



Bicycle & Pedestrian Planning Committee

February 13, 2024



AGENDA

1. Roll Call
2. Public Forum
- 3. Approval of Minutes: December 12, 2023***
4. CRCOG Updates and News
 - Capitol Region East Coast Greenway Study
 - CTDOT Micro Grant Program
 - CRCOG Bike Ped Priority Network Plan
 - 2024 LOTCIP Solicitation
 - Other
5. Presentation – CRCOG Roundabout Feasibility Study
6. What's New in My Town
7. Other Business
8. Adjournment

Roll Call

Public Comment

Approval of Minutes December 12, 2023

Bicycle and Pedestrian Planning Committee Meeting – DRAFT Minutes

TIME: 12:00pm

DATE: Tuesday, December 12, 2023

PLACE: Zoom Call

<i>Name</i>	<i>Affiliation</i>
Amy Watkins	Watch for Me CT
Bob Dickinson	Resident of Bloomfield
CJ Gandza	City of New Britain
Grace Yi	City of Hartford
Hiram Peck	Town of Avon
Jay Stange	Transport Hartford
Jason Scott	Town of Rocky Hill
Michele Lipe	Town of South Windsor
Owen Deutsch	City of Hartford
Patrice Carson	Town of Bolton

CRCOG Staff

Anaka Maher
Caitlin Palmer
Jacob Knowlton
Heidi Samokar
Lindsay Drotman
Mike Cipriano
Rob Aloise

Roll Call

1. **Call to Order (00:00)** Caitlin Palmer called the meeting to order. Attendees were asked to introduce themselves.

Updates and News



Capitol Region East Coast Greenway Study

- Simsbury
 - Resolution unanimously endorsed by CRCOG Transportation and Policy Boards
- Bloomfield
 - Meet with Trails Committee to preview revised route maps, evaluation scores and determine “benefits and drawbacks”
- Hartford
 - Reviewed Griffin Line Report
- East Hartford
 - Reviewed Benefits Analysis for Silver Lane and Brewer Street Alignments



Updates and News

CTDOT Micro Grant Program

CTDOT currently has a [survey](#) out to gauge interest in the program and better understand the needs of applicants.

The deadline for responses is now extended through to **February 23rd**.

Eligible Applicants Include:



Municipalities

Schools



School Districts

NPO's



Micro Grant Program

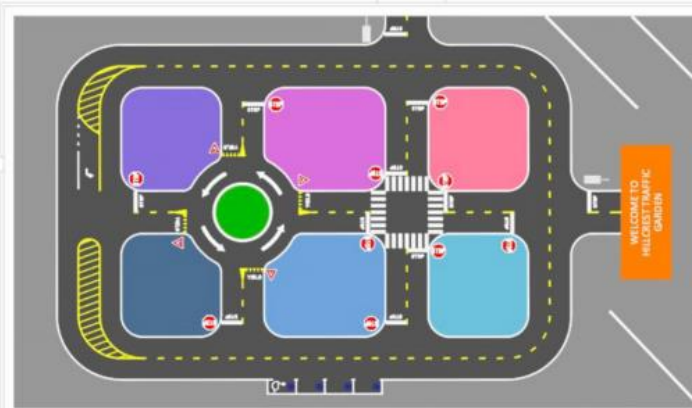
Eligible Expenses:



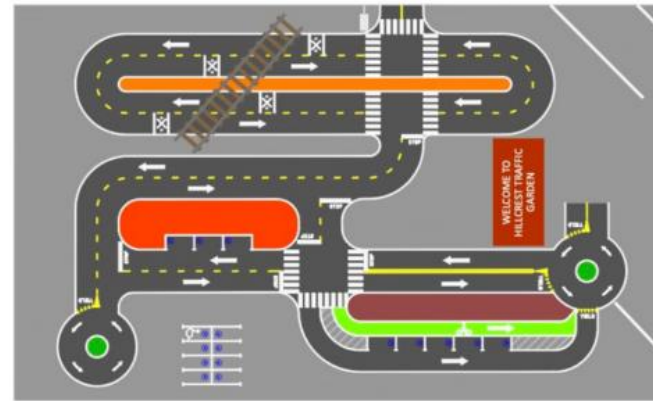
Maintenance Stations



Helmets



Traffic Gardens



Training Classes



Safety

Updates and News

CRCOG Bike Ped Priority Network Plan

- Updated Scope of Work to reflect comments and feedback received by the Bike Ped Committee in December.
- Currently on pace to submit Scope and RFQ to CTDOT for review
- Consultant is anticipated to be hired this spring

Updates and News

LOCAL TRANSPORTATION CAPITAL IMPROVEMENT PROGRAM (LOTICIP)

Request For Proposals: 2024 LOTICIP Solicitation

The Capitol Region Council of Governments (CRCOG) is inviting municipalities to submit proposals for Transportation Improvement Projects for funding under the Local Transportation Capital Improvement Program (LOTICIP). CRCOG is reserving \$42 million from the following categories for this purpose: Reconstruction (roadway and bridge) projects, Bicycle/Pedestrian projects, Pavement Rehabilitation projects and Stand-Alone Sidewalk projects. Each municipality may submit materials for two (2) Project proposals in any combination, however CRCOG will limit the award to no more than \$4 million per municipality.

Submissions must be received by **February 21, 2024 by 2:00pm.**

Please submit questions to Sotoria Montanari – LOTICIP Program Manager
smontanari@crcog.org

Updates and News

Other

- 2024 Walk Audits
- RAISE Planning Grant

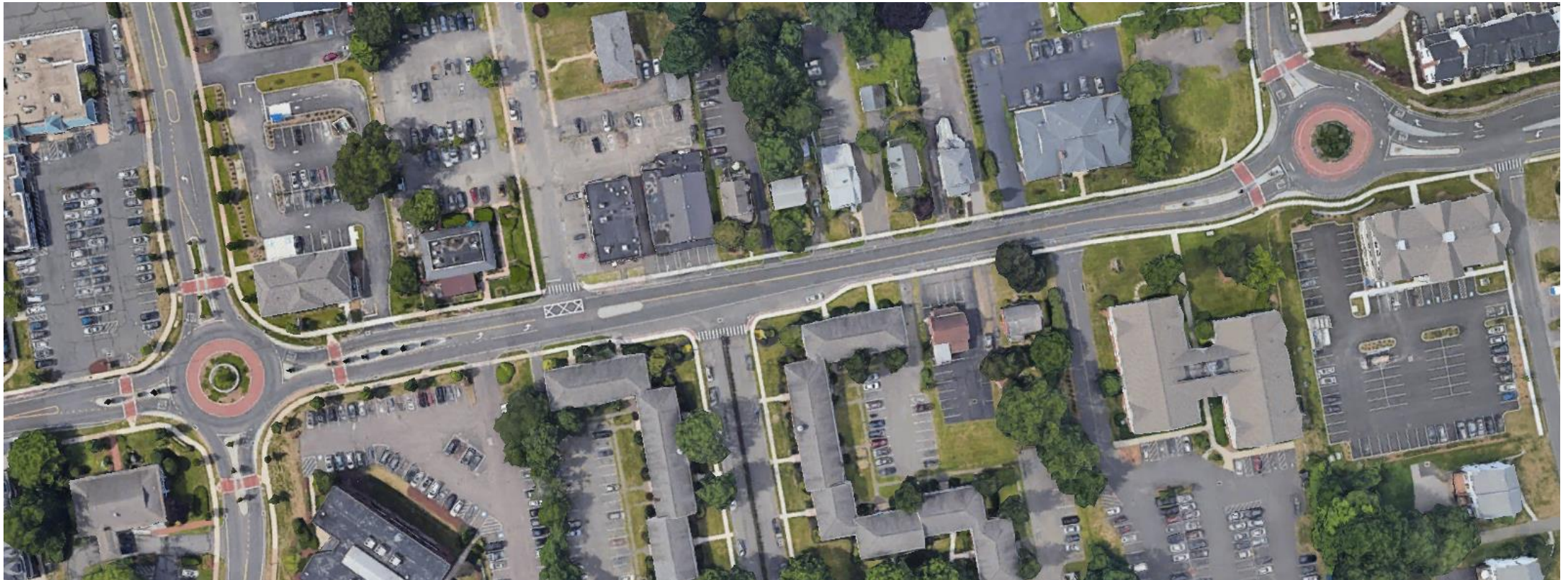
CRCOG Roundabout Feasibility Study

An aerial photograph of a roundabout with a central landscaped island. The roundabout is surrounded by green fields and trees. The text "CRCOG Roundabout Feasibility Study" is overlaid at the top.

