Existing Conditions

MAY 2017
EXISTING CONDITIONS REPORT

This report summarizes the existing conditions of the pedestrian and trail network in the City and County of Denver. Public outreach efforts informed the vision, goals and performance measures for the Plan. The performance measures are used to track the City’s progress towards and status of achieving these goals. This report includes a spatial and summary analysis of each key indicator to assess the performance of the entire system.
VISION, GOALS AND PERFORMANCE MEASURES

Building off of the community outreach effort, a vision, goals and performance measures have been identified for both the pedestrian and trail network in the City. The vision statement describes the ultimate, ideal build out of the pedestrian and trail networks in the long-term. The goals identified for each element of the Plan identify the criteria that are a top priority in reaching the vision. The performance measures are tied to each goal and are used to prioritize projects and track the City’s progress towards the ultimate vision.
Vision

The vision for the pedestrian network of the City and County of Denver is one that provides residents, employees and visitors with a walkable environment that is comfortable for all users. The pedestrian environment will be well-connected with a complete set of sidewalks and crossings that accesses key destinations including transit stops and stations, parks and grocery stores. These facilities will be accessible to all users by complying with Americans with Disabilities Act (ADA) guidelines. Walking will be a safe mode of transportation and activity for all ages. The pedestrian environment will not only create a comfortable walking experience, but serve as a beautiful, clean and well-lit space that promotes healthy living.
Goals

- **Accessibility**: A pedestrian system with a complete network of well-maintained, ADA-compliant sidewalks, walkways and crossings for users of all abilities.

- **Connectivity**: A complete sidewalk network without gaps and with frequent pedestrian crossings across barriers.

- **Destination Access**: A complete pedestrian network with sidewalks and crossings that are up to standards and provide direct access to key destinations: consisting of grocery stores, parks, schools, rail stations, and bus stops.

- **Equity**: A complete pedestrian network with sidewalks and crossings up to standards and without gaps within low-income areas.

- **Health**: A complete pedestrian network with sidewalks and crossings up to standards and without gaps within areas of health concern.

- **Safety**: A safe network of pedestrian facilities that enables walking as a comfortable transportation mode and designed to reduce or eliminate crashes involving pedestrians.

Performance Measures

- **Accessibility**: sidewalk completion (≥4 feet) throughout the City, WalkSCOPE overall pedestrian environment rating.

- **Connectivity**: frequent crossings of arterials and major barriers including highways, rivers and railroads.

- **Destination Access**: sidewalk completion (≥4 feet) within ¼ mile from bus stops and ½ mile from rail stations, ½ mile from parks, ½ mile from grocery stores and ½ mile from schools.

- **Equity**: sidewalk completion (≥4 feet) in census tracts where at least twenty percent of the population is below the Colorado state poverty level.

- **Health**: sidewalk completion (≥4 feet) in areas with high child obesity rates.

- **Safety**: sidewalk completion (≥4 feet) along the corridors with the highest number of crashes causing injuries and fatalities, known as the High Injury Network (HIN); signal spacing along the HIN.
The vision for the trail network in the City and County of Denver is one that provides residents, employees and visitors with a safe, connected and beautiful set of off-street facilities that they can access and walk and bike on comfortably. The network of trails can be accessed safely and conveniently, with a focus on trail connections to all parts of the City. Trails provide not only a connection to destinations, but also a world-class recreational network that is well-maintained, beautiful and clean. The trail network provides an opportunity for all ages and abilities to comfortably bike and walk for recreation and transportation.
EXISTING CONDITIONS

GOALS

- **Connectivity**: A trail network without gaps that can be conveniently and comfortably accessed by residents and visitors biking and walking throughout the City.

- **Destination Access**: A trail network with access points and crossings that provide comfortable connections to trails from key destinations including grocery stores, parks, schools, rail stations and bus stops.

- **Equity**: A trail network that can be accessed comfortably and conveniently from throughout the City, especially low-income areas.

- **Health**: A trail network that can be accessed comfortably and conveniently from throughout the City, especially areas of health concern and can be used to access other facilities that support local health indices.

- **Safety**: A well-maintained and network of wide trails and access points that fosters a high level of personal safety, infrequent conflicts between bicyclists and pedestrians, and infrequent conflicts between trail users and vehicles at trail crossings and access points.

