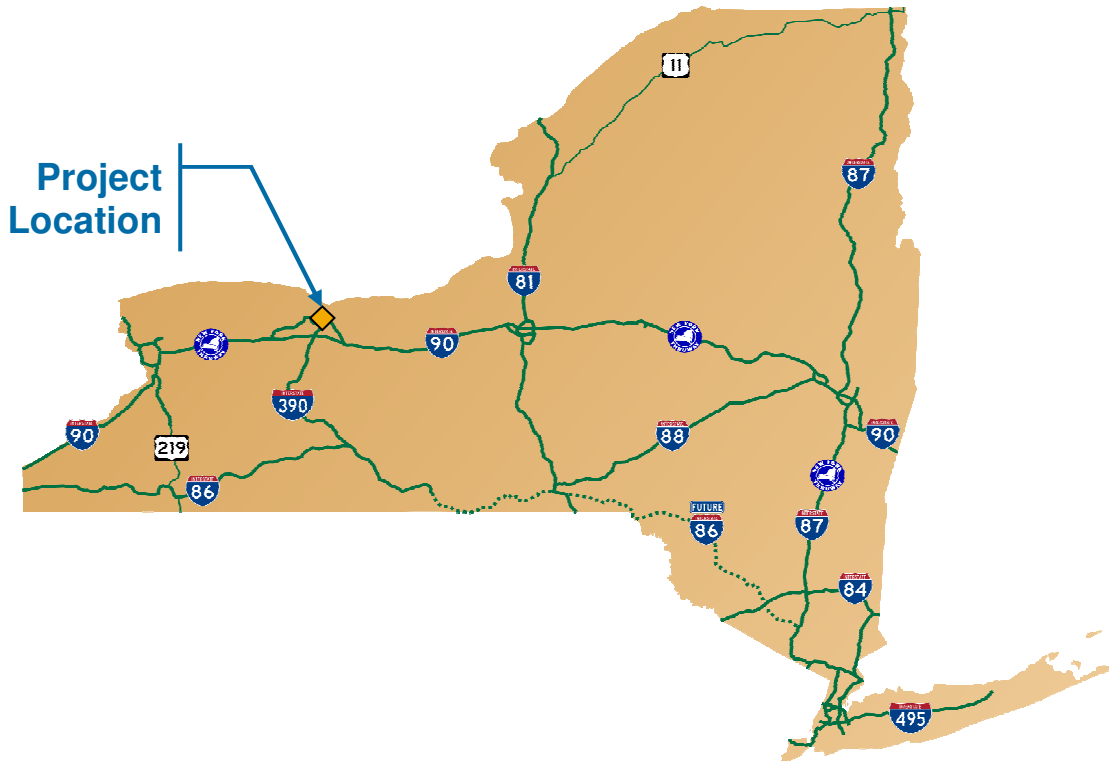


# Transportation Project Report

## Project Scoping Report/Final Design Report

June 2024

2025 Preventive Maintenance Project  
Project Identification Number (PIN): 4CR0.21  
City of Rochester  
Monroe County



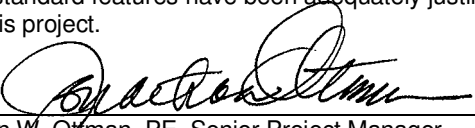
Department of  
Transportation



U.S. Department of Transportation  
Federal Highway Administration



**Project Approval Sheet**

<u>Milestones</u>	<u>Signatures</u>	<u>Dates</u>
A. Recommendation for, Initiation, Scope and IPP Approval:	The project cost and schedule are consistent with the Regional Capital Program.  <b>Christopher Reeve</b> _____ Christopher Reeve, P.E., Regional Director, NYSDOT Region 4	<b>8/24/2022</b> _____ Date
B. Recommendation for Scope, Design, and Nonstandard Feature Approval:	All requirements requisite to these actions and approvals have been met, the required independent quality control reviews separate from the functional group reviews have been accomplished, and the work is consistent with established standards, policies, regulations and procedures, except as otherwise noted and explained.  The nonstandard features have been adequately justified and it is not prudent to eliminate them as part of this project.   _____ Jonathan W. Ottman, PE, Senior Project Manager, Lu Engineers	<b>6/27/2024</b> _____ Date
C. Categorical Exclusion Determination on Behalf of FHWA	This project qualifies as a Categorical Exclusion under the National Environmental Policy Act per the NYSDOT/FHWA Programmatic Agreement Regarding Categorical Exclusions.  _____ Christopher Reeve, P.E., Regional Director, NYSDOT Region 4	_____ Date
D. Recommendation for Scoping & Design Approval:	The project cost and schedule are consistent with the Regional Capital Program.  _____ Joel Kleinberg, NYSDOT RPPM, NYSDOT Region 4	_____ Date
E. Public Hearing Certification (Pursuant to 23 USC 128 and 23 CFR 771.111):  Scope, Design and Nonstandard Feature Approval:	A public hearing was not required.  _____ Holly E. Barrett, PE, City Engineer, City of Rochester	_____ Date

**CONTACT:** Darin Ramsay  
**PHONE:** (585) 428-6695

## List of Preparers

### Group Director Responsible for Production of this Project Scoping Report/Final Design Report (PSR/FDR):

**Jonathan W. Ottman, PE, Senior Project Manager, Lu Engineers**

Description of Work Performed: Directed the preparation of the PSR/FDR in accordance with established standards, policies, regulations and procedures, except as otherwise explained in this document.



**Note:** It is a violation of law for any person, unless they are acting under the direction of a licensed professional engineer, architect, landscape architect, or land surveyor, to alter an item in any way. If an item bearing the stamp of a licensed professional is altered, the altering engineer, architect, landscape architect, or land surveyor shall stamp the document and include the notation "altered by" followed by their signature, the date of such alteration, and a specific description of the alteration.

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## CHAPTER 1 – PROJECT DEVELOPMENT

### 1.1. Introduction

This report was prepared in accordance with the NYSDOT Project Development Manual, 17 NYCRR (New York Codes, Rules and Regulations) Part 15, and 23 CFR (Code of Federal Regulations) 771. Transportation needs have been identified (section 1.2), objectives established (1.2.3) to address the needs, and cost-effective alternatives developed (1.3). This project is federally funded.

#### 1.1.1. Project Location

- A. Culver Road from Monroe Avenue to Atlantic Avenue
- B. Monroe Avenue from Werner Park to Culver Road
- C. University Avenue from N. Goodman Street to Culver Road
- D. City of Rochester
- E. Monroe County
- F. Total Project Length: 2.3 Miles

### 1.2. Purpose, Need and Objectives

#### 1.2.1. Project Need

Culver Road, Monroe Avenue, and University Avenue Corridors are mixed-use with residential, commercial, retail, restaurant, school, and park/recreation uses scattered throughout the project limits. Culver Road, Monroe Avenue, and University Avenue are critical connections between the community and the surrounding businesses. Within the project limits, the existing roadway pavement along Culver Road and University Avenue exhibits cracking throughout, localized spalling, and raveling. At the intersections the existing pavement typically exhibits wheel path rutting. Additionally, the existing pavement markings are weathered and beginning to fade. Throughout the project limits there are continuous sidewalks with curb ramps in various states of compliance. The Culver Road eastside sidewalk along the Cobbs Hill Park between Monroe Avenue and the I-490 EB ramp does not provide a 5 ft width passing zone every 200 ft. Several of the existing sidewalk flags and curb ramps do not comply with the Americans with Disabilities Act (ADA) requirements. The poor condition of the pavement and sidewalk facilities will increase in severity and create a risk to the traveling public unless it is rehabilitated.

#### 1.2.2. Project Purpose

The purpose of this project is to correct the existing pavement and sidewalk deficiencies and improve the safety and operational features of the corridor. This project will implement the City of Rochester Complete Streets Policy which considers multi-modal transportation including pedestrians, bicyclists, buses, and motorists. Additionally, the existing pedestrian facilities will be upgraded to conform to the Americans with Disabilities Act (ADA), final PROWAG ruling, and Manual of Uniform Traffic Control Devices (MUTCD) requirements.

#### 1.2.3 Project Objectives

- (1) Restore pavement to good condition using cost effective pavement treatments which provide a service life of 15 years from the time of construction.
- (2) Improve overall traffic conditions using cost effective methods to reduce delay and to provide an acceptable level of service.
- (3) Address geometric deficiencies to improve traffic flow and facilitate traffic operations.
- (4) Identify and address sidewalk and curb ramp deficiencies to meet the current ADA and MUTCD standards.
- (5) Correct safety deficiencies using cost effective accident reduction measures such that accident reduction benefits equal or exceed project costs attributable to safety work.



- (6) Improve existing facilities and services using cost effective measures to eliminate the degradation of mainline level of service and improve level of service or reduce the hours of delay at LOS E for the design year.
- (7) Improve the bicycling facilities within the project limits where feasible in a cost-effective manner.

### 1.3. Project Alternative(s)

#### Alternatives Under Consideration:

**No Build Alternative** will maintain the existing conditions and the pavement and sidewalks will continue to deteriorate. Additional bicycle facilities and ADA compliant curb ramps will not be provided. This alternative does not meet the project objectives, however it is retained for comparison to the following alternative recommended.

**Alternative 1:** includes milling and resurfacing the roadway throughout the project limits on Culver Road and University Avenue. The majority of the existing curbs will be retained except in locations in which the curbing is in poor condition. The sidewalk and curb ramps will be upgraded to comply with the ADA requirements. Signs will be replaced or added as needed based on condition and meeting current applicable MUTCD and City requirements. The pavement markings will be replaced with modifications to the lane configurations and geometry. The traffic signal timings and offsets will be optimized, and the traffic signals will be upgraded from roadway loop detection to camera video detection.

**Culver Road:** Additionally, this alternative includes a “Road Diet” along Culver Road from Monroe Avenue to Hinsdale Street/Norris Drive. Culver Road from Monroe Avenue to Hinsdale Street/Norris Drive would be reduced to a single lane in the northbound direction and the southbound direction, a single parking lane in the southbound direction, and bike lanes with buffers in each direction. At the intersection of Culver Road / I-490 Eastbound Ramp, one of the northbound travel lanes is proposed to be converted into a designated right turn lane. Along the Culver Road Bridge over I-490, the four lanes would be retained in their current lane usage which is two lanes (thru-left turn lane and a thru lane) in each direction (*the Culver Road bridge over I-490 is owned by the NYSDOT and is not within the project limits for improvements*). Culver Road from Humboldt Street to Atlantic Avenue will retain the existing lane usage which includes one travel lane in each direction with parking lanes and a left turn lane at both intersection approaches.

The Culver Road improvements will also include the following:

1. removal of the northbound right turn lane at Humboldt Street to facilitate the extension of the northbound bike lane to the Humboldt Street intersection.
2. southbound bike lane will be directed “off -street” just north of the CSX RR bridge overpass to utilize the existing elevated concrete safety walk as a bike path under the CSX RR overpass until just south of the of the bridge where it will be directed back to an “on-street” southbound bike lane again. This improvement will provide additional roadway space to include a striped bike lane buffer for the northbound bike lane next to the travel lane.

The alternative on Culver Road from Monroe Avenue to Hinsdale Street/Norris Drive has three different striping options under consideration for the west side or southbound direction of the street. The recommended striping or lane usage option will be determined during the Final Design Phase. Refer to **Appendix A** for the Typical Sections and Pavement Marking Plans for further details.

- Option 1 lane configuration includes an 8 ft. parking lane along the west curb lane, 5 ft. bike lane with a 2 ft. striped buffer between the bike lane and the southbound travel lane.
- Option 2 lane configuration includes a 5 ft. bike lane along the west curb lane with a 2 ft. striped buffer and an 8 ft. parking lane between the bike lane with buffer and the southbound travel lane.
- Option 3 lane configuration is identical to option 1 above, but also includes the removal of the southbound left turn lane at the Culver Road intersection with Monroe Avenue. This option will extend the west side parking lane south to a newly installed bump-out at the intersection to reduce the pedestrian crossing length for Culver Road at the traffic signal.

During the Final Design phase, the Design Team will further investigate extending bicycle facilities on Culver Road, either off-street (shared use path of one-way cycle track) or on-street (bike lanes) between Hinsdale Street/Norris Drive intersection and Harvard Street including accommodations over the I-490 bridge overpass.

**University Avenue** will retain the existing configuration throughout the project limits from N. Goodman Street to Culver Road except for the following sub-options. The recommended configuration will be fully determined during the Final Design Phase. Refer to **Appendix A** for the Typical Sections and Pavement Marking Plans for further details.

- Option 1 lane configuration on University Avenue between N. Goodman Street and Atlantic Avenue includes removal of the two on-street parking spaces along the northern curblin just west of Atlantic Avenue. This modification will allow the roadway width to be reallocated as follows: one center left-turn lane, one travel lane and bike lane in each direction.
- Option 2 on University Avenue between Portsmouth Terrace (Bike Boulevard) and Elton Street (Bike Boulevard) includes the addition of an off-street cycle accommodation that connects bicyclists between these two side street bike boulevards. This option is under development and is not included in **Appendix A** Typical Sections or Plans but will be further evaluated during Final Design.
- Option 3 on University Avenue between Atlantic Avenue and Culver Road will include one-way cycle tracks on the south and north side of the street where conflicts with other amenities are minimized. This option is under development and is not included in **Appendix A** Typical Sections or Plans but will be further evaluated during Final Design.

**Monroe Avenue at Werner Park:** the improvements at the existing pedestrian crossing on Monroe Avenue at Werner Park includes installing a center median refuge island for pedestrians with the required pavement markings and signage. Refer to **Appendix A** for the Typical Sections and Pavement Marking Plans for further details.

For a more in-depth discussion of the design criteria and nonstandard features for the reasonable alternative under consideration see Section 2.5 of this report.

#### **Alternatives Found to Be Not Reasonable:**

**Alternative 2:** includes the same improvements listed under Alternative 1 plus the removal of the northbound and southbound left turn lanes along Culver Road at its intersection with Canterbury Road / Harvard Street, Park Avenue, and East Avenue. This alternative allows for continuous bike lanes along Culver Road from Monroe Avenue to Humboldt Street. In the existing condition, there are bike lanes along Culver Road from Harvard Street to Humboldt Street, however the bike lanes drop out with sharrows at its intersection with Canterbury Road / Harvard Street, Park Avenue, East Avenue, and Humboldt Street. The existing curb to curb street width would remain unchanged and the existing bike lanes would be carried continuously through the intersections. It should be noted that the Culver Road / University Avenue intersection will be unchanged because bike lanes are carried through the intersection in the existing layout.

This alternative has been dismissed from further evaluation because Monroe County acting as the City Traffic Engineer does not support the reduction of the level of service at each intersection due to the removal of the opposing left-turn lanes to accommodate the addition of bike lanes in each direction. Also bike lanes will not be allowed on Culver Road across the I-490 bridge overpass which is under NYSDOT ownership and jurisdiction. Refer to **Appendix A** for the Typical Sections and Pavement Marking Plans for further details.

**1.4 Project Effects**

**1.4.1 Environmental Classification**

Exhibit 1-1 Environmental Classification Summary			
NEPA Classification	Class II CE	BY	Federal Highway Administration
SEQRA Type:	Type II	BY	Responsible Local Official

**1.4.2 Comparison of Considered Alternatives**

Exhibit 1-2 Comparison of Considered Alternatives			
Category	Alternatives Evaluated		
	No Build	Preferred Alternative 1:	Alternative 2: Continuous Bike Lanes
<b>Environmental Impacts</b>			
Wetlands	None	None	None
Cultural Resources (Section 106)	None	TBD	TBD
Section 4(f)	None	None	None
Endangered/Threatened Species (Northern Long Eared Bat)	None	No Effect, Activity Based	No Effect, Activity Based
<b>Social Impacts</b>			
Property/Relocations	None	None	None
Mobility (Pedestrian, bicycle, transit, etc.)	No Effect	Improved pedestrian and bicycle mobility along Culver Road from Monroe Avenue to Norris Drive intersection.	Improved pedestrian and bicycle mobility throughout the project limits.

Exhibit 1-2 Comparison of Considered Alternatives			
Category	Alternatives Evaluated		
	No Build	Preferred Alternative 1:	Alternative 2: Continuous Bike Lanes
Environmental Justice	No Effect	No disproportionate high and adverse effects to minority or low-income populations	No disproportionate high and adverse effects to minority or low-income populations
General Social Groups	No Effect	Beneficial impacts for disabled (new accessible sidewalks and crossings)	Beneficial impacts for disabled (new accessible sidewalks and crossings)
Crash Costs	High	Low	Low
Economic and/or Operational Impacts			
Economic Impacts	No Effect	No change to vehicular access to businesses	No change to vehicular access to businesses
Temporary Detours	No Effect	No Effect	No Effect
Reduction of Parking	No Effect	No Effect	No Effect
Operation at ETC +10 (AM Peak)	3.7 min delay	2.5 min delay	3.2 min delay
Operation at ETC +10 (PM Peak)	4.6 min delay	2.8 min delay	5.3 min delay
Utilities	None	None	None
Construction Cost	None	\$5.0 M	\$5.0 M

Proposed Mitigation:

No mitigation measures are proposed for this project.

**1.4.3 Anticipated Permits/Coordination/Certifications**

Exhibit 1-3 Anticipated Permits/Certifications/Coordination	
<u>Permits</u>	
<b>Others</b>	
<ul style="list-style-type: none"> <li>• Local Permits</li> <li>• NYSDOT</li> </ul>	
<u>Coordination</u>	
<ul style="list-style-type: none"> <li>• New York State Historic Preservation Officer (SHPO)</li> <li>• Municipalities - City of Rochester</li> <li>• Utilities - Rochester Gas &amp; Electric, Time Warner Communications, Century Link, Rochester Telephone, Monroe County Department of Environmental Services, Bureau of Water &amp; Lighting, City of Rochester, Department of Environmental Services, Pure Waters, Monroe County Department of Transportation, Monroe County Water Authority, Verizon, and Lighttower Fiber Tech.</li> </ul>	
<u>Certifications</u>	
<ul style="list-style-type: none"> <li>• None Anticipated</li> </ul>	

**1.5 Preferred Alternative**

Alternative 1 as discussed under section 1.3 in this report is the preferred alternative and meets the project objectives. A decision to enter final design will not be made until after the environmental determination is made and evaluation of the comments on the draft design approval document and comments received from the public has been completed.

