City of Evanston

Multi-Modal Transportation Plan

April 2009

prepared by
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at the direction of the
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City of Evanston
Multi-Modal Transportation Plan

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City of Evanston
Multi-Modal Transportation Plan
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Section 1
Summary

The purpose of the Evanston Multi-Modal Transportation Plan is to shape long-range planning efforts for the future transportation system. The Transportation Plan addresses all transportation modes (alleys, bicycle, parking, pedestrian, transit and vehicle) in a manner that is representative of community values.

The Transportation Plan will encourage Evanston to build upon its distinct character derived from its geographic, economic, and cultural strengths. Evanston's location in the region (**see Map 1-1**) and its unique business districts, homes, and public parks are draws to the community. The street layout and convenient mix of land uses promote walking, bicycling, and mass transit ridership. The character of Evanston mixes the charm of a typical suburban development with the dynamics of a city.[1]

Today, planners recognize the need to create communities where benefits from walking, bicycling, transit and vehicles can be attained. The Transportation Plan provides guidance to achieve a balance between these modes of transportation.

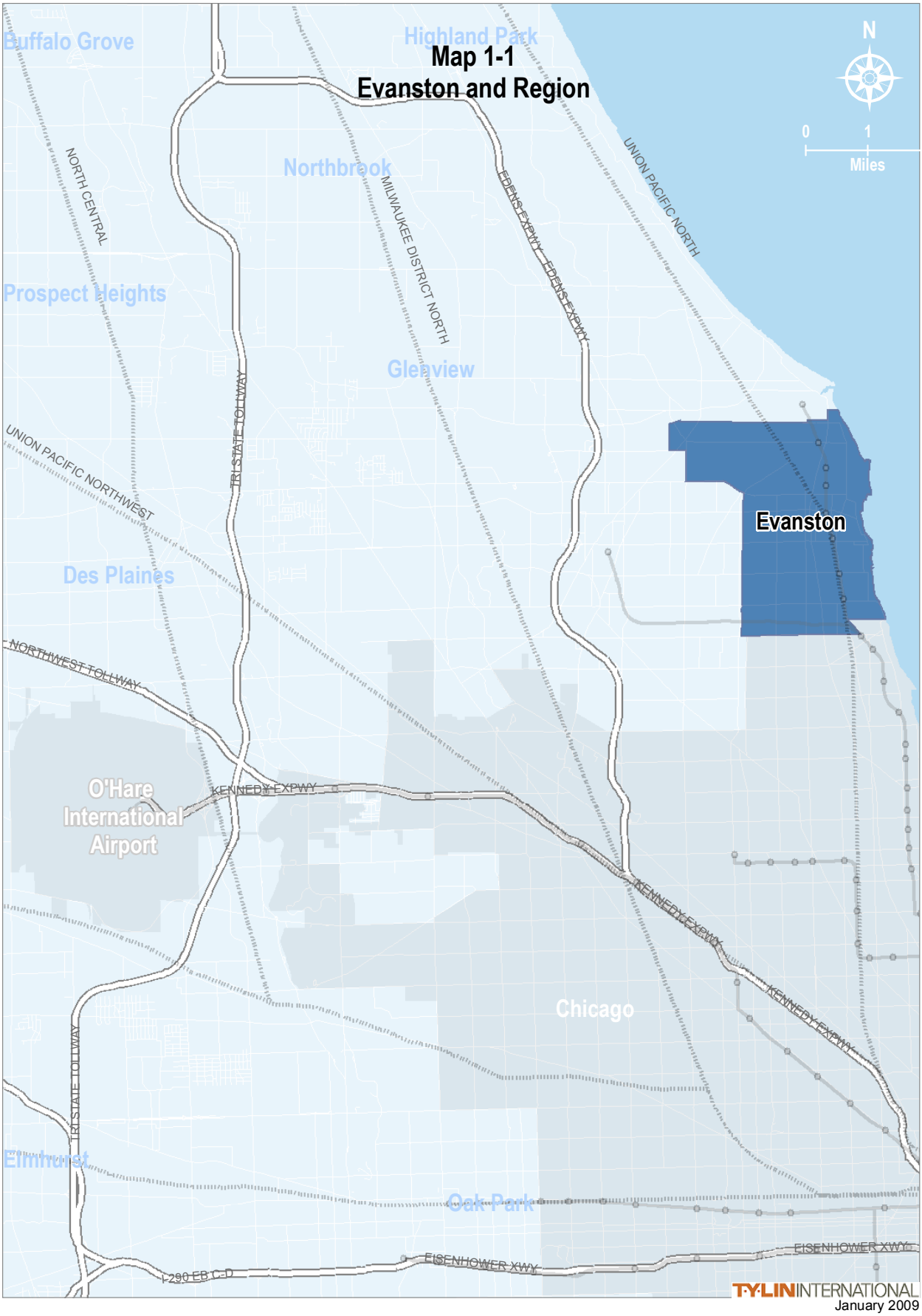
Section 2 summarizes the previous planning efforts that influenced this Plan. Prior to this Plan the City's transportation goals, objectives and policies were found in numerous documents. One of the important takes of this effort was to consolidate the previous planning efforts to present transportation goals and policies in one document. The goals and objectives are found later in this section.

Section 3 provides a review of current regulations and policies that affect the transportation system. **Section 4** provides community characteristics and **Section 5** summarizes the role of other government agencies in the transportation planning process.

Sections 6 – 11 provide background, guidelines, and recommendations for the transportation modes, respectively: alley, bicycle, parking, pedestrian, roadway and transit. Each section describes the data that was collected and analyzed, including:

- An alley condition assessment performed by Evanston Division of Streets and Sanitation
- A parking inventory and utilization at 5 commercial areas: Central Street, Downtown, Chicago/Dempster, Chicago/Main, Howard Street, and
- Pedestrian counts at 100 locations
- A condition assessment of more than 300 miles of sidewalk conducted by volunteers
- Vehicle counts at 50 locations
- Turning movement counts at 10 locations
- A bus stop sign inventory conducted by Evanston's Transportation Future
- Transit station amenities

[1] "Evanston Comprehensive General Plan." City of Evanston, Community Development Department, 2000. 1-164.


Map 1-1
Evanston and Region
N
0
1
Miles
Buffalo Grove
Highland Park
Northbrook
Glenview
Prospect Heights
Des Plaines
Evanston
Chicago
O'Hare International Airport
Elmhurst
Oak Park
NORTH CENTRAL
MILWAUKEE DISTRICT NORTH
EDENS EXPWY
EDENS EXPWY
UNION PACIFIC NORTH
UNION PACIFIC NORTHWEST
TRI STATE TOLLWAY
NORTHWEST TOLLWAY
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The transportation mode sections also describe current conditions and provide background on proposed programs and improvements. Also, guidelines are presented for select modes. While these guidelines are not included as specific recommendations of the plan, they will provide the City with a consistent approach for future transportation improvements. A methodology for prioritizing the transportation improvements is discussed. Finally, recommendations for improving the transportation modes are presented. Some modes also include policy recommendations.

Suggestions to improve pedestrian and bicycle safety at four schools were developed.

Section 12 includes environmental sustainable recommendations related to the transportation system. These recommendations are an outcome of both the Climate Action Plan and Multi-Modal Transportation Plan processes.

Health and Safety is an important consideration as cities begin to pay more attention to alternative transportation system. **Section 13** discusses these issues and presents a recommendation for a social marketing program to encourage residents to use transportation modes other than automobiles.

Section 14 summarizes the revenue sources and costs associated with this Plan. Many of the programs and costs associated with this Plan will require further attention, consideration and development by the City of Evanston.

Section 15 suggests expanding the role of the parking committee to a transportation committee. Many recommendations in this Plan will require further consideration or approvals. A transportation committee could serve to address the multi-modal issues presented in the Plan.

An extensive public and stakeholder involvement process, as summarized in **Section 16**, was undertaken in the development of this Multi-Modal Transportation Plan. The planning process was initiated with a public workshop to allow the community to present transportation issues of concern. This was followed by seven focus group meetings that discussed desired transportation needs and improvements. A survey with more than 400 responses was used to measure the desire for the proposed programs and improvements. In addition, a polling session was conducted at a community workshop to obtain additional feedback in a group setting.

The basis for the Evanston Multi-Modal Transportation Plan came from the *Evanston Strategic Plan*, thus the goals of this Plan are adopted from the Strategic Plan. The objectives of this Plan are a reflection of this planning process as well as previous planning efforts. The goals and objectives are presented below. Following the objectives statements are recommendations that resulted from this planning effort. The recommendations include policy changes, new programs, and infrastructure improvements. The recommendation numbers correspond to the appropriate section in the Plan. Additional information about the recommendation will be found at the appropriate sub-section.

Evanston Strategic Plan Goals:

- **Create and maintain functionally appropriate, sustainable, accessible high quality infrastructure and facilities.**

- **Protect and optimize the City's natural resources and built environment, leading by example through sustainable practices and behaviors.**

- **Coordinate and influence transportation resources to provide an improved system that is safe, integrated, accessible, responsive, understandable, efficient, and meets the needs of all people.**

Section 6: Alley

Objective: Pave all alleys and reduce repetitive maintenance costs caused by regrading unpaved alleys.

6.3.1 Infrastructure: Continue to Upgrade Alleys – *Continue the current 50/50 program whereby the City pays 50% of the upgrade costs and the adjoining property owners pay the remaining 50%.*

6.3.2 Policy: Expand Paving Options – *Provide property owners with options for paving alleys, which includes lower cost and sustainable solutions.*

6.3.3 Program: Improve the Alley Paving Promotion Program – *Update and actively distribute the alley paving promotional brochure.*

6.3.4 Infrastructure: Incorporate Sustainable Practices into Alley Projects – *Pave alleys with recycled or permeable materials. The City should implement sustainable measures in projects fully-funded by the City and pay the additional incremental costs for the sustainable measures in other projects.*

6.3.5 Program: Negotiate with Major Property Owners to Pave Alleys – *Work directly with major property owners such as Northwestern University, Union Pacific Railroad, and Chicago Transit Authority to encourage them to participate in paving the alleys.*

6.3.6 Study: Evaluate Alternative Financing Methods – To e*armark funding for alley improvements. This could also include charging property owners for the incremental cost of maintaining unpaved alleys versus paved alleys.*

Section 7: Bicycle

Objective: Expand the bicycle network and enhance the safety of bicyclists.

7.4.1 Infrastructure: Install Bicycle Racks at Transit Stations – *Continue implementation of the recommendations in the Evanston Bicycle Parking Report to provide additional bicycle parking at transit stations.*

7.4.2 Program: Establish a Bike Rack Request System – *Create a system whereby residents and business owners can request additional bike racks in publicly-owned locations.*

7.4.3 Policy: Adopt a Bicycle Parking Ordinance – *Build bicycle parking requirements into the zoning ordinance to ensure that new development accommodates bike parking needs.*

7.4.4 Infrastructure: Improve and Expand the On-Street Bicycle Network – *Continue to install dedicated bicycle lanes on City streets. Where streets are not wide enough for bicycle lanes, implement shared lane markings to mark a bicycle facility.*

7.4.5 Infrastructure: Improve and Expand the Off-Street Bicycle Network – *Connections that would better integrate existing facilities to the bikeway network were identified in the Evanston Bicycle System Improvement Plan.*

7.4.6 Program: Educate Road Users – *Educate bicyclists and motorists on the rules and responsibilities of each type of user.*

7.4.7 Study: Develop a Plan for a Downtown Bicycle Station – *Bicycle Stations provide amenities for bicyclists such as secure, covered parking, lockers, and shower facilities and additional public bicycle parking.*

7.4.8 Study: Pilot a Bicycle Boulevard – *A bicycle boulevard is a shared roadway designed for only local vehicular traffic, but allows through bicycle traffic. These facilities capitalize on existing roadways to expand the bicycle network and are ideal for inexperienced riders.*

7.4.9 Study: Establish a Shared Bike Program – *Provide a service for short-term bicycle rentals for travel within Evanston. Such services are low-cost rentals ideal for utilitarian bicycle trips.*

7.4.10 Program: Re-evaluate Bicycle Facilities Every 3 Years – *Evaluate on-street and off-street facilities and bicycle parking regularly to ensure bicyclists' needs are met.*

Section 8: Parking

Objective: Increase utilization of public parking and expand supply where needed.

8.5.1 Policy: Improve Downtown Public Parking Utilization by Discouraging Private Parking Supply – R*educe the private supply created by lowering zoning ordinance requirements or allowing a fee-in-lieu of parking program*

8.5.2 Program: Improve Downtown Public Parking Efficiencies through Pricing and Information Strategies – V*ariable pricing strategy, converting short-term parking to long-term commuter parking, and improved information systems about parking pricing and availability.*

8.5.3 Study: Provide Additional Public Parking in Chicago/Main and Central Street Areas

8.5.4 Policy: Consider Increasing Commuter Parking for Evanston Residents at Transit Stations by Relaxing On-Street Parking Restrictions

8.5.5 Infrastructure: Increase Scooter/Motorcycle Parking at Public Facilities

8.5.6 Infrastructure: Upgrade Public Parking Signage

8.5.7 Program: Develop a Public Parking Marketing Program – *To better promote the public parking system.*

8.5.8 Policy: Implement Graded Parking Fines – *To prevent abuse of public parking, increase the cost of repeat parking offenses. For example, the first fine would be $10 and the second would be $15.*

8.5.9 Program: Conduct an Infrastructure Audit of the Parking Facilities – *To document the current condition and assess the structural condition of facilities.*

8.5.10 Program: Improve Parking Payment Technology & Validation System – *Using a system that allows credit card payment or some other standardized method.*

8.5.11 Program: Develop Parking Plans for Special Events – *For example, Northwestern University, downtown and lakefront events.*

8.5.12 Program: Provide Parking Incentives for No- or Low-Emission Vehicles – *Prime parking spaces or reduced parking fees can be used to encourage vehicles that have low or no emissions.*

8.5.13 Program: Re-evaluate Parking Demand/Supply Every 5 Years – *Evanston should monitor the inventory/utilization of parking as the recommended strategies are implemented. These monitoring efforts can be used to best determine how to address future parking demand.*

Section 9: Pedestrian

Objective: Ensure that the pedestrian network is safe and convenient for the community.

9.5.1 Policy: Make Adjoining Property Owner Participation in 50/50 Program Mandatory – *Require participation in 50/50 sidewalk and curb replacement program by property owners to maintain a safe and accessible sidewalk network. Offer CDBG assistance to low-income residents.*

9.5.2 Infrastructure: Upgrade All Sidewalk Surfaces – *Address level changes in sidewalks in a systematic manner, using the Priority Index developed in this Plan.*

9.5.3 Infrastructure: Address Sidewalk Clearance (4 feet) and Gaps – *As projects are identified and programmed, remove obstacles from pedestrian ways and complete gaps in network.*

9.5.4 Infrastructure: Address Roadway Crossings and Curb Ramps – *As roadway projects are identified and programmed, establish appropriate crossings in a systematic manner and install or improve accompanying curb ramps.*

9.5.5 Program: Promote Sidewalk Maintenance by Property Owners – *Ensure that property owners maintain adjacent sidewalks through education and enforcement.*

9.5.6 Infrastructure: Upgrade Traffic Signals – *Improve pedestrian crossings through fixed-time signals, phase timing, and countdown signals with each signal project.*

9.5.7 Program: Improve Motorist Compliance with Crosswalks – *Through education and enforcement, make motorists yield to pedestrians in crosswalks.*

9.5.8 Program: Promote Formation of a Safe Routes to School Transportation Committee – *Encourage a multi-disciplinary committee to address school travel safety considerations.*

9.5.9 Infrastructure: Incorporate Sustainable Practices in Sidewalk Projects – *Permeable and recycled materials should be considered in sidewalk repair and replacement projects.*

Section 10: Roadways

Objective: Support the needs of roadway users through effective traffic management.

10.4.1 Infrastructure: Continue to Maintain and Improve Roadway Surfaces and Bridges

10.4.2 Study: Implement Vehicle Crash Reduction Strategies

10.4.3 Infrastructure: Manage Truck Traffic through Improved Signage

10.4.4 Infrastructure: Increase Roadway Capacity at Intersections with Improved Signal Timing and Additional Lanes

10.4.5 Program: Maintain Traffic Databases – *Monitor and record traffic data to keep information current and determine if or when roadways are at or near capacity.*

10.4.6 Policy: Develop a Complete Streets Approach *that ensures that all users are considered during design, construction, and renovation of transportation facilities.*

10.4.7 Program: Continue with the Current Traffic Calming Program and Consider Additional Best Practices.

10.4.8 Policy: Continue to Pursue Roadway Jurisdictional Transfers from the Illinois Department of Transportation.

Section 11: Transit

Objective: Increase transit access, information, and ridership and improve service efficiencies.

11.5.1 Infrastructure: Provide Amenities at Bus Centers and Hubs – *Add amenities such as benches, shelters, and informational signs.*

11.5.2 Study: Develop a Plan to Convert the Current Flag Stop Bus Policy to Fixed Bus Stops with Amenities – *Consider converting the current flag stop bus policy to a fixed-stop policy.*

11.5.3 Program: Expand the Subsidized Taxi Program

11.5.4 Program: Coordinate Northwestern University Shuttle Service and Stops with CTA – *Partner with Northwestern University to coordinate routes and stops.*

11.5.5 Program: Advocate for Improvements to Regional Transit – *Encourage priority improvements within the regional transit system.*

11.5.6 Program: Consider a Local Circulator Bus Service – *To serve the downtown area, transit stations, and the lakefront.*

11.5.7 Study: Evaluate Transit Routes Along Central Street –*Investigate potential service redundancies along Central Street.*

11.5.8 Study: Conduct an Alternatives Analysis of Sites for an Additional Yellow Line CTA Station – *Three potential sites have been identified.*

Section 12: Sustainability

Objective: Reduce transportation-related environmental impacts.

12.2.1 Program: Expand Green Fleets – *Continue to reduce fuel use and air emissions related to motor fuel use by City fleet.*

12.2.2 Program: Accommodate and Promote Car Sharing – *Support car sharing programs by designating spaces for cars and encouraging membership by residents, businesses, and City agencies.*

12.2.3 Study: Establish an Eco-Pass Program – *An Eco-Pass program would provide Evanston residents with an unlimited transit card for boarding buses and CTA trains.*

12.2.4 Program: Consider Establishing a Green Roads Rating System – *Rate roadway construction based on sustainability factors to encourage environmentally-friendly practices.*

12.2.5 Policy: Continue to Develop Land Use Policies Supporting Transit-Oriented Development – *Increasing residential density and employment centers near transit hubs and centers will promote energy-efficient travel.*

12.2.6 Program: Reduce Energy Impacts through Improved Transportation Technology – *Monitor and implement new technology where possible to increase energy efficiency.*

Health and Safety

13.3.1 Program: Implement a Smart Trips Program – *Use social marketing to encourage the use of alternative modes of transportation.*

Organizational Management

15.1 Program: Create a Transportation Advisory Committee – *Assist with further development and implementation of transportation policies and programs.*

Section 2
Previous Planning Efforts

Previous planning efforts laid the foundation for this Transportation Plan. These efforts include the Comprehensive Plan, Strategic Plan, Climate Action Plan and Downtown Plan). In addition, several district, neighborhood, and corridor plans provide important influences on transportation policy within the City of Evanston. This Section explains how the previous planning efforts undertaken by Evanston influence this Transportation Plan.

Strategic Plan

The City of Evanston approved the Evanston Strategic Plan on March 27, 2006. It identifies the mission, goals, and indicators of the City. The Plan is divided into three main topics, Economic Viability, Environmental Sustainability, and Strengthening Community. The overarching theme of the Strategic Plan is to create the "most livable City in America." As part of the sustainability vision, the Plan puts forth a goal to provide for a coordinated transportation system that is safe, integrated, accessible, responsive, understandable, and efficient.[1]

As such, the City set forth the objective to complete a multi-modal transportation plan that identifies disconnects in the transportation system and develops strategies to provide multi-modal connections. The objectives also include leveraging funds from multiple sources to accomplish the goal of coordinating transportation resources to provide an improved system.

Comprehensive Plan

The City of Evanston Comprehensive General Plan, updated in 2004, addresses four primary goals, consisting of land use, public facilities, circulation, and community environment. The circulation component provides for safe, convenient streets that link neighborhoods to the remainder of the community and safe, affordable, and convenient alternative transportation modes, including bicycle and pedestrian facilities.

The Evanston Comprehensive Plan indicates that the roadway system does not demand reconfiguration, but rather a means to finding appropriate ways to sustain the network and to enhance its efficiency through improvements. The City recognizes the importance of addressing the diverse needs of all users and providing policies that are sensitive to drivers, transit riders, bicyclists, and pedestrians.

Climate Action Plan

Prior to the start of the development of the Transportation Plan, an effort had been started to develop initiatives and strategies in regard to lowering green house gas emissions. One section of the plan dealt specifically with transportation and land use and included a specific goal for carbon dioxide (CO2) emission reductions. In this regard, many of the objectives and recommendations outlined in this Transportation Plan are reflective of Climate Action Plan.

[1] City of Evanston Strategic Plan, Goal #6. http://www.cityofevanston.org/global/strat1.shtml.

Downtown Plan

The transportation goals of the Downtown Evanston Plan recognize the need to improve overall circulation within the City. This Plan recommends studies to evaluate a change from a one-way traffic to a two-way traffic.

The Plan also includes the goal to improve non-motorized transportation facilities, links to public transit, and development that supports transit. Recommendations provide that the City works with the Chicago Transit Authority, Pace, and Metra to improve service at rail and bus stop locations. In particular, the Plan's objectives are to improve bus shelters and signage to provide more comfortable accommodations and direction to users of the systems. Additionally, the City will continue to provide bicycle lanes and route markings in the downtown area.

District and Neighborhood Plans

The goal of the district and neighborhood planning process within the City of Evanston is to promote the quality of life, economic health, and physical welfare of the City's neighborhoods.[2] The neighborhood planning process has involved the West Evanston Neighborhood Plan, the Lakefront Plan, the Howard Street Revitalization Initiative, the Central Street Master Plan, and the Chicago Avenue Corridor Study. Some of the goals within the neighborhood plans provide an impetus for the multi-modal transportation planning process.

The Howard Street Revitalization Initiative addresses transportation issues, such as sidewalk improvements, consistent snow removal, and improved street lighting to meet neighborhood security and safety needs. In addition, residents of this area require additional street parking and would like the City to review residential parking permits, especially near Elks Park, located at Mulford Street between the Union Pacific tracks and Callan Avenue.

The Central Street Master Plan includes transportation-related goals. Among the objectives of the plan are to maintain and enhance a pedestrian-oriented street and to improve pedestrian, bicycle, and vehicular access and circulation. Strategies to achieve those goals are laid out, including recommended streetscape designs to preserve the pedestrian orientation to the street, and several recommendations related to roadway and alley infrastructure, and parking, bicycling, and transit facilities.

The Chicago Avenue Corridor Study and Recommendations Report include the southeast neighborhoods of Evanston. Chicago Avenue is a transit and automobile thoroughfare connecting the City of Evanston to neighboring suburbs and the City of Chicago. One of the primary goals of this plan is to increase the supply of parking to meet future and existing parking needs through public/private partnerships. Additional parking, for instance, should be created on sites that include the Chicago Transit Authority (CTA) and Union Pacific right of way and parcels north of the existing Great Bank Evanston facility.

The Chicago Avenue Corridor Study also recommends improvements for the overall streetscape to foster a sustainable and pedestrian-friendly environment. Numerous features of the corridor currently impede pedestrian flow and make the area uninviting to pedestrians. This Study

[2] City of Evanston. "Canal-Green Bay Road/Ridge Avenue-Church Street Study Area." Evanston City Council, 2005.

proposes to improve traffic management and signalization to improve vehicular, on-street transit, and pedestrian safety and movement; expanding commuter parking supply; instituting shared parking arrangements; promoting new construction that meets transit-oriented development design and site plan goals; physical rehabilitation of train infrastructure; and improving the physical conditions of the embankments and viaducts.

Section 3
Policy and Regulations

This section provides an overview of existing policies and regulations governing the use and location of transportation facilities within the City of Evanston. Sources for this information include the Comprehensive Plan, Municipal Code, Zoning Ordinance and general city policies.

Alleys

The 50/50 Alley Improvement Program was designed to provide City funds to cover half the cost of alley projects. The remaining cost is paid through a special assessment on the property owners seeking the improvement. The City undertakes the alley improvement when a majority of the neighbors agree to having the work done, for up to ten projects per year. Property owners meeting income eligibility guidelines can receive assistance in paying for their half through a fund established under the federal Community Development Block Grant (CDBG) program. The Comprehensive Plan recommendation is to continue this program. (Evanston Comprehensive General Plan, 2000)

Bicycles

Bicycling in the City of Evanston is regulated by the City Code. Persons who reside within the City and operate bicycles must register them and receive licenses; the cost of the license is fifty cents ($.50) to be purchased through the Chief of Police (10-9-2: Registration Required, Issuance). Unregistered bicycles can be ticketed.

Persons riding bicycles are subject to the laws of the State of Illinois with regard to operation on roadways. They must ride as close as practicable to the right hand curb or edge of the roadway except when passing another vehicle or when necessary to avoid conditions that are unsafe. Bicycles cannot be ridden on sidewalks within the central business district designated as D1, D2, and D3 districts in the proposed Evanston zoning ordinance or in any other district where signs prohibit sidewalk riding. If permitted in other areas, pedestrians are to be provided the right of way. Likewise, bicyclists are not to operate their vehicles on a public roadway so as to obstruct motor vehicle traffic (10-9-4: Operation). For children, parents or guardians are responsible for ensuring that the bicycle safety rules are abided. The Evanston Police Department is responsible for the enforcement of bicycle regulations.

The City of Evanston does not require bicycle parking, unless it is required by the site plan and appearance review committee. Bicycle parking facilities are included as part of the City Code for new public buildings, hospital buildings, university or college buildings, and shopping centers when required by this committee.

According to Schedule XV, bicycles are not permitted on Ridge Avenue from Howard Street to Emerson Street (10-11-15: Schedule XV, Operation of Certain Vehicles on Certain Streets and Alleys Prohibited).

Designated bicycle routes are authorized by the City traffic engineer with the consent of the City Council. If designated, signs are to be posted that provide notice to operators. Bicyclists are not permitted to ride upon roadways or sidewalks where signage is posted that prohibits bicycle traffic.

Parking

The allocation of parking is dependant on the type of use associated with the lot/structure. For mixed use developments, the total number of required spaces is based upon the principal use of the zoning lot except where residential uses are proposed as part of the development. The number of parking spaces to be allocated for these purposes would be calculated separately and in addition to the parking requirements needed for the non-residential uses (6-16-3-3).

For off-street parking, spaces shall be constructed in the following manner:

> Except for parallel parking spaces, each required off-street parking space shall be at least eight and one-half feet (8 1/2') in width and at least eighteen feet (18') in length, exclusive of access drives or aisles, ramps, columns, or office work areas. For parallel parking, the width of the parking space shall be decreased to eight feet (8') and the length of the parking space shall be increased to twenty one feet (21'). All other requirements as to size shall be as hereinafter set forth in the Schedule of Off-Street Parking Requirements set forth in Table 16-B herein.[1]

Parking also is required so as to meet the needs of handicap users. The Access Board sets forth guidelines on the number of handicap parking spaces needed based on the number of total parking spaces.

Pedestrian

The system of sidewalks within the City of Evanston falls under the control of the Director of Public Works and are subject to the direction and authority of the City Council and other ordinances of the City. The sidewalk system under this regulation refers to those laid in the public streets, parks, or places within the City.

The general requirements for constructing new sidewalks within the City are shown below. The information incorporates a summary of the regulations found in Sections 7-3-2-1 Construction Specifications, 7-3-2-2 Width and Slope, 7-3-2-3 Alignment; Detours around Trees, 7-3-2-4 Grades Generally, 7-3-2-6 Cover Openings in Sidewalks, and 7-3-2-8 Drinking Fountains, Planter Boxes on Sidewalks of the City Code.[2]

[1] "Evanston Illinois, City Code." 2007. Updated by Ordinance 94-0-07. 6-16-2-4: Size of Parking Stalls.
[2] "Evanston Illinois, City Code." 2007. Updated by Ordinance 94-0-07. Title 7: Public Ways, Chapter 3: Sidewalks; Sidewalk Construction.

Sidewalk Construction Specifications	
Item	**Description**
Width	Five and one-third feet (5 1/3 ft.)
Slope	Three-eights of an inch (3/8") to the foot towards the center of the street
Grade	Fixed by the Director of Public Works, but in no case be less than six inches (6") above the established grade on the top of the curb, except where the sidewalk touches the curb
Openings for Vaults Beneath	May be set in iron frames or in reinforced concrete frames, each unit to measure not more than sixteen square inches (16" x 16"); iron covers having a rough surface and rabbeted into or made flush with the sidewalk may be used
Street Furniture: Drinking Fountains	May be erected near the outer edge of the sidewalk at locations authorized by the City Council or where the Director of Public Works may designate
Street Furniture: Planter Boxes	May be erected in the business district on sidewalks at locations as the City Manager may authorize, provided that they allow safe passage of pedestrians and handicapped persons and comply with rules by City Code and other ordinances
Street Furniture: Signs	Unlawful for any person to place any sign on any sidewalk except as may be provided in the City Code or by ordinance or resolution of the City Council otherwise specially provided
Street Furniture: News racks	No box shall be less than one and a half feet (1.5') from the back of curb edge of the roadway.
Repairs	Director of Public Works shall cause the same to be repaired without delay and will keep an accurate account of the expense of such repairs, and shall report the same to the City Council
Vehicles on Sidewalks	No person shall drive any vehicle over any sidewalk, curb or parkway on any public street unless it is in crossing the same to go into a yard or lot where no other suitable crossing or means of access is provided, and in such case only when such curb, parkway or sidewalk shall have been fully protected against injury therefrom

The most extensive regulations regarding the construction of sidewalks are included within the requirements established for planned developments. As part of the City's site review, planned developments must include a system of walkways. The following language is provided within the City Code for site controls and standards:

> 4. Walkways developed for a planned development shall form a logical, safe and convenient system for pedestrian access to all dwelling units, all project facilities, as well as any off-site destination likely to attract substantial pedestrian traffic. Walkways, when used by substantial numbers of children as play areas, routes to school or other principal destinations, shall be so located and safeguarded as to minimize contacts with normal automobile traffic. Street crossings shall be located, designed, and marked to promote the utmost safety. If substantial bicycle traffic is anticipated, bicycle paths shall be incorporated into the walkway system. Pedestrian ways shall not be used by other automotive traffic.[3]

[3] "Evanston Illinois, City Code." 2007. Updated by Ordinance 94-0-07. 6-8-1-10 Planned Developments.

As part of the overall transportation system, sidewalks need to be kept clear of snow, ice, dirt, and weeds. The City requires that actions be taken upon the accumulation of four inches (4”) or more and within twenty-four (24) hours of the snowfall. Section 7-2-9-3 of the City Code reads as follows:

> (A) Sidewalks: Every owner or occupant of any dwelling house or other building, or proprietor or lessee of any enclosed lot or premises, within the City shall, during winter months, whenever there is a snowfall with an accumulation of four inches (4") or more and within twenty four (24) hours of said four inch (4") accumulation, clear the sidewalks in front of or adjoining such house, building or premises of snow or ice in order to give access to abutting property and public ways, and keep the same conveniently free therefrom; or shall, in case the snow and ice are so congealed as not to be removed without difficulty or injury to the pavement, spread the same with sand or salt. Every such owner or occupant shall also, at all times, keep such sidewalks clear and free from all obstructions so as to allow pedestrians the safe and unobstructed use of the same. (Ord. 9-0-80)
>
> Any person who removes snow or ice from the public sidewalk or street shall not, as a result of his acts or omissions in such removal, be liable for civil damages. (Ord. 6-0-79)

Streets are maintained by the City, but the repair and replacement of damaged sidewalk slabs are the responsibility of the homeowner or business whose property the pavement passes. Under the 50/50 program, the City pays half the cost of replacing the sidewalk with the property owner paying the other 50 percent. The program covers all the public walks in the City, including those in front of private homes, businesses, churches, and schools. The owner is charged only for the walk in front of the property. The City assumes the total cost for replacement of the ‘key” areas of an intersection where the sidewalk extends to the street corner. (50/50 Sidewalk Replacement Program, Evanston Division of Transportation (EDOT), 2007)

News-racks are not to be placed, installed, used or maintained within three feet of the outer end of the any bus bench or with three feet ahead or fifteen feet to the rear of any sign marking a designated bus stop. (City Code 7-3-17-7 Location and Manner of Installation, Size, and Maintenance of News racks and Distributor Identification)

Traffic Calming

Residents can request neighborhood traffic calming methods, such as speed humps, through either a neighborhood meeting where Ward Aldermen and/or Traffic Engineering staff are present or through a petition to the Division of Transportation. (Neighborhood Traffic Calming Policy)

Transit

The traffic engineer with the consent of the City Council shall establish bus stops, bus stands, taxicab stands and stands for other passenger common carrier motor vehicles on such public

streets in such places and in such number as shall be determined to be of the greatest benefit and convenience to the public, and every such bus stop and stand, taxicab stand or other stand shall be designated by appropriate signs. (City Code 10-4-14-4 Public Carrier Stops and Stands Designated) (Ord. 112-0-75)

The operator of a bus shall not stand or park such vehicle upon any street at any place other than a bus stand so designated as provided herein. The operator of a bus shall not stop upon any street at any place for the purpose of loading or unloading passengers or their baggage other than at a bus stop, bus stand or passenger loading zone so designated as provided herein, except in case of an emergency. The operator of a bus shall enter a bus stop and stand or passenger loading zone on a public street in such a manner that the bus when stopped to load or unload passengers or baggage shall be in a position with the right front wheel of such vehicle not farther than eighteen inches (18") from the curb and the bus approximately parallel to the curb so as not to unduly impede the movement of other vehicular traffic.

The operator of a taxicab while for hire shall not stand or park such vehicle upon any street at any place other than in a taxicab stand so designated as provided herein. This provision shall not prevent the operator of a taxicab from temporarily stopping in accordance with other stopping or parking regulations at any place for the purpose of and while actually engaged in the expeditious loading or unloading of passengers. (Ord. 112-0-75) (10-4-14-5 Stopping, Standing, Parking of Buses and Taxicabs Regulated)

A bus can idle a maximum of fifteen (15) minutes in any sixty (60) minute period to maintain passenger comfort while non-driver passengers are on board (10-4-18-1 Standing or Parked Idling Motor Vehicles).

Section 4
Community Characteristics and Forecasts

The purpose of this section is to provide an understanding of characteristics that influence travel behaviors and patterns in the City of Evanston. Socio-economic factors, including population, households, and employment, are important determinations of current and future transportation needs. Specific attention to minority and low-income population distributions are pertinent to ensuring that transportation services reach all groups of people within the City of Evanston.

The City of Evanston is a diverse community and has a particular strength in its capacity to cater to residents of all backgrounds. As a City with University ties, Evanston also has unique relationships between permanent and transient residents.

Table 4-1 shows year 2000 and 2030 forecasts for population, households, and employment as generated by the Chicago Metropolitan Agency for Planning (CMAP). As shown, the total population increase within the City of Evanston is expected to be approximately 8%. This percentage is somewhat lower than the remainder of Cook County and Northeastern Illinois. However, Evanston has shown a steady increase within the past twenty years. Household growth is less than the remainder of the region, while employment shows only a slight increase.

Table 4-1
Population, Households, and Employment Forecasts (2000 – 2030)

		Northeastern Illinois	Cook County	Evanston
Population	**2000**	8,092,145	5,376,741	74,239
	2030	10,050,860	5,952,794	80,224
	Increase	24.21%	10.71%	8.06%
Households	**2000**	2,907,201	1,974,181	29,651
	2030	3,636,108	2,229,864	30,796
	Increase	25.07%	12.95%	3.86%
Employment	**2000**	4,297,686	2,818,334	42,660
	2030	5,535,236	3,305,003	42,681
	Increase	28.80%	17.27%	.05%

Source: U.S. Census 2000 and http://www.nipc.org/2030_forecast_endorsed_093003.htm

Evanston is a fully developed community with little or no vacant land to build upon. The forecast in population suggests that Evanston will witness redevelopment with more housing units and population. According to the U.S. Census, downtown Evanston had become more populous but has had a decline in population per household. Between 1990 and 2000, the City saw a 2.75% increase in population and a 6.7% increase in housing units. During that same interval, the census tract that includes downtown Evanston saw a 34% increase in population and a 48% increase in total housing units.

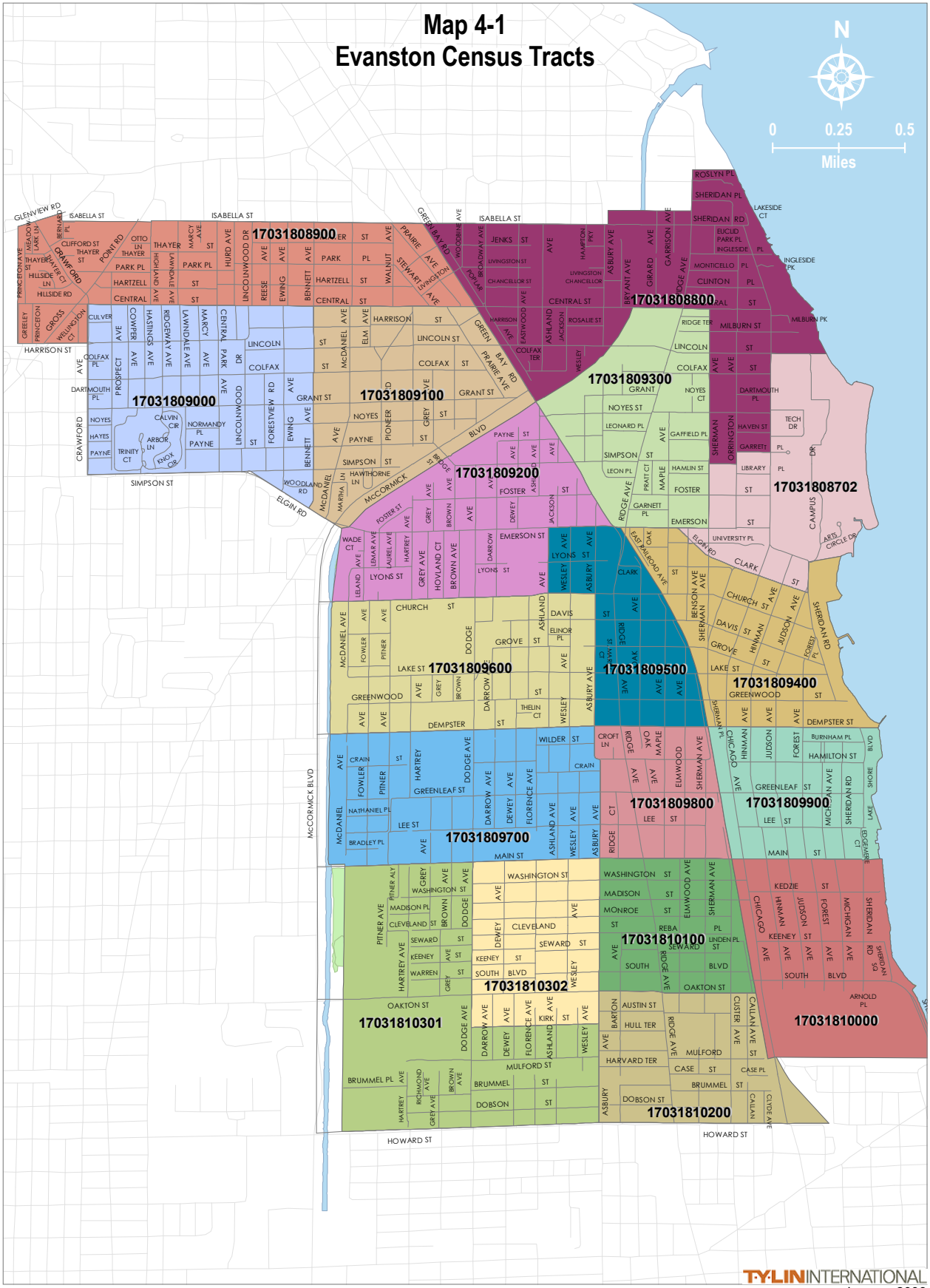
The area north and west of Northwestern University also saw an increase in population and in population density. Between 1990 and 2000, the total number of housing units increased by 59% while the population increased by 77% (see **Table 4-2**). See **Map 4-1 Evanston Census Tracts** for the Census Tract boundaries.

Table 4-2
Change in Population, Housing Units, and Population/Households by Census Tract (1990 – 2000)

Census TRACT	*% CHANGE IN UNITS*	*% CHANGE IN POPULATION*	*% CHANGE IN POP./UNIT*	NOTES
17031806700	*4.98%*	*1.80%*	*-3.03%*	
17031808702	*-39.22%*	*-28.39%*	*17.83%*	Northwestern Campus
17031808800	*59.41%*	*77.05%*	*11.06%*	Just off Campus to North & West
17031808900	*8.81%*	*9.29%*	*0.44%*	
17031809000	*19.27%*	*-3.84%*	*-19.37%*	NW Evanston, Central Ave near Skokie
17031809100	*-0.28%*	*-2.66%*	*-2.39%*	
17031809200	*3.45%*	*4.78%*	*1.29%*	
17031809300	*6.05%*	*3.94%*	*-1.99%*	
17031809400	*48.05%*	*33.61%*	*-9.75%*	Downtown Evanston
17031809500	*-0.52%*	*-0.26%*	*0.25%*	
17031809600	*17.64%*	*3.89%*	*-11.69%*	West Evanston
17031809700	*-1.23%*	*0.21%*	*1.45%*	
17031809800	*1.40%*	*2.77%*	*1.35%*	
17031809900	*1.03%*	*-2.67%*	*-3.66%*	
17031810000	*3.37%*	*0.08%*	*-3.17%*	
17031810100	*2.76%*	*-0.72%*	*-3.38%*	
17031810200	*-1.53%*	*6.24%*	*7.88%*	Howard Street Area
17031810301	*1.45%*	*6.47%*	*4.95%*	SW Evanston, Howard near McCormick
17031810302	*0.69%*	*3.11%*	*2.40%*	
CITYWIDE	*6.78%*	*2.65%*	*-3.87%*	City of Evanston

Source: United States Census. 1990 and 2000.

The growth forecast for Northeastern Illinois seems to suggest that the urban area will continue to expand outward as it has for more than fifty years. This pattern implies that the automobile will remain the primary mode of transportation. However, if gas prices continue to rise and roadway congestion is not ameliorated, the urban area could see greater growth pressure that would place residential and employment land uses closer together. Therefore Evanston, with its extensive transit system, could witness a growth greater than forecasted.


Map 4-1
Evanston Census Tracts
N
0 0.25 0.5
Miles
17031808900
17031808800
17031809000
17031809100
17031809200
17031809300
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17031809900
17031810000
17031810100
17031810200
17031810301
17031810302
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Table 4-3 shows the number of persons identified as a particular race(s). The 2000 Census was the first opportunity for people to self-identify as more than one race, and therefore, data on race from 2000 is not directly comparable with that from the 1990 census. Only overall trends in population can be determined.

Table 4-3
Racial Composition

	1980		1990		2000	
Total Population:	73,702	-	73,243	-	74,239	-
White alone	54,937	74.5%	51,694	70.6%	48,382	65.2%
Black or African American alone	15,804	21.4%	16,749	22.9%	16,412	22.1%
American Indian and Alaska Native alone	100	.13%	131	.18%	114	.15%
Asian alone	1,988	2.7%	3,535	4.8%	4,493	6.1%
Native Hawaiian and Other Pacific Islander alone	-	-	-		17	.02%
Some other race alone	-	-	-		2,378	3.2%
Two or more races	-	-	-		2,443	3.3%

According to the 2000 Census, 36 percent of Evanston residents worked within Evanston (shown in **Table 4-4**). This is a decrease in the number and proportion of resident who lived and worked in Evanston in 1990.

Table 4-4
Place of Employment[1]

	1990		2000	
Total # of Evanston residents in the work-force:	39,597	-	37,655	-
Total # of Evanston residents who work in Evanston	16,876	42.6%	13,634	36.2%
Total # of Evanston residents who work outside of Evanston	22,721	57.4%	24,021	63.8%
Total # of persons from other communities who travel to Evanston for work[2]	24,567	-	26,722	-

Table 4-5 illustrates the changes in mode of transportation and the percentage of the working population using each mode.[3] Public transit for the City of Evanston will be analyzed in greater detail in **Section 11 - Transit**.

[1] United States Census 2000.
[2] United States Census 2000. Note: Commuters into Evanston include workers outside the *Evanston* workforce.
[3] United States. U.S. Census Bureau. Profile of General Demographic Characteristics Geographic Area: Evanston City, Illinois. 2000.

Table 4-5
Primary Mode of Transportation of Evanston Workforce

	1980		1990		2000		% Change 1980-2000	% Change 1990-2000
	Total Number	% of Total	Total Number	% of Total	Total Number	% of Total		
Total Workers	37,785	-	39,597	-	37,655	-	-.34	-4.9
Work From Home	935	2.5	1,659	4.2	2,294	6.1	145.3	38.3
Drive Alone	15,694	41.6	19,561	49.4	20,095	53.4	28.04	2.7
Carpool	5,159	13.7	3,867	9.8	3,121	8.3	-39.5	-19.3
Bus	10,288	27.2	2,114	5.3	1,227	3.3	-34.32	-42.0
Rail			6,072	15.3	5,530	14.7		-8.9
Bicycle	n/a	n/a	615	1.6	630	1.7	n/a	2.4
Walked	5,166	13.7	5,412	13.7	4,388	11.7	15.06	-18.9
Other	543	1.4	297	0.8	350	0.9	-35.54	17.9

* Source: U.S. Census Data. Public transit data was grouped for 1980, and bicycle travel was included within "other."
**Source: U.S. Census Data

As shown in **Table 4-5**, the use of public transportation decreased between 1990 and 2000, while the use of a private car increased as per the percentage of total workers. Likewise, the percentage of people walking and carpooling decreased, as well.

The census data for Evanston is consistent with results from the 2003 National Citizen Survey. When respondents were asked, "What one method of transportation do you usually use (for the longest distance of your commute) to travel to work?" The responses included 61% for motorized vehicles, 21% for public transit, 10% for walking, 5% for working from home, and 3% for other means. Of those responding that they drove to work, only 29% of the respondents had another person in the vehicle.[4]

[4] National Research Center, Inc. "The National Citizen Survey 2003: Report of Normative Comparisons for the City of Evanston, IL." 2003.

For workers ages 16 and over who do not work at home, 49% of Evanston workers have travel times of less than 30 minutes. Only 11.9% of this working group has a commute over an hour. **Table 4-6** shows the distribution of travel times for workers and whether public transit was used.

Examination of travel duration lends greater insight into how the trip making patterns account for the traveling public and miles traveled on Evanston's transportation system. Trip duration provides an indication of how much time and money is associated with trip making at the expense of other activities that might generate value in the economy.[5] Travel times also are important measures used to determine when and where congestion may occur. Congestion affects both public transit operations and driving.

Table 4-6
Travel Time for Evanston Workers

	Workers	**Split**	
Total # of workers who do not work from home:	35,361	% of Total	% by Travel Time
Less than 30 minutes:	17,680	49%	-
Public transportation	1,060	-	6%
Other Means	16,620	-	94%
30 to 44 minutes:	7,962	23%	-
Public transportation	1,791	-	22%
Other Means	6,171	-	78%
45 to 59 minutes:	5,513	16%	-
Public transportation	1,997	-	36%
Other Means	3,516	-	64%
60 or more minutes:	4,206	12%	-
Public transportation	2,063	-	49%
Other Means	2,143	-	51%

[5] Michigan Department of Transportation. "State Long Range Transportation Plan 2005-2030: Travel Characteristics Technical Report." 2006.

Section 5
Planning by Other Governmental Agencies

Transportation planning in Evanston is influenced by state and regional plans, as well as the surrounding communities. This section summarizes and explains these other government agency planning efforts.

The City of Evanston transportation system is part of a larger geographic network of roadways, pedestrian and bicycle facilities, and public transit. Improvements and construction outside the City boundaries affect the local transportation network. The City also relies on funding from outside its immediate jurisdiction for transportation improvements. For these reasons, state, county, and regional agency policies and plans have an impact on the City's transportation network.

Illinois Department of Transportation

The Illinois Department of Transportation's (IDOT) mission is to provide safe, cost effective transportation in ways that enhance the quality of life, promote the economic prosperity of the state, and respect the natural and cultural environment. IDOT has the responsibility for planning, construction, and maintenance of Illinois' extensive transportation network. The City of Evanston is under the jurisdiction of IDOT District One. The Division of Highways works closely with communities throughout the state to ensure the upkeep and maintenance of existing roads under its jurisdiction (see **Map 5-1 Roadway Jurisdiction**).

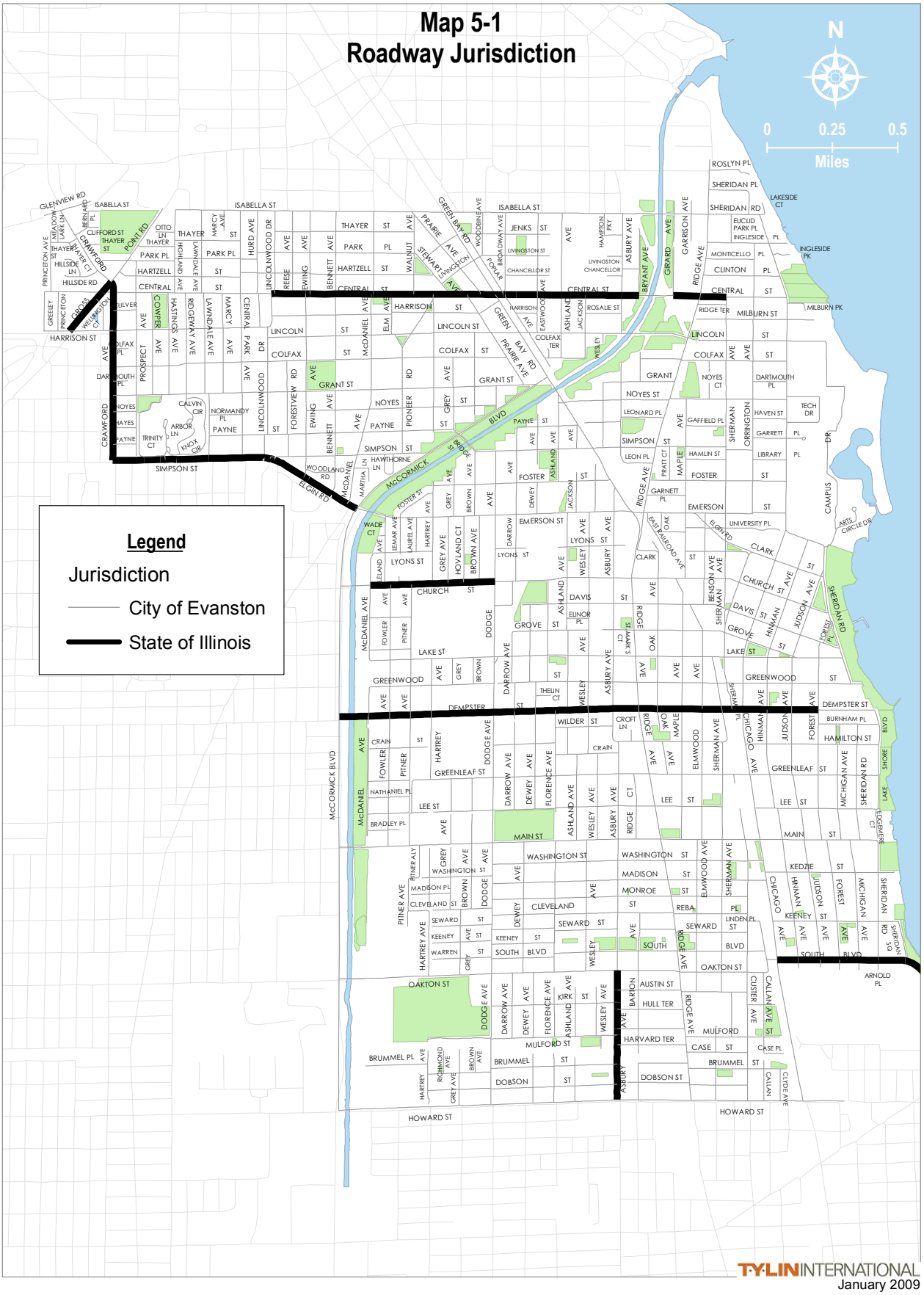
Chicago Metropolitan Agency for Planning

The Chicago Metropolitan Agency for Planning (CMAP) was created on August 8, 2005. CMAP combines the previously separate transportation and land-use planning agencies for Northeastern Illinois (Chicago Area Transportation Study (CATS) and the Northeastern Illinois Planning Commission (NIPC)) into a single entity, which is designed to protect natural resources and to minimize traffic congestion within the seven-county region.

The CATS 2030 Regional Transportation Plan states that the greatest transportation challenge facing this region is maintaining and improving the integrity of the existing system. The NIPC 2040 Framework Plan, adopted by the CMAP board in 2007, recommends that the coming years will be marked by a rise in non-traditional means of transportation in an attempt to conserve energy resources. The design of infrastructure will need to recognize these changes and safely integrate their presence with that of the automobile.

A new Regional Comprehensive Plan is being developed by CMAP for adoption by the fall of 2010. The *GO TO 2040* Plan and campaign began in 2007. The regional plan will identify policies, strategies, and investments needed for Northeastern Illinois and will extend through 2040 and beyond. The Plan will incorporate objectives and goals for the transportation system, land use and development patterns, the natural environment, economic development, housing, social systems, and human services. From the winter of 2007 through September 2008, CMAP will be working on the development of the regional vision.

Map 5-1
Roadway Jurisdiction



CMAP helps plan, program and implement transportation improvements for the northeastern Illinois planning area. As part of its organization, CMAP includes a Council of Mayors, consisting of 11 sub-regional councils plus the City of Chicago. The North Shore Council is one of the sub-regional councils to which Evanston belongs. The Council of Mayors provides a necessary connection between local elected officials and the regional transportation agencies. Topics of discussion typically include the programming of surface transportation program funds and issues that encompass the municipalities within this Council.

Regional Public Transit

The Regional Transportation Authority (RTA) is a special-purpose unit of local government and is a municipal corporation of the State of Illinois. The RTA is the financial oversight and regional planning body for the three public transit operators in northeastern Illinois: the Chicago Transit Authority (CTA), Metra commuter rail, and Pace suburban bus. The CTA, Metra and Pace handle their respective transit operations and fare responsibilities. Each is led by a Board of Directors that determines levels of service, fares, and operational policies. The RTA is required annually to review and approve a five-year capital plan, which is a blueprint of the capital activities to be funded by the RTA and executed by the CTA, Metra, and Pace. All three agencies provide service in the City of Evanston.

CTA, Metra, and Pace programming will affect the overall climate of public transit within the City of Evanston (See **Section 11 - Transit**). Individual plans for the improvement of stations and station amenities, such as parking, will have a significant impact on the transportation system within the City.

Cook County

Cook County does not own or maintain any roadways in the City of Evanston. However, there are nearby Cook County roadways that can affect Evanston. The Cook County Highway Department prepares a capital plan that presents projects in five-year elements. Projects that will affect the City of Evanston are included in the Cook County plans for fiscal year 2010. Part of this project includes traffic signal modernization at Crawford Avenue and Elgin Road.[1]

Surrounding Communities

Planning within the City of Evanston is affected by efforts in surrounding communities due to links within the transportation network. Evanston is bordered by the City of Chicago to the south, the Village of Skokie to the west, and the Village of Wilmette to the north.

City of Chicago planning efforts that affect Evanston include development along the lakefront and along Howard Street, its shared border. Recent investment in this area, for instance, includes $3 million for the Howard street beautification program.[2] The City of Chicago's Department of

[1] "Highway Transportation Plan 2008 through 2012." County of Cook Department of Highways: County of Cook, 2008.
[2] City of Chicago. Department of Planning and Development Website. Retrieved March 2008. http://egov.cityofchicago.org/city

Transportation also has an extensive pedestrian and bicycle program. These non-motorized transportation facilities provide links between the two cities.

The Village of Skokie encourages coordination with surrounding communities within their comprehensive planning efforts. One of their primary transportation goals is to increase and improve facilities for alternative transportation. As part of this goal, the Village wishes to provide bicycle route connections to all surrounding communities and to cooperate with the Chicago Transit Authority (CTA) with the expansion of service on the Skokie Swift Yellow Line, which may include new station development within Evanston.

Transportation projects within the Village of Wilmette also will impact the City of Evanston. Reconstruction of Green Bay Road and coincident streetscape improvements in the southern portion of the Village are intended to improve the flow of traffic and to enhance the aesthetics of the roadway.[3] This north-south roadway is located within both municipalities.

In addition, non-motorized transportation planning within the Village of Wilmette will provide essential links to the City of Evanston. The Village has participated in extensive efforts to increase the amount of bicycle facilities. The Village would like to provide additional facilities that will allow connections to be made between the Skokie Valley Trail and other existing paths, such as the Green Bay Trail and the Evanston Lakefront Path.

[3] "Comprehensive Plan: Village of Wilmette." Village of Wilmette, 2000.

Section 6
Alley

The City of Evanston's transportation system includes alleys for access to the backs of most properties. Evanston has roughly 72 miles of alleys that serve personal garage access, garbage collection, and commercial deliveries.

The City of Evanston aims to upgrade deteriorating alleys, particularly unpaved alleys. The City would also like to explore ways to incorporate environmental features into the upgraded alleys. Evanston began experimenting with its first green alley, which was completed in 2008.

In this section, the current conditions of the alleys are discussed, according to results from a recent condition assessment.

6.1 Current Conditions

Evanston's alleys are made up of various materials and conditions. Alley surface materials include brick, concrete, asphalt, grindings, and gravel (See **Map 6-1 Evanston Alleys by Material**). Roughly one-third of the City's alleys are unpaved.

An alley condition assessment form was created by TYLI (see **Appendix A – Alley Condition Assessment Form**). This form was used by the Evanston Streets and Sanitation Division, which performed the material and condition assessment. Each alley was given a rating of "Excellent", "Good", "Average", or "Poor". The results of this survey are shown by condition of paved alleys (see **Map 6-2 Evanston Paved Alleys – Condition**) and unpaved alleys (see **Map 6-3 Evanston Unpaved Alleys – Condition**). Of the 46 miles of paved alleys, 20 miles are in average or poor condition. Nearly all of the 25 miles of unpaved alleys are in average or poor condition, with 20 miles in poor condition.

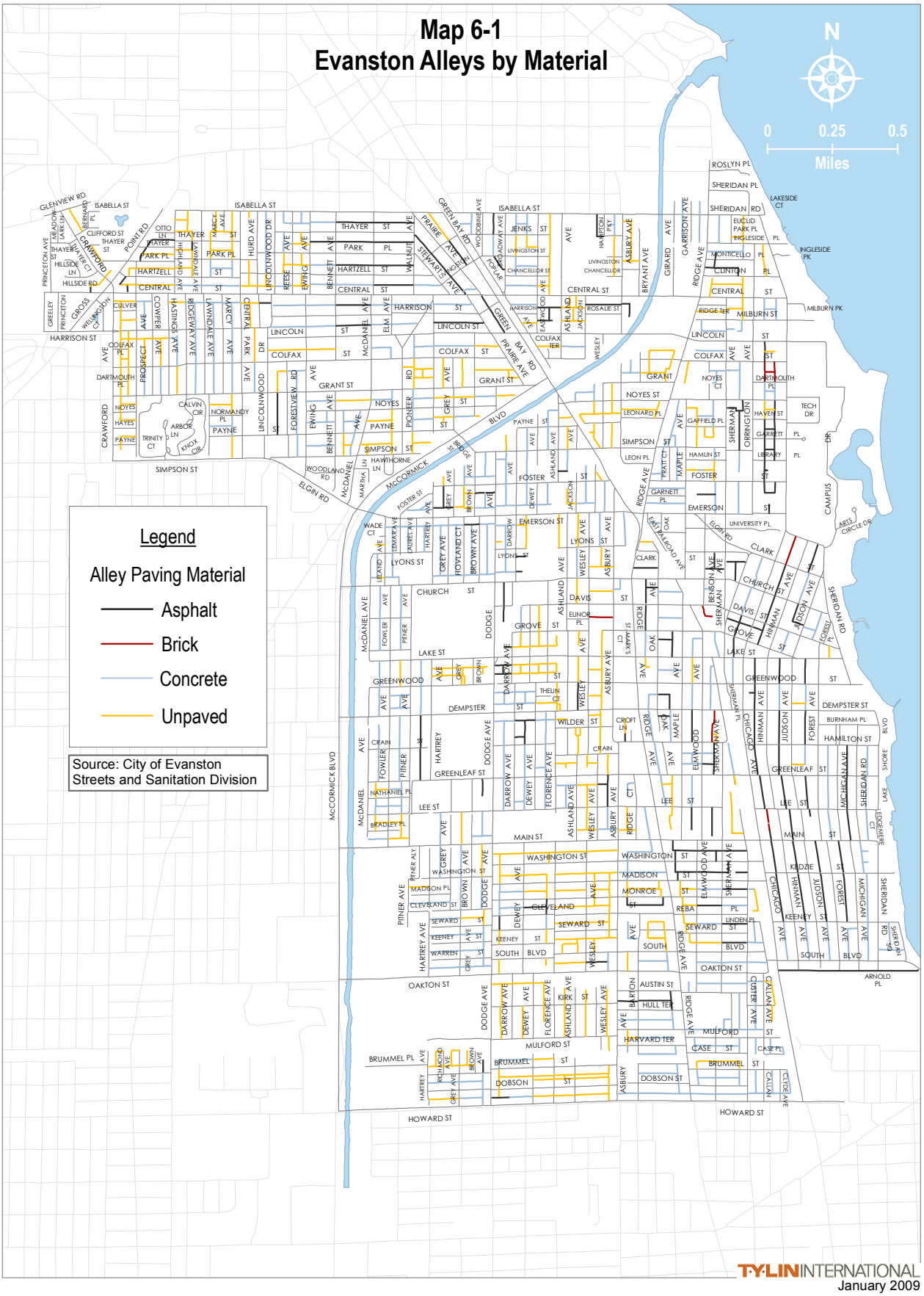
The primary purpose for paving the alleys is that while there is a significant up-front cost, in the long term it results in lower over all costs to the City. Unpaved alleys typically need to be re-graded twice a year due to ruts and uneven surfaces that form through weather and traffic. Grading unpaved alleys contributes the largest maintenance expense of any single maintenance activity in the streets division.[1] Paved alleys, by contrast, are much less expensive to maintain and have a lifespan of roughly 50 years.

