PLANNING AND ZONING COMMISSION
REGULAR MEETING
SEPTEMBER 6, 2022
6:30 P.M.

1. CALL TO ORDER - PLEDGE OF ALLEGIANCE

2. Approval of the Regular Meeting Minutes of August 2, 2022.
Planning and Zoning Commission will consider approving

Presenter:

3. CITIZEN PARTICIPATION

4. PUBLIC HEARINGS

a. Resolution No 4, Series 2022, Home Child Care,
Planning and Zoning Commission will consider approving.

Presenter: Contract City Planner Nancy Dosdall

b. Resolution No. 5, Series 2022 - ADU's
Planning and Zoning Commission will consider approving

Presenter: Contract City Planner Nancy Dosdall

c. Resolution No. 6, Series 2022 - Food Trucks
Planning and Zoning Commission will consider approving

Presenter: Contract City Planner Nancy Dosdall

d. Resolution No. 7, Series 2022, Affordable Housing
Planning and Zoning Commission will consider approving

Presenter: Contract City Planner Nancy Dosdall

e. Resolution No 8, Series 2022, Champion Xpress Car Wash
Planning and Zoning Commission will consider approving

Presenter: Contract City Planner Nancy Dosdall

f. Resolution No 9, Series 2022, CBERT, LLC
Planning and Zoning Commission will consider approving

Presenter: Contract City Planner Nancy Dosdall

5. UNFINISHED BUSINESS

6. NEW BUSINESS

a. Resolution No 10, Series 2022, an encroachment for 102 E. North St., Patricia Berens.
Planning and Zoning Commission will consider approving.

Presenter: Contract City Planner Nancy Dosdall

7. OTHER ITEMS OF BUSINESS

a. August 2022 Building Permits
Planning and Zoning Commission may comment

Presenter:

8. ADJOURNMENT

CITY OF CORTEZ
123 ROGER SMITH AVENUE
CORTEZ, CO 81321

September 6, 2022 Agenda Item: 2.

MEMO TO: Planning and Zoning Commission

FROM: Cheryl Lindquist, Permit Technician/Deputy City Clerk

SUBJECT: Approval of the Regular Meeting Minutes of August 2, 2022.

BACKGROUND
See Attached

RECOMMENDATION
Approval of the Regular Meeting Minutes of August 2, 2022.

Attachments

Minutes for August 2, 2022

PLANNING AND ZONING COMMISSION
REGULAR MEETING
TUESDAY, AUGUST 2, 2022

1. The regular meeting was called to order 6:30 p.m. and was opened with the Pledge of Allegiance. Commission members present were Chairperson Robert Rime, Vice-Chairperson Rebecca Levy, Commissioners Lance McDaniel, Jim Skvorc, and new Commissioner Katrina Weiss. City staff present included Contract City Planner Nancy Dosdall,, Director of Community and Economic Development Rachael Marchbanks, City Manager Drew Sanders, City Attorney Patrick Coleman, and Deputy City Clerk Cheryl Lindquist. There were 6 people in the audience.

   Commissioner McDaniel moved that the minutes of the Regular Meeting of July 5, 2022, be approved.
   Commissioner Skvorc seconded the motion and the vote was as follows:

Levy	McDaniel	Skvorc	Rime
Yes	Yes	Yes	Yes

2. PUBLIC HEARING:

   An application from Charles Albert had been received and discussed at the July 5, 2022, meeting and was continued for this meeting per Mr. Alberts request. Mr. Albert has since withdrawn his application.

   Chairman Rime stated the application for a Public Hearing for Charles Albert had been withdrawn so no vote was needed

3. NEW BUSINESS –

   a. New Commissioner Katrina Weiss was introduced and took her Oath of Office.

   b. City Planner Dosdall introduced for discussion and possible action various proposed Code Amendments to the Land Use Code Sections 3.05(a) Schedule of Use Regulations, 3.05(b)(9) Child Care Facility, 3.05(b)(11) Mobile Venders, 3.05(b)(22) Accessory Dwelling Units (ADU), 3.06(a) Schedule of Residential Area Regulations, 3.09(f) R-2 Multi-family District Minimum lot Area, 3.14(b)(f) Neighborhood Business District Minimum lot Area and 2.02 Definitions.

      1. **3.05(b)(11) Mobile Venders**: City Planner Dosdall made the recommendation to add to the wording the following statment “unless associated with an approved special event. In no instance shall mobile venders locate within the right-of-way of a public road within the Central Business District”. Members of the audience spoke in favor of mobile venders in the Central Business District as well as in vacant parking lots. Commissioners had questions concerning licensing and enforcement.

Chairperson Rime directed City Planner Dosdall to draft an ordinance for the next meeting.

2. **3.05(b)(9) Child Care Facility:** City Planner Dosdall stated a change in state regulations requiring local regulatory agencies throughout Colorado to treat all licensed family child care homes as residences for regulatory purposes meaning the city must approve the license application as stated.
   Chairperson Rime directed City Planner Dosdall to draft an ordinance for the next meeting.

3. **3.05(b)(22) Accessory Dwelling Units (ADU):** City Planner Dosdall presented her proposed code changes for the ADU's, including allowing them in all zones with the issuance of Conditional Use Permits. Also, parcels must contain an existing or proposed single-family unit that is or will be occupied by the property owner, and may be attached or detached. Other changes discussed were the number of parking spaces for ADU's, how large in size ADU's can be in comparison with the primary home, setbacks, water, sewer, traffic flow, and more.
   Chairperson Rime directed City Planner Dosdall to draft an ordinance.

4. **3.09(f) R-2 Multi-family District Minimum lot Area, 3.14(b)(f) Neighborhood Business District Minimum Lot Area:** City Planner Dosdall clarified the difference between affordable housing and workforce housing She then introduced a code amendment stating, "(4) Two thousand (2,000) square feet per multi-family dwelling unit for affordable and workforce housing. Where affordable and workforce housing projects are mixed with market rate projects the density will be pro-rated based on the percent of affordable versus market units".
   Elizabeth Salkind, executive director of Housing Solutions of the Southwest spoke of their purchase of a single lot in Cortez and the constructing of affordable housing. They hope to purchase more lots to build on.
   Chairperson Rime directed City Planner Dosdall to draft an ordinance for the next meeting.

4. UNFINISHED BUSINESS - none

5. OTHER ITEMS OF BUSINESS
   a. Permits issued July, 2022

6. PUBLIC PARTICIPATION – none

7. ADJOURNMENT OF REGULAR MEETING

Commissioner McDaniel moved that the meeting be adjourned at 8:05 p.m. Commissioner Levy seconded the motion, and the vote was as follows:

Levy	McDaniel	Skvorc	Weiss	Rime
Yes	Yes	Yes	Yes	Yes

_____
Robert Rime, Chairperson

ATTEST:

_____
Cheryl K. Lindquist, Deputy City Clerk

CITY OF CORTEZ
123 ROGER SMITH AVENUE
CORTEZ, CO 81321

September 6, 2022 Agenda Item: 4. a.

MEMO TO: Planning and Zoning Commission

FROM:

SUBJECT: Resolution No 4, Series 2022, Home Child Care,

BACKGROUND
see attached

RECOMMENDATION
Planning and Zoning Commission will consider approving HomeChild Care Resolution 4, Series 2022.

Attachments

Daycare facilities

MEMO

TO: **PLANNING AND ZONING**

FROM: **COMMISSION NANCY DOSDALL,**

SUBJECT: **CITY PLANNING Code**

DATE: **Amendment HB 21-1222 September**

6, 2022

BACKGROUND:

House Bill 21-1222 became effective on September 8, 2021. The bill requires local agencies to treat all licensed family child care homes the same as the would treat a single family dwelling. The existing land use code allows small, home based child care facilities as a permitted use in all zones (except "O") that allow single family homes without additional regulation. Large home based child care facilities (12 or less children) are currently conditional uses in all zones (except "O") that allow single family homes.

DISCUSSION:

The existing code appears compliant for small, home based child care facilities. The large, home based facilities are non-compliant and require a code amendment to make them permitted uses. The HB does not apply to non-home based facilities which can remain conditional uses in all zones.

ALTERNATIVES

1. The Commission can recommend that the Council approve the code revision.
2. The Commission can recommend denial of the application for the proposed code revision and state their reasons;
3. The Commission can ask for more information and table the request; or

RECOMMENDATION

Staff recommends Alternative "1" above, recommend approval of the proposed code revision per Resolution No. 4**,** Series 2022.

If the Planning and Zoning Commission so chooses to follow the recommendation of Staff, the Commission can **make the motion to recommend that Council.**

CITY OF CORTEZ
PLANNING AND ZONING COMMISSION
RESOLUTION NO. 4, SERIES 2022

A Resolution Recommending Approval of Revisions to Section 3.05 – Use Regulations regarding Child Care Facilities, large home based, City of Cortez Land Use Code

WHEREAS, uses identified in the City of Cortez Land Use Code (the "Code"), Section 3.05, as Child care facilities, large home based, are classified as Conditional Uses in all zone districts in the City of Cortez; and

WHEREAS, Colorado House Bill 21-1222 codified amendments to the Child Care Licensing Act, C.R.S. § 26-6-101, et. seq, which has been repealed and renumbered as C.R.S. § 26.5-5-301, et. seq, (the Child Care Licensing Act"); and

WHEREAS, the Child Care Licensing Act, as amended, requires that all local regulatory agencies treat all licensed family child care homes as residences for regulatory purposes; and

WHEREAS, the Code currently classifies large home based child care facilities as conditional uses in the RE, R-1, R-2 MH, CBD, C and NB Zoning Districts; and

WHEREAS, the Code currently classifies single family dwellings as Permitted Uses in the RE, R-1, R-2 MH, O and NB Zoning Districts and Conditional Uses in the C Zoning District; and

WHEREAS, at the September 6, 2022 Planning and Zoning Commission meeting, the Planning and Zoning Commission reviewed the revisions to the Code, as evidenced by the adoption of P&Z Resolution No. 4, Series 2022; and

WHEREAS, based on the evidence and testimony presented at said meeting, the Planning and Zoning Commission recommends that the Schedule of Use Regulations, Cortez Land Use Code Section 3.05 be revised as set forth in this Resolution, as required by the Child Care Licensing Act.

NOW, THERFORE, BE IT RESOLVED BY THE CITY OF CORTEZ PLANNING AND ZONING COMMISSION:

THAT, P&Z Resolution No. 4, Series 2022, recommends to the City Council of the City of Cortez amend the Cortez Land Use Code Section 3.05 to change the classification of large home based child care facilities from Conditional Uses to Permitted Uses in the RE, R-1, R-2, MH, and NB zones, and to keep the classification of the same as Conditional Uses in the C and CBD zones.

MOVED, SECONDED, AND ADOPTED THIS 6th DAY OF SEPTEMBER 2022

CORTEZ PLANNING AND ZONING COMMISSION

_____
Robert Rime, Chairman

ATTEST:

_____
_ Cheryl Lindquist, Deputy City Clerk

CITY OF CORTEZ
123 ROGER SMITH AVENUE
CORTEZ, CO 81321

September 6, 2022 Agenda Item: 4. b.

MEMO TO: Planning and Zoning Commission

FROM:

SUBJECT: Resolution No. 5, Series 2022 - ADU's

BACKGROUND
see attached

RECOMMENDATION
Planning and Zoning Commission will consider approving Resolution No. 5, Series 2022 - ADU's

Attachments

Resolution No 5, Series 2022 ADU's

CITY OF CORTEZ
PLANNING AND ZONING COMMISSION
RESOLUTION NO. 5, SERIES 2022

A Resolution Recommending Approval of Revisions to Section 3.05 – Use Regulations regarding Dwelling, accessory unit - ADU, City of Cortez Land Use Code

WHEREAS, uses identified in the City of Cortez Land Use Code (the "Code"), Section 3.05, as dwelling, accessory unit - ADU, are classified as Conditional Uses in the RE and R-1 zone districts in the City of Cortez; and

WHEREAS, dwelling, accessory unit – ADU are further subject to the standards in Section 3.05 (22); and

WHEREAS, the City desires to expand the opportunity for ADU's in additional zone districts; and

WHEREAS, at the September 6, 2022 Planning and Zoning Commission meeting, the Planning and Zoning Commission reviewed the revisions to the Code, as evidenced by the adoption of P&Z Resolution No. 5, Series 2022; and

WHEREAS, based on the evidence and testimony presented at said meeting, the Planning and Zoning Commission recommends that the Schedule of Use Regulations, Cortez Land Use Code Section 3.05 be revised as set forth in this Resolution.

NOW, THERFORE, BE IT RESOLVED BY THE CITY OF CORTEZ PLANNING AND ZONING COMMISSION:

THAT, P&Z Resolution No. 5, Series 2022, recommends to the City Council of the City of Cortez amend the Cortez Land Use Code Section 3.05 require Conditional Use Permits for ADU's in the R-2, MH, NB and C zone districts and to revise Section 3.05(22) as follows:

(22) Accessory Dwelling Units (ADUs). This type of use is intended to provide a mechanism to help meet the need of affordable housing by allowing accessory residential dwelling units under certain circumstances in areas normally restricted to a single unit, while preserving existing single-family character. All accessory single-family dwelling units shall be subject to the following requirements:
a. An ADU shall be permitted within any zone in the City as a conditional use and shall be reviewed by the planning and zoning commission and the city council as per Section 6.10 of this code, Conditional use permits.

b. The parcel must contain an existing or proposed single-family unit that is or will be occupied by the property owner.

c. The ADU may be attached or incorporated within the living area of the existing primary dwelling or detached.

d. The ADU shall not result in an increase of more than fifty (50) percent in the existing living area or 750 sq. ft., whichever is greater.

e. The ADU may be used for rental purposes and shall be reserved for occupancy of one (1) or two (2) persons.

f. The ADU must be provided with two off-street parking spaces, in addition to the two required for the existing single family residence as per Section 5.01 of this code. Spaces may be contained in a garage or protected by a carport. The spaces provided may be in tandem (one car in front of the other).

g. Any new construction associated with the ADU shall comply with all setbacks, lot coverage, height, and design standards contained within the base zone and shall not alter the general appearance of the primary dwelling as a single-family residence.

h. The ADU shall have adequate sewer and water services and additional tap fees may be required for the dwelling.

i. The ADU shall not adversely impact traffic flow or parking in the neighborhood.

j. The lot shall meet the minimum lot size in the underlying zoning district.

An ADU that conforms to these requirements shall not be considered to exceed the allowable density for the lot upon which it is located, and shall be deemed to be a residential use consistent with the existing general plan and zoning designation for the lot.