The No Build Alternative will be retained for use as a baseline to measure and evaluate impacts that might accrue from the preferred alternative.

**1.6 Project Schedule and Cost**

Exhibit 1-4 - Project Schedule	
Activity	Date Occurred/Tentative
Scope/Design Approval	July 12, 2024
ROW Acquisition	No ROW Aquisition is anticipated
Construction Start	April 2025
Construction Complete	November 2025

Exhibit 1-5 Project Costs - Design Bid Build		
Preferred Alternative		Alt 1
Pavement Milling & Resurfacing		\$1,500,402
Sidewalks and Curb Ramps		\$515,637
Signs & Pavement Markings		\$258,153
Traffic Signals		\$126,000
Lighting		\$128,800
Misc. Utilities (Water/Sewer)		\$484,550
WZTC & Survey		\$349,400
Landscaping		\$40,000
Field Change	5%	\$179,000
Mobilization	4%	\$143,000
<b>Subtotal in Base Year Dollars</b>		<b>\$3,724,942</b>
Contingency/Risk	5%	\$179,000
<b>Subtotal in Base Year Dollars</b>		<b>\$3,903,942</b>
<i>Cost Data Year and Midpoint of Construction Year</i>		
	2024	2025
Inflation/Escalation to Midpoint of Construction	3%	\$117,118
<b>Award/Construction Cost</b>		<b>\$4,021,060</b>
Construction Inspection		\$668,500
<b>Total Project Cost</b>		<b>\$4,689,560</b>
<b>Rounded to nearest \$10K</b>		<b>\$4,690,000</b>

### 1.7 Public Involvement

Refer to **Appendix L** for the project’s Public Participation Information and related project correspondence.

Exhibit 1-6 Public Involvement Plan Schedule of Milestone Dates	
Activity	Date Occurred/Tentative
Public Informational Meetings	April 16, 2024 (Occurred) August 20, 2024 (Tentative)
Current Project Letting date	December 10, 2024

For additional information or to provide comments, please contact. . .

Mailing Address:           Darin Ramsay, Project Manager  
                                  City of Rochester Street Design Division  
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Telephone:                (585) 428-6695

Please include the six-digit Project Identification Number (PIN) 4CR0.21 in any correspondence.

The deadline for submitting comments is April 24, 2024.

The remainder of this report is a detailed technical evaluation of existing conditions, anticipated impacts of the one reasonable/preferred alternative and comparison to the null alternative, copies of technical reports and plans and other supporting information.

## CHAPTER 2 – EXISTING AND PROPOSED CONDITIONS AND CONSIDERATIONS

### 2.1 Functional Classification/National Highway System/Truck Access

Exhibit 2-1 Classification Data		
Route(s)	Culver Road	University Avenue
Functional Classification	Urban Minor Arterial	Urban Minor Arterial
National Highway System (NHS)	No	No
Designated Truck Access Route	Yes	No
Qualifying Highway	No	No
Within 1 mile of a Qualifying Highway	Yes	Yes
Within the 16 ft vertical clearance network	No	No

### 2.2 Planning Considerations

#### 2.2.1 Abutting Highway Segments and Future Plans

The City of Rochester City Engineer has confirmed that there are no plans to reconstruct or widen this highway segment, or the adjoining segments, within the next 20 years.

#### 2.2.2 Local Plans for the Project Area

This project is on the 2023-2026 State Transportation Improvement Program (STIP). Project funding has been fully allocated on the STIP.

#### 2.2.3. Access Control

Access is unrestricted along Culver Road and University Avenue. Several business and residential driveways exit onto the roadway within the project limits. This project will not change the existing access control.

#### 2.2.4 Access Modification

There is no proposed access modification to the I-490 ramps.



### 2.3. Traffic Considerations

#### 2.3.1 Traffic Volumes

Exhibit 2-2 Existing and Forecast Traffic Volumes				
	CULVER ROAD		UNIVERSITY AVENUE	
Year	ADT	DHV	ADT	DHV
Existing (2023)	22,181	1,722	12,236	1,105
ETC (2025)	22,403	1,739	12,356	1,115
ETC+10 (2035)	23,747	1,844	12,956	1,170

Note: ETC is the Estimated Time of Completion

Forecast no-build design year traffic volumes – The Estimated Time of Completion (ETC) + 10 design year was selected per HDM Chapter 5. A 0.5% per year non-compounding growth rate has been applied to all forecasted volumes based upon the *Monroe County Volume Trends*.

#### 2.3.2 Speed Studies

Exhibit – 2-3 Speed Data		
Route	Culver Road	University Avenue
Existing Speed Limit (mph)	30 MPH	30 MPH
85 <sup>th</sup> Percentile Speed	Northbound = 35 MPH Southbound = 35 MPH	Northbound = 34 MPH Southbound = 36 MPH

#### 2.3.3 Level of Service Analysis

A traffic impact analysis has been prepared and is appended to the DAD. Based upon the results of the capacity and queue analysis, the lane reduction “road diet” alternative is recommended as the preferred alternative. Under the “continuous bike lane” alternative, the reduction in level of service and increase in queue lengths does not appear to be practical to accommodate the continuous bike lanes. The existing layout appears to be adequate in accommodation of multimodal transportation.

Based upon the Monroe County Department of Transportation’s multilane conversion policy, the lane reduction “road diet” alternative meets the County approval along Culver Road from Monroe Avenue to the Norris Drive / Hinsdale Street Intersection, however from the I-490 Eastbound Ramp to Canterbury Road / Harvard Street the AADT and DDHV exceed the maximum volumes. Additionally, the intersections of Culver Road / I-490 Eastbound Ramp and Culver Road / Canterbury Road & Harvard Street have several approaches that reduce in level of service from the “no build” to “road diet” alternative. Therefore, the “road diet” alternative should be only considered along Culver Road from Monroe Avenue to the Norris Drive / Hinsdale Street Intersection.

### 2.3.4 Safety and Crash History Analysis

A crash analysis was performed in accordance with NYS Highway Design Manual Chapter 5. The analysis was conducted along Culver Road from Monroe Avenue to Atlantic Avenue, University Avenue from North Goodman Street to Culver Road, and the intersection of Monroe Avenue & Werner Park.

The crash rate for this segment of Culver Road is 8.03 crashes per million vehicle miles. This is over two times greater than the statewide crash rate for similar facilities, which is 3.5 crashes per million vehicle miles. Additionally, this rate is over two times greater than the Monroe County wide crash rate for similar facilities which is 3.01 crashes per million vehicles miles.

There are High Accident Locations (HALs) within the study area at the following intersections:

- Culver Road & I-490 Westbound Ramp
- Culver Road & Harvard Street / Canterbury Road
- Culver Road & Milburn Street
- Culver Road & Park Avenue
- Culver Road & East Avenue
- Culver Road & University Avenue
- Culver Road & Humboldt Street
- Culver Road & Atlantic Avenue

The predominate crash types are:

Exhibit 2-6A Collision Summary Culver Road from Monroe Avenue to Atlantic Avenue		
Type of Collision	Number	Percentage
Rear End	98	35.9%
Sideswipe	55	20.1%
Left Turn	42	15.4%
Right Angle	48	17.6%
Right Turn	6	2.2%
Head On	1	0.4%
Fixed Object	10	3.7%
Collision with Pedestrian	5	1.8%
Collision with Bicyclist	3	1.1%
Collision with Animal	1	0.4%
Other	4	1.5%

The crash rate for this segment of University Avenue is 5.17 crashes per million vehicle miles. This is nearly 1.5 times greater than the statewide crash rate for similar facilities, which is 3.5 crashes per million vehicle miles. Additionally, this rate is over 1.5 times greater than the Monroe County wide crash rate for similar facilities which is 3.01 crashes per million vehicles miles.

There are High Accident Locations (HALs) within the study area at the following intersections:

- University Avenue & N. Goodman Street
- University Avenue & Atlantic Avenue

The predominate crash types are:

Exhibit 2-6B Collision Summary University Avenue from North Goodman Street to Culver Road		
Type of Collision	Number	Percentage
Rear End	24	36.9%
Sideswipe	11	16.9%
Left Turn	2	3.1%
Right Angle	16	24.6%
Right Turn	4	6.2%
Head On	1	1.5%
Fixed Object	2	3.1%
Collision with Pedestrian	2	3.1%
Collision with Bicyclist	2	3.1%
Collision with Animal	0	0.0%
Other	1	1.5%

The crash analysis is contained in **Appendix D**. The crash analysis recommends consideration of the following crash reduction measures: Installation of reflective backplates along the traffic signal heads and reassessment of the traffic signal timing.

### 2.3.5 Pedestrians, Bicyclists and Transit (Complete Streets)

#### Pedestrians

There are existing continuous sidewalks for pedestrian use along each side of the street for the entire project limits, excluding approximately 1,050ft. length of sidewalk between University Avenue and Humboldt Street along the west side of the roadway due to an existing retaining wall along a bridge abutment and pier. There are residential, retail, restaurant, and commercial uses within the project area that generate frequent pedestrian travel. The curb ramp inventory / assessment indicates that several of the existing curb ramps are not compliant to the Americans with Disabilities Act (ADA). The existing non-compliant sections of sidewalk curb ramps will be constructed to meet the ADA-compliant standards for pedestrian facilities in HDM Chapter 18. An option to complete the sidewalk along the west side of Culver Road has been considered, however this option does not appear to be feasible due to the limited project funding.

A marked crosswalk analysis was conducted at the intersection of Monroe Avenue and Werner Park, which has been included within the Traffic Analysis Report. The marked crosswalk evaluates the need for additional traffic calming features at the existing crossing. The analysis concludes that a Rectangular Rapid Flashing Beacon (RRFB) is not warranted, however mitigation techniques should be considered due to the excessive vehicle speeds and insufficient acceptable gaps. A 12' wide curb bump-out installed along the north side of the intersection would decrease the crossing width which increases the number of acceptable gaps and reduces vehicle speeds. Additionally, another traffic calming feature to be considered is a raised median / pedestrian refuge island which would reduce the total crossing distance, increase the number of acceptable gaps, and reduce vehicle speeds.

#### Bicyclists

The existing potential for bicycling within the project limits is high. There are commercial generators of bicycle traffic within and outside of the project limits. High levels of bicycle traffic have not been identified during site visits or the traffic data, however it is anticipated there are higher levels during evening hours and on weekends.

Question 2.3 on the Capital Projects Complete Streets Checklist in **Appendix B** indicates the existing bicycle accommodations do not meet current standards along Culver Road from Monroe Avenue to Canterbury Road / Harvard Street and Humboldt Street to Atlantic Avenue. Within these sections of Culver Road, the existing lane width is 10-12' with no shoulders or bike lanes. The remaining length of Culver Road from Canterbury Road / Harvard Street to Humboldt Street has an existing lane width of 10 ft and 5 ft bike lane width which meet the standards for bicycling. However, at the intersections, the bike lane drops-off into a 10' shared-use lane to create space for a 10' wide left turn lane. This lane configuration is non-compliant. University Avenue from North Goodman Street to Culver Road meets the current standards for bicycle accommodation with an existing 13' wide shared-use lane in each direction.

### Transit

There are several existing Regional Transit Service (RTS) bus routes that run through the project limits; Routes 9, 10, 11, 289, 368, 436, 447, 487, 765, 785, 839, and several school bus routes. There are eighteen (18) bus stops within the project limits; four (4) bus stops along Culver Road, two (2) along Monroe Avenue, and twelve (12) along University Avenue, several of which have shelters. There are no proposed bus stops to be added with this project.

## **2.4 Structures**

There is one structure which carries Culver Road over I-490 which is not within the project limits. The project limits break at the begin and end abutment joints along Culver Road.

### **2.4.1 Structures Data**

No work is proposed on the existing bridge(s) and no new bridge is proposed.

### **2.4.2 Hydraulic Considerations**

There are no waterways within the project limits.

## **2.5 Design Standards**

The design standards within this report are based upon HDM Chapter 2 Section 2.6 & 2.7.

2.5.1 Critical Design Elements

Exhibit 2-8.1 Critical Design Elements for Culver Road					
<b>PIN</b>	4CR0.21		<b>BIN</b> (if applicable)	N/A	
<b>Functional Class:</b>	Urban Minor Arterial	<b>NHS</b>		<b>Non-NHS</b> X	
<b>Design Class:</b>	Arterial	<b>Context Class:</b>		Urban	
<b>Project Type:</b>	1R - Rehabilitation	<b>Terrain:</b>		Flat	
<b>Design Year AADT:</b>	23,747	<b>Percentage of Trucks:</b>		3.4% (2023)	
<b>Truck Access or Qualifying Highway (QH)?</b>	Truck Access Highway I-490 to Atlantic Avenue	<b>If not a QH, is project within 1 mi of a QH?</b>		Yes I-490	
<b>Existing or Proposed Bicycle Route?</b>	No	<b>Anticipated level of bicycle activity</b>		High	
Element	Standard	Existing Condition	Proposed Condition <sup>2</sup>		
1	Design Speed	30 mph <sup>1</sup> minimum 45 mph <sup>1</sup> maximum HDM Section 2.7.2.3 A	35 mph 85 <sup>th</sup> percentile 30 mph posted	35 mph design 30 mph posted	
2	Travel Lane Width	11 ft. minimum 12 ft. desirable HDM Section 2.7.2.3 Exhibit 2-4	10 ft.**	10 ft.** – 11 ft.	
	Travel Lane Width (Shared Lane)	13 ft. minimum 15 ft. desirable HDM Section 2.7.2.3 Exhibit 2-4	10 ft. **	10 ft. **	
	Bike Lane Width	5 ft. minimum 6 – 7 ft. desirable HDM Section 2.7.2.3 Exhibit 2-4	5 ft.	5 ft.	
	Turn Lane Width	11 ft. minimum 12 ft. desirable HDM Section 2.7.2.3 Exhibit 2-4	10 ft.**	10 ft.** – 11 ft.	
	Parking Lane Width	8 ft. minimum HDM Section 2.7.2.3 Exhibit 2-4	8 – 10 ft.	8 – 10 ft.	
3	Shoulder Width	0 ft. minimum 4 ft. desirable HDM Section 2.7.2.3 Exhibit 2-4	0 ft.	0 ft.	
4	Horizontal Curve Radius	263 ft. Min (at e <sub>max</sub> = 4%) HDM Section 2.7.2.3 Exhibit 2-4	No Horizontal Curves	No Horizontal Curves	

5	Superelevation	$e_{max} = 4\%$ HDM Section 2.6.5 Exhibit 2-1b	0% @ $e_{max} = 4\%$	0% @ $e_{max} = 4\%$
6	Stopping Sight Distance (Horiz. and Vert.)	220 ft. Min. HDM Section 2.7.2.3 Exhibit 2-4	>220 ft.	>220 ft.
7	Maximum Grade	8% HDM Section 2.7.2.3 Exhibit 2-4	<7%	<7%
8	Cross Slope	1.5% Min., 3.0% Max. HDM Section 2.7.2.4 H	2%	2%
9	Americans with Disabilities Act Compliance <sup>3</sup>	HDM Chapter 18	Existing pedestrian facilities do not comply with HDM Chapter 18 standards	If pedestrian facilities are found to have noncompliant elements that cannot be made compliant, they will be justified as nonstandard. <sup>4</sup>

Exhibit 2-8.2 Critical Design Elements for University Avenue				
<b>PIN</b>	4CR0.21	<b>BIN (if applicable)</b>		N/A
<b>Functional Class:</b>	Urban Minor Arterial	<b>NHS</b>		<b>Non-NHS</b> X
<b>Design Class:</b>	Arterial	<b>Context Class:</b>		Urban
<b>Project Type:</b>	1R - Rehabilitation	<b>Terrain:</b>		Flat
<b>Design Year AADT:</b>	12,296	<b>Percentage of Trucks:</b>		3% (2019)
<b>Truck Access or Qualifying Highway (QH)?</b>	Neither	<b>If not a QH, is project within 1 mi of a QH?</b>		Yes I-490
<b>Existing or Proposed Bicycle Route?</b>	No	<b>Anticipated level of bicycle activity</b>		High
Element		Standard	Existing Condition	Proposed Condition <sup>2</sup>
1	Design Speed	30 mph <sup>1</sup> minimum 45 mph <sup>1</sup> maximum HDM Section 2.7.2.3 A	38 mph 85 <sup>th</sup> percentile 30 mph posted	40 mph design 30 mph posted
2	Travel Lane Width	11 ft. minimum 12 ft. desirable HDM Section 2.7.2.3 Exhibit 2-4	NA	NA
	Travel Lane Width (Shared Lane)	13 ft. minimum 15 ft. desirable HDM Section 2.7.2.3 Exhibit 2-4	13 ft.	13 ft.
	Bike Lane Width	5 ft. minimum 6 – 7 ft. desirable HDM Section 2.7.2.3 Exhibit 2-4	NA	NA
	Turn Lane Width	11 ft. minimum 12 ft. desirable HDM Section 2.7.2.3 Exhibit 2-4	10 ft. **	10 ft. **
	Parking Lane Width	8 ft. minimum HDM Section 2.7.2.3 Exhibit 2-4	8 – 10 ft.	8 – 10 ft.
3	Shoulder Width	0 ft. minimum 4 ft. desirable HDM Section 2.7.2.3 Exhibit 2-4	0 ft.	0 ft.
4	Horizontal Curve Radius	263 ft. Min (at e <sub>max</sub> = 4%) HDM Section 2.7.2.3 Exhibit 2-4	0 ft.	0 ft.
5	Superelevation	e <sub>max</sub> = 4% HDM Section 2.6.5 Exhibit 2-1b	0% @ e <sub>max</sub> = 4%	0% @ e <sub>max</sub> = 4%

6	Stopping Sight Distance (Horizontal and Vertical)	220 ft. Min. HDM Section 2.7.2.3 Exhibit 2-4	>220 ft.	>220 ft.
7	Maximum Grade	8% HDM Section 2.7.2.3 Exhibit 2-4	<7%	<7%
8	Cross Slope	1.5% Min., 3.0% Max. HDM Section 2.7.2.4 H	2%	2%
9	Americans with Disabilities Act Compliance <sup>3</sup>	HDM Chapter 18	Existing pedestrian facilities do not comply with HDM Chapter 18 standards	If pedestrian facilities are found to have noncompliant elements that cannot be made compliant, they will be justified as nonstandard. <sup>4</sup>

Notes:

- 1 The City Traffic Engineer has concurred that the proposed Design Speed of 35 mph for Culver Road and 40 mph for University Avenue is consistent with the anticipated off-peak 85<sup>th</sup> percentile speed and is within the design classification's range of design speeds for terrain and volume.
- 2 \*\* Denotes non-standard feature
- 3 Refer to Section 2.3.5 for detailed pedestrian facility information.
4. Pedestrian facility nonstandard features to be retained or created will be justified in final design.

