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introduction

The primary study area is Fox Station East, the area of Globeville bounded by I-70 and I-25 to the north, east, and south, and the rail tracks to the west. Fox Station East lies at the western edge of the Globeville neighborhood, bordering the Sunnyside neighborhood to the west. Refer to Figure 1 for location and context map.

Figure 1. Location and Context Map

Fox Station East has limited access to neighboring communities through the historic development of the railroads, highways, and industrial development patterns. While enabling regional growth, these facilities have also impeded local connectivity, fractured the existing Globeville neighborhood, and created artificial drainage patterns and flood risks in ancillary areas.

In 2009 the City and County of Denver adopted the 41st and Fox Station Area Plan. This plan was adopted soon after the funding agreement was finalized for RTD’s Eagle P3 project to expand commuter rail, including the G and B Lines. The 41st and Fox Station Area Plan established an ambitious vision for transforming the 41st and Fox Station area into a high density, mixed-use, walkable neighborhood served by transit and developed using best practices of Transit Oriented Development (TOD). In recent years, market conditions cooled dramatically, and the 41st and Fox Station area has...
remained stagnant since the adoption of the plan. However, this trajectory may change as a result of the recent opening of the 41st and Fox Station, which is served by RTD’s G and B Lines.

Today, Denver is growing at historic rates and is projected to absorb 200,000 additional residents over the next 20 years. Some of this energy is beginning to surface in the study area through development activity, including rezoning and development applications for parcels adjacent to the station.

The intent of the 41st and Fox Next Steps Study is to evaluate the feasibility, cost, and potential design of four distinct transportation investigations. Three investigation areas include specific infrastructure evaluation and analysis; the fourth investigation offers policy recommendations designed to drastically shift travel habits of residents, employees, and visitors towards biking, walking, and transit options.

1. I-25 Interchange / 39th Avenue / 38th Avenue / Fox Street intersection, including 38th Avenue underpass
2. Northern crossing options near former Denver Post printing site
3. 44th Avenue overpass at I-25
4. Area-wide Travel Demand Management (TDM) strategies

**key findings and opportunities**

*Fox Station East* presents a unique set of opportunities and challenges. The clashing blend of residential and industrial historical development patterns in Globeville has built a neighborhood where interests and priorities often conflict. As Denver’s population growth surges on, these conflicts are producing new opportunities to reshape the character and future of *Fox Station East*. Anchored by the 41st and Fox Commuter Rail Station, *Fox Station East* is exceptionally positioned to transform into an area where multimodal options are convenient, accessible, and abundant.

Through a review of recent planning efforts, a current analysis of infrastructure conditions, and collaboration with community stakeholders, several key issues and opportunities can be summarized and are detailed below:

1. **Major Public Investment in Mass Transit**

   The opening of the RTD G Line in April 2019 provides a direct rail connection from this area to Denver Union Station and surrounding areas such as Arvada and Wheat Ridge. The 41st and Fox station also serves the B Line, which currently connects to Westminster and will ultimately provide service to Broomfield, Boulder, and Longmont. The massive investment in public infrastructure should be leveraged by creating more opportunities and incentives for residents, workers, and visitors to access the rail system consistently and intuitively.

2. **Location, Location, Location**

   *Fox Station East* is just 2.5 miles from the heart of downtown Denver, within shouting distance of Denver’s billion-dollar reinvestment of National Western Center, next door to the lively Sunnyside and Highland neighborhoods, and directly along both regional bike trails and key automobile corridors. This location is an attractive area for many redevelopment opportunities, including residential, office, and commercial land uses. Buoyed by a bold, transit-oriented development plan adopted in 2009, this area could be
rapidly reshaped by new development. However, connectivity constraints currently limit access in and out of the area and may hinder potential development opportunities.

3. **An Area Defined by Edges**

The same infrastructure that helped grow Denver – highways and rails – also serves as a challenge for development in this area. Despite the attractive location for redevelopment, infrastructure challenges such as I-70 to the north and I-25 to the west and south separate this area from the rest of the Globeville neighborhood. While the interstates provide access to regional transportation network and regional amenities, these highways severely limit local connectivity for walkers and bikers within the neighborhood. Rail yards to the east and south are particularly challenging physical barriers to overcome.

4. **Substandard Pedestrian and Bike Network**

As a historically industrial area, much of *Fox Station East* lacks basic pedestrian infrastructure. Large lots have developed to accommodate the parking, access, and movement needs of larger vehicles. While some recent redevelopment has created new sidewalks, many areas remain devoid of curb, gutter, and sidewalks. The pedestrian network is most complete near the residential areas and becomes more piecemeal throughout the industrial areas. Additionally, bike infrastructure within the area is incomplete. With significant bike facilities nearby, this area represents a missing link for users to access the local and regional bike network.

