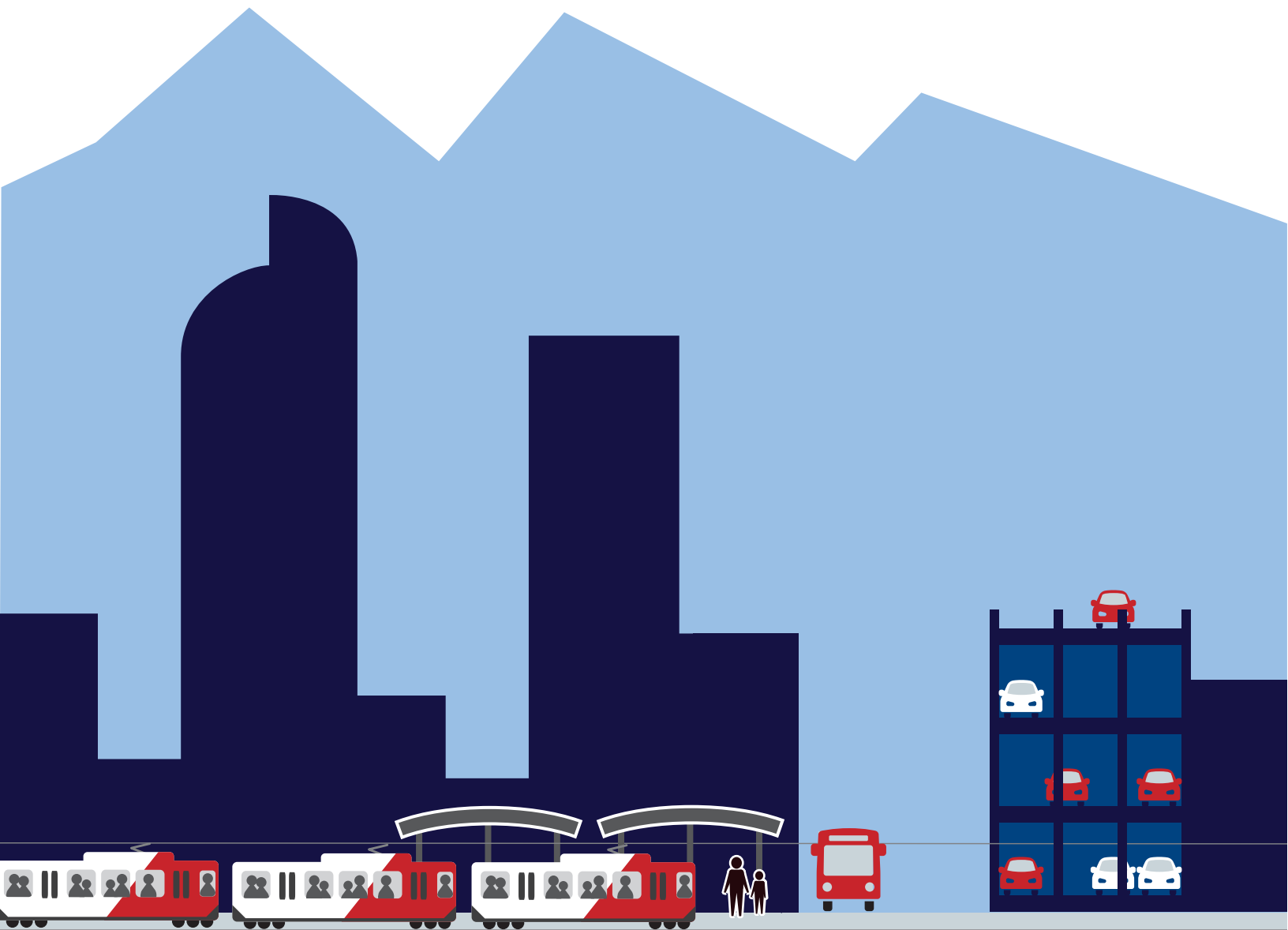


Residential Parking in Station Areas: A Study of Metro Denver



December 2020



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Executive Summary

In late 2019 and early 2020, the Regional Transportation District (RTD) of Metro Denver, Colorado, surveyed property managers, counted parking supply and demand, and analyzed findings from 86 station-area developments. Per RTD's analysis of peak parking demand, market-rate properties provide 40 percent more parking than residents use, and income-restricted properties provide 50 percent more parking than residents use.



At market-rate properties, 40% of parking spaces go unused at peak, while income-restricted properties provide 50% more parking than used.

Providing an excessive amount of parking at station-area properties across Metro Denver affects residents' welfare and the economic vitality of the region, which the State of Colorado enabled RTD to promote.¹ As parking increases development costs, developers pass on costs to residents – particularly low-income residents – in the forms of higher rent, fewer units, and reduced services.² In aggregate, increased costs for unnecessary parking contribute to a higher cost of living across Metro Denver, which recently experienced the second greatest rate of gentrification in the country.³ From the perspective of the transit agency, which particularly benefits from the patronage of low-income passengers, fewer income-restricted units near existing service threatens the agency's fiscal solvency and satisfaction of its mandate.

TOD at RTD

RTD's TOD mission is to help facilitate TOD opportunities that increase ridership or enhance transit investments throughout the District through station design and close coordination with local jurisdictions and developers. RTD plays a proactive role in facilitating transit-supportive development around transit stations. RTD's TOD group manages and conducts research to support transit-oriented development, shares information with both public and private sector partners, and provides planning assistance to help local jurisdictions connect constituents to transit service.

¹ State of Colorado, "[Colorado Revised Statutes §32-9-102\(1\)a](#)"

² A parking space in a structured parking facility costs approximately \$25,000 in Metro Denver in 2020.

