

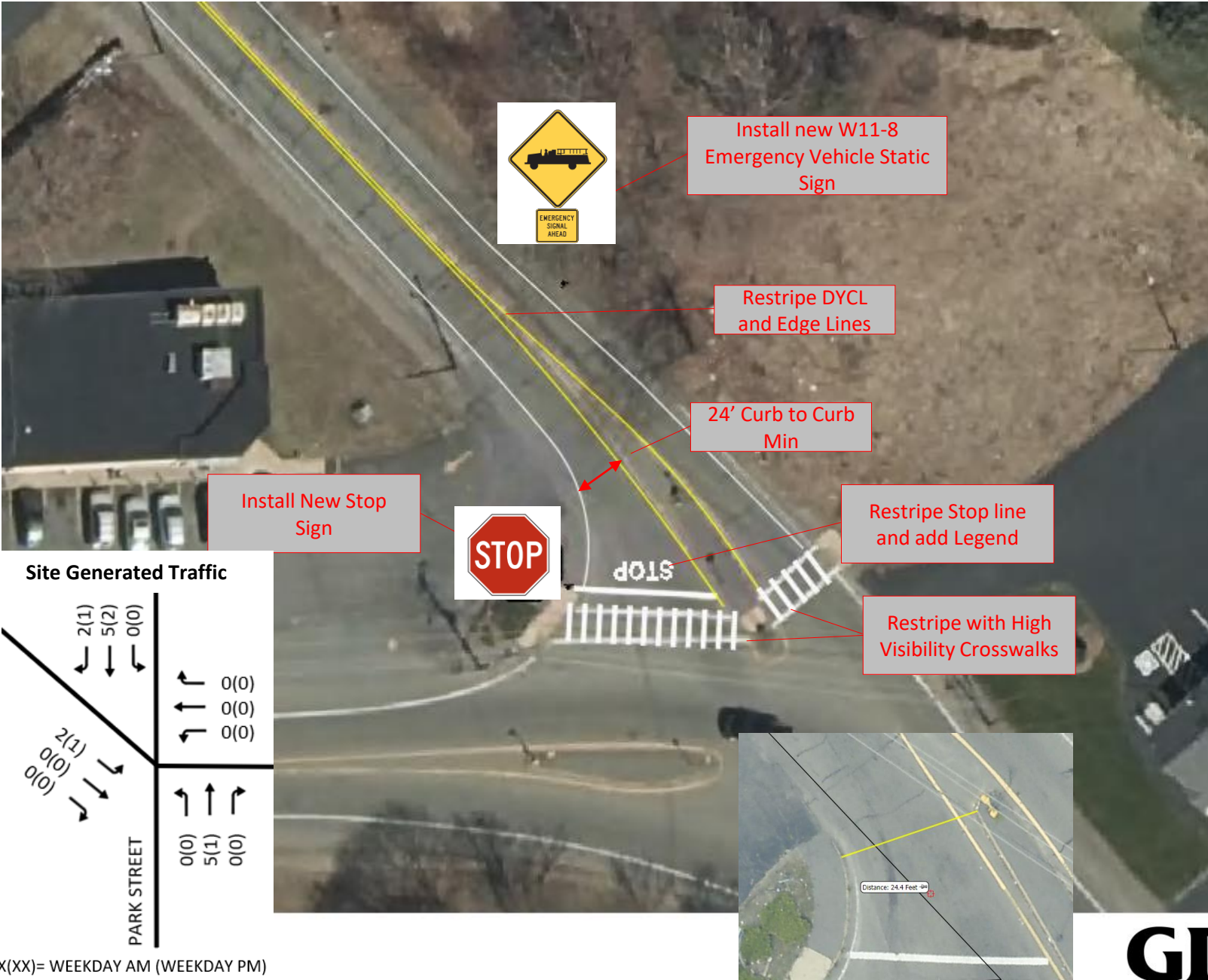
Prospect Street at Park Street

Impacts

- Less than 5 sec additional delay added during morning & evening peak hours
- No change in operational LOS
- At most additional 1 vehicle to SB queue
- Crash Rate: 0.34
 - (0.57 District Ave)
- **Traffic levels do not warrant traffic signalization**

