

# Data and Evaluation Background

## Supplement to Community Works Evaluation Document

The Community Works Data and Evaluation Background supplemental report provides detailed information to support the evaluation material in the Community Works Program Evaluation. The measures included in this report were selected through a thoughtful internal process which considered the Community Works (CW) program vision and its five keystone goals:

1. Enhance the tax base
2. Stimulate economic development and job growth
3. Strengthen and connect places and people
4. Innovate and advance sustainability
5. Lead collaborative planning and implementation

The CW Evaluation consists of two areas: *performance evaluation* and *outcome evaluation*. (Figure 1.1)

Performance evaluation is based on:

- **Inputs** - resources, such as funding, that are used to perform program **activities**.
- **Outputs** - the direct results of a program's activities, such as infrastructure improvements.

Outcome evaluation is based on:

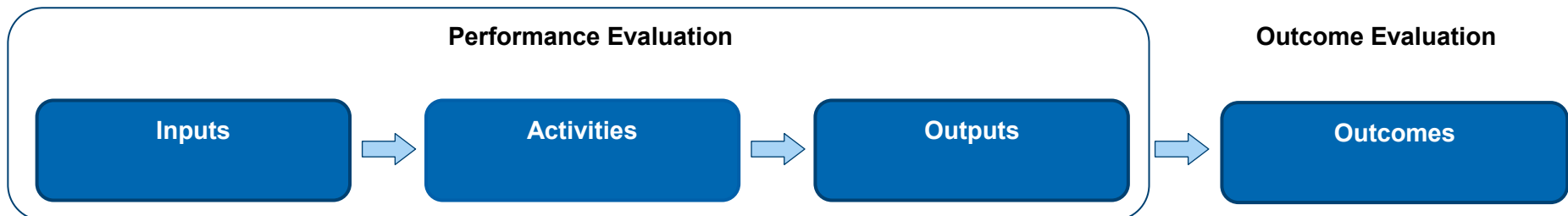
- **Outcomes** - the benefits or changes that result from the outputs of a program. These are usually not achievable in a short time. Outcome measurement should account for context (e.g. larger trends and other major variables contributing to the observed/measured changes).

Measuring outcomes of community and economic development programs is a common and persistent challenge, even for thorough, well-funded studies, because such a wide range of variables often contributes to the outcomes and the outcomes may not be achieved until well after program implementation.

### Development of the Measures

Through 2008, Housing, Community Works, and Transit (HCWT) with support from Research, Planning, and Development (now Center for Innovation and Excellence) identified and evaluated around 50 potential measures that were aligned with the five CW principles. From these initial measures, staff chose four for integration in the **Midtown Report Card** in 2011 as an initial evaluation of some impacts associated with that program.

Figure 1.1 Basic evaluation logic model



In advance of the development of this report, HCWT staff revisited the initial 50 measures to prioritize key measures for use in this evaluation that could be used across CW programs. Several factors influenced the selection of those measures for CW programs:

- *Data availability:* Data sources needed to be recent and collected at least annually. The data needed to be easily collectable and complete.
- *Granularity:* The data needed to be available at a fine enough level (e.g. parcel or block based) to allow meaningful comparisons within CW program areas.
- *Validity:* The measure needed to measure something that a CW investment could reasonably be expected to impact.
- *CW Goals:* The measures needed to tie back to the CW program goals and to the goals of individual programs.

HCWT staff, in consult with HCWT leadership, identified 12 measures that met these criteria. These measures are identified in Figure 1.2 and include input measures, output measures, and outcome measures. In addition, Figure 1.2 identifies how these 12 measures line up with the five Community Works goals. As the figure shows, each of the CW program goals has several measures to gauge their effectiveness. The list below provides some more detail:

**Inputs and Activities**

- *Program funding:* the amount invested in CW program activities by the County and its partners for planning, land acquisition, and infrastructure investment.
- *CW Partnerships:* the number and type of partnerships created by CW programs, including

**Figure 1.2 Comparing Community Works measures with CW program goals**

	KEYSTONE GOALS				
	Enhance Tax Base	Economic Development & Job Growth	Connect Places and People	Sustainability	Innovate / Advance / Collaborative Planning & Implementation
<b>Inputs and Activities</b>					
1. Program funding	X	X	X	X	X
2. CW partnerships					X
3. Community engagement			X		X
<b>Outputs</b>					
1. Connectivity improvements			X	X	
2. Natural systems improvements			X	X	
3. Developable land	X	X			
<b>Outcomes</b>					
1. Property values	X				
2. Real estate development	X	X			
3. Building permits	X	X			
4. Community vision metrics	X	X	X	X	X
5. Crime and safety			X		
6. Accessibility		X	X	X	

financial and non-financial partners.

- *Community Engagement:* measures how CW programs engage stakeholders in these efforts, with an emphasis on traditionally underrepresented populations.

### **Outputs**

- *Connectivity Improvements:* improvements — such as trails, bikeways, sidewalks, and ADA enhancements — that make it easier for people to walk, bike, or travel through their communities and to area destinations.
- *Natural Systems Improvements:* improvements that benefit natural systems and the environment, including watershed and creek enhancements and parks and open space.
- *Developable Land:* amount of land made available for redevelopment.

### **Outcomes**

- *Property Values:* the change in the value of properties within CW program areas — which also ties to the amount of property taxes generated by those properties. These changes can be compared with values in surrounding communities to determine the measure impact of the CW program on those values.
- *Real Estate Development:* the amount of commercial and residential development in CW program areas helps determine whether CW programs enhance economic vitality in communities.
- *Building Permits:* building permit activity tracks the level to which Community Works program areas are attracting investment relative to other parts of Minneapolis and /or the county.
- *Community Vision Metrics:* these measures look at improvements in quality of life and livability for people in CW program areas.
- *Crime and safety:* measures the amount of crime in program areas— a potential proxy for quality of life.
- *Accessibility:* measures whether program area residents have better

access to jobs and other destinations via walking, biking, and transit after program investments—includes not only quantity of access (number of jobs) but also quality of access (is it a better or safer walking environment).

HCWT staff received valuable assistance from Strategic Planning and Resources (SPR) and the Center for Innovation and Excellence in reviewing and collecting some of the data. In addition, HCWT contracted with the University of Minnesota to provide technical assistance both in the conduct of the evaluation and in the analysis of several performance measures related to economic activity and accessibility. The results from the University's components of the evaluation are summarized in this document and included as an attached document.

## Input 1: Program Funding

**What is it?** This measure identifies total dollar investment in 17 Community Works program areas from inception through December 2013. This measure tracks financial investment by both Hennepin County, through Community Works and other county programs, and through leveraged partner funds.

### Community Works goals:

- ◇ Enhance the tax base
- ◇ Stimulate economic development and job growth
- ◇ Strengthen and connect places and people
- ◇ Innovate and advance sustainability
- ◇ Lead collaborative planning and implementation

**Programs included?** This measure includes all programs funded through the Community Works capital budget. Note, however, that several of these projects are not typical Community Works project and are excluded from further analysis in this report.

The Van White project was a bridge that was not completed as a CW effort. Hiawatha Crossings funded the Sabo Bridge along the Midtown Greenway—those impacts are folded into the Midtown Greenway evaluation. Corridor Planning is pool of funding for targeted planning projects and does not

involve capital investments.

**What are the results?** Hennepin County has directly expended \$73 million of county funds (95% general obligation bonds and 5% property taxes) in 17 program areas as of December 2013. Two-thirds of that funding has been on three programs: Lowry Avenue North, Midtown/29th Street, and the Humboldt Greenway.

**Figure 2.1 Investment in CW programs (through December 2013)**

	CW Capital Expenditures	Partner Funds (thru CW )	Other HCWT Investment	Addnl Public Investment	TOTAL
<b>Humboldt</b>	10,815,595	18,034,405	394,380	0	29,244,380
<b>Midtown</b>	14,345,081	5,810,678	7,230,000	0	27,385,759
<b>Lowry Avenue North</b>	23,123,862	7,499,757	927,818	75,000	31,626,437
<b>Minnehaha-Hiawatha</b>	1,135,073	700,000	2,601,950	1,305,000	5,742,023
<b>66th Street</b>	7,221,426	180,000	1,670,000	0	9,071,426
<b>Brooklyn Park SNAP</b>	2,512,937	0	0	46,700,000	49,212,937
<b>Bottineau</b>	1,643,440	1,147,000	584,250	0	3,374,690
<b>Southwest</b>	(451,240)	825,000	1,880,000	1,011,200	3,264,960
<b>Shady Oak</b>	15,125	0	0	0	15,125
<b>Penn Ave</b>	28,690	0	300,000	220,000	548,690
<b>Daylighting Creeks</b>	465,287	0	0	3,000,000	3,465,287
<b>Lowry Avenue NE</b>	0	0	0	0	0
<b>Van White</b>	7,938,000	0	0	0	7,938,000
<b>Hiawatha Crossing</b>	1,443,864	4,212,679	0	0	5,656,543
<b>Victory Memorial</b>	1,847,608	1,615,898	0	0	3,463,506
<b>Fort Snelling</b>	326,119	1,865,500	0	0	2,191,619
<b>Corridor Planning</b>	758,622	0	0	0	758,622
<b>TOTAL</b>	<b>\$73,169,489</b>	<b>\$41,890,917</b>	<b>\$15,588,398</b>	<b>\$52,311,200</b>	<b>\$182,960,004</b>

This direct investment has leveraged \$42 million of city, state, and federal funds that have directly passed through 10 programs' capital budgets—much of that in the Humboldt Greenway program. CW has also leveraged more than \$52 million of local public investment (mostly in Brooklyn Park) in CW program areas.

HCWT has also spent \$16 million of “program” funds in eight CW program areas, including Midtown, Minnehaha-Hiawatha, Southwest, and 66th Street. Program funds include Transit-Oriented Development and Affordable Housing Incentive Fund funded projects.

**How is it calculated?** The CW capital expenditures and partner funds are directly reflected in the County's capital budget data. Other PW program funds are available through AHIF and TOD project managers. Partner funds direct expenditures have been reported to CW program managers and are reflected in the chart.

**Definition of terms:**

*CW Capital Expenditures:* Expended funds from Hennepin County Community Works capital budget.

*Partner Funds (thru CW):* Federal, state, or local funds for CW programs which are **revenue** to county and then expended through the capital budget.

*Other HCWT Investments:* Funds from other Hennepin programs (Transit-Oriented Development and Affordable Housing Incentive Fund) spent on projects within CW program areas.

*Additional Public Investment:* Federal, state, local, or other funds directly spent within Community Works program areas which do not flow through Hennepin County.

**Sources:**

- ◇ Hennepin County Office of Budget and Finance
- ◇ Community Works program managers

## Input 2: Community Works Partnerships

**What is it?** This measure tracks CW programs' effectiveness in building relationships with a wide variety of partners in scoping, planning, designing, and implementing programs. The measure includes the number of partners, the breadth of partnerships, and the role these partners have in CW programs.

### Community Works goal:

◇ *Lead collaborative planning and implementation*

**Programs included?** Measure includes partners for all CW projects.

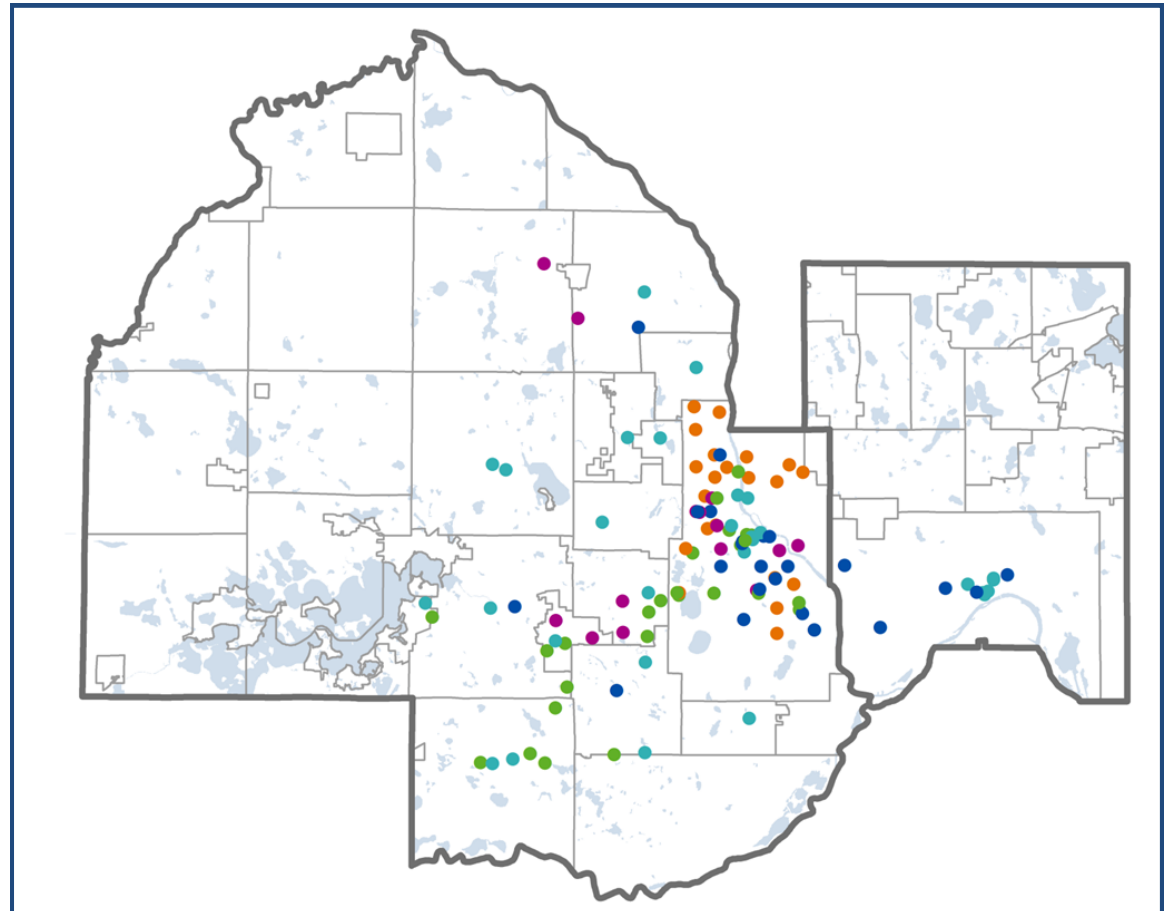
**What are the results?** The Community Works program has created partnerships with over 125 different organizations, including advocacy and other nonprofits, businesses, education and health, government, and neighborhood organizations. Figure 3.1 shows the geographic distribution of partners, with many based in Minneapolis, downtown St Paul, and along the Southwest suburbs.

These partner organizations participate on project advisory and steering committees, help with outreach and engagement, identify opportunities to align investments, provide technical assistance, and invest directly or indirectly in CW programs.

### Sources:

◇ Community Works program managers

Figure 3.1 Community Works partners - location map



### Input 3: Community Engagement

**What is it?** This measure tracks CW programs’ engagement activities with stakeholders and community members.

**Community Works goal:**

- ◇ *Lead collaborative planning and implementation*
- ◇ *Strengthen and connect places and people*

**Programs Included?** HCWT staff have been tracking community outreach activities for many programs initiated since 2007. Minnehaha-Hiawatha CW is now in its implementation phase, so community engagement is limited to project-specific activities. Bottineau, Lowry Northeast, Penn, and Southwest are still in the midst of their planning phases, so community engagement activities are more robust. Projects created through the CIP process, e.g. 66th Street and SNAP, tended to have more targeted county investment and less identified need for community outreach.

**What are the results?** Each CW program took an approach to community engagement that reflected the unique characteristics of the program area and an integrated new techniques for engaging stakeholders. Figure 4.1 summarizes the number of events / activities and the estimated number of contacts for CW programs that include a high level of community engagement in their work.

**Bottineau Community Works:** The program is in an early phase of engaging communities in the Bottineau LRT station area planning process. A grant from Blue Cross and Blue Shield of Minnesota (BCBSM) is providing funding to focus on designing healthy communities and on targeting underrepresented populations. The community engagement plan is intended to result in more participation, better information, and increased trust and support for the program.

**Strategies:**

- Identifying issues and opportunities that LRT planners can address early in the planning process

**Figure 4.1 Community engagement overview (since 2007)**

Program	Est. Number of Events / Activities	Est. Number of “Contacts”
Lowry Northeast	7	278
Minnehaha-Hiawatha	26	820
MHCW – CARE Project	30	1,320
Penn Avenue <sup>1</sup>	85	1,413
Southwest	11	905

- Educating community representatives on station area planning so they can be more effective in their participation
- Using BCBSM funding for a cohort of community based organizations to reach traditionally underrepresented populations to enable people to share in their own language and cultural setting.

**Lowry Avenue NE Community Works:** Community engagement activities in the program planning phase have included a public workshop on the program and a business owner meeting. Staff have also attended neighborhood meetings and community events to provide basic info about the program and seek input. The public workshops were well-attended due to comprehensive outreach efforts.

**Strategies:** Extensive outreach for public workshop included:

- Govdelivery monthly newsletter
- Neighborhoods advertised meeting in monthly publications
- Electronic media to reach a broader audience, facilitate more regular communication, advertise events, and provide platform for submitting comments

**Minnehaha-Hiawatha Community Works:** Initial engagement efforts were designed to identify concerns, strategies and desired outcomes for stakeholders in the program area. After completion of the Strategic Investment Framework in 2010, outreach efforts have been for specific projects under the MHCW program, such as the streetlighting or intersection improvement projects.

In addition, as part of the MHCW program, the County received a CARE (Community Action for a Renewed Environment) Project award from the US Environmental Protection Agency to do extensive community outreach to identify and address environmental health risks in the area. This effort included three phases of engagement to identify community assets and risks, community ranking of identified environmental health risks, and prioritization of strategies to address risks.

*Strategies:*

- Initial engagement targeted people throughout the community — at LRT stations, park buildings, faith communities, police station and community events.
- Sponsored community forum with breakout presentations on area’s history, market conditions, and rail industry.
- Door knocked all properties in corridor area to get broader community input into program.

**Penn Avenue Community Works (PACW):** The program includes a detailed community engagement plan for each program phase. Results from initial community outreach shaped the program process and scope. The plan is intended to build long-term community trust with Hennepin County Public Works and the program team and to focus community engagement on the programmatic elements that the community can have significant and meaningful impact on.

*Strategies:*

- Strengths-based approach
- A dedicated staff person to manage community engagement
- Being accountable and honest to the community: communicate how

**Figure 4.2 Community engagement techniques and locations**

Techniques	
Community conversations	Open houses
Door knocking	Social media
Dot-mocracy	Surveys
Focus groups	Govdelivery
In-person interviews	Tabling at community events
Interpretation and translation	Web pages
Online surveys	

Locations / Events	
Business association meetings	National Night Out
Community events	Neighborhood org meetings
Faith community festivals	Open Streets events
Farmers markets	Police stations
Health fairs	Street corners
Libraries	Transit stations / stops

and when community input can influence the process and program and why and when it cannot

- Established “Conditions for Success” : conditions that are essential for achieving the community's vision for Penn Avenue
- Conducted door-to-door survey of 600 residents in the program area

**Southwest Community Works:** In 2013, the program focused on engaging the community in the development of the Investment Framework in collaboration with the Southwest Project Office (SPO). The collaboration helped to avoid engagement fatigue and reduce confusion among stakeholders.



Community input, along with city staff knowledge, directly informed the identification of infrastructure improvements in the investment frameworks. Moving into implementation, the community engagement activities will focus on smaller community groups and elements specific to each station area.

*Strategies:*

- An open house in each city along the proposed LRT route
- Integrating efforts with SPO in attending existing open-houses and other events
- Online engagement: Mind-mixer (interactive, online commenting tool), redesign of website to provide info in a more user friendly way
- Attending and tabling at other planned events: SPO open houses and Community Development Initiative event series.
- Coordination with Corridors of Opportunity grantees: Blake Road Corridor Collaborative (serving mostly low-income residents) and New American Academy (serving mostly new immigrants) helped incorporate perspectives of traditionally under-represented groups

**What were the Challenges and Lessons Learned?** In engaging the communities they serve, Community Works programs have encountered common challenges. The programs build on lessons learned from earlier efforts and share strategies and approaches for addressing challenges.

*Reaching historically underrepresented populations:* Traditional outreach activities, such as open houses and neighborhood group meetings only reach a small part of the community. Historically underrepresented populations (including low income communities, people of color, non-English speakers, and persons with disabilities) may find it particularly difficult to be reached at these types of events. CW programs have evolved their community engagement activities with an eye on ensuring participation among all populations by bringing engagement activities to the community (e.g. going to local events and local hangouts) and by contracting with community-based groups to help with engagement.

*Maintaining realistic expectations:* Program teams have learned that, in communicating with the public, it is important to maintain realistic

expectations about what the programs can and cannot accomplish. An example of building on lessons learned can be seen in PACW's community engagement plan to be accountable and honest to the community and communicate how and when community input can influence the process and when it cannot.

*Multiple processes can be confusing for the public:* The timing of Community Works programs typically overlaps with other related projects in the program areas. For example, the Southwest LRT planning process is concurrent with the Southwest Community Works program. Multiple engagement efforts for different projects can lead to confusion among the public. Program teams have found that community engagement activities and communications must be appropriately coordinated and timed with other processes in the program areas.

*Lengthy program timeline:* Between program initiation and program implementation, several years are typically required for comprehensive Needs Assessment and Planning/Concept Design phases. The lengthy program duration can pose challenges to effective community engagement because participants lose interest, residents and participants turn over, and new participants are not connected to the original framework. The Penn Avenue CW Early Results effort is an attempt to address this challenge.

