

CHAPTER 4 ACCESS FOR THE COMMUNITY



Gothenburg should create a transportation system that moves people effectively through and beyond the community, while preserving the city's distinctive environment and accommodating future growth.





TRANSPORTATION ANALYSIS

This section examines important elements of the transportation system that will assist in developing specific projects and policies. It discusses the structure of the city's street system and the role that its individual parts play.

Gothenburg's street pattern grew from the survey grid, oriented to the Union Pacific Railroad and then aligned north/south at 12th Street. The system has remained fairly true to this pattern. This approach means that Gothenburg's neighborhoods are well connected to each other and community destinations. The pattern has also created a tight development pattern that uses land and infrastructure in an efficient manner. These features are important to the overall character of the city and should be taken into consideration as portions of the city grow.

Street Classification

The Street Classification Map, Map 4.1, displays the city's existing Federal Functional Classifications. A street segment must be designated part of the Federal Aid system to be eligible for Federal funding when implementing major improvements. Streets in Gothenburg are placed in the following functional categories:

Interstate. Federally designated National System of Interstate and defense highways.

- Interstate 80

Principal Arterials. These roads serve regional needs and connect major activity centers. They include:

- Highway 47 (Lake Avenue north of 12th Street and Avenue G south of 12th Street)
- Highway 30 (8th Street)

Minor Arterials. These streets connect with and complement the principal arterial system by linking activity centers and connecting various parts of the city together. As a general rule, these streets are spaced at 0.5 to 1.0 mile in developed urban areas. Streets currently in this classification include:

- 10th Street, from Avenue G to Avenue D (to Highway 47/30)
- Avenue D, from 10th Street to 8th Street (to Highway 47/30)

Collectors. The collector system links neighborhoods together and connects them to arterials and activity centers. Collectors are designed for relatively low speeds (30 miles per hour and below), are typically 32 feet wide with parking on one side, and provide unlimited local access. Examples of collectors in Gothenburg's current system include:

- Avenue G, from 10th Street to 27th Street
- Avenue M, from Highway 30 to outside of the city limits.
- Lake Avenue, south of the railroad tracks

- 6th Street
- 12th Street
- 20th Street

Local Streets. Local streets serve individual properties within residential or commercial areas. They provide direct, low-speed access for relatively short trips.

Community Streets. These are streets that provide special civic spaces for the community by connecting major features together. Additionally, these streets should accommodate pedestrians. Lake Avenue is a dominate civic street serving the northside while the Avenue G and its viaduct serves the southside.

Traffic Capacity Analysis

A capacity analysis compares the traffic volumes on a street segment with the design traffic capacity of that segment. The ratio of volume over capacity (V/C) corresponds to a “level of service” (LOS), which describes the quality of traffic flow.

Measures of Level of Service (LOS)

System performance of a street is evaluated using a criterion called the “level of service” or LOS. LOS is a qualitative measure that generally focuses on speed and smoothness of traffic flow under specific volume conditions. In short, all of Gothenburg’s streets and highways operate at the highest efficiency. A ratio of volume to capacity (that is how much traffic the street carries divided by how much traffic the street was designed to carry) provides a short method for determining LOS. LOS categories are described as follows:

LOS A: Free-flowing operation. Vehicles face few impediments to maneuvering. The driver has a high level of physical and psychological comfort. Minor accidents or breakdowns cause little interruption in the traffic stream. LOS A corresponds to a volume-capacity (V/C) score of 0 to 0.60.

LOS B: A reasonably free-flowing operation. Maneuvering ability is slightly restricted, but ease of movement remains high. LOS B corresponds to a V/C score of 0.60 to 0.70.

LOS C: Stable operation. Traffic flows approach the range in which traffic increases will degrade service. Minor incidents can be absorbed, but a local slowdown will result. LOS C corresponds to a V/C score of 0.70 to 0.80.

LOS D: Borders on unstable traffic flow. Small traffic increases produce substantial service deterioration. Maneuverability is limited and comfort reduced. LOS D represents a V/C score of 0.80 to 0.90.



LOS E: Typical operation at full design capacity of a street. Operations are extremely unstable because there is little margin of error in the traffic stream. LOS E corresponds to a V/C score of 0.90 to 1.00

LOS F: A breakdown in the system. Such conditions exist when queues form behind a breakdown or congestion point. This condition occurs when traffic exceeds the design capacity of the street.

