

APPENDIX B – CITY OF NORTHFIELD
USE AND APPLICATION GUIDELINES FOR THE
RESIDENTIAL ALL-WAY STOP CONTROL JUSTIFICATION WORKSHEET

The residential all-way stop control justification worksheet was developed in order to respond to increasing requests by residents for all-way stop control to address safety concerns in their neighborhoods. In following the intent of the recommended policy and procedures for residential all-way stop control; this worksheet was developed to evaluate the speed, volume, site distance, traffic accident, and pedestrian activity criteria for the subject intersection request.

This policy and procedure is intended only for local/residential neighborhood street intersections with speed limits of 30 mph. Higher functional classification streets such as major collector or arterial streets are not applicable to this Policy Procedure and the standard All-Way Stop Control Warrants in the Minnesota Manual on Uniform Traffic Control Devices (MnMUTCD) apply.

Following are directions for completing the worksheet.

Functional Classification Review

The first step in this process is to review the current City Transportation Plan to verify that the subject intersection is not on a designated major collector or arterial street. If the subject intersection is on a major collector or arterial street the MnMUTCD supersedes this procedure and the MnMUTCD warrants for All-Way Stop Control shall be applied.

Residents Petition

Once the petition for residential all-way stop control has been submitted to the City, a review is made of the number of “households” within 300 feet of the intersection that have signed the petition. Either through the site survey or by use of appropriate mapping, the “total” number of households is determined within 300 feet from the center of the subject intersection and along the streets that would be affected by the AWSC. From the number of households (not the number of residents) signed on the petition and the total number of households within 300 feet of the subject intersection, the percent of households signing the petition is made. At least 51 percent of the total number of households within 300 feet of the subject intersection must have signed the petition.

Approach Speeds

Based on the speed data collected for the uncontrolled approaches to the subject intersection enter these speeds in the blanks on the worksheet and mark two boxes on the worksheet, one for the highest 85th percentile speed and one for the highest recorded speed group with 2 or more observations.

Traffic Volumes

Based on the average daily approach traffic volumes collected at the subject intersection, enter the approach traffic volumes in the blanks on the worksheet and mark two boxes on the worksheet, one for the major street “total” approach volume (both approaches) and one for the highest minor street approach volume (doubled or times two).

Sight Distance

Based on the site survey, determine if the available site distance on each uncontrolled approach to the subject intersection is adequate. This can be done by driving or walking those uncontrolled approaches and stopping at a “point” 300 feet and also at 450 feet from the subject intersection. At each of these locations look to see if some feature on the controlled approach like a car, curb, sign or other appropriate feature is visible from that location. Measure the distance between a “point” at 300 feet and also at 450 feet from the center of the subject intersection using either a vehicle installed distance measuring instrument (DMI) or measuring wheel.

Mark the box and score 60 points on the worksheet if the sight distance is less than 300 feet (unsafe condition). Where the controlled approach is not visible from the 300 foot point.

Mark the box and score 10 points if the sight distance is greater than 300 feet but less than 450 feet (uncomfortable condition). Where the controlled approach is visible at the 300 foot point but not at the 450 foot location.

Other Conditions

Based on traffic accidents recorded by the City police for the last 12 month period enter the number of accidents (not number of vehicles or persons involved) in the blank space. Multiply this number of accidents by 10 points and enter the score in the adjacent box.

Based on the site survey and other available information mark the box and score 20 points if there is significant pedestrian activity crossing the subject intersection caused by a nearby school, park, bus stop or other pedestrian generator.

Worksheet Results

Total the points scored for each category box marked or the points for accident history and enter that total in the total points box. If the total point score is greater than or equal to 120, all-way stop control may be justified at the subject intersection. The final recommendation to install All-Way Stop Control at the subject intersection will be made based on the results of this worksheet and the professional judgment of the City Staff.

CITY OF NORTHFIELD DEPARTMENT OF PUBLIC SERVICES
RESIDENTIAL ALL-WAY STOP CONTROL REQUEST POLICY/PROCEDURES

Due to the increasing number of requests for all-way stop control and to address concerns for vehicle speed and safety in residential neighborhoods, the City established this traffic all-way stop control policy.

This policy provides a procedure to respond to requests for all-way stop control in residential neighborhoods and to address the safety and quality of life issues related to these concerns. It is the intent of this policy to address the need for a review, screening and justification procedure for the installation of all-way stop control in residential neighborhoods.

The Minnesota Manual on Uniform Traffic Control Devices (MnMUTCD) establishes “warrants” for all-way stop control. However, these warrants are not intended to address the conditions present on residential neighborhood/local streets. These Mn/MUTCD warrants are intended to address the conditions present on higher functional classification roadways such as major collector and arterial streets.

