

I-84 Danbury Project Needs and Deficiencies Study Multimodal *Appendix*

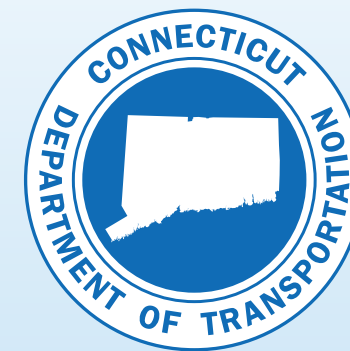


I-84 Danbury Project



State Project Number 34-349

November 2018



**CDM
Smith**



Pedestrian and Bicycle Compatibility Index

I-84 Danbury Project Pedestrian and Bicycle Compatibility Index			Local Intersections Adjacent to I-84																			
			1. Miry Brook Rd - Wooster Heights (at Sugar Hollow Rd)	2. Backus Ave - Park Ave (at Sugar Hollow Rd)	3. Segar St (at Mail Access Rd)	4. Lake Ave (at Segar St)	5. Westville Ave (at Scuppo Rd)	6. Franklin St (at Davis St)	7. Starr Ave - Downs St (at Fairview Ave)	8. Main St (at Golden Hill Rd)	9. Madison Ave (at Juniper Ridge Dr)	10. North St (at Exit 6)	11. Tamarack Ave (at Hayestown Ave)	12. Great Plain Rd (at Carolyn Ave)	13. Rockwell Rd (at Sand Pit Rd)	14. Federal Rd (at White Turkey Rd)	15. Federal Rd (at Old Brookfield Rd)	16. Federal Rd (at Starr Rd)	17. Eagle Rd (at Executive Dr)	18. Newtown Rd (at Exit 8)	19. Stony Hill Rd (at Exit 8)	
Pedestrian and Bicycle Safety Deficiency Factors																						
D1 - No. of Lanes Entering Intersection (Avg. of all legs)																						
1 to 2 Lanes	10	pts	5	1	5	1	10	10	10	1	5	5	1	5	5	1	1	1	5	1	5	
2 to 3 Lanes	5	pts																				
3+ Lanes	1	pts																				
D2 - Bicycle Facilities																						
Paved Shoulder	10	pts	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Wide Curb Lane	5	pts																				
Nothing	1	pts																				
D3 - Average Daily Traffic (ADT) Volumes																						
0 - 2,000	10	pts	2	1		1	8	8	1	1	10	1	1	6	10	1	1	1	1	1	1	
2,000 - 4,000	8	pts																				
4,000 - 6,000	6	pts																				
6,000 - 8,000	4	pts																				
8,000 - 10,000	2	pts																				
> 10,000	1	pts																				
D4 - Adequate Street Lighting																						
Good Lighting	10	pts	1	1	5	5	1	5	5	10	5	5	5	5	1	1	5	1	5	5	5	
Spotty or Poor Lighting	5	pts																				
No Lighting	1	pts																				
D5 - Intersection Turning Radii																						
Less Than 10 feet	10	pts	1	1	1	1	1	1	5	1	5	5	5	1	1	1	1	1	1	1	1	
10 to 30 feet	5	pts																				
More than 30 feet	1	pts																				
D6 - One-Way / Two-Way Operations																						
Two-Way Operations	10	pts	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	1	1	
One-Way Operations	5	pts																				
One-Way Operations with Multiple Lanes	1	pts																				
D7 - Sidewalks																						
Sidewalks on Both Sides	10	pts	1	5	1	5	1	5	10	10	10	10	10	1	1	1	5	1	5	1	1	
Sidewalk on One Side	5	pts																				
No Sidewalks	1	pts																				
D8 - Crosswalks																						
Crosswalks on All Legs/Approaches	10	pts	1	1	1	1	1	5	1	5	1	5	5	1	1	1	5	1	1	1	1	
Crosswalks on Some Legs/Approaches	5	pts																				
No Crosswalks	1	pts																				
D9 - Excessive Travel Lane Width on Local Streets																						
Avg. Width of All Lanes is 12' or Less	10	pts	5	1	5	5	1	1	10	5	1	5	5	1	5	5	5	5	5	5	5	
Avg. Width of All Lanes is Between 12' and 13'	5	pts																				
Avg. Width of All Lanes Exceeds 13'	1	pts																				
D10 - ADA Pedestrian Signals (Signalized Intersections Only)																						
Fully Accessible and Audible Signals with Ped Phase	10	pts	1	1	1	1	1	1	1	5	1	1	1	1	1	1	1	1	1	1	1	
Pedestrian Signals Do Not Comply With ADA	5	pts																				
No Pedestrian Signals	1	pts																				
Total of Pedestrian and Bicycle Safety Deficiency Factors = Sum of D1 through D10			28	23	30	31	35	47	54	49	49	48	44	32	36	23	35	23	35	18	22	
D (Pedestrian and Bicycle Safety Deficiency) = Sum of D1 through D10/10 (Highest Possible Score = 10)			2.8	2.3	3.0	3.1	3.5	4.7	5.4	4.9	4.9	4.8	4.4	3.2	3.6	2.3	3.5	2.3	3.5	1.8	2.2	
Vehicular Crash Factors (based on three-year crash history data) ²																						
C1 - Total Number of Crashes																						
0	10	pts	5	5	5	1	10	5	10	1	10	1	1	10	5	1	1	1	5	1	1	
1 - 9	5	pts																				
10 or More	1	pts																				
C2 - Number of Crashes Involving Pedestrians																						
0	10	pts	10	10	10	10	10	10	10	5	10	5	10	10	10	10	10	5	10	10	10	
1	5	pts																				
2 or More	1	pts																				
C3 - Number of Crashes Involving Bikes																						
0	10	pts	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
1	5	pts																				
2 or More	1	pts																				
Total of Crash Factors = Sum of C1, C2 and C3			25	25	25	21	30	25	30	16	30	16	21	30	25	21	21	16	25	21	21	
C (Vehicular Crash Factor) = Sum of C1, C2 and C3/3 (Highest Possible Score = 10)			8.3	8.3	8.3	7.0	10.0	8.3	10.0	5.3	10.0	5.3	7.0	10.0	8.3	7.0	7.0	5.3	8.3	7.0	7.0	
PBCI - Pedestrian and Bicycle Compatibility Index (Higher Value = Less Compatibility)																						
(D) X (C) = Pedestrian and Bicycle Compatibility Index (Highest Possible Score = 100)			23.3	19.2	25.0	21.7	35.0	39.2	54.0	26.1	49.0	25.6	30.8	32.0	30.0	16.1	24.5	12.3	29.2	12.6	15.4	
1. Source: Inrix Median Speed Data			Color Codes for PBCI Values:																			
2. Source: CTDOT via Uconn Crash Data Repository			<div><div></div> = Compatible (range of values: 67 to 100)</div> <div><div></div> = Medium Compatibility (range of values: 34 to 67)</div> <div><div></div> = Least Compatible (range of values: 1 to 33)</div>																			
(Scale of 1 to 100: The higher the score, the safer the street)																						

