Appendix A

Ann Arbor
Lower Town Mobility Study

Summary of Planning Documents

LOWER TOWN STUDY – SUMMARY OF PLANNING DOCUMENTS

This is a summary of the road user needs and mobility challenges we identified in certain existing City policy documents.

A. City Master Plan – Land Use Element 2009

Lower Town is a separate chapter of the Plan document (pages 43 – 57). It notes that it has "… a street pattern that remains virtually unchanged from the mid- 19th century." Relevant portions of the text have been highlighted.

Concerns, challenges and desired outcomes identified include:

- Increasing traffic volumes
- Convergence of 8 streets (congestion, intersection controls, wayfinding, et al.)
- Large surface parking lots that discourage pedestrian activity
- Lack of pedestrian access to Riverside Park
- Need for better pedestrian / bike access for Border To Border Trail
- Commercial uses prioritize automobile access
- The Broadway/Plymouth connection prioritizes through traffic between Downtown and the US-23 interchange (commuter traffic)
- Lack of mid-block (pedestrian) connections between Maiden Ln and Canal St
- Additional mid-block pedestrian crossings for Broadway, Maiden Ln, Wall St and Canal St
- Traffic calming on Broadway between Huron River and Maiden Ln, including on-street parking
- Off-street (surface) parking should be minimized and be shared between properties
- Improve pedestrian and bike connections to surrounding neighborhoods, downtown, and U-M
- Consolidate commercial loading zones for area businesses
- Need for select wider sidewalks (café seating for dining, multiuse paths, etc.)

B. City Master Plan – Transportation Plan Update 2009

The horizon year for this version of the plan is 2030. In broad terms, the document is founded on the following statement: "Ann Arbor does not desire to tie up scarce and valuable land resources in streets and surface parking in the key activity areas. The City reinforces, encourages, and supports the full gamut of travel options."

There are several broad policy goals. They are:

1. Provide effective access and mobility for people and goods, with minimal negative impacts for all.
2. Protect and enhance the natural environment and energy resources, and the human and built environment.
3. Promote a safe, secure, attractive, and productive transportation system.
4. Invest in transportation infrastructure in a manner consistent with other goals, and within the financial constraints of public/private resources.
5. Promote cooperation between the City of Ann Arbor and other governmental entities, particularly the surrounding townships and municipalities and the University of Michigan, in support of transportation initiatives in a manner consistent with the other goals.
6. Ensure that meaningful public involvement will be part of any transportation project in the City of Ann Arbor.
7. Promote a transportation system supportive of and integrated with land use decisions.
8. Promote green transportation improvements to reduce vehicle emissions.

The strategies identified as suitable for use include:

- Transportation Demand Management (advanced traffic signals, parking management, etc.)
- Transit Enhancements

- Non-motorized Transportation Systems
- Access Management
- Context Sensitive Solutions (CSS)
- Green Transportation (i.e. sustainable design)

The 2005 analysis indicated that only Barton Dr was subject to congestion (page 4-9). From the M-14 freeway to Pontiac Trail it was considered slight congestion (V/C from 0.8 to 0.9). From Pontiac Trail to Plymouth it was considered moderate congestion (V/C 0.9 – 1.0). The 2030 forecasts (page 5-10) indicate that the following Lower Town roadways will be moderate to severely congested (V/C > 0.9): Barton Dr, Broadway St, Maiden Ln, Plymouth Rd and Pontiac Trail.

There were no specific roadway (capacity) recommendations for the Lower Town area. For transit, the only idea identified was to provide queue jumping at the intersection of Fuller Rd / Maiden Ln / E. Medical Center Dr.

C. City Master Plan – Non-motorized Transportation Plan 2013 Update

There is no specific horizon year associated with this plan. The enumerated goals are:

1. Incorporate non-motorized best practices into all relevant policies, and all aspects and stages of planning available to the City and its partner organizations.
2. Provide a comprehensive, easy to implement non-motorized network as an integral component of the City's transportation system.
3. Increase awareness of the opportunities for, and benefits of, non-motorized transportation, as well as provide information to all users on safe ways to integrate motorized and non-motorized modes of transportation.

