



INFRASTRUCTURE & PUBLIC SAFETY 5

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FINDINGS AND KEY QUESTIONS

Findings

- Nationally, infrastructure issues are a huge topic of concern and public policy debate. While our transportation network is the most visible aspect, water mains, sewer lines, electric and gas lines are part of a complex web of critical public infrastructure. The universal challenge facing American infrastructure is that it is aging and needs significant investment for repair or reconstruction. Federal infrastructure policies have a significant impact on local infrastructure issues. For example, the federal motor fuel tax rate determines the level of funding set aside to support local transportation infrastructure.
- Generally speaking, Normal's infrastructure is in good repair. However, the Town continues to grapple with the same funding issues other communities are facing. The Town's increasing focus on compact, mixed-use development patterns and efforts to curb sprawl also assist in the efficient management of utilities, both by the Town and by other utility providers.
- Normal's more than 400 miles of streets provide connections at all levels of use. Upgrades to the transportation system are being made thoughtfully, keeping in mind the future role of the street network. These include accommodations for pedestrians, bicyclists, and transit vehicles.
- In 2016, Connect Transit will implement a revised route structure, intended to prioritize frequency of service on more heavily used routes. This revision will make transit service more flexible for the majority of riders but will also remove routes with less ridership, including some routes in northeast Normal.
- Each infrastructure system, public or private, must be properly installed and maintained, often in a location shared with other systems. There is limited space within right-of-way easements and/or utility poles on which multiple service providers must compete for installation space. Newer technology infrastructure, such as fiber optic network, exacerbates the problem.
- The Bloomington Normal Water Reclamation District (BNWRD) has advised that under EPA standards, the West treatment plant on Oakland Avenue will require reconstruction, possibly within the next 5 to 15 years. This project could cost an estimated \$140 to \$160 million and is of considerable complexity. This issue, raised recently during the stakeholder outreach process, should be thoroughly investigated during the course of the comprehensive plan process to determine its implications for the economy, environment, and cost of living.
- Landfill use is of principal concern given the anticipated closure of the McLean County Landfill #2 in the near future. The Ecology Action Center (EAC), the regional solid waste planning agency for the Town, City, and County, is currently updating the county-wide Integrated Solid Waste Management Plan to address this and other solid waste issues such as recycling and household hazardous waste.

Key Questions

- When investing huge public dollars in infrastructure and facilities, how can we ensure that they support broader community goals?
- How can land under public ownership, such as streets or detention basins, be utilized more efficiently? As demand for new types of services (e.g., broadband) increases, how can public easements be best managed?

Infrastructure, particularly public infrastructure like schools, streets, sewers and parks, is the structural scaffolding that supports the community and makes modern life possible. People expect that the many interconnected infrastructure systems will work at the touch of a button or flip of a switch, and even a brief (and usually rare) interruption of service can have a real impact on lives and communities.

Infrastructure exists in three dimensions; while this seems obvious, it has far-reaching implications for cost, maintenance and longevity of co-located systems. Many elements of infrastructure interact and share space, multiplying their complexity.

NATIONAL PERSPECTIVE

In recent years, incidents across the country have demonstrated the sometimes catastrophic impact of infrastructure failures. The most severe include the loss of life and destroyed neighborhoods in New Orleans following Hurricane Katrina; widespread flooding, snow, and wind damage from Hurricane Sandy across the densely populated mid-Atlantic coast; and the water supply crisis during the persistent drought that has gripped California over the past several years. These threats to core infrastructure arose from weather or climate conditions. These and other events have prompted the U.S. Department of Homeland Security to create the Office of Infrastructure Protection and formulate the National Infrastructure

Protection Plan to define critical infrastructure and safeguard against any threat, whatever its origin.

Debate about the condition of public infrastructure focuses on two concerns, system failures and the cost of remediation or replacement. For many public agencies and governments, the balance has shifted to cost reduction, and thus to delays in infrastructure repair or rebuilding. These calculations can be as catastrophic as hurricanes and floods, as demonstrated by the Minneapolis bridge collapse in 2007 and the lead contamination in the Flint, Michigan water supply documented in 2015. Delayed infrastructure management has created a massive backlog of needed work. The American Society of Civil Engineers (ASCE) estimates that by 2020 it will cost \$1.1 trillion to address national infrastructure deficiencies, but failure to act could cost the economy over \$3 trillion between now and 2020 (see Figure 1.5.1).

TOWN OF NORMAL INFRASTRUCTURE

The Town of Normal has many miles of pavement, piping, and other infrastructural assets that require ongoing maintenance to keep them in good repair. Proper maintenance reduces the incidence of sudden system failure and allows the Town to avoid the fiscal shock of un-budgeted repair or maintenance. Specific systems and their needs are discussed below.

TRANSPORTATION

Transportation infrastructure is among the

U.S. Department of Homeland Security statements on critical infrastructure:

“The nation’s critical infrastructure provides the essential services that underpin American society and serve as the backbone of our nation’s economy, security, and health.”

“Critical infrastructure includes systems, facilities, and assets so vital that their destruction or incapacitation would have a debilitating impact on national security, the economy, or public safety, health, or welfare.”



Figure 1.5.1

Source: American Society of Civil Engineers (ASCE)

most visible systems in the array of infrastructure people encounter each day. Streets, trails, transit, sidewalks, and Uptown Station lace the Town with travel options, whatever the nature and location of the origin and destination. At a regional level, Normal sits at the confluence of three interstate highways and has the benefit of extensive freight and passenger rail connections. The federal initiative to improve passenger rail has already produced track upgrades, fueled the development of Uptown Station, and will provide a more robust schedule of passenger routes. Uptown Station also provides a hub location for local and regional bus service, including Connect Transit, as well as for pedestrian and bicycle users of the Constitution Trail network.

Streets and Roads

Normal's transportation network is generally in good repair, providing connectivity to major institutions, commercial or industrial areas, and residential neighborhoods.

Normal's more than 400 miles of streets

provide connections at all levels of use, from individual houses to institutional campuses. They are designed to maximize the efficiency of vehicular traffic. Some streets fall under a federally defined functional classification system as illustrated in Map 1.5.1. Retaining the functional classification system permits the use of federal transportation funding. This support for street improvements extends the Town's fiscal capacity to address transportation and other needs. Unclassified streets give access to individual locations, such as those within neighborhoods.

Occasionally a street installation moves away from standard design and creates new ways of interacting with a neighborhood. The Uptown Circle is an example. Combining functions as an intersection, central park plaza, water filtration site, and public garden, the Circle has emerged as the focal point of the revitalized Town core.

Officially called a "circular intersection," the Circle replaces the previous awkward intersection, and connects to the new Constitution Boulevard.

