

COTTONWOOD HEIGHTS ACTIVE TRANSPORTATION PLAN









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MID-VALLEY ACTIVE TRANSPORTATION PLAN | COTTONWOOD HEIGHTS

LIST OF ACRONYMS

ADA: Americans with Disabilities Act **AT-FIT:** UDOT Active Transportation Facility Implementation Tool **ATP:** Active Transportation Plan **CATF:** County Active Transportation Fund **FHWA:** Federal Highway Administration **GIS:** Geographic Information System **LTS:** Level of Traffic Stress **MID-VALLEY ATP:** Mid-Valley Active Transportation Plan **NACTO:** National Association of City Transportation Officials **PROWAG:** Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way **ROW:** Right-of-way **RTP:** Regional Transportation Plan SLC: Salt Lake City, Utah **SLCO:** Salt Lake County **SLCO ATIP:** Salt Lake County Active Transportation Implementation Plan **SLCBAC:** Salt Lake County Bicycle Advisory Committee **SRTS:** Safe Routes to School **STIP:** Statewide Transportation Improvement Program **TLC:** Transportation and Land Use Connection program **TTIF:** Transit Transportation Investment Fund **UCATS:** Utah Collaborative Active Transportation Study **UDOT:** Utah Department of Transportation **UTA:** Utah Transit Authority WFRC: Wasatch Front Regional Council



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MID-VALLEY ACTIVE TRANSPORTATION PLAN | COTTONWOOD HEIGHTS

EXECUTIVE SUMMARY

OVERVIEW

The Mid-Valley Active Transportation Plan ("Mid-Valley ATP" or "Plan") is a joint plan among Cottonwood Heights, Holladay, Midvale, Millcreek, Murray, and Taylorsville. City staff from all the jurisdictions met regularly and collaborated with a consultant team to create a cohesive plan that connects and develops an active transportation Backbone Network across all six cities. The Mid-Valley ATP also coordinated with major stakeholders such as the Wasatch Front Regional Council (WFRC), Utah Department of Transportation (UDOT), Salt Lake County, and the Utah Transit Authority (UTA). The Mid-Valley ATP examined regional connections and opportunities for collaboration on implementation while also providing the framework for each municipality to identify priorities, policies, and routes specific to their jurisdiction. This plan serves as the foundation for future budget allocations, multi-jurisdictional grant opportunities, and policy implementation by city staff, elected officials, and commissions to ensure the proper construction and modification of roadways to allow for multimodal transportation.

By providing an efficient active transportation network, the Mid-Valley ATP seeks to better serve our residents who commute and/or recreate with regional connections between communities. Additionally, the Mid-Valley ATP aims to improve our residents' quality of life and overall health by promoting opportunities/facilities for an active lifestyle and improving air quality by reducing the environmental impacts of personal vehicles.

VISION AND GOALS

The vision statement and accompanying goals helped guide the active transportation plan team and process from beginning to end.

One of the Mid-Valley ATP's primary aims is to create a regional Backbone Network of active transportation facilities connecting the cities of **Cottonwood Heights**, **Holladay**, **Midvale**, **Millcreek**, **Murray**, and **Taylorsville**. The Plan approaches the study area as a collective region but also looks at each municipality individually. This allows each City to take a detailed look at bicycle and pedestrian facilities within its city limits and at the larger scale of regional connections surrounding its borders. This highly collaborative planning process identifies needs, gaps, opportunities, and constraints to produce a list of 244 total projects. Out of these projects, 31 were selected to create the Backbone Network for the Mid-Valley ATP.

PROJECT PROCESS

The process to develop the Mid-Valley ATP relied on the input and insight of the steering committee and the larger group of key collaborators and public outreach. The study team frequently returned to the other groups to review and obtain approval for additions, deletions, and changes to the Mid-Valley ATP as it approached finalization.



WORKING TOGETHER ON A CONNECTED ACTIVE TRANSPORTATION SYSTEM FOR ALL AGES & ABILITIES.

OVERALL GOALS:

VISION:





ALL PROJECTS For the MID-VALLEY REGION

There were 245 projects in total evaluated across all six cities.



Figure 2. The Mid-Valley ATP connected Backbone Network



Thirty-three projects were identified as critical to create the Backbone Network.



ALL PROJECTS

FOR COTTONWOOD HEIGHTS

There are 51 projects in total for Cottonwood Heights. Refer to **Chapter 8** for a complete list of these projects.

Figure 3. All projects for Cottonwood Heights



BACKBONE NETWORK

There are six projects in the Backbone Network that are in or intersect Cottonwood Heights.

- Buffered bike lane
- Multi-use path
- Neighborhood Byway
- Shoulder bikeway

Figure 4. All backbone network projects in Cottonwood Heights

Cottonwood Heights Backbone Network Project and Cost List

#	PROJECT	CODE*	ТҮРЕ	COTTONWOOD HEIGHTS LENGTH	TOTAL LENGTH	COTTONWOOD HEIGHTS COST	TOTAL COST
7	Fort Union Blvd: 1300 E to Wasatch Blvd	РР	Multi-use Path	18,580'	18,580'	\$2,955,000	\$2,955,000
11	1300 E: Approx. Elgin Ave to South Union Ave	2A	Buffered Bike Lane	5,420'	33,000'	\$33,000	\$231,000
23	2700 E: Fort Union Blvd to Bengal Blvd	3	Neighborhood Byway	1,240'	5,160'	\$2,000	\$6,000
254	Wasatch Blvd: 3900 S to Big Cottonwood Canton Rd	PP	Multi-Use Path	5,720′	27,320′	\$910,000	\$4,344,000
271	Highland Dr./Van Winkle: I-215 to Creek Rd	2B	Multi-Use Path	6,600'	37,200'	\$27,000**	\$149,000**
283	Wasatch Blvd: City boundary to Fort Union Blvd	РР	Multi-Use Path	17,180'	17,180′	\$2,732,000	\$2,732,000

^{*}This column is part of WFRC's Active Transportation schema for coded values. The code definitions are as follows: **1** = General Cycle Track; **1A** = Cycle Track: At-Grade, Protected with Parking; **1B** = Cycle Track: Protected with Barrier; **1C** = Cycle Track: Raised and Curb Separated; **2** = General Bike Lane; **2A** = Buffered Bike Lane; **2B** = Bike Lane; **3** = General Shared Roadway; **3A** = Shoulder Bikeway; **3B** = Marked Shared roadway; **3C** = Signed Shared roadway; **PP** = Parallel Bike Path, Paved/Multi Use Path; **PU** = Parallel Bike Path, Unpaved; **UN** = Unknown Category.

^{**}These cost estimates reflect the price of a painted bike lane. The estimates have not been updated to reflect Cottonwood Heights city's vision for a future multi-use path.



Figure 5. Cottonwood Heights

NEXT STEPS

FOR COTTONWOOD HEIGHTS

The projects in the Mid-Valley ATP are intended to give each community a list of improvements that are needed to form the Backbone Network. The Mid-Valley ATP is a collective vision, a useful tool that can support specific projects and may also allow funding to become more accessible.

Prioritizing the development of the Backbone Network will benefit regional connectivity. Once completed, it will manifest the multi-jurisdictional commitment for a connected active transportation system for all ages and abilities, as expressed in the vision statement. However, when seeking funding, whether individually or multi-jurisdictional, it is advantageous for communities to be flexible and adaptable.

After the Mid-Valley ATP is adopted, energy and efforts should be focused on completing the Backbone Network and all other fundable projects that connect key origins and destinations throughout the six cities. All projects should contribute to the overarching goal of providing a regional active transportation system based on user needs, comfort level, and ease of accessibility.



CHAPTER 1

INTRODUCTION TO ACTIVE TRANSPORTATION



PLAN PURPOSE

The number of people in Utah who walk or bike to their destination is growing quickly. Utahns are looking for safe active transportation routes in their communities. That is why the six cities of Millcreek, Murray, Taylorsville, Holladay, Midvale, and Cottonwood Heights teamed up to plan for a better regional active transportation network. The Mid-Valley ATP created a regionally connected Backbone Network that offers safe, comfortable, and direct routes between origins and destinations. Beyond the Backbone Network, over 200 other projects were identified and vetted to create a regional active transportation plan list and map.

This plan focuses on developing an active transportation network that promotes equitable and healthy lifestyle choices for residents. It is an effective tool to help the six cities prepare for a future regional community that is connected, inviting, beautiful, and provides safe mobility options to everyone.

Perhaps the most important part of the Plan is capital improvements projects. These projects represent the needs of the growing communities and address the demand for a more complete multi-modal transportation system.

There are 244 proposed and vetted active transportation projects identified on the final project map and list in addition to the backbone projects. The numbering of each project does not reflect any hierarchy of importance or ranking.



MAKING THE Case for active Transportation

Walking and bicycling are more popular than ever before. Bicyclists and pedestrians need safe, convenient walking and biking routes. Utahns want increased transportation choices and expanded connectivity for active transportation, which comes through regional projects. This Plan provides implementable projects that address this need while providing the following benefits:



TODAY'S WALKING AND Biking Challenges

Unsafe conditions and lack of connections are significant barriers for people walking and biking. Wide roads with lane widths designed for dangerously fast speeds dominate much of the study area's roadway system. The lack of existing comfortable and safe active transportation facilities that offer connections to everyday destinations is a major barrier to people getting around without using a car.

COTTONWOOD HEIGHTS' PRIORITIES FOR ACTIVE TRANSPORTATION -

Cities in Salt Lake County are working closely with the County's Active Transportation Improvement Plan (ATIP). The ATIP aims to develop a transportation network that provides choices for everyone, including those who cannot or choose not to use automobiles for all or some of their trips. For more information about the ATIP, please see Chapter 2: Existing Conditions.



ENHANCES SAFETY

Designing roads for all people and modes creates safer environments where the speed of vehicles is not the only priority of design. Comfort, safety, and pedestrian level connections have more credence when design elements consider walkers, bicyclists, and all members of the community that travel along the public right of way throughout the day.



ECONOMICS

Cycling and walking as a means of commuting minimize the need to own and operate a costly vehicle and charge economic development*. A study in Salt Lake City demonstrated

that businesses along 300 South experienced an 8.8% increase in sales after the construction of fully separated bike lanes, compared to a 7% increase that the rest of the city experienced at the same time**.



ACCESSIBILITY For everyone

The Americans with Disabilities Act ("ADA") requires new facilities to be accessible to all people. Active transportation

improvements, therefore, create an opportunity to improve existing ADA accommodations. Many active transportation designs incorporate safer crossings, pedestrian refuge islands, widened sidewalks and shared-use paths, and many other elements that improve safety, mobility, and access to all.



MAKES A

HEALTHIER COMMUNITY

Providing safe and easily. accessible sidewalks and bike infrastructure allows people to incorporate exercise into their daily lives, improving the overall health of the community.