In addition to suggestions on various facility treatments for pedestrians and bicyclists, it promotes use of Quality of Service models to evaluate alternative solutions. It notes that the Florida DOT method is used for scoring scenarios. This is the same method OHM used for the Nixon Rd Corridor Study. The key Factors, in order of statistical significance for pedestrian facilities are:

- Presence of a sidewalk
- Amount of lateral separation between pedestrians and motor vehicles
- Presence of physical barriers and buffers (including parking) between pedestrians and motor vehicles
- Motorized vehicle volume
- Motorized vehicle speed

For bicycle facilities, they are:

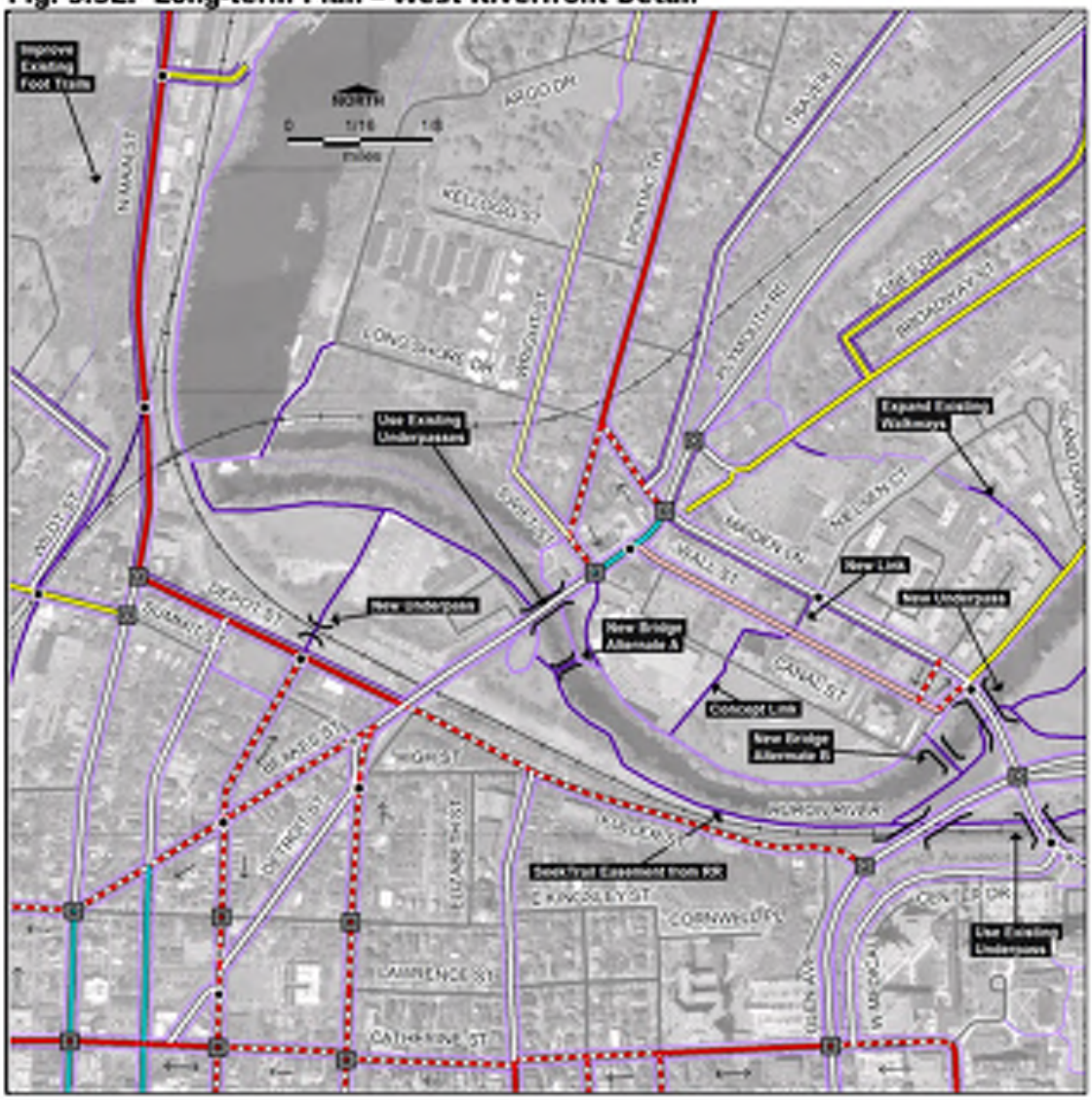
- Presence of bicycle lane or paved shoulder
- Proximity of bicyclists to motorized vehicles
- Motorized vehicle volume
- Motorized vehicle speed
- Motorized vehicle type (percent truck/commercial traffic)
- Pavement condition
- The amount of on-street parking

