



Traffic Engineering and Parking Divisions

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All Way Stop Staff Recommendations: Baldwin St & Wilson St

Background

Baldwin St & Wilson St is a typical 4-legged intersection. It is 2-way stop controlled with Wilson St traffic stopping for Baldwin St traffic. Wilson St has significant bicycle traffic since it carries the Capital City Path users from Dickinson St to just west of Ingersoll St. Baldwin St traffic volumes average about 3,600 vehicles a day and Wilson St about 2,700 vehicles (67% are bicycles) a day.

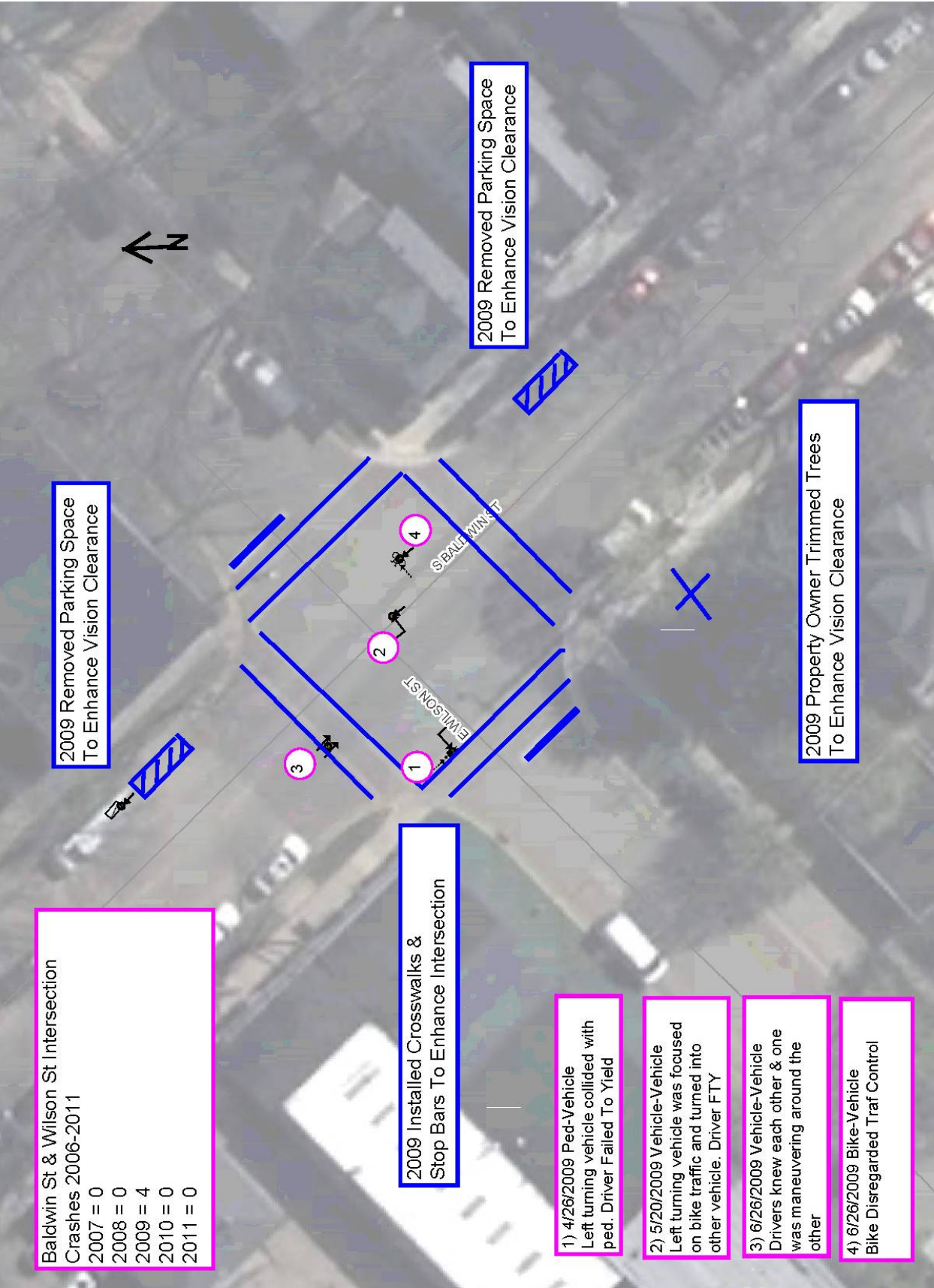
5-Year Crash Review – 2007-2011

In the past 5 years the intersection has had 4 crashes, all in 2009. See exhibit 1. Several improvements were made to enhance the intersection in 2009 including crosswalks & stop bars. The intersection has had no crashes since.