I-84 Danbury Project
Prioritization of Non-Motorized Transportation Improvements

Color Codes for PBCI Values:

- = **Compatible** (range of values: 67 to 100)
- = **Medium Compatibility** (range of values: 34 to 67)
- = **Least Compatible** (range of values: 1 to 33)

			Local Intersections Adjacent to I-84																		
			1. Miry Brook Rd - Wooster Heights (at Sugar Hollow Rd)	2. Backus Ave - Park Ave (at Sugar Hollow Rd)	3. Segar St (at Mall Access Rd)	4. Lake Ave (at Segar St)	5. Westville Ave (at Scuppo Rd)	6. Franklin St (at Davis St)	7. Starr Ave - Downs St (at Fairview Ave)	8. Main St (at Golden Hill Rd)	9. Madison Ave (at Juniper Ridge Dr)	10. North St (at Exit 6)	11. Tamarack Ave (at Hayestown Ave)	12. Great Plain Rd (at Carolyn Ave)	13. Rockwell Rd (at Sand Pit Rd)	14. Federal Rd (at White Turkey Rd)	15. Federal Rd (at Old Brookfield Rd)	16. Federal Rd (at Starr Rd)	17. Eagle Rd (at Executive Dr)	18. Newtown Rd (at Exit 8)	19. Stony Hill Rd (at Exit 8)
Prioritization of Non-Motorized Transportation Improvements Factors																					
Pedestrian and Bicycle Compatibility Index (PBCI) Scores:			23.3	19.2	25.0	21.7	35.0	39.2	54.0	26.1	49.0	25.6	30.8	32.0	30.0	16.1	24.5	12.3	29.2	12.6	15.4
P1 - PBCI Factor																					
Least Compatible	2	pts																			
Medium Compatibility	1	pts	2	2	2	2	1	1	1	2	1	1	2	2	2	2	2	2	2	2	2
Compatible	0	pts																			
P2 - Street is on a Desire Line																					
Yes	1	pts																			
No	0	pts	0	1	0	1	1	1	1	1	0	1	1	1	0	1	1	1	1	1	0
P3 - Street Serves Environmental Justice (EJ) Communities																					
Street is Within an EJ Community	2	pts																			
Street Connects EJ Communities to Services or Major Destinations	1	pts	0	1	2	2	1	2	2	2	2	2	1	0	0	0	0	0	0	0	0
No	0	pts																			
P4 - Street is Served by Bus Transit Route																					
Yes	1	pts																			
No	0	pts	0	1	1	1	0	1	0	1	0	0	1	1	1	1	1	1	0	1	1
Total = Sum of P1 through P4 (Highest Possible Score = 6)			2	5	5	6	3	5	4	6	3	4	5	4	3	4	4	4	3	4	3

Color Codes for Priority Ranking Values:

- = **Low Priority (1-3)**
- = **High Priority (4-6)**

(Scale of 1 to 6: The higher the score, the greater the need for improvement)



1. Miry Brook Rd – Wooster Heights
(at Sugar Hollow Rd)

Mainline Reference	Rt. 7 – Exit 7
Functional Classification of Local Street	Minor Arterial
Connection Type	Underpass
ADT Traffic Volumes	8,200 per day
85% Vehicle Speeds	30 MPH
Location of Closest Sidewalks	N/A
Pedestrian Features	No sidewalks / no crosswalks
Bicycle Features	No bike lanes
Street Lighting	No street lighting

Route PBCI Score and Priority Ranking

Pedestrian and Bicycle Compatibility Index		23.3
(Scale of 1 to 100: The higher the score, the safer the street)		
1		100
Low	Med	High

Priority Ranking		2
(Scale of 1 to 6: The higher the score, the greater the need for improvement)		
1		6
Low		High





2. Backus Ave – Park Ave

(at Sugar Hollow Rd)

