

## CITY OF ESSEX JUNCTION BIKE WALK ADVISORY COMMITTEE REGULAR MEETING AGENDA

Online & 6 Lincoln St. (Kolvoord Room)
Essex Junction, VT 05452
Thursday, January 9<sup>th</sup>
2025, 7:00 PM

Phone: 802-878-6944, ext. 1625

E-mail: mgiguere@essexjunction.org

www.essexjunction.org

This meeting will be held in-person at 6 Lincoln Street in the Kolvoord Room at Brownell Library and available remotely. Options to join the meeting remotely:

- JOIN ONLINE: Join Zoom Meeting
- JOIN CALLING: (toll free audio only): (888) 788-0099 | Meeting ID: 958-5750-2850; Passcode: 790174
  - 1. CALL TO ORDER [7:00 PM]
  - 2. **DETERMINE WHO WILL TAKE MINUTES**
  - 3. **AGENDA ADDITIONS/CHANGES**
  - 4. MINUTES FOR APPROVAL
    - a. December 12th, 2024
  - 5. **PUBLIC TO BE HEARD**
  - 6. **BUSINESS ITEMS** 
    - a. CCRPC regional safety data discussion
    - b. \* Sidewalk Policy introduction
    - c. BWAC annual summary report
  - 7. MEMBERS UPDATES
  - 8. **STAFF UPDATES** 
    - a. \* Lincoln Terrace traffic calming proposal
  - 9. **READING FILE**
  - 10. ADJOURN

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<sup>\*</sup> attachments included in packet



# CITY OF ESSEX JUNCTION BIKE WALK ADVISORY COMMITTEE MEETING MINUTES DRAFT

Online & 6 Lincoln St. (Kolvoord Room)
Essex Junction, VT 05452
Thursday, December 12<sup>th</sup>
2024, 7:00 PM

Phone: 802-878-6944, ext. 1625

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#### 1. MEMBERS PRESENT

John O'Brien (chair), David Achee, Philip Bieber, Eric Bowker, Lauren Philbrook

#### 2. OTHERS PRESENT

Jack Evans (Local Motion), Alia Liebowitz, Michael Giguere (staff representative)

#### 3. **CALL TO ORDER**

John called the meeting to order at 7:00pm.

#### 4. **DETERMINE WHO WILL TAKE MINUTES**

John offered to take minutes.

#### 5. AGENDA ADDITIONS/CHANGES

Michael added CCRPC Safety Action Plan Data to Staff Updates.

#### 6. MINUTES FOR APPROVAL

a. November 14th, 2024

Motion by Lauren to approve the minutes, seconded by Phil. Motion passed unanimously (5-0).

#### 7. PUBLIC TO BE HEARD

No members of the public to be heard at this meeting.

#### 8. **BUSINESS ITEMS**

a. Traffic Calming Policy presentation

Michael introduced UVM student Alia Liebowitz, who has been working on an updated framework for traffic calming policies. The following presentation was to gather feedback from the committee to possibly bring the framework to the city council for implementation.

Alia presented a streamlined process and criteria for anyone to request calming measures to be installed by the city. The importance of trying out temporary treatments and collecting data and community feedback to measure success is vital for this process and a point system scale is utilized to score and determine how viable a street is for measures.

Lauren questioned if the city currently allows speed bumps (one of the possible tools in the packet), as in the past it appears that the city has had them removed, Phil also has experienced this in his neighborhood due to plow damage, Michael spoke to the cities desire to be able to install more permanent solutions but that winter snow management makes that a balancing act.

Access for non-community members to request measures from the city was also brought up but the committee in general wanted to allow anyone to be able to apply regardless of residency or age.

A summary of several possible calming designs followed, David brought up that in each case whether or not a snowplow would affect the measure should definitely be noted.

Michael brought up the possibility of the committee spearheading the implementation of these new

## CITY OF ESSEX JUNCTION BIKE WALK ADVISORY COMMITTEE MEETING AGENDA – DECEMBER 12<sup>TH</sup>, 2024

policies in the future which would include fielding applications as well as taking community feedback. Committee members expressed interest in serving that role.

Jack questioned which policies are able to be implemented considering the winter challenges, Michael noted that the city staff has been open thus far in the process and appears open to trying new ideas as outlined in the presentation.