Roger Krahn, P.E. – Principal Transportation Engineer
Mike Cipriano, AICP – Senior Transportation Planner

Roundabouts

- What is a Roundabout?
 - Developed in the 1960's in the U.K.
 - Able to handle heavy traffic
 - Used for efficiency and safety
 - Versatile in size, shape and design



Hebron Avenue - Glastonbury

Hartford LOTCIP – New Britain Ave @ White Street and Chandler Street



Traffic Calming Circles - NOT Roundabouts!

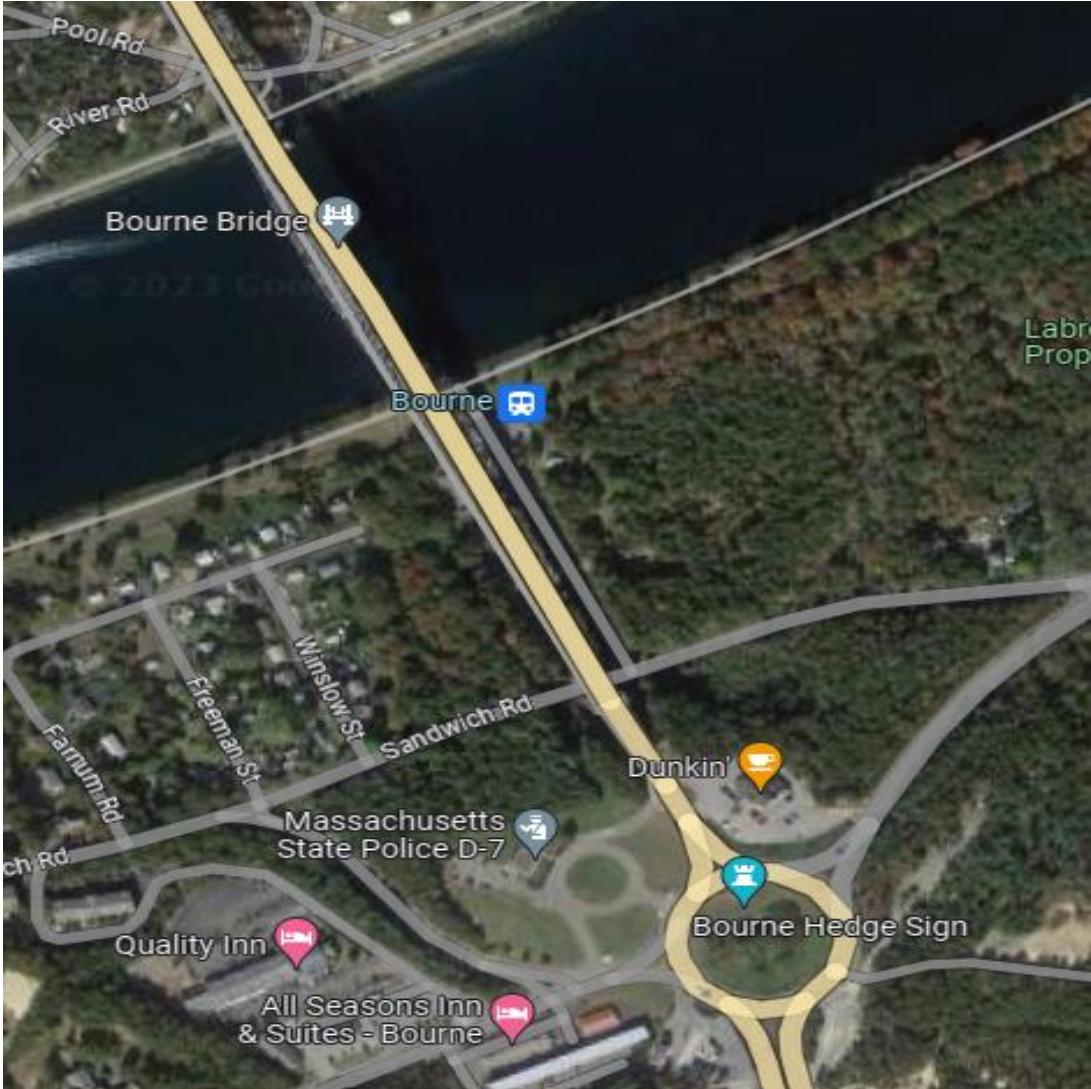
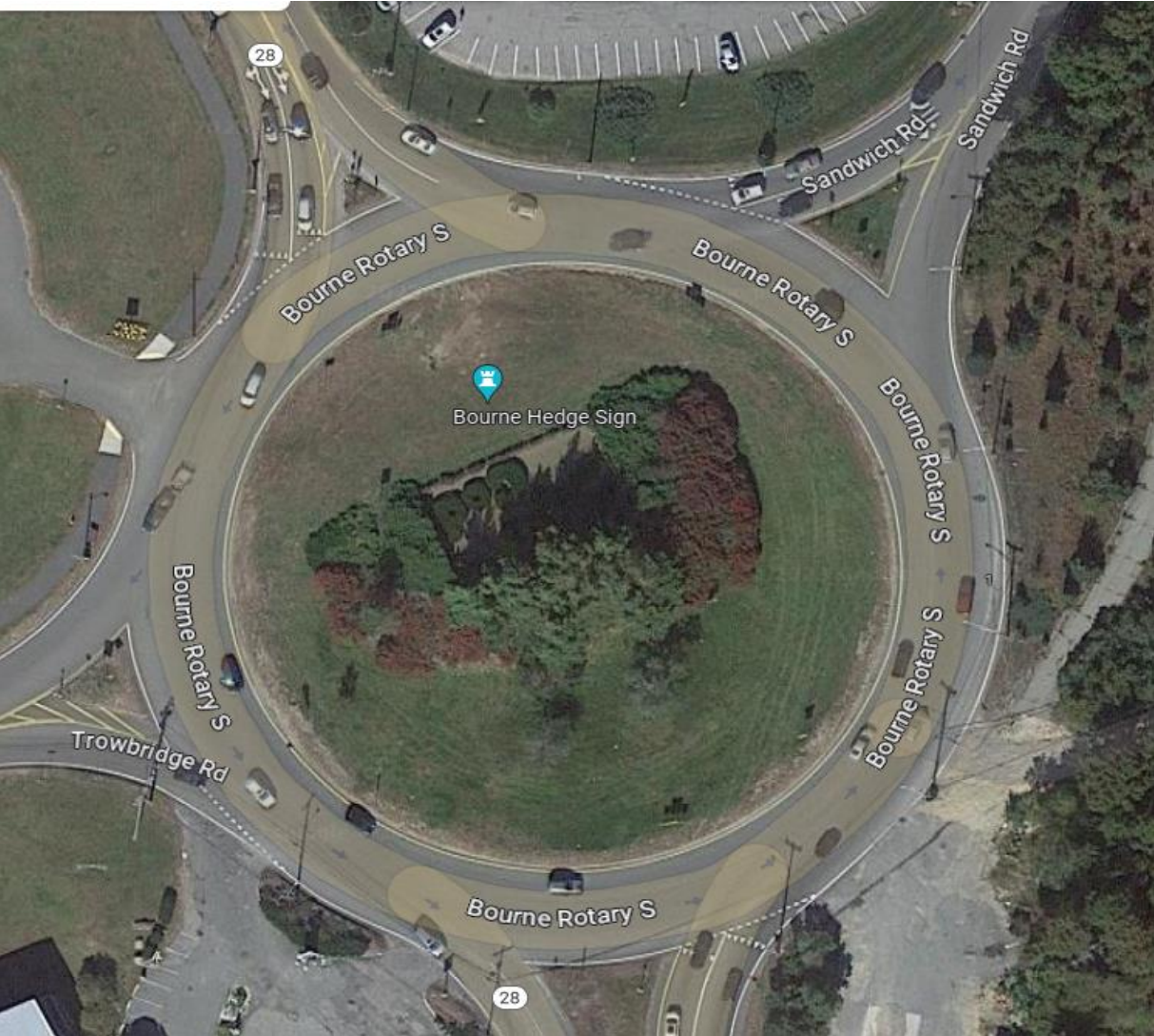


Traffic Circles - NOT Roundabouts!