2.5.2 Other Design Parameters

Exhibit 2-10 Other Design Parameters			
Element	Parameter	Existing Conditions	Proposed Condition
Level of Service	LOS "D" maximum	LOS "D" maximum	LOS "D" maximum

\*Nonconforming feature  
[Nonconforming Features Checklist](#)

Exhibit 2-11 Other Design Parameter: Design Vehicle		
Location	Design Vehicle (HDM Ch. 5)	Vehicle Accommodated
Culver Road (Monroe Avenue to I-490)	SU Truck	SU Truck
Culver Road (I-490 to Atlantic Avenue)	WB-67	WB-67
University Avenue	City Bus	City Bus

\*Nonconforming feature



### 2.5.3 Nonstandard/Nonconforming Features

The following nonstandard and nonconforming features are proposed to be retained.

#### Nonstandard Features

The existing 10' travel lanes and turn lanes along Culver Road are proposed to be retained.

The compliance of existing pedestrian facilities within the scope of this project (refer to Section 2.3.5) will be evaluated in final design using the applicable standards in the NYSDOT Critical Elements for the Design, Layout and Acceptance of Pedestrian Facilities found on the NYSDOT Highway Design Manual [Chapter 18 webpage](#). If any facilities do not meet the applicable standards, then the procedural requirements identified in ED 15-004 - Design, Construction and Inspection of Pedestrian Facilities in the Public Right of Way will be followed and they will be rehabilitated, replaced, or justified as nonstandard (in final design).

## 2.6 Other Infrastructure Considerations

### 2.6.1 Pavement Condition

Fourteen (14) pavement cores were taken by a subcontractor in March 2024 to identify the existing asphalt condition within the travel lanes of Culver Road and University Avenue. The results of the Pavement Evaluation and Treatment Selection Report (PETSr) are included within the Technical Memorandum in **Appendix E**.

The proposed treatment is a 2" top course mill and resurface with localized areas of full depth repairs as needed.

**2.6.2 Right of Way** – There are no anticipated ROW Acquisitions

### 2.6.3 Geotechnical

There are no special geotechnical concerns with the soils or rock slopes within the project area.

### 2.6.4 Access Management

This project will not permanently affect access to any properties along Culver Road or University Avenue.

### 2.6.5 Traffic Control Devices

There are ten (10) signalized intersections and two (2) unsignalized intersections along Culver Road within the project limits:

1. **Culver Road / Monroe Avenue** – Signalized four-legged intersection with protected southbound left and westbound right turn phases. There are crosswalks with pedestrian signals and pushbuttons at the north, south, and west legs of the intersection.
2. **Culver Road / Hinsdale Street & Norris Drive** – Signalized four-legged intersection with permitted phasing. There are crosswalks with pedestrian signals and pushbuttons at each quadrant.

3. **Culver Road / I-490 Eastbound Ramp** - Signalized four-legged intersection with a protected southbound left phase. There are crosswalks with pedestrian signals and pushbuttons at the south, east, and west leg of the intersection. The east and west legs of the intersection are one-way eastbound.
4. **Culver Road / I-490 Westbound Ramp** - Signalized four-legged intersection with a protected northbound left phase. There are crosswalks with pedestrian signals and pushbuttons at the east and west sides of the intersection. The east and west legs of the intersection are one-way westbound.
5. **Culver Road / Canterbury Road & Harvard Street** – Signalized five-legged intersection with permitted phasing and a separate leg of Harvard Street which is stop controlled with no westbound left turns permitted. There are crosswalks with pedestrian signals and pushbuttons at each quadrant.
6. **Culver Road / Milburn Street** – Unsignalized three-legged intersection which is stop controlled along Milburn Street. There is an unstriped crosswalk at the west leg of the intersection.
7. **Culver Road / Park Avenue** – Signalized four-legged intersection with a protected northbound left turn phase. There are crosswalks with pedestrian signals and pushbuttons at each quadrant.
8. **Culver Road / East Avenue** - Signalized four-legged intersection with a protected northbound left turn phase. There are crosswalks with pedestrian signals and pushbuttons at each quadrant.
9. **Culver Road / Sager Drive** – Unsignalized three-legged intersection with no stop control. The east leg of the intersection is one-way eastbound. There is an unstriped crosswalk at the east leg of the intersection.
10. **Culver Road / University Avenue** - Signalized four-legged intersection with a protected left turn phase in each direction. There are crosswalks with pedestrian signals and pushbuttons at each quadrant.
11. **Culver Road / Humboldt Street** – Signalized three-legged intersection with permitted phasing. There are crosswalks with pedestrian signals and pushbuttons at each quadrant.
12. **Culver Road / Atlantic Avenue** - Signalized four-legged intersection with permitted phasing. There are crosswalks with pedestrian signals and pushbuttons at each quadrant.

There are three (3) signalized intersections, seven (7) unsignalized intersections, and one (1) signalized midblock crossing along University Avenue within the project limits:

1. **University Avenue / North Goodman Street** - Signalized four-legged intersection with permitted phasing. There are crosswalks with pedestrian signals and pushbuttons at each quadrant.
2. **University Avenue / Arlington Street & Upton Park** - Unsignalized four-legged intersection which is stop controlled along Arlington Street and Upton Park. There is a striped crosswalk along the north leg and an unstriped crosswalk at the south leg of the intersection.
3. **University Avenue / Atlantic Avenue & Rundel Park** - Signalized four-legged intersection with permitted phasing and stop control along Rundel Park. There are crosswalks with pedestrian signals and pushbuttons at each quadrant.

4. **University Avenue / Oxford Street** – Unsignalized three-legged intersection with stop control along Oxford Street. There are unstriped crosswalks at the west and south legs of the intersection.
5. **University Avenue / Merriman Street** - Signalized four-legged intersection with permitted phasing. There are crosswalks with pedestrian signals and pushbuttons at each quadrant.
6. **University Avenue / Portsmouth Terrace** – Unsignalized three-legged intersection with stop control along Portsmouth Terrace. There is a striped crosswalk at the south leg of the intersection.
7. **University Avenue / Elton Street** – Unsignalized three-legged intersection with stop control along Elton. There is as unstriped crosswalk at the north leg of the intersection.
8. **University Avenue / Russel Street** – Unsignalized three-legged intersection with no stop control. The north leg of the intersection is one-way northbound. There are unstriped crosswalks at the north and west legs of the intersection.
9. **University Avenue at 1000 University Avenue (Gleason Works)** – Signalized midlock crossing with pedestrian signals and push buttons for north / south pedestrian traffic.
10. **University Avenue / Granger Place** – Unsignalized three-legged intersection with stop control along Granger Place. There are unstriped crosswalks at each leg of the intersection.
11. **University Avenue / Oliver Street** – Unsignalized three-legged intersection with stop control along Oliver Street. There are unstriped crosswalks at each leg of the intersection.

#### 2.6.6 Drainage Systems

The existing closed drainage systems will be maintained, and drainage structures will be adjusted or replaced as needed.

## 2.6.7 Utilities and Lighting

### Utilities

Exhibit - 2-14 Utilities			
Owner	Type	Location/Side	Condition/Conflict
Rochester Gas & Electric (RGE)	Underground Power Line	East and West sides of Culver Road North and South Sides of University Avenue	Condition unknown; no obvious conflicts.
Rochester Gas & Electric (RGE)	Gas Main	East and West sides of Culver Road North and South Sides of University Avenue	Condition unknown; no obvious conflicts.
Time Warner Communications	Cable	Unknown, not marked / no record provided	Condition unknown; no obvious conflicts.
Century Link	Underground Cable / Fiber Optic	South Side of University, services 1000 University Ave. East Side of Culver Road, services 145 & 155 Culver Road. West Side of Culver Road @ Atlantic, crosses and extends down Humboldt	Condition unknown; no obvious conflicts.
Rochester Telephone Company	Underground Telephone Overhead Telephone	Unknown, not marked / no record provided	Condition unknown; no obvious conflicts.
Monroe County Department of Environmental Services, Bureau of Water & Lighting	Water Line	East and West sides of Culver Road North and South Sides of University Avenue	Condition unknown; no obvious conflicts.
City of Rochester, Department of Environmental Services, Pure Waters	Storm, Sanitary, and Combined Sewer Lines; Trunk Sewers and CSOAP Structures	East and West sides of Culver Road North and South Sides of University Avenue	Condition unknown; no obvious conflicts.
Monroe County Department of Transportation	Underground Conduit and Traffic Interconnect Duct	South Side of University Avenue	Condition unknown; no obvious conflicts.
Monroe County Water Authority	Water Line	Crosses University Avenue @ Goodman Street,	Condition unknown; no obvious conflicts.
Verizon	Communications	No response	Condition unknown; no obvious conflicts.
Lightower Fiber Tech	Fiber Optic	No response	Condition unknown; no obvious conflicts.

## **Lighting**

There are two (2) types of existing street lighting within the project limits decorative vertical poles with a lantern and mast arm streetlights. There are only mast arm type street lights along Culver Road throughout the project limits. The most abundant street lighting along University Avenue is decorative lighting with several mast arm streetlights scattered.

### **2.6.8 Guide Railing, Median/Roadside Barriers and Impact Attenuators**

There is no proposed guide rail within the project limits.

### **2.6.9 Intelligent Transportation Systems (ITS)**

Implementing an Intelligent Transportation System (ITS) is not within the scope of this project.

### **2.6.10 Landscape and Community Enhancement Considerations**

The City Forestry Department will be consulted concerning existing tree protection during construction and including any new plantings during the final design.

## **2.7 Work Zone Safety and Mobility**

### **2.7.1 Transportation Management Plan**

*The Region has determined that the subject project is not significant per 23 CFR 630.1010.*

### **2.7.2 Proposed Work Zone Traffic Control**

Two-way traffic will be maintained at all times via lane shifts onto the existing pavement area. No off-site detours will be required. Routes for emergency vehicles will be maintained and open during construction. The details for the work zone traffic control will be prepared and evaluated during final design. No additional environmental impacts will occur.

### **Special Provisions**

Due to the close proximity to residences and the ability to maintain traffic with acceptable delays during daylight hours, night time construction will not be utilized. The use of time-related provisions will be evaluated during final design. The work zone traffic control will need to be coordinated with local officials and residents.

## **2.8 Additional Considerations**

### **2.8.1 Constructability Review**

There are currently no concerns regarding the constructability of the proposed project. Any potential issues that arise will be addressed during final design.

### **2.8.2 Ownership and Maintenance Jurisdiction**

The City of Rochester owns and maintains the City Streets within the project limits, with the exception of the I-490 bridge and associated adjacent intersections on Culver Road. Traffic signals are under the jurisdiction of MCDOT (except the State Traffic Signals at the location of the Culver Road and I-490 on and off ramp intersections).

### **2.8.3 NYS Smart Growth Public Infrastructure Policy Act (SGPIPA)**

Pursuant to ECL Article 6, this project is compliant with the New York State Smart Growth Public Infrastructure Policy Act (SGPIPA).

To the extent practicable this project has met the relevant criteria as described in ECL § 6-0107. The Smart Growth Screening Tool was used to assess the project's consistency and alignment with relevant Smart Growth criteria; the tool was completed by Lu Engineers and at the City of Rochester on June 28, 2024 and reflects the current project scope. The Smart Growth Screening Tool is included in **Appendix B**.

### **2.8.4 Miscellaneous Information - None**

## CHAPTER 3 – SOCIAL, ECONOMIC AND ENVIRONMENTAL CONSIDERATIONS

Refer to the Social, Economic and Environmental Resources Checklist (SEERC) included in **Appendix B** for information on all environmental issues for which the project was screened.

### 3.1 National Environmental Policy Act (NEPA)

This project is being progressed as a NEPA Class II action (Categorical Exclusion).

In accordance with the Federal Highway Administration's regulations in 23 CFR 771.117(c) this is an action which will not have significant environmental effects and does not normally require additional federal approval regarding NEPA. Specifically this action meets the description in 23 CFR 771.117(c)(26) described as "Modernization of a highway by resurfacing, restoration, rehabilitation, reconstruction, adding shoulders, or adding auxiliary lanes (including parking, weaving, turning, and climbing lanes), " and meets the constraints listed in 23 CFR 771.117(e) . This is further detailed in the Federal Environmental Approvals Worksheet (FEAW) included in **Appendix B**.

### 3.2 State Environmental Quality Review Act (SEQRA)

Refer to 17 NYCRR Part 15.14 for SEQRA Type II criteria. A project that does not meet the Type II criteria is classified as Non-Type II (EA).

The proposed project meets the criteria established for a SEQRA Type II Action per 6 NYCRR Section 617.5, Subdivision (c), Item 2, "replacement, rehabilitation of a structure or facility in kind, on the same site, including upgrading buildings to meet building or fire codes, unless such action meets or exceeds any thresholds in Section 617.4 of this part." This permits the project to be classified as Type II since the project does not meet or exceed any of the criteria contained in Section 617.4. No further review under SEQR is required. Additional information related to how the project meets the SEQR Type II criteria is included in **Appendix B**.

The following Checklist(s) are attached:

- Federal Environmental Approvals Worksheet (FEAW)
- Social, Economic and Environmental Resources Checklist
- Smart Growth Screening Tool Checklist
- Capital Projects Complete Streets Checklist

### 3.3 Additional Environmental Information

For topics checked yes on the Social, Economic, and Environmental Resources Checklist or applicable on the FEA in the appendix, resolution is as follows:

#### **Neighborhoods and Community Cohesion**

There is potential to impact transportation options; these impacts would be considered positive impacts, as walking and bicycling opportunities would increase as a result of the project. Installation of bike lanes where existing roadway space is available will provide additional opportunity, and replacement of sidewalk pedestrian curb ramps to current standards will improve pedestrian facilities.

#### **Community Services**

There is potential to positively affect access to or use of Schools, Recreation Areas or Places of Worship; through the replacement of sidewalk pedestrian curb ramps to current standards.

#### **Business Districts**

Bicycle opportunities will be affected, as installation of bike lanes will occur where existing roadway space is available. Sidewalks will be affected; positive impacts are anticipated as pedestrian curb ramps will be replaced to current standards.

#### **Specific Business Impacts**

This project has the potential to positively impact businesses through the installation of bike lanes and replacement of curb ramps to current standards in many locations on the project.

#### **Low Income, Minority and Ethnic Groups (Environmental Justice)**

This project is located in a potential Environmental Justice Area, however the scope of project activities are limited to normal activities which will not have disproportionately high and adverse human health and environmental effect on minority or low-income populations.

#### **Aquifers**

The project is not in a federal Sole Source Aquifer Area, or Primary Aquifer area, however the project is located above a Principal Aquifer Area. It is not anticipated that the project will significantly impact this aquifer, as new highway construction, significant pavement widening and construction of additional travel lanes resulting in a major net increase in impervious area is not part of the project. Surface water will be protected during project construction through the use of NYSDEC Approved Erosion and Sediment Control practices.

#### **Section 106**

This federal-permitted project is an undertaking subject to review under Section 106 of the National Historic Preservation Act and its implementing regulation, 36 CFR Part 800. A Project Submittal Package (PSP) was prepared for submission to NYSDOT for review in accordance with Appendix C of the executed Programmatic Agreement among the FHWA, the New York State Historic Preservation Officer, the Advisory Council on Historic Preservation, the National Park Service, and the NYSDOT Regarding the Federal-Aid Highway Program in New York State (Section 106 PA).

Upon review of project information, NYSDOT SOI qualified staff determined that the project activities result in No Historic Properties Affected under Section 106 PA Categorical Review. As such, there are no further obligations under Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulation, 36 CFR Part 800 – Protection of Historic Properties.

#### **Parks**

The project is located adjacent to Cobbs Hill Park on Culver Road. The project will be located within the existing highway boundary on land previously disturbed for the initial construction of the roadway. No impacts to parks are anticipated.



## Endangered Species

The federal listed endangered species Northern Long Eared Bat (*Myotis septentrionalis*) was identified through consultation with the U.S. Fish and Wildlife Service's IPaC Review Process. To assess the potential for the project to impact this species, the FHWA New York Division's Section 7 Endangered Species Act Process for Compliance and Consultation was followed.

As per the Section 7 process, the project was classified as a 2R Project and was identified on the Activity-Based "No Effect" Determination. As no tree clearing or removal is proposed for the project, the project was identified as Activity Number 25: 2R Projects that do not involve drainage work or work off the paved surface/shoulder, or bridge work. Existing roadway pavement, curb ramps, traffic signals, sidewalks, and paved multi-use paths are all considered to be part of the existing impervious surface for this "No Effect" Determination.

The IPaC species list was updated on 6/14/2024, and the newly listed species tricolored bat (*Perimyotis subflavus*) was identified as potentially being located at the project site. The official species list includes wording with respect to TCB that "this species only needs to be considered if the project includes wind turbine operations." This project does not include wind turbines, so no assessment of effects or determination from FHWA is required.

Federal USFWS IPaC revealed that the Monarch Butterfly has potential to be located within the project area. Currently, the monarch butterfly does not have protection under ESA Section 7 so consultation or conference with USFWS is not required at this time.

The NYSDEC Online Environmental Resource Mapper was reviewed to determine the potential for presence of State Listed Threatened or Endangered Species within the project area. The project limits do not fall within an area identifying Rare Plants and Animals near the project, and consultation with the NYSDEC Natural Heritage Program (NYNHP) was not required.

Additional documentation of the FHWA Section 7 Process for Compliance and Consultation, including Transmittal Sheet and USFWS Species List are included in **Appendix B**.

## Hazardous Waste

A hazardous waste screening/assessment was conducted for the project site utilizing procedures in the NYSDOT TEM Chapter 5.1. The assessment was prepared in general accordance with the American Society for Testing and Materials (ASTM) Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (Designation E1527-13).