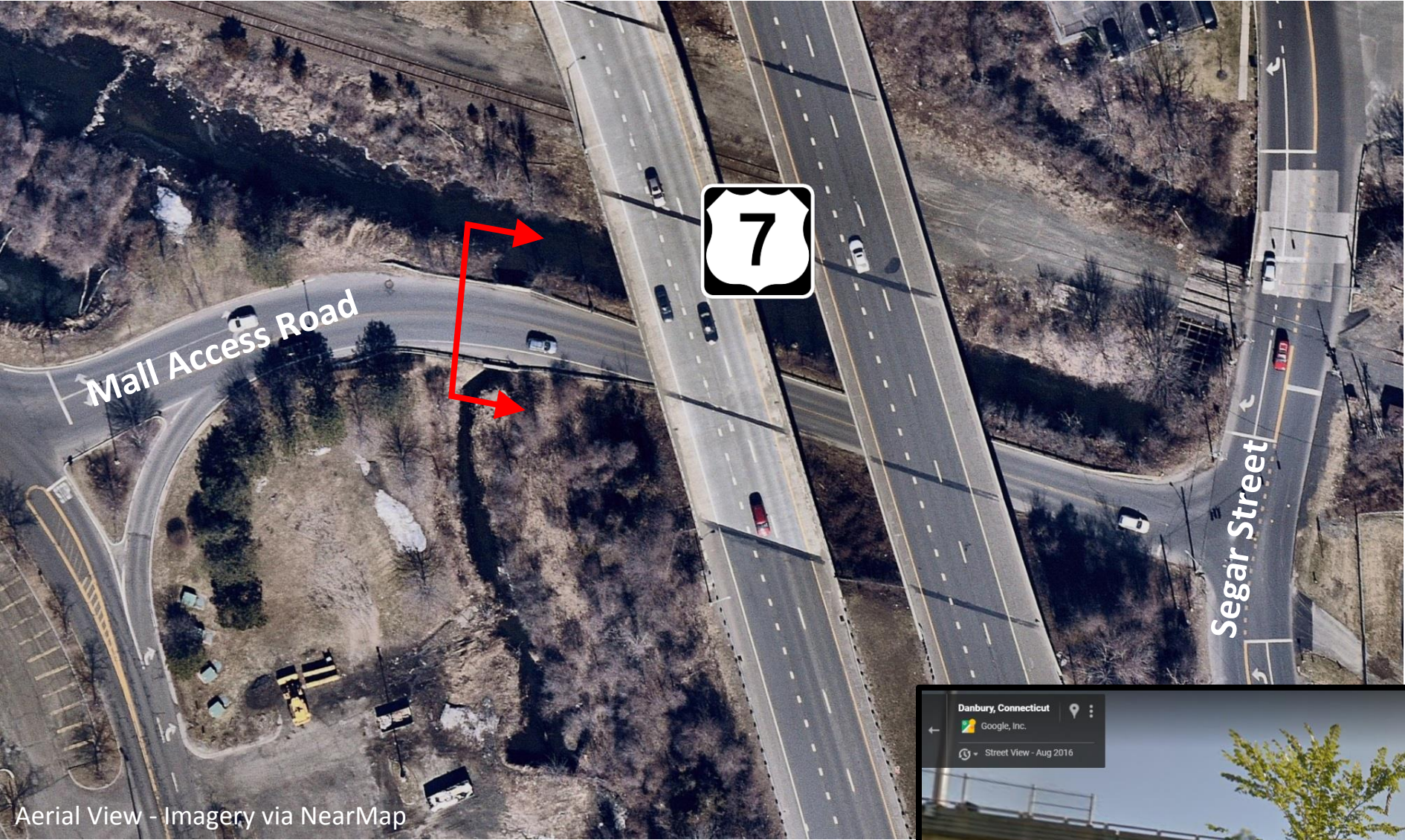
Mainline Reference	Rt. 7 – Exit 8
Functional Classification of Local Street	Minor Arterial
Connection Type	Underpass
ADT Traffic Volumes	11,200 per day
85% Vehicle Speeds	29 MPH
Location of Closest Sidewalks	N/A
Pedestrian Features	No sidewalks / crosswalks
Bicycle Features	No bike lanes
Street Lighting	No street lighting

Route PBCI Score and Priority Ranking

Pedestrian and Bicycle Compatibility Index			19.2
(Scale of 1 to 100: The higher the score, the safer the street)			
1		100	
Low	Med	High	

Priority Ranking		5
(Scale of 1 to 6: The higher the score, the greater the need for improvement)		
1	6	
Low	High	