**Notes:**

- <sup>1</sup> Penn Avenue numbers have been updated with spring/summer events since the Board Evaluation was completed.

## Output 1: Connectivity Improvements

**What is it?** Connectivity improvements make is safer, easier, and more appealing for people to walk, bike, or use transit to travel through and within CW program areas.

### Community Works goals:

- ◇ *Strengthen and connect people and places*
- ◇ *Innovate and advance sustainability*

**What are the results?** Community Works program investments have created or improved over 19 miles of multi-use trails, bikeways, and sidewalks. New connections have included the following:

- Midtown Greenway: created a mostly grade separated 5.7 mile east-west bike and pedestrian connection between the Mississippi River and the Uptown area, connecting to western Hennepin County.
- Humboldt Greenway: created a multi-use trail along 49th Street from Humboldt Avenue to I-94, connecting Upper Mississippi Regional Park with Shingle Creek trails as well as related connections through Humboldt central green.
- Lowry Avenue: installed on-street bike lanes from 4th Street to Theodore Wirth Parkway and Victory Memorial Drive providing the first east-west bike connection through north Minneapolis.
- 32nd Street (MHCW): striped new bike lanes that filled a two-block gap in the bike network making a key neighborhood connection to the area’s high school.
- Shingle Creek Connections: made a 0.6 mile connection in Brooklyn Park along Shingle Creek between residential areas and high school and commercial area.

CW programs have also enhanced and improved existing infrastructure:

- Humboldt Avenue: made Shingle Creek trail improvements in conjunction with other stormwater enhancements.
- Lowry Avenue: constructed 5 linear miles of sidewalk upgrades, including ADA ramps and other enhancements at key nodes.

**Figure 5.1 Community Works connectivity improvements**

Trails, bikeways, and sidewalks (19 miles)	
Humboldt Greenway	1.0 mile
Lowry Avenue bike lanes	5.0 linear mi.
Lowry Avenue sidewalk enhancements	5.0 linear mi.
Midtown Greenway	5.7 miles
32nd Street bike lanes	0.5 linear mi
Shingle Creek Connection	0.6 miles
Victory Memorial trail	2.5 miles
Lighting Improvements (658)	
46th Street (MHCW) streetlights	55
Brooklyn Park/SNAP	37
Lowry	151
Midtown Greenway	226
Victory Memorial Drive street and trail lights	189
ADA Ramps (317)	
Hiawatha Ave ADA ramps	46
Humboldt ADA ramps	60
Lowry Ave ADA ramps	114
Midtown Greenway ADA ramps	17
Victory Memorial Drive ADA ramps	80

- Brooklyn Park SNAP (Stable Neighborhood Action Plan): created a new and upgraded sidewalk network connecting to and through Village Creek redevelopment.

- Victory Memorial Trail: in collaboration with the Minneapolis Park and Recreation Board, upgraded 2.5 miles of multiuse trail from Lowry Avenue to Humboldt Avenue North.

CW programs have also supported other enhancements to improve access for pedestrians, bikers, and persons with disabilities:

- Lighting enhancements along 46th Street (55), Lowry Avenue (151), Midtown Greenway (226), Victory Memorial Drive (189) and in the SNAP area (37) have improved perceptions of safety and accessibility for pedestrians and others.
- Installation of 317 ADA ramps (ramps with truncated domes) along Hiawatha Avenue, Humboldt Avenue, Lowry Avenue, Midtown Greenway, and Victory Memorial Parkway have improved street crossings for persons with disabilities, pedestrians, and bikers.
- The Sabo Bridge, along the Midtown Greenway, provides an ADA-compliant grade-separated crossing of Hiawatha Avenue.

**Sources:**

- ◇ Hennepin County CW Program Managers
- ◇ CW Program partners

## Output 2: Natural Systems Improvements

**What is it?** Natural systems improvements include creation of open, green, or natural spaces and improvements that create a more sustainable corridor.

### Community Works goals:

- ◇ *Strengthen and connect people and places*
- ◇ *Innovate and advance sustainability*

**What are the results?** Community Works programs have created 13 acres of green or open space, supported development of 14,500 feet of creeks, and planted 765 trees.

- The Humboldt Greenway added 7.3 acres of new green space to the community, including a central green and addition to Creekview Park. The project also enhanced 4,000 feet of Shingle Creek.
- The Brooklyn Park SNAP program removed several dated apartment buildings and replaced them with 4 acres of greenspace, daylighted 2,000 feet of Shingle Creek, and created land for new housing and commercial development.
- Over 8,500 feet of Shingle Creek was daylighted or improved near Brookdale Mall and Brooklyn Center City Hall.
- An abandoned grain elevator was demolished and replaced by a 1.7 acre open space at the CEPRO site along the Midtown Greenway.
- A 750 foot portion of Shingle Creek provides enhanced greenspace near a high school in Brooklyn Park.
- A small underutilized parcel in the MHCW program area was turned into a community hops garden through an agreement with a local neighborhood organization.
- The County has planted 350 trees along the Hiawatha Corridor to improve area aesthetics, enhance the pedestrian and bike realm, improve air quality, and support species diversity.
- The Lowry CW program included 405 trees, permeable soils in the boulevard, boulevard and median plantings, and pedestrian improvements at key nodes.

**Figure 6.1 Community Works natural systems improvements**

Creek Improvements (14,530 feet)	
Brooklyn Center City Hall	7,750 feet
Brookdale Mall	800 feet
Shingle Creek—Brooklyn Park	2,000 feet
Shingle Creek—Humboldt	4,000 feet
Shingle Creek—Connections	750 feet
Green space / open space / civic space (13 acres)	
Brooklyn Park—Village Creek	4.0 acres
CEPRO site (Midtown)	1.7 acres
Creekview Park (Humboldt)	5.7 acres
Humboldt central green	1.6 acres
Longfellow community hops garden (MHCW)	0.1 acres
Trees (765)	
Hiawatha Avenue (MHCW)	350
Lowry Avenue	415

### Sources:

- ◇ Hennepin County CW Program Managers
- ◇ CW Program partners

## Output 3: Developable Land

**What is it?** CW programs generate opportunities to work with partners to identify and acquire key redevelopment sites. Through tax forfeiture, right of way condemnation, and direct purchase, CW helps stabilize and make these properties available for redevelopment or community use.

### Community Works Goals:

- ◇ *Stimulate economic development and job growth*
- ◇ *Enhance the tax base*

**What are the results?** Community Works programs have prepared 50 acres of land for development through blight removal and parcel assembly (Figure 7.1). These efforts have included:

- 35 acres of outdated, undersized housing acquired as part of the Humboldt Greenway program with a goal to diversify the area’s housing stock. In its place, developers have constructed 75 senior rental units, 44 fourplex units, 77 single-family homes, and a central green.
- 7.6 acres acquired as part of the 66th Corridor program, which became the site of the 330,000 square foot Cedar Pointe retail development.
- 5 acres acquired on Lowry Avenue to create redevelopment opportunities, including the sustainable Eco-Village housing development.

### Sources:

- ◇ Hennepin County CW Program Managers
- ◇ CW Program partners

**Figure 7.1 Developable land**

Developable Land (50 acres)	
Brooklyn Park / SNAP	2.4 acres
Cedar Point	7.6 acres
Humboldt Greenway	35.0 acres
Lowry Avenue	5.0 acres

## Outcome 1: Property Values

**What is it?** This outcome measure looks at the estimated market value of properties within 0 to 1/4 mile and 1/4 to 1/2 mile of Community Works program areas. This measure aims to determine whether Community Works programs stabilize or improve the value of properties near those investments. The measure compares the value in the program area with nearby properties, hypothesizing that higher increases in the program areas indicate these investments have created an amenity, which increases the value of those properties.

### Community Works goal:

◇ *Enhance the tax base.*

**How was it Calculated?** The analysis looked at estimated market values (EMV) in seven program areas in the years 2001 and 2013: 66th Street, Brooklyn Park / SNAP, Humboldt, Lowry, and Midtown (East, Central, and West). The analysis included EMV in three different zones: 0 to 1/4 mile from the corridor, 1/4 to 1/2 mile from the corridor, and a larger comparison area which included the Minneapolis community or suburban city in which the program is located [note the EMV's for the comparison areas include the 1/4 mile and 1/2 mile zones]. The analysis compared the change in EMV between those two years. Figure 8.1 summarizes the results; Figure 8.2 (page 15) shows more detail.

**What are the results?** Overall, EMV in the seven program areas increased 72 percent within 1/4 mile of the program area between 2001 and 2013 and 50 percent from 1/4 to 1/2 mile from the program areas—a 22 point gap. Moreover, EMV in the surrounding neighborhoods increased 55 percent—17 percentage points less than in the program areas.

Five of the individual program areas showed increases from 2001 to 2013. The greatest increases were within 1/4 mile of

the Midtown Greenway area: 117 percent in the Central area, 94 percent in Midtown west, and 90 percent in Midtown east.

The gaps between the 1/4 mile area and comparison areas were above 17 percentage points in the three Midtown areas and in Humboldt. The area within 1/4 mile of 66th Street increase 14.5 percentage points faster than the city of Richfield as a whole.

Only two areas experienced declines relative to their comparison areas: Lowry North and Brooklyn Park/SNAP. In Lowry North, the program area still suffers from the economic and housing crisis, which has mitigated EMV increases relative to north Minneapolis as a whole.

Figure 8.2 (page 15) provides detailed EMV data for the seven program areas for 2001 and 2013. The figure details the number of properties in each program area, the total EMV for all those properties, and the average EMV per property. The figure also compares changes in these values from 2001 to 2013.

**Notes:** The EMV data does not include cooperative and condo units. A peculiarity in EMV data prior to 2005 does not include data for specific condo units.

### Source:

◇ Hennepin County GIS data

**Figure 8.1 Estimated market value increase from 2001 to 2013**

Corridor	0 to 1/4 mi	1/4 - 1/2 mi	Comparison area
66 <sup>th</sup> Street	65%	34%	51% (Richfield)
Brooklyn Park SNAP	8%	16%	35% (Brooklyn Park)
Humboldt	37%	20%	29% (Camden)
Lowry North	25%	27%	38% (North, Camden)
Midtown – West	94%	85%	73% (Cedar Isles)
Midtown – Central	117%	101%	97% (Phillips, Powderhorn)
Midtown - East	90%	63%	71% (Longfellow)

Figure 8.2 Estimated market value detailed spreadsheet (page 1)

	# Props	Total EMV	Ave EMV	# Props	Total EMV	Ave EMV	# Props	Total EMV	Ave EMV
	Midtown - Total 0 to 1/4 mile			Midtown - Total 1/4 to 1/2 mile			Calhoun Isle, Phillips, Powderhorn, Longfellow		
2001	4,744	\$ 942,924,900	\$ 198,762	5,829	\$ 941,977,900	\$ 161,602	31,479	\$ 4,731,747,420	\$ 150,314
2013	4,918	\$ 1,938,691,300	\$ 394,203	5,829	\$ 1,715,497,400	\$ 294,304	31,707	\$ 8,604,377,400	\$ 271,372
Change	174	\$ 995,766,400	\$ 195,442	0	\$ 773,519,500	\$ 132,702	228	\$ 3,872,629,980	\$ 121,057
% Increase	3.7%	105.6%	98.3%	0.0%	82.1%	82.1%	0.7%	81.8%	80.5%
	Midtown - West Total 0 to 1/4 mile			Midtown West - Total 1/4 to 1/2 mile			Calhoun Isle		
2001	1,963	\$ 626,879,500	\$ 319,348	2,464	\$ 582,403,500	\$ 236,365	6,575	\$ 2,073,965,220	\$ 315,432
2013	2,050	\$ 1,271,793,200	\$ 620,387	2,437	\$ 1,065,423,100	\$ 437,186	6,628	\$ 3,632,818,400	\$ 548,102
Change	87	\$ 644,913,700	\$ 301,039	-27	\$ 483,019,600	\$ 200,821	53	\$ 1,558,853,180	\$ 232,670
% Increase	4.4%	102.9%	94.3%	-1.1%	82.9%	85.0%	0.8%	75.2%	73.8%
	Midtown Central - Total 0 to 1/4 mile			Midtown Central - Total 1/4 to 1/2 mile			Phillips, Powderhorn		
2001	1,640	\$ 174,163,400	\$ 106,197	1,809	\$ 151,129,500	\$ 83,543	15,255	\$ 1,482,264,900	\$ 97,166
2013	1,697	\$ 390,262,500	\$ 229,972	1,795	\$ 301,849,700	\$ 168,161	15,315	\$ 2,932,627,300	\$ 191,487
Change	57	\$ 216,099,100	\$ 123,775	-14	\$ 150,720,200	\$ 84,618	60	\$ 1,450,362,400	\$ 94,321
% Increase	3.5%	124.1%	116.6%	-0.8%	99.7%	101.3%	0.4%	97.8%	97.1%
	Midtown - East Total 0 to 1/4 mile			Midtown East - Total 1/4 to 1/2 mile			Longfellow		
2001	1,141	\$ 141,882,000	\$ 124,349	1,556	\$ 208,444,900	\$ 133,962	9,649	\$ 1,175,517,300	\$ 121,828
2013	1,171	\$ 276,635,600	\$ 236,239	1,597	\$ 348,224,600	\$ 218,049	9,764	\$ 2,038,931,700	\$ 208,821
Change	30	\$ 134,753,600	\$ 111,890	41	\$ 139,779,700	\$ 84,087	115	\$ 863,414,400	\$ 86,993
% Increase	2.6%	95.0%	90.0%	2.6%	67.1%	62.8%	1.2%	73.4%	71.4%

Figure 8.2 Estimated market value detailed spreadsheet (page 2)

	# Props	Total EMV	Ave EMV	# Props	Total EMV	Ave EMV	# Props	Total EMV	Ave EMV
	<b>Humboldt - 0 to 1/4 mile</b>			<b>Humboldt - 1/4 to 1/2 mile</b>			<b>Camden</b>		
2001	1,449	\$ 102,275,800	\$ 70,584	2,174	\$ 176,288,100	\$ 81,089	11,006	\$ 842,609,400	\$ 76,559
2013	1,515	\$ 146,368,700	\$ 96,613	2,198	\$ 213,414,900	\$ 97,095	11,205	\$ 1,107,128,900	\$ 98,807
Change	66	\$ 44,092,900	\$ 26,029	24	\$ 37,126,800	\$ 16,006	199	\$ 264,519,500	\$ 22,248
% Increase	4.6%	43.1%	36.9%	1.1%	21.1%	19.7%	1.8%	31.4%	29.1%
	<b>Lowry - 0 to 1/4 mile</b>			<b>Lowry - 1/4 to 1/2 mile</b>			<b>Camden / Near North</b>		
2001	2,800	\$ 189,657,300	\$ 67,735	3,457	\$ 274,499,700	\$ 79,404	19,792	\$ 1,469,279,500	\$ 74,236
2013	2,758	\$ 233,928,800	\$ 84,818	3,492	\$ 351,773,200	\$ 100,737	20,235	\$ 2,064,902,500	\$ 102,046
Change	-42	\$ 44,271,500	\$ 17,084	35	\$ 77,273,500	\$ 21,333	443	\$ 595,623,000	\$ 27,810
% Increase	-1.5%	23.3%	25.2%	1.0%	28.2%	26.9%	2.2%	40.5%	37.5%
	<b>Brooklyn Park SNAP - 0 to 1/4 mile</b>			<b>Brooklyn Park SNAP - 1/4 to 1/2 mile</b>			<b>Brooklyn Park</b>		
2001	857	\$ 169,648,500	\$ 197,956	1,648	\$ 180,395,800	\$ 109,463	19,460	\$ 3,034,771,600	\$ 155,949
2013	1,153	\$ 245,460,500	\$ 212,889	1,664	\$ 211,771,600	\$ 127,267	22,680	\$ 4,756,858,200	\$ 209,738
Change	296	\$ 75,812,000	\$ 14,932	16	\$ 31,375,800	\$ 17,803	3,220	\$ 1,722,086,600	\$ 53,789
% Increase	34.5%	44.7%	7.5%	1.0%	17.4%	16.3%	16.5%	56.7%	34.5%
	<b>66th Street - 0 to 1/4 mile</b>			<b>66th Street - 1/4 to 1/2 mile</b>			<b>Richfield</b>		
2001	2,795	\$ 426,200,600	\$ 152,487	3,284	\$ 602,129,800	\$ 183,353	10,888	\$ 1,621,823,800	\$ 148,955
2013	2,630	\$ 662,283,400	\$ 251,819	3,133	\$ 771,396,800	\$ 246,217	10,698	\$ 2,404,946,300	\$ 224,803
Change	-165	\$ 236,082,800	\$ 99,332	-151	\$ 169,267,000	\$ 62,864	-190	\$ 783,122,500	\$ 75,848
% Increase	-5.9%	55.4%	65.1%	-4.6%	28.1%	34.3%	-1.7%	48.3%	50.9%



## Outcome 2: Real Estate Development

Economic vitality helps demonstrate the short- and long-term health of a community. Economic vitality is tracked by looking at commercial development or viability, residential development, job creation, and ultimately tax revenue generation. This analysis considers several measures of economic activity.

**What is it?** This measure looks at the amount of public and private investment generated in CW program areas in terms of commercial space and housing units.

### Community Works goal:

- ◇ Enhance the tax base.
- ◇ Stimulate economic development and job growth

**What are the results?** Nearly 2 million square feet of commercial development and 3,700 housing units have occurred in CW program areas. Some of this development, notably in Humboldt, Lowry, and Brooklyn Park, has directly resulted from the county's investment. Other development has occurred independent of the county's investment:

- The Humboldt Greenway program's goal was to diversify the housing stock in this far north Minneapolis community. The program included the acquisition and clearing of 35 acres of land. In its place, developers have constructed 75 senior rental units, 44 fourplex units, and 77 single-family homes. Some land still remains available for development
- In the Brooklyn Park / Stable Neighborhood Action Plan (SNAP) program the county partnered with Brooklyn Park on the removal of outdated apartments buildings and the creation of 2.4 developable acres. This land became the site of 291 housing units and 106,300 square feet of commercial space.
- In the 66th Corridor program, the County partnered with Richfield on the acquisition of 7.6 acres of land, which became the site of the 330,000 square foot Cedar Pointe development.

**Figure 9.1 Commercial development in CW program areas**

Development	Year	Commercial Sq Footage
Cedar Point development	2005 - 2014	330,000 <sup>1</sup>
Brookdale Mall area	2008 - 2014	400,000 <sup>1</sup>
Brookdale Mall area (restored)	2011 - 2014	125,000 <sup>1</sup>
Midtown Greenway	2005 - 2014	1,044,410 <sup>2</sup>

**Figure 9.2 Housing units in CW program areas**

Development	Year	Housing Units
Brooklyn Park / SNAP	2008 - 2014	291 <sup>1</sup>
Humboldt	2001 - 2014	196 <sup>1</sup>
Lowry Avenue	2010 - 2014	15 <sup>4</sup>
Midtown Greenway	2005 - 2014	2,757 <sup>3</sup>
Minnehaha-Hiawatha	2011 - 2014	460 <sup>3</sup>

- As part of the Daylighting Creeks initiative, the county supported local efforts to plan creek improvements around the Brookdale Mall. Subsequently, 525,000 square feet of commercial property were developed or restored.
- The Lowry Avenue program acquired 5 acres of land to make available for redevelopment. Despite a poor economy, 10 new single family homes were completed and sold, and one duplex/four single family homes were rehabbed as part of the EcoVillage project.

- The Midtown Greenway area has seen significant development since the Greenway went in. Over 1 million square feet of commercial space, much of that associated with the completion of the Midtown Exchange building, has occurred since 2005. In addition, 2,757 multifamily housing units have been constructed within a few blocks of the corridor.
- In the Minnehaha-Hiawatha Community Works program area, 460 multifamily housing units have been constructed in five different developments since 2011.

**Sources:**

<sup>1</sup> CW Program Managers

<sup>2</sup> Midtown Development Summary; Faith Cable

<sup>3</sup> *Minneapolis Trends Reports, 2005 through 2013*

[http://www.minneapolismn.gov/cped/resources/reports/cped\\_trends\\_reports\\_home](http://www.minneapolismn.gov/cped/resources/reports/cped_trends_reports_home)

<sup>4</sup> City of Minneapolis

### Outcome 3: Public and Private Investment in Program Areas

**What is it?** Building permit activity is an indicator of public and private investment in the Community Works program areas. This section of the evaluation includes only programs located in Minneapolis due to data availability limitations (see page XX).

To give a more complete view of building permit activity related to CW programs, the data are presented using two measures:

- Total dollar value of building permits in program areas (Figure 10.1)
- Density of building permit value and activity mapped (Figures 10.2– 10.3)
- Relative concentration of building permit value and activity (Figures 10.4 - 10.14)

**Community Works goal:**

- ◊ Enhance the tax base
- ◊ Stimulate economic development and job growth

#### 3.1 Total value of building permits

This measure calculates the value of all the building permit activity within 1/4 mile and 1/2 mile of CW program corridors for Humboldt, Lowry North, Midtown, and Minnehaha-Hiawatha.

**Programs included?** This measure only includes Community Works programs within the City of Minneapolis which are experiencing some investment in their program areas. Southwest, Bottineau, Penn Ave and Lowry Ave Northeast were still in initial planning stages to early to experience notable impacts.