Most of the plan provides direction on geometric guidelines regarding the widths of sidewalks, vehicle-only travel lanes, shared travel lanes, bike lanes, multi-use paths, etc. There is also information on signing and pavement marking standards, ADA standards, preferred crosswalk configurations, etc.

The document also has an inventory of current (2013) facilities of sidewalks, crosswalks (at intersections and mid-block), shared-use paths, signed bike routes and bike lanes. These can be found in Figures 4.2A thru 4.3C, pages 149

– 154. Coupled with this were diagrams of Near Term Opportunities to try to add sidewalk, mid-block crossings, remove or add on-street parking, add on-street bike lanes, and the like. These are Figures 5.1A thru 5.1E, pages 162 – 166. The long term plan is to have on-street bike lanes on all major roads in the Lower Town study area, with limited roadway widening only to accomplish this objective. The pertinent detail for our study is Fig. 5.3E:

Fig. 5.3E. Long-term Plan – West Riverfront Detail



Legend:

Existing	Proposed:	
		Signalized Crosswalk
		Major Mid-block Crossing
		Minor Mid-block Crossing
		Remove Crosswalk
		Grade Separated Crossing
		Bicycle Lanes
		Bicycle Lane, 1 Side Only
		Signed Bike Route
		Shared-use Arrow

Existing	Proposed:	
		Sidewalk / Walkway (< 8' wide)
		Shared-use Path (8 - 10' wide) includes Bridges and Boardwalks
		Foot Trail

Other Features:

- Local Road
- Freeway
- Railroad
- No Improvements Near-term

D. City Master Plan – Sustainability Framework 2013

This is a high-level policy document. The limited discussion regarding transportation options is encapsulated in the following quote:

Establish a physical and cultural environment that supports and encourages safe, comfortable and efficient ways for pedestrians, bicyclists, and transit users to travel throughout the city and region.

E. City Parks and Recreation Open Space (PROS) Plan 2016-2020

The PROS Plan is focused on individual park properties. The report acknowledges that some of the sidewalk gaps occur along park frontages. So, this report emphasizes the need for improved pedestrian and trail connections to the parks. The following parks are either directly in the Lower Town study area, or immediately adjacent:

- Argo Park
- Argo Nature Area
- Bandermer Park
- Beckly Park
- Island Park
- Longshore Park
- Northside Playground
- Plymouth Parkway Park
- Riverside Park

The other significant concern noted involves the two railroad lines (MDOT/Amtrak and Ann Arbor RR). The concern is that the railroad tracks cut off access to river parks. At two locations, Gallup Park and Argo Pond, the city has procured licenses from the railroad to construct non-motorized trails, however, access to these trails, especially the Border-to-Border Trail, which runs along the Huron River through Washtenaw County, is limited, as the railroad will not allow additional at-grade crossings.

F. City Capital Improvements Plan FY 2020-2025

Went through the CIP looking for discrete projects that involved the Lower Town study area. Projects identified include:

Prioritization Rank	Project Name	CIP Project Datasheet Reference
2	Maiden Lane at Nielsen Ct Traffic Signal (New Install)	Sheet 17 of PDF
7	Signal Timing Optimization	22
9	Accessible Pedestrian Signals (Broadway at Swift specifically mentioned)	2
18	Lower Town Area Mobility Study	16

G. North Main Huron River Corridor Vision 2013

The study is generally focused on N. Main St from the interchange ramps at M-14 southwards to Summit St. It does have an investigation into the possible uses of the DTE site (south side of Huron River west of Broadway St), focusing on possible public uses such as recreational and open space. Conversely, DTE may be interested in a mixed-use development that may include restaurants, retail, residential and office space. If developed in this manner, there is the possibility of significant traffic impacts to Broadway St.