PERFORMANCE MEASURES

- **Connectivity**: gaps in the trail network; presence of existing and proposed, high and low ease of use bicycle facilities providing direct access to trail connections; proximity to trails and access to other high ease of use bicycle facilities; and sidewalk completion ($\geq$ 4 feet) within $\frac{1}{2}$ mile of trail connections.

- **Destination Access**: density of key destinations (grocery stores, parks, schools, bus stops, rail stations) in combination with distance from the nearest trail access point.

- **Equity**: sidewalk completion around trail access points and bicycle access to trails in census tracts where at least twenty percent of the population is below the Colorado state poverty level.

- **Health**: sidewalk completion around trail access points and bicycle access to trails in areas of high childhood obesity rates.

- **Safety**: percent of trails that meet trail design standards; trail counts.
MEASURING THE GOALS

A spatial analysis was performed for each identified performance measure in order to assess how the pedestrian and trail system is addressing the goals of the plan based on these key indicators.
**PEDESTRIAN NETWORK**  
**GOAL: ACCESSIBILITY**

*Performance Measure: Sidewalk Quality Assessment*

The City has current standards for sidewalks consisting of required sidewalk and buffer width that vary by street classification. Only about 5% of the City’s total sidewalk network are meeting the required standards. Arterials are the street classification with least amount of sidewalks meeting standards, with less than 2% meeting the required eight-foot sidewalk width and 12-foot buffer width.

<table>
<thead>
<tr>
<th>Roadway Classification</th>
<th>Sidewalk Width Standard</th>
<th>Buffer Width Standard</th>
<th>Percent Meeting Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arterial</td>
<td>8’</td>
<td>12’</td>
<td>2%</td>
</tr>
<tr>
<td>Collector</td>
<td>5’</td>
<td>8’</td>
<td>8%</td>
</tr>
<tr>
<td>Local</td>
<td>5’</td>
<td>8’</td>
<td>5%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>8</strong></td>
<td><strong>12</strong></td>
<td><strong>5%</strong></td>
</tr>
</tbody>
</table>
GOAL: ACCESSIBILITY

Performance Measure: Sidewalk Quality Assessment

The minimum continuous sidewalk width based on Americans with Disabilities Act design guidance is four feet. The street network with potential for a sidewalk was analyzed for sidewalks four feet or greater, sidewalks present but less than four feet and no sidewalk at all. This analysis is shown in Figure 1. The largest portion of missing and deficient width sidewalks are locations on the east and west sides of the City, while the center of the City has mostly a sidewalk network of four feet or greater.

<table>
<thead>
<tr>
<th>Percent of Sidewalk</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sufficient width (&gt;4’)</td>
<td>60%</td>
</tr>
<tr>
<td>Deficient width (&lt;4’)</td>
<td>30%</td>
</tr>
<tr>
<td>Missing</td>
<td>10%</td>
</tr>
</tbody>
</table>
EXISTING CONDITIONS

FIGURE 1: SIDEWALK QUALITY ASSESSMENT
GOAL: ACCESSIBILITY

Performance Measure: WalkSCOPE Overall Pedestrian Environment Rating

WalkDenver and PlaceMatters have collaborated with grant funding from Mile High Connects to develop WakSCOPE, a crowdsourced tool to collect data related to sidewalks, intersections and pedestrian counts. The tool has currently collected almost 23,000 reports on the pedestrian environment. Users provided a one through five rating of the overall pedestrian environment, with five as the highest and most comfortable and one as the lowest and least comfortable. A breakdown of these ratings is shown in the table following and in Figure 2. Although the previous analysis showed that 40% of the sidewalk network is missing or of deficient width, the WalkSCOPE analysis reveals that 64% of the network scored a one, two, or three in comfort. This comparison reveals that sufficient sidewalk width is not the only factor that affects comfort. Other factors affecting perceived comfort include crossing treatments, landscaping, street furniture, and sidewalk condition.