IMPROVES QUALITY OF LIFE

Having access to active transportation facilities is increasingly sought after in Utah. The addition of more biking and walking trails and pathways throughout the region will create a better quality of life for residents and may increase adjacent property values*.



RELIEVES PEOPLE OF THE FINANCIAL Burden of vehicles

Active transportation options help relieve_ the community of the financial burden of vehicles. Housing and vehicle ownership require too much income for far too many people. A 2017 report from the US Government

Accountability Office found that 48% of Americans are "rentburdened," meaning they spend more than 30% of their household income on rent. Those households that fall under the categories of "extremely low-income and very low income" households pay over 80% of their monthly income to rent. Adding the cost of one or two vehicles to this financial reality is a burden that has a multigenerational effect.



PEOPLE SPEND MORE BY MAKING Smaller Purchases But More Trips every Month

When people can make shopping trips on foot or using a bike, they make more frequent, smaller trips, which leads to higher spending each month.

A city-led economic study found this to be true in Salt Lake City when evaluating the rate of sales increase along 300 South before and after bike lanes were installed**.

*Source: Iroz-Elardo, N. (2017, June 21). Economic Impacts of Active Transportation **Source: 300 South Progress Report Broadway Protected Bike Lane, http://www.slcdocs.com/transportation/Project/300South/300SouthProgressReport.pdf

PLAN OVERVIEW

The Mid-Valley ATP followed five steps: Vision, Brainstorm, Evaluation, Design, and Delivery. Breaking down the project into these stages with direct and transparent communication of timelines to the steering committee, key collaborators, and the public allowed easy tracking of progress. The plan progressed by narrowing down specific projects and resulted in a final Backbone Network and associated project list. This page shows the steps for the Mid-Valley Active Transportation plan and provides a snapshot of each step.







LEYACTIVE

VISION

HOLLADAY • MIDVALE MILLCREEK MURRAY TAYLORSVILLE

Develop a Vision and identify clear and actionable goals based on each city's active transportation needs and objectives for the network.







BRAINSTORM

Develop a "universe of potential options" and a draft backbone network/ project list that includes all Committee, agency, and public input.





EVALUATION Arrive at prioritized list of projects based on a multi-level evaluation/screening process



Develop reliable concept level designs and estimates for the top priority





An accessible and interactive plan that both everyday users and decision makers can use and detailed funding documentation for each city's use to secure funding for implementation.





STEP 1: Vision

PROCESS

STEP 2: Brainstorm 🖲 STEP 3: Evaluation 🐼 STEP 4: Design

The vision process brought the study team and the key collaborators together to develop a collective vision and identify clear and actionable goals based on each city's active transportation needs and objectives for the Backbone Network. The brainstorming process identified potential projects and combined internal feedback from key collaborators with public comments. Projects in the Mid-Valley study area already on existing plans were also included. The brainstorming process produced the universe of options for

potential projects for the Mid-Valley study area. The evaluation process took the potential projects created from the brainstorming process and weighed them against variables that evaluated connectivity, how each project served community members, and the collectively identified values of the Mid-Valley Vision Statement. Conceptual designs were created for projects on the Backbone Network. In total, four designs are included, and each city had at least one project design. The designs for each project were imported into Google Earth in the form of KMZ files, which makes viewing, sharing, and exploring the designs' details easy.

💮 STEP 5: Delivery

The delivery phase prepares the project team and steering committee to present to city councils and planning commissions. The team produced a final project map and list, including the Backbone Network. It is intended for the Backbone Network to be amended into the WFRC's Regional Transportation Plan (RTP).



CHAPTER 2

EXISTING Conditions What is happening now?

COTTONWOOD HEIGHTS | MID-VALLEY ACTIVE TRANSPORTATION PLAN

EXISTING PLANS AND PROGRAMS

At the onset of the Mid-Valley ATP, the project team evaluated existing plans and policies to establish a baseline of understanding on which to build the plan.

LOCAL PLANS

COTTONWOOD HEIGHTS BICYCLE AND TRAILS MASTER PLAN

This active transportation Plan's purpose "is to propose strategies to create a cohesive and functional network of trails and bicycle lanes throughout the city." A key goal of the Plan is to make active transportation "a viable option within the city, and between Cottonwood Heights and its surrounding communities." All the projects identified in this Plan were carried over to the Mid-Valley ATP.

Learn more about the plan at <u>https://www.cottonwoodheights.utah.gov/city-</u> services/community-development/adopted-and-<u>special-plans</u>



Figure 6. Cottonwood Heights City General Plan

EXISTING PLANS AND PROGRAMS

REGIONAL- AND COUNTY-LEVEL PLANS & PROGRAMS



WFRC 2019 - 2050 REGIONAL TRANSPORTATION PLAN

The Regional Transportation Plan (RTP) is the vision created by the WFRC with direct input from cities. Updated every four years, the RTP sets forth a strategy for regional transportation investments for all modes according to the collective vision of increasing quality of life in the region. The plan also details phased investment recommendations (Phase One: 2019 to 2030, Phase Two: 2031 to 2040, Phase Three: 2041 to 2050).

The RTP calls for approximately 137 new miles of active transportation facilities within the Mid-Valley region, with 87 miles of facilities recommended in Phase One, 47 miles of facilities recommended in Phase Two, and three miles recommended in Phase Three. For more information, as well as a full list of projects in the Mid-Valley area, visit the website at <u>https://wfrc.org/vision-plans/regional-transportation-plan/2019-2050-regional-transportation-plan/</u>



WFRC TRANSPORTATION AND LAND USE CONNECTION PROGRAM

The WFRC Transportation and Land Use Connection program provides technical assistance to communities in their planning efforts to reduce travel demand and plan for future growth, implementing the Wasatch Choice Regional Vision. This program is a partnership between WFRC, UTA, UDOT, SLCo, and others and operates in conjunction with the RTP.

The Mid-Valley ATP was funded in part by the WFRC's Transportation and Land Use Connection (TLC) program.

Learn more about this program at https://wfrc.org/programs/ transportation-land-use-connection/



WFRC WASATCH CHOICE REGIONAL VISION

The Wasatch Choice Regional Vision is a map that reflects the shared community goals for transportation investments, land use, and economic development to bring about preferred outcomes at the local and regional scales. The vision focuses on four key strategies:

- provide transportation choices
- support housing options
- preserve open space, and
- link economic development with transportation and housing decisions.

Learn more about the Wasatch Choice Regional Vision at <u>https://wfrc.</u> org/vision-plans/wasatch-choice-2050/

SLCO ACTIVE TRANSPORTATION IMPLEMENTATION PLAN

Salt Lake County aims to provide safer, more sustainable transportation options for residents and visitors alike by creating a valley-wide, high-comfort, connected bicycle network through its 2017 Active Transportation Implementation Plan (ATIP). This plan identifies and prioritizes bicycle routes and enhancements between communities, community destinations, public transit, and other regional routes. The ATIP compiles prior plans and studies from UDOT, UTA, regional partners, the County, and cities. The ATIP exists as a detailed and living map that documents planned and existing active transportation routes.

Learn more about this plan at <u>https://slco.org/planning-transportation/</u> transportation-portal/active-transportation/

EXISTING CONDITIONS AT-A-GLANCE • ALL SIX CITIES





STRAVA

Strava is a mobile app and website that uses GPS tracking to record the route of a cyclist, runner, jogger, walker, etc. The data provides information about where some people are participating in active transportation. This data is only representative of a small segment of the general population. It doesn't represent all active transportation users, just those that have and use the app. However, it is beneficial to see where these active transportation trips occur along the road network.



LEVEL OF TRAFFIC STRESS

Level of Traffic Stress (LTS) is a 1-4 rating system, where 1 is the most comfortable road for an active transportation user, and 4 is the least comfortable road. When each bikeway's LTS is determined, bikeway network connectivity can be evaluated by comfortability.



EXISTING CONDITIONS AT-A-GLANCE • COTTONWOOD HEIGHTS

COTTONWOOD HEIGHTS

Cottonwood Heights currently has **28.1 MILES** of existing Active Transportation Facilities

MILES	TYPE	% OF ALL 6 CITIES
9.1	Bike Lanes	54%
1.8	Buffered Bike Lar	nes 47%
12.3	Shared Roadway	29%
4.0	Trails/Paths	18%
0.8	Other	54%



ACTIVE-TRANSPORTATION-RELATED CRASHES (2014 - 2018)

48 Total 5% of all AT crashes in all six cities

Bike- and Ped-involved Crashes by Injury Severity



27 Pedestrian-involved 5% of all six cities



21 Bicyclist-involved 6% of all six cities

ACTIVE-TRANSPORTATION-RELATED CRASHES BY INJURY

AMT	INJURY %OF	ALL SIX CITIES
0	Fatal	0%
2	Suspected Serious Injury	2%
15	Minor Injury	5%
25	Possible injury	7%
6	No Injury	11%

TRANSIT ACTIVITY

Total average daily boardings and alightings at bus stops (2019).



STRAVA

Fatal

Suspected Serious Injury

Suspected Minor Injury

Possible Injury
 No injury/PDO

Strava is a mobile app and website that uses GPS tracking to record the route of a cyclist, runner, jogger, walker, etc. The data provides information about where some people are participating in active transportation. This data is only representative of a small segment of the general population. It doesn't represent all active transportation users, just those that have and use the app. However, it is beneficial to see where these active transportation trips occur along the road network.



TOTAL ORIGINS AND DESTINATIONS

LEVEL OF TRAFFIC STRESS

Level of Traffic Stress (LTS) is a 1-4 rating system, where 1 is the most comfortable road for an active transportation user, and 4 is the least comfortable road. When each bikeway's LTS is determined, bikeway network connectivity can be evaluated by comfortability.



MID-VALLEY ACTIVE TRANSPORTATION PLAN | COTTONWOOD HEIGHTS

ACTIVE TRANSPORTATION INFRASTRUCTURE

This section provides an overview of the active transportation infrastructure types discussed in this plan and provides instances where they may exist in Cottonwood Heights.



BIKE LANES

This type of bikeway uses signage and striping to delineate the right-of-way assigned to bicyclists and motorists. Bike lanes encourage predictable movements by both bicyclists and motorists. Cottonwood Heights has segments of bike lanes on Wasatch Blvd from 8165 South to 9249 South and Creek Road from 1319 East to 3319 East, among other locations.



NEIGHBORHOOD Byways

Neighborhood byways, also known as bicycle boulevards and neighborhood bikeways, are residential streets where bicycles and pedestrians are given priority. In Cottonwood Heights, this includes Parkridge Drive.

