



PEDESTRIAN CROSSING POLICY
FOR UNCONTROLLED CROSSINGS¹

Adopted by the Carver County Board of Commissioners – May 5, 2020

Policy Statement

Purpose

It is the goal of Carver County to establish consistency and uniformity in the application, installation, and maintenance of pedestrian crossing facilities on Carver County's transportation system. Carver County strives to provide safe, accessible, and efficient travel for all modes of transportation, including pedestrians, bicycles, transit, and motor vehicles, while also maintaining long-term strategic priorities and cost-effective investments in highway rights-of-way. This includes balancing sometimes competing objectives of system preservation, mobility, and access for a broad range of users and needs.

Providing safe and effective crossing situations for pedestrians relies on placing crosswalks and other pedestrian crossing treatments at appropriate locations in a way that balances system and localized highway and land use conditions with different user demands, characteristics and interests. While pedestrians have a legal right to cross at any uncontrolled intersection, it is important and practical that motorists are also able to reasonably travel and fulfill their obligations to stop and yield to pedestrians given the prevailing speed and corridor conditions; and likewise for pedestrians to reasonably travel and expect motorists to reasonably observe them and yield and stop under the same or similar conditions.

The purpose of this policy is to provide guidelines and permissible locations for pedestrian crosswalk treatments at uncontrolled pedestrian crossing locations on highways under the jurisdiction of Carver County. As marked crosswalks are a traffic control device, this policy recognizes that the Minnesota Manual on Uniform Traffic Control Devices (MN MUTCD) is the standard for all traffic control devices on all public roads in Minnesota, and therefore all traffic control devices on Carver County's highway system must conform to its standards and specifications as specified in Minnesota State Statute 169.06. Every roadway intersection whether it is marked or not is a legal crossing for pedestrians. This policy will guide Carver County Public Works in documenting and implementing a pedestrian crossing program at uncontrolled crossings that is consistent with Carver County's Comprehensive Plan; county-level transportation system and highway functional classification service functions; state law

¹ Uncontrolled crossings occur at intersections where neither a stop or yield sign nor a traffic signal controls traffic at the street of the crossing. Intersections without traffic signals or stop or yield signs are considered uncontrolled intersections.

and rules of the road; industry standards for traffic control devices and engineering; and the various interests, values, and plans of both Carver County and local communities within Carver County.

Policy

All new pedestrian crosswalk crossing requests or existing pedestrian crosswalk crossings within the project area of a resurfacing or reconstruction project of a Carver County highway at uncontrolled crossings shall be reviewed and approved in accordance with the requirements and guidelines contained in related Minnesota State Statutes, the MN MUTCD and this policy. Marked crosswalks and pedestrian crossing treatments not explicitly required to be installed by the MN MUTCD at uncontrolled crossings should not be installed on Carver County's highway system unless otherwise specified in this policy or authorized by the Public Works Division Director.

The need, basis, priority, and risks for specific potential crossing locations shall be evaluated according to the policy guidelines and appropriate treatment options will be recommended by the traffic engineer as designated by the Public Works Division Director. Implementation of recommended treatments shall comply with the Carver County's Roadway Systems Plan, Capital Improvement Program, legal requirements, accepted professional engineering practice, and budgetary constraints.

Policy Guidelines

General

These policy guidelines were developed to provide a consistent and systematic approach to evaluate uncontrolled pedestrian crossing locations for the installation of marked crosswalks and additional pedestrian crossing treatments, that:

- Provides marked crosswalks at locations where there is substantial conflict between vehicle and pedestrian movements, where significant pedestrian concentrations occur, and where pedestrians and motorists would not otherwise recognize a crossing location; and
- Borrows from industry best-practices and proven, effective considerations and crossing treatments; and
- Includes the creation of an uncontrolled crosswalk warrant system, crossing treatment thresholds, and crossing treatment categories, that can be used on a system wide, network basis; and
- Balances potential crosswalk locations with other transportation users and needs, access management, highway system preservation, mobility, capacity and safety goals and guidelines.

It is in the interest of Carver County and the public to use the least restrictive but effective, sustainable method of traffic control, that relies on already established state statutes and rules of the road. Where additional measures are required, Carver County will plan, coordinate, prioritize, install, and maintain a responsive but limited, case by case, corridor planned, strategic number of pedestrian crossing locations on the county highway system.