All Way Stop Review

TE uses the criteria recommended by Federal Highway Administration to evaluate the appropriateness of installing an all-way stop at an intersection. See Exhibit 2. The criteria is based upon studies showing intersections that DO NOT meet certain criteria experience poor stop compliance as well as other side effects such as speeding.

Using 2009 data, the worst year in the review period, Baldwin St & Wilson St does not meet the minimum recommended criteria for installing all-way stops. Since the improvements made in 2009 the intersection has shown a good safety record and with no other site conditions contributing to a need for an all-way stop TE does not recommend installing an all-way stop at this time.



Baldwin St & Wilson St Intersection
Crashes 2006-2011

2007	= 0
2008	= 0
2009	= 4
2010	= 0
2011	= 0

2009 Installed Crosswalks & Stop Bars To Enhance Intersection

1) 4/26/2009 Ped-Vehicle
Left turning vehicle collided with ped. Driver Failed To Yield

2) 5/20/2009 Vehicle-Vehicle
Left turning vehicle was focused on bike traffic and turned into other vehicle. Driver FTY

3) 6/26/2009 Vehicle-Vehicle
Drivers knew each other & one was maneuvering around the other

4) 6/26/2009 Bike-Vehicle
Bike Disregarded Traf Control

**City of Madison, Wisconsin Traffic Engineering
Minimum Criteria Summary for Installation of All-Way Stop Signs in Urban Areas**

For a multiway stop to be considered for installation the criteria listed under 1. or 2. or 3. or 4. should be met.

Intersection of: **Baldwin St & Wilson St**

1. Traffic Signal Justified
Where traffic signals are warranted and urgently needed, the multiway stop is an interim measure that can be installed quickly to control traffic while arrangements are being made for the signal installation.

Are traffic signals warranted and urgently needed? **NO**

2. Crash Problem
Crash data for period of: 2009
A crash problem, as indicated by 5 or more reported crashes of a type susceptible of correction by a multiway stop installation in a 12-month period. Such crashes include right and left-turn collisions as well as right-angle collisions.

	% Of
Number of crashes in the last 12 Months = 4	Criteria Met
Correctables = 2	40%

Does a crash problem exist which would be susceptible to correction by a multiway stop installation? **NO**

3. Minimum Volumes & Delay
a.) Vehicles per hour for any eight hours in which the average volume of traffic entering the intersection from the major street exceeds:

85th Percentile Speed	Required Volume (Including Bikes)	Avg Highest Hours	% Of Criteria Met
<= 40 m.p.h.	300	256	85%
> 40 m.p.h.	210	NA	NA

b.) For the same 8 hours, the average volume from the minor street must exceed:

85th Percentile Speed	Required Volume (Including Bikes & Peds)	Avg Highest Hours	% Of Criteria Met
<= 40 m.p.h.	200	225	113%
> 40 m.p.h.	140	NA	NA

c.) Delay to minor street vehicular traffic must average at least 30 seconds per vehicle during the peak traffic hour for at least one direction.

Required Delay	Estimated Delay	Direction	% Of Criteria Met
30	13.9	EB Delay	46.3%

Has minimum volume & delay criteria been met **NO**

4. No single criterion met but 2 & 3 are both 80% met.

No single criterion met but 2, 3a.) 3b.) and 3c.) are at least 80% met. **NO**

NO, The minimum criteria to be considered for a multiway stop HAS NOT BEEN MET for the intersection of Baldwin St & Wilson St

24-Hr Factored Approach Volumes From Manual Turning Movement Study

4/24/2012