SHOULDER BIKEWAY

Shoulder bikeways are paved shoulders of rural roads that provide an area for bicycling that reduces speed conflicts with faster-moving motor vehicles. Paved shoulders typically do not meet accessibility requirements for pedestrians. An example of a shoulder bikeway in Cottonwood Heights would be Wasatch Blvd (6525 to 8889)/ North Little Cottonwood Road from 8931 South

BUFFERED BIKE LANES Like bike lanes, buffered bike lanes use signage and striping

lanes use signage and striping to delineate the right-ofway assigned to bicyclists and motorists. A buffered bike lane includes a one- to three-foot-wide striped zone between either the travel lane, or the parking lane, or both. Notable buffered bike lanes can be found on Bengal Blvd from 2051 South to 3319 South.



PROTECTED BIKE LANE

Protected bike lanes are bike lanes separated from vehicle traffic lanes by curbing, onstreet parking, planters, or other physical barriers. There are currently no examples of this in Cottonwood Heights.

SIDEWALK

to 9379 South.

Sidewalks are paved footpaths commonly found adjacent to roads, separated by a buffer of some sort like park strips.



These combination trail/bikeway facilities are separate from roads and are for bicyclists and pedestrians. These can also be considered urban trails. Cottonwood Heights' notable multi-use paths include the Big Cottonwood Canyon Trail.

SHARED ROADWAYS

Shared roadways are designated bicycle routes where bicyclists and cars operate within the same travel lane. These facilities may be marked with wayfinding signage and/or shared lane markings ('sharrows'). An example of a shared roadway in the area includes Parkridge Drive from 1541 East to 1999 East.



A trail path is an off-road passage typically alongside rivers, lakes, canals, etc. Similar to a multiuse path, trails allow people to walk, hike, or other uses. Trail paths may be paved or unpaved. Some of Cottonwood Heights' trails include the Big Cottonwood Canyon Trail.





OVERVIEW AND Existing Network

Existing active transportation facilities are dispersed throughout the six cities. Many people use these facilities on foot, bike, or however a person decides to travel from point A to point B. Where active transportation facilities do not exist, people still rely on active transportation to travel. This chapter highlights the existing conditions for the Mid-Valley study area through the level of traffic stress (LTS) for people cycling alongside the roadway network, current safety conditions for pedestrians and bicyclists, and levels of active transportation participation through STRAVA data, an app that tracks users travel behavior on a voluntary basis. For STRAVA section of this Plan.

Figure 7. Cottonwood Heights Overview and existing network



Figure 8. Level of Traffic Stress (LTS) for the Mid-Valley region

Figure 9. General categories of bike riders. Data source: Portland Bureau of Transportation



Safety, comfort, and connectivity are three key indicators that determine who and how many people ride on a bicycle facility. The public can be divided into general categories of bicycle ridership, with most people being "interested but concerned" when riding bikes on the road. This information is often a factor in determining why a certain facility type is recommended when designing active transportation facilities. Figure 9 shows the four general types of bike riders.

Level of traffic stress (LTS) is a rating system based on the numbers 1-4, where 1 is the most comfortable or least stressful road for an active transportation user, and 4 is the least comfortable or most stressful road. Evaluating LTS can help planners understand what type of rider will feel comfortable and safe in a given facility. When each bikeway's LTS is determined, bikeway network connectivity can be evaluated by the level of comfort.

LEVEL OF TRAFFIC STRESS • COTTONWOOD HEIGHTS



Figure 10. Level of Traffic Stress (LTS) in Cottonwood Heights

CRASHES AND SAFETY ANALYSIS • ALL SIX CITIES



Figure 11. Pedestrian and bicycle-related vehicle crashes in all six cities. Data source: UDOT, Numetrics.

FATAL AND SERIOUS INJURY CRASHES BY MODE FOR EACH CITY (2014 - 2018)



Figure 12. Fatal and serious crashes by mode. Data source: UDOT Numetrics



CRASHES AND SAFETY ANALYSIS • COTTONWOOD HEIGHTS



Figure 13. Pedestrian and bicycle-related vehicle crashes in Cottonwood Heights. Data source: UDOT, Numetrics.

One of the stated goals for the Mid-Valley ATP is to prioritize safe routes for all people walking and cycling. To understand safety concerns in the six cities, the project team used data from the Utah **Department of Transportation (UDOT) Traffic and** Safety Division, showing vehicle crashes from 2014 to 2018 involving pedestrians and bicyclists. Figure 11 shows where concentrations of crashes occurred across all six cities, and Figure 13 shows where concentrations of crashes occurred in the city. Most of these happened along busy corridors such as Redwood Road, State Street, 3300 South, and 4500 South. While these roads have a high LTS, they may be the most direct connection between an origin and a destination. Like those driving in cars, active transportation users often want to get to their destination as efficiently as possible.

BICYCLE AND PEDESTRIAN CRASHES

Data on the number and proportion of pedestrian and bicycle crashes informs the prioritization of

RATIO OF PEDESTRIAN- AND BICYCLING-RELATED CRASHES



active transportation projects and the specific design choices for each facility.

Special attention should be paid to locations where serious and fatal crashes have occurred. The Mid-Valley ATP has safer facilities planned on many of these corridors. These projects create safer environments for people

walking and biking.



Figure 14. Overall pedestrian- and bicyclist-involved vehicle crash density. Data source: UDOT, Numetrics.

CRASH DENSITY • ALL SIX CITIES

RECOMMENDED ACTIVE TRANSPORTATION FACILITY TYPE BY ROADWAY CONTEXT



Figure 15. Recommended active transportation facility type by roadway context. Data Source: Bikeway Selection Guide.



Within each city, some corridors and intersections offer minimal protection to people walking and cycling. Barriers and lack of alternative connections may force people onto these roads, putting them in risky situations.

The Federal Highway Administration (FHWA) offers guidance for selecting the appropriate active transportation design depending on roadway type. Figure 15 shows the level of protection recommended by the FHWA. By ensuring that a project's location and the design choice for a project dovetail with recommendations such as these will greatly benefit specific areas of concern throughout the Mid-Valley ATP study area. More information can be found at <u>https:// safety.fhwa.dot.gov/ped_bike/tools_solve/</u> <u>docs/fhwasa18077.pdf</u>.

CRASH DENSITY • COTTONWOOD HEIGHTS



Figure 16. Overall pedestrian- and bicyclist-involved vehicle crash density Data source: UDOT, Numetrics.

STRAVA-BASED WALKING AND BICYCLING TRIPS • ALL SIX CITIES

Strava is a mobile phone app that uses GPS tracking



Figure 17. Total STRAVA bike trips for all six cities



Figure 18. Total STRAVA pedestrian trips for all six cities

routes, mainly those that run along roads that are classified as arterials and collectors, such as Wasatch Boulevard, receive the highest amount
STRAVA-BASED WALKING TRIPS • COTTONWOOD HEIGHTS



Figure 19. Total STRAVA bike trips for Cottonwood Heights

BICYCLING

AND



Figure 20. Total STRAVA pedestrian trips for Cottonwood Heights

STRAVA-BASED TRIPS: ORIGINS & DESTINATIONS • ALL SIX CITIES



Figure 21. STRAVA-based Trips: Key Origins and Destinations for all six cities.

STRAVA

This data, while helpful in illustrating patterns of walking and bicycling activity in the east half of the study area, provides limited insights on patterns in the west half of the study area. UTA's transit boarding data provides an alternate source to understand how people are traveling, often including a bike or walk trip on either side of a transit trip. Figures 24 and 26 shows estimated totals of daily boardings from UTA bus stops and TRAX and FrontRunner stations in 2019. Figure 25 shows boardings both by transit type and by city, also in 2019. Most transit trips include active transportation during the first mile or the last mile leg of a trip. It is much less likely that a transit stop will be directly next to both a trip's origin and destination than the likelihood that a person will need to walk or bike to a transit stop. These first- and last-mile connections are very important and can make the difference between transit being a burden or a convenience. A community with an effective transit system needs to provide active transportation access to and from stops, which means there needs to be connected pedestrian and bicycle networks that provide access.

COMBINED STRAVA-BASED ORIGINS AND DESTINATIONS BY CITY (2018)



Figure 22. Combined STRAVA-based Key Origins and Destinations by Mode

39



Figure 23. Total Average daily transit boardings and alightings for all six cities. Data source UTA AVERAGE DAILY TRANSIT BOARDINGS & ALIGHTINGS (2019) BY CITY

22,640 TOTAL AVERAGE DAILY BOARDINGS + ALIGHTINGS



Figure 24. Total Average daily boardings and alightings for all six cities. Data source UTA



COTTONWOOD HEIGHTS



travel may change weekly, daily, or trip by trip.

Figure 25. Total Average daily transit boardings and alightings for Cottonwood Heights. Data source: UTA



CHAPTER 3

VISION, GOALS, AND SUBGOALS

COTTONWOOD HEIGHTS | MID-VALLEY ACTIVE TRANSPORTATION PLAN

The project team, which included representatives from the six cities, created and approved the following Vision Statement for the Plan:

"WORKING TOGETHER ON A CONNECTED ACTIVE TRANSPORTATION SYSTEM FOR ALL AGES AND ABILITIES."

Supporting this Vision Statement were the following goal statements:

- Prioritizing safe routes for all
- Completing a connected Backbone Network
- Collaborating for public & multi-city commitment
- Improving access to key origins & destinations

GOALS AND SUBGOALS

Key collaborators developed the Mid-Valley Vision Statement during the Vision workshop held at the UDOT Complex on February 10, 2020. Themes and goals manifested themselves into main themes that became the vision statement's five goals. The following are the goals, and below each are the subgoals, ideas, and phrases that came out of the visioning process.

PRIORITIZING SAFE ROUTES FOR ALL

- On-street safety
- A greater understanding of the needs of the city and the public
- Making the right decisions for the community

COMPLETING A CONNECTED BACKBONE NETWORK

- Expanding the network.
- No gaps connecting beyond boundaries
- Improving access to key origins and destinations

COLLABORATING FOR PUBLIC AND MULTI-CITY COMMITMENT

- Connected city plans with a multi-jurisdictional commitment
- Complete buy-in from officials and the public
- Design standards across cities

IMPROVING ACCESS TO KEY origins and destinations

- Make the dead ends work
- Better east to west, transit, parkway, and community connections
- Proximity and linking to regional and local destinations
- Find parallel routes to state roads if they are unavailable or inaccessible

DEVELOPING AN IMPLEMENTABLE Project list

- A living plan that is adaptable
- Utilizing quick wins, phased approach
- Use of existing infrastructure

For each of these goal statements, the project team developed metrics that each potential corridor or project could be evaluated against.

TYING GOALS TO DATA AND OBSERVATIONS

HOW WE QUANTIFY IT:



GOALS

Identify areas of highest-priority for safety improvements using the High Injury Network (HIN).



Identify gaps in the existing and planned active transportation network where facilities need to connect communities and cross barriers.