Proposed Mitigation

- Restripe Stop Line and Add "STOP" Legend for Improved visibility.
- Restripe DYCL and edge lines between Fire Station Drive and Park Street
- Install new STOP Sign
- Install Emergency Signal Ahead Sign



2022 Massachusetts Amendments to the 2009 MUTCD

Prospect Street at Pleasant Street

Traffic Control Signal Warrant Analyses

(Based on MUTCD-2009 Edition)

Intersection: **Park Street at Prospect Street**

Pop. <10,000? (Y/N) **N** Count Date: **1/4/2023** Analysis Date: **01/11/23**

Speed (in mph): **40 mph** Analysis Year: **2022** Analyst: **JWD**

?* #Lanes* Adjustment Factor: **1** Raw counts

(one way)

1	Major Lanes: 1	Enter the higher number of lanes for the major street approach
1	Minor Lanes: 1	Enter the number of lanes for the minor street approach you want to analyze
1		

*Note: If intersection is a "T" intersection, leave cells blank for the non-existent approach

Section 4C.02 Warrant 1, Eight-Hour Vehicular Volume

Insert the following paragraphs:

Standard:

Except as provided in Paragraphs 03B and 03C below, Warrant 1 shall be met prior to the consideration of the installation of any new traffic control signal on State Highway.

Option:

03B If an intersection on State Highway meets the criteria for Warrant 7, per Section 4C.08, and an Intersection Control Evaluation shows that alternatives to a traffic control signal are not practical or do not provide the same benefit, then a traffic control signal may be considered.

03C Massachusetts has an approved request for Interim Approval for IA-19, Optional Use of an Alternate Signal Warrant 7. As long as the Interim Approval remains active, the methodology described in IA-19 is an acceptable substitute for Warrant 7.

	Σ WB	Σ NB	Σ SB	Σ Major	Σ Minor	Σ Max Minor	W1 A	W1 B	W1combo	W2	W3
	629	0	46	924	46	46	N	N	N	N	N
	580	0	81	939	81	81	N	Y	N	N	N
	391	0	52	719	52	52	N	N	N	N	N
	403	0	80	763	80	80	N	Y	N	N	N
	378	0	99	742	99	99	N	N	N	N	N
	426	0	81	818	81	81	N	Y	N	N	N
13:00	523	0	87	929	87	87	N	Y	N	N	N
14:00	524	521	109	1045	109	109	N	Y	N	Y	N
15:00	589	569	159	1158	159	159	Y	Y	Y	Y	N
16:00	576	626	168	1202	168	168	Y	Y	Y	Y	Y
17:00	581	551	126	1132	126	126	N	Y	Y	Y	N
18:00	449	413	108	862	108	108	N	Y	N	N	N
19:00	305	323	61	628	61	61	N	N	N	N	N

2 of 8 9 of 8 3 of 8 4 of 4 1 of 1

Warrant Analyses
Warrant 1: Condition A Minimum Vehicular Volume Warrant is Not Met
Warrant 1: Condition B Interruption of Continuous Traffic Warrant is Met
Warrant 1: Combination of Warrants 1A and 1B is Not Met
Warrant 2: Four-Hour Warrant is Met
Warrant 3: One-Hour Warrant is Met

Impacts

- SB Left Turn operates at LOS 'A'
- WB turns operate at LOS 'B'
- 8 Firefighters on 24 hour shift
- 0800 Shift Change
- No Site Traffic During Morning Peak
- Improved Traffic Operations in Town Center with Removal of Fire Station and interruption of Coordinated Traffic Signal
- Majority of traffic (65%) to Park St
- Sight lines in excess of 800' well over requirements of 45 mph

