

Connectivity and Mobility

Summary of Key Findings

Connectivity relates to the number of direct routes between places. Mobility is the ability to move around easily and safely, whether by car, transit, bike or on foot. Connectivity is critical to ensure mobility for all community members. Key findings include:

- Limited connectivity due to multiple railroad tracks, disconnected roads and other physical barriers isolates Globeville and Elyria Swansea residents within their neighborhoods, and from other places. It also limits access to physical activity and recreation opportunities.
- Over half of the public streets in Globeville and Elyria Swansea do not have sidewalks. Those that exist are often broken. There is one separated bike lane in the neighborhoods. Residents also indicate issues with bus schedules and amenities such as benches at bus stops.
- Broken or missing sidewalks, lack of bike lanes, lack of bus amenities, and unsafe intersection crossings all can impact residents' mobility, and will be important to increase access to the transit rail stations currently under construction.
- The opportunity to walk within one's immediate community is a key factor in reducing cardiovascular disease, obesity, and diabetes, which residents in these neighborhoods suffer from at a higher rate than Denver overall.

How the Neighborhood Plans Can Improve Connectivity and Mobility

Better overall connectivity and mobility through improved bicycle, pedestrian, and transit infrastructure could positively impact health in Globeville and Elyria Swansea by increasing physical activity, reducing chronic disease rates and obesity, and increasing the likelihood that residents can access neighborhood destinations safely.



Connectivity and Mobility in Globeville and Elyria Swansea Today

Connectivity relates to the number of direct routes between places. Good connectivity reduces the amount of travel required and often encourages shorter vehicle trips and the use of alternative modes such as biking and walking.¹ **Mobility** is the ability to move around easily and safely, whether by car, transit, bike or on foot. Connectivity is critical to ensure mobility for all community members, regardless of age or physical ability level. This is known as “universal access.”

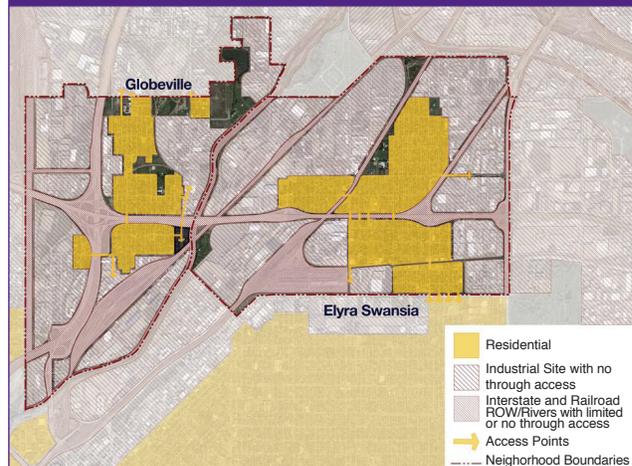
Globeville and Elyria Swansea have been poorly connected to the rest of Denver over the years because of railroad tracks, large industrial sites lacking through streets, dead ends, and the South Platte River. Construction of I-70 and I-25 in the 1950s and 1960s further fragmented these neighborhoods into a series of residential islands.

Connectivity between the neighborhoods is significantly restricted (*Figure 19*). Only two streets provide east-west access between the neighborhoods: 46th Avenue (turns into 47th) and Washington St. (turns into 38th St.). In Globeville, only Lincoln and Washington Streets connect the northern and southern parts of the neighborhood. This impacts daily activities such as children travelling safely to school. Globeville’s neighborhood elementary school, Garden Place Academy, is located south of I-70, while the majority of homes in Globeville are north of I-70. While Globeville and Elyria Swansea are very close to the central business district ((just 20 blocks north of downtown), getting into and out of these neighborhoods on local streets requires circuitous travel routes that add time and distance to trips to work, shopping, schools, and other destinations.

What is universal access?