Data for each program is collected from a key milestone year through 2013. Key milestones included:

- Humboldt—construction began 1998

**Figure 10.1 Building permit activity in Minneapolis**

Corridor	¼ mile buffer (million \$)	½ mile buffer (million \$)	Year
Humboldt	64.6	90.2	1999 - 2014
Lowry North	20.8	44.6	2010 - 2014
Midtown	752.7	1,099.9	2005 - 2014
Minnehaha-Hiawatha	45.7	76.7	2011 - 2014
<b>TOTAL</b>	<b>\$883.8</b>	<b>\$1,311.4</b>	

- Lowry North— construction completed 2009
- Midtown—Phase 11 opened in 2004
- Minnehaha-Hiawatha—Framework approved 2011

**What are the results?** Nearly \$900 million of building permit activity has occurred in Minneapolis within 1/4 mile of five Community Works program areas. Another \$435 million of building permit activity in Minneapolis has happened between 1/4 to 1/2 mile of the corridors. As is shown in Figure 10.1, most of the permit activity (\$1.1 billion) has occurred near the Midtown Greenway since 2005.

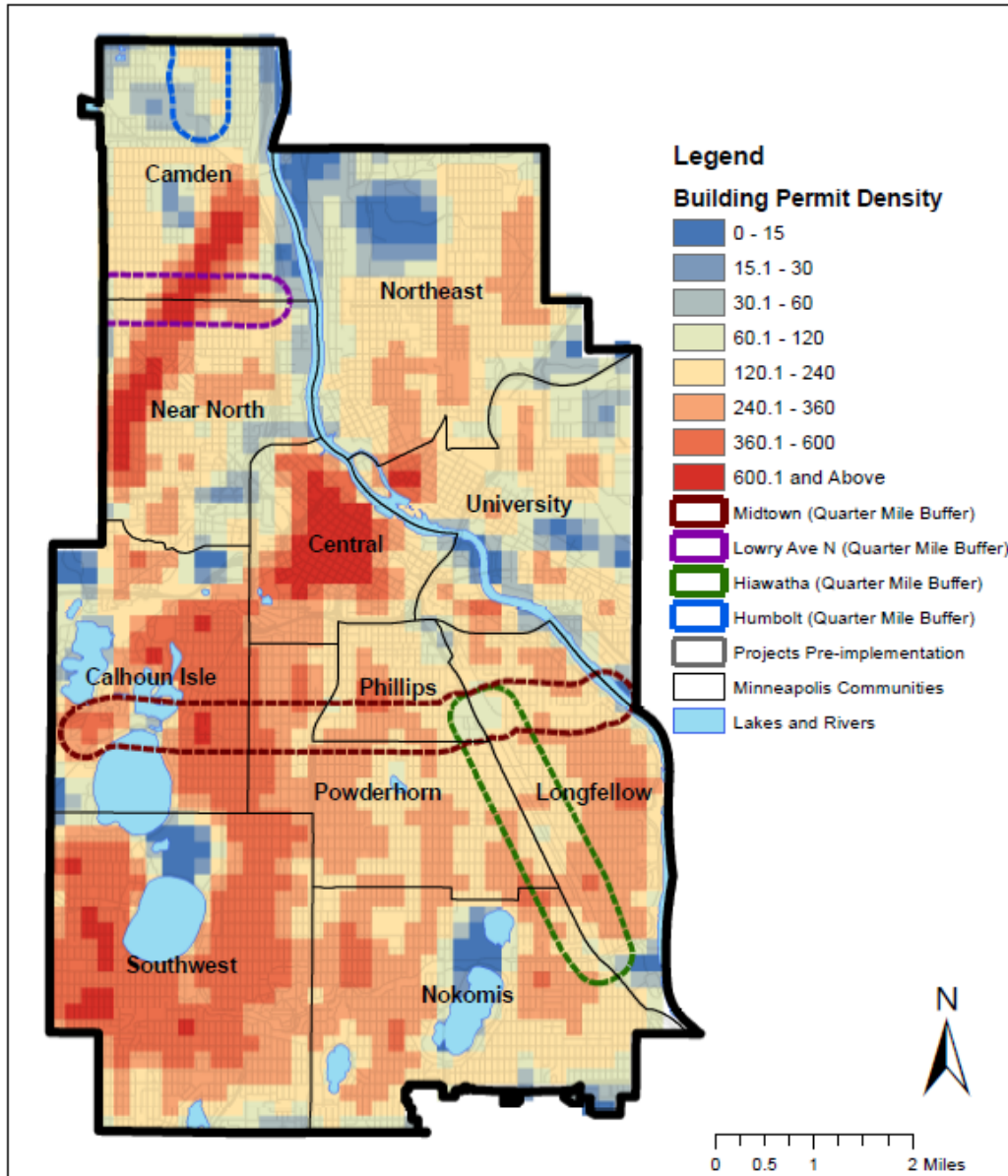
**Notes:**

- Building permit data were only available in the City of Minneapolis. Building permit data only includes permits with a value of \$5,000 or higher.
- The “year” column tells the time period for which the data are collected, e.g. Humboldt building permit results include permits from 1999 through 2013.
- Baseline data were also collected for Lowry Avenue NE, Penn Ave, and Bottineau (Minneapolis station areas) for 2013.

Figure 10.2 Building permit density maps

## Minneapolis Building Permit Density Map (2011-2013)

Kernel density estimation; bandwidth = .10 mile



### 3.2 Kernel density

**Kernel density** estimation is a technique that can be used to plot permit data on map, using color to indicate areas with higher and lower levels of activity and investment. Kernel density is a useful tool in providing a geographical context to the analysis. It enables evaluation of program benefits to determine if they are evenly and equitably distributed within impact areas .

**Programs included?** This measure includes all programs located within the city of Minneapolis.

**What are the results?** Figure 10.2 shows building permit density, with shades of red equating to higher levels for permit activity and shades of blue equating to lower levels of permit activity (in terms of number of permits). During the 2011-2013 period, permit activity is spread throughout the city, with heavier activity in the downtown and in north Minneapolis in the tornado recovery area.

Figure 10.3 below shows two maps comparing building permit value density. The map on the left shows value in the 1999-2001 time period (prior to completion of any CW programs) and the one on the right in the 2011-2013 period. These timeframes are most helpful for comparing activity pre-and post-implementation of Humboldt, Lowry, Minnehaha-Hiawatha and the Midtown Greenway.

*Humboldt:* A bump in permit values shows up in the 1999-2001 period, when construction began on some of the replacement housing in the area. There is less activity in the later period as noted in the drop off in construction activity in later years.

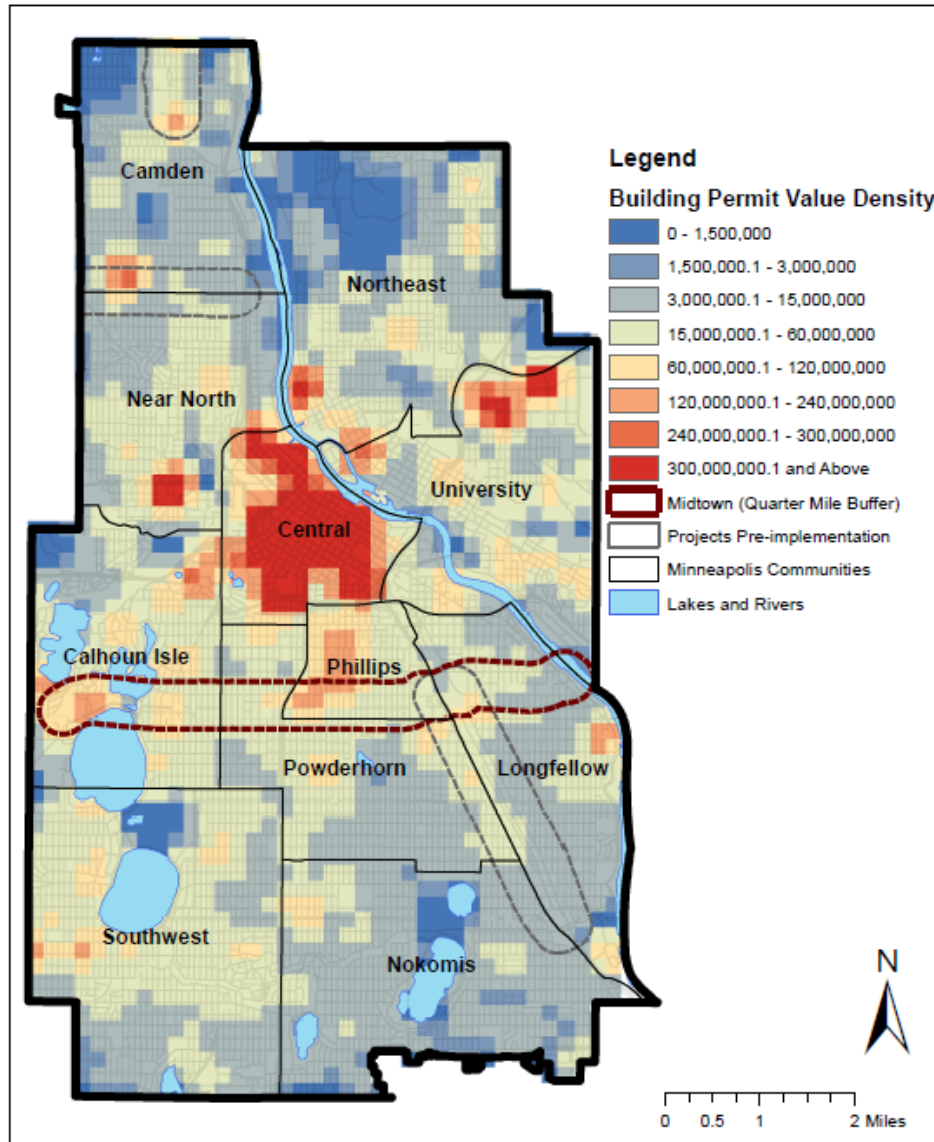
*Lowry:* The impact of the economic and housing crisis is still visible in the permit values figures.

*Minnehaha-Hiawatha:* A slight bump in permit values shows up between 2011 and 2013 along the Powderhorn and Longfellow community boundaries. However, comparing it to previous years does not show significant changes in permitting activity

Figure 10.3 Building permits value density maps

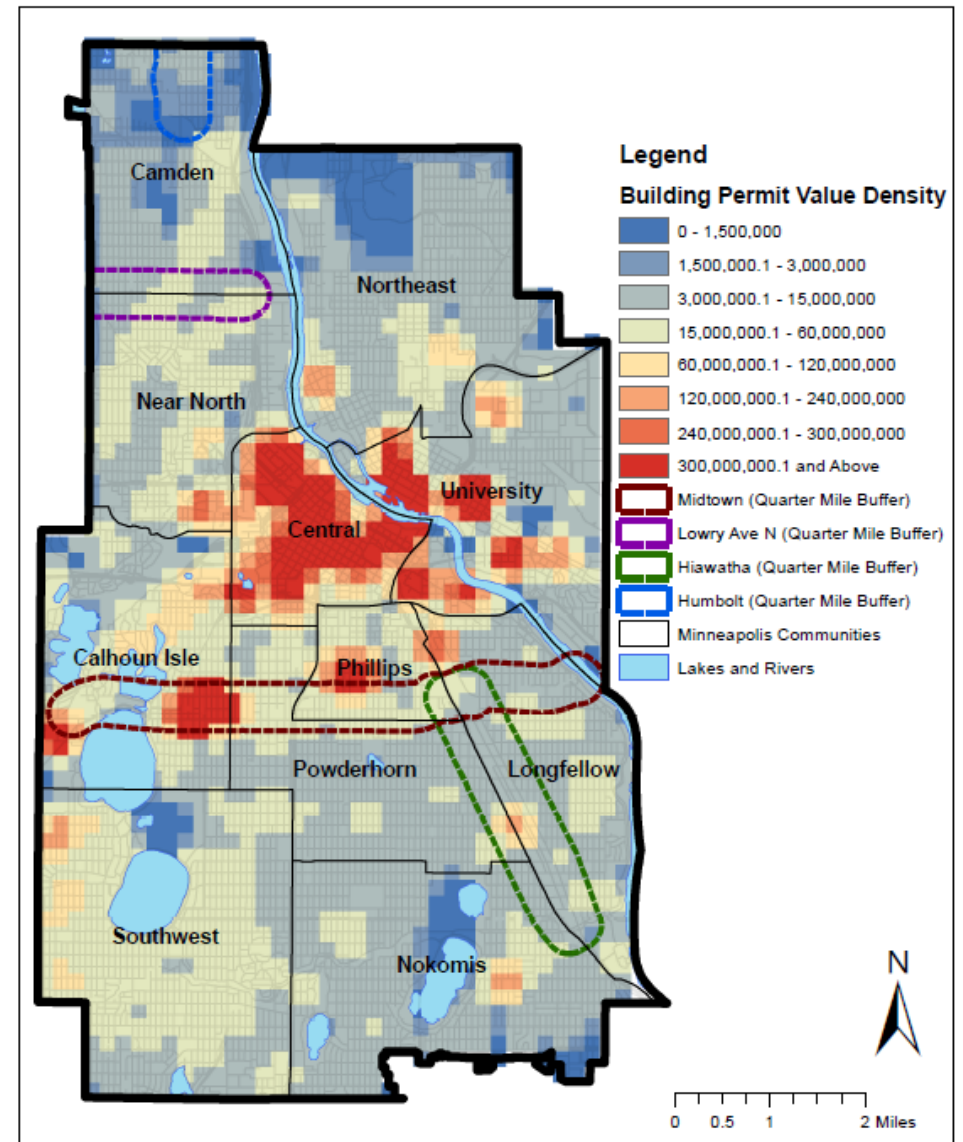
### Minneapolis Building Permit Value Density Map (1999-2001)

Kernel density estimation; bandwidth = .10 mile



### Minneapolis Building Permit Value Density Map (2011-2013)

Kernel density estimation; bandwidth = .10 mile



attributable to Community Works programs.

*Midtown:* There is a big increase in permit value that corresponds with the completion of the Greenway in the mid-2000s, particularly in the West Lake, Lyndale-Hennepin, and mid-Phillips areas.

**Sources:** Data collected by the University of Minnesota:

- ◇ Permit data - City of Minneapolis Department of Planning and Economic Development for all permits pulled within city limits between January 1, 1999 and April 15, 2014.

### 3.3 “Location Quotient”

**What is it?** Another way to look at building permit activity is through a measure called a “location quotient” or LQ. A location quotient is used to determine the relative intensity of development in a program area versus a comparison area (e.g. neighborhood or city).

**Community Works goals:**

- ◇ *Enhance the tax base*
- ◇ *Stimulate economic development and job creation*

**How is it calculated?** The formulas for “location quotient” are listed in Figure 10.4. Essentially, the value compares ratios of permit level/activity in program areas with the city as a whole. If the ratio in the program area is higher than the city as a whole, then the LQ will be greater than “1”, indicating the intensity of development is higher than the city as a whole, or that more activity has happened in that area versus the city as a whole.

For each CW program, the analysis compared three different areas:

- 1/4 mile buffer: Activity within 1/4 mile of CW program corridor (for Humboldt, Lowry, Midtown,

**Figure 10.4 Location quotient formulas**

#### **Permit Location Quotient (LQ)**

$$\frac{\text{Number of Permits within Impact Area}}{\text{Number of Parcels within Impact Area}} \div \frac{\text{Number of Permits within Minneapolis}}{\text{Number of Parcels within Minneapolis}}$$

#### **Value Location Quotient (LQ)**

$$\frac{\text{Adjusted Value of Permits within Impact Area}}{\text{Number of Parcels within Impact Area}} \div \frac{\text{Adjusted Value of Permits within Minneapolis}}{\text{Number of Parcels within Minneapolis}}$$

Minnehaha-Hiawatha, and Penn) or rail station areas (for Bottineau and Southwest).

- 1/2 mile buffer: Activity within 1/2 mile of CW program corridors or rail station areas.
- Community: Activity inside the community or neighborhoods that the CW program is located in.

For this measure, the comparison communities included:

**Bottineau LRT:** Bryn Mawr, Jordan, Harrison, Hawthorne, Near North, North Loop, Sumner-Glenwood, Willard-Hay

**Humboldt:** Camden Industrial Area, Cleveland, Folwell, Humboldt Industrial Area, Lind-Bohanon, McKinley, Shingle Creek, Victory, Webber-Camden

**Lowry North:** Cleveland, Folwell, Hawthorne, Jordan, McKinley, Near North, Victory, Webber-Camden, Willard-Hay

**Lowry Northeast:** Audubon Park, Beltrami, Bottineau, Columbia Park, Holland, Logan Park, Marshall Terrace, Northeast Park, Sheridan, St. Anthony East, St. Anthony West, Waite Park, Windom Park

**Midtown:** Bancroft, Bryant, Bryn Mawr, CARAG, Cedar-Isles-Dean, Central, Cooper, Corcoran, East Calhoun, East Isles, East Phillips, Hiawatha, Howe, Kenwood, Longfellow, Lowry Hill, Lowry Hill East, Lyndale, Midtown Phillips, Phillips West, Powderhorn Park,

Seward, Standish, Ventura Village, West Calhoun, Whittier

**Minnehaha-Hiawatha:** Cooper, Corcoran, Ericsson, Hiawatha, Howe, Keewaydin, Longfellow, Minnehaha, Morris Park, Seward, Standish, Wenonah

**Penn Ave:** Bryn Mawr, Cleveland, Folwell, Harrison, Humboldt Industrial Area, Jordan, Near North, Shingle Creek, Victory, Webber-Camden, Willard-Hay

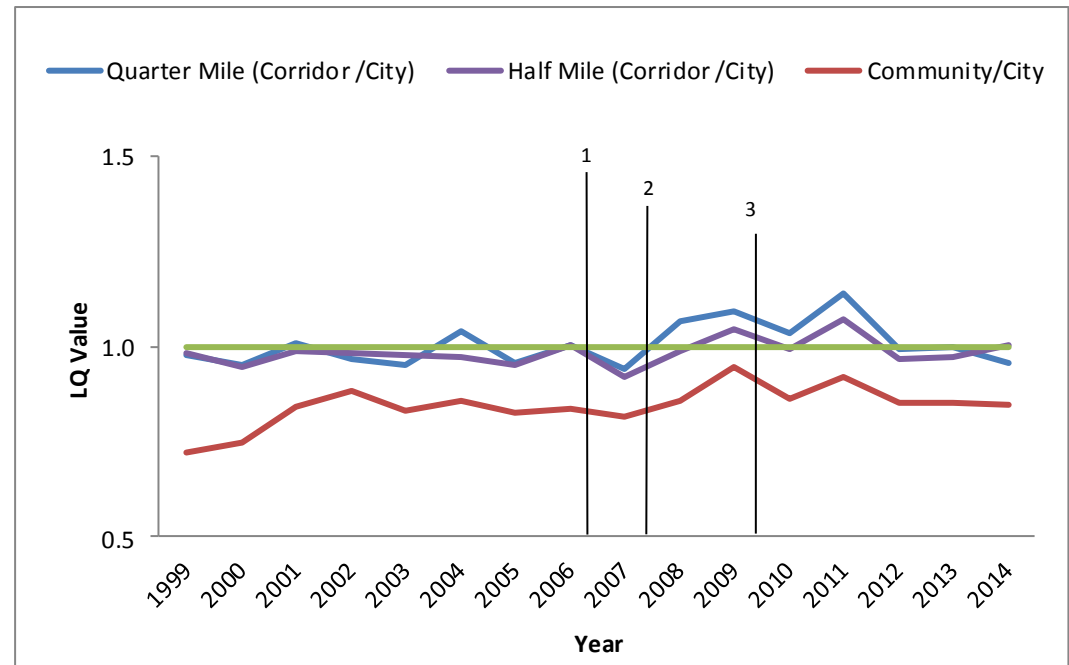
**Southwest LRT:** Bryn Mawr, CARAG, Cedar-Isles-Dean, East Calhoun, East Isles, Harrison, Kenwood, Lowry Hill, Lowry Hill East, Near North, North Loop, Sumner-Glenwood, West Calhoun

The comparison of these three LQs shows how activity levels change at different distances from the CW investment. That is, an LQ that decreases further from the program area demonstrates that CW programs are potentially having a positive influence on permits.

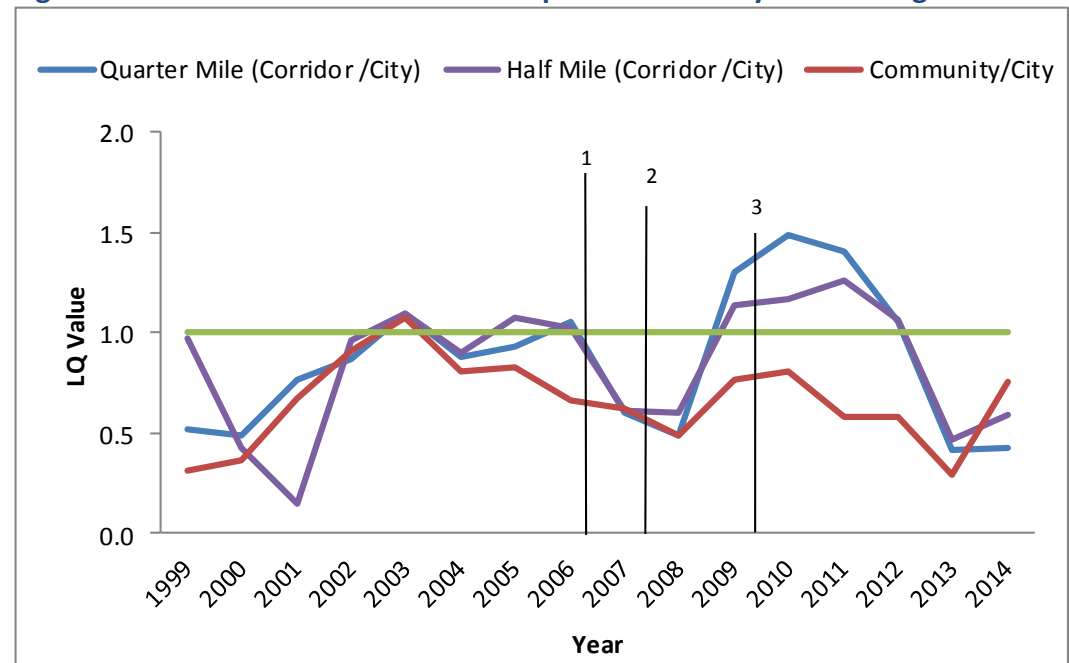
University of Minnesota researchers calculated two measures for the “location quotient” that allow a broader understanding of permit activity: value of permits and number of permits.

