# **APPENDIX 'A'**

# **Location Map**



**Poject Limits:** Mt. Read Blvd to Lake Ave

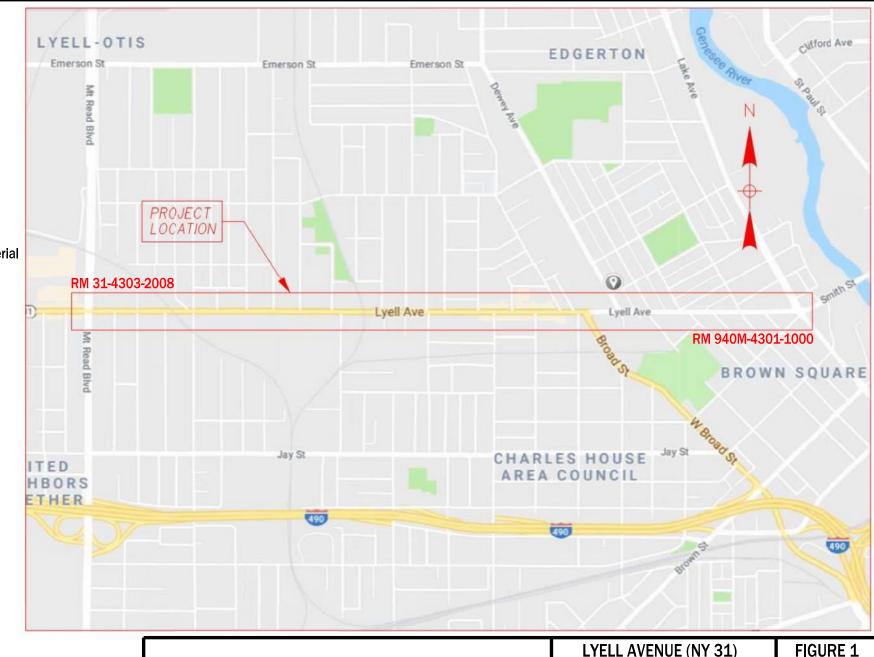
Poject Length: 3.6 Lane Miles

**Functional Class: Urban Minor Arterial** 

Federal Aid System: Non-NHS

**Existing AADT:** 17,724 (2013) Per IPP

Truck %: 6.13%



**TYLIN**INTERNATIONAL

255 EAST AVENUE ROCHESTER, NY 14604 (585) 512-2000 LYELL AVENUE (NY 31)

**PROJECT LOCATION MAP** Monroe County City of Rochester, NY

# **APPENDIX 'B'**

# Pavement Evaluation and Treatment Selection Report (PETSR)



# **PAVEMENT EVALUATION & TREATMENT SELECTION REPORT (PETSR)**

4/2018 Lyell Avenue

General	·	Lucil Aug	
Region: 04	County: Monroe	Lyell Ave Route No.: (NY 31)	PIN: 4CR004
	iption: 2020 Preventive Mainten	•	
31- Begin RM: <sub>Mt.</sub>	-4303-2008 940M-4301- Read Blvd End RM:Lake Ave	1000 Total Length: 3.6 Lar	ne Miles
Latest Pavem	ent Rehabilitation/Treatment Da	ate(s):	
Original Cont	ract Date(s): Unknown		
Related Paver	ment Data:		
Traffic AA	DT (Range):17,724 Date: 201	3 % Trucks: 6.13%	
Sufficienc	y Rating Surface Score: 6	Date: Unknown	
Roadway Feat	tures		
Gutter:	ountable Non-Mountable None Description	Concrete Median	<u> </u>
<u>Travel Lanes:</u>	<u>.</u>		
Number:	2 Width(s): 2 @ 11'		
Type:	Reinforced PCC Non-Reinfo		
	d and Non-Reinforced PCC Pave	., ., .	Note: See Pavement Core Data - Appendix C
Kemoree	Slab Length:	ments omy.	
	_	☐ 2 Component ☐	
	Transverse Joints: Contraction		
Subbase:	Type: Thickness (nom	-	
Shoulders: N		,	
Type: HM	1A ☐ PCC ☐ Gravel ☐ Thio	ckness:	
Su	rface Treatment/Stabilized Grav	el 🗌 Thickness:	
Width: L	eft: Right:		
Drainage Tvp	e: Open System  Closed Sys	stem 🛛	

# PAVEMENT EVALUATION & TREATMENT SELECTION REPORT (PETSR)

PAVEMENT DISTRESS	SEVERITY – Typical for Length of Project COMMENTS
Wheelpath Cracking Transverse Cracking Longitudinal Cracking Edge Cracking Raveling Rutting Corrugations Settlements/Heaves Other	None       X Low       Medium       High         None       Low       Medium       X High         None       Low       Medium       High         None       Low       Medium       High         None       X Low       Medium       High         None       Low       Medium       High         None       Low       Medium       X High         None       Low       Medium       High         None       Low       Medium       High         None       Low       Medium       High
SHOULDER DISTRESS NA	SEVERITY – Typical for Length of Project COMMENTS
Cracking Separation Drop Off Deformation	None Low Medium High   None Low Medium High   None Low Medium High   None Low Medium High

**REMARKS AND PAVEMENT RECOMMENDATIONS:** 

**EXISTING SHOULDER REMARKS: NA** 

Mill existing pavement surface; place T & L course as needed to achieve cross slope, if necessary; tack coat milled surface; and place new hot mix asphalt.

### **GEOTECHNICAL REMARKS AND RECOMMENDATIONS:**

See Appendix C for the geotechnical report including pavement core data and photographs.

# PAVEMENT EVALUATION & TREATMENT SELECTION REPORT (PETSR)

Prepared by: Meaghan Capuano, PE Approved by: Date: 4/23/2018 Date:	
If you have any questions regarding this report, please contact	at . (585) 512-2000
	Dennis Kennelly, PE
Recommendations: NA	
Results of Life Cycle Cost Analysis: NA	
3.	
2.	
1.	
reatment Options: NA	

**Professional Engineering Seal for Recommendations to Use Beyond Preservation Treatments:** 

# **APPENDIX 'C'**

# **Pavement Core Data**





Lyell Avenue Cores – Various Locations
Rochester, New York
January 17, 2018
Terracon Project No. J5171371

# Prepared for:

T.Y. Lin International Rochester, New York

# Prepared by:

Terracon Consultants-NY, Inc. Rochester, New York

terracon.com



January 17, 2018

T.Y. Lin International 255 East Avenue Rochester, NY 14604 Phone: 585 512 2000



Attn:

Mark D. Bellavia

F٠

mark.bellavia@tylin.com

Re:

Geotechnical Data Report

Lyell Avenue Cores - Various Locations

Rochester, New York

Terracon Project No. J5171371

Dear Mr. Bellavia:

Terracon Consultants-NY, Inc. (Terracon) has completed the geotechnical exploration services for the above referenced project. This study was performed in general accordance with our proposal dated October 5, 2017. This report presents the findings of the subsurface exploration program for the proposed project.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning this report, or if we may be of further service, please contact us.

Sincerely,

Terracon Consultants-NY, Inc.

Frank R. Minnolera Project Manager

Charles B. Guzzetta Office Manager

Terracon Consultants-NY, Inc. 15 Marway Circle, Suite 2B Rochester, New York 14624
P [585] 247 3471 terracon.com

Environmental

Facilitie:

Geotechnica



# **REPORT TOPICS**

INTRODUCTION	2
PROJECT DESCRIPTION	2
EXPLORATION AND TESTING PROCEDURES	3
GENERAL COMMENTS	2

ATTACHMENTS
SITE PLAN
EXPLORATION PLANS
PAVEMENT PHOTO LOG

#### **Geotechnical Data Report**

Lyell Avenue Cores – Various Locations 
Rochester, New York January 17, 2018 Terracon Project No. J5171371



# GEOTECHNICAL DATA REPORT LYELL AVENUE CORES – VARIOUS LOCATIONS ROCHESTER, NEW YORK

Terracon Project No. J5171371 January 17, 2018

# INTRODUCTION

This report presents the results of our subsurface exploration services performed for the Lyell Avenue pavement investigation project located at various locations along Lyell Avenue between Mount Read Boulevard and Lake Street in the City of Rochester, New York. The purpose of these services is to provide information relative to:

- Existing pavement thickness and type
- Pavement comments

The geotechnical exploration scope of work for this project included the advancement of nineteen pavement cores at various locations along Lyell Avenue through the existing asphalt section.

Maps showing the site are shown in the **Site Location** section and core locations are shown on the **Exploration Plan**, respectively. Core photographs with measurements are included in the **Pavement Photo Log** section. These sections are included as an appendix to this report.

# **PROJECT DESCRIPTION**

Our understanding of the project conditions can be generalized as follows:

Item	Description		
Project Location	Various locations along Lyell Avenue in the City of Rochester, New York		
Existing Improvements	Existing roadway		
Current Ground Cover	Asphalt Pavement		

#### **Geotechnical Data Report**

Lyell Avenue Cores – Various Locations ■ Rochester, New York January 17, 2018 ■ Terracon Project No. J5171371



# **EXPLORATION AND TESTING PROCEDURES**

## Field Exploration

Our field exploration consisted of extracting nineteen pavement cores through the roadway section to the top of subbase materials. The coring locations were selected by the City of Rochester – Department of Environmental Services and laid out in the field by Terracon personnel. The locations of the pavement cores should be considered accurate only to the degree implied by the means and methods used to define them.

**Subsurface Exploration Procedures:** The existing flexible pavement at each location was cored using a portable coring machine equipped with either a 4-inch or a 6-inch (nominal) diameter diamond thin wall core barrel. The recovered core samples were labeled in the field and returned to the laboratory for measurement and photographs.

The pavement locations were then patched with quick setting, high strength non-shrink grout upon completion of coring.

Results of the field exploration can be found in the Pavement Photo Log section.

# **GENERAL COMMENTS**

Variations will occur between exploration point locations, across the site, or due to the modifying effects of construction or weather. The nature and extent of such variations may not become evident until during or after construction. Our scope of services does not include either specifically or by implication any environmental or biological (e.g., mold, fungi, bacteria) assessment of the site or identification or prevention of pollutants, hazardous materials or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be undertaken.

Our services and any correspondence are intended for the sole benefit and exclusive use of our client for specific application to the project discussed and are accomplished in accordance with generally accepted geotechnical engineering practices with no third party beneficiaries intended. Any third party access to services or correspondence is solely for information purposes only. Reliance upon the services and any work product is limited to our client, and is not intended for third parties. Any use or reliance of the provided information by third parties is done solely at their own risk. No warranties, either express or implied, are intended or made.

# **Geotechnical Data Report**

Lyell Avenue Cores – Various Locations ■ Rochester, New York January 17, 2018 ■ Terracon Project No. J5171371

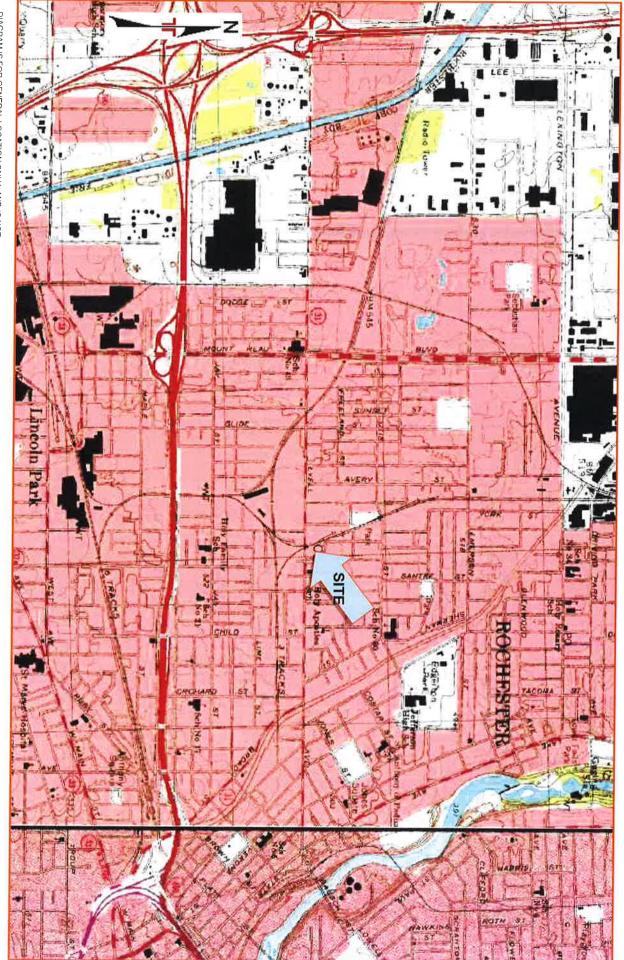


# SITE LOCATION AND EXPLORATION PLAN

# SITE LOCATION

Lyell Avenue Cores E Rochester, NY January 17, 2018 🏿 Terracon Project No. J5171371





GeoReport



Lyell Avenue Cores various locations along Lyell Avenue, Rochester, New York January 17, 2018 Terracon Project No. J5171371



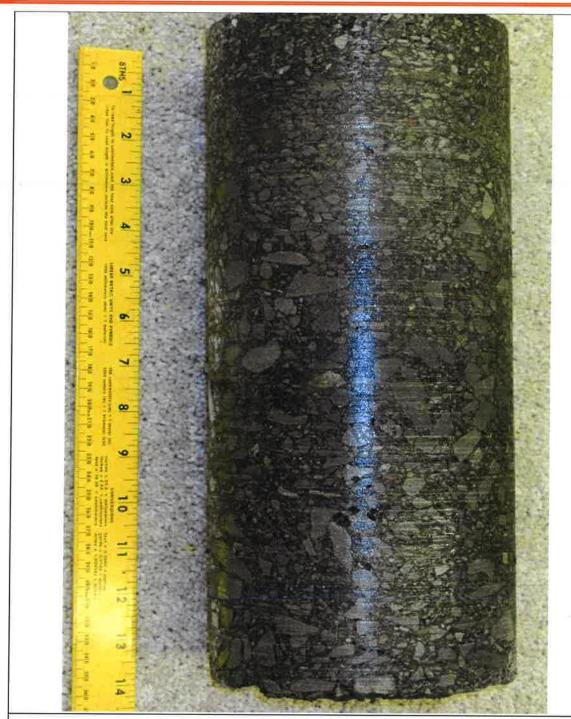


Course	Thickness	Conditions	Remarks
Тор	2" Overlay 3"	Good	Delamination at 5"
Base	7"	Good	

**TOTAL** 12 inches

Lyell Avenue Cores ■ various locations along Lyell Avenue, Rochester, New York January 17, 2018 ■ Terracon Project No. J5171371





Course	Thickness	Conditions	Remarks
Тор	1 ½" Overlay 3 ½"	Good	
Binder/Base	8 ¾"	Good	

TOTAL 13 ¾ inches

Lyell Avenue Cores ■ various locations along Lyell Avenue, Rochester, New York January 17, 2018 ■ Terracon Project No. J5171371





Pavement core at Location C-3: Front of #1069 Lyell Ave.

Course	Thickness	Conditions	Remarks
Тор	1 ¼" Overlay 1 ½" Overlay 1 ¼" Overlay 1 ½" Top	Good	
Base	6 1⁄4"	Good	Delamination at 8 inch depth

TOTAL 11 3/4 inches

Lyell Avenue Cores various locations along Lyell Avenue, Rochester, New York January 17, 2018 Terracon Project No. J5171371





Pavement core at Location C-4: Front of #1004 Lyell Ave.

Course	Thickness	Conditions	Remarks	
Тор	1 ½" Overlay 3 " Overlay	Good		
Base	3 ¾" Overlay 3 ¾" Base	Good		

TOTAL 12 inches

Lyell Avenue Cores various locations along Lyell Avenue, Rochester, New York January 17, 2018 Terracon Project No. J5171371





	Pavement Core at Lo	cation C-5 : Front	of #961 Lyell Ave.
urse	Thickness	Conditions	Remarks

Course	Thickness	Conditions	Remarks	
Тор	1 ½" Overlay 2" Overlay 1" Overlay 1 ½" Overlay	Good		
Binder/Base	3" Base Overlay 4 3/4" Base	Good		

TOTAL 13 ¾ inches

Lyell Avenue Cores ■ various locations along Lyell Avenue, Rochester, New York January 17, 2018 ■ Terracon Project No. J5171371





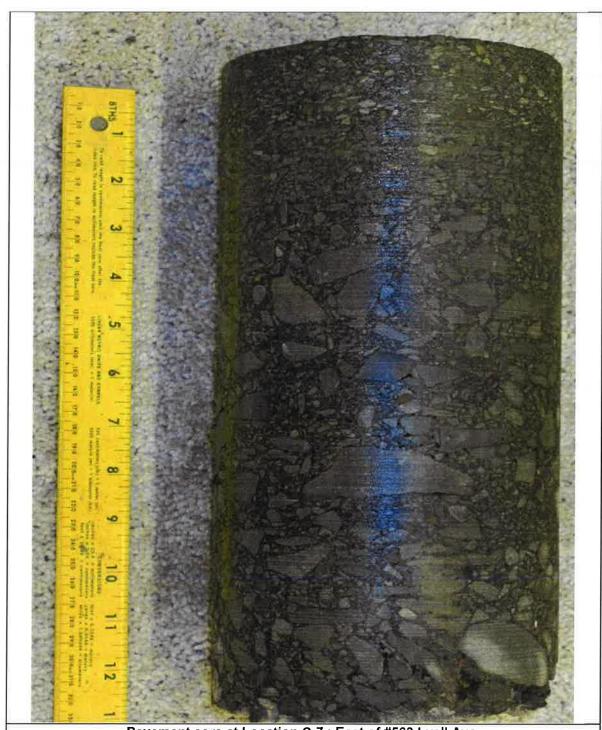
Pavement core at Location C-6: Front of #568 Lyell Ave.

Course	Thickness	Conditions	Remarks
Тор	1 1/4" Overlay 1" Overlay 2 3/4" Overlay (Coarse)	Good	
Base	7"	Good	

TOTAL 12 inches

Lyell Avenue Cores • various locations along Lyell Avenue, Rochester, New York January 17, 2018 • Terracon Project No. J5171371





Pavement core at Location C-7 : East of #563 Lyell Ave.				
Course	Thickness	Conditions	Remarks	
Тор	1 ½" Overlay 2" Overlay	Good		
Base	4 1/4" Overlay 4 3/4" Base	Good		

TOTAL 12 1/2 inches

Lyell Avenue Cores ■ various locations along Lyell Avenue, Rochester, New York January 17, 2018 ■ Terracon Project No. J5171371





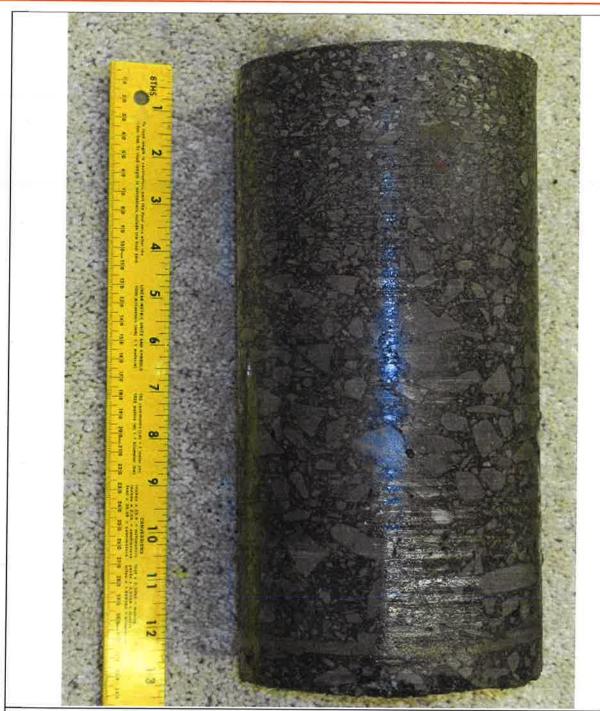
# Pavement Core at Location C-8: Front of #530 Lyell Ave.

Course	Thickness	Conditions	Remarks	
Тор	1 ¾" Overlay 1 ¾""	Good	P	
Binder/Base	3 ¾" Base Overlay 6 ¾" Base	Good		

# **TOTAL 14 inches**

Lyell Avenue Cores • various locations along Lyell Avenue, Rochester, New York January 17, 2018 • Terracon Project No. J5171371





Pavement core at Location C-9: Front of #497 Lyell Ave.

Course	Thickness	Conditions	Remarks
Тор	1 ¾" Overlay 1 ¾" Overlay 2" Top	Good	
Binder/Base	3 ½" Overlay 3 ¼" Base	Good	

TOTAL 12 1/4 inches





Pavement core at Location C-10 : Front of #468 Lyell Ave.

Course Thickness Conditions Remarks

Тор	1 ½" Overlay 1" Overlay 2" Top	Good	
Binder/Base	3 ¾" Overlay 3 ¾" Base	Good	

TOTAL 12 inches

Lyell Avenue Cores ■ various locations along Lyell Avenue, Rochester, New York January 17, 2018 ■ Terracon Project No. J5171371





Pavement Core at Location C-11: Front of #437 Lyell Ave.

Course	Thickness	Conditions	Remarks
Тор	3/4" Overlay 3/4" Coarse Overlay 1 1/2" Fine Overlay	Good	
Binder/Base	3 ¼" Base Overlay 7 ½" Concrete	Good	

TOTAL 13 3/4 inches

Lyell Avenue Cores ■ various locations along Lyell Avenue, Rochester, New York January 17, 2018 ■ Terracon Project No. J5171371





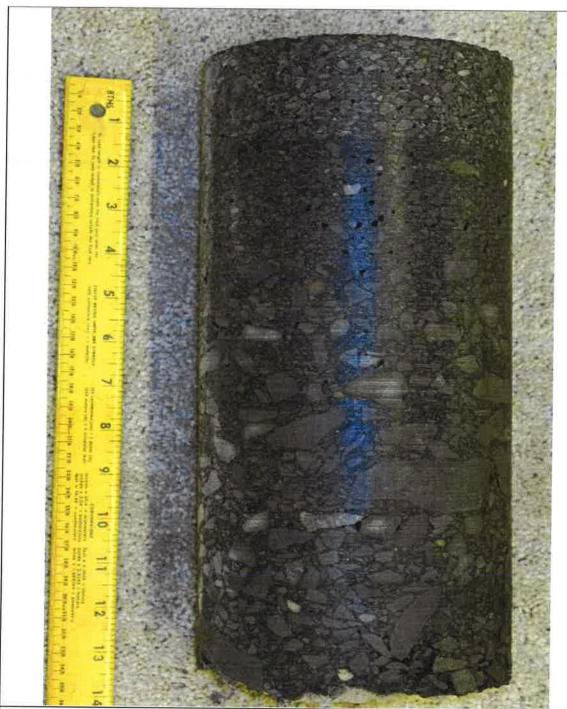
Pavement core at Location C-12 : West of #392 Lyell Ave.

Course	Thickness	Conditions	Remarks
Тор	2" Overlay 3 1/4" Top	Good	
Base	8 1⁄4" Base	Good	

TOTAL 13 1/2 inches

Lyell Avenue Cores various locations along Lyell Avenue, Rochester, New York January 17, 2018 Terracon Project No. J5171371





Pavement core at Location C-13: Front of #361 Lvell Ave.

Course	Thickness	Conditions	Remarks	
Тор	2 ½" Overlay 2 ½" Overlay 2 ½" Top	Good		
Base	3" Overlay 3 1/4" Base	Good		

TOTAL 13 3/4 inches





Pavement Core at Location C-14: Front of #280 Lyell Ave.

Course	Thickness	Conditions	Remarks
Тор	1 ½" Overlay 1 ¼" Overlay 1 ¼" Overlay 1 ½" Overlay 1 ½" Overlay	Good	
Binder/Base	3 1/4" Binder/Base 7" Concrete	Good	Delamination Between Concrete and Base/Binder Courses

TOTAL 17 1/4 inches

Lyell Avenue Cores various locations along Lyell Avenue, Rochester, New York January 17, 2018 Terracon Project No. J5171371





Pavement core at Location C-15: Front of #229 Lyell Ave.

Course	Thickness	Conditions	Remarks
Тор	1 ½" Overlay 2 " Top	Good	
Binder/Base	7 1/4" Binder/Base	Good	Delaminated at 7" Depth

TOTAL 10 3/4 inches





Pavement core at Location C-16: Front of #158 Lyell Ave.

Course	Thickness	Conditions	Remarks
Тор	1 ½" Overlay 2" Coarse Overlay 2 ½" Coarse Top	Good	
Binder/Bse	4 ½" Binder/Base	Good	

TOTAL 10 1/2 inches





Course	Thickness	Conditions	Remarks
Тор	2 ½" Overlay 1 ¼" Coarse 2 ¾" Top	Good	
Base	5" Concrete	Good	Delamination Between Concrete and Asphalt Courses





Pavement core at Location C-18: Front of #50 Lyell Ave.

Course	Thickness	Conditions	Remarks	
Тор	1 ¼" Overlay 1 ¾" Top	Good		
Base	7" Base	Good	Delamination at 7" Depth	

TOTAL 10 inches





Pavement core at Location C-19: Front of #15 Lyell Ave.

Course	Thickness	Conditions	Remarks
Тор	1" Overlay 3" Coarse Top	Good	
Binder/Base	6 1/2" Binder/Base	Good	

TOTAL 10 1/2 inches

# **APPENDIX 'D'**

# **Accident Analysis and Summary Tables**

**Priority Investigation Locations** 

**Accident Rate Tables** 

**Synchro Printouts** 





Project:	Lyell Avenue	Job No.	436546.00	Sheet: 1 of 4	
Item:	Accident Summary Tables	Designer:	MPC	Date: 06/25/18	
		Checker:	CAB	Date:	
				Grid:	

### LYELL AVENUE CORRIDOR ACCIDENT ANALYSIS

The accident analysis was conducted using the most recent three years of available data (10/1/2014 - 9/31/2017) obtained from the NYSDOT. The countywide and statewide average accident rates have been provided by MCDOT based upon three years of accident data from 2014-2016 and from the NYSDOT based on two years of accident data from 2015-2016. A summary of the accident rates can be found in the following Tables 1 through 3. The accident data summarized by type and year can be found in Tables 4-6.

**Table 1 - Accident Rates Midblock Sections** 

Midblock Sections	No. Accidents	Intersection Rate (Acc/Mvm)	MCDOT Rate (Acc/Mvm)	Rate Exceeded?
1 Mt. Read Blvd to Glide St	15	2.86	2.53	Υ
2 Glide St to Hague St	24	3.25	2.53	Υ
3 Hague St to Murray St	20	4.68	2.53	Υ
4 Murray St to Child St	30	9.09	2.53	Υ
5 Child St to Broad St	29	5.98	2.53	Υ
6 Broad St to Dewey Ave	9	6.62	2.53	Υ
7 Dewey Ave to Saratoga Ave	9	2.9	2.53	Υ
8 Saratoga Ave to Plymouth Ave	16	5.5	2.53	Υ
9 Plymouth Ave to Lake Ave	18	6.18	2.53	Y

**Table 2 - Accident Rates Signalized Intersections** 

Signalized Intersections	No. Accidents	Intersection Rate (Acc/Mev)	County/State DOT Rate (Acc/Mev)	Rate Exceeded?
1 Mt. Read Blvd	64	1.54	0.25	Υ
2 Glide Street	30	1.18	1.00	Υ
3 Hague Street	17	0.79	0.51	Υ
4 Murray Street	40	1.83	0.51	Υ
5 Child Street	56	2.25	1.00	Υ
6 Sherman Street	11	0.48	0.51	N
7 Broad Street	39	1.38	1.16	Υ
8 Dewey Avenue	48	1.63	1.16	Υ
9 Saratoga Ave/Spencer St	32	1.45	0.51	Υ
10 Plymouth Avenue	15	0.63	1.00	N
11 Lake Ave/State St/Smith St	96	1.99	0.25	Υ



Project:Lyell AvenueJob No.436546.00Sheet:2 of 4Item:Accident Summary TablesDesigner:MPCDate: 06/25/18

Checker: CAB Date: Grid:

**Table 3 - Accident Rates Unsignalized Intersections** 

Unsignalized Intersections	No. Accidents	Intersection Rate (Acc/Mev)	MCDOT Rate (Acc/Mev)	Rate Exceeded?
1 Fairgate Street	3	0.15	0.19	N
2 Wetmore Park	3	0.15	0.19	N
3 Campbell Park	4	0.20	0.19	Υ
4 Sunset Street	10	0.48	0.19	Υ
5 Rockview Terrace	4	0.20	0.19	Y
6 McNaughton Street	6	0.28	0.19	Υ
7 Avery Street	10	0.47	0.19	Υ
8 Burrows Street	10	0.48	0.19	Y
9 Rutter Street	8	0.39	0.19	Υ
10 Warner Street	9	0.43	0.19	Υ
11 Calihan Park	3	0.14	0.19	N
12 Austin Street	5	0.24	0.19	Υ
13 Myrtle Street	13	0.62	0.19	Υ
14 Cameron Street	14	0.67	0.19	Y
15 Angle Street	5	0.25	0.19	Υ
16 Whitney Street	18	0.86	0.19	Y
17 Likly Alley	1	0.05	0.19	N
18 Orchard Street	17	0.80	0.19	Υ
19 Amber Pl	1	0.05	0.19	N
20 Durkin Alley	1	0.05	0.19	N
21 Moore Street	3	0.14	0.19	N
22 Oak Street	8	0.41	0.19	Υ
23 Parkway	12	0.57	0.19	Υ
24 Daus Alley	8	0.38	0.19	Y
25 Carroll Alley	1	0.05	0.19	N
26 Verona Street	4	0.19	0.19	N
27 Frankfort St	4	0.19	0.19	N



Project: Lyell Avenue Job No. 436546.00 Sheet: 3 of 4

Item: Accident Summary Tables Designer: MPC Date: 06/25/18

Checker: CAB Date:

Grid:

#### Table 4 - Accident Type Summary by Year

Accidents								Severity								
Year	Rear-end	Side-swipe	Angle	Left-turn	Right-turn	Overtaking	Fixed Object	Pedestrian	Bicyclist	Head On	Ran Off Road	Other	Unknown	Total	Injury	Fatal
2017	71	1	30	16	8	31	5	8	4	2		27	1	204	53	
2016	100	8	32	25	11	44	11	16	10	5		34	4	300	104	
2015	91	11	30	16	8	39	13	4	5	6	1	21	6	251	42	
2014	24	1	8	3	1	11	4	2	2			2	1	59	8	
Total	286	21	100	60	28	125	33	30	21	13	1	84	12	814	207	0

#### <u>Table 5 - Midblock Accident Type Summary</u>

							Acci	dents							Sev	erity
Lyell Avenue Midblocks	Rear-end	Side-swipe	Angle	Left-turn	Right-turn	Overtaking	Fixed Object	Pedestrian	Bicyclist	Head On	Ran Off Road	Other	Unknown	Total	Injury	Fatal
1 Mt. Read Blvd to Glide St	3	1	0	1	1	4	1	0	0	0	0	3	1	15	2	
2 Glide St to Hague St	6	0	4	3	2	5	1	1	0	1	0	1	0	24	6	
3 Hague St to Murray St	9	0	1	2	0	3	1	1	0	0	0	3	0	20	3	
4 Murray St to Child St	10	0	3	0	0	8	1	2	0	1	0	5	0	30	8	
5 Child St to Broad St	7	1	8	0	1	6	0	1	1	0	0	4	0	29	4	
6 Broad St to Dewey Ave	3	0	0	0	1	4	0	0	1	0	0	0	0	9	1	
7 Dewey Ave to Saratoga Ave	5	0	1	0	0	1	0	1	0	0	0	1	0	9	1	
8 Saratoga Ave to Plymouth Ave	8	1	1	0	0	4	0	1	0	1	0	0	0	16	4	
9 Plymouth Ave to Lake Ave	11	1	0	0	0	2	0	0	0	0	0	4	0	18	3	
Total	62	4	18	6	5	37	4	7	2	3	0	21	1	170	32	0



Project: Lyell Avenue Job No. 436546.00 Sheet: 4 of 4

Item: Accident Summary Tables Designer: MPC Date: 06/25/18

Checker: CAB

Date:
Grid:

							Accid	dents							Seve	erity
Lyell Avenue	Rear-end	Side-swipe	Angle	Left-turn	Right-turn	Overtaking	Fixed Object	Pedestrian	Bicyclist	Head On	Ran Off Road	Other	Unknown	Total	Injury	Fatal
Mt. Read Blvd	32		4	3	1	9	4	1		1		8	1	64	14	
Fairgate Street			2							1				3	1	
Wetmore Park	1		1									1		3		
Campbell Park				2	1				1					4	2	
Sunset Street		4		3		1	1					1		10	1	
Glide Street	13	2	4	3		2			2	1		2	1	30	10	
Rockview Terrace	1				1	1			1				-	4	1	
McNaughton Street			1		<u> </u>		1	1	-			2	1	6	4	
Avery Street	2		4	1		1				1		1		10	5	
Burrows Street	1	1	2	<u> </u>	1	<u> </u>	1	1	1	1		1		10	3	
Rutter Street	1	1	1	1	i i	1	1		·			1	1	8	2	
Hague Street	6	<u> </u>	4	<u> </u>		4	2	1						17	4	
Warner Street	3		2	1		2	1							9	5	
Calihan Park	1						2							3	1	
Austin Street	1			1		1	_	1	1					5	3	
Murray Street	12		5	3	1	6	3	1	3	1		4	1	40	7	
Myrtle Street	5		2	2	·	2	Ů	•		<u> </u>		2	· ·	13	5	
Cameron Street	4		1	1	2	3	1					1	1	14	4	
Child Street	17		7	4	5	6	•	4	3	1	1	7	1	56	15	
Angle Street	2		•	<u> </u>	⊢ Ŭ	l –		1		<u> </u>	•	2	•	5	4	
Whitney Street	7	2	1	1	1	2		2				2		18	11	
Sherman Street	3		3	<u> </u>	<u> </u>	2	1	1				1		11	2	
Likly Alley	<del>                                     </del>		1			<del>-</del>	'	_ '				<u> </u>		1		
Orchard Street	6		2	5	1	2						1		17	4	
Broad Street	13		3	4	3	7	2	2	1	1		3		39	8	
Dewey Avenue	13	3	11	6	1	6	1	1	1	<u> </u>		5		48	17	
Amber Pl	13	3	1.1	J .	<del>- '</del> -		'	ı	ı			1		1	17	
Durkin Alley	1											'		1		
Moore Street	<del>  '</del>						1	1				1		3		
Oak Street	4		1		1		1	'				1		8	1	
Parkway	5		1		<del>- '</del> -	1	'		1			4		12	1	
Daus Alley	3		2			2			- 1			1		8	ı	
Saratoga	1															
Ave/Spencer St	13	1	2	1		6	2	4				1	2	32	5	
Carroll Alley	1													1		
Verona Street	3					1								4	1	
Plymouth Avenue	3		5			5	1						1	15	1	
Frankfort St	2					1						1		4	1	
Lake Ave/State St/Smith St	42	1	10	11	4	12	2	1	3	2		7	1	96	31	
Total	221	15	82	53	23	86	28	23	18	10	1	62	11	633	174	0



Project	: Lyell Avenue	Job No.	436546.00	Sheet: 1 of 16
Item:	Accident Rate Calculations	Designer:	MPC	Date: 06/25/18
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				Grid:

#### LYELL AVENUE SIGNALIZED INTERSECTION ACCIDENT ANALYSIS

#### #1 Lyell Avenue @ Mt. Read Blvd

ADT Lyell Ave = 17,724 Forecasted ADT Mt. Read Blvd = 20,287

Total: 38,011 veh/day

Total Accidents = 64 Time Period = 3 Years

> > = 1.54 Acc/Mev\*

New York State DOT Average Accident Rate for Signalized Intersections = 0.25 Acc/Mev Note: \* Roadway Segment Exceeds NYSDOT Average Accident Rate.

#### #2 Lyell Avenue @ Glide Street

ADT Lyell Ave = 17,724ADT Glide St = 5,451

Total: 23,175 veh/day

Total Accidents = 30 Time Period = 3 Years

Accident Rate =  $\frac{(30 \text{ Accidents}) 1x10^{-6}}{(3 \text{ Yr.})(365 \text{ days/year})(23,175 \text{ veh/day})}$ 

= 1.18 Acc/Mev\*

Monroe County Average Accident Rate for Signalized Intersections = 1.00 Acc/Mev Note: \* Roadway Segment Exceeds MCDOT Countywide Average Accident Rate.

#### #3 Lyell Avenue @ Hague Street

ADT Lyell Ave = 17,724Estimated ADT Hague St = 2,000

Total: 19,724 veh/day

Total Accidents = 17 Time Period = 3 Years

> > = 0.79 Acc/Mev\*



Project:	Lyell Avenue	Job No.	436546.00	Sheet: 2 of 16
Item:	Accident Rate Calculations	Designer:	MPC	Date: 06/25/18
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#4 Lyell Avenue @ Murray Street

ADT Lyell Ave = 17,724 Estimated ADT Murray St = 2,200

Total: 19,924 veh/day

Total Accidents = 40 Time Period = 3 Years

> > = 1.83 Acc/Mev\*

Monroe County Average Accident Rate for Signalized Intersections = 0.51 Acc/Mev Note: \* Roadway Segment Exceeds MCDOT Countywide Average Accident Rate.

#5 Lyell Avenue @ Child Street

ADT Lyell Ave = 17,724Forecasted ADT Child St = 5,034

Total: 22,758 veh/day

Total Accidents = 56 Time Period = 3 Years

= 2.25 Acc/Mev\*

Monroe County Average Accident Rate for Signalized Intersections = 1.00 Acc/Mev Note: \* Roadway Segment Exceeds MCDOT Countywide Average Accident Rate.

#6 Lyell Avenue @ Sherman Street

ADT Lyell Ave = 17,724Estimated ADT Sherman St = 3,300

Total: 21,024 veh/day

Total Accidents = 11 Time Period = 3 Years

> > = 0.48 Acc/Mev

Monroe County Average Accident Rate for Signalized Intersections = 0.51 Acc/Mev

#7 Lyell Avenue @ Broad Street

Project:	Lyell Avenue	Job No.	436546.00	Sheet: <b>3</b> of <b>16</b>
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ADT Lyell Ave = 17,724
Forecasted ADT Broad St = 8,023Total: 25,747 veh/day
Total Accidents = 39
Time Period = 3 Years

Monroe County Average Accident Rate for Signalized Intersections = 1.16 Acc/Mev Note: \* Roadway Segment Exceeds MCDOT Countywide Average Accident Rate.

#### #8 Lyell Avenue @ Dewey Avenue

ADT Lyell Ave = 17,724ADT Dewey Ave = 9,126

Total: 26,850 veh/day

Total Accidents = 48 Time Period = 3 Years

Monroe County Average Accident Rate for Signalized Intersections = 1.16 Acc/Mev Note: \* Roadway Segment Exceeds MCDOT Countywide Average Accident Rate.

#### #9 Lyell Avenue @ Saratoga Ave/Spencer St

ADT Lyell Ave = 17,724 Estimated ADT Saratoga Ave = 2,500

Total: 20,224 veh/day

Total Accidents = 32 Time Period = 3 Years

Accident Rate = 
$$(32 \text{ Accidents}) \frac{1 \times 10^{-6}}{(3 \text{ Yr.})(365 \text{ days/year})(20,224 \text{ veh/day})}$$
  
=  $\frac{1.45}{6} \frac{\text{Acc/Mev}^*}{\text{Acc/Mev}^*}$ 

Project:	Lyell Avenue	Job No.	436546.00	Sheet: 4 of 16
Item:	Accident Rate Calculations	Designer:	MPC	Date: 06/25/18
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				Grid:

#### #10 Lyell Avenue @ Plymouth Avenue

ADT Lyell Ave = 17,724 Estimated ADT Plymouth Ave = 4,100

Total: 21,824 veh/day

Total Accidents = 15 Time Period = 3 Years

Monroe County Average Accident Rate for Signalized Intersections = 1.00 Acc/Mev

#### #11 Lyell Avenue @ Lake Avenue/State Street

ADT Lyell Ave = 17,724 Forecasted ADT Lake Ave = 26,322

Total: 44,046 veh/day

Total Accidents = 96 Time Period = 3 Years

> Accident Rate =  $(96 \text{ Accidents}) 1x10^{-6})$ ( 3 Yr.)( 365 days/year)( 44,046 veh/day) = 1.99 Acc/Mev\*

New York State DOT Average Accident Rate for Signalized Intersections = 0.25 Acc/Mev Note: \* Roadway Segment Exceeds NYSDOT Average Accident Rate.

Project:	Lyell Avenue	Job No.	436546.00	Sheet: 5 of 16
Item:	Accident Rate Calculations	Designer:	MPC	Date: 06/25/18
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				Grid:

#### LYELL AVENUE UNSIGNALIZED INTERSECTION ACCIDENT ANALYSIS

#### #1 Lyell Avenue @ Fairgate Street

ADT Lyell Ave = 17,724Estimated ADT Fairgate St = 1,000

Total: 18,724 veh/day

Total Accidents = 3 Time Period = 3 Years

= 0.15 Acc/Mev

Monroe County Average Accident Rate for Unsignalized Intersections = 0.19 Acc/Mev

#### #2 Lyell Avenue @ Wetmore Park

ADT Lyell Ave = 17,724Estimated ADT Fairgate St = 1,000

Total: 18,724 veh/day

Total Accidents = 3 Time Period = 3 Years

Accident Rate =  $\frac{(3 \text{ Accidents}) 1x10^{-6}}{(3 \text{ Yr.})(365 \text{ days/year})(18,724 \text{ veh/day})}$ 

= 0.15 Acc/Mev

Monroe County Average Accident Rate for Unsignalized Intersections = 0.19 Acc/Mev

#### #3 Lyell Avenue @ Campbell Park

ADT Lyell Ave = 17,724Estimated ADT Campbell Pk = 1,000

Total: 18,724 veh/day

Total Accidents = 4 Time Period = 3 Years

> > = 0.20 Acc/Mev\*

Project	Lyell Avenue	Job No.	436546.00	Sheet: 6 of 16
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#4 Lyell Avenue @ Sunset Street

ADT Lyell Ave = 17,724

Estimated ADT Sunset St =  $\frac{1,400}{19,124}$  veh/day

Total Accidents = 10

Time Period = 3 Years

Accident Rate =  $\frac{10 \text{ Accidents}}{10 \text{ Accidents}} \frac{1 \times 10^{-6}}{19,124}$  veh/day)

Monroe County Average Accident Rate for Unsignalized Intersections = 0.19 Acc/Mev Note: \* Roadway Segment Exceeds MCDOT Countywide Average Accident Rate.

Acc/Mev\*

0.48

#### #5 Lyell Avenue @ Rockview Terrace

ADT Lyell Ave = 17,724 Estimated ADT Rockview Terr = 250

Total: 17,974 veh/day

Total Accidents = 4 Time Period = 3 Years

Monroe County Average Accident Rate for Unsignalized Intersections = 0.19 Acc/Mev Note: \* Roadway Segment Exceeds MCDOT Countywide Average Accident Rate.

#### #6 Lyell Avenue @ McNaughton Street

ADT Lyell Ave = 17,724 Estimated ADT McNaughton St = 1,600

Total: 19,324 veh/day

Total Accidents = 6 Time Period = 3 Years

Project	Lyell Avenue	Job No.	436546.00	Sheet: <b>7</b> of <b>16</b>
Item:	Accident Rate Calculations	Designer:	MPC	Date: 06/25/18
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# #7 Lyell Avenue @ Avery Street ADT Lyell Ave = 17,724 Estimated ADT Avery St = 1,600 Total: 19,324 veh/day Total Accidents = 10 Time Period = 3 Years Accident Rate = ( 10 Accidents) 1x10^6) ( 3 Yr.)( 365 days/year)( 19,324 veh/day)

Monroe County Average Accident Rate for Unsignalized Intersections = 0.19 Acc/Mev Note: \* Roadway Segment Exceeds MCDOT Countywide Average Accident Rate.

Acc/Mev\*

0.47

#### #8 Lyell Avenue @ Burrows Street

ADT Lyell Ave = 17,724Estimated ADT Burrows St = 1,400

Total: 19,124 veh/day

Total Accidents = 10 Time Period = 3 Years

Monroe County Average Accident Rate for Unsignalized Intersections = 0.19 Acc/Mev Note: \* Roadway Segment Exceeds MCDOT Countywide Average Accident Rate.

#### #9 Lyell Avenue @ Rutter Street

ADT Lyell Ave = 17,724Estimated ADT Rutter St = 1,000

Total: 18,724 veh/day

Total Accidents = 8 Time Period = 3 Years

Project:	Lyell Avenue	Job No.	436546.00	Sheet: 8 of 16
Item:	Accident Rate Calculations	Designer:	MPC	Date: 06/25/18
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## ADT Lyell Ave = 17,724 Estimated ADT Warner St = 1,400 Total: 19,124 veh/day

#10 Lyell Avenue @ Warner Street

Monroe County Average Accident Rate for Unsignalized Intersections = 0.19 Acc/Mev Note: \* Roadway Segment Exceeds MCDOT Countywide Average Accident Rate.

#### #11 Lyell Avenue @ Calihan Park

Total: 19,124 veh/day

Total Accidents = 3 Time Period = 3 Years

Monroe County Average Accident Rate for Unsignalized Intersections = 0.19 Acc/Mev

#### #12 Lyell Avenue @ Austin Street

ADT Lyell Ave = 
$$17,724$$
  
Estimated ADT Austin St =  $1,400$ 

Total: 19,124 veh/day

Total Accidents = 5 Time Period = 3 Years

Project:	Lyell Avenue	Job No.	436546.00	Sheet: 9 of 16
Item:	Accident Rate Calculations	Designer:	MPC	Date: 06/25/18
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# #13 <u>Lyell Avenue @ Myrtle Street</u> ADT Lyell Ave = 17,724 Estimated ADT Myrtle St = 1,400 Total: 19,124 veh/day

Total Accidents = 13 Time Period = 3 Years

Monroe County Average Accident Rate for Unsignalized Intersections = 0.19 Acc/Mev Note: \* Roadway Segment Exceeds MCDOT Countywide Average Accident Rate.

#### #14 Lyell Avenue @ Cameron Street

ADT Lyell Ave = 17,724 Estimated ADT Calihan Park = 1,400

Total: 19,124 veh/day

Total Accidents = 14 Time Period = 3 Years

Monroe County Average Accident Rate for Unsignalized Intersections = 0.19 Acc/Mev Note: \* Roadway Segment Exceeds MCDOT Countywide Average Accident Rate.

#### #15 Lyell Avenue @ Angle Street

ADT Lyell Ave = 17,724Estimated ADT Austin St = 250

Total: 17,974 veh/day

Total Accidents = 5 Time Period = 3 Years

Project:	Lyell Avenue	Job No.	436546.00	Sheet: <b>10</b> of <b>16</b>
Item:	Accident Rate Calculations	Designer:	MPC	Date: 06/25/18
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#16 <u>Lyell Avenue @ Whitney Street</u>

ADT Lyell Ave = 17,724

Estimated ADT Whitney St = 1,400

Total: 19,124 veh/day

Total Accidents = 18 Time Period = 3 Years

Monroe County Average Accident Rate for Unsignalized Intersections = 0.19 Acc/Mev Note: \* Roadway Segment Exceeds MCDOT Countywide Average Accident Rate.

#### #17 Lyell Avenue @ Likly Alley

ADT Lyell Ave = 17,724 Estimated ADT Likley Alley = 1,000

Total: 18,724 veh/day

Total Accidents = 1 Time Period = 3 Years

Monroe County Average Accident Rate for Unsignalized Intersections = 0.19 Acc/Mev

#### #18 Lyell Avenue @ Orchard Street

ADT Lyell Ave = 17,724Estimated ADT Orchard St = 1,600

Total: 19,324 veh/day

Total Accidents = 17 Time Period = 3 Years



Project:	Lyell Avenue		Job No.	436546.00	Sheet: 11 of 16
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					Grid:
‡19 Lve	ell Avenue @ Amber Pl				
-	T Lyell Ave =	17,724			
	timated ADT Amber PI =	100			
	Total:	·	veh/day		
Tot	tal Accidents = 1				
Tin	ne Period = 3 Years				
	Accident Rate =	(	1 Accidents	) 1×10^ <sup>6</sup> )	
	, tostaette trate		365 days/year)		(day)
				( 11,621 16.1)	ady)
	=	0.05	Acc/Mev		
Мо	onroe County Average Acciden	t Rate for U	nsignalized Inte	rsections = 0.1	L9 Acc/Mev
	,		S		,
‡20 <u>Lye</u>	ell Avenue @ Durkin Alley				
AD	T Lyell Ave =	17,724			
Est	timated ADT Durkin Alley =	<u>100</u>			
	Total:	17,824	veh/day		
Tot	tal Accidents = 1				
Tin	ne Period = 3 Years				
	Accident Rate =	(	1 Accidents	) 1x10^ <sup>6</sup> )	
			365 days/year)		<del>day</del> )
	=			, ,	
	_	0.05	Acc/Mev		
Mo	onroe County Average Acciden	it Rate for U	nsignalized Inte	rsections = 0.1	L9 Acc/Mev
_	ell Avenue @ Moore Street				
	T Lyell Ave =	17,724			
Est	timated ADT Moore St =	<u>1,600</u>			
	Total:	19,324	veh/day		

Total Accidents = Time Period = 3 Years

0.14 Acc/Mev

Monroe County Average Accident Rate for Unsignalized Intersections = 0.19 Acc/Mev

Project:	Lyell Avenue	Job No.	436546.00	Sheet: <b>12</b> of <b>16</b>
Item:	Accident Rate Calculations	Designer:	MPC	Date: 06/25/18
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				Grid:

#22 <u>Lyell Avenue @ Oak Street</u>

ADT Lyell Ave = 17,724

Estimated ADT Oak St = 100

Total: 17,824 veh/day

Total Accidents = 8 Time Period = 3 Years

Monroe County Average Accident Rate for Unsignalized Intersections = 0.19 Acc/Mev Note: \* Roadway Segment Exceeds MCDOT Countywide Average Accident Rate.

#### #23 Lyell Avenue @ Parkway

ADT Lyell Ave = 17,724 Estimated ADT Parkway = 1,400

Total: 19,124 veh/day

Total Accidents = 12 Time Period = 3 Years

> Accident Rate =  $(12 \text{ Accidents}) 1x10^{-6})$ (3 Yr.)(365 days/year)(19,124 veh/day) = 0.57 Acc/Mev\*

Monroe County Average Accident Rate for Unsignalized Intersections = 0.19 Acc/Mev Note: \* Roadway Segment Exceeds MCDOT Countywide Average Accident Rate.

#### #24 Lyell Avenue @ Daus Alley

ADT Lyell Ave = 17,724 Estimated ADT Daus Alley = 1,400

Total: 19,124 veh/day

Total Accidents = 8 Time Period = 3 Years

Project:	Lyell Avenue	Job No.	436546.00	Sheet: <b>13</b> of <b>16</b>
Item:	Accident Rate Calculations	Designer:	MPC	Date: 06/25/18
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#25 Lyell Avenue @ Carroll Alley

ADT Lyell Ave = 17,724 Estimated ADT Carroll Alley = 100

Total: 17,824 veh/day

Total Accidents = 1 Time Period = 3 Years

Monroe County Average Accident Rate for Unsignalized Intersections = 0.19 Acc/Mev

#26 Lyell Avenue @ Verona Street

ADT Lyell Ave = 17,724Estimated ADT Verona St = 2,000

Total: 19,724 veh/day

Total Accidents = 4 Time Period = 3 Years

Monroe County Average Accident Rate for Unsignalized Intersections = 0.19 Acc/Mev Note: \* Roadway Segment Exceeds MCDOT Countywide Average Accident Rate.

#27 Lyell Avenue @ Frankfort Street

ADT Lyell Ave = 17,724Estimated ADT Frankfort St = 1,600

Total: 19,324 veh/day

Total Accidents = 4 Time Period = 3 Years

Monroe County Average Accident Rate for Unsignalized Intersections = 0.19 Acc/Mev



Project:	Lyell Avenue	Job No.	436546.00	Sheet: <b>14</b> of <b>16</b>
Item:	Accident Rate Calculations	Designer:	MPC	Date: 06/25/18
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#### LYELL AVENUE MIDBLOCK ACCIDENT ANALYSIS

#### #1 Lyell Avenue from Mt. Read Blvd to Glide Street:

AADT = 17,724 veh/day Total Accidents = 15 Time Period = 3 Years

Length of Road = 0.27 Miles

Accident Rate = 
$$(15 \text{ Accidents}) (1x10^{-6})$$
  
 $(3 \text{ Yr.}) (365 \text{ days/year}) (17,724 \text{ veh/day}) (0.27 \text{ Miles})$   
=  $2.86 \text{ Acc/Mvm*}$ 

Monroe County Average Accident Rate (Urban Minor Arterial) = 2.53 Acc/Mvm Note: \* Roadway Segment Exceeds MCDOT Countywide Average Accident Rate.

#### #2 Lyell Avenue from Glide Street to Hague Street:

AADT = 17,724 veh/day Total Accidents = 24

Time Period = 3 Years

Length of Road = 0.38 Miles

Accident Rate = 
$$(24 \text{ Accidents}) (1x10^6)$$
  
 $(3 \text{ Yr.}) (365 \text{ days/year}) (17,724 \text{ veh/day}) (0.38 \text{ Miles})$   
=  $3.25 \text{ Acc/Mvm*}$ 

Monroe County Average Accident Rate (Urban Minor Arterial) = 2.53 Acc/Mvm

Note: \* Roadway Segment Exceeds MCDOT Countywide Average Accident Rate.

#### #3 Lyell Avenue from Hague Street to Murray Street:

AADT = 17,724 veh/day

Total Accidents = 20

Time Period = 3 Years

Length of Road = 0.22 Miles

Accident Rate = 
$$(20 \text{ Accidents}) (1x10^{-6})$$
  
 $(3 \text{ Yr.}) (365 \text{ days/year}) (17,724 \text{ veh/day}) (0.22 \text{ Miles})$   
=  $4.68 \text{ Acc/Mym*}$ 

Monroe County Average Accident Rate (Urban Minor Arterial) = 2.53 Acc/Mvm

Note: \* Roadway Segment Exceeds MCDOT Countywide Average Accident Rate.



Project:	: Lyell Avenue	Job No.	436546.00	Sheet: <b>15</b> of <b>16</b>
Item:	Accident Rate Calculations	Designer:	MPC	Date: 06/25/18
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				Grid:

#### LYELL AVENUE MIDBLOCK ACCIDENT ANALYSIS

#### #4 Lyell Avenue from Murray Street to Child Street:

AADT = 17,724 veh/day

Total Accidents = 30

Time Period = 3 Years

Length of Road = 0.17 Miles

Accident Rate = 
$$(30 \text{ Accidents}) (1x10^6)$$
  
 $(3 \text{ Yr.}) (365 \text{ days/year}) (17,724 \text{ veh/day}) (0.17 \text{ Miles})$   
=  $9.09 \text{ Acc/Mvm*}$ 

Monroe County Average Accident Rate (Urban Minor Arterial) = 2.53 Acc/Mvm

Note: \* Roadway Segment Exceeds MCDOT Countywide Average Accident Rate.

#### #5 Lyell Avenue from Child Street to Broad Street:

AADT = 17,724 veh/day

Total Accidents = 29

Time Period = 3 Years

Length of Road = 0.25 Miles

Accident Rate = 
$$(29 \text{ Accidents}) (1x10^{-6})$$
  
 $(3 \text{ Yr.})(365 \text{ days/year})(17,724 \text{ veh/day})(0.25 \text{ Miles})$   
= 5.98 Acc/Mvm\*

Monroe County Average Accident Rate (Urban Minor Arterial) = 2.53 Acc/Mvm

Note: \* Roadway Segment Exceeds MCDOT Countywide Average Accident Rate.

#### #6 Lyell Avenue from Broad Street to Dewey Avenue:

AADT = 17,724 veh/day

Total Accidents = 9

Time Period = 3 Years

Length of Road = 0.07 Miles

Accident Rate = 
$$(9 \text{ Accidents}) (1x10^{-6})$$
  
 $(3 \text{ Yr.}) (365 \text{ days/year}) (17,724 \text{ veh/day}) (0.07 \text{ Miles})$   
= 6.62 Acc/Mvm\*

Monroe County Average Accident Rate (Urban Minor Arterial) = 2.53 Acc/Mvm

Note: \* Roadway Segment Exceeds MCDOT Countywide Average Accident Rate.