Alleys are considered for paving by resident request. The City requires that a majority of the property owners served by the alley agree with the request. Currently, upgrading unpaved alleys involves providing drainage infrastructure as well as surfacing with 8 inches of concrete plus gravel base.

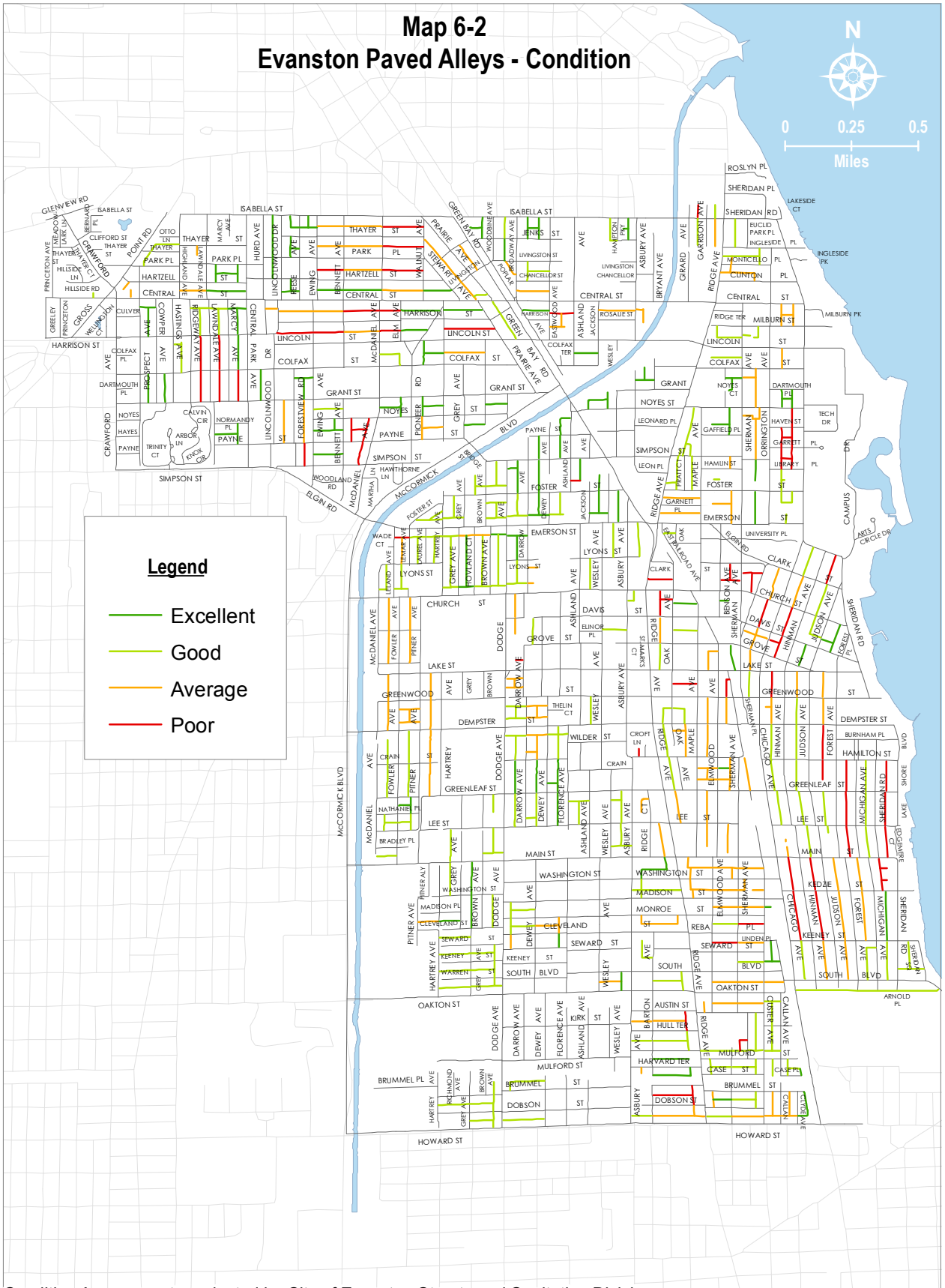
Improvements to Evanston's alleys are funded through a 50/50 program that holds abutting property owners responsible for half the cost of the alley improvement through a special

[1] 2007-2008 Final Capital Improvement Program, City of Evanston.

Map 6-1
Evanston Alleys by Material



Map 6-2
Evanston Paved Alleys - Condition



Condition Assessment conducted by City of Evanston Streets and Sanitation Division

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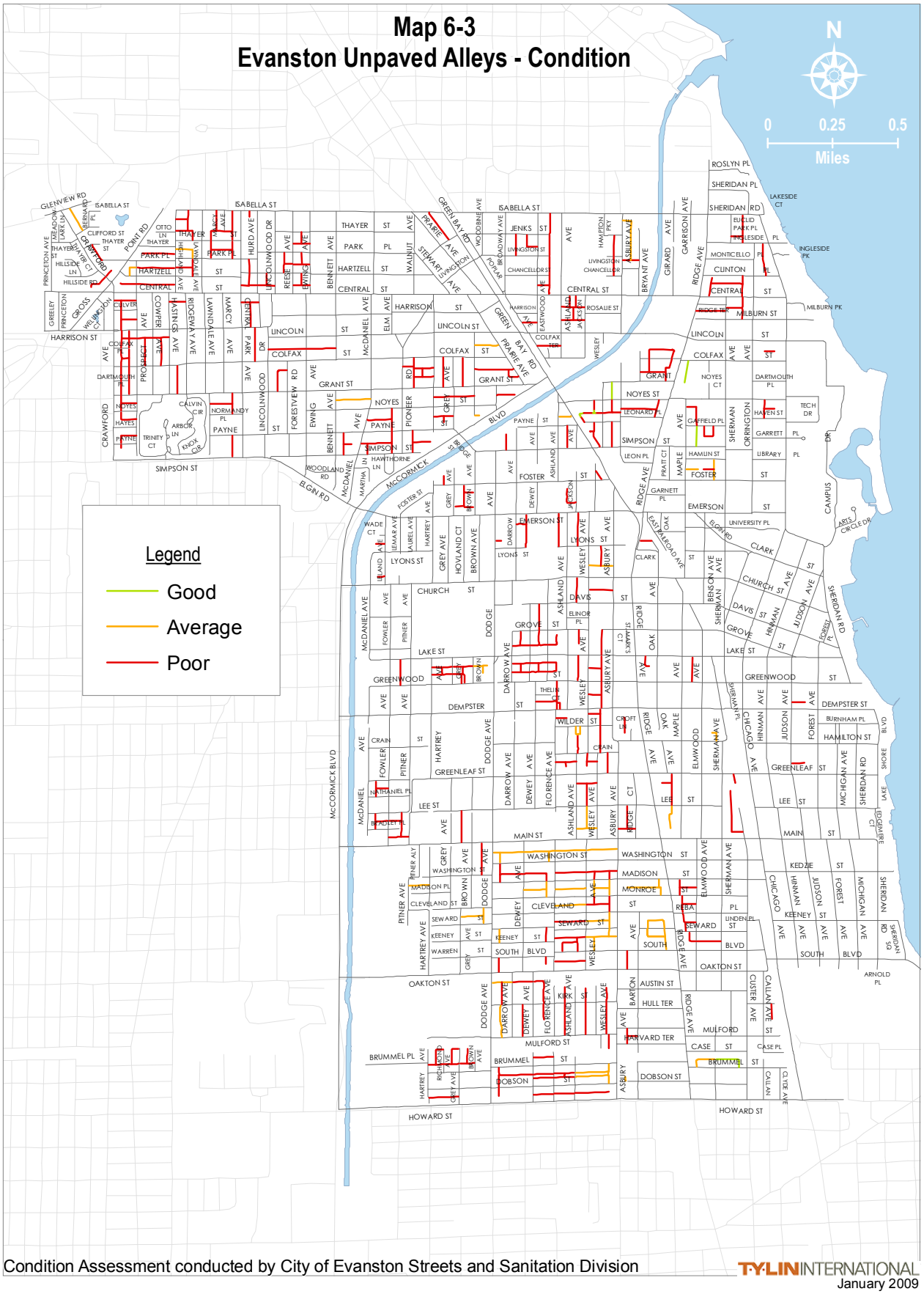
Map 6-3
Evanston Unpaved Alleys - Condition



Condition Assessment conducted by City of Evanston Streets and Sanitation Division

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assessment. The City covers the other half of the costs. Historically, up to ten alleys per year have been programmed. However, according to the City, the special assessment alley improvement program is growing in popularity with residents because the paved alleys are preferred. The increased interest requires a greater investment from the City but saves money in the long run by reducing maintenance costs.

The Community Development Block Grant (CDBG) program also is available to assist with funding for eligible residents, based on income level. Generally, one alley per year can be fully funded by the CDBG program.

Evanston has an alley speed bump program to deter motorists from traveling through the alleys to avoid traffic on the streets. Speed bumps are only appropriate on paved alleys. A petition must be signed by two-thirds of the property owners along the alley before a speed bump will be considered. Alley speed bumps are part of the neighborhood traffic management program and are implemented at no cost to the property owners.

6.2 Guidelines

The City of Evanston would like to initiate a sustainable alley program. The alley program includes four primary elements: stormwater management, heat reduction, recycled materials, and energy conservation and glare reduction.

Alleys should always be properly pitched and graded to facilitate draining. To improve energy efficiency and reduce glare, dark sky compliant light fixtures are used, which direct light downward. Lastly, recycled concrete is used wherever concrete is installed, whether it is a base layer or the surface material. The amount and placement of concrete varies by approach.

Green materials refer to materials using recycled components. Recycled material may be concrete made with reused concrete or slag, a byproduct of metal smelting, or asphalt composed of ground rubber tires. The concrete used is also considered green because it has a high albedo, meaning that it reflects light and reduces the heat island effect.

Permeable pavements are porous materials that allow water to filter through. They include permeable concrete, asphalt, or permeable pavers. Permeable pavers are the strongest and should be used in areas of larger loads. All alleys are designed to withstand single-unit trucks to accommodate moving vans and garbage trucks.

Generally, thee are four approaches to constructing green alleys: 1) Green pavement material with conventional drainage, 2) full alley infiltration using permeable pavement, 3) center alley infiltration using permeable pavement, and 4) green pavement materials with subsoil filtration system.

The approach used is based on the type of soil, infiltration capacity, and proximity of buildings. The favored approach uses permeable pavement in the center of the alley with recycled concrete pavement on the sides, where the vehicle tires travel. The center trench approach is less costly – there is no subsurface drainage and less concrete is used.

The costs of materials for green alleys, such as recycled concrete and permeable pavement, are higher than traditional alley paving materials. However, in surveys conducted as part of this planning process there was strong agreement to pay higher costs associated with constructing alleys that were more sustainable. Still, as the City gets familiar with this practice, reasonable costs associated with green alleys should be achieved.

A situation that causes concern is where structures with basements abut an alley. These present a potential for water seeping into the basement and flooding private property. The center trench design helps with that issue because it moves the permeable pavement away from the building.

Permeable pavement surface present some maintenance issues. Dirt and debris can clog the porous pavement. Dirt can also reduce the reflectivity of the high albedo concrete, which is intended to help reduce the heat island effect. A maintenance program should consider using existing street sweepers that use a vacuum to clean debris on the alleys in addition to the streets. Street sweepers are not currently used in the alleys.

Adjacent construction also can clog the permeable pavement. Developers are required to contact the City about mitigation efforts before proceeding with their construction projects.

In fall 2008, Evanston conducted a "green" alley paving pilot, using a combination of porous concrete and high-albedo concrete. This construction is similar to the center trench approach in Chicago's Green Alley program. Evanston's pilot included porous concrete in the center with no additional drainage system. If the pilot is successful, the program may be expanded City-wide, offering another option for alley paving.

6.3 Recommendations

6.3.1 Infrastructure: Continue to Upgrade Alleys – *Continue the current 50/50 program whereby the City pays 50% of the upgrade costs and the adjoining property owners pay the remaining 50%.*

Twenty-seven miles of alley in Evanston remain unpaved. To upgrade these alleys within 20 years would require paving 1 ¼ miles of alleys each year.

Evanston currently paves 6-8 alley-blocks a year. An alley-block refers to all alleyways within one city block. Generally, 4 of the alley-blocks are funded through the 50/50 program. That is, half the cost is paid through the City's capital improvement program (approximately $500,000 a year) and the other half is paid by a special assessment of the surrounding property owners. In addition, 1 alley-block is paved using Community Development Block Grant Program (CDBG) funds (approximately $75,000), which partially covers the residents' portion of the alley paving costs.

In addition to upgrading the unpaved alleys, paved alleys need to be continually maintained. The results of the condition assessment indicate that there are 24 miles of paved alleys that are in average to poor condition. The current alley upgrade program is becoming difficult to maintain.

Fewer property owners are inclined to agree to have their alleys paved. The recommendations below are intended to encourage the paving of alleys.

Infrastructure Costs: $500,000/year

6.3.2 Policy: Expand Paving Options – *Provide property owners with options for paving alleys, which includes lower cost and sustainable solutions.*

Providing a menu of improvement options might encourage more people to participate in the alley improvement program. Currently, the only option is concrete with sub-surface drainage, which is expensive. Additional options could provide cheaper alternatives. For example, an asphalt surface with surface drainage could be constructed at much less cost.

Also, alternatives that allow for green materials should be included. Recycled and permeable paving materials can reduce the impact on the environment over traditional paving methods. Many Evanston residents agreed that they would be willing to pay a higher cost to pave alleys with green materials.

The following list provides an example of a menu of options for alley upgrades.

- Asphalt with surface drainage
- Concrete with sub-surface drainage
- Green Alley:
    - High-Albedo Concrete
    - Permeable Pavers
    - Recycled Concrete
    - Recycled Asphalt

Giving property owners a range of lower cost options would presumably facilitate gaining support from residents to pave their alley and allow the City to move forward more quickly. At the same time, offering an option with sustainable features would reduce the impact on the City's sewer system.

Infrastructure Costs: Will vary on a case-by-case basis and will be built into the overall alley improvement program.

6.3.3 Program: Improve the Alley Paving Promotion Program – *Update and actively distribute the alley paving promotional brochure.*

The City of Evanston publishes an informational brochure on the benefits of paved alleys and the procedures for upgrading unpaved alleys. This flyer should be updated to reflect a menu of paving options and any new information about the alley paving program.

Currently, the brochure is distributed to residents upon request. The City should adopt a more active marketing program to reach out to property owners to encourage them to upgrade unpaved

alleys. This may include automatically distributing the brochure to property owners abutting selected unpaved alleys.

Program Costs: $10,000

6.3.4 Infrastructure: Incorporate Sustainable Practices into Alley Projects – *Pave alleys with recycled or permeable materials. The City should implement sustainable measures in projects fully-funded by the City and pay the additional incremental costs for the sustainable measures in other projects.*

Some alleys are paved entirely using City funds. For instance, if an alley is within a Community Development Block Grant (CDBG) area, the grant will cover the cost of the alley paving. In these cases, the City should incorporate sustainable features into the alley.

Each alley project has unique characteristics. Also, the type of sustainable practices that should be incorporated into alleys is still in the development stage. The actual costs would have to be determined with individual projects.

Infrastructure Costs: Incorporate the costs with the individual alley projects.

6.3.5 Program: Negotiate with Major Property Owner to Pave Alleys – *Work directly with major property owners to encourage them to participate in paving the alleys.*

In some cases, one major property owner abuts a majority of the alley. The single property owner determines whether the alley will be upgraded under the current system, since a consensus is required to improve an alley. Therefore, if the major property owner does not want it paved, it will not be paved.

The City should actively work with these major property owners to promote the benefits of paving the alley.

Program Costs: Staff time.

6.3.6 Study: Evaluate Alternative Financing Methods – To e*armark funding for alley improvements. This could also include charging property owners for the incremental cost of maintaining unpaved alleys versus paved alleys.*

If the City continues with the current program it will be difficult to pave all the alleys and to maintain those that are paved. A specific earmarked fund for alley improvements should be explored. The Policy Committee had suggested that a line item for alleys be added to the tax bill. While this may not be the solution, it does suggest that an earmark to maintain alleys may be needed.

Program Costs: Staff time.

Section 7
Bicycle

Compared to other communities within the greater Chicago region, the City of Evanston is known for its high rate of bicycle ridership. This is in part due to the Northwestern University student population, but also Evanston residents have the highest rate of biking to work in the northeastern Illinois region, according to Census data.

7.1 Current Conditions

The Evanston bicycle network includes a combination of bicycle lanes, signed routes, and off-street paths. A bicycle lane is a designated space for bicyclists that is striped within the roadway pavement. Bicycle lanes are standard on-street facilities, recognized in the Manual of Uniform Traffic Control Devices (MUTCD), and have a minimum width requirement. Signed routes are streets that are suitable for bicycling and are signed to let both bicyclists and motorists know that it is a recommended facility for biking. Signed routes may be implemented on streets that are part of a bicycle network but do not have the width required to stripe a bicycle lane.

Typically, off-street paths are open to the public for all non-motorized uses. Paths in Evanston follow the lake and the canal and traverse several parks.

The bicycle network in Evanston is part of a larger, regional network with connections to on-street facilities in neighboring communities and off-street trails in the region. The network connects to existing bicycle facilities in Chicago on Howard Street, Clark Street, Florence Avenue, Kedzie Avenue, and California Avenue.

The Village of Skokie, located to the west of Evanston, connects to the City of Evanston's bicycle network using recommended on-street bike lanes and signed routes including Howard Street, Oakton Street, Main Street, Church Street, and Grant Street. A shared-use path along the North Shore Channel also connects Evanston and Skokie. An additional trail, the Skokie Valley Trail, has been proposed, which would begin in Skokie, roughly two miles west of the Evanston border.

To the north, the Village of Wilmette has recently installed bike lanes on Sheridan Road, beginning at the Evanston border north to 10th Street. Wilmette's bicycle plan also recommends future connections to Evanston along Poplar Avenue. The Green Bay Trail, a significant regional trail spanning nearly 20 miles, begins in Wilmette. Signed bike routes in Evanston direct cyclists to this trail.

In 2003, the Evanston City Council approved the *Evanston Bicycle System Improvement Plan*. Recommended bike lane markings and bike route signing on various streets throughout the City were implemented in 2007.[1] Five and a half miles of bike lanes and thirty-four miles of signed bike routes were installed on the City's streets. Additional recommendations from the plan include off-street trails that will connect to the on-street network. Since 2003, improvements have been made to paths in Beck, Butler, and Harbert Parks in accordance with the plan. The

[1] "City of Evanston Newsletter." Department of Public Works, 2007. 2. Vol. 1.

existing bicycle network and future off-street trails are shown in **Map 7-1 Existing and Future Bicycle Facilities**.

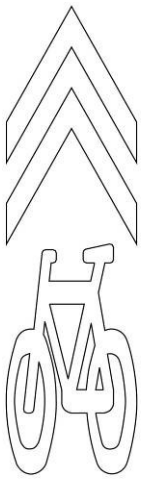
According to City Code, bicycles are permitted on streets unless the street has signs prohibiting them. Currently, Ridge Avenue from Howard Street to Emerson Street prohibits bicycles. Bicycles are also permitted on sidewalks, with the exception of sidewalks in the central business district.

7.2 Guidelines

Streets with bicycle lanes are often preferred by bicyclists to streets without bicycle lanes. Consisting of just pavement markings and accompanying signs, the lanes are a relatively easy and inexpensive treatment and can create a good base for a bicycle network. However, due to a minimum width requirement, it is not always possible to include them on a roadway without either widening the pavement or reducing the number or width of travel and parking lanes. The *Evanston Bicycle System Improvement Plan* includes bicycle lane design and installation guidance. The plan also includes ideas for finding space for bike lanes (section 2.4) and how to improve shared roadway conditions for bicyclists (section 2.5).

Following are additional strategies that the City of Evanston can use to expand or improve its bicycle network.

<u>Marked Shared Lanes</u>
Marked shared lanes are used on streets that, while too narrow for a bike lane, can accommodate a bicyclist in the outside travel lane. Marked shared lanes are designated by a bicycle symbol with chevrons indicating the direction of travel, as shown to the right. The markings demonstrate that the lane is intended to be shared between motorists and bicyclists. Since there is no physical separation between bikes and cars in shared lanes, the traffic volumes on these streets should be low enough to accommodate routine passing of cyclists.

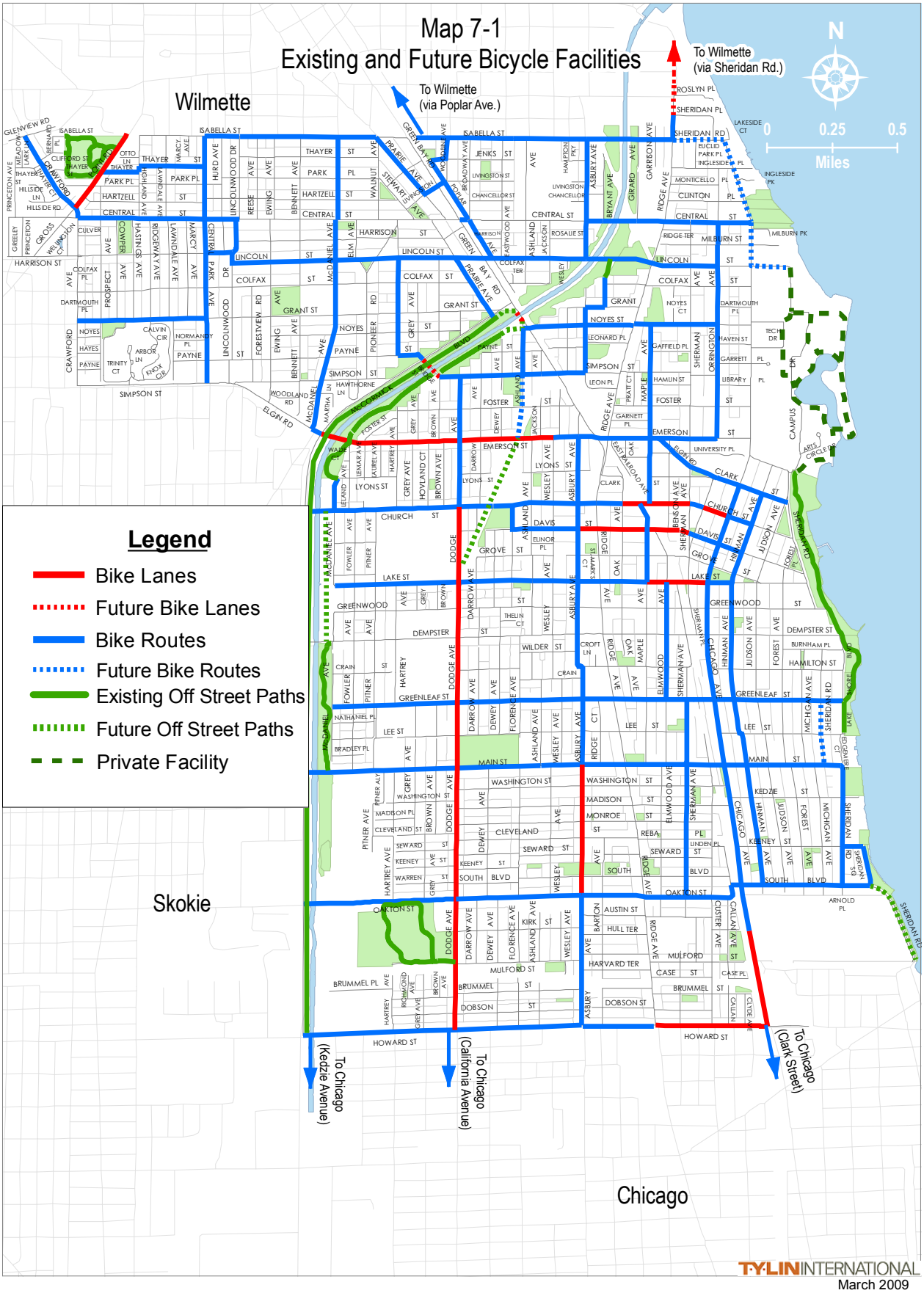


Shared Lane Pavement Marking
(Source: Chicago Department of Transportation)

The markings identify streets that are appropriate for bicycling, indicate where on the roadway a bicyclist should be riding, and alert motorists that bicyclists may be present. Marked shared lanes may be appropriate on signed routes, making the facility more prominent and noticeable to drivers.

Marked shared lanes are also used to continue a facility where a bike lane must end. For instance, shared lane markings are used at intersections where the bike lane must be discontinued briefly to make room for a right turn lane or where a bike lane cannot begin directly at the far side of an intersection. Shared lane markings also are useful in continuing a facility over a longer distance in cases where a roadway narrows or parking is introduced and a bike lane no longer fits.

Map 7-1
Existing and Future Bicycle Facilities



T·Y·LIN INTERNATIONAL
March 2009

Shared lane markings currently are not included in the MUTCD, however they have been recommended by the National Committee for Uniform Traffic Control Devices for inclusion in the next version of the MUTCD. Shared lane markings are used extensively in many cities, including Chicago, IL, New York, NY, San Francisco, CA, and Portland, OR.

Cul-de-sac Cut-throughs

In some places, cul-de-sacs are added to streets in an attempt to deter through vehicle traffic and calm the street. The resulting conditions make the street comfortable for biking; however, closing it off from the original grid prevents, or renders inconvenient, the use of the street as part of the bicycle network. To counter that effect, many communities add a cut-through accessible by bicycles. The Villages of Oak Park and Wilmette offer good examples of cul-de-sac cut-throughs.

When implementing new cul-de-sacs, the City should accommodate both pedestrians and bicyclists by maintaining through connections for these modes. The City should consider adding cut-throughs to the streets that have been closed off from the grid system in the past.

7.3 Future Considerations

7.3.1 Planning Efforts

Bicycle Racks

The City of Evanston worked with the Active Transportation Alliance (formerly Chicagoland Bicycle Federation) to identify needs for additional bicycle parking. The *Evanston Bicycle Parking Report* was completed in March 2008 and recommends that the City install 179 bicycle racks at CTA and Metra rail stations and commercial areas, which will add 368 bicycle parking spaces, as each rack can secure two bicycles. The report allots the number of recommended racks by location and includes guidelines for installation.

Lakefront Plan

The City of Evanston reviewed a series of vision statements at a public meeting for the *Lakefront Master Plan* in November 2007, which included recommendations for bicycle and pedestrian access to and along Lake Michigan. The final vision for the plan included the desire to:

- Create a strategy to improve multi-use trail conditions, minimizing traffic conflict and emphasizing community connections for all trail users.
- Coordinate transportation resources to improve lakefront-user access while preserving the integrity of lakefront open space and natural areas.

Several recommendations of the Bicycle Plan support this vision, including providing on-street access at various “neighborhood gateways” that would connect to any additional lakefront improvements recommended in the Lakefront Master Plan. In particular, a treatment is recommended in the Bicycle Plan that would complement the development of a gateway at Clark Street and the lakefront.

The Lakefront Master Plan provides for separate pedestrian and bicycle paths within the park from Lee Street to Clark Street and from the City's border to Keeney Street along Sheridan Road.

Sheridan Road

Sheridan Road is a key link in both the local and regional bicycle networks. Currently, the road is used by cycling commuters, students, and recreational riders. Although there are no formal bike facilities on the majority of the street, bicyclists are permitted to use the roadway. Sheridan Road serves several major destinations, including Northwestern University, and connects to a new on-street bicycle facility in Wilmette.

Bicycle routes are proposed for Sheridan Road between Central Street and Ridge/Isabella, connecting to the Wilmette facility and for the portion between Main Street and Greenleaf Street.

North of Main Street, the roadway varies in width and parking regulations. The Phase 1 study considered a variety of possible accommodations on Sheridan and the portions of Forest that serve southbound traffic from Sheridan Road. For the portion of Sheridan Road abutting Northwestern University, various alternatives were discussed at the bicycle focus group meeting. Among those were:

- Reconfigure cross-section from four travel lanes to three, with one bike lane in each direction. This option will require a traffic study to determine if a three-lane cross-section can handle the volume of traffic using Sheridan Road.
- Maintain existing cross-section and widen the sidewalk on the west side to 12', matching the sidewalk on the east side. This option will be subject to tree impacts.
- Add a 4', one-directional bike path to the sidewalks on either side of Sheridan Road. This would result in a 12' sidewalk with a 4' bike path on the east side and a 6' sidewalk with a 4' bike path on the west side. This option will be subject to tree impacts.
- Widen Sheridan Road to accommodate a 4-lane cross-section with marked shared lanes in the outside lane. This option will be subject to impacts on utility poles, drainage, and trees.

The use of Northwestern University's private path along the lakefront was also discussed. The University will continue to maintain and improve this path in future planning efforts.

In fall 2001, bicycle counts were conducted as part of the Bicycle Plan. A total of 564 bicyclists were counted over six hours at the intersection of Chicago Avenue and Sheridan Road. This number was over twice that at any other location where counts were taken.

Residents have named a facility on Sheridan Road as one of the most immediate needs for improving the on-street bicycle network in Evanston. The facility would need to accommodate bicyclists with a range of abilities and skills. Evanston has an opportunity to improve bicycle access to Sheridan Road during a reconstruction project that is currently undergoing Phase I planning.

Under the current proposals for bicycle facilities along Sheridan Road, the existing signed route between South Street and Main Street would be extended to Greenleaf Street and a signed route will be added from Central Street to the Isabella/Ridge intersection.

Bicycles on Bridges

Bicycle accommodations on bridges should be considered during all future bridge rehabilitation and reconstruction projects. Bridges provide an important connection in the roadway network. Bicyclists are often forced to take a long detour if sufficient facilities are not provided on bridges. As bridges are costly to retrofit, the bicycle facilities should be incorporated into the planning process from the initial stages.

In Evanston, facilities on the Green Bay Road Bridge and Bridge Street Bridge are proposed in the *Evanston Bicycle System Improvement Plan.* Bridge Street provides a key connection between Twiggs Park, which has paths that will be reconstructed in 2009, and the path along the Canal. The Emerson Street Bridge was recently widened to accommodate a bicycle lane, per the *Evanston Bicycle System Improvement Plan.* This bridge connects paths on either side of the canal.

7.3.2 New Technologies

Bicycle facilities are continually evolving and progressing. Cities throughout the United States and Europe are investigating innovative treatments to improve bicyclist safety and accommodation. Some of these treatments are described here for future consideration.

Bicycle Boulevards

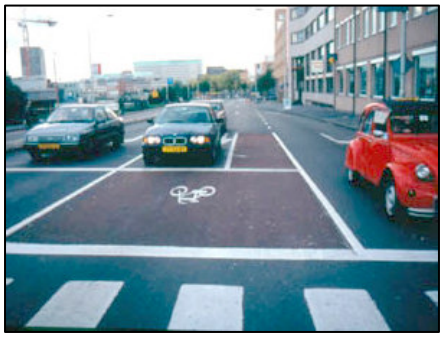
Bicycle boulevards use local streets with low vehicular traffic volumes and speeds to create safe, comfortable, and convenient routes for cyclists of all abilities. In communities with little opportunity to expand off-street facilities, bicycle boulevards offer a similar experience on existing roadways. A bicycle boulevard does not designate a certain portion of the roadway for bicycle travel, as in a bicycle lane. Rather, it takes a local street that is already suitable for bicycling and makes it both safer and more convenient for bicycling.

The boulevards give bicycles priority over vehicular traffic by giving the roadway that has been designated as a bicycle boulevard the right-of-way at intersections wherever possible. To keep vehicle speeds and volumes low and maintain a safe, comfortable bicycling facility, traffic is slowed or impeded through typical traffic calming measures, such as diverters and speed humps. Streets that are designated as bicycle boulevards are intended for residential vehicle traffic only, hence through-traffic is often prohibited.

Bicycle boulevards are distinctive from other local streets, signaling to both bicyclists and motorists that they are on a street designed to give priority to bicyclists. Signs and pavement legends indicate the streets on the bicycle boulevard system. Aside from signs and pavement markings, a bicycle boulevard is created through a series of traffic-calming devices.

Bike Boxes

A bike box establishes space for bicyclists at the head of a traffic lane at traffic signals, providing a safe and visible way to the front of a traffic queue at a red light. It extends at a right angle from the bicycle lane across a lane or lanes of traffic. The intent of the bike box is to make bicyclists more visible to motorists and to eliminate conflicts for vehicles that otherwise would be turning across a bicyclist's path. The bike box also facilitates a left turn by a bicyclist. This treatment increases pedestrian safety as well, by providing a buffer between vehicles and crosswalks and improving visibility.



Bicycle Box
Source: Metropolitan Transportation Commission

Bike boxes are appropriate on streets that already have bicycle lanes installed. In the United States, bike boxes are currently used in Portland, OR, New York, NY, and Cambridge, MA.

Colored Bicycle Lanes

Colored bicycle lanes are used to draw attention to the presence of bicycle lanes. Typically, only a portion of the lane is colored where a conflict point between motorists and bicyclists exists. One example is where a right turn lane at an intersection crosses a bicycle lane. Materials such as an epoxy stone treatment can be used to color the pavement or a thermoplastic paint.

Blue Bicycle Lane
Source: City of Portland

Preliminary findings from a study in Portland, OR suggest that colored bicycle markings result in a statistically significant increase in motorists yielding to cyclists, to motorists slowing or stopping when approaching a potential conflict area, and a slight reduction in conflicts (although data is pending regarding the amount of crashes).[2] The City of Chicago has also experimented with colored bike lanes at conflict areas, using a green treatment instead of blue. Chicago's trial was part of a FHWA study to measure the effectiveness of the colored lanes on bicycle safety. A before and after study of the green lanes has not been completed.

Bicycle Sharing Programs

Bicycle sharing programs are intended to provide access to bicycles for intra-city transportation. The goal of these programs is to reduce overall motor vehicle travel by providing a convenient, low-cost alternative for short trips. The bicycle sharing program establishes stations where communal bikes are locked in locations distributed throughout a community. The bicycles often are distinctive to indicate that they are part of the shared program. Users are able to pick up a bicycle and then return it to any station within the system.

[2] City of Portland. "Portland's Blue Bike Lanes: Improved Safety through Enhanced Visibility." Office of Transportation, 1999. Retrieved July 2007. < http://www.portlandonline.com/shared/cfm/image.cfm?id=58842>


Examples of International Bike Share Programs (Paris and Barcelona)
Source: www.flickr.com

Programs can be operated free of charge, by a deposit, through membership fees, or with a long-term check-out. Bike share programs that operate free of charge often specify the limits of use, while those with long-term checkouts allow users to travel further from the initial point of pick-up. These types of programs can be operated by private companies or initiated by municipalities as a public-private partnership. Universities also provide a potential market for a bicycle share program.

Bicycle Station

A bicycle station provides a secure, covered space for parking bicycles for extended periods of time. The station also can provide a variety of other amenities and services including showers, lockers, bicycle rentals, and repair services. The station also can be a center for a bike share program.

In the City of Chicago, a bicycle station is located at Millennium Park. The facility offers secure parking, shower facilities, rentals, and repair services. Parking is offered free of charge to all users, while many of the other services are provided with a membership. With a paid membership, users have access to the secure parking 24 hours a day, along with shower and locker privileges. Discounts are provided for repairs and retail items, as well as events and related programming.

Bicycle Signal Heads

Signalized intersections can be calibrated to provide a bicycle-only phase with bicycle signal heads. Although the bicycle signal head is not listed within the MUTCD, the state of California has approved the use of these signals.

With a bicycle signal head, the traditional red, yellow, and green “balls” are replaced with the same color bicycle icons. The lights can be actuated in the same manner as a traditional signal.

These signals should be used only at intersections where volumes at peak hours, incidents, and proximity to generators warrant their need.[3]

7.4 Recommendations

The City of Evanston recently implemented bicycle lanes and routes as proposed from the *Evanston Bicycle System Improvement Plan* and is currently implementing recommendations from the *Evanston Bicycle Parking Report*. This section includes recommendations from the plan that have not yet been implemented as well as additional bicycle improvements. As the bicycle improvements are relatively new to the community, Evanston should re-evaluate the plan and parking report every five years to determine any additional needs that have not been met.

7.4.1 Infrastructure: Install Bicycle Parking at Transit Stations – *Continue implementation of the recommendations in the Evanston Bicycle Parking Report to provide additional bicycle parking at transit stations.*

The City of Evanston has initiated a bicycle rack installation program as recommended in the *Evanston Bicycle Parking Report,* beginning with bicycle racks in the downtown locations. This report focuses on bicycle parking needs in downtown Evanston and transit stations and recommends a total of 178 racks. During the planning process for this Plan, the needs for additional bike parking at the Central Street Metra station and the Main Street Metra and CTA stations were particularly stressed. The City should install these and conduct after studies to monitor usage and determine if additional racks are needed.

Infrastructure Costs: $600 per rack

7.4.2 Program: Establish a Bike Rack Request System – *Create a system whereby residents and business owners can request additional bike racks in publicly-owned locations.*

The current effort to increase bicycle parking will give the City a good base at locations where it is most needed. However, bicycle parking needs are dynamic and the City should continue to install bike racks on a routine basis to ensure that bike parking needs are met.

Through the public involvement process, Evanston residents agreed that a request system should be put in place to allow residents and/or business owners to request additional bicycle racks within the public right-of-way. This is an efficient way to identify locations where bicycle parking is needed. Additional bicycle racks could be funded by the City or through a shared funding program whereby business owners cover half the cost. Locations where property owners are willing to share the cost would be a higher priority and would be installed first.

Program Costs: Staff time.

[3] Metropolitan Transportation Commission. "Bicycles/Pedestrians Safety Toolbox: Engineering." Oakland, CA, 2008. (April 14, 2008). Retrieved July 2008.
<http://www.mtc.ca.gov/planning/bicyclespedestrians/tools/bikeSignals/index.htm>.

7.4.3 Policy: Adopt a Bicycle Parking Ordinance – *Build bicycle parking requirements into the zoning ordinance to ensure that new development accommodates bike parking needs.*

Requiring bicycle parking accommodation along with new development would help ensure adequate parking throughout the City. A bicycle parking ordinance should be passed in accordance with the recommendation set forth in the Bicycle Plan. The following table suggests bicycle parking requirements. These are adapted from ordinances used in Cambridge, MA and San Francisco, CA.

Land Use	**Bicycle Parking Requirement**
Residential	
4 – 50 dwelling units	1 bicycle space per 2 dwelling units
50 + dwelling units	25 bicycle spaces + 1 per every 4 dwelling units over 50
Commercial	
10,000 ≤ floor area < 50,000 sf	4 bicycle spaces
50,000 ≤ floor area < 100,000 sf	8 bicycle spaces
Floor area > 100,000 sf	16 bicycle spaces
Assembly	1 bicycle space per 20 seats

Program Costs: Staff time.

7.4.4 Infrastructure: Improve and Expand the On-Street Bicycle Network – *Continue to install dedicated bicycle lanes on City streets. Where streets are not wide enough for bicycle lanes, implement shared lane markings to mark a bicycle facility.*

Bicycle Lanes

The City of Evanston also should continue to implement recommendations included in the *Bicycle Plan*. Several bicycle lanes were not implemented initially and should be considered on the following road segments in the future:

- Green Bay Road (Asbury to Simpson) (0.2 mile)
- Asbury Avenue (Emerson to Green Bay) (0.1 mile)
- Asbury Avenue (Howard to Oakton) (0.5 mile)
- Maple Avenue (Church to Foster) (0.4 mile)
- Central Street (Gross Point to Lincolnwood and Green Bay to Sherman) (1.4 miles)
- Crawford Road (Glenview to Central) (0.4 mile)

Continuing with the implementation of the bicycle plan would add 3 miles of bicycle lanes to the network.

Marked Shared Lanes

At the time the *Evanston Bicycle System Improvement Plan (Bicycle Plan)* was being developed, McCormick Boulevard was undergoing a jurisdictional transfer and reconstruction and was not considered for inclusion in the bicycle network. The reconstruction, including a reduction in the

number of vehicle lanes has since been completed. Bicycle routes should now be considered along McCormick Boulevard.

Evanston's on-street bicycle network could be expanded upon with marked shared lanes. In the past, application of marked shared lanes was limited by IDOT approval, as the City was using federal grants to implement the bicycle network. However, if Evanston used City funds, marked shared lanes could be implemented.

Potential applications of marked shared lanes in Evanston include roads designated as signed routes that have the appropriate width. Per IDOT's standards, a shared lane must be 13 feet wide. However, the City of Chicago is currently developing an update to its *Bike Lane Design Guide*, which will include the latest standards on the lane widths appropriate for shared lanes and placement guidelines for the pavement markings. These may include recommendations for shared lane markings on lanes that are narrower than 13 feet.

Roads that have bike lanes for only a portion of their length would benefit from adding shared lane markings where the bicycle lanes end. This extends the facility that has already been designated by the bike lane and lets motorists know to expect bicyclists to continue. The road segments where a shared lane marking could serve as an extension of a bicycle lane are as follows:

- Emerson Street (Wesley Avenue to Sheridan Road) (0.75 miles)
- Church Street (McCormick Boulevard to Oak Avenue and Chicago Avenue to Sheridan Road) (1.5 miles)
- Davis Street (Florence Avenue to Asbury Avenue and Sherman Avenue to Hinman Avenue) (0.75 miles)
- Dodge Avenue (Church Street to Simpson Street) (0.5 miles)
- Asbury Avenue (Main Street to Emerson Street) (1.75 miles)
- McCormick Boulevard (Emerson Street to Prairie Avenue) (1.25 miles)

This would add 6.5 miles of on-street marked shared lanes to Evanston's existing 5.5 miles of bicycle lanes.

In addition, any location where a bike lane must be discontinued for a brief segment is a potential use for shared lane markings. This occurs most often at intersections with right and/or left turn lanes. Often, there is not enough room for the turn lanes and a bicycle lane, and the bicycle lane drops off in advance of the intersection. In this application, the shared lane marking helps clarify traffic patterns and reduce conflicts. One example of such a case in Evanston is Chicago Avenue and South Boulevard.

Through the public involvement process, Evanston residents agreed that the City should continue its efforts to install on-street bicycle facilities, where possible. In particular, the need for facilities along Sheridan Road was stressed. The type of facility that is appropriate for Sheridan Road requires further study and is currently being investigated under a separate contract to rebuild the roadway.

Infrastructure Costs: $170,000 (includes $90,000 for bicycle lanes and $80,000 for marked shared lanes)

7.4.5 Infrastructure: Improve and Expand the Off-Street Bicycle Network – *Connections that would better integrate existing facilities to the bikeway network were identified in the Evanston Bicycle System Improvement Plan.*

The *Evanston Bicycle System Improvement Plan* also included several recommendations for off-street trail segments to expand upon the existing trails along the North Shore Channel in Skokie. New trail connections were proposed along Oakton Street between Dodge and the Channel, connecting the trail to James Park and along McDaniel Street between Dempster and Church, which would connect to a trail running through Harbert Park. Through this planning process, recommendations to continue the Canal path north from Green Bay Road to Evanston's border at Isabella. Together, these trail segments would add 1.8 miles of off-street trails to Evanston's system.

The bicycle plan also proposed localized improvements that would augment access to existing trails and parks at Twiggs Park, and the Green Bay Trail. The suggested improvements would enhance bicyclist safety and convenience and should also be considered at this time. Improvements at Twiggs Park have been designed and construction is expected to begin spring/summer 2009.

Other improvements to off-street bicycle facilities were included in various plans. These include trail segments specified in the Lakefront Master Plan through the park between Lee Street and Clark Street and along Sheridan Road between the City border and Keeney Street. The West Evanston Trail, as identified in the *West Evanston Physical Planning and Urban Infill Design Services* would extend from the intersection of Dodge and Davis Streets to Foster and Jackson Streets.

An additional issue that was raised during this planning process is the need for a connection along Isabella Street across Green Bay Road, where the street network is discontinuous. This would require an underpass and would need to undergo further study to determine the feasibility of such a connection.

Infrastructure Costs: $1,000,000/mile (includes planning, design, and construction of trail segments)

7.4.6 Program: Educate Road Users – *Educate bicyclists and motorists on the rules and responsibilities of each type of user.*

With the increase in the bicycle network and facilities, there may be bicyclists and motorists who are unaware of their rights and responsibilities on or near those facilities. The community agreed that education of both bicyclists and motorists would be a valuable investment by the City.

On-street education by police officers and community organizations is an effective way to reach both motorists and cyclists and instill the rules of the road in these users. The focus of this effort would be to target specific behaviors, such as vehicles driving in the bike lane and bicyclists riding the wrong direction, and try to reverse them. Good behaviors, such as bicyclists wearing helmets and lights at night could also be acknowledged to reinforce safety.

Adding education programs to Evanston's grade schools is another effective way to reach a large population and promote safe cycling skills. Schools in the Village of Wilmette have established a successful program that could serve as a good example for Evanston. Students in Wilmette are taught safe cycling skills at the end of 2nd grade and again at the end of 5th grade. As a result, many students ride their bikes to school. Partnerships could be sought with local bicycle shops and clubs to develop a similar program in Evanston.

Another resource for bicyclist and motorist education could be the Northwestern University Center for Public Safety Traffic Institute. The Center for Public Safety offers similar courses already, such as a Police Motorcycle Training.

Program Costs: $20,000 – $30,000/year

7.4.7 Study: Develop a Plan for a Downtown Bicycle Station – *Bicycle Stations provide amenities for bicyclists such as secure, covered parking, lockers, and shower facilities and additional public bicycle parking.*

Through this planning process, Evanston residents noted a lack of secure, convenient long-term bicycle parking in the downtown area. The bicycle plan should consider establishing a bicycle station, similar to McDonald's Cycle Center in Millennium Park in Chicago, to provide parking and other amenities. Bicycle stations include secure, weather-protected bicycle parking and a combination of other facilities that may include showers, lockers, a café, bicycle repair service, or bicycle rentals. A bicycle station is ideal for commuters who intend to leave their bicycle for a full day and would benefit from the additional amenities. In Evanston, it would serve both commuters destined for downtown Evanston as well as those accessing CTA or Metra for longer distance commutes.

Davis Street would be a logical location to capture a variety of users. It would also be a good addition to a proposed transit hub, with enhanced transit amenities. The addition of a bicycle station would expand the hub and make it more versatile for intermodal connections. Possibilities for specific locations include the intersection of Emerson/Elgin/Benson, or the Sherman Avenue parking garage. The City should study the feasibility of a bike station, including the ideal

location for such a facility. As an intermediary provision, long-term bicycle parking facilities could be installed in the Sherman Avenue parking garage.

Study Costs: $20,000 - $50,000

7.4.8 Study: Pilot a Bicycle Boulevard – *A bicycle boulevard is a shared roadway designed for only local vehicular traffic, but allows through bicycle traffic. These facilities capitalize on existing roadways to expand the bicycle network and are ideal for inexperienced riders.*

Given the built-out infrastructure in Evanston, opportunities for additional bike lanes and trails may be limited. In addition to marked shared lanes, Evanston should consider its roadways for applicability of bicycle boulevards. Good candidates for bicycle boulevards are local streets with low volume to capacity ratios. **Section 10: Roadways** of this Plan includes data from 50 roadways in Evanston including the volume to capacity ratios. A potential street should be selected to pilot a bicycle boulevard. A street that serves several schools would be a good candidate, as it would provide a safe bicycle facility for young students to ride to school. If successful, the concept could be expanded to create a network throughout the City. This would significantly expand the bicycle network.

Study Costs: $10,000 - $15,000

7.4.9 Study: Establish a Shared Bike Program – *Provide a service for short-term bicycle rentals for travel within Evanston. Such services are low-cost rentals ideal for utilitarian bicycle trips.*

Evanston is a compact city, which makes it ideal for a shared bike program. With the student population of Northwestern University, such a program would be in high demand. The City should consider partnering with the university to implement a program that extends to the campus and points throughout Evanston. Several companies, including ClearChannel and JC Decaux, operate shared bike programs as well as transit shelters. Evanston should consider a joint contract that would provide both amenities. Other cities using these programs include Washington, D.C., Paris, and Lyon, France. These cities will serve as good examples for a program template.

Study Costs: $10,000 - $20,000 (includes research and bid preparation)

7.4.10 Program: Re-evaluate Bicycle Facilities Every 3 Years – *Evaluate on-street and off-street facilities and bicycle parking regularly to ensure bicyclists' needs are met.*

As both the needs and the opportunities of bicycle improvements change over time, the bicycle network should be re-evaluated every 3 years. A recurring assessment will allow the community to adjust priorities and guarantee that the most pressing needs are met.

Program Costs: $20,000 - $50,000

Section 8
Parking

The parking section of this report identifies the function of existing parking in Evanston based on field observations. The City identified five key areas for examination (see **Map 8-1 Parking Study Areas**):

- Central Street Area
- Dempster/Chicago Streets Area
- Howard Street Area
- Chicago/Main Streets Area
- Downtown Area

The parking assessment looks at how the parking is operating in terms of overall occupancy and defines whether and where there are surpluses and shortages of parking. The analysis goes further by looking at occupancy trends over the course of a day and offers insight into the significance of the various assessments and how the pricing of parking impacts demand.

The parking section also identifies recommendations that will guide the City with establishing its own parking policies and directives by offering insight into key areas in the parking system, decision points and associated pros and cons for consideration.

8.1 Parking Inventory

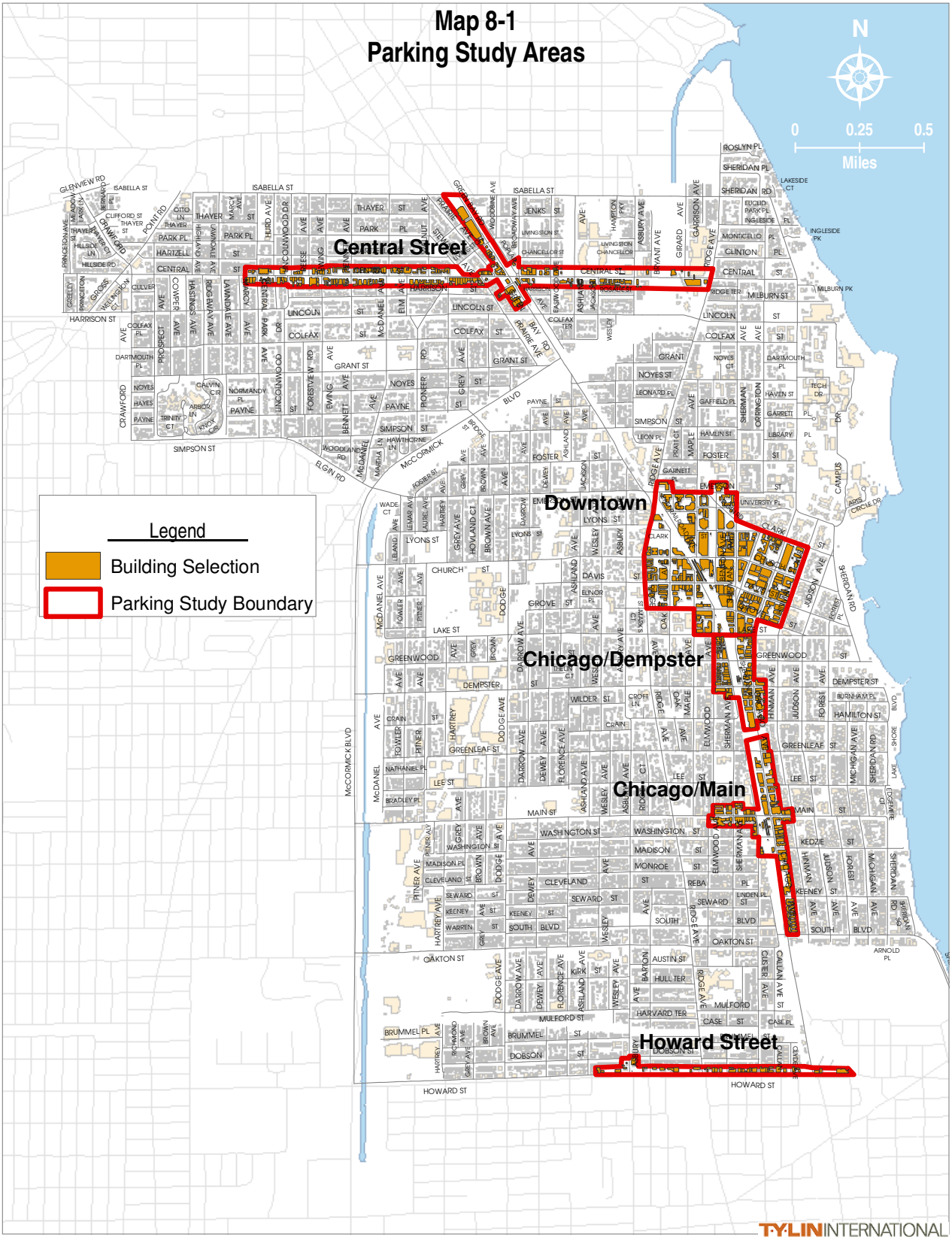
Table 8-1 identifies the existing parking supply in the study area. Included in the summary is a breakdown of the public and private supply by study sub-area.

Table 8-1
Parking Supply

Sub-Area	Subtotal	Public	Private
Central Street	1,535	651	884
Chicago Dempster	714	323	391
Chicago Main	805	590	215
Downtown	5,796	2,753	3,043
Howard Street	548	106	442
Total	9,398	4,423	4,975

There are a total of approximately 9,398 parking spaces in the five study areas. Of these parking spaces, 4,423 (or 47%) are public and 4,975 (or 53%) are private off-street spaces. Rich and Associates recommend that a best practice approach to public parking is that the community manage or own 50% of the total supply. Evanston is very close to this ratio by having direct control or ownership of 47% of the total parking supply.

Key reasons for controlling 50% of the parking include the ability to control pricing of the available parking, ability to respond to development opportunities from a parking and economic


Map 8-1
Parking Study Areas
N
0 0.25 0.5
Miles
Central Street
Downtown
Chicago/Dempster
Chicago/Main
Howard Street
Legend
Building Selection
Parking Study Boundary
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January 2009

development perspective and the ability to aid in achieving overall urban design goals for the community.

Figure 8-1 exhibits the occupancy comparison between the public parking supply and the private parking supply. As a measure of parking system function, it is ideal to have both the public and private parking supply close in occupancy. The parking in Evanston, overall and in each of the sub-areas, is functioning reasonably well in terms of relatively equal occupancy of the public and private parking.

Figure 8-1: Variation between Public and Private Parking

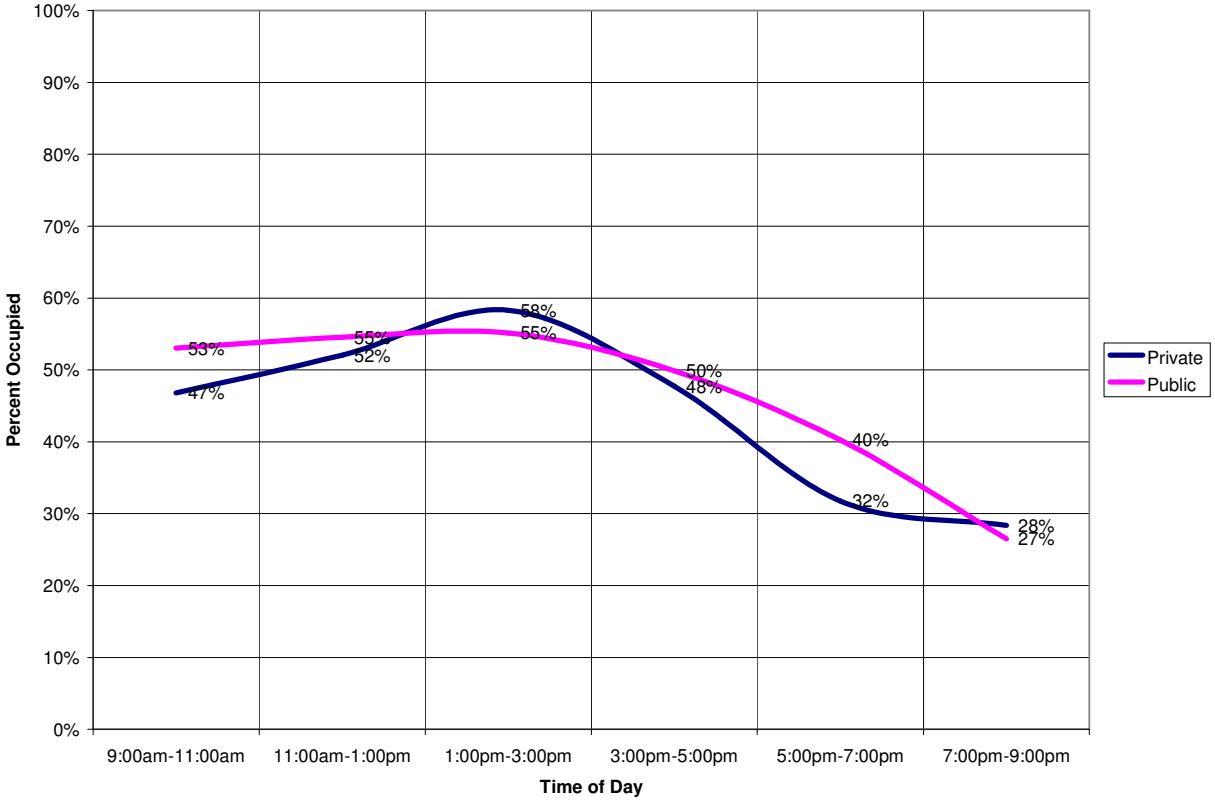
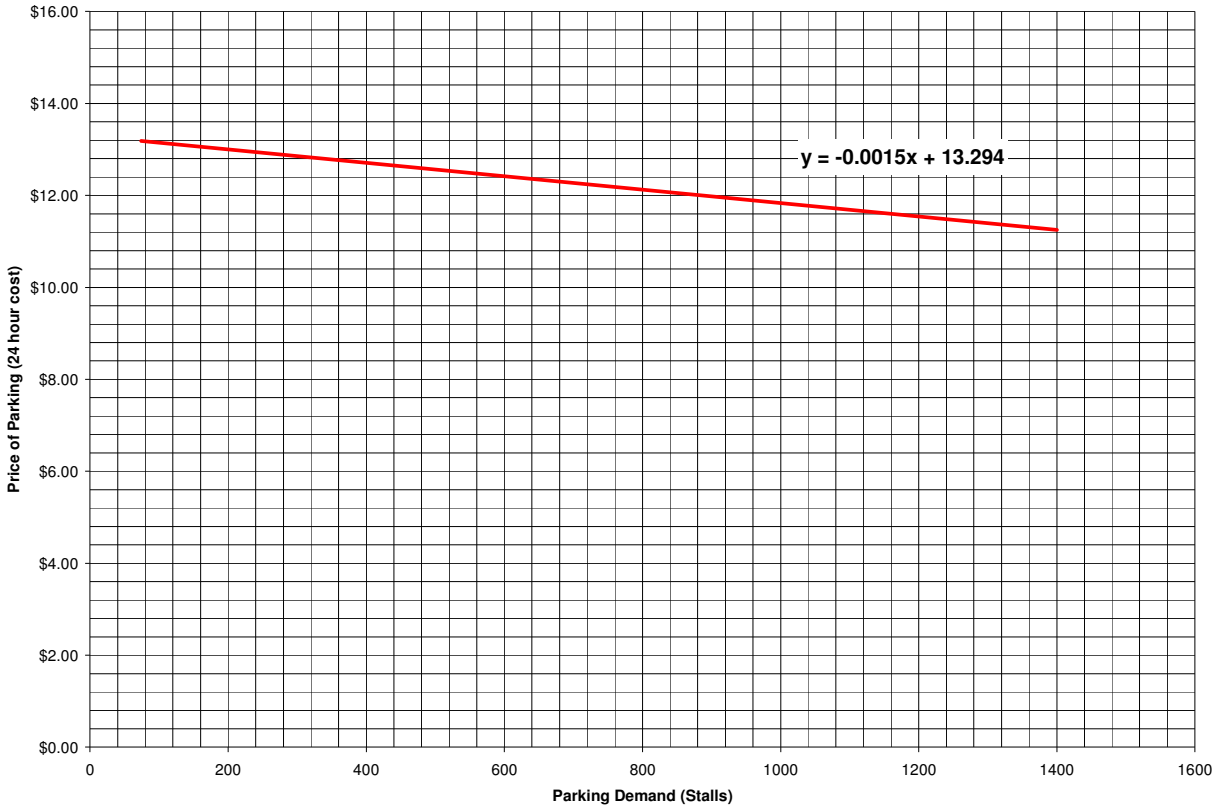


Figure 8-2 illustrates that parking is price sensitive in Evanston. The graph is an examination of the occupancy derived demand for parking at various parking areas according to price. A distinct trend emerges that illustrates the price sensitivity consumers have with regard to parking. Even a modest increase of one dollar in the price of parking reduces demand by hundreds of parking spaces.

Figure 8-2: Comparing Parking Price to Parking Demand



Statistically the data available in Evanston only allows for generalizations about the price sensitivity of parking demand. However, evidence from other parking studies undertaken across the country and from academic efforts supports the observations in Evanston.