H. Northeast Area Transportation Plan 2006

The study, with a 2025 horizon year, is generally focused on the anticipated traffic impacts from the development of the NE area that then contained most of the undeveloped land in Ann Arbor. Particular attention was paid to evaluating traffic movement and safety between M-14/U.S. 23 and the northside neighborhoods currently served by the Barton Drive/M-14 interchange.

Given the focus on the Barton Dr/M-14 interchange, many of the key roads in the Lower Town area were part of the analysis. The roadways were discussed in Section 6, starting on Page 222 of the report.

The plan also had recommendations on non-motorized improvements (sidewalks, cross walks, bike lanes, shared-use paths, etc.) for Lower Town, but they should all be considered superseded by more recent plans.

I. The Treeline – Allen Creek Urban Trail Master Plan 2017

The plan explored the possibility of developing an urban trail that generally followed the path of the Ann Arbor Railroad (Wayco Co.) and the Allen Creek floodplain. The northern terminus would link to the regional Border-to-Border (B2B) trail and then extend south to S. State St at Stimson St. A corollary goal was to look at the Allen Creek floodplain and specific properties for improvements.

The route options developed were very cursory and conceptual. Viewed in zones, the plan expressed a strong preference for off-street trail alignments with a desire for a continuous, barrier free trail facility to the maximum extent possible. It also sought as many connections to parks, open space, and existing non-motorized facilities as practical.

Zones 1 and 2 represent the spaces adjacent to the Lower Town study area. The focus is on connections to the B2B Trail and then crossing the Amtrak rail line and N. Main St. At this time, the City is having a tunnel designed under Amtrak collocated with the Allen Creek outlet to the Huron River. They will also undertake an alignment study (starting in 2020) that will look at the alternatives to advance the Treeline Trail to the city-owned property at 721 N Main St.

J. Connector Feasibility and Alternatives Analysis Studies

The purpose of The Connector Alternatives Analysis (AA) is to evaluate high capacity transit options and to select a preferred route and transit mode. The report recommended a rail transit (streetcar or light rail) system. The study evaluated both rail transit and Bus Rapid Transit (BRT) and concluded that rail transit would provide a better long term, sustainable solution consistent with the project goals.

In Phase I, the initial system would extend from Plymouth Road/US 23 into Downtown Ann Arbor providing connections between the major trip generators at the University and in Downtown. The routing would start at the US-23 / Plymouth Rd Park & Ride lot, run west along Plymouth Rd and south along Murfin Ave. One option then runs along Fuller Rd and a second along the Amtrak track westward. Either option turns southwards to run along Glen Ave. Fuller near E. Medical Center Dr would be the closest approach to Lower Town.