5. **Stormwater Infrastructure**

While most of the study area is free from major flooding concerns, the 38th Avenue underpass, at the western edge of the study area, is prone to flooding during major storm events. Flooding at this underpass presents a significant safety concern, preventing western travel from the site during extreme, rare conditions.

**existing plans and guiding documents**

Since the adoption of the 41st and Fox Station Area Plan in 2009, this area has been examined through various planning, engineering, mobility, and land use studies. In addition to the 41st and Fox Station Area Plan, the following documents mention or include specific analyses or recommendations of the Fox Station East area:

- Northwest Drainage Subarea and Transportation Study (2012)
- Globeville Elyria Swansea Health Impact Assessment (2014)
- Globeville Neighborhood Plan (2014)
- NDCC Master Mobility Plan (2017)
- Fox North Infrastructure Master Plan (2018)
- Fox Station East Rules & Regulations (2018)
Summaries of each existing planning efforts, as related to 41st and Fox Next Steps Study, are detailed below.

**northwest drainage subarea and transportation study (2012)**

The primary purpose of Northwest Denver Sub-area Drainage and Transportation Study (NDSDT) is to ensure that drainage and transportation improvements are compatible and complementary. This study area includes parts of the Sunnyside, Globeville, and Highland neighborhoods.

The plan contains four specific recommendations related to the 41st and Fox Next Steps Study. One project is the reconstruction of the 38th Avenue underpass, which recommends extending the north retaining wall and replacing or enhancing curbs, gutters, pedestrian lighting, and utilities. The study recommends safety improvements for the intersection of 38th Avenue and Fox Street to increase visibility and decrease unexpected crash rates. The study identifies 44th, 46th, and 47th Avenue as potential locations for a railroad overpass connecting the 41st and Fox study area to the surrounding community, drawing specific attention to the possibilities of the 47th Avenue alternative. Finally, the study identifies three options to implement Denver Moves and expand the bicycle network within the 41st and Fox Next Steps Study area.

Completed in 2012, most planning analysis and recommendations from this study are still relevant to today’s conditions. Several minor improvements have been constructed since the publication of this document, such as sidewalk completion and asphalt re-paving in key areas. These improvements have been aligned with the 41st and Fox Station construction to improve connectivity to the new station.

**globeville elyria swansea health impact assessment (2014)**

Key findings and recommendations from the GES HIA that help inform the 41st and Fox Next Steps Study include:

- 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 (p. 39)
- 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 (p. 39)
- Improve connectivity and safety in School Zones, including Garden Place Elementary. Improvements could include analyzing current School Zones and making modifications as necessary. (Recommendation 14.A, p. 65).

**globeville neighborhood plan (2014)**

 Adopted in 2014, this plan sets a neighborhood vision for the entirety of Globeville, including a specific subsection on the 41st and Fox Station Area. The Globeville Neighborhood Plan does not update the recommendations of the 41st and Fox Station Area Plan. Rather, the plan focuses on ensuring robust connections to the station area. The plan recognizes that a successful station area results from improving connectivity from the Globeville Residential Neighborhood core to the Fox Station East area.
Key recommendations from the neighborhood plan that help inform the 41st and Fox Next Steps Study include:

- Enhancing multimodal corridors to better connect with the South Platte River Trail and National Western Center (Plan Recommendations B10, C5, C6, C10, C11, and C12)
- Improve 44th Avenue bridge into Fox Station Area (Plan Recommendations E10, and E11)
- Complete missing multimodal links, including sidewalk construction and new routing (Plan Recommendations C8, C9, C10, C12, and C13)
- Address traffic operations and circulation improvements (Plan Recommendations c18, c19, and C20)

**north denver cornerstone collaborative master mobility plan (2017)**

The North Denver Cornerstone Collaborative (NDCC) Mobility Master Plan summarizes and prioritizes transportation improvements that have been identified through various planning projects. The NDCC area consists of all or a portion of Globeville, Elyria, and Swansea neighborhoods and RiNo area – including the 41st and Fox Station.

Projects were scored and prioritized using four criteria – mobility and access; safety; economic development; and, sustainability and livability. Projects were categorized into three tiers based on feasibility and project complexity. Several priority projects were identified that are within the 41st and Fox Study Area or immediately adjacent.

- Project 78, Tier 2: Improve bicycle and pedestrian amenities on 44th Avenue bridge over I-25
- Project 97, Tier 2: Fox Street bicycle, pedestrian, and streetscape improvements (SAP)
- Project 118, Tier 1: Install ramp and/or stairs connecting 44th Avenue bridge and Broadway (Globeville Plan)
- Project 122, Tier 2: Improve Fox Street and 38th Avenue Intersection for bicycles and pedestrians (Globeville Neighborhood Plan)
- Project 143, Tier 3: Improve 38th Avenue Railroad Underpass (NDSDT Study)
- Project 205, Tier 3: Create new multimodal connections across BNSF railroad and I-25

Projects prioritized under this plan will be considered within the connected strategy of the 41st and Fox Next Steps Study.

