

## 2 Framework for Urban Street Design

The design guidance provided in this document is predicated on the concept that the elements of street design should change as the context of the places that a street passes through change. This concept is rooted in the belief that the design of the street and the place-making aspects of the areas adjacent to the street influence each other and that consistency between the two is necessary for successful place-making in the City.

The palette of street design types and place types from the system planning framework described in the *Citywide Ten-Year Action Plan* are the basic building blocks for identifying design elements that are appropriate for reinforcing the character and role of the *place* and the *street* through the design process. The street design should reflect the street's design type and the adjacent land uses (including future land use where changes are proposed). Conversely, future land uses should be consistent with the street design type to the extent possible. Street design decisions and land use decisions should be mutually reinforcing.

While the street and sidewalk design guidelines have been developed primarily to address work within the public right-of-way, they are also applicable to new development and the review of new development proposals. The Design Guidelines can also be used in land use planning and the development review process to achieve the city's goals for the public realm when opportunities are presented during the small area planning process or by development/redevelopment proposals.

### 2.1 Place Types

Place type is important to the design of streets and the pedestrian zone because the buildings and spaces along the street tell us a great deal about the city's character; the volume of pedestrian, bicycle, transit and automobile activity; and the need for parking, street furniture, trees, landscaping and other facilities. Just as the place types inform the street design process, the street design types should inform the land use planning and development approval process. The place types used for the design framework are based on the designated land use features identified in *The Minneapolis Plan*<sup>2</sup> and shown in Figure 2-1. The *Minneapolis Plan* identifies the following place types:

#### 2.1.1 Activity Centers

An activity center is described in the *Minneapolis Plan* as a place that supports a wide range of commercial, office and residential uses. An Activity Center typically has a busy street life with activity throughout the day and into the evening. It is heavily oriented toward pedestrians and maintains a traditional urban form and scale. Activity Centers are well-served by transit. An important consideration is the balance between the benefits Activity Centers bring to the city as a whole and the need to mitigate undesirable impacts that could range from overflow parking and traffic impacts on neighborhood streets to a need for

---

<sup>2</sup> *Minneapolis Plan for Sustainable Growth*, City of Minneapolis, DRAFT, December 2007. Go to CPED website to view most current version of the city's comprehensive plan.

increased city services such as trash removal or street cleaning. Uptown, the Warehouse District in Downtown, and the East Hennepin area are examples of *Activity Centers*.

### **2.1.2 Commercial Corridors**

A commercial corridor is described in the *Minneapolis Plan* as a corridor that has traditionally served as a boundary connecting a number of neighborhoods and serves as a focal point for activity. Development and revitalization of these corridors helps to strengthen surrounding urban neighborhoods. Commercial Corridors can accommodate intensive commercial uses and high levels of traffic. These corridors support all types of commercial uses, with some light industrial and high density residential uses as well. While the character of these streets is mainly commercial, residential areas are nearby and impacts from commercial uses must be mitigated as appropriate. The city encourages new medium- to high-density residential development along Commercial Corridors, particularly as a part of mixed-use development. These corridors frequently carry large traffic volumes and must balance significant vehicular through-traffic capacity with automobile and pedestrian access to commercial property. In most cases, these corridors are part of the Primary Transit Network that provides frequent, high quality transit service citywide. Central Avenue and Lake Street are examples of *Commercial Corridors*.

### **2.1.3 Community Corridors**

A Community Corridor is described in the *Minneapolis Plan* as a corridor that supports new residential development from low to high density in specified areas, as well as increased housing diversity in neighborhoods. Community corridors support limited commercial uses, frequently concentrated in Neighborhood Commercial Nodes. Proposed commercial uses are evaluated based on their impacts on residential character. Design and development along Community Corridors is oriented toward the pedestrian experience. These streets carry moderate volumes of traffic but must balance vehicular traffic against residential quality of life. These streets are important travel routes for both neighborhood residents and through traffic. In many cases, they are part of the Primary Transit Network that provides frequent, high quality transit service citywide. University Avenue NE and Nicollet Avenue S are examples of *Community Corridors*.

### **2.1.4 Neighborhood Commercial Nodes**

A Neighborhood Commercial Node is described in the *Minneapolis Plan* as typically comprised of a handful of small and medium –sized businesses focused around one intersection. They primarily serve the needs of surrounding neighborhoods although they may contain specialty stores that serve a regional client base. The character of Neighborhood Commercial Nodes is defined by the limited scale of businesses operating in these locations. Related to the city's historical growth pattern, these nodes generally consist of traditional commercial storefront buildings. They maintain a building typology and pedestrian orientation that is appropriate for the surrounding residential neighborhoods. There are many Neighborhood Commercial Nodes in the city as shown in Figure 2-1.

