CMAP

THE UNIVERSITY OF ILLINOIS AT CHICAGO

UIC

UIC Multimodal Transportation Plan

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Acknowledgements

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1. INTRODUCTION AND OVERVIEW

The University of Illinois at Chicago (UIC) is a major public research university located in the heart of one of the largest transit systems in the country. People from around the world come to Chicago to study at UIC. The student population is over 27,000 and total staff is approximately 12,000; the university is also a draw for visitors utilizing their health care facilities and visiting public venues such as the UIC Pavilion and the UIC Forum. Each person coming to the campus area makes a decision about his or her mode choice; for those that live close to campus, there are many options. A great transportation system can, however, fall short of customer demands in terms of safety, reliability, connectivity, cleanliness, and cost.

In late 2012, UIC's Office of Sustainability requested the assistance of the Chicago Metropolitan Agency for Planning (CMAP) through the Local Technical Assistance (LTA) program to develop an interactive, community-based process to create a comprehensive, multimodal transportation plan, with the goal of improving safety, accessibility and connectivity, as well as the livability and vitality of the campus. Using the 2010 Campus Master Plan as a framework, this project sought to identify and prioritize the needs of UIC's transit, bike, and pedestrian system. Some factors are out of the control of UIC, but other small changes can help to make sustainable travel modes the preferred choice for students, visitors, faculty, and staff.

Successfully improving active and public transportation on campus will require investments in infrastructure, as well as promotion and education. These investments will enable the University to become a leader in sustainable campus transportation and help reduce congestion and parking demand. The University should also strive to coordinate investments with surrounding institutional uses such as the Illinois Medical District (IMD), Chicago Tech Park, and Roosevelt Square, especially with regards to strengthening transit service and connections to these and nearby destinations.

The recommendations outlined in this report are intended to help the University prioritize actions and direct attention to improvements that will have the most impact. Section 1 provides background information on the project. Section 2 summarizes study area information from the Existing Conditions Report. Section 3 contains detailed recommendations for walking and campus navigation, bicycling, transit, driving and parking, and land use. Section 4 lists the recommendations with implementation information, followed by funding resources information in Section 5.

Project Background

In the summer of 2013, CMAP and UIC developed a scope of work and began the process of understanding existing conditions, reviewing past planning efforts, and engaging the public for input. The resulting Existing Conditions report was published in February 2014, and laid the groundwork for development of detailed recommendations.

Created with the assistance of the steering committee and input from students, faculty, staff, and residents, the Multimodal Transportation Plan outlines a series of recommendations to help UIC address identified transportation challenges. Addressing these challenges will help the campus promote safe, sustainable travel choices and improve access for all campus users and people with disabilities of all kinds. In order to achieve these goals, this Plan presents guiding principles and associated recommendations for the following topic areas: Walking and Campus Navigation, Bicycling, Transit, Driving and Parking, and Land Use.

Relationship with GO TO 2040

CMAP's GO TO 2040 plan is metropolitan Chicago's long-range comprehensive regional plan, developed to assist communities in planning collaboratively for sustainable prosperity.

The following regional recommendations support development of UIC's Multimodal Transportation Plan:

- Achieve Greater Livability through Land Use and Housing. Support creative opportunities for communities to invest in livability strategies including more compact, healthy, safe, and walkable areas with mixed-use development. Principles stated in the regional plan that will improve livability on the UIC campus include supporting greater transit use, walking, and biking, increased housing supply, and coordinated land use.
- Improve Access to Information. To guide important local decisions, we need better access to information in our region. The Multimodal Transportation Plan addresses the need for real-time transit data, as well as regular collection of shuttle ridership data to monitor service and make informed improvements.
- Invest Strategically in Transportation. Prioritize efforts to modernize existing assets and make wise decisions regarding transportation improvements. Investments of all types should take a multimodal approach, with consideration for transit users, bicyclists, and pedestrians. The Multimodal Transportation Plan presents a broad set of improvements to existing facilities and construction of new facilities where appropriate. The Plan effectively balances the needs of all users, including bicyclists, motorists, and pedestrians.
- Increase Commitment to Public Transit. Public transportation reduces congestion and improves air quality. Moreover, the mobility enabled by transit supports the regional economy and quality of life The Multimodal Transportation Plan includes access and infrastructure improvements to support transit use.

The cumulative choices of our region's large institutions, job centers, municipalities, and seven counties determine quality of life and economic prosperity across our region. The UIC campus is a part of the larger Chicago metropolitan economic region and both influences and is influenced by the region.

Transportation and Livability

Livability, as a planning concept and goal, refers to the overall social and environmental quality of a community, as perceived by residents, workers, and visitors. It is commonly referred to as "quality of life." Livability is primarily defined and achieved at the local level, reflecting a community's values and priorities on a wide spectrum of issues, including public safety, health, the environment, opportunities for employment, education, social interaction, recreation and cultural activity, and, of course, transportation.

Transportation impacts nearly every aspect of a person's life. Going to work or school, making appointments, running errands, meeting friends, and engaging in recreational activities are all affected by the transportation options that are available to us. Transportation can also affect the environment we live in: the quality of the air we breathe, the noise levels we experience, and the quantity and quality of our drinking water. It can also affect our safety, security, and health. In addition to community livability, transportation and the massive infrastructure needed to support it directly affect how our communities look, function, and feel.

The potential for transportation to enhance and improve livability is substantial. The quality, location, and type of transportation facilities and services available to a community significantly affect its ability to advance and achieve broader livability objectives, such as access to jobs, affordable housing, high quality schools, good health, a vibrant economy, environmental health, and safe streets. The Federal Highway Administration, in its *Livability in Transportation Guidebook*,[1] indicates that achieving livability in transportation involves:

...addressing road safety and capacity issues through better planning and design, maximizing and expanding new technologies such as intelligent transportation systems and quiet pavements, and using travel demand management approaches in system planning and operations. It also includes developing high quality public transportation to foster economic development, and community design that offers residents and workers the full range of transportation choices. And, it involves strategically connecting the modal pieces — bikeways, pedestrian facilities, transit services, and roadways — into a truly intermodal, interconnected system.

[1] http://www.fhwa.dot.gov/livability/case_studies/guidebook/.

At the local level, streets and streetscapes that are safe, attractive, and designed to accommodate all travel modes — particularly walking — are a key element in livable communities. Such streets can improve and enhance the experience of using public transportation, which typically begins and ends with a walking trip. Pedestrian- and bicycle-friendly streets also help promote social interaction and community cohesion by creating more opportunities for residents to interact and form relationships that build community and promote civic engagement. Promoting active transportation can improve the health of community residents and lower their transportation costs, which are often the second largest household expense, after housing. Safety, one of the most important goals for communities, transportation engineers, and planners, is enhanced when streets are designed to accommodate all users.

GO TO 2040 explicitly recognizes that providing more transportation choices to residents is a vital component of livability. When asked what makes a community livable, residents in our region—and around the country—consistently point to certain elements, including health, safety, and walkability. They characterize livable communities as those offering transportation choices that provide timely access to schools, jobs, services, and basic needs; those that allow and promote walking, biking, and the use of public transportation; and those that are broadly accessible for people of all ages and abilities and allow safe, convenient travel by multiple transportation modes.

Complete Streets

Complete Streets are designed, built, and operated to enable safe access and travel by all roadway users of all ages and abilities — including pedestrians, bicyclists, and transit riders, as well as mobility-impaired individuals. This approach to street design corrects decades of practice in which planners and engineers designed and built streets primarily, if not solely, for automobiles, regardless of context and need. Complete Streets is a transportation policy and design approach that fully recognizes the fact that streets need to serve and provide for travel by various modes simultaneously in a manner that is safe, convenient, and comfortable for all travelers.

Both the State of Illinois and the City of Chicago have formally adopted policies supporting

Complete Streets. The State passed its Complete Streets law (Public Act 095-0665) in October 2007. The law requires the Illinois Department of Transportation (IDOT) to “incorporate bicycle and pedestrian accommodations into state highway projects in urbanized areas.” Chicago developed and adopted its Complete Streets policy in 2006. In 2013, the Chicago Department of Transportation developed a set of accompanying design guidelines to build upon the policy and help define processes, standards, and expected outcomes. These guidelines are discussed in more detail in the recommendations section.

CDOT also developed the Sustainable Urban Infrastructure Guidelines and Policies document in 2013, which establishes a citywide approach for integrating environmental performance goals into infrastructure design and outlines a number of strategies, performance metrics, requirements, and policies to accomplish sustainability goals. These guidelines are aligned and integrated with the City’s Complete Streets Chicago Design Guidelines.

More information and useful resources can be found on the website of the National Complete Streets Coalition, a program of Smart Growth America.

Planning Process and Outreach Overview

A significant feature of CMAP's Local Technical Assistance (LTA) program is the commitment to broad-based public involvement. For the UIC Multimodal Transportation Plan, the community-tailored "project outreach strategy" (PROUST) was supported by background research and initial conversations with the University of Illinois at Chicago Office of Sustainability project coordinator and Steering Committee members. The first steps to developing the public engagement strategy for UIC were to find out what type of public participation had occurred on campus prior to this project; to learn more about the demographics of the study area; and to begin building a comprehensive list of the key stakeholders to involve in the planning process (see Appendix for associated outreach documents).

From this background research, the initial direction of the PROUST was devised, establishing an overarching goal that the project's public outreach would draw from a number of stakeholders familiar with the University's campus area. The outreach strategy was designed with the intent to attract individuals who would share their transportation experiences and brainstorm ideas about how to make UIC a safer and more accessible campus for students, faculty, staff, hospital employees, surrounding neighborhood residents, and visitors. Based on study area demographics, the project team chose to conduct a variety of outreach activities that would take place throughout the campus area and would appeal to students, faculty, staff, and community residents.

Steering Committee

Each LTA project has a steering committee that serves as a review body at each step of the project. In the case of the UIC Multimodal Transportation Plan, the steering committee was made up of individuals representing various University departments, transportation agencies, and related non-governmental organizations.

Steering Committee members are:

- Pablo Acevedo, *UIC Physical Plant Administration*
- Joe Alonzo, *Chicago Department of Transportation* (*CDOT*)
- Jennifer Henry, *Chicago Transit Authority* (*CTA*)
- Fernando Howell, *UIC Facility and Space Planning*
- Cynthia Klein-Banai, *UIC Office of Sustainability*
- Aren Kriks, *Illinois Department of Transportation* (*IDOT*)
- Michael Redding, *UIC Department of Public and Government Affairs*
- Steve Schlickman, *Urban Transportation Center*
- Dave Taeyaerts, *UIC Campus Learning Environment*
- Curt Winkle, *UIC College of Urban Planning and Public Affairs*
- Kate Yoshida, *UIC Office of Sustainability*

Outreach Efforts

The UIC Multimodal Transportation Plan process featured a number of outreach activities to engage individuals affiliated with UIC's campus and the surrounding communities. At the start of the planning process, it was determined that the process would include four phases. The first phase would entail information-gathering, utilizing a detailed existing conditions report and user input. The second phase would focus on strategy development, identification of key challenges and opportunities, and the development of draft concepts and solutions. The third phase would involve the development of a draft transportation plan that would be reviewed by UIC students, faculty, staff, and administrators. The fourth and final phase would be the presentation of the final report to UIC for adoption and implementation.

Outreach activities took place during the first and second phases of the planning process. These activities included class visits, surveys, community workshops, and a focus group. To ensure that the plan addressed accessibility issues, it was important to connect with relevant UIC departments such as the Chancellor's Committee on the Status of Persons with Disabilities, the Disability Resource Center, and the Office of Access and Equity. Outreach staff also worked with the Chicago Lighthouse to connect with visually impaired people in the community. The outreach methods along with associated public input received are outlined in greater detail in the Appendix.

2. LOCAL AND REGIONAL CONTEXT

History

The University of Illinois at Chicago (UIC) was officially established in 1982 following the merger of the University of Illinois Circle and Medical Center. Presently, the east side of campus is made up of the former "Circle Campus" while the west side is the site of the University's historic medical campus and the Illinois Medical District. Named for its proximity to the Circle Interchange, the Circle Campus was originally established as an urban renewal site at the intersection of Halsted and Harrison Streets. The campus was designed by Skidmore, Owings, and Merrill, in conjunction with Walter Netsch and opened in 1965.

UIC's medical sciences and research roots on the west side of campus go back to 1859 when the Chicago College of Pharmacy was established as a private institution. In 1896, the College became officially affiliated with the University of Illinois, and between 1897 and 1901, it and the College of Physicians and Surgeons and the Columbian Dental College were incorporated into the University of Illinois system as the Department of Medicine. The Illinois Medical District was established by the state legislature in 1941 with the passage of the Medical District Act with the intention of attracting new investment in research centers and care facilities to the present day West Campus area.

One long-standing issue for transportation at UIC is the lack of a strong connection between the east and west sides of campus that results from the historical growth and development of the campus, and this plan seeks to address that.

Regional Setting/Context

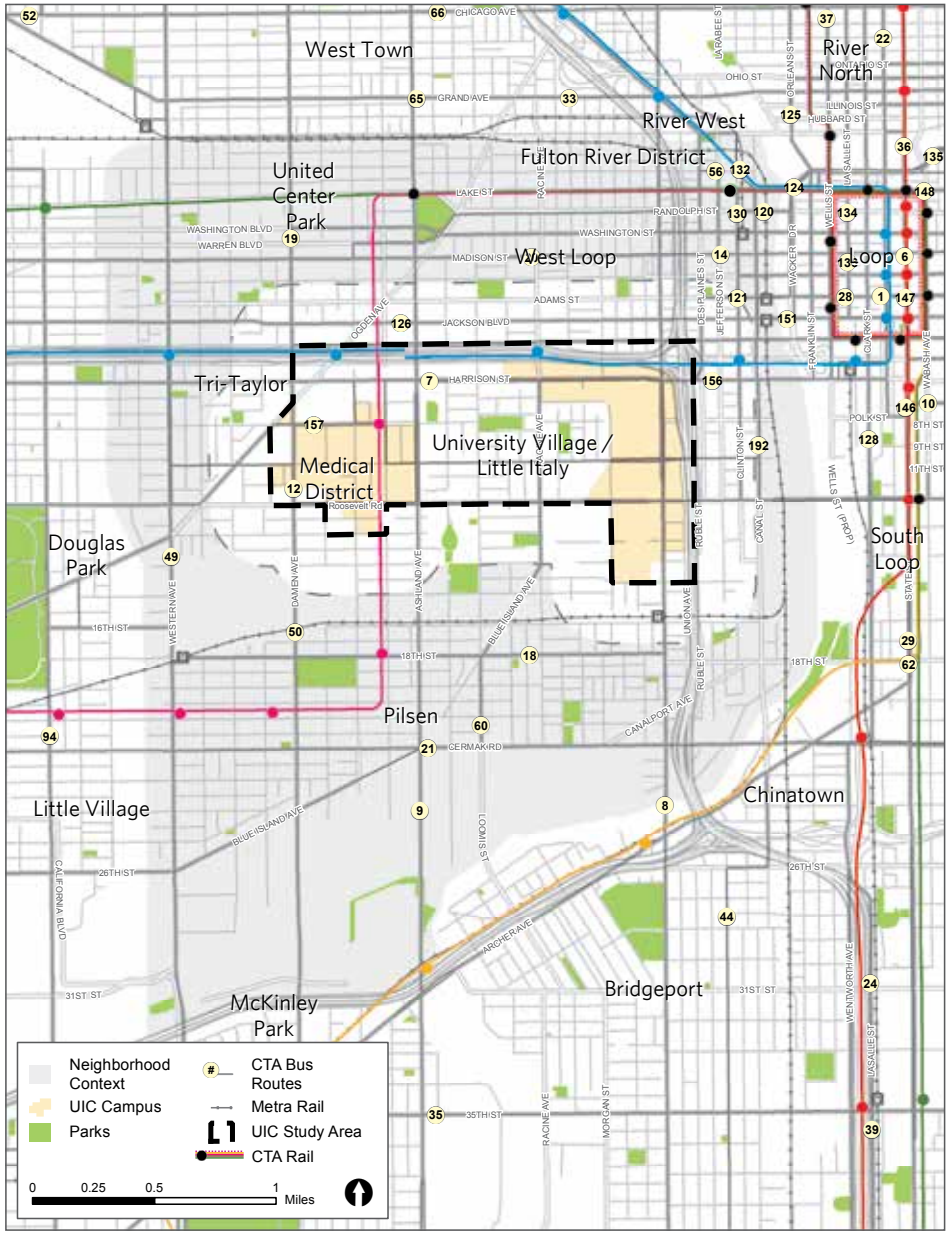
Located just outside of Chicago's Loop, the University of Illinois campus is embedded within a dynamic area that includes parts of the Illinois Medical District. The UIC campus area is part of a greater regional and urban whole. As a major regional destination, and one of the largest developments in the area, the campus has a tremendous impact on the surrounding communities shown in Figure 1. Every day approximately 30,000 students, faculty, and staff flow into the campus, and do so by utilizing the wide range of transportation options that connect UIC to Chicago's neighborhoods and the greater region.

Core Study Area

Figure 2 shows the core UIC study area, which contains the physical campus and all immediately adjacent areas. This area includes east, west, and south areas of UIC's 332-acre campus. The east and south areas of campus account for 199 acres and contain a majority of campus administrative, classroom, research, student housing, and recreational facilities. The west side of campus is UIC's medical sciences hub and includes parts of the 560-acre Illinois Medical District (IMD) and each of its four major hospitals. These major medical facilities that make up the much larger IMD employ 20,000 people and attract approximately 75,000 visitors daily.

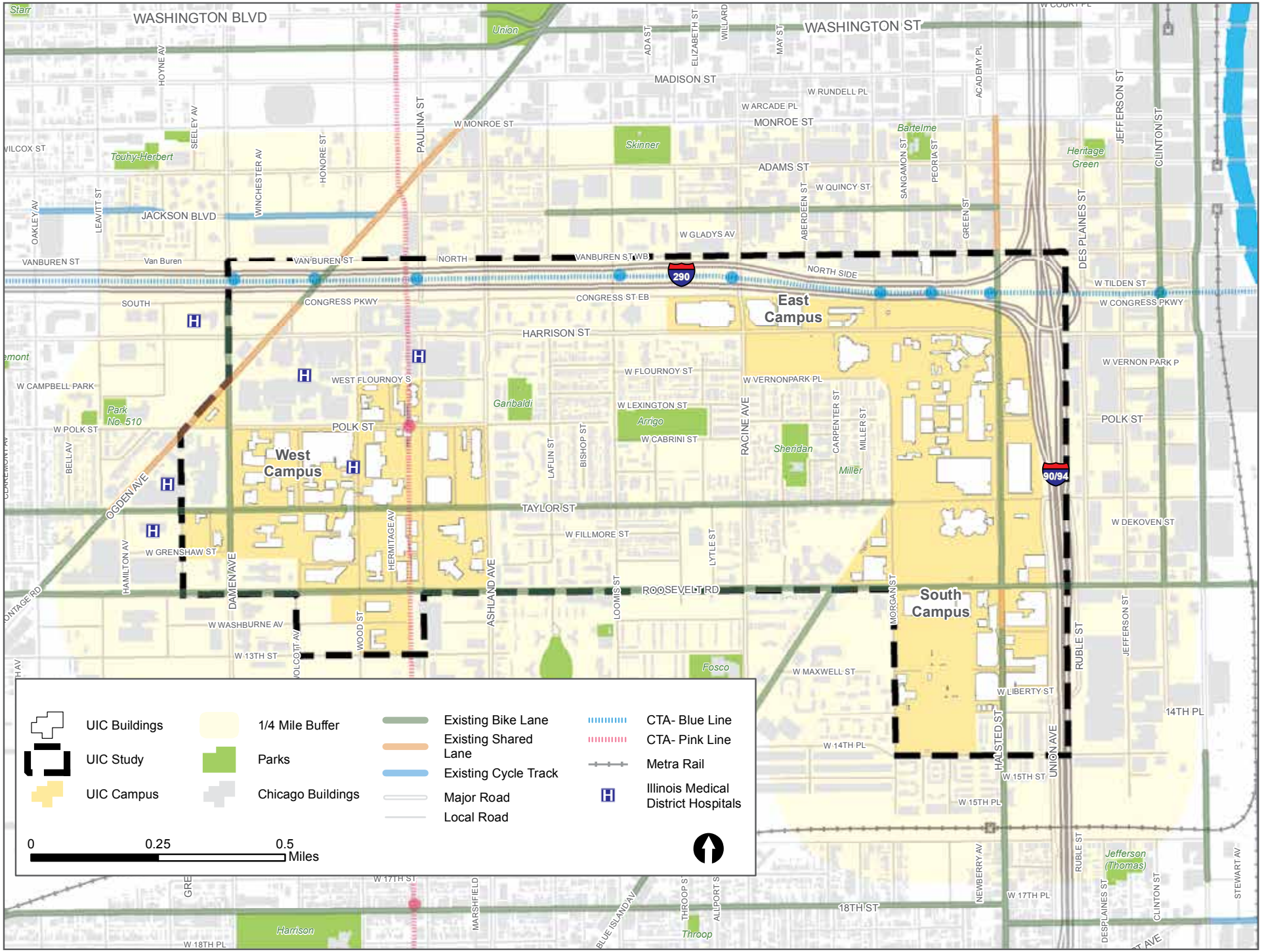
The Core Study Area is also home to historic neighborhoods, including Greektown along Halsted and Taylor Street's Little Italy commercial and heritage corridor.

Figure 1. UIC and neighborhood context



Source: Chicago Metropolitan Agency for Planning.

Figure 2. UIC core study area



Source: Chicago Metropolitan Agency for Planning.

Previous Plans, Reports, and Studies

This section provides a brief summary of existing City and University plans, studies, and reports that helped to shape the recommendations in this plan. More in-depth summaries of the following plans are found in the Existing Conditions Report.

- UIC Master Plan (2010)
- Chicago Streets for Cycling Plan 2020 (2012)
- Chicago Pedestrian Plan (2012)
- Circle Interchange Rehabilitation Project
- Chicago Central Area Plan (2003)
- UIC Climate Action Plan (2009)
- Sustainable Transportation and Grounds in UIC (2009)
- Chicago Climate Action Plan: Transportation (2008)
- Near West Side Plan (2000)

UIC Master Plan 2010

The Master Plan is integral to UIC's development plans and evolution from a traditional commuter campus toward a research campus that provides 24/7 services and amenities to students. The plan identifies key immediate-impact projects that incrementally advance this vision under fiscally constrained conditions. The identification and assessment of these planned actions was guided by the planning process, its analyses, and the following principles:

- Limit land development and concentrate on the campus core.
- Identify and reinforce the campus edges and connections to the adjacent community.
- Reduce or eliminate surface parking lots.
- Develop an improved pedestrian experience.
- Create clear, safe, and connective streetscapes within and between the east and west campuses.

The plan stresses the importance of an integrated transportation network that reinforces multimodal circulation within and between campuses. With the goal of connecting the east and west sides to create a unified campus, many of the plan's recommendations focus on developing new pedestrian, bike, and university/CTA transit connections for the entire campus.

Chicago Streets for Cycling Plan 2020 (2012)

The Chicago Streets for Cycling Plan, released by CDOT in 2012, states that bicycling will play a critical role in the city's economic future by reducing transportation costs, improving physical health, and enhancing the quality of life and attractiveness of the city. It builds on the city's previous bike plans from 1992 and 2006, and lays out a series of recommendations to increase the number of on-street bikeways from 200 miles in 2012 to more than 600 miles in 2020. In regards to the UIC campus and its surrounding neighborhoods, the plan identifies multiple roadways for future bicycle routes (Figure 3). Planned and proposed facilities include, Crosstown bike routes on Halsted Street, Harrison Street, Jackson Boulevard, and Blue Island Avenue; and Neighborhood bike routes on Loomis Street, Morgan Street, Wood Street, and Polk Street.

Chicago Pedestrian Plan (2012)

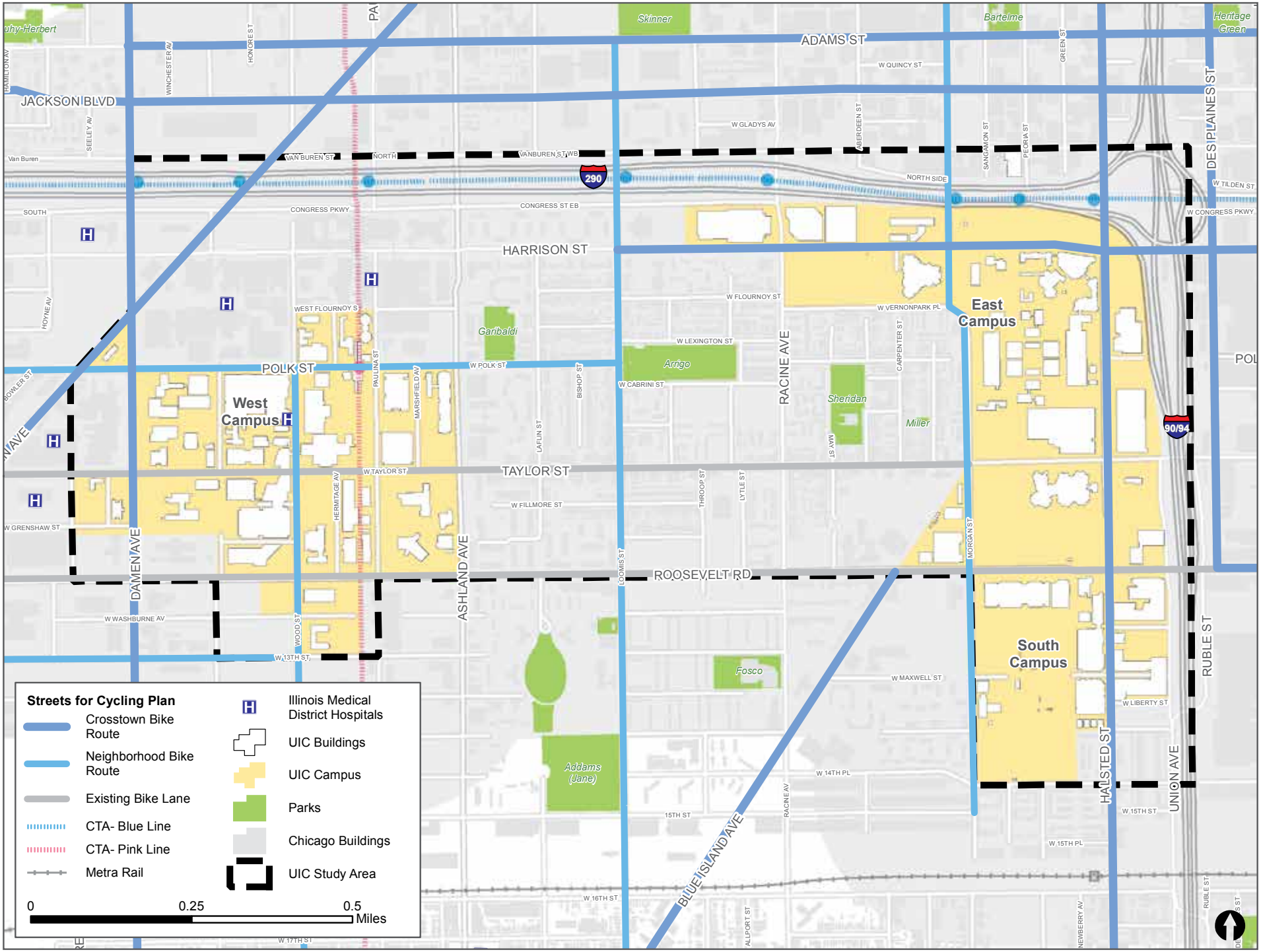
Released in September 2012, the CDOT plan focuses on improving the safety, connectivity, and overall quality of the pedestrian network throughout the city. The plan expresses the public's concerns and CDOT's own analyses in a series of key safety, connectivity, and livability goals. The plan provides a higher-level strategic framework with the goal of eliminating all pedestrian traffic fatalities in ten years ("0 in 10" goal) by proposing a wide array of safety-enhancing strategies geared toward infrastructure improvements, a more balanced/multimodal street space, as well as targeted and city-wide outreach and education programs.

Circle Interchange Rehabilitation Project: Environmental Assessment (2013)

The Environmental Assessment (EA) concerns the planned rehabilitation and congestion relief project at the confluence of I-90/94 and I-290 (Eisenhower Expressway), known as the Circle Interchange. Results of the EA include a "preferred alternative" that reconstructs the roadways to improve safety and mobility at the complex interchange and improve and extend the lifespan of the facilities.

The project also includes the reconstruction of a number of street bridges that either feed directly into the UIC campus or are within the core study area. Plans for the Harrison and Halsted Street bridges include wider sidewalks, corner radii reduction at Harrison/Halsted intersection, and a new signalized mid-block crossing at the Halsted Street station CTA Blue Line entrance. The reconstruction of the Peoria Street Bridge focuses on improving the pedestrian and bicycle experience by maintaining non-vehicle access and by increasing the setback of the CTA station house, reflecting the UIC Master Plan's identification of the area as a critical campus gateway.

Figure 3. Streets for Cycling Plan (UIC area)



Source: Chicago Metropolitan Agency for Planning.

Chicago Central Area Plan (2003)

Approved by the Chicago Plan Commission in 2003, the Chicago Central Area Plan, which generally covers the area bound by the Stevenson Expressway (I-55), Halsted Street, Division Street, and Lake Michigan, is intended to guide the significant economic and physical growth projected for the area in ways that promote its further economic competitiveness; regional, national, and international connectivity; and environmental sustainability. The plan specifies projects and infrastructure design standards that would:

- Make transit the first choice of central area workers and residents.
- Improve the quality of the pedestrian environment.
- Encourage the widespread use of bikes and other alternative modes of transportation.

The transportation section's most significant proposal is the development of a West Loop Transportation Center that would, in effect, expand the integrated public transit options west of the Loop, so as to provide the same level of service and convenience that has helped sustain the Loop's competitiveness. The plan also targets the sites along Roosevelt Road just east of UIC's campus for high density commercial development, and much of this development has been completed.

UIC Climate Action Plan (2009)

In 2007, the University of Illinois at Chicago became an official signatory to the American College and University Presidents' Climate Commitment (ACUPCC). The ACUPCC represents a network of more than 650 colleges and universities that have made commitments to eliminating net greenhouse gas (GHG) emissions from campus operations. The commitment requires the development and monitoring of a comprehensive climate action plan so as to formalize and accelerate the process of environmental stewardship.

The UIC Climate Action Plan is a set of strategies and goals put forward by the Chancellor's Committee on Sustainability and Energy and the Office of Sustainability in compliance with UIC's participation in the ACUPCC program. It targets a 40 percent decrease in GHG emissions by 2030 and 80 percent by 2050. The study found that increasing the commuter mode share of biking, walking, and transit by 30 percent would reduce UIC's carbon footprint by more than 18 percent. Because of this, many of the plan's transportation recommendations are centered on changing the behaviors of commuters by making walking, biking, and the use of transit more accessible and attractive through the use of transit incentives, more efficient intracampus shuttle service, and improved quality and location of bike and pedestrian oriented infrastructure.

Sustainable Transportation and Grounds in UIC (2009)

The purpose of the research study and resultant report was to assess the campus's current transportation and grounds practices, their environmental impacts, and to identify any potential interventions that would facilitate UIC's stated goals of reducing net greenhouse gas emissions and creating an environmentally sustainable urban campus. An extensive travel survey of campus users include 2,785 respondents who provided the research team with data concerning the residential location of faculty, students, and staff as well as their daily commute mode of travel. The report identified key characteristics of UIC campus users' travel behaviors and generated recommendations mainly composed of strategies geared toward altering the commuting and intracampus travel patterns of faculty, students, and staff through education/outreach campaigns, improved design and accessibility of multimodal infrastructure, and targeted service improvements.

Chicago Climate Action Plan: Transportation (2008)

The City of Chicago Climate Task Force's Plan assessed the city's existing environmental impacts and serves as a strategic roadmap toward the goal of reducing the city's GHG emissions by 80 percent below 1990 levels by 2050. The plan's research found that 21 percent of the city's GHG emissions are produced from its cars, trucks, buses, and trains. For this reason, the "Improved Transportation Options" strategy is dedicated to proposing and implementing actions that will dramatically reduce the amount that city residents and workers rely on their cars as their sole means of transportation. These include increased investment in, and expansion of, the city/regional transit network and the concentration of new development around transit hubs. The development of a bus rapid transit (BRT) network that further connects the city's neighborhoods to high quality transit service is mentioned as one tool that can be utilized, along with employer-based transit benefits programs to attract additional transit riders over time.

Near West Side Plan (2000)

Bounded by Lake Street to the north, the Eisenhower Expressway to the South, the Kennedy Expressway to the East, and Ashland Avenue to the west, the Near West Side encompasses 88 city blocks and is immediately adjacent to the UIC campus. The Near West Side Comprehensive Area Land Use Plan was prepared by the City of Chicago Department of Planning to establish a cohesive framework for the long-term (re) development of this active and diverse mixed-use Chicago Community Area. The plan encourages physical improvements and new land-use patterns that build on the mixed-use nature of the area and underlines the importance of building on and bringing attention to existing area assets such as Greektown and UIC in order to attract new investment and visitors. Implementation of this plan is underway.

Transportation Network

The UIC community and local residents are served directly by regional and national thoroughfares as well as a wide array of public transit options, including multiple CTA rail lines, bus routes, and Metra commuter lines. The study area is also linked into Chicago's street grid and its expanding bicycle network, providing opportunity to develop and improve connections across all available modes.

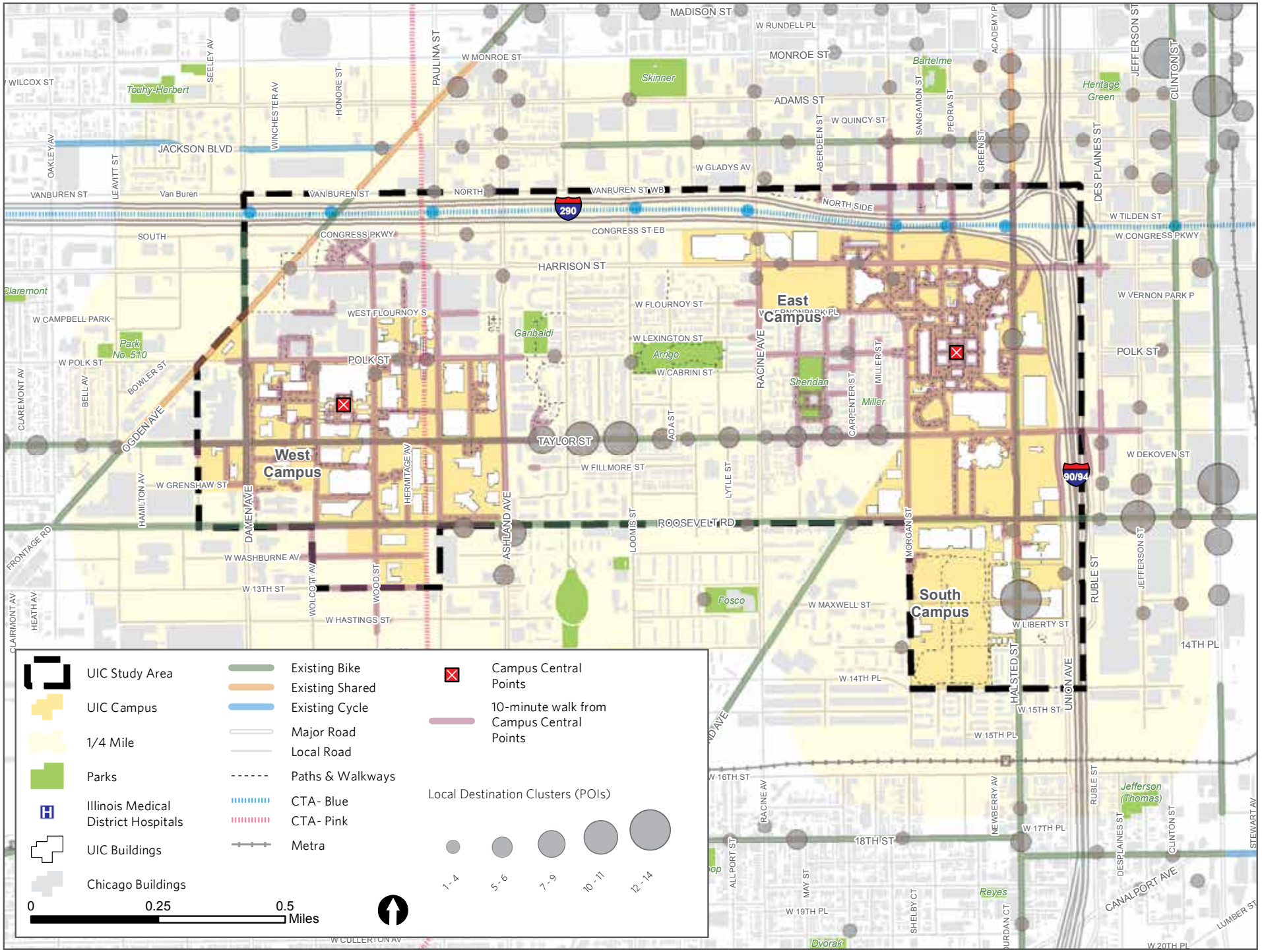
Pedestrian Network

The UIC campus has an extensive network of walkways and paths that connect academic and administrative buildings on each campus. Additionally, streets in the surrounding area provide sidewalks that link campus users and local residents to the campuses, the IMD, city destinations, and public transportation facilities.

The ability of the UIC community to reach a variety of amenities and destinations within a short walk is critical to the campus and study area's overall walkability. Figure 4 illustrates the destinations and points of interest that can be reached within a quarter mile or a 10-minute walk from the Quad on the east side, and a 10-minute walk from the west side's core area. This walkable area is called the "walkshed" or "walkform."

Development in and near the East Campus has resulted in many interruptions to the city's consistent street grid, creating longer blocks and fewer intersections along the edges of the East and South campuses. The internal path system on the East campus fills in the gaps that these developments created, but for destinations just outside of campus, walkability is compromised, as indicated by the irregular shape of the mapped walkshed. In contrast, the West campus has maintained the standard Chicago street grid to a much higher degree, resulting in a nearly symmetrical diamond-shaped walkform, signifying uniform accessibility from its central point.

Figure 4. Core study area: Walkshed



Source: Chicago Metropolitan Agency for Planning.

Bicycle Network

The UIC campus is linked directly into the city's growing network of bike lanes and other bicycle-oriented facilities. While there are not many direct and continuous routes connecting the UIC campus to areas outside of the immediate neighborhood context, the following existing routes link directly into established routes to the north, south, east, and west.

- **East-west routes**: The Taylor Street route runs from Morgan to Western and consists of a minimum width (5') bike lane adjacent to parking lanes in both directions. Narrow street dimensions and congestion caused by the street's busy commercial segments, which in turn result in frequent parking maneuvers that often require stopping and backing up through bicycle lanes, present actual and perceived safety concerns for cyclists. Roosevelt Road also features a striped bike lane (5') adjacent to parking lanes (along some blocks). The higher volume of traffic at greater speeds associated with the arterial character of Roosevelt Road present different safety concerns for cyclists; however, the quality and maintenance of pavement conditions and markings are significantly better than those found on Taylor Street.
- **North-south routes**: On the east side of campus, Halsted Street, north of Roosevelt Road, features 5'-6' bike lanes adjacent to the curb, while the narrower and more congested commercial segment south of Roosevelt has 5' bike lanes adjacent to on-street parking. The 6-foot wide bike lanes adjacent to the curb along Damen Avenue provide cyclists a small buffer to maneuver along the busy corridor. However, the route ends abruptly to the north at Congress Parkway and to the south at Roosevelt Road, making it difficult to rely on this route for commuting and linking into the broader network.

CDOT's commitment to expanding the city's network of designated bike routes includes plans for new routes and extensions of existing routes serving the UIC campus and core study area. These include the following planned or proposed improvements:

- Proposed new buffered bike lanes along **Harrison Street** between Desplaines and Loomis Streets will enhance east-west connectivity on campus and into downtown.
- Extending the existing **Taylor Street bike lane** east through campus from its current terminus at Morgan Street.
- Adding bike lanes on **Loomis Street, Wood Street, Paulina Street,** and **Racine Avenue**, providing enhanced north-south access to existing intracampus routes.
- New bike lanes on **Morgan Street** that will bring bike facilities to the center and western edge of the East Campus.
- Enhancements to nearby **Jackson Boulevard** and **Adams Street** will complete connections into downtown, while the southern extension of the existing **Blue Island Avenue** bike lanes will expand access further into the South Side.

Level of Traffic Stress

According to a recent report from the Mineta Transportation Institute, a highly connected, low-stress network is fundamental to attract the highest numbers of bicyclists to the network.[2] The method developed to measure traffic stress considers a number of factors, including the average annual daily traffic (AADT), the number of travel lanes, posted speed limits, and location of the center line. For streets where bicyclists and cars share the road, street width and speed limit are the primary factors affecting traffic stress. These ratings (see Table 1) aim to estimate the level of stress that a bicyclist would feel while riding along different routes, without the need to survey every road in the study area. Using available data, Figure 5 measures the Level of Traffic Stress (LTS) on the roadways in the study area.

Table 1. Level of traffic stress ratings[3]

	Street Width			
Speed Limit	1	2 or 3 lanes	4 or 5 lanes	6 lanes or more
25 mph or less	**LTS 1**	**LTS 1* or 2***	**LTS 3**	**LTS 4**
30-35 mph	**LTS 2**	**LTS 2* or 3***	**LTS 4**	**LTS 4**
40+ mph	**LTS 4**	**LTS 5**	**LTS 5**	**LTS 5**

*The lower LTS value applies to two-lane, local neighborhood streets without painted centerlines.

Source: Mineta Transportation Institute, 2012.

While many of the road segments in the study area are considered "low-stress" (LTS 1 or 2), there is only one that is continuous through the study area and does not end in a cul-de-sac or dead-end, and that is Taylor Street. The poor condition of Taylor Street's surface, along with a narrow bike lane alongside parked cars (with "dooring potential), makes the reality of biking on Taylor Street more stressful. That means that there are no low-stress biking routes between the east and west sides of campus.

The higher stress roads (LTS 4) coincide with most of the conflict intersections that were identified in the 2010 Campus Master Plan, such as those along Damen, Halsted, Harrison, and Roosevelt. A well-connected, low-stress network will need to provide better east-west travel routes. As for north-south travel, Loomis Street is the only low-stress route that crosses the Eisenhower Expressway.

Bike Share and Bike Parking

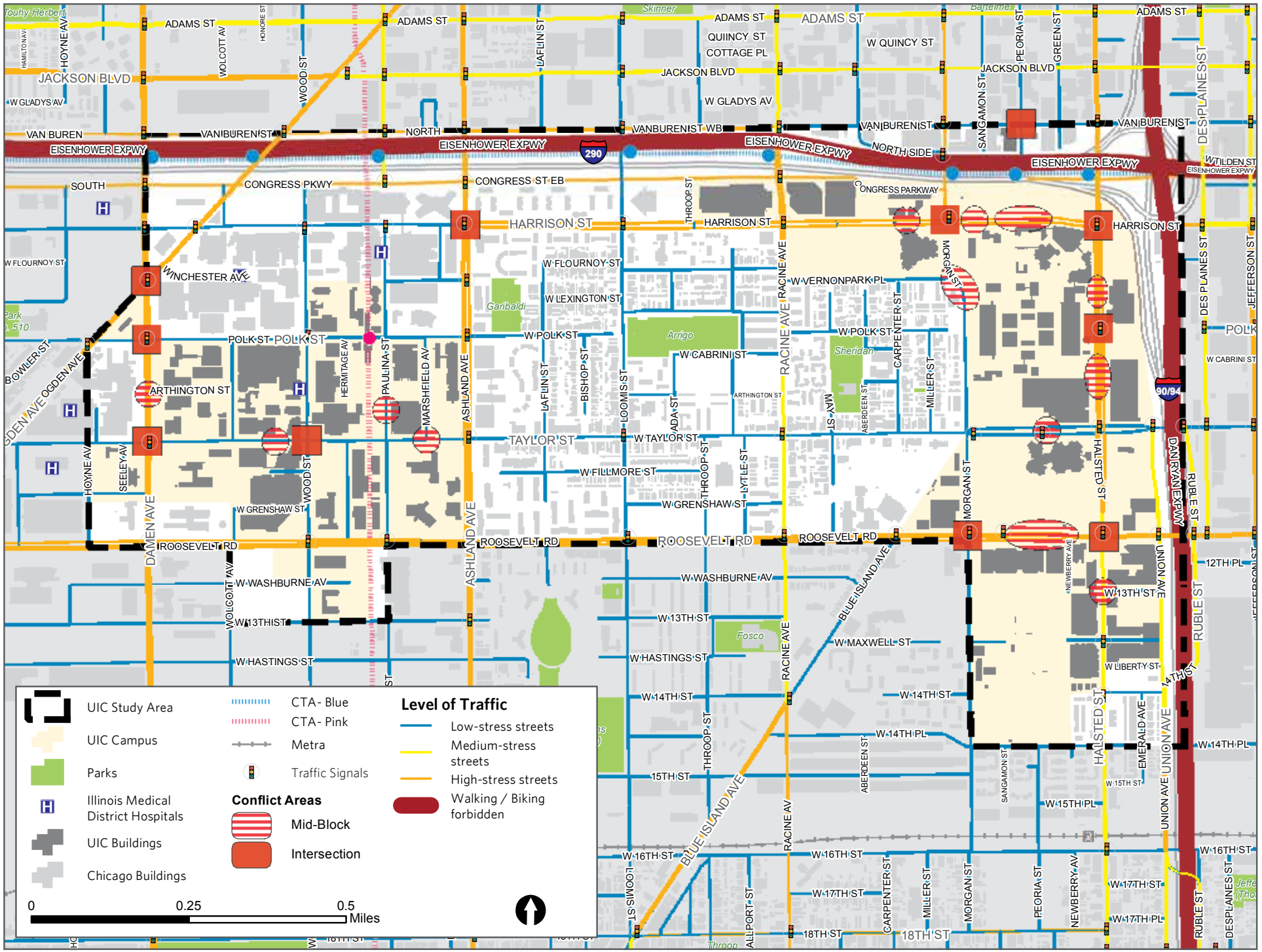
Bikesharing was introduced in Chicago in June 2013 with the Divvy Bikes system. Presently, the UIC campus area is served by more than 15 Divvy stations (Figure 6), which are evenly distributed throughout the campus area. Taking into account planned network expansions and the recent agreement to provide Divvy membership subsidies to UIC students and employees, bike share is likely to become a popular mode for trips across campus and to nearby destinations.

The current supply of 800 bicycle parking spaces throughout the UIC campus is well below the industry standard of 1 space for every 10 campus users. To meet this standard, an additional 1,100-1,600 traditional inverted U-shaped bike racks, each providing 2 spaces, is required. UIC is in the process of adding more bike racks and covered bike parking.

[2] Mekuria, M. C., Furth, P. G., and Nixon, H. 2012. Low-Stress Bicycling and Network Connectivity. San Jose: Mineta Transportation Institute. Online: http://transweb.sjsu.edu/PDFs/research/1005-low-stress-bicycling-network-connectivity.pdf.

[3] Ibid.

Figure 5. Level of traffic stress



Source: Chicago Metropolitan Agency for Planning.

