New Auburn Village Center Study

Auburn | Maine

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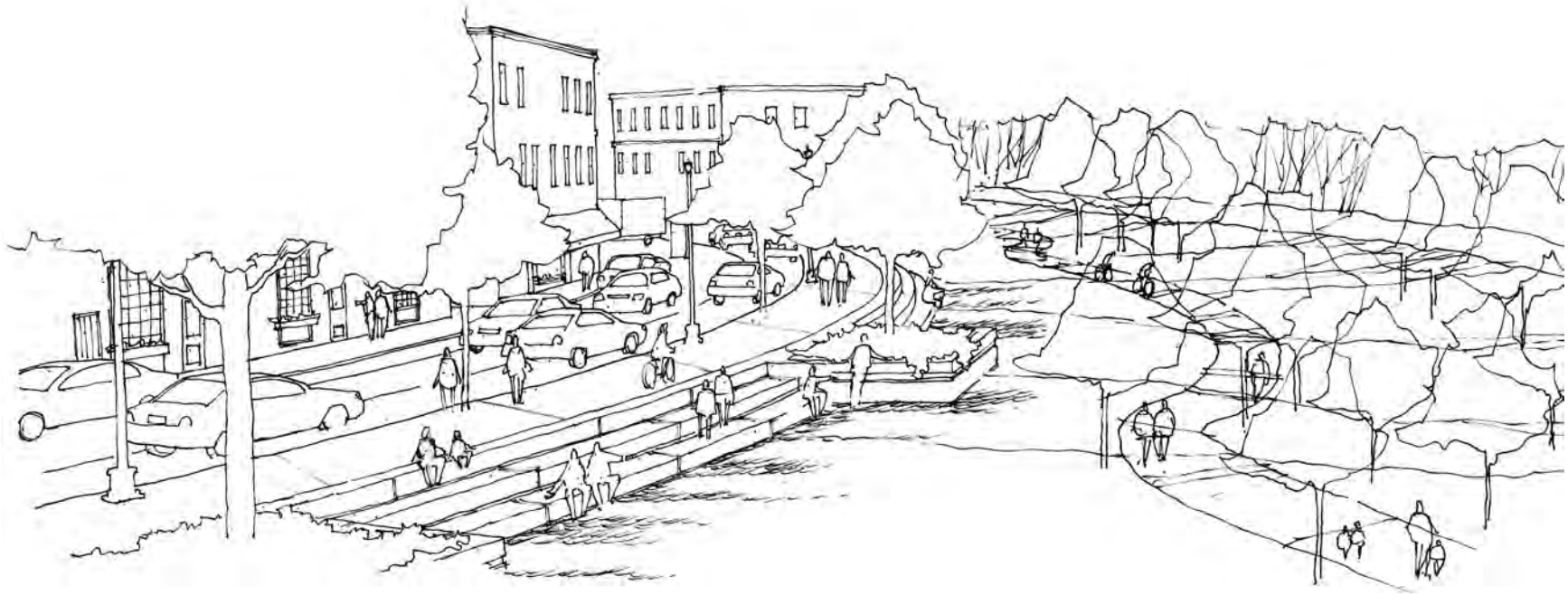

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2. Project Overview

The New Auburn Village Center Study (Study) builds on many of the recommendations and the vision of the 2009 New Auburn Master Plan, which has since been adopted as part of the Auburn Comprehensive Plan. While the Master Plan looked at all of New Auburn, the Study examines a more focused 38 +/- acre commercial area surrounded by residential neighborhoods as shown on **Figure 1.** More detailed designs for new streets, parks, parking and concept building locations are identified an 18-acre focus area as shown on **Figure 27.**

Figure 1: Study Area

The Master Plan calls for:

> A Village Center that is a well-designed commercial core that serves as the community's downtown. The district is compact with buildings facing the street and ample sidewalks and green spaces to encourage a lively pedestrian environment. In character with the surrounding neighborhoods, this mixed-use village provides first floor small-scale commercial and retail uses and upper floor offices and residential uses. Historic buildings in the area have been maintained and refurbished and act as a model for the scale and design of the new buildings. A focus is placed on supporting local neighborhood businesses including salons, pharmacies, laundromats, markets, and specialty retail stores. There are cafes, restaurants, and pubs that provide places for residents and visitors to gather.
>
> The New Auburn Village Center District is served by a one-way loop or other feasible road system to enhance traffic flow and safety.
>
> Along the riverfront between the South Lowe Peace Bridge and the South Main Street Bridge, the floodplain has been reclaimed as open space with parks, trails, and public access points along the Androscoggin and Little Androscoggin Rivers that provide opportunities for walking, swimming, fishing, and boating.

The Study strongly reflects this holistic vision in the anticipated building forms, street networks, streetscapes, green spaces and the envisioned mix of uses. The working motto for the Study is to "integrate multi-modal transportation and street types with urban form to create a framework for revitalization." It was decided early in the planning process that while addressing regional traffic was an important consideration, designing a revitalized New Auburn Village Center – a place of distinct character building on the best of the past while embracing a bold vision for the future – was the primary goal and that this will be accomplished through specific urban design and transportation choices supported by the enabling policies and codes.

This Study presents a dynamic vision for New Auburn Village Center supported by detailed technical recommendations for transportation improvements, streetscapes and the built environment.

The Study is based in a Context Sensitive Solutions (CSS) approach to placemaking. The CSS approach to transportation planning arose from the desire of communities to work with planners and State and Federal agencies to create a process where community values regarding mobility and land use are integrated from the outset of a project. This approach seeks to take into account public knowledge and input in conjunction with a consideration of the built and natural environment. As its name implies, the point of this approach is to build transportation infrastructure that is sensitive to the human, built and natural context in which it is located.

Key to a CSS approach is the development of a Value and Purpose Statement at the beginning of the project to identify the vision, goals, issues and the process. The Value and Purpose Statement established the metrics for a project. During the course of the Study the SC and the consultant team referred to it when making decisions.

Value and Purpose Statement

New Auburn Village Center is a thriving, walkable community. It is a place, a destination, a gateway and an inviting entrance to downtown Auburn. The compact center is safe, inviting and home to restaurants, shops, markets and services. Strategic investments in the public realm such as parking, streetscapes, transportation improvements and the expanded Little Androscoggin Park demonstrate an ongoing commitment on behalf of the City to make smart choices that have exponential returns.

The placemaking opportunities of economic development are carefully considered when proactively working with the private sector. It is understood that each development or redevelopment is part of a bigger picture of revitalizing New Auburn Village Center as a neighborhood of urban streets, buildings and public spaces. By making a place inviting to people, a place is made that is inviting to businesses and attractive for new investment.

Over the past several decades, neighborhood businesses including restaurants, shops, a bank and a hardware store have closed their doors. It is evident that the tendency to build public infrastructure favoring pass through commuters and the automobile at the expense of pedestrian needs has played a role in the changing economic conditions and will need to be considered if renewed investment is desired. The New Auburn Village Center Study will be a success when residents see the role the past can play in a new economy and change is measured by increased community vitality, new investment and growing property values.

Process

- Review the existing transportation network, urban form and land use in the New Auburn Center District;
- Determine effectiveness of the network in light of proposed land-use changes and build-out scenarios;
- Identify and evaluate vehicle, bicycle, pedestrian, transit, and parking transportation alternatives that include both physical improvements as well as potential changes to City ordinances and development standards;
- Work with the Advisory Committee, as well as local community businesses and residents on recommendations;
- Develop recommendations for the network to improve traffic flow while respecting and improving the traditional form of New Auburn, and;
- Develop cost estimates and prioritized list of improvements/recommendations, which may include project phasing.

The 1873 grid street plan **(Figures 2 and 3)** for New Auburn created a strong framework for the urban form. This plan was basically built overtime with the hallmarks of efficient urbanism including a high level of connectivity, short blocks, walkability, defined intersections and buildings set close to the front property line. However, the integrity of the grid and the scale of the buildings framing the streets has eroded over time due to a number of factors including the fire of 1933 that destroyed 248 buildings and left 1,500 homeless; the introduction (or persistence) of Mill Street, which cuts across the grid creating inefficient intersections and development blocks at Riverside, Second, Broad, Third and South Main; the slicing of South Main across the grid from Second and Mill to Sixth and Dunn; suburban style developments and zoning standards creating expanses of parking and finally, road and intersection “improvements”, which accommodate peak commuter / pass through traffic, while making local circulation difficult for local traffic and unsafe for pedestrians.

The 1873 street grid established a legible network of streets that in turn comprised a greater neighborhood. The grid acted as a framework for development. The street network did not act so much to move traffic as it did to plat the land for infill development. In developing the Master Plan, the grid was studied in light of the needs of the contemporary city, and while it was used as a point of inspiration, it was not recreated, or simply rewoven back together. The Little Androscoggin and the Androscoggin Rivers are two of the areas greatest assets. The grid turned the back of the New Auburn to these resources. The proposed street alignments as shown on **Figure 27** create unique public spaces along the river frontage that also allows for building redevelopment that is anticipated to be prized real estate.

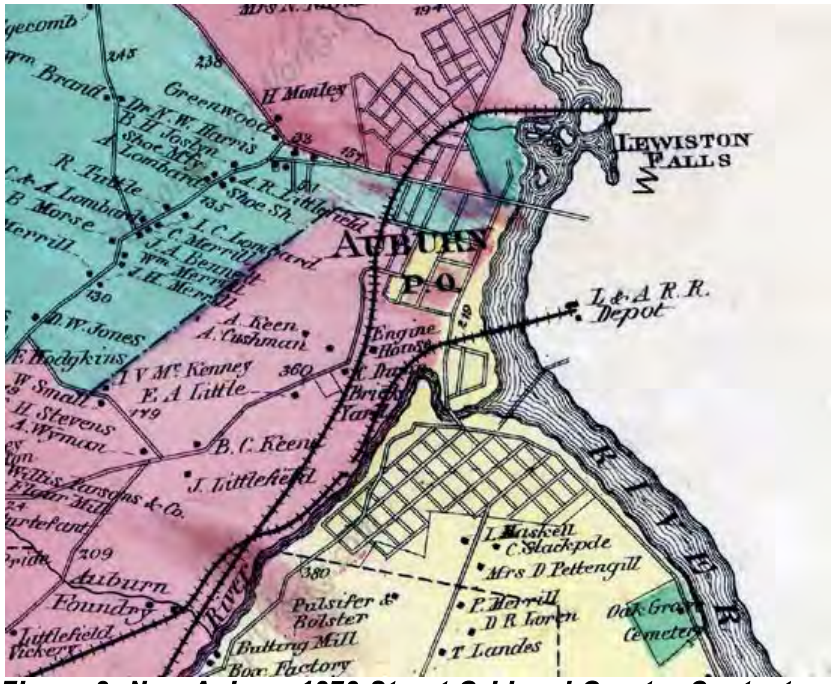

Figure 2: New Auburn 1873 Street Grid and Greater Context

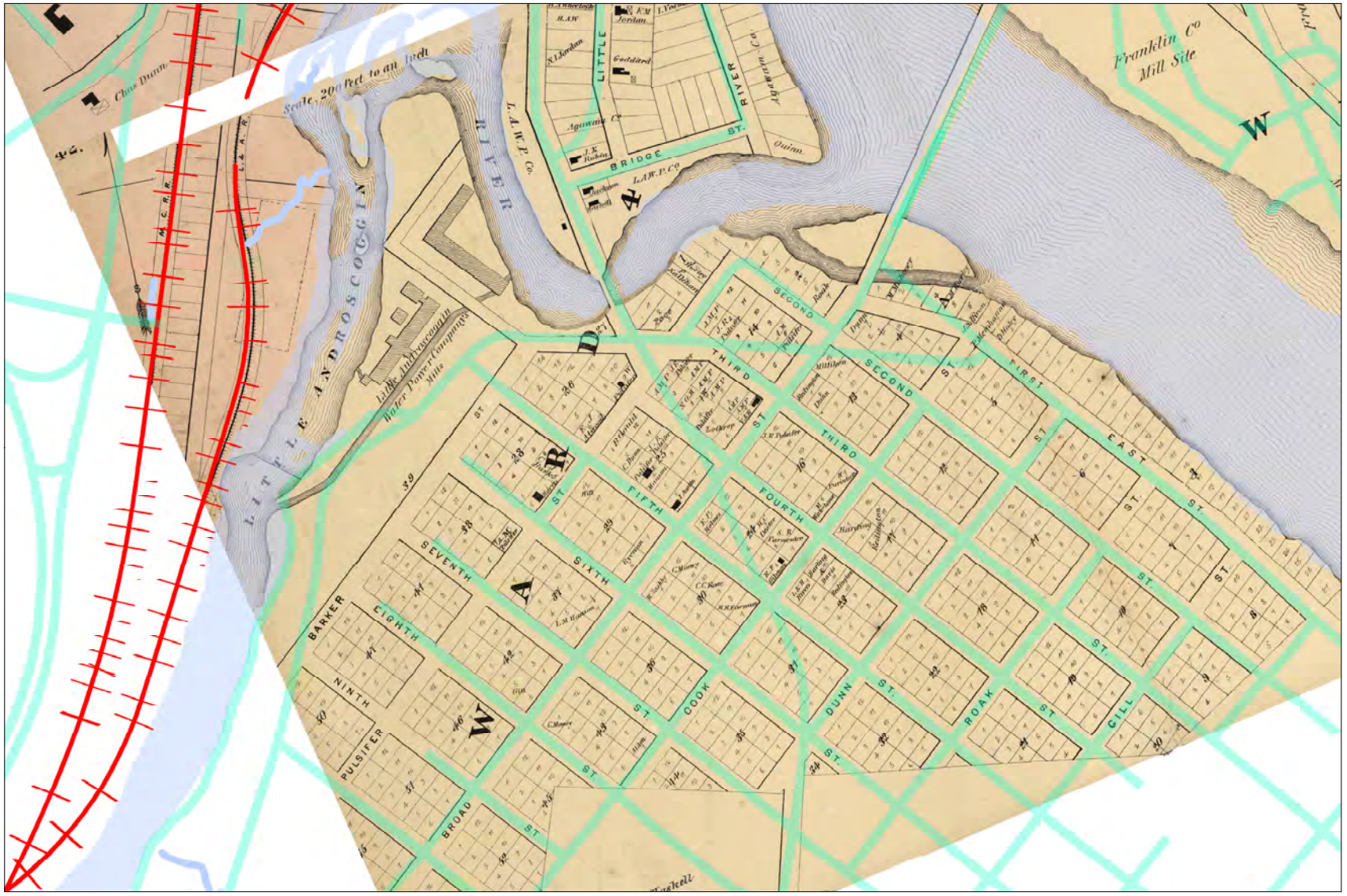

Figure 3: 1873 Plat of New Auburn (Existing Streets Shown in Green)

3. Public Participation and the Planning Process

The New Auburn Village Study was guided by input from staff from the City as well as a Steering Committee (SC) comprised of stakeholders representing a range of interests in the area. The Study received additional professional assistance from the Androscoggin Transportation Resource Center. The Steering Committee and representative staff included:

- Leroy Walker: Ward 5 City Councilor
- Ken Blais: New Auburn Village Business, Representative of the United New Auburn Association
- John Roy: Firehouse Grille, New Auburn Village Business
- Tina Croteau: Marcel's Barber Shop, New Auburn Village Business
- Eric Potvin: New Auburn Village Real Estate/Developer
- Larry Pelletier: New Auburn Village Resident
- Mia Poliquin-Pross: Planning Board Member

- Eric Cousens: Director of Planning and Permitting, City of Auburn
- Doug Greene: City Planner, City of Auburn
- Dan Goyette: City Engineer / Deputy Public Works Director, City Auburn
- Jason Ready: Transportation Planner, ATRC

All of the work prepared by the consultant team was reviewed and edited by the Steering Committee. It was a deliberate planning process taking into account many variables, but ultimately the Steering Committee vetted recommendations before presentation to the community. In addition to numerous staff meetings, the following meetings were held over the course of the Study.

- Steering Committee: May 30, 2013
- Public Meeting #1: June 20, 2013
- Steering Committee: July 11, 2013
- Steering Committee: August 15, 2013
- Public Meeting #2: September 5, 2014
- Steering Committee: October 10, 2013
- Steering Committee: October 24, 2013
- Steering Committee: November 21, 2013
- Steering Committee: December 19, 2013
- Public Meeting #3: February 6, 2014
- Steering Committee: April 10, 2014

As part of further due diligence for developing consensus for the most appropriate and responsible plan in terms of meeting the goals of the community and attracting investment, following the second public meeting and the general acceptance of the concept master plan by the Steering Committee, the consultant team developed refined nine options, five of which were selected for a detailed “apples to apples” comparison, particularly in regards to residential and commercial growth and parking capacity. From the analysis of the five schemes, a sixth scheme, “The Riverway” – which was also analyzed using the same metrics as the five schemes – was adopted as the favored approach by the Steering Committee and staff. The schemes were also presented at the final public meeting in February and the Riverway Master Plan received unamious approval from the community.

The Master Plan evolved from a thorough analysis of a wide range of existing conditions issues, previous reports, the evaluation of various street / block configurations as well as input from the public and the Steering Committee. One of the most important aspects of the Master Plan, relocating the Lowe Bridge downstream to the current intersection of Mill Street and Riverside Drive, evolved from a breakout group design exercise at the first public workshop as shown on **Figure 4.**

Figure 4: Drawing from First Public Meeting Showing Concept of Moving Bridge Down Stream

At the final Public Meeting (**Figure 5**), in addition to reaching general consensus on the Riverway Concept, it was important to receive specific input on the following issues that are central for the redevelopment vision of the 18-acre focus area:

Issue	Response
Relocating the Bridge:	Yes
Placing Buildings Close to Street	Yes
Height of Buildings	2-4 floors
Shared Parking Areas Behind Buildings	Yes
On-Street Parking	Yes
Two-Way Traffic versus One-Way	Two-way
Traffic Signals versus Roundabouts	Signals
Closing South Main Between Broad and Cook	Interesting, but needs further analysis
Encouraging Streets with Different Character	Yes
Making the Riverfront Public Space	Yes
Designing to Maximize Place versus Accommodating Traffic	Yes

4. Existing Transportation Infrastructure

4.1 Hourly Traffic Volume Variation

To gain an understanding of hourly traffic volume variation in the study area traffic volumes were reviewed over a 12-hour period between 6:00am and 6:00pm at the Main Street/South Main Street/Mill Street and Broad Street/Mill Street intersections. **Tables 1 and 2** present the hourly volume levels for each approach and for the intersections overall. As noted in the tables the peak volumes occurred during the afternoon commute time period.

TABLE 1 – HOUR TRAFFIC VOLUMES AT MAIN STREET/SOUTH MAIN STREET/MILL STREET

	Main Street Southbound			Mill Street Westbound			South Main Street Northbound			Mill Street Eastbound			
Start Time	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Hourly Total**
06:00 AM	0	13	74	40	1	0	0	16	0	0	1	0	652
06:15 AM	2	8	66	44	3	1	1	13	1	0	1	1	725
06:30 AM	5	2	85	52	1	0	1	16	0	0	1	5	809
06:45 AM	5	10	75	67	7	0	1	31	0	0	1	1	914
07:00 AM	5	12	93	69	1	0	1	27	1	0	6	3	1059
07:15 AM	2	15	102	65	1	0	2	26	0	0	5	7	1084
07:30 AM	4	17	113	92	2	0	3	34	0	1	3	4	1115
07:45 AM	8	25	117	117	10	0	1	46	0	2	4	13	852
08:00 AM	3	15	97	70	7	0	1	41	0	0	3	6	821
08:15 AM	0	16	107	79	4	0	1	40	0	0	4	5	936
08:30 AM	0	1	6	3	0	0	0	0	0	0	0	0	993
11:00 AM	2	42	73	136	5	0	2	38	0	0	5	9	1358
11:15 AM	8	35	103	142	7	2	4	46	1	0	4	6	1418
11:30 AM	7	37	79	146	5	0	1	27	0	0	3	8	1453
11:45 AM	9	25	121	154	2	0	4	44	0	0	8	8	1549
12:00 PM	9	32	114	161	4	0	1	40	0	1	5	5	1586
12:15 PM	11	43	120	156	7	2	0	42	1	0	3	8	1229
12:30 PM	10	36	112	166	10	0	0	42	0	1	11	21	1340
12:45 PM	10	44	130	161	9	0	1	40	1	1	5	10	1380
01:00 PM	1	3	5	6	0	0	0	0	0	0	0	0	1421
03:45 PM	**11**	**58**	**160**	**192**	**9**	**0**	**4**	**54**	**0**	**0**	**7**	**9**	**1833**
04:00 PM	6	60	130	176	6	2	2	50	1	0	9	7	1784
04:15 PM	11	57	114	190	7	1	7	58	1	0	1	6	1813

TABLE 1 – HOUR TRAFFIC VOLUMES AT MAIN STREET/SOUTH MAIN STREET/MILL STREET													
	Main Street Southbound			Mill Street Westbound			South Main Street Northbound			Mill Street Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Hourly Total
04:30 PM	9	48	124	173	7	1	1	48	0	0	1	15	1783
04:45 PM	12	57	117	189	5	0	2	52	0	0	5	16	1712
05:00 PM	6	59	130	196	7	1	1	64	0	0	2	12	1613
05:15 PM	7	50	133	172	2	0	0	41	1	1	5	11	1438
05:30 PM	9	37	112	147	5	0	0	33	0	1	4	8	1015
05:45 PM	11	53	96	136	5	2	1	39	1	0	6	6	659
06:00 PM	5	49	83	100	1	1	1	52	0	0	1	10	303

TABLE 2 – HOUR TRAFFIC VOLUMES AT BROAD STREET/MILL STREET													
	Southbound			Westbound			Northbound			Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Hourly Total
06:00 AM	0	30	36	28	8	0	4	17	3	0	27	0	759
06:15 AM	0	32	40	42	12	1	0	13	0	3	24	0	826
06:30 AM	0	21	49	48	12	0	2	29	2	4	44	1	929
06:45 AM	1	20	51	52	21	0	1	27	2	5	46	1	1027
07:00 AM	0	28	54	61	11	0	1	33	1	2	29	0	1166
07:15 AM	0	39	72	51	12	3	2	34	4	5	48	0	1248
07:30 AM	2	32	77	56	30	1	4	40	1	1	63	2	1270
07:45 AM	1	44	112	61	23	2	4	42	4	2	71	0	1242
08:00 AM	0	37	87	60	25	0	0	38	1	1	51	2	1159
08:15 AM	2	24	85	56	22	3	6	32	5	6	50	1	1138
08:30 AM	2	27	65	72	30	3	0	33	6	3	41	0	1118
08:45 AM	2	25	72	69	17	2	3	40	7	6	40	0	1090
09:00 AM	3	29	66	65	27	1	7	36	6	7	33	0	1102
09:15 AM	1	28	68	79	34	1	5	24	5	1	26	0	1066
09:30 AM	2	33	62	55	23	2	0	28	5	4	39	1	1057
09:45 AM	1	42	64	72	35	3	1	37	4	4	31	1	1101
10:00 AM	0	23	67	74	23	2	4	30	3	0	19	0	1064
10:15 AM	3	34	64	75	28	4	2	27	0	1	23	2	1102
10:30 AM	1	37	59	82	42	2	3	36	4	6	26	0	1187
10:45 AM	1	30	57	78	31	2	2	23	0	0	34	0	1191

TABLE 2 – HOUR TRAFFIC VOLUMES AT BROAD STREET/MILL STREET													
	Southbound			Westbound			Northbound			Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Hourly Total
11:00 AM	0	24	62	88	29	5	3	28	3	2	38	1	1283
11:15 AM	1	34	70	125	28	1	10	39	2	1	35	2	1347
11:30 AM	0	32	69	108	29	1	5	34	3	2	16	3	1378
11:45 AM	2	40	91	122	29	2	5	25	2	1	30	1	1423
12:00 PM	2	27	68	134	45	2	7	31	0	5	26	0	1436
12:15 PM	0	27	72	149	40	3	3	36	2	7	40	0	1406
12:30 PM	1	16	80	121	39	3	4	37	2	2	41	1	1344
12:45 PM	0	27	78	138	47	1	4	31	2	4	31	0	1326
01:00 PM	2	34	74	92	40	3	4	36	2	0	27	3	1292
01:15 PM	0	33	67	114	41	6	2	11	3	0	40	0	1326
01:30 PM	2	35	85	111	39	7	4	17	1	1	24	3	1345
01:45 PM	0	34	57	142	39	0	2	18	2	0	34	1	1344
02:00 PM	2	26	82	131	25	4	3	27	0	4	47	0	1344
02:15 PM	3	24	64	131	35	4	2	30	4	1	38	0	1362
02:30 PM	1	37	81	90	40	1	2	38	3	1	33	1	1380
02:45 PM	0	38	79	102	31	1	3	35	0	5	32	3	1490
03:00 PM	2	26	70	121	53	6	2	52	1	2	33	1	1559
03:15 PM	0	29	73	135	50	1	4	23	6	1	32	0	1644
03:30 PM	3	34	100	145	48	5	5	52	2	4	39	1	1743
03:45 PM	2	42	69	136	51	3	3	57	3	2	29	1	1751
04:00 PM	1	28	84	164	54	1	1	60	1	4	56	0	1812
04:15 PM	**2**	**35**	**109**	**139**	**57**	**4**	**5**	**60**	**3**	**4**	**33**	**2**	**1843**
04:30 PM	0	29	90	122	75	4	4	71	4	3	44	0	1837
04:45 PM	0	39	92	146	77	3	12	45	2	3	39	0	1712
05:00 PM	0	52	98	145	84	2	6	50	3	2	42	1	1538
05:15 PM	0	48	107	132	61	1	4	53	3	2	36	0	1077
05:30 PM	0	26	84	72	36	2	4	52	3	4	37	1	630
05:45 PM	0	15	72	86	32	1	6	38	0	1	33	1	309
06:00 PM	0	2	2	8	2	0	0	8	0	0	2	0	24

In order to determine the peak hour of the entire corridor, a comparison of the peak hour volumes from the varying traffic counts was made and are presented in **Table 3.**

TABLE 3 - PEAK HOUR VOLUME BY INTERSECTION		
Location	**AM Peak Hour Begin Time**	**PM Peak Hour Begin Time**
South Main Street/Main Street/Mill Street	7:30	3:45
Mill Street/Broad Street	7:30	4:15
Mill Street/3rd Street	7:00	4:00
Mill Street/Riverside Drive	7:15	4:30
Broad Street/Riverside Drive	7:15	3:30
Mill Street/5th Street	7:45	3:00
South Main Street/Broad Street	7:15	4:30
South Main Street/5th Street/Cook Street	7:15	4:15
Overall	7:15	4:30

The determination of the AM peak hour was easily determined, as most intersection peak hours occurred between 7:15 and 8:15 am. The PM peak hours varied at the study area intersections and a detailed comparison of the hourly volumes was conducted to determine the overall peak volume. As shown in **Table 4**, the maximum total volume occurred between 4:30 and 5:30 pm and was therefore used for analysis purposes

TABLE 4 - PM HOUR VOLUME COMPARISON				
Location	**Begin Time**			
	3:45	**4:00**	**4:15**	**4:30**
South Main Street/Main Street/Mill Street	1751	1812	1843	1837
Mill Street/Broad Street	1833	1784	1813	1783
Mill Street/3rd Street	1163	1216	1215	1201
724Mill Street/Riverside Drive	673	693	704	724
Broad Street/Riverside Drive	1195	1129	1174	1194
Mill Street/5th Street	90	92	89	102
South Main Street/Broad Street	668	681	692	726
South Main Street/5th Street/Cook Street	559	571	593	567
TOTAL	7932	7978	8123	**8134**

General Conclusion: The peak hour volumes at the study intersections generally occurred between 7:15 and 8:15 am and 4:30 and 5:30 pm.