MOVED, SECONDED, AND ADOPTED THIS 6th DAY OF SEPTEMBER 2022

CORTEZ PLANNING AND ZONING COMMISSION

_____
Robert Rime, Chairman

ATTEST:

_____
_ Cheryl Lindquist, Deputy City Clerk

CITY OF CORTEZ
123 ROGER SMITH AVENUE
CORTEZ, CO 81321

September 6, 2022 Agenda Item: 4. c.

MEMO TO: Planning and Zoning Commission

FROM:

SUBJECT: Resolution No. 6, Series 2022 - Food Trucks

BACKGROUND
see attached

RECOMMENDATION
Planning and Zoning Commission will consider approving Resolution No. 6, Series 2022 - Food Trucks

Attachments

Resolution No 6, Series 2022, Food Trucks

MEMO

TO: **PLANNING AND ZONING COMMISSION**

FROM: **NANCY DOSDALL, CITY PLANNING**

SUBJECT: **WORKSESSION: Food Truck/Mobile Vender**

DATE: **Review August 2, 2022**

BACKGROUND:

At the request of the City Council, the Planning Department initiated a public process to review the Food Truck (Mobile Vender) portion of the land use code. The Cortez Land Use Code allows Mobile Vendors in all zones except the Central Business District subject to the following standards:

Article IX. - Mobile Food Vendors.[1]

Editor's note— Ord. No. 1220 , §§ 1—11, adopted March 28, 2017, amended article IX, in its entirety to read as herein set out. Former article IX, §§ 15-66—15-68.9, pertained to similar material, and derived from Ord. No. 1191 , adopted September 9, 2014.

Sec. 15-66. - Definition.

As used in this article only, "mobile food vendor" shall mean a retail food establishment that is not intended to be permanent and is a motorized wheeled vehicle or trailer attached to a motor vehicle designed and equipped to serve food and beverages, operating in either a static or transitory location and serving the public during the hours of operation authorized by this article. The sale and distribution of frozen milk, frozen dairy or ice confection products, candy, gum or other confection products shall be permitted for mobile food vendors.

Temporary buildings for the purpose of mobile vending are not allowed in the City of Cortez.

(Ord. No. 1220 , § 1, 3-28-17)

Sec. 15-67. - Operations.

The operation of a mobile food vendor is allowed provided that such operation is in compliance with all requirements and limitations contained in this article. In the event that a food vender is authorized to operate within the city pursuant to authority granted and limits found elsewhere in the code, this article shall not apply. This program may be expanded to include other types of non-food items at the discretion of city council.

(Ord. No. 1220 , § 2, 3-28-17)

Sec. 15-68. - Licenses.

A Cortez business or sales tax license or transient vendor license, if applicable, proof of inspection by the Montezuma County Health Department are required as well as any land owner written permission required in section 15-68.4 and must be conspicuously displayed at all times during the operation of a

mobile food vendor. Failure to display received licenses shall be a violation and punishable as set forth in section 15-68.8.

(Ord. No. 1220 , § 3, 3-28-17)

Sec. 15-68.1. - Hours of operation.

Mobile food vendors may operate only between the hours of 7:00 a.m. and 9:00 p.m. The mobile food vendor operation and equipment must be removed from the location described in sections 15-68.4 and 15.68.5 when not open for business.

(Ord. No. 1220 , § 4, 3-28-17)

Sec. 15-68.2. - Zone districts.

Mobile food vendors shall not operate in the following zone districts: CBD, central business district. (Ord. No. 1220 , § 5, 3-28-17)

Sec. 15-68.3. - Operating within public right-of-way.

Except within the Central Business District where they are not allowed, Mobile food vendors may operate within the public right-of way provided they meet the following requirements:

(a)Mobile food vendor must be parked in a legal parking space and comply with all city and state parking restrictions;(b)When operating within the public right-of-way mobile food vendor may only serve customers from an adjacent sidewalk or from the curbside of the vehicle.

(Ord. No. 1220 , § 6, 3-28-17)

Sec. 15-68.4. - Operating on private property.

Mobile food vendors may operate on private property provided they meet the following requirements:

(a)Mobile food vendor operator must obtain prior written permission from the private property owner and must have available an original copy of such permission for inspection purposes at all times;(b)Mobile food vendor must be parked on a paved surface or weather proof surface outside any designated fire lane and outside the corner visibility triangle, as that term is defined in section 5.02(j)(3) City of Cortez Land Use Code.

(Ord. No. 1220 , § 7, 3-28-17)

Sec. 15-68.5. - City-owned property.

Mobile food vendors shall not operate on city property including city parking lots regardless of the zone district unless such authority to operate is provided for elsewhere in this Code or otherwise authorized by the city manager. This prohibition shall not apply to city-owned public right-of-way as provided for in section 15-68.3 of this article.

(Ord. No. 1220 , § 8, 3-28-17)

Sec. 15-68.6. - Littering and trash removal.

Mobile food vendor operators must keep the sidewalks, roadways and other spaces adjacent to their business site or location clean and free of paper, peelings, trash, debris and other refuse of any kind generated from the operation of their business. All trash or debris accumulating within twenty-five feet of any mobile food vendor shall be collected by the operator and deposited in a trash container maintained by the operator in good condition and constructed of a non-corrodible and watertight material, sufficient to hold the refuse generated by the business. Such container and its contents shall be removed from the site by the operator whenever the mobile food vendor moves to another location or at the close of business.

(Ord. No. 1220 , § 9, 3-28-17)

Sec. 15-68.7. - Noise.

Mobile food vendors must adhere to the provisions of Cortez City Code and Cortez Land Use Code now in effect or as may be amended from time to time regarding noisemaking devices.

(Ord. No. 1220 , § 10, 3-28-17)

Sec. 15-68.8. - Violations.

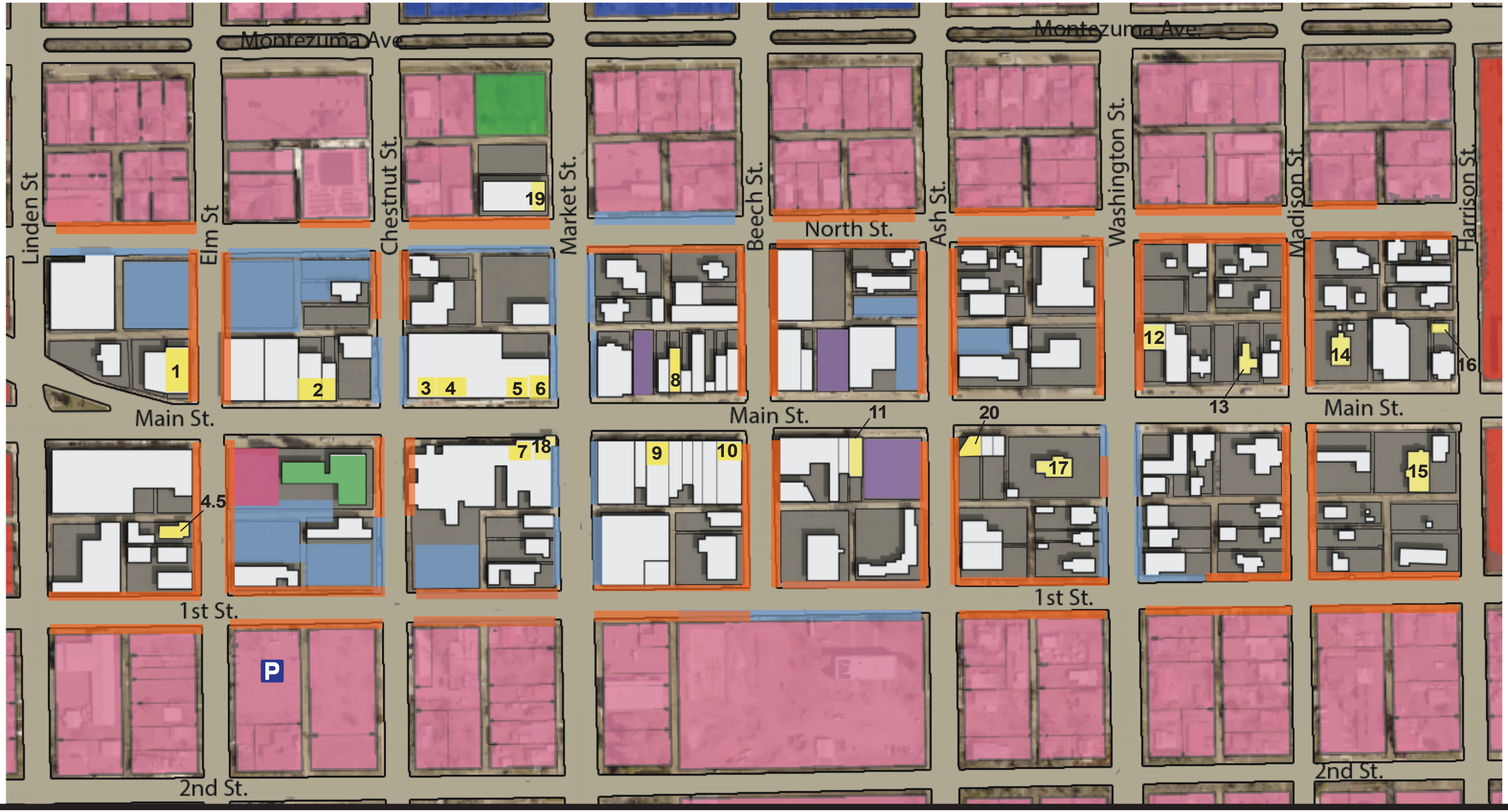
A violation of this article shall be punishable as set forth in section 17-16A of the Cortez City Code now in effect or as may be amended from time to time.

(Ord. No. 1220 , § 11, 3-28-17)

DISCUSSION:

At the request of the City Council, the Planning Department initiated a public process to reconsider the prohibition of mobile vendors in the Central Business District. The process generated many comments from the general public, most in support of food trucks in general. After a review of the public comments, the City conducted strategic outreach to restaurant owners and other businesses in the Central Business District. Most restaurant owners in the CBD had concerns with allowing food truck on an unlimited basis in the CBD, although most did not have concerns with food trucks being present at the Farmers Market. A summary of both general public and CBD comments is attached.

Cortez Central Business District Food Truck Map



Parking (private)

P FREE Public Parking

Parallel Parking

Farmer's Market

County Administrative Building & Montezuma Park

Restaurants

Vacant Lot

1 Beny's Diner
2 Pippo's Cafe
3 The Wigglin' Pig
4 The Farm Bistro
4.5 Merriweather Home & Market
5 Stonefish Sushi
6 Loungin' Lizard
7 Once Upon a Sandwich
8 El Grande Cafe
9 Main St. Brewery & Restaurant
10 Blondie's Trophy Room
11 Gustavo's Restaurant & Bar
12 Ocean Pearl Chinese Restaurant
13 La Casa De Cortez
14 Burger Boy Drive In
15 Lotsa Pasta & That'za Pizza
16 Pie Maker Bakery
17 Wendy's
18 FB Organics
19 WildEdge Brewery
20 Abundant Life

CITY OF CORTEZ
PLANNING AND ZONING COMMISSION
RESOLUTION NO. 6 , SERIES 2022

A Resolution Recommending Approval of Revisions to Section 3.05 – Use Regulations regarding Mobile Vendors, City of Cortez Land Use Code

WHEREAS, uses identified in the City of Cortez Land Use Code (the "Code"), Section 3.05, as Mobile Vendors are classified as Permitted Uses in all zone districts in the City of Cortez with the exception of the CBD and I zones; and

WHEREAS, mobile vendors have requested to operate in the CDB under special conditions such as at approved special events; and

WHEREAS, the Code currently further restricts Mobile Vendors in the CBD under specific provisions in Section 3.05(11); and

WHEREAS, the City has held public meetings with the general public, food truck advocates and CBD business owners; and

WHEREAS, at the September 6, 2022 Planning and Zoning Commission meeting, the Planning and Zoning Commission reviewed the revisions to the Code, as evidenced by the adoption of P&Z Resolution No. 6, Series 2022; and

WHEREAS, based on the evidence and testimony presented at said meeting, the Planning and Zoning Commission recommends that the Schedule of Use Regulations, Cortez Land Use Code Section 3.05 be revised as set forth in this Resolution to allow Mobile Vendors as Conditional Uses in the CBD and I zones with the following additional provision:

3.05 (11): Mobile vendors shall be allowed on public or private property in the CBD zone at approved temporary, special events such as Third Thursdays and the Farmers Market. Mobile vendors may be allowed in the central business district (CBD) outside of special events only after issuance of a conditional use permit with full consideration for impacts on adjacent businesses. Mobile Vendors in the CBD shall only be allowed in approved locations and never in public right of way of State or Public roads, unless closed for approved special events. Mobile vendor food courts may be approved with a Conditional Use Permit that would allow the mobile vendor to remain for up to 90 days on private land in an approved location. Mobile vendors shall also be regulated as set forth in the Cortez City Code at Chapter 15, Article IX, Mobile Food Vendors Sections 15-66 thru 15-68.8 and all other applicable Cortez City Code sections, now in effect or as may be amended from time to time with the exception that the Conditional Use Permit shall determine the time frame.

NOW, THERFORE, BE IT RESOLVED BY THE CITY OF CORTEZ PLANNING AND ZONING COMMISSION:

THAT, P&Z Resolution No. 6, Series 2022, recommends to the City Council of the City of Cortez amend the Cortez Land Use Code Section 3.05 and 3.05(11) to revise standards for food trucks in the CBD zone.

MOVED, SECONDED, AND ADOPTED THIS 6th DAY OF SEPTEMBER 2022

CORTEZ PLANNING AND ZONING COMMISSION

_____
Robert Rime, Chairman

ATTEST:

_____
_ Cheryl Lindquist, Deputy City Clerk

CITY OF CORTEZ
123 ROGER SMITH AVENUE
CORTEZ, CO 81321

September 6, 2022 Agenda Item: 4. d.

MEMO TO: Planning and Zoning Commission

FROM:

SUBJECT: Resolution No. 7, Series 2022, Affordable Housing

BACKGROUND
see attached

RECOMMENDATION
Planning and Zoning Commission will consider approving Resolution No. 7, Series 2022, Affordable Housing

Attachments
Resolution No 7, Series 2022, Affordable Housing

MEMO

TO: **PLANNING AND ZONING**

FROM: **COMMISSION NANCY DOSDALL,**

SUBJECT: **CITY PLANNING**

DATE: **WORKSESSION: Affordable Housing August 2, 2022**

BACKGROUND:

Housing Solutions for the Southwest, Southwest Colorado Council of Governments has recently a Regional Housing Needs Assessment & Strategy. The report is attached for your information. The study includes comments such as:

"Cortez and Montezuma County. Rising prices in the city and county are due to an increase in in-commuters from La Plata County and the "zoom town" phenomenon. The housing authority in Montezuma county has an average of 45 people added to the wait-list each month, around half of them indicate being homeless. Fair Market Rents (FMR's) in the county have not kept up with the increases in the rental market, making finding a rental unit even harder in the tight market."