A conservative use of pedestrian traffic control systems improves the effectiveness of the highest priority locations and balances interests in county highway regional system mobility and service needs. Prioritizing and focusing a limited number of substantiated, enhanced pedestrian traffic control systems achieves the following:

- Fulfills demonstrated needs
- Champions a command of attention
- Conveys a consistent, clear, simple meaning within a corridor's context
- Commands respect from road users
- Provides reasonable measures, adequate time, and proper cues for proper response and obligations required of motorists and pedestrians
- Supports the strategic, fiscally focused, and long-term interests of a Comprehensive Plan and specifically the Roadway Systems Plan

Consistency with Other Plans, Standards, and Guidelines

It is in the interest of Carver County and the public to provide a set of guidelines and a deliberate number of pedestrian crossing locations and appropriate, effective, and sustainable treatment options which are focused around the Carver County Comprehensive Plan and specifically the Roadway Systems Plan, which contains the functional classification and access management guidelines.

The MN MUTCD states that crosswalk pavement markings should not be placed indiscriminately, and an engineering study should be completed when crosswalk markings are being contemplated at a crossing. Defining where to place pedestrian crossing facilities depends on many factors, including pedestrian volume, vehicular traffic volume, sight lines, number of lanes to cross and the posted speed limit.

Special Considerations for County-Level Highways

Crosswalks and crossing treatments on Carver County highways need to be balanced with other key Carver County highway level objectives such as corridor mobility, capacity, system preservation, budget, and ongoing maintenance and operations. Not all crosswalk locations can be marked or treated properly, rather a given corridor may have the ability to include a few key crossing locations in a manner similar to the spacing and installation of traffic signals or all way stop controlled intersections. In addition, not all candidate crosswalk or crossing projects can be supported by the county budget, resources and adopted Capital Improvement Program.

Due to their nature and role in the transportation system, most county highways are thoroughfares with speed limits of 45 mph or higher. These arterial-like streets require higher order pedestrian crossing treatments and other substantial highway improvements. Cities and townships are different than a county, where generally there are lower speeds and more collector and local streets, where more frequent crossings and marked crosswalks can be accommodated. Where a highway has more demands for mobility versus access and speeds of 45 mph and over, most engineering standards and guidelines recommend or require special additional measures beyond simple crosswalk markings and signs.

Engineering Study Review and Legal Standards

The County has established this policy to help facilitate and formalize its standards and process for the evaluation, installation, and maintenance of pedestrian and bicycle crossing facilities on Carver County's highway system. Current practice and guidelines related to unsignalized intersections and midblock locations with no traffic signals or stop signs on the approach to the crossing follow closely to the same policy, standards, state statutes, rules of the road, MN MUTCD, and other guidelines from such sources as the Minnesota Department of Transportation and the Federal Highway Administration.

As a general standard based on the MN MUTCD guidance, standards, and requirements, marking of a crosswalk is not required, but is considered an enhancement to standard traffic control systems and rules of the road. Crosswalk markings by themselves, or in conjunction with other road crossing enhancements like signs and other measures, help to alert road users of a designated pedestrian crossing point across roadways at locations that are not controlled by traffic signals or stop or yield signs. At non-intersection locations, crosswalk markings legally establish the crosswalk.

The MN MUTCD states that crosswalk pavement markings should not be placed indiscriminately, and an engineering study should be completed when crosswalk markings are being contemplated at a crossing. Before placing crosswalk markings or other crossing treatments at uncontrolled intersections, an engineering study shall be completed to determine the necessity and feasibility of pedestrian crossing treatments.

Pedestrian Crossing Evaluation Criteria

Carver County has developed a pedestrian crossing evaluation process that combines and refines what is available in current practice and research into a consolidated process that:

- Screens locations with a minimum pedestrian or bicycle crossing volume threshold or warrant and location spacing and consistency with respect to a given corridor's functional classification and access management guidelines; and
- Evaluates the potential risk of a crossing in terms of speed, volume, and number of lanes at the crossing; and

- Recommends a package of treatments based on the highest level of risk, and other factors such as sight distance, higher speeds, access management / spacing guidelines, and transitions in corridor context / speed.