Project:	Lyell Avenue	Job No.	436546.00	Sheet: <b>16</b> of <b>16</b>
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#### LYELL AVENUE MIDBLOCK ACCIDENT ANALYSIS

#### #7 Lyell Avenue from Dewey Avenue to Saratoga Avenue:

AADT = 17,724 veh/day Total Accidents = 9

Time Period = 3 Years

Length of Road = 0.16 Miles

Accident Rate = 
$$(9 \text{ Accidents}) (1x10^{-6})$$
  
 $(3 \text{ Yr.}) (365 \text{ days/year}) (17,724 \text{ veh/day}) (0.16 \text{ Miles})$   
= 2.90 Acc/Mvm\*

Monroe County Average Accident Rate (Urban Minor Arterial) = 2.53 Acc/Mvm Note: \* Roadway Segment Exceeds MCDOT Countywide Average Accident Rate.

#### #8 Lyell Avenue from Saratoga Avenue to Plymouth Avenue:

AADT = 17,724 veh/day

Total Accidents = 16

Time Period = 3 Years

Length of Road = 0.15 Miles

Accident Rate = 
$$(16 \text{ Accidents}) (1x10^{-6})$$
  
 $(3 \text{ Yr.}) (365 \text{ days/year}) (17,724 \text{ veh/day}) (0.15 \text{ Miles})$   
=  $5.50 \text{ Acc/Mvm*}$ 

Monroe County Average Accident Rate (Urban Minor Arterial) = 2.53 Acc/Mvm

Note: \* Roadway Segment Exceeds MCDOT Countywide Average Accident Rate.

#### #9 Lyell Avenue from Plymouth Avenue to Lake Avenue:

AADT = 17,724 veh/day

Total Accidents = 18

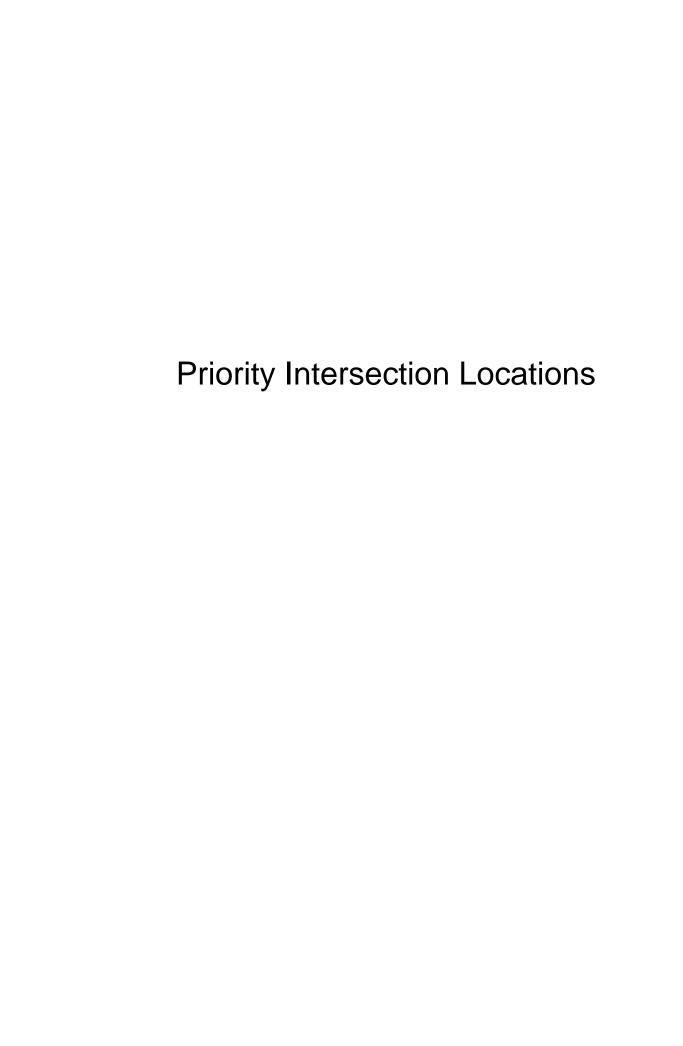
Time Period = 3 Years

Length of Road = 0.15 Miles

Accident Rate = 
$$(18 \text{ Accidents}) (120^{-6})$$
  
 $(3 \text{ Yr.}) (365 \text{ days/year}) (17,724 \text{ veh/day}) (0.15 \text{ Miles})$   
= 6.18 Acc/Mvm\*

Monroe County Average Accident Rate (Urban Minor Arterial) = 2.53 Acc/Mvm

Note: \* Roadway Segment Exceeds MCDOT Countywide Average Accident Rate.



TO:

James R. Pond, P.E., PTOE, Chief of Traffic Signal Engineering & Operations

FROM:

David P. Hrankowski, P.E., Principal Traffic Engineering Technician

DATE:

June 21, 2018

SUBJECT:

Lyell Avenue at Saratoga Avenue/Spencer Street

#### Introduction

This is a P.I.L. study as part of the High Accident Location Program.

#### Site Visits

3/1/18

field review (PBM)

3/7/18

review via Google Maps (DPH)

#### **Discussion**

The subject intersection is controlled by a two phase traffic signal. Eastbound and westbound Lyell Avenue comprises the major street, one travel lane for inbound and for outbound with bike lanes on both sides. Saratoga Avenue intersects from the north at a left hand skew with one inbound lane (signal controlled) and one outbound lane. Spencer Street is part of the intersection but is one way away northeasterly. There are marked signal controlled crosswalks on all four legs; the crosswalk on the west leg is enhanced. There are pedestrian actuated buttons to cross Lyell Avenue only. The white crosswalk and stop bar markings are faded. One hour parking is allowed on the south side opposite Saratoga Avenue and on the north side west of Saratoga Avenue. Parking is prohibited on Saratoga Avenue near the intersection; it's alternate parking on Spencer Street.

The three year – three month accident history (10/1/14-12/31/17) revealed a total of 29 accidents. The annual accident rates for 2015 and 2017 exceeded the critical rate. Seventeen of the 29 accidents were either rear end type (twelve) or sideswipe type (five); all but one were in the eastbound or westbound directions. There were also three pedestrian accidents; all three occurred west of the intersection outside the crosswalk, pedestrian error was a factor in all three.

#### Conclusions/Recommendations

Based on the findings, I recommend no action other than refreshing the crosswalk and stop bar markings. The crosswalk on the west leg is enhanced as per a recommendation from the 2007 Pedestrian Activity Safety Study. The markings should be refreshed with a ladder crosswalk (NYSDOT type LS).

TO:

Dave Hrankowski, Principal Traffic Engineering Technician

FROM:

Paul McComb, Traffic Eng. Tech.

DATE:

December 5, 2014

SUBJECT:

Lyell Avenue at Whitney Street

- updet 115/16 PILShoy

#### Introduction

This is a P.I.L. study as part of the High Accident Location Program.

#### Site Visits

11/25/14 - field review (PBM)
12/2/14 - field review (DPH/PBM)
12/24/14 - Kreld ventur - field

#### Discussion

- Lyell Avenue is a two lane east/west minor arterial roadway. Whitney Street is a residential street that "T" intersects Lyell Avenue from the south and is stop controlled for northbound traffic.
- There is small grocery store located on the southeast corner and a used car lot on the southwest corner. There are also businesses on the north side opposite the car lot and a small shopping plaza located about 100 feet west of Whitney Street on the north side with a parking lot for about 50 vehicles.
- There is white edge line on both sides of Lyell Avenue eight feet offset from the curb and bike lanes for eastbound and westbound traffic. The bike lane ends for eastbound traffic east of Whitney Street.
- Unrestricted parking exists on both sides of Lyell Avenue. During the field reviews parked vehicles were sparse on Lyell Avenue. I did not observe any parked vehicles on Lyell Avenue within 100 feet of Whitney Street.
- Sight distance is adequate for northbound traffic looking to the east and west from ten feet back of the white edge line. It's adequate from ten feet back of the curb line on the south side of Lyell Avenue if there are no parked vehicles near the intersection.

#### **Accident History**

- The accident history reviewed for a four year eight month period, 8/1/09 through 3/31/14, identified 19 accidents that occurred at the subject intersection. The annual accident rates generally exceed the critical rate over the past five years.
- There were five right angle type accidents. Four of the five involved a northbound vehicle and an eastbound vehicle. In four of the five right angle accidents the northbound motorist was making a left turn. Failure to yield the right of way was a common factor.
- There was no significant pattern of time in the right angle type accidents; one occurred during the AM peak hour period. Two of the right angle type accidents occurred in 2013 and involved an eastbound vehicle.

There were eight rear end type accidents. Five of these involved westbound traffic, the most recent occurred in 2012. There was no significant pattern of time; none occurred during a peak hour period.

#### Conclusions/Recommendations

Based on the findings, I do not recommend any traffic control or traffic feature changes. The sign investigator was notified to have a corner clearance sign installed on the southwest corner in advance of the bus stop.

I concur. D. P. 12/10/14 I field reviewed the lacation on 12/22/19. I field reviewed the locatron on 12122119.

I agree that Atraffic control and traffic features in place are adequate (with the corner clearance sign added). There are no accident patrions of note. Fear and collisions would be related to signals at other intersections to the east and west, and are expected in a highly whom area like this sensing, Jap 12/23/14

12/27/14

12/27/14

TO:

Dave Hrankowski, P.E., Principal Traffic Engineering Technician

FROM:

Paul McComb, Traffic Eng. Tech. PBM

DATE:

November 15, 2016

**SUBJECT:** 

Lyell Avenue, Murray Street to Sherman Street

#### Introduction

This is a P.I.L. study as part of the High Accident Location Program. As a result of a 2014 P.I.L. study at the intersection of Lyell Avenue/Whitney Street a work order was written to install a corner clearance sign on the southwest corner in advance of the bus stop. The bus stop sign and the corner clearance sign no longer exist at this location. To address accident patterns at the intersection with Sherman Street, an eastbound left turn only lane and a westbound right turn only lane was striped in February 2007.

#### **Site Visits**

10/31/16 -

field review (PBM)

11/2/16

field review (DPH/PBM)

Fold review - gap

#### **Field Conditions**

- The subject section of Lyell Avenue is a two-lane urban minor arterial roadway; development primarily consists of small retail shops. There is also a small shopping plaza located about 100 feet west of Whitney Street on the north side, a fire station opposite Child Street, and a Rite Aid Pharmacy opposite Angle Street.
- There are seven intersections, three with two phase traffic signal control (at Murray Street, Child Street, and Sherman Street). Murray Street is a four legged intersection with the north leg (one way southbound) offset to the west of the south leg by about 20 feet. There are red light cameras for eastbound/westbound traffic at this intersection.
- Child Street "T" intersects Lyell Avenue from the south and Sherman Street "T" intersects Lyell Avenue from the north at a skew. Angle Street intersects from the north and is one way away from Lyell Avenue. The remaining three "T" intersections are stop controlled for northbound or southbound traffic.
- There are no left turn only lanes at Murray Street or at Child Street so there is a negative offset to opposing traffic for westbound left turning vehicles. A negative offset also exists for eastbound left turning vehicles at Sherman Street although there is a left turn only lane for eastbound traffic. these are not me
- negative offsets be aure there are no opposing left run movements at any of these three intercections Thus no one stropped to block the wiew. A five foot wide bike lane exists on both sides, but is interrupted for westbound traffic along the block east of Murray Street and the block east of Child Street. This allows a bypass lane on the north side for through vehicles to pass westbound left turning vehicles at both intersections.
- Parking is generally allowed on both sides of Lyell Avenue with some time restrictions. The sight distance looking to the east and west from ten feet back of the white edge line is adequate for northbound or southbound traffic at the four unsignalized intersections if there are no parked vehicles. Parking can limit sight distance, but that is normal for urban conditions.

• There is an existing marked crosswalk on the north leg of Myrtle Street at Lyell Avenue. The safe route to school maps do not direct students to cross this leg.

#### **Accident History**

The accident history for a three year period from 8/1/13 through 7/31/16 identified 201 accidents that occurred along the subject section of roadway. The intersection and non-intersection annual accident rates are generally above the critical rate. The intersection with Murray Street is a designated P.I.L.

#### Lyell Avenue at Murray Street

- There were 34 accidents that occurred at this intersection; seven were left turn type accidents, six involved westbound left turning vehicles. Two of the six occurred in 2013, two in 2014 and two in 2015. In both of the accidents that occurred in 2014 the eastbound motorist had just entered traffic from a parked position near the southwest corner. Failure to yield the right was a contributing factor in the two that occurred in 2015 and one in 2013. One of the six occurred during the PM peak hour period.
- There were three right angle type accidents; all three involved a southbound and a westbound vehicle. Two occurred in 2014 and one in 2015. Slippery pavement was a contributing factor in one that occurred in 2014, unsafe speed was a contributing factor in the other that involved a police vehicle that passed the red with lights and sirens. The traffic control being disregarded was a contributing factor in the one that occurred in 2015. The southbound vehicle passed the red in all three.
- There were three bike type accidents. Two of the bike type accidents occurred in 2014 and one in 2015. Unsafe speed was a contributing factor in one, failure to yield the right of way was a contributing factor in one and bicyclist error was a contributing factor in the other.
- There were two pedestrian type accidents; one in 2016 and one in 2013. The one that occurred in 2013 involved a wheel chair. The motorist hit the wheel chair in the crosswalk; she stated that she did not see the wheel chair. The view being obstructed/ limited was a contributing factor. The other one involved a pedestrian being pursued by police, pedestrian error was a contributing factor in this accident.
- There were twelve rear end type accidents, five involved eastbound traffic and five involved westbound traffic. Three of the five that involved eastbound traffic occurred in 2015. Two of the five that involved westbound traffic occurred in 2015, two occurred in 2014. Slippery pavement was a contributing factor in one that involved westbound traffic. Following too closely was a factor in most of them.

#### Lyell Avenue, East of Murray Street

• There were six accidents that occurred along this section of roadway; four were sideswipe type accidents, two occurred in 2015 and two in 2016. Three of the four involved eastbound traffic, two involved vehicles that were previously parked but attempted to merge into traffic within 50 feet east of Murray Street.

#### Lyell Avenue at Myrtle Street

• Eight of the nine rear end type accidents involved westbound traffic. Two of the eight occurred in 2013, three occurred in 2014, and three occurred in 2015. All eight occurred on a weekday, three occurred during a peak hour period. A contributing factor in one that occurred in 2015 was slippery pavement, following too closely or driver inattention were factors in the others.

- There was one pedestrian type accident that occurred when the pedestrian was not crossing at a crosswalk and was hit by the mirror of a westbound vehicle. Pedestrian error was a contributing factor.
- There was one bike type accident that occurred when an eastbound left turning vehicle hit the bicyclist crossing Myrtle Street. Failure to yield the right of way was a contributing factor.

#### Lyell Avenue, East of Myrtle Street

- There were fourteen accidents that occurred along this section of roadway. Five of the eight rear end type accidents involved eastbound traffic. Two of the five occurred in 2015, two in 2013 and four of the five occurred on a weekday. None occurred during a peak hour period, but all four that occurred on a weekday occurred in the afternoon or evening. The three that involved westbound traffic all occurred during a different year, all on a weekday, and all during the afternoon.
- Both sideswipe type accidents occurred in 2015; one involved eastbound traffic and one involved westbound traffic. Both occurred close to the intersection with Cameron Street and involved vehicles entering traffic from a parked position. Failure to yield the right of way or driver inattention were contributing factors.

#### Lyell Avenue at Cameron Street

• There were four side swipe type accidents; all involved westbound traffic, there was no pattern of time. Two occurred in 2015, one in 2014 and one in 2013. In one of the accidents the motorist at fault was attempting to pass a right turning vehicle on the right side. In another one the motorist at fault made a right turn in front of a street cleaner that was moving along the curb. Failure to yield the right of way was a contributing factor in this accident, passing or improper lane use was a contributing factor in the other three.

#### Lyell Avenue, East of Cameron Street

- There were thirteen accidents that occurred along this section of roadway, six were rear end type accidents. Of the six accidents, five involved eastbound traffic; three occurred in 2015, two in 2013, and all occurred on a weekday.
- All of the rear end type accidents that involved eastbound traffic occurred during the afternoon, one during the PM peak hour period. A contributing factor in one in 2013 was slippery pavement. The one that involved a westbound vehicle occurred during the AM peak hour period.
- The three side swipe type accidents all involved eastbound traffic; all three occurred during a different year, the most recent one occurred in July 2016. In the ones that occurred in 2016 and 2014, the eastbound vehicles at fault entered the eastbound lane from a parked position. Failure to yield the right of way was a contributing factor in all three accidents.

#### Lyell Avenue at Child Street

• There were 38 accidents that occurred at this intersection, five were left turn type accidents. Of the five, one occurred in 2015, three occurred in 2014 and all five involved a westbound left turning vehicle. There was no significant pattern of time; all occurred on a weekday, none occurred during a peak hour period. Failure to yield the right of way or driver inattention were contributing factors.

- Of the thirteen rear end type accidents five involved eastbound traffic, six involved westbound traffic, and in one the direction is unknown. Of the five that involved eastbound traffic, two occurred in 2016 and three occurred in 2015. All five occurred on a weekday, two during the PM peak hour period. A contributing factor in one was slippery pavement; following too closely was a contributing factor in three of the others.
- Of the six that involved westbound traffic, two occurred in 2016 and three occurred in 2014. Two occurred during the AM peak hour period and two occurred during the PM peak hour period. Following too closely was a contributing factor in four of the accidents.
- There were nine sideswipe type accidents, six involved westbound traffic. One of the six occurred in 2016, two occurred in 2015, and two occurred in 2013. The five that occurred on a weekday occurred during the afternoon or evening, one occurred during the PM peak hour period. A contributing factor in one was slippery pavement. The contributing factor in the other five was unsafe lane change or improper passing or lane use.
- The three that involved eastbound traffic all occurred during a different year, the most recent was in July of 2016. The one that did not occur on a weekend occurred in 2013. The contributing factors in two of the accidents were unsafe lane change or improper passing or lane use.
- There were three pedestrian type accidents. Two involved northbound right turning vehicles and both occurred in 2016. In one, the pedestrian was hit when the motorist was getting away from the pedestrian after stopping; the pedestrian was later arrested. Pedestrian error was a contributing factor in this accident. Alcohol was a contributing factor in the other accident.
- In the pedestrian type accident that involved a westbound vehicle the pedestrian crossed against the red. Failure to yield the right of way was a contributing factor in this accident.
- In the bike type accident the northbound right turning vehicle was hit by an eastbound bike. Failure to yield the right of way and the traffic control being disregarded was a contributing factor in this accident.

#### Lyell Avenue, East of Child Street

- There were three driveway type accidents. Two of them involved southbound vehicles exiting the parking lot at #444. In the one involving an eastbound vehicle, the southbound left turning motorist stated that he did not see the eastbound vehicle. Two of the three occurred in 2014, one in 2016, and two occurred during a peak hour period. Failure to yield the right of way was a contributing factor in all three accidents.
- There were three sideswipe type accidents all involving eastbound traffic, all three occurred on a weekday in 2014. In two of the accidents the vehicle was either parked or pulled over before entering traffic. In one of the accidents the vehicle's mirror was covered with snow.
- There were four rear end type accidents; two involved eastbound traffic and two involved westbound traffic. Three occurred in 2015, one in 2016, and none during a peak hour period.
- There were two pedestrian type accidents, one occurred in 2016 and one in 2014. In one, the northbound pedestrian was hit by a westbound vehicle. In the other the pedestrian outside of the crosswalk was hit by a northbound right turning vehicle; failure to yield the right of way was a contributing factor.

#### Lyell Avenue at Angle Street

• There were three rear end type accidents, all involved westbound traffic. All three occurred during a different year, the most recent one in 2016. There was no significant pattern of time.

#### Lyell Avenue, East of Angle Street

- There were fifteen accidents, seven were rear end type accidents, one occurred on a weekend. Four of the seven occurred in 2014, two in 2015, and three during the PM peak hour period. Following too closely was a contributing factor in most; driver inexperience in two.
- In one of the two sideswipe type accidents the westbound vehicle at fault was entering traffic from an on street parked position. Failure to yield the right of way was a contributing factor. Unsafe lane change was a contributing factor in the other sideswipe type accident.

#### Lyell Avenue at Whitney Street

- There were two right angle type accidents, both occurred 2013 and involved a northbound and an eastbound vehicle. Failure to yield the right of way was a contributing factor in both.
- There was one pedestrian type accident occurred when a northbound pedestrian crossing Lyell Avenue was hit by a backing vehicle. Backing unsafely and pedestrian error were contributing factors.
- There were three rear end type accidents that involved westbound traffic. All three occurred during a different year with no pattern of time. There were two sideswipe type accidents that occurred during different years. One involved an eastbound vehicle that entered the roadway from a parked position.

#### Lyell Avenue, East of Whitney Street

- There were seven rear end type accidents, five involved eastbound traffic. Two of the five occurred in 2015, two in 2014, and there was no pattern of time. A contributing factor in one of the accidents that occurred in 2015 was slippery pavement and unsafe speed. Sun glare was a contributing factor in one that occurred in 2014. All of the rear end type accidents occurred on a weekday, one during a peak hour period.
- There were three sideswipe type accidents, all three involved eastbound vehicles, and all three occurred during a different year. The one that occurred in 2015 involved the eastbound vehicle entering traffic from a parked position. A contributing factor in this accident was the view being obstructed/limited.

#### Lyell Avenue at Sherman Street

- There were thirteen accidents; six were rear end type accidents, four involved eastbound traffic. Of the four, two occurred in 2014 and one occurred in 2016. Slippery was a contributing factor in one of the two that occurred in 2014.
- There were three left turn type accidents; two occurred in 2013 and one in 2016. Driver inattention was a contributing factor in the one that occurred in 2016, failure to yield the right of way in the other two.
- There was one pedestrian type accident that involved an eastbound left turning vehicle. The pedestrian was struck by the vehicle's mirror; the vehicle left the scene.

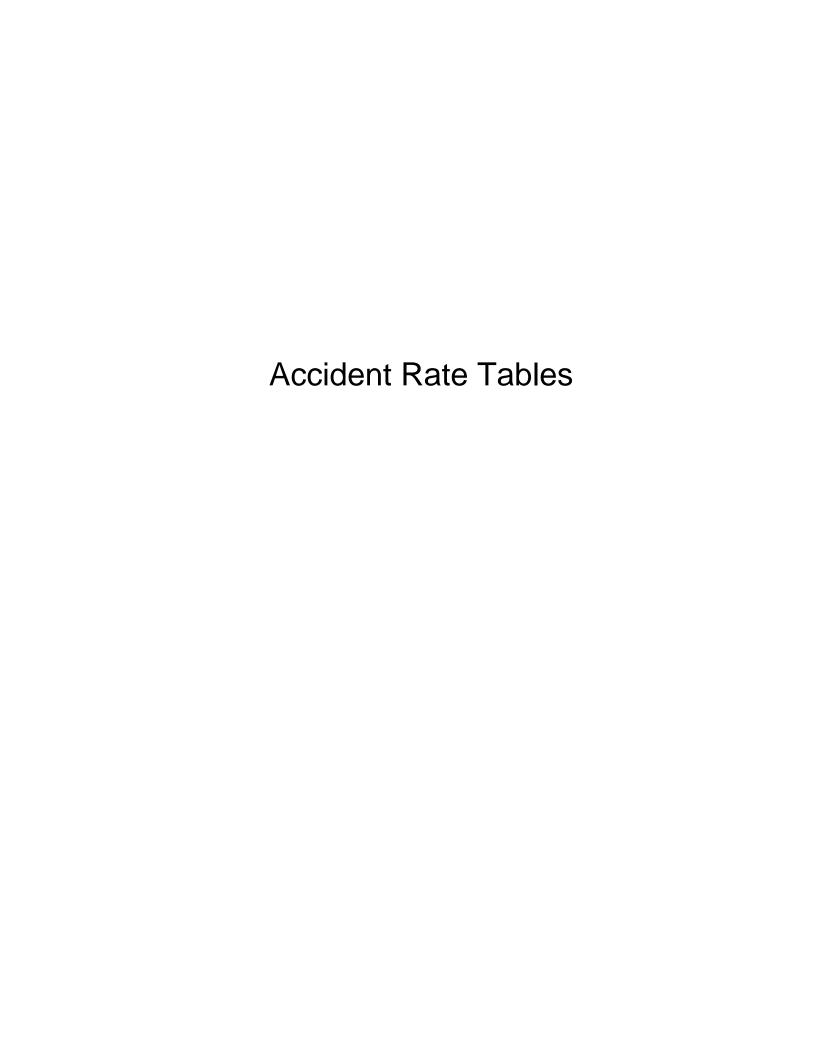
#### **Conclusion/Recommendations**

Based on the findings, I do not recommend any traffic control or traffic feature changes. There are no accident patterns at any location significant enough to need specific countermeasures at this time. I requested that the sign investigator have the missing corner clearance sign installed on the south side of Lyell Avenue west of Whitney Street. I also requested that the investigator look into missing "One Hour Parking 7 AM to 8 PM" parking signs on the north side from east of Murray Street to Cameron Street. Finally, I asked Brent Penwarden to have the crosswalk on the north leg of the intersection with Myrtle Street be allowed to fade. There is no school route or MCDOT policy reason to have a crosswalk here.

I field reviewed the beatinn on 11/23/16,
The road has been resorrised to add bryde laner in recent years. This has helped to channelize traffic better. The lack of left own lanes at the signalized interactions noted above are not of concern for viously oncoming traffic since none of those left similes movements have apposing fest running traffic either because her are the interrections (shorman, child) or because of one may operation (murray). Overall as noted above there are no significant callisten patterns. The typer we to see are typical of the type of road diavactiones found here with parking frequent signals and many commercial diversity.

I give with the above recommendations. In 11/26/16

On 11/26/16, I discussed the above with tony RD2 and he concurred.



#### AVERAGE ACCIDENT RATES FOR STATE HIGHWAYS BY FACILITY TYPE

(BASED ON ACCIDENT DATA January 1, 2015 TO December 31, 2016)

Average accident rates are based on both reportable and available non-reportable crashes.

MAINLINE ACCIDENTS ONLY: "Non-Intersection Accidents/MVM" is used for linear highway sections where there are no intersecting roads or ramp junctions within analysis limits. An example of the correct use of these rates would involve a linear section of highway which contains no intersections with other public highways, but may contain intersections with private roads or driveways.

MAINLINE & JUNCTURE ACCIDENTS: "Intersection & Non-Intersection Accidents/MVM" includes intersection and mainline accidents. They are used for analysis of linear highway sections where intersections are involved within the analysis limits and are the most commonly used rates for accident analysis purposes.

**FACILITY TYPE** 

FRE	FREE ACCESS CONTROLLED		MAINLINE ACCIDENTS ONLY			MAINLINE & JUNCTURE ACCIDENTS			
	RURAL FUNCTION CLASS	ALL TYPES	WET ROAD	FIXED OBJECT	ALL TYPES	WET ROAD	FIXED OBJECT		
	UNDIVIDED	ACC/MVM	ACC/MVM	ACC/MVM	ACC/MVM	ACC/MVM	ACC/MVM		
	2 LANES	2.1	0.33	0.58	2.61	0.4	0.68		
	3 LANES	1.87	0.24	0.57	2.25	0.27	0.64		
	4 LANES	1.9	0.26	0.36	2.55	0.34	0.44		
	ALL LANES	2.09	0.33	0.58	2.6	0.4	0.68		
	DIVIDED								
	2 LANES	1.88	0.27	0.46	2.56	0.36	0.57		
	4 LANES	1.92	0.29	0.51	2.15	0.32	0.54		
	ALL LANES	1.92	0.29	0.48	2.3	0.33	0.57		
	URBAN FUNCTION CLASS								
	UNDIVIDED								
	2 LANES	2.23	0.33	0.34	3,5	0.52	0.45		
	3 LANES	2.71	0.36	0.27	4.31	0.63	0.38		
	4 LANES	3.22	0.49	0.22	5.5	0.86	0.31		
2	ALL LANES	2.46	0.36	0.31	3.95	0.59	0.43		
	DIVIDED			-					
	2 LANES	3.13	0.48	0.2	5.14	0.78	0.28		
	4 LANES	2.85	0.45	0.18	4.52	0.72	0.24		
	6 LANES	3.65	0.53	0.16	4.8	0.71	0.2		
	7 LANES	3.05	0.58	0.09	3.99	0.72	0.16		
	ALL LANES	3.1	0.48	0.16	4.7	0.73	0.25		

F	PARTIAL CONTROL OF ACCESS	MAINL	INE ACCIDENT	S ONLY	MAINLINE & JUNCTURE ACCIDENT		CCIDENTS	
	RURAL FUNCTION CLASS	ALL TYPES	WET ROAD	FIXED OBJECT	ALL TYPES	WET ROAD	FIXED OBJECT	
-	UNDIVIDED	ACC/MVM	ACC/MVM	ACC/MVM	ACC/MVM	ACC/MVM	ACC/MVM	
	2 LANES	1.87	0,35	0.44	2,44	0.48	0.51	
	ALL LANES	1.91	0.35	0.43	2.47	0.48	6.53	
	DIVIDED							
	4 LANES	1.85	0,29	0.81	1.97	0,32	0.85	
	ALL LANES	1.84	0.29	0.8	1.96	0.32	0.85	
	URBAN FUNCTION CLASS							
	UNDIVIDED							
	2 LANES	1.73	0.32	0.39	2.51	0.45	0.47	
	ALL LANES	2.02	0.39	0.35	3,11	0.58	0.43	
	DIVIDED							
	4 LANES	1.62	0.27	0.32	1.94	0.32	0.34	
	6 LANES	1.73	0.27	0.25	2	0.32	0,27	
	ALL LANES	1.73	0.28	0.31	2.1	0.34	0.33	
	CONTROLLED ACCESS (FULL)							
	RURAL FUNCTION CLASS							
	UNDIVIDED							
	2 LANES	2.13	0.36	0.56	2.64	0.44	0.67	
	ALL LANES	2.26	0.37	0.57	2.79	0.44	0.67	
	DIVIDED							
	4 LANES	1.07	0.16	0.45	1.11	0.16	0,46	
	5 LANES	1.01	0.16	0.47	1.04	0.16	0.5	
	6 LANES	1.11	0.23	0.51	1.23	0.24	0.55	
	ALL LANES	1.08	0.16	0.45	1.11	0.17	0.46	
.1.		MAINL	INE ACCIDEN	TS ONLY	MAINLINE & JUNCTURE ACCIDENTS			
	URBAN FUNCTION CLASS	ALL TYPE\$	WET ROAD	FIXED OBJECT	ALL TYPES	WET ROAD	FIXED OBJEC	
_	UNDIVIDED	ACC/MVM	ACC/MVM	ACC/MVM	ACC/MVM	ACC/MVM	ACC/MVM	
	ALL LANES	1.48	0.21	0.27	2.1	0.31	0.34	
	DIVIDED							
	4 LANES	1.08	0.16	0.29	1.18	0.18	0.3	
	5 LANES	0.99	0.16	0.29	1.14	0.18	0.31	
	6 LANES	1.16	0.18	0.19	1.26	0.19	0.21	
	7 LANES	1.42	0.2	0.28	1.47	0.21	0.33	

### AVERAGE INTERSECTION ACCIDENT RATES FOR STATE HIGHWAYS BY INTERSECTION TYPE (BASED ON ACCIDENT DATA January 1, 2015 TO December 31, 2016)

INTERSECTION TYPE	ALL TYPES	WET ROAD	LEFT TURN	REAR END	OVER- TAKING	RIGHT ANGLE	RIGHT TURN	HEAD ON	SIDE- SWIPE
RURAL FUNCTION CLASS	ACC/MEV	ACC/MEV	ACC/MEV	CC/ME	ACC/MEV	ACC/MEV	ACC/MEV	ACC/MEV	ACC/MEV
3 LEGGED INTERSECTIONS									
SIGNAL ALL LANES	0.26	0.04	0.03	0.09	0.03	0.03	0.01	0.00	0.00
SIGN ALL LANES	0.17	0.02	0.01	0.03	0.01	0.01	0.00	0.00	0.00
NO CONTROL ALL LANES	0.11	0.02	0.01	0.02	0.01	0.01	0.00	0.00	0.00
4LEGGED&>INTERSECTIONS									
SIGNAL ALL LANES	0.58	0.09	0.06	0.16	0.03	0.15	0.02	0.01	0.01
SIGN ALL LANES	0.35	0.05	0.03	0.05	0.01	0.1	0.01	0	0.01
NO CONTROL ALL LANES	0.23	0.05	0.02	0.05	0.01	0.04	0	0.01	0
ON RAMP (ALL CONTROL)									
MERGE W/ 1 LANE	0.19	0	0	0.19	0	0	0	0	0
MERGE W/ 2&> LANES	0.03	0.01	22	**	22	-	••	••	
OFF RAMP (ALL CONTROL)									
MERGE W/ 1 LANE	0	0	**	**	**	••		**	25.5
MERGE W/ 2&> LANES	80.0	0.01	**	0.01	0	(9.4)	(#.E.)		3434

INTERSECTION TYPE	ALL	WET	LEFT	REAR	OVER-	RIGHT	RIGHT	HEAD	SIDE-
	TYPES	ROAD	TURN	END	TAKING	ANGLE	TURN	ON	SWIPE
URBAN FUNCTION CLASS	ACC/MEV	ACC/MEV	ACC/MEV	CC/ME	ACC/MEV	ACC/MEV	ACC/MEV	ACC/MEV	ACC/MEV
3 LEGGED INTERSECTIONS									
SIGNAL 1-4 LANES	0.32	0.05	0.03	0.12	0.04	0.04	0.01	0	0.01
SIGNAL W/ LEFT TURN 5 & > LANES	0.14	0.02	0.01	0.05	0.03	0.02	0	0	0
SIGNAL W/0 LEFT TURN 5 & > LANES	0.14	0.02	0.01	0.06	0.03	0.01	0	0	0
SIGN 1-3 LANES	0.18	0.03	0.02	0.06	0.01	0.02	0	0	0
SIGN 4 LANES	0.12	0.02	0.01	0.04	0.01	0.02	0	0	0
SIGN 5 & > LANES	0.06	0.01	0	0.02	0.01	0.01	0	0	0
NO CONTROL ALL LANES	0.05	0.01	0	0.02	0.01	0	0	0	0
4 LEGGED &> INTERSECTIONS									
SIGNAL 1-4 LANES	0.52	80.0	0.05	0.21	0.06	80.0	0.02	0.01	0.01
SIGNAL W/ LEFT TURN 5 & > LANES	0.25	0.04	0.01	0.11	0.04	0.03	0.01	0	0
SIGNAL W/0 LEFT TURN 5 & > LANES	0.2	0.03	0.02	0.06	0.03	0.04	0.01	0	0
SIGN 1-3 LANES	0.29	0.04	0.03	0.08	0.02	0.07	0.01	0	0
SIGN 4 & > LANES	0.16	0.02	0.01	0.05	0.01	0.03	0	0	0
NO CONTROL ALL LANES	0.19	0.03	0.01	0.07	0.02	0.04	0.01	0	0
ON RAMP (ALL CONTROL)									
MERGE W/ 1 LANE	0.17	0	0.01	0.12	0.01	0.01	0	0	0
MERGE W/ 2 LANES	0.03	0	0	0.01	0	0	0	0	0
MERGE W/ 3&> LANES	0.01	0	0	0.01	0	0	0	0	0
OFF RAMP (ALL CONTROL)									
MERGE W/ 1 LANE	0.18	0.03	0	0.06	0.06	0.01	222		2.
MERGE W/ 2 LANES	0.04	0.01	***	0.01	0.01	155		22	**
MERGE W/ 3&> LANES	0.02	0	123	0.01	**	3434	**	**	344

## MCDOT Average Accident Rates Intersection Accident Data For 2014-2016

Intersection Functional Class	Number of Intersections	Average Rate
Rural Local / Rural Local - Unsignalized	219	0.19
Rural Major Collector / Rural Local - Unsignalized	30	0.09
Rural Major Collector / Rural Major Collector - Unsignalized	5	0.24
Rural Major Collector / Rural Minor Collector - Unsignalized	4	0.75
Rural Minor Arterial / Rural Local - Unsignalized	7	0.12
Rural Minor Collector / Rural Local - Unsignalized	145	0.17
Rural Minor Collector / Rural Minor Collector - Unsignalized	28	0.34
Urban Collector / Rural Local - Unsignalized	14	0.09
Urban Collector / Urban Collector - Signalized	37	0.99
Urban Collector / Urban Collector - Unsignalized	63	0.35
Urban Collector / Urban Local - Signalized	44	0.78
Urban Collector / Urban Local - Unsignalized	1316	0.21
Urban Local / Rural Local - Unsignalized	13	0.03
Urban Local / Urban Local - Signalized	6	0.52
Urban Local / Urban Local - Unsignalized	2285	0.27
Urban Minor Arterial / Urban Collector - Signalized	99	1.00
Urban Minor Arterial / Urban Collector - Unsignalized	26	0.57
Urban Minor Arterial / Urban Local - Signalized	227	0.51
Urban Minor Arterial / Urban Local - Unsignalized	1621	0.19
Urban Minor Arterial / Urban Minor Arterial - Signalized	131	1.16
Urban Minor Arterial / Urban Minor Arterial - Unsignalized	53	0.23
Urban Principal Arterial (Other Street) / Urban Collector - Signalized	6	0.55
Urban Principal Arterial (Other Street) / Urban Collector - Unsignalized	4	1.09
Urban Principal Arterial (Other Street) / Urban Local - Signalized	24	0.53
Urban Principal Arterial (Other Street) / Urban Local - Unsignalized	99	0.12
Urban Principal Arterial (Other Street) / Urban Minor Arterial - Signalized	14	0.98
Urban Principal Arterial (Other Street) / Urban Minor Arterial - Unsignalized	3	0.66
Urban Principal Arterial (Other Street) / Urban Principal Arterial (Other Street) - Signalized	5	
Urban Principal Arterial (Other Street) / Urban Principal Arterial (Other Street) - Unsignalized	4	0.42

### MCDOT Average Accident Rates Linear Accident Data For 2014-2016

Functional Class	Total Length (miles)	Average Rate
Rural Local	135.49	2.18
Rural Major Collector	19.48	2.39
Rural Minor Arterial	4.82	2.38
Rural Minor Collector	81.43	2.01
Urban Collector	222.33	2.34
Urban Local	501.42	5.64
Urban Minor Arterial	237.29	2.53
Urban Principal Arterial (Other Street)	15.89	2.39

	-	•	•	<b>←</b>	•	/
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	<b>†</b>	7	*	<b>^</b>	ň	7
Traffic Volume (vph)	440	287	288	333	58	198
Future Volume (vph)	440	287	288	333	58	198
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	10	15	11	11
Storage Length (ft)		0	125		0	125
Storage Lanes		1	1		1	1
Taper Length (ft)			25		25	
Right Turn on Red		Yes				Yes
Link Speed (mph)	30			30	30	
Link Distance (ft)	87			466	2098	
Travel Time (s)	2.0			10.6	47.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)						
Turn Type	NA	Perm	pm+pt	NA	Prot	pt+ov
Protected Phases	6		5	2	8	8 5
Permitted Phases		6	2			
Detector Phase	6	6	5	2	8	8 5
Switch Phase						
Minimum Initial (s)	7.0	7.0	6.0	7.0	6.0	
Minimum Split (s)	29.0	29.0	12.0	29.0	26.0	
Total Split (s)	35.0	35.0	29.0	64.0	26.0	
Total Split (%)	38.9%	38.9%	32.2%	71.1%	28.9%	
Yellow Time (s)	4.0	4.0	4.0	4.0	3.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-3.0	-3.0	-3.0	-3.0	-2.5	
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	
Lead/Lag	Lead	Lead	Lag			
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	None	C-Max	None	
Intersection Summary						

### Intersection Summary

Area Type: Other

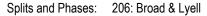
Cycle Length: 90

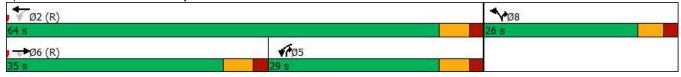
Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBT, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated





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	<b>→</b>	•	•	<b>←</b>	•	/
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	489	319	320	370	64	220
v/c Ratio	0.55	0.35	0.41	0.12	0.31	0.28
Control Delay	20.5	4.0	6.3	1.5	39.7	4.5
Queue Delay	1.4	0.4	0.0	0.0	0.0	0.0
Total Delay	22.0	4.3	6.3	1.5	39.7	4.5
Queue Length 50th (ft)	202	7	19	10	34	13
Queue Length 95th (ft)	326	47	65	26	70	49
Internal Link Dist (ft)	7			386	2018	
Turn Bay Length (ft)			125			125
Base Capacity (vph)	885	914	787	3167	437	968
Starvation Cap Reductn	219	225	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.46	0.41	0.12	0.15	0.23
Intersection Summary						

	<b>→</b>	•	•	←	•	<i>&gt;</i>	
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	<u> </u>	7	*	<b>^</b>	ሻ	7	
Traffic Volume (veh/h)	440	287	288	333	58	198	
Future Volume (veh/h)	440	287	288	333	58	198	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach	No			No	No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1945	1870	1870	
Adj Flow Rate, veh/h	489	319	320	370	64	220	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	
Percent Heavy Veh, %	2	2	2	2	2	2	
Cap, veh/h	665	564	930	3101	168	872	
Arrive On Green	0.36	0.36	0.90	1.00	0.09	0.10	
Sat Flow, veh/h	1870	1585	1781	3793	1781	1585	
Grp Volume(v), veh/h	489	319	320	370	64	220	
Grp Sat Flow(s), veh/h/ln	1870	1585	1781	1848	1781	1585	
Q Serve(g_s), s	20.5	14.6	0.0	0.0	3.0	0.0	
Cycle Q Clear(g_c), s	20.5	14.6	0.0	0.0	3.0	0.0	
Prop In Lane		1.00	1.00	3.0	1.00	1.00	
Lane Grp Cap(c), veh/h	665	564	930	3101	168	872	
V/C Ratio(X)	0.74	0.57	0.34	0.12	0.38	0.25	
Avail Cap(c_a), veh/h	665	564	930	3101	455	1127	
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	0.93	0.93	1.00	1.00	
Uniform Delay (d), s/veh	25.3	23.4	2.0	0.0	38.3	10.6	
Incr Delay (d2), s/veh	7.1	4.1	0.1	0.1	0.5	0.1	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	10.1	5.9	0.6	0.0	1.3	2.1	
Unsig. Movement Delay, s/veh		0.0	0.0	0.0	1.0	۷.۱	
LnGrp Delay(d),s/veh	32.4	27.5	2.1	0.1	38.8	10.6	
LnGrp LOS	02.4 C	27.5 C	Α	Α	50.0 D	В	
Approach Vol, veh/h	808			690	284	<u> </u>	
Approach Delay, s/veh	30.5			1.0	17.0		
Approach LOS	30.5 C			1.0 A	17.0 B		
Apploauti LOS	U			A	D		
Timer - Assigned Phs		2			5	6	
Phs Duration (G+Y+Rc), s		78.5			43.5	35.0	
Change Period (Y+Rc), s		6.0			6.0	6.0	
Max Green Setting (Gmax), s		58.0			23.0	29.0	
Max Q Clear Time (g_c+l1), s		2.0			2.0	22.5	
Green Ext Time (p_c), s		1.0			0.5	1.3	
· · ·							
Intersection Summary			40.0				
HCM 6th Ctrl Delay			16.9				
HCM 6th LOS			В				

	•	<b>→</b>	<b>←</b>	•	<b>&gt;</b>	4
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	ħ.	<b>†</b>	<b>∱</b> 1>		۲	7
Traffic Volume (vph)	194	505	374	65	149	357
Future Volume (vph)	194	505	374	65	149	357
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10
Storage Length (ft)	125			125	0	125
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		30	30		30	
Link Distance (ft)		466	202		2222	
Travel Time (s)		10.6	4.6		50.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)						
Turn Type	pm+pt	NA	NA		Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases	2					4 5
Detector Phase	5	2	6		4	4 5
Switch Phase						
Minimum Initial (s)	6.0	6.0	11.0		6.0	
Minimum Split (s)	11.0	11.0	29.0		26.0	
Total Split (s)	25.0	64.0	39.0		26.0	
Total Split (%)	27.8%	71.1%	43.3%		28.9%	
Yellow Time (s)	3.0	3.0	4.0		3.5	
All-Red Time (s)	2.0	2.0	2.0		1.5	
Lost Time Adjust (s)	-2.0	-3.0	-3.0		-2.0	
Total Lost Time (s)	3.0	2.0	3.0		3.0	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Recall Mode	None	C-Max	C-Max		None	
Intersection Summary						

### Intersection Summary

Area Type: Other

Cycle Length: 90

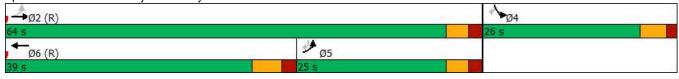
Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Splits and Phases: 207: Lyell & Dewey



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	•	-	←	<b>\</b>	4
Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	216	561	488	166	397
v/c Ratio	0.28	0.42	0.31	0.58	0.48
Control Delay	2.2	2.1	18.4	44.1	10.4
Queue Delay	0.0	0.3	0.0	0.0	0.0
Total Delay	2.2	2.4	18.4	44.1	10.4
Queue Length 50th (ft)	9	24	104	98	84
Queue Length 95th (ft)	20	45	162	161	109
Internal Link Dist (ft)		386	122	2142	
Turn Bay Length (ft)	125				125
Base Capacity (vph)	785	1341	1572	422	919
Starvation Cap Reductn	0	315	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.28	0.55	0.31	0.39	0.43
Intersection Summary					

	۶	<b>→</b>	+	4	<b>\</b>	4
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	T T	<u> </u>	<b>↑</b> ↑	TIBIC	) T	7
Traffic Volume (veh/h)	194	505	374	65	149	357
Future Volume (veh/h)	194	505	374	65	149	357
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0	- 0	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	1.00	No	No	1.00	No	1.00
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	216	561	416	72	166	397
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	741	1288	1213	208	455	405
Arrive On Green	0.49	1.00	0.40	0.40	0.26	0.26
Sat Flow, veh/h	1781	1870	3126	521	1781	1585
Grp Volume(v), veh/h	216	561	242	246	166	397
Grp Sat Flow(s), veh/h/ln	1781	1870	1777	1777	1781	1585
	0.0	0.0	8.5	8.7	6.9	22.4
Q Serve(g_s), s	0.0	0.0	8.5	8.7	6.9	22.4
Cycle Q Clear(g_c), s	1.00	0.0	0.0	0.29		1.00
Prop In Lane	741	1200	711	711	1.00 455	405
Lane Grp Cap(c), veh/h		1288 0.44				0.98
V/C Ratio(X)	0.29		0.34	0.35	0.36	
Avail Cap(c_a), veh/h	741	1288	711	711	455	405
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	1.00	1.00	0.84	0.84
Uniform Delay (d), s/veh	9.3	0.0	18.8	18.8	27.5	33.3
Incr Delay (d2), s/veh	0.1	0.9	1.3	1.3	0.2	35.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.3	3.7	3.7	2.9	21.3
Unsig. Movement Delay, s/veh				•		
LnGrp Delay(d),s/veh	9.4	0.9	20.1	20.1	27.7	68.9
LnGrp LOS	Α	Α	С	С	С	E
Approach Vol, veh/h		777	488		563	
Approach Delay, s/veh		3.3	20.1		56.7	
Approach LOS		Α	С		Е	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		64.0		26.0	25.0	39.0
Change Period (Y+Rc), s		5.0		5.0	5.0	6.0
Max Green Setting (Gmax), s		59.0		21.0	20.0	33.0
Max Q Clear Time (g_c+l1), s		2.0		24.4	2.0	10.7
Green Ext Time (p_c), s		1.4		0.0	0.5	1.1
`` ,		1.7		0.0	0.0	1.1
Intersection Summary						
HCM 6th Ctrl Delay			24.2			
HCM 6th LOS			С			

	-	•	•	←	4	<b>/</b>
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	<b>†</b>	7	ሻ	<b>†</b> †	Ŋ	7
Traffic Volume (vph)	526	215	281	588	157	350
Future Volume (vph)	526	215	281	588	157	350
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	10	15	11	11
Storage Length (ft)		0	125		0	125
Storage Lanes		1	1		1	1
Taper Length (ft)			25		25	
Right Turn on Red		Yes				Yes
Link Speed (mph)	30			30	30	
Link Distance (ft)	88			466	2098	
Travel Time (s)	2.0			10.6	47.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)						
Turn Type	NA	Perm	pm+pt	NA	Prot	pt+ov
Protected Phases	6		5	2	8	8 5
Permitted Phases		6	2			
Detector Phase	6	6	5	2	8	8 5
Switch Phase						
Minimum Initial (s)	7.0	7.0	6.0	7.0	6.0	
Minimum Split (s)	29.0	29.0	12.0	29.0	26.0	
Total Split (s)	47.0	47.0	27.0	74.0	26.0	
Total Split (%)	47.0%	47.0%	27.0%	74.0%	26.0%	
Yellow Time (s)	4.0	4.0	4.0	4.0	3.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	-3.0	-3.0	-3.0	-3.0	-2.5	
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	
Lead/Lag	Lead	Lead	Lag			
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	None	C-Max	None	
Intersection Summary						

### Intersection Summary

Area Type: Other

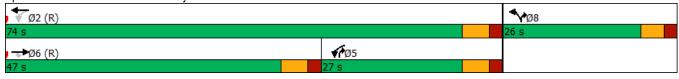
Cycle Length: 100 Actuated Cycle Length: 100

Offset: 92 (92%), Referenced to phase 2:WBTL and 6:EBT, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Splits and Phases: 206: Broad & Lyell



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	<b>→</b>	•	<	<b>←</b>	•	/
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	584	239	312	653	174	389
v/c Ratio	0.65	0.27	0.49	0.22	0.59	0.49
Control Delay	24.2	3.4	13.6	1.5	46.0	11.0
Queue Delay	1.4	0.4	0.0	0.0	0.0	0.0
Total Delay	25.7	3.7	13.6	1.5	46.0	11.0
Queue Length 50th (ft)	323	16	58	8	103	80
Queue Length 95th (ft)	466	16	143	35	161	142
Internal Link Dist (ft)	8			386	2018	
Turn Bay Length (ft)			125			125
Base Capacity (vph)	897	882	641	2991	393	868
Starvation Cap Reductn	152	282	0	0	0	0
Spillback Cap Reductn	0	0	0	111	2	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.40	0.49	0.23	0.45	0.45
Intersection Summary						

	<b>→</b>	•	•	<b>←</b>	•	<i>&gt;</i>	
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	<b>†</b>	7	*	<b>†</b> †	ሻ	7	_
Traffic Volume (veh/h)	526	215	281	588	157	350	
Future Volume (veh/h)	526	215	281	588	157	350	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach	No			No	No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1945	1870	1870	
Adj Flow Rate, veh/h	584	239	312	653	174	389	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	
Percent Heavy Veh, %	2	2	2	2	2	2	
Cap, veh/h	823	697	739	2933	261	753	
Arrive On Green	0.44	0.44	0.65	1.00	0.15	0.15	
Sat Flow, veh/h	1870	1585	1781	3793	1781	1585	
Grp Volume(v), veh/h	584	239	312	653	174	389	
Grp Sat Flow(s), veh/h/ln	1870	1585	1781	1848	1781	1585	
Q Serve(g_s), s	25.4	9.9	0.0	0.0	9.2	0.0	
Cycle Q Clear(g_c), s	25.4	9.9	0.0	0.0	9.2	0.0	
Prop In Lane		1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	823	697	739	2933	261	753	
V/C Ratio(X)	0.71	0.34	0.42	0.22	0.67	0.52	
Avail Cap(c_a), veh/h	823	697	739	2933	410	885	
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	0.82	0.82	0.98	0.98	
Uniform Delay (d), s/veh	22.8	18.5	10.0	0.0	40.4	18.3	
Incr Delay (d2), s/veh	5.1	1.3	0.1	0.1	1.1	0.2	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	11.9	3.8	2.6	0.1	4.1	6.1	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	27.9	19.8	10.1	0.1	41.5	18.5	
LnGrp LOS	С	В	В	A	D	В	
Approach Vol, veh/h	823			965	563		į
Approach Delay, s/veh	25.6			3.4	25.6		
Approach LOS	C			A	C		
• •				,,			1
Timer - Assigned Phs		2			5	6	
Phs Duration (G+Y+Rc), s		82.4			35.4	47.0	
Change Period (Y+Rc), s		6.0			6.0	6.0	
Max Green Setting (Gmax), s		68.0			21.0	41.0	
Max Q Clear Time (g_c+I1), s		2.0			2.0	27.4	
Green Ext Time (p_c), s		1.9			0.5	1.9	
Intersection Summary							
HCM 6th Ctrl Delay			16.5				ĺ
HCM 6th LOS			В				

	٠	<b>→</b>	<b>←</b>	•	<b>\</b>	4
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	ሻ	<b>†</b>	<b>∱</b> ∱		ሻ	7
Traffic Volume (vph)	351	573	672	98	66	329
Future Volume (vph)	351	573	672	98	66	329
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10
Storage Length (ft)	125			125	0	125
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		30	30		30	
Link Distance (ft)		466	202		2222	
Travel Time (s)		10.6	4.6		50.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)						
Turn Type	pm+pt	NA	NA		Prot	Perm
Protected Phases	5	2	6		3	
Permitted Phases	2					3 5
Detector Phase	5	2	6		3	3 5
Switch Phase						
Minimum Initial (s)	3.0	6.0	11.0		6.0	
Minimum Split (s)	8.0	11.0	29.0		26.0	
Total Split (s)	30.0	70.0	40.0		30.0	
Total Split (%)	30.0%	70.0%	40.0%		30.0%	
Yellow Time (s)	5.0	3.0	4.0		3.5	
All-Red Time (s)	0.0	2.0	2.0		1.5	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	
Total Lost Time (s)	5.0	5.0	6.0		5.0	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	_					
Recall Mode	None	C-Max	C-Max		None	
Intersection Summary						
Area Type:	Other					

Area Type: Other

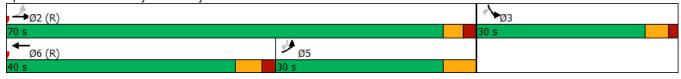
Cycle Length: 100 Actuated Cycle Length: 100

Offset: 92 (92%), Referenced to phase 2:EBTL and 6:WBT, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Splits and Phases: 207: Lyell & Dewey



07/23/2018 Synchro 10 Report TYLI Page 4

	٠	<b>→</b>	←	<b>\</b>	4
Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	390	637	856	73	366
v/c Ratio	0.58	0.45	0.53	0.48	0.60
Control Delay	11.0	2.8	22.4	57.3	27.9
Queue Delay	14.1	0.3	0.0	0.0	0.0
Total Delay	25.1	3.1	22.4	57.3	27.9
Queue Length 50th (ft)	56	42	241	47	182
Queue Length 95th (ft)	115	99	307	92	283
Internal Link Dist (ft)		386	122	2142	
Turn Bay Length (ft)	125				125
Base Capacity (vph)	671	1405	1622	413	838
Starvation Cap Reductn	261	289	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.95	0.57	0.53	0.18	0.44
Intersection Summary					

