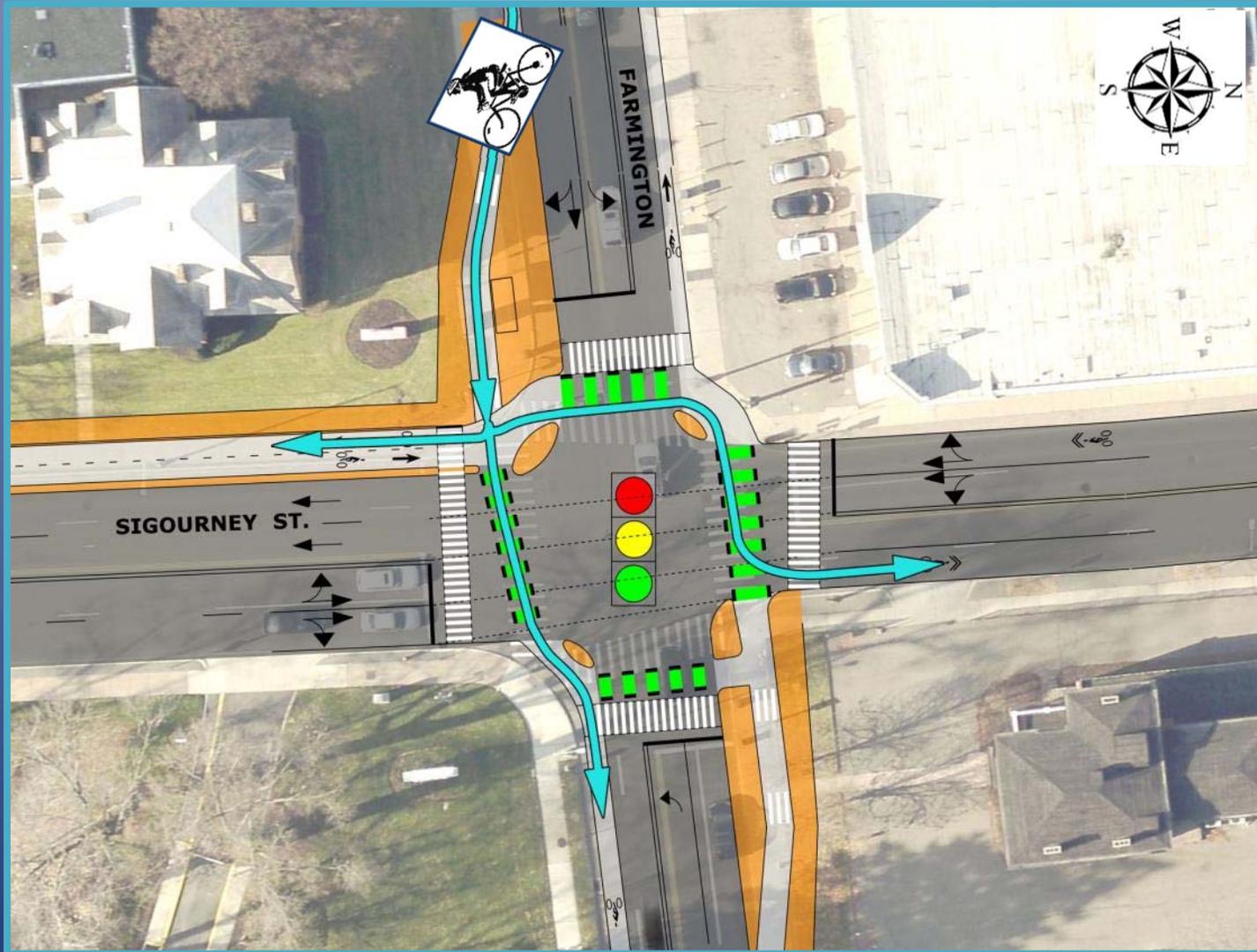
Cyclists Traveling North on Sigourney



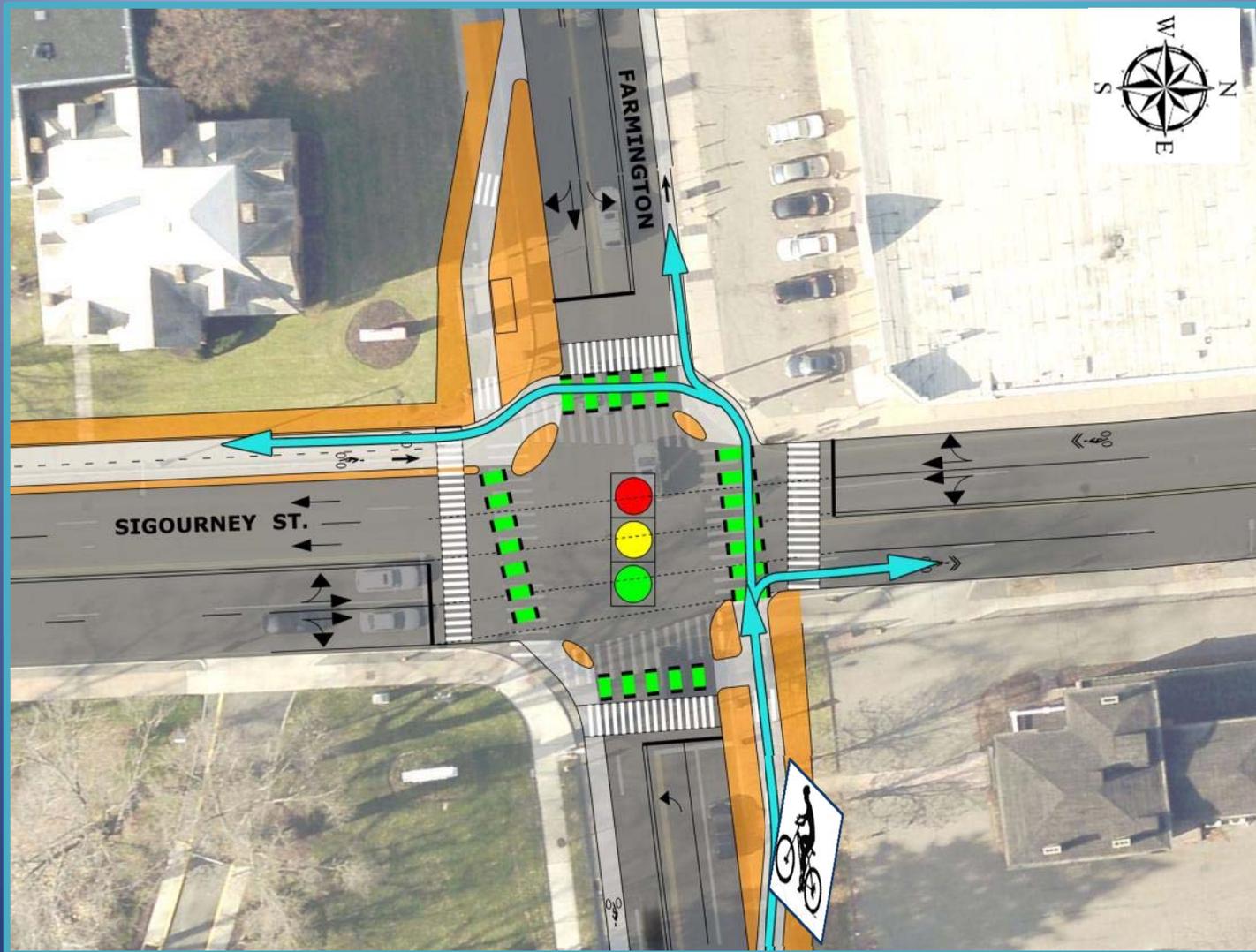
Cyclists Traveling South on Sigourney



Cyclists Traveling East on Farmington



Cyclists Traveling West on Farmington





Questions

SIGOURNEY STREET BICYCLE IMPROVEMENTS

Bicycle improvements are proposed along Sigourney Street from Capitol Avenue to Farmington Avenue. These improvements are intended to serve as a low-stress connection for bicyclists across the I-84 corridor to replace the bicycle access previously provided at Flower Street. One of the options being considered is a two-way separated bike lane, commonly known to as a two-way cycle track, along the west side of Sigourney Street.