Table 4.1 presents the capacity of various street sections at LOS D, the point at which congestion problems begin to occur.

Cautions about the LOS System

The Level of Service measure is ultimately a measure of traffic speed. Clearly, LOS is an important measure because the fundamental purpose of streets is to move traffic. However, LOS does not measure other important values, including:

- Neighborhood preservation
- Environmental quality
- Economic vitality and access
- Energy conservation
- Efficient development patterns
- Pedestrian environment

A development pattern that improves LOS, can involve driving longer distances. This ultimately increases the amount of traffic and the total number and length of vehicle trips. Thus, while LOS is a useful tool, it should not be used to the exclusion of other values. The transportation system should serve, rather than dominate, the overall environment.

Although measures to improve LOS, such as widening roadways and adding lanes, can improve the flow of traffic, they can also diminish the quality of the pedestrian environment. These measures can also increase traffic speeds, which can in turn decrease pedestrian safety.

Operational Analysis

Table 4.2 compares daily vehicles per day (vpd) in 2000, 2002, 2004 and 2006 collected by the Nebraska Department of Roads. The following is a summary of Table 4.2.

- Highway 30 traffic counts have escalated since 2000. A higher number of traffic counts were reported for the eastern portion of Highway 30 than the western portion. This is likely a reflection of the traffic between Lexington and Gothenburg.
- Highway 47 counts have declined from I-80 to the viaduct, dropping from 5,885

vpd in 2000 to 5,730 vpd in 2006.

- Highway 47 counts north of town increased by 38%, growing from 1,730 vpd in 2002 to 2,380 vpd in 2006. This area is likely a reflection of both local and regional traffic utilizing access into and out of the community.
- Bypass traffic has declined, generally. The level of traffic at 11th Street intersections with Ave D, Lake Ave, Ave G has declined from 2002 to 2006.

**TABLE 4.1: TYPICAL TRAFFIC CAPACITY BY FACILITY TYPE
CAPACITY AT LOS D (VPD)**

| | 2-LANE | 3-LANE | 4-LANE |
|---------------------------|--------|--------|--------|
| MINIMAL ACCESS | 12,500 | 16,550 | 25,400 |
| RESIDENTIAL | 12,300 | 16,250 | 25,300 |
| MIXED ZONING | 11,200 | 14,850 | 23,600 |
| CENTRAL BUSINESS DISTRICT | 9,400 | 12,650 | 20,500 |

TABLE 4.2: CHANGE IN AVERAGE DAILY TRAFFIC COUNTS, 2001-2003

| STREET | 2000 COUNT | 2002 COUNT | 2004 COUNT | 2006 COUNT | '00-'06 CHANGE | % CHANGE |
|----------------------------|---------------|---------------|---------------|---------------|-------------------|-------------|
| HIGHWAY 30 | | | | | | |
| at 2nd Avenue | 1,595 | 1,640 | 1,630 | 1,905 | 310 | 19% |
| at Avenue D NW | 3315 | 4070 | 3710 | 3670 | 355 | 11% |
| at Avenue F | - | 3485 | 3615 | 3625 | *140 | 4% |
| at Cozad Canal | 1815 | 2670 | 2695 | 2860 | 1,045 | 58% |
| HIGHWAY 47 | | | | | | |
| at 27th St | - | 1730 | 2135 | 2380 | *650 | 38% |
| at 22nd St | 3590 | 3600 | 3270 | 3535 | -55 | -2% |
| at 20th St | 3970 | 4060 | 3795 | 4045 | 75 | 2% |
| at Avenue C (from I-80) | 5885 | 5590 | 5425 | 5730 | -155 | -3% |
| DOWNTOWN BYPASS | | | | | | |
| at Hwy 30 and Avenue D NE | 1390 | 1575 | 1880 | 1470 | 80 | 6% |
| at 11th St and Avenue D | 1500 | 1195 | 1245 | 1160 | -340 | -23% |
| at 11th St and Lake Ave NE | 4960 | 4835 | 4445 | 4080 | -880 | -18% |
| at 11th St and Lake Ave SE | - | 2630 | 2580 | 2605 | *-25 | -1% |
| at Avenue G and 10th St | 4200 | 4170 | 3865 | 3735 | -465 | -11% |

Source: Nebraska Department of Roads



Table 4.3 illustrates the performance of key segments of Gothenburg’s street network based on the 2006 traffic counts collected by the Nebraska Department of Roads. Presently, drivers in Gothenburg experience LOS “A” conditions on all major street segments. It is unlikely that traffic flow is significantly hampered except during peak times when left turns onto and off of Highway 47.