<table>
<thead>
<tr>
<th>Overall Pedestrian Environment Rating</th>
<th>Percent of Network with Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 (most comfortable)</td>
<td>9%</td>
</tr>
<tr>
<td>4</td>
<td>27%</td>
</tr>
<tr>
<td>3</td>
<td>34%</td>
</tr>
<tr>
<td>2</td>
<td>19%</td>
</tr>
<tr>
<td>1 (least comfortable)</td>
<td>11%</td>
</tr>
</tbody>
</table>
FIGURE 2: WALKSCOPE OVERALL PEDESTRIAN ENVIRONMENT RATING

Sidewalk Quality Reports (18,758)
Overall Pedestrian Environment Rating
- 5 (highest)
- 4
- 3
- 2
- 1 (Lowest)

Intersection Quality Reports (4,274)
Pedestrian Counts (329)
GOAL: CONNECTIVITY

Performance Measure: Pedestrian Crossing Spacing Across Major Roadways

Major roadways can serve as a barrier for pedestrians if there is a lack of pedestrian crossing opportunities. Major roadways are defined as streets that are classified as arterials. Given that marked crossings for pedestrians exist only at signals, an assessment of the frequency of signalized crossings of arterials represents the opportunities for pedestrians to comfortably cross. The average signal spacing across arterials around the City is 1,211 feet, or almost ¼ of a mile. This results in a potentially high amount of out of direction travel and poorly connected pedestrian grid. As shown in Figure 3, signal spacing is the most dispersed on the outer edges of the City.

The average signal spacing across arterials is 1,133 feet
FIGURE 3: SIGNAL SPACING ACROSS MAJOR ROADWAYS

- EXISTING CONDITIONS

- Signals (On Arterials)

Distance Between Signals
- Less than 1/4 mile
- 1/4 - 1/2 mile
- 1/2 - 3/4 mile
- 3/4 to 1 mile
- More than 1 mile

- DIA
- City Boundary
GOAL: CONNECTIVITY

Performance Measure: Pedestrian Crossing Spacing Across Major Barriers

In addition to arterials, the three main barriers in the street grid for pedestrians are freeways, railroads and rivers. The average spacing of crossings with pedestrian facilities for all three of these barriers is over 3,000 feet. These barriers may result in a significant amount of out of direction travel for pedestrians. These barriers are located primarily north-south running and on the west side of the City, creating a barrier to east-west travel between destinations on either side of I-25, the Platte River and the Union Pacific and BNSF railroad. Figure 4 shows the location of barriers and crossing frequency around the City.

<table>
<thead>
<tr>
<th>Barrier</th>
<th>Average Crossing Spacing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freeways</td>
<td>3,380 feet</td>
</tr>
<tr>
<td>Railroads</td>
<td>3,151 feet</td>
</tr>
<tr>
<td>Rivers</td>
<td>3,601 feet</td>
</tr>
</tbody>
</table>
FIGURE 4: PEDESTRIAN CROSSING SPACING ACROSS MAJOR BARRIERS
GOAL: DESTINATION ACCESS

Performance Measure: Sidewalk Completion Around Key Destinations

Public outreach determined that the four destinations most important for pedestrian access are grocery stores, parks, schools, and transit stops and stations. Figures 5, 6, 7 and 8 respectively show the walkshed using the street network and sidewalk completion around these four destination types. Half-mile buffers were used for all destinations except for bus stops, where anticipated walking distance is expected to be on average no more than ¼ mile. Consistent with the citywide analysis, the walksheds of each key destination has the largest portion of missing and deficient width sidewalks located on the east and west sides of the city, while the center of the city has mostly a sidewalk network of four feet or greater. All key destinations have a slightly larger percentage of complete, sufficient sidewalk that the average of the whole City.

<table>
<thead>
<tr>
<th>Percent of Sidewalk</th>
<th>Grocery Store (1/2 mile)</th>
<th>Park (1/2 mile)</th>
<th>School (1/2 mile)</th>
<th>Light Rail Station (1/2 mile) and Bus Stop (1/4 mile)</th>
<th>Entire City</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sufficient width (&gt;4’)</td>
<td>69%</td>
<td>61%</td>
<td>61%</td>
<td>63%</td>
<td>60%</td>
</tr>
<tr>
<td>Deficient width (&lt;4’)</td>
<td>25%</td>
<td>30%</td>
<td>32%</td>
<td>28%</td>
<td>30%</td>
</tr>
<tr>
<td>Missing</td>
<td>6%</td>
<td>9%</td>
<td>7%</td>
<td>9%</td>
<td>10%</td>
</tr>
</tbody>
</table>
FIGURE 5: SIDEWALK COMPLETION AROUND GROCERY STORES