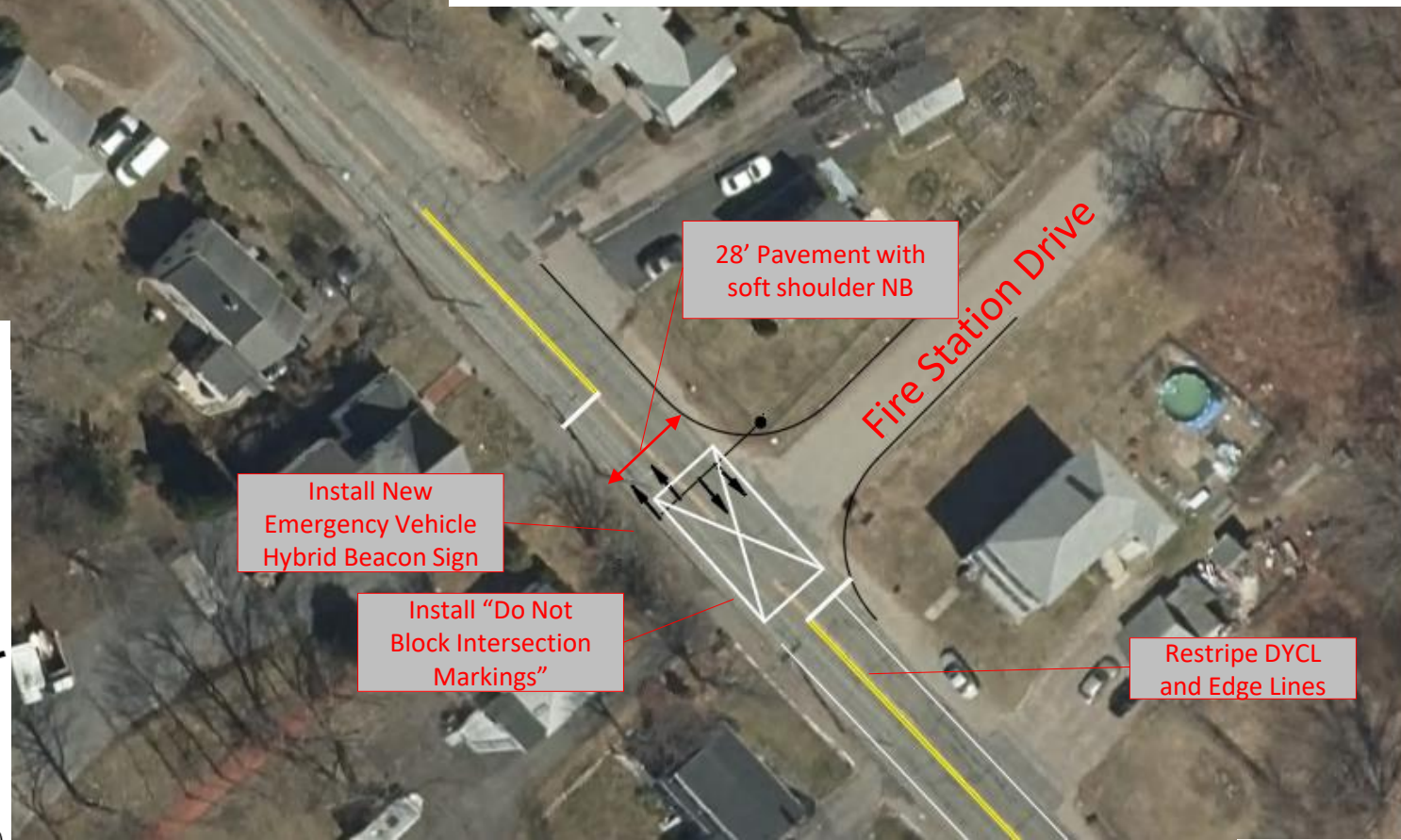
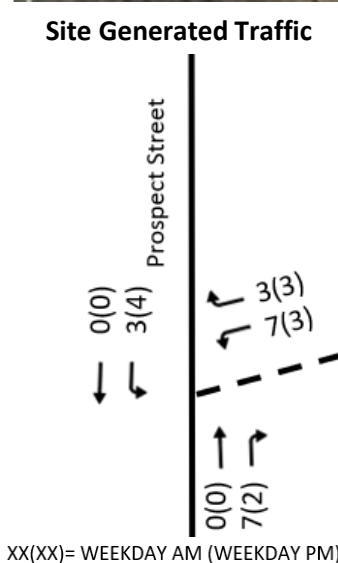
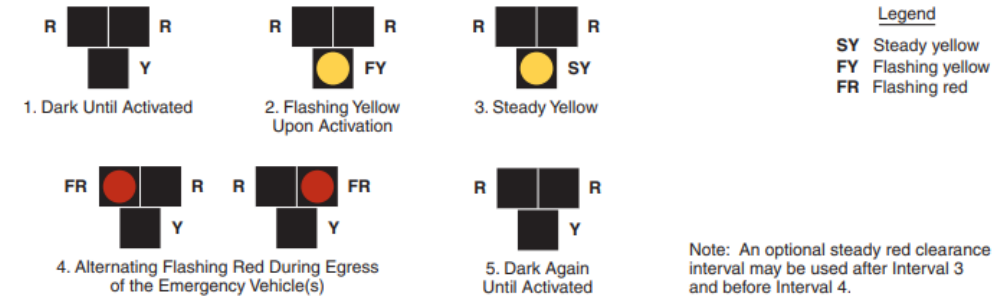
Proposed Mitigation