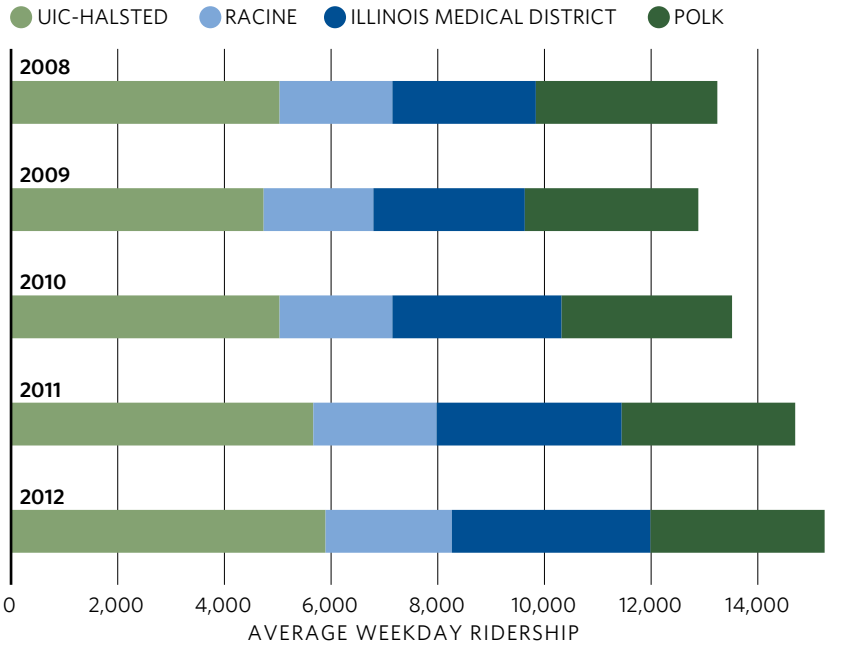
Transit

The UIC campus and surrounding communities are linked into the city and region's mass transit network via CTA rail and bus, Metra rail, and Pace bus, as well as an internal campus shuttle system.

CTA Rail

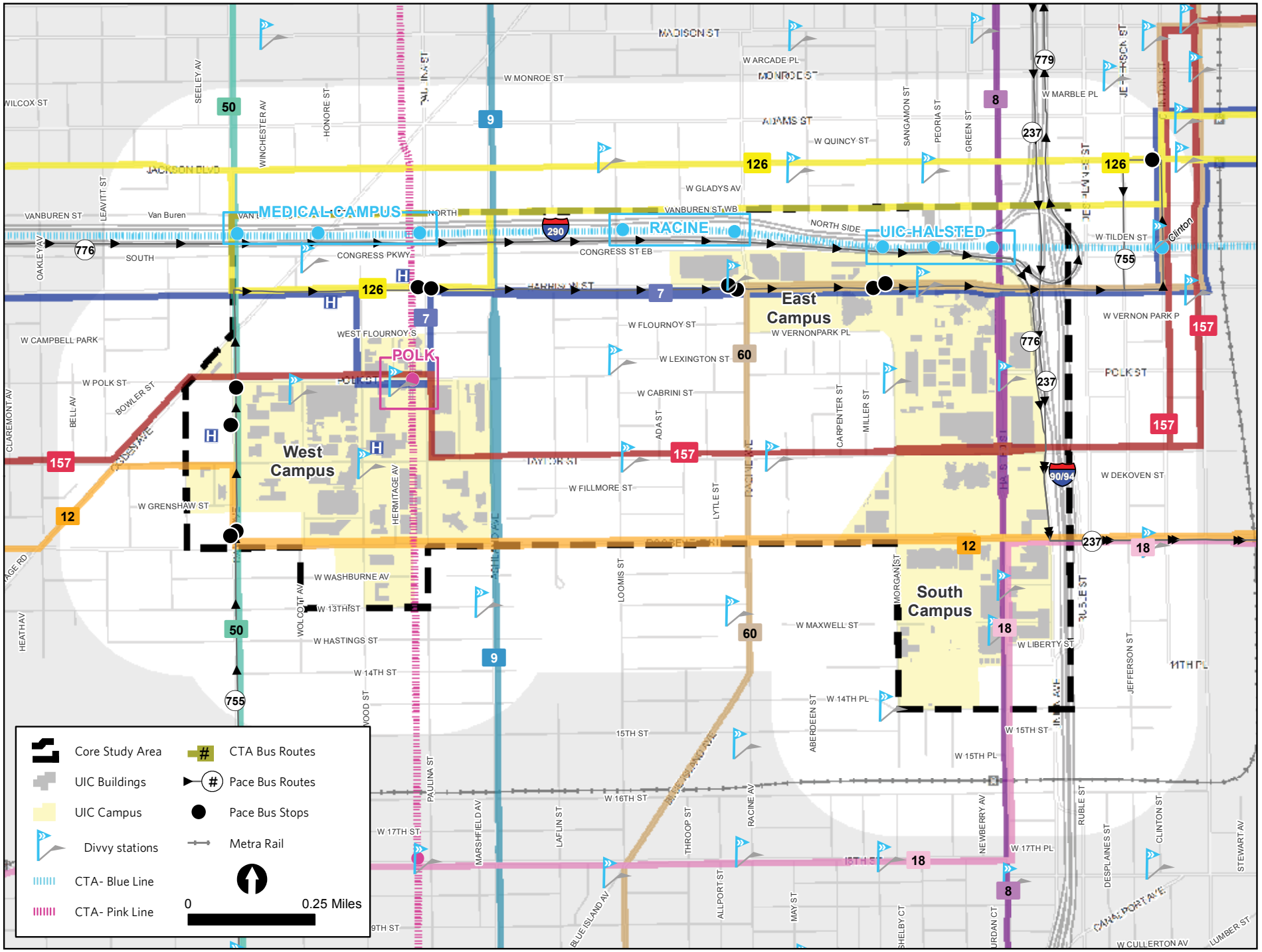
The UIC campus is directly served by the CTA's rail network with three Blue Line stations and a Pink Line station. Between 2008 and 2012, CTA rail ridership within the study area — taken as a measure of average weekday station entrances by riders — increased more than 15 percent (Figure 7). The UIC-Halsted station, which is the primary access point for the east side of campus, remains the most heavily trafficked station serving the campus area, accounting for 38 percent of all study-area ridership. Over the same time period, the IMD station experienced a 40 percent increase in ridership. At both stations, boardings are concentrated at one of three station entrances, with Peoria Street and Ogden Avenue entrances seeing the highest traffic, respectively.

Figure 7. CTA five-year average weekday ridership chart



Source: Regional Transportation Authority Mapping and Statistics (RTAMS), 2014.

Figure 6. Core transit



Source: Chicago Metropolitan Agency for Planning.

CTA Bus

UIC is directly served by nine CTA bus routes that align with the area's major corridors. The north-south routes that cross the study area along Halsted (#8), Racine (#60), Ashland (#9), and Damen (#50) provide much needed access to neighborhoods to the north, where staff and students could live, and to the south, which lacks convenient access to a CTA rail facility. These also provide connections to the green line on Lake Street, which connects commuters to the western suburbs. East-west routes along Harrison (#7), Taylor (#157), and Roosevelt (#12) are convenient for intracampus travel and provide direct connections to downtown and western communities. Despite offering quality service to Taylor Street's commercial corridor and popular off-campus student housing locations, the #157 does not provide evening or weekend service. Additionally, direct connections between the campus and Ogilvie Transportation Center and Union Station are provided by Routes #60 and #7.

While bus stops along these routes are typically located a 1/4-mile apart, boardings and alightings are clearly concentrated, as shown in Figure 8. Each of these areas is characterized by key CTA bus-rail or bus-bus transfer nodes and/or major UIC facilities such as Student Center East (SCE).

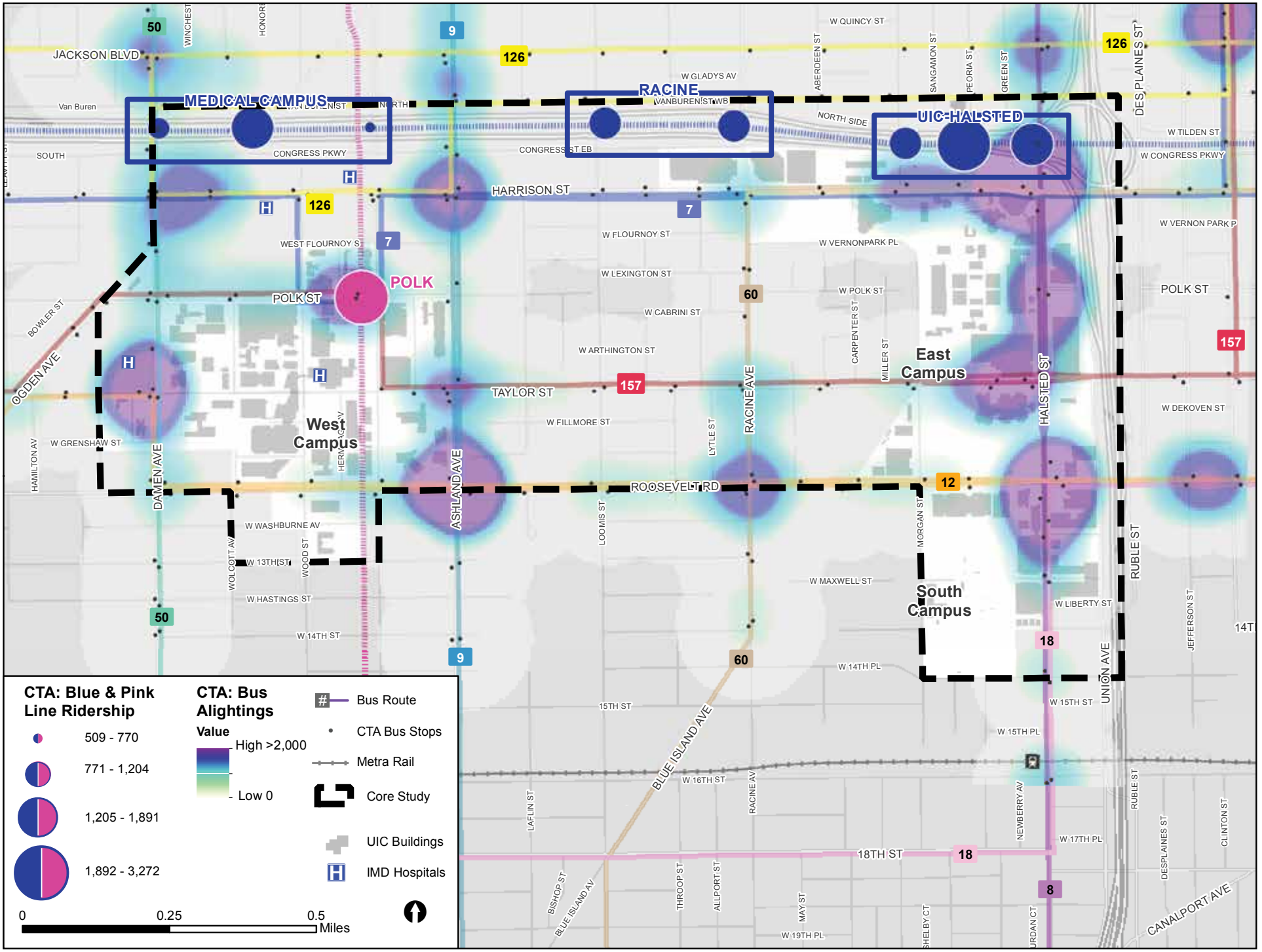
Future Plans: Bus Rapid Transit

The Chicago Transit Authority has selected a 16-mile segment of Ashland Avenue to implement a new bus rapid transit BRT corridor. This project is designed to improve the speed, convenience, and reliability of service along this critical corridor. This will be accomplished by developing a dedicated right-of-way for corridor buses in the center of the roadway, increasing the distance between BRT stops to approximately 1/2-mile, utilizing transit signal priority technology at intersections along the corridor, and pre-payment to speed boarding. Phase one of the project is set for the segment of Ashland Avenue between 31st Street and Cortland Avenue. This area encompasses the UIC campus and IMD, with planned stops at the intersections of Ashland Avenue and Roosevelt Road, Polk Street, Harrison Street, and Jackson Street in the core study area, and additional stops at 18th Street, Blue Island Avenue, Madison Street, and Lake Street.

Regional Transit

Regionally, UIC and the IMD are served by Metra rail and the Pace suburban bus system. Located just outside of the core study area, the Ogilvie Transportation Center (OTC) and Union Station are the region's two major commuter transit hubs, offering access to all but two of the region's eleven Metra commuter rail lines. Additionally, Pace suburban bus Route 755 provides express service from the southwest suburbs to Downtown Chicago, offering five stops (inbound and outbound) along Damen Avenue and Harrison Street within the campus area. Average weekday boardings along this route's entirety have increased dramatically between 2009 and 2013, likely due to its bus-on-shoulder program designed to bypass congestion on Route I-55 during peak periods. Other Pace bus routes cross through the study area, but do not have any stops within the campus.

Figure 8. Core study area: rail ridership and bus alightings



Source: Chicago Metropolitan Agency for Planning.

UIC Campus Shuttle

UIC operates a fleet of campus vehicles meant to transport campus users around and between each area of the campus (Figure 9.) Below is a breakdown of the UIC Shuttle routes and their hours of operations:

- **Commuter**: Connection from Metra Hubs to East and West campuses (20-min. intervals, M-F, 7:00-9:30 a.m. and 4:00-6:30 p.m.)
- **East Side**: Circles the East and South campuses (20-min. intervals, M-F, 7:00 a.m.-11:00 p.m.)
- **Intracampus**: Links the East and West campuses (30-min. intervals, 7:00 a.m.-6:00 p.m.)
- **Intracampus Evening/ Weekend/ Holiday**: Expanded Intercampus service (30-min. intervals, M-F, 6:00-11:00 p.m. and weekends, 7:00 a.m.-11:00 p.m.)
- **Semester Express**: Connects South Campus to the East/West campuses (30-min. intervals, M-F, 7:00 a.m.-3:00 p.m.)

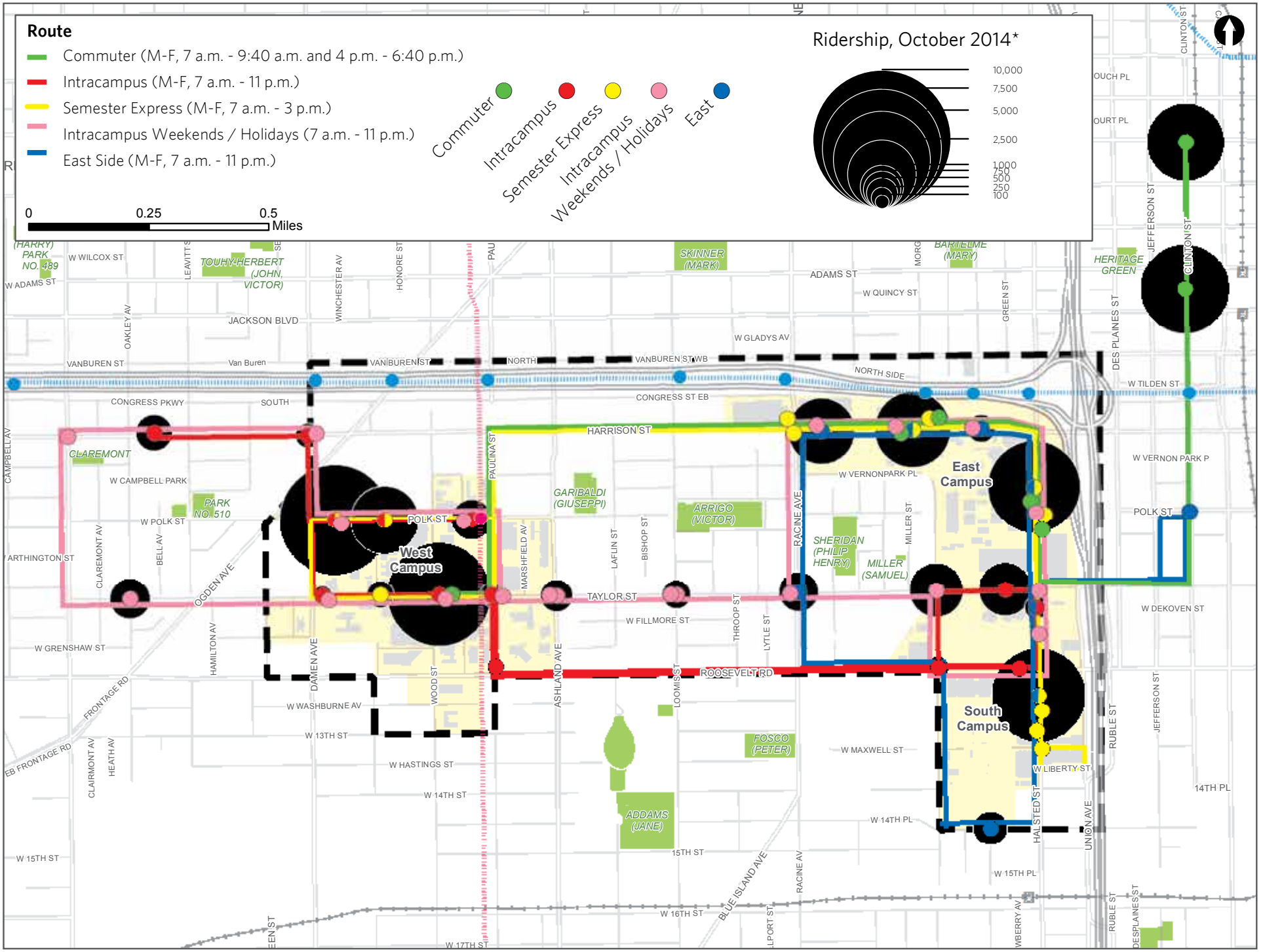
Using ridership data provided by UIC Facilities Management, the Semester Express route was found to be the most popular and productive daytime route in terms of overall ridership and ridership per service hour from October 2012 through October 2013, as shown in Table 2. Stop level data for the same time period reveals that ridership is highly concentrated along routes, especially during the daytime, at specific points. More than 80 percent of daytime ridership along the East Campus route is concentrated at 4 of the 10 stops. Likewise, 7 out of 13 stops along the Intracampus route account for more than 84 percent of the route's ridership. These areas are typically located at or near east/west side residence halls, major campus activity centers such as Student Center East, and major campus destinations such as the UIC Forum and the Behavioral Sciences building.

Table 2. UIC Shuttle Ridership

Route	Route Length (mi.)	Trips/day	Ridership (2012-13)	Daily Average	Riders/ Service Hour (2012-13)
Semester Express	**5.3**	**16**	**59,753**	**291.5**	**36.4**
Evening	**5.75**	**10**	**29,930**	**146.0**	**29.2**
Intercampus	**4.5**	**22**	**55,668**	**271.6**	**24.7**
Weekend	**5.75**	**32**	**23,880**	**265.3**	**16.6**
East	**2.7**	**48**	**49,753**	**242.7**	**15.2**

Note: Ridership data is incomplete.
Source: University of Illinois at Chicago, 2015.

Figure 9. Campus shuttle routes and ridership



Data Source: University of Illinois at Chicago, 2015. *Some stops were combined from multiple routes and/or across the street. Ridership numbers for Intracampus Weekends/Holiday are from 2012.

Driving

Centrally located in the City of Chicago, the UIC campus is connected to the rest of the city and region via the city's grid network of streets and the regional interstate system. Over time, the physical development of the campus has interrupted the local street grid, creating some large blocks, especially throughout the East Campus. While some local connectivity has been sacrificed, many major and minor roadways cross the campus and connect it to surrounding communities. Figure 10 shows the functional classification of all study area roadways and their Average Annual Daily Traffic volumes (AADT).

Five heavily trafficked roadways cross directly through the UIC campus, including Halsted Street, Roosevelt Road, Ashland Avenue, Damen Avenue, and Ogden Avenue. Of these five roadways, Ashland Avenue (27,200 AADT) and Roosevelt Road (25,900 – 28,100 AADT) experience levels of daily traffic above the average for City of Chicago's collector and arterial roadways (22,909 AADT). The busiest roadway in the core study area is the segment of Roosevelt Road that intersects Halsted Street and separates East Campus and South Campus. This roadway is a critical component to the overall transportation network and is designated as a strategic regional arterial (SRA) east of I-90/94. This area also experiences a high volume of pedestrian traffic travelling from one side of campus to the other, making intersection safety on this segment of Roosevelt Road a key priority.

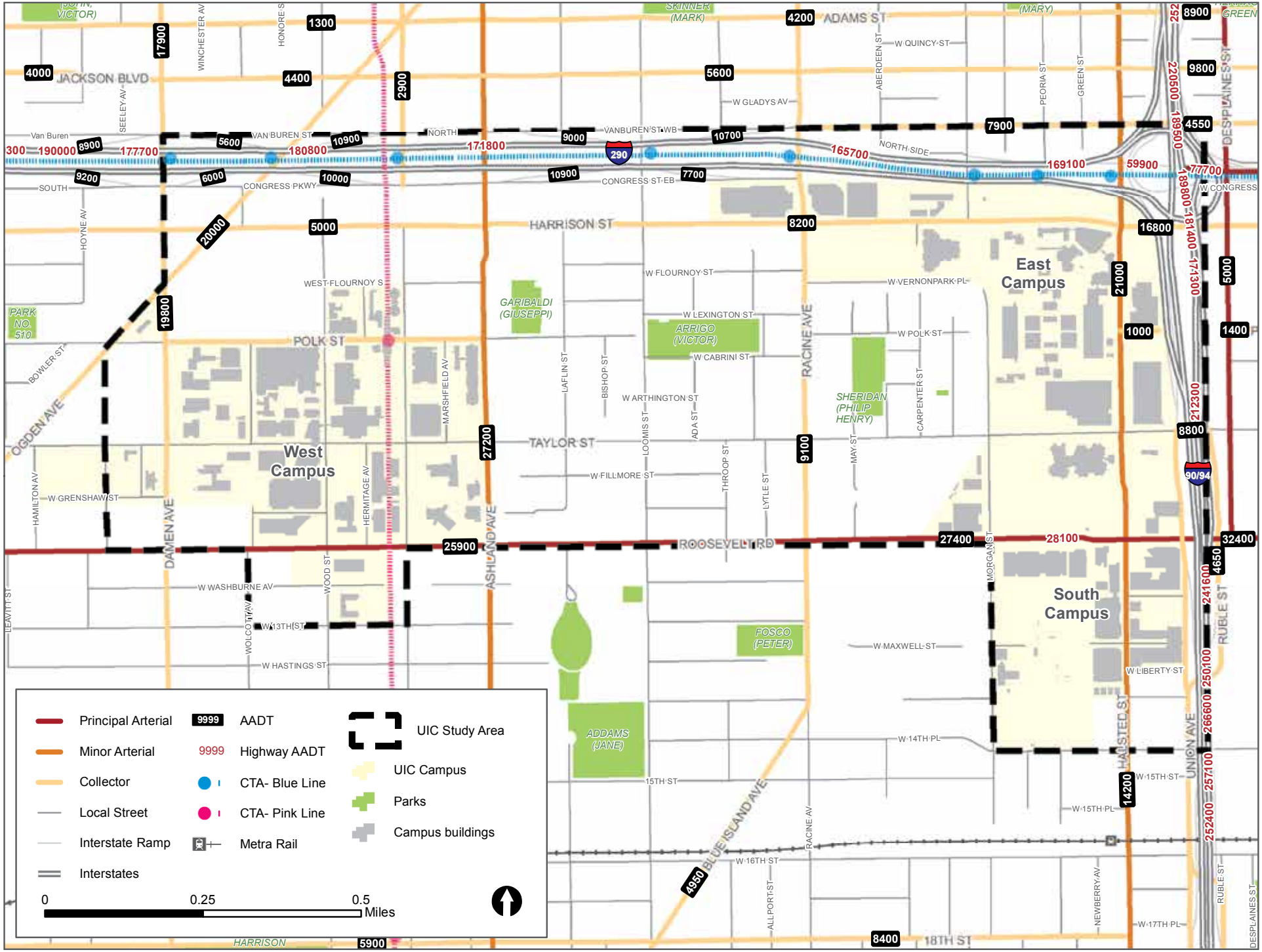
In addition to the city street network, the core study area also contains portions of the Eisenhower (I-290) and Dan Ryan (I-90 and I-94) Expressways. These heavily trafficked corridors that connect at the Circle Interchange, accommodate hundreds of thousands of vehicles every day, and operate as critical regional and national connections to Chicago's centers of commerce, culture, and education.

Parking

The UIC campus has nearly 12,000 parking spaces spread between 39 surface parking lots *and* five multi-story parking garages maintained by Campus Parking Services (Figure 11). Not including the lots allowing for visitor and permit card access, 30 percent of all spaces are dedicated to permit holders only, with less than 3 percent of remaining spaces (286 spaces) reserved for daily visitors or in short-term metered areas lots. Permit holders are assigned a specific lot on campus where they can search for parking, and they also have the ability to pay for a reserved space.

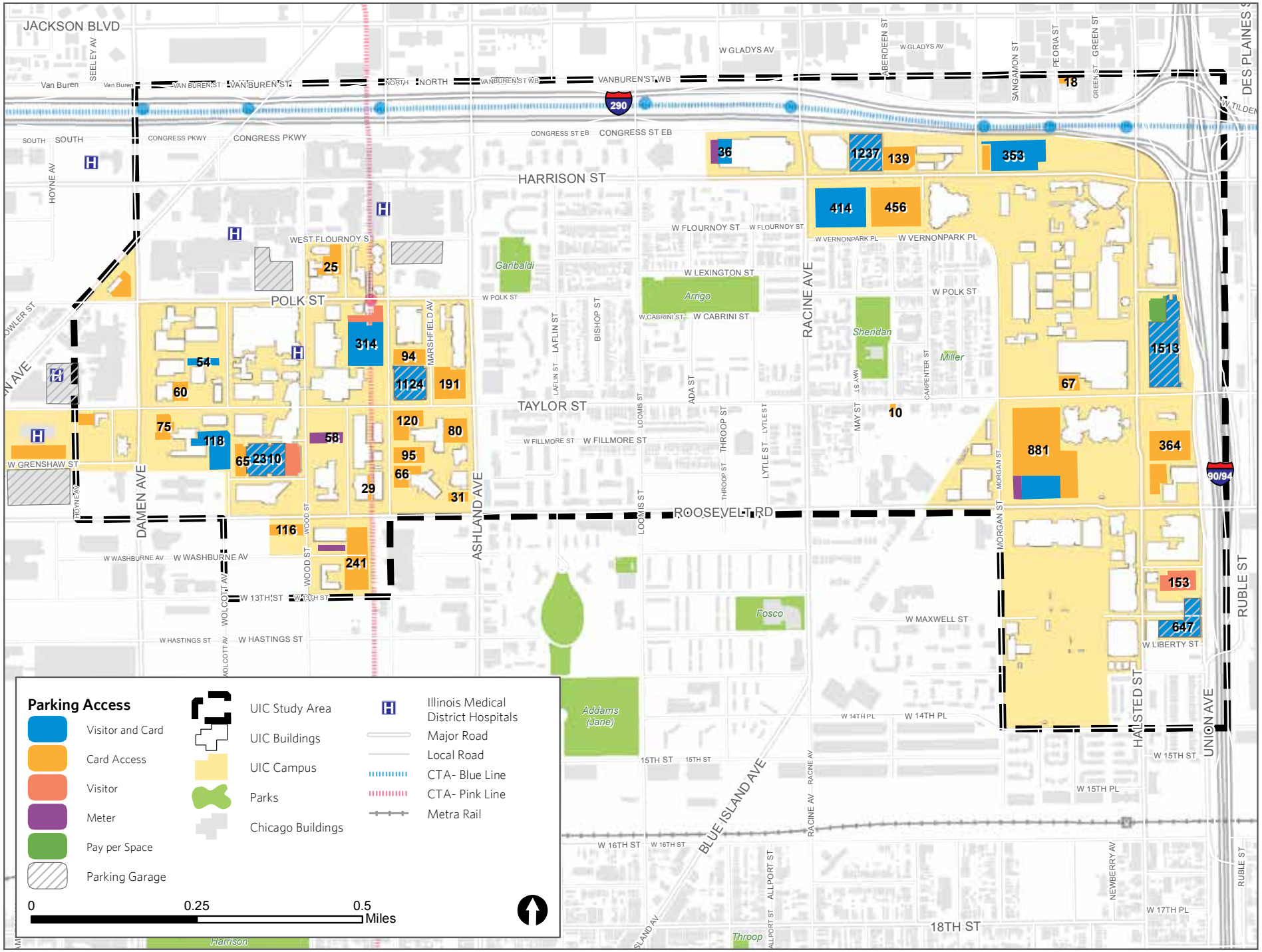
UIC Campus Parking Services estimates that during times of peak parking demand, 7,528 total parking spaces are being utilized, which translates to 63 percent of total capacity across campuses. Further, at peak times, 83 percent of total parking capacity is utilized on the West Campus, while only 48 percent of the combined capacity for the East and South Campus facilities is utilized. This discrepancy can be partially explained by the presence of facilities geared toward accommodating parking for major events at the East Campus's UIC Pavilion.

Figure 10. Average annual daily traffic



Source: Illinois Roadway Information System, 2012.

Figure 11. UIC campus parking supply

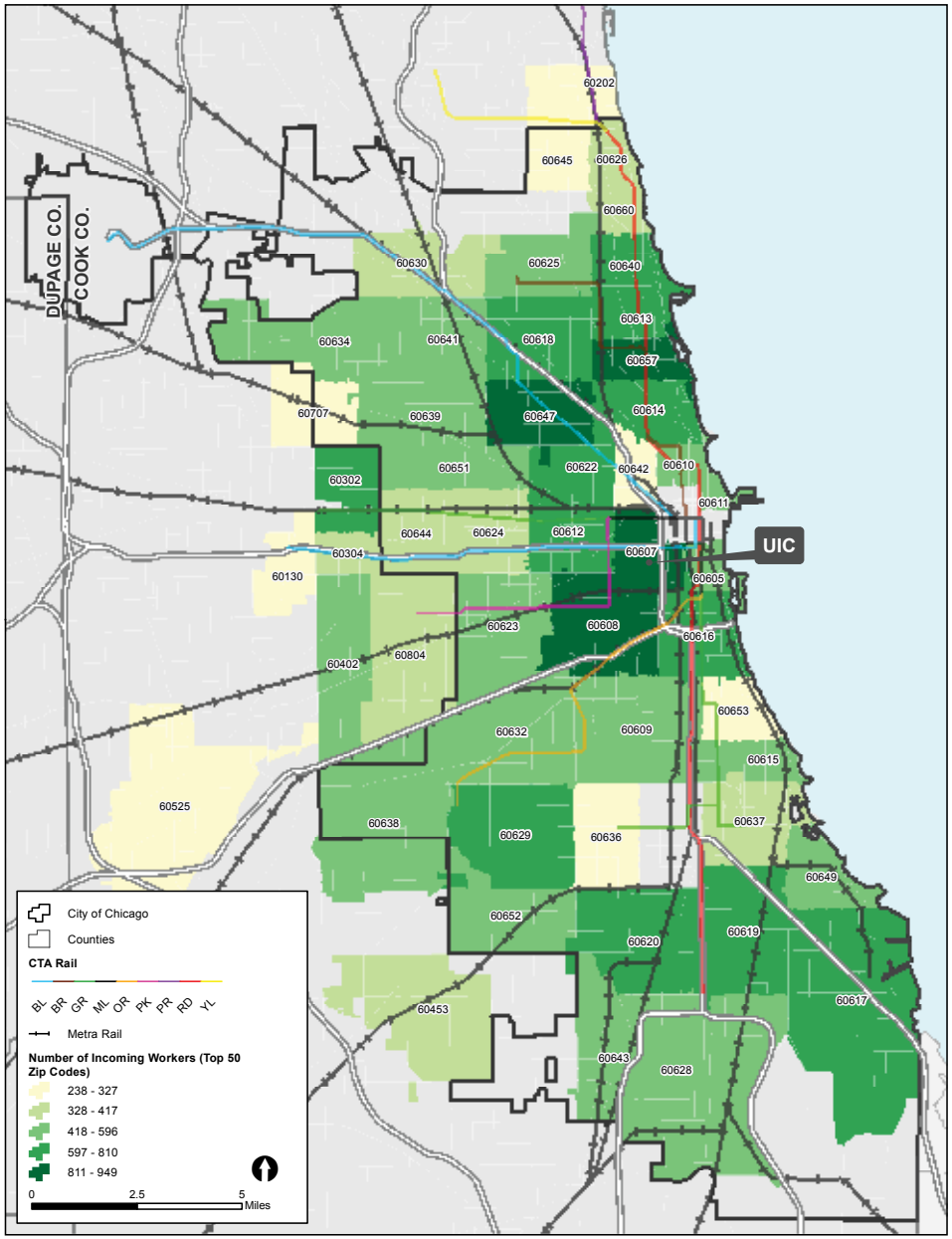


Data source: University of Illinois at Chicago, 2014.

Commuting and Mobility Patterns

More than 50 percent of workers commuting into the core study area reside in the city of Chicago (Figure 12.). Zip codes with the highest numbers of residents commuting into the core study area include the Lower/Near West Side, Logan Square, Lakeview, Avondale, and Lincoln Park neighborhoods. Overall, most commuters are coming in from communities that have access to the region's bus and rail network.

Figure 12. LEHD zip code map for inbound workers



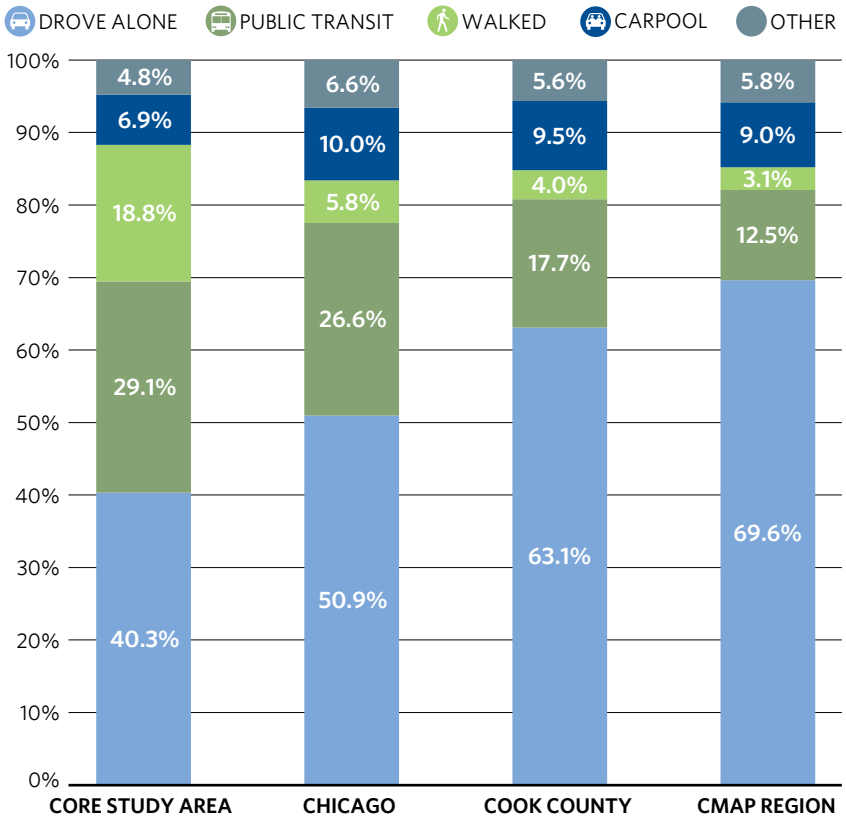
Source: Chicago Metropolitan Agency for Planning and U.S. Census, LEHD, 2011.

More than 70 percent of core study area residents commute to jobs within the City of Chicago. The area's many public transit options and the inclusion of major employment centers such as the IMD and UIC campus encourage higher levels of transit use and walking among residents, as evidenced by the finding that 48 percent of area residents use public transit or walk to work, significantly higher than Chicago (32 percent), Cook County (22 percent), or the CMAP region (16 percent) (Figure 13).

The 2008 UIC campus commuter survey found that:

- The average commute for students, faculty, and staff was approximately 15 minutes.
- Thirty-five percent of full-time students live within 2-5 miles of campus.
- Thirty-eight percent of faculty and staff reside in zip codes where transit accessibility is considered to be either good or excellent.

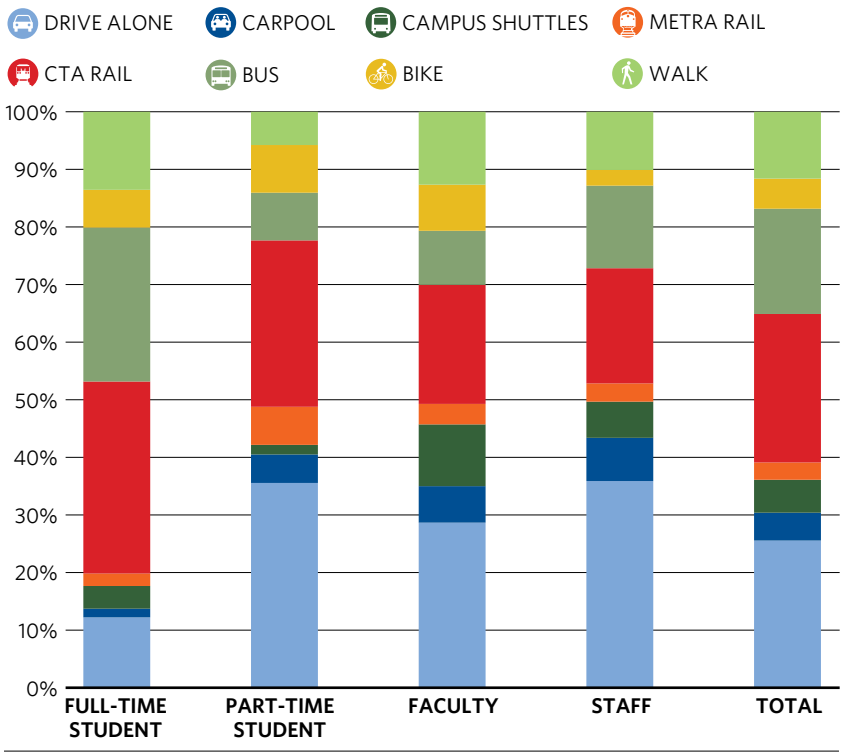
Figure 13. Modal comparison chart for core study area residents



Source: American Community Survey, 2006-10.

In terms of how students, faculty, and staff arrived on campus, according to the commuter survey approximately 70 percent of all respondents arrived on campus either by walking (11.6 percent), biking (5.2 percent), or using some form of transit (52.8 percent). Only 25.5 percent of the surveyed population arrived on campus by single-occupant vehicle (SOV). Full-time students are by far the most likely to use some form of transit (66 percent) or walk to campus (14 percent), and the least likely to arrive by car (12 percent SOV, 2 percent carpool). Even though overall transit use is high across the other groups (44-45 percent), approximately one-third of all part-time students, faculty and staff drive alone to campus (Figure 14). Similar trends were observed as a result of a 2010 commuter survey focused on analyzing the University's cumulative greenhouse gas emissions (GHGs). In regards to a commuter's primary mode of travel (i.e., the mode with the most mileage/trip), this study revealed that faculty and staff are more than three times more likely to commute via SOV, and that students walk, bike, and ride CTA transit significantly more than faculty and staff.

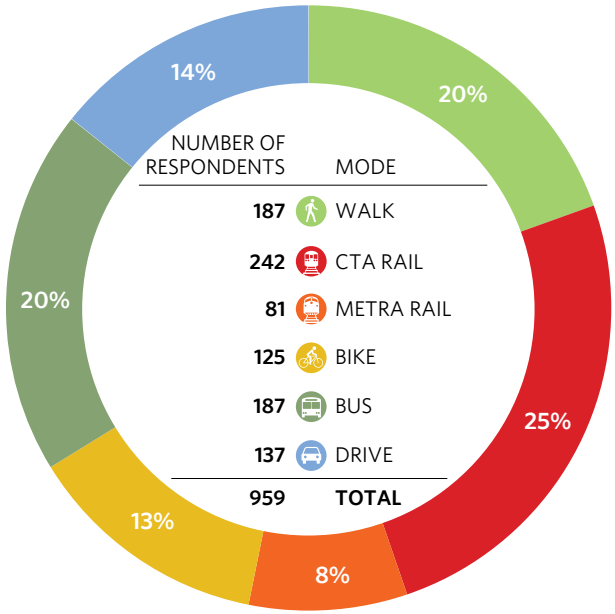
Figure 14. 2008 Mode of arrival chart



Source: University of Illinois at Chicago, Office of Sustainability 2008 Commuter Survey.

In an on-line survey for this project in 2013 (detailed results are available in the appendix), nearly 1,000 participants shared their primary travel mode. The survey was open to area residents and employees and was not limited to UIC. According to that survey, only 14 percent of people who travel in the area are driving, and the rest rely primarily on public and active transportation (Figure 15).

Figure 15. Primary mode of transportation (Metroquest survey)

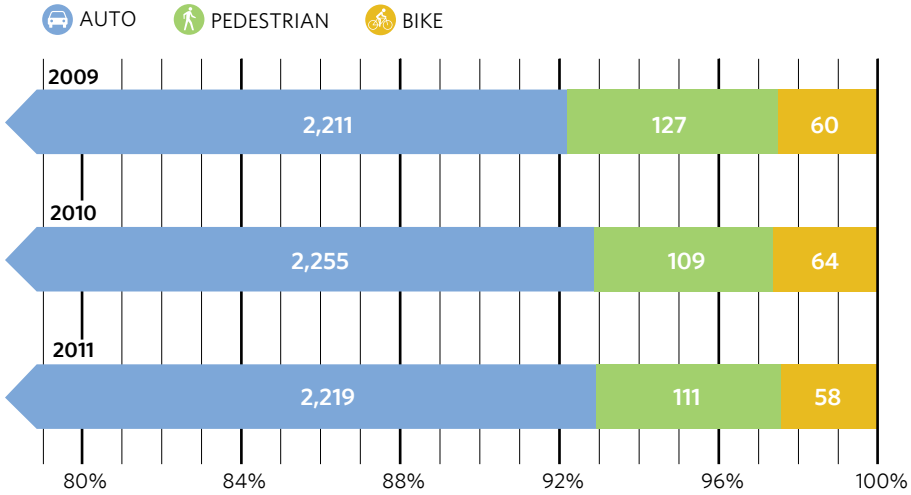


Source: Chicago Metropolitan Agency for Planning.

Safety and Accessibility

While sidewalks are prevalent throughout the UIC campus area and many of the roadways have existing or planned bike facilities, safety concerns for all road users persist and are often concentrated at intersections and busy crossings involving multiple modes. From 2009-2011, reported crashes involving motor vehicles, pedestrians, and bicycles in the core study area remained fairly constant, ranging from a low of 2,388 in 2011 to 2,428 in 2010. In this time, 7.3 percent of these reported crashes involved a bicyclist, a pedestrian, or both, slightly higher than the rate for Chicago overall (6.7 percent).

Figure 16. Crash data chart



Source: Chicago Metropolitan Agency for Planning analysis of Illinois Department of Transportation data, 2014.

Data for crashes involving a bicycle, pedestrian, or both in the core study area between 2009 and 2011 generally support the conflict areas identified in the 2010 UIC Master Plan, with exceptions such as Ashland Avenue intersections, and Taylor Street between the east and west sides of campus. The highest concentrations of conflicts are around these major intersections (Figures 17, 18, and 19):

- Halsted Street/Roosevelt Road
- Ashland Avenue between Roosevelt Road and Polk Street
- Ogden Avenue, Damen Avenue, and Harrison Street intersection
- Harrison Street/Ashland Avenue
- Ashland Avenue/Roosevelt Road
- Mid-block crossings and intersections along portions of Harrison Street and Taylor Street on both sides of campus.

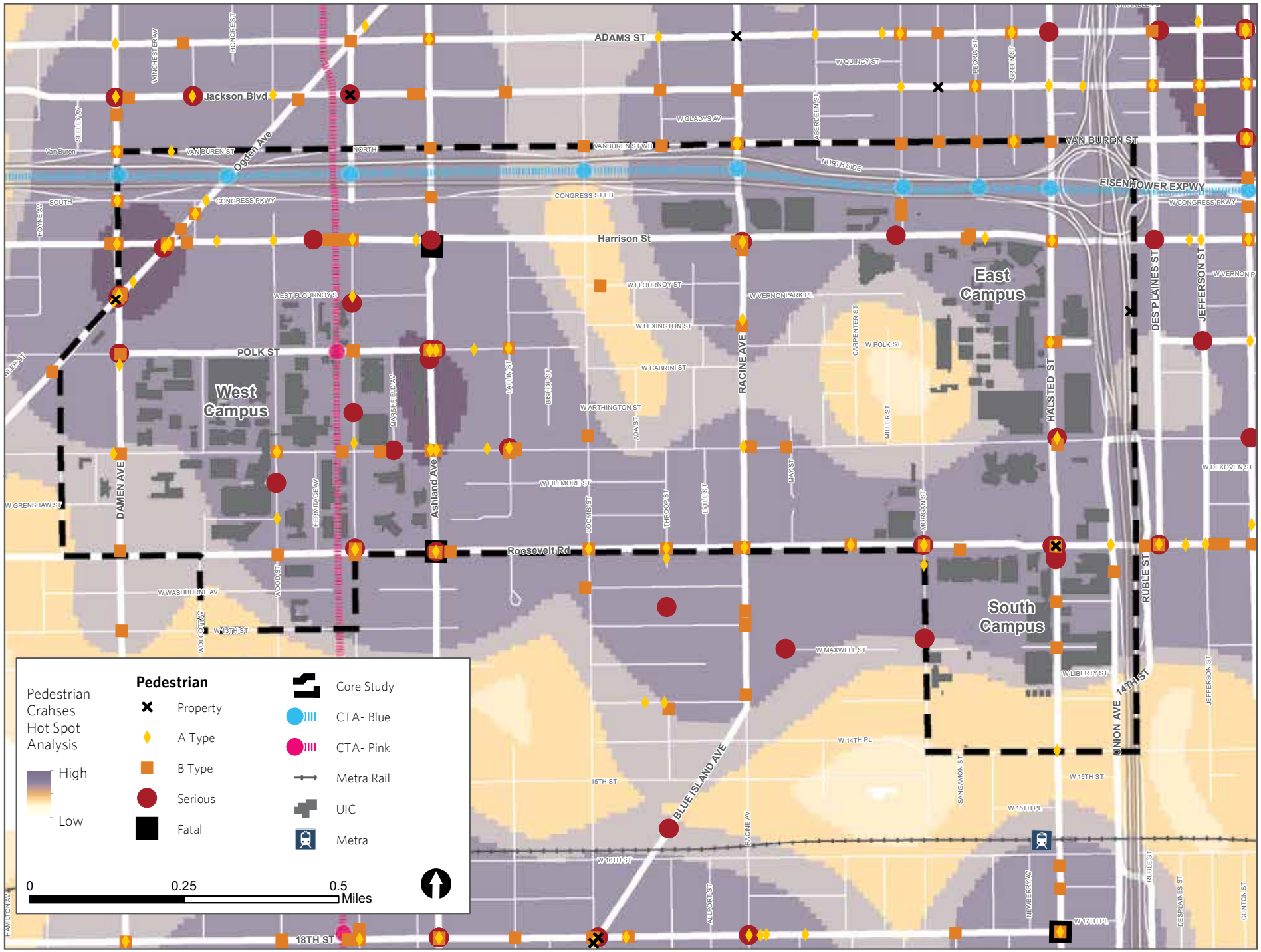
These areas are typified by wide, busy intersections, poor signage or lack of signalizations at crossings, and poor on-road bike facilities.