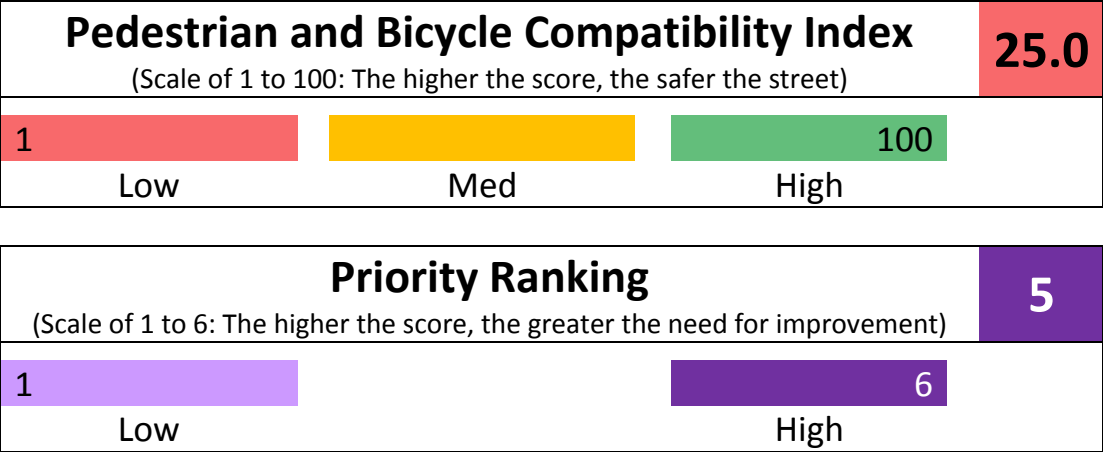


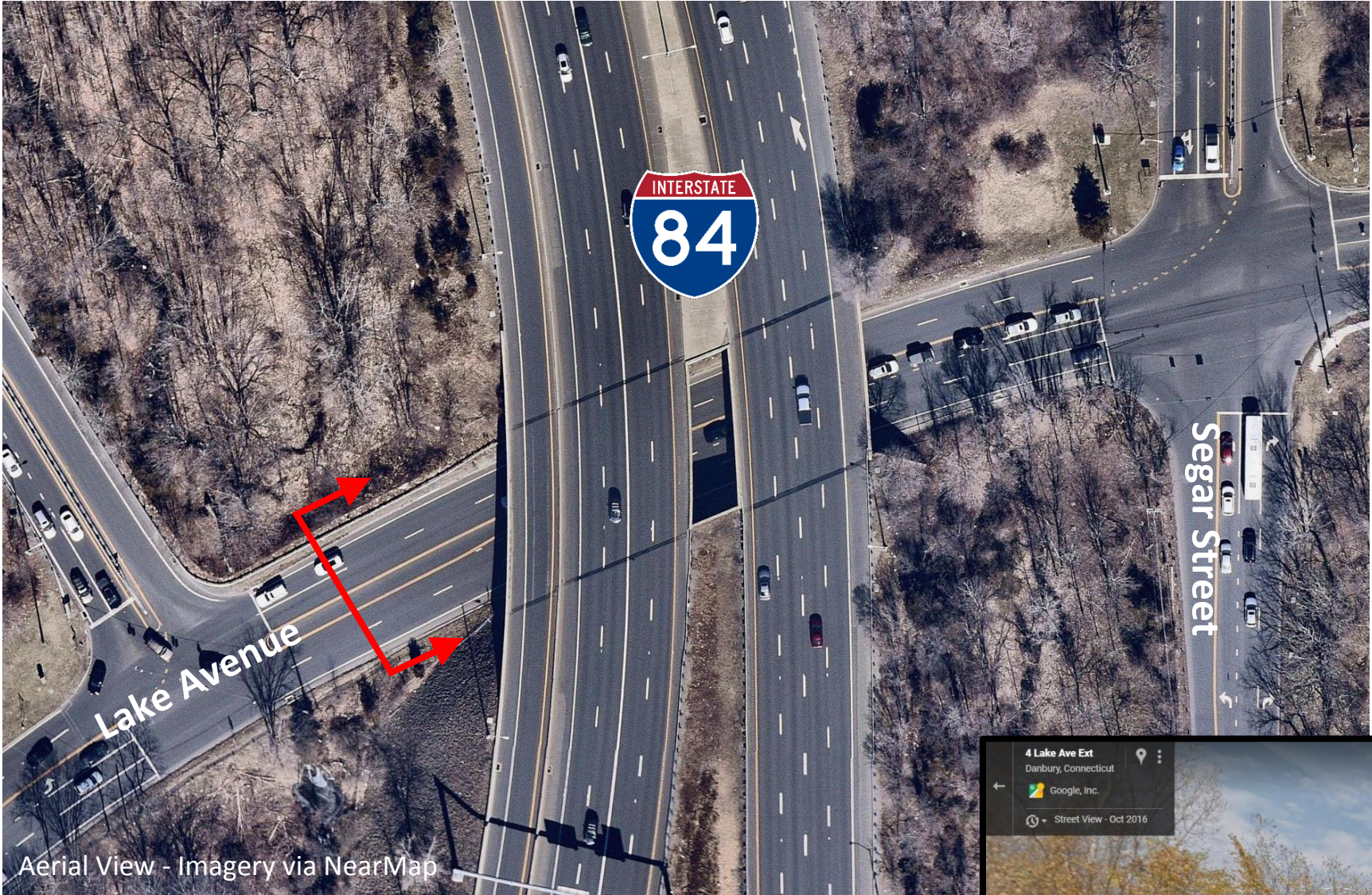
3. Segar St

(at Mall Access Rd)

Mainline Reference	Rt. 7
Functional Classification of Local Street	Local
Connection Type	Underpass
ADT Traffic Volumes	N/A
85% Vehicle Speeds	24 MPH
Location of Closest Sidewalks	N/A
Pedestrian Features	No sidewalks / no crosswalks
Bicycle Features	No bike lanes
Street Lighting	Spotty or poor lighting

Route PBCI Score and Priority Ranking





4. Lake Ave (at Segar St)

Mainline Reference	I-84 – Exit 4
Functional Classification of Local Street	Principal Arterial – Other
Connection Type	Underpass
ADT Traffic Volumes	20,300 per day
85% Vehicle Speeds	27 MPH
Location of Closest Sidewalks	N/A
Pedestrian Features	No sidewalks / no crosswalks
Bicycle Features	No bike lanes
Street Lighting	Under bridge

Route PBCI Score and Priority Ranking

Pedestrian and Bicycle Compatibility Index (Scale of 1 to 100: The higher the score, the safer the street)			21.7
1		100	
Low	Med	High	

Priority Ranking (Scale of 1 to 6: The higher the score, the greater the need for improvement)			6
1		6	
Low		High	





5. Westville Ave

(at Scuppo Rd)

Mainline Reference	I-84
Functional Classification of Local Street	Local
Connection Type	Underpass
ADT Traffic Volumes	2,800 per day
85% Vehicle Speeds	N/A
Location of Closest Sidewalks	N/A
Pedestrian Features	No sidewalks / no crosswalks
Bicycle Features	No bike lanes
Street Lighting	One side

Route PBCI Score and Priority Ranking

Pedestrian and Bicycle Compatibility Index

(Scale of 1 to 100: The higher the score, the safer the street)

1

Low

Med

100

High

35.0

Priority Ranking

(Scale of 1 to 6: The higher the score, the greater the need for improvement)

1

Low

High

6

3





6. Franklin St
(at Davis St)

Mainline Reference	I-84
Functional Classification of Local Street	Minor Arterial
Connection Type	Underpass
ADT Traffic Volumes	3,800 per day
85% Vehicle Speeds	26 MPH
Location of Closest Sidewalks	100 feet to the east – at Kohanza Street
Pedestrian Features	No sidewalks / no crosswalks
Bicycle Features	No bike lanes
Street Lighting	Spotty or poor lighting

Route PBCI Score and Priority Ranking

Pedestrian and Bicycle Compatibility Index

(Scale of 1 to 100: The higher the score, the safer the street)

1

Low

Med

100

High

39.2

Priority Ranking

(Scale of 1 to 6: The higher the score, the greater the need for improvement)

1

Low

High

5





7. Starr Ave – Downs St

(at Fairview Ave)

Mainline Reference	I-84 – Exit 5
Functional Classification of Local Street	Minor Arterial
Connection Type	Underpass
ADT Traffic Volumes	11,600 per day
85% Vehicle Speeds	N/A
Location of Closest Sidewalks	780 feet to the east – at Main Street
Pedestrian Features	No sidewalks / no crosswalks
Bicycle Features	No bike lanes
Street Lighting	At intersection

Route PBCI Score and Priority Ranking

Pedestrian and Bicycle Compatibility Index (Scale of 1 to 100: The higher the score, the safer the street)		54.0
1		100
Low	Med	High

Priority Ranking (Scale of 1 to 6: The higher the score, the greater the need for improvement)		4
1		6
Low		High