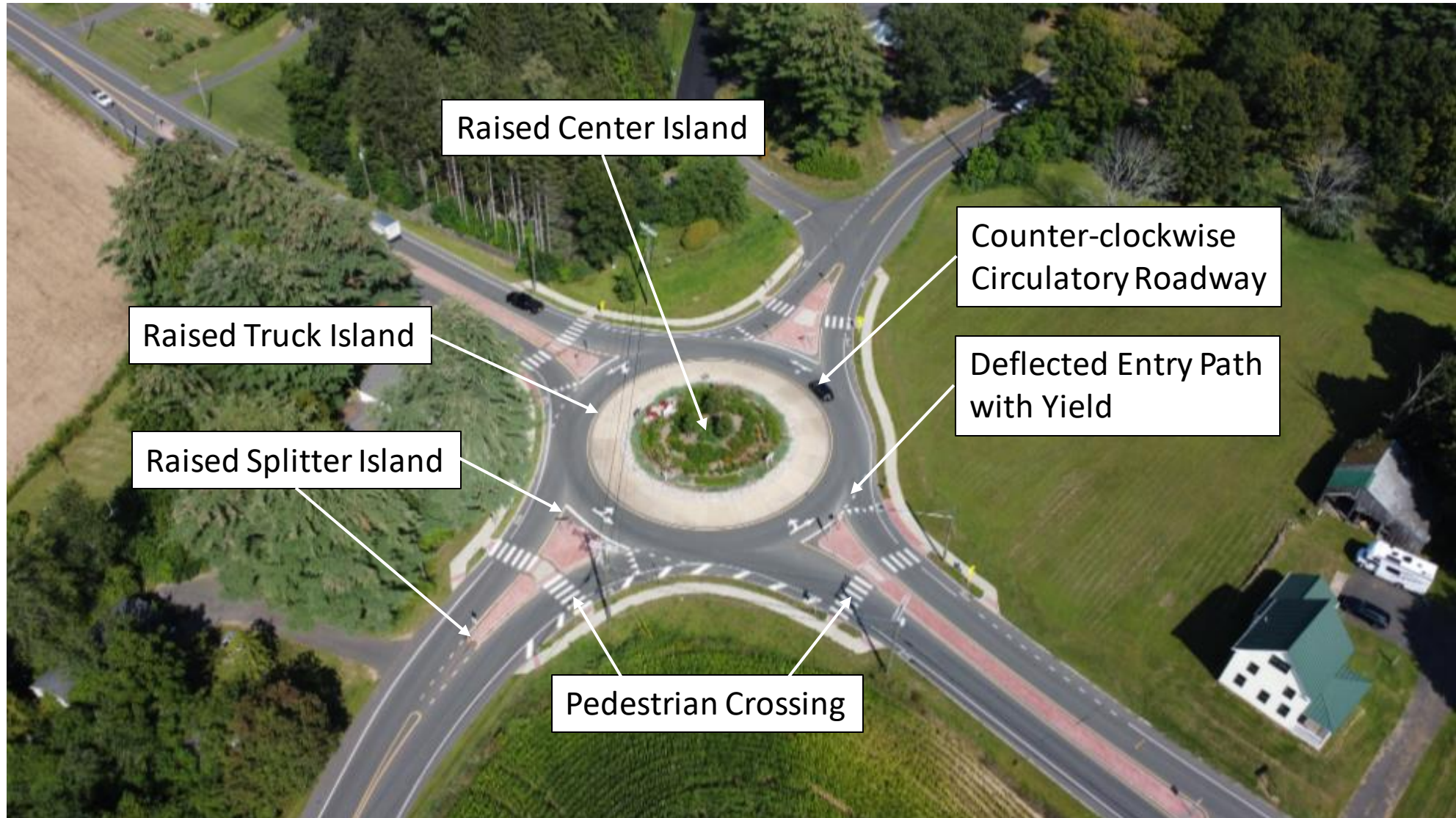


Pulaski Circle - Hartford

Rotaries - NOT Roundabouts!



Physical Characteristics of a Modern Roundabout



HOW TO USE A ROUNDAABOUT



SINGLE LANE ROUNDAABOUT



Watch for the **yellow "roundabout ahead"** sign, then reduce your speed on approach.



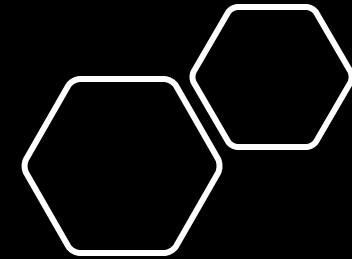
Lookout for **pedestrians & bike riders.**



Look to your left & **yield to traffic** already in the roundabout. When you see a gap in the traffic, you can safely enter the circle.

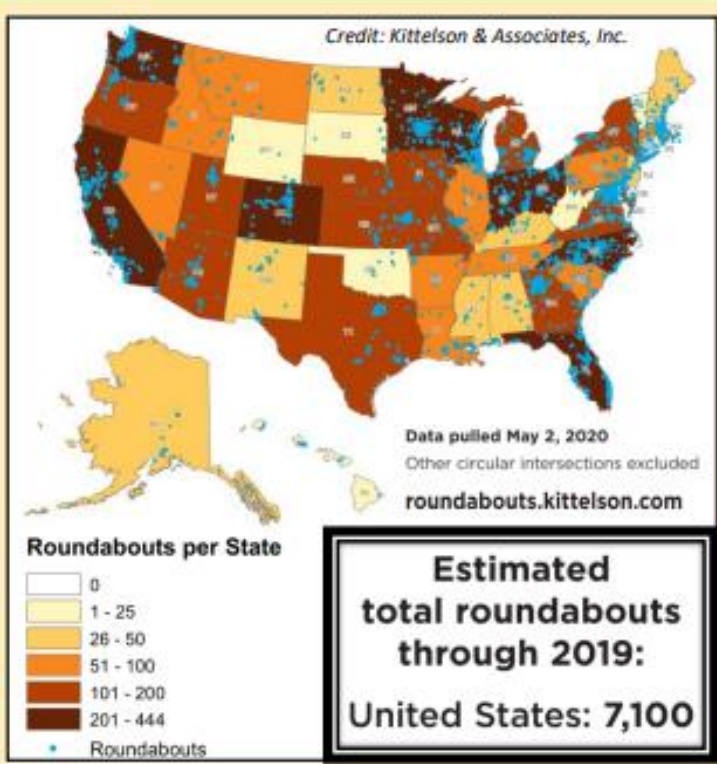


Drive around the roundabout until you get to your exit. **Use your turn signal,** watch for other cars & exit safely.