- Emergency Hybrid Signal Beacon
- Activated only during emergency response
- Install Emergency Signal Ahead Signs on Prospect St

Prospect Street at Fire Station Drive



Figure 4G-1. Sequence for an Emergency-Vehicle Hybrid Beacon



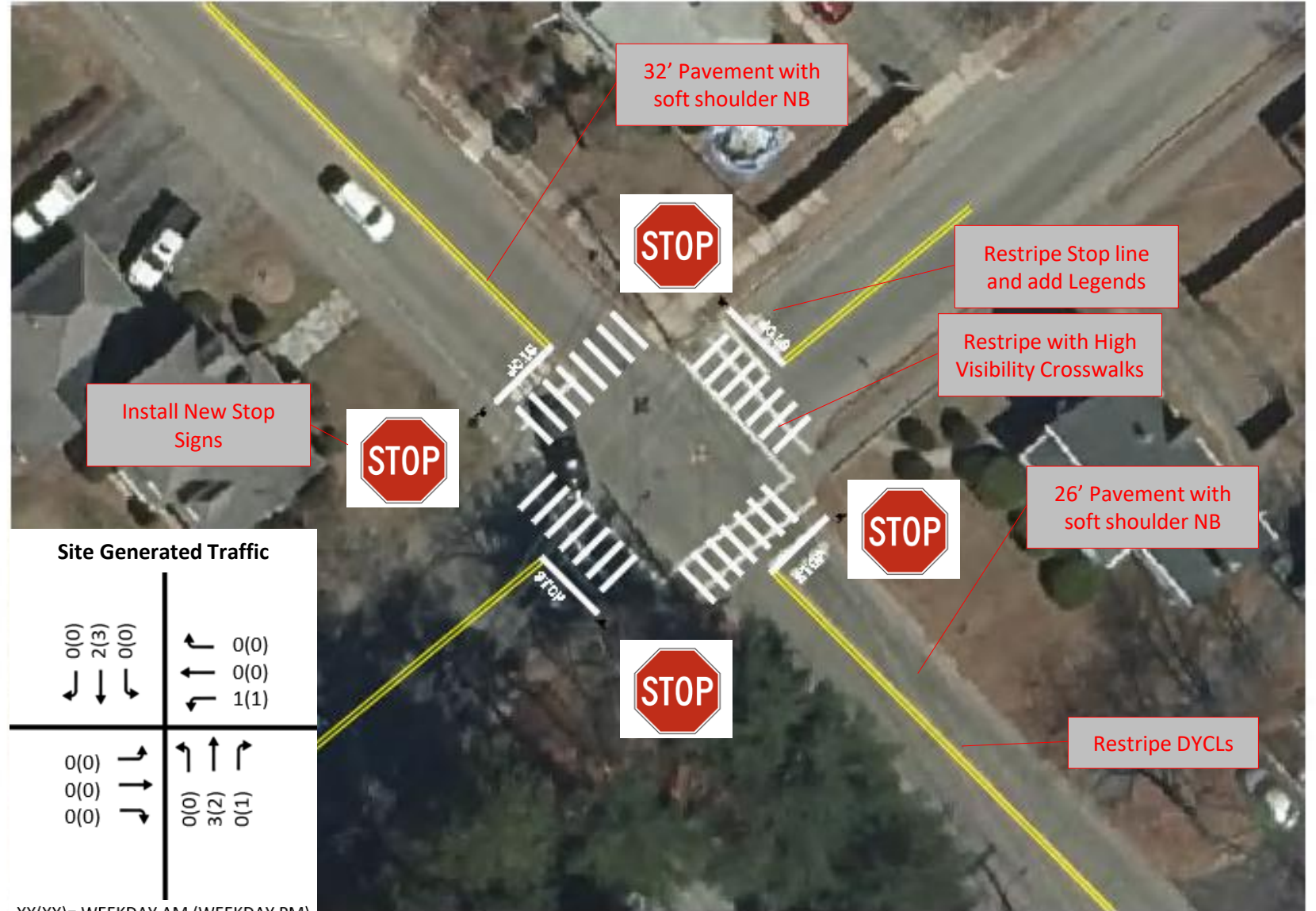
Prospect Street at Walnut Street

Impacts

- Less than 1 sec additional delay added during morning & evening peak hours
- No change in operational LOS
- At most additional 1 vehicle to NB queue
- Crash Rate: 0.73
 - (0.57 District Ave)

Proposed Mitigation

- Restripe Stop Line and Add "STOP" Legend for Improved visibility on all approaches
- Restripe DYCL on all approaches
- Install new STOP Signs on all approaches
- Restripe all crosswalks with high visibility "ladder" style markings
- Trim vegetation to ensure visibility of warning signal and signs.



Site Generated Traffic

0(0)	2(3)	0(0)	↖	0(0)
↘	↘	↘	↖	0(0)
0(0)	↘	↘	↖	1(1)
0(0)	↘	↘	↖	↖
0(0)	↘	↘	↖	↖
0(0)	↘	↘	↖	↖
0(0)	↘	↘	↖	↖
0(0)	↘	↘	↖	↖

XX(XX)= WEEKDAY AM (WEEKDAY PM)