4.2 Turning Moving Counts

Intersection turning movement counts were conducted within the study area at key locations as shown on **Figure 6**. Turning movement volumes provide critical information that helps to evaluate the performance of intersections and how well they are operating from a delay perspective. Additionally, analyses should focus on the peak volume demand time period which is typically used to determine if a roadway is meeting standards for the worst-case volume period. The volumes will be the primarily input variable in the traffic models evaluating traffic operations. A summary on the locations counted are noted as follows.

- South Main Street/Main Street/Mill Street – July 30, 2009 (6:00am to 6:00pm)
- Mill Street/3rd Street – April 30, 2013 (7:00am to 9am/3:00pm to 6:00pm)
- Mill Street/Broad Street – August 4, 2009 (6:00am – 8:45am/11:00am to 1:15pm/3:45pm to 6:15pm)
- Mill Street/Riverside Drive – April 23 and May 1, 2013 (7:15am to 9am/3:00pm to 5:45pm)
- Broad Street/Riverside Drive – April 30, 2013 (7:00am to 9am/3:30pm to 6:00pm)
- Mill Street/5th Street – April 30 and May 1, 2013 (7:00am to 9am/3:00pm to 6:00pm)
- South Main Street/Broad Street – April 10 and 11, 2013 (7:00am to 9am/3:00pm to 6:00pm)
- South Main Street/5th Street/Cook Street – April 24, 2013 (7:00am to 9am/3:00pm to 6:00pm)

Design Hour Volume traffic volumes were estimated using the 2011 Maine Department of Transportation Count Book Table of Weekly Group Mean Factors, 6th lowest group mean factor was determined to be 0.87. A factor was then determined for each count based on its week in the month. The weekly factor was divided by the 6th lowest factor, multiplied by the peak hour total volume and rounded to the next highest whole volume. These volumes were then balanced with the remaining volumes in the corridor to determine the AM and PM Peak hour volumes as depicted on the following page as shown on **Figure 7**.

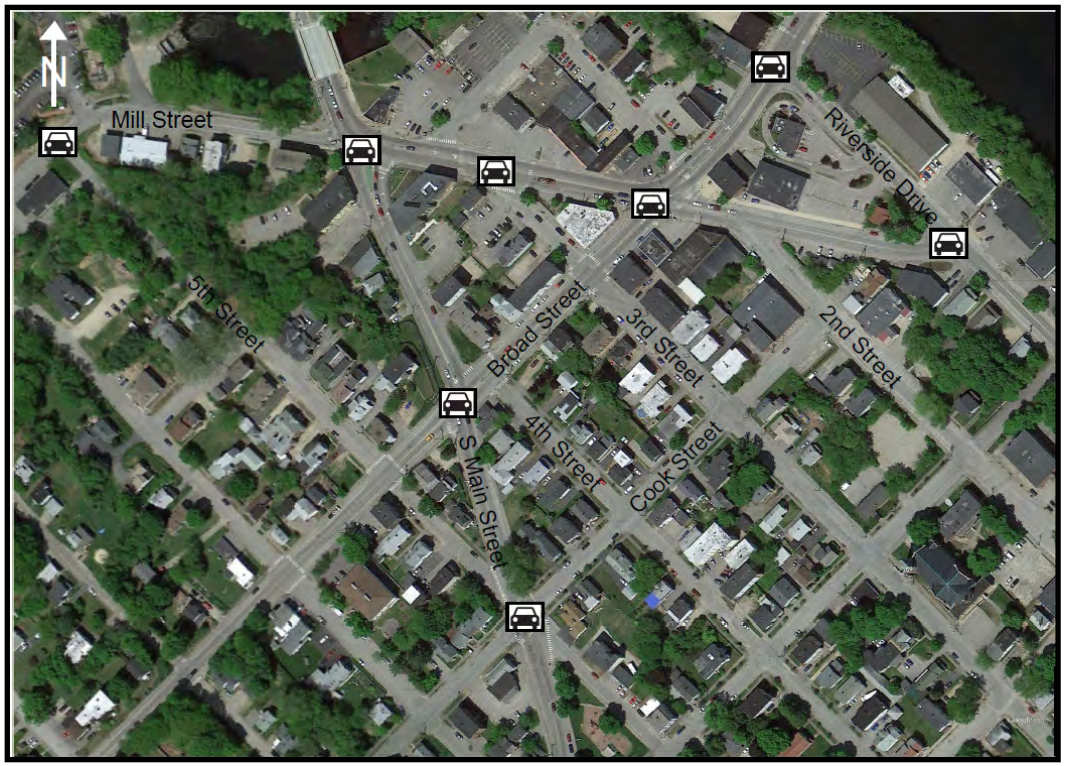

Figure 6: Study Intersections

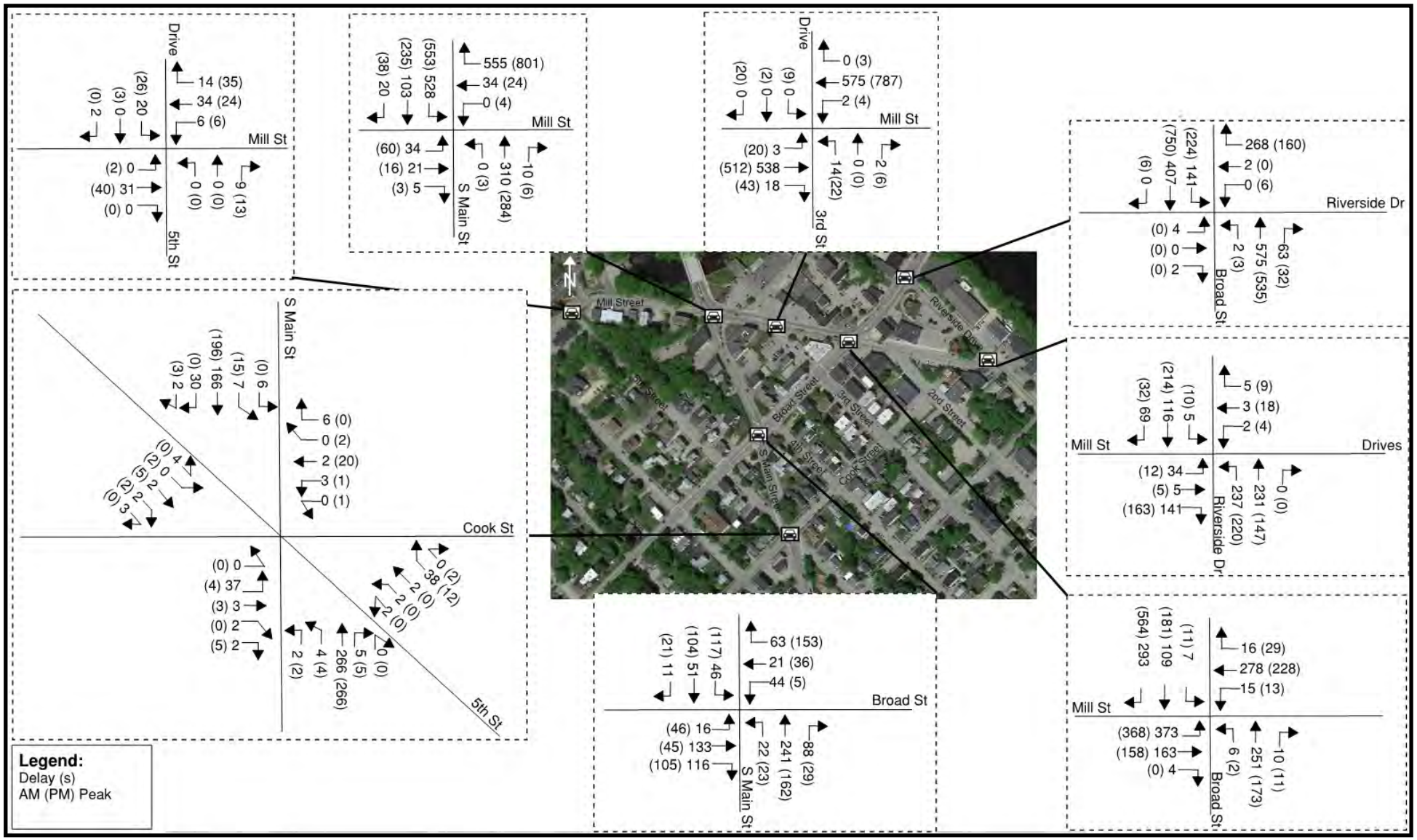

Figure 7: Existing AM and PM Peak Hour Volumes

4.3 Daily Traffic Volumes

Table 5 presents the 2011 Average Annual Daily Traffic (AADT) volumes within the study area as obtained from MaineDOT. Daily traffic volumes are not used in detailed analysis of a roadway but provide a general level of traffic as it relates to other roadways and is sometimes used in long-term planning analyses. These volumes are provided for informational purposes and are not expected to be used in the assessment of improvement alternatives.

TABLE 5 - 2011 AVERAGE ANNUAL DAILY TRAFFIC VOLUME	
Main Street s/o Academy Street	17,300
Mill Street w/o Broad Street	11,550
Broad Street ne/o Riverside Drive	14,920
Mill Street w/o Main Street	1,500
South Main Street se/o Mill Street	4,780

4.4 Vehicle Classification

Vehicle classification information was obtained from the intersection turning movement counts. **Table 6** presents the percent of heavy vehicles (defined as single-unit and tractor trailer trucks) for each study intersection. Truck volumes are an important part of evaluating a transportation system as they are an input variable into the traffic models and are a consideration in the geometric design of intersections.

TABLE 6 - PEAK HOUR % TRUCKS (AM: 7:15 – 8:15AM, PM: 4:30 – 5:30PM)		
Approach	AM	PM
South Main Street/Main Street/Mill Street		
South Main Street Northbound	8%	4%
Mill Street Westbound	9%	5%
Main Street Southbound	5%	4%
Mill Street Eastbound	6%	1%
Mill Street/3rd Street		
Driveway Southbound	0%	0%
Mill Street Westbound	3%	2%
3rd Street Northbound	7%	0%
Mill Street Eastbound	5%	1%
Broad Street/Mill Street		
Mill Street Eastbound	6%	2%
Broad Street Southbound	8%	1%

Mill Street Westbound	3%	3%
Broad Street Northbound	2%	2%
Riverside Drive/Mill Street		
Riverside Drive Southbound	3%	0%
Driveway	0%	0%
Riverside Drive Northbound	4%	3%
Mill Street Eastbound	6%	1%
Broad Street/Riverside Street		
Broad Street Southbound	4%	1%
Riverside Drive Westbound	2%	1%
Broad Street Northbound	3%	1%
Driveway Eastbound	0%	0%
Mill Street/5th Street		
Driveway Southbound	12%	13%
Mill Street Westbound	8%	4%
5th Street Northbound	0%	0%
Mill Street Eastbound	4%	0%
Broad Street/South Main Street		
Broad Street Westbound	7%	2%
South Main Street Southbound	7%	4%
Broad Street Eastbound	2%	2%
South Main Street Northbound	4%	4%
5th Street/South Main Street/Cook Street		
South Main Street Southbound	12%	1%
Cook Street Westbound	14%	0%
5th Street Northwest-bound	0%	0%
South Main Street Northbound	6%	1%
Cook Street Eastbound	6%	0%
5th Street Southeast-bound	0%	0%

General Conclusion: In general heavy truck percentages within the study area are higher than typical averages. Future improvements will need to take into account that trucks will need to maneuver through New Auburn.

4.5 Historical Traffic Volumes

Historical AADT information was obtained from MaineDOT for the study area between 2008 and 2011. **Table 7** presents the historical traffic volumes with growth patterns over the three year period. As noted traffic volumes have both increased and declined over the time periods noted.

TABLE 7 - HISTORICAL AVERAGE ANNUAL DAILY TRAFFIC VOLUMES

Location	2011	2009	2008	% Change 2008 to 2011
Main Street s/o Academy Street	17,300	16,220	18,160	-5.0%
Mill Street w/o Broad Street	11,550	11,450	12,190	-5.5%
Broad Street ne/o Riverside Drive	14,920	N/A	16,040	-7.5%
Mill Street w/o Main Street	1,500	1,230	1,420	+5.3%
S. Main Street se/o Mill Street	4,780	4,290	5,410	-13.2%

General Conclusion: Traffic volumes have declined over the last several years and this trend is likely related to several factors including the economic recession. This information will be considered when developing future traffic volumes in conjunction with evaluation of future roadway performance.

4.6 Crash History

Crash data was obtained from MaineDOT for the most recent available three-year period (2009-2011) for study area as shown on **Figures 8 and 9**. One location (intersections and roadway segments) was identified as a critical location but did not meet the criteria to be a High Crash Location (HCL) per MaineDOT criteria (8 or more crashes and a Critical Rate Factor greater than or equal to 1.0). **Table 8** notes locations that had one or more crashes over the reported three-year period.

Table 8 - 2009-2011 Crash Data

Location	# of Crashes between 2009-2011	Crash Rate	Critical Rate Factor (CRF)
Intersections			
Mill Street/5th Street	1	0.72	1.20
Mill Street/South Main Street	3	0.15	0.14
Mill Street/2nd Street	2	0.67	0.45
Mill Street/3rd Street	1	0.08	0.24
Mill Street/Broad Street	8	0.45	0.42
Mill Street/2nd Street	3	0.15	1.52
Mill Street/Riverside Drive	5	0.70	1.94
Broad Street/Riverside Drive	3	0.18	0.58
Broad Street/3rd Street	2	0.36	0.95
Broad Street/4th Street	1	0.33	0.77
Broad Street/South Main Street	6	0.72	2.08
Cook/5th/South Main Street	2	0.33	0.89
Roadway Segments			
Int of Broad St, Mill St, 0.06 mi	2	263.56	0.53
Int of Mill St, 2nd St, 0.03 mi	1	255.38	0.43
Int of Mill St, 2nd St, 0.03 mi	2	492.18	0.85
Int of Main St, Mill St, S Main St, 0.10 mi	1	53.91	0.14
Int of Cook St, 5th St, S Main St, 0.08 mi	1	278.43	0.53
Int of Main St, Mill St, S Main St	2	1217.66	1.01
Int of Broad St, 4th St, 0.04 mi	1	3261.58	2.29
Non-Int 2nd St, 0.07 mi	2	13932.96	16.28
Int of Broad St, Riverside Dr, 0.09 mi	3	204.03	0.49
Non Int Broad Street, 0.03 mi	1	260.63	0.44
Non-Int Riverside Dr, 0.06 mi	4	557.10	2.78
Int of Broad St, 5th St, 0.04 mi	2	2365.91	3.83
Int of Broad St, Mill St, 0.04 mi	2	1003.56	1.71
Int of Cook St, 4th St, 0.05 mi	1	6088.28	6.07

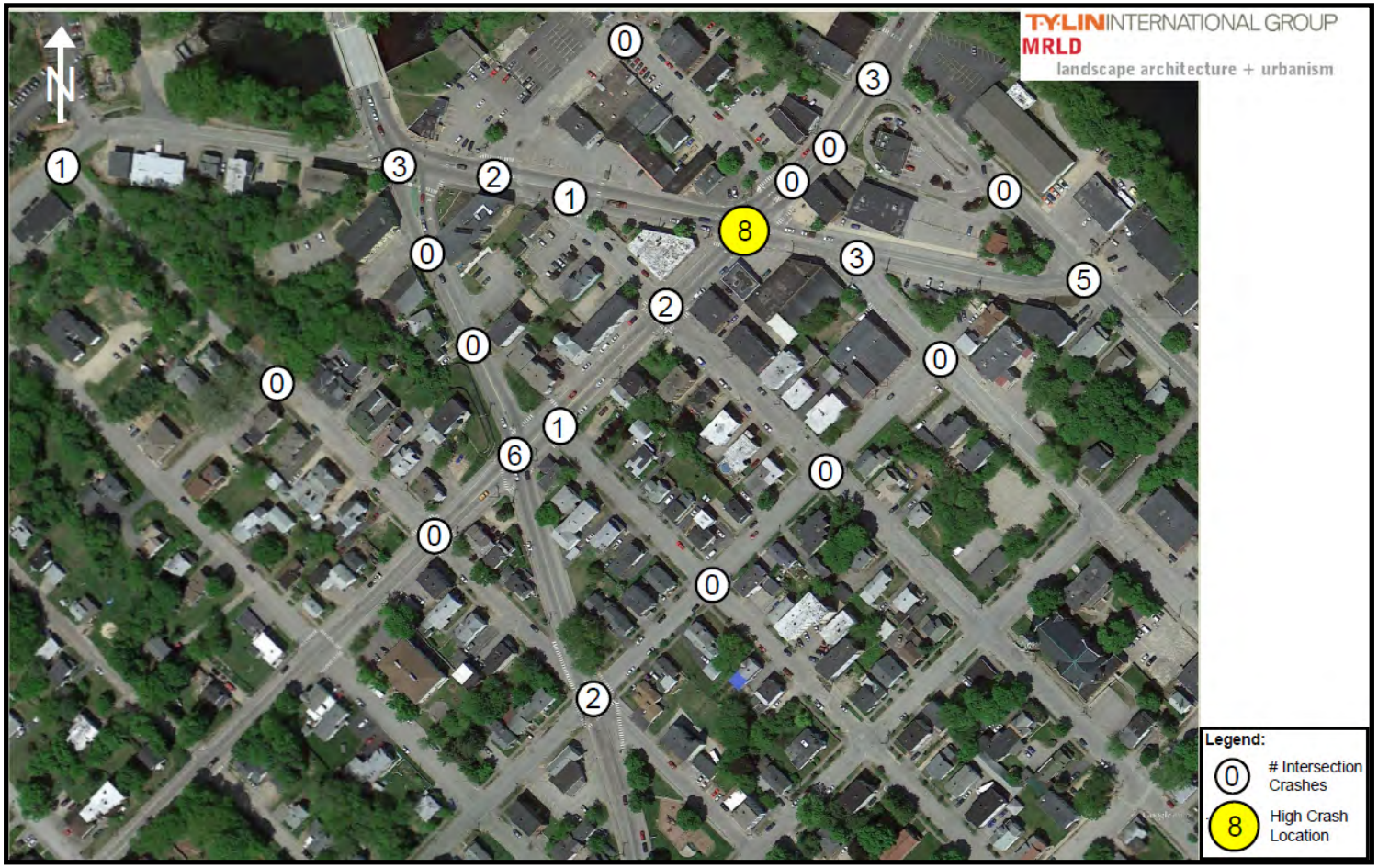

Figure 8: Intersection Segment Crash Numbers

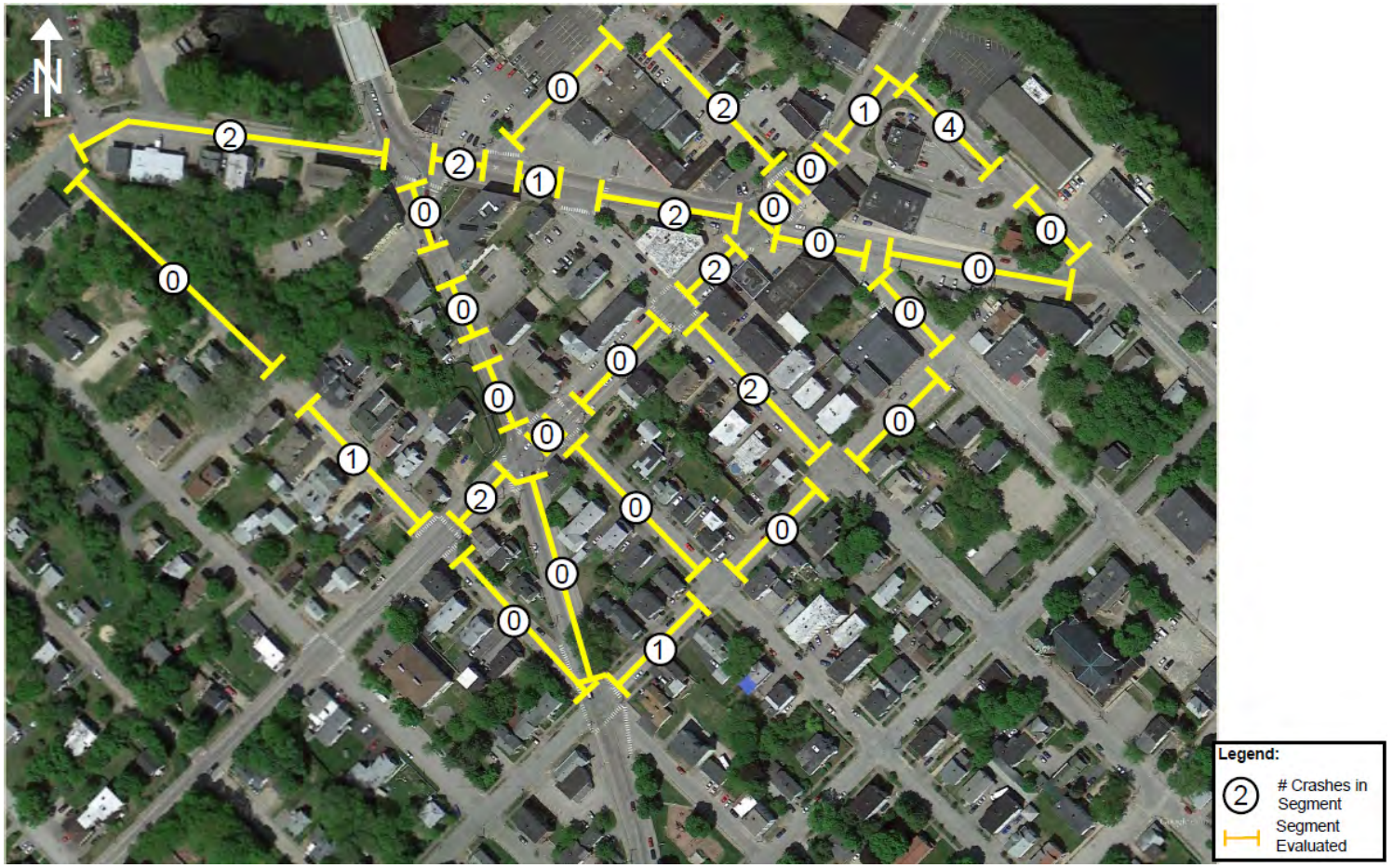

Figure 9: Roadway Segment Crash Numbers

General Conclusion: Intersections and roadways within the study area do not have safety problems. The Broad Street/Mill Street intersection was identified to have a high number of crashes per MaineDOT criteria but does not have a Critical Rate Factor greater than 1. Further review indicated no correctable deficiency was identified.

4.7 Intersection Level of Service

The standard used to evaluate traffic operating conditions of the transportation system is referred to as the Level of Service (LOS). This is a qualitative assessment of the quantitative effect of factors such as speed, volume of traffic, geometric features, traffic interruptions, delays, and freedom to maneuver. LOS analysis was based upon procedures detailed in the 2010 Highway Capacity Manual, Transportation Research Board. One of the standard programs used in traffic modeling is Synchro. However, Synchro may not accurately model closely spaced intersections. As such, SimTraffic was used in place of Synchro based on the fact that it better assesses the implication of closely spaced intersections, which currently contribute to spillback issues in New Auburn (spillback is when vehicles queuing at one intersection extend to a point where it blocks an adjacent intersection. Gridlock is a common term used to define spillback).

Signalized intersection LOS is based on average stopping delay per vehicle. **Table 7** summarizes LOS categories and their associated delay.

Table 7 - Signalized Intersections

Level of Service	Average Delay Per Vehicle (sec.)	General Description
A	≤10	Very low vehicle delays, free flow, signal progression extremely favorable, most vehicles arrive during given signal phase.
B	>10 and ≥20	Good signal progression, more vehicles stop and experience higher delays than for LOS A.
C	>20 and ≥35	Stable Flow (Acceptable Delays) Stable flow, fair signal progression, significant number of vehicles stop at signals.
D	>35 and ≥55	Approaching Unstable Flow (Tolerable Delay) Congestion noticeable, longer delays and unfavorable signal progression, many vehicles stop at signals.
E	>55 and ≥80	Unstable Flow (Intolerable Delay) Limit of acceptable delay, unstable flow, poor signal progression, traffic near roadway capacity, frequent cycle failures.
F	>80	Unacceptable delays, extremely unstable flow and congestion, traffic exceeds roadway capacity, stop-and-go conditions.

The measures of delay for each level of service rating for unsignalized intersections are found in **Table 8.**

TABLE 8 - UNSIGNALIZED INTERSECTIONS

Level of Service	Average Delay Per Vehicle (sec.)	General Description
A	≤10	No delays at intersections with continuous flow of traffic. Uncongested operations: high frequency of long gaps available for all left and right turning traffic. No observable queues.
B	>10 and ≤20	Same as A
C	>20 and ≤30	Moderate delays at intersections with satisfactory to good traffic flow. Light congestion; infrequent backups on critical approaches
D	>30 and ≤40	Increased probability of delays along every approach. Significant congestion on critical approaches, but intersection functional. No standing long lines formed.
E	>40 and ≤50	Heavy traffic flow condition. Heavy delays probable. No available gaps for cross-street traffic or main street turning traffic. Limit of stable flow.
F	>50	Unstable traffic flow. Heavy congestion. Traffic moves in forced flow condition. Average delays greater than one minute highly probable. Total breakdown.