#### b. Bicycle Friendly Community application review

The committee was updated on what had been completed so far and Michael brought up that in order for the committee to complete the full application outside of regular meetings we would need a smaller subcommittee to work on it. David, Lauren, and Phil volunteered to form the task force. Michael will share the login information and give an overview to this task force. Jack also noted that he could help in some capacity.

Motion by Lauren to form the task force, seconded by Philip. Motion passed unanimously (5-0).

#### c. Bike parking survey data

We revisited newer locations that have been added to the survey since the last viewing several meetings ago. Phil brought up that the area surrounding the train station does not yet have bike parking, and Michael noted that with the redesign of the station that there will very likely be bike parking as a part of the final design.

Jack elaborated that the "multimodal hubs" such as the bus and train station are vital places for this infrastructure. The committee will continue to gather data in order to find new contenders and reach out to other business owners in order to possibly share the stored bike racks.

#### d. Community Spark Grant

Michael shared that the Community Spark Grant (\$2000 mini-grants) are available for committees such as ours to fund projects with vision in their communities. The timeline is tight for the application as it is due in mid-January. The committee decided that this time of year would be difficult to complete without a clear project or event in mind. Michael then implored the group to come with event ideas or other visions that we would then be able to seek funding for in the future, rather than finding funding first.

#### e. Bike locker advertisement

More information on the bike lockers located on the crescent connector was presented. Possible signage was explored as well as their associated costs. Also how obscured the lockers will be by the signs was discussed, as well as the possibility of advertising for these lockers in the Amtrak station.

#### 9. **MEMBERS UPDATES**

Erik brought up the safe routes program that Essex town is working on to connect much of the area and that he will be contributing on that project as an advisor and he will keep the committee updated as it moves forward.

Phil brought up the possibility of public ebike parking / charging here in the city in order to make it more of a destination. The group discussed the logistics of this and what is commercially available.

As the conversation about ebikes continued, the possibility of working with the Brownell Library in

## CITY OF ESSEX JUNCTION BIKE WALK ADVISORY COMMITTEE MEETING AGENDA – DECEMBER 12<sup>TH</sup>, 2024

distributing ebikes for rent as well as hand carts (from Walk to Shop) in the future was proposed by Jack as an effort to be taken on in conjunction with Local Motion.

#### 10. **STAFF UPDATES**

a. Park Street Engineering project proposal

Michael shared the proposal that he pitched to the UVM engineering program seeking help with the capstone project specifically in redesigning the corridor in Park Street from the Williston Bridge to the Crescent Connector. The benefits of the smaller scale of the proposal was favored by the committee as it will be more likely to be adopted by the city.

#### b. Bike parking installation updates

Michael and John shared that the city will be contributing 2 bike parking racks to the Essex Junction Shopping Center for installation under cover from the elements in locations determined during a site visit last month. The committee was also encouraged to continue to consider future locations and businesses to collaborate with in this effort.

c. Buffered lane striping on Pearl Street

Michael gave an update on the restriping of bike lanes up and down Pearl Street, which will be occurring moving forward and into the foreseeable future despite a brief hiatus from this being the norm.

#### d. CCRPC

Michael reported that there is new safety data that has recently come from the Chittenden County Regional Planning Commission which he will be sharing with the committee before the next meeting.

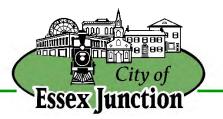
#### 11. **READING FILE**

No reading file items were added.

#### 12. ADJOURN

A motion to adjourn by Lauren occurred at 8:36pm, the motion was seconded by Erik and passed unanimously (5-0).

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#### **MEMORANDUM**

**To:** Bike/Walk Advisory Committee **From:** Michael Giguere, City Planner

**Date:** January 9<sup>th</sup>, 2025 **Subject:** Sidewalk Policy

#### Issue:

The Trustees' Policy Regarding Sidewalks is being updated. Feedback and guidance from this committee is requested.

#### **Discussion:**

Essex Junction has a sidewalk policy that was adopted by the trustees in 2005 and revised in 2013. Like the recent drafted update to the Traffic Calming Policy reviewed by this committee, there is interest among City Staff in modernizing this policy and evaluating its effectiveness.

The intent of this policy is to allocate Public Works' limited resources to effectively track and manage the long-term maintenance and removal of public sidewalks while continuing to provide a comprehensive and safe pedestrian network. The current sidewalk snowplow routes and priority list are also outlined. Sidewalks are proposed to be added and removed as listed in the policy based on the streets' traffic load and population density.