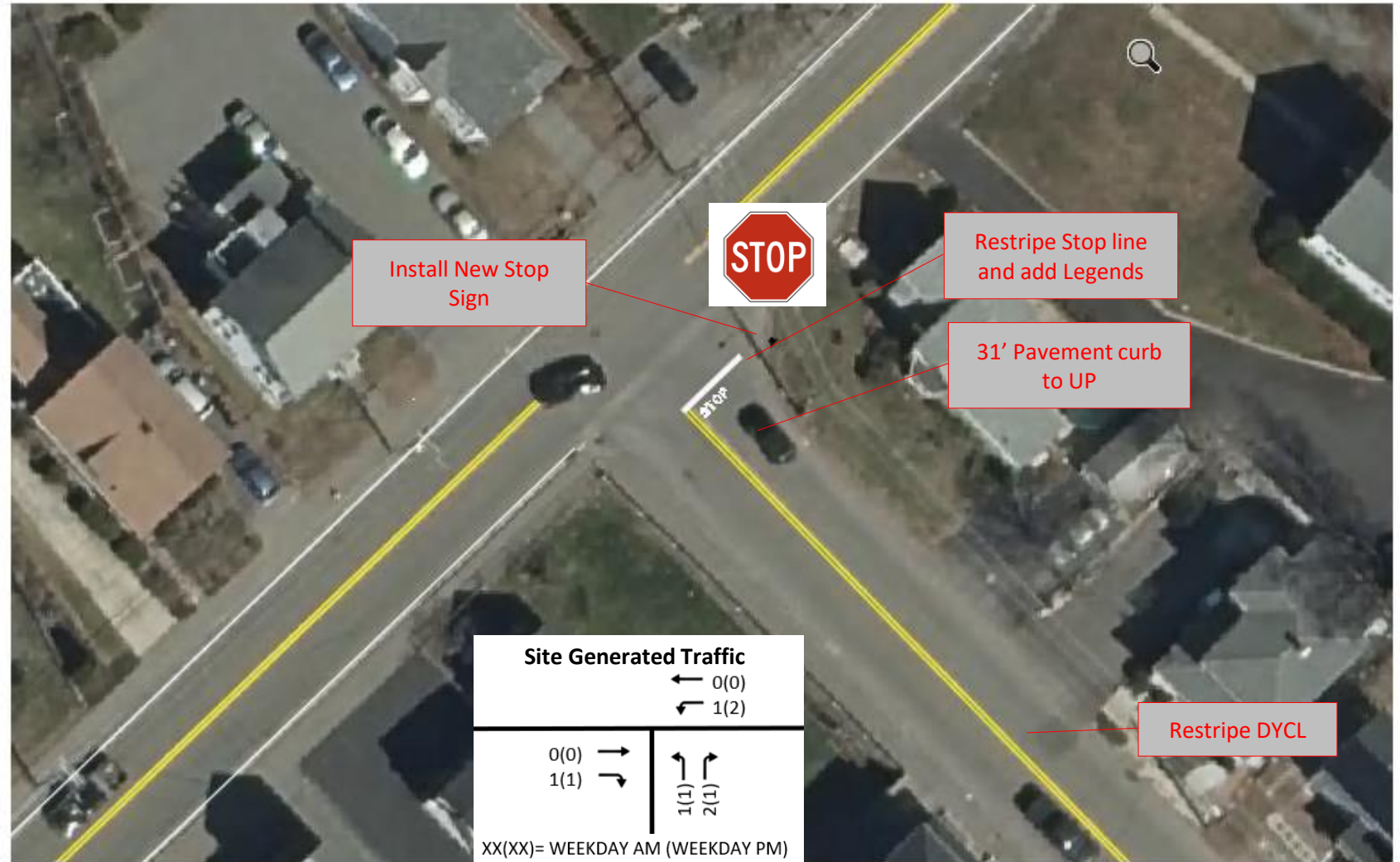
Prospect Street at Pleasant Street

Impacts

- Less than 3 sec additional delay added during morning & evening peak hours
- No change in operational LOS
- At most additional 1 vehicle to NB queue
- Crash Rate: 0.17
 - (0.57 District Ave)