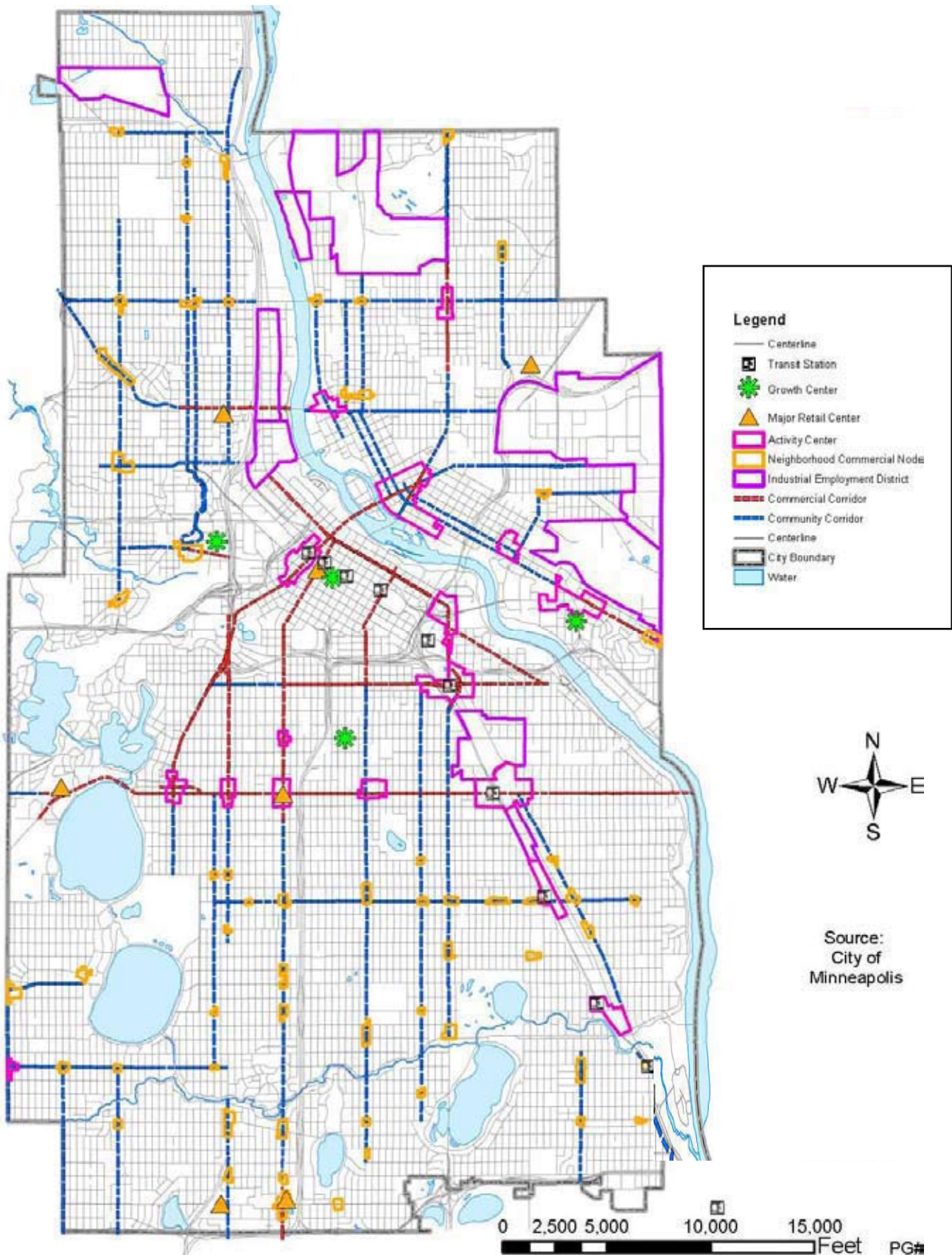


Figure 2-1 Place Type Characteristics

This page left blank intentionally.

### **2.1.5 Transit Station Areas**

The *Minneapolis Plan* describes Transit Station Areas as areas with unique opportunities and challenges within ½ mile of regional transit stations. Density, urban design and public infrastructure are especially critical in these areas. Transit Station Areas are designed with the pedestrian, bicyclist, and/or transit user in mind and are intended to serve individuals who are more likely to use transit. These areas include small-scale retail services that are neighborhood in scale and from which pedestrians, bicyclists and transit users are likely to benefit. The area around the 38th Street/Hiwatha LRT Station is an example of a *Transit Station Area*.

In addition to Transit Station Areas, there are several Transit Centers in the City. These serve as hubs on the Primary Transit Network. While the surrounding land use characteristics may be different, Transit Centers may have similar needs for improved facilities for pedestrians, bicyclists and transit users.

### **2.1.6 Growth Center**

The *Minneapolis Plan* describes Growth Centers as areas where there is a concentration of employment activity accompanied by a wide range of complementary activities taking place throughout the day. These areas include residential, office, retail, entertainment and recreational uses. Growth areas are supported by very good transit service. The Plan identifies four growth centers in the city: (1) Downtown Minneapolis, (2) University of Minnesota, (3) Bassett Creek Valley, and (4) Wells Fargo/Hospitals area.

### **2.1.7 Major Retail Centers**

The *Minneapolis Plan* describes major retail centers as unique locations that can accommodate large-scale retail uses with immediate and easy access to regional road networks. These sites may be more oriented to the automobile but need to be designed to accommodate pedestrians and other forms of transportation to retain their compatibility within the city. The Quarry Center is an example of a *Major Retail Center*.

### **2.1.8 Industrial Employment Districts**

The *Minneapolis Plan* describes industrial employment districts as areas identified in the city's Industrial Land Use and Employment Policy Plan. These districts serve to protect prime industrial space, as well as providing an opportunity for the city to support targeted industries and redevelop underutilized sites. Many of these uses may need to accommodate the movement of large trucks. The Southeast Minneapolis Industrial (SEMI) area is an example

### **2.1.9 Place Type Characteristics**

The following characteristics are used to differentiate the place types: Urban Form, Building Placement, Frontage Types, Enclosure, and Edge Treatments/Open Space. These characteristics are described below and in Figure 2-2.

**2.1.9.1 Urban Form, Building Placement and Frontage Type**

These three characteristics are related and function as the basic determinants for place. Urban form refers to the character of the built place. A place with traditional urban form will have short blocks and be well connected via a street grid. Buildings in traditional urban places are close together and oriented toward the street. Parking in such places should be on-street, under or behind the buildings. Pedestrian connections to buildings should be direct from the street. The relationship of the building to the street (the frontage type) fundamentally defines the pedestrian aspects of the place. Areas with buildings that form near-continuous street walls function better for pedestrians than do areas with buildings with parking between the building and sidewalk and with sidewalks interrupted by many driveways.

**2.1.9.2 Building Height and Enclosure**

The height and variety of buildings along a street affect how attractive a street is for pedestrians. Streets with human scale frontage and detail provide for a more walkable environment. Enclosure is a measure of the height of adjacent buildings in relation to the width of the street. Enclosure ratios of 1:3 to 1:2 (building height to building-to-building width) are typically found on streets that are described as walkable. The height of a building does not, per se, determine walkability or human scale. The design of the building can have a significant impact on perceived scale and walkability by including elements such as setback of upper stories, creation of plaza spaces, small setbacks for frontage zone landscaping or sidewalk cafes, trees and other plantings, public art, ground floor windows, and building lighting. Guidance and requirements for the height of buildings comes from the city's zoning code, the *Minneapolis Plan*, and small area plans.