The following tables summarize each intersection and movement - providing the delay (in seconds) followed by the Level of Service (A-F) for each movement. An overall Level of Service for each intersection is also provided. The analysis was conducted for both the weekday AM and PM peak hours. 95th% queues were estimated and provided in the following tables. The 95th% queue is a queue length that is exceeded only 5% of the time and is commonly used for design purposes.

MILL STREET/MAIN STREET/ SOUTH MAIN STREET – Overall this intersection operates at an acceptable level service during both peak hours. Long delays are experienced on the Mill Street eastbound approach and are related to signal time allocation and the desire to provide more green time to heavier volume movements. Queue lengths can be long on the Main Street approach, but in most cases vehicles do not wait through multiple signal cycles.

Table 9 – Existing Level of Service
Mill Street /Main Street/South Main Street
xxx – AM Peak Hour
(xxx) – PM Peak Hour

Movement	Level of Service	Delay (sec/veh)	95th% Queue (feet)
Mill Street EB Left	E (C)	56 (30)	134 (71)
Mill Street EB Through	E (C)	63 (26)	
Mill Street EB Right	C (B)	35 (16)	
Mill Street WB Left	N/A (C)	N/A (28)	49 (50)
Mill Street WB Through	D (C)	47 (25)	
Mill Street WB Right	A (A)	8 (9)	152 (167)
South Main Street Left	C (B)	24 (17)	198 (190)
South Main Street Through	C (B)	23 (20)	
South Main Street Right	B (A)	14 (9)	10 (37)
Main Street Left	D (C)	42 (28)	506 (433)
Main Street Through	C (B)	21 (12)	421 (283)
Main Street Right	B (A)	11 (8)	
Overall	C (B)	27 (17)	N/A

MILL STREET/3RD STREET – Movements from the STOP sign controlled 3rd Street approach do experience some delay, but it is not considered excessive. The analysis does indicate long queues on Mill Street, but the queuing is related to operations at the Main Street intersection.

Table 10 – Existing Level of Service
Mill Street/3rd Street
xxx – AM Peak Hour
(xxx) – PM Peak Hour

Movement	Level of Service	Delay (sec/veh)	95th% Queue (feet)
Mill Street EB Left	A (A)	6 (10)	116 (132)
Mill Street EB Through	A (A)	2 (1)	
Mill Street EB Right	A (A)	2 (1)	
Mill Street WB Left	A (A)	2 (9)	97 (250)
Mill Street WB Through	A (A)	1 (4)	
Mill Street WB Right	N/A (A)	N/A (3)	
3rd Street Left	C (F)	24 (119)	48 (78)
3rd Street Right	A (F)	2 (58)	
Driveway Left	N/A (D)	N/A (35)	N/A (57)
Driveway Through	N/A (E)	N/A (46)	
Driveway Right	N/A (E)	N/A (47)	
Overall	A (A)	2 (6)	N/A

MILL STREET/BROAD STREET – This location operates well and little problems were identified.

table 11- Existing Level of Service
Mill Street/Broad Street
xxx – AM Peak Hour
(xxx) – PM Peak Hour

Movement	Level of Service	Delay (sec/veh)	95th% Queue (feet)
Mill Street EB Left	C (C)	35 (21)	356 (283)
Mill Street EB Through	B (B)	15 (15)	113 (109)
Mill Street EB Right	A (A)	10 (9)	
Mill Street WB Left	D (C)	36 (25)	193 (188)
Mill Street WB Through	C (C)	31 (24)	
Mill Street WB Right	C (B)	23 (18)	
Broad Street NB Left	C (C)	31 (22)	263 (42)
Broad Street NB Through	C (B)	22 (16)	
Broad Street NB Right	B (A)	19 (4)	
Broad Street SB Left	C (B)	26 (16)	59 (56)
Broad Street SB Through	B (B)	16 (15)	
Broad Street SB Right	A (A)	2 (2)	84 (136)
Overall	C (B)	22 (13)	N/A

MILL STREET/RIVERSIDE DRIVE – This location operates well and little problems were identified.

Table 12 – Existing level of service Mill Street/Riverside Drive xxx – AM Peak Hour (xxx) – PM Peak Hour			
Movement	Level of Service	Delay (sec/veh)	95th% Queue (feet)
Mill Street Left	A (B)	8 (12)	37 (40)
Mill Street Through	B (A)	11 (8)	
Mill Street Right	A (A)	2 (3)	
Driveway Left	B (C)	13 (17)	24 (20)
Driveway Through	A (B)	8 (12)	
Driveway Right	A (A)	5 (4)	
Riverside Drive NB Left	A (A)	2 (4)	87 (119)
Riverside Drive NB Through	A (A)	0 (2)	
Riverside Drive NB Right	A (A)	0 (1)	
Riverside Drive SB Left	A (A)	2 (1)	14 (12)
Riverside Drive SB Through	A (A)	0 (0)	
Riverside Drive SB Right	A (A)	0 (0)	
Overall	A (A)	4 (3)	N/A

BROAD STREET/RIVERSIDE DRIVE – This location operates at excellent levels overall with long delays noted for the left-turns from Riverside Drive. This movement is very low and in fact prohibited by regulations.

Table 13 – existing level of service Broad Street/Riverside Drive xxx – AM Peak Hour (xxx) – PM Peak Hour			
Movement	Level of Service	Delay (sec/veh)	95th% Queue (feet)
Riverside Dr WB Left	E (E)	43 (46)	30 (150)
Riverside Dr WB Through	A (C)	0 (24)	
Riverside Dr WB Right	A (A)	9 (15)	
Riverside Drive EB Left	A (A)	0 (0)	169 (0)
Riverside Drive EB Through	C (A)	15 (0)	
Riverside Drive EB Right	C (A)	17 (0)	
Broad Street NB Left	A (A)	1 (4)	30 (38)
Broad Street NB Through	A (A)	0 (0)	
Broad Street NB Right	A (A)	0 (0)	
Broad Street SB Left	A (A)	8 (5)	196 (236)
Broad Street SB Through	A (A)	3 (3)	
Broad Street SB Right	A (A)	0 (3)	
Overall	A (A)	4 (4)	N/A

MILL STREET/5TH STREET – This location operates at excellent levels, overall and for individual movements, and operationally little delay is experienced.

Table 14 – Existing Level of Service Mill Street/5th Street xxx – AM Peak Hour (xxx) – PM Peak Hour			
Movement	Level of Service	Delay (sec/veh)	95th% Queue (feet)
Mill Street EB Left	N/A (A)	N/A (0)	0 (0)
Mill Street EB Through	A (A)	0 (0)	
Mill Street WB Left	A (A)	1 (1)	10 (7)
Mill Street WB Through	A (A)	1 (1)	
Mill Street WB Right	A (A)	1 (1)	
5th Street Right	A (A)	2 (2)	29 (26)
Driveway Left	A (A)	3 (3)	49 (52)
Driveway Through	N/A (A)	N/A (3)	
Driveway Right	A (N/A)	2 (N/A)	
Overall	A (A)	1 (1)	N/A

BROAD STREET/SOUTH MAIN STREET – This location operates at excellent levels, overall and for individual movements, and operationally little delay is experienced.

Table 15 – existing level of service Broad Street/South Main Street xxx – AM Peak Hour (xxx) – PM Peak Hour			
Movement	Level of Service	Delay (sec/veh)	95th% Queue (feet)
South Main Street NB Left	A (A)	0 (1)	7 (32)
South Main Street NB Through	A (A)	0 (1)	
South Main Street NB Right	A (A)	0 (1)	
South Main Street SB Left	A (A)	2 (1)	27 (18)
South Main Street SB Through	A (A)	1 (1)	
South Main Street SB Right	A (A)	1 (1)	
Broad Street EB Left	A (A)	9 (9)	100 (53)
Broad Street EB Through	A (A)	10 (7)	
Broad Street EB Right	A (A)	8 (4)	
Broad Street WB Left	A (A)	8 (10)	63 (81)
Broad Street WB Through	A (A)	6 (8)	
Broad Street WB Right	A (A)	4 (6)	
Overall	A (A)	4 (2)	N/A

SOUTH MAIN STREET/COOK STREET/5TH STREET – This location operates at excellent levels, overall and for individual movements, and operationally little delay is experienced.

Table 16
South Main Street/Cook Street/5th Street
xxx – AM Peak Hour
(xxx) – PM Peak Hour

Movement	Level of Service	Delay (sec/veh)	95th % Queue (feet)
5th Street EB Left 2	A (A)	0 (0)	0 (0)
5th Street EB Left	A (A)	0 (0)	
5th Street EB Through	A (A)	0 (0)	
5th Street EB Right	A (A)	0 (0)	
5th Street EB Right 2	A (A)	0 (0)	
5th Street WB Left 2	A (A)	0 (0)	24 (20)
5th Street WB Left	A (A)	0 (0)	
5th Street WB Through	A (A)	0 (0)	
5th Street WB Right	A (A)	6 (2)	
5th Street WB Right 2	A (A)	3 (0)	
S Main Street NB Left 2	A (A)	1 (0)	24 (35)
S Main Street NB Left	A (A)	0 (0)	
S Main Street NB Through	A (A)	0 (0)	
S Main Street NB Right	A (A)	0 (2)	
S Main Street NB Right 2	A (A)	0 (0)	
S Main Street SB Left 2	A (A)	0 (0)	43 (86)
S Main Street SB Left	A (A)	3 (4)	
S Main Street SB Through	A (A)	0 (1)	
S Main Street SB Right	A (A)	0 (1)	
S Main Street SB Right 2	A (A)	0 (0)	
Cook Street EB Left 2	A (A)	0 (0)	42 (30)
Cook Street EB Left	A (A)	9 (0)	
Cook Street EB Through	A (A)	5 (7)	
Cook Street EB Right	A (A)	0 (0)	
Cook Street EB Right 2	A (A)	4 (5)	
Cook Street WB Left 2	A (A)	0 (0)	44 (44)
Cook Street WB Left	A (A)	9 (0)	
Cook Street WB Through	A (A)	7 (8)	
Cook Street WB Right	A (D)	0 (31)	
Cook Street WB Right 2	A (A)	0 (0)	
Overall	A (A)	1 (1)	N/A

General Conclusion: Intersections within the study area generally operate at acceptable levels of service with little vehicle delay.

4.8 Sidewalks

Sidewalks in the study area are largely bituminous concrete with a few small areas of concrete and are generally in good condition. There are a few gaps within the study area:

- Both sides of Mill Street from the Goodman Wipes and Paper Company west to the project extents.
- Both sides of 5th Street from Mill Street roughly to Pulsifier Street.
- Pulsifier Street as it connects with Mill Street to the northern section of 2nd Street.

There are many obstacles in the sidewalks (mostly utility poles), a problem that exists in the study area. The sidewalks do not have ADA compliant ramps, ramps on steep roads lead users into the intersection, and none have detectible warning tiles. The majority of intersections do not have perpendicular approaches at the crosswalks (the preferred alignment for ADA compliance).

4.9 Crosswalks

Crosswalks are provided at many intersections in the study area. All crosswalks have the "block" design paint layout configuration. A summary of crosswalk locations are noted as follows.

South Main Street and Mill Street:
- Mill Street westerly approach
- South Main Street southerly approach
- Mill Street easterly approach

Pulsifier Street and Mill Street:
- Pulsifier Street northerly approach

3rd Street and Mill Street:
- 3rd Street southerly approach
- Mill Street westerly approach

Broad Street and Mill Street:
- Mill Street easterly approach
- Mill Street westerly approach
- Broad Street northerly approach
- Broad Street southerly approach
- 2nd Street from northerly approach (adjacent to Broad Street)

5th Street and Broad Street:

- 5th Street northerly approach
- 5th Street southerly approach
- Broad Street easterly approach

5th Street, Cook Street, and South Main Street:

- 5th Street northerly approach
- 5th Street southerly approach
- Cook Street easterly approach
- Cook Street westerly approach
- South Main Street northerly approach
- South Main Street southerly approach

South Main Street and Broad Street/Broad Street and 4th Street:

- South Main Street northerly approach
- South Main Street southerly approach
- Broad Street westerly approach
- Broad Street easterly approach
- 4th Street southerly approach

3rd Street and Broad Street:

- 3rd Street northerly approach
- 3rd Street southerly approach
- Broad Street westerly approach
- Broad Street easterly approach

Broad Street and Riverside Drive:

- Riverside Drive southerly approach
- Broad Street easterly approach

4.10 Bicycle Facilities

As part of implementing the City's Complete Street Policy, bike lanes have been located on Mill Street.

4.11 Regulatory Signage

Table 17 presents a summary of regulatory signs posted within the study area.

Table 17 - Regulatory Signage Summary

Sign Type	Direction of Travel	Sign	Identifying Characteristics
Speed Limit	Mill St WB	25 MPH	Just after Int with S Main Street
Warning	Riverside Dr NB	Right Turn Only	Intersection with Broad St
	4th St NB	Right Turn Only	Intersection with Broad St
	5th St SB	Yield with 5th St Sign on top	Intersection with 5th and Cook
	Mill St EB	Yield	Intersection with Riverside Drive
	Broad St SB	No Left Turn	Just after Intersection with Riverside Drive
	Broad Street SB	No Left Turn	In the Median at the Intersection with Mill St
	Riverside Drive NB	No Left Turn Ahead	Just South of the Intersection with Mill Street
	2nd Street EB (Northern Section)	Do Not Enter	Intersection with Broad Street
	S Main Street NB	Do Not Enter	Intersection with Mill Street
	Riverside Drive NB	Low flying aircraft	Just south of the Intersection with Mill Street
	Mill St WB	No Turn on Red (mounted on mast arm)	Intersection with S Main Street
	Mill St WB	Yield to Pedestrians in Crosswalk/Pedestrian Crossing Sign	Intersection with S Main Street
	S Main Street SB	Yield to Pedestrians in Crosswalk/Pedestrian Crossing Sign	Intersection with Mill Street
Lane Use	Broad St NB	Keep Right with Diamond	On Back of Stop Sign at Intersection with S Main Street
	Broad St SB	Keep Right with Diamond	On Back of Sign in Median
	S Main St SB	Stay to the Right, Black Diamond with yellow dots	Intersection with Broad Street
	S Main St NB	Right side of island (mounted on mast arm pole)	Intersection with Mill Street
Stop	5th St NB	Stop Sign with 5th Street mounted on top	Intersection with Mill Street
	5th St SB	Stop Sign	Intersection with Broad Street
	5th St NB	Stop Sign	Intersection with Broad Street
	5th St NB	Stop Sign	Intersection with 5th and Cook
	Cook St NE	Stop Sign with Cook,5th and S Main Mounted on Top	Intersection with 5th and Main
	Cook St SW	Stop Sign	Intersection with 5th and Main

Table 17 - Regulatory Signage Summary			
Sign Type	Direction of Travel	Sign	Identifying Characteristics
	Cook St NE	Stop Sign	Intersection with 3rd St
	Cook St SW	Stop Sign	Intersection with 3rd St
	Cook St NE	Stop Sign	Intersection with 2nd St
	4th St NB	Stop Sign	Intersection with Cook St
	4th St SB	Stop Sign	Intersection with Cook St
	4th St NB	Stop Sign (with Broad Street Sign mounted on top)	Intersection with Broad St
	3rd St NB	Stop Sign	Intersection with Broad St
	3rd St SB	Stop Sign	Intersection with Broad St
	3rd St NB	Stop Sign	Intersection with Mill St
	2nd St NB	Stop Sign (2nd Street Sign mounted on top)	Intersection with Mill St
	2nd St NB	Stop Sign (2nd Street Sign mounted on top)	Intersection with Mill St (near S Main St Intersection)
	Riverside Drive NB	Stop Sign	Intersection with Broad St
	2nd St EB (Northern Section)	Stop Sign (2nd Street Sign mounted on top)	Intersection with Broad St
	Broad St SB	Stop Sign with All Way (2)	Intersection with S Main Street
	Broad St NB	Stop Sign with All Way (2)	Intersection with S Main Street
	S Main Street NB	Stop Sign with All Way (2)	Intersection with Broad Street
	S Main St SB	Stop Sign with All Way (2)	Intersection with Broad Street
Directional	Riverside Drive NB	Auburn Downtown/Lewiston directional	Across from Dunkin Donuts
	Mill St EB	North 136	Intersection with Riverside Drive
	Riverside Drive NB	Auburn Downtown/Lewiston directional	Just south of Intersection with Mill Street
	Riverside Drive NB	136 and Hospital	Just south of Intersection with Mill Street
	Mill St EB	136 sign with arrows on utility pole	Intersection with Broad Street
	Mill St EB	Mill St Sign mounted on top of Pedestrian Heads	Intersection with Broad Street
	Mill St EB	Street sign mounted to signal pole	Intersection with South Main Street
	Broad St NB	136 Arrow and Ped Heads mounted on Mast Arm	Intersection with Mill St
	Mill St WB	Signs to 136, 121, 202, 11, and 4	Intersection with South Main Street
	S Main St NB	Route 136 Arrow mounted on mast arm	Intersection with Mill Street
	S Main St SB	Durham, Freeport, South 136	Intersection with Mill Street

4.12 Roadway Characteristics

- Mill Street is a two-lane roadway with pockets for turn lanes onto South Main Street and Broad Street that runs straight through the corridor area with the exception of a slight turn before intersecting with 5th Street. There are signals at each of the major intersections with South Main Street and Broad Street and areas of on-street parking.
- South Main Street is a relatively straight road through the corridor area intersecting the original grid system. It is a two-lane road system with turn pockets at the intersection of Mill Street and on-street parking throughout the corridor.
- Broad Street is a relatively straight road through the corridor running parallel to Cook Street. It is a two-lane roadway with a pocket for turn lanes where it intersects Mill Street at the signalized intersection.
- First, Second, Third, Fourth and Fifth Streets make up the cross-legs of the grid system and are largely residential streets. They are two-lane roadways with on-street parking available and stop signs where they cross major intersecting roadways.
- Riverside Drive intersects Broad Street and Mill Street in the corridor. It is a two lane roadway with the biggest attraction being Dunkin Donuts. There are limited areas of on-street parking here.

4.13 Roadway System

Mill Street, Main Street, and Broad Street east of Mill Street are functionally classified as an Other Principal Arterial. South Main Street, Riverside Drive, Broad Street west of Mill Street, and Mill Street east of Broad Street are classified as a Major Urban Collector. All other roadways in the study area are local streets. In simplistic terms, "functional classification" reflects a highway's balance between providing land access versus mobility. Functional classification is the process by which public streets and highways are grouped into classes according to the character of service they are intended to provide. Generally, highways fall into one of four broad categories-- principal arterial, minor arterials, collector roads, and local roads. Arterials provide longer through travel between major trip generators (larger cities, recreational areas, etc.); and collector roads collect traffic from the local roads and also connect smaller cities and towns with each other and to the arterials: local roads provide access to private property or low volume public facilities. Definitions of the all roadway classifications are noted below.

Principal Arterial - Interstate: A series of continuous routes that have trip lengths and volumes indicative of substantial statewide or interstate travel. This classification is for highways designated as interstate and include I-95, I-195, I-295 and I-395.

Principal Arterial - Other Freeways and Expressways: These roads must be divided highway with partial (freeway) or full (expressway) control-of-access. Primarily serve through traffic and major circulation movements within federally-defined Urban Areas.

Other Principal Arterial: Highways that provide long distance connections, but do not fit the two categories above.

Rural: Corridor movement suitable for substantial statewide or interstate travel between larger population centers. (e.g., Route 3, Augusta to Belfast).

Urban: Routes which carry through traffic and most of the trips entering/leaving a Federally-designated Urban Area. They provide continuity for all rural arterials that intercept the urban boundary. (e.g., Western Avenue in Augusta or Brighton Avenue in Portland).

Minor Arterial: A series of continuous routes that should be expected to provide for relatively high overall travel speeds with minimum interference to through movement, and are defined as two distinct types:

Rural: Form a network of 1,039 miles in Maine, in conjunction with the rural principal arterial system, with service characteristics that:

1. Link cities, large towns and other traffic generators (i.e., major resort areas) that are capable of attracting travel over long distances.
2. Integrate interstate and inter-county service.
3. Have spacing consistent with population density so all developed areas are within a reasonable distance from the arterial system.
4. Provide service to corridors with trip lengths and travel densities greater than those served by rural collector or local systems. (e.g., Route. 27 from Farmington to Sugarloaf Mountain and to the intersection of Route 16 in Eustis or Route 3 between Ellsworth and Bar Harbor).

Urban: Within a Federally designated Urban Area, these roads interconnect with and augment the urban principal arterial system. They distribute travel to geographic areas smaller than those of higher systems (e.g., Hogan Road in Bangor, or Stone Street in Augusta from the East side rotary to Eastern Avenue [Route 17]).

Collectors: Rural: Generally serve travel of primarily intra-county rather than statewide importance and travel distances are shorter than arterial routes.

1. Major Collector Roads: (a) Serve county seats not on arterial routes, larger towns not directly served by higher systems (b) link nearby larger towns, or cities, or with route of higher classifications (c) serve more important intra-county travel corridors which could connect consolidated schools, shipping points, important agricultural areas, etc. (e.g., Route 9 in Augusta from intersection of Route 17 to the intersection of Route 126 in Randolph).

2. Minor Collector Roads: Spaced consistent with population density to accommodate local roads within reasonable distance of collector roads. Provide service to smaller communities. Link locally important traffic generators with the arterial system. (e.g., Pond Road / Neck Road between Manchester and Litchfield).

Urban: Provide both land access and traffic circulation within urban residential neighborhoods and commercial and industrial areas in federally designated Urban Areas. Route density is much higher than in rural areas. (e.g., Buck Street in Bangor next to the racetrack, or Hotel Road in Auburn from Route 122 near the Lewiston / Auburn airport to West Auburn Road).

Local Roads: Provide access to adjacent land and provide service to travel over relatively short distances as compared to the higher systems.

Rural: All rural roads not classified as principal arterial, minor arterial, or collector roads (e.g., Caribou Lake between Washburn and Caribou, or Flag Pond Road in Saco from Route One west to Route 112).

Urban: All urban streets in a federally designated Urban Area that are not in one of the other higher systems. They permit direct access to land, route density is higher than rural areas, and they connect to the higher systems. They also offer lower mobility and service and through-traffic movement is deliberately discouraged. (e.g., Purington Avenue in Augusta between North Belfast Avenue and South Belfast Avenue, or Longfellow Avenue in Brunswick from Route 123 to Maine Street).

4.14 ADA Compliance

Title II of the Americans with Disabilities Act (ADA) requires state and local governments to make pedestrian crossings accessible to people with disabilities by providing curb ramps. To comply, the curb ramps provided must meet specific standards for width slope, cross slope, placement, and other features. Ramp design criteria include the following:

- Ramp slope must be 8.33% or less (1:12).
- Cross slope cannot exceed 2%.
- Ramp must be at least 3 feet wide, not including flared sides.
- Ramp must have detectable warnings (dome-shaped bumps) that extend the full width and depth of the ramp.
- Rise is the vertical change measured from the low point (base of curb) at the high point on the other side. Since sidewalks have a cross slope to direct water toward street, the rise of the curb ramp is often greater than the curb reveal height.
    - Ramp run may have a running slope of up to 10% (1:10) if the rise is no more than 6 inches.
    - Ramp run may have a running slope of up to 12.5 % (1:8) several of the existing sidewalk ramps have detectable warning panel surfaces.

General Conclusion: Many ramp slopes in the study area exceed the maximum ramp slope on steep roads, leading users into the intersection. Some cross slopes exceed 2% in areas without curbs. There are no detectable warning tiles in the study area.

4.15 Driveway Characteristics and Access Management

Access management standards for the City of Auburn were generally reviewed and are noted as follows:

Safe Sight Distance: "Driveways and other accesses for all developments, including individual residences, sub-divisions and commercial and other non-residential developments shall be located to meet a minimum sight distance measured in each direction along the arterial or collector while maintaining adequate distances from adjacent driveways and intersections." For the study area, a minimum sight distance of 250 feet must be provided as measured from the driver's seat of a vehicle 10 feet behind the curb with a height of 3 ½ feet above the pavement with an object height of 4 ¼ feet.

Curb Cut and Driveway Spacing: "The minimum distance between curb cuts and driveways shall be measured from the centerline of the driveways at the right-of-way line and shall be a function of the posted corridor road speed…" For the study area a minimum spacing of 105 feet is required. If a lot lacks sufficient corridor road frontage for spacing the distance can be reduced to 85 feet.

Number of Driveways per Lot: "the maximum number of driveways to a particular site shall be governed by the following:"

- No low volume traffic generator, including single-family dwellings and duplexes shall have more than one two-way access onto a single roadway
- No medium or high volume traffic generator shall have more than one two-way access or two one-way accesses in total onto a single roadway.
- All driveways shall comply with the spacing requirements.

Corner Lot Access: "…entrance(s) to and exit(s) from the site shall be located only on the minor or collector road."

Shared Driveways: "Shared driveways shall be encouraged for adjacent sites in order to minimize the number of driveways along the arterial."

Interconnections: "For all projects, provisions for vehicular and pedestrian circulation connections to future projects on adjacent properties shall be provided wherever feasible and to the maximum extent possible."

General Conclusion: Several areas are non-compliant with City standards for access management but do to the short city blocks in this area many cannot be avoided. Future access management recommendations will be identified.

4.16 Traffic Signals

Two intersections within the study area are controlled by traffic signals (Main Street/South Main Street/ Mill Street and Broad Street/Mill Street) with the following details:

Main Street/South Main Street at Mill Street:

- Span wire supported signal.
- Fully actuated (an actuated signal has detection for all turn movements and the signal phasing and timing is adjusted according to demand).
- Pedestrian signal equipment on all approaches.

Broad Street and Mill Street:

- Span wire supported signal.
- Fully actuated.
- All movements permissive except for Mill Street eastbound, which is protected.
- Pedestrian signal equipment on all approaches.

