

Boulder County Mobility for All Program: Low-Income Assessment

Nate Silverstein

Boulder County Transportation

May 11, 2017

*Capstone Project submitted in partial satisfaction of the requirements
for the degree of Master of Urban and Regional Planning, College of
Architecture and Planning, University of Colorado Denver.*



Master of Urban and Regional Planning

COLLEGE OF ARCHITECTURE AND PLANNING

UNIVERSITY OF COLORADO **DENVER**



TABLE OF CONTENTS

Executive Summary.....	i
1. Introduction.....	1
2. Community Overview.....	4
3. Background Research and Literature Review.....	10
5. Methodology.....	17
Prioritization Rubric.....	25
6. Findings: Block Groups.....	29
Transportation Gaps.....	32
7. Findings: Subsidized Housing Sites.....	35
Closest Facility Analysis.....	37
Priority Sites by Housing Authority.....	39
Transportation Gaps.....	42
8. Conclusion.....	54
9. References.....	55
Appendix	
A: Block Group Rankings.....	57
B: Affordable Housing Site Rankings.....	64
C: Prioritization Score Sheets.....	73

LIST OF FIGURES

Figure 1: Boulder County Area Median Income Chart.....	2
Figure 2: Outline of Report.....	3
Figure 3: Population Chart and Map.....	4
Figure 4: Median Income Chart and Map.....	5
Figure 5: Income to Poverty Ratio Chart and Map.....	6
Figure 6: Tenure Chart and Map.....	7
Figure 7: Median Gross Rent Chart and Map.....	7
Figure 8: Means of Transportation to Work.....	8
Figure 9: Average Commute Time.....	9
Figure 10: Housing and Transportation Costs as Percent of Income.....	9
Figure 11: Code Script for Block Group AMI.....	17
Figure 12: Map of Boulder County Block Groups Below AMI.....	18
Figure 13: Map of Affordable Housing Sites in Boulder County.....	20
Figure 14: Matrix of Network Analysis Distances.....	23
Figure 15: Site Characteristics Prioritization Scoring Charts.....	25-26
Figure 16: Bus Routes Prioritization Scoring Charts.....	26-27
Figure 17: Bike/Walk Prioritization Scoring Charts.....	28
Figure 18: Car Share Prioritization Scoring Chart.....	28
Figure 19: Top Ten Highest Priority Block Groups.....	29
Figure 20: Highest Priority Block Groups Map.....	30
Figure 21: Map of Block Groups With No Bus Stops.....	32
Figure 22: Block Groups With No Local Bus Stops.....	33
Figure 23: Block Groups With No Regional Bus Stops.....	34
Figure 24: Ten Highest Priority Affordable Housing Site Chart.....	35
Figure 25: Ten Highest Priority Affordable Housing Sites Map.....	36
Figure 26: Closest Facility Analysis Charts.....	37-38
Figure 27: Ten Highest Priority BCHA Housing.....	39
Figure 28: Ten Highest Priority BHP Housing Sites.....	40
Figure 29: Ten Highest Priority Housing Sites.....	41
Figure 30: Housing Sites Without Access to Bus Stops.....	43
Figure 31: Housing Sites Without Access to Local Bus Routes.....	44
Figure 32: Housing Sites Without Access to Regional Bus Routes.....	45
Figure 33: Top Ten Priority Sites Without Access to a Bike Lane.....	46
Figure 34: Top Ten Priority BHP Sites Without Access to a Bike Lane.....	47
Figure 35: Top Ten Priority LHA Sites Without Access to a Bike Lane.....	48
Figure 36: Housing Sites Within Access of a B-Cycle Station.....	49
Figure 37: Top Ten Priority BHP Sites Without Access to Pedestrian Facility..	51
Figure 38: Top Ten Priority LHA Sites Without Access to Pedestrian Facility..	52
Figure 39: Ten Highest Priority Sites Without Access to eGo Car Share.....	53

EXECUTIVE SUMMARY

PROJECT BACKGROUND

The Mobility for All Program, run by the Boulder County Transportation Multi-Modal Division, works to promote affordable multi-modal transportation options (transit, bike, etc.) and raise awareness that transportation is a basic social and economic need. The program provides transportation resources to vulnerable populations such as older adults, people with disabilities, and households with low-income. In 2015, the County completed the Mobility For All Needs Assessment to provide a clear and strategic vision for addressing some of the current gaps in Boulder County's transportation system. In particular, the Needs Assessment identified a need for Boulder County to continue its investment in affordable transportation programs to low-income individuals. This capstone project addresses the need to better tailor affordable transportation options to low-income communities in Boulder County in order to reduce rising transportation cost burdens and enhance economic resiliency.

In particular this project will address the following research questions:

- 1). What low-income areas within Boulder County are the least connected to alternative transportation options?

And

- 2). Which areas should be prioritized first for improvement?

CONTEXT

For most households, transportation is the second highest expense after housing. According to the Center for Neighborhood Technology (CNT) affordability index no more than 45% of a household's income should be spent on housing and transportation combined (2017). In Boulder County, rising housing costs have hindered the ability of many residents to meet this threshold, and the average household spends 49% (CNT, 2017) with low-income populations spending an even greater amount. Transportation costs disproportionately affect low-income households and can "account for 55 percent of the budget of an average very-low income household, compared with less than 9 percent of a high-income household's budget" (Center for Transit Oriented Development, 2014, p. 12).

This project helps the Mobility for All program address this challenge by locating the low-income areas most in need of mode diversification and the cost saving benefits that come with it. Subsequent transportation improvements to these priority

areas should take into account the 3D's of transportation – density, diversity, and design – in order to encourage and create opportunities and communities that can best reap the transportation cost saving benefits, and health benefits that increased access to alternative transportation options provide.

METHODS

The method for this project can be broken down into four different phases:

1). Identify Low-Income Areas

Low-income areas were identified at two different scales: block group and housing site.

- Low-income block groups were identified as block groups with a collective median income of 30, 60, or 80 percent that of Boulder County's median income. In total there were 91 block groups within this classification
- Housing sites were identified through contacts with Boulder County Housing Authority (BCHA), Boulder Housing Partners (BHP), and Longmont Housing Authority (LHA). In total there were 108 identified subsidized housing sites from the housing authorities.

2). Locate Alternative Transportation Options

Transportation options included:

- RTD Bus Routes/Stops – local and regional routes
- FLEX Bus routes/Stops
- RTD Call-n-Ride services
- Bicycle Paths – includes striped, buffered, and protected bike lane
- Pedestrian Paths – includes multi-use paths, trails, and sidewalks
- Boulder B-Cycle stations
- eGo Car share locations

3). GIS Network Analysis

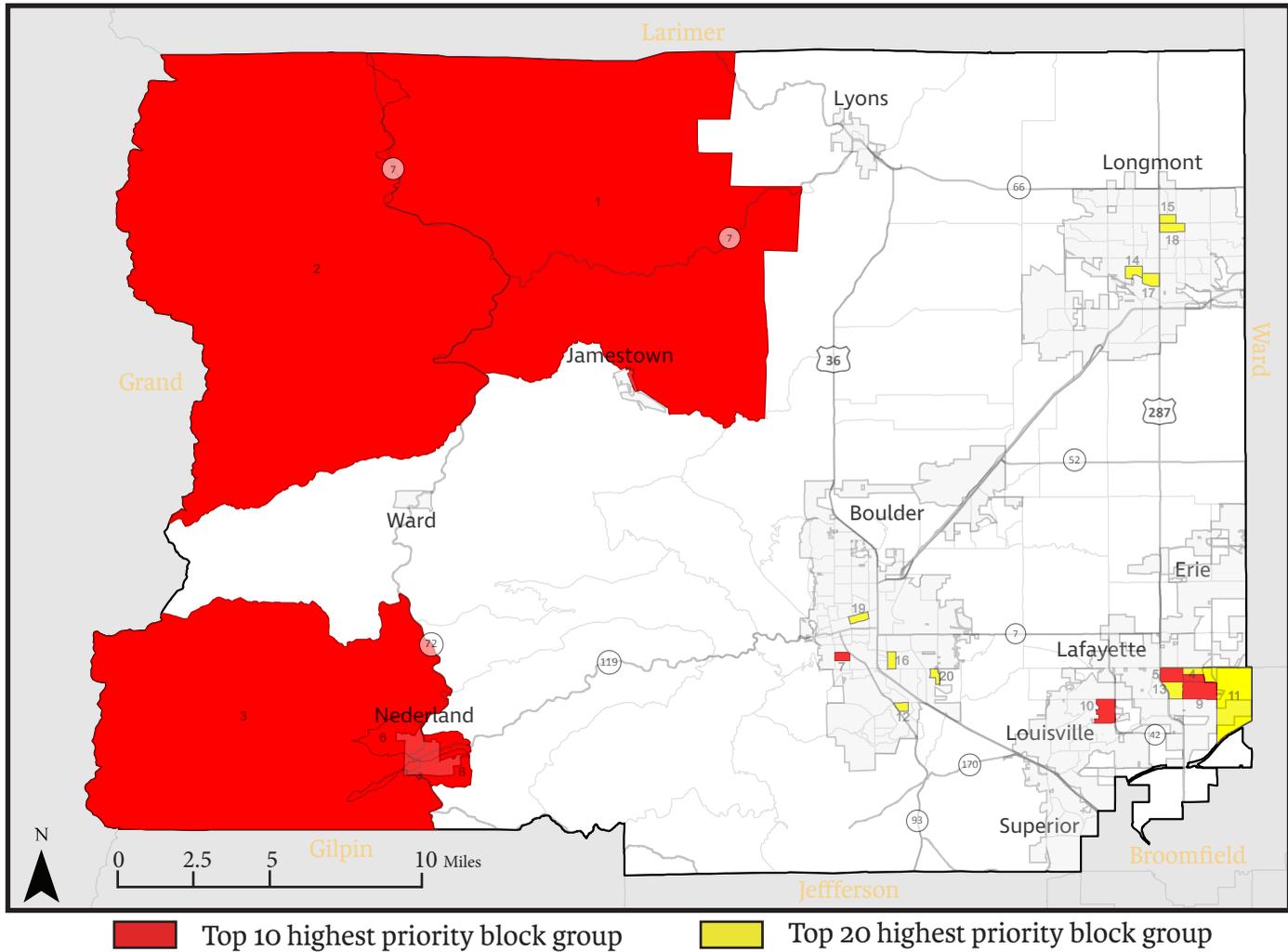
Service areas were created for subsidized housing sites to represent actual street network distances from transportation options. In addition, a closest facility analysis was conducted in order to provide a more detailed understanding of the transportation gaps for the highest priority sites.

4). Collect Results

Based on a low-income area's access to alternative transportation options, it was assigned points and ranked. From this ranking, block groups and housing sites were identified that should be first priority for transportation improvements due to lack of available options.

FINDINGS: HIGHEST PRIORITY BLOCK GROUPS

These areas should be targeted for transportation improvements and programming

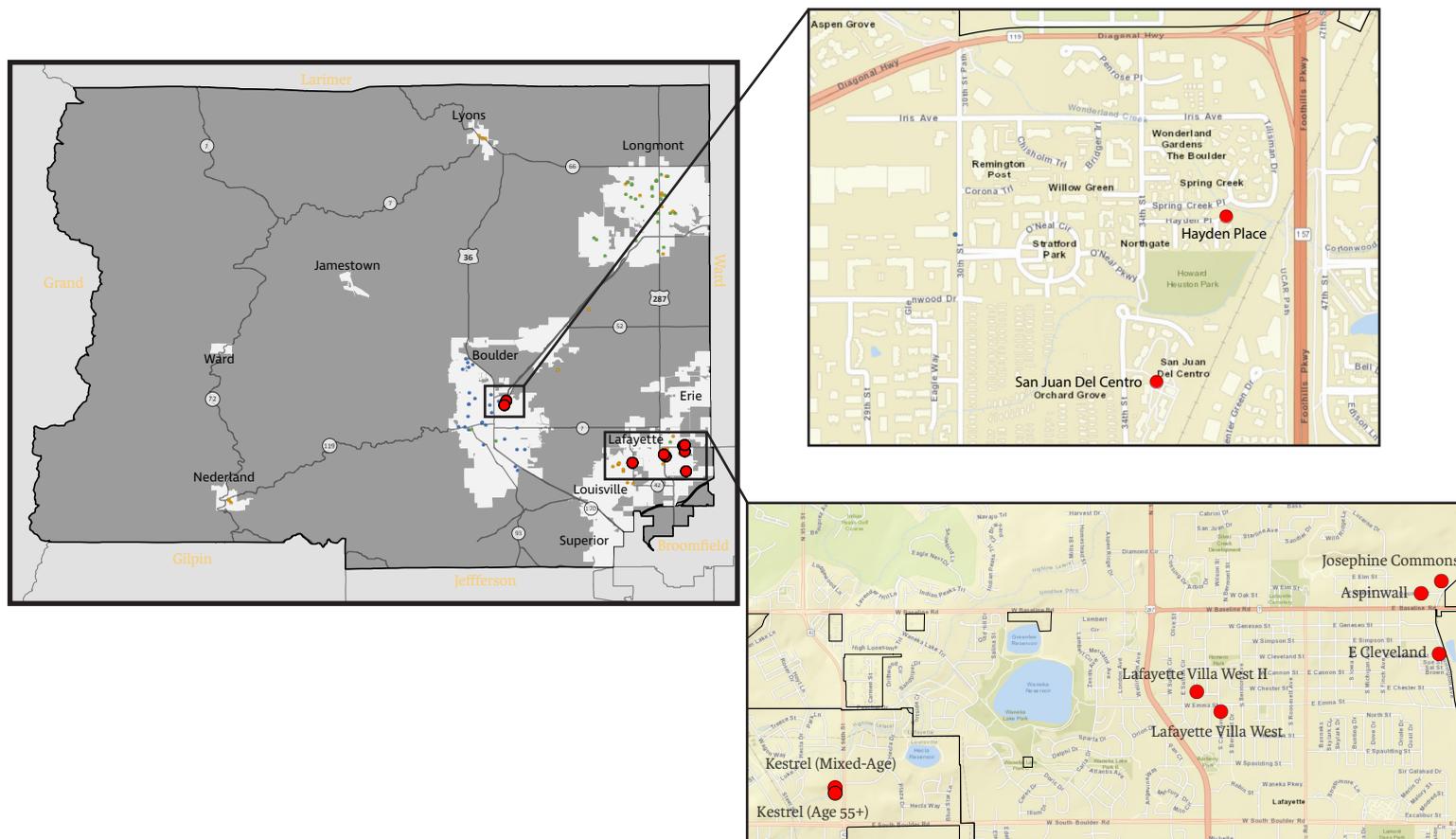


Highest Priority Block Groups

Rank	Location	Tract	Block Group	AMI	Score
1	Unincorporated NW/Jamestown	13602	1	80	6
2	Unincorporated NW	13602	2	80	7
3	Nederland/Unincorporated	13702	7	30	10
4	Lafayette	60800	4	60	12
5	Lafayette	12905	1	80	12
6	Nederland/Unincorporated	13702	6	80	12.5
7	Boulder	12401	4	30	13
8	Nederland/Unincorporated	13702	5	80	13
9	Lafayette	60800	5	60	18
10	Louisville	13005	1	80	19

FINDINGS: HIGHEST PRIORITY SUBSIDIZED HOUSING SITES

These sites should be targeted for transportation improvements and programming



Highest Priority Housing Sites

Rank	Name	Authority	Location	Units	Type	Score
1	Josephine Commons	BCHA	Lafayette	74	Age 55+	6
2	Aspinwall	BCHA	Lafayette	72	Mixed-Age	7
3	E Cleveland	BCHA	Lafayette	4	Mixed Age	9
4	Hayden Place	BHP	Boulder	30	Affordable Rental	9.5
5	Lafayette Villa West	BCHA	Lafayette	28	Mixed-Age	10
6	Lafayette Villa West II	BCHA	Lafayette	10	Mixed-Age	11
7	Sagrimore	BCHA	Lafayette	1	Mixed-Age	11
8	San Juan Del Centro	LHA	Boulder	150	Privately Owned Subsidized	12
9	Kestrel (Mixed-Age)	BCHA	Louisville	129	Mixed-Age	13
10	Kestrel (Age 55+)	BCHA	Louisville	71	Age 55+	13

**In event of a tie, the housing site with the most units was placed ahead.*

CONCLUSION

Providing transportation improvements to the identified priority areas can help reduce transportation cost burdens and improve economic resiliency for low-income populations in Boulder County.

The analysis and maps in this report reveal a need for additional outreach and study of the low-income populations living in the smaller mountainous communities of western Boulder County as well as the low-income housing sites in the southeast of the County—Lafayette & Louisville area. These areas were the least accessible to alternative modes of transportation and are recommended for priority implementation of transportation improvements and programming.

1. INTRODUCTION

PURPOSE

The purpose of the Boulder County Mobility For All Program: Capstone Project is to locate low-income neighborhoods within Boulder County, inventory current transportation options available to these areas, and prioritize and recommend multi-modal transportation programs and improvements.

Throughout this report low income refers to households earning 30, 60, or 80 percent of the area median income (AMI) for Boulder County, or \$70,961.¹

Area Median Income	
30%	\$21,288.30
60%	\$42,576.60
80%	\$56,768.80

Figure 1: AMI Chart

ISSUE ADDRESSED

For most households, transportation is the second-highest cost after housing, and according to the Center for Neighborhood Technology affordability index, no more than 45% of a household's income should be spent on housing and transportation combined (CNT, 2017). Currently, the average household in Boulder County spends 49% of their income on housing and transportation combined (CNT, 2017); and those with low incomes are spending an even greater proportion.

Rising housing costs have forced many low-income workers in Boulder County to locate farther away from their workplace creating additional transportation cost burdens. Transportation costs rise with distance and

more affordable transportation options, when compared to a personal vehicle, such as walking, biking, or transit become limited. Identifying low-income areas is the first step to providing increased affordable transportation solutions to those who need it most. This capstone project addresses the need to better tailor affordable transportation options to low-income communities in Boulder County in order to reduce transportation cost burdens and enhance economic resiliency.

BACKGROUND

Boulder County encompasses 726 square miles of rural plains, thriving cities, and elevated mountain towns; it is a beautiful and distinctive place to live and 310,032 people call it home.² Boulder County Transportation works

^{1 2} U.S. Census Bureau. 2011-2015 American Community Survey 5-Year Estimates.

to maintain and enhance the high quality of life found in the County through providing safe and efficient transportation facilities and options for the residents, commuters, and visitors that travel within the County. The transportation department is comprised of five primary divisions: Engineering, Planning, Road Maintenance, Fleet Services, and Multi-Modal. The Multi-Modal division oversees the Mobility For All Program whose goal is to promote affordable multi-modal transportation options and raise awareness that transportation is a basic social and economic need.

In 2015, the Mobility For All Program undertook the Mobility For All Needs Assessment to provide a clear and strategic vision for addressing gaps in the County's transportation system. The report collected information and data over a period of six months and included extensive outreach to the public, transportation providers, and mobility service customers. The report consists of a context review of the county and existing transportation services, a spatial analysis of the county including vulnerable population identification (older adults, low-income, persons with disability, and limited English proficiency) as well as a travel pattern analysis, a summary of community outreach and feedback, a transportation gap analysis, and finally a list of strategies to

meet the identified needs and gaps. In particular, the Needs Assessment identified a need for Boulder County to continue its investment in affordable transportation programs and expand mobility options specifically for people whose primary mobility limitation is economic. The report recognized the need for further analysis of these populations.

OBJECTIVES

The Mobility For All: Low-Income Assessment addresses the need for further analysis of low-income populations and their transportation access. It answers the research questions:

- What low-income areas within Boulder County are the least connected to alternative transportation options?

And

- Which areas should be prioritized first for improvement?

The information contained in this report will help the Mobility For All Program tailor specific community outreach and transportation solutions to areas in Boulder County that are most in need of affordable mobility options; specifically affordable housing sites and block groups containing households making 30, 60, or 80% AMI.

OUTLINE OF REPORT

The following report will first present a community overview of Boulder County followed by a background literature review on transportation's relationship to affordability and planning best practices for creating more diverse, dense, accessible and connected communities that reduce transportation cost burdens. Following the literature review the project methodology is presented which provides an overview of the data and methods used for the GIS analysis and an overview of the prioritization scoring process. After the methodology section, the findings of the report are presented. The findings begin with a block group analysis and then narrowing down to affordable housing sites. The top ten highest priority low-income areas and a transportation gap analysis are presented for both block group and affordable housing site data. The findings provide information needed for Boulder County to enhance mobility options for low-income areas. Following the report findings, there is a brief discussion of next steps and conclusions.

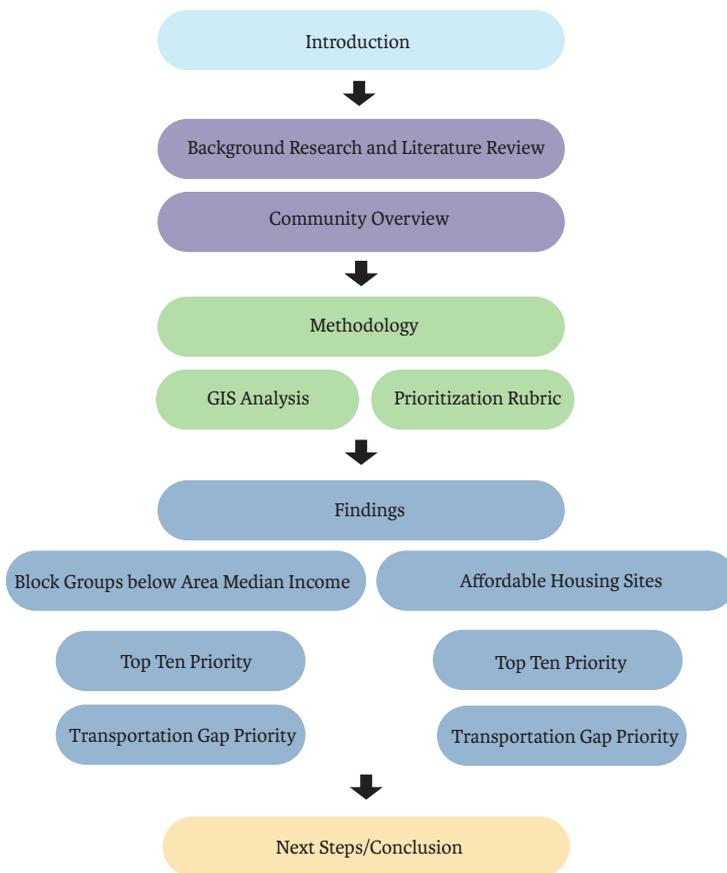


Figure 2: Outline of Report

2. COMMUNITY OVERVIEW

The following community overview presents existing demographic conditions based on data from the U.S. Census Bureau 2011-2015 American Community Survey.

LOCATION/POPULATION

Boulder County encompasses beautiful Rocky Mountain elevations as well as rolling plains along the foothills. It is bordered by Larimer County to the north, Weld County to the east, Broomfield, Jefferson, and Gilpin counties to the south, and Grand County to the west. Close to 90% of Boulder County's population lives in one of the ten different incorporated municipalities in Boulder County. These municipalities range in population from 310,032 to 115 people.

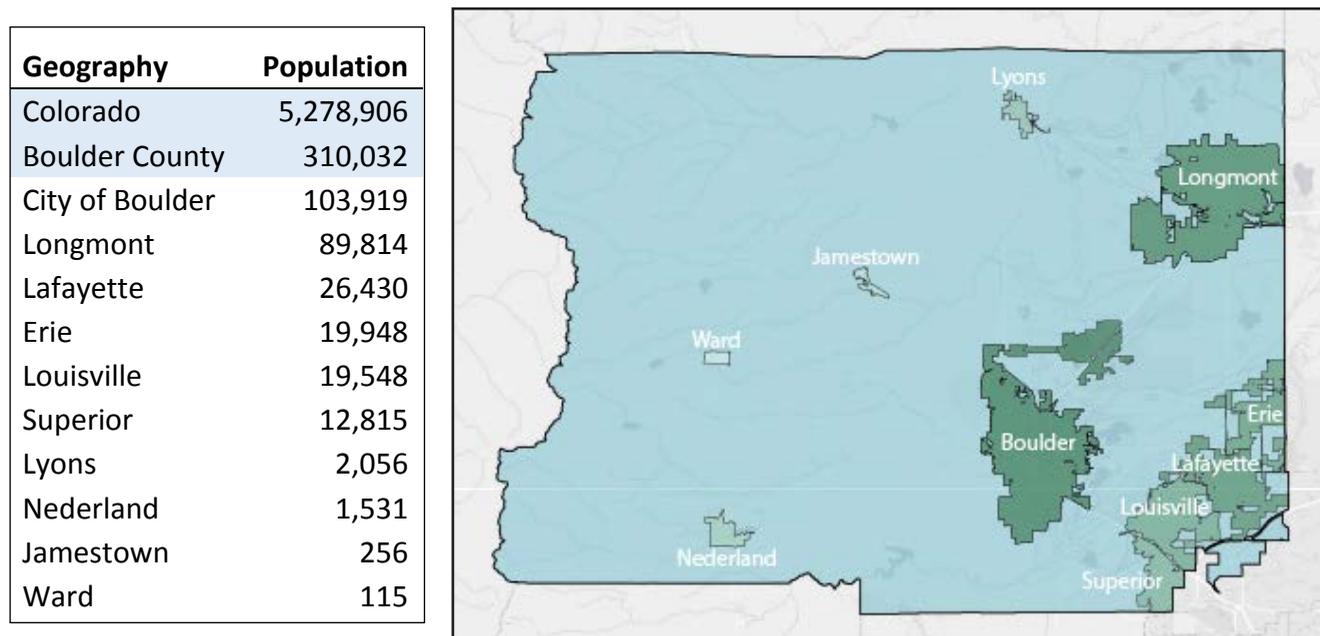


Figure 3: Population Chart and Map

MEDIAN INCOME

Boulder County has a higher median income (\$70,961) than the rest of the state (\$60,629). A higher concentration of wealth, based on median income, is concentrated in the southeast corner of Boulder County within the cities of Superior, Louisville, Lafayette, and Erie while the smaller more remote cities of Boulder County such as Ward, Nederland, and Jamestown tend to have lower median incomes than the rest of the county.