Map 1.5.1. Functional Classification of Streets

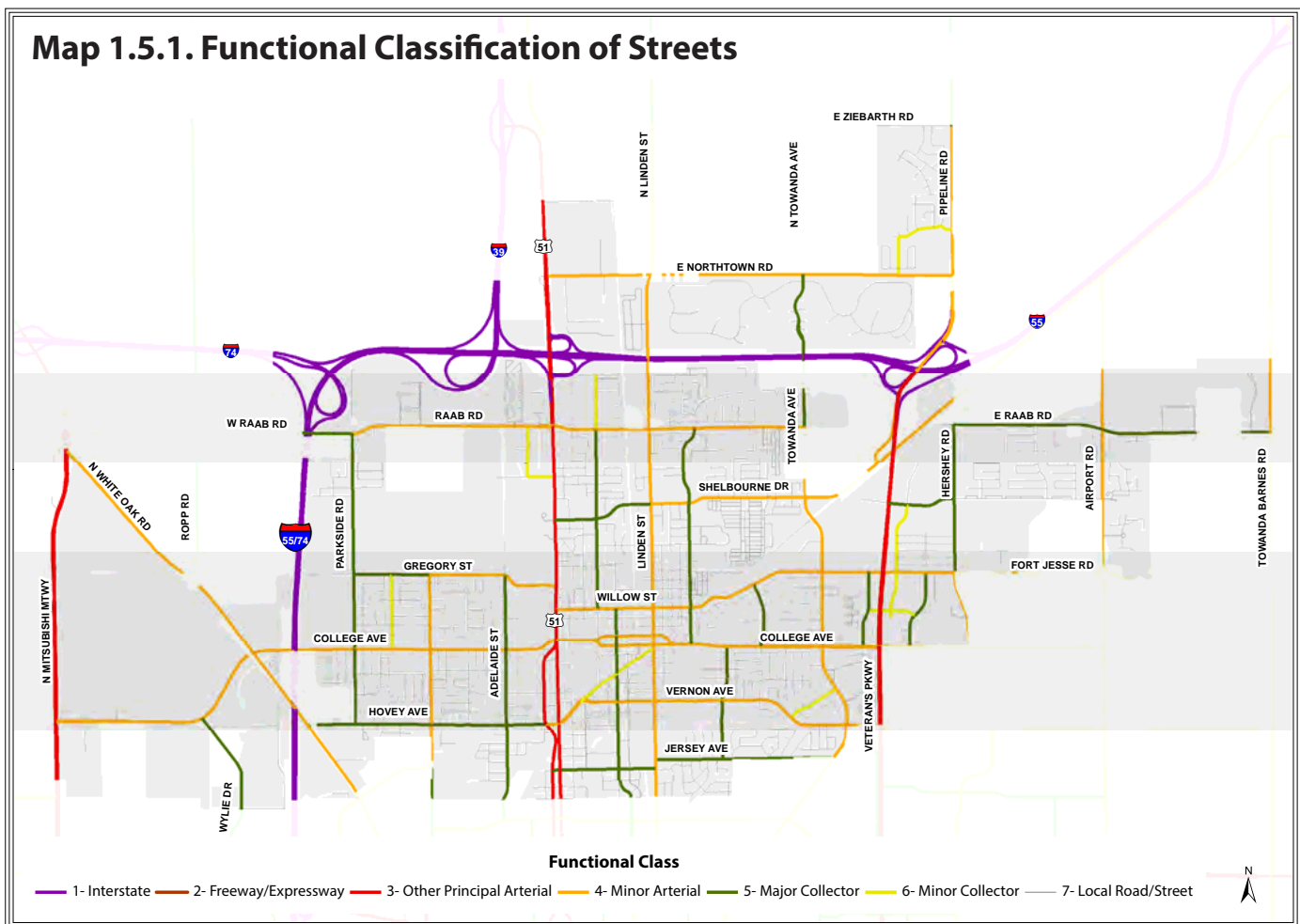
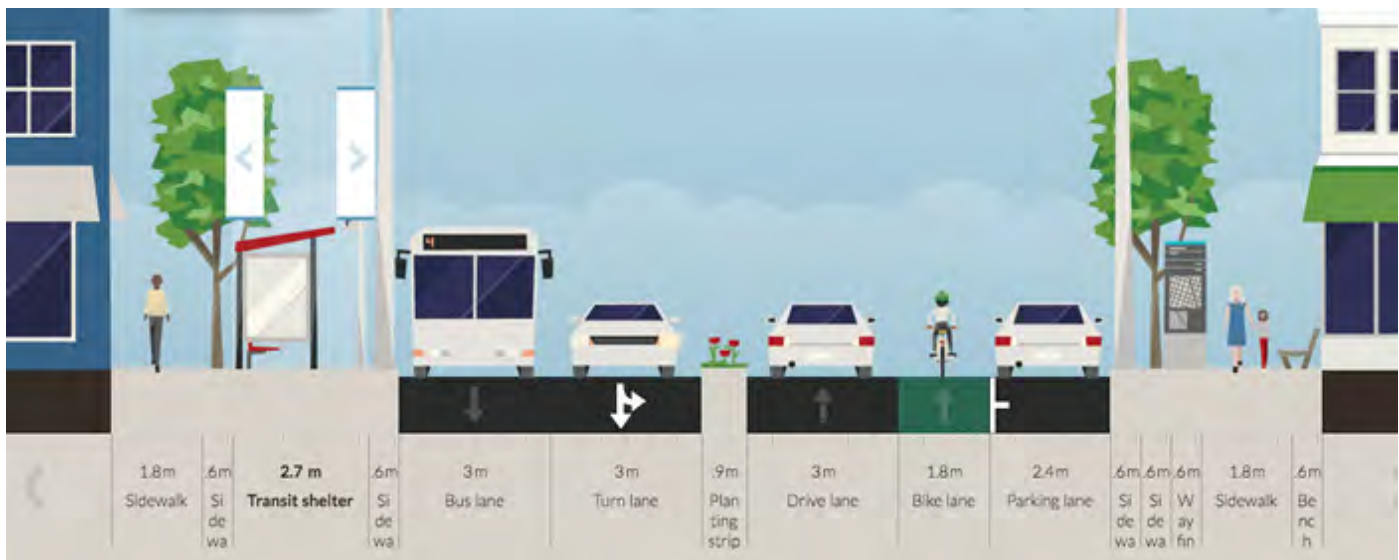


Figure 1.5.2. Cross-section of a Complete Street. Source: streetmix.net



The Circle also accommodates safe movement of pedestrians, bicyclists, transit and other modes.

Complete Streets

The planning advocacy group Smart Growth America defines Complete Streets as follows:

“Complete Streets are streets for everyone. They are designed and operated to enable safe access for all users, including pedestrians, bicyclists, motorists and transit riders of all ages and abilities. Complete Streets make it easy to cross the street, walk to shops, and bicycle to work. They allow buses to run on time and make it safe for

people to walk to and from train stations.”

Figure 1.5.2 illustrates an implementation of the Complete Streets concept, executed within the limits of the prior conventional street design but providing separated areas of travel for vehicles, including transit, pedestrians and bicycles.

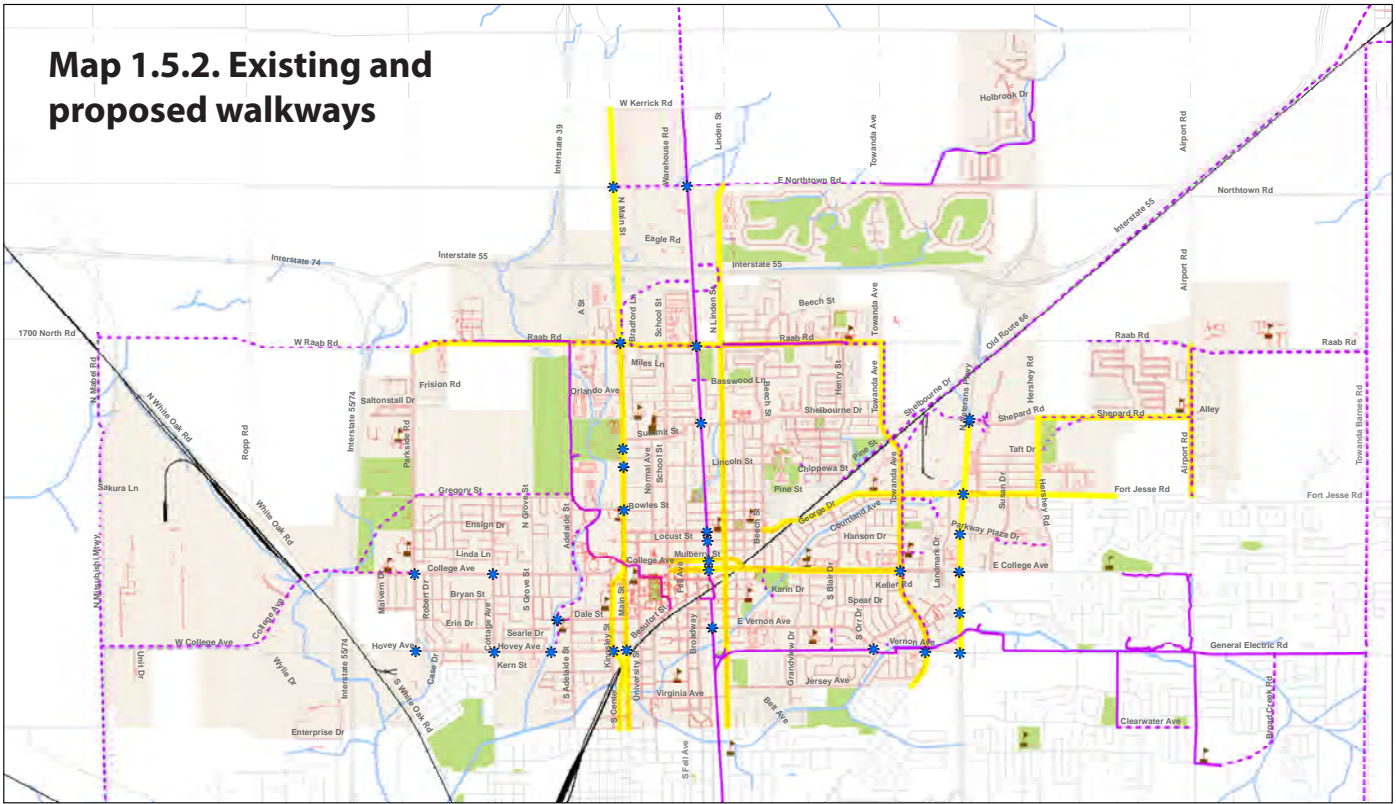
Although Normal has not officially adopted a Complete Streets policy, it is already employing many of the techniques that embody the Complete Streets concept. The *Bicycle and Pedestrian Master Plan* adopted by the Town in 2009 guides the improvement of such facilities. Maps 1.5.2 and 1.5.3 show the existing bicycle and pedestrian infrastructure and the improvements recommended

5.1. Implementation of Bike/ Pedestrian projects in Normal

Bike/Ped improvements since adoption of the plan

1. Major upgrade and widening of the Vernon bridge section of Constitution Trail
2. Parks & Recreation has repaved many concrete sidewalk/ trail intersections
3. Repaved section of trail from Linden to Grandview, Connie Link Amphitheatre to Vernon, and Division to Vernon.
4. Trail extension to Ziebarth
5. Trail extension along Northtown
6. Southern Normal Corridor
 - Bryan Street Bike Boulevard logo designed and signs manufactured and installed
 - Jersey Bike Lanes
 - Wayfinding along rest of route
7. Added trail to NCHS
8. Addition of more than 225 bike parking spaces in Uptown and new bike parking at all Town parks
9. Installation of two Fixit stations on trail
10. Street markings
 - Sharrows on W. College from Redbird Arena to Parkside
11. Wayfinding for entire trail system
12. Town staff also organizes or collaborates with other agencies to create events that enhance the bike/ped culture in Town. These include
 - Bike Rodeo
 - Annual bike movie
 - Light the Night (free light giveaways)
 - Bike Summit
 - Free bike parking at various events in collaboration with Friends of the Constitution Trail and WGLT
 - and many more