General Conclusion: From a corridor system perspective, the two study traffic signals operate independently of each other. Coordination of the traffic signals should be considered as a recommendation

4.17 Bus Service

Bus service is provided within the New Auburn Center Study area and the schedule (**Tables 18 and 19**), route description, and route map is presented as follows.

Table 18 – Weekday Bus Schedule

L Oak Street	B Franco American Center	C Walton School	D Barker Arms	E Roak Block	A Great Falls	Spring Street	D Barker Arms	C Walton School	B Franco American Center	L Oak Street
					6:45	6:47	6:53	6:58	7:01	7:05
7:15	7:19	7:27	7:32	7:35	7:45	7:47	7:53	7:58	8:01	8:05
8:15	8:19	8:27	8:32	8:35	8:45	8:47	8:53	8:58	9:01	9:05
9:15	9:19	9:27	9:32	9:35	9:45	9:47	9:53	9:58	10:01	10:05
10:15	10:19	10:27	10:32	10:35	10:45	10:47	10:53	10:58	11:01	11:05
11:15	11:19	11:27	11:32	11:35	11:45	11:47	11:53	11:58	12:01	12:05
12:15	12:19	12:27	12:32	12:35	12:45	12:47	12:53	12:58	1:01	1:05
1:15	1:19	1:27	1:32	1:35	1:45	1:47	1:53	1:58	2:01	2:05
2:15	2:19	2:27	2:32	2:35	2:45	2:47	2:53	2:58	3:01	3:05
3:15	3:19	3:27	3:32	3:35	3:45	3:47	3:53	3:58	4:01	4:05
4:15	4:19	4:27	4:32	4:35	4:45	4:47	4:53	4:58	5:01	5:05
5:15	5:19	5:27	5:32	5:35	5:45	5:47	5:53	5:58	6:01	6:05
6:15	6:19	6:27	6:32	6:35	6:45	6:47				

Table 19 – Saturday Bus Schedule

L Oak Street	B Franco American Center	C Walton School	D Barker Arms	E Roak Block	A Great Falls	Spring Street	D Barker Arms	C Walton School	B Franco American Center	L Oak Street
9:15	9:19	9:27	9:32	9:35	9:45	9:47	9:53	9:58	10:01	10:05
11:15	11:19	11:27	11:32	11:35	11:45	11:47	11:53	11:58	12:01	12:05
1:15	1:19	1:27	1:32	1:35	1:45	1:47	1:53	1:58	2:01	2:05
3:15	3:19	3:27	3:32	3:35	3:45	3:47	3:53	3:58	4:01	4:05

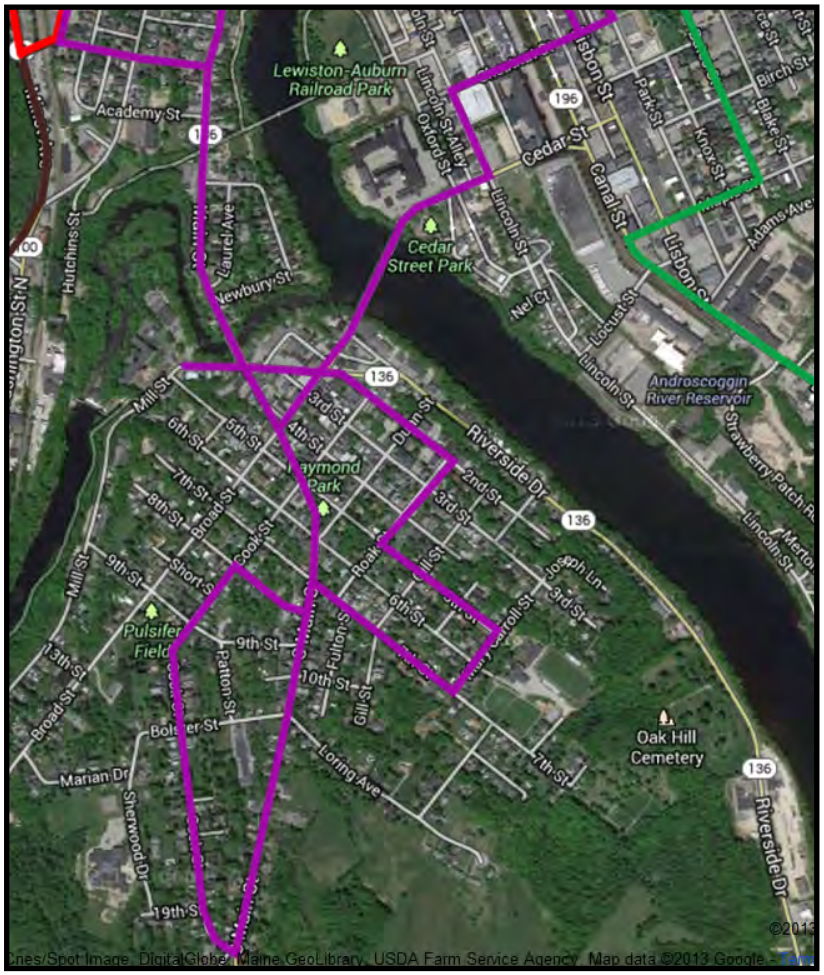

Figure 10: Bus Route

Route Description (Figure 10) - Depart Oak Street Bus Station, Bates Street, turn right onto Ash Street, turn left onto Park Street, turn right onto Chestnut Street, turn left onto Lincoln Street, turn right onto Cedar Street, proceed into New Auburn, straight on Broad Street, turn left onto South Main Street, turn right onto Cook Street, turn right onto 8th Street, turn left onto South Main Street, turn right onto 7th Street, turn left onto Mary Carroll Street, turn left onto 3rd Street, turn right onto Dunn Street, turn left onto 2nd Street, turn left onto Mill Street, proceed to Barker Arms. Depart Barker Arms on Mill Street, turn left onto Main Street, straight to Great Falls Plaza, straight to Great Falls Transfer Hub.

5. Future Traffic Volumes and Analysis

Future peak hour traffic volumes during the AM and PM peak hours within the study area were based upon growth projections contained in the ATRC travel demand model. Based upon recent traffic volume trends, two volume scenarios were evaluated, an aggressive model growth scenario and a reduced scenario (50% reduction). The following table presents the percent changes expected within the study area between 2013 and 2030.

Location	Aggressive Growth	Reduced Growth
Mill Street and 5th Street		
5th Street	8%	4%
Mill Street	12%	6%
South Main Street and Mill Street		
Mill Street west of south Main Street	12%	6%
Mill Street east of south Main Street	20%	10%
South Main Street south of Mill Street	12%	6%
South Main Street north of Mill Street	18%	9%
Mill Street and 3rd Street		
Mill Street	20%	10%
3rd Street	4%	2%
Riverside Drive and Broad Street		
Broad Street south of Riverside Drive	22%	11%
Broad Street north of Riverside Drive	26%	13%
Riverside Drive east of Broad Street	30%	15%
Riverside Drive and Mill Street		
Mill Street west of Riverside Drive	18%	9%
Riverside Drive west of Mill Street	30%	15%
Riverside Drive east of Mill Street	20%	10%
Broad Street and Mill Street		
Mill Street east of Broad Street	18%	9%
Mill Street west of Broad Street	20%	10%
Broad Street north of Mill Street	22%	11%
Broad Street south of Mill Street	26%	13%
South Main Street and Broad Street		
Broad Street east of South Main Street	26%	13%
Broad Street west of South Main Street	8%	4%
South Main Street	12%	6%
South Main Street and Cook Street and 5th Street		
South Main Street	12%	6%
Cook Street	8%	4%

2030 No-Build Intersection Operations / Level of Service

An evaluation of key study area intersections during the critical PM peak hour was performed and is summarized in the following tables. The results indicated the following:

- For the 2030 Reduced volume scenario, acceptable level of service results are projected at the key study intersections with a few movements that do experience long delays.
- For the 2030 Aggressive volume scenario, long delays are projected for several movements at the key study intersections.

2030 No-Build Level of Service **Mill Street /Main Street/South Main Street** XXX – PM Peak Hour			
Movement	Existing	2030 No-Build Reduced	2030 No-Build Aggressive
Mill Street EB Left	D	D	F
Mill Street EB Through	D	D	F
Mill Street EB Right	C	C	F
Mill Street WB Left	D	D	E
Mill Street WB Through	D	D	D
Mill Street WB Right	A	A	A
South Main Street Left	C	D	D
South Main Street Through	C	C	D
South Main Street Right	A	B	E
Main Street Left	C	C	F
Main Street Through	B	B	C
Main Street Right	B	B	B
Overall	B	C	D
2030 No-Build Level of Service **Mill Street/Broad Street** XXX – PM Peak Hour			
Movement	Existing	2030 No-Build Reduced	2030 No-Build Aggressive
Mill Street EB Left	C	C	C
Mill Street EB Through	B	C	F
Mill Street EB Right	B	C	F
Mill Street WB Left	C	D	E
Mill Street WB Through	C	D	E
Mill Street WB Right	B	C	E
Broad Street NB Left	D	E	F
Broad Street NB Through	B	C	F
Broad Street NB Right	A	C	F
Broad Street SB Left	B	C	F
Broad Street SB Through	B	B	D
Broad Street SB Right	A	A	B
Overall	B	C	D

2030 No-Build level of service Mill Street/Riverside Drive xxx – PM Peak Hour			
Movement	Existing	2030 No-Build Reduced	2030 No-Build Aggressive
Mill Street Left	B	E	F
Mill Street Through	B	C	F
Mill Street Right	A	C	F
Driveway Left	C	D	F
Driveway Through	B	D	F
Driveway Right	A	D	F
Riverside Drive NB Left	A	A	A
Riverside Drive NB Through	A	A	A
Riverside Drive NB Right	A	A	A
Riverside Drive SB Left	A	B	E
Riverside Drive SB Through	A	B	E
Riverside Drive SB Right	A	C	C
Overall	A	B	F

2030 No-Build level of service Broad Street/Riverside Drive xxx – PM Peak Hour			
Movement	Existing	2030 No-Build Reduced	2030 No-Build Aggressive
Riverside Dr WB Left	E	F	F
Riverside Dr WB Through	D	F	F
Riverside Dr WB Right	B	F	F
Riverside Drive EB Left	A	A	B
Riverside Drive EB Through	A	A	A
Riverside Drive EB Right	A	A	A
Broad Street NB Left	A	A	A
Broad Street NB Through	A	A	A
Broad Street NB Right	A	A	A
Broad Street SB Left	A	A	B
Broad Street SB Through	A	A	B
Broad Street SB Right	A	A	A

6. Existing Zoning, Land Use and Urban Design Conditions

6.1 Introduction

New Auburn Center was platted as a grid in the tradition of many great downtowns. This grid system established a strong relationship between streets and blocks of buildings, creating a direct relationship between urban form and mobility. See **Figure 3** for an image of the historic plat. The formal platting of the grid was not perfect. In draping the grid over the area, topography and the confluence of the Little Androscoggin and the Androscoggin Rivers as well as the alignment of Mill Street created variations that give New Auburn Village Center its unique character – but have also created challenges for redevelopment and pedestrian and vehicular circulation. **Figure 11** shows Mill Street cutting across the grid, creating a direct route for traffic, but inefficient intersections and development parcels.

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Figure 11: Aerial Showing New Auburn with Mill Street Bisecting the grid.

All the streets in the original plan were not the same. A hierarchy based on the intensity and type of use created streets of varying character. For example, Fifth Street between Mill and Broad Streets was different than Broad Street between Riverside and Mill Streets. This direct relationship between function and character has in part eroded overtime – especially on Mill, Broad and South Main Streets – as the accommodation of the car and regional traffic has in many cases been favored over the needs of New Auburn Village Center proper.

As New Auburn Center grew and the grid and intersections became more legible with the construction of buildings lining the streets including such landmarks such as the Baker Mill Complex, the historic firehouse building and the St. Louis Parish campus, the experience of living “on the grid” became more dynamic. The dynamic nature of the grid was further enhanced by the dramatic topography, which frames views of landscapes and landmarks in the distance. Thus the grid functions to orient one within Auburn as well as to the greater context.

This rich history of the built environment, natural features and the greater context is an excellent starting point for understanding the potential for revitalizing New Auburn Village Center in a manner meeting the needs of the community today and into the future. One such example is the current focus on recovering the flood plain for public access along the Little Androscoggin and Androscoggin Rivers. As originally platted, the City turned its back to the rivers. Waterfronts are now part of the new economy. Rivers are valued for recreational opportunities, habitat and beauty, not just as sources for generating power.

The New Auburn Center grid – the urban fabric – has responded to the New Auburn Fire of 1933, which destroyed 249 buildings, the closure of mills and, changing demographics and uses, the South Main extension and the absorption of regional traffic flows. The grid has also been impacted by the placement of buildings that do not properly address the street and changes to intersections that benefitted the movement of vehicles through the area over intrinsic value of the area. Grids have elasticity, but New Auburn Center has become increasingly fragmented over the years. The community now has the opportunity to revisit the past and relink legible urban form with economic development as part of a new 21st Century economy.

The 2009 New Auburn Master Plan is an excellent guiding document for the Study. In regards to the study area (see **Figure 13** for the Proposed Zoning Districts) the vision for the community includes a "well designed commercial core that serves as the community's downtown. The district is compact with buildings facing the street and ample sides and green spaces to encourage a lively environment. In character with the surrounding neighborhoods, this mixed-use village provides fist floor small-scale commercial and retail use and upper floor offices and residential uses. Historic buildings in the area have been maintained and refurbished and act as a model for scale and design of new buildings. A focus is placed on supporting local neighborhood businesses including salons, pharmacies, Laundromats, markets, and specialty retail stores. There are cafes, restaurant, and pubs that provide places for residents and visitors to gather." In terms of the more adjacent residential streets, the Master Plan envisions "a high-density residential neighborhood that also supports small-scale non-residential development. This urban neighborhood promotes mixed-use buildings that include upper floor owner and renter occupied apartments and as condominiums well as ground floor businesses, such as bakeries, specialty markets, cafes, art studio, and professional offices."

The Master Plan outlines a future for New Auburn Village Center that reconciles different modes of travel with different uses in a manner that strengthens the historic patterns of growth in the area. Mobility and urban form are not mutually exclusive, but inform each other to create a place that attracts investment and is inviting for the full demographic spectrum.

6.2 Existing Zoning

As shown on **Figure 12** the study area is currently comprised of the General Business and Multi-Family Urban Districts. In addition there is a Flood Plain Overlay and Shoreland Overlay District along the Little Androscoggin and Androscoggin Rivers. **Figure 19** shows the extent of the 100-year flood plain as defined by the 135' contour.

The purpose of the General Business District (to be primarily rezoned as the New Auburn Village Center, Riverfront Transition and Limited Business Development Districts):

This District is intended to include commercial uses serving both the City and the region, together with normal accessory uses compatible with a cohesive and attractive shopping and office area.

Key standards:

- Uses: The allowable uses are generally appropriate
- Lot Width: 100'
- Lot Depth: 100'
- Minimum Front Setback: 25' or average of 25% of lot
- Height: Four stories or 45'

General review of standards (as the City proceed to implement the standards for the New Auburn Center Village District):

- Considerer Residential dwelling uses allowed in the Multi-Family Urban versus the Multi-Family Urban District;
- The prohibition of restaurants or restaurants with drive-in facilities is appropriate in an area with limited space and the focus is on creating a strong relationship between the building and the street;
- Off-street parking standards should be more flexible, recognizing that certain uses do not need parking at the same time;
- Major Retail Development (over 100,000 SF of new ground floor retail space) is a large footprint and out of scale with the existing pattern of development. In addition, and more problematic, is that the required off-street parking for such types of development often exceed the footprint of the building;
- Buildings should have a **maximum** front setback of 0' to 15' to encourage a vibrant pedestrian realm;
- Allow for 0' side setbacks, which allows for a continuous building edge reinforcing the pedestrian realm;
- Consider a prohibition of single-family homes or only allow one-unit buildings if residence is on second floor or above;
- There are several one-story buildings in the area that do not contribute to the proper sense of scale and do not take advantage the allowed and desired density for an urban center;
- The most recent full site development has a building that does not directly address Broad, Riverside or Mill Street. The site plan is suburban in nature, with a focus on serving the needs of the car, not the pedestrian. In tight knit

urban areas with limited space, every effort should be made to develop sites in a manner reinforcing the pedestrian experience by placing buildings directly adjacent to sidewalks;
- The pedestrian network does not allow for complete and safe movement through the area, which discourages pedestrian activity, and;
- In urban areas designated parks as well as the activated streetscape are the primary "open spaces." Consider reducing the required 50% open space per each lot. This would free up more space on each lot for building coverage as well as off-street parking. In addition, many urban areas are now also allowing green roofs to count towards "open space" coverage.

The purpose of the Multi-Family Urban District (to be primarily rezoned as the New Auburn Center Enterprise District):

> This district is intended to stabilize and protect medium to high-density residential areas by providing for a varied denser urban pattern made suitable to the needs of the population by encouraging a range of housing types. This multi-family zone has maximum density of 17 dwellings units per acre, yet retains the open character of residential areas by requiring 50 percent green space. It is intended that this district will provide the maximum possible freedom in the design of structures and their grouping and will encourage flexible and imaginative layouts and designs.

Key standards:
- Uses: The allowable uses are generally appropriate
- Lot Width: 100'
- Lot Depth: 100 to 200'
- Minimum Front Setback: 25' or average depth of 25% of lot
- Height: Four stories or 45'

General review of purpose and standards (as the City proceed to implement the standards for the New Auburn Center Village District):

- Consider Residential dwelling uses allowed in the Multi-Family Urban versus the Multi-Family Suburban District;
- Farming of field crops, row crops, orchards, truck gardens are uses that require extensive space in an area that should focus on density of residential uses, pocket parks and quality streetscapes. Farming is now used in some shrinking cities as a landscape urbanism strategy for creating a ecological / economic framework, but New Auburn is not a shrinking city like Detroit;
- Do not require subdivision review for multi-family units. This will ease the permitting process and encourage reinvestment;
- Do not make multi-family units in existence prior to September 23, 1988 a non-conforming use. Find other mechanisms for controlling the quality of housing stock and density in order to encourage investment;
- Buildings should have a **maximum** front setback of 0' to 25' to encourage a vibrant pedestrian realm;

- Buildings on corner lots should define the intersection with appropriated scaled landscaping or fencing made of quality materials, and;
- Do not require that professional offices be in buildings that are listed on the State Resource List and/or Federal Historic Register. This limits investment to a number of buildings in the proposed District.

Summary: Aspects of existing zoning and standards, such as building placement, parking requirements, and the creation of a civic public realm need to be more urban rather than suburban in nature to encourage redevelopment and align with the vision outlined in the New Auburn Master Plan, the Auburn Comprehensive Plan and the goals of the New Auburn Village Center Study. Existing zoning and standards allow for suburban type development that is an inefficient use of land, favors vehicles and does not include deliberate strategies and tactics to increase the vibrancy of the neighborhood.

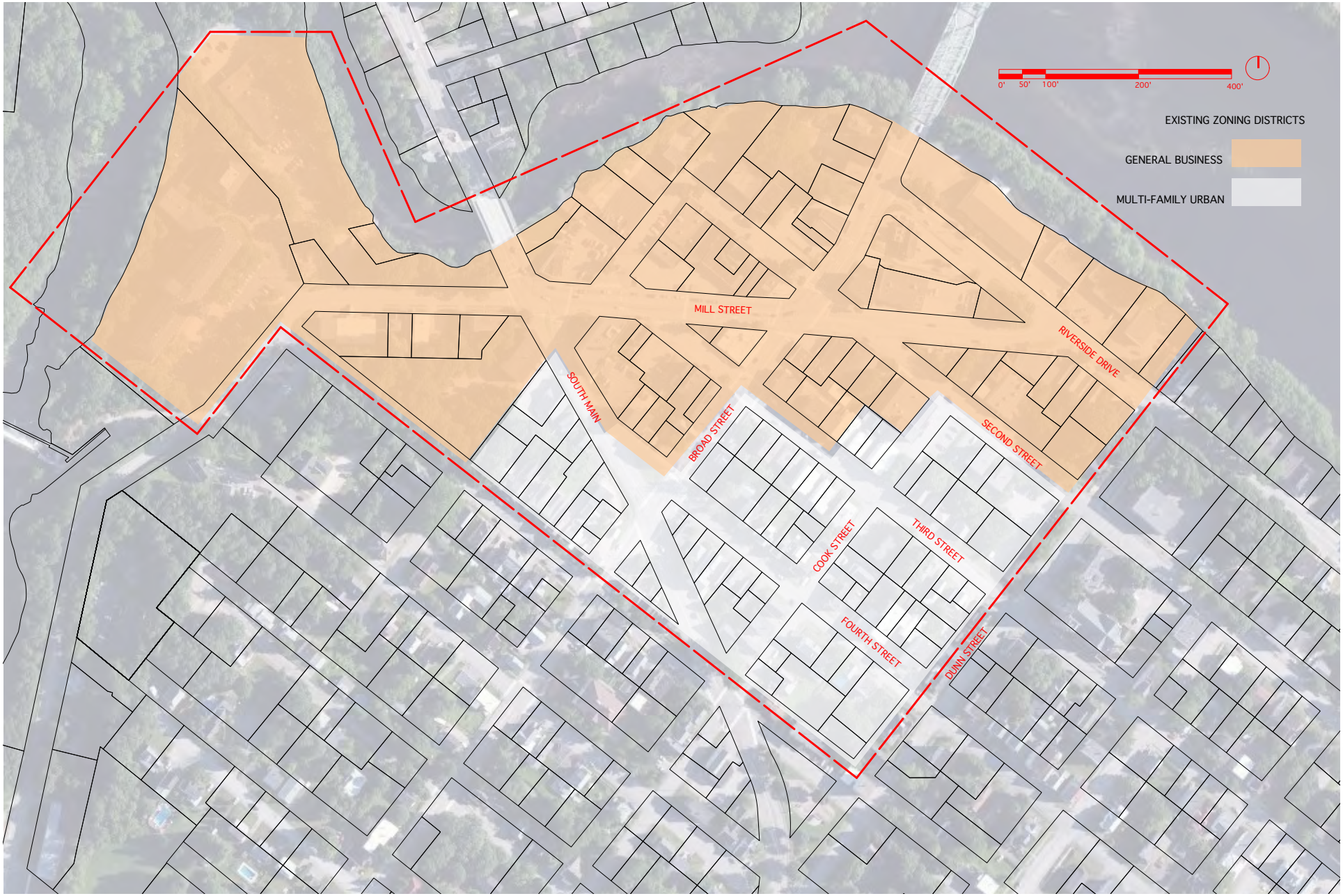


Figure 12: Existing Zoning

6.3 Proposed Zoning

The 2009 New Auburn Master Plan was incorporated into the 2011 Auburn Comprehensive Plan. This New Auburn Village Center Study is more focused planning effort looking at the downtown mixed-use core of New Auburn Center and the adjacent high-density residential neighborhoods supporting the core. The core is primarily commercial, but includes several of the areas largest multi-family buildings. The surrounding neighborhoods are primary residential with scattered professional / commercial / social / institutional uses. The Comprehensive Plan recommends rezoning the study area into the following four Districts as shown on **Figure 13**.

New Auburn Village District

Objective:

Promote the upgrading and redevelopment of the traditional New Auburn Village Center District. The district is intended to assure that development or redevelopment occurs in a manner
that reinforces the historic village/urban pattern of development with a strong pedestrian orientation, buildings located close to the street, and parking located at the side or rear of the buildings. The focus of the City's land use regulations in this area should be on allowing property owners flexibility in the reuse and redevelopment of properties as long as the "village/urban character" is maintained.

Automotive-related uses, including vehicle repair and service stations, should not be allowed within this district. Drive-through services should be allowed, but only if they are located and designed in a manner that is compatible with a pedestrian-friendly, village environment.

Development Standards:

The standards in the New Auburn Village Center District should allow property owners flexibility in the use and development/redevelopment of properties, as long as an urban/village pattern of development is maintained.

Lot size and frontage requirements should be minimized or eliminated. Setback requirements should allow buildings to be located at the sidewalk line, and side setbacks should not be required. Any area between the front of the building and the street should be required to be used for pedestrian purposes, including outdoor spaces, and vehicle use should be prohibited. Parking should be required to be located at the side or rear of the building, but the minimum parking requirement should be reduced, and new or redeveloped properties should be allowed to count the use of shared or public parking to meet the standard.

New Auburn Enterprise District:

Objective:

Encourage the reinvestment in property on the fringe of the New Auburn Village Center District through a combination of upgrading of the public infrastructure and allowing limited commercial use of existing buildings. The commercial use within residential buildings should be secondary to the residential use and should be limited to low intensity uses that do not detract from the area's residential character

Retail and other uses that rely on commuters or pass-by customers for a significant share of their market should not be allowed in the New Auburn Enterprise District.

Development Standards:

Residential development and redevelopment should be allowed at density of up to 12-18 units per acre. The reuse/reconfiguration of space within existing buildings for residential purposes should be allowed without consideration of the density/lot size requirements provided that the
buildings will be renovated, be compatible with the neighborhood, and meet the City's requirements for residential units including the provision of appropriate parking and green space.
The development standards should allow for development to occur in a manner that is similar to the existing pattern of setbacks within the district. Residential buildings with nonresidential uses should be allowed to consider shared parking to meet their parking requirements.

Riverfront Transition District:

Objective:

Reclaim developed areas within the 100-Year floodplain of the Androscoggin River
for open space and public usage through a combination of regulation and acquisition. Within these areas, the City should limit new development and redevelopment while acquiring property from willing sellers for fair market value. Once blocks of riverfront are acquired, these should be redeveloped as public open space with extension of the River walk trail system where appropriate.

Existing developed properties within the Riverfront Transition District should be allowed to continue to be used for their current use and be maintained and expanded within
strict limits. New development or redevelopment for residential or commercial purposes should not be permitted. Allowed uses in the Riverfront Transition District should be limited to
recreational and open space uses, and facilities for providing public access to the river, including boat/canoe launches.

Development Standards:

The standards for the Riverfront Transition District should allow existing buildings to be expanded by up to 30% of the current building footprint or building volume as long as the expansion does not make the building closer to the shoreline. New development including parking and recreational facilities other than trails/paths and facilities for water access should be required to be set back from the shoreline to create a "green edge" along the shoreline.