Universal access is the goal of enabling all citizens to reach every destination served by their public street and pathway system. Universal access is not limited to access by persons using automobiles. Travel by bicycle, walking, or wheelchair to every destination is accommodated in order to achieve transportation equity, maximize independence, and improve community livability. At various stages of life and fortune almost half of the U.S. population does not or cannot own or operate automobiles, or may need wheelchairs to travel as pedestrians. Access to employment, goods and services is essential and must be protected for all persons using public ways.²

FIGURE 19:
Barriers to Connectivity within Globeville and Elyria Swansea



SOURCE: Denver Community Planning and Development 2014



Residents of both Globeville and Elyria Swansea identify a street network characterized by insufficient connectivity as problematic. They express concerns regarding the lack of connections between their neighborhoods and the rest of Denver, and the quality of the transportation environment:⁴ In neighborhood planning meetings, residents have noted:

- The east-west connectivity is poor
- Routes within neighborhoods can be confusing
- 47th St and York Ave is especially unsafe for kids due to RR crossing

- The 45th St. pedestrian bridge is problematic
- Poor connectivity to river
- Need more bike lanes
- Need better access to businesses and schools
- Need safer connections and more sidewalks
- Need infrastructure improvements for all travel modes under the tunnels from Washington St. to 38th and Blake
- Need better bus stop facilities, more stops closer to employers, and good access to new transit rail stations.

Pedestrian and Bicycle Mobility

Sidewalks

Over half of the public streets in Globeville and Elyria Swansea do not have sidewalks, as Figure 20 shows.

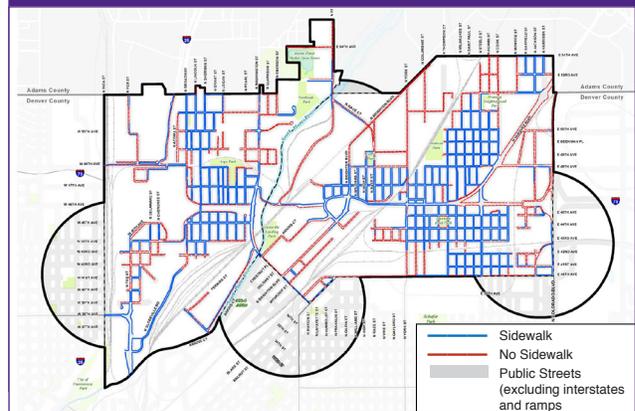
Another way of measuring the pedestrian experience is “walkability,” or the ease and pleasant experience of walking. Walkability depends on several factors including adequate sidewalks, safety (distance from traffic and lighting), living near retail destinations, ambiance and cleanliness, and block length (the distance between intersections). As indicated in Figure 21, Globeville and Elyria Swansea are rated lower for walkability (based on block size) than some other nearby Denver neighborhoods, such as Five Points, Cole and Clayton.

The areas in Globeville and Elyria Swansea that have relatively good walking environments tend to be located in the center of their respective neighborhoods. Areas with poor walkability are located at the edges and boundaries of Globeville and Elyria Swansea, and are not connected to other Denver neighborhoods. Residents have expressed concerns about poor walkability in some areas due to lack of maintenance and unclean conditions, for example in underpasses.

Bicycles

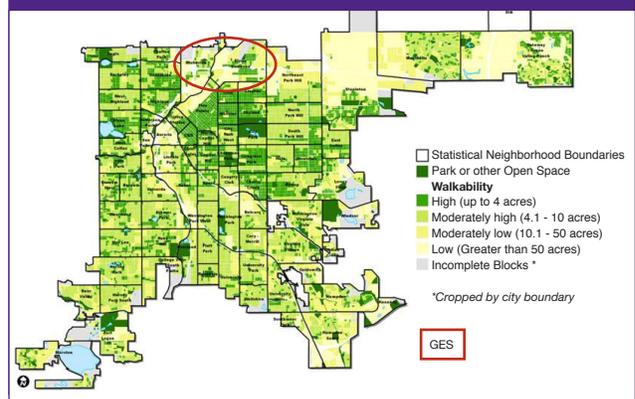
There are four designated bicycle routes through Globeville and Elyria Swansea; however, they all share the travel lane with cars. There is only one separated bike lane, along 45th Avenue in Globeville, connecting to the South Platte River trail. Some residents believe that these bike routes might be insufficient for current

FIGURE 20:
Inventory of Sidewalks in Globeville and Elyria Swansea



SOURCE: Denver Community Planning and Development 2014

FIGURE 21:
Walkability Measure using City Block Size, Denver, 2009



SOURCE: Denver Community Planning and Development 2014

or future needs of the neighborhoods, stating that “the roads are not friendly for cycling and more bike lanes are desired” and the lack of bike lanes “impedes travel within the neighborhoods.”⁴