**fox north infrastructure master plan**

The Fox North Infrastructure Master Plan (IMP) evaluates the 41-acre Fox North mixed-use redevelopment within the study area. The proposed plan leverages public and private infrastructure investment to construct medium/high density mixed-use development and create opportunities for jobs, housing, and public spaces. The plan focuses on preserving the former Denver Post building, while including centralized open space, walkable streets, and a diversity of uses throughout the redevelopment.

This development proposes significant change to the area. While development plans may change, the IMP anticipates approximately 3,000 residential units and 700,000 square-feet of mixed use, commercial, office, and retail space with building heights up to 12 stories. The plan restores Huron Street (westernmost street adjacent to RTD tracks), extends existing Fox Street and Elati Street, and
creates a new segment of Galapago Street through the site. A conceptual rendering is shown below in Figure 2. The subsequent section on Land Use features a more detailed discussion of the impacts and design of Fox North development.

Figure 2. Conceptual Rendering of Fox North Development

fox station east rules & regulations

The City and County of Denver Community Planning and Development and the Department of Public Works have created rules to help manage use of the streets by new developments within the Fox Station East area. The Rules and Regulations apply a maximum allowable number of trips to the area and require certain new developments to produce Travel Demand Management (TDM) strategies that reduce vehicle trips. All development projects requiring review through the Site Development Plan (SDP) process are governed by these Rules and Regulations.

Site Development Plans are required for any new development involving 3 or more units, new non-residential construction, and building expansions or changes in use that require site or infrastructure improvements. The SDP process is typically not required for single family or two-family dwellings or remodeling of existing structures; however, development where multiple single-family dwellings or two-family dwellings are proposed could trigger SDP review.

Assumptions for the Rules and Regulations include:

- A Total Trip Capacity of 25,000 trips
- Existing Trip Count of 13,700 trips (including estimated 1,500 trips for the RTD Park-n-Ride)
- Remaining Trip Capacity of 11,300 trips (plus additional 15% buffer)
Once the remaining trip capacity is captured by new development, no additional development shall be permitted unless infrastructure or policy changes alter the Trip Capacity. During the conceptual design phase, new projects estimate number of new development trips based on a traffic study and TDM planning. Once the project is released from the conceptual design phase, these trips become ‘reserved.’ The Rules and Regulations allow for a 15% over-capacity reserve in number of trips.

**area-wide transportation and mobility**

**vehicle access, roadway network and overall operations**

Vehicle access to the *Fox Station East* site is served by only two points: 44th Avenue overpass and the intersections of 38th Avenue / Fox Street / Park Avenue West / I-25 Interchange. 44th Avenue, overpassing I-25 and becoming 45th Avenue to the east of I-25, is a designated Collector and provides direct roadway access to the historic Globeville main street at 45th Avenue. 38th Avenue, a designated Arterial, provides the primary vehicle connection to neighborhoods west of *Fox Station East* and connects to Pecos Street with full access to I-70. Fox Street is the primary north-south roadway within Fox Station East and is a designated Collector between 39th Avenue and 44th Avenue. One segment of Fox Street, between 38th and 39th Avenues is also a designated arterial and connects to 38th Avenue and Park Avenue West, creating the singular entry point into the site from the east and south. Access to and from I-25 South is also provided at the intersection of I-25 and Fox Street. Refer to Figure 3 for a diagram of existing roadway network.

![Figure 3. Existing Roadway Network](image)

**traffic volumes and overall operations**

Daily traffic volumes are greatest along the boundaries of the study area and significantly diminish within the site interior. An average of 280,000 cars travel daily on I-25 at the eastern border of *Fox Station East*. This segment near the *Fox Station East* area is the busiest segment of I-25 within Denver.
I-70 at the northern edge of the study area sees another 143,000 cars per day west of I-25. Area traffic volumes indicate significant traffic volumes at the intersection of 38th Avenue / Park Avenue / I-25, while internal site traffic is relatively low. Fox Street to 44th Avenue, between 39th Avenue and I-25, carries approximately 4,000 daily vehicles. Predominant movement at this intersection are southbound turns from 38th Avenue and westbound movement onto 38th Avenue from I-25. Currently, traffic volumes are limited by the development capacity, as previously discussed in the section on Rules and Regulations.

Roadway design within and around the study area creates access and operational issues. There is no direct access into the site onto or from I-70. The intersections of Fox Street and 38th Avenue/39th Avenue/I-25 Off–Ramp create a disjointed, multiple node intersection that can be confusing for drivers and pedestrians and bicyclists.