- *Value of building permits:* This measure compares the value of building permit activity within 1/4 mile and 1/2 mile of the CW program area as well as the comparison community to the entire city of Minneapolis. A number higher than one indicates the CW programs have a greater concentration of higher value development activity compared to the city as a whole.

**Figure 10.5 Permit quantities for all Minneapolis Community Works Program areas**



**Figure 10.6 Permit values for all Minneapolis Community Works Program areas**



**Figure 10.5 / 10.6 Notes:**  
 1 = Humboldt Post-Construction  
 2 = Midtown Post-Construction  
 3 = Lowry North Post Construction

- *Number of building permits:* This measure compares the number of building permits within 1/4 mile and 1/2 mile of the CW program area as well as the comparison community to the entire city of Minneapolis. A higher number indicates there are more permits in the CW program area than the city as a whole. Number of permits is a valuable measure as it could show a high level of smaller-scale investments (e.g. homeowners remodeling or adding onto their homes) which would capture individuals reinvestment in their own community.

**What are the results?** Figure 10.5 shows the results for the LQ for the aggregate number of permits in all Community Works programs in Minneapolis. The “community” represents all neighborhoods identified in the list above. Note that permit activity tended to be higher in the 1/4 mile program area as compared to the 1/2 mile area. Also, permit activity was consistently higher in the CW program areas versus their broader community—again demonstrating that CW corridor areas have higher levels of permit activity than other areas.

Figure 10.6 shows the aggregate value of permits in all CW programs in Minneapolis. In this case, there was a huge jump in intensity of the value of investment in the CW program areas from 2009 through 2012, which also lines up with the completion of the Midtown Greenway and with other CW investments starting to come online.

Figures 10.7 through 10.14 below highlight LQ results from Community Works programs within the City of Minneapolis.

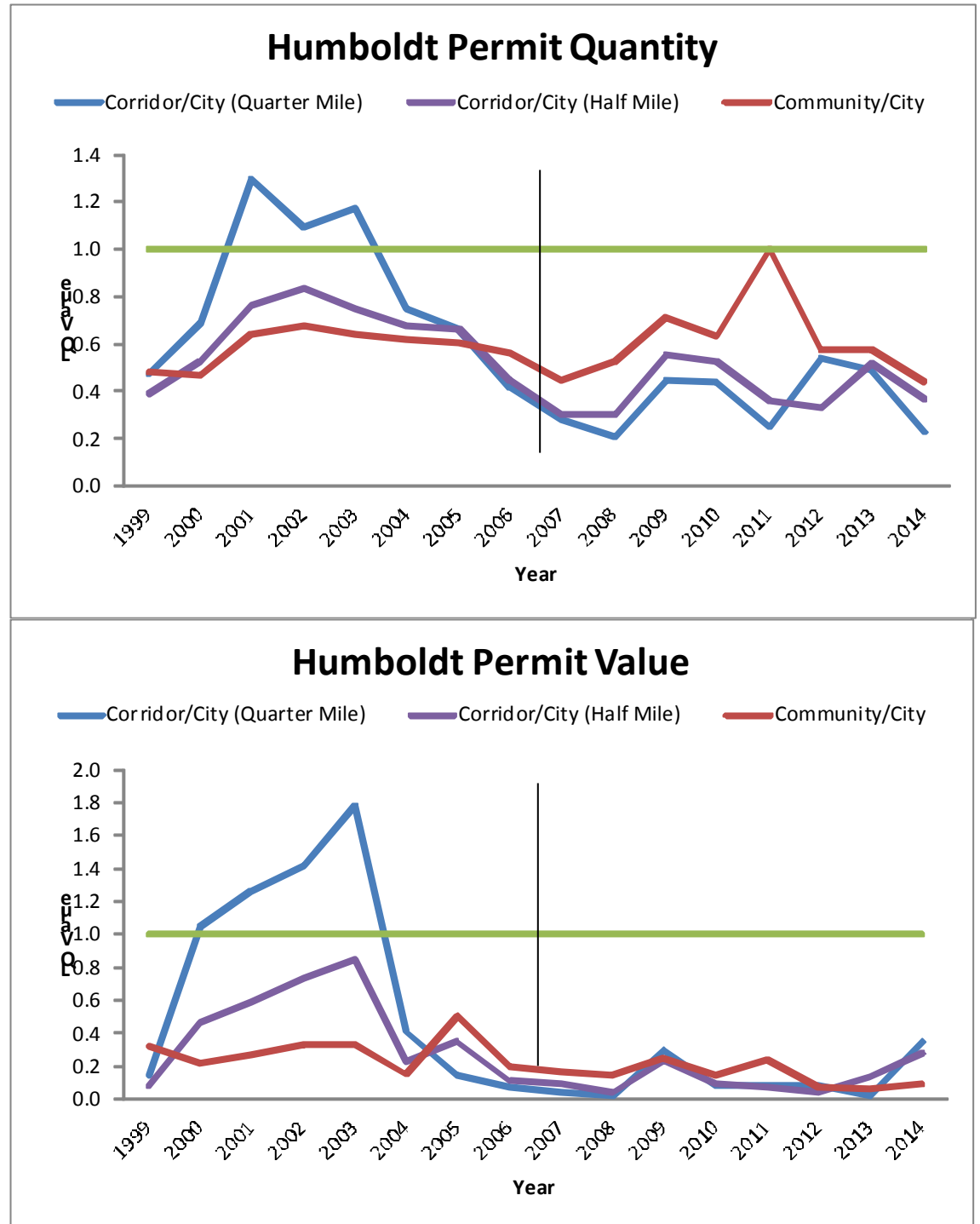
**Sources:** Data collected by the University of Minnesota:

- ◇ Permit data: City of Minneapolis Department of Planning and Economic Development for all permits pulled within city limits between January 1, 1999 and April 15, 2014.
- ◇ Parcel Data: Parcel data was acquired using the MetroGIS data finder tool for years 2002 – 2013.



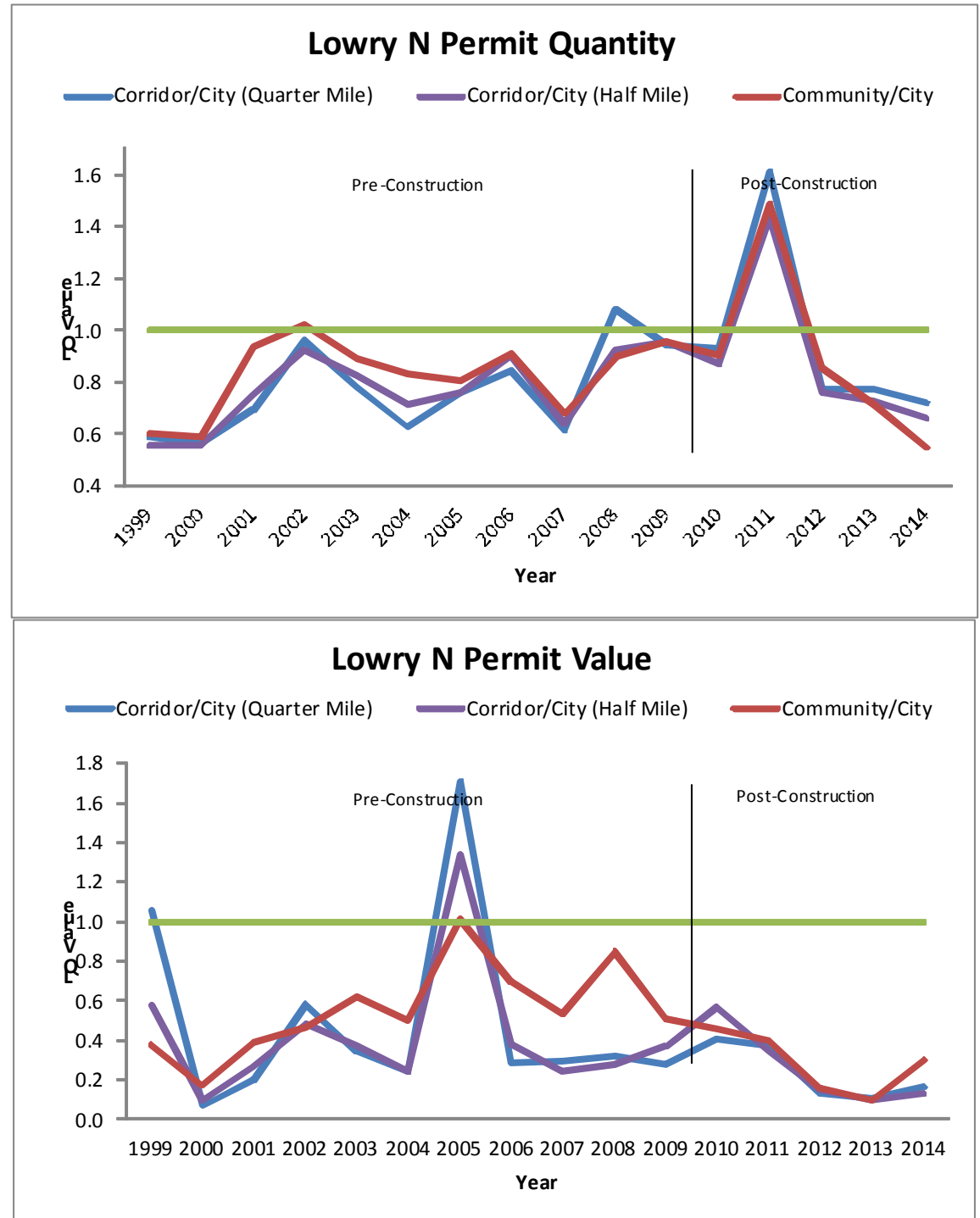
**Figure 10.7 Humboldt Greenway LQ**

Both the Permit Quantity and Permit Value were notably higher in the 1/4 mile corridor area as compared to the community and city roughly between 2000 and 2003. This period corresponds to the period of greatest construction activity in the area and the time of greatest activity directly associated with the project. The drop-off after 2004 suggests little permit activity in the program area after the program's completion. The fact that the "community" line is higher than the corridor lines indicates most of the permit activity in the area occurred in areas outside the Humboldt Greenway area.



**Figure 10.8 Lowry North Community Works LQ**

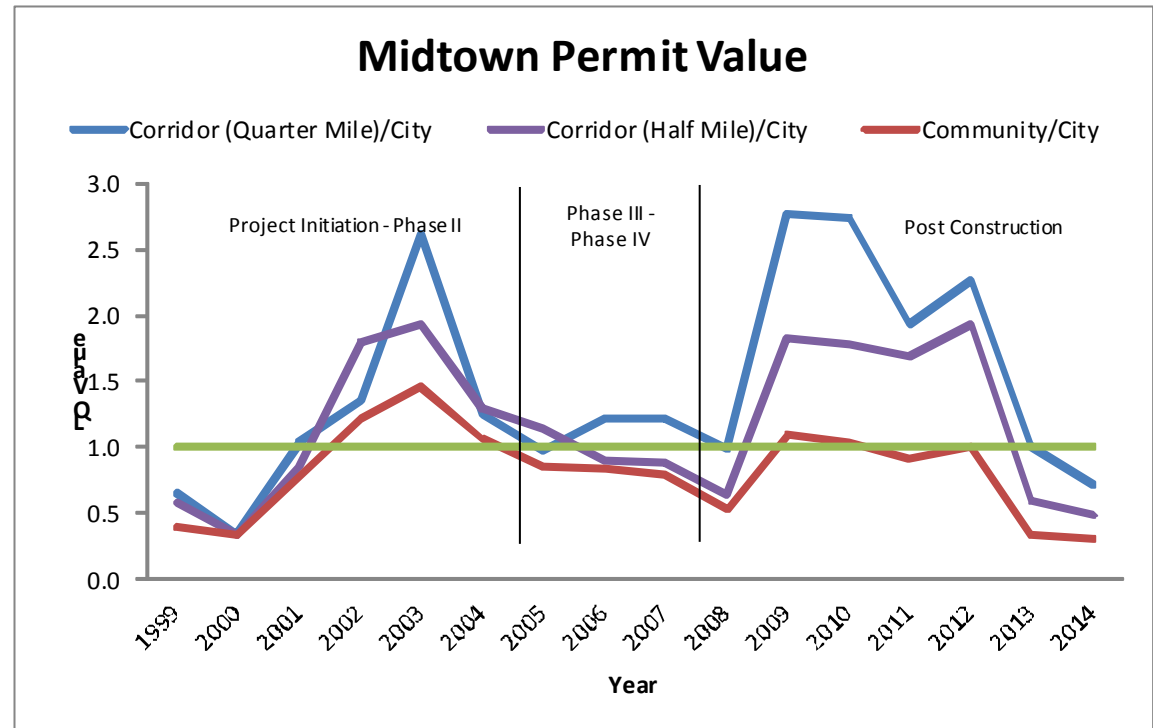
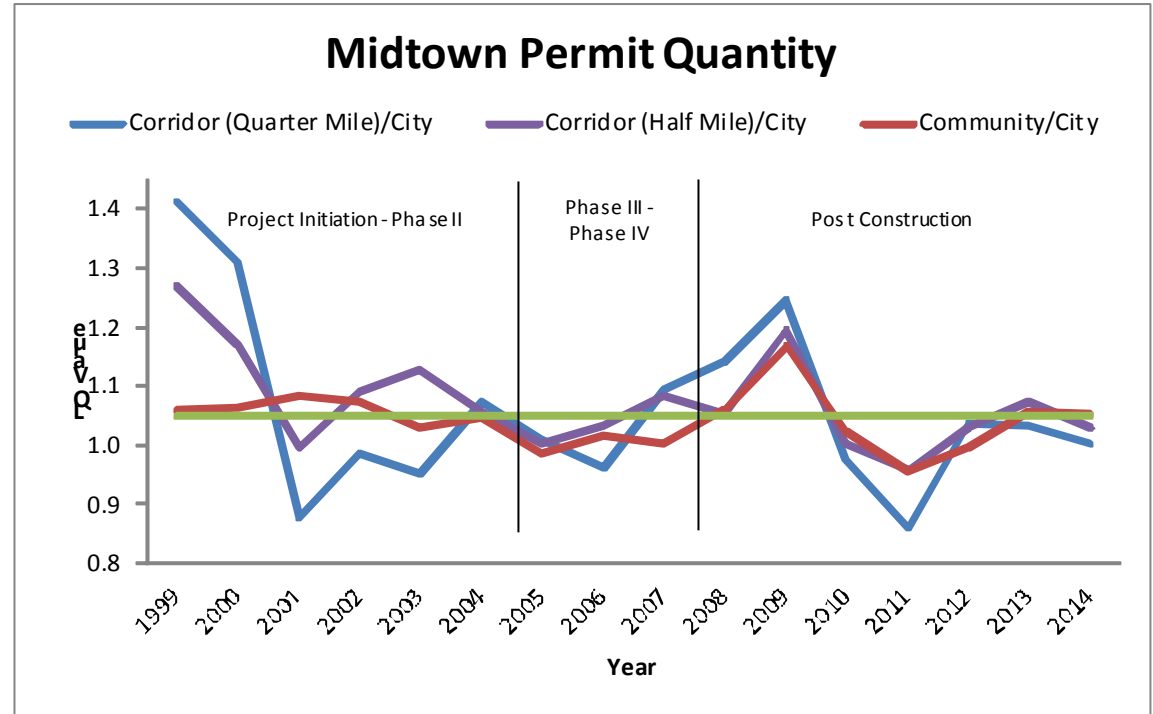
The Permit Quantity in the Lowry program area closely tracked the comparison community, and was in general at or below the city's rate. The major exemption was in 2011, where higher permit quantities were related to rebuilding from the May tornado that struck the area. Permit values were generally lower than the city as a whole, except in 2005. As noted in the kernel density analysis in the previous section, the impact of the economic and housing crisis is still visible in the permit values figures.



**Figure 10.9 Midtown Greenway LQ**

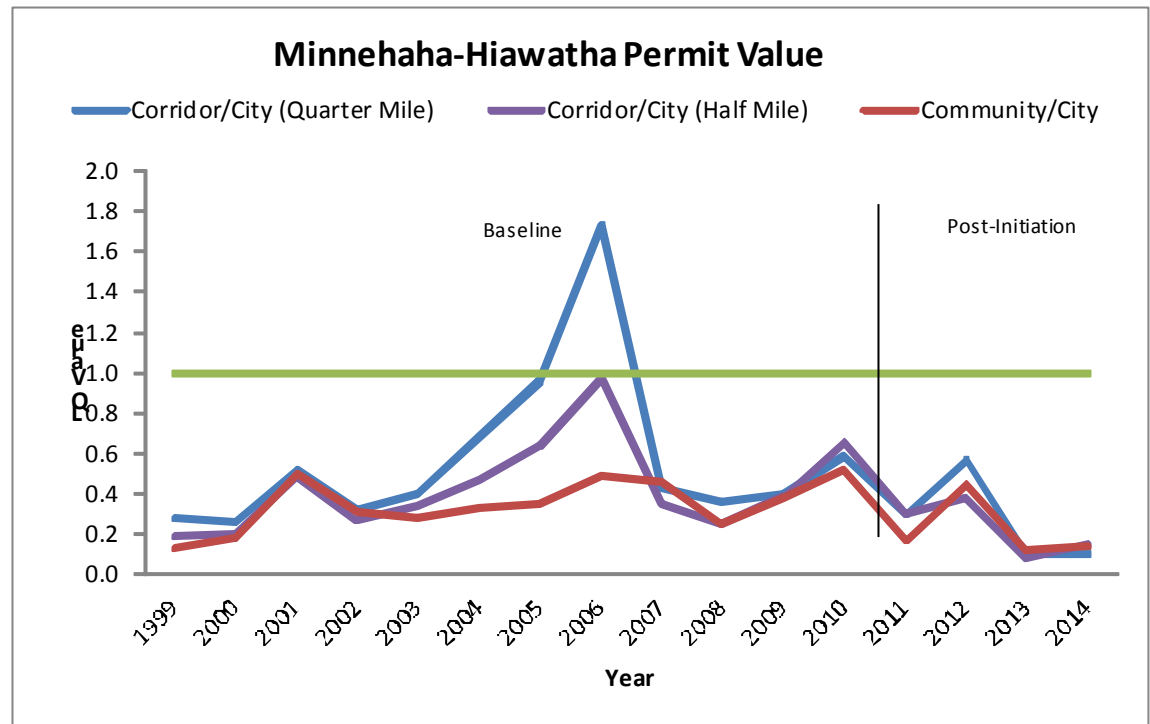
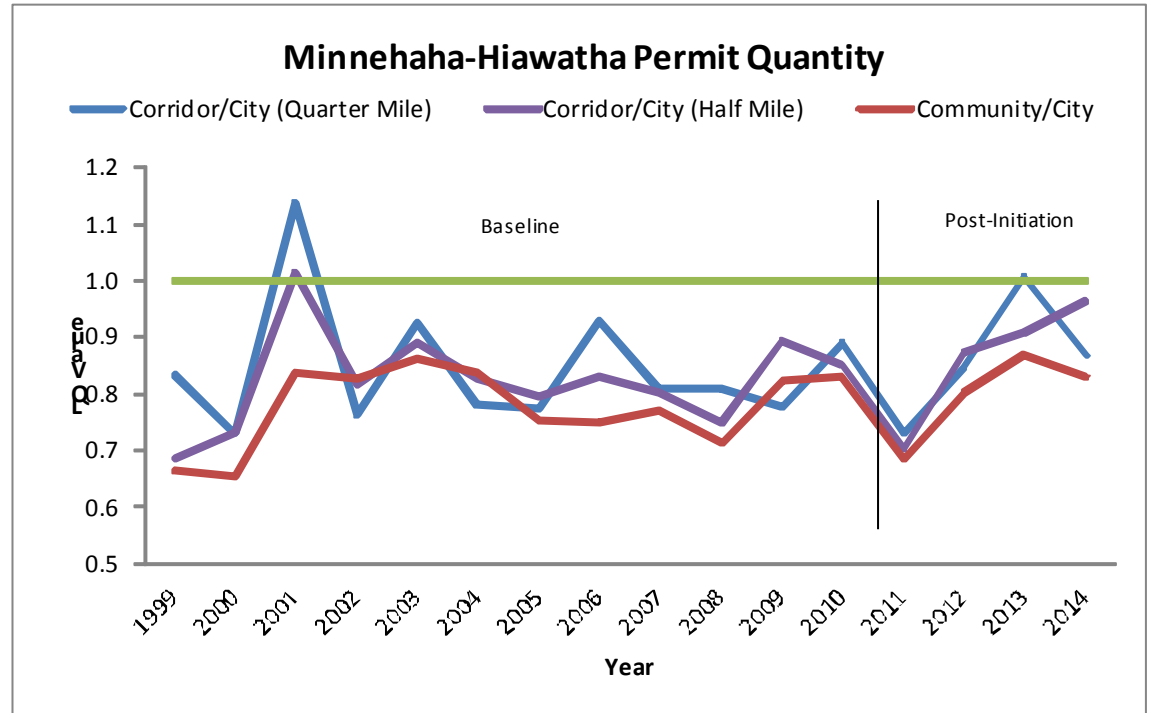
Phase I of the Midtown Greenway opened in 2000, followed by Phase II (2004) Phase III (2006) and Phase IV (2007). For nearly all of the time period from 2001 to 2012, the LQ for Permit Values within 1/4 mile of the Midtown Greenway was greater than 1 and also exceeded the LQ values for the area up to 1/2 mile of the corridor and the surrounding community. These numbers indicate a higher level of investment in the program area following the initial construction of the greenway.