Staff are working collaboratively on this policy update to balance municipal resources while working to improve the walkability of the City as called for in the Comprehensive Plan. Feedback on the current enacted policy and ideas for how to scope for the future are encouraged.

#### Cost:

There are no costs associated with this memo.

#### **Recommendation:**

Bike/Walk Advisory Committee members should review the 2013 sidewalk policy and provide input, with particular attention being given to the sidewalk removal procedure.

#### **Attachments:**

1. Existing 2013 sidewalk policy

#### VILLAGE OF ESSEX JUNCTION Trustees' Policy Regarding Sidewalks

#### A. PURPOSE & NEED

Essex Junction has always prided itself on being a pedestrian friendly community. Pedestrians have access to the Village's commercial districts, schools, parks and residential areas via the public sidewalk network.

The primary purpose of sidewalks is to provide connectivity and give residents the ability to circulate within the community in a safe manner. Sidewalks are also used for recreation, exercise and serve as a place for social interaction. Finally, sidewalks are important from an economic development standpoint by providing access to commercial businesses and jobs.

Essex Junction does not provide bus services for Village students, so it is essential that Essex Junction have an adequate pedestrian network in place, which is adequately maintained. It is expected that sidewalks will be plowed prior to the start of school to allow children to walk to school.

The expectation that sidewalks be cleared prior to the start of school, the demand placed on the road crew to maintain an expanding sidewalk network, and the cost of reconstructing sidewalks is straining our limited municipal resources. The intent of this sidewalk policy is to better allocate our resources to enhance the safety and connectivity of the sidewalk network, prioritize winter sidewalk plowing and to establish a policy to guide the long term maintenance and reconstruction of the sidewalk network. The overall goal of this policy is to maintain and enhance pedestrian connectivity while maximizing the use of public resources.

#### **B. EXISTING CONDITIONS**

#### Sidewalk Network

The Village of Essex Junction currently has 38 total miles of sidewalk to plow, reconstruct and maintain (See Figure 1). The sidewalk network evolved over time on a development by development basis with no community sidewalk master plan to serve as a guide. As a result some major state highways with high vehicular and pedestrian travel have a sidewalk only on one side of the street and some low traveled residential streets have sidewalks on both sides of the street. Generally the higher the vehicular and pedestrian travel, the greater the potential conflict between the two modes of travel and the need for sidewalks on both sides of the street.

Class 1 State highways have the highest vehicular travel and for the most part have sidewalks on both sides of the street and traffic signals at major intersections. Class 2 highways are roads that connect state highways and/or other class 2 highways. They have the next highest volume of vehicular travel. Although South Street from its intersection with Park to the West Street intersection has sidewalks on both sides of the street, the remainder of Class 2 highways only have sidewalks on one side of the street. Class 3 roads are residential roads, which include some major collectors. They generally have the lowest volume of vehicular travel. Some Class 3 residential streets have no sidewalks; some have a sidewalk on one side of the street, and some have a sidewalk on both sides of the street.

#### C. <u>FUTURE CONDITIONS</u>

#### Methodology

Several site specific conditions were considered in developing the future sidewalk plan including, but not limited to, safety, physical barriers in the right-of-way, traffic volumes, connectivity, school connections and density. The effect of these criteria on the development of the future sidewalk plan will be discussed more fully in the following section on the plan.

A study done for the Federal Highway Administration (FHWA) on sidewalk placement and safety played a significant role in developing the sidewalk plan. The guidelines were attained from the book entitled <u>Best Development Practices</u> by Richard Ewing. <sup>1</sup> The FHWA study recommends using the guidelines listed in Table 1 to assist in determining the best location for sidewalks. The basis for the guidelines is that generally there is a direct correlation between density, traffic volumes and safety. However, Ewing does note that the issue of connectivity must be considered because some neighborhoods might meet the density requirement for a sidewalk, but because the neighborhood does not provide a through connection, a sidewalk may not be required.<sup>2</sup>

#### Table 1

Arterial Streets Both Sides
Collectors Both Sides

Residential Streets with a density greater

than 4 units per acre Both Sides

One Side

Residential Streets with a density between 1 and 4 units per acre

Residential Streets with a density of less

than 1 unit per acre None

#### D. GOALS AND OBJECTIVES

Based on the Purpose & Need and Existing Conditions, the following goals and objectives have been identified:

#### Goals

- 1. Maintain and enhance pedestrian connectivity
- 2. Reduce future capital reconstruction liability
- 3. Stabilize maintenance costs (i.e. snow plowing, etc.)