Due to the nature of the proposed work, which includes milling and resurfacing of pavement, and repair of existing curb ramps - no locations of concern that have the potential to impact project activities were identified in the Database review. No conditions that would result in the exposure of Hazardous Waste and/or Contaminated Materials during project activities were discovered during the assessment. As such, no further studies are recommended. The Hazardous Waste/Contaminated Materials Screening Report can be found in **Appendix B**.

## Asbestos

The site was reviewed for the presence of potential Asbestos Containing Materials (ACMs). A site visit was performed and items with potential ACM were sampled and sent to the laboratory for analysis. The results of the analysis determined that no asbestos was present. As such, no ACM will be disturbed as a result of this project. The Survey report is provided in **Appendix B**.

## Critical Environmental Areas

The project is located adjacent to Cobbs Hill Park on Culver Road, which is designated a Critical Environmental Area by the City of Rochester. The project will be located within the existing highway boundary and no impacts to this area are anticipated.

### 3.3 ANTICIPATED PERMITS/CERTIFICATIONS/COORDINATION

#### Others

- Local Permits
- NYSDOT PERM #33

#### Coordination

- NYSDOT
- Regional Transit Services
- Rochester Fire Department
- MCDOT
- City of Rochester
- Resident and Businesses
- DMV
- Utility Agencies
- Rochester City School District

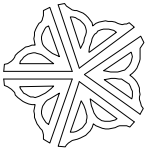
# APPENDICES



# **APPENDIX A**

## **MAPS PLANS & TYPICAL SECTIONS** (Under Separate Cover)





DATE:	MAY 2024
COR PN/PIN:	23137 / 4CR0.21
DRAWN BY:	JRM
MAP SOURCE:	NYSOT EASTER QUADRANGLES - 1987 DOT EDITION ROCHESTER WEST, ROCHESTER EAST, WEST HENRIETTA AND PITTSFORD

**LOCATION MAP**

**2025 PREVENTIVE MAINTENANCE PROJECT**

**CULVER ROAD (MONROE AVENUE TO ATLANTIC AVENUE)**

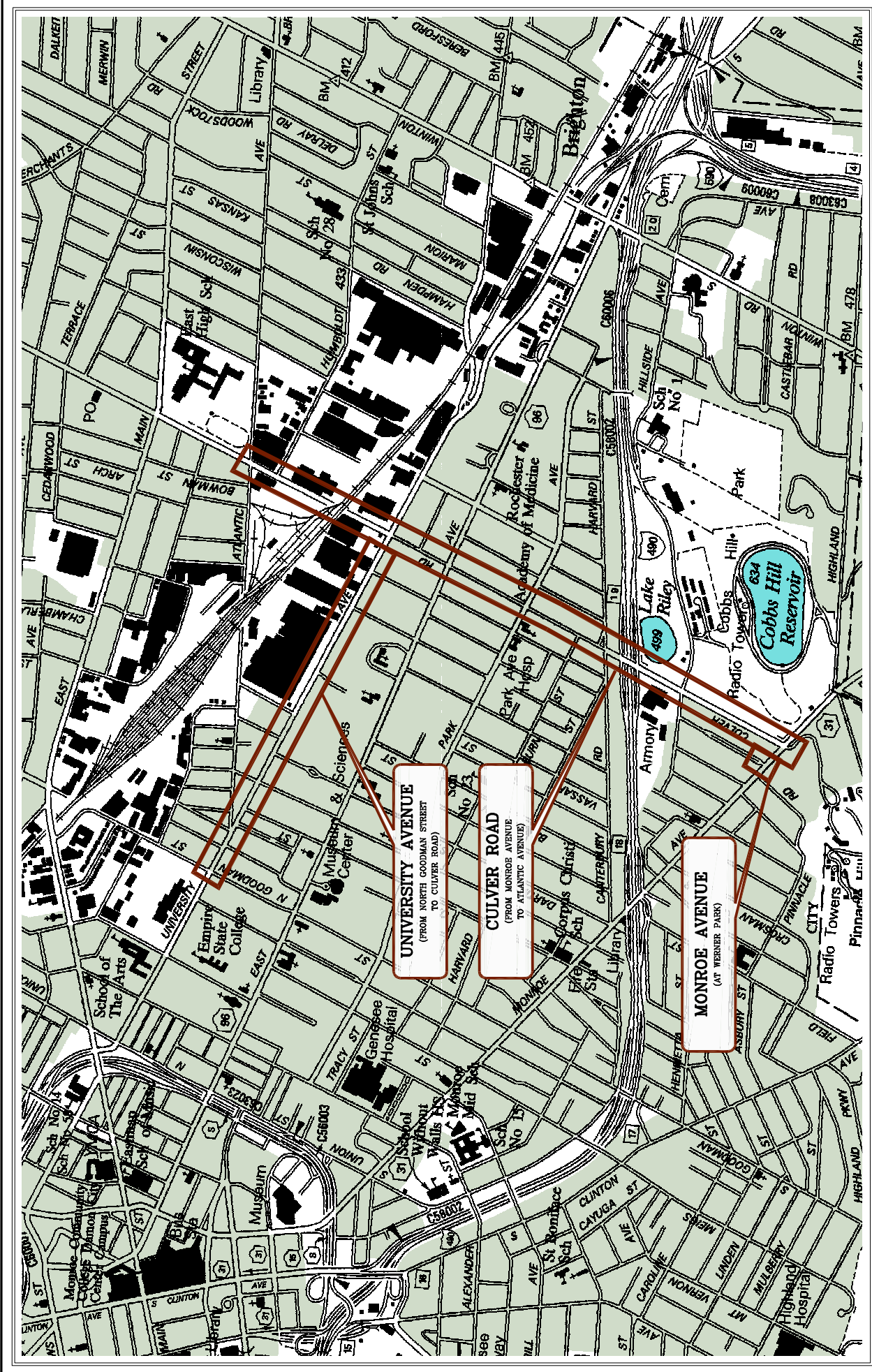
**UNIVERSITY AVENUE (NORTH GOODMAN STREET TO CULVER ROAD)**

**MONROE AVENUE (AT WERNER PARK)**

CITY OF ROCHESTER

**Lu Engineers**  
ENVIRONMENTAL • TRANSPORTATION • CIVIL

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**UNIVERSITY AVENUE**  
(FROM NORTH GOODMAN STREET  
TO CULVER ROAD)

**CULVER ROAD**  
(FROM MONROE AVENUE  
TO ATLANTIC AVENUE)

**MONROE AVENUE**  
(AT WERNER PARK)





# **APPENDIX B**

## **ENVIRONMENTAL INFORMATION** (Under Separate Cover)



# **APPENDIX C**

## **TRAFFIC INFORMATION** (Under Separate Cover)



# **APPENDIX D**

## **CRASH ANALYSIS** (Under Separate Cover)



# **APPENDIX E**

## **PAVEMENT INFORMATION** (Under Separate Cover)





# **APPENDIX F**

## **ADA SIDEWALK CURB RAMP ASSESSMENT** (Under Separate Cover)



# **APPENDIX G**

## **TRAFFIC SIGNS, CURB AND SIDEWALK INVENTORY AND EVALUATION**





280 East Broad Street  
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## *Technical Memorandum*

To: Darin Ramsay, COR Street Design PM  
From: Jonathan W. Ottman, P.E., Design Consultant PM  
Date: May 1, 2024

2025 Preventive Maintenance Project  
Culver Road (Monroe Avenue to Atlantic Avenue)  
University Avenue (North Goodman Street to Culver Road)  
City of Rochester Project Number 23137  
Project Identification Number PIN: 4CR0.21

Re: **Traffic Sign, Curb and Sidewalk Inventory and Evaluation**  
Lu Project No.: 4278

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**Summary:** The 2025 Preventive Maintenance project will perform a 1R preventative maintenance along the Culver Road and University Avenue corridors. An inventory and evaluation of existing traffic signs, curb, and sidewalk was completed for the Culver Road and University Avenue corridors.

### **Traffic Sign Inventory and Evaluation**

Approximately four hundred and ninety-one (491) traffic signs were photo logged and inventoried at approximately two hundred and eighty-six (286) locations along the Culver Road (268 signs/140 locations) and University Avenue (223 signs/146 locations) project corridors. Refer to the project Roadway Plans for each existing traffic sign and locations (Appendix A of the PSR/FDR). Every traffic sign was evaluated for reflectivity, sign panel damage, mounting condition and if the traffic sign was current with the most recent versions of the National Manual on Uniform Traffic Control Devices (NMUTCD), 2009 Edition with revisions and the New York Supplement to the Manual on Uniform Traffic Control Devices (NYSMUTCD), 2009 Edition with revisions. Refer to attached supporting documentation to this Technical Memorandum for the “Traffic Sign Inventory and Evaluation Table” for the results of the inventory / evaluations. Also, refer to attached supporting documentation to this Technical Memorandum for existing traffic sign evaluation photo examples.

### **Traffic Sign Inventory and Evaluation Supporting Documentation**

1. **The Traffic Sign Inventory and Evaluation Table** inventories each traffic sign location by station, offset, side of roadway and by existing sign type (i.e. street signs, stop signs, parking signs, etc.) or by proposed MUTCD number (i.e. NYR2-4, NYP1-2, M1-8, etc.). Approximately 13 percent (62 signs) of the existing traffic signs were determined to either be removed and replaced or to be relocated. Refer to the “Traffic Sign Inventory and Evaluation Table” for the itemized backup.
2. **Sign Evaluation Photos** were taken and used to evaluate each individual traffic sign for replacement or relocation. Example photos have been provided for reference.

### **Curb Inventory and Evaluation**

Roughly 7,450 linear feet of curb per side of roadway was field observed along the Culver Road, and 4,825 linear feet of curb per side along the University Avenue project corridors for broken or missing curb sections to be removed and replaced or for sunken or offset curb that could be reset in place. Refer to attached supporting documentation to this Technical Memorandum for the “Curb Inventory and Evaluation Table” for the results of the inventory / evaluations. Also, refer to attached supporting documentation to this Technical Memorandum for curb evaluation photo examples. Existing curb will be replaced and / or reset in place per City of Rochester Detail S609-17 - “Stone Curb Replacement - Concrete Base”, attached to this Technical Memorandum.

### **Curb Inventory and Evaluation Supporting Documentation**

1. **The Curb Inventory and Evaluation Table** inventories all damaged curb sections by station, side of roadway and if the damaged curb is to be replaced or reset in place. Less than 1% (66 linear feet) of the existing curb was determined to either be removed and replaced or to be reset. Refer to the “Curb Inventory and Evaluation Table” for the itemized backup.
2. **Curb Evaluation Photos** were taken and used to evaluate each individual damaged curb location for replacement or to be reset in place. Example photos have been provided for reference.

### **Sidewalk Inventory and Evaluation**

Over 31,500 square feet of sidewalk per side of roadway was field observed along the Culver Road and University Avenue project corridors for damaged sections due to cracks, heaves, and/or tripping hazards. Refer to the project Roadway Plans for existing sidewalk repair locations (Appendix A of the PSR/FDR). Refer to attached supporting documentation to this Technical Memorandum for the “Sidewalk Inventory and Evaluation Table” for the results of the inventory / evaluations. Also, refer to attached supporting documentation to this Technical Memorandum for sidewalk evaluation photo examples. Existing sidewalk will be replaced per City of Rochester Detail S608-6 - “Concrete Sidewalk and Driveway” and S608-32 “Sidewalk Jog around Existing Tree” when applicable, attached to this Technical Memorandum.

### **Sidewalk Inventory and Evaluation Supporting Documentation**

1. **The Sidewalk Inventory and Evaluation Table** inventories all damaged sidewalk sections by station, side of roadway, and if the type of damage will require replacement. Less than ten percent (864 square feet) of the existing sidewalk was determined to be removed and replaced. Refer to the “Sidewalk Inventory and Evaluation Table” for the itemized backup.
2. **Sidewalk Evaluation Photos** were taken and used to evaluate each section of damaged sidewalk for replacement. Example photos have been provided for reference.



# **Supporting Documents**

**Traffic Sign Inventory and Photos, Curb Inventory and Photos,  
and Sidewalk Inventory and Photos**





# **Traffic Sign Inventory/Evaluation Table and Photos**





TRAFFIC SIGN INVENTORY AND EVALUATION

ITEM NO.	DESCRIPTION	EXISTING SIGN TYPE OR PROPOSED MUTCD NUMBER	SIGN SIZE (IN x IN)	SIGN PANEL			MOUNTING TYPE			RELOCATE			REMOVAL			REMARKS	
				ITEM 645.5101 (SF)	ITEM 645.5201 (SF)	ITEM 645.050000MO (EA)	ITEM 645.81 (EA)	ITEM 645.81020003 (EA)	ITEM 645.85 (EA)	ITEM 647.31 (EA)	ITEM 647.51 (EA)	ITEM 647.61 (EA)					
STATION	OFFSET	FUNDING SHARE	MCDOT	COR	MCDOT	COR	MCDOT	COR	MCDOT	COR	MCDOT	COR	MCDOT	COR	MCDOT	COR	
C 14-01	40.0 LT.	STREET SIGNS	x														SIGNS TO REMAIN
		STREET SIGNS	x														SIGNS TO REMAIN
C 14-54	24.0 RT.	M1-1	30 x 24														SIGN TO REMAIN
		M2-1	30 x 21														SIGN TO REMAIN
C 15-70	33.0 RT.	NYR2-1 (MOD. 30)	12 x 18														SIGN TO REMAIN
		NYPL-2	12 x 18														SIGN TO REMAIN
C 16-19	24.0 LT.	NYR2-1 (MOD. 30)	24 x 30														SIGN TO REMAIN
		NYPL-2	12 x 18														SIGN TO REMAIN
C 17-91	23.0 RT.	W9-1 (MOD. RIGHT)	36 x 36	9.0													REPLACE SIGN ON LIGHT POLE
		RB-1 (MOD. RIGHT ARROW)	36 x 12														SIGN TO REMAIN
C 19-82	33.0 LT.	RB-1	36 x 12														SIGN TO REMAIN
C 20-15	31.0 RT.	RS-1	30 x 30														SIGN TO REMAIN
		R10-36	9 x 15														SIGN TO REMAIN
		M3-4	24 x 12														SIGN TO REMAIN
		M3-2	24 x 12														SIGN TO REMAIN
		M1-1	30 x 24														SIGN TO REMAIN
C 20-20	31.0 RT.	M1-1	30 x 24														SIGN TO REMAIN
		M6-3	21 x 15														SIGN TO REMAIN
		M6-1	21 x 15														SIGN TO REMAIN
		RS-5 (MOD. RIGHT ARROW)	30 x 36														SIGN TO REMAIN
C 20-32	31.0 RT.	R10-36	9 x 15														SIGN TO REMAIN
		RB-1 (MOD. RIGHT ARROW)	36 x 12														SIGN TO REMAIN
		RB-1	36 x 12														SIGN TO REMAIN
		RS-1	30 x 30														SIGN TO REMAIN
		M3-2	24 x 12														SIGN TO REMAIN
C 20-51	30.0 LT.	M1-1	30 x 24														SIGN TO REMAIN
		M6-1 (MOD. LEFT ARROW)	21 x 15														SIGN TO REMAIN
		R10-36	9 x 15														SIGN TO REMAIN
C 20-54	54.0 RT.	RS-10B	30 x 18														SIGN AND POST TO REMAIN
C 20-68	31.0 RT.	R10-36	9 x 15														SIGN TO REMAIN
		RB-1	36 x 12														SIGN TO REMAIN
C 21-83	30.0 LT.	RB-1 (MOD. RIGHT ARROW)	36 x 12														SIGN TO REMAIN
		R10-36	9 x 15														SIGN TO REMAIN
C 22-13	47.0 LT.	RS-10B	30 x 18														SIGN AND POST TO REMAIN
		M3-4	24 x 12														SIGN TO REMAIN
		M1-1	30 x 24														SIGN TO REMAIN
C 22-18	30.0 RT.	M6-1 (MOD. LEFT ARROW)	21 x 15														SIGN TO REMAIN
		RB-1	36 x 12														SIGN TO REMAIN
		RB-1 (MOD. RIGHT ARROW)	36 x 12														SIGN TO REMAIN
		RS-1	30 x 30														SIGN TO REMAIN
C 22-38	30.0 LT.	R10-36	9 x 15														SIGN TO REMAIN
		R10-36	9 x 15														SIGN TO REMAIN