EXISTING CONDITIONS

Key Destinations Walkshed and
Gap Analysis: Grocery Store

Grocery Store

Overall Sidewalk Status

- Existing Sidewalk (4' or more)
- Existing Sidewalk (less than 4')
- Missing

- Park
- Grocery Stores Walkshed
- DIA
- City Boundary
FIGURE 6: SIDEWALK COMPLETION AROUND PARKS
EXISTING CONDITIONS

FIGURE 7: SIDEWALK COMPLETION AROUND SCHOOLS

Key Destinations Walkshed and Gap Analysis: Schools

Overall Sidewalk Status
- Existing Sidewalk (4’ or more)
- Existing Sidewalk (less than 4’)
- Missing

Legend:
- School
- Park
- Schools Walkshed
- DIA
- City Boundary
FIGURE 8: SIDEWALK COMPLETION AROUND TRANSIT STOPS AND STATIONS
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GOAL: EQUITY

Performance Measure: Sidewalk Completion in Low Income Areas

The goal of equity is measured by the percent of complete sidewalks in low income areas. Low income is defined by the US Census Bureau as areas with twenty percent or more of the population under the state-defined poverty line. This analysis uses Census data at the scale of the census tract to determine areas defined as low income, which are shown in Figure 9. Slightly less than half of roadways in these census tracts have missing or deficient sidewalks (less than four feet). Compared to the rest of the City, low income areas have slightly more deficient and missing sidewalks.

<table>
<thead>
<tr>
<th>Percent of Sidewalk</th>
<th>Low Income Areas</th>
<th>Entire City</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sufficient width (&gt;4')</td>
<td>53%</td>
<td>60%</td>
</tr>
<tr>
<td>Deficient width (&lt;4')</td>
<td>34%</td>
<td>30%</td>
</tr>
<tr>
<td>Missing</td>
<td>13%</td>
<td>10%</td>
</tr>
</tbody>
</table>
FIGURE 9: SIDEWALK COMPLETION IN LOW INCOME AREAS
GOAL: HEALTH

Performance Measure: Sidewalk Completion in Areas of Health Concern

The plan addresses the goal of improving health by examining the percent of sidewalks complete in areas with health concern. Areas of health concern were identified as the areas with the highest rates of childhood obesity. By breaking the City into quintiles, the top two quintiles (or 40%) of neighborhoods with highest health concern were selected. This 40% of neighborhoods selected as areas of health concern have 31% or more of children and youth under the age of 21 that have a Body Mass Index that is considered overweight or obese. Slightly less than half of roadways in these areas have missing or deficient sidewalks (less than four feet). Compared to the rest of the City, areas of health concern have slightly more deficient and missing sidewalks. Poor health areas and their level of sidewalk completion are shown in Figure 10. This map shows that the neighborhoods of health concern are generally on the western side and northeastern corner of the City. Missing sidewalks are primarily in the northern neighborhoods and along I-25 and Santa Fe Drive. Sidewalks of deficient width are located in the southeastern part of the City.

<table>
<thead>
<tr>
<th>Percent of Sidewalk</th>
<th>Areas of Concern</th>
<th>Entire City</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sufficent width (&gt; 4’)</td>
<td>56%</td>
<td>60%</td>
</tr>
<tr>
<td>Deficient width (&lt; 4’)</td>
<td>32%</td>
<td>30%</td>
</tr>
<tr>
<td>Missing</td>
<td>12%</td>
<td>10%</td>
</tr>
</tbody>
</table>
FIGURE 10: SIDEWALK COMPLETION IN AREAS OF HEALTH CONCERN
GOAL: SAFETY

Performance Measure: Sidewalk Completion on the High Injury Network

The High Injury Network (HIN), as calculated through the city’s Vision Zero process, identifies the intersections and corridors with a high rate of bicycle and pedestrian crashes resulting in injuries and fatalities. These corridors are the highest priority locations for the implementation of additional safety treatments and have the largest capacity for reducing crashes. Therefore, sidewalk completion along the HIN is also a priority. Figure 11 shows the presence and deficiency of existing sidewalk along these corridors. These corridors have a high percentage of sidewalk of sufficient width compared to the entire City. However, due to the importance of these corridors, prioritizing the remaining missing or deficient width sidewalks is important.