Figure 4: Median Income Chart and Map

Geography	Median Household Income
Colorado	\$60,629
Boulder County	\$70,961
Superior	\$115,846
Erie	\$111,745
Louisville	\$91,230
Lyons	\$85,577
Lafayette	\$70,714
Longmont	\$62,208
Ward	\$61,250
Nederland	\$60,000
City of Boulder	\$58,484
Jamestown	\$55,313

INCOME TO POVERTY RATIO

The ratio of income to poverty level measures a households income in relation to the federal poverty level taking into account household size. For example a ratio of 1.50 correlates to a household earning 150% of the federal poverty level. The federal poverty level is updated every year, adjusting for inflation and cost of food. In 2017 an income to poverty ratio of 1.5 is reflective of the following income levels:

**2017 Federal Poverty Guideline:
Income to Poverty Ratio of 1.5**

Persons in Household	Poverty Guideline
1	\$18,090.0
2	\$24,360.0
3	\$30,630.0
4	\$36,900.0
5	\$43,170.0
6	\$49,440.0
7	\$55,710.0
8	\$61,980.0

Compared to

**Boulder County:
Below-AMI levels**

Area Median Income	
30%	\$21,288.30
60%	\$42,576.60
80%	\$56,768.80

In terms of income to poverty ratio, Boulder County has a slightly lower percentage of its population that earn less than 150% of the federal poverty level when compared to the state as a whole. The cities of Boulder, Nederland, and Longmont have the highest proportion of households that earn less than 150% of the poverty level, and Erie has the lowest with only 4%.

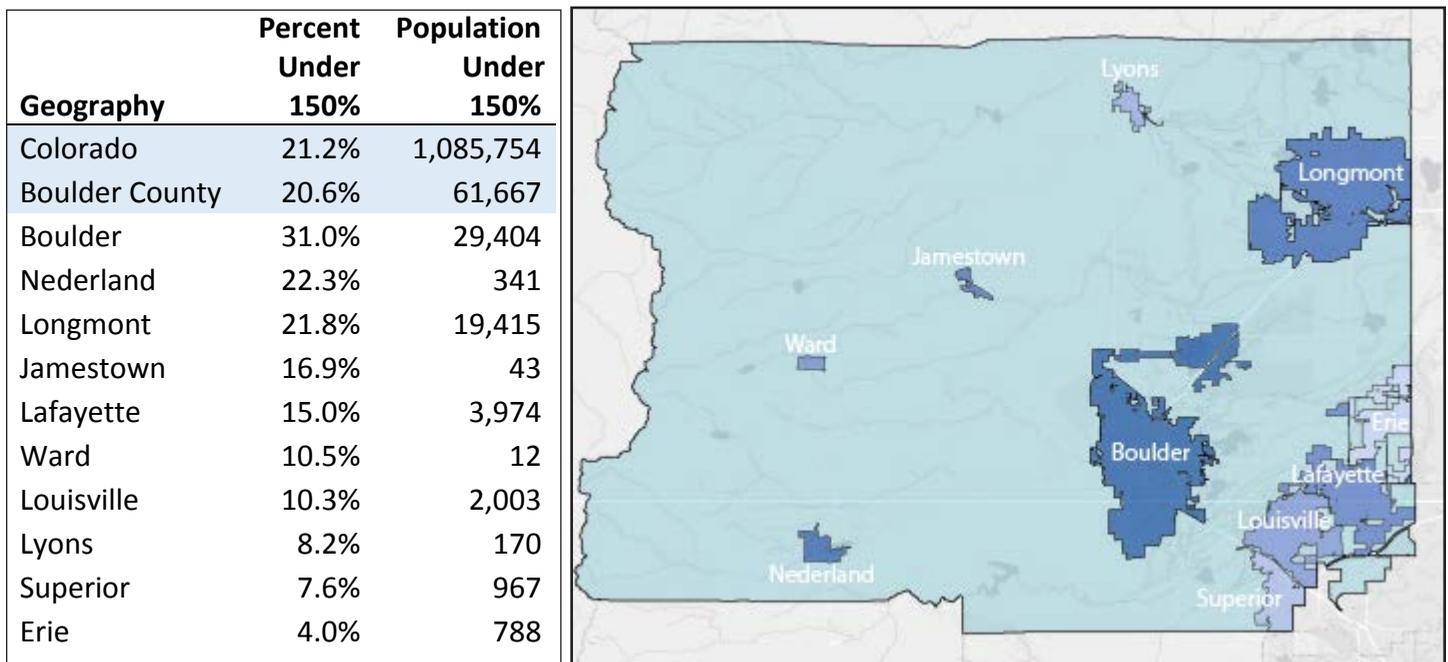


Figure 5: Income to Poverty Ratio Chart and Map

TENURE

Boulder County has a slightly higher proportion of renters than the state of Colorado as a whole.

Geography	Tenure (Renter)
Colorado	35.70%
Boulder County	37.80%
Boulder city	52.20%
Nederland	44.70%
Longmont	38.40%
Superior	36.90%
Lafayette	28.50%
Louisville	27.70%
Lyons	25.30%
Jamestown	24.80%
Ward	13.00%
Erie	12.90%

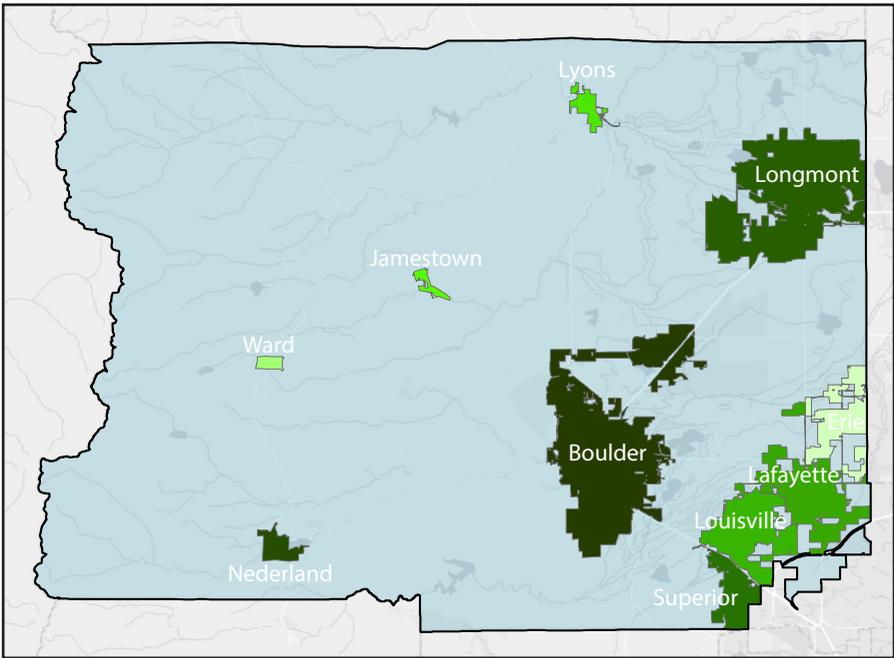


Figure 6: Tenure Chart and Map

MEDIAN GROSS RENT

The median gross rent varies between municipalities ranging from a low of \$991 in Nederland to a high of \$1,729 in Erie. As a whole, Boulder County is more expensive for renters when compared to the state.

Geography	Median Gross Rent
Colorado	\$1002
Boulder County	\$1187
Erie	\$1729
Superior	\$1478
Louisville	\$1417
Lyons	\$1291
Boulder city	\$1243
Jamestown	\$1225
Lafayette	\$1222
Longmont	\$1016
Nederland	\$991
Ward	N/A

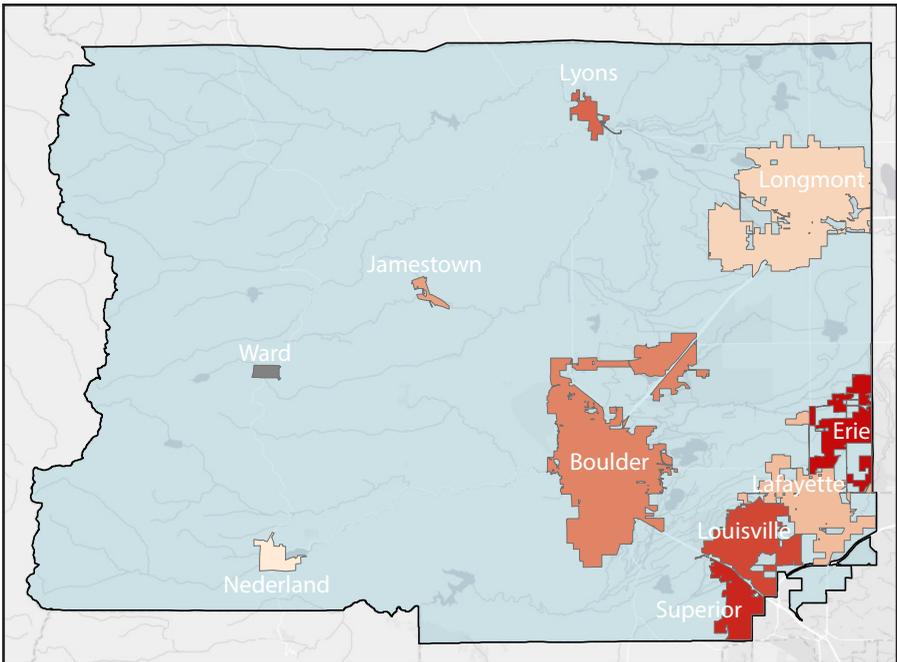


Figure 7: Median Gross Rent Chart and Map

MEANS OF TRANSPORTATION TO WORK

Boulder County has a higher proportion of its population that takes alternative transportation modes, such as walking, biking, and public transit than the state of Colorado as a whole. A shorter commute to work time in Boulder County contributes to the ability and encouragement of such mobility options, and helps lower the proportion of the population that drive alone to work (65.2%) when compared to Colorado as a whole at 75.3%.

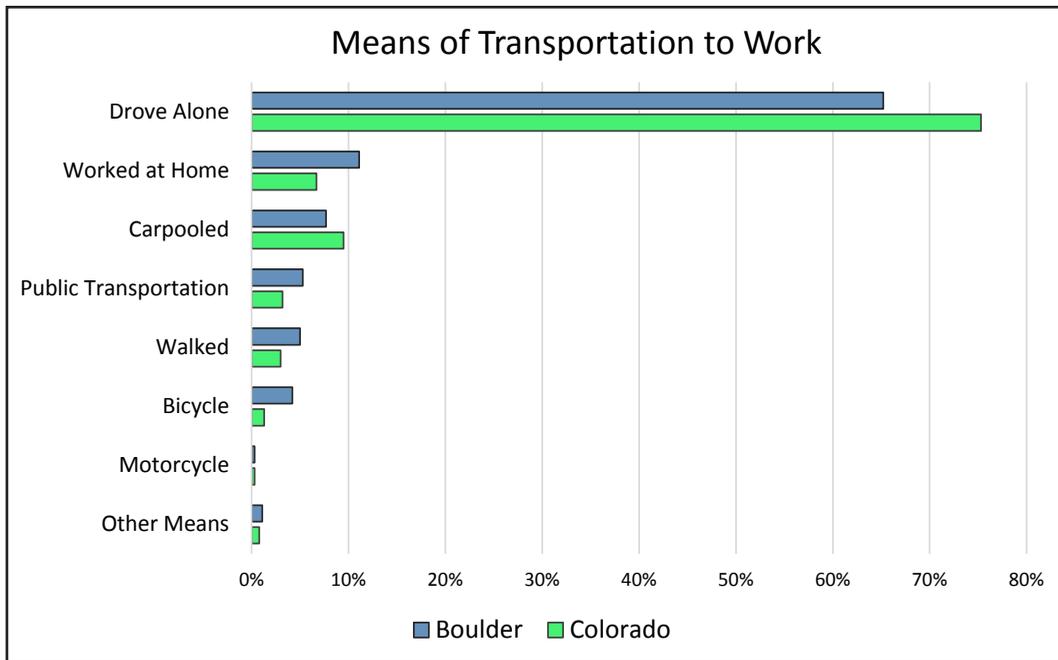


Figure 8: Means of Transportation to Work

Average Commute to Work (Min.)	
Colorado	25
Boulder County	23

Figure 9: Average Commute Time

HOUSING AND TRANSPORTATION COSTS

Despite higher proportions of people walking, biking, and taking public transportation in Boulder County, residents still spend an average of 49% of their income on housing and transportation combined, with 58.1% of residents spending more than the recommended 45% (CNT).

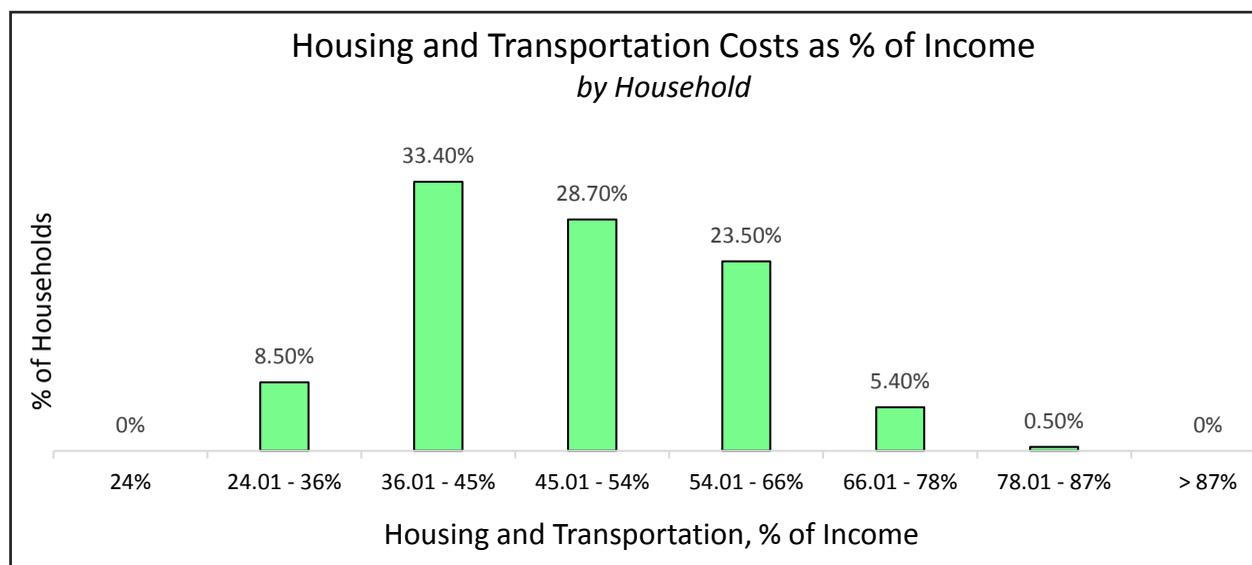


Figure 10: Housing and Transportation Costs as percent of Income

For the most part, Boulder County fares better than the state of Colorado as a whole when it comes to income and poverty metrics. However, rising rent prices have contributed to an increase in income spent on housing and transportation together. Many Boulder County residents already use a variety of mobility options such as walking, biking, or public transit however, as rent prices continue to escalate it will become even more important to encourage and provide opportunities for alternative transportation to help ease poverty and income-related concerns and burdens.

3. BACKGROUND RESEARCH & LITERATURE REVIEW

The cost of transportation is the second highest expense after housing for the average American. On average Americans spend \$9,503 a year on transportation, including costs such as maintenance, gas, and purchasing vehicles (BLS, 2015). Within Boulder County, annual transportation costs are slightly higher at an average of \$12,813. For the average Boulder County resident this constitutes 19% of household income, which is slightly higher than the recommended 15% (CNT, 2017). For lower-income households the burden of this expense is even greater. Transportation costs disproportionately affect low-income households and can “account for 55 percent of the budget of an average very-low income household, compared with less than 9 percent of a high-income household’s budget” (Center for Transit Oriented Development, 2014, p. 12). Providing affordable transportation options frees up household income and can help keep low-income families out of crisis mode. A variety of research, best practices, and ideas have emerged over the years that provide a framework for providing equitable and affordable transportation options to those who need it most.

In the 1980s, new urbanism emerged as new form of urban thinking in the United States and has since been at the heart of

many equitable and affordable transportation strategies. New urbanism promises to “reduce sprawl and improve societal wellbeing through changes to the built environment that produce compact, socially diverse, and pedestrian oriented developments” (Trudeau, 2013, p. 435). With the rise of new urbanism came a renewed interest in how the built environment influences transportation decisions. The 3D’s of transportation—density, diversity, and design—became a popular empirical explanation of the influences shaping transportation use in America (Cervero and Kockelman, 1997). Various other D’s have been added to this list such as “destination accessibility” and “distance to transit” (Ewing & Cervero, 2001; Ewing et al., 2009), however, for the purposes of this research, the three D’s will be used as the underlying framework for further discussion on the strategies and best practices for planning multi-modal communities. The three D’s and subsequent expansions in their thought have been at the heart of planning decisions intended to create successful compact, mixed-use, walkable communities with reduced vehicle miles traveled, greater public transit utilization, and increased rates of walking and bicycling all of which contribute to significant transportation cost savings. This framework

will be helpful in organizing the literature and thinking on creating successful transit oriented communities and the benefits they can provide to low-income populations in particular.

The first D, density, refers to both population and employment and their relationship to increased cost savings from increased public transportation opportunities. Density helps to increase cost effectiveness of transportation primarily through increasing ridership levels due to higher numbers of origins and destinations and a larger population base from which to draw (Guerra and Cervero, 2011). Density is good for both riders and operators of public transportation. In a study of 59 different transit investments, heavy rail, light rail, and bus, a 10% increase in population per acre corresponded with a 3.2% drop in capital costs per rider, and a 10% increase in jobs per acre resulted in a 1.5% reduction in capital costs per rider (Guerra and Cervero(2), 2011, p. 1). Transportation agencies prefer to locate services in denser parts of town as there is a better likelihood of recouping capital costs and obtaining the ridership levels needed to continue to pay for the service provided. As a result, providing affordable housing in high density locations provides enhanced opportunities for low-income-populations to access alternative transportation options.

The second D, diversity has significant

ramifications for low-income populations.

Within the field of transportation planning diversity can refer to an assortment of modes, prices, services, location options, land uses, and people (VTPI, 2017, p. 5.9-1). Inadequate diversity negatively affects the opportunities and ability of people to use transportation. Many auto-dependent communities lack diversity of transportation modes forcing residents to use automobiles when they otherwise would not have chosen to do so. For low-income populations especially, this results in increased transportation costs without the ability to choose otherwise.

Providing diverse transportation options at a variety of locations allows people to choose alternative transportation modes other than a personal vehicle, and oftentimes, just providing the opportunity can significantly change people's travel behavior. Analysis of newly installed protected bicycle lanes in five major U.S. cities found that bicycle ridership increased after installation by a range of 21 to 171 percent (Monsere et al., 2014). Many auto-dependent communities fail to see the benefit of providing alternative transportation options because so many of the residents use their car, however, this finding should encourage such communities to invest in other mobility options. The findings argue that a current lack of alternative transportation commuters may not indicate a lack of interest,

but rather a lack of opportunity.

Providing a diversity of transportation options not only gives people option value, referring to the value people place on the ability to have options, but also increases resiliency. In places with transportation diversity people are able to easily shift transportation modes to respond to changing conditions such as fuel price increases or even injuries. Transportation option diversity is especially beneficial for low-income populations who can be disproportionately affected by fuel prices and car maintenance costs.

Population diversity, in terms of income, age, races, and education, is another crucial aspect for the success transportation systems. Oftentimes transportation decisions have been made without the recognition of the symbiotic relationship between transportation and diversity. An example of this is the major highway building projects of the post WWII period that benefited middle class suburban populations over those within the city. Transit systems such as bus or rail benefit from locating near communities of different ages, incomes, and races because different people have different transportation needs. Areas with high diversity are likely to support various mobility options and provide the needed ridership to fiscally support transportation agencies.

The last D, design is the “how” of the framework. The way transportation and its surrounding land uses are designed and built significantly affect the ability and desire of people to use it. Design includes planning for higher density and encouraging greater diversity, but also addresses accessibility and connectivity issues. Accessibility refers to the ability to use, afford, and reach transportation, and connectivity refers to the degree to which destinations and networks are connected and easily reachable.

Design decisions play a key role in individual’s willingness and ability to access transportation access, and is a major factor in the decision to use an alternative transportation mode such as walking or bicycling. In 2006, Roger Geller, with the Portland Bureau of Transportation, published a paper defining four typologies of people who bike in Portland, which has since been widely adopted and applied as a typology throughout the nation to help plan for more accessible bicycle infrastructure. The four types of bicyclist as defined by Geller are 1) strong and fearless, 2) enthused and confident, 3) interested but concerned, and 4) no way no how. The majority of Americans (thought to be around 60%) fall within the interested but concerned category, which means that they are interested in riding their bicycle more but are uncomfortable riding alongside vehicular traffic. Designs such

as protected bike lanes or buffered bike lanes can be used to encourage this typology of people to feel more comfortable and convince them to ride their bicycle when they otherwise would not have. Most residents surveyed in the 2014 report “Lessons from the Green Lanes” agreed that they would be more likely to ride a bicycle if they were separated from traffic, with the self-selected interested but concerned population expressing the highest agreement at 85% (Monsere et al.). In addition to being more willing to ride a bicycle on protected bicycle lanes, the vast majority of people felt safer riding in bicycle lanes that had been designed with some sort of protection such as plastic bollards. Through bicycle facility design, this transportation mode can be made more accessible and encourage people who otherwise would not have chosen to ride their bicycle. Protected bicycle lanes are but one example of how design can be used to enhance accessibility; design can and has been used in hundreds of more cases to improve transportation accessibility by creating more comfortable and desirable streetscapes, amenities, and physical improvements. For low-income populations increasing accessibility of alternative transportation options through design helps provide safer more comfortable options for those who may not have another choice and in general provides a better opportunity to use alternative

transportation options when needed or desired.

Connectivity is another main objective of design, and has especially important planning ramifications for low-income populations. Connectivity refers to the ability to get to a destination in the shortest time possible and ideally, for those walking or bicycling, in the shortest distance. Distance is a main determinant of connectivity, and greatly influences the ability and willingness of people to take alternative transportation options. In an analysis of travel and the built environment Ewing and Cervero found that a one percent decrease in distance to transit corresponded to a .29 percent increase in transit use (2010). In a California study, people living within a distance of .5 miles of a transit stop were about four times more likely to use transit than those living a distance of a half mile to three miles away (Cervero, 2007). In recognition of the importance distance plays in promoting alternative transportation options best practice has been to create transportation/transit catchment areas of a half mile. A half mile corresponds to a ten minute walk at three miles per hour and is thought to represent the maximum distance and time the average American is willing to walk to a destination. Research tends to agree with this catchment area but in terms of transit ridership suggests that a quarter mile catchment area better represents ridership as a function of jobs

while a half mile better represents ridership as a function of population (Guerra et al, 2011). In relation to design, this means that to attract alternative mobility modes and provide accessible transportation options transportation facilities such as bike lanes, multi-use paths, sidewalks, bus stops, light rail, and car share locations should be located within a half mile of any population and main destinations. Locating such opportunities in relation to low-income populations is especially important to facilitate easier access to the cost saving benefits of alternative transportation.

While a half-mile radius proves useful as a decision-making framework, caution must be exercised as it often fails to account for actual distance given street design. The half-mile catchment area is often used as a Euclidean distance measure without taking into account barriers such as disjointed street patterns or highways non-traversable to a person on foot or bicycle. This can mean areas that fall within a half-mile catchment area are actually much longer than a ten minute walk and are not accessible or connected. Street designs such as cul-de-sacks and winding streets can also create added distance which limits the mobility of people not in an automobile. In addition, segregated land uses creates more added distance to get to employment centers, shopping,

groceries, or other destinations. ArcGIS analysis techniques such as the Network Analysis tool provides a solution to better mapping 10-minute catchment areas. Through network analysis, catchment areas can be created based on actual street networks which provide more realistic and accurate portrayals of the distance it takes to access various destinations. This technique provides transportation planners and agencies useful data on how transportation services can better serve populations that are under-served by traditional Euclidean half-mile catchment areas. Such a tool provides visual representation of the importance of street design in creating better-connected and more accessible communities.

Apparent through discussion of the three D's of transportation, successful development and successful communities are created through harmony between the built environment and transportation. Communities where density, diversity, and design are all considered provide location efficiency with employment, shopping, food, public transportation, social life, and other amenities located close by which can reduce household transportation costs dramatically. Given the benefits of development that incorporates the three D's of transportation, such mixed-use walkable areas are becoming one of the most popular and desirable housing

preference. According to the National Association of Realtors Community Preference Survey, 79% of respondents believe that easy walking distance to places is an important factor when looking for a new home (2015); and in the Urban Land Institute's "America in 2015" report they find that 52% of all Americans and 63% of Millennials would prefer to live in a place where they do not have to use a car very often (2015). The result of this increased demand for such development is increased housing costs in these locations, driven in part by the higher cost of land (Zuk and Carlton, 2015). According to a study by Smart Growth America, walkable urban places have an average rental premium of 74% over suburban auto-dominated areas (2015, p. 4). While the immense demand for locations that provide opportunities for alternative transportation options provides a strong argument in favor of creating more such opportunities, it poses a problem for low-income households.