Map 1.5.2. Existing and proposed walkways



Normal Bicycle and Pedestrian Master Plan
Source: Town of Normal, Illinois
Author: HKS
Date: July, 2009

Existing Shared Use Path
Existing Sidewalks

Proposed Walkways
Shared Use Path
Pedestrian Priority Corridors
Intersection Improvements

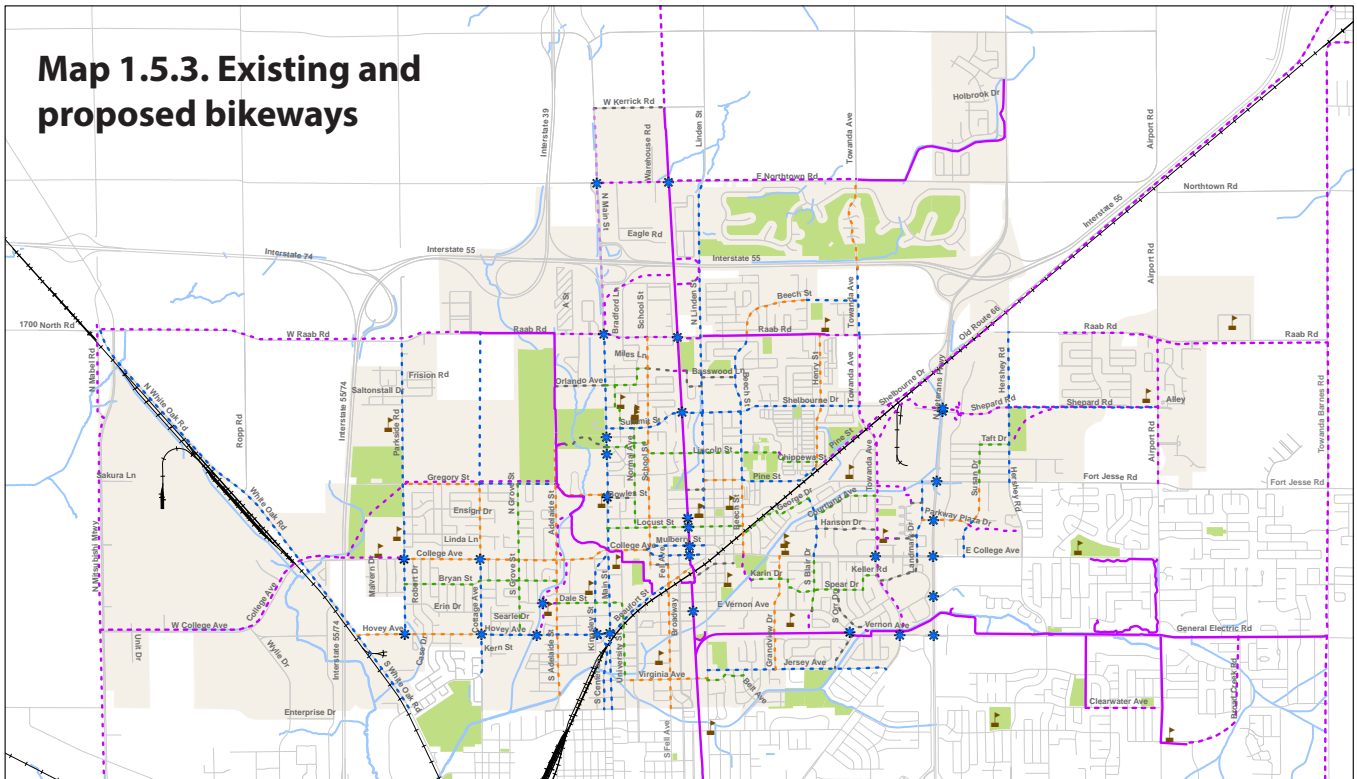
Schools
Parks
Normal Town Boundary

Streets
Railroad
Waterways

0 0.25 0.5 Miles



Map 1.5.3. Existing and proposed bikeways



Normal Bicycle and Pedestrian Master Plan
Source: Town of Normal, Illinois
Author: HKS
Date: July, 2009

Existing Shared Use Path
Proposed Bikeways
Shared Use Path
Cycle Track

Bike Lane
Shared Lane Markings
Bike Boulevard
Signed Connection

Proposed Intersection Improvements
Schools
Parks
Normal Town Boundary

Streets
Railroad
Waterways

0 0.25 0.5 Miles



by the master plan. Many suggested improvements have been implemented^(5.1), and in 2014 the Town of Normal achieved Bicycle Friendly Community status from the League of American Bicyclists. The ISU campus and Heartland Community College also provide accommodations for pedestrians and bicycle riders.

A prime example of regional cooperation, the expansion of the Constitution Trail has been a community effort since its inception 25 years ago. Normal and Bloomington, working with the Friends of the Constitution Trail, have built over 37 miles of trail throughout the community. In recent years, the Friends have been joined by newer groups such as the McLean County Wheelers and Bike BloNo in advocating increased bicycle access.

Main Street: A Call for Investment, released in late 2007, is a comprehensive planning document for the entire Main Street corridor spanning Normal and Bloomington. It proposed strategies with respect to mobility, accessibility, land use, and economic development. A subsequent transportation

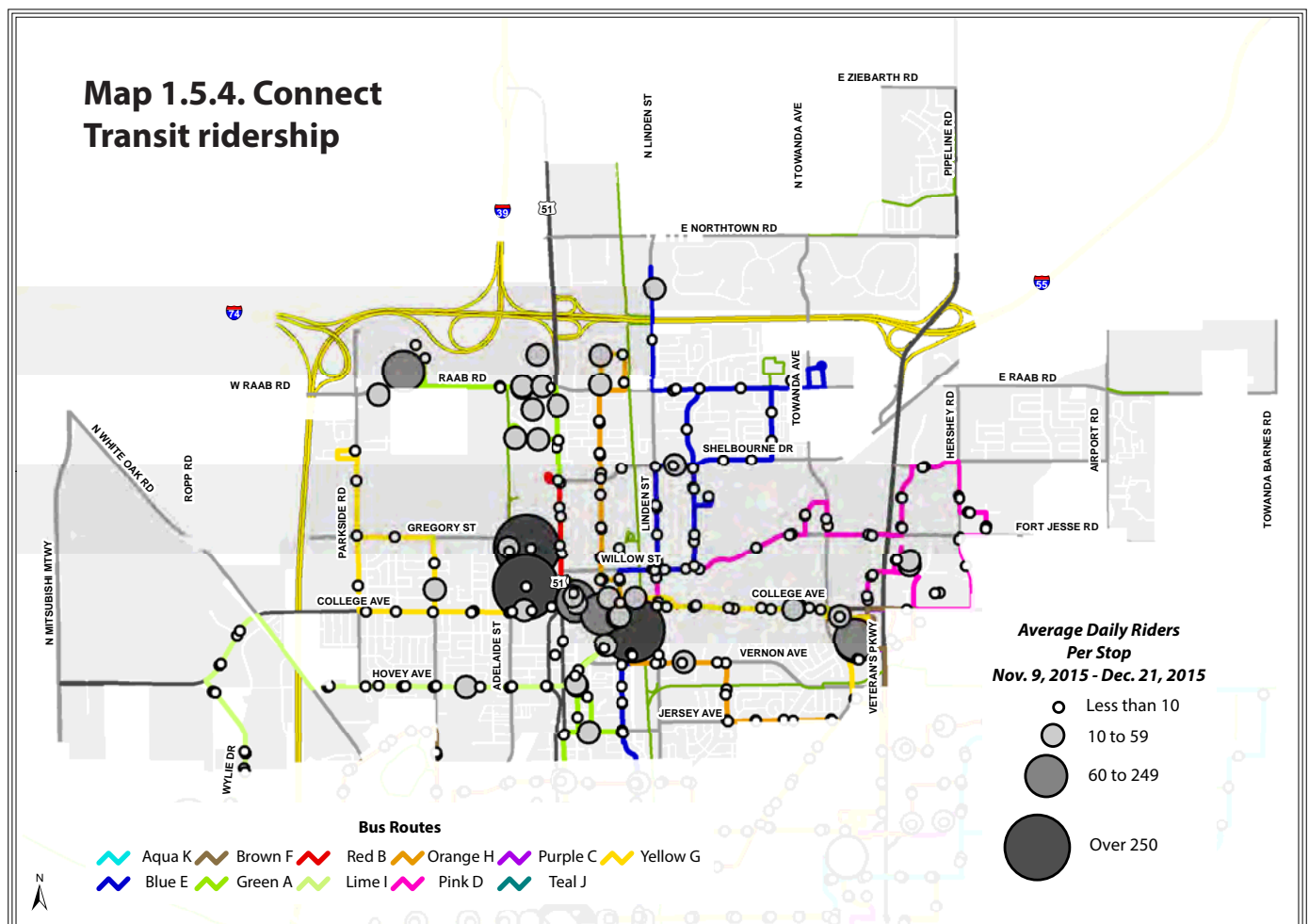
feasibility study, limited to the street right-of-way, examined the feasibility of the aforementioned strategies from an engineering perspective. It further prioritized the transportation-related strategies from the Main Street plan designed to broaden multimodal access.

Because Main Street is also US 51 and is controlled and maintained by the Illinois Department of Transportation (IDOT), neither Normal nor Bloomington can modify Main Street without IDOT's consent. IDOT is pursuing funding for implementation of bicycle and pedestrian accommodations from College Avenue south into downtown Bloomington. These improvements implement elements of the Main Street plan and feasibility study.