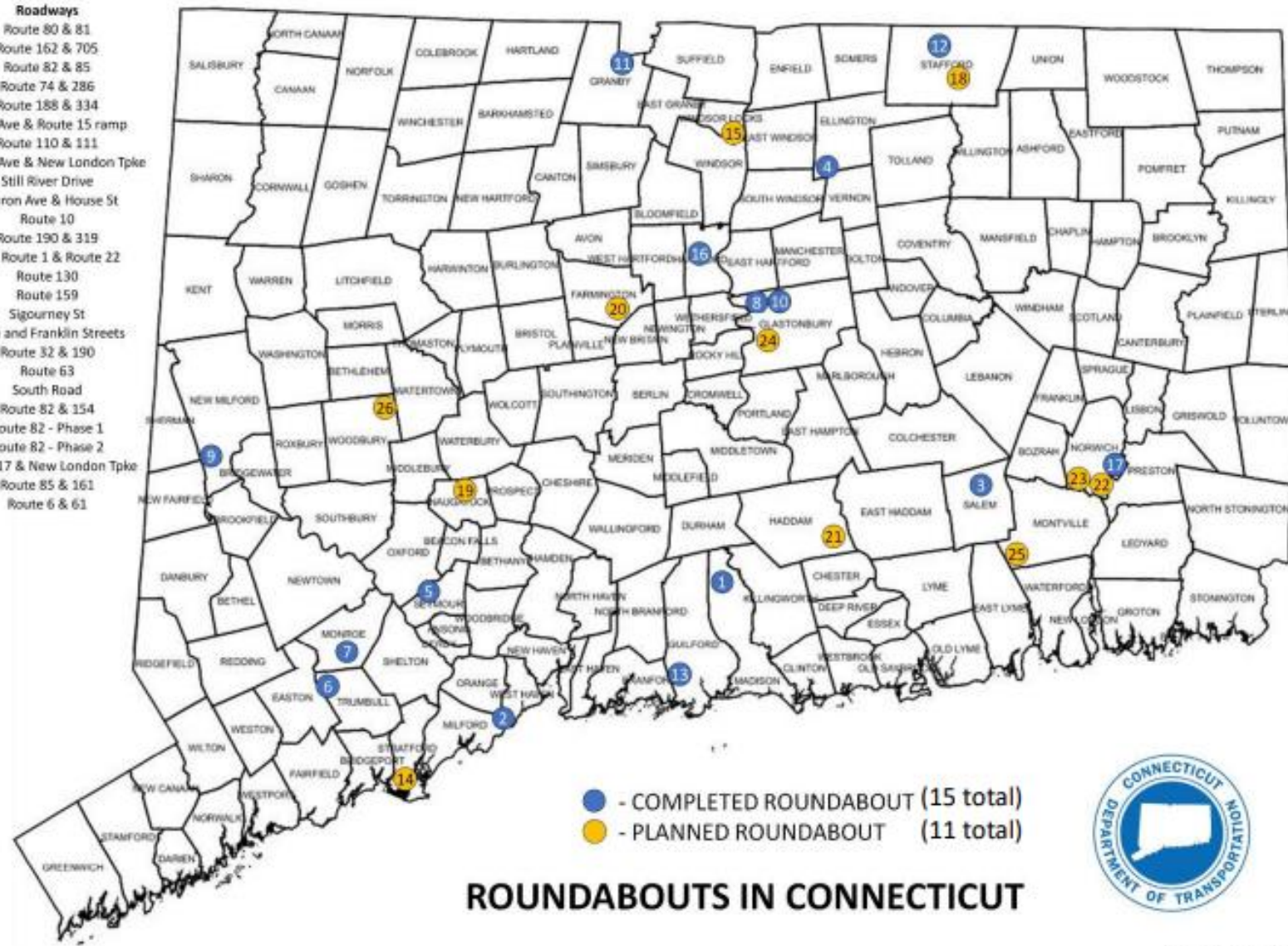




★ National Roundabouts Week (NRW) 2022 ★ September 19th to 23rd



ID	Town	Roadways
1	Killingworth	Route 80 & 81
2	West Haven	Route 162 & 705
3	Salem	Route 82 & 85
4	Ellington	Route 74 & 286
5	Seymour	Route 188 & 334
6	Trumbull	Park Ave & Route 15 ramp
7	Monroe	Route 110 & 111
8	Glastonbury	Hebron Ave & New London Tpk
9	New Milford	Still River Drive
10	Glastonbury	Hebron Ave & House St
11	Granby	Route 10
12	Stafford	Route 190 & 319
13	Gulford	U.S. Route 1 & Route 22
14	Stratford	Route 130
15	Windsor Locks	Route 159
16	Hartford	Sigourney St
17	Norwich	Main and Franklin Streets
18	Stafford	Route 32 & 190
19	Naugatuck	Route 63
20	Farmington	South Road
21	Haddam	Route 82 & 154
22	Norwich	Route 82 - Phase 1
23	Norwich	Route 82 - Phase 2
24	Glastonbury	Route 17 & New London Tpk
25	Montville	Route 85 & 161
26	Woodbury	Route 6 & 61



NATIONAL vs. CONNECTICUT

Converting to a roundabout results in less crashes.

SIGNALIZED INTERSECTION TO A ROUNDABOUT

Reductions up to:

78% SEVERE CRASHES
48% OVERALL CRASHES

CONNECTICUT DOT CONVERTED 5 INTERSECTIONS TO ROUNDABOUTS

Reductions:

81% SEVERE CRASHES
49% OVERALL CRASHES

As of 2022, hundreds of crashes and injuries have been prevented by roundabouts.

ROUNDABOUTS IN CONNECTICUT



**SLOW
DOWN**



Screening Process

Crash Weighting x Volume Factor x ROW Factor = CVR (Crash, Volume, ROW) Score

- **Crash Weighting**—Equalize the crashes (Killed, Injury Types A, B & C) No PDO
- **Traffic Factor**—Adjust for Traffic ADT on Major Approaches
- **ROW Factor**—Factor for Potential Impact to ROW
- **KABC Filter**
 - For the purposes of ranking, only potential sites with 6 or more *KABC (injury related crashes) crashes* over the 3-year analysis period, were included in the final ranking. The KABC filter was applied to focus on sites with high potential to reduce the number of crashes with roundabout application.
 - FHWA Roundabout Proven Safety Countermeasure Fact Sheet: Conversions Reduce Fatal and Serious Injury Crashes up to 78%

- [CRCOG Roundabout Webpage](#)



Capitol Region Roundabout Screening Study

FINAL REPORT December 15, 2023

PREPARED FOR



Capitol Region Council of
Governments
241 Main Street, 4th Floor
Hartford, CT 06106
860.522.2217

Funding Provided by:



PREPARED BY



100 Great Meadow Road
Suite 200
Wethersfield, CT 06109
860.807.4300

With support from Tighe &
Bond

Screening Process—Crash

Crash Weighting x Volume Factor x ROW Factor = CVR (Crash, Volume, ROW) Score

- **Crashes within 250' Diameter of Intersection Included**

- Weighting factors by crash severity (KABCO injury scale) per FHWA

- K—Weight Factor = 574
- A—Weight Factor = 30
- B—Weight Factor = 11
- C—Weight Factor = 6
- O—Weight Factor = 1

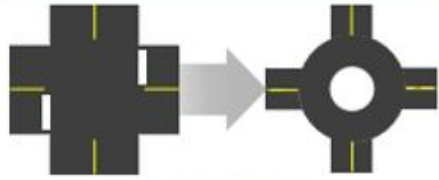
- Weighted Crash Score =

$(\#PDO*1 + \#C*6 + \#B*11 + \#A*30 + \#K*574) / 3$ (Years of Data)



Safety Benefits:

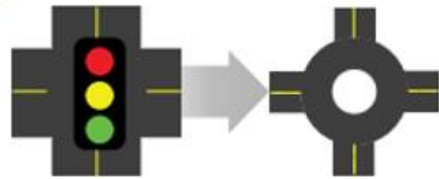
Two-Way Stop-Controlled Intersection to a Roundabout