The report includes a number of recommendations, including:

"Land use and zoning changes to facilitate affordable housing are new in many high-cost communities. These changes can include density bonuses for certain housing types and/or in exchange for a share of affordable units; by-right Accessory Dwelling Units (ADU's); and by right attached housing products (townhomes, duplexes/triplexes, mixed-use development). To ensure that these changes produce workforce housing, they must be coupled with affordability requirements, as well as public subsidies to lower construction costs, first rights of refusal for workforce, and down payment assistance for homeowners. Otherwise, such products will be unaffordable and/or built for seasonal and vacation use."

Planning staff was recently approached by an affordable housing provider requesting a density variance on a property in order to build affordable housing. Generally, density variances are not supportable when variance criteria are applied. Staff recommended that we consider implementing a density bonus system for affordable housing instead.

See attached for the recommended revision. While this minor code change will not solve the affordable housing issue in this community, it may help to some degree.

New Definitions:

Affordable housing. To qualify as Affordable Housing, the housing must be affordable to a household with an income that is eighty (80) percent or lower than area median income of households of that size. Housing developed or co-developed by non-profit or governmental/quasi-governmental organizations whose mission or intent is to provide affordable and/or workforce housing will meet this definition. Non-profits and governmental organizations that do not intend to hold the property for at least 20 years and for-profit developers will be required to provide assurances that the housing is and will remain affordable for at least 20 years.

Workforce Housing: To qualify as Workforce Housing, the housing must be affordable to a household with an income of between eighty (80) percent and one hundred and forty (140) percent of the area median income for households of that size. Housing developed or co-developed by non-profit or governmental/quasi-governmental organizations whose mission or intent is to provide affordable and/or workforce housing will meet this definition. Non-profits and governmental organizations that do not intend to hold the property for at least 20 years and for-profit developers will be required to provide assurances that the housing is and will remain affordable for at least 20 years.

3.09 R-2, residential multi-family district

(f) Minimum Lot Area. The minimum lot area per dwelling unit in the R-2, residential multi-family district shall be as follows, subject to Section 3.06(c) of this chapter:

(1) Six thousand (6,000) square feet per single-family dwelling unit;

(2) Three thousand five hundred (3,500) square feet per duplex unit.

(3) Three thousand (3,000) square feet per multi-family dwelling unit; and

(4) Two thousand (2,000) square feet per multi-family dwelling unit for affordable and workforce housing. Where affordable and workforce housing projects are mixed with market rate projects the density will be pro-rated based on the percent of affordable versus market units. For example, a project proposing 10 affordable units and 10 market rate units would achieve an overall density of 2,500 sq. ft. per unit.

3.09 M-H, Residential manufactured home district.

(f) Minimum Lot Area. The minimum lot area per dwelling unit in the M-H residential manufactured home district shall be as follows, subject to Section 3.06(c) of this chapter:

(1) Six thousand (6,000) square feet per single-family and manufactured home dwelling unit;

(2) Three thousand five hundred (3,500) square feet per duplex unit.

(3) Three thousand (3,000) square feet per multi-family dwelling unit; and

(4) Two thousand (2,000) square feet per multi-family dwelling unit for affordable and workforce housing. Where affordable and workforce housing projects are mixed with market rate projects the density will be pro-rated based on the percent of affordable versus market units. For example, a project proposing 10 affordable units and 10 market rate units would achieve an overall density of 2,500 sq. ft. per unit.

3.09 NB neighborhood business district.

(f) Minimum Lot Area. The minimum lot area per dwelling unit in the NB neighborhood business district shall be as follows, subject to Section 3.06(c) of this chapter:

(1) Six thousand (6,000) square feet per single-family and manufactured home dwelling unit;

(2) Three thousand five hundred (3,500) square feet per duplex unit.

(3) Three thousand (3,000) square feet per multi-family dwelling unit; and

(4) Two thousand (2,000) square feet per multi-family dwelling unit for affordable and workforce housing. Where affordable and workforce housing projects are mixed with market rate projects the density will be pro-rated based on the percent of affordable versus market units. For example, a project proposing 10 affordable units and 10 market rate units would achieve an overall density of 2,500 sq. ft. per unit.

Facility	Lot Size	Units	Lot sqft per Unit
Brubaker	3.3 ac/144,000 sq ft	48	3,000
Calkins	3.7 ac/161,000 sq ft	42	3,800
Sleeping Ute Apts	8.7 ac/378,000 sq ft	62	6,000
Prairie Mesa Estates	2.1 ac/92,000 sq ft	31	3,000
Adobe Apts (S Ash@1st St)	0.5 ac/21,780 sq ft	11	2,000
Cedar Terrace (S Cedar St)	1.5 ac/66,000 sq ft	32	2,000
Cedar Oaks Condos	1.8 ac/80,000 sq ft	30	2,600

Map Printed August 2022

NOTE: For this exercise P&Z is considering increasing the density in the R2, MH and NB zones from 1 unit/3000 sq. ft. to 1 unit/2000 sq ft for affordable multi-family projects

Analysis - Vacant Properties in the R2, MH and NB zones

0 0.5 1 2 Miles

CORTEZ

Legend

Vacant in R2, MH and NB Zones

- Parcels - 387 acres
- EXEMPT - 56 acres
- City Limits
- Cortez Parks

CITY OF CORTEZ
PLANNING AND ZONING COMMISSION
RESOLUTION NO. 7, SERIES 2022

A Resolution Recommending Approval of Revisions to Section 2.02 Definitions and 3.06 Residential Area Regulations, 3.09 R-2 residential multi-family district, 3.10 MH, residential manufactured home district, and 3.13 NB, neighborhood business district to create definitions for Affordable and Workforce housing and increase density in the R-2, M-H and NB zones for affordable and workforce housing, City of Cortez Land Use Code

WHEREAS, Housing costs have been rising rapidly in the City of Cortez; and

WHEREAS, the City of Cortez wishes to promote housing for all residents;

and

WHEREAS, the Land Use Code currently lacks a definition of affordable housing and workforces housing; and

WHEREAS, the Code currently allows multi-family developments at a density of 3,000 sq. ft. per multi-family unit in the R-2, M-H and NB zones; and

WHEREAS, the City desires to encourage more affordable and workforce housing projects by allowing an increased density for qualifying development; and

WHEREAS, at the September 6, 2022 Planning and Zoning Commission meeting, the Planning and Zoning Commission reviewed the revisions to the Code, as evidenced by the adoption of P&Z Resolution No. 7, Series 2022; and

WHEREAS, based on the evidence and testimony presented at said meeting, the Planning and Zoning Commission recommends that Sections 2.02, 3.06, 3.09, 3.10 and 3.14 be amended as follows:

2.02 Definitions

Affordable housing. To qualify as Affordable Housing, the housing must be affordable to a household with an income that is eighty (80) percent or lower than area median income of households of that size. Housing developed or co-developed by non-profit or governmental/quasi-governmental organizations whose mission or intent is to provide affordable and/or workforce housing will meet this definition. Non-profits and governmental organizations that do not intend to hold the property for at least 20 years and for-profit developers will be required to provide assurances that the housing is and will remain affordable for at least 20 years.

Workforce Housing: To qualify as Workforce Housing, the housing must be affordable to a household with an income of between eighty (80) percent and one hundred and forty (140)

percent of the area median income for households of that size. Housing developed or co-developed by non-profit or governmental/quasi-governmental organizations whose mission or intent is to provide affordable and/or workforce housing will meet this definition. Non-profits and governmental organizations that do not intend to hold the property for at least 20 years and for-profit developers will be required to provide assurances that the housing is and will remain affordable for at least 20 years.

3.09 R-2, residential multi-family district

(f) Minimum Lot Area. The minimum lot area per dwelling unit in the R-2, residential multi-family district shall be as follows, subject to Section 3.06(c) of this chapter:

(1) Six thousand (6,000) square feet per single-family dwelling unit;

(2) Three thousand five hundred (3,500) square feet per duplex unit.

(3) Three thousand (3,000) square feet per multi-family dwelling unit; and

(4) Two thousand (2,000) square feet per multi-family dwelling unit for affordable and workforce housing. Where affordable and workforce housing projects are mixed with market rate projects the density will be pro-rated based on the percent of affordable versus market units. For example, a project proposing 10 affordable units and 10 market rate units would achieve an overall density of 2,500 sq. ft. per unit.

3.09 M-H, Residential manufactured home district.

(f) Minimum Lot Area. The minimum lot area per dwelling unit in the M-H residential manufactured home district shall be as follows, subject to Section 3.06(c) of this chapter:

(1) Six thousand (6,000) square feet per single-family and manufactured home dwelling unit;

(2) Three thousand five hundred (3,500) square feet per duplex unit.

(3) Three thousand (3,000) square feet per multi-family dwelling unit; and

(4) Two thousand (2,000) square feet per multi-family dwelling unit for affordable and workforce housing. Where affordable and workforce housing projects are mixed with market rate projects the density will be pro-rated based on the percent of affordable versus market units. For example, a project proposing 10 affordable units and 10 market rate units would achieve an overall density of 2,500 sq. ft. per unit.

3.09 NB neighborhood business district.

(f) Minimum Lot Area. The minimum lot area per dwelling unit in the NB neighborhood business district shall be as follows, subject to Section 3.06(c) of this chapter:

(1) Six thousand (6,000) square feet per single-family and manufactured home dwelling unit;

(2) Three thousand five hundred (3,500) square feet per duplex unit.

(3) Three thousand (3,000) square feet per multi-family dwelling unit; and

(4) Two thousand (2,000) square feet per multi-family dwelling unit for affordable and workforce housing. Where affordable and workforce housing projects are mixed with market rate projects the density will be pro-rated based on the percent of affordable versus market units. For example, a project proposing 10 affordable units and 10 market rate units would achieve an overall density of 2,500 sq. ft. per unit.

NOW, THERFORE, BE IT RESOLVED BY THE CITY OF CORTEZ PLANNING AND ZONING COMMISSION:

THAT, P&Z Resolution No. 7, Series 2022, recommends to the City Council of the City of Cortez amend the Cortez Land Use Code Sections 2.02 Definitions and 3.06 Residential Area Regulations, 3.09 R-2 residential multi-family district, 3.10 MH, residential manufactured home district, and 3.13 NB, neighborhood business district to create definitions for Affordable and Workforce housing and increase density in the R-2, M-H and NB zones for affordable and workforce housing.

MOVED, SECONDED, AND ADOPTED THIS 6th DAY OF SEPTEMBER 2022

CORTEZ PLANNING AND ZONING COMMISSION

_____
Robert Rime, Chairman

ATTEST:

_____
_ Cheryl Lindquist, Deputy City Clerk

Root Policy Research
6740 E. Colfax Avenue, Denver, CO 80220
www.rootpolicy.com
970.880.1415

Regional Housing Needs Assessment & Strategy

Housing Solutions for the Southwest

Southwest Colorado Council of Governments

DRAFT REPORT

August 2021

Table of Contents

SECTION I.

PROJECT BACKGROUND & COMMUNITY PERCEPTIONS

PROJECT BACKGROUND & COMMUNITY PERCEPTIONS

BACKGROUND

In spring of 2021, the Southwest Colorado Council of Governments (SWCCOG) and Housing Solutions of the Southwest (Housing Solutions) received a grant to complete a regional meta-analysis of existing housing data, housing plans, and identified housing needs across the five-county SWCCOG region. Although some cities and counties in the region have completed independent housing needs assessments, no studies have examined the cross-dependency of housing supply and demand among jurisdictions in the region. Similarly, no studies have taken a regional approach to housing strategies to address needs.

This study is the product of that effort.

STUDY OBJECTIVES

This Regional Housing Needs Assessment & Strategy brings together past and current efforts to identify and address housing needs into one document. The strategy covers the counties of Archuleta, Dolores, La Plata, Montezuma, and San Juan.

The components of the strategy include:

1. An easy-to-digest report to be actively utilized by the counties and cities in housing and land use planning;

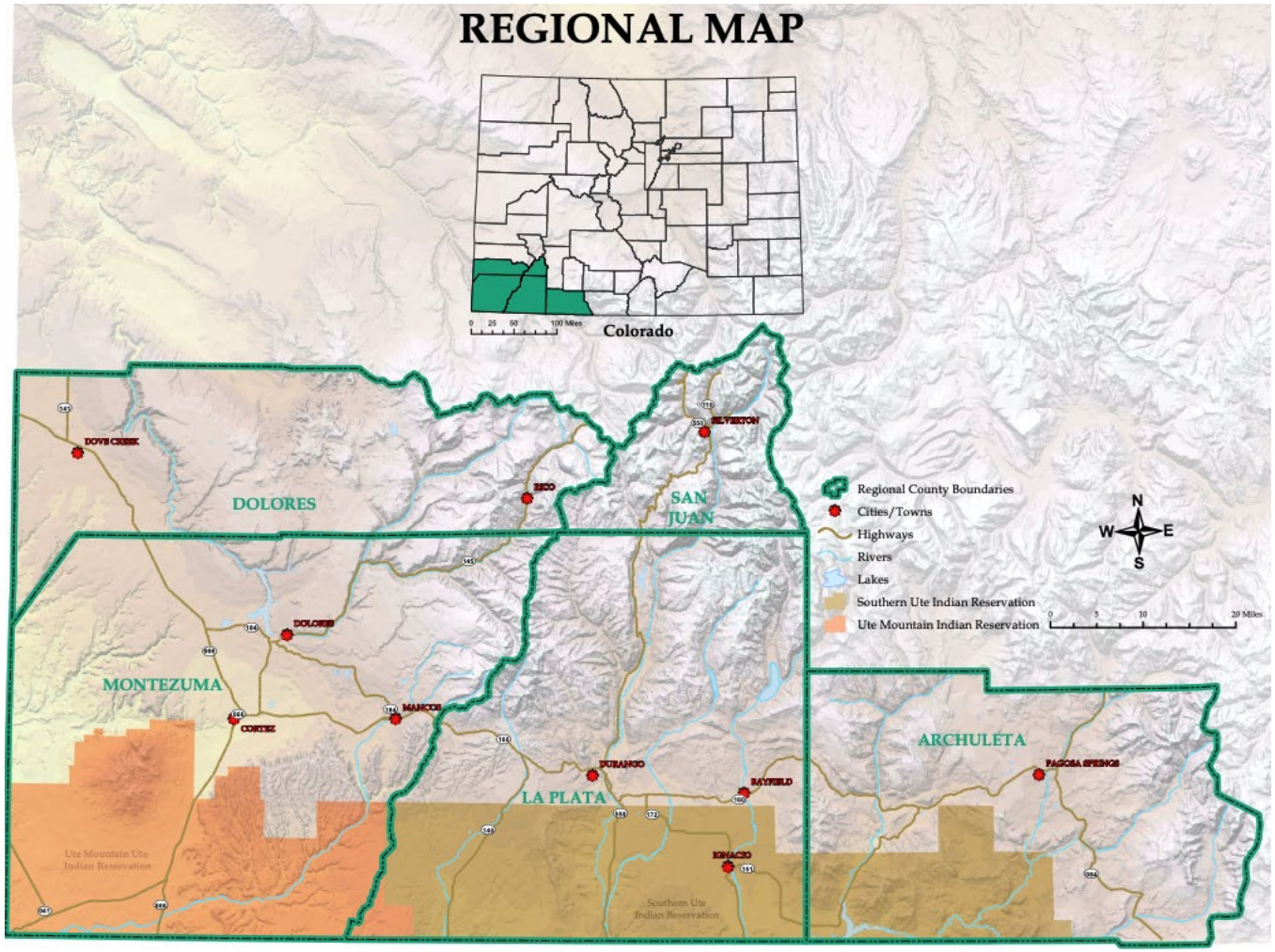
2. A searchable and updatable data dashboard that contains key housing supply, demand, employment, and affordability metrics. This report and dashboard provide current data on housing needs that can help the region be competitive with funding grant applications.