Tally support for facilities from stakeholder and public comments.



Identify routes that connect to major centers but lack a comfortable way to get there, using accessibility analysis tools.

Identify places where demand for active transportation facilities is probably high using a latent demand network.

Each individual proposed option was ranked based on how well it met the metrics outlined above. The process for evaluating these metrics is described in the following chapter.



CHAPTER 4

EVALUATION

DETERMINING WHERE IMPROVEMENTS ARE NEEDED



METRICS EVALUATION PROCESS







PUBLIC AND CITY COLLABORATION

The project team gathered comments from both City stakeholders and the public to identify places where people most wanted improvements to cycling and walking facilities. City stakeholders provided comments at a February 2020 meeting, which were then digitized into a geographic information system (GIS) as proposed project locations. The public provided comments via a GISbased web map, which were then combined with the stakeholder comments to create a combined layer of all desired project locations indicated by the public and stakeholders. Project options received a score if they overlapped with locations desired by the public or stakeholders.

CONNECTED BACKBONE NETWORK ANALYSIS

Proposed active transportation facilities should improve connectivity and fill gaps in the existing and planned networks. Facilities were prioritized based on whether each one would:

- Connect current or planned facilities;
- Connect across or between communities as well as regionally; or,
- Fill a critical gap or eliminated barriers between facilities.

This process resulted in an identified set of facilities that best improve community connectivity.

HIGHEST POTENTIAL BICYCLE AND PEDESTRIAN DEMAND

The Wasatch Front Regional Council updated regional models for estimating potential demand for bicycle and pedestrian activity (first developed for the Utah Collaborative Active Transportation Study (UCATS) in 2013). These models take into account factors such as land use, socioeconomics, and transportation networks to provide an indexed score for each roadway: higher scores indicate a greater likelihood of demand for biking and walking, whereas lower scores indicate a lower likelihood of demand. The street segments with the highest 20% of scores for both bicycling and walking were isolated in GIS, and project options that overlaid with these areas received a score to prioritize them in the overall ranking process.







SAFETY ASSESSMENT USING THE HIGH INJURY NETWORK

The project team identified areas with the greatest need for safety improvements by creating a High Injury Network based on reported crash data. The High Injury Network is based on assigning collisions to individual links of a roadway network. The project team used collision data from 2017-2019 taken from UDOT's Numetric database, isolating bicycle and pedestrian collisions from the rest of the database. The High Injury Network clearly shows locations with elevated rates of fatalities or serious injuries and highlights roadway segments where corridor improvements have the greatest potential to enhance safety for people walking or bicycling. Project options were scored based on whether they overlapped with the High Injury Network for bicyclists and pedestrians.

ACCESSIBILITY TO DESTINATIONS ON THE LEVEL OF TRAFFIC STRESS

The project team analyzed how each proposed facility would improve the public's ability to travel to jobs, shopping, recreation, and other public amenities. Using a GIS analysis framework, the team estimated how many households can access community amenities (including parks, trailheads, schools, shopping centers, civic centers, and healthcare facilities) by bicycle under current conditions. This analysis used a level of traffic stress network to inform where cyclists can and cannot ride comfortably.

For each proposed new facility, the team estimated the increase in households that can access various amenities thanks to the enhanced connections that the facility provides to the regional network. This analysis was conducted for the regional population as a whole to understand which projects provide the greatest benefits.

CONSOLIDATION AND SCORING

Based on all five of the metrics above, each project received an overall score reflecting how well it supports the Plan's goals. While these scores were not the sole basis for prioritizing active transportation facilities, they provided the project team with a starting point for further refining how proposed facilities should be prioritized and implemented.



CHAPTER 5

PUBLIC INVOLVEMENT AND COMMUNITY PRIORITIES

COTTONWOOD HEIGHTS | MID-VALLEY ACTIVE TRANSPORTATION PLAN

PUBLIC AND STAKEHOLDER ENGAGEMENT

Community and stakeholder engagement are significant parts of the planning process. Experts make decisions that serve the community from a functional perspective, but the public's input guides these decisions. While the COVID-19 pandemic and subsequent public health measures hampered in-person outreach efforts, there were extensive online community and stakeholder engagement. These included a project website with interactive maps, public surveys tailored to each of the six cities, social media and email blasts, and multiple meetings with stakeholders and key collaborators. This chapter covers the input resulting from these efforts that provided invaluable information contributing greatly to the planning process.





KICK-OFF BIKE RIDE

A bike tour, that took place on October 19, 2019, was the unofficial start of the project. It brought together stakeholders to experience various active transportation facility types in Salt Lake City – what works in what conditions, how does it help create comfort, human scale, wayfinding, etc.

The purpose of the bike tour was to ensure everyone involved in the Mid-Valley ATP had the opportunity to experience a variety of bike facility types firsthand. This allowed people to determine what works in what conditions and how certain design choices can create a comfortable experience for the active transportation user. The group traveled along curb-protected bike lanes, buffered bike lanes, roads marked with sharrows, through chicane fencing around railroad crossings on a shared-use path, paths around Liberty Park, and through road intersections that have been designed to provide high levels of comfort and safety for people walking and cycling. The complete ride was recorded and can be viewed at https://www.youtube.com/ watch?v=f7oXt04XwVM



Figure 26. Chicane fencing are installed at places like rail crossings to increase safety by slowing down people on foot or bikes and to make them look both directions before crossing. Image source: Google



Figure 27. The Mid-Valley bike tour kicked off the project on October 17, 2019.

COMMUNITY OUTREACH

Community outreach was restricted to online methods during the Mid-Valley ATP due to COVID-19 social distancing protocols. Initially, public involvement included multiple outdoor community events across the study area with locations in each of the six cities. These events were intended to collect public feedback and inform the public of potential projects during the evaluation and design processes. However, these events were unable to proceed due to the ongoing COVID-19 pandemic and subsequent public health guidelines.

PROJECT WEBSITE

While in-person public involvement was prohibited, the project team developed and frequently updated the project website, <u>www.midvalleyatp.com</u>.

COMMUNITY SURVEYS

Two community surveys were launched through this website. The first survey gathered information on issues and ideas from the public and ran from March 4 through April 15, 2020. The second survey was open from January 28 to March 19, 2021, and gave an opportunity for community feedback on the refined, near-finalized project list. These surveys were advertised on the social media platforms of all six cities, as well as the WFRC email list, Bike Utah, and Millcreek City email distribution lists.



Figure 28. Mid-Valley ATP website: phase one (L), and Phase 2 (R)

COMMUNITY ENGAGEMENT TIMELINE



COMMUNITY SURVEY #1

While COVID-19 significantly changed the public outreach approach, the shift in strategy produced results. The public engagement process gathered feedback through online outreach.

The regional community's input was critical for developing the universe of options. The online survey and the interactive maps for the study area proved to be a great platform for receiving public input.

Interactive map responses were either

- drawn as **points** on a map, which allowed the public to provide comments about specific locations that should be considered when creating active transportation projects,
- drawn as **lines** on a map, which allowed the public to draw where a project should be located.

Participants were prompted to draw or ask for anything they imagined related to active transportation. Over 650 people participated, and over 900 responses were collected from the interactive maps. This was incredibly valuable for early project knowledge as we developed projects and evaluations.

The public input from the interactive maps combined with the lines drawn from the brainstorming meeting and the planned facilities included on existing active transportation plans created a range of potential projects that the study team put through the evaluation process. Figure 30 shows the results of this outcome on one map.

COMMUNITY SURVEY #1



Figure 29. Online community survey #1 results mapped for all six cities

The online survey provided valuable insight into the type of projects desired, the level of use, and the state of existing active transportation



Figure 30. Community Survey #1 landing page

like 'bike lane,' 'trail,' or 'connection is needed.' Several roads (such as 3900 South became a top-ranked Backbone Network project) had many lines and comments attached to them, while other roads had no comments.

Prior to the public input, the study team may have considered some of these roads equally significant to the future active transportation network. The survey map showed what projects were of the highest importance to the public. This process provided the study team with a high level of certainty that the collection of lines and comments on the map was a realistic representation of what active transportation facilities the public wanted throughout Mid-Valley.

COMMUNITY SURVEY #2

With projects finalized, including the Backbone Network, the project team solicited feedback



Figure 31. Survey #1, question 1 results for Cottonwood Heights



Figure 33. Survey #1, question 2 results for Cottonwood Heights



Figure 32. Survey #1, question 1 results for all six cities



Figure 34. Survey #1, question 2 results for all six cities

MID-VALLEY ACTIVE TRANSPORTATION PLAN | COTT<u>onwood heights</u>

IF YOUR IDEAL WALKING AND BICYCLING FACILITIES WERE AVAILABLE, HOW OFTEN WOULD YOU USE THEM? 1% Never



HOW SHOULD YOUR COMMUNITY PRIORITIZE SPENDING OF ACTIVE TRANSPORTATION FUNDS?



COMMUNITY SURVEY #2



Figure 39. Online community survey #2 results mapped for all six cities



Figure 40. Community Survey #2 landing page

To efficiently manage producing an effective regional active transportation plan that meets the individual needs of six cities, three separate working groups were crucial to the development of the plan :

- Study Team: Members of the consultant's team and WFRC
- Steering Committee: one representative from each of the six cities
- Key Collaborators: additional city representatives such as city engineers, public works directors, economic development directors, planning commissioners, city council members, and concerned residents. Key Collaborators also included representatives from UDOT, UTA, Bike Utah, Salt Lake County Bicycle Advisory Committee (SLCCBAC).

The collaborative planning process was instrumental during every step of the Plan process. Regularly scheduled meetings and other frequent communications kept the key collaborators up to date on all changes and progress along the way. Insight from key collaborators provided a depth of local knowledge, judgment, and professional expertise that allowed the study team to move forward with confidence, knowing that the planning process produced results that would likely obtain community consensus.

STEERING COMMITTEE

Steering committees are advisory bodies that provide strategic oversight and help manage the project and determine priorities. Steering committee meetings were held on the third Tuesday of every month from January to October 2020. The steering committee for this Plan consisted of staff from each of the six cities and WFRC.

Individual city design review meetings were held throughout November 2021 in place of the standard monthly steering committee meeting. Members of the project team attended the meetings, as did steering committee members from the cities and a handful of people who were not key collaborators. These people varied from city to city but included public works directors, city engineers, and various people whose area of expertise and knowledge could benefit the project designs. For a complete list of Steering Committee Members, see the **Acknowledgments page**.

KEY COLLABORATORS

The purpose of the key collaborator's group is to provide a broader perspective and guidance throughout the study. Their local and expert knowledge ensured the plan was both more accurate and useful for the communities. The group met four times throughout the study, including the bike tour, vision workshop, brainstorming workshop, and project review. For a complete list of Key Collaborators, see the **Acknowledgments page**.