PUBLIC TRANSIT

Normal and Bloomington are served by Connect Transit, which is chartered to provide service only in the incorporated areas of the Twin Cities. In recent years, Connect Transit has

Map 1.5.4. Connect Transit ridership



experienced considerable growth in its ridership. This increase is in part the result of universal access agreements with Illinois State University and Heartland Community College.

On Connect Transit’s fixed route network, bus stops are located roughly every quarter-mile. Map 1.5.4 illustrates each stop location and the intensity of its use. In 2016, Connect Transit will implement a revised route structure, intended to prioritize frequency of service on more heavily used routes. This revision will make transit service more flexible for the majority of riders, but will also remove routes with less ridership. In Normal this would impact the Blue E and Pink D routes.

Connect Mobility, the paratransit service, provides transportation to qualified riders who live within half a mile of any fixed route. As the new route structure is implemented in 2016, there should be a careful review of the impacts of these changes on paratransit availability in the Town.

Even with these options, there are gaps in public transit service in Normal and Bloomington. These include a lack of service in off hours and on Sundays, both of which impact transit-dependent riders. These gaps are partially addressed by not-for-profits such as the YWCA of McLean County^(5.2), Faith In Action^(5.3), and SHOW Bus^(5.4). Other local agencies provide transportation services to agency clients, either directly or by contracting with transportation providers.

Although Connect Transit recognizes these gaps, limited resources and structural constraints make it difficult for them to quickly address these issues. In the interim, it is critical to provide the necessary support to the nonprofit agencies bridging that gap.

PASSENGER RAIL SERVICE

Uptown Station serves Amtrak passenger rail riders with ten trains per day, and it is the second-most heavily used Amtrak station in Illinois. In addition to passenger rail service on the Union Pacific line from Chicago to St. Louis, Uptown Station also serves Connect Transit and intercity bus service providers, and so provides intermodal connections.

Work continues on the implementation of high-speed passenger rail service to Normal. Amtrak consistently serves a high volume of passengers, and the substantial investment in the multi-modal and intermodal Uptown Station is expected to support continued growth, especially as high-speed rail service becomes more available.

PASSENGER AIR SERVICE

Central Illinois Regional Airport (CIRA) has benefited from a series of infrastructure investments over the past 15 years, including the construction of a substantially larger terminal east of the original site that can accommodate large jets. The airport serves passenger and freight operations.

CIRA is currently served by three airlines: Allegiant, American, and Delta. They serve seven direct destinations, including O’Hare International in Chicago and cities in Florida, Georgia, Michigan, Minnesota, and Texas. The airport also provides services for general aviation.

After peaking in 2011, annual passenger volume has declined over the past several years, which airport management noted is the result of airline retrenching and the withdrawal of Frontier from CIRA. Recently, an expansion of airport freight operations began with the opening of a new FedEx hub facility.



Nonprofit organizations providing transit alternatives in Normal and Bloomington

5.2. YWCA of McLean County provides non-emergency medical transportation throughout Normal, Bloomington, and McLean County. This service is available to the general public, including Medicaid recipients. The YWCA program uses accessible paratransit vehicles with wheelchair lifts. The YWCA also offers a Sunday service, Wheels-to-Work, which for qualified persons provides service to and from Sunday employment.

5.3. Faith In Action provides service for older people who do not require use of an accessible vehicle, but need rides for everyday tasks, social events, worship and appointments.

5.4. SHOW BUS provides rural public transportation in McLean and six other counties, and in some instances may provide rides to an incidental destination in Normal and Bloomington or to a Connect Transit stop or transfer hub. SHOW BUS uses accessible vehicles.

The Bloomington-Normal Airport Authority owns over 700 acres of property. It seeks to facilitate appropriate development in the airport area for warehousing and other transportation and logistics facilities (see Chapter 1.4, Economic Vitality, for more details on the BN Advantage regional economic strategy, which identifies transportation and logistics as a target sector).

TRANSPORTATION FOR FREIGHT

Freight rail service is provided by the Norfolk Southern and Union Pacific railroads operating through Bloomington-Normal. Norfolk Southern has six freight trains that pass through the urban area daily. Union Pacific (UP) traverses the urban area from the Northeast to the Southwest. It is important to note that the UP and Norfolk Southern lines through Bloomington-Normal are single mainline tracks. The high-speed rail initiative has added several sidings to the UP line, including one north and another south of Bloomington-Normal.

Bridge replacement, the development of new rail crossings, and safety infrastructure for high-speed rail are continuing points of discussion in Normal. Located at the connection of three interstate highways, Normal is a locus for highway freight traffic. Although the closure of the Mitsubishi automotive plant may produce reductions in freight activity, potential reuse of the plant may well compensate for that loss over time. The Town's arterial network provides freight access to sources and destinations, including the commercial and industrial areas along Veterans' Parkway, the large institutions reached by Main Street, and the former Mitsubishi industrial campus with its close connection to the interstate system via Mitsubishi Motorway.

Over the next year, MCRPC will be developing the 2017 update of the Long Range Transportation Plan (LRTP) for our urbanized area. Prior iterations of the LRTP have been hampered with respect to freight planning, as accurate information on freight traffic is difficult to obtain. Most freight sources and carriers are private entities and regard the details of their cargo and operations as proprietary information. General data on freight traffic collected by the Illinois Departments of Transportation and Commerce and Economic Opportunity do not offer the level of detail needed to

accurately assess local freight impacts. The upcoming LRTP update aims to improve local understanding of freight traffic in the urban area.

TRANSPORTATION AND AIR QUALITY

In 2014, the Ecology Action Center published a greenhouse gas inventory for Normal and Bloomington, using 2008 as the baseline year. The report attributed approximately 20% of the area's greenhouse gas emissions to the transportation network.

Transportation is the most easily constrained major source of greenhouse gas pollution. Emissions resulting from the transportation system, specifically by vehicle use, can be isolated to particular sources.

One measure of air quality is ground-level ozone concentrations. Ozone is an important element of the upper atmosphere, but at ground level it is a product and a component of greenhouse gas emissions, and a threat to human health. In October 2015, the standard for ground-level ozone was reduced from 75 parts per billion (ppb) to 70 ppb, based on a three-year average of air sampling results. Areas not in compliance with this standard will be designated by the U.S. EPA in October 2017 as non-attainment zones. The 2012-2014 average level in Bloomington-Normal was 71 ppb, slightly exceeding the new standard. Fortunately, the 2013-2015 ozone average fell to 66 ppb, within the standard but by a small margin.

Compliance with the new standard will be determined by the three-year ground-level ozone average for 2014-2016. Should Bloomington-Normal be designated a non-attainment zone, a series of regulations and programs will be required until ground-level ozone concentrations meet the standard. Such a designation would negatively affect our ability to attract new industries. While the comprehensive plan should acknowledge these restrictions and consider possible actions by the Town of Normal to reduce transportation-sourced emissions, a regional approach will be necessary to address this issue.

UTILITIES

There are two categories of utility infrastructure, those provided by public entities and

those provided by private entities regulated by the Illinois Commerce Commission. Public utility services include water and sanitary sewer services provided by the Town as well as stormwater management and treatment facilities provided through cooperation with other local governments and the Bloomington-Normal Water Reclamation District (BNWRD). Private providers regulated as public utilities through the Illinois Commerce Commission include electric, gas, and telecommunication systems.

Each system, public or private, must be properly installed and maintained, often in a location shared with other systems. In the stakeholder interviews (see the Infrastructure and Public Safety subsection in Chapter 2.2, Stakeholder Interviews), one consistent concern was the limited space within easements or rights-of-way within which multiple service providers must compete for installation space. This means that each time the Town or another entity digs into the space, it has to take pains to avoid conflict with other installations. Efforts to install infrastructure further underground only make the entire process more complicated and expensive. There is increasing demand for installation space overhead as well, with similar limitations. As utility companies expand their capacity to use wireless technology to monitor and communicate with their systems, the number of transmitters, repeaters, and other electronics needing a utility pole to sit on can only increase. These increasing demands and best practices for the effective management of easements will be investigated further during the remainder of the comprehensive planning process.

The many layers of public and private infrastructure that permit the Town to function all bring their own challenges and complexities into already populated areas and those yet to be developed (see Figure 1.5.3). Each system must also be conducted through and around others, as disparate systems share space underground, on the surface, and overhead. Not only must the physical installations be managed and maintained, but the various public and private agencies and entities that own them must interact to avoid conflicts and maximize the benefits of infrastructure investment.

MUNICIPAL UTILITIES

The Town of Normal provides two critical utility services to residential and other occupants: the treatment and delivery of water by the Water Department and the sanitary and storm sewer systems run by the Sewer Division of the Public Works Department. Each of these systems requires substantial investment and continuous careful management.

The Water Department operates a well system and treatment plant, with substantial excess capacity at present. In 2014, the system pumped more than 1.4 billion gallons of water to Town residents. The Department has an ongoing pipe replacement program, which is intended to forestall system failures due to aging water pipes, in which approximately \$2 million are invested annually. The Town has found that installing water distribution across (or under) interstate highways is expensive, and would prefer to avoid such situations. The Town is confident that the capacity of the system and the supporting infrastructure are more than adequate to support growth and increased densities over the next 30 years, based on current analysis. The level of density under consideration for the Uptown South redevelopment proposals can be served within the current production capacity.