The growing demand for location efficient housing with access to alternative transportation means that these locations are often above manageable housing prices. As a result, low-income populations, who stand to benefit most from improved affordable transportation access, are often pushed away. In the Mobility For All Needs Assessment survey, participants responded that accessibility and

transportation cost were the two greatest transportation challenges they face (2015, p. 5-9). Fortunately a variety of strategies and tools exist for preserving affordable housing in transit oriented compact-walkable developments, such as inclusionary housing ordinances, incentive based zoning, low-income tax credits, and more innovative approaches like Denver's Regional Transit Oriented Development Fund. However, these approaches focus on producing new development not retrofitting existing development. While new and infill development often utilizes affordable housing tools and policies, there is not always new development happening, and the areas where it is can become very competitive. In addition, many people do not want to remove themselves from the neighborhood and community they are a part of and relocate elsewhere. The Boulder County Comprehensive plan acknowledges the importance of individual preference with the overriding goal of "permit[ing] the maximum opportunit[y] for individual choice" (p. 1). Together with the transportation goal G.5: to ensure that adequate transportation exists for all users regardless of age, income, or ability (p. 4), the Boulder County Comprehensive plan specifies the need to provide transportation opportunities to all people regardless of whether they live in location efficient housing or not.

Encouraging development that provides greater density, diversity, and designs that increase accessibility and connectivity can greatly reduce transportation cost burdens. However, until all low-income populations can locate to such areas and desire to be in such areas, there will be a need to provide mobility options that permit maximum individual choice while allowing opportunities to live without a personal automobile, the highest transportation related expense and often an option low-income individuals do not have. This project will provide the Mobility For All program the information needed to provide low-income residents with greater mobility options that can prevent crisis mode and lead to greater overall county resiliency.

4. METHODOLOGY

GENERAL APPROACH

This capstone project provides information on the accessibility of alternative transportation options to low income areas within Boulder County. Alternative transportation options analyzed in this report include public transportation, bicycle facilities, walking facilities, and car share locations. The approach for this project was to first locate and identify low income areas within Boulder County, second, to identify transportation options within the County, and finally to perform a GIS network analysis to prioritize the low income areas with limited access to transportation options. The results of the project will allow the Mobility for All Program to better tailor transportation improvements to the places that need it most.

METHOD

The following is a presentation of the steps taken for this project including the data used, how it was obtained, and how it was prepared for analysis.

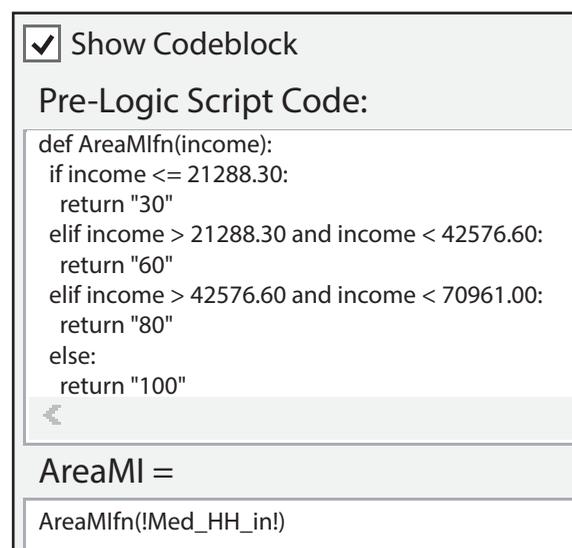
1). Identify Low-Income Areas within Boulder County

This project took two different approaches for identifying low-income areas. The first was to identify low-income block groups within Boulder

County earning 30%, 60%, or 80% AMI or less. The second was to identify subsidized housing sites maintained by Boulder County Housing Authority (BCHA), Boulder Housing Partners (BHP), and Longmont Housing Authority (LHA).

Locating Low-Income Block Groups

Median incomes for Boulder County block groups were obtained using data from the U.S. Census Bureau 2011-2015 American Community Survey Five year estimates. In order to identify areas with an AMI of 30, 60, or 80% of Boulder County's median income as a whole (\$70,961), the ArcGIS field calculator was used with the code script displayed below. The resulting GIS field provided the AMI of the block group and allowed for further analysis of the



```
 Show Codeblock
Pre-Logic Script Code:
def AreaMlfn(income):
    if income <= 21288.30:
        return "30"
    elif income > 21288.30 and income < 42576.60:
        return "60"
    elif income > 42576.60 and income < 70961.00:
        return "80"
    else:
        return "100"
AreaMI =
AreaMlfn(!Med_HH_in!)
```

Figure 11: Code Script for block group AMI

Below AMI Block Groups

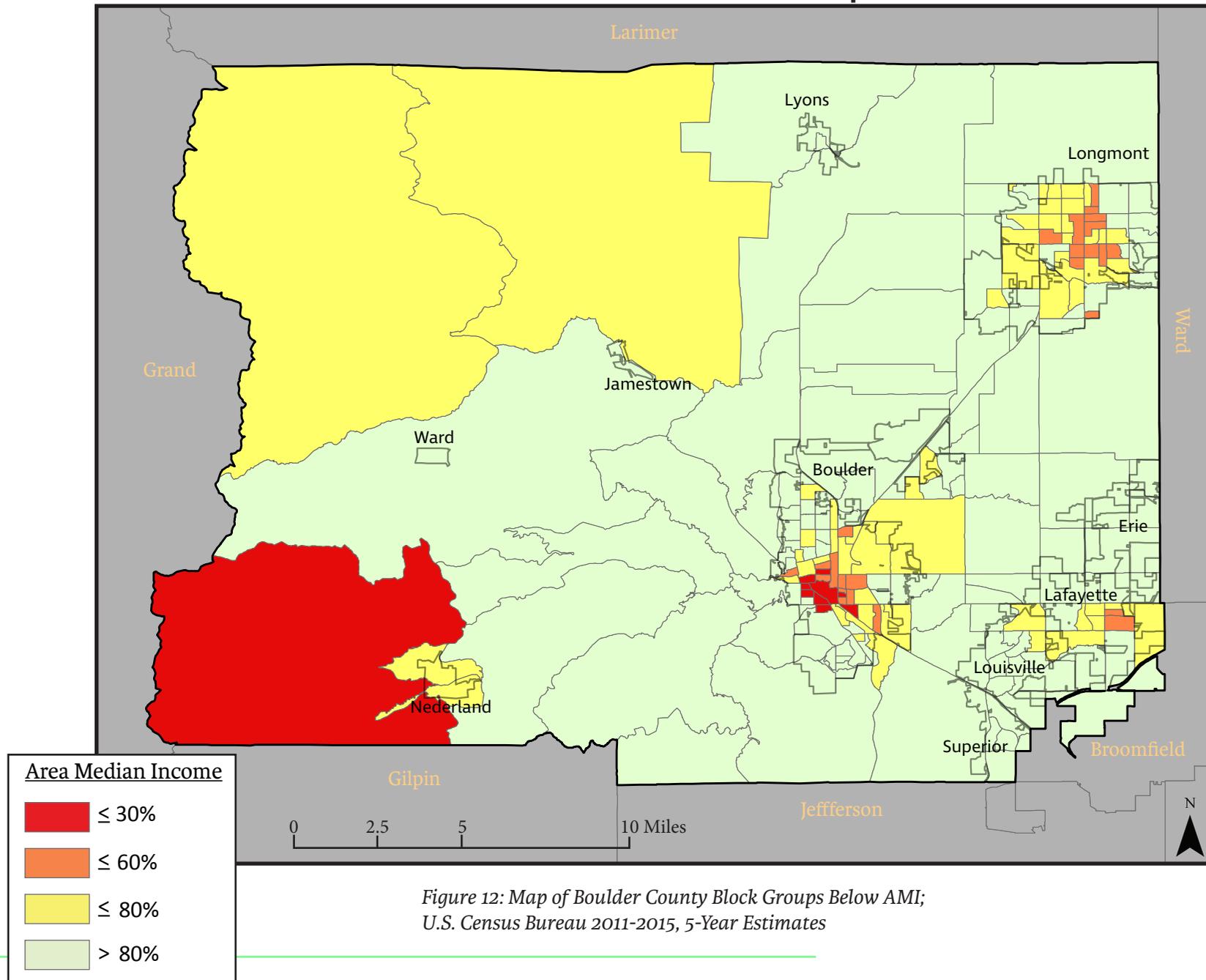


Figure 12: Map of Boulder County Block Groups Below AMI; U.S. Census Bureau 2011-2015, 5-Year Estimates

Locating Subsidized Housing Sites

Subsidized housing site data was obtained for all properties owned/managed by BCHA, BHP, and LHA through contacts with the corresponding authority. In total there are 108 subsidized housing sites within Boulder County. Each housing site contains data on the number of units and the type of housing it provides. In addition, each housing site has data on whether it falls within a low-income block group, which was calculated using the spatial join tool. These site characteristics help inform the prioritization scoring, which is discussed in more detail in the prioritization rubric section.

In order to analyze these sites in relation to transportation options, the subsidized housing properties were mapped by location according to address and converted into shapefile point data. Important to note is that the actual location of some affordable housing units may differ slightly depending on proximity to where the address point is located.

The map on the next page displays all of the affordable housing sites used in the analysis.

2). LOCATE TRANSPORTATION OPTIONS

Transportation options included in the analysis are public transportation (RTD stops, FLEX stops, and Call-n-Ride areas), bicycle facilities, B-Cycle stations, walking facilities, and eGO car share locations, each of which are discussed below.

Public Transportation

❑ RTD Bus Stops

Data for RTD bus stops and routes was obtained and downloaded through the developer resources page on the RTD website. The data used was current as of March 2017. RTD maintains both local and regional bus routes, and for this analysis it was important to be able to identify which stop served which route. Therefore, the bus stop data was given a new field in GIS and labeled either “Local,” “Regional,” or “Both” depending on which routes were served by the bus stop.

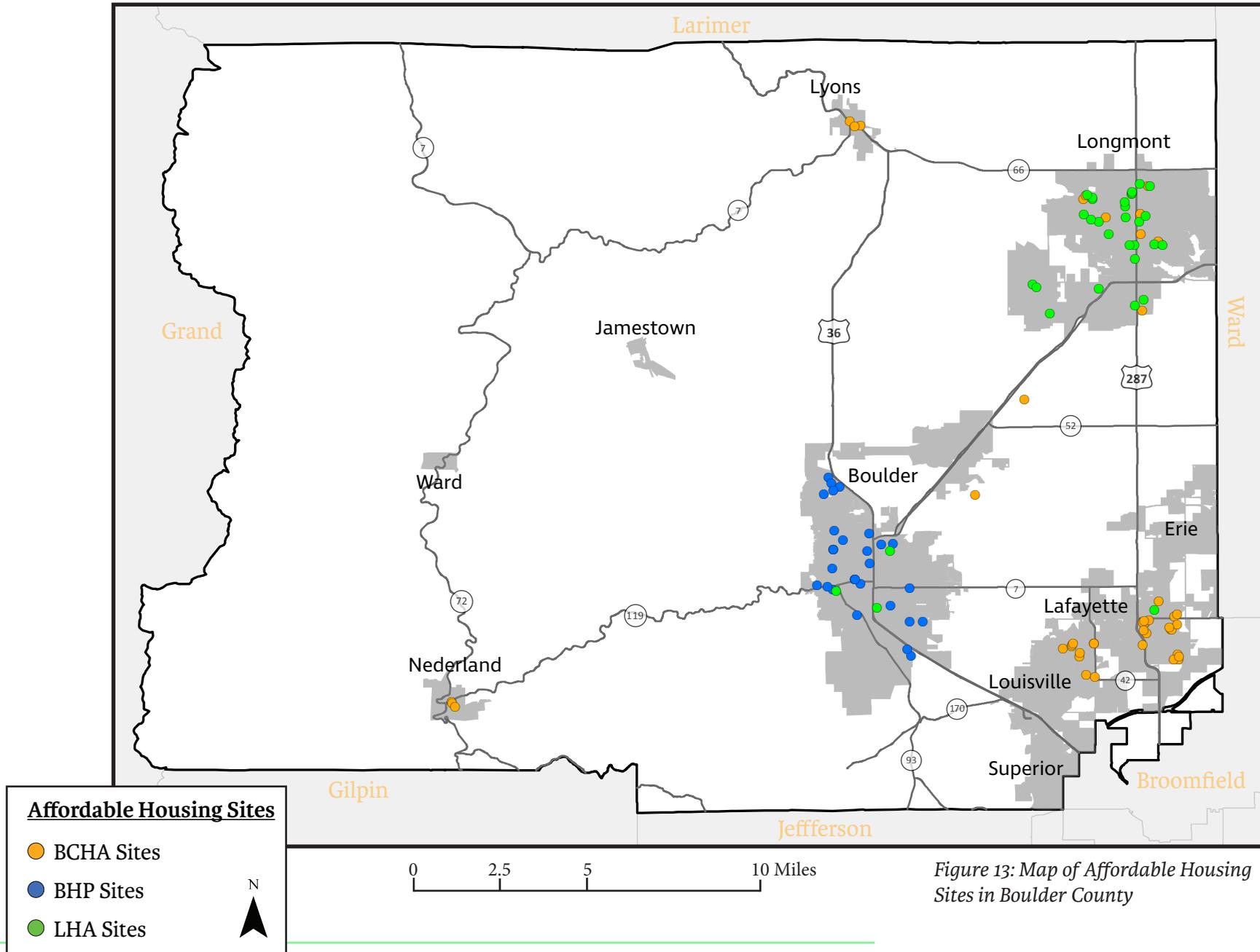
❑ FLEX Bus Stops

Data for FLEX bus stops and routes was obtained through contacts with Boulder County. No additional work was performed on the data.

❑ Call-n-Ride

Data for RTD bus stops and routes was

Affordable Housing Sites



obtained and downloaded through the developer resources page on the RTD website. The data downloaded was current as of March 2017. Only Longmont is completely within a call-n-ride zone, however, the majority of Louisville and Superior are also covered by a zone.

Bicycle Facilities

■ Bike Lanes

Data on bicycle facilities and routes include data from Boulder County, City of Boulder, City of Longmont, and the Denver Regional Council of Governments (DRCOG). Multiple data sources were used for bicycle facility data in order to provide the most comprehensive and up-to-date information on currently existing bicycle lanes and trails. From these data sources, only bike lanes (i.e. buffered bike lanes, protected bike lanes, cycle tracks, contraflow bike lanes) were considered in the analysis. Bicycle facilities such as shared lanes and wide outside shoulders were not included in the analysis because they do not provide enhanced safety or encourage people to bicycle (NACTO, 2012).

■ B-Cycle Stations

GIS data on B-Cycle stations was obtained through DRCOG. Currently, B-Cycle stations

in Boulder County are only located in the City of Boulder. However, the Longmont Zagster bicycle share program is set to open at the end of April. Data on the Zagster program has not been incorporated into this project due to time restraints however, future studies should take this new transportation option into account.

Walking Facilities

■ Multi-Use Paths and Sidewalks

Walking paths data was created using Boulder County Sidewalk data and data on multi-use paths from DRCOG, Longmont, City of Boulder, and Boulder County bicycle route data. Sites without access to a multi-use path or sidewalk may compromise pedestrian safety and comfort and may hinder the ability of people to get to where they need to go.

Car Share

■ eGo Car Share

eGo car share data was obtained through contacts with the company. Locations were mapped based on address of car location. There are a total of 35 car share locations in Boulder County, all but one of which are located within the City of Boulder. (Longmont has the other location).

3). GIS NETWORK ANALYSIS

In order to locate transportation options within an accessible distance to low-income areas, a service area analysis was conducted using the Network Analyst tool in ArcGIS. This tool allows distances to be measured based on actual street network, and therefore, allows accurate representations of distance to be modeled.

Only affordable housing sites were used in the network analyst as block groups are too large a geographic area to produce a meaningful service area. Therefore, the block group GIS analysis only takes into account whether a transportation option is contained within the block group not how far away it is.

The next page contains a matrix explaining the network distances that were used in the GIS analysis to create service areas around the affordable housing sites. These distances represent actual street distances and not Euclidean distances.

Transportation Mode	Service Area Distance	Explanation
Bus Stop (RTD & FLEX)	.5 Mile	A half-mile radius is a typical representation of the farthest distance the majority of people are willing to walk.
Call-n-Ride	N/A	No service area was used; Call-n-ride operates in fixed locations only.
Bicycle Facility	.1 mile	A tenth of a mile was used for bike lane access as it accommodates sites that may be set back from the road or may be located off busier roads on calmer neighborhood streets, but nonetheless have reasonable direct access to a bicycle lane without having to travel on potentially unsafe roads for bicyclists.
B-Cycle Station	.25 mile	This distance was chosen as people located within a closer walk of a bike share are more likely to consider using a bike and more likely to know of its existence.
Walking Facility	.1 mile	A tenth of a mile was used for multi-use path and sidewalk access as it accommodates sites that may be set back from the road or may be located off busier roads on calmer neighborhood streets, but nonetheless have reasonable direct access to a safer pedestrian amenity without having to travel along potentially unsafe roads for pedestrians.
eGo Car Share	.5 mile	A half-mile radius is a typical representation of the farthest distance the majority of people are willing to walk.

Figure 14: Matrix of Network Analysis Distances

4). COLLECTING RESULTS

After the service areas were computed for the housing sites, transportation features that were within these areas were selected through the spatial analyst tools: select by location and select by attributes. Transportation features that were within the allotted network distance of the housing sites were the recorded in an Excel spreadsheet. Once all of the transportation features were analyzed and recorded, the sites were then scored and prioritized based on access to mobility options. An explanation of the prioritization scoring rubric is provided in the following section.

PRIORITIZATION RUBRIC

In order to prioritize subsidized housing sites and below-AMI block groups, a scoring rubric was created to allocate points for each transportation and site variable. Variables scored include the characteristics of the site itself (number of units, type of housing, location within a low-income block group), RTD and FLEX bus stop accessibility (number of stops and type of stop), bicycle facility access (presence of bike lanes and B-cycle stations), pedestrian access (multi-use paths, trails, and sidewalks), and access to eGO Car share vehicles.

Once the scores were established, a weighted score was then applied to in order to better prioritize transportation access rather than particular site/housing characteristics. The prioritization works by allocating larger shares of points to sites that already have good access to transportation. This means that sites with fewer points are higher priority than sites with a large number of points. The scoring rubric used to prioritize and score the housing sites is presented below.

EXPLANATION OF SCORING

Housing Type

Housing sites had been given typologies from their respective authorities. Based on these existing typologies, low-income sites that cater to the elderly, the disabled, families, and the chronically homeless were given higher scores over other housing types. Transportation access for these groups is more important as the ability to operate, own, and maintain a vehicle is often harder for these groups of people due to ability and increased financial burden.

Number of Units

Housing sites that provide a larger number of units were prioritized over those with few units. Improvements to these denser sites will provide an overall greater good in terms of number of total people affected.

SITE CHARACTERISTICS

Weight = 1

Housing Type	Score	Weighted Score
Elderly/Disabled	0	0
Family	0	0
Chronic Homelessness	0	0
Transitional	1	1
Section 8 Community	1	1
Mixed-Age	1	1
Affordable Rental	1	1
Privately Owned Subsidized	1	1

Weight = 1

Number of Units	Score	Weighted Score
0 – 5	5	5
6 - 15	4	4
16 - 30	3	3
31 - 50	2	2
51 - 80	1	1
> 80	0	0

SITE CHARACTERISTICS

Weight = 1

AMI of Block Group	Score	Weighted Score
30%	0	0
60%	2	2
80%	3	3
Higher	5	5

AMI of Block Group

Sites that are located within a block group that had a lower area median income than the rest of the county were prioritized. Sites within the lowest AMI block groups were further prioritized as they may have more financial burdens and will benefit more from transportation improvements.

Weight = 1

Housing Sites in Block Group	Score	Weighted Score
0	5	5
1	4	4
2	3	3
3	2	2
4	1	1
5 or more	0	0

Affordable Housing Sites in Block Group

This scoring was only used for the below-AMI block group prioritization. The scoring prioritizes block groups containing subsidized housing sites over those without sites.

Figure 15: All site characteristics prioritization scoring charts

BUS ROUTES

Weight = 2

Local (#)	Score	Weighted Score
0	0	0
1 - 2	1	2
3 - 4	2	4
5 - 6	3	6
7 - 10	4	8
> 10	5	10

Local Bus Stop

Sites without access to local bus stops or with a limited number of stops within a .5 mile walking distance were prioritized over sites with access to a large number of local stops. The analysis includes all bus stops, including those on opposite sides of the street.

Weight = 2.5

Regional (#)	Score	Weighted Score
0	0	0
1 - 2	1	2.5
3 - 4	2	5
4 - 6	3	7.5
7 - 10	4	10
> 10	5	12.5

Regional Bus Stops

Regional routes were weighted at a higher rate (2.5) than local routes because regional routes take riders farther thereby saving money on gas and car maintenance while providing access to opportunities outside of the neighborhood.

Weight = 3

Both Local and Regional (#)	Score	Weighted Score
0	0	0
1 - 2	1	3
3 - 4	2	6
4 - 6	3	9
7 - 10	4	12
> 10	5	15

Both Bus Stops

Stops with access to both regional and local bus routes were weighted the highest out of all the bus stops. These stops provide greater transportation options and a better chance of connecting to key destinations.

Weight = 2.5

Flex Bus Stop	Score	Weighted Score
Access to at least one stop	2	5

FLEX Bus Stops

A site with access to a stop was given a weighted score of 5. This score was chosen to reflect the benefits of having access to this amenity but not unduly prioritize sites without access. FLEX routes are not available to all parts of the County, but those with access have another regional transportation resource.

Call-n-Ride Area

Call-n-Ride areas are fixed boundaries in which people can call RTD for transportation pick up from their home. Areas with this convenient option were given a weighted score of 3 points, while areas without service were given 0.

CallInRide	Score	Weighted Score
Within service area	1	3

Figure 16: All bus routes prioritization scoring charts

Bike Lane

Sites without access to a bike lane were prioritized. Only bike lanes that area buffered, protected, contraflow, or single stripe were considered. No shared lane markings or wide shoulders were considered as these facilities do not significantly improve safety or encourage people to use a bicycle.

Multi-Use Path or Sidewalks

Sites without access to a multi-use path or sidewalk within .1 miles were prioritized. Sites without access to these amenities may not welcome or encourage pedestrian activity, hindering the ability of people to walk to where they need to go.

B-Cycle Station

B-Cycle currently only operates 15 stations within Boulder County, all of which are within the City of Boulder. While this means the majority of Boulder County housing sites do not have access to these stations, the sites that do will be given 3 points for each station within a half-mile of the site.

Car Share

Sites without access to an eGO car share within a half-mile walk were given priority. The majority of eGo car share locations are within the city of Boulder, however, Longmont also hosts a few locations. Two points were given for each eGO car share location within a .5 mile walking distance of a housing site.

BIKE/WALK

Weight = 2

Bike Lane	Score	Weighted Score
Yes	5	10
No	0	0

Weight = 2

Multi-Use Path or Sidewalk	Score	Weighted Score
Yes	5	10
No	0	0

B-Cycle Station	Score/Weighted Score
Yes	3 pts. for each station

Figure 17: All bike/walk prioritization scoring charts

CAR SHARE

eGO Car Share	Score/Weighted Score
Yes	2pts for each location

Figure 18: Car share prioritization scoring chart

5. FINDINGS: BLOCK GROUPS

TEN HIGHEST PRIORITY BLOCK GROUPS

This section of the report presents findings from an analysis of the 91 block groups making 30, 60, and 80 percent of Boulder County AMI. This section serves as a guide for prioritizing and implementing broader transportation initiatives that cover a larger area. (Site-specific improvement recommendations can be found in the subsidized housing findings section). The prioritization scores for these areas ranged from a low of 6 to a high of 71, with an average score of 26.6.

Analysis of the block groups revealed that the ten highest priority areas, based on the prioritization scoring methodology, all lacked access to a bike lane, multi-use path, B-Cycle station, and eGO car share location. Therefore, instead of creating maps that each display the same ten priority areas, these top ten sites will be presented together in the ten highest priority site map and chart displayed below. (Further information and expanded lists of all block groups without access to bike, walk, or share mobility options can be found in Appendix A; and the prioritization score sheet can be found in Appendix C).