<table>
<thead>
<tr>
<th>Percent of Sidewalk</th>
<th>High Injury Network (HIN)</th>
<th>Entire City</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sufficient width (&gt; 4’)</td>
<td>88%</td>
<td>60%</td>
</tr>
<tr>
<td>Deficient width (&lt; 4’)</td>
<td>7%</td>
<td>30%</td>
</tr>
<tr>
<td>Missing</td>
<td>5%</td>
<td>10%</td>
</tr>
</tbody>
</table>
FIGURE 11: SIDEWALK COMPLETION ALONG HIGH INJURY NETWORK
GOAL: SAFETY

Performance Measure: Signal Spacing on the High Injury Network

The frequency of pedestrian crossings, as identified by signal spacing across the corridors in the High Injury Network (HIN), tracks the safety of pedestrian crossings in these high priority locations. With an average signal spacing of 970 feet along these corridors, pedestrians are likely to make risky behaviors while crossing or forced to endure out of direction travel. Figure 12 shows the distribution of signal spacing throughout the HIN.

The average signal spacing across the High Injury Network is 878 feet.
FIGURE 12: SIGNAL SPACING ALONG HIGH INJURY NETWORK

Table: Distance Between Signals

- Less than 1/4 mile
- 1/4 - 1/2 mile
- 1/2 - 3/4 mile
- 3/4 to 1 mile
- More than 1 mile
- DIA
- City Boundary
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TRAILS NETWORK
GOAL: CONNECTIVITY

*Performance Measure: Gaps in the Trail Network*

There are a number of locations throughout the trail network with missing segments of trail. These gaps create a barrier for trail users. There are a number of gaps along the Weir Gulch Trail, East Harvard Gulch Trail, and on trails in the eastern part of the City. Based on the ‘weakest link’ approach to bicycle and pedestrian comfort, a trip is only as comfortable as the least comfortable portion. Therefore, it is important to address these gaps to create a connected and comfortable trail network.
FIGURE 13: GAPS IN THE TRAIL NETWORK
GOAL: CONNECTIVITY

Performance Measure: Pedestrian Access to Trails

Sidewalk completion around trail access points is important to create a connected pedestrian network with safe and convenient access to trails. Figure 14 shows ½ mile walksheds based on the street grid around trail access points, and shows the completion and sufficiency of the sidewalk network in these high priority locations. Compared to the rest of the City, the area around trail access points has a slightly more complete sidewalk network.

<table>
<thead>
<tr>
<th>Percent of Sidewalk</th>
<th>Trail Access (1/2 mile walkshed)</th>
<th>Entire City</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sufficient width (&gt; 4’)</td>
<td>61%</td>
<td>60%</td>
</tr>
<tr>
<td>Deficient width (&lt; 4’)</td>
<td>29%</td>
<td>30%</td>
</tr>
<tr>
<td>Missing</td>
<td>10%</td>
<td>10%</td>
</tr>
</tbody>
</table>
FIGURE 14: PEDESTRIAN ACCESS TO TRAILS
GOAL: CONNECTIVITY

Performance Measure: Bicycle Access to Trails

Bicycle access to trails via on-street bicycle facilities is important to create a connected network between the on-street and off-street system. Figure 15 shows the trail access points that are connected to the bicycle network by high ease of use existing and proposed bicycle facilities and medium to low ease of use existing and proposed bicycle facilities as identified by Denver Moves: Bicycles (2016). High ease of use bicycle facilities include bike boulevards, cycle tracks, and shared use sidewalks; low ease of use bicycle facilities include bike lanes, bike/bus lanes, buffered bike lanes, climbing lanes, paved shoulders, shared parking/bike lane, and sharrows. These accesses are distributed throughout the City but should become more frequent.

<table>
<thead>
<tr>
<th>Bicycle Facility Type</th>
<th>Percent of Trail Accesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any bicycle facility</td>
<td>37%</td>
</tr>
<tr>
<td>High ease of use (existing)</td>
<td>9%</td>
</tr>
<tr>
<td>High ease of use (proposed)</td>
<td>8%</td>
</tr>
<tr>
<td>Medium-low ease of use (existing)</td>
<td>10%</td>
</tr>
<tr>
<td>Medium-low ease of use (proposed)</td>
<td>10%</td>
</tr>
<tr>
<td>No bicycle facility</td>
<td>63%</td>
</tr>
</tbody>
</table>
GOAL: CONNECTIVITY