Pedestrian Crossing Review Process and Agreements with Local Agencies

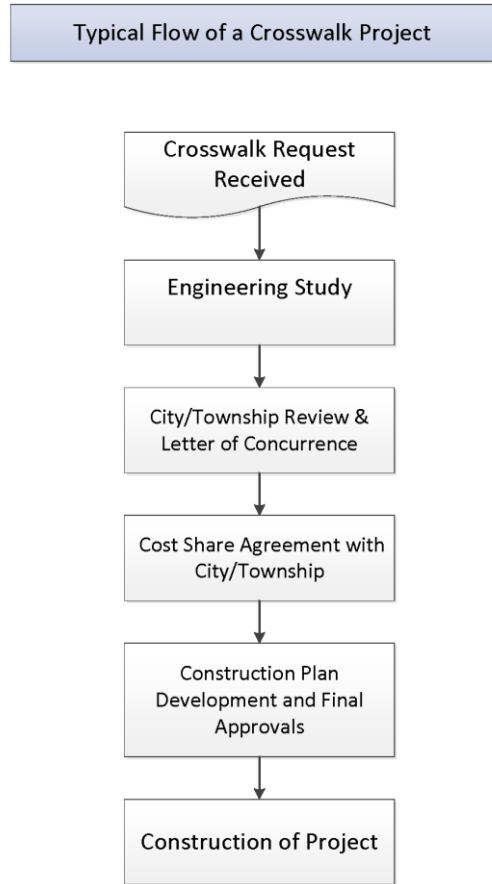
As conveyed by state law, standards and guidelines, pedestrian crossings come in marked and unmarked crosswalk versions, and every roadway intersection is a legal crossing whether it is has a marked crosswalk or not. Crosswalk markings are not required for a crossing at an intersection to be legal and for motorists to be obligated to yield and stop for a pedestrian crossing the street.

Potential marked crosswalks or pedestrian crossing projects on highways of all ranges and types shall go through a formal review and justification process, and the development and selection of an appropriate crossing treatment that may include markings, signs, beacons, center median islands, and other substantial road improvements. Not at all potential crosswalk locations can be marked based on engineering and traffic control standards.

Potential crosswalk or pedestrian crossing locations on Carver County highways need to meet minimum criteria, and if approved may require formal agreements for local agency cost share and maintenance responsibilities. Specifically, potential crosswalk locations need to meet minimum criteria of pedestrian demand thresholds and be at a strategic well-spaced location, consistent with the highway’s functional classification and Carver County’s access management guidelines as shown in the Comprehensive Plan and specifically the Roadway Systems Plan.

Carver County desires local agencies to be a partner on pedestrian crossing projects and processes including an engineering study, plan development and approvals, cost share agreements and public outreach approvals. The review and process of a potential crosswalk location involves several steps and the support of the local governmental unit is critical to successful implementation.

A given community’s priorities, contexts, resources, and values are important considerations. Carver County Public Works will coordinate with local agencies, who are generally responsible for sidewalks and trails located within the Carver County highway rights of way,



to evaluate and attempt to match pedestrian crossing locations with the local agency's interests and its sidewalk and trails comprehensive plan or master plan.

Upon receiving a crosswalk request, Carver County Public Works will conduct an engineering study based on this policy and engineering standards. The findings and recommendation of an engineering study for a potential marked crossing location will be shared with the respective local agency, for their formal review and concurrence prior to further action by Carver County Public Works.

Engineering Study Review and Criteria

The traffic engineer as designated by the County Engineer shall review and provide a recommendation for any pedestrian crossing request for a potential crosswalk and/or pedestrian crossing treatment. Prior to consideration for installation, the proposed location must have met the requirements of an engineering study and have a formal concurrence and joint powers agreement from the local agency to move forward with a marked crosswalk project or other crossing enhancement project.

A pedestrian crossing location request is required to go thru an engineering study that involves a deliberate process, data collection and various levels of review. Among other things the engineering study will review whether a potential crossing request meets basic warrants, proper location and spacing, justification thresholds and traffic and engineering criteria. A pedestrian crossing on a Carver County highway at a given location and given context needs to have a demonstrated pedestrian crossing demand in terms of pedestrians crossing per hour. In addition, the location needs to be at a strategic or key crossing location consistent and compatible with a road's functional classification and Carver County's access management guidelines in the Comprehensive Plan and specifically the Roadway Systems Plan.

Other factors in addition to the above may be considered such as a tiered prioritization or context of a corridor, context sensitive solutions and design, documented safety and crash issues, and demonstrated level of service or delay concerns. More specific details and criteria of an engineering study and engineering standards may be found in the MN MUTCD and related materials and guidelines, including Appendix A of this policy which may be updated by the County Engineer or his designee as deemed necessary.