³ National Community Reinvestment Coalition, "[Gentrification and Displacement 2020](#)"



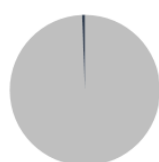
RTD intends this research to prompt discussion about more appropriate parking provision for properties in transit-rich neighborhoods. RTD, municipal, and development partners who have a role in promoting the region's economic welfare should prefer station-area affordable housing in disposition guidelines, zoning regulations, and funding requirements. In addition, developers should rely on findings like those presented here to make the case to municipalities and financial partners to tailor expectations for parking demand to a multimodal environment. RTD hopes that this research effort will help to foster a more affordable, connected, and competitive Metro Denver region.



Background

RTD provides fixed-route transit service for the eight-county Metro Denver region – one of the nation’s largest service areas, covering 2,342 square miles and including more than three million residents. In 2019, before COVID-19-related service adjustments, RTD operated nearly 44 million miles of regular fixed-route service with a fleet of 66 commuter-rail and 201 light-rail trains, more than one thousand local- and regional-service buses, and nearly 400 special-service vehicles. RTD provided more than 100 million trips in 2019.⁴

In 2004, residents within RTD’s service area approved a sales-tax increase to fund FasTracks, the nation’s largest transit expansion at that time. Between 2015 and 2020, RTD opened seven new rapid transit services, including the University of Colorado A Line between Denver Union Station and Denver International Airport and the Flatiron Flyer bus rapid transit service between Denver Union Station and Boulder. Since 2005, an outsized amount of development has occurred near rapid-transit stations: 43 percent of all multifamily development and 55 percent of all office development in Metro Denver has occurred within a half-mile of RTD rapid-transit stations, which together account for only 0.6 percent of land area in the Denver-Aurora-Lakewood and Boulder metropolitan statistical areas.



0.6% of land area in Denver/Boulder Metropolitan Statistical Area (MSA) is within a half-mile of an RTD station area.

Since 2005, those station areas have captured:



43% of multifamily development

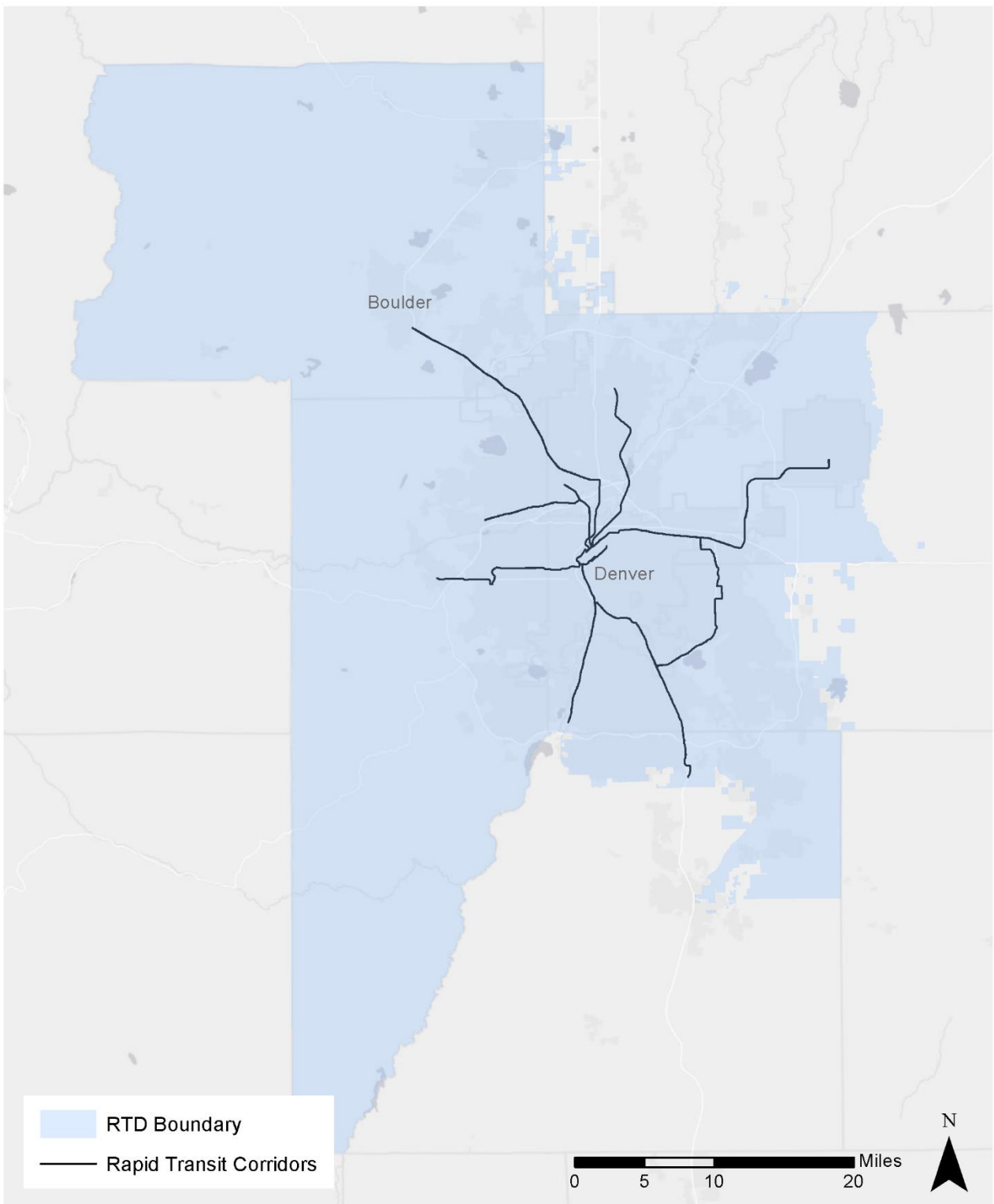


55% of office development

⁴ Regional Transportation District, “[Facts and Figures](#)”



Figure 1: Map of RTD Service Area



Despite impressive growth in Metro Denver's station-area development, transit ridership has not followed. Between 2015 and 2018, ridership decreased from 103 million to 98 million, and recent RTD research suggests that the *type* of development more than simply *total* development may play a role. In 2017 and 2018, RTD surveyed 1,340 residents of 35 station-area apartments and found a compelling relationship between low-income households and transit service.^{5 6}

RTD research shows:

- **61 percent** of low-income households have no car, while **93 percent** of market-rate households have at least one car.
- **63 percent** of low-income households ride the bus once a week or more, while **88 percent** of market-rate households ride the bus once a week or less.
- **57 percent** of low-income households ride the train once a week or more, while **73 percent** of market-rate households ride the train once a week or less.