The Sewer Division is completing a five-year plan for sewer improvements to address current needs but will not be addressing future growth issues or rate assessments. The Division maintains, repairs, and tests storm sewers, inlets, sanitary sewers, and lift stations. Town staff has noted that the current system has sufficient capacity in the short term; concerns arise from possible long-term costs for system maintenance, given the reliance on lift stations in the system. The five-year sewer program will evaluate where gravity sewer infrastructure can be augmented or installed without the additional cost and maintenance of lift stations. There is little expectation that the Town will expand its sanitary sewer infrastructure northward. Areas in north-east, north-west and west Normal are better suited for sewer expansion.

Currently the Town stormwater infrastructure is well within its capacity, including culverts and detention facilities. As with the water system, the Town periodically plans for the future stormwater system, and posts its stormwater utility plan.

The Town and the City of Bloomington have discussed coordinated siting of high capacity stormwater detention basins. Larger detention facilities designed to serve multiple developments would simplify access, control, and maintenance and allow for fewer and more direct connections to the stormwater system. However, making the transition to this approach has proved difficult, and newer development still generally provides detention within the development site. As the comprehensive planning process moves forward, areas with potential for regional stormwater detention should be identified.

REGIONAL UTILITIES

The management of sanitary sewer effluent and stormwater is to some extent a regional endeavor, in which the Town, the City of Bloomington, and the County work with the Bloomington-Normal Water Reclamation District (BNWRD). BNWRD operates the two treatment plants (in west Bloomington and in Randolph Township) that receive sewage and stormwater flow from the urban area, process the effluent, and manage the controlled release of treated outflow. BNWRD

has particular concerns about urban stormwater management. Stormwater that is not properly channeled and detained in the municipal systems will find its way to the sanitary sewage treatment system, where it can overwhelm treatment capacity and force the release of untreated effluent.

Planning for the water reclamation district is a process with long timelines. BNWRD spent many years developing and securing approval for the service area changes that enabled the siting, construction, and use of the Randolph Township treatment plant.

BNWRD advised MCRPC staff that under EPA standards, the West treatment plant on Oakland Avenue will require reconstruction, possibly within the next 5 to 15 years. This project could cost an estimated \$150 million and is of considerable complexity. This issue, raised recently during the stakeholder outreach process, should be thoroughly investigated during the course of the comprehensive plan process.

ENERGY UTILITIES

The Town of Normal is served by two electricity utility providers, Ameren Illinois Corporation

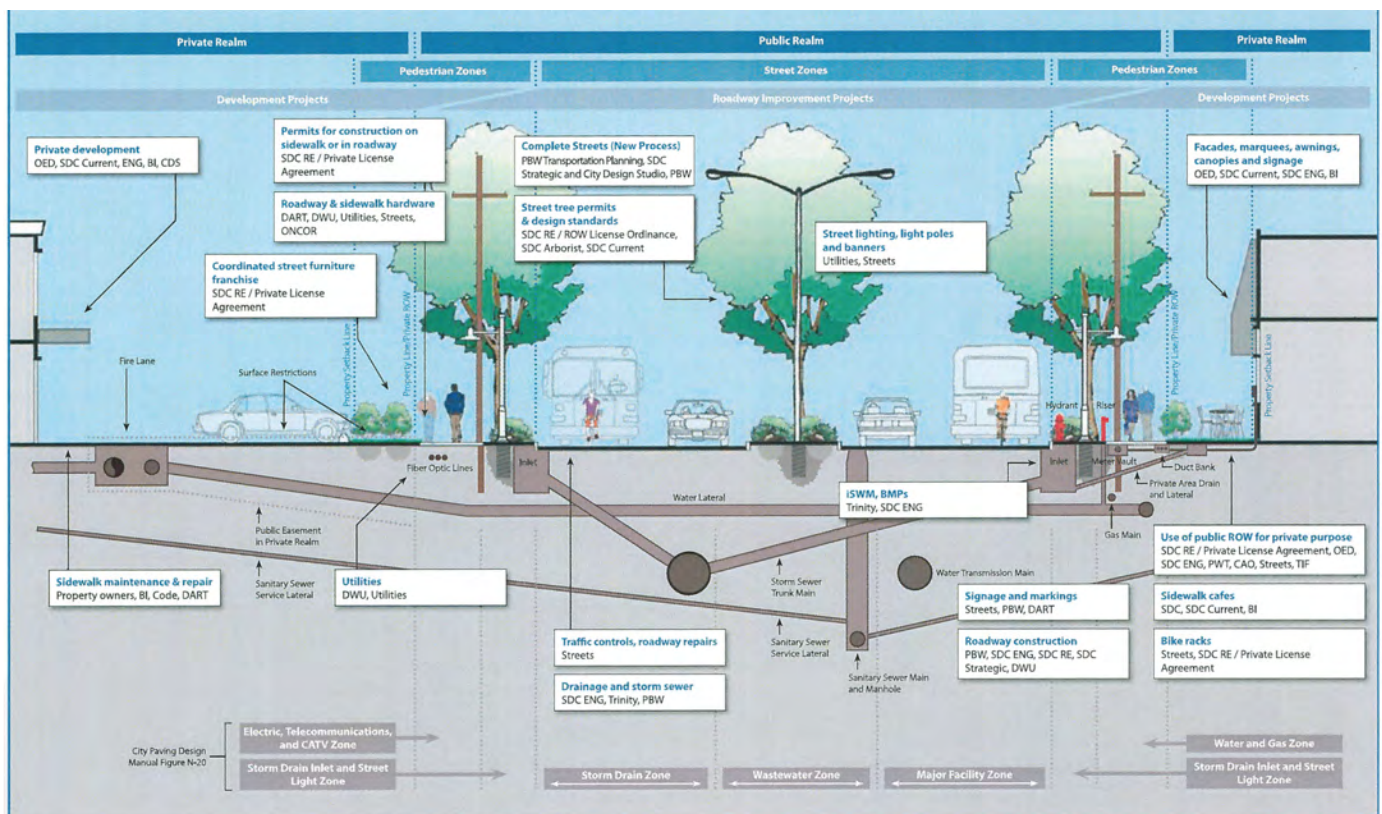


Figure 1.5.3. Agency roles on the Town's streets. Source: Dallas, TX draft Complete Streets Manual, 2012.

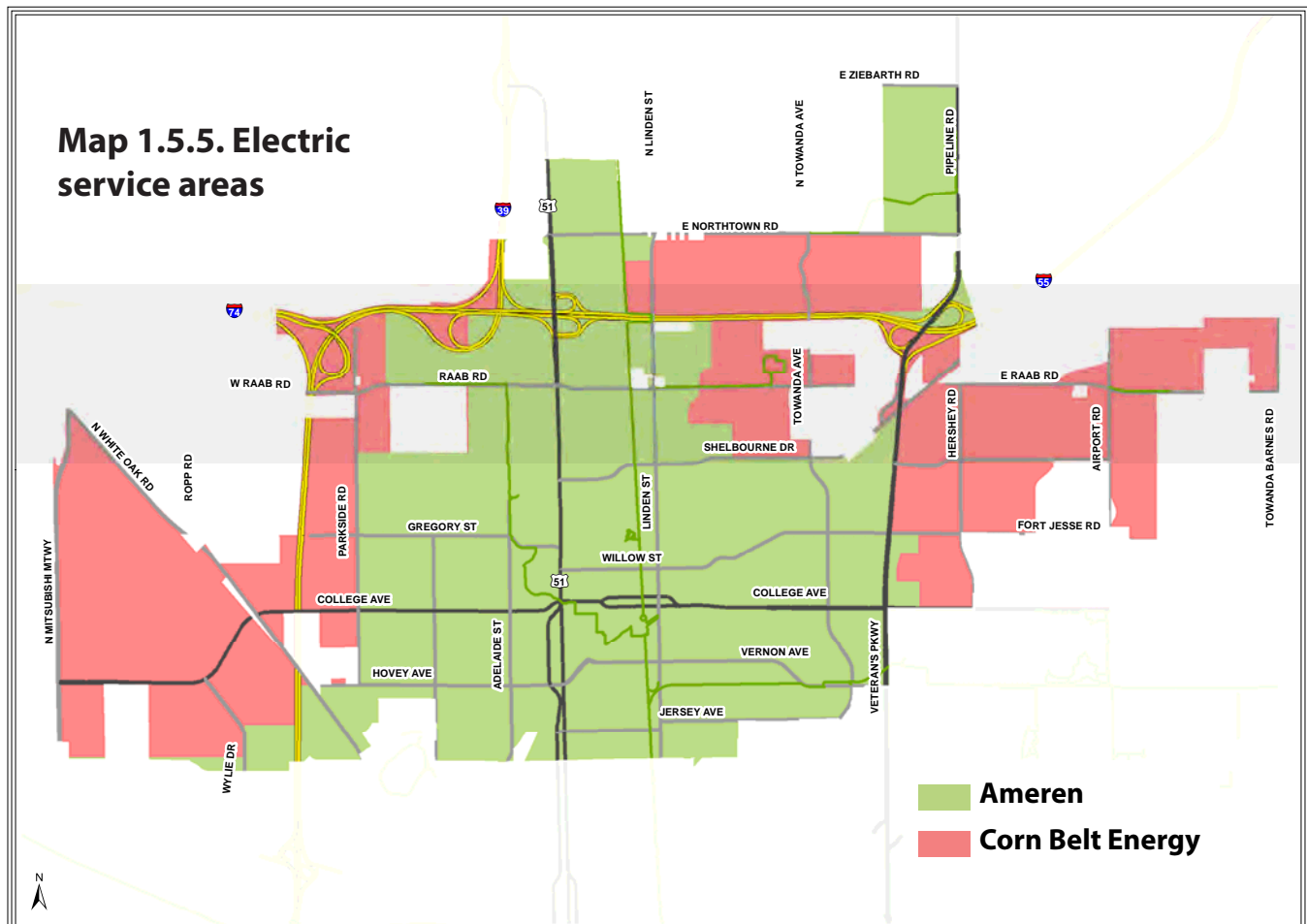
(Ameren) and Corn Belt Energy, which have designated territories for power distribution. Ameren is a publicly traded utility and is regulated by the Illinois Commerce Commission (ICC). Corn Belt Energy is a cooperative. As illustrated in Map 1.5.5, most of Normal is in Ameren territory. The newer developments on the north east and west of Normal are served by Corn Belt.