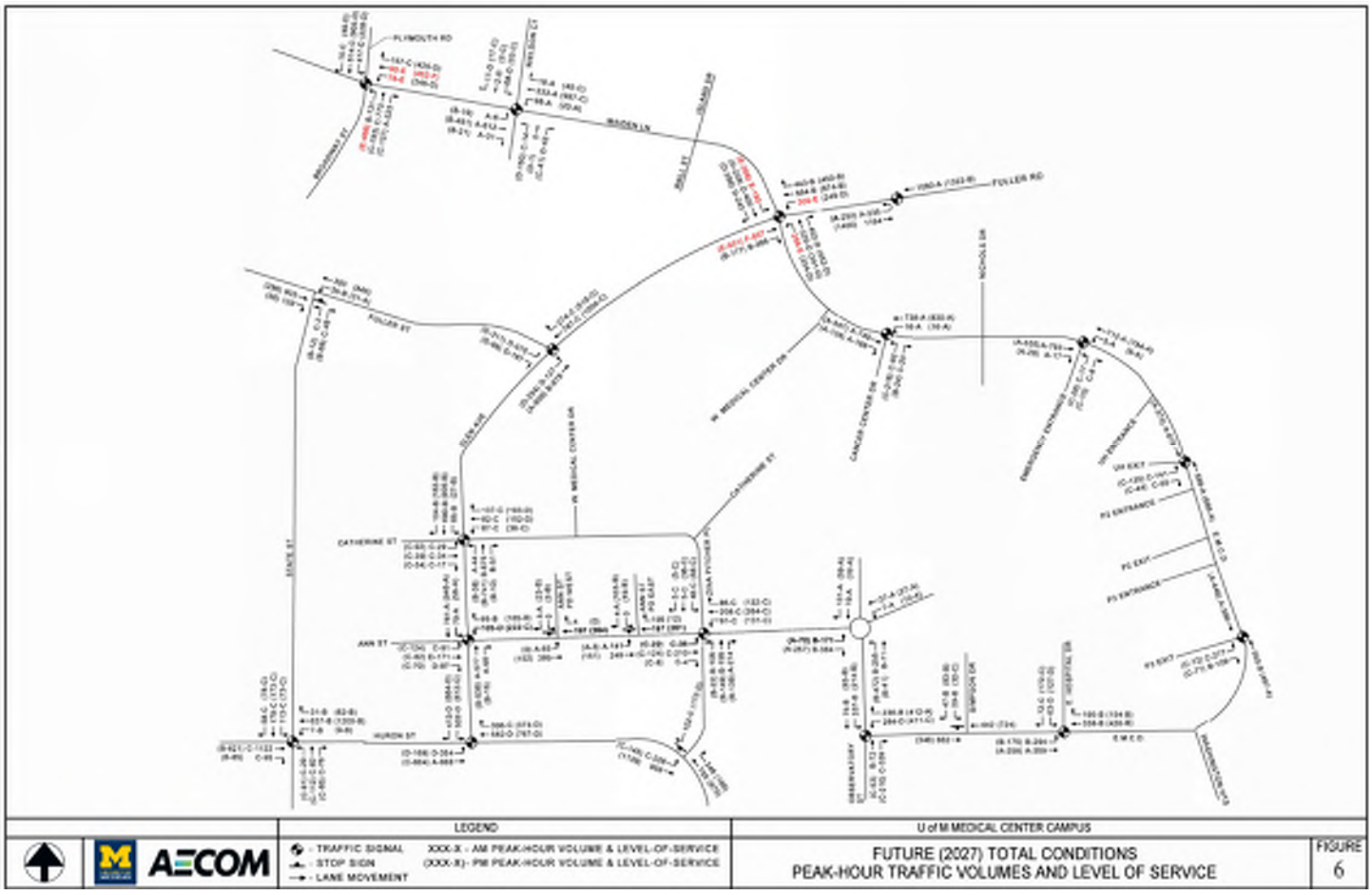
Phase II of the system would extend the line south from downtown to the vicinity of Briarwood Mall near State Street / I-94. The study evaluated a corridor extending from Plymouth Road and US 23 on the north to State Street and I-94 on the south. From the cost effectiveness assessment (cost per rider) it was concluded that the portion from Downtown to the north is more cost effective than the segment south of Downtown.

K. Fuller East Medical Intersection Improvement Analyses

A total of 15 documents were reviewed, which referenced an additional dozen studies and reports. The evaluations were undertaken over a timespan from 2006 to 2018. The earlier works, from 2006 through about 2015, seemed to indicate that the best practical alternatives for improving vehicle operations at Fuller and East Medical / Maiden involved multi-lane roundabouts, usually with one or several by-pass lanes. The key impedes for this option was to avoid the bridge work to three (3) structures if adding lanes to the traditional signalized intersection was used to improve capacity. Several focused just on the need for and impacts of requiring

pedestrian hybrid beacons (HAWK signals) to improve pedestrian crossing safety at the intersection. In a letter of Oct. 20, 2015, the University of Michigan stated their absolute opposition to having a roundabout provided at this intersection.

The subsequent documents were prepared by AECOM on behalf of U of M outlining an attempt to identify alternatives to using a roundabout, but trying to limit the impacts to the bridges. It involves providing a median crossover east of the intersection of Fuller and East Medical / Maiden and eliminating direct left turns for eastbound traffic at this intersection. There are also excerpts from a study by AECOM for the University looking at future (2027) traffic impacts by planned changes to the Medical Center Campus. The volume figures encompass much of the Lower Town study area.