The close proximity to regional highways provides high visibility to the site, which may make the area attractive to potential retailers or developers. New development will impact traffic volumes within this area. Kimley-Horn and Associates prepared and submitted a Traffic Impact Study in 2018 to accompany the proposed redevelopment of the former Denver Post printing site. This report provides current traffic counts of key intersections and up-to-date analysis of existing intersection conditions, and potential impacts to the roadway network based on area development. Refer to Figure 4 for current roadway volumes within the study area, expressed as Average Daily Traffic (ADT).

![Figure 4. Average Daily Traffic](image)

**bicycle network**

The current bicycle network within Fox Station East is fairly limited. Bicycle lanes exist along 44th Avenue, west of I-25, and terminate at 43rd Avenue and Fox Street. Across I-25, along the 44th Avenue bridge, both east- and west-bound bike lanes become shared-lane markings (sharrows) due to space constraints. West of the railroad, a 12-foot multi-use path along Inca Street provides a bridge across 38th Avenue and a connection to the South Platte River Trail and the regional bicycle network. On the east side of railroad tracks, however, access to the South Platte River Trail is less apparent. Bicyclists
must cross the three-legged intersection of 38th Avenue / Fox Street / Park Avenue West. Currently, bicyclists must ride on a shared use sidewalk through this area.

This study aims to identify a coordinated and complete bicycle network in the area, connecting through the site to the rest of the Globeville neighborhood and to nearby areas like Sunnyside, downtown, and National Western Center. Three key roadways in the area have been identified as needing further study from Denver Moves (2015): 38th Avenue, from Sheridan Boulevard (County Line) to Park Avenue West; Fox Street, from 44th Avenue to the 38th Avenue intersection; and Elati Street, from 44th Avenue to 40th Avenue. Developing this multimodal link to the South Platte River Trail could complete a key connection within Denver’s multimodal network, linking Sunnyside, Globeville, RiNo, and downtown Denver. Refer to Figure 5 below for a diagram of the existing and proposed bicycle network.

![Figure 5. Existing and Proposed Bicycle Network](image)

**pedestrian environment**

The existing sidewalk and pedestrian environment is fractured. The Fox Station East area is primarily industrial, with small pockets of residential and commercial. The industrial core of the neighborhood is mostly missing sidewalks, with some of the residential area containing three-foot rollover curb sidewalks. Along Fox Street, the sidewalk condition varies. On the west side of Fox Street, the sidewalk network is complete. On the east side of Fox Street, however, many of the sidewalks are missing. Overall, approximately 19,000 linear feet of sidewalk is in place, while an estimated 16,000 linear feet of sidewalk is missing. Completed sidewalks account for approximately 53 percent of the total length of all sidewalks in Fox Station East. Refer to Figure 6 for a diagram of existing sidewalk inventory.
transit and shared systems

On April 26, 2019 RTD opened the G Line, a new commuter rail line with service from Union Station to Wheat Ridge. Ridership projections for the G Line at the 41st and Fox Station call for 1,200 boardings per average weekday in 2019, and 1,400 average weekday boardings in 2035. Once the G Line and the 41st and Fox Station opened, the existing B Line, a commuter rail line with service from Union Station to Westminster at 72nd Avenue and Federal Boulevard, began stopping at the 41st and Fox Station. The G Line operates every 15 minutes during the day, and every 30 minutes during the early morning and late evening. The B Line operates every 30 minutes during the morning and evening peak, and every 60 minutes the rest of the day.

RTD bus route #8 also serves the area, providing north-south service from Northglenn / Thornton area to downtown Denver. This route travels along Fox Street, over I-25 along 44th Avenue, and under I-70 along Lincoln Street. This bus route provides a direct connection with rail access at 41st and Fox Station and has additional stops along 44th Avenue and Fox Street.

The B-Cycle station at Fox Street / 40th Avenue is the farthest north station in the B-Cycle system and is relatively isolated from any other stations. This station represents the only B-Cycle system in the Globeville or Elyria-Swansea neighborhoods and the next nearest station is approximately 1.5 miles away along Brighton Boulevard in the River North Arts District (RiNo). Refer to Figure 7 for a diagram of transit and shared systems.
Parking

Public, on-street parking is readily available in the study area. Nearly all of the 1,137 available parking spots in the study area are unrestricted, free spaces. Eleven spaces on the east side of Fox Street, between 39th and 40th Avenues adjacent to retail, are 1-hour restricted parking.

With the opening of the 41st and Fox Station, serving both the B and G Lines, 500 off-street, surface parking spaces are available at a Park-n-Ride (PnR) lot adjacent to the station. These spaces are available on a first-come, first-served basis and are for the specific use of transit passengers. As part of the G Line planning process with the Federal Transit Administration, RTD identified the 41st and Fox Station as potentially needing 500 additional parking spaces by 2030. This number was based on projected demand at the station; the agency will base the build-out of future parking on actual demand.

A recent parking occupancy study in the area revealed no street segment was more than 50 percent parking occupancy at any of the three surveyed times (6AM, 1PM, and 7PM). All three surveyed times show study area occupancy of less than 10 percent.