**2.1.9.3 Edge Treatments, Open Space, Trees and Streetscaping**

Urban form is also influenced by the types of open space, tree planting, green space and streetscaping present along the street. Whether these features are more natural in form (pocket parks, planted boulevards, street trees) or more hardscape (plazas, squares, public art) influence how pedestrians and motorists relate to an area. While people generally tend to prefer green spaces, hardscape can be designed to be pedestrian-friendly particularly if it is designed to support people activities and incorporates interesting public art.

**2.2 Street Design Types**

Historically, the design of city streets (as well as county and state roads) has been based primarily on traffic volumes, the functional classification of the roadway, and state-aid design standards. The city is trying to change how design, operation and maintenance decisions are made in order to:

- Achieve a better balance among transportation modes
- Achieve a better alignment and interface between streets and adjacent land uses
- Incorporate trees and landscaping as an essential part of the public infrastructure to achieve the environmental benefits
- Better manage stormwater through the reduction of impervious surface

## Design Guidelines for Streets and Sidewalks

Figure 2-2 Place Type Characteristics

Place Type	Identifying Characteristics	Form	Building Placement	Frontage Types	Typical Density	Edge Treatments and Open Space
<b>Activity Centers, Growth Centers and Transit Station Areas</b>	<ul style="list-style-type: none"> <li>Diversity of uses with citywide and regional draw</li> <li>Medium and high density residential uses, though varies by location</li> <li>Accommodates retail and commercial services, entertainment uses, educational campuses, or other large-scale cultural or public facilities</li> <li>Significant pedestrian and transit orientation</li> <li>May have concentration of employment</li> <li>Mix of uses occurs within and among structures</li> </ul>	<ul style="list-style-type: none"> <li>Traditional urban form regarding building siting and massing</li> <li>Unique urban character that distinguishes them from other commercial uses</li> </ul>	<ul style="list-style-type: none"> <li>Small or no setbacks</li> <li>Buildings oriented to street</li> </ul>	<ul style="list-style-type: none"> <li>Storefronts</li> <li>Landscaped buffer areas</li> </ul>	<ul style="list-style-type: none"> <li>Medium to very high</li> </ul>	<ul style="list-style-type: none"> <li>Plazas and squares</li> <li>Pocket parks</li> <li>Trees planted in pits/trenches</li> <li>Streetscaping but minimal planted boulevards</li> </ul>
<b>Commercial Corridors</b>	<ul style="list-style-type: none"> <li>Historically have been prominent destinations in city</li> <li>High traffic volumes</li> <li>Mix of uses, with commercial uses dominating</li> <li>Residential uses tend to be medium to high density</li> <li>Primary Transit Network corridors</li> </ul>	<ul style="list-style-type: none"> <li>Buildings generally retain a traditional urban form in their siting, massing and relationship to the street</li> </ul>	<ul style="list-style-type: none"> <li>Shallow to medium setback</li> <li>Buildings oriented to street</li> </ul>	<ul style="list-style-type: none"> <li>Storefronts</li> <li>Landscaped buffer</li> <li>Fences</li> </ul>	<ul style="list-style-type: none"> <li>Medium to high</li> </ul>	<ul style="list-style-type: none"> <li>Limited</li> <li>Trees planted in pits/trenches</li> <li>Streetscaping</li> <li>Few planted boulevards</li> </ul>
<b>Community Corridors</b>	<ul style="list-style-type: none"> <li>Connect more than two neighborhoods</li> <li>Moderate traffic volumes and may be principal travel routes</li> <li>Primary Transit Network corridors with some exceptions</li> <li>Primarily residential with intermittent commercial uses clustered at intersections in nodes</li> <li>Small scale retail sales and services serving immediate neighborhood</li> </ul>	<ul style="list-style-type: none"> <li>Traditional commercial and residential form and massing</li> </ul>	<ul style="list-style-type: none"> <li>Residential front yard setbacks</li> <li>Small or no setbacks in Commercial Nodes</li> <li>Buildings oriented to street</li> </ul>	<ul style="list-style-type: none"> <li>Storefronts</li> <li>Landscaped buffer areas</li> <li>Porches</li> <li>Fences</li> <li>Residential front yards</li> </ul>	<ul style="list-style-type: none"> <li>Low to medium</li> </ul>	<ul style="list-style-type: none"> <li>Parks</li> <li>Planted boulevards except in commercial nodes</li> <li>Residential front yards</li> </ul>
<b>Neighborhood Commercial Nodes</b>	<ul style="list-style-type: none"> <li>Generally retail or services on at least three corners of intersection</li> <li>Oriented to pedestrian traffic, with few automobile-oriented uses</li> <li>Generally serve needs of surrounding neighborhood with limited number of businesses serving larger area</li> <li>Commercial uses are typically focused close to a single intersection of community corridors though may be more dispersed</li> <li>Mix of uses occur within and among structures</li> </ul>	<ul style="list-style-type: none"> <li>Generally have a historic commercial function and form</li> </ul>	<ul style="list-style-type: none"> <li>Small or no setbacks</li> <li>Buildings oriented to street</li> </ul>	<ul style="list-style-type: none"> <li>Storefronts</li> <li>Landscaped buffer areas</li> </ul>	<ul style="list-style-type: none"> <li>Medium to high</li> </ul>	<ul style="list-style-type: none"> <li>Streetscaping</li> <li>Trees planted in pits/trenches</li> </ul>
<b>Major Retail Centers</b>	<ul style="list-style-type: none"> <li>Large concentration of retail floor space, and have at least one major chain of grocery or household goods retail</li> <li>Significant parking</li> <li>Convenient and direct access to a the regional road network</li> </ul>	<ul style="list-style-type: none"> <li>Varies; generally large single story retail buildings with large surface parking lots</li> <li>Policy direction for reinforcing elements of traditional urban form</li> </ul>	<ul style="list-style-type: none"> <li>Large setbacks</li> <li>Commercial frontage</li> <li>Surface parking in front</li> </ul>	<ul style="list-style-type: none"> <li>Parking lots</li> <li>Storefronts</li> <li>Landscaped buffer areas</li> <li>Fences</li> </ul>	<ul style="list-style-type: none"> <li>Varies</li> </ul>	<ul style="list-style-type: none"> <li>Trees planted in pits/trenches</li> <li>Landscaped sidewalks</li> <li>Parking lots</li> </ul>
<b>Residential Neighborhood</b>	<ul style="list-style-type: none"> <li>Primarily residential but may contain scattered non-residential uses including small scale commercial and public/institutional</li> </ul>	<ul style="list-style-type: none"> <li>Varies</li> </ul>	<ul style="list-style-type: none"> <li>Varies</li> </ul>	<ul style="list-style-type: none"> <li>Varies</li> </ul>	<ul style="list-style-type: none"> <li>Low to very high</li> </ul>	<ul style="list-style-type: none"> <li>Parks</li> <li>Planted boulevards</li> </ul>
<b>Industrial/Employment District</b>	<ul style="list-style-type: none"> <li>Protected areas intended for industrial growth and expansion without residential uses in their boundaries</li> <li>Designated in the Industrial Land Use and Employment Policy Plan</li> </ul>	<ul style="list-style-type: none"> <li>Varies</li> </ul>	<ul style="list-style-type: none"> <li>Varies</li> </ul>	<ul style="list-style-type: none"> <li>Varies</li> </ul>	<ul style="list-style-type: none"> <li>Varies</li> </ul>	<ul style="list-style-type: none"> <li>Varies</li> </ul>