Co-locating income-restricted housing and high-frequency transit service benefits both low-income households and transit agencies.

In other words, co-locating income-restricted housing and high-frequency transit service benefits both low-income households and the transit agency. Reducing parking supply at station-area developments reduces development cost, helping residents to reduce housing and transportation costs and RTD to increase ridership on its expansive transit network.⁷

⁵ Travel Behaviour and Society, "[Comparing the travel behavior of affordable and market-rate housing residents in the transit-rich neighborhoods of Denver, CO](#)"

⁶ TransitCenter, "[Transit-Oriented Development is More Transit-Oriented When It's Affordable Housing](#)"

⁷ Center for Neighborhood Technology, "[Housing and Transportation Affordability Index](#)"



Methodology

RTD's research into station-area developments' parking provision and utilization relied on results of an electronic survey of property managers and counts of properties' parking facilities during peak demand.

Guidance

In summer 2019, RTD consulted several planning, parking, and development practitioners to better understand similar research efforts, nuances, and pressing issues facing each discipline. In particular, the [Metropolitan Area Planning Council](#) (MAPC) in Greater Boston and the [North Central Texas Council of Governments](#) (NCTCOG) in the Dallas-Fort Worth Metroplex offered lessons learned from their similar work to understand and inform station-area parking supply.

Survey

Following these agencies' lessons, RTD drafted an electronic survey in Google Forms for managers of residential properties to understand each property's general characteristics, parking programs, and transportation amenities.

RTD tracks all station-area development in Metro Denver, logging development type, size, and location among other features. RTD used that database to develop a universe of properties for this study, prioritizing rental apartment buildings with more than 50 units within a 10-minute walk of a bus rapid transit or train station and that opened or were substantially renovated within five years of transit service opening.⁸ That filter identified 120 properties, and RTD relied on contact information provided by transportation management associations or property websites to contact managers of those properties between fall 2019 and spring 2020 to explain the research and distribute the online survey. Of 111 property managers who received the survey, RTD received 99 responses.

Count & Confirmation

Learning from MAPC and NCTCOG and taking advantage of a State-mandated stay-at-home order in April 2020, RTD counted parking utilization at 104 properties in April 2020 on a Tuesday through Thursday between 10 a.m. and 3 p.m., avoiding Friday through

⁸ RTD did not survey or count condominiums. A State construction defects law has limited condominium development, thus mitigating the benefit of studying this product type, and surveying individual condo-unit owners proved prohibitively challenging.



Monday because utilization is typically lower on those days. RTD again followed up with property managers after these counts to clarify questions raised in the field and further detail survey responses.

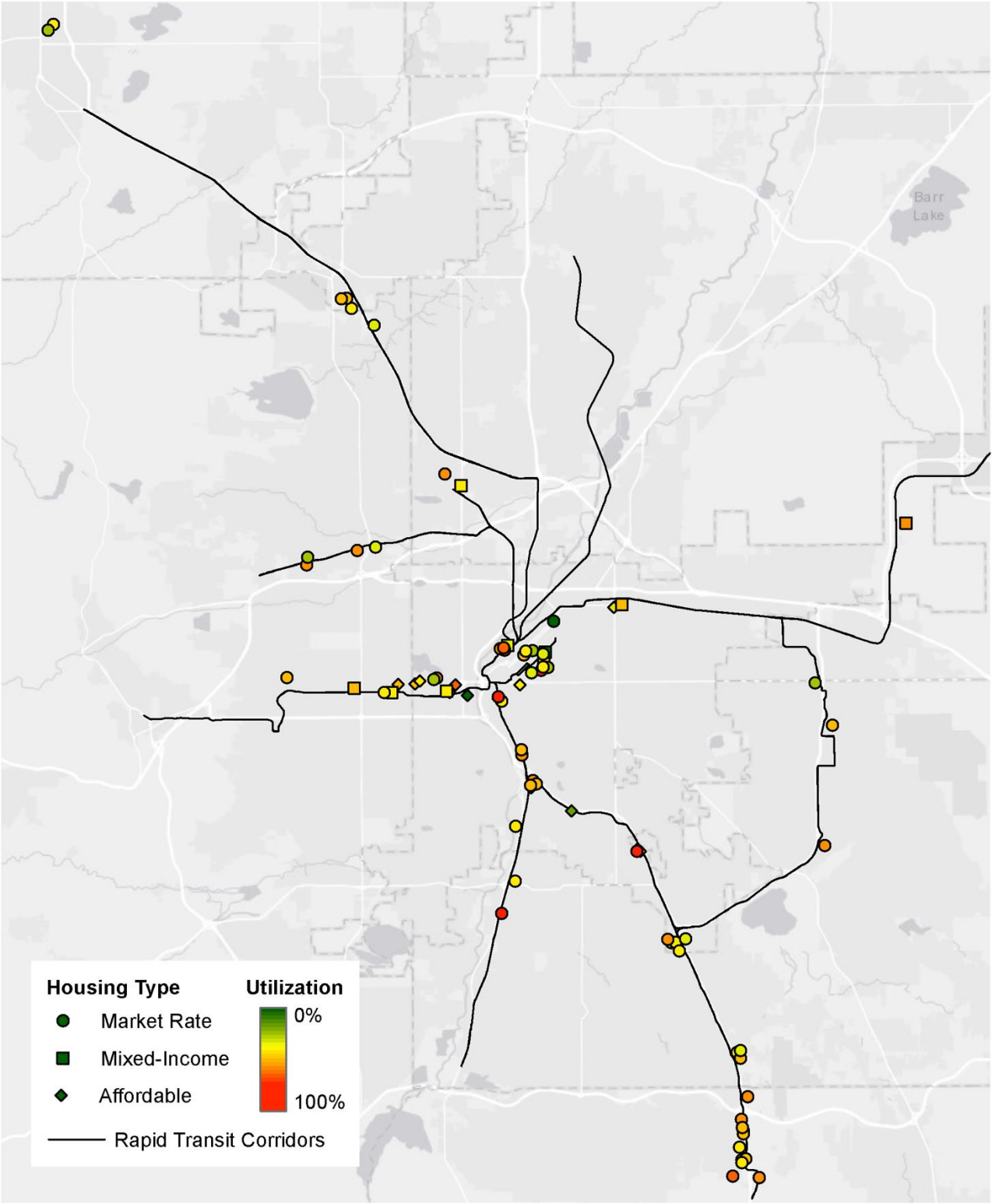
In the two weeks following Labor Day 2020, RTD verified April daytime counts with nighttime counts of 19 properties (approximately 22 percent of the 86 analyzed properties) on a Tuesday through Thursday between 9 p.m. and midnight to verify consistency between the counting time periods. Utilization from the smaller nighttime counts nearly matched that of the daytime counts: 63 percent utilization by day in April; 62 percent utilization by night in September.