Street Improvement Program

Map 4.2 identifies the existing construction and condition of streets in Gothenburg in 2006. Within Gothenburg’s corporate limits, the City has 32.7 miles of roads, of which approximately 73.7% is concrete, 19.6% is asphalt, and 6.7% is gravel.

Generally, the physical condition of Gothenburg’s street network is good with some improvements needed. Streets were evaluated by their material and the presence of potholes, rutting and cracking. Streets in the northeast area of the community are experiencing some cracking and will eventually need to be resurfaced or reconstructed. Specifically, streets needing repair include Avenue F, Avenue I, 12th Street, 16th Street and 20th Street. In addition, several intersections east of Lake Avenue need to be repaired. Streets south of the railroad tracks and serving the residential areas consist mostly of unimproved gravel streets. These streets need to be improved and provide the same level of service as other neighborhood streets. Streets in and near downtown should be pristine and exhibit little to no blemishes. These streets are commonly used by residents and visitors and can leave a long-standing impression about community quality.

TABLE 4.3 PERFORMANCE OF KEY STREET SEGMENTS, 2006

| Street | Capacity (VPD) | Actual Volume (2006) | V/C Ratio | Estimated LOS |
|----------------------------|----------------|----------------------|-----------|---------------|
| HIGHWAY 30 | | | | |
| at 2nd Avenue | 14,850 | 1,905 | 0.128 | A |
| at Avenue D NW | 12,650 | 3670 | 0.29 | A |
| at Avenue F | 12,650 | 3625 | 0.286 | A |
| at Cozad Canal | 14,850 | 2860 | 0.192 | A |
| HIGHWAY 47 | | | | |
| at 27th St | 12,300 | 2380 | 0.193 | A |
| at 22nd St | 12,300 | 3535 | 0.287 | A |
| at 20th St | 12,300 | 4045 | 0.329 | A |
| at Avenue C (from I-80) | 11,200 | 5730 | 0.512 | A |
| DOWNTOWN BYPASS | | | | |
| at Hwy 30 and Avenue D NE | 9,400 | 1470 | 0.156 | A |
| at 11th St and Avenue D | 9,400 | 1160 | 0.123 | A |
| at 11th St and Lake Ave NE | 9,400 | 4080 | 0.434 | A |
| at 11th St and Lake Ave SE | 9,400 | 2605 | 0.277 | A |
| at Avenue G and 10th St | 9,400 | 3735 | 0.397 | A |

Source: Nebraska Department of Transportation

Every year the city clearly defines what street projects will need to be completed in the next five to six years. For the 2006 to 2011 period these projects include:

- 27th Street from Lake Avenue to west corporate limits (0.1 mile) – grading only
- 23rd Street from G to H Avenues (0.1 mile) – grading, concrete paving, and utility adjustments
- 22nd Street from G to H Avenues (0.1 mile) – grading, concrete paving, and utility adjustments
- 18th Street from A to B Avenues (0.2 mile) – grading and concrete paving
- 17th Streets from L to M Avenues (0.1 mile) – grading, concrete paving, and storm sewer construction
- J Avenue from 23rd to 27th Streets (0.3 mile) – grading only
- 22nd Street from H to J Avenues (0.2 mile) – grading and concrete paving
- I Avenue from 22nd Street to north (0.1 mile) – grading and concrete paving
- Jefferson from J to L Avenues (0.2 mile) – grading, concrete paving and utility adjustments
- K Avenue from 19th to 20th Streets (0.1 mile) – grading, concrete paving, sidewalks, curbs and gutters.
- 6th Street from Highway 47 to Cottonwood Drive (0.2 mile) – grading, concrete paving, curbs and gutters.
- Road 107/Lakeview Drive across the irrigational canal (0.1 mile) – drainage structures only
- Lake Street improvements (0.2 mile) – milling and asphalt paving.