Accessibility

Figure 20 shows the location of existing amenities designed to serve people with disabilities and locations of issues identified during public outreach. According to the Americans with Disabilities Act (ADA), accessible routes such as those delineated here should be continuous unobstructed paths connecting all accessible elements and spaces of a building, facility, or area. UIC's accessible routes connect accessible parking and building entrances along paths that include parking access aisles, curb ramps, crosswalks, and building entrance ramps or lifts.

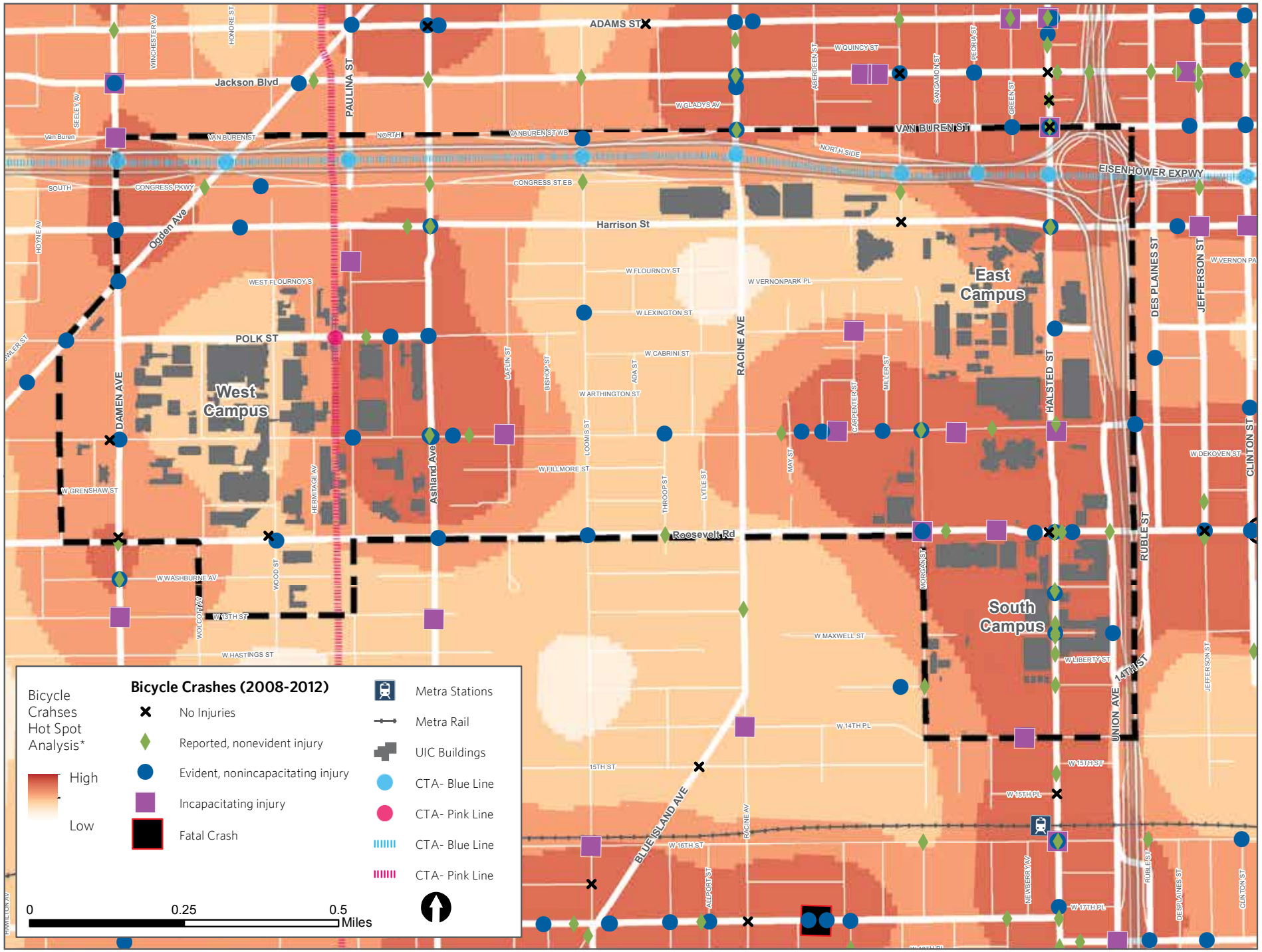
Poor sidewalk and curb ramps conditions persist throughout the academic year due to age as well as additional issues of flooding and snow/ice removal. Concentrations of poor infrastructure and surface conditions are clear throughout the East campus's busiest areas, the Quad and the area surrounding the Peoria Street Blue Line entrance. The identified areas lacking accessible signal crossings align with the conflict areas shown in Figure 19, with major intersections and mid-block crossings such as the area south of the Peoria Street Blue Line entrance representing the most need for improvements.

Figure 17. Pedestrian crash hot spot analysis



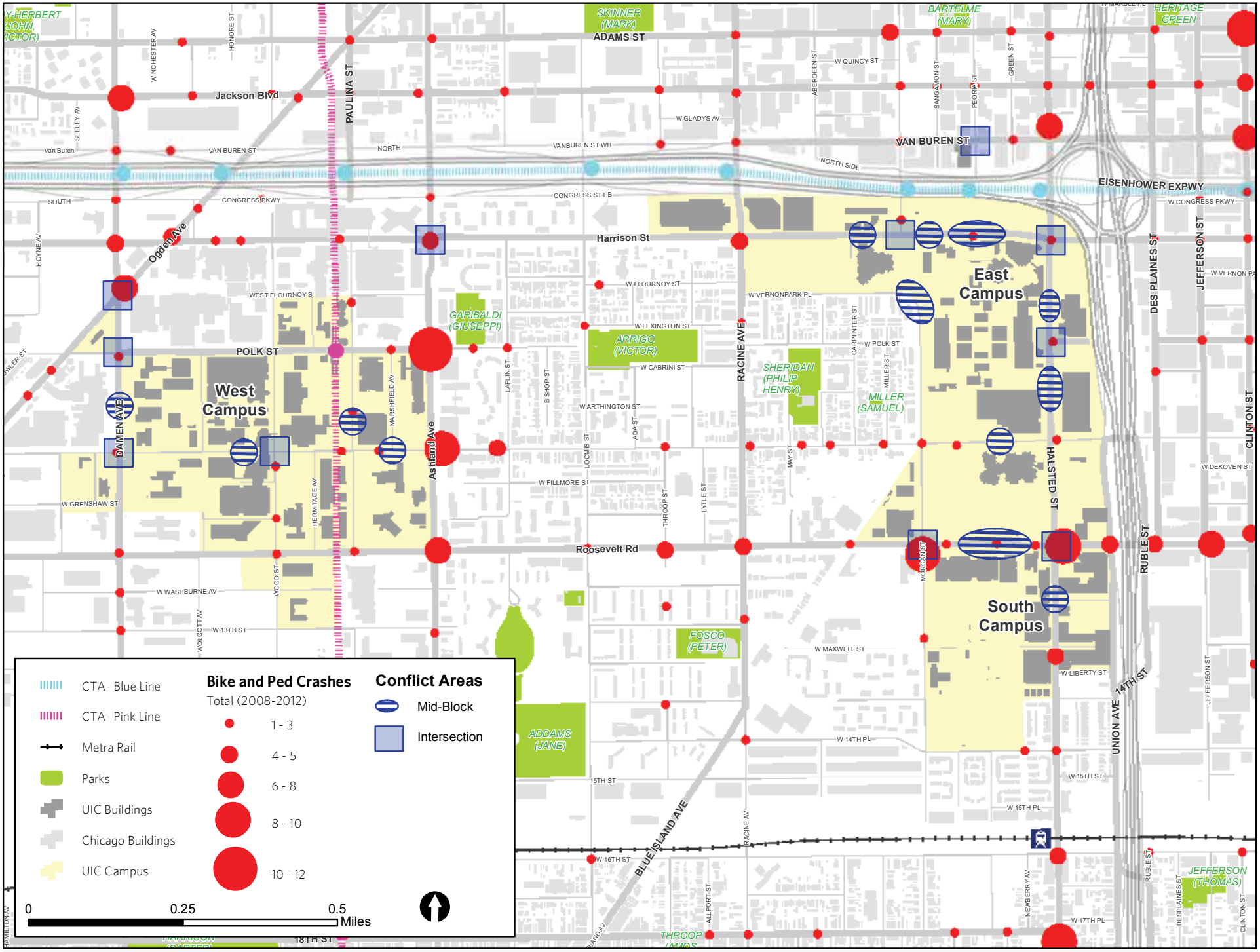
Source: Chicago Metropolitan Agency for Planning analysis of Illinois Department of Transportation data, 2014.

Figure 18. Bicycle crash hot spot analysis



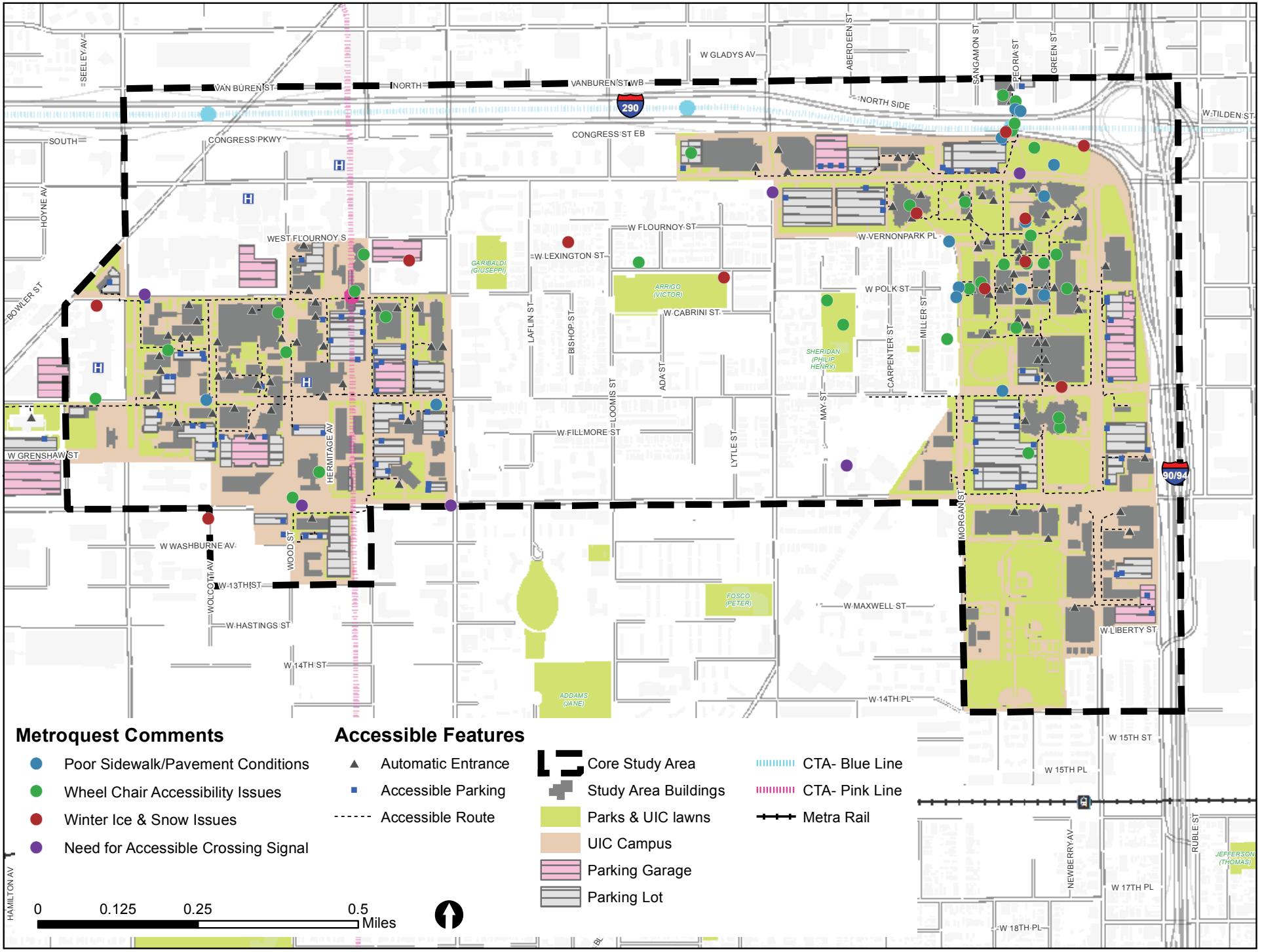
Source: Chicago Metropolitan Agency for Planning analysis of Illinois Department of Transportation data, 2014.

Figure 19. Crash density



Source: Chicago Metropolitan Agency for Planning analysis of Illinois Department of Transportation data, 2014.

Figure 20. Accessibility



Source: Chicago Metropolitan Agency for Planning.

Land Use and Development

Table 3 is a breakdown of land use categories within the core study area and the total acreage associated with each use. Acreage was calculated only for land within parcels and does not include any land associated with the 513 acres of road right-of-ways.

Table 3. Land use classification breakdown

Land Use Classification	Core Study Area	
	Acreage	Percentage
Institutional	**494.8**	**40.6%**
Multi-Family Residential	**148.7**	**12.2%**
Mixed-Use	**122.6**	**10.1%**
Industrial	**109.5**	**9.0%**
Vacant	**73.4**	**6.0%**
Commercial	**67.9**	**5.6%**
Single Family Residential	**65.0**	**5.3%**
Construction	**53.1**	**4.3%**
Open Space	**49.7**	**4.1%**
Transportation & Utilities	**34.5**	**2.8%**
Total Parcel Acreage	**1,219.2**	**100.0%**

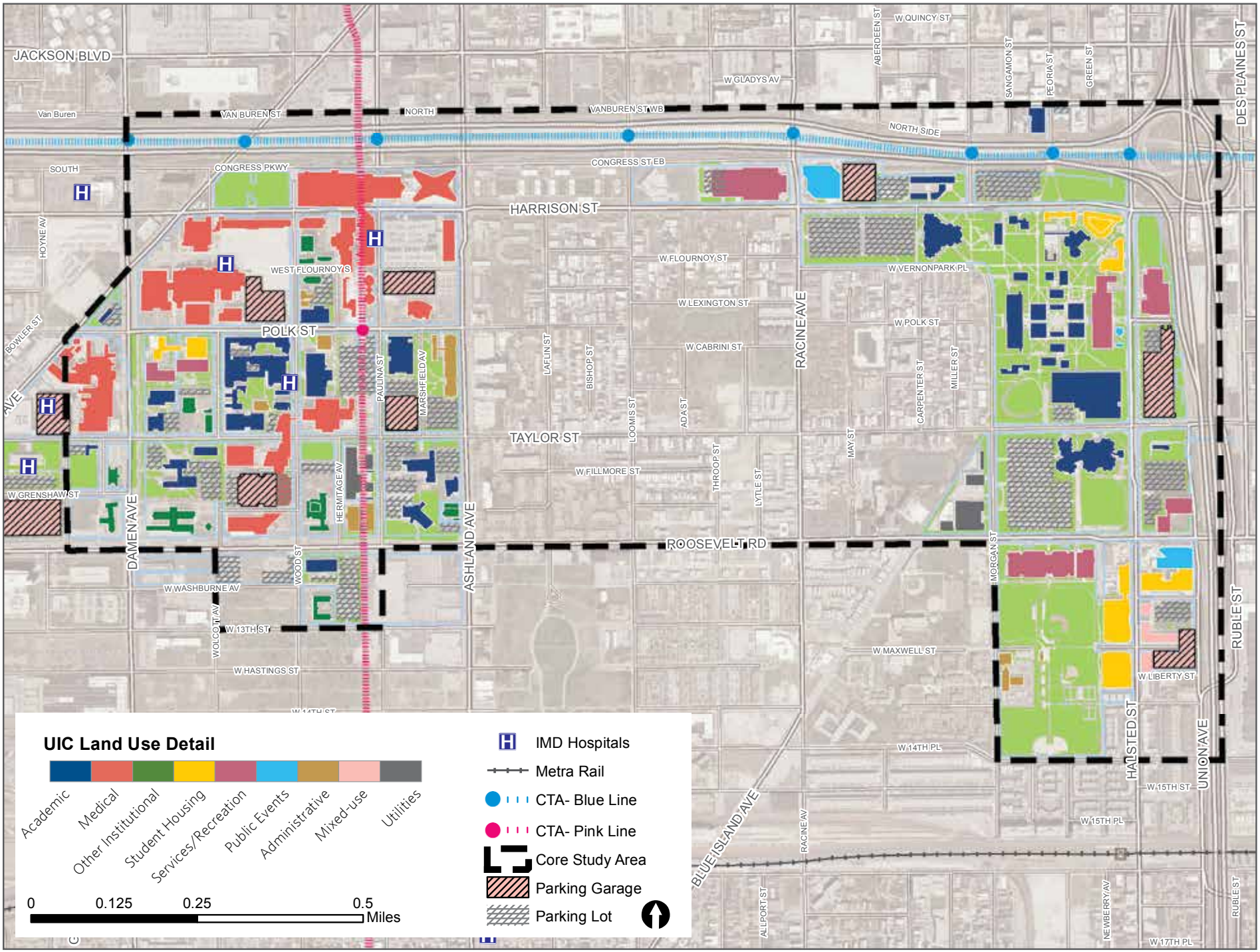
Source: Chicago Metropolitan Agency for Planning.

Institutional

More than 40 percent of land in the core study area contains an institutional use. These lands consist primarily of those developed and utilized by the UIC campus and Illinois Medical District (IMD.) Figure 21 provides a more detailed breakdown of the types of uses and amenities found throughout the UIC campus and IMD.

While the UIC campus area is classified as a single institutional use, the campus has developed to provide a wide range of amenities and services for the UIC community. The campus is made up of a network of open spaces and recreational facilities, student housing, academic buildings, and a number of retail and entertainment developments. Historically, UIC has developed as a commuter school, with only a small portion of its lands being developed for residential uses. Despite this, the campus does have facilities to house approximately 3,800 students with residence halls located on the east, west, and south areas of campus. South campus residence halls have been formed as part of recent mixed-use developments along Halsted Street south of Roosevelt Road that feature first floor retail and student residences on the floors above.

Figure 21. Institutional land use detail



Source: Chicago Metropolitan Agency for Planning.

Residential

Multi-family residential uses are the second largest land use in the core study area, accounting for 12.2 percent of overall land use. These residential uses are concentrated in the areas between the East and West campuses, and primarily consist of detached 2-4 story buildings. Newer residential complexes have developed along Ashland Avenue on the eastern edge of the West campus and in the area on and near Halsted Avenue between 14th Street and the BNSF railroad tracks to the south. These developments range from 2-3 story connected townhouses to large 12 story apartment buildings.

Commercial and Mixed-use

Commercial and mixed-use developments make up 15.7 percent of land in the core study area. Traditional mixed use retail strips along Taylor Street (Little Italy) and Halsted Street (Greek Town) are complemented by recent developments on the South campus and along Roosevelt Road. These areas provide a range of retail and entertainment destinations, including small-scale retail and restaurants on Taylor Street and Halsted Street and big box retail on Roosevelt Road.

Parking

Surface parking and parking facilities make up approximately 15 percent of lands designated as institutional, or 6 percent of all developed land in the core study area. Table 4 shows how parking is distributed throughout the UIC campus area.

Table 4. UIC parking land use

Campus	Surface parking lots	Parking garages	Total acres
East	**15**	**2**	**26.3**
South	**1**	**1**	**2.5**
West	**23**	**2**	**21.6**
Total	**39**	**5**	**50.4**

Source: Chicago Metropolitan Agency for Planning.

3. RECOMMENDATIONS

Based on the initial assessment of priorities identified through the planning process so far — including public visioning workshops, findings of the existing conditions report, online survey and mapping input, a focus group meeting, and key stakeholder interviews — common issues and opportunities have emerged that provide direction for formulating recommendations.

As a campus with a strong commuting culture, no requirement for students to live on campus, and limited options for families, many students, faculty, and staff seek out housing in surrounding neighborhoods as well as other neighborhoods throughout Chicago and the region. The 2010 Master Plan was essential to furthering the goal of the ongoing transition to have more students, faculty, and staff living closer to campus. In addition to housing recommendations, many of the recommendations in the Master Plan call for improving the pedestrian environment, encouraging more bicycling, and increasing transit ridership.

Despite high numbers of active transportation users, traffic safety records and opinion surveys indicate that improvements to the multimodal transportation system could enhance the experience for pedestrians and bicyclists, improve mobility options for people with physical impairments, and encourage more drivers to reduce the amount single-occupancy trips to and throughout the campus. Small improvements to the wide array of transportation assets available on campus can have big impacts on transportation options, mobility, affordability, and livability.

To help UIC achieve sustainability goals and promote a multi-modal campus transportation system, CMAP has organized the plan recommendations around five topic areas and their associated guiding principles, goals, and challenges/opportunities. While there is certainly overlap between the topics, they have been organized for clarity and simplicity. The five topic areas are:

- Walking and Campus Navigation
- Bicycling
- Transit
- Driving and Parking
- Land Use

The topic areas of Accessibility and Transportation Demand Management have been integrated within each topic area, rather than as stand-alone topics. Accessibility and the concerns of people with mobility and sensory impairments span all modes and have been considered within each. Transportation Demand Management (TDM) is a term used to describe strategies designed to promote the use of alternative modes of transportation and reduce the number of trips taken in single-occupant vehicles (SOV)[4]. These strategies typically include tools and programs focused on bringing the direct, out-of-pocket costs of active transportation (walking, bicycling, and transit) trips in line with those of SOV trips. As opposed to costly capital improvement projects that focus on expanding or improving transit infrastructure, TDM strategies attempt to leverage existing alternative transportation resources through cost-effective and targeted programs that include personal financial incentives and passive strategies such as the marketing of existing transportation options and programs. These have also been incorporated into each section as appropriate.

[4] For a comprehensive discussion of TDM strategies and examples of their implementation, visit the Victoria Transport Policy Institute's TDM Encyclopedia, http://www.vtpi.org/tdm/tdm12.htm.

Principle

A cohesive campus that prioritizes pedestrians, connects the east and west sides of campus, and provides clear navigation information can encourage a safe and efficient walking environment.

Goal

Enhance the safety, navigation, and overall experience of pedestrians.

Challenges & Opportunities

- Limited, faded, or hard-to-read wayfinding and building signage makes it difficult for pedestrians to navigate campus — especially people with visual impairments and visitors arriving via transit.
- Personal safety concerns, urban design shortcomings, areas with poor lighting, and limited hours of active street life contribute to a pedestrian environment that does not encourage people to walk to their destination.
- Dangerous traffic conditions for pedestrians at intersections and mid-block crossings create a barrier to walking, especially for people with visual or mobility impairments, and have led to many pedestrian-vehicle collisions in the area.
- The campus has an interrupted street grid, high pedestrian and bicycle volumes, and no distinct paths for either user group, which can create conflicts between them.
- It is challenging for the UIC Facilities Management department to survey sidewalks, paths, and campus street conditions with enough frequency to be able to address all maintenance needs (such as flooding, snow, or structural damage) in a timely fashion.

Walking and Campus Navigation

Walkability is an important part of life in an urban setting. The UIC campus has an extensive network of walkways and paths that connect academic and administrative buildings on each campus. Additionally, streets in the surrounding area provide sidewalks that link campus users and local residents to the campuses, the IMD, city destinations, and public transportation facilities. Creating an environment that is accessible to all users, regardless of ability, is a priority for the University.

Of course, the presence of sidewalks and walkways is not the only determinant of whether walking will be an attractive mode of transportation. Important considerations include pleasant streetscapes, safety, and convenient access to local amenities, stores, parks, and other destinations.

Recommendations

The UIC campus is, by most standards, a very walkable area. However, there are barriers to walkability throughout campus and between the east and west sides of campus. These barriers include limited navigational information, concerns about personal safety, dangerous traffic conditions, and inaccessible curbs, among others.

The following recommendations outline a number of strategies that the University can undertake — some in partnership with local transportation agencies — that will help improve the overall pedestrian experience at UIC and encourage more people to walk. When intersections are improved, it is important to correctly install tactile pads for visually impaired pedestrians. Each corner should have two distinct pads that direct visually impaired pedestrians toward the curb ramp on the opposite side of the street, and not out into the middle of the intersection, as some 90-degree arc pads currently do.

1. Install new wayfinding system and maps at strategic locations.

Signage and wayfinding helps to direct and inform people of their location, nearby amenities, and how to get to their destination. UIC's signage and wayfinding is faded or lacking in many locations, particularly at CTA train stations and bus stops. Wayfinding can be a challenge for many people and poses additional challenges for people who are visually impaired. An improved, coordinated, and high-tech wayfinding system can help connect people to their destination and provide a more enjoyable campus experience.

Due to the presence of other area institutions, such as the Illinois Medical District, Rush University, and the Chicago Tech Park, as well as existing street and navigation signs for the City of Chicago, it is important to coordinate efforts with CDOT and these institutions to ensure the streets do not become littered with confusing signs. In fact, UIC should review the Illinois Medical District navigation plan and work with the IMD on implementation of a coordinated navigation plan. In the interest of creating a more active campus, UIC should also consider other off campus destinations and the needs of people navigating to these other locations, such as the United Center, Chicago Tech Park, elementary schools, City Colleges, and Metra and other transit stations.

1.1 Create a branded signage and wayfinding program.

A campus-wide wayfinding system will create a more cohesive look for UIC, and will allow it to be easily distinguished from neighboring institutions, particularly in the Medical District with many non-UIC hospitals. This can be accomplished while still coordinating wayfinding efforts with neighboring institutions. The University should focus first on installing signs within and around CTA train and bus stops to help visitors arriving via transit to more easily navigate the campus. UIC may have to work with JC Decaux in order to install new signage on bus shelters or other street furniture per its contract with the City. The new program should be applied to directional and informational signage inside and outside of buildings for vehicles, bicycles, and pedestrians.

As with static signs, it is important to create a unified design standard for both interior and exterior digital signs that is consistent with those for the static signs, so that they are easily identifiable by users and immediately associated with the University. The UIC Academic Computing and Communications Center is creating a prototype digital sign and wayfinding program that is to be installed at key locations and buildings across the University. Signage should locate accessible entryways and any potential barriers for people with mobility impairments, such as stairs. Ideally, digital signage would provide real-time transit information for nearby buses, shuttles, trains, and locations of Divvy stations, in addition to other campus information. To ensure that signage is uniform and easily identifiable, the wayfinding system should also be coordinated with transit shuttle vehicle signage at bus stops.

In 2011, the Lakota Group prepared a wayfinding and signage system for the Illinois Medical District. UIC should consider working within the design and scheme established for the IMD, which has already installed some of the signs, in order to develop a coordinated, comprehensive, and district-wide navigation and signage plan. Auburn University is another good example of cohesive graphic identity. They developed a unified sign

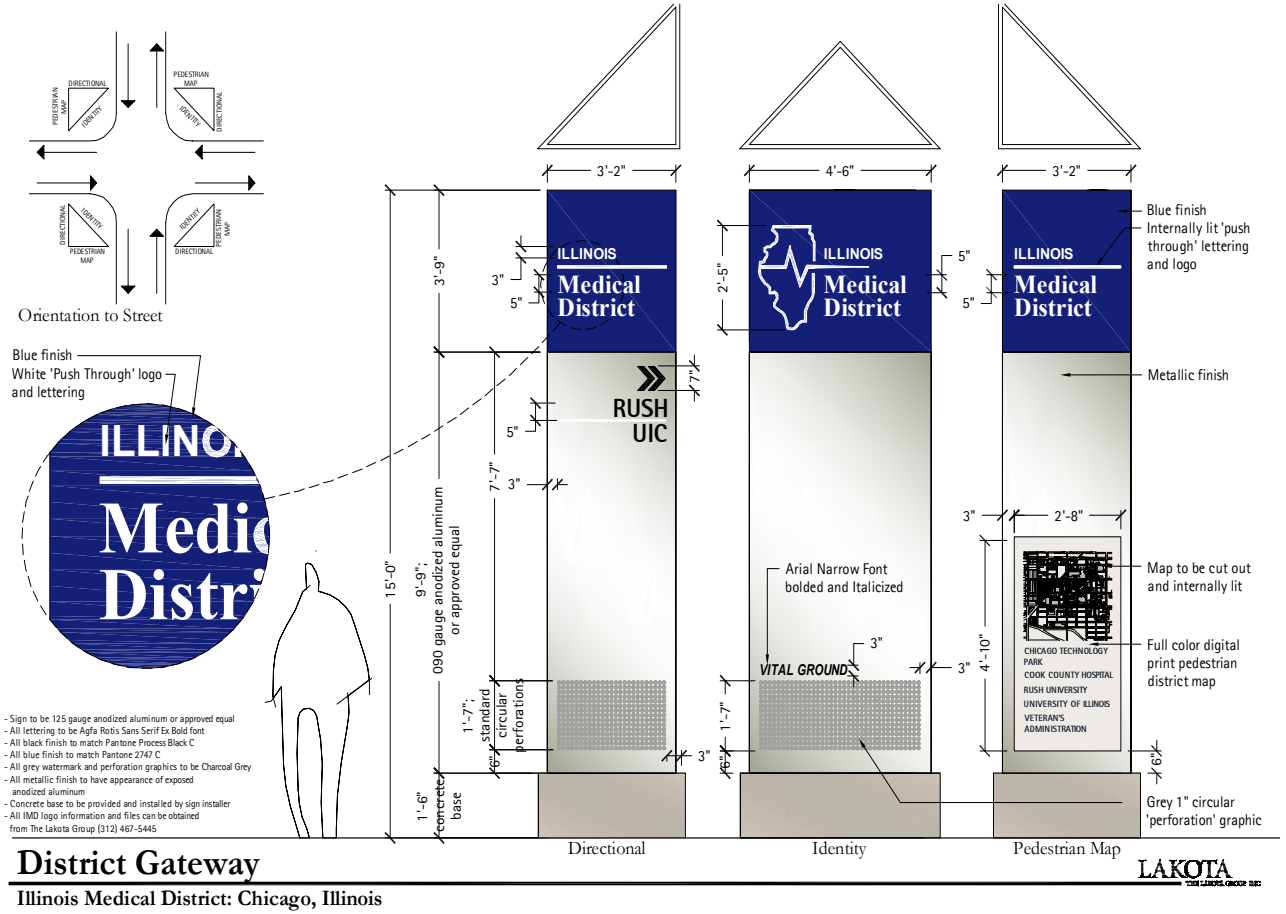
program through their Campus Master Plan, which proposes different designs for pedestrian information, transit information, bicycle routes, and drivers. While each set of signs is directed at a different audience, similar graphic elements tie them all together and create the branded identity of the University. Figure 22 is a sample of the wayfinding style in the IMD District/

Campuses Signage System booklet prepared for the IMD Commission (full booklet in the Appendix). Auburn University also serves as a good example of a coordinated wayfinding system.[5]

Additional wayfinding and Signage Examples: University of Pennsylvania, Princeton University, University of Michigan-Dearborn, DePaul University, Columbia College Chicago.

[5] Auburn University wayfinding report available online: http://www.auburn.edu/administration/facilities/organization/university-architect/cpsm/campus-planning/signs-wayfinding/.

Figure 22. Wayfinding example from Illinois Medical District



1.2 Develop a universally accessible campus map and programs for people with disabilities.

Improving locational and directional information for travelers with mobility and/or visual impairments can change the campus from a navigational challenge to a comfortable and efficient experience. To this end, the University of Boulder created a universally designed campus navigation project that offers website visitors options for basic directions, detailed directions (for visually impaired), and stair-free directions (for wheelchair users and strollers). They also partnered with the mapping service "ClickAndGo" to help develop campus tours and maps.[6] UIC should work with the Chicago Lighthouse, design students, and computer programmers to develop similar comprehensive, universally designed maps and wayfinding tools. There could also be a collaborative map made in conjunction with area hospitals and other agencies within the IMD.

Currently, 90 of the CTA's 145 train stations are wheelchair accessible, but the possibility of getting stranded at an inaccessible station prevents some from using public transit. People with mobility impairments need to know which train stations are accessible. There is an app for Chicagoans seeking this information — "RollWithMeApp.com" — which gives step-by-step directions on how to avoid stairs and turn stiles on public transportation by using only buses and train stations with elevators. The app also includes real-time information on out-of-service elevators or construction.

Mobility challenges for people with visual impairments are two-fold: avoiding obstacles and wayfinding. Avoiding obstacles can often be mitigated with the use of a cane, guide dog, or residual vision, but wayfinding presents a greater challenge. In order to learn their environment and determine how to navigate through an area, visually impaired people make use of tactile cues as well as auditory (sound) and olfactory (smell) cues. The use of tactile maps can be very helpful for enabling independent travel, and high-tech options make use of GPS technology to inform someone where they are on campus and what amenities are located inside different buildings. Students at California State University in Northridge developed a digital application that communicates locational information with a user's mobile device to help visually impaired people navigate campus.

Technologies for interior wayfinding for visually impaired people include: Braille signs, talking signs, talking lights, Radio Frequency Identification (RFID) tags, and systems using Wi-Fi signals. The main limitation of these technologies is that they provide fixed messages about the immediate surrounding area. Also important, many visually impaired people do not read Braille, and Braille signs can be difficult to locate. Other systems (talking signs and talking lights) are less common because they can be cost-prohibitive. A location-based app for cell phones, potentially designed by UIC students, could help bridge the technology and cost gaps to enable independent campus travel for visually impaired people.

[6] For more information on CU-Boulder's accessible mapping program, see http://infojugaad.com/tag/cuboulder.

2. Coordinate with CDOT to increase the safety of crosswalks and intersections.

Many of the crossings around UIC are outdated and do not meet the current needs of the community. Crosswalks around UIC have not been repainted recently and are typical of the Standard Crosswalk style (two parallel white lines); in most cases, these painted lines were observed to be worn down by traffic and the elements. Many intersections also do not have safety features for the disabled and elderly (such as countdown timers and tactile pads), which is of particular importance on the west side of campus due to the high concentration of medical facilities and offices.

It may also be possible to coordinate branding and wayfinding efforts with crosswalk improvements at campus pedestrian gateways (Recommendation 1.1.) UIC could work with CDOT to create visually distinct and branded crosswalks that meet safety and maintenance standards, announce pedestrians' arrival on campus, and direct pedestrians to the inter-campus pedestrian network. Gateways where this treatment may be appropriate are identified in the 2010 Master Plan. Coordination with CDOT is essential to this suggestion since CDOT would continue to maintain campus crosswalks.

CDOT's Pedestrian Plan outlines a goal to eliminate pedestrian fatalities in ten years and reduce pedestrian injuries by 50 percent every five years. UIC also has the goal of making all crossings around the campus safer for its students. Since UIC is traversed by several major thoroughfares, and there is such a high concentration of pedestrians in and around Campus, the University should work with CDOT to improve pedestrian safety in the UIC community. UIC would be valuable in helping CDOT accomplish this goal since they have a better understanding of the movement and actions taken by students, faculty, and staff. Additionally, they would be able to inform CDOT of any new on-campus construction that will affect the movement of students once they leave university property.

Many of the following strategies are drawn from the work of the 2010 Master Plan and have been updated and reviewed by CDOT for general feasibility (not for engineering purposes). Some of the recommendations from the Master Plan are not included, where CMAP or CDOT found the recommendation to be inappropriate for current standards or practices. The University should work with the local aldermen, whose "Menu Funds" can be used to help fund improvements. Each alderman controls $1.3 million of discretionary funds to spend on infrastructure improvements such as alleys, residential streets, pavement, curbs, speed-bumps, sidewalks, lighting, security cameras, curb-gutters, traffic signals and park-related improvements. The campus area is split between four wards (11, 25, 27, and 28), and UIC should work with all four aldermen for specific improvements in their wards. Additionally, UIC can send requests for crosswalk improvements to CDOT. All roads in the study area are under CDOT's jurisdiction, with the exception of Ogden Avenue, Roosevelt Road, and the local highways, which are under IDOT's jurisdiction.

All recommendations should comply with the guidelines and standards put forth in the Manual on Uniform Traffic Control Devices (MUTCD). The MUTCD defines standards to be used by road managers across all public streets, highways, bikeways, and private roads open to public travel. The MUTCD has national standards for all traffic control devices, including signage, pavement markings, and signals. For pedestrian and accessibility guidelines, the Public Rights-of-Way Accessibility Guidelines (PROWAG) should be consulted.[7]

2.1 As streets are improved or resurfaced, work with CDOT to reconfigure identified conflict intersections and mid-block crossings.

Street Intersections

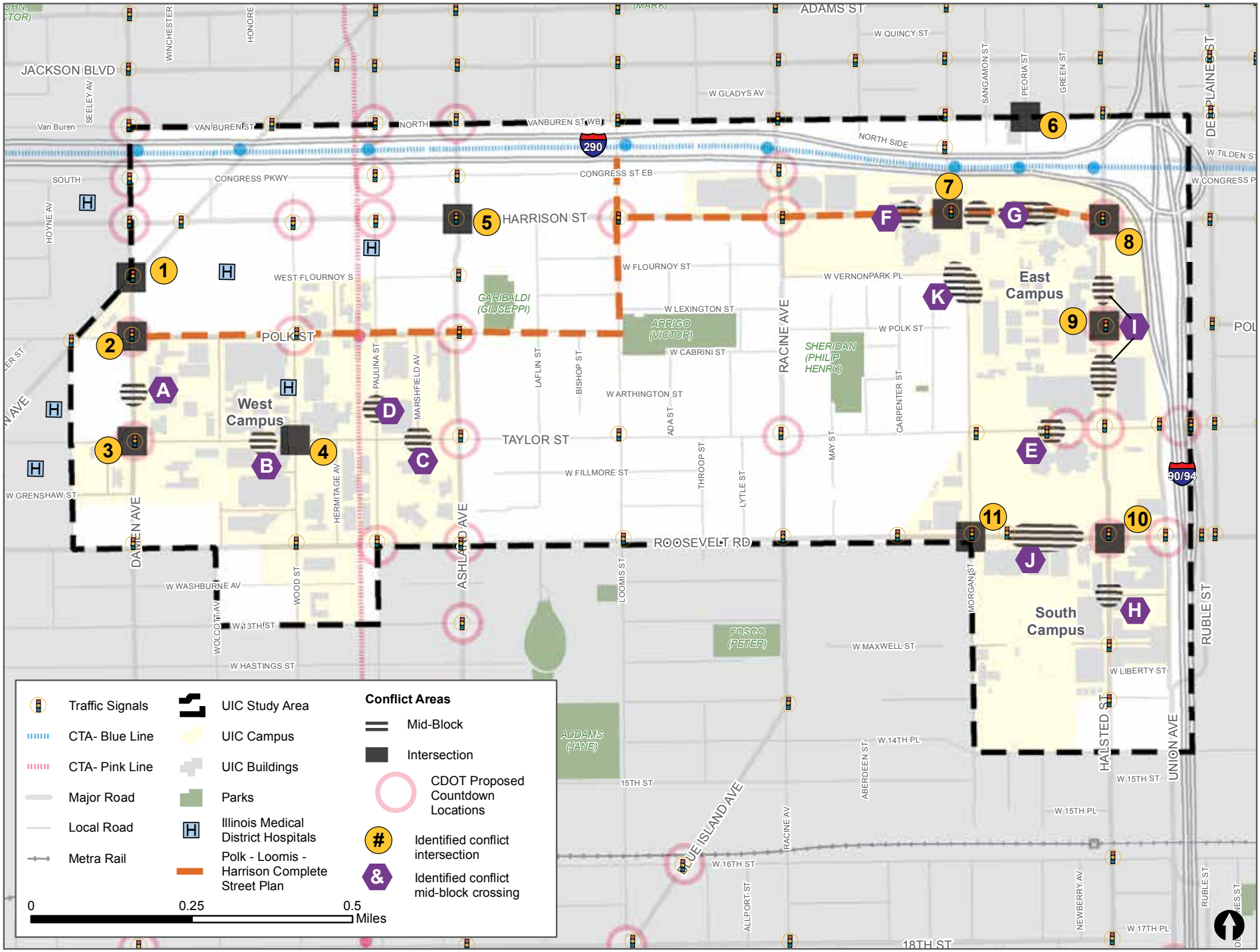
The locations shown in Figure 23 include the following intersections and their associated recommended improvements. Intersections are numbered in orange circles; mid-block crossings are identified with purple lettered hexagons:

1. **Damen Avenue & Ogden Avenue Jurisdiction: IDOT (Ogden Avenue) and CDOT (Damen Avenue)**
   - Optimize signal timings and/or signal coordination along Damen Avenue
   - Relocate bus stops to far side of intersection
   - Enhance bus stops with shelters and benches
   - Install a Leading Pedestrian Interval (LPI)
   - Coordinate with the IMD and Chicago Tech Park on the development of the proposed Gateway Center

2. **Damen Avenue & Polk Street Jurisdiction: CDOT**
   - Optimize signal timings and/or signal coordination along Damen Avenue
   - Replace pedestrian signals with pedestrian countdown signals with or without audible features

[7] MUTCD: http://mutcd.fhwa.dot.gov/, PROWAG: http://www.access-board.gov/attachments/article/743/nprm.pdf.

Figure 23. Conflict intersections and mid-block crossings identified in the master plan



Source: Chicago Metropolitan Agency for Planning.

- Relocate Polk Street bus stops to far side of intersection
- Enhance bus stops with shelters and benches
- Replace arc tactile pad with 2 distinct tactile pads on northeast & southwest corners[8]

3. **Damen Avenue & Taylor Street**
   Jurisdiction: CDOT
   - Optimize signal timings and/or signal coordination along Damen Avenue
   - Replace pedestrian signals with pedestrian countdown signals with or without audible features
   - Replace parallel-line crosswalks with high-visibility, continental style crosswalks
   - Relocate bus stops to far side of intersection

4. **Taylor Street & Wood Street**
   Jurisdiction: CDOT
   - If warranted, install a traffic signal with pedestrian countdown signals with audible features
   - Reconfigure Wood Street to allow parking on both sides (two 10' lanes and parking)
   - Re-stripe Taylor street and modify parking lanes to provide a center left-turn lane at Wood Street
   - Replace parallel-line crosswalks with high-visibility, continental style crosswalks
   - Relocate bus stops to far side of intersection
   - Add bumpouts to the intersection

5. **Ashland Avenue & Harrison Street**
   Jurisdiction: CDOT
   - Optimize signal timings and/or signal coordination along Ashland Avenue
   - Add pedestrian signals on the north side of the intersection
   - Reduce curb radii on the southeast and northwest corners, and properly locate the tactile pads to facilitate crossing for visually impaired pedestrians
   - Relocate the Harrison Street west-bound bus stop to the far side of the intersection where there is more sidewalk right-of-way, and add a bus shelter and bench

6. **Peoria Street & Van Buren Street**
   Jurisdiction: CDOT
   - Replace parallel-line crosswalks with high-visibility, continental style crosswalks
   - Install advanced pedestrian crossing warning signs

7. **Harrison Street & Morgan Street[9]**
   Jurisdiction: CDOT
   - Install traffic signal with a 5-head signal, green arrows, and a leading pedestrian interval across Harrison Street
   - Install pedestrian countdown signals with or without audible features

[8] Improperly installed tactile pads, some of which arc across 90 degrees instead of being two distinct pads, can be highly problematic for the visually impaired. They should be placed on the curb ramp so that the bumps point the visually impaired person towards the opposite curb ramp and not out into the middle of the street.

[9] CDOT is planning "Complete Streets" improvements in the UIC area along Harrison, Loomis, and Polk Streets. Preliminary plans, funded through Congestion Mitigation Air Quality (CMAQ) grant money, are currently under review, with plans to begin installation in the summer of 2015. Many of the identified problematic locations and intersections would be addressed with the proposed improvements along these routes. Proposed improvements include replacing a driving lane in each direction with a buffer-protected bike lane on Harrison from Halsted to Loomis, a neighborhood bike route on Loomis from Harrison to Polk, a neighborhood route on Polk from Loomis to Ashland, and barrier-protected bike lanes on Polk from Ashland to Damen.

- Replace parallel-line crosswalks with high-visibility, continental style crosswalks
- Relocate bus stops on Harrison Street to the far side of the intersection

8. Harrison Street & Halsted Street
   Jurisdiction: CDOT — This intersection will be affected by the Circle interchange; planned improvements include wider sidewalks and reduced corner radii.
   - Install decorative pavement or high-visibility, continental style crosswalks
   - Install pedestrian countdown signals with or without audible features
   - Install tactile pads on the "pork chop islands" and at curb ramps along the sidewalks
   - Install Leading Pedestrian Intervals

9. Halsted Street & Polk Street
   Jurisdiction: CDOT
   - CDOT should determine if a "road diet" on Halsted Street would be feasible, narrowing it to two travel lanes with a center left-turn lane, bike lanes, and building loading zones and bus stop turnouts. This would narrow Halsted to the same width that is found north of Van Buren and south of Roosevelt.
   - Install pedestrian countdown signals with or without audible features
   - Relocate bus stops to the far sides (north for northbound buses, south for southbound buses) of the intersection

10. Halsted Street & Roosevelt Road
    Jurisdiction: CDOT (Halsted Street) and IDOT (Roosevelt Road)
    - CDOT should determine if a "road diet" on Halsted Street would be feasible, narrowing it to two travel lanes with a center left-turn lane, bike lanes, and building loading zones and bus stop turnouts. This would narrow Halsted to the same width that is found north of Van Buren and south of Roosevelt.
    - Replace pedestrian signals with pedestrian countdown signals with audible features, and LPI.
    - Optimize signal timings and/or signal coordination along Roosevelt Road
    - Relocate bus stops to far side of intersection

11. Roosevelt Road & Morgan Street
    Jurisdiction: IDOT (Roosevelt Road) and CDOT (Morgan Street)
    - Optimize signal timings and/or signal coordination along Roosevelt Road
    - Relocate bus stops to far side of intersection

Mid-block Crossings

CDOT generally does not recommend mid-block crossings for safety reasons. In a university and hospital environment, however, where many of the blocks on campus are extremely long and students have a habit of crossing whether there is a legitimate pedestrian crossing or not, mid-block crossings are appropriate and should be upgraded to be as safe as possible. Most of the recommendations below regarding mid-block crossings involve consolidating multiple mid-block crossings, relocating them to more appropriate locations, and upgrading them to be safer. All midblock crossings need pedestrian crossing signage and advanced pedestrian crossing warning signage installed at the recommended distance from MUTCD standards.

The mid-block crossings (identified by purple hexagons in Figure 23) and recommended improvements (shown in the following graphic representation/diagrams) include:

A. Damen Avenue Between Polk Street and Taylor Street (CDOT) (**Figure 24**) Consolidate the two crossings into one large crossing and install a High-Intensity Activated crossWalK beacon (HAWK). A HAWK signal is a traffic signal that is activated by pedestrians wishing to cross and stops traffic as needed. This could also include countdown indicators.

Figure 24. Damen Avenue between Polk Street and Taylor Street ►

B. Taylor Street Between Wolcott Avenue and Wood Street (CDOT) (**Figure 25**) The access drive (also known as Filmore Street) to the large parking structure south of the Eye & Ear Infirmary creates an intersection where it crosses Taylor Street to the Outpatient Care Center. Many people park in the garage, walk up Filmore Street, and cross Taylor at this uncontrolled intersection, rather than walk to Wood Street or Wolcott Avenue. A high-visibility crosswalk on the west side of the intersection as well as a 'must stop for pedestrians in road' sign could help to make the crossing safer.