Analysis

RTD both received a survey from and counted parking utilization at 94 properties, of which 86 properties in 11 municipalities were more than 80 percent leased at the time of the count. RTD analyzed these 86 properties' parking provision and utilization patterns related to resident income, property age, property transportation policies, and location features.



Figure 2: Map of Properties Analyzed



Findings

Most significant, the analysis found that all 86 properties provide 42 percent more parking on average than residents use at peak demand, and income-restricted properties provide 50 percent more parking than used – well above the 5 to 15 percent considered optimal parking management.⁹ This over-supply comes at a substantial cost: approximately \$25,000 per parking space in a Metro Denver parking structure, which are typical of station-area developments that make efficient use of high-value land. While excessive parking at any station-area property would fail to complement the neighborhood's intrinsic multimodal alternatives and increase residents' cost of living, the cost of excessive parking often jeopardizes affordable housing. Thus, the unnecessary cost of housing cars instead of families often limits or effectively prohibits affordable housing in station areas and limits transit access for reliable transit users.

Excessive parking particularly affects the viability of low-income housing, whose developers have few financial sources to afford inefficient costs. The [City and County of Denver](#) estimates that the region lacks 100,000 homes, and the [Colorado Housing and Finance Authority](#) reports that annual demand for competitive low-income housing tax credit capital was over-subscribed by 219 percent in 2020. Not surprising, the [National Community Reinvestment Coalition](#) (NCRC) ranked Metro Denver as the second fastest gentrifying region in the country between 2013 and 2017.

Table 1: Selection from NCRC's "Gentrification and Displacement 2020"

City	Total Tracts	Eligible Tracts	Gentrifying Tracts	Rate of Gentrification
San Francisco-Oakland	975	131	41	31.3%
Denver	619	80	22	27.5%
Boston	1003	75	16	21.3%
Miami-Ft. Lauderdale	1215	81	17	21.0%
New Orleans	392	64	13	20.3%
Austin	350	56	11	19.6%
New York City	4515	362	70	19.3%

Reproduced from "Gentrification and Displacement 2020"

Excess parking is particularly inappropriate in transit-rich neighborhoods. Not only does it effectively prohibit affordable housing, but it unnecessarily increases development cost, reduces project savings, and obstructs access to transit and, by extension, to economic opportunity for a growing number of low-income households.

⁹ Urban Land Institute, "[Shared Parking](#)"



Resident Income

Table 2 details the number of parking spaces available and utilized on a per-unit basis at all 86 properties that were studied, separated by their inclusion of market-rate, mixed-income, and income-restricted units. Residents of income-restricted properties use less parking than residents of market-rate residents, suggesting that municipalities and developers should have different standards for parking demand at market-rate and income-restricted properties in station areas.



In market-rate properties, 1.23 parking spaces per unit are provided, but only 0.74 parking spaces per unit are used.

Income-restricted properties provide 0.72 parking spaces per unit, but residents use only 0.36 parking spaces per unit.



In the 65 market-rate properties analyzed, an average of 1.23 parking spaces per unit are provided, but only 0.74 parking spaces per unit are used – a 60 percent utilization rate. At 16 income-restricted properties, an average of 0.72 spaces are provided per unit, but residents only use 0.36 parking spaces per unit – a 50 percent utilization rate. Less parking is provided at income-restricted properties, and, of that provision, less parking is used.

Table 2: Parking Available and Utilized per Unit at Property by Resident Income

Resident Income	Properties	Units	Parking Spaces	Spaces Available Per Unit	Spaces Utilized Per Unit	Percent Utilized
All Properties	86	25,333	30,478	1.20	0.70	58%
Market Rate	65	19,850	24,462	1.23	0.74	60%
Mixed Income	5	985	845	0.86	0.49	57%
Income Restricted	16	1,587	1,135	0.72	0.36	50%



Bundled Parking

Nearly an even split of properties include (45) or do not include (41) a parking space in a tenant's lease, otherwise known as bundling or unbundling parking, respectively. Although one may expect an additional parking fee at unbundled properties to result in lower parking demand, prompting developers to reduce supply, properties with unbundled parking provide more parking per unit and have higher utilization rates than their bundled-parking counterparts. This unexpected finding for higher supply and utilization at unbundled properties may be explained by resident income at these properties; 38 of 41 unbundled properties are market-rate properties, thus accommodating a higher-income tenant, who is more likely to own a vehicle than a lower-income tenant. Developers of market-rate apartments with unbundled parking likely anticipate a high demand for parking from higher-income tenants.