That dashboard can be found at this link.

SOUTHWEST REGION

Source:

Southwest Colorado Council of Governments.



RESOURCES AND CAPACITY

The five-county region has historically addressed housing needs through programs and development provided by nonprofit housing organizations, including public housing authorities (PHAs). The primary organizations involved in regional housing policy include the following.

Housing Solutions

Housing Solutions was founded in 1981 and has been serving the region for 40 years, providing affordable housing expertise and services to all the communities in Southwest Colorado. Housing Solutions is a certified HUD housing counseling agency and a state-certified Community Housing Development Organization (CHDO). Housing Solutions is the administrator for the Coordinated Entry System for the region that provides a single point of entry for persons experiencing homelessness to access needed services and housing support.

As a developer, Housing Solutions has developed, built and managed affordable housing for many decades. Housing Solutions has built workforce housing, including a 60 unit single family home workforce housing development in La Plata County and is currently building Espero, a 40 unit supportive housing project. The organization has also built affordable housing for seniors.

The organization also operates a revolving loan fund to repair health and safety problems for homeowners to keep people housed, with 350 homes rehabilitated, and provides low income households assistance with energy bills. The organization has 20+ staff with decades of combined experience and expertise in the field.

Through this work, Housing Solutions serves thousands of households each year, reducing service costs for the public sector. The organization also brings millions of dollars of outside funding to the community each year for providing affordable housing and building affordable housing.

Southwest Colorado Council of Government (SWCCOG)

The SWCCOG provides regional leadership on behalf of local governments through the five-county region. This includes advocating for mutual goals and administering programs that benefit local governments. The SWCCOG is relatively new, officially formed in 2009, through an agreement among 14 local governments in southwest Colorado. The SWCCOG provides local public officials with the means of more effectively responding to local and regional challenges.

Although not directly involved in providing housing, the SWCCOG is well-positioned to advocate for state- and federal-solutions to address the region's affordability challenges and to further a collective, regional approach to addressing housing needs.

Regional Housing Alliance. The Regional Housing Alliance (RHA) covering La Plata County recently reconvened to confirm its mission and establish an organizational Action Plan.

The RHA board members share a vision of more workforce and affordable housing being developed across La Plata County.

The RHA agreed to take a collaborative leadership role in addressing the urgent need of workforce and affordable housing in the county. This will occur through facilitating coordinated funding efforts and supporting current organizations and local governments in their efforts to develop units across the housing continuum.

Several elements of the RHA action plan will benefit regional housing efforts:

- The RHA new executive director, support staff, and/or consultant will help align the regional housing efforts of the governmental agencies, nonprofits, and key stakeholders. Since La Plata County is the largest county in the southwest region, the RHA has a unique ability to convene community leaders and build political will to collectively address housing needs.
- RHA intends to track and organize funding opportunities to ensure no funding is missed (emergency—ARPA, state, and other federal dollars).
- If the fall of 2021, the RHA intends to identify and list of potential immediate development opportunities and joint ARPA projects in the county.

Nonprofit Developers and Housing Assistance Providers

The region has many successful and active organizations specializing in affordable housing development, housing programs, and housing advocacy. The primary organizations in the region include:

- The Homes Fund focuses on homeownership. The organization formed in 2008, and is a certified Community Development Financial Institution (CDFI) and HUD-approved counseling agency. Homes Fund provides downpayment assistance, homebuyer education, and mortgage lending programs to help low and moderate income households purchase homes through shared appreciation loans, including purchase of mobile and manufactured homes. The organization serves households earning between 60 and 125 percent of the Area Median Income (AMI)—or approximately $52,620 to $109,600 per year in income for a family of four.
- Habitat for Humanity has two chapters in Archuleta and La Plata Counites. Those organizations build affordable homes for ownership using a model of "sweat equity," contributed by potential buyers and community volunteers. Homes are affordable to households earning 30 to 60 percent AMI—or approximately $26,500 to $52,620. Habitat also maintains a "ReStore" which sells new and gently used building materials, household items, furniture, and fixtures that are donated from contractors, individuals, and retail stores.

- Mercy Housing is a national housing developer with three affordable housing developments in Durango, providing affordable homes to families and residents with special needs. Two of the developments were made possible through partnerships with health care organizations who donated land. Mercy manages an additional attainable housing development that was built by the development arm of the Southern Ute Tribe. Mercy also provides resident services at no cost to tenants. Altogether, Mercy manages 170 units in the region.
- Volunteers of America is a national organization that provides affordable housing to seniors in Durango. The organization has developed three properties, providing 107 units of senior housing.
- Archuleta Housing is a nonprofit housing provider in Pagosa Springs. The organization was funded in 1965 by local residents committed to providing low income apartments in the town. The organization now has 52 affordable units, all centrally located in downtown Pagosa Springs. Archuleta Housing for the Elderly provides 12 affordable units for seniors.
- Durango Housing Corporation provides 100 units of deeply subsidized housing.

The region also benefits from private low income tax credit developers, as well as local supportive service and advocacy organizations. Pagosa Housing Partners is a local nonprofit that advocates for expanding housing choices and opportunities. Pinon Project provides services to support low and moderate income residents residing in and needing affordable housing in the region. The Southwest Center for Independence advocates for persons with disabilities and is the Independent Living service provider in the region. The organization also runs the accessible transportation service Southwest Rides; assists long-term care residents relocate into communities of choice with community-based service provision; provides an employment training and job access program; supports youth with disabilities as they transition into adult life; and helps persons with disabilities find housing.

Housing Authorities

Two housing authorities exist in the region. The Archuleta County Housing Authority (ACHA) serves as a development partner and operator of affordable housing. ACHA owns and operates two properties in the county with 50 total units. One serves low income seniors and the other provides a mix of bedroom sizes to households and families.

The Housing Authority of the County of Montezuma is a more traditional housing authority providing rental assistance and public housing. The authority serves Montezuma, La Plata, and Dolores Counties. Affordable housing properties are located in Mancos, Cortez, and Dolores, and serve seniors and persons with disabilities and families.

State Funders

State resources for affordable housing are typically provided by the Colorado Department of Local Affairs (DOLA), Division of

Housing (DOH), and the Colorado Housing and Finance Authority (CHFA).

- DOH provides funding to nonprofit developers, nonprofit housing providers, and directly to households. Eligible activities include acquisition of properties to preserve or repurpose into affordable housing; gap financing for affordable housing development; hotel/motel and mobile home park acquisition, rehabilitation, and preservation; infrastructure to support affordable housing development; rehabilitation of owner-occupied homes; housing to help persons experiencing homelessness; rental assistance; and supportive services.
- DOLA will implement the state's new Innovative Affordable Housing Strategies and Development Incentives Grant program. During fall of 2021, grant money will be available to local governments to promote innovative solutions to the development of affordable housing. The program has three components: 1) Funding for housing needs plans; 2) Funding for land use code updates; and 3) Flexible funding to support a variety of strategies that spur housing creation.
- CHFA is a financing entity, providing favorable mortgage loans and downpayment assistance to Colorado households, and financing for developers of Low Income Housing Tax Credit (LIHTC) housing. LIHTC developments typically serve households earning 40 to 60 percent of the AMI, or below $52,620 in the region. CHFA's has a variety of homebuyer programs with most serving households earning less than 100 percent AMI. CHFA also sets a limit on the price of the purchased home; in the southwest region, that limit ranges between $311,000 and $392,000.

In sum, the region has a relatively traditional yet comprehensive network of housing and supportive service providers. Gaps in organizational capacity were not identified by stakeholders as a primary factor contributing to affordable housing challenges—capacity was considered a moderate factor. Instead, as discussed below, gaps in resources, lack of commitment, and market factors are the primary contributing factors limiting housing options in the region.

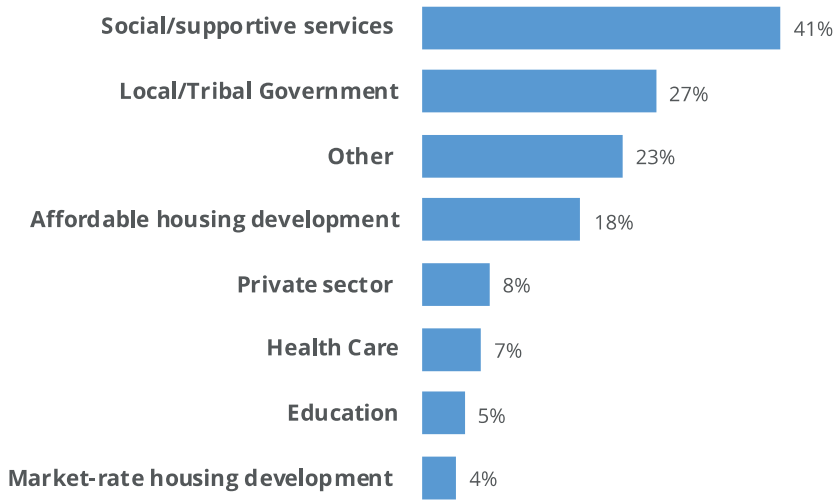
COMMUNITY PERCEPTIONS OF NEED

Regional stakeholders working in the fields of housing, community development, provision of services to low- and moderate-income (LMI) households, local government, and economic development contributed their perspectives on housing needs—and how housing shortages affect the economic health of the region.

Twenty-four stakeholders participated in virtual meetings to discuss their concerns about housing availability and affordability and explore local and regional solutions. These interviews were conducted in May and June 2021. Stakeholders interviewed worked in the fields of city/town/county leadership, community development, housing, economic development, planning, and service provision.

A total of 105 stakeholders in the region completed an online survey, available in May 2021. As shown in the following figure, most respondents work in the field of social and supportive services, followed by local/tribal government.

Figure I-1.
In which industries do you work or volunteer?



Note: n=105, percentages do not add to 100 due to multiple responses allowed.
Source: Southwest Colorado Housing Survey 2021 and Root Policy Research.

Survey respondents represented all areas of the region, as shown in the following table. Fifty-eight percent represented Montezuma County and cities/towns within that county; 51 percent, La Plata County and its cities/towns; 30 percent, Archuleta County; another 30 percent, Dolores County; and 21 percent, San Juan County.

Top findings from stakeholder survey.

Affordable housing challenges that concern stakeholders the most include: :

- Limited rental housing;
- Lack of starter homes and difficulties in attaining ownership; and
- Distance between areas of employment and affordable housing.

Secondary concerns focused on the negative economic impacts of limited affordable housing from residents cutting back on local spending, and businesses not being able to attract or retain workforce.

Stakeholders are moderately concerned about housing for seniors to age in place and public transportation connecting workplaces and affordable housing. They are least concerned about the effect of affordable housing challenges on attracting or retaining families.

Figure I-2.
In which towns, cities, and counties do you provide services?

Place	Distribution	
	Responses	Percent
Archuleta County	31	30%
Pagosa Springs	25	24%
Dolores County	31	30%
Dove Creek	25	24%
Rico	17	16%
La Plata County	53	51%
Bayfield	31	30%
Durango	44	42%
Ignacio	32	31%
Montezuma County	60	58%
Cortez	42	40%
Dolores	32	31%
Mancos	36	35%
San Juan County	22	21%
Silverton	20	19%

Note: n=104, percentages do not add to 100 due to multiple responses allowed.
Source: Southwest Colorado Housing Survey 2021 and Root Policy Research.

Figure I-3.
When you think about affordable housing challenges in your community, what concerns you the most?

Housing Challenges	# and % of Responses
Limited rental housing	83 83%
Lack of starter homes/difficult to attain homeownership	77 77%
No affordable housing near areas of employment	66 66%
Lack of housing requires residents to cut back on other household necessities	54 54%
Limited housing for seniors to downsize and age in place	50 50%
Lack of reliable public transportation to move workers between housing and employment	49 49%
Lack of accessible housing stock for frail elderly/people with disabilities	48 48%
Limits economic growth	44 44%
Cannot attract or retain workforce	43 43%
Cannot attract or retain families	36 36%
Other	21 21%

Note: n=100, numbers do not add to 100 due to multiple responses allowed.
Source: Southwest Colorado Housing Survey 2021 and Root Policy Research.

"Other" challenges offered by respondents include:

Regulatory challenges.

- Durango's fee-in-lieu affordable housing program incentivizes payment over unit production.
- Lack of Short Term Rental (STR) regulations in many parts of the region to limit conversions of permanent rentals to vacation rentals.
- Overly complicated funding sources.

Community bias.

- Bias against low income families and individuals, those with criminal histories, those with substance abuse challenges.
- Lack of interest in providing subsidized rentals and starter homes (30-80% AMI) and transitional housing.