TEN HIGHEST PRIORITY BLOCK GROUPS FOR TRANSPORTATION IMPROVEMENTS

Rank	Location	Tract	Block Group	AMI	Score
1	Unincorporated NW/Jamestown	13602	1	80	6
2	Unincorporated NW	13602	2	80	7
3	Nederland/Unincorporated	13702	7	30	10
4	Lafayette	60800	4	60	12
5	Lafayette	12905	1	80	12
6	Nederland/Unincorporated	13702	6	80	12.5
7	Boulder	12401	4	30	13
8	Nederland/Unincorporated	13702	5	80	13
9	Lafayette	60800	5	60	18
10	Louisville	13005	1	80	19

Figure 19: Ten highest priority block groups

Highest Priority Block Groups

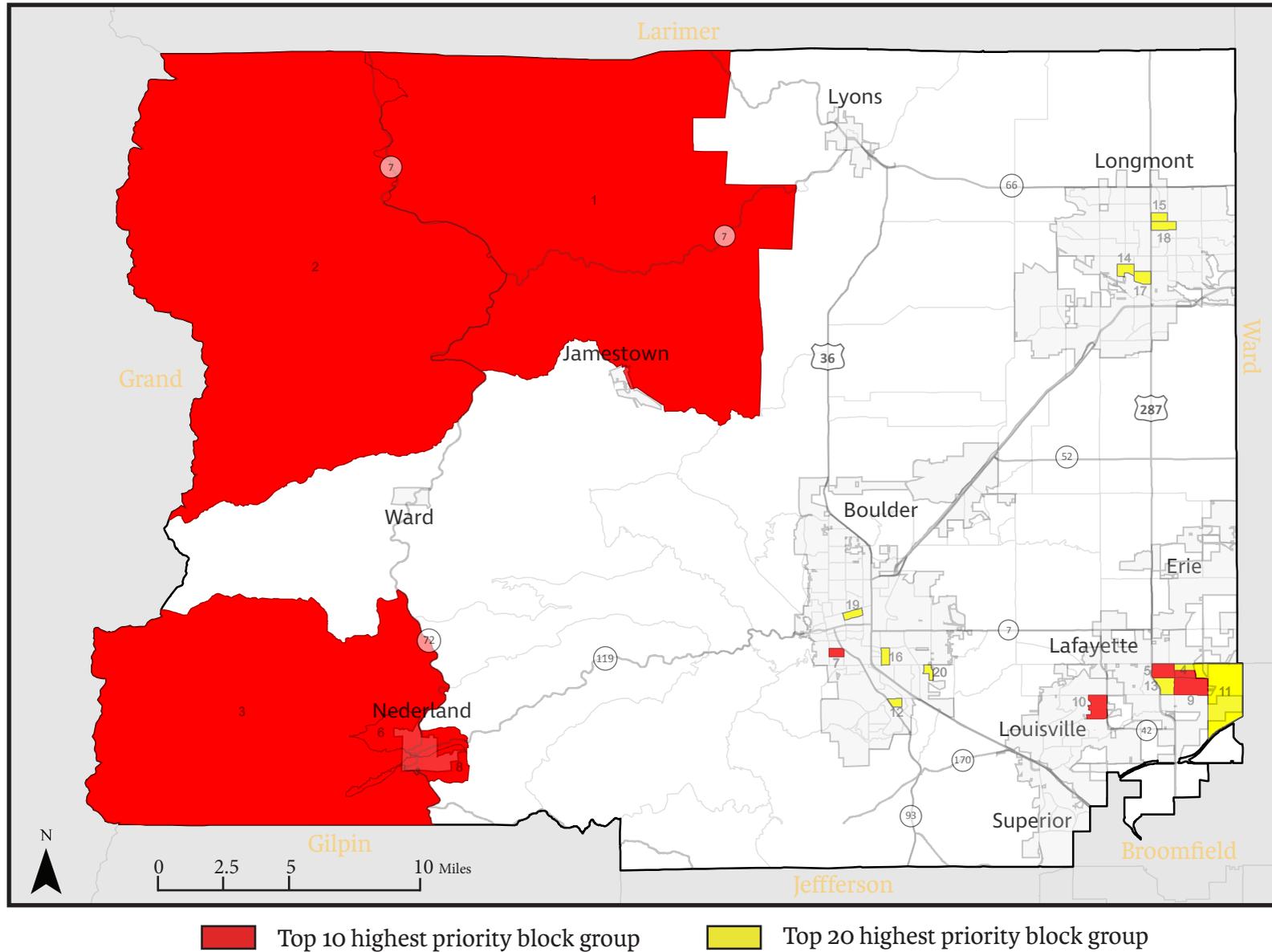


Figure 20: Highest priority block group map

HIGHEST PRIORITY BLOCK GROUPS: FINDINGS ANALYSIS

Half of the highest priority block groups are located in the mountainous and more isolated western portions of Boulder County. Many of these communities lack the alternative transportation options that can be found in the more densely populated cities of Boulder and Longmont. The elevation changes, weather related obstacles, and relative distance of amenities and destinations within these communities often make bicycling and walking, as a means of travel, relatively challenging. Therefore, improvements to public transportation and car share options should be prioritized.

These rural mountain areas warrant further study for transportation improvements such as bus routes and car share options. Through greater analysis and community engagement with these areas, the Mobility For All Program should identify desirable alternative transportation options that help improve economic resiliency for low-income populations in these areas.

In addition to the western block groups of Boulder County, the eastern side of the County -- in the Lafayette & Louisville area -- also had a high concentration of high priority block groups. These areas had limited access to all the alternative options measured in this analysis, and should also be targeted for all-around transportation improvements.

TRANSPORTATION GAPS

The ten highest priority block groups presented in the last section highlight the bike, walk, and share transportation gaps that exist on the block group level for Boulder County. However, public transportation gaps are not as readily apparent in the top ten analysis and as such this block group transportation gap analysis will provide information to better address bus stop deficiencies.

BUS

NO BUS ACCESS

While the top ten highest priority block groups all shared a lack of bike, walk, and car share mobility options block groups differed depending on access to bus transportation. Only four block groups lacked complete access to a bus stop and include the following:

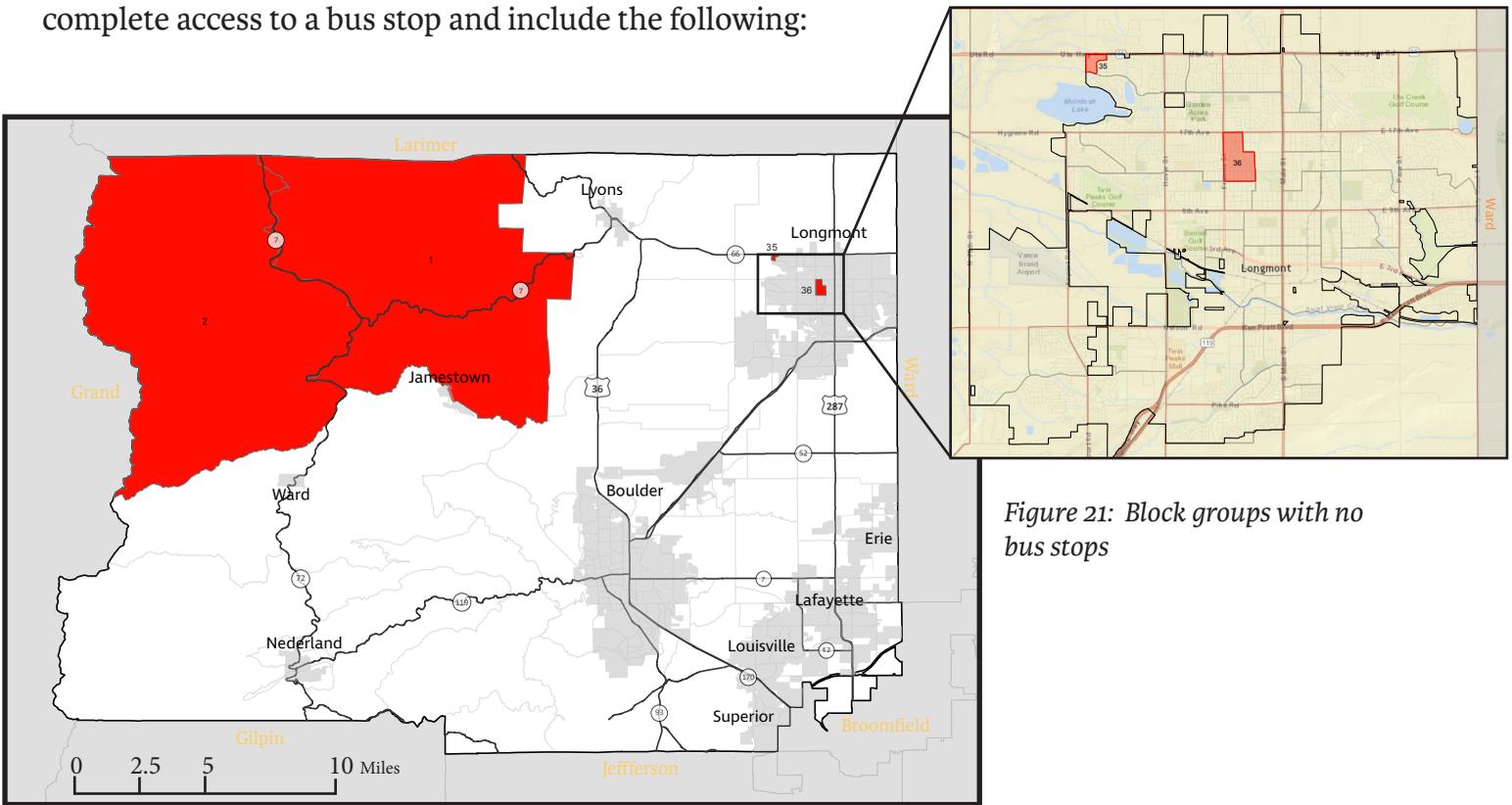
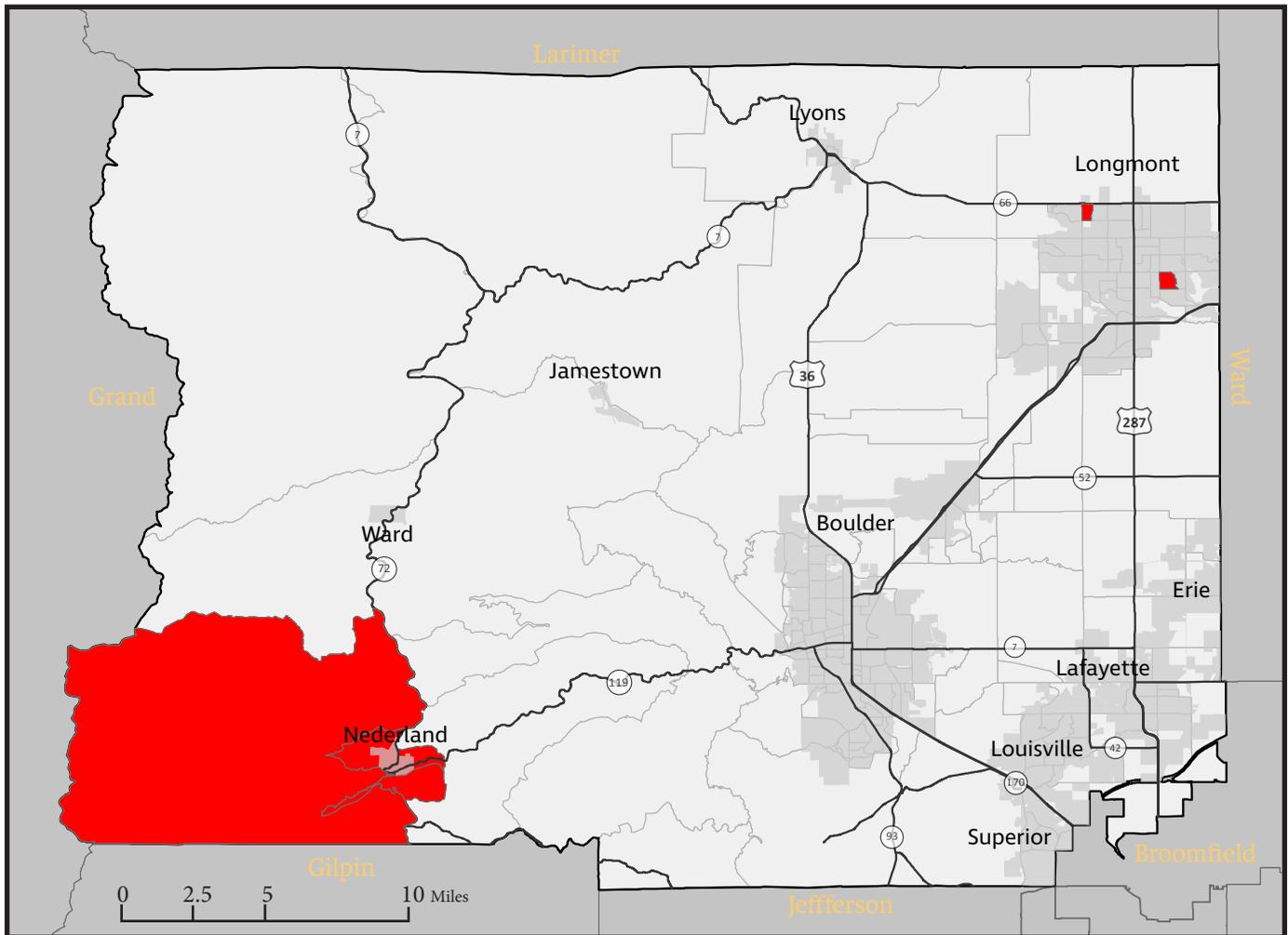


Figure 21: Block groups with no bus stops

Rank	Location	Tract	Block Group	AMI
1	Unincorporated NW/Jamestown	13602	1	80
2	Unincorporated NW	13602	2	80
35	Longmont	13207	2	80
36	Longmont	13308	1	80

NO LOCAL BUS ROUTE ACCESS

In addition to the block groups without access to any bus stop, there are a total of five more block groups that do not have access to a local RTD bus route. (These block groups have access to a regional route but no local route). Three of the five block groups are located in and around Nederland, and two are in Longmont.

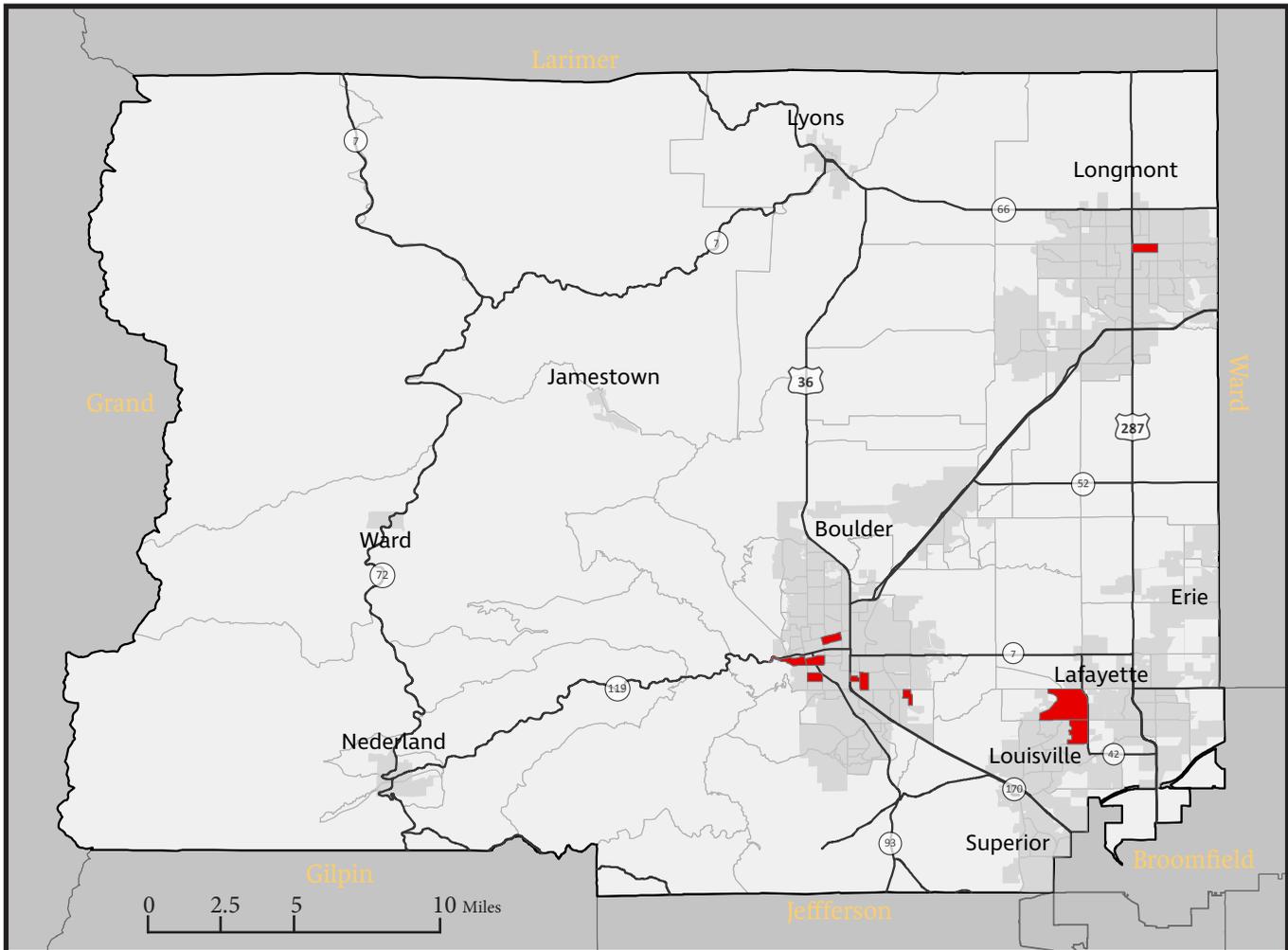


Rank	Location	Tract	Block Group	AMI
3	Nederland/Unincorporated	13702	7	30
6	Nederland/Unincorporated	13702	5	80
8	Nederland/Unincorporated	13702	6	80
48	Longmont	13208	3	80
59	Longmont	13212	1	80

Figure 22: Block groups with no local bus stops

NO REGIONAL BUS ROUTE ACCESS

In addition to the block group without access to any bus stop, there are a total of 26 block groups below that do not have access to regional route. (These block groups have access to a local route but no regional route). The ten highest priority block groups from the list of 26 is presented below, ranked by the prioritization scoring. (A full list of these block groups can be found in Appendix A).



Rank	Location	Tract	Block Group	AMI
7	Boulder	12401	4	30
10	Louisville	13005	1	80
16	Boulder	12607	4	60
18	Longmont	13503	2	60
19	Boulder	12202	1	80
20	Boulder	12501	2	80
24	Lafayette/Louisville	13003	4	80
26	Boulder	12204	2	30
28	Boulder	12607	1	30
30	Boulder	12201	2	80

Figure 23: Block groups with no regional bus stops

6. FINDINGS: SUBSIDIZED HOUSING SITES

The following section presents the highest priority sites from the 108 subsidized housing sites that were analyzed as well as a transportation gap analysis for these sites. The first section, (Ten Highest Priority Sites) presents the ten highest priority sites out of all the sites analyzed and is followed by a closest facility analysis of these areas. The closest facility analysis provides greater insight into specific transportation improvements that would most benefit the highest ranking housing sites. Following this analysis, the top ten highest priority areas for each separate housing authority is presented. These results will help housing authorities prioritize improvements for sites within their specific control. Finally, a transportation gap analysis is presented which provides mode specific recommendations for housing sites without access to specific transportation options regardless of their priority ranking.

The housing site prioritization scores ranged from a low of 6 to a high of 70, with an average score of 33.1. Below are the ten highest priority sites based on lowest prioritization score.

(In the following charts the housing site typologies are from the respective housing authority; Additional information for the charts and data presented in this section can be found in Appendix B and the prioritization score sheets can be found in Appendix C).

TEN HIGHEST PRIORITY SITES

Rank	Name	Authority	Location	Units	Type	Score
1	Josephine Commons	BCHA	Lafayette	74	Age 55+	6
2	Aspinwall	BCHA	Lafayette	72	Mixed-Age	7
3	E Cleveland	BCHA	Lafayette	4	Mixed Age	9
4	Hayden Place	BHP	Boulder	30	Affordable Rental	9.5
5	Lafayette Villa West	BCHA	Lafayette	28	Mixed-Age	10
6	Lafayette Villa West II	BCHA	Lafayette	10	Mixed-Age	11
7	Sagrimore	BCHA	Lafayette	1	Mixed-Age	11
8	San Juan Del Centro	LHA	Boulder	150	Privately Owned Subsidized	12
9	Kestrel (Mixed-Age)	BCHA	Louisville	129	Mixed-Age	13
10	Kestrel (Age 55+)	BCHA	Louisville	71	Age 55+	13

**In event of a tie, the housing site with the most units was placed ahead.*

Figure 24: Top ten highest priority subsidized housing sites chart

Ten Highest Priority Subsidized Housing Sites

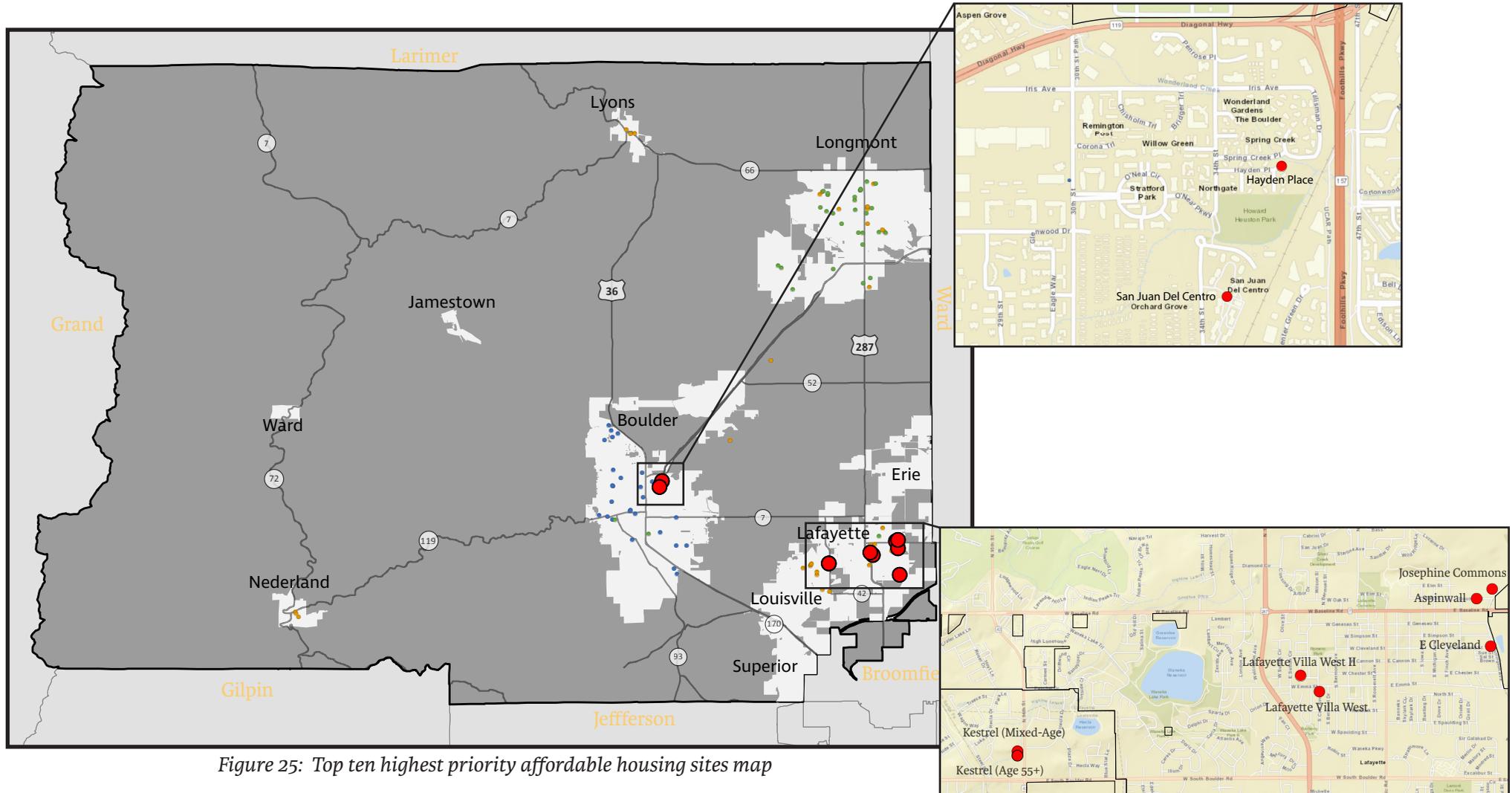


Figure 25: Top ten highest priority affordable housing sites map

Ten Highest Priority Sites: Closest Facility Analysis

A closest facility GIS analysis was conducted in order to provide more targeted recommendations for mobility improvements to the highest priority sites. The following analysis provides recommendations for specific transportation enhancements based on distance from the nearest option. The charts display the subsidized housing site name along with the distance it is from the nearest specific transportation option. Sites that are farthest away are first in the chart and are recommended for highest priority improvement for that specific transportation option.

NARRATIVE

Both FLEX bus Stops and RTD bus stops were included in the closest bus stop facility analysis. In all cases an RTD bus stop was located nearer to the housing site than a FLEX route.

<i>Bus Stop</i>		
Rank	Name	Distance (Miles)
1	Josephine Commons	0.71
3	E Cleveland	0.61
2	Aspinwall	0.61
7	Sagrimore	0.51
5	Lafayette Villa West	0.48
6	Lafayette Villa West II	0.44
4	Hayden Place	0.39
9	Kestrel	0.32
10	Kestrel	0.32
8	San Juan Del Centro	0.14

In order to determine closet bicycle lane facilities, which is linear GIS data, a new point data shapefile was created and points were placed at vertices of the intersection between the bicycle street network. The closest facility analysis used these vertices points to determine the distance between the housing site and the nearest bike lane.

<i>Bicycle Facility</i>		
Rank	Name	Distance (Miles)
3	E Cleveland	1.28
1	Josephine Commons	1.24
2	Aspinwall	1.22
9	Kestrel	0.77
10	Kestrel	0.77
5	Lafayette Villa West	0.73
6	Lafayette Villa West II	0.59
4	Hayden Place	0.51
7	Sagrimore	0.45
8	San Juan Del Centro	0.13

B-Cycle

Rank	Name	Distance (Miles)
7	Sagrimore	11.21
3	E Cleveland	10.59
1	Josephine Commons	10.49
2	Aspinwall	10.38
5	Lafayette Villa West	9.89
6	Lafayette Villa West II	9.75
9	Kestrel	8.41
10	Kestrel	8.41
4	Hayden Place	0.98
8	San Juan Del Centro	0.43

None of the top priority sites are within an acceptable distance of a bike share station, however, given B-Cycle only operates within Boulder and Longmont, this finding is not surprising. Future improvements to any bike share program should be sure to include any of these priority sites.