Key investigation areas

A primary focus of the Next Steps Study is to examine transportation and mobility improvements at three major nodes. These major nodes represent compelling areas of opportunity to enhance overall connectivity, improve traffic operations, and catalyze transit-oriented development.

Existing conditions at each node are described below.
**I-25 Interchange / 39th Avenue / 38th Avenue / Fox Street intersection, including 38th Avenue underpass**

The I-25 Interchange / 39th Avenue / 38th Avenue / Fox Street intersection is part of a complex transportation node that includes highway ramps at I-25, with southbound on- and off-ramp access. This node can be best described as three separate intersections:

1. 38th Avenue / Fox Street intersection and the ‘front door’ of Fox Station East
2. I-25 highway ramps / Fox Street
3. Fox Street / 39th Avenue

**Figure 8** provides an aerial view of this node. Each intersection is labeled as described above. As the ‘front door’ of Fox Station East, this junction connects directly to downtown Denver, Sunnyside, and Highland neighborhoods, and provides access to the regional transportation networks.

38th Avenue, a designated arterial, is a primary east-west thoroughfare in north Denver, with connections to key north-south arterials like Federal Boulevard and Pecos Street. 38th Avenue also provides access to local neighborhood commercial nodes such as Tennyson Street. At the intersection with Fox Street, 38th Avenue widens to accommodate double left turn lanes onto Fox Street and two through lanes onto Park Avenue.

Fox Street is a collector roadway and the primary north-south roadway within the site. At the northern edge of the site, Fox Street connects to 44th Avenue, which in turn connects to eastern Globeville. Southbound Fox Street has two through lanes onto Park Avenue and a channelized right turn lane onto westbound 38th Avenue. The short link of Fox Street between 38th Avenue and the I-25 ramps is a designated arterial and handles over 15,000 ADT as drivers traverse between I-25, 38th Avenue, and downtown Denver. This section of roadway is approximately 86 feet wide, measured flow-line to flow-line, and accommodates two on-ramp lanes, one northbound through lane, two southbound through lanes, and one eastbound right lane. Refer to **Figure 8** for an aerial view of this node and existing lane configurations.
There are two dominant vehicle patterns at this node: Vehicles entering I-25 southbound from northbound Park Avenue and vehicles heading south onto Park Avenue from eastbound 38th Avenue. The existing flyover ramp from I-25 to Park Avenue connects vehicles directly to downtown Denver without adding additional cars to this node.

According to the Northwest Denver Sub-area Drainage and Transportation Study, CCD crash data shows 67 crashes at this intersection between 2005 and 2010. Eight crashes resulted in injuries. The most common crash type (25 instances of 67 total) was rear-end crash. Key patterns identified in the Northwest Denver Sub-area Drainage and Transportation Study included drivers running red lights to proceed to westbound 38th Avenue. Enhanced signal visibility, wayfinding, and increased enforcement were all identified as potential fixes.

As the sole southern access point to Fox Station East, this intersection also plays a critical role in facilitating bicycle and pedestrian movement into and out of the site. This area is not only an important connection for existing residents, businesses, and transit users, but also students living in student
housing, located just north of this node, who rely on navigating this intersection for bicycle connections into downtown and the Auraria campus.

However, crossing this intersection can be difficult under current conditions. Pedestrian crossing distances are lengthy and connections to adjacent bicycle routes can be unclear or impeded. The large radii of existing roadways often encourage high-speed vehicular turns, increasing the risk for pedestrians and bicyclists.

The node is surrounded by detached sidewalks of at least 5-feet on all sides. While the condition of the sidewalks is generally acceptable, curb ramps at all crossings are not currently ADA compliant and require upgraded detectable warning surfaces and field verifications of slope conditions. On the west side of Fox Street, pedestrians have created a shortcut, social path that more directly connects 38th Avenue to Fox Street. The South Platte River Trail can be accessed via the existing 12-foot shared use path on the west side of Fox Street. Approximately one quarter of a mile south of Fox Station East, at Park Avenue and Globeville Road, a small sign directs users to the trail access point (Figure 9). To access this path from Fox Station East, however, bicyclists need to cross the western leg of 38th Avenue, a crossing of approximately 150 feet and six lanes of traffic.

Figure 9. Existing Wayfinding Sign for Trail Access Point

The proximity to downtown Denver, adjacent city center neighborhoods, and the South Platte River Trail presents unique opportunities to reshape this intersection for mobility enhancements to pedestrians, bicyclists, and motorists alike. Re-evaluation of this intersection could result in more efficient traffic conditions as well as improved pedestrian and bicycle crossings. A new configuration
may reduce the amount of traffic signals along the corridor, reduce crossing lengths, and provide more appropriate wayfinding into the Fox Station area.