8. Main St
(at Golden Hill Rd)

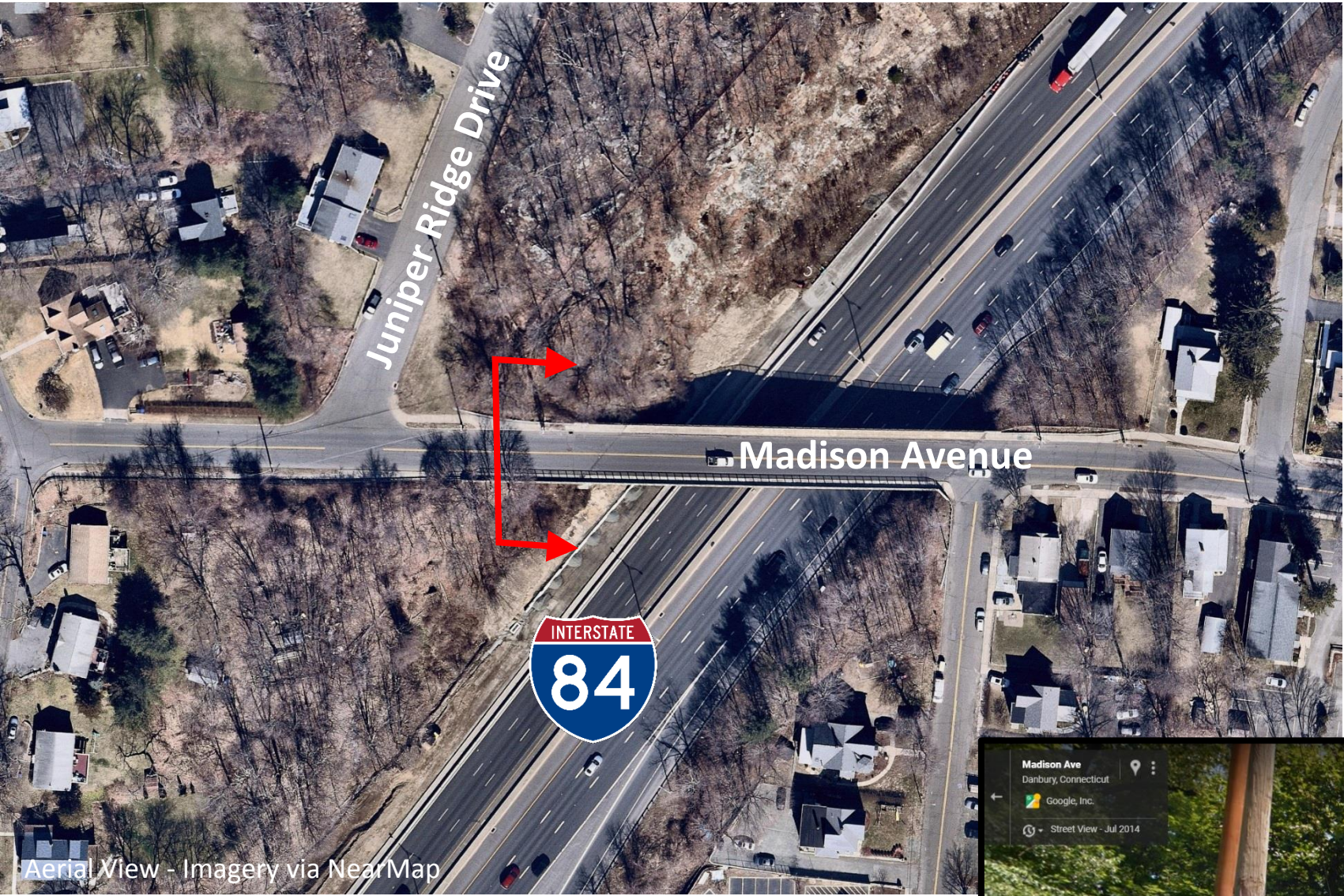
Mainline Reference	I-84 – Exit 5
Functional Classification of Local Street	Minor Arterial
Connection Type	Underpass
ADT Traffic Volumes	22,000 per day
85% Vehicle Speeds	25 MPH
Location of Closest Sidewalks	At intersection
Pedestrian Features	Sidewalks and crosswalks
Bicycle Features	No bike lanes
Street Lighting	Both sides, under bridge

Route PBCI Score and Priority Ranking

Pedestrian and Bicycle Compatibility Index			26.1
(Scale of 1 to 100: The higher the score, the safer the street)			
1		100	
Low	Med	High	

Priority Ranking			6
(Scale of 1 to 6: The higher the score, the greater the need for improvement)			
1		6	
Low		High	





9. Madison Ave

(at Juniper Ridge Dr)

Mainline Reference	I-84
Functional Classification of Local Street	Local
Connection Type	Overpass
ADT Traffic Volumes	1,300 per day
85% Vehicle Speeds	N/A
Location of Closest Sidewalks	N/A
Pedestrian Features	Sidewalks
Bicycle Features	No bike lanes
Street Lighting	Spotty or poor lighting

Route PBCI Score and Priority Ranking

Pedestrian and Bicycle Compatibility Index (Scale of 1 to 100: The higher the score, the safer the street)		49.0
1		100
Low	Med	High

Priority Ranking (Scale of 1 to 6: The higher the score, the greater the need for improvement)		3
1		6
Low		High





10. North St

(at Exit 6)

Mainline Reference	I-84 – Exit 6
Functional Classification of Local Street	Minor Arterial
Connection Type	Underpass
ADT Traffic Volumes	25,700 per day
85% Vehicle Speeds	26 MPH
Location of Closest Sidewalks	At intersection
Pedestrian Features	Sidewalks and crosswalks
Bicycle Features	No bike lanes
Street Lighting	Both sides, under bridge

Route PBCI Score and Priority Ranking

Pedestrian and Bicycle Compatibility Index (Scale of 1 to 100: The higher the score, the safer the street)			25.6
1		100	
Low	Med	High	

Priority Ranking (Scale of 1 to 6: The higher the score, the greater the need for improvement)			4
1		6	
Low		High	