Pedestrian Facility

Rank	Name	Distance (Miles)
3	E Cleveland	1.33
1	Josephine Commons	1.22
2	Aspinwall	1.11
7	Sagrimore	0.88
6	Lafayette Villa West II	0.40
5	Lafayette Villa West	0.22
4	Hayden Place	0.20
9	Kestrel	0.16
10	Kestrel	0.16
8	San Juan Del Centro	0.09

Similar to the bicycle lane closest facility analysis, vertices were created at the intersection the street network and, in this case, multi-use path and sidewalk data. The closet pedestrian facility analysis used these vertices to determine the distance between the housing site and a pedestrian amenity.

eGO Car Share

Rank	Name	Distance (Miles)
1	Josephine Commons	9.18
3	E Cleveland	9.09
2	Aspinwall	9.07
7	Sagrimore	8.85
6	Lafayette Villa West II	8.10
5	Lafayette Villa West	7.99
9	Kestrel	6.20
10	Kestrel	6.20
8	San Juan Del Centro	0.71
4	Hayden Place	0.55

As eGo car share is primarily located in the City of Boulder, besides one location in Longmont, it is not surprising many of the sites lacked access to this option. Moving forward, the cities of southeast Boulder County--Lafayette and Louisville--should pursue car sharing options in order to benefit the low-income populations within this area.

Figure 26: Closest Facility Analysis Charts

Ten Highest Priority Sites by Housing Authority

TOP TEN BCHA SITES

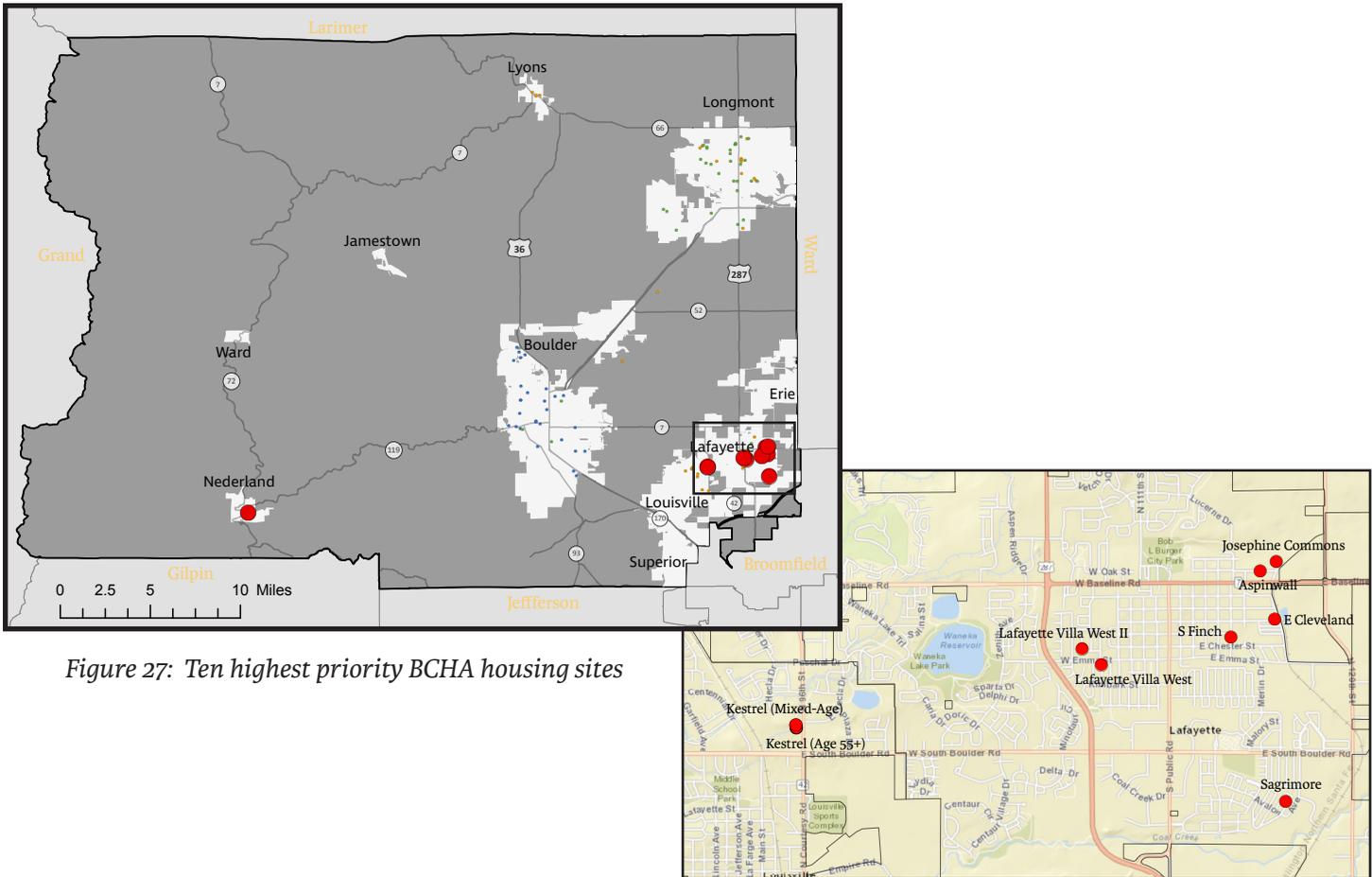


Figure 27: Ten highest priority BCHA housing sites

Rank	Name	Location	Units	Type	Score
1	Josephine Commons	Lafayette	74	Age 55+	6
2	Aspinwall	Lafayette	72	Mixed Age	7
3	E Cleveland	Lafayette	4	Mixed Age	9
4	Lafayette Villa West	Lafayette	28	Mixed Age	10
5	Lafayette Villa West II	Lafayette	10	Mixed Age	11
6	Sagrimore	Lafayette	1	Mixed Age	11
7	Kestrel (Mixed-Age)	Louisville	129	Mixed-Age	13
8	Kestrel (Age 55+)	Louisville	71	Age 55+	13
9	Rodeo Court	Nederland	6	Mixed-Age	13
10	S Finch	Lafayette	3	Mixed Age	13

*In event of a tie, the housing site with the most units was placed ahead.

TOP TEN BHP SITES

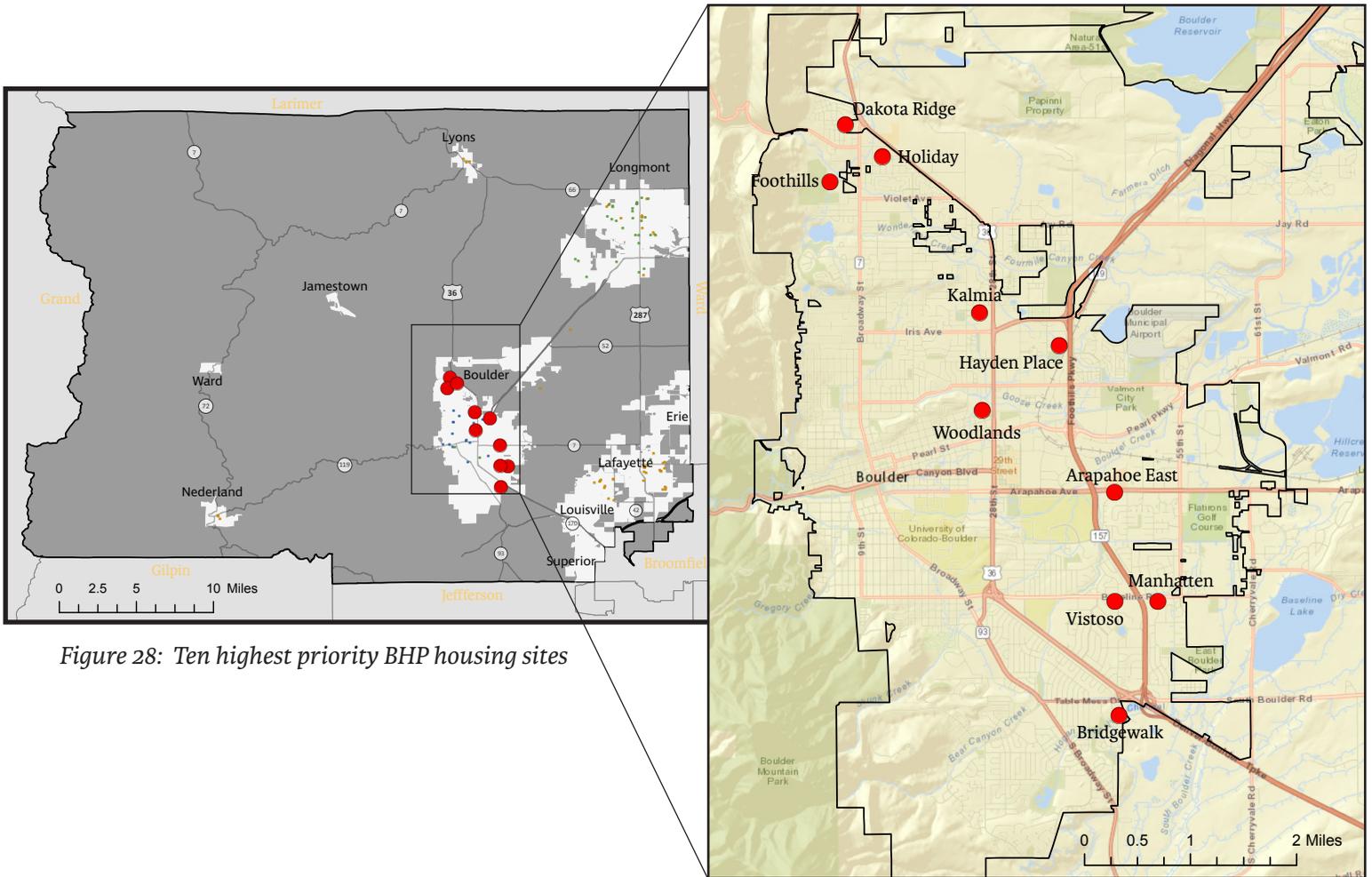


Figure 28: Ten highest priority BHP housing sites

Rank	Name	Location	Units	Type	Score
1	Hayden Place	Boulder	30	Affordable Rental	9.5
2	Bridgewalk	Boulder	123	Affordable Rental	17
3	Dakota Ridge	Boulder	13	Affordable Rental	17
4	Foothills	Boulder	74	Affordable Rental	20
5	Woodlands	Boulder	35	Family Self-Sufficiency	24
6	Kalmia	Boulder	49	Section 8 Community Program	26
7	Holiday	Boulder	49	Affordable Rental	26
8	Manhattan	Boulder	41	Section 8 Community Program	26
9	Vistoso	Boulder	15	Affordable Rental	28
10	Arapahoe East	Boulder	11	Affordable Rental	28

**In event of a tie, the housing site with the most units was placed ahead.*

TOP TEN LHA SITES

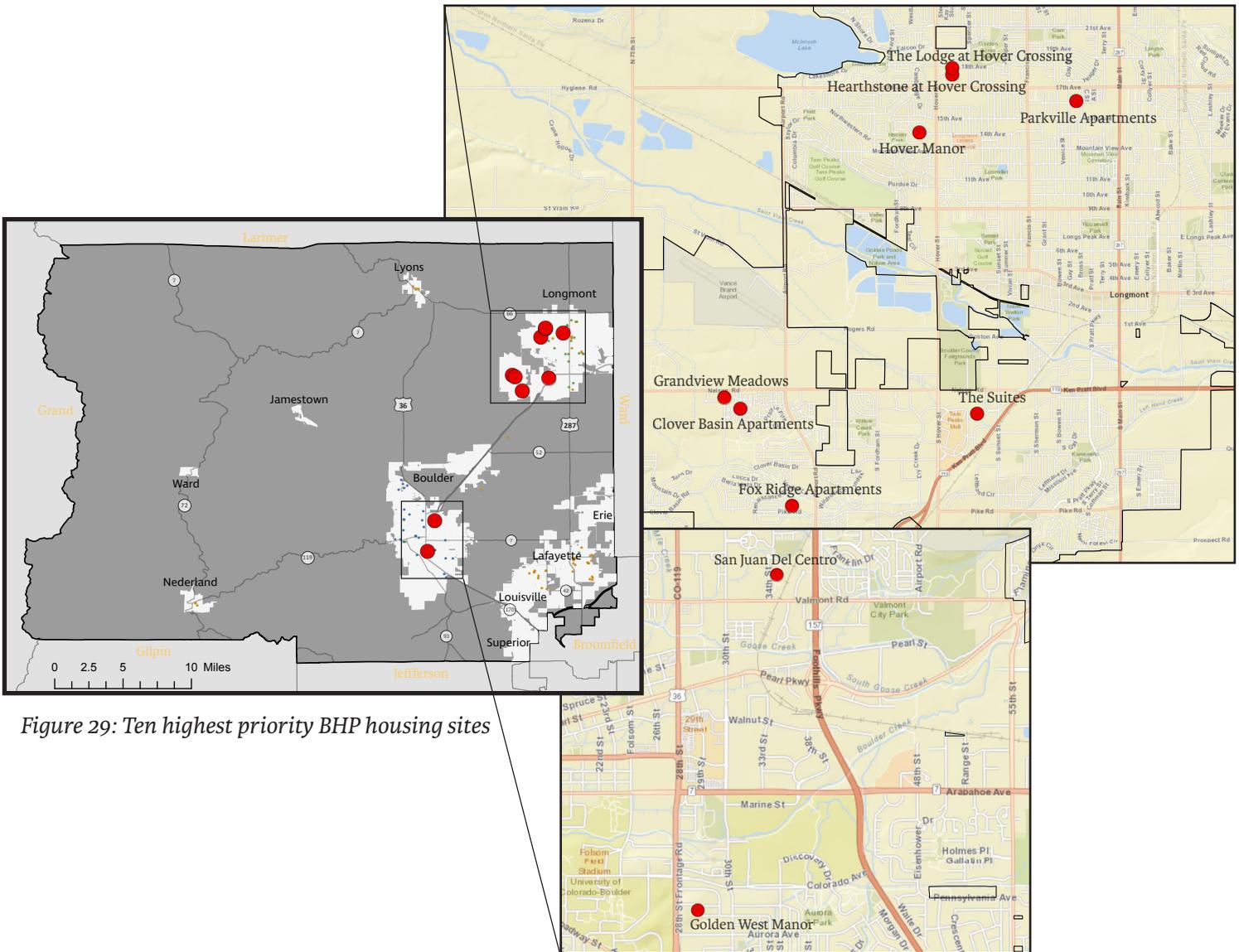


Figure 29: Ten highest priority BHP housing sites

Rank	Name	Location	Units	Type	Score
1	San Juan Del Centro	Boulder	150	Privately Owned Subsidized	12
2	Fox Ridge Apartments	Longmont	3	Family Affordable	15.5
3	Parkville Apartments	Longmont	75	Family Affordable	16
4	The Suites	Longmont	70	Family Affordable	18.5
5	Clover Basin Apartments	Longmont	388	Family Affordable	20
6	Grandview Meadows	Longmont	96	Family Affordable	20
7	Hearstone at Hover Crossing	Longmont	50	Senior (Privately Owned)	20
8	Golden West Manor	Boulder	250	Senior/Disabled	20.5
9	Hover Manor	Longmont	120	Senior/Disabled	20.5
10	The Lodge at Hover Crossing	Longmont	50	Senior (Privately Owned)	21

*In event of a tie, the housing site with the most units was placed ahead.

TRANSPORTATION GAPS

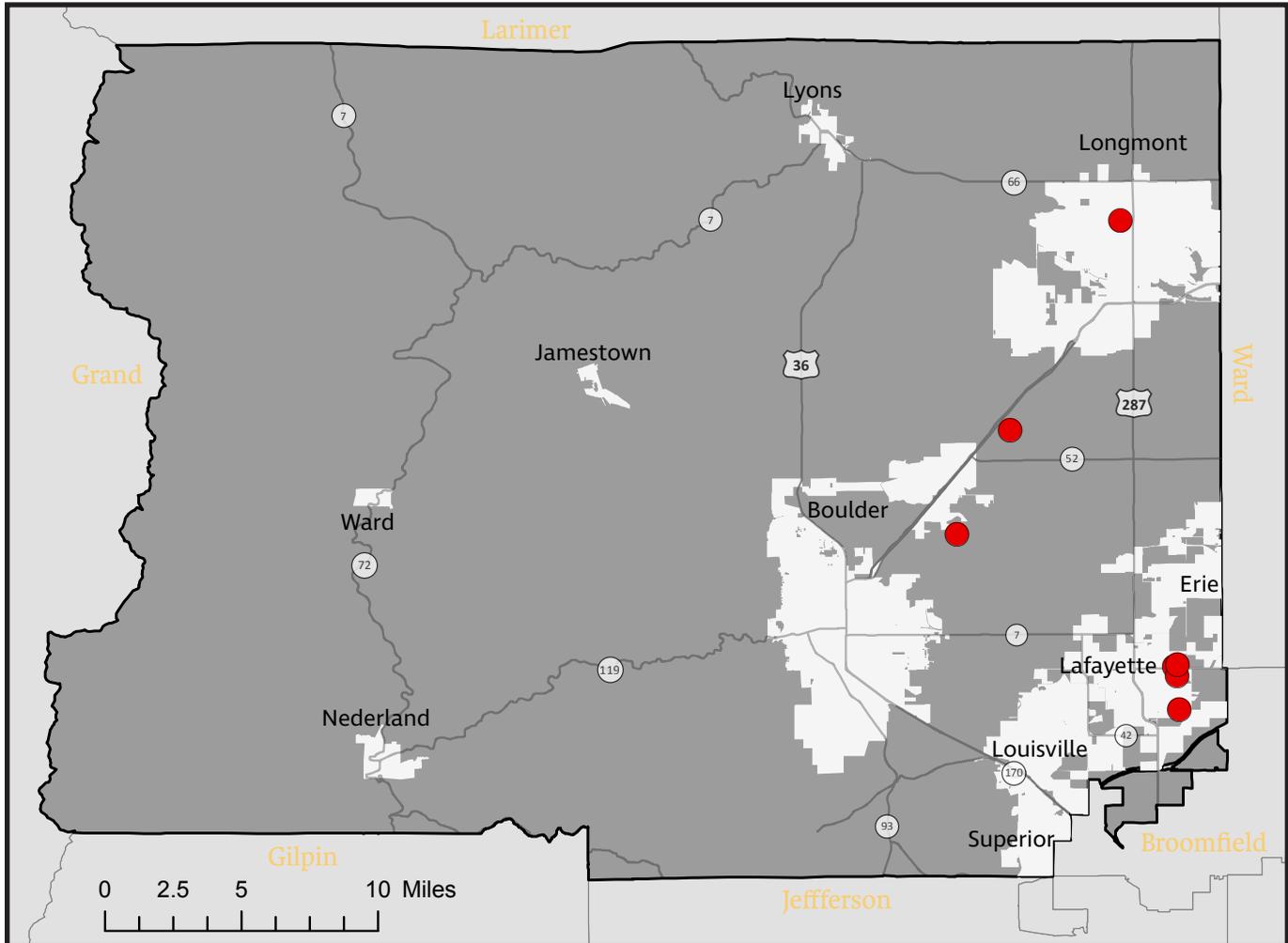
This section presents subsidized housing sites with specific transportation gaps as revealed from the GIS analysis. Where possible these gaps are presented by housing authority in order to provide targeted priorities for each authority to pursue. For each transportation gap analyzed, the highest priority sites without access to the transportation mode are presented whether they fall within the ten highest priority housing sites or not. When more than ten sites lack access to a transportation mode, only the ten highest ranked sites are presented. (Full lists of these sites can be found in Appendix B). Where possible this analysis provides transportation gap data by specific housing authority.

Through analysis of bus, bike, walk, and share transportation options this section highlights areas where the Mobility All Program and specific housing authorities can target transportation improvements to support greater economic resiliency for low-income populations.

BUS

NO ACCESS TO ANY BUS ROUTE

Out of the 108 sites analyzed, only seven sites were not within a half-mile walking distance of a bus stop. These sites are displayed below:

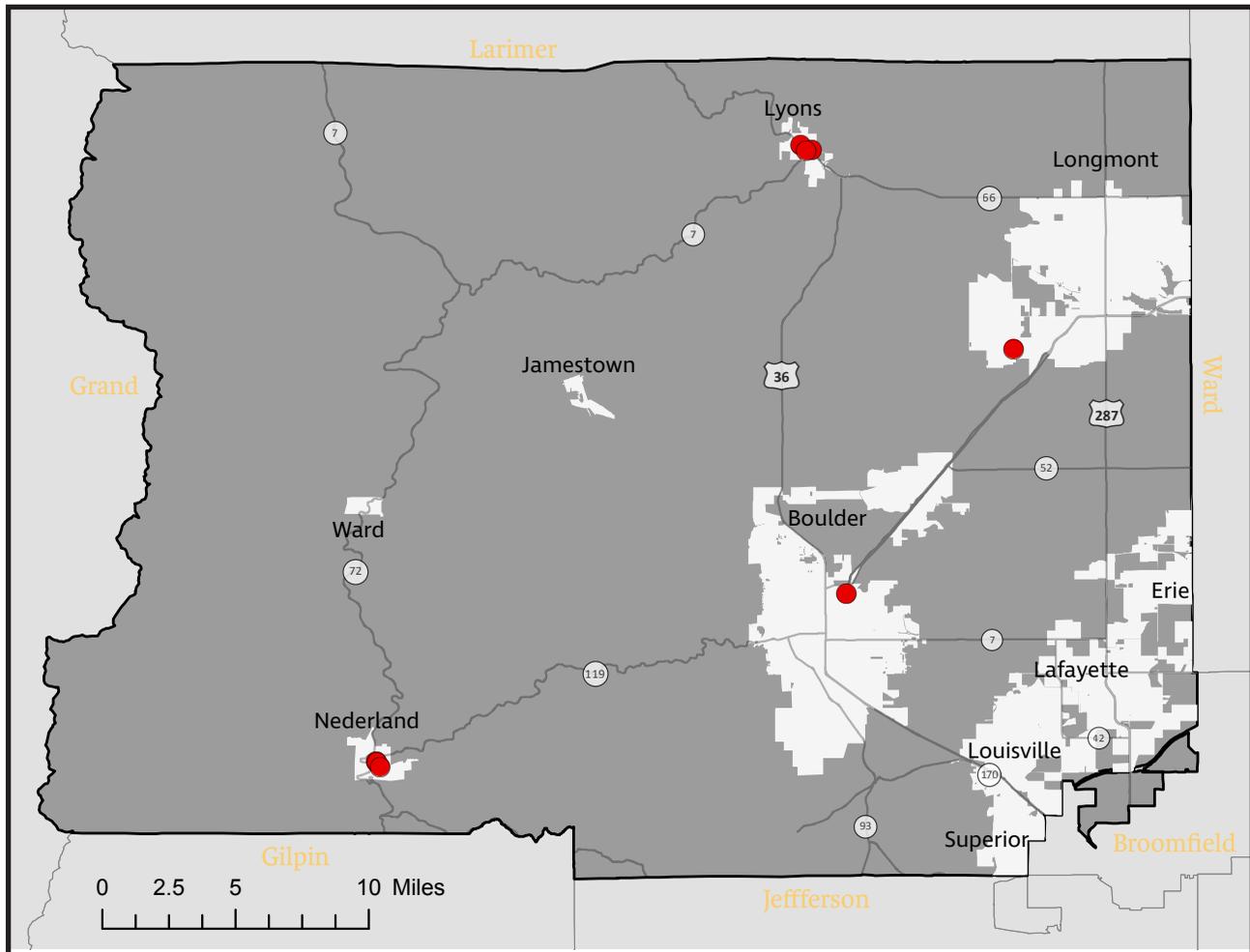


Rank	Name	Location	Authority	Units	Type	Distance to Closest Stop (miles)
1	Josephine Commons	Lafayette	BCHA	74	Age 55+	.71
2	Aspinwall	Lafayette	BCHA	72	Mixed Age	.61
3	E Cleveland	Lafayette	BCHA	4	Mixed Age	.61
7	Sagrimore	Lafayette	BCHA	1	Mixed Age	.51
24	Parkville Apartments	Longmont	LHA	75	Family Affordable	.54
34	Eagle Place	Niwot	BCHA	12	Age 62+ or Disabled	.52
35	Catamaran Court	Gunbarrel	BCHA	12	Mixed Age	.55

Figure 30: Housing sites without access to bus stop

NO ACCESS TO LOCAL BUS ROUTE

In addition to subsidized housing sites without access to any bus stops, there are eight sites that are not within a half mile walk to a local bus route. (These sites have access to a regional but not local route). Unsurprisingly, most of these locations are located in the smaller rural mountain communities of Lyons and Nederland. Smaller population sizes and density make local routes challenging for RTD to justified added services, however, if need is determined to be great enough for local bus service in these communities, contracting with a private van or small bus company may be a viable and more affordable alternative than obtaining RTD local bus service.