The City of Northfield residential all-way stop control policy recognizes that there are conditions that may justify all-way stop control at local residential street intersections. These predominant causes or conditions are related to vehicle speed, traffic volume, sight distance, pedestrian activity and traffic accident history. It also recognizes that there must be a method to screen requests for all-way stop control in order to reduce the indiscriminate use of all-way stop control where it is not justified.

Upon receiving an initial request for all-way stop control the city will provide the interested party with an informational flyer describing the policy and procedure and specific information concerning all-way stop control, what it can and cannot do for the neighborhood, what the likely side effects of all-way stop control are, what cautions should be considered, and who they should contact at the city should they choose to go forward with their request for all-way stop control. Along with this flyer, a petition form and instructions for use will be attached in order to obtain support in the form of signatures from the neighborhood.

Should the neighborhood decide to go forward with their all-way stop control request, they should complete the attached petition form and submit this petition to the City of Northfield Engineering Division, 801 Washington Street, Northfield, MN. Once this signed petition has been received by the Engineering Division a site survey and traffic data collection will be scheduled for the subject intersection. This site survey and data collection can be done only from May through October due to weather related conditions.

This site survey will include traffic volume counts on all intersection legs and an approach speed survey on the uncontrolled approaches. A review of sight distance, pedestrian use and traffic accident history for the past 12 months will also be completed.

When the site survey/traffic data collection has been completed, the subject site will be evaluated based on a worksheet system where points are scored for the various speed, volume, sight distance, traffic accident history and pedestrian use criteria. When a minimum point threshold is reached or exceeded the all-way stop control may be justified. The final recommendation to install all-way stop control will be made based on this evaluation and the professional judgment of the appropriate city staff. The site evaluation, data collection, and staff recommendation will be completed within 60 days of receipt of the submitted petition.

Once the final recommendation to install all-way stop control has been given, for the subject intersection the appropriate Resolution for City Council action will be prepared and included in the agenda for the next available City Council meeting. The neighborhood will also be notified of this action.

If the final recommendation for the subject site is not to install all-way stop control, the neighborhood will be notified of that decision and provided additional materials relative to their case and what other actions or measures could be considered.

Is All-Way Stop Control the right prescription for your residential neighborhood street intersection?

- Symptoms--speeding vehicles, higher traffic volumes, concern for child and adult safety. It is reasonable that neighborhoods be concerned for speeding vehicles and safety issues and general neighborhood wellness
- All-Way Stop Control--is it effective in treating your neighborhoods safety concern? AWSC has been shown to be affective in diverting or redistributing high “through” traffic volumes. But the data show that they are not very effective in reducing overall travel speeds or increasing safety in typical residential neighborhoods.
- Side Effects--negative side effects from the installation of an All-Way Stop, like increased rate of stop sign violators, plus increased acceleration/deceleration, noise, auto emissions, fuel consumption and travel delay.
- Cautions: Don’t allow a false sense of security to develop. The street should not be considered a safe area to play in or along side under any circumstances even with an all-way stop in place. Over use of AWSC can lead to contempt and non-compliance of this important traffic control.
- Schedule an appointment--submit a request for all-way stop control with a petition signed by neighbors in favor of the all-way stop.
- Physical Examination-- taking the pulse of your neighborhood intersection. The city will schedule traffic data collection and site survey of your intersection after they receives the petition/request for AWSC. This activity includes traffic counts, speed measurement and site survey. This site survey and data collection activity can only be done from May through October due to weather conditions.
- Diagnosis and Treatment--based on the traffic data collected and conditions present at your neighborhood intersection the city will determine if all-way stop control is justified and would be an appropriate form of treatment in your case. If not, some other form of treatment may be indicated.
- Other treatments available--increased traffic law enforcement, “neighborhood watch,” and neighborhood communication and education programs.
- To proceed with your request for all-way stop control please circulate a petition for this All-Way Stop Control through the neighborhood (all residents within 300 feet from the subject intersection and along the affected streets). When the neighborhood residents have signed this petition please submit this petition to the Engineering Division at City Hall, 801 Washington Street, Northfield, MN, (507) 645-3020.

CITY OF NORTHFIELD

DEPARTMENT OF PUBLIC SERVICES

RESIDENTIAL STREET ALL-WAY STOP CONTROL JUSTIFICATION WORKSHEET

INTERSECTION LOCATION: _____

EXISTING TRAFFIC CONTROL: _____

DATE: _____

This Residential Street All-Way Stop Control Justification Worksheet is applicable only to intersections of residential streets with speed limits of 30 miles per hour. This procedure is "not" to be applied to the intersection of a local residential street with a major collector or arterial street as identified in the City's Transportation Plan.