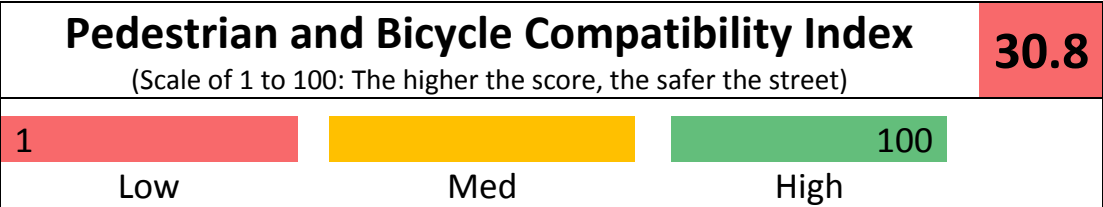


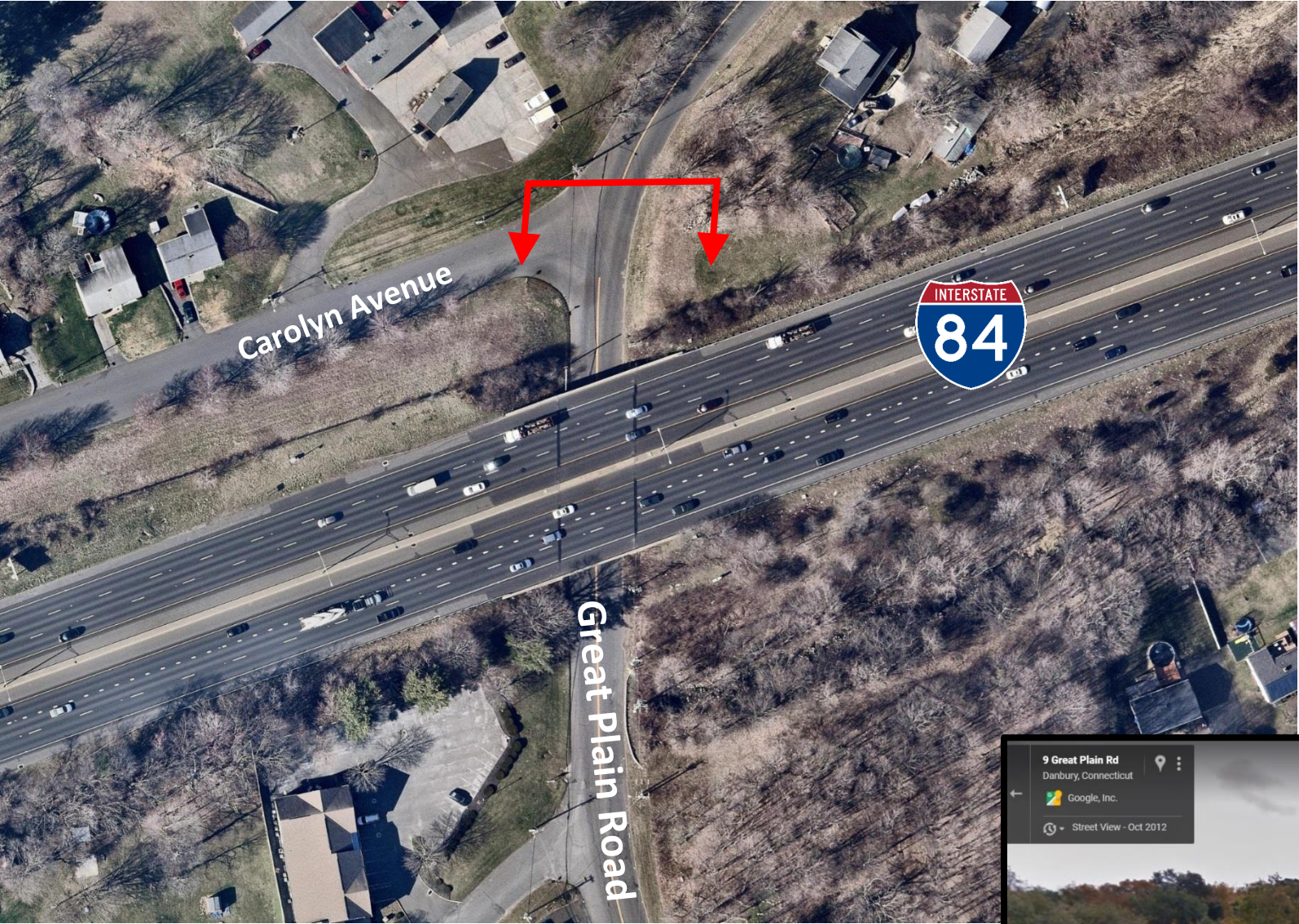
11. Tamarack Ave

(at Hayestown Ave)

Mainline Reference	I-84
Functional Classification of Local Street	Collector
Connection Type	Underpass
ADT Traffic Volumes	11,900 per day
85% Vehicle Speeds	27 MPH
Location of Closest Sidewalks	At intersection
Pedestrian Features	Crosswalks
Bicycle Features	No bike lanes
Street Lighting	Under bridge

Route PBCI Score and Priority Ranking





12. Great Plain Rd

(at Carolyn Ave)

Mainline Reference	I-84
Functional Classification of Local Street	Minor Arterial
Connection Type	Underpass
ADT Traffic Volumes	5,700 per day
85% Vehicle Speeds	29 MPH
Location of Closest Sidewalks	1,600 feet to the south – at Germantown Road
Pedestrian Features	No sidewalks / no crosswalks
Bicycle Features	No bike lanes
Street Lighting	Under bridge

Route PBCI Score and Priority Ranking

Pedestrian and Bicycle Compatibility Index (Scale of 1 to 100: The higher the score, the safer the street)			32.0
1		100	
Low	Med	High	

Priority Ranking (Scale of 1 to 6: The higher the score, the greater the need for improvement)			4
1		6	
Low		High	