TRAFFIC SIGN INVENTORY AND EVALUATION

ITEM NO.	DESCRIPTION	STATION	OFFSET	EXISTING SIGN TYPE OR PROPOSED MUTCD NUMBER	SIGN SIZE (IN x IN)	SIGN PANEL			MOUNTING TYPE			RELOCATE			REMOVAL			REMARKS					
						ITEM 645.5101 (SF)	MCDOT	COR	ITEM 645.5201 (SF)	MCDOT	COR	ITEM 645.050000MO (EA)	MCDOT	COR	ITEM 645.81 (EA)	MCDOT	COR		ITEM 647.31 (EA)	MCDOT	COR	ITEM 647.51 (EA)	MCDOT
C-38-10	19.0 RT.			R3-17	24 x 18																SIGN AND POST TO REMAIN		
C-38-21	18.0 LT.			R3-17	24 x 18	3.0															1	REPLACE SIGN	
C-38-40	26.0 LT.			R3-17BP	24 x 8																	SIGN AND POST TO REMAIN	
C-38-73	26.0 RT.			NYP1-2	12 x 18																	SIGN TO REMAIN	
C-41-04	26.0 LT.			NYP1-2	12 x 18																	SIGN TO REMAIN	
C-42-09	26.0 RT.			NYP1-2	12 x 18																	SIGN TO REMAIN	
C-42-30	18.0 LT.			R3-17	24 x 18																	SIGN TO REMAIN	
C-43-29	26.0 LT.			NYP1-2	12 x 18																	SIGN AND POST TO REMAIN	
C-44-42	26.0 RT.			NYP1-2	12 x 18																	SIGN TO REMAIN	
C-44-67	22.0 RT.			SOUTHEAST EASTMAN HOUSE, MEMORIAL ART GALLERY, MUSEUM/PLANETARIUM	x																	SIGN TO REMAIN	
C-45-79	24.0 LT.			STREET SIGN	x																	SIGN TO REMAIN	
C-45-86	84.0 LT.			R3-5	30 x 36																	SIGN TO REMAIN	
C-45-91	48.0 LT.			NYP1-5 (MOD. DOUBLE ARROW)	12 x 18																	SIGN TO REMAIN	
C-45-91	34.0 RT.			BUS STOP	x																	SIGN AND POST TO REMAIN	
C-45-91	34.0 RT.			STREET SIGN	x																	SIGN TO REMAIN	
C-45-91	34.0 RT.			R3-5	30 x 36																	SIGN TO REMAIN	
C-46-32	110.0 LT.			NYP1-5 (MOD. DOUBLE ARROW)	12 x 18																	SIGN TO REMAIN	
C-46-32	110.0 LT.			ROCHESTER WELCOME TO CENTER CITY SOUTHEAST	x																	SIGN TO REMAIN	
C-46-40	32.0 LT.			STREET SIGNS	x																	SIGN TO REMAIN	
C-46-40	33.0 RT.			NYP1-5 (MOD. DOUBLE ARROW)	12 x 18																	SIGN TO REMAIN	
C-46-40	33.0 RT.			BUS STOP	x																	SIGN AND POST TO REMAIN	
C-46-60	25.0 RT.			STREET SIGN	x																	SIGN TO REMAIN	
C-47-45	19.0 LT.			R3-5	30 x 36																	SIGN TO REMAIN	
C-47-45	19.0 LT.			NEW SIGN COVERED WITH BAG	x																	SIGN AND POST TO REMAIN	
C-47-45	19.0 LT.			NEW SIGN COVERED WITH BAG	x																	SIGN AND POST TO REMAIN	
C-47-96	21.0 RT.			R3-17	24 x 18																	SIGN AND POST TO REMAIN	
C-48-49	19.0 RT.			R3-17	24 x 18	3.0																1	REPLACE SIGN ON LIGHT POLE
C-48-49	19.0 RT.			NYP1-2	12 x 18	1.5																1	REPLACE SIGN ON LIGHT POLE
C-49-36	18.0 LT.			R3-17	24 x 18																	1	RELOCATE SIGN ON NEW POST
C-49-87	40.0 RT.			R3-17BP	24 x 8																		RELOCATE SIGN ON NEW POST
C-49-87	40.0 RT.			R5-10b	30 x 18																		SIGN AND POST TO REMAIN
C-49-89	20.0 RT.			STREET SIGNS	x																		SIGN AND POST TO REMAIN
C-49-89	20.0 RT.			R6-1 (MOD. RIGHT ARROW)	36 x 12																		SIGN TO REMAIN
C-49-89	20.0 RT.			R6-1	36 x 12																		SIGN TO REMAIN







TRAFFIC SIGN INVENTORY AND EVALUATION

ITEM NO.	DESCRIPTION	OFFSET	EXISTING SIGN TYPE OR PROPOSED MUTCD NUMBER	SIGN SIZE (IN x IN)	SIGN PANEL				MOUNTING TYPE				RELOCATE				REMOVAL				REMARKS			
					ITEM 645.5101 (SF)	ITEM 645.5201 (SF)	ITEM 645.050000MO (EA)	ITEM 645.81 (EA)	ITEM 645.81020003 (EA)	ITEM 645.85 (EA)	ITEM 647.31 (EA)	ITEM 647.51 (EA)	ITEM 647.61 (EA)	MCDOT	COR	MCDOT	COR	MCDOT	COR	MCDOT		COR		
U0+49	25.0 LT. STREET SIGNS			x																			SIGNS TO REMAIN	
U0+75	36.0 RT. STREET SIGNS			x																				SIGNS TO REMAIN
U0+78	87.0 LT. BUS STOP			30 x 36																				SIGNS TO REMAIN
U0+83	75.0 RT. NYPI-5 (MOD. DOUBLE ARROW)			x																				SIGN AND POST TO REMAIN
U1+20	98.0 LT. NYPI-5 (MOD. DOUBLE ARROW)			12 x 18																				SIGN AND POST TO REMAIN
U1+29	33.0 LT. STREET SIGNS			x																				SIGNS TO REMAIN
U1+52	25.0 RT. STREET SIGNS			30 x 36																				SIGNS TO REMAIN
U1+86	25.0 LT. NYPI-5 (MOD. DOUBLE ARROW)			1.5																				REPLACE SIGN ON LIGHT POLE
U2+03	25.0 RT. BUS STOP			x																				SIGN AND POST TO REMAIN
U2+25	25.0 LT. SOUTHEAST MUSEUM/PLANETARIUM, AUDITORIUM THEATRE, MEMORIAL ART GALLERY			x																				SIGN TO REMAIN
U2+43	26.0 RT. NYRS-35			24 x 30																				SIGN TO REMAIN
U3+09	25.0 LT. NYPI-5 (MOD. DOUBLE ARROW)			12 x 18																				SIGN TO REMAIN
U3+13	25.0 RT. NYPI-5 (MOD. DOUBLE ARROW)			12 x 18																				SIGN TO REMAIN
U3+73	25.0 RT. NEIGHBORHOOD OF THE ARTS			x																				SIGN AND POST TO REMAIN
U3+80	45.0 LT. STREET SIGNS			12 x 18																				SIGNS TO REMAIN
U4+10	54.0 LT. NYPI-5 (MOD. HERE TO CORNER, RIGHT ARROW)			30 x 24																				SIGNS TO REMAIN
U4+37	24.0 LT. NYPI-2 (MOD. LEFT ARROW)			12 x 18																				SIGN AND POST TO REMAIN
U4+47	50.0 RT. NEIGHBORHOOD OF THE ARTS			x																				SIGN TO REMAIN
U4+48	57.0 RT. NYPI-5 (MOD. HERE TO CORNER, RIGHT ARROW)			12 x 18																				SIGN AND POST TO REMAIN
U4+81	45.0 RT. NYPI-4 (MOD. LEFT ARROW)			12 x 18																				SIGN TO REMAIN
U5+03	25.0 RT. NEIGHBORHOOD OF THE ARTS			x																				REPLACE SIGN
U5+64	25.0 LT. NYPI-5 (MOD. DOUBLE ARROW)			12 x 18																				SIGN TO REMAIN
				x																				SIGN TO REMAIN
				x																				SIGN AND POST TO REMAIN
				1.5																				REPLACE SIGN ON LIGHT POLE
				12 x 18																				SIGN TO REMAIN
				12 x 18																				SIGN TO REMAIN

TRAFFIC SIGN INVENTORY AND EVALUATION

ITEM NO.	DESCRIPTION	STATION	OFFSET	EXISTING SIGN TYPE OR PROPOSED MUTCD NUMBER	SIGN SIZE (IN x IN)	SIGN PANEL		MOUNTING TYPE						RELOCATE		REMOVAL		REMARKS	
						ITEM 645.5101 (SF)	MCDOT COR	ITEM 645.5201 (SF)	MCDOT COR	ITEM 645.050000MO (EA)	MCDOT COR	ITEM 645.81 (EA)	MCDOT COR	ITEM 645.81020003 (EA)	MCDOT COR	ITEM 645.85 (EA)	MCDOT COR		ITEM 647.31 (EA)
645.5101	GROUND-MOUNTED SIGN PANELS WITHOUT Z-BARS		30.0 LT.		12 x 18		1.5												
645.5201	GROUND-MOUNTED SIGN PANELS WITHOUT Z-BARS, HIGH-VISIBILITY SHEETING		4.0 RT.		24 x 30		5.0												
645.050000MO	SIGN SLEEVE				x														
645.81	TYPE A SIGN POSTS																		
645.81020003	RETROREFLECTIVE SIGN POST STRIP																		
645.85	POLE-MOUNTED SIGN SUPPORT SYSTEM (BAND MOUNTING)																		
647.31	RELOCATE SIGN PANEL, SIGN PANEL ASSEMBLY SIZE (UNDER 30 SQUARE FEET)																		
647.51	REMOVE AND DISPOSE SIGN PANEL, SIGN PANEL ASSEMBLY SIZE (UNDER 30 SQUARE FEET)																		
647.61	REMOVE AND DISPOSE GROUND-MOUNTED TYPE A SIGN SUPPORTS, FOUNDATIONS AND ANY ATTACHED SIGNS - SIZE (UNDER 30 SQUARE FEET)																		
U6+12			30.0 LT.		12 x 18		1.5												
U6+47			4.0 RT.		24 x 30		5.0												
U6+48			46.0 LT.		24 x 24														
U6+50			25.0 RT.		30 x 36														
U6+79			55.0 LT.		36 x 8		2.0												
U7+04			5.0 RT.		36 x 12														
U7+05			27.0 LT.		12 x 18		1.5												
U7+07			26.0 RT.		30 x 24														
U7+10			76.0 LT.		30 x 24														
U7+24			52.0 RT.		12 x 18														
U7+27			4.0 RT.		24 x 30		5.0												
U7+27			48.0 LT.		12 x 18														
U7+28			24.0 LT.		24 x 36														
U7+47			55.0 RT.		24 x 30														
U7+54			26.0 LT.		12 x 18		1.5												
U7+87			40.0 RT.		30 x 24														
U7+91			82.0 RT.		12 x 18		1.5												
U8+14			24.0 LT.		12 x 18														
U8+19			26.0 RT.		12 x 18														



TRAFFIC SIGN INVENTORY AND EVALUATION

ITEM NO.	DESCRIPTION	STATION	OFFSET	EXISTING SIGN TYPE OR PROPOSED MUTCD NUMBER	SIGN SIZE (IN x IN)	SIGN PANEL			MOUNTING TYPE			RELOCATE			REMOVAL			REMARKS				
						ITEM 645.5101 (SF)	ITEM 645.5201 (SF)	ITEM 645.050000MO (EA)	ITEM 645.81 (EA)	ITEM 645.81020003 (EA)	ITEM 645.85 (EA)	ITEM 647.31 (EA)	ITEM 647.51 (EA)	ITEM 647.61 (EA)	MCDOT	COR	MCDOT		COR	MCDOT	COR	
645.5101	GROUND-MOUNTED SIGN PANELS WITHOUT Z-BARS																					
645.5201	GROUND-MOUNTED SIGN PANELS WITHOUT Z-BARS, HIGH-VISIBILITY SHEETING																					
645.050000MO	SIGN SLEEVE																					
645.81	TYPE A SIGN POSTS																					
645.81020003	RETROREFLECTIVE SIGN POST STRIP																					
645.85	POLE-MOUNTED SIGN SUPPORT SYSTEM (BAND MOUNTING)																					
647.31	RELOCATE SIGN PANEL, SIGN PANEL ASSEMBLY SIZE (UNDER 30 SQUARE FEET)																					
647.51	REMOVE AND DISPOSE SIGN PANEL, SIGN PANEL ASSEMBLY SIZE (UNDER 30 SQUARE FEET)																					
647.61	REMOVE AND DISPOSE GROUND-MOUNTED TYPE A SIGN SUPPORTS, FOUNDATIONS AND ANY ATTACHED SIGNS - SIZE (UNDER 30 SQUARE FEET)																					
U 13-40			100.0 RT.																			
U 13-49			25.0 LT.																			
U 13-73			32.0 RT.																			
U 13-47			21.0 LT.																			
U 13-94			25.0 RT.																			
U 14-07			25.0 LT.																			
U 15-98			25.0 RT.																			
U 16-07			25.0 LT.																			
U 16-58			25.0 RT.																			
U 17-02			69.0 RT.																			
U 17-36			25.0 LT.																			
U 17-45			53.0 RT.																			
U 17-48			85.0 RT.																			
U 17-88			25.0 RT.																			
U 17-96			27.0 LT.																			
U 18-43			24.0 RT.																			
U 18-57			25.0 LT.																			
U 19-03			32.0 LT.																			
U 19-04			84.0 LT.																			
U 19-06			53.0 LT.																			
U 19-26			25.0 RT.																			
U 19-36			71.0 LT.																			
U 19-64			15.0 LT.																			

TRAFFIC SIGN INVENTORY AND EVALUATION

ITEM NO.	DESCRIPTION	EXISTING SIGN TYPE OR PROPOSED MUTCD NUMBER	SIGN SIZE (IN X IN)	SIGN PANEL			MOUNTING TYPE						RELOCATE			REMOVAL			REMARKS
				ITEM 645.5101 (SF)	ITEM 645.5201 (SF)	ITEM 645.050000MO (EA)	ITEM 645.81 (EA)	ITEM 645.81020003 (EA)	ITEM 645.85 (EA)	ITEM 647.31 (EA)	ITEM 647.51 (EA)	ITEM 647.61 (EA)	MCDOT	COR	MCDOT	COR	MCDOT	COR	
U 19-82	28.0 LT.	NYP1-5 (MOD. HERE TO CORNER)	12 x 18																SIGN TO REMAIN
U 21-66	25.0 RT.	NYP1-5	12 x 18																SIGN TO REMAIN
U 21-87	28.0 LT.	NYP1-5 (MOD. HERE TO CORNER, RIGHT ARROW)	12 x 18																SIGN AND POST TO REMAIN
U 22-22	28.0 RT.	NYP1-5 (MOD. RIGHT ARROW)	12 x 18	1.5															REPLACE SIGN AND POST
U 22-41	68.0 LT.	NYP1-5 (MOD. HERE TO CORNER)	12 x 18																SIGN AND POST TO REMAIN
		RUSSELL ST (SNS)	x																RELOCATE SIGN ON NEW POST
		RUSSELL ST (SNS)	x																RELOCATE SIGN ON NEW POST
		UNIVERSITY AV (SNS)	x																RELOCATE SIGN ON NEW POST
		UNIVERSITY AV (SNS)	x																RELOCATE SIGN ON NEW POST
		RE-1 (MOD. RIGHT ARROW)	36 x 12																RELOCATE SIGN ON NEW POST
		RE-1	36 x 12																RELOCATE SIGN ON NEW POST
U 22-74	50.0 LT.	NYP1-5 (MOD. HERE TO CORNER, RIGHT ARROW)	12 x 18																SIGN TO REMAIN
U 23-23	34.0 LT.	NYP1-2 (MOD. LEFT ARROW)	12 x 18																SIGN TO REMAIN
U 23-54	30.0 LT.	NYP1-5 (MOD. HERE TO CORNER)	12 x 18																SIGN AND POST TO REMAIN
U 24-09	27.0 LT.	NYP1-5 (MOD. RIGHT ARROW)	12 x 18																SIGN AND POST TO REMAIN
U 24-78	25.0 RT.	W2-2	30 x 30																SIGN TO REMAIN
U 24-78	25.0 RT.	NYW5-17R (MOD.)	x																SIGN TO REMAIN
U 25-36	28.0 LT.	NYP1-5 (MOD. DOUBLE ARROW)	12 x 18																SIGN AND POST TO REMAIN
U 25-36	28.0 LT.	NYP1-5	12 x 18																SIGN TO REMAIN
U 28-43	28.0 RT.	GREEK ORTHODOX CHURCH ANNUNCIATION	x																SIGN TO REMAIN
U 28-43	28.0 RT.	GREEK ORTHODOX CHURCH ANNUNCIATION	x																SIGN TO REMAIN
U 29-03	27.0 RT.	NYP1-5	12 x 18	1.5															SIGN TO REMAIN
U 29-08	28.0 LT.	NYP1-5 (MOD. RIGHT ARROW)	12 x 18																REPLACE SIGN AND POST
U 30-04	28.0 LT.	NYP1-5 (MOD. DOUBLE ARROW)	12 x 18																SIGN TO REMAIN
U 30-10	28.0 LT.	BUS STOP	x																SIGN AND POST TO REMAIN
U 30-55	28.0 RT.	NYP1-5 (MOD. DOUBLE ARROW)	12 x 18																SIGN TO REMAIN
U 30-55	28.0 RT.	BUS STOP	x																SIGN TO REMAIN
U 30-67	24.0 RT.	R10-6	24 x 36																SIGN AND POST TO REMAIN
U 30-74	28.0 LT.	NYP1-5 (MOD. DOUBLE ARROW)	12 x 18																SIGN AND POST TO REMAIN
U 30-74	28.0 LT.	NYP1-5 (MOD. DOUBLE ARROW)	12 x 18																SIGN AND POST TO REMAIN
U 31-05	33.0 RT.	R10-36	9 x 15																SIGN TO REMAIN
U 31-25	28.0 LT.	R10-36	9 x 15																SIGN TO REMAIN
U 31-25	28.0 LT.	R10-6	24 x 36																SIGN TO REMAIN
U 31-69	28.0 LT.	NYP1-5	12 x 18	1.5															REPLACE SIGN ON LIGHT POLE
U 31-76	27.0 RT.	NYP1-4 (MOD. 7AM-6PM MON-FRI, RIGHT ARROW)	12 x 18	1.5															REPLACE SIGN ON LIGHT POLE
U 32-81	28.0 LT.	NYP1-5 (MOD. 7AM-6PM MON-FRI)	12 x 18																SIGN AND POST TO REMAIN







**Traffic Sign Evaluation Photos - Examples to Remain**



**Photo Description**  
 Pole Mounted Signs (Band Mounted)  
 Good Reflectivity  
 Signs to Remain



**Photo Description**  
 Post Mounted Sign  
 Good Reflectivity  
 Sign and Post to Remain



**Photo Description**  
 Post Mounted Sign  
 Good Reflectivity  
 Sign and Post to Remain



**Photo Description**  
 Pole Mounted Sign (Band Mounted)  
 Good Reflectivity  
 Signs to Remain

**Traffic Sign Evaluation Photos - Examples to be Replaced**



**Photo Description**  
 Pole Mounted Sign (Band Mounted)  
 Damaged Sign  
 Sign Panel (only) to be Replaced



**Photo Description**  
 Post Mounted Sign (Crooked Post)  
 Faded Sign with Limited Reflectivity  
 Sign and Post to be Replaced



**Photo Description**  
 Pole Mounted Sign (Band Mounted)  
 Faded sign with Limited Reflectivity  
 Sign (only) to be Replaced