Performance Measure: Bicycle Proximity and Access to Trails

Denver Moves: Bicycle (2016) sets a goal of “a biking and walking network where every household is within a quarter mile (5-minute walk or 2-minute bicycle ride) of a high ease of use facility.” Figure 16 shows parcels that are more than a quarter mile from a trail (considered a high ease of use facility), while showing how the on-street bicycle high ease of use facilities provide comfortable access to the remaining parcels. This maps shows that the largest areas of the City that are more than a quarter mile from a trail are in the northwest, southwest, northeast and north-central areas. It is important to consider the location of on-street high ease of use bicycle facilities in these areas especially, to provide safe and comfortable access to trails.
FIGURE 16: BICYCLE PROXIMITY AND ACCESS TO TRAILS
GOAL: DESTINATION ACCESS

Performance Measure: Trail Access Near Key Destinations

Trail access to and from key destinations including grocery stores, parks, schools and rail stations are a priority. Existing trail access points are often infrequently spaced. This analysis, exhibited in Figure 17, shows a heat map of the density of key destinations as well as the distance that a trail segment is from the nearest trail access point. These two variables combined demonstrate the need for additional trail accesses.
FIGURE 17: TRAIL ACCESS NEAR KEY DESTINATIONS
Given the goal of equity, pedestrian and bicycle access to trails in low income areas is identified as a priority. Low income is defined by the US Census Bureau as areas with 20% or more of the population under the state-defined poverty line. This analysis uses Census data at the scale of the census tract to determine areas defined as low income. Figure 18 shows the percent of sidewalk complete and sufficient width within ½ mile walkshed of each trail access point within low income areas.

<table>
<thead>
<tr>
<th>Percent of Sidewalk</th>
<th>Trail Access in Low Income Areas (1/2 mile walkshed)</th>
<th>Trail Access (1/2 mile walkshed)</th>
<th>Entire City</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sufficient width (&gt; 4’)</td>
<td>50%</td>
<td>62%</td>
<td>60%</td>
</tr>
<tr>
<td>Deficient width (&lt; 4’)</td>
<td>38%</td>
<td>30%</td>
<td>30%</td>
</tr>
<tr>
<td>Missing</td>
<td>12%</td>
<td>8%</td>
<td>10%</td>
</tr>
</tbody>
</table>

Figure 19 shows trail access points within low income areas that are connected to a bicycle facility. Bicycle facilities are divided into four categories by Denver Moves: Bicycle (2016): existing high ease of use, proposed high ease of use, existing low to medium ease of use and proposed low to medium ease of use.

<table>
<thead>
<tr>
<th>Bicycle Facility Type</th>
<th>Percent of Trail Accesses (Low Income Areas)</th>
<th>Percent of Trail Accesses (entire City)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any bicycle facility</td>
<td>32%</td>
<td>37%</td>
</tr>
<tr>
<td>High ease of use (existing)</td>
<td>11%</td>
<td>9%</td>
</tr>
<tr>
<td>High ease of use (proposed)</td>
<td>10%</td>
<td>8%</td>
</tr>
<tr>
<td>Medium-low ease of use (existing)</td>
<td>11%</td>
<td>10%</td>
</tr>
<tr>
<td>Medium-low ease of use (proposed)</td>
<td>13%</td>
<td>10%</td>
</tr>
<tr>
<td>No bicycle facility</td>
<td>68%</td>
<td>63%</td>
</tr>
</tbody>
</table>
FIGURE 18: PEDESTRIAN ACCESS TO TRAILS IN LOW INCOME AREAS
EXISTING CONDITIONS

FIGURE 19: BICYCLE ACCESS TO TRAILS IN LOW INCOME AREAS
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GOAL: HEALTH

Performance Measure: Pedestrian and Bicycle Access to Trails in Areas of Health Concern

Given the goal of improved health, the completion of sidewalks in areas of health concern is identified as a priority. Areas of health concern were identified as the areas with the highest rates of childhood obesity. By breaking the City into quintiles, the top two quintiles (or 40%) of neighborhoods with highest health concern were selected. This 40% of neighborhoods selected as areas of health concern have 31% or more of children and youth under the age of 21 that have a Body Mass Index that is considered overweight or obese. Figure 20 shows the percent of sidewalk complete and sufficient width within ½ mile walkshed of each trail access point within areas of health concern.