While the LQ for Permit Values was largely above 1 near the program area, the LQ for Permit Quantity was often below 1—suggesting the investments near the program area tended to be higher in value in comparison to the city on average.



**Figure 10.10 Minnehaha-Hiawatha Community Works LQ**

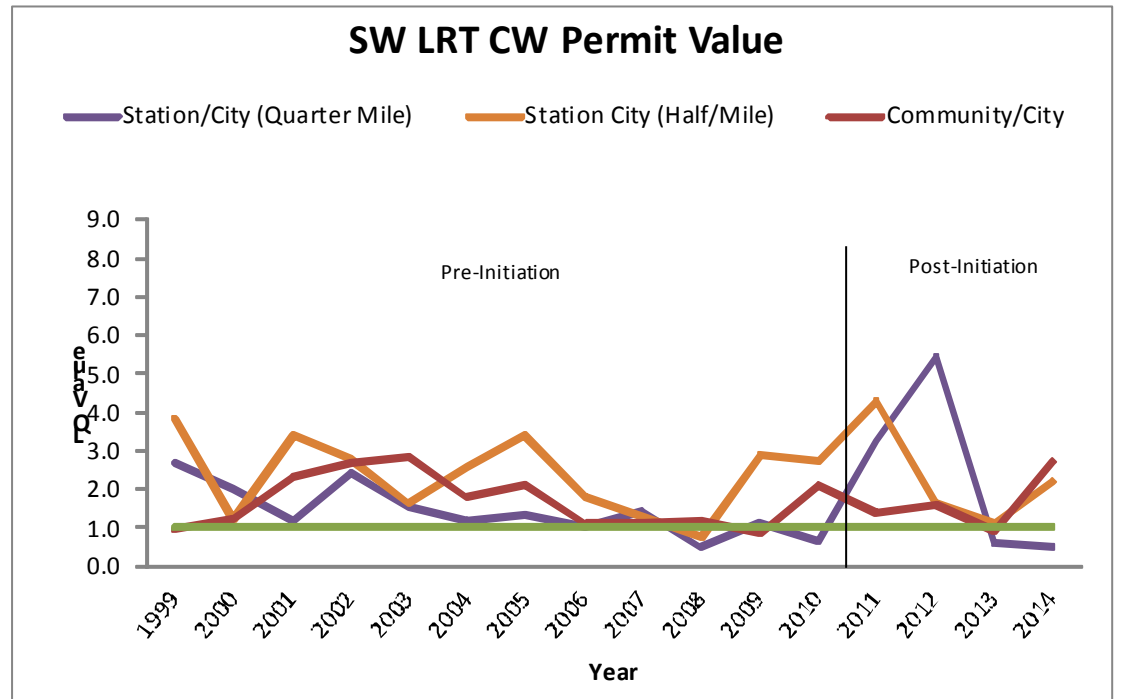
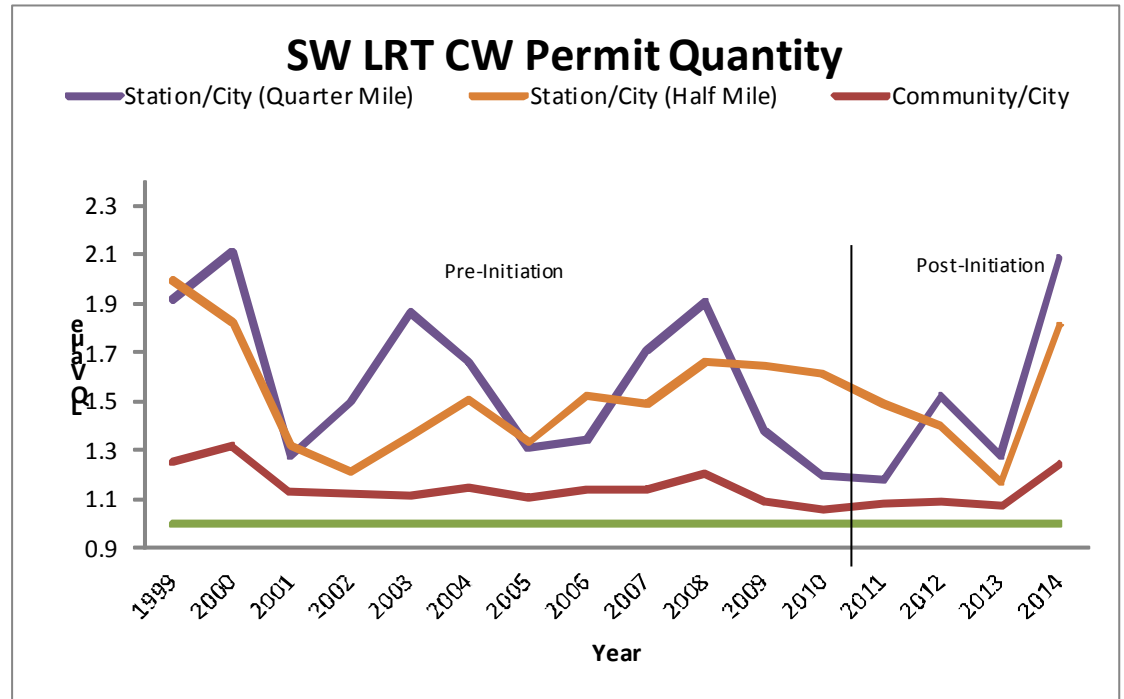
The Minnehaha-Hiawatha CW program is early in the implementation stage, so little impact would be expected at this point. Scoping began in 2010, followed by planning, design, and the implementation of several localized projects. In general, permit activity in the corridor areas has closely tracked the community's level of activity, but is below the city baseline. Ongoing tracking in upcoming years will help assess the impact of projects currently being implemented.



**Figure 10.11 Southwest LRT Community Works LQ**

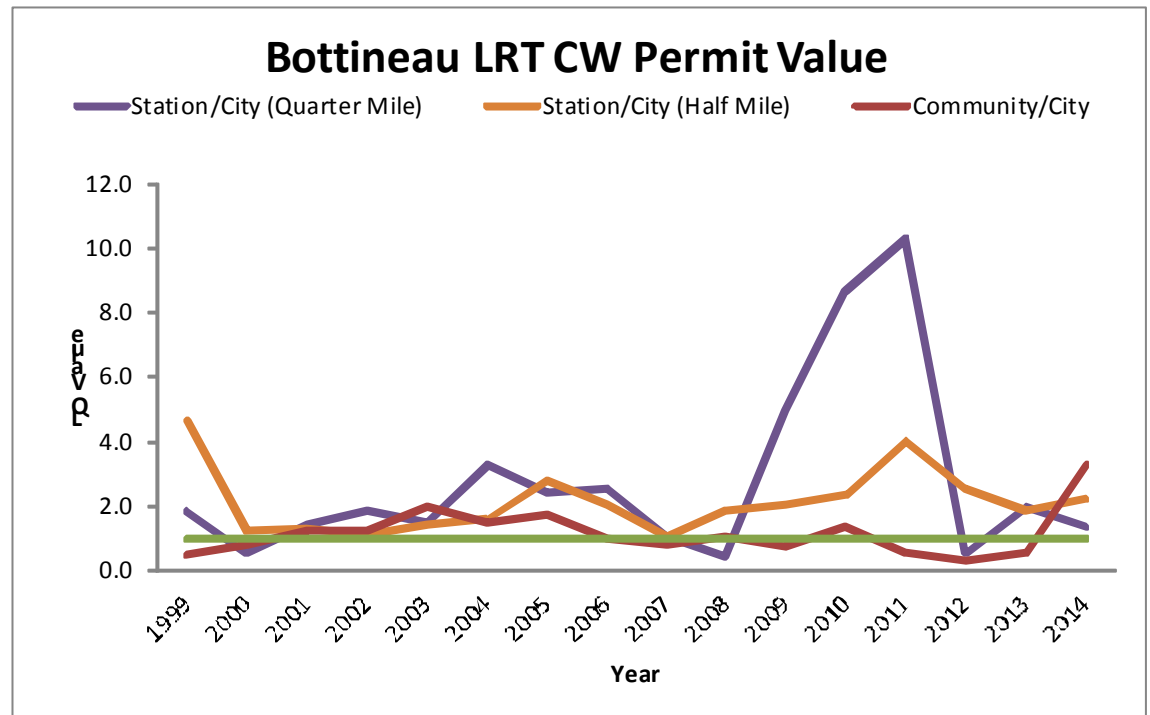
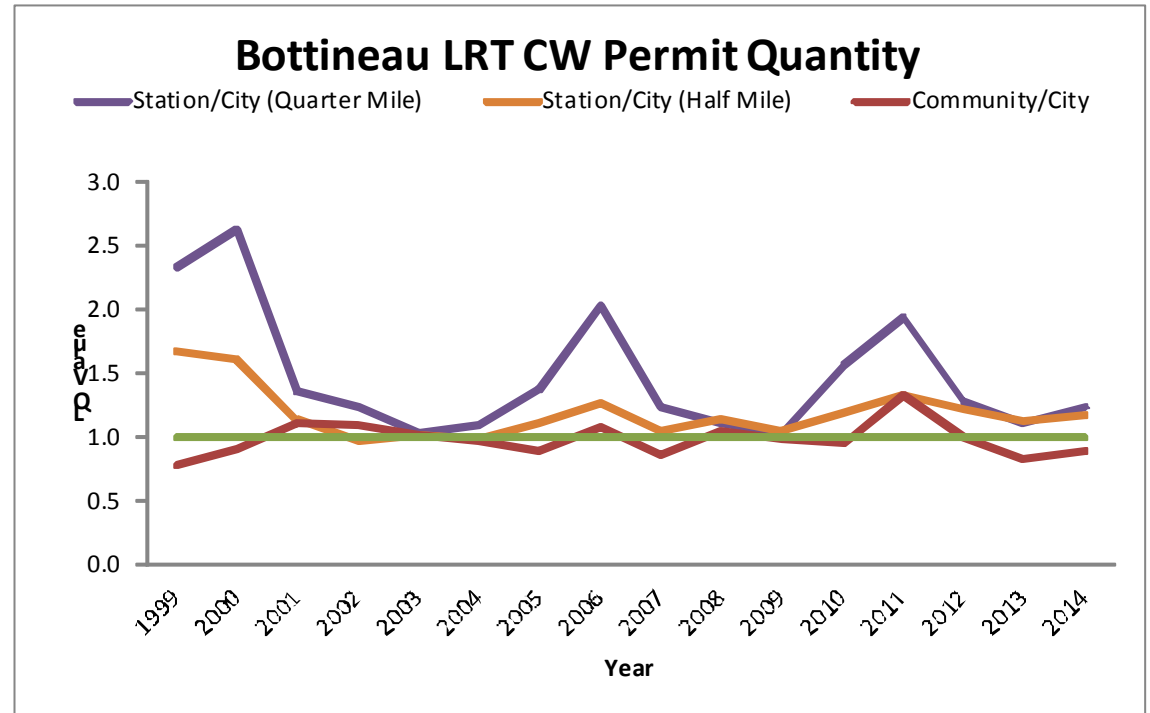
The Southwest Community Works program was initiated in 2011 and is still in the planning stage. The data in these figures are solely looking at activity near proposed rail stations within the City of Minneapolis.

As the data show, Permit Quantity and Value in this area has regularly exceeded the City's rate. Proximity to the North Loop and West Lake area — with their construction booms — has probably contributed to those permit levels. Continuing tracking will provide data to serve as baselines for future project implementation.



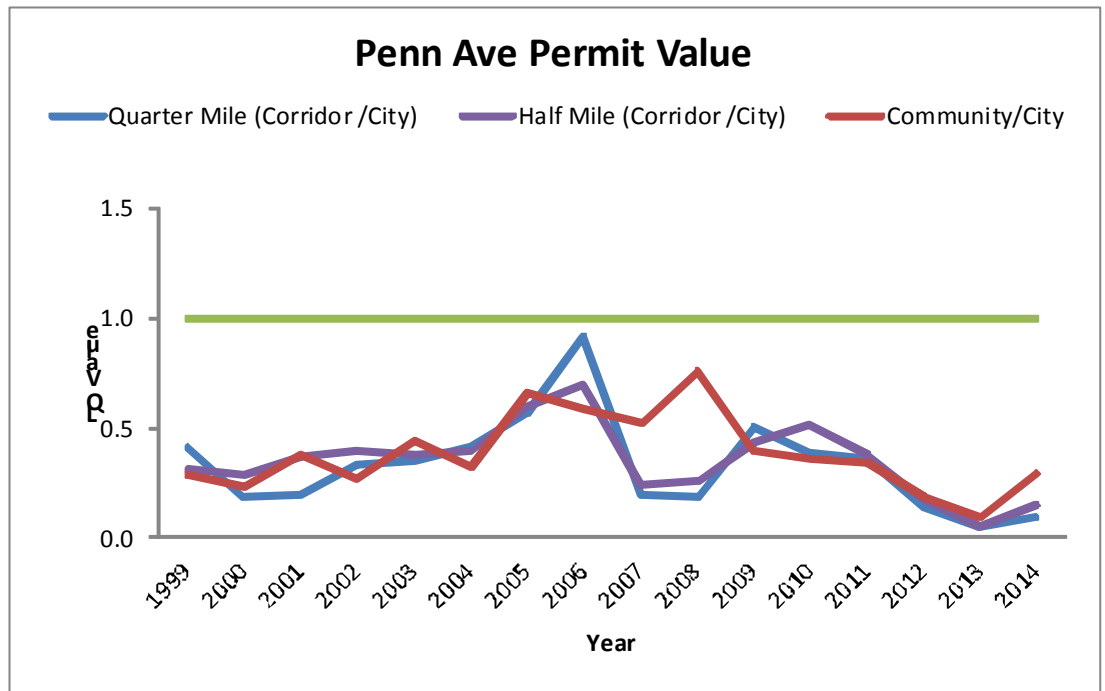
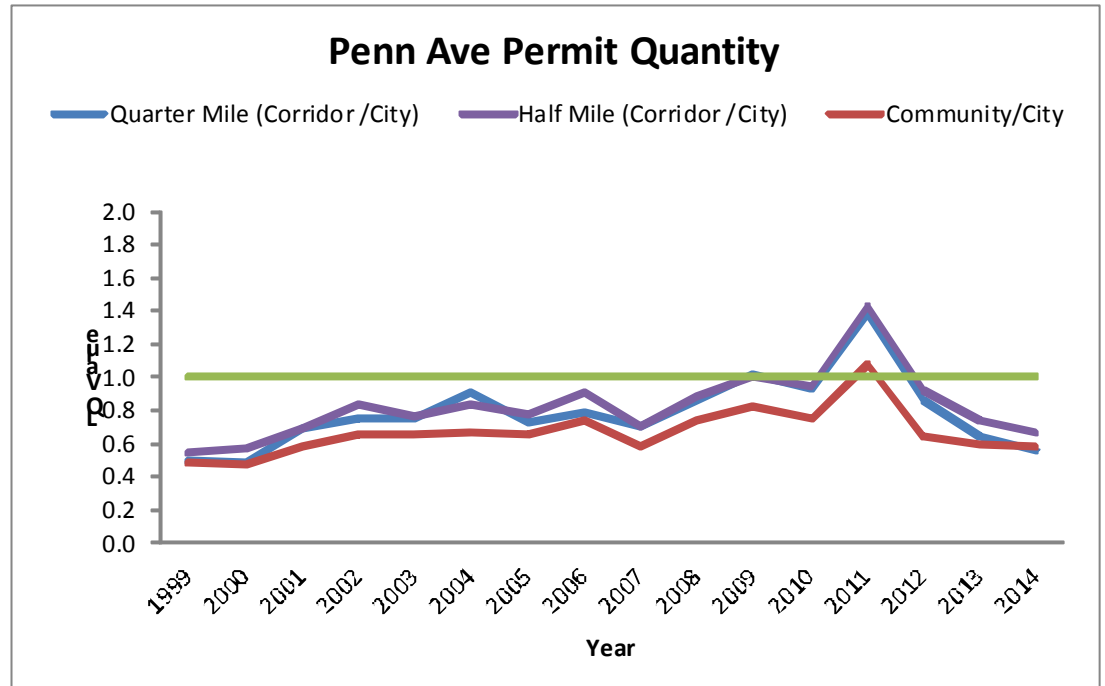
**Figure 10.12 Bottineau LRT Community Works LQ**

The Bottineau Community Works program is just starting. As such, these data serve as baselines for future project implementation. Overall, Permit Value and Quantity have exceeded the city baseline numbers. A reminder that these numbers include proposed rail station areas within the city of Minneapolis.



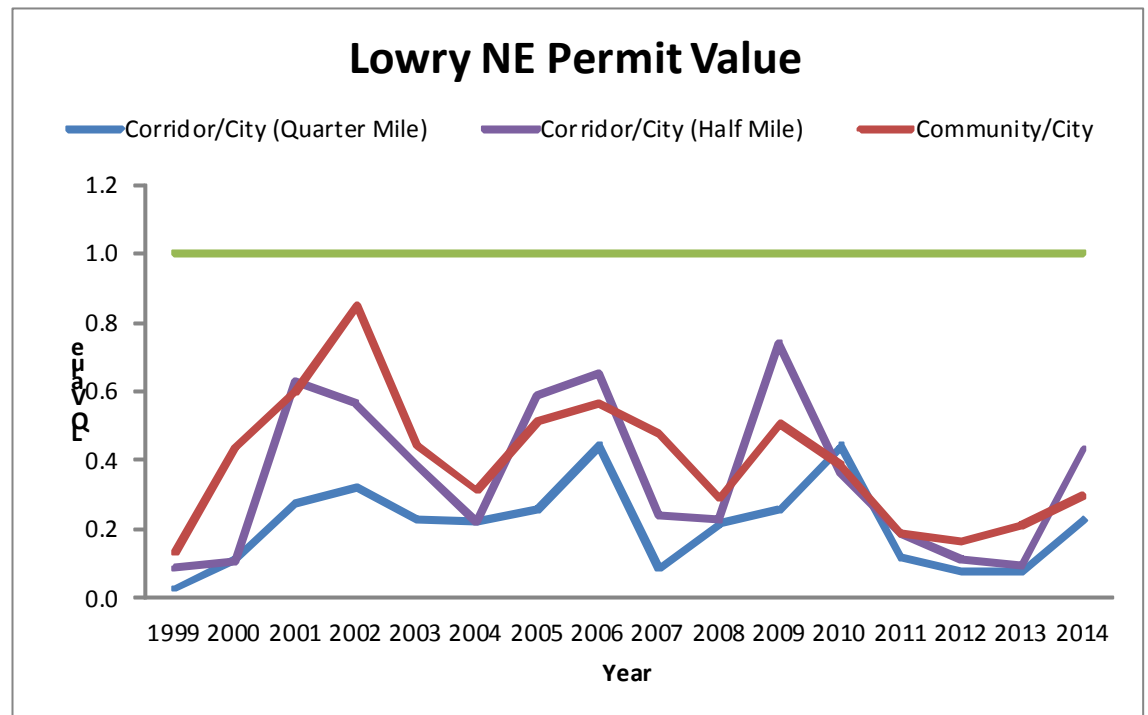
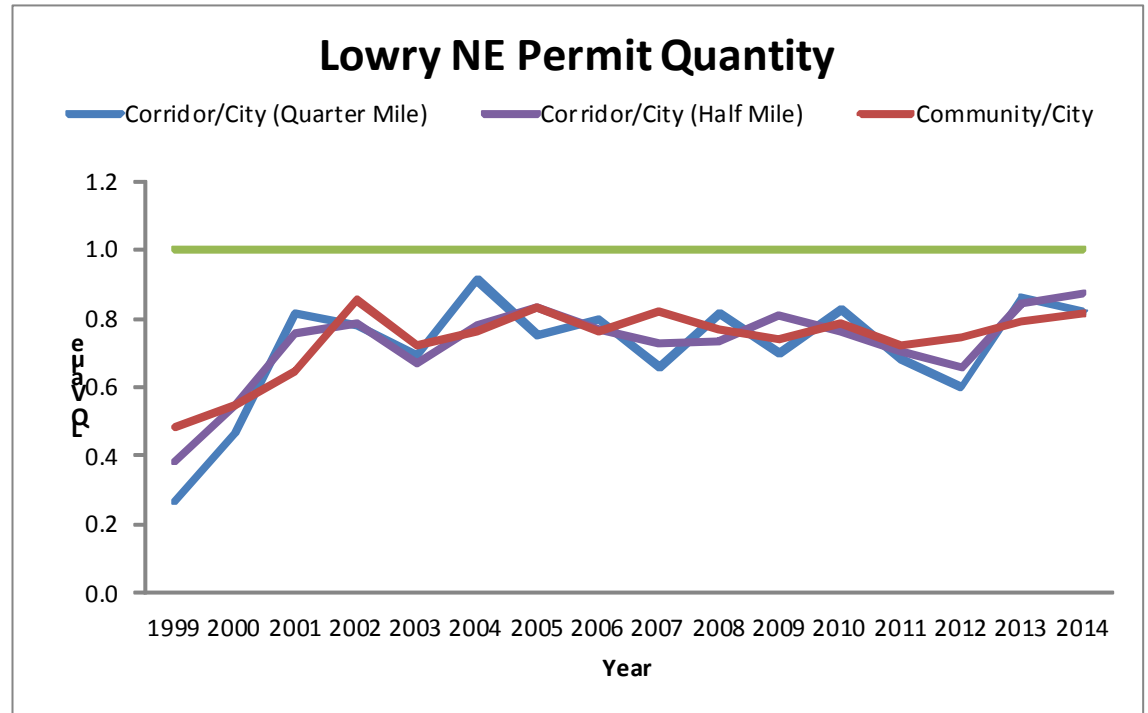
**Figure 10.13 Penn Avenue Community Works LQ**

The Penn Avenue Community Works program was initiated in 2013 and has just started its planning stage. These baseline data indicate permit activity has typically been below the city average, with the exception of the year of the northside tornado.