Sidewalk Improvement Program

In an effort to create a balanced transportation system that meets the needs of both the automobile and the pedestrian, Gothenburg should establish a Sidewalk Improvement Program (SIP). The program should provide safe pedestrian access for all residents and assist the city in meeting requirements of the Americans with Disabilities Act. A Sidewalk Improvement Program (SIP) should provide a closed loop network of sidewalks throughout Gothenburg that can be easily accessed from any residence in the city.

Priorities for the program should include:

- Accessible routes to schools.
- Linkages along arterial streets that provide a safe area for pedestrians.
- Linkages to the city's future trail system. Specific routes have been identified within this plan to link the city's off-road trail system. These links may include widened sidewalks that are improved as a part of the city's Park and Recreation Plan.
- Missing ramps.
- Ramps that have excessive grades. Although ramps have been installed at number of intersections around the city some of these have excessive grades that are difficult for persons in wheelchairs or even some strollers to maneuver.



The development of the Sidewalk Improvement Program began with a review of the city's current sidewalk system in July of 2006. Gothenburg has 109,485 feet of existing sidewalks, or 20.7 miles. Nearly 16.9 miles of the system is in good condition, while 3.8 miles needs improvement. Based on this inventory Map 4.3 was created to identify areas of needed improvement. Missing links are noticeable by their omission, creating a sense of an incomplete network. General assessments from the inventory are as follows:

- Gothenburg has a fairly complete sidewalk system.
- In general the sidewalks are in good condition with few areas experiencing excessive heaving, cracking, or spalling. However, the sporadic presence and omission of sidewalks in highly visible areas creates an overall perception that the sidewalk system needs significant improvement.
- There are a number of intersections with missing ramps or ramps that have excessive grade, making them difficult to maneuver for those in wheelchairs and using strollers.

Project Priorities

Each year the city should commit to improving sidewalks along paths that are damaged or missing. The City should work with property owners to reconstruct or build sidewalks to establish a complete and networked sidewalk system. The City could consider coordinating the sidewalk reconstruction with other reconstruction efforts throughout the vicinity, minimizing the cost to the property owner. A program of creating a quality sidewalk system in Gothenburg should follow a series of phases discussed in the public participation component of this plan.

The program is broken down into phases and within each of the phases yearly projects should be identified based on quarter-mile radii around key destinations in the community. Many of these areas are overlapping and meet the priorities laid out above. Yearly projects may overlap as needs within service radii might not be as great or have been covered in previous years. Project phases and descriptions are as follows.

Phase 1 - Safe Routes to Schools

- A. School Campus – The condition of existing sidewalks within a quarter-mile of the Gothenburg School District needs significant improvement. Missing segments, lack of ramps, poor existing sidewalks create challenges for students and particularly the handicapped. The priority in this area should be installing missing sidewalk segments, connecting the entire system to the surrounding neighborhood, repairing existing sidewalks, installing ramps, and setting the sidewalk back from the curb.

Improvements are important to allow students to pass to and from their home and school. As a priority, the city should consider installing sidewalks along

major routes with accessory routes spanning from them. In other words, the system should appear as a fishbone, where there is a main spine route and then shorter routes leading from the main spine. Sidewalk crossings should be marked along the spine routes (Avenue G and 12th Street).

Phase 2 – Community Destinations

- A. Downtown – Sidewalk improvements in the downtown should focus on the character of the pedestrian zone, which includes the space between the curb and building. Streetscape furniture, streetlighting, signage, graphics, and paving material are all important elements to consider in this zone. This can be done with both visual and texture cues, including colored or stamped concrete.

Phase 3 – Park and Recreation Destinations

Improved access to the city's parks is an important project for all ages. Preferably, all city parks should be served by strong routes and connect to each other. Priority parks include:

- A. Lake Helen and Lafayette Park
- B. Community Pool and Sports Complex
- C. Ehmen Park and the Pony Express Station

Phase 4 – Remaining Developments

- A. South Gothenburg – Residential and commercial development in south Gothenburg will need a completed sidewalk system, connecting it to the northside amenities and to an overall trail network.
- B. Memorial Hospital – Sidewalks surrounding the hospital should allow patients, visitors and residents to exercise and enjoy the outdoors. Sidewalks should be six feet wide to allow wheelchairs to pass each other. Sidewalks should have an additional two feet if they are adjacent to curbs.

Phase 5 – Accessible Ramps

- A. Within previous phases missing ramps or ramps that are in poor condition should be a first priority, and all ramps at an intersection should be uniform. Those intersections that have not previously been addressed because they are currently in good condition should be addressed in this final stage.