**Photo Description**  
 Post Mounted Sign  
 Damaged Sign  
 Sign (only) to be Replaced

# **Curb Inventory/Evaluation Table and Photos**



**CURB INVENTORY AND EVALUATION**

ITEM NO.	DESCRIPTION													
	STATION	SIDE	LENGT H (FT)	ITEM 203.02 (CY)	ITEM 404.1989 (TON)	ITEM 407.0102 (GAL)	ITEM 503.1012 (CY)	ITEM 609.0203 (FT)	ITEM 609.15 (FT)	ITEM 627.50140008 (FT)	REMARKS			
203.02	UNCLASSIFIED EXCAVATION AND DISPOSAL													
404.1989	19 F9 BINDER COURSE HMA, 80 SERIES COMPACTION													
407.0102	DILUTED TACK COAT													
503.1012	PCC FOUNDATION FOR PAVEMENT, HES CONCRETE													
609.0203	GRANITE CURB, TYPE C													
609.15	RESET EXISTING STONE CURB													
627.50140008	SAWCUTTING PAVEMENT													
C 02+00.0	RT	18.0	2.0	0.3	0.3	0.3	0.8	18.0	20.0	20.0	RESET MISALIGNED CURB			
C 09+30.0	RT	12.0	1.4	0.2	0.2	0.2	0.6	12.0	14.0	14.0	REPLACE MISSING CURB			
C 10+75.0	LT	6.0	0.8	0.1	0.1	0.3	0.3	6.0	8.0	8.0	REPLACE BROKEN CURB			
C 11+00.0	LT	12.0	1.4	0.2	0.2	0.2	0.6	12.0	14.0	14.0	RESET MISALIGNED CURB			
C 12+55.0	LT	12.0	1.4	0.2	0.2	0.2	0.6	12.0	14.0	14.0	RESET MISALIGNED CURB			
C 14+31.0	RT	6.0	0.8	0.1	0.1	0.3	0.3	6.0	8.0	8.0	REPLACE BROKEN CURB			
C 24+85.0	RT	12.0	1.4	0.2	0.2	0.2	0.6	12.0	14.0	14.0	REPLACE BROKEN CURB			
C 30+70.0	RT	6.0	0.8	0.1	0.1	0.3	0.3	6.0	8.0	8.0	RESET MISALIGNED CURB			
C 44+05.0	LT	12.0	1.4	0.2	0.2	0.2	0.6	12.0	14.0	14.0	RESET MISALIGNED CURB			
C 45+40.0	LT	12.0	1.4	0.2	0.2	0.2	0.6	12.0	14.0	14.0	REPLACE BROKEN / MISSING CURB			
C 52+05.0	LT	6.0	0.8	0.1	0.1	0.3	0.3	6.0	8.0	8.0	REPLACE BROKEN CURB			
C 54+95.0	RT	6.0	0.8	0.1	0.1	0.3	0.3	6.0	8.0	8.0	REPLACE BROKEN CURB			
C 58+55.0	RT	6.0	0.8	0.1	0.1	0.3	0.3	6.0	8.0	8.0	REPLACE BROKEN CURB			
C 63+30.0	RT	12.0	1.4	0.2	0.2	0.2	0.6	12.0	14.0	14.0	REPLACE BROKEN CURB			
C 65+00.0	RT	6.0	0.8	0.1	0.1	0.3	0.3	6.0	8.0	8.0	REPLACE BROKEN CURB			
C 69+50.0	RT	6.0	0.8	0.1	0.1	0.3	0.3	6.0	8.0	8.0	REPLACE BROKEN CURB			
U 34+69.0	LT	6.0	0.8	0.1	0.1	0.3	0.3	6.0	8.0	8.0	REPLACE BROKEN CURB			
U 38+02.0	LT	6.0	0.8	0.1	0.1	0.3	0.3	6.0	8.0	8.0	REPLACE BROKEN CURB			
U 39+33.0	LT	6.0	0.8	0.1	0.1	0.3	0.3	6.0	8.0	8.0	REPLACE BROKEN CURB			
U 42+74.0	LT	6.0	0.8	0.1	0.1	0.3	0.3	6.0	8.0	8.0	REPLACE MISSING CURB			
<b>TOTAL</b>			<b>19.4</b>	<b>2.6</b>	<b>2.6</b>	<b>2.6</b>	<b>7.8</b>	<b>114.0</b>	<b>42.0</b>	<b>194.0</b>				

CULVER	16.2	2.2	2.2	2.2	6.6	90.0	42.0	162.0
UNIVERSITY	3.2	0.4	0.4	1.2	24.0	32.0		

**Curb Evaluation Photos**



**Photo Description**  
 Missing Curb  
 Reset Curb



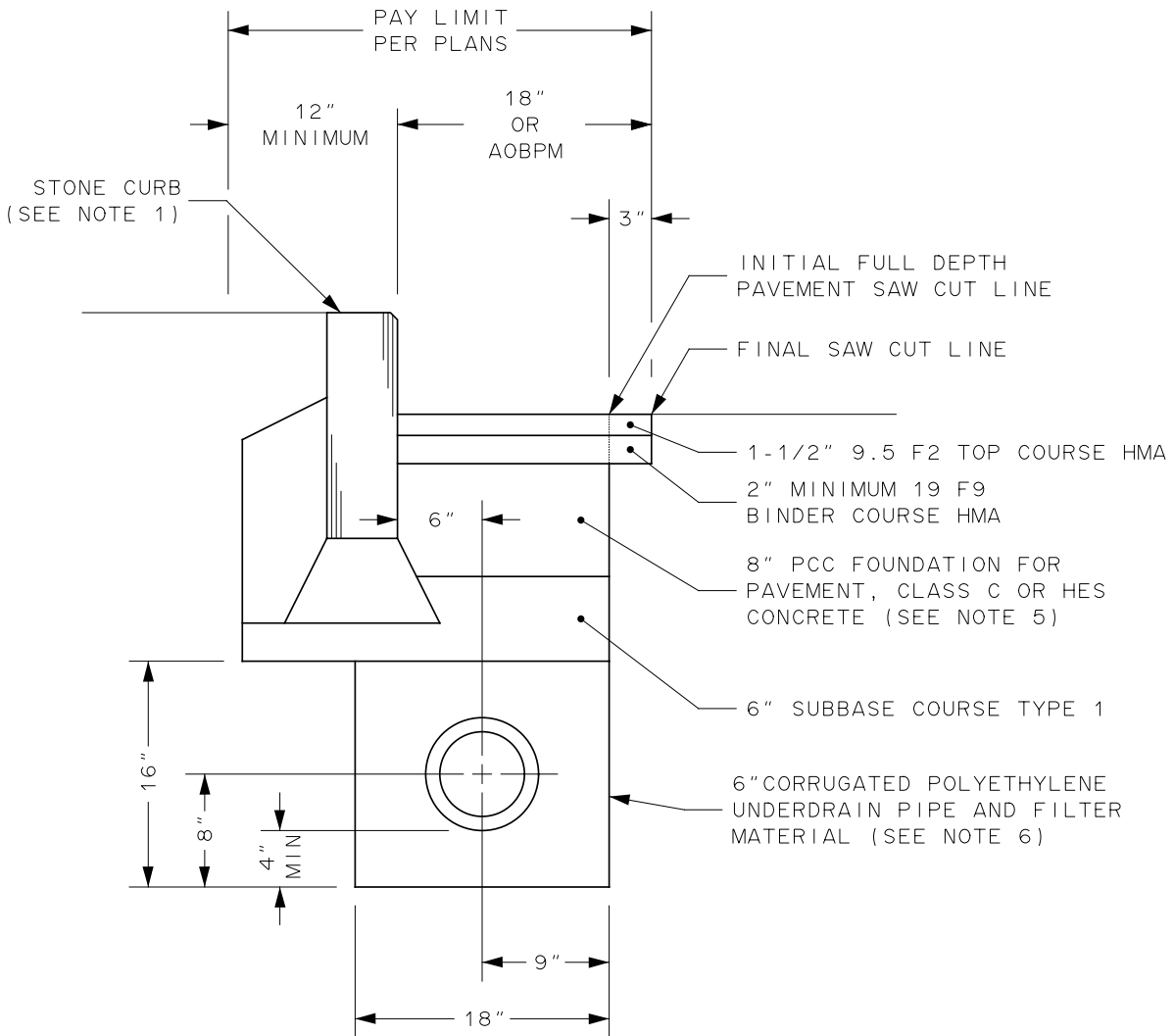
**Photo Description**  
 Broken Curb  
 Replace Curb



**Photo Description**  
 Broken Curb  
 Replace Curb



**Photo Description**  
 Broken Curb  
 Replace Curb



NOTES :

1. CURB IS TO BE NYSDOT TYPE NVF CURB OR APPROVED EQUIVALENT WITH OVERALL TOP WIDTH AND REVEAL AS REQUIRED IN CONTRACT DOCUMENTS.
2. APPLY TACK COAT TO UNEXPOSED FACE OF CURB, TOP OF CONCRETE AND BETWEEN ALL LIFTS OF HMA COURSES.
3. HMA COURSES TO BE EITHER 60, 70 OR 80 SERIES COMPACTION AS REQUIRED IN CONTRACT DOCUMENTS.
4. SEAL ALL TOP COURSE JOINTS WITH ASPHALT PAVEMENT JOINT ADHESIVE IN ACCORDANCE WITH NYSDOT SECTION 418 ASPHALT PAVEMENT JOINT ADHESIVE.
5. TOP OF CONCRETE BASE IS TO BE EVEN WITH OR LOWER THAN TOP OF EXISTING PAVER/CONCRETE BASE TO PROVIDE MINIMUM 3-1/2 INCH THICKNESS OF ASPHALT TOP AND BINDER COURSES.
6. UNDERDRAIN PIPE AND FILTER MATERIAL TO BE INSTALLED AS INDICATED IN CONSTRUCTION DOCUMENTS. TYPICAL DEPTH OF UNDERDRAIN PIPE TO BE CHANGED AS NECESSARY TO MAINTAIN POSITIVE DRAINAGE TO DRAINAGE STRUCTURES.
7. SEE DETAIL R609-1 FOR CURB INSTALLATION.

CITY OF ROCHESTER		
STONE CURB REPLACEMENT - CONCRETE BASE		
ISSUED	12-30-11	NON-STANDARD DWG.NO.S609-17
REVISED	8-10-21	





# **Sidewalk Inventory/Evaluation Table and Photos**



SIDEWALK INVENTORY AND EVALUATION												
ITEM NO.	DESCRIPTION											
203.02	UNCLASSIFIED EXCAVATION AND DISPOSAL											
304.15	SUBBASE COURSE, OPTIONAL TYPE											
608.0101	CONCRETE SIDEWALKS AND DRIVEWAYS											
610.1403	TOPSOIL - LAWNS											
610.1602	TURF ESTABLISHMENT - LAWNS											
TO STATION	FROM STATION	SIDE	LENGTH (FT)	WIDTH (FT)	ITEM 203.02 (CY)	ITEM 304.15 (CY)	ITEM 608.0101 (CY)	ITEM 610.1403 (CY)	ITEM 610.1602 (SY)	REMARKS (SEE NOTE 1)		
C 25+98.0	C 26+03.0	RT	5.0	5.0	1.1	0.6	0.4	0.2	1.2	TRIP HAZARD		
C 36+27.0	C 36+32.0	LT	5.0	5.0	1.1	0.6	0.4	0.2	1.2	TRIP HAZARD		
C 36+63.0	C 36+68.0	RT	5.0	5.0	1.1	0.6	0.4	0.2	1.2	TRIP HAZARD		
C 45+25.0	C 45+30.0	RT	5.0	5.0	1.1	0.6	0.4	0.2	1.2	TRIP HAZARD		
C 49+32.0	C 49+37.0	RT	5.0	5.0	1.1	0.6	0.4	0.2	1.2	TRIP HAZARD		
C 51+37.0	C 51+42.0	LT	5.0	5.0	1.1	0.6	0.4	0.2	1.2	TRIP HAZARD		
C 52+35.0	C 52+40.0	RT	5.0	7.0	1.5	0.8	0.6	0.2	1.2	TRIP HAZARD		
C 70+17.0	C 70+22.0	RT	5.0	5.0	1.1	0.6	0.4	0.2	1.2	TRIP HAZARD		
U 11+20.0	U 11+25.0	RT	5.0	5.0	1.1	0.6	0.4	0.2	1.2	TRIP HAZARD		
U 11+84.0	U 11+89.0	RT	5.0	5.0	1.1	0.6	0.4	0.2	1.2	SIDEWALK CRACKING		
U 30+85.0	U 31+05.0	LT	20.0	27.0	20.7	10.4	8.4	0.5	4.5	SIDEWALK CRACKING		
U 37+90.0	U 38+00.0	LT	10.0	5.0	2.2	1.2	0.8	0.3	2.3	SIDEWALK CRACKING		
U 41+19.0	U 41+24.0	LT	5.0	10.0	2.1	1.1	0.8	0.2	1.2	TRIP HAZARD		
U 41+24.0	U 41+42.0	LT	18.0	5.0	4.0	2.0	1.4	0.5	4.0	TRIP HAZARD		
U 43+86.0	U 43+96.0	LT	10.0	5.0	2.2	1.2	0.8	0.3	2.3	SIDEWALK CRACKING		
<b>TOTAL</b>					<b>42.6</b>	<b>22.1</b>	<b>16.4</b>	<b>3.8</b>	<b>26.3</b>			

NOTE:

1. UTILIZE DETAIL S608-32, SIDEWALK JOG AROUND EXISTING TREES AS NEEDED WHEN REPLACING SIDEWALK ADJACENT TO EXISTING TREES AS DETERMINED BY THE RESIDENT PROJECT REPRESENTATIVE.

<b>Culver</b>	<b>9.2</b>	<b>5.0</b>	<b>3.4</b>	<b>1.6</b>	<b>9.6</b>
<b>University</b>	<b>33.4</b>	<b>17.1</b>	<b>13.0</b>	<b>2.2</b>	<b>16.7</b>

**Sidewalk Evaluation Photos**



**Photo Description**  
 Trip Hazard  
 Replace sidewalk to remove hazard



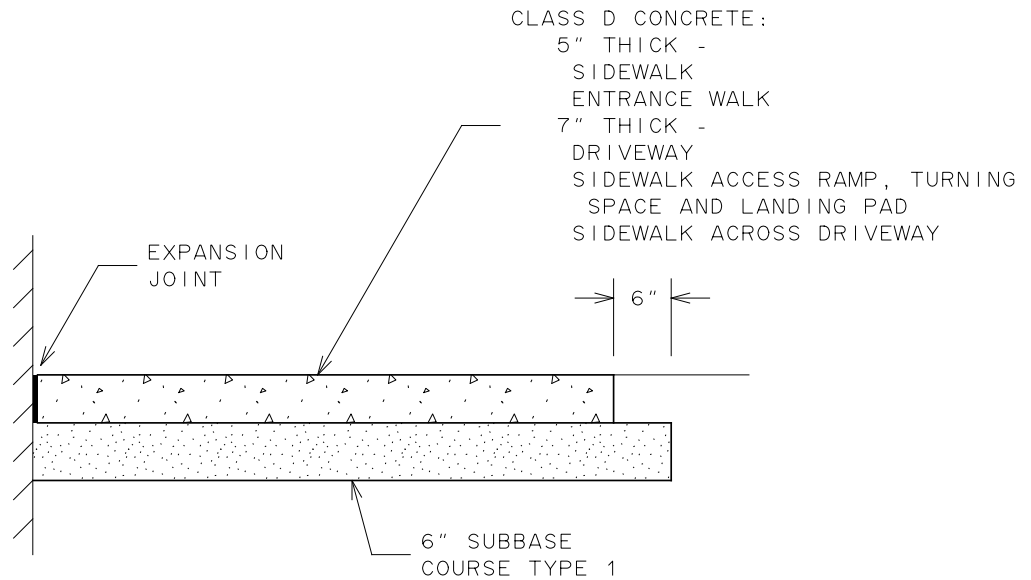
**Photo Description**  
 Sidewalk Cracking  
 Replace sidewalk to remove cracked sections



**Photo Description**  
 Trip Hazard  
 Replace sidewalk to remove hazard



**Photo Description**  
 Sidewalk Cracking  
 Replace sidewalk to remove cracked sections



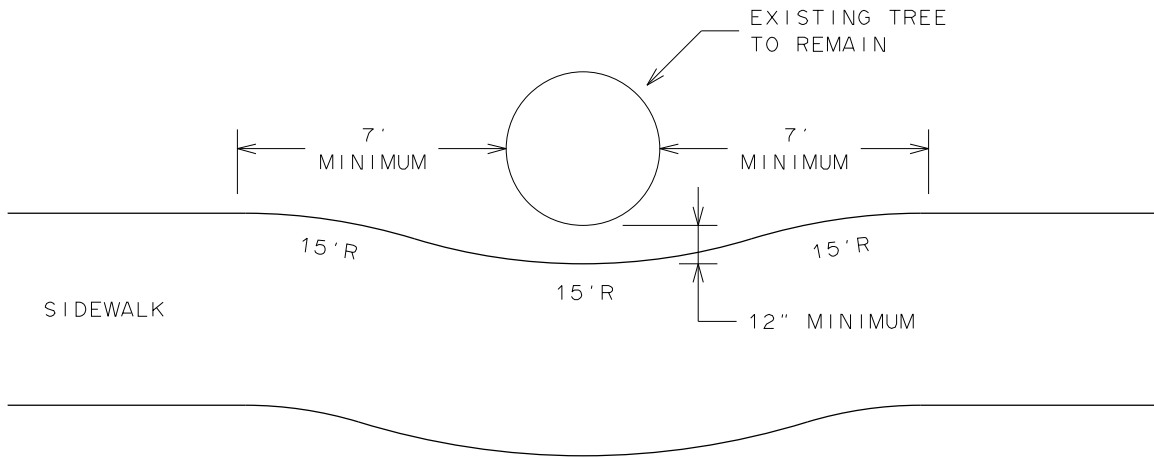
OTHER PAVED SURFACES  
 STRUCTURES AND  
 APPURTENANCES

LAWN

NOTES:

1. MINIMUM CLEAR WIDTH FOR SIDEWALK IS 5 FEET AS MEASURED FROM BACK EDGE OF CURB OR CONCRETE GUTTER.
2. CROSS SLOPE OF SIDEWALK TO BE 1.50%.
3. SURFACE TO BE FIRM, STABLE AND SLIP-RESISTANT.
4. SIDEWALK ACCESS RAMP AND LANDING PAD TO BE 7 INCH THICK CLASS D CONCRETE.
5. PROVIDE 1/2 INCH WIDE EXPANSION JOINT BETWEEN NEW CONCRETE CONSTRUCTION AND OTHER PAVED SURFACES, STRUCTURES AND APPURTENANCES.
6. EXPANSION JOINT: 1/2 INCH WIDE PREMOULDED EXPANSION JOINT MATERIAL, SEAL WITH CAULKING SEALANT 1/2 INCH WIDE 5/8 INCH DEEP.
7. SIDEWALK SURFACE, GRADE AND CROSS SLOPE ARE TO BE MAINTAINED ACROSS DRIVEWAYS.