L. City Council Resolutions Regarding Non-motorized Improvements

Over the years, the Ann Arbor City Council has adopted several resolutions focused on non-motorized transportation. These include:

- Resolution R-176-5-03 – In support and promotion of bicycle use, establishes the goal of providing adequate and convenient bicycle facilities. It calls for the establishment of a connected network of bicycle lanes along main commuter routes. It earmarks 5.0% of their Act 51 revenue towards achieving this goal.

- Resolution R-217-5-04 – Building on the resolution from the previous year, this one calls for the formulation of a detailed plan for the construction of the integrated bike lane network. It requires explicit yearly projections of the number of miles of bike lanes to be constructed annually.

- Resolution R-11-088 – With changes to the Michigan Planning Enabling Act, communities with an explicit commitment to a Complete Streets policy may receive funding preference under the competitiveness guidelines for the MDOT Transportation Enhancement (TE) program. [Note this program has been superseded by the Transportation Alternatives Program (TAP), but there remains a funding preference.] This resolution restates their decades-old commitment to a Complete Streets philosophy for transportation planning, project development and delivery. As practiced in Ann Arbor, complete streets elements include providing sidewalks on both sides of streets, defining an appropriate accommodation for bicyclists within the right-of-way, receiving community input on planning activities, administering a transit millage, and allocating funding for the maintenance of a non-motorized transportation program.

In essence, the resolutions provide the direction to the policy goals currently expressed in Item C of this document, City Master Plan – Non-motorized Transportation Plan 2013 Update.

M. University of Michigan Medical Center Campus Master Plan (2005)

The plan envisions about a 15 year horizon (2020). There is a separate section of the plan (pages 20 to 22) for what is called the Wall Street District, which is identified as a natural extension of the Medical Center Campus core.

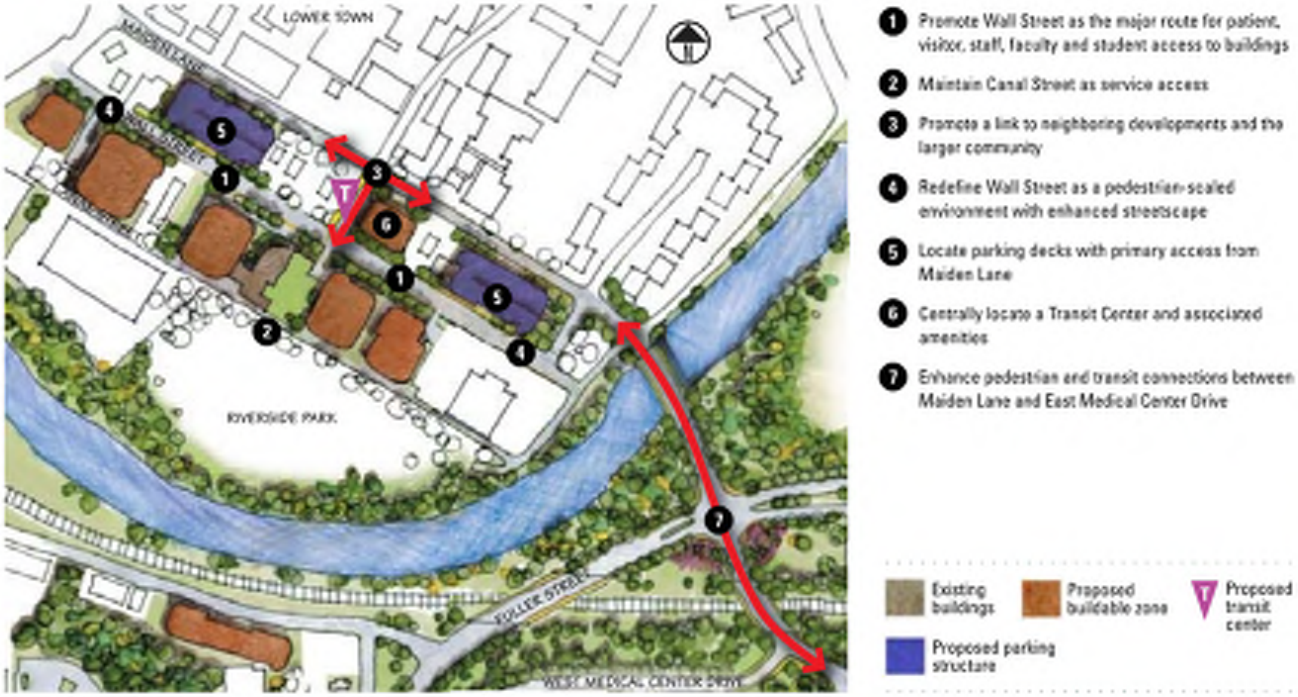
General policy statements for the overall plan includes goals to design projects with coordinated parking solutions to minimize the impact on patients, visitors, faculty, staff and students. Another is the goal to ensure mobility and access through:

~ pedestrian-friendly connectors
~ clear wayfinding
~ strategically-placed transit centers
~ accessible and safe patient and visitor parking
~ alternatives to vehicular traffic

The Wall Street district appears to be bounded as the south side of Maiden Ln to the north side of Canal St, west of Broadway to the Huron River. Per this plan, they anticipate over 1 million gsf of space, two 500-600 stall parking structures with primary access to Maiden Ln and a transit center. The defining figure illustrating their planned developments is Figure 5, shown below.

FIGURE 5

Wall Street Potential Development Sites and Planning Highlights



There are mentions of the Wall St district in the other sections of the plan. It is anticipated that the primary vehicle access (and wayfinding) will be from Fuller Rd. There are superficial mentions of remote parking lots and shuttle service, the U-M/AAATA MRide program, parking permit pricing as an incentive/disincentive, and promotion of U-M Parking and Transportation's carpool /van pool that should continue to be used and expanded.

Regarding pedestrian circulation, the plan identifies Wall Street as becoming more pedestrian-friendly by adding benches and banners, installing a strategically located transit center, providing ample pedestrian lighting and improving sidewalks. The primary pedestrian connectivity between the Wall Street district and the Medical Center Campus will be Maiden Ln, which should be enhanced to provide adequate sidewalks and a safe and attractive walking environment to accommodate the increasing numbers of pedestrians that will take advantage of this 10 minute walk.

N. University of Michigan North Campus Master Plan (2009)

There is very little within this plan that relates to the Lower Town Study Area. It does give lip service to the need for connectivity (transit, pedestrian, bicycle and vehicle) both internally within North Campus, as well as externally to the Central, Medical and East Medical Campuses, and so by inference the Wall St medical district. As with the Medical Campus Master Plan, it is anticipated that the primary vehicle access (and wayfinding) between North Campus, the Medical Center and Central Campus will be from Fuller Rd. It also notes that non-motorized links will be the sidewalks/pathways along Fuller Rd, Plymouth Rd and the north side of the Huron River.

O. Ann Arbor Area Transportation Authority (AAATA) Transit Improvement Plan (2014)

This is nominally a 30-year plan. It was developed in light of an increase in transit ridership that was driven by adding service frequency, adding new services, expanding service into areas previously not served, high and volatile gas prices, changing demographics, and a recovering economy with more people returning to work. TheRide's ridership included both fixed-route and demand response service.

The key fixed-routes serving the Lower Town Study area include service on: Broadway St, Fuller Rd, Maiden Ln, Plymouth Rd and Pontiac Trail.

Excerpt of System Map for Routes to NE of Study area

Excerpt of Downtown Routes Serving Lower Town

P. Amtrak Ann Arbor Station EA, P&N, Appendixes et al. (2014)

The documents describe the process for identifying and screening locations for a potential new multi-modal, intermodal, intercity and commuter passenger rail station in Ann Arbor (Ann Arbor Intermodal Passenger Rail Station). In Phase I, now completed, possible station sites were identified and screened. Also, a Purpose and Need was developed as part of the NEPA process for an Environmental Assessment (EA).

Site selection criteria were developed in order to identify potential station sites. The primary criterion, stipulated by both MDOT and Amtrak, was that the state be located on tangent track sections that should be at least 1000 feet long to support railroad operational needs.

Of the eight locations evaluated, the strongest candidates, in priority order, are:

- Fuller Rd (West) – Portion of track under E Medical Center Dr bridge
- Depot St – Existing Station Location
- N Main St – Portion of track centered on Lake Shore Dr

Phase II is to develop conceptual station design alternatives for the sites identified in Phase I and review of those design alternatives to determine which are reasonable to advance into the Environmental Assessment phase. It does not appear that this phase has yet been undertaken.