MILESTONE MEETINGS



Figure 41. Visioning Summit, February 10, 2020



Figure 42. Key collaborators create the universe of options at the brainstorm meeting at the UDOT Complex, March 9, 2020

VISIONING SUMMIT

The Visioning Summit took place at the UDOT Complex on February 10, 2020. The goal of this summit was to create a collective vision and set of goals to guide the process of brainstorming potential projects. The workshop allowed the key collaborators to provide input on the objectives and goals that would eventually be selected for the vision statement. The chosen vision statement provided a platform for consensus-building when reviewing projects, including the reasoning behind selecting the Backbone Network projects located in each city.

This summit set the stage for the brainstorming meetings, which provided a large amount of qualitative and quantitative information and a deeper understanding of the study area on both micro and macro scales. Overall, the vision helped determine what criteria would be used to evaluate projects. A recording from the Visioning Summit can be viewed at <u>https://</u> youtu.be/Q-aQrEQIjHI.

BRAINSTORM MEETING

The brainstorm meeting took place at the UDOT Complex on March 9, 2020. It was the cornerstone element of the collaborative process. The meeting identified the universe of potential project options and a draft Backbone Network project list that eventually included all comments, feedback, and input from the Steering Committee, key collaborators, and the public. Each of the six cities was individually mapped and placed on a separate table. Each table was seated with community members, who brainstormed projects while drawing out the growing list of options, along with their various comments, observations, and suggestions. During the meeting, all participants ultimately visited each table and each city map, which allowed them to contribute their ideas to other cities and the broader Mid-Valley study area. A recording from the brainstorm meeting can be viewed at https://youtu.be/8mV8iKgr_rQ.

EVALUATION MEETING

The project review meeting took place online, due to the pandemic's onset, on August 24, 2020. A survey was sent out to the key collaborators in July, which had city-specific projects to review and rank. This information was incorporated into the meeting. It also prepared key collaborators for the project review process and discussion. Instead of seeing the projects for the first time during the online meeting, people were aware of which projects were contenders for concept design, and they were ready to provide their opinions and feedback.

As the range of projects became more finite through selection and the data-driven evaluation process, it was necessary to share the results with steering committee members and key collaborators. This meeting was instrumental in refining the evolving draft project list because of the group screening of top identified projects.

The online platform worked well for the meeting, allowing the large group of participants to break into smaller groups to review projects by city and rank them from most important to least important, keeping in mind the vision statement and corresponding goals created months prior to guide the Plan. A predominant factor for the key collaborators to consider when screening the project list was how well each option contributed to the connected six-city Backbone Network.

This meeting offered vetting, validation, and scrutiny for the ranking of projects ensuring the final list included sound data analysis and public representation and feedback.

DESIGN MEETINGS

During the third key collaborators meeting, held remotely on August 24, 2020, we held breakout groups for individual cities. The key collaborators reviewed the top projects and voted on which project should be carried into the design phase. The resulting outcomes were vetted and discussed with the steering committee. This process assured that the final projects chosen for concept design had recognized support by each city, as well as the steering committee representative's approval. For more information on the conceptual design projects, see *I*.



Figure 43. Evaluation meeting, August 24, 2020



Figure 44. Design meeting, August 24, 2020



CHAPTER 6

RECOMMENDATIONS FROM VISION TO IDENTIFIED PROJECTS

COTTONWOOD HEIGHTS | MID-VALLEY ACTIVE TRANSPORTATION PLAN

INTRODUCTION

The planning process began by identifying the collective vision with the key collaborators. Engagement with the public further refined all the potential projects available. Then the extensive review and evaluation process brought the active transportation plan into focus. This led to the final list and map of identified projects. Guided by a collective vision, this list of projects creates a solid foundation to build a regionally connected active transportation system for all ages and abilities. By following the vision statement and its corresponding goals, the project list is not based on past plans but instead on a dream that the community wants to see actualized.

RECOMMENDATIONS

This plan is not simply about identifying routes for trails and bike lanes. This active transportation plan provides a much larger opportunity to realize a regional system that unites each city's key destinations by connecting trails and bike lanes throughout the central Salt Lake Valley while accommodating people of all abilities in safety and comfort.

After the Mid-Valley ATP is adopted, energy and efforts should be focused on completing the Backbone Network and all other fundable projects that connect key origins and destinations throughout the six cities. All projects should contribute to the overarching goal of providing a regional active transportation system based on user needs, comfort level, and ease of accessibility.



Figure 45. All proposed projects for Cottonwood Heights



Proposed Backbone Network Projects

- 🛑 Bike lane
 - Buffered bike lane
- 🗕 Multi-use path
- Neighborhood Byway
- Shoulder bikeway

Figure 46. All proposed backbone projects for Cottonwood Heights

MAP AND LIST OF FINAL PROJECTS

The following project map and list represent the community and regional partners' desires to complete a connected active transportation network. These projects were developed using regional networks, existing facilities, brainstormed options, key origins, destinations, and public input.

COTTONWOOD HEIGHTS

Cottonwood Heights has 49 projects in its city, including 13 multi-use path projects. The map and corresponding list of projects build on the Cottonwood Heights Bicycle and Trails Master Plan, which identifies 24 projects for the city. Figure 33 is a map of the recommended projects for Cottonwood Heights. If all projects are completed as shown, 37.82 miles of AT facilities will be created in Cottonwood Heights. These 49 projects provide the foundation for a complete AT network.

This list of projects is the result of the coordinated effort from the six cities. It is designed to allow people to safely navigate in comfort on a regional network, far beyond their home neighborhoods and cities. These projects offer the benefit of creating enhanced walkability and livability across the Mid-Valley region.

Table 2. Cottonwood Heights Project List

#	PROJECT	CODE *	TYPE	TOTAL LENGTH
7	Fort Union Blvd: 1300 E to Wasatch Blvd	PP	Multi-Use Path	18,580'
11	1300 E: Approx, Elgin Ave to South Union Ave	2A	Buffered Bike Lane	33,000'
23	2700 E: Fort Union Blvd to Bengal Blvd	3	Neighborhood Byway	5,160'
27	South Union Ave/Creek Rd: 1020 E to Siesta Dr	2A	Buffered Bike Lane	2,380'
95	Siesta Dr: Creek Rd to Creek Rd	3A	Multi-Use Path	7,860'
99	Hollow Dale Dr/6670 S/Greenfield Way: 1300 E	3A	Shoulder Bikeway	4.800'
100	1495 E: 6670 S to Fort Union Blvd	3A	Shoulder Bikeway	1,600'
101	La Cresta Dr: Greenfield Way to Highland Dr	2B	Bike Lane	1,020'
102	1700 E/1710 E: Fort Union Blvd to Parkridge Dr	3A	Shoulder Bikeway	3,020'
103	Chris Ln: 7200 S to Parkridge Dr	3A	Shoulder Bikeway	1,300'
104	McCormick Way/Parkridge Dr	3A	Shoulder Bikeway/MUP	14,640'
105	Bengal Blyd: Highland Dr to Wasatch Blyd	2A	Buffered Bike Lane	12,300'
121	2300 E: Big Cottonwood Rd to Bengal Blvd	2B	Bike Lane	9.260'
122	Cavalier Dr: 2300 E to 2700 E	3A	Shoulder Bikeway	2,980'
123	3500 E/Enchanted Hills: Trail to Wasatch	3A	Bike Lane	6,500'
124	Oakledge Rd: Bengal Blvd to Creek Rd	3A	Shoulder Bikeway	1,820'
125	Creek Rd: Highland Dr to 3500 E	3A	MUP/Shoulder Bikeway	10.800'
126	Danish Rd: Bengal Blvd to Creek Rd	3A	Shoulder Bikeway	2.400'
127	Danish Rd/Wasatch Blvd: Creek Rd to South boundary	2B	Multi-Use Path	10.040'
128	North Little Cottonwood Rd: Wasatch Boulevard to Cottonwood Heights Fast Boundary	2B	Multi-Use Path	5.500'
129	2325 F/Nantucket Dr: Bengal Blvd to Bengal Blvd	3A	Shoulder Bikeway	4.620'
130	Portsmouth Ave/Oak Creek Dr: Nantucket Dr to Fast Creek Road	3A	Shoulder Bikeway	2.620'
145	Cottonwood Pkwy: 3000 E to end of Cottonwood Pkwy	2B	Bike Lane	2,520'
154	Fast Jordan Canal Trail: 1495 E to Greenfield Way	PP	Multi-Use Path	3 040'
157	Trail Connection: 1300 E to 1330 E	PP	Multi-Use Path	960'
159	Trail Connection: Magic View to Wasatch Blvd	PP	Multi-Use Path	2 340'
164	Keswick Rd: Siesta Dr to Creek Rd	3A	Shoulder Bikeway	2,010
181	Trail Connection: Highland Dr to 2325 F	PP	Multi-Use Path	2,020
182	Deercreek Rd: Creek Rd to Danish Rd	PP	Multi-Use Path	2,520
183	Trail Connection to Wasatch Blvd	PP	Multi-Use Path	1 320'
184	Danish Downs Ct to Bengal Blvd	3	Neighborhood Byway	1 340'
185	Fort Union Blyd to West of Wasatch Blyd	PP	Multi-Use Path	3 740'
186	Big Cottonwood Canyon Bd to 6200 S	2B	Multi-Use Path	5,840'
187	3000 F: Hollow Mill Dr to Fort Union Blvd	20	Buffered Bike Lane	1 700'
188	Sagebrush Way/7180 St Fort Union Blvd to Banbury Rd	3	Neighborhood Byway	3 000'
189	Trail Connection: Banbury Rd to Magic View Drive	PP	Multi-Use Path	3 080'
190	3000 E/Hollow Mill Dr. Cottonwood Pkwy to Anne Marie Drive	2B	Rike Lane	1 780'
191	Cottonwood Pkwy to Hollow Mill Dr	3	Neighborhood Byway	1 800'
226	Banbury Rd: 2700 E to Brighton Way	2B	Multi-Use Path	2 540'
220	Top of the World Dr: Honeywood Cove Dr to Top of the World Circle	2B	Neighborhood Byway	3 820'
230	2300 S to Bengal Blvd	2B	Rike Lane	960'
230	School Entrance: Creek to Boundary	2B	Bike Lane	1 140'
231	Trail Connection: Fort Union Blvd to 7200 S	PP	Multi-Ilse Path	3 480'
233	6670 S to Highland Dr	PP	Multi-Use Path	1 920'
245	Riverwood Dr/7800 St Siesta Dr to Devin Pl	24	Neighborhood Byway	9,000'
254	Wasatch Blyd: 3800 S to Big Cottonwood Canyon Rd	PP	Multi-Use Path	28 020'
271	Highland Dr. /Van Winkle: I-215 to Creek Rd	2B	Multi-Use Path	37 200'
280	Fort Union Blyd: 700 E to 1300 E	1B	Protected Cycle Track	5 360'
283	Wasatch Blyd: City boundary to Fort Union Blyd	PP	Multi-Use Path	17 120'
286	Creek Rd-Danish Rd: Wasatch Blvd to Siesta Dr	PP	Multi-Use Path	3 300'
287	I-215: Big Cottonwood Creek to Highland Dr	PP	Multi-Use Path	23,496

* This column is part of WFRC's Active Transportation schema for coded values. The code definitions are as follows: 1 = General Cycle Track; 1A = Cycle Track: At-Grade, Protected with Parking; 1B = Cycle Track: Protected with Barrier; 1C = Cycle Track: Raised and Curb Separated; 2 = General Bike Lane; 2A = Buffered Bike Lane; 2B = Bike Lane; 3 = General Shared Roadway; 3A = Shoulder Bikeway; 3B = Marked Shared roadway; 3C = Signed Shared roadway; PP = Parallel Bike Path, Paved/Multi Use Path; PU = Parallel Bike Path, Unpaved; UN = Unknown Category.