Carver County Public Works may allow a local agency sponsored pedestrian crossing project subject to the local agency providing an engineering study in a manner that is consistent with this policy, for final review and approval and disposition by the County Engineer or his designee. A formal joint powers agreement may still be required to provide for cost sharing and other obligations or responsibilities including maintenance and operations.

With any project, conditions and interests may change such that the County Engineer or his designee may require the removal or modification of a previously approved pedestrian crosswalk or crossing treatment package after conducting an engineering study.

Formal Letter of Concurrence Required by Local Agency

Carver County Public Works desires to obtain local agency support of pedestrian crossing locations and to partner with them on the engineering study review and approval, plan development, cost share agreements and public outreach. Upon the formal concurrence of an engineering study by the local agency, the local agency may need to enter into a joint powers agreement with Carver County for project cost sharing and responsibilities for the implementation of the recommended project.

Carver County Public Works can evaluate and recommend a potential crossing as a candidate project with a Carver County recommended improvement, however, if a local agency does not concur or agree to move forward with a cost share agreements then such crossing location may be placed on file until such time as the local agency agrees to implement the recommended improvements. Carver County desires cooperative and proactive local partnerships with local agencies for pedestrian crossing locations and projects. Pedestrian crossing requests where a local agency does not respond within a reasonable time will be placed on file by Carver County Public Works. The respective local agency may request to reactivate a candidate project provided the local agency agrees to enter into a joint powers agreement.

Project Cost Share Agreements and Funding

After the completion of the engineering study and prior to construction plan development and related work, the local agency may need to enter into a joint powers agreement with Carver County to move forward with what is considered a stand-alone project. Carver County may, at its discretion, be able to incorporate a recommended pedestrian crossing treatment in its Capital Improvement Program (CIP) and seek available grant programs.

Carver County has adopted a Cost Participation Policy for county highway projects which will be applied to any pedestrian crossing project except as modified by this policy. See the Cost Participation Policy for more cost sharing information which may be updated from time to time.

Project Cost Participation and Maintenance

Prior to any pedestrian crosswalk installation, the local agency will need to work with Carver County to determine the cost share, maintenance and operations responsibilities according to Carver County Public Works standards, Cost Participation Policy and this policy.

Project Cost Sharing

Project costs for pedestrian crossing projects within a larger programmed capital improvement project will be cost shared by the parties in accordance with the current version of the Carver County Cost Participation Policy, and as may be augmented within an approved joint powers agreement.

Total project costs and responsibilities for stand-alone pedestrian crossing improvement projects will be cost shared by Carver County and the local agency in accordance with the current version of the Carver County Cost Participation Policy, for a Conventional Project, except as augmented as follows:

Carver County will pay for all project costs for a pedestrian crossing with a designation of a Destination Regional Trail as shown in the Carver County Comprehensive Plan, provided the pedestrian crossing project meets the requirements as established by this policy and funds are available in the Carver County budget.

For all other trails and sidewalk pedestrian crossings, Carver County will pay up to a maximum cap of 50% of total project costs, provided the pedestrian crossing project meets the requirements as established by this policy and funds are available in the Carver County and local agency's budgets. In determining the cost share for said non-Destination Regional Trail designated facilities, project construction elements involving specialty electronic pedestrian warning systems such as Rapid Rectangular Flashing Beacons or specialty pedestrian traffic control signal systems such as Pedestrian Hybrid Beacons (HAWKs) and Pedestrian Traffic Signals will be evenly cost shared, subject to said maximum Carver County funding cap.

The basis for project construction cost share shall be determined at the completion of the concept and design phases of the project, based upon a professional engineer's estimate of the total project cost. Upon the completion of the bidding process, the estimated total project cost and cost share shall be updated in accordance with the joint powers agreement.

The local agency will be required to pay for all local agency requested improvements that are included in the project that Carver County Public Works does not deem necessary to carry out the scope of the project, which would include painting of any specialty pedestrian systems. The cost share will show such requested improvement costs for the local agency's approval.

Maintenance and Operations Costs

Carver County will own, operate, and maintain all features of a pedestrian crossing, except that the local agency shall have the specific duties to maintain and pay for any costs for the power, lighting and painting for any specialty electronic pedestrian warning systems and pedestrian traffic control signal systems for pedestrian crossings that do not have a designation of a Destination Regional Trail as shown in the Carver County Comprehensive Plan.