**W 38th Avenue underpass**

The 38th Avenue underpass, west of the Fox Street intersection, poses additional challenges. Built in the 1930s, the underpass connects 38th Avenue to Fox Street underneath two railroad bridges. According to the Northwest Denver Sub-Area Drainage and Transportation Study (2012), this bridge structure received a Denver Health Index structural rating of 78 out of 100, resulting in an assessment of *fair*. (Rehabilitation of bridge structures is typically considered when ratings fall below 70). The existing clearance of only 13 feet 3 inches and is not suitable for most trucks. Standard bridge structure clearance is 16 feet 6 inches. Clearance at this overpass should be reevaluated in conjunction with flooding and other structural improvements.

From retaining wall to retaining wall, the underpass measures approximately 58 feet and accommodates four travel lanes and parallel shared use sidewalks. Sidewalk conditions are adequate for walking and meet minimum ADA requirements. However, as the sidewalks are currently designated as a shared use compatible, they are too narrow to accommodate both pedestrians and bicyclists at the same time. The confined and dark space under the bridge is not an attractive walking or bicycling environment.

**Existing drainage and flooding**

*Fox Station East* sits in the Globeville-Utah Junction Basin (Denver Basin 0059-01). Due to the railroad and interstates, much of this area is not at risk for flooding. However, existing flooding issues persist at 38th Avenue underpass and the surrounding areas. The Globeville Stormwater Systems Study (currently underway) is identifying key projects in the area to alleviate flooding and provide community benefits. Specific recommendations for the flooding issues at 38th Avenue Underpass will align with community goals identified in the Globeville Stormwater Systems Study. Refer to Figure 10 for localized flooding concerns.

As this study aims to explore options for the 38th Avenue Underpass that improve flooding conditions, it will also ensure freight and truck travel is better accommodated.
Figure 10. Local Flooding

**northern crossing**

At the northern edge of the study area, several opportunities for a connection to the east or north have been identified through previous planning efforts. With the only access points at the 38th Avenue intersection and 44th Avenue bridge, concerns over general ingress and egress for cars, pedestrians and emergency vehicles have prompted exploration of new area connections. Recent development pressure, accelerated by the opening of the 41st and Fox station, has heightened concerns over the limited access points currently available for Fox Station East area residents and visitors.

The 41st and Fox Station Area Plan identifies opportunities for a bridge across the RTD and BNSF rail tracks at either 44th Avenue or 46th Avenue. The Northwest Denver Sub-area Drainage and Transportation Study (2012) offers an additional alternative for crossing near 47th Avenue. An additional option, tunneling to the north of I-70, has been highlighted by Denver Public Works and some community advocates. This study will evaluate the options in greater depth, ensure alignment with neighborhood goals, and explore options to fund the construction of these connections.

**land use**

Creating a new connection to the west of Fox Station East must consider existing and future land uses as well as construction impacts to residents, services, and businesses in the area. To the west, the Sunnyside neighborhood is primarily low-density, single-family residential neighborhood, with higher densities and a mix of uses closer to the railroad tracks. Several new developments are currently being
constructed along Inca Street, including higher density multi-family and condominiums. To the north, between 44th Avenue and 47th Avenue, and along Inca Street, Jason Street, and Lipan Street, the footprint is more industrial with larger lots and buildings. North of I-70, the area is primarily light industrial, including businesses such as Endpoint Direct and Western Steel and Boiler Company.

Several schools, parks and recreational centers are in the direct neighborhood, including Aztlan Recreation Center, Ciancio Park, and Horace Mann Middle School. Quigg Newtown Homes, an affordable housing community managed by the Denver Housing Authority, accounts for approximately 29 acres between Lipan Street and Navajo Street. Refer to Figure 11 for a map of current land use conditions.

![Figure 11. Current Land Use Conditions](image)

**topography and aerial constraints**

New crossings will be designed in accordance to the existing topography and aerial constraints. To the west, the RTD G-Line rises to cross over the BNSF railroad and then slopes down to pass underneath I-70. Any new bridge construction is required to maintain a minimum 23-foot 6-inch clearance over the top of rail. Xcel Energy also maintains facilities in this area, including aerial electrical transmission towers. Any new bridge construction is required to maintain a minimum 40-foot clearance below these transmission lines. Refer to Figure 12 for an illustration of these existing conditions.
Figure 12. Existing Conditions Related to Northern Crossing

Aerial electrical transmission tower. Minimum 40’ clearance required.

RTD Tracks. Minimum 23’ 6” clearance required.

Potential bridge location.
To the north, a new tunnel option could potentially be built under I-70 and connect with existing West 48th Avenue. To the east, a new bridge option could potentially be built across the RTD / BNSF rail road tracks and connect with existing West 47th Avenue. Both options are shown in Figure 13.