Figure 25. Taylor Street between Wolcott Avenue and Wood Street

Figure 26. Taylor Street between Paulina Street and Ashland Avenue

C. Taylor Street Between Paulina Street and Ashland Avenue, at Marshfield (west side) (Figure 26) The Master Plan recommends removing the eastern crossing of Taylor at Marshfield and replacing the parallel line crossing on the west side of the intersection with a high-visibility, continental style crosswalk. CDOT and CMAP's transportation consultant, however, recommend maintaining both existing crosswalks at this intersection since it is a "T" intersection, and converting them to the new standard high-visibility crosswalks. In-road, must stop for pedestrian signs may also be beneficial here.

D. **Paulina Street between Taylor Street and Polk Street (west side) (CDOT) (Figure 27)** Narrow lane widths on Paulina to a suggested cross section of two 10-foot lanes and a 10- foot cycle track on the west side with a 2-foot buffer and an 8-foot parking lane on the east side. The loading area can be constructed within the parking lane in front of the College of Dentistry, and a high-visibility crosswalk with customized paving treatment from the northwest side of the parking structure to connect with the UIC hospital, and install accessible ramps.

E. **Taylor Street Between Morgan Street and Halsted Street (east side) (Figures 28 and 29)** Currently, there is a traffic light with walk/don't walk signals. The Master Plan recommends replacing the walk/don't walk with countdown signals with or without audible features and installing a high-visibility crosswalk with customized paving treatment.

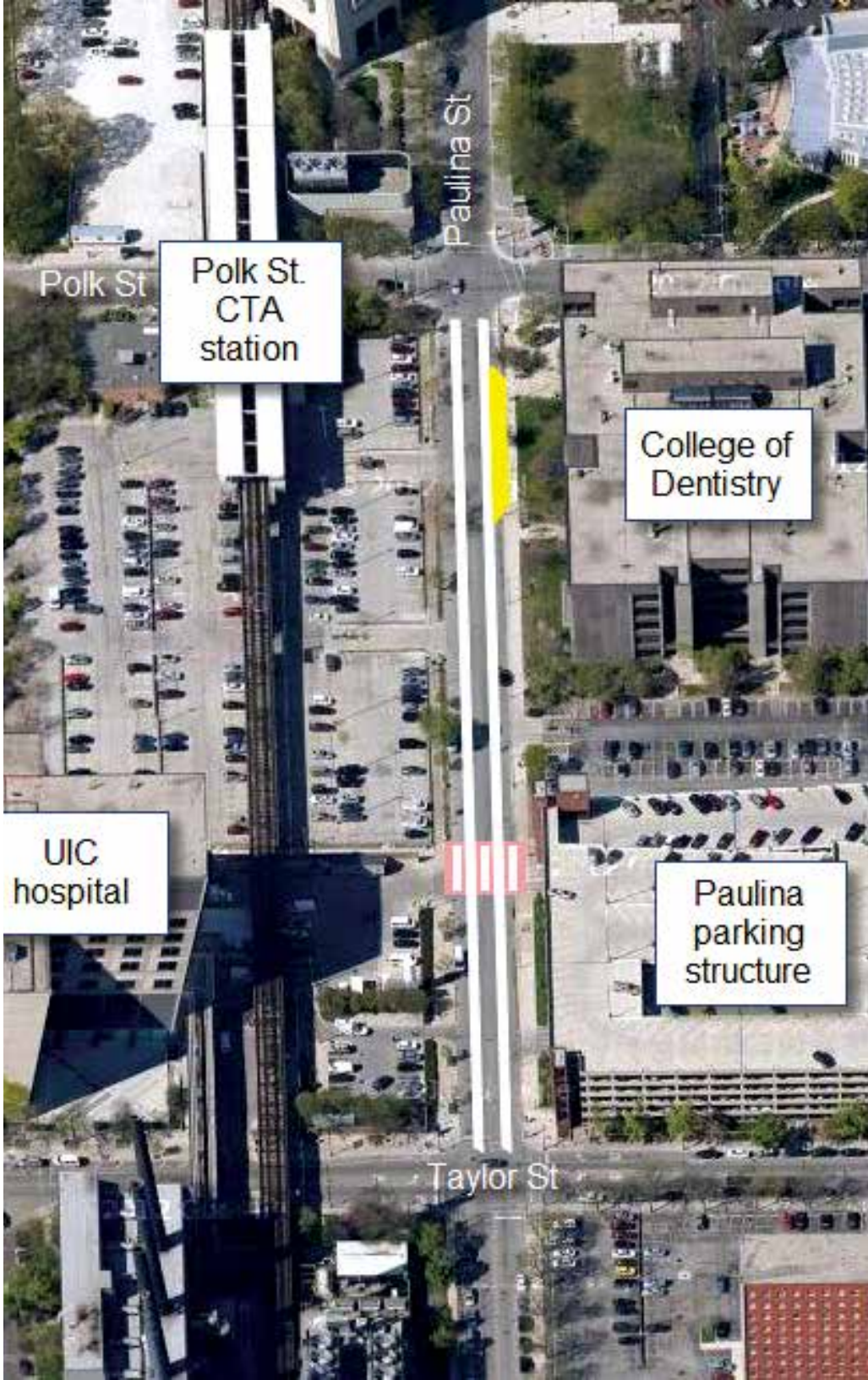


Figure 27. Paulina Street between Taylor Street and Polk Street ►

Figure 28. ►
Existing conditions of Taylor Street between Morgan Street and Halsted Street

Figure 29. ►
Proposed improvements to Taylor Street between Morgan Street and Halsted Street

Figure 30. Harrison Street between Racine Avenue and Morgan Street

F. Harrison Street Between Racine Avenue and Morgan Street (east side) (CDOT) (Figure 30) Consolidate multiple mid-block crossings to two locations: between Behavioral Sciences Building and UIC Theatre, and between parking Lot 1A and Lot 11. Install high visibility crosswalks with customized paving treatment between parking lots. Modify the parking lot fence openings to direct pedestrians to enhanced crosswalks. UIC should work with CDOT to determine if they would allow Rectangular Rapid Flash Beacons (RRFB) at both of these locations given that they are less than 300' apart and that the east one is less than 300' from the signal with Morgan Street. Install pedestrian crossing warning signs according to MUTCD standards.

G. Harrison Street Between Morgan Street and Halsted (east side) (Figure 31) Consolidate dual crosswalks on Harrison Street into a single crossing with customized paving treatment and single accessible curb ramp, and eliminating the eastern crossing. Install HAWK pedestrian signal with countdown indicators and, ideally, audible features.

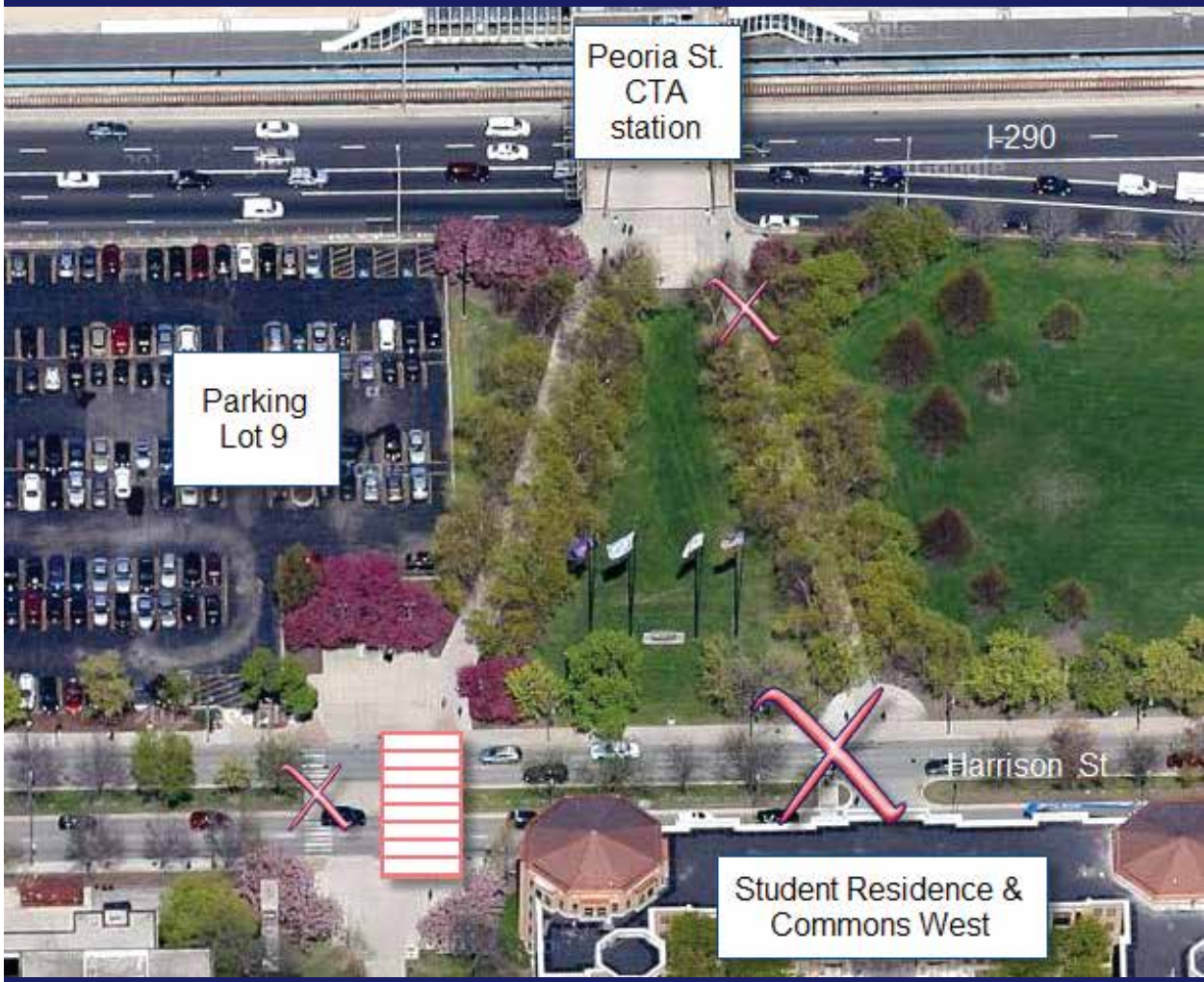
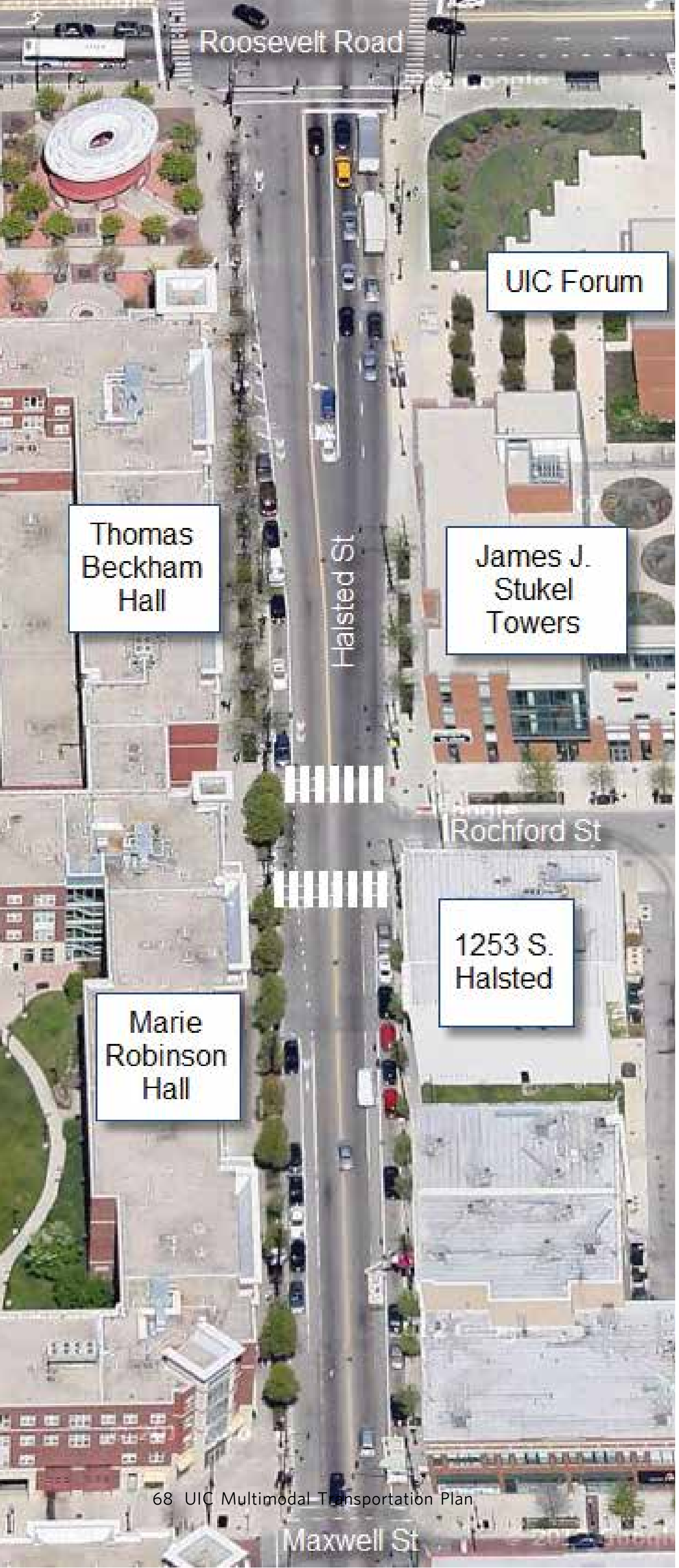


Figure 31. ►
Harrison Street between Morgan Street and Halsted Street

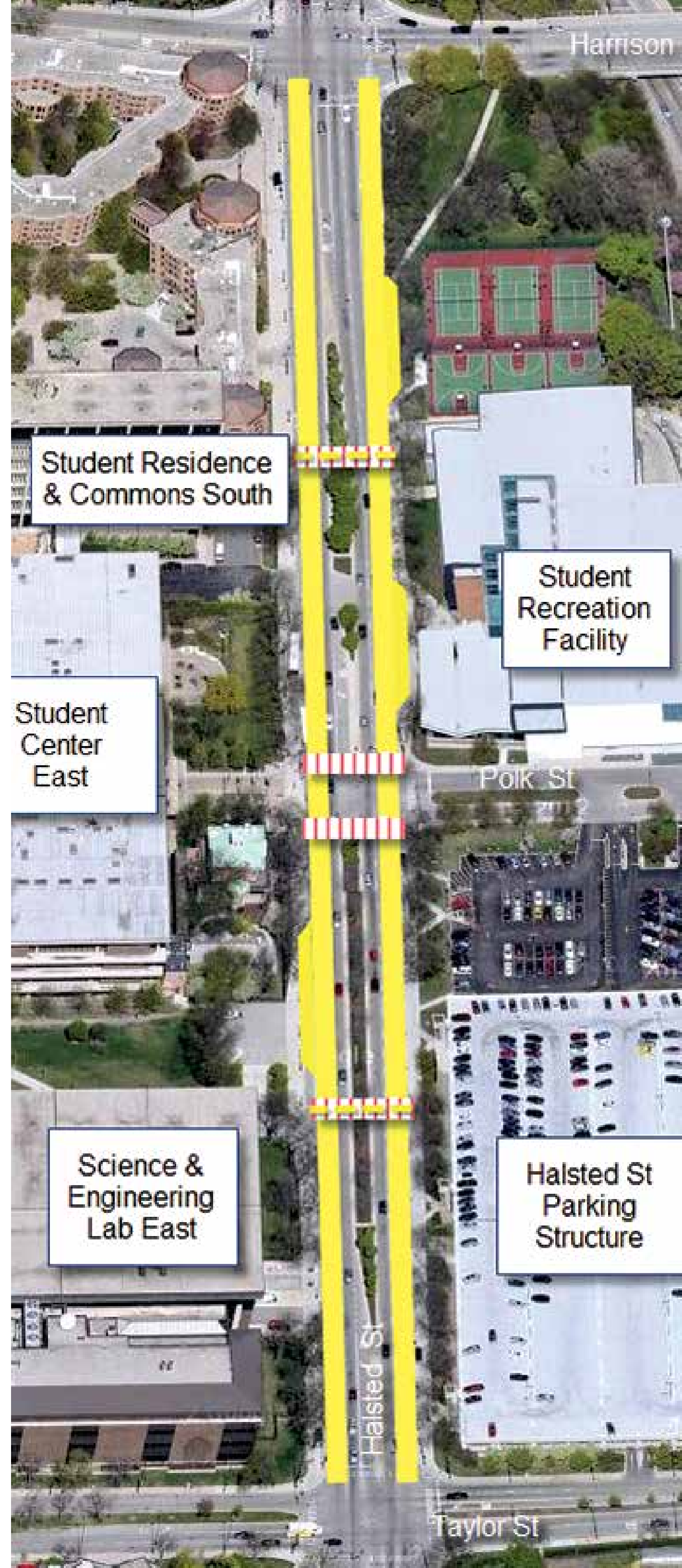


H. **Halsted Street Between Roosevelt Road and Maxwell Street, at Rochford Street (east side) (CDOT) (Figure 32)** Replace parallel-line crosswalks with high-visibility, continental style crosswalks, and add pedestrian crossing warning signage following MUTCD standards.

I. **Halsted Street Between Taylor Street and Harrison Street (east side) (Figure 33)** CDOT should determine if it is feasible to narrow Halsted Street to two lanes and consolidate crossings. The potential design could have buffered bike lanes and bus stop turnouts and standing zone parking spaces, similar to the design of Halsted Street north of Van Buren Street and south of Roosevelt Road. The mid-block crossings would be consolidated to two new locations: north of Polk Street between Student Recreation Facility and the Student Residence & Commons South, and south of Polk Street between Halsted Street parking structure and Science & Engineering Laboratory East. These locations should have high-visibility crosswalks with MUTCD appropriate signage and HAWK signals. Install overhead (or post-mounted) flashing pedestrian crossing warning signs with pedestrian-activated RRFB.

◂ **Figure 32. Halsted Street between Roosevelt Road and Maxwell Street**

Figure 33. Halsted Street between Harrison Street and Taylor Street ▸



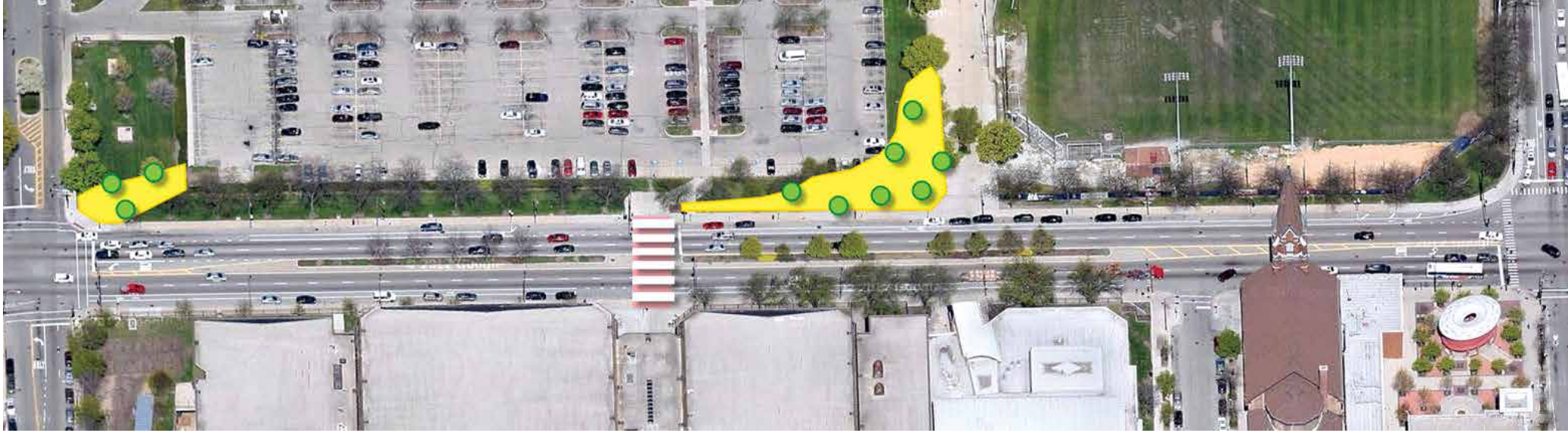


Figure 34. Roosevelt Road between Morgan Street and Halsted Street

J. Roosevelt Road Between Morgan and Halsted (East side) (IDOT) (Figure 34) The current pedestrian crossing is between the Physical Education Building and parking lot 5C. The Master Plan recommends moving this crossing slightly east, to connect the pedestrian walkway and the Flames Athletic Center. This would include closing the median at the Physical Education Building and the adjacent pedestrian entrance to the parking lot and creating two parking lot pedestrian access points at the southwest and southeast corners, directing them to the new crossing or the crossing at Morgan Street. Keeping the existing crossing, while adding a new crossing, would not be recommended due to close proximity to each other and to Halsted Street. The Steering Committee for this project did not want to close the crossing by the Physical Education Building, given the high foot traffic from that location. Instead, the recommendation is to steer pedestrians from the path toward the existing crossing with a treatment that would create a pedestrian plaza and shorten the walking distance.

The traffic signal should have pedestrian countdown timers, audible features, and a high-visibility crosswalk due to volume of pedestrians and vehicular traffic, as well as proximity to Halsted. Future development on the lot between the pedestrian path and Halsted Street should consider pedestrians traveling from the path to Halsted, with a diagonal cut-through path or similar plaza treatment.

K. W. Vernon Park Place and Morgan Street dead end
See Bicycling Recommendation 2.4, Eliminate physical barriers to bicycling on campus, Graphic 26.

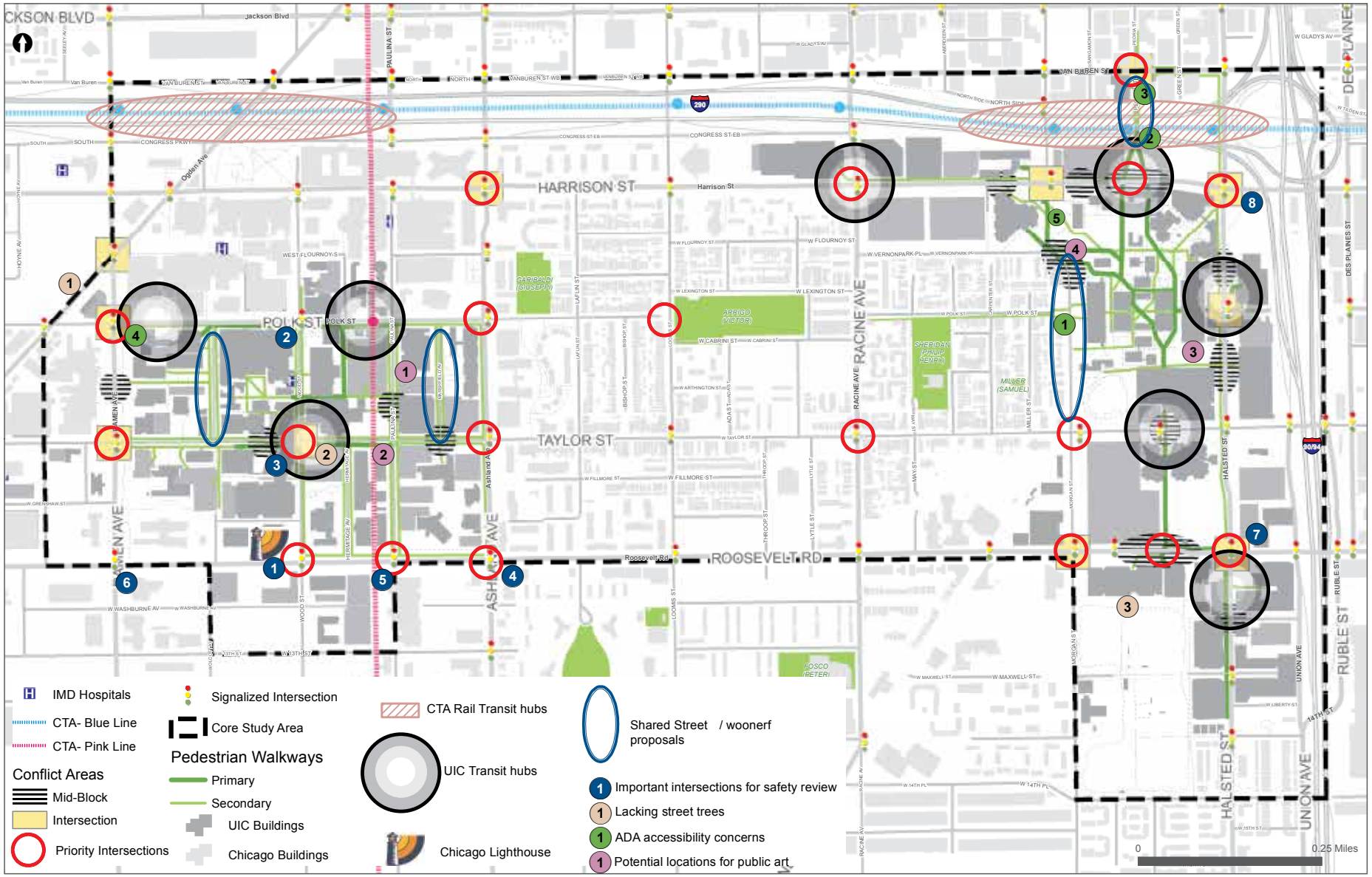
Figure 35. High-visibility continental style crosswalk

2.2 Repaint crosswalks, starting with those most heavily used.

Using the high visibility continental crosswalk style preferred by CDOT, the University should repaint all crosswalks under their jurisdiction and work with CDOT to prioritize re-painting crosswalks across campus that are CDOT-maintained facilities. This strategy would fall under the purview of CDOT and Facilities Management, and locations should be prioritized by pedestrian traffic, car traffic, and proximity to key campus destinations or transit hubs. Figure 22 shows transit hubs and "priority intersections." The "priority intersections" were identified through a review of recent pedestrian crashes (2008 – 2012), comments received during public outreach, and pedestrian traffic measured in the 2010 Master Plan. The "transit hubs" are locations along CTA bus routes and/or campus shuttle routes that connect passengers to important campus destinations; they are covered in more detail in the Transit recommendations section.

Most of the existing crosswalks on campus are parallel line crosswalks, and many are faded. The preferred style for new crosswalks is the high-visibility, continental style crosswalk, like that shown in Figure 35.

Figure 36. Transit hubs and priority intersections for safety review



Source: Chicago Metropolitan Agency for Planning.

2.3 Install "State Law – Stop for Pedestrians" signs.

A 2010 Illinois state law requires motorists to completely stop for pedestrians in crosswalks. Since the law is relatively new, many drivers may not be aware of it. At non-signalized crosswalks, these signs are a physical reminder to drivers that they have to stop for pedestrians. Priority locations could be determined by Facilities Management working closely with CDOT and Aldermen, who can help fund the signs using menu funds. Some, but not all of the intersections and mid-block crossings with dangerous conditions identified in Recommendation 2.1 may be appropriate for this type of signage. Traffic along Damen Avenue, for example, may warrant an overhead pedestrian beacon, rather than a sign on the ground.

2.4 Install safety tools at signalized intersections.

A variety of tools, including Leading Pedestrian Interval (LPI) signals, crosswalk chirpers, and countdown timers, can be used on major signalized thoroughfares to improve pedestrian safety. Installing an LPI gives pedestrians a 3-5 second head start to enter and claim the intersection before vehicles do, positioning pedestrians directly in the driver's field of vision before a turn is made. In conjunction with this, chirpers and countdown timers increase safety for visually and physically impaired individuals and seniors who have a more difficult time crossing major streets safely and confidently. This is especially important on the west side of campus due to the concentration of medical facilities that serve these individuals. This strategy would fall under the purview of CDOT.

Chicago Lighthouse, a national social service agency that caters to people with vision impairments, is located at the northwest corner of Roosevelt and Wood. Public transportation helps many people with vision impairments to live independently. To access the Lighthouse, the primary transit routes are the Polk Pink Line CTA station, the Roosevelt Road bus (#12), the Damen Avenue bus (#50), and the Ashland Avenue bus (#9). Installing crosswalk chirpers and LPIs at transit nodes that connect to the Chicago Lighthouse would make the transit experience safer for all users, but especially for people with vision impairments. Important signalized intersections to prioritize for LPI and chirpers (dark blue numbered circles in Figure 36) include:

1. Roosevelt & Wood (IDOT/CDOT)
2. Polk & Wood (CDOT)
3. Taylor & Wood (not currently a signalized intersection — but recommended to be converted) (CDOT)
4. Ashland & Roosevelt (IDOT/CDOT)
5. Paulina & Roosevelt (IDOT/CDOT)
6. Damen & Roosevelt (IDOT/CDOT)

According to CDOT, LPI's cannot be installed at intersections with left turn arrows and leading left turn phasing (left turns are made before oncoming traffic has the right of way.) Therefore, at intersections where these would be beneficial such as those listed below, further study would be needed to determine whether converting left turn operations to lagging instead of leading is feasible. Important signalized intersections on the east side of campus where LPIs should be considered include:

1. Roosevelt & Halsted (IDOT/CDOT)
2. Halsted & Harrison (CDOT)

2.5 Reduce pedestrian crossing times with bump-outs/curb extensions.

A curb extension ("bump-out" or "bulb-out") extends the sidewalk out into the roadway, often in front of on-street parking spaces. This strategy has a two-fold benefit: it narrows the roadway, which encourages drivers to slow down and it reduces the distance that pedestrians have to cross. Additionally, curb extensions help to decrease the turning speed of vehicles by reducing the radius of the corner, and reduced speed improves a driver's field of vision and reaction time while increasing the perception of a safer intersection by pedestrians. This strategy would fall under the purview of CDOT, Campus Master Planning Committee, and the Facility and Space Planning Department. This strategy might be appropriate for intersections along Taylor Street as long as there is sufficient room for CTA buses to make their stop maneuvers. This would also be appropriate on Roosevelt Road where on-street parking is present.

2.6 Coordinate snow removal with the City of Chicago Department of Streets and Sanitation.

While the average snowfall in a Chicago winter is about 37," the past four winters have seen over 50" of snowfall, with 80" in the 2013-14 season. With 278 snow plows and 9,456 lane miles to plow, the Department of Streets and Sanitation (DSS) has a very complex task of maintaining roadway access during winter events. In August of 2014, DSS acknowledged problems with pedestrian right-of-way snow clearance last winter and hopes to improve this winter.[10] Their command center is prepared to coordinate all plows (and additional trucks if needed). The first priority for DSS is to clear Lake Shore Drive and snow route arterials. The north-south snow routes on the UIC campus are Halsted, Racine, Ashland, and Damen. The east-west snow routes are Harrison and Roosevelt. After arterials are completed, side streets are plowed. Enhanced technology, real-time data, and apps allow anyone to follow the progress of snow plows (using the "Plow Tracker"). CTA workers shovel CTA bus stops, shelters and train stations, and property owners are, in most cases, responsible for sidewalk snow removal.

To the extent possible, the University should work with DSS and CTA to adopt policy agreements that identify which entity will clear specific areas and ensure that pedestrian and bicycle pathways and crossings, as well as CTA bus stops, remain free and clear of snow. Particular emphasis should be on the west side of campus due to the location of multiple medical facilities, high concentrations of persons with temporary and permanent physical disabilities, and emergency services. This strategy would fall under the purview of DSS, CTA, and UIC Facilities Management.

There are a number of strategies that UIC can follow to improve snow management. There are many applications for Apple and Android users that can be used to obtain information regarding snow management. For example, "Plow Tracker" displays when and where streets have been plowed. "Snow Corps," a City of Chicago app, connects volunteer snow shovelers with residents in need of snow removal assistance. "Adopt-a-Sidewalk" allows people to claim sidewalks that they will shovel, share snow supplies and equipment, request assistance, and announce cleared sidewalks. "Was My Car Towed?" helps drivers determine if their car has been towed or relocated due to snow removal needs. The City maintains an updated list of some popular winter apps: http://www.cityofchicago.org/city/en/depts/mayor/snowportal/winter_apps.html.

[10] Streetsblog Chicago: http://chi.streetsblog.org/2014/08/08/thinking-snow-yet-cdot-owns-up-to-gaps-in-its-snow-removal-job/.

3. Enhance the pedestrian environment.

Driving will continue to be the mode of choice for many people that visit the area, but it is important to plan for all modes — especially walking, since everyone is a pedestrian at the beginning and end of their trip. People prefer to walk in areas that convey a feeling of safety, comfort, and interest. Improving the quality of the pedestrian environment will increase the likelihood that more people will choose to walk between destinations. Physical improvements that create a clear and inviting pedestrian pathway include adding space for pedestrians and accessibility or enhancing the aesthetic experience. While some improvements are geared toward traffic safety, others address personal safety and the threat of violent crime. The best way to improve personal safety is to have more people walking through the day and evening, and a program to improve overall conditions (for both traffic safety and personal safety) will help to accomplish that.

3.1 Make physical improvements that create clear and inviting pedestrian pathways.

For short trips, most people with a choice between driving and walking will only make the choice to walk if the walk is "simultaneously useful, safe, comfortable, and interesting."[11] More pedestrians mean more eyes on the street, which enhances the perception of safety. UIC should work with CDOT to make improvements that will encourage people to walk more, including wider sidewalks, street trees, adornment of blank façades, street furniture, pedestrian-scale lighting, and better ADA accessibility. Safety is an area that needs continual monitoring, and some simple lighting improvements can help.

Sidewalks

Narrow sidewalks on streets without on-street parking are uninviting for pedestrians since they offer little refuge space between the individual and moving traffic. Additionally, narrow sidewalks are harder to navigate for visually and physically impaired individuals with street signs, electrical/phone poles, and other street furniture often getting in their way. Wider sidewalks along primary pathways will improve upon these issues and also provide more space around crowded transit stops and other busy areas to maintain the free flow of movement for all campus users. ADA standards recommend a minimum of 5' wide sidewalks to allow two wheelchairs to pass each other, and wider sidewalks on streets with substantial pedestrian traffic are preferred. Sidewalk widening should be considered whenever road-narrowing is a possibility. Streets where sidewalks or existing buffers should be widened are Harrison, Racine, Roosevelt, and Ashland.

[11] Speck, Jeff. "On Walkability: an Interview with Jeff Speck." By Ash Blankenship, www.parksify.com. Web: http://parksify.com/post/56508222584/on-walkability-aninterview-with-jeff-speck. 28 Oct 2013.

Street Trees and Street Furniture

To enhance the character and perceived safety and comfort of sidewalks and other pathways, continuous street or pathway trees are often used to influence the likelihood of people choosing to walk to a destination. The addition of street trees provides shade to pedestrians and can create a perceptual narrowing of the roadway, which helps to naturally lower vehicle speeds. Lower vehicle speeds increase the driver's field of vision and lowers their required stopping distance, making the street more bicycle and pedestrian friendly.

As evidenced by the numerous, newly planted trees along much of Roosevelt Road in the Medical District, the campus area and the City of Chicago continue to improve the coverage of street trees. Most blocks have excellent tree coverage, which will only improve as the trees mature, and a 2015 CDOT tree planting has occurred along Laflin Street, Ashland Avenue, Polk, Lexington, and Racine. Some minor exceptions where trees should be planted include (beige circles on Figure 36):

1. Ogden Avenue between Damen and Polk
2. The south side of Taylor Street between Wood and Hermitage
3. Along the walking path on the north side of the Flames athletic fields between Morgan Street and Newberry Avenue

While there are many places to sit, the lack of tables makes enjoyment of outdoor campus areas more difficult. Many students would like to be able to enjoy their lunch outside and read a book or do homework at a table — particularly near student centers and the Quad. Street furniture, including benches and tables should be constructed of durable materials that are also "warm and inviting," like wood or stainless steel. The Master Plan recommends developing a simple palette that will wear well over time but not be too expensive to replace. Using the same palette across the campus will help to unify the overall campus identity. Some universities, such as the University of Wisconsin, UCLA, and the University of Florida have combined sustainability efforts with innovative campus furniture. One example from UCLA is a shaded picnic table with solar panels and a charging station (see below). Accessible picnic tables, such as the one shown below, should be incorporated into the mix of campus furniture.

Two newly installed tables in the Ackerman Student Union patio outside the first-level fod court use solar energy to power a charging station. The tables are part of a student-run project

Photo credit: Brandon Choe / Daily Bruin.

Lighting and Crime Prevention Through Environmental Design

The 2010 Master Plan stressed the importance of outdoor lighting for providing an atmosphere of safety and accessibility. When people with multiple transportation options feel unsafe walking, they are more likely to drive. Continuous monitoring of crime incidents, as well as campus and neighborhood lighting conditions are essential to providing a safe pedestrian environment. While a nighttime lighting assessment was not conducted for this plan, many online survey respondents indicated a need for additional lighting on Polk Street on the west side of campus (see Pedestrian Public Comments Map in Appendix).

The UIC Police regularly conduct security surveys and seek ways to improve security and reduce crime on campus. The UIC Police have initiated a program called Campus Oriented Policing Strategy to keep the UIC community safe and enhance awareness of personal safety matters. These officers could also conduct a "Crime Prevention Through Environmental Design" (CPTED) survey of campus buildings and walkways. CPTED is a set of design principles used to discourage crime. By anticipating the thought processes of a potential offender, CPTED principles attempt to create an environment that discourages criminal behavior. See Appendix for a CPTED Audit & Site Assessment Checklist.

ADA accessibility

UIC has many resources and groups to help give a voice to people with disabilities and to make campus life fully accessible to all users. UIC's Disability Resource Center (DRC) maintains a database of accessibility concerns that are reported by students, faculty, staff, or visitors. Information submitted to the DRC is shared with the Chancellor's Committee on the Status of Persons with Disabilities (CCSPD) for review and to address any problems. Any infrastructural changes on campus (such as new bike lanes) should be reviewed with the DRC and the CCSPD to consider the needs of the visually impaired in the design and ensure that known issues are resolved with new designs.

ADA accessible picnic table.
Photo credit: vastateparkstaff on Flickr.

Creative seating along New York's Highline.
Photo credit: La-Citta-Vita on Flickr.

A complete accessibility analysis was not possible for this project, but some problematic locations for ADA accessibility were identified during the public outreach phase (see Appendix for a map of public comments relating to accessibility), including (green circles in Figure 36):

1. **Morgan Street, with no direct accessible crossing from Polk Street to the UIC Library and the Quad.**
2. **The inaccessible Peoria Street CTA station.**
3. **The College of Urban Planning and Public Affairs building (with reportedly unreliable elevators).**
4. **Sidewalks flooding on the east side of campus, especially north of the Quad.**
5. **The Single Student Residences where more accessible ramps on the interior courtyard are needed to enter the building.**

3.2 Install automatic pedestrian and bicycle counters along primary and secondary university pathways, near transit hubs

Automated counters along primary corridors will help to increase the amount of data the University has available to better understand walking and cycling trends around campus, for improved university planning efforts. Additionally, they will identify how travel patterns are affected by weather, disruptions (i.e., traffic, special events, construction, etc.), and the physical environment. The data could also be used to inform the University where upgrades should be completed first. The Office of Sustainability can recommend key locations for placement of automated counters, based upon their extensive previous studies on biking and walking. Counters can also be placed along primary and secondary pedestrian walkways, near identified transit hubs (see Figure 36).

3.3 Support and encourage public art along primary and secondary pedestrian pathways.

A quality pedestrian environment is not only well-maintained and protected from traffic, but is also active and interesting. Existing buildings with large, featureless blank walls along pathways can be enhanced by adding decorative features (public art, hanging sculptures, hanging gardens, etc.). The Facility and Space Planning Department, with the assistance and guidance of the Campus Master Planning Committee could work with the Arts Department and students majoring in Art and Design to commission works to enhance the public space along pedestrian pathways. Temporary and rotating exhibits, or permanent sculptures, could be used. This will help to activate the pedestrian environment and attract more pedestrians, further improving personal safety by adding more "eyes on the street."

The 2010 Master Plan recommends several prominent locations for public art based on high pedestrian counts, good visibility, and available space. These locations, indicated by purple circles in Figure 36, include:

1. **The proposed Health & Sciences Greenway located on the existing parking lots adjacent to the School of Dentistry and along Paulina near the CTA train tracks.**
2. **The proposed Power Grove at the intersection of Taylor and Paulina.**
3. **On the east side of campus in the area just south of the Quad and adjacent to the proposed Hull House addition.**
4. **The terminus of Morgan Street at Vernon Park Place.**

Figure 37. Aerial of Quad to Halsted Street Cut-Through

Figure 38. Quad to Halsted Street Cut-Through

Figure 39. Wood Street to Taylor Street Cut-Through

Figure 40. Medical Sciences Cut-Through

3.4 Formalize cut-through paths.

When pedestrians and cyclists cross through open spaces where there is no path, a trail is formed in the grass, indicating preferred routes, usually a more direct route between two points than a route via provided sidewalks. These paths, commonly called “cow paths,” indicate where the deficiencies of the existing pathway network are, and where the university should install new pathways. Examples of this exist south of the UIC Student Center East between the Quad and Halsted Street, and on the West side of campus near the intersection of Taylor and Wood Streets, as well as within the Neuropsychiatric Institute courtyard (see Figures 37-40). This strategy would fall under the purview of the Campus Master Planning Committee, Facilities Management, and the Facility and Space Planning Department.

4. Clearly designate pedestrian and bicycle environments to minimize conflicts.

UIC students, faculty, and staff cited that pedestrian-bicycle conflicts are a problem on campus. Currently, there are no physical designations that separate bicycles and pedestrians throughout the on-campus path system. The University should consider whether visual cues or branding would help to differentiate pedestrian and bicycle priority areas. For example, there might be a 'walking' brand and a 'biking' brand to designate pathways.

4.1 Create a bicycle-only network on the campus interior.

Formally separating bicycles and pedestrians via signs and/or pavement markings will improve the safety of both users since it reduces the risk of accidental collisions. This also increases cyclist and pedestrian awareness of where to expect each user, further reducing potential pedestrian-bicycle conflicts. See Bicycling Recommendation 2.3 for more details.

4.2 Create a Pedestrian Priority Zone for the East Side quad.

The quad on the east side of campus is one of the most heavily congested pedestrian areas in the University during class transitions. As a result, it creates a dangerous situation when there are competing forms of movement within the limited space. Additionally, pedestrian routes converge from different directions, increasing the potential for a surprise collision between a cyclist and pedestrian.

A pedestrian priority zone at Boise State University was established in two stages: the University removed bicycle parking within the zone and added high capacity bike parking on the periphery, installed signage and pavement markers for cyclists, and improved bike routes around the pedestrian zone. After the first stage was complete, they evaluated bicycle and pedestrian interactions. Finding more than six bike/ped conflicts in an hour, they continued with the second stage: implementing a "dismount zone."

At UIC, the bike racks are already located at the periphery of the Quad, but increased signage, pavement markings, and bike routes around the Quad could help to direct bicycle traffic to travel along preferred routes and prevent conflicts in the pedestrian-heavy core of the Quad. After those improvements, an analysis of conflicts between cyclists and pedestrians should be performed during peak hours and a "dismount zone" should be considered if there are more than six conflicts per hour. A designated "dismount zone" requires bicyclists to walk their bikes and can be limited to certain hours. It will require proper enforcement to be successful; the dismount requirement should be limited to peak hours of activity, such as 7:30 a.m. to 6:00 p.m., Monday through Friday. During those hours, UIC campus police would give tickets to cyclists who do not dismount. A period where only warnings are issued may be necessary while people get accustomed to the change.

In addition to the pedestrian priority zone from Boise State University's Bicycle/Pedestrian Safety Master Plan,[12] other examples of pedestrian/bicyclist separation can be found in the University of Arizona's Area Bicycle and Pedestrian Plan[13] and the University of California Santa Barbara's Long Range Development Plan.[14]

[12] Boise State University Bicycle/Pedestrian Safety Master Plan: http://transportation.boisestate.edu/docs/BicyclePedestrianMasterPlan2010.pdf.

[13] University of Arizona's Area Bicycle and Pedestrian Plan: https://parking.arizona.edu/alternative/documents/UAAreaBikePedPlanFinalAugust2012.pdf.

[14] University of California Santa Barbara's Long Range Development Plan: http://lrdp.id.ucsb.edu/.

4.3 Create a bicycle and pedestrian safety handbook.

A bicycle and pedestrian safety manual that consisted of a handbook or pamphlet with information concerning bicycle and pedestrian safety tips, University policies, circulation maps, and relevant state and city laws could be informative for drivers, non-drivers, and cyclists. These handbooks should be distributed during graduate and undergraduate orientation and included in new faculty and staff hire packets. In an effort to educate drivers about safe driving and tips for sharing the road, CDOT mailed a pamphlet to 1.5 million car owners with registration renewal papers (See Appendix).

Additionally, the Office of Sustainability should continue to promote taking the League of Illinois Bicyclists' Safety Quiz to students, faculty, and staff (http://www.bikesafetyquiz.com/). To encourage participation, they can give promotional materials to anyone who completes a survey and presents the completion certificate, or enter them in a prize drawing (such as a Divvy membership). This strategy would fall under the purview of the UIC Police, Office of Sustainability, and Facilities Management.

4.4 Install shared streets (also known as "woonerfs") on streets with low vehicular traffic and high pedestrian traffic.

The 2010 UIC Master Plan calls for vacating one or more streets on the west side of campus to create a more pedestrian friendly campus environment. However, the closure of a street reduces the connectivity of the area and forces more traffic on surrounding streets. Turning these streets into a shared public space for all modes can accomplish the same goal of making the campus more pedestrian friendly while still maintaining connectivity. A shared street (or woonerf) often is designed with no sidewalks or roadway markings, has a very low speed limit (the Dutch, from which the term woonerf originated, recommend a "walking speed"), and uses visual cues to indicate that the roadway is to be shared by all users and pedestrians may cross at any point. The area can include larger trees and green space or planters to help narrow the area where cars would travel.

Locations where shared streets could be implemented on the west side of campus are on Wolcott Avenue between Taylor and Polk, and on Marshfield between Taylor and Polk. Wolcott is not a through street, so it has less vehicular traffic, but there are many pedestrians that cross the street mid-block from a parking area to campus buildings. Alternatively, this block of Wolcott could be split into north and south sections, with auto traffic allowed on the south half and a cul-de-sac treatment north of the parking lot entrance, and the north half could become a pedestrian-only street. Traffic calming implements on the south half would enhance the street and the north half would be accessible to emergency vehicles only. For Marshfield, an alternative treatment would be to convert the street to a "skinny street" as defined in CDOT's toolbox of Complete Streets treatments, narrowed, converted to a one-way street, and enhanced with pedestrian-friendly elements. Both the "skinny street" and the shared street proposals would maintain access to the loading dock and the parking garage.

On the east side of campus, this strategy could be applied to Morgan Street, from Taylor Street north to its cul-de-sac termination, and to Peoria Street between Van Buren and the Peoria Street CTA entrance (blue ovals on Figure 36). The Master Plan recommends eliminating vehicular traffic on Wolcott and Marshfield (with exceptions for access to parking lots or garages), but a shared street could be a better solution. Examples of shared streets exist on the Loyola campus and in downtown Batavia, Illinois.