Definitions and names are derived from the *Minneapolis Plan*

This page left blank intentionally.

- Enhance the built urban form of Minneapolis and create a more walkable city by building streets that have a more human scale

A new system of street design types has been developed to accomplish these objectives by more directly linking land use, street design and urban form. In short, design decisions are based not only on the “function” of the street but also on the “form” of the street. Just as place types inform the street design types and the street design process, the street design types and the street design guidelines can be used to inform the land use planning and development review process.

In line with this emphasis on form in addition to function, it is important to note that the street design types are not organized by either “functional classification” (see Figure 2-5) or jurisdiction (see Figure 1-1). Historically, the functional classification of a roadway has been a significant determinant of the design of the roadway. Under the method outlined here, functional class is one of several factors that help to determine the appropriate design (form) of a particular street.

Jurisdiction reflects the level of government that is responsible for decisions on, as well as construction, operation and maintenance of, a particular roadway. The city can make final design decisions about any roadway under its jurisdiction but not on the design of a roadway under another agency’s jurisdiction. While the city does not make final design decisions on roadways under Hennepin County or state jurisdiction, the design guidelines for the street design types will provide the basis for city input into the county or state design process on county and state roadways.

Nine street design types have been defined as shown in Figure 2-3. The design characteristics of these street design types are based on the place types described earlier in this report and in *The Minneapolis Plan*. The nine street design types are:

### **2.2.1 Commuter Street**

A commuter street is a high capacity roadway that carries primarily through traffic, serves longer trips and provides limited access to land uses. These streets are likely to be under the jurisdiction of Mn/DOT or Hennepin County. Examples are Hiawatha Avenue (Hwy 55) and Olson Memorial Highway (Hwy 55) and most have a functional classification of Principal Arterial. There are very few true commuter streets in Minneapolis outside the freeway system (see Figure 2-3). It should be noted that the design guidelines do not address freeway design (Mn/DOT jurisdiction) although they are applicable to cross-streets and bridges and to city streets that serve as the freeway’s frontage roads. The freeway system provides for the majority of commuter trips to, from and through Minneapolis.

### **2.2.2 Commerce Street**

A commerce street is a medium capacity street that supports retail, service commercial and higher intensity residential land uses on a corridor basis. These streets are likely to be under the jurisdiction of Mn/DOT or Hennepin County. Examples include Hennepin Avenue (Hennepin County) and Central Avenue (Mn/DOT).

### **2.2.3 Activity Area Street**

Activity Area Streets support retail, service commercial and higher intensity residential land uses in a large node of several blocks (sometimes very large like downtown). Activity Area Streets are found primarily near the land use categories of activity centers, growth centers and transit station areas. They may also be found near some neighborhood commercial nodes or major retail centers. Activity Area Streets may have many different design characteristics and capacities depending on the unique needs within the specific area where they are located. These streets may be under the jurisdiction of Hennepin County or the city. Examples of Activity Area Streets include 3<sup>rd</sup> Avenue S. in downtown, 15<sup>th</sup> Street S.E. near the University of Minnesota campus, and 31st Street W. near Uptown.

There is no one design appropriate for an activity area street because each street may have unique needs depending on the adjacent land uses and how the street fits into and serves the area. In addition, activity area streets may extend along the edge or outside the boundaries of a designated Activity Center, Growth Area or Transit Station Area. In some cases (31<sup>st</sup> Street W. is a good example), connection and transition needs between adjacent neighborhoods and higher intensity land use areas may be even more important than the linear needs of the street. Activity area streets typically need significant pedestrian capacity, need to accommodate high transit loadings/unloadings, often serve high bicycle volumes, and have significant on-street and/or off-street parking demand. Traffic volumes are often high in these areas with a large share of traffic accessing parking and properties within or near the adjoining activity center, growth area or other high density area.