Carver County will manage and oversee repairs due to damages from crashes, over the life-cycle of the specialty pedestrian crossing systems. Where a pedestrian crossing system requires replacement or reconstruction due to age or end of life and/or engineering or legal standards, the cost to modify, update, or completely reconstruct the specialty crossing systems will be cost shared at the same percentage as the original installation.

If the local agency does not adequately fulfill the said local agency requirements to maintain the specialty electronic pedestrian warning systems, specialty traffic control signal systems and lighting systems related to a pedestrian crossing project as specified in this policy within a reasonable time and upon written notice to the local agency, Carver County Public Works has the authority to make such proper remedies and the local agency shall reimburse Carver County Public Works for all costs incurred to perform this work.

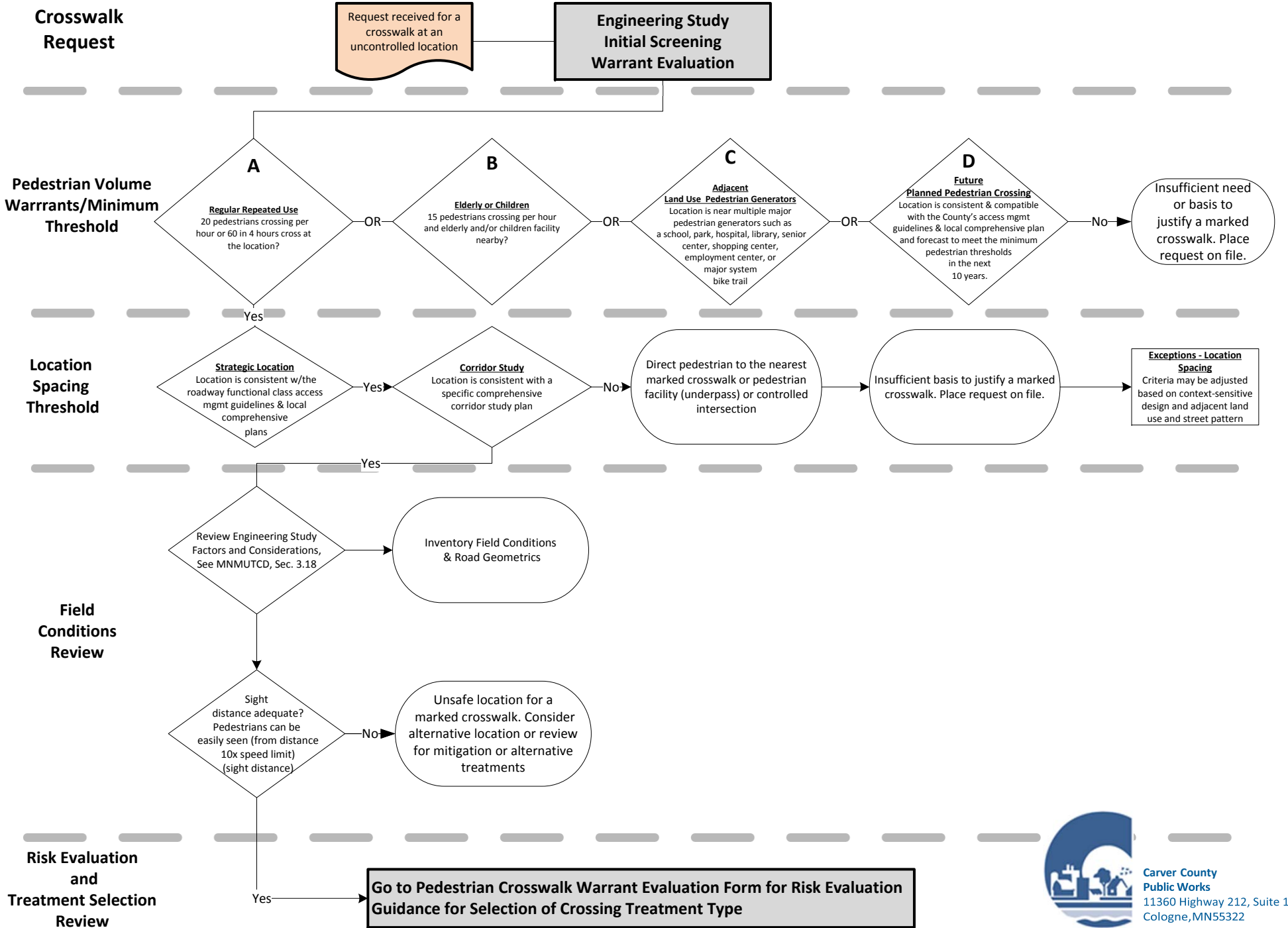
Oversight and Management

Carver County Public Works shall maintain ultimate oversight and approval of any pedestrian crossing improvements on Carver County highways unless agreed upon in the terms of a joint powers agreement or maintenance agreement.