Rank	Name	Location	Authority	Units	Type
4	Hayden Place	Boulder	BHP	30	Affordable Rental
11	Rodeo Court	Nederland	BCHA	6	Mixed-Age
17	Bloomfield Place	Lyons	BCHA	8	Age 62+ or Disabled
23	Fox Ridge Apartments	Longmont	LHA	3	Family Affordable
29	Prime Haven	Nederland	BCHA	6	Age 62+ or Disabled
31	Beaver Creek	Nederland	BCHA	12	Mixed-Age
59	Walter Self	Lyons	BCHA	12	Age 62+ or Disabled
71	Mountaingate	Lyons	BCHA	6	Mixed-Age

Figure 31: Housing sites without access to local bus routes

NO ACCESS TO REGIONAL BUS ROUTES

In addition to subsidized housing sites without access to any bus stops, there are eight sites that are not within a half mile walk to a local bus route. (These sites have access to a local but not regional route). there are 26 sites that are not within a half mile walk to a regional bus route. The top ten sites, according to their comprehensive prioritized rank are displayed below. (See Appendix B for the full list).

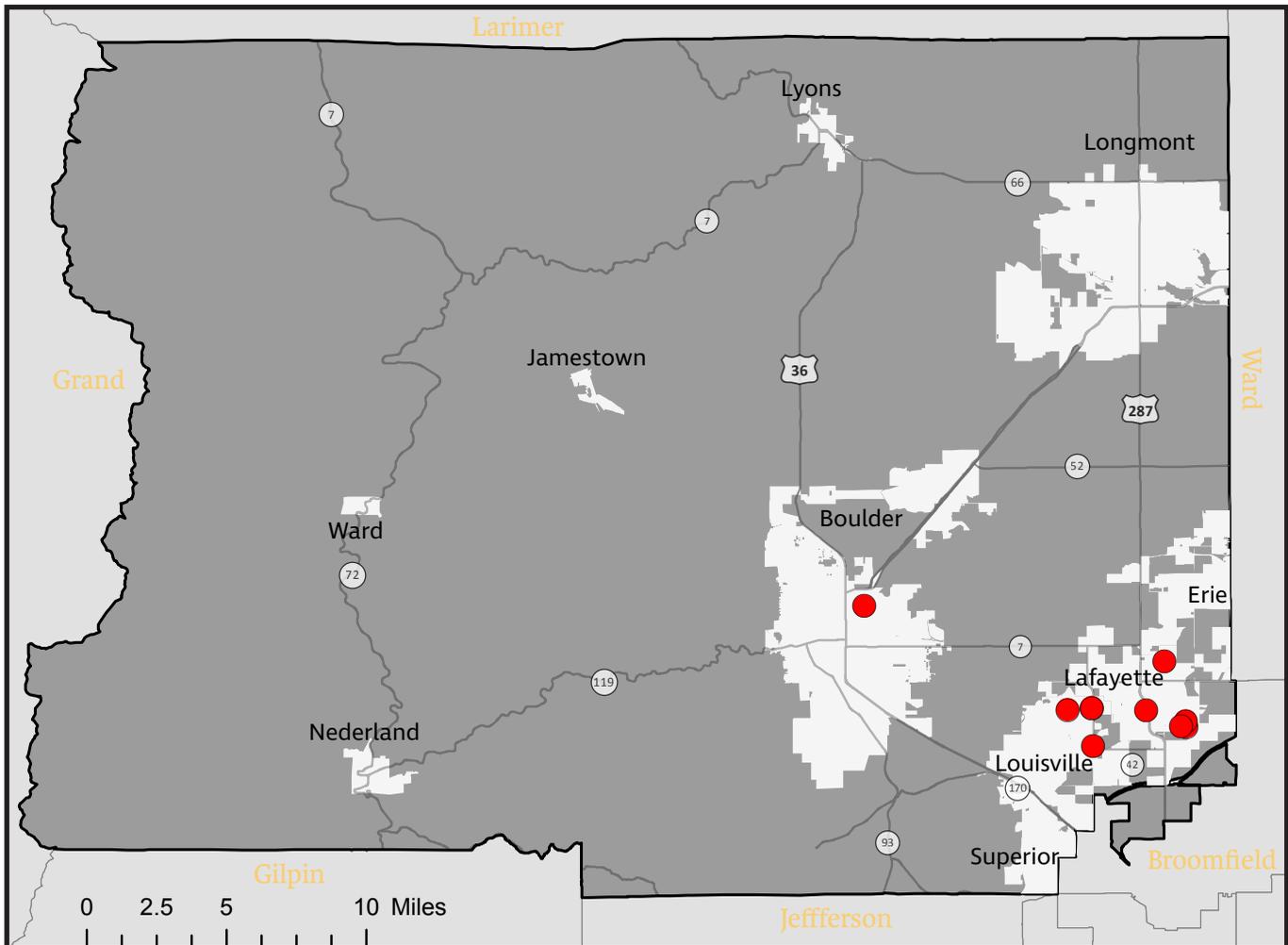


Figure 32: Housing sites without access to regional bus routes

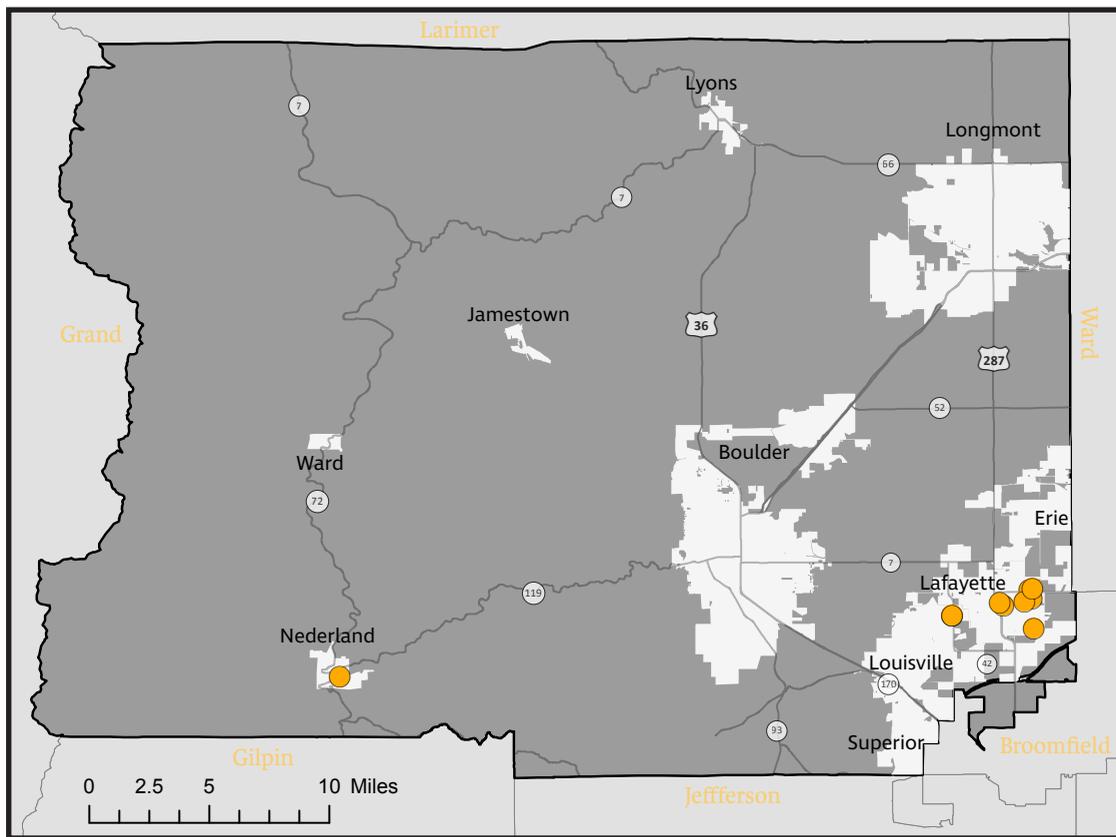
Rank	Name	Location	Authority	Units	Type
8	San Juan Del Centro	Boulder	LHA	150	Privately Owned Subsidized
9	Kestrel	Louisville	BCHA	129	Mixed-Age
10	Kestrel	Louisville	BCHA	71	Age 55+
15	Bedivere	Lafayette	BCHA	1	Mixed Age
16	Sunnyside Place	Louisville	BCHA	17	Mixed-Age
20	Avalon	Lafayette	BCHA	3	Mixed Age
22	Lyonesse	Lafayette	BCHA	1	Mixed Age
26	Milo	Lafayette	BCHA	7	Mixed Age
30	Lucerne	Lafayette	BCHA	1	Mixed Age
36	Regal Court II	Louisville	BCHA	10	Mixed-Age

BIKE

NO ACCESS TO BIKE LANE: TOP TEN PRIORITY SITES

There are 69 sites that do not have access within .1 mile of a bicycle lane. The top ten priority areas for each housing authority are presented below. The full list of sites without access to a bicycle lane can be found in the appendix.

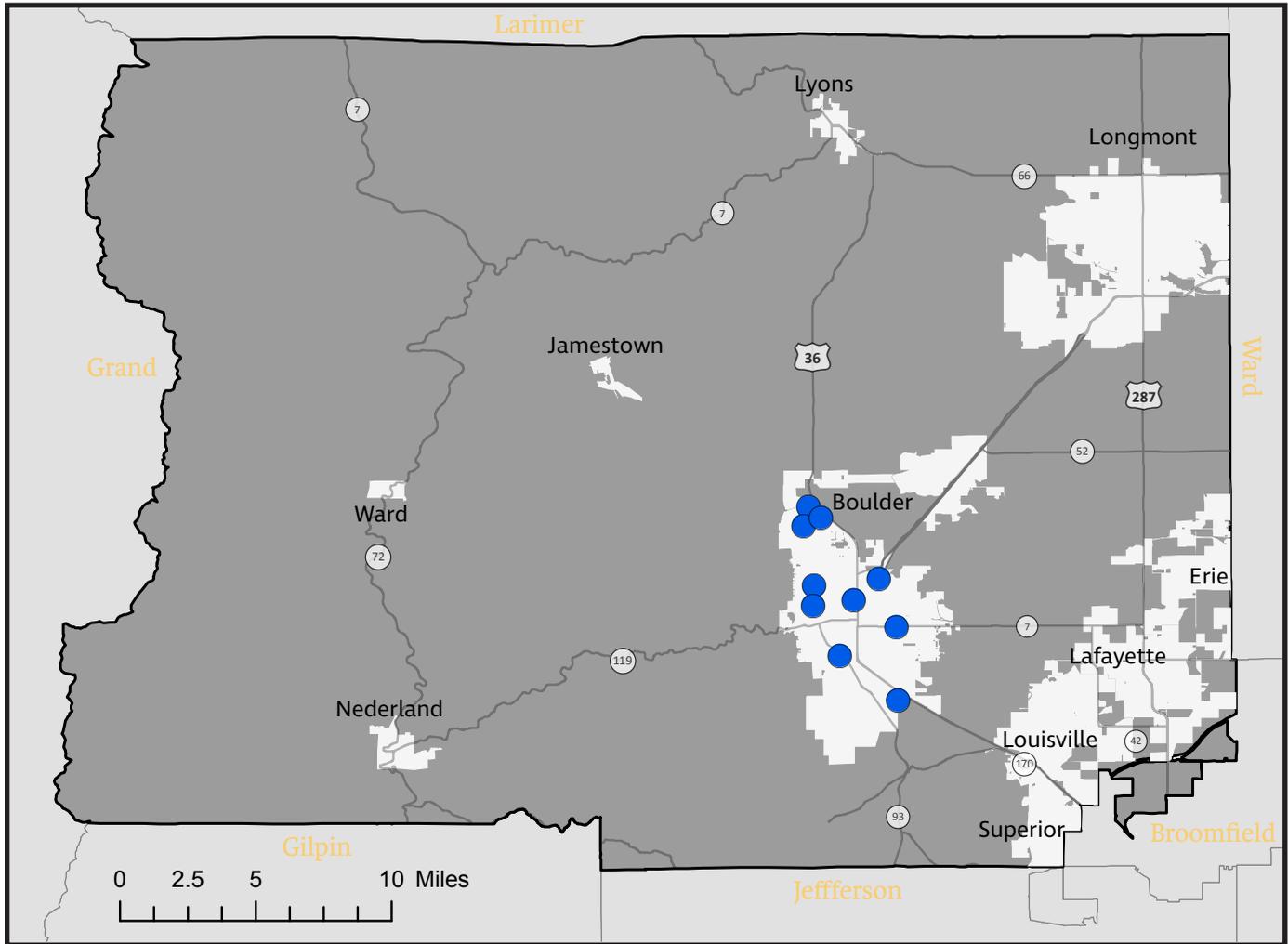
*The top ten BCHA sites without access to a Bike Lane are also the top ten highest priority areas without access to walking paths. Therefore, the map below shows not only areas without bicycle lane access, but also without walking path access.



Rank	Name	Location	Authority	Units	Type
1	Josephine Commons	Lafayette	BCHA	74	Age 55+
2	Aspinwall	Lafayette	BCHA	72	Mixed Age
3	E Cleveland	Lafayette	BCHA	4	Mixed Age
5	Lafayette Villa West	Lafayette	BCHA	28	Mixed Age
6	Lafayette Villa West II	Lafayette	BCHA	71	Mixed Age
7	Sagrimore	Lafayette	BCHA	10	Mixed Age
9	Kestrel	Louisville	BCHA	1	Mixed-Age
10	Kestrel	Louisville	BCHA	36	Age 55+
11	Rodeo Court	Nederland	BCHA	2	Mixed-Age
12	S Finch	Lafayette	BCHA	2	Mixed Age

Figure 33: Top ten priority BCHA sites without access to a bike lane

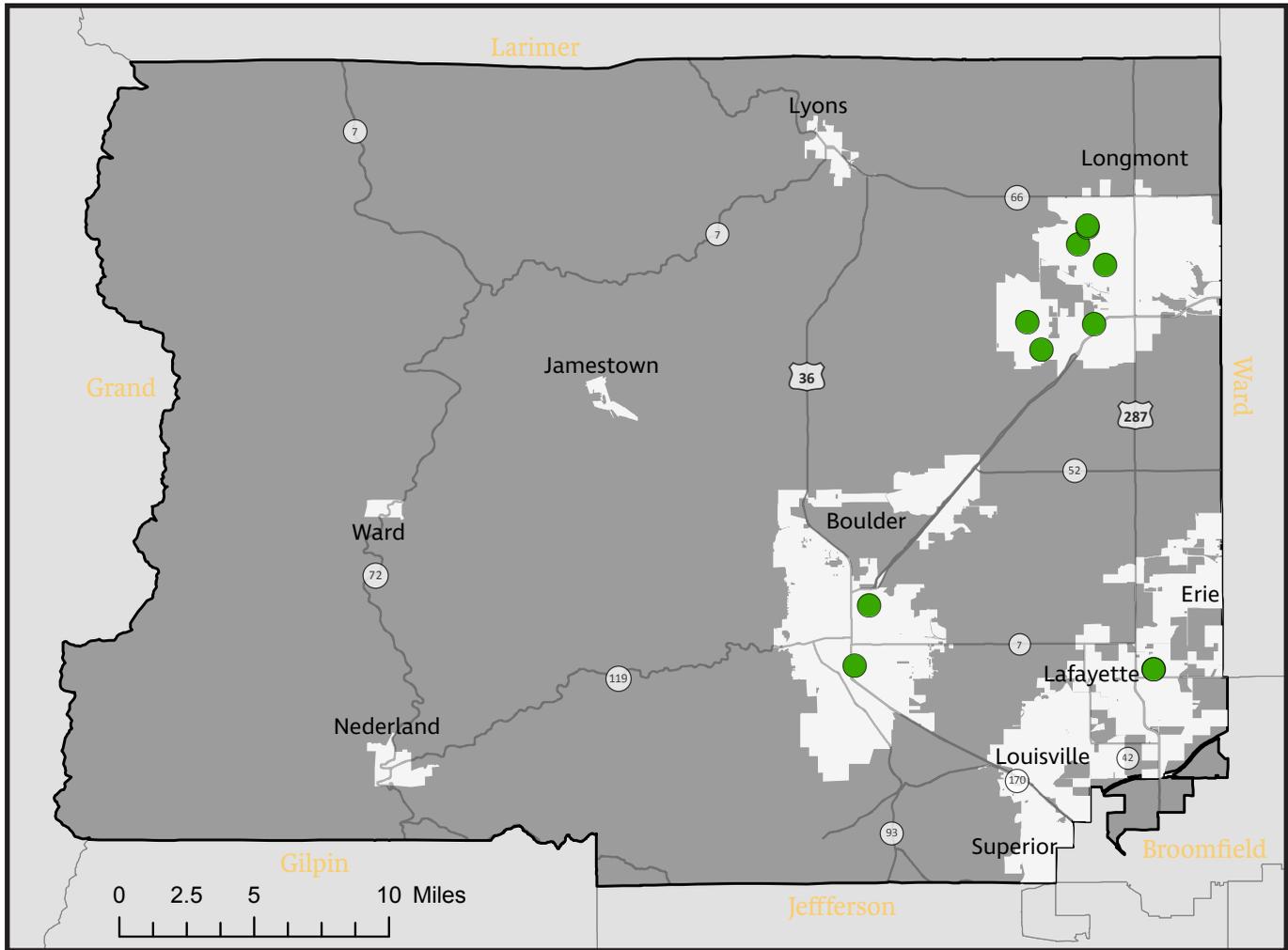
BHP Sites



Rank	Name	Location	Authority	Units	Type
4	Hayden Place	Boulder	BHP	129	Affordable Rental
27	Bridgewalk	Boulder	BHP	1	Affordable Rental
28	Dakota Ridge	Boulder	BHP	32	Affordable Rental
40	Foothills	Boulder	BHP	20	Affordable Rental
52	Woodlands	Boulder	BHP	13	Family Self-Sufficiency
55	Holiday	Boulder	BHP	34	Affordable Rental
65	Araphahoe East	Boulder	BHP	22	Affordable Rental
73	Northport	Boulder	BHP	70	Section 8 Community Program
78	Madison	Boulder	BHP	388	Elderly/Disabled/Family
80	Midtown	Boulder	BHP	50	Affordable Rental

Figure 34: Top ten priority BHP sites without access to a bike

LHA Sites



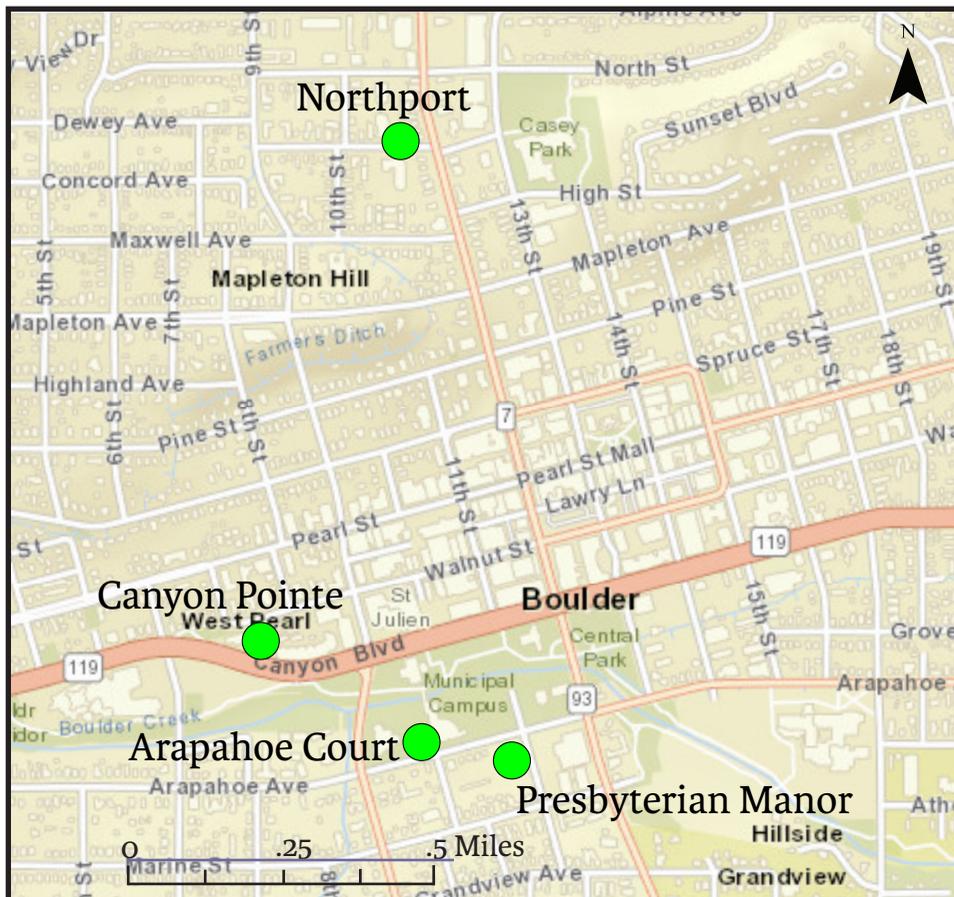
Rank	Name	Location	Authority	Units	Type
8	San Juan Del Centro	Boulder	LHA	17	Privately Owned Subsidized
23	Fox Ridge Apartments	Longmont	LHA	7	Family Affordable
33	The Suites	Longmont	LHA	12	Family Affordable
38	Clover Basin Apartments	Longmont	LHA	12	Family Affordable
41	Hearthstone at Hover Crossing	Longmont	LHA	6	Senior (Privately Owned)
44	Golden West Manor	Boulder	LHA	13	Senior/Disabled
45	Hover Manor	Longmont	LHA	74	Senior/Disabled
46	The Lodge at Hover Crossing	Longmont	LHA	35	Senior (Privately Owned)
48	Chateau Villa Apartments	Longmont	LHA	11	Family Affordable
50	Helios Station	Lafayette	LHA	50	Privately Owned Subsidized

Figure 35: Top ten priority LHA sites without access to a bike lane

B-CYCLE STATIONS: ALL SITES

Only four affordable sites, across all the housing authorities, are within a quarter mile of a B-Cycle station. However, in late spring the Longmont Zagster bicycle share stations will be opening which may increase access to bicycle share locations to more low-income sites. Further study of the accessibility of the Longmont Zagster to low-income housing sites is needed to better prioritize bike share improvements. The map and chart below only show sites with access to B-cycle stations.

As the B-cycle only operates within Boulder and Denver, the map below shows the sites in Boulder within a quarter mile of a B-cycle location.



Rank	Name	Authority	Location	Units	Type
73	Northport	BHP	Boulder	50	Section 8 Community Program
96	Canyon Pointe	BHP	Boulder	82	Section 8 Community Program
107	Presbyterian Manor	LHA	Boulder	80	Senior/Disabled
108	Arapahoe Court	BHP	Boulder	14	Elderly/Disabled

Figure 36: Housing sites within access of a B-cycle station

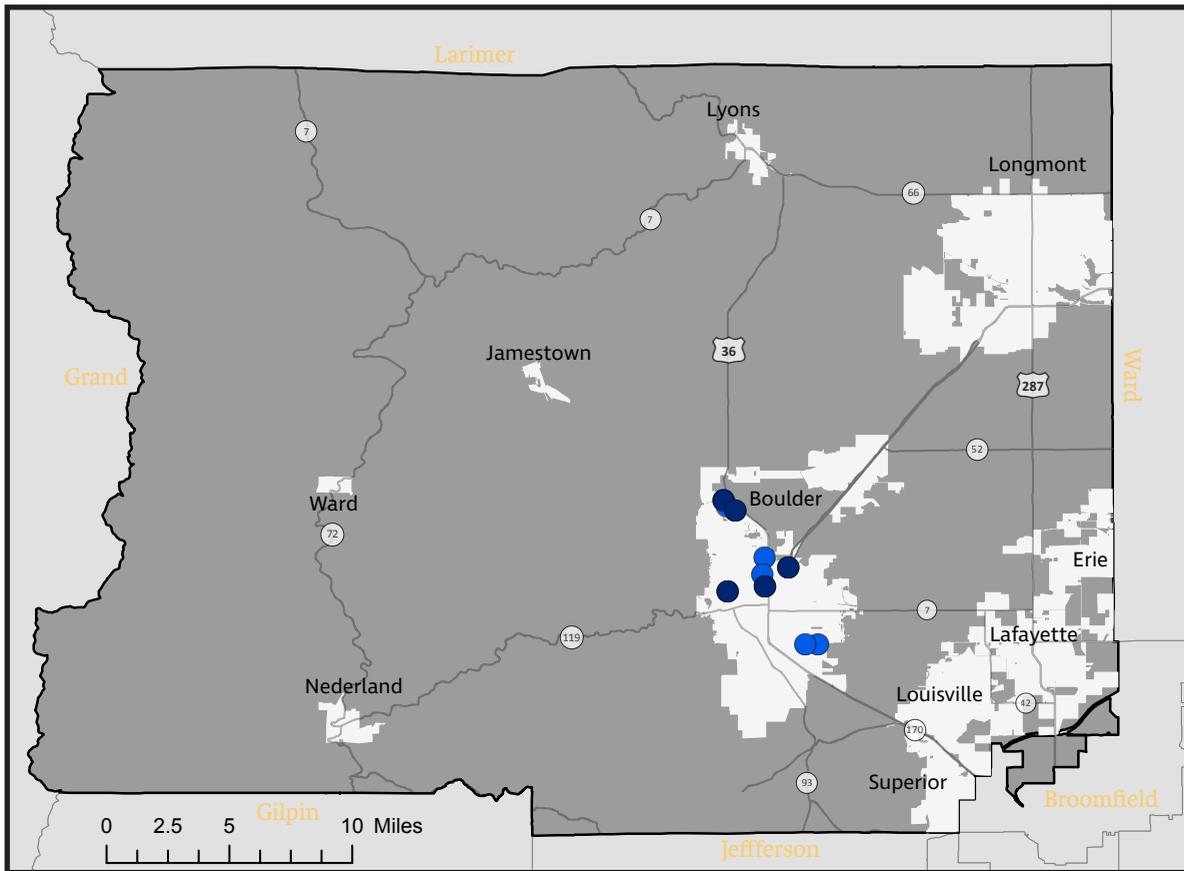
WALK

The following charts display the top ten sites from each housing authority, ranked by prioritization scoring, that do not have access to a multi-use path or sidewalk within a tenth mile walk. In all there are 82 sites that are not within a tenth mile of a sidewalk or multi-use path, with 39 BCHA sites, 17 BHP sites, and 26 LHA sites. (To see a full list of these sites see Appendix B).