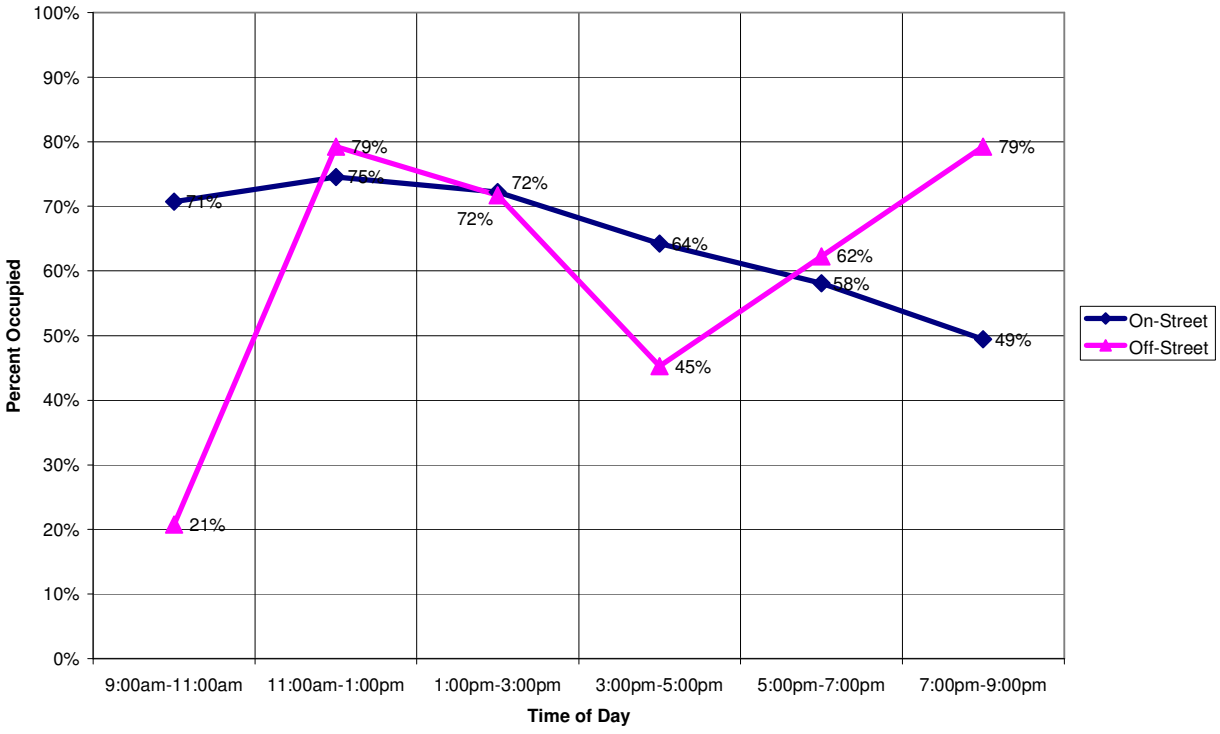
A key conclusion that can be drawn from this information is that varying the pricing of parking (higher prices in high utilization areas and lower prices in low utilization areas) will help encourage individuals to park in underutilized areas. We also know from experience that price sensitivity changes over time. Specifically, a drop in demand from an increase in price is most pronounced during the initial months after the rate change.

8.2 Sub-Area Parking Occupancy Analysis

Occupancy studies were undertaken in Evanston during the months of May and June 2008 (May 8, 2008 and June 5, 2008). The studies included a sampling of the total parking supply to determine a parking occupancy rate and included 4,689 (public and private) parking spaces. Occupancy is a measure of how full various parking areas are and is an important aspect of establishing how parking demand fluctuates throughout the day.

Figure 8-3 through **Figure 8-7** graphically represent parking occupancies for the five study areas in Evanston. Of note in the chart is the high daytime off-street occupancy (79%) in the Central Street area. When parking reaches 85% capacity, it is considered to be reaching functional capacity since parkers perceive the parking area to be full.

Figure 8-3: Central Street, On versus Off-Street Public Parking



The next comparison examined is the Chicago Main area occupancy (**Figure 8-4**). This chart illustrates that the parking occupancies of both types of parking are relatively close during the day, with on-street increasing in the evening. Parking in this area is relatively adequate and functioning efficiently

Figure 8-4: Chicago Main, On versus Off-Street Public Parking

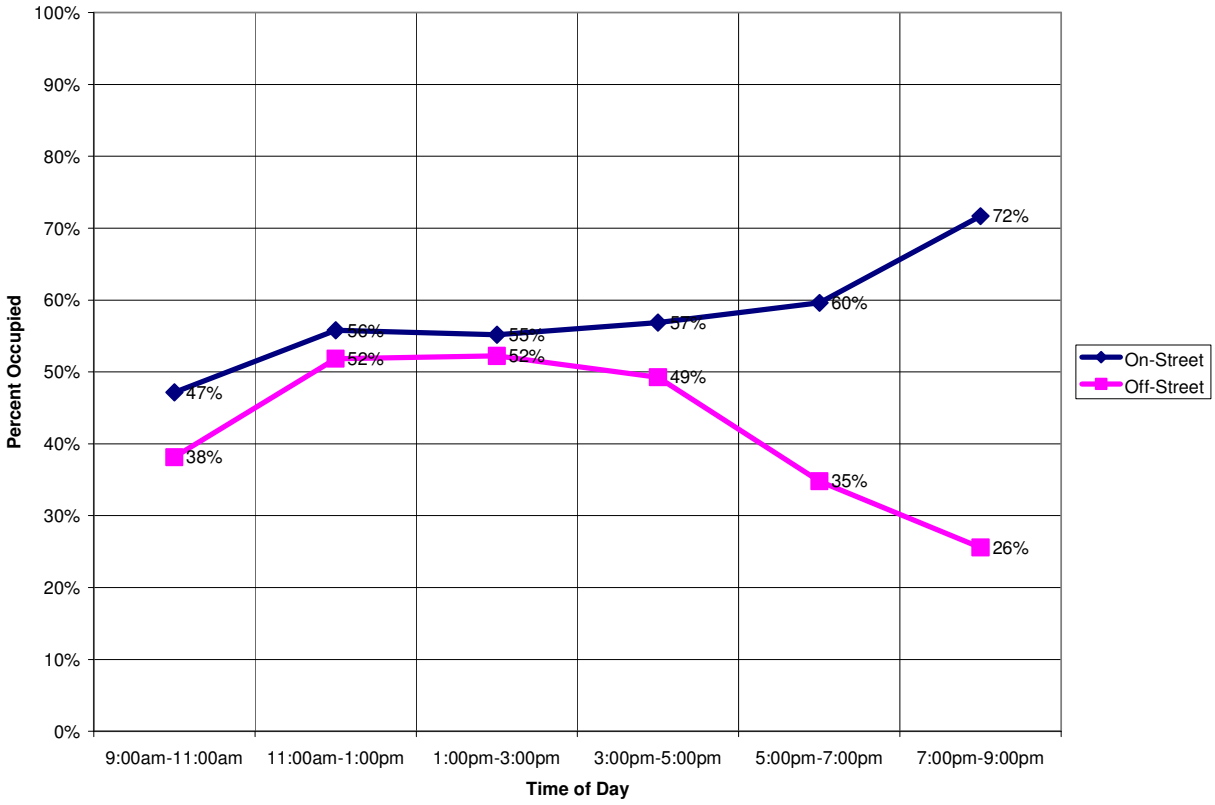


Figure 8-5 shows that there is a great amount of difference between the public on and off-street parking. Variation between the on and off-street parking usually can be attributed to a need for a more comprehensive sign program and a pricing strategy to help encourage the use of off-street parking. Specifically, consideration should be given to increasing the cost of on-street parking to help encourage the use of off-street parking in this area.

Figure 8-5: Chicago Dempster, On versus Off-Street Public Parking

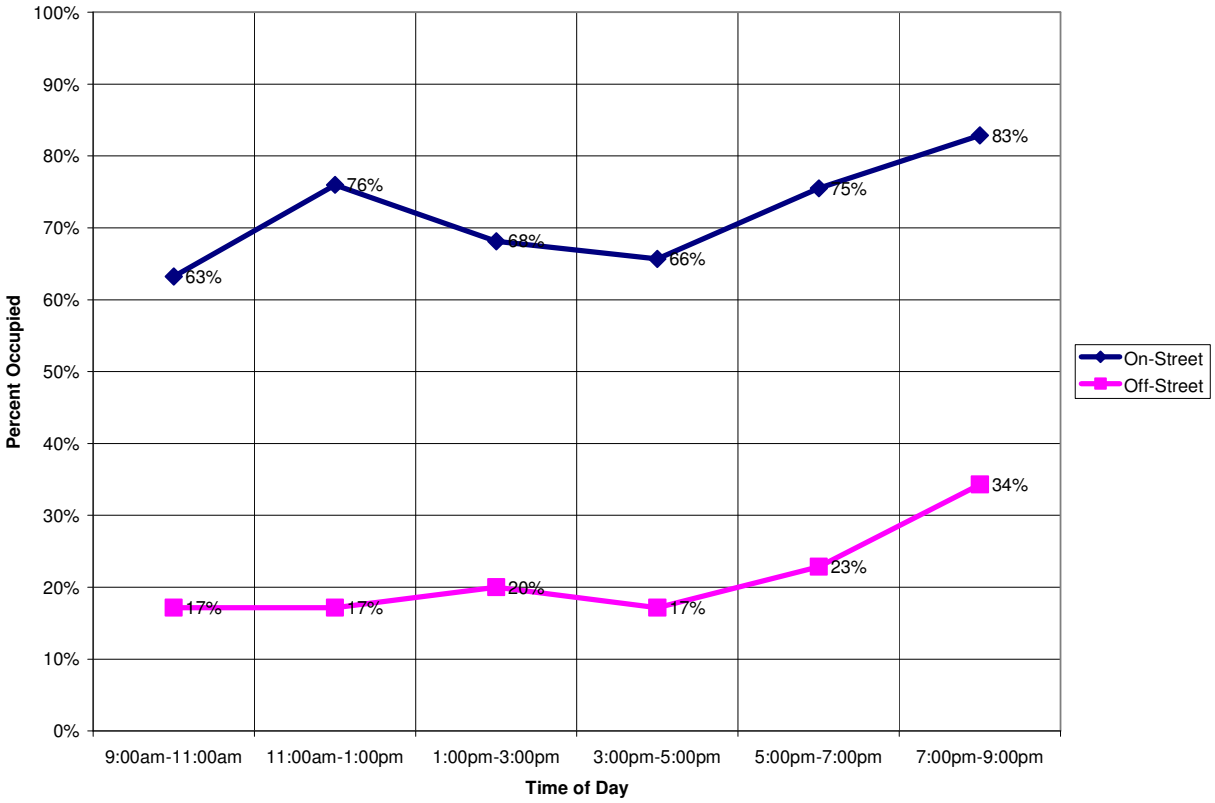


Figure 8-6 shows a pattern for the Downtown area that exhibits some variation between the on and off-street parking, demonstrating that the off-street parking is not being used as efficiently as possible for this area. The Downtown area would benefit from better parking signs and a review of parking pricing to help encourage the use of the off-street parking.

Figure 8-6: Downtown, On versus Off-Street Public Parking

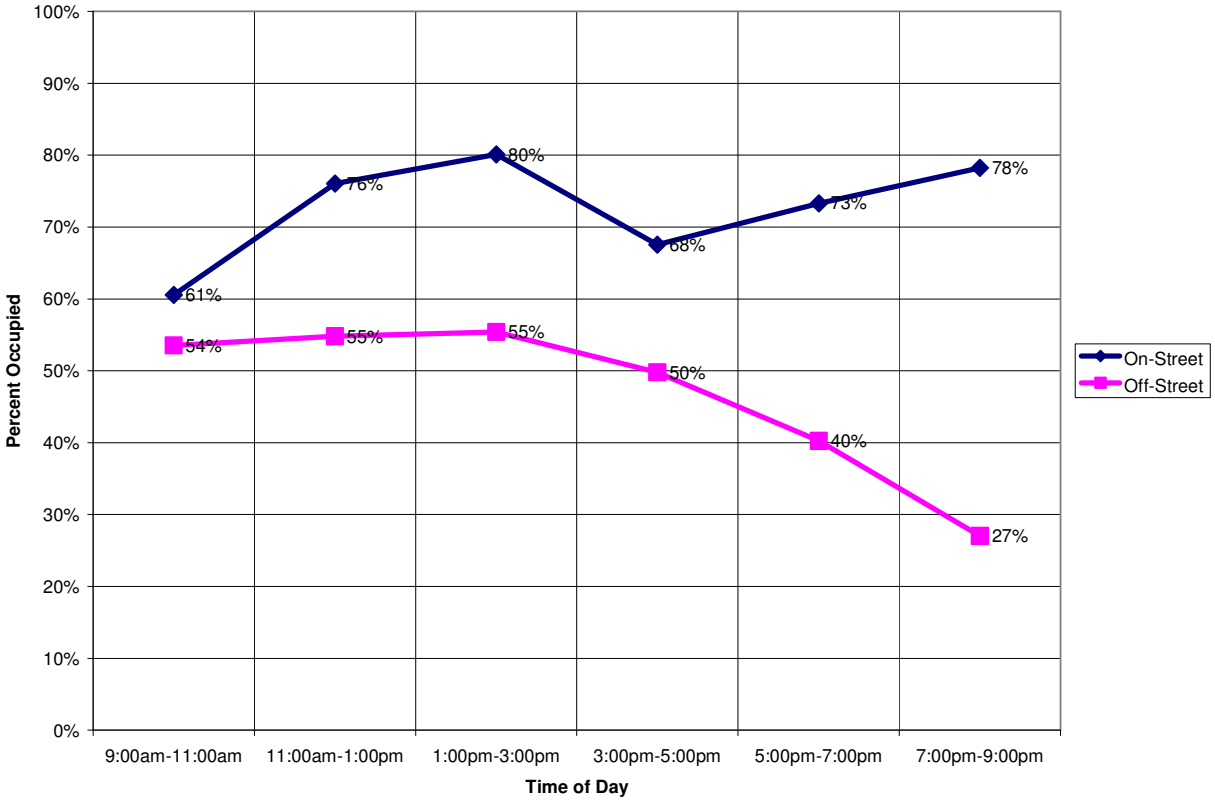


Figure 8-7 is the last sub-area chart. The Howard Street area only has on-street public parking and the occupancy study reveals that it is functioning efficiently. Further the parking occupancy is less than 85% indicating that there is adequate paring in this area.

Figure 8-7: Howard Street, On-Street Public Parking

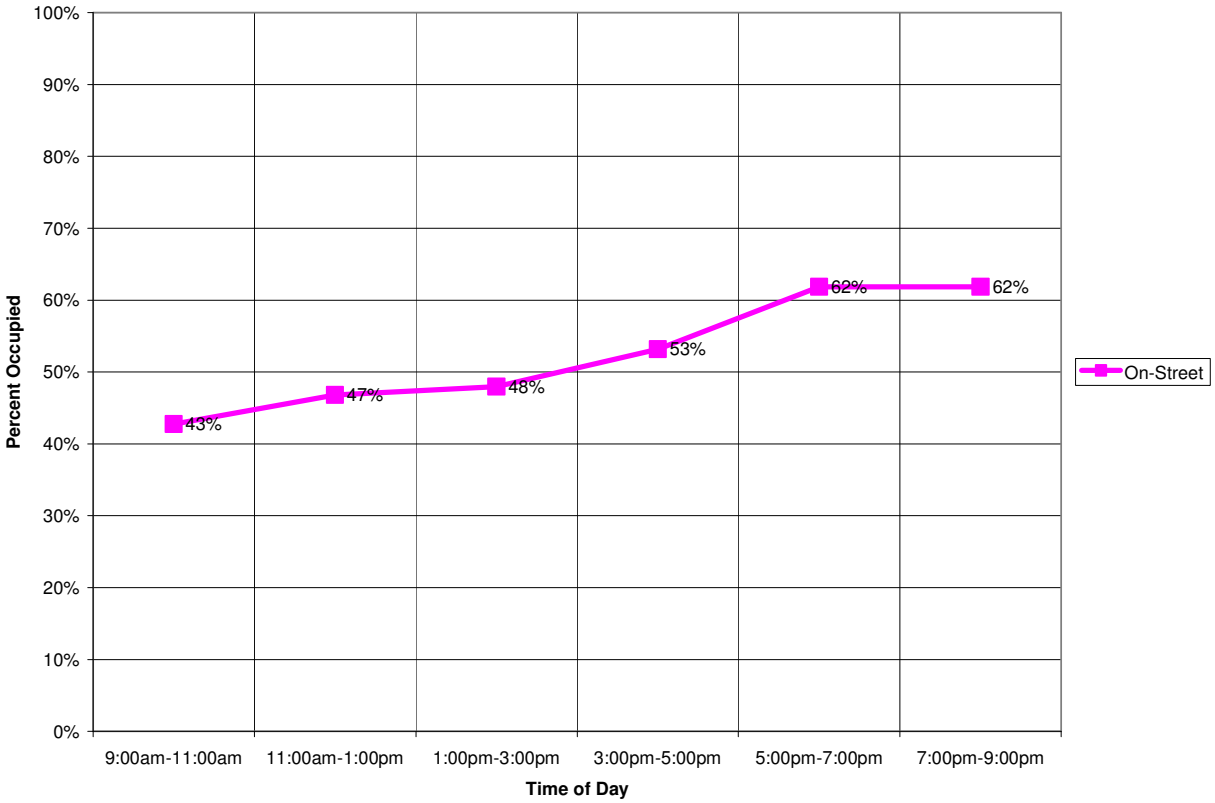


Figure 8-8 is a demonstration of the occupancy of the public parking broken out by general or mixed parking versus commuter parking. While the general parking is functioning well and appears to serve Evanston's needs, commuter parking is achieving occupancy of over 95%. When parking reaches 95% capacity it is consider to be functionally full since there is a natural 5% turnover rate (vehicles pulling into or out of spaces). At a capacity of 95% or more, the demand is effectively more than the supply.

Figure 8-8: Public Parking versus Commuter Parking

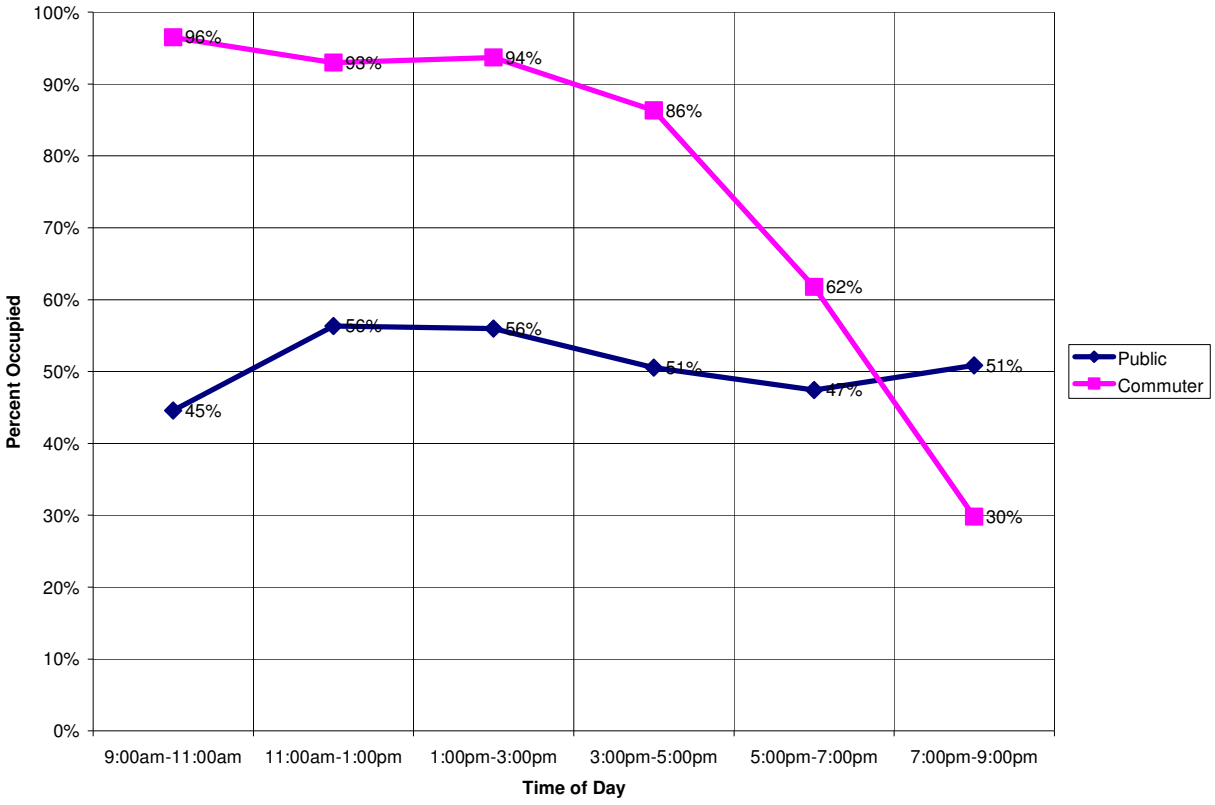


Table 8-2 shows the average daily ridership per Metra and CTA station, along with the existing parking at each station. The need for parking will vary by station based on land use, population density, and type of service. According to parking utilization rates calculated by Metra in October 2008, parking occupancy at Metra stations ranges from 95%-100%. This suggests that additional commuter parking may help to increase ridership at Metra as well as CTA stations. The amount of additional parking at each station will require a more in-depth study of existing parking utilization and demand.

Table 8-2
Existing Commuter Parking

Station Name	Daily Passengers[1]	Existing Spaces[3]	Spaces/Passenger
Metra			
Central Street	1,234	317	0.26
Davis Street	1,854	68	0.04
Main Street	869	74	0.09
Subtotal	**3,957**	**459**	**0.12**
CTA			
South Boulevard	386	0	0
Main	609	0	0
Dempster	369	0	0
Davis	1,922	0	0
Foster	371	34	0.09
Noyes	313	20	0.06
Central	412	0	0
Subtotal	**4,382**	**54**	**0.01**

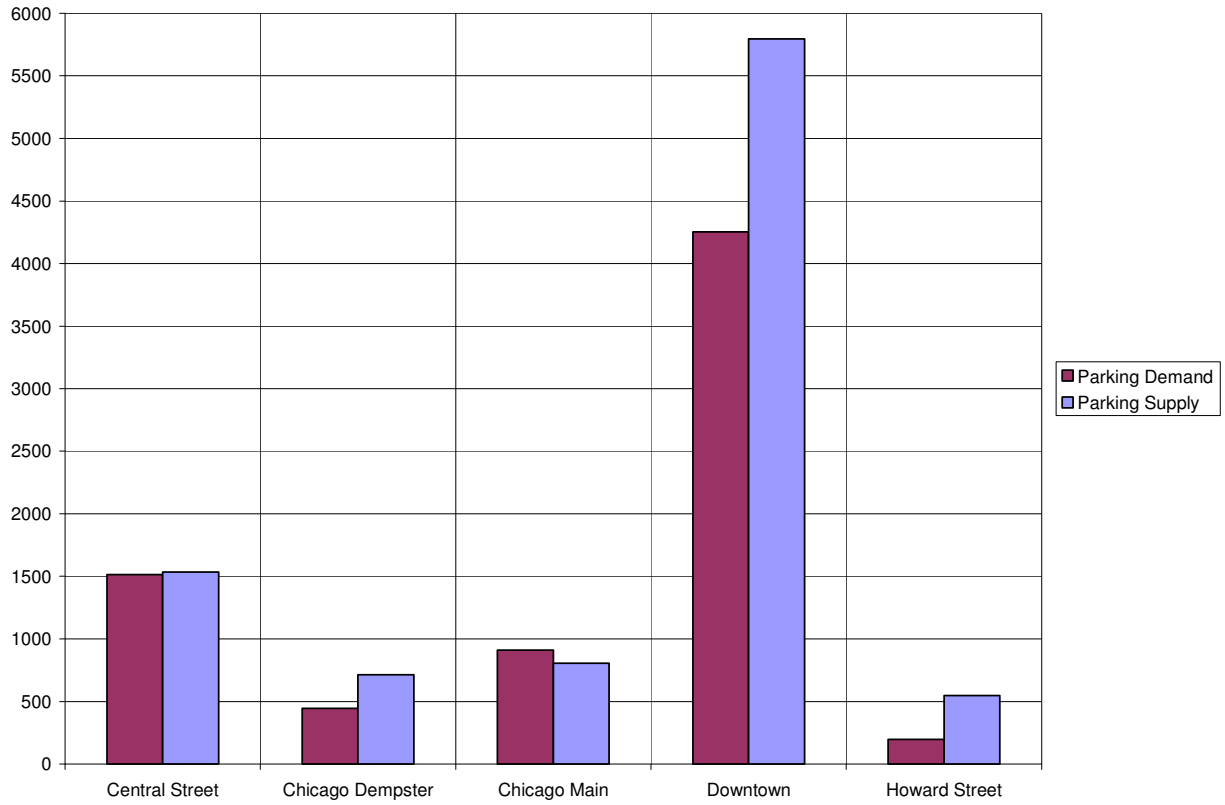
1. Source: Metra 2006 Boarding Counts. Metra Parking Statistics, 2008. CTA Ridership, 2006.
2. Parking at Foster and Noyes provided by the City of Evanston.

Currently, most (69%) of the public parking supply available to commuters is in the Downtown area, where only 45% of the rail commuters board at the Davis Street CTA and Metra Stations serving the Downtown area.

Projected growth in ridership is approximately 1% per year based on historical data. Growth could be higher with the introduction of new or additional commuter parking spaces, since parking availability is most likely a limiting factor in ridership for the Metra and CTA rail stations outside of the Downtown.

Figure 8-9 is addressing where additional parking should be considered by the City. The chart is an approximation of how much parking is needed by study area, as compared to the available supply. In general, three of the five study areas have adequate parking. The Chicago Main area and the Central Street area would benefit from additional parking. Opportunities for acquiring land for parking and public-private joint ventures should be considered as primary means of adding parking supply within these locations.

Figure 8-9: Parking Demand versus Supply



The Central Street and Main areas would need an additional (approximated) 209 and 225 parking spaces respectively based on the occupancy observations. Additional parking supply in these areas should be publicly built commuter parking. However, the decision to create additional commuter parking needs to be addressed by the City as a matter of policy.

Based on the observed occupancies, there is a total estimated oversupply of 1,105 parking spaces. These include 163 in the Chicago Dempster area, 672 in the Downtown area and 270 in the Howard Street area.

8.3 Parking Signage Guidelines

The following are guidelines for a parking sign system. Many communities come up with a "brand" to help market the downtown and commercial areas. The guidelines can be used to help develop an overall way-finding program.

The following five types of parking signs increase a drivers' way-finding experience:

Introduction: Introduction parking signage alerts drivers approaching the downtown of the locations of the publicly owned, off-street parking lots. This type of signage is distinctive in color and size, and it can be characterized by

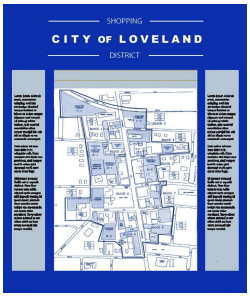
unique logos. The signs display the names of the off-street parking lots and the names of the streets. The signs are located on the street, and are mounted on poles of standard heights.

Directional: Directional-parking signage is distinct in color, size and logo and directs drivers to off-street parking areas. The signs are mounted on poles at standard heights, on the streets.

Location: Parking location signage complements the directional parking signage by adding place names or other references. The signs have arrows pointing to the off-street lots. The signs are mounted on poles at standard heights and located on-street.

Identification: Identification signage is placed at the entry of each parking lot. The name of the parking area is identified and the type of parking available at the parking area is listed on the sign. The identification signage is distinctive in color and size, and it is located on a pole at a lower height.

Way-finding: Way-finding signs are placed at the points of pedestrian entry/exit to parking lots and structures. The sign is a map illustrating the downtown area that points out the various shops or attractions that can be found. These types of signs are placed at locations easily found by a pedestrian and are intended to help that person orient themselves to the downtown area such that they can locate their destination and then be able to return to where they parked.



The general qualities of good signage include the following aspects:

- Use of common logos and colors.
- Placement at or near eye level.
- Use of reflective, durable material.
- All parking sign types should be used in conjunction to guide motorist and pedestrian activity.
- All entrances to the downtown need to have introduction signage.
- All parking areas need to have identification signage.
- All routes through the downtown need to have directional and location signage.
- All pedestrian routes to and from major customer/visitor parking areas need to have way finding signs.
- The identification signs located at parking areas need to convey parking rates, hours of operation, maximum durations, and validation availability.

Design Specific Criteria Recommendations:

- In general, sign lettering should be at least 4 inches in height. Smaller lettering may be difficult to see and cause traffic slow-downs as drivers read signs before entering a parking area.

- Logos and sign colors can be customized to suit the communities' desired design criteria. The important element is to be sure that signs can be read easily by being a distinctive color that stands out from background colors of adjacent buildings.

- The sign colors and logos need to be consistent for ease of understanding and quick visual reference by drivers.

- Sign programs are usually best undertaken at a City-wide level and include all the City's signs. The comprehensive nature of a large scale sign program helps ensure that all forms of way-finding signs (vehicular and pedestrian) are taken into account.

- Vehicular way-finding needs to be laid out initially in a coordinated fashion to determine what the preferred entry points to the community should be. Often directed traffic flow is a more efficient option that allows the community to take advantage of planned vehicle routes and entry points. A key 'rule of thumb' is that fewer, well thought out and well placed signs are far better than too many signs scattered throughout a community.

- Vehicular way-finding should include direction arrows to key destination places such as theaters, museums, shopping districts, etc., used in conjunction with the parking direction signs to allow drivers to quickly orient themselves to their destination and best parking options. Arrows should always be oriented to indicate forward, left or right movement. Reverse arrows or arrows indicating that a destination has been passed should be avoided to reduce confusion.

The parking signs in Evanston meet some of the guidelines listed above. The signs have a common theme with text, color, and logo. The signs also let drivers know what lot they are in. Important criteria that many lot signs are missing are; the parking duration, who the lots are intended for, customer/visitor or employee/permit and the hours of enforcement. Some of the text size is difficult to read on the parking way-finding signs. It is important that all signs work together in leading the customer or visitor to parking.

8.4 Privatization of Parking Facilities

The following table includes a review of the pros and cons associated with the City owning and operating parking, leasing existing facilities to private operators or outright selling facilities.

Parking Ownership and Operation Considerations		
	Pros	**Cons**
City operates parking structures.	- Maximizes City control over operations, ensuring quick response to changing market conditions and opportunities. - Customer service is typically a priority for staff and management, helping to minimize issues for the community.	- Staff costs are often higher as the pay and benefit standards for City employees tend to be higher than private operations. - Requires a hierarchy of staff to operate parking, including management and technical expertise. Private operators will endeavor to share resources among clients to help keep costs low.
City contracts parking to private operator.	- Operation parameters can be laid out in detail through a contractual relationship with the lessee/operator. - The City receives revenue from the parking facility per the terms of agreement. - Parking operations are usually more streamlined and performance standards adhered to without much time and effort on the part of City staff. - Parking operations benefit from professional service by a company that is regularly engaged in parking operations. - Resource sharing, knowledge base and staff experience are much greater than the City could acquire operating its own parking.	- Some cities have taken issue with private parking operator practices, citing lack of customer orientation and zero infraction tolerance as issues. Thee operator will run the parking as a business and revenue generation is their top priority if their compensation is based on gross/net revenue. - The City will still need to consider parking facility maintenance, repairs and replacement when considering leasing arrangements. Maintenance and repairs can be included in the lease agreement as the responsibility of the operator, but replacement will need to be addressed as the parking facilities age.
City sells a long-term parking facilities lease.	- City receives up-front money through the sale of a long-term lease. - City staff dedicated to parking facilities sold is greatly reduced.	- Building and land resources, including potential future opportunities for re-use are lost during the term of the lease. - City looses control of parking asset - Parking becomes market driven in terms of supply and price. - If applicable, future efforts to re-enter parking market by City would be difficult as private operators of leased facility would require a non-compete clause. - New parking lease will need to include legacy parking arrangements previously entered into between the City and building owners. - Potential lessee must determine value based on revenue potential taking into account current market rates and possibly higher operating costs. - If market parking rates were implemented, there could be negative economic impacts to local businesses, employees, customers and visitors.

The City of Evanston may consider a long-term leasing of the existing parking facilities. Leasing allows the City to continue to own the parking assets and to be able to maintain a degree of control over parking operations. Selling the assets can have long-term negative consequences. City owned and operated parking can have benefits, however the value added by a private operator is worth further consideration.

8.5 Recommendations

The parking field work, analysis and maps can be summed up as revealing that Evanston has adequate parking for the most part. Some areas do experience shortfalls of parking and in particular commuter parking. A number of initiatives would help to use the existing parking more efficiently and the City should consider adding new commuter parking in the Central and the Chicago/Main areas.

There is a surplus of parking in the downtown area. The surplus of parking results in a waste of resources. There are several means of addressing the inefficiency. The parking surplus should be reviewed on a block-by-block basis. Some blocks may not have a surplus and others may have a deficit. Also, the application of the recommendations may vary block-by-block.

The recommendations present a review of the changes being suggested for Evanston's overall parking system. The recommendations are intended to enhance the existing supply of parking through operational, management, and policy changes aimed at increasing the efficiency of the parking system.

8.5.1 Policy: Improve Downtown Public Parking Utilization by Discouraging Private Parking Supply – R*educe the private supply created by lowering zoning ordinance requirements or allowing a fee-in-lieu of parking program.*

Discourage Private Parking (Surface Lots)

Public parking provides better opportunities for shared used parking. Shared use parking is much more efficiently in mixed-use land use areas like the Evanston Downtown. Consider discouraging future creation of private surface parking lots in the downtown except as a component of residential developments. Small surface parking lots disrupt pedestrian activity and reduce density. An overall reduction in the private supply of parking could be accomplished with changes in the zoning requirements.

Fee-in-Lieu Parking

While there is surplus of parking in the downtown, additional public parking may be needed to support economic activity. Most of this parking could be provided by the City through parking structures and on-street parking. The City could consider charging an impact fee for new development to assist in funding new parking or transportation projects. This style of parking control and development has been successful in communities such as Grand Rapids, Michigan.

In lieu fees are typically based on a percentage of the cost of providing one parking stall in a new parking structure. The rate determined needs to be re-examined every three to five years to keep the amount in line with market prices and construction costs. The average fee in the United

States among communities that provide an in-lieu-option for parking is approximately $10,000 per stall. The revenues collected could also be used to fund other programs mentioned in this Plan.

To determine the number of parking spaces, Rich and Associates recommends using parking ratios from the City's Zoning Code as a basis to calculate how much parking would be needed as the basis for an assessment. As an example, if a mixed use development is proposed that includes retail, office and residential space, the floor area of each use would have a ratio applied to it to determine the total amount of parking needed.

The amount of parking needed to serve the development would then be the basis of the in-lieu-fee assessment. If the developer could demonstrate a shared use potential for the development that would result in a reduction in the overall amount of parking needed, the shared use reduction would then be deducted from the total amount of parking needed.

An example calculation follows for determining the in-lieu-fee for a hypothetical re-development project. The sample uses 50% of the cost of providing a parking stall in a new parking structure.

I.	**Building Gross Floor Area:**	**50,000 sq.ft.**
Current Use:	Vacant with no parking.	
New Use:	Mixed retail, offices and residential.	
Parking Needed: 50,000 x 0.00247 (as an example)		124 spaces
II.	**Cost of Supplying Parking in a Deck/Structure**	**$17,500/parking stall**
Parking Impact Fee (50% of cost)		
		$17,500 x 50% = $8,750 / parking stall
III.	**Project Subsidy (Incentive x Added Public Parking)**	
		124 spaces x $8,750 / stall = $1,085,000 (for parking fund)

In-Lieu-Fee Example Calculation

Program Costs: Staff time.

8.5.2 Program: Improve Downtown Public Parking Efficiencies through Pricing and Information Strategies – V*ariable pricing strategy, converting short-term parking to long-term commuter parking, or improved information systems about parking pricing and availability.*

Variable Pricing Strategies

The on-street parking utilization is higher than the off-street utilization. The City should raise the parking rates of the on-street meters. This would lower the demand for on-street parking and improve the utilization of off-street parking. Also, some of the public parking lots that have lower utilization rates. Lower the rates in these lots should increase demand. A variable pricing structure should be implemented to encourage higher utilization rates.

Converting Short-Term Parking to Long-Term Commuter Parking

The underutilized parking could be converted to long-term commuter parking. This is discussed more fully below. The parking oversupply in the Downtown area could be addressed by allowing daily fee parking by commuters or anyone needing daily parking. Consideration should be given to preventing long-term vehicle storage by ticketing any vehicle parked more than 24 hours in public parking areas. Alternatively, the City could consider allowing long-term vehicle storage in select underutilized parking structures for a premium rate as an additional revenue source.

Parking Information Technology

Various technologies can be implemented to improve the parking utilization rates. These are more fully discussed below. These technologies are not just limited to the downtown area, but could be considered with all parking areas. The technology should provide information on parking availability and pricing before the driver reaches the parking facility.

Costs: Staff time.

8.5.3 Program: Provide Additional Public Parking in Chicago/Main and Central Street Areas

The utilization study indicated additional demand for public parking spaces in the Chicago/Main area and the Central Street area. This demand could be met with additional parking or alternative strategies, as discussed in this section. Additional parking would be expensive.

A study should be conducted to determine how to meet the parking demand. The Central Street area is a linear commercial area. Additional parking would have to be addressed on a block-by-block basis and cannot be placed in only one location. The *Central Street: Master Plan* (2007) and the *Central Street Parking Study* (2002) had recommended several parking recommendations. These should be examined carefully. For example:

- Reconfigure the public parking lot at the northwest corner of Central and Stewart to add few additional spaces
- Add more parking with new retail uses
- Improve parking utilization at several of the existing private lots

Study Costs: $25,000

8.5.4 Policy: Consider Increasing Commuter Parking for Evanston Residents at Transit Stations by Relaxing On-Street Parking Restrictions

The City will need to consider developing a policy specific to commuter parking provision. As demonstrated in the occupancy analysis, additional commuter parking sources would help to alleviate parking shortages. Options for the City include developing additional surface lots on City-owned property near commuter rail stations, increasing meter durations near the commuter rail stations to allow for all day parking, or to relax parking restrictions in residential areas to allow commuter parking to take place.

A low cost method available to the City is to relax the parking restrictions in the residential areas. **Map 8-2 Evanston Parking Restrictions** illustrates the on-street parking restriction on areas within ¼ mile of transit stations. These areas could provide a substantial source of commuter parking that would greatly benefit users of Metra and CTA rail services. **Table 8-2 Commuter Parking Demand** suggests the number of additional parking spaces needed at each commuter station.

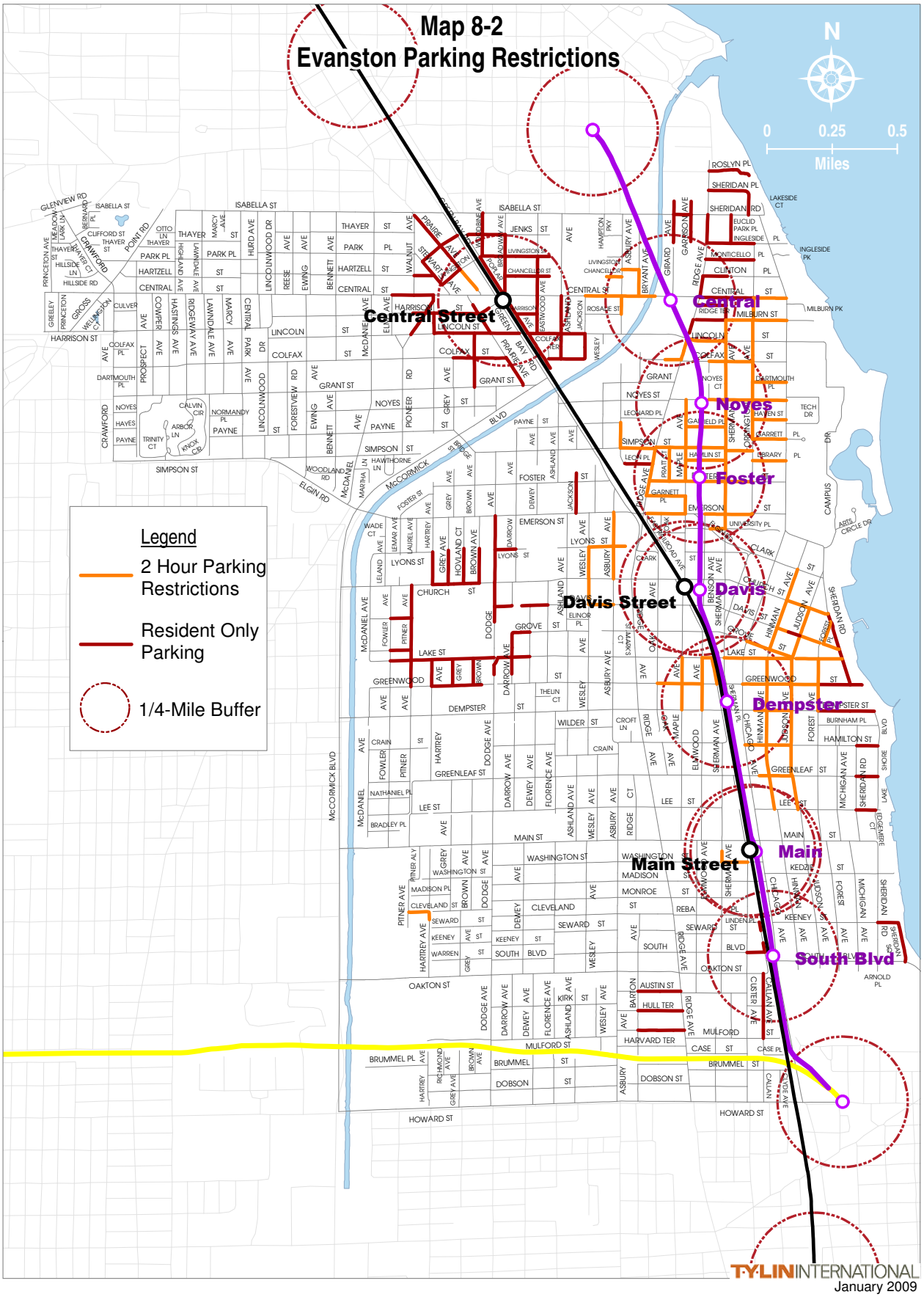
The community was not in favor of relaxing on-street parking restrictions near transit stations. However, when it was suggested that it be limited to Evanston residents or that a fee be derived, there was more agreement in favor of this recommendation. The recommendation for Evanston is that only resident commuters are allowed to park in "residential only areas" with the use of a resident commuter parking permit along with a fee. Non-resident commuters should only be allowed to park in first-come-first-serve daily fee parking areas or non-resident commuter permit parking areas. Consideration could also be given to allowing resident commuters to park in any underutilized residential 2-hour zones. Still, any relaxation of on-street parking restrictions near transit stations will require further discussion with community groups to ensure its acceptance.

Program Costs: To be determined.

8.5.5 Infrastructure: Increase Scooter/Motorcycle Parking at Public Facilities

As discussed in **Section 11.3**, more people are utilizing scooters and motorcycles. This appears to be correlated to the higher cost of gasoline and, thus, the trend is expected to continue. More spaces should be provided for scooters and motorcycles with both on-street and off-street parking. A suggested standard for the creation of motorcycle and scooter parking is five percent of automobile parking. Some communities sign automobile spaces for motorcycle/scooter parking during the spring, summer and fall months, converting the spaces back to automobile use in the winter.

Program Costs: $15,000


Map 8-2
Evanston Parking Restrictions
N
0
0.25
0.5
Miles
Legend
2 Hour Parking Restrictions
Resident Only Parking
1/4-Mile Buffer
Central Street
Davis Street
Main Street
Central
Noyes
Foster
Davis
Dempster
Main
South Blvd
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8.5.6 Infrastructure: Upgrade Parking Signage

This recommendation is specifically for parking signs, though this is also part of an entire signage package that could promote the downtown and other commercial areas. Many communities come up with a "brand" to help market the downtown and signs are often part of that "branding". This recommendation involves a community effort to developing way-finding and a choice of themes and colors for the signs.

The parking signs in Evanston already have a common theme with text, color, and logo. The signs also let drivers know what lot they are in. Important criteria that many lot signs are missing are: the parking duration, who the lots are intended for, customer/visitor or employee/permit and the hours of enforcement. Some of the text size is difficult to read on the parking way-finding signs. It is important that all signs work together in leading the customer or visitor to parking.

Implementation Costs: 500,000 (includes a way-finding study and design program, sign creation and installation)

8.5.7 Program: Develop a Public Parking Marketing Program – *To better promote the public parking system.*

Marketing is one of the most important aspects of a successful parking system. Marketing should be used every time there is a change to the parking system and should be directed towards downtown employers, employees and customers/visitors. It is very important to help encourage downtown employees to park in the long-term parking areas to preserve the on-street parking for customers and visitors. Additionally, an individual's perception of Evanston is greatly enhanced if they know ahead of time where they can park.

Promotional materials can include direct mailings, brochures, maps, kiosks, on-line web pages or articles in magazines. Information contained in the marketing material should include location, up-coming changes, regulations, fine payment options and any other information relating to the parking system.

Program Costs: $10,000/year (includes on-going printing, advertising and on-line content)

8.5.8 Policy: Implement Graded Parking Fines – *To prevent abuse of public parking, increase the cost of repeat parking offenses. For example, the first fine would be $10 and the second would be $15.*

Some communities experience situations where an individual or group of individual's abuse parking privileges regularly. In some cases, the abuse is a result of parking fines being too low to warrant compliance and in other cases the individuals are simply willing to pay a price for convenient parking. The use of a graded fine schedule is a Rich and Associates' best practices method of deterring repeat offenders and for aiding in colleting unpaid parking fines.

Handheld ticket writers are the only efficient means of issuing graded fine tickets, as the device tracks license plate information and can recognize the number of citations issued and whether

they were paid. The handheld ticket writer can be programmed to issue tickets in varying amounts at the discretion of the City. An example of a revised fine structure is provided below.

Failure to comply with parking durations reduces parking turnover and negatively impacts parking availability for customers and visitors. As a result the City should always have a focus of ensuring compliance with the regulations and encouraging prompt payment of fines. One of the best ways to accomplish this is with handheld ticket writers and a graded fine system that increases fine rates for repeat offenders or delinquent fine payments.

Sample Graded Fine Schedule Example

Standard Overtime Parking Fine (Issued to one vehicle in a three month period and/or applied to unpaid citations)	Amount
1	$10.00
2	$15.00 + warning
3	$30.00 + warning
4	$60.00 + warning
5	Boot or tow vehicle

Program Costs: To be determined - manufacturer to provide estimate

8.5.9 Program: Conduct an Infrastructure Audit of the Parking Facilities – *To document the current condition and assess the structural condition of facilities.*

The typical life span of a parking facility is approximately 50 to 60 years. In some instances, these facilities can last longer provided that repairs and maintenance have been ongoing and adequate for the facility type. Lack of regular maintenance and repairs can lead to a shortened life span.

In Evanston, there are several parking facilities that should have a conditions audit undertaken by a qualified civil-structural engineer and with experience in parking facilities. Specifically, the Best Western parking structure is reaching a maximum life span of 50 years and replacement may be necessary depending on the findings of the conditions audit.

Program Cost: $25,000/structure. More in-depth testing may be necessary depending on the outcome of the audit.

8.5.10 Program: Improve Parking Payment Technology & Validation System – *Using a system that allows credit card payment or some other standardized method.*

The use of technology in parking has increased dramatically over the past several decades. Through the use of computer technology a variety of enforcement aids, payment options, accounting, revenue control and meter configurations are now available for communities to use.

Evanston should consider transitioning and/or incorporating advanced technology for on-street and off-street parking locations. Further consideration of the options available and pros and cons of each will need to be examined by the City.

System cohesiveness in terms of payment options is important from a user perspective. In surveys undertaken by Rich and Associates for previous clients, customers often express frustration with a lack of payment options. This situation can be compounded where on-street meters only accept coin payment. A best practice for parking is to adopt a policy of having as many payment options for customers as practical and to have uniformity of options in on-street and off-street parking areas.

Evanston needs to adopt a policy of having the same payment options at all parking facilities in order to standardize the parking system, minimally including cash and credit card. Options for other payment types that should also be considered are cell phone payments, tokens, value cards, debit cards and cash keys.

Parking Meter Technology

Meter-type	Pros	Cons
Multi-Space Meters	High degree or flexibility in terms of fee structure, accounting, enforcement and validation acceptance. Can be used in parking structures, lots and on-street	Some resistance to the technology by users. Need to number each stall for reference purposes.
Pay and Display Meters	Low cost option that also accepts validation cards.	Cannot differentiate parking rates by location, only by time of day. Parker needs to go to the machine for a ticket, then return to their vehicle and display the ticket on the dash for enforcement personal.
In-Car-Meters	Low cost option where the apparatus is in the parker's vehicle.	Stronger resistance to the technology at first.
Cell Phone Payment	Lowest cost option. Only signs are needed to direct parkers on how to use the system. Handheld ticket writers will need to be upgraded to allow for real-time payment tracking.	Some resistance to use. Limited cases of fraud.
Individual Space Meters	Old technology that is familiar to most if not all users. Reliable and inexpensive.	Limited flexibility in terms of validations, rate changes, enforcement enhancements.
Permits/Hang Tags	Lowest cost to Evanston.	Cumbersome for parkers to obtain and enforce. Work best for employees and commuters, but present a hindrance to customers and visitors.

In conjunction with new meter technology, a validation system for parking can be implemented. Essentially validations are a method of offering free parking by having local merchants purchase

parking credits from the City. The credit can be in the form of a token for individual space meters, tickets for multi-space meters, hang tags for almost any application, or credit style cards.

The recommended method for Evanston is to consider using paper validation tickets. These very low cost validation instruments are a simple paper ticket with a magnetic strip on the back. The City can purchase a ticket spitter that encodes the magnetic strip with parking credits (any amount desired in multiples of minutes, hours days, etc.). The tickets can then be purchased by merchants and given to their customers. The customer then has a ticket to insert in a multi-space or pay and display meter for free parking on their next visit.

The paper tickets require the use of either the multi-space meter or the pay and display meter. Other meter types will require different validations that are more costly. As follows:

Meter	Validation (least expensive to most expensive)
Pay and Display	Paper Ticket
Multi-Space	Paper Ticket
Individual Space Meter	Token/Chip Card

The other option for the City is to purchase hang-tags. These paper tags hang in the window of a vehicle and the parker simply scratches off the date and time of their arrival. The tag then provides free parking for the indicated duration.

Program Costs: $35,000 Implementation costs would be developed as part of this program effort.

8.5.11 Program: Develop a Parking Plan for Special Events – *For example, Northwestern University, downtown and lakefront events.*

There are major events that occur in Evanston that can burden the parking and transportation systems. An overall plan for dealing with these special events should be prepared.

Program costs: $20,000

8.5.12 Program: Provide Parking Incentives for No- or Low-Emission Vehicles – *Prime parking spaces or reduced parking fees can be used to encourage vehicles that have low or no emissions.*

The City of Evanston and its residents have put a priority on reducing vehicle emissions. Offering parking incentives for those driving no- or low-emission vehicles would support other efforts that the City is implementing through the Climate Action Plan.

Program Costs: To be determined.

8.5.13 Program: Re-evaluate Parking Demand/Supply Every 5 Years – *Evanston should monitor the inventory/utilization of parking as the recommended strategies are implemented. These monitoring efforts can be used to best determine how to address future parking demand.*

As growth continues in the downtown and Evanston implements the parking strategies listed above there may be increased demand for additional parking. This demand can be better met by Evanston acquiring or building new structured parking. Public/private joint ventures can also be used as development increases beyond the parking capacity.

The use of structured parking can aid in increasing urban density. Density combined with a mixture of uses can encourage activity in an urban setting. Privately developed surface parking lots can be discouraged through zoning ordinances. Some communities implement parking maximums that limit the amount of on-site parking that can be built within development.

The City should be open to proposals from developers to jointly build parking. Parking structures are an expensive infrastructure component that can achieve greater 'economies of scale' as they become larger (to a point). It would be in the best interest of the City to consider joint parking ventures to take advantage of lower infrastructure cost. Further, the responsibility for project delivery is also shifted to the developer reducing City staff workload.

Each proposal would need to be considered on an individual basis to determine City interest. Most important with any joint venture project is to ensure that the public parking component of the facility remains public parking and is operated at the same performance standards as all of the other City parking.

Conversely, Evanston may decide to decrease the demand of parking. This policy could be used to encourage the alternative forms of transportation as discussed in this Plan. A lack of parking especially at employment centers has been found to be one of the best methods of promoting alternative forms of transportation.

The City should study, in particular, the adequacy of the commuter parking supply. Once other recommendations regarding the supply of commuter parking have been implemented, a utilization study should be conducted to determine if additional long-term parking is needed near transit stations.

Program Costs: $35,000

Section 9
Pedestrian

Every trip taken begins and ends with walking. Good walking infrastructure has been shown to enhance the character of a community, increase retail viability, and improve the health of residents. For these reasons among many others, the City of Evanston seeks to improve the overall walking environment.

Maintaining the condition of the walking environment is essential because it in turn affects other modes of transportation. For instance, transit improvements cannot be successful without providing adequate pedestrian facilities to access transit.

Evanston has a strong culture of walking, attributable to several different factors. Development in Evanston is fairly dense, putting destinations such as shopping districts within walking distance of many residents. The extensive sidewalk network also enables people to walk comfortably and safely. Also, a college campus, like Northwestern University, innately contributes to a walking culture with its layout and population of students, many of whom use walking as their primary mode of travel.

9.1 Current Conditions

9.1.1 Pedestrian Network

Evanston has a substantial pedestrian network. Sidewalks have routinely been constructed during residential and commercial development throughout Evanston's history. As a result, the City has almost 285 miles of sidewalk and less than 15 miles of roadways without sidewalks on one or both sides of the street. **Map 9-1 Sidewalk Gaps** shows the current gaps in the sidewalk network.

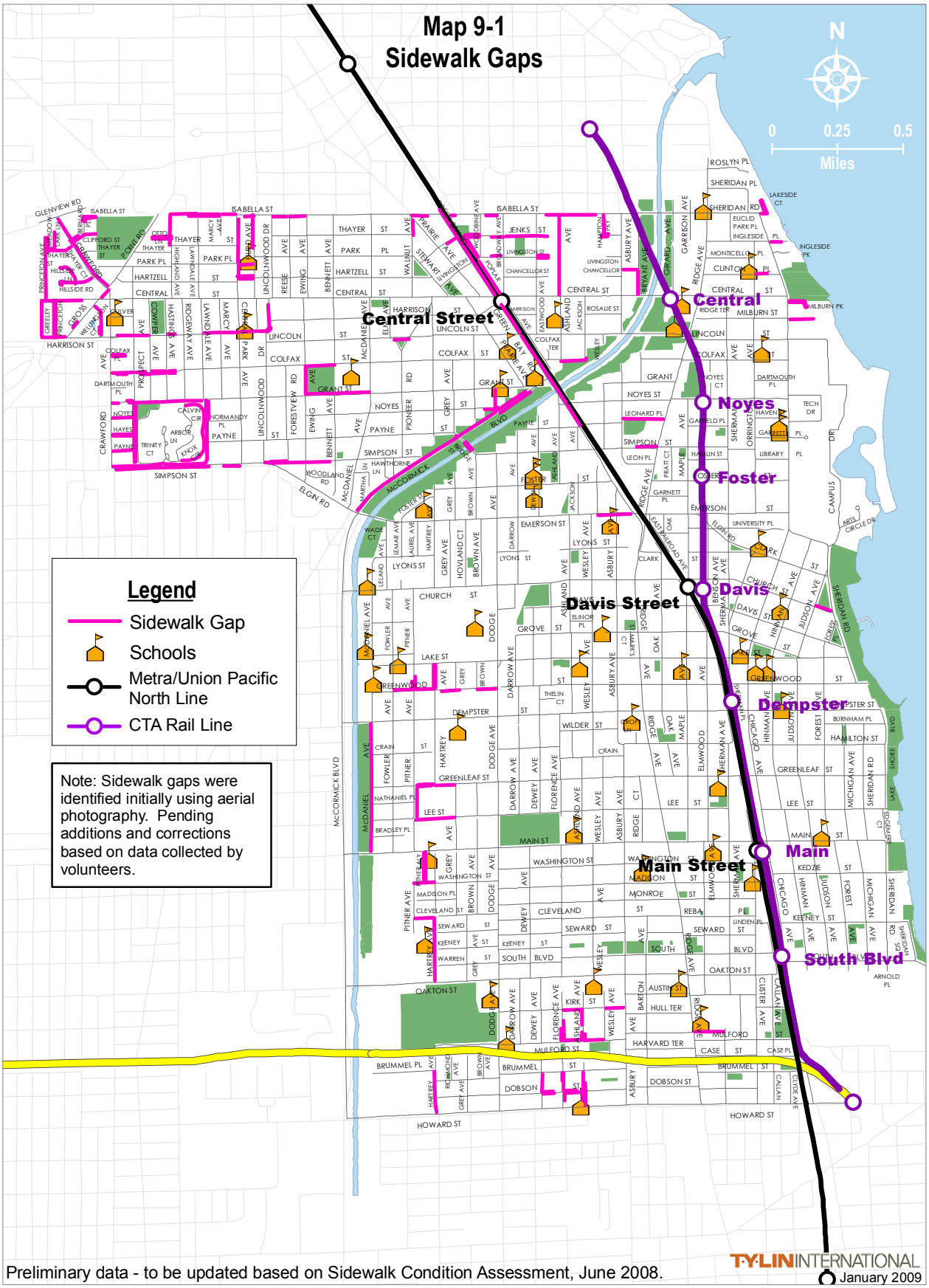
Pedestrian generators attract groups of pedestrians and thus should have good access and connections to the overall network. It is important to maintain the environment surrounding these locations in good condition. Priority pedestrian generators are schools, public institutions, commercial areas, transit stops/stations, hospitals and senior centers. **Map 9-2 Pedestrian Generators** illustrates the pedestrian generator locations.

9.1.2 Pedestrian Counts

Pedestrian counts were taken at 100 locations throughout the City at crossing guard locations, transit stops, and commercial centers. The results from the crossing guard location counts are discussed in **Section 9.3**.

9.1.3 Condition Assessment

The condition of the sidewalks is an important factor in the overall pedestrian environment. A condition assessment was conducted of all sidewalks in the City. The purpose of the condition assessment was to identify and prioritize the need for sidewalk repair. The assessment focused


Map 9-1
Sidewalk Gaps
N
0 0.25 0.5
Miles
Central Street
Davis Street
Main Street
Dempster
Central
Noyes
Foster
Davis
Main
South Blvd
Legend
Sidewalk Gap
Schools
Metra/Union Pacific North Line
CTA Rail Line
Note: Sidewalk gaps were identified initially using aerial photography. Pending additions and corrections based on data collected by volunteers.
Preliminary data - to be updated based on Sidewalk Condition Assessment, June 2008.
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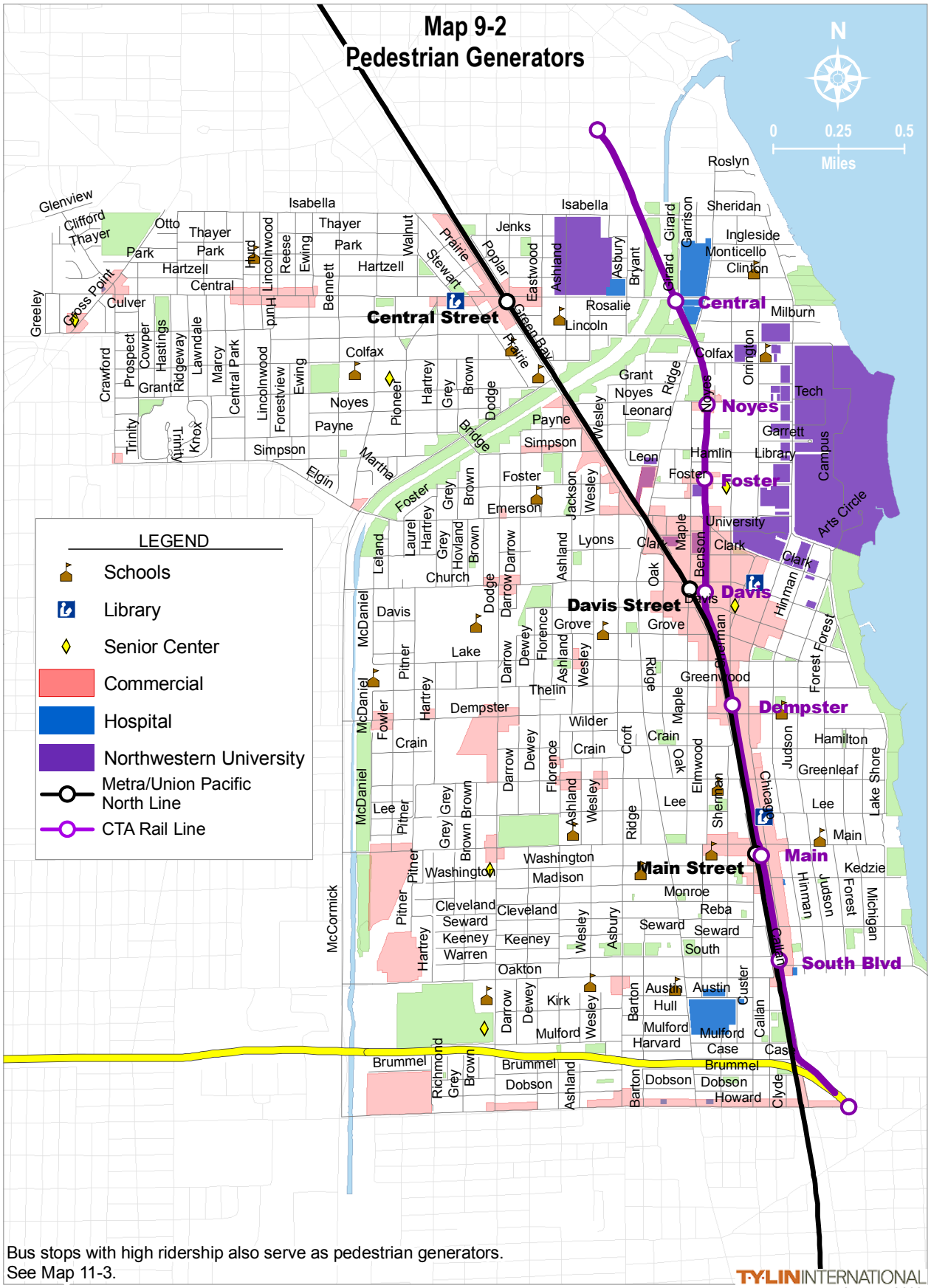

Bus stops with high ridership also serve as pedestrian generators.
See Map 11-3.

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on surface condition, obstructions, and missing curb ramps. The City was divided into 29 zones (see **Map 9-3 Sidewalk Condition Assessment Areas**) and volunteers were assigned to each section to conduct the condition assessment. Volunteers looked for tripping hazards, physical obstructions, and missing curb ramps. Ramps should be present at each street, alley, or driveway crossing.