The City of Chicago is also developing plans for a shared street on Argyle Street between Broadway and Sheridan Boulevard.

This concept would fall under the purview of CDOT, the Campus Master Planning Committee, Facility and Space Planning Department, Office of Sustainability, and Campus Police. It would also be important to connect with the DRC and the Chicago Lighthouse to address any mobility issues that could arise with such a layout.

[15] http://www.cityofbatavia.net/Content/templates/?a=3794.

[16] The City of Chicago is currently developing plans for their first shared street, on Argyle Street, between Broadway and Sheridan Boulevard. See the article on the 48th Ward website at http://48thward.org/your-ward/argyle-streetscape-project.

Example of a "woonerf," or "people street," from Asheville, NC.
Photo credit: Dan Burden

5. Improve reporting of street and sidewalk conditions, accessibility problems, and safety issues.

Keeping track of and maintaining the conditions of on-campus pathways is a monumental task, but one that is necessary to provide consistent levels of mobility for campus users, especially those with disabilities. Facilities Management currently learns about issues from direct phone calls or notifications on the Facilities Management Website. There are many existing resources for collecting and sharing real-time data that would help to supplement these procedures.

5.1 Promote the use of an online conditions reporting tool to students, faculty, staff, and campus visitors.

UIC is currently pursuing the development of a general maintenance and management tracking system, which may be enhanced through the integration of an online reporting mechanism that allows people to report issues related to the public right-of-way using their mobile phone. Examples include the Chicago Works mobile app, which is connected to the City's 311 information system, or "SeeClickFix,"[17] both of which provide easy communication tools that automatically geo-locate information about non-emergency issues, and send it to the appropriate agency or department to be addressed. CDOT currently uses SeeClickFix to track and fix reported road and infrastructure problems, and other cities like Washington, D.C. and Ann Arbor, Michigan have dedicated staff to check and report back on reported issues. The receiving parties can track, manage, and reply to submissions about status of the report, creating transparency and improving accountability. Anyone with a cell phone camera can also submit photos of the problem. Facilities Management would "follow" a specific area (campus boundaries) and could sign up to receive notifications of any newly reported issues. By incorporating this application into their maintenance procedures, Facilities Management would be able to receive complaints and issues reported in real-time and respond to them in a streamlined and transparent manner.

While Facilities Management can "follow" the reporting and get notifications of new incident reports for free, they can also sign up to be a verified official account holder and get access to more features. With the example of SeeClickFix, a government account holder can acknowledge and close issues, assign "tickets" to staff, print work orders, create reports, set benchmarks, and measure success. The tool also allows for in-depth analysis of issues.

Promoting the use of the website to students, faculty, and staff will help UIC stay informed of infrastructural issues and concerns. The website should also be promoted through the Disability Resource Center to report problematic sidewalks, building entrance issues, and other barriers to accessibility.

[17] More information available at https://en.seeclickfix.com/near-west-side.

Bicycling

As a means of transportation, bicycling is affordable and can help universities provide equitable, balanced travel options to persons of all income levels when safe, convenient bicycling infrastructure exists. Increasing the number of trips made by bicycle can reduce the need for automobile parking areas and can mitigate traffic congestion in surrounding communities. As active transportation, bicycling improves the health of students, faculty, and staff, while also helping to save energy and reduce our impact on the environment. To limit reliance on personal automobiles on campuses, colleges and universities across the country are taking steps to increase bicycle use among students, faculty, and staff through educational and encouragement programs, bicycle-supportive policies, and bicycle-friendly infrastructure.

Making bicycling a viable and popular choice for the fullest possible range of people will require UIC to ensure that bicycling is safe, comfortable, and well connected to the city's network of bike facilities. Studies have shown that a comprehensive package of infrastructure, programs, and policies is the best way to overcome physical and cultural barriers to bicycling and significantly increase levels of cycling. In order to advance towards these standards and adhere to the guiding principle outlined above, UIC should adopt bicycling-supportive policies, implement education and encouragement programs, and invest in infrastructure focused on improving the overall conditions for cycling on and around campus.

Principle

A connected network of safe and efficient bicycle-friendly routes, secure facilities, and supportive infrastructure and administration will encourage bicycling on and around campus.

Goal

Improve conditions, facilities, and infrastructure for bicycling to, from, and on campus.

Challenges & Opportunities

- UIC does not have a mode-specific bicycle plan or a long-term vision for cycling as transportation.
- Bicycling as transportation has not been adequately prioritized or integrated into streets and intersections, public right-of-way infrastructure, or campus facilities and programs.
- There are no dedicated bikeways on campus.
- Bicyclists and pedestrians share on-campus pathways in an informal or improvised manner, producing conflicts that can compromise comfort and safety, especially at "peak" times.
- The east and west sides of campus are not directly linked by safe bikeways with appropriate bicycle infrastructure.
- The design and conditions of existing on-street bikeways feel inadequate and unsafe to cyclists with lower tolerance for riding near traffic.
- Some students, faculty, and staff see the initial cost of a Divvy membership as too expensive.
- Campus bicycle theft is problem, deterring many from bicycling on campus.

Recommendations

Numerous barriers and obstructions hinder easy, stress-free bicycling on and between different parts of campus. These barriers range from curbs, stairs, cul-de-sacs, fences and walls, hazardous sewer grates, outdated bikeway designs or poor/incomplete routing, and dangerous street intersections. Additionally, inadequate, insecure, or inconvenient bicycle parking is a hindrance. While the university has made progress in addressing the need for more and higher quality bike parking, demand continues to exceed supply.

An extensive network of pathways crisscross campus, leading from major access points, across campus grounds and quads to academic and administrative buildings and other destinations. This network of pathways was designed primarily for pedestrians, however, a growing numbers of cyclists use these paths in order to traverse the campus and/or to reach destinations on campus, including bicycle parking facilities serving these destinations. The pathway network is most highly developed on the east side of campus, where the University's main Quad is located. West and south sides of campus, while they do contain pathways, for the most part utilize the roadway network (streets, driveways, and parking lots) to provide access to buildings. Campus pathways vary in width from 4- to 5-foot sidewalks, to very wide (20-30 feet) paths that lead to and merge with plazas (quads). However, average widths range from 12 to 16 feet.

1. Encourage cycling through pursuit of higher status in the Bicycle Friendly University program.

In 2013, UIC applied to the Bicycle Friendly University (BFU) program. The University succeeded in attaining bronze-level status in the fall of that year. Higher levels in the BFU program are silver, gold, and platinum. The BFU program recognizes institutions of higher education for promoting and providing a more bikeable campus for students, faculty, staff, and visitors. Application to the program entails a self-evaluation of existing programs and conditions for cycling, an explicit and publicly recorded commitment to BFU program goals, plans for implementation of defined actions for encouraging and improving conditions for cycling, and ongoing monitoring and measurement of implementation actions and progress toward achieving BFU goals. Successful applicants must re-apply (to maintain status) every four years.

The BFU program evaluates applicants' efforts to promote bicycling in five primary areas known as the Five E's: engineering, encouragement, education, enforcement, and evaluation/planning.

According to BFU program scoring guidelines,[18] colleges and universities that have achieved bronze-level status have initiated projects, policies, and programs that exhibit a strong commitment to cycling, which have resulted in an above-average number of students and faculty riding bicycles for transportation. Bronze-level universities, typically, are particularly strong in one or two of the Five E's, by which applicants are evaluated.

[18] See BFU "Award Levels and General Scoring Guidelines." A "quick assessment" can be made on the League of American Bicyclists' BFU webpage, http://bikeleague.org/bfa/quick-assessment/university. General information on the program and the application process are available at http://bikeleague.org/content/process-0.

Silver-level colleges and universities have begun to implement projects, policies, and programs that exhibit a strong commitment to cycling. These institutions often have a part- to full-time bicycle coordinator, growing bicycling culture, and a bicycle advisory group that meets regularly. They are usually particularly strong in two or three of the Five E's.

Examples of actions or characteristics typical for silver-level universities are as follows:

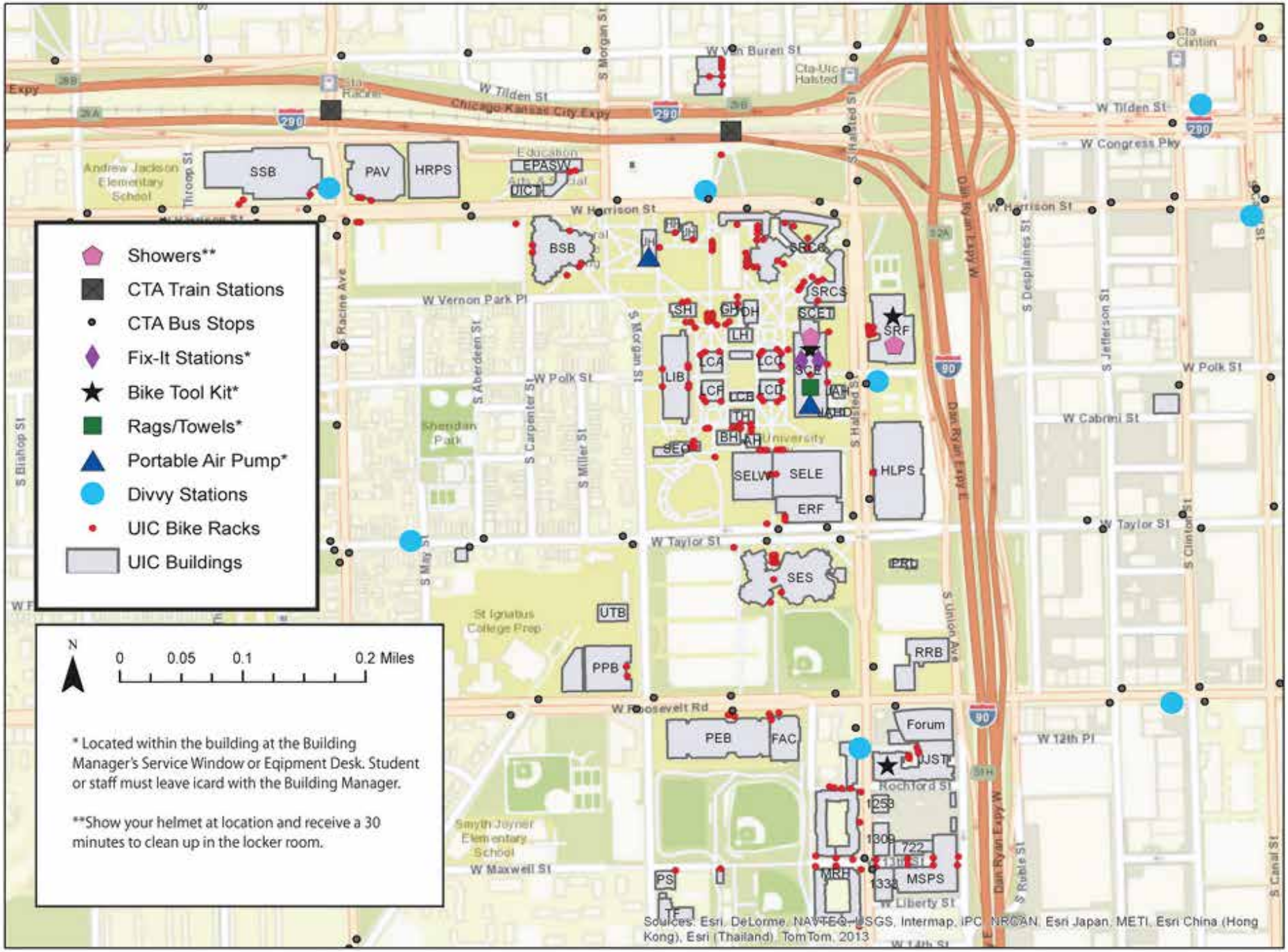
- **Engineering**. The campus has made a significant investment in its bicycle facilities and has invested in making the streets around the workplace bicycle friendly.
- **Education**. Bicycling educational materials are provided to all students, staff, and faculty. Safety classes are offered on a regular basis and the campus actively promotes safe bicycling.
- **Encouragement**. Campus has an on-campus bike shop and/or a bike-share program.
- **Enforcement**. Officers are familiar with laws relating to bicyclists and work with the bicycling community to disseminate safety information to motorists and cyclists. Some officers are on bikes in the community and provide safety outreach on-bike.
- **Evaluation**. A significant percentage of students, faculty, and staff bike to campus more than twice a week. Goals have been set for campus-wide bike use.

For UIC to advance to a higher level in the BFU program, the University must undertake significant steps, as defined by the program, to further increase and improve conditions for cycling. Some of these steps have recently been taken or are currently underway at UIC, including the creation of the "I BIKE UIC" website (https://sustainability.uic.edu/campus-resources/transportation/bicycling/), the formation of a Bicycle Advisory Group (BAM) that meets on a regular basis, the installation of bicycle "Fix-it" stations, the provision of air pumps and Bike Tool Kits (which can be "checked out"), allowing the use of showers at campus athletic facilities, the construction of high-quality, covered bicycle parking, participation in Bike2Campus Week, development of a university policy addressing abandoned bikes, a bicycle recycling program, participation/representation at broader sustainability events like EcoJam, and the aggressive promotion of Divvy Bike Share through information dissemination and through subsidized memberships.

Figures 41 and 42, from the "I BIKE UIC" website,[19] show the range of amenities offered to cyclists at UIC, yet it does not show existing bikeways and routes. However, the I BIKE UIC website does provide links to CDOT's "Chicago Bike Map," as well other maps and mapping resources. These links should be regularly updated with new information as it becomes available from CDOT.

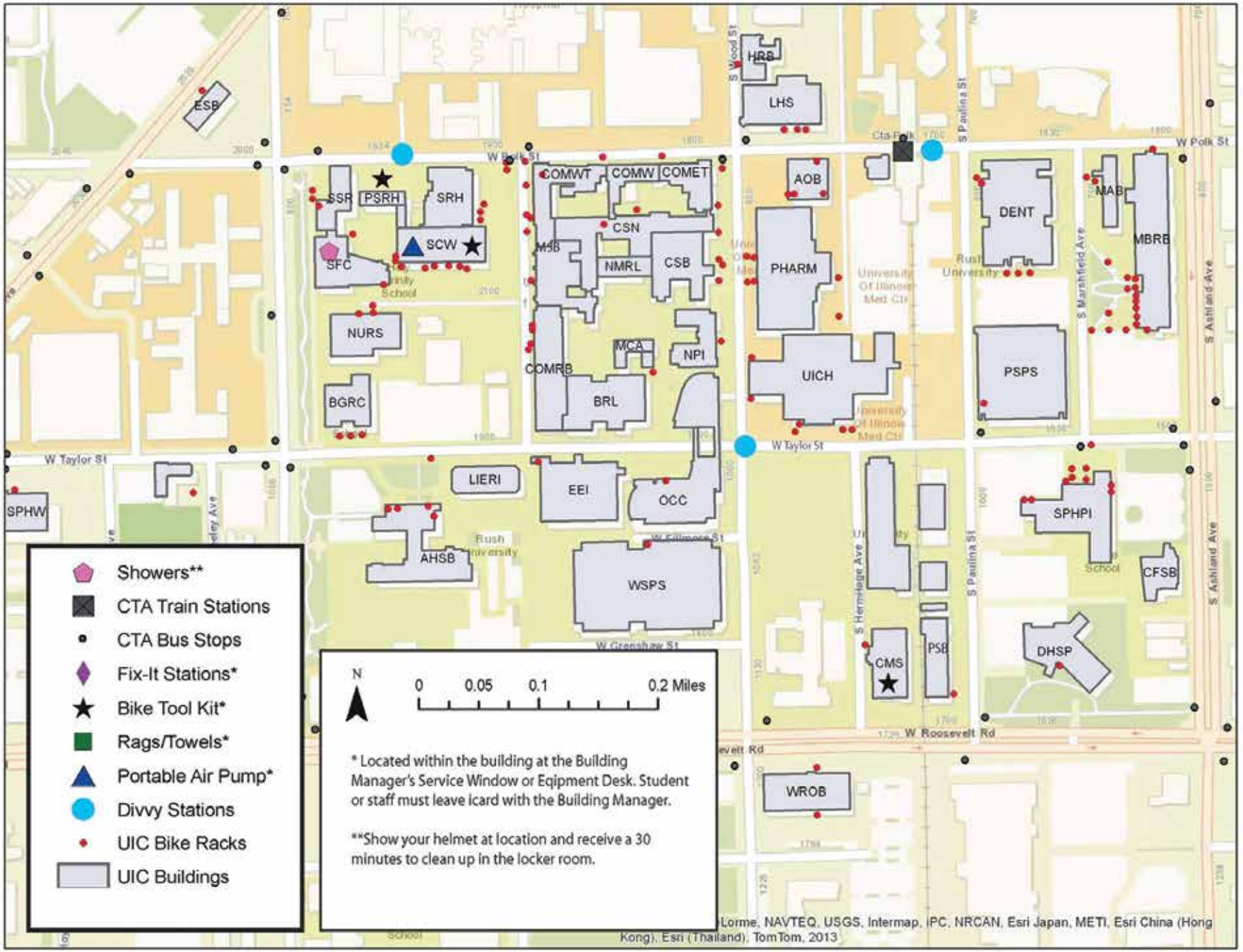
[19] Website address: https://sustainability.uic.edu/campus-resources/transportation/bicycling/.

Figure 41. UIC bicycle amenities, East Campus



Source: Univerity of Illinois at Chicago, Office of Sustainability.

Figure 42. UIC bicycle amenities, West Campus



Source: Univerity of Illinois at Chicago, Office of Sustainability.

With the help of consultants, the university is currently conducting experiments with pavement markings and other ways to designate portions of some on-campus pathways as bikeways. This effort is intended to help separate and reduce conflicts between pedestrians and cyclists, as discussed in the previous section. The university is also working with CDOT on plans to expand and improve the City of Chicago's bikeways in the area of the UIC campus.

One step for future consideration, which would help UIC advance to the next level of bicycle-friendliness, is the creation of a mode-specific bicycle plan that is more detailed and specific than this plan. The current BFU program coordinator has indicated in conversations that the existence of a stand-alone, mode-specific bicycle plan is explicitly looked for (as part of the "Evaluation" E) when assessing applicants for silver or higher level BFU status. It is possible that this plan, with the addition of a final off-street bike route map and pavement marking plan, could fulfill the need for a bicycle plan; UIC would need to work with League of American Bicyclists to meet their requirements.

The University should continue to aggressively promote cycling and continue to develop and maintain the infrastructure, programs, and policies needed to create a more bikeable campus for students, faculty, staff, and visitors through the League of American Bicyclists' Bicycle Friendly University.

One of the most powerful ways the University can increase the amount of bicycle travel on campus is through the adoption of bicycle-friendly policies.[20] Such policies can remove obstacles to cycling, raise cycling's visibility, create incentives for cycling, and make it easier and safer to bicycle around campus. Policies — in contrast to encouragement programs and educational campaigns, which focus on changing individual behavior or beliefs — can change the whole environment and create a new bike-friendly culture at the University. UIC should look for opportunities to develop and adopt University-wide policies to promote bicycling. Such policies will help establish a campus environment in which a majority of students, faculty, and staff view cycling as a practical and appealing way to get to and around campus.

[20] See appendix for examples of bicycle-friendly policies.

2. Improve bicycle circulation and safety throughout the UIC campus and surrounding area.

All bike paths, routes, and access points on campus should be free of physical barriers and the overall network should strive to include routes that are as direct and as safe as possible for the full range of cyclists. Comments received from UIC cyclists as part of the current planning process — as well as those of previous studies — have revealed a number of barriers to safe and convenient bicycling as a travel option for students, faculty, and staff. These include a lack of intra-campus connections and linkages into the greater bikeway network, and access to key UIC and local destinations. Others expressed barriers such as physical obstacles; urban form and street patterns, such as dead-end streets and cul-de-sacs; raised medians; fencing and bollards; and walled areas that block bicycle routes. The following strategies focus on adding and modifying routes throughout the campus area to improve conditions and address the most critical physical barriers to increasing bicycle trips around the UIC campus.

Capital infrastructure projects that involve additions or changes to the physical environment can be designed and constructed on campus by the University itself, drawing on the expertise and assistance of knowledgeable staff, faculty, students, and/or consultants. Examples of such projects may include installation of bike parking and/or bicycle repair stations, striping of designated bikeways along on-campus pathways, installation of on-campus signage and wayfinding elements, and bicycle-friendly modifications to service driveways, private sidewalks, pathways, stairs, and buildings. However, to implement projects that are located within, or that directly impact, the public right-of-way, UIC will need to coordinate and collaborate with public agencies and transportation service providers, including CDOT, Cook County DOT, IDOT, Divvy Bike Share, the CTA, Metra, and Pace.

2.1 Establish direct and safe on-street bikeways connecting the two main sides of campus to one another and into the broader network.

UIC is fortunate to be located in a city where bicycling as transportation is resolutely promoted and provided for. Through the efforts of CDOT, partner agencies, and advocacy organizations, the quantity and quality of bicycling facilities have been growing rapidly in Chicago. The City of Chicago's *Streets for Cycling Plan 2020 Plan*[21] provides an excellent framework and foundation for a campus bicycle network. The bikeways built and planned as part of the Streets for Cycling Plan — including the buffered bike lane along Harrison currently proposed[22] — serve as major

[21] http://www.cityofchicago.org/content/dam/city/depts/cdot/bike/general/ChicagoStreetsforCycling2020.pdf. Read more at http://chicagocompletestreets.org/your-streets/bikeways/.

[22] The Harrison Street bikeway between Desplaines and Loomis is proposed by CDOT as an extension of the recently installed facility on Harrison between Desplaines and Wabash. The feasibility of design consisting of a road diet with buffered bike lanes adjacent to the curb along this section of Harrison is currently being studied by CDOT engineers.

cross-campus routes and provide connections to different parts of the campus, as well as to neighborhoods and destinations beyond the UIC campus. However, this network has, by definition, been planned and scaled from the perspective of the city as a whole. The goal of Chicago's bikeway network is to reach all parts of the city in an efficient, cost-effective, feasible way. Routes have been chosen to maximize both coverage and access across the entire city.

When considering the UIC campus and the specific cycling needs of its students, faculty, and staff, there are destinations and routes that are not adequately provided for by the city's existing network or in its *Streets for Cycling Plan* (see Figure 3). Two new segments, in particular, were identified during the existing conditions analysis and public outreach process, and are recommended here to enhance overall mobility of cyclists on campus. These recommended facilities will enhance the bicycle network in the vicinity of UIC and provide connectivity between important and popular destinations on and off campus.

Proposed on-street bikeway segment 1: Polk-Racine-Lexington

Establishing a safe and direct bike route connecting the east and west sides of campus will allow for more convenient intra-campus travel and access to important institutional, commercial, and residential destinations. Current east-west routes along Taylor Street and Roosevelt Road present numerous issues that make them unattractive to many UIC cyclists. These issues include minimal-width bike lanes directly adjacent to high-speed, high-volume traffic and/or parked cars (which present the danger of 'dooring'), traffic and pedestrian congestion, and poor pavement conditions and markings. The relatively high number of bicycle crashes along each of these corridors suggests that people may be biking here because there is a facility, not because they represent the safest routes.

In an effort to calm traffic along Harrison Street and provide additional bicycling facilities, CDOT is working on the "Polk –Loomis-Harrison Complete Streets Project." This facility will greatly improve the bicycling connection between the east and west sides of campus. At the same time, many cyclists already use the unofficial Polk-Racine-Lexington route — characterized by its low traffic volumes and speeds along two access-controlled (cul-de-sac) roads, Lexington and Polk, and may not go out of their way to ride along Harrison Street. The Polk-Racine-Lexington route is not currently shown as a bikeway in Chicago's Streets for Cycling 2020 Plan.

Designation of the Polk-Racine-Lexington route as an official bikeway would entail working with CDOT to accept the route and, as implementation, to install clear and visible route signage along its extent and, if warranted, shared lane markings. The proposed route runs along Polk Street from Morgan Street to Racine Avenue, jogs north for a short distance on Racine, before continuing west on Lexington Street to Loomis Street (see Figure 43). At Loomis, the route will connect to CDOT-proposed bike facilities on Loomis and Polk Street (west of Loomis). This route provides direct connection between two existing Divvy stations: one on Morgan, behind UIC's library; and the other at the point where Lexington meets Loomis, in the small plaza adjacent to Arrigo Park. If needed, another Divvy station could be added, approximately halfway along the route on Racine, where CTA bus #60 currently runs.

Once at Loomis, the route will rejoin Polk Street, where cyclists can continue west to the Polk Street CTA Pink Line station, the west side of the UIC campus, and the IMD facilities. This segment of Polk Street (west of Loomis) is shown as a Neighborhood Bike Route in Chicago's Streets for Cycling 2020 Plan, and is currently being designed to have marked shared lanes between Loomis and Ashland and to include a buffered bike lane between Ashland and Damen.

Figure 43. Polk-Racine-Lexington Route

For most of the proposed Polk-Racine-Lexington route, bikeway signage and shared lane markings and signage would be sufficient to establish the route, given the low vehicular volumes and speeds. However, at the ends of the proposed route — where Polk dead-ends in a small pocket park at Morgan, and at the west end, where Lexington dead-ends in a pocket park at Loomis — curb cuts would be necessary to allow comfortable and convenient access for cyclists, and would also improve accessibility to the park. These curb cuts are discussed in more detail in spot barriers, recommendation 2.4. For the short segments along Racine and Loomis, green pavement markings, such as is practiced by CDOT in mixing zones, and signage may also be necessary to alert and direct drivers and cyclists.

Figure 44. Extension of bike facilities on Taylor Street east of Morgan Street

Proposed on-street bikeway segment 2: Taylor Street from Morgan to Canal

The proposed Taylor Street facility (the facility described here would be new, while Taylor Street recommendations in 2.2 below refer to changes to an existing facility west of Morgan) would be an extension of the existing Taylor Street bike lane from its current terminus at Morgan Street, east to Canal Street. This eastward extension of the Taylor Street bikeway would cross four existing north-south (N-S) bikeways (Halsted Street, Desplaines Street southbound buffered bike lane, Clinton Street southbound bike lane, the Canal Street north- and southbound barrier-protected bike lanes), and the planned northbound facility on Jefferson Street. These N-S bikeways provide direct connections north to the West Loop neighborhood and the two major Metra commuter rail stations, and south to Chinatown, Bridgeport, and the bikeway on Archer Avenue. In addition, the future CTA transit center at Union Station[23] (terminus for the planned Central Loop BRT[24]) will also be accessible via these north-south bikeways. The proposed facility would also increase connectivity between the UIC campus and the retail and entertainment district that is expanding in the area west of Halsted Street along Taylor and Roosevelt.

[23] http://www.cityofchicago.org/city/en/depts/cdot/provdrs/transit_facilities/news/2013/feb/bus_rapid_transitincentralloopeast-westcorridorwillprovidebalanc.html.

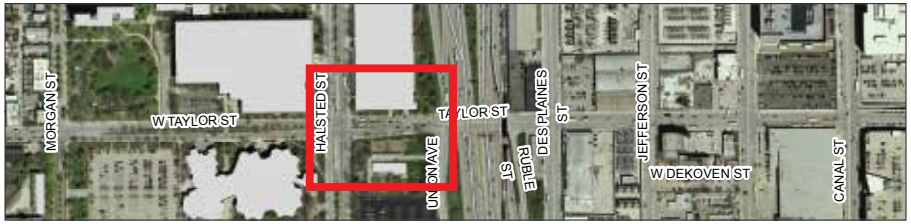
[24] http://www.cityofchicago.org/city/en/depts/cdot/supp_info/central_loop_busrapidtransit.html.

Taylor Street between Canal Street and Union Avenue features a 55'-56' curb-to-curb right-of-way, with 2 traffic lanes in both directions. From Union Avenue west to Morgan Street, Taylor Street widens to include a center median within a 65'–70' curb-to-curb right-of-way. This geometry meets the minimum standard set by the Chicago Streets for Cycling plan to be considered for barrier and/or buffer-protected bike lanes. While detailed design and engineering would be required to accommodate the installation of new bike facilities. The images in Figure 45 illustrate current conditions along Taylor Street and potential designs for new bike facilities. These proposed designs do not alter basic roadway geometry (width) and include new 5'-6' dedicated bike lanes, separated from vehicular traffic either by striped buffers or bollard protectors. East of Morgan Street, Taylor Street narrows for the commercial corridor, with on-street parking, and is too narrow to add protected bike lanes without removal of parking.

A proposed "road diet"[25] scenario would eliminate two travel lanes, leaving one through-travel lane in each direction, a two-way center turn lane or median, and dedicated, barrier- or buffer-protected bike lanes adjacent to the curb. If feasible, this treatment would gain right-of-way for the proposed bikeway, calm traffic along Taylor, and perhaps allow for wider sidewalks and sidewalk amenities such as street trees. The wide median between Morgan and Halsted streets should be retained since it functions as a pedestrian refuge island for existing mid-block crossings and provides space for parkway trees. To ensure that bicycle traffic is recognized and accommodated along this short stretch that connects the existing Taylor Street bikeway to the proposed eastern expansion, "sharrows" and other pavement markings, along with warning and regulatory signage should be placed along its extent. These markings and signage are intended to communicate that travel lanes are to be shared by all vehicles.

[25] Road diets are one of nine proven countermeasures, promoted and recommended by the FHWA. For more information, see http://safety.fhwa.dot.gov/provencountermeasures/fhwa_sa_12_013.htm.

Figure 45. Taylor Street configurations



Existing Taylor Street (Morgan to Halsted)

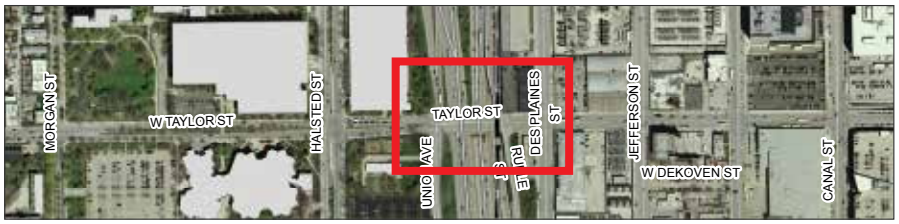
Existing Taylor Street (Halsted to Union)

Proposed Taylor Street (Morgan to Halsted)

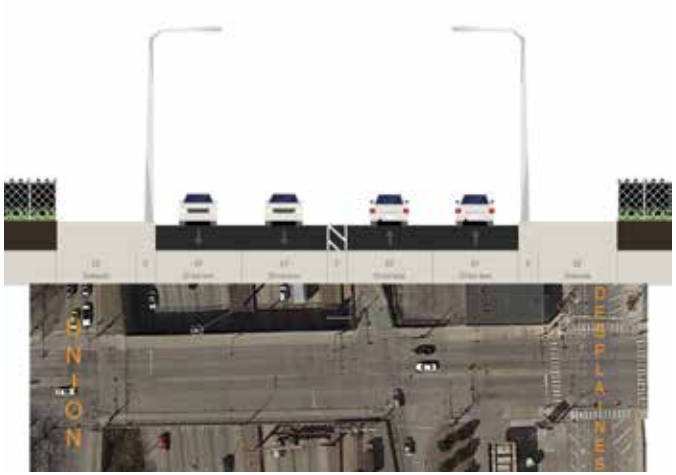
Proposed Taylor Street (Halsted to Union)

Source: www.streetmix.net.

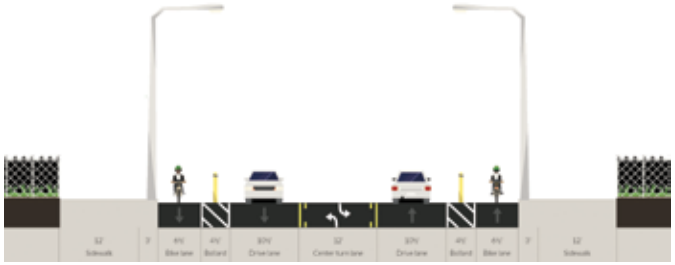
Figure 45. Taylor Street configurations continued



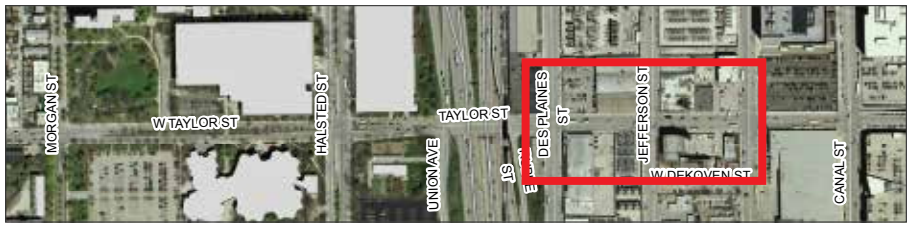
Existing Taylor Street (Union to Desplaines)



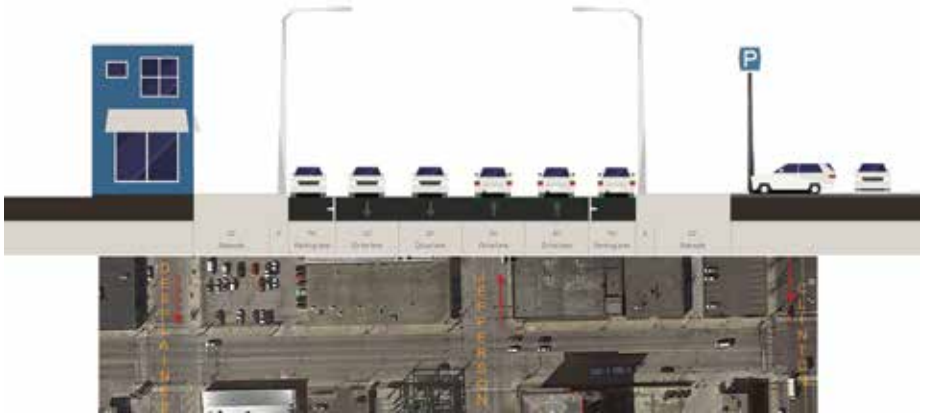
Proposed Taylor Street (Union to Desplaines)



Source: www.streetmix.net.



Existing Taylor Street (Desplaines to Clinton)

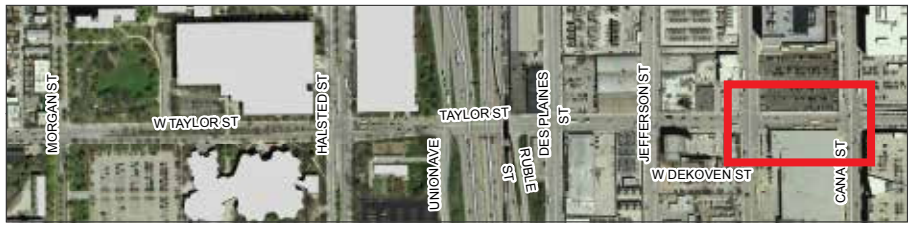


Proposed Taylor Street (Desplaines to Clinton)

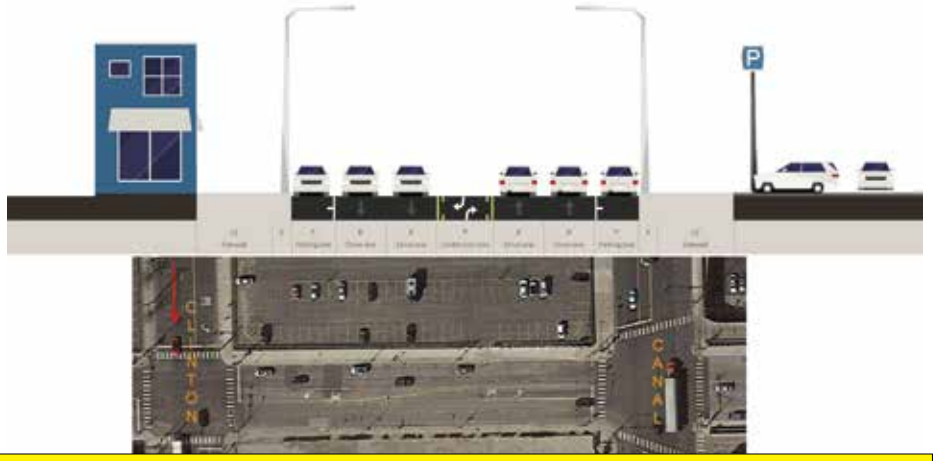
From Des Plaines to Jefferson

From Jefferson to Clinton

Figure 45. Taylor Street configurations continued



Existing Taylor Street (Clinton to Canal)



Proposed Taylor Street (Clinton to Canal)

Source: www.streetmix.net.

2.2 Consult and collaborate with CDOT on improving existing facilities.

In addition to new bike facilities, this plan recommends that UIC consult and collaborate with CDOT to study the feasibility of altering existing bikeways on both Taylor Street (west of Morgan Street) and Roosevelt Road in the vicinity of the campus. As discussed above, both roads currently have traditional bike lanes that do not provide the level of safety that many cyclists desire. While no cyclists we heard from suggested that the facilities on these roads be removed, many did express the desire to investigate opportunities for redesign to increase safety and comfort for cyclists of varying abilities and experience.

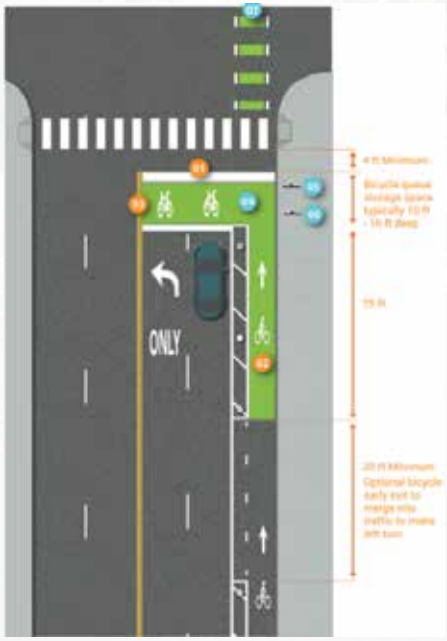
Taylor Street west of Morgan (the recommendations here refer to changes to the existing Taylor Street facility west of Morgan and Bicycling Recommendation 2.1.2 refers to a new Taylor Street facility east of Morgan) measures approximately 44' curb-to-curb and presently consists of one travel lane, one parking lane, and one traditional 5' dedicated bike lane in each direction. UIC cyclists report that this tight arrangement creates an unsafe and uncomfortable environment, with "dooring" accidents and veering vehicles — especially large trucks and buses — representing the most pervasive threats. Unfortunately, the narrow roadway, on-street parking, and the #157 bus route leaves little room for expanding or adding buffering elements to the bike facilities along this dense commercial corridor. There are many alternative measures that can be explored with CDOT to help increase the safety and comfort of bicyclists and limit conflicts with other vehicles in this area. This includes implementing MUTCD-approved bikeway treatments such as the application of green-colored pavement in the existing marked bicycle lanes (Figure 46), at intersections and other conflict zones, and in the form of "bike boxes" (Figure 47). Colored bike lanes along Taylor Street, while they would not add space or physical protection for cyclists, may improve safety by more clearly defining the multimodal roadway uses, warning automobiles of the presence of cyclists and helping to better guide cyclists of the appropriate location to ride.

Figure 46.
Green Bike Lane and Door Zone

Green bike lane, with the door zone shown in red.

Source: http://bostonbiker.org/2009/10/07/how-to-use-a-door-zone-bike-lane-part-2-attack-of-the-door-zone.

Figure 47. Bike Box



1. The bike box should include a minimum depth of 10 ft and minimum combined width of the bike lane, buffer space, and adjacent travel lane.
2. At signalized intersections, passive bicycle detection (inductive loops) may be used to give bicyclists a green light.
3. On multilane streets where left turns are allowed, bike boxes may be extended across the left turning lane.
4. A variety of pavement marking treatments can be used to improve the visibility of the separated bike lane and reinforce expected bicyclist behaviors.
5. A "Turning vehicles yield to bikes" sign may be used.
6. Install STOP HERE ON RED sign (MUTCD R10-6A).

Source: Federal Highway Administration, *Separated Bike Lane Planning and Design Guide* (2015)

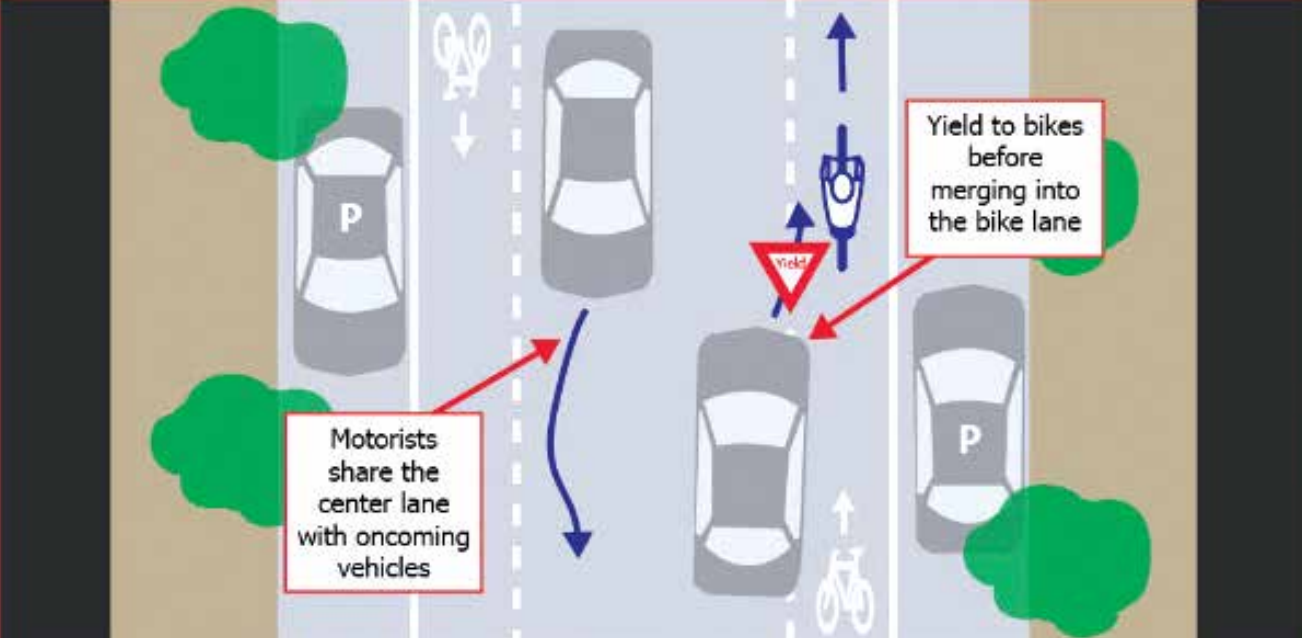


Figure 48. Advisory bike lanes
Image courtesy of City of Minneapolis Bicycle Program (http://www.minneapolismn.gov/bicycles/bicycling101/advisory-bike-lane).

Figure 49. Advisory bike lanes 2
Image courtesy of Bike Miami Beach (http://www.bikemiamibeach.org/street-design/bicycle-facilities/).

One possibility for Taylor Street would be for the City of Chicago to obtain permission from the Federal Highway Administration (FHWA) to experiment with Advisory Bike Lanes. An advisory bike lane is similar to a regular bike lane, but is used on relatively low-volume streets that are narrow. An advisory bike lane is typically marked with a solid white line on the right (next to parked cars) and a dotted line to the left. These markings give bicyclists a space to ride, but are also available to motorists if space is needed to pass oncoming traffic (Figure 48). FHWA and CDOT would determine is traffic volumes are appropriate for this treatment.

Another design for advisory bike lanes — typically used on slightly wider and higher volume roads like Taylor Street — places the "sharrows" symbol in the middle of the travel lane, with dotted lines on either side of the symbol (Figure 49). This communicates to both drivers and cyclists that bicycles can and should travel in the center of the lane. These markings can also be emphasized with green paint (though such a treatment requires FHWA experimentation permission). A new treatment that CDOT is currently experimenting with, and which may work here, involves a striped buffered area in the door-zone of parked cars, with the sharrows symbol placed to the left of this buffer area.[26]

[26] See Streetsblog Chicago described CDOT's implementation of this design at http://chi.streetsblog.org/tag/barrows/.

The constrained right-of-way on Roosevelt Road, or restrictions imposed by IDOT to maintain vehicular travel throughput, may preclude the possibility of redesigning the bike lane. However, if possible, one obvious solution here would be to provide a buffered or barrier-protected bike lane where possible and considered safe by IDOT's measures. These solutions would be possible if 11-foot wide travel lanes are provided.

Additionally, the recommended improvements for calming traffic as outlined in Walking and Campus Navigation Recommendation 2.1, as well as Driving and Parking Recommendation 2.1 will help to increase the safety and comfort of cyclists.

In addition to proposed improvements to existing bikeways and traffic calming measures on both Roosevelt Road and Taylor Street, maintenance of the roadways and of the cycling and pedestrian facilities is extremely important to safety. Accordingly, UIC should work closely with CDOT to ensure that facilities and treatments on Roosevelt Road and Taylor Street are well-maintained. Cyclists interviewed and surveyed as part of the planning process routinely expressed concern with the pavement conditions on Taylor Street (large potholes, cracks, faded markings, etc.) and on Roosevelt Road (faded markings). UIC should work with CDOT and the alderman to prioritize these streets for resurfacing and to ensure that bikeway treatments are included in re-stripping designs.

The creation of new on-street bicycle facilities and the improvement of existing on-street facilities will require that UIC consult and collaborate with CDOT and IDOT. Interviews carried out as part of this planning process, as well as and stated goals and policies of the City of Chicago, indicate that CDOT is aware of and attuned to the fact that UIC, like other institutes of higher education, presents an extraordinary opportunity to increase bicycling for transportation. Realizing this opportunity requires investment in and maintenance of high-quality infrastructure that offers safe and convenient routes for all types of cyclists.