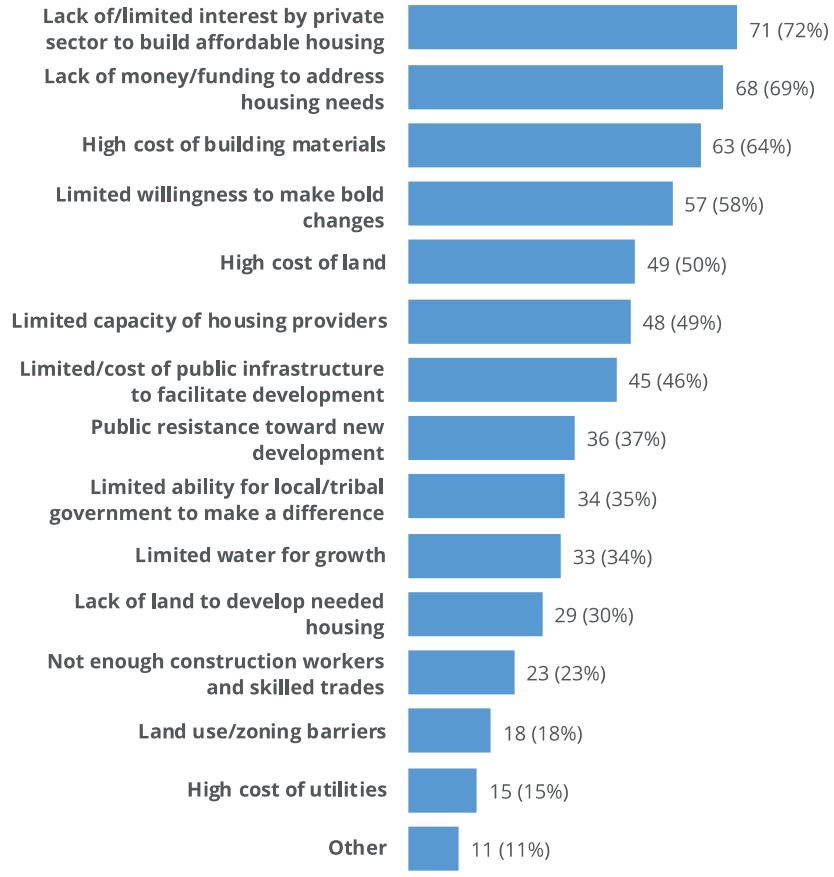
Economic changes.

- Gap between wages and housing prices; lack of high-wage jobs (2 mentions).
- Gentrification spurred by the prices investors and out-of-state buyers and willing to pay.
- Limited resources to commit to affordable housing solutions.

Stakeholders identified the **greatest barriers** to addressing housing needs as:

- Lack of/limited interest by the private sector to build affordable housing;
- Lack of money/funding to address housing needs;
- High cost of building materials; and
- Limited willingness [of leaders] to make bold changes.

Figure I-4.
In your opinion, what are the greatest barriers to addressing housing needs in your community?



Note: n=98, percentages do not add to 100 due to multiple responses allowed.

Source: Southwest Colorado Housing Survey 2021 and Root Policy Research.

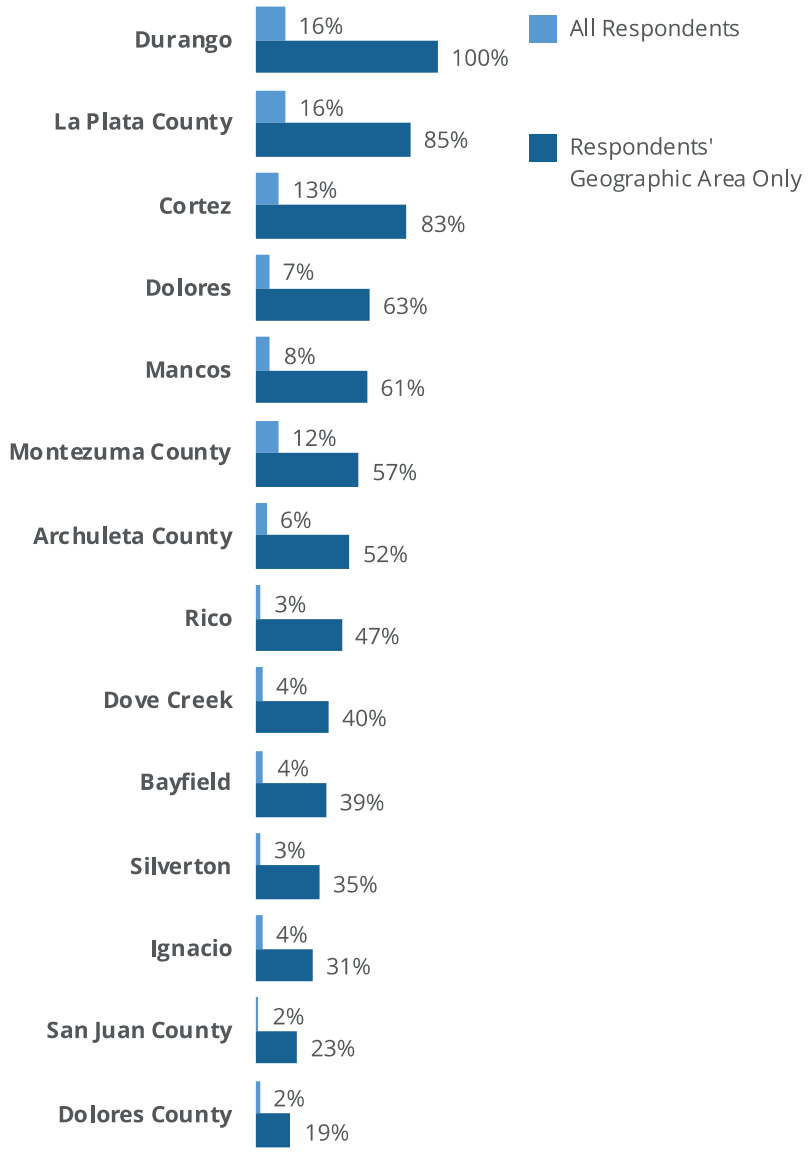
When asked about the **geographic areas** where challenges are most severe, most respondents identified the La Plata County-Montezuma County commute shed. This was true for respondents overall and when adjusted by respondents' geographic area. For example, 100 percent of respondents serving Durango said that area has the most severe housing needs. This compares to 23 percent of San Juan County respondents and 19 percent of Dolores County respondents who identified their respective service areas as having the most severe needs.

The next figure shows the proportion of respondents from each geographic area who selected their region as having the most severe housing needs.

Figure I-5. In which geographic areas do you feel the above challenges are most severe?

Source:

Southwest Colorado Housing Survey 2021 and Root Policy Research



Solutions. Stakeholders were asked what information they wished they had to help their community better respond to housing challenges. The top answers were:

- Strategies to address needs (68 responses);
- Best practices to address needs (60 responses);
- Number of residents with housing needs (56 responses);
- How much of current housing stock is affordable (53 responses); and
- Types of housing and price points lacking (53 responses.)

Stakeholder survey respondents were also invited to record their thoughts about solutions. This open-ended portion of the survey generated many responses.

Most solutions focused on **making better use of land** through zoning reform and repurposing under-utilized properties (motels, mobile home parks) into cooperatives and affordable housing, as well as enacting inclusionary zoning regulations. One stakeholder suggested imposing first right of refusals on homes for sale to limit opportunities for investor purchases.

On **zoning**, stakeholders attributed high housing costs to land use restrictions and community resistance against affordable housing. Embracing density, allowing innovative housing types (tiny homes, container homes), and loosening regulatory restrictions for affordable housing was recommended.

Many stakeholders acknowledged that cost of extending **public infrastructure** to accommodate housing development is a significant challenge. Stakeholders offered many ideas to address this challenge, most of which called for regional, public-private collaboration:

- ***"Bring all players to the table rather than address in a piecemeal fashion. Local governments need to work together to obtain funding to address this challenge. This will take a unified effort."***
- ***"Cities and counties should share in land development costs associated with public infrastructure, water and utilities… business owners should share in those costs as a solution for filling jobs."***
- ***"Areas might be able to be developed if we could provide infrastructure to designated areas which in turn affects our ability for economic growth."***
- ***"State and federal grant assistance for infrastructure improvements are needed to accommodate long term deed restricted work force housing."***
- ***"Utility companies—e.g., La Plata County water—need to extend infrastructure to areas of the region where it makes sense to develop housing. Cities should extend their water pipelines to beyond city limits to reach available rural properties that could be re-zoned for minimum of 10-to-20 housing units per acre."***
- ***"Consolidation, oversight and support to special district for service extensions to potential development locations."***

Top findings from stakeholder interviews.

Twenty-five stakeholders participated in virtual meetings to discuss their concerns about housing availability and affordability and explore local and regional solutions. Main themes from conversations with stakeholders included:

- There is widespread concern about responding quickly to address needs. While stakeholders recognize that updated data on needs is important for obtaining grants, they feel the data need to be quickly turned into action. For many, the magnitude of need feels overwhelming compared to available resources.
- Investor activity spurred by short term rentals (STR) market is a huge challenge to maintaining long term rental stock.
- Needs are most acute on the rental side, one and 2 bedroom, and deeply affordable rentals. The region is in need of apartments and townhomes and "missing middle" housing. Both market rate and income-restricted units would help address supply needs. The region must actively recruit and reward developers who specialize in workforce housing.
- Residents with disabilities have very few housing options. Tenant-based rental assistance (Housing Choice Vouchers funded by the state) no longer work in the region. There are almost no units with rents low enough for voucher holders ***("$900 per month is not affordable")***.
- Public infrastructure and availability of water resources present challenges to affordable development in many communities. A collaborative approach is vital, and infrastructure problems must be addressed as part of a comprehensive housing approach.
- Other barriers to affordable development—particularly in rural and mountain communities—in a short construction season, limited supply of labor and materials, and restrictive local land use codes. As such, solutions should leverage existing stock and innovative development Including preservation of existing affordable units, conversion of underutilized hotels/motels into housing, encouraging modular housing options, and promoting resident ownership and condition improvements in manufactured housing communities.
- Land is available to address needs—some publicly owned. Yet land in highly valued in the region, and converting open land into housing is not yet a top priority.
- Residents will complain about *any and all* development. The region should set workforce housing goals and stick to those—recognizing that they will be controversial.
- Housing solutions are dependent on increased resources, and the region needs to be much more aggressive in generating funding. For example, communities should charge fees for development above 200 percent median price, and lower fees or waive fees for developments around 120 percent of the median price.
- Local government capacity is very limited. A plan that lays out a regional effort with tailored goals for addressing needs would be helpful to get everyone on the same page, reduce duplication.

Bayfield, Durango, Ignacio, and La Plata County. Housing costs have not been reasonable for years, but the current situation is untenable. Old motels that served as a de facto reserve for affordable housing used have been purchased by investors, and those that remain now rent for$850 to $900 per room per month.

The impact of housing shortages on businesses is seen in reduced operating hours. The only employees who can live in the area are those who found a place awhile back.

Bayfield's purchase of land entitled for townhomes is encouraging, and will be a much-needed housing solution. The region should also consider facilitating factory-built housing solutions—and make sure those units are allowed in planned unit developments (by HOA covenants).

Difficulty finding builders and building costs are much more of a barrier than getting entitlements/developments approved.

Durango's Fair Share Housing ordinance has not produced units and needs to be revised; the fee-in-lieu is much too low to incentivize unit creation. Durango has been a regional in STR regulation; their approach is a model for other towns.

To facilitate housing development, the county needs to address infrastructure challenges very aggressively. Ignacio is on the Southern Ute water and wastewater system and the costs are very high.

Real estate transfer taxes should be allowed to help generate revenue to support affordable housing development. Investors and wealthy owners are contributing to the problem and should be part of the solution: ***"TABOR is killing us."***

Cortez and Montezuma County. Rising prices in the city and county are due to an increase in in-commuters from La Plata County and the "zoom town" phenomenon.

The housing authority in Montezuma county has an average of 45 people added to the waitlist each month, around half of them indicate being homeless.

Fair Market Rents (FMRs) in the county have not kept up with the increases in the rental market, making finding a rental unit even harder in the tight market.

Dolores County. There are very few housing options for workforce in the county—no apartment complexes, limited attached housing. Housing supply is largely comprised of single family homes and mobile homes.

Second homeowners have crowded out workers, and there are no alternative housing types for workforce. This includes local government workers.

Housing has become a top need for low income residents; calls from residents seeking services are almost always related to housing insecurity. Housing choice vouchers/Section 8 is less effective due to the lack of housing supply.

A couple of small apartment complexes targeting families, workforce, in addition to expansion of home health care for seniors, would go a long way to addressing critical needs. The county needs both publicly-subsidized housing and market rate housing.

The county is in a "Catch 22" situation, with economic growth dependent on workforce, workforce dependent on adequate housing, and adequate housing dependent on economic growth.

Pagosa Springs and Archuleta County. Movement of Baby Boomers into the area for retirement has dramatically changed the housing market. This trend, coupled with a "wave of investors" purchasing and converting units into STRs, has led to a very challenging market for workforce. These trends make sense from the investors' perspective. Unaccounted for is the negative effects on the community—loss of teachers, challenges recruiting workforce, impact on the environment.

Median home prices rose $150,000 in one year, with fewer than 10 percent of typical inventory for sale currently.

Many stakeholders expressed regret that the town and county did not move faster to implement housing solutions before costs were this high and the gap so wide.

"Even doctors can't afford to live in the area. Our economy cannot function without health workers, local government staff, grocery store workers."

"When I hire I ask—Do you have a plan for where to live?"

The town and county have been reluctant to cap the number of STRs, which has discouraged some hotels from opening in the area. The town requires a license for STRs, requires a two-year ownership before converting to STR use, regulates occupancy, and taxes STRs like commercial lodging. The county recently increased fees for STRs.

The area has a significant lack of supply of workforce housing including attached homes and condominiums. Eighty-percent of housing units are in HOAs. Pagosa Springs is a very small part of the county, and is limited in its ability to accommodate growth.

To adapt, workers are living in campgrounds, doubling up, living in their cars.

Core needs are for 50-120 percent AMI/workforce housing, both rental and for sale. The most acute need is for long term rentals, studio and 1 bedroom for workers. Nonprofit housing partners are a central part of the solution, as is continued education about needs.

Some stakeholders feel that a focus on missing middle products is misguided due to low wages of service and tourism workers; missing middle products are not affordable to the lowest wage workers who have the most critical needs.

On the other hand, state program AMI caps are too low for ownership and have not kept up with rising housing costs.

Pagosa Springs is exploring land use solutions to facilitate affordability—offering density bonuses for new construction with a share of affordable units, embracing innovative building types (e.g., carbon containers), and examining barriers in the building and land use code.