<sup>&</sup>lt;sup>1</sup> R.L. Knoblach et al., Investigation of Exposure Based Pedestrian Accident Areas: Crosswalks, Sidewalks, Local Streets and Major Arterials, Federal Highway Administration, Washington, D.C. 1988, p. 143

<sup>&</sup>lt;sup>2</sup> Ewing, Richard. <u>Best Development Practices</u>. Chicago, IL: American Planning Association, 1996

4. Establish a database to monitor the condition of the sidewalk network and prioritize future capital projects

#### Objectives\*\*

- Maintain one sidewalk on all residential streets that currently have at least one sidewalk
- 2. Sidewalks on both sides of Class 1 and 2 Highways and Major Collectors
- 3. Add sidewalks to Class 1 and 2 Highways that currently have only one sidewalk
- 4. Add one sidewalk to residential streets that currently have no sidewalks, a density between 1 and 4 units per acre AND which provide a key through connection
- 5. Add a second sidewalk on residential streets that have a density of at least 4 units per acre and provide an important pedestrian linkage
- 6. Remove sidewalks on residential streets with a density equal to or less than 4 units per acre and which do not provide a through connection
- 7. As resources become available a comprehensive inventory of the condition of the sidewalk infrastructure should be completed in concert with the roadway network. In the past, the Chittenden County Metropolitan Planning Organization (CCMPO) completed a similar assessment for the Village in 1990 and 1997. However, since that time the CCMPO has developed GIS based software to track the condition of infrastructure. The Village should develop a database of infrastructure conditions as resources permit.

#### E. SIDEWALK AND BIKE PATH PLAN

Figure 2 shows the Future Sidewalk & Bike Path network in Essex Junction. The plan was established using the objectives listed above as guidance for the removal of sidewalks and sidewalk additions. However, several other site specific factors mentioned above played a significant role in establishing where to propose sidewalk additions. Several residential streets in the Village meet the guidelines in Table 1 for the addition of one or more sidewalks, but are not included on the future sidewalk map. Physical barriers such as excessive slopes, street trees and infrastructure (power poles, fire hydrants, etc.) precluded the ability to provide a sidewalk addition on several residential streets, particularly in the Village's traditional neighborhoods. Neighborhoods such as Indian Acres and the Villa Drive neighborhood met the density requirement for at least one sidewalk, but due to the absence of through traffic, houses having shallow front setbacks, large street trees and narrow street design to slow traffic, sidewalks are not recommended for these neighborhoods. The overall goal of the plan, to increase the connectivity of the sidewalk network and to maximize Essex Junction's capital resources appears feasible with an overall reduction in the length of sidewalks by approximately 26,022 feet while at the same time improving connectivity where possible.

Table 2: Length of Sidewalk to be Added and Removed

Additions: 11,795 feet 43,103 feet Difference: -31,308 feet

Tables 3 and 4 list the sidewalks to be added and removed respectively.

<sup>\*\*</sup>Does not include 8,672 Feet for Route15 bike path (not a Village project)

#### F. IMPLEMENTATION

The sidewalk plan will be implemented over an extended period of time. Essex Junction does not plan to immediately remove sidewalks. The Village will phase these sidewalks out over time in association with other reconstruction projects or when they are in a state of disrepair.

#### Removal of Sidewalks

Remove sidewalks on residential streets that currently have sidewalks on both sides when any of the following occur:

- a. The sidewalk conditions become unsafe or are not in compliance with the Americans with Disabilities Act.
- b. The street and/or the sidewalk on the other side of the street are reconstructed.
- c. A major repair or construction of other municipal infrastructure that would impact a significant portion of the sidewalk that is not on the Future Sidewalk & Bike Path Plan.
- d. A majority of the residents on a street request the sidewalk be removed AND it is approved by the Village Trustees.

#### Sidewalk Additions

Add sidewalks (as identified in Table 3) as money becomes available in the capital plan and/or outside funding sources are obtained. Also, the Planning Commission should require a developer to install future sidewalk and bike path connections that would service their development. The Official Map may be an effective tool for integrating private developments into the overall sidewalk plan or incorporation of the sidewalk and bike path plan into the Land Development Code.