### **2.2.4 Community Connector**

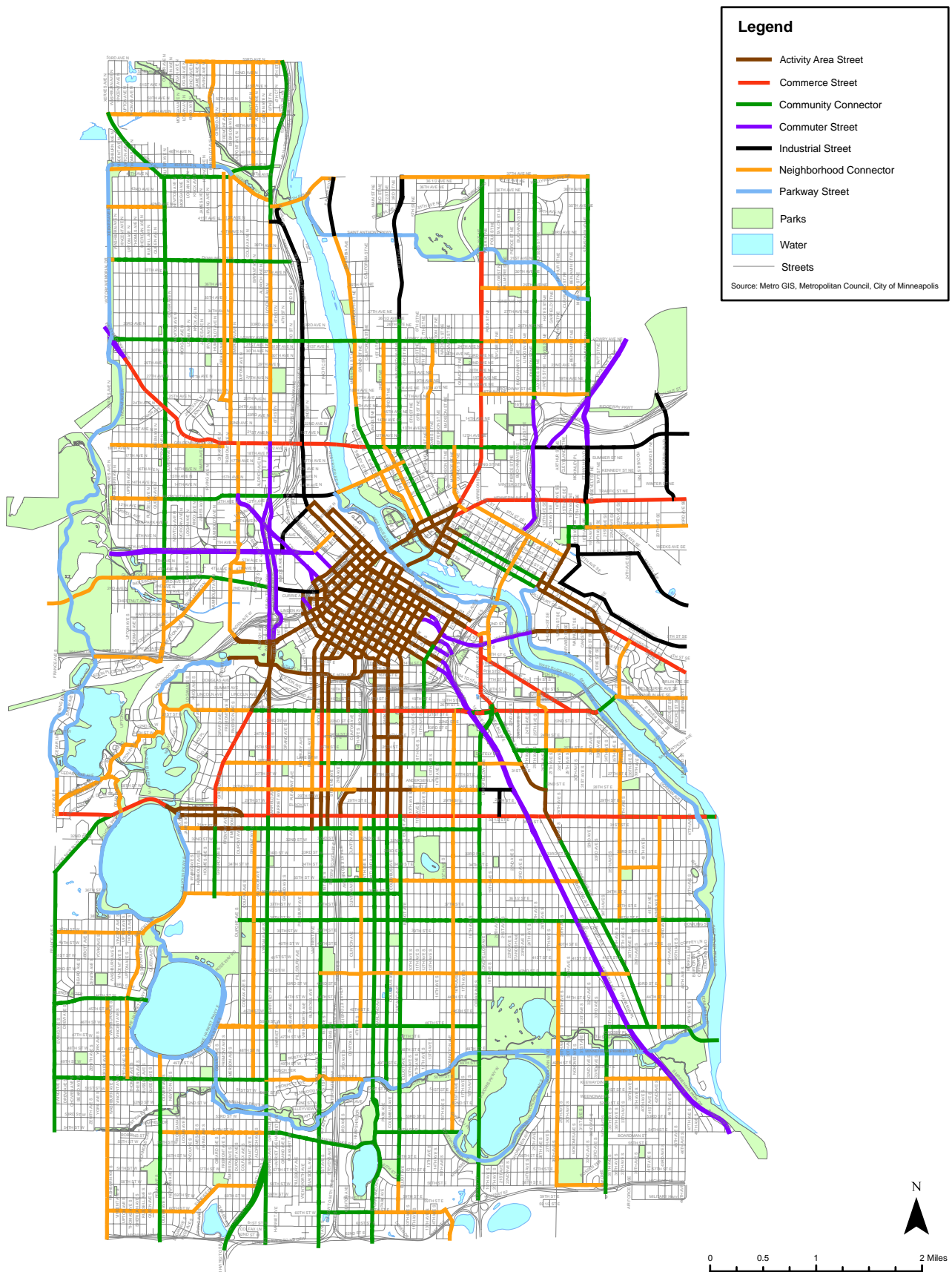
A Community Connector a medium capacity street (usually under Hennepin County or city jurisdiction) that connects neighborhoods with each other, neighborhoods with commercial corridors and other districts, districts with each other and serves as the main street of a neighborhood commercial node. Examples are Nicollet Avenue (city) and Lowry Avenue (Hennepin County).

### **2.2.5 Neighborhood Connector**

A Neighborhood Connector a low capacity street (usually under city jurisdiction) that connects neighborhoods with each other. Examples are Emerson Avenue North and Bloomington Avenue South.

### **2.2.6 Industrial Connector**

An Industrial Connector is a low capacity street (usually under city jurisdiction) that provides access to or serves abutting property in industrial/employment districts. These streets may need to be designed to accommodate high truck volumes, depending on the uses in the industrial/employment district. An example is Washington Avenue North.



**Figure 2-3** Street Design Types

This page left blank intentionally.

Figure 2-4 Street Design Type Characteristics

Proposed Street Types	Description	Equivalent Functional Class	Through Traffic Lanes	Target Operating Speed	Transit	Pedestrian Facilities	Bicycle Facilities <sup>5</sup>	Freight	Connection to Freeway System	Median	Turn Lanes	Curb Parking <sup>6</sup>	Curb Extensions	Driveway Access	Trees and landscaping
Commuter Street	High capacity; carries through traffic, serves longer trips and provides limited access to land uses	Principal or A Minor Arterial	4-6 <sup>1</sup>	40 mph	PTN	Yes	Yes (on Parallel paths) <sup>4</sup>	Regional truck routes	Yes	Yes	Yes	No	No	Limited; access from alleys or access lanes	Yes
Commerce Street	Medium capacity; supports retail, service commercial and higher intensity residential land uses on a corridor basis	A and B Minor Arterials	2-4	30 mph	PTN and Local routes	Yes	Yes if in Master Plan	Local truck routes	Yes	Optional	Optional	Yes	Yes	Limited; access from alleys	Yes
Activity Area Street	Medium capacity; provides access to abutting properties in activity centers, growth centers, transit station areas, and neighborhood commercial nodes	A and B Minor Arterials, Collectors, and Locals	2-4	30 mph	PTN and Local routes	Yes	Yes if in Master Plan	Local delivery	Provisional	Optional	Optional	Yes	Yes	Yes	Yes
Community Connector	Medium capacity; connects neighborhoods together and with commercial corridors and other districts; districts with each other; serves as the main street of a neighborhood commercial node. Some streets have a commuter function that require special frontage design	B Minor Arterials and Collectors	2-3 <sup>2</sup>	30 mph	PTN and Local routes	Yes	Yes if in Master Plan	Local truck routes	Provisional	Optional	Optional	Yes	Yes	Allowable where side or rear not feasible	Yes
Neighborhood Connector	Low capacity; connects neighborhoods with each other. Some streets have a commuter function that require special frontage design	Collectors	2	30 mph	PTN and Local routes	Yes	Yes if in Master Plan	Local deliveries	Provisional	Optional	Optional	Yes	Yes	Yes	
Industrial Connector	Low capacity; connects districts with neighborhoods and serves abutting property in single use (industrial/employment) districts	Collectors	2-3 <sup>2</sup>	30 mph	PTN and Local routes	Yes	Yes if in Master Plan	Local truck routes	Provisional	Optional	Optional	Optional	Yes	Yes	Yes
Parkway Street	Low-capacity thoroughfare designed to provide circulation adjacent to and through parkland	Locals	1-2	25 mph	Provisional	Yes	Yes (on Parallel paths)	No	No	Optional	Optional	Recessed in bays	Yes	Optional	Yes
Local Street	Low capacity; serves abutting property in residential neighborhoods or single use (industrial/employment) districts	Locals	1-2 <sup>3</sup>	30 mph	Local Routes	Yes	Yes if in Master Plan	Local deliveries	No	No	Optional	Yes	Yes	Yes	Yes
Alley	Property and parking access	Locals	1-2	5 mph	No	No	No	Local deliveries	No	No	No	No	No	Yes	No