For the county, solutions to explore include carving off land for workforce housing (including land owned by the school district and hospital), working with builders and landowners, and figuring out how to extend infrastructure in exchange for affordable housing. Employers are also doing more to address needs and providing modest amounts of workforce housing. These solutions are dependent on the county hiring a housing coordinator to manage solutions.

Some stakeholders feel that developer incentives are not a successful tool; it is hard to convince developers to build anything but luxury units given the high return those command. Instead, the region should require developer contributions—e.g., given some proportion of units, 10 to 20 percent, to housing workforce. Catching up to needs remains a huge challenge.

"Fee waivers, fast track, density bonus, loosening regulations…they haven't seemed to work. They won't [contribute to affordable housing] unless it is a requirement."

"It shouldn't be the priority of government to give people a second home."

Silverton and San Juan County. The "housing crunch" in Silverton is unlike anything the town has seen in more than a decade. Conversion of housing into vacation rentals and sales of rental units has definitely displaced workforce. The town has done a good job of restricting STRs.

Workforce who rent must move constantly, with some staying in their cars or camping during the summer and many "couch surfing." Some live in temporary conditions for nearly a full year; many cycle in and out of homelessness.

Condition of rentals is also a concern among stakeholders, primarily related to weatherization and heating during winter months. Not only does this impact health/safety but also affordability: one stakeholder noted that there are units available to rent for $600 per month but the cost of heating in winter can run up to $1,200 per month.

If workers are lucky, they have connections in town and can figure out who is moving and how to secure housing. Those moving into the town for new jobs—typically higher-level jobs—are having the hardest time.

"Lack of workforce housing is preventing economic growth 100%. Businesses can't open, businesses can't grow."

One business estimates that one-fifth of their workforce turns over each year due to lack of housing.

It is difficult for workers to remain in the town as they become older and want to start families; there is no housing to accommodate them.

The town needs a variety of housing solutions:

- A housing cooperative or tiny home community for single workers and roommates—more transient workforce—accessible to local businesses to house workers;
- A program to entice owners of vacation rentals to convert those to long-term rentals. For smaller landlords (v. wealthy investors), this should be a monthly subsidy v. a tax break, as not all landlords are wealthy;
- A new workforce housing community, with units for rent and for sale, and with both market rate and income-restricted units. We have no "down valley" housing relief in Silverton. The survey a few years ago that concluded that the town needed 12 or so units for housing was off—we could have easily absorbed 20 units.
- Better coordination between the public sector, employers, and developers including employer-assisted housing models and expanded infrastructure to support housing.

SECTION II.

HOUSING NEEDS

HOUSING NEEDS

INTRODUCTION & METHODOLOGY

This core section of the regional housing needs assessment describes how the region's demographics, employment, and housing landscape have changed since 2010, and the interplay of needs among the counties and cities/towns in the region. It concludes with an estimate of the housing units that are needed, with target rents and sales prices.

Data Sources

This report utilized the most current data from the sources listed below. This analysis also draws on a variety of local and regional economic development and housing studies.

- Bureau of Labor Statistics (BLS)
- Census' American Community Survey (ACS)
- Colorado Housing and Finance Authority
- Colorado State Demographer
- Home Mortgage Disclosure Act
- Local planning departments data
- Local Real Estate agents
- Longitudinal Employer–Household Dynamics (LEHD)
- Multiple Listing Service (MLS) data

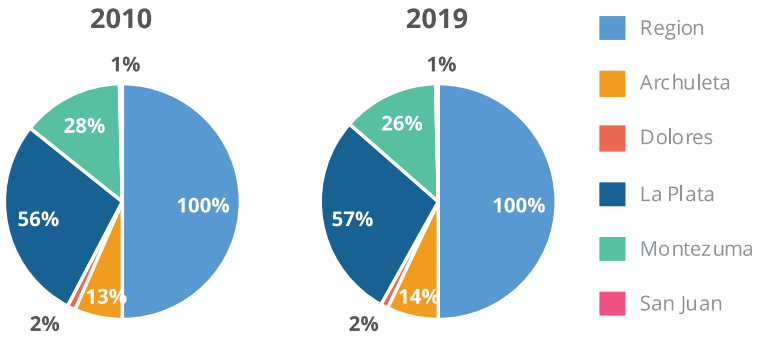
SOCIOECONOMIC TRENDS

Demographics

Demographics drive the types of housing needed—and housing prices respond to demographic changes. Shifts in demographics can also indicate displacement of low income households and workforce housing challenges. This section discusses how the region has changed demographically since 2010, setting the context for the housing needs analysis that follows.

Permanent resident population. As of 2019, the Colorado State Demographer estimated a population of 99,197 for the region. La Plata County is the largest county in the region and where 57 percent of the region's residents live. The distribution of residents by county changed little between 2010 and 2019, even with shifts in migration and commute patterns, as shown below.

Figure II-1.
Distribution of Permanent Residents by County, 2010 and 2019



Source: Colorado State Demographer.

Figure II-2 shows the change in permanent residents between 2010 and 2019. Overall, the region gained about 7,400 people—an increase of 8 percent. La Plata County alone accounted for 65 percent of that growth and, Archuleta County, 26 percent. This was driven by strong growth in the counties' most populated communities including Pagosa Springs (20% population increase), Bayfield (15%), and Durango (13%).

The reason for growth varied by community. The declines in the permanent resident populations in the small communities of Dove Creek and Rico indicate outmigration of permanent resident households and an increase in housing occupied by seasonal or vacation owners.

Figure II-2.
Permanent Resident Population by City/Town, County and Region, 2010 and 2019

	2010	2019	# Change	% Change
Region	**91,802**	**99,197**	**7,395**	**8%**
Archuleta	12,060	14,002	1,942	16%
Pagosa Springs	1,722	2,072	350	20%
Dolores	2,060	2,037	-23	-1%
Dove Creek	734	632	-102	-14%
Rico	264	231	-33	-13%
La Plata	51,441	56,272	4,831	9%
Bayfield	2,357	2,708	351	15%
Durango	16,889	19,117	2,228	13%
Ignacio	699	718	19	3%
Montezuma	25,532	26,160	628	2%
Cortez	8,484	8,723	239	3%
Dolores	936	966	30	3%
Mancos	1,337	1,419	82	6%
San Juan	709	726	17	2%
Silverton	646	660	14	2%

Source: Colorado State Demographer.

Archuleta County, by contrast, saw a significant increase in permanent residents that outpaced housing unit growth. In this case, seasonal homeowners moved into the county permanently.

Figure II-3.
Change in Permanent Resident Population v. Housing Units, 2010 to 2019

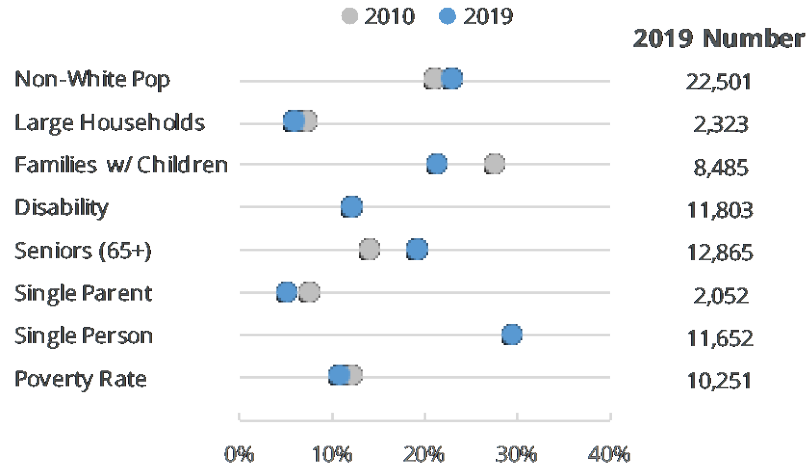
	Permanent Residents		Housing Units		
	# Change	% Change	# Change	% Change	What Changes Signal
Region	7,395	8%	2921	6%	
Archuleta	1,942	16%	611	7%	Seasonal owners became permanent residents
Dolores	-23	-1%	113	8%	Increase in housing owned for seasonal/vacation purposes
La Plata	4,831	9%	1965	8%	Growth in housing units accommodated permanent residents, as well as seasonal/vacation demand
Montezuma	628	2%	237	2%	Growth in housing units accommodated permanent residents, as well as seasonal/vacation demand
San Juan	17	2%	-5	-1%	Seasonal owners became permanent residents

Source: Colorado State Demographer.

La Plata and Montezuma Counties experienced relatively uniform growth between permanent residents (both workforce and retirees) and housing units. Although workers may have left La Plata County for more affordable communities within Montezuma County, that outmigration was tempered by housing development that served permanent residents, as well as seasonal and vacation owners.

As shown by Figure II-4, the region now has fewer families with children, including single parent households, and more seniors (65+ years) than in 2010. This single demographic shift—strong growth in seniors offset by a decline in families with children—is consistent across all counties in the region.

Figure II-4.
Demographic Shifts, Region, 2010-2019

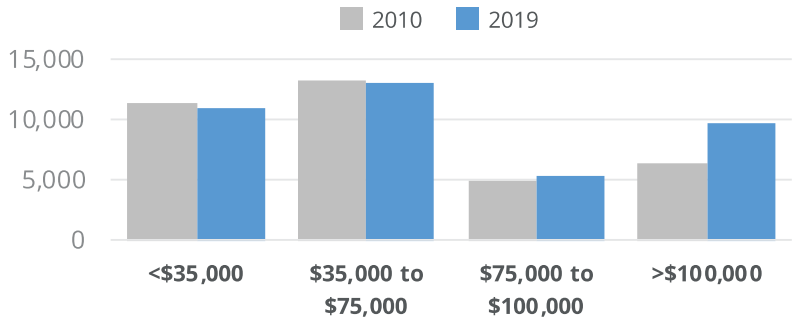


Source: 2010 and 2019 5-year ACS estimates and Root Policy Research.

Income. Between 2010 and 2019, median household income in the region rose by 13 percent. The overall median, for all household sizes, was $62,061 as of 2019—up from $55,110 in 2010.

The median increased due to an influx of high-income households, as shown in Figure II-5.

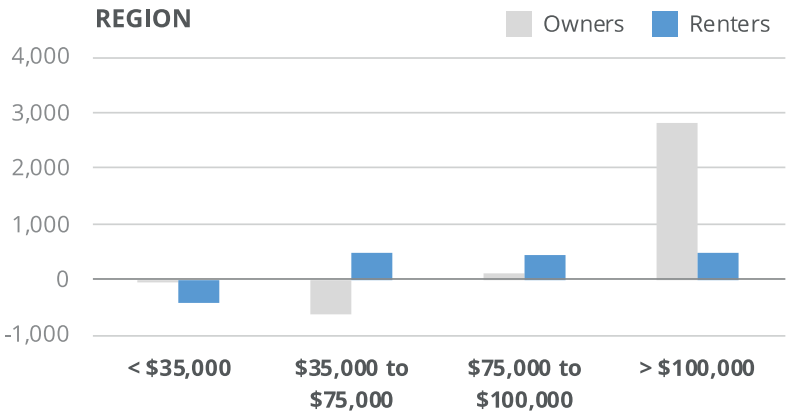
Figure II-5.
Shifts in Household Income Distribution, 2010-2019



Source: 2010 and 2019 5-year ACS estimates and Root Policy Research.

Figure II-5a shows income distribution trends separated by rentership and ownership (housing "tenure"). The decline in households with incomes of $35,000 and less was driven by a decline in renter households who either left the region or remained in the region and moved into a higher income bracket. Conversely, the decline in $35,000 to $75,000 income households was driven by a decline in owners in the region, and offset by an increase in renters. While the increase in $75,000 to$100,000 income households was mostly comprised of renters, the increase in $100,000+ income households was largely comprised of owners.

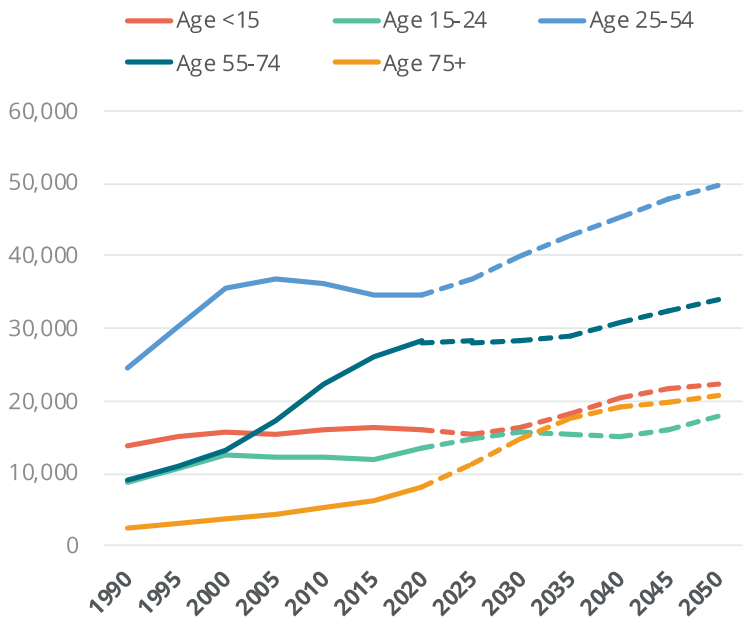
Figure II-5a.
Shifts in Household Income Distribution by Tenure, 2010-2019



Source: 2010 and 2019 5-year ACS estimates and Root Policy Research.

Forecasted growth. The Colorado State Demographer predicts that future population growth in the region will be concentrated in the age cohorts of working age adults (25-54) and 75+ residents, as shown in Figure II-6. A critical aspect of this growth will be the region's continued employment growth, and the ability of the region to accommodate workers' housing needs.

Figure II-6.
Population by Age, 1990-2050



Source: Colorado State Demographer.

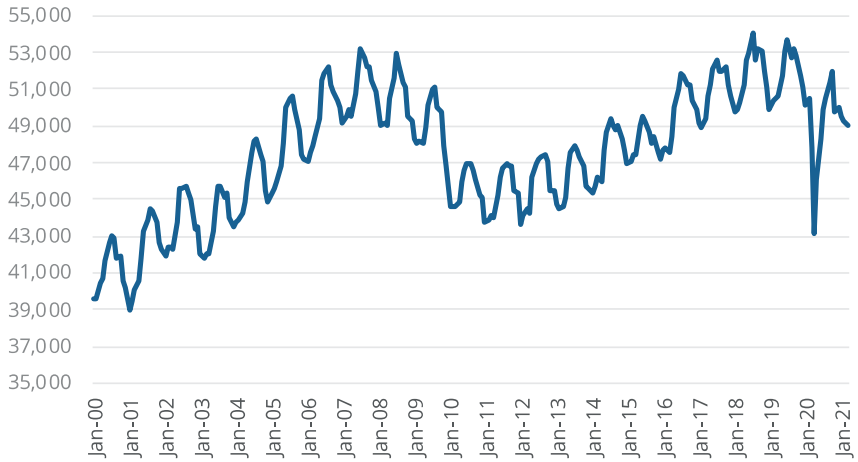
Employment

The Region 9 Economic Development District of Southwest Colorado tracks employment and economic development in the region. Regional employment is expected to exceed 60,000 jobs by 2022, including sole proprietors, according to estimates provided by Region 9 in their latest economic outlook.