82%

reduction in fatal and injury crashes.¹

Signalized Intersection to a Roundabout

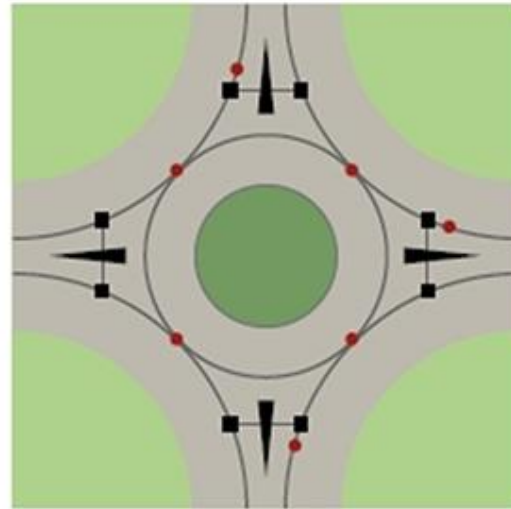


78%

reduction in fatal and injury crashes.¹

Conflicts

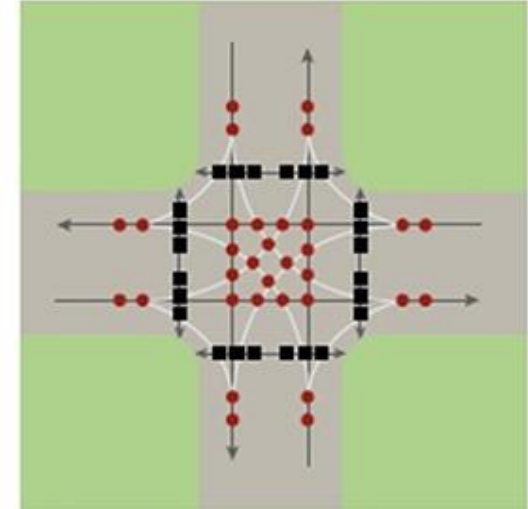
Two-lane roundabout



- Eight vehicle to vehicle conflicts
- Eight vehicle to pedestrian conflicts

Conflicts

Two-lane road standard intersection



- 32 vehicle to vehicle conflicts
- 24 vehicle to pedestrian conflicts

Screening Process—Traffic

$$\text{Crash Weighting} \times \text{Volume Factor} \times \text{ROW Factor} = \text{CVR (Crash, Volume, ROW) Score}$$

- Use Highest ADT For Any Leg Of The Intersection
- Obtain Traffic Factor From Table:

	ADT Range	Factor
0	10,000	1.00
10,000	12,000	0.90
12,000	14,000	0.75
14,000	15,000	0.50
15,000	17,000	0.25
17,000	25,000	0.10
25,000	>	0.00

- Factors and Volumes Derived from NCHRP 672 and CT Roundabout Experience
- Intersections with ADT >25,000 receive Traffic Factor of 0, eliminated from further consideration due to capacity constraint for single lane roundabouts

• Diameters

• Crash Zone

- 250' Circle

• Roundabout

- **120' Circle**
- Outside Edge



Screening Process—ROW

Crash Weighting x Volume Factor x **ROW Factor** = CVR (Crash, Volume, ROW) Score

- Measured Impacts to Parcels, Buildings Using GIS

- Scoring system:

ROW Impact 2,000 – square feet Parcel Impact

Building Impact 200 – square feet Building Impact

Total ROW Impact Factor (sum)/2,200

- Locations with No ROW Impact = 1.0
- All others, Less Than 1.0
- Locations with negative scores = 0.0, and Eliminated

120' Diameter Fitment Circle in GIS (*Outside Edge of Circle*)

250' Diameter Crash Inclusion Circle



Screening Process—Example Calculation

- Newington Avenue at John Downey Drive, New Britain

- 20 Crashes = 11 PDO, 2 Type C, 7 Type B, 0 Type A, 0 Fatalities:

- Step 1: Weighted Crash Score:

- $((11 \text{ PDO} * 1) + (2 \text{ Type C} * 6) + (7 \text{ Type B} * 11) + (0 \text{ Type A} * 30) + (0 \text{ K} * 574)) / 3 = \mathbf{33.33}$

- Step 2: Volume Adjustment Factor = **0.75** (Highest Leg ADT = 13,000 on East Leg)

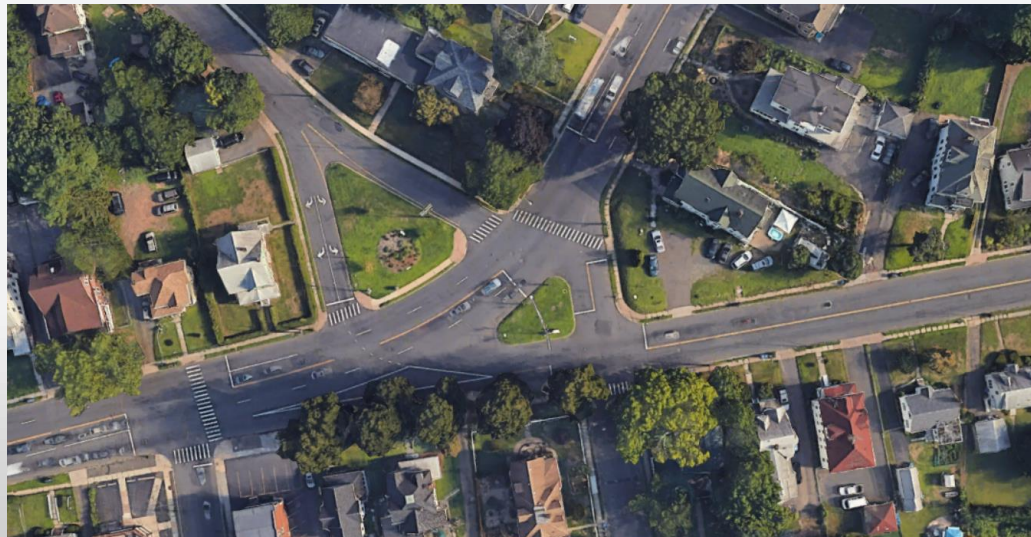
- Step 3: Total ROW Impact Factor:

- $(2,000 - 1,050.7 \text{ SF Parcel Impact}) + (200 - 42 \text{ SF Building Impact}) / 2,200 = \mathbf{0.50}$

CVR Score = $33.33 * 0.75 * 0.50 = 12.5$

Screening Process—Desktop Reviews

- Over 200 Locations Screened
 - Top 100 Overall
 - All Town Suggested Locations
 - Top 3 in Each Municipality
- Google Earth/Street View
- Constructability
- Obvious Constraints
 - Major Utilities
 - Topography
 - Historic/Cultural Resources



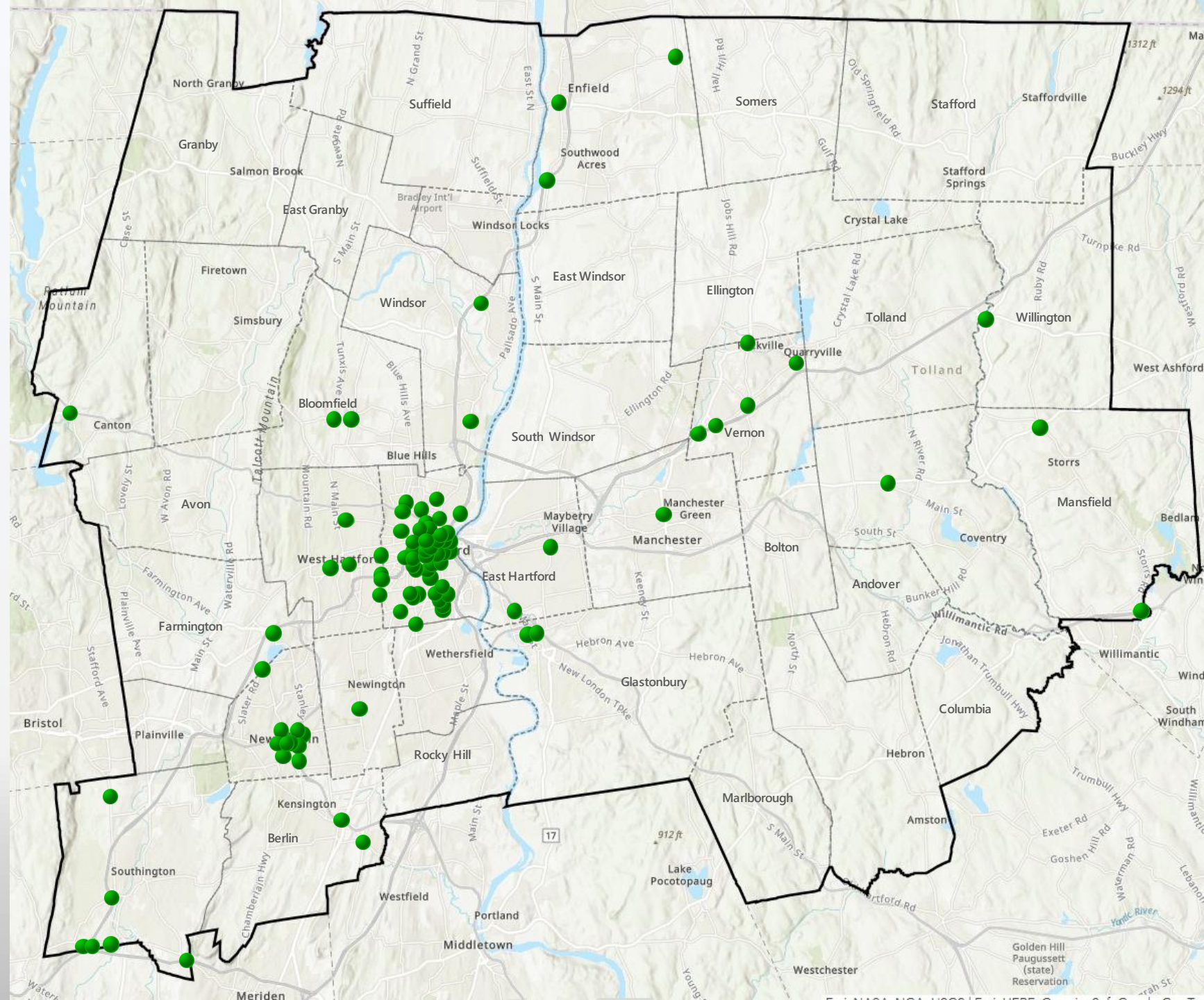
New Britain Avenue at White Street, Hartford