![Figure 13. Considered Options for Northern Connectivity](image)

**44th Avenue overpass**

Connecting with the rest of Globeville neighborhood, the 44th Avenue bridge turns into 45th Avenue historic main street on the east side of I-25. The existing bridge is approximately 46 feet wide (including bridge structures) and accommodates two travel lanes, two bike lanes, and a sidewalk on the south side.

This corridor is a critical multimodal link between eastern and western portions of Globeville, as well as the South Platte River Trail, new multimodal facilities planned on Washington Street, and the new National Western Center complex to the east. This investigation includes reallocation of space and/or additional pedestrian and bike infrastructure considerations, including recommendations of the Elevate Denver Bond Program GES Sidewalk Improvements, described in detail further in this document. No consideration of additional traffic lanes or capacity is considered at this time.

**structural assessment and capacity**

The 44th Street Bridge was constructed in 1988 and remains in fairly good condition. As of June 18, 2018, the sufficiency rating was 83.9, according to the Colorado Department of Transportation.

**existing cross section**

The existing cross section, looking east, of 44th Avenue bridge is shown below. The bridge maintains directional bike facilities and a sidewalk on the south side protected by jersey, or F-Type, barriers.
Driving lanes are 12 feet wide and adjacent bike lanes are 6 feet wide. The sidewalk on the south side of the road is approximately 6 feet wide. Refer to Figure 14 for a cross-section diagram of the existing configuration of the 44th Avenue Bridge.

![Cross-section diagram of the existing configuration of the 44th Avenue Bridge](image)

*Figure 14. Existing Configuration of 44th Avenue Bridge*

While the existing jersey barrier provides some level of protection, the barrier can make bicyclists feel squeezed or trapped when vehicles pass. All amenities serving cars, bicyclists, and pedestrians are on the same plane, and there is no curb for vertical separation to provide a sense of safety for more vulnerable users.

**elevate denver bond program ges sidewalk improvements**

The Elevate Denver Bond Program provides funding for sidewalk improvements in the Globeville neighborhood. The Bond improvements will be coordinated with those identified in the 41st & Fox Next Steps Study to create a cohesive pedestrian network through the area. The social path that exists between 44th Avenue and Broadway will be a key improvement to be funded under the Bond Program, as recommended by the Globeville Neighborhood Plan. Refer to Figure 15 for a diagram of the proposed Elevate Denver Bond Program improvements along and adjacent to the 44th Avenue Bridge.
One of the Elevate Denver Bond GES sidewalk Improvements being studied to create a formal connection to replace is a social trail the east side of I-25, which has been created leading to the bridge at West 44th Avenue. The social trail is shown in Figure 16. The social trail is approximately 75 feet long and rises approximately 20 feet from the end of East 44th Avenue to the bridge at West 44th Avenue.

\[\text{social trail}\]

\[\text{One of the Elevate Denver Bond GES sidewalk Improvements being studied to create a formal connection to replace is a social trail the east side of I-25, which has been created leading to the bridge at West 44th Avenue. The social trail is shown in Figure 16. The social trail is approximately 75 feet long and rises approximately 20 feet from the end of East 44th Avenue to the bridge at West 44th Avenue.}\]

\[\text{\footnote{Proposed improvements subject to change due to feasibility of construction or funding.}}\]
Figure 16. Social Trail Leading from 44th Avenue Bridge

land use and development

current land use

Today, the land use in Fox Station East is primarily a mix of light industrial and manufacturing, single family residential, student housing, and small-scale commercial. Refer to Figure 17 below for a breakdown of existing land use by type, and Figure 18 for a map of existing conditions.

<table>
<thead>
<tr>
<th>LAND USE TYPE</th>
<th>AMOUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Right of Way</td>
<td>21 Acres</td>
</tr>
<tr>
<td>Commercial / Retail</td>
<td>189,000 square feet</td>
</tr>
<tr>
<td>Industrial</td>
<td>844,000 square feet</td>
</tr>
<tr>
<td>Office</td>
<td>0 SF</td>
</tr>
<tr>
<td>Single Family</td>
<td>58 Dwelling Units</td>
</tr>
<tr>
<td>Multi Family</td>
<td>354 Dwelling Units</td>
</tr>
</tbody>
</table>

Figure 17. Land Use by Type
Figure 18. Existing Conditions

Existing single-family homes are generally one-story homes on small lots, some of which have varying needs for rehabilitation. Several residential lots have been repurposed for some light industrial uses such as auto storage, sales, or repairs. The commercial and retail uses are concentrated in the southern portion of the study area. Lots to the southeast are used by the Community College of Denver for educational purposes and student housing.
Current zoning in this area is a mix of higher density commercial / mixed use and industrial uses. Several areas have been rezoned in the last few years in alignment with the 2009 Station Area Master Plan. Refer to Figure 19 for a map of current zoning.