Table 3: Parking Available and Utilized per Unit at Properties with Bundled Parking

Bundled	Properties	Units	Parking Spaces	Spaces Available Per Unit	Spaces Utilized Per Unit	Percent Utilized
All Properties	45	9,851	11,580	1.18	0.66	56%
Market Rate	27	7,892	10,147	1.29	0.73	57%
Mixed Income	4	901	751	0.83	0.48	58%
Income Restricted	14	1,058	682	0.64	0.33	50%

Table 4: Parking Available and Utilized per Unit at Properties with Unbundled Parking

Unbundled	Properties	Units	Parking Spaces	Spaces Available Per Unit	Spaces Utilized Per Unit	Percent Utilized
All Properties	41	11,241	13,330	1.19	0.74	63%
Market Rate	38	10,947	13,042	1.19	0.75	63%
Mixed Income	1	84	94	1.12	0.56	50%
Income Restricted	2	210	194	0.92	0.45	49%

Neighborhood Transit Quality

The Center for Neighborhood Technology's (CNT) [All Transit](#) (AT) compiles transit stop, route, and frequency information in more than 300 regions, including Metro Denver. RTD used properties' AT scores to approximate their neighborhoods' levels of transit service and separated scores into quartiles of transit quality. (Tables 5-8, Figure 3)

One may expect quartiles to relate inversely to parking utilization – the better the transit quality, the lower the need to own and park a vehicle – and that expectation holds true.



After accounting for single-property outliers, resident income continues to correlate with parking utilization. Rates of parking supply and demand are higher at market-rate properties and lower at income-restricted properties than average in each quartile, and income-restricted properties exhibit the lowest per-unit utilization (0.31) across all quartiles. However, parking utilization across all properties in all quartiles are neither as distinct among the quartiles nor as related to neighborhood transit quality as one may expect. For example, the lowest per-unit utilization falls in the second lowest quartile, not the highest quartile.

It is surprising that neighborhood transit quality does not play a more significant role in parking provision or utilization. Municipalities and developers may better consider neighborhood transit quality when determining parking provision, as the transit agency may consider transit-supportive land uses in station areas when determining provision of transit services to neighborhoods.

Table 5: Parking Available and Utilized per Unit at Properties in Lowest Quartile

Lowest Quartile	Properties	Units	Parking Spaces	Spaces Available Per Unit	Spaces Utilized Per Unit	Percent Utilized
All Properties	21	6,429	7,067	1.10	0.66	60%
Market Rate	19	6,018	6,911	1.15	0.69	60%
Mixed Income	1	266	126	0.47	0.24	52%
Income Restricted	1	145	30	0.21	0.19	90%

Table 6: Parking Available and Utilized per Unit at Properties in Low Quartile

Low Quartile	Properties	Units	Parking Spaces	Spaces Available Per Unit	Spaces Utilized Per Unit	Percent Utilized
All Properties	23	5,277	6,028	1.14	0.72	63%
Market Rate	15	4,283	5,351	1.25	0.80	64%
Mixed Income	2	194	199	1.03	0.53	52%
Income Restricted	6	800	478	0.60	0.31	52%

Table 7: Parking Available and Utilized per Unit at Properties in High Quartile

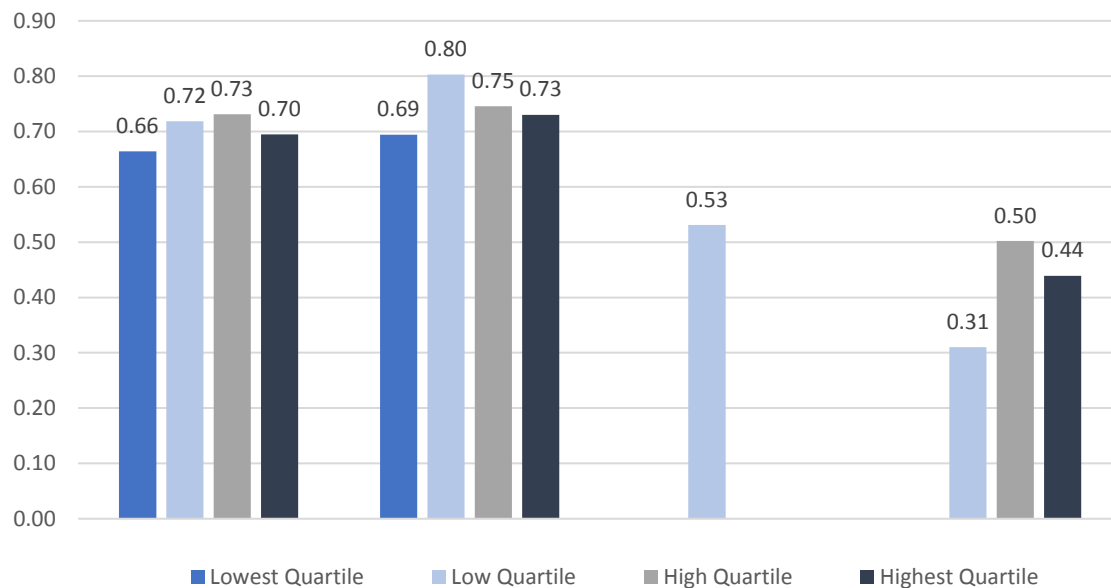
High Quartile	Properties	Units	Parking Spaces	Spaces Available Per Unit	Spaces Utilized Per Unit	Percent Utilized
All Properties	22	6,129	8,015	1.31	0.73	56%
Market Rate	17	5,761	7,617	1.32	0.75	56%
Mixed Income	1	129	158	1.22	0.51	42%
Income Restricted	4	239	240	1.00	0.50	50%