Cycle tracks are exclusive spaces for bicyclists that are physically separated from motor vehicles and pedestrians. Cycle tracks are common in some European cities and have now been installed in 82 cities around the United States. Research shows that cycle tracks attract more people to bicycling, improve safety for all road users, and are preferred by both motorists and bicyclists. The utilized design principles are consistent with the Federal Highway Administration's *Separated Bike Lane Planning and Design Guide*, and are allowed in

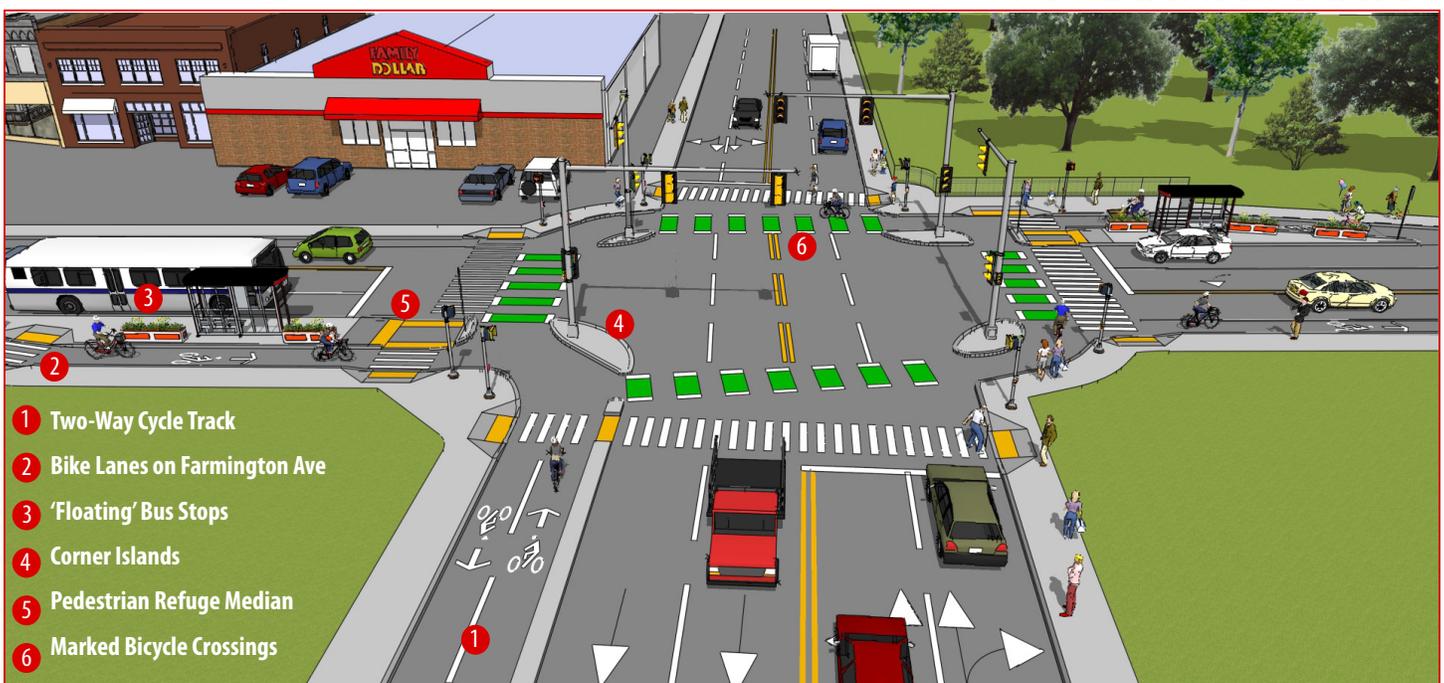
Connecticut in accordance with Public Act 15-41, dated July 1, 2015.

A two-way cycle track option is being considered along Sigourney Street because it:

1. Provides a more comfortable facility for bicyclists of all ages and experience levels.
2. Reduces the number of conflict points between bicyclists and motorists, particularly at high volume on-ramps and driveways, and eliminates mixing zone conflicts where bikes merge with motor vehicles.
3. Eliminates conflicts at bus stops by using 'floating' bus stops.
4. Creates improved connectivity to the CTfastrak Sigourney Street Station.
5. Saves space within the corridor compared with a pair of one-way cycle track option.



Two-Way Cycle Track
Philadelphia, PA



- 1 Two-Way Cycle Track
- 2 Bike Lanes on Farmington Ave
- 3 'Floating' Bus Stops
- 4 Corner Islands
- 5 Pedestrian Refuge Median
- 6 Marked Bicycle Crossings

Rendering looking north on Sigourney Street at Farmington Ave. showing a two-way cycle track and protected intersection.