2.3 Develop on-campus bikeway network, utilizing existing pathways.

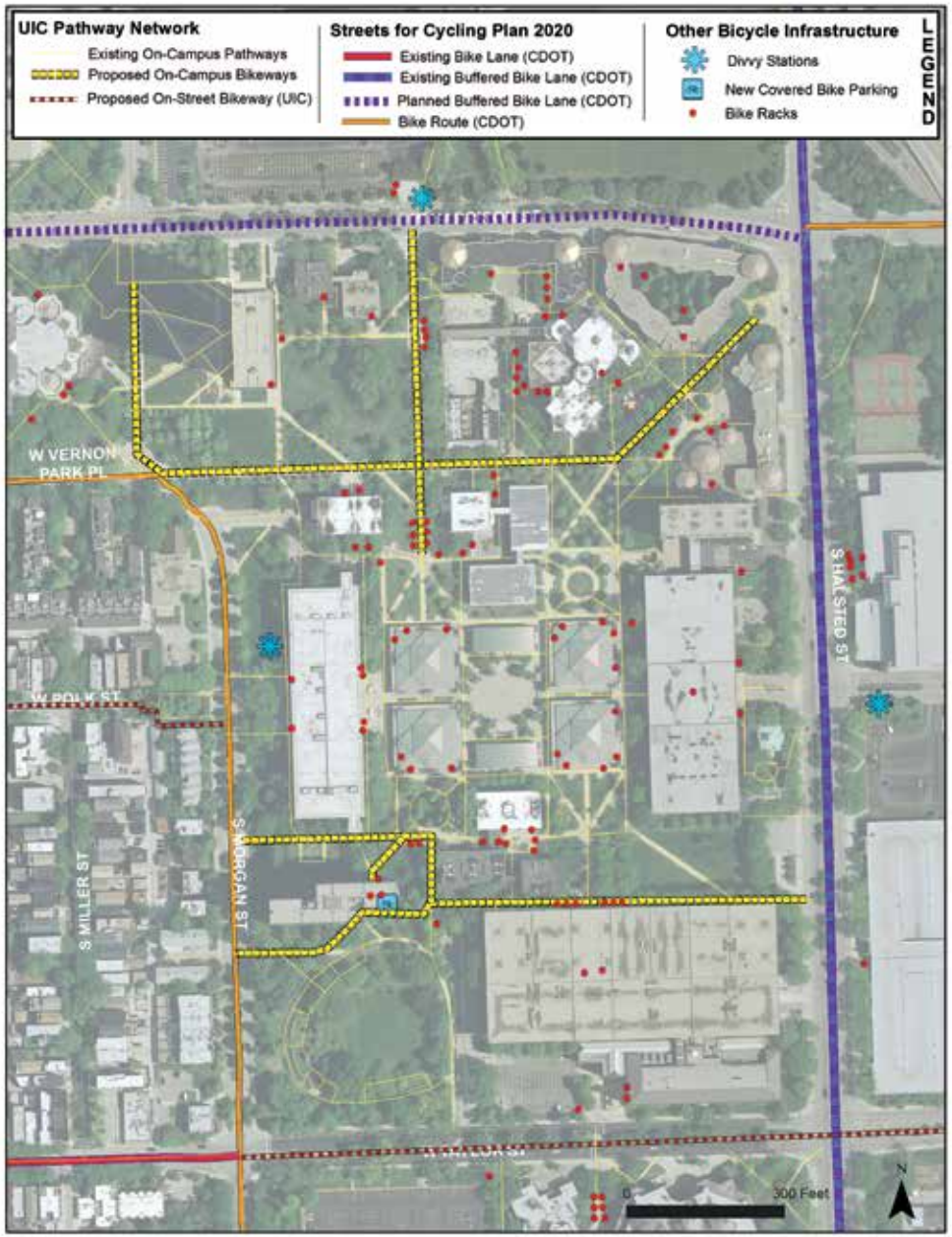
UIC is currently studying the development of an on-campus bikeway network for the east side of campus. The network would utilize existing pathways and would consist of:

1. **A limited number of routes selected from among the extensive and intricate network of on-campus pathways, which could best carry cyclists from main campus entry points to locations near the center or core of the campus.**
2. **Markings, signage, or other means of indicating both that cyclists will be present and where cyclists should ride.**

The study consists of on-site experimentation, with temporary installation of designated (marked) areas for cyclists along on-campus pathways and then surveying cyclists and pedestrians at the locations of these installations regarding their use, effectiveness, desirability, etc. The routes to be evaluated are shown in Figure 50.

As can be seen, the on-campus bikeways currently being studied are intended to provide access from the periphery of the east campus to locations near the core, where cyclists would dismount and continue by foot to their destination. In some instances, the pathways may need to be widened or otherwise altered in order to safely accommodate both bicyclists and pedestrians. The network is designed to connect transit hubs and major entry points to key destinations on campus. UIC, like other universities seeking to minimize conflicts between pedestrians and cyclists on campus pathways, may consider designated dismount zones, where cyclists are called upon — through permanent and temporary signage, as well as enforcement activities — to dismount and walk their bikes. In some cases, such areas are designated walk zones only on certain days and/or at certain times when pedestrian traffic is highest. To achieve this flexibility, universities often make use of portable signs.

Figure 50. Potential East Side on-campus bikeways



Source: Chicago Metropolitan Agency for Planning.

Where cyclists and pedestrians share pathways, pavement markings and signage can indicate to both that a pathway is also a designated bikeway, and where on the path bicyclists should position themselves. UIC should consider supplementing bikeway pavement markings on pathways with complimentary signage to strengthen the message and to help achieve the overarching goal of minimizing conflicts between pedestrians and bicyclists.[27]

University officials should consider various alternative markings on-campus bikeways. One suggestion is to mark a one-way bike lane on each side of designated pathways with a solid line at least 2 feet from edge of the pathway (see Figure 51). This design would mimic the typical arrangement for one-way bike lanes on streets. Given the pedestrian volumes on campus paths, this design would work best on pathways that are 16' wide or wider. However, it should be noted that, if striped at the minimum width of 2', cyclists may feel like they must focus their attention on staying in the bike lane to such a degree that they are not able to look out for other potential conflicts (with pedestrians, other cyclists, and other obstacles). Another design that could work on wide pathways (16' or more) would be a two-way bikeway on one side of the pathway. Two options for both wide and narrower (12') pathways would be analogous to on-street "sharrows" markings and on-street "advisory bike lanes."

[27] For examples of shared use signage and pavement markings, see: http://www.americantrails.org/photoGalleries/cool/41-share-urban-trail-sign.html.

Source: Bike traffic control examples from *Western Michigan University: Best Practice Study of Bike Friendly Universities – Sidewalks and Signage Policies*, at http://tinyurl.com/kye7bub.

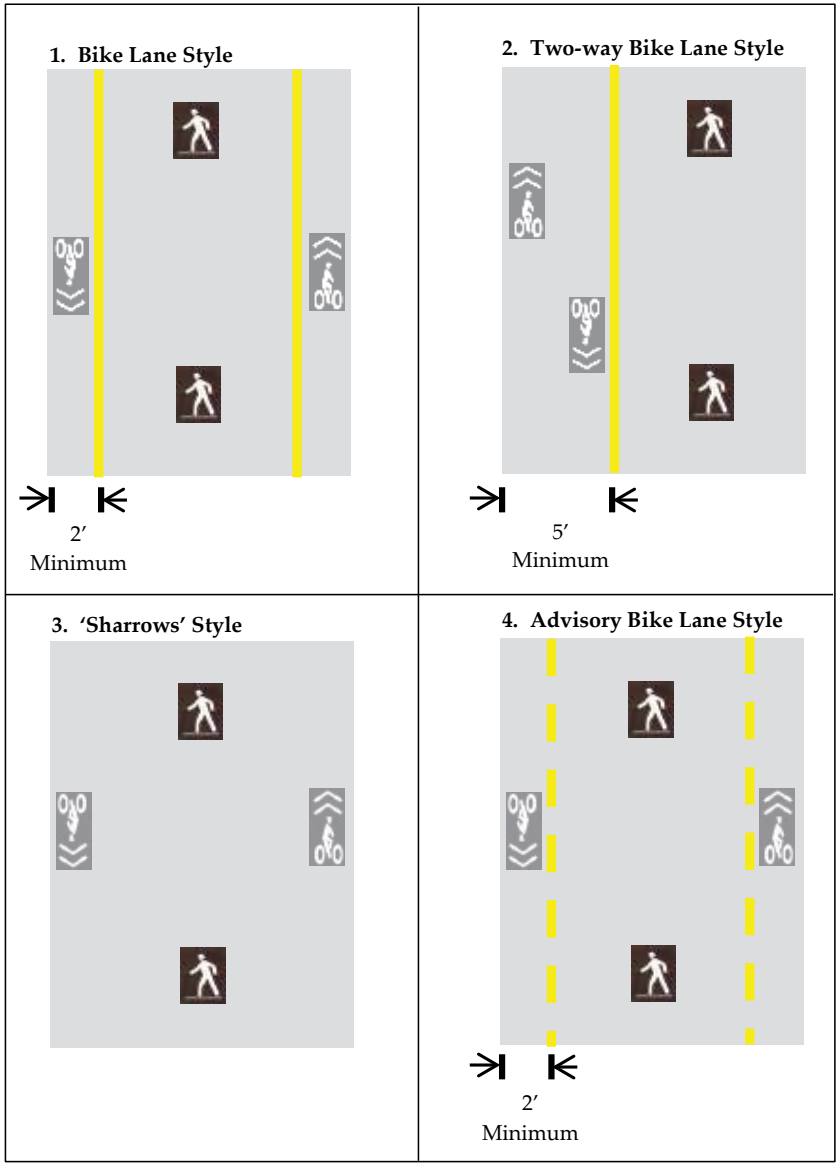
UIC is experimenting with the use of pavement markings to indicate bikeways on campus paths. For paths that were designed and built primarily to serve pedestrians, this experimentation is unique and innovative. When implemented, the combination of on-campus bike routes together with a small number of new local, on-street facilities intended primarily to serve UIC students, staff, faculty, and visitors to the university and surrounding areas, will create a campus bicycle network that successfully integrates and "nests" within the larger, City of Chicago Streets for Cycling system. This finer-grained network of routes will provide safe and convenient access by bicycle to all destinations and parts of campus.

2.4 Eliminate physical barriers to bicycling on campus.

There are many small, but significant barriers along existing and planned bicycle routes throughout the campus and surrounding area, which are the product of several historical facts. First, much of the campus and surrounding urban environment and infrastructure was designed and built before the Americans with Disabilities Act (ADA) became law. Second, in order to accommodate the UIC campus, the highly connected street grid pattern of the area was broken up into large super-blocks and culs-de-sac. Third, over the years, new on- and near-campus pathways, designed primarily to serve pedestrians and to connect to other pedestrian facilities were not originally envisioned as part of a bicycle route and therefore did not include details or modifications to accommodate cyclists.

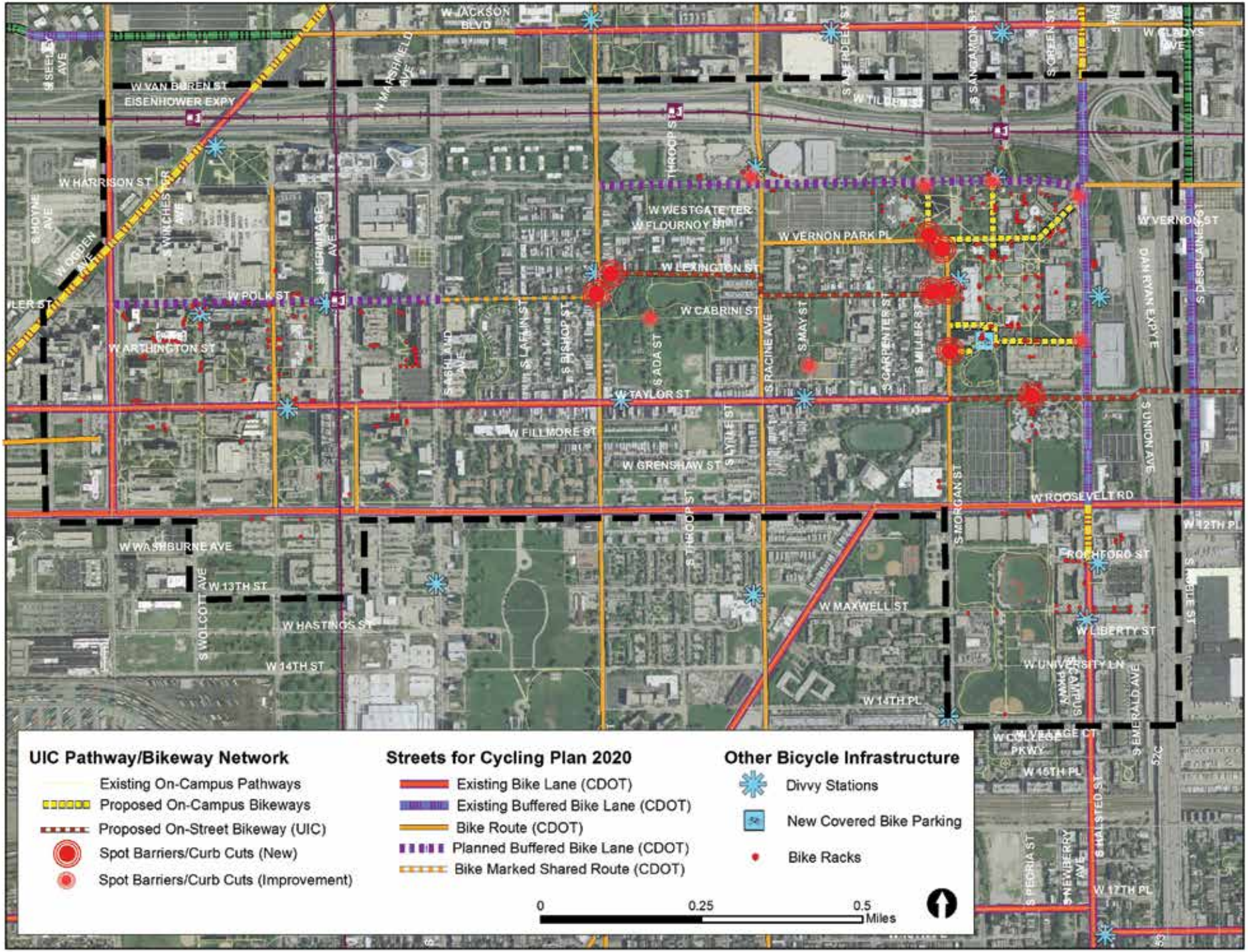
Most of the spot barriers consist of road-edge or median (raised) curbs, which force cyclists to dismount and lift their bicycles over the curb, or to circumnavigate the barrier, often along either a circuitous/inconvenient route or a constrained, pedestrian way. The locations of some major barriers of this type were identified as part of the planning process, through outreach and field surveys, and are noted in Figure 52.

Figure 51. Potential designs for on-campus bikeways



Source: Chicago Metropolitan Agency for Planning.

Figure 52. Spot barriers identified by the Office of Sustainability



Source: Chicago Metropolitan Agency for Planning.

At a raised intersection along the Vassar Street cycle track in Cambridge, MA bicyclists and pedestrians are each given their own crossing zones.

Photo credit: "Calm Streets Boston" post by Will Allen, for Northeastern University CIVE 5376 Traffic Engineering course (Instructor, Peter Furth).

Many of the identified spot barrier locations relate to either the planned on-campus bikeway network or the proposed on-street local bike routes. Just over half of the fifteen locations would involve new curb cuts or ramps providing access for bicyclists (and pedestrians). The locations for new ramps are shown in slightly larger and darker red circles. The remaining spot barrier locations involve improvements to existing access points. Improvements may consist of ramp widening or realignment to better accommodate cyclists merging with pedestrians or motor vehicles; installation of directional signage for cyclists; and/or regulatory signage for cyclists, pedestrians, and drivers. In addition, bicycle crosswalks may be appropriate to reduce conflicts between roadway/crosswalk users.[28]

In surveying UIC cyclists and examining conditions in the field, the Office of Sustainability determined that the spot barriers causing the greatest inconvenience for cyclists are:

1. **Those along the proposed Polk-Racine-Lexington bikeway, which has Divvy stations at either end.**
2. **Those at the two closely spaced culs-de-sac of Morgan Street and Vernon Park Place.**
3. **On Morgan Street, where an existing path leads from Morgan Street directly to the new, covered bicycle parking.**

All of these high priority locations would require one or more new ramps.

[28] Examples of this treatment can be seen at Calm Streets Boston at: http://calmstreetsboston.blogspot.com/2010/04/vassar-street-cycle-track-cambridge-ma.html (accessed January 2015).

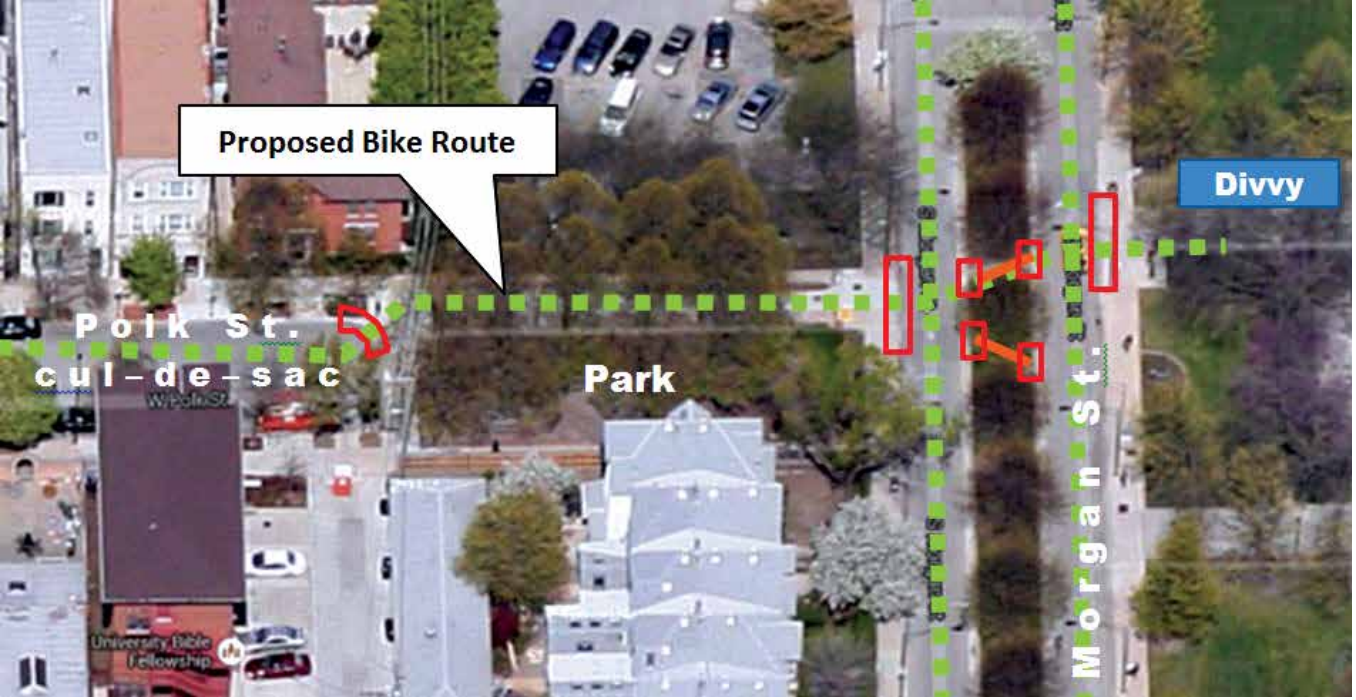


Figure 53. Spot barriers along the Polk-Racine-Lexington bikeway

Figure 54. Spot barriers on Morgan Street median
(Looking west across Morgan to Polk Street cul-de-sac)

The locations of spot barriers along the proposed Polk-Racine-Lexington bikeway are shown below in Figures 53 and 54. The proposed curb cuts at these locations — and at the other two areas — are indicated by red outlines and by call-outs in the graphics below. In Figure 53, proposed bikeways are shown in green dotted lines and the Divvy station near the UIC Library is also indicated. The short, non-ADA compliant walkways over the Morgan Street median are shown as solid brown lines and in the photograph, Figure 54.

As shown in Figures 53 and 54, when approaching the eastern end of the proposed Polk-Racine-Lexington route, cyclists must dismount from their bicycles to get from the Polk Street cul-de-sac to Morgan Street and the Divvy station located on a wide sidewalk (behind the UIC library) without bicycle-friendly access at the nearby curb. Morgan Street is divided by a raised and planted center median with two narrow pathways passing over it, but no curb cuts to provide access for bicycles or wheelchairs. A curb cut on the east side of Morgan Street, directly in line with the proposed route, leads to the east side of campus, the UIC library, and adjacent Divvy station. The red boxes show where bicycle-friendly curb cuts should be installed.

Figure 55. Lexington cul-de-sac

As shown in Figure 55, at the western end of the proposed Polk-Racine-Lexington bike route, Lexington ends in a cul-de-sac where another Divvy station is located on a wide sidewalk adjacent to Arrigo Park. While there is one narrow curb cut near the entrance to an alleyway, providing access to the Divvy station and to Loomis Avenue, there is no curb cut on the main pathway. In fact, the main pathway is blocked (to prevent motor vehicles from entering) by two bollards connected by a chain.

Figure 56. Arrigo Park

In addition to a bicycle-friendly and wheelchair-accessible curb cut that would lead from Lexington Street to the Divvy station, another curb cut at this cul-de-sac is recommended to provide access to the existing pathway through Arrigo Park, which leads to the Christopher Columbus fountain. This route would provide more direct access to the marked midblock crossing on Loomis (which CDOT is planning to upgrade with a pedestrian refuge island when a bikeway along Loomis is installed) and to the CDOT-planned bikeway on Polk Street, connecting to the west side of campus and Illinois Medical District. A curb cut to access Polk Street is also needed, as shown in Figure 56.

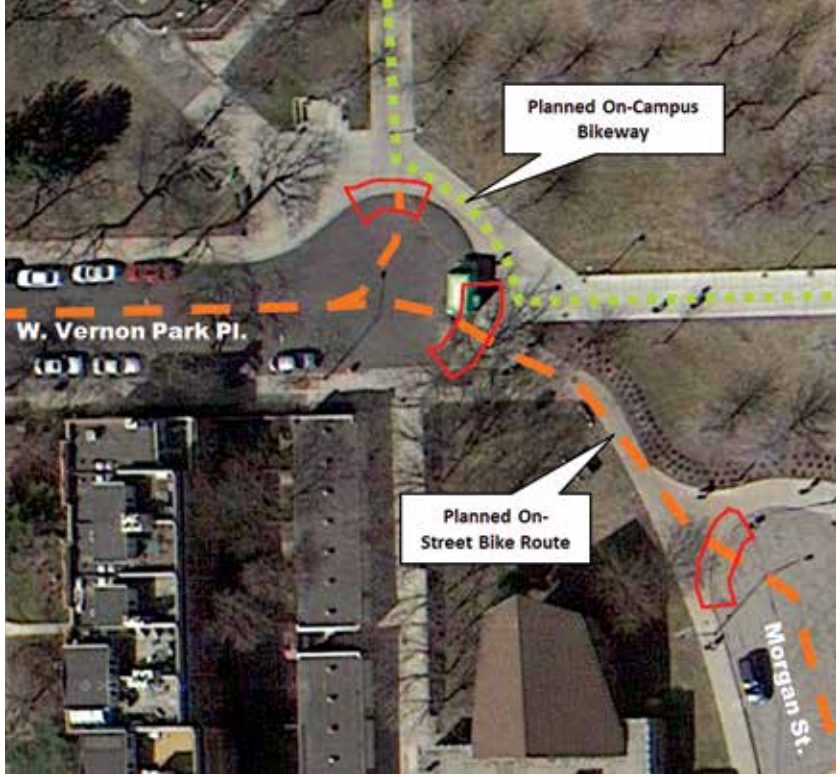


Figure 57. Morgan Street and W. Vernon Park culs-de-sac

The closely-spaced culs-de-sac at the north end of Morgan Street and the east end of West Vernon Park Place also need to be addressed (Figure 57). Here, the university's proposed on-campus bikeway network would make a 90-degree turn and also connect to bike routes along Morgan Street and West Vernon Park Place, which are recommended and/or proposed by CDOT on the Chicago Bike Map and in the Streets for Cycling 2020 Plan.

If the existing cul-de-sacs at the ends of Morgan Street and Vernon Park Place are retained in their present locations and configurations, 3-4 curb cuts will be needed to supplement the one cut currently in place (on the north side of the Vernon Park Place cul-de-sac). These cuts will allow cyclists to more comfortably and conveniently pass between the two streets and to access on-campus pathways. It should be noted that, in addition to curb cuts, the sidewalks may need to be widened in this area to safely accommodate cyclists and pedestrians.

A second option for this area would be to reconfigure one or both cul-de-sacs to create a plaza or node where the multiple campus pathways and bikeways meet. This concept, which would involve additional planning, engineering, and a significantly greater cost, was proposed in the 2010 Master Plan. This option would allow for adequate space for pedestrians and cyclists at an important and congested nodal point where four major campus pathways and two on-street bike routes converge. It would also provide an opportunity for other amenities such as wayfinding and signage, bicycle parking, pedestrian improvements, and landscape enhancements to be installed and/or improved.

3. Work with Divvy Bikes to increase the accessibility and use of bike sharing on and around campus.

The City of Chicago deployed the Divvy bike share system in the summer of 2013 across a large part of the city. This system includes bicycles and docking stations at 15 locations on or near the UIC campus, with many others at nearby transit hubs and in neighboring residential and commercial areas. Because of its ability to effectively connect destinations that are beyond convenient walking distance, bike share offers an exceptional opportunity to the UIC community to get around campus more efficiently and increase cycling as transportation.

3.1 Promote Divvy Bike Share to the UIC community.

Currently, Divvy bike share stations are strategically located at some of the most visible and active areas across campus. Despite this, the relative youth of the Divvy bike share program means that many within the UIC community are either unaware of the system or unfamiliar with the way it works and how to access it. To overcome these identified information gaps and continue to increase the program's visibility on campus, UIC officials should work with the Chicago Department of Transportation (CDOT) to develop targeted promotional materials, events, and campaigns to engage, educate, and encourage students, faculty, and staff to utilize the system. Events such as new student orientations and student activity fairs should be targeted for formal tabling and educational demonstrations. In addition, the UIC Office of Sustainability should continue to collaborate with other universities in the Divvy service area to increase awareness and usage of the system.

3.2 Reduce barriers to Divvy membership.

Similar to the "U-Pass" program, which has been responsible for significant shifts in student travel behaviors, discounted access to the Divvy bike share system can incentivize people to use Divvy as a convenient and affordable option for short trips throughout campus and the surrounding area. However, surveys and interviews conducted as part of this planning process indicate that a large number of students, faculty, and staff at UIC are not aware of Divvy bike share, its presence on and near to campus, or the transportation value that Divvy offers subscribers. UIC should seek to increase awareness of the program and its value.

In 2014, UIC and Divvy began offering discounted memberships to the UIC community. Divvy reduced the annual membership price for students to $55 (normally priced at $75), and the University's Green Fee subsidizes memberships for another $10 discount, bringing student memberships to $45. Faculty and staff receive the University's $10 discount bring their annual membership cost to $65. UIC officials should continue to track usage among the campus population to determine the effectiveness of these discounts and consider the possibility of offering larger discounts, which may incentivize even greater use. In addition, increasing awareness of the discount should also be a high priority for the University. One option for increasing use, which the University may explore, would be to make a Divvy membership an optional "add-on" to the U-Pass, which is mandatory for all full-time students

Examples of partnerships between Universities and bike share entities in other cities to subsidize student, faculty, and staff memberships include Harvard University and Hubway Bike Share and the University of Wisconsin and B-Cycle, which both offer annual memberships at discounts greater than 40 percent.[29] Deeper discounts hinge on the University's ability to guarantee a higher volume of annual registrants. For this reason, UIC officials should continue to assess demand levels and work with Divvy and other local institutions to explore further pricing options and incentives. There is also a possibility to work with other Illinois Medical District institutions to promote Divvy usage and provide membership subsidies.

3.3 Work with City of Chicago and Divvy Bikes to expand and improve bike share infrastructure at UIC and in the surrounding areas.

The University should continue to coordinate and collaborate with City of Chicago, CDOT, and Divvy Bikes in order to add additional stations and bikes on and in the vicinity of the campus. While the current Divvy bike share system serves the UIC campus and surrounding area well, UIC should continue to work closely with CDOT to increase the number of docking stations and individual bicycles as needed in the future — especially as the system becomes more well-known and used on campus, and as more knowledge of how it is used becomes available. In addition, UIC should collaborate with CDOT/Divvy on the operation of the system, helping Divvy staff better understand and react to demands for station rebalancing and maintenance of the facilities on and near campus.

[29] For more information on these partnerships, see http://www.transportation.harvard.edu/commuterchoice/bike/hubway-bike-share-program and http://transportation.wisc.edu/transportation/bike_sharing.aspx.

4. Increase and improve on-campus bicycle parking.

It has been estimated that UIC needs to nearly double the number of basic bicycle parking spots that exist on and near campus in order to meet current and future demand. In addition, the lack of high-quality and secure bicycling parking at the University was mentioned in surveys and previous studies. A lack of secure parking can contribute to high theft rates and an unwillingness to bicycle to campus because of the potential risk of theft; it can also result in bicyclists bringing bicycles into their office (which is not a preferred solution for the University). Inadequate supply of bike parking also often leads cyclists to seek out ad hoc parking solutions as close as possible to their ultimate destination. Examples of this include handrails, fences, and other public amenities in highly-trafficked campus areas leading to pedestrian flow issues including the blocking of handicap facilities. The university should develop guidelines for bike parking siting. CDOT's Request Bike Parking website may help the University identify high-demand locations.[30]

4.1 Develop centralized and secure bicycle parking and service hubs.

In addition to the public bike racks throughout campus, creating space for dedicated and secure bike parking throughout campus and inside of buildings and areas accessible only by UIC ID would help increase available parking, reduce bicycle theft, and further the University's commitment to making bicycling to and around campus attractive and convenient. The new bike parking facility at the base level of the SEO building should be used as a model for concentrating bike parking in central areas. However, to truly enhance bike parking security and the ways that bikes and bicyclists are accommodated on campus, UIC officials should assess the feasibility of incorporating additional security measures into bike parking areas. Measures that should be evaluated include bike parking areas restricted by i-card entry and the creation of UIC-staffed bike corrals or bike valet stations, and the installation and monitoring of security cameras at bike parking locations.

Secure bike parking, whether in the form of a fenced-off area, interior storage room, or some other arrangement such as the recycling shipping containers shown above, will not only enhance security, but will also help to integrate bicycling further into the built environment and into the campus identity. While not all bike parking amenities should be centralized, the University should focus on concentrating critical and helpful infrastructure such as secure parking, air pumps, and other service amenities to form bicycle "hubs" on both sides of campus. These central hubs will not be able to accommodate all bicycle parking, however, they should be used as organizing elements in a greater campus wide bike parking strategy that would ensure convenient, traditional bike parking for all campus buildings, and the requirement that all future campus developments include areas or rooms for secure, indoor bike parking.

[30] The CDOT Request Bike Parking page is available at: http://bikeparking.chicagocompletestreets.org/ .

Indoor, secure bike parking using recycled shipping containers in Pittsburgh, PA.
Photo credit: bikepgh.org.

Bike valet service in Portland, OR.
Photo credit: bikeportland.org.

5. Integrate and develop connections between bicycling and other modes of transportation.

UIC is fortunate to be located in the heart of Chicago and the metropolitan region, with a campus that is well served by CTA rail and bus, as well as Metra and Pace. The campus and surrounding areas are, for the most part, highly walkable and well-positioned in terms of the City's substantial and growing bikeway network and related infrastructure (including the Divvy bike share system). UIC should look for and pursue opportunities to improve and expand integration between all modes, especially the active, resource-efficient modes of cycling, walking, and transit. Potential opportunities would include education programs, social marketing, incentive programs (such as a Divvy subsidy, discussed above), installation of additional bike racks at CTA stations and on-campus shuttles, development of an on-campus bikeway network, and multi- and intra-modal signage and wayfinding systems.

Programs aimed at increasing the knowledge, visibility of, or enthusiasm for cycling focus on changing the travel behavior of individuals. Similar to infrastructure projects, bicycle education and encouragement programs, events, and campaigns may be organized. The University can carry these out on its own or in collaboration with other entities, including government or transportation agencies and departments, other universities, bicycle advocacy groups, private companies, non-profit organizations, and other stakeholder groups interested in promoting sustainable and active transportation and lifestyles.

Whether developed and administered by UIC alone or together with other groups, the University may find it practical and efficient to link bicycle encouragement and educational programs to existing, related programs, campaigns, and events organized by the Office of Sustainability and UIC colleges and institutes, such as the College of Urban Planning and Public Administration, Public Health, Architecture, Engineering, the Institute for Health Research and Policy, and University hospitals. This collaboration can help increase participation and the number of persons being reached by placing the "message" about bicycling as transportation in broader and more diverse contexts.

Transit

In addition to the University's on-campus shuttle system, UIC is embedded within the CTA's extensive bus and rail network and is located near major regional commuter rail stations, offering faculty, students, staff, and visitors an array of options to travel to, from, and around campus. The University is committed to leveraging this favorable position to encourage students, faculty, staff, and campus visitors to utilize the transit network, thus minimizing the impact of single occupancy vehicles upon the campus, surrounding neighborhoods, and region as a whole.

Local and regional transit services bring thousands of commuters to the UIC and IMD campuses, with areas around key transit facilities representing strategic campus access points. These areas exhibit the potential for improved connectivity as well as strategic real estate development. Improving the transit experience and focusing on how these facilities are accessed and utilized will help to not only shift campus users towards using the transit network more consistently, but will also encourage other forms of active transportation such as walking and biking.

Principle

A more cohesive and accessible transit network serving the UIC community will enhance internal campus connectivity and broaden access to UIC among the region's population.

Goal

Increase transit ridership among the UIC community by making transit an attractive, efficient, and cost-effective option for all campus users.

Challenges & Opportunities

- The campus shuttle system is viewed as unreliable and convoluted, and its accommodations for people with disabilities are considered insufficient.
- A lack of awareness and understanding of the University's shuttle system has played a significant role in hindering its acceptance as an attractive and convenient option for campus users.
- There is limited awareness or information regarding routes and schedules of the UIC shuttle system and the CTA's bus and rail network available to students, which makes connections between destinations and modes difficult.
- UIC's para-transit service is only available within a limited area.
- Many of the CTA rail stations in the study area lack accessibility amenities such as elevators and other ADA-compliant features.
- Despite the presence of UIC and CTA transit facilities throughout the campus area, access to some facilities and the amount of comfort afforded to waiting passengers varies greatly.
- For some, transit is more expensive and less convenient than driving, especially if the commute involves a connection **between modes or transit agencies that don't use the same fare card.** This results in lower levels of transit use by faculty and staff, who do not have the benefit of the CTA's "U-Pass."
- Transitioning between transit and walking is made difficult by poor sidewalk conditions and a lack of perceived safety and overall maintenance of paths leading up to key UIC and CTA transit facilities, especially shuttle and bus stop areas.
- Aside from pre-tax commuter transit benefits, there are currently no additional programs or strategies geared towards making transit economically competitive with parking, providing little incentive for faculty and staff to limit their SOV trips.

Recommendations

While students rely heavily on the local transit network, shifting other campus users from their cars to transit will require strategies focused on service improvements, better information and awareness, financial incentives, and improving accessibility for people with disabilities. The following recommendations outline strategies and actions that UIC can pursue on their own and in coordination with local agencies to enhance the transit experience for all campus users, reinforcing it as a convenient, efficient, and accessible option in the area's multimodal transportation network.

Where possible, the University should pursue opportunities to partner with institutions providing local transit services to consolidate routes, improve headways, and eliminate redundant services. This is particularly important within the Illinois Medical District, where a variety of shuttles serve the area. It is also important that UIC work closely with CTA and CDOT when it comes to planned improvements to the public transportation system. For example, as CTA improves the Blue Line IMD station, UIC should coordinate efforts with CTA to insure that their improvements tie into and support campus plans for increasing transit use among students, faculty, and staff and for enhancing the safety and convenience of walking and biking to and from nearby transit.

1. Simplify and improve operations of UIC Shuttle System.

The UIC shuttle operates to provide students an on-campus alternative to CTA services. It also offers UIC employees and affiliated partners a viable and free option to travel throughout the entire campus area. To provide riders with better service and convenience, UIC shuttle routes should be assessed for their potential to be realigned and/or consolidated to reflect current utilization patterns and focus on filling gaps within the local CTA network/services. While any significant route modifications will require a rigorous demand and operations analysis to identify optimal route alignments, the following criteria should serve as a foundation to such analysis.

These recommendations are specific to the UIC shuttle system; coordination with other local shuttle service providers (such as the Jesse Brown VA Medical Center and Rush University Medical Center in the Illinois Medical District) should be investigated and pursued. Ideally, one robust shuttle system with frequent headways could serve the entire Illinois Medical District and UIC could contribute to its provision or provide payment reimbursements for students, faculty, and staff. Other institutions and destinations that should be considered for inclusion in a transit network are the Chicago Technology Park, Gateway commercial development, and Roosevelt Square mixed use development south of Roosevelt Road.

1.1 Prioritize service to transit hubs and campus activity centers.

Concentrating resources and limiting shuttle stops to campus activity centers such as the eight areas identified in Figure 58 will improve overall convenience and frequency of shuttle service. These areas, or Transit Hubs, are central to daily campus life and are located at or near major campus destinations and key CTA and on-campus transit nodes. Proximity to campus parking facilities and Divvy stations were also considered in identifying these areas. Currently, shuttle stops with direct service to these areas account for more than 80 percent of ridership on the East and Intracampus shuttle routes. In the future, any route modifications or consolidation pursued by the University should result in more frequent and direct service to these areas.

1.2 Eliminate redundant service and fill gaps along CTA Routes.

The density of the local CTA bus system provides the UIC community with many intracampus travel options, but many, especially when South campus origins/destinations are involved, either do not connect central points or require a transfer. With the CTA's Taylor Street (#157) and Harrison Street (#7) bus routes providing direct connections between the East and West campus' most central points (shown in Figure 58), there are clear redundancies between these routes and the three daytime UIC shuttle routes (Intracampus, Semester Express, and East Campus circulator). These redundancies in service are an opportunity to modify daytime shuttle service to more fluidly connect the east, west, and south areas of campus along one or more consolidated routes. Additionally, other hospitals provide shuttle services in the Medical District. Rush University operates a shuttle that goes between Metra's Union Station and their Medical Center. The Jesse Brown VA Medical Center operates a shuttle for employees and veterans between Northwestern University's downtown hospital and their facility.

Presently, the CTA Taylor Street bus (#157) does not provide local service during evening and weekend hours. This gap in CTA service is currently filled by UIC's evening and weekend shuttle route, maintaining service along this critical route serving UIC students and employees travelling to and from evening classes, off-campus residences, or the area's commercial/entertainment destinations. Service along the evening and weekend route should continue to ensure safe and convenient travel within the UIC community, especially during evening hours.

Figure 58. Transit hubs and activity centers

1 WEST HOUSING

Campus area w/in walking distance: **21.3%**

Housing: **945 beds**

Parking: **--**

Current shuttle ridership:
21.3% Intracampus

Transit Connections:
Bus: #157 Taylor St.

Destinations:
Student Housing & Services: Single Student Residence (SSR); Polk Street Residence Hall (PSRH); student Residence Hall (SRH); Student Center West (SCW); College of Medicine (CM)

2 POLK STREET

Campus area w/in walking distance: **23.5%**

Housing: **--**

Parking: **340 spaces**

Current shuttle ridership:
5.7% Intracampus

Transit Connections:
Rail: Polk Pink Line
Bus: # 157 Taylor St.; #7 Harrison

Destinations:
Academic Facilities: Library of the Health Sciences (LHS); College of Pharmacy (PHARM); college of Medicine (CM); Administrative Office Building (AOB); UI Hospital (UIH)

3 UIC HOSPITAL

Campus area w/in walking distance: **23%**

Housing: **--**

Parking: **2,368 spaces**

Current shuttle ridership:
4.9% Intracampus

Transit Connections:
Bus: #157 Taylor St.

Destinations:
Medical and Academic Facilities: UI Hospital (UIH); College of Pharmacy (PHARM); Out-patient care center; Eye & Ear Infirmary (EEI); Biologic Resource Laboratory (BRL); Neuropsy-chiatric Institute (NPI); Medical Center Admin Building (MCA); Clinical Science Building (CSB)

4 HARRISON GATEWAY

Campus area w/in walking distance: **3.6%**

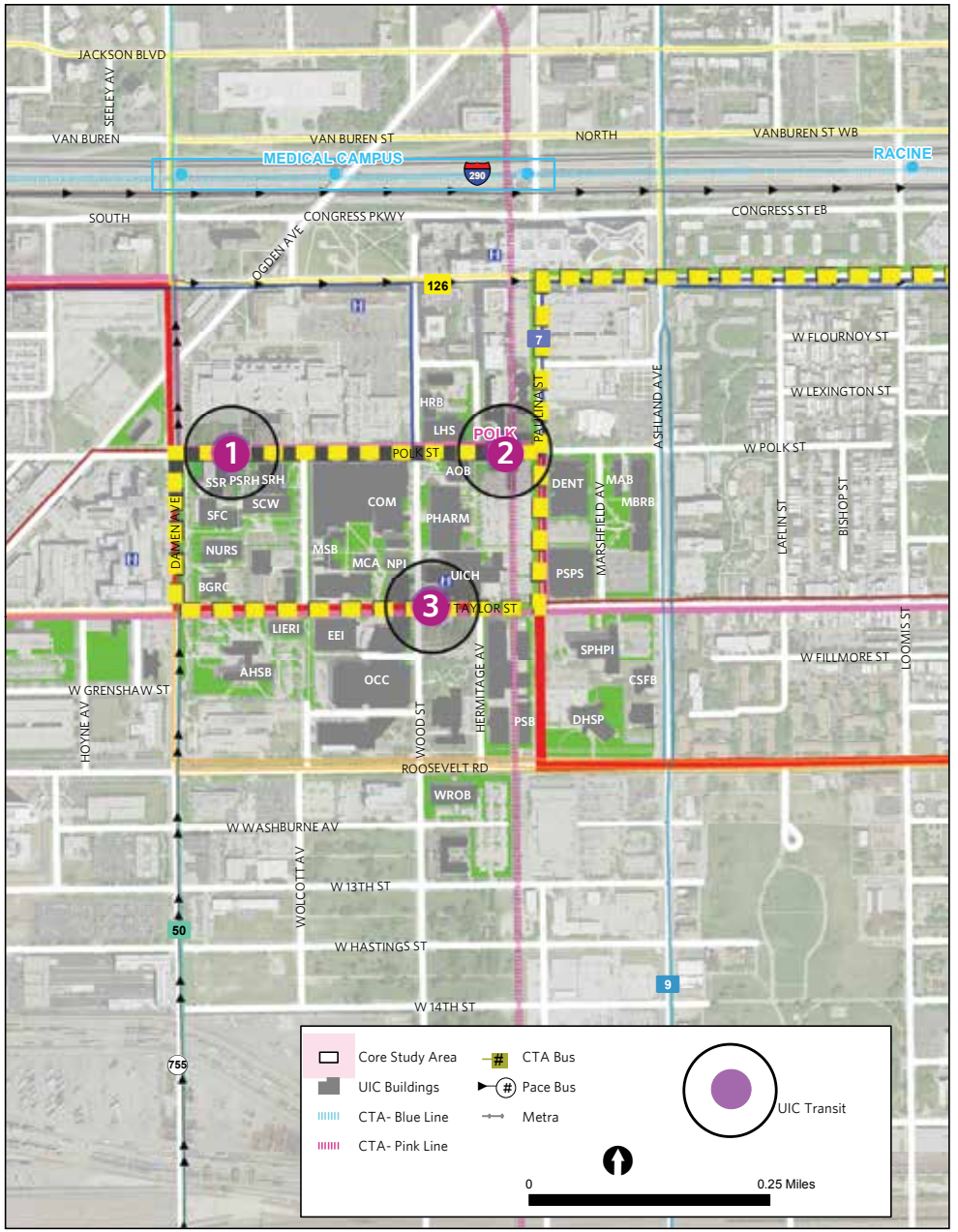
Housing: **--**

Parking: **2,246 spaces**

Current shuttle ridership:
7.4% East

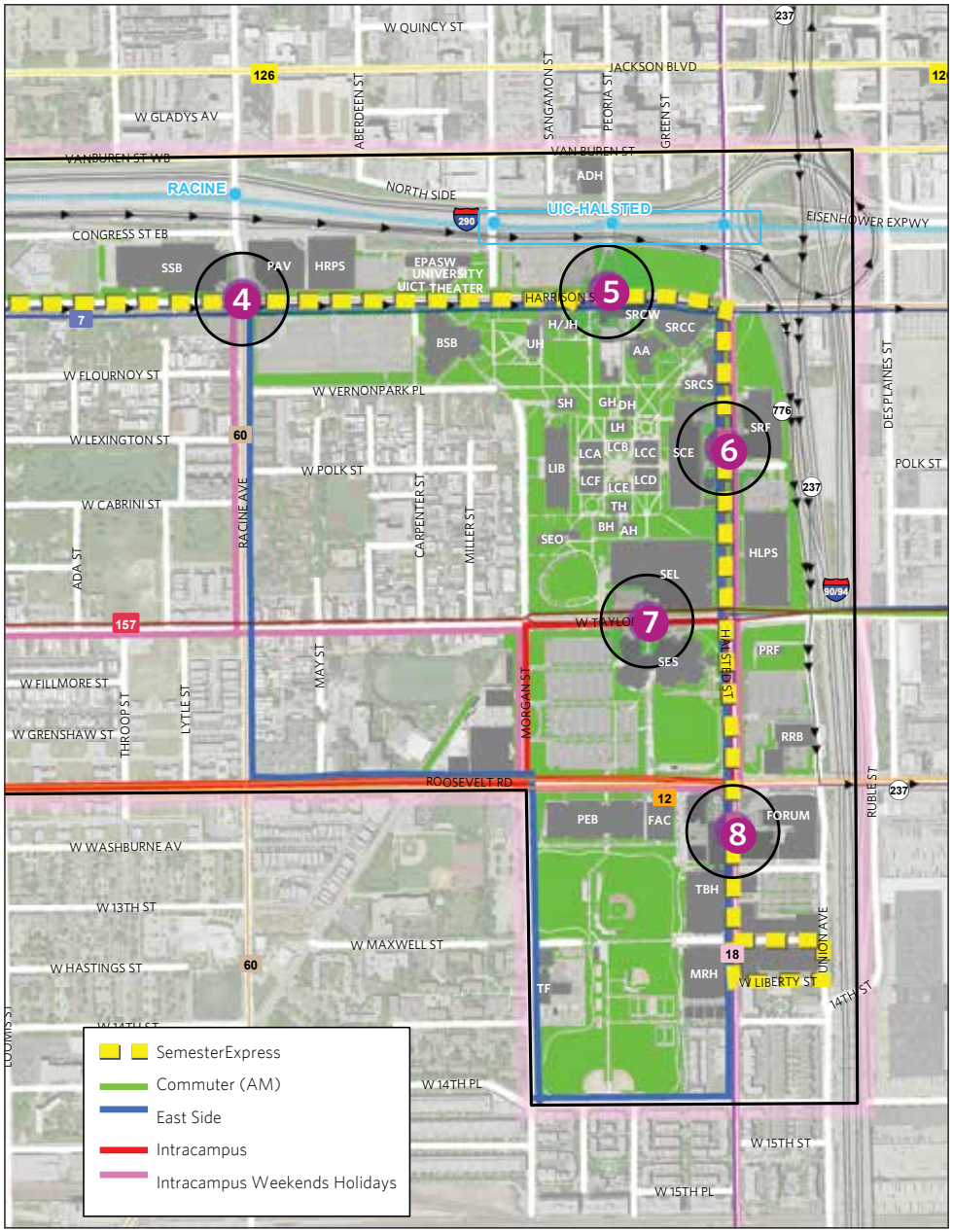
Transit Connections:
Rail: Racine Blue Line
Bus: #7 Harrison; #60 Blue Island/26 St

Destinations:
Entertainment & Student Services: Student Services Building (SSB); UIC Pavillion (PAV)



Source: Chicago Metropolitan Agency for Planning.

Figure 58. Transit hubs and activity centers continued



Source: Chicago Metropolitan Agency for Planning.