Illinois law allows municipal aggregation, whereby municipalities and counties purchase electricity on behalf of residential and small business utility customers within their corporate limits. Ameren customers within Town of Normal are eligible for and participate in the municipal aggregation program.

Nicor Gas is the primary natural gas utility serving the Town. Natural gas is not produced in the area. It is transported to the area by pipelines and stored in underground aquifers located north of Normal for supply during the winter months. Nicor has concerns about the area north of Normal occupied by its gas injection facility and the

pipe network, well heads, and other infrastructure which support and monitor the status of the compressed natural gas stored in the aquifers. Wells are used to measure underground water displacement by the stored gas, allowing Nicor to confirm the quantity stored. Relocation of these wells to accommodate urban growth is possible but extremely expensive. Because the various infrastructure elements associated with natural gas storage and distribution require both monitoring and maintenance or repair, Nicor is reluctant to see extensive development take place in areas where concentrated infrastructure is present. In Map 1.5.6, blue lines indicate natural gas lines and red lines indicate hazardous liquid lines.

With respect to energy utilities, it is important to note that they are increasingly reluctant to support speculative new development with upfront investment in infrastructure. They see an unacceptable level of risk in extending distribution systems to areas that do not yet offer a sufficient customer base to offset the cost of new



installation. This concern poses a challenge that the Town, commercial and residential developers, and the utilities will need to navigate.

ENERGY FOR EDUCATION

In response to the most striking energy development in the region, the installation of hundreds of megawatts of electricity generation capacity produced by wind, Heartland Community College has installed a 1.65 megawatt wind turbine on its campus. A part of the Heartland Green Institute, the turbine is one element in the college's commitment to environmental sustainability. The turbine generates approximately 50% of the electricity used on the campus and is a tool for teaching and practical experience in the expanding field of renewable green energy.

Telecommunications and Broadband

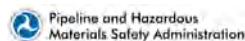
The Town of Normal is acutely aware of the shifting and increasingly critical role of telecommunications and especially broadband access in today's social and economic setting, and it has pursued initiatives to provide access in Town facilities.

Illinois State University has also demonstrated recognition of this need, as campus buildings have been retrofitted to incorporate the necessary levels of connectivity. New public facilities, whether municipal or educational, are now designed to include these capabilities as a matter of course. Challenges in this area are based primarily on two factors: the speed with which these technologies change and expand their reach and the cost of keeping infrastructure on the same level as the technology.

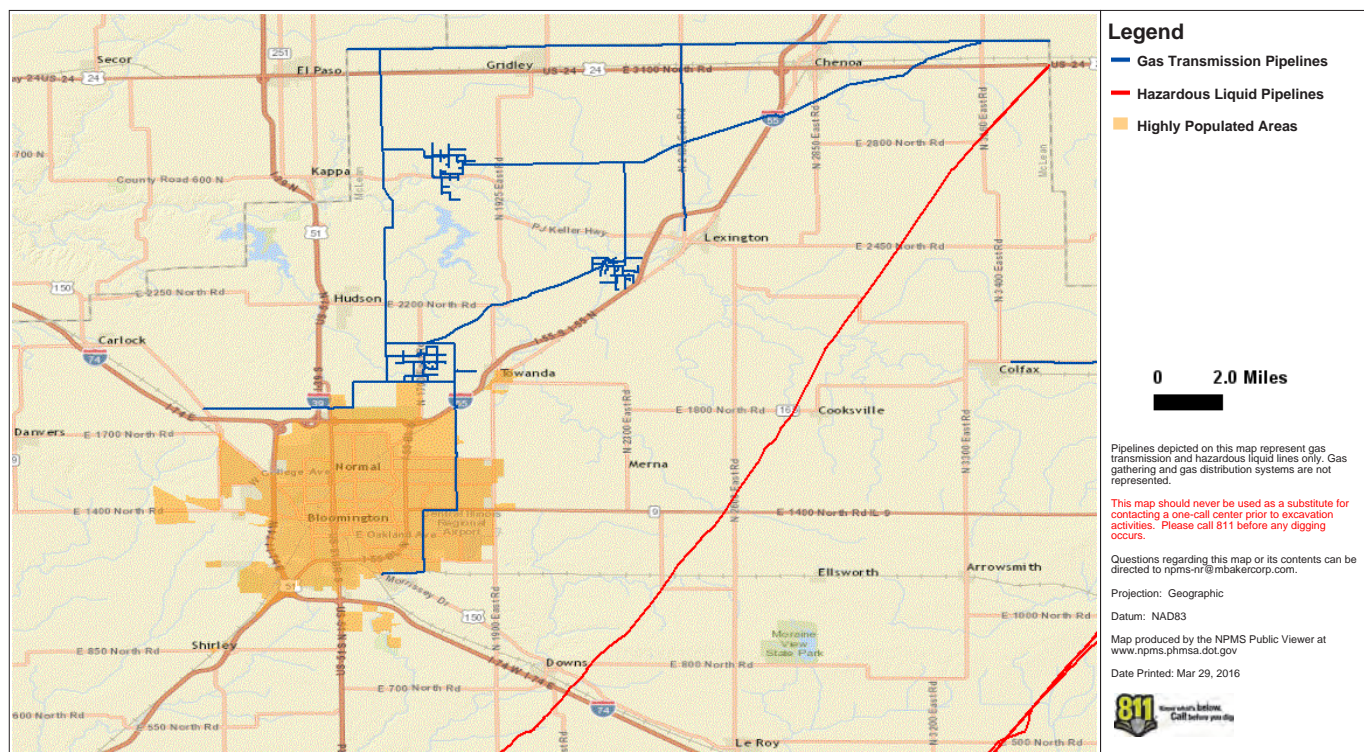
In 2010, the community applied for and received a federal grant to expand broadband access in the region. Central Illinois Regional Broadband Network (CIRBN) was created to deliver high speed internet and intranet through fiber optic cable. This is overseen by the Town of Normal, the City of Bloomington, Heartland Community College, and Illinois State University. There are also private broadband service providers in the area with their own fiber networks.

SOLID WASTE MANAGEMENT

The Town of Normal is one of the few



NATIONAL PIPELINE MAPPING SYSTEM



Map 1.5.6. Gas transmission pipelines and hazardous liquid pipelines

Source: USDOT National Pipeline Mapping System

municipalities in Illinois that directly provides trash and recycling collection services. Recently the Town has invested significant resources in its trash and recycling systems, including vehicle upgrades and new receptacles for residents.

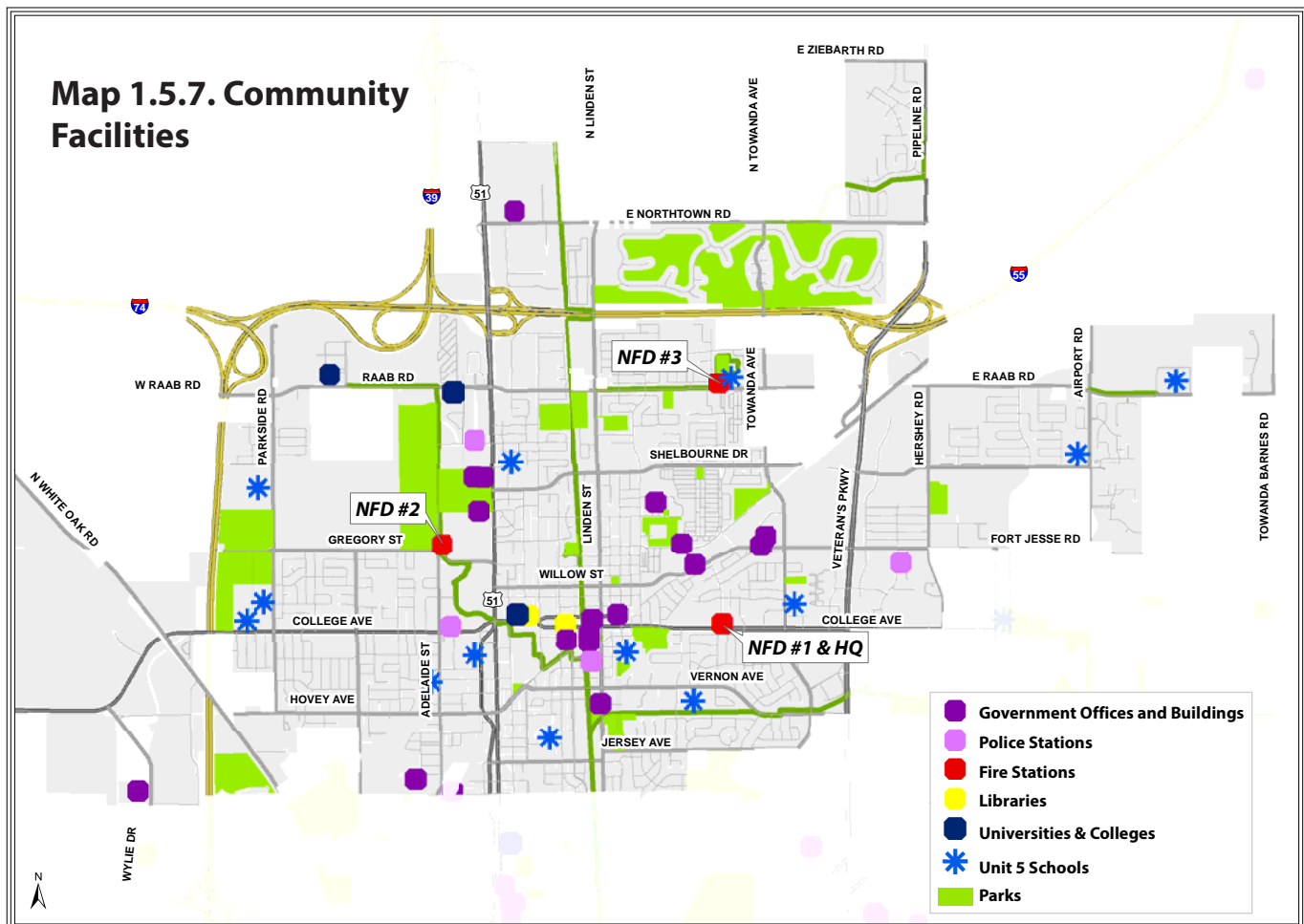
These upgrades increased efficiencies in trash collection and enabled curbside recycling services for single-family households. The Town does not have a curbside recycling program for multi-family structures. However, all residents have the option of taking certain materials to recycling dropboxes located around Normal. The Town also maintains an electronics drop-off location at the Public Works Annex on Warriner street.