Limited Business Development District:

Objective:

Allow for the development and redevelopment of small and moderate scale nonresidential uses in areas that have good vehicle access and are served or can be served by public water and sewerage Since these districts are often located adjacent to existing residential neighborhoods or residentially zoned areas, the allowed uses and development standards are intended to assure that activity within these districts have minimal adverse impact on the adjacent residential areas. In addition to nonresidential activity, the Limited Business Development District should allow for both existing and new residential uses at a density of up to 10-12 units per acre.

Development Standards:

The focus of the City's development standards for the Limited Business Development District should be on assuring that new development or redevelopment/expansion of existing uses is done in a manner the results in well-designed, attractive projects that minimize the potential for undesirable impacts. To ensure that redevelopment/conversion of residential buildings to nonresidential uses is compatible with the design and character of the community; these projects should require site plan review. The review standards should include provisions to manage the amount and location of vehicular access to the site, minimize storm water runoff and other potential environmental impacts, require an attractive treatment along the boundary between the lot and the street, and provide for the buffering of adjacent residential districts.

Multifamily housing and townhouse style development should be allowed at a density of up to 10-12 units per acre, while single and two-family housing should be allowed at a density of up to 6-8 units per acre. Conversion of older single-family units to duplexes is encouraged, as well as the full utilization of all established units within multi-unit buildings provided that the building will be renovated and meet the City's requirements for residential units, including the provision of appropriate parking and green space.

Summary: The Comprehensive Plan vision and proposed standards and uses for the New Auburn Master Plan area are consistent with the goals of the New Auburn Village Center Study in order to create a downtown that:

- Acknowledges the environmental, cultural and economic benefits of the Little Androscoggin and Androscoggin River;
- Encourages uses that support a local economy;
- Requires the placement of buildings that reinforce a pedestrian realm;
- Allows for appropriate mix of uses and densities encouraging a range of economic development opportunities that reinforce urban form and neighborhood character;
- Assumes ongoing strategic public investment in transportation and public realm infrastructure to attract private sector investment, and;
- Respects the historic urban form of the New Auburn Center grid through appropriate transportation policies and urban design standards

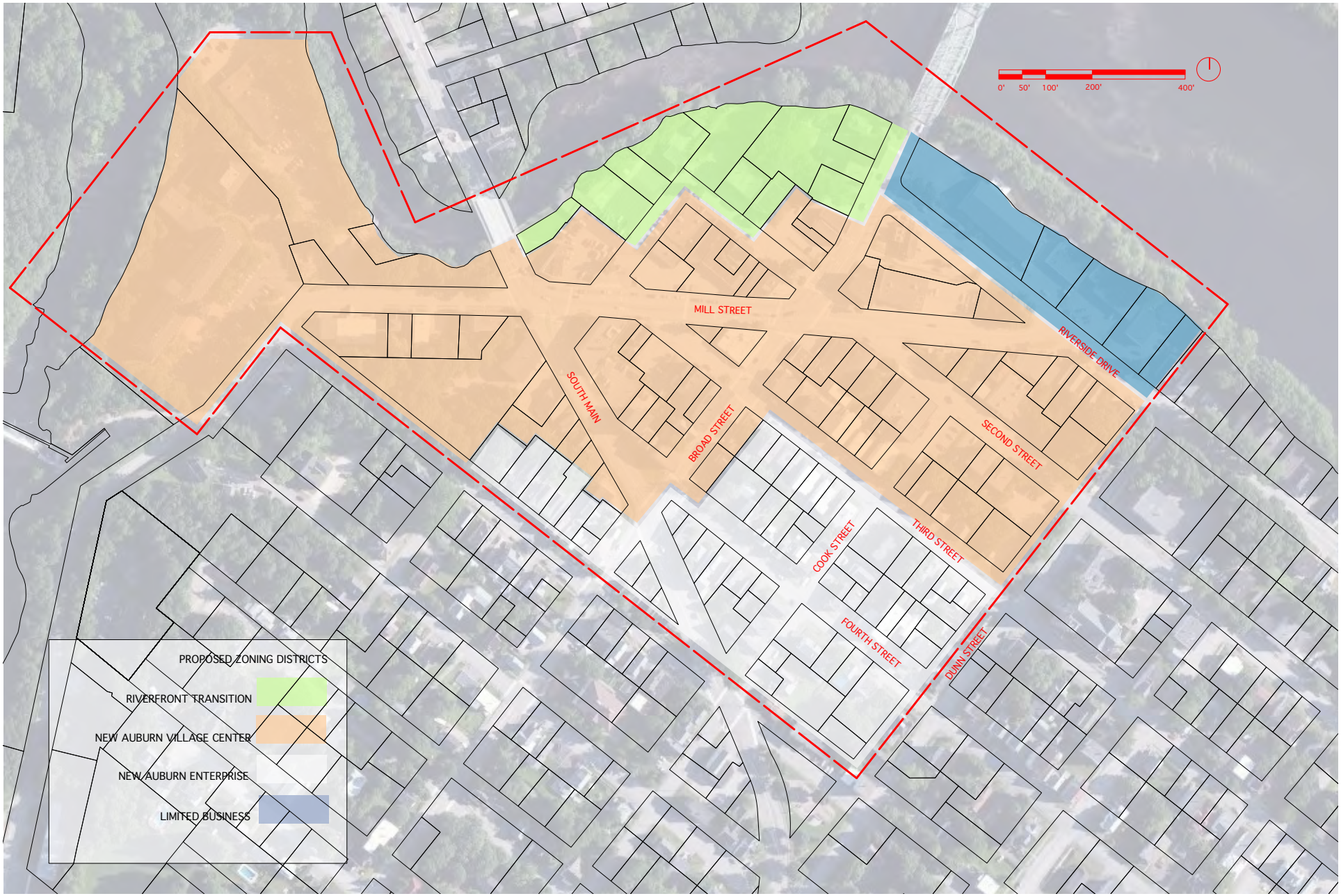


Figure 13: Proposed Zoning - From New Auburn Master Plan

6.4 Urban Form, Street Space and Sight Lines

As noted in the introduction and further analyzed below, New Auburn Village Center has a strong and legible urban form in large part due to the street grid. Overtime, buildings filled the blocks creating well-defined street "walls." Many of the streets in New Auburn Village Center have all the components that are desired in contemporary communities designed to meet the fundamental principles of New Urbanism. The components of these ideal streets or what is sometimes called the "outdoor room" include:

- A 3:1 building face to building face to building height ratio
- A semi-public realm with front porches or a small front lawn
- Buildings set close to the front property line in a consistent manner
- A public pedestrian realm including sidewalks and an esplanade with street trees
- On-street parking
- Travel lanes (a two-way street is preferred)

See **Figure 14** for a diagram analysis of an ideal street in New Auburn.

Figure 14 is an analysis of Cook Street, which includes the components of an ideal street or the “outdoor room.”

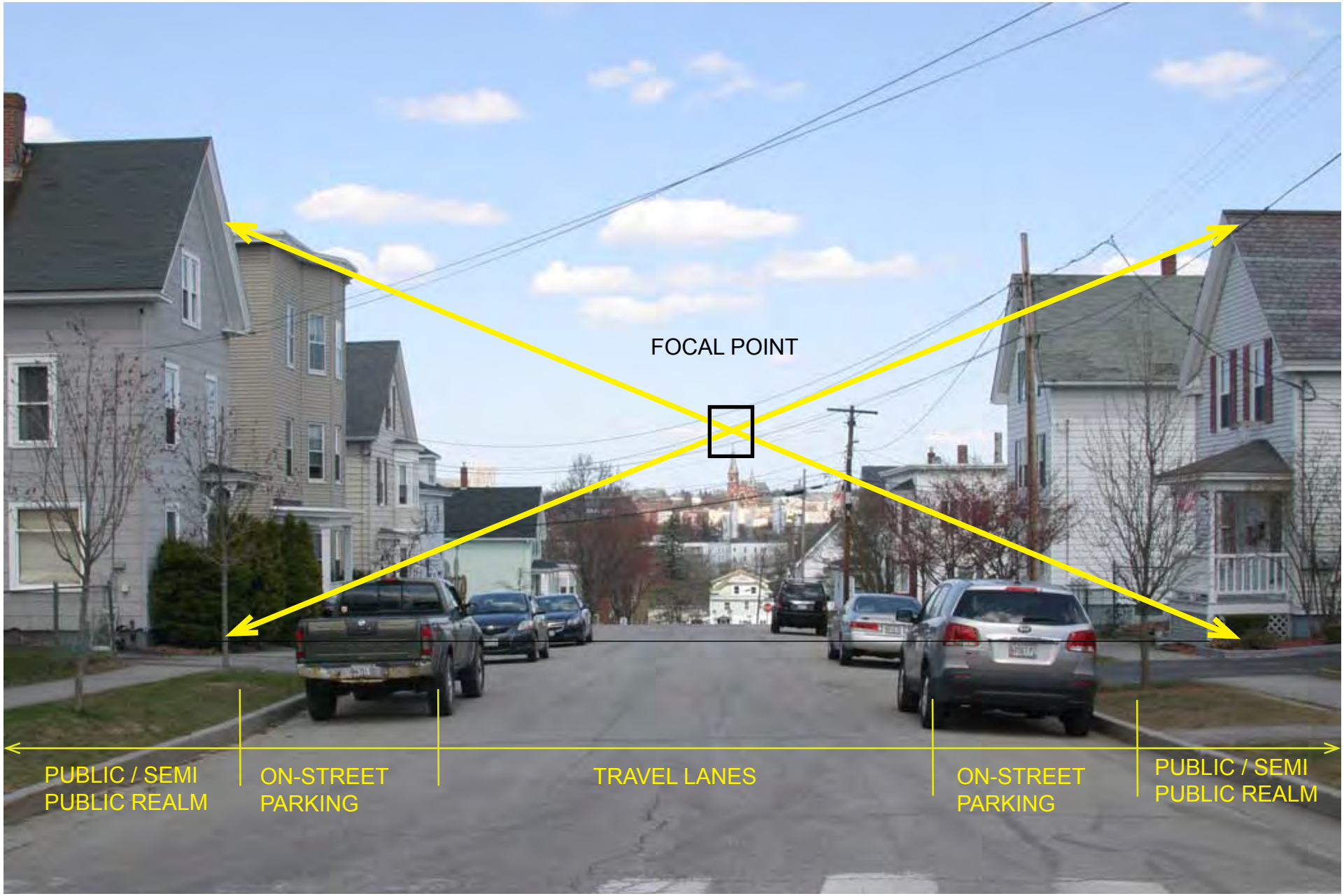


Figure 14: Elements of an Ideal Street

As previously noted, the street grid and change in topography allow for the framing of distant landscapes and landmarks in Auburn and Lewiston. These vistas add to the dynamic quality of moving through the streets in the study area that are in general scaled to the pedestrian.

Fifth at Broad Looking Towards Barker Mill and Auburn

Broad at Fifth Looking Towards Lewiston

South Main at Cook Looking Towards Auburn (buildings are45 degrees to road because South Main cuts through historic block)

Cook at South Main Looking Towards Lewiston

Dunn at Sixth and South Main Looking Towards Lewiston

Fourth at Dunn looking towards Lewiston

Third at Dunn looking towards Auburn

Second at Dunn looking towards Auburn

Riverside at Dunn looking towards Broad Street

Not all of the above examples of streets and sight lines are perfectly framed. Some of the edges to the street are undefined due to no building, lack of streetscape, wide curb cuts or parking lots directly adjacent to the street. The experience of the streets can be enhanced with improved access management, infill development and streetscaping,

which includes curbing, street trees and sidewalks. **Figure 15** is a Figure / Ground Study of New Auburn Center. This graphic depicts the footprints of buildings. It is valuable for understanding the pattern and scale of growth as well as identifying missing pieces in the urban fabric and where streets are not well defined by buildings. In general, the lands north of Mill Street have become fragmented over time. South Main is also apparent as it cuts through the grid creating odd shaped lots and complex intersections. It is easy to identify the blocks that are more residential in nature due to the finer grain of the footprints.

Figure 15: Figure / Ground Analysis of Development Patterns

Summary: New Auburn Center has numerous opportunities to simultaneously strengthen the historic urban form through public and private investments in traffic infrastructure, streetscaping and redevelopment of infill development at the appropriate scale and located as to define the street wall.

In reconsidering zoning for the downtown area, consider a Form-Based Code approach versus a more traditional land use approach. To better align the Master Plan with the Study:

- **Zone the proposed Limited Business District to the proposed New Auburn Village Zone**
- **Integrate the Riverway south into the New Auburn Village Zone – removing it from the Riverfront Transition Zone**

6.5 Street Types and Hierarchies

As noted earlier, Mill Street, Main Street, and Broad Street east of Mill Street are functionally classified as an Other Principal Arterial. South Main Street, Riverside Drive, Broad Street west of Mill Street, and Mill Street east of Broad Street are classified as a Major Urban Collector. All other roadways in the study area are local streets. In simplistic terms, "functional classification" reflects a highway's balance between providing land access versus mobility. The functional classification definitions for the streets in the study area are:

Other Principal Arterial: Highways that provide long distance connections, but are not Freeways such as 295 or Interstates such as 95.

Major Urban Collector: Provides both land access and traffic circulation within urban residential neighborhoods and commercial and industrial areas in federally designated Urban Areas. Route density is much higher than in rural areas.

Local Urban Streets: All urban streets in a federally designated Urban Area that are not in one of the other higher systems. They permit direct access to land, route density is higher than rural areas, and they connect to the higher systems. They also offer lower mobility and service and through-traffic movement is deliberately discouraged.

In this portion of the Study, streets are identified in terms of their current role in relations to the land use and urban form of New Auburn Village Center. Because the streets are already part of a platted network – a network which has evolved over time to handle increasing traffic volumes more than support economic growth in New Auburn Center – the intention is to understand how all the streets can have the character of local streets, but have varying functional aspects based on the desired capacity for traffic volumes. An ideal downtown has fewer street classifications. There is no empirical evidence provided for this except for the experience of visiting vibrant places. Vibrant places have diversity, but not extremes. A place tends to be more coherent when there are less formal differences between the design of streets. There should be variation, but more a variation on a theme rather than distinct divisions. The goal is to create connections, not divide or

bypass the community as was often prior to current thinking on integrating mobility and land use. In the most traditional sense, a place may have a Main Street and then side streets. This simplicity is not always easy or possible to maintain with the regionalization of growth, but it is something to consider if it is the goal of the community.

The design of streets is a major factor in how a community envisions the future of a place. Great streets are also great places. The streets must function, but the level of service should be tempered by the values of the community, not just the desire to efficiently move traffic through New Auburn Village Center.

Figure 16 is a diagram of the mapped streets by mapping use and using intuition, not traffic counts combined with the proposed zoning districts. Zoning district lines typically distinct use areas that are located on discrete parcels, follow natural features such as a river, are setback a specific distance from the centerline of a street or are located down the center of streets. Diversity is key to vibrancy, but consistency is important for creating an urban framework that is legible and practical. To achieve the traditional street form of an “outdoor room”, but sides of the street should have the same design standards and allowable uses. This is not to require a monotonous mirror image between the different sides of the street, but provide diversity without extremes. Buildings on either side of a street should be approximately the same height. The streetscape on either side of the street should unify the space, but diversity in street trees, signage and other components do not distract from the whole.

After combining the intuitive street mapping with the proposed zoning in **Figure 16**, only Third Street was the clear divide between two zones: the New Auburn Village Center and New Auburn Enterprise Districts. These are names and the standards and uses may be similar to the extent that Third Street will be a blurry district line, but there is an underlying vision between the zones and it is important to understand why one vision or objective is applicable to one side of the street and the other vision is applicable to the other side of the street. Is this the best way to make coherent places?

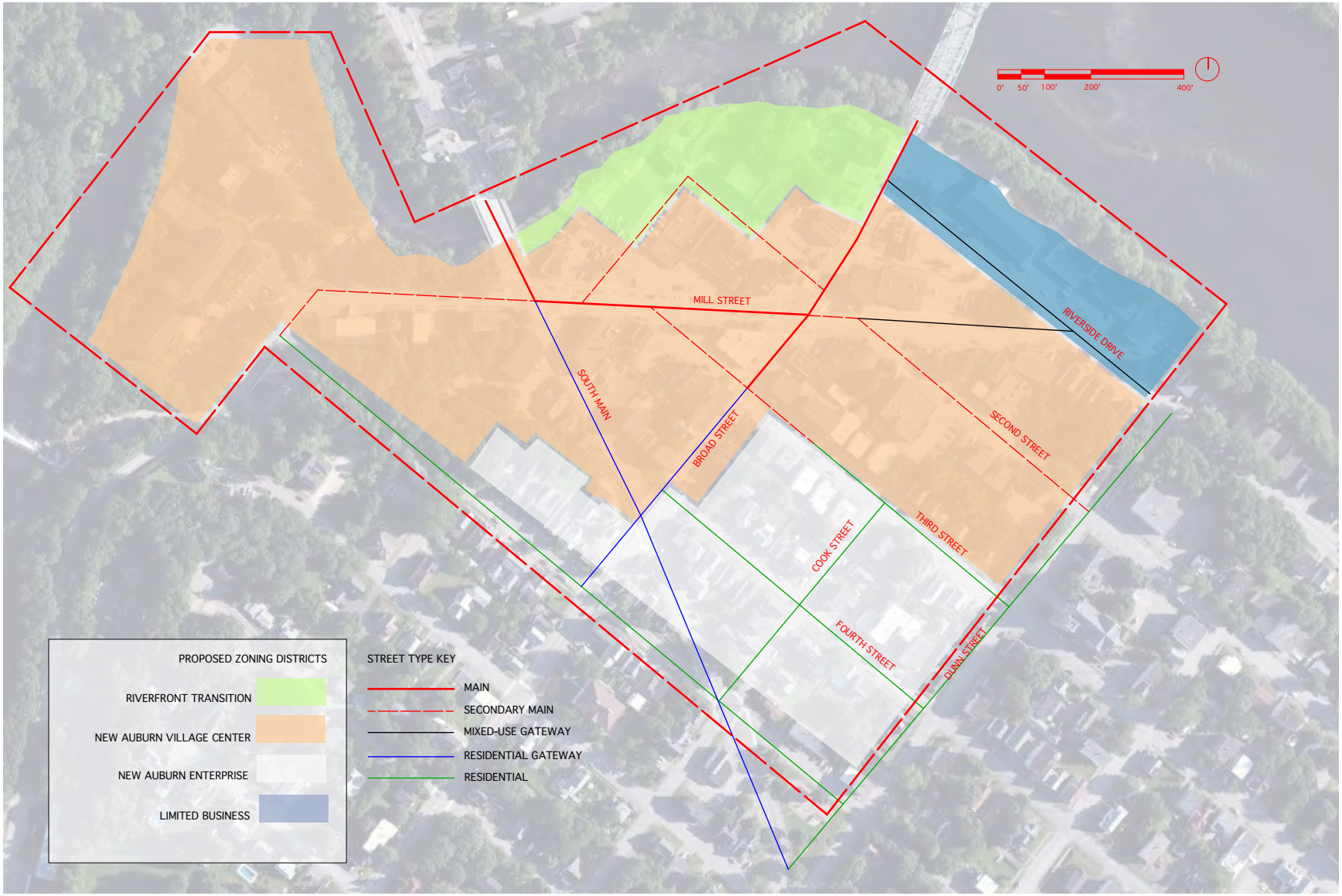


Figure 16: Proposed Zoning from New Auburn Master Plan combined with Intuitive Street Mapping

Summary: Streets are places. Vibrant places are diverse, but do not have extremes. Urban renewal introduced extremes to many cities. Years later many communities are trying repair the damage by such aggressive transportation choices that were not sensitive to context or community values.

6.6 Open Space and Natural Features

As previously discussed, the natural features of the area played a central role in shaping the economy, culture and urban form of New Auburn Village Center. The Little Androscoggin and Androscoggin Rivers defined edges of the community. It has also been noted that the grid of streets in conjunction with the change in topography creates dramatically framed views of Auburn and Lewiston.

As discussed below, a typical block length of the grid is 400' by 200'. It is no coincidence that the long side of a block is in general parallel with the slope of the topography. This allows for an efficient layout of streets maximizing the number of units fronting each street while the depth of each block is typically two lots deep – allowing for a traditional formal arrangement of buildings fronting the street in a public manner and the two private backyards addressing each other. The streets are relatively flat and the backyards absorb the change in grade. This formal relationship is made evident where South Main cuts through the middle of a block from Broad to Cook, exposing the back of the homes fronting Fifth and Fourth Streets. In this instance, the traditional urban form of the area was disrupted to benefit the car.

The topography in the area levels off at Riverside Drive and Mill Street. These are in effect the toe of the slope and are probably the extent of the 200-year flood plain. Urban landscapes are often highly manipulated through cut and fill, but as with the orientation of the grid, it is probably not a coincidence that Mill Street follows the bottom of the hillside, cutting an angle across the grid. If the topography extended further to Broad Street in this area, Mill Street would probably not have the alignment it does today: a direct connection between Riverside and the Main Street Bridge / Barker Mill complex.

In addition to the importance of making the public realm of the streets safe and inviting "open space", the City is pursuing a larger plan of connectivity and open space planning to help revitalize New Auburn Village Center by providing new opportunities for recreation and public access. As with many riverfronts, for many years New Auburn Village Center turned its back on the Little Androscoggin. It was not considered as an asset in the way that natural resources now valued as important components in economic development plans. The City is not planning a waterfront park just for the sake of access, but creating a place that is unique to New Auburn Village Center. The expanded Riverwalk will link the riverfront to a greater system of trails and open spaces as well as create opportunities for redevelopment in the area to address both the river and the formal street grid.

The proposed Riverfront Transition District will enable a focal point in the heart of New Auburn Village Center that integrates urban and ecological systems. One will be able to move upstream along the Little Androscoggin to the open space on the Barker Mill peninsula, to the Barker Mill Trail, then along Mill Street to Sherwood Heights, across to the Huston Farm / Oak Point / Walton School open space and finally back along the Androscoggin River to the Little Androscoggin River. This loop system will complement the more urban streetscapes that currently provide almost complete connectivity throughout New Auburn.

Summary: The development of New Auburn Center, both formally and economically, is directly related to natural features such as the rivers and the topography. While the orientation of the street grid still works with the topography and is a clue as to best place future buildings, the identification of the Little Androscoggin River as an asset to showcase will help inform how the core of the downtown grows and becomes a magnet for 21st Century economic development.

6.7 Parking

Strategically placed parking is critical for supporting businesses, however it should not detract from urban form. Off-street parking, access and internal circulation are often placed between buildings and the street, creating a suburban or strip mall arrangement in an urban setting. It is a goal of the New Auburn Village Center Study to best integrate parking where it does not become a visually and functionally dominant “land use.”

As redevelopment occurs, the demand for parking increases. As part of an economic development plan it is critical to understand how ideal build-out scenarios will impact parking supply and demand. For example, if a key corner parcel is redeveloped with a three-story building, both the new parking demand and the displaced parking have to be considered in a holistic manner.

Parking is part of the math of a successful place, an integral aspect of the future of New Auburn Village Center, but the community will have to decide where it is best located, the role it plays in the daily function, best management strategies and required enforcement if currently lacking.

By beginning with an inventory of available on-street and off-street parking the Master Plan embodies recommendations on build-out scenarios, street design standards and policies regarding parking management, the potential need for community parking as well as any recommended changes to parking ordinances.

Summary: Parking is essential to the success of a downtown, but it has to be strategically located and managed in order to create a place that feels like a city rather than a suburb and enables revitalization through cost sharing such as reducing the required number of parking spaces, developing a shared parking ordinance, maximizing on-street parking and if needed creating a shared public parking facility – either surface or structured.

6.8 Connectivity

The most desirable compact villages and urban centers have a high degree of connectivity, including streets, sidewalks and pathways. Communities with a high degree of connectivity can more efficiently deliver services, reduce emergency response times and offer a greater diversity of experiences because every block is different than the next and every intersection has a unique identity. There are numerous ways to calculate the quality of connectivity and walkability of a community. The following three are the most common.

Pedestrian Shed

Healthy, vibrant places are walkable. People should be able to walk to work, school, church, open space, stores and transit. A pedestrian shed is defined as a five minute walk or approximately 1,320'. As shown on **Figure 17**, starting at the intersection of Mill and Broad Streets all of New Auburn Center (as well as parts of Auburn and Lewiston) is within a five minute pedestrian shed (eight to ten minutes if you are heading uphill.)

Block Lengths

Long blocks are monotonous and do not provide opportunities for taking alternative routes between points A and B. In urban locations it is recommended that block lengths consistently range between 300' to 600'. Portland, OR has a maximum block length of 530'. As shown on **Figure 18**, New Auburn Village Center is comprised of a grid with blocks measuring approximately 200' by 400'. This is an ideal length for connectivity as well as supporting the desired density.

Intersection Density

Intersection density is measured by dividing the number of intersections by the unit of an area, e.g. square mile. The U.S. Green Building Council recommends 140 intersections per square mile to ensure a certain degree of connectivity. The New Auburn Village Center Study area is approximately 38 acres, which using the U.S. Green Building Council benchmark results in a desired number of eight intersections. The study area has 2s well-defined intersections as shown on **Figure 19.** This calculation does not take into account informal paths, alleys or parcel-to-parcel connections.

Summary: New Auburn Village Center is well connected. Connectivity for all modes of travel is at the heart of a safe and vibrant downtown. The recommended sidewalk and intersections improvements will only increase the walkability and connectivity of the area.

Figure 17: Pedestrian Shed

Figure 18: Block Lengths

Figure 19: Intersection Density

6.9 Floodplain

Approximately 5.5 acres of the 18-acre focus area are in the 100-year floodplain as shown on **Figure 20**. Elevation 135 is the base elevation for the flood plain. New buildings require a first floor elevation at elevation 136. The new roads and buildings have been planned to be above the flood plain, which reduces insurance costs and eases permitting.

Figure 20: 100 Year Flood Plain

7.0 Concept Plans

The Master Plan evolved from a series of diagrams that evolved into concept plans exploring different street networks, one-way and two-way traffic flows, building placements, development opportunities and constraints, parking, the relationship between the community and the two rivers and other factors. The concept plans focus the 18-acre "downtown" area of New Auburn, roughly defined by South Main, Broad, Mill to Riverside, and then the Androscoggin and Little Androscoggin river frontage back to South Main. The concept plans were also directly informed by input from the public as well as the Steering Committee. All of the concept plans were vetted by the Steering Committee and staff, leading to the preferred combination of components resulting in the Master Plan. A variety of comparison metrics – as shown in **Table 7.1** – in addition to the Value and Mission Statement guided the evaluation process. As previously noted the five concept plans were carefully evaluated for a range of factors, leading to concept 6, The Riverway as shown on **Figure 25**.