SIGOURNEY STREET BICYCLE FACILITY DECISION MATRIX



EVALUATION CRITERIA

NEIGHBORHOOD/BICYCLE FACILITY CONNECTIVITY

Provides connections to existing bicycle facilities and neighborhoods.

NOTES:

MICRO CONNECTIVITY

Provides connections to parks, businesses, schools, transit, or cultural resources such as museums, libraries, etc.

NOTES:

	BIKE LANES	ONE-WAY CYCLE TRACK	TWO-WAY CYCLE TRACK
MEDIUM	MEDIUM	HIGH	
Hawthorn & Farmington turning movements require two-stage turns or use of travel lanes. Park Terrace facilities not provided.	Hawthorn & Farmington turning movements require two-stage turns or use of travel lanes. Park Terrace facilities not provided.	Neighborhoods are located along the west side of Sigourney. Farmington turning movements occur at a protected intersection. Connections at Hawthorn would benefit from bike lane installation.	
MEDIUM	MEDIUM	HIGH	
Northbound lanes provide direct access to Aetna. Southbound lanes provide direct access to west side destinations.	Northbound lanes provide direct access to Aetna. Southbound lanes provide direct access to west side destinations.	Provides direct access to the majority of destinations along Sigourney located along the west side, including the CTfastrak Station, Culinary Arts Academy / Lincoln Education Center, Department of Revenue Services.	

LEGEND

GOOD
FAIR
POOR

SIGOURNEY STREET BICYCLE FACILITY DECISION MATRIX



EVALUATION CRITERIA

LEVEL OF COMFORT

The comfort and ease of use felt by people who use the route. Designs that accommodates children and inexperienced or concerned bicycle riders.

NOTES:

	BIKE LANES	ONE-WAY CYCLE TRACK	TWO-WAY CYCLE TRACK
LEVEL OF COMFORT	<p>LOW</p> <p>Requires mixing of bicycles and right turning vehicles at the I-84 on-ramp and Aetna Service Road. Connections at Farmington would require mixing with vehicles or two-stage turns. Capitol connections require shared lane use of Park Terrace.</p>	<p>LOW</p> <p>Requires mixing of bicycles and right turning vehicles at Aetna Service Road. Locates bicyclists between through and right-turning vehicles at I-84 on-ramp. Connections at Farmington would require mixing with vehicles or two-stage turns. Capitol connections require shared lane use of Park Terrace, including conflicts at right-turn slip ramp to Sigourney.</p>	<p>MEDIUM / HIGH</p> <p>Bicyclists separated from motor vehicles with a minimum 2' wide buffer in addition to a vertical separation. Conflicts with vehicles are limited to low-volume driveways and Hawthorn (which will include signalized control to minimize conflicts.) Connections at Farmington would occur using a protected intersection.</p> <p>Because this would be the first two-way cycle track and protected intersection in the area, outreach should occur to educate the public about the purpose and functionality of these features.</p>

LEGEND

GOOD
FAIR
POOR

SIGOURNEY STREET BICYCLE FACILITY DECISION MATRIX



EVALUATION CRITERIA

	BIKE LANES	ONE-WAY CYCLE TRACK	TWO-WAY CYCLE TRACK
TRANSIT CONFLICTS Bikeway route conflicts with transit loading and unloading. NOTES:	MEDIUM Bus stops on Sigourney are accommodated using "floating" bus stops that eliminate the bus/bike conflict. Bus stops on Farmington conflict between buses and bikes.	MEDIUM Bus stops on Sigourney are accommodated using "floating" bus stops that eliminate the bus/bike conflict. Bus stops on Farmington conflict between buses and bikes.	LOW Bus stops on Sigourney and Farmington are accommodated using "floating" bus stops that eliminate the bus/bike conflicts.
TRAFFIC CONFLICTS # of vehicle conflict points* NOTES:	9-NB, 14-SB 6 High Volume Roadways 1 High Volume Driveway 7 Low Volume Driveways	10-NB, 14-SB 7 High Volume Roadways 1 High Volume Driveway 7 Low Volume Driveways	13-NB/SB 4 High Volume Roadways 5 Low Volume Driveways

LEGEND

GOOD
FAIR
POOR

* Assumes Capitol Avenue to Sigourney Street north of Farmington Avenue