Table 8: Parking Available and Utilized per Unit at Properties in Highest Quartile

Highest Quartile	Properties	Units	Parking Spaces	Spaces Available Per Unit	Spaces Utilized Per Unit	Percent Utilized
All Properties	20	4,587	5,332	1.16	0.70	60%
Market Rate	14	3,788	4,583	1.21	0.73	60%
Mixed Income	1	396	362	0.91	0.62	68%
Income Restricted	5	403	387	0.96	0.44	46%

Figure 3: Parking Utilization at Properties Located in All Station-Area Quartiles¹⁰



Transit Pass Provision

RTD's [Neighborhood EcoPass](#) (NEco) Program allows managers with at least 40 units to purchase monthly transit passes at significant discount and provide those passes to tenants to encourage their transit use. Of the 86 properties analyzed, managers at only eight properties provide Neighborhood EcoPasses, translating to slightly lower parking provision and utilization (1.15 and 0.64 parking spaces per unit, respectively) compared to the majority of properties (1.18 and 0.71 parking spaces per unit, respectively). Although few station-area properties participate in the NEco Program, this finding suggests nonetheless that RTD should encourage municipalities and developers to consider reductions in parking provision on condition of participation in NEco and other transportation-demand management programs.

¹⁰ After removing single-property outliers.



Table 9: Parking Available and Utilized per Unit at Properties with Neighborhood EcoPasses

With NEco	Properties	Units	Parking Spaces	Spaces Available Per Unit	Spaces Utilized Per Unit	Percent Utilized
All Properties	8	1,330	1,532	1.15	0.64	56%
Market Rate	4	1,011	1,273	1.26	0.72	57%
Mixed Income	0	-	-	-	-	N/A
Income Restricted	4	319	259	0.81	0.42	51%

Table 10: Parking Available and Utilized per Unit at Properties without Neighborhood EcoPasses

Without NEco	Properties	Units	Parking Spaces	Spaces Available Per Unit	Spaces Utilized Per Unit	Percent Utilized
All Properties	78	21,092	24,910	1.18	0.71	60%
Market Rate	61	18,839	23,189	1.23	0.74	60%
Mixed Income	5	985	845	0.86	0.49	57%
Income Restricted	12	1,268	876	0.69	0.35	50%

Proximity to Transit

The distance between property and station may play a small role in parking supply and demand. Twenty-nine (29) properties lying less than 0.3 miles from a station provide 0.17 fewer parking spaces per unit and residents of those properties utilize 0.10 fewer parking spaces per unit compared to 57 properties between 0.3 and 0.5 miles from a station. In other words, for every 30 units, a property within a five-minute walk of a station provides five fewer parking spaces and its residents use three fewer parking spaces than a comparable station-area property farther away.

Table 11: Parking Available and Utilized at Properties less than 0.3 Miles from Station

<0.3 mi.	Properties	Units	Parking Spaces	Spaces Available Per Unit	Spaces Utilized Per Unit	Percent Utilized
All Properties	29	6,670	7,086	1.06	0.63	60%
Market Rate	19	5,380	6,334	1.18	0.71	61%
Mixed Income	4	589	483	0.82	0.40	48%
Income Restricted	6	701	269	0.38	0.23	59%



Table 12: Parking Available and Utilized at Properties between 0.3 and 0.5 Miles from Station

0.3 mi. – 0.5 mi.	Properties	Units	Parking Spaces	Spaces Available Per Unit	Spaces Utilized Per Unit	Percent Utilized
All Properties	57	15,752	19,356	1.23	0.73	59%
Market Rate	46	14,470	18,128	1.25	0.75	60%
Mixed Income	1	396	362	0.91	0.62	68%
Income Restricted	10	886	866	0.98	0.47	48%

Core vs Suburbs

Of the 86 properties analyzed, 45 are in Denver, where relatively sophisticated parking requirements may influence properties' provision of 0.04 fewer parking spaces per unit, compared to their suburban counterparts.¹¹

Table 13: Parking Available and Utilized at Properties Located in Denver

Denver	Properties	Units	Parking Spaces	Spaces Available Per Unit	Spaces Utilized Per Unit	Percent Utilized
All Properties	45	10,217	11,801	1.16	0.68	59%
Market Rate	27	8,081	10,109	1.25	0.75	60%
Mixed Income	3	609	614	1.01	0.59	58%
Income Restricted	15	1,527	1,078	0.71	0.35	49%

Table 14: Parking Available and Utilized at Properties not Located in Denver

Non-Denver	Properties	Units	Parking Spaces	Spaces Available Per Unit	Spaces Utilized Per Unit	Percent Utilized
All Properties	41	12,205	14,641	1.20	0.72	60%
Market Rate	38	11,769	14,353	1.22	0.73	60%
Mixed Income	2	376	231	0.61	0.32	52%
Income Restricted	1	60	57	0.95	0.65	68%

Transit-Oriented Development Typology

In 2015, the City and County of Denver's [Transit-Oriented Development Strategic Plan](#) classified all 29 stations in the city into five typologies: Downtown, Urban Center, General Urban, Urban, and Suburban. Of 45 analyzed properties in all five Denver typologies, the

¹¹ The City and County of Denver [Zoning Code](#) allows for alternative minimum vehicle parking ratios (Art. 10.4.5.2) and vehicle parking reductions (Art. 10.4.5.3) for affordable housing.



five properties in the Downtown typology near Union Station – arguably the region’s most transit-oriented and walkable environment – exhibit the lowest parking provision (0.96 parking spaces per unit) among the five typologies but the highest parking utilization (0.76 parking spaces per unit), despite all five requiring an additional for parking fee (i.e., unbundling). Four market-rate properties where residents use 0.77 parking spaces per unit, on average, significantly influence the high utilization rate. Income-restricted properties in the Urban and General Urban typologies exhibit the lowest rates of parking supply (0.58 and 0.54 parking spaces per unit, respectively) and parking demand (0.28 and 0.29 parking spaces per unit, respectively).