CHAPTER 7

DESIGN GUIDANCE ESTABLISH DESIGN STANDARDS

COTTONWOOD HEIGHTS | MID-VALLEY ACTIVE TRANSPORTATION PLAN

Each city identified a top priority backbone project that was carried forward into concept design. These concept designs are high-level and do not account for the potential obstacles, details, or nuances that a final, shovel-ready design would encounter. Rather, the goal was to develop a reliable general concept with an approximate cost estimate that would offer guidance using best practices in active transportation design.

DESIGN MEETINGS

The design process began once the project list approached finalization. It became clear which projects would be part of the Backbone Network. Each city had at least one project design and met individually to discuss, review, and critique the designs located within their borders. A total of fourteen miles of conceptual designs were produced



throughout the regional Backbone Network. The designs for each project were imported into Google Earth in the form of KMZs, which makes viewing, sharing, and exploring the designs' details easy.

Figure 47. Concept designs were imported into Google Earth for easy sharing and review

Conceptual designs were produced for the following projects:

- **3900 South:** (2700 West to Wasatch Boulevard and connecting Holladay and Millcreek)
- **4800 South:** (Redwood Road to 900 East and connecting Murray and Taylorsville)
- Center Street: (Jordan River Trail to Sandra Way, which creates an east to west connection across Midvale)
- **Fort Union Boulevard:** (700 East to 1300 East and connecting Cottonwood Heights and Midvale).



Figure 48. Location of all four conceptual design projects

PROJECTS IDENTIFIED FOR CONCEPT DESIGN

During the third key collaborators meeting, held remotely on August 24, 2020, we held breakout groups for individual cities. The key collaborators reviewed the top projects and voted on which project should be carried into the design phase. The resulting outcomes were vetted and discussed with the steering committee. This process assured that the final projects chosen for concept design had recognized support by each city, as well as the steering committee representative's approval. Four projects were then brought forward into project design: Project #1, #5, #18, and #280.

Table 3. City location of Concept Design Projects

	CONCEPT DESIGN PROJECT					
	#1	#5	#18	#280		
	3900 TO 4100 SOUTH	4800 SOUTH	CENTER STREET	FT. UNION BLVD		
Cottonwood Heights				 ✓ 		
Holladay	✓					
Midvale			✓	✓		
Millcreek	✓					
Murray		✓				
Taylorsville	~	✓				

DESIGN PROCESS



PROJECT #1: 3900 – 4100 MILLCREEK AND TAYLORSVILLE

This project involves a 7.1-mile long, multi-use path designed along the south side of 3900 South, extending from 2300 East in Holladay, through Millcreek to 2700 West in Taylorsville. This conceptual design creates a safe, comfortable, and direct connection among the three cities and opens up travel options to the TRAX Meadowbrook Station, the Jordan River Trail, St Mark's Hospital, Olympus High School, Valley Jr. High School, and many local and neighborhood roads in three cities.

A key goal for each Mid-Valley ATP design is to provide as much separation from vehicles as possible while accounting for utilities such as power poles and keeping the project within the existing public Right-of-Way. This design provides accommodation for a separated bike facility and sidewalks for the entire length of the project. No vehicle lanes are removed to accommodate these active transportation features. However, roadway shoulders become protected cycle tracks, and intersections are redesigned, allowing cyclists and pedestrians to safely travel across roads without vehicles turning right at high speeds.



PROJECT #5: 4800 SOUTH, MURRAY, AND TAYLORSVILLE

Project #5 is located along 4800 South and extends four miles from 900 East in Murray to Redwood Road in Taylorsville. Buffered bike lanes are the primary facility type for this conceptual design and run along both sides of the road until about 1,000 feet before 4800 South meets 700 East. At that location, safety is a heightened concern due to traffic on and heading toward 700 East. Here, the buffered bike lanes become a single, protected cycle track along the south side of the road. This cycle-track offers added protection around 700 East as the project turns to join 900 East. Where the cycle-track begins along 4800 South, curbs are extended out into the road. These curb extensions cause vehicles to slow down due to the reduced width of drivable pavement and provides a safe crossing for pedestrians using the sidewalk on the north side of the road.

This design calls for removed parking in certain locations along 4800 South. In place of the existing roadway shoulders that allow for parking, the space accommodates 6-foot bike lanes and two-foot striped buffers. This conceptual design also allows for adding a new center turn lane in certain areas, permitting traffic passing along 4800 South to flow more freely in these locations. This project provides improved active transportation facilities along a top-ranked Backbone Network corridor. 4800 South's east-to-west connection, past many small neighborhood roads, allows for direct and safe travel between Redwood Road and 900 East.



PROJECT #18: CENTER STREET, MIDVALE

The Center Street project is 1.9 miles in length and is the only conceptual design in just one city. This project is important not just to Midvale but also to the entire region. It provides a valuable east-to-west connection in a location where these active transportation routes are sparse. Because of barriers created by land uses, including the Highways I-15 and 215, the closest project to the north that offers a broader east to west connection is along 5900 South, which is two miles away.

This design provides a blend of buffered bike lanes and separated cycle-track ties directly into the Jordan River Trail. Wherever possible, the separated cycle-track facility was used, providing a high level of safety and comfort for people. This design decision depended on available public Right-of-Way and the location of utilities such as power poles. For example, where the project is closest to the Jordan River Trail, it is possible to have buffered bike lanes along the road, sidewalks, and a two-way separated cycle track that leads to the

Jordan River Trail.

Midvale plans to add medians along Center Street, so the conceptual design incorporates this. This project also crosses under I-15 and two sets of railroad tracks at one point. The sloping concrete walls necessary to support these bridges consume the majority of existing Right-of-Way at this location. The limited space around these features (highway and railroad) is a common design challenge for creating active transportation solutions. For this segment along Center Street, cycle-tracks on both sides of the street merge with the sidewalk, allowing for separation from the road for traveling pedestrians and cyclists.



PROJECT #280: COTTONWOOD HEIGHTS AND MIDVALE

Project #280 is a protected cycle track designed for Fort Union Boulevard from 1300 East in Cottonwood Heights to 700 East in Midvale. Just over a mile in length, this multi-city project provides an accessible east-to-west connection along the southern portion of the Mid-Valley study area. The design calls for protected bike facilities along both sides of the project. A key goal for each Mid-Valley ATP design is to provide as much separation from vehicles as possible while accounting for utilities, power poles, and keeping the project within the existing public Right-of-Way. For this project, park strips and curbing keep the cycle-track off the road while allowing for comfortable 6-foot bike lanes.

The intersections receive important curb improvements, providing for appropriate levels of comfort for people walking and cycling. The curbs extend out further into the intersection, which changes the angle of the curb corners, forcing vehicles to slow down more when taking right turns. Increasing the size of the curbs also shortens the distance between them, which means people walking or cycling spend less time crossing the street.

DESIGN RESOURCES

The following list is a compendium of the most recent and relevant design resources that Cottonwood Heights should consult when constructing new facilities in-house. Since resources are updated regularly, and URL links tend to break over time, none are provided here. However, these resources and their updates are easily accessible via an internet search. Particularly noteworthy are the comprehensive resources provided by Salt Lake County, specifically the Bikeway Design Guide.

LOCAL POLICIES AND PLANS

- Cottonwood Heights Bicycle and Trails Master Plan
- Cottonwood Heights General Plan

REGIONAL RESOURCES

- Salt Lake County Bikeway Design Guide
- Salt Lake County Wayfinding Protocol
- Salt Lake County Active Transportation Implementation Plan
- Salt Lake County Bicycle Best Practice
- Utah Collaborative Active Transportation Study (UCATS)
- UDOT Region 2 Bike Plan
- UTA First/Last Mile Study

STATE RESOURCES

- UDOT Active Transportation Facility Implementation Tool (AT-FIT)
- UDOT 2017 Design Standards & Specifications (incl. Supplemental/ Revised standards)
- UDOT Policy 07-117: Inclusion of Active Transportation
- UDOT Policy 06C-27: Marked Pedestrian Crosswalks
- UDOT ADA Transition Plan 2014
- UDOT Safe Routes to School (SRTS)
- UDOT Safe Sidewalk Program
- UDOT Manual on Uniform Traffic Control Devices (MUTCD)

NATIONAL RESOURCES

- Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way (PROWAG)
- Americans with Disabilities Act Accessibility Guidelines (ADAAG)
- A Policy on Geometric Design of Highways and Streets (AASHTO Green Book)
- AASHTO Roadside Design Guide
- FHWA Separated Bike Lane Design Guide
- AASHTO Guide for the Development of Bicycle Facilities, 4th Edition

MAINSTREAM GUIDANCE

- National Association of City Transportation Officials (NACTO) Urban Street Design Guide
- Recommended Design Guidelines to Accommodate Pedestrians and Bicycles at Interchanges: An ITE Proposed Recommended Practice

CROSS SECTIONS

This section, and the below graphic provides examples of typical active transportation road cross sections, and the levels of protection that different bicycle facilities can offer.

- LEVEL 3 PROTECTION: roads that are shared between bicycles and vehicles. These roads are sometimes marked with road striping or a sign.
- LEVEL 2 PROTECTION: a road with striping that designates a bike lane. This can sometimes take the form of a typical bike lane, shoulder space for bicyclists, or a buffered bike lane with increased space between bicyclists and vehicles.
- LEVEL 1 PROTECTION: offers the most protection. These facilities are separated by grade, physical barriers such as bollards and parked vehicles, and other elements that separate the bicyclists and pedestrians from vehicles.



Figure 49. Nine different cross section ideas.