**Figure 10.14 Lowry Northeast Community Works LQ**

The Lowry Avenue Northeast Works program started its planning in 2014. These baseline data indicate activity below the city average throughout the program area.





## Outcome 4: Community Vision Metrics

Livability is the combined factors that contribute to a community's quality of life. Livability crosses multiple disciplines and dimensions of community life. Factors commonly included in attempts to measure livability include the built and natural environments, economic prosperity, social stability and equity, physical and mental health, educational opportunity, entertainment, recreation, and social belonging <sup>1,2,3</sup>.

Benchmarks for livability vary from community to community and numerous indices attempt to quantify livability yielding contrasting results.

**What is it?** The Federal Highway Administration funded the Community Vision Metrics tool to provide guidance on measuring community livability. This tool describes twelve overlapping themes of livability and recommends an array of potential metrics for tracking progress toward the livability themes that are relevant to the circumstances and quality of life goals of community being assessed <sup>4</sup>. Using the Community Vision Metrics tool as framework provides a lens for understanding CW's role in community livability.

### Community Works goals:

- ◇ Enhance the tax base
- ◇ Stimulate economic development and job growth
- ◇ Strengthen and connect people and places
- ◇ Innovate and advance sustainability
- ◇ Stimulate economic development and job creation

**What are the results?** CW principles, as well as the programs' outputs and outcomes, align with the majority of livability themes described in the Community Vision Metric (Figure 11.1). The evaluation team reviewed the tool's recommended metrics and identified measures similar to

**Figure 11.1 CW program results aligned with Community Vision Metrics tool**

Livability Themes	Sample CW results
Accessibility	300 ADA ramps installed
Aesthetics/Sensory	755 trees planted
Community Amenities	Amphitheater and two learning centers
Community Engagement	4,750 contacts made with community stakeholders
Economic	17 percentage point greater increase in property values
Housing	503 housing units facilitated and improved
Land Use	50 acres of developable land created
Mobility	19.5 miles of upgraded or new trails, bikeways, and sidewalks
Natural Resources	Nearly three miles of daylighted or improved creeks
Public Health	13+ acres of green space created
Safety	658 street/trail lights installed and improved
Socio-Cultural	15 historic panels installed

these metrics for which data were readily available. The ongoing evaluation of CW programs will include further assessment of livability impacts. Approaches will include setting measurable benchmarks for the livability of program areas to quantify CW's impact on livability and conducting community surveys that include questions on livability themes.

## Outcome 5: Crime and Safety

**What is it?** Change in crime levels surrounding program areas was selected as a measure of the crime component of community livability.

### Community Works goal:

◇ *Strengthen and connect people and places*

**Programs included?** This measure was originally analyzed looking at the three programs that have been substantially implemented thus far:

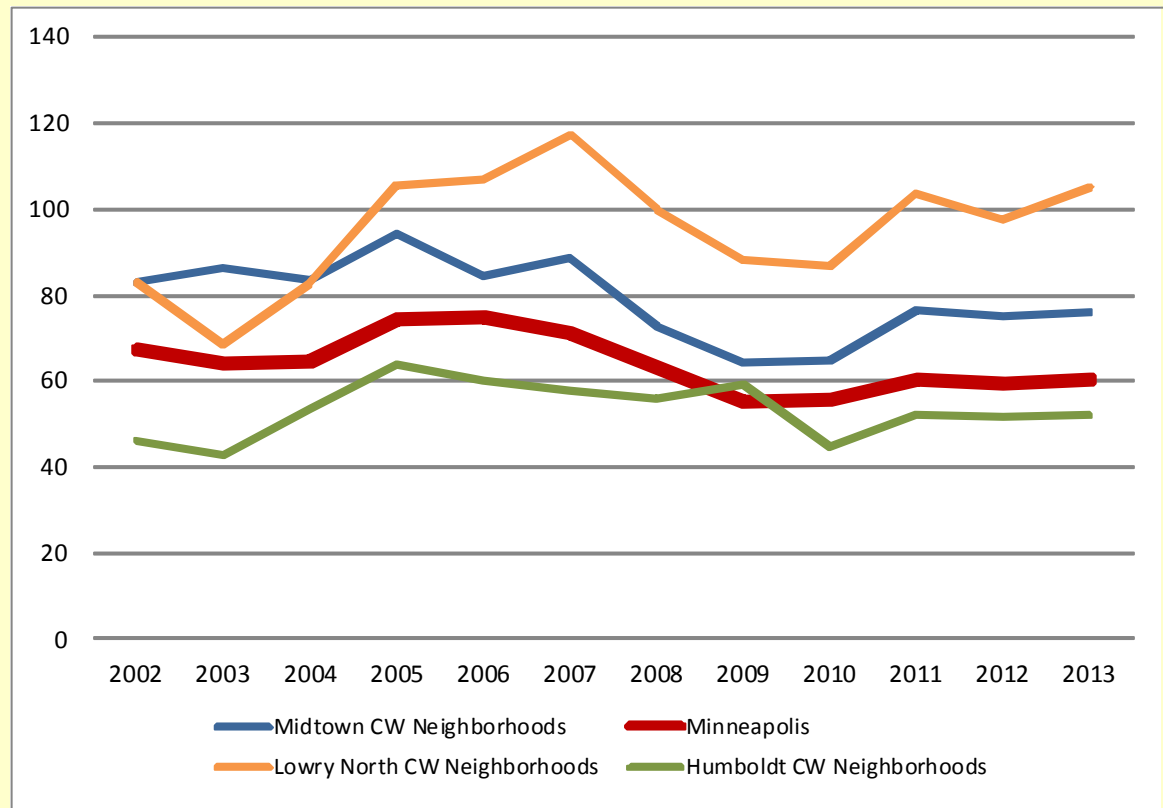
**Humboldt:** including data from the Humboldt Industrial Area, Lind-Bohanon, and Shingle Creek, neighborhoods.

**Lowry North:** including data from the Cleveland, Folwell, Hawthorne, Jordan, and McKinley neighborhoods.

**Midtown:** including data from the Cedar-Isles-Dean, Cooper, East Isles, East Phillips, Longfellow, Lowry Hill East, Midtown Phillips, Phillips West, Seward, West Calhoun, and Whittier neighborhoods.

**How is it measured?** The only crime data available for this analysis was at the neighborhood level and based on CODEFOR statistics maintained by the Minneapolis Police Department. CODEFOR statistics include certain categories of offenses that show the level of criminality in communities. These crime counts include every offense involved in a crime event. Because the method of counting is unique to Minneapolis, crime rates derived using CODEFOR data should not be compared with crime rates of other jurisdictions<sup>5</sup>.

**Figure 12.1 Crime rate\* in Minneapolis Neighborhoods\*\* per 1,000 residents**



\*Crime counts are based on CODEFOR crime data maintained by the Minneapolis Police Department. To calculate the crime rate per neighborhood resident populations, non-census year neighborhood populations were estimated by assuming the change in number of residents was the same in each year between 2000 and 2010.

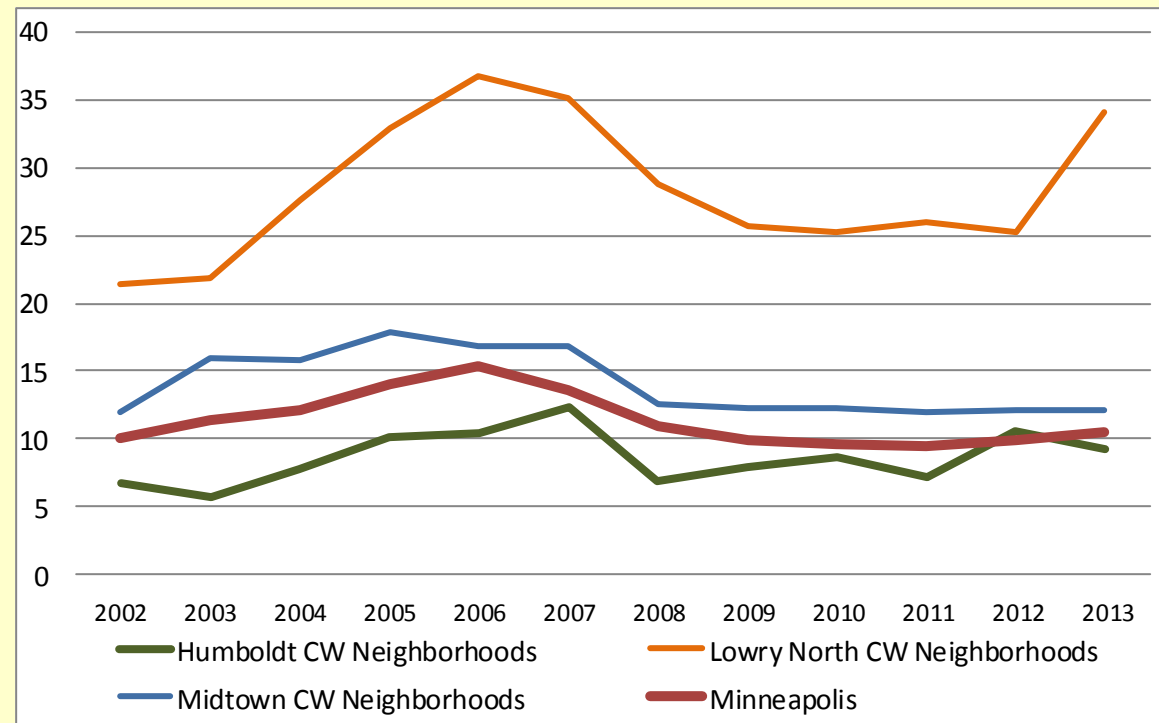
\*\*CW Neighborhoods include all neighborhoods that intersect with a CW program. Multiple neighborhoods were missing data in years 2003, 2004, 2007, and 2010. For the years for which neighborhoods were missing crime data, those neighborhood populations were excluded from the denominator. Non-census year neighborhood populations were estimated by assuming the change in number of residents was the same in each year between 2000 and 2010. Lowry Hill East (in the Midtown program area) 2007 crime rate is an estimate due to 2 months of missing data. Estimated values for missing months were constructed by taking the average of the month before and the month after the months for which data were missing.

**What are the results?** Analysis of crime data for neighborhoods surrounding Community Works programs indicates crime rates in program areas mirror broader city trends (Figure 12.1). In general, crime rates increased in the mid-2000s and reached a low in the 2009-10 timeframe. Figure 12.2 shows similar trends looking solely at violent crimes (assault, homicide, rape, and robbery). Humboldt and Midtown mirrored city trends during the 12-year period. Lowry North experienced a big jump in the mid-2000s and in 2013.

**What does it mean?** A team of UMN policy researchers conducted literature review on the impacts of programs on neighborhood crime, examined potential statistical models, and identified notable limitations with attempting to measure and attribute changes in crime to CW programs:

1. *Challenges with crime analysis in general:* Crime has a very complex relationship with numerous socio-economic, neighborhood, and administrative characteristics that may limit the results of program impact analysis, such as education, unemployment rate, youth population, retail employment density, vegetation, highway proximity, and law enforcement/criminal justice system.<sup>6,7,8,9</sup>
2. *Data availability:* While models can be designed to take into account socio-economic, neighborhood, and administrative characteristics the data available to do so are limited. For example, annual socio-economic data is only available through the American Community Survey (ACS) from 2009 onwards.

**Figure 12.2 Violent crime rate\* in Minneapolis Neighborhoods\*\* per 1,000 residents**



\*CODEFOR neighborhood crime counts are generated by the Minneapolis Police Department. CODEFOR statistics use the same crime categories as the Part I categories of Uniform Crime Report (UCR) statistics. The offenses included in the UCR Part I crimes provide an indicator of the level of criminality in communities. CODEFOR statistics include each offense involved in a crime event. To calculate the crime rate per neighborhood resident populations, non-census year neighborhood populations were estimated by assuming the change in number of residents was the same in each year between 2000 and 2010. .

\*\*CW Neighborhoods include all neighborhoods that intersect with a CW program. Multiple neighborhoods were missing data in years 2003, 2004, 2007, and 2010. For the years for which neighborhoods were missing crime data, those neighborhood populations were excluded from the denominator. Non-census year neighborhood populations were estimated by assuming the change in number of residents was the same in each year between 2000 and 2010. Lowry Hill East (in the Midtown program area) 2007 crime rate is an estimate due to 2 months of missing data. Estimated values for missing months were constructed by taking the average of the month before and the month after the months for which data were missing.

3. *Problems with crime analysis at the neighborhood level:* Crime data at the neighborhood level includes data for areas significantly larger than the program areas, so the impacts may be diluted. Minneapolis neighborhoods vary greatly from one another in terms of the numbers of people moving through them each day. Population counts do not account for the number of the workers, shoppers, etc. in the neighborhood daily, which also impact crime.
4. Past research suggests that neighborhoods contain crime hot spots. If a CW program is not in proximity to neighborhood crime hot spots or does not focus on changing/improving features of crime hot spots, its impact on the crime rate in the neighborhood may not be significant.<sup>10</sup>

**Sources:**

- <sup>1</sup> Partners for Livability website: <http://livable.org/about-us/what-is-livability>
- <sup>2</sup> Livability Performance Measures Resource Companion: <http://planningcommunities.com/livabilitytool/Livability%20Performance%20Measures%20Resource%20Companion.pdf>
- <sup>3</sup> Neighborhood-scale Planning Tools to Create Livable Communities: [http://lgc.org/wordpress/docs/freepub/community\\_design\\_fact\\_sheets/neighborhood\\_planning.pdf](http://lgc.org/wordpress/docs/freepub/community_design_fact_sheets/neighborhood_planning.pdf)
- <sup>4</sup> <http://www.livabilitytool.planningcommunities.com/>
- <sup>5</sup> City of Minneapolis website: [http://www.minneapolismn.gov/police/statistics/police\\_crime-statistics\\_understanding-codefor](http://www.minneapolismn.gov/police/statistics/police_crime-statistics_understanding-codefor)
- <sup>6</sup> FBI- List of variables affecting crime: [http://www2.fbi.gov/ucr/cius2009/about/variables\\_affecting\\_crime.html](http://www2.fbi.gov/ucr/cius2009/about/variables_affecting_crime.html)
- <sup>7</sup> Fajnzylber P, Lederman D, Loayza N. What causes violent crime? *European Economic Review* 46 (2002) 1323-1357
- <sup>8</sup> Stolzenberg L, Eitle D, D'Alessio SJ. Race, economic inequality, and violent crime. *Journal of Criminal Justice* 34 (2006) 303–316
- <sup>9</sup> Brush J. Does income inequality lead to more crime?: A comparison of cross-sectional and time-series analyses of United States countries. *Economics letters* 96 (2007) 264-268
- <sup>10</sup> Literature review findings from UMN research team.

## Outcome 6. Accessibility

“Accessibility indicates the collective performance of land use and transportation systems and determines how well that complex system serves its residents.”[1] Improvements that make it safer, easier, and more appealing for people to travel via walking, biking, transit, and vehicle to employment centers and other destinations can improve accessibility.

The evaluation effort identified two key dimensions of how Community Works programs address accessibility :

1. *Quantity of improvements* refers to changes in the amount of infrastructure, such as miles of bikeways or sidewalks, number of ADA ramps, or connections to transit, that impact the speed of travel and the number of destinations (e.g. jobs, retail, parks, etc.) made reachable through the improvements.
2. *Quality of improvements* refers to changes in the safety, comfort and aesthetics of the infrastructure or environment that encourage walking, biking, or transit use. For example, the Lowry Avenue program included improvements to the quality and ADA aspects of the sidewalks along Lowry Avenue North. While the project did not increase the walk-shed by adding sidewalks to the network, accessibility could be improved because the environment is safer and more hospitable for walking.

In working with the UMN researchers, the CW evaluation team selected four sets of quantitative analyses to measure accessibility in CW program areas: (6.1) transit access to jobs; (6.2) pedestrian access to goods, services, and parks; (6.3) bike access to destinations; and (6.4) bike access to jobs.

These measures are applicable to programs that added infrastructure to the transportation network. To address the impact of quality improvements, the CW team recommends that subsequent evaluations include community surveys with questions on the perceived safety and comfort of the bike and pedestrian environment in program areas.

### 6.1 Transit Access to Jobs

**What is it?** This indicator looks at the number of jobs a person living within CW program areas has access to within a 45 minute transit ride.

**Community Works goals:**

- ◇ *Strengthen and connect people and places*
- ◇ *Stimulate economic development and job growth*

**Programs included?** Three Community Works programs will have transit improvements integrated into their programs, and as a result, could be expected to have an impact on job access within their program areas. Both the Bottineau and Southwest Community Works programs include improved transit — specifically light rail transit — as an essential component of those programs. Penn Avenue CW is a potential arterial bus rapid transit route and is integrating employment and transit access as key components of their work.

**How is it measured?** The University of Minnesota calculated and mapped a transit travel-shed for all three program areas using the current transit system as a baseline. Figures 13.1 to 13.3 show those travel-sheds, with the “green” area showing the parts of the region that can be reached in a 45 minute transit ride for people living within 1/4 mile of the transit stations or program area (for Penn Ave), and the “yellow” area showing the additional areas that can be reached by people living within 1/2 mile of the transit stations or program area.

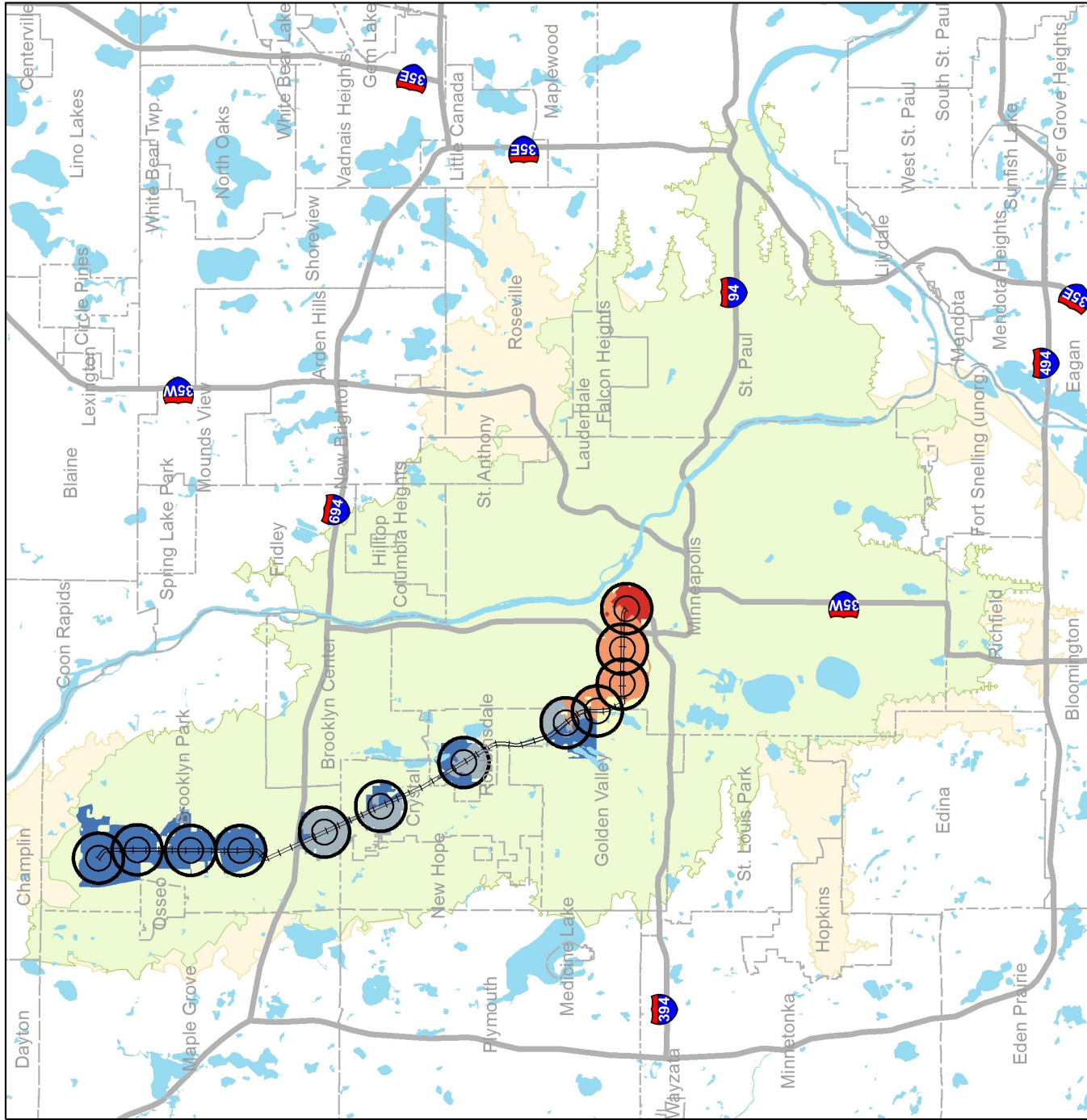
The program areas themselves are colored coded based on the number of jobs that can be accessed within that 45-minute transit ride.

**What are the results?** Figures 13.1 to 13.3 provide baseline data (pre-transit line opening) for Bottineau, Southwest, and Penn Avenue CW programs.