Bridge Street at Main Street, East Windsor

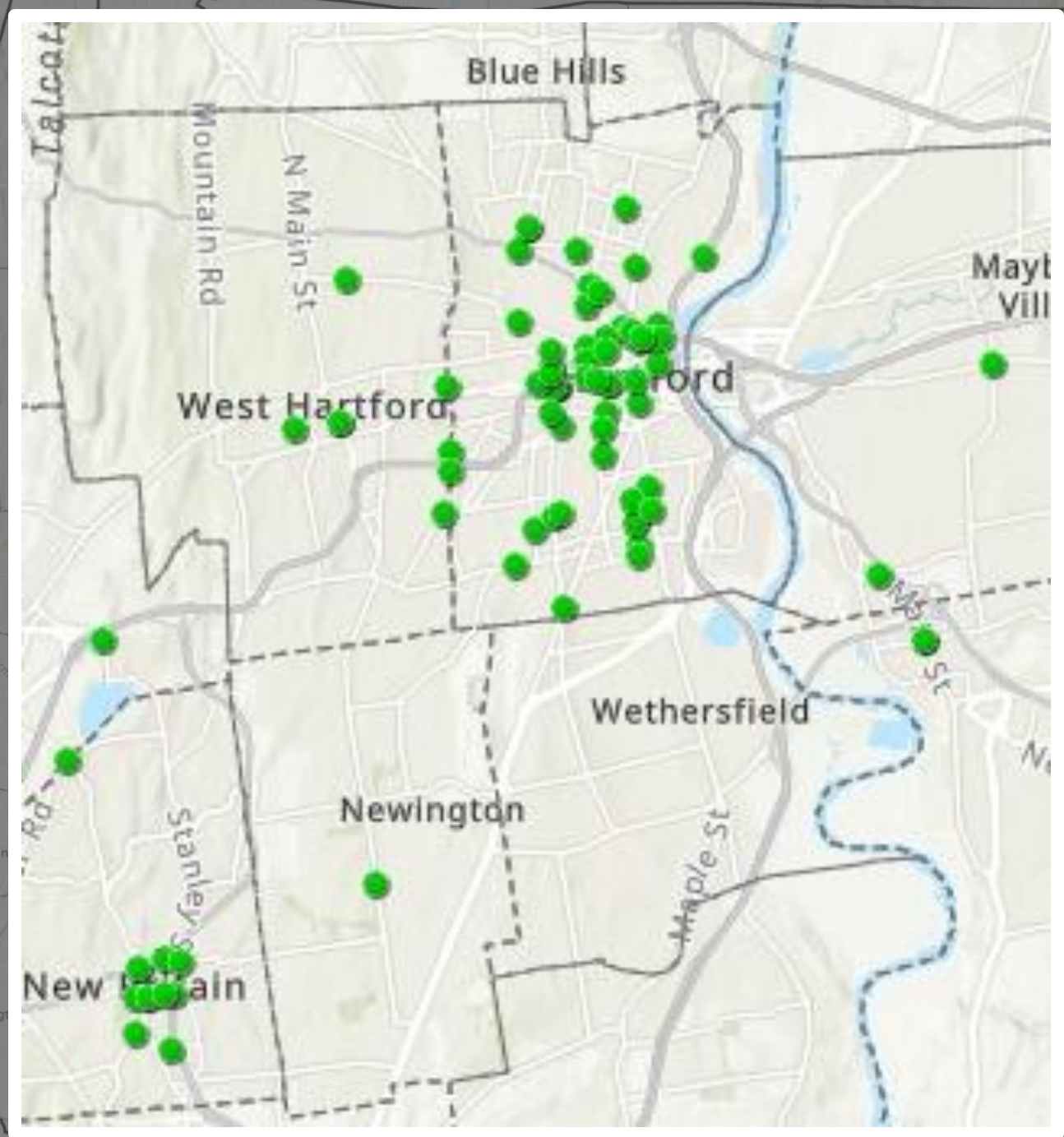
• Top 100 Ranked

- **Hartford (48)**
- **New Britain (10)**
- **West Hartford (7)**
- **Others (35):**
 - Southington
 - Berlin
 - Newington
 - Farmington
 - Canton
 - Bloomfield
 - Windsor
 - Enfield
 - Willington
 - Mansfield
 - Coventry
 - Vernon
 - Manchester
 - East Hartford
 - Glastonbury