The condition assessment showed that nearly 20,000 sidewalk squares must be replaced or repaired due to level changes. Assuming a typical sidewalk made up of 5' x 5' squares, this amounts to 19 miles of sidewalk repair needed. Missing curb ramps were identified at 355 locations. These findings are listed by area in **Table 9-5.**

The assessment also noted where physical obstructions narrowed the through width below the requirements set by the Americans with Disabilities Act (ADA), which is four feet. In 83 locations, a minor obstruction that would be relatively easy to relocate, such as a sign post was found in the travel way. More substantial obstructions, such as utility poles, were found in 64 locations. The assessment also uncovered a general need for sidewalk maintenance by residents and business owners. Shrubbery and street furniture encroached on the sidewalk in over 4000 locations.

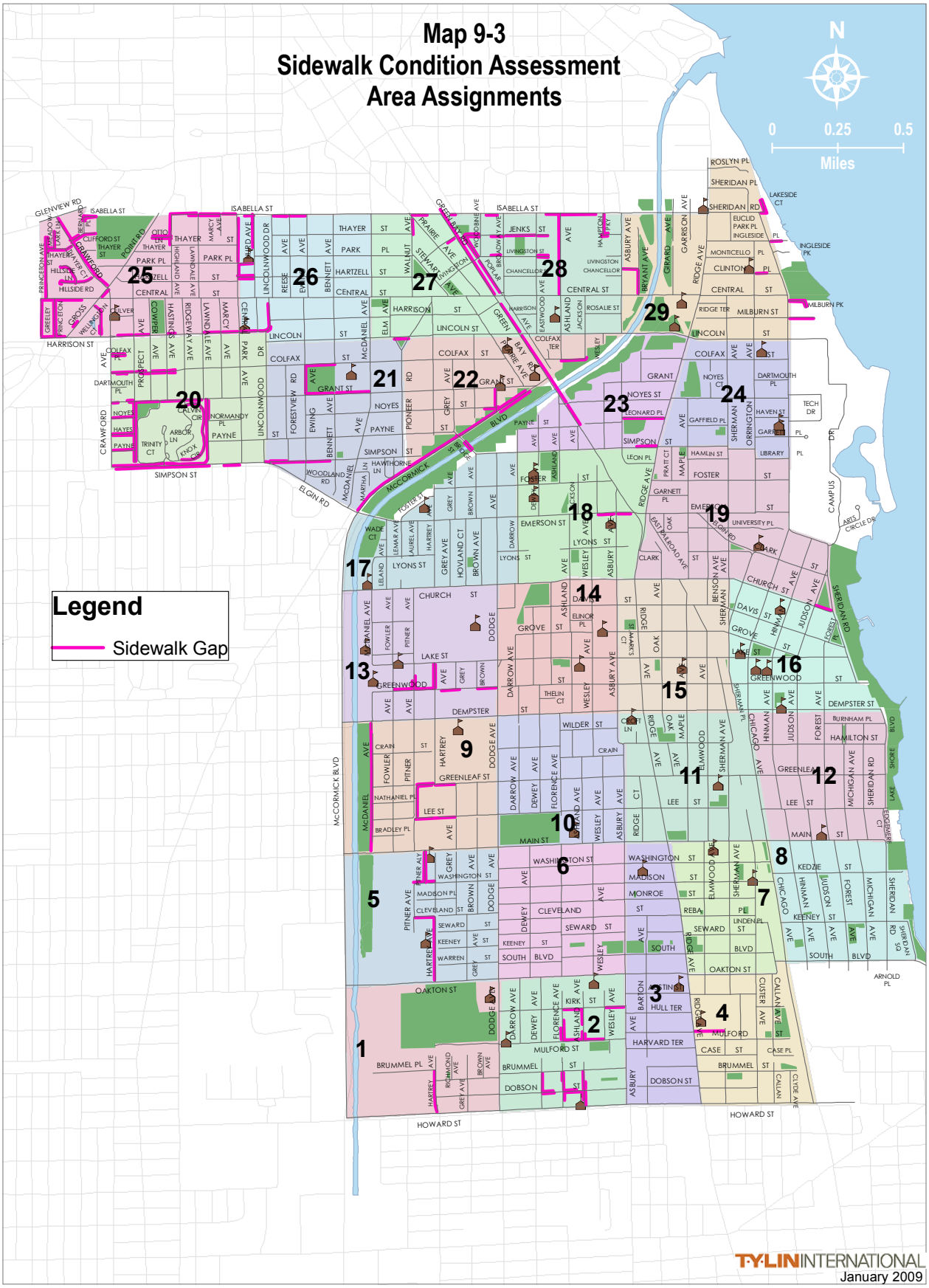
9.1.4 Sidewalk Repairs

Currently, the cost of sidewalk repairs are covered through the 50/50 curb and sidewalk replacement program, in which property owners and the City are each responsible for half the cost. This program includes sidewalks abutting private homes, businesses, churches, and schools. The property owner is responsible for a share of the sidewalk abutting their property while the City assumes full responsibility for portions of the sidewalk that extend to street corners. Identifying the need for a repair may come from the property owner or from the City. If it is not identified by the property owner, the City will send a letter explaining the need and asking the property owner if they are interested in participating in the 50/50 program. If the property owner does not want to upgrade the sidewalk, the City will apply a temporary asphalt patch to address any tripping hazards.

The City of Evanston is continually installing curb ramps in compliance with the ADA requirements. Currently, no formal program exists for the number or locations of new curb ramps, but the City has replaced roughly 460 curbs with ADA-compliant ramps since 2001. Community Development Block Grants (CDBG) fund the curb ramp improvements.

9.1.5 Sidewalk Maintenance

Regular maintenance, including snow removal and keeping the sidewalk clear of shrubbery is the responsibility of the property owner. Snow removal was discussed at focus group meetings and public workshops. In particular, the windrows that are caused by snow plows in the streets prevent people from accessing the sidewalks. The sidewalk condition assessment revealed frequent violations of shrubbery encroaching on the sidewalk. **(See Table 9-5.)**


Map 9-3
Sidewalk Condition Assessment
Area Assignments
N
0 0.25 0.5
Miles
Legend
Sidewalk Gap
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
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9.1.6 School Considerations

The trip to school is commonly taken on foot in Evanston, where schools are situated amid residential neighborhoods. The pedestrian environment around schools has unique needs, as it serves large groups of vulnerable pedestrians for brief periods of time. Safety concerns, especially for elementary school students, are paramount. Many young children lack the ability to judge safe gaps in traffic and need extra help in crossing streets with high traffic volumes or high speeds.

A school travel survey was sent school principals to understand their concerns for the area surrounding their school. The survey was sent to all Evanston public schools and two parochial schools. A sample of the survey and a summary of responses are included in **Appendix B – School Travel Questionnaire Results.**

The most common concerns that were raised through the survey were excessive traffic congestion, inadequate drop-off locations, and unsafe intersections. With the exception of one school, missing sidewalks were not identified as a problem near schools in Evanston. Most schools have small parking lots and only City streets are available for student drop-off and pick-up. The roadway system must accommodate buses and individual vehicles transporting students.

Walking and bicycling are viable ways for students to get to school. As part of this plan, School Concept Plans were created for four schools. The four schools were selected based on the survey responses, geographic distribution, student age, and need as identified by the City and school district officials. The focus schools are Dewey Elementary School, Haven Middle School, Lincoln Elementary School, and Oakton Elementary School.

The plans address signs and pavement markings and encourage a consistent approach to school zone traffic management. The plans also recommend site-specific improvements that may be needed to improve safety around schools; and address crossing guard locations and further plans and programs the community might wish to pursue. The intent is that improving the pedestrian environment will make it safer, thus encouraging more students to walk or bike to school. Increasing the number of students walking and biking would in turn address other concerns that have been raised, such as traffic congestion and inadequate drop-off locations. The School Concept Plans are included in **Addendum B – Evanston School Transportation Concept Plans**. These will serve as examples of measures that could be taken at other Evanston schools.

A City-wide school travel plan should be developed in conjunction with District 65, the schools, and the Parent-Teacher Association to enable the City to apply for Federal Safe Routes to School funding.

9.2 Crosswalk Guidelines

The most important consideration in the design of crosswalks must be the safety of the pedestrian. Marked crosswalks indicate to pedestrians the best place to cross a street, while alerting motorists to the potential of pedestrian traffic. Consistency of crossing treatments will improve people's understanding of what is expected of them at these locations.

Crosswalk guidelines are outlined in **Table 9-1** and discussed below. Two types of guidelines are presented: basic and additional measures. The basic guidelines recommend common markings, signs, and/or signals that should be used at each location. The markings and signs vary slightly based on the existing conditions and the destination. The markings and signs are consistent with the Manual on Uniform Traffic Control Devices (MUTCD).

In many cases, additional measures may be necessary or desired to further improve pedestrian safety. The appropriate tool for each location will depend on site-specific conditions and must be analyzed individually. **Table 9-1** indicates where additional measures are recommended or optional. The additional measures are described below, including a discussion of where they may be appropriate.

9.2.1 Basic Guidelines

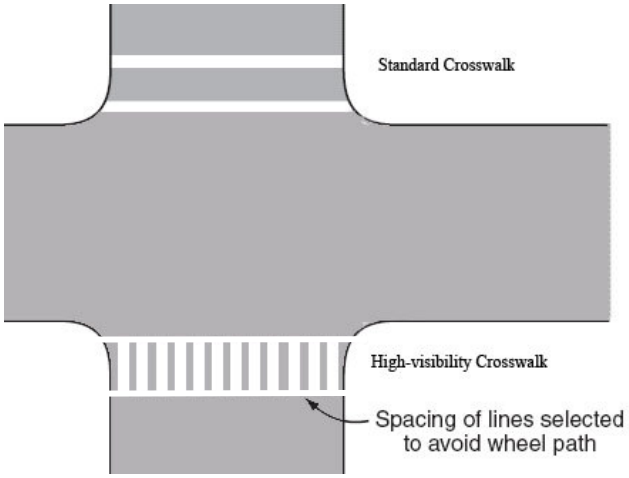
Crosswalk Markings

Standard

A standard crosswalk consists of two transverse lines, each between 6 and 24 inches in width and striped at least 6 feet apart. The separation between the lines should increase as pedestrian volumes increase. Standard crosswalks used along school walk routes should consist of transverse lines placed at least 8 feet apart.

High-visibility

A high-visibility crosswalk consists of longitudinal lines striped across the roadway. The longitudinal lines should be between 12 and 24 inches in width and spaced 12 to 60 inches apart. The markings may be striped to avoid the wheel paths of vehicles, reducing maintenance needs. The longitudinal lines may be used alone or in addition to transverse lines, thus creating a ladder-style crossing. The City of Evanston has used the ladder-style crosswalks at various locations throughout the City and should continue this practice for consistency. As with standard crosswalks, the overall width of the crosswalk should be a minimum of 6 feet, unless at school crossings, where a minimum 10-foot width is recommended.



Standard and High-visibility crosswalks

Table 9-1
Crosswalk Guidelines

Existing Conditions					Basic Guideline					Additional Measures
Generator	**Street Type**	**# lanes**	**ADT**	**Traffic Control**	**Crosswalk Markings**	**Signs[3]**				
School (Adjacent)	Main or Local	2-4	≤ 12,000[1]	Signal or Stop	High-visibility	-	-			Optional
				None	High-visibility[2]	S1-1 W16-9p	S1-1 W16-7p	or	S4-3 R1-6	Optional
		2-4	> 12,000[1]	Signal or Stop	High-visibility	-	-			Optional
				None	High-visibility[2]	S1-1 W16-9p	S1-1 W16-7p	or	S4-3 R1-6	Recommended
School (Along Designated Walk Route)	Main	2-4	≤ 12,000[1]	Signal or Stop	Standard	-	-			Optional
				None	High-visibility[2]	-	S1-1 W16-7p	or	R1-6	Optional
		2-4	> 12,000[1]	Signal or Stop	High-visibility	-	-			Optional
				None	High-visibility[2]	-	S1-1 W16-7p	or	R1-6	Recommended
	Local	2	≤ 9,000	Stop Sign	Standard	-	-			None
				None	Standard[2]	-	S1-1 W16-7p	or	R1-6	None
Park, Senior Center, Medical Center, Sports Venue	Main	2-4	≤ 12,000[1]	Signal or Stop	Standard or High-visibility	-	-			Optional
				None	High-visibility[2]	W11-2 W16-7p	-			Optional
		2-4	> 12,000[1]	Signal or Stop	Standard or High-visibility	-	-			Optional
				None	High-visibility[2]	W11-2 W16-7p	-			Recommended
	Local	2	≤ 9,000	Stop Sign	Standard	-	-			None
				None	Standard or High-visibility[2]	- -	W11-2 W16-7p	or	R1-6	Optional
Bus Stops	Main	2-4	≤ 12,000[1]	Signal or Stop	Standard	-	-			Optional
				None	High-visibility[2]	W11-2 W16-7p	-			Optional
		2-4	> 12,000[1]	Signal or Stop	Standard	-	-			Optional
				None	High-visibility[2]	W11-2 W16-7p	-			Recommended
Downtown or Urban Comm Center	Main	2-4	≤ 12,000[1]	Signal or Stop	Standard or High-visibility	-	-			Optional
				None	High-visibility[2]	W11-2 W16-7p	-			Optional
		2-4	> 12,000[1]	Signal or Stop	Standard or High-visibility	-	-			Optional
				None	High-visibility[2]	W11-2 W16-7p	-			Recommended

[1] If a median or crossing island is present, the ADT breakpoint is 15,000

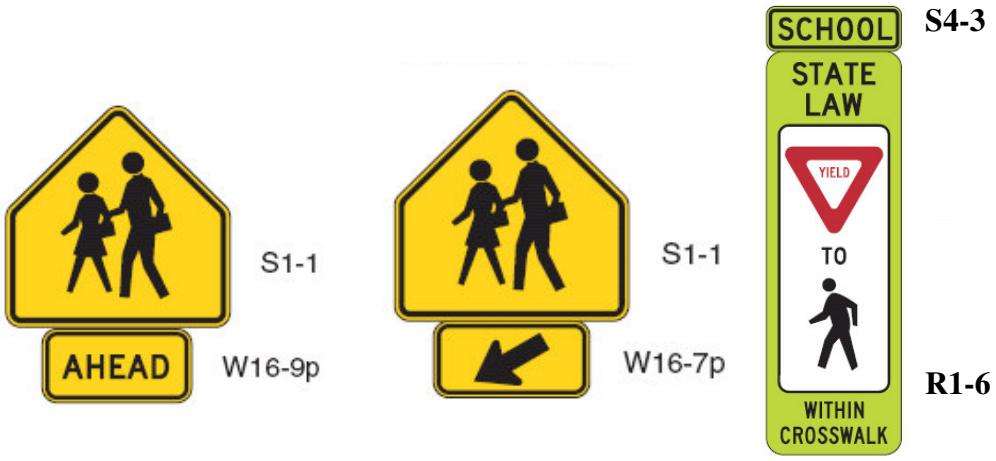
[2] Uncontrolled locations should be assessed to determine appropriateness of a marked crosswalk

[3] As designated in the MUTCD

Signs

Consistency in signing crossings is important to ensure that people understand the message and that the message does not get lost amongst a clutter of signs. At schools, a school warning sign (see signs S1-1 and W16-9p below) should be placed in advance of the crossing along with a school crosswalk warning sign (S1-1, W16-7p), placed at the crossing. An in-roadway sign (R1-6, S4-3) could be placed within the roadway at a school crossing in lieu of or in addition to the crosswalk sign at the curb. These three sign configurations are shown below. School crossing signs should have a fluorescent yellow-green background, as is proposed to be included in the next version of the MUTCD.

Evanston currently uses a temporary "A-frame" type sign at crossing guard locations. The crossing guards are responsible for displaying the sign during school crossing times.



Advanced School Warning Sign, School Crosswalk Warning Sign, In-roadway Crosswalk Warning Sign with School Plaque

Crosswalks at uncontrolled locations should be accompanied by a sign showing a pedestrian crossing (W11-2), as shown to the right, along with the downward arrow plaque (W16-7p). An in-roadway crossing sign (R1-6) can replace this sign. Crossing signs that are not associated with schools may also have the fluorescent yellow-green background, but are not required. However, Evanston has recently installed crosswalk signs with the fluorescent background, therefore future installations should be consistent.

Crosswalk Warning Sign

In-roadway signs are recommended for use on streets with low vehicle speeds. These signs are subject to damage from passing vehicles and require more frequent maintenance or replacement if used on streets with higher speeds.

Signals

This guidance does not include where traffic signals should be installed, as that is a complex issue governed by various signal warrants in the MUTCD and under the purview of the City's traffic engineer. However, there are elements of existing traffic signals that should be addressed in consideration of ensuring safety of a pedestrian crossing.

The first consideration is that adequate time must be given to the Walk and Flashing Don't Walk (FDW) phases of the signal cycle. In the next edition of the MUTCD, the standard walking speed used to calculate the minimum time for the FDW phase is proposed to be decreased to 3.5 ft/sec from the current 4.0 ft/sec, and the total Walk plus FDW phases would be based on a 3.0 ft/sec walking speed.

Secondly, pedestrian countdown clocks will also likely be standard in the next version of the MUTCD for all new pedestrian signal heads and a provision to upgrade all existing signal heads within a specified time period is also likely to be imposed. The City of Evanston has already begun to address these upgrades by incorporating these upcoming standards into new and upgraded signals. Pedestrian push-buttons should only be considered at traffic signals with a low volume of pedestrians crossing.

Finally, stop bars should be marked at each approach to a signalized intersection. Stop bars should be 12 to 24 inches wide and should be placed at least 4 feet in advance of the crosswalk.

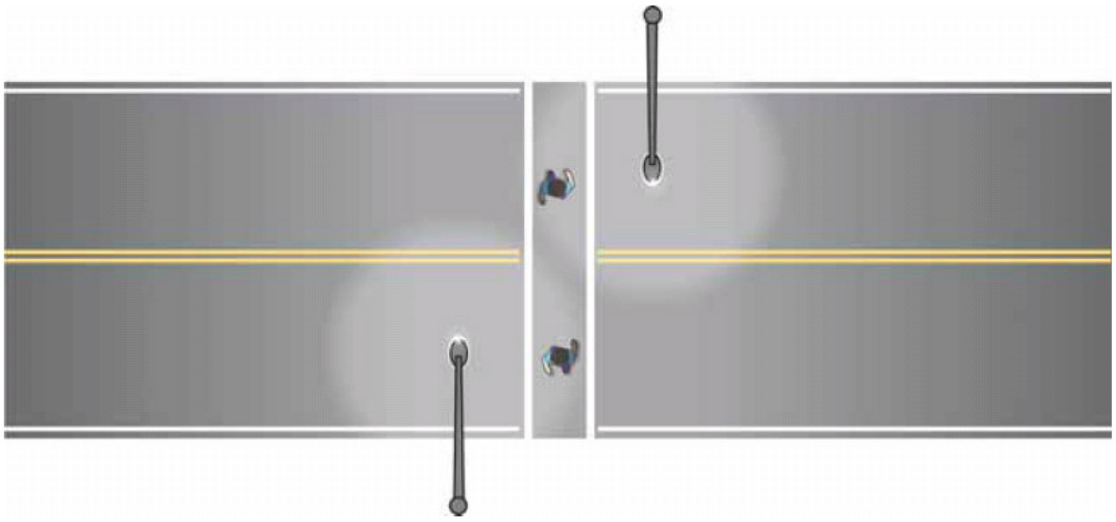
Lighting

Visibility is integral to ensuring pedestrian safety at crossings. Motorists may have difficulty seeing a pedestrian in dark conditions or may see them too late to have a chance to yield. Thus, pedestrian-oriented lighting is vital, particularly at mid-block crossings, where ambient lighting is less bright. Recent research was conducted on this issue by the Federal Highway Administration (FHWA) that can provide guidance on the types of street lighting and optimal placement and heights of street lamps to enhance pedestrian visibility in a crosswalk.

This research concluded that many factors affect the visibility and that the optimal condition will depend on the type of lamp used as well as environmental factors. It determined that an illumination level of 20 lux measured 5 feet above the ground provided adequate detection capabilities. The combination of the bulb used and the height and placement of the lamp should be such that it achieves an illumination level of 20 lux in the crosswalk.

Additional guidelines can also be derived from the findings. Historically, street lamps were often placed directly over the crosswalk. The FHWA research found that visibility is improved by locating a street lamp in advance of the crosswalk for traffic traveling in each direction.[1] This would include two street lamps for every roadway carrying two-way traffic (see below). One-way streets may require two street lamps and multi-lane roadways may benefit from street lamps in the center, if a median is available, dependent on the street width and environmental conditions.

[1] Gibbons, Ronald, Chris Edwards, Brian Williams, and Carl Andersen. FHWA-HRT-08-053. "Informational Report on Lighting Design for Midblock Crosswalks." April 2008.



Lighting Placement at Mid-block Crosswalks
Source: Gibbons, et al.

In-Roadway Lighting
In-roadway lighting can be used in conjunction with marked crosswalks where a heightened awareness of pedestrians is desired. In-roadway flashing lights are activated by a pedestrian push-button or pedestrian detection and thus are only activated when a pedestrian is ready to cross. Per the MUTCD, in-roadway lights may not be used at stop-controlled or signalized crossings.

In-roadway lighting has been shown to improve pedestrian safety. However, they are costly to install and cause increased maintenance costs for the roadway as well. These should be furthered researched and the benefits and costs weighed for each potential location.

Curb Ramps
Curb ramps must be installed per ADA guidelines at every crosswalk. For enhanced durability, truncated dome tiles should be considered in lieu of stamped concrete truncated domes, which tend to deteriorate quickly.

Parking Restrictions
Parking should be restricted within 30 feet of a marked crosswalk. This improves visibility of pedestrians waiting to cross. The parking prohibition can be marked by a sign and/or painted curb.

9.2.2 Additional Measures
Pedestrian safety treatments at crossings were presented to the pedestrian focus group during this planning process. Many items were discussed, including treatments used in other countries. The measures included here represent some of the leading technology to address this issue. They have been used extensively and shown to improve safety.

Curb Extensions

Curb extensions, also referred to as bulb-outs, bring the original curb line out into the parking lane to provide a larger protected space for pedestrians to wait before crossing. This improves visibility of the pedestrian waiting to cross and also improves the view that the pedestrian has of oncoming traffic. Curb extensions enforce the parking restriction in advance of the crosswalk. Detached curb extensions have a similar effect for a reduced cost, as they do not require reconstruction of the existing curb and do not affect drainage. The images below show attached and detached curb extensions. Evanston currently has curb extensions in various locations.

Why: Reduces crossing distance and improves visibility.

Where: Corners or mid-block locations along streets where parking is permitted.

Note: Turns may be more difficult for larger vehicles such as emergency vehicles and school buses.

Curb Extensions: Attached and Detached

Crossing Island or Median

Crossing islands and medians allow pedestrians to break the crossing into two phases, while providing a protected place to wait within the roadway. This allows pedestrians to focus on one direction of traffic at a time.

Why: Reduces crossing distance and complexity of crossing.

Where: Streets with 3 or more lanes and mid-block crossings on streets with high traffic volumes.

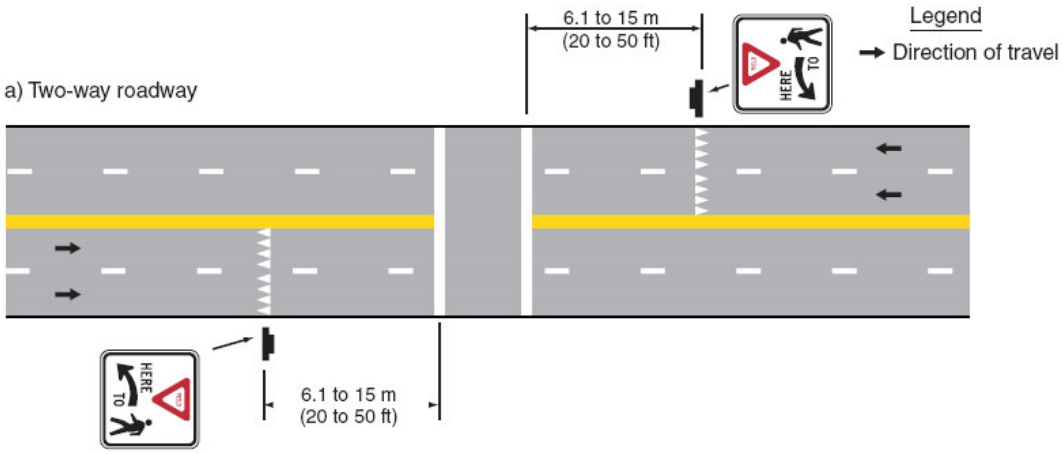
Note: Applicable only where space allows; islands may also create a hazard for private, emergency, and maintenance vehicles and thus should be well-marked.

Yield Lines

Yield lines may reinforce the message that drivers are expected to yield to pedestrians in a crosswalk. If used, yield lines should be supplemented by a sign at the curb indicating “Yield Here to Pedestrians”. On roadways with two lanes in each direction, providing an advance yield line will improve the visibility for motorists in adjacent lanes.

Why: Reinforces State law to yield to pedestrians in crosswalks.

Where: Marked crosswalks at uncontrolled intersections or mid-block.



Layout of Yield Line and Sign
Source: MUTCD 2003 rev.3

Leading Pedestrian Interval

A leading pedestrian interval (LPI) gives pedestrians a head start at traffic signals. An LPI starts the Walk phase of a traffic signal in advance of the green phase for vehicles traveling in the same direction. This lets pedestrians get out into the crosswalk before the cars start, improving their visibility.

Why: Reduces conflicts between pedestrians and turning vehicles

Where: Signalized intersections where conflicts between pedestrians and turning vehicles are high.

Note: This measure may add time to the overall signal cycle.

Raised Crosswalk

A raised crosswalk raises the surface of the roadway by 3 to 4 inches at a pedestrian crossing. Raised crosswalks are similar to speed humps, which are commonly used to slow traffic, but have several advantages. The profile of a raised crosswalk is less severe than that of a speed hump, which makes it less intrusive to travel over. The profile of the raised crosswalk allows it to be used on collector streets and emergency routes, whereas speed humps are generally reserved for local streets. Speed humps may reduce speeds more than raised crosswalks; however, vehicles tend to speed up after a speed hump whereas a raised crosswalk slows vehicles directly at the crossing.

Why: Reduce vehicle speeds.

Where: Local and collector streets.

Note: Locations should be reviewed by emergency services, as it may impact travel time along designated routes.

Raised Crosswalk

Pedestrian-Actuated Beacons

These are high-intensity beacons or LED arrays attached to a pedestrian crossing warning sign, activated by pedestrians wishing to cross. The beacons are dormant until activated by a push button or pedestrian detection device, and then flash until the pedestrian crossing is assumed to be completed (usually calculated at a 3.0 ft/sec walking speed). These beacons are often supplemented with additional lighting on the pedestrian waiting to cross and voice messages instructing the pedestrian to wait until the motorist has stopped.

Why: Draws attention to pedestrians when needed.

Where: Appropriate at difficult crossings where a marked crosswalk alone is not sufficient, yet a traffic signal is not warranted.

High-Intensity Activated Crosswalk

A high-intensity activated crosswalk (HAWK) signal is activated by a pedestrian who is waiting to cross. The signal remains dormant until activated by a push-button, at which point the signal flashes yellow, warning motorists to slow down. The lights then change to a solid red, allowing the pedestrian to cross while traffic is stopped, and then switching to flashing red during the flashing Don't Walk interval. This flashing red allows motorists to proceed once the crosswalk is clear in front of them. Corresponding pedestrian signals let the pedestrian know when to cross using traditional Walk and Don't Walk signal heads and pedestrian countdown clocks.

Why: Increases protection to pedestrians at difficult crossings.

Where: Appropriate where pedestrian demand is high at certain times, but a marked crosswalk alone is not sufficient and a traffic signal is not warranted.

9.3 Crossing Guard Guidelines

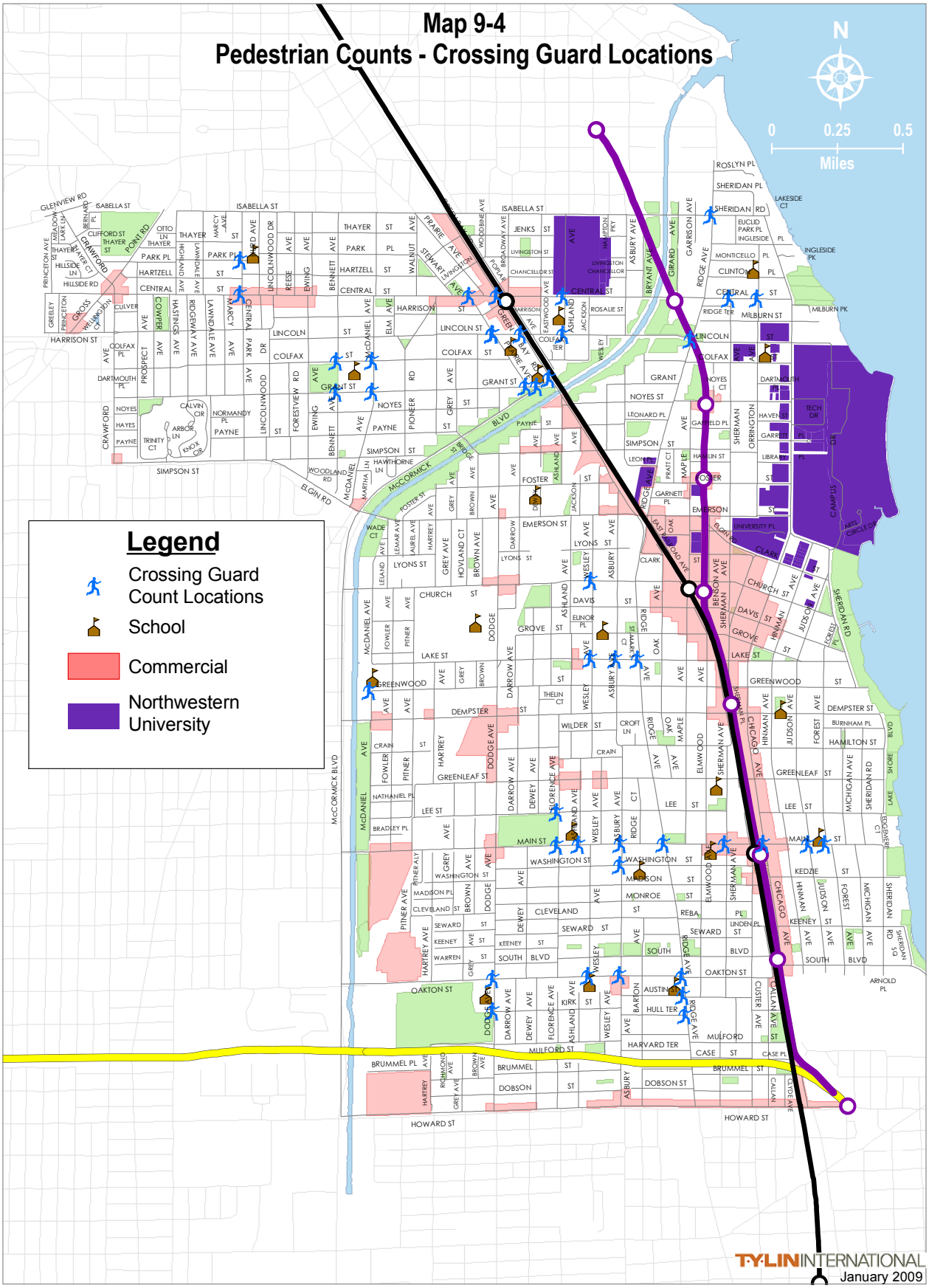
The City administers a crossing guard program with forty-one crossing guards helping students at difficult intersections, or where a large number of students are crossing. **Map 9-4 Pedestrian Counts – Crossing Guard Locations** shows the current locations where crossing guards are used. The crossing guards are requested by the District 65 Transportation Manager. Many students in Evanston walk to school, but the City continues to receive requests for additional crossing guards due to concerns over traffic safety.

Table 9-2 lists guidelines derived from the Web site of the National Center for Safe Routes to School, will assist the City in determining a need for a crossing guard at a particular location. The items listed are suggested factors to consider. Specific thresholds are not recommended as each situation is unique and will include a combination of factors.

Table 9-2
Crossing Guard Guidelines

Age of students	Younger children generally need more assistance with crossing.
Width of street	A wider crossing is more treacherous for pedestrians.
Number of traffic lanes	Each additional lane adds a potential hazard. Additional lanes also affect the sight distance of the pedestrian and motorist. Roadways with more than 2 lanes sometimes require more than one crossing guard.
Sight distance at crossing (street geometry)	If sight distance is limited, students may need assistance crossing. This may be related to vehicle speeds as well
Safe gaps in traffic	At least one adequate gap per minute should occur, according to the Institute of Traffic Engineers. This requires fairly extensive data collection.
Existing traffic control	A signalized intersection is easier for students to cross without assistance. However, pedestrian signal heads should be in place and the walk phases should be of adequate length.
Vehicle speeds	Vehicles traveling at higher speeds require a longer stopping distance. Streets with higher vehicle speeds may be difficult to cross without traffic signals, or if there are not sufficient safe gaps for crossing.
Pedestrian volumes	The number of pedestrians currently using the crossing as well as projected pedestrian volumes are relevant.
Crash history	If pedestrian crashes have occurred at a particular location in the past, it may be a sign that one of the above factors is a concern. In this case, the crossing should be examined to determine if a crossing guard is appropriate or a more permanent solution is required.

As part of this Plan, pedestrian counts were taken at all crossing guard locations during school arrival and dismissal times. The results are listed in **Table 9-3**. The counts were reported for students and adults separately and the numbers for each are listed for both the morning peak period and the afternoon peak period. The results are sorted by the volume of students at each crossing.


Map 9-4
Pedestrian Counts - Crossing Guard Locations
N
0
0.25
0.5
Miles
Legend
Crossing Guard Count Locations
School
Commercial
Northwestern University
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January 2009

Table 9-3
Pedestrian Counts at Crossing Guard Locations
(listed in order by number of children crossing)

School	Intersection		Traffic Signal	AM Peak		PM Peak		Total	
				Students	Adults	Students	Adults	Students	Adults
Haven/Kingsley	Prairie	Lincoln	N	287	159	335	91	622	250
Lincolnwood	Bennett	Grant	N	200	136	229	147	429	283
Lincolnwood	McDaniel	Colfax	N	101	8	239	14	340	22
King Lab	McDaniel	Greenwood	N	238	3	98	17	336	20
Dewey	Wesley	Lake	N	139	112	196	116	335	228
Dawes	Dodge	Kirk	N	165	131	143	80	308	211
St. Athanasius	Ashland	Lincoln	N	207	120	87	63	294	183
Oakton	Asbury	Oakton	Y	91	24	190	36	281	60
Park	Sherman	Main	Y	106	187	153	233	259	420
Washington	Florence	Lee	N	118	55	139	62	257	117
Chute	Wesley	Oakton	N	110	5	144	7	254	12
Oakton	Ridge	Oakton	Y	128	0	125	0	253	0
Haven/Kingsley	Prairie	Central	N	59	136	192	151	251	287
Willard	Central Pk	Park	N	73	59	168	125	241	184
Oakton	Ridge	Austin	N	107	80	121	88	228	168
Haven/Kingsley	McCormick	Grant	N	104	0	117	0	221	0
Dawes	Dodge	Oakton	Y	68	52	150	24	218	76
Pope John 23rd	Asbury	Main	Y	32	49	175	55	207	104
Oakton	Ridge	Hull	Y	107	45	84	45	191	90
Orrington	Ridge[1]	Isabella	Y	4	-	10	-	14	-
Haven/Kingsley	Prairie	Grant	N	52	0	115	0	167	0
Orrington	Sherman	Central	N	70	84	95	88	165	172
Pope John 23rd	Asbury	Washington	N	58	34	102	58	160	92
Lincoln	Judson	Main	N	55	101	86	87	141	188
Lincoln	Chicago	Main	Y	60	434	74	369	134	803
Washington	Florence	Main	N	69	63	56	49	125	112
Orrington	Ridge	Lincoln	Y	56	67	66	71	122	138
Haven/Kingsley	Green Bay	Lincoln	Y	64	120	51	53	115	173
Haven/Kingsley	Green Bay	McCormick	Y	48	10	64	9	112	19
Lincolnwood	Bennett	Colfax	N	50	49	59	49	109	98
Dewey	Asbury	Lake	N	44	62	62	42	106	104
Lincoln	Forest	Main	N	49	90	46	91	95	181
Dewey	Wesley	Church	N	37	50	45	3	82	53
Dewey	Ridge	Lake	Y	30	58	51	57	81	115
Orrington	Orrington	Central	N	23	61	52	59	75	120
Pope John 23rd	Ridge	Main	Y	23	67	49	34	72	101
Willard	Central	Central Pk	Y	30	48	41	58	71	106
Lincolnwood	McDaniel	Grant	N	34	51	20	68	54	119
Haven/Kingsley	Green Bay	Central	Y	26	253	15	158	41	411
Washington	Ashland	Main	N	15	16	22	27	37	43
St. Athanasius	Ashland	Central	Y	3	72	15	91	18	163

[1] - Counts for pedestrians crossing Ridge are from City counts in 2004.

9.4 Pedestrian Improvement Prioritization

The sidewalk condition assessment provided an opportunity to prioritize the need for sidewalk improvements. Indexes were created to capture the importance of the pedestrian network and the condition of the network by area, as designated for the condition assessment. The methodology used to establish the priorities are described below.

Walkability Importance

Generators of pedestrian activity help to highlight where a high concentration of pedestrians is likely. Schools, parks, transit stations, commercial centers, and institutions such as hospitals and senior centers are important pedestrian generators. These generators are shown on **Map 9-2 Pedestrian Generators**.

As shown in **Table 9-4**, a score is given to each type of generator within or bordering a zone. The result is a Walkability Importance score for each zone. The generators were weighted based upon their importance. For instance, schools and transit service were given a higher weight than commercial areas.

Scores for the ADA Priority category were based on routes that were prioritized during a focus group meeting on disability issues. Participants were asked to determine the most important routes for those with disabilities. These results were compiled to establish routes of High, Medium, or Low priority, as shown on **Map 9-5 ADA Priority Routes.** These results were also included in the Walkability Importance rating.

Map 9-5
ADA Priority Routes

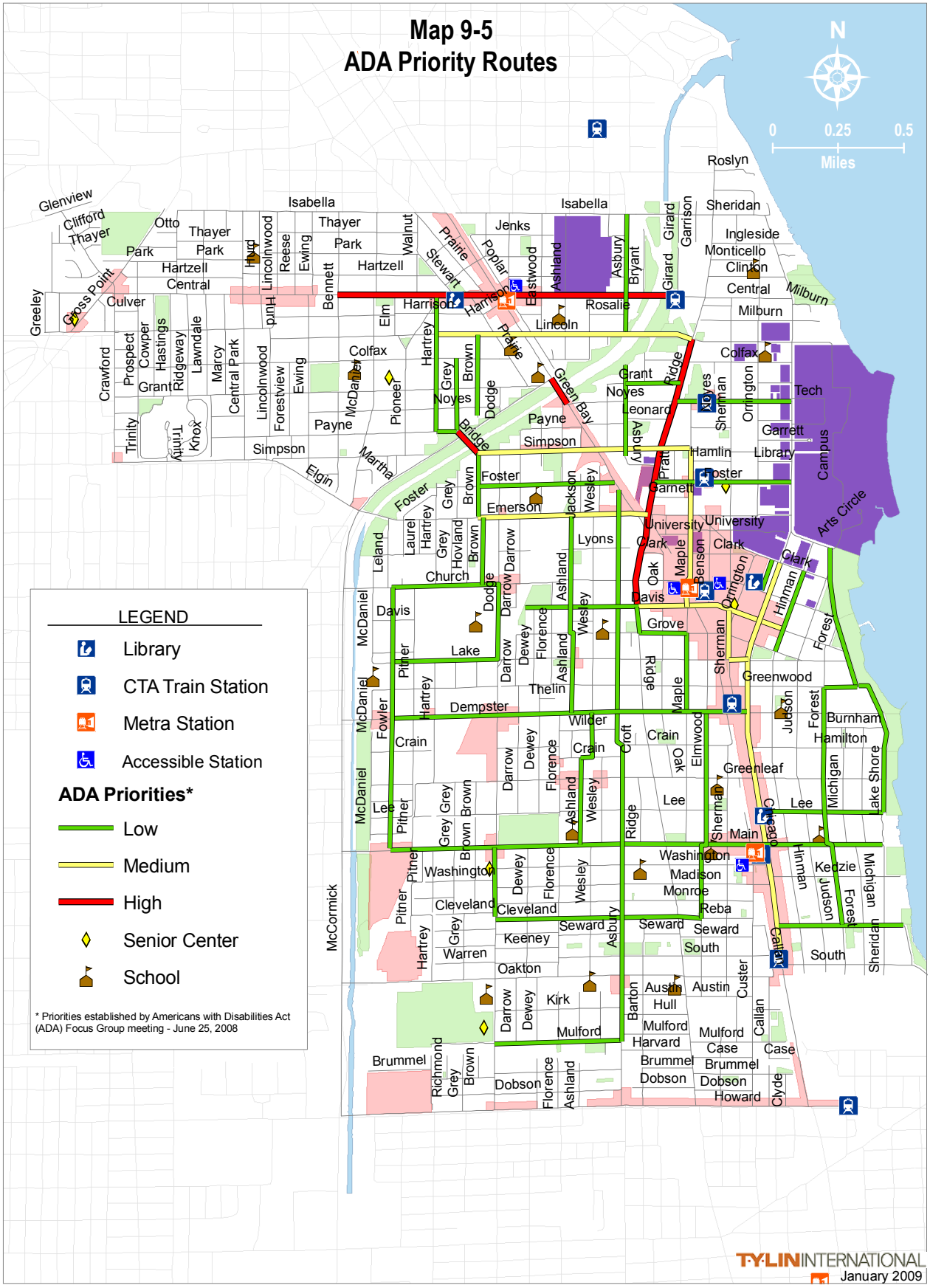


Table 9-4
Walkability Importance

	Schools	Parks	Transit	Commercial	ADA Priority	Institutions	Score
Max Points	**10**	**2**	**3**	**2**	**4**	**1**	**25**
Zone 1	4	2	2	1	0	1	**10**
Zone 2	8	1	2	1	1	0	**13**
Zone 3	10	1	2	1	2	0	**16**
Zone 4	2	1	3	1	0	1	**8**
Zone 5	4	2	2	1	0	1	**10**
Zone 6	10	1	2	0	2	0	**15**
Zone 7	6	1	5	2	2	0	**16**
Zone 8	4	2	5	2	3	0	**16**
Zone 9	1	2	2	1	1	0	**7**
Zone 10	4	2	2	0	1	0	**9**
Zone 11	8	1	4	2	1	0	**16**
Zone 12	4	2	4	2	3	0	**15**
Zone 13	10	2	2	1	2	0	**17**
Zone 14	8	1	3	0	2	0	**14**
Zone 15	4	1	6	2	4	0	**17**
Zone 16	2	2	5	2	4	1	**16**
Zone 17	4	2	2	0	3	0	**11**
Zone 18	4	1	3	1	4	0	**13**
Zone 19	4	2	6	2	4	1	**19**
Zone 20	1	1	2	0	0	0	**4**
Zone 21	4	2	2	0	0	1	**9**
Zone 22	10	2	2	0	3	0	**17**
Zone 23	2	2	2	1	3	0	**10**
Zone 24	6	1	4	0	3	1	**15**
Zone 25	4	2	2	1	0	1	**10**
Zone 26	4	0	2	1	3	0	**10**
Zone 27	4	1	4	2	4	0	**15**
Zone 28	8	1	4	2	4	1	**20**
Zone 29	4	2	4	0	2	1	**13**

Scoring
Schools: 4 points per school within or bordering a zone, 2 points per school in close proximity, 1 point minimum
Parks: 1 point for a park and 2 points for major parks such as Lakefront, Canal, James Parks
Transit: 2 points for bus or rail service, 4 points for both, 6 points for Davis hub
Commercial: 1 point for light commercial, 2 points for heavy commercial
ADA Priority: Points based on priority routes identified by ADA Focus Group
Institutions: 1 point awarded to zones with hospital or senior center

Surface Condition

The results of the sidewalk condition assessment were used to prepare the Surface Condition index. A score was assigned to each zone equal to the sum of level changes recorded in that

zone. The sum was adjusted to account for variability in the mileage of sidewalks between the zones then converted to a relative score to match the scale of the Walkability Importance scores. This allows for a direct comparison between the Importance and Surface Condition indexes. The results of the Surface Condition indices are shown in **Table 9-5.**

Table 9-5
Surface Condition

	Level Changes (Sum)	Adjusted Score (Sum/Miles)	Relative Score*
Zone 1	434	**75**	**11**
Zone 2	1527	**166**	**24**
Zone 3	421	**44**	**6**
Zone 4	569	**67**	**9**
Zone 5	294	**36**	**5**
Zone 6	889	**79**	**11**
Zone 7	251	**28**	**4**
Zone 8	251	**30**	**4**
Zone 9	281	**29**	**4**
Zone 10	498	**53**	**7**
Zone 11	113	**11**	**2**
Zone 12	556	**59**	**8**
Zone 13	162	**20**	**3**
Zone 14	1277	**129**	**18**
Zone 15	337	**34**	**5**
Zone 16	497	**56**	**8**
Zone 17	451	**45**	**6**
Zone 18	519	**61**	**9**
Zone 19	216	**15**	**2**
Zone 20	2300	**175**	**25**
Zone 21	2033	**177**	**25**
Zone 22	469	**48**	**7**
Zone 23	326	**47**	**7**
Zone 24	126	**17**	**2**
Zone 25	1690	**118**	**17**
Zone 26	1272	**117**	**17**
Zone 27	731	**88**	**12**
Zone 28	818	**95**	**13**
Zone 29	919	**77**	**11**

*Relative Score = (Zone adjusted score/maximum adjusted score) x 25 (maximum area walkability importance score)

Sidewalk Repair Priority

The Walkability Importance and Surface Condition scores were added to arrive at a priority index for pedestrian improvements. This classification suggests where the City should begin to concentrate on pedestrian improvements. **Table 9-6** lists the Sidewalk Repair Priority by zone, listed in order of highest score to lowest.

Table 9-6
Sidewalk Repair Priority

	Walkability Importance	Surface Condition	Total Score
Zone 2	13	24	37
Zone 21	9	25	34
Zone 28	20	13	33
Zone 14	14	18	32
Zone 20	4	25	29
Zone 27	15	12	27
Zone 25	10	17	27
Zone 26	10	17	27
Zone 6	15	11	26
Zone 16	16	8	24
Zone 29	13	11	24
Zone 22	17	7	24
Zone 12	15	8	23
Zone 3	16	6	22
Zone 15	17	5	22
Zone 18	13	9	22
Zone 19	19	2	21
Zone 1	10	11	21
Zone 8	16	4	20
Zone 7	16	4	20
Zone 13	17	3	20
Zone 11	16	2	18
Zone 4	8	9	17
Zone 24	15	2	17
Zone 17	11	6	17
Zone 23	10	7	17
Zone 10	9	7	16
Zone 5	10	5	15
Zone 9	7	4	11

Sidewalk Obstructions

The sidewalk condition assessment revealed pedestrian barriers due to obstructions within the sidewalk, reducing the effective width of the sidewalk and missing sidewalks that created gaps in the network. These pedestrian barriers are listed by zone in **Table 9-7** and are shown geographically, ranked from high to low by zone in **Map 9-7 Pedestrian Barriers by Zone.**

Missing curb ramps also present obstructions for those in wheelchairs. Zones with missing curb ramps are listed in **Table 9-8.**

Table 9-7
Pedestrian Barriers

	Sign Post	Telephone Pole/Structure	Sidewalk Gaps	Total
Zone 28	33	3	1	37
Zone 20	0	0	36	36
Zone 2	0	1	21	22
Zone 29	8	0	13	21
Zone 27	0	15	3	18
Zone 13	13	0	1	14
Zone 21	0	2	12	14
Zone 16	5	5	3	13
Zone 18	1	11	0	12
Zone 23	6	4	1	11
Zone 25	9	0	0	9
Zone 4	0	3	5	8
Zone 26	7	0	1	8
Zone 9	0	4	3	7
Zone 19	1	6	0	7
Zone 15	0	3	3	6
Zone 11	0	5	0	5
Zone 3	0	0	4	4
Zone 1	0	0	3	3
Zone 5	0	0	3	3
Zone 6	0	0	3	3
Zone 10	0	0	2	2
Zone 7	0	1	0	1
Zone 8	0	0	1	1
Zone 12	0	0	1	1
Zone 14	0	0	1	1
Zone 17	0	1	0	1
Zone 22	0	0	0	0
Zone 24	0	0	0	0

Table 9-8
Missing Curb Ramps

Zones	# Missing Curb Ramps
9, 28, 29	> 40
-	21 - 40
5, 6, 10, 13, 16, 18, 25, 26, 27	11 - 20
1, 4, 7, 12, 17, 22, 23, 24	6 - 10
3, 11, 14, 15, 19	1 - 5
8, 20, 21	0

9.5 Recommendations

Overwhelmingly, the Evanston community indicated that after roadway surfaces are improved, they value improvements to the pedestrian environment. Key issues include sidewalk maintenance, crosswalk enforcement, safety near schools, and traffic signals.

9.5.1 Policy: Make Adjoining Property Owner Participation in 50/50 Program Mandatory – *Require participation in 50/50 sidewalk and curb replacement program by property owners to maintain a safe and accessible sidewalk network. Offer CDBG assistance to low-income residents.*

The current 50/50 curb and sidewalk replacement program relies on property owners agreeing to the improvement before the sidewalk can be improved. However, residents agreed that this program should be mandatory, allowing the City to make the necessary improvements and billing the property owner afterwards. Thus, the improvements could be made on a regional basis, rather than focusing on one location at a time. This will decrease the overall cost of the program due to economies of undertaking improvements in central areas. In conjunction with this policy, a low-income assistance program should be established to cover the costs for those who cannot afford the share of the sidewalk replacement cost.

Cost: Staff time.

9.5.2 Infrastructure: Upgrade All Sidewalk Surfaces – *Address level changes in sidewalks in a systematic manner, using the Priority Index developed in this Plan.*

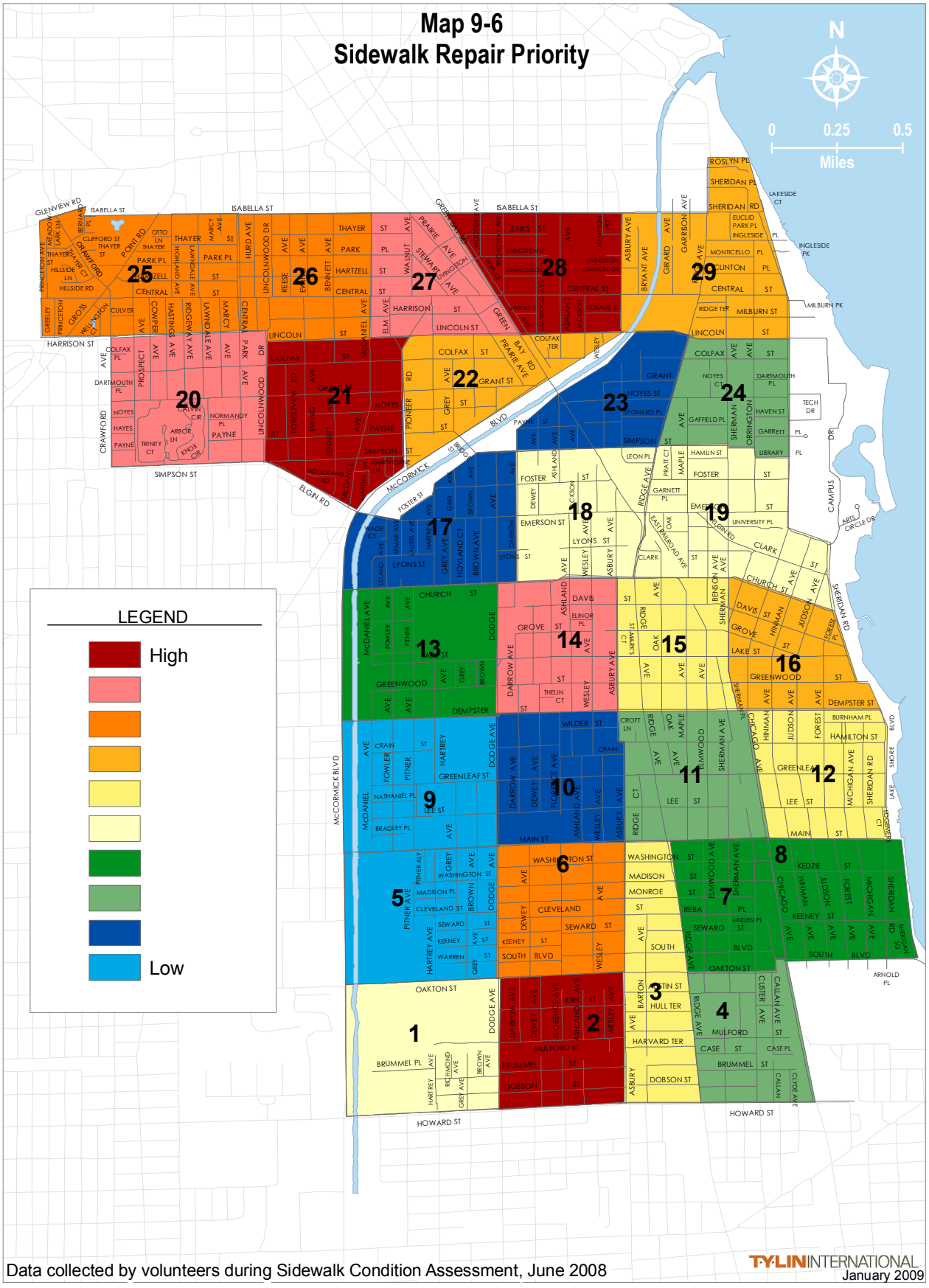
Evanston residents agreed that maintaining the surface condition of the sidewalks is one of the most pressing transportation issues. The Sidewalk Repair Priority established in this Plan provides a basis for scheduling sidewalk surface upgrades. To complete the improvements over a ten-year period, the City should undertake three areas per year. **Map 9-6 Sidewalk Repair Priority** shows a projected timeline of improvements by area based on the Pedestrian Improvement Priority. Following the ten-year period, the sidewalk assessment should be repeated to continue to identify needs.

Infrastructure Costs: $300,000/mile

9.5.3 Infrastructure: Address Sidewalk Clearance (4 feet) and Gaps – *As projects are identified and programmed, remove obstacles from pedestrian ways and complete gaps in network.*

During roadway reconstruction and resurfacing projects, the pedestrian facilities within the project limits should be upgraded in conjunction with the roadway improvements. Pedestrian improvements that should be undertaken include removing obstructions that reduce the throughway to less than 4 feet and constructing sidewalks if necessary.

Obstructions, such as telephone poles and sign posts and missing sidewalks were identified during the sidewalk assessment.


Map 9-6
Sidewalk Repair Priority
N
0 0.25 0.5
Miles
LEGEND
High
Low
Data collected by volunteers during Sidewalk Condition Assessment, June 2008
TY·LIN INTERNATIONAL
January 2009

Evanston may need to address locations that do not comply with ADA requirements more frequently than with associated roadway projects. To address this, **Map 9-7 Pedestrian Barriers by Zone** shows areas by priority of ADA improvement needs. These were determined by the number obstructions limiting the throughway to less than four feet wide in each area.

To prevent future obstructions to filling in sidewalk gaps, any new tree plantings should be coordinated between the Division of Transportation and the Division of Forestry to ensure that trees are not placed where a future sidewalk would be located.

Infrastructure Costs: To be determined.

9.5.4 Infrastructure: Address Roadway Crossing and Curb Ramps – *As roadway projects are identified and programmed, establish appropriate crossings in a systematic manner and install or improve accompanying curb ramps.*

Also during roadway construction and maintenance projects, the need for additional or improved pedestrian crossings should be programmed. Locations and treatments of marked crosswalks should be assessed on a case-by-case basis, using the guidelines presented in this Plan. Curb ramps associated with the crossings should be installed or upgraded, if necessary, per ADA requirements.

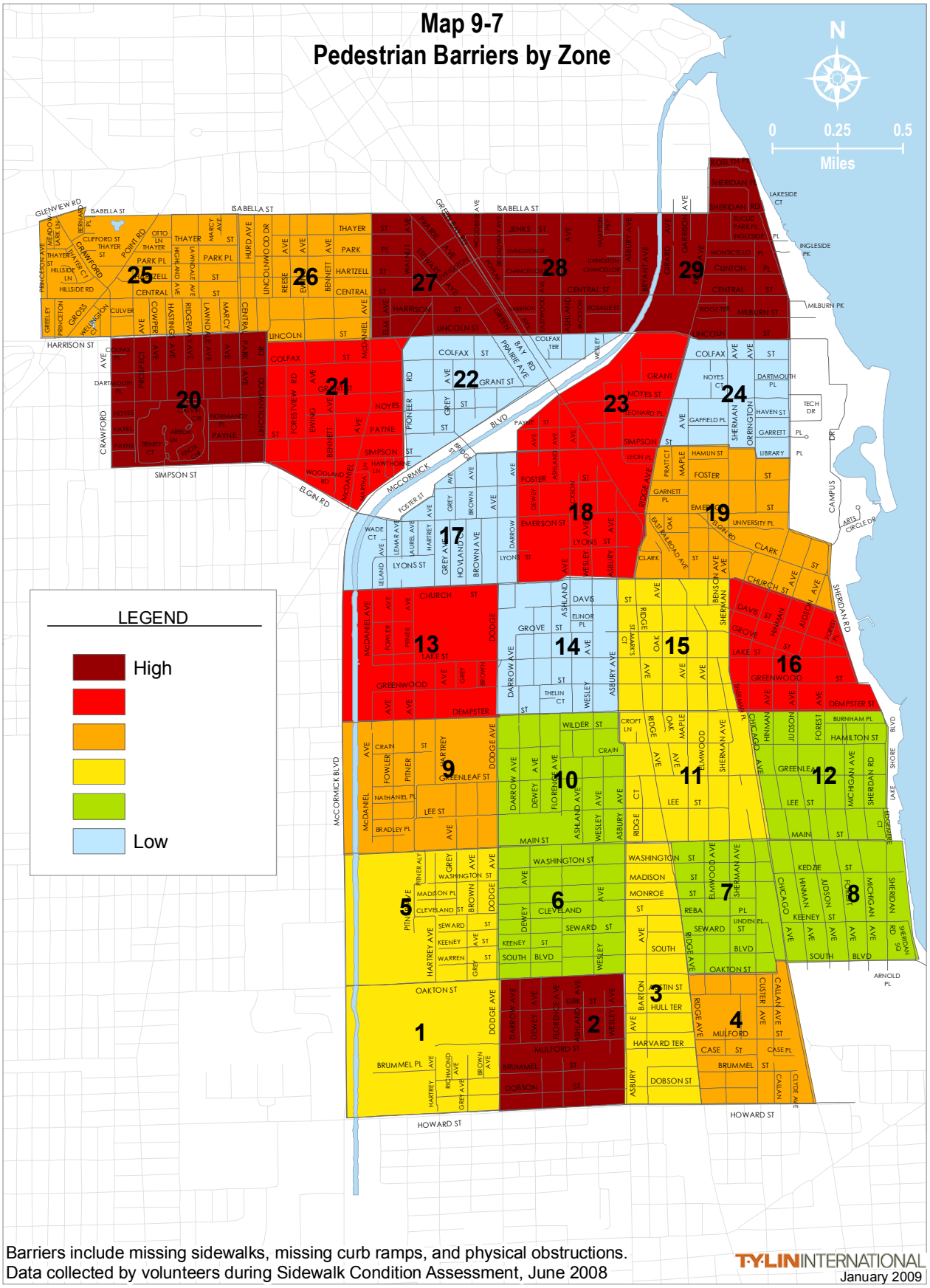
Cost: To be determined.

9.5.5 Program: Promote Sidewalk Maintenance by Property Owners – *Ensure that property owners maintain adjacent sidewalks through education and enforcement.*

The Evanston community ranked keeping the sidewalks clear of snow as the most important issue regarding the pedestrian environment. The community valued education of property owners as a solution, followed by enforcement, if necessary.

The City should take a proactive role in educating property owners of their responsibility to keep sidewalks clear of snow and shrubbery. An educational pamphlet could be included in a homeowner's guide distributed by the City. Reminders could also be sent out on a seasonal basis. The City could partner with utility companies to add an educational insert to mailings. Partnerships are key to spreading these messages. Notifications through community groups, churches, and aldermanic listservs are all good methods to educate and encourage a broad base of citizens.

Following education efforts, the City should take measures to ensure that property owners are keeping up with their responsibilities. The City could do this through enforcement, distributing warnings and tickets to property owners who do not comply. Currently the Property Standards Division responds to complaints about sidewalk clearance, but they have limited staff. One option would be for the Parking Enforcement Officer to handle complaints. This would require training, guidelines, and code changes. The City should consider this possibility, keeping in mind impacts to parking operations.


Map 9-7
Pedestrian Barriers by Zone
N
0 0.25 0.5
Miles
LEGEND
High
Low
1
2
3
4
5
6
7
8
9
10
11
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29
ISABELLA ST
HARRISON ST
SIMPSON ST
ELGIN RD
CRAWFORD
McCORMICK BLVD
HOWARD ST
CAMPUS
ARTS CIRCLE DR
SHERIDAN RD
LINCOLN ST
COLFAX ST
GRANT ST
NOYES ST
FOSTER ST
EMERSON ST
LYONS ST
CHURCH ST
DAVIS ST
GROVE ST
LAKE ST
GREENWOOD
DEMPSTER
WILDER ST
CRAIN
GREENLEAF ST
LEE ST
MAIN ST
WASHINGTON ST
MADISON
MONROE
CLEVELAND ST
SEWARD ST
KEENEY ST
SOUTH BLVD
OAKTON ST
BRUMMEL ST
MULFORD ST
DOBSON ST
HARVARD TER
HULL TER
CASE ST
CLINTON
CENTRAL ST
RIDGE ST
MILBURN ST
HAMILTON ST
GREENLEAF
BURNHAM PL
ARNOLD PL
Barriers include missing sidewalks, missing curb ramps, and physical obstructions.
Data collected by volunteers during Sidewalk Condition Assessment, June 2008
TY·LIN INTERNATIONAL
January 2009

Another option would be for the City to clear the sidewalk sections that are being neglected and bill the property owner for the work.