- *Bottineau:* Residents near the proposed Brooklyn Park station areas have access to fewer than 100,000 jobs on average in a 45 minute transit ride, while residents near the Minneapolis stations have

Figure 13.1 45-minute transit travel-shed from Bottineau LRT stations

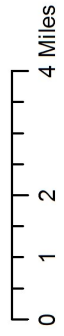
45 Minute Transit Shed Bottineau Rail (Station)



**Legend**

- Jobs Accessible**
- 0 - 100000
  - 100001 - 200000
  - 200001 - 300000
  - 300001 - 400000
  - 400001 and above

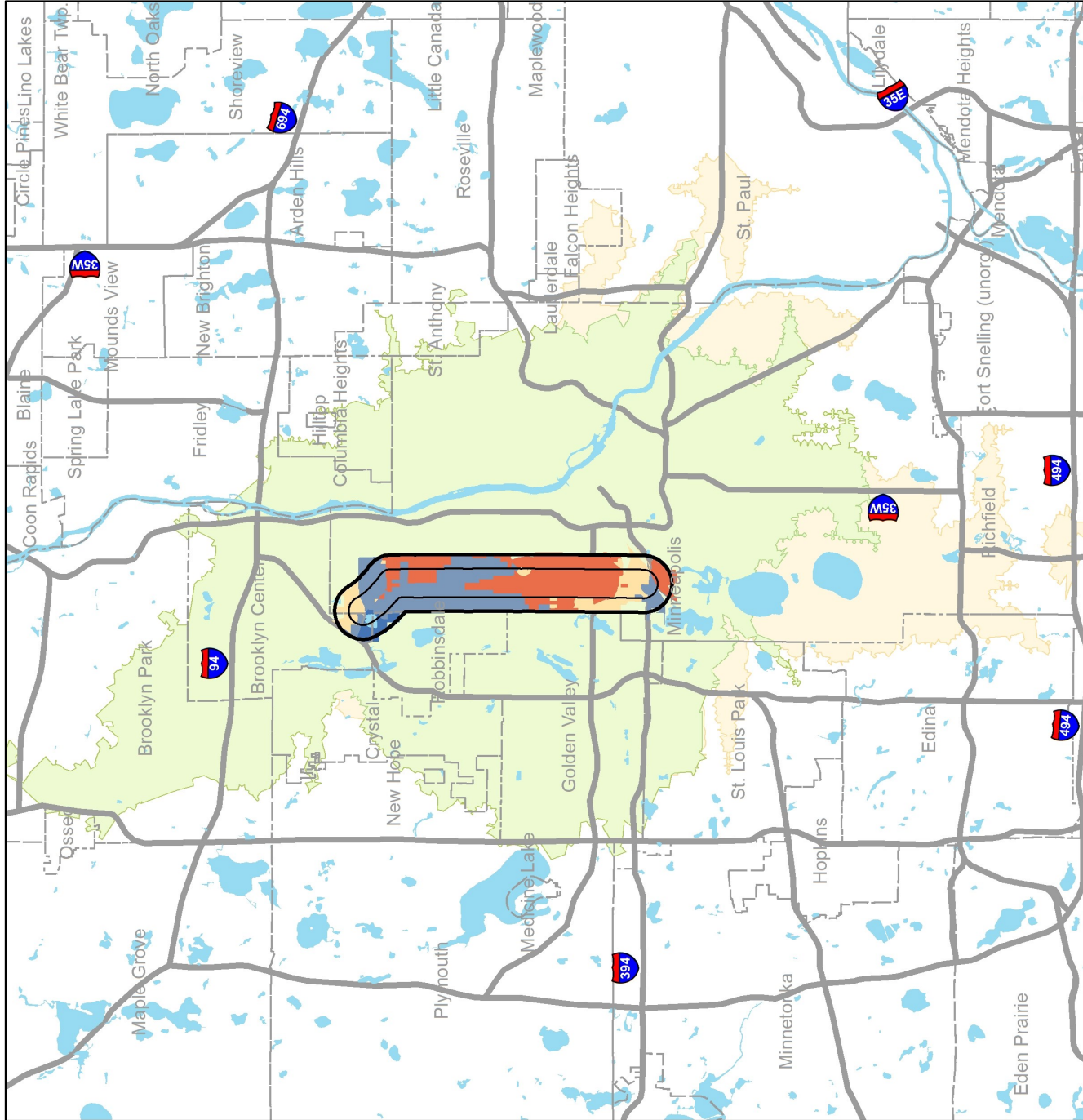
- Impact Area Half Mile Buffer
- Impact Area Quarter Mile Buffer
- Quarter Mile Station Transit Shed
- Half Mile Station Transit Shed
- Bottineau Line
- Interstate Highway
- City Boundaries
- Lakes and Rivers



Note:  
-Jobs accessible are jobs reachable from impact areas by the transit system within 45 minutes.

Figure 13.2 45-minute transit travel-shed from Penn Ave CW corridor

45 Minute Transit Shed Penn Avenue



**Legend**

**Jobs Accessible**

- 0 - 100000
- 100001 - 200000
- 200001 - 300000
- 300001 - 400000
- 400001 and above

- Impact Area Half Mile Buffer
- Impact Area Quarter Mile Buffer
- Quarter Mile Transit Shed
- Half Mile Transit Shed
- Interstate Highway
- City Boundaries
- Lakes and Rivers

Note:

-Jobs accessible are jobs reachable from impact areas by the transit system within 45 minutes.

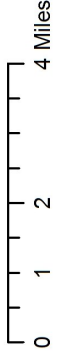
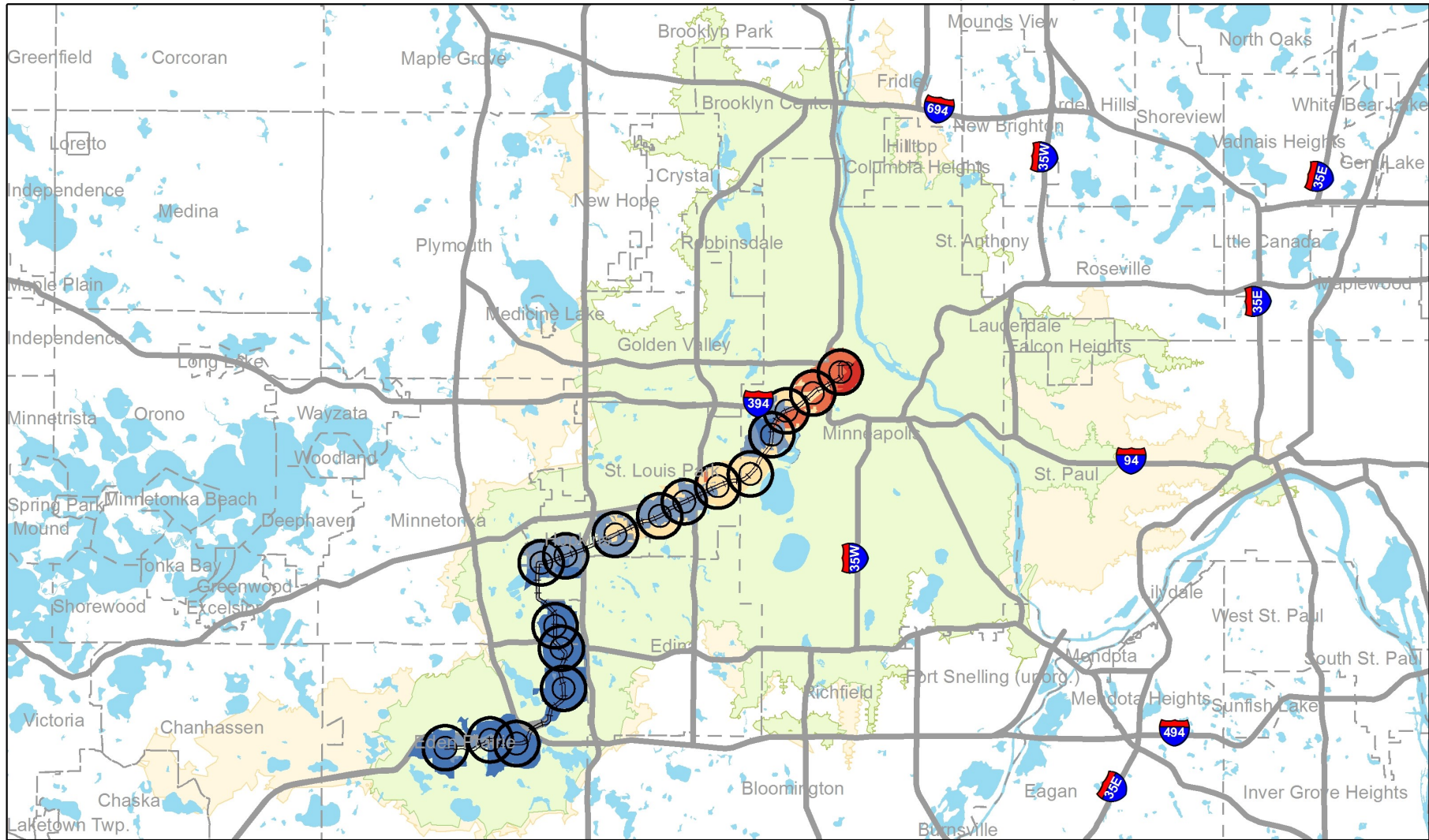


Figure 13.3 45-minute transit travel-shed from Southwest LRT stations

### 45 Minute Transit Shed South West Light Rail (Stations)



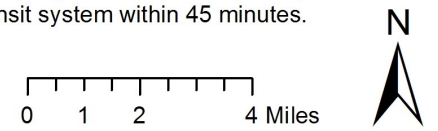
**Legend**

**Jobs Accessible**

- 0 - 100000
- 100001 - 200000
- 200001 - 300000
- 300001 - 400000
- 400001 and above

- Impact Area Half Mile Buffer
- Impact Area Quarter Mile Buffer
- Quarter Mile Station Transit Shed
- Half Mile Station Transit Shed
- South West Line
- Interstate Highway
- City Boundaries
- LakesAndRivers

Note:  
- Jobs accessible are jobs reachable from impact areas by the transit system within 45 minutes.





access to over 300,000 jobs—this gap is not surprising given the Minneapolis stations proximity to downtown and its extensive transit service and employment centers.

In addition, the 45-minute transit travel-shed (green and yellow shaded areas) for Bottineau is centered on Minneapolis, western St. Paul, and the communities directly along the Bottineau route.

- **Southwest:** Residents near the proposed Eden Prairie and Hopkins stations, in general, had access to fewer than 100,000 jobs within a 45 minute transit ride. St Louis Park station areas have more jobs within 45 minutes, likely reflecting its closer proximity to downtown.
- **Penn Avenue:** Much of the corridor has access to over 200,000 jobs via a 45-minute transit ride. However, the portion near and including Robbinsdale has access to fewer than 100,000 jobs.

The 45-minute transit travel-shed for the Southwest area stations is limited in the southwest suburbs (reflecting the limited range of local transit service in the area) but does reach most of Minneapolis and northward into Robbinsdale and Brooklyn Center.

The 45-minute transit travel-shed for the corridor is smaller than the ones for Southwest or Bottineau. It includes much of Minneapolis and parts of several first ring suburbs and Brooklyn Park. However, Bottineau and Southwest included all of Minneapolis and reached into St. Paul. This information suggests that current transit service in the Penn Avenue area is slow enough that — even though they can connect to many transit lines in downtown — the total travel time to many locations will be over 45 minutes. It also suggests that transit rail transit or arterial bus rapid transit improvements could significantly improve access to the southwest, northwest, south, and St. Paul.

**Sources:** Data collected by the University of Minnesota:

- ◇ El-Geneidy AM, Levinson DM. Access to Destinations: Development of Accessibility Measures. University of Minnesota. May 2006. <http://www.lrrb.org/media/reports/200616.pdf>
- ◇ Roads: Minnesota Department of Transportation County Basemap
- ◇ Transit alignment and stations: Metropolitan Council, Metro GIS

- ◇ Transit schedule data: General Transit Feed Specification (GTFS), MetroGIS
- ◇ Jobs data: Longitudinal Employer-Household Dynamics (LEHD) 2011 dataset

## 6.2 Pedestrian Access to Goods, Services, and Parks

**What is it?** This measure considers the number of residents who gained access to additional amenities (i.e. education, entertainment, financial services, food, health care, shopping) and the total number of additional park acres they gained access to in the program impact area with improved access resulting from CW investment.

### Community Works goals:

- ◇ *Innovate and advance sustainability*
- ◇ *Strengthen and connect people and places*
- ◇ *Stimulate economic development and job growth*

**Program included?** The analysis focused on the three program areas that included the most significant connectivity improvements:

- Brooklyn Park/SNAP: in the Village Creek area encompassed by Brooklyn Boulevard, 73rd Avenue, Unity Ave, and Zane Ave North.
- Brooklyn Park Connections: Adjacent to Park Center Senior High, connecting from Regent Ave North, south along Brooklyn Boulevard and west along Shingle Creek to Noble Ave North.
- Daylighting Creeks program in Brooklyn Center in the old Brookdale Mall area, extending northward along Shingle Creek to Interstate 694.

Other CW programs, such as Midtown, Humboldt, and Lowry, included significant investments in trails and sidewalks. However, these investments improved the quality of the walking environment instead of the quantity. For example, the Midtown Greenway has created a grade separated corridor that might be a more pleasant walk, but there are parallel sidewalks so it has not appreciably increased household proximity to businesses.

**How is it collected?** The University of Minnesota collected data on the number and types of destinations that could be accessed by impact area residents before and after CW investments occurred. In addition, block level population data was used to calculate the number of residents with accessibility gains.

**How is it measured?** The University of Minnesota calculated the number of destinations and acres of park space accessible by a 1/2 mile walk from each block within 1/2 mile of the program area. The number of destinations and park acreage accessible were then compared before and after CW program improvements based on the population of the 1/2 mile impact area blocks. Finally, the number of residents with improved access to amenities and the additional park area accessible was calculated for each program. Before and after CW program impact analysis was done by calculating accessibility with and without CW connectivity improvements .

**What are the results?** Figure 13.4 shows the number of residents in the 1/2 mile impact area with improved access to various destinations and the additional acres of park accessible after CW program implementation.

- *Daylighting Creeks/Brooklyn Center:* residents gained access to an additional 20 acres of parks, but none of the residents gained access to any other amenities.
- *Brooklyn Park Connections:* 433 residents gained access to additional entertainment destinations, 655 to shopping destinations, and 293 to schools. In addition, residents gained access to an additional seven acres of parks.
- *Brooklyn Park/SNAP:* 546 residents gained access to additional schools and 158 gained access to additional financial service destinations. They also had the highest gain of park acres, 178 acres, compared to the other CW programs.

The analysis also showed that while the overall area traversable by a 1/2 mile walk did not change significantly for program impact areas as a whole after CW program improvements, individual blocks did gain access to additional destinations and park acres.

**Figure 13.4 Number of residents in the half mile impact area that have improved access and additional acres of park accessible after Community Works Programs**

	Daylighting - BC	Connections	SNAP
	Count	Count	Count
Total Impact Area Population	5,326	8,043	12,314
Businesses			
Education	0	89	0
Entertainment	0	433	0
Financial	0	0	158
Food	0	0	0
Healthcare	0	140	0
Shopping	0	655	0
Schools	0	293	546
Parks (Acres)	20	7	178

While the analysis does show some promising results it also suggests that in some cases (e.g. Daylighting Creeks ) the improvements did not eliminate substantial connectivity gaps, or that there were not many destinations in the areas to access.

**Note:** These types of qualitative improvements could not be captured through the University’s research. HCWT staff is recommending a community survey or other means to try to track this information.

**Sources:**

Data collected by the University of Minnesota:

◇ Roads: Minnesota Department of Transportation County Basemap

- ◇ Parks: Metropolitan Council Generalized Land Use 2010
- ◇ Schools: Hennepin County Facilities database
- ◇ Businesses: Hoover 2014 Business dataset
- ◇ Block level Population: Metropolitan Council, Metro GIS

### 6.3 Bike Access to Destinations

**What is it?** This measure uses an origin-destination analysis to look at biking time savings attributable to the Midtown Greenway while traveling between 10 sample origins and destinations.

**Community Works goals:**

- ◇ *Strengthen and connect people and places*
- ◇ *Innovate and advance sustainability*

**Program included?** The analysis focuses on the bike accessibility improvements from the Midtown Greenway.

**How is it measured?** The Midtown Greenway provides a safe and easily accessible biking opportunity with fewer stops than assigned bike lanes, and as a result it could be expected to reduce travel times between locations and increase the distance users are able to travel in a given period of time.

For the origin destination analysis, the University of Minnesota calculated travel time between origins and destinations, as identified in Figure 13.5 using current road and bikeway data with and without the Midtown Greenway. The aim of this analysis is to identify the travel-time savings that bikers experience because the Greenway exists.

**What are the results?** Figure 13.5 shows the time savings attributable to the Midtown Greenway between 10 sample origins and destinations. Across these ten routes there was an average of 10.92 minutes (24 percent) of savings in travel time.

**Figure 13.5 Average travel time savings for bicyclists with and without Midtown Greenway for sample origins and destinations**

Origin	Destination	Travel Time Savings (Minutes)	Travel Time Savings (Percent)
5000 Penn Ave S	3311 E 25th Street (Birchwood Café)	12.88	25%
Excelsior & Grand St. Louis Park	2115 Summit Ave, St Paul (University of St. Thomas)	20.20	30%
1600 S 6th Street (Riverside Plaza)	2880 Hennepin Ave S (Walker Library)	9.70	31%
2900 Bryant Ave S	Snelling & Marshall St Paul	15.66	30%
2929 Chicago Ave S, (Midtown Exchange)	9380 Excelsior Blvd, Hopkins (Cargill Inc.)	7.90	19%
929 Portland Ave, (Skyscape Condos)	6500 Excelsior Blvd, SLP (Methodist Hospital)	3.02	6%
310 E 38th St, (Sabathani Comm Center)	301 19th Ave S (Humphrey School)	3.73	12%
2900 Thomas Ave S (Calhoun Beach Club)	4801 S Minnehaha Park Dr (Minnehaha Park)	12.66	27%
2225 E Lake Street	1339 Theodore Wirth Pkwy (Theodore Wirth Park)	8.11	18%
4600 E Lake Street (West River Commons)	3200 W Lake Street (Calhoun Village)	15.36	35%

Routes traveling mostly east/west, which were best able to take advantage of the greenway, observed more than a 30 percent time savings, including *Excelsior & Grand to St. Thomas* with 20.2 minutes (30 percent); *Riverside Plaza to Walker Library* with 9.70 minutes (31 percent); *29th & Bryant to Snelling & Marshall* with 15.66 minutes (30 percent); and *West River Commons to Calhoun Village* with 15.36 minutes (35 percent).

**Sources:** Data collected by the University of Minnesota

- ◇ Roads: Minnesota Department of Transportation County Basemap

- ◇ Bikeways: Metropolitan Council, Metro GIS
- ◇ Jobs data: Longitudinal Employer-Household Dynamics (LEHD) 2011 dataset

## 6.4 Bike Access to Jobs

**What is it?** This measure uses a 45-minute bike travel-shed analysis to look at changes in job accessibility due to the Midtown Greenway.

### Community Works goals:

- ◇ *Strengthen and connect people and places*
- ◇ *Economic development and job growth*

**Program included?** The analysis focuses on the bike accessibility improvements to jobs along the Midtown Greenway.

**How is it measured?** The University of Minnesota calculated the number of jobs accessible with a 45-minute bike ride under two cases: (1) the current trail system, and (2) a trail system assuming the Midtown Greenway had not been constructed. They then compared the travel-shed of both cases to determine the number of additional jobs bikers have access to within 45 minutes with the existence of the Midtown Greenway.