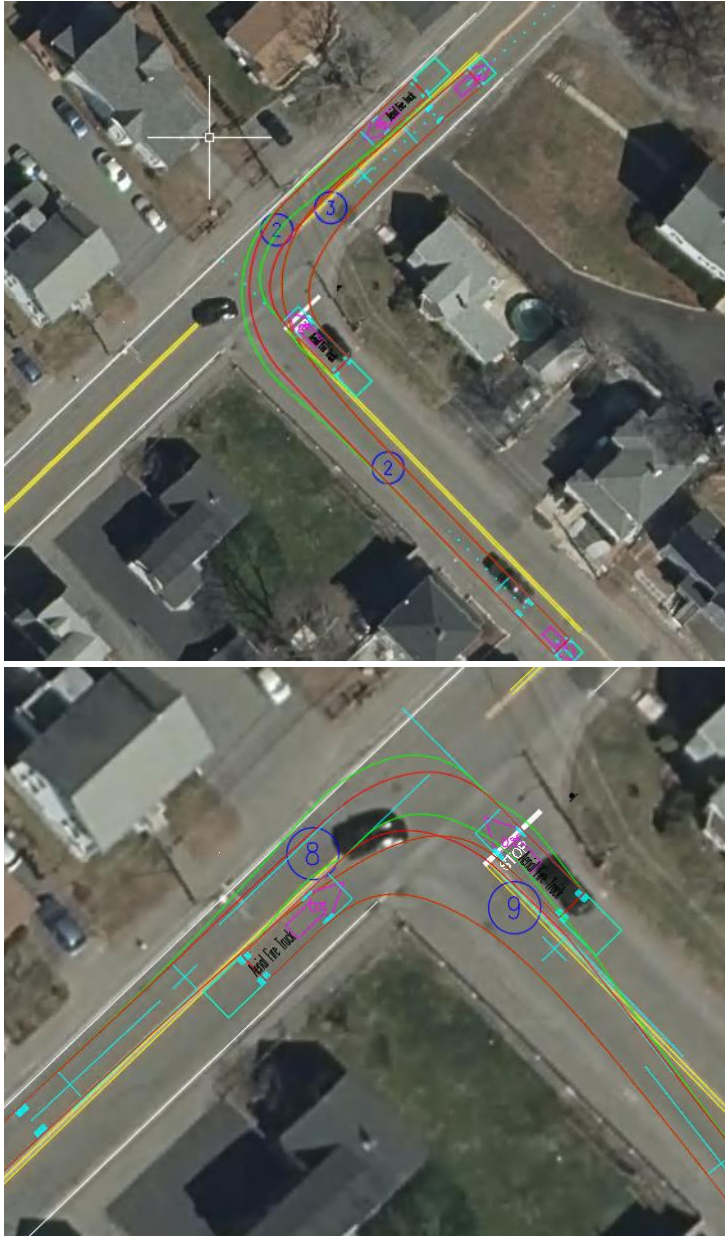
Proposed Mitigation

- Restripe Stop Line and Add "STOP" Legend for Improved visibility.
- Restripe DYCL
- Install new STOP Sign

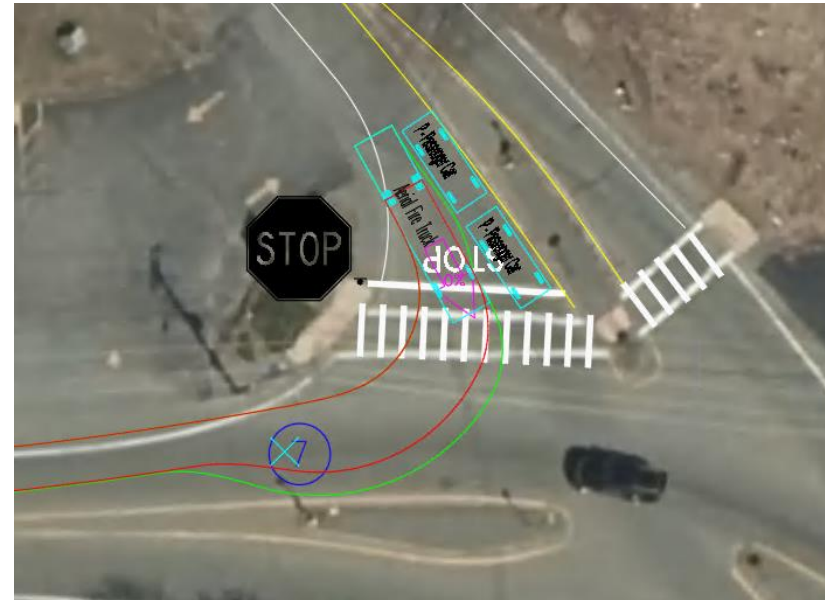


Fire Truck Movements

Pleasant St at Prospect St



Prospect St at Park Street



Prospect St at Fire Station Drive