Program Costs: To be determined.

9.5.6 Infrastructure: Upgrade Traffic Signals – *Improve pedestrian crossings through fixed-time signals, phase timing, and countdown signals with each signal project.*

Actuation

The MUTCD states that pedestrians should be given a Walk phase during every signal cycle, or through pedestrian detection, where pedestrians are regularly crossing. At actuated signals, pedestrians must push a button to activate a Walk phase. This can be confusing to pedestrians and can also lead to non-compliance with the traffic signal, if pedestrians opt to cross when they see a gap in traffic instead of waiting for their signal. The benefit of actuated signals is that they improve the efficiency of vehicular traffic flow, reducing the idling time of vehicles at intersections, and improving air quality.

A discussion of the advantages and disadvantages of actuated signals was raised during the pedestrian focus group. The group agreed that pedestrian push-buttons should only be used in cases where it is pre-emptive, calling the Walk phase immediately and reducing the wait time for pedestrians.

Certain locations with low volumes may be appropriate for semi-actuated signals. Otherwise, the City should install fixed-time signals as a standard, using actuated or semi-actuated signals only where they have been determined appropriate. At any actuated or semi-actuated signal locations, the push-button must be compliant with ADA requirements.

Phase Timing

Adequate time should be given to the Walk and Flashing Don't Walk (FDW) phases of the signal cycle. In the next edition of the MUTCD, the standard walking speed used to calculate the minimum time for the FDW phase is proposed to be decreased to 3.5 ft/sec from the current 4.0 ft/sec, and the total Walk plus FDW phases would be based on a 3.0 ft/sec walking speed.

Countdown Signals

Pedestrian count-down signals will likely be mandatory for new pedestrian signals in the next version of the MUTCD, along with a requirement to upgrade all existing signals within a timeframe. Evanston has already begun installing countdown signals along with new signal installations. It is recommended that Evanston also develop an improvement program to upgrade all pedestrian signals within ten years.

Infrastructure Costs: $250,000/location

9.5.7 Program: Improve Motorist Compliance with Crosswalks – *Through education and enforcement, make motorists yield to pedestrians in crosswalks.*

The Evanston community agreed that the City should place a higher priority on enforcing compliance with crosswalk laws. Many motorists do not realize that they are required to yield to a pedestrian at mid-block crossings and uncontrolled intersections.

This will require shifting the current culture and raising expectations of motorists to yield to pedestrians in crosswalks. It will require continued education at crosswalk locations throughout the city, coupled with media coverage or public service announcements to reach a broader audience. Following an education campaign, the City should enforce crosswalk compliance in various locations to ensure that the behavior change is sustained. The effort would be more effective in conjunction with crosswalk improvements, as outlined in the guidelines included in this Plan.

Program Costs: $50,000

9.5.8 Program: Promote Formation of a Safe Routes to School Transportation Committee – *Encourage a multi-disciplinary committee to address school travel safety considerations.*

The School District should develop a Safe Routes to School Transportation Committee to address school-related transportation issues, such as pick-up and drop-off procedures and crossing guard locations. The committee should include representation from City staff as well as individual schools. The committee would develop Pedestrian and Bicycle School Safety Plans for each school in Evanston, to review the existing conditions and identify any concerns. The plans should follow the model presented in the four focus schools as part of this Plan.

Pedestrian and Bicycle School Safety Concept Plans were created for four schools in Evanston. Each plan includes suggestions for consideration for the focus school as well as general guidance that can be applied to all schools in Evanston. The plans are included in **Addendum B – Multi-Modal School Transportation Concept Plans.** The proposed committee will review and refine these plans.

In addition, the committee would be responsible for handling individual concerns regarding transportation as they arise, such as requests for crossing guards. The crossing guard guidelines presented in this section (see **Table 9-2 Crossing Guard Guidelines**), should be used when considering adding or removing crossing guards.

Currently, the City administers the crossing guard program and incurs the full cost. Due to escalating costs, the School Committee may consider modifying the program or the funding to get the most out of the program.

Program Costs: Staff time.

9.5.9 Infrastructure: Incorporate Sustainable Practices in Sidewalk Projects – *Permeable and recycled materials should be considered in sidewalk repair and replacement projects.*

The City should expand its efforts with sustainable alleyways to include sidewalks. Sidewalks may be an ideal application for permeable materials, which would reduce the amount of

rainwater runoff entering the sewer system. One of the disadvantages of permeable materials is that it does not hold up to turning vehicles as well as asphalt or concrete. With sidewalk applications, this would not be a concern. Recycled materials could also be used in sidewalk construction to reduce the impact on the amount of waste generally associated with such projects.

Cost: To be determined.

Section 10
Roadway

This section documents existing roadway, bridge, and traffic control infrastructure in the City of Evanston. The current performance of the City's infrastructure, as well as the City's efforts to maintain and improve this network was reviewed. Recommendations for capital improvements, recommended design guidelines, and changes to operational activities are proposed.

10.1 Current Conditions

Roadway Miles & Intersections

According to databases maintained by the City, Evanston maintains a network of more than 137 miles of streets, 100 signalized intersections[1], and 781 stop-controlled intersections[2].

Roadway Jurisdiction

Map 5-1 Roadway Jurisdiction shows roadways by jurisdiction. With the exception of a few private streets, the City of Evanston and the Illinois Department of Transportation (IDOT) maintain all streets in Evanston. The City conducts routine maintenance on roadways under IDOT jurisdiction, which includes portions of Central Street, Gross Point Road, Crawford Avenue, Simpson Street, Elgin Road, Church Street, Dempster Street, South Boulevard, and Asbury Avenue.

Recent agreements between Evanston and IDOT have been made for jurisdictional transfers of roads from IDOT to the City of Evanston. This includes Sheridan Road from South Boulevard to Isabella Street, Ridge Avenue from Howard Street to Clark Street, and McCormick Boulevard from Emerson Street to Green Bay Road.

There are no roadways under the jurisdiction of Cook County within the City of Evanston.

Average Daily Traffic/Peak Hour Traffic

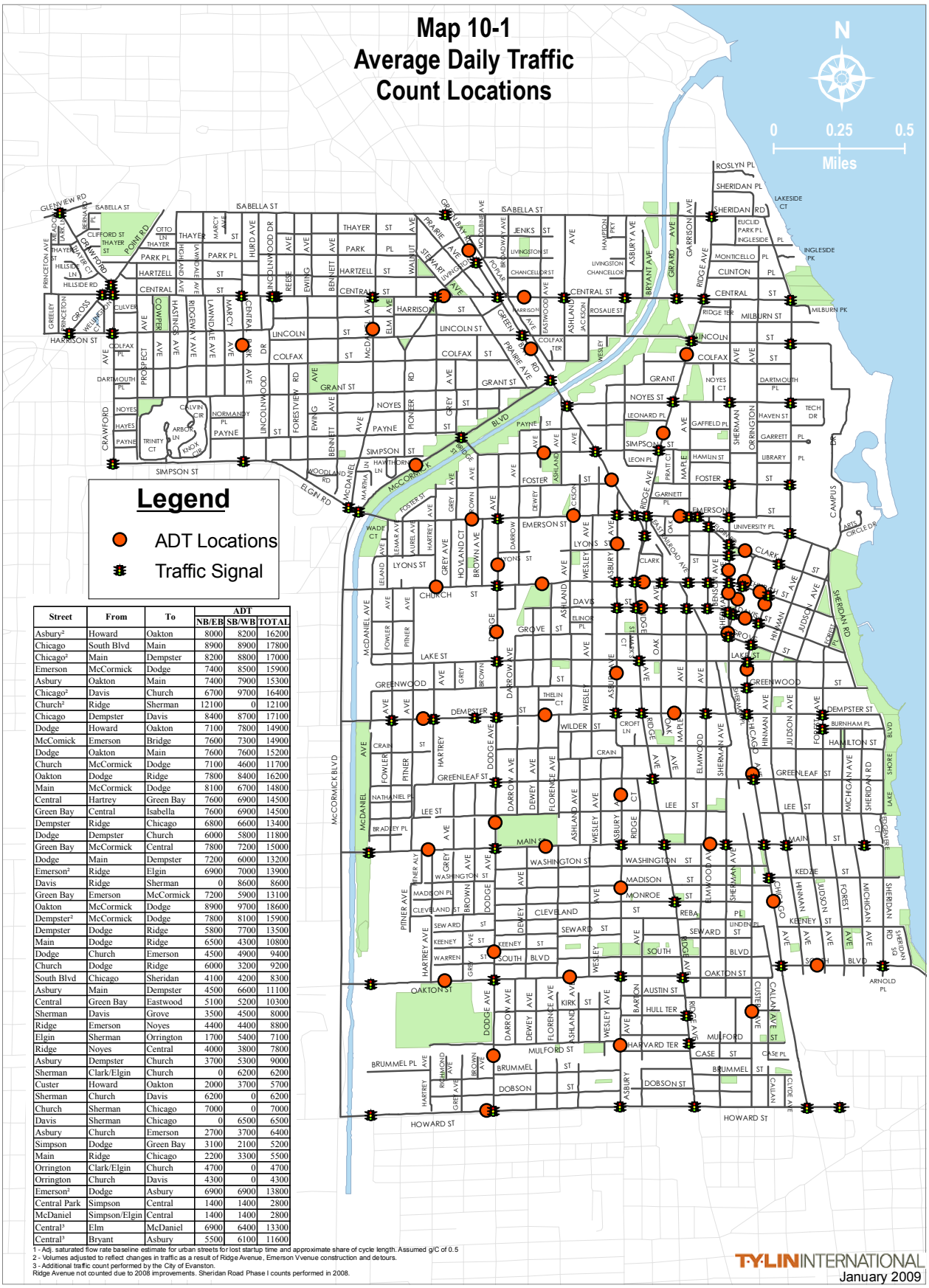
Average daily traffic (ADT) and peak-hour intersection traffic counts have been collected for several streets and intersections to monitor traffic and congestion within the City of Evanston, particularly in the downtown. **Map 10-1 Average Daily Traffic Count Locations** shows the roadway segments and intersections for which data have been collected. ADT data for the City of Evanston is included in **Appendix C – Average Daily Traffic Summary**.

Truck Routes

To accommodate truck traffic through the City of Evanston, it is important that infrastructure improvements accommodate heavy vehicles. Currently, the Evanston Police Department (EPD) is responsible for enforcing truck traffic restrictions within the City of Evanston. The Evanston Division of Transportation (EDOT) is responsible for maintaining and updating the truck traffic management plan.

[1] As of January, 2009 the City maintains 99 signals and owns 1 signal near completion at the intersection of McCormick & Oakton.
[2] City of Evanston Department of Business Performance & Technology. n.d.

Map 10-1
Average Daily Traffic Count Locations



Street	From	To	ADT		
			NB/EB	SB/WB	TOTAL
Asbury[2]	Howard	Oakton	8000	8200	16200
Chicago	South Blvd	Main	8900	8900	17800
Chicago[2]	Main	Dempster	8200	8800	17000
Emerson	McCormick	Dodge	7400	8500	15900
Asbury	Oakton	Main	7400	7900	15300
Chicago[2]	Davis	Church	6700	9700	16400
Church[2]	Ridge	Sherman	12100	0	12100
Chicago	Dempster	Davis	8400	8700	17100
Dodge	Howard	Oakton	7100	7800	14900
McComick	Emerson	Bridge	7600	7300	14900
Dodge	Oakton	Main	7600	7600	15200
Church	McCormick	Dodge	7100	4600	11700
Oakton	Dodge	Ridge	7800	8400	16200
Main	McCormick	Dodge	8100	6700	14800
Central	Hartrey	Green Bay	7600	6900	14500
Green Bay	Central	Isabella	7600	6900	14500
Dempster	Ridge	Chicago	6800	6600	13400
Dodge	Dempster	Church	6000	5800	11800
Green Bay	McCormick	Central	7800	7200	15000
Dodge	Main	Dempster	7200	6000	13200
Emerson[2]	Ridge	Elgin	6900	7000	13900
Davis	Ridge	Sherman	0	8600	8600
Green Bay	Emerson	McCormick	7200	5900	13100
Oakton	McCormick	Dodge	8900	9700	18600
Dempster[2]	McCormick	Dodge	7800	8100	15900
Dempster	Dodge	Ridge	5800	7700	13500
Main	Dodge	Ridge	6500	4300	10800
Dodge	Church	Emerson	4500	4900	9400
Church	Dodge	Ridge	6000	3200	9200
South Blvd	Chicago	Sheridan	4100	4200	8300
Asbury	Main	Dempster	4500	6600	11100
Central	Green Bay	Eastwood	5100	5200	10300
Sherman	Davis	Grove	3500	4500	8000
Ridge	Emerson	Noyes	4400	4400	8800
Elgin	Sherman	Orrington	1700	5400	7100
Ridge	Noyes	Central	4000	3800	7800
Asbury	Dempster	Church	3700	5300	9000
Sherman	Clark/Elgin	Church	0	6200	6200
Custer	Howard	Oakton	2000	3700	5700
Sherman	Church	Davis	6200	0	6200
Church	Sherman	Chicago	7000	0	7000
Davis	Sherman	Chicago	0	6500	6500
Asbury	Church	Emerson	2700	3700	6400
Simpson	Dodge	Green Bay	3100	2100	5200
Main	Ridge	Chicago	2200	3300	5500
Orrington	Clark/Elgin	Church	4700	0	4700
Orrington	Church	Davis	4300	0	4300
Emerson[2]	Dodge	Asbury	6900	6900	13800
Central Park	Simpson	Central	1400	1400	2800
McDaniel	Simpson/Elgin	Central	1400	1400	2800
Central[3]	Elm	McDaniel	6900	6400	13300
Central[3]	Bryant	Asbury	5500	6100	11600

1 - Adj. saturated flow rate baseline estimate for urban streets for lost startup time and approximate share of cycle length. Assumed g/C of 0.5
2 - Volumes adjusted to reflect changes in traffic as a result of Ridge Avenue, Emerson Vvenue construction and detours.
3 - Additional traffic count performed by the City of Evanston.
Ridge Avenue not counted due to 2008 improvements. Sheridan Road Phase I counts performed in 2008.

Map 10-2 Truck Routes shows truck routes and roadways restricted to trucks within Evanston. The network includes include truck routes, delivery routes, 8,000 pound vehicle weight restrictions, and truck traffic restrictions. Truck traffic restrictions are accompanied by regulatory signs. All other roadways are subject to IDOT vehicle weight restrictions[3]. Currently, permitting procedures within the City for heavy vehicle movements require an IDOT permit and registration number that is recorded by the City. No additional permit fees or local permits are required.

Roadway Surface

Infrastructure Management Services (IMS) provided roadway pavement rating services to the City of Evanston in 2006. Data from a report submitted to the City was used to develop a five-year capital improvement plan for roadways within Evanston. Pavement surface is rated on a scale of 10 to 100, with smooth pavement in good condition rated 100. The pavement management rating is used as an input to the City's Capital Improvement Program. To reduce vehicle noise and vibration, and to minimize roadway wear, municipalities often establish a desired average pavement rating. Average ratings typically range from 70-85.

Bridge Maintenance

The City of Evanston provides inspection data on its bridges to the Illinois Department of Transportation to be included in the Structures Information Management System (SIMS). Other bridges, including those maintained by IDOT, the Union Pacific Railroad (UPRR), or the Chicago Transit Authority, are maintained separately. Overhead clearance heights are recorded in a City database.

In February 2009, the Ciorba Group completed a structural assessment for bridge structures under the jurisdiction of Evanston. The assessment identified various elements of each bridge and culminated in a recommended capital program for bridge maintenance in Evanston, along with a documentation of existing and potential funding sources for bridge rehabilitation. **Table 10-1** lists all structures within the City of Evanston, including those from SIMS, IDOT, UPRR, and CTA.

[3] *Understanding the Illinois Size & Weight Laws*. Illinois Department of Transportation. n.d.

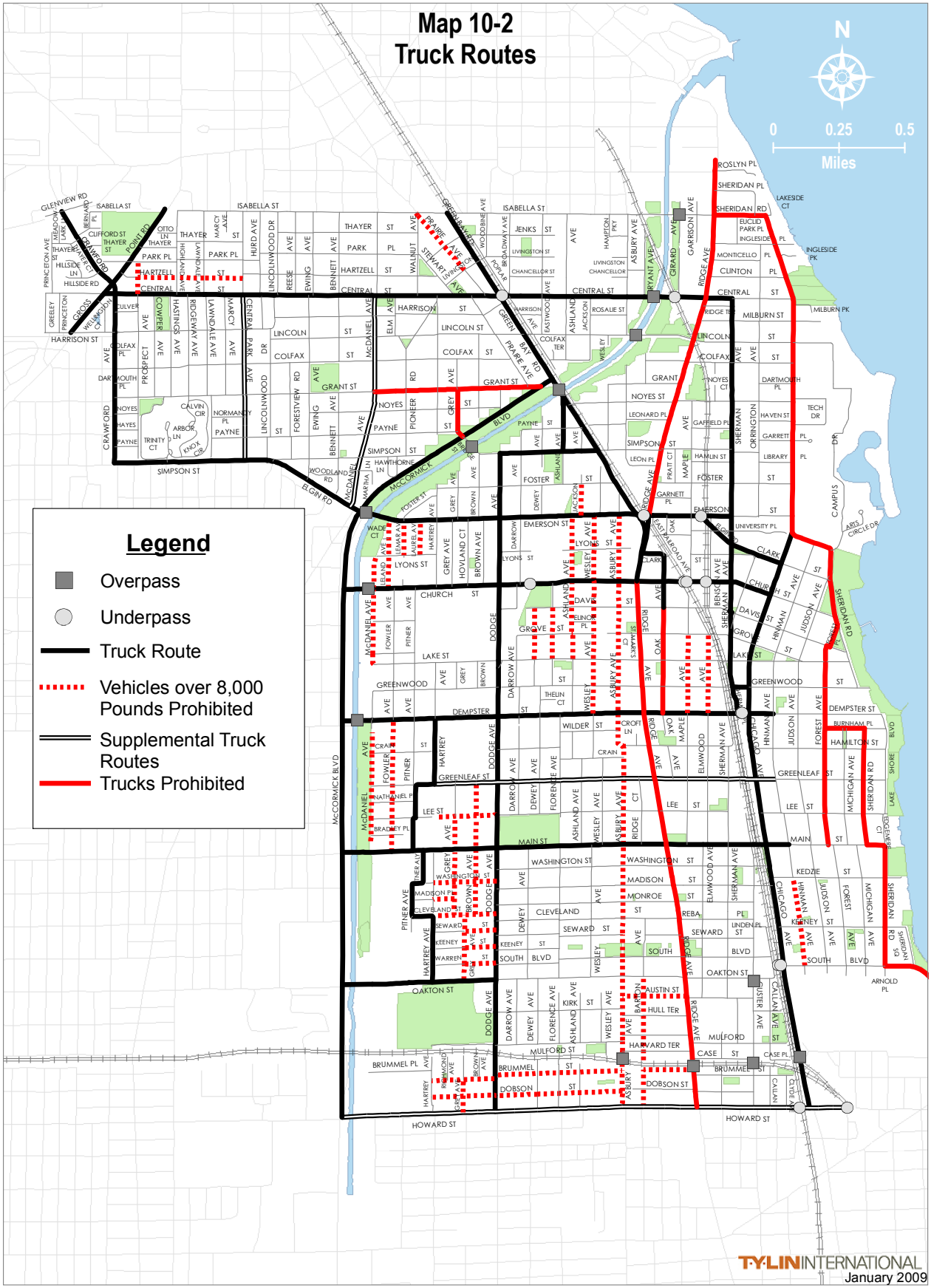

Map 10-2
Truck Routes
N
0 0.25 0.5
Miles
Legend
Overpass
Underpass
Truck Route
Vehicles over 8,000 Pounds Prohibited
Supplemental Truck Routes
Trucks Prohibited
TY·LIN INTERNATIONAL
January 2009

Table 10-1
Bridge Structure Summary

Structure Number	Carries	Jurisdiction	Crosses	Roadway Width (ft)	Side-walk Width (ft)	Federal Aid Eligible	Last Inspection	Next Inspection
016-0289	Green Bay Road	IDOT	North Shore Channel	-	-	-	-	-
016-0358	Union Pacific Railroad	UPRR	Dempster Street	-	NO	-	-	-
016-0359	CTA	CTA	Dempster Street	-	NO	-	-	-
016-0655	Emerson Street	IDOT	North Shore Channel	-	-	-	-	-
016-0657	Union Pacific Railroad	UPRR	Emerson St/ Ridge Ave	-	NO	-	-	-
016-0658	North Shore RR (Aban.)	N/A	Emerson Street	-	NO	-	-	-
016-2773	Dempster Street	IDOT	North Shore Channel	-	-	-	-	-
016-3030	Union Pacific Railroad	UPRR	Howard Street	-	NO	-	-	-
016-3031	CTA	CTA	Howard Street	-	NO	-	-	-
016-6950	Isabella Street	Evanston	North Shore Channel	28	5', 5'	NO	Feb 09	Dec 10
016-6951	Central Street	Evanston	North Shore Channel	50	5.3', 5.3'	YES	Feb 09	Dec 10
016-6952	Lincoln Street	Evanston	North Shore Channel	28	5', 5'	YES	Feb 09	Dec 10
016-6953	Bridge Street	Evanston	North Shore Channel	28	5', 5'	YES	Feb 09	Dec 10
016-6954	Chicago Avenue	Evanston	CTA Skokie Swift	46.2	8.8', 8.8'	NO	Feb 09	Dec 10
016-6956	Custer Avenue	Evanston	CTA Skokie Swift	46	9', 9'	YES	Feb 09	Dec 10
016-6957	Ridge Avenue	Evanston	CTA Skokie Swift	44	13.4', 13.4'	YES	Feb 09	Dec 10
016-6959	Asbury Avenue	Evanston	CTA Skokie Swift	52	9', 9'	YES	Feb 09	Dec 10
016-9709	Church Street	IDOT	North Shore Channel	-	-	-	-	-
016-9902	Union Pacific Railroad	UPRR	Central Street	-	NO	-	-	-
016-9903	CTA	CTA	Central Street	-	NO	-	-	-
016-9904	Union Pacific Railroad	UPRR	Church Street	-	NO	-	-	-
016-9905	Union Pacific Railroad	UPRR	Church Street	-	NO	-	-	-
016-9906	Union Pacific Railroad	UPRR	Church Street	-	NO	-	-	-
016-9907	CTA	CTA	Church Street	-	NO	-	-	-
016-9908	CTA Skokie Swift	CTA	South Boulevard	-	NO	-	-	-
016-9909	Union Pacific Railroad	UPRR	South Boulevard	-	NO	-	-	-
-	CTA Skokie Swift	CTA	Howard Street	-	-	-	-	-
-	CTA Skokie Swift	CTA	Howard Street	-	-	-	-	-
-	CTA	CTA	Madison Street	-	-	-	-	-

Table 10-1
Bridge Structure Summary (Continued)

Structure Number	Carries	Jurisdiction	Crosses	Roadway Width (ft)	Side-walk Width (ft)	Federal Aid Eligible	Last Inspection	Next Inspection
-	CTA	CTA	Washington Street	-	-	-	-	-
-	CTA	CTA	Main Street	-	-	-	-	-
-	Union Pacific Railroad	UPRR	Howard Street	-	-	-	-	-
-	Union Pacific Railroad	UPRR	Greenleaf Street	-	-	-	-	-
-	Union Pacific Railroad	UPRR	Dempster Street	-	-	-	-	-
-	Union Pacific Railroad	UPRR	Greenwood Street	-	-	-	-	-
-	Union Pacific Railroad	UPRR	Lake Street	-	-	-	-	-
-	Union Pacific Railroad	UPRR	Grove Street	-	-	-	-	-
-	Union Pacific Railroad	UPRR	Davis Street	-	-	-	-	-
-	CTA	CTA	Church Street	-	-	-	-	-
-	Union Pacific Railroad	UPRR	Church Street	-	-	-	-	-
-	CTA	CTA	Clark Street	-	-	-	-	-
-	CTA	CTA	University Place	-	-	-	-	-
-	CTA	CTA	Elgin Road	-	-	-	-	-
-	CTA	CTA	Emerson Street	-	-	-	-	-
-	Union Pacific Railroad	UPRR	Emerson Street	-	-	-	-	-
-	Union Pacific Railroad	UPRR	Ridge Avenue	-	-	-	-	-
-	CTA	CTA	Foster Street	-	-	-	-	-
-	CTA	CTA	Hamlin Street	-	-	-	-	-
-	CTA	CTA	Simpson Street	-	-	-	-	-
-	CTA	CTA	Alley b/w Foster/Hamlin	-	-	-	-	-
-	CTA	CTA	Garfield Place	-	-	-	-	-
-	CTA	CTA	Noyes Street	-	-	-	-	-
-	CTA	CTA	Colfax Street	-	-	-	-	-
-	CTA	CTA	Lincoln Street	-	-	-	-	-
-	CTA	CTA	Central Street	-	-	-	-	-
-	CTA	CTA	Livingston Street	-	-	-	-	-
-	Union Pacific Railroad	UPRR	Noyes Street	-	-	-	-	-
-	Union Pacific Railroad	UPRR	Simpson Street	-	-	-	-	-
-	CTA	CTA	Dodge Avenue	-	-	-	-	-

Sources: IDOT, 2008. Ciorba Group, 2008.

Traffic Signal Operation

The City maintains computer traffic models of downtown Evanston and Chicago Avenue. These traffic models, created using Synchro and SimTraffic simulation software, enable the City to produce simulations of traffic conditions using peak-hour intersection traffic counts. The models provide valuable information regarding intersection delay using a measure of intersection performance known as Level of Service (LOS).

Between 2007 and 2009, the City will have upgraded and coordinated the operation of 38 traffic signals. These include signals along Ridge Avenue and portions of the downtown along Church Street, Davis Street, Central Street, and Chicago Avenue.

Additional signal coordination improvements along major corridors are expected to continue in the future.

Recent improvements to traffic control hardware have been made possible with assistance from the Illinois Clean Energy Community Foundation. Approximately half of the existing traffic signals heads were replaced with light-emitting diode (LED) lamps. LED lamps use 80 percent less energy and last up to 10 times longer than a traditional incandescent lamp.

Traffic Calming

The City of Evanston provides a neighborhood traffic calming program managed by the Public Works department to install traffic circles and speed humps on local streets. A speed hump program operated by the City of Evanston provides residents with an opportunity to request additional speed humps on local streets. These requests are processed as needed through a neighborhood involvement process. **Map 10-3 Traffic Calming Infrastructure** shows existing traffic calming infrastructure in Evanston.

10.2 Guidelines

Roadway Width

The City of Evanston has the following roadway width guidelines for existing streets.

- Minimum 24’ curb-to-curb with parking on both sides
- Minimum 17’ curb-to-curb with parking on one side

Due to fixed widths for nearly all streets in Evanston, roadway widening is a rare occurrence as a method for reducing traffic congestion and improving roadway capacity. The City of Evanston has recently adopted the *West Evanston Physical Planning and Urban Infill Design*. The plan includes Street Type Standards for new one-way and two-way streets and alleys. These standards are provided in **Appendix D** and should be followed in the West Evanston TIF District and considered in future developments.

The City of Chicago Department of Transportation (CDOT) has published *Street and Site Plan Design Standards*, which identifies recommended widths for travel, parking, and bike lanes, as well as parkway, pedestrian, and property line setback recommendations. Roadway width

Map 10-3
Traffic Calming Infrastructure

guidelines from CDOT also are included in **Appendix D**. This publication should be considered as guidelines for new developments.

Traffic Calming

The following best practices should be considered as additions to the City's traffic calming toolbox:

Speed Tables: An extended version of a speed hump that is approximately one car-length long or longer, depending on the application. A benefit of speed tables in addition to calming traffic is that they may create a level crossing plane for pedestrians. This treatment can be used in exchange of traditional curb ramps for pedestrian where pedestrian activity is high.

Raised Intersections: A raised intersection is a variation on a speed table. This is a treatment where the entire roadway surface is elevated to the sidewalk level to reduce vehicle speeds when traveling through intersections and increase the visibility of pedestrians to motorists. The grade change is minimal so as not to disturb emergency vehicles, transit vehicles, or drainage, and has the potential to reduce crashes. Raised intersections also mitigate the grade change issues commonly associated with curb ramps for persons with disabilities[4].

Roundabouts: A traffic control device used in low- to medium-volume intersections where traffic signals are not warranted but traffic calming is desired. These may be used in place of two- or all-way stops. Roundabouts direct one-way, counter-clockwise vehicular movements around a central island where vehicles yield upon entry into the roundabout.

Curb Extensions: The area of the roadway closest to the intersection usually imposes parking restrictions to allow for turning lanes. In the absence of turn lanes, particularly at one-way street intersections, curb extensions may also be used to purposefully narrow the roadway to improve sight lines for motorists and pedestrians at intersection. Curb extensions also reduce the total width of a pedestrian crossing, thereby decreasing the overall time of exposure of pedestrians to automobile traffic.

Speed Reporting Signs: In school zones and in areas where pedestrian activity is high, solar-powered speed reporting display the speed at which motorists are traveling, which may in turn reduce speeding in certain areas. These signs may be solar-powered, requiring no external energy supply, and may be provided through traffic safety grants available to the Village.

Signalized Intersection Traffic Violation Photo Enforcement (Red light cameras): This tool was not supported as a priority for residents. Although not well-received in focus groups, photo enforcement at signalized intersections has the ability to deter red-light

[4] As with any improvement in the public right-of-way, traffic calming infrastructure still must be made accessible to persons with disabilities. Detectable warning tiles are still required at flush transitions to demarcate the boundary between the pedestrian and vehicular travel ways.

traffic violations. Installing red-light cameras at select locations may help to reduce intersection crashes caused by speeding and failure to stop at intersections. Improved compliance with traffic control devices also may improve overall traffic flow. If the City wishes to pursue the installation of red light cameras to deter traffic violations and generate revenue, additional public involvement would be needed to identify potential locations where this practice would be supported.

10.3 Analysis

10.3.1 Traffic Volume & Capacity

A volume-to-capacity (V/C) ratio is a ratio of a roadway's carrying capacity to the actual volume of traffic observed. A V/C ratio less than 1.0 is under capacity, and a value greater than 1.0 is characteristic of roadway segments operating beyond capacity. A V/C ratio above 0.9 is considered to be "congested"[5]. V/C ratios were calculated for Evanston using Highway Capacity Software (HCS) and are shown in **Table 10-2** (following page).

Currently, no roadway segment is beyond capacity, yet several areas are congested. Furthermore, roadways that are known to be congested yet are shown to have a low V/C ratio should be the subject of further analysis. In many cases, volume is not the issue, particularly if a roadway segment is congested due to traffic signal backups that greatly restrict the traffic flow of that segment. In those cases, the V/C ratio is not a good indicator of congestion. Strategies for capacity improvements to reduce congestion are provided in section 10.4.

10.3.2 One-Way/Two-Way Conversion

Downtown Evanston has two one-way pairs; Church Street/Davis Street running east-west, and Sherman Avenue/Orrington Avenue running north-south. A review of converting one-way streets to two-way streets identified the following pros and cons[6]:

Pros	Cons
▪ Improved traffic circulation ▪ Improved wayfinding for motorists ▪ Businesses prefer two-way street locations due to increased visual exposure ▪ More amenable to transit routes/stops ▪ Less circuitous, provides the most direct route for motorists	▪ Possible increase in left-turning traffic, conflict with bicyclists, pedestrians ▪ Parking lanes, bike lanes may be eliminated ▪ New turn lanes may be required ▪ Extra signals may be required ▪ Signal timing must be adjusted to accommodate two-way movement ▪ Two-way streets create one lane in each direction ▪ Removal of through lanes may require on-street loading zones for trucks

[5] Southwest Washington Regional Transportation Council. Congestion Monitoring Report Summary. 2006. http://www.rtc.wa.gov/data/cms/?year=2006#vc Accessed April 30, 2008.

[6] Source: Walker, G.W., Kulash, W.M., McHugh, B.T. *Downtown Streets: Are We Strangling Ourselves on One-Way Networks?* TRB Circular E-C019: Urban Street Symposium. 2000.

Table 10-2
Volume to Capacity Ratios

Rank	Street	From	To	V/C Ratio[A]
1	Asbury[B]	Howard	Oakton	0.96
2	Chicago	South Blvd.	Main	0.91
3	Chicago[B]	Main	Dempster	0.85
4	Asbury	Oakton	Main	0.81
5	Chicago[B]	Davis	Church	0.80
6	Church[B]	Ridge	Sherman	0.80
7	Chicago	Dempster	Davis	0.79
8	Dodge	Howard	Oakton	0.76
9	Dodge	Oakton	Main	0.72
10	Church	McCormick	Dodge	0.71
11	Oakton	Dodge	Ridge	0.67
12	Main	McCormick	Dodge	0.65
13	Central	Hartrey	Green Bay	0.64
13	Green Bay	Central	Isabella	0.64
15	Dempster	Ridge	Chicago	0.62
16	Dodge	Dempster	Church	0.60
17	Green Bay	McCormick	Central	0.57
18	Dodge	Main	Dempster	0.57
19	Emerson[B]	Ridge	Elgin	0.56
20	Davis	Ridge	Sherman	0.52
21	Green Bay	Emerson	McCormick	0.52
22	Oakton	McCormick	Dodge	0.52
23	Dempster[B]	McCormick	Dodge	0.50
24	Dempster	Dodge	Ridge	0.50
25	Main	Dodge	Ridge	0.48
26	Dodge	Church	Emerson	0.47
27	Church	Dodge	Ridge	0.45
28	South Blvd	Chicago	Sheridan	0.44
29	Central	Green Bay	Eastwood	0.43
29	Asbury	Main	Dempster	0.43
31	Sherman	Davis	Grove	0.42
32	Emerson	McCormick	Dodge	0.42
33	Ridge	Emerson	Noyes	0.41
34	McCormick	Emerson	Bridge	0.38
35	Elgin	Sherman	Orrington	0.36
36	Ridge	Noyes	Central	0.36
37	Asbury	Dempster	Church	0.35
38	Sherman	Clark/Elgin	Church	0.35
39	Custer	Howard	Oakton	0.34
40	Sherman	Church	Davis	0.34
41	Church	Sherman	Chicago	0.33
42	Davis	Sherman	Chicago	0.32
43	Asbury	Church	Emerson	0.31
44	Simpson	Dodge	Green Bay	0.29
45	Main	Ridge	Chicago	0.27
46	Orrington	Clark/Elgin	Church	0.23
47	Orrington	Church	Davis	0.23
48	Emerson[B]	Dodge	Asbury	0.20
49	Central Park	Simpson	Central	0.17
50	McDaniel	Simpson/Elgin	Central	0.16

A) Volume to Capacity Ratio. Assumed the peak hour flow compared to design capacity
B) Volumes adjusted to reflect changes in traffic as a result of Ridge Avenue construction and detours
Sheridan Road was excluded due to the Phase 1 Study by the City of Evanston (2008).

Infrastructure and operational costs are significant when converting a street of any kind, and the benefits to property owners are difficult to quantify. Impact studies can demonstrate how traffic and pedestrian movements will be affected by the conversion of one-way streets to two-way movement, but there is no compelling evidence to support one configuration over the other. The decision to alter traffic movements on urban streets ultimately depends on community preference.

Using the Evanston traffic simulation model, average vehicle delay was calculated for each intersection that would be converted along Church, Davis, Sherman, and Orrington. Average vehicle delay for all vehicles through each intersection remained largely unchanged following the conversion to two-way movement.

The approximate cost for one-way to two-way conversion must take into account the cost of pavement marking removal and placement, sign removal and installation, and the placement of additional traffic signals, which vary by the number of additional approaches that require signalization. The approximate per-intersection cost is provided in **Table 10-3** below.

Table 10-3
Two-Way Conversion

Item	Unit Cost	Units Required	Intersection Subtotal
Pavement marking removal/ placement	$2.00 per linear foot	1000 feet	$2,000
Sign removal/ installation	$250 per sign	4 signs	$1,000
Traffic signal installation	$70,000 per additional leg	1 leg	$70,000
		Average Intersection Total	**$73,000**
Church/Davis	12 signalized intersections		$876,000
Sherman/Orrington	2 signalized intersections		$146,000
	4 shared signalized intersections (two legs required per shared intersection)		$584,000
		Grand Total	**$1,606,000**

No changes are recommended to the one-way pairs of streets in downtown Evanston (Church/Davis, Sherman/Orrington). The costs and benefits of one-way street pairs are approximately equal to the costs and benefits that would be realized from a two-way conversion. The benefits that would be realized are not expected to justify the engineering costs that would be required to convert one or both pairs of streets from one-way to two-way operation.

10.3.3 Crash Locations and Analysis

Vehicle crash information was collected from the City of Evanston for the years 2002-2006. The method used in this analysis to calculate crash rates is the number of crashes per million vehicles (C/MV) entering an intersection. This method normalizes crash rates by comparing actual crashes to the sum of ADT on all approaching legs of the intersection over the period of time for which crash data was collected[7]. This method was used to determine the intersections in

[7] In more detailed analyses, additional weight is given to intersections based on the severity of the crash. This method, which rates fatal and injury crashes higher than equivalent-property damage only (EPDO) crashes, was not

Evanston with the highest crash rates. **Table 10-4** shows the crash rates for these intersections. **Appendix C – Average Daily Traffic Summary** provides additional information on ADT, intersection and mid-block crashes.

Table 10-4
Crash Rate Summary

Street Name	Intersecting Street	Average Annual Crashes	Crashes per million vehicles (C/MV)
Dempster	Maple	17	3.02
Dempster	Dodge	24.5	1.93
Dempster	Sherman	8	1.64
Emerson	Darrow	5.5	1.54
Central	Green Bay	12.5	1.36
Green Bay	McCormick	8.5	1.32
Dodge	Oakton	15	1.31
Church	Maple	11	1.25
Church	Wesley	5	1.22
Dodge	Main	11.5	1.21
Dodge	Emerson	7.5	1.19
Howard	Kedzie	8.5	1.17
Chicago	Greenleaf	9	1.07
Dodge	Church	8	1.04
Green Bay	Lincoln	7	0.97
Emerson	McCormick	5	0.87
Chicago	Howard	9	0.84
Dempster	Hartrey	7.5	0.83
Dempster	Asbury	4	0.81
Chicago	Davis	7.5	0.80
Chicago	Main	7.5	0.78
Chicago	South	5.5	0.76
Emerson	Green Bay	7.5	0.72
Chicago	Kedzie	3.5	0.72
Dempster	Fowler	6.5	0.72
Asbury	Lee	4	0.69
Dempster	Chicago	6	0.66
Asbury	Emerson	5	0.63
Church	Oak	5.5	0.63
Dodge	Cleveland	2.5	0.60
Dodge	Simpson	2.5	0.60
Dempster	Pitner	5	0.55
Asbury	Mulford	3	0.52
Asbury	Howard	6	0.52
Asbury	Oakton	5.5	0.50
Asbury	Main	4.5	0.50
Emerson	Brown	3	0.46
Dempster	Darrow	2.5	0.44

Ridge Avenue excluded due to recent signal upgrades and roadway reconstruction. (2008).
Sheridan Road was excluded due to its current involvement in the Phase 1 Study by the City of Evanston (2008).

This information was used to support the selection of locations that should be examined in greater detail to determine crash mitigation strategies through infrastructure improvements.

used for this summary. While 50 counts were conducted, only 38 intersections contained the data necessary to conduct crash analysis.

10.3.4 Automobile Dependency

The Victoria Transport Policy Institute has developed an automobile dependency index, which measures how well a municipality's transportation network serves non-drivers. According to this study, "a community can be considered highly automobile dependent if more than 80% of *personal trips* are made by private automobile" [8]. Inputs to this estimate include share of transit use, known as mode split. Mode split in Evanston, collected by the U.S. Census in 2000 shows that approximately 62% of work trips are made by car or in a carpool. According to this measure, Evanston falls into the "medium" category, in which 50-80% of personal trips are made by automobile.

A review of vehicles registered within the City of Evanston as of 2008 showed[9]:

- 45,000 Registered vehicles in Evanston
- 847 Motorcycles (2%)
- 200 Hybrid vehicles (0.4%)
- 1.6 vehicles per household (average)

In 2000, the United State Census reported an average of 1.4 vehicles per household. This increase in vehicle ownership suggests that parking demand has and will continue to increase in the future. Furthermore, the rise in the number of registered hybrid vehicles and motorcycles suggests that even as per capita vehicle ownership rises, residents are choosing more fuel-efficient vehicles. While this may have little impact on total vehicle miles traveled, an increase in fuel efficiency travel may offset total emissions.

There is an interest, however, in improving other modes of transportation to offset this increase in Evanston while continuing to improve the efficiency of the roadway and bridge infrastructure network in Evanston. Recommendations for improvement are provided below.

[8] Victoria Transport Policy Institute. *Automobile Dependency. Transportation and Land Use Patterns That Cause High Levels of Automobile Use and Reduced Transport Options.* http://www.vtpi.org/tdm/tdm100.htm. 2008.
[9] Registered Vehicles within the City of Evanston. City of Evanston Climate Action Plan. 2008.

10.4 Recommendations

10.4.1 Infrastructure: Continue to Maintain and Improve Roadway Surfaces and Bridges

The community stated that their highest priority is for the City to maintain the roadways in good surface condition. The City has recently initiated an aggressive roadway resurfacing program. This roadway resurfacing program should be continued.

The City has implemented a pavement condition information system. This system known as the Infrastructure Management System (IMS) is updated every five years. The pavement condition system provides a valuable tool for prioritizing roadway repairs. The City should establish an overall pavement rating goal as a performance measure for roadway resurfacing and reconstruction.

Also, the City has developed a 10-year Bridge Asset and Program Management Plan. This plan provides another valuable tool to prioritize the transportation needs of the City.

Infrastructure Cost: Current $4 - $5 million/year

10.4.2 Study: Implement Vehicle Crash Reduction Strategies

Crash reduction strategies based on the Federal Highway Administration's *Toolbox of Countermeasures and Their Potential Effectiveness for Pedestrian Crashes* (2008) are proposed for ten (10) locations. This toolbox identifies strategies that have the potential to reduce automobile crashes, including those involving pedestrians.

Improvements include:

- Pavement markings to clarify travel, Turning, and parking lanes
- parking restrictions near intersections
- reduced pedestrian crossing distances to minimize pedestrian exposure to vehicles
- improved crosswalk markings
- Additional crosswalk locations to provide additional protection at crossing locations with high levels of pedestrian activity

Crash reduction strategies are shown in **Table 10-5**.

Table 10-5 Crash Reduction Strategies		
Street	**From-To**	**Strategy**
Davis	Sherman to Chicago	Reduce pedestrian crossing distance at Chicago Avenue
Emerson	Ridge to Elgin	No improvements recommended: Traffic improvements currently underway
Dempster	Ridge to Chicago	Reduce pedestrian crossing distances at intersections
Orrington	Clark/Elgin to Church	Reduce pedestrian crossing distances at Church. Improve crosswalk visibility at Clark/Elgin. Improve/clarify automobile lane markings
Main	Ridge to Chicago	Improve pedestrian crosswalk visibility at Maple, Elmwood, Sherman
Sherman	Davis to Grove	Improve crosswalk visibility at Grove, consider mid-block crossing at confluence of southbound Sherman and northbound Orrington, realign crosswalk at Sherman and Davis
Church	Ridge to Sherman	Improve crosswalk visibility at intersections, revise crosswalk marking pattern near Davis Street Station
Sherman	Church to Davis	Revise pavement markings to clarify 1 parallel parking lane, 2 through lanes, and 1 angled parking lane. Reduce pedestrian crossing distance at Sherman and Church
Sherman	Clark/Elgin to Church	Consider mid-block crossing near alley on Sherman, impose parking restrictions adjacent to southbound left turn lane at Church
Central	Green Bay to Eastwood	Reduce pedestrian crossing distances at Eastwood Avenue, improve crosswalk markings near Central Street Station

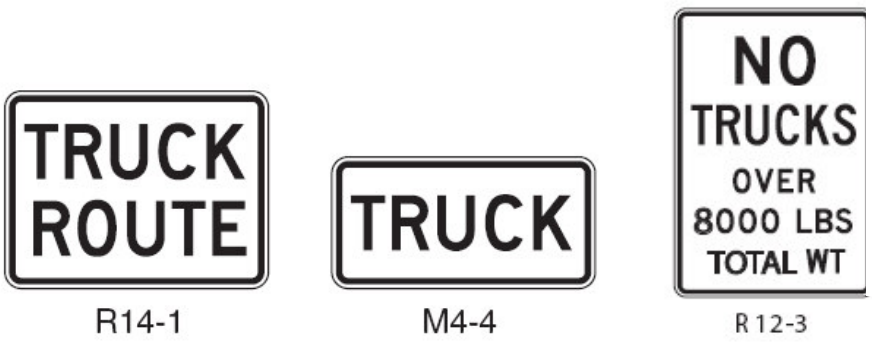
Infrastructure Cost: Implementation costs to be determined.

10.4.3 Infrastructure: Manage Truck Traffic through Improved Signage

The City should install signs to identify designate truck routes (for vehicles up to 72,260 gross vehicle weight[10]). Permits are not required for these roadways but truck operators must be registered with the Illinois Department of Transportation (IDOT) and the Evanston Division of Transportation (EDOT) prior to any movement activity. Signs Sign R14-1 or sign M4-4 indicating the recommended truck route should be placed after each intersection with another truck route or delivery access route. These signs may be enhanced with sign R14-4 (see figure on following page).

Signs indicating the clearance height should be placed at all bridge underpasses. Underpass clearance heights should be placed at least one full intersection in advance of all underpasses and at least one full truck route intersection in advance of all underpasses located on or as part of truck routes.

[10] Illinois Department of Transportation.



Selected Truck Route Regulatory Signs

Source: Manual on Uniform Traffic Control Devices. 2003.

Map 10-5 shows the proposed truck route and signage plan for the City of Evanston. Currently, no changes are proposed to the existing truck route network. However, designated truck route signs and viaduct clearance height signs are recommended to minimize truck traffic on streets not intended for truck traffic and facilitate in truck route enforcement. Changes to truck routes and restrictions should be reviewed on a case-by-case basis.

Infrastructure Cost: $5,000

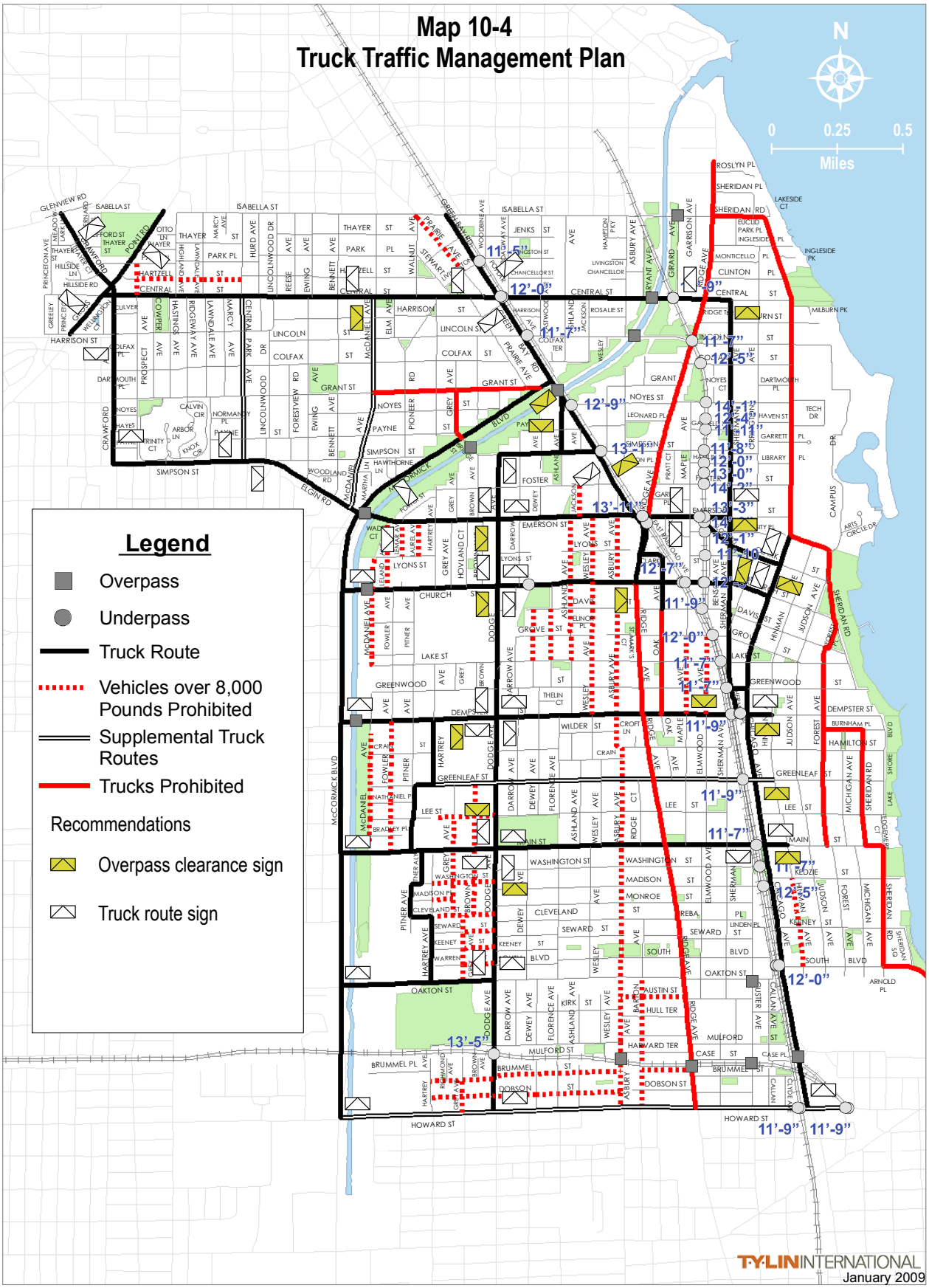
10.4.4 Infrastructure: Increase Roadway Capacity at Intersections with Improved Signal Timing and Additional Lanes

The City of Evanston Synchro Traffic Model Update Report (2008) identified various capacity improvements to streets in the Downtown and along Chicago Avenue. This plan concurs with recommendations set forth in the *Synchro Traffic Model Update Report*.

Signal timing adjustments will optimize the efficiency of existing signals without requiring any additional infrastructure. Congestion mitigation and air quality (CMAQ) funding can be used to pursue the installation of coordinated signals and semi-actuated signals that better facilitate two-way traffic, and respond to changes in traffic patterns at different times throughout the day.

Backups were observed on eastbound Oakton Street stretching as far west as McCormick Avenue. One improvement included the addition of a right-turn lane on eastbound Oakton Street at Dodge Avenue. All of these improvements can be implemented without adversely affecting pedestrian traffic. The City should continue to coordinate the timing signals along the priority corridors of Church, Davis, Central, Ridge, and Chicago.

Program Cost: To be determined.


Map 10-4
Truck Traffic Management Plan
N
0 0.25 0.5
Miles
Legend
Overpass
Underpass
Truck Route
Vehicles over 8,000 Pounds Prohibited
Supplemental Truck Routes
Trucks Prohibited
Recommendations
Overpass clearance sign
Truck route sign
11'-5"
12'-0"
11'-7"
12'-9"
13'-11"
12'-7"
11'-9"
12'-0"
11'-7"
11'-7"
11'-9"
11'-9"
11'-7"
12'-5"
12'-0"
13'-5"
11'-9"
11'-9"
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10.4.5 Program: Maintain Traffic Databases – *Monitor and record traffic data to keep information current and determine if or when roadways are at or near capacity.*

In addition to capacity improvements at the intersections identified in the *Synchro Model Traffic Update Report*, roadway segments identified in **Table 10-3** that have a V/C ratio of 0.80 or higher should be monitored by the City of Evanston. While none of these roadways were determined to be above capacity, it may be necessary in the future to increase capacity to reduce congestion. This may include additional signal timing adjustments, adding turning lanes at intersections, or imposing parking restrictions at intersections.

To maintain current data on roadways within the City of Evanston, it is recommended that two databases be maintained to track and monitor the performance of roadways and intersections within the City of Evanston:

- *Annual Daily Traffic Database*

This database identifies location where a 24-hour traffic count was performed, the average daily traffic (ADT) volume, and the year the count was performed. This database should be used to identify and determine the severity of congested areas, as well as an input to tracking crash data.

- *Peak Hour Intersection Count Database*

This database identifies intersections in the City of Evanston where peak hour traffic information has been collected. Ideally, all signalized intersections should be included in this database. This database should be used to monitor the performance of vehicular and pedestrian traffic at signalized intersections, and also to make any adjustments to signalized intersection timing plans to relieve traffic congestion.

These databases, along with the IMS and the *Bridge Inspection Report*, should be used to monitor infrastructure in Evanston and be used as supporting documentation for capital improvement programming. Traffic count information that is prepared for development proposals should be added to these databases.

Program Cost: $20,000 every 5 years.

10.4.6 Policy: Develop a Complete Streets Approach *that ensures that all users are considered during design, construction, and renovation of transportation facilities.*

To more formally recognize the multimodal nature of the City's transportation network, the City of Evanston should consider a Complete Streets policy. This will facilitate continued maintenance practices that ensure a multimodal approach to the Evanston roadway infrastructure network for pedestrian, bicycle, and transit improvement as well as traditional roadway improvements.

Program Cost: Staff time.

10.4.7 Program: Continue with the Current Traffic Calming Program and Consider Additional Best Practices.

The City of Evanston traffic calming program should be continued on a case-by-case basis throughout the City. In addition, many best practices for the pedestrian facility design also have traffic calming benefits. It is recommended that the City pursue best practices for these and potential new traffic calming strategies in Evanston.

In addition to infrastructure improvements, the traffic calming program should consider additional education and marketing strategies to address the concern for traffic violations within Evanston.

Infrastructure Cost: $50,000/year

10.4.8 Policy: Continue to Pursue Roadway Jurisdictional Transfers from the Illinois Department of Transportation.

Evanston has jurisdiction over nearly all roads within the Evanston City limits. **Map 5-1 Roadway Jurisdiction** shows the remaining portions of Asbury, Church, Crawford, Dempster, Elgin, Emerson, Gross Point, Simpson, and South Boulevard that are under the jurisdiction of IDOT. Efforts to transfer jurisdiction to the City of Evanston have been successful in the recent past with Sheridan Road, McCormick Boulevard, and Ridge Avenue by leveraging state and federal funding.

To improve the design and maintenance of these select streets, the City should continue to pursue jurisdictional transfers.

Program cost: Staff time.

Section 11
Transit

High-quality transit service provide adequate information for routes served, facilitate easy transfers between routes, and provide convenient and accessible transit stations and stops. This section examines existing transit in Evanston and provides guidelines and strategies to promote and increase transit use. In general, Evanston is well-served by transit. Nearly all Evanston residents are within ¼ mile of a bus route or rail line.

11.1 Current Conditions

11.1.1 Existing Transit Service

Bus

CTA operates six routes and Pace operates four routes within or through Evanston. The routes, service hours, bus frequencies, and major destinations served are listed in **Table 11-2**. Transit routes are shown in **Map 11-1 Existing Transit**.

Rail

The CTA Purple Line runs seven days a week through Evanston and connects to the CTA Red Line, with service to downtown Chicago. Seven stations are located within Evanston. The Purple Line Express directly serves downtown Chicago on weekday peak periods (see **Map 11-1**). The Metra Union Pacific North Line serves destinations from downtown Chicago along to north shore to Kenosha, Wisconsin seven days a week, with three stations in Evanston (see **Map 11-1**). The number of trains serving Evanston each weekday is shown in **Table 11-1** below.

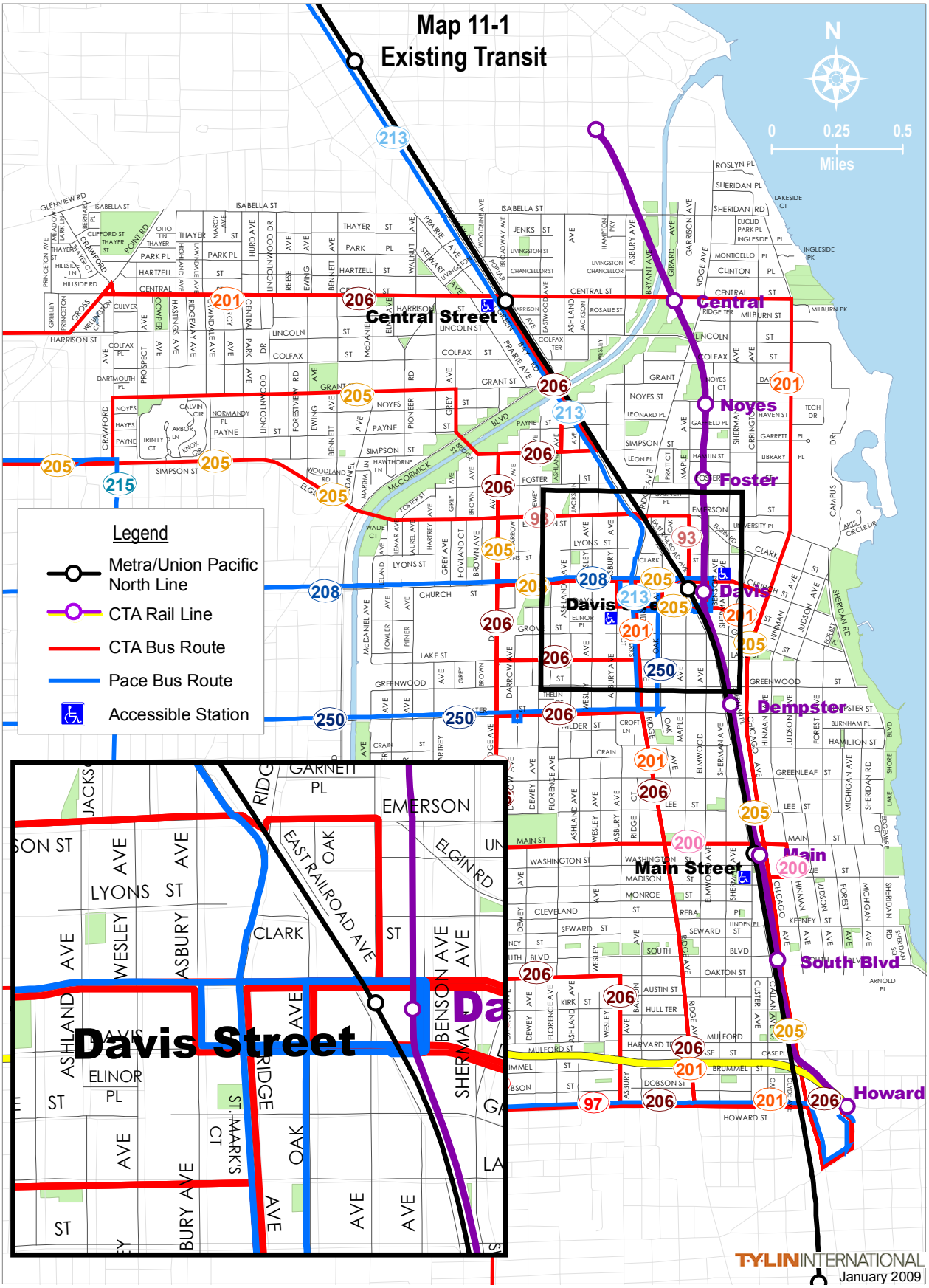
Table 11-1
Trains per Day

	Metra		CTA	
	South	North	South (Express*)	North (Express*)
Central Street	33	28	152 (35)	152 (35)
Davis Street	34	32	152 (35)	152 (35)
Main Street	29	26	152 (35)	152 (35)

*Express trains to Downtown Chicago during weekday peak travel periods.
Source: Metra, 2008. CTA, 2008

Other Transit

Several private transit providers also have established regular, peak-hour, or special event routes to serve their customers. The largest providers of these services are Northwestern University and Evanston Hospital. Northwestern University provides several shuttles for its students, faculty, and staff, including a circulator between the Evanston campus and downtown Evanston, an inter-campus shuttle connecting the Chicago campus to the Evanston campus, and limited schedule services that take passengers to downtown Chicago, shopping destinations, and the football stadium (see **Map 11-2 Northwestern Shuttle**).