5 EAST GATEWAY

Campus area w/in walking distance: **6.8%**

Housing: **350 beds**

Parking: **809 spaces**

Current shuttle ridership:
16.6% of East Shuttle

Transit Connections:
Rail: UIC-Halsted Blue Line;
Bus: #60 Blue Island/26th St.; #7 Harrison

Destinations:
Behavioral Sciences Building; Education, Theatre, Music, and Social Work Building; UIC Theatre; University Hall; Henry Hall; Jefferson Hall; Student Residence & Commons West

6 MID CAMPUS

Campus area w/in walking distance: **10.7%**

Housing: **855 beds**

Parking: **1,606 Spaces**

Current shuttle ridership:
26.6% of East Shuttle

Transit Connections:
Bus: #8 Halsted

Destinations:
Student Services, dining, & recreation; Student Center East (SCE); Student recreation Facility (SRF); Lecture Center C/D (LCC/D); Student Residence & commons South (SRCS); Science & Engineering Laboratory (SEL)

7 TAYLOR-EAST

Campus area w/in walking distance: **7.7%**

Housing: **--**

Parking: **880 spaces**

Current shuttle ridership:
15.3% of Intracampus

Transit Connections:
Bus: #157 Taylor St

Destinations:
Academic Center: Science & Engineering Laboratory (SEL); Science & Engineering South (SES)

8 CITY GATEWAY

Campus area w/in walking distance: **8.3%**

Housing: **1,520 beds**

Parking: **1,164 spaces**

Current shuttle ridership:
16.6% of East Shuttle

Transit Connections:
Bus: #8 Halsted; #12 Roosevelt

Destinations:
Entertainment and Residences: UIC Forum (FORUM); James J. Stukel Towers (JJST); Thomas Beckham Hall (TBH) Marie Robinson Hall (MRH)

1.3 Consider consolidating daytime shuttle system.

Daytime shuttle users need to travel between destinations quickly and efficiently. Existing transit options are available, but at lower speeds due to high frequency of stops. Consolidated daytime service, serving a limited number of stops along an optimized route, can offer shuttle riders distinct conveniences that stand apart from other CTA options.

As it is currently aligned, the 5.3-mile Semester Express route travels through each campus area, providing direct connections between major campus activity centers and seven of the eight transit hubs (weekdays from 7:00 a.m.-3:00 p.m., on 30-minute headways). The route meets the criteria established above focusing on providing a targeted and unique service, and should be considered a model for consolidating daytime shuttle service to increase overall system convenience and efficiency. By eliminating the Intracampus and East routes that currently offer services duplicative of the Semester Express and those of the CTA and consolidating service to the Semester Express route, vehicles and resources can be shifted to the consolidated route to provide more hourly trips while minimizing costs and environmental impacts. Figure 59 below shows the existing shuttle routes and identified transit hubs on campus. Table 5 shows shuttle operations details for current daytime routes as well as the proposed consolidated service.

Table 5. Shuttle operations details

Route	Trip Cycle (min.)	Headways (min.)	Vehicles Required	Vehicle Miles	Average Capacity/hr.	Average Riders/hr.
East	**20**	**20**	**1**	**110**	**76**	**17**
Intercampus	**30**	**30**	**1**	**110**	**51**	**25**
Express	**30**	**30**	**1**	**80**	**51**	**36**
Current Total			**3**	**300**	**178**	**78**
Consolidated Route	**30**	**15**	**2**	**220**	**102**	

Source: University of Illinois at Chicago, 2015.

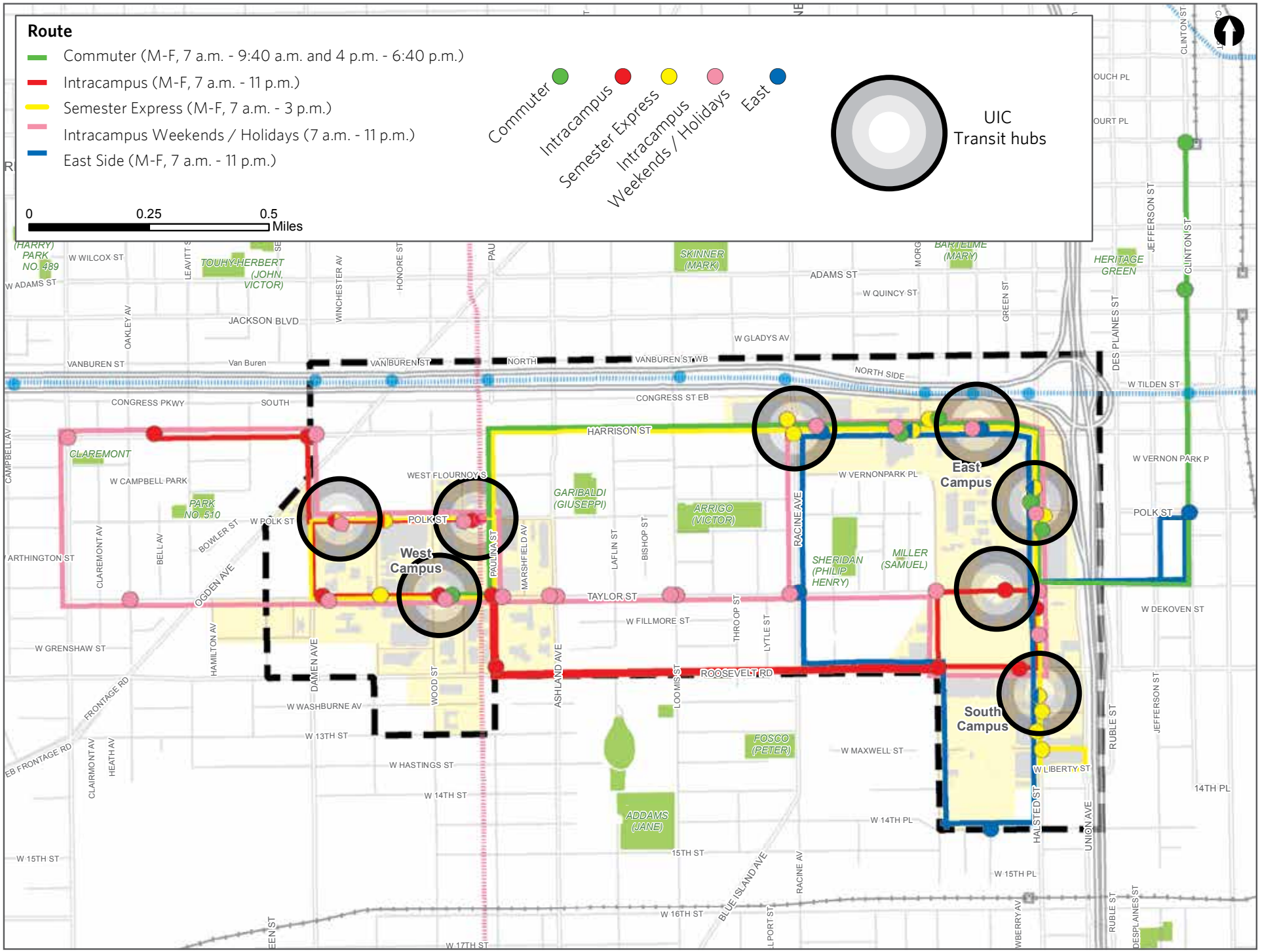
While Table 5 is based on route length estimates provided by Facilities Management, shifting resources to the consolidated, but more frequent daytime service results in one fewer vehicle being employed and limits impact on overall system carrying capacity. Since ridership levels have been found to be well below fleet capacity in recent years, there is little need for concern when it comes to supply of service meeting demand in the short term. The additional vehicle can become a “flex” vehicle that is deployed during peak periods or in response to any induced demand. Another option would be to put the third vehicle into rotation and reduce headways to 10 minutes, making the service more attractive to potential riders.

This consolidation would not affect the Commuter shuttle service, but coordination with IMD shuttle providers could result in a more efficient shuttle service for all providers (Rush University, UIC, Jesse Brown VA Medical Center, etc.) between West Campus and downtown Metra stations. CTA will add service if the agencies agree to pay for it.

1.4 Streamline shuttle data collection and analysis.

As the University and surrounding neighborhoods continue to provide more and varied uses in an effort to create a 24/7 campus environment, the needs of campus users and resultant shuttle utilization is sure to change. To respond to these changes in demand over time, improved data collection and analysis of shuttle efficiency and stop-level ridership should be incorporated into annual operations strategies to identify areas where additional service is needed or where resources are being unnecessarily allocated. The University should consider making shuttle ridership data available to the public to promote openness and transparency.

Figure 59. Shuttle routes and transit hubs



Source: Chicago Metropolitan Agency for Planning and University of Illinois at Chicago, 2015.

2. Increase awareness and availability of information for all on-campus transit services.

While the majority of campus users are familiar with the major campus-serving transit services and facilities provided by the CTA, the UIC shuttle operates daily service connecting many of the campus's most heavily trafficked areas, yet many in the UIC community are unaware of the system and its routes. To raise awareness, the University should consider new promotional strategies and efforts to provide the community with high-quality information related to the shuttle's operations.

2.1 Promote shuttle service to UIC community.

Encouraging the UIC community to utilize the shuttles will require a consistent and targeted approach because of the annual high turnover of student population. Since the shuttle provides a degree of convenience to specific campus users, whether they are residents in campus housing, people with disabilities, or students/employees that make frequent cross campus trips, the University should incorporate promotional strategies that target these types of groups. In addition to targeting specific groups, UIC Facilities Management should pursue more traditional marketing to the general UIC community by actively participating in the following University-sponsored events:

- First Year and Transfer Student Orientations
- Graduate Student Orientation
- New International Student Orientation
- Student Activities Board Involvement Fairs
- Office of Sustainability Transportation Fair

In addition to actively marketing the shuttle to the community, the image and appearance of the shuttles, and how they fit into the overall campus environment and brand, should be considered. During public outreach, many participants mentioned that they had never noticed any of the UIC shuttles in and around the campus area. Presently, the white shuttle buses have minimal identifying markings. To make shuttles stand out on the busy campus streets, distinctive and bright paint schemes, using school colors, for vehicles should be considered to improve recognition and overall usage.

Bus branding examples.
Sources (from top to bottom): University of Buffalo (SUNY) Transportation Services, Disneyland shuttle via Flickr user prayitnophotography Flickr user paulkimo90.

2.2 Provide high-quality, on-campus transit information to the UIC community.

Transit users are often willing to utilize transit more, and wait longer for it, when they know exactly how long the wait will be. To enhance system reliability and provide travel information to the UIC community, the University recently launched a shuttle tracking application that allows users to monitor shuttles and arrival times in real-time on their mobile devices. This application has the potential to be a very useful service for current and future shuttle users, and should integrate existing transit data provided by the CTA and Divvy to further emphasize the local multi-modal network.

Coordinated with the new transit app, improved transit signage will provide a consistent source of information for campus users taking transit and will also enhance UIC's brand and identity as an urban campus embedded within a robust transit network. By placing more detailed signage and/or electronic kiosks in the most concentrated and active campus areas, identified as Transit Hubs in Figure 58, a consistent source of information and internal wayfinding can be established. Using flexible technology such as the digital display software provided by Transit Screen, display screens located at these critical locations can have route and arrival time information for the UIC shuttle and local CTA transit. Information regarding nearby Divvy stations, car-share locations, and locational information such as walking distance to buildings or destinations should also be shown.

Source: Transit Screen.

3. Improve the operation of campus transportation options to better accommodate people with disabilities.

UIC campus users with disabilities have reported that the University's shuttle and paratransit systems can be unaccommodating, uncomfortable, and inconsistent. These experiences discourage some riders from utilizing the Universities transit offerings, resulting in limited on-campus accessibility and continued reliance on automobiles. The following strategies respond to these issues and are designed to improve the on-campus transit experience for passengers with disabilities.

3.1 Strategies for UIC Shuttle System

To help balance system efficiency with the comfort and safety of passengers with disabilities, improvements to boarding procedures, on-board protocol, and fleet accommodations should be made. Implementation of the strategies below will improve the ride experience for people with disabilities and will potentially attract new riders.

3.1.1 Develop and require a recurring passenger sensitivity training program.

Many passengers with disabilities have complained of uncomfortable and sometimes unsafe conditions once onboard UIC shuttles. To ensure that shuttle operators are aware of these concerns and the needs of passengers with disabilities, the University should develop and institute sensitivity training programs for transit operators. Training of this type is common in many public transit agencies and is geared towards ensuring compliance with the Americans with Disabilities Act (ADA), improving disability awareness, and providing operators with information regarding the needs of riders with disabilities.

Training modules should be developed in coordination with the UIC Disability Resource Center and Office of Access and Equity to focus on improving awareness of the range of disabilities present in the UIC community and providing operators with an understanding of tools and techniques to effectively interact with passengers with disabilities. By requiring operators to go through these trainings on a recurring basis, a high degree of familiarity can be established between UIC Facilities Management and the University's Disability Resource Center as students and other campus users transition into and out of campus life.

In developing the training(s), UIC Facilities Management, the Disability Resource Center, and the Office of Access and Equity should utilize resources provided by the U.S. Department of Transportation and Federal Transit Administration-sponsored Easter Seals Project Action (ESPA).[31] The mission of ESPA is to provide local transit providers with resources, including online and in-person training and technical assistance that promote universal access to transportation. Other examples of training programs and practices have been developed by the Human Development Institute.[32]

[31] For more detailed information, http://www.projectaction.org/AboutESPA/Whoweare.aspx.

[32] Transit Drivers' ADA & Disability Awareness Training Module, https://www.adadrivers.org/default.aspx.

3.1.2 Require audible shuttle stop announcements.

To aid passengers with visual impairments, the University may consider requiring drivers to announce shuttle stops over the onboard public announcement system in order to alert riders in advance of arrival. This type of announcement is required by the Americans with Disabilities Act of 1990. Whether made by shuttle operators or by automatic voice announcements made possible by on-board GPS and audio capabilities, shuttle stop and route announcements should be implemented consistently for all UIC shuttle trips, as with CTA routes.

3.1.3 Make improvements to the UIC shuttle fleet.

Unlike CTA buses that are able to easily accommodate wheelchairs, current UIC shuttles require drivers to alight from the vehicle to assist in boarding, through the use of the on-board lift system, upon each request. This procedure adds time to routes, limits the system's overall convenience and efficiency, and negatively impacts the passenger experience. Additionally, the traditional on-board wheelchair lifts, present in all UIC vehicles, were reported to be major maintenance concerns, resulting in increased operating costs from recurring maintenance requirements and occasional inability to accommodate passengers with wheelchairs.

Beyond providing these basic accommodations for riders with disabilities, any new vehicles purchased for the UIC shuttle fleet should include the most up-to-date accessibility features. Low-floor vehicles, which lack stairs at the entrance and throughout the vehicle and are accessible from a minimum step height from ground level, should be prioritized for all new vehicles. These types of vehicles also typically feature extendable ramps, making it easier and more efficient for passengers with wheelchairs to board and alight without the direct assistance of the vehicle operator.

Presently, none of the 13 UIC shuttles, whether active or in reserve, are low-floor vehicles. New and used vehicles range in cost, but despite the high initial costs, new vehicles that feature hybrid fuel technologies offer long-term cost savings and environmental impact mitigation in line with the University's sustainability goals. When projecting future budgets and financial needs, UIC Facilities Management should consider budgeting additional costs related to assembling a modernized fleet.

Low-floor bus.
Photo credit: Image by Thomas Lee, used under a Creative Commons ShareAlike License.

3.2 Strategies for UIC Paratransit Service

The current paratransit system provides curb-to-curb transport services within the boundaries shown in Figure 60. While this service offers many benefits to UIC students, faculty, and staff with disabilities, access to the service is limited not only by these geographic boundaries, but also by the supply of vehicles, the program scheduling system, and requirements.

3.2.1 Analyze demand for paratransit service. Many students, faculty, and staff with disabilities live, shop, or work near, but outside of the current paratransit service boundaries, limiting their usage of the service to on-campus circulation. Although expansion of the current boundaries would result in the need for additional paratransit vehicles and operators, any resulting increase in service area and capacity would limit the demands on the UIC shuttle system and its current fleet, while enhancing overall campus mobility/accessibility.

To determine the feasibility and extent of service area expansion, a rigorous demand analysis should be pursued that looks at demand in terms of location, time of day, and type of campus user. In-house data analysis and the development of a survey instrument to be administered in cooperation with the University's Disability Resource Center and the Office of Access and Equity should serve as the basis to determine and guide system modifications so as to identify opportunities with the most substantial impact.

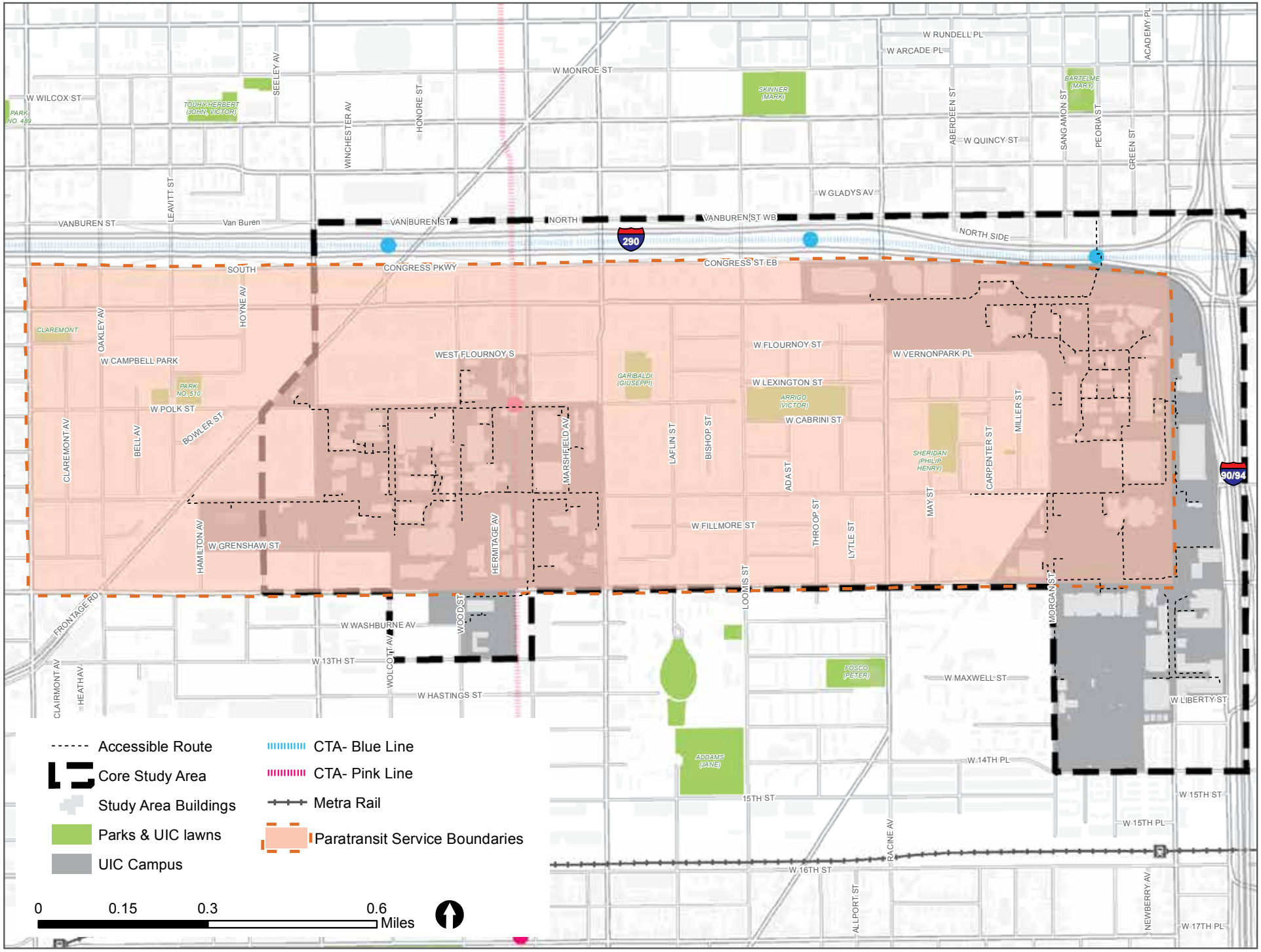
Improvements to paratransit operations should also consider the location of accessible classrooms to ensure that drivers are aware of the best routes and access points to these and other classrooms. This may also involve capital improvements to ensure that facilities easily accommodate loading and unloading of passengers. Consult with the Office of Classroom Scheduling to determine best approach to this recommendation.

3.2.2 Streamline the paratransit reservation process. When scheduling paratransit trips, students, faculty, and staff are required to submit written requests on a weekly basis. Recently, other Universities with extensive paratransit demand and services, including the University of Minnesota, have introduced online reservation systems. Paratransit users that have access to these online reservation systems have the ability to add, change, and cancel reservations in a transparent and efficient manner. Streamlining the paratransit reservation process in this way will make it easier for campus users to access the services and understand the process in light of their individual circumstances.

Similar to its partnership with the Department of Computer Science's BITS laboratory for the development of the UIC Shuttle Tracker, Facilities Management can look to pursue the development and implementation of an online reservation and scheduling platform for its paratransit services in conjunction with campus partners/resources.[33]

[33] For more detailed information concerning the BITS Laboratory and their work, http://www.cs.uic.edu/bin/view/Bits/WebHome.

Figure 60. Paratransit service



Source: Chicago Metropolitan Agency for Planning.

4. Improve access to, and conditions of, on-campus transit facilities.

Safe, clean, and accessible transit facilities (e.g., train stations, bus stops, and UIC shuttle routes) enhance the transit experience for all riders and integrate the transit network into the pedestrian/built environment. To encourage ridership to and around campus, the University should prioritize making improvements to local transit facilities and the areas and pathways immediately surrounding them, based on the following strategies/guidelines.

4.1 Locate, design, and maintain transit facilities to maximize comfort and integration into pedestrian network.

Bus stops and rail station entrances are the areas where the transit network interfaces with the pedestrian environment. Locating stops to minimize conflict between waiting passengers and pedestrians on the sidewalk, and designing these areas to be attractive for all potential riders should be prioritized by the University going forward. Any shuttle route modifications or CTA/UIC Shuttle stop improvements pursued by the University or CTA should consider the following elements that together can have a significant impact on the campus area's transit riders, pedestrians, and built environment.

4.1.1 Location

UIC Shuttle stops should be prioritized for areas with high trip-generation characteristics, such as those in Figure 58. These areas offer strategic overlaps with the CTA bus and rail network and offer convenient access to campus destinations. Co-locating UIC and CTA transit facilities will help ease transitions between necessary transfers while enhancing the visibility of the campus area's transit network.

The quality and dimensions of pathways leading up to transit facilities, whether existing or proposed, should also be considered when locating stops and facilities at specific sites. These considerations include the presence of adequately wide sidewalks to accommodate waiting passengers and pedestrians, the physical condition of the sidewalk(s), and proximity to accessible routes and features such as curb ramps. Where possible, stops and accompanying amenities should be moved or located to maximize access to the campus' pedestrian network and minimize impact on overall circulation.

As an example, the area surrounding Transit Hub #2 on Taylor Street near the SEL building is frequently overwhelmed by pedestrians and CTA riders waiting for the westbound #157 bus. The University should work with the CTA to relocate the stop to an area that can better accommodate waiting passengers, such as the paved plaza just east of the existing stop. The Transportation Research Board (TRB) recommends that to maintain an adequate pedestrian level-of-service, waiting areas at on-street bus stops should provide at least seven square feet per waiting passenger.[34] This figure does not include sidewalk area reserved for pedestrian/wheelchair movement.

[34] For more information, see The Transit Capacity and Quality of Service Manual, Fig. 7-8 http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp100/part%207.pdf.

While it is relatively easy to shift the location of bus and shuttle facilities to meet these criteria, there are some instances where transit facilities are not adequately linked into the area's pedestrian network and are fixed in place. An example of this is the Illinois Medical District's three rail station entrances. Steps must be taken to identify convenient and accessible pathways that link these facilities to the campus' central points. These steps include identifying the shortest path that can best accommodate people with accessibility needs, working with CDOT to make improvements to sidewalks and intersections, and finally, marking and publicizing these paths as accessible routes.

Sidewalk crowding on Taylor Street west of SEL building.
Source: Chicago Metropolitan Agency for Planning.

4.1.2 Passenger amenities

Chicago's highly variable weather during the academic year can make waiting outside for transit uncomfortable, and in some cases, unsafe. Of the 32 existing shuttle stops only eight provide weather protection in the form of bus shelters. At a minimum, stops serving the campus' main activity centers, or Transit Hubs, should provide adequately sized bus shelters and stop area seating. For the most part, these areas are presently outfitted with shelters. However, shuttle stops located at and near the very active node at Roosevelt and Halsted lack convenient and secure weather protection to match the area's high UIC shuttle and CTA bus ridership. Locations of bus shelter installations should be prioritized based on ridership statistics.

In addition to providing shelters at UIC shuttle stops, the installation of CTA bus shelters should also be pursued at stops serving UIC Transit Hubs and other areas that link into the broader regional transit network. An example is the busy Harrison/Halsted Streets intersection that provides multiple direct routes to the Ogilvie and Union Station commuter rail hubs, and was flagged during the public outreach process for its lack of weather protection (see Harrison/Halsted Street Waiting Area image). UIC should work with the CTA to improve waiting conditions at this location, which is presently limited by its very narrow sidewalk, which creates safety issues for waiting passengers and passing pedestrians similar to the aforementioned area on Taylor Street west of the SEL building.

Top image: Single Student Residence, Polk Street Residence Hall, and Student Residence Hall (SSR, PSRH, and SRH) Transit Hub Amenities.
Source: Chicago Metropolitan Agency for Planning.

Bottom image: Harrison/Halsted St. waiting area.
Source: Chicago Metropolitan Agency for Planning.

4.1.3 Visibility and aesthetics

UIC Shuttle stops should be easy to see and recognize, and they should also fit in with the campus' character and brand. To further promote the shuttle and improve the UIC community's awareness of its services, additional design measures should be considered for shuttle stops. Planned improvements could include larger route signage and/or the installation of information kiosks in high-traffic areas, placing stop information and advertising on glass panels of bus shelters, or painting the stop area's pavement with colors associated with the routes serving the stop (see image below).

CTA's "Jeffrey Jump" BRT stop with painted sidewalk.
Source: Streetsblog Chicago, John Greenfield.

4.1.4 Lighting

Adequate illumination at bus/shuttle stops during nighttime service should be provided both inside and outside of bus shelters, in order to increases security, deter crime, and enhance the visibility of waiting passengers to oncoming buses and other traffic.[35] The Transit Hubs at the Polk Pink Line station (#7) and UIC-Halsted Blue Line station (#1) were identified in the public outreach process as busy transit nodes in need of enhanced lighting.

4.1.5 Maintenance

Transit facilities, and the pathways leading up to them, are critical University areas that should be kept clean and clear of snow, ice, and water. As mentioned in the Walking and Navigation section, providing better upkeep and maintenance for campus sidewalks should be a priority for the University and Facilities Management. By focusing on, at a minimum, the high activity areas that experience the most transit ridership the University should develop the in-house capacity to respond to other issues related to pavement conditions throughout the campus. This will greatly improve the pedestrian and transit experience for all campus users.

While Facilities Management currently does a good job of clearing sidewalks and transit facilities of ice and snow during winter events, it was reported that conditions around these facilities often worsen throughout the day, leaving previously cleared pathways and curb cuts inaccessible. To respond to this in the short term, Facilities Management can incorporate free and open incident reporting and tracking platforms such as SeeClickFix to establish an open line of communication between the Department and the UIC community utilizing on-campus pathways and facilities.[36] See Walking and Campus Navigation Recommendation 5 for more details.

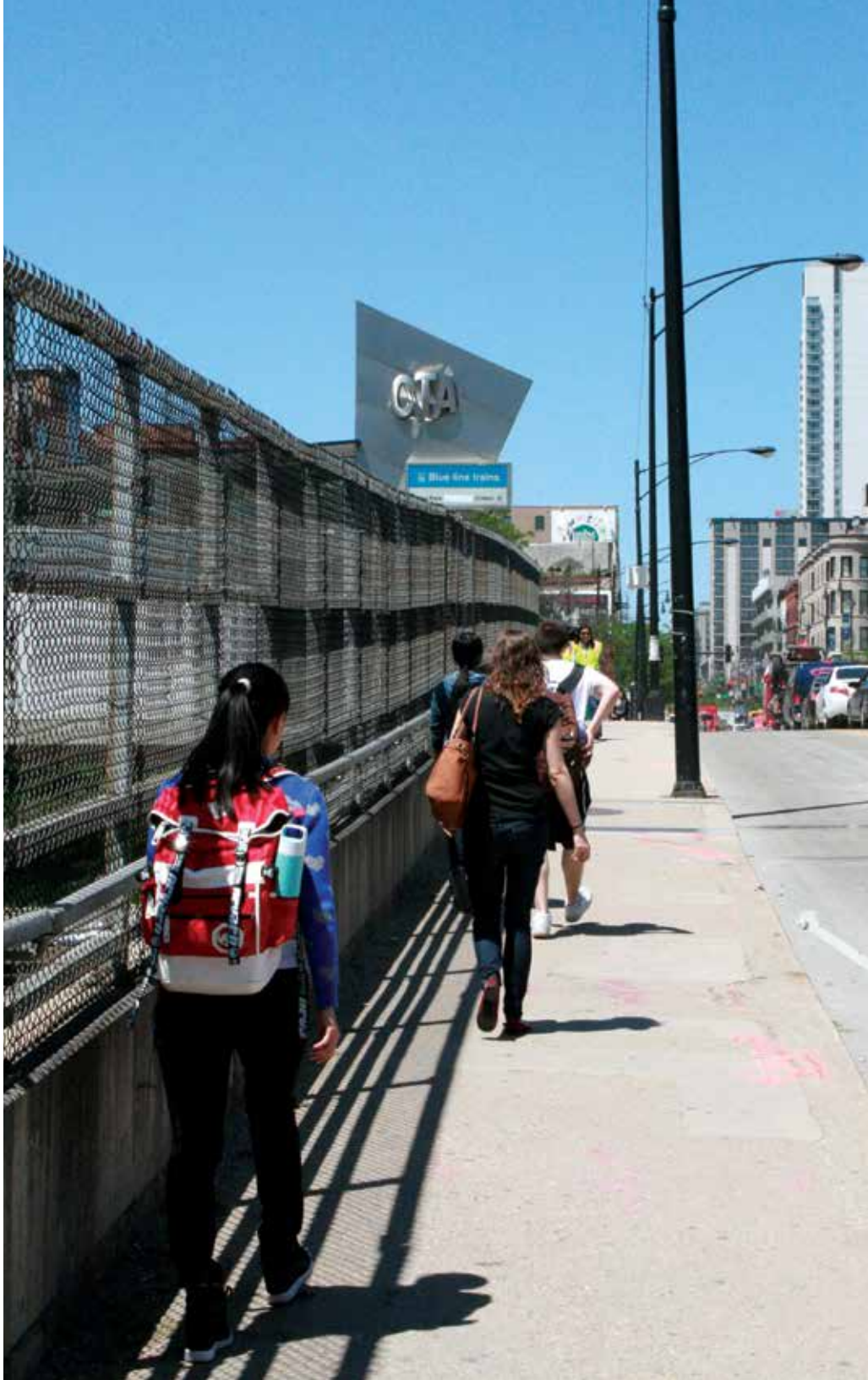
[35] APTA Lighting Standards, http://www.apta.com/resources/standards/Documents/APTA-SS-SIS-RP-008-10.pdf.

[36] For more details, http://en.seeclickfix.com/.

4.2 Consult and collaborate with CTA on rail station accessibility improvements.

In 2014, the CTA announced improvement plans for the IMD Blue Line station that included enhanced accessibility features to comply with ADA guidelines. Despite these needed improvements near west campus and the IMD campus, the UIC-Halsted station, which has experienced the highest daily ridership since 2008 of all UIC-serving stations, continues to lack basic accessibility features. Fortunately, the Circle Interchange reconstruction project includes plans for station modifications in this location, including the installation of an elevator at the Peoria Street entrance. To ensure that these plans and others over time are integrated with on-campus accessibility amenities and routes, University officials should continue to work with agencies involved with these projects and the CTA.

In addition to working with the CTA to ensure that transit facilities feature accessibility/universal design amenities, the University and Facilities Management should partner with the CTA to focus on improving and maintaining the physical conditions of pedestrian routes leading up to transit facilities. Issues related to the physical conditions of pedestrian paths leading up to transit facilities were cited at the Halsted Street entrance and each of the IMD station's three entrances (Damen, Ogden, and Paulina). Reinforcing the recommendations set forth in the Walking and Navigation section, pathways connecting these facilities into campus should be targeted for enhanced signage and maintenance to improve accessibility and safety.



5. Provide enhanced commuter transit benefits to faculty and staff.

Providing employees with financial incentives geared toward making transit competitive with other travel modes is a common and effective Transportation Demand Management (TDM) strategy. A large portion of the University's approximately 12,000 employees (83 percent full-time) live in the region's transit-accessible areas, so promoting CTA, Metra, and Pace transit services to this group will help to alleviate on-campus parking pressures and limit the University's carbon footprint. To shift more employees towards transit as their commute mode of choice, this plan recommends promoting the federally authorized Pre-Tax Qualified Transportation Program,[37] and assessing the feasibility of expanding the universal transit pass ("U-Pass") or some form of subsidized transit pass to faculty and staff.

5.1 Assess the demand for and feasibility of providing transit subsidies to employees.

The introduction of CTA's "U-Pass" has led to significant transit ridership growth among the student population at UIC and other local institutions. While the current U-Pass is not offered to faculty and staff employed at UIC or other local institutions, it may be possible to create an arrangement with the CTA to provide access to either the U-Pass program or other transit pass subsidies resulting from large volume purchasing. Examples of reduced-price universal passes being made available to employees include the University of Washington, University of Denver, and the University of Colorado-Boulder, among others.[38] Other urban universities including the University of Pennsylvania and Harvard University offer faculty and staff access to subsidized transit passes (5-50 percent savings) in addition to pre-tax transit benefits with the condition that they do not purchase a campus parking pass.

It is expected that UIC organizations representing faculty and staff will have little interest in any program or subsidy that requires universal buy-in. In the short term, official discussions with these organizations about transit subsidies and level of employee contribution should be pursued. Beyond these discussions, UIC officials should hold discussions with local transit agencies as well as other local institutions to further explore programs that would encourage transit ridership among faculty and staff at the region's institutions.

[37] Pre-Tax Qualified Transportation Program currently sets a maximum pre-tax dollar amount ($130) that used for the program. This amount would currently cover unlimited monthly ride passes on CTA/PACE and would nearly cover all monthly costs for Metra riders commuting into the city from zones A-D (D= $135.25/ month). The maximum cost of a Metra monthly pass is currently $263.50.

[38] http://www.aashe.org/resources/campus-universal-transit-passes.

Principle

Increased walking, bicycling, and transit, and lower use of motor vehicles, can improve the health of campus users, reduce traffic congestion, and lower University expenses and demand for parking.

Goal

Improve parking management and make alternative, active modes of transportation more attractive, easier, and more economical for students, faculty, and staff.

Challenges & Opportunities

- Many UIC faculty and staff drive to work alone; they have cited the high cost of transit (compared to the cost of driving and parking) as a barrier to taking transit on a regular basis.
- Parking utilization is not well-balanced; there are underutilized parking lots, as well as garages and lots with long waiting lists for permits.
- High traffic speeds and dangerous driving are hazardous to bicyclists and pedestrians, especially those with visual or mobility impairments.
- Shift changes generate traffic congestion problems in the Medical District.

Driving and Parking

As noted in the GO TO 2040 regional plan, sustainable prosperity depends on our region's success in reducing congestion by promoting transportation options other than driving. While cars will continue to be the primary mode of transportation for many, other modes — like walking, bicycling, and transit — need to make up a greater share of trips in the future. Spreading users between the various modes can improve conditions for those that need to drive as well as improve air quality for all. Many roads are at capacity during rush hour; there is often little space to expand roadways, and providing the parking necessary to support single-occupant drivers at current rates can be cost-prohibitive. Nonetheless, accommodating automobiles is a necessary part of a multi-modal transportation strategy.

Recommendations

The following recommendations outline a number of strategies that the University can undertake to help reduce congestion, make streets safer, balance parking supply and demand, and encourage some drivers to utilize other modes when they have that option.

1. Adopt and implement a UIC Complete Streets policy.

The UIC campus street environment is primarily oriented toward motorized vehicles. Complete Streets is a new approach to transportation planning in which all anticipated users of the roadway, including pedestrians and bicyclists, are fully accommodated by road design. In addition, Complete Streets, by carefully fitting street design to land use context, helps activate the public right-of-way as a place where more than just transportation occurs.

1.1 Formally adopt and implement a Complete Streets policy for the University.

UIC should commit to this innovative approach to street design by adopting and working with CDOT to implement a Complete Streets policy. By committing to consider and accommodate all modes with any project, a Complete Streets policy can change the culture from being automobile-focused to multimodal. The CMAP Complete Street Policy toolkit[39] can be used to help develop a policy that could be adopted by the Campus Master Planning Committee.

In 2006, the City of Chicago adopted a Complete Streets Policy stating the following: "The safety and convenience of all users of the transportation system including pedestrians, bicyclists, transit users, freight, and motor vehicle drivers shall be accommodated and balanced in all types of transportation and development projects and through all phases of a project so that even the most vulnerable — children, elderly, and persons with disabilities — can travel safely within the public right-of-way." UIC could model their own policy after this one and utilize CDOT's Complete Streets Design Guidelines.[40]

Using sample Complete Streets checklists (see Appendix), the Office of Sustainability and Facilities Management could create a Complete Streets checklist, most relevant to UIC, of questions that project managers would complete for new construction or rehabilitation of existing street infrastructure. This checklist can be used for on-street projects as well as off-street facilities (such as new buildings, parking lots, or off-street pathways) to ensure that all roadway users are accommodated in new designs.

39 See http://www.cmap.illinois.gov/programs-and-resources/local-ordinances-toolkits/complete-streets.

40 Available at http://www.cityofchicago.org/content/dam/city/depts/cdot/Complete%20Streets/CompleteStreetsGuidelines.pdf.

2. Increase road safety and decrease vehicle conflict zones through street typologies, visual cues, and speed control.

Using a set of street typologies and appropriate street infrastructure treatments, as recommended in the 2010 Master Plan (Figure 61), the University can visually indicate important information to drivers (such as when to expect pedestrians and when to drive slowly). Infrastructure changes at key roadway locations can improve safety and reduce conflict zones, as well as indicate arrival to, and departure from, the campus environment at campus gateways.

2.1 As streets need improvements or resurfacing, work with CDOT to reconfigure their design according to roadway typologies set forth in the Master Plan.

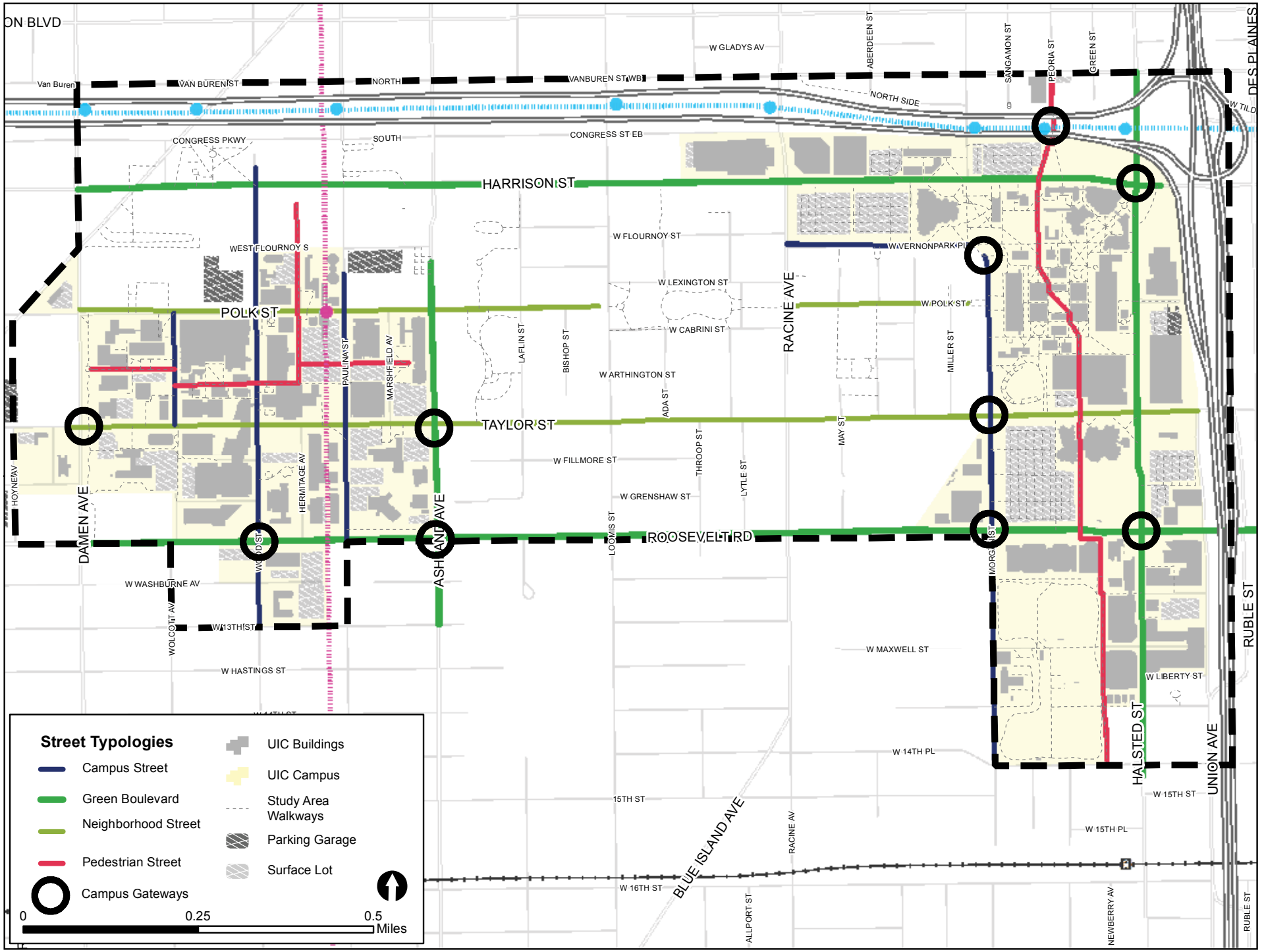
- Address identified conflict intersections and mid-block crossings (see Walking and Campus Navigation Recommendation 2.1).
- Convert Roosevelt Road, Halsted Street, and Harrison Street to "Green Boulevards."

The 2010 Master Plan defines a green boulevard as a main city thoroughfare defining campus boundaries, and presenting a "greener" image than what currently exists. Recommended treatments include narrowing roadway widths, incorporating native plantings, adding more street trees, lighting, and signage, all of which are supported by IDOT if the number of lanes on Roosevelt Road is maintained. Any non-breakaway items such as trees, monuments/sculptures, and benches must be placed at least four feet from the face of curb. For Halsted Street and Harrison Streets, the plan recommends narrowing the streets from four travel lanes to two travel lanes (as is found on Halsted Street north of Van Buren Street and south of Roosevelt), adding a center turn lane, improving the bike lanes, and creating loading zones and bus stop turnouts. This process is already underway for Harrison Street, under the direction of CDOT.

- **Convert Paulina Street, Wood Street, Morgan Street, and W Vernon Park Place to "Campus Streets"**
  The streets on campus that provide vehicular access to campus buildings and destinations and yet are wholly contained within the campus are called "Campus Streets." The goal of this new typology is to reduce vehicular traffic, while offering opportunities for innovative stormwater management and mitigation. These streets should include bike lanes, narrowed widths, and increased plantings and greenery. Some of these are also candidates for applying the "woonerf" treatment, as discussed in Walking and Navigation Recommendation 4.4.

- **Convert Polk Street and Taylor Street to "Neighborhood Streets"**
  Polk and Taylor Streets offer connections between the east and west sides of campus, cutting through residential and small-scale commercial neighborhoods. The vehicular traffic is low, but it is not campus-specific. These streets help to weave the campus into the neighborhood, and should help to enhance a pleasant pedestrian experience. The use of permeable pavers, bike lanes and parking, additional street trees, and other stormwater management improvements are recommended.

Figure 61. Street types and campus gateways



Source: Chicago Metropolitan Agency for Planning.

2.2 Install gateway markers at key campus entry points.

The locations for the proposed gateways from the 2010 Master Plan were chosen to enhance the connection to the city and complement the proposed roadway typologies. To successfully welcome people to the campus, each gateway should be designed to reflect the character of the street, level of vehicular traffic, and level of pedestrian traffic. The gateway at Halsted and Roosevelt, for example, should be directed toward drivers, to signal that they are entering a university setting. Many drivers exit the highway at excessive speeds, making the intersection dangerous for pedestrians. A gateway marker could be a helpful cue to slow down and watch for pedestrians. The gateway at the Peoria Street CTA station, in contrast, would be a pedestrian scaled gateway, and those along Taylor Street would be designed with a neighborhood focus indicating high pedestrian traffic. The intention is to create a distinct UIC identity and should be similar in design to the style used for overall campus wayfinding. The proposed gateway marker designs and features from the Campus Master Plan will help define the campus.

2.3 Implement an on-campus speed limit of 20 miles per hour on streets within the campus area.

High-speed traffic can create a real or perceived unsafe environment for non-driving roadway users. A campus speed limit of 20 miles per hour on non-arterial streets can improve driver reaction time, improve safety for vulnerable road users, and calm traffic overall, creating a more inviting space for other users. Some studies have shown an inverse relationship with traffic speeds/volumes and levels of walking and bicycling.[41] Lowering the overall speed limit reduces the sense of risk that cyclists and pedestrians feel, and increases the chances that they will choose to walk or bike for short trips. Clear, informative signage and an educational campaign for campus drivers will be a key aspect of the success of a 20 mph zone. Major arterial roads would not be part of the 20 mph zone. When paired with roadway narrowing and streetscaping, the 20 mph speed limit can be very effective at calming traffic and improving safety.

[41] See http://www.20splentyforus.org.uk/BriefingSheets/20mphLimits_encourage_cycling_and_walking.pdf.

3. Develop a comprehensive parking policy for the campus.

The presence and proximity of transit, car and bike share systems, and a growing bicycle network enable many people to live and work on or near campus without a car. Reducing or eliminating the University's use of parking ratios and minimums will help to reduce costs to the university, and will provide additional buildable land. Many of the recommendations in this section were adopted from the recommendations proposed by Jane Wilberding, a CMAP intern, through her UIC Master's Student thesis on campus parking management. To increase multimodal transportation use, the use of financial incentives and disincentives are an effective means to shift travel behavior. The demand for parking is highest in the medical district and some parking locations are more desirable than others. The key to addressing affordability issues is to provide users with a range of options and modes so they can ultimately select a plan that most closely aligns with their schedules and needs. Parking takes up a significant amount of land and is expensive to build and maintain, and providing an excessive quantity of parking can encourage single occupant vehicle (SOV) travel.

3.1 Price parking based on demand and offer priority parking spaces to carpoolers.

With the variation in parking demand that exists on UIC's campus, it is clear that some parking lots are more desirable than others. An effective way to manage high parking demand is to increase pricing, while offering convenient alternative transportation programs. Many universities keep parking prices consistent and give priority for better locations based on need or status, or create long waiting lists for priority parking lots. Artificially keeping prices low when demand is high only works to perpetuate a sense that more parking is needed to satisfy demand. The cost to build structured parking is approximately $30,000 per space,[42] and permit prices do not reflect this staggering cost.