## Notes

<sup>1</sup> Six lanes is an exception for surface streets in Minneapolis<sup>2</sup> Three lane streets are two-way streets with one travel lane in each direction and left turn lane (not necessarily continuous)<sup>3</sup> One lane streets are two-way yield streets with parking on one or both sides and one wide travel lane<sup>4</sup> Parallel paths - shared bicycle/pedestrian facilities adjacent to streets, but separated by wide planting areas<sup>5</sup> If in Bicycle Master Plan, bicycle facility should be provided on target street or on a parallel street serving the same travel shed.<sup>6</sup> Curb extensions should be provided except in conditions where the parking lane is used as a traffic lane during peak periods or space is required at the intersection for a turn lane.

This page left blank intentionally.

### **2.2.7 Parkway Street**

A Parkway Street is a low-capacity street designed to provide circulation adjacent to and through parkland. These streets may be under the jurisdiction of the Park Board or the city. Examples are 45<sup>th</sup> Avenue North (city street) and Calhoun Parkway (Park Board Parkway). It should be noted that the term “parkway” is only used to name a Park Board street. The parkway street design type includes both Park Board parkways and local streets that are adjacent to or provide circulation through parkland. These streets will not be named as parkways but may have design characteristics that are similar to a Park Board parkway.

### **2.2.8 Local Street**

A Local Street is a low capacity street that serves abutting property in residential neighborhoods or single use (industrial/employment) districts. These streets are usually under City jurisdiction, but may be private.

### **2.2.9 Alley**

An alley is a shared local street used exclusively for property and parking access. These streets are usually under City jurisdiction, but may be private.

### **2.2.10 Street Design Type Characteristics**

In the design guidance, the criteria that describe a street design type are used to differentiate design decisions in relation to place type characteristics. The design elements are drawn from a set of functional criteria, which are summarized in Figure 2-4. These criteria are described below.

#### **2.2.10.1 Equivalent Functional Class**

There is no direct correlation between functional classification and street design type. However, it is important that a link be maintained between the city’s street design types and the region’s functional roadway classifications because regional, state and federal agencies use these functional classes as one of the criteria for allocating funds, and this funding process is expected to continue in the future. In the long term, a closer correlation should emerge between street design type and functional class.

The regional planning process<sup>3</sup> identifies four functional classes of roadways (principal arterials, minor arterials, collectors and local streets) based on speed and distance (see Figure 2-5). Both principal and minor arterial roadways in the regional system are intended to be higher speed roadways that serve a higher proportion of regional or sub-regional trips with longer travel distances. These roadways typically de-emphasize property access, giving priority to through movements.

Most principal arterials are freeways although both Hiawatha Avenue (TH 55) and Olson Memorial Highway (TH 55), which are identified as “commuter street” design types, carry a Principal Arterial functional classification. Minor arterials include “A” minor arterials and “B”

---

<sup>3</sup> 2030 Transportation Policy Plan, Appendix F, Functional Classification Criteria, Figures F-1 through F-6, Metropolitan Council, St. Paul, MN, adopted December 15, 2004.

minor arterials. Most “A” minor arterials in the city are county roads and include streets such as Park and Portland Avenues and West Broadway. These streets typically have design types of “commerce street” or “community connector”.

“B” minor arterials in the city include both county roads and city streets. Examples are Lowry Avenue, which is a county road, and Nicollet Avenue, which is a city street. While minor arterial streets in built urban environments such as Minneapolis tend to serve higher volumes of traffic and have more moving lanes than other streets, they operate in low speed conditions providing property access and serving a mix of short and long trips. While commerce and community connectors may be classified as minor arterials in the regional system, they should be designed to reflect the speeds, property access, trip types, and use of alternative modes more suitable to built urban environments.