Table 15: Parking Available and Utilized at Properties per Denver Downtown Typology

Downtown	Properties	Units	Parking Spaces	Spaces Available Per Unit	Spaces Utilized Per Unit	Percent Utilized
All Properties	5	1,592	1,522	0.96	0.76	79%
Market Rate	4	1,485	1,396	0.94	0.77	82%
Mixed Income	0	-	-	-	-	N/A
Income Restricted	1	107	126	1.18	0.59	50%

Table 16: Parking Available and Utilized at Properties per Denver Urban Center Typology

Urban Center	Properties	Units	Parking Spaces	Spaces Available Per Unit	Spaces Utilized Per Unit	Percent Utilized
All Properties	15	3,862	4,844	1.25	0.74	59%
Market Rate	12	3,616	4,586	1.27	0.76	60%
Mixed Income	0	-	-	-	-	N/A
Income Restricted	3	246	258	1.05	0.50	48%

Table 17: Parking Available and Utilized at Properties per Denver Urban Typology

Urban	Properties	Units	Parking Spaces	Spaces Available Per Unit	Spaces Utilized Per Unit	Percent Utilized
All Properties	6	1,176	1,243	1.06	0.47	44%
Market Rate	2	537	874	1.63	0.70	43%
Mixed Income	0	-	-	-	-	N/A
Income Restricted	4	639	369	0.58	0.28	48%



Table 18: Parking Available and Utilized at Properties per Denver General Urban Typology

General Urban	Properties	Units	Parking Spaces	Spaces Available Per Unit	Spaces Utilized Per Unit	Percent Utilized
All Properties	15	3,083	3,601	1.17	0.65	55%
Market Rate	7	2,055	2,761	1.34	0.74	55%
Mixed Income	3	609	614	1.01	0.59	58%
Income Restricted	5	419	226	0.54	0.29	53%

Table 19: Parking Available and Utilized at Properties per Denver Suburban Typology

Suburban	Properties	Units	Parking Spaces	Spaces Available Per Unit	Spaces Utilized Per Unit	Percent Utilized
All Properties	4	504	591	1.17	0.73	62%
Market Rate	2	388	492	1.27	0.81	64%
Mixed Income	0	-	-	-	-	N/A
Income Restricted	2	116	99	0.85	0.43	51%

Property Age

Property age does not clearly affect parking supply or demand. In terms of parking provision, whereas the 22 properties built before 2010 and the 38 properties built after 2015 have higher per-unit supply (1.21 and 1.28 parking spaces per unit, respectively), the 26 properties built between 2010 and 2015 offer only 1.01 parking spaces per unit. This reduction may be a result of constrained development financing available during the Great Recession.

Table 20: Parking Available and Utilized at Properties Built before 2010

Pre-2010	Properties	Units	Parking Spaces	Spaces Available Per Unit	Spaces Utilized Per Unit	Percent Utilized
All Properties	22	6,420	7,771	1.21	0.74	61%
Market Rate	16	5,398	7,175	1.33	0.81	61%
Mixed Income	2	662	488	0.74	0.47	64%
Income Restricted	4	423	189	0.45	0.22	49%



Table 21: Parking Available and Utilized at Properties Built between 2010 and 2014

2010-2014	Properties	Units	Parking Spaces	Spaces Available Per Unit	Spaces Utilized Per Unit	Percent Utilized
All Properties	26	5,959	6,014	1.01	0.67	66%
Market Rate	19	5,367	5,593	1.04	0.70	67%
Mixed Income	1	110	105	0.95	0.51	53%
Income Restricted	6	482	316	0.66	0.37	56%

Table 22: Parking Available and Utilized at Properties Built after 2015

2015-2019	Properties	Units	Parking Spaces	Spaces Available Per Unit	Spaces Utilized Per Unit	Percent Utilized
All Properties	38	8,713	11,125	1.28	0.70	55%
Market Rate	30	8,074	10,421	1.29	0.72	56%
Mixed Income	2	213	252	1.18	0.53	45%
Income Restricted	6	426	452	1.06	0.49	46%



Recommendations

Together, RTD's ridership and parking research support policy changes in Metro Denver, and several planning and development partners have the opportunity to drive change for mutual benefit.

RTD

Understanding that low-income households utilize transit more and demand parking less than higher income neighbors, RTD should amend its policy for joint development (i.e., redevelopment of agency property) to prefer income-restricted housing in order to increase ridership, which market-rate housing is less likely to accomplish. Considering income-restricted properties' relatively low parking demand, RTD should negotiate with developers to share parking between transit patrons and residents and encourage municipalities to recognize lower parking demand at income-restricted housing, either by right or through variances from unduly high minimum parking requirements.

While promoting affordable housing through redevelopment of RTD parking facilities may be a laudable goal, RTD's limited property holdings in station areas as well as competition for maintaining or expanding parking for transit patrons minimize the potential impact of that effort and so invites collaboration from municipalities.

Municipalities

Municipalities could expand the impact of co-locating income-restricted housing in station areas by amending local zoning or issuing variances from parking requirements to encourage affordable housing in station areas through context-sensitive parking requirements. The City and County of Denver exemplifies several leading practices: the zoning code allows reducing minimum parking requirements by 25 percent for all properties within 0.25 miles of a station; the [Dedicated Affordable Housing Fund](#) and other funding sources prioritize financial support to transit-rich neighborhoods; recently published recommendations for transportation demand management complement significant station-area investments; and the proposed [Affordable Housing Zoning Incentive](#) would reduce parking requirements citywide (coincidentally consistent with RTD's expansive bus network in the region's core).