	۶	<b>→</b>	+	4	<b>\</b>	4		
Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	7	<u></u>	<b>†</b> ‡	WEIT	<u> </u>	7		
Traffic Volume (veh/h)	351	573	672	98	66	329		
Future Volume (veh/h)	351	573	672	98	66	329		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	•	•	1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Work Zone On Approach	1.00	No	No	1.00	No	1.00		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870		
Adj Flow Rate, veh/h	390	637	747	109	73	366		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	595	1222	1058	154	439	391		
Arrive On Green	0.51	1.00	0.34	0.34	0.25	0.25		
Sat Flow, veh/h	1781	1870	3205	454	1781	1585		
Grp Volume(v), veh/h	390	637	426	430	73	366		
Grp Sat Flow(s), veh/h/ln	1781	1870	1777	1789	1781	1585		
Q Serve(g_s), s	4.9	0.0	20.8	20.9	3.2	22.6		
Cycle Q Clear(g_c), s	4.9	0.0	20.8	20.9	3.2	22.6		
Prop In Lane	1.00			0.25	1.00	1.00		
Lane Grp Cap(c), veh/h	595	1222	604	608	439	391		
V/C Ratio(X)	0.66	0.52	0.71	0.71	0.17	0.94		
Avail Cap(c_a), veh/h	595	1222	604	608	445	396		
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.78	0.78	1.00	1.00	0.92	0.92		
Uniform Delay (d), s/veh	17.7	0.0	28.7	28.7	29.6	36.9		
Incr Delay (d2), s/veh	2.0	1.2	6.8	6.8	0.1	27.3		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	5.0	0.4	9.8	9.9	1.4	11.6		
Unsig. Movement Delay, s/vel	h							
LnGrp Delay(d),s/veh	19.7	1.2	35.5	35.4	29.6	64.2		
LnGrp LOS	В	Α	D	D	С	Е		
Approach Vol, veh/h		1027	856		439			
Approach Delay, s/veh		8.3	35.4		58.5			
Approach LOS		Α	D		Е			
Timer - Assigned Phs		2			5	6	8	
Phs Duration (G+Y+Rc), s		70.3			30.3	40.0	29.7	
Change Period (Y+Rc), s		5.0			5.0	6.0	5.0	
Max Green Setting (Gmax), s		65.0			25.0	34.0	25.0	
Max Q Clear Time (g_c+l1), s		2.0			6.9	22.9	24.6	
Green Ext Time (p_c), s		1.6			1.6	1.8	0.1	
Intersection Summary								
HCM 6th Ctrl Delay			27.8					
HCM 6th LOS			27.0 C					
HOW OUT LOS			C					

### **APPENDIX 'E'**

### **Safety Assessment Checklist**



Exhibit 7-1 Resurfacing ADA and Safety Assessment Form (Page 1 of 2)

		1	PIL. PII or HAL?	ADT: 17,724 (2013)	ĺ						
PIN:	4CR004	Date: 4/23/2018	Posted Speed:								
Safe	ety Assessment	Team Design: Traffic: Maintenance	City Speed Limit 30 mph								
✓	Element		Guidance		Comments						
Eler	nents for All S	ingle <u>and</u> Multicourse R	Resurfacing Projects (1R, 2	R, and 3R):							
✓	Signing	To be determiend during final design.									
✓	Pavement Markings										
	Delineation	Install per the National N	MUTCD and NYS Supplemen	nt.	NA						
✓	ADA	1R projects: curb ramps 2012 must be in conform Elements for the Design HDM Section 7.3.2.1. Si unless they are altered a 2R / 3R projects: all per values in the Critical Ele	Sidewalk curb ramps and crosswalks will be upgraded to comply with current ADA standards. Hazardous sidewalks will be replaced.								
			replacement pedestrian sign								
			R projects must be justified p								
	Rumble Strips	El 16- 014.	red by <u>El 13-021</u> , and SHAF	RDS in accordance with	NA						
✓	Sight Distance	speed. Clear and grub observed to be substant calculations are not requestion sight dist through and right turners ag vertical curve SS Horizontal SSD.	vegetation to improve the fo ially less than the standard ( ired):	alized intersections and for left, ns and major driveways. es. th sight distances that are	Site distances are acceptable.						
<b>✓</b>	Fixed Objects	within the ROW based on the outside of a curve within the prevailing cleaters. Reesta crash worthy, shield by s	on engineering judgment fron e or installation of traversable ar zone). ablish the clear zone and rer	n the prevailing clear area and n a field visit (e.g., tree removal e driveway culvert end sections nove, relocate, modify to make lelineate any fixed objects. For 10.3.1.2 B	No fixed objects need to be removed.						
	Guide Rail	Review the guide rail for  Nonfunctioning or sev  Guide rail height (HD overlay thickness.  Deflection distance (House of the error of	:: verely deteriorated rail(HDN	// §10.3.1.2 B) Is) considering the proposed -3). HDM §10.2.2.1).	NA						
	Bridge Rail Transitions	The Regional Structures Design Quality Assurance	Group, Regional Design Gr	oup, Main Office Structures, and ed, as needed, to help identify	NA						

02/27/17 §7.2.1

Exhibit 7-1 Resurfacing ADA and Safety Assessment Form (Page 2 of 2)

	nibit /-1	Resurfacing ADA and Safety Assessment Form (Page 2 of 2)													
✓	Element	Guidance	Comments												
	Rail Road Crossing	Contact Regional Rail Coordinator. Contact Office of Design if replacing crossing surface as required per HDM Ch 23.	NA												
	Shoulder Resurfacing	Unpaved, stabilized shoulders should be paved a minimum of 2' beyond the travelled way in uncurbed sections to reinforce the traveled way, for occasional bicyclists, and to improve safety. Design criteria for 2R/3R may require a wider width. A 1:10 pavement slope may be used to transition between the travel way paving and a paved shoulder that will not be resurfaced. Requires milling a longitudinal rebate and cannot exceed max rollover rate of 10% for ≤ 4' shoulders and 8% for wider shoulders.	NA												
	Edge Drop- Offs	NA													
	Super- elevation	Identify where the advisory speed, ball bank indicator, accelerometer, or record plans reveal superelevation that is less than recommended for the posted speed (using AASHTO Method 2 noted in HDM §5.7.3). Improve superelevation (up to the maximum rate as necessary using AASHTO Superelevation Distribution Method 2) to have the recommended speed equal to the posted speed. Where the maximum rate is insufficient, install advisory speed signs as needed and consider additional treatments (e.g., chevrons, roadside clearing), as needed.	NA												
	Utilities	Manholes, valves, frames and grates are to be adjusted in accordance with Sections 655 and 663 of the Standard Specifications. Poles, guy wires, sign posts, trees, and other obstructions should be 18" or more from the face of curb. In uncurbed areas, they should be 48" or more from the edge line. Vertical drops at grates or frames should be addressed if they exceed 1" and horizontal gaps parallel to the direction of traffic should be addressed if they exceed 5/8"	Adjustment and/or replacement of receiving basins frame and grates and manhole frame and covers will be done.												
Add	litional Elemer	nts for 2R and 3R Projects:													
	Super- elevation	For Freeway projects, the superelevation is to be improved to meet the values in HDM Ch 2, Exhibits 2-13a or 2-14a (which utilizes AASHTO Superelevation Distribution Method 5).	NA												
	Speed Change Lanes	Speed change lanes should meet AASHTO "Green Book" Ch 10 standards. Shoulders for speed change lanes should meet HDM §2.7.5.2 and §2.7.5.3	NA												
	Clear Zone(s)	Establish based on HDM §10.3.2.2 A for non-freeway and HDM §10.2.1 for freeways. Check all points of need (HDM §10.2.2.1).	NA												
	Traffic Signals	Signal heads should be upgraded to meet current requirements. Detection systems should be evaluated for actuated signals and considered for fixed-time signals. New traffic signals that meet the signal warrants may be included.	NA												
	Shoulder Widening	Shoulders should be widened to 2' min on local rural roads and low speed collectors. 4' min is used for other nonfreeway rural facilities for crash avoidance, bicyclists, and pedestrians.	NA												
	Lane Widening	Non-freeway lanes may be widened per HDM Exhibits 7-5 and 7-9. New through travel lanes are not permitted.	NA												
	Design Vehicle	Intersections should accommodate the design vehicle without encroachment into other travel lanes or turning lanes.	NA												
	Driveways	Driveways shall meet the spirit and intent of the most recent "Policy and Standards for the Design of Entrances to State Highways" in HDM Chapter 5, Appendix 5A.	NA												
	Turn Lanes	Turn lanes should meet the requirements of HDM §5.9.8.2	NA												
	Curbing	Curbing must meet the requirements of HDM §10.2.2.4. For freeways, curbing that cannot be eliminated should be replaced with the 1:3 slope, 4" high traversable curb.	NA												
	Drainage	Closed drainage work may include new closed drainage structures, culverts, and the cleaning and repair of existing systems. Subsurface utility exploration should be considered for closed drainage system modifications.	NA												
	Pedestrian & Bicycle	Pedestrian facilities must meet the requirements of HDM Chapter 18, and the values shown in the <u>Critical Elements for the Design, Layout and Acceptance of Pedestrian Facilities</u> table. Consider installing crosswalks and pedestrian push buttons at signals. Install pedestrian countdown timers as needed. Minimum shoulder width of 4' if no curbing.	NA												

02/27/17 §7.2.1

### **APPENDIX 'F'**

# Curb Ramp Inventory Form and Photos

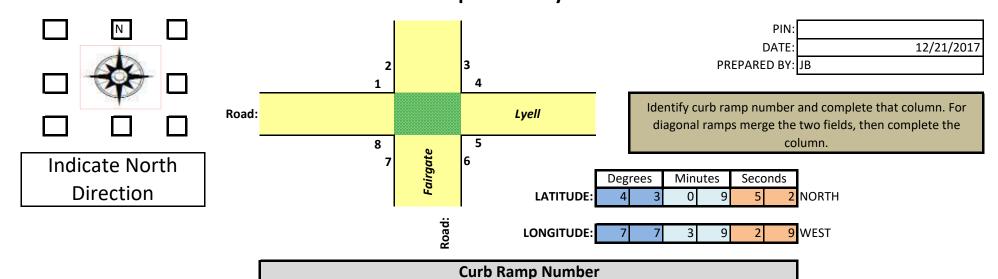


NON-COMPLIANT ADA RAMP LOCATIONS													
STREET NAME	RAMP QUADRANT	NON-COMPLIANT JUSTIFICATION (see Notes)											
CAMPBELL PARK	SE	EXISTING RIGHT OF WAY AND BUILDING											
SUNSET STREET	NW	EXISTING RIGHT OF WAY											
GLIDE STREET	SW	EXISTING RIGHT OF WAY											
	SE	EXISTING RIGHT OF WAY AND BUILDING											
McNAUGHTON STREET	NE	EXISTING RIGHT OF WAY AND BUILDING											
HAGUE STREET	SW	EXISTING RIGHT OF WAY AND BUILDING											
MART PLACE	SE	EXISTING RIGHT OF WAY											
MURRAY STREET	NW	EXISTING RIGHT OF WAY AND BUILDING											
	NE	EXISTING RIGHT OF WAY AND BUILDING											
MYRTLE STREET	NW	EXISTING RIGHT OF WAY AND BUILDING											
CHILD STREET	SE	EXISTING RIGHT OF WAY AND BUILDING											
ANGLE STREET	NW	EXISTING RIGHT OF WAY											
	NE	EXISTING RIGHT OF WAY											
DEWEY AVENUE	NE	EXISTING RIGHT OF WAY											
MOORE STREET	SE	EXISTING RIGHT OF WAY											
PARKWAY	NW	EXISTING RIGHT OF WAY											
	NE	EXISTING RIGHT OF WAY AND BUILDING											
OAK STREET	SW	EXISTING RIGHT OF WAY											
	SE	EXISTING RIGHT OF WAY											
DAUS ALLEY	NE	EXISTING RIGHT OF WAY AND BUILDING											
SARATOGA AVENUE	SW	EXISTING RIGHT OF WAY AND BUILDING											
	SE	EXISTING RIGHT OF WAY											
SPENCER STREET	NE	EXISTING RIGHT OF WAY AND BUILDING											
CARROLL ALLEY	NE	EXISTING RIGHT OF WAY AND BUILDING											
VERONA STREET	SE	EXISTING RIGHT OF WAY											
PLYMOUTH AVENUE	NW	EXISTING CONCRETE RETAINING WALL											
FRANKFORT STREET	SW	EXISTING RIGHT OF WAY AND BUILDING											
	SE	EXISTING RIGHT OF WAY											

### Notes:

- 1. The required design slopes at the ramps identified above cannot be fully met due to restrictions as noted.
- 2. Improvements to these ramps will be made to the maximum extent practicable, including slopes, concrete repair and installation of detectable warning units
- 3. The final determination for justification of nonstandard features will be made during the construction phase.

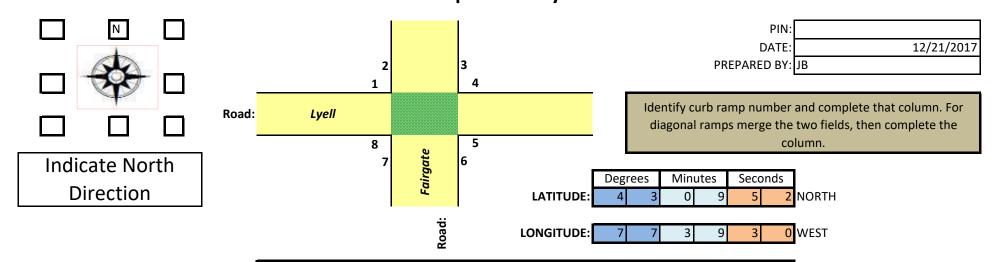




Ramp Field Measured Values

### Criteria **Feature** 1 2 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 7.7 Cross Slope (%) 1.7 Length (ft) 6 Ramp Width (ft) 3.5 RT RT LT RT LT RT LT RT LT LT RT LT RT LT LT RT Side Flare Slope (%) 12.4 11.5 Length (ft) Turning Space (top Width (ft) 5.25 of ramp) 2.6 Cross Slope (%) **Dome Orientation** n/a Color n/a **Detectable** Length (ft) n/a Warning n/a Width (ft) Condition n/a none **Transition to** Vertical Difference (in) 0 Roadway Length (ft) 3.42 Width (ft) 3.5 **Clear Space** (bottom of ramp) Cross Slope (%) 0.5

Counter Slope (%)



**Curb Ramp Number** 

### Ramp Field Measured Values Criteria **Feature** 1 2 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 8.8 7.9 Cross Slope (%) Length (ft) 8 Ramp Width (ft) 3 RT RT RT LT RT LT LT RT LT LT RT LT RT LT LT RT Side Flare Slope (%) 12.9 21.2 Length (ft) 5.42 Turning Space (top Width (ft) 4.92 of ramp) 4.7 Cross Slope (%) **Dome Orientation** n/a n/a Color **Detectable** Length (ft) n/a Warning n/a Width (ft) Condition n/a none **Transition to** Vertical Difference (in) -0.5 Roadway Length (ft) 4 Width (ft) **Clear Space** 3 (bottom of ramp) Cross Slope (%) 1.7 3.7 Counter Slope (%)

### **Lyell Ave & Fairgate St**

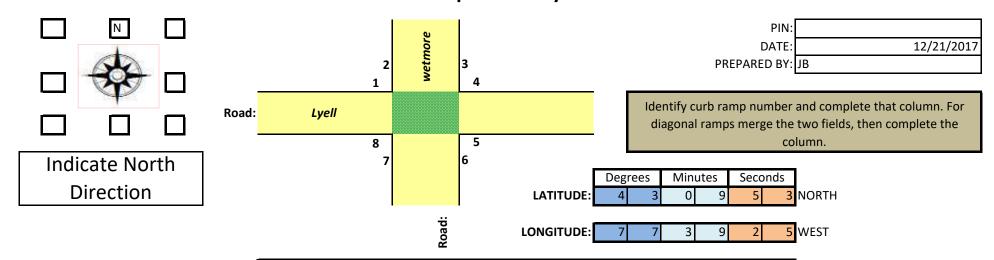


SE Corner – CW 6



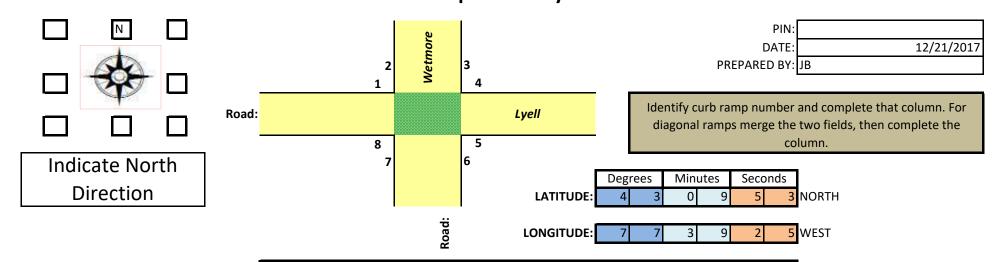
SW Corner – CW 7





**Curb Ramp Number** 

	Ramp Field Measured Values																				
Criteria	:	1		2 3		4		5		6		7		8		Notes					
Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft) Width (ft)				11.4 4 11.75 6.75																	
Side Flare Slope (%)	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT					
Length (ft) Width (ft) Cross Slope (%)			4.	5 33																	
Dome Orientation Color Length (ft) Width (ft) Condition				n/a n/a n/a n/a																	none
Vertical Difference (in)				1																	
Length (ft) Width (ft) Cross Slope (%)			6.	75 3																	
	Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft) Width (ft)  Side Flare Slope (%)  Length (ft) Width (ft) Cross Slope (%)  Dome Orientation Color Length (ft) Width (ft) Condition  Vertical Difference (in)  Length (ft) Width (ft)	Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft) Width (ft)  Side Flare Slope (%)  Length (ft) Width (ft) Cross Slope (%)  Dome Orientation Color Length (ft) Width (ft) Condition  Vertical Difference (in)  Length (ft) Width (ft) Cross Slope (%)	Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft) Width (ft)  Side Flare Slope (%)  Length (ft) Width (ft)  Cross Slope (%)  Dome Orientation Color Length (ft) Width (ft) Condition  Vertical Difference (in)  Length (ft) Width (ft) Cross Slope (%)	Standard Sheet Type	Standard Sheet Type	Standard Sheet Type	Criteria         1         2         3           Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft) Width (ft) Side Flare Slope (%)  Length (ft) Width (ft) Cross Slope (%)  Dome Orientation Color Length (ft) Width (ft) Condition  Vertical Difference (in)  Length (ft) Width (ft) Cross Slope (%)  O.7  Dome Orientation Color Length (ft) Width (ft) Condition  Vertical Difference (in)  Length (ft) Width (ft) Salar  A UT   RT   LT   RT   LT   RT   RT   LT   RT   LT   R	Criteria         1         2         3         4           Standard Sheet Type         I1.4         I1.4         I1.4         I1.4         I1.4         I1.75         I1.4         I1.75         I1.75 <th>Criteria         1         2         3         4           Standard Sheet Type Running Slope (%)           Cross Slope (%)         4</th> <th>Criteria         1         2         3         4           Standard Sheet Type Running Slope (%)           Cross Slope (%)         11.4             Length (ft)         4             Width (ft)         6.75             Side Flare Slope (%)         10.8         n/a             Length (ft)         5   </th> <th>Criteria       1       2       3       4       5         Standard Sheet Type Running Slope (%)         Cross Slope (%)       4      </th> <th>Criteria         1         2         3         4         5           Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft) Width (ft)  Side Flare Slope (%)  Length (ft) Width (ft)  Cross Slope (%)  Dome Orientation Color Length (ft) Width (ft) Cross Slope (%)  Dome Orientation Color Length (ft) Width (ft) Condition  Vertical Difference (in)  Length (ft) Width (ft) Coross Slope (%)  Orr  Length (ft) Side Flare Slope (%) Side</th> <th>Criteria         1         2         3         4         5         6           Standard Sheet Type Running Slope (%)           Cross Slope (%)         11.4         3         4         4         3         4         5         6         4</th> <th>Criteria         1         2         3         4         5         6         7           Standard Sheet Type Running Slope (%)         11.4  </th> <th>Criteria         1         2         3         4         5         6         7           Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft) Width (ft)         11.4  </th> <th>Criteria         1         2         3         4         5         6         7         8           Standard Sheet Type           Running Slope (%)         11.4  </th> <th>Criteria         1         2         3         4         5         6         7         8           Standard Sheet Type Running Slope (%)           Cross Slope (%)         11.4         3         4         3         4         3         4         3         4         3         4</th>	Criteria         1         2         3         4           Standard Sheet Type Running Slope (%)           Cross Slope (%)         4	Criteria         1         2         3         4           Standard Sheet Type Running Slope (%)           Cross Slope (%)         11.4             Length (ft)         4             Width (ft)         6.75             Side Flare Slope (%)         10.8         n/a             Length (ft)         5	Criteria       1       2       3       4       5         Standard Sheet Type Running Slope (%)         Cross Slope (%)       4	Criteria         1         2         3         4         5           Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft) Width (ft)  Side Flare Slope (%)  Length (ft) Width (ft)  Cross Slope (%)  Dome Orientation Color Length (ft) Width (ft) Cross Slope (%)  Dome Orientation Color Length (ft) Width (ft) Condition  Vertical Difference (in)  Length (ft) Width (ft) Coross Slope (%)  Orr  Length (ft) Side Flare Slope (%) Side	Criteria         1         2         3         4         5         6           Standard Sheet Type Running Slope (%)           Cross Slope (%)         11.4         3         4         4         3         4         5         6         4	Criteria         1         2         3         4         5         6         7           Standard Sheet Type Running Slope (%)         11.4	Criteria         1         2         3         4         5         6         7           Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft) Width (ft)         11.4	Criteria         1         2         3         4         5         6         7         8           Standard Sheet Type           Running Slope (%)         11.4	Criteria         1         2         3         4         5         6         7         8           Standard Sheet Type Running Slope (%)           Cross Slope (%)         11.4         3         4         3         4         3         4         3         4         3         4				

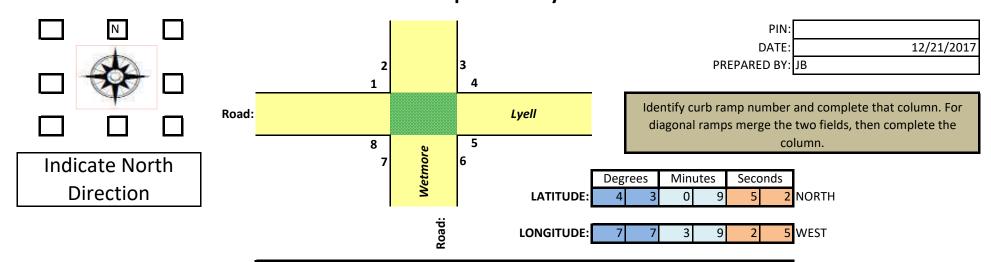


Curb Ramp Number
Ramp Field Measured Values

### Criteria **Feature** 1 2 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 8.9 Cross Slope (%) 8.3 Length (ft) 12.5 Ramp Width (ft) 4.5 RT LT RT LT RT RT RT LT RT LT LT LT LT RT LT RT Side Flare Slope (%) 7.8 7.9 Length (ft) 5 Turning Space (top Width (ft) 5 of ramp) 1.6 Cross Slope (%) **Dome Orientation** n/a n/a Color **Detectable** Length (ft) n/a Warning Width (ft) n/a Condition n/a none **Transition to** Vertical Difference (in) 0 Roadway Length (ft) 5 Width (ft) 4.5 **Clear Space** (bottom of ramp) Cross Slope (%) 3

3.3

Counter Slope (%)

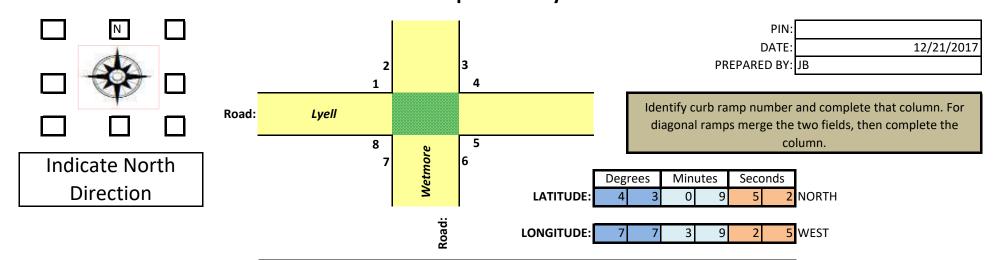


**Curb Ramp Number** 

### Ramp Field Measured Values Criteria **Feature** 1 2 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 7.1 Cross Slope (%) 7.4 Length (ft) 9.42 Ramp Width (ft) 5.42 RT RT LT RT LT RT LT RT LT LT RT LT RT LT LT RT Side Flare Slope (%) 6.7 16.8 Length (ft) Turning Space (top Width (ft) of ramp) 1.9 Cross Slope (%) **Dome Orientation** n/a n/a Color **Detectable** Length (ft) n/a Warning n/a Width (ft) Condition n/a none **Transition to** Vertical Difference (in) 0 Roadway Length (ft) 5.5 Width (ft) 5.42 **Clear Space** (bottom of ramp) Cross Slope (%) 1.4

Counter Slope (%)

1.8



Curb Ramp Number												
	Rar	ကp Field Me	easured Val	ues								

Feature	Criteria	:	1		2	3	3	4	1	5	5	6	5	7		7 8		Notes	
Ramp	Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft) Width (ft)													8. 9. 9. 4.0	.2 75				
	Side Flare Slope (%)	LT	RT	<b>LT</b> 6.3	<b>RT</b> 8.9	LT	RT												
Turning Space (top of ramp)	Length (ft) Width (ft) Cross Slope (%)													5					
Detectable Warning	Dome Orientation Color Length (ft) Width (ft) Condition													n, n, n, n,	/a /a /a			none	
Transition to Roadway	Vertical Difference (in)													C	)				
Clear Space (bottom of ramp)	Length (ft) Width (ft) Cross Slope (%) Counter Slope (%)																		

### **Lyell Ave & Wetmore Park**



NW Corner – CW 2



**NE Corner – CW 3** 



### **Lyell Ave & Wetmore Park**



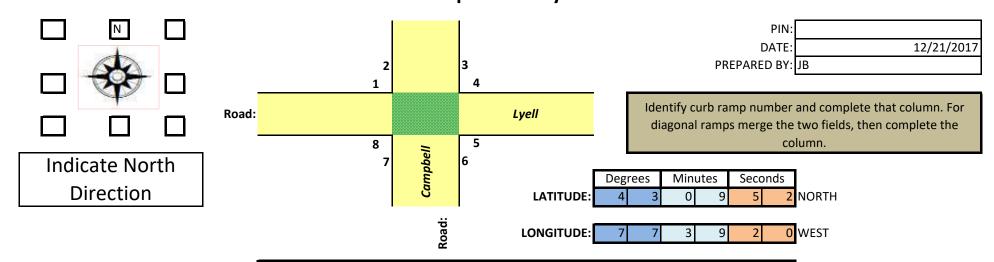
SE Corner – CW 6



SW Corner – CW 7

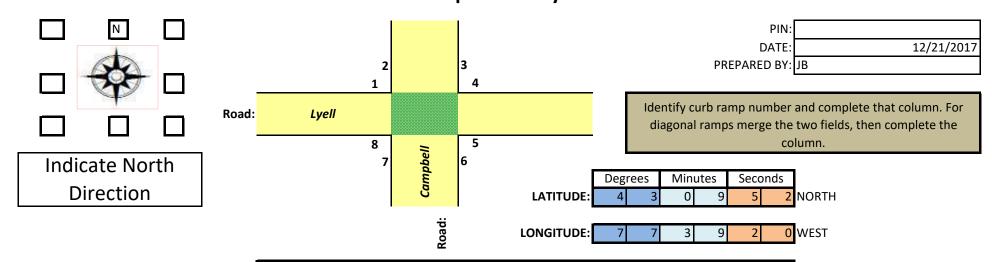


engineers | planners | scientists



**Curb Ramp Number** 

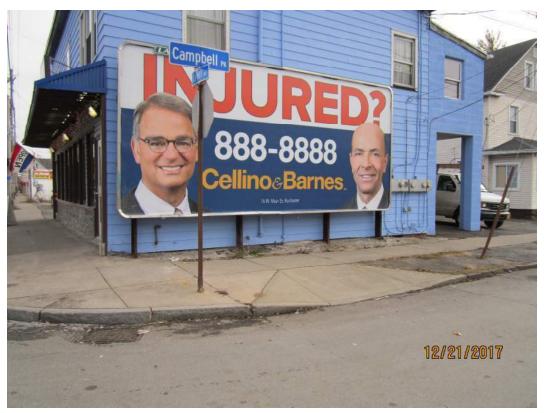
### Ramp Field Measured Values Criteria **Feature** 1 2 3 4 5 6 7 8 **Notes** Standard Sheet Type Running Slope (%) 11.9 Cross Slope (%) 0.1 5.5 Length (ft) Ramp Width (ft) 6.42 RT RT RT LT RT LT RT LT LT RT LT RT LT LT LT RT Side Flare Slope (%) 11.3 6.5 Length (ft) 4.75 Turning Space (top Width (ft) 4.25 of ramp) 1.3 Cross Slope (%) **Dome Orientation** n/a none Color n/a **Detectable** Length (ft) n/a Warning n/a Width (ft) Condition n/a **Transition to** Vertical Difference (in) 0.5 Roadway Length (ft) 0 road Width (ft) **Clear Space** 0 (bottom of ramp) Cross Slope (%) 0.2 Counter Slope (%) 4.6



**Curb Ramp Number** 

### Ramp Field Measured Values Criteria **Feature** 1 2 3 4 5 6 7 8 **Notes** Standard Sheet Type Running Slope (%) 8.2 Cross Slope (%) 0.9 Length (ft) 9.67 Ramp Width (ft) 4.33 RT RT RT LT RT LT LT RT LT LT RT LT RT LT LT RT Side Flare Slope (%) 7.3 7.9 Length (ft) 2.5 Turning Space (top Width (ft) 7.67 of ramp) 0.3 Cross Slope (%) **Dome Orientation** n/a none n/a Color **Detectable** Length (ft) n/a Warning n/a Width (ft) Condition n/a **Transition to** Vertical Difference (in) 0 Roadway Length (ft) 5 road Width (ft) 5.5 **Clear Space** (bottom of ramp) Cross Slope (%) 1.9 2.8 Counter Slope (%)

### **Lyell Ave & Campbell Park**

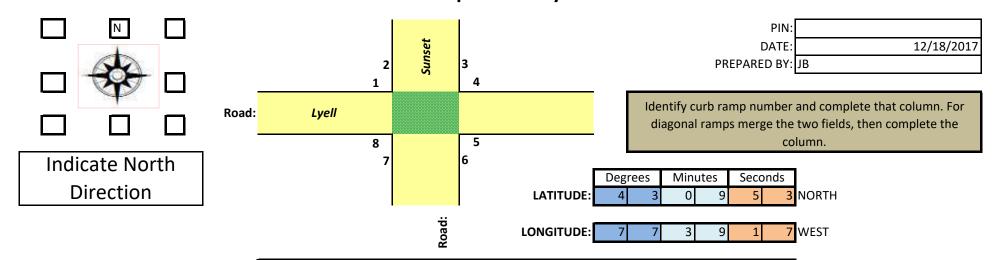


SE Corner – CW 6



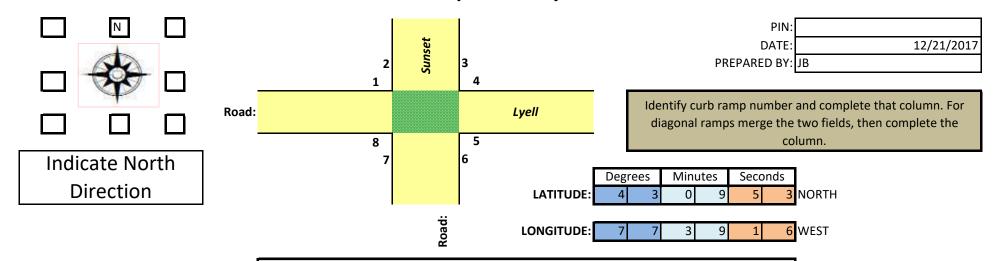
SW Corner – CW 7





**Curb Ramp Number** 

### Ramp Field Measured Values Criteria **Feature** 1 2 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 9 Cross Slope (%) 0.7 8.83 Length (ft) Ramp 5.17 Width (ft) RT LT RT LT RT RT RT LT LT RT LT LT LT RT LT RT Side Flare Slope (%) 11.6 7.0 Length (ft) 6.25 **Turning Space (top** Width (ft) 5.5 of ramp) 0.8 Cross Slope (%) **Dome Orientation** perp Color grey **Detectable** Length (ft) 2.17 Warning Width (ft) Condition fair sunken brick **Transition to** Vertical Difference (in) 0.5 Roadway Length (ft) 3 road Width (ft) 5.17 **Clear Space** (bottom of ramp) Cross Slope (%) 1.8 1.2 Counter Slope (%)



			Curb Ram	p Numbe	r		
		Rar	np Field Me	easured Val	ues		
4	•	•		-		-	

Feature	Criteria	:	1		2	3	3	4	l .	5		6			7	8		Notes
Ramp	Standard Sheet Type         10.9           Running Slope (%)         2.8           Cross Slope (%)         7.2           Width (ft)         4																	
	Side Flare Slope (%)	LT	RT	LT	RT	<i>LT</i> 11.3	<b>RT</b> 14.3	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	
Turning Space (top of ramp)	Length (ft) Width (ft) Cross Slope (%)					8.0												
Detectable Warning	Dome Orientation Color Length (ft) Width (ft) Condition					n/a n/a n/a n/a n/a												none
Transition to Roadway	Vertical Difference (in)					-0.	75											
Clear Space (bottom of ramp)	Length (ft) Width (ft) Cross Slope (%) Counter Slope (%)					1.	1.7											road

### **Lyell Ave & Sunset St**

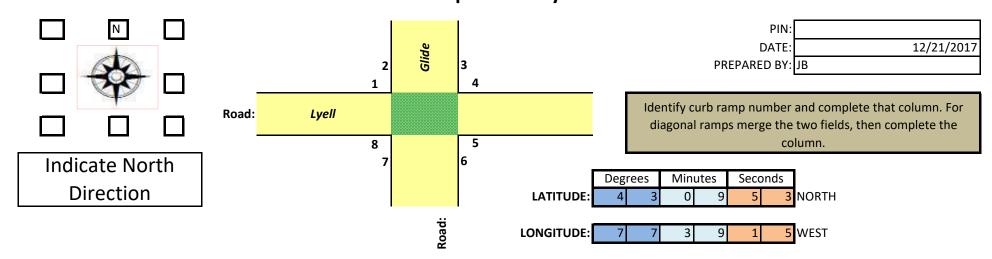


NW Corner – CW 2



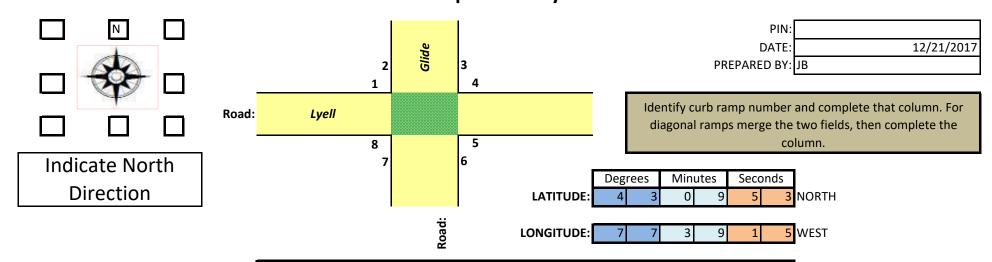
**NE Corner – CW 3** 





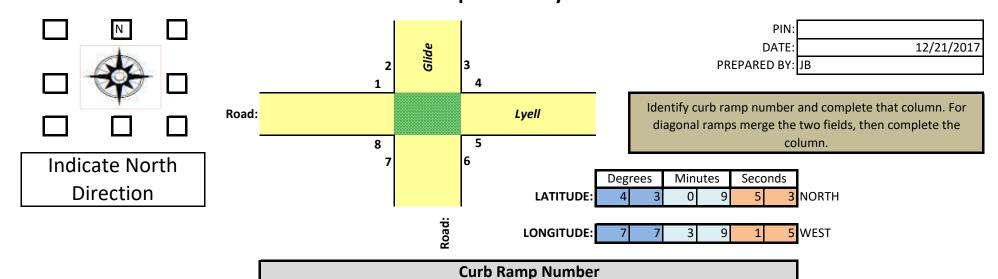
**Curb Ramp Number** 

### Ramp Field Measured Values Criteria **Feature** 1 2 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 9.8 Cross Slope (%) 1.5 Length (ft) 6.42 Ramp Width (ft) 4.92 LT RT LT RT LT RT RT RT LT RT LT LT LT RT LT RT Side Flare Slope (%) 9.2 15.3 Length (ft) 5.42 Turning Space (top Width (ft) 4.92 of ramp) 1.1 Cross Slope (%) **Dome Orientation** perp Color grey **Detectable** Length (ft) 2 Warning Width (ft) 4.92 Condition brick good **Transition to** Vertical Difference (in) 0 Roadway Length (ft) 2 Width (ft) 4.92 **Clear Space** (bottom of ramp) Cross Slope (%) 1.6 2.5 Counter Slope (%)

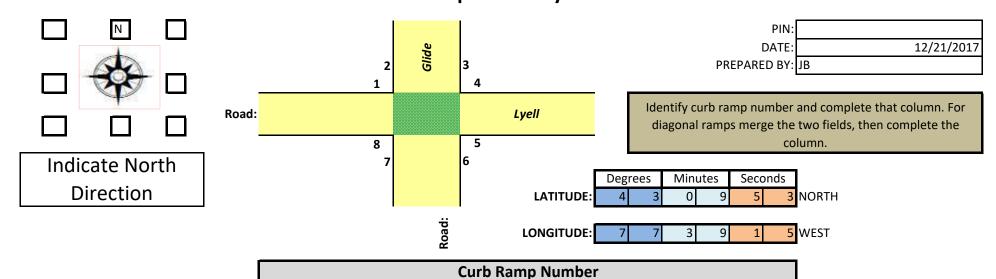


**Curb Ramp Number** 

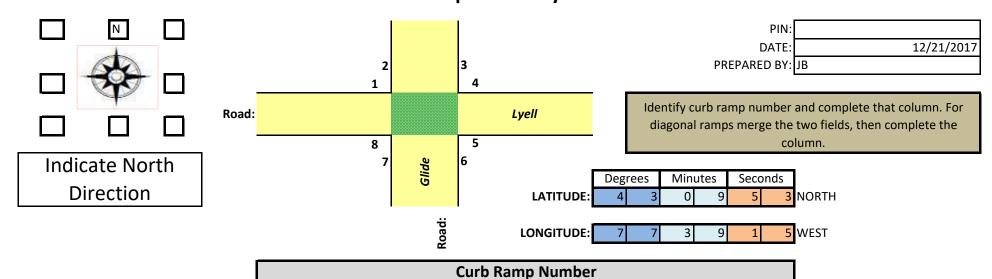
### Ramp Field Measured Values Criteria **Feature** 1 2 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 6.9 Cross Slope (%) 0.5 6.83 Length (ft) Ramp Width (ft) 5 RT LT RT LT RT RT RT LT RT LT RT LT LT LT LT RT Side Flare Slope (%) 15.9 9.2 Length (ft) 6 Turning Space (top Width (ft) 4.58 of ramp) Cross Slope (%) 0.1 **Dome Orientation** perp Color grey **Detectable** Length (ft) Warning Width (ft) 5 Condition sunken brick ok **Transition to** Vertical Difference (in) 0 Roadway Length (ft) 3 Width (ft) 5 **Clear Space** (bottom of ramp) Cross Slope (%) 0.5 0.9 Counter Slope (%)



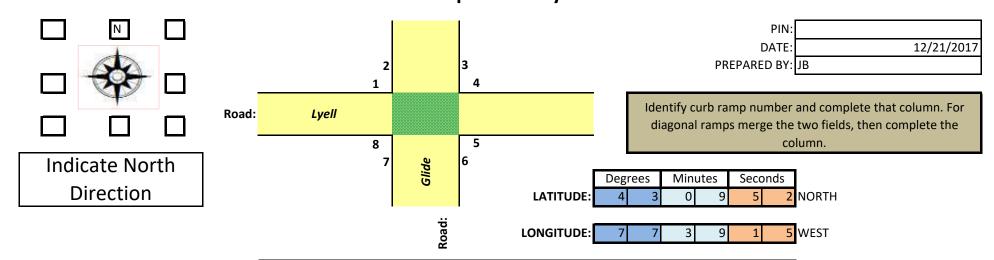
		Ramp Field Measured Values																
Feature	Criteria		1 2		2	3		4		5		6		7		8		Notes
Ramp	Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft) Width (ft)					6.8 4.6 7.58 5												
	Side Flare Slope (%)	LT	RT	LT	RT	<b>LT</b> 16.3	<b>RT</b> 14	LT	RT									
Turning Space (top of ramp)	Length (ft) Width (ft) Cross Slope (%)				5.33 5 1		5											
Detectable Warning	Dome Orientation Color Length (ft) Width (ft) Condition					perp grey 2 5 ok												sunken brick
Transition to Roadway	Vertical Difference (in)					-0.	25											
Clear Space (bottom of ramp)	Length (ft) Width (ft) Cross Slope (%)					0.	7											
	Counter Slope (%)					2.	.3											



		Ramp Field Measured Values																
Feature	Criteria		1 2		2	3		4		5		6		7		8		Notes
Ramp	Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft) Width (ft)					7.9 0.5 5.83 4.9												
	Side Flare Slope (%)	LT	RT	LT	RT	LT	RT	<i>LT</i> 16.3	<b>RT</b> 9.3	LT	RT	LT	RT	LT	RT	LT	RT	
Turning Space (top of ramp)	Length (ft) Width (ft) Cross Slope (%)							7.3 5.3 0.	75 33									
Detectable Warning	Dome Orientation Color Length (ft) Width (ft) Condition							pe gro	ey S									brick
Transition to Roadway	Vertical Difference (in)							(										
Clear Space (bottom of ramp)	Length (ft) Width (ft) Cross Slope (%)							4. 1.	9 4									
	Counter Slope (%)							0.	3									



	Ramp Field Measured Values																
Criteria	1 2			2	(3)	3	4		5				7		8		Notes
Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft)									10.3 2.7 13.25								
Width (ft) Side Flare Slope (%)	LT	RT	LT	RT	LT	RT	LT	RT	<b>LT</b> 8.			<b>RT</b>	LT	RT	LT	RT	
Length (ft) Width (ft) Cross Slope (%)										6.	5 .33						
Dome Orientation Color Length (ft) Width (ft) Condition										n n n	/a /a /a /a						none
Vertical Difference (in)											0						
Length (ft) Width (ft) Cross Slope (%)										3	.83 !.3						
	Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft) Width (ft)  Side Flare Slope (%)  Length (ft) Width (ft) Cross Slope (%)  Dome Orientation Color Length (ft) Width (ft) Condition  Vertical Difference (in)  Length (ft) Width (ft)	Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft) Width (ft)  Side Flare Slope (%)  Length (ft) Width (ft) Cross Slope (%)  Dome Orientation Color Length (ft) Width (ft) Condition  Vertical Difference (in)  Length (ft) Width (ft) Cross Slope (%)	Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft) Width (ft)  Side Flare Slope (%)  Length (ft) Width (ft)  Cross Slope (%)  Dome Orientation Color Length (ft) Width (ft) Condition  Vertical Difference (in)  Length (ft) Width (ft) Cross Slope (%)	Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft) Width (ft)  Side Flare Slope (%)  Length (ft) Width (ft) Cross Slope (%)  Dome Orientation Color Length (ft) Width (ft) Condition  Vertical Difference (in)  Length (ft) Width (ft) Cross Slope (%)	Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft) Width (ft)  Side Flare Slope (%)  Length (ft) Width (ft) Cross Slope (%)  Dome Orientation Color Length (ft) Width (ft) Condition  Vertical Difference (in)  Length (ft) Width (ft) Cross Slope (%)	Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft) Width (ft)  Side Flare Slope (%)  Length (ft) Width (ft) Cross Slope (%)  Dome Orientation Color Length (ft) Width (ft) Condition  Vertical Difference (in)  Length (ft) Width (ft) Cross Slope (%)	Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft) Width (ft)  Side Flare Slope (%)  Length (ft) Width (ft)  Cross Slope (%)  Dome Orientation Color Length (ft) Width (ft) Condition  Vertical Difference (in)  Length (ft) Width (ft) Cross Slope (%)	Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft) Width (ft)  Side Flare Slope (%)  Length (ft) Width (ft)  Cross Slope (%)  Dome Orientation Color Length (ft) Width (ft) Condition  Vertical Difference (in)  Length (ft) Width (ft) Cross Slope (%)	Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft) Width (ft)  Side Flare Slope (%)  Length (ft) Width (ft)  Cross Slope (%)  Dome Orientation Color Length (ft) Width (ft) Condition  Vertical Difference (in)  Length (ft) Width (ft) Cross Slope (%)	Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft) Width (ft)  Side Flare Slope (%)  Length (ft) Width (ft) Cross Slope (%)  Dome Orientation Color Length (ft) Width (ft) Condition  Vertical Difference (in)  Length (ft) Width (ft) Cross Slope (%)	Standard Sheet Type	Standard Sheet Type   Running Slope (%)   10.3   10.3   10.3   10.5	Standard Sheet Type       10.3         Running Slope (%)       2.7         Length (ft)       13.25         Width (ft)       3.83         Side Flare Slope (%)         Length (ft)       8.2       6         Width (ft)       5         Width (ft)       6.33         Cross Slope (%)       3.3         Dome Orientation       n/a         Color       n/a         Length (ft)       n/a         Width (ft)       n/a         Vertical Difference (in)       0         Length (ft)       3.83         Cross Slope (%)       2.3	Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft) Width (ft)  Side Flare Slope (%)  Length (ft) Width (ft)  Cross Slope (%)  Length (ft) Width (ft)  Cross Slope (%)  Dome Orientation Color Length (ft) Width (ft)  Condition  Vertical Difference (in)  Length (ft) Width (ft) Cross Slope (%)  Length (ft)  Length (ft)  Salar  Longth (ft)  India  India	Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft) Width (ft)  Side Flare Slope (%)  Length (ft) Width (ft)  Cross Slope (%)  Length (ft) Width (ft)  Cross Slope (%)  Dome Orientation Color Length (ft) Width (ft) Condition  Vertical Difference (in)  Length (ft) Width (ft) Cross Slope (%)  Length (ft)  Width (ft) Condition  Length (ft)  Length (ft)  Length (ft)  Width (ft) Condition  Length (ft)  Length	Standard Sheet Type   Running Slope (%)   Cross Slope (%)   Length (ft)   Width (ft)     TRT   LT   RT   LT   RT	Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft) Width (ft)  Side Flare Slope (%)  Under the first of the



**Curb Ramp Number** 

### Ramp Field Measured Values Criteria **Feature** 1 2 3 4 5 6 7 **Notes** Standard Sheet Type Running Slope (%) 10.3 Cross Slope (%) 3.1 Length (ft) 11.42 Ramp Width (ft) 5 RT RT RT LT RT LT LT RT LT RT LT LT LT RT Side Flare Slope (%) 5.3 8.4 Length (ft) 5 Turning Space (top Width (ft) 5 of ramp) 0 Cross Slope (%) **Dome Orientation** n/a n/a Color **Detectable** Length (ft) n/a Warning Width (ft) n/a Condition n/a none **Transition to** Vertical Difference (in) -0.5 Roadway Length (ft) 4 Width (ft) 5 **Clear Space** (bottom of ramp) Cross Slope (%) 2.2 Counter Slope (%) 3.2

### **Lyell Ave & Glide St**





NW Corner - CW 1

**NW Corner - CW 2** 





**NE Corner – CW 3** 

**NE Corner - CW 4** 

### **Lyell Ave & Glide St**

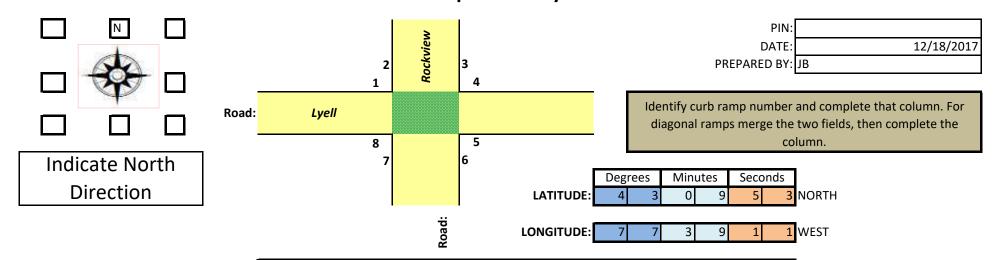


SE Corner – CW 5



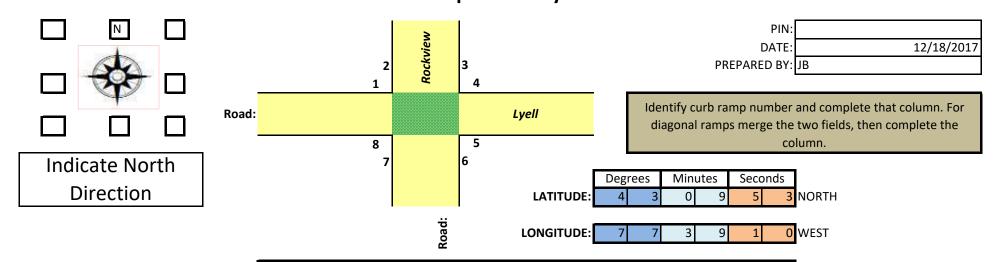
**SW Corner - CW 7** 





**Curb Ramp Number** 

### Ramp Field Measured Values Criteria **Feature** 1 2 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 7.6 Cross Slope (%) 8.3 Length (ft) 8.25 Ramp Width (ft) 6 RT LT RT LT RT RT RT RT LT LT RT LT LT LT LT RT Side Flare Slope (%) 12.4 11.8 Length (ft) 4.5 Turning Space (top Width (ft) 5 of ramp) 3.2 Cross Slope (%) **Dome Orientation** n/a none n/a Color **Detectable** Length (ft) n/a Warning n/a Width (ft) Condition n/a **Transition to** Vertical Difference (in) 0 Roadway Length (ft) 5.25 road Width (ft) 6 **Clear Space** (bottom of ramp) Cross Slope (%) 1.8 2.8 Counter Slope (%)



**Curb Ramp Number** 

road

### Ramp Field Measured Values Criteria **Feature** 1 2 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 8 9 Cross Slope (%) Length (ft) 9.25 Ramp Width (ft) 5 RT LT RT LT RT RT RT LT RT LT LT LT LT RT LT RT Side Flare Slope (%) 23.4 13.4 Length (ft) 5.92 Turning Space (top Width (ft) 5 of ramp) 3.8 Cross Slope (%) **Dome Orientation** n/a none n/a Color **Detectable** Length (ft) n/a Warning Width (ft) n/a

n/a

-0.5

5

5

2.3

0.6

Condition

Vertical Difference (in)

Length (ft)

Width (ft)

Cross Slope (%)

Counter Slope (%)

**Transition to** 

Roadway

Clear Space (bottom of ramp)

### **Lyell Ave & Rockview Terrace**

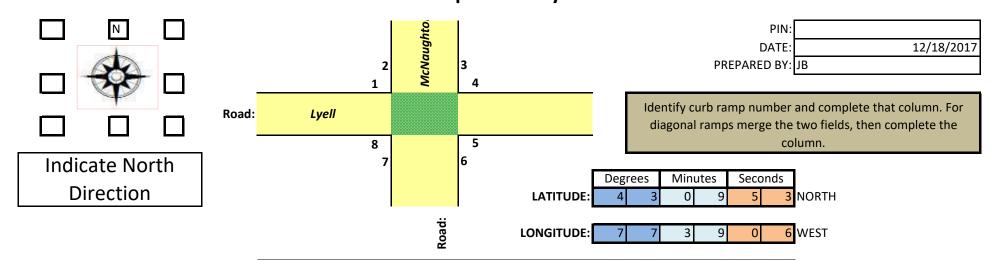


**NW Corner – CW 2** 



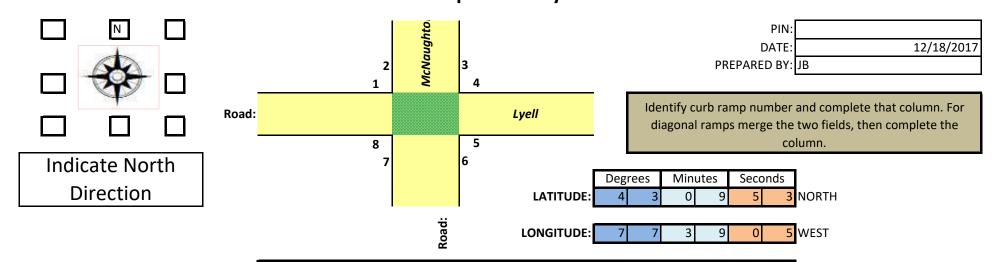
**NE Corner – CW 3** 





**Curb Ramp Number** 

### Ramp Field Measured Values Criteria **Feature** 1 2 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 7.4 Cross Slope (%) 10.7 Length (ft) 9.92 Ramp Width (ft) 5.75 RT LT RT LT RT RT RT LT LT RT LT LT LT RT LT RT Side Flare Slope (%) 13.3 15.0 Length (ft) 5.75 Turning Space (top Width (ft) 4.83 of ramp) 4.3 Cross Slope (%) **Dome Orientation** n/a none n/a Color **Detectable** Length (ft) n/a Warning n/a Width (ft) Condition n/a **Transition to** Vertical Difference (in) 0 Roadway Length (ft) 4.33 road Width (ft) 5.75 **Clear Space** (bottom of ramp) Cross Slope (%) 1.2 Counter Slope (%) 0.4



Curb Ramp Number
Ramp Field Measured Values

### Criteria **Feature** 1 2 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 7.5 Cross Slope (%) 7.1 Length (ft) 10 Ramp Width (ft) 5 LT RT LT RT RT RT LT RT LT LT LT RT LT RT Side Flare Slope (%) 16.4 16.4 Length (ft) 5.92 **Turning Space (top** Width (ft) 4.75 of ramp) 3 Cross Slope (%) **Dome Orientation** perp Color grey **Detectable** Length (ft) 2 Warning 4 Width (ft) Condition d/w poly mat good **Transition to** Vertical Difference (in) -0.5 Roadway Length (ft) 6 road Width (ft) 5 **Clear Space** (bottom of ramp) Cross Slope (%) 1.7

2

Counter Slope (%)

### **Lyell Ave & McNaughton St**



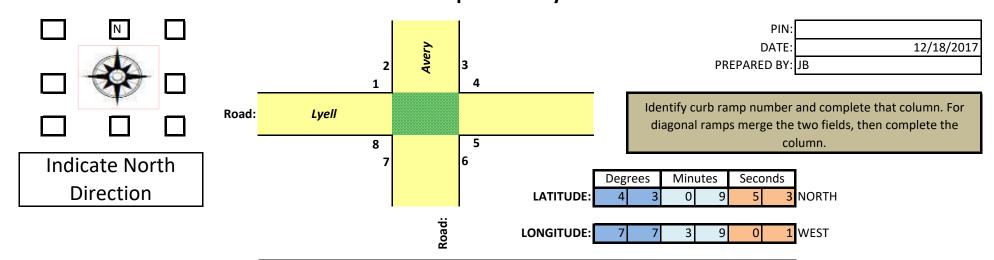
NW Corner – CW 2



NE Corner – CW 3

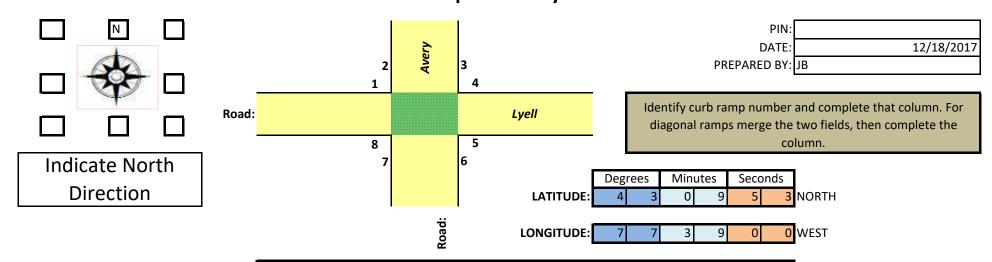


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**Curb Ramp Number** 

### Ramp Field Measured Values Criteria **Feature** 1 2 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 9.8 Cross Slope (%) 8.7 Length (ft) 9 Ramp Width (ft) 5.33 RT LT RT LT RT RT RT RT LT LT RT LT LT LT LT RT Side Flare Slope (%) 18.6 13.7 Length (ft) 5.75 Turning Space (top Width (ft) 6.17 of ramp) 3.3 Cross Slope (%) **Dome Orientation** n/a none n/a Color **Detectable** Length (ft) n/a Warning n/a Width (ft) Condition n/a **Transition to** Vertical Difference (in) 0 Roadway Length (ft) 5.5 road Width (ft) 5.33 **Clear Space** (bottom of ramp) Cross Slope (%) 2.1 0.9 Counter Slope (%)