#### G. PRIORITIZATION FOR ADDING SIDEWALKS

The following prioritization will be used in the expenditure of capital funds on the addition of sidewalks. The Village may choose to install a sidewalk that is lower on the priority list in association with the reconstruction of a sidewalk on the opposite side of the street

- 1. Add sidewalks on Class 1 Highways
- 2. Add sidewalks on Class 2 Highways
- 3. Add sidewalks on residential streets with a density of between 1 and 4 units and which provide a through connection
- 4. Add a second sidewalk on residential streets

#### H. PLOWING

Figure 3 shows the current sidewalk plowing plan, which is broken down into two distinct plow routes. Based on the purpose and need for a comprehensive sidewalk network, the goals of the plowing plan are to maximize the Village's Public Works resources while maintaining a safe, efficient and interconnected sidewalk network in the winter months that provides access to all areas currently served by the sidewalk network. It is essential that children and residents alike have the ability to safely and efficiently access the schools and employment centers prior to their opening in the morning. Therefore, to meet the goals of the sidewalk plan the following criteria were used as general guidelines in developing the plow routes:

- 1. Plow both sides of Class 1 and 2 Highways
- 2. Plow one side of Class 3 Residential Streets\*, except streets that have been identified as a key connection to Village Schools
- 3. Plow the right side of the dead end streets where sidewalks exist on both sides
- 4. Plow both sides of streets that provide key connections to the schools

## TABLE 3 SIDEWALK ADDITIONS

Street Location	Between	Priority
	Educational Drive and Athens	
West Side of Main Street	Drive	1
Route 15 Bikepath - Pearl St. and RR		
ROW	Park Street to Susie Wilson Road	N/A
	56 Lincoln Street to St. James	
Lincoln Street	Place	1
River Street Sidewalk	Park Street to IBM Gate	2
Along the Railroad ROW	Main Street and Maple Street	N/A
, and the second	South Street and Hiawatha	
West Side of West Street	Avenue	2
East Side of West Street	Killoran and West Street Ext.	2
North Side of Iroquois Avenue	Park Street and South Summit	4
•	Railroad Avenue and Educational	
South Side of Central Street	Drive	4
South Side of Park Terrace	Park Street and School Street	3

### TABLE 4 SIDEWALKS TO BE REMOVED

		Schedule
Street Location	Between	Removal
Outside loop of Beech Street	All	
Western side of Aspen Drive	All	
Western side of Tamarack	All	
South side of Hubbel's Falls	Bridge and Beech Street	
Outer Loop of Vale Drive	All	
West side of Countryside Drive	All	
Eastern side of Corduroy Road	All	
Outer Loop of Kiln and Mason		
Drives	All	
Eastern side of Woods End Drive	All	
West side of Rivendell	All	
North Side of Briar Lane	All	FY 07'

<sup>\*</sup>Residents of a Class 3 Residential Street can request that the Village switch sides for plowing if all households on the street sign a petition and submit it to the Village Manager.

West side of Maplewood Lane	All	
South side of Taft Street	All	FY 08'
East side of Drury Drive	Upland and cul de sac	
North side of Crestview Drive	Drury and Upper Main	
North side of Densmore Drive	All	FY 10'
West side of Killoran Drive	All	
West side of Loubier Drive	All	
West side of Orchard Terrace	All	FY 07'
West side of Doon Way	All	
East side of Brownell Drive	All	
West side of Cascade Court	All	
Outer loop on Southhill Drive	All	
Outer loop of Greenwood and		
Redwood	All	
Eastern side of Southview Road	All	

Adopted by the Village Trustees 10/11/05. Revised 1/8/13.



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#### **MEMORANDUM**

To: Chris Yuen, Community Development Director

From: Michael Giguere, City Planner

Date: December 17th, 2024

**Subject:** Lincoln Terrace traffic calming project

#### Preface:

The intersection of Lincoln Terrace and School Street has been identified as a concerning intersection for pedestrians. This is a common walking route for access to Summit Street School and is commonly used by vehicle traffic to bypass the Five Corners intersection, creating a hazardous combination of transit types.

#### **Existing Conditions:**

Currently, the corner has a measured radius of 22.66' as seen in Figure 1. This results in a crosswalk distance of 39' on the short side and 53' on the long side. Following MUTCD guidelines of estimating 3.5' per second for pedestrian crossing speeds, this results in crossing times between 11.14 and 15.14 seconds. Average crossing times are likely even slower than this when young children are being escorted to school due to slower walking speeds.