CHAPTER 8

IMPLEMENTATION AND FUNDINGGETTING IT BUILT

MID-VALLEY ACTIVE TRANSPORTATION PLAN | COTTONWOOD HEIGHTS

PROJECT LIST AND COST ESTIMATES

The project list is ordered by project number. The city length is the length in feet of the project section in Cottonwood Heights. The Total Length is the length of the whole project in feet. The Total Cost is the city cost plus the remaining cost for the project outside the city boundaries.

Basic cost estimates were applied to projects using generalized financial assumptions based on the length of the project and the facility type. These are high-level, per mile cost estimates derived from similar, recently completed projects constructed regionally.

Table 4. Cottonwood Heights Project and Cost List

#	PROJECT	CODE*	ТҮРЕ	COTTONWOOD HEIGHTS LENGTH	TOTAL LENGTH	COTTONWOOD HEIGHTS COST	TOTAL COST
7	Fort Union Blvd: 1300 E to Wasatch Blvd	PP	Multi-Use Path	18,580'	18,580'	\$2,955,000	\$2,955,000
11	1300 E: Approx. Elgin Ave to South Union Ave	2A	Buffered Bike Lane	33,000'	33,000'	\$33,000	\$231,000
23	2700 E: Fort Union Blvd to Bengal Blvd	3	Neighborhood Byway	5,160'	5,160'	\$2,000	\$6,000
27	South Union Ave/Creek Rd: 1020 E to Siesta Dr	2A	Buffered Bike Lane	2,380'	2,380'	\$9,000	\$17,000
95	Siesta Dr: Creek Rd to Creek Rd	3A	Multi-Use Path	7,860'	7,860'	\$8,000**	\$8,000**
99	Hollow Dale Dr/6670 S/Greenfield Way: 1300 E	3A	Shoulder Bikeway	4,800'	4,800'	\$5,000	\$5,000
100	1495 E: 6670 S to Fort Union Blvd	3A	Shoulder Bikeway	1,600'	1,600'	\$2,000	\$2,000
101	La Cresta Dr: Greenfield Way to Highland Dr	2B	Bike Lane	1,020'	1,020'	\$5,000	\$5,000
102	1700 E/1710 E: Fort Union Blvd to Parkridge Dr	3A	Shoulder Bikeway	3,020'	3,020'	\$4,000	\$4,000
103	Chris Ln: 7200 S to Parkridge Dr	3A	Shoulder Bikeway	1,300'	1,300'	\$2,000	\$2,000
104	McCormick Way/Parkridge Dr	3A	Shoulder/MUP	14,640'	14,640'	\$15,000**	\$15,000**
105	Bengal Blvd: Highland Dr to Wasatch Blvd	2A	Buffered Bike Lane	12,300'	12,300'	\$53,000	\$87,000
121	2300 E: Big Cottonwood Rd to Bengal Blvd	2B	Bike Lane	9,260'	9,260'	\$16,000	\$38,000
122	Cavalier Dr: 2300 E to 2700 E	3A	Shoulder Bikeway	2,980'	2,980'	\$3,000	\$3,000
123	3500 E/Enchanted Hills: Trail to Wasatch	3A	Bike Lane	6,500'	6,500'	\$7,000	\$7,000
124	Oakledge Rd: Bengal Blvd to Creek Rd	3A	Shoulder Bikeway	1,820'	1,820'	\$2,000	\$2,000
125	Creek Rd: Highland Dr to 3500 E	3A	MUP/Shoulder Bikeway	10,800'	10,800'	\$6,000**	\$11,000**
126	Danish Rd: Bengal Blvd to Creek Rd	3A	Shoulder Bikeway	2,400'	2,400'	\$3,000	\$3,000
127	Danish Rd/Wasatch Blvd: Creek Rd to South boundary	2B	Multi-Use Path	10,040'	10,040'	\$27,000**	\$41,000**
128	North Little Cottonwood Rd: Wasatch Boulevard to Cottonwood Heights East Boundary	2B	Multi-Use Path	5,500'	5,500'	\$22,000**	\$22,000**
129	2325 E/Nantucket Dr: Bengal Blvd to Bengal Blvd	3A	Shoulder Bikeway	4,620'	4,620'	\$5,000	\$5,000
130	Portsmouth Ave/Oak Creek Dr: Nantucket Dr to East Creek Road	3A	Shoulder Bikeway	2,620'	2,620'	\$3,000	\$3,000

*This column is part of WFRC's Active Transportation schema for coded values. The code definitions are as follows: 1 = General Cycle Track; 1A = Cycle Track: At-Grade, Protected with Parking; 1B = Cycle Track: Protected with Barrier; 1C = Cycle Track: Raised and Curb Separated; 2 = General Bike Lane; 2A = Buffered Bike Lane; 2B = Bike Lane; 3 = General Shared Roadway; 3A = Shoulder Bikeway; 3B = Marked Shared roadway; 3C = Signed Shared roadway; PP = Parallel Bike Path, Paved/Multi Use Path; PU = Parallel Bike Path, Unpaved; UN = Unknown Category.

#	PROJECT	CODE*	ТҮРЕ	COTTONWOOD HEIGHTS LENGTH	TOTAL LENGTH	COTTONWOOD HEIGHTS COST	TOTAL COST
145	Cottonwood Pkwy: 3000 E to end of Cottonwood Pkwy	2B	Bike Lane	2,520'	2,520'	\$11,000	\$11,000
154	East Jordan Canal Trail: 1495 E to Greenfield Way	PP	Multi-Use Path	3,040'	3,040'	\$484,000	\$484,000
157	Trail Connection: 1300 E to 1330 E	PP	Multi-Use Path	960'	960'	\$153,000	\$153,000
159	Trail Connection: Magic View to Wasatch Blvd	PP	Multi-Use Path	2,340'	2,340'	\$373,000	\$373,000
164	Keswick Rd: Siesta Dr to Creek Rd	3A	Shoulder Bikeway	2,020'	2,020'	\$3,000	\$3,000
181	Trail Connection: Highland Dr to 2325 E	PP	Multi-Use Path	2,320'	2,320'	\$369,000	\$369,000
182	Deercreek Rd: Creek Rd to Danish Rd	PP	Multi-Use Path	2,560'	2,560'	\$408,000	\$408,000
183	Trail Connection to Wasatch Blvd	PP	Multi-Use Path	1,320'	1,320'	\$210,000	\$210,000
184	Danish Downs Ct to Bengal Blvd	3	Neighborhood Byway	1,340'	1,340'	\$2,000	\$2,000
185	Fort Union Blvd to West of Wasatch Blvd	PP	Multi-Use Path	3,740'	3,740'	\$595,000	\$595,000
186	Big Cottonwood Canyon Rd to 6200 S	2B	Multi-Use Path	5,840'	5,840'	\$24,000**	\$24,000**
187	3000 E: Hollow Mill Dr to Fort Union Blvd	2A	Buffered Bike Lane	1,700'	1,700'	\$12,000	\$12,000
188	Sagebrush Way/7180 S: Fort Union Blvd to Banbury Rd	3	Neighborhood Byway	3,000'	3,000'	\$3,000	\$3,000
189	Trail Connection: Banbury Rd to Magic View Drive	PP	Multi-Use Path	3,080'	3,080'	\$490,000	\$490,000
190	3000 E/Hollow Mill Dr: Cottonwood Pkwy to Anne Marie Drive	2B	Bike Lane	1,780'	1,780'	\$8,000	\$8,000
191	Cottonwood Pkwy to Hollow Mill Dr	3	Neighborhood Byway	1,800'	1,800'	\$2,000	\$2,000
226	Banbury Rd: 2700 E to Brighton Way	2B	Multi-Use Path	2,540'	2,540'	\$11,000**	\$11,000**
229	Top of the World Dr: Honeywood Cove Dr to Top of the World Circle	2B	Neighborhood Byway	3,820'	3,820'	\$16,000	\$16,000
230	2300 S to Bengal Blvd	2B	Bike Lane	960'	960'	\$4,000	\$4,000
231	School Entrance: Creek to Boundary	2B	Bike Lane	1,140'	1,140'	\$5,000	\$5,000
233	Trail Connection: Fort Union Blvd to 7200 S	PP	Multi-Use Path	3,480'	3,480'	\$554,000	\$554,000
234	6670 S to Highland Dr	PP	Multi-Use Path	1,920'	1,920'	\$306,000	\$306,000
245	Riverwood Dr/7800 S: Siesta Dr to Devin Pl	2A	Neighborhood Byway	9,000'	9,000'	\$12,000	\$63,000
254	Wasatch Blvd: 3800 S to Big Cottonwood Canyon Rd	PP	Multi-Use Path	28,020'	28,020'	\$910,000	\$4,344,000
271	Highland Dr./Van Winkle: I-215 to Creek Rd	2B	Multi-Use Path	37,200'	37,200'	\$27,000**	\$149,000**
280	Fort Union Blvd: 700 E to 1300 E	1B	Protected Cycle Track	5,360'	5,360'	\$1,488,300	\$4,961,000
283	Wasatch Blvd: City boundary to Fort Union Blvd	PP	Multi-Use Path	17,180'	17,180'	\$2,732,000	\$2,732,000
286	Creek Rd-Danish Rd: Wasatch Blvd to Siesta Dr	PP	Multi-Use Path	3,300'	23,496'	\$490,000	\$3,735,864
287	I-215: Big Cottonwood Creek to Highland Dr	PP	Multi-Use Path	23,496'	6.600'	\$524,700	\$1.049.400

**These estimates have not been updated to reflect final changes proposed by Cottonwood Heights city staff. New estimates will need to be prepared for these projects.

PHASING

Each city should determine where and when funding opportunities are available as they consider how to prioritize projects upon the value each project offers to the community. The Vision Statement and associated goals defined at the beginning of the Mid-Valley Active Transportation Plan should be consulted. As discussed in **Chapter 5**, the process of tying goals to specific projects should be used as a guide when determining the value each project adds to the city and the active transportation network.

In general, the larger projects, like those identified as part of the Backbone Network, offer a greater regional value compared to neighborhood byways and local connections. These may have higher costs but will make a larger positive impact on the active transportation network. However, smaller, low-cost projects may offer a favorable return on investment and can help advance active transportation facilities throughout a community.

The phasing for active transportation projects does not need to be set in stone. Projects may move from the bottom of a prioritization list to the top as opportunities present themselves (such as private developments or roadway resurfacing projects). As each project is completed, the regional active transportation network will become more comprehensive and welcoming to a wider range of people.

MAINTENANCE

Maintenance of active transportation facilities may be as important as the initial installation. Cities should develop a policy to ensures maintenance will occur on a consistent and ongoing basis. Maintenance includes regular upkeep of pavement, paint, landscaping, trash removal, and signage replacement. The following is general guidance for developing a maintenance policy:

- Cities and their public works departments should plan for yearly and reoccurring routine maintenance;
- Ensure that active transportation facility maintenance is incorporated into line items for a City's annual budget;
- A general timeline for repairing each type of facility should be established. This can help effectively prioritize facility upkeep;
- Maintenance should be incorporated into private development requirements;
- Sweeping of facilities should occur multiple times per year.