Curb Ramp Number
Ramp Field Measured Values

### Criteria **Feature** 1 2 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 6.6 Cross Slope (%) 8 8.5 Length (ft) Ramp Width (ft) 5 RT LT RT LT RT RT RT LT RT LT LT LT LT RT LT RT Side Flare Slope (%) 16.3 15.6 Length (ft) 5.5 Turning Space (top Width (ft) 5.5 of ramp) 1.3 Cross Slope (%) **Dome Orientation** n/a none n/a Color **Detectable** Length (ft) n/a Warning Width (ft) n/a Condition n/a **Transition to** Vertical Difference (in) 0 Roadway Length (ft) 4.5 road Width (ft) 5 **Clear Space** (bottom of ramp) Cross Slope (%) 0.8

1.4

Counter Slope (%)

### **Lyell Ave & Avery St**



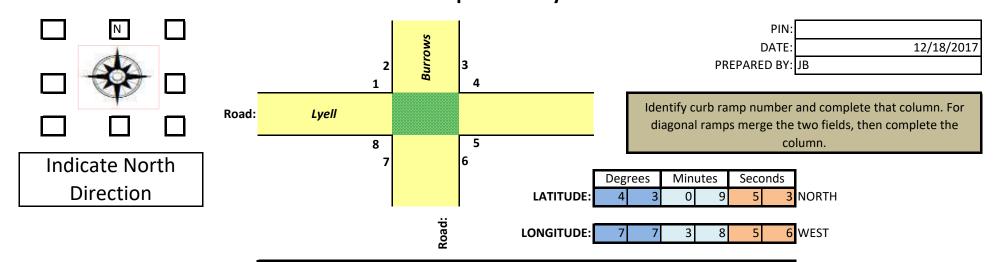
**NW Corner – CW 2** 



NE Corner - CW 3

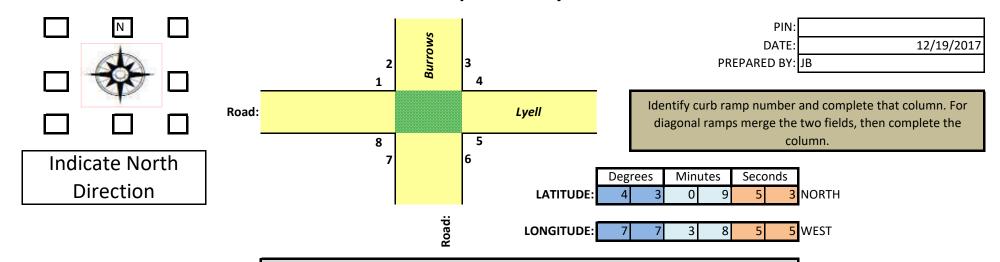


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**Curb Ramp Number** 

### Ramp Field Measured Values Criteria **Feature** 1 2 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 9.5 Cross Slope (%) 4.1 7.58 Length (ft) Ramp 5.67 Width (ft) RT LT RT LT RT RT RT LT RT LT RT LT LT LT LT RT Side Flare Slope (%) 18.4 8.3 Length (ft) 6 Turning Space (top Width (ft) 5.5 of ramp) 2.4 Cross Slope (%) **Dome Orientation** n/a none n/a Color **Detectable** Length (ft) n/a Warning n/a Width (ft) Condition n/a **Transition to** Vertical Difference (in) 0 Roadway Length (ft) 5 road Width (ft) 5.67 **Clear Space** (bottom of ramp) Cross Slope (%) 1.6 1.5 Counter Slope (%)



Curb Ramp Number												
		Rar	np Field Me	easured Val	ues							

Feature	Criteria	:	1		2	3	3	4	4		5		6		7	8		Notes	
Ramp	Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft)					9.3 4.8 9.33 4.58													
	Width (ft)  Side Flare Slope (%)  LT RT LT RT		RT	4.5 LT 15.3	RT	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT				
Turning Space (top of ramp)	Length (ft) Width (ft) Cross Slope (%)				5.67 5.25 0.6		67 25												
Detectable Warning	Dome Orientation Color Length (ft) Width (ft) Condition						n/a n/a n/a n/a n/a											none	
Transition to Roadway	Vertical Difference (in)					C	)												
Clear Space (bottom of ramp)	Length (ft) Width (ft) Cross Slope (%) Counter Slope (%)					4.5	4 4.58 3.7 0.4											road	

### **Lyell Ave & Burrows St**



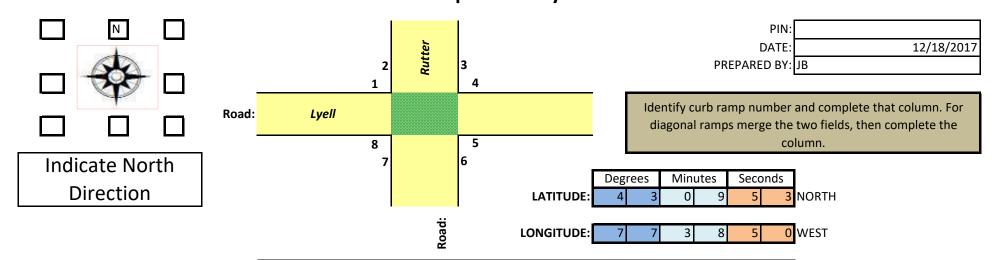
**NW Corner – CW 2** 



**NE Corner - CW 3** 

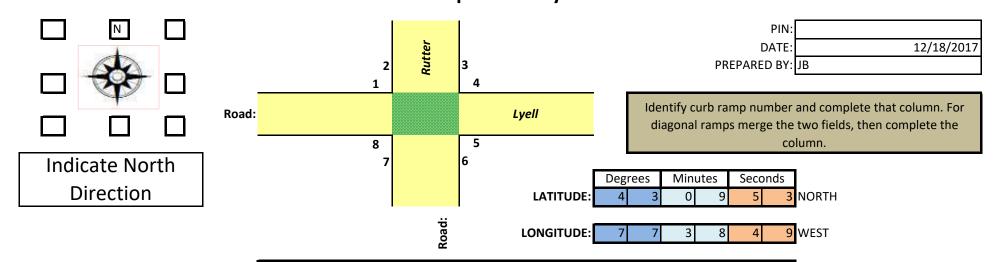


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**Curb Ramp Number** 

### Ramp Field Measured Values Criteria **Feature** 1 2 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 10.7 Cross Slope (%) 2.7 Length (ft) 9.08 Ramp Width (ft) 5.75 RT LT RT LT RT RT RT LT RT LT RT LT LT LT LT RT Side Flare Slope (%) 7.7 10 Length (ft) 5 Turning Space (top Width (ft) 7 of ramp) 1.1 Cross Slope (%) **Dome Orientation** n/a none n/a Color **Detectable** Length (ft) n/a Warning n/a Width (ft) Condition n/a **Transition to** Vertical Difference (in) 0 Roadway Length (ft) 4.17 road Width (ft) 5.75 **Clear Space** (bottom of ramp) Cross Slope (%) 3 1.1 Counter Slope (%)



**Curb Ramp Number** 

### Ramp Field Measured Values Criteria **Feature** 1 2 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 11 Cross Slope (%) 10 Length (ft) 11.5 Ramp Width (ft) 5.58 RT LT RT RT RT LT RT LT LT LT LT RT LT RT Side Flare Slope (%) 9.1 6.7 Length (ft) 3.75 Turning Space (top Width (ft) 4.5 of ramp) 0.8 Cross Slope (%) **Dome Orientation** n/a none Color n/a **Detectable** Length (ft) n/a Warning Width (ft) n/a Condition n/a **Transition to** Vertical Difference (in) -0.5 Roadway Length (ft) 5.33 road Width (ft) 5.58 **Clear Space** (bottom of ramp) Cross Slope (%) 3.3

0.6

Counter Slope (%)

### **Lyell Ave & Rutter St**



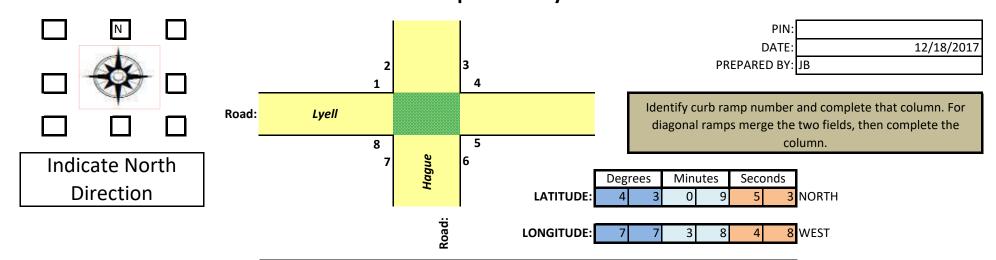
NW Corner - CW 2



**NE Corner – CW 3** 

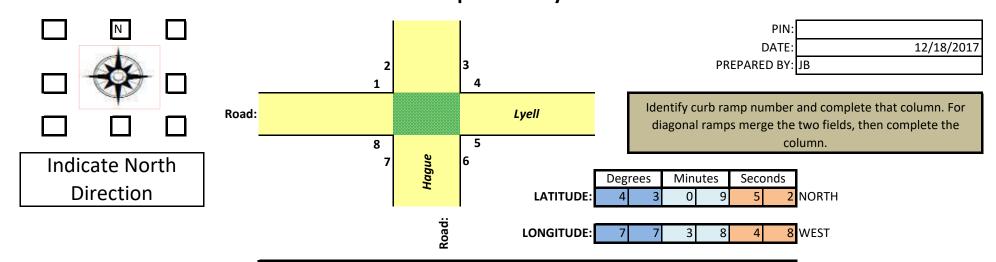


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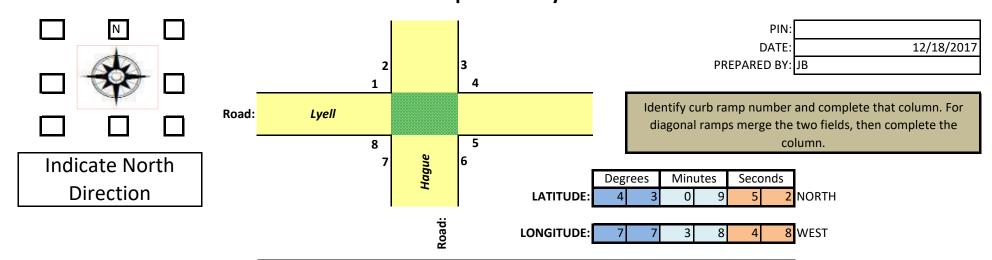
**Curb Ramp Number** 

### Ramp Field Measured Values **Feature** Criteria 1 2 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 7.8 Cross Slope (%) 0.3 8.67 Length (ft) Ramp Width (ft) 4.75 LT RT LT RT RT RT LT RT LT RT LT LT LT RT LT RT Side Flare Slope (%) 15.2 17.4 Length (ft) 3.25 landscaping Turning Space (top Width (ft) 6 of ramp) 0.2 Cross Slope (%) **Dome Orientation** n/a none n/a Color **Detectable** Length (ft) n/a Warning Width (ft) n/a Condition n/a **Transition to** Vertical Difference (in) 0 Roadway Length (ft) 0 road Width (ft) 4.75 **Clear Space** (bottom of ramp) Cross Slope (%) 1.4 1.9 Counter Slope (%)



**Curb Ramp Number** 

### Ramp Field Measured Values Criteria **Feature** 1 2 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 12 Cross Slope (%) 5.3 Length (ft) 10 Ramp Width (ft) 6.58 RT RT RT LT RT LT RT LT LT RT LT RT LT LT LT RT Side Flare Slope (%) 9.7 11.1 Length (ft) Turning Space (top Width (ft) of ramp) 3 Cross Slope (%) **Dome Orientation** n/a none Color n/a **Detectable** Length (ft) n/a Warning n/a Width (ft) Condition n/a **Transition to** Vertical Difference (in) 0 Roadway Length (ft) 4 road Width (ft) **Clear Space** 6.58 (bottom of ramp) Cross Slope (%) 1.3 1.5 Counter Slope (%)



**Curb Ramp Number** 

### Ramp Field Measured Values Criteria **Feature** 1 2 3 4 5 6 7 **Notes** Standard Sheet Type Running Slope (%) 8.2 Cross Slope (%) 6.3 Length (ft) 11.08 Ramp Width (ft) 7.58 RT RT RT LT RT LT LT RT LT RT LT LT LT RT Side Flare Slope (%) 6.3 14.1 Length (ft) 5 **Turning Space (top** Width (ft) 5 of ramp) 2.8 Cross Slope (%) **Dome Orientation** n/a none n/a Color **Detectable** Length (ft) n/a Warning Width (ft) n/a Condition n/a **Transition to** Vertical Difference (in) 0 Roadway Length (ft) 3.33 Width (ft) 7.58 **Clear Space** (bottom of ramp) Cross Slope (%) 2.7 Counter Slope (%) 1.6

### **Lyell Ave & Hague St**



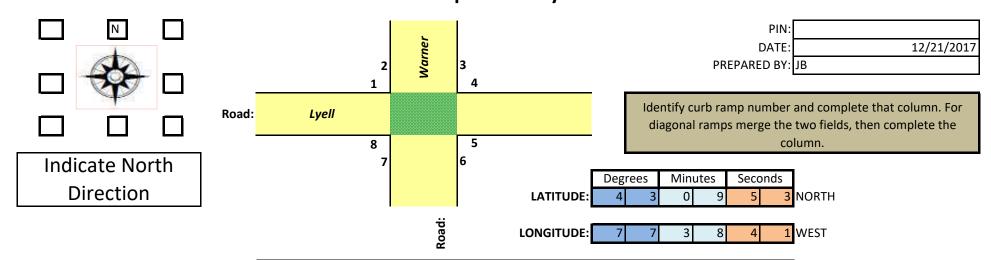
NW Corner (crossing Lyell) – CW 1



SE Corner – CW 6

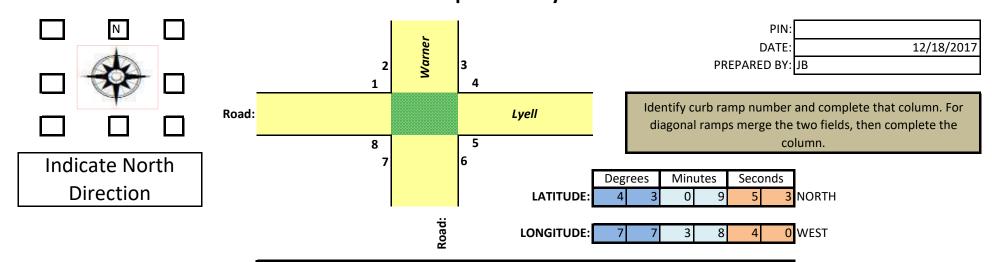


SW Corner – CW 7



**Curb Ramp Number** 

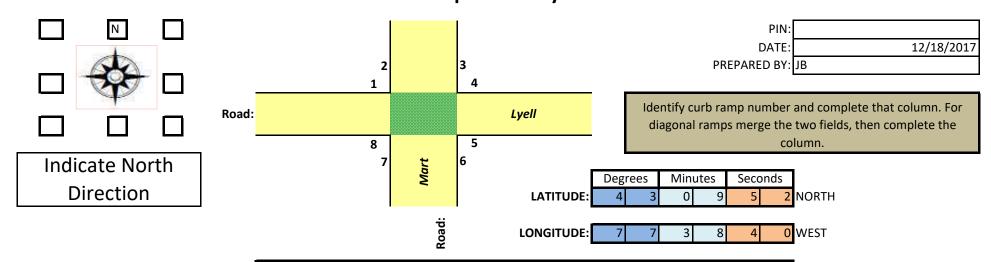
### Ramp Field Measured Values Criteria **Feature** 1 2 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 7.2 Cross Slope (%) 5.7 Length (ft) 10.33 Ramp Width (ft) 4.5 RT LT RT LT RT RT RT RT LT LT RT LT LT LT LT RT Side Flare Slope (%) 7.6 8.4 Length (ft) 5 Turning Space (top Width (ft) 5 of ramp) 1.9 Cross Slope (%) **Dome Orientation** n/a none n/a Color **Detectable** Length (ft) n/a Warning n/a Width (ft) Condition n/a **Transition to** Vertical Difference (in) -0.5 Roadway Length (ft) 6 road Width (ft) 4 **Clear Space** (bottom of ramp) Cross Slope (%) 0.9 1.6 Counter Slope (%)



**Curb Ramp Number** 

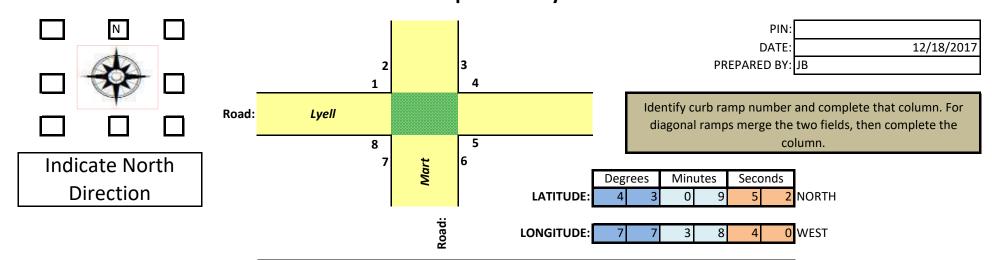
### Ramp Field Measured Values Criteria **Feature** 1 2 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 8.4 Cross Slope (%) 4 8.75 Length (ft) Ramp 5.5 Width (ft) RT LT RT LT RT RT RT LT RT LT LT LT LT RT LT RT Side Flare Slope (%) 5.9 9.5 Length (ft) 5.25 Turning Space (top Width (ft) 5.5 of ramp) 1.1 Cross Slope (%) **Dome Orientation** n/a none n/a Color **Detectable** Length (ft) n/a Warning Width (ft) n/a Condition n/a **Transition to** Vertical Difference (in) 0 Roadway Length (ft) 6 road Width (ft) 5.5 **Clear Space** (bottom of ramp) Cross Slope (%) 1.1 Counter Slope (%)

1.4



**Curb Ramp Number** 

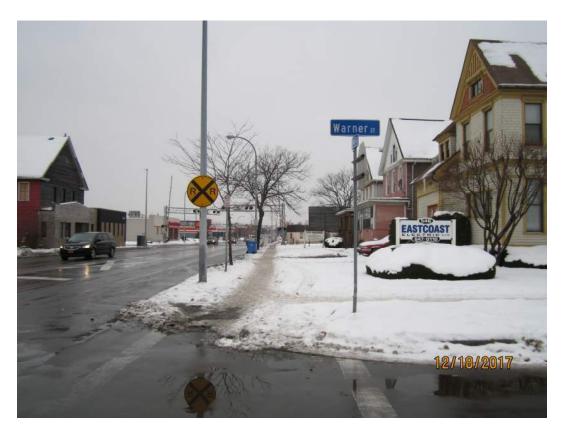
### Ramp Field Measured Values Criteria **Feature** 1 2 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 9.1 Cross Slope (%) 10.4 Length (ft) 10.5 Ramp Width (ft) 4.75 RT RT RT LT RT LT RT LT LT RT LT RT LT LT LT RT Side Flare Slope (%) 9.8 7.9 Length (ft) Turning Space (top Width (ft) 5.08 of ramp) 3.5 Cross Slope (%) **Dome Orientation** n/a none Color n/a **Detectable** Length (ft) n/a Warning n/a Width (ft) Condition n/a **Transition to** Vertical Difference (in) 0 Roadway Length (ft) 2 road Width (ft) **Clear Space** 4.75 (bottom of ramp) Cross Slope (%) 0.3 1.4 Counter Slope (%)



**Curb Ramp Number** 

### Ramp Field Measured Values Criteria **Feature** 1 2 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 7 7.5 Cross Slope (%) 7.83 Length (ft) Ramp Width (ft) 4.5 RT RT RT LT RT LT LT RT LT LT RT LT RT LT LT RT Side Flare Slope (%) 7.2 10.2 Length (ft) 4.5 Turning Space (top Width (ft) of ramp) 3.4 Cross Slope (%) **Dome Orientation** n/a none n/a Color **Detectable** Length (ft) n/a Warning n/a Width (ft) Condition n/a **Transition to** Vertical Difference (in) 0 Roadway Length (ft) 2.5 road Width (ft) 4.5 **Clear Space** (bottom of ramp) Cross Slope (%) 0.9 2.5 Counter Slope (%)

### **Lyell Ave & Warner St**



NW Corner – CW 2



**NE Corner – CW 3** 



### Lyell Ave & Mart PL

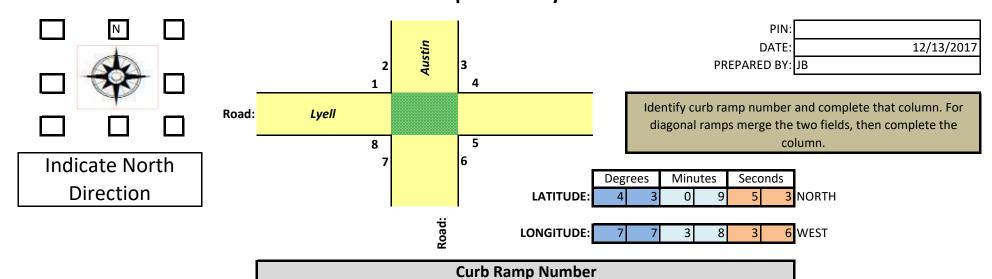


SE Corner – CW 6

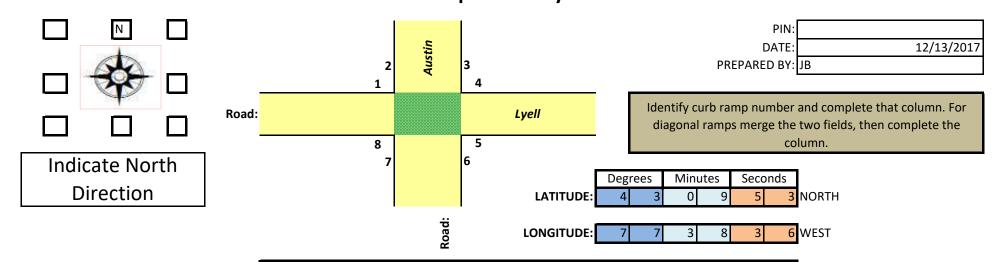


SW Corner – CW 7



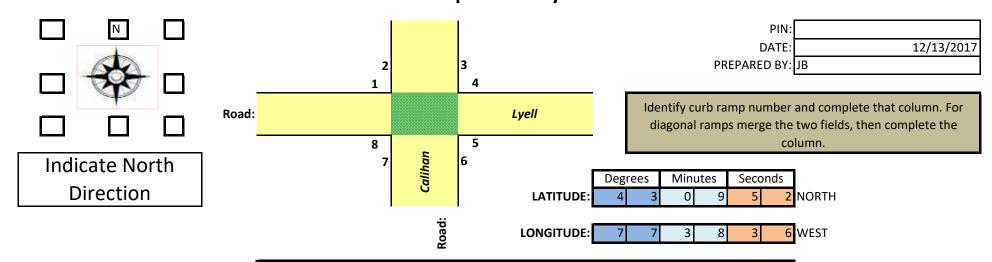


		Ramp Field Measured Values																
Feature	Criteria	:	1		2 3		3	4		5		6		7		8		Notes
Ramp	Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft) Width (ft)				10.4 5.9 7 7													
	Side Flare Slope (%)	LT	RT	<b>LT</b> 17.8	<b>RT</b> 17.2	LT	RT											
Turning Space (top of ramp)	Length (ft) Width (ft) Cross Slope (%)				10.83 5.08 3.1													
Detectable Warning	Dome Orientation Color Length (ft) Width (ft) Condition				n/a n/a n/a n/a n/a													none
Transition to Roadway	Vertical Difference (in)				0													
Clear Space (bottom of ramp)	Length (ft) Width (ft) Cross Slope (%) Counter Slope (%)			2	7 7 2.8 0.4													road



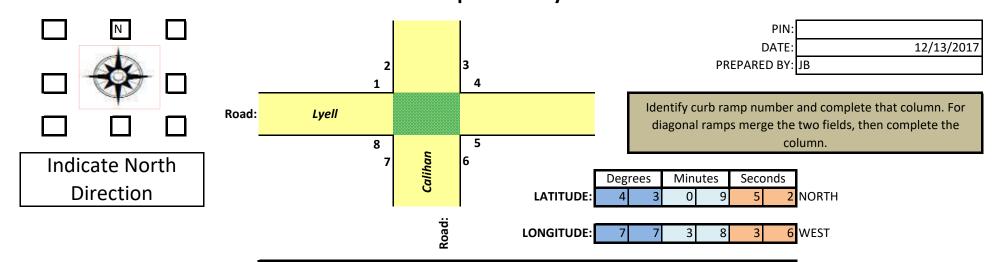
**Curb Ramp Number** 

### Ramp Field Measured Values Criteria **Feature** 1 2 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 11.9 Cross Slope (%) 9.5 Length (ft) 8.25 Ramp 6.75 Width (ft) RT LT RT LT RT RT RT LT RT LT LT LT LT RT LT RT Side Flare Slope (%) 15.4 19.7 Length (ft) 5.67 Turning Space (top Width (ft) 5 of ramp) 1.8 Cross Slope (%) **Dome Orientation** n/a none n/a Color **Detectable** Length (ft) n/a Warning Width (ft) n/a Condition n/a **Transition to** Vertical Difference (in) 0.5 Roadway Length (ft) 7.5 road Width (ft) 6.75 **Clear Space** (bottom of ramp) Cross Slope (%) 1.7 Counter Slope (%) 2.3



**Curb Ramp Number** 

### Ramp Field Measured Values Criteria **Feature** 1 2 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 8.9 Cross Slope (%) 6.5 9.58 Length (ft) Ramp Width (ft) 6 RT RT LT RT LT RT LT RT LT LT RT LT RT LT LT RT Side Flare Slope (%) 9.2 9 Length (ft) Turning Space (top Width (ft) of ramp) 1.9 Cross Slope (%) **Dome Orientation** n/a none n/a Color **Detectable** Length (ft) n/a Warning n/a Width (ft) Condition n/a **Transition to** Vertical Difference (in) -1 Roadway Length (ft) 6 road Width (ft) 6 **Clear Space** (bottom of ramp) Cross Slope (%) 0.4 4.1 Counter Slope (%)



**Curb Ramp Number** 

		Ramp Field Measured Values																
Feature	Criteria 1		1		2		3		4		5		6		7	8		Notes
Ramp	Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft)													8.3 6.8 9.17				
	Width (ft) Side Flare Slope (%)	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	6 <b>LT</b> 7.2	25 <b>RT</b> 7.9	LT	RT	
Turning Space (top of ramp)	Length (ft) Width (ft) Cross Slope (%)													4	25 5			
Detectable Warning	Dome Orientation Color Length (ft) Width (ft) Condition													n, n, n,	/a /a /a /a /a			none
Transition to Roadway	Vertical Difference (in)														)			
Clear Space (bottom of ramp)	Length (ft) Width (ft) Cross Slope (%) Counter Slope (%)													6. 1	.1			road

### Lyell Ave & Austin St / Calihan Park



**NW Corner - CW 2** 



NE Corner – CW 3



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### Lyell Ave & Austin St / Calihan Park

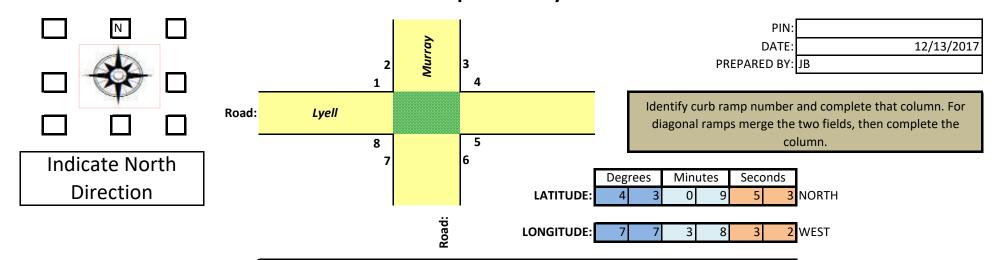


SE Corner – CW 6



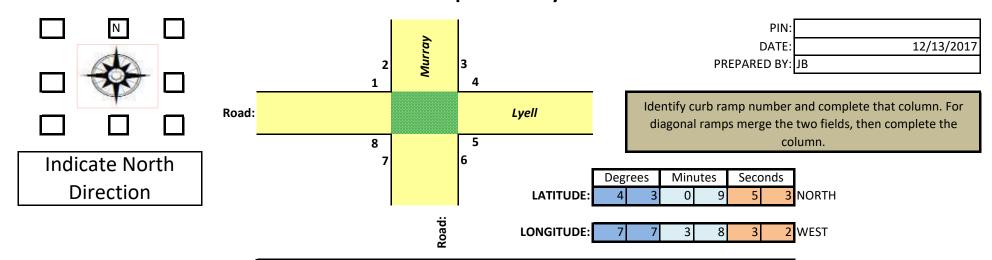
SW Corner – CW 7





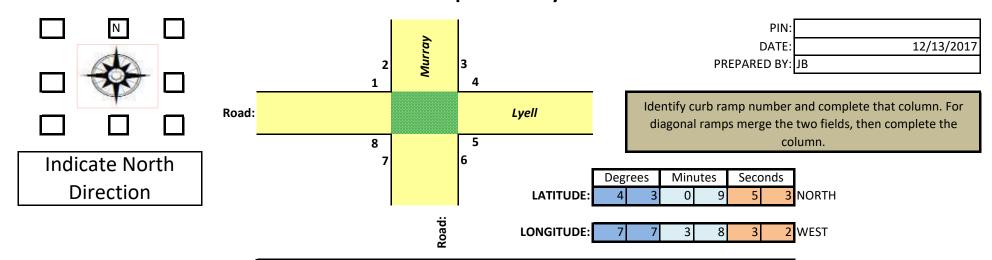
**Curb Ramp Number** 

-							Rai	np Fie	eld Me	easure	ed Val	ues						
Feature	Criteria			1		(1)	3	4	1	-,	5		6	7	7		3	Notes
Ramp	Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft)		4.	.6 5 25														
	Width (ft) Side Flare Slope (%)	<b>LT</b> 5.2		5	<b>RT</b>	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	
Turning Space (top of ramp)	Length (ft) Width (ft) Cross Slope (%)		n	/a /a /a														bldg
Detectable Warning	Dome Orientation Color Length (ft) Width (ft) Condition		n n n n	/a /a /a /a /a														none
Transition to Roadway	Vertical Difference (in)			0														
Clear Space (bottom of ramp)	Length (ft) Width (ft) Cross Slope (%)		2	17 5 .4														road
	Counter Slope (%)		2	.7														



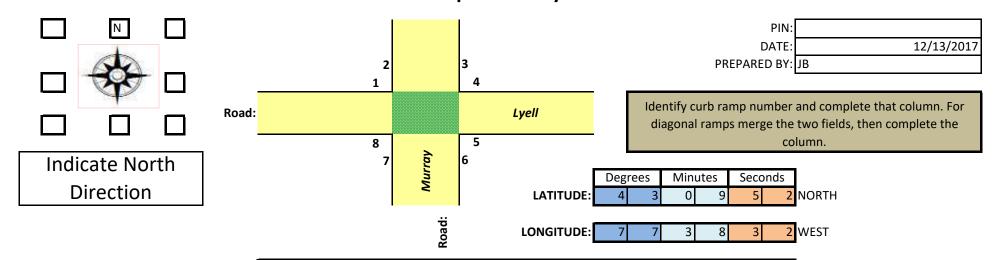
**Curb Ramp Number** 

### Ramp Field Measured Values Criteria **Feature** 1 2 3 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 12.8 Cross Slope (%) 1.4 Length (ft) 6 Ramp Width (ft) 4.25 RT LT RT RT RT LT RT LT LT LT LT RT LT RT Side Flare Slope (%) 10.8 17.9 Length (ft) n/a bldg Turning Space (top Width (ft) n/a of ramp) Cross Slope (%) n/a **Dome Orientation** n/a none Color n/a **Detectable** Length (ft) n/a Warning Width (ft) n/a Condition n/a **Transition to** Vertical Difference (in) 0 Roadway Length (ft) 0 road Width (ft) 0 **Clear Space** (bottom of ramp) Cross Slope (%) 1.6 3.7 Counter Slope (%)



			Curb Ram	p Numbe	r		
		Rar	np Field Me	easured Val	ues		
1	2	3	4	5	6	7	8

Feature	Criteria		1		2	3	3	4	4	!	5	(	5	•	7		8	Notes
Ramp	Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft) Width (ft)							0	.8 .8 .5									
	Side Flare Slope (%)	LT	RT	LT	RT	LT	RT	<b>LT</b> 15.7	<b>RT</b> 16.6	LT	RT	LT	RT	LT	RT	LT	RT	
Turning Space (top of ramp)	Length (ft) Width (ft) Cross Slope (%)							n,	/a /a /a									bldg
Detectable Warning	Dome Orientation Color Length (ft) Width (ft) Condition							n, n, n,	/a /a /a /a /a									none
Transition to Roadway	Vertical Difference (in)							0.	25									
Clear Space (bottom of ramp)	Length (ft) Width (ft) Cross Slope (%) Counter Slope (%)							0	.2 4 .1 2									

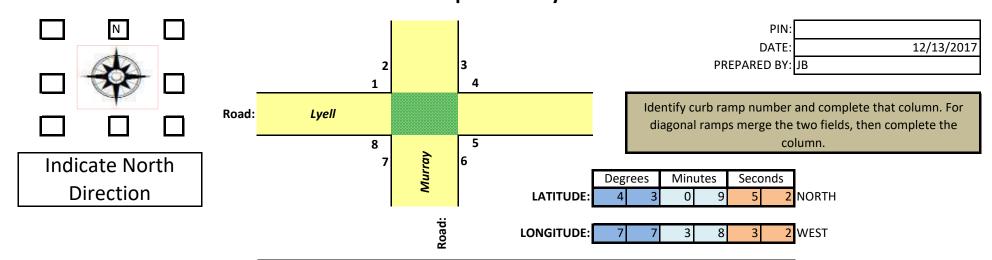


Curb Ramp Number
Ramp Field Measured Values

### Criteria **Feature** 1 2 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 8 2.3 Cross Slope (%) Length (ft) 9.5 Ramp Width (ft) 7 RT LT RT RT LT RT LT LT RT LT RT LT LT RT Side Flare Slope (%) 8.4 9.2 Length (ft) 4 Turning Space (top Width (ft) 7 of ramp) 1.3 Cross Slope (%) **Dome Orientation** n/a none Color n/a **Detectable** Length (ft) n/a Warning Width (ft) n/a Condition n/a **Transition to** Vertical Difference (in) 0 Roadway Length (ft) 4 road Width (ft) 7 **Clear Space** (bottom of ramp) Cross Slope (%) 1.2

2

Counter Slope (%)



**Curb Ramp Number** 

### Ramp Field Measured Values Criteria **Feature** 1 2 3 4 5 6 7 **Notes** Standard Sheet Type Running Slope (%) 5.9 6 Cross Slope (%) Length (ft) 10.5 Ramp Width (ft) 7.5 RT RT RT RT LT RT LT LT RT LT RT LT LT LT Side Flare Slope (%) n/a tree lawn It side Length (ft) 7.83 **Turning Space (top** Width (ft) 5 of ramp) 3 Cross Slope (%) **Dome Orientation** n/a none n/a Color **Detectable** Length (ft) n/a Warning Width (ft) n/a Condition n/a **Transition to** Vertical Difference (in) 0 Roadway Length (ft) 5.83 Width (ft) 7.5 **Clear Space** (bottom of ramp) Cross Slope (%) 0.9 0.8 Counter Slope (%)

### **Lyell Ave & Murray St**



**NW Corner – CW 1** 



**NE Corner – CW 3** 



**NE Corner – CW 4** 

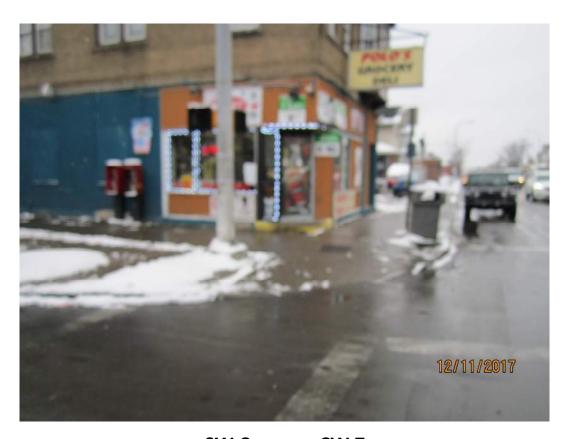
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### **Lyell Ave & Murray St**



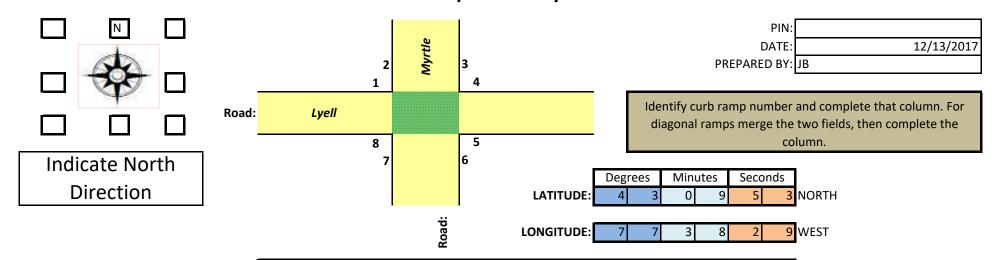
SE Corner – CW 5



SW Corner – CW 7

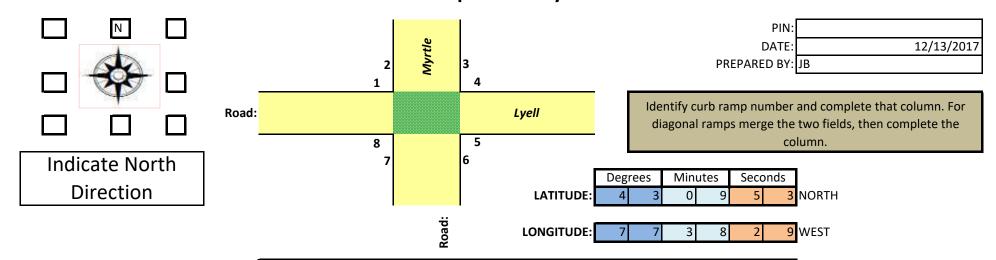


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**Curb Ramp Number** 

### Ramp Field Measured Values Criteria **Feature** 1 2 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 14.3 Cross Slope (%) 10.1 Length (ft) 7.25 Ramp Width (ft) 4.42 RT LT RT LT RT RT RT LT RT LT RT LT LT LT LT RT Side Flare Slope (%) 6.7 8.5 Length (ft) Turning Space (top Width (ft) 3.5 of ramp) 5.8 Cross Slope (%) **Dome Orientation** n/a none n/a Color **Detectable** Length (ft) n/a Warning n/a Width (ft) Condition n/a **Transition to** Vertical Difference (in) 0 Roadway Length (ft) 4 road Width (ft) 4.42 **Clear Space** (bottom of ramp) Cross Slope (%) 1.4 Counter Slope (%) 2.6



**Notes** 

				(	Curb Ram	p Numbe	r			
				Rai	mp Field Me	easured Val	ues			
Feature	Criteria	1	2	3	4	5	6	7	8	
	Standard Sheet Type									
	Running Slope (%)			8						

Running Slope (%)					8	8											
Cross Slope (%)					4	.6											
Length (ft)					8	8											
Width (ft)					6.	83											
C:   E  C  (0()	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	
Side Flare Slope (%)					7.1	5.9											
Length (ft)					5.	42						-		-			
Width (ft)					7.	.5											
Cross Slope (%)					3	.9											
Dome Orientation					n,	/a											none
Color					n,	/a											
Length (ft)					n,	/a											
Width (ft)					n,	/a											
Condition					n,	/a											
V 1: 10:00 (: )						^											
vertical Difference (in)					(	J											
Length (ft)					4	.5											road
Width (ft)					6.	83											
Cross Slope (%)					0	.2											
Counter Slope (%)					3	.1											
	Length (ft) Width (ft)  Side Flare Slope (%)  Length (ft) Width (ft) Cross Slope (%)  Dome Orientation Color Length (ft) Width (ft) Condition  Vertical Difference (in)  Length (ft) Width (ft) Cross Slope (%)	Running Slope (%) Cross Slope (%) Length (ft) Width (ft)  Side Flare Slope (%)  Length (ft) Width (ft) Cross Slope (%)  Dome Orientation Color Length (ft) Width (ft) Condition  Vertical Difference (in)  Length (ft) Width (ft) Cross Slope (%)	Running Slope (%) Cross Slope (%) Length (ft) Width (ft)  Side Flare Slope (%)  Length (ft) Width (ft) Cross Slope (%)  Dome Orientation Color Length (ft) Width (ft) Condition  Vertical Difference (in)  Length (ft) Width (ft) Cross Slope (%)	Running Slope (%) Cross Slope (%) Length (ft) Width (ft)  Side Flare Slope (%)  Length (ft) Width (ft) Cross Slope (%)  Dome Orientation Color Length (ft) Width (ft) Condition  Vertical Difference (in)  Length (ft) Width (ft) Cross Slope (%)	Running Slope (%) Cross Slope (%) Length (ft) Width (ft)  Side Flare Slope (%)  Length (ft) Width (ft)  Cross Slope (%)  Dome Orientation Color Length (ft) Width (ft) Condition  Vertical Difference (in)  Length (ft) Width (ft) Cross Slope (%)	Running Slope (%)       3         Cross Slope (%)       4         Length (ft)       5         Width (ft)       7         Length (ft)       5         Width (ft)       7         Cross Slope (%)       3         Dome Orientation       n         Color       n         Length (ft)       n         Width (ft)       n         Condition       n         Vertical Difference (in)       4         Length (ft)       4         Width (ft)       6         Cross Slope (%)       0	Running Slope (%)       8         Cross Slope (%)       4.6         Length (ft)       8         Width (ft)       6.83         LT RT LT RT LT RT         Side Flare Slope (%)       5.42         Length (ft)       5.42         Width (ft)       7.5         Cross Slope (%)       3.9         Dome Orientation       n/a         Color       n/a         Length (ft)       n/a         Width (ft)       n/a         Condition       n/a         Vertical Difference (in)         Length (ft)       4.5         Width (ft)       6.83         Cross Slope (%)       0.2	Running Slope (%)       8         Cross Slope (%)       4.6         Length (ft)       8         Width (ft)       6.83         LT RT LT RT LT RT LT RT LT         Side Flare Slope (%)       7.1 5.9         Length (ft)       5.42         Width (ft)       7.5         Cross Slope (%)       3.9         Dome Orientation       n/a         Color       n/a         Length (ft)       n/a         Width (ft)       n/a         Condition       n/a         Vertical Difference (in)       0         Length (ft)       4.5         Width (ft)       6.83         Cross Slope (%)       0.2	Running Slope (%) Cross Slope (%) Length (ft) Width (ft)  Side Flare Slope (%)  Length (ft) Width (ft)  Cross Slope (%)  Dome Orientation Color Length (ft) Width (ft)  Condition  Vertical Difference (in)  Cross Slope (%)  Length (ft) Width (ft) Cross Slope (%)  Length (ft)  Vertical Difference (in)  Length (ft) Width (ft) Cross Slope (%)  Cross Slope (%)  A.6  A.6  A.6  A.7  AT  AT  AT  AT  AT  AT  AT  AT  AT  A	Running Slope (%)	Running Slope (%)	Running Slope (%) Cross Slope (%) Length (ft) Width (ft)  Side Flare Slope (%)  Length (ft) Width (ft)  Cross Slope (%)  Dome Orientation Color Length (ft) Width (ft)  Cross Slope (%)  Dome Orientation Color Length (ft) Width (ft) Cross Slope (%)  Description  Color Length (ft) Width (ft) Condition  Vertical Difference (in)  Length (ft) Width (ft) Cross Slope (%)  O  Length (ft)	Running Slope (%) Cross Slope (%) Length (ft) Width (ft)  Side Flare Slope (%)  Length (ft) Width (ft)  Cross Slope (%)  Length (ft) Width (ft)  Cross Slope (%)  Dome Orientation Color Length (ft) Width (ft)  Condition  Vertical Difference (in)  Length (ft) Width (ft) Cross Slope (%)  Length (ft) Width (ft) Coross Slope (%)  Length (ft) Width (ft) Condition  Vertical Difference (in)  Length (ft) Width (ft) Cross Slope (%)  Length (ft)  Length (ft)  Length (ft)  Length (ft) Width (ft) Condition  Length (ft) Width (ft) Coross Slope (%)  Length (ft) Width (ft) Cross Slope (%)  Length (ft) Width (ft) Cr	Running Slope (%) Cross Slope (%) Length (ft) Width (ft)  Side Flare Slope (%)  LT RT LT R	Running Slope (%) Cross Slope (%) Length (ft) Width (ft)  Side Flare Slope (%)  Length (ft) Width (ft)  Cross Slope (%)  Length (ft) Width (ft)  Cross Slope (%)  Dome Orientation Color Length (ft) Width (ft) Condition  Vertical Difference (in)  Length (ft) Width (ft) Cross Slope (%)  Dome Orientation Color Length (ft) Width (ft) Condition  Vertical Difference (in)  Length (ft) Width (ft) Cross Slope (%)  O   O   O   O  O  O  O  O  O  O  O  O	Running Slope (%) Cross Slope (%) Length (ft) Width (ft)  Side Flare Slope (%)  Length (ft) Width (ft)   Length (ft)  Width (ft)  Side Flare Slope (%)  Length (ft)  Width (ft)  Cross Slope (%)  Dome Orientation Color Length (ft) Width (ft)  Condition  Vertical Difference (in)  Length (ft) Width (ft)  Cross Slope (%)  Length (ft)  Dome Orientation Color Length (ft) Width (ft) Condition  Vertical Difference (in)  Length (ft) Width (ft) Cross Slope (%)  Dome Orientation Color Length (ft) Width (ft) Condition  O  Length (ft) Width (ft) Cross Slope (%)  O  Length (ft)  Cross Slope (%)  O  Length (ft)  Cross Slope (%)  O  Length (ft)  Cross Slope (%)  O  Length (ft)  Cross Slope (%)  O  Length (ft)  Cross Slope (%)  O  Length (ft)  Cross Slope (%)  O  Length (ft)  Cross Slope (%)  O  Length (ft)  Cross Slope (%)  O  Length (ft)  Cross Slope (%)  O  Length (ft)  Cross Slope (%)	Running Slope (%) Cross Slope (%) Length (ft) Width (ft)  Side Flare Slope (%)  Length (ft) Width (ft)  Cross Slope (%)  Length (ft)  Width (ft)   Length (ft)  Width (ft)  Cross Slope (%)  Dome Orientation Color Length (ft) Width (ft)  Condition  Vertical Difference (in)  Length (ft) Width (ft)  Cross Slope (%)  Length (ft)  Width (ft) Condition  Relation and a second and a secon

### **Lyell Ave & Myrtle St**

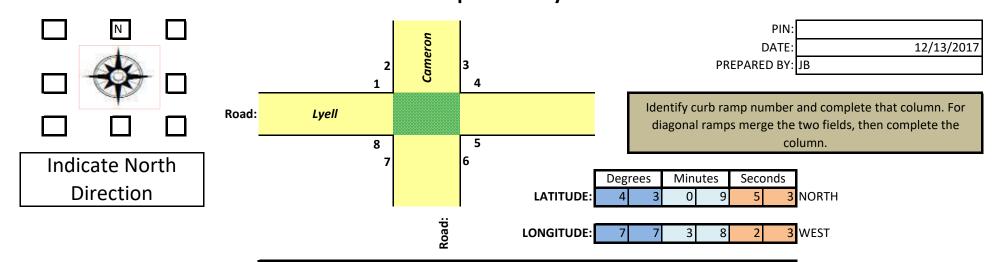


NW Corner – CW 2



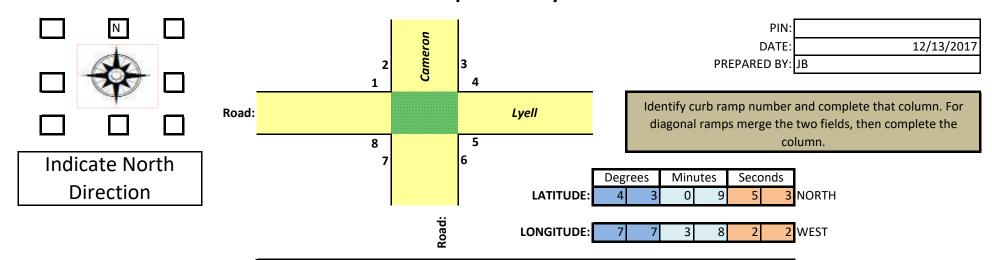
**NE Corner – CW 3** 





**Curb Ramp Number** 

### Ramp Field Measured Values Criteria **Feature** 1 2 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 9.3 Cross Slope (%) 2.4 Length (ft) 9.1 Ramp Width (ft) 6.5 RT LT RT LT RT RT RT LT RT LT RT LT LT LT RT LT Side Flare Slope (%) 9.9 n/a tree lawn RT Length (ft) 5 Turning Space (top Width (ft) 4 of ramp) 1.1 Cross Slope (%) **Dome Orientation** n/a none n/a Color **Detectable** Length (ft) n/a Warning n/a Width (ft) Condition n/a **Transition to** Vertical Difference (in) 0 Roadway Length (ft) 3.75 road Width (ft) 6.5 **Clear Space** (bottom of ramp) Cross Slope (%) 2.4 1.6 Counter Slope (%)



		Curb Ram	p Numbe	r	
	Rar	np Field Me	easured Val	ues	

Feature	Criteria		1		2		3	4	1	!	5		6		7	;	8	Notes
Ramp	Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft) Width (ft)					8.	2.3 .4 25											
	Side Flare Slope (%)	LT	RT	LT	RT	<b>LT</b> 8.9	<b>RT</b> 7.4	LT	RT									
Turning Space (top of ramp)	Length (ft) Width (ft) Cross Slope (%)					4.	6 83 3											
Detectable Warning	Dome Orientation Color Length (ft) Width (ft) Condition					n n n	/a /a /a /a /a											none
Transition to Roadway	Vertical Difference (in)						0											
Clear Space (bottom of ramp)	Length (ft) Width (ft) Cross Slope (%) Counter Slope (%)					3	5 9 6											road

### **Lyell Ave & Cameron St**



NW Corner - CW 2



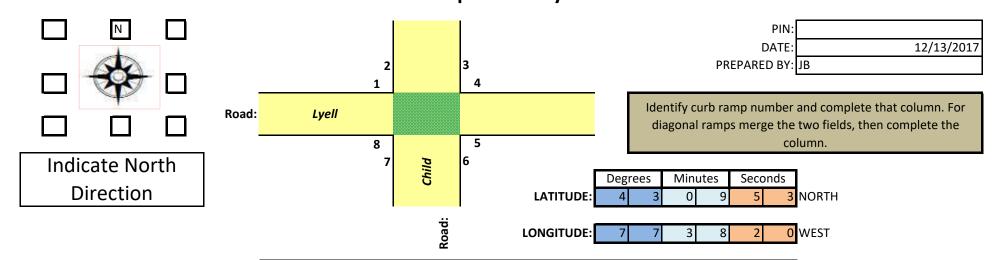
NE Corner - CW 3



		Firehouse dv 3 4		PIN: DATE: 12/13/2017 PREPARED BY: JB
	Road:	5	Lyell	Identify curb ramp number and complete that column. For diagonal ramps merge the two fields, then complete the column.
Indicate North Direction	7	Child 9	LATITUDE:	egrees Minutes Seconds 4 3 0 9 5 3 NORTH
		Road:	LONGITUDE:	7 7 3 8 2 0 WEST

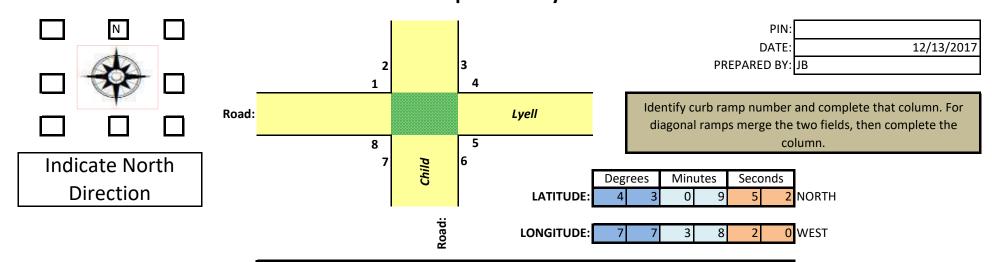
**Curb Ramp Number** 

							Rar	np Fie	eld Me	easur	ed Val	ues						
Feature	Criteria	:	1		2	3	3	4	1		5		6	7	7		8	Notes
Ramp	Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft) Width (ft)																	Non ADA ramp in dwy
	Side Flare Slope (%)	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	
Turning Space (top of ramp)	Length (ft) Width (ft) Cross Slope (%)																	
Detectable Warning	Dome Orientation Color Length (ft) Width (ft) Condition																	
Transition to Roadway	Vertical Difference (in)																	
Clear Space (bottom of ramp)	Length (ft) Width (ft) Cross Slope (%) Counter Slope (%)																	



**Curb Ramp Number** 

							Rar	np Fie	ld Me	easure	ed Val	ues						
Feature	Criteria	1	L	7	2	3	3	4	1	!	5		6	7	7		8	Notes
Ramp	Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft) Width (ft)	5. 1. 8.6 5.2	6 57															
	Side Flare Slope (%)	<i>LT</i> 15.6	<b>RT</b> 16.2	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	Walking Surfaces- Out of Spec
Turning Space (top of ramp)	Length (ft) Width (ft) Cross Slope (%)	n/ n/ n/	′a															firehouse lawn
Detectable Warning	Dome Orientation Color Length (ft) Width (ft) Condition	n/ n/ n/ n/ n/	/a /a /a															none
Transition to Roadway	Vertical Difference (in)	C	)															
Clear Space (bottom of ramp)	Length (ft) Width (ft) Cross Slope (%)	1.	.3															road
	Counter Slope (%)	0.	4															



Curb Ramp Number
Ramp Field Measured Values

### Criteria **Feature** 1 2 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 12.8 Cross Slope (%) 3.9 Length (ft) 8.25 Ramp Width (ft) 5 RT LT RT RT LT RT LT LT RT LT RT LT LT RT Side Flare Slope (%) 13.2 15.8 Length (ft) 5 **Turning Space (top** Width (ft) 6.17 of ramp) 4.8 Cross Slope (%) **Dome Orientation** n/a none Color n/a **Detectable** Length (ft) n/a Warning Width (ft) n/a Condition n/a **Transition to** Vertical Difference (in) 0 Roadway Length (ft) 6 road Width (ft) 5 **Clear Space**

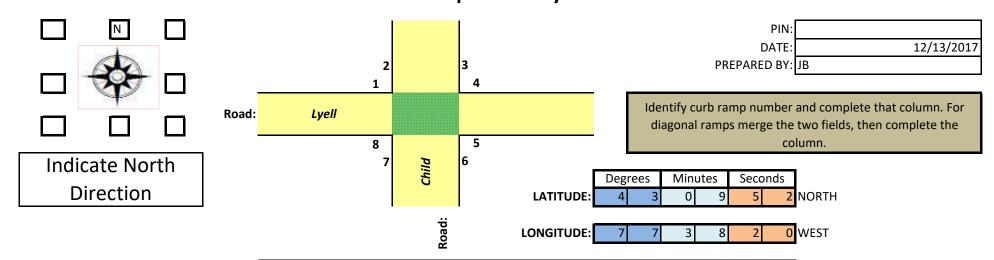
3

0.6

(bottom of ramp)

Cross Slope (%)

Counter Slope (%)



**Curb Ramp Number** 

### Ramp Field Measured Values Criteria **Feature** 1 2 3 4 5 6 7 **Notes** Standard Sheet Type Running Slope (%) 13.3 Cross Slope (%) 0.5 Length (ft) Ramp Width (ft) 4 RT RT RT LT RT LT LT RT LT RT LT LT LT RT Side Flare Slope (%) 12.5 9.5 Length (ft) 4 Turning Space (top Width (ft) 5 of ramp) 4 Cross Slope (%) **Dome Orientation** n/a none n/a Color **Detectable** Length (ft) n/a Warning Width (ft) n/a Condition n/a **Transition to** Vertical Difference (in) 0.5 Roadway Length (ft) 5 road Width (ft) 4 **Clear Space** (bottom of ramp) Cross Slope (%) 3 Counter Slope (%) 1.3