For UIC, a tiered pricing structure based on demand and consistent with market value may be the best option for spreading demand throughout the campus parking resources. Under such a pricing structure, UIC's parking supply would be split into 3 tiers of pricing. The low permit tier includes all lots that have a 0-50 percent occupancy rate, with the prices increasing 10 percent above the current rate charged. The medium tier includes lots that have a 51-90 percent occupancy rate, and would be raised 30 percent for all permit holders; and the high permit tier inclusive of all lots that have a 90-100 percent occupancy rate, with price increasing by 50 percent. These price increases will ensure that drivers who are willing and able to pay for a spot in this location will do so, ultimately reducing the demand and excessive waiting lists currently associated with these lots, and increasing revenue — which can help offset the cost of construction of future parking facilities.

[42] See CMAP's Parking Strategies for Livable Communities for more on parking and the cost of structured parking: http://www.cmap.illinois.gov/programs-and-resources/local-ordinances-toolkits/parking.

An issue of equity often arises when price increases are discussed. Often, when prices are increased, it penalizes employees who are unable to afford higher fees and neglects this user group. However, one of the main considerations when creating this pricing proposal was to account for this cohort. This was accomplished by allowing lots that are lower in demand to marginally increase (10 percent) from the existing permit rate, creating a rate that is closer to the market but still affordable to lower income drivers. Discounts may also be provided to night-shift workers who may not be able to pay higher parking rates, and who may feel unsafe using transit and parking in lots farther from their work location at night, when there are fewer 'eyes on the street.' Additionally, an enhanced (and safer) pedestrian environment will make the walk from further lots safer and more enjoyable.

Another way to address equity issues is to offer priority parking to carpoolers. They could offer parking in the more expensive high-demand structures/lots for carpoolers and charge them a low-tier price. A carpool incentive, in conjunction with a higher cost to park in the most desirable locations, will incentivize some drivers to carpool, and shift others to underutilized lots and alternative transportation.

3.2 Update the current permit renewal process and offer permit options for short-term and those who drive periodically.

The existing automatic permit renewal policy currently encourages users to renew their parking permits and has a 90-100 percent renewal rate. Potential applicants are placed on a waiting list for one to seven years. This structure inflates demand over time, leading to the construction of additional, and possibly unnecessary, parking. Requiring drivers to go through a permit renewal process each year may result in a greater likelihood that some drivers will consider alternate commuting options, carpooling, or shift to a different parking lot.

One of the main differences between UIC's parking management policies and other universities is the absence of parking options for occasional drivers. The number of times a driver parks within UIC's boundaries greatly varies between user type and location; however, the existing payment structure does not offer payment options that reflect these factors. This leads more users to purchase permits and incentivizes card holders to drive despite their fluctuating schedules.

Parking Services could create multiple plan options for users to choose from. For example, an infrequent driver could have the option to purchase a plan with 20 passes per semester, the equivalent of driving to campus one day per week. Options for users who drive 2 or 3 times per week could be offered as well. This system better accommodates individual schedules, reduces the number of permits purchased, and decreases the overall demand for campus parking.

3.3 Eliminate parking requirements for developments within 1,000 feet of transit hubs and require "unbundled parking" pricing.

When formulating a comprehensive parking policy, the University should commit to the elimination of parking requirements for developments near transit hubs. While the University does not have minimum parking requirements for new on-campus developments, they often apply the City of Chicago's parking requirements to new developments or base their desired parking quantity on examples from other campuses. New housing developments near transit should have no minimum parking requirements, and developments that do provide parking should provide it at an additional cost to residents (rather than included with the rental price). When the cost of parking is separate from the cost of housing, it is called "unbundled parking." This helps to lower construction costs, and to lower the cost of living for those that do not have a personal vehicle. Such housing options should have nearby bike- and car-share vehicles, easy transit access, as well as secure bicycle parking amenities. A variety of housing options and a mix of uses near transit will help to increase campus activity without over-burdening the traffic congestion and parking supply.

3.4 Develop parking design guidelines.

Parking lots are designed for the movement of vehicles and typically lack decent pedestrian accommodations. Expansive impervious surfaces can cause flooding and pollution issues, and parking garages without ground floor commercial spaces create an uninviting atmosphere for pedestrians by creating dead zones along the street.

Parking design guidelines would address issues created by parking lots and how to mitigate their adverse effects. Mitigation efforts could include the following recommendations:

Pedestrian Walkways

Parking lots should contain pedestrian walkways between 8 to 10 feet in width between parking rows. These walkways provide a safe place for pedestrians to be while they are walking to and from their vehicle. These walkways could also be lined with trees and paved with permeable pavers to enhance stormwater management.

Vegetated Walls

Parking garage walls could be covered in vegetation (vine plants, hanging gardens, etc.) to help soften their appearance and help improve the pedestrian realm.

Ground floor commercial

New parking garages should include ground floor commercial spaces to help activate the surrounding area where appropriate. This will help to activate a dead zone, and make the area more comfortable for pedestrians.

Building Ring

Ensure that the first 50 to 75 feet of all major street frontages for parking lots one-quarter acre in size or greater are fronted by mixed use buildings.

3.5 Investigate the possibility of reducing health care costs for people who do not drive to work.

People using alternative modes of transportation engage in more physical activity during their commutes than drivers, which provides physical and mental health benefits. Cumulatively, these health advantages have the potential to translate directly into broad health care cost savings for the University. Though the University's health care is controlled by the State of Illinois, it may be possible for UIC to work with the state to incentivize active transportation options by reducing health care costs for individuals that utilize these alternative modes. One of the insurance plans offered by the University is Blue Cross Blue Shield, which recently offered a promotion giving discounts on Divvy Bike Share memberships for their subscribers, capitalizing on the health benefits that active transportation can bring.

4. Provide real-time data about parking availability, information, and cost.

When drivers have access to real-time parking information, they can make better decisions about where to park, which can lead to reduced traffic congestion due to drivers seeking parking spaces. The real-time information can include data on the number of parking spaces available at various locations, cost of parking options, and any other relevant information like special events or traffic delays. The information could be provided on a webpage or through an app. Spot Hero is an example of an app that allows users to search for, reserve, and pay for parking spots before arriving.

Divvy Bike Share station.
Source: Steven Vance.

5. Ensure that there is adequate parking accessible to people with disabilities.

Due to physical impairments, some people are only able to travel by car and their journey should be as seamless and convenient as possible. Simple inconveniences like a hard-to-reach ID card reader can prove to be significant barriers for people with mobility impairments. Other potential barriers to accessibility include sidewalk conditions, ID card readers that require the user to slide a card rather than tap, flooded walkways, and accumulated snow not cleared or improperly plowed into the accessible walkway.

5.1 Transition ID card readers to contactless smart card systems or transponders.

Some people have a difficult time using ID card readers that require the specific motion of sliding a card as a result of arthritis or other physical impairment. Contactless smart cards use RFID technology to pass information through radio waves so that a card holder would simply tap the ID over a reader rather than slide a magnetic strip. This would require chips to be embedded into the ID and might be cost-prohibitive for the University to implement for all users. One solution would be to add an RFID system to University parking areas and allow users to apply for a contactless smart card, with the long-term possibility of transitioning all users to the system. Another option would be to use long-range card reader systems (transponders), where the transponder is in the vehicle (similar to I-Pass) and the receiver is near the driveway gate or garage door. This type of systems is typically connected to a telephone entry system or centralized control system.

5.2 Ensure clear pathways from accessible parking spaces.

Improved stormwater management in parking lots and the pathways that connect parking lots to campus buildings will help to prevent many of the flooding issues cited in the public outreach process. Some potential stormwater improvements offer the added benefit of beautifying the parking lot, such as the use of vegetated filter strips, tree box filters, native plantings, and permeable pavers.

For problems with accumulation of snow during winter events, the University should take care to provide clear paths from accessible parking spaces to buildings and improve the ability of users to report poor conditions in real-time so that any problems can be immediately addressed. (Also see Walking and Campus Navigation Recommendation 5 for more information).

Principle

An appropriate mix and density of land uses helps activate the campus environment during off-peak hours and encourage greater use of active transportation modes.

Goal

Create more diverse mixed-use environments on and adjacent to campus.

Challenges & Opportunities

- Limited high quality and/or affordable housing on and near campus, particularly for couples and families, limits the ability to live near campus.
- Limited commercial uses on campus leads campus users to leave campus for errands or entertainment and limits the hours of pedestrian activity.
- Low density around transit hubs limits the potential number of transit users.

Land Use

Successful multimodal transportation systems (including efficient transit, safe cycling and pedestrian environments) require supportive land use. Transit expansion should be accompanied by land use planning that seeks to create an affordable, transit-friendly environment, with investments in sidewalks, bus shelters, bicycle accommodations, and other infrastructure. Transit decision makers should prioritize investments in places where supportive land use planning is occurring.

When people are able to live near their jobs (and students live near their campus), it helps to reduce travel costs, pollution, and congestion. Efficient use of land that supports walking, bicycling, and access to transit also reduces energy consumption — saving money for individuals, communities, and the region.

Recommendations

The following recommendations support infill development to create opportunities for more compact, walkable, and mixed-use developments, with a range of housing options within easy travel distance to campus. Growth that emphasizes access to transit and other transportation alternatives can reduce reliance on cars, helping to reduce congestion and transportation costs for everyone. UIC's land use decisions, and those of local developers, should focus on the interrelationship of transportation, land use, and housing, with an emphasis on development patterns that support the use of public transit and access to jobs and destinations.

1. Provide a variety of commercial and entertainment uses on campus, and support nearby residential development.

As identified in the UIC Master Plan, ground floor space in some existing University buildings could be re-purposed as commercial uses for people who live on campus or are on campus at late hours. These uses can generate pedestrian activity throughout day and nighttime hours. It is also important that the uses serve the surrounding community and pull in additional customers, acting as a "good neighbor" and helping the businesses to succeed. The near-term Gateway mixed-use project will meet some of the demand for new commercial and entertainment uses near campus.

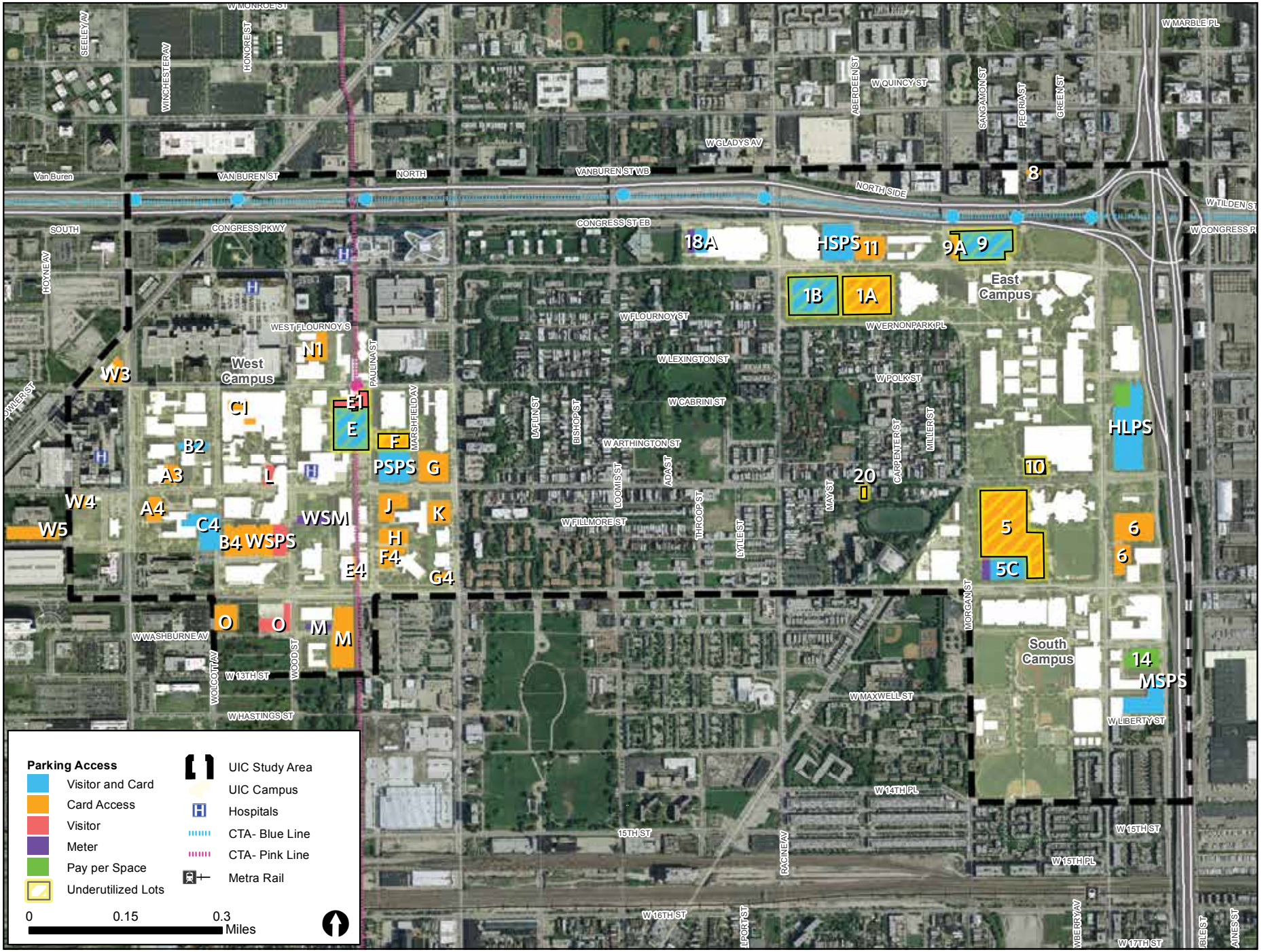
Though the University itself is prioritizing the use of on-campus infill opportunities for academic buildings and facilities, it should advocate for the continuing development of a variety of housing options near campus for students, faculty, and staff. Many people would live closer to campus and reduce reliance on automobiles if there were more affordable, quality housing options to suit the different needs of campus users, including couples and families with children.

1.1 Identify infill sites with potential for redevelopment.

With a focus on areas around existing transit nodes and neighborhood commercial centers, the University should identify and prioritize potential sites for re-development. This will concentrate new development in key areas that will help to support transit and neighboring centers, integrate the university and surrounding neighborhoods, and make the University more attractive and livable. This strategy would fall under the purview of the Campus Master Planning Committee.

UIC should focus on potential infill sites that are on-campus, near transit, and currently underutilized. This could include the repurposing of parking lots 1B, 1A, 5, 9, 10, and 20 on the east side of campus and E, E1, and F on the west campus (highlighted parking lots in Figure 62). These locations are prime infill sites for mixed-use development due to proximity to transit hubs (Blue Line UIC-Halsted & Racine Stations, Pink Line Polk Street Station) and neighborhood commercial centers (Little Italy and Greektown). In an effort to connect to the broader community, commercial sites should be located in high visibility locations, such as streets at the perimeter of campus or on major thoroughfares internal to campus. Mixed-use projects can benefit from public-private partnerships to share costs and develop synergistic uses. Joint venture projects should be considered for large sites that allow for more flexibility.

Figure 62. Potential infill parking lots



Source: Chicago Metropolitan Agency for Planning.

1.2 Offer students, faculty, and staff diverse and affordable housing options.

In the popular neighborhoods surrounding the UIC campus, housing has become increasingly expensive, making it harder for students, faculty, and staff to live within walking and biking distance to campus — especially if they have families. A diverse housing stock with variably sized units will help to meet demand for the UIC community, and help to improve recruitment and retention of both the student body and its faculty and staff.

The University can construct new housing units or acquire and manage existing housing in the area. Low rental prices for properties owned by the University would help attract students, faculty, and staff. The Office of Capital Programs – Real Estate Planning and Services, could also develop a financial assistance program for faculty that want to purchase housing within 1 mile of campus. Along those lines, the University of Colorado has developed a need-based faculty housing assistance program to provide loans to help with down payments needed to qualify for a loan and potentially avoid the cost of private mortgage insurance.[43]

2. Encourage more commercial, residential, and mixed-use development near transit that is oriented toward pedestrians and alternative modes of transportation.

New mixed-use buildings that provide for the needs of the UIC community throughout the day (such as restaurants, daycare facilities, and movie theatres) help to generate foot traffic that will lead to a more active pedestrian environment during day and nighttime hours, as well as an increased sense of safety. The University can work with developers to identify sites for redevelopment on and near campus, focusing on transit nodes and other important hubs of activity.

2.1 Promote land uses that support active transportation.

The University should encourage the development of mixed-use buildings with an active ground floor, located close to transit, with substantial secure bicycle parking. UIC should identify potential sites in new and existing buildings that could be turned into new activity centers. By encouraging a mix of residential, academic, and commercial uses, UIC and the Illinois Medical District could meet their mutual goal of creating a livable, 24-hour community.

UIC could create a mixed use extension of Little Italy/ University Village along Taylor Street east of Morgan Street. This would require new development on a portion of Lot 5 and all of Lot 10. The north-south passage through the SEL complex could also have the ground floor retrofitted to provide new activity-generating uses; this would require new window and door bays to be created in order to make the buildings more transparent

[43] For more information, see: http://www.cu.edu/treasurer/faculty-housing-assistance-program-0.

and welcoming to pedestrians. This could be done with a relatively minor impact to the classrooms and labs in the building since general seating and study areas front the passage; however these areas are blocked off from the passage by the solid cinderblock wall. These new bays will also allow for more eyes to be on the passageway at all times, increasing the safety of pedestrians, and will help to deter bicycle theft.

Pace has created an interactive and downloadable set of guidelines to foster transit-supportive development that will enable reliable, efficient, convenient, and accessible transit in communities throughout the Chicago region. The guidelines are available online: http://pacebus.com/guidelines/01a_intro.asp.
Source: Pace.

2.2 Create guidelines for on-campus urban and building design.

Urban design dramatically affects the way people utilize public spaces and how they commute, particularly how they engage with the surrounding buildings and environment. Good urban design principles make people feel comfortable in their surroundings, while bad urban design makes people feel unsafe or discourages active street life. Design guidelines will provide uniform materials, styles, and designs throughout the university, which will increase the comfort level while making the campus more professional and uniform looking.

Leadership in Energy and Environmental Design (LEED) is a well-known program administered by the U.S. Green Building Council that evaluates and certifies green buildings. LEED-ND, or LEED for Neighborhood Development, takes the concept of environmental efficiency beyond the individual building and applies it to the neighborhood context. LEED-ND has established a set of measurable standards for developments that can help a developer get recognition for supportive neighborhood development, but they also serve as a "ready-made" set of environmental standard for land development, and could be adopted by the University. For example, the standards supporting walkable streets include the following requirements:[44]

[44] U.S. Green Building Council. LEED ND: Built Project, v4. Available online: http://www.usgbc.org/credits/neighborhood-development-plan-neighborhood-development/v4-draft/npdp1 . Accessed 12/15/14.

Design and build the project such that all of the following are achieved:

a. For 90 percent of new building frontage, a principal functional entry on the front façade faces a public space such as a street, square, park, paseo, or plaza, but not a parking lot, and is connected to sidewalks or equivalent provisions for walking. The square, park, or plaza shall be at least 50 feet wide at a point perpendicular to each entry.

b. At least 15 percent of existing and new street frontage within and bordering the project has a minimum building-height-to-street-width ratio of 1:3, or a minimum of one foot of building height for every three feet of street width.

- *Alleys and driveways are excluded.*
- *Non-motorized rights-of-way may be counted toward the 15 percent requirement, but 100 percent of such spaces must have a minimum building-height-to-street-width ratio of 1:1.*
- *Street frontage is measured in linear feet.*
- *Projects with bordering street frontage are only responsible for meeting their proportional share of the height-to-width ratio, i.e. only on the project side of the street.*
- *Building height is measured to eaves or the top of the roof for a flat roof structure, and street width is measured facade-to-facade. For block frontages with multiple heights and/or widths, use average heights or widths weighted by each segment's linear share of total block distance*

c. Continuous sidewalks, or equivalent all-weather provisions for walking, are provided along both sides of 90 percent of streets or frontage within the project, including the project-side of streets bordering the project. New sidewalks, whether adjacent to streets or not, must be at least 8 feet wide on retail or mixed use blocks and at least 6 feet wide on all other blocks. Equivalent provisions for walking include woonerfs and all-weather surface footpaths. Alleys, driveways, and reconstructed existing sidewalks are excluded from these calculations.

d. No more than 20 percent of the street frontages within the project are faced directly by garage and service bay openings.

Projects located in a designated historic district subject to review by a local historic preservation entity are exempt from (b), (c), and (d) if approval for compliance is not granted by the review body. Projects located in historic districts listed in or eligible for listing in a State Register or the National Register of Historic Places that are subject to review by a State Historic Preservation Office (SHPO) or the National Park Service, are exempt from (b), (c), and (d) if approval for compliance is not granted.

This strategy would fall under the purview of the Campus Master Planning Committee and the Facility and Space Planning Department.

Examples of campuses that have created design guidelines include: University of Colorado, Denver — Anschutz Medical Campus Design & Development Guidelines; Stanford University — Central Campus Design Guidelines; University of California Santa Barbara — The Campus Plan for the University of California Santa Barbara.

4. PRIORITIZATION AND IMPLEMENTATION

For UIC to fully take advantage of the multi-modal transportation network that it is served by, the University must be proactive in identifying new opportunities to make on-campus improvements and in collaborating with local agencies and stakeholders to improve connections into existing services and communities. This section provides a summary of mode-specific recommendations and prioritized implementation strategies that enhance the University's connectivity and accessibility and can be immediately incorporated into its development framework and vision.

In recognition of the role different UIC offices and local agencies play within the study area, this chapter identifies a lead implementer and key partners for each strategy.

UIC has the unique advantage of being located in an increasingly dense and walkable area of the city tied directly into the city's existing and planned transit and bicycle networks. The recommendations put forth in this plan were developed to build on this advantage, improve on-campus mobility, and decrease the reliance on automobiles. Implementing components of the Multimodal Transportation Plan will require the University to be strategic in prioritizing the proposed programs, policies, and infrastructure projects to overcome the main implementation barriers. Navigating funding and administrative challenges are fundamental to successful implementation of this plan, as is the need for coordination and compliance with local transportation agencies and other partners.

Many of the plan's recommendations focus on strategies geared towards improving fundamental awareness and knowledge of all transportation options available to the UIC community. Whether focused on outreach and marketing of existing services and their benefits, or developing more useful information resources and signage, these short and mid-term education and engagement programs can be pursued immediately in partnership with targeted UIC offices and groups. The Transportation Demand Management (TDM) policies discussed in the plan will also benefit from quality outreach and will be most effective if administered from a dedicated administrative office. Likewise, incorporating the proposed land use policies into University operations will lay the groundwork for more consistent implementation of the plan's physical recommendations and the long-term development framework set forth in the 2010 Campus Master Plan.

Infrastructure projects proposed as part of the Multimodal Transportation Plan range from less capital-intensive investments such as improved signage and on-street markings to more intensive intersection enhancements and roadway redesigns. While off-campus infrastructure improvements will require a significant amount of coordination with transportation agencies, the proposed on-campus enhancements to the pedestrian and bicyclist environment can be pursued in conjunction with the aforementioned programs and policies. Many on-campus infrastructure projects such as the introduction of on-campus bikeways and centralized bike parking facilities will require multiple steps including piloting of the concept for a defined period of time. Other capital projects focused on improving the conditions of facilities that should be prioritized for implementation in targeted areas. These areas include major transit and active transportation nodes near transit facilities and popular campus locations that have been flagged in the plan for their importance as well as their and safety and convenience deficiencies. Making improvements in these areas that benefit mobility and accessibility on UIC's campus and invite cooperation by local agencies will result in more cohesive connections between the campus and the city's pedestrian, bicycle, and transit networks.

The following table lists the recommendations from the plan, suggested initiation steps for each recommendation, phasing, and potential lead implementers and partners. The recommendations fall into three categories: program, policy, and infrastructure. For phasing information, it is not expected that UIC would be able to complete all tasks within the identified time frame; rather, this information should be viewed as ease of implementation with regards to how long it may take to make progress. Some of the challenges to implementation include coordination efforts, data collection, or political opposition to changes.

Implementation table

Rec. #/Recommendation	Type	Phasing			Next steps	Level of complexity/difficulty in implementation 1 = easy to 5 = difficult	Cost $ = low to $$$$ = high
		0-18 months	18 months - 3 years	3+ years			
WALKING & NAVIGATION							
1. Install new wayfinding system and maps at strategic locations							
1.1. Create a branded signage and wayfinding program	Program	X			Assemble a committee to identify priority areas for signage and develop brand standards.	2	$$
1.2. Develop a universally accessible campus map and programs for people with disabilities	Program	X	X		Assemble a committee to research and identify best practices and strategies for a universally accessible wayfinding system.	3	$$
2. Coordinate with CDOT to increase the safety of crosswalks and intersections							
2.1. As streets are improved or resurfaced, work with CDOT to reconfigure identified conflict intersections and mid-block crossings according to recommendations set forth in the Master Plan	Infrastructure	X	X	X	Maintain regular contact with CDOT	2	$
2.2. Repaint crosswalks, starting with those most heavily used	Infrastructure	X			Develop inventory map	2	$
2.3. Install and maintain"State Law – Stop for Pedestrians" signs	Infrastructure	X			Develop map and submit to CDOT for approval	1	$
2.4. Install safety tools at signalized intersections	Infrastructure		X		Create priority map and coordinate with CDOT and IDOT	2 to 3	$$
2.5. Reduce pedestrian crossing time with bump-outs/curb extensions	Infrastructure		X	X	Prepare engineering plans	2 to 3	$$
2.6. Coordinate snow removal with the City of Chicago Department of Streets and Sanitation	Policy	X			Develop priority map	1	$
3. Enhance the pedestrian environment							
3.1. Make physical improvements that create clear and inviting pedestrian pathways	Infrastructure	X	X		Prepare engineering plans	3 to 5	$$$
3.2. Install automatic pedestrian and bicycle counters along primary and secondary university pathways, near transit hubs	Infrastructure		X		Prepare engineering plans	2	$
3.3. Support and encourage public art along primary and secondary pedestrian pathways	Program		X	X	Assemble a committee to select locations	1	$
3.4. Formalize cut-through paths throughout campus	Infrastructure		X		Prepare plan	3	$$$

Implementation table continued

Rec. #/Recommendation	Type	Phasing			Next steps	Level of complexity/difficulty in implementation 1 = easy to 5 = difficult	Cost $ = low to $$$$ = high
		0-18 months	18 months - 3 years	3+ years			
WALKING & NAVIGATION CONTINUED							
4. Clearly designate pedestrian and bicycle environments to minimize conflicts							
4.1. Create a bicycle only network on the campus interior	Infrastructure		X		Develop bike map	2	$
4.2. Create a Pedestrian Priority Zone around for the East Side quad	Policy	X	X		Develop sidewalk / pathway map and create a bicycle wayfinding plan to keep bicyclist out of the pedestrian zone	2	$
4.3. Create a bicycle and pedestrian safety handbook	Program	X			Write and publish handbook	1	$
4.4. Install shared streets ("woonerfs") on streets with low vehicular traffic and high pedestrian traffic	Infrastructure		X	X	Maintain regular contact with CDOT	2	$
5. Improve reporting of street and sidewalk conditions, accessibility problems, and safety issues							
5.1. Promote the use of an online conditions reporting tool to students, faculty, staff, and visitors	Program	X			Develop marketing strategy	1	$
BICYCLING							
1. Encourage cycling through pursuit of higher status in the Bicycle Friendly University (BFU) program							
1.1. Finalize off-street bike routes and placement of pavement markings	Policy	X			Work with focus groups to review proposed routes and pavement markings	1	$
1.2. Develop a mode-specific bicycle plan for the campus area to formalize infrastructure improvements and bicycle-friendly policies	Policy		X		Hire a consulting team to develop a map and pavement marking and signage plan for off-street bikeways on campus property and to develop recommendations for bike-friendly policies.	2 to 3	$
2. Improve bicycle circulation and safety throughout campus and the surrounding area							
2.1. Establish direct and safe on-street bikeways connecting the two sides of campus to one another and into the broader network	Infrastructure	X	X		Prepare engineering plans for bike lanes, paths, etc.	1	$$
Polk East-West Connector	Infrastructure	X			Prepare engineering plans for bike lanes, paths, etc.	1	$$
Taylor Street Extension	Infrastructure		X		Prepare engineering plans for bike lanes, paths, etc.	1	$$
2.2. Consult and collaborate with CDOT on improving existing facilities	Infrastructure	X	X	X	Assemble a stakeholders committee to develop improvement priorities	1	$

Implementation table continued

Rec. #/Recommendation	Type	Phasing			Next steps	Level of complexity/difficulty in implementation 1 = easy to 5 = difficult	Cost $ = low to $$$$ = high
		0-18 months	18 months - 3 years	3+ years			
BICYCLING CONTINUED							
2.3. Develop on-campus bikeway network, utilizing existing pathways (ID paths, develop signage and markings system).	Infrastructure		X		ID paths, develop signage and markings system	1 to 2	$
2.4. Eliminate physical barriers to bicycling on campus	Infrastructure		X		Identify improvement locations and prepare demolition / construction plans as necessary	3	$ to $$$
3. Work with Divvy Bikes to increase the accessibility and use of bike sharing on and around campus							
3.1. Promote Divvy to UIC community	Program	X			Work with CDOT to develop marketing materials to promote Divvy to campus users. Identify key on-campus fairs and events to attend and promote Divvy.	1	$
3.2. Reduce barriers to Divvy membership	Policy	X	X		Identify a strategy for further subsidizing UIC-affiliate bike share memberships. Partner with other local universities to develop shared strategy.	1 to 2	$
3.3. Work with City of Chicago and Divvy Bikes to expand and improve bike share infrastructure at UIC and in the surrounding areas	Infrastructure	X	X		Prepare divvy bike facility plan for implementation	1 to 2	$$
4. Increase and improve on-campus bicycle parking							
4.1. Develop centralized and secure bicycle parking and service hubs	Infrastructure	X	X		Prepare bike facility plan for implementation	2 to 3	$$
5. Integrate and develop connections between bicycling and other modes of transportation							
5.1. Develop programs to increase the knowledge, visibility and enthusiasm for cycling	Program	X	X				
TRANSIT							
1. Simplify and improve operations of UIC Shuttle System							
1.1. Prioritize service to transit hubs and campus activity centers	Program		X		Apply for grant to fund analysis	2	$$
1.2. Eliminate Redundant Service and Fill Gaps along CTA routes	Program		X		Develop bike route plan	2	$
1.3. Consider Consolidating Daytime Shuttle System	Program		X		Apply for grant to fund test	3	$
1.4. Streamline shuttle system operations data collection and analysis to better inform future service changes	Policy		X		Coordinate with CTA	3	$$

Implementation table continued

Rec. #/Recommendation	Type	Phasing			Next steps	Level of complexity/difficulty in implementation 1 = easy to 5 = difficult	Cost $ = low to $$$$ = high
		0-18 months	18 months - 3 years	3+ years			
TRANSIT CONTINUED							
2. Increase awareness and availability of information for all on-campus transit services							
2.1. Promote shuttle service to UIC community and targeted groups at recurring official events, through social media, and print media	Program	X			Develop marketing / advertising program	1	$
2.1.1. Design and apply new paint or decal schemes to shuttle vehicles to increase on-street visibility	Policy	X			Develop paint and decal schemes	1	$
2.1.2. Review existing options and market offerings for high-quality transit signage, including digital displays	Policy	X			Inventory signage and research signage options	1	$
2.2. Provide high-quality on-campus transit information to the UIC community	Infrastructure		X		Prepare plans for locating and building kiosks	3	$$$
2.2.1. Design and install shuttle and transit information kiosks at prioritized transit hubs to provide high-quality and real-time information to the UIC community	Infrastructure		X	X	Prepare plans for locating and building kiosks	3	$$$
3. Improve the operation of campus transportation options to better accommodate people with disabilities							
3.1. Improve the UIC Shuttle System for people with disabilities	Policy	X			Develop plan	2	$
3.1.1. Develop and require recurring passenger sensitivity training for all UIC transportation operators	Policy	X			Assemble teachers and training materials	2	$
3.1.2. Require audible shuttle stop announcements	Policy	X			Coordinate with CTA	2 to 3	$$
3.1.3. Make Improvements to the UIC Shuttle Fleet	Infrastructure		X	X	Develop plan	2 to 3	$
3.2. Improve the UIC Paratransit Service for people with disabilities	Policy	X			Develop plan	2 to 3	$
3.2.1. Conduct analyses on UIC paratransit demand to determine feasibility of expanding paratransit service area	Program	X			Apply for grant to fund analysis	2	$$
3.2.2. Develop streamlined paratransit reservation process and management system	Program	X	X		Conduct analysis	2 to 3	$$
4. Improve access to, and conditions of, on-campus transit facilities							
4.1. Locate, design, and maintain UIC shuttle stops to maximize comfort and integration into the pedestrian environment	Policy		X		Coordinate with CTA	2	$
4.2. Consult and Collaborate with CTA on rail station accessibility improvements	Infrastructure	X	X		Coordinate with CTA	3	$$ to $$$$
5. Provide enhanced commuter transit benefits to faculty and staff							
5.1. Assess the demand for and feasibility of providing transit subsidies to employees.	Policy		X		Review best practices in internal and external program delivery, survey faculty and staff to determine demand and feasibility of providing transit subsidies.	1 to 2	$

Implementation table continued

Rec. #/Recommendation	Type	Phasing			Next steps	Level of complexity/difficulty in implementation 1 = easy to 5 = difficult	Cost $ = low to $$$$ = high
		0-18 months	18 months - 3 years	3+ years			
DRIVING & PARKING							
1. Adopt and implement a UIC complete streets policy							
1.1. Formally adopt and implement a complete streets policy for the University	Policy	X			Prepare and publish complete streets policy	1	$
2. Increase road safety and decrease vehicle conflict zones through street typologies, visual cues, and speed control							
2.1. As streets need improvements or resurfacing, work with CDOT to reconfigure their design according to roadway typologies set forth in the Master Plan.	Infrastructure		X		Coordinate with CDOT	2	$$
2.2. Install gateway markers at key campus entry points	Infrastructure			X	Prepare location plans	2	$$
2.3. Implement an on-campus speed limit of 20 miles per hour on streets within the campus area	Policy		X	X	Conduct sign inventory and replace speed limit signs	1	$
3. Develop a comprehensive parking policy for the campus							
3.1. Price parking based on demand and offer priority parking spaces to carpoolers	Policy		X		Develop computer inventory tracking system	2 to 3	$$
3.2. Update the current parking permit renew system and offer new options for short-term and periodic drivers	Policy		X		Develop computer program upgrade for renewals	2	$
3.3. Eliminate parking requirements for developments within 1,000 feet of transit hubs and require “unbundled parking” pricing	Policy		X	X	Write and publish policy	1	$
3.4. Develop parking design guidelines	Policy		X		Write / draw parking design guidelines and publish	1	$
3.5. Investigate the possibility of reducing health care costs for people who do not drive to work	Program		X		Assemble committee to research	1	$
4. Provide real-time data about parking availability, information, and cost							
4.1. Develop a webpage and/or an app to provide real-time parking information. (Research best practices)	Program		X	X	Develop computer program	3 to 4	$$
5. Ensure that all parking is accessible to people with disabilities							
5.1. Transition ID card readers to contactless smart card systems or transponders	Infrastructure		X		RFQ / RFP vendors	2 to 3	$$ to $$$
5.2. Ensure clear pathways from accessible parking spaces	Infrastructure	X	X		Inform maintenance employees	2 to 3	$ to $$$
LAND USE							
1. Provide a variety of commercial and entertainment uses on campus, and support nearby residential development							
1.1. Identify infill sites with potential for re-development	Program		X	X	RFQ / RFP planning consultants	1	$
1.2. Offer students, faculty, and staff diverse and affordable housing options on or near campus	Program			X	Promote program	1 to 2	$
2. Encourage more commercial, residential, and mixed-use development near transit that is oriented towards pedestrians and alternative modes of transportation							
2.1. Promote land uses that support active transportation	Policy			X	Develop marketing strategies	1 to 2	$
2.2. Create guidelines for on-campus urban and building design	Policy			X	Write and publish guidelines	1	$

5. FUNDING RESOURCES

This section identifies specific public funding sources that may be used to develop and implement the bicycle and pedestrian enhancements recommended in the UIC Multimodal Transportation Plan. While most of the enhancements the Plan recommends are capital improvement projects, UIC should also consider further, more detailed planning initiatives, as well as safety, education, and encouragement programs, which can help increase cycling and walking while reducing crashes.

Funds for developing and implementing bicycle and pedestrian projects and programs can be obtained through four primary sources: government funding sources, private sector resources, community fundraising and creative partnerships, and foundations. Details on each of these funding avenues — as well as case studies and funding resources and research — can be found at the Funding Revenue Sources web page of the Pedestrian and Bicycle Information Center, a national clearinghouse for information about health and safety, engineering, advocacy, education, enforcement, access, and mobility for pedestrians and bicyclists.[45] Most major public funding programs originate with the federal government and thus involve the use of federal funds. University officials should be aware that the use of federal funds carries with it significant processing and reporting requirements. The University will need to coordinate with CDOT for funding most infrastructure improvements identified in this plan.

[45] See http://www.pedbikeinfo.org/planning/funding.cfm.

The following are some of the primary funding resources that UIC could pursue, and associated recommendations from this plan.

Congestion Mitigation and Air Quality Improvement Program

CMAQ funds bicycle, pedestrian, transit, and congestion relief projects. It prioritizes projects that have substantial air quality benefits by reducing single occupancy vehicle use. Numerous strategies in this plan are eligible for funding from the CMAQ program. Per CMAQ rules, pedestrian improvements are limited to those that directly promote safe access to transit facilities. State agencies are eligible to receive CMAQ funds.

Potential eligible recommendations:

Walking and Campus Navigation

- 1.1 Create a branded signage and wayfinding program.
- 2.1 As streets are improved or re-surfaced, work with CDOT to reconfigure identified conflict intersections and mid-block crossings according to recommendations set forth in the Master Plan.
- 4.4 Install woonerfs on streets with low vehicular traffic and high pedestrian traffic.

Bicycling

- 2.1 Develop direct and safe on-street bikeways connecting the two sides of campus to one another and into the broader network.
- 2.4 Eliminate physical barriers to bicycling on campus.

Transit Recommendations

- 1.1 Identify new routing to prioritize service to transit hubs and eliminate redundancies with CTA service.
- 1.3 Test Semester Express route, or other route identified in analyses, to evaluate impact of concentrating resources in a consolidated system.
- 4.1 Locate, design, and maintain transit facilities to maximize comfort and integration into pedestrian network.

CMAQ Program Recommended Proposals

- Start-up and operating costs of a pilot phase of new cross-campus route.
- Implement recommended improvements to bus stops and CTA Pink Line Polk Station.
- Purchase and installation of passenger transit information displays for high-traffic buildings.
- Intersection improvements for Harrison and Halsted, Harrison and Morgan, and mid-block on Paulina Street between Polk and Taylor.
- Construct Polk-Loomis-Harrison Complete Streets project.
- Complete Taylor Street bikeway network improvements.
- Fix spot barrier bicycling problems identified in plan for Morgan, Vernon Park Place, Polk and Lexington streets.
- Woonerf on Peoria Street between CTA station and Van Buren Street.

Transportation Alternatives Program (through IDOT)

The Federal Highway Administration provides funding to the Illinois Department of Transportation (IDOT) and to Chicago Metropolitan Agency for Planning (CMAP) via the Transportation Alternatives Program (TAP). These funds are then sub-granted to eligible entities for projects that improve bicycle and pedestrian networks. University of Illinois at Chicago, as a state agency, cannot be the primary applicant but may partner with an eligible applicant such as the City of Chicago. CMAP has chosen to dedicate its TAP funds to completing the regional greenways and trails network. This likely precludes any funding for projects identified in this plan. However, several identified projects may be eligible for funding from IDOT.

Specific potential eligible recommendations (numbers reference the recommendation number from this plan):

Walking and Campus Navigation

- 1.1 Create a branded signage and wayfinding program.
- 2.1 As streets are improved or re-surfaced, work with CDOT to reconfigure identified conflict intersections and mid-block crossings according to recommendations set forth in the Master Plan.
- 2.2 Repaint crosswalks, starting with those most heavily used.
- 2.4 Install safety tools at signalized intersections.
- 2.5 Reduce pedestrian crossing time with bump-outs/curb extensions.
- 3.1 Make physical improvements that create clear and inviting pedestrian pathways.
- 3.4 Formalize cut-through paths throughout campus.
- 4.1 Create a bicycle-only network on the campus interior.
- 4.4 Install woonerfs on streets with low vehicular traffic and high pedestrian traffic.

Bicycling

- 2.1 Develop direct and safe on-street bikeways connecting the two sides of campus to one another and into the broader network.
- 2.3 Develop a network of on-campus bikeways.
- 2.4 Eliminate physical barriers to bicycling on campus.

Transportation Alternatives Program Recommended Proposals

- Developing the identified cut-through paths in Walking and Campus Navigation Recommendation.
- Create pedestrian-friendly intersections and mid-block crossings at each location identified in Walking and Campus Navigation Recommendation.
- Install curb-outs on Taylor Street and Roosevelt Road.
- Widen sidewalks on Harrison, Racine, Roosevelt and Ashland roads.
- Purchase and install consistent street furniture (limited to concurrent TAP funded roadway project on same corridor).
- Install woonerfs on Wolcott and Marshfield streets.
- Complete Polk-Racine-Lexington bikeway route.
- Develop East Campus bikeway network.
- Develop campus-wide wayfinding and signage network.

TIGER Program

The Transportation Investment Generating Economic Recovery (TIGER) program is funded by the U.S. Department of Transportation. These highly competitive discretionary grants support the development of multi-modal transportation networks that enhance local economies and advance transportation safety. The University of Illinois at Chicago can be a primary applicant. Most of the construction projects identified in this plan are eligible for funding. To be competitive, projects should be selected that best advance the multi-modal network and have significant regional benefits.

Walking and Campus Navigation

- 1.1 Create a branded signage and wayfinding program.
- 2.1 As streets are improved or re-surfaced, work with CDOT to reconfigure identified conflict intersections and mid-block crossings according to recommendations set forth in the Master Plan.
- 2.2 Repaint crosswalks, starting with those most heavily used.
- 2.4 Install safety tools at signalized intersections.
- 2.5 Reduce pedestrian crossing time with bump-outs/curb extensions.
- 3.1 Make physical improvements that create clear and inviting pedestrian pathways.
- 3.4 Formalize cut-through paths throughout campus.
- 4.1 Create a bicycle only network on the campus interior.
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Bicycling

- 2.1 Develop direct and safe on-street bikeways connecting the two sides of campus to one another and into the broader network.
- 2.3 Develop a network of on-campus bikeways.
- 2.4 Eliminate physical barriers to bicycling on campus.

Transit Recommendations

- 1.2 Identify new routing to prioritize service to transit hubs and eliminate redundancies with CTA service.
- 1.3 Test Semester Express route, or other route identified in analyses, to evaluate impact of concentrating resources in a consolidated system.
- 2.2 Provide high-quality on-campus transit information to the UIC community.
- 2.2.1 Design and install shuttle and transit information kiosks at prioritized transit hubs to provide high-quality and real-time information to the UIC community.
- 4.1 Locate, design, and maintain transit facilities to maximize comfort and integration into pedestrian network.

Driving and Parking Recommendations

- 2.2 Install gateway markers at key campus entry points to enhance identity and signify a pedestrian-oriented campus environment.
- 5.1 Transition ID card readers to contactless smart card readers.

TIGER Program Recommended Proposals

- Develop the West Side Connector pedestrian pathway.
- Design and construct the gateways identified in the 2010 Campus Master Plan.
- Install pedestrian-friendly intersections and mid-block crossings on Roosevelt Road.
- Install campus-wide, branded wayfinding system.
- Purchase and install consistent street furniture.
- Improve parking lot accessibility with new entry system and removal of spot barriers.

Acronyms

ACUPCC	American College and University Presidents' Climate Commitment
AADT	Average Annual Daily Traffic
ACC	UIC Academic Computing and Communications Center
ADA	Americans with Disability Act
BRT	Bus Rapid Transit
CCSPD	Chancellor's Committee on the Status of Persons with Disabilities
CDOT	Chicago Department of Transportation
CTA	Chicago Transit Authority
CMAP	Chicago Metropolitan Agency for Planning
CPTED	Crime Prevention Through Environmental Design
DRC	UIC Disability Resource Center
EA	Environmental Assessment
FHWA	Federal Highway Administration
FM	UIC Facilities Management
GHG	Greenhouse Gases
HAWK	High-Intensity Activated crossWalK beacon
IDOT	Illinois Department
IMD	Illinois Medical District
LEED	Leadership in Energy and Environmental Design
LEED-ND	Leadership in Energy and Environmental Design for Neighborhood Development
LPI	Leading Pedestrian Interval
MUTCD	Manual on Uniform Traffic Control Devices
OAE	UIC Office of Access and Equity
OFSP	UIC Office of Facility and Space Planning
OS	UIC Office of Sustainability
PROWAG	Public Rights-of-Way Accessibility Guidelines
PROUST	Project Outreach Strategy
RFID	Radio Frequency Identification
RRFB	Rectangular Rapid Flash Beacons
SCE	Student Center East
SRA	Strategic Regional Arterial
TIGER	Transportation Investment Generating Economic Recovery
UIC	University of Illinois at Chicago

Appendices

Outreach Appendix

All outreach activities were thoroughly documented, including all comments received online and at meetings. The full report is available here (PDF – 133 pages): http://www.cmap.illinois.gov/documents/10180/113513/UIC+MMTP+Outreach+Appendix.pdf/a96129b2-6e33-4a07-8c33-fc5142e4cdd4.

Wayfinding and Signage Examples

1. IMD Signage booklet
   http://www.cmap.illinois.gov/documents/10180/113513/IMD+Signage+Booklet.pdf/a32740aa-0cd9-4f2f-8c6e-02993a3989cb
2. Auburn University
   http://www.cmap.illinois.gov/documents/10180/113513/Wayfinding1_Auburn.pdf/4ab91c59-a6da-4d74-bd68-4dba97176a42
3. Princeton University
   http://www.cmap.illinois.gov/documents/10180/113513/Wayfinding2_Princeton.pdf/beeedb1c-e732-4868-8384-66231403e3be
4. New York University
   http://www.cmap.illinois.gov/documents/10180/113513/Wayfinding3_NYU.pdf/7cd82134-63d1-48b3-895b-58a306fac557
5. University of Michigan-Dearborn
   http://www.cmap.illinois.gov/documents/10180/113513/Wayfinding4_UMD.pdf/eaca0071-aa74-4827-82c2-d58d19764c7e

CPTED Audit & Site Assessment Checklist

http://www.cmap.illinois.gov/documents/10180/113513/CPTED-Audit-Checklist.pdf/8adf9ae4-1649-41ed-88ca-39c3dff3d2fb

Tips for Motorists mailer

CDOT included this helpful tip sheet for motorists and bicyclists to safely share the road in a mailer to 1.5 million car owners with their registration renewal papers: http://www.cmap.illinois.gov/documents/10180/113513/TipsForMotorists.pdf/b8ca74ec-1a4b-4b0e-9bc8-14ad052f9de7.

CMAP Complete Streets Toolkit

See http://www.cmap.illinois.gov/programs-and-resources/local-ordinances-toolkits for local ordinances and toolkits.

LEED-ND Development Standards

U.S. Green Building Council. LEED ND: Built Project, v4. Available online: http://www.usgbc.org/credits/neighborhood-development-plan-neighborhood-development/v4-draft/npdp1. Accessed 12/15/14.

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