Developers and Financial Partners

Developers and their financial partners should consider and expand on this research to make data-driven, evidence-based decisions about development that will attract residents who prefer a transit-oriented lifestyle and other amenities that reduced or deferred project costs can support. Relevant for income-restricted housing that relies on low-income housing tax credits, the Colorado Housing and Finance Authority has shown interest in considering revisions to its qualified allocation plan in order to increase funding for non-parking transportation resources. The Colorado Chapter of the Urban Land Institute also has expressed support to advance these findings among members.

Financial partners play a significant role in Denver's transit-oriented affordable housing landscape, with many of them, as well as the City and County of Denver, the Colorado Housing and Finance Authority, and state agencies, investing in the [Denver Region Transit-Oriented Development Fund](#) to provide low-interest loans to affordable-housing developers in transit-rich neighborhoods. In addition, [Mile High Connects](#) provides a forum for government, funders, and advocates to identify and secure broad community benefits through station-area development.



Conclusion

Metro Denver station-area developments provide substantially more parking than residents use. On average, the 86 properties analyzed provide 42 percent more parking than residents use at peak demand and, further, income-restricted properties provide 50 percent more parking than used. In terms of parking ratios, the 65 market-rate properties analyzed provide an average of 1.23 parking spaces per unit, but only 0.74 parking spaces per unit are used. The 16 income-restricted properties provide an average of 0.72 spaces per unit, but residents only use 0.36 parking spaces per unit.



Planning and development partners should tailor parking requirements for station-area development's unique transportation landscape.

This excessive allowance unnecessarily adds significant development cost. Residents pay this cost through higher rent. Further, a reduced number of housing units across the region translates to a higher cost of living for all. These burdens are most discouraging for low-income residents, who own fewer cars and so demand parking least but who need lower-cost housing to keep up with the region's staggering rate of gentrification. Backed by these findings, planning and development partners should tailor parking requirements for station-area developments' unique transportation landscape in order to achieve shared goals for enhanced public welfare and economic vitality.



Appendix

RTD Residential Property Parking Survey

Created and distributed with Google Forms

The RTD Residential Property Parking Survey is designed to understand current parking demand at residential properties near train and bus rapid transit stations to inform future parking supply provided in transit-served areas. RTD will aggregate and anonymize your response and others and publish findings on our website. Your participation is voluntary and the survey should take less than 10 minutes to complete. Please contact [Name] at [Name]@RTD-Denver.com for further information. Thank you!

Property Information

1. How many units are there in the property? (E.g., 100 units)
2. How many of those total units are leased? (E.g., 85 units)
3. How many of those total units are income-restricted? (E.g., 40 units)
4. How many studio apartments are in the property?
5. How many one-bedroom apartments are in the property?
6. How many two-bedroom apartments are in the property?
7. How many three-bedroom apartments are in the property?
8. What is the average monthly rent for a market-rate studio apartment?
9. What is the average monthly rent for a market-rate one-bedroom apartment?
10. What is the average monthly rent for a market-rate two-bedroom apartment?
11. What is the average monthly rent for a market-rate three-bedroom apartment?

Parking Information

12. How many parking spaces are available at the property for passenger vehicles?
13. Is parking for passenger vehicles included (i.e., bundled) in a tenant's lease?
Mark only one oval.
 - a. Yes *Skip to question 14*
 - b. No *Skip to question 17*
 - c. Other:
14. How many parking spaces are provided in the lease? (Please express in terms of per unit, per bedroom, etc. E.g., 1 space per unit)
15. Can a tenant receive additional parking beyond what is guaranteed in its lease?
Mark only one oval.
 - a. Yes
 - b. No
 - c. Other:
16. Can the tenant decline to use parking in order to reduce the lease payment?
Mark only one oval.



- a. Yes *Skip to question 18*
 - b. No *Skip to question 18*
 - c. Other:
17. What is the monthly cost of reserving a parking space? (If applicable, please specify different costs for covered or uncovered parking, for first, second, or third spaces, etc. E.g., "\$75 for first covered, \$50 for first uncovered; \$100 for each additional covered or uncovered")
18. Is there a waitlist for parking spaces? *Mark only one oval.*
- a. Yes
 - b. No
 - c. Other:
19. In addition to parking for tenants, does the property provide parking for any of the following users? *Check all that apply.*
- a. N/A - the property does not provide parking for any other user
 - b. Property management
 - c. Visitors
 - d. Car sharing
 - e. Nearby business employees
 - f. Nearby retail customers
 - g. Nearby residents
 - h. General public - hourly
 - i. General public - daily
 - j. Other:
20. Do you think tenants are parking off-site? *Mark only one oval.*
- a. Yes
 - b. No
 - c. Other:
21. If you do think tenants park off-site, where and why?
22. Does the property provide any of the following to tenants? *Check all that apply.*
- a. RTD pass subsidy
 - b. RTD service info (e.g., schedules and maps)
 - c. Shuttle service
 - d. Carshare membership subsidy
 - e. Bikeshare membership subsidy
 - f. Bike parking - uncovered
 - g. Bike parking - covered
 - h. Bike parking - secured (e.g., in a locker or locked room)
 - i. Bike maintenance equipment
 - j. Other:
23. Do you hear from tenants any recurring comments or complaints about parking or transportation in/around the property?



Contact Information

- 24. Property Name
- 25. Property Address - Street & City
- 26. Property Management Company
- 27. Property Manager Name
- 28. Property Manager Phone Number
- 29. Property Manager Email Address

Thank you!

30. Thanks for your help! RTD may follow up with questions. Please feel free to provide additional comment below.