#### Curb Radius



Figure 1: Aerial view of existing conditions at Lincoln Terrace and School Street with the curb radius measured in red. Source: Vermont Center for Geographic Information (VCGI)

Other problematic existing conditions include limited visibility and pedestrian safety concerns. The painted stop bar location for vehicles on Lincoln Terrace currently blends in with the crosswalk striping as seen in Figure 2, making it difficult for cars to know where they're required to stop and presenting a direct point of conflict with pedestrians attempting to cross the street. The stop bar has also eroded from vehicle wear.

Additionally, staffed crossing guards no longer service this intersection as of Fall 2024. There are also visibility issues with southbound traffic on School Street. The visibility triangle for this corner was obstructed by tree growth, which has since been taken care of through trimming and tree removal by the property owner at 24 Lincoln Street and is no longer an issue. The vehicle stop bar is located far back on School Street, meaning that pedestrians are not visible to southbound traffic until they are already crossing the street.



Figure 2: Street view of elongated vehicle stop bar conflicting with crosswalk striping. Source: Google street view

#### **Project Proposal:**

Proposed changes include one of the following options:

#### Option 1: Reduce Lincoln Terrace to one traffic lane

- Reduce Lincoln Terrace traffic from two lanes to one lane, with traffic flowing westbound from Lincoln Street to School Street.
- Bottleneck the entry and exit points of Lincoln Terrace to fifteen (15) feet using flexi-posts, planters, and white traffic striping paint using the existing exit of School Street onto Pearl Street as a design reference. This example is shown below in Figure 6.
  - Flexi-posts to be removed and stored with Public Works by November 30<sup>th</sup>, and to be returned by April 30<sup>th</sup>.
  - Existing planters at 1 Main Street park to be used for delineation.
- The asphalt between curb and flexi-posts shall be painted with acrylic asphalt paint, with the color
  to be recommended by Bike/Walk Advisory Committee for City Council. Examples from other cities
  are provided in Figures 8 and 9 for reference.

# Option 1: One-way traffic and entry/exit bottlenecks



Figure 3: Overview of Option 1's painting and installation plan with proposed traffic flow in blue for demonstration purposes only (not to be painted/installed). The entrance and exit of Lincoln Terrace have been reduced to fifteen (15) feet in width to match the design at the intersection of School Street and Pearl Street. The stop bar has been moved south to accommodate curb bulb-out and match single traffic lane placement

## Option 1: West detailing

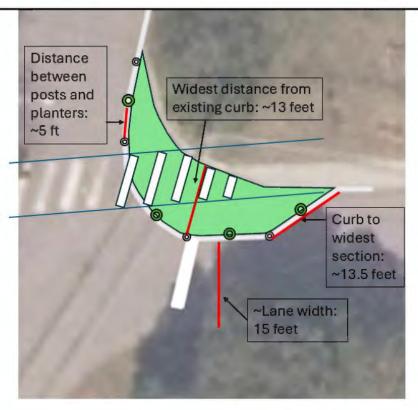


Figure 4: Option 1's installation plan for the intersection of Lincoln Street and Lincoln Terrace

## Option 1: East detailing

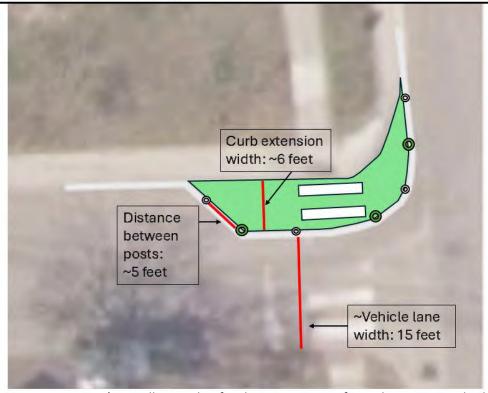


Figure 5: Option 1's installation plan for the intersection of Lincoln Terrace and School Street