Pedestrian and Bicycle Mobility continued

Injuries to Bicyclists and Pedestrians

In each neighborhood, there are locations where traffic collisions have resulted in injuries to bicyclists or pedestrians. In particular, 47th St. and Washington in Globeville and 46th St. and Josephine in Elyria Swansea have experienced multiple traffic collisions resulting in injuries and/or death to bicyclists or pedestrians. These incidents discourage people from travelling on bikes or on foot, and necessitate further investigation and solutions that may include additional enforcement, education, or engineering. *(See Community Safety section for more detailed discussion).*

School Zones

There are designated “school zones” around Swansea and Garden Place Elementary schools, but concerns have been raised by residents that the boundaries of the school zones may need adjustment in order to slow vehicle speeds and improve safety for students walking to school.

Trucks

Due to the large number of industrial and commercial businesses in Globeville and Elyria Swansea, freight trucks regularly traverse the neighborhood streets, including the residential areas. Residents have long raised concerns about the dangers posed to pedestrians by the close proximity of trucks. Some businesses have voluntarily re-routed their trucks to nonresidential streets, but there are not specifically designated truck routes due to the numerous industrial businesses located throughout the neighborhood that depend on trucks for deliveries.

Public Transit

Bus Routes and Infrastructure

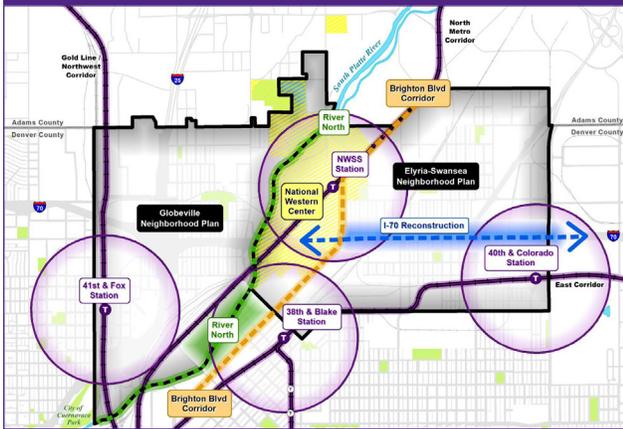
The Regional Transportation District (RTD) operates bus routes along major north/south streets including Lincoln, Washington, York/Josephine, Steele Streets and Colorado Boulevard and east/west along 40th, 47th, 48th, and 52nd Streets. Residents have indicated that these routes may not be serving riders with the most convenient schedules and routes.⁵ Given that residents rely on public transit more frequently than in other Denver neighborhoods, due to lower vehicle ownership, the Neighborhood Plans should recommend that current and future bus routes align with current and future destinations including job centers, schools, and businesses.

Many bus stops in the neighborhoods lack benches. This makes it difficult for riders to use the bus system who need to sit while waiting for a bus. The addition of benches or other amenities such as shelters could enhance the existing bus stop environment and spur additional ridership especially for vulnerable populations. Research shows that providing amenities for barrier-free design encourages bus ridership especially for the disabled, young and elderly.

Rail

Several commuter rail lines are already under construction within and adjacent to Globeville and Elyria Swansea. The community will gain four new transit stations in the next four years as part of the multimillion-dollar infrastructure and redevelopment initiative known as the “North Denver Cornerstone Collaborative.” Globeville will be served by the 41st Avenue and Fox Street station on the Gold Line. The East Rail Line will serve Elyria Swansea with stations at 38th and Blake (on the southern boundary of the neighborhood) and 40th and Colorado, with service east to Denver International Airport. Finally, the North Metro Rail Line will have a station at the National Western Stock Show, a 100-acre complex that is currently undergoing master planning for redevelopment into a year round destination for conventions and tourism, including science, history and agricultural attractions. Additional rail capacity could serve the interior of the neighborhood if the Central Rail Line is linked with the East Rail Line, providing a direct connection between the 38th and Blake station and downtown Denver with no transfers *(Figure 22).*

FIGURE 22:
Planned RTD Rail Lines and Stations within
Globeville and Elyria Swansea



SOURCE: North Denver Cornerstone Collaborative 2014

These new rail lines and stations will provide valuable access to and from downtown Denver, and points north, south, east and west. Station area plans have already been developed for 38th and Blake and 41st and Fox, with transit-oriented development envisioned around the stations.⁶ However, access to the stations from within the neighborhoods will be critical. Perhaps the greatest challenge to pedestrian access is the lack of sidewalks. For example, around the future 38th and Blake station, the majority of streets within a half-mile of the station do not have sidewalks, and a significant portion of those that do have sidewalks that are in poor condition. There are virtually no sidewalks in the River North area within a half-mile of the station.⁷ And the 40th and Colorado station is adjacent to the Market Lead Ditch, an unused below-grade railroad spur between the Elyria Swansea neighborhood and the new station location. These physical barriers will need to be addressed to provide safe, efficient access to the new rail stations.