Table 7.1 Concept Matrix							
	Existing Conditions	**One-Way Loop**	**Grid**	**Option 1 Variation**	**Option 1**	**Option 2**	**Riverway**
Metrics							
Study Area	18 Acres +/-	18 Acres +/-	18 Acres +/-	18 Acres +/-	15 Acres +/-	15 Acres +/-	18 Acres +/-
Existing Residential Units	101 Units +/-	65 Units +/-	59 Units +/-	55 Units +/-	49 +/-	55 Units +/-	57 Units +/-
Proposed Residential Units	0	150 Units +/-	186 Units +/-	191 Units +/-	82 +/-	54 Units +/-	192 Units +/-
Total Residential	**101 +/-**	**215 Units +/-**	**245 Units +/-**	**246 Units +/-**	**131 +/-**	**109 Units +/-**	**249 Units +/-**
Existing Commercial	85,048 SF +/-	15,579 SF +/-	15, 579 SF +/-	15,579 SF +/-	15,867 SF +/-	24,953 SF +/-	17,149 SF +/-
Proposed Commercial		90,000 SF +/-	111,600 SF +/-	118,800 SF +/-	76,065 SF +/-	63,225 SF +/-	115,200 SF +/-
Total Commercial	**85,048 SF +/-**	**105,579 SF +/-**	**127, 179 SF +/-**	**134,379 SF +/-**	**91,932 SF +/-**	**88,178 SF +/-**	**132,349 SF +/-**
100-Year Flood Plain	5.5 Acres +/-	9 Acres +/-	9 Acres +/-	9 Acres +/-	9 Acres +/-	9 Acres +/-	9 Acres +/-
ROW	5 Acres +/-	5 Acres +/-	4.40 Acres +/-	4.5 Acres +/-	4 Acres +/-	4.40 Acres +/-	4.50 Acres +/-
Riverfront Park	1.2 Acres +/-	1.2 Acres +/-	1.2 Acres +/-	1.5 Acres +/-	1.55 Acres +/-	1.4 Acres +/-	1.7 Acres +/-
Net Residential Density	**9 Units Per Acre +/-**	**18.22 Units Per Acre +/-**	**19.97 Units Per Acre +/-**	**20.50 Units Per Acre +/-**	**14 Units Per Acre +/-**	**12 Units Per Acre +/-**	**21 Units Per Acre +/-**
On-Street Parking Off-Street Public Parking Off-Street Private Parking	90 +/- 14 +/- 256 +/-	146 +/- 0 348 +/-	160 +/- 0 398 +/-	181 +/- 0 412 +/-	123 +/- 14 +/- 299 +/-	125 +/- 14 +/- 241 +/-	170 +/- 0 291 +/-
Sub Total Existing Parking	*360 +/-*	*494 +/-*	*558 +/-*	*593 +/-*	*436 +/-*	*380 +/-*	*461 +/-*
Total Required Parking by Uses	425 +/-	674 +/-	791 +/-	816 +/-	502 +/-	458 +/-	814 +/-
Total Required w/ 1/3 Shared Efficiency	280 +/-	452 +/-	530 +/-	547 +/-	337 +/-	307 +/-	546 +/-

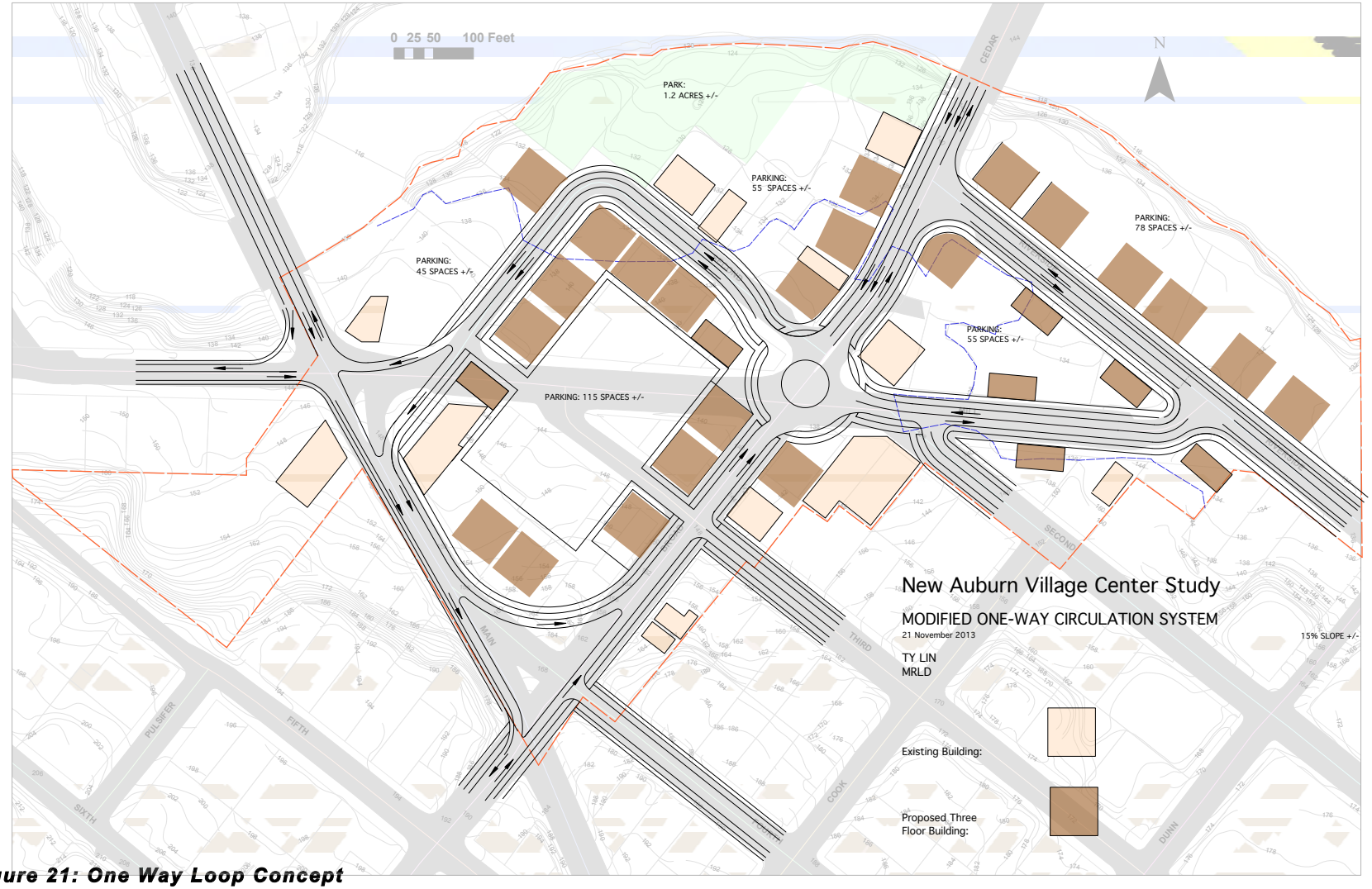


Figure 21: One Way Loop Concept

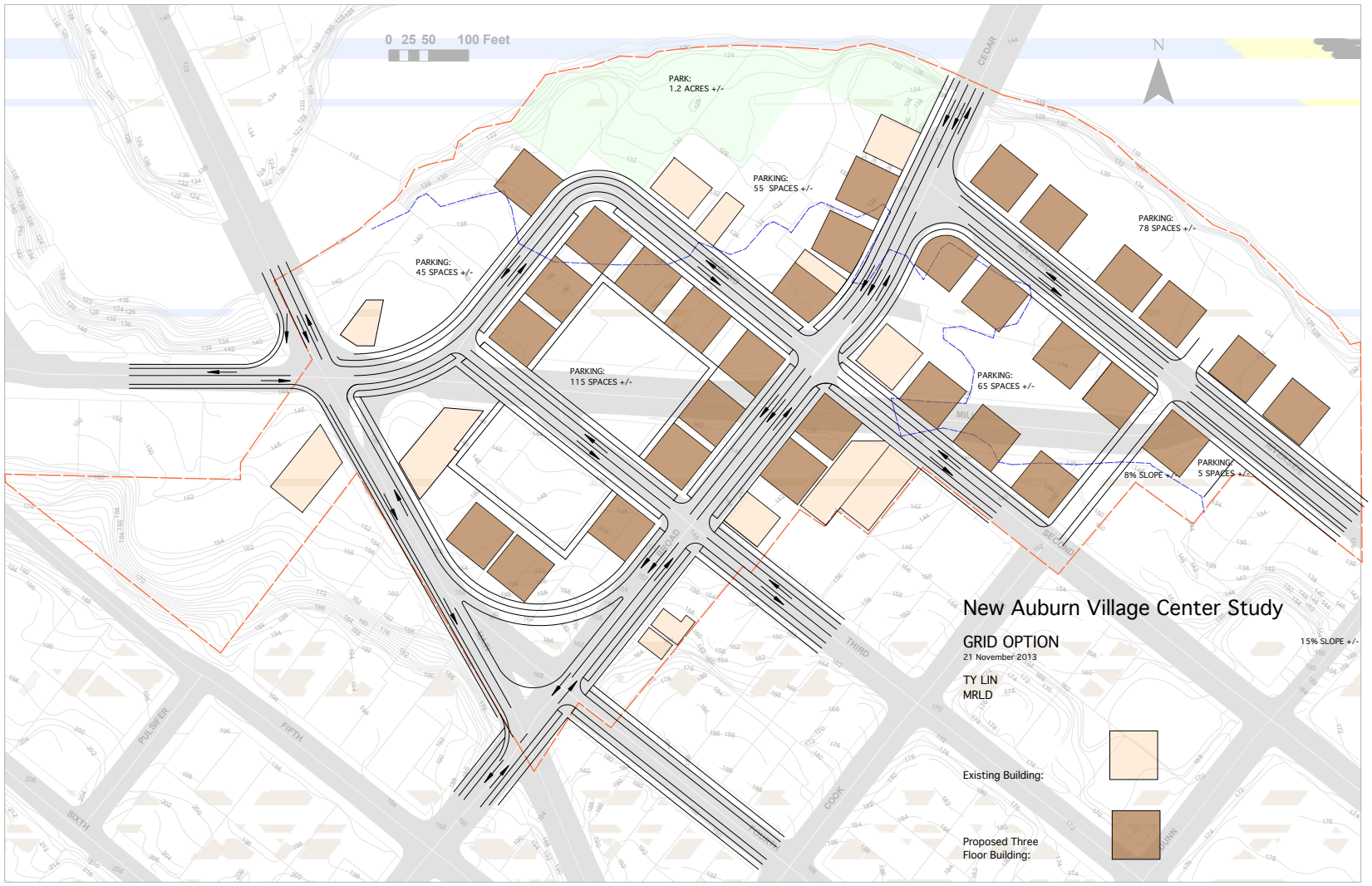


Figure 22: Grid Concept

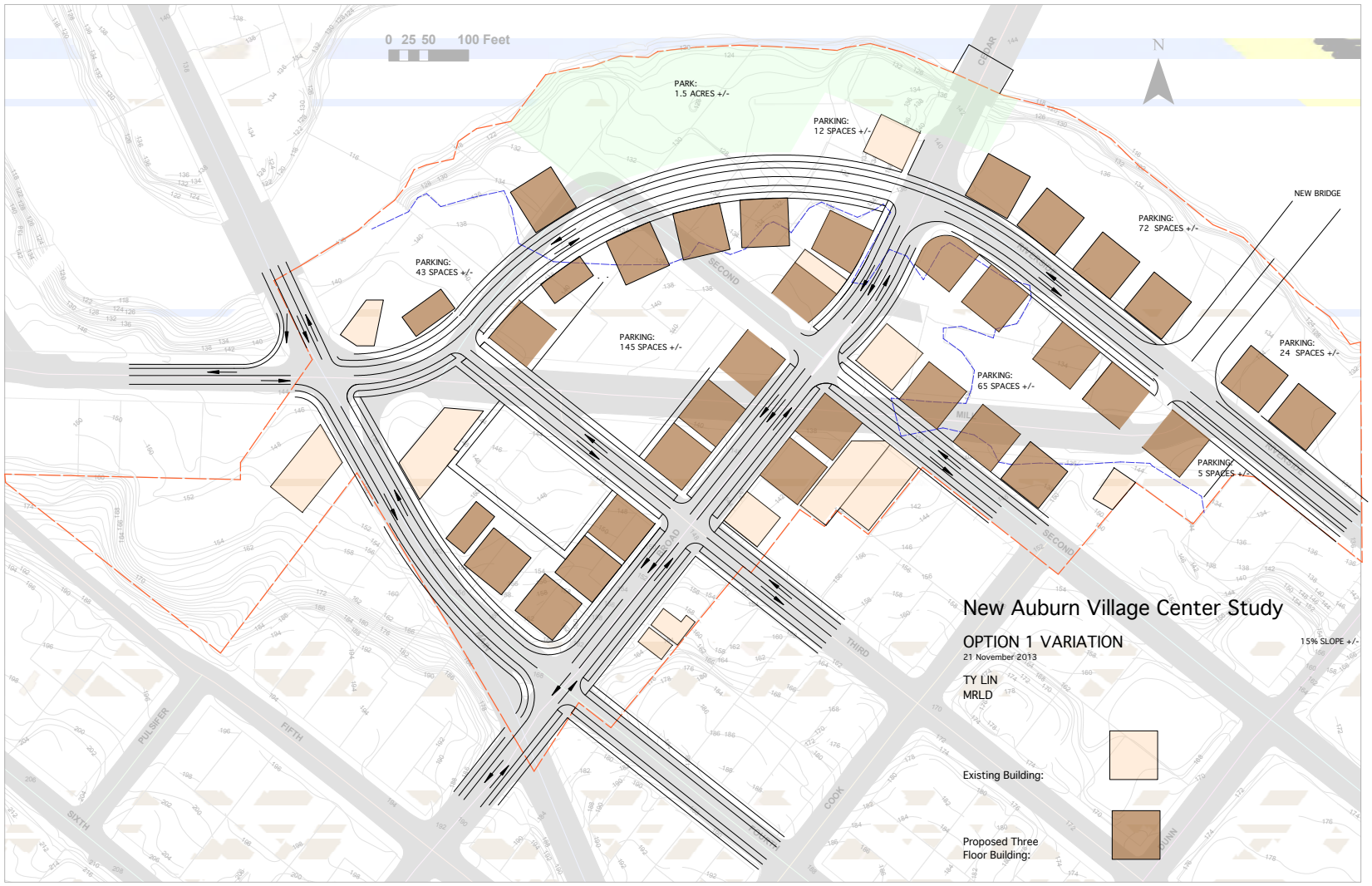


Figure 23: Option 1 Concept Variation

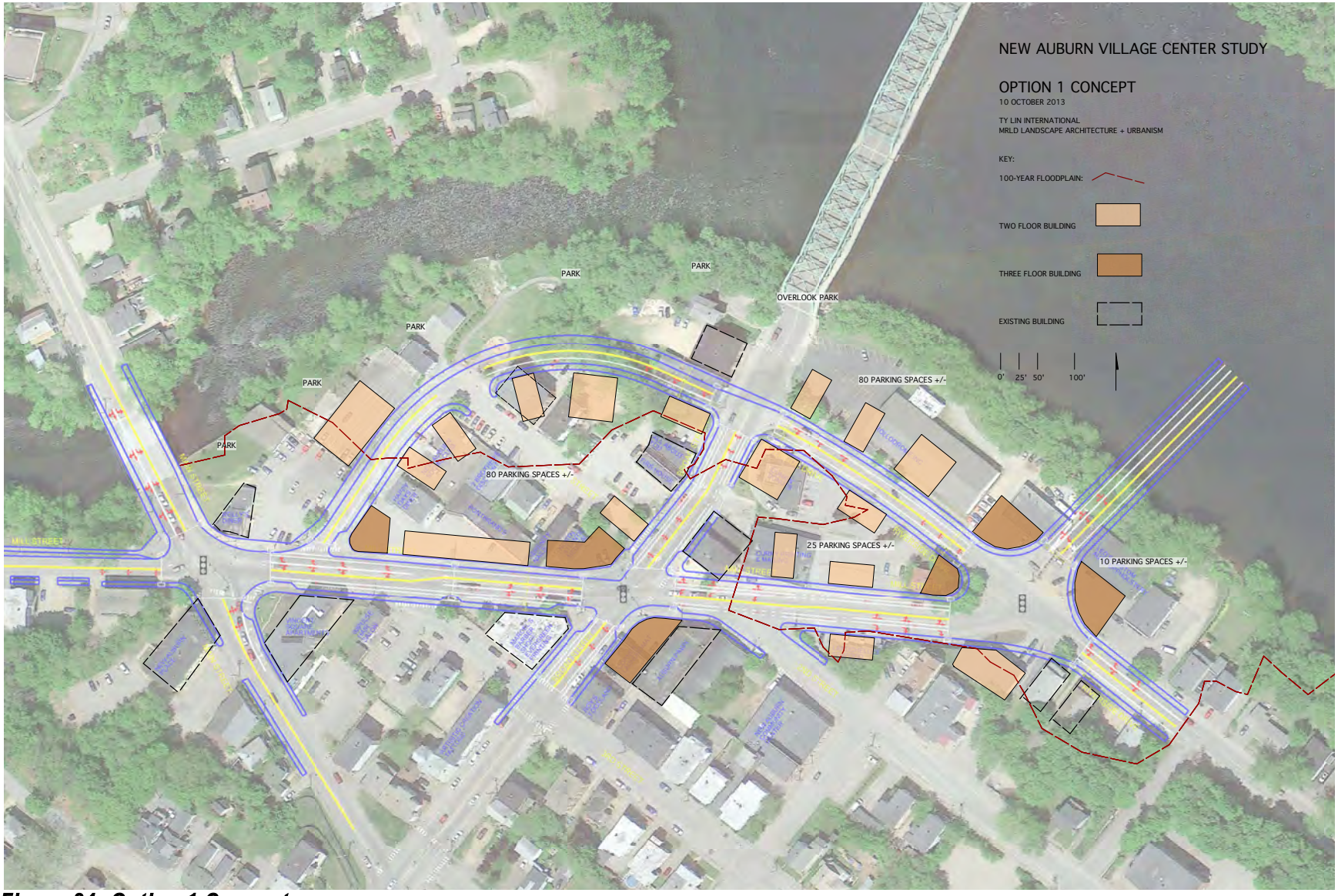


Figure 24: Option 1 Concept

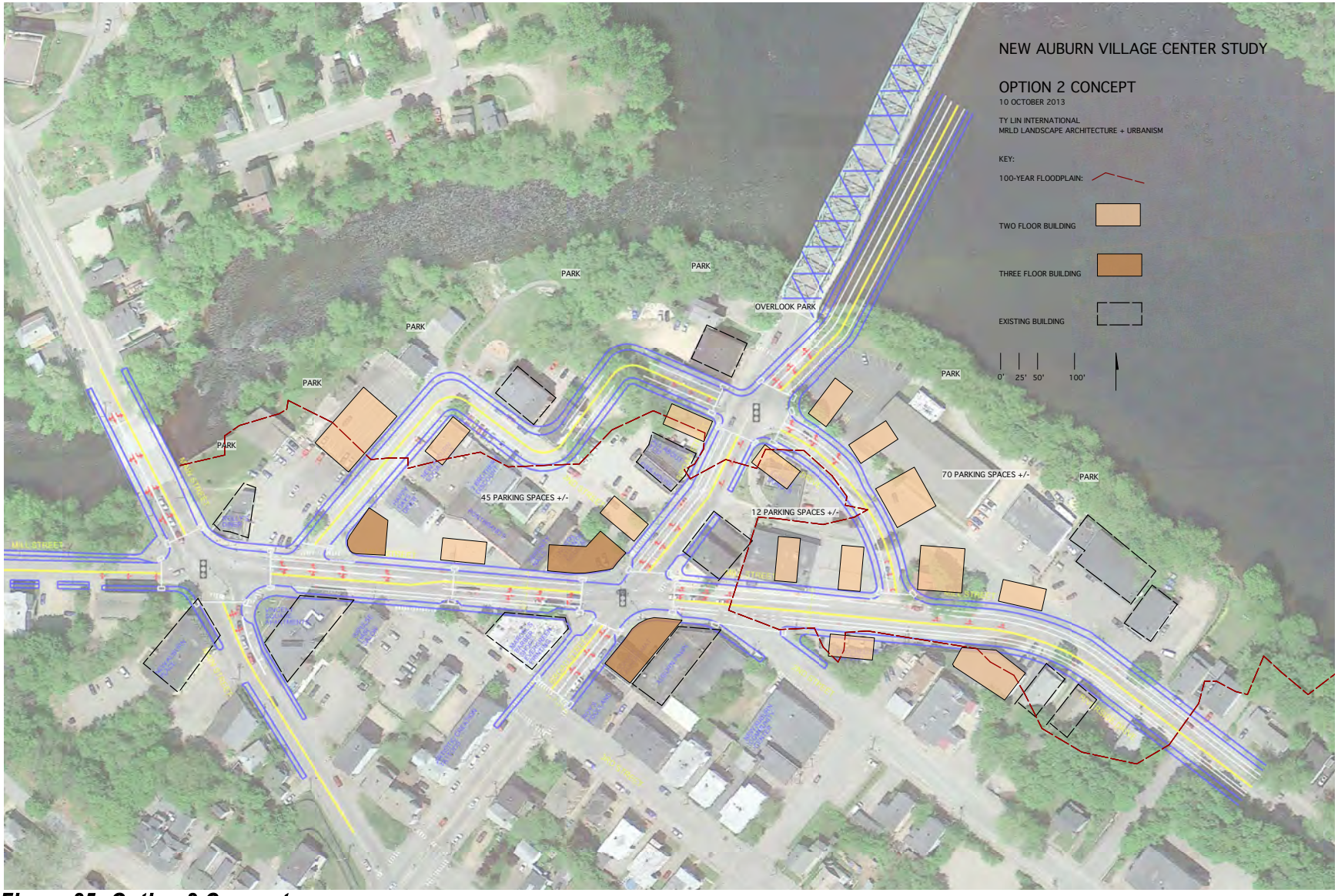


Figure 25: Option 2 Concept

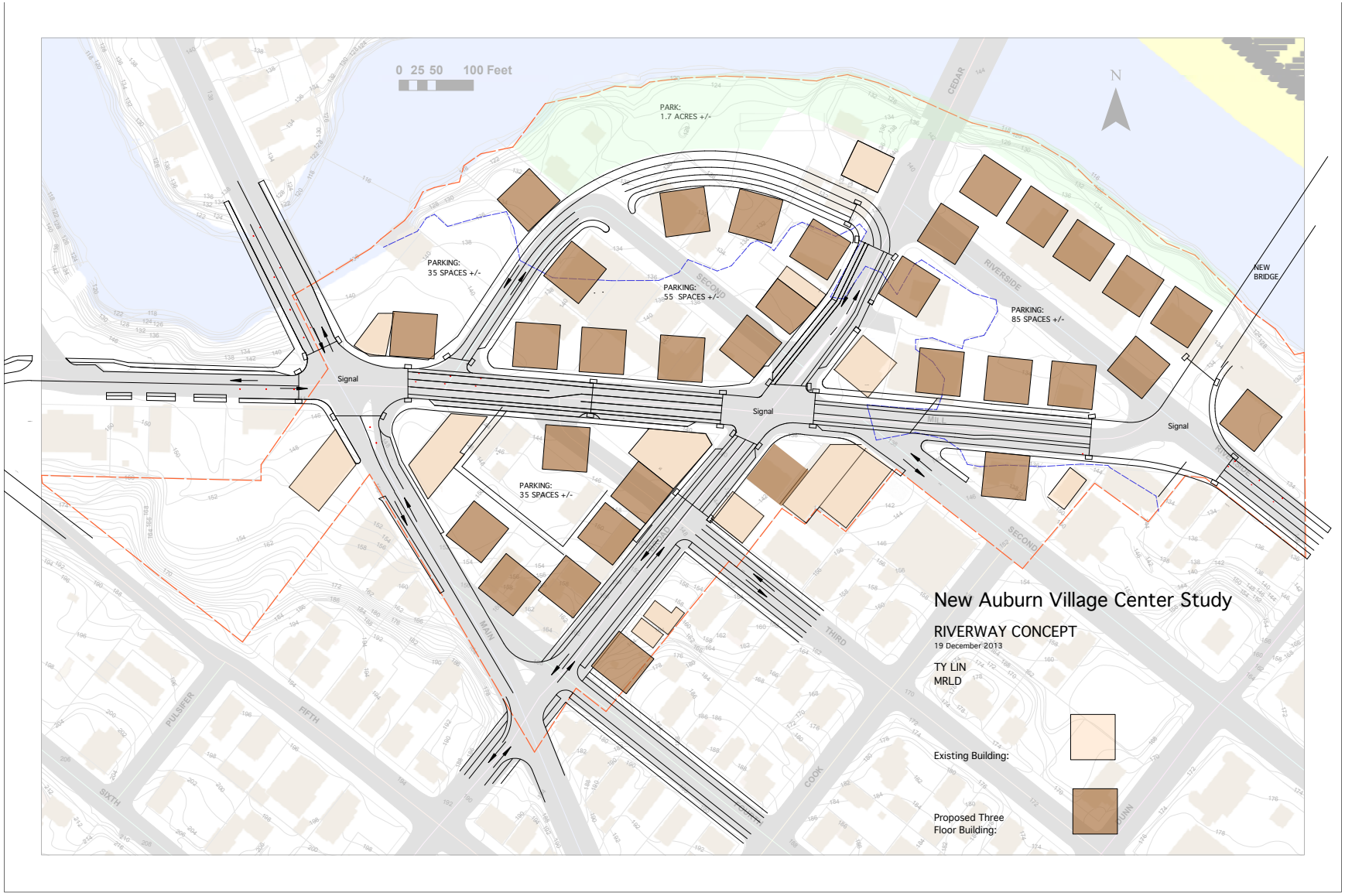


Figure 26: Riverway Concept

8. Master Plan

Figure 27: New Auburn Village Center Master Plan

Figure 28: New Auburn Center Master Plan (showing 300 Car Structured Parking at Androscoggin Block)

8.1 Overview

The Master Plan focus area is approximately 18 acres. The Master Plan maximizes the potential of the area, creating a blue print for an urban neighborhood that is highly livable and can be phased in over a number of years through strategic public and transportation infrastructure investments, open space improvements and private sector investment. The Master Plan looks to how other communities have embraced riverfronts as well as designed streets as a template for a bottom up scenario for revitalization. The realities of vehicular traffic are carefully balanced against the need to design a place of a specific character – a place that is unique to the locale. Key aspects of the Master Plan include:

- Relocating the bridge to the Mill Street / Riverside Drive intersection. This routes traffic on Mill and allows for the new "Riverway" and "Androscoggin" blocks to evolve as quiet, dense neighborhoods that take advantage of views and access to the Little Androscoggin and Androscoggin Rivers;

- Closing Riverside Drive between Mill and Broad to create an internal parking lot allowing for perimeter development;

- Closing Second Street between Broad and Mill (and creating the Riverway) to create an internal parking lot allowing for perimeter development;

- Closing Third between Broad and Mill creating infill development opportunities as well as off-street parking;

- Constructing an esplanade along the Riverway overlooking the Little Andy Park. This esplanade and steps will be on fill that will create a defined edge to the flood plain, creating new redevelopment opportunities above the 100-year flood plain elevation;

- Continuing the Little Andy Park to a "Broad Street Plaza" – a new civic space and overlook at the location of the existing bridge;

- Locating a Riverwalk between the Androscoggin Block buildings and the Androscoggin River to allow for public access as well as economic development opportunities;

- Placing building close to the sidewalk and street in a traditional manner;

- Creating vibrant and safe streetscapes with wide sidewalks, street trees, pedestrian-scaled lighting, bike racks and other amenities, and;

- All streets are designed to comply with Auburn's Complete Street policy

The summary **Table 8.1** in Section 8.2 for the purposes of development, density and parking calculations assumes that each new building has three floors with three residential units on the second and third floors. Although the downtown area is surrounded by residential neighborhoods and there are strong traffic counts – it was a working assumption of this Study that increasing residential density will make New Auburn Village Center more attractive as a place to start a business, visit or live.