The following sites represent findings using Boulder County sidewalk data and City of Boulder, City of Longmont, and DRCOG multi-use path data and may not accurately reflect the presence of sidewalks. Future studies should incorporate more robust sidewalk data into the analysis as it becomes available.

BCHA sites without access to a sidewalk or multi-use path is displayed in the BCHA bike lane map and chart, as the top ten priority sites are the same for both variables. Sites with an asterisk next to them in the chart and that are a darker shade on the map are sites that are also in the top ten priority sites without access to a bicycle lane.

BHP SITES

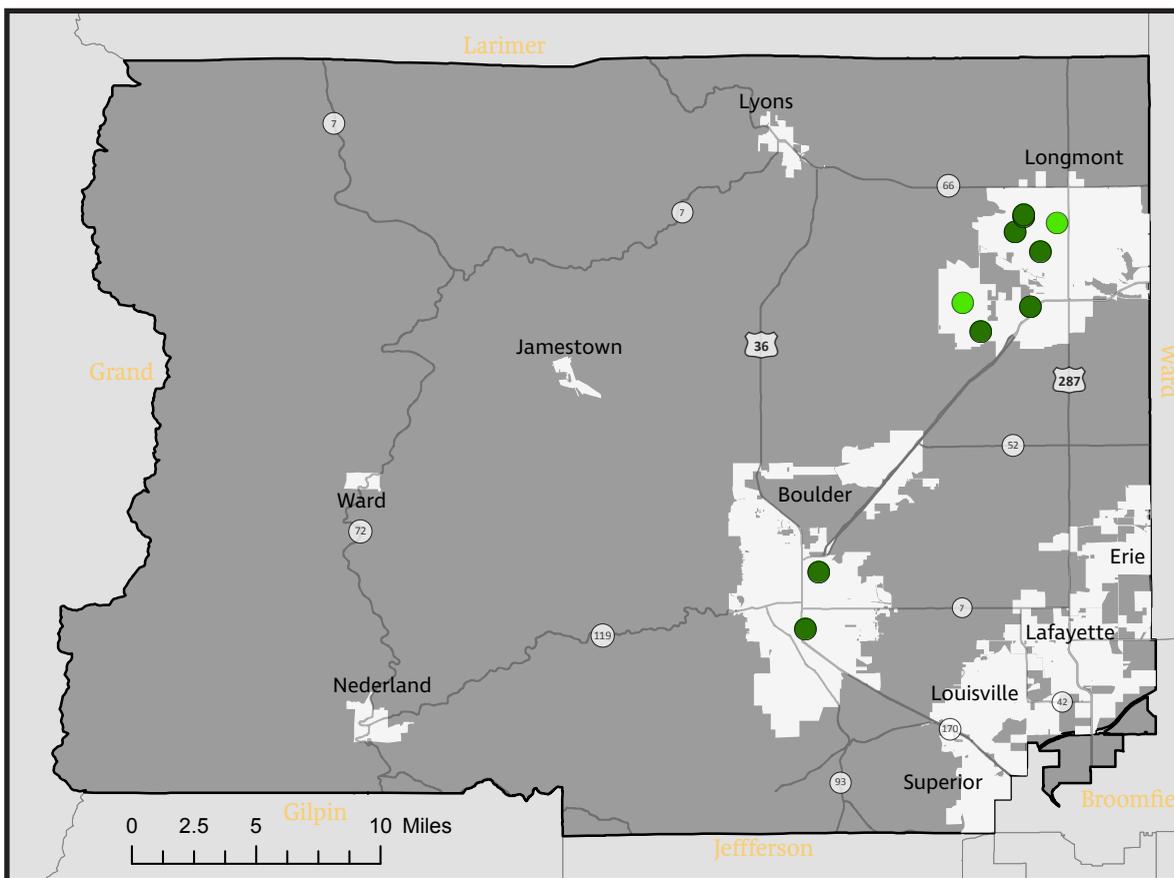


Rank	Name	Authority	Location	Units	Type
* 4	Hayden Place	BHP	Boulder	30	Affordable Rental
* 28	Dakota Ridge	BHP	Boulder	13	Affordable Rental
* 52	Woodlands	BHP	Boulder	35	Family Self-Sufficiency Program
54	Kalmia	BHP	Boulder	49	Section 8 Communities Program
* 55	Holiday	BHP	Boulder	49	Affordable Rental
57	Manhattan	BHP	Boulder	41	Section 8 Communities Program
64	Vizioso	BHP	Boulder	15	Affordable Rental
* 68	Red Oak Park	BHP	Boulder	59	Affordable Rental
73	Northport	BHP	Boulder	50	Section 8 Communities Program
75	Lee Hill	BHP	Boulder	31	Chronic Homelessness

* Also lacks access to bicycle lane

Figure 37: Top ten priority BHP sites without access to a pedestrian facility

LHA SITES



Rank	Name	Authority	Location	Units	Type
* 8	San Juan Del Centro	LHA	Boulder	150	Privately Owned Subsidized
* 23	Fox Ridge Apartments	LHA	Longmont	3	Family Affordable
24	Parkville Apartments	LHA	Longmont	75	Family Affordable
* 33	The Suites	LHA	Longmont	70	Family Affordable
39	Grandview Meadows	LHA	Longmont	96	Family Affordable
* 41	Hearthstone at Hover Crossing	LHA	Longmont	50	Senior (Privately Owned)
* 44	Golden West Manor	LHA	Boulder	250	Senior/Disabled
* 45	Hover Manor	LHA	Longmont	120	Senior/Disabled
* 46	The Lodge at Hover Crossing	LHA	Longmont	50	Senior (Privately Owned)
* 48	Chateau Villa Apartments	LHA	Longmont	33	Family Affordable

* Also lacks access to bicycle lane

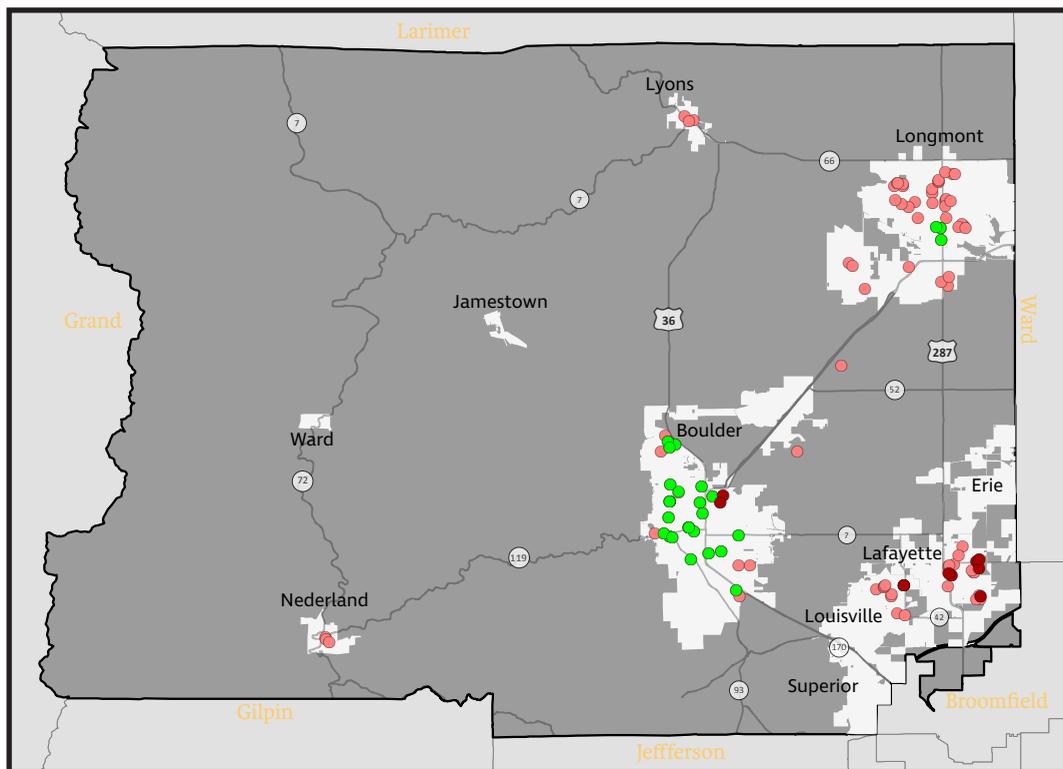
Figure 38: Top ten priority LHA sites without access to a pedestrian facility

SHARE

There are 35 eGO car share locations within Boulder County. All but one eGo location is located within the City of Boulder, with the other location in Longmont. In total 26 housing sites are within a half mile walking distance of an eGO car share location. No BCHA site is within this distance, however, 21 BHP sites and 5 LHA sites are.

The sites with access to an eGO car share location are displayed in the map below. (A list of these sites can be found in Appendix B). Sites without access are highlighted in red and should be targeted for future improvements. The top ten highest priority sites all did not have access to an eGo car share location and are highlighted in darker red on the map and are displayed in the chart.

Top Ten Highest Priority Sites Without access to eGO Car Share



Rank	Name	Authority	Location	Units	Type
1	Josephine Commons	BCHA	Lafayette	74	Age 55+
2	Aspinwall	BCHA	Lafayette	72	Mixed Age
3	E Cleveland	BCHA	Lafayette	4	Mixed Age
4	Hayden Place	BHP	Boulder	30	Affordable Rental
5	Lafayette Villa West	BCHA	Lafayette	28	Mixed Age
6	Lafayette Villa West II	BCHA	Lafayette	10	Mixed Age
7	Sagrimore	BCHA	Lafayette	1	Mixed Age
8	San Juan Del Centro	LHA	Boulder	150	Privately Owned Subsidized
9	Kestrel	BCHA	Louisville	129	Mixed-Age
10	Kestrel	BCHA	Louisville	71	Age 55+

Figure 39: Ten highest priority sites without access to eGo car share location

7. CONCLUSION

This low-income transportation assessment provides the Mobility For All Program (M4A) with priority areas for transportation improvements at a block group and site specific scale. The maps and data provided serves as recommendations for increasing the accessibility and number of transportation options to identified low-income areas. Through implementing targeted transportation improvements in these areas, the M4A can help reduce transportation cost burdens and improve economic resiliency for low-income populations in Boulder County.

As the M4A and Boulder County Transportation work to address the transportation gaps revealed in this report, the prioritization for improvements will change. This report serves as a guide and methodology for prioritizing low-income areas in greatest need of mobility diversification and should be used as a reference for updating and scoring new priority areas as Boulder County continues to grow and mature.

Key Takeaways/Next Steps

A key takeaway identified from the block group analysis is the need for additional study and outreach to low-income populations living in the more mountainous western regions of Boulder

County. These areas lacked access to most alternative transportation options and more active forms of transportation, such as walking and bicycling, are more difficult in these areas. Implementing car share or other small scale transit opportunities in these areas may be a way to potentially bridge the transportation gap to low-income people in these areas. Further study and outreach should be conducted in these areas to determine the more viable and desired transportation improvements.

A key takeaway from the housing analysis is that the southeastern portion of the County--Lafayette and Louisville areas--had the highest proportion of housing sites with limited access to alternative transportation options. The cities of Boulder and Longmont had the largest share of subsidized housing sites, however, no site in Longmont and only two sites in Boulder made the highest priority rankings. All other priority sites were located in southeast Boulder County. Based on this finding, M4A should target southeastern Boulder County for transportation enhancements and programming.

8. REFERENCES

- Boulder County. (2015). Boulder County Comprehensive Plan; updated July 14, 2015.
- Boulder County. (2016). Boulder County Mobility For All Needs Assessment & Action plan.
- Bureau of Labor Statistics (BLS). (2016). Consumer Expenditures – 2015. United States Department of Labor. Retrieved from: <https://www.bls.gov/news.release/cesan.nro.htm>
- Center for Transit-Oriented Development (CTOD). (2014). Creating Connected Communities: A Guidebook for Improving Transportation Connections for Low and Moderate-Income Households in Small and Mid-Sized Cities. U.S. Department of Housing and Urban Development. Retrieved from: https://www.huduser.gov/publications/pdf/Creating_Cnnted_Comm.pdf
- Cervero, R, Kockelman, K, (1997). TRAVEL DEMAND AND THE 3DS: DENSITY, DIVERSITY, AND DESIGN. Transportation Research Part D: Transport and Environment, Volume 2, Issue 3, p. 199-219.
- Cervero, R. (2007). Transit-oriented development's ridership bonus: a product of self-selection and public policies. *Environment and Planning A*, 39, no. 9, 2007, p. 2068–2085.
- Ewing, R., & Cervero, R. (2010). Travel and the Built Environment--A Meta-Analysis. *Journal Of The American Planning Association*, 76(3), 265-294. doi:10.1080/01944361003766766
- Federal Highway Administration (FHWA). (2015). Transportation and Housing Fact Sheet. U.S. Department of Transportation. Retrieved from: https://www.fhwa.dot.gov/livability/fact_sheets/transandhousing.cfm
- Guerra, E., & Cervero, R. (2011). Cost of a Ride. *Journal Of The American Planning Association*, 77(3), 267-290. doi:10.1080/01944363.2011.589767
- Guerra, E., & Cervero, R. (2) (2011). Mass Transit & Mass: Densities needed to make transit investments pay off. UTC Policy Brief 2011-02. Retrieved from: <http://www.uctc.net/research/briefs/UCTC-PB-2011-02.pdf>
- Guerra, E., Cervero, R., Tischler, D. (2011). The Half-Mile Circle: Does It Best Represent Transit Station Catchments? Institute of Transportation Studies: University of California, Berkley. Retrieved from: <http://www.its.berkeley.edu/sites/default/files/publications/UCB/2011/VWP/UCB-ITS-VWP-2011-5.pdf>
- Leinberger, Christopher B. and Michael Rodriguez. (2016) Foot Traffic Ahead: Ranking walkable

- urbanism in America's largest Metros. The George Washington School of Business. Retrieved from: <https://www.smartgrowthamerica.org/app/legacy/documents/foot-traffic-ahead-2016.pdf>
- Monsere, C., Dill, J., McNeil, N., Clifton, K., Foster, N., Goddard, T,...Parks, J. (2014). Lessons from the Green Lanes: Evaluating Protected Bike Lanes in the U.S. National Institute for Transportation and Communities. NITC-RR-583. Retrieved from: https://bikeportland.org/wp-content/uploads/2014/06/NITC-RR-583_ProtectedLanes_FinalReportb.pdf
- National Association of City Transportation Officials. (NACTO). (2012) "Urban Bikeway Design Guide." Retrieved from: <http://nacto.org/publication/urban-bikeway-design-guide/>
- National Association of Realtors. (2015). Community and Transportation Preference Survey 2015: News Release. Portland State University. Retrieved from: <https://www.nar.realtor/sites/default/files/reports/2015/nar-psu-2015-poll-press-release.pdf>
- The Center for Neighborhood Technology (CNT). (2017). H+T Affordability Index. Retrieved from: <http://htaindex.cnt.org/map/>
- Trudeau, Dan. 2013. "New Urbanism as Sustainable Development?" *Geography Compass* 7(6):435-448.
- Urban Land Institute (ULI). (2015). American in 2015: A ULI Survey of Views on Housing, Transportation, and Community. Washington, D.C.: the Urban Land Institute. Retrieved from: <http://uli.org/wp-content/uploads/ULI-Documents/America-in-2015.pdf>
- U.S. Census Bureau. 2011-2015 American Community Survey 5-Year Estimates.
- Victoria Transport Policy Institute. (2017). Transportation Cost and Benefit Analysis: Techniques, Estimates and Implications. [Second Edition]. Retrieved from: (<http://www.vtpi.org/tca/tca0509.pdf>)
- Zuk, Miriam and Ian Carlton. (2015). Equitable Transit Oriented Development: Examining the progress and continued challenges of developing affordable housing in opportunity and transit-rich neighborhoods. Poverty and Race Research Action Council: Civil Rights Research. Retrieved from: <http://www.prrac.org/pdf/EquitableTOD.pdf>

APPENDIX A: Below AMI Block Group Rankings

RANKING OF ALL BLOCK GROUPS IN ANALYSIS

(Page 1 of 3)

Rank	Location	Tract	Block Group	AMI	Score
1	Unincorporated NW/Jamestown	13602	1	80	6
2	Unincorporated NW	13602	2	80	7
3	Nederland/Unincorporated	13702	7	30	10
4	Lafayette	60800	4	60	12
5	Lafayette	12905	1	80	12
6	Nederland/Unincorporated	13702	6	80	12.5
7	Boulder	12401	4	30	13
8	Nederland/Unincorporated	13702	5	80	13
9	Lafayette	60800	5	60	18
10	Louisville	13005	1	80	19
11	Lafayette/Unincorporated	60800	2	80	20
12	Boulder	12508	3	80	23
13	Lafayette	12905	2	80	23
14	Longmont	13302	4	80	23
15	Longmont	13505	1	60	24
16	Boulder	12607	4	60	25
17	Longmont	13302	2	60	26
18	Longmont	13503	2	60	26
19	Boulder	12202	1	80	26
20	Boulder	12501	2	80	26
21	Longmont	13308	3	80	26
22	Boulder	12607	3	60	26.5
23	Boulder	12505	1	30	27
24	Lafayette/Louisville	13003	4	80	27
25	Longmont	13211	3	60	27.5
26	Boulder	12204	2	30	28
27	Longmont	13306	2	80	28.5
28	Boulder	12607	1	30	29
29	Boulder	12401	2	30	30
30	Boulder	12201	2	80	30
31	Longmont	13305	1	80	30
32	Boulder	12511	3	30	31
33	Boulder	12607	2	60	31
34	Boulder	12102	4	80	31
35	Longmont	13207	2	80	31
36	Longmont	13308	1	80	31
37	Boulder	12203	1	80	31.5
38	Boulder	12508	2	80	31.5

RANKING OF ALL BLOCK GROUPS IN ANALYSIS

(Page 2 of 3)

Rank	Location	Tract	Block Group	AMI	Score
39	Longmont	13505	3	60	32
40	Boulder	12204	1	80	32
41	Boulder	12705	2	80	32
42	Lafayette	12904	1	80	32
43	Boulder	12401	1	30	33
44	Boulder	12202	2	60	33
45	Longmont	13401	3	60	33
46	Longmont	13208	1	80	33
47	Longmont	13208	3	80	33
48	Longmont	13305	3	80	33
49	Longmont	13401	1	60	34
50	Longmont	13307	2	60	34.5
51	Boulder	12202	3	30	35
52	Longmont	13503	3	60	35
53	Boulder	12102	1	80	35
54	Boulder	12511	2	80	35
55	Longmont	13503	1	80	35
56	Longmont	13503	4	80	35
57	Boulder	12103	3	80	36
58	Longmont	13402	1	80	36
59	Longmont	13402	5	60	37
60	Boulder	12501	1	80	37
61	Boulder	12507	2	80	37
62	Longmont	13505	2	80	37
63	Boulder	12608	1	80	38
64	Longmont	13213	2	80	38
65	Longmont	13302	3	80	38
66	Boulder	12511	1	60	38.5
67	Boulder	12705	1	80	38.5
68	Longmont	13212	1	80	38.5
69	Longmont	13308	2	60	39
70	Louisville/Lafayette	60900	1	80	39
71	Boulder	12201	1	60	39.5
72	Boulder	12605	2	60	39.5
73	Longmont	13401	2	80	40
74	Boulder	12203	3	60	40.5
75	Boulder	12300	2	60	41
76	Boulder	12105	2	80	41
77	Longmont	13507	1	80	41

RANKING OF ALL BLOCK GROUPS IN ANALYSIS

(Page 3 of 3)

Rank	Location	Tract	Block Group	AMI	Score
78	Boulder	12507	1	80	42
79	Boulder	12707	1	80	43
80	Longmont	13305	2	80	43
81	Longmont	13307	1	80	43
82	Longmont	13302	1	60	43.5
83	Longmont	13210	1	80	44.5
84	Boulder	12605	1	60	47
85	Longmont	13306	1	80	47.5
86	Boulder	12203	2	80	50
87	Boulder	12202	4	60	53.5
88	Boulder	12300	1	30	55
89	Longmont	13210	2	80	57
90	Boulder	12203	4	80	64
91	Boulder	12204	3	80	71

BLOCK GROUPS WITH NO ACCESS TO REGIONAL BUS ROUTE

Rank	Location	Tract	Block Group	AMI	Score
7	Boulder	12401	4	30	13
10	Louisville	13005	1	80	19
16	Boulder	12607	4	60	25
18	Longmont	13503	2	60	26
19	Boulder	12202	1	80	26
20	Boulder	12501	2	80	26
24	Lafayette/Louisville	13003	4	80	27
26	Boulder	12204	2	30	28
28	Boulder	12607	1	30	29
30	Boulder	12201	2	80	30
32	Boulder	12511	3	30	31
33	Boulder	12607	2	60	31
39	Longmont	13505	3	60	32
41	Boulder	12705	2	80	32
42	Lafayette	12904	1	80	32
49	Longmont	13401	1	60	34
54	Boulder	12511	2	80	35
55	Longmont	13503	1	80	35
56	Longmont	13503	4	80	35
57	Boulder	12103	3	80	36
58	Longmont	13402	1	80	36
59	Longmont	13402	5	60	37
60	Boulder	12501	1	80	37
63	Boulder	12608	1	80	38
75	Boulder	12300	2	60	41
77	Longmont	13507	1	80	41

RANKING OF BLOCK GROUPS WITH NO ACCESS TO BIKE LANE FACILITY

Rank	Location	Tract	Block Group	AMI	Score
1	Unincorporated NW/Jamestown	13602	1	80	6
2	Unincorporated NW	13602	2	80	7
3	Nederland/Unincorporated	13702	7	30	10
4	Lafayette	60800	4	60	12
5	Lafayette	12905	1	80	12
6	Nederland/Unincorporated	13702	6	80	12.5
7	Boulder	12401	4	30	13
8	Nederland/Unincorporated	13702	5	80	13
9	Lafayette	60800	5	60	18
10	Louisville	13005	1	80	19
13	Lafayette	12905	2	80	23
24	Lafayette/Louisville	13003	4	80	27

BLOCK GROUPS WITH ACCESS TO B-CYCLE STATION

B-Cycle operates 15 stations within the City of Boulder. Only seven below AMI block groups contain a B-cycle station and of these block groups none have are 30% or below AMI. This finding can help Boulder County and the City of Boulder prioritize new station locations within the poorest block groups, which at current are not served by bike share options. Below are the block groups that currently contain a B-Cycle Station.

Rank	Location	Tract	Block Group	AMI	Score
40	Boulder	12204	1	80	32
71	Boulder	12201	1	60	39.5
75	Boulder	12300	2	60	41
86	Boulder	12203	2	80	50
87	Boulder	12202	4	60	53.5
90	Boulder	12203	4	80	64
91	Boulder	12204	3	80	71

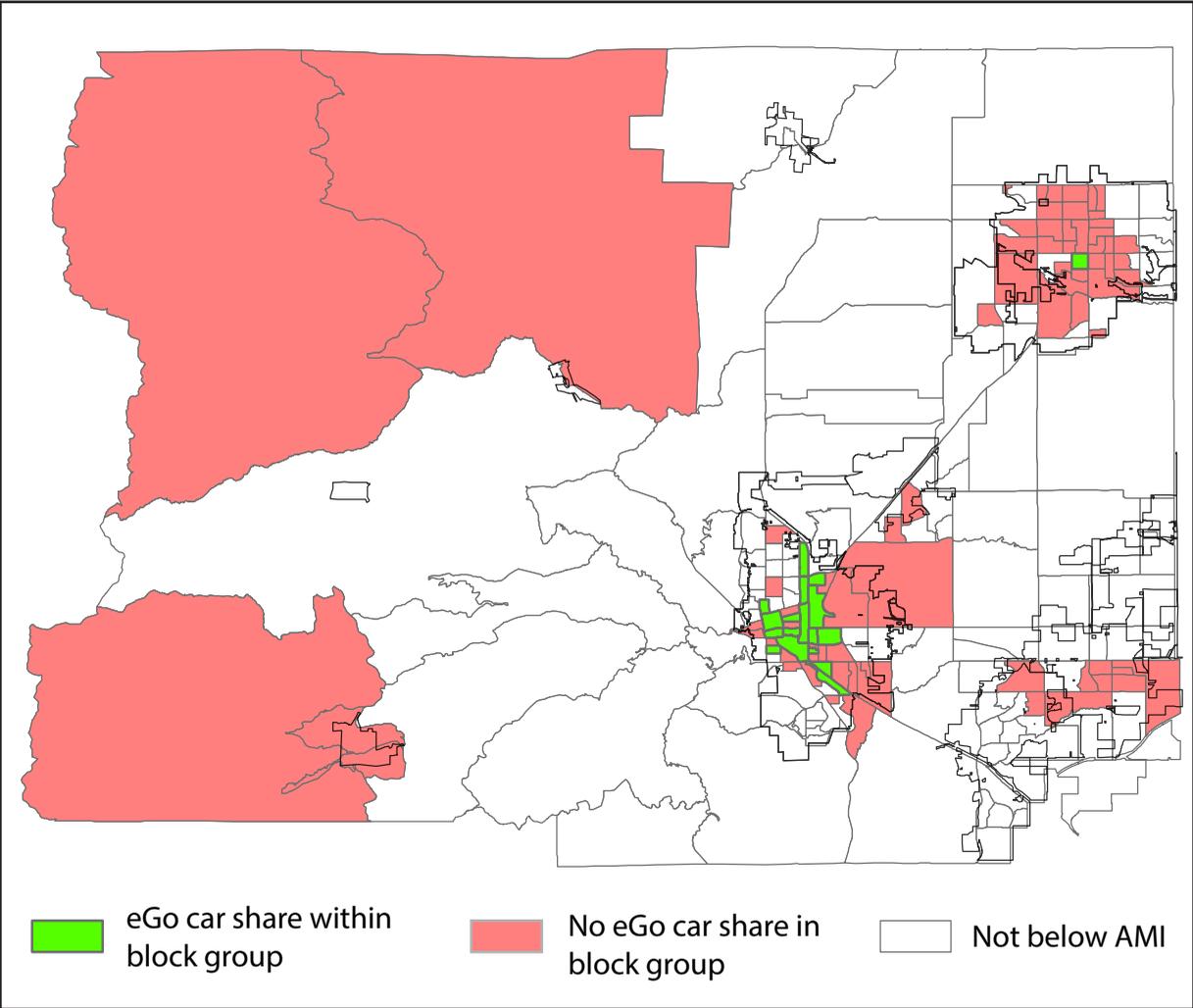
RANKING OF BLOCK GROUPS WITH NO ACCESS TO MULTI-USE PATH/SIDEWALKS

There are 30 Below AMI block groups that are not served by multi-use paths or Boulder County sidewalks. Important to note is that the following block groups represent findings using Boulder County sidewalk data and City of Boulder, City of Longmont, and DRCOG multi-use path data and may not accurately reflect the presence of all sidewalks. Future studies should incorporate more robust sidewalk data into the analysis as it becomes available.