CITY OF ROCHESTER		
<b>CONCRETE          SIDEWALK AND          DRIVEWAY</b>		
ISSUED	9-2-91	STANDARD DWG.NO.R608-6
REVISED	5-15-20	



NOTES :

1. TO BE USED ONLY WHERE INDICATED IN CONTRACT DOCUMENTS.
2. FORMS FOR NEW SIDEWALK WITHIN 15 FEET OF TRUNK OF EXISTING TREE ARE TO BE THIN WALL, AND FLEXIBLE ENOUGH TO BE CAPABLE OF FORMING REQUIRED RADII.
3. USE OF SUBBASE MATERIAL MAY BE LIMITED OR DELETED WITHIN 15 FEET OF TRUNK OF EXISTING TREE.

CITY OF ROCHESTER		
<p><b>SIDEWALK JOG AROUND EXISTING TREE</b></p>		
ISSUED	5-19-98	NON-STANDARD DWG.NO.S608-32
REVISED	7-1-17	

# **APPENDIX H**

## **NONSTANDARD FEATURE JUSTIFICATION**







**Exhibit 2-15  
Nonstandard Feature Justification**

Rev. 04/15/21

<b>PIN:</b> 4CR0.21	<b>Route No. and Name:</b> Culver Road		
<b>Project Type:</b> 1R - Preventive Maintenance	<input type="checkbox"/> National Network/Qualifying Highway	<input checked="" type="checkbox"/> Access Highway	
<b>Functional Class:</b> Urban Minor Arterial	<b>Design Classification:</b> Arterial	<b>Context Class:</b> Urban	
<b>AADT:</b> 23,747 (2035)	<b>% Trucks:</b> 3.4% (2023)	<input type="radio"/> NHS <input checked="" type="radio"/> Non-NHS	<b>Terrain:</b> Rolling

**1. Description of Nonstandard Feature**

<b>Type of Feature:</b> Lane Width	<b>Other:</b>
<b>Location:</b> Monroe Avenue to University Avenue	
<b>Latitude and Longitude (Linear Feature)</b> FROM Lat: 43.137934 Long: -77.578240 TO Lat: 43.151439 Long: -77.570714	
<b>Latitude and Longitude (Point Feature)</b> Lat: Long:	
<b>Standard Value:</b> 11.0' (travel/turn lane), 13.0' (shared-use lane)	<b>Design Speed:</b> 35 mph
<b>Existing Value:</b> 10.0' (travel/turn lane), 10.0' (shared-use lane)	<b>Recommended Speed - Existing:</b> 30 mph
<b>Proposed Value:</b> 10.0' (travel/turn lane), 10.0' (shared-use lane)	<b>Recommended Speed - Proposed:</b> 30 mph

**2. Accident Analysis**

<b>Current Accident Rate<sup>1</sup>:</b> 8.03 <input checked="" type="radio"/> acc/mvm <input type="radio"/> acc/mev	<b>Statewide Accident Rate:</b> 3.5 <input checked="" type="radio"/> acc/mvm <input type="radio"/> acc/mev
<b>From</b> Monroe Avenue <b>to</b> Atlantic Avenue	<b>Is the Nonstandard Feature a contributing factor?</b> <input type="radio"/> Yes <input checked="" type="radio"/> No

**Anticipated accident rates, severity, and costs:**  
 The existing 10.0' travel and turning lanes are proposed to be retained. There are no clusters or abnormally high amounts of sideswipe collisions which would be anticipated as a result of narrowed travel and turning lanes. The accident rates are not anticipated to increase as a result of the non-standard feature.

**3. Cost Estimates**

<b>Cost to fully meet standards:</b> \$925,000 (2ft Reconstruction Widening)	<b>Cost(s) for incremental improvements:</b> \$0 (Removal of bike lanes & restripe travel lanes)
--	--

**4. Mitigation**

*e.g., increased superelevation and speed change lane length for a non-standard ramp radius*  
 The curbs will need to be replaced or bike lanes will need to be removed to allow for wider travel, shared-use, and turn lanes.

**5. Compatibility with Adjacent Segments and Future Plans**

Along Culver Road, north of Atlantic Avenue the travel lane width increases from 10.0' to 11.0' wide.

**6. Other Factors**

*e.g., social, economic, and environmental*  
 Widening the roadway would additionally adversely impact drainage structures, tree lawn and possible require tree removal.

**7. Proposed Treatment (i.e., recommendation)**

Retain the existing 10.0' wide travel and turn lanes along Culver Road from Monroe Avenue to University Avenue.

<sup>1</sup> Use accidents per million vehicle miles (acc/mvm) for linear highway segments; use accidents per million entering vehicles (acc/meh) for intersections.



# **APPENDIX I**

## **PARKING STUDY**



# ***PARKING STUDY***

## **2025 Preventive Maintenance Project**

Culver Road (Monroe Avenue to Atlantic Avenue)  
University Avenue (North Goodman Street to Culver Road)  
City of Rochester, Monroe County  
City Project No. 23137  
PIN 4CR0.21

*Prepared for:*



City of Rochester  
Department of Environmental Services (Street Design)  
30 Church Street  
Rochester, NY 14614

*By:*



280 East Broad Street, Suite 170 Rochester, New York 14604

May 2024



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III. PARKING INVENTORY ..... 1

IV. PARKING SURVEY ..... 2

V. PROPOSED PARKING AND BIKE LANE ALTERNATIVES..... 3

VI. CONCLUSIONS AND RECOMMENDATIONS ..... 3

**FIGURES AND TABLES**

TABLES 1A – 1D PARKING BLOCK (ON-STREET) UTILIZATION – EXISTING ..... 5-8

FIGURES 1 - 2 PARKING STUDY AREA ..... 9-13

## I. INTRODUCTION

This study is being performed in support of the Design Approval Document prepared for the City of Rochester PJ# 23137 – 2025 Preventive Maintenance Project, PIN 4CR0.21. The purpose of the parking survey (or parking usage study) is to provide details on the efficiency and utilization of existing on-street parking and to evaluate the effects of modifications to on-street parking within the project limits along Culver Road and University Avenue. This report presents a summary of the existing parking inventory, survey results, and conclusions.

The need for a parking study was established to determine if existing on-street parking can be impacted, changed, or reduced, whether or not there is an observed shortfall or excess of on-street vehicular parking, and whether additional parking spaces may be needed for special instances, such as, businesses or schools. A reduction in spaces would be a direct result of implementing a proposal to include on-street bike lanes along Culver Road and University Avenue within the project limits.

The Parking Study as shown in Figures 1 - 2 includes the on-street parking (or curbside parking) spaces provided on each side of the street in the study area. Culver Road from Monroe Avenue to Atlantic Avenue consists mainly of residential with a mix of business and retail land use. Along University Avenue from N Goodman Street to Culver Road there is a mix of residential, business, retail, and restaurant land uses.

## II. METHODOLOGY

Parking inventories gather information on the existing parking supply and its use. Parking inventories include observations of the number of parking spaces, their location, and the type of parking facility. To allow for a comprehensive method of evaluating the data the study area is divided into blocks and the inventoried parking locations are recorded into *Tables 1A – 1D*.

A parking (or occupancy) survey was used in analyzing the parking capacity of the study area. Parking occupancy is the total number of vehicles parked at any given time. The purpose of occupancy surveys are to establish variations and peak parking demand.

## III. PARKING INVENTORY

An inventory of the number of on-street parking spaces was conducted by Lu Engineers. The number of existing available on-street parking spaces was estimated assuming 20 ft. long spaces, no parking 20 ft. from an intersection, no parking 15 ft. from a fire hydrant and no parking 5 ft. from a driveway. All inventoried spaces are identified with individual block numbers (on-street parking) as shown in *Figures 1 - 4* and *Tables 1A – 1D*. The total number of estimated available on-street parking spaces identified in the study area was forty-one (41) on Culver Road, and one hundred and fifty-six (156) on University Avenue.



#### IV. PARKING SURVEY

The parking survey was performed during the following dates / times:

- Tuesday, January 25, 2024 at 6:30 AM, 10:00 AM, 12:30 PM, 3:00 PM, and 7:00 PM
- Thursday, January 27, 2024 at 6:30 AM, 10:00 AM, 12:30 PM, 3:00 PM, and 7:00 PM
- Saturday, January 29, 2024 at 2:00 PM

An observer traveled a fixed route and recorded the total amount of on-street parking occupied spaces. The parking survey shows the number of vehicles parked in predefined areas during a set time-period. *Tables 1A – 1D: On-Street Parking Utilization* summarize the information for the parking survey for Culver Road (*Table 1A-1B*), and University Avenue (*Table 1C-1D*) within the project limits. It is apparent that the most highly utilized on-street parking areas are along the retail, business, and residential property blocks.

Combined maximum utilization is defined as the number of vehicles parked throughout the study areas divided by the total number of study hours. For defining practical capacity, it is assumed that 90% of the total spaces will be utilized at one time. Maximum utilization is defined as the maximum number of vehicles parked in the defined blocks or areas throughout the study period.

##### **Culver Road On-Street Parking Observations**

The following are general observations from Table 1A & 1B (Culver Road: On-Street Parking Utilization):

- None of the individual parking block time periods were found to be at practical or full capacity (90% - 100% utilization).
- None of the time periods surveyed had a combined utilization of parking spaces of 30% or greater.
- All properties located within this section of Culver Road have driveways or off-street parking lots that can be used for parking multiple vehicles.

##### **University Avenue On-Street Parking Observations**

The following are general observations from Tables 1C & 1D (University Avenue: On-Street Parking Utilization):

Practical or full capacity (90% - 100% utilization) was observed at the following parking blocks:

- Block 3, Atlantic Avenue to Merriman Street (North Side) for the following study period:
  - Thursday at 12:30 PM and 7:00 PM
  - Saturday at 2:00 PM
- Block 5, Elton Street to Russell Street (North Side) for the following study period.
  - Tuesday at 10:00 AM
  - Thursday at 12:30 PM and 3:00 PM
- Block 11, Rundel Park to Oxford Street (South Side) for the following study period.
  - Thursday at 12:30 PM and 7:00 PM
- Block 16, Oliver Street to Culver Road (South Side) for the following study period.

- Tuesday at 10:00 AM, 12:30 PM, and 7:00 PM
- Saturday at 2:00 PM
- None of the time periods surveyed had a combined utilization of parking spaces greater than 50%.
- The combined maximum utilization for this section of University Avenue was calculated to be 35% over the 11 study hours.
- The on-street parking spaces along University Avenue are typically utilized by motorists accessing the retail, restaurant, and commercial properties throughout the day.
- Most properties on this block have driveways or off-street parking lots that may be used by motorists.

## **V. PROPOSED PARKING AND BIKE LANE ALTERNATIVES**

The 2025 Preventive Maintenance Project proposes changing the current bike facility configuration along Culver Road by implementing additional bike lanes with no reduction or addition to on-street parking. No changes to the current on-street parking configuration or bike facilities along University Avenue are proposed in this project. The proposed bike lane and parking configuration is as follows:

### **Culver Road**

The two alternatives proposed for Culver Road are referred to as the Road Diet Alternative and the Continuous Bike Lane Alternative. The Road Diet Alternative includes the addition of northbound/southbound bike lanes between Monroe Avenue and Canterbury Road/Harvard Street. The Continuous Bike Lane Alternative includes the same improvements listed in the Road Diet Alternative plus the addition of continuous northbound/southbound bike lanes through the intersections of Canterbury Road/Harvard Street, Park Avenue, East Avenue, and Humboldt Street. Both alternatives propose eliminating seven (7) of twenty-three (23) parking spaces between Monroe Avenue and Hinsdale Street/Norris Drive (*block 1*) due to taper lengths for the lane shifts. These alternatives propose a designated parking lane along the west side of the road, which will eliminate the need for time restrictions on the twenty-three (23) existing on-street parking between Monroe Avenue and Hinsdale Street/Norris Drive (*block 1*). Since the block is typically underutilized at all times of the day and most residences have an off-street driveway, there are no major impacts anticipated. Refer to *Figure 1 – Culver Road Parking Study Area* for proposed bike lane and parking lane configuration.

### **University Avenue**

The proposed University Avenue plan does not include any changes to the existing on-street parking or bike lane configuration. The existing one hundred and fifty-six (156) on-street parking spaces will remain in place and no bike lanes will be added or removed. Refer to *Figure 2 – University Avenue Parking Study Area* for proposed bike lane and parking lane configuration.

## VI. CONCLUSIONS AND RECOMMENDATIONS

The on-street parking spaces within the Culver Road and University Avenue Project limits are consistently utilized with various blocks on University Avenue reaching 100% maximum utilization. It appears that residents rely upon on-street parking despite most properties having driveways or parking lots. The following recommendations are provided for the proposed roadway design.

### **Culver Road**

Based upon the results of the traffic analysis, it is recommended to include the installation of new bike lanes from Monroe Avenue to the I-490 eastbound ramp proposed in the Road Diet Alternative and shown in *Figure 1 - Culver Road Parking Study Area*. This alternative will not reduce the number of parking spaces along Culver Road since the Road Diet includes the installation of a designated parking lane along block #1.

### **University Avenue**

Due to the observed public's utilization of on-street parking on University Avenue between North Goodman Street and Culver Road it is recommended to make no changes to the existing on-street parking and shared-use lanes as proposed and shown in *Figure 2 – University Avenue Parking Study Area*.

Table 1A - CULVER ROAD (MONROE AVENUE to ATLANTIC AVENUE)																																
Parking Block (On-Street) Utilization - Existing																																
Parking Block #	West Side																															
	1	2	3	4	5	6	7	8	Total Spaces Filled (Including East Side)						Combined Utilization (Including East Side)																	
Side																																
Block Sidestreets	Hinsdale		Hinsdale		Canterbury		Canterbury		Milburn		Milburn		Park		Park		East		East		University		University		Humboldt		Humboldt		Atlantic			
	Monroe	Hinsdale	No parking	No parking	No parking	No parking	No parking	No parking	No parking	No parking	No parking	No parking	No parking	No parking	No parking	No parking	No parking	No parking	No parking	No parking	No parking	No parking	No parking	No parking	No parking	No parking	No parking	No parking	No parking	No parking		
	Existing # of Spaces/Block	23																														
Removed # of Spaces/Block	0																															0
Proposed # of Spaces/Block	23																														41	
Day																																
Time Period																																
Tuesday (1/23/2024)	6:30 AM	12	52%													0	0%	12	29%													
	10:00 AM	5	22%													0	0%	7	17%													
	12:30 PM	6	26%													0	0%	8	20%													
Thursday (1/25/2024)	3:00 PM	3	13%													0	0%	6	15%													
	7:00 PM	3	13%													0	0%	3	7%													
	6:30 AM	12	52%													0	0%	12	29%													
Saturday (1/27/2024)	10:00 AM	4	17%													1	9%	8	20%													
	12:30 PM	7	30%													1	9%	10	24%													
	3:00 PM	3	13%													2	18%	7	17%													
7:00 PM	4	17%													5	45%	9	22%														
2:00 PM	5	22%													1	9%	6	15%														
Maximum # Vehicles / Block	12														5		20		20%													
Maximum Utilization / Block	52%														45%		49%		20%													

 Denotes area at or above practical capacity (90% utilization or greater)

Table 1B - CULVER ROAD (MONROE AVENUE to ATLANTIC AVENUE) - CONTINUED																	
Parking Block (On-Street) Utilization - Existing																	
Parking Block #	East Side																
	9	10	11	12	13	14	15	16		Total Spaces Filled (Including South Side)		Combined Utilization (Including South Side)					
Side	Norris	Norris	Harvard	Park	Park	East	East	Sager	Sager	University	University	Harvard	Harvard	Atlantic			
Block Sidestreets	Monroe	Norris	Harvard	Harvard	Park	Park	East	East	Sager	Sager	University	University	Harvard	Harvard	Atlantic		
Existing # of Spaces/Block	No parking	No parking	No parking	No parking	No parking	No parking	No parking	No parking	No parking	No parking	No parking	No parking	No parking	No parking	7	41	
Removed # of Spaces/Block															0	0	
Proposed # of Spaces/Block															7	41	
Day																	
Time Period																	
Tuesday (1/23/2024)															0	12	29%
															2	7	17%
															2	8	20%
															3	6	15%
															0	3	7%
Thursday (1/25/2024)															0	12	29%
															3	8	20%
															2	10	24%
															2	7	17%
															0	9	22%
Saturday (1/27/2024)															0	6	15%
															3	20	20%
															43%	49%	20%

 Denotes area at or above practical capacity (90% utilization or greater)