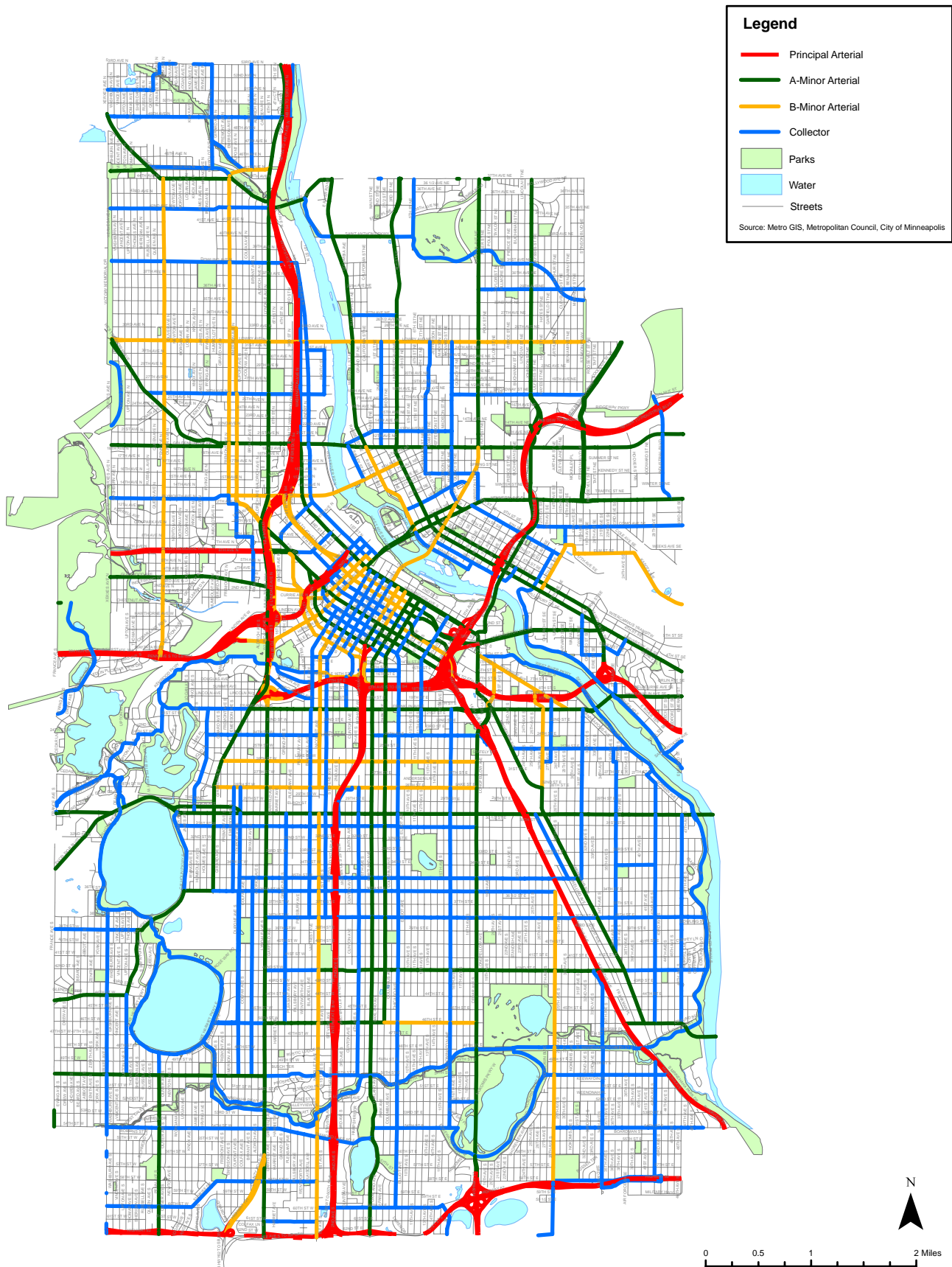
The functional classification of “collector” streets typically provide both mobility for citywide trips and property access, while local streets focus primarily on providing property access. Community connector design types, as well as industrial connectors, typically carry the functional classification of collector streets in the regional system, although some community and neighborhood connectors may be functionally classified as minor arterials and some may be functionally classified as local streets.

#### **2.2.10.2      Through Lanes**

A *maximum* desirable number of lanes is established for each street design type. Streets in the City of Minneapolis typically have right-of-way widths of 60, 66 or 80 feet and some are even narrower. A very small number of streets have 100 feet right-of-way. These widths must accommodate through lanes, turn lanes and parking lanes, bike lanes, sidewalks, space for trees and landscaping, transit shelters, and many other desired special features. Exceeding the maximum desirable number of lanes will have a negative impact on the walkability of the corridor and the ability to provide features such as bike lanes, transit facilities, on-street parking and adequate sidewalks, trees, landscaping and streetscaping. Thus, the design guidance establishes a *maximum* number of through lanes for each street design type. It should be noted that there are some circumstances where the existing number of lanes may exceed the desirable maximum. In these cases, a reduction in the number of lanes may make the scale of the roadway more compatible with adjacent land uses. However, this change may result in longer periods of congestion and/or traffic diversion to nearby streets. A careful evaluation of these trade-offs must be made during the design process.

#### **2.2.10.3      Target Speed**

A maximum target speed is established for each street design type. Target speed is the desired actual operating speed of the street with regard to walkability and compatibility with fronting land use and urban form. The target speed provides guidance regarding what design elements are needed to make a particular corridor walkable and bikable. Speed does not, by itself, determine if a particular street is or is not walkable and bikable.



**Figure 2-5 Existing Functional Classification of Streets**

This page left blank intentionally.

It should be noted that, while the target operating speed for residential streets is noted as 30 mph (see Figure 2-4); this will be reduced to 25 mph if current efforts to change state law are successful. The actual typical operating speed on most local residential streets in Minneapolis is 25 mph or less. However, state law currently allows a legal speed limit of 25 mph only if it is specifically signed. It does not appear necessary or financially feasible to sign all local streets for 25 mph to achieve that operating speed.

#### **2.2.10.4      Transit Facilities, Bicycle Facilities, Pedestrian Facilities, Freight**

The network needs for other modal networks affect the design of particular streets. These needs will not be the same for all streets within a particular street design type but should be given priority consideration when they are present.

- Transit Facilities indicate a street where passenger facilities (e.g., additional sidewalk space for waiting passengers, room for transit shelters, information displays) may be needed and certain design or traffic management strategies (e.g., curb extensions, far-side stops, signal priority, queue jump lanes) may be required to maintain fast and reliable transit service. Streets that are on the Primary Transit Network (PTN) are the streets most likely to require expanded facilities for transit (see Figure 2-6). These streets are typically commerce streets and community connector streets. It is expected that any planned transit facilities will be incorporated into designs for streets that are on the Primary Transit Network.
- Bicycle Facilities indicate the types of treatments (striped, signed, separated paths, etc.) that could be found if a street is included in the City's bicycle network. The Bicycle Advisory Committee (BAC) has proposed a network of bicycle facilities, which will be updated when the Bicycle Master Plan is developed (expected completion by end of 2008). It is expected that planned bicycle facilities will be incorporated into designs for these streets or, if necessary, provided on parallel streets. It should be noted that, while bicycle facilities may be identified as appropriate for certain street types, this should not be interpreted as a requirement for a bicycle facility on all streets carrying that street type. Rather, the locations where bicycle facilities are needed will be identified in the Bicycle Master Plan. These facilities should be incorporated, on the street in question or on a parallel street, only if a bicycle facility has been recommended in the Bicycle Master Plan.
- Pedestrian Facilities indicate the types of treatment appropriate for sidewalks and other pedestrian facilities. More detailed design guidelines for pedestrian facilities will be developed in the Pedestrian Master Plan currently being prepared with assistance from the Pedestrian Advisory Committee (expected completion by end of 2008). It is expected that planned pedestrian facilities and pedestrian design guidelines will be incorporated into street designs as recommended in the Pedestrian Master Plan.
- Freight is used to define the level of regional or local goods movement that could be expected on each street design type. These needs should be accommodated to the extent feasible for each street. Freight needs will be a priority in designing industrial connector streets and roadways designated as commuter streets. Large trucks must be accommodated on county roads. The need to accommodate large trucks on other streets will be tied more closely to property needs adjacent to the roadway in question.