Discretionary Decisions by Public Works Division Director

Situations may occasionally arise which require flexibility and practicality when following this policy. The Public Works Division Director is authorized to make good management decisions relating to matters not specifically addressed by this policy. Management decisions that are made should follow the general intent of this policy.

Flowchart for Engineering Study of a Marked Crosswalk at Uncontrolled Intersections (Figure 1)





Pedestrian Crossing Warrant Evaluation Form

Contact & project location information

City/Town:	Date:	County Highway:
Primary contact:	Phone:	Email:

Identify specific location of crossing for evaluation and attach location map.

Step 1: Warrant - pedestrian volume threshold or strategic connection

- A. Is the pedestrian & bicycle activity ≥ 20 per hour on a regular and repeated basis?
 No. Yes. Complete and attach pedestrian & bicycle count documentation.
- B. Is the pedestrian & bicycle activity ≥ 15 per hour for an elderly or child-related facility nearby?
 No. Yes. Complete and attach pedestrian & bicycle count documentation.
 Yes. Name of elderly or children facility: _____
- C. Does the crossing connect to multiple major generators such as a major park or regional trail?
 No. Yes. Name of major generators or regional trail: _____
- D. Is the proposed crossing forecast to meet pedestrian volume levels in the future?
 No. Yes. Please describe: _____

Volume warrant screening - Does the crossing meet one of the above warrants? Yes. No.
 Check warrant type: A. B. C. D.

Step 2: Warrant - pedestrian location threshold

- Is the location at a strategic location and nearest crosswalk both spaced consistent with County Access Management Guidelines or Special Corridor Study Plan?
- No. Direct pedestrian to the nearest marked crosswalk or ped. facility (underpass/controlled intersection)
 Yes. Confirm consistent with roadway functional class, access management, and Comprehensive Plan.

Step 3: Field Conditions Review

Review engineering study factors and considerations. Inventory field conditions and road geometrics. Is the sight distance adequate? (Pedestrians can be easily seen from distance 10x speed limit)
 Yes. No. If no, Consider alternative location or review for mitigation or alternative treatments.
 Note: ADA ramps; lighting; sight vision triangles; geometrics, etc.

Staff Notes

Step 4: Assess Level of Risk

● Low level of risk ● Moderate level of risk ● High level of risk

A. Legally established (posted) speed limit (mph):

● ≤30 ● 35 ● 40 ● 45 ● 50 ● ≥ 55 List order date: _____

B. List vehicle ADT (Year) and select category below: _____ (_____)Year

● ≤ 3,000 vpd ● > 3,000 - 6,000 ● > 6,000 - 9,000

● > 9,000 - 12,000 ● > 12,000 - 15,000 ● > 15,000

C. Number of lanes at crossing (include shoulder and parking width in crossing distance):

● 2 lanes (crossing distance ≤ 28')

● 3 lanes (> 28' to ≤ 36')

● Multilane (4 lanes: > 36' to ≤ 44')

● Multilane (5 lanes: > 44' to ≤ 52')

● Multilane (6 lanes: > 52' to ≤ 60')

● Multilane (7 or more lanes: > 60')

Step 5: Select Treatment Type by Highest Level of Risk Identified

Option A: Marked crosswalk with warning signs



Highest level of risk determines treatment type.

Option B: Option A + advance warning signs + curb extensions or median refuge islands



Option C: Option B + Ped activated, side-mounted warning device (RRFB)



Option D: Option C + Ped activated, overhead warning device (RRFB); advanced active warning



Option E: HAWK, Traffic Signal, Underpass, Overpass



Next Steps & References:

- ⇒ Intersection location will be cross-referenced with posted speed limit, traffic volume (vehicle ADT), and number of travel lanes to determine the best fitting pedestrian crossing treatment option.
- ⇒ The selection of treatment type Option will reference the associated table and notes: **Criteria for Crossing Treatments at Uncontrolled Locations.**
- ⇒ See **Treatment Descriptions** section and notes for full a definition of each Option.