The city should re-evaluate the priorities and phases for the Street Improvement Program on an annual basis and re-assess sidewalk conditions every five years. The city should also consider a signage system that directs sidewalk users to key destinations within the city and to the city's proposed trail system.

Implementation

Funding for the Sidewalk Improvement Program can be done through several approaches or a combination of approaches. These include:

- Construction of sidewalks in all new subdivisions on both sides of the street as part of the city's Subdivision regulations. The city may consider requiring them on only one side in projects where at least 50-percent of the units are affordable units or providing city assistance for sidewalks in those projects.
- As major infrastructure projects are completed in city right-of-way or curb-replacement projects are completed intersections should be brought to current ADA standards.
- The City could assess property owners for constructing new sidewalks. At current construction costs, approximately \$20 a linear foot, the owner of a 50 foot wide lot will be assessed \$1000 or \$100 a year.
- The City could fund sidewalk improvements through the general fund and then assessed half of the cost to the landowner. Assessments to the landowner could be over the course of ten years. At current construction costs, approximately \$20 a linear foot, the owner of a 50 foot wide lot will be assessed \$500 or \$50 a year. This has been a successful approach in many communities, including Wayne, Nebraska.
- Outside funding sources including grant funding for designated routes and beautification projects. A good example of these includes any sections that have been identified as part of the trail system. Sidewalks that are wider than four-feet as part of the trail system can receive funding through a number of sources including the Department of Roads and the Game and Parks Commission. The city should seek out these sources and avoid assessing the additional cost for these links to the landowners.



TRANSPORTATION POLICIES AND ACTIONS

The transportation program for Gothenburg should meet current and future mobility needs while enhancing the character of the city's small-town environment. Gothenburg's existing street system functions very well but increased demand associated with growth will require further transportation improvements. Map 4.4 illustrates various transportation improvements needed in Gothenburg through the 20-year planning period. The following actions are part of this transportation improvement plan:

- **HIGHWAY 30 AND ENVIRONMENTAL ENHANCEMENTS**
- **LINK TO INTERSTATE 80**
- **A WEB OF COLLECTOR STREETS**
- **LOCAL STREETS**
- **TRUCK ROUTE**
- **PEDESTRIAN AND BICYCLE FACILITIES**
- **COMMUNITY GATEWAYS AND CORRIDORS**
- **DIRECTIONAL GRAPHICS**
- **GREEN STREETS FOR GOTHENBURG**

HIGHWAY 30 ENVIRONMENTAL ENHANCEMENTS

Highway 30 should be linked closely to the community, supporting the downtown while creating more economic development opportunities for the community.

Enhancing Highway 30 could create an important economic development tool for the community. However, for this to occur, it will be essential for the highway to be an enhancement to the community. To do this the corridor should:

- Create a positive impression on everyone. The function of Highway 30 goes beyond being a conduit for traffic to flow; it makes a statement about what the community values held in the community. A corridor that has a personality and that compliments the values of the city creates an impression on passersby. The corridor needs to create a positive and memorable experience for everyone to attract visitors to the downtown and other areas of the community. Clean streets, trees, ornamental lighting, appealing business fronts, landscaping, community graphics, and a strong pedestrian environment help influence the perception of the corridor, and thus the overall perception of the community.
- Direct travelers to the community, advertising both the downtown and cultural destinations. Directional graphics and entrance features at both east and west ends of the city along Highway 30 should welcome travelers to the community and direct them to key community destinations, including shopping, schools and entertainment.



- Provide access to new development areas with as many connections back into the community. A major interchange should be constructed at Lake Avenue and Highway 30. Projects within this area should offer a positive image of community, including higher quality landscaping and building standards. The 800 Block between Lake Avenue and Avenue F could be redeveloped with new commercial buildings, enhancing the intersection and gateway into downtown.
- Enhancements to Highway 30 should be done to improve the travelers experience entering the community and to link new development at the highway with the city.

LINK TO INTERSTATE 80

Gothenburg's presence along Interstate 80 should attract visitors to the community and lead them to downtown and other cultural destinations.