### **Lyell Ave & Child St**



**NE Corner Lyell Firehouse Dwy** 



**NW Corner – CW 1** 



### **Lyell Ave & Child St**

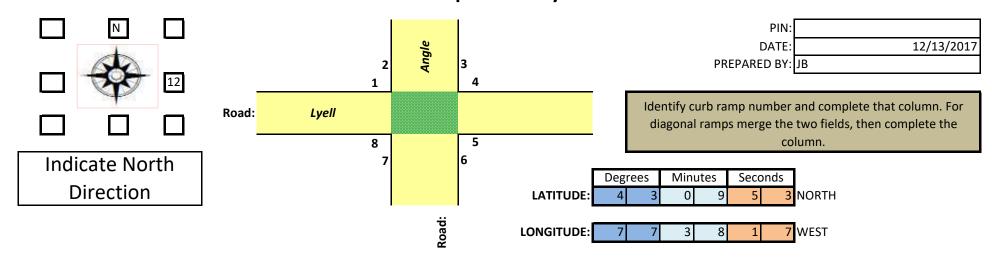


SE Corner – CW 5



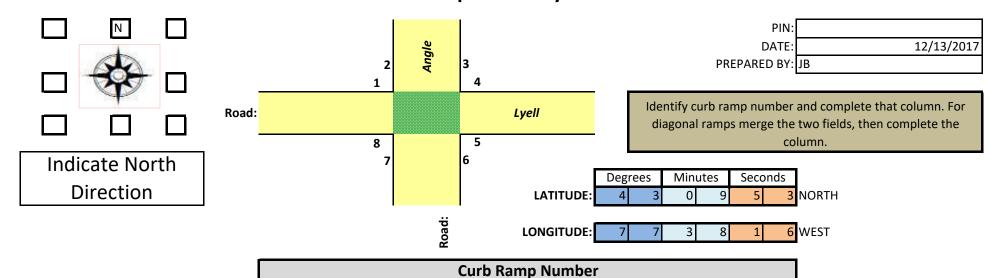
**SW Corner – CW 7** 





**Curb Ramp Number** 

### Ramp Field Measured Values Criteria **Feature** 1 2 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 5.8 Cross Slope (%) 3.8 Length (ft) 6.83 Ramp Width (ft) 4.67 RT RT LT RT RT RT LT LT RT LT RT LT LT LT LT RT Side Flare Slope (%) 7 6.4 Length (ft) 8 **Turning Space (top** Width (ft) 7.67 of ramp) 1.4 Cross Slope (%) **Dome Orientation** perp Color grey **Detectable** Length (ft) Warning 4.75 Width (ft) Condition fair partially sunken brick **Transition to** Vertical Difference (in) 0 Roadway Length (ft) 2.33 road Width (ft) 5 **Clear Space** (bottom of ramp) Cross Slope (%) 1 Counter Slope (%) 2.2



### Ramp Field Measured Values **Feature** Criteria 1 2 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 3.4 Cross Slope (%) 2.4 Length (ft) 8.25 Ramp 4.75 Width (ft) RT LT RT LT RT RT RT LT RT LT LT LT LT RT LT RT Side Flare Slope (%) 10.8 7 Length (ft) 9.25 **Turning Space (top** Width (ft) 7.75 of ramp) 1.9 Cross Slope (%) **Dome Orientation** perp Color grey **Detectable** Length (ft) 2 Warning

partially sunken brick

road

4.75

good

0

5

4.33

1.4

Width (ft) Condition

Vertical Difference (in)

Length (ft)

Width (ft)

Cross Slope (%)

Counter Slope (%)

**Transition to** 

Roadway

Clear Space (bottom of ramp)

### **Lyell Ave & Angle St**

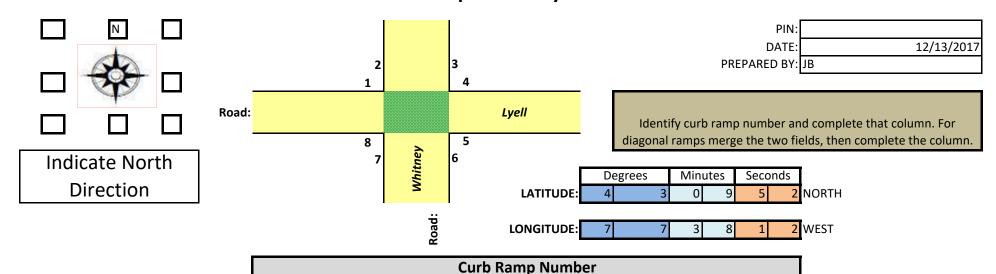


NW Corner – CW 2

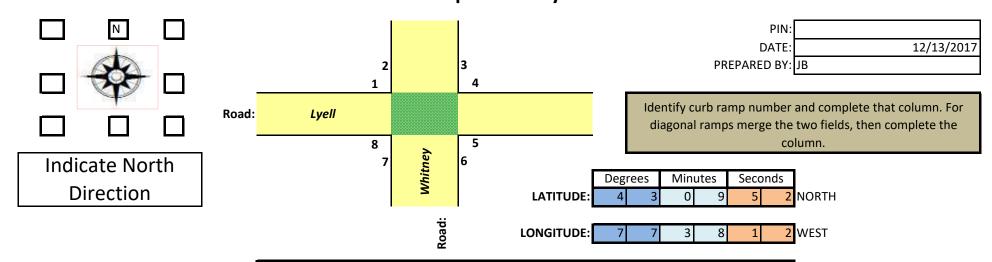


**NE Corner - CW 3** 





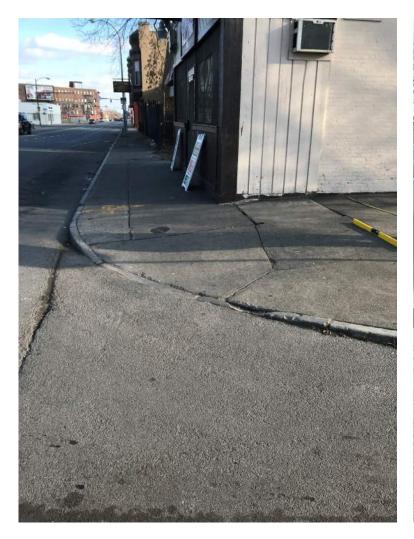
### Ramp Field Measured Values Criteria 5 **Feature** 1 2 3 4 6 7 8 **Notes** Standard Sheet Type Running Slope (%) 12.1 Cross Slope (%) 3.1 6.83 Length (ft) Ramp Width (ft) 5 LT RT Side Flare Slope (%) 7.1 7.2 Length (ft) LT 5.5 RT 4.83 2 clear spaces Turning Space (top Width (ft) 7.5, 10.42 of ramp) Cross Slope (%) 6.2, 3 **Dome Orientation** n/a none Color n/a **Detectable** Length (ft) n/a Warning Width (ft) n/a Condition n/a **Transition to** Vertical Difference (in) 0 Roadway Length (ft) 4 Width (ft) 5 **Clear Space** Cross Slope (%) 0.5 (bottom of ramp) Counter Slope (%) 2.3



**Curb Ramp Number** 

### Ramp Field Measured Values Criteria **Feature** 1 2 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 12.1 Cross Slope (%) 0.5 Length (ft) 8.17 Ramp Width (ft) 5.33 RT RT RT LT RT LT LT RT LT LT RT LT RT LT LT RT Side Flare Slope (%) 5.2 7.7 Length (ft) 5.42 Turning Space (top Width (ft) 7.67 of ramp) 3.5 Cross Slope (%) **Dome Orientation** n/a none n/a Color **Detectable** Length (ft) n/a Warning n/a Width (ft) Condition n/a **Transition to** Vertical Difference (in) 0 Roadway Length (ft) 5 Width (ft) 5.37 **Clear Space** (bottom of ramp) Cross Slope (%) 0.6 1.2 Counter Slope (%)

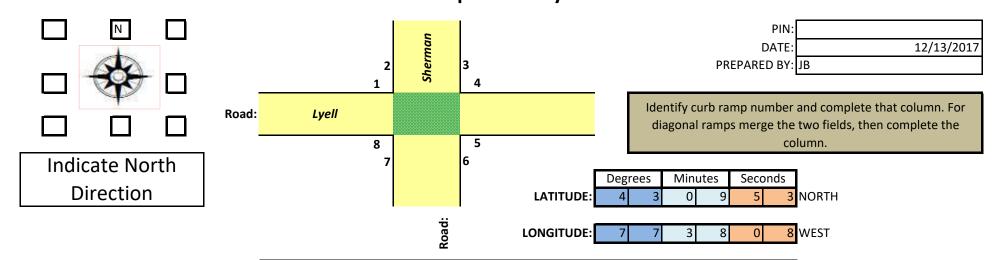
### **Lyell Ave & Whitney St**





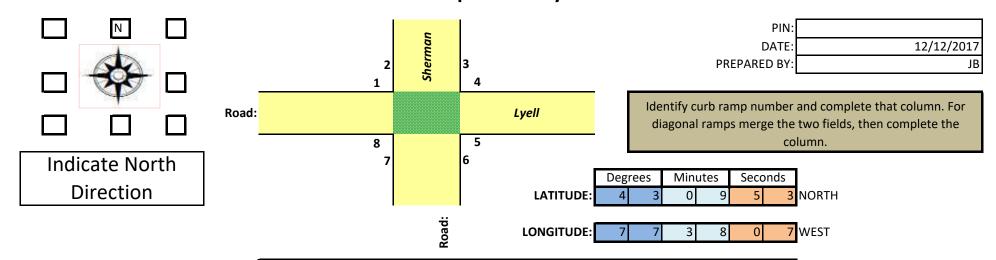
SE Corner – CW 6

**SW Corner – CW 7** 



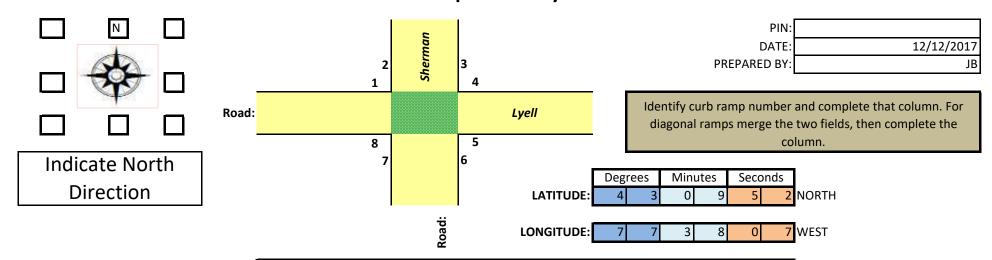
**Curb Ramp Number** 

### Ramp Field Measured Values Criteria **Feature** 1 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 8 Cross Slope (%) 2.1 Length (ft) 8 Ramp Width (ft) 5 LT RT LT RT RT RT LT RT LT LT LT RT LT RT Side Flare Slope (%) 12.7 8.6 Length (ft) LT 4.33, RT 6 2 clear spaces Turning Space (top Width (ft) 10.6 of ramp) 1.7, 3.1 Cross Slope (%) **Dome Orientation** n/a none n/a Color **Detectable** Length (ft) n/a Warning Width (ft) n/a Condition n/a **Transition to** Vertical Difference (in) 0 Roadway Length (ft) 7 Width (ft) 5 **Clear Space** (bottom of ramp) Cross Slope (%) 0.1 0.6 Counter Slope (%)



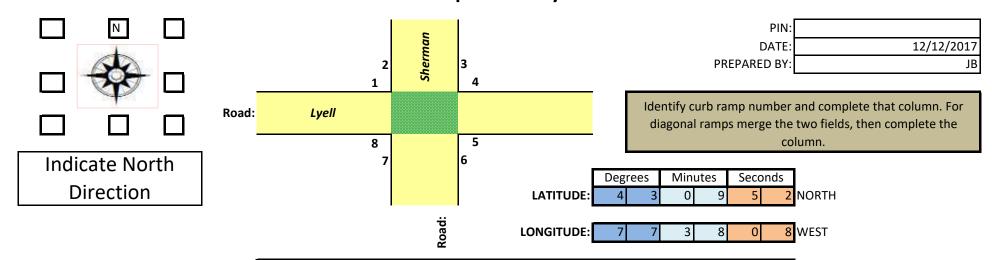
**Curb Ramp Number** 

						Rar	np Field M	easur	ed Val	ues						
Feature	Criteria	:	1		2	3	3		5		6	7	7	:	8	Notes
Ramp	Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft) Width (ft)					9. 2. 6.: 4.	.6 17									
	Side Flare Slope (%)	LT	RT	LT	RT	<b>LT</b> 2.9	<b>RT</b> 7.6	LT	RT	LT	RT	LT	RT	LT	RT	
Turning Space (top of ramp)	Length (ft) Width (ft) Cross Slope (%)					2.	.5									
Detectable Warning	Dome Orientation Color Length (ft) Width (ft) Condition					n, n, n, n,	/a /a /a									none
Transition to Roadway	Vertical Difference (in)					(	)									
Clear Space (bottom of ramp)	Length (ft) Width (ft) Cross Slope (%) Counter Slope (%)					7. 7. 0	25 .8									



		Curb Ram	p Numbe	r	
	Rar	np Field Me	easured Val	ues	

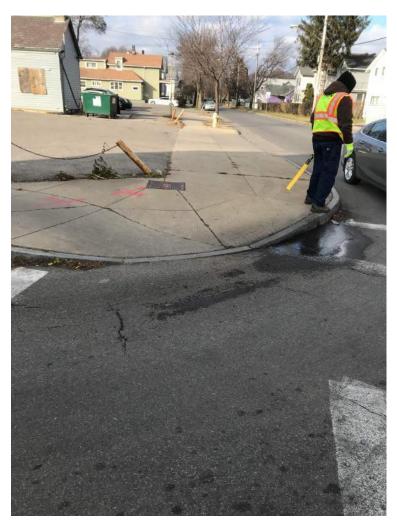
Feature	Criteria		1		2	3	3	4		!	5	6		7		8		Notes	
	Standard Sheet Type																		
	Running Slope (%)										.6								
Ramp	Cross Slope (%) Length (ft)										.7 58								
Kamp	Width (ft)										.5								
	Side Flare Slope (%)	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT		
										4.7	7.1								
Turning Space (top	Length (ft) Width (ft)										3 33								
of ramp)	Cross Slope (%)										.2								
	Dome Orientation									рє	erp								
Detectable	Color									gr	еу								
Warning	Length (ft)										2								
	Width (ft)										.5								
	Condition									go	od							brick	
Transition to Roadway	Vertical Difference (in)										0								
	Length (ft)									n	/a							road/xwalk	
Clear Space	Width (ft)									n	/a								
(bottom of ramp)	Cross Slope (%)										.2								
	Counter Slope (%)									1	.3								



		Curb Ram	p Numbe	r	
	Rar	np Field Me	easured Val	ues	

Feature	Criteria	:	1		2	3	3	4	4		5		6		7		8	Notes
Ramp	Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft) Width (ft)															14.2 0.9 4.5 5		
	Side Flare Slope (%)	LT	RT	<b>LT</b> 6	<b>RT</b> 6.3													
Turning Space (top of ramp)	Length (ft) Width (ft) Cross Slope (%)																3 5 .8	
Detectable Warning	Dome Orientation Color Length (ft) Width (ft) Condition															gr	erp ey 2 5 sken	brick
Transition to Roadway	Vertical Difference (in)																).5	o rec
Clear Space (bottom of ramp)	Length (ft) Width (ft) Cross Slope (%) Counter Slope (%)															0	0 0 .2 4	road/xwalk

### **Lyell Ave & Sherman St**





NW Corner - CW 1

**NE Corner - CW 3** 

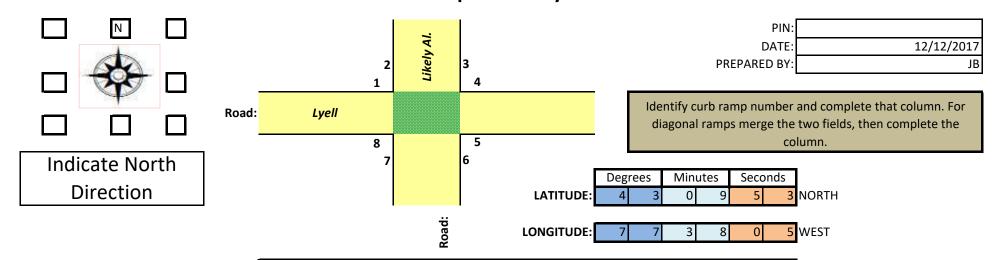
### **Lyell Ave & Sherman St**





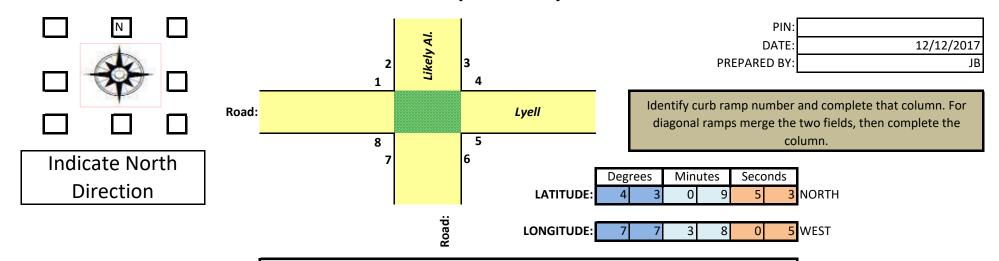
SE Corner – CW 5

**SW Corner - CW 8** 



Curb Ramı	p Number	•	
Ramp Field Me	easured Valu	ues	
-			

Feature	Criteria	:	1		2 3		4		!	5 6		6	7		8		Notes	
	Standard Sheet Type								•									
	Running Slope (%) Cross Slope (%)				.5 .5													
Ramp	Length (ft)				42													
	Width (ft)			9.	67													
	Side Flare Slope (%)	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	
				3.7	2.2													
Turning Space (top	Length (ft) Width (ft)				.5 67													
of ramp)	Cross Slope (%)				1.7													
	Dome Orientation			n/a n/a														none
Detectable	Color																	
Warning	Length (ft)			n/a														
8	Width (ft)				/a													
	Condition			n,	/a													
Transition to Roadway	Vertical Difference (in)			(	0													
	Length (ft)			4	.5													road
Clear Space	Width (ft)																	
(bottom of ramp)	Cross Slope (%)				.9													
	Counter Slope (%)			4	.1													



			Curb Ram	p Numbe	r										
	Ramp Field Measured Values														
1	2	2	4	-	6	7	0								

Feature	Criteria		1		2	3	3		4		5		5	'		8		Notes	
Ramp	Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft) Width (ft)						10.3 2.3 5.17 5.25												
	Side Flare Slope (%)	LT	RT	LT	RT	<b>LT</b> 14.9	<b>RT</b> 9.1	LT	RT										
Turning Space (top of ramp)	Length (ft) Width (ft) Cross Slope (%)				5 7.33 4.3		33												
Detectable Warning	Dome Orientation Color Length (ft) Width (ft) Condition						n/a n/a n/a n/a n/a											none	
Transition to Roadway	Vertical Difference (in)					-	1												
Clear Space (bottom of ramp)	Length (ft) Width (ft) Cross Slope (%) Counter Slope (%)					5. 1	.5 25 .2 .8											road	

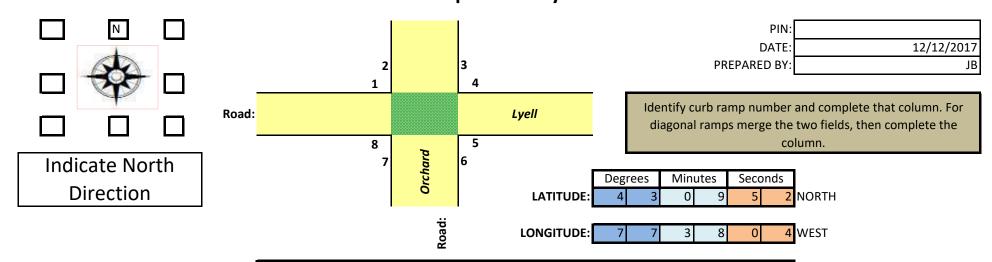
### **Lyell Ave & Likly Alley**





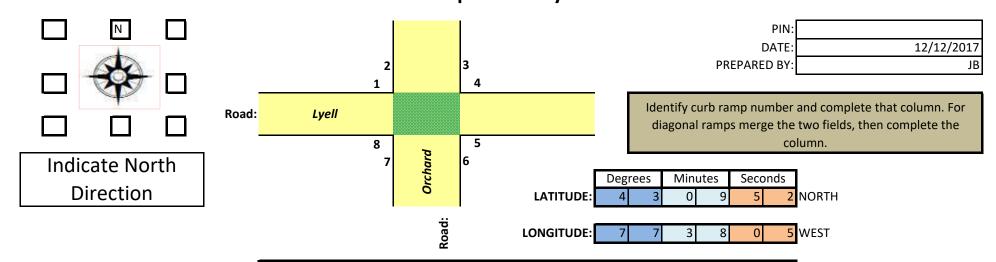
NW Corner – CW 2

**NE Corner - CW 3** 



**Curb Ramp Number** 

### Ramp Field Measured Values Criteria **Feature** 1 2 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 9.7 2.7 Cross Slope (%) 6.5 Length (ft) Ramp Width (ft) 5 RT RT LT RT LT RT LT RT LT LT RT LT RT LT LT RT Side Flare Slope (%) 10.3 7.7 Length (ft) 5.17 Turning Space (top Width (ft) 7.5 of ramp) 1.2 Cross Slope (%) **Dome Orientation** brick perp Color grey **Detectable** Length (ft) 2 Warning Width (ft) Condition sunken **Transition to** Vertical Difference (in) 0 Roadway Length (ft) 6 road Width (ft) 7.5 **Clear Space** (bottom of ramp) Cross Slope (%) 2.5 Counter Slope (%) 2.6



**Curb Ramp Number** 

### Ramp Field Measured Values Criteria **Feature** 1 2 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 8.2 Cross Slope (%) 0 Length (ft) 6.17 Ramp Width (ft) 4.83 RT RT RT RT LT LT RT LT LT RT LT RT LT LT LT RT Side Flare Slope (%) 7.1 4 Length (ft) 5 Turning Space (top Width (ft) 7 of ramp) 2.9 Cross Slope (%) **Dome Orientation** brick perp Color grey **Detectable** Length (ft) Warning 4.83 Width (ft) Condition sunken **Transition to** Vertical Difference (in) 0 Roadway Length (ft) 4.25 road Width (ft) **Clear Space** 5.33 (bottom of ramp) Cross Slope (%) 0 2.8 Counter Slope (%)

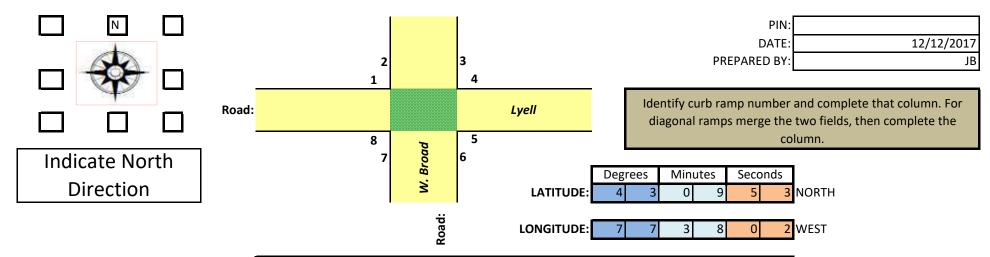
### **Lyell Ave & Orchard St**





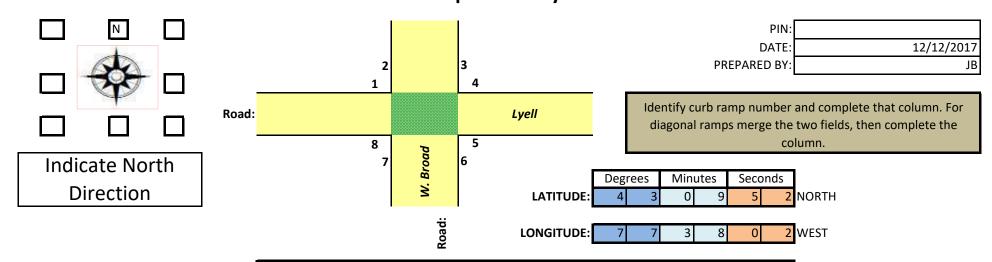
**SE Corner – CW 6** 

SW Corner – CW 7



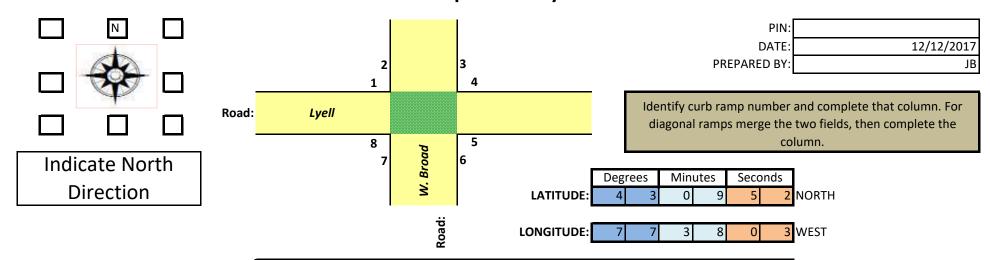
		Curb Ram	p Numbe	r	
	Rar	np Field Me	easured Val	ues	

Feature	Criteria		1		2	3	3	4	1	ŗ	5	6	5		7	1	8	Notes
Ramp	Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft) Width (ft)							6. 0. 6.9	.1 92									
	Side Flare Slope (%)	LT	RT	LT	RT	LT	RT	<b>LT</b> 12.6	<b>RT</b> 10	LT	RT	LT	RT	LT	RT	LT	RT	
Turning Space (top of ramp)	Length (ft) Width (ft) Cross Slope (%)							n/ n/ n/	/a									field/lot
Detectable Warning	Dome Orientation Color Length (ft) Width (ft) Condition							pe gre 2 5 sun	ey <u>2</u>									brick
Transition to Roadway	Vertical Difference (in)							C	)									
Clear Space (bottom of ramp)	Length (ft) Width (ft) Cross Slope (%) Counter Slope (%)																	road/xwalk



					Curb Ram	p Number			
				Rar	np Field Me	easured Values			
Feature	Criteria	1	2	3	4	5	7	8	
	Standard Sheet Type								

Feature	Criteria	:	1		2	3	3	4	4	!	5		7	8	8	Notes
	Standard Sheet Type Running Slope (%) Cross Slope (%)										.2 .9					
Ramp	Length (ft) Width (ft)										5					
	Side Flare Slope (%)	LT	RT	LT	RT	LT	RT	LT	RT	<i>LT</i> 10.1	<b>RT</b> 4.7	LT	RT	LT	RT	
Turning Space (top of ramp)	Length (ft) Width (ft) Cross Slope (%)									n,	/a /a /a					lawn
Detectable Warning	Dome Orientation Color Length (ft) Width (ft)									gr	erp ey 2					
Transition to Roadway	Condition  Vertical Difference (in)										od )					brick
Clear Space (bottom of ramp)	Length (ft) Width (ft) Cross Slope (%)									!	42 5 .3					
	Counter Slope (%)									2	.5					



**Curb Ramp Number** 

0

3.5

5.25

0.4

3.5

road/crosswalk

### Ramp Field Measured Values Criteria **Feature** 1 2 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 10 Cross Slope (%) 0 6.58 Length (ft) Ramp Width (ft) 5.25 RT RT RT RT LT LT RT LT LT RT LT RT LT LT LT RT Side Flare Slope (%) 7.3 6.1 Length (ft) 4 Turning Space (top Width (ft) 7.08 of ramp) 1.6 Cross Slope (%) **Dome Orientation** brick perp Color grey **Detectable** Length (ft) Warning 4.92 Width (ft) Condition sunken

**Transition to** 

Roadway

Clear Space (bottom of ramp)

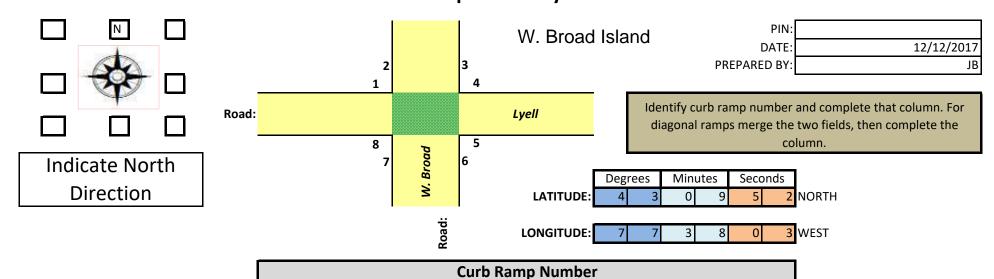
Vertical Difference (in)

Length (ft)

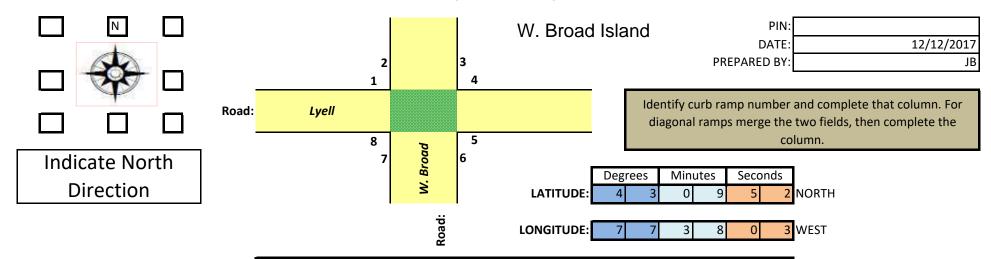
Width (ft)

Cross Slope (%)

Counter Slope (%)



### Ramp Field Measured Values **Feature** Criteria 1 2 3 4 5 6 7 8 **Notes** Standard Sheet Type Running Slope (%) 3 Cross Slope (%) 1.9 Length (ft) 6.08 Ramp Width (ft) 4 RT RT LT RT LT RT LT RT LT LT RT LT RT LT LT RT Side Flare Slope (%) 10.4 5.2 Length (ft) 5.25 **Turning Space (top** Width (ft) 5.33 of ramp) 1.9 Cross Slope (%) **Dome Orientation** brick perp Color grey **Detectable** Length (ft) 2 Warning Width (ft) 4 Condition good **Transition to** Vertical Difference (in) 0 Roadway Length (ft) 0 road/crosswalk Width (ft) 0 **Clear Space** (bottom of ramp) Cross Slope (%) 0.8 Counter Slope (%) 1.3



			Curb Ram	p Numbe	r		
		Rar	np Field Me	easured Val	ues		
1	2	3	4	5	6	7	8

Feature	Criteria	:	1		2	3	3	4	1		5	6	5	7	7	8	3	Notes
	Standard Sheet Type Running Slope (%) Cross Slope (%)													5. 1.				
Ramp	Length (ft) Width (ft)													5.2	75			
	Side Flare Slope (%)	LT	RT	<b>LT</b> 16.1	<b>RT</b> 14	LT	RT											
Turning Space (top of ramp)	Length (ft) Width (ft) Cross Slope (%)													5.8 8 1.	3			
Detectable Warning	Dome Orientation Color Length (ft) Width (ft) Condition													pe gro 2 3.3 sun	ey 2 37			brick
Transition to Roadway	Vertical Difference (in)													C	)			
Clear Space (bottom of ramp)	Length (ft) Width (ft) Cross Slope (%) Counter Slope (%)													n, n, 1.	/a .2			road/crosswalk

### Lyell and W. Broad



**NE Corner – CW 4** 



**SE Corner – CW 5** 



SW Corner – CW 7

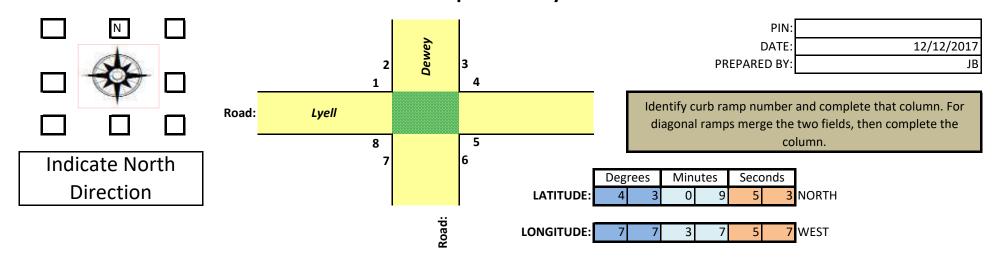
### Lyell and W. Broad Island





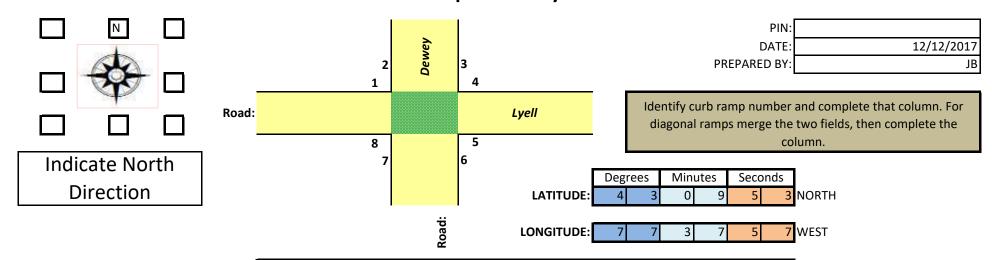
Island East Side - CW 6

Island West Side - CW 7



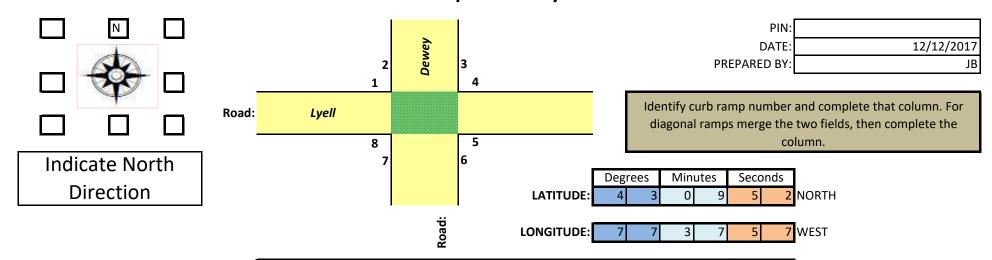
**Curb Ramp Number** 

### Ramp Field Measured Values Criteria **Feature** 1 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 7.8 Cross Slope (%) 0.1 6.75 Length (ft) Ramp Width (ft) 8.67 LT RT LT RT RT RT LT RT LT LT LT RT LT RT Side Flare Slope (%) 7.7 5.6 Length (ft) 7.25 4.5 Turning Space (top Width (ft) 7.67 9 of ramp) 2.6 1.4 Cross Slope (%) **Dome Orientation** n/a n/a Color **Detectable** Length (ft) n/a Warning Width (ft) n/a Condition n/a **Transition to** Vertical Difference (in) 1 Roadway Length (ft) 3 Width (ft) 8.67 **Clear Space** (bottom of ramp) Cross Slope (%) 1.8 3.2 Counter Slope (%)



		Curb Ram	p Numbei	r		
		Ramp Field Me	easured Val	ues		
1	2	3	5	6	7	8

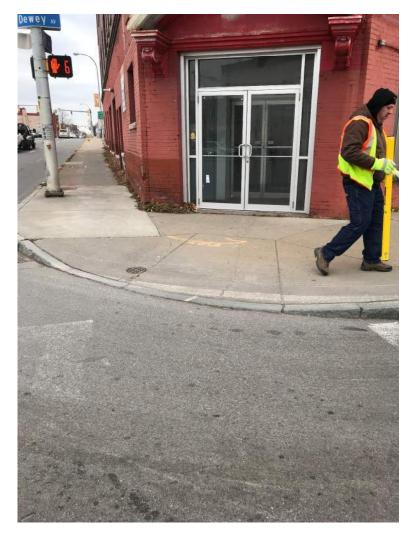
Feature	Criteria		1		2		3	3	5	5	(	6		7		8	Notes
Ramp	Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft) Width (ft)						7. 2. 8.:	.4									
	Side Flare Slope (%)	LT	RT	LT	RT	<b>LT</b> 7.1	<b>RT</b> 9.6		LT	RT	LT	RT	LT	RT	LT	RT	
Turning Space (top of ramp)	Length (ft) Width (ft) Cross Slope (%)					5, 5	RT3 5.67 0.6										2 clear spaces 2 clear spaces 2 clear spaces
Detectable Warning	Dome Orientation Color Length (ft) Width (ft) Condition					gr 2	erp ey 2 5 ugh										deteriorated mat
Transition to Roadway	Vertical Difference (in)					(	0										
Clear Space (bottom of ramp)	Length (ft) Width (ft) Cross Slope (%) Counter Slope (%)					1	.5 5 .2 .7										



### **Curb Ramp Number** Ramp Field Measured Values Criteria **Feature** 2 5 **Notes** 1 3 4 6 7 8 Standard Sheet Type Running Slope (%) 6.1 Cross Slone (%)

	Cross Slope (%)																.8	
Ramp	Length (ft)															7.	33	
	Width (ft)																5	
	Side Flare Slope (%)	LT	RT	LT	RT													
	Side Hare Slope (70)															5.6		
Turning Space (top	Length (ft)															n	/a	pk lot
of ramp)	Width (ft)															n	/a	
of famp)	Cross Slope (%)															n	/a	
	Dome Orientation		•		•		•		•				•			n	/a	none
Detectable	Color															n	/a	
Warning	Length (ft)															n	/a	
vvarring	Width (ft)															n	/a	
	Condition															n	/a	
Transition to	Vertical Difference (in)																0	
Roadway	vertical billerence (iii)																0	
	Length (ft)																0	road
Clear Space	Width (ft)																0	
(bottom of ramp)	Cross Slope (%)															0	.9	
	Counter Slope (%)															1	.8	

### **Lyell Ave & Dewey Ave**

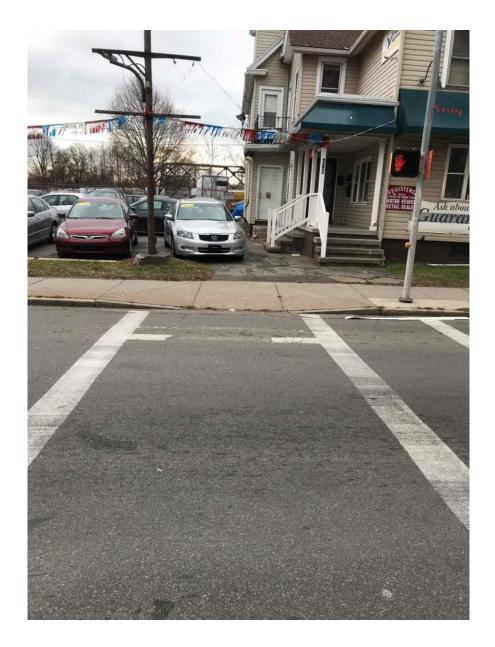




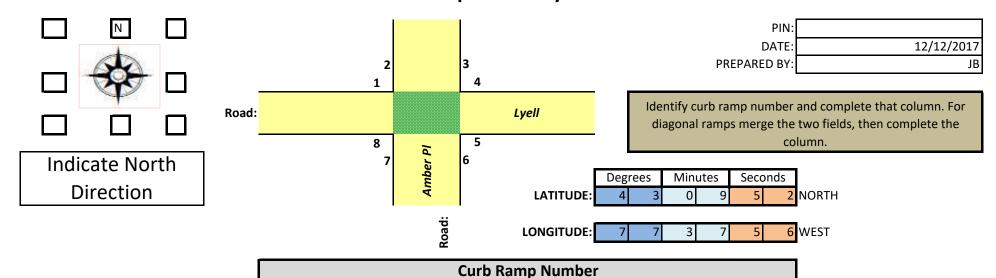
NW Corner - CW 1

**NE Corner - CW 3** 

### **Lyell Ave & Dewey Ave**



**SW Corner - CW 8** 



Ramp Field Measured Values

0.3

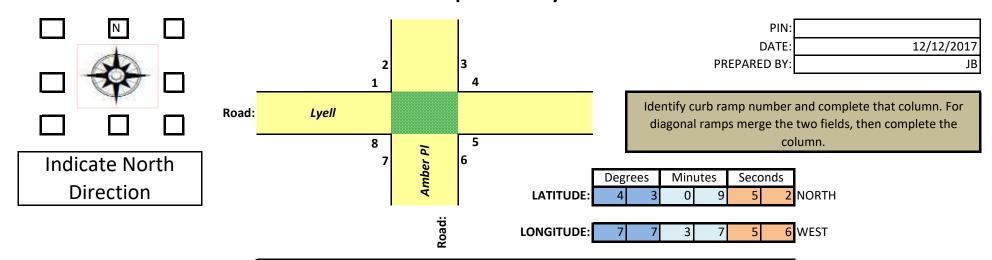
0.3

### **Feature** Criteria 1 2 3 4 5 6 7 8 **Notes** Standard Sheet Type Running Slope (%) 3.5 Cross Slope (%) 5.42 Length (ft) Ramp Width (ft) 9.33 radius RT RT LT RT LT RT RT LT RT LT LT RT LT RT LT LT Side Flare Slope (%) 5.3 n/a no RT flare Length (ft) 8.33 Turning Space (top Width (ft) 7.5 of ramp) 0.2 Cross Slope (%) **Dome Orientation** perp Color grey **Detectable** Length (ft) 2 Warning 5 Width (ft) Condition brick good **Transition to** Vertical Difference (in) 0 Roadway Length (ft) 5.75 Width (ft) **Clear Space** 7.5

(bottom of ramp)

Cross Slope (%)

Counter Slope (%)



			Curb Ram	p Numbe	r		
		Rar	np Field Me	easured Val	ues		
1	2	3	4	5	6	7	8

Feature	Criteria		1		2	3	3	4	1		5	6	5	,	7		8	Notes
Ramp	Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft)													1	5 5			
	Width (ft) Side Flare Slope (%)	LT	RT	4 LT 8.4	5 <b>RT</b> 3.7	LT	RT											
Turning Space (top of ramp)	Length (ft) Width (ft) Cross Slope (%)													6.	83 92 6			
Detectable Warning	Dome Orientation Color Length (ft) Width (ft) Condition													gr 4.	rey 2 83			brick
Transition to Roadway	Vertical Difference (in)														0			
Clear Space (bottom of ramp)	Length (ft) Width (ft) Cross Slope (%) Counter Slope (%)													4	6 5 4 4			

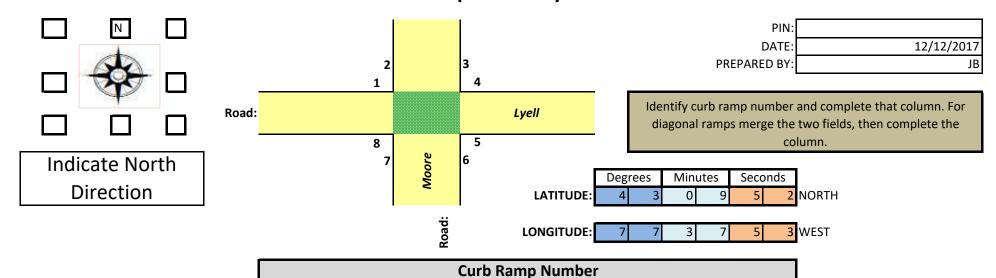
### Lyell Ave & Amber Pl



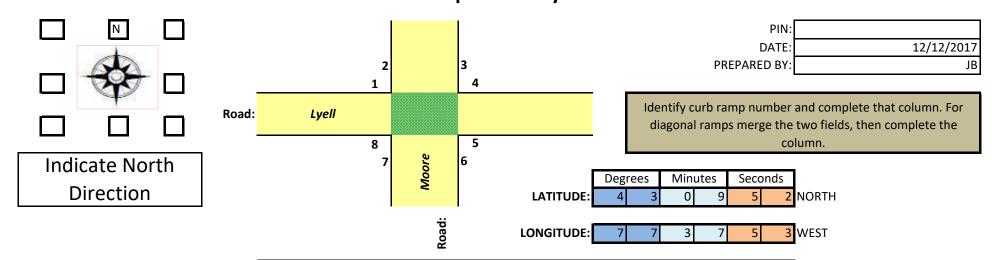


SE Corner – CW 6

**SW Corner – CW 7** 



### Ramp Field Measured Values Criteria **Feature** 1 2 3 4 5 6 7 8 **Notes** Standard Sheet Type Running Slope (%) 4.9 Cross Slope (%) 1 6.83 Length (ft) Ramp Width (ft) 4.33 RT RT LT RT LT RT LT RT LT LT RT LT RT LT LT RT Side Flare Slope (%) 9.6 18.6 Length (ft) 4.83 Turning Space (top Width (ft) 4.17 of ramp) 3.5 Cross Slope (%) **Dome Orientation** n/a none Color n/a **Detectable** Length (ft) n/a Warning n/a Width (ft) Condition n/a **Transition to** Vertical Difference (in) -0.5 Roadway Length (ft) 4 Width (ft) **Clear Space** 4.17 (bottom of ramp) Cross Slope (%) 1.6 Counter Slope (%) 1



**Curb Ramp Number** 

### Ramp Field Measured Values Criteria **Feature** 1 2 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 11.1 Cross Slope (%) 1.7 6.33 Length (ft) Ramp Width (ft) 4.33 RT RT RT LT RT LT LT RT LT LT RT LT RT LT LT RT Side Flare Slope (%) 20.1 11.2 Length (ft) 6.75 Turning Space (top Width (ft) 7.17 of ramp) 1.2 Cross Slope (%) **Dome Orientation** n/a none n/a Color **Detectable** Length (ft) n/a Warning Width (ft) n/a Condition n/a **Transition to** Vertical Difference (in) 0 Roadway Length (ft) 7.58 Width (ft) **Clear Space** 4.42 (bottom of ramp) Cross Slope (%) 3.7

Counter Slope (%)

2.5

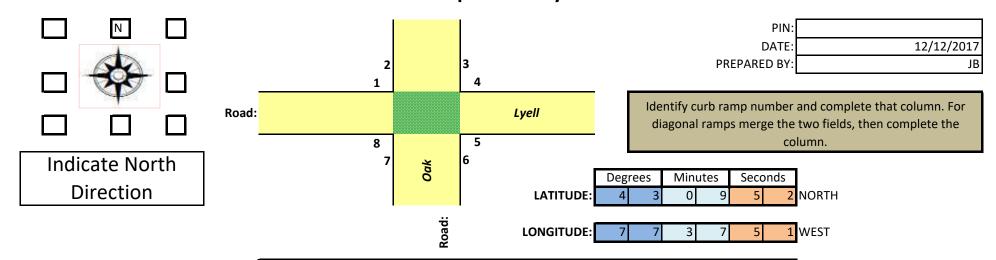
### **Lyell Ave & Moore St**





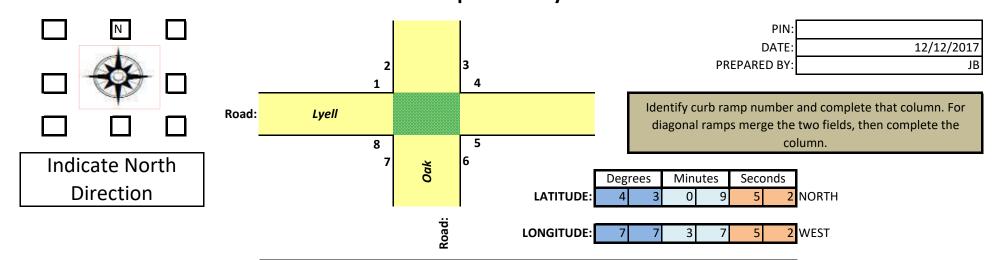
SE Corner – CW 6

SW Corner – CW 7



**Curb Ramp Number** 

							Rar	np Fie	eld Me	easure	ed Val	ues						
Feature	Criteria	:	1	2	2	(1)	3	4	1	-,	5	(	5		7		8	Notes
Ramp	Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft)											7. 2. 3.33						
	Width (ft)											4.	.5					
	Side Flare Slope (%)	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	
												5.5	7.5					
Turning Space (top of ramp)	wiath (ft)											4						
O. 10p/	Cross Slope (%)											1.						
Detectable Warning	Dome Orientation Color Length (ft)											n, n, n,	/a /a					none
	Width (ft)											n,						
Transition to Roadway	Condition  Vertical Difference (in)											n,						
	Length (ft)												3					
Clear Space (bottom of ramp)	Width (ft) Cross Slope (%)											4.5	.3					
	Counter Slope (%)											1	.7					



**Curb Ramp Number** 

### Ramp Field Measured Values Criteria **Feature** 1 2 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 11.7 Cross Slope (%) 2.1 Length (ft) 6.42 Ramp Width (ft) 3.67 RT RT RT LT RT LT LT RT LT LT RT LT RT LT LT RT Side Flare Slope (%) 3.2 5.2 Length (ft) 4.17 Turning Space (top Width (ft) 4.17 of ramp) 3.6 Cross Slope (%) **Dome Orientation** n/a none n/a Color **Detectable** Length (ft) n/a Warning n/a Width (ft) Condition n/a **Transition to** Vertical Difference (in) 0 Roadway Length (ft) 4 Width (ft) **Clear Space** 3.67 (bottom of ramp) Cross Slope (%) 5.4 1.9 Counter Slope (%)

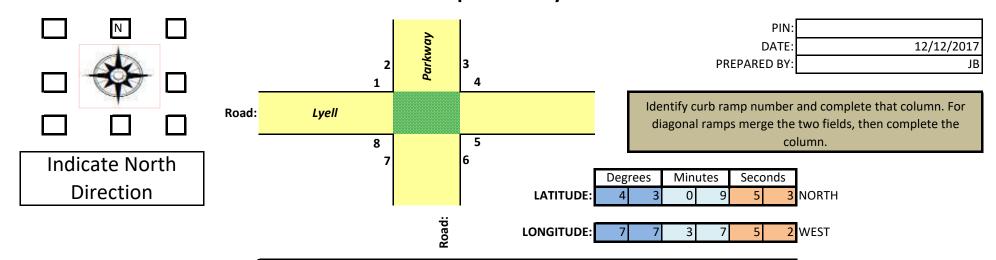
### **Lyell Ave & Oak St**





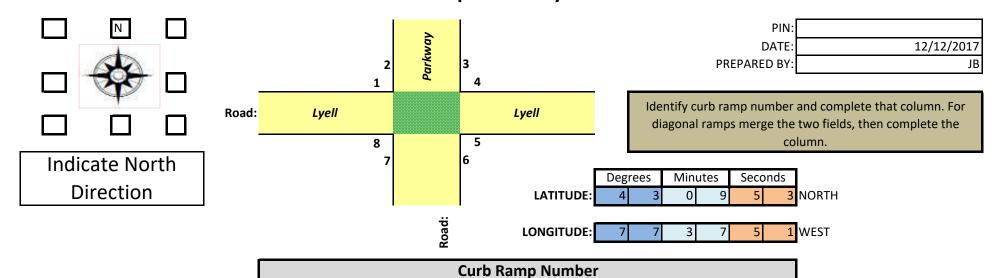
SE Corner – CW 6

SW Corner – CW 7



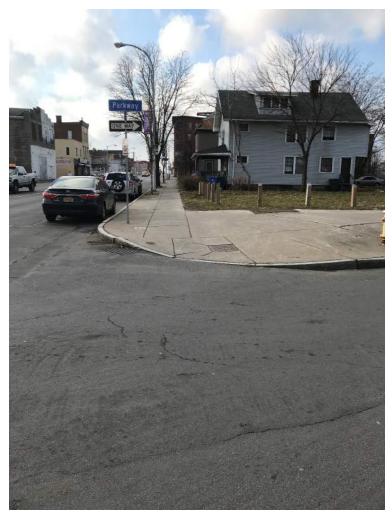
		Curb Ram	p Numbe	r	
	Rar	np Field Me	easured Val	ues	

Feature	Criteria	:	1		2 3		4		5		6		7			8	Notes	
	Standard Sheet Type Running Slope (%)			0	.5													
	Cross Slope (%)				.5 .5													
Ramp	Length (ft)				.4													
	Width (ft)		ī		67		ī		1		ī						ī	
	Side Flare Slope (%)	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	
				9.5	8.2													
Turning Space (top	Length (ft) Width (ft)				.u 67													
of ramp)	Cross Slope (%)				.9													
	Dome Orientation			n	/a													none
Detectable	Color				/a													
Warning	Length (ft)				/a													
ŭ	Width (ft)				<u>/</u> a													
Tuonsition to	Condition			n	/a													
Transition to Roadway	Vertical Difference (in)				0													
	Length (ft)				8													
Clear Space	Width (ft)				67													
(bottom of ramp)	Cross Slope (%)				.1													
	Counter Slope (%)			0	.8													



							Rar	np Fie	ld Me	easure	ed Val	ues						
Feature	Criteria	:	1		2	3	8	4	1	ļ	5		6	7	7	8	3	Notes
Ramp	Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft) Width (ft)		IT DT			8.1 2.4 15.25 7.17												
	Side Flare Slope (%)	LT	RT	LT	RT	<b>LT</b> 8.5	<b>RT</b> 7.3	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	
Turning Space (top of ramp)	Length (ft) Width (ft) Cross Slope (%)					n, n, n,	′a											bldg
Detectable Warning	Dome Orientation Color Length (ft) Width (ft) Condition					n/a n/a n/a n/a n/a												none
Transition to Roadway	Vertical Difference (in)						)											
Clear Space (bottom of ramp)	Length (ft) Width (ft) Cross Slope (%) Counter Slope (%)					5. 7.: 0.	17 .6											

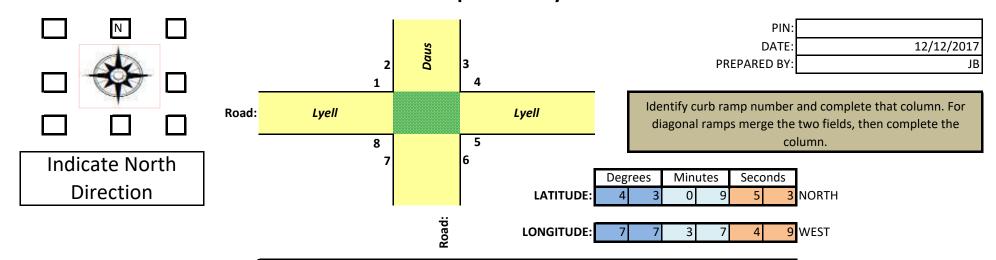
### **Lyell Ave & Parkway**





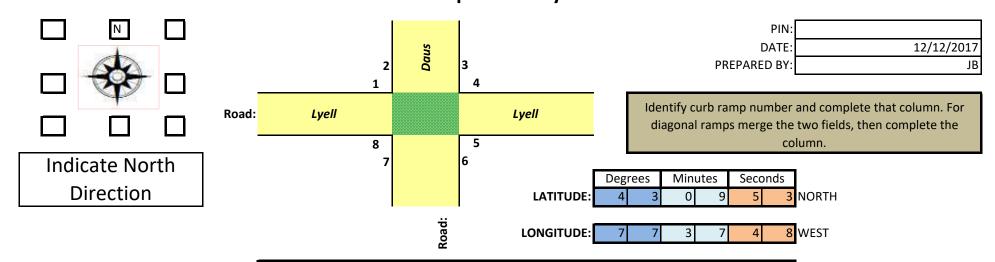
NW Corner – CW 2

**NE Corner – CW 3** 



**Curb Ramp Number** 

							Rar	np Fie	ld Me	easure	ed Val	ues						
Feature	Criteria	:	1		2	(1)	3	4	1	ļ	5		6	7	7	8	8	Notes
Ramp	Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft) Width (ft)				3.9 5 4													
	Side Flare Slope (%)	LT	RT	LT	<b>RT</b> 14.4	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	
Turning Space (top of ramp)	Length (ft) Width (ft) Cross Slope (%)			2.	25 4 5													
Detectable Warning	Dome Orientation Color Length (ft) Width (ft) Condition				/a /a /a /a /a													
Transition to Roadway	Vertical Difference (in)				0													
Clear Space (bottom of ramp)	Length (ft) Width (ft) Cross Slope (%) Counter Slope (%)			n 1	/a /a 6													road



**Curb Ramp Number** 

### Ramp Field Measured Values Criteria **Feature** 1 2 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 11.1 Cross Slope (%) 12.1 Length (ft) 7 Ramp Width (ft) 4.17 RT LT RT LT RT RT RT RT LT RT LT LT LT LT RT LT Side Flare Slope (%) building left flare n/a 14.9 Length (ft) bldg n/a **Turning Space (top** Width (ft) n/a bldg of ramp) 3.2 Cross Slope (%) **Dome Orientation** n/a Color **Detectable** Length (ft) Warning Width (ft) Condition **Transition to** Vertical Difference (in) 0 Roadway Length (ft) 0 Width (ft) 0 **Clear Space** 2.9 (bottom of ramp) Cross Slope (%) 2.6 Counter Slope (%)

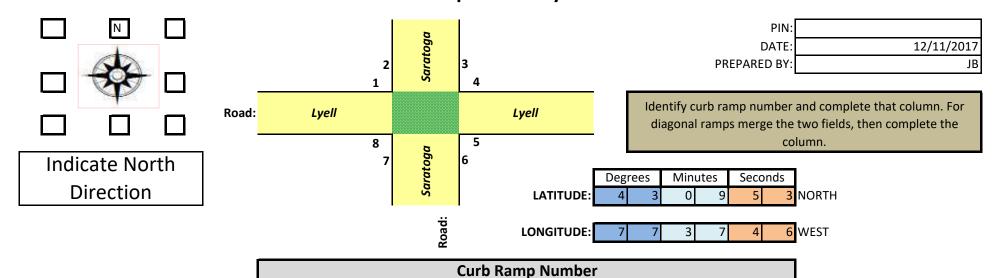
### **Lyell Ave & Daus Alley**



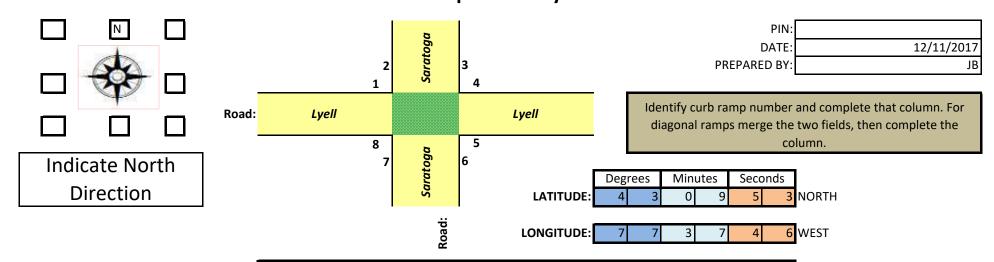


**NW Corner – CW 2** 

**NE Corner - CW 3** 

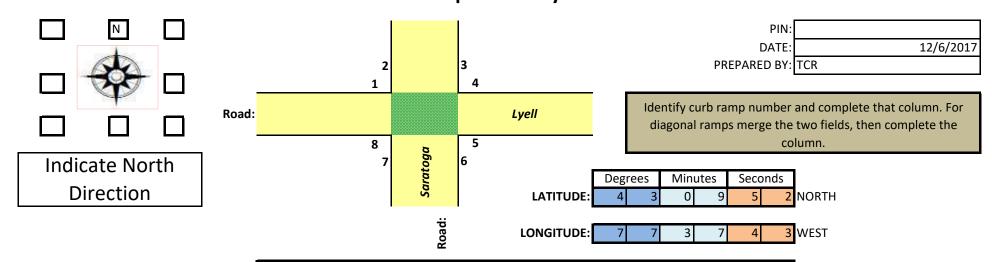


		Ramp Field Measured Values														
Feature	Criteria	1	L	;	3	4	1		5		6	7	7	8	8	Notes
Ramp	Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft) Width (ft)	12.7 1.5 7.67 8.75														
	Side Flare Slope (%)	<b>LT</b> 8.7			RT	LT	RT									
Turning Space (top of ramp)	Length (ft) Width (ft) Cross Slope (%) Dome Orientation	7. 7. 0. N/	.5 .8													none
Detectable Warning	Color Length (ft) Width (ft) Condition															
Transition to Roadway	Vertical Difference (in)	0														
Clear Space (bottom of ramp)	Length (ft) Width (ft) Cross Slope (%) Counter Slope (%)	5. · 2.														