Employment trends tracked by the Bureau of Labor Statistics (BLS) are shown in Figure II-7. The region has experienced a steady increase in employment since 2009, rising from approximately 40,000 jobs in January 2020 to 49,000 in March 2021. The highest level of employment occurred in July 2018 at 54,000 jobs.

As of the spring 2021, employment remained slightly below near pre-pandemic levels, with the region averaging around 3,500 fewer summer jobs in 2020 compared to summer 2019. Although data are not yet available, economic activity in the region suggests that jobs rebounded during 2021.

Figure II-7.
Total Regional Employment, January 2000-March 2021

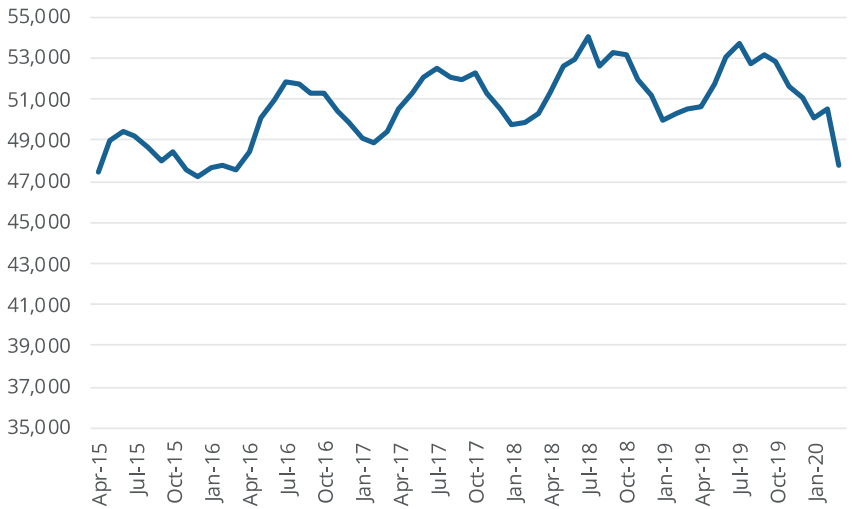


Source: BLS and Root Policy Research.

Seasonality. The figure below shows a five-year trend demonstrating the seasonal nature of employment in the region prior to the pandemic. Employment typically peaks in July between 52,000 and 54,000 jobs. The lowest levels occur in December and January, between 49,000 and 50,000 jobs.

The seasonal swing in jobs between peak and low periods is 3,000 to 4,000. At 2 jobs per household, this means that the region needs 2,000 additional housing units during peak employment to accommodate the seasonal surge in workforce.

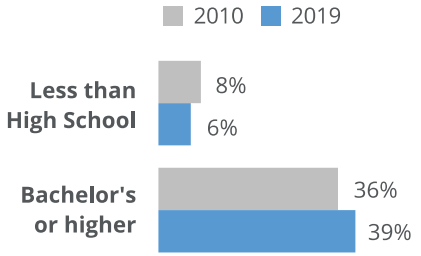
Figure II-8.
Seasonality of Regional Employment, April 2015-March 2020



Source: BLS and Root Policy Research.

Education. The region's workforce is relatively well educated, as shown below, and educational attainment has shifted upwards since 2010.

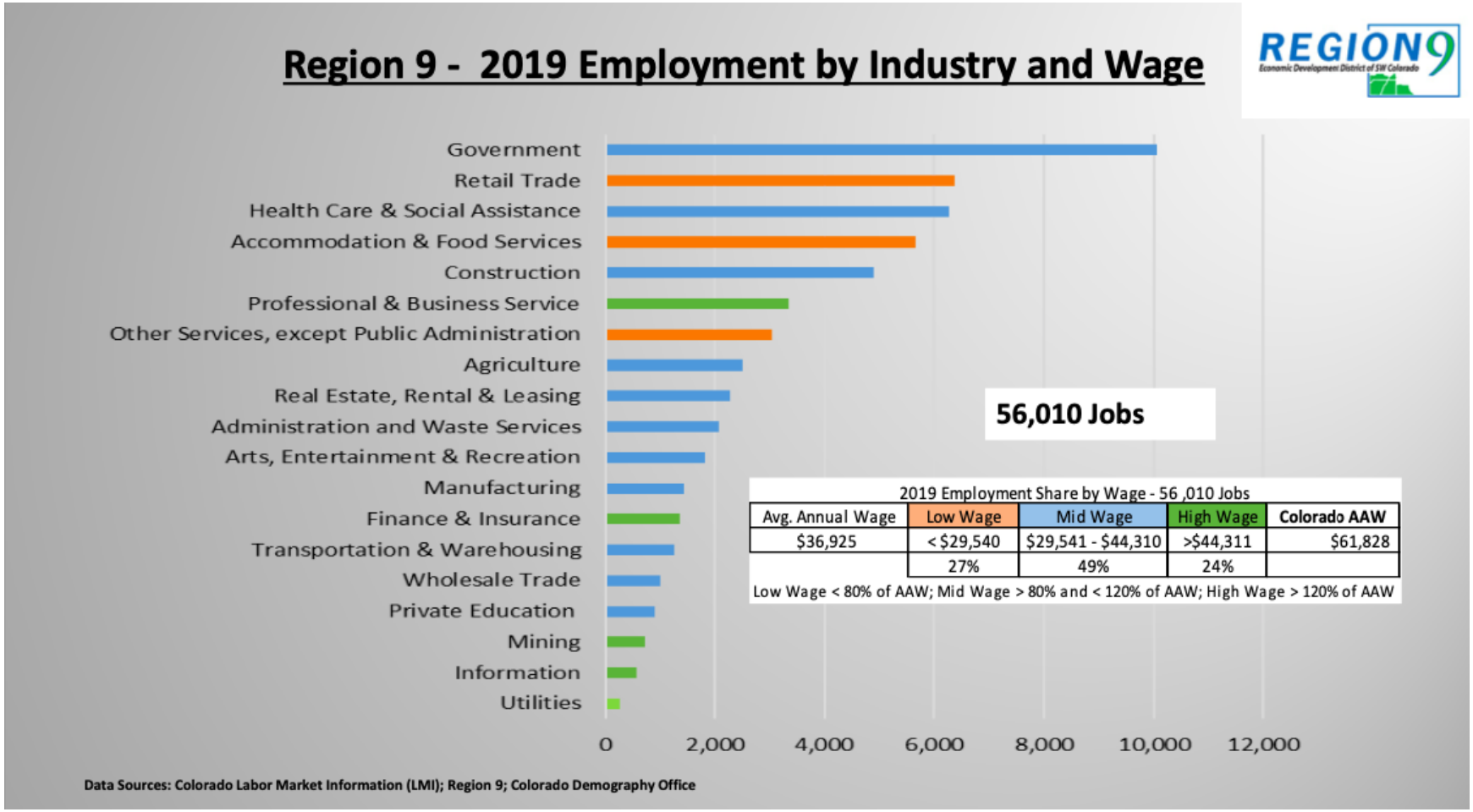
Figure II-9.
Shifts in Educational Attainment, 2010-2019



Source:
2010 and 2019 5-year ACS estimates and Root Policy Research.

Dominant industries. The Region 9 Economic Development District tracks employment by industry and average wages by industry. As shown in Figure II-10, the region's largest employment industries include government, retail trade, health care and social assistance, accommodation and food services, and construction—all of which pay low to moderate wages.

Figure II-10.
Employment by Industry and Wage, 2019



Source: Region 9 Economic Development District, SW Forum 2021.

Employment growth through 2023 is expected to be concentrated in low to moderate wage industries, and, secondarily, the higher-wage management industry, as shown by Figure II-11.

Figure II-11.
Industry Growth Forecast, 2019-2023

Region 9 – Industry Growth Forecast 2019 – 2023

Industry	2019	2023	# Change	% Change	Earnings per Worker
Health Care and Social Assistance	5,763	6,093	330	6%	$54,949
Other Services (except Public Administration)	2,414	2,673	259	11%	$27,395
Accommodation and Food Services	5,494	5,630	136	2%	$24,362
Manufacturing	1,396	1,515	119	9%	$49,666
Retail Trade	5,798	5,914	116	2%	$36,430
Educational Services	703	806	103	15%	$37,444
Professional, Scientific, and Technical Services	2,163	2,264	101	5%	$72,162
Government	10,146	10,243	97	1%	$59,497
Agriculture, Forestry, Fishing and Hunting	471	558	87	18%	$37,833
Transportation and Warehousing	1,101	1,177	76	7%	$75,264
Arts, Entertainment, and Recreation	1,277	1,333	56	4%	$27,773
Wholesale Trade	860	903	43	5%	$63,764
Real Estate and Rental and Leasing	1,076	1,116	40	4%	$55,517
Administrative and Support and Waste Management and Remediation Services	1,508	1,544	36	2%	$35,818
Management of Companies and Enterprises	203	233	30	15%	$112,729
Information	517	529	12	2%	$111,809
Utilities	246	236	(10)	(4%)	$113,090
Mining, Quarrying, and Oil and Gas Extraction	577	562	(16)	(3%)	$147,275
Finance and Insurance	1,172	1,134	(38)	(3%)	$99,170
Construction	4,172	4,122	(49)	(1%)	$54,098
Total Estimated Jobs	**47,055**	**48,583**	**1,528**		

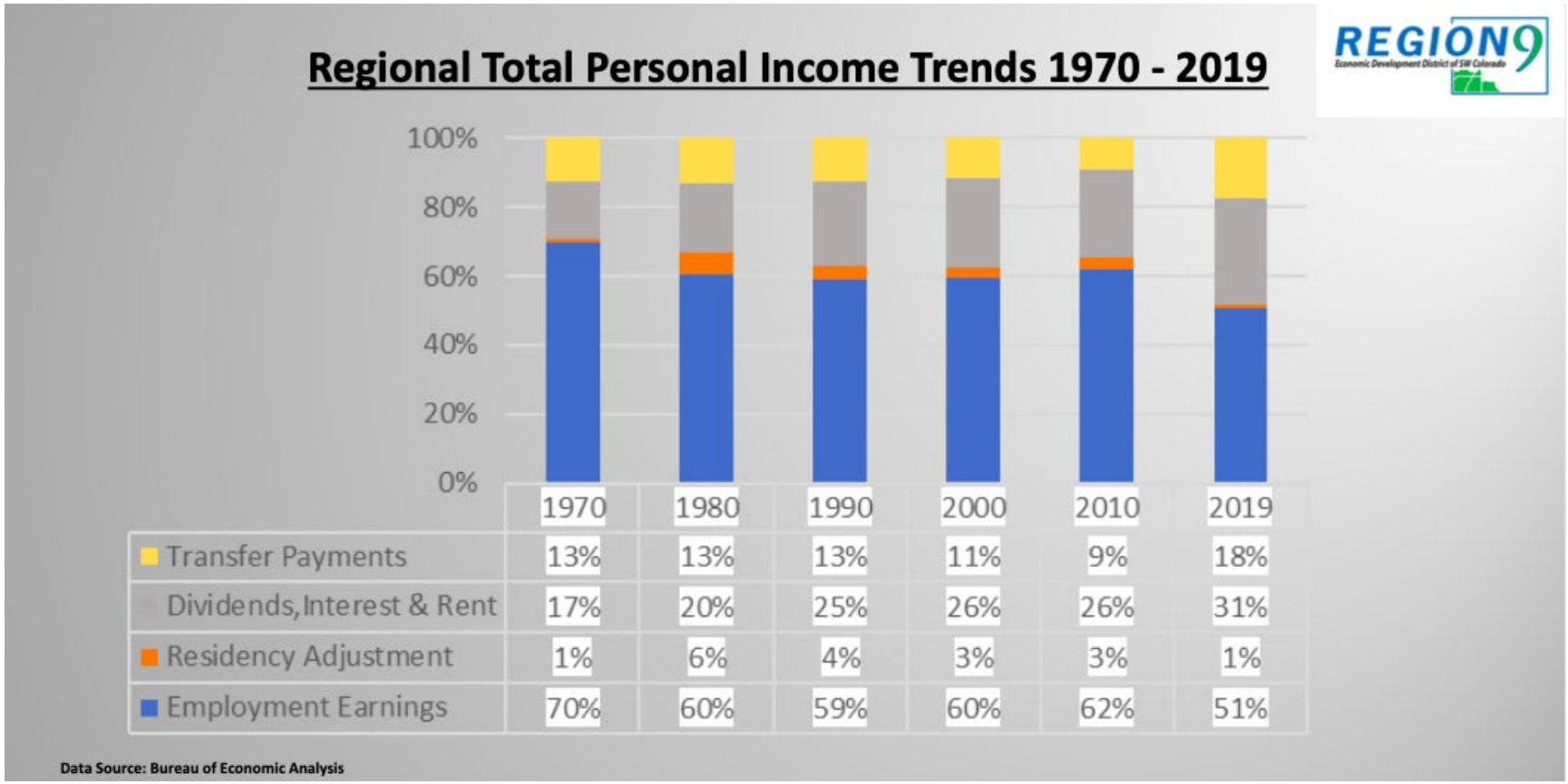
Data Source: EMSI Q.4 2020 Dataset

Source: Region 9 Economic Development District, SW Forum 2021.

Earned income makes up a much lower share of resident incomes than in the past, as shown in Figure II-12, and dividends, interest and rents, and secondarily, government transfers, making up a much higher share.

Reliance on earned income. Overall, 31 percent of the aggregate income of permanent residents in the region is from dividends, interest and rents. This has been steadily increasing since 1970, when it was 17 percent. In contrast, the shift away

Figure II-12.
Sources of Income, 1970-2023



Source: Region 9 Economic Development District, SW Forum 2021.

from employment earnings has been more recent and abrupt: between 1980 and 2010, employment earnings made up around 60 percent of aggregate income and is now 51 percent.

Commute flows. As the region's housing market has struggled to keep up with workforce needs, in-commuting increased.