Rank	Location	Tract	Block Group	AMI
1	Unincorporated NW	13602	2	80
2	Unincorporated NW/Jamestown	13602	1	80
3	Nederland/Unincorporated	13702	7	30
4	Boulder	12401	4	30
5	Lafayette	60800	4	60
6	Nederland/Unincorporated	13702	5	80
7	Lafayette	12905	1	80
8	Nederland/Unincorporated	13702	6	80
9	Louisville	13005	1	80
10	Lafayette	60800	5	60
11	Lafayette/Unincorporated	60800	2	80
12	Longmont	13505	1	60
13	Longmont	13503	2	60
14	Boulder	12508	3	80
16	Longmont	13302	4	80
17	Longmont	13302	2	60
19	Longmont	13308	3	80
20	Boulder	12607	4	60
21	Longmont	13211	3	60
22	Longmont	13306	2	80
23	Boulder	12202	1	80
24	Boulder	12501	2	80
25	Boulder	12607	3	60
26	Longmont	13305	1	80
32	Longmont	13401	3	60
39	Boulder	12102	4	80
41	Longmont	13307	2	60
54	Boulder	12202	2	60
64	Boulder	12204	1	80
77	Longmont	13302	1	60

BLOCK GROUPS WITH NO ACCESS TO CAR SHARE

Only 18 below AMI Block groups have an eGO car share location and are displayed below. Below AMI block groups that do not have access to an eGO car share location are displayed in red, those that do are in green.



APPENDIX B: Affordable Housing Site Rankings

RANKING OF ALL HOUSING SITES IN ANALYSIS

(Page 1 of 3)

Rank	Name	Authority	Location	Units	Type	Score
1	Josephine Commons	BCHA	Lafayette	74	Age 55+	6
2	Aspinwall	BCHA	Lafayette	72	Mixed Age	7
3	E Cleveland	BCHA	Lafayette	4	Mixed Age	9
4	Hayden Place	BHP	Boulder	30	Affordable Rental	9.5
5	Lafayette Villa West	BCHA	Lafayette	28	Mixed Age	10
6	Lafayette Villa West II	BCHA	Lafayette	10	Mixed Age	11
7	Sagrimore	BCHA	Lafayette	1	Mixed Age	11
8	San Juan Del Centro	LHA	Boulder	150	Privately Owned Subsidized	12
9	Kestrel (Mixed-Age)	BCHA	Louisville	129	Mixed-Age	13
10	Kestrel (Age 55+)	BCHA	Louisville	71	Age 55+	13
11	Rodeo Court	BCHA	Nederland	6	Mixed-Age	13
12	S Finch	BCHA	Lafayette	3	Mixed Age	13
13	608 E Chester	BCHA	Lafayette	2	Mixed Age	13
14	612 E Chester	BCHA	Lafayette	2	Mixed Age	13
15	Bedivere	BCHA	Lafayette	1	Mixed Age	13
16	Sunnyside Place	BCHA	Louisville	17	Mixed-Age	14
17	Bloomfield Place	BCHA	Lyons	8	Age 62+ or Disabled	14
18	Dover Court	BCHA	Lafayette	8	Mixed Age	14
19	501 - 602 W Geneseo	BCHA	Lafayette	35	Mixed Age	15
20	Avalon	BCHA	Lafayette	3	Mixed Age	15
21	W Cleveland	BCHA	Lafayette	3	Mixed Age	15
22	Lyonesse	BCHA	Lafayette	1	Mixed Age	15
23	Fox Ridge Apartments	LHA	Longmont	3	Family Affordable	15.5
24	Parkville Apartments	LHA	Longmont	75	Family Affordable	16
25	Cottonwood Court	BCHA	Longmont	36	Mixed-Age	16
26	Milo	BCHA	Lafayette	7	Mixed Age	16
27	Bridgewalk	BHP	Boulder	123	Affordable Rental	17
28	Dakota Ridge	BHP	Boulder	13	Affordable Rental	17
29	Prime Haven	BCHA	Nederland	6	Age 62+ or Disabled	17
30	Lucerne	BCHA	Lafayette	1	Mixed Age	17
31	Beaver Creek	BCHA	Nederland	12	Mixed-Age	18
32	S Carr	BCHA	Lafayette	2	Mixed Age	18
33	The Suites	LHA	Longmont	70	Family Affordable	18.5
34	Eagle Place	BCHA	Niwot	12	Age 62+ or Disabled	19
35	Catamaran Court	BCHA	Gunbarrel	12	Mixed Age	19
36	Regal Court II	BCHA	Louisville	10	Mixed-Age	19
37	1410 Emery	BCHA	Longmont	4	Mixed-Age	19
38	Clover Basin Apartments	LHA	Longmont	388	Family Affordable	20
39	Grandview Meadows	LHA	Longmont	96	Family Affordable	20
40	Foothills	BHP	Boulder	74	Affordable Rental	20

RANKING OF ALL HOUSING SITES IN ANALYSIS

(Page 2 of 3)

Rank	Name	Authority	Location	Units	Type	Score
41	Hearthstone at Hover Crossing	LHA	Longmont	50	Senior (Privately Owned)	20
42	712-718 W Geneseo	BCHA	Lafayette	4	Mixed Age	20
43	Acme Place	BCHA	Louisville	4	Mixed-Age	20
44	Golden West Manor	LHA	Boulder	250	Senior/Disabled	20.5
45	Hover Manor	LHA	Longmont	120	Senior/Disabled	20.5
46	The Lodge at Hover Crossing	LHA	Longmont	50	Senior (Privately Owned)	21
47	Casa de la Esperanza	BCHA	Longmont	32	Mixed-Age	21
48	Chateau Villa Apartments	LHA	Longmont	33	Family Affordable	22
49	Mountain View Plaza	LHA	Longmont	80	Senior (Privately Owned)	23
50	Helios Station	LHA	Lafayette	30	Privately Owned Subsidized	23
51	Cinnamon Park	LHA	Longmont	48	Senior/Disabled	24
52	Woodlands	BHP	Boulder	35	Family Self-Sufficiency	24
53	Aspen Meadows Nbhd	LHA	Longmont	28	Family Affordable	24
54	Kalmia	BHP	Boulder	49	Section 8 Community Program	26
55	Holiday	BHP	Boulder	49	Affordable Rental	26
56	Kimbark Street Apartments	LHA	Longmont	48	Family Affordable	26
57	Manhattan	BHP	Boulder	41	Section 8 Community Program	26
58	Regal Court I	BCHA	Louisville	30	Mixed-Age	26
59	Walter Self	BCHA	Lyons	12	Age 62+ or Disabled	26.5
60	Lydia Morgan	BCHA	Louisville	30	Age 62+	27
61	Regal Square	BCHA	Louisville	30	Age 62+ or Disabled	27
62	The Inn Between Property (Coffman)	LHA	Longmont	17	Transitional	27
63	Eastglen Townhomes	LHA	Longmont	21	Family Affordable	28
64	Vistoso	BHP	Boulder	15	Affordable Rental	28
65	Araphahoe East	BHP	Boulder	11	Affordable Rental	28
66	1327-1353 Emery	BCHA	Longmont	4	Mixed-Age	28
67	English Village Apartments	LHA	Longmont	32	Family Affordable	28.5
68	Red Oak Park	BHP	Boulder	59	Affordable Rental	29
69	Rees Court	BCHA	Longmont	2	Mixed-Age	29
70	East St. Clair	BCHA	Longmont	6	Mixed-Age	30
71	Mountaingate	BCHA	Lyons	6	Mixed-Age	30
72	Lilac Place	BCHA	Louisville	12	Mixed-Age	31
73	Northport	BHP	Boulder	50	Section 8 Community Program	32
74	Twin Peaks Apartments	LHA	Longmont	22	Family Affordable	32
75	Lee Hill	BHP	Boulder	31	Chronic Homelessness	33
76	Diagonal Court	BHP	Boulder	30	Section 8 Community Program	33
77	Montview Meadows	LHA	Longmont	27	Family Affordable	33
78	Madison	BHP	Boulder	33	Elderly/Disabled/Family	34
79	Wedgewood Apartments	BCHA	Longmont	20	Mixed-Age	34
80	Midtown	BHP	Boulder	13	Affordable Rental	34
81	Glen Willow	BHP	Boulder	34	Section 8 Community Program	34.5
82	The Inn Between Property (1901)	LHA	Longmont	12	Transitional	35

RANKING OF ALL HOUSING SITES IN ANALYSIS

(Page 2 of 3)

Rank	Name	Authority	Location	Units	Type	Score
83	Cambridge	BCHA	Longmont	6	Mixed-Age	35
84	Parkside Apartments	LHA	Longmont	50	Privately Owned Subsidized	35.5
85	Stonehedge Place Apartments	LHA	Longmont	114	Privately Owned Subsidized	36
86	Broadway West	BHP	Boulder	26	Affordable Rental	36
87	Casa Libertad	LHA	Longmont	18	Disabled/Family	36
88	Meadows	BCHA	Longmont	12	Mixed-Age	36
89	Sumner Properties	BCHA	Longmont	8	Mixed-Age	36
90	High Mar	BHP	Boulder	59	Affordable Rental	37
91	Quail Village Apartments	LHA	Longmont	43	Family Affordable	38
92	WestView	BHP	Boulder	34	Affordable Rental	40
93	Broadway East	BHP	Boulder	44	Section 8 Community Program	41
94	Hillside Square	BCHA	Louisville	13	Mixed-Age	41
95	Longs Peak Residence	LHA	Longmont	50	Senior (Privately Owned)	41.5
96	Canyon Pointe	BHP	Boulder	82	Section 8 Community Program	42.5
97	Terry Apartments	LHA	Longmont	12	Family Affordable	44
98	Walnut Place	BHP	Boulder	95	Elderly 55+	45
99	The Inn Between Property (1913)	LHA	Longmont	8	Transitional	45
100	902-904 Emery	BCHA	Longmont	2	Mixed-Age	45.5
101	St. Vrain Manor	LHA	Longmont	72	Senior/Disabled	45.5
102	Village Place Apartments	LHA	Longmont	72	Senior/Disabled	47.5
103	Twin Pines	BHP	Boulder	22	Affordable Rental	48
104	Iris Hawthorn	BHP	Boulder	14	Section 8 Community Program	49
105	Sanitas Place	BHP	Boulder	12	Affordable Rental	51
106	Whittier Apartments	BHP	Boulder	10	Affordable Rental	58
107	Presbyterian Manor	LHA	Boulder	80	Senior/Disabled	59.5
108	Arapahoe Court	BHP	Boulder	14	Elderly/Disabled	70

RANKING OF ALL HOUSING SITES WITHOUT ACCESS TO A REGIONAL BUS

Rank	Name	Location	Authority	Units	Type
8	San Juan Del Centro	Boulder	LHA	150	Privately Owned Subsidized
9	Kestrel	Louisville	BCHA	129	Mixed-Age
10	Kestrel	Louisville	BCHA	71	Age 55+
15	Bedivere	Lafayette	BCHA	1	Mixed Age
16	Sunnyside Place	Louisville	BCHA	17	Mixed-Age
20	Avalon	Lafayette	BCHA	3	Mixed Age
22	Lyonesse	Lafayette	BCHA	1	Mixed Age
26	Milo	Lafayette	BCHA	7	Mixed Age
30	Lucerne	Lafayette	BCHA	1	Mixed Age
36	Regal Court II	Louisville	BCHA	10	Mixed-Age
38	Clover Basin Apartments	Longmont	LHA	388	Family Affordable
39	Grandview Meadows	Longmont	LHA	96	Family Affordable
43	Acme Place	Louisville	BCHA	4	Mixed-Age
53	Aspen Meadows Nbhd	Longmont	LHA	28	Family Affordable
54	Kalmia	Boulder	BHP	49	Section 8 Community Program
57	Manhattan	Boulder	BHP	41	Section 8 Community Program
58	Regal Court I	Louisville	BCHA	30	Mixed-Age
60	Lydia Morgan	Louisville	BCHA	30	Age 62+
61	Regal Square	Louisville	BCHA	30	Age 62+ or Disabled
63	Eastglen Townhomes	Longmont	LHA	21	Family Affordable
64	Vizioso	Boulder	BHP	15	Affordable Rental
69	Rees Court	Longmont	BCHA	2	Mixed-Age
70	East St. Clair	Longmont	BCHA	6	Mixed-Age
72	Lilac Place	Louisville	BCHA	12	Mixed-Age
85	Stonehedge Place Apartments	Longmont	LHA	114	Privately Owned Subsidized
94	Hillside Square	Louisville	BCHA	13	Mixed-Age

RANKING OF ALL HOUSING SITES WITHOUT ACCESS TO A BIKE LANE FACILITY

Rank	Name	Location	Authority	Units	Type
1	Josephine Commons	Lafayette	BCHA	74	Age 55+
2	Aspinwall	Lafayette	BCHA	72	Mixed Age
3	E Cleveland	Lafayette	BCHA	4	Mixed Age
5	Lafayette Villa West	Lafayette	BCHA	28	Mixed Age
6	Lafayette Villa West II	Lafayette	BCHA	71	Mixed Age
7	Sagrimore	Lafayette	BCHA	10	Mixed Age
9	Kestrel	Louisville	BCHA	1	Mixed-Age
10	Kestrel	Louisville	BCHA	36	Age 55+
11	Rodeo Court	Nederland	BCHA	2	Mixed-Age
12	S Finch	Lafayette	BCHA	2	Mixed Age
13	608 E Chester	Lafayette	BCHA	1	Mixed Age
14	612 E Chester	Lafayette	BCHA	6	Mixed Age
15	Bedivere	Lafayette	BCHA	3	Mixed Age
16	Sunnyside Place	Louisville	BCHA	8	Mixed-Age
17	Bloomfield Place	Lyons	BCHA	35	Age 62+ or Disabled
18	Dover Court	Lafayette	BCHA	8	Mixed Age
19	501 - 602 W Geneseo	Lafayette	BCHA	3	Mixed Age
20	Avalon	Lafayette	BCHA	3	Mixed Age
21	W Cleveland	Lafayette	BCHA	1	Mixed Age
22	Lyonesse	Lafayette	BCHA	10	Mixed Age
25	Cottonwood Court	Longmont	BCHA	4	Mixed-Age
26	Milo	Lafayette	BCHA	4	Mixed Age
29	Prime Haven	Nederland	BCHA	12	Age 62+ or Disabled
30	Lucerne	Lafayette	BCHA	6	Mixed Age
31	Beaver Creek	Nederland	BCHA	2	Mixed-Age
32	S Carr	Lafayette	BCHA	12	Mixed Age
34	Eagle Place	Niwot	BCHA	4	Age 62+ or Disabled
35	Catamaran Court	Gunbarrel	BCHA	30	Mixed Age
36	Regal Court II	Louisville	BCHA	30	Mixed-Age
37	1410 Emery	Longmont	BCHA	30	Mixed-Age
42	712-718 W Geneseo	Lafayette	BCHA	30	Mixed Age
43	Acme Place	Louisville	BCHA	123	Mixed-Age
47	Casa de la Esperanza	Longmont	BCHA	49	Mixed-Age
58	Regal Court I	Louisville	BCHA	33	Mixed-Age
60	Lydia Morgan	Louisville	BCHA	26	Age 62+
61	Regal Square	Louisville	BCHA	82	Age 62+ or Disabled
72	Lilac Place	Louisville	BCHA	3	Mixed-Age
79	Wedgewood Apartments	Longmont	BCHA	50	Mixed-Age
83	Cambridge	Longmont	BCHA	33	Mixed-Age

RANKING OF ALL HOUSING SITES WITHOUT ACCESS TO A MULTI-USE PATH/SIDEWALK

(Page 1 of 3)

Rank	Name	Location	Authority	Units	Type
1	Josephine Commons	Lafayette	BCHA	74	Age 55+
2	Aspinwall	Lafayette	BCHA	72	Mixed Age
3	E Cleveland	Lafayette	BCHA	4	Mixed Age
4	Hayden Place	Boulder	BHP	30	Affordable Rental
5	Lafayette Villa West	Lafayette	BCHA	28	Mixed Age
6	Lafayette Villa West II	Lafayette	BCHA	10	Mixed Age
7	Sagrimore	Lafayette	BCHA	1	Mixed Age
8	San Juan Del Centro	Boulder	LHA	150	Privately Owned Subsidized
9	Kestrel	Louisville	BCHA	129	Mixed-Age
10	Kestrel	Louisville	BCHA	71	Age 55+
11	Rodeo Court	Nederland	BCHA	6	Mixed-Age
12	S Finch	Lafayette	BCHA	3	Mixed Age
13	608 E Chester	Lafayette	BCHA	2	Mixed Age
14	612 E Chester	Lafayette	BCHA	2	Mixed Age
15	Bedivere	Lafayette	BCHA	1	Mixed Age
16	Sunnyside Place	Louisville	BCHA	17	Mixed-Age
17	Bloomfield Place	Lyons	BCHA	8	Age 62+ or Disabled
18	Dover Court	Lafayette	BCHA	8	Mixed Age
19	501 - 602 W Geneseo	Lafayette	BCHA	35	Mixed Age
20	Avalon	Lafayette	BCHA	3	Mixed Age
21	W Cleveland	Lafayette	BCHA	3	Mixed Age
22	Lyonesse	Lafayette	BCHA	1	Mixed Age
23	Fox Ridge Apartments	Longmont	LHA	3	Family Affordable
24	Parkville Apartments	Longmont	LHA	75	Family Affordable
25	Cottonwood Court	Longmont	BCHA	36	Mixed-Age
26	Milo	Lafayette	BCHA	7	Mixed Age
28	Dakota Ridge	Boulder	BHP	13	Affordable Rental
29	Prime Haven	Nederland	BCHA	6	Age 62+ or Disabled
30	Lucerne	Lafayette	BCHA	1	Mixed Age
31	Beaver Creek	Nederland	BCHA	12	Mixed-Age
32	S Carr	Lafayette	BCHA	2	Mixed Age
33	The Suites	Longmont	LHA	70	Family Affordable
36	Regal Court II	Louisville	BCHA	10	Mixed-Age
37	1410 Emery	Longmont	BCHA	4	Mixed-Age
39	Grandview Meadows	Longmont	LHA	96	Family Affordable
41	Hearthstone at Hover Crossing	Longmont	LHA	50	Senior (Privately Owned)
42	712-718 W Geneseo	Lafayette	BCHA	4	Mixed Age
43	Acme Place	Louisville	BCHA	4	Mixed-Age

RANKING OF ALL HOUSING SITES WITHOUT ACCESS TO A MULTI-USE PATH/SIDEWALK

(Page 2 of 3)

Rank	Name	Location	Authority	Units	Type
44	Golden West Manor	Boulder	LHA	250	Senior/Disabled
45	Hover Manor	Longmont	LHA	120	Senior/Disabled
46	The Lodge at Hover Crossing	Longmont	LHA	50	Senior (Privately Owned)
47	Casa de la Esperanza	Longmont	BCHA	32	Mixed-Age
48	Chateau Villa Apartments	Longmont	LHA	33	Family Affordable
49	Mountain View Plaza	Longmont	LHA	80	Senior (Privately Owned)
50	Helios Station	Lafayette	LHA	30	Privately Owned Subsidized
51	Cinnamon Park	Longmont	LHA	48	Senior/Disabled
52	Woodlands	Boulder	BHP	35	Family Self-Sufficiency
53	Aspen Meadows Nbhd	Longmont	LHA	28	Family Affordable
54	Kalmia	Boulder	BHP	49	Section 8 Community Program
55	Holiday	Boulder	BHP	49	Affordable Rental
56	Kimbark Street Apartments	Longmont	LHA	48	Family Affordable
57	Manhattan	Boulder	BHP	41	Section 8 Community Program
59	Walter Self	Lyons	BCHA	12	Age 62+ or Disabled
62	The Inn Between Property (Coffman)	Longmont	LHA	17	Transitional
63	Eastglen Townhomes	Longmont	LHA	21	Family Affordable
64	Vistoso	Boulder	BHP	15	Affordable Rental
66	1327-1353 Emery	Longmont	BCHA	4	Mixed-Age
67	English Village Apartments	Longmont	LHA	32	Family Affordable
68	Red Oak Park	Boulder	BHP	59	Affordable Rental
69	Rees Court	Longmont	BCHA	2	Mixed-Age
70	East St. Clair	Longmont	BCHA	6	Mixed-Age
71	Mountaingate	Lyons	BCHA	6	Mixed-Age
73	Northport	Boulder	BHP	50	Section 8 Community Program
75	Lee Hill	Boulder	BHP	31	Chronic Homelessness
76	Diagonal Court	Boulder	BHP	30	Section 8 Community Program
77	Montview Meadows	Longmont	LHA	27	Family Affordable
80	Midtown	Boulder	BHP	13	Affordable Rental
82	The Inn Between Property (1901)	Longmont	LHA	12	Transitional
88	Meadows	Longmont	BCHA	12	Mixed-Age
89	Sumner Properties	Longmont	BCHA	8	Mixed-Age
90	High Mar	Boulder	BHP	59	Affordable Rental
91	Quail Village Apartments	Longmont	LHA	43	Family Affordable
92	WestView	Boulder	BHP	34	Affordable Rental
95	Longs Peak Residence	Longmont	LHA	50	Senior (Privately Owned)
97	Terry Apartments	Longmont	LHA	12	Family Affordable
98	Walnut Place	Boulder	BHP	95	Elderly 55+
99	The Inn Between Property (1913)	Longmont	LHA	8	Transitional

RANKING OF ALL HOUSING SITES WITHOUT ACCESS TO A MULTI-USE PATH/SIDEWALK

(Page 3 of 3)

Rank	Name	Location	Authority	Units	Type
100	902-904 Emery	Longmont	BCHA	2	Mixed-Age
101	St. Vrain Manor	Longmont	LHA	72	Senior/Disabled
102	Village Place Apartments	Longmont	LHA	72	Senior/Disabled
106	Whittier Apartments	Boulder	BHP	10	Affordable Rental
108	Arapahoe Court	Boulder	BHP	14	Elderly/Disabled

HOUSING SITES WITH ACCESS TO CAR SHARE LOCATIONS

Rank	Name	Location	Authority	Units	Type
44	Golden West Manor	Boulder	LHA	250	Senior/Disabled
52	Woodlands	Boulder	BHP	35	Family Self-Sufficiency
54	Kalmia	Boulder	BHP	49	Section 8 Community Program
55	Holiday	Boulder	BHP	49	Affordable Rental
62	The Inn Between Property	Longmont	LHA	17	Transitional
65	Arapahoe East	Boulder	BHP	11	Affordable Rental
68	Red Oak Park	Boulder	BHP	59	Affordable Rental
73	Northport	Boulder	BHP	50	Section 8 Community Program
75	Lee Hill	Boulder	BHP	31	Chronic Homelessness
76	Diagonal Court	Boulder	BHP	30	Section 8 Community Program
78	Madison	Boulder	BHP	33	Elderly/Disabled/Family
80	Midtown	Boulder	BHP	13	Affordable Rental
86	Broadway West	Boulder	BHP	26	Affordable Rental
90	High Mar	Boulder	BHP	59	Affordable Rental
92	WestView	Boulder	BHP	34	Affordable Rental
93	Broadway East	Boulder	BHP	44	Section 8 Community Program
96	Canyon Pointe	Boulder	BHP	82	Section 8 Community Program
98	Walnut Place	Boulder	BHP	95	Elderly 55+
101	St. Vrain Manor	Longmont	LHA	72	Senior/Disabled
102	Village Place Apartments	Longmont	LHA	72	Senior/Disabled
103	Twin Pines	Boulder	BHP	22	Affordable Rental
104	Iris Hawthorn	Boulder	BHP	14	Section 8 Community Program
105	Sanitas Place	Boulder	BHP	12	Affordable Rental
106	Whittier Apartments	Boulder	BHP	10	Affordable Rental
107	Presbyterian Manor	Boulder	LHA	80	Senior/Disabled
108	Arapahoe Court	Boulder	BHP	14	Elderly/Disabled