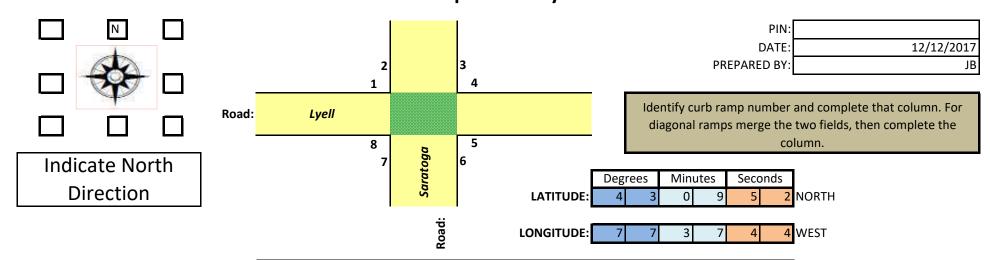
**Curb Ramp Number** 

### Ramp Field Measured Values Criteria **Feature** 1 2 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 11.4 Cross Slope (%) 0.5 Length (ft) 5 Ramp Width (ft) 4.25 RT LT RT LT RT RT RT LT RT LT LT LT LT RT LT RT Side Flare Slope (%) 15.5 18.1 Length (ft) 8 Turning Space (top Width (ft) 5.17 of ramp) 1.4 Cross Slope (%) **Dome Orientation** N/A none Color **Detectable** Length (ft) Warning Width (ft) Condition **Transition to** Vertical Difference (in) 2 Roadway Length (ft) 5 roadway Width (ft) 5 **Clear Space** (bottom of ramp) Cross Slope (%) 0.5 Counter Slope (%) 0



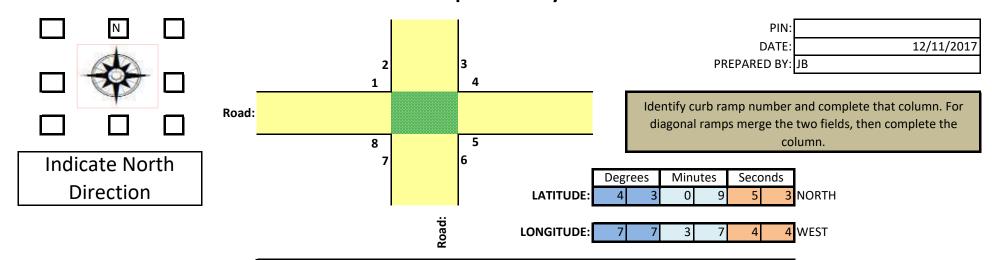
**Curb Ramp Number** 

### Ramp Field Measured Values **Feature** Criteria 1 2 3 4 5 6 7 8 **Notes** Standard Sheet Type 2 Running Slope (%) 10.3 Cross Slope (%) 1.7 Length (ft) 4.42 Ramp Width (ft) 5.42 RT RT LT RT LT RT LT RT LT LT RT LT RT LT LT RT Side Flare Slope (%) 11.1 12.1 Length (ft) 10 **Turning Space (top** Width (ft) 5.33 of ramp) 1.4 Cross Slope (%) **Dome Orientation** Perpend Color Grey **Detectable** Length (ft) 1.83 Warning Width (ft) 3.75 Condition Broken/Missing Domes Deteriora **Transition to** Vertical Difference (in) -0.5 Roadway Length (ft) 5 Width (ft) **Clear Space** 5.42 (bottom of ramp) Cross Slope (%) 1.5 0.7 Counter Slope (%)



**Curb Ramp Number** 

### Ramp Field Measured Values Criteria **Feature** 1 2 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 7.7 Cross Slope (%) 2.4 Length (ft) 5 Ramp Width (ft) 4.42 RT RT RT LT RT LT LT RT LT LT RT LT RT LT LT RT Side Flare Slope (%) 12.6 6.8 Length (ft) **Turning Space (top** Width (ft) 4 of ramp) 0.7 Cross Slope (%) **Dome Orientation** Perpend Color Grey **Detectable** Length (ft) 2 Warning Width (ft) Condition Old missing domes **Transition to** Vertical Difference (in) 0" Roadway Length (ft) 3.25 Width (ft) **Clear Space** 4.42 (bottom of ramp) Cross Slope (%) 0.1 Counter Slope (%) 1.4



**Curb Ramp Number** 

1.5

5

1

2.2

4.08

roadway

### Ramp Field Measured Values Criteria **Feature** 1 2 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 12.5 Cross Slope (%) 2.5 Length (ft) 7.42 Ramp Width (ft) 4.08 RT RT RT RT LT RT LT RT LT LT RT LT RT LT LT LT Side Flare Slope (%) 7.5 9.3 Length (ft) N/A building Turning Space (top Width (ft) of ramp) Cross Slope (%) 1 **Dome Orientation** N/A none Color **Detectable** Length (ft) Warning Width (ft) Condition

**Transition to** 

Roadway

**Clear Space** 

(bottom of ramp)

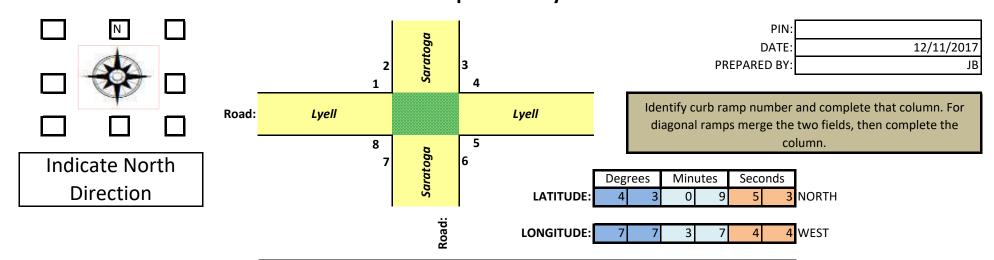
Vertical Difference (in)

Length (ft)

Width (ft)

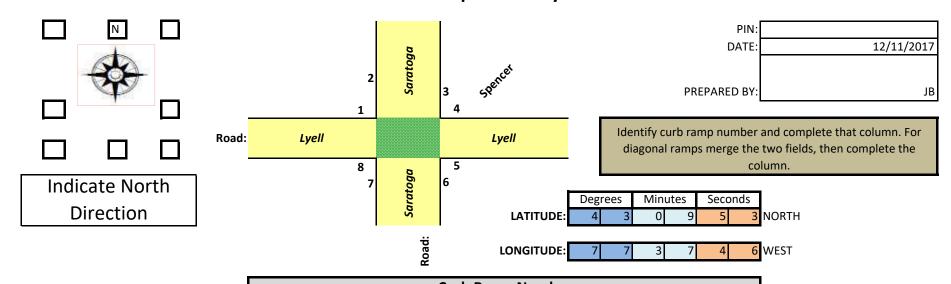
Cross Slope (%)

Counter Slope (%)

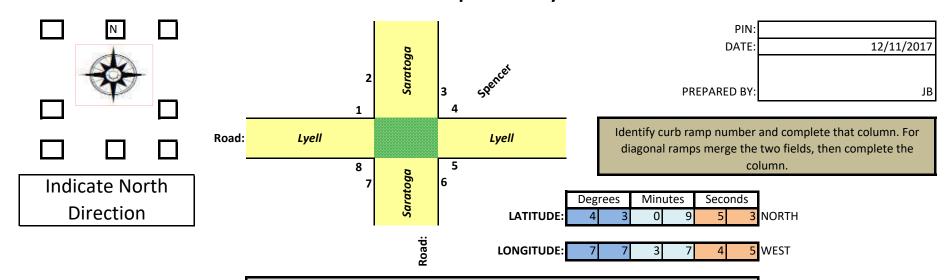


**Curb Ramp Number** 

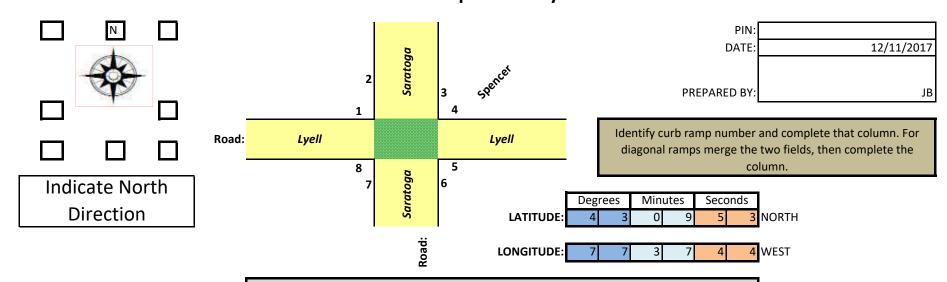
### Ramp Field Measured Values **Feature** Criteria 1 2 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 11.5 Cross Slope (%) 2.2 Length (ft) 8.42 Ramp Width (ft) 4.42 RT RT RT LT RT LT RT LT LT RT LT RT LT LT RT LT Side Flare Slope (%) 10.3 12.1 Length (ft) N/A Building **Turning Space (top** Width (ft) of ramp) Cross Slope (%) **Dome Orientation** None No d/w Color **Detectable** Length (ft) Warning Width (ft) Condition **Transition to** Vertical Difference (in) 8 Roadway Length (ft) 5 roadway Width (ft) 4.42 **Clear Space** (bottom of ramp) Cross Slope (%) 2.8 Counter Slope (%) 1.1



			Curb Ramp Number  Ramp Field Measured Values															
							Rai	mp Fie	eld Me	easure	ed Val	ues						
Feature	Criteria	:	1	2	2 3		4		!	5		6		7		8	Notes	
Ramp	Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft) Width (ft)		IT OT		.2 0 42 25													
	Side Flare Slope (%)	LT	RT	<b>LT</b> 7.8	<b>RT</b> 10.5	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	
Turning Space (top of ramp)	Length (ft) Width (ft) Cross Slope (%)			7.	.6 25 .2													
Detectable Warning	Dome Orientation Color Length (ft) Width (ft) Condition			N	/A													none
Transition to Roadway	Vertical Difference (in)			(	0													
Clear Space (bottom of ramp)	Length (ft) Width (ft) Cross Slope (%) Counter Slope (%)			7. 0	5 25 .9													roadway



		Curb Ramp Number Ramp Field Measured Values																	
							Rai	np Fie	eld Me	easure	ed Val	ues							
Feature	Criteria	:	1 2				3	4	4		5		6		7	8		Note	es
Ramp	Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft) Width (ft)					7.1 0.8 7.25 4													
	Side Flare Slope (%)	LT	RT	LT	RT	<b>LT</b> 6.6	<b>RT</b> 8.4	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT		
Turning Space (top of ramp)	Length (ft) Width (ft) Cross Slope (%)					8	33 .5 1												
Detectable Warning	Dome Orientation Color Length (ft) Width (ft) Condition					N	/A											none	
Transition to Roadway	Vertical Difference (in)						0												
Clear Space (bottom of ramp)	Length (ft) Width (ft) Cross Slope (%) Counter Slope (%)					0	5 4 4 4											roadway	



								Curb	Kam	p Nu	mbe	r						
							Rai	mp Fie	eld Me	easure	ed Val	ues						
Feature	Criteria	:	1	:	2	;	3	4	4	!	5	(	5		7	:	8	Notes
Ramp	Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft) Width (ft)																	
	Side Flare Slope (%)	LT	RT	LT	RT	LT	RT	<b>LT</b> 11.2	<b>RT</b> 10.7	LT	RT	LT	RT	LT	RT	LT	RT	
Turning Space (top of ramp)	Length (ft) Width (ft) Cross Slope (%)								2 33 .7									
Detectable Warning	Dome Orientation Color Length (ft) Width (ft) Condition							N,	/A									none
Transition to Roadway	Vertical Difference (in)							-	1									
Clear Space (bottom of ramp)	Length (ft) Width (ft) Cross Slope (%) Counter Slope (%)							4.	33 .4 .4									roadway

### **Lyell Ave & Saratoga Ave**



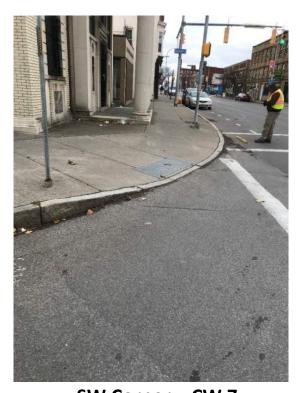
NW Corner – CW 1



**SE Corner – CW 6 SW** 



**NE Corner – CW 3** 



SW Corner - CW 7

## **Lyell Ave & Saratoga Ave**

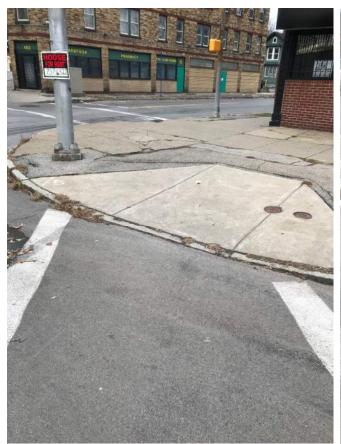


SW Corner (crossing Lyell) – CW 8



SW Corner (Crossing Saratoga) – CW 8

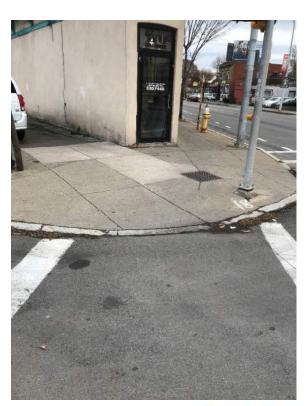
## **Lyell Ave & Spencer St**





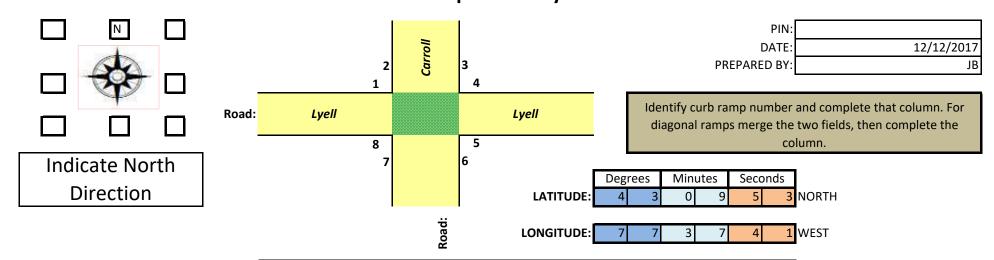
NW Corner – CW 2

**NE Corner – CW 3** 



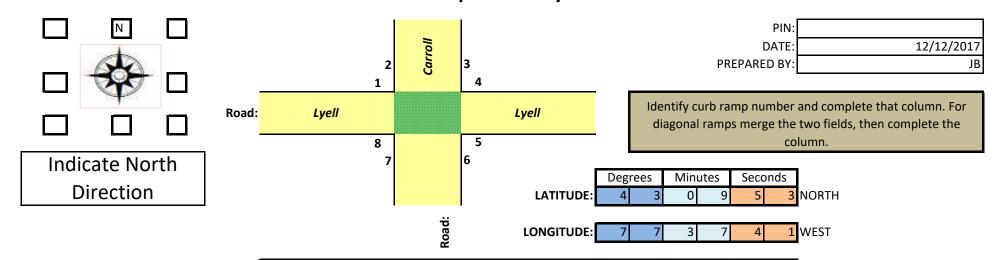
**NE Corner – CW 4** 





**Curb Ramp Number** 

#### Ramp Field Measured Values Criteria **Feature** 1 2 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 6.7 Cross Slope (%) 2.1 5.8 Length (ft) Ramp 4.7 Width (ft) RT LT RT LT RT RT RT RT LT LT RT LT LT LT LT RT Side Flare Slope (%) 7.1 n/a Length (ft) 5.1 Turning Space (top Width (ft) 4.8 of ramp) 0.3 Cross Slope (%) **Dome Orientation** n/a Color **Detectable** Length (ft) Warning Width (ft) Condition **Transition to** Vertical Difference (in) 0 Roadway Length (ft) roadway Width (ft) 4.8 **Clear Space** (bottom of ramp) Cross Slope (%) 3.3 2.8 Counter Slope (%)



**Curb Ramp Number** 

									Ramp Field Measured Values									
Feature	Criteria	:	1	:	2	(3)	8	4	1	ļ	5		5	7	7		3	Notes
Ramp	Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft) Width (ft)					6. 9. 8.	.6											
	Side Flare Slope (%)	LT	RT	LT	RT	<i>LT</i> 6.1	<b>RT</b>	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	
Turning Space (top of ramp)	Length (ft) Width (ft) Cross Slope (%)					3. 4. 5.	.3											
Detectable Warning	Dome Orientation Color Length (ft) Width (ft) Condition					n,	/a											none
Transition to Roadway	Vertical Difference (in)					0.	.5											
Clear Space (bottom of ramp)	Length (ft) Width (ft) Cross Slope (%) Counter Slope (%)					4.	.3											road

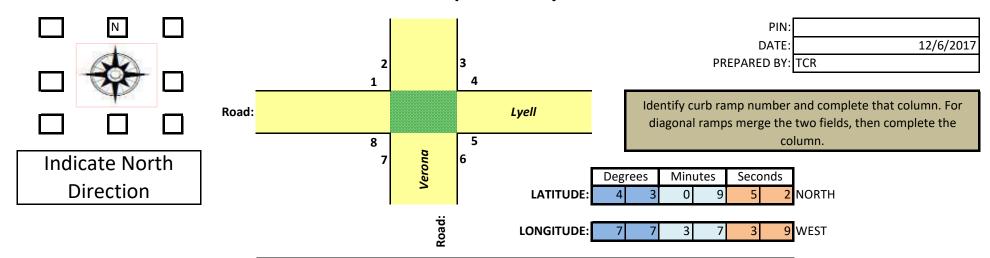
## **Lyell Ave & Carroll Alley**





NW Corner – CW 2

**NE Corner - CW 3** 

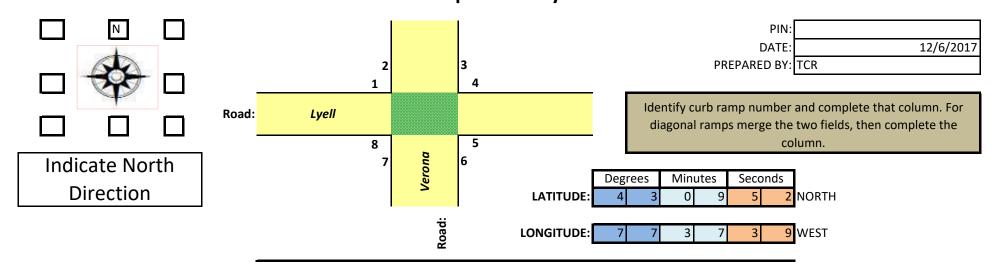


			(	Curb Ram	p Numbe	r			
			Rai	mp Field Me	easured Val	ues			
Criteria	1	2	3	4	5	6	7	8	
dard Sheet Type						2			

**Notes** 

**Feature** 

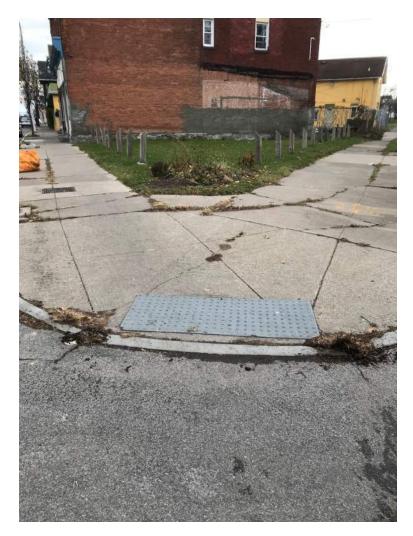
													-					
	Standard Sheet Type											2	2					
	Running Slope (%)											10	).7					
	Cross Slope (%)											0.	.7					
Ramp	Length (ft)											7.:	25					
	Width (ft)											6.3	25					
	Side Flare Slope (%)	LT	RT	LT	RT	LT	RT	LT	RT									
	Side Flate Slope (%)											9.5	9.8					
Turning Space (top	Length (ft)											8.	08					
of ramp)	Width (ft)											7.	.5					
Of failip)	Cross Slope (%)											0.	.1					
	Dome Orientation											Pe	rp					
Detectable	Color											Gr	ey					
Warning	Length (ft)											2	2					
warmig	Width (ft)											Ę	5					
	Condition											0	ld					Truncated Domes Missing
Transition to Roadway	Vertical Difference (in)											(	)					
-	Length (ft)											ŗ	5					
Clear Space	Width (ft)											6.	25					
(bottom of ramp)	Cross Slope (%)											0	.7					
	Counter Slope (%)											1	.1					



**Curb Ramp Number** 

#### Ramp Field Measured Values **Feature** Criteria 1 2 3 4 5 7 8 **Notes** Standard Sheet Type 2 Running Slope (%) 10.2 Cross Slope (%) 1.5 Length (ft) 4.42 Ramp Width (ft) 4.17 RT RT RT LT RT LT LT RT LT LT RT LT RT LT LT RT Side Flare Slope (%) 16.1 16 Length (ft) 4 **Turning Space (top** Width (ft) 9.42 of ramp) Cross Slope (%) 0.4 **Dome Orientation** Perp Color Grey **Detectable** Length (ft) 2 Warning Width (ft) Condition Old Truncated Domes Missing **Transition to** Vertical Difference (in) 0 Roadway Length (ft) Roadway 5 Width (ft) 4.17 **Clear Space** (bottom of ramp) Cross Slope (%) 0.2 2.1 Counter Slope (%)

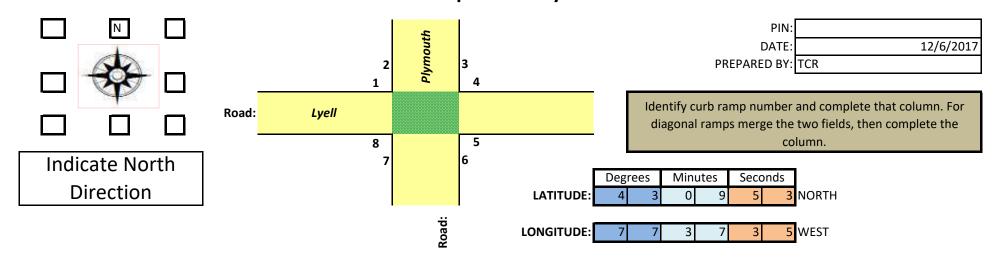
## **Lyell Ave & Verona St**





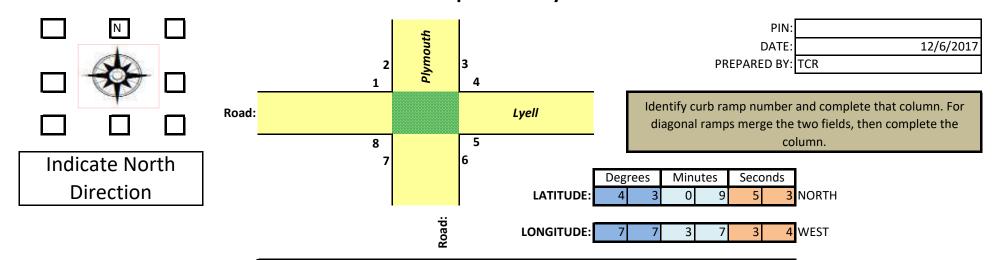
SE Corner – CW 6

SW Corner – CW 7



**Curb Ramp Number** 

#### Ramp Field Measured Values **Feature** Criteria 1 3 4 5 7 8 **Notes** Standard Sheet Type 2 Running Slope (%) 8.9 Cross Slope (%) 1.5 Length (ft) 8.58 Ramp Width (ft) 5 LT RT LT RT RT LT RT LT LT RT LT RT LT RT Side Flare Slope (%) 8.8 6.4 Length (ft) N/A Concrete Curb/Parking Lot **Turning Space (top** Width (ft) N/A of ramp) N/A Cross Slope (%) **Dome Orientation** N/A No D/W Present N/A Color Detectable Length (ft) N/A Warning N/A Width (ft) Condition N/A **Transition to** Vertical Difference (in) 0" Roadway Length (ft) 5' Roadway Width (ft) 5' **Clear Space** (bottom of ramp) Cross Slope (%) 0.5 0.5 Counter Slope (%)



**Curb Ramp Number** 

#### Ramp Field Measured Values Criteria **Feature** 1 2 3 5 7 8 **Notes** Standard Sheet Type 2 Running Slope (%) 5.9 Cross Slope (%) 1.2 Length (ft) 7.75 Ramp Width (ft) 9.08 RT LT RT RT RT LT RT LT LT LT LT RT LT RT Side Flare Slope (%) 7.0 9.2 Length (ft) 5 Turning Space (top Width (ft) 5 of ramp) 1.1 Cross Slope (%) **Dome Orientation** N/A No D/W Present N/A Color **Detectable** Length (ft) N/A Warning Width (ft) N/A Condition N/A

0"

1.83

9.08

1.1

0.5

**Transition to** 

Roadway

Clear Space (bottom of ramp)

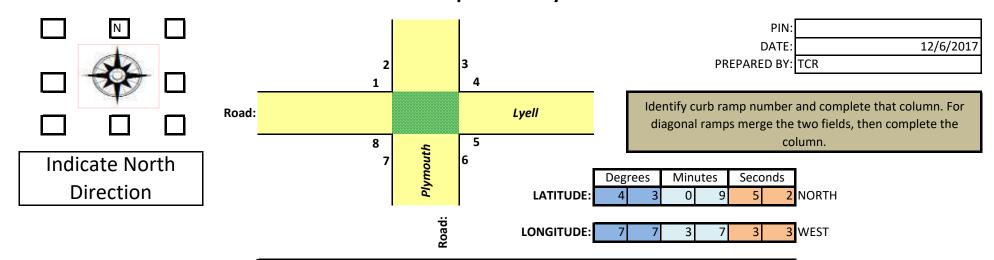
Vertical Difference (in)

Length (ft)

Width (ft)

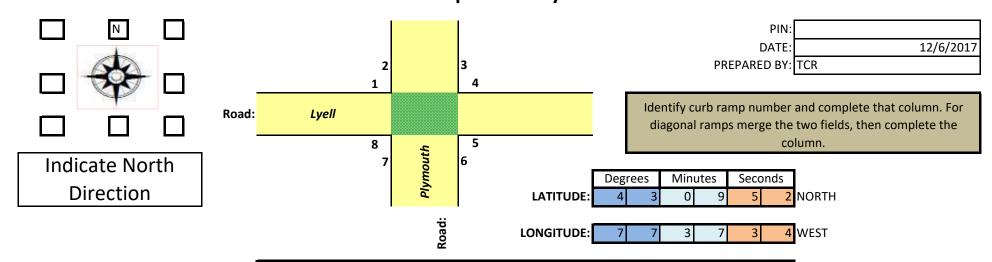
Cross Slope (%)

Counter Slope (%)



			Curb Ram	p Number		
		Rar	mp Field Me	easured Values		
1	2	3	4	5	7	8

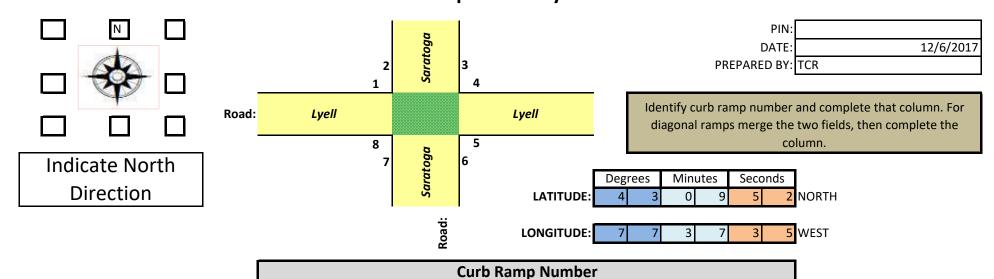
Feature	Criteria		1		2	3	3	4	4	5			7		8	Notes
	Standard Sheet Type Running Slope (%)										.9					
Ramp	Cross Slope (%) Length (ft) Width (ft)									5.	33					
	Side Flare Slope (%)	LT	RT	LT	RT	LT	RT	LT	RT	<b>LT</b> 4.9	<b>RT</b> 5.7	LT	RT	LT	RT	
Turning Space (top of ramp)	Length (ft) Width (ft) Cross Slope (%)									!	83					
Detectable Warning	Dome Orientation Color Length (ft) Width (ft) Condition									Gr	ey 2 5 orating					
Transition to Roadway	Vertical Difference (in)										)"					
Clear Space (bottom of ramp)	Length (ft) Width (ft) Cross Slope (%) Counter Slope (%)										5 5 2 .6					Roadway



**Curb Ramp Number** 

#### Ramp Field Measured Values Criteria **Feature** 1 2 3 4 5 7 8 **Notes** Standard Sheet Type 2 Running Slope (%) 6.5 Cross Slope (%) 0.2 Length (ft) 5 Ramp Width (ft) 5 RT RT RT LT RT LT LT RT LT LT RT LT RT LT LT RT Side Flare Slope (%) 8.5 5.4 Length (ft) 4.75 Turning Space (top Width (ft) 4.58 of ramp) 1.9 Cross Slope (%) **Dome Orientation** Perp Color Grey **Detectable** Length (ft) Warning 2 Width (ft) Condition Deteriorating Det **Transition to** Vertical Difference (in) 0 Roadway Length (ft) Roadway 5 Width (ft) 5 **Clear Space** (bottom of ramp) Cross Slope (%) 0.5 2.3

Counter Slope (%)



#### Ramp Field Measured Values **Feature** Criteria 1 2 3 4 5 7 8 **Notes** Standard Sheet Type 2 Running Slope (%) 9.1 Cross Slope (%) 1.5 Length (ft) 5.17 Ramp Width (ft) 4.83 RT RT RT LT RT LT RT LT LT RT LT RT LT LT RT LT Side Flare Slope (%) 13.5 7.6 Length (ft) 3.83 **Turning Space (top** Width (ft) 4.25 of ramp) 2.6 Cross Slope (%) **Dome Orientation** Perp Color Grey **Detectable** Length (ft) 2 Warning 5 Width (ft) Condition **Domes Missing** Det **Transition to** Vertical Difference (in) 0" Roadway Length (ft) Roadway 5 Width (ft) **Clear Space** 4.83 (bottom of ramp) Cross Slope (%) 1 Counter Slope (%) 0.2

## **Lyell Ave & Plymouth Ave**



NW Corner - CW 1



**NE Corner – CW 3** 



SE Corner – CW 5



engineers | planners | scientists

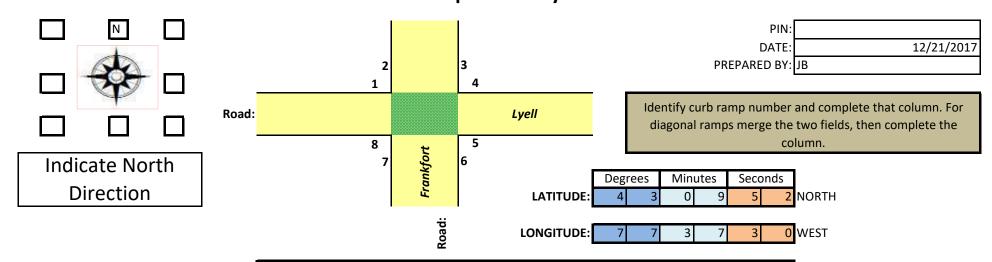
## **Lyell Ave & Plymouth Ave**





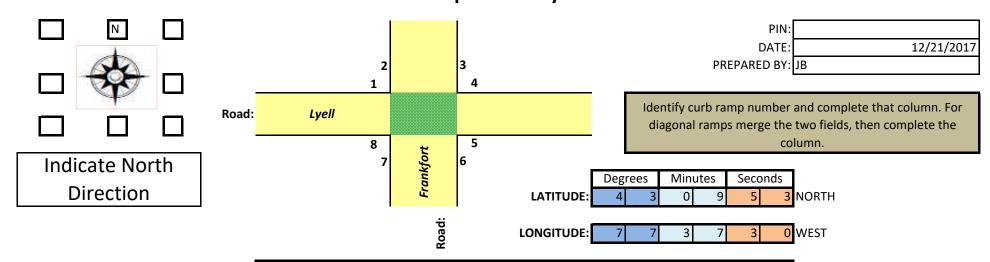
**SW Corner – CW 7** 

**SW Corner – CW 8** 



**Curb Ramp Number** 

#### Ramp Field Measured Values Criteria **Feature** 1 2 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 6.7 3.7 Cross Slope (%) 5.5 Length (ft) Ramp Width (ft) 4.83 RT RT LT RT LT RT LT RT LT LT RT LT RT LT LT RT Side Flare Slope (%) 6.1 n/a Length (ft) 4.25 Turning Space (top Width (ft) 4.83 of ramp) Cross Slope (%) 1 **Dome Orientation** n/a none n/a Color **Detectable** Length (ft) n/a Warning Width (ft) n/a Condition n/a **Transition to** Vertical Difference (in) 0 Roadway Length (ft) 3 Width (ft) 5 **Clear Space** (bottom of ramp) Cross Slope (%) 2.5 1.6 Counter Slope (%)



**Curb Ramp Number** 

#### Ramp Field Measured Values Criteria **Feature** 1 2 3 4 5 6 7 8 **Notes** Standard Sheet Type Running Slope (%) 11.3 Cross Slope (%) 4.8 Length (ft) 4.33 Ramp Width (ft) 3.5 RT RT RT LT RT LT LT RT LT LT RT LT RT LT LT RT Side Flare Slope (%) 9.9 11.1 Length (ft) 4.5 **Turning Space (top** Width (ft) 4.33 of ramp) 1.7 Cross Slope (%) **Dome Orientation** n/a none n/a Color **Detectable** Length (ft) n/a Warning n/a Width (ft) Condition n/a **Transition to** Vertical Difference (in) 0 Roadway Length (ft) n/a roadway Width (ft) n/a **Clear Space** (bottom of ramp) Cross Slope (%) n/a Counter Slope (%) n/a

## **Lyell Ave & Frankfort St**

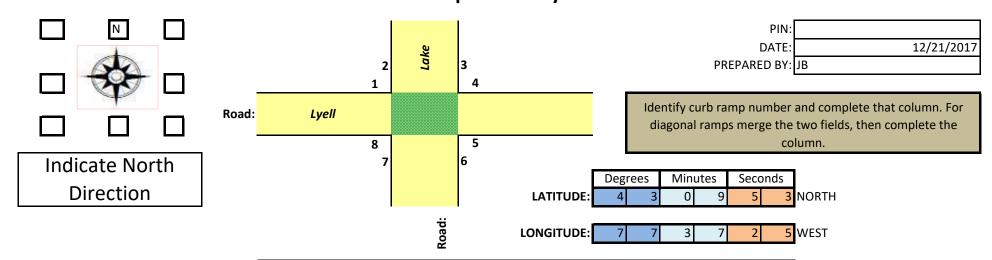


SE Corner – CW 6



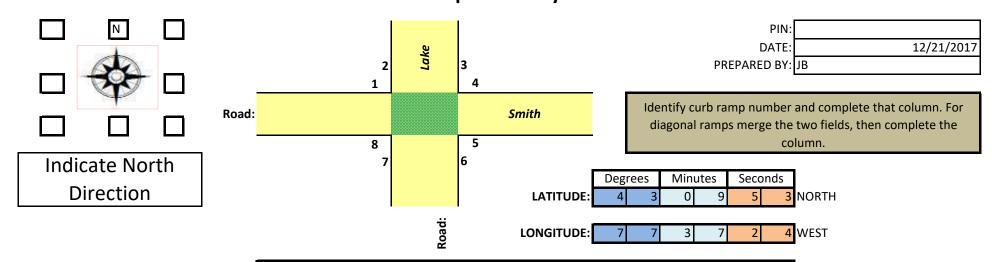
SW Corner – CW 7





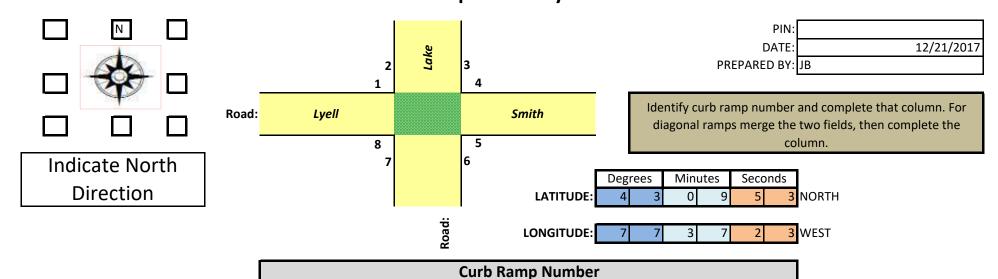
**Curb Ramp Number** 

#### Ramp Field Measured Values Criteria **Feature** 1 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 4.2 Cross Slope (%) 1 6.25 Length (ft) Ramp Width (ft) 5 LT RT LT RT RT RT LT RT LT LT LT RT LT RT Side Flare Slope (%) 7.4 7.6 Length (ft) 5.58 Turning Space (top Width (ft) 4.67 of ramp) 1.9 Cross Slope (%) **Dome Orientation** perp Color grey **Detectable** Length (ft) 2 Warning 5 Width (ft) Condition good **Transition to** Vertical Difference (in) -0.125 Roadway Length (ft) 0 road Width (ft) 5 **Clear Space** (bottom of ramp) Cross Slope (%) 2.1 1.6 Counter Slope (%)

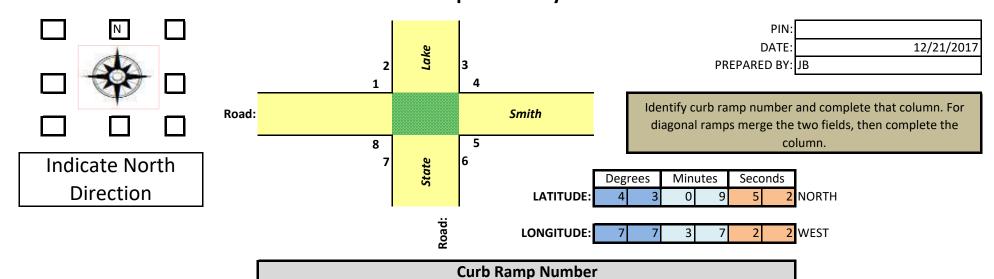


**Curb Ramp Number** 

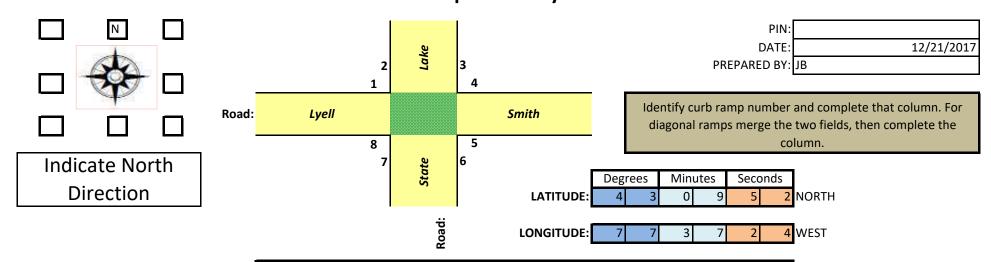
#### Ramp Field Measured Values **Feature** Criteria 1 2 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 6.7 Cross Slope (%) 2.4 6.83 Length (ft) Ramp Width (ft) 5 RT LT RT LT RT LT RT LT RT LT LT RT LT RT LT RT Side Flare Slope (%) 4.9 5.9 Length (ft) 6.58 **Turning Space (top** Width (ft) 5 of ramp) 0.8 Cross Slope (%) **Dome Orientation** perp Color grey **Detectable** Length (ft) 2 Warning 5 Width (ft) Condition domes missing, sunken bricks poor **Transition to** Vertical Difference (in) -0.25 Roadway Length (ft) 4 Width (ft) 5 **Clear Space** (bottom of ramp) Cross Slope (%) 1.1 Counter Slope (%) 1



							Rar	np Fie	eld Me	Measured Values								
Feature	Criteria		1	:	2	3	3	4	1		5		6	,	7		3	Notes
Ramp	Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft) Width (ft)							8. 1. 5.!	.1									
	Side Flare Slope (%)	LT	RT	LT	RT	LT	RT	<b>LT</b> 9.5	<b>RT</b> 6.8	LT	RT	LT	RT	LT	RT	LT	RT	
Turning Space (top of ramp)	Length (ft) Width (ft) Cross Slope (%)							3.7	75 5									
Detectable Warning	Dome Orientation Color Length (ft) Width (ft) Condition							pe gro	ey <u>2</u>									brick
Transition to Roadway	Vertical Difference (in)							-0.										
Clear Space (bottom of ramp)	Length (ft) Width (ft) Cross Slope (%)							1.	.9									road
	Counter Slope (%)							0.	.9									

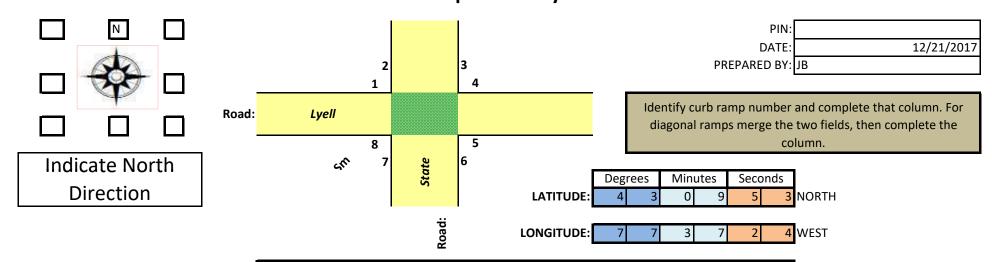


#### Ramp Field Measured Values Criteria **Feature** 1 2 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 7.4 Cross Slope (%) 0.7 5.33 Length (ft) Ramp Width (ft) 5 RT RT RT LT RT LT LT RT LT RT LT LT LT RT Side Flare Slope (%) 7.6 4.9 Length (ft) 5.17 Turning Space (top Width (ft) 5 of ramp) 1.2 Cross Slope (%) **Dome Orientation** perp Color grey **Detectable** Length (ft) 2 Warning 5 Width (ft) Condition good **Transition to** Vertical Difference (in) 0 Roadway Length (ft) 6 Width (ft) 5 **Clear Space** (bottom of ramp) Cross Slope (%) 1.6 Counter Slope (%) 1.5



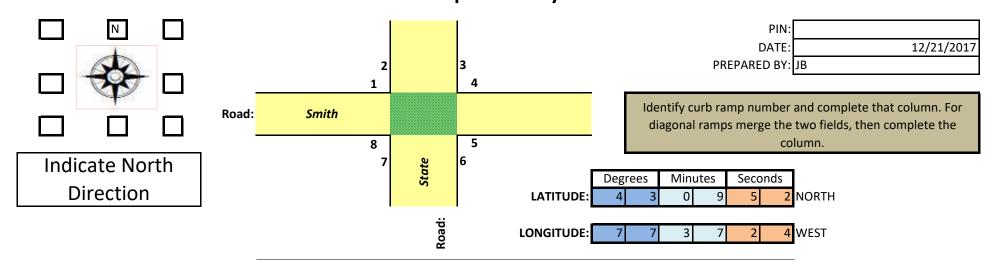
**Curb Ramp Number** 

#### Ramp Field Measured Values Criteria **Feature** 1 2 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 8.7 Cross Slope (%) 2.6 Length (ft) 6.08 Ramp Width (ft) 5 RT RT RT LT RT LT LT RT LT LT RT LT RT LT LT RT Side Flare Slope (%) 9.9 Length (ft) 8.08 Turning Space (top Width (ft) of ramp) 2.7 Cross Slope (%) **Dome Orientation** perp Color grey **Detectable** Length (ft) 2 Warning Width (ft) Condition good **Transition to** Vertical Difference (in) 0 Roadway Length (ft) 0 Width (ft) 5 **Clear Space** (bottom of ramp) Cross Slope (%) 0.6 Counter Slope (%) 2.8



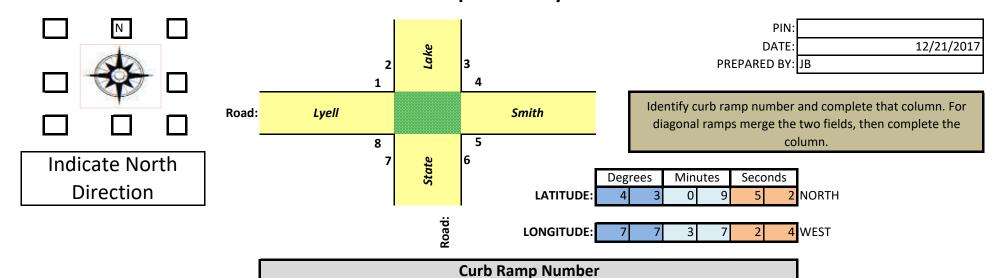
**Curb Ramp Number** 

#### Ramp Field Measured Values Criteria **Feature** 1 2 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 8.4 1.5 Cross Slope (%) Length (ft) 6.67 Ramp Width (ft) 6.33 RT RT RT LT RT LT RT LT LT RT LT RT LT LT RT LT Side Flare Slope (%) 8.7 3.9 Length (ft) 5 **Turning Space (top** Width (ft) 6 of ramp) 2.4 Cross Slope (%) **Dome Orientation** perp Color grey **Detectable** Length (ft) 2.25 Warning Width (ft) 6.33 Condition missing domes, brick sunken poor **Transition to** Vertical Difference (in) 0 Roadway Length (ft) 7.83 Width (ft) **Clear Space** 6.33 (bottom of ramp) Cross Slope (%) 1.6 1.9 Counter Slope (%)



**Curb Ramp Number** 

#### Ramp Field Measured Values Criteria **Feature** 1 2 3 4 5 7 8 **Notes** Standard Sheet Type Running Slope (%) 8.5 Cross Slope (%) 4 Length (ft) 5 Ramp Width (ft) 5 RT RT RT RT LT RT LT RT LT LT RT LT RT LT LT LT Side Flare Slope (%) 6.6 4.5 Length (ft) 4 **Turning Space (top** Width (ft) 6.83 of ramp) 2.8 Cross Slope (%) **Dome Orientation** perp Color grey **Detectable** Length (ft) 2 Warning 5 Width (ft) Condition sunken brick poor **Transition to** Vertical Difference (in) -0.25 Roadway Length (ft) 0 road Width (ft) 5 **Clear Space** (bottom of ramp) Cross Slope (%) 1.8 1.2 Counter Slope (%)



							Rar	np Fie	eld Me	easure	ed Val	ues						
Feature	Criteria		1		2	3	3	4	1		5		6	,	7	:	В	Notes
Ramp	Standard Sheet Type Running Slope (%) Cross Slope (%) Length (ft) Width (ft)															3 7.	.4 .3 75	
	Side Flare Slope (%)	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	<b>LT</b> 5.7	<b>RT</b> 8.2	
Turning Space (top of ramp)	Length (ft) Width (ft) Cross Slope (%)																5	
Detectable Warning	Dome Orientation Color Length (ft) Width (ft) Condition															gr	erp ey 2 5	brick
Transition to Roadway	Vertical Difference (in)																)	
Clear Space (bottom of ramp)	Length (ft) Width (ft) Cross Slope (%)															3	0 5 .3	
	Counter Slope (%)															1	.5	

### **Lyell Ave & Lake Ave**



NW Corner (crossing Lyell) – CW 1



NE Corner (Crossing Lake) – CW 3



NE Corner (crossing Smith) - CW 4



SE Corner (crossing State) - CW 5

### **Lyell Ave & Lake Ave**





SW Corner (crossing State) – CW 7

SW Corner S. Side Ramp (crossing Lyell)— CW 8



SW Corner S. Side Ramp (crossing Smith) – CW 8



SW Corner N. Side Ramp (crossing Smith) – CW 8

## **APPENDIX 'G'**

# Federal Environmental Approvals Worksheet (FEAW)



PIN: 4CR004	Completed by:EDR	Date completed: 6/28/2018	FUNDING TYPE: 100% State									
	-	-	Funding									
DESCRIPTION: The	ne proposed Project generally in	cludes milling and resurfacing	NEPA CLASS: Class II: CE									
Lyell Avenue from Lake Avenue to Mount Read Boulevard in Rochester, New												
York. The Project,	in total, is approximately 9,600	feet in length. All Project work	SEQR TYPE: Type II									
will be limited to the existing right of way.												
LOCALITY (Village	e, Town, City): City of Rochester		COUNTY: Monroe									
1												

#### **Purpose of this Worksheet:**

- Implement the <u>Programmatic Agreement Between the Federal Highway Administration</u>, New York Division (FHWA), and the New York State Department of Transportation (NYSDOT) <u>Regarding the Processing of Actions Classified as Categorical Exclusions (CEs) for Federal-Aid Highway Projects (PARCE)</u>, executed September 2017.
- Communicate the project National Environmental Policy Act (NEPA) classification and identify whether the FHWA or the NYSDOT (titles identified per <u>Project Development Manual (PDM) Chapter 4, Exhibit 4-2</u> is making the CE determination.
- Identify any FHWA independent determinations, approvals and/or concurrences required before the CE determination can be made.
- To be included within the Design Approval Document (DAD) in accordance with the documentation requirements in the PARCE.

**Categorical Exclusion (CE)** - a category of actions which do not individually or cumulatively have a significant effect on the human environment and which have been found to have no such effect in procedures adopted by a Federal agency (40 CFR 1508.4). Actions that do not individually or cumulatively have a significant environmental effect are excluded from the requirement to prepare an Environmental Assessment (EA) or Environmental Impact Statement (EIS) (23 CFR 771.115(b)).

#### Instructions:

Initial review of the Federal Environmental Approval Worksheet (FEAW) should occur in scoping or early in Design Phase I to identify potential risks. Complete new review of the FEAW periodically, particularly if project parameters or site condition changes result in potential resource impacts. Completion of the FEAW with signature in Step 4 is required prior to Design Approval. See PDM Chapter 4 for additional details.

#### Step 1A: Unusual Circumstances Threshold Determination – 23 CFR 771.117(b)

Do any, or the potential for any, unusual circumstances exist<sup>1</sup>?

•	Significant environmental impacts	YES□ NO⊠
•	Substantial controversy on environmental grounds	YES□ NO⊠
•	Significant impact on properties protected by Section 4(f) of the DOT Act or Section 106 of the National Historic Preservation Act	YES□ NO⊠
•	Inconsistencies with any Federal, State, or local law, requirement or administrative	
	determination relating to the environmental aspects of the project	YES□ NO⊠

If yes to any of the above, contact the Main Office Project Liaison (MOPL) (see PDM Exhibit 4-1). Any project which would normally be classified as a CE but could involve unusual circumstances (or even uncertainty) will require consultation with the Office of Environment (OOE) and subsequently with the FHWA to determine if CE classification is still warranted. If, after consultation with the FHWA, it is determined that the project cannot be progressed as a CE, **skip** to step 4 and see PDM Chapter 4 for NEPA Class I (EIS) or Class III (EA) processing. If, after consultation with the FHWA, it is determined that the project can be progressed as a CE, **proceed to step 1B**.

If no to all the above, then this project qualifies as a CE; proceed to step 1B.

#### Step 1B: Identification of CE action

Is the project an action listed in 23 CFR 771.117 (c) - (d) (or as identified in FHWA's additional flexibilities memo)? YES NO

#### If Yes, proceed to step 2.

If No, contact the MOPL (see PDM Exhibit 4-1). If, after consultation with the OOE and the FHWA, it is determined that the project cannot be progressed as a CE, **skip to step 4** and see PDM Chapter 4 for NEPA Class I (EIS) or Class III (EA) processing. If, after consultation with the FHWA, it is determined that the project can continue as a CE, **proceed to step 2**.

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<sup>&</sup>lt;sup>1</sup> See definitions and examples of unusual circumstances in FEAW\_Instructions.doc

Project ID Number: 4CR004
Step 2: FHWA environmental actions required prior to CE determination <sup>2</sup>
The Step 2 table identifies certain issues that require: the FHWA to make the CE determination (Column A and 2.4);
independent FHWA determinations (2.1); FHWA approvals, compliance or concurrence (2.2); or notification to the
FHWA (2.3). Review <i>the FEAW Thresholds document</i> to determine how to fill out each column of Step 2.