Landfill use is of principal concern given the anticipated closure of the McLean County Landfill #2. The Ecology Action Center (EAC), which serves as the regional solid waste planning agency for the Town, City and the County, is currently updating the county-wide Integrated Solid Waste Management Plan. The landfill closure and alternate plans for waste management will be thoroughly addressed in that plan.

EAC also administers programs to promote recycling, conduct events to collect hazardous materials, and monitor performance in reducing solid waste. The Town is an active partner in these efforts.

COMMUNITY FACILITIES

The Town of Normal boasts an extensive collection of community facilities and assets that contribute to the Town's quality of life and provision of public services (see Map 1.5.7). For the purposes of the comprehensive plan, community facilities are defined as buildings or places which are owned or substantially controlled by the Town. These include government buildings, departmental offices or workshops in other locations, police and fire facilities, parks and parking decks (see 5.5). The Parks and Recreation, Fire, and Police departments oversee and maintain their respective facilities. The Facilities and Energy Management Department is responsible for all aspects of building operations and maintenance of the 18 facilities,



5.5. Community Facilities in Normal

Uptown Station/City Hall: Uptown Station provides a transportation hub to the area. This facility serves several modes of transportation, including high-speed passenger rail, intercity and local bus service, airport shuttles, taxi services, passenger vehicles and pedestrians. Additionally, it provides a home to City Hall and Town Offices.

Normal Public Library: The Town library, built in 1972, is an excellent facility. Despite expansion in 1993, continuing population growth, the expansion of reference material, and demand for new media, have resulted in a need for additional space. The Library is considering plans for a new facility, with the location yet to be determined.

Children's Discovery Museum: The Children's Discovery Museum, located in Uptown Normal, is a destination for families and educators in central Illinois. It is a regional resource for innovative educational field trips and a unique family entertainment destination with three floors of professional exhibits and an abundance of innovative programs.

Carol A. Reitan Conference Center: The Town-owned conference center, named in honor of former Normal Mayor Carol Reitan, is attached to the Marriott Hotel.

Normal Theater: Restored to its 1937 Art-Moderne design, the Normal Theater includes plush seating, deco wall sconces, and a ceiling of recessed neon lights. The exterior features a neon marquee. The theater is connected to the Carol Reitan Conference Center.

One Normal Plaza: The 22-acre One Normal Plaza Park, formerly the site for the Illinois Soldiers and Sailors Children's School, includes the Community Activity Center; a baseball field; a 30-foot by 60-foot picnic shelter; two playground areas; a youth football field, which is home to the Twin City Tigers; an inline hockey rink; and open space suitable for recreational sports. The Community Activity Center features two rooms available to rent, the Social Room (40' x 65') and the Arts & Crafts Room (20' x 40'); is home to Heartland Theatre; and contains historic materials from the Illinois Soldiers and Sailors Children's School Historical Society.

Parks

Anderson Park: This 13-acre park includes the Anderson Aquatic Center, a lighted softball/baseball diamond, three lighted tennis courts, restroom facilities, two large picnic shelters, two large playground areas, a hard surface basketball court, and the Born Learning Trail, which was constructed in partnership with the United Way. The Aquatic Center includes a large pool with a diving board, which is also used for competitive swimming. A second pool features two water slides and a third offers shallow water with spray toys and a small slide for younger children. The Aquatic Center is home to the Normal Sharks swim team.

Carden Park: A five-acre park provided through a cooperative partnership with McLean County Unit 5 School District, Carden Park is near Prairieland Elementary School and the #3 Fire Station. It includes playground equipment, a backstop for baseball or softball, two soccer fields, a basketball court with adjustable baskets, an accessible picnic shelter, and a 1/3-mile walking path around the perimeter of the site. This path connects to Constitution Trail. Safety Town is designed for children to ride bikes in a safe traffic area with miniature signs, small scale roads, play equipment, and a miniature fire truck.

Connie Link Amphitheatre: The Connie Link Amphitheatre is accessible from the Constitution Trail. Current programs include: High School Summer Theatre productions, Dress-Up Movie Nights, and the Sounds of the Amphitheatre concert series, which highlights local talent from the Bloomington/Normal area.

Constitution Trail: The Constitution Trail is a 37-mile hard surfaced trail running through the Twin Cities for walking, hiking, jogging, and biking, providing the community with an outstanding linear park.

East Detention Basin: This nine-acre detention basin was developed to detain heavy amounts of stormwater. The area is maintained as open space and utilized as a neighborhood park. Park amenities include playground equipment and picnic tables, which are accessible from the parking area.

Fairview Park: Fairview Park contains the Fairview Family Aquatic Center, a lighted softball diamond, lighted tennis courts, a 60' by 30' picnic shelter, five smaller shelters, playground areas, a skate park and a restroom facility. Constitution Trail runs through the west end of the park and is accessible from the numerous parking areas. The Aquatic Center features four pool areas and five slides. For younger children, the facility has a spray toy area. Fairview also includes a zero depth activity pool, a full service concession area, a one-meter diving board and an area for lap swimming during public swim hours. The Skate Park offers a variety of obstacles, ramps and multiple surface types, and is open to inline skaters, skateboarders and BMX bikes.

Fell Park: The two-acre Fell Park is the oldest park in Normal, and was set aside as a park by Jesse Fell in the mid-1850s. The Town constructed a water tower in the park in 1898. The park includes a small shelter, a circular basketball court, horseshoe courts, and a playground. A central plaza is a monument to Jesse Fell.

Fransen Nature Area: This area is 5.5 acres of naturalized prairie enclosed by evergreen trees. A 1/4 mile gravel trail leads to an observation deck that overlooks a small pond. It can be accessed from the Constitution Trail or by vehicle from Sycamore Street. This passive recreational area features native

5.5. Community Facilities in Normal (continued)

flowers and grasses, benches for relaxation, mature trees, and a small butterfly garden.

Ironwood Golf Course, Ironwood Park: Ironwood Golf Course is a full-service golf facility. The Roger Packard-designed course features a par-72 championship layout playing from 5,400-6,900 yards with four sets of tees. Ironwood offers a grass tee practice range, a large putting green, and a practice bunker. The clubhouse contains a pro shop, snack bar, and meeting rooms. The eight-acre park site is adjacent to Ironwood Golf Course. There are four lighted tennis courts, a picnic shelter and playground equipment. The lighted baseball field includes dugouts, concrete seating areas, and a drinking fountain. Constitution Trail is located across from the park.

Kelly Detention Basin: The 16-acre Kelly Detention Basin serves as open space for a number of recreational uses by residents, such as soccer practices, football, baseball, Frisbee, and other sports. The park is home to the Central Illinois Cricket Association. This site is located on an original section of Route 66.

Martin Luther King Park: This neighborhood park, which was dedicated by the Town in memory of civil rights leader Martin Luther King, contains four acres and adjoins Sugar Creek Elementary School. It contains a small park shelter, playground equipment, and a soccer field. Sidewalks provide access from the school parking lots and nearby residential streets.

Maxwell Park: This 125-acre park is part of the school/park partnership between the Town and the Unit 5 school district, connecting Parkside Elementary and Junior High Schools, and Normal West High School. The park provides sports and recreational opportunities and passive areas for more relaxed activity. Facilities and equipment include the Champion Fields softball complex, six lighted tennis courts, playground equipment for all ages, a large picnic shelter, restrooms, and a dog park. Champion Fields has eight lighted diamonds in the main complex and two lighted diamonds at Maxwell Park. Fields have covered dugouts, bleacher seating, scoreboards, and P.A. systems. Each set of four fields has a concession stand and restrooms. A playground area is located in the center of the softball complex. Other facilities include an 18-hole disc golf course, a 12-pit lighted horseshoe court, three small picnic shelters, a hard-surfaced basketball court, and a large natural area in the rear of the park with hiking trails.