• Top 100 Ranked

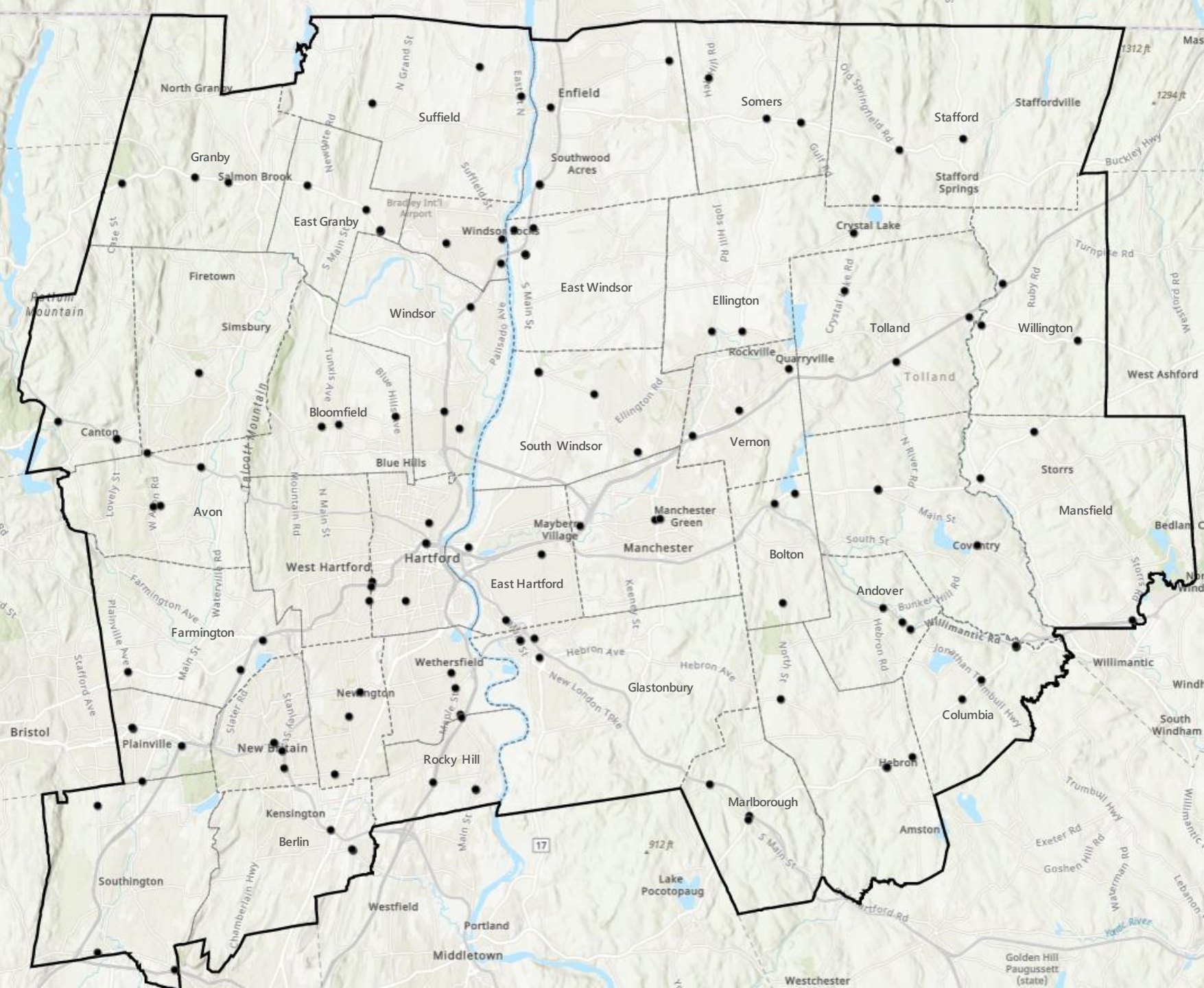
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 - Glastonbury



• CRCOG Roundabout Screening Study: **Top 100 Locations**

Rank	CVR Score	Municipality	Major Road	Minor Road	Total Crashes	Total KABC Crashes	Crash Score	ADT	ADT Factor	ROW Issues	Geometric Factor	Recommended	Comment
1	250.20	HARTFORD	MAIN ST	MAHL AVE/PAVILLION ST	31	10	417.00	13500	0.75	Moderate	0.80	Yes	
2	232.65	HARTFORD	CHAPEL ST. NO/WALNUT ST/-84 EB RAMP	HIGH ST	60	11	232.67	9900	1	None	1.00	No	Volumes
3	187.54	HARTFORD	NEW BRITIAN AVE	SUMMIT ST/FAIRFIELD AVE	17	6	216.33	10600	0.9	Insignificant	0.96	Yes	
4	187.50	BERLIN	MILL ST (CT 372)	SAVAGE HILL RD/BECKLEY RD	12	6	208.33	10300	0.9	None	1.00	Yes	
5	162.28	HARTFORD	FRANKLIN AVE	BUSHNELL ST	13	7	213.67	8600	1	Significant	0.76	No	ROW
6	149.93	HARTFORD	WASHINGTON ST	VERNON ST # 2	34	11	229.00	12100	0.75	Insignificant	0.87	Yes	
7	145.27	HARTFORD	FRANKLIN AVE	BLISS ST	13	7	213.67	8600	1	Significant	0.68	No	Fatal likely occurred at Bushnell
8	131.67	HARTFORD	WESTLAND ST	BARBOUR ST	18	6	205.33	5700	1	Significant	0.64	No	ROW
9	108.48	HARTFORD	HOMESTEAD AVE/WALNUT ST	GARDEN ST #1	54	28	270.67	13100	0.75	Moderate	0.53	Yes	
10	89.31	HARTFORD	ALBANY AVE (US 44)	BROOK ST	19	6	215.33	13400	0.75	Significant	0.55	No	ROW
11	81.67	HARTFORD	WETHERSFIELD AVE	ADELAIDE ST	19	7	212.33	12000	0.9	Significant	0.43	No	ROW
12	79.75	HARTFORD	MORGAN ST (US 44)	MARKET ST	128	30	127.00	12800	0.75	Insignificant	0.84	No	ROW
13	67.43	SOUTHINGTON	MERIDAN-WATERBURY TPKE (CT 322)	CLARK ST (CT 509)	15	7	215.67	11700	0.9	Moderate	0.35	Yes	Vols, Signal System
14	65.05	HARTFORD	ZION ST # 1	WARD ST	18	9	220.33	10400	0.9	Significant	0.33	No	ROW
15	64.30	HARTFORD	FARMINGTON AVE	BROAD ST	84	23	89.67	12600	0.75	Insignificant	0.96	No	Needs Multi-Lane Rdbt
16	63.79	HARTFORD	TRUMBULL ST	CHAPEL ST SOUTH	47	18	67.00	7100	1	Significant	0.95	No	ROW, Vols?
17	58.25	HARTFORD	MAIN ST #2	CHARTER OAK AVE/BUCKINGHAM ST	36	14	233.00	15900	0.25	Moderate	1.00	Yes	
18	55.72	HARTFORD	NEW BRITAIN AVE	HILLSIDE AVE	44	15	247.00	10600	0.9	Significant	0.25	No	ROW
19	53.33	HARTFORD	ANN UCELLO ST #1 /PLEASANT ST	CHAPEL ST NORTH	41	12	53.33	6800	1	Significant	1.00	No	ROW
20	52.44	HARTFORD	MAIN ST (US 44)/MORGAN ST	CHAPEL ST NORTH	78	24	82.67	12500	0.75	Moderate	0.85	No	Volumes

