



Multi-Way Stop Rating System

Date: 7/9/20 Checked By: Ashley White & Kevin Moore

1. Location: Mathews Street @ Whitfield Street

2. Street Classification:

- a. Street 1: Mathews Street (25 mph) Classification: Local
b. Street 2: Whitfield Street (25 mph) Classification: Local

3. ISD (looking left) is: greater than the minimum requirement (280 ft)
ISD (looking right) is: greater than the minimum requirement (280 ft)

4. 85th Percentile Speed on Main (Thru) Street: 33-34 mph (data collected 2/3/20 to 2/16/20)
32-34 mph (data collected 4/16/20 to 4/29/20)

WARRANT ANALYSIS

A. As an interim measure prior to signalization:
WARRANT MET: YES NO

B. Total Accidents Within a One-Year Time Period: 1
5 Preventable by Multi-Way (right and left turn collisions as well as right angle collisions):
WARRANT MET: YES NO

C. Total Volumes for any 8 hours - The total vehicles entering the intersection from the major street approaches must average at least 300 vehicles per hour for any 8 hours (210 if 85th percentile exceeds 40 mph)
WARRANT MET: YES NO

D. The combined vehicular & pedestrian volume from the minor street must average at least 200 vehicles per hour for the same 8 hours (140 if the 85th percentile exceeds 40 mph) with an average delay to minor street traffic of at least 30 seconds per vehicle during the peak hour
WARRANT MET: YES NO

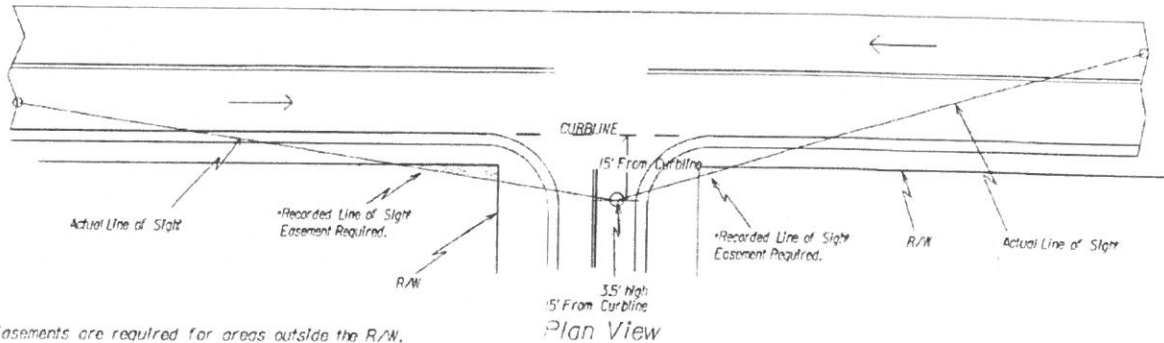
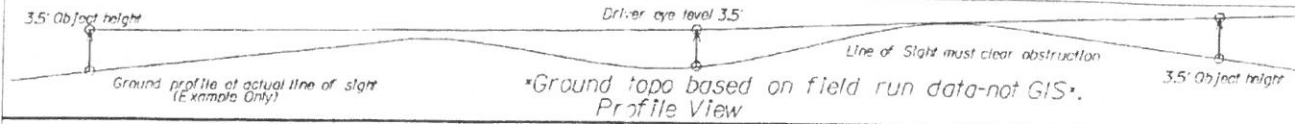
E. Where no single criterion is satisfied but where Criteria B, C and D are all satisfied to 80 percent of minimum values (excluding 85th percentile speeds)
WARRANT MET: YES NO

- Other Criteria That May be Considered: A. The need to control LT conflicts: Y N
B. The need to control vehicle/pedestrian conflicts near locations with high pedestrian volumes: Y N
C. Locations with limited ISD: Y N

RECOMMENDATION:

MULTI-WAY STOP IS NOT WARRANTED AT THIS INTERSECTION BASED ON VOLUME AND SIGHT DISTANCE. SPEED BUMPS HAVE BEEN RECOMMENDED.

Intersection Sight Distance (ISD) Requirements:



ISD Easements are required for areas outside the R/W.
 * Line of Sight Easement shown for example. The specific location, curvature of roadway, etc. shall determine easement limits.
 Intersection Sight Distance (ISD) shall be measured from a point established 15' from the curbline of the egress lane, at a 3.5' height above finished grade. The actual Line of Sight is then extended in a straight line, the minimum required distance to both sides of the abutting street along the thoroughfare to the edge of the oncoming travel lane of threat, terminating at a point 3.5' above finished grade. Approach grades are to be shown on profile. Approach Grades of 3.1% up to 12% are to be increased by 10%. Approach Grades exceeding 12% shall be reviewed by CDOT. Further calculation factors, type vehicles, lanes crossed, divided median, etc. are to be considered in requirement. CDOT reserves the right to make adjustments based on AASHTO requirements, Latest Edition.

Distances are for undivided roads.

SPEED LIMIT	INTERSECTION SIGHT DISTANCE in FEET		
	2 lane	3 & 4 lane	5 & 6 Lane
45 MPH	500'	560'	630'
40MPH	445'	500'	560'
35MPH	390'	440'	490'
30MPH	335'	----	----
25MPH	280'	----	----



DETAIL 401B
 INTERSECTION SIGHT
 DISTANCE (ISD)