Map 11-1
Existing Transit
N
0 0.25 0.5
Miles
Legend
Metra/Union Pacific North Line
CTA Rail Line
CTA Bus Route
Pace Bus Route
Accessible Station
Central Street
Central
Noyes
Foster
Davis
Dempster
Main Street
Main
South Blvd
Howard
Davis Street
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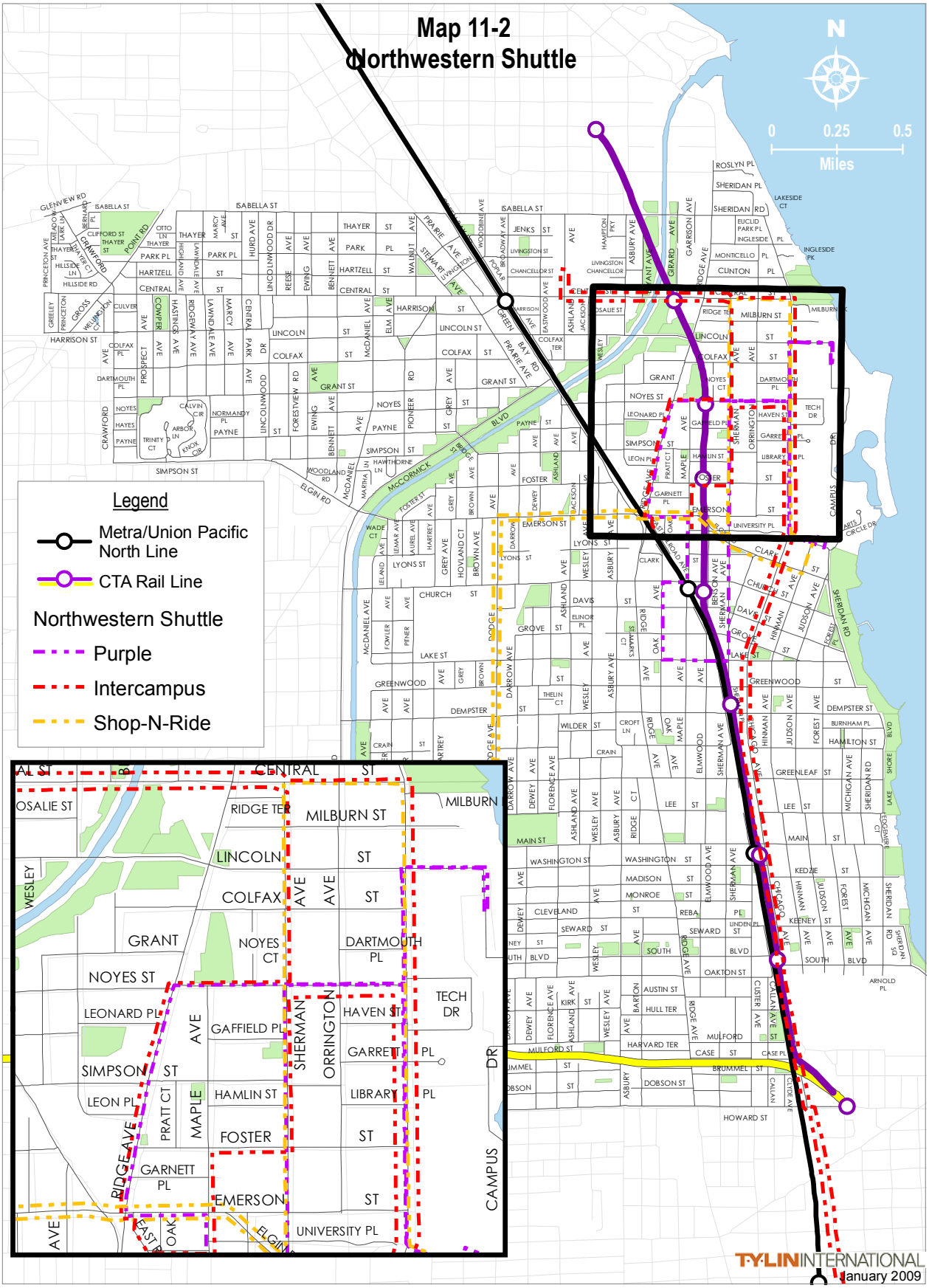
Map 11-2
Northwestern Shuttle
N
0 0.25 0.5
Miles
Legend
Metra/Union Pacific North Line
CTA Rail Line
Northwestern Shuttle
Purple
Intercampus
Shop-N-Ride
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Table 11-2
Bus Service Frequency and Destinations Served

	Weekday		Saturday		Sunday		Regional Destinations Served
Route	**Frequency**	**Hours**	**Frequency**	**Hours**	**Frequency**	**Hours**	
CTA							
93 – California//Dodge	10-20 min.	6:00 AM - 9:00 PM	20 min.	7:00 AM - 8:00 PM	No Service		Swedish Covenant Hospital North Park College Evanston Township High School
97 – Skokie	15-20 min.	5:00 AM - 10:40 PM	20 min.	7:00 AM - 10:30 PM	30 min.	7:00 AM - 10:30 PM	Old Orchard Mall
200 – Main Shuttle	15-30 min.	6:00 AM - 8:00 AM 2:45 PM - 6:15 PM	No Service		No Service		Rand McNally Campus
201 – Central/Ridge	15-20 min.	5:30 AM - 8:30 PM	20 min.	9:00 AM - 8:00 PM	No Service		Old Orchard Mall Northwestern University Evanston Hospital
N201 – Central/Ridge	30 min.	1:30 AM - 5:30 AM	30 min.	1:30 AM - 5:45 AM	30 min.	1:20 AM - 6:45 AM	CTA Granville Station (Red Line)
205 – Chicago/Golf	20 min.	6:30 AM - 8:00 PM	No Service		No Service		Old Orchard Mall Cook County Courthouse
206 – Evanston Circulator	15 min.	6:00 AM - 9:00 AM 2:00 PM - 6:30 PM	No Service		No Service		None
Pace							
208 – Golf Road	30 min.	6:00 AM - 11:00 PM	30 min.	6:30 AM - 10:30 PM	30 min.	7:30 AM - 9:30 PM	Old Orchard Mall Cook County Courthouse Woodfield Mall
213 – Green Bay Road	15-30 min.	6:30 AM - 10:00 PM	30 min.	8:20 AM - 8:00 PM	No Service		New Trier High School Chicago Botanic Gardens Northbrook Court Mall
215 – Crawford-Howard	20-40 min.	5:00 AM - 12:00 AM	40-60 min.	6:00 AM - 12:00 AM	40-60 min.	6:00 AM - 12:00 AM	Rush North Shore Medical Center Old Orchard Mall
250 – Dempster Street	20-30 min.	5:00 AM - 12:00 AM	30 min.	6:00 AM - 12:00 AM	30 min.	7:00 AM - 12:00 AM	Skokie Station O'Hare International Airport

Source: CTA, Pace, 2008.

11.1.2 Existing Ridership

Bus

Map 11-3 Bus Ridership shows bus boardings by stop. Generally, transfer locations, including Davis Street Station, are among the busiest bus stops in Evanston. Total average weekday boardings for Pace and CTA that provide service in Evanston are shown in **Table 11-3**.

The routes carrying the most passengers are routes 97 Skokie, 250 Dempster Street, and 93 California/Dodge, all of which serve rail transit stations, as well as regional destinations outside Evanston.

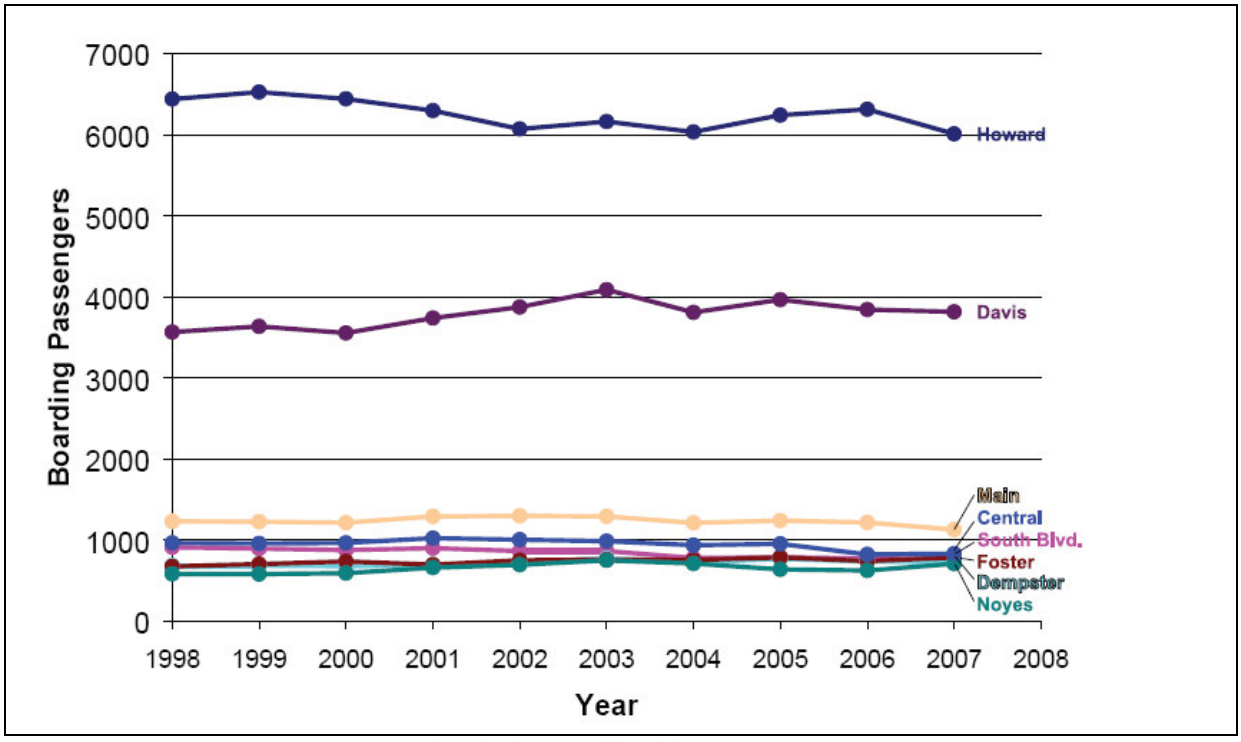
Table 11-3
Average Bus Ridership

Bus Route	Avg. Weekday Boardings
93	3,253
97	3,516
200	108
201	1,530
205	1,013
206	756
208	2,412
213	1,347
215	1,593
250	3,265

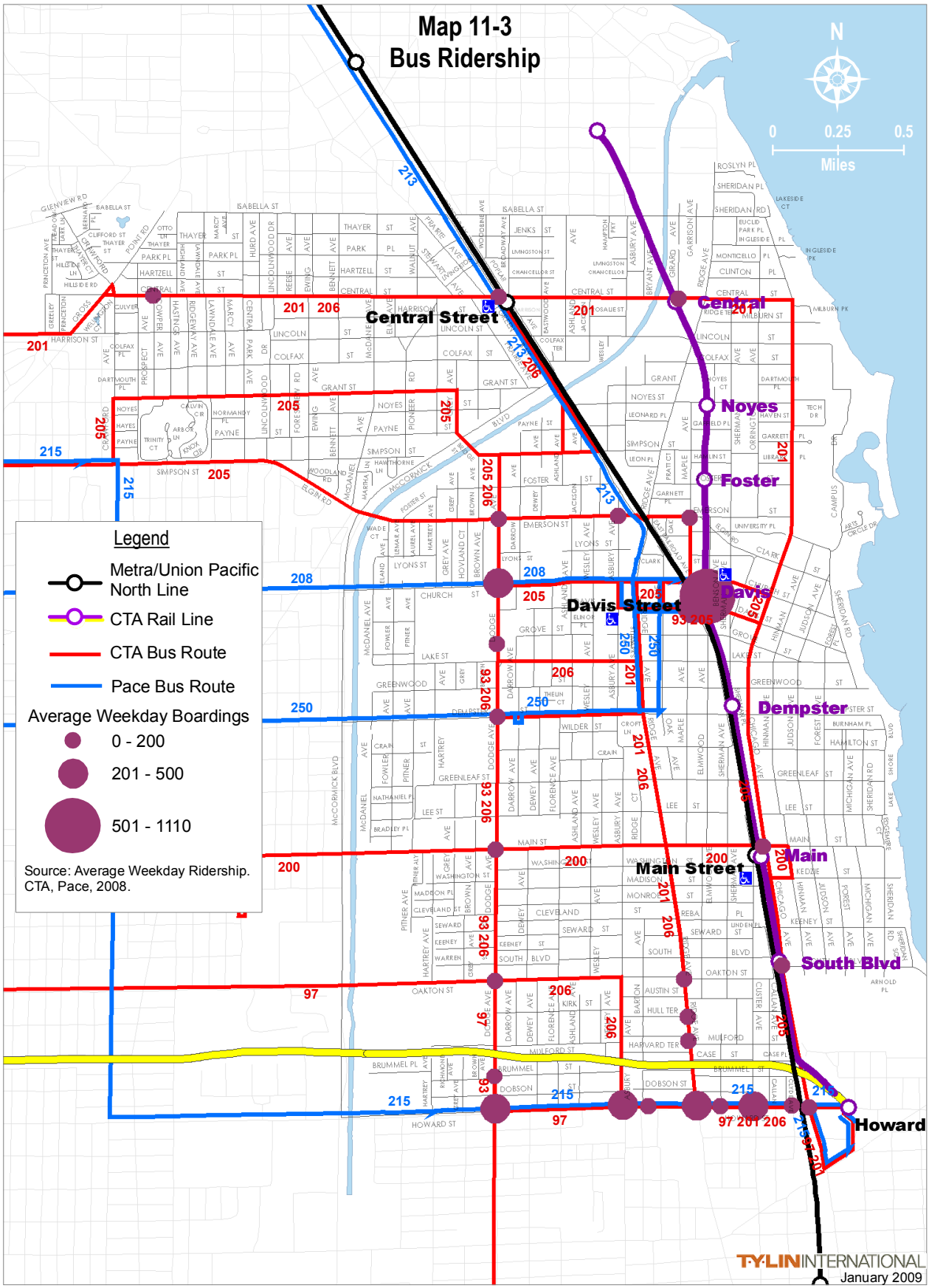
Source: RTAMS. CTA Ridership; May 2008. Pace Ridership; August 2008.

Rail

CTA rail boardings from 1998 to 2007 are shown in the figure below. The City's busiest station, Davis, serves an average of 3,814 boarding passengers per day. Other Evanston stations serve an average of 710 to 830 boarding passengers per day. Howard, located just beyond the southern edge of the City, serves an average of 6,009 passengers per day.



Historical CTA Ridership, 1998-2007.
(Source: RTAMS, 2008.)


Map 11-3
Bus Ridership
N
0 0.25 0.5
Miles
Legend
Metra/Union Pacific North Line
CTA Rail Line
CTA Bus Route
Pace Bus Route
Average Weekday Boardings
0 - 200
201 - 500
501 - 1110
Source: Average Weekday Ridership. CTA, Pace, 2008.
Central Street
Central
Noyes
Foster
Davis Street
Davis
Dempster
Main Street
Main
South Blvd
Howard
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Davis Street is also the busiest Metra Station in Evanston. Davis Street serves 1,854 boarding passengers and 1,937 alighting passengers each day. **Table 11-4** shows existing boarding and alighting data for each of the Evanston Metra Stations.

Table 11-4
Metra Ridership (Boardings and Alightings)

	Boardings	AM Peak Boardings	Alightings	PM Peak Alightings
Central Street	1,234	1,020	1,199	892
Davis Street	1,854	843	1,937	895
Main Street	869	717	873	627
Total	3,957	2,580	4,009	2,414

Source: Metra, 2006.

Evanston also is a major employment center and attracts transit passengers from Chicago and other communities. The Metra Stations in Evanston receive significant passenger traffic from other communities. "Reverse commuters", alighting trains in Evanston during the AM peak, are shown in **Table 11-5.**

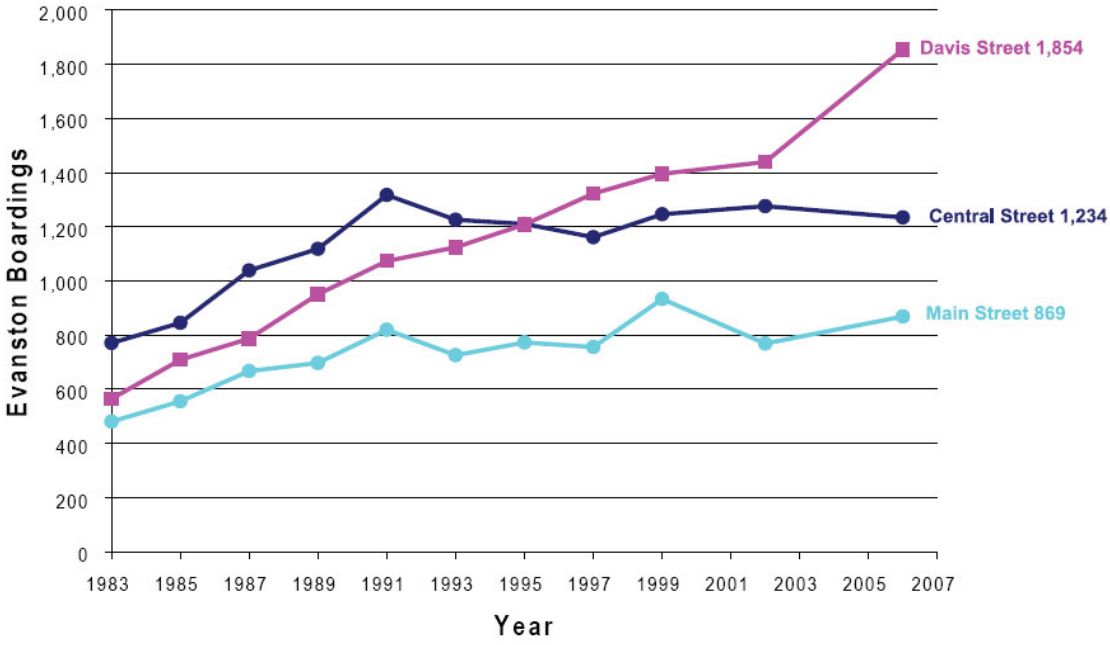
Table 11-5
Metra Reverse Commute Activity
(Passenger Alightings, AM Peak)

	Southbound	Northbound	Total
Central Street	35	54	89
Davis Street	237	444	681
Main Street	14	32	46
Total	286	530	816

Source: Metra, 2006.

Metra ridership has grown steadily since 1983, when Metra was established. The figure below shows Metra ridership trends by Evanston station. Ridership in Evanston has grown by an average of 2.35% annually since 1983; faster than the Union Pacific North Line as a whole, which grew by an annual average of 1.39%[1].

[1] Source: Metra , 2006.



Metra Ridership (Source: RTAMS, 2008)

In 2002, Metra conducted an Origin-Destination Survey to identify how passengers were accessing the stations. In Evanston, Main Street had a high percentage of passengers accessing the station on foot, at 73%. Nineteen percent drive alone to the station and none reported taking a bus. The remainder bicycle, carpool, are dropped off, use CTA or other modes. Davis Street had 52% walking to the station, 16% driving alone, 8% taking the L, and 6% arriving by bus. The remainder were dropped off or carpooled. Central Street had the highest percentage of passengers driving alone, at 28%. Central Street also had the highest percentage of bicyclists accessing the station, at 5%. This was the highest percentage of bicyclists at any station along the UP North line. No other station had more than 2% of passengers arriving by bicycle. At Central Street, 49% walked, 2% took the bus, and the remainder were dropped off or carpooled.

According to Metra's fall 2002 Origin-Destination Survey, the following are the origins of riders by community using the Evanston, Main Street Station: 83% from Evanston, 6% from Skokie, 2% from the City of Chicago, and 9% from other communities. For the Davis Street Station, 72% are from Evanston, 9% are from Skokie, 7% are from the City of Chicago, 1% are from Wilmette, and 11% are from other communities. For the Central Street Station, 76% are from Evanston, 11% are from Wilmette, 6% are from Skokie, and 7% are from other communities.

11.1.3 Pace Paratransit

Public transit should accommodate all residents, regardless of their level of mobility. Those who are unable to use regular transit services should have access to paratransit. Paratransit is a subsidized, shared-ride, curb-to-curb transportation program. This type of service recognizes that some users of public transportation, due a disability, are unable to use fixed route services even when made accessible. To ensure equal access for these riders, public transit operators within the

United States are required by the Americans with Disabilities Act (ADA) to offer a paratransit alternative.

Paratransit is provided by various contractors, all of which are managed by Pace. Since July 2006, Pace is responsible for managing these services within the RTA service area, as well as the Taxi Access Program, which operates within the CTA service area. Paratransit falls into one of five categories:

- ADA paratransit services in the Pace Services Area
- Dial-a-Ride Services in the Pace Service Area
- Pace's Vanpool Services
- ADA paratransit services in the CTA Service Area (Special Services)
- Taxi Access Program[2]

By law, paratransit must operate during the same days and hours as the fixed route services within the service area. Pace paratransit operates within ¾ mile of fixed routes. If an area does not have transit service, it will not have paratransit service. Paratransit customers must schedule a ride one day in advance.

In reviewing paratransit in the region, the RTA has identified service gaps. Of these, the major challenges are:

- Service hours often are limited to weekdays, traditional business hours
- Local connections are difficult to make
- Eligibility requirements are cumbersome; restrict the number of eligible customers
- Same day service is only available through taxi subsidy programs
- Ability to book recurring trips ("subscription service") is limited
- Customer service complaints over late arrivals for scheduled pick-ups
- Fare increases raise affordability concerns for some customers

The RTA has recommended several strategies to improve the paratransit service. Short-term strategies include centralizing information for customers using paratransit; reducing service costs and examining different operating scenarios; establishing volunteer driver/escort programs; expanding taxi subsidy programs; introducing community bus routes, flexible transit services and expanding reverse commute strategies.[3]

11.1.4 Evanston Subsidized Taxi

The City of Evanston sponsors a subsidized taxi service for its residents. This service provides low-cost transportation for residents over 60 years of age, those with mobility, cognitive, or visual disabilities with an annual income of $30,000 or less. Registered users purchase a voucher at a subsidized cost for use with any taxi company licensed by the City. A voucher is valid for

[2] "Coordinated Public Transit-Human Services Transportation Plan: Connecting Communities through Coordination." Regional Transportation Authority, 2007.
[3] Regional Transportation Authority. 2007.

one trip within the City and covers the entire cost of the ride. The taxi company returns the voucher to the City for reimbursement. Residents may purchase a $6 voucher for $2.50.

The program is used more by older residents than by those with disabilities. Of the 1,038 registered users, 876 of them are sixty years of age or older. To prove eligibility for the subsidized taxi service, persons with disabilities must present documentation from Social Security or a physician. Generally, this process is easier than the requirements of the Pace system. For wheelchair users, the subsidized taxi service is limited to the resources of the taxi companies to provide vehicles with wheelchair access.

11.2 Transit Assessment

11.2.1 Bus Stop Signage

An independent bus sign assessment was completed by Peter Nicholson of Evanston's Transportation Future in March 2006. The assessment indicates where bus signs should be installed, replaced or repaired, and where the existing signage is adequate. **Map 11-4 Bus Transit Sign Assessment** displays these findings. Each intersection identified may be lacking one or multiple signs. The assessment recommended:

- Replace 20 bus stop signs
- Remove 1 bus stop sign
- Install 175 bus stop signs

If the City decides to establish fixed bus stops, sign replacement or installation should be coordinated with the relocation of any bus stops.

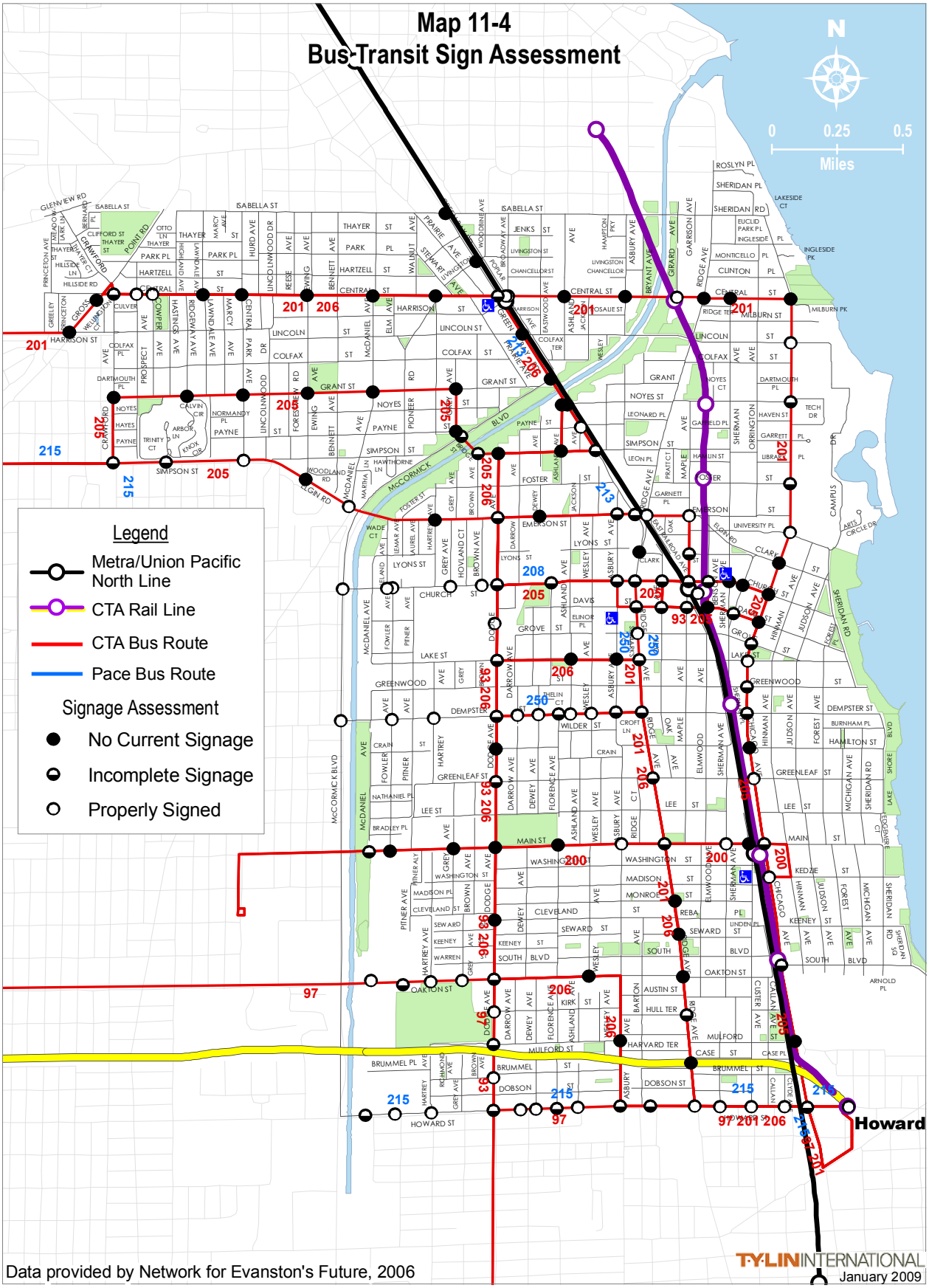
11.2.2 Service Assessment

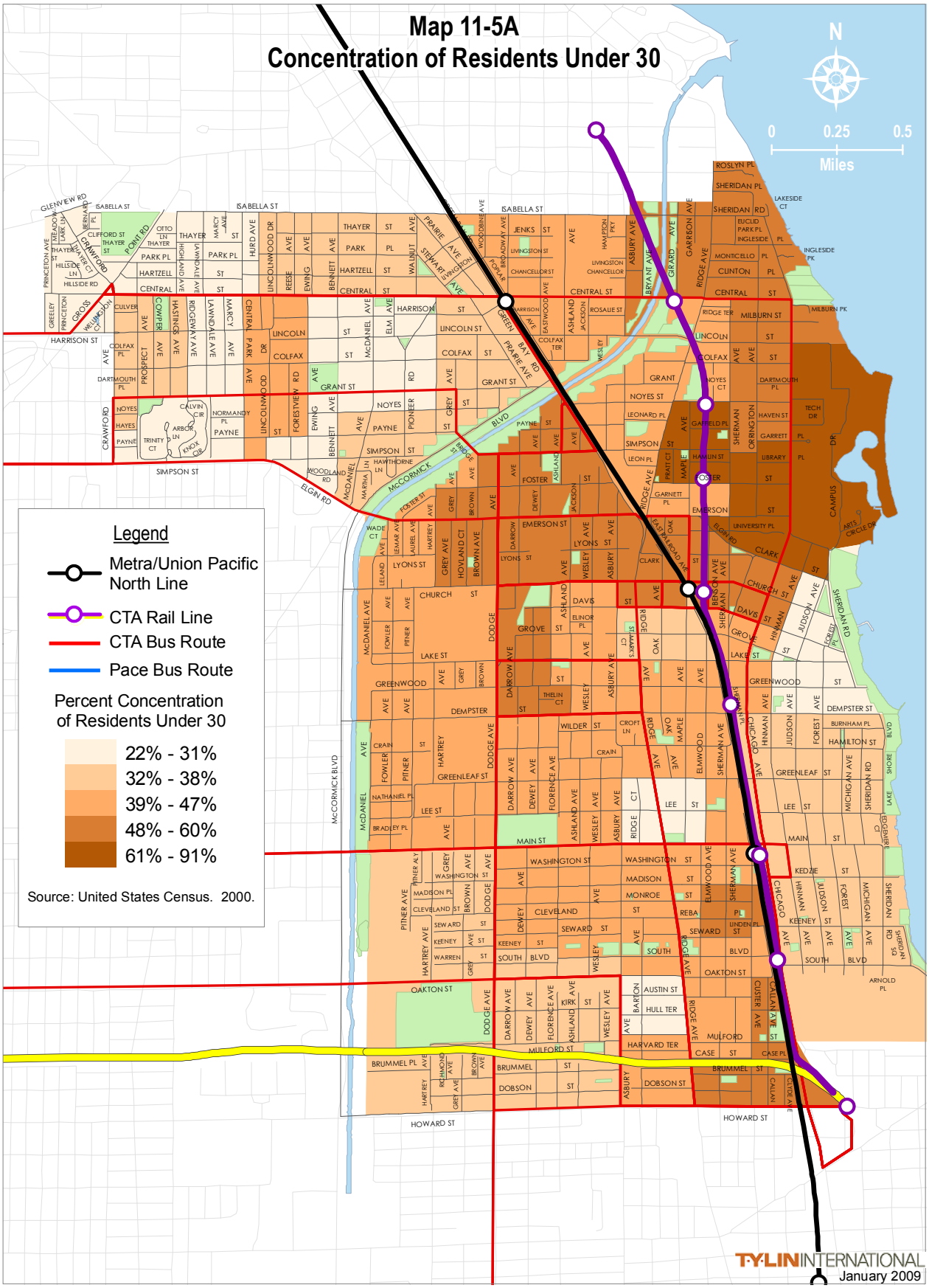
An analysis of various demographic characteristics with respect to transit service was performed. The demographic information is represented in the following maps:

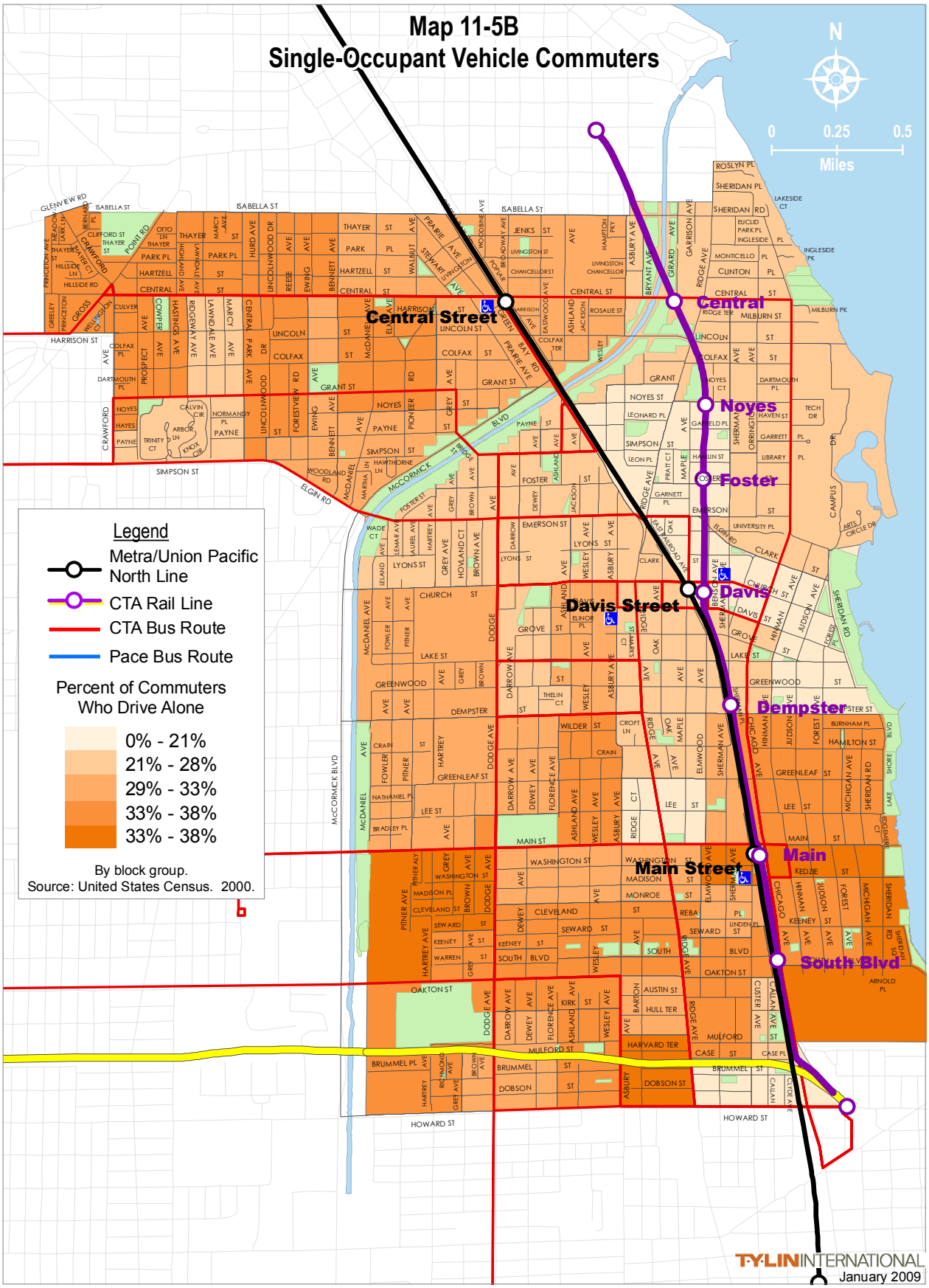
- **Map 11-5A Concentration of Residents Under 30**
- **Map 11-5B Single-Occupant Vehicle Commuters**
- **Map 11-5C Households with No Vehicles Available**
- **Map 11-5D Median Household Income**

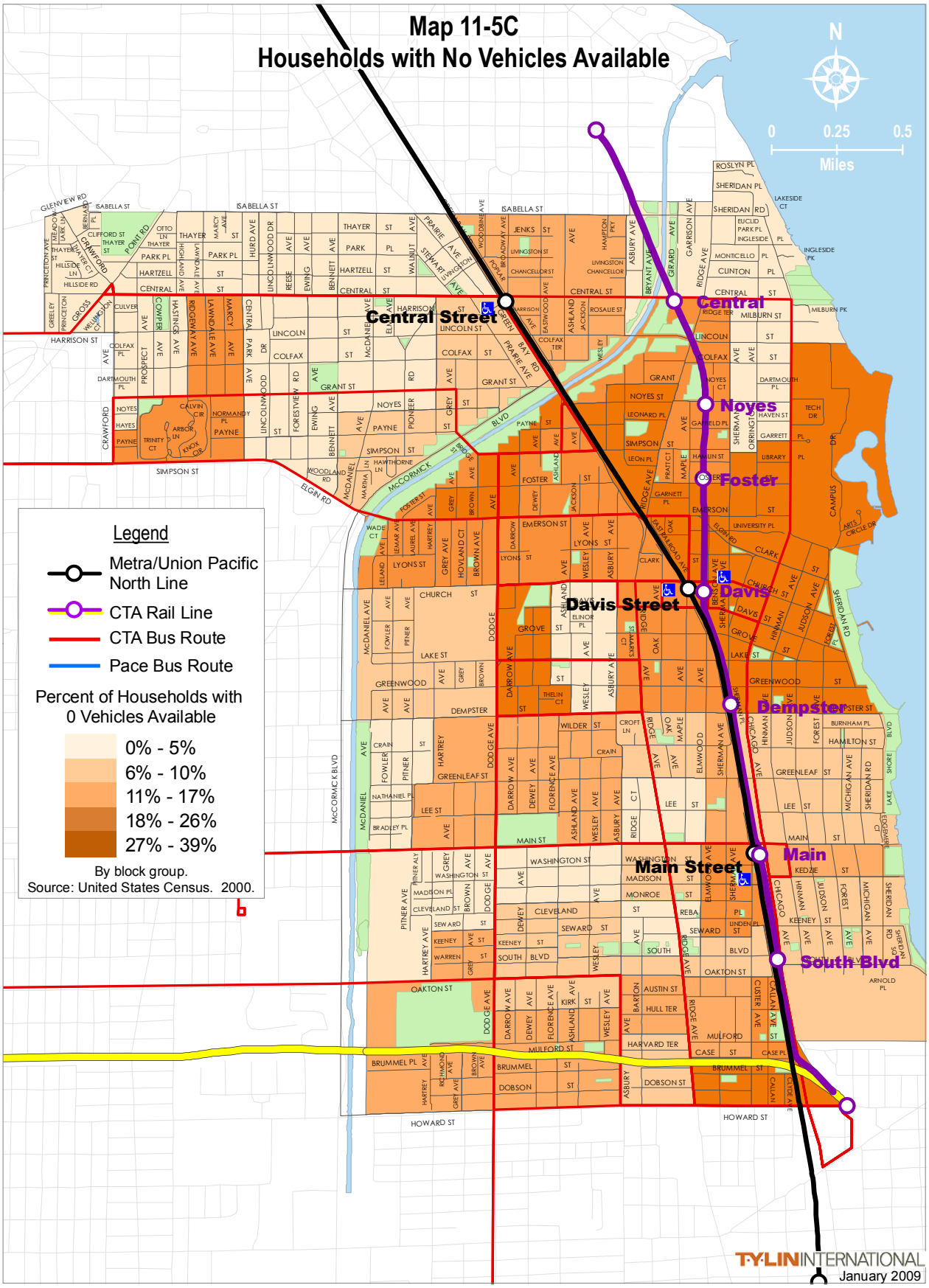
Each of these maps where prepared to illustrate the population that should generate the highest transit ridership. A review of current transit service and population that would use the transit service does not show any areas that are underserved by transit within Evanston.

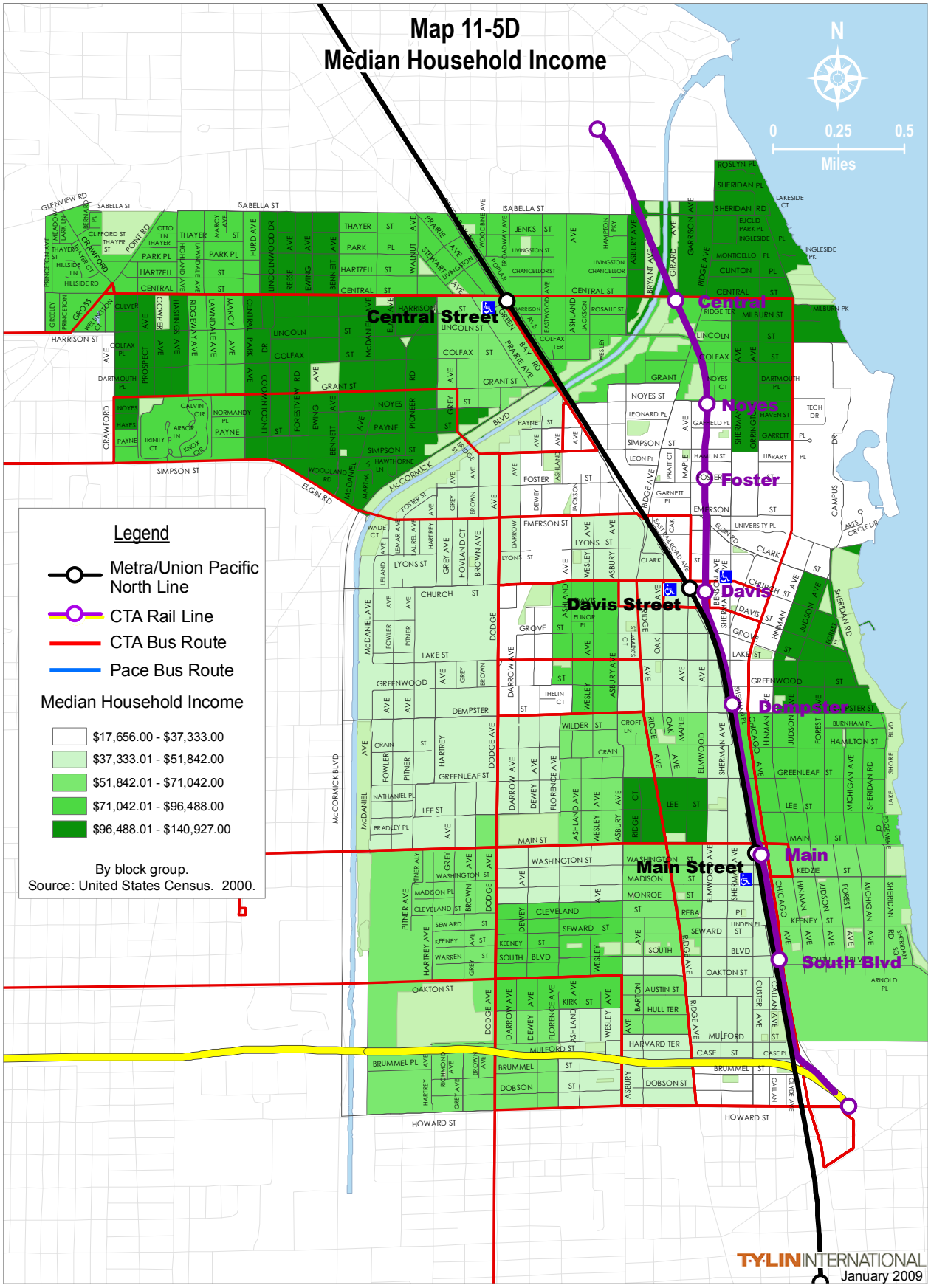
The maps show correlations between transit service and demographic indicators. Those near rail transit appear less likely to own vehicles, which may allow residents to be car-free by choice or to move closer to transit. Residents under 30 years of age also appear to locate near rail transit.


Map 11-4
Bus-Transit Sign Assessment
N
0 0.25 0.5
Miles
Legend
Metra/Union Pacific North Line
CTA Rail Line
CTA Bus Route
Pace Bus Route
Signage Assessment
No Current Signage
Incomplete Signage
Properly Signed
Howard
Data provided by Network for Evanston's Future, 2006
TY·LIN INTERNATIONAL
January 2009


Map 11-5A
Concentration of Residents Under 30
N
0 0.25 0.5
Miles
Legend
Metra/Union Pacific North Line
CTA Rail Line
CTA Bus Route
Pace Bus Route
Percent Concentration of Residents Under 30
22% - 31%
32% - 38%
39% - 47%
48% - 60%
61% - 91%
Source: United States Census. 2000.
T·Y·LIN INTERNATIONAL
January 2009


Map 11-5B
Single-Occupant Vehicle Commuters
N
0 0.25 0.5
Miles
Central Street
Central
Noyes
Foster
Davis Street
Davis
Dempster
Main Street
Main
South Blvd
Legend
Metra/Union Pacific North Line
CTA Rail Line
CTA Bus Route
Pace Bus Route
Percent of Commuters Who Drive Alone
0% - 21%
21% - 28%
29% - 33%
33% - 38%
33% - 38%
By block group.
Source: United States Census. 2000.
T·Y·LIN INTERNATIONAL
January 2009


Map 11-5C
Households with No Vehicles Available
N
0 0.25 0.5
Miles
Central Street
Davis Street
Dempster
Main Street
Central
Noyes
Foster
Davis
Dempster
Main
South Blvd
Legend
Metra/Union Pacific North Line
CTA Rail Line
CTA Bus Route
Pace Bus Route
Percent of Households with 0 Vehicles Available
0% - 5%
6% - 10%
11% - 17%
18% - 26%
27% - 39%
By block group.
Source: United States Census. 2000.
T·Y·LIN INTERNATIONAL
January 2009


Map 11-5D
Median Household Income
N
0 0.25 0.5
Miles
Central Street
Central
Noyes
Foster
Davis Street
Davis
Dempster
Main Street
Main
South Blvd
Legend
Metra/Union Pacific North Line
CTA Rail Line
CTA Bus Route
Pace Bus Route
Median Household Income
$17,656.00 - $37,333.00
$37,333.01 - $51,842.00
$51,842.01 - $71,042.00
$71,042.01 - $96,488.00
$96,488.01 - $140,927.00
By block group.
Source: United States Census. 2000.
T·Y·LIN INTERNATIONAL
January 2009

Household income does not appear to vary greatly in the presence of transit service, as there are high and low income areas throughout Evanston.

The proximity of Northwestern University to the areas with the most transit service may explain some of these trends, as college students typically have fewer vehicles, lower incomes, and often are under 30 years of age. In general, there appears to be no major indicators that suggest a lack of service or that show any measurable difference between residents located near bus or rail transit.

11.2.3 Transit Station Conditions

Stations along the CTA and Metra lines in Evanston were originally constructed up to 100 years ago; however, some of the stations have been renovated. **Table 11-6** lists all CTA and Metra stations in Evanston, their year of construction, and the year they were renovated, when applicable.

Table 11-6
Station House Construction and Renovation

	Year Constructed	Year Renovated
CTA		
South Boulevard	1931	-
Main Street	1910	-
Dempster Street	1910	-
Davis Street	1909	1979, 1994
Foster Street*	NA	-
Noyes Street*	NA	-
Central Street	1931	-
Metra		
Main Street	1909	1988
Davis Street	1909	1986
Central Street	1910	1996

*Temporary station houses were removed in 1964.
Source: www.chicago-l.org, Metra.

Davis Street is the only CTA station that has undergone major renovation since it originally was constructed. Davis Street was observed to be in good condition. Main Street and Dempster Street stations were constructed in 1910. Plans for renovation of these two stations were developed; however, due to lack of funding, these projects currently are on hold. Central Street and South Boulevard stations were constructed in 1931. These stations are likely in slightly better condition than Main Street and Dempster Street. The Foster Street and Noyes Street stations have ticket booths on the platform, but do not have station houses.

All three Metra station houses in Evanston have been renovated within the last 25 years. The Central Street Station was most recently renovated in 1996. Main Street and Davis Street Stations were renovated in 1988 and 1986, respectively. In addition to station house renovation, the Main Street and Davis Street Metra Stations have received other significant improvements in

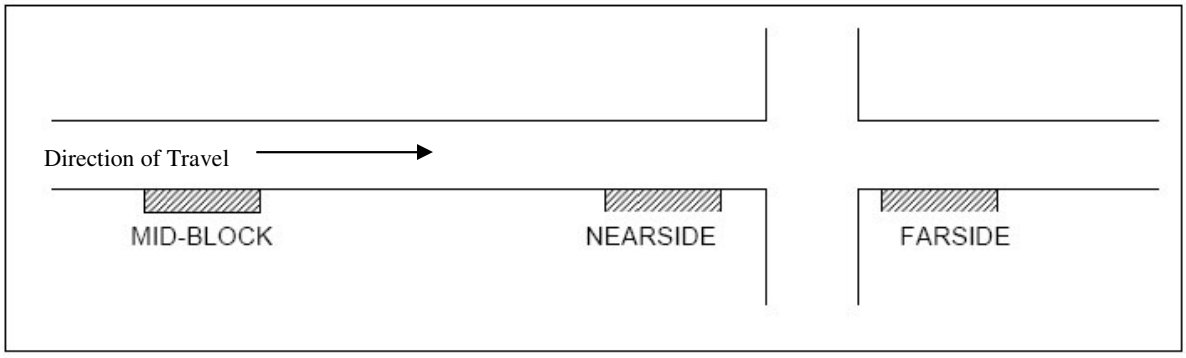
2004 and 2003, respectively, such as accessibility improvements, lighting enhancements, bridge and retaining wall maintenance, and platform upgrades. In addition to improvements made by Metra, the Custer Street Fair Association completed interior and exterior improvements on the Main Street Metra station in 1999. A station assessment for all CTA and Metra Stations in Evanston is shown in **Table 11-7**.

11.3 Bus Stop Guidelines

11.3.1 Pace

Pace currently operates a flag stop policy which states that unless otherwise noted, buses will stop upon signal to the driver at any intersection along the route, where it is safe to do so.

Bus stops may be located at the near side or far side of an intersection, in the direction of travel, or mid-block. In Evanston, a majority of the Pace bus stops are placed on the nearside. Farside stops are preferred by the service provider. Mid-block stops are appropriate at bus turnouts, T-intersections, and places with high passenger volumes.



Bus Stop Locations

Pace installs bus stop signs at no cost to communities or developers to identify a stop. The standard Pace bus stop sign includes the transit operator designation, the route number, and the words, “Bus Stop.” Signs are posted with a minimum vertical clearance of 7 feet. Wall mounted signs or free standing kiosks typically contain additional information, such as a system map or bus frequency. Bus stop signs must adhere to the Americans with Disability Act Accessibility Guidelines for Buildings and Facilities (ADAAG) requirements for accessible signage.

Pace also is exploring ways to improve bus service within the City of Evanston. Pace has proposed a posted stop system to replace the current flag stop policy with stop spacing no less than 1/8 mile. Stop locations will be determined by density and ridership conditions. This would be consistent with both City policy and current practice by the CTA.

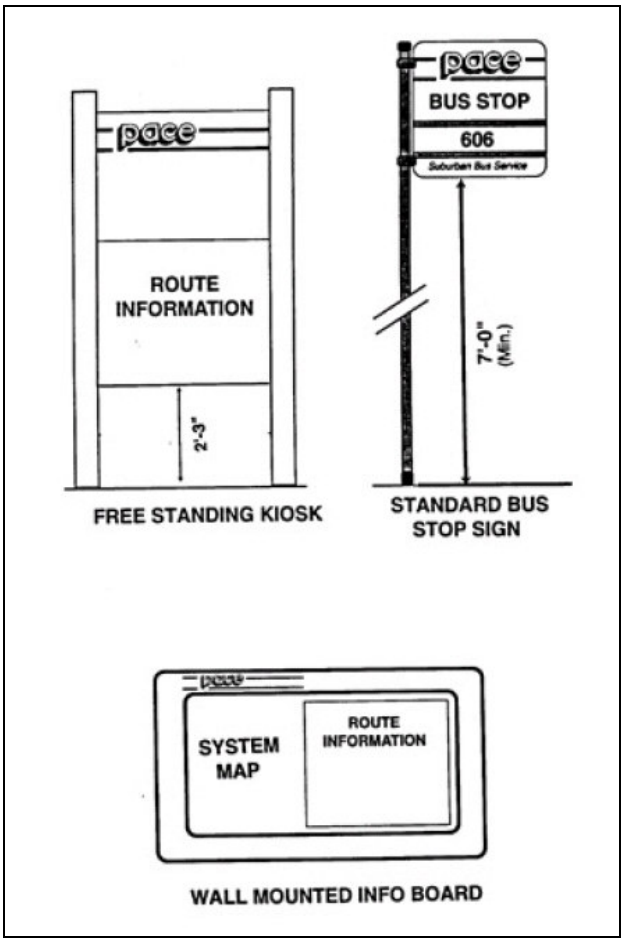
Table 11-7
Transit Station Assessment Summary

	Metra			CTA						
Station	**Central**	**Davis**	**Main**	**Central**	**Noyes**	**Foster**	**Davis**	**Dempster**	**Main**	**South Blvd**
Platform	Fully accessible, Good condition	Fully accessible, Good condition	Fully accessible, Good condition	Not accessible, Good condition	Not accessible, Good condition	Not accessible, Good condition	Fully accessible, Good condition	Not accessible, Fair condition	Not accessible, Fair condition	Not accessible, Good condition
Lighting	Very Good	Very Good	Very good	Standard. Some maintenance needed	Standard. Some maintenance needed	Standard. Some maintenance needed	Standard. Some maintenance needed	Standard. Some maintenance needed	Standard. Some maintenance needed	Standard. Some maintenance needed
Shelter	Fully enclosed depot, 50% coverage for inbound canopy, 20% coverage for outside canopy. No outdoor heating.	Fully enclosed depot, 100% canopy coverage. No outdoor heating.	Fully enclosed depot, no inbound canopy, 10% coverage for outbound canopy. No outdoor heating.	Enclosed depot. 100% canopy coverage, deck in good condition, two windbreaks w/on-demand heat.	100% canopy coverage, deck in poor condition. One windbreak w/on-demand heat.	100% canopy coverage, deck in poor condition. One windbreak w/on-demand heat.	Enclosed depot. 100% canopy coverage, deck in good condition. One windbreak w/on-demand heat.	Enclosed depot. 40% canopy coverage, in poor condition. One 12-foot windbreak w/on-demand heat.	Enclosed depot. 30% canopy coverage, in poor condition. Two windbreaks, one/w on-demand heat.	Enclosed depot. 90% canopy coverage, fair condition. Three windbreaks w/on-demand heat.
Wayfinding Signage	Adequate information, fading signs	Adequate information, fading signs	Adequate information	Direction of travel, access to street	Direction of travel only	Access to street only	Direction of travel, access to street	Direction of travel, access to street	Direction of travel, access to street	Direction of travel, access to street
System Information	Metra information only	Metra information only	Metra information only	CTA map and schedule only	CTA map and schedule only	CTA map and schedule only	CTA map and schedule, Variable message sign on platform. Connecting service information at street level	CTA map and schedule only	CTA map and schedule. NU shuttle information at street level.	CTA map and schedule. Connecting bus, regional transit, and downtown maps at street level.

Table 11-7 (cont'd.)
Transit Station Assessment Summary

	Metra			CTA						
Station	**Central**	**Davis**	**Main**	**Central**	**Noyes**	**Foster**	**Davis**	**Dempster**	**Main**	**South Blvd**
Benches	No bench on inbound platform. Two six-seat benches on outbound platform.	No bench on inbound platform. One 5-seat bench on outbound platform.	No bench on inbound platform. One 5-seat bench on outbound platform.	Two 5-seat benches	One 5-seat bench	Two 5-seat benches	Three 6-seat benches on each platform	One 4-seat bench on SB platform, Two 4-seat benches on NB platform	Two 4-seat benches on SB platform, One 4-seat bench on NB platform	Two 8-seat benches
Retail	None	Coffee Shop	Coffee Shop	None	None	None	Dunkin' Donuts	None	None	None
Newspapers	In station	In station	In station	At street	At street	At street	In station, At street	At street	At street	At street
Trash Receptacles	Yes	Yes	Yes	Yes	Yes	Yes	Yes, and at bus stops at street level	Yes	Yes	Yes
Bike Parking	Approx. 20 spaces	None at station. Other bike parking nearby.	1 small rack, capacity unknown. Informal bike parking observed	Five 2-bike racks, obscured on north side of Central Street	Five 2-bike racks, informal bike parking observed	One 5-bike rack, informal bike parking observed	Several on Benson and at west entrance, well-used but in poor condition	None, informal bike parking observed	Four 2-bike racks, well-used	Approx. 6 spaces
Landscaping	Good	Good on west side	Minimal	None	None	None	Minimal	None	Minimal	Minimal
Sidewalk Access	Good	Good	Good	Fair, Entrance environment uninviting	Fair, Entrance dark, uninviting, set back from street	Fair, entrance dark, uninviting, set back from street	Very good	Fair, Station entrance obscured	Fair	Fair

According to Pace guidelines, nearside stops have signs approximately 10 feet from the corner and 5 feet from the outer curb. Where site limitations exist, signs are set a minimum of 2 feet from the outer curb.[4] Locations of signs at farside bus stops are not included in the existing guidelines.



Pace Bus Information Sign
Source: Pace Development Guidelines, 1999.

Bus stops should incorporate a paved passenger waiting area into the sidewalk design, especially at high-volume transit stops and in new developments. The paved waiting areas should have a minimum 4-inch thick concrete pad ideally 25 feet in length and complete between the curb and sidewalk. Access ramps for individuals with mobility limitations should be provided at all corner curbs. These ramps may be designed with special pavement textures and should comply with the American National Standards Institute, Inc. (ANSI) Section 4.7 (1).[5]

The City of Evanston is responsible for the maintenance of bus stops, which must provide access to buses by persons with disabilities in all weather conditions, which includes snow removal. Maintenance of adjacent sidewalks is the responsibility of the property owner. The City of

[4] Mohammed, Taqhi. Pace Development Guidelines. Chicago, Illinois: Pace, 1999.
[5] Mohammed, Taqhi. Pace Development Guidelines. 1999.

Evanston should notify transit agencies of missing signage or signs that require replacement. "No Parking" signs should be installed by the City at bus stops.

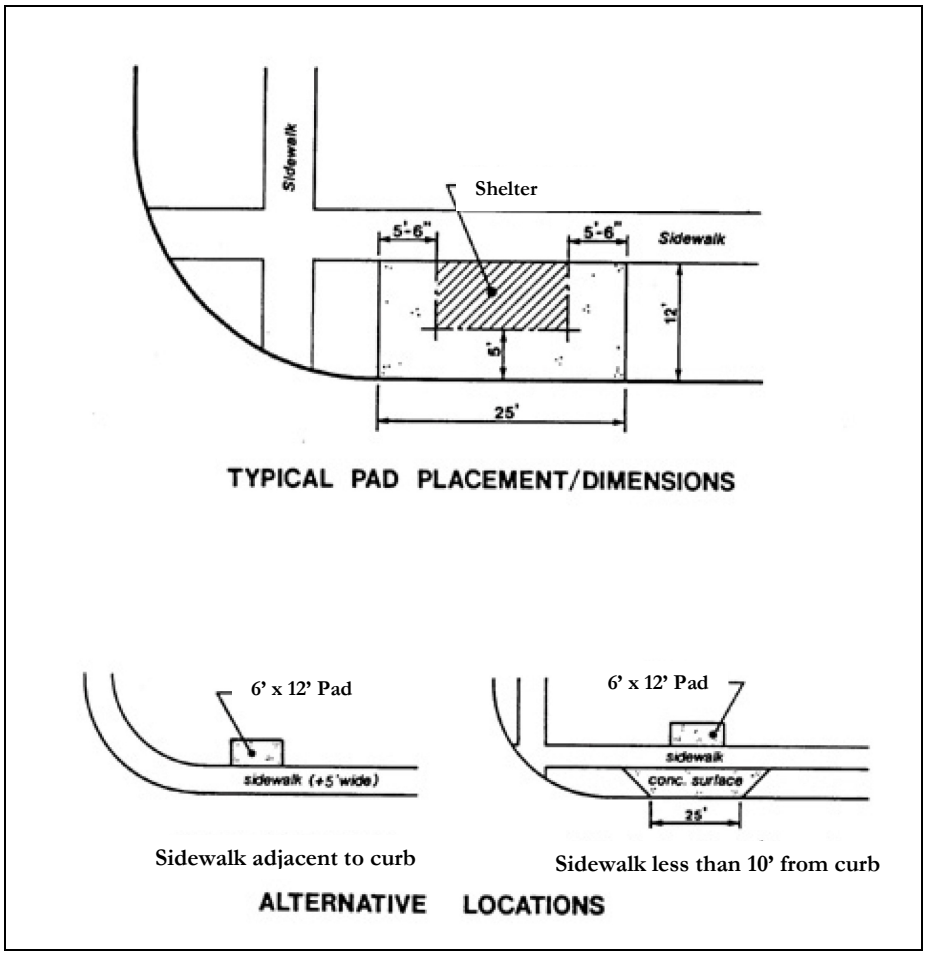
Passenger shelters are recommended by Pace for stops with high ridership. Standard shelters are 13.5 feet by 6.5 feet with a minimum 5-foot setback from the street. These dimensions ensure maneuverability of wheelchairs and adequate space for seating. The location depends on space availability, utility placement, passenger counts, and driver visibility needs. Pace will provide and install standard shelters, including a bench, at no cost, including routine maintenance and on-demand repairs.

All shelters should be designed to accommodate wheelchair access and maneuverability, visibility of approaching traffic for 1000 feet, adequate lighting, seating, access to the bus, route and schedule display, and weather protection.

Enhanced shelters, such as those that are architecturally consistent with particular development designs or with advertisements also can be used. Their placement should be reviewed by Pace to avoid visual obstructions to drivers or interference with utilities. Shelters with advertising are subject additional guidelines. Pace offers free advertising space for municipalities and non-profit associations to promote local events. Municipal governments or private property owners who approve advertisement shelters on their property share in the advertising revenue generated by these shelters.[6] Pace can install non-standard shelters, but municipalities typically maintain them. Pace will cover up to $5,000 towards the cost of a non-standard shelter.

Where shelters are not feasible or where passenger volumes may not warrant the installation of a shelter, a bus stop with a bench may be installed. Benches should not obstruct the pedestrian path and should ensure a clear zone for persons using wheelchairs or other mobility aids. The City should work with the transit agencies to install benches at bus stops, particularly if the bench is not included as part of a shelter.

[6] https://www.pacebus.com/sub/vision2020/shelters.asp



Source: Pace Development Guidelines, 1999.

11.3.2 Chicago Transit Authority

The CTA service coverage standard is to provide a maximum walk distance of ½ mile to the nearest route. Stops are located at approximately 660-foot intervals along typical local service routes and approximately ½ mile intervals along limited service routes, such as peak-hour routes. Additional stops are placed at major trip generators.

CTA provides varying levels of infrastructure at stops based upon the number of passengers boarding at a location, the wait times between buses, the percentage of transfer passengers, and the percentage of seniors and disabled riders. The distribution of amenities throughout the service area also considers the equity of infrastructure placement.

Signs for all CTA routes are posted at bus stops. For single bus route stops, signs display a detail of the route, and for multiple route stops, a brief description of the service is shown. Signs are installed on 8 foot tall posts and support 24 inch or 30 inch CTA bus stop signs.

CTA does not provide shelters. The City of Chicago has an exclusive contract with JC Decaux for shelters at CTA stops within the City. The contract provides for the construction and maintenance of 2,175 shelters city-wide.

Some stops may include bicycle racks, which are supplied by the local municipality. Racks should not obstruct boarding and alighting at bus stops. The City of Evanston should work with the CTA prior to installing bicycle racks at bus stops.

11.3.3 Amenities

Enhancing bus stops to improve the quality of transit in Evanston is an important objective. Bus stop amenity guidelines have been developed for three categories of bus stops. The bus stop categories and associated amenities are described below. The items included in each category are described in greater detail in **Table 11-8**.

- **Bus Stop:** This type of stop includes the basic amenities that should be included at all bus stops. Convenient access should be provided for all stops, regardless of ridership levels and frequency of service. A basic bus stop typically is located in residential areas or within low-density commercial areas.

- **Bus Center:** This type of stop is served by several bus routes, and typically has a higher level of passenger volume than a basic stop. A bus center may also be located near commercial districts, schools, senior citizen housing facilities, or community centers. These types of stops may have large concentrations of young or elderly riders. [7]

- **Bus Hub:** This type of stop is characterized by a major transfer location where several bus routes or other transit services intersect, such as the Davis Street Station, which is considered a Regional Bus Hub. Passenger volumes and transfer activity are high. This type of stop has the greatest potential for transit-oriented development.[8]

Based on these guidelines, the proposed locations for bus centers and bus hubs are shown on **Map 11-6 Bus Stop Classifications**. Proposed Bus Hubs include Metra and CTA stations.

Bus Centers are proposed at twenty-eight locations throughout the City. These locations are primarily at transfer points between bus routes or locations that already have a high bus ridership, such as Evanston Township High School.

To improve predictability and customer service, the remaining bus stop locations within Evanston should be spaced at approximately 1/8-mile intervals, according to existing Pace and CTA guidelines. At a spacing of 1/8-mile, approximately 200 Bus Stops are recommended along existing routes.