Oak Street Baseball Field: This baseball field is located on the south side of Chiddix Junior High School and is used by the school teams and local baseball organizations. The site includes parking at the school, a drinking fountain, bleachers, and dugouts.

Rosa Parks Commons: This 13.5-acre park site was developed to collect heavy stormwater from nearby properties. It is used extensively for organized sports including soccer and lacrosse and as a practice area for football teams within the

community. Large open areas are available, with room for up to three soccer fields. There is access to Constitution Trail. Amenities include accessible playground equipment, portable restrooms, a drinking fountain, and a small shelter.

Savannah Green Park: This 2.5-acre neighborhood park includes a shelter, playground equipment, a drinking fountain, and a circular basketball court.

Shepard Park: Shepard Park includes a large picnic shelter, two baseball fields, two playground areas including a fenced tot playground, restroom facilities, a basketball court, and a large parking lot. A dog park is located at the north end of the park.

Underwood Park: Underwood Park contains 18 rolling acres with large mature trees. The park has two lighted tennis courts, a large picnic shelter, a softball diamond, restrooms, playground equipment, four smaller picnic shelters, and a hard-surface basketball court.

including the Children's Discovery Museum, Up-town Station and the historic Normal Theater. This department also surveys facility conditions and provides an annual report on status and needed maintenance and repairs.

PUBLIC SAFETY

The Town protects the safety of its residents in numerous ways, including ordinances setting standards for construction, requirements for business licensing, inspections to ensure that safety standards for buildings and services are met, and other regulatory actions. These tools, combined with the management of land use and development, aid in maintaining Normal as a place that is safe and welcoming for its residents and visitors.

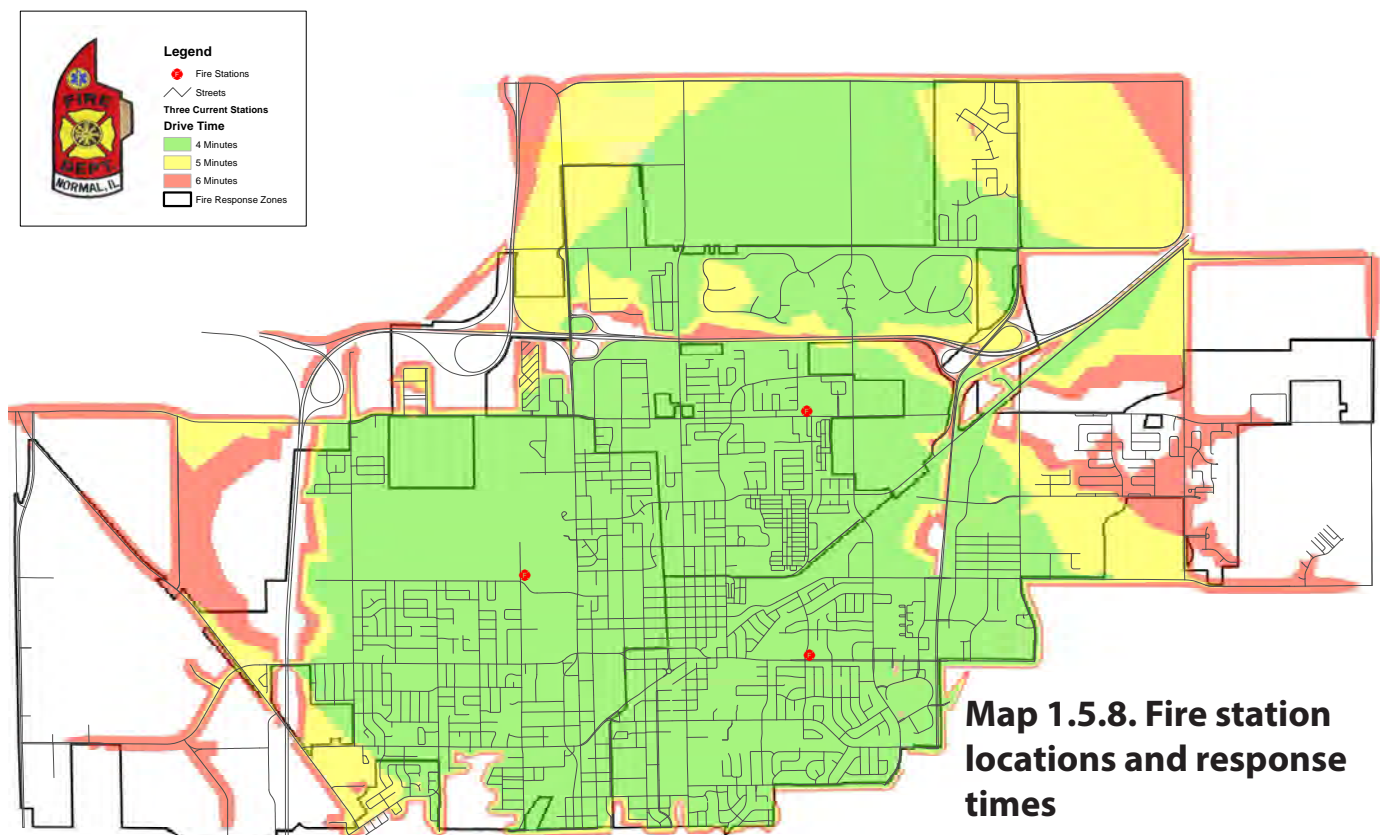
The Town's most direct contribution to public safety is through its first responders in the police and fire departments. Police officers, firefighters, and the emergency medical service responders staffing ambulances can be the literal difference between life and death. In less dire circumstances, these public servants provide reassurance, contact with needed resources, and education for

the community to preserve everyone's safety and security.

FIRE DEPARTMENT

Normal currently has three fire stations. Within the last five years, the Town of Normal Fire Department (NFD) has evaluated the performance of these stations, including physical deterioration, design obsolescence, and geographic location challenges. Its evaluation indicated a need to replace at least two of the three existing facilities due to physical deterioration. It also reported that the locations of the existing stations no longer allowed for acceptable response times throughout the Town (see Map 1.5.8). Several options to address these deficiencies were presented to the Council in June 2013. Of those options, the Council chose to pursue the replacement of all three stations.

As a result, NFD is currently in the midst of substantial investment in new infrastructure, beginning with the relocation of its headquarters facility to a new building slated for construction on Main Street. This will be followed by the replacement of the remaining fire stations as resources permit. In the studies and assessments leading



to this realignment of facilities, NFD assumed that the Town's physical extent is likely to remain compact. Any further expansion could alter those assessments.

As changes to the fire stations are implemented, there should be ongoing evaluation of the results across the Town—in particular, to gauge the accuracy of the assumptions regarding response times and other metrics associated with the fire station relocation.

POLICE DEPARTMENT

As with other Town departments, the Normal Police Department's (NPD) analysis of programs and needs proceeds under the assumption that the Town will not grow substantially beyond its current boundaries in the near future. Much of the Department's focus is on maximizing communication between police officers and the public through the practice of community policing. Police activities are less infrastructure-oriented than is the case for other Town departments. However, information technology and the equipment, software, and staff that carry out IT-based tasks are important resources.

Using information technology, the NPD makes extensive use of data analysis tools, using analyses of call origins and criminal incident reports to identify areas requiring additional resources beyond the standard patrols and community contacts. Mapping is also used to identify problem areas for traffic incidents. Traffic data is categorized by the type of vehicle or pedestrian involved in a crash, as well as location and severity. More concentrated enforcement can be undertaken in locations with higher incidence of crashes or other safety concerns, such as jaywalking and improper actions by bicycle riders.

The NPD also works with apartment management companies to address issues in areas with concentrated university student populations or other locations with high residential densities. These areas are identified based on concerns reported by apartment managers regarding law enforcement issues as well as NPD's internal analysis.

The NPD also coordinates with other Town departments and the ISU campus police to evaluate patterns and develop responses. The Department has an excellent relationship with

the Bloomington Police Department. The forces conduct joint trainings and coordinate on some activities, such as crowd control, SWAT deployment, and hostage negotiation.

The Police Department data analysis and the police response to conditions is part of the annual departmental report. The departmental strategy focuses on modifying behavior to comply with laws and ordinances and reduce the incidence of crime. This strategy is reinforced by extensive community outreach and communication through multiple channels, designed to sustain NPD awareness of enforcement and education needs in the Town.

FUNDING

The universal fact about infrastructure is its high cost. Creating and sustaining complex systems requires extensive technical preparation in forecasting needs, determining the scale of installation, determining feasibility, and designing and installing system components. Each step of the process requires substantial financial investment.

Infrastructure funding is drawn from a variety of sources. These include local government revenue, and for some types of infrastructure, funding from state or federal grant programs. Some infrastructure projects involve multiple agencies that may share the associated costs. The Town participates in several of these cooperative projects, including the Constitution Trail, regional stormwater management, shared street and intersection projects, the Historic Route 66 Bikeway, and others.

In the forecasting and planning efforts undertaken by the Town, various departments have calculated future needs for infrastructure under the assumption that the Town is unlikely to grow extensively in area over the next 20 to 30 years. Instead, the Town is expected to emphasize infill development during this period. Of course, maintenance and repair to existing infrastructure systems will require ongoing investment.