Motorists along Interstate 80 frequently stop to refuel, break from driving and visit cultural destinations. Gothenburg should capitalize on this market and create a strong economic and aesthetic link. Possible strategies include:

- Establish an attractive gateway into Gothenburg. An attractive entrance feature using quality materials and signage will welcome visitors and residents to the community and improve the presence and impression of Gothenburg. Landscape design at the interchange will improve the presence and impression of Gothenburg, as well as improve the appearance of the State of Nebraska. Native grasses, trees, open spaces and low-lying plants could be positioned near ramps to create a passive and attractive space full of life.
- Enhance the streetscape along Highway 47 to the viaduct. Currently, motorists entering Gothenburg from Interstate 80 travel along Highway 47 looking at the elevators and the lighted arches of McDonald's. The street could be enhanced with ornamental lighting spaced evenly along the corridor. Trees could also be planted along the street, creating a parade of life to and through the city. The extension of 1st Street to the proposed ethanol plant could demand a signalized intersection. The design of this intersection will be critical to establishing a strong identity for the community.
- Create a signalized intersection at 1st Street and Highway 47. As 1st Street extends east and west to connect to developing viaducts, 1st Street should become a major connector street for industrial traffic. Signalizing the intersection should be actuated by traffic loads, responding to the stacking of vehicles rather than a timed circulation.
- Extend access roads parallel to the Interstate. Much like Ogallala, businesses could develop along a parallel route to Interstate 80. Gas stations, restaurants, lodging and museums are typical services with exposure along the Interstate. A detailed

development plan should be prepared that identifies vehicle routes and pads for future services.

- Create a trailhead at the Sod Museum. Visitors to Gothenburg, particularly those staying in a hotel, could use the trail while visiting Gothenburg. The trail could direct users to downtown and other community destinations. Attractive signage should direct travelers to the trailheads.
- Install directional information near the Interstate. Direct travelers to the community, advertising both the downtown and cultural destinations. Directional graphics and entrance features along Highway 47 should welcome travelers to the community and direct them to key community destinations, including shopping, schools, entertainment, and Highway 30.

A WEB OF COLLECTOR STREETS

A collector street and parkway system in developing areas should be designated ahead of development and dedicated as growth takes place.

In a town like Gothenburg, residential and commercial development tends to occur on an incremental, project-by-project basis. As a result, developments can provide for their own internal circulation needs, and ignore cross connections and linkages necessary to create an integrated transportation network. This creates a “pod” type of development pattern, by which most traffic exits a development onto key streets, where it comes into conflict with through and regional traffic. Gothenburg has successfully avoided this pattern in its newer developments.

Continuing this pattern of development will be especially important as development opens new areas such as the northeast and west growth areas. The circulation network that connects different neighborhoods together will not develop by chance. Instead, these important links should be pre-designated through this comprehensive plan. As projects develop, their design should incorporate a framework of connecting streets, reserving the required collector routes and dedicating their rights-of-way. The actual alignments of the collector network may differ somewhat from those proposed in the plan. However, the general web of collector streets should be maintained. In some cases, the city may pre-develop a street segment to create necessary linkages. Planned links in the collector system could include:

- A new collector route west of the city providing truck access to Highway 30 and Highway 47 without passing through Gothenburg’s neighborhoods and downtown.
- Extension of 20th Street west to the proposed truck route.
- Extension of 16th Street west to the proposed truck route.
- Possible extension of 1st Street east to service future industrial development.

LOCAL STREETS

The local street network in developing areas should be designed with multiple connections and relatively direct routes.

Local street systems will develop to serve individual developments and neighborhoods. These systems should be designed with clear circulation patterns that preserve quiet qualities of local streets while providing residents, visitors, and public safety and service vehicles access which is comprehensible and direct. This can be done by incorporating the following standards into local street design:

- **Hierarchy and Order.** Local street networks should have a natural order to them and provide cues, leading residents and visitors naturally to their destinations in a manner that is not confusing. Hybrid street networks combine the ease of use of a grid with privacy in residential areas.
- **Connectivity.** The street network should have segments which connect to one another internally and to collector streets. Map 4.4, Transportation Plan, presents possible local street connections in each of the city's growth areas. 16th Street through 22nd Street could continue east of Avenue M, providing access to new residential areas.
- **Alternatives to cul-de-sacs and dead-ends.** Cul-de-sacs are often valued by developers and homebuyers for their privacy, but are difficult and expensive to serve with public safety and maintenance. Alternatives are available which maintain the positive characteristics of cul-de-sacs while limiting some of the liabilities. These include:
 - Access loops, which provide two points of access
 - Circles or bulbs at the corners of streets or access loops. These provide many of the features of cul-de-sacs, including safe environments observed by the cluster of houses.
 - T-intersections, which reduce the number of traffic/pedestrian conflicts.
 - Short cul-de-sacs, shorter than 300 feet in length.