**2.2.10.5      Connection to the Freeway System**

Connection to the Freeway System is used to address which street design types are appropriate to link to freeway access ramps. This designation is also linked to equivalent functional class for regional funding purposes. There may be some circumstances where existing freeway access is provided to/from a street that does not carry a design type suitable for this function. If so, a change may need to be considered at some point in the future if a more suitable alternative is available. There may be some circumstances where freeway access has to be retained because other alternatives are not available.

**2.2.10.6      Medians and/or Turn Lanes**

Medians and/or Turn Lanes are used to identify where separation of opposing directions of traffic or provision of exclusive turn lanes may be appropriate. In some locations, planted medians may be provided for landscaping, tree planting and/or stormwater management or to simply to narrow the roadway. The need for turn lanes will vary considerably depending on the traffic volumes and travel patterns on specific corridors and corridor segments. In general, dedicated left and/or right turn lanes should be provided only where absolutely necessary to minimize negative impacts on pedestrian environment and alternative modes of transportation. There may be some circumstances, particularly on streets with high traffic volumes and a wide right-of-way (100 feet or more), where the provision of turn lanes coupled with a planted median would be a desirable solution that has benefits both for traffic and for pedestrians.

**2.2.10.7      Curb Parking, Curb Extensions**

Curb Parking in an urban environment has an importance beyond the immediate parking value to adjacent land uses. The absence or presence of curb parking affects intersection design, the speed and efficiency of operation of the moving lanes of traffic on the street, and transit operations. Curb parking also interacts with the design of the pedestrian zone and affects the perception of pedestrian safety. Curb parking is a flexible design element on the street that buffers pedestrians from moving traffic, can be traded for bus stops or turn lanes and can be sheltered with curb extensions to form parking bays between intersections.

Curb Extensions are an additional design element that benefits pedestrians and transit and delineates areas for on-street parking. ***The design guidelines are based on the assumption that curb extensions will be provided unless specific conditions exist at a particular intersection or transit stop that preclude their provision.***

**2.2.10.8      Driveway Access**

Driveway Access is linked to target speed. It is desirable for safety reasons to limit the number of driveways on streets with higher target operating speeds and/or with high pedestrian volumes.

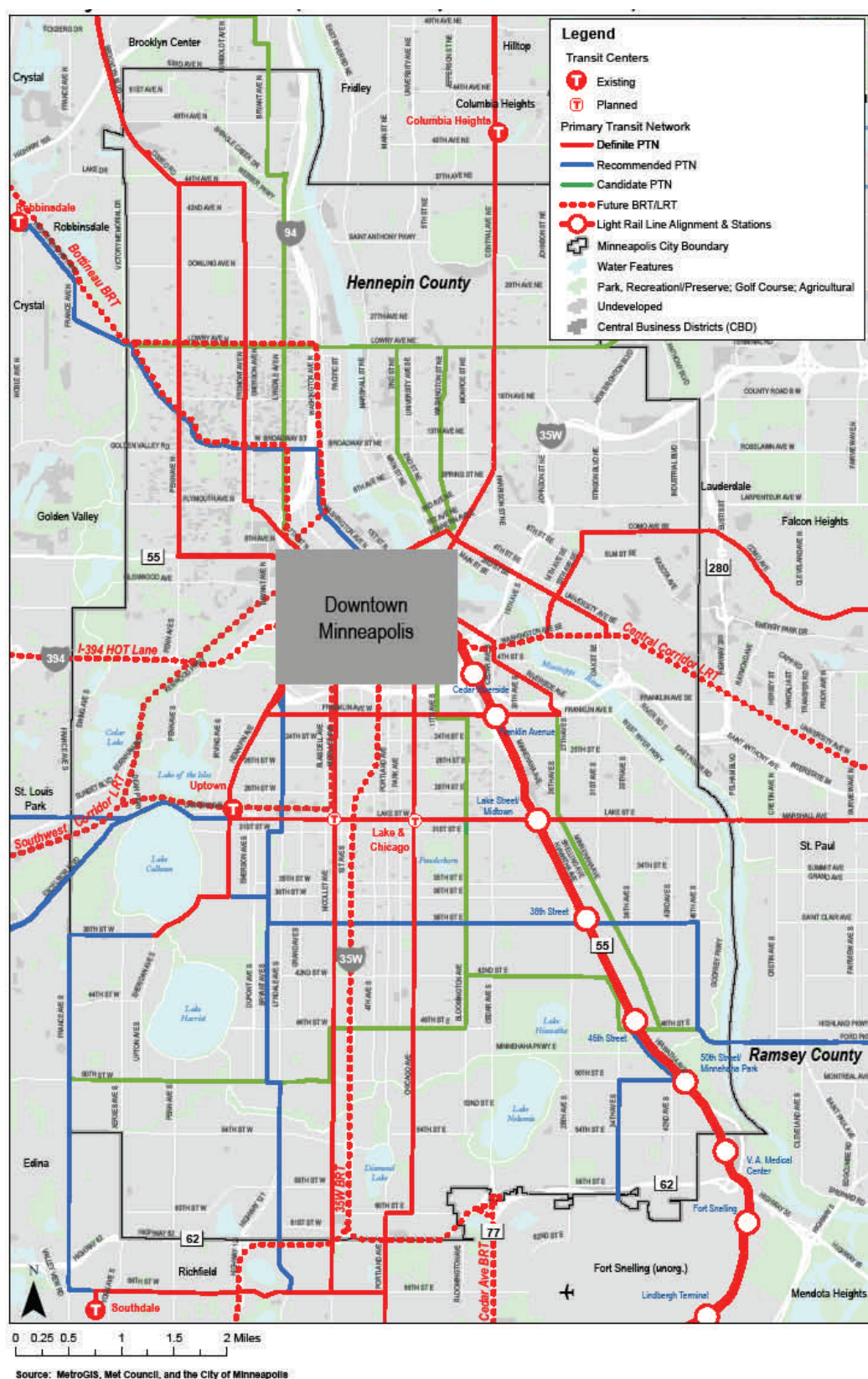


Figure 2-6 Primary Transit Network

This page left blank intentionally.