How Connectivity and Mobility Affect Health

Researchers have identified strong relationships between the way we design and build our communities and our rates of physical activity. Street-scale urban design that supports walking has been found to be effective in increasing levels of physical activity, according to a number of peer-reviewed research studies.⁸ Neighborhoods that contain obstacles such as high traffic volumes and speeds, narrow or missing sidewalks, poor lighting, dangerous intersections, and poor roadway connectivity are likely to discourage walking and bicycling on residential streets.⁹ Conversely, built environments that increase opportunities for active transportation (walking, biking, and use of transit) may decrease the risk of obesity, cardiovascular, and other chronic diseases impacted by physical activity.

Neighborhood elements that are associated with higher rates of physical activity include those sometimes referred to as the “5 Ds”: relatively high residential *density*; *diversity* of land uses (mixed-use development) promoting live-work neighborhoods and neighborhood *destinations* (attractive places to walk or bike to); walkable *distance* to transit; and walkable *design*, which includes well-connected streets, small block sizes, and a high density of intersections.¹¹

The Centers for Disease Control and Prevention asserts that “...integrating health-enhancing choices into transportation policy has the potential to save lives by preventing chronic diseases, reducing and preventing motor-vehicle-related injury and deaths, improving environmental health, while stimulating economic development, and ensuring access for all people.”¹⁰

Prediction: How the Neighborhood Plans Can Affect Connectivity and Mobility

The current conditions in Globeville and Elyria Swansea limit the ability of residents to travel safely and efficiently through their neighborhoods. If disconnected streets and the lack of sidewalks are not remedied, negative health impacts such as pedestrian and bicyclist injuries and low physical activity levels contributing to chronic diseases would be expected to continue. Children and youth in particular suffer the negative health effects of a broken pedestrian system if they cannot safely walk or bike to schools and parks.

Recommendations to Improve Connectivity and Mobility

Health Recommendations that Can Be Addressed by the Globeville and Elyria Swansea Neighborhood Plans

1. Prioritize street infrastructure improvements, including sidewalks, bike lanes, bus stop furnishings, intersection crossings, and connections to transit, to achieve the goals of the 2014 City Council Priorities, *Denver Moves* (2011) and the *Strategic Transportation Plan* (2008). (See Section 8, Recommendation 2.A)
2. Connect streets as prioritized in the Globeville and Elyria Swansea Neighborhood Plans' "Street Grid Connectivity Map." (See Section 8, Recommendation 3.A)
3. Improve connectivity to parks, trails and recreation, especially to the South Platte River parks and trails. (See Section 8, Recommendation 9.A)
4. Improve connectivity and safety in School Zones. Improvements could include analyzing current School Zones and making modifications as necessary. (See Section 8, Recommendation 14.A)
5. Review truck routes in the neighborhoods to improve environmental quality, safety and connectivity. (See Section 8, Recommendation 11.A)
6. Improve access and connectivity to and through residential neighborhoods and the redeveloped National Western Center. (See Section 8, Recommendation 12.A)

References & Endnotes

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- ³ Notes from Globeville Neighborhood Plan Steering Committee meeting, August 23, 2012, and Elyria Swansea Neighborhood Plan public meeting, Feb 13, 2013
- ⁴ Ibid.
- ⁵ Tenney, M (2014). Stress and the Built Environment: Key Informant Interviews in Globeville and Elyria Swansea. Submitted to Denver Environmental Health February 2014.
- ⁶ Transit-oriented development is attractive, walkable, and sustainable development that allows Denver residents to have fair housing, ample transportation choices and the ability to live convenient, affordable, enjoyable lives. City and County of Denver (2014). "Transit Oriented Development." Accessed at: <http://www.denvergov.org/Default.aspx?alias=www.denvergov.org/tod>.
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