TRUCK ROUTE

A new Truck Route should be linked closely to the community, supporting both the downtown and neighborhoods while creating new economic development opportunities for the community.

The construction of the viaduct at G Street directs traffic around the downtown and through residential areas in order to access Highway 30 and 47. This path is confusing for motorists to navigate, and creates a conflicts between residential uses and commercial and agriculture traffic. A new truck route could alleviate traffic circulation issues while creating an important economic development tool for the community. However, for this

to occur, it will be essential that the truck route is an enhancement to the community. The route should:

- Be placed within close proximity to the community. Map 4.4 illustrates a possible course for the truck route that extends 1st Street west past the city limits and curving north over the railroad tracks and Highway 30 and continuing north to intersect Lake Avenue north of 27th Street. This alignment would move truck traffic more efficiently and safely to Highway 30 and 47. Alignments that move the highway any further way from the community would figuratively “bypass” Gothenburg offering few if any economic benefits to the community.
- Provide an alternative route when traffic is being redirected from the Interstate 80 to Highway 30. The new route will minimize the amount of traffic circulating around the core of downtown and residential neighborhoods.
- Provide access to new development areas with as many connections back into the community. A major interchange should be constructed at Highway 30 and smaller ones north and south of Highway 30 to access existing and proposed development. The area outside the floodplain and south of the railroad tracks could then develop as a high quality business park with easy access to Interstate 80 and Highway 30. Projects within this area should offer a positive image of community, including higher quality landscaping and building standards.
- Direct travelers to the community, advertising both the downtown and the Lake Avenue corridor. Directional graphics and entrance features at the Highway 47 and Highway 30 interchange should welcome travelers to the community and direct them to key community destinations, including shopping, schools and entertainment. Enhancements to south Lake Avenue should be done to improve the travelers experience entering the community and to link new development at the truck route with the city.

An expressway project could be seen as a detriment to the 7th Street corridor. Therefore, when the truck route is built it is essential that compensating improvement to the 7th Street corridor upgrade the physical and business environment of the corridor. These could include modifications to 7th Street as a mixed use boulevard, with design features that improve environmental quality and help treat the street as a unifying rather than dividing element.

PEDESTRIAN AND BICYCLE FACILITIES

Gothenburg should maintain a continuous network of sidewalks and trails to complement the street system.

Providing a good environment for non-motorized transportation can complement automobile trips. The incorporation of sidewalks into new development and the



provision of sidewalks in areas of existing development are essential to maintaining a safe, convenient pedestrian environment. At present, Gothenburg maintains a relatively complete sidewalk network within its traditional grid. Ensuring that new development continues to provide these links and gradual adaptation of major pedestrian facilities to full accessibility will be an important priority for Gothenburg's pedestrian system. In addition, the city's multi-use trail network should be linked to activity centers, enhancing the city's walkability and allowing residents to safely walk to work and school, as well as for recreation.

Specific recommendations include:

- As described earlier in this chapter, the Sidewalk Improvement Program should be implemented, in a phased process providing safe routes to school and linkages to key community destinations.
- Complete the city wide trail system and implement the interconnected network discussed in Chapter 5 of the plan. Map 5.2 illustrates a system of on- and off-street trails that link the city's looped system to community destinations and the region.
- Ensure that new development areas include sidewalks on both sides of all streets connecting to the remainder of the city's sidewalk network and on-street parking to slow traffic in residential areas.

COMMUNITY GATEWAYS AND CORRIDORS

Gothenburg should maintain the design quality of its major community corridors, allowing them to serve as attractive gateways into the town and positive business and community environments.

Principal corridors that link the center of Gothenburg to the larger region provide major gateways into the community, as well as providing critical functional links in the city's transportation system. These key auto-oriented corridors include Highways 30 and 47. A program to maintain the attractive character and good functioning of these key corridors should include:

- Enhancing the intersection of Avenue G and 10th Street should be designed to welcome motorists to turn west to enter downtown.
- Enhancing the intersection of Highway 30 and Lake Avenue should be designed to welcome motorists to the business center of Gothenburg and provide a positive impression to visitors. These improvements should calm traffic, making the corridor less of a dividing line within the community.
- Streetscaping both Highway 30 and 47 with trees, quality sidewalks, glare-free

street lighting, greenspace and public art.