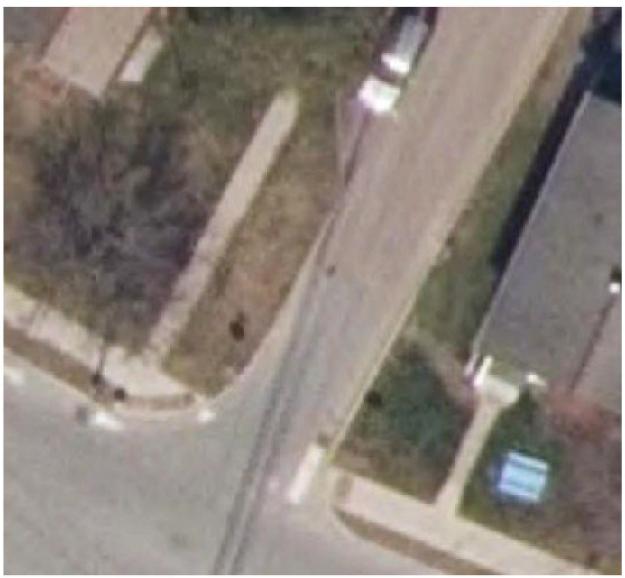


Figure 6: Intersection of Pearl Street and School Street with fifteen (15) foot width, used for one-way bottleneck design guidance for option 1

#### Option 2: Temporary Curb Extension

- Temporarily decrease the measured radius of the corner to 15' as seen in Figure 7 using flexi-posts, planters, and white traffic striping paint.
  - From NACTO: "In urban settings, smaller corner radii are preferred and actual corner radii exceeding 15 feet should be the exception."
  - This reduces the crosswalk distance to 25' on the north side and 38' on the south side, resulting in crossing times between 7.14 and 10.85 seconds as well as higher visibility.
  - Flexi-posts to be removed and stored with Public Works by November 30<sup>th</sup>, and to be returned by April 30<sup>th</sup>.
  - o Existing planters at 1 Main Street park to be used for delineation.
  - The asphalt between curb and flexi-posts shall be painted with acrylic asphalt paint, with the color to be recommended by Bike/Walk Advisory Committee for City Council. Examples from other cities are provided in Figures 8 and 9 for reference.

## Option 2: Two-way traffic and curb extension at Lincoln Terrace & School



Figure 7: Option 2's proposed curb radius reduction with painting and installation plan. Stop bar to be repainted in existing location, eight flexi-posts to be installed at locations marked by circles, and 15-foot curb radius to be painted in white as shown

#### **Future Considerations:**

If problematic conditions still exist after the implementation of option 1 or 2, a relocation of the stop bar on Lincoln Terrace should be considered.

#### **Costs:**

#### Option 1

8 flexible traffic delineation posts, \$38 each: \$304

1 gallon of white striping paint: \$373 gallons of acrylic mural paint: \$150

• Total project cost: \$491

#### Option 2

4 flexible traffic delineation posts, \$38 each: \$152

1 gallon of white traffic striping paint: \$37

2 gallon of acrylic mural paint: \$100

Total project cost: \$289

#### **Recommendation:**

I recommend approval and installation of either of the proposed options with a preference for Option 1. This would be subject to an evaluation period agreed upon between Community Development and other relevant City departments. If proven to be effective, potential permanent installation can be considered later after full evaluation.

#### Examples:

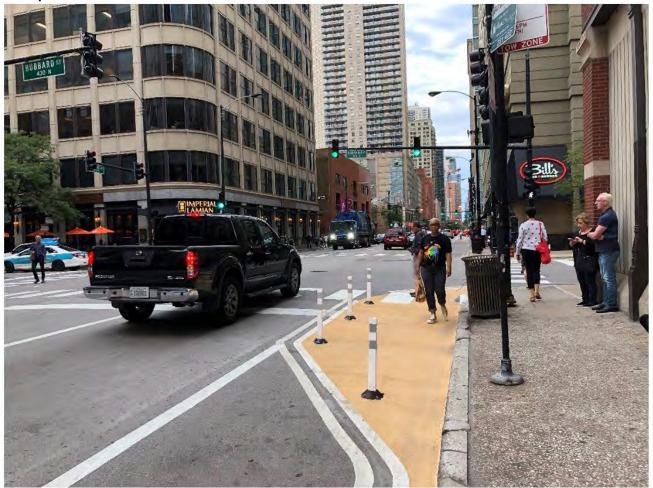


Figure 8: Temporary curb extension in Chicago, IL



Figure 9: Temporary curb extension in South Bend, IN

#### Sources:

Federal Highway Administration guidelines on curb extensions
Local Motion active transportation infrastructure funding guide
National Association of City Transportation Officials curb extensions guide
PedBikeSafe guide on curb radius design
Vermont Center for Geographic Information