RESIDENTS' PETITION

A petition has been submitted to the City which has been signed by more than 50% of the residents within 300 feet of the subject intersection and who live on the streets that would be affected by the requested All-way Stop Control.

SUBMITTED BY: _____

DATE: _____

ADDRESS: _____

PHONE: _____

APPROACH SPEEDS

1 **2**

Uncontrolled approach speed. Check two boxes, one for the 85th percentile approach speed group and one for the highest recorded speed group with two or more observations.

27.5 miles per hour or less	0 points	<input type="checkbox"/>	<input type="checkbox"/>
27.6 to 32.5 miles per hour	10 points	<input type="checkbox"/>	<input type="checkbox"/>
32.6 to 37.5 miles per hour	20 points	<input type="checkbox"/>	<input type="checkbox"/>
37.6 to 42.5 miles per hour	30 points	<input type="checkbox"/>	<input type="checkbox"/>
42.6 to 47.5 miles per hour	40 points	<input type="checkbox"/>	<input type="checkbox"/>
47.6 to 52.5 miles per hour	50 points	<input type="checkbox"/>	<input type="checkbox"/>
52.6 miles per hour or more	60 points	<input type="checkbox"/>	<input type="checkbox"/>

_____ **1** = 85th percentile approach speed (highest approach).

_____ **2** = highest recorded speed group with two or more observations.

TRAFFIC VOLUMES

1 **2**

Intersection approach daily traffic volume. Check two boxes, one for the total major street approach volume and one for the highest minor street leg.

Less than 250 vehicles per day	0 points	<input type="checkbox"/>	<input type="checkbox"/>
250 to 450 vehicles per day	10 points	<input type="checkbox"/>	<input type="checkbox"/>
450 to 700 vehicles per day	20 points	<input type="checkbox"/>	<input type="checkbox"/>
700 to 1000 vehicles per day	30 points	<input type="checkbox"/>	<input type="checkbox"/>
More than 1000 vehicles per day	40 points	<input type="checkbox"/>	<input type="checkbox"/>

_____ **1** = total daily traffic volume for both major street approaches.

_____ **2** = highest minor street approach daily traffic volume (times two).

SIGHT DISTANCE RESTRICTION

The safe stopping sight distance on any uncontrolled approach is restricted to less than 300 feet by horizontal and/or vertical roadway alignment, or by other "permanent" obstructions to sight distance.

60 points

The safe stopping sight distance on any uncontrolled approach is greater than 300 feet but less than 450 feet due to horizontal and/or vertical roadway alignment, or other "permanent" obstructions to sight distance.

10 points

OTHER CONDITIONS

The number of reported traffic accidents at the subject intersection within the past 12 months = _____

x (times) 10 points = _____

School, park, bus stop or other major pedestrian generator causing many pedestrians to cross the subject intersection.

10 points

PREPARED BY: _____

Total Points

If the worksheet point total is greater than or equal to 120, all-way stop control may be "justified" at the subject intersection. See the reverse side of this worksheet for an explanation of the results of this review and the status of this request.

CITY OF NORTHFIELD

DEPARTMENT OF PUBLIC SERVICES

RESIDENTIAL STREET ALL-WAY STOP CONTROL JUSTIFICATION WORKSHEET

RESULTS AND STATUS OF THIS RESIDENTIAL STREET ALL-WAY STOP CONTROL REVIEW

<u>Total Points</u>	<u>Results and Status</u>
120 +	Conditions at the subject intersection may "justify" installation of residential street all-way stop control. After further review, a final City staff recommendation will be made based on the results of this worksheet and professional judgement. If the recommendation is to install All-way Stop Control a City Council Resolution will be prepared and submitted for Council action on the next available City Council agenda. Once the City Council has approved this Resolution the all-way stop control will be installed as soon as work schedules permit.
100-120	Conditions at the subject intersection "do not" justify installation of residential street all-way stop control at this time. However, conditions do warrant further future review. In approximately 12 months the City staff will initiate contact with the neighborhood to verify continued interest in all-way stop control installation at this intersection. If so, traffic data collected will be updated and the intersection re-evaluated. After one re-evaluation that results in 90 points or less the neighborhood will be required to submit a new petition at such time that they feel conditions have changed significantly and continue to want All-way Stop Control.
< 100	Conditions at the subject intersection "do not" justify installation of residential street all-way stop control at this time. However, further review may be justified at some future time. After two or more years, or after the neighborhood feels there has been a significant change in conditions, the neighborhood can submit a new petition for residential street all-way stop control at this intersection.

Should there be any questions or comments concerning this review please contact the Engineering Division at 507-645-3020.