14. Federal Rd
(at White Turkey Rd)

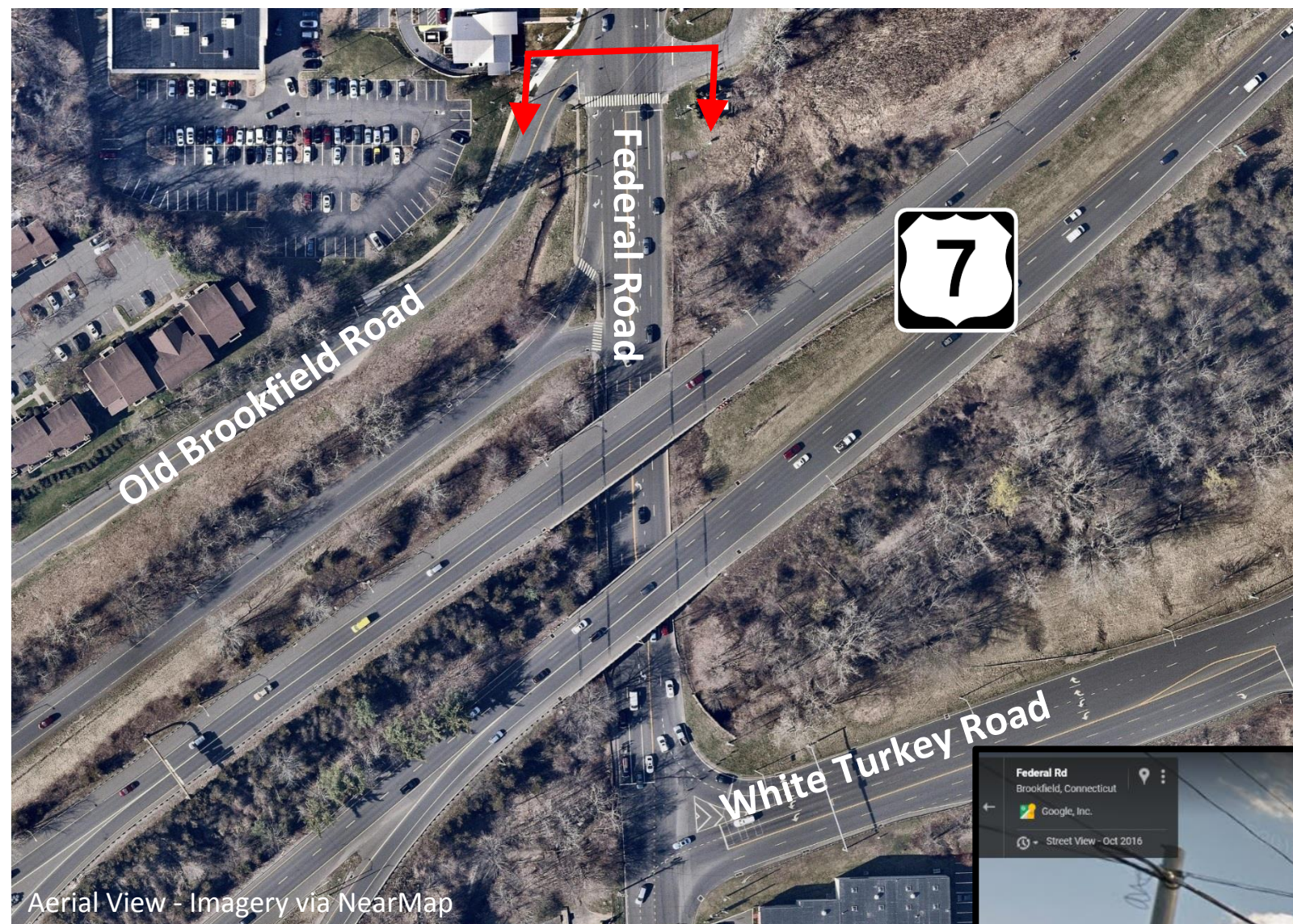
Mainline Reference	Rt. 7 – Exit 10
Functional Classification of Local Street	Principal Arterial – Other
Connection Type	Underpass
ADT Traffic Volumes	24,000 per day
85% Vehicle Speeds	35 MPH
Location of Closest Sidewalks	700 feet to the north – at Old Brookfield Road
Pedestrian Features	No sidewalks / no crosswalks
Bicycle Features	No bike lanes
Street Lighting	Under bridge

Route PBCI Score and Priority Ranking

Pedestrian and Bicycle Compatibility Index			16.1
(Scale of 1 to 100: The higher the score, the safer the street)			
1		100	
Low	Med	High	

Priority Ranking		4
(Scale of 1 to 6: The higher the score, the greater the need for improvement)		
1	6	
Low	High	





15. Federal Rd

(at Old Brookfield Rd)

Mainline Reference	Rt. 7 – Exit 10
Functional Classification of Local Street	Principal Arterial – Other
Connection Type	Underpass
ADT Traffic Volumes	20,200 per day
85% Vehicle Speeds	35 MPH
Location of Closest Sidewalks	At intersection
Pedestrian Features	Crosswalks and sidewalks
Bicycle Features	No bike lanes
Street Lighting	Under bridge

Route PBCI Score and Priority Ranking

Pedestrian and Bicycle Compatibility Index
(Scale of 1 to 100: The higher the score, the safer the street)

1 Low Med High 100

The figure shows a horizontal bar chart representing the Pedestrian and Bicycle Compatibility Index. The scale ranges from 1 (Low) to 100 (High). The current score is 24.5, which is indicated by a red box on the right side of the chart. The chart is divided into three colored segments: red for Low (1 to 33.3), yellow for Med (33.3 to 66.7), and green for High (66.7 to 100). The score of 24.5 falls within the Low range.