- Improving the appearance of development adjacent to Highway 30 and 47, communicating the values and quality of the community to passersby.

DIRECTIONAL GRAPHICS

Gothenburg should implement a comprehensive community-wide directional graphics system.

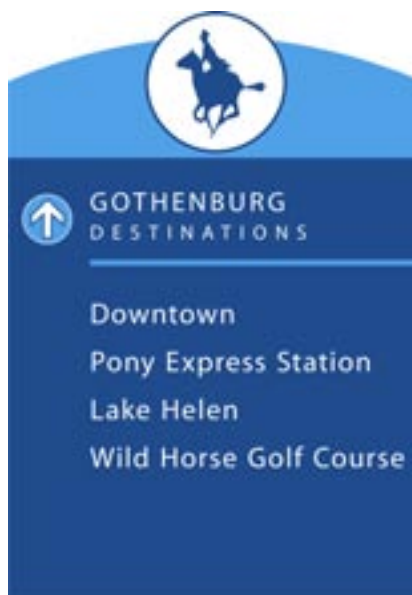
Many communities are adopting directional graphic systems that guide residents and visitors around the community. During the public input process of this plan, residents thought that visitors need to be directed to cultural destinations from Highway 30 and 47.

While local residents know their way around Gothenburg, providing directional assistance to visitors is important. Wayfinding systems make urban districts friendlier to users and market community features. This is important because the main gateways into Gothenburg deposit visitors in areas that require further explanation and directional information.

The city should design and install a wayfinding graphics system to address the city's needs. Signs should be designed around a consistent and attractive graphic theme, and should replace a number of smaller, less coordinated signs.

Directional graphics should be installed at points of arrival into the city. The graphics should direct visitors to three or four major destinations that represent points of orientation. These key destinations may be represented by both graphic icons and text. This system may also incorporate directions to secondary, more detailed destinations. For example, a community-wide wayfinding system could identify Downtown as a key district with secondary points of interest being City Hall and Post Office.. The system should operate on several levels, including:

- *Motorist information.* A system along the major gateway routes. The system should orient travelers to a limited number of important destinations in Gothenburg including:
 - Downtown
 - Lake Helen
 - School Campus
 - Sports Complex
 - The Hospital
 - Pony Express Station



The system may also direct travelers to important secondary destinations.

- *Trail information.* A trail directional graphic system should reinforce links from the trails to other important community features.
- *Bike route information.* The system of on-street bicycle routes should include directional information to reinforce links between the trail network and major community features.

GREEN STREETS FOR GOTHENBURG

The city should require street trees in residential areas for calming traffic and aesthetic purposes.

Tree planting transforms a street's appearance and offers great benefits with limited funds. Street trees visually separate vehicles and pedestrian pathways, provide shade for pedestrians, slow traffic, add color, and help the city breathe, while improving the appearance of the neighborhood.

Lake Avenue is a great example of a street with a consistent canopy of trees along it. Trees should be planted along other major corridors, using Lake Avenue as a model. The city could require streets trees, at the rate of one per residential lot between the sidewalk and the curb, in addition to requiring sidewalks on both sides of all streets in new developments.

Highway 30 and 47 should be designated as a first priority for establishing green streets. Followed by Avenue G and 16th and 20th Streets. Trees along 16th Street would reinforce the appearance leading to the school campus. A pleasant environment for the school can improve the area's attractiveness to young families. Trees along 20th Street and Avenue G will support the appearance of the neighborhood and create a stronger relationship between the viaduct and hospital.

Since Highway 30 and 47 are state highways, tree planting in the right-of-way must meet Lateral Obstacle Clear Zone (LOC) standards set by the Nebraska Department of Roads. LOC standards vary depending on roadway design. For example, trees planted along a curbed street with a 35 mph speed limit must be no less than six feet from the curb. However, planting trees outside of the public right-of-way, effectively in private property, is permitted without NDOR approval.

Tree selection is also important. Trees along major roads should resist disease and be tolerant of rather harsh conditions. Street trees should also be resilient and appropriate to their surrounding land use contexts.