Calculating density is not always easy (units versus people, what land to include in the calculation, the perception of the demographic, etc.), however utilizing the concept of the Transect, New Urbanists have developed the following rule of thumb for defining residential density and in turn neighborhood character:

Urban Core:	25 to 100 Units Per Acre
Center:	15 to 40 Units Per Acre (most closely aligned with NUV vision)
General Urban:	6 to 20 Units Per Acre
Suburban:	2 TO 8 Units Per Acre

Note: Net Residential Density for the purposes of this memo is calculated by subtracting ROW and park area from the total study area and then dividing by the number of units.

This information is from the Better Cities and Towns website. “Center” is described as:

> The Center (T5) is like the core in many ways — buildings typically mix uses, with shops on the first floor and offices and residential units above, and are usually built to the sidewalk — but the character has more of a "main street" feel.
>
> PlaceMakers describes the historical center thus: “The main street neighborhood was as diverse as any, including merchants living over their shops and old folks who didn’t want to have to saddle up to get to all the necessities. You could see lights on in the windows over the square every evening, and could hear mothers calling their kids to come in and do their homework...Most buildings are attached, with their fronts aligned. Full four-way intersections with rectilinear trajectories (i.e., streets at right angles to each other) are common. Buildings top out at two to four stories. Setbacks are short and sidewalks are wide. Open space often takes the form of squares. Transit is often available. Housing consists of apartments above retail, stand-alone apartment buildings, townhouses, and live/work units (townhouses designed so that one or more floors can accommodate business activities). Unlike the core, the density allows for surface parking in the center of blocks. Thoroughfares generally consist of main streets and boulevards. Net residential densities generally range from 15 to 40 units/acre.
>
> *Source: http://bettercities.net/article/transect*

The “Center” definition is close to the definition in the New Auburn Master Plan for the proposed New Auburn Village Zone.

8.2 Development Matrix

Table 8.1 Riverway Matrix		
	Existing Conditions	**Riverway**
Metrics		
Study Area	18 Acres +/-	18 Acres +/-
Existing Residential Units	101 Units +/-	57 Units +/-
Proposed Residential Units	0	192 Units +/-
Total Residential	**101 +/-**	**249 Units +/-**
Existing Commercial	85,048 SF +/-	17,149 SF +/-
Proposed Commercial		115,200 SF +/-
Total Commercial	**85,048 SF +/-**	**132,349 SF +/-**
100-Year Flood Plain	9 Acres +/-	9 Acres +/-
ROW	5 Acres +/-	4.5 Acres +/-
Riverfront Park	1.2 Acres +/-	1.7 Acres +/-
Net Residential Density	**9 Units Per Acre +/-**	**21 Units Per Acre +/-**
On-Street Parking Off-Street Public Parking Off-Street Private Parking	90 +/- 14 +/- 256 +/-	170 +/- 0 291 +/-
Sub Total Existing Parking	*360 +/-*	*461 +/-*
Total Required Parking by Uses	425 +/-	814 +/-
Total Required w/ 1/3 Shared Efficiency	280 +/-	546 +/-

8.3 Roadway, Intersections and Pedestrian Improvements

Conceptual Roadway improvement plans were developed that illustrate recommendations within the study area and include travel lanes; bicycle accommodations; sidewalks, crosswalks, traffic control, geometric adjustments and street layout. **Figures 29 through 33** illustrate the improvements There recommended improvements are intended to reflect a Complete Streets plan from a multi-modal transportation perspective.

Figure 29 – Main Street/Mill Street/South Main Street

- The intersection remains controlled by a traffic signal.
- One travel lane is eliminated on the northbound South Main Street approach. Otherwise the number of lanes remains unchanged.
- Curb extension will be provided on southeast corner where the lane is being eliminated.
- New crosswalks and pedestrian signals is included
- New sidewalks and streetscape is included
- Bicycle lanes on Mill Street is included
- Close driveway at Rolly's Diner

Following the above changes, the intersection is estimated to operate at Level of Service D overall in the future 2035 condition, with some movements operating with long delays.

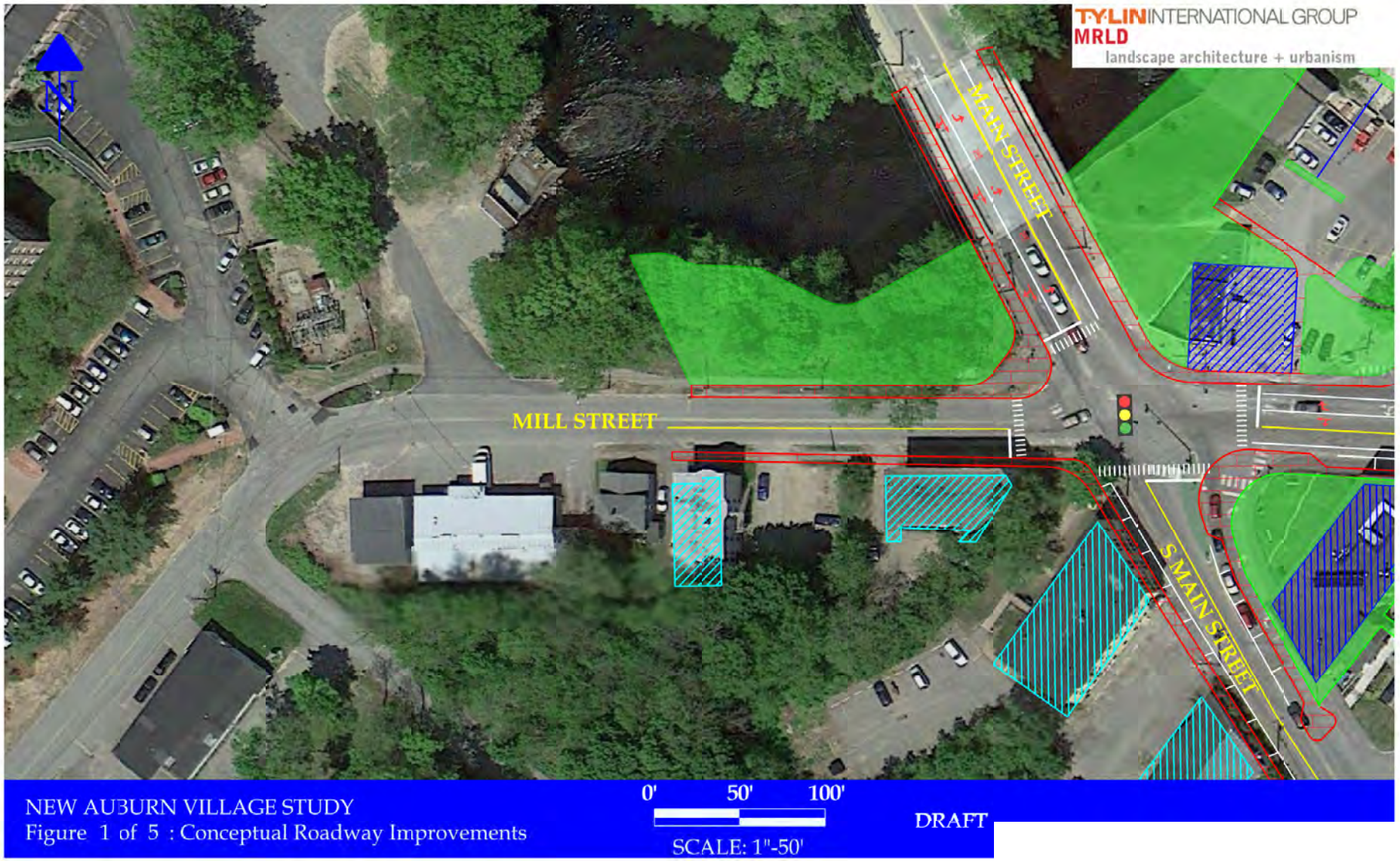


Figure 29: ROW Improvements Main Street/Mill Street/South Main Street

Figure 30 – Broad Street/Riverway

- The intersection controlled by stop sign
- Single approach lanes on Broad Street and Riverway
- Curb extensions will be provided on all corners.
- New sidewalks and streetscape is included
- Bicycle lanes on Broad Street is included but not on Riverway because of shared path in park and shared nature of roadway

Following the above changes, the intersection is estimated to operate at an acceptable level of service in the future 2035.

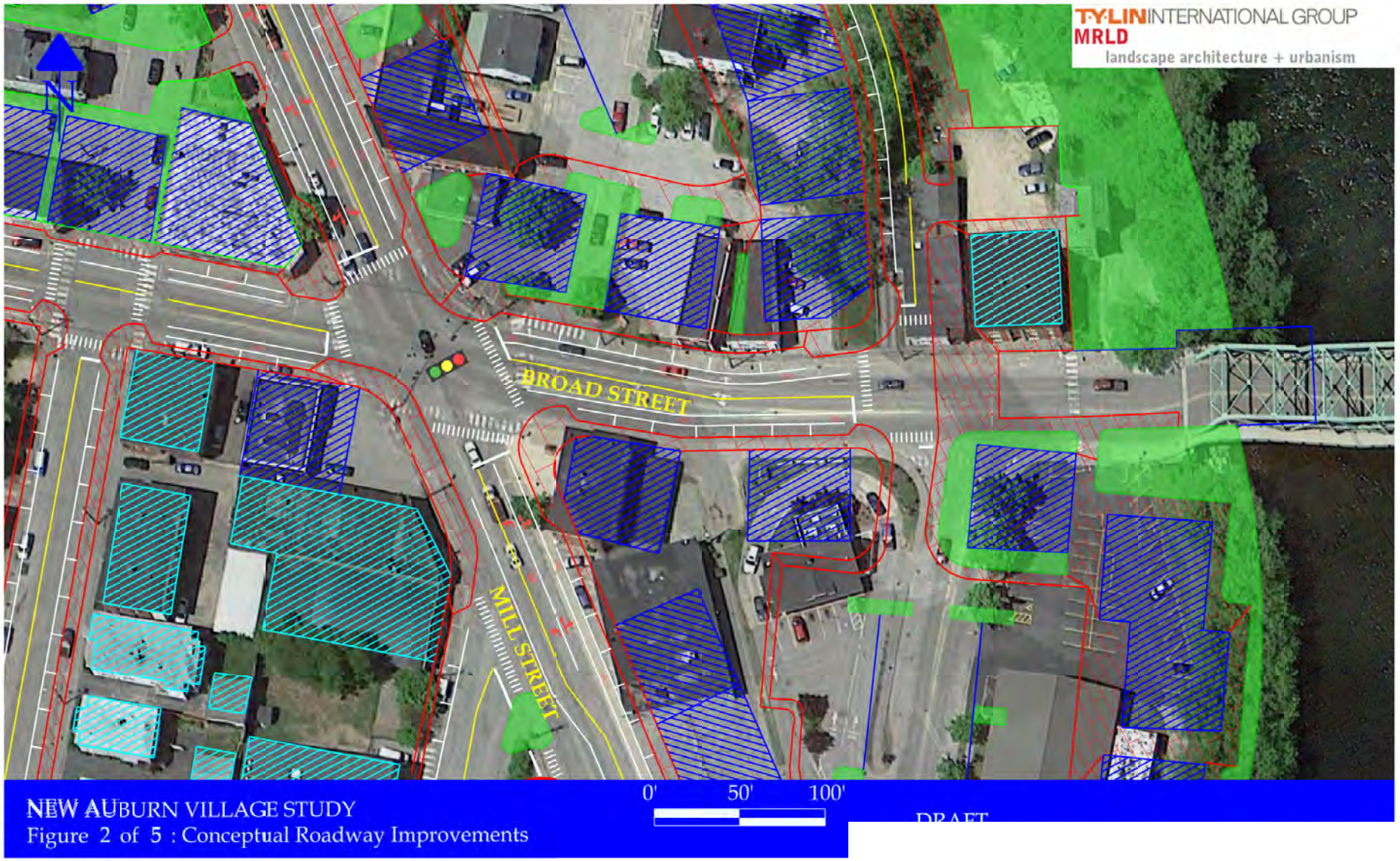


Figure 30: ROW Improvements Summary Forthcoming

Figure 31 – Mill Street/Broad Street

- The intersection remains controlled by a traffic signal.
- Single approach lanes on Broad Street.
- Two approach lanes on Mill Street (dedicated left-turn lanes and a shared through/right lane)
- Curb extensions will be provided on all corners.
- New crosswalks and pedestrian signals (crosswalks will be provided on all four approaches) is included
- New sidewalks and streetscape is included
- Bicycle lanes on Mill Street and Broad Street is included

Following the above changes, the intersection is estimated to operate at Level of Service B overall in the future 2035 condition, with some movements operating at Level of Service D.

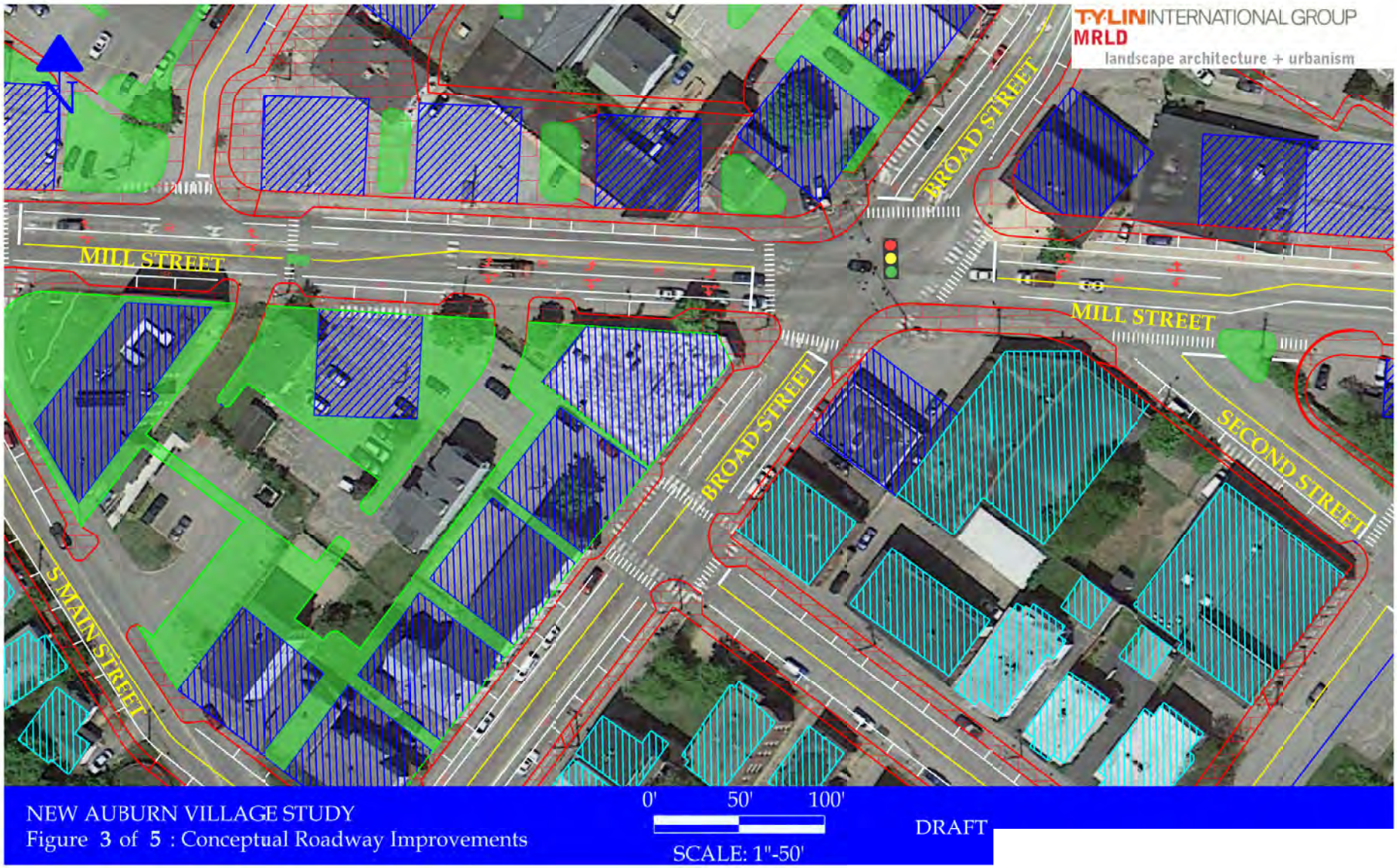


Figure 31: ROW Improvements Mill Street/Broad Street

Figure 32 – Riverway

- On-street parking will be provided on development side of street.
- Two 10-foot travel lanes will be provided
- A 8-foot sidewalk on the building side of the street and a 12-foot shared use path on the river side will be provided
- Curb Extensions and crosswalks are included at Mill Street, Broad Street, and the new parking lot entrance.
- New sidewalks and streetscape is included
- STOP sign controlled intersection at Broad Street/Riverway/ Parking Driveway intersection is proposed.

The intersection of Mill Street and the Riverway will be STOP sign controlled and left-turn movements will be restricted due to the proximity of the of this intersection to the Main Street traffic signal. Both new Riverway intersections are expected to operate at an acceptable level of service.

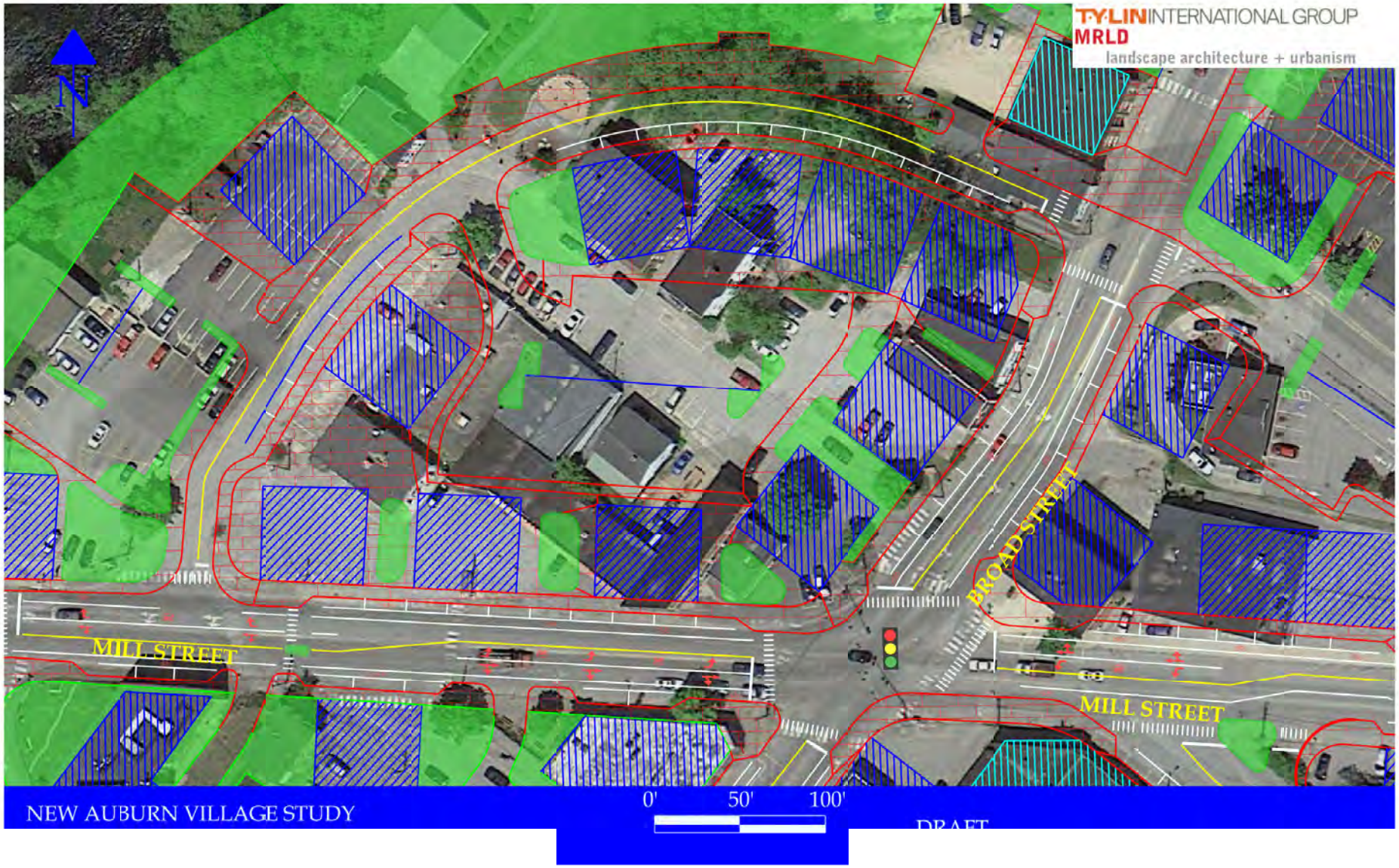


Figure 32: ROW Improvements Riverway

Figure 33 – Riverside Drive/Mill Street/New Bridge

- The intersection will be controlled as traffic signal.
- Two lanes will be provided on all approaches as noted as follows:
- The bridge approach will have a left lane and a through lane
- Riverside Drive will have a left lane and a right lane
- Mill Street will have a through lane and a right lane
- Curb extensions will be provided at crosswalk locations
- Crosswalks will be provided on all intersection approaches
- New sidewalks and streetscape is included
- Bicycle lanes will be provided on all roadways

Following the above changes, the intersection is estimated to operate at Level of Service F overall in the future 2035 condition. It should be noted that this level of service conclusion occurs during short peak commute time periods. A guiding principle in the development of improvements is that expanding roadway capacity so that through vehicles can quickly and efficiently travel through New Auburn should not compromise the integrity of the plan. This poor level of service conclusion reflects this principle.

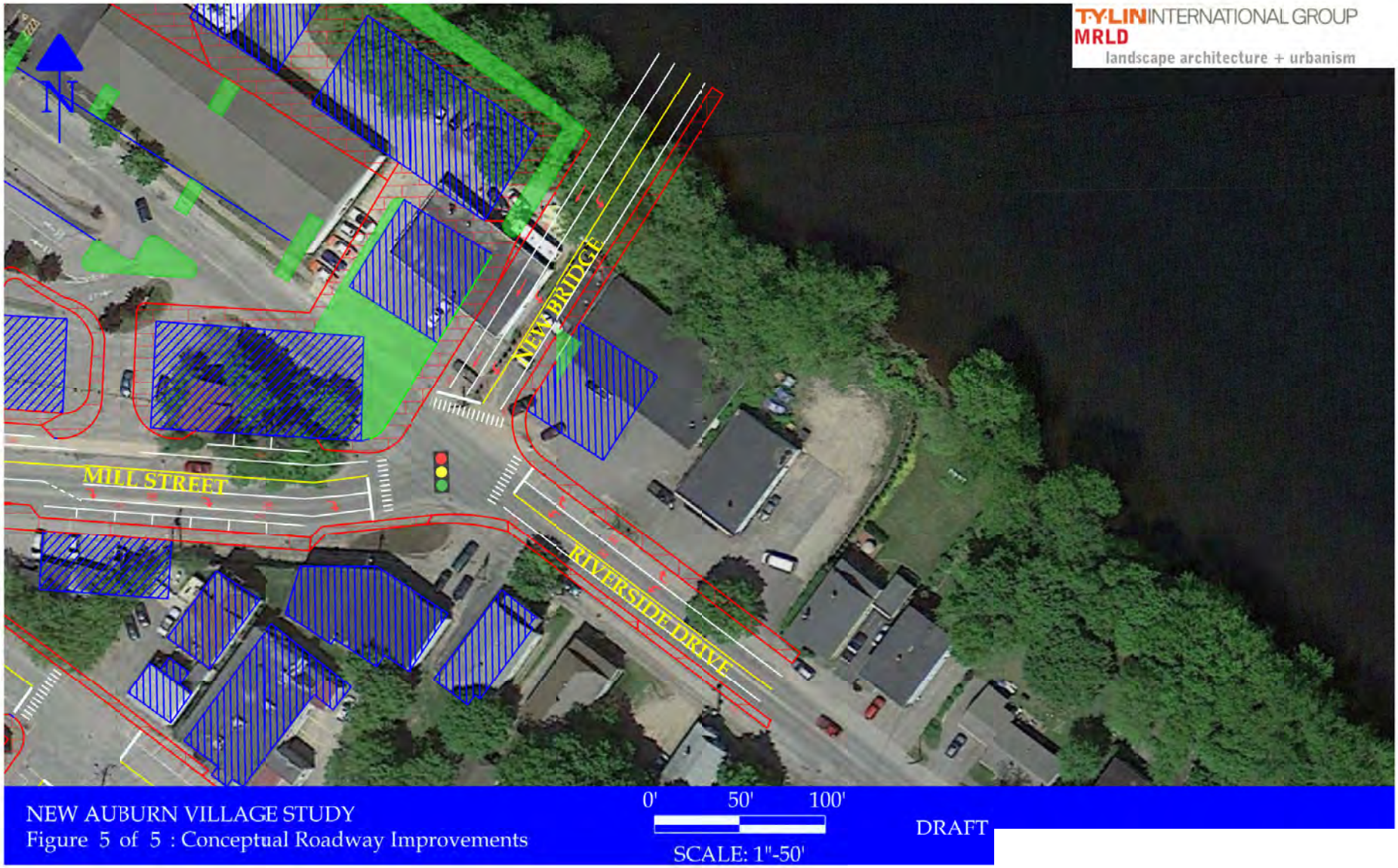


Figure 33: ROW Improvements Riverside Drive/Mill Street/New Bridge

8.4 Urban Design

A number of aspects of the Master Plan distinguish it as both illustrative of the goals of the community as well as capitalizing on the inherent qualities of the area. The following drawings are traced over existing conditions photos to demonstrate the transformative concepts of that are central to the Master Plan including the integration of transportation with the built environment, the strategic use of streets to encourage economic development and leveraging the unique assets of the river frontage to create places of value and distinction benefiting the community as well as the individual investor.