<table>
<thead>
<tr>
<th>Percent of Sidewalk</th>
<th>Trail Access in Areas of Health Concern (1/2 mile walkshed)</th>
<th>Trail Access (1/2 mile walkshed)</th>
<th>Entire City</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sufficient width (&gt;4’)</td>
<td>61%</td>
<td>61%</td>
<td>60%</td>
</tr>
<tr>
<td>Deficient width (&lt;4’)</td>
<td>30%</td>
<td>29%</td>
<td>30%</td>
</tr>
<tr>
<td>Missing</td>
<td>9%</td>
<td>10%</td>
<td>10%</td>
</tr>
</tbody>
</table>

Figure 21 shows trail access points within areas of health concern that are connected to a bicycle facility. Bicycle facilities are divided into four categories by Denver Moves: Bicycle (2016): existing high ease of use, proposed high ease of use, existing low to medium ease of use and proposed low to medium ease of use.

<table>
<thead>
<tr>
<th>Bicycle Facility Type</th>
<th>Percent of Trail Accesses (Low Income Areas)</th>
<th>Percent of Trail Accesses (entire City)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any bicycle facility</td>
<td>44%</td>
<td>37%</td>
</tr>
<tr>
<td>High ease of use (existing)</td>
<td>13%</td>
<td>9%</td>
</tr>
<tr>
<td>High ease of use (proposed)</td>
<td>7%</td>
<td>8%</td>
</tr>
<tr>
<td>Medium-low ease of use (existing)</td>
<td>11%</td>
<td>10%</td>
</tr>
<tr>
<td>Medium-low ease of use (proposed)</td>
<td>12%</td>
<td>10%</td>
</tr>
<tr>
<td>No bicycle facility</td>
<td>56%</td>
<td>63%</td>
</tr>
</tbody>
</table>
FIGURE 20: PEDESTRIAN ACCESS TO TRAILS IN AREAS OF HEALTH CONCERN
FIGURE 21: BICYCLE ACCESS TO TRAILS IN AREAS OF HEALTH CONCERN
This page is intentionally left blank.
GOAL: SAFETY

Performance Measure: Trail Deficiency Assessments

Trail standards are established in this plan in order to provide for sufficiently safe and comfortable trails for all users. Trails are broken into three classifications based on their regional significance, length and access to destinations. Figure 22 shows which trails are meeting standards and which are not based on their classification.

<table>
<thead>
<tr>
<th>Trail Type</th>
<th>Percent Meeting Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional Trail</td>
<td>11%</td>
</tr>
<tr>
<td>Collector Trail</td>
<td>.3%</td>
</tr>
<tr>
<td>Local Trail</td>
<td>1%</td>
</tr>
<tr>
<td>All trails</td>
<td>7%</td>
</tr>
</tbody>
</table>

**Trail Standards**

- **Regional Trail**
  - 12’ Concrete Trail
  - 4’ Adjacent Soft Surface Trail
  - 3’ Shoulders on Each Side

- **Regional Trail (Cherry Creek- Downing to Colfax)**
  - 18’ Concrete Trail
  - 3’ Shoulders on Each Side

- **Regional Trail (Cherry Creek- Colfax to S. Platte)**
  - 12’ Concrete Bike Trail
  - 3’ Shoulders on Each Side of Bike Trail
  - 8’ Concrete Pedestrian Trail
  - Vegetated Shoulders on Each Side of Pedestrian Trail

- **Regional Trail (High Line Canal)**
  - 10’ Concrete Trail
  - 4’ Adjacent Soft Surface Trail
  - 3’ Shoulders on Each Side

- **Collector Trail**
  - 10’ Concrete Trail
  - 3’ Adjacent Soft Surface Trail
  - 2’ Shoulders on Each Side

- **Local Trail**
  - 10’ Concrete Trail
  - 2’ Shoulders on Each Side
FIGURE 22: TRAIL DEFICIENCY ASSESSMENT
GOAL: SAFETY

Performance Measure: Trail Counts

Trail counts were performed at 25 different locations throughout the trail network over the past couple of years. Trail counts report average weekday and average weekend volumes. This data helps inform trail standards such as width and adjacent unpaved path to ensure there is sufficient capacity during peak times and to promote safe interaction between bicyclists and pedestrians. The results of the trail counts are shown in Figure 23.
FIGURE 23: TRAIL COUNTS

Legend:
- Count Location
- XX Average Weekday Count
- (YY) Average Weekend Count
- Off-Street Trail
- DIA
- City Boundary

Map showing trail counts in Denver with various streets and their corresponding counts.