Table 1C - UNIVERSITY AVENUE (N GOODMAN STREET to CULVER ROAD)																		
Parking Block #	Parking Block (On-Street) Utilization - Existing																	
	1	2	3	4	5	6	7	8	North Side						Total Spaces Filled (Including South Side)	Combined Utilization (Including South Side)		
Side																		
Block Sidestreets																		
	Existing # of Spaces/Block	Arlington		Arlington	Merriman	Merriman	Elton	Elton	Russell	Russell	Russell	Granger	Granger	Oliver	Oliver	Culver	156	
	Removed # of Spaces/Block	No parking		2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Proposed # of Spaces/Block	X		2	14	8	8	8	8	8	8	32	32	3	3	3	3	156	
Day																		
Time Period																		
Tuesday (1/23/2024)	6:30 AM	1	50%	1	7%	4	50%	3	38%	0	0%	0	0%	0	0%	0	31	20%
	10:00 AM	0	0%	9	64%	7	88%	8	100%	11	34%	0	0%	0	0%	0	71	46%
	12:30 PM	1	50%	13	93%	6	75%	7	88%	11	34%	0	0%	0	0%	0	72	46%
	3:00 PM	1	50%	8	57%	4	50%	5	63%	12	38%	0	0%	1	33%	0	52	33%
Thursday (1/25/2024)	6:30 AM	1	50%	9	64%	4	50%	3	38%	2	6%	0	0%	0	0%	0	39	25%
	10:00 AM	1	50%	2	14%	5	63%	2	25%	1	3%	0	0%	0	0%	0	33	21%
	12:30 PM	1	50%	8	57%	6	75%	7	88%	12	38%	0	0%	0	0%	0	66	42%
	3:00 PM	1	50%	14	100%	7	88%	8	100%	10	31%	0	0%	0	0%	0	78	50%
Saturday (1/27/2024)	6:30 AM	1	50%	10	71%	6	75%	8	100%	13	41%	0	0%	1	33%	0	69	44%
	7:00 PM	1	50%	13	93%	6	75%	2	25%	2	6%	0	0%	1	33%	0	47	30%
2:00 PM	1	50%	13	93%	5	63%	2	25%	0	0%	0	0%	0	0%	0	46	29%	
Maximum # Vehicles / Block																		
	Maximum Utilization / Block	X		1	14	7	88%	8	100%	13	41%	0	0%	1	33%	0	91	35%

 Denotes area at or above practical capacity (90% utilization or greater)

Table 1D - UNIVERSITY AVENUE (N GOODMAN AVENUE to CULVER ROAD) - CONTINUED																					
Parking Block (On-Street) Utilization - Existing																					
Parking Block #	Side	South Side														Total Spaces Filled (Including North Side)	Combined Utilization (Including North Side)				
		9	10	11	12	13	14	15	16	13		14		15		16					
Block Sidestreets	Block Sidestreets	N Goodman	Upton	Upton	Rundel	Oxford	Oxford	Merriman	Merriman	Merriman	Portsmouth	Portsmouth	Granger	Granger	Oliver	Oliver	Culver	156	20%		
		No parking	No parking	3	7	10	10	52	9	5	5	5	5	5	5	5	5			156	20%
		Removed # of Spaces/Block	Removed # of Spaces/Block	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0	0
Time Period	Time Period	Proposed # of Spaces/Block	Proposed # of Spaces/Block	3	7	10	10	52	9	5	5	5	5	5	5	5	5	156	20%		
		Day	Day	Tuesday (1/23/2024)	Tuesday (1/23/2024)	2	4	5	3	2	2	3	3	3	3	3	3	3	31	20%	
		6:30 AM	6:30 AM	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	31	20%	
Thursday (1/25/2024)	Thursday (1/25/2024)	10:00 AM	10:00 AM	33%	14%	40%	40%	22	3	3	3	3	3	3	3	3	3	71	46%		
		12:30 PM	12:30 PM	33%	0%	50%	50%	20	3	3	3	3	3	3	3	3	3	72	46%		
		3:00 PM	3:00 PM	67%	29%	30%	30%	8	3	3	3	3	3	3	3	3	3	52	33%		
Saturday (1/27/2024)	Saturday (1/27/2024)	7:00 PM	7:00 PM	0%	43%	30%	30%	6	3	3	3	3	3	3	3	3	3	39	25%		
		6:30 AM	6:30 AM	67%	57%	10%	10%	8	1	6	6	6	6	6	6	6	6	33	21%		
		10:00 AM	10:00 AM	67%	29%	60%	60%	16	2	3	3	3	3	3	3	3	3	66	42%		
Maximum # Vehicles / Block	Maximum # Vehicles / Block	12:30 PM	12:30 PM	100%	29%	50%	50%	20	5	5	5	5	5	5	5	5	5	78	50%		
		3:00 PM	3:00 PM	0%	71%	40%	40%	18	4	4	4	4	4	4	4	4	4	69	44%		
		7:00 PM	7:00 PM	3	5	2	2	6	2	2	2	2	2	2	2	2	2	47	30%		
Maximum Utilization / Block	Maximum Utilization / Block	2:00 PM	2:00 PM	1	6	4	4	8	15%	1	1	1	1	1	1	1	1	46	29%		
		Maximum # Vehicles / Block	Maximum # Vehicles / Block	3	6	6	6	22	5	5	5	5	5	5	5	5	5	91	35%		
		Maximum Utilization / Block	Maximum Utilization / Block	100%	86%	60%	60%	42%	56%	100%	56%	100%	56%	100%	56%	100%	58%	35%			

 Denotes area at or above practical capacity (90% utilization or greater)

NO.	REVISION	BY	DATE

ISSUE	DATE	BY	NO.	REVISION	BY	DATE



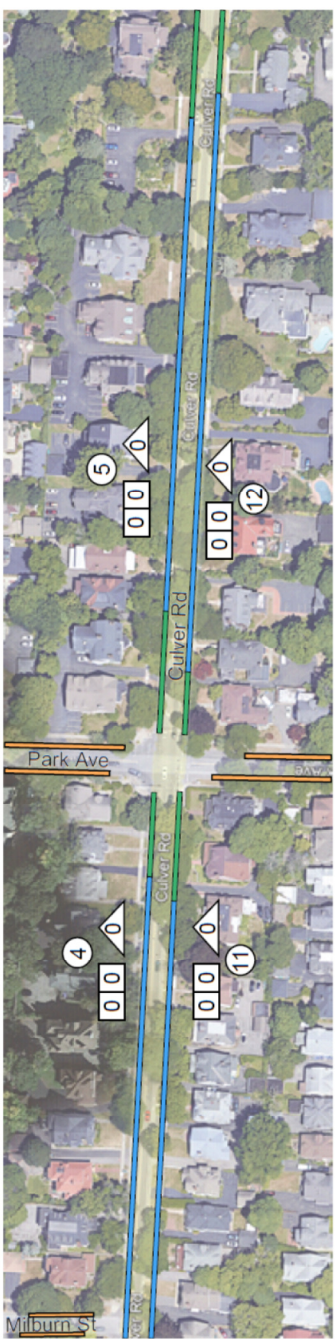
- LEGEND:**
- Parking Blocks (West Side)
    - 1 MONROE AVENUE TO HINSDALE STREET
    - 2 HINSDALE STREET TO CANTERBURY ROAD
    - 3 CANTERBURY ROAD TO MILBURN STREET
  - Parking Blocks (East Side)
    - 9 MONROE AVENUE TO NORRIS DRIVE
    - 10 NORRIS DRIVE TO HARVARD STREET
  - XX NUMBER OF AVAILABLE ON-STREET PARKING SPACES (EXISTING / PROPOSED)
  - MAXIMUM OBSERVED NUMBER OF ON-STREET PARKING SPACES CURRENTLY UTILIZED
  - EXISTING ON-STREET PARKING (Orange line)
  - EXISTING ON-STREET PARKING WITH NO PARKING M-F 4-6PM (Yellow line)
  - EXISTING BIKE LANE (Blue line)
  - PROPOSED BIKE LANE (Green line)





NO.	REVISION	BY	DATE

ISSUED	FEB 2024
CREATED	JMO
DESIGNED	MJD
POSITION	PI
SCALE	NOT TO SCALE
PROJECT NUMBER	4278

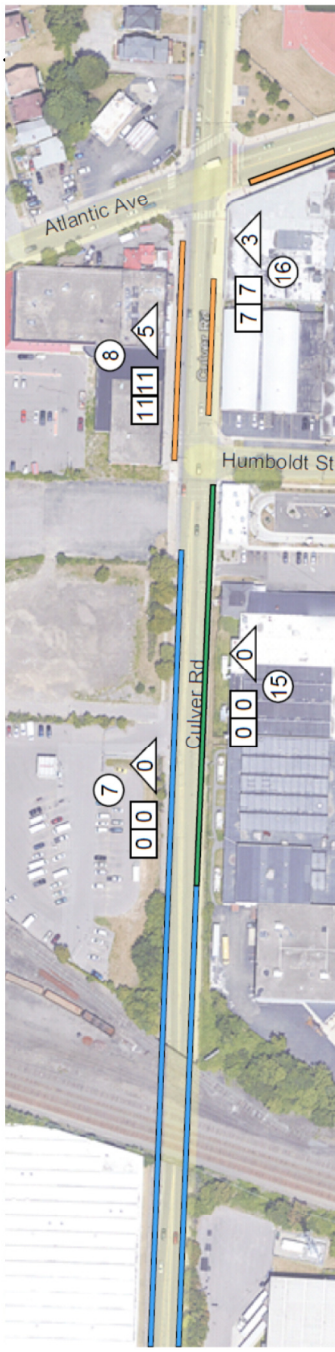


**LEGEND:**

- Parking Blocks (West Side)**
- ④ MILBURN STREET TO PARK AVENUE
  - ⑤ PARK AVENUE TO EAST AVENUE
  - ⑥ EAST AVENUE TO UNIVERSITY AVENUE
- Parking Blocks (East Side)**
- ⑪ HARVARD STREET TO PARK AVENUE
  - ⑫ PARK AVENUE TO EAST AVENUE
  - ⑬ EAST AVENUE TO SAGER DRIVE
  - ⑭ SAGER DRIVE TO UNIVERSITY AVENUE
- NUMBER OF AVAILABLE ON-STREET PARKING SPACES (EXISTING / PROPOSED)**
- XX
- MAXIMUM OBSERVED NUMBER OF ON-STREET PARKING SPACES CURRENTLY UTILIZED**
- △
- EXISTING ON-STREET PARKING**
- EXISTING ON-STREET PARKING WITH NO PARKING M-F 4-6PM
  - EXISTING BIKE LANE
  - PROPOSED BIKE LANE



ISSUE	DATE	NO.	REVISION	BY	DATE
DESIGN	JMO				
DRAWN	MJD				
DESIGN	PL				
SCALE	NOT TO SCALE				
PROJECT	4278				



**LEGEND:**

- Parking Blocks (West Side)**  
 7 UNIVERSITY AVENUE TO HUMBOLDT STREET  
 8 HUMBOLDT STREET TO ATLANTIC AVENUE

- Parking Blocks (East Side)**  
 15 UNIVERSITY AVENUE TO HUMBOLDT STREET  
 16 HUMBOLDT STREET TO ATLANTIC AVENUE

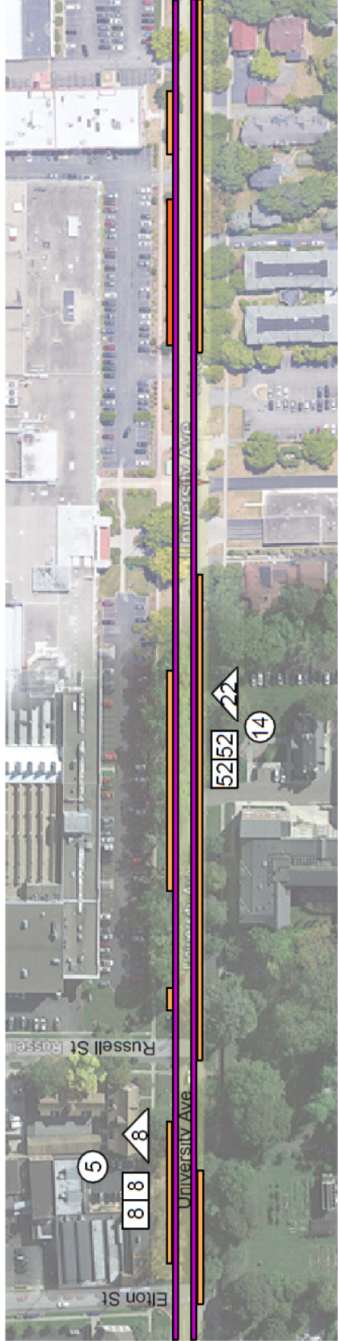
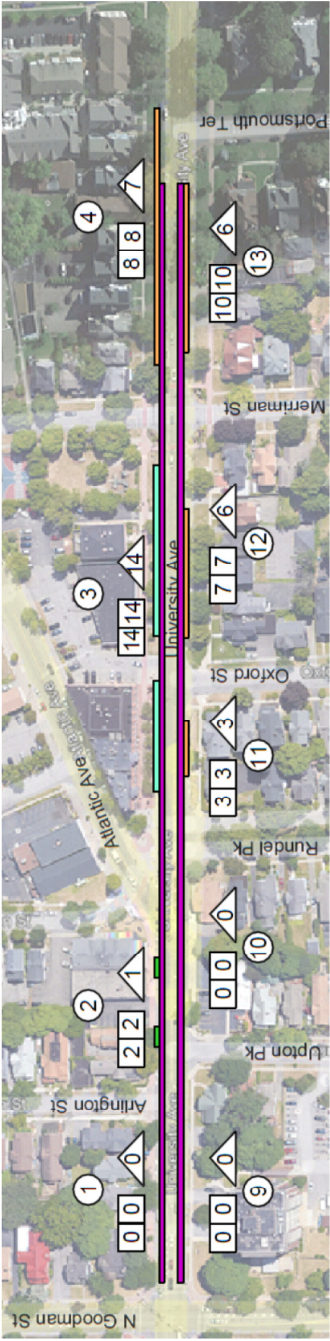
- XX NUMBER OF AVAILABLE ON-STREET PARKING SPACES (EXISTING / PROPOSED)  
 X MAXIMUM OBSERVED NUMBER OF ON-STREET PARKING SPACES CURRENTLY UTILIZED

- EXISTING ON-STREET PARKING  
 EXISTING ON-STREET PARKING WITH NO PARKING M-F 4-6PM  
 EXISTING BIKE LANE  
 PROPOSED BIKE LANE



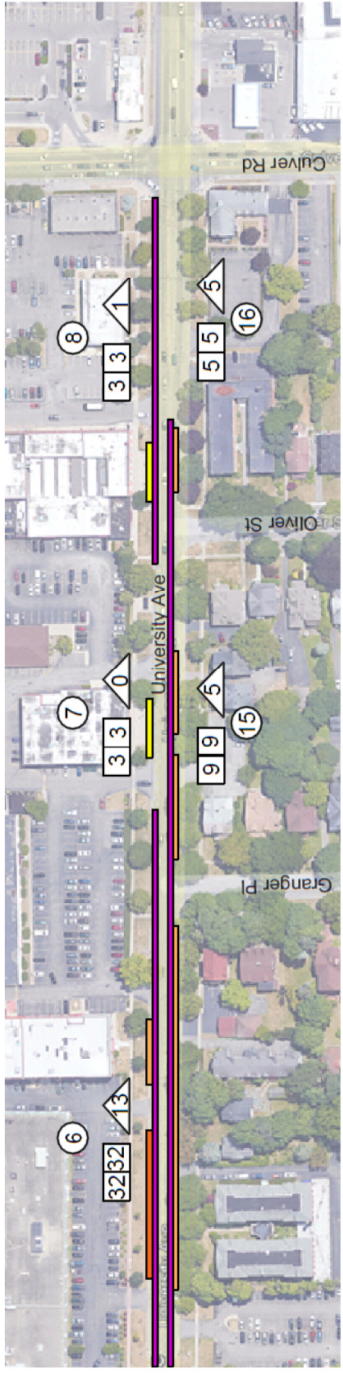
NO.	REVISION	BY	DATE

ISSUE	DATE	CREATED	DESIGNED	POSITION	SCALE	PROJECT NUMBER
ISSUED	FEB 2024	JMO	MJD	PI	AS SHOWN	4278



**LEGEND:**

- Parking Blocks (North Side)**
- ① N GOODMAN STREET TO ARLINGTON STREET
  - ② ARLINGTON STREET TO ATLANTIC AVENUE
  - ③ ATLANTIC AVENUE TO MERRIMAN STREET
  - ④ MERRIMAN STREET TO ELTON STREET
  - ⑤ ELTON STREET TO RUSSELL STREET
- Parking Blocks (South Side)**
- ⑥ N GOODMAN STREET TO UPTON PARK
  - ⑦ UPTON PARK TO RUNDEL PARK
  - ⑧ RUNDEL PARK TO OXFORD STREET
  - ⑨ OXFORD STREET TO MERRIMAN STREET
  - ⑩ MERRIMAN STREET TO PORTSMOUTH TERRACE
  - ⑪ PORTSMOUTH TERRACE TO GRANGER PLACE
- EXISTING ON-STREET**
- EXISTING ON-STREET PARKING WITH 30 MIN PARKING M-F 7AM-6PM
  - EXISTING ON-STREET PARKING WITH NO PARKING M-F 7AM-6PM
  - EXISTING ON-STREET PARKING WITH 1 HOUR PARKING 9AM-9PM
  - EXISTING ON-STREET PARKING WITH 2 HOUR PARKING 9AM-9PM
  - EXISTING SHARED USE LANE
- NUMBER OF AVAILABLE ON-STREET PARKING SPACES (EXISTING / PROPOSED)**
- MAXIMUM OBSERVED NUMBER OF ON-STREET PARKING SPACES CURRENTLY UTILIZED**



**LEGEND:**

- Parking Blocks (West Side)**
- 6 RUSSELL STREET TO GRANGER PLACE
  - 7 GRANGER PLACE TO OLIVER STREET
  - 8 OLIVER STREET TO CULVER ROAD
- Parking Blocks (East Side)**
- 15 GRANGER PLACE TO OLIVER STREET
  - 16 OLIVER STREET TO CULVER ROAD

- NUMBER OF AVAILABLE ON-STREET PARKING SPACES (EXISTING / PROPOSED)
- MAXIMUM OBSERVED NUMBER OF ON-STREET PARKING SPACES CURRENTLY UTILIZED

- EXISTING ON-STREET
- EXISTING ON-STREET PARKING WITH 30 MIN PARKING M-F 7AM-6PM
- EXISTING ON-STREET PARKING WITH NO PARKING M-F 7AM-6PM
- EXISTING ON-STREET PARKING WITH 1 HOUR PARKING 9AM-9PM
- EXISTING ON-STREET PARKING WITH 2 HOUR PARKING 9AM-9PM



# **APPENDIX J**

## **ESTIMATE OF PROBABLE CONSTRUCTION COST** (Under Separate Cover)



# **APPENDIX K**

## **TREE INVENTORY** (Under Separate Cover)





# **APPENDIX L**

## **PUBLIC PARTICIPATION INFORMATION** (Under Separate Cover)