FHVV.	A (2.3). Review <b>the FEAW Thresholds docu</b> l	<i>ment</i> to determ	line now to fill out e	ach column of St	ep 2.
2.1	Required FHWA Independent environmental determinations	PARCE threshold exceeded <sup>3</sup>	FHWA independent determination/ concurrence required	Date determination/ concurrence issued	Resource not present, or present but threshold not exceeded
		Α	В	B1	С
Wetla	utive Order (EO) 11990 Protection of ands Individual Finding			Date Issued	
ESA : Speci	Section 7 Threatened and Endangered es			Date Issued	
Section	on 106 of National Historic Preservation Act			Click here to enter a date.	
	on 4(f) (Park, Wildlife Refuge, Historic Sites, lational Wild and Scenic Rivers)			Date Issued	
2.2	Other FHWA environmental approvals, compliance and/or concurrence required	PARCE threshold exceeded <sup>3</sup>	Threshold exceeded; FHWA approval, compliance or concurrence required		Resource not present, or present but threshold not exceeded
EO 1	1988 Floodplains				$\boxtimes$
EO 1	3112 Invasive Species				
EO 1	2898 Environmental Justice				
	Drinking Water Act Section 1424(e)				$\boxtimes$
US A NWP	rmy Corps of Engineers, Section 404/10 #23				
Section	on 6(f) Land and Water Conservation Funds				
Migra	tory Bird Treaty Act				
23CF	R772 Type I Noise abatement				$\boxtimes$
2.3	Other Environmental Issues requiring FHWA notification	PARCE threshold exceeded <sup>3</sup>	FHWA notification threshold exceeded		Resource not present, or present but threshold not exceeded
	rmy Corps of Engineers, Section 404/10 dual Permit				
Natio	nal Wild and Scenic Rivers				$\boxtimes$
	oast Guard Bridge Permit				$\boxtimes$
Know Priori	n hazardous waste site (only EPA National ty list)				$\boxtimes$
Proje	ct on or affecting Native American Lands				
2.4	Other Issues Triggering FHWA Approval of Categorical Exclusion	PARCE threshold exceeded <sup>3</sup>			Resource not present, or present but threshold not exceeded
Prope	erty Acquisition				$\boxtimes$

<sup>&</sup>lt;sup>2</sup> This table does not represent all environmental issues and actions that a project is subject to. Classification as a CE does not exempt the project from further environmental review. Refer to the PDM and The Environmental Manual (TEM) to determine review requirements.

<sup>3</sup> When PARCE threshold is exceeded, the NYSDOT recommends that the project qualifies as a CE and requests the FHWA make the CE determination. Information on PARCE specific thresholds are contained within *the FEAW Thresholds document*.

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Changes in Access Control		$\boxtimes$
Project ID Number: 4CR004		

#### Step 3: Who makes the NEPA CE Determination?

To identify which party, either the FHWA or the NYSDOT, makes the CE determination in accordance with the PARCE, follow the instructions found in the table below, beginning in Step 3A. This step also identifies which correspondence shell to use to distribute the FEAW and other environmental notifications or approvals.

3	Determine whether the FHWA or the NYSDOT makes the CE determination and whether additional notifications or approvals are required.
	Is the project an action listed in 23 CFR 771.117 (c) - (d) (Answered yes in Step 1B)?
3A	YES ⊠ If Yes, proceed to 3B.
	<ul> <li>NO  If No, the FHWA makes the CE determination.</li> <li>For Locally Administered Federal Aid Projects only, the DAD, the NYSDOT recommendation and request (that the FHWA determines the project qualifies as a CE) are sent from the Regional Planning and Program Manager (RPPM) to the FHWA directly using Shell 4.</li> <li>For all other projects, the DAD and the NYSDOT recommendation and request (that the FHWA determines the project qualifies as a CE) are sent to the MOPL for review using Shell 3. Proceed to Step 4.</li> </ul>
	Are any of the CE Thresholds from the PARCE not met (Are there any checks in Column A of Step 2)?
3B	<ul> <li>YES  If Yes, the FHWA makes the CE determination.</li> <li>For Locally Administered Federal Aid Projects only, the DAD and the NYSDOT recommendation and request (that the FHWA determines the project qualifies as a CE) are sent from the RPPM to the FHWA directly using Shell 4.</li> <li>For all other projects, the DAD and the NYSDOT recommendation and request (that the FHWA determines the project qualifies as a CE) are sent to the MOPL for review using Shell 3. Proceed to Step 4.</li> </ul>
	NO ⊠ If No, proceed to 3C.
3C	<ul> <li>Are there outstanding independent environmental approvals or concurrences? (Are there checks in column B of Step 2.1 without dates in column B1)?</li> <li>YES ☐ If Yes, then the FHWA makes the CE determination.</li> <li>For Locally Administered Federal Aid Projects only, the DAD and the NYSDOT recommendation and request (that the FHWA determines the project qualifies as a CE) are sent from the RPPM to the FHWA directly using Shell 4.</li> <li>For all other projects, the DAD and the NYSDOT recommendation and request (that the FHWA determines the project qualifies as a CE) are sent to the MOPL for review using Shell 3. Proceed to Step 4.</li> <li>NO ☒ If No, the NYSDOT makes the NEPA CE determination. Proceed to 3D.</li> </ul>
	Are there
3D	<ul> <li>□ any circumstances requiring demonstration of applicable EO compliance (any checks in column B of Table 2.2); or</li> <li>□ any issues requiring the FHWA environmental notification (any checks in column B of Table 2.3)?</li> <li>YES □ If either box is checked, once all required approvals and concurrences have been secured, the NYSDOT makes the CE determination but the information must be forwarded to FHWA for notification or action prior to Design Approval using Shell 1. Proceed to step 5.</li> <li>NO ☒ If neither box is checked, once all required approvals and concurrences have been secured the NYSDOT makes the CE determination without notification to the FHWA. The project will use Shell 2. Proceed to step 4.</li> </ul>

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Project ID Number: 4CR004	

#### Step 4: Summary and Recommendation

- The project is not located within an area subject to transportation air quality conformity.
  - o If the project is within such areas, the NEPA process may not be completed until all transportation conformity requirements are met<sup>4</sup>. Transportation conformity requirements have been met at the time of this signature.
- This project does qualify to be progressed as a Categorical Exclusion.
- The NEPA Determination will be made by NYSDOT
- Project is c(26) "Modernization of a highway by resurfacing, restoration, rehabilitation, reconstruction, adding shoulders, or adding auxiliary lanes (including parking, weaving, turning, and climbing lanes), if the action meets the constraints in paragraph (e)..." 4
- All outstanding FHWA environmental approvals will be obtained and are listed here:
- All the conditions of the PARCE are addressed herein (or within the DAD or attachments).

I certify that the information provided above is true and accurate and recommend the project be processed as described above.

Project Manager/Designer (or Responsible Local Official)	× Dems J. Kenelly	Date 7/10/18
Print Name and Title:	Dennis J. Kennelly, P.E., Consultant Project Manager	
Regional Environmental Unit Supervisor Print Name and Title:	× Mertinf Edwards PEZ	Date 7/17/18
Regional Local Project Liaison (Locally Administered Projects Only)	× Gas	Date
Print Name and Title:	Craig Ekstrom, PE NYSDOT R4 MPL	

Changes that may have occurred since the preparation of the FEAW which would create the need to go through the FEAW again include, but are not limited to: a change in the scope of the proposed project; a change in the social, economic or environmental circumstances or the setting of the project study area (i.e. the affected environment); a change in the federal statutory environmental standards: discovering new information not considered in the original process; and a significant amount of time has passed (equal or greater than three years).

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<sup>&</sup>lt;sup>4</sup> See additional information on identifying (c)26, (c)27 & (c)28 versus d (13) in FEAW\_Instructions.doc

## **APPENDIX 'H'**

# Social, Economic and Environmental Resources Checklist

NYSDOT Section 106 Submittal Package & Response

**ESA Section 7 Summary Review** 

**Correspondence** 



Social, Economic and Environmental Resources Checklist			
PIN:4CR004	FUNDING TYPE: Federal/local		
DESCRIPTION: The proposed Project generally includes milling and	DATE:07/11/2018		
resurfacing Lyell Avenue from Lake Avenue to Mount Read Boulevard in Rochester, New York. The Project, in total, is approximately 9,600 feet in length. All Project work will be limited to the existing right of way.	REVISION DATE:		
MUNICIPALITY: City of Rochester, New York	NEPA CLASS: II/Cat Ex		
COUNTY: Monroe	SEQRA TYPE: II		
SCOPE: IPP FDR Design Report			

SOCIAL, ECONOMIC AND ENVIRONMENTAL CONSIDERATIONS	IF YES, GO TO IMPACT OR ISSUE; IF NO CHECK BOX BELOW	_	CT <sup>1</sup> OR UE?
	NO	YES	NO
Social			
A. Land Use			
Is there potential to affect current land use/zoning?	$\boxtimes$		
2. Is there a lack of consistency with community's comprehensive plan and/or other local or regional planning goals?			
Will the project affect any planned or future development?	$\boxtimes$		
B. Neighborhoods and Community Cohesion			
<ol> <li>Are relocations of homes or businesses proposed or acquisition of community resources anticipated?</li> </ol>			
2. Is there potential for changes to neighborhood character?			
<ol><li>Is there a potential to impact transportation options (e.g., transit, walking, bicycling)?</li></ol>			
4. Are there potential changes to travel patterns that could affect neighborhood quality of life?			$\boxtimes$
5. Will the project divide or isolate portions of the community or generate new development that could affect the current community structure?	$\boxtimes$		
C. General Social Groups			
<ol> <li>Are there potential effects to the ability of transit dependent, elderly, or disabled populations to access destinations (particularly local businesses and health care facilities)?</li> </ol>			
<ol><li>Does the project have the potential to disproportionately impact low income or minority populations (Environmental Justice)?</li></ol>			$\boxtimes$
3. Are there alterations to pedestrian facilities that would affect the elderly or disabled such as lengthening pedestrian crossings or providing median refuge?	$\boxtimes$		
D. Community Services			
<ol> <li>Is there potential to affect access to or use of Schools,</li> </ol>	$\boxtimes$		

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SOCIAL, ECONOMIC AND ENVIRONMENTAL CONSIDERATIONS	IF YES, GO TO IMPACT OR ISSUE; IF NO CHECK BOX BELOW	IMPAC ISSI	-
	NO	YES	NO
Recreation Areas or Places of Worship (e.g., detours, sidewalk removal, addition of curb ramps, crosswalks, pedestrian signals, etc.)?			
Is there potential to affect emergency service response?			
Economic			
A. Regional and Local Economies			
Is there potential to affect local economic viability (e.g., development potential, tax revenues, employment opportunities, retail sales or public expenditures)?			
Is there a potential to divert traffic away from businesses?			
B. Business Districts			
Are there potential effects on the viability or character of Business Districts?			
2. Will the project affect transportation options available for patrons getting into or out of the District?			
3. Will sidewalks, bicycling opportunities or transit opportunities to or within the district be affected?			
4. Will parking within the district be affected?	$\boxtimes$		
C. Specific Business Impacts			
<ol> <li>Are effects to specific businesses anticipated? (e.g., sidewalks, bicycling opportunities, or handicapped access to and from businesses)?</li> </ol>			
2. Will the project affect available transportation options for patrons to businesses?			
3. Will the project affect the ability of businesses to receive deliveries?			
4. Will parking for businesses be affected?			
Environmental			
<ol> <li>Are there wetlands within or immediately adjacent to the project limits? See Environmental Procedures Manual (EPM) 4.A.R, Executive Order (EO) 11990 may apply.</li> </ol>			
Are there Surface Waters (other than wetlands) within or immediately adjacent to the project limits?      lakes, ponds streams or wetlands of any jurisdiction			
Is there a designated Wild or Scenic River within or immediately adjacent to the project limits? (See <u>The Environmental Manual</u> (TEM) 4.4.3)	$\boxtimes$		
Will the project require a U.S. Coast Guard Bridge Permit?     Project area includes a bridge over navigable waters of U.S.			
<ol> <li>Does the project area contain waters regulated as Navigable by         <ul> <li>U. S. Army Corps of Engineers? Section 404/10 Individual Permit or NWP 23 may be required</li> </ul> </li> </ol>			
6. Is the project in a mapped Flood Zone? TEM section 4.?, EO 11988			
7. Is the project in or could it affect a designated coastal area? FAN			

July 2018 PIN 4CR004

SOCIAL, ECONOMIC AND ENVIRONMENTAL CONSIDERATIONS	IF YES, GO TO IMPACT OR ISSUE; IF NO CHECK BOX BELOW	IMPAC ISSU	_
	NO	YES	NO
and/or Consistency determination may be required. See <u>TEM 4.6</u>			
8. Is the project area above a Sole Source Aquifer? See TEM 4.4 Coordination with FHWA and/or EPA may be required.	$\boxtimes$		
<ol> <li>Will the project involve one (1) acre of ground disturbance (or 5,000 sf in the East of Hudson watershed)?</li> </ol>			
10. Are federally/state listed endangered species or designated critical habitat indicated for the project county? Coordination with DEC and/or a FHWA determination may be required. See <u>TEM 4.4.9.3</u>			
11. Is the project in a designated Critical Environmental Area? TEM 4.4.11(SEQR issue)	$\boxtimes$		
12. Are there any resources protected by Section 106 (or Section 1409) within the project limits or immediate area? See <u>TEM</u> <u>4.4.12 Appendix G</u>			
13. Is Native American coordination required outside of Section 106 consultation? The project on or affecting Native American Lands or other areas of interest			
14. Is there a use, constructive use or temporary occupancy of a 4(f) resource? See <u>SECTION 4(f) POLICY PAPER</u> and contact Area Engineer.			
15. Will the project involve conversion of a 6(f) resource? listed as having Land and Water Conservation funds spent on the resource			
16. Is there any potential to affect the character of important and possibly significant the visual resources of the project area and its environs? (See <u>PDM Chapter 3.2.2.2</u> )	$\boxtimes$		
17. Will the project convert land protected by the Federal Farmland Protection Act? See <u>TEM 4.4.15</u>	$\boxtimes$		
<ol> <li>Will the project acquire active farmland from an Agricultural District? (SEQR issue)</li> </ol>			
19. Is the project in a non-attainment area and exceed the CO screening criteria? see <u>EPM Chapter 1 1.1-19 an Air Quality</u> <u>Analysis required</u>			
20. Is the project in a non-attainment area and exceed the PM screening criteria? see <u>EPM Chapter 1 1.1-19? A hot spot analysis is required</u>			
21. Is the project a Type I Noise project as per 23 CFR 772? See <u>TEM 4.4.18</u>			
22. Will the project require the removal of Asbestos Containing Materials? See <u>TEM 4.4.19</u>	$\boxtimes$		
23. Does the project area contain Contaminated and Hazardous Materials? EPA National Priority List			
24. Will the project increase the height of towers, construct new towers or other obstructions in a known migratory bird flyway?			

# NOTES:

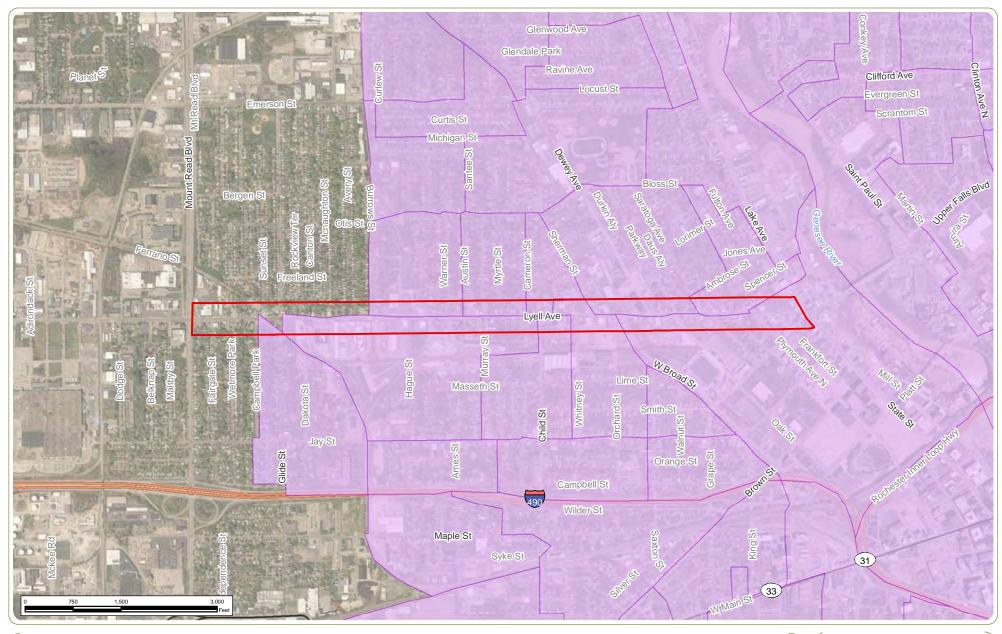
<sup>&</sup>lt;sup>1</sup> The term "impacts" means both positive and negative effects. Both types of effects should be discussed in the body of the report as appropriate.

PREPARED BY: (Hayley Effler)	
CERTIFICATION:	
I certify that the information provided above is true and accurate.	
Regional/Main Office Environmental Unit Supervisor	Date

Print Name and Title: \_\_\_\_\_

**PIN 4CR004** 

July 2018



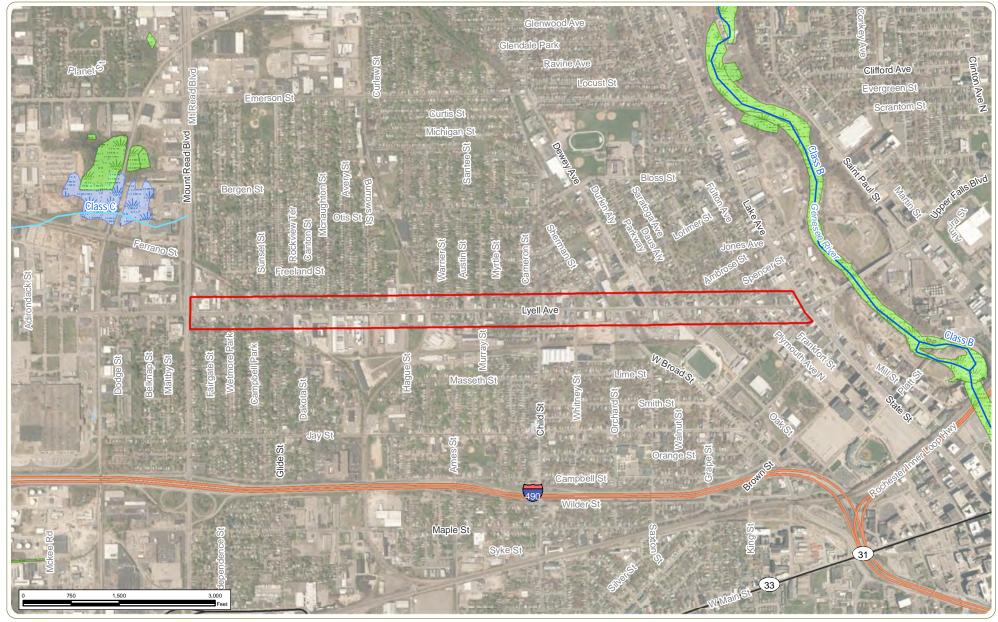
City of Rochester, Monroe County, New York

**Environmental Justice Areas** 

Notes: 1. Basemap: NYSDOP 2015 orthoimagery map service. 2. This map was generated in ArcMap on March 22, 2018. 3. This is a color graphic. Reproduction in grayscale may misrepresent the data.







City of Rochester, Monroe County, New York

Mapped Wetlands and Streams

Notes: 1. Basemap: NYSDOP 2015 orthoimagery map service. 2. This map was generated in ArcMap on March 22, 2018. 3. This is a color graphic. Reproduction in grayscale may misrepresent the data.



NYS Protected Stream

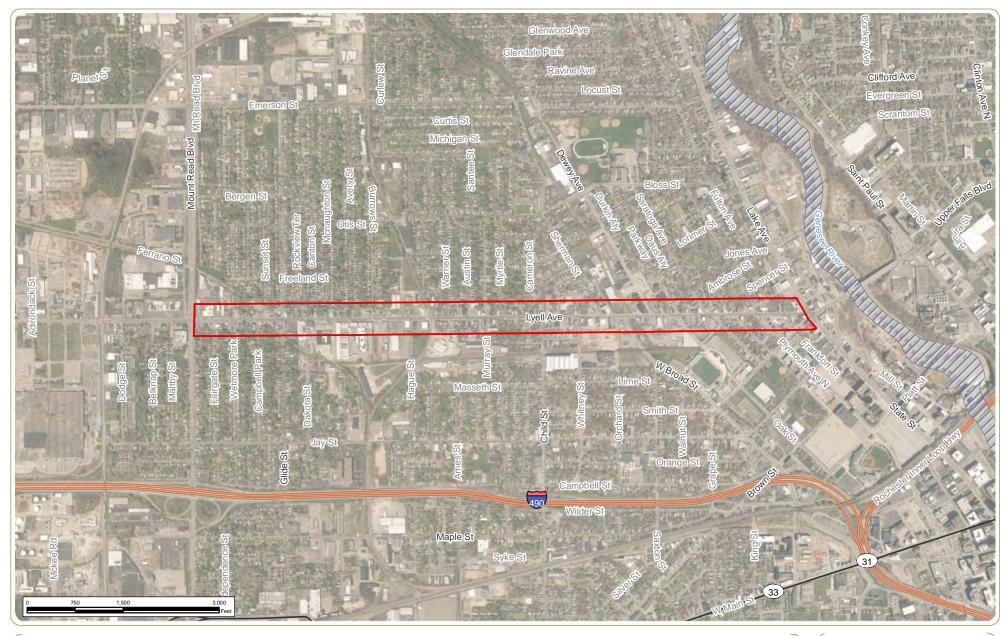
Unprotected Stream

NWI Wetland

NYSDEC Wetland

Project Location





City of Rochester, Monroe County, New York

FEMA Flood Hazards

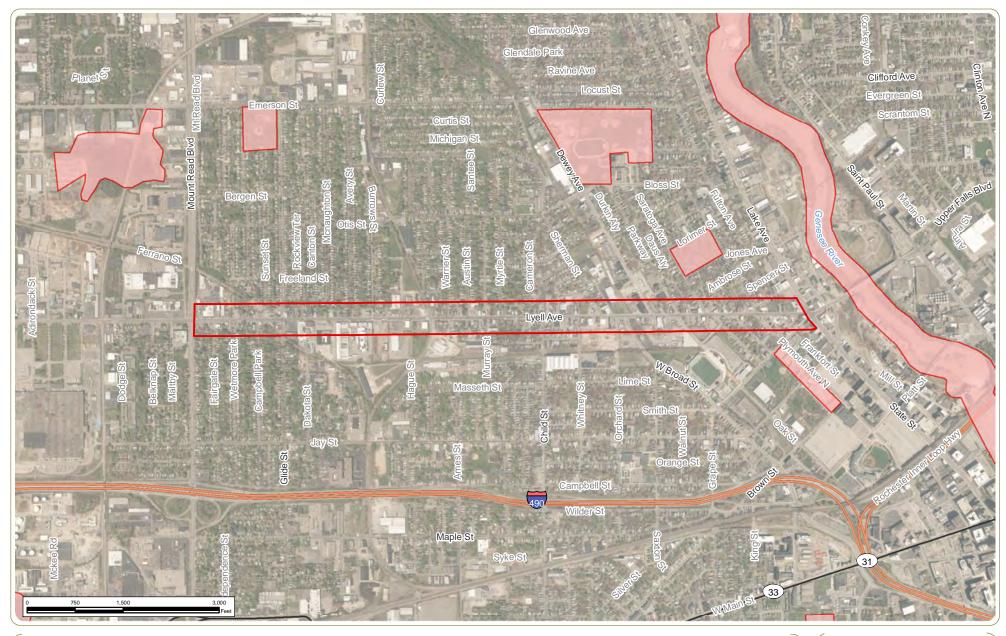
Notes: 1. Basemap: NYSDOP 2015 orthoimagery map service. 2. This map was generated in ArcMap on March 22, 2018. 3. This is a color graphic. Reproduction in grayscale may misrepresent the data.

FEMA Flood Hazard:









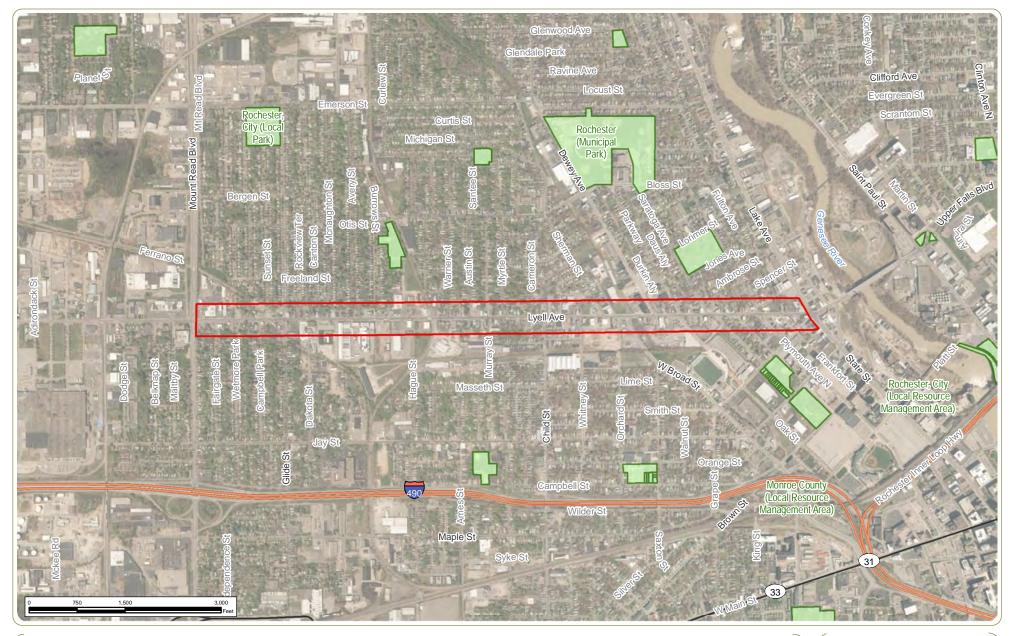
City of Rochester, Monroe County, New York

Critical Environmental Areas

Notes: 1. Basemap: NYSDOP 2015 orthoimagery map service. 2. This map was generated in ArcMap on March 22, 2018. 3. This is a color graphic. Reproduction in grayscale may misrepresent the data.







City of Rochester, Monroe County, New York

Parks and Protected Areas

Notes: 1. Basemap: NYSDOP 2015 orthoimagery map service. 2. This map was generated in ArcMap on March 22, 2018. 3. This is a color graphic. Reproduction in grayscale may misrepresent the data.





# NYSDOT Section 106 Submittal Package & Response

# **Section 106 Project Submittal Package**

# PIN 4CR004 – Lyell Avenue Improvement Project

City of Rochester, Monroe County, New York

#### Prepared for:



**T.Y. LIN International Engineering, Architecture & Land Surveying, P.C.** 255 East Avenue, Rochester, NY, 14604 www.tylin.com

#### Prepared by:



Environmental Design & Research,
Landscape Architecture, Engineering, & Environmental Services, D.P.C.
217 Montgomery Street, Suite 1000
Syracuse, New York 13202
www.edrdpc.com

#### NEW YORK STATE DEPARTMENT OF TRANSPORTATION PROJECT SUBMITTAL PACKAGE

#### Section 106 of the National Historic Preservation Act For Locally-Administered Federal-Aid Projects

A Project Submittal Package is prepared by the Local Project Sponsor (Sponsor) or their consultants for federal aid transportation projects to provide sufficient information for NYSDOT assessment of Section 106 obligations.

The Sponsor sends the package to the Regional Local Project Liaison (RLPL) for Regional Cultural Resource Coordinator (RCRC) review. The RCRC will make recommendations to identify what is needed for Section 106 compliance for the project.

DATE: April 18, 2018 PIN: 4CR004 BIN(s): N/A

#### **IDENTIFICATION**

Project Name (if any): Lyell Avenue Improvement Project

Project Area Boundaries: The Project involves improvements and upgrades to Lyell Avenue and its associated utilities. The limits of work will

include the existing Lyell Avenue roadway corridor between Lake Avenue and Mt. Read Boulevard (approximately 1.8 miles in length).

County: Town/City: Rochester Village/Hamlet: N/A Monroe Have you consulted the NYSHPO web site at \*http://nysparks.state.nv.us to determine the preliminary presence or absence of previously identified cultural resources within or adjacent to the project area? If yes: Was the project site wholly or partially included within an identified archaeologically sensitive area? ⊠ Yes □ No Does the project site involve or is it substantially contiguous to a National Register of Historic Places listed property?

\*http://nysparks.state.ny.us then select HISTORIC PRESERVATION then Historic Preservation Field Services Bureau then On

Line Tools - CRIS

### ALL PROJECTS SUBMITTED FOR REVIEW SHOULD INCLUDE THE FOLLOWING INFORMATION

☐ Yes ⊠No

- Project Description Attach a full description of the nature and extent of the work to be undertaken as part of this project. This should include, but not limited to, potential activities that might involve drainage, cutting, excavation, grading, filling, on-site detours, new sidewalks, right-of-way acquisition. Relevant portions of the project applications or environmental statements may be submitted. This could be from sections of the Draft Design Report/ Draft Scoping Document.
- ☑ Location Maps Provide USGS Quad or DOT Planimetric map showing project area location. The map must clearly show street and road names surrounding the project area as well as all portions of the project.
- Photos Provide clear, original color photographs of the entire project area keyed to a site plan. These photos should indicate:
  - Buildings/structures more than 50 years old that are located along the property or on adjoining property
  - Areas of prior ground disturbance (removal of original topsoil; filling and plowing are not considered disturbance)

#### LOCAL SPONSOR CONTACT

Name: Kamal L. Crues, P.E. Title: City Engineer

Firm/Agency: City of Rochester

Address: City Hall, 30 Church Street City: Rochester State: NY Zip: 14614

Phone: (585) 272-3755 E-Mail: Kamal.Crues@cityofrochester.gov

Consultant Name: Environmental Design & Research, Landscape Architecture, Engineering & Environmental Services, D.P.C.

217 Montgomery Street, Suite 1000, Syracuse, NY 13202 Contact Information:

Phone: (315) 471-0688

#### 1.0 Project Information

This Section 106 Project Submittal Package for the proposed Lyell Avenue Improvement Project, located in the City of Rochester in Monroe County, New York, was prepared by Environmental Design & Research, Landscape Architecture, Engineering, & Environmental Services, D.P.C. (EDR) on behalf of T.Y. LIN International Engineering, Architecture & Land Surveying, P.C. (T.Y. LIN) and the City of Rochester. This submittal was prepared by EDR cultural resources staff who meet the qualifications specified by the Secretary of the Interior's Standards for Historic Preservation and Archaeology per 36 CFR Part 61.

#### 1.1 Project Description

The proposed Lyell Avenue Improvement Project (hereafter "the Project") proposes improvements to Lyell Avenue, and its associated utilities in the City of Rochester, New York (see Attachment A). Proposed work as part of the Project includes:

- PIN 4CR004 Lyell Avenue Improvement Project The proposed Project consists of street improvements
  such as milling and resurfacing along Lyell Avenue, adjustments to water and sewer utilities, and upgrading
  of sidewalks, curb ramps and crosswalks to comply with current standards. Upon completion of the Project,
  the roadway alignment will remain the same.
- Area of Potential Effect (APE): The APE for this Project consists of the proposed limits of work, which will
  include areas to be disturbed by resurfacing Lyell Avenue, and the necessary adjustments and improvements
  to utilities and pedestrian infrastructure.

#### 1.2 Impact on Historic Resources

The New York State Office of Parks, Recreation and Historic Preservation (NYSOPRHP) Cultural Resources Information System (CRIS) website was reviewed to determine the location of any properties listed in the National Register of Historic Places (NRHP) located at or adjacent to the proposed Project. According to the CRIS website, there are no properties listed in the NRHP, and 13 properties determined to be eligible for the NRHP located within 500 feet of the APE, which include the following:

81 Lake Ave (Unique Site Number [USN] 05540.007068) is a three-story brick Neoclassical commercial
building located approximately 480 feet north from the APE. The building was built in 1911 and originally
contained a bottling plant for a number of Rochester-based distillers and brewing companies. It is significant
due to its association with major industries of Rochester's past (Parker, 1998).

- The Union Trust Company (Brown Square Health Center) (USN 05540.000444), is a two-story brick and stone Neoclassical commercial bank building located at 175 Lyell Avenue, on the southern edge of the APE. The building was built in 1930 for the Union Trust Company before undergoing rehabilitation as a health care facility. It is significant as an example of Neoclassical commercial architecture in the Dutchtown/Brown Square neighborhoods and is the only small-scale Neoclassical building of its type in the city of Rochester. It was determined to be eligible for the NRHP in 1986 (MCA, 1986a).
- The C.T. Manufacturing Company, also known as the Charles Settlement House (USN 05540.006071), is a brick industrial complex consisting of a six-story block constructed in 1891 and a four-story addition constructed in 1917. The building is located approximately 380 feet north of the APE at 71 Parkway and is considered significant as an intact industrial complex in the Edgerton Neighborhood. It was determined to be eligible for the NRHP in 1986 (MCA, 1986b).
- 600 Oak Street (USN 05540.007730) was a small stone warehouse building constructed along the original Erie Canal alignment through the City of Rochester. It was determined to be NRHP-eligible in 2003 due to its association with the early industrial complexes along the Erie Canal (Englert, 2003). Field review indicated that the resource is no longer extant at this documented address and is assumed to have been demolished.
- 280-286 Lyell Avenue (USN 05540.008729) consists of two five-story brick buildings located approximately
  100 feet north from the APE.<sup>1</sup> The two buildings were constructed between 1887 and 1890 and in 1910 and
  are significant in that they represent the transition in style between commercial styles of the Late Victorian
  and the more modern commercial styles of the late nineteenth and early twentieth century. It was determined
  as eligible for the NRHP in 1986 (MCA, 1986c).
- 386 Lyell Avenue (USN 05540.006033) is a one-story, Federal Revival-style commercial gas station. The
  building was constructed in 1927 and is significant as it is one of several extant Federal Revival-style gas
  stations constructed during the early twentieth century. It was determined eligible for listing in the NRHP in
  1986 (MCA, 1986d).
- Police Station Precinct Number 5 (USN 05540.006034) is a three-story, Classical Revival style brick building located at 464 Lyell Avenue on the northern edge of the APE. It was constructed between 1904 and 1905

<sup>&</sup>lt;sup>1</sup> This resource is also known as the Crouch Complex (Tent City Warehouse) and is shown on CRIS with a separate USN (05540.006032),

and is considered significant because it is one of two precinct stations designed by Claude Bragdon, a Rochester architect of national notoriety. It was determined as eligible for the NRHP in 1986 (MCA, 1986e).

- Lyell Avenue Baptist Church, also known as the Cameron Community Ministry (USN 05540.005931), is a
  one-and-one-half-story brick church in the Gothic and Italianate styles located at 48 Cameron Street and is
  approximately 300 feet north of the APE. It was constructed in 1890 and is significant as an example of late
  nineteenth century religious architecture. It was determined as eligible for the NRHP in 1986 (MCA, 1986f).
- The Holy Apostles School (USN 05540.005914) is a two-story brick school building with some Romanesque elements located approximately 50 feet north of the APE at 6 Austin Street. It was constructed in 1918 and is significant as an example of early twentieth century parochial school architecture in Rochester. It was determined eligible for the NRHP in 1986 (MCA, 1986g).
- The Holy Apostles Rectory (USN 05540.005915) is a two-story brick residence located approximately 230 feet north of the APE at 7 Austin Street. It was constructed between 1918 and 1926 and is architecturally significant as one of the three buildings that compose the Apostles Church complex. It was determined to be eligible for the NRHP in 1986 (MCA, 1986h).
- The Holy Apostles Roman Catholic Church (USN 05540.006035) is a one-story church with a four-story bell tower and elements of both Romanesque and Gothic architectures, is constructed from Medina sandstone and is located on the northern edge of the APE at 520 Lyell Avenue. It was constructed in 1896 and is architecturally significant as a distinct example of religious architecture in the city of Rochester. Additionally, it is historically significant as a mission church of St. Patrick's parish, which was founded in 1882. It was determined to be eligible for the NRHP in 1986 (MCA, 1986i).
- The Theodore Roosevelt School #43 (USN 05540.000657), a two-story brick school building located at the western edge of the APE at 1305 Lyell Avenue. It was first constructed in 1918 as an eight-room school house and expanded upon significantly in 1921. It is architecturally significant as an example of early twentieth century school architecture in the city of Rochester. It was determined to be eligible for the NRHP in 1976 (The Landmark Society of Western New York, 1976).

In addition to the 12 properties described above, a residence at 147 Spencer Street (USN 05540.00893) was indicated on the CRIS website to be NRHP-eligible. However, no building inventory form was available, and subsequent correspondence with NYSOPRHP determined that there is no building inventory form available at this time.

The locations of these resources are indicated on the map included as Attachment B. Photographs of NRHP-eligible resources discussed above are included as Attachment C. As noted above, these NRHP-eligible resources are all located within 500 feet from the APE of the proposed Project. However, the proposed Project is an improvement of an existing roadway, with all work to be completed within the existing right-of-way. No direct impacts to these NRHP-eligible properties are anticipated.

#### 1.3 Archaeological Sensitivity

A review of the NYSOPRHP CRIS website determined that the proposed Project occurs partially within an archaeologically sensitive area. A review of CRIS also indicated that there are no previously identified archaeological sites which are NRHP-eligible or for which NRHP eligibility has not been formally determined located within 1,000 feet of the APE. Additionally, the CRIS website indicated that no New York State Museum (NYSM) sites or areas are located within 1,000 feet of the APE.

A review of the CRIS website also determined that two previous cultural resources surveys have been conducted within a half-mile of the proposed Project APE:

- A Cultural Resource Management Report, Phase IB and II Cultural Resource Reconnaissance: The Proposed Paetec Park was prepared in 2003 to determine the archaeological sensitivity of an 18-acre parcel associated with the construction of the Capelli Sport Stadium located approximately 150 feet south of the APE. As part of this survey, the Rochester Museum and Science Center (RMSC) mechanically excavated 13 trenches during the Phase IB component of the survey. During the Phase II component an additional three trenches, and two 1 meter by 1 meter and four 1 meter by 0.5-meter test units were excavated. RMSC determined that the area had been subjected to extensive impact associated with industrial activities, building demolition, and modification to the project area and recommended no additional archaeological testing at that location (RMSC, 2003).
- A Phase 1 Architectural Survey (PIN 4940.K4.101) Mount Read Boulevard Improvements was prepared in 2017 to assess the impact of safety improvements along a 5,568-foot portion of Mount Read Boulevard on historic architectural resources. The survey identified two properties as eligible for listing in the NRHP (PAF, 2017).

The locations of these cultural resources surveys are indicated on the map included as Attachment B.

The proposed Project occurs primarily within previously disturbed areas comprised of a paved roadway and immediately adjacent areas with associated commercial and residential infrastructure. The Project area has been developed and infilled since the late nineteenth century. No intact/original soils are present within the Project area or are anticipated to be disturbed, and therefore there is little to no likelihood that prehistoric or historic deposits would be impacted by construction of the Project.

#### 1.4 Photographs

A site visit was conducted by EDR staff on March 23, 2018 to document existing conditions within the APE for the Lyell Avenue Project and to assess the potential for impacts to cultural resources. Photographs documenting existing conditions within the Project area, including existing land use, visual character and previous ground disturbance of the Project APE are included as Attachment C. Photograph locations are noted on maps included as Attachment D.

#### LIST OF ATTACHMENTS

Attachment A. Project Location Map

Attachment B. Previously Identified Cultural Resources

Attachment C. Photographs

Attachment D. Photograph Locations

#### Appendix A. REFERENCES

Englert, Robert. 600 Oak Street. New York State Office of Parks, Recreation, and Historic Preservation Resource Evaluation Form. On file, New York State Office of Parks, Recreation, and Historic Preservation, Waterford, NY. Available at https://cris.parks.ny.gov/.

Landmark Society of Western New York. 1976. *Theodore Roosevelt School No. 43.* New York State Historic Archaeological Site Inventory Form. On file, New York State Office of Parks, Recreation, and Historic Preservation, Waterford, NY. Available at <a href="https://cris.parks.ny.gov/">https://cris.parks.ny.gov/</a>.

Mack Consulting Associates. 1986a. *Union Trust Company*. New York State Historic Archaeological Site Inventory Form. On file, New York State Office of Parks, Recreation, and Historic Preservation, Waterford, NY. Available at <a href="https://cris.parks.ny.gov/">https://cris.parks.ny.gov/</a>.

Mack Consulting Associates. 1986b. *C.T. Ham Manufacturing Company*. New York State Historic Archaeological Site Inventory Form. On file, New York State Office of Parks, Recreation, and Historic Preservation, Waterford, NY. Available at https://cris.parks.ny.gov/.

Mack Consulting Associates. 1986c. *Crouch Complex (Tent City Warehouse)*. New York State Historic Archaeological Site Inventory Form. On file, New York State Office of Parks, Recreation, and Historic Preservation, Waterford, NY. Available at <a href="https://cris.parks.ny.gov/">https://cris.parks.ny.gov/</a>.

Mack Consulting Associates. 1986d. *Unnamed Gas Station*. New York State Historic Archaeological Site Inventory Form. On file, New York State Office of Parks, Recreation, and Historic Preservation, Waterford, NY. Available at <a href="https://cris.parks.ny.gov/">https://cris.parks.ny.gov/</a>.

Mack Consulting Associates. 1986e. *Police Station Precinct No. 5.* New York State Historic Archaeological Site Inventory Form. On file, New York State Office of Parks, Recreation, and Historic Preservation, Waterford, NY. Available at <a href="https://cris.parks.ny.gov/">https://cris.parks.ny.gov/</a>.

Mack Consulting Associates. 1986f. *Lyell Avenue Baptist Church (Cameron Community Ministry)*. New York State Historic Archaeological Site Inventory Form. On file, New York State Office of Parks, Recreation, and Historic Preservation, Waterford, NY. Available at <a href="https://cris.parks.ny.gov/">https://cris.parks.ny.gov/</a>.

Mack Consulting Associates. 1986g. *Holy Apostles School*. New York State Historic Archaeological Site Inventory Form. On file, New York State Office of Parks, Recreation, and Historic Preservation, Waterford, NY. Available at <a href="https://cris.parks.ny.gov/">https://cris.parks.ny.gov/</a>.

Mack Consulting Associates. 1986h. *Rectory, Holy Apostles Church*. New York State Historic Archaeological Site Inventory Form. On file, New York State Office of Parks, Recreation, and Historic Preservation, Waterford, NY. Available at <a href="https://cris.parks.ny.gov/">https://cris.parks.ny.gov/</a>.

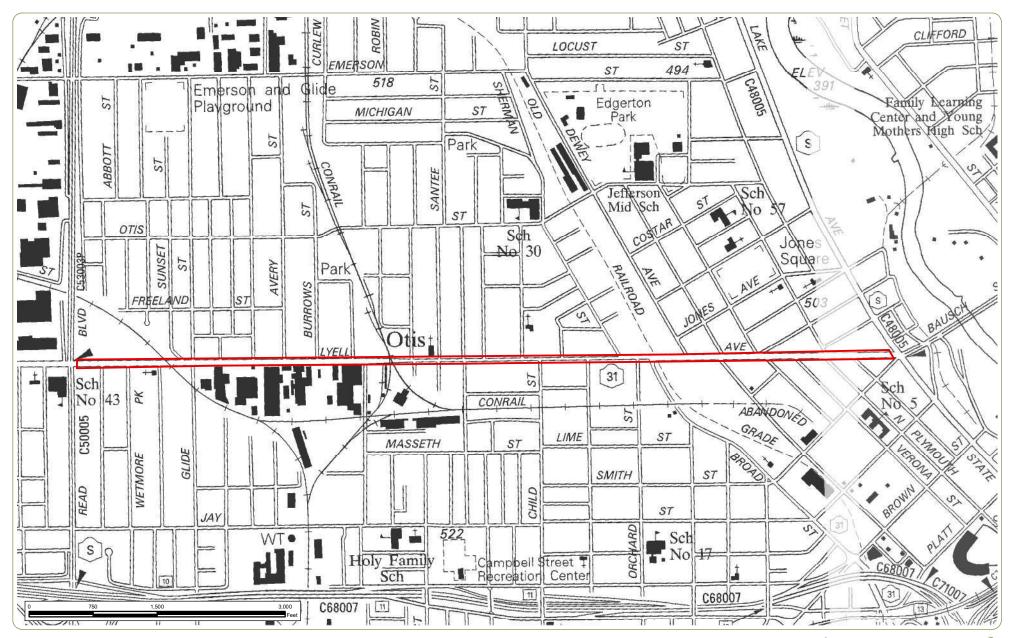
Mack Consulting Associates. 1986i. *Holy Apostles Church*. New York State Historic Archaeological Site Inventory Form. On file, New York State Office of Parks, Recreation, and Historic Preservation, Waterford, NY. Available at <a href="https://cris.parks.ny.gov/">https://cris.parks.ny.gov/</a>.

Parker, Margaret. 1998. Rochester Bottling Co./81 Lake Avenue. New York State Department of Transportation Building-Structure Inventory Form. On file, New York State Office of Parks, Recreation, and Historic Preservation, Waterford, NY. Available at https://cris.parks.ny.gov/.

Public Archaeology Facility (PAF). 2017. *Phase 1 Architectural Survey (PIN 4940.K4.101) Mount Read Boulevard Improvements, City of Rochester, Monroe County, New York, MCD 05540.* Prepared for New York State Museum and the State Education Department. On file, New York State Office of Parks, Recreation, and Historic Preservation, Waterford, NY. Available at <a href="https://cris.parks.ny.gov/">https://cris.parks.ny.gov/</a>.

Rochester Museum and Science Center (RMSC). 2003. *Cultural Resource Management Report Phase IB and II Cultural Resource Reconnaissance: The Proposed Paetec Park.* Prepared for Labella Associates, P.C. On file, New York State Office of Parks, Recreation, and Historic Preservation, Waterford, NY. Available at https://cris.parks.ny.gov/.

# Attachment A: Project Location Map



### PIN 4CR0.04 - Lyell Avenue Improvement Project

City of Rochester - Monroe County, New York

#### **Attachment A: Project Location Map**

Notes: 1. Basemap: NYSDOT Rochester West, NY and Rochester East, NY Planimetric Quadrangles

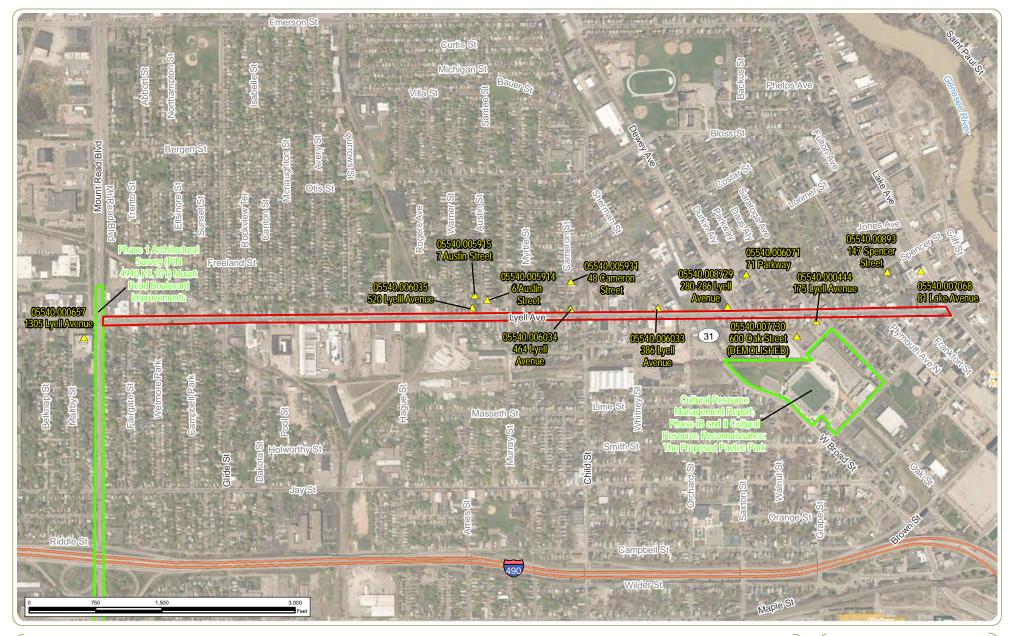
2. This map was generated in ArcMap on April 16, 2018.

3. This is a color graphic. Reproduction in grayscale may misrepresent the data.





# Attachment B: Previously Identified Cultural Resources



# PIN 4CR0.04 - Lyell Avenue Improvement Project

City of Rochester - Monroe County, New York

## Attachment B: Previously Identified Cultural Resources

Notes: 1. Basemap: NYSDOP 2015 orthoimagery map service.
2. This map was generated in ArcMap on April 17, 2018.
3. This is a color graphic. Reproduction in grayscale may misrepresent the data.

△ NRHP-Eligible Resource (NYSOPRHP Determined)

Previous Cultural Resources Survey

NRHP-Listed Site

Project Area Boundary (APE)



**Attachment C:** 

**Photographs** 



View to the south west toward the NRHP-eligible property, the Theodore Roosevelt School (05540.000657) at 1305 Lyell Avenue.



#### Photo 2

View to the west along Lyell Avenue toward Mount Read Boulevard and the western APE boundary.

# PIN 4CR0.04 –Lyell Avenue Improvement Project City of Rochester - Monroe County, New York

Attachment C Photographs

Sheet 1 of 15





Photo 3

View to the east along Lyell Avenue toward the intersection with Fairgate Street.



## Photo 4

View to the west along Lyell Avenue toward the intersection with Glide Street.

# PIN 4CR0.04 –Lyell Avenue Improvement Project City of Rochester - Monroe County, New York

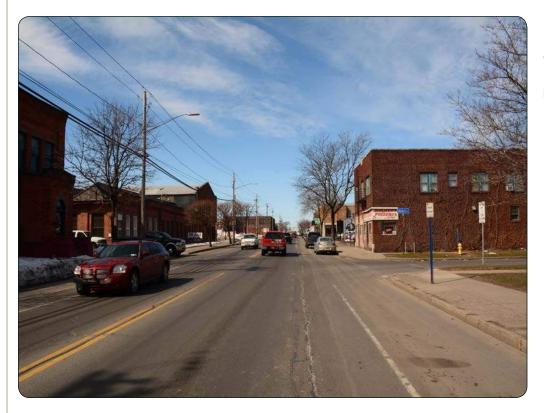
Attachment C Photographs

Sheet 2 of 15





View to the east along Lyell Avenue toward the intersection with Glide Street.



## Photo 6

View to the west along Lyell Avenue toward the intersection with Avery Street.

# PIN 4CR0.04 –Lyell Avenue Improvement Project City of Rochester - Monroe County, New York

Attachment C Photographs

Sheet 3 of 15





Photo 7

View to the east along Lyell Avenue toward the intersection with Avery Street.



## Photo 8

View to the NRHP-eligible property, the Holy Apostles Rectory (05540.005915) at 7 Austin Street.

PIN 4CR0.04 –Lyell Avenue Improvement Project City of Rochester - Monroe County, New York

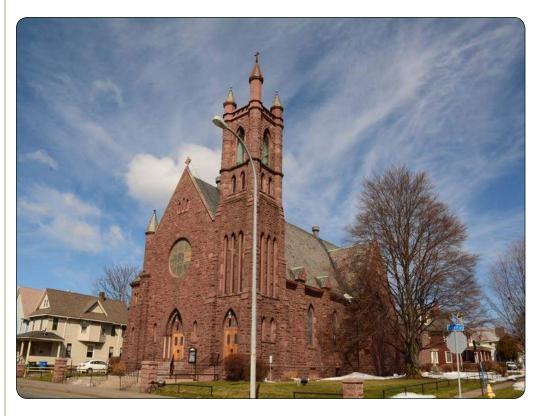
Attachment C Photographs

Sheet 4 of 15





View to the NRHP-eligible property, the Holy Apostles School (05540.005914) at 6 Austin Street.



#### Photo 10

View to the north west toward the NRHP-eligible property, the Holy Apostles Roman Catholic Church (05540.006035) at 520 Lyell Avenue.

# PIN 4CR0.04 –Lyell Avenue Improvement Project City of Rochester - Monroe County, New York

Attachment C Photographs

Sheet 5 of 15



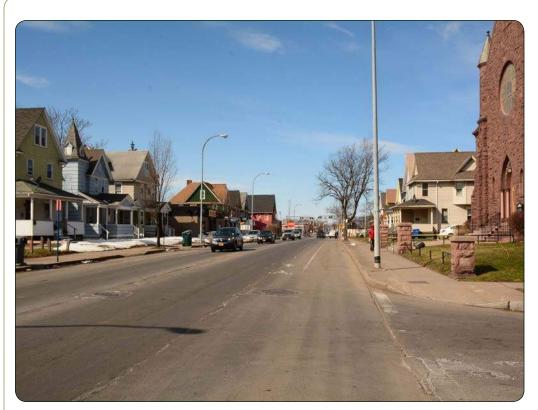


Photo 11

View to the west along Lyell Avenue from the intersection with Austin Street.



#### Photo 12

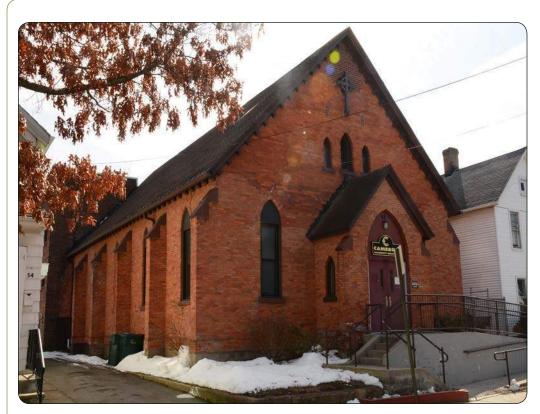
View to the east along Lyell Avenue from the intersection with Austin Street.

# PIN 4CR0.04 –Lyell Avenue Improvement Project City of Rochester - Monroe County, New York

Attachment C Photographs

Sheet 6 of 15





View to the south east toward the NRHP-eligible property, the Lyell Avenue Baptist Church, also known as the Cameron Community Ministry (05540.005931), at 48 Cameron Street.



#### Photo 14

View to the north east toward the NRHP-eligible property at Police Station Precinct Number 5 (05540.006034) at 464 Lyell Avenue.

# PIN 4CR0.04 –Lyell Avenue Improvement Project City of Rochester - Monroe County, New York

Attachment C Photographs

Sheet 7 of 15





View to the west along Lyell Avenue toward the intersection with Angle Street.



## Photo 16

View to the east along Lyell Avenue toward the intersection with Whitney Street.

# PIN 4CR0.04 –Lyell Avenue Improvement Project City of Rochester - Monroe County, New York

Attachment C Photographs

Sheet 8 of 15





Photo 17

View to the north west toward the NRHP-eligible property at 386 Lyell Avenue (05540.006033).



#### Photo 18

View to the north west toward the NRHP-eligible property at 280-286 Lyell Avenue (05540.008729) and the intersection of Lyell Avenue and Dewey Avenue.

# PIN 4CR0.04 –Lyell Avenue Improvement Project City of Rochester - Monroe County, New York

Attachment C Photographs

Sheet 9 of 15





View to the east along Lyell Avenue toward the intersection with Moore Street.



# Photo 20

View to the north west toward the NRHP-eligible property, the C.T. Manufacturing Company, also known as the Charles Settlement House (05540.006071), at 71 Parkway.

PIN 4CR0.04 –Lyell Avenue Improvement Project City of Rochester - Monroe County, New York

Attachment C Photographs

Sheet 10 of 15





View to the south west toward the NRHP-eligible property, the Union Trust Company, also known as the Brown Square Health Center (05540.000444), at 175 Lyell Avenue.



#### Photo 22

View to the west along Lyell Avenue toward the intersection with Carroll Street.

PIN 4CR0.04 –Lyell Avenue Improvement Project City of Rochester - Monroe County, New York

Attachment C Photographs

Sheet 11 of 15





Photo 23

View to the east along Lyell Avenue near the intersection with Carroll Street.



Photo 24

View to the south west toward the NRHP-eligible property at 147 Spencer Street (05540.00893).

# PIN 4CR0.04 –Lyell Avenue Improvement Project City of Rochester - Monroe County, New York

Attachment C Photographs

Sheet 12 of 15





## Photo 25

View to the west along Lyell Avenue near the eastern APE boundary and the intersection with Lake Avenue.



## Photo 26

View to the east along Lyell Avenue toward eastern APE boundary and the intersection with Lake Avenue.