The 41st and Fox Station Area Plan (2009) anticipates significant growth increase, yet market conditions, connectivity constraints, and neighborhood context may prescribe lower densities. The
study team presented incremental growth scenarios that may be more realistic than the full buildout of the Station Area Plan. The project team’s thinking around land use is an important aspect to future decision-making around transportation infrastructure, design options and TDM practices.

This study is not proposing a new or amended land use map for the existing Station Area Plan as adopted in 2009. Land-use and market evaluation is intended to inform transportation and other infrastructure improvements in the area. Further refinement of these scenarios is on-going.

**fox north**

The former Denver Post printing press site encompasses 41 acres at the northern edge of Fox Station East, framed by I-70 and I-25. The Fox North development team ushered in new zoning and an adopted infrastructure master plan in 2017, but recent ownership changes at this site may signal new development ideas, land use mixes or intensities.

The approved infrastructure master plan for this site includes a revised grid street network within the site and a new 2.5-acre park along Fox Street near the former Denver Post building. Refer to Figure 20 for the proposed street network under the Fox North Infrastructure Master Plan.

Currently, this vision would be limited by the trip capacity, as discussed in the Fox Station East Rules and Regulations. While specifics of this development remain unclear, it is likely a development of this size and scale would monopolize the relatively few numbers of remaining trip under the current trip capacity rules. Infrastructure improvements, coupled with travel demand management strategies and complimentary land use plan, could help make this development a reality.
The health and environment assessment utilizes the Denver Neighborhood Equity Index published by the Denver Department of Public Health and Environment (DDPHE) to assess conditions in Globeville and Sunnyside. The Denver Neighborhood Equity Index represents by neighborhood some of the socioeconomic, built environment, health care, and health barriers that residents face in accessing opportunities for good health.

According to the Denver Neighborhood Equity Index, both Globeville and Sunnyside rank in the category for the lowest score, which indicates the highest level of inequity. Compared to the Denver’s average of 3.15, Globeville scores 2.10 on the Equity Index and Sunnyside scores 2.50. While both neighborhoods score low, Sunnyside residents have higher incomes and education, better access to healthy foods and parks, better access to healthcare, better life expectancy, and similar child obesity. Figure 21 below summarizes the Denver Neighborhood Equity Index rankings by neighborhood and the five factors that are included in the ratings.

Demographically, Sunnyside has remained about 50 percent Hispanic and 50 percent non-Hispanic since 2015, whereas Globeville’s population distribution has changed. In 2015, the population of Globeville was approximately 61 percent Hispanic and is now around 57 percent Hispanic. The population of Denver is around 30 percent Hispanic.
Socioeconomically, the poverty rate of the Globeville neighborhood is about 24 percent and the poverty rate of the Sunnyside neighborhood is about 16 percent. The average poverty rate for Denver is around 5 percent. Educational attainment is lower in Globeville than Sunnyside. In Globeville, nearly 18 percent of adults older than 25 years do not have a high school diploma compared to around 11 percent in Sunnyside and 7 percent in Denver. Both income and educational status are predictors of health and impact access to resources. Sunnyside residents have better access to health care, and overall life expectancy in Sunnyside is 76 years and in Globeville is 73 years. Both neighborhoods are below the average life expectancy in Denver, which is 78 years.

Regarding the built environment, the two neighborhoods differ dramatically in land use. The predominant land use in Sunnyside is single and multifamily residential (~72 percent) whereas in Globeville the predominant land use is industrial (~42 percent). In Globeville, single and multifamily residential accounts for approximately 15 percent of the existing land use. For all Denver neighborhoods, the existing land use is around 25 percent residential and 7 percent industrial.

The differing land use distributions between Globeville and Sunnyside may also impact access to resources. Sunnyside residents have similar access to parks as Denver overall but less access to grocery stores. However, a new local market is slated to open in Sunnyside in fall 2019, which will improve neighborhood food access. In contrast, not a single residence in Globeville is within a quarter mile of a grocery store, and only 31 percent are able to walk to a park or open space within that same distance (compared to 46 percent in Denver).

As noted in the existing plans and guiding documents section, several key findings of the Globeville Elyria Swansea (GES) Health Impact Assessment (HIA) (2014) are relevant to this study. These findings pertain to environmental quality and connectivity and mobility. Regarding environmental quality, the proximity to major highways and industry may be a reason for periodic, noticeable spikes in poor air quality in these communities. These land uses also contribute to local noise pollution, and, at times, exceed recommended federal thresholds for noise.

Regarding connectivity and mobility, fewer residents own vehicles in these communities than in Denver overall. Therefore, residents must rely on multimodal infrastructure like sidewalks, bicycle lanes, and transit facilities to access employment, schools, recreation, and resources. However, as previously discussed in this report, multimodal transportation infrastructure is often disjointed or incomplete in GES neighborhoods due to highways, railroad tracks, and other physical barriers. As a result, access to resources and opportunities for physical activity may be limited for residents of these communities.