[7] "Transit Waiting Environments: An Ideabook for Making Better Bus Stops." Cleveland, 2004. Greater Cleveland Regional Transit Authority, Urban Design Center, and EcoCity Cleveland. Retrieved April 2008.
[8] Transit Authority of River City. "Transit Standards Manual: A Reference Guide." River City, 2006. Retrieved April 2008. <http://www.ridetarc.org/Transit-Standards-Manual-Reference-Guide.pdf>.

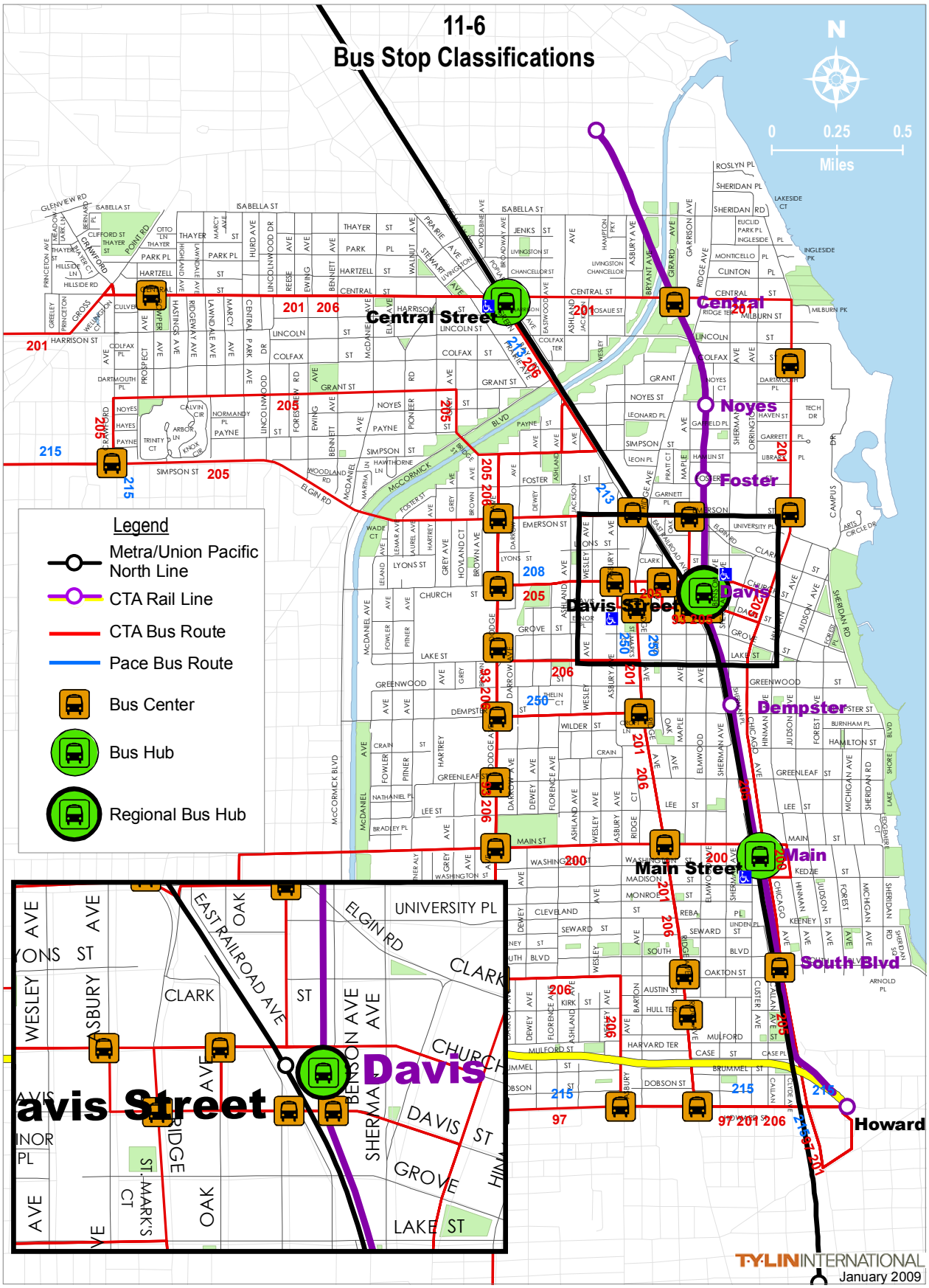

11-6
Bus Stop Classifications
N
0 0.25 0.5
Miles
Legend
Metra/Union Pacific North Line
CTA Rail Line
CTA Bus Route
Pace Bus Route
Bus Center
Bus Hub
Regional Bus Hub
Central Street
Central
Noyes
Foster
Davis Street
Davis
Dempster
Main Street
Main
South Blvd
Howard
Davis
Davis Street
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Table 11-8
Recommended Bus Stop Amenities

	Category			Responsibility	
	Stop	Center	Hub	Agency	City
Waiting Pad Use existing Pace standards of 6' x 12' minimum dimensions. The pad can be located on either side of the sidewalk.	R	R	R		✓
Sidewalk Access Ensure that a sidewalk of adequate width leads to the waiting pad. The sidewalk must comply with ADA requirements.	R	R	R		✓
Adequate lighting The bus stop and waiting passengers should be visible at night to bus drivers, which may require lighting in addition to standard street lights, intended for roadway illumination.	R	R	R		✓
Standard bus stop sign A standard bus stop sign should include the operator, route #, route, and terminus. The sign should be posted with a minimum vertical clearance of 7 feet and the sign post must not interfere with pedestrian traffic or driver visibility. If multiple routes under the same transit provider use the stop, the sign will contain information for all of the routes.	R			✓	
Additional Route/Interagency information At stops where transfers occur, signs should include information about other bus routes and in some cases, other transit modes, such as CTA and Metra train information.		R	R	✓	
Information kiosk Kiosks should contain route and local destination information. Kiosks should be adaptable to accommodate real-time information displays when they become available.			R	✓	
Shelter Shelters may be provided by Pace and CTA or through a contractual agreement with a private provider, such as in the City of Chicago. Shelters may be designed specifically for the City or individual sites, subject to approval by transit agencies.		O	R	✓	✓
Bench		R	R	✓	✓
Newspaper boxes		O	R		✓
Trash receptacle		O	R		✓
Bike racks		O	R		✓
Landscaping		O	R		✓

R – Recommended, O – Optional

11.4 Related Planning Efforts

Regional Transportation Authority

The RTA initiated the *Regional Transit Coordination Plan* (RTCP) in 1999. The Plan is an effort to identify ways to improve and facilitate transfers between transit agencies. It includes evaluations of four interagency transfer elements:

- Physical coordination
- Service coordination
- Fare coordination
- Information coordination

With all three transit agencies providing service in Evanston, interagency coordination at transfer locations becomes an important consideration. Many inter-agency transfer opportunities exist (see **Map 11-7 Interagency Transfer Locations**).

As part of the information coordination effort of RTCP, the Davis Street Stations was selected as of the first locations to test the Interagency Transit Passenger Information Design (ITPID) system. This consists of signs and information displays that incorporate transit route and destination information for all agencies in a more comprehensive and user-focused format. The ITPID signage is expected to be installed in 2009. Installations of this type should be pursued at other locations throughout Evanston where interagency connections exist.

Pace

The Pace *Vision 2020: Blueprint for the Future* was prepared to improve mobility on Pace buses within the suburbs of Northeastern Illinois. To improve service and decrease passenger travel time, the plan recommends new service and infrastructure improvements.

Vision 2020 identifies the Davis Street as a community transportation center. Proposed additional Pace service includes a community-based service hub and a trolley circulator hub.[9] Community-based service is intended to serve the "first and last mile," getting passengers to and from the transit network. These types of service include feeder buses, employee shuttles, historic trolleys, circulators, and flexible routes.

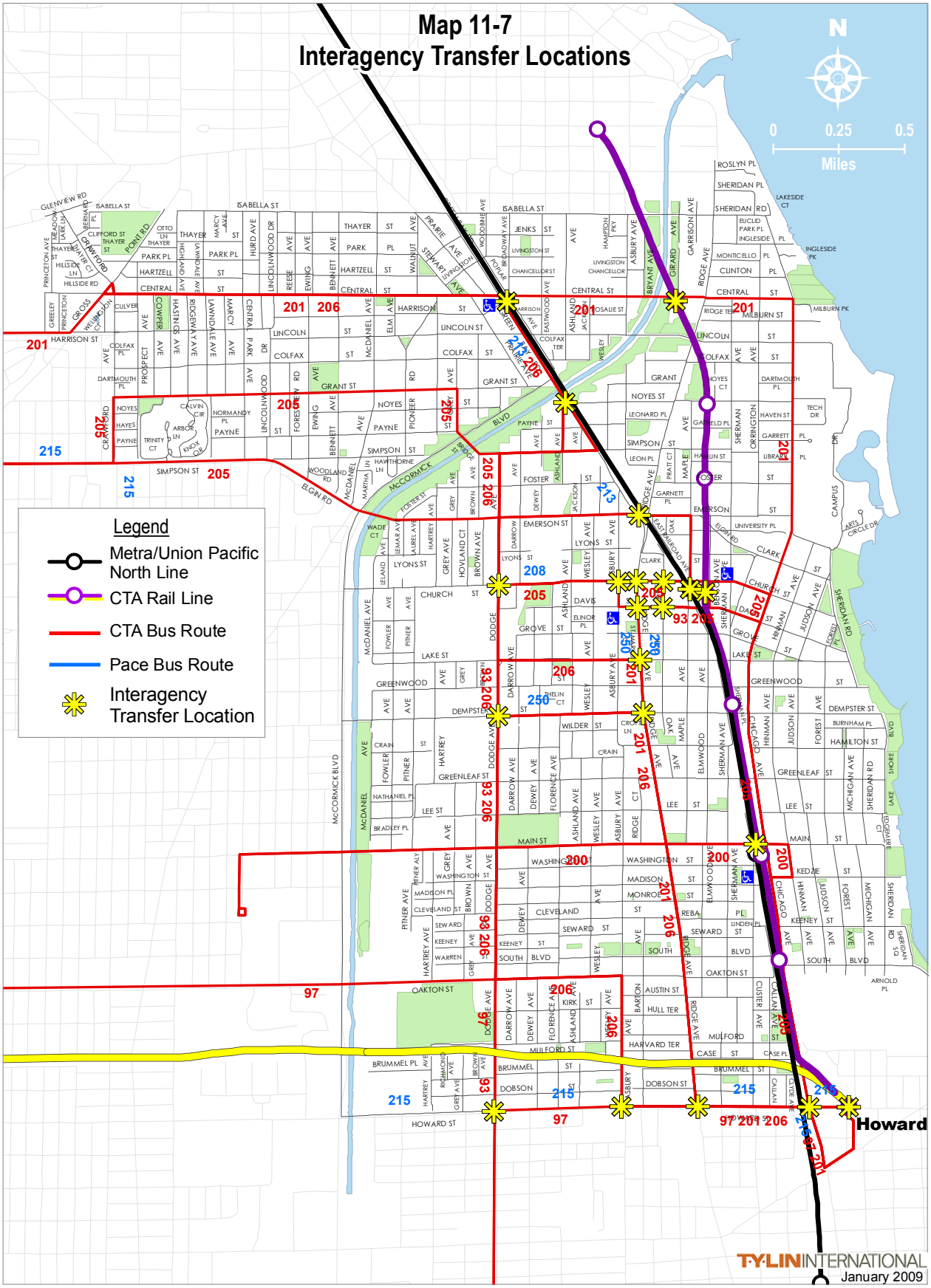
Vision 2020 also identifies two potential routes for arterial rapid transit (ART) along Golf Road, where Pace's existing Route 208 runs, and Dempster Street, where Route 250 currently runs. Both ART routes would terminate at the Davis Street hub. ART provides faster service with limited stops along a key route between suburbs. While details regarding these routes are still being developed, the stops would likely be located at existing stops with high daily boardings. Local service would likely continue to operate along the same routes to serve intermediate destinations.

Pace also is exploring means to improve bus service within the City of Evanston. Pace has proposed a fixed bus stop system to replace the current flag stop policy. This would be consistent with both City policy and the current practice by the CTA.

Skokie Swift Station

One of the primary planning efforts that will affect the transportation system within Evanston is the Skokie Swift North Shore Corridor Initiative. In 2007 the City of Evanston hired a consultant to conduct a market analysis to identify locations for an intermediate station along the CTA Yellow Line between Howard Street and the Skokie terminal. Three potential locations were identified at Dodge Avenue, Asbury Avenue, and Ridge Avenue. Each location has existing bus routes that would provide transfer opportunities. The addition of a rail station along the Skokie Swift may call for service adjustments in the form of route or schedule changes

[9] Pace Suburban Bus. "Vision 2020 Blueprint for the Future." 2002.


Map 11-7
Interagency Transfer Locations
N
0 0.25 0.5
Miles
Legend
Metra/Union Pacific North Line
CTA Rail Line
CTA Bus Route
Pace Bus Route
Interagency Transfer Location
Howard
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Bicycle Parking

The Active Transportation Alliance (formerly the Chicagoland Bicycle Federation) prepared a report on bicycle parking in Evanston in March 2008. The study concluded that most transit stations are in need of additional bike parking. The needs identified at transit stations are as follows:

	Metra			CTA				
Bike Racks:	Central	Davis	Main	Foster	Davis	Dempster	Main	South
	9	8	4	3	8	4	3	3

11.5 Recommendations

11.5.1 Infrastructure: Provide Amenities at Bus Centers and Hubs – *Add amenities at bus such as benches, shelters, and informational signs.*

The City should pursue providing amenities at the 3 Bus Hubs and 23 Bus Centers identified in **Map 11-6, Bus Stop Classifications**. The type of amenities are identified in **Table 11-9, Recommended Bus Stop Amenities**.

Pace provides a revenue-sharing advertisement shelter program that could offset the costs of providing amenities. Alternatively, a public-private partnership could be sought to provide transit shelters in exchange for advertising revenue. J.C. Decaux provides this service in several cities, including the City of Chicago and Clear Channel holds contracts in other cities.

Infrastructure Costs: $5,000 - $22,000 per location

11.5.2 Study: Develop a Plan to Convert the Current Flag Stop Bus Policy to Fixed Bus Stops with Amenities – *Consider converting the current flag stop bus policy to a fixed-stop policy.*

During the planning process, Evanston residents were not in agreement on whether the City should move toward or away from the flag stop policy to bus stops with amenities. However, the community was interested in improved bus stop amenities. The City will need to undertake further discussion in this regard. A more formalized planning process will be needed to obtain concurrence on a plan to move from flag stops to bus stops.

Any fixed stops should be coordinated with CTA and Pace and should be consistent with Pace's planned dedicated stops and ART program.

Study Costs: $50,000

11.5.3 Program: Expand the Subsidized Taxi Program

The Evanston subsidized taxi program provides an essential service to the community. The program is open to both residents over 60 years of age and disabled residents, subject to income requirements. During the public involvement process there was agreement to expand this service.

This could involve making the service available to a larger audience or providing a greater subsidy. More effort will be needed to determine if and how much this subsidy should be expanded.

The City also should also consider expanding service to transport customers who use wheelchairs.

Program Costs: To be determined.

11.5.4 Program: Coordinate Northwestern University Shuttle Service and Stops with CTA – *Partner with Northwestern University to coordinate routes and stops.*

The public involvement process identified concerns about bus service provided by Northwestern University. The City of Evanston should work with Northwestern University to identify ways to improve the use of the service to community. Customer service information including clarification of shuttle availability within Evanston would be useful.

Program Costs: Staff time.

11.5.5 Program: Advocate for Improvements to Regional Transit – *Encourage priority improvements within the regional transit system.*

Many efforts to improve transit within Evanston are the responsibility of regional transit agencies and are not under the control of the City of Evanston. However, the City can advocate for the improvements that would have the biggest impact on the community. During the public involvement process the following improvements were expressed by the community:

- Eco-Pass: This involves a fully-paid or subsidized transit pass for Evanston residents or workers.
- Improve the Appearance of Commuter Railroad Viaducts – Coordinate any aesthetic improvements with Union Pacific.
- More Frequent Service – 67% of respondents to the community survey said they would take transit more if more frequent service were available.
- Rebuild CTA Stations – Some of Evanston's CTA stations are in a state of disrepair. The Main and Dempster stations are slated for renovation, however, those plans have been put on hold due to lack of funding.
- Install Elevators at Stations
- Promote the Interagency Transit Passenger Information Display Signage that is currently in development by the Regional Transit Authority. This signage will promote and improve the transfer between the three transit service agencies – Pace, Metra and CTA. There are 21 locations in Evanston (see **Map 11-7 Interagency Transfer Locations**).
- Evaluate excessive bus capacity along Central Street – it appears that many bused go by with little or no passengers. A means of approving utilization should be reviewed.
- Improve Passenger Information at Train Stations – Expand upon the pilot sign system at Davis Street Stations, installing signs at all CTA and Metra stations.

- Improve Station Amenities – In particular, benches on Metra platforms and improved lighting at CTA station approaches and entrances and on CTA platforms.
- New CTA Yellow Line Station in South Evanston – Three sites have been selected for a potential new station.
- Coordinate Bus Service with Future Yellow Line Station – Consider a bus route connecting the future Yellow Line Station with the Village of Wilmette.
- Funding for Improvements – As some of these efforts would not be under the control of the transit agencies without a capital bill, advocating for funding of these improvements is necessary.

Program Costs: To be determined.

11.5.6 Program: Consider a Local Circulator Bus Service – *To serve the downtown area, transit stations, and the lakefront.*

There was also public discussion about Evanston providing a local circulator bus service that would take patrons from residential areas to the transit stations and commercial areas. This concept did not receive popular support during the community survey, if funded by local sources. Still, this service may be something that Evanston considers in the future. The City should conduct a formal study to determine if such a service would be feasible.

Study Costs: $40,000

11.5.7 Study: Evaluate Transit Routes Along Central Street – *Investigate potential service redundancies along Central Street.*

Throughout the planning process, the public expressed concern over too many empty buses traveling along Central Street. Residents felt that the buses create too much noise and are under-utilized and therefore, the services could be combined or reduced to eliminate some of the buses using the street. An in-depth study of the utilization of all bus and shuttle services should be conducted to determine what types of service efficiency improvements could be made.

Study Costs: To be determined.

11.5.8 Study: Conduct an Alternatives Analysis of Sites for an Additional Yellow Line CTA Station – *Three potential sites have been identified.*

During a previous study conducted by Cambridge Systematics, three sites in Evanston were identified along the CTA Yellow Line for a potential station. These sites should be studied in greater depth and compared to evaluate the feasibility of a station at each site.

Study Costs: $275,000

Section 12
Sustainability

The City of Evanston is faced with the challenge of promoting development and spurring economic growth while at the same time preserving the environment. Growth and high levels of consumption negatively impact the natural environment. In the face of these challenges, the City of Evanston has taken a proactive approach to creating sustainable initiatives for the overall transportation network to ensure a high quality of life for future generations.

Sustainable transportation systems, when designed properly, help the community as a whole to think, plan, and act in a manner to address the root causes rather than the symptoms of environmental problems associated with air pollution, energy conservation, transportation infrastructure, and vehicular use.

This section will provide an overview of current initiatives within the City of Evanston to address sustainability with regard to the transportation system, as well as provide recommendations for improving existing facilities to address environmental concerns.

12.1 Current Conditions

Greenhouse Gas Emissions

Specific actions have been taken by Evanston in order to reduce air emissions and specifically greenhouse gases. In October 2006, the City unanimously voted to sign the United States Mayor's Climate Protection Agreement. The agreement pledges to reduce greenhouse gas (GHG) emissions by 7% from the 1990 levels by 2012 through state and federal government policies and programs as per the Kyoto Protocol. [1]

In the fall of 2007, Evanston completed a GHG emission inventory, which indicated that Evanston needs to reduce emissions by an estimated 13% in the next four years to meet the goal established by the Climate Protection Agreement.

The City has formed the Office of Sustainability and has developed a Climate Action Plan. Two primary goals of the City are as follows:

- Improve air quality within the region.
- Create public policy that actively encourages alternatives to one person/one car trips and promotes/facilitates capital improvements (public and private) toward that end.

As a continued effort in reaching the goals of the City, Evanston, the Network for Evanston's Future and hundreds of Evanston residents have developed the *Evanston Climate Action Plan* (ECAP). The ECAP outlines a wide range of goals intended to reduce the City's GHG emissions.

[1] "U.S. Conference of Mayors Climate Protection Agreement." Washington, D.C., 2007. Retrieved May 2008. <http://usmayors.org/climateprotection/agreement.htm>.

The specific goals for transportation and land use include the following:

- Support and encourage high-density, mixed use, green/high performing, transit-oriented development
- Encourage Evanston businesses to adopt commuting and telecommuting programs
- Reduce car ownership
- Reduce vehicle emissions
- Investigate the use of an Eco-Pass for boarding Pace or Chicago Transit Authority trains or buses
- Expand transit as a viable commuting option
- Increase affordable housing options as a means to reducing vehicle travel (Note: this is intended to encourage people to live closer to their place of employment and thus reduce travel time)
- Collect and track data on Evanston travel trends
- Reduce City fleet vehicle emissions

The primary contributor (more than 95%) to greenhouse gas emissions from transportation sources is carbon dioxide (CO_2). An average vehicle creates approximately one pound of carbon dioxide emissions per mile of travel. An automobile traveling twenty miles will emit approximately 20 pounds of CO_2.[2]

In order to address the goal of reducing air emissions, the Evanston City Council adopted an anti-idling ordinance in June 2006. The ordinance prohibits standing vehicles that are over 8,000 lbs. in gross weight from idling their engines for more than five minutes in any sixty minute period.

The City also has sought to promote the use of alternative methods of transportation in order to improve air quality. Over the course of the year, a single person could reduce their CO_2 emissions by more than 4,800 pounds by taking transit alone.[3] Statistics from the City of Evanston suggest that for every 1,000 commuters who bike or use public transit instead of driving, air pollution may be reduced by 25 tons per year.[4]

The City of Evanston has provided residents and visitors to the City with numerous resources to reduce air emissions from personal vehicles on an individual level. The City suggests that individuals take the following actions:

- Bike, walk or jog to work
- Rideshare with a co-worker, family member or friend
- Take public transportation

[2] Davis, Todd, and Monica Hale. "Public Transportation's Contribution to U.S. Greenhouse Gas Reductions." American Public Transportation Association, Greenhouse Gas Reduction and Energy Conservation: Public Transportation's Strategic Role. Washington, D.C., 2007.
[3] Davis, Todd, and Monica Hale, 2007.
[4] "Air." City of Evanston, 2007. Retrieved May 2008 <http://www.cityofevanston.org/global/green/air.shtml>.

- Ask employers to establish van pools; to encourage telecommuting; to have office rideshare programs; to reward the use of public transit; and to install showers and secure storage for bikers and joggers[5]

Transportation Infrastructure

The City of Evanston uses the maximum amount of recycled asphalt pavement allowed by the Illinois Department of Transportation (IDOT), which includes up to 15% on finished paving course and 25% on leveling binder in all street resurfacing projects. Recycled products eliminate unnecessary waste and reduce transportation costs incurred by the provision of new materials. The use of these products, therefore, reduces overall trips of production and transport vehicles, as well as cost due to rises in overall fuel prices.

The Evanston Division of Transportation also has been working to provide more energy efficient signals at intersections. By the end of 2007, almost half of the 100 signalized intersections in Evanston were operating with light emitting diode (LED) lamps instead of incandescent lamps. LED lamps use 80 percent less energy than an incandescent lamp and last up to 10 times longer.[6]

The City has also invested in upgrading street lights. To date, 4100 Tallmadge lights have been changed to more efficient induction lighting. Davit arm lights, numbering 1500, are being considered for an upgrade from mercury vapor. The new lights are yet to be determined.

Vehicle Fleets

The City of Evanston also has begun to evaluate its own vehicle fleet. Diesel vehicles on average are capable of emitting over 8 tons of pollution per year. For this reason, the City of Evanston initiated the usage of B20 bio diesel in its diesel fleet. B20 has fewer harmful emissions than regular diesel. Additionally, the City has retro-fitted many of its diesel engines to reduce soot, hydrocarbon, and carbon monoxide emissions.[7]

Vehicle Miles Traveled

The Chicago Metropolitan Agency for Planning (CMAP) calculates vehicle miles traveled (VMT) as part of the regional transportation planning process. VMT, as a metric of traffic volume to and from a particular area, is used as a primary input into air quality analyses.

VMT in Evanston has been calculated for the baseline year (2007) and projected for the year 2030. In order to calculate current year VMT and the 2030 projection, the following assumptions were made within the CMAP model:

- Local residential streets and alleys are not included in the traffic model network.
- The share of trips occurring within Evanston (intra-city) remains constant.
- The share of trips taken on transit, by bicycle, or on foot, remains constant.
- Evanston's roadway network remains fixed. No new roads will be constructed, and no roadway widening will occur.

[5] "Air." City of Evanston, 2007. Retrieved May 2008. <http://www.cityofevanston.org/global/green/air.shtml>.
[6] City of Evanston, 2007.
[7] "Air." City of Evanston, 2007. Retrieved May 2008. <http://www.cityofevanston.org/global/green/air.shtml>.

Table 12-1 Evanston VMT Forecast					
	2007	**2030**	**Increase**	**% Increase**	**% Annual Increase**
Population	74,239	80,224	5,985	7.5%	0.34%
Households	45,940	47,501	1,561	3.29%	0.15%
Employment	51,378	51,721	343	0.66%	0.03%
Vehicle Miles Traveled (VMT)	827,813	831,344	3,531	0.42%	0.02%
Source: Chicago Metropolitan Agency for Planning. 2006.					

CMAP projects a relatively modest increase of 0.42% in VMT through 2030 (0.02% annual growth). For established urban areas like Evanston with fixed roadway networks, roadway traffic has neared saturation as VMT growth has all but leveled off. The promotion of alternative forms of transportation could lower the VMT and, thus, reduce emissions.

Helpful Emission Saving Statistics

Below are examples of transportation actions that can reduce greenhouse gas emissions.

Transportation Actions that can Save Greenhouse Gas Emissions	
CO2 Savings (pounds)	Action
1	Every mile of walking or biking.
22	Each gallon of gasoline not used.
1,590	Leaving a car at home two days a week (based on an average passenger car that emits 11,400 pounds of CO2 each year).
1,606	Walking the minimum suggested for good health - 60 minutes per day or about 3 miles for a year, instead of driving.
1,800	Reduce annual driving from 12,000 to 10,000 miles (automobile that gets 25 miles per gallon).
Information Sources: http://www.parade.com/celebrate/help-earth.html http://www.ecomall.com/greenshopping/20things.htm http://www.earthday.net/resources/2006materials/Top10.aspx http://walking.about.com/od/pedestrians/tp/walkforearth.htm	

12.2 Recommendations

The planning efforts for the *Evanston Climate Action Plan* overlapped the Transportation Plan. The two efforts were coordinated with several people participating in both processes, in order to ensure that the plans are complementary. The recommendations in this section build upon the transportation related strategies included in the *Evanston Climate Action Plan.*

12.2.1 Program: Expand Green Fleets – *Continue to reduce fuel use and air emissions related to motor fuel use by City fleet.*

The City of Evanston should increase their participation in the Illinois Environmental Protection Agency (IEPA) Green Fleets Program, which is a state-run, voluntary program where businesses, government units, and organizations gain recognition and additional marketing opportunities for having clean, domestic, and renewable fuel vehicles within their fleet. Illinois Green Fleets are those that acquire vehicles using natural gas, propane, 85% ethanol (E-85), electricity, bio-diesel, and other clean, American fuels. This program focuses on encouraging the use of alternative fuels and has no regulatory components. The City of Evanston currently has 149 vehicles registered for the bio-diesel component and 2 vehicles registered for natural gas. The City hosts a natural gas site for its own vehicles, Northwestern University, and the Village of Skokie.[8] To promote this program, vehicles that use alternative fuels should be identified with a special sticker or tag visible to the public. In addition to vehicles that use cleaner types of fuel, the City should consider using vehicles that require less fuel and sharing vehicles among departments to allow for a reduction of the overall fleet.

The following actions to reduce emissions within the City fleet come from the *Climate Action Plan:*

- Continue to replace higher emitting vehicles with vehicles that meet or exceed the most current Environmental Protection Agency (EPA) emission standards.
- Ensure that the vehicle purchased "fits" the size of the job that is intended.
- Where feasible, pool City vehicles as opposed to assigning vehicles to various Departments and Divisions to improve efficiency and reduce the size of the fleet.
- Investigate the feasibility of using car-share vehicles to reduce the size of the City's fleet.
- Offer bicycling and walking as an option, where feasible, within Police and Parking Enforcement operations to reduce fleet size.
- Consider revising the citywide Anti-Idling Ordinance to include City vehicles.
- Continue to retrofit all viable City vehicles with emission reduction technology.
- Continue to provide staff with resources and information to increase awareness around the environmental effects and costs of idling.
- Achieve Platinum level membership in Clean Air Counts.
- Investigate the feasibility of implementing planned routes that minimize the number of left-hand turns as a method to reduce idling for City service vehicles.

[8] "Illinois Green Fleets." Springfield, IL, 2008. Illinois Environmental Protection Agency. Retrieved May 2008. <http://www.illinoisgreenfleets.org/index.html>.

It is important to note that while there may be upfront costs with expanding the green fleet program, it could result in long-term savings for the City. Program costs and savings should be documented as part of the overall effort.

Program Cost: $25,000/vehicle

12.2.2 Program: Accommodate and Promote Car Sharing – *Support car sharing programs by designating spaces for cars and encouraging membership by residents, businesses, and City agencies.*

Other opportunities to manage the vehicle fleet to increase sustainability are available, including car sharing programs, such as I-Go Car Sharing and Zipcar. These programs allow members access to a fleet of vehicles for rent on an hourly basis. Members can include individuals, businesses, and government agencies. Both programs currently serve Evanston with seven cars in the I-Go fleet and five cars in the Zipcar fleet within the City.

The I-Go Car Sharing organization has indicated the following statistics found after four years in operation:

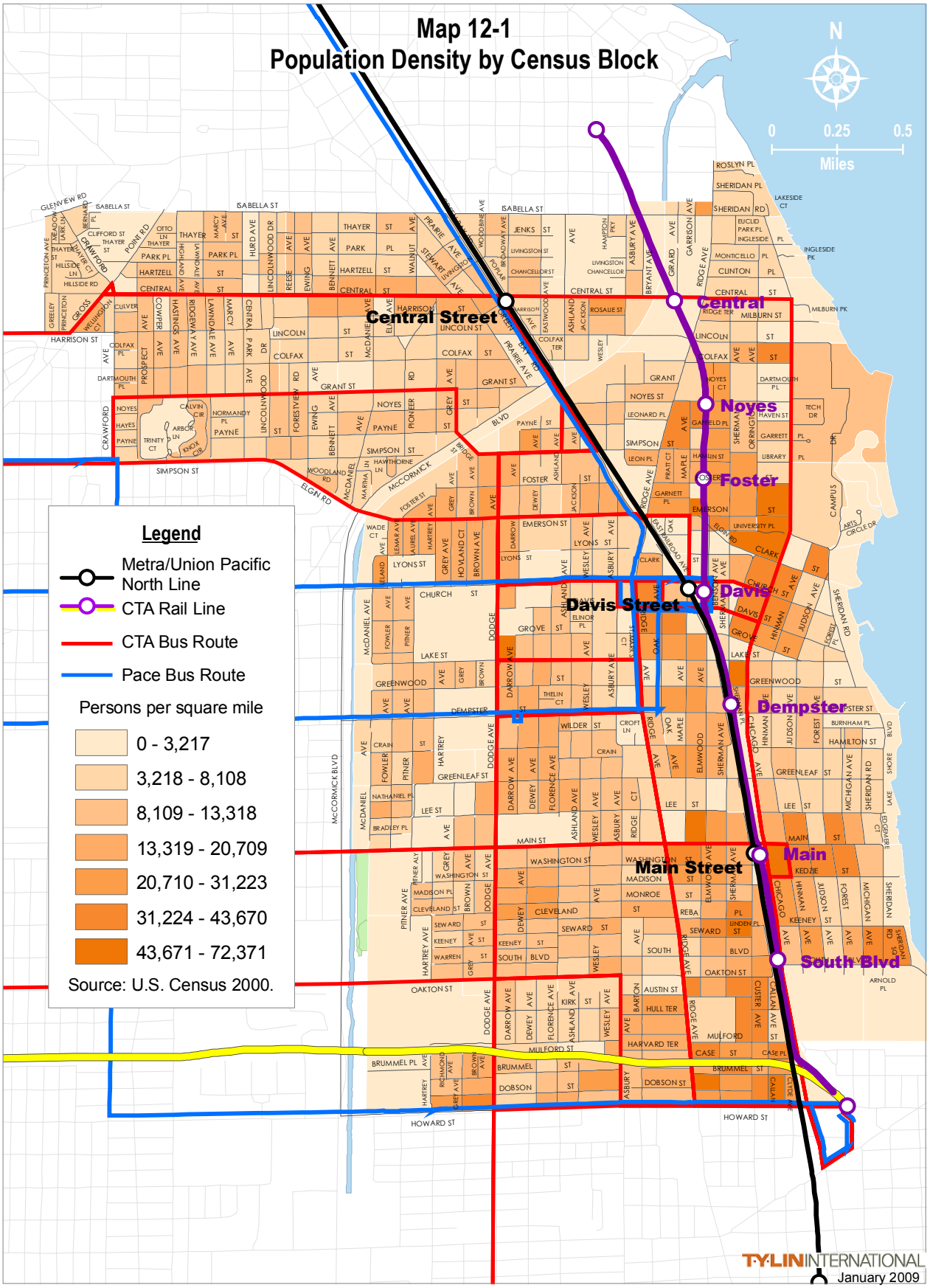
- Each I-GO car replaces 17 cars on the road.
- 25% of members increased their walking.
- 14.5% of members increased their biking.
- 17.6% of members increased their public transit usage.
- 45.9% of members gave up or postponed purchase of a vehicle or considered selling a vehicle because of joining I-GO.
- Members report driving only 9.6 miles per week, or 500 miles per year, whereas the typical car owner in Chicago drives 10,000 miles per year.
- Of those who did not own a car at the time of orientation, 56% postponed buying a car or gave up a car prior to joining I-GO.[9]

Evanston should provide public parking spaces for use by car sharing programs. The City should work with car sharing programs to ensure that spaces are provided where the cars are most likely to be used. Population density is one factor that can be used to locate the car sharing sites. **Map 12-1 Population Density (by Census Block)** can be used as a guide. The success of the car sharing programs should be monitored bi-annually to address any fleet size or location changes needed.

Car sharing can save costs for businesses and agencies by replacing the need to purchase and maintain their own vehicles. Evanston should promote these programs and encourage community members to consider them as an alternative to vehicle ownership.

Program Cost: To be determined.

[9] "Green Matters." Chicago, IL, 2008. I-Go. Retrieved May 2008. <http://www.igocars.org/green_benefits>.


Map 12-1
Population Density by Census Block
N
0 0.25 0.5
Miles
Central Street
Davis Street
Dempster
Main Street
Central
Noyes
Foster
Davis
Dempster
Main
South Blvd
Legend
Metra/Union Pacific North Line
CTA Rail Line
CTA Bus Route
Pace Bus Route
Persons per square mile
0 - 3,217
3,218 - 8,108
8,109 - 13,318
13,319 - 20,709
20,710 - 31,223
31,224 - 43,670
43,671 - 72,371
Source: U.S. Census 2000.
TY·LIN INTERNATIONAL
January 2009

12.2.3 Study: Establish an Eco-Pass Program – *An Eco-Pass program would provide Evanston residents with an unlimited transit card for boarding buses and CTA trains.*

An innovative measure posed by the ECAP is the use of an "EcoPass" for Evanston residents. The pass is valid for boarding any Pace or CTA train or bus within Evanston at no fare. The EcoPass has several implementation difficulties that would need to be resolved by CTA and Pace including who would pay for the pass, what type of pass card could be used, and how would the pass be read. This effort would take extensive study and work with the regional transit agencies.

During the public involvement process the Eco-Pass was not considered a high priority unless the pass was funded by developers or from other funding sources. A potential source could include parking revenues.

Program Cost: $35,000

12.2.4 Program: Consider Establishing a Green Roads Rating System – *Rate roadway construction based on sustainability factors to encourage environmentally-friendly practices.*

Green Roads is a standard rating system designed to distinguish high-performance, sustainable, and environmentally sound new or redesigned/rehabilitated roads. The system awards credits for approved choices/practices and can be used to certify projects based on a total point value. The standard is intended to provide incentives for organizations to incorporate environmental stewardship into roadway construction and design. It also will allow agencies to evaluate and to improve their existing roadway practices, while at the same time providing a baseline standard to be used for comparisons and the establishment of requirements.[10]

A standard rating system for sustainability can provide a number of potential benefits. The main priority of this type of system is to provide a means for sustainable assessment, a utility not typically associated with roadways. The rating system also could be used to define the basic roadway attributes and provide recognition for innovative designs. Adherence to the Green Roads system could be implemented on a voluntary basis or adopted as formal policy.

Sustainable roadway rating systems are under development by various agencies. The City of Evanston should monitor this trend and consider implementing a rating system based on the success of the programs currently being created. An example is the Green Roads rating system at the University of Washington, which includes the following categories:

- Sustainable Design: Reduce impacts due to design choices including the roadway alignment
- Materials and Resources: Reduce impacts from material extraction, processing, and transport
- Stormwater Management: Reduce impacts of polluted stormwater and treatment devices
- Energy and Environment: Improve human and wildlife health

[10] "Green Roads: A Research Proposal for the State Pavement Technology Consortium." Retrieved June 2008 from http://www.pavementinteractive.org/images/e/e5/Sptc_green_roads_proposal.pdf.

- Construction Activities: Reduce impacts from these activities
- Innovation: Encourage innovation in design

The point totals from each category are added together to determine the overall certification level. The levels consist of Green Road Certified Standard, Silver, Gold, and Evergreen. [11]

Program Cost: $25,000

12.2.5 Policy: Continue to Develop Land Use Policies Supporting Transit-Oriented Development – *Increasing residential density and employment centers near transit hubs and centers will promote energy-efficient travel.*

Land use policies impact transportation and vice versa. Energy savings from transportation can be reduced through land use policies that encourage development patterns that reduce the number and/or length of vehicle trips. Specifically, encouraging dense housing and mixed-use development near transit stations and major bus stops creates an environment that facilitates transit use as well as walking and biking.[12]

Evanston has an extensive transit system that could benefit from enhanced access to transit, including creating pedestrian-friendly environments. Evanston has already begun to capitalize on the transit options at the Davis Street Stations with high density development and a walkable commercial area. The Metra Central Street and Main Street along with their connections to several bus routes each present great TOD locations. All of the CTA stations are potential TOD sites. In some regards, these station areas are already TOD oriented.

Good candidates for bus-supported TOD include transfer points and bus stops with high levels of passenger activity (see **Map 11-7 Interagency Transfer Locations** and **Map 11-3 Bus Ridership**). Additionally, bus stops along express routes are more desirable for TOD than local service bus stops. Examples in Evanston include intersections along Howard Street at Dodge Avenue and Asbury Avenue. Dodge and Asbury are also potential sites for an additional CTA station along the Skokie Swift L line. The potential of each location should be studied in greater detail with consideration of other transit and land use plans for the surrounding area.

Vehicle trips can also be reduced by bringing residents closer to their employment. As noted in the *Climate Action Plan*, increasing affordable housing options in Evanston offers residents greater options to live near their work. This increases their chances of being able to use transit or non-motorized transportation for work tips.

A more formal land use policy that supports energy-efficient transportation should be considered. Changes to development regulations would also be needed.

[11] Muench, Steve, and Kim Willoughby. "Green Roads: More Sustainable Roads for a Better Transportation Future." United States Environmental Protection Agency Resource Conservation Challenge Conference Presentation, 2008.
[12] American Public Transportation Association. "Transit Resource Guide." Retrieved October 2008. <http://www.apta.com/research/info/briefings/briefing_8.cfm>

Program Cost: Staff time.

12.2.6 Program: Reduce Energy Impacts through Improved Transportation Technology – *Monitor and implement new technology where possible to increase energy efficiency.*

Advances in technology continue to improve upon the efficiency of materials and transportation operations. For instance, flashing beacons could be powered by solar panels and traffic signals could consist of light-emitting diodes (LED), which are more energy efficient than incandescent bulbs. These and similar efforts would help Evanston to achieve the goals set forth in the Climate Action Plan. The City has already begun to convert its traffic signals to LED lights and should continue this trend, using LED signals as a standard.

Other advances, such as connecting signals along a corridor, increase the efficiency of the transportation system. When signals are coordinated, vehicles spend less time idling at traffic signals, which leads to fewer emissions. Evanston staff has already begun such efforts. This program would document the effort, energy savings and recommend additional technological advances.

Program Costs: To be determined.

Section 13
Health and Safety Benefits

A well-designed multi-modal transportation system has many benefits on the community it serves. Literature shows the importance of non-motorized and transit facilities in helping to prevent and reduce traffic accidents and provide health benefits for communities.

A multi-modal transportation system serves all citizens, providing options for those who cannot drive due to age, income, or ability. A multi-modal system also addresses social inequities by providing viable alternatives to the automobile.

13.1 Public Health Benefits

The City recognizes the importance of alternative transportation systems that not only provide viable means of travel, but also promote healthy lifestyles that in particular target obesity and asthma, two growing problems within the United States. Public health experts promote walking and bicycling as a means of responding to issues regarding health. They have suggested walking and bicycling programs in communities throughout the country in order to combat a growing obesity epidemic.[1]

Motorized vehicles emit particulates into the air that are linked to increases of asthma and other respiratory illnesses within communities. By reducing the amount of vehicle travel, pedestrian and bicycle facilities can help to reduce particulate matter released from motorized vehicles.[2]

The connection between health and urban form can be made by understanding the relationship between development patterns and transportation choices. Compact development, increased land use density, and walkable/bikeable communities increase the levels of active non-motorized transportation use within a population.[3] Policies and regulations adopted within Evanston can assist in the creation of a continuous and effective pedestrian and bicycle network. Construction and/or retro-fitting of this network can lead to numerous advantages including community fitness, improved air quality, safe travel routes, and accommodations for non-motorized transportation users.

During the public involvement process, a concern was raised about indoor air quality in public facilities, including public transit vehicles. Indoor air quality in vehicles, restrooms, and waiting areas is a serious issue for persons with asthma, pulmonary disease, and chemical sensitivities as well as other respiratory, immune, neurological, and cardiovascular disabilities. It may be an issue covered under the Americans with Disabilities Act, though there is debate on this point. However, toxic chemicals are undeniably hazardous to those with these disabilities. The National Institute of Building Sciences and the Access Board provide guidelines for measures that can be taken to improve indoor air quality and reduce the impact of chemicals to those with these disabilities.

[1] Frumkin, Howard. "Urban Sprawl and Public Health." Public Health Reports 117 (2002): 201-17.
[2] Frank, Kavage, and Litman n.d.
[3] Frank, Kavage, and Litman n.d.

Ultimately, providing a complete and balanced transportation system improves and enhances opportunities and choices for the citizens, community organizations, and businesses.

13.2 Safety Benefits

Crash data are important means of determining areas within communities that may require additional attention for addressing the needs of motorists, pedestrians, transit users, and bicyclists. Crash data can be recorded in a variety of ways. For instance, some communities record crashes involving pedestrians and bicycles, while others only record data relevant to motor vehicle accidents. The level of detail within these records also may vary dependent on who reports the incident.

In addition to well-designed motor vehicle facilities, Evanston also can promote the use of alternative means of transportation as a method of reducing overall accident rates. The National Safety Council data suggests that riding public transit is nearly 170 times safer than automobile travel. In fact, public transit trips in the United States have resulted in 190,000 fewer deaths, injuries, and accidents annually than trips by automobiles. Measured per passenger mile, riding public transit is less than a tenth as risky as driving a car. The reduction in injuries and accidents through the use of public transit adds up to between $2 billion and $5 billion per year in safety benefits. [4]

Bicycle accident and fatality statistics are reduced when bicycle lanes that are designed and maintained properly are present. [5] This conclusion is supported by a number of government studies. For instance, the Community Development Department in Cambridge, Massachusetts found that on-street bicycle facilities help define road space, promote an orderly flow of traffic, encourage bicyclists to ride with the flow of traffic, signal motorists that bicyclists have a right to the road, reduce the chance of motorists straying into the bicyclist's path, and make it less likely for passing motorists to swerve toward opposing traffic.[6] Independent studies have confirmed similar results.

Likewise, these facilities further reduce the risks associated with driving indirectly by promoting walking and bicycling over other transportation choices. International studies have suggested that as the number of people walking and bicycling increases, the number of deaths and injuries related to traffic decreases.[7] Furthermore, by building and incorporating pedestrian and bicycle facilities into designs, Evanston can reduce points of contention by keeping pedestrians and bicyclists out of the same spaces as motorized traffic.[8] Maintaining pedestrian facilities in

[4] "The Benefits of Public Transportation-an Overview." Washington, D.C., 2003. American Public Transportation Association. Retrieved May 2008. <http://www.apta.com/research/info/online/ben_overview.cfm#ptt>.
[5] Herman, Michele, et al. "Accidents: 'Three Who Died'." The Bicycle Blueprint: A Plan to Bring Bicycling into the Mainstream in New York City. New York: Transportation Alternatives, 1999.
[6] "Safety Benefits of Bicycle Lanes." Cambridge, MA, 2004. The Department of Community Development. (2007). Retrieved May 2008. <http://www.cambridgema.gov/~CDD/et/bike/bike_safety.html>.
[7] www.completestreets.com.
[8] Alaimo, Katherine, et al. Design Guidelines for Active Michigan Communities: Imagining, Creating, and Improving Communities for Physical Activity, Active Living, and Recreation. Flint, MI: Print Comm, 2006.

accordance with the Americans and Disabilities Act requirements ensures the safety of those with mobility complications.

Reducing pedestrian and bicyclists' risk also can be accomplished through the design of pedestrian and bicycle facilities by creating a scale amenable to travel without motorized means. In doing so, personal security can be increased by the perception of being visible by cars and from buildings. The notion of "watchful eyes" returns to communities when people are able to make use of the streets for walking and biking.[9] For example, studies have suggested that people who lived in highly walkable areas had more social involvement within their communities and were more likely to know their neighbors, to participate in local events, and to trust others than those who did not live in these environments.[10]

13.3 Recommendation

13.3.1 Program: Implement a Smart Trips Program – *Use social marketing to encourage the use of alternative modes of transportation.*

Having multi-modal facilities in place enables people to use alternative modes of transportation; however, the culture of travel within this country is largely centered on the private automobile. Many people may need education and encouragement in order to change their behavior and use other modes of transportation. Evanston should consider programs that educate and encourage their residents to walk, bike, and use transit as part of their daily lives. The program described here is an example of an encouragement program that has proved to be successful in other cities.

The emergence of community-based social marketing over the last several years can be traced to a growing understanding that programs which rely exclusively on information sources such as advertising and web sites can be effective in creating public awareness, but are limited in their ability to foster change, especially in the long term. The more personal approach of social marketing initiatives is thought to impact behaviors that have been difficult to change.

The City of Portland, Oregon has undertaken a social marketing program called Smart Trips that has effectively increased transit usage, walking and bicycling while decreasing motor vehicle trips by on average 10%. The program was established with the assistance of a transportation planning organization called Socialdata America which conducts research on transportation mode shift. At the present time Socialdata America is operating projects in Portland, Oregon and Seattle, Washington, as well as several pilot projects in Bellingham, Washington, Sacramento, California, Durham, North Carolina and Cleveland, Ohio, funded by the Federal Transit Administration. These programs have a common methodology that includes household contacts and individualized follow-up. The follow-up includes information, resources and incentives to

[9] Southworth, Michael. "Designing the Walkable City." Journal of Urban Planning and Development (2005): 246-57.

[10] Frank, Lawrence, Sarah Kavage, and Todd Litman. Promoting Public Health through Smart Growth: Building Healthier Communities through Transportation and Land Use Policies and Practices. Vancouver, British Columbia: Smart Growth BC, n.d.

encourage transit usage, walking and bicycling. A research component that measures effectiveness is involved in all of the programs, as well.

A description of the basic program follows:

- Pilot - A pilot project demonstrates the relative effectiveness of the concept in the community. In Portland, a 600 household pilot project was conducted that was expanded to 6,000 households. After these projects proved successful, Portland took over complete control of the project and modified it to reduce costs, add some activities and increase the contact period with residents to eight months.

- Initial Contact - Each household in the target area receives a newsletter including information about Smart Trips and an order form for information about and incentives for walking, bicycling and walking. Two elements of Smart Trips programs are commonly thought to increase effectiveness: follow-up and timely delivery of the requested information. In the case of Portland, a follow-up postcard is sent after the initial newsletter/order form and materials are delivered within two weeks of request.

- Subsequent Contact - A second newsletter is sent to all area households approximately six weeks after the first one, reminding recipients to order materials and listing contact information and events and activities that are available in their neighborhood. Everyone who orders materials or attends one of the events receives additional newsletters.

- Materials - A range of materials are made available to respondents and range from transit schedules to bike and walking maps and coupon booklets. The materials are tailored to the neighborhood and to individual interests. Individualized materials are also developed. In Portland, for instance, personalized bicycle trip planning is available upon request and a “transit tracker” card is available that indicates the four transit stops that are closest to a resident’s home and destination. Materials could be distributed at events such as summer festivals or distributed through the mail along with block party notifications.

Program Costs: $100,000

Section 14
Public Finance

An essential part of the Plan is prioritizing the recommendations for implementation. Cost estimates provide decision-makers with information that can assist with determining priorities. **Table 14-1, Recommendations Cost Summary**, provides a list of all the recommendations developed from this planning process and the cost estimates for implementation. The table also suggests the funding source that will be used.

The implementation of the recommendations in this Plan will be a multi-year effort. Therefore, the priorities also provide a guide as to which recommendations should be addressed first. A preliminary implementation priority is included in the table, as determined by the Plan's Policy Advisory Committee. This priority will assist the City in determining which recommendations should be addressed first. Still almost two-thirds of the recommendations have received high priority. The formation of a Transportation Committee has been recommended to provide further attention to prioritizing Plan recommendations and to provide assistance to the Evanston Staff in further developing the policy and program recommendations of this Plan. Further detail is provided on this in **Section 15, Organization Management**.

The final authority on all recommendations will come from the Evanston City Council. That is, they must approve the funding to implement each recommendation. Evanston maintains a city-wide budget that is annually approved. The budget is the policy document that sets the financial course for the City and defines the service priorities that will be provided to the community. The City Manager submits a proposed operating budget to the City Council in December for the fiscal year commencing the following March 1. The operating budget includes proposed expenditures and the means of financing those expenditures. The fiscal year of the City of Evanston commences on March 1 each year and closes on the last day of February of the subsequent year.

Table 14-1 suggests the funding sources to be used for the recommendations. In some cases multiple sources may be used or a final decision has not been made. These funding sources are described below.

Capital Improvement Program (CIP) - Is a five-year plan to address the capital needs of the City's built environment. The first year of the CIP is the capital budget and is reviewed and approved concurrent with the City budget. The subsequent four years of the CIP are presented for information and set forth the recommended plan for addressing future capital needs.

Community Development Block Grant (CDBG) - The funds for this account are granted from the United States Department of Housing and Urban Development. The funding amount is in accordance with federal formula. These funds are generally used for alley improvements, sidewalk improvements, and accessible curb ramp replacements.

Congestion Mitigation and Air Quality Improvement (CMAQ) – This is a federal program administered by the Federal Highway Administration (FHWA) that allows for municipalities to apply for funds for projects that decrease congestion and improve air quality.

Fifty/Fifty (50/50) Program – Evanston property owners are responsible for half the cost of replacement of or improvements to sidewalks and alleys abutting their property. The remaining 50% of the cost comes from other funding programs listed.

Fleet Services Fund - Internal fund in which revenues are derived from the charges for services at the municipal service center.

Grant – An unspecified grant will be sought to fund the recommendation.

Illinois Department of Natural Resources (IDNR) – Grants are available from the IDNR to install or upgrade off-street trails, paths, or parklands.

Illinois Transportation Enhancement Program (ITEP) – This program provides for community based project that expand travel choice and enhance the transportation experience through cultural, historic, aesthetic, and environmental aspects of the transportation infrastructure.

Motor Fuel Tax (MFT) - The revenues from this fund are to be used for street improvement and repair, as allowed by the State of Illinois Department of Transportation. The funding comes from taxes on the sale of gasoline collected by the State of Illinois.

Parking Fund **–** Funds are generated from public parking fees.

Private – Private funds will be encouraged. That is, opportunities will be sought to encourage private investment.

Regional Transportation Authority (RTA) – The Regional Transportation Authority provides grants to municipalities to assist in developing transit initiatives within the community. The grants are awarded through a competitive process on an annual basis.

Safe Routes to School (Safe Routes) – This is a federal program that is intended to encourage and enable children, including those with disabilities, to walk and bicycle to schools. Projects should improve safety and reduce motor vehicle traffic in the vicinity of schools.

Staff – The City of Evanston staff will perform the work. Therefore, no costs associated with the recommendation have been included.

Surface Transportation Program – This is a federal program administered by the Chicago Metropolitan Agency for Planning to provide funding for improvements to the surface transportation network. Eligible projects include roadway surface repaving and maintenance.

Table 14-1
Recommendations Cost Summary

Priority[A]	No.	Action	Recommendation	Estimated Funding Needs	Period	Source	Notes
Alley							
High	6.3.1	Infrastructure	Continue to Upgrade Alleys	$500,000	per year	50/50 Program, CDBG	
High	6.3.2	Policy	Expand Paving Options	TBD	per alley	CIP	Dependent on option, Should lower costs
High	6.3.3	Program	Improve the Alley Paving Promotion Program	$10,000	one-time	Staff, CIP	Brochure
High	6.3.4	Infrastructure	Incorporate Sustainable Practices into Alley Projects	TBD	per alley	CIP	Dependent on option
High	6.3.5	Program	Negotiate with Major Property Owners to Pave Alleys	n/a	ongoing	Staff	
Medium	6.3.6	Study	Evaluate Alternative Financing Methods	n/a	one-time	Staff	Future City Council consideration
Bicycle							
High	7.4.1	Infrastructure	Install Bicycle Racks at Transit Stations	$600	per rack	CIP	CTA/Metra coordination
Low	7.4.2	Program	Establish a Bike Rack Request System	n/a		Staff	establish cost-sharing program
High	7.4.3	Policy	Adopt a Bicycle Parking Ordinance	n/a		Staff	Update zoning ordinance
High	7.4.4	Infrastructure	Improve & Expand the On-Street Bicycle Network	$25,000	per mile	CMAQ, ITEP, CIP	Seek grants
High	7.4.5	Infrastructure	Improve & Expand the Off-Street Bicycle Network	$1,000,000	per mile	IDNR, CMAQ, ITEP, CIP	Seek grants
High	7.4.6	Program	Educate Road Users	TBD	per year		Coordinate with educational institutions
High	7.4.7	Study	Develop a Plan for a Downtown Bicycle Station	$40,000	one-time	CMAQ, RTA	Seek grants; coordinate with Evanston Bike Club
Low	7.4.8	Study	Pilot a Bicycle Boulevard	$15,000	one-time	CIP	Further evaluation
Low	7.4.9	Study	Establish a Shared Bike Program	$20,000	one-time	Private	DePaul University currently studying it.
High	7.4.10	Program	Re-evaluate Bicycle Facilities Every 3 Years	n/a	every 3 years	Staff	

[A] As determined by Transportation Plan Policy Advisory Committee on February 19, 2009

Table 14-1 (cont'd.)
Recommendations Cost Summary

Priority[A]	No.	Action	Recommendation	Estimated Funding Needs	Period	Source	Notes
Parking							
High	8.5.1	Policy	Improve Downtown Public Parking Utilization by Discouraging Private Parking Supply	n/a	one-time	Staff	Update zoning ordinance
High	8.5.2	Program	Improve Downtown Parking Efficiencies through Pricing and Information Strategies	n/a	on-going	Staff	
High	8.5.3	Study	Provide Additional Public Parking in Chicago/Main and Central Street Areas	$25,000	one-time	Parking Fund	Study
High	8.5.4	Policy	Consider Increasing Commuter Parking for Evanston Residents at Transit Stations by Relaxing On-Street Parking Restrictions	TBD	per location	Staff	Requires further evaluation
Medium	8.5.5	Infrastructure	Increase Scooter/Motorcycle Parking at Public Facilities	$15,000	one-time	Parking Fund	
High	8.5.6	Infrastructure	Upgrade Public Parking Signage	$500,000	one-time	Parking Fund, Grant	Seek grant
High	8.5.7	Program	Develop a Public Parking Marketing Program	$10,000	per year	Parking Fund	
Low	8.5.8	Policy	Implement Graded Parking Fines	TBD			Requires further evaluation
Low	8.5.9	Program	Conduct an Infrastructure Audit of the Parking Facilities	$25,000	per structure	Parking Fund	
High	8.5.10	Program	Improve Parking Payment Technology & Validation System	$35,000	per year	Parking Fund	
Low	8.5.11	Program	Develop Parking Plans for Special Events	$20,000	every 3 years	Staff	
Medium	8.5.12	Program	Provide Parking Incentive for No- or Low-Emission Vehicles	TBD			Requires further evaluation
Low	8.5.13	Program	Re-evaluate Downtown Parking Demand/Supply Every 5 Years	$35,000	every 5 years	Parking Fund	Study

[A] As determined by Transportation Plan Policy Advisory Committee on February 19, 2009

Table 14-1 (cont'd.)
Recommendations Cost Summary

Priority[A]	No.	Action	Recommendation	Estimated Funding Needs	Period	Source	Notes
Pedestrian							
High	9.5.1	Policy	Make Adjoining Property Owner Participation in 50/50 Program Mandatory	n/a		Staff	Develop 50/50 mandatory program for the City Council consideration
High	9.5.2	Infrastructure	Upgrade All Sidewalk Surfaces	$300,000	per mile	50/50 Program, CDBG, CIP	
Medium	9.5.3	Infrastructure	Address Sidewalk Clearance (4 feet) and Gaps	TBD	per location	CIP, Private, Safe Routes, CMAQ, ITEP	Dependent on improvement
High	9.5.4	Infrastructure	Address Roadway Crossings & Curb Ramps	TBD	per location	CIP	Dependent on improvement
High	9.5.5	Program	Promote Sidewalk Maintenance by Property Owners	TBD	per year	Staff	Education and enforcement
Medium	9.5.6	Infrastructure	Upgrade Traffic Signals	$250,000	per location	CMAQ, CIP	Seek grant
High	9.5.7	Program	Improve Motorist Compliance with Crosswalks	$50,000		Staff	
High	9.5.8	Program	Promote Formation of a Safe Routes to School Transportation Committee	n/a	one-time	Staff	School District 65, PTA Council and Schools
Medium	9.5.9	Program	Incorporate Sustainable Practices in Sidewalk Projects	TBD	per year	CIP, CDBG	Dependent on option
Roadway							
High	10.4.1	Infrastructure	Continue to Maintain and Improve Roadway Surfaces and Bridges	$4 to $5 million	per year	MFT, CIP, STP	
High	10.4.2	Study	Implement Vehicle Crash Reduction Strategies	TBD	per location	CIP	Dependent on option
Medium	10.4.3	Infrastructure	Manage Truck Traffic Through Improved Signage	$5,000	one-time	Staff, CIP	
Low	10.4.4	Infrastructure	Increase Roadway Capacity at Intersections with Improved Signal Timing and Additional Lanes	TBD	per location	CIP	Dependent on option
Low	10.4.5	Program	Maintain and Update Traffic Databases	$20,000	every 5 years	Staff, CIP	
High	10.4.6	Policy	Develop a Complete Streets Approach	n/a	per project	Staff	

[A] As determined by Transportation Plan Policy Advisory Committee on February 19, 2009

Table 14-1 (cont'd.)
Recommendations Cost Summary

Priority[A]	No.	Action	Recommendation	Estimated Funding Needs	Period	Source	Notes
Roadway (cont'd.)							
High	10.4.7	Program	Continue with the Current Traffic Calming Program and Consider Additional Best Practices	$50,000	per year	CIP	
Low	10.4.8	Policy	Continue to Pursue Roadway Jurisdictional Transfers from the Illinois Department of Transportation.	n/a	on-going	Staff	
Transit							
High	11.5.1	Infrastructure	Provide Amenities at Bus Centers and Hubs	$5,000 - $22,000	per location	Private	Coordinate with RTA and transit agencies
Medium	11.5.2	Study	Develop a Plan to Convert the Current Flag Stop Bus Policy to Fixed Bus Stops with Amenities	$50,000	one-time	RTA	Study after completing 11.5.1.
High	11.5.3	Program	Expand the Subsidized Taxi Program	TBD	per year		Dependent on program
Medium	11.5.4	Program	Coordinate Northwestern Shuttle Service & Stops with CTA	n/a	per route	Staff	Coordination underway for the Sheridan Road stops in front of NU.
High	11.5.5	Program	Advocate for Improvements to Regional Transit	TBD	per program		Coordinate with RTA and transit agencies
Low	11.5.6	Study	Consider a Local Circulator Bus Service	$40,000	one-time	RTA	
High	11.5.7	Study	Evaluate Transit Routes Along Central Street	TBD	one-time	RTA	
High	11.5.8	Study	Conduct an Alternatives Analysis of Sites for an Additional Yellow Line CTA Station	$275,000	one-time	CMAQ, CIP	Grant received; RFQ underway
Sustainability							
High	12.2.1	Program	Expand Green Fleets	$25,000	per vehicle	Fleet Fund	40% increase in cost
High	12.2.2	Program	Accommodate and Promote Car Sharing	TBD	per year		Dependent on program, further evaluation
High	12.2.3	Study	Establish an Eco-Pass Program	$35,000	one-time	TBD	
Medium	12.2.4	Study	Consider Establishing a Green Roads Rating System	$25,000	one-time	Grant	
High	12.2.5	Policy	Continue to Develop Land Use Policies Supporting Transit-Oriented Development	n/a		Staff	

[A] As determined by Transportation Plan Policy Advisory Committee on February 19, 2009

Table 14-1 (cont'd.)
Recommendations Cost Summary

Priority[A]	No.	Action	Recommendation	Estimated Funding Needs	Period	Source	Notes
Sustainability (cont'd.)							
High	12.2.6	Program	Reduce Energy Impacts Through Improved Transportation Technology	TBD		TBD	Dependent on technology
Health and Safety							
Medium	13.3.1	Program	Implement a Smart Trips Program	$100,000	one-time	Grant	Pilot program
Organization Management							
High	15.1	Program	Create a Transportation Advisory Committee	n/a	one-time	Staff	Expand the responsibilities of the Parking Committee, prepare resolution for the City Council consideration

[A] As determined by Transportation Plan Policy Advisory Committee on February 19, 2009

To develop costs for this Plan the unit costs shown in **Table 14-2** were used. These estimates are for planning and budget purposes.