Priority Ranking
(Scale of 1 to 6: The higher the score, the greater the need for improvement)

Score	Priority Level
1	Low
2	
3	
4	
5	
6	High





16. Federal Rd

(at Starr Rd)

Mainline Reference	I-84 – Exit 7
Functional Classification of Local Street	Principal Arterial – Other
Connection Type	Underpass
ADT Traffic Volumes	12,800 per day
85% Vehicle Speeds	33 MPH
Location of Closest Sidewalks	N/A
Pedestrian Features	Sidewalks
Bicycle Features	No bike lanes
Street Lighting	Under bridge

Route PBCI Score and Priority Ranking

Pedestrian and Bicycle Compatibility Index			12.3
(Scale of 1 to 100: The higher the score, the safer the street)			
1			100
Low		Med	High

Priority Ranking			4
(Scale of 1 to 6: The higher the score, the greater the need for improvement)			
1			6
Low		High	





17. Eagle Rd
(at Executive Dr)

Mainline Reference	I-84 – Exit 7
Functional Classification of Local Street	Collector
Connection Type	Underpass
ADT Traffic Volumes	14,300 per day
85% Vehicle Speeds	N/A
Location of Closest Sidewalks	N/A
Pedestrian Features	Sidewalks
Bicycle Features	No bike lanes
Street Lighting	Under bridge

Route PBCI Score and Priority Ranking

Pedestrian and Bicycle Compatibility Index			29.2
(Scale of 1 to 100: The higher the score, the safer the street)			
1		100	
Low	Med	High	

Priority Ranking		3
(Scale of 1 to 6: The higher the score, the greater the need for improvement)		
1	6	
Low	High	





18. Newtown Rd

(at Exit 8)

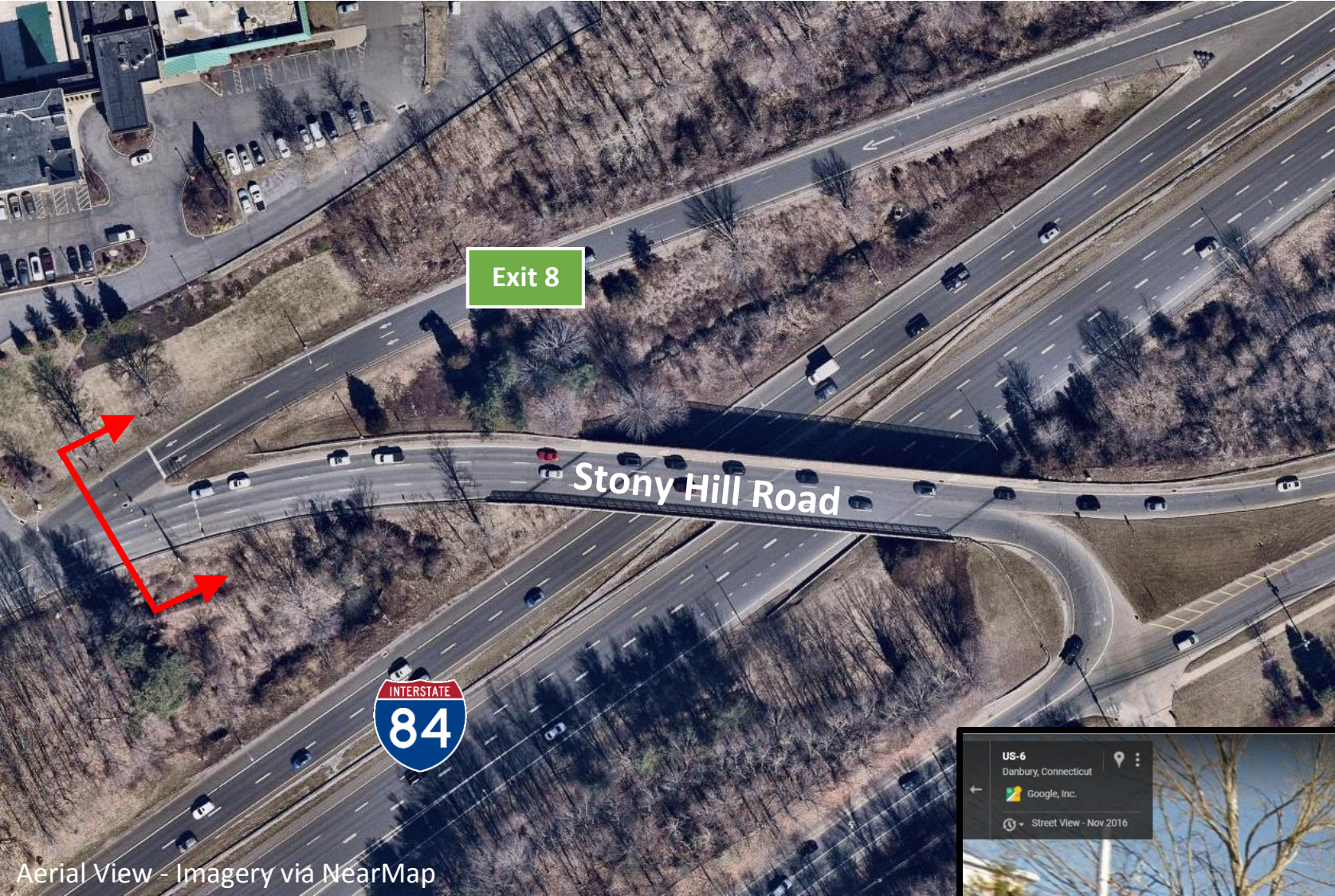
Mainline Reference	I-84 – Exit 8
Functional Classification of Local Street	Minor Arterial
Connection Type	Overpass
ADT Traffic Volumes	12,500 per day
85% Vehicle Speeds	29 MPH
Location of Closest Sidewalks	N/A
Pedestrian Features	No sidewalks / no crosswalks
Bicycle Features	No bike lanes
Street Lighting	No street lighting

Route PBCI Score and Priority Ranking

Pedestrian and Bicycle Compatibility Index			12.6
(Scale of 1 to 100: The higher the score, the safer the street)			
1		100	
Low	Med	High	

Priority Ranking			4
(Scale of 1 to 6: The higher the score, the greater the need for improvement)			
1		6	
Low		High	





19. Stony Hill Rd

(at Exit 8)

Mainline Reference	I-84 – Exit 8
Functional Classification of Local Street	Minor Arterial
Connection Type	Overpass
ADT Traffic Volumes	25,800 per day
85% Vehicle Speeds	29 MPH
Location of Closest Sidewalks	N/A
Pedestrian Features	No sidewalks / no crosswalks
Bicycle Features	No bike lanes
Street Lighting	No street lighting

Route PBCI Score and Priority Ranking

Pedestrian and Bicycle Compatibility Index (Scale of 1 to 100: The higher the score, the safer the street)			15.4
1		100	
Low	Med	High	

Priority Ranking (Scale of 1 to 6: The higher the score, the greater the need for improvement)			3
1		6	
Low		High	