Snow removal along bike facilities should occur when necessary. It should receive the same urgency and frequency as vehicle travel lanes. Equipment needed to remove snow along specific facilities, such as shared-use paths, should be incorporated into a city's budget.

FUNDING

How projects get constructed often comes down to them getting funded. This section identifies available funding resources to pay for active transportation projects in the Mid-Valley study area.

Active transportation routes often span multiple jurisdictions and provide regional significance to the transportation network. As a result, other government jurisdictions or agencies often help pay for such regional benefits and projects. Those jurisdictions and agencies could include the Federal Government, the State (UDOT), the County, and the local metropolitan planning organization (WFRC). Each of the six cities will need to continue to partner and work with other jurisdictions to ensure adequate funds are available for these projects. Partnering with other adjacent communities will ensure corridor continuity across jurisdictional boundaries.

FEDERAL AND STATE FUNDING

Federal funds are available to cities and counties through the federal aid program. UDOT administers the funds. To be eligible, a project must be listed on the five-year **Statewide Transportation Improvement Program (STIP)**

Learn more about the STIP at https://site.utah.gov/connect/about-us/commission/stip/.

SURFACE TRANSPORTATION PROGRAM (STP)

The **Surface Transportation Program (STP)** funds can be used for transportation enhancements in twelve categories, including bicycle and pedestrian facilities. The Joint Highway Committee allocates a portion of the STP funds for projects around the state in urban areas. This is a five-year funding tool, and the STIP projects are updated regularly to maintain a five-year list of projects. Adding active transportation projects and other projects in the study area to UDOT Region 2's transportation plan is an important early step.

Learn more at https://wfrc.org/programs/transportation-improvement-program/ surface-transportation-program/.

STATE CLASS B AND C PROGRAM FUND

The distribution of **State Class B and C Program funds** is established by State Legislation and is administered by UDOT. Revenues for the program come from state fuel taxes, registration fees, driver license fees, inspection fees, and transportation permits. UDOT keeps seventy-five percent of these funds for their construction and maintenance programs. The rest is made available to counties and cities. Some of the roads with active transportation facilities in the study area fall under UDOT jurisdiction. It is in the best interest of each city that staff are aware of the procedures used by UDOT to allocate those funds and are proactive in requesting the funds be made available for UDOT-owned roadways in the City. Class B and C funds are allocated to each city and county by a formula based on population, centerline miles, and land area. Class B funds are given to counties, and Class C funds are given to cities and towns.

Class B and C funds can be used for maintenance and construction projects, including active transportation; however, thirty percent of those funds must be used for construction or maintenance projects that exceed \$40,000. The remainder of these funds can be used to match federal funds or pay the principal, interest, premiums, and reserves for issued bonds.

Learn more at <u>https://www.udot.utah.gov/connect/business/public-entities/</u> <u>local-government-program-assistance</u> or view the regulations here: <u>https://</u> <u>drive.google.com/file/d/10KwUcoo9En7H8yYuI0WzZxi3QnFZ6g1K/view</u>.

SAFE ROUTES TO SCHOOL (SRTS)

UDOT also administers **Safe Routes to School (SRTS)** funding. This is a \$1.2 Million annual fund to pay for active transportation safety improvements near schools across the state. Cities apply for this funding which is a reimbursement fund with no matching dollars required. This money can be used for improvements such as new trails or sidewalks, signals, crosswalks, etc.

Learn more at <u>https://site.utah.gov/connect/business/public-entities/safe-routes-to-school-srts-program/</u>.

TRANSIT TRANSPORTATION INVESTMENT FUND (TTIF)

The **Transit Transportation Investment Fund (TTIF)** was created under Senate Bill 136. This new fund, beginning July 1, 2019, allocates state funding from the fuel tax specifically for public capital transit projects. However, Senate Bill 72 opened this fund up to non-motorized projects as well. These dollars can also be used for active transportation projects around transit facilities, but the new infrastructure provides access to transit stops. This UDOT fund has not been distributed for the first time yet, and UDOT has stated that cities will need to apply for their projects to get access to this fund. It also requires 40% matching funds from local governments. Cities can use federal (but not state) dollars for the match. More information on this fund will be developing in the coming years.

Learn more at <u>https://www.udot.utah.gov/connect/about-us/commission/</u> project-prioritization-process/.

MPO-LEVEL FUNDING

The WFRC administers several funding programs of both federal and state dollars for the region.

TRANSPORTATION ALTERNATIVES PROGRAM (TAP)

The **Transportation Alternatives Program (TAP)** funds the construction and planning of bicycle and pedestrian facilities. All cities in Salt Lake, Davis, and Weber Counties are eligible. Funds may be used to construct, plan, and design on- and off-road trail facilities for pedestrians, bicyclists, and other non-motorized forms of transportation. Non-motorized forms can include sidewalks, bicycle infrastructure, pedestrian and bicycle signals, traffic calming techniques, lighting, and other safety-related infrastructure that will provide safe routes for non-motorists.

WFRC asks cities to submit letters of intent in the fall, with full applications due December 12th this year for funding in July of the following year. Salt Lake County cities typically receive \$800,000 to \$900,000 every year from this fund.

Learn more at https://wfrc.org/programs/transportation-improvement-program/

transportation-alternatives-program/

CONGESTION MITIGATION AND AIR QUALITY PROGRAM

The **Congestion Mitigation and Air Quality Program (CMAQ)** funds are for transportation projects and programs to help meet the requirements of the Clean Air Act. Funds must be used for projects which improve air quality. Eligible projects include transportation activities in the State Air Quality Implementation Plan (SIP), construction and/or purchase of public transportation facilities and equipment, construction of bicycle or pedestrian facilities serving commuter transportation needs, and promotion of alternative modes such as ridesharing.

Learn more at https://wfrc.org/programs/transportation-improvement-program/ congestion-mitigation-air-quality-program/

STATE-LEVEL FUNDING (NON-UDOT)

RECREATIONAL TRAIL PROGRAM

Administered by the Utah Division of State Parks and Recreation, the **Recreational Trails Program** required that motor fuel tax revenues generated from motor fuel sales for off-highway recreational purposes be transferred from the Highway Trust Fund to the Trails Trust Fund for recreational trail and facility improvements. This program provides grants for non-motorized and motorized trails, including the construction and maintenance of trails and facilities, staging areas, trailheads, restroom facilities, and trail signing.

Learn more at <u>https://stateparks.utah.gov/resources/grants/recreational-</u> trails-program/

LAND AND WATER CONSERVATION FUND

Administered by the Utah Division of State Parks and Recreation, the **Land and Water Conservation Fund Act** provides federal grants for the acquisition and/ or development of public outdoor recreation areas. Any site/facility purchased, developed, or improved with funding from this grant is protected in perpetuity (forever) as a public outdoor recreation area.

Learn more at http://stateparks.utah.gov/resources/grants/land-and-water-

conservation-fund/

UTAH OUTDOOR RECREATION GRANT

Administered through the Office of Outdoor Recreation, the **Utah Outdoor Recreation Grant** project helps communities build trails and other recreation infrastructure by awarding matching grants. The grants help enhance recreational opportunities and amenities in Utah's communities.

Learn more at https://business.utah.gov/outdoor/uorg/

COUNTY-LEVEL FUNDING

COUNTY ACTIVE TRANSPORTATION FUND (CATF)

Salt Lake County maintains the **County Active Transportation Fund (CATF)**, an active transportation fund, used to pay for a portion of active transportation projects within the County. There is currently \$1 Million annually that cities can apply for to fund their projects. This fund typically requires a match and is often used to pay for smaller projects since it is limited. Applications are due annually in July.

Learn more at <u>https://slco.org/planning-transportation/county-active-transportation-fund/</u>

SENATE BILL 136

Senate Bill 136 also allocated a quarter of one percent sales tax to the Regional Transportation Choice Fund. Salt Lake County now has an ongoing transportation fund that can be spent on a variety of transportation projects, including active transportation. One-quarter of this fund is earmarked for active transportation projects. Salt Lake County administers these funds and requires cities to submit applications. Every project is scored based on several criteria, including if the project is multi-jurisdictional. The administration of this fund is changing. The cities within Salt Lake County will be receiving individual portions of this fund, the details of which are still being determined. For more information, contact Salt Lake County Regional Planning and Transportation.

CITY FUNDING

It is common for cities to use general fund revenues for active transportation programs. General fund revenues are typically reserved for operation and maintenance purposes as they relate to transportation. However, general funds could be used if available to fund the expansion of active transportation facilities. Providing a line item in the city budgeted general funds to address improvements, which are not impact-fee eligible, is recommended to fund active transportation projects, should other funding options fall short of the needed amount. Revenue bonding can also be used for projects intended to benefit the entire community.

Private interests may also provide resources for active transportation improvements. Developers can construct the local streets with bike lanes within subdivisions. They may often dedicate right-of-way to trails and parks. Areas with planned or anticipated new growth may include new active transportation facilities provided by the developers. Cities can encourage developers to include active transportation amenities during development review. From small site plans to larger master-planned communities, as city staff and planning commissions review new developments, they can require developers to show how the proposed development will accommodate or enhance active transportation connections.

NEXT STEPS

IMPORTANCE OF COLLABORATION AND REGIONAL PERSPECTIVE

Cities should be on the lookout for unique opportunities such as their roadway resurfacing schedule, emerging developer agreements, or parks and open space plans that might include paving or creating a shared-use path. Project prioritization beyond the completion of the Backbone Network should reflect each community's goals. The projects in the Mid-Valley ATP are intended to give each community a list of improvements that are needed to form the Backbone Network. It will be up to each city to ensure the funding and building of them. Projects that are low-hanging fruit or easiest to complete within a municipality may be prioritized. Still, an eye should be kept on the primary goal of completing the connected Backbone Network.

The Mid-Valley ATP is a collective vision. Completing many of the 244 projects will be the individual responsibility of each city. This active transportation plan is a useful tool that can support specific projects and may also allow funding to become more accessible.

Prioritizing the development of the Backbone Network will benefit regional connectivity. Once completed, it will be a manifestation of the multi-jurisdictional commitment for a connected active transportation system for all ages and abilities, as expressed in the vision statement. However, when seeking funding, whether individually or multi-jurisdictional, it is advantageous for communities to be flexible and adaptable.

After the Mid-Valley ATP is adopted, energy and efforts should be focused on completing the Backbone Network and all other fundable projects that connect key origins and destinations throughout the six cities. All projects should contribute to the overarching goal of providing a regional active transportation system based on user needs, comfort level, and ease of accessibility.



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