Figure 34: Southern Gateway / Intersection of Mill/Riverside/Proposed Bridge

Southern Gateway. A new intersection at Mill and Riverside where the bridge is relocated is highly functional yet makes a strong statement regarding the built environment whether arriving from the south, east or north.

Figure 35: Mill Street

Main Street. Mill Street, which is Route 136, will continue to carry the most thru traffic, however, redesigned with buildings set close to the street, a vibrant streetscape, pedestrian amenities and on-street parking will help calm traffic, create a Main Street feel and encourage people to stop and explore New Auburn Village Center.

Figure 36: Androscoggin Block

The Androscoggin Block. The riverfront and Broad and Mill Streets define this development block. Buildings on Mill and Broad address the street while a series of buildings directly address the Androscoggin River and a riverwalk. This block can either have an interior surface parking lot or structured parking.

Figure 37: Broad Street Plaza

Broad Street Plaza. By relocating the existing bridge downstream, there is an opportunity to create a pedestrian plaza at the approach to the old bridge – a new visual terminus looking down Broad Street towards Lewiston. The buildings fronting this plaza have parking to the rear. Part of the existing bridge can be transformed into a river overlook.

Figure 38: Broad Street Looking Towards Lewiston and the Proposed Broad Street Plaza. Third Street is Closed to the Left

Closing Third Street. In the Master Plan the short length of Third between Broad and Mill is closed, maximizing parking and creating infill opportunities. In this view, as with other views the Complete Streets policy is evident in accommodating a range of users. Broad Street leads to Broad Street Plaza, the Riverway and the Androscoggin Walk.

Figure 39: Riverway – Existing Conditions

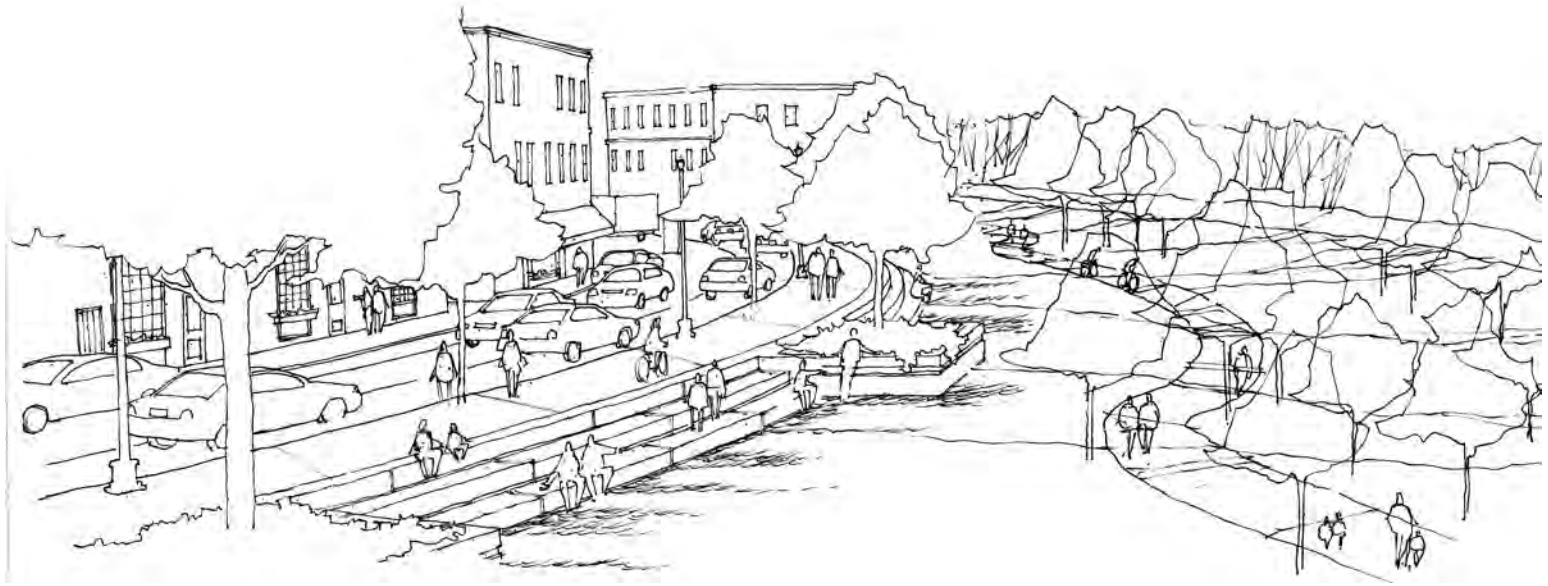


Figure 40: Riverway – Proposed Conditions

Riverway. In contrast to the Andrscoggin Block, the Riverway as shown on **Figure 40** above includes a series of buildings that overlook a quiet, pedestrian-friendly street and a park running along the Little Androscoggin to the confluence. This park has a less urban feel than the riverwalk along the Androscoggin Block and is also an area that can absorb storm events as it is in the flood plain. The Riverway and adjacent buildings are raised out of the flood plain. One can envision closing the Riverway for special events that fill the Riverway, the adjacent parking and Broad Street Plaza with a range of activities.

Closing of South Main between Cook and possibly to Dunn is not depicted in a view, however it has several potential opportunities although it would require rerouting traffic through the existing grid of neighborhoods. In effect, vehicles would disperse through the grid depending on their point of origination and intended destination. In closing South Main, intersections at Broad, Cook and Dunn will be safer and there are opportunities for infill development, the return of lands to abutting properties, the creation of a greenway or any combination of the above. The closure of South Main between Broad and Dunn is an interesting idea, but requires further study.

8.5 Streetscape / Street Hierarchy and Character

As noted earlier, a diversity of street types, adds to the character of an area and provides a range of development opportunities. The streets and intersections have been designed, modeled and evaluated for traffic capacity, but as of equal importance they have been designed to support different types of adjacent development, establishing a synergy between mobility, urban design and economic development.

The following street cross-sections illustrate the range of streetscapes and character envisioned in the Master Plan.

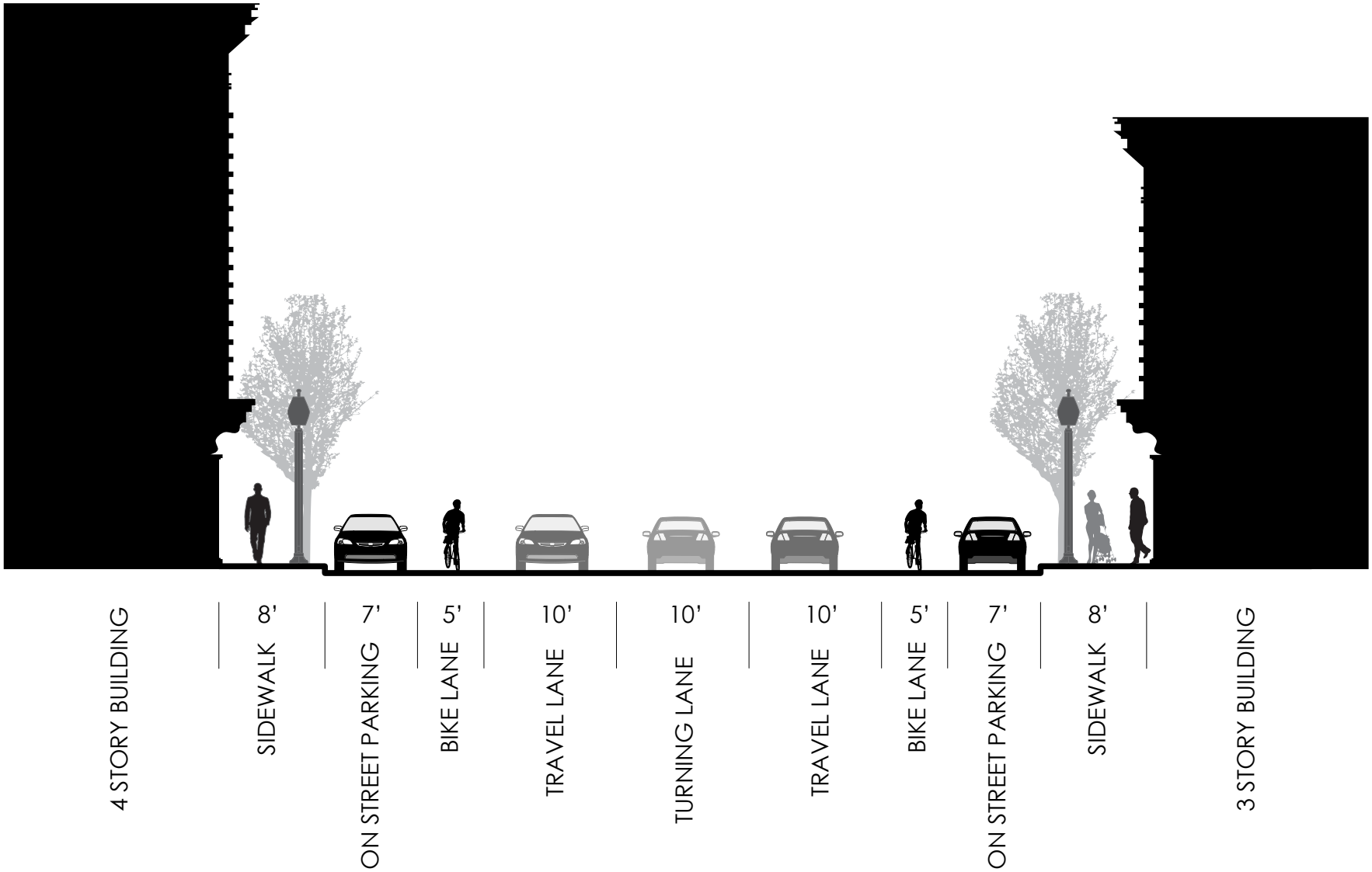


Figure 41: Typical Section through Mill Street

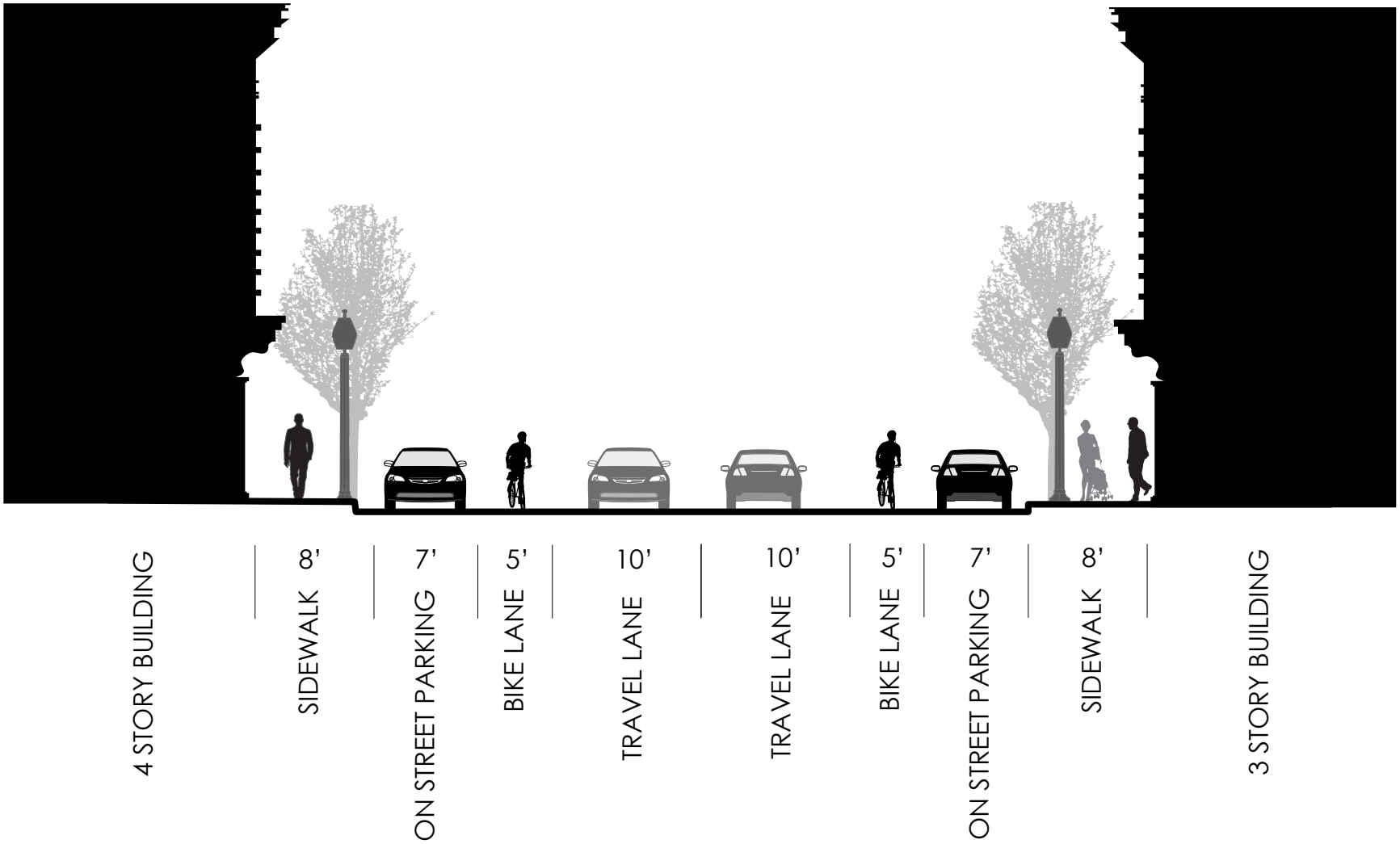
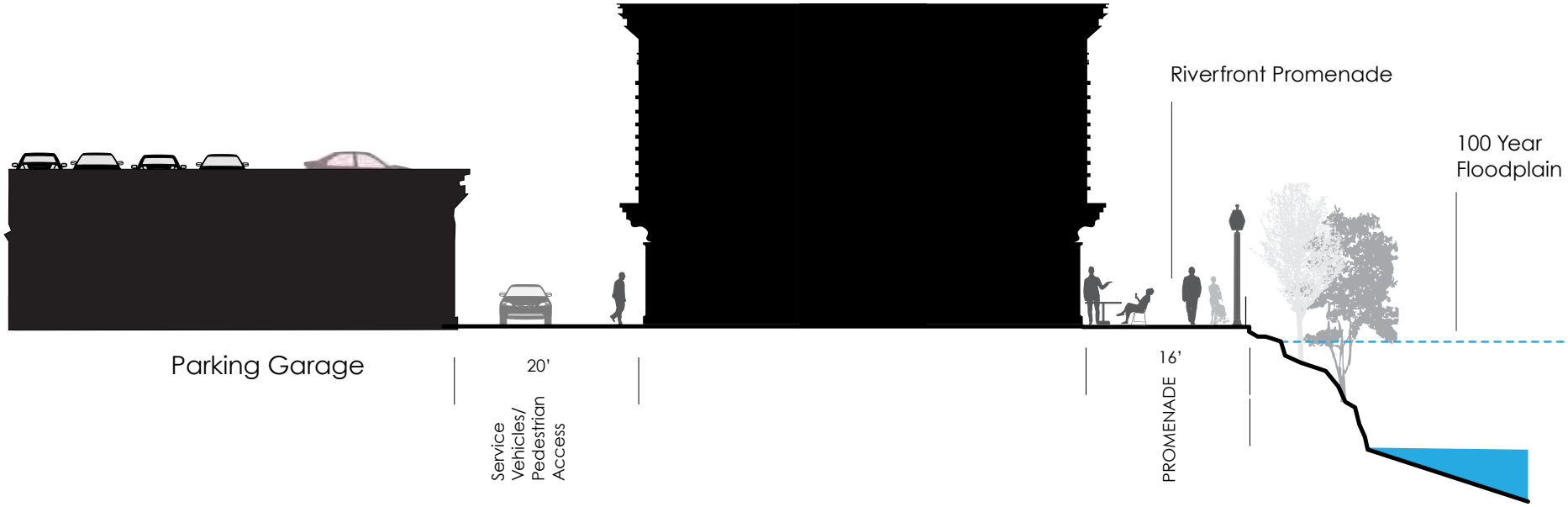


Figure 42: Typical Section through Broad Street

Androscoggin Block
w/ Surface Parking (100 cars +/-)

Figure 43: Typical Section through Androscoggin Block with Surface Parking



Andoscoggin Block
w/ Parking Garage (300 cars +/-)

Figure 44: Typical Section through Androscoggin Block with Structured Parking

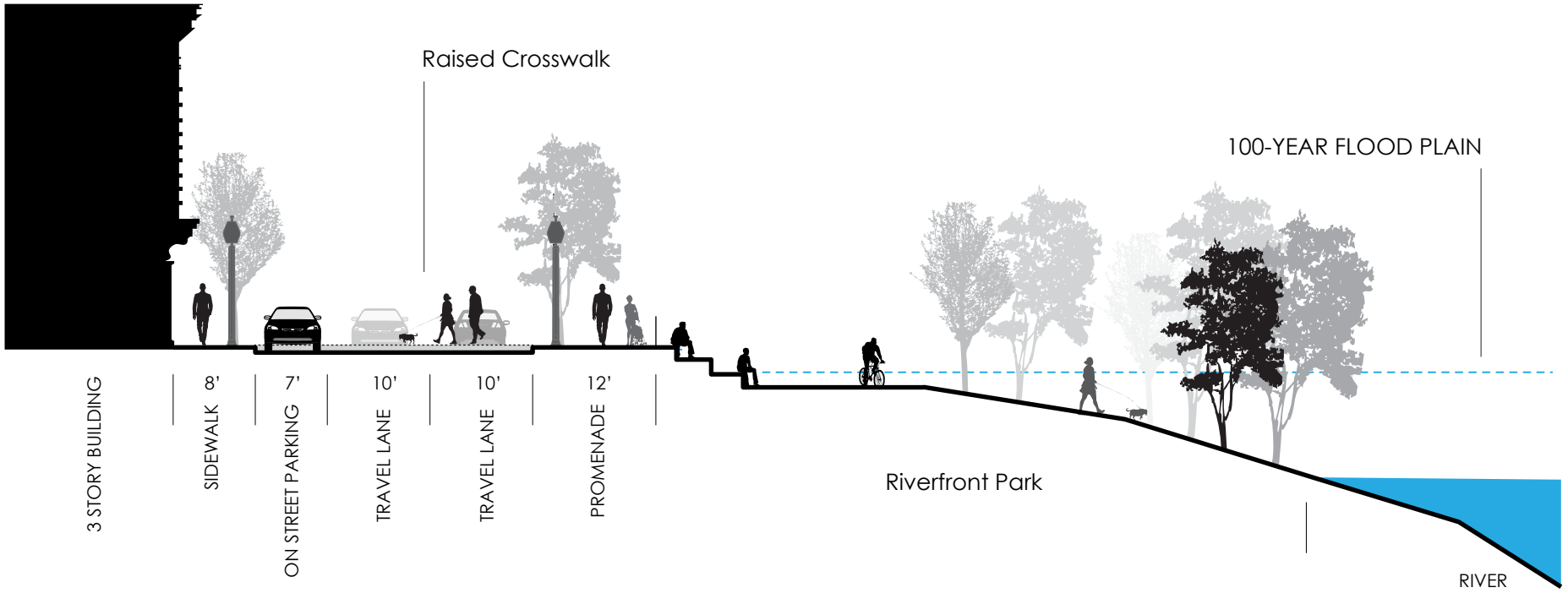


Figure 45: Typical Section through The Riverway

8.6 Open Space

8.7 Connectivity

As previously discussed, reestablishing the original street grid was explored, and this might provide maximum connectivity for the focus study area, however, the Master Plan achieves a level of both connectivity and accessibility for vehicles and pedestrians without replicating the grid. The revitalized New Auburn Village Center will be efficient and safe for cars. Two-way traffic flows and a careful distribution of both on-street and off-street parking will make the area easy to visit, encouraging economic development.

New Auburn Village Center must be safe and accessible for all modes of travel and users in order to encourage economic development. There have been discussions regarding New Auburn Village Center where the situation is described as congested, not pedestrian friendly, aging, losing businesses, circuitous, and underdeveloped. The ideas of accessibility and connectivity are central to unlocking the potential of New Auburn Village Center. To quote the Victoria Transport Policy Institute website, “just as a car is a machine for mobility, a city is a machine for accessibility.” Accessibility seeks to maximize connectivity, balance a mix of uses, provide parking without creating suburban sprawl, include a range of housing types, and establishing a scale of development that is financially viable while creating a vital public realm.

8.8 Floodplain

5.5 +/- acres of the 18-acre focus study area is in the flood plain as shown on **Figure 46**. Most of the buildings in the flood plain will only need to be raised one foot or so to reach elevation 136', which is one foot above the 100-year flood plain. The Riverway requires the most fill, ranging from approximately one foot to six feet of fill in order to create a block suitable for development. Fill for the Riverway is included in the cost estimates.

Figure 46: Master Plan with Extent of Existing 100-Year Flood Plain

9. Urban Design and Land Use Recommendations

10. Phasing and Implementation

10.1 Transportation Phasing and Implementation Plan

This section of the Study covers project phasing and implementation and what transportation system components can be constructed as standalone projects or are a function of other activities. **Figure 47** illustrates how the overall Master Plan improvements can occur in a systematic and realistic fashion given the timing of area-wide infrastructure activities, most notably reconstruction of the Peace Bridge. It should be noted that much of the improvements detailed will be implemented as re-development activities occurs and thus there may be additional phases not specified in this section. The section is intended to discuss larger phasing issues and concludes that major components of the Plan can proceed without waiting.

- The following locations have no constraints and can be implemented at any time.
    - Main Street/Mill Street intersection
    - Mill Street between Main Street and Broad Street
    - Broad Street from Mill Street to just south of 3rd Street
    - 3rd Street
    - 2nd Street

- The intersection area of South Main Street/Broad Street/4th Street needs further study. This plan notes suggested changes to the street network layout in the residential neighborhood that attempts to create a street grid system. This suggested change will introduce traffic impacts to some streets and a robust public process is suggested. Accordingly, the suggested recommendations in the plan should not proceed until a separate specific public process is performed.

- Riverway Area (bounded by Mill Street and Broad Street). This area of improvement can occur without the relocation of the Peace Bridge. If fully developed and improved, a temporary traffic signal may be required at the intersection of the Riverway and Broad Street. This intersection will serve as a key access point for the Riverway Area and heavy traffic volumes to and from Lewiston will continue with no changes to the Peace Bridge, and thus high level traffic control is required.

- The triangle bounded by Mill Street, South Main Street, and Broad Street. This area of improvement can occur at any time. Closure of 3rd Street does not require any special action to the area transportation system.

- The triangle bounded by Mill Street, Broad Street, and Riverside Drive. A significant portion, if not all, of this area cannot be constructed until the Peace Bridge is relocated opposite Mill Street. Heavy traffic volumes to and from

Lewiston cannot be accommodated through the Mill Street/Broad Street intersection given intersection alignment geometry.

- Broad Street between Mill Street and the Peace Bridge cannot be improved until the bridge is relocated.

- The Mill Street/Broad Street can't be fully improved until the Peace Bridge is relocated. The eastbound Mill Street and northbound Broad Street approaches can be improved prior to the bridge relocation.

Figure 47: Phasing Plan

11. ROW Improvement Cost Estimates

- Mill Street, West of Main Street $1.1M (This section assumes an overlay section of pavement.)
- Mill Street, Main to Broad St: $2.3M (This section assumes a widening section and pavement rehabilitation.)
- Mill Street, Broad to Riverside: $2.2M (This section assumes a widening section and pavement rehabilitation.)
- Main Street, North of Mill Street: $800k (This section assumes an overlay section of pavement.)
- Main Street, Mill to Broad Street: $1.8M
- Fourth Street, from Broad to Cook St: $1M
- Third Street, Cook Street to the End: $300k
- Second Street to Cook Street: $750k
- Riverside Street: $1.1M
- Broad Street, South: $800k
- Broad Street, Main Street to Mill Street: $1.8M
- Broad Street Mill to End: $1.2M
- Pulsar St: $1.2M
- New Loop from Pulsar to Riverside: $1.5M

The costs above do not assume any right of way costs, costs to construct the new bridge, removal of the old bridge, existing building demolition, or improvements to existing sites outside of the right of way. Included in the costs are common borrow costs, pedestrian lights, street trees and grates, traffic signal additions and updates, brick sidewalk with granite curb, drainage and sewer rehabilitation and adjustments, underground utilities, pavement markings, new signage, removal of existing pavement and other common excavation, maintenance of traffic, mobilization, contingency, design engineering, and construction administration.