**What are the results?** Figure 13.6 shows the gain in access to jobs due to the Midtown Greenway at eight sample locations. Across these eight locations, there was an increase in access to an average of 57,159 jobs (22 percent) excluding downtown Minneapolis. The origins that saw the greatest benefit include the following:

- 2900 Bryant Ave South: 92,411 jobs (36 percent)
- Excelsior and Grand: 73,387 jobs (36 percent)
- 2225 E. Lake Street: 66,203 jobs or (25 percent)
- Midtown Exchange building: 60,394 jobs (23 percent)

Figures 13.7 to 13.9 provide a visual representation of the additional area made accessible to bikers because of the Midtown Greenway. These maps focus on results of the bike travel-shed analysis for the three origins with

**Figure 13.6 Number of jobs accessible within 45 minute bike ride—comparison with and without Midtown Greenway (excluding downtown Minneapolis)**

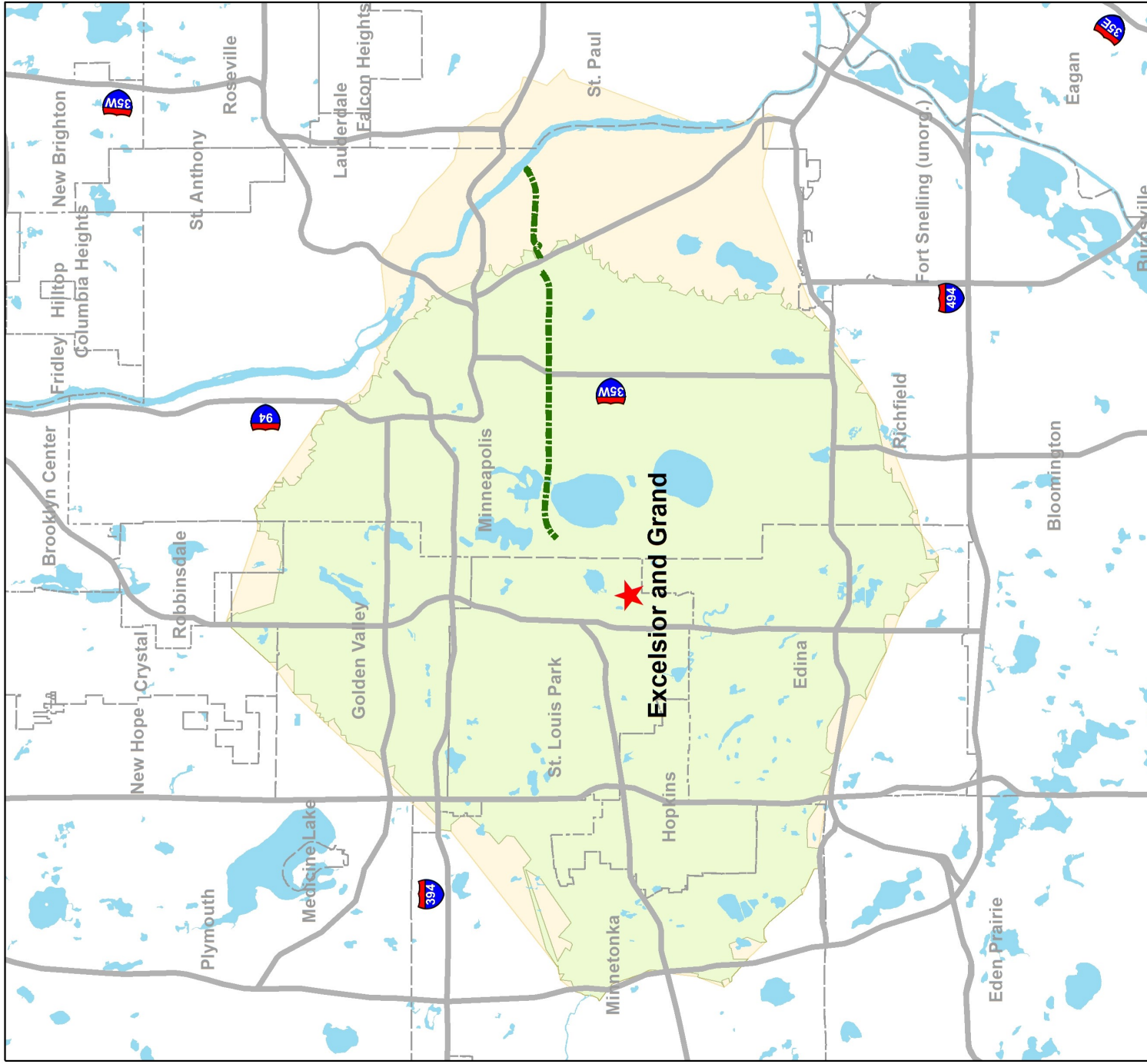
Bike Travel-Shed Origins	Total Jobs Accessible Before	Total Jobs Accessible After	Percent Change
3311 E 25th Street (Birchwood Café)	260,542	318,258	22%
Excelsior & Grand St. Louis Park	205,539	278,926	36%
3200 W Lake Street (Calhoun Village)	276,397	325,945	18%
2900 Bryant Ave S	256,543	348,954	36%
2929 Chicago Ave S, (Midtown Exchange)	263,656	324,050	23%
310 E 38th St, (Sabathani Comm Center)	235,398	278,162	18%
2225 E Lake Street	268,923	335,126	25%
4600 E Lake Street (West River Commons)	274,045	288,894	5%

the highest increase in accessible jobs, Excelsior and Grand, 2900 Bryant Ave South, and 2225 East Lake Street.

The “green” areas in the maps represent the 45 minute bike travel-shed before the Midtown Greenway and the “yellow” represent the bike travel-shed after the Midtown Greenway. As would be expected, in most cases the highest accessibility gains seem to fall in the opposite direction of where origins are located with respect to the Greenway.

Figure 13.7 45 minute bike travel-shed—Excelsior and Grand

45 Minute Bicycle Travelshed: Excelsior & Grand, St. Louis Park



**Legend**

- ★ Excelsior & Grand, St. Louis Park
- Pre-Midtown Bike travelshed
- Post-Midtown Bike travelshed
- Interstate Highways
- City Boundaries
- Lakes and Rivers
- Midtown Greenway



Figure 13.8 45 minute bike travel-shed—2900 Bryant Avenue South

45 Minute Bicycle Travelshed: 2900 Bryant Ave S, Minneapolis

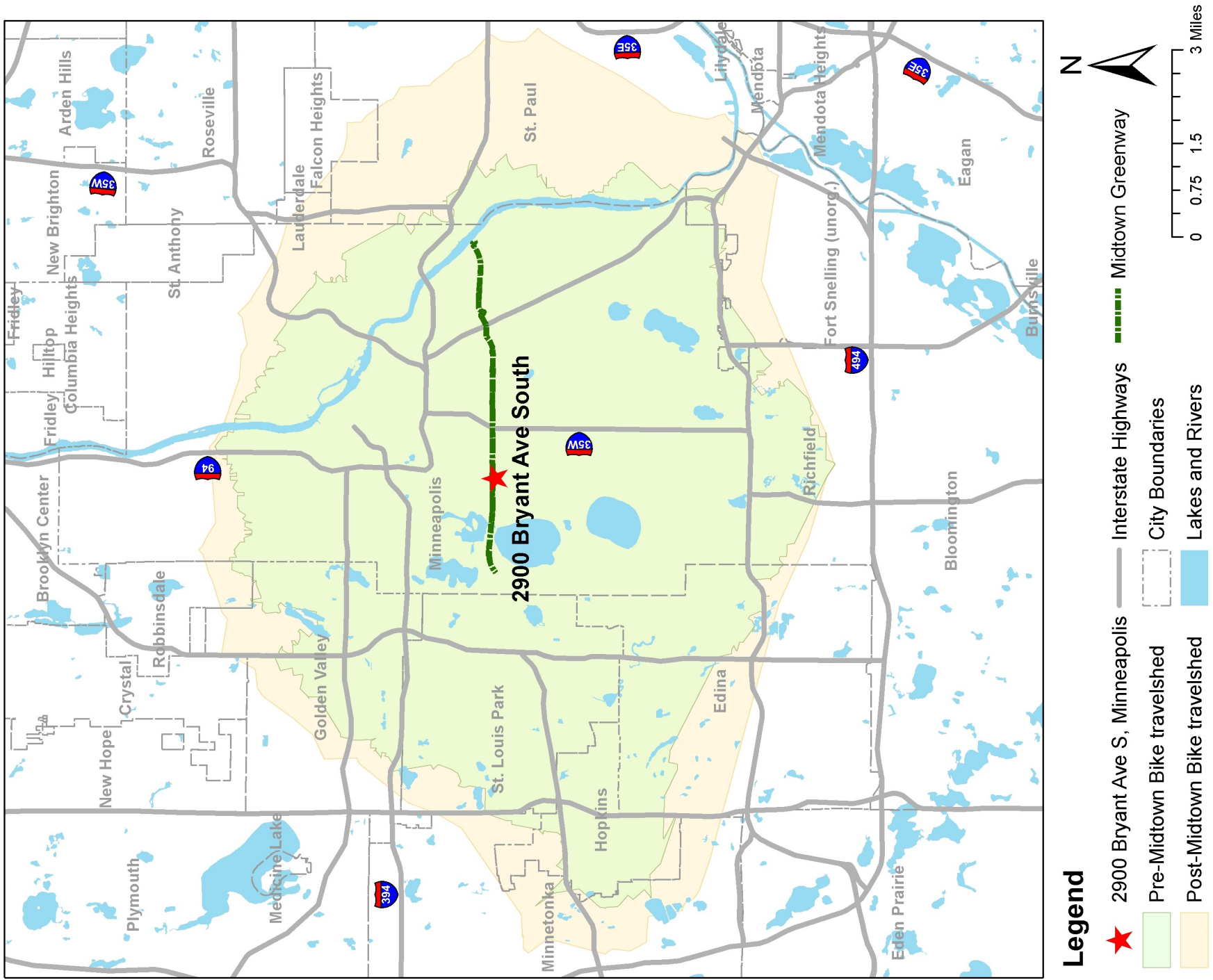
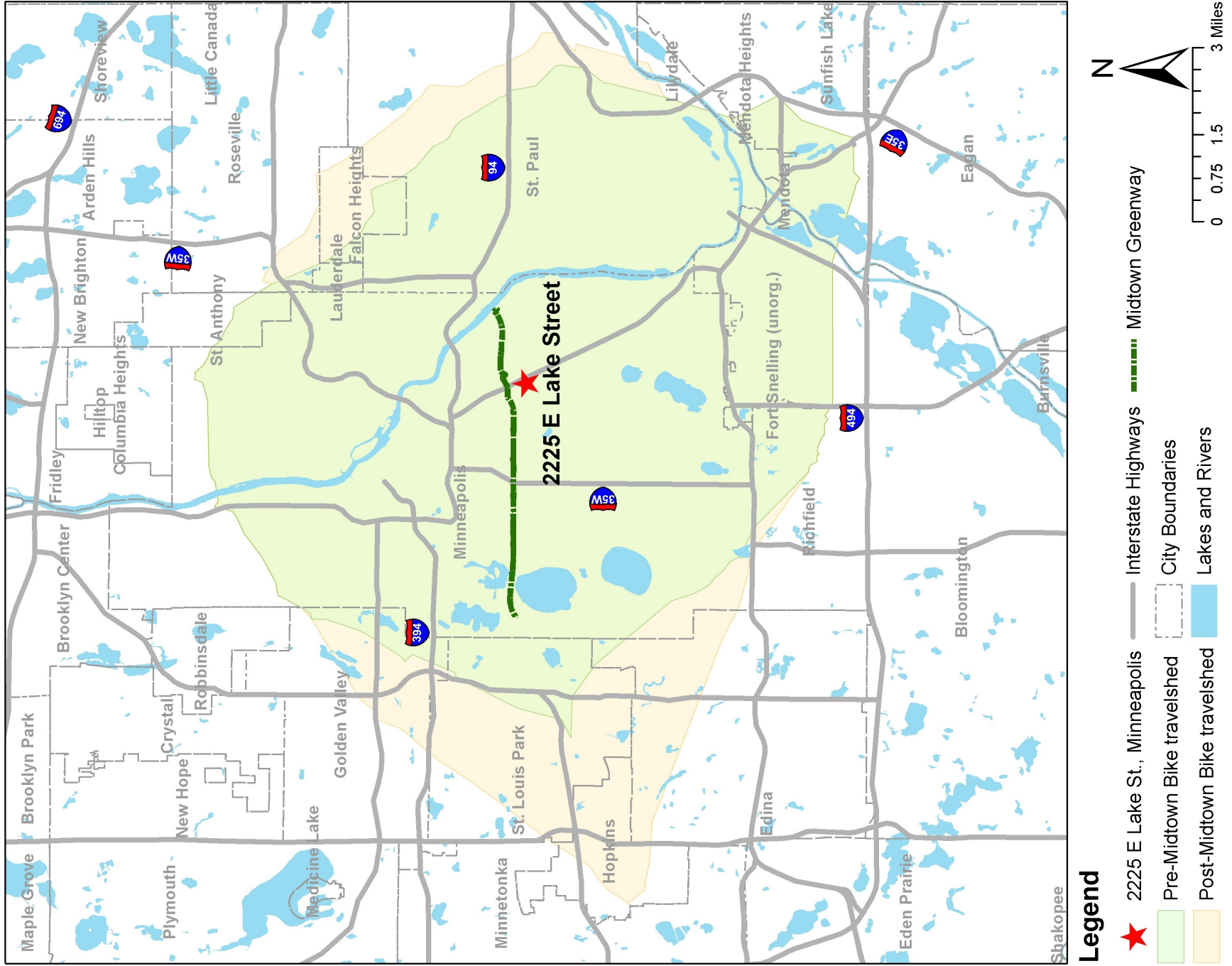


Figure 13.9 45 minute bike travel-shed—2225 East Lake Street

45 Minute Bicycle Travelshed: 2225 E Lake St., Minneapolis



For Excelsior and Grand that is located west of the Midtown Greenway the 45 minute biking accessibility increased the most towards eastern Minneapolis and parts of St. Paul. Similarity for 2225 East Lake Street, located along the eastern part of the Greenway, the highest accessibility gains were towards the west into St. Louis Park, Edina and Hopkins. A more balanced increase in the bike travel-shed was seen in the case of 2900 Bryant Ave South, with accessibility gains towards the west into Minnetonka and Edina, and towards the east into St. Paul.

**Notes:** This analysis excluded jobs located in downtown Minneapolis because the number of jobs located there would dilute the results.

**Sources:** Data collected by the University of Minnesota

- ◇ Roads: Minnesota Department of Transportation County Basemap
- ◇ Bikeways: Metropolitan Council, Metro GIS
- ◇ Jobs data: Longitudinal Employer-Household Dynamics (LEHD) 2011 dataset



## Issues with Data Availability and Quality

Based on the measures identified for Community Works program evaluation, the University of Minnesota project team identified a number of issues with acquiring data required for analysis. The data issues limited the scope of the analysis in many cases and caused significant delays in completing the required evaluation work. A summary of strategies to deal with these issues in the future is given in Figure 14.

For building permit data used in the Location Quotient (LQ) analysis, data were only available for the City of Minneapolis. Of the permit data provided by the City of Minneapolis, 632 of the 61,917 permits provided city wide were excluded due to incomplete location information.

Fifteen municipalities were contacted without success. Some municipalities lacked electronic filing of building permits, such as the city of Robbinsdale which only maintains records of image based filings by property location. Some municipalities only maintained partial records of permit data, while other municipalities were unresponsive to requests for data.

For walk-sheds and bike travel-shed analysis, the required historical road network files were not available, limiting the potential of accurate longitudinal analysis. For analysis related to jobs and businesses two data sets were used: the

**Figure 14 Data issues and recommendations summary table**

Data Requirement	Measure(s)	Current Use	For the Future
Building permit data	Location quotient Kernel density	Only Minneapolis permit data used	Explore getting permit data for all cities with CW programs
Parcel data	Location quotient	Data are readily available	N/A
Road network data	Walk-sheds, Transit travel-sheds Bike travel-sheds	Only current road networks used for all analysis	Explore getting historical road network data (based on project implementation years) for longitudinal analysis
Parks	Walk-sheds	Data are readily available	N/A
Schools	Walk-sheds	Data are readily available	N/A
Business/ jobs	Walk-sheds Transit travel-sheds Bike travel-sheds	Hoover 2014 data was used for walk-sheds and LEHD 2011 for the remaining two	Explore options for getting more up-to-date business data for longitudinal analysis. While Hoover data was more current, there were questions about reliability of location-based job numbers
Block level population data	Walk-sheds	Data are readily available	N/A
Transit scheduling data	Transit travel-sheds	General Transit Feed Specification (GTFS) data from Metro GIS	Ensure that the most up to date GTFS data is used
Bikeways data	Bike travel-sheds	Bikeways information from MetroGIS used	Explore using historical data. Identify sources for getting the most up-to-date bikeways files (MetroGIS file is outdated). Double check for accuracy of bikeway connections to roadways.

LEHD 2011 dataset and the Hoover 2014 dataset. Both datasets had their limitations. While the LEHD data provides accurate job related information the most recent dataset is from 2011. In addition, LEHD data is aggregated at the block level which limits measuring access to businesses (e.g. stores, schools, banks etc.).

On the other hand while Hoover data does provide individual business location information, the job related information was questionable. A number of business locations reported having no employees which indicated they may simply be addresses registered to businesses that do not provide any services at that location. This limits the accuracy of a business accessibility analysis as having access to businesses that provide no services has no added value for residents. The team could not identify any other reliable source of annual business (historical and current) and jobs data during the analysis.

The most significant data quality issue for the analysis was the quality of bikeway data used for the Midtown bike travel-shed analysis. The file available for the analysis was outdated (MetroGIS/ MnDOT file from 2007) and was missing numerous connections to the road network which would result in inaccurate results. The project team spent over two weeks to clean the bikeways data shapefile to conduct the analysis.

In the future, University of Minnesota researchers recommend pursuing sources for data a few months before evaluations to avoid delays and ensure the quality of the final analysis. There may also be a need for broader discussions with cities where Community Works programs are implemented about the format in which data are currently being maintained as it limits the ability to evaluate projects.

## Plan for Ongoing Evaluation

The 2014 Board Evaluation Report and this supplemental report represent the initiating step in a cross-program Community Works evaluation. In order to continue to track progress toward intended goals, build on lessons learned, and ensure programs reach their goals, the CW evaluation will continue on an annual basis, accompanied by a more rigorous analysis of program outcomes on a three to five year cycle.

Because this first cross-program evaluation completed much of the groundwork (including identifying measures and data sources, defining program impact areas for analysis, and collecting program baseline data) subsequent evaluation can build on these efforts. However, there are opportunities to engage the University of Minnesota in additional research (i.e. return on investment or other analyses). The following describes a plan for ongoing evaluation of CW programs.

### Annual Evaluation

CW staff will conduct the annual evaluations and will primarily focus on documenting and tracking program outputs throughout each year. Outcome evaluation measures collected and analyzed will include new commercial square footage, new housing, and property values in program impact areas. See Figure 15 below for the measures selected to be tracked for each program. These selections are based on data availability and the relevancy of each measure to the program activities and goals.

The evaluations will be aligned to the five overarching Community Works goals as well as the goals tailored to each specific program. Findings will be used to prepare an annual Community Works report.

### Three to Five Year Outcome Evaluation

Every three to five years, CW will conduct a more in-depth evaluation of program outcomes with outside research support. This evaluation effort will include collecting current data for analysis of trends in building permit activity and access to destinations in program impact areas. This work will build on the baseline and trend data already collected in the initial evaluation.

This outcome evaluation will also include a community survey in relevant program areas. Each program's community survey will be tailored to the respective program's specific goals and will serve to provide data on livability outcomes and track community perceptions of the program impacts. The Community Vision Metrics tool will help to identify survey questions on livability.

Findings will be used to prepare a detailed outcome evaluation report, similar to the 2014 board report and this supplemental report, pending resource availability.

### Evaluation Results

The findings from the evaluations will be used for the following:

- An action plan for how to apply findings to future program activities to ensure programs reach their intended goals.
- Evidence for the Community Works story to garner recognition for Hennepin County's leadership and strategic investments.
- Updates to a Community Works guidebook to operationalize lessons learned, formalize best practices, and establish consistent supporting materials.

### Additional Methods, Measures and Tools

- *Livability Measures:* The evaluation team will work with program managers to identify benchmarks and appropriate measures to track community livability that dovetail with each respective community's vision of livability and the program goals. Depending on program timelines, these measures will be tracked either annually or on a three to five year cycle.
- *Equity Measures:* The evaluation team will consult with the University research team to identify measures of the programs' outcomes for traditionally underrepresented populations. Depending on program timelines, these measures will be tracked either annually or on a three to five year cycle.

Figure 15 Measures to be tracked for each CW program in ongoing evaluation

		66th Street Corridor	Bottineau	SNAP	Daylighting Creeks	Humboldt	Lowry N	Lowry NE	Midtown	Minnehaha-Hiawatha	Penn Ave	Shady Oak	Southwest
INPUTS / ACTIVITIES	1. Program Funding	X	X	X	X	X	X	X	X	X	X	X	X
	2. Partnerships	X	X	X	X	X	X	X	X	X	X	X	X
	3. Community Engagement		X					X		X	X		X
OUTPUTS	1. Connectivity Improvements	X	X					X	X	X	X	X	X
	2. Natural Systems Improvements (trees, green space, creeks)		X		X			X		X	X		X
	3. Developable Land	X	X				X	X		X	X	X	X
OUTCOMES	1. Property Values	X	X	X	X	X	X	X	X	X	X	X	X
	2. Real Estate Development	X	X				X	X	X	X	X		X
	3. Building Permits		X			X	X	X	X	X	X		X
	4. Community Vision Metrics		X					X		X	X		X
	5. Crime												
	6. Accessibility	X	X				X	X	X	X	X		X

- *Return on Investment (ROI) Study:* The evaluation team will further investigate the potential for conducting an ROI study to demonstrate the monetary benefits of CW programs. There are modeling systems such as the Regional Input-output Modeling Systems (RIMS II from the Bureau of Economic Analysis) and IMPLAN (used by housing authorities) that take into account direct infrastructure investment dollars and other project spending information to give direct impacts in terms of local jobs created (e.g. construction jobs), output for local economy, added household earnings etc. An ROI study could also apply to transit improvement programs to analyze congestion mitigation and the programs' potential for reducing environmental pollutants.
- *Qualitative Evaluation:* Subsequent evaluations should incorporate qualitative evaluation of program impacts. Given the CW focus on community engagement and participation there is value added in terms of knowledge creation and community awareness of issues that may impact people's health. These non-tangible impacts are a significant contribution of the CW programs and should be identified and highlighted.

Additionally, qualitative evaluation may better identify the benefits of CW programs that improve pedestrian facilities and streetscape aesthetics. The evaluation team found that traditional accessibility analysis does not fully capture the benefits of these programs because the programs often make the environment more pleasing, convenient and safer for pedestrians rather than add more routes to the pedestrian network.

- *Ripple Effect Mapping (REM):* Ripple Effect Mapping is an innovative impact-evaluation method developed to retrospectively and visually map the performance of complex programs or collaborations. The REM process combines elements of mind mapping, group interviewing, and qualitative data analysis.

The evaluation team consulted with the UMN Extension about the potential for using REM and determined it to be an appropriate tool to qualitatively identify program impacts. Due to time limitations this initial evaluation did not include REM, but future evaluations

may benefit from working with the UMN Extension to conduct REM sessions for select CW programs.