# PIN 4CR0.04 –Lyell Avenue Improvement Project City of Rochester - Monroe County, New York

Attachment C Photographs

Sheet 13 of 15





Photo 27

View to the north west toward the NRHP-eligible property at 81 Lake Ave (05540.007068).



## Photo 28

View to the south east from the eastern APE boundary at the intersection of Lyell and Lake Avenues.

# PIN 4CR0.04 –Lyell Avenue Improvement Project City of Rochester - Monroe County, New York

Attachment C Photographs

Sheet 14 of 15





Photo 29

View to the north west toward the eastern APE boundary at the intersection of Lyell and Lake Avenues.

Attachment C Photographs

Sheet 15 of 15



# Attachment D: Photograph Locations



## PIN 4CR0.04 – Lyell Avenue Improvement Project

City of Rochester - Monroe County, New York

## **Attachment D: Photograph Locations**

Notes: 1. Basemap: NYSDOP 2015 orthoimagery map service.
2. This map was generated in ArcMap on April 17, 2018.
3. This is a color graphic. Reproduction in grayscale may misrepresent the data.

- △ NRHP-Eligible Resource (NYSOPRHP Determined)
- Photograph Location
- Project Area Boundary (APE)





## PIN 4CR0.04 – Lyell Avenue Improvement Project

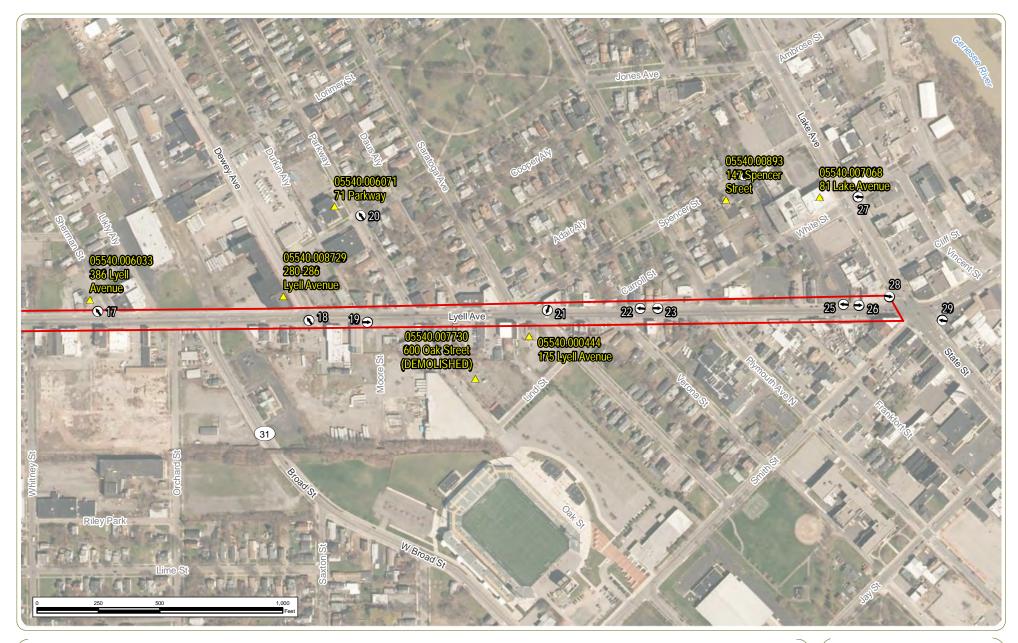
City of Rochester - Monroe County, New York

## **Attachment D: Photograph Locations**

Notes: 1. Basemap: NYSDOP 2015 orthoimagery map service.
2. This map was generated in ArcMap on April 17, 2018.
3. This is a color graphic. Reproduction in grayscale may misrepresent the data.

- NRHP-Eligible Resource (NYSOPRHP Determined)
- Photograph Location
- Project Area Boundary (APE)





## PIN 4CR0.04 - Lyell Avenue Improvement Project

City of Rochester - Monroe County, New York

## **Attachment D: Photograph Locations**

Notes: 1. Basemap: NYSDOP 2015 orthoimagery map service.
2. This map was generated in ArcMap on April 17, 2018.
3. This is a color graphic. Reproduction in grayscale may misrepresent the data.

- NRHP-Eligible Resource (NYSOPRHP Determined)
- Photograph Location
- Project Area Boundary (APE)



### **Dennis Kennelly**

From: Caraccilo, Christopher P (DOT) < Christopher.Caraccilo@dot.ny.gov>

**Sent:** Tuesday, June 26, 2018 6:56 AM

**To:** Dennis Kennelly; Ekstrom, Craig E (DOT)

Cc: Donna Clements (Donna.Clements@CityofRochester.Gov); Lisa Y. Reyes

(Lisa.Reyes@CityofRochester.Gov); Mark D. Bellavia

Subject: RE: City of Rochester - 2020 PM Group #11 Lyell Ave Project: Section 106 Submittal

Package

**Attachments:** 4CR004\_Lyell Ave Improvements\_COR.pdf

#### Craig and Dennis-

Attached is my response memo for the above subject project. After reviewing the submitted material, I have concluded that properties protected by Section 106 will not be affected or impacted; OR located in the Area of Potential Effect.

The project's scope is to rehabilitate the pavement with no work outside of the paved areas. The proposed actions do not have the potential to cause effects to any National Register Eligible or listed resource. All work will be completed on previously disturbed soils.

The activities are listed under 'New York State Department of Transportation Section 106 Procedures: Activities That Are Undertakings With No Potential to Cause Effects On Historic Properties –Pursuant to 36 CFR 800.3(a)(1). Part III Pavement:

- Routine pavement/shoulder maintenance such as crack filling, patching, joint repair, grooving, etc.
- Pavement/shoulder rehabilitation in-kind, no undercutting of existing sub base in cut sections (unless on previously disturbed soils)
- Pavement/shoulder overlays in-kind
- Asphalt overlays on PCC pavement/shoulders or replacing asphalt pavement/shoulders with concrete pavement within the existing roadway limits
- Curb replacement in-kind
- Replacement of sidewalk in-kind
- Making sidewalks handicap-accessible

If a detour(s) onto other roads results in a need for improvements on those roads, please be aware that may trigger further environmental review including cultural resources.

Please use the submitted material and attached memo to document this in the Design Report.

#### Chris

#### Christopher P. Caraccilo

Cultural Resource Specialist
Asbestos Coordinator
Landscape Architect
NYS Department of Transportation
Region 4
1530 Jefferson Road
Rochester, NY 14623
(585)-371-9250
christopher.caraccilo@dot.ny.gov



From: Dennis Kennelly [mailto:dennis.kennelly@tylin.com]

Sent: Thursday, June 21, 2018 12:55 PM

**To:** Caraccilo, Christopher P (DOT) < Christopher.Caraccilo@dot.ny.gov> **Cc:** Ekstrom, Craig E (DOT) < Craig.Ekstrom@dot.ny.gov>; Donna Clements
(Donna.Clements@CityofRochester.Gov) < Donna.Clements@CityofRochester.Gov>; Lisa Y. Reyes
(Lisa.Reyes@CityofRochester.Gov) < Lisa.Reyes@CityofRochester.Gov>; Mark D. Bellavia

<mark.bellavia@tylin.com>

Subject: City of Rochester - 2020 PM Group #11 Lyell Ave Project: Section 106 Submittal Package



Hi, Chris –

The Section 106 Project Submittal Package for the subject project is attached, for your review and approval. Please let me know if you have any comments.

Thank you,

Dennis

Dennis Kennelly
TYLININTERNATIONAL
255 East Avenue
Rochester, NY 14604
+1.585.512.2000 main
dennis.kennelly@tylin.com
Visit us online at www.tylin.com
Twitter | Facebook | LinkedIn | Google+



#### ANDREW M. CUOMO Governor

#### **PAUL A. KARAS** Acting Commissioner

CATHY CALHOUN

Chief of Staff

**TO:** Craig Ekstrom, Regional Local Project Liaison

FROM: Chris Caraccilo, Regional Cultural Resource Coordinator

**SUBJECT:** PROJECT SUBMITTAL PACKAGE – SECTION 106 RECOMMENDATIONS

PIN 4CR0.04, LYELL AVE IMPROVEMENT PROJECT

CITY OF ROCHESTER, MONROE COUNTY

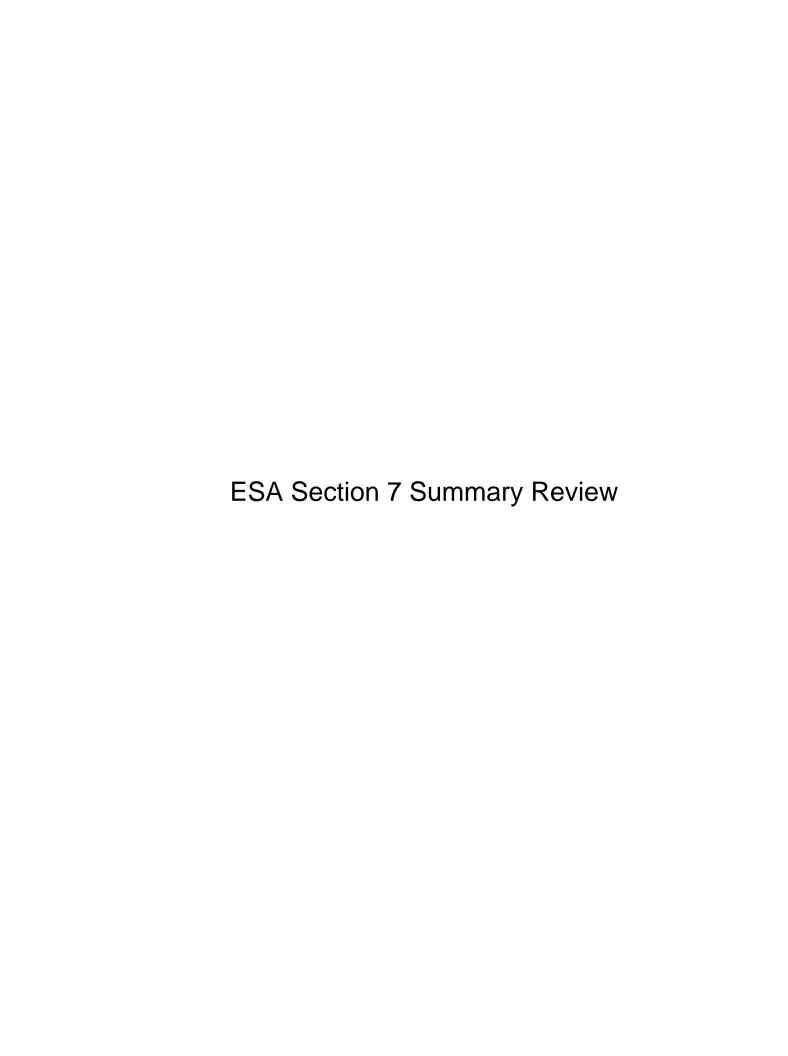
June 26, 2018

**MEMORANDUM** 

As the Regional Cultural Resource Coordinator (RCRC) I have reviewed the Project Submittal Package (PSP) prepared for the above referenced Locally Administered Federal Aid project for assessment of obligations under Section 106 of the National Historic Preservation Act (36 CFR Part 800).

Based on review of this PSP, I conclude:

The project activities have no potential to cause effects on historic properties in accordance with 36 CFR 800.3(a)(1) therefore, there are no further obligations for compliance with Section 106 of the National Historic Preservation Act. This determination should be recorded in the project environmental documentation. The project activities may cause effects on historic properties: However, this is no potential for historic properties present. Therefore, there are no further obligations for compliance with Section 106 of the National Historic Preservation Act. This determination should be recorded in the project environmental documentation. A Phase I Cultural Resource Survey is needed to identify historic and cultural resources. Based on project description and activities, the following preliminary Area of Potential Effect is recommended. Based on project description and activities in the PSP a preliminary Area of Potential Effect is provided. A bridge inventory and evaluation of National Register eligibility is needed for BIN \_\_\_\_\_ bridge that has not been previously evaluated. A Finding Documentation package is needed to assess the project effect on one or more previously identified National Register (NR) listed and/ or NR eligible historic buildings, structures, bridges, districts, objects, or sites. The following additional information is needed to complete our assessment: Detailed project description & activities Project location map showing project limits (USGS Quad) BIN and date of construction for pre-1961 bridge(s) Approximate limits of ground disturbance associated with proposed project activities (vertical & horizontal) Photos of buildingS Other





## memorandum

To: New York State Department of EDR Project No: 18049

Transportation (NYSDOT) Region 4

c/o Dennis Kennelly T.Y. Lin International

From: Caitlin Graff, Environmental Design & Research, Landscape Architecture, Engineering &

Environmental Services, D.P.C. (EDR)

**Date:** June 26, 2018

**Reference:** Endangered Species Act (ESA), Section 7 Summary Review:

PIN 4CR004 – Lyell Avenue Highway Preventative Maintenance

City of Rochester, Monroe County, New York

#### Comments:

EDR is pleased to provide this Memorandum summarizing the review of the Lyell Avenue Highway Preventative Maintenance Project (Project) under the Federal Highway Administration (FHWA) New York Division Environmental Procedures: ESA, Section 7 Process for Compliance and Consultation (updated August 10, 2017).

#### **Project Description**

The proposed Project generally includes milling and resurfacing Lyell Avenue from Lake Avenue to Mount Read Boulevard in Rochester, New York (see attached Project location map). More specifically, the Project includes repairing the existing pavement base, resurfacing of adjacent driveway aprons to meet the new street grades, adjusting water valve and sewer castings, resetting or installing new granite curbs (as needed), replacing hazardous sidewalks, installing truncated domes at the handicap ramps, installing pavement markings, and replacing traffic loops. The Project, in total, is approximately 9,600 feet in length, with a total area of approximately 19.6 acres. All Project work will be limited to the existing right of way.

#### **ESA Process**

The New York Natural Heritage Program (NYNHP) was contacted on March 26, 2018, and the United States Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPaC) system was reviewed on April 13, 2018 (see attached) to identify listed threatened and/or endangered species potentially present within the Project vicinity. Identified species include the following:

Species Name	Identified by	Federal Listing	New York State Listing
Northern long-eared bat (NLEB)	IPaC	Threatened	Threatened
Peregrine falcon	NYNHP	Not Applicable	Endangered

The NLEB was listed by the IPaC as potentially located within the Project area, but was not listed by the NYNHP as having been identified within the vicinity of the Project. The IPaC listed the NLEB as both a threatened Federal- and state-listed species.

Correspondence from the NYNHP dated April 13, 2018 did not indicate the presence of the NLEB within the vicinity of the Project (see attached). According to the New York State Department of Environmental Conservation's (NYSDEC) available online data of NLEB occurrences by town<sup>1</sup>, there are no NLEB hibernaculum (winter habitat) or known roost trees (summer habitat) in Monroe County, New York.

Trees with flaking and peeling bark are considered potential NLEB habitat and roost trees. Some trees within the Project site and adjacent to the Project site were observed with flaking or peeling bark. Based on existing Project information, no tree removal is expected to occur; therefore, potential NLEB habitat and roost trees will not be affected by Project work.

The aforementioned NYNHP correspondence indicated that peregrine falcons have breeding habitat within 0.3 miles of the Project. Peregrine falcons have adapted to living in many cities and make use of tall buildings that provide suitable ledges for nesting and depend on the large populations of pigeons and starlings in cities for food<sup>2</sup>. Rochester, New York has fostered successful breeding pairs of peregrine falcons since 1998<sup>3</sup>. Originally, a nesting box was placed at the top of the Kodak Office Building in 1995, which was first occupied by peregrine falcons in 1998. This nesting box was moved to the Powers Building in 2008 to accommodate renovations to the Kodak Office Building, and a second nesting box was placed onto the Times Square Building. Currently, there is a nesting pair atop the Times Square Building<sup>4</sup>, approximately 2.45 miles from the Project. An assessment of the Project site did not reveal suitable habitat (i.e., tall buildings/tall bridges) nor visible sign of activity by peregrine falcons (i.e., bird strikes) within the Project area. Therefore, the Project is anticipated to result in "no effect" to the species or species habitat.

#### **Effect Determination**

Based on Project information, a site visit, and correspondence from the USFWS and NYNHP, EDR completed the ESA Transmittal Sheet and Species Conclusion Table (see attached). Due to the nature of the proposed Project<sup>5</sup>, EDR determined that the finding for the Project site is: Activity-Based, No Effect. The Project is classified as Item 24 on the Activity-Based No Effect List in the *ESA*, *Section 7 Process for Compliance and Consultation*. This classification indicates that based on the work type and the lack of tree removal, the Project will have No Effect on listed species or critical habitat due to the nature of the activity as: a 1R Project that does not involve drainage work or work off the paved surface/shoulder, or bridge work.

As noted above, the finding for the state-listed peregrine falcon is: No effect, no suitable habitat present.

### Attachments:

- Project Location Map
- USFWS Species List
- NYNHP Correspondence
- ESA Transmittal Sheet
- Species Conclusion Table

<sup>&</sup>lt;sup>1</sup> NYSDEC. 2016. Northern Long-eared Bat Occurrences by Town. Available at: http://www.dec.ny.gov/docs/wildlife\_pdf/nlebtowns.pdf (Accessed March 2018).

<sup>&</sup>lt;sup>2</sup> Defenders of Wildlife. Undated. Peregrine falcon. Available at https://defenders.org/peregrine-falcon/basic-facts. (Accessed April 2018).

<sup>&</sup>lt;sup>3</sup> City of Rochester, New York. Undated. Downtown Falcons. Available at: http://www.cityofrochester.gov/article.aspx?id=858994251. (Accessed April 2018).

<sup>&</sup>lt;sup>4</sup> Genesee Valley Audubon Society. 2018. Rfalconcam. Available at: http://rfalconcam.com/rfc-main/. (Accessed April 2018).



## Lyell Avenue Highway Preventive Maintenance (PIN 4CR004)

City of Rochester, Monroe County, New York

## **Project Location**

**Notes: 1.** Basemap: NYSDOP 2015 orthoimagery map service. **2.** This map was generated in ArcMap on March 26, 2018. **3.** This is a color graphic. Reproduction in grayscale may misrepresent the data.



Project Location





## United States Department of the Interior

### FISH AND WILDLIFE SERVICE

New York Ecological Services Field Office 3817 Luker Road Cortland, NY 13045-9385

Phone: (607) 753-9334 Fax: (607) 753-9699 http://www.fws.gov/northeast/nyfo/es/section7.htm



April 13, 2018

In Reply Refer To:

Consultation Code: 05E1NY00-2018-SLI-1754

Event Code: 05E1NY00-2018-E-05359

Project Name: PIN 4CR004 Lyell Avenue Highway Preventive Maintenance

Subject: List of threatened and endangered species that may occur in your proposed project

location, and/or may be affected by your proposed project

## To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 et seq.). This list can also be used to determine whether listed species may be present for projects without federal agency involvement. New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list.

Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the ESA, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC site at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list. If listed, proposed, or candidate species were identified as potentially occurring in the project area, coordination with our office is encouraged. Information on the steps involved with assessing potential impacts from projects can be found at: <a href="http://">http://</a> www.fws.gov/northeast/nyfo/es/section7.htm

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/

<u>eagle\_guidance.html</u>). Additionally, wind energy projects should follow the Services wind energy guidelines (<u>http://www.fws.gov/windenergy/</u>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <a href="http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm">http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm</a>; <a href="http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html">http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html</a>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the ESA. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

#### Attachment(s):

Official Species List

## **Official Species List**

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New York Ecological Services Field Office 3817 Luker Road Cortland, NY 13045-9385 (607) 753-9334

## **Project Summary**

Consultation Code: 05E1NY00-2018-SLI-1754

Event Code: 05E1NY00-2018-E-05359

Project Name: PIN 4CR004 Lyell Avenue Highway Preventive Maintenance

Project Type: TRANSPORTATION

Project Description: The Project work will occur on Lyell Avenue (Lake Avenue to Mount

Read Boulevard, in Rochester, New York.

The scope of work consists of milling and resurfacing city streets, including repair of the existing pavement base, resurfacing of adjacent driveway aprons to meet the new street grades, adjustment of water valve and sewer castings, resetting or installing new granite curbs as needed, replacement of hazardous sidewalks, installation of truncated domes at the handicap ramps, installation of pavement markings, and replacement of

traffic loops.

#### Project Location:

Approximate location of the project can be viewed in Google Maps: <a href="https://www.google.com/maps/place/43.16464585066471N77.64138886415014W">https://www.google.com/maps/place/43.16464585066471N77.64138886415014W</a>



Counties: Monroe, NY

## **Endangered Species Act Species**

There is a total of 1 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. <u>NOAA Fisheries</u>, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## **Mammals**

NAME STATUS

Northern Long-eared Bat Myotis septentrionalis

Threatened

No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9045">https://ecos.fws.gov/ecp/species/9045</a>

#### **Critical habitats**

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

#### NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Fish and Wildlife, New York Natural Heritage Program 625 Broadway, Fifth Floor, Albany, NY 12233-4757 P: (518) 402-8935 | F: (518) 402-8925 www.dec.ny.gov

April 13, 2018

Madeline Turnquist Environmental Design & Research 217 Montgomery Street, Suite 1000 Syracuse, NY 13202

Re: 18049 - Lyell Avenue Highway Preventivie Maintenance

County: Monroe Town/City: City of Rochester

Dear Ms. Turnquist:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to the above project.

Enclosed is a report of rare or state-listed animals and plants, and significant natural communities that our database indicates occur in the vicinity of the project site.

For most sites, comprehensive field surveys have not been conducted; the enclosed report only includes records from our database. We cannot provide a definitive statement as to the presence or absence of all rare or state-listed species or significant natural communities. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other sources may be required to fully assess impacts on biological resources.

Our database is continually growing as records are added and updated. If this proposed project is still under development one year from now, we recommend that you contact us again so that we may update this response with the most current information.

The presence of the plants and animals identified in the enclosed report may result in this project requiring additional review or permit conditions. For further guidance, and for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the NYS DEC Region 8 Office, Division of Environmental Permits, as listed at www.dec.ny.gov/about/39381.html.

Sincerely,

Andrea Chaloux

Environmental Review Specialist

New York Natural Heritage Program

NEW YORK
STATE OF OPPORTUNITY
OPPORTUNITY
Department of Environmental Conservation

COMMON NAME

Peregrine Falcon



## The following state-listed animal has been documented in the vicinity of the project site.

The following list includes animals that are listed by NYS as Endangered, Threatened, or Special Concern; and/or that are federally listed or are candidates for federal listing.

For information about any permit considerations for the project, contact the Permits staff at the NYSDEC Region 8 Office. For information about potential impacts of the project on this species, and how to avoid, minimize, or mitigate any impacts, contact the Wildlife Manager.

A listing of Regional Offices is at http://www.dec.ny.gov/about/558.html.

The following species has been documented within 0.3 mi of the project site.

SCIENTIFIC NAME

Falco peregrinus

Percerine Falcon	Falco peregrinus	Endangered	9340
Birds			

NY STATE LISTING

Endangered

Breeding

FEDERAL LISTING

This report only includes records from the NY Natural Heritage database.

If any rare plants or animals are documented during site visits, we request that information on the observations be provided to the New York Natural Heritage Program so that we may update our database.

Information about many of the listed animals in New York, including habitat, biology, identification, conservation, and management, are available online in Natural Heritage's Conservation Guides at www.guides.nynhp.org, and from NYSDEC at www.dec.ny.gov/animals/7494.html.

> 4/13/2018 Page 1 of 1

PIN: 4CR004 PROJECT NAME: Lyell Avenue Highway Preventative Maintenance DATE: June 2018	04 PROJECT NAME: Lyell Avenue Highway Preventative Maintenance DATE: June 2018	June 2018	DATE:	Lyell Avenue Highway Preventative Maintenance	PROJECT NAME:	4CR004	PIN:
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## **Section 7 ESA Process: ESA Transmittal Sheet**

Step 3: Documentation. Please complete the appropriate boxes below and complete the documentation as described.

	ESA Does Not Apply	No Effect, Activity- Based	No Effect, No Suitable Habitat or No Effect	BATS: MA, NLAA, 14-Day Form, or IPaC Submittal	NLEB: MA, LAA 30 Day Form or IPaC Submittal	MA, NLAA, Traditional 7-step Process	MA, LAA, Formal Consultation
Northern Long-eared Bat		24/1R					
Indiana Bat					NA		
Bog Turtle				NA	NA		
Mollusks (Dwarf Wedge Mussel, Rayed Bean, Clubshell, Chittenango Ovate Amber Snail)				NA	NA		
Karner Blue Butterfly				NA	NA		
Sturgeon (Shortnose, Atlantic)				NA	NA		
Other listed species (Please List) Peregrine falcon (state-listed)				NA	NA		
Documentation Required	The IPaC report is included in the Design Report.	Record the corresponding number(s) of the activity in the box above. This sheet and the IPaC printout are included in the Design Report.	NYSDOT submits "No Suitable Habitat Determination" or "No Effect" Documentation to FHWA for Concurrence.	NYSDOT submits 14-day Form to the USFWS (cc: Area Engineer), or submits through IPaC w/ Area Engineer included	NYSDOT submits 30-day Form to FHWA (then to USFWS) or submits through IPaC w/ Area Engineer included	NYSDOT submits either BE or BA to FHWA, who submits to USFWS for concurrence.	NYSDOT submits BA to FHWA for Initiation of Formal Consultation with USFWS.

Instructions for Use: This Summary Sheet is sent to FHWA for concurrence for all submissions, except "ESA Does Not Apply" and "No Effect, Activity-Based". A submittal package should include all documentation for all species requiring concurrence, with a cover letter requesting concurrence, so that FHWA can make one ESA determination. **SEE EACH SPECIES-SPECIFIC PACKAGE FOR SPECIFIC DOCUMENTATION REQUIREMENTS FOR SUBMITTALS**. Also, FHWA requires documentation of compliance with ESA in the Design Report.

Fillable Form v. April 2017

## Species Conclusions Table

Project Name: PIN 4CR004 – Lyell Avenue Highway Preventative Maintenance Project

Date: June 26, 2018

Species Name/Critical Habitat	Potential Habitat Present?	Species Present?	Critical Habitat Present?	ESA / Eagle Act Determination	Notes / Documentation Summary (include full rationale in your report)
NLEB (Federal- and state- listed threatened species)	Yes	No	No	Activity-based "No Effect"	March 28, 2018 site visit observed no sightings or evidence of bats.  The Project is classified as a 24/1R Project; and as such, receives this determination.
Peregrine falcon (state- listed endangered species)	No	No	No	No Effect, No Suitable Habitat Present	Peregrine falcons have adapted to living in many cities and make use of tall buildings that provide suitable ledges for nesting and depend on the large populations of pigeons and starlings in cities for food. A nesting pair is present in Rochester's Times Square Building, approximately 2.45 miles from the Project.  The Project is limited to improvement of an existing roadway, which is not suitable habitat for this species.

# **APPENDIX 'I'**

# Capital Projects Complete Streets Checklist



## Chapter 18, Appendix A - CAPITAL PROJECTS COMPLETE STREETS CHECKLIST (18A-4)

PIN:	PIN: 4CR004 Project Location: Lyell Avenue (Mt. Read Blvd to Lake Ave)			ve)		
Conte	Context: Urban / Village Suburban Rural					
Projec	Project Title: Lyell Avenue Hwy PM (Group 11)					
STEP '	1- APPL	ICABILITY OF CHECK	KLIST			
1.1	Is the project located entirely on a facility where bicyclists and pedestrians are prohibited by law and the project does not involve a shared use path or pedestrian/bicycle structure? If <b>no</b> , continue to question 1.2. If <b>yes</b> , stop here.					☐ Yes    No
1.2	a. Is this project a 1R* Maintenance project? If <b>no</b> , continue to question 1.3. If <b>yes</b> , go to part b of this question.					
1.2	<ul> <li>b. Are there opportunities on the 1R project to improve safety for bicyclists and pedestrians with the following Complete Street features?</li> <li>Sidewalk curb ramps and crosswalks</li> <li>Shoulder condition and width</li> <li>Pavement markings</li> <li>Signing</li> <li>Document opportunities or deficiencies in the IPP and stop here.</li> <li>* Refer to Highway Design Manual (HDM) Chapter 7, Exhibit 7-1 "Resurfacing ADA and Safety Assessment Form" under ADA, Pavement Markings and Shoulder Resurfacing for guidance.</li> </ul>					<b>○</b> Yes <b>○</b> No
1.3	Is this project a Cyclical Pavement Marking project? If no, continue to question 1.4. If yes, review El 13-021* and identify opportunities to improve safety for bicyclists and pedestrians with the following Complete Streets features:  • Travel lane width • Shoulder width • Markings for pedestrians and bicyclists  Document opportunities or deficiencies in the IPP and stop here.  * El 13-021, "Requirements and Guidance for Pavement Marking Operations - Required Installation of CARDS and Travel Lane and Shoulder Width Adjustments".					☐ Yes   No
1.4	Is this a Maintenance project (as described in the "Definitions" section of this checklist) and different from 1.2 and 1.3 projects? If no, continue to Step 2. If yes, the Project Development Team should continue to look for opportunities during the Design Approval process to improve existing bicycle and pedestrian facilities within the scope of project. Identify the project type in the space below and stop here.					☐Yes • No
STEP '	<b>1</b> prepar	ed by: T.Y. Lin Internat	ional		Date: 4/16	6/2018
STEP 2	2 - IPP L	EVEL QUESTIONS (A	t Initiation)		Comment / Action	

Chapter 18, Appendix A - CAPITAL PROJECTS COMPLETE STREETS CHECKLIST (18A-5)

<u> </u>	10, Appendix A - O/11 11/12 1 11002010 COIIII			CHECKEICH (10/10)
2.1	Are there public policies or approved known development plans (e.g., community Complete Streets policy, Comprehensive Plan, MPO Long Range and/or Bike/Ped plan, Corridor Study, etc.) that call for consideration of pedestrian, bicycle or transit facilities in, or linking to, the project area? Contact municipal planning office, Regional Planning Group and Regional Bicycle/Pedestrian Coordinator.	<b>○</b> Yes	□No	City of Rochester's Complete Streets Policy, Bicycle Master Plan, NACTO Urban Bikeway Design Guide.
2.2	Is there an existing or planned sidewalk, shared use path, bicycle facility, pedestrian-crossing facility or transit stop in the project area?	<b>○</b> Yes	□No	Existing sidewalks, bike lanes, pedestrian-crossings, transit stops.
	a. Is the highway part of an existing or planned State, regional or local bicycle route? If <b>no</b> , proceed to question 2.4. If <b>yes</b> , go to part b of this question.	• Yes	□No	Existing bike lanes.
2.3	b. Do the existing bicycle accommodations meet the minimum standard guidelines of HDM Chapter 17 or the AASHTO "Guide for the Development of Bicycle Facilities"? * Contact Regional Bicycle/Pedestrian Coordinator  * Per HDM Chapter 17- Section 17.4.3, Minimum Standards and Guidelines.	• Yes	□No	
2.4	Is the highway considered important to bicycle tourism by the municipality or region?	Yes	<b>○</b> No	Considered important to local bicycle use.
2.5	Is the highway affected by special events (e.g., fairs, triathlons, festivals) that might influence bicycle, pedestrian or transit users? Contact Regional Traffic and Safety	Yes	<b>●</b> No	
2.6	Are there existing or proposed generators within the project area (refer to the "Guidance" section) that have the potential to generate pedestrian or bicycle traffic or improved transit accommodations? Contact the municipal planning office, Regional Planning Group, and refer to the CAMCI Viewer, described in the "Definitions" section.	<b>⊙</b> Yes	□No	
2.7	Is the highway an undivided 4 lane section in an urban or suburban setting, with narrow shoulders, no center turn lanes, and existing Annual Average Daily Traffic (AADT) < 15,000 vehicles per day? If yes, consider a road diet evaluation for the scoping/design phase. Refer to the "Definitions" section for more information on road diets.	Yes	<b>®</b> No	The majority of Lyell Ave is a 3 lane section, with various turn lanes. The AADT is 17,724 in 2013.

C	hapter	18, Appendix A - CAPITAL PROJECTS COMP	LETE STREETS	CHECKLIST (18A-6)		
	2.8	Is there evidence of pedestrian activity (e.g., a worn path) and no or limited pedestrian infrastructure?	☐Yes <b> </b>	Pedestrian infrastructure exists, including sidewalks and crosswalks.		
	STEP 2 prepared by:  T.Y. Lin International  Date:  4/16/2018  Bicycle/Pedestrian Coordinator has been provided an opportunity to comment:  Yes No  ATTACH TO IPP AND INCLUDE RECOMMENDATIONS FOR SCOPING/DESIGN.					

	3 - PROJECT DEVELOPMENT LEVEL QUESTIONS ing/Design Stage)		Comment / Action
3.1	Is there an identified need for bicycle/pedestrian/ transit or "way finding" signs that could be incorporated into the project?	Yes  No	Signs will be udated as needed. No way finding signs are proposed.
3.2	Is there history of bicycle or pedestrian crashes in the project area for which improvements have not yet been made?	Yes No	An Accident anlaysis is being conducted.
3.3	Are there existing curb ramps, crosswalks, pedestrian traffic signal features, or sidewalks that don't meet ADA standards per HDM Chapter 18?	Yes	Pedestrian access and handicap accessibility does not meet curent ADA standards at various locations.
3.4	Is the posted speed limit is 40 mph or more and the paved shoulder width less than 4' (1.2 m) (6' in the Adirondack or other State Park)? Refer to El 13-021.	Yes No	30 mph speed limit.
3.5	Is there a perceived pedestrian safety or access concern that could be addressed by the use of traffic calming tools (e.g., bulb outs, raised pedestrian refuge medians, corner islands, raised crosswalks, mid-block crossings)?	☐ Yes <b> </b>	No, except for ADA compliance at pedestrian crossings. Pedestrian access will be upgraded where practically feasible.
3.6	Are there conflicts among vehicles (moving or parked) and bike, pedestrian or transit users which could be addressed by the project?	Yes	Upgrades to pedestrian access, signage, and bicycle infrastructure providing continuous bicycle lanes will reduce conflicts.
3.7	Are there opportunities (or has the community expressed a desire) for new/improved pedestrian-level lighting, to create a more inviting or safer environment?	Yes No	
3.8	Does the community have an existing street furniture program or a desire for street appurtenances (e.g., bike racks, benches)?	☐ Yes  ■ No	

Chapter 18, Appendix A - CAPITAL PROJECTS COMPLETE STREETS CHECKLIST (18A-7) Gaps in connections exist at the Are there gaps in the bike/pedestrian connections major intersections (Mt. Read Blvd. between existing/planned generators? Consider Broad St, and Lake Ave). 3.9 Yes No locations within and in close proximity of the project area. (Within 0.5 mi (800 m) for pedestrian facilities and within 1.0 mi (1600 m) for bicycle facilities.) Recommended adjustments will be Are existing transit route facilities (bus stops. coordinated with RTS and the City. shelters, pullouts) inadequate or in inconvenient 3.10 locations? (e.g., not near crosswalks) Consult with Yes No Traffic and Safety and transit operator, as appropriate Vehicle parking maintained where Are there opportunities to improve vehicle parking appropreate and removed where it is patterns or to consolidate driveways, (which would 3.11 Yes No not needed to include bicycle lanes. benefit transit, pedestrians and bicyclists) as part of this project? Is the project on a "local delivery" route and/or do 3.12 area businesses rely upon truck deliveries that Yes No need to be considered in design? Are there opportunities to include green Yes 🖸 No infrastructure which may help reduce stormwater 3.13 runoff and/or create a more inviting pedestrian environment? Continuous bicycle lanes will be Are there opportunities to improve bicyclist provided. Yes No operation through intersections and interchanges 3.14 such as with the use of bicycle lane width and/or signing? T.Y. Lin International 4/16/2018 STEP 3 prepared by: Additional comments, supporting documentation and clarifications for answers in step 1, 2 or 3:

# **APPENDIX 'J'**

## **Smart Growth Screening Tool**



**PIN 4CR004** 

## Prepared By: Environmental Design and Research, D.P.C.

Smart Growth Screening Tool (STEP 1)

**NYSDOT & Local Sponsors** – Fill out the Smart Growth Screening Tool until the directions indicate to **STOP** for the project type under consideration. For all other projects, complete answering the questions. For any questions, refer to <u>Smart Growth Guidance</u> document.

Title of Proposed Project: Lyell Avenue Highway Preventative Maintenance

Location of Project: City of Rochester, Monroe County, New York

Brief Description: The proposed Project generally includes milling and resurfacing Lyell Avenue from Lake Avenue to Mount Read Boulevard in Rochester, New York. More specifically, the Project includes repairing the existing pavement base, resurfacing of adjacent driveway aprons to meet the new street grades, adjusting water valve and sewer castings, resetting or installing new granite curbs (as needed), replacing hazardous sidewalks, installing truncated domes at the handicap ramps, installing pavement markings, and replacing traffic loops. The Project, in total, is approximately 9,600 feet in length, with a total area of approximately 19.6 acres. All Project work will be limited to the existing right of way.

## A. Infrastructure:

#### Addresses SG Law criterion a. -

(To advance projects for the use, maintenance or improvement of existing infrastructure)

1. Does this project use, maintain, or improve existing infrastructure?

Yes 🖂	No	N/A

**Explain:** (use this space to expand on your answers above – the form has no limitations on the length of your narrative)

This Project will maintain and improve the existing Lyell Avenue roadway through resurfacing and infrastructure improvements, generally by milling and resurfacing the existing roadway. Curb and sidewalk replacements will be limited to an as-needed basis. Sidewalks, curb ramps, and crosswalks will be evaluated and upgraded to meet standard Americans with Disabilities Act (ADA) compliance.

- a. Continue with screening tool for the four (4) types of maintenance projects listed below, as defined in NYSDOT PDM Exhibit 7-1 and described in 7-4: https://www.dot.ny.gov/divisions/engineering/design/dgab/pdm
  - Shoulder rehabilitation and/or repair;
  - Upgrade sign(s) and/or traffic signals;
  - Park & ride lot rehabilitation;
  - ⇒ 1R projects that include single course surfacing (inlay or overlay), per Chapter 7 of the NYSDOT Highway Design Manual.
- b. For all other maintenance projects, **STOP** here. Attach this document to the programmatic **Smart Growth Impact Statement and signed Attestation** for Maintenance projects.

For all other projects (other than maintenance), continue with screening tool.

## B. Sustainability:

NYSDOT defines Sustainability as follows: A sustainable society manages resources in a way that fulfills the community/social, economic and environmental needs of the present without compromising the needs and opportunities of future generations. A transportation system that supports a sustainable society is one that:

- Allows individual and societal transportation needs to be met in a manner consistent with human and ecosystem health and with equity within and between generations.
- ⇒ Is safe, affordable, and accessible, operates efficiently, offers choice of transport mode, and supports a vibrant economy.
- Protects and preserves the environment by limiting transportation emissions and wastes, minimizes the consumption of resources and enhances the existing environment as practicable.

the Smart nability

eating new of future loping and stain and

				stainability strategy, refer to Appendix 1 /ww.dot.ny.gov/programs/greenlites/sus	
cc ge in	ommunities which enerations, by am	n reduce greenho nong other means	ouse gas em s encouragi	tainability by strengthening existing and nissions and do not compromise the needing broad based public involvement in detection the governance structure is adequate to	ds ( eve
1.	Will this project	promote sustaina	ability by st	trengthening existing communities?	
	Yes 🖂	No 🗌	N/A		
2.	Will the project i	reduce greenhou	se gas emis	ssions?	
	Yes	No 🖂	N/A		
	Explain: (use thi	s space to expan	d on your a	answers above)	
c c	Cata (ravised May	2012)	-	D PIN 4CP004	

This Project will promote sustainability by improving the transportation infrastructure within the community. The Project will also increase roadway safety and accessibility for different user groups. Bike lanes will be improved or added on an as-needed basis. Sidewalks and handicap ramps will improve disability access.

		A .1 .3	r . •
( '	mort	( -rossith	Location:
<b>U</b> .	Sillait	CHOWLL	LOCALIOII.

Plans and investments should preserve our communities by promoting its distinct identity through a local vision created by its citizens.

(Addresses SG Law criteria b and c: to advance projects located in municipal centers; to advance projects in developed areas or areas designated for concentrated infill development in a municipally approved comprehensive land use plan, local waterfront revitalization plan and/or brownfield opportunity area plan.)

1.	Is this project loc	ated in a devel	oped area?			
	Yes 🖂	No 🗌	N/A			
2.	Is the project loca	ated in a munic	ipal center?			
	Yes	No 🖂	N/A			
3.	Will this project f	oster downtow	n revitalization?			
	Yes	No 🖂	N/A			
4.	in a municipally a Brownfield Oppo	pproved comp	located in an area designated for concentrated infill development rehensive land use plan, waterfront revitalization plan, or an?			
	Yes	No 🖂	N/A			
	Explain: (use this	space to expa	nd on your answers above)			
	This Project is located in a mixed residential and commercial area, and is an improvement of existing transportation infrastructure. The area is currently fully developed, but it is approximately two miles from the downtown center of Rochester, and is not directly located in a municipal center.					

## D. Mixed Use Compact Development:

Future planning and development should assure the availability of a range of choices in housing and affordability, employment, education transportation and other essential services to encourage a jobs/housing balance and vibrant community-based workforce.

(Addresses SG Law criteria e and i: to foster mixed land uses and compact development, downtown revitalization, brownfield redevelopment, the enhancement of beauty in public spaces, the diversity and affordability of housing in proximity to places of employment, recreation and commercial development and the integration of all income groups; to ensure predictability in building and land use codes.)

1.	Will this project f	oster mixed lan	d uses?		
	Yes	No 🖂	N/A 🗌		
2.	Will the project fo	oster brownfiel	d redevelopment?		
	Yes	No 🖂	N/A 🗌		
3.	Will this project f	oster enhancen	nent of beauty in public spaces?		
	Yes 🖂	No 🗌	N/A		
4.	Will the project for recreation?	oster a diversity	of housing in proximity to places of employment and/or		
	Yes	No 🖂	N/A 🗌		
5.	Will the project for and/or compact of		of housing in proximity to places of commercial development		
	Yes	No 🖂	N/A 🗌		
6.	Will this project for	oster integratio	on of all income groups and/or age groups?		
	Yes	No 🖂	N/A		
7.	Will the project e	nsure predictab	pility in land use codes?		
	Yes	No 🖂	N/A		
8.	Will the project e	nsure predictab	pility in building codes?		
	Yes	No 🖂	N/A		
	Explain: (use this	space to expar	nd on your answers above)		
	This Project is an improvement of deteriorating transportation infrastructure, and will therefore foster enhancement of beauty in public spaces. The Project is not expected to have a significant impact on land use or brownfield redevelopment. This Project will have no impact on diversity of housing related to places of employment, commercial development, or recreation.				

## E. Transportation and Access:

NYSDOT recognizes that Smart Growth encourages communities to offer a wide range of transportation options, from walking and biking to transit and automobiles, which increase people's access to jobs, goods, services, and recreation.

(Addresses SG Law criterion f: to provide mobility through transportation choices including improved public transportation and reduced automobile dependency.)

1.	Will this project pr	ovide public tr	ansit?
	Yes	No 🖂	N/A
2.	Will this project er	nable reduced a	automobile dependency?
	Yes 🖂	No 🗌	N/A
3.	• •	, lane striping,	and pedestrian facilities (such as shoulder widening to provide for crosswalks, new or expanded sidewalks or new/improved
	Yes 🖂	No 🗌	N/A
	requires that cons	ideration be gi instruction and	n on question 2. The recently passed Complete Streets legislation ven to complete street design features in the planning, design, I rehabilitation, but not including resurfacing, maintenance, or ects.)

Explain: (use this space to expand on your answers above)

This Project does not provide public transit; however, the Project may reduce automobile dependency by improving and adding bicycle lanes and improving the handicap and ADA accessibility along the roadway. These improvements include improving surface drainage and riding quality, and installing handicap ramps and equipping existing ramps with truncated domes. Bike posts will be installed and video detection at boulevard signalized intersections.

## F. Coordinated, Community-Based Planning:

Past experience has shown that early and continuing input in the transportation planning process leads to better decisions and more effective use of limited resources. For information on community based planning efforts, the MPO may be a good resource if the project is located within the MPO planning area.

5 PIN 4CR004

(Addresses SG Law criteria g and h: to coordinate between state and local government and intermunicipal and regional planning; to participate in community based planning and collaboration.)

1. Has there been participation in community-based planning and collaboration on the project?

	Yes		No 🗌	N/A	
2.	Is th	e project cons	sistent with l	ocal plan	s?
	Yes		No 🗌	N/A	
3.	Is th	e project cons	sistent with c	county, re	egional, and state plans?
	Yes		No 🗌	N/A	
4.	Has proje		ordination b	etween i	nter-municipal/regional planning and state planning on the
	Yes		No 🗌	N/A	
	Expl	ain: (use this	space to exp	and on y	our answers above)
					, and state plans. There has been, and will continue to local officials and groups.
Cl	ean v	vater, clean ai	r and natural	l open la	and Cultural Resources:  Indicate the analysis of the second seco
		and open spa use and infra	•	-	y efficiency, and green building, should be incorporated into ecisions.
àg	ricult	tural land, for	ests surface a	and grou	, preserve and enhance the State's resources, including nd water, air quality, recreation and open space, scenic gical resources.)
1.	Will	the project pr	otect, preser	rve, and/	or enhance agricultural land and/or forests?
	Yes		No 🖂	N/A	
2.	Will	the project pr	otect, preser	rve, and/	or enhance surface water and/or groundwater?
	Yes		No 🖂	N/A	
3.	Will	the project pr	otect, preser	rve, and/	or enhance air quality?
	Yes		No 🖂	N/A	
4.	Will	the project pr	otect, preser	rve, and/	or enhance recreation and/or open space?
	Yes		No 🖂	N/A	
5.	Will	the project pr	otect, preser	rve, and/	or enhance scenic areas?
SC	j-13 (1	revised May, 2	.013)		6 PIN 4CR004

	Yes	No 🖂	N/A
6.	Will the project p	rotect, preserv	e, and/or enhance historic and/or archeological resources?
	Yes	No 🖂	N/A
	Explain: (use this	space to expan	nd on your answers above)
	or ground wat or archeologic resources. Th	er, forests, air cal resources.	protect, preserve, or enhance agriculture lands, surface water quality, recreation or open spaces, scenic areas, and/or historic However, the Project will also not adversely affect these ated in a mixed residential commercial area surrounded by ater drains.

## Smart Growth Impact Statement (STEP 2)

**NYSDOT:** Complete a Smart Growth Impact Statement (SGIS) below using the information from the Screening Tool.

**Local Sponsors:** The local sponsors are **not** responsible for completing a Smart Growth Impact Statement. Proceed to **Step 3**.

## **Smart Growth Impact Statement**

#### PIN:

## **Project Name:**

Pursuant to ECL Article 6, this project is compliant with the New York State Smart Growth Public Infrastructure Policy Act. This project has been determined to meet the relevant criteria, to the extent practicable, described in ECL Sec. 6-0107. Specifically, the project:

0

This publically supported infrastructure project complies with the state policy of maximizing the social, economic and environmental benefits from public infrastructure development. The project will not contribute to the unnecessary costs of sprawl development, including environmental degradation, disinvestment in urban and suburban communities, or loss of open space induced by sprawl.

## Review & Attestation Instructions (STEP 3)

**Local Sponsors:** Once the Smart Growth Screening Tool is completed, the next step is to submit the project certification statement (Section A) to Responsible Local Official for signature. After signing the document, the completed Screening Tool and Certification statement should be sent to NYSDOT for review as noted below.

NYSDOT: For state-let projects, the Screening Tool and SGIS is forwarded to Regional Director/ RPPM/Main Office Program Director or designee for review, and upon approval, the attestation is signed (Section B.2). For locally administered projects, the sponsor's submission and certification statement is reviewed by NYSDOT staff, the appropriate box (Section B.1) is checked, and the attestation is signed (Section B.2).

I HEREBY CERTIFY, to the best of my knowledge, all of the above to be true and correct.

## A. CERTIFICATION (LOCAL PROJECT)

Preparer of this document:

July 10, 2018

Signature

Senior Environmental Analyst

Title

Responsible Local Official (for local projects):

Signature

Signature

City Engineer

August July 10, 2018

Date

Hayley Effler

Printed Name

8-2-2018

Date

Kamal L. Crues, P.E.

Title

Printed Name

## B. ATTESTATION (NYSDOT)

. I HEREBY:	
☐ Concur with the above certification, thereby with the State Smart Growth Public Infrastruct	. ,
<ul> <li>Concur with the above certification, with the force confirming studies, project modifications, etc.)</li> </ul>	
(Attach additional sheets as needed)	
<ul> <li>do not concur with the above certification, the a recipient of State funding or a subrecipient State Smart Growth Public Infrastructure Policies</li> </ul>	of Federal funding in accordance with the
. <b>NOW THEREFORE,</b> pursuant to ECL Article 6, this State Smart Growth Public Infrastructure Policy A in the attached Smart Growth Impact Statement.	Act, to the extent practicable, as described
NYSDOT Commissioner, Regional Director, MO Prog Regional Planning & Programming Manager (or offi	·
iignature	Date
	Printed Name

# **APPENDIX 'K'**

## PI Plan

To be Completed Prior to Construction Phase



# **APPENDIX 'L'**

# **Approved IPP and Project Correspondence**



# TRANSPORTATION

## INITIAL PROJECT PROPOSAL

September 2016

P.I.N. 4CR004
Lyell Avenue Hwy PM
(Group 11)
City of Rochester

U.S. Department of Transportation Federal Highway Administration



NEW YORK STATE DEPARTMENT OF TRANSPORTATION ANDREW M. CUOMO, Governor MATTHEW J. DRISCOLL, Commissioner



## **PROJECT APPROVAL SHEET**

(Pursuant to SAFETEA-LU Matrix)

Milestones	Signatures	<u>Dates</u>
A. Recommendation for IPP Approval:	The project cost and schedule are consistent with the James P. Willer, Regional Program Manager	Regional Capital Program.
B. IPP Approval:	The project is ready to be added to the Regional Capital scoping or preliminary design can begin.	al Program and project
	Kevin C. Bush, Regional Director	

PIN:

4CR004

PROJECT NAME: Lyell Avenue, Group 11

MUNICIPALITY:

City of Rochester

**COUNTY: Monroe** 

ROUTE/LIMITS:

Lyell Avenue (Lake Ave – Mt. Read Blvd)

BIN(s):

NA

**PROJECT LENGTH:** 

3.6 lane miles

FEDERAL AID SYSTEM:

FA, Non-NHS

## FUNCTIONAL CLASS/ EXISTING AADT (YEAR)/TRUCKS- %:

Lyell Avenue (Lake Ave-Mt. Read Blvd)

Minor Arterial/17,724 AADT (2013)/ 6.13%

#### **EXISTING CHARACTERISTICS OF CONCERN:**

Road surface is oxidized; ADA and pedestrian access does not meet current standards; Streets do not meet current goals for bicycle infrastructure.

#### MEASURE/INDICATOR

ELEMENT

Lyell Ave

Pavement Score

6

## PROJECT OBJECTIVE(S):

The project objective is to replace the oxidized wearing surface and rehabilitate the pavement's structure. Upgrade handicap accessibility; improve surface drainage and riding quality; bike lanes will be maintained where exiting and added wherever space allows. Handicap accessibility will be upgraded as ADA and pedestrian access will be investigated and improvements made in this project where practically feasible and scheduled for the future where not feasible.

## PROJECT ELEMENT(S) TO BE ADDRESSED:

	Deck/Minor Bridge Rehabilitation	Bridge Replacement, Existing Location
	Major Bridge Rehabilitation	Bridge Replacement, New Location
$\boxtimes$	Highway Resurfacing	Highway Reconstruction
	Appurtenance	Culvert Rehabilitation/Replacement
	Traffic Control	Corrective/Preventative Bridge
	Other:	Maintenance

#### **DESCRIPTION OF PROPOSED WORK:**

Project includes milling 1-1/2" and resurfacing 1-1/2" of the existing pavement along with spot base repair, spot curb repair, sidewalk repair inclusive of installation of handicap ramps as well as equipping existing ramps with truncated domes, installation of bike posts, installation of bus stop landing pads as needed, improvements to existing tree pits where needed to allow healthy tress to continue to grow. Replace traffic signals as needed, adjustment of sewer and water castings along with repairing receiving basins and replacement of traffic loops and pavement markings. Installation of crosswalk handicap ramps where needed; installation of video detection at bike boulevard signalized intersections.

September 2016	Initia	al Project Pro	oosal	PIN 4CR004
PRIORITY RESULTS:		ty & Reliability mic Competitive	Safety ness Environm	Security ental Stewardship
FUNDING SOURCE:	□ 100% \$	State		
SEQRA AND NEPA CL	ASSIFICAT	ION [OR] SEQF	RA CLASSIFICATION	N:
SEQRA Type:	☐ Exempt	⊠ Type II □ Type I*	☐ Non-Type ☐Unlisted* (*	II *Locally Administered)
NEPA Class:		- CE (C-List or I roject is 100% S	D-List To Be Determi state funded	ned During Design)
The following checklists ☑ Federal Environmen ☑ Regional Environme ☐ Landscape Architect	tal Approval ntal Checklis	Worksheet st	IPP Report	
MPO INVOLVEMENT:	□No		me: Lyell Ave, Grou No.: H17-19-MN1	p 11
TIP AMENDMENT REQ	UIRED:	⊠ No	Yes Needed b	y:
STIP STATUS:		On STIP	☐ Not on STIP	
NOTES ON SPECIAL C Scoping, design, and co sponsor's project manag	nstruction a	re to be adminis		
SPECIAL TECHNICAL  A State-Local agreemen consistent with the applications of the construction of the cons	t will be requ	uired to allow for		
DI ANNED DUDI 10 1811/	OLVENENS	<b>.</b>		

#### PLANNED PUBLIC INVOLVEMENT:

A Public Involvement Plan will be developed during preliminary engineering and will be implemented throughout final design and construction.

#### **WORKZONE SAFETY & MOBILITY:**

A Transportation Management Plan (TMP) will be prepared for the project consistent with 23 CFR 630.1012. The TMP will consist of a Temporary Traffic Control (TTC) plan. Transportation Operations (TO) and Public Information (PI) components of a TMP will be considered during final design.

#### PROBABLE SCHEDULE AND COST:

Consultant selection is underway and will be completed by late 2016. Scoping/Preliminary Engineering will begin in March 2017. Final design will begin in December 2018. The PS&E will be produced in December 2019 for a bid opening in April 2020. The contract award and construction start will be in June 2020 and construction will be completed by December 2020. The estimated cost of engineering, construction and inspection is \$3,658,385.

**DESIRED LETTING: 3/2020 DESIRED CONSTRUCTION COMPLETION: 12/2020**  **SCHEDULE ISSUES:** Dublic Meeting

Permits

Consultant(s) for: Design and CI

4(f)/106 FHWA sign-off

No Consultant Needed

Other - Identify

Project Phase	Activity Duration	Estimated Cost	Fund Source	Obligation Date
Scoping	3 months	\$24,659	STP-URBAN	Mar-2017
Design I-IV	18 months	\$98,633	STP-URBAN	Mar-2017
Design V-VI	12 months	\$204 926	STP-URBAN	Dec-2018

Construction 12 months \$2,808,276 STP-URBAN Dec-2019 STP-URBAN Dec-2019 \$521,892 Construction Inspection 12 months \$3,658,385\* TOTAL

BASIS OF ESTIMATE: Sponsor's TIP Application, \*Estimated costs in year of expenditure

dollars.

PROJECT MANAGEMENT GROUP:

Simple

Moderate

☐ Complex

**STATEWIDE SIGNIFICANCE:** 

Yes

⊠ No

Remarks:

#### PUBLIC FRIENDLY DESCRIPTION OF PROJECT:

This project proposes to provide a smooth driving surface on Lyell Ave. from Lake Ave. to Mt Read Blvd. by removing the top 1.5 inches of the existing pavement and replacing it in-kind. The project will also address bicycle and pedestrian needs by repairing and improving the existing systems, by upgrading existing infrastructure to meet requirements of the Americans with Disabilities Act, and by installing a new bicycle lane between Mt Read Blvd. and Glide St.

PROJECT MANAGER/JOB MANAGER: Craig Ekstrom

**FUNCTIONAL AREA(S):** 

Local Projects Unit

PHONE(S):

585-272-3755

IPP PREPARED BY:

Rick Papaj (for the City of Rochester)

**DATE:** 08/25/2016