Table 14-2
Planning Costs (2008 Dollars)

Item	Unit Cost	Unit	Notes
Alleys:			
Concrete Alley w/drainage	$280,000	block (500')	Cost assumes 18'-wide alley
Permeable Alley w/o drainage	$350,000	block (500')	Cost assumes 18'-wide alley
Pedestrian:			
Sidewalk	$300,000	mile	
Standard Crosswalk	$1.65	linear foot	
High-visibility Crosswalk	$2.80	linear foot	
Sign	$44	square foot	
Countdown Signal	$12,000	intersection	Cost includes replacement of 8 pedestrian signal heads
Curb Ramps	$40,000	intersection	Cost assumes 8 ramps
Roadway:			
Pavement Marking (Stripe)	$2.80	linear foot	
Overhead Clearance Sign	$250 - $400	each	
Bicycle:			
Bicycle Rack	$600	each	
Bicycle Lane	$30,000	mile	
Shared Lane	$12,000	mile	
Bicycle Path	$1,000,000	mile	
Transit:			
Bus Stop Shelter	$5,000	each	
Installation w/o electric lighting	$10,000	each	
Concrete Pad and sidewalk access	$5,000	each	
Bench	$1,000	each	
Bus Stop	$5,000	each	Includes concrete pad and sidewalk access
Bus Center	$6,000	each	Includes concrete pad and sidewalk access and bench
Bus Hub	$21,600	each	Includes concrete pad and sidewalk access, bench, shelter, installation, and two bike racks

Section 15
Organizational Management

The City of Evanston is a home rule unit, as defined in the 1970 Illinois Constitution, and operates under the Council/Manager form of government. Evanston also is a Township with the same boundaries as the City's. A home rule unit is any municipality within the State of Illinois that has a population of more than 25,000 people. A home rule unit may exercise any power and perform any function pertaining to its government and affairs, including, but not limited to, the power to regulate for the protection of public health, safety, welfare, and morals; to license; to tax; and to incur debt.

The City Manager and staff direct the administration and execution of the policies and goals formulated by the City Council. These responsibilities include advising the Council on financial and program needs, implementing priorities, establishing procedures, and preparing the annual budget. Staff is involved in the coordination and implementation of development projects, as well as program evaluation and policy analysis.

Four standing committees are part of the City Council; one of these, the Administration and Public Works Committee is primarily responsible for transportation issues including: bills and purchases; budget policy; finance; fire; legal; licensing; personnel; public works (including streets and alleys, lighting, refuse disposal, water and sewers, traffic control, and parking); public buildings; public transportation; public utilities; safety (including civil defense); liaison with the police and fire pension boards; and capital improvements.

The City has an advisory parking committee that is made of several aldermen and citizens appointed at large that role could be expanded.

15.1 Recommendation

15.1.1 Program: Create a Transportation Advisory Committee – *Assist with further development and implementation of transportation policies and programs.*

Due to the complex nature of the issues associated with the multi-modal plan it has been suggested that an advisory committee be formed to review the policy and program issues recommended in this Plan. The role of the parking advisory committee could be expanded to include all transportation-related issues. There are a number of policies and programs that have been recommended as part of this Plan. Some of these policies and programs require additional stakeholder and public involvement before they can be implemented. The Advisory Committee can provide a sounding board to work through, refine and further develop the recommended policies and programs. The Village of Wilmette has established a code[1] dealing with the creation of a transportation committee that could serve as a starting point for creating this committee.

Program Costs: Staff time.

[1] Wilmette, IL, Code of Ordinances, Chapter 2 – Administration, Section 2-16.6 – Transportation Committee

Section 16
Public and Stakeholder Involvement

Public and stakeholder involvement is an integral part of the transportation planning process. The City of Evanston has a tradition of providing citizens with opportunities to offer feedback on the transportation system. For the Evanston Multi-Modal Transportation Plan, the public has assisted the City by providing comment and input for the overall transportation vision and goals and prioritization of improvements. In addition, the public assisted with an extensive data collection effort regarding the condition of the City's sidewalks. The results of the public and stakeholder involvement process are incorporated throughout this Plan and are summarized in this section. Additional background information for the public and stakeholder involvement process is found in **Addendum C – Public Involvement Documentation**.

Public Workshops

Public Workshop #1

An initial public workshop was held at the Evanston Civic Center on April 10, 2008. The purpose of the meeting was to present an overview of the Multi-Modal Transportation Plan planning process to the public. An introduction to the concept of Complete Streets, whereby all streets are designed and maintained with all modes in mind, was given. The public was also invited to remain involved throughout the process and opportunities for their participation were outlined.

Public Workshop #2

The second public workshop was held on October 1, 2008, also at the Evanston Civic Center. The purpose of this second meeting was to understand the community's priorities. By this point in the planning process, concerns relevant to each mode had become apparent. With the support of the Chicago Metropolitan Agency for Planning (CMAP), an interactive polling session queried participants about specific issues and asked them to rate the importance of types of improvements over others. This session helped direct the Plan toward a set of priorities. The results of questions asked during the polling session are provided in **Appendix E – Polling Session Results**.

Public Workshop #3

The final public workshop was held on February 17, 2009. A short presentation on the Plan was provided. The draft Plan was posed on the City's website prior to the workshop. The recommendations from the draft Plan were reviewed with those in attendance. Comments on the recommendations were received and were appropriate, changes were made.

Focus Groups

Seven focus groups were established for specific subject areas to provide feedback on the Plan and guide the development of various modes. The focus groups met to discuss the following subjects: bicycles, health/ADA, municipal practices, parking, pedestrian, sustainability, and transit. The meetings were open to the public and stakeholders of each group received direct invitations. Participation was based on individual interest and was advertised to the public through the initial public meeting, press release, and email lists. Members of the policy and

technical advisory committees were also invited to attend these meetings. Evanston's regularly scheduled Parking Committee meetings served as the parking focus group for this Plan.

The outcome of these meetings guided the remainder of the public involvement process. The focus groups initiated discussion of the concerns and potential solutions of the subject at hand. These issues were then included in the community questionnaire to gauge the importance of each issue amongst the community at large. The focus groups were also presented with relevant deliverables and asked for feedback.

Policy Committee

The City convened a group of stakeholders including elected officials and representatives from school, business, health, and disabled communities. The policy committee convened throughout the planning process to guide the development of transportation policies to be included in the Plan. The Policy Committee met at the beginning of planning process and 3 times at the end to review and comments on the Plan.

Technical Committee

Members of the technical committee consisted of representatives from the transit agencies, schools, including Northwestern University, community-based organizations, and City staff. The technical committee met to review specific aspects of the Plan. The technical committee met at the beginning of the planning process and at the end to review and comment on the draft Plan.

Other Committees/Plan Commission

The Plan was presented to the Parking Committee on February 25, 2009. On the same evening it also was presented to a joint meeting of the Economic Development Commission and Planning Commission.

Community Survey

A community survey was developed and posted on the City's web site and was made available in hard copy. The survey was available on-line for 5 weeks in August and September of 2008. Copies were distributed to all community centers, the public library, and through ADA organizations. More than four hundred people completed the survey. The results of the survey are summarized in **Appendix F – Community Survey Results**.

School Travel Survey

A school travel survey was developed and sent to the principal of each public school as well as two private schools. Seventeen surveys were sent out and fourteen were completed and returned. The survey results led to the selection of four schools as the focus of more detailed study, the results of which are included in **Addendum B – Multi-Modal School Transportation Concept Plans.**

Sidewalk Condition Assessment

A group of volunteer community members gathered on a Saturday June 7, 2008 to conduct a condition assessment of Evanston's sidewalks. The City was divided into 30 areas and volunteers selected an area to walk and record the level changes and obstructions on each block. The

volunteers continued the assessment on their own time and returned the results for a complete inventory of the condition of all of Evanston's sidewalks.

Evanston National Citizen Survey

In 2003, a survey was conducted by the National Research Center, Inc. This survey was developed to provide local jurisdictions with an accurate and affordable way to assess and interpret residents' opinions regarding community issues. The survey is customized to each jurisdiction in order to address unique citizen concerns.

The results of this survey provide useful information for this Plan. Several questions posed to the residents of Evanston rated the quality of transportation services. As shown in **Table 16-1**, the following ratings were found:

Table 16-1
2003 National Citizen Survey Results

	Evanston Rank	Number of Jurisdictions for Comparison	Jurisdictions Ranked Below Evanston
Street Repair	152	173	13%
Street Cleaning	65	106	40%
Street Lighting	86	93	9%
Snow Removal	59	83	30%
Sidewalk Maintenance	30	50	42%
Traffic Signal Timing	12	35	69%
Amount of Public Parking	11	17	41%

Source: National Research Center, Inc. "The National Citizen Survey 2003: Report of Normative Comparisons for the City of Evanston, IL," 2003

The ratings for the quality of transportation services were based on the responses shown in **Table 16-2**.

Table 16-2
Transportation Survey Responses

	Excellent	Good	Fair	Poor	Total
Street Repair	5%	25%	37%	34%	100%
Street Cleaning	12%	50%	27%	11%	100%
Street Lighting	9%	38%	29%	24%	100%
Snow Removal	13%	50%	25%	12%	100%
Sidewalk Maintenance	8%	35%	40%	17%	100%
Traffic Signal Timing	9%	47%	32%	12%	100%
Amount of Public Parking	6%	23%	32%	39%	100%

Source: National Research Center, Inc. "The National Citizen Survey 2003: Report of Normative Comparisons for the City of Evanston, IL," 2003

City of Evanston
Multi-Modal Transportation Plan

Appendices

Appendix A

EVANSTON ALLEY CONDITION ASSESSMENT FORM

(circle one) **(circle one)**
N / W of _____ & S / E of _____

From: _____

To: _____

Does alley have low spots where water ponds? ☐ Yes ☐ No

Approximate location of ponding:

_____

_____

_____

Surface Type (Check all that apply)

Asphalt ☐
Concrete ☐
Brick ☐
Gravel ☐
Grindings ☐
Other ☐

Condition of Paved Alley:

Good ☐
Fair ☐
Poor ☐

If Gravel or Grindings:

- Are there ruts? ☐ Yes ☐ No

Percent of alley rutted:
____ <10%
____ 10-20%
____ 20-30%
____ >30%

- How often does alley need grading(in a year)? _____

Condition of paved alley

Good – Surface condition is intact with only minor surface cracks.

Fair – Surface has deep cracks.

Poor – Surface has large cracks, holes, or parts of surface missing.

Appendix B
School Travel Questionnaire Results

School Name	Dawes	Dewey	King Lab	Lincoln	Lincolnwood	Oakton	Orrington	Pope John XXIII
How many students attend your school?	360	375	550	287	407	420	320	336
Does your school have students who:								
Walk	3	5	0	3	3	0	1	0
(0-10%=0; 11-20%=1, 21-40%=3, >40%=5)								
Ride their bike	1	1	1	0	1	0	3	1
(0%=0; 1-5%=1, 6-10%=3, >10%=5)								
Ride a school bus	0	1	5	3	3	0	1	0
(0-15%=0; 16-30%=1, 31-45%=3, >45%=5)								
Are driven by an adult	1	5	3	5	3	0	3	0
(0-20%=5; 21-40%=3, 41-60%=1, >60%=0)								
Use public transportation	0	0	1	0	0	0	0	0
(0%=0; 1-10%=1, 11-20%=3, >20%=5)								
Are students permitted to ride their bikes to school?								
Yes (1)	1	1	1		1	1	1	1
No (0)				0				
Which of the following types of crossing guards are used at your school?								
Police (1)								1
Trained Adults (1)	1	1	1	1	1	1	1	
Student Patrols (1)		1						
None (0)								
Has your school encountered any of the following problems during student arrival and dismissal related to school transportation (check all that apply)?								
Excessive traffic congestion (2)	2	2	2		2	2	2	2
Parent or community complaints (1)		1	1	1	1	1	1	1
Conflicts between autos and school buses (2)				2				
Excessive queuing (1)	1	1						1
Conflicts between motor vehicles and pedestrians (4)								
Inadequate drop-off locations (1)	1	1	1					
Are you aware of any specific problem locations in the school vicinity that serve as barriers to walking or bicycling?								
Problem intersections (4)	4						4	
Difficult street crossings (4)					4	4		4
Missing or inadequate sidewalks (4)	4							
High traffic volumes and/or speeds (3)						3		3
Fear of crime (3)								
Have there been any efforts or programs to increase walking and bicycling to school?								
Yes (1)	1						1	1
No (0)		0	0	0	0	0		
Does your school have any school transportation policies, including drop-off and pick-up?								
Yes (1)	1	1	1		1	1	1	1
No (0)				0				
Would you, your staff and/or parents be interested in attending a half day workshop about the Safe Routes to School program and funding opportunities?								
Yes (1)	1			1				1
No (0)		0	0		0	0	0	
Total Point Values	**22**	**21**	**17**	**16**	**20**	**13**	**19**	**17**

Appendix B
School Travel Questionnaire Results

School Name	St. Athanasius	Washington	Willard	Haven	Nichols	ETHS
How many students attend your school?	330	437	350	640	500	3000
Does your school have students who:						
Walk	0	5	5	5	5	0
(0-10%=0; 11-20%=1, 21-40%=3, >40%=5)						
Ride their bike	0	3	3	1	3	0
(0%=0; 1-5%=1, 6-10%=3, >10%=5)						
Ride a school bus	0	1	1	5	0	5
(0-15%=0; 16-30%=1, 31-45%=3, >45%=5)						
Are driven by an adult	0	5	5	3	5	5
(0-20%=5; 21-40%=3, 41-60%=1, >60%=0)						
Use public transportation	0	0		1	1	0
(0%=0; 1-10%=1, 11-20%=3, >20%=5)						
Are students permitted to ride their bikes to school?						
Yes (1)	1	1	1	1	1	1
No (0)						
Which of the following types of crossing guards are used at your school?						
Police (1)						
Trained Adults (1)	1	1	1	1		1
Student Patrols (1)			1			
None (0)					0	
Has your school encountered any of the following problems during student arrival and dismissal related to school transportation (check all that apply)?						
Excessive traffic congestion (2)	2		2	2	2	2
Parent or community complaints (1)	1		1	1	1	
Conflicts between autos and school buses (2)			2			
Excessive queuing (1)	1					
Conflicts between motor vehicles and pedestrians (4)			4	4	4	4
Inadequate drop-off locations (1)		1	1	1		1
Are you aware of any specific problem locations in the school vicinity that serve as barriers to walking or bicycling?						
Problem intersections (4)	4		4		4	
Difficult street crossings (4)	4		4			
Missing or inadequate sidewalks (4)			4			
High traffic volumes and/or speeds (3)	3	3				
Fear of crime (3)						3
Have there been any efforts or programs to increase walking and bicycling to school?						
Yes (1)			1			
No (0)	0	0		0	0	0
Does your school have any school transportation policies, including drop-off and pick-up?						
Yes (1)	1	1	1	1	1	
No (0)						0
Would you, your staff and/or parents be interested in attending a half day workshop about the Safe Routes to School program and funding opportunities?						
Yes (1)	1		1			
No (0)		0			0	
Total Point Values	**19**	**21**	**42**	**26**	**27**	**22**

Appendix C
Average Daily Traffic Summary

Rank	Street	From	To	ADT		
				NB/EB	SB/WB	TOTAL
1	Asbury[2]	Howard	Oakton	8000	8200	16200
2	Chicago	South Boulevard	Main	8900	8900	17800
3	Chicago[2]	Main	Dempster	8200	8800	17000
4	Emerson	McCormick	Dodge	7400	8500	15900
5	Asbury	Oakton	Main	7400	7900	15300
6	Chicago[2]	Davis	Church	6700	9700	16400
7	Church[2]	Ridge	Sherman	12100	0	12100
8	Chicago	Dempster	Davis	8400	8700	17100
9	Dodge	Howard	Oakton	7100	7800	14900
9	McComick	Emerson	Bridge	7600	7300	14900
11	Dodge	Oakton	Main	7600	7600	15200
12	Church	McCormick	Dodge	7100	4600	11700
13	Oakton	Dodge	Ridge	7800	8400	16200
14	Main	McCormick	Dodge	8100	6700	14800
15	Central	Hartrey	Green Bay	7600	6900	14500
15	Green Bay	Central	Isabella	7600	6900	14500
17	Dempster	Ridge	Chicago	6800	6600	13400
18	Dodge	Dempster	Church	6000	5800	11800
19	Green Bay	McCormick	Central	7800	7200	15000
20	Dodge	Main	Dempster	7200	6000	13200
21	Emerson[2]	Ridge	Elgin	6900	7000	13900
22	Davis	Ridge	Sherman	0	8600	8600
23	Green Bay	Emerson	McCormick	7200	5900	13100
24	Oakton	McCormick	Dodge	8900	9700	18600
25	Dempster[2]	McCormick	Dodge	7800	8100	15900
26	Dempster	Dodge	Ridge	5800	7700	13500
27	Main	Dodge	Ridge	6500	4300	10800
28	Dodge	Church	Emerson	4500	4900	9400
29	Church	Dodge	Ridge	6000	3200	9200
30	South Boulevard	Chicago	Sheridan	4100	4200	8300
31	Asbury	Main	Dempster	4500	6600	11100
31	Central	Green Bay	Eastwood	5100	5200	10300
33	Sherman	Davis	Grove	3500	4500	8000
34	Ridge	Emerson	Noyes	4400	4400	8800
35	Elgin	Sherman	Orrington	1700	5400	7100
36	Ridge	Noyes	Central	4000	3800	7800
37	Asbury	Dempster	Church	3700	5300	9000
38	Sherman	Clark/Elgin	Church	0	6200	6200
39	Custer	Howard	Oakton	2000	3700	5700
40	Sherman	Church	Davis	6200	0	6200
41	Church	Sherman	Chicago	7000	0	7000
42	Davis	Sherman	Chicago	0	6500	6500
43	Asbury	Church	Emerson	2700	3700	6400
44	Simpson	Dodge	Green Bay	3100	2100	5200
45	Main	Ridge	Chicago	2200	3300	5500
46	Orrington	Clark/Elgin	Church	4700	0	4700
47	Orrington	Church	Davis	4300	0	4300
48	Emerson[2]	Dodge	Asbury	6900	6900	13800
49	Central Park	Simpson	Central	1400	1400	2800
50	McDaniel	Simpson/Elgin	Central	1400	1400	2800
N/A	Central[3]	Elm	McDaniel	6900	6400	13300
N/A	Central[3]	Bryant	Asbury	5500	6100	11600

[1] Adj. saturated flow rate baseline estimate for urban streets for lost startup time, and approximate share of cycle length. Assumed g/C of 0.5. [2] Volumes adjusted to reflect changes in traffic as a result of Ridge Avenue, Emerson Avenue construction and detours. [3] Additional traffic count performed by the City of Evanston. Ridge avenue not counted due to 2008 improvements. Sheridan Road Phase I counts performed in 2008.

Appendix D

Recommended Roadway Width Guidelines													
Street Type	Offset to Property Line	Sidewalk	Parkway Landscape Area	Curb	Parking Lane	Travel Lane	Parking Lane	Curb	Parkway Landscape Area	Sidewalk	Offset to Property Line	ROW Width	Face-to-face Width
Two-way Parking	1'	6'	4'	0.5'	7'	10' - 10'	7'	0.5'	4'	6'	1'	57' min.	34'
Both Sides	1'	6'	8.5'	0.5'	7'	10' - 10'	7'	0.5'	8.5'	6'	1'	66'	34'
Two-way Parking	1'	6'	4'	0.5'	7'	10' - 11'	---	0.5'	4'	6'	1'	51' min.	28'
One Side	1'	6'	11.5'	0.5'	7'	10' - 11'	---	0.5'	11.5'	6'	1'	66'	28'
Two-Way	1'	6'	4'	0.5'	---	11' - 11'	---	0.5'	4'	6'	1'	45' min.	22'
No Parking	1'	6'	14.5'	0.5'	---	11' - 11'	---	0.5'	14.5'	6'	1'	66'	22'
One-Way Parking	1'	6'	4'	0.5'	7'	14'	7'	0.5'	4'	6'	1'	51' min.	28'
Both Sides	1'	6'	11.5'	0.5'	7'	14'	7'	0.5'	11.5'	6'	1'	66'	28'
One-Way Parking	1'	6'	4'	0.5'	7'	15'	---	0.5'	4'	6'	1'	45' min.	22'
One Side	1'	6'	14.5'	0.5'	7'	15'	---	0.5'	14.5'	6'	1'	66'	22'
One-Way	1'	6'	4'	0.5'	---	16'	---	0.5'	4'	6'	1'	39' min.	16'
No Parking	1'	6'	17.5'	0.5'	---	16'	---	0.5'	17.5	6'	1'	66'	16'*

* 16-foot width requires a special exception, approved by CDOT and the Chicago Fire Department. Similar consideration should be given to roadways of this type within Evanston.

Subsection III: Street Type Standards

West Evanston Zoning Overlay
III. Street Type Standards

A. General Requirements.

1. All streets, parkways and sidewalks shall be located in dedicated public Right-of-Ways as required by this Section; no private streets are permitted.
2. All streets must meet the minimum requirements of all the City of Evanston's street and construction standards.

B. Intersection Design.

Intersection design should consider pedestrians and bicyclists as well as vehicular users negotiating the intersection.

1. **Curb Radii.** Small curb radii at intersections shorten pedestrian crossing distances and reduce vehicle turning speeds, thereby balancing the ease of travel of the vehicles and pedestrians. Maximum radii at the intersection of all types of neighborhood street types should be no larger than twenty (20) feet. Preferred radii is ten (10) feet.
2. **Alley Intersections.** The curb radii at intersections involving alleys shall be a maximum ten (10) feet.
3. **Crosswalks.** Crosswalks shall be required at all controlled street intersections.
   a. **Dimensions.** Crosswalks shall be six to ten (6-10) feet in width, measured from mid-stripe to mid-stripe.
   b. **Markings.** Crosswalks shall be appropriately indicated on the finished street surface with painted markings and/or other approved City treatments.
   d. **Accessibility Requirements.** Wheelchair-accessible ramps in compliance with or better than the Illinois Accessibility Code shall be provided at all locations in which the sidewalk intersects with the curb of a street. The approach to the ramp shall be aligned with the corresponding sidewalk without any jogs or unnecessary deviations.

C. General Street Type Standards.

1. **Street Types.** Street types defined in this Section outline acceptable street configurations for the streets depicted on the Regulating Plans, Subsection II.
2. **Typical Street Elements.** Typical elements of a vehicular right-of-way are divided into the vehicular and pedestrian realm. Each Street Type detailed in this Section outlines which facilities are applicable to each realm.
   a. **Vehicular Realm.** The vehicular realm is comprised of the travel lanes, bicycle lanes and parking lanes.
   b. **Pedestrian Realm.** The pedestrian realm is typically comprised of the pedestrian facilities, such as sidewalk, path/trail, or off-street bicycle lane, and a parkway that serves to buffer pedestrians or bicyclists from the movements of higher speed vehicles in the vehicular realm.
3. **Fire Access.** Street configurations have been calculated to provide fire truck access. Where on-street parking is available and the total width of all travel lanes is narrower than eighteen (18) feet, the following shall apply.
   a. **Room to Pass.** Per the Fire Chief, where needed, at one hundred (100) foot increments, or as otherwise deemed necessary by the Fire Chief, a twenty (20) foot opening in the on-street parking must be provided to allow vehicles to pull over for a fire truck to pass.
   b. **Driveway or Fire Hydrant Zone.** A driveway or fire hydrant zone may be utilized to fulfill the requirement as set forth in paragraph (a) above.
4. **Vehicular On-Street Parking.** On-street parking, as permitted on designated street types, must meet the following requirements.
   a. **Parallel Parking.** Parallel parking is permitted on designated street types.
   b. **Vehicular Parking Space Dimensions.** Dimensions for parking spaces must meet the City of Evanston's requirements for parking dimensions.
5. **Existing Street Diagram.** Figure III-A defines the street types for the existing streets within and surrounding the Overlay District for reference in the Building Type regulations. Contact the City of Evanston's Department of Public Works for standards for these streets.
6. **Modifications.** Modifications to the requirements relating to streets, parkways, and sidewalks set forth in this Subsection III may be approved as part of the site plan and appearance review process if deemed necessary by the City for public safety or fire protection purposes.

D. Street Standards.

Refer to the Regulating Plans, Subsection II, for permitted locations of these street types. For all street types except the alley, sidewalks and parkways are required on both sides of the street.

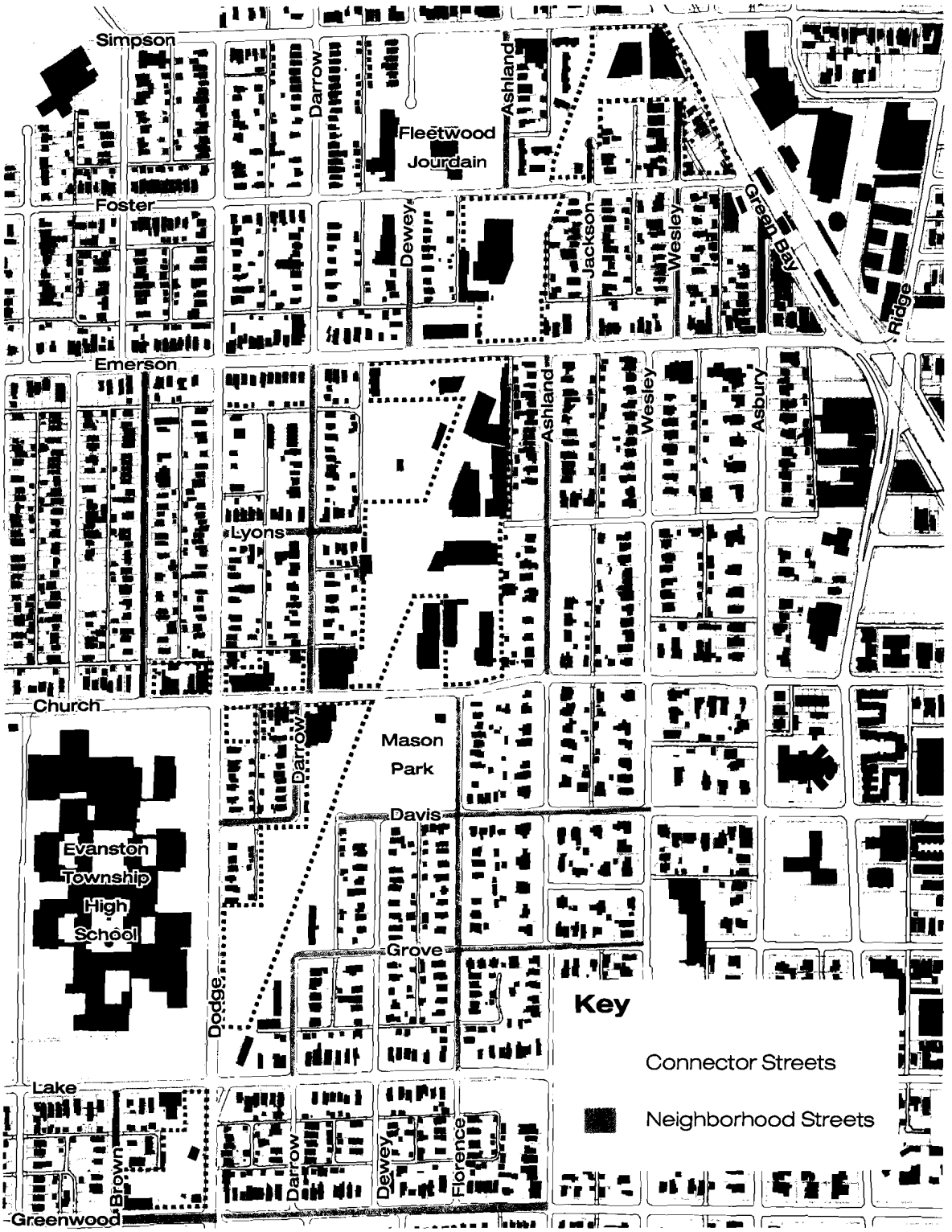


Figure III-A: Existing Street Types.

West Evanston Zoning Overlay
III. Street Type Standards

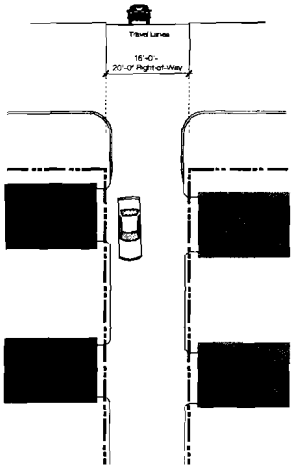


Figure III-1: Alley.

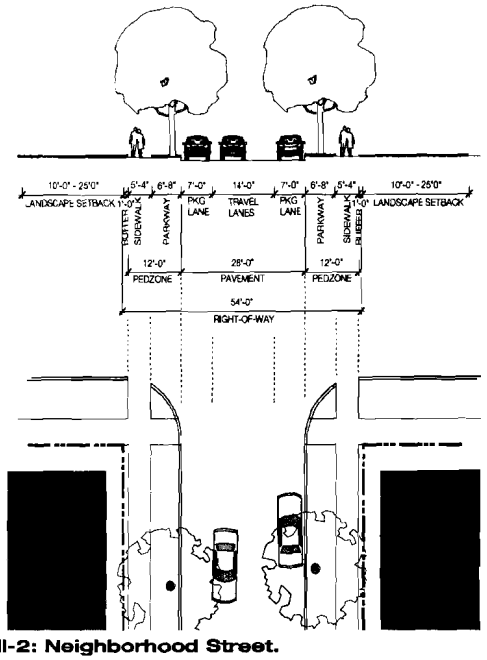


Figure III-2: Neighborhood Street.

		Alley Requirements
	Location	Permitted adjacent to all districts
	Typical Right-of-Way Width	16-20 feet
Vehicular Realm	**Travel Lanes**	N/A
	Lane Width	N/A
	Allowable Turn Lanes	none
	Parking Lanes	prohibited in the right-of-way
	Pavement Width	minimum 16 feet maximum 19 feet as approved by the City
	Curbs	optional
	Target Speed	15 mph
	Permitted Median	prohibited
	Bicycle Facilities	shared
Pedestrian Realm	**Pedestrian Facilities**	shared; travel lanes are shared among drivers, pedestrians, and bicyclists
	Street Buffer	none required

Table III.1: Alley Requirements.

		Neighborhood Street Requirements
	Location	Permitted adjacent to all districts
	Typical Right-of-Way Width	54 feet
Vehicular Realm	**Travel Lanes**	1 yield lane
	Lane Width	minimum 14'
	Allowable Turn Lanes	permitted in place of parking at intersections
	Parking Lanes	both sides of the street
	Pavement Width	minimum 28 feet
	Curbs	required
	Permitted Median	prohibited
	Bicycle Facilities	shared
Pedestrian Realm	**Pedestrian Facilities**	minimum 5'4" wide clear sidewalk on both sides
	Street Buffer	6'8" wide parkway

Table III.2: Neighborhood Street Requirements.

1. **Alley.** The alley is a very low capacity drive located at the rear of parcels. From the alley, access to parking facilities, loading facilities, and service areas, such as refuse and utilities, is possible without a driveway interrupting the street. Alleys shall be developed pursuant to the standards set forth in Table III.1 and as illustrated in Figure III-1.

2. **Neighborhood Street.** The neighborhood street is a low capacity street that primarily serves those properties directly adjacent to it. This street allows for two way traffic and parking on both sides of the street in a reduced right-of-way. Neighborhood streets shall be developed pursuant to the standards set forth in Table III.2, and as illustrated in Figure III-2.

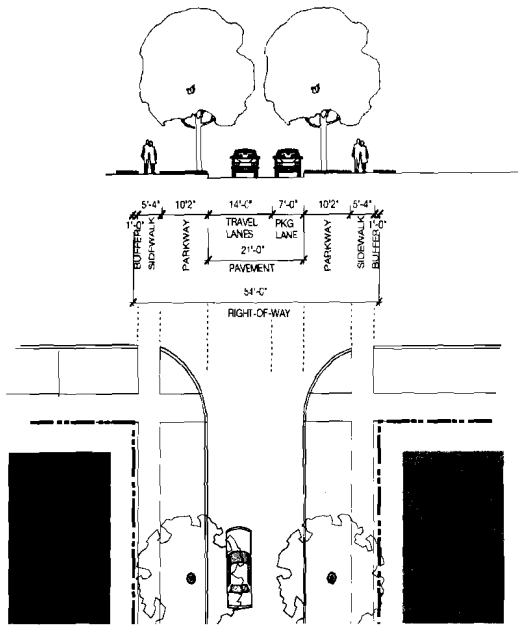


Figure III-3: One Way Neighborhood Street.

	One Way Street Requirements	
	Location	Permitted adjacent to all districts
	Typical Right-of-Way Width	54 feet
Vehicular Realm	**Travel Lanes**	1 lane in one direction
	Lane Width	minimum 14'
	Allowable Turn Lanes	permitted in place of parking at intersections
	Parking Lanes	optional, one or both sides of street, parallel only
	Pavement Width	minimum 21 feet
	Curbs	required
	Permitted Median	prohibited
	Bicycle Facilities	shared
Pedestrian Realm	**Pedestrian Facilities**	minimum 5'4" wide clear sidewalk on both sides
	Street Buffer	minimum 10'2" wide parkway

Table III.3: One Way Neighborhood Street Requirements.

3. **One Way Neighborhood Street.** The one way neighborhood street is a low capacity street that primarily serves those properties directly adjacent to it. This street allows for one way traffic and parking on one or both sides of the street in a narrow right-of-way. One way neighborhood streets shall be developed pursuant to the standards set forth in Table III.3, and as illustrated in Figure III-3.

Appendix E
Polling Session Results

Results by Question

1.) Which is your favorite team?

	Responses (percent)	(count)
Cubs	22.73%	5
Sox	27.27%	6
None of the above	50%	11
Totals	100%	22

2.) Which of these cities do you think has the strongest claim to the invention of the ice cream sundae?

	Responses (percent)	(count)
Ithaca, New York	22.73%	5
Two Rivers, Wisconsin	27.27%	6
Evanston, Illinois	50%	11
Totals	100%	22

3.) What is your primary role in the Evanston community?

	Responses (percent)	(count)
Resident	68.18%	15
Business Owner	0%	0
Student	4.55%	1
Elected Official	0%	0
Employee	18.18%	4
Other	9.09%	2
Totals	100%	22

4.) How long have you lived in Evanston?

	Responses (percent)	(count)
0-4 years	4.55%	1
5-9 years	9.09%	2
10-19 years	13.64%	3
20+ years	40.91%	9
I do not live in Evanston	31.82%	7
Totals	100%	22

Appendix E
Polling Session Results

5.) Where in Evanston do you live?

	Responses (percent)	(count)
North of Davis, West of Ridge	13.64%	3
North of Davis, East of Ridge	4.55%	1
South of Davis, West of Ridge	22.73%	5
South of Davis, East of Ridge	22.73%	5
I do not live in Evanston	36.36%	8
Totals	100%	22

6.) What is your primary mode of transportation?

	Responses (percent)	(count)
Bicycle	26.09%	6
Bus	13.04%	3
Car	34.78%	8
Motorcycle/Scooter	4.35%	1
Train	17.39%	4
Walking	0%	0
Wheelchair	4.35%	1
Other	0%	0
Totals	100%	23

7.) Did you complete the community survey?

	Responses (percent)	(count)
Yes	100%	6
No	0%	0
Totals	100%	6

8.) Did you complete the community survey?

	Responses (percent)	(count)
Yes	55%	11
No	45%	9
Totals	100%	20

9.) The City should take a stronger role in ensuring sidewalk maintenance through:

	Responses (percent)	(count)
Increased enforcement	50%	12
Promotional/Encouragement programs	37.50%	9
Higher fines	4.17%	1
None	8.33%	2
Totals	100%	24

10.) In the case of repairing tripping hazards, should participation by residents in the 50/50 program be voluntary or mandatory?

	Responses (percent)	(count)
Voluntary	41.67%	10
Mandatory	58.33%	14
Totals	100%	24

11.) In consideration of all the responsibilities of the Police Department, do you agree that the City should take a stronger role in enforcing compliance at crosswalks?

	Responses (percent)	(count)
Strongly Agree	66.67%	16
Agree	12.50%	3
Neutral	12.50%	3
Disagree	4.17%	1
Strongly Disagree	4.17%	1
Totals	100%	24

12.) Should the City implement a supplementary program whereby bike racks may be requested within the public right-of-way:

	Responses (percent)	(count)
By any community member	12%	3
By property owners, adjacent to their property	28%	7
Both	28%	7
Neither	32%	8
Totals	100%	25

13.) How should a supplemental bike rack program be funded?

	Responses (percent)	(count)
100% by property owners	30.43%	7
50% by property owners / 50% by City	39.13%	9
100% by City	30.43%	7
Totals	100%	23

14.) Do you agree that recent efforts to implement on-street bicycle facilities where possible should be continued?

	Responses (percent)	(count)
Strongly Agree	58.33%	7
Agree	16.67%	2
Neutral	16.67%	2
Disagree	0%	0
Strongly Disagree	8.33%	1
Totals	100%	12

Appendix E
Polling Session Results

15.) Do you agree that recent efforts to implement on-street bicycle facilities where possible should be continued?

		Responses (percent)	(count)
Strongly Agree		37.50%	9
Agree		29.17%	7
Neutral		25%	6
Disagree		4.17%	1
Strongly Disagree		4.17%	1
	Totals	100%	24

16.) Are you familiar with the bus flag stop policy?

		Responses (percent)	(count)
Yes		79.17%	19
No		20.83%	5
	Totals	100%	24

17.) Do you prefer flag stops or pre-determined stops for your bus service?

		Responses (percent)	(count)
Flag stops		34.78%	8
Pre-determined stops		52.17%	12
No preference		13.04%	3
	Totals	100%	23

18.) Do you agree that Evanston expand its subsidized taxi program to include low-income residents?

		Responses (percent)	(count)
Strongly Agree		30.43%	7
Agree		17.39%	4
Neutral		21.74%	5
Disagree		8.70%	2
Strongly Disagree		21.74%	5
	Totals	100%	23

Appendix E
Polling Session Results

19.) Do you agree that Evanston should provide a greater subsidy for the existing subsidized taxi program?

	Responses (percent)	(count)
Strongly Agree	13.04%	3
Agree	8.70%	2
Neutral	26.09%	6
Disagree	26.09%	6
Strongly Disagree	26.09%	6
Totals	100%	23

20.) Would you most favor a transit pass program funded by:

	Responses (percent)	(count)
Employer contributions	34.78%	8
Developer impact fees	17.39%	4
Parking revenue	13.04%	3
City taxes	8.70%	2
I am not in favor of a transit pass program	26.09%	6
Totals	100%	23

21.) Do you agree that the City should continue with the current, accelerated level of street resurfacing?

	Responses (percent)	(count)
Strongly Agree	56.52%	13
Agree	26.09%	6
Neutral	17.39%	4
Disagree	0%	0
Strongly Disagree	0%	0
Totals	100%	23

22.) Do you agree that the City should offer a menu of paving options for upgrading alleys?

	Responses (percent)	(count)
Strongly Agree	47.83%	11
Agree	26.09%	6
Neutral	17.39%	4
Disagree	0%	0
Strongly Disagree	8.70%	2
Totals	100%	23

23.) Do you agree that daytime parking restrictions within ¼-mi. of train stations should be relaxed to allow access to all Evanston residents?

	Responses (percent)	(count)
Strongly Agree	33.33%	7
Agree	4.76%	1
Neutral	19.05%	4
Disagree	14.29%	3
Strongly Disagree	28.57%	6
Totals	100%	21

24.) Do you agree that Evanston residents living outside of the permit zone should have access to on-street parking within ¼-mi. of train stations for a fee?

	Responses (percent)	(count)
Strongly Agree	23.81%	5
Agree	19.05%	4
Neutral	19.05%	4
Disagree	14.29%	3
Strongly Disagree	23.81%	5
Totals	100%	21

25.) Do you agree that non-Evanston residents should have access to on-street parking within ¼-mi. of train stations for a fee?

	Responses (percent)	(count)
Strongly Agree	17.65%	3
Agree	17.65%	3
Neutral	17.65%	3
Disagree	5.88%	1
Strongly Disagree	41.18%	7
Totals	100%	17

26.) Do you agree that non-Evanston residents should have access to on-street parking within ¼-mi. of train stations for a fee?

	Responses (percent)	(count)
Strongly Agree	13.64%	3
Agree	18.18%	4
Neutral	9.09%	2
Disagree	13.64%	3
Strongly Disagree	45.45%	10
Totals	100%	22

Appendix E
Polling Session Results

27.) Do you agree that the City should consider increasing parking meter rates?

		Responses (percent)	(count)
Strongly Agree		80%	4
Agree		0%	0
Neutral		0%	0
Disagree		0%	0
Strongly Disagree		20%	1
	Totals	100%	5

28.) Do you agree that the City should consider increasing parking meter rates?

		Responses (percent)	(count)
Strongly Agree		36.36%	8
Agree		13.64%	3
Neutral		18.18%	4
Disagree		4.55%	1
Strongly Disagree		27.27%	6
	Totals	100%	22

29.) Do you agree that it would be beneficial to introduce a new technology to make paying for parking more flexible?

		Responses (percent)	(count)
Strongly Agree		52.17%	12
Agree		8.70%	2
Neutral		17.39%	4
Disagree		4.35%	1
Strongly Disagree		17.39%	4
	Totals	100%	23

30.) Without consideration for cost, what is your preference in terms of making transportation improvements?

		Responses (percent)	(count)
Pedestrian		54.55%	12
Bicycle		13.64%	3
Bus Stop Amenities		31.82%	7
Subsidized Taxi Service		0%	0
	Totals	100%	22

Appendix E
Polling Session Results

31.) What is the second most important?

		Responses (percent)	(count)
Pedestrian		45.45%	10
Bicycle		31.82%	7
Bus Stop Amenities		18.18%	4
Subsidized Taxi Service		4.55%	1
	Totals	100%	22

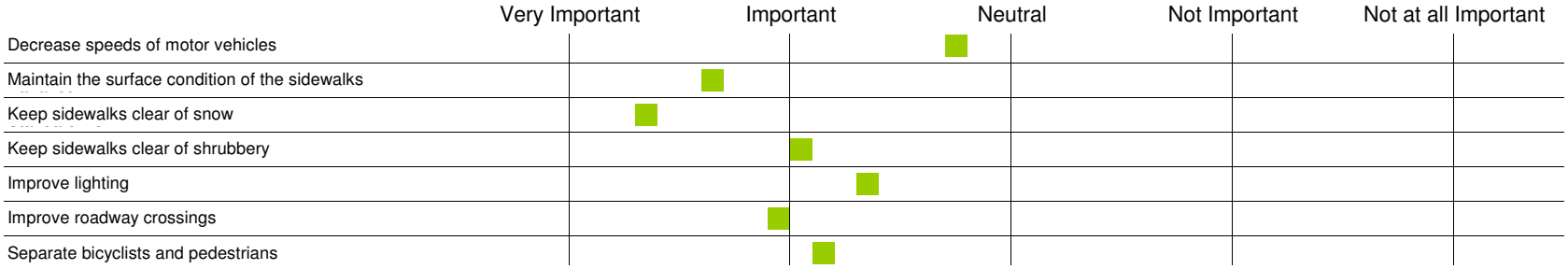
32.) If the City had a $100,000 to spend on bicycle, pedestrian or transit improvements, what would you most recommend?

		Responses (percent)	(count)
0.5 miles of sidewalk replacement		42.86%	9
300 bicycle racks		28.57%	6
4 bus stops with concrete pad, shelter and bench		19.05%	4
22,400 subsidized taxi coupons		9.52%	2
	Totals	100%	21

Appendix F
Community Survey Results

Pedestrian Facilities

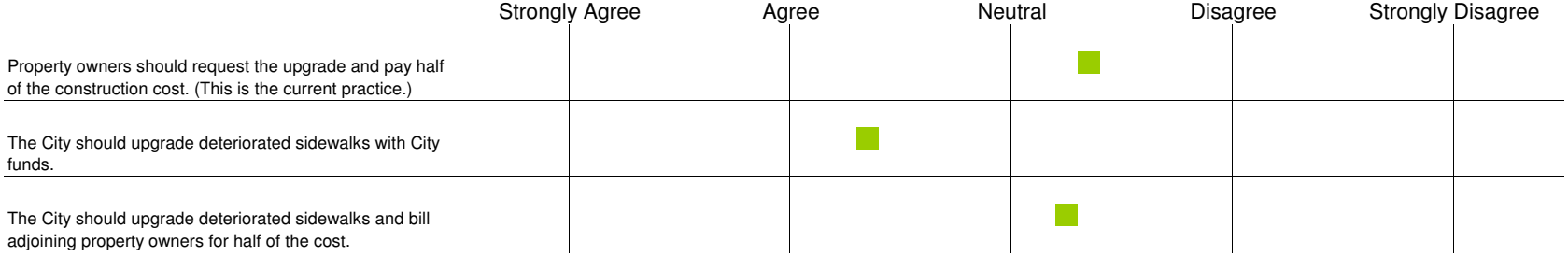
2 Rate the importance of the following improvements to the pedestrian environment in Evanston:



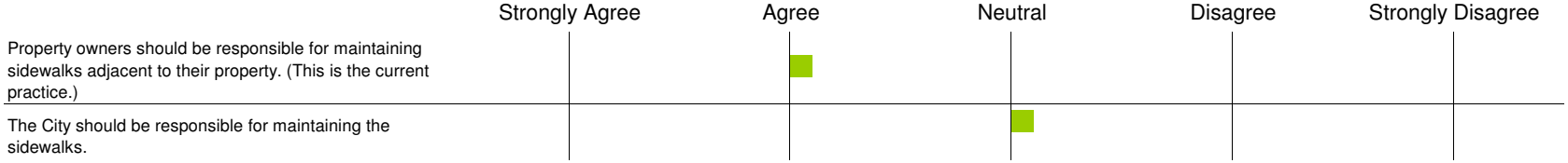
3 How comfortable are you with allowing your elementary and middle school children to walk to school alone?

Very comfortable	7.64%
Somewhat comfortable	8.80%
Neutral	3.47%
Somewhat uncomfortable	12.96%
Very uncomfortable	8.10%
I do not have elementary/middle school children	**59.03%**

4 The City of Evanston is evaluating the current practice of improving existing sidewalks. Do you agree or disagree with the following statements?



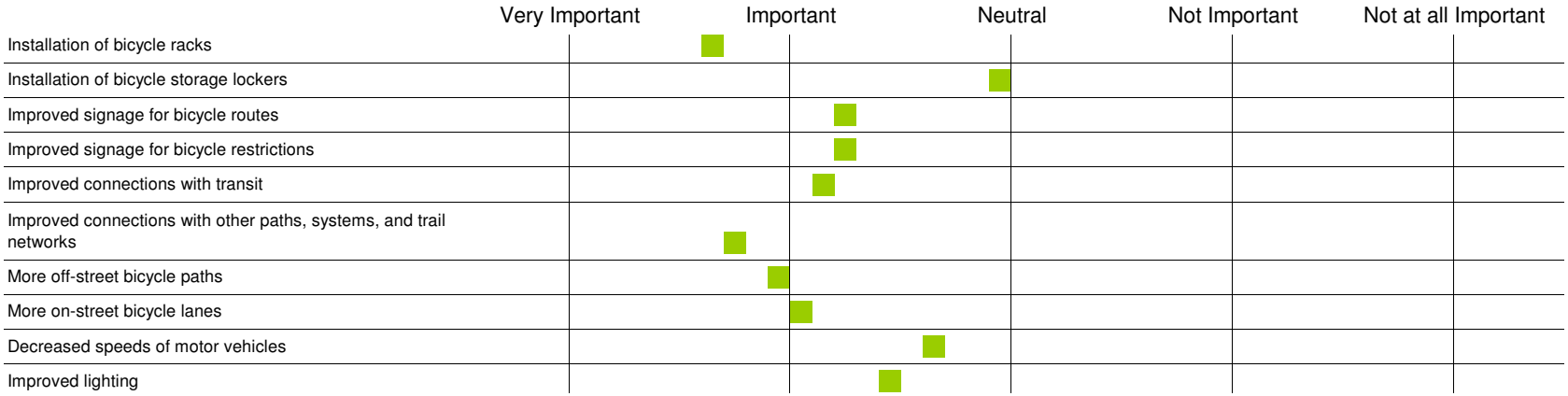
5 The City of Evanston is evaluating the maintenance practices (snow removal, clearing shrubbery) of sidewalks. Do you agree or disagree with the following statements?



Appendix F
Community Survey Results

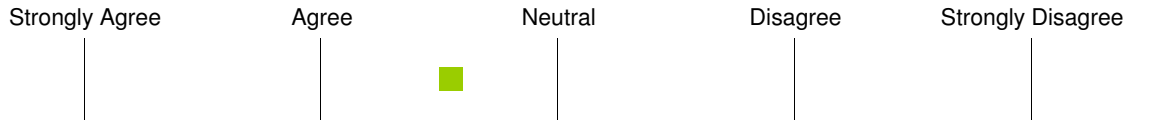
Bicycle Facilities

7 Rate the importance of the following bicycle improvements in Evanston:



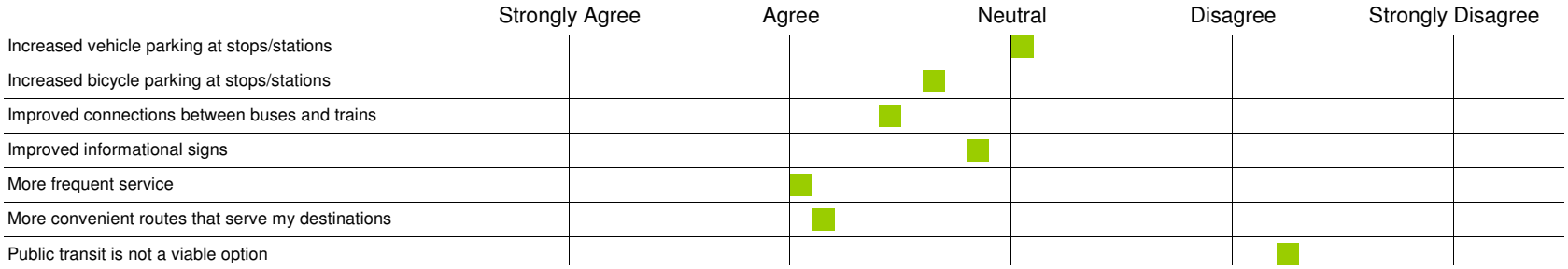
8

Do you agree or disagree that the City should consider funding a bicycle commuter station downtown?



Transit

11 Would you take public transit more if any of the following were offered?

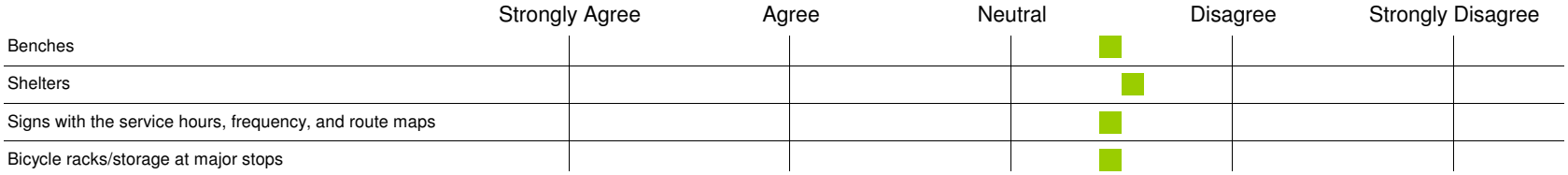


12 Do you prefer flag stops (the current practice in Evanston) or pre-determined stops for your bus service?

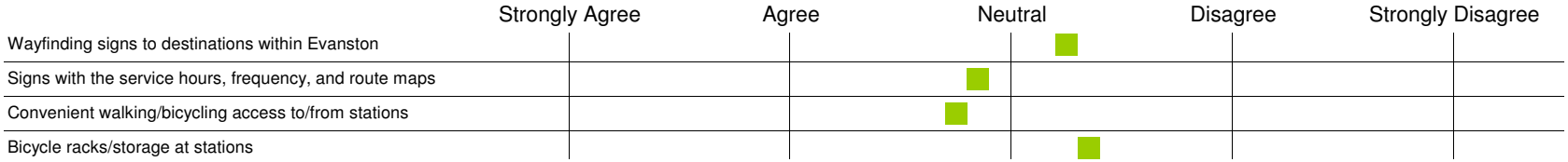
I prefer flag stops	22.36%
I prefer pre-determined stops	**31.97%**
I have no preference	17.55%
I am not sure of the difference between the two options	5.53%
I do not take the bus	22.60%

Appendix F
Community Survey Results

13 Are the following amenities adequately provided at bus stops?



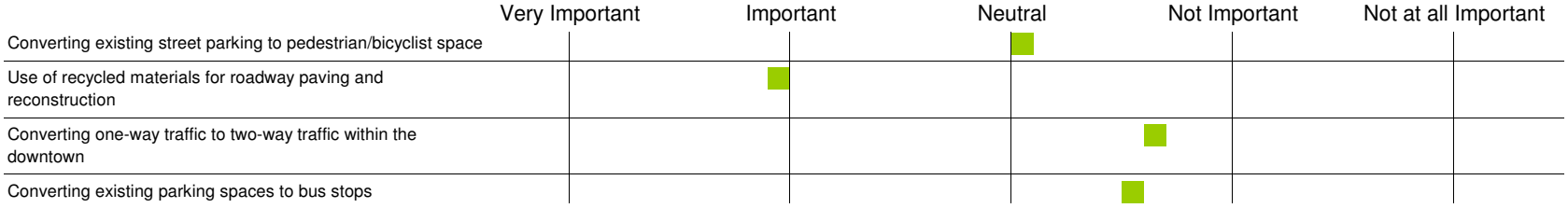
14 Are the following amenities adequately provided at train stations?



15 Do you agree or disagree that the City should fund a bus service connecting residents and employees within Evanston to train stations and downtown in addition to the existing Pace and CTA services?

Roadway/Alley

16 Rate the importance of the following improvements to the roadway network in Evanston:

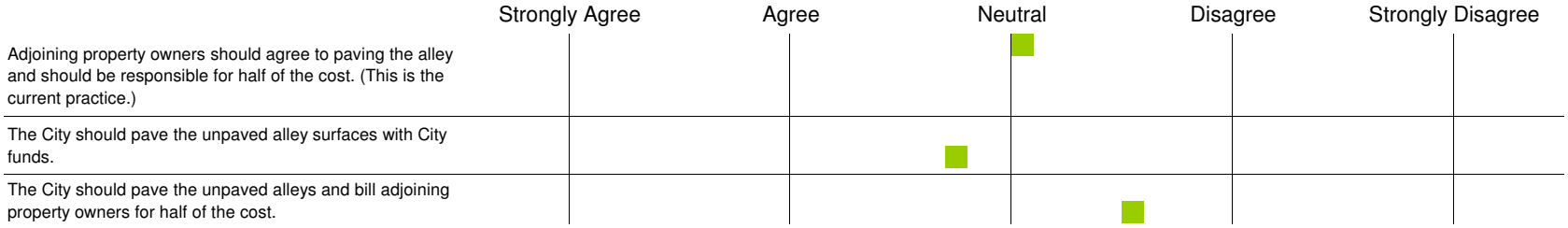


17 Paving alleys comes with an upfront cost that is shared by the City and residents. Paved alleys save money for the City by reducing long-term maintenance costs. With that in mind, which type of alley surface do you prefer?

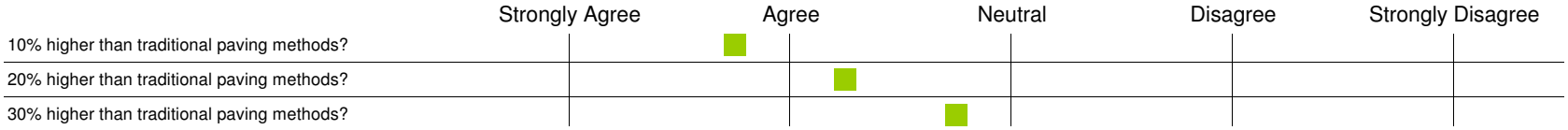
Unpaved (Gravel)	11.72%
Paved (Concrete)	**69.33%**
Not Sure	18.95%

Appendix F
Community Survey Results

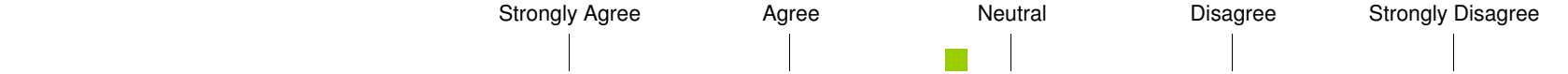
18 The City of Evanston is evaluating the current practice of paving alleys. Do you agree or disagree with the following statements?



19 Would you support the construction/reconstruction of alleys with permeable pavements, if the cost is...

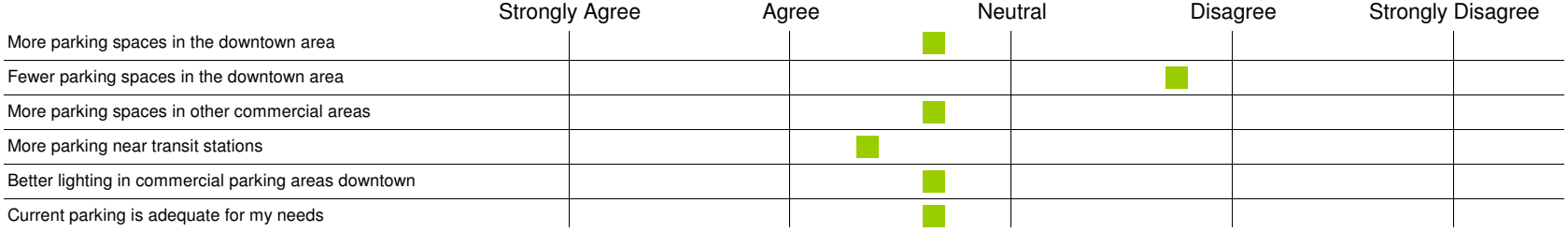


20 Should the City of Evanston use cameras to cite violators who disobey the RED (STOP) traffic signal at intersections?



Parking (Vehicular)

21 How should parking in the City of Evanston be improved?

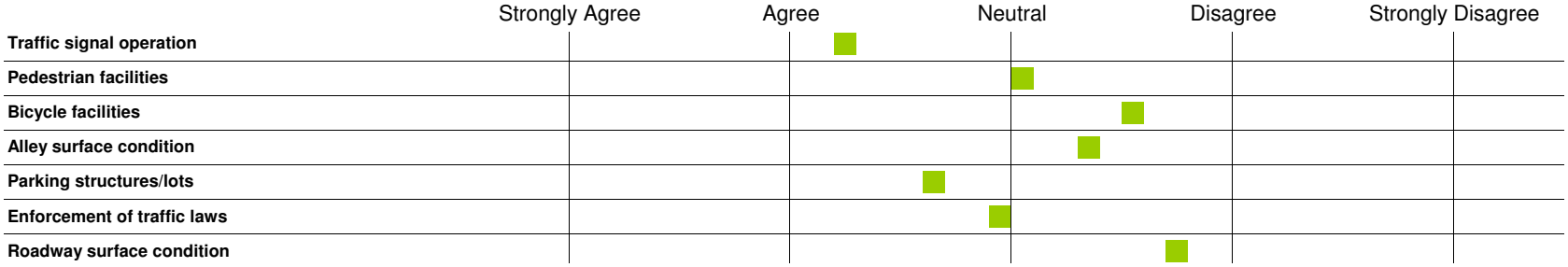


Appendix F
Community Survey Results

22 Do you agree or disagree with the following statements regarding the parking system within the City of Evanston:

Funding

23 Do you agree or disagree that the City adequately provides for the following:



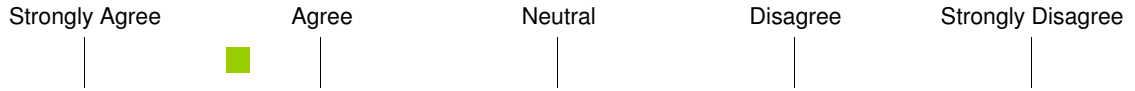
24 Please rank the importance (1-9) of the Citys funding of each of the following: (1=most important...9=least important)

Maintain City roadway surfaces in good condition (44.5% ranked #1)
Pedestrian facilities
Bicycle facilities
Traffic signal operations
Amenities (shelters, benches, signs, etc.) at bus stops and train stations
Increased enforcement of traffic laws
Pave the unpaved alleys
City-sponsored neighborhood bus service
Construct new parking structures/lots

Appendix F
Community Survey Results

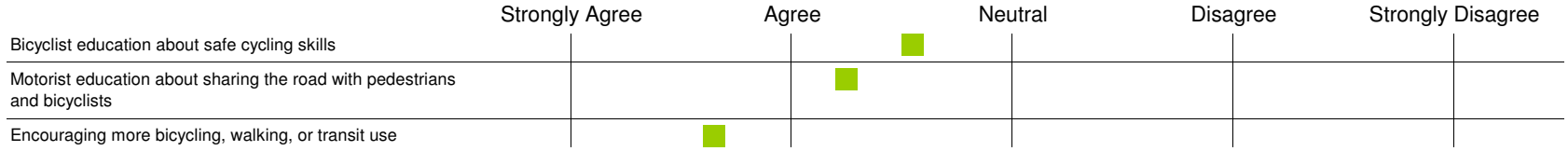
Policy

25 Do you agree or disagree that Evanstons streets should accommodate all users, including bicyclists, pedestrians, transit, and vehicles?



Programs

26 Do you agree or disagree that City funds should be invested in the following transportation programs?



27 Would you support an Eco-Pass for transit use if funded from City revenue?