- Municipality
Top 3 Ranked

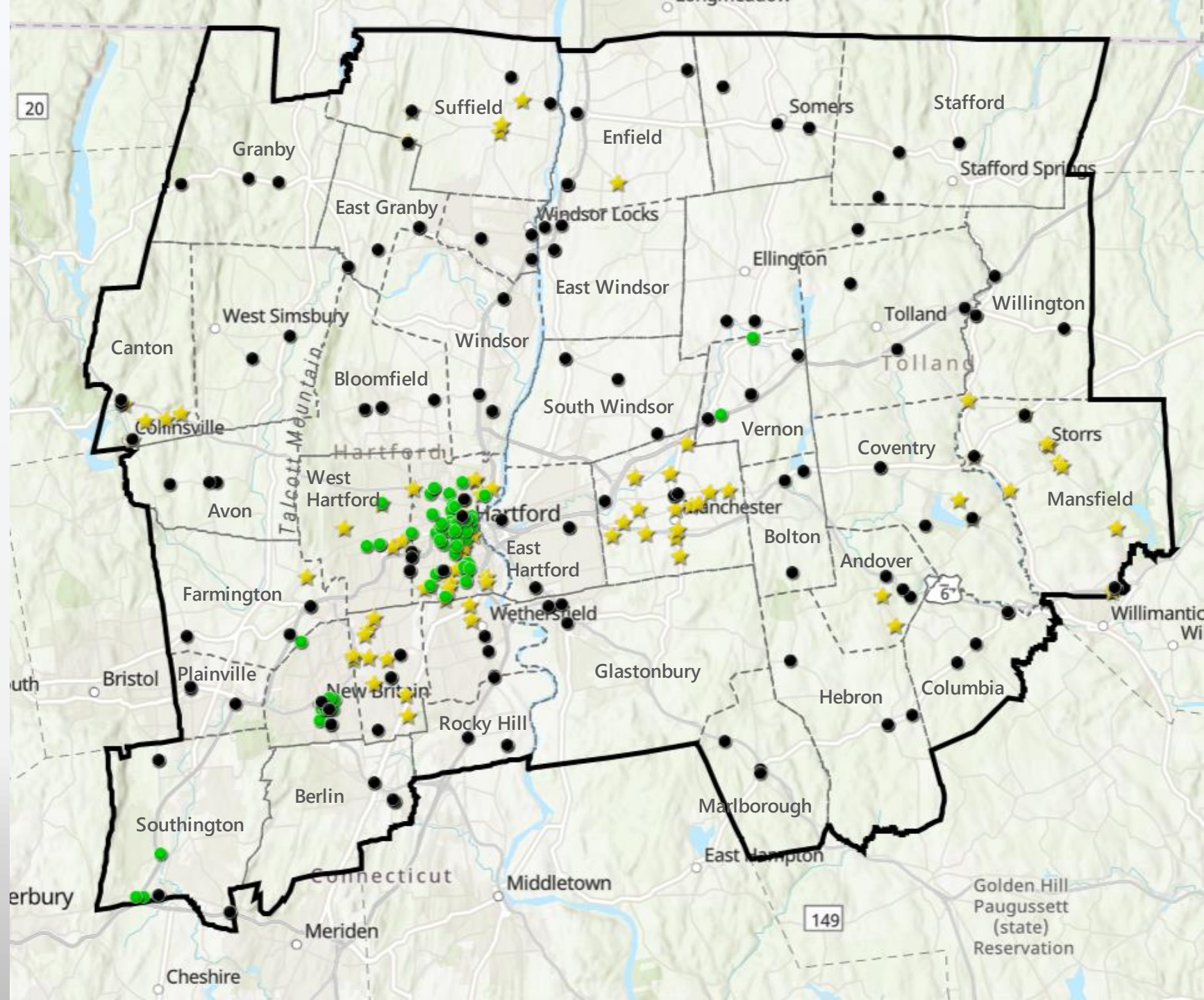
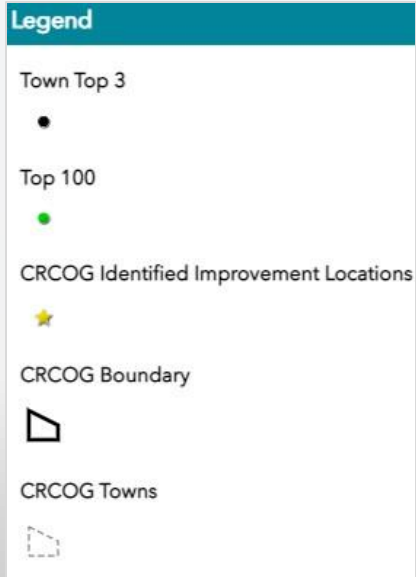


• CRCOG Roundabout Screening Study: **Municipal Top 3 Locations**

Rank	CVR Score	Municipality	Major Road	Minor Road	Muni Identified List	Total Crashes	Total KABC Crashes	ADT	Intersection Control Type	ROW Issues	Recommended	Comments
Not in Top 300	3.30	ANDOVER	JONATHAN TRUMBULL HIGHWAY/WILLIMANTIC RD (US 8)	JONATHAN TRUMBULL HIGHWAY (CT 87)	No	6	1	10600	Signal	None	No	Lack of Crash History
Not in Top 300	6.74	ANDOVER	JONATHAN TRUMBULL HIGHWAY (US 8)	LAKE RD	No	7	2	10600	Signal	Insignificant	No	Lack of Crash History
Not in Top 300	13.20	ANDOVER	JONATHAN TRUMBULL HIGHWAY (US 8)	HEBRON RD (CT 138)	No	14	4	11200	Signal	Moderate	No	Lack of Crash History
Not in Top 300	4.58	AVON	LOVELY ST (CT 177)	WESTMONT RD/COUNTRY CLUB RD	No	11	4	9400	Signal	Significant	Yes	
147	13.26	AVON	WEST AVON RD (CT 187)	COUNTRY CLUB RD	No	14	6	12400	Signal	Moderate	Yes	
Not in Top 300	5.36	AVON	COUNTRY CLUB RD	BURNHAM RD	No	5	4	5700	All-Way Stop	Moderate	Yes	
4	187.50	BERLIN	MILL ST (CT 372)	SAVAGE HILL RD/BECKLEY RD	No	12	6	10300	Signal	None	Yes	
93	20.64	BERLIN	MILL ST (CT 372)	MIDDLETOWN RD/BERLIN ST	No	22	11	13000	Signal	None	Yes	
33	38.50	BERLIN	FRONTAGE RD (CT 572)/MILL ST (CT 372)	WORTHINGTON RIDGE (CT 372-SOUTH/572- NORTH)	No	26	12	13700	Signal	Moderate	Yes	
72	23.20	BLOOMFIELD	MOUNTAIN AVE (CT 178)	MAPLE AVE/BROWN ST	No	21	8	10400	Signal	Insignificant	Yes	
45	32.33	BLOOMFIELD	BLOOMFIELD AVE (CT 189)	PARK AVE/MOUNTAIN AVE (CT 178)	No	27	9	9900	Signal	Insignificant	Yes	
196	7.91	BLOOMFIELD	WINTONBURY AVE (CT 178)	EAST WINTONBURY AVE (CT 178)	No	33	11	15600	Signal	Insignificant	No	Volumes
Not in Top 300	191.33	BOLTON	WEST ST (CT 85)	LYMAN RD	No	1	1	4400	Side Street Stop	Insignificant	No	Lack of Crash History
Not in Top 300	16.20	BOLTON	BOSTON TURNPIKE (US 44)	QUARRY RD	No	10	3	10200	Signal	Moderate	Yes	
Not in Top 300	5.78	BOLTON	BOSTON TURNPIKE (US 44)	SOUTH RD	No	13	2	9600	Signal	Moderate	Yes	
Not in Top 300	7.49	CANTON	RIVER RD (CT 179)	MAPLE AVE	Yes	15	5	12700	<Null>	<Null>	Yes	
92	20.70	CANTON	US 202	RIVER RD (CT 179)	No	24	8	11600	Signal	None	Yes	
Not in Top 300	9.00	CANTON	ALBANY TURNPIKE (US 44)	CHERRY BROOK RD (CT 179)	No	10	3	10300	Signal	None	Yes	
Not in Top 300	193.56	COLUMBIA	MIDDLETOWN RD (CT 66)	HENNEQUIN RD/PINE ST	No	12	4	7700	Side Street Stop	Insignificant	Yes	
Not in Top 300	14.67	COLUMBIA	MIDDLETOWN RD (CT 66)	JONATHAN TRUMBULL HIGHWAY (CT 87)	No	14	5	8800	Signal	None	Yes	
Not in Top 300	21.00	COLUMBIA	WILLIMANTIC RD (US 6)	WILLIMANTIC RD (CT 66)	No	30	4	12400	Signal	None	Yes	
Not in Top 300	3.04	COVENTRY	SOUTH ST	SEAGRAVES RD	No	3	1	1700	Side Street Stop	Insignificant	No	Lack of Crash History
Not in Top 300	12.08	COVENTRY	MAIN ST (CT 31)	STONEHOUSE RD/LAKE ST	Yes	11	5	4900	<Null>	<Null>	<Null>	Volumes, Grade, Recent Project
39	34.50	COVENTRY	BOSTON TURNPIKE (US 44)	MAIN ST (CT 31)	No	30	11	10300	Signal	Insignificant	Yes	
Not in Top 300	12.67	EAST GRANBY	SOUTH MAIN ST (CT 187)	HATCHETT HILL RD	No	8	4	6500	Signal	None	Yes	
Not in Top 300	0.00	EAST GRANBY	RAINBOW RD (CT 20)	BRADLEY PARK RD	No	33	7	33400	Signal	Insignificant	No	Volumes
Not in Top 300	15.67	EAST GRANBY	NORTH MAIN ST (CT 187)	SOUTH STONE RD	Yes	7	5	6900	<Null>	<Null>	Yes	

• Results – GIS Tool

- Municipality Top 3 Intersections
- Top 100 Ranked Intersections Across Region
- Municipality Identified Locations



What's New in My Town?

Other Business

Topics You're Interested In



Adjournment

Next Meeting – Tuesday May 14