As shown in the following figure, in-commuting increased in every county in the region—although those increases varied considerably. Smaller counties and towns, with fewer housing options for workers and sustained employment growth, saw the largest in-commuting increases. For example, the proportion of workforce in-commuting into Dove Creek rose from 50 percent to 85 percent, and Silverton's in-commuting rose from 24 percent to 49 percent.

In contrast, in-commuting rose very modestly in the larger counties of La Plata and Montezuma, and larger cities of Pagosa Springs and Bayfield, and declined slightly in Durango and Cortez.

Changes in out-commuting were smaller, with all but Montezuma County reporting declines.

The decline in out-commuting indicates that the new jobs in the region have partially benefitted residents employed in the city in which they live. However, shifts in housing units toward seasonal, vacation, and retiree occupancy have reduced the number of housing units available for workforce, simultaneously increasing in-commuting.

Figure II-13.
Commuting Patterns, 2010 and 2018

Place	Share of Jobs filled by In-commuters			Share of Workers Commuting Out		
	2010	2018	% Point Change	2010	2018	% Point Change
Archuleta County	24%	29%	6%	37%	32%	-4%
Pagosa Springs	89%	91%	1%	68%	54%	-14%
Dolores County	27%	55%	29%	61%	59%	-2%
Dove Creek	50%	85%	35%	97%	75%	-22%
Rico	81%	100%	19%	95%	100%	5%
La Plata County	27%	28%	1%	24%	23%	-1%
Bayfield	88%	89%	1%	93%	90%	-3%
Durango	69%	68%	-1%	45%	37%	-8%
Ignacio	95%	95%	0%	92%	91%	-2%
Montezuma County	28%	29%	1%	33%	36%	3%
Cortez	65%	63%	-2%	49%	49%	0%
Dolores	93%	90%	-3%	91%	89%	-3%
Mancos	84%	82%	-2%	93%	87%	-7%
San Juan County	31%	44%	13%	52%	46%	-5%
Silverton	24%	49%	24%	73%	55%	-17%

Source: LEHD and Root Policy Research.

HOUSING MARKET TRENDS

This section begins with a discussion of the region's housing supply, how the housing market has changed, and how well supply accommodates workforce, retiree, and seasonal and vacation demand. It then provides trends in housing costs, discusses housing needs, and concludes with projected housing gaps, and the supply needed to accommodate employment, resident, and second and vacation home growth.

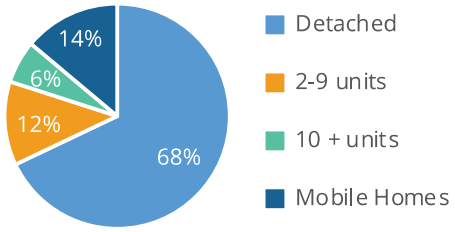
Housing Supply

Single family detached homes make up the vast majority of housing units in the region, as shown in Figure II-14. Attached homes with 2 to 9 units—townhomes, rowhomes, and some condominium products—make up 12 percent. This is less than the 14 percent that mobile homes comprise. Multifamily developments—those with 10+ units—make up the smallest amount of housing in the region at 6 percent.

Figure II-14. Housing Type, 2019

Source:

2019 5-year ACS estimates and Root Policy Research.



Mobile homes provide housing to about 7,000 households throughout the region with most located in La Plata (3,600), Montezuma (2,300), and Archuleta (1,000) Counties. Census data show a stable inventory of homes between 2010 and 2019; however, it is likely that many parks are currently at-risk of sales and redevelopment due to the high cost of land and increasing demand for housing in the region.

With single family detached units as the most common type of housing, it is not surprising that most units in the county have 2- and 3-bedrooms, as shown in Figure II-15.

Figure II-15. Number of Bedrooms, 2019

Source:

2019 5-year ACS estimates and Root Policy Research.

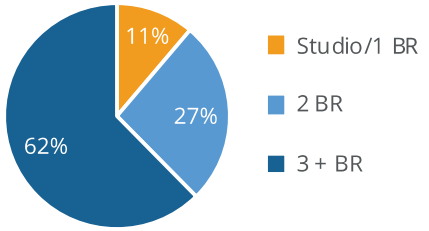
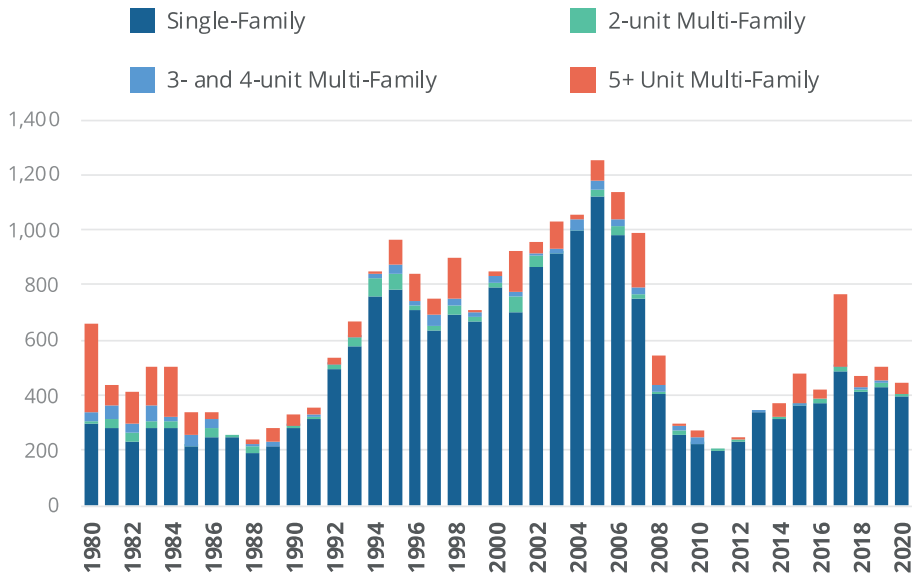


Figure II-16 shows trends in residential building permits. With a few exceptions (during the years of 2007 and 2017, and the early 1980s), single family detached homes have been the dominant type of units permitted in the region in the past 40 years.

The figure also reveals the considerable drop in residential building permits beginning in 2008, after the Great Recession. Although residential permitting has been on an upward trend since 2010, the level of annual permits remains at one-third to half the volume between the high growth years of the mid- to late-1990s and early-2000s.

Figure II-16.
Building Permits, 1980-2020

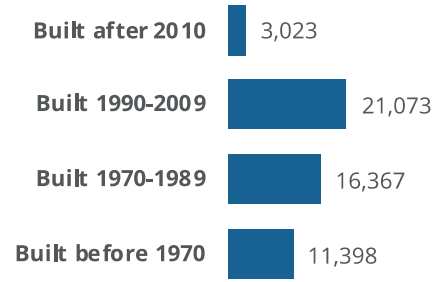


Source: HUD State of the Cities Data Systems (SOCDS), and Root Policy Research.

Given the above building permit trends, it is not surprising that most of the region's units were built between 1990 and 2009, followed by between 1970 and 1989, as shown in Figure II-17.

Units built since 2010 make up a very small share of the region's total housing supply.

Figure II-17.
Age of Housing Units



Source:
2019 5-year ACS estimates and Root Policy Research.

Figure II-18 shows changes in housing units between 2010 and 2019, for the region overall and by county. Unit growth was highest in Archuleta, Dolores, and La Plata County. Housing unit growth in Montezuma County was very modest, and San Juan County experienced a small decline in total units according to housing unit estimates.

The region did not uniformly create housing opportunities for workers and permanent residents during the past decade: many areas saw the largest growth in units that are occupied for seasonal and vacation use. For example, Dolores County saw a shift away from units occupied by permanent residents to units used for seasonal or vacation use. Growth in units for seasonal and vacation use was also strong in La Plata County.

Figure II-18.
Change in Total Housing Units and Occupied Housing Units, 2010-2019

	All Units		Occupied Units		Unoccupied Seasonal Units	
	# Change	% Change	# Change	% Change	# Change	% Change
Region	2,921	6%	1,204	3%	518	8%
Archuleta County	611	7%	591	11%	113	5%
Dolores County	113	8%	-140	-16%	92	21%
La Plata County	1,965	8%	694	3%	369	13%
Montezuma County	237	2%	114	1%	-56	-8%
San Juan County	-5	-1%	-55	-16%	0	0%

Source: 2010 and 2019 5-year ACS estimates and Root Policy Research.

In contrast, in Archuleta County, units occupied by permanent residents increased faster than unit growth overall and growth of seasonally occupied units, meaning that units shifted from seasonal to permanent use.

Montezuma County's trends also differed from other counties', demonstrating a decrease in units for seasonal and vacation use. This could be related to an increased demand for housing by workers from other counties facing affordability challenges.

San Juan County demonstrates a curious trend of a loss of permanently occupied units without an offset in seasonal or vacation occupancy, which is likely due to margin of error in data. There is anecdotal evidence that units have converted to seasonal and vacation use in the county, especially in the past year.

Housing units for workers. The influx of higher-income permanent resident households who rely on non-earned income (Figure II-12) means that housing units are increasingly occupied by non-workers. In tight housing markets, this constrains the supply of housing available for core workforce.

Regionwide, during the past decade, household growth has been driven by non-working households. These households are retirees and/or wealthy households not reliant on earned income.

Of the new households in the region since 2010, an estimated 80 percent contained no workers.

In La Plata County, growth in non-working households exceeded total household growth, meaning that some workers were likely displaced. Similarly, households with workers declined in Dolores, Montezuma, and San Juan Counties, related to the conversion of housing units occupied by permanent residents and workers into seasonal and vacation use.

Archuleta County saw even growth among worker and non-worker households.

In sum, these trends indicate that workforce moved to more affordable and outlying communities as housing in higher-cost areas shifted occupancy to seasonal, retiree, and higher-income residents.

Housing vacancies. Vacant units represent units vacant for rent, units vacant and for sale, units in transition of being occupied (i.e., tenants and owners have not yet moved in), and units vacant for seasonal or vacation use.

Figure II-19 shows vacant units by type for the region.

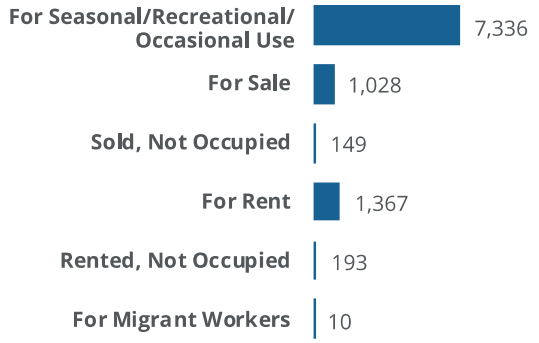
As of 2019, 24 percent of the region's housing units were vacant. When seasonal units are removed, this drops to 5 percent and reflective of a functioning market.

The proportion of housing units that are vacant varies considerably across counties due to the presence of seasonal and vacation properties. Cortez and Ignacio had the lowest overall vacancies (9% and 6%, respectively), and Rico, Silverton, and San Juan County had the highest (65%, 49%, 62%, respectively).

Since these vacancy data were collected, the housing market in the region has tightened considerably due to a sharp increase in demand and slowdown in construction related to the pandemic (business closures, supply chain disruptions).

Figure II-19. Vacancy by Type, 2019

Source:
2019 5-year ACS estimates and Root Policy Research.



Vacation homes and short term rentals. A 2021 Vacation Home Counties report by the National Association of Realtors (NAR) documents the recent surge in vacation home purchases, and the effect on housing prices. Nationwide, vacation home sales grew by more than 16 percent in 2020—well beyond existing home sales which grew by 5.6 percent. In the mountain region, the median price of homes in counties with high proportions of vacation homes rose by 20 percent, versus 10 percent in non-vacation home counties. Homes also sold faster when in vacation-home counties.

The report confirms that vacation home buyers are wealthy, with 53 percent buying with cash sales (compared to 22% for existing homes).

The surge in vacation rental demand associated with the pandemic encouraged seasonal owners and investors to convert units to STRs. According to data from airdna.com (a market analytics website for STR), during the first quarter of 2021 there were 2,939 homes listed as short-term rentals in the

region. This represents an 18 percent increase from the first quarter of 2020 and a 28 percent increase from the first quarter of 2019. Some of these may be permanently occupied and rented occasionally, others may be rented consistently and otherwise vacant or used seasonally.

Almost half (44%) of all the STRs listed in the region are located around Pagosa Springs (1,290 active rentals), another 38 percent are in and around Durango (1,113 active rentals).

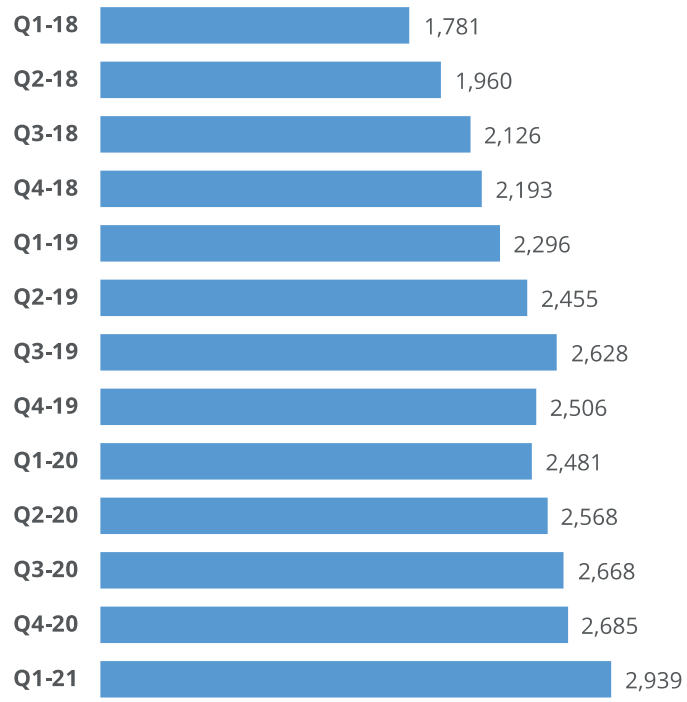
Figure II-20 shows the increase in STRs in the region between first quarter 2018 and first quarter 2021.

The STR data from airdna.com typically exceeds the number of units tracked locally. This is likely due to margin of error in the data (e.g., airdna.com counting multiple listings rather than units) and localities undercounting STRs.

If the region's STRs are similar to those owned in Archuleta County, the vast majority of STRs—about 90 percent—are owned by non-residents, mostly from other states.

As of 2019, if the region's STRs were instead available to permanent residents, this would increase the number of rentals available to workforce by 10 percent.

Figure II-20.
Short-Term Active Rentals, 2018Q1-2021Q1



Note: AirDNA data does not algin perfectly with City/Town boundaries.
Source: AirDNA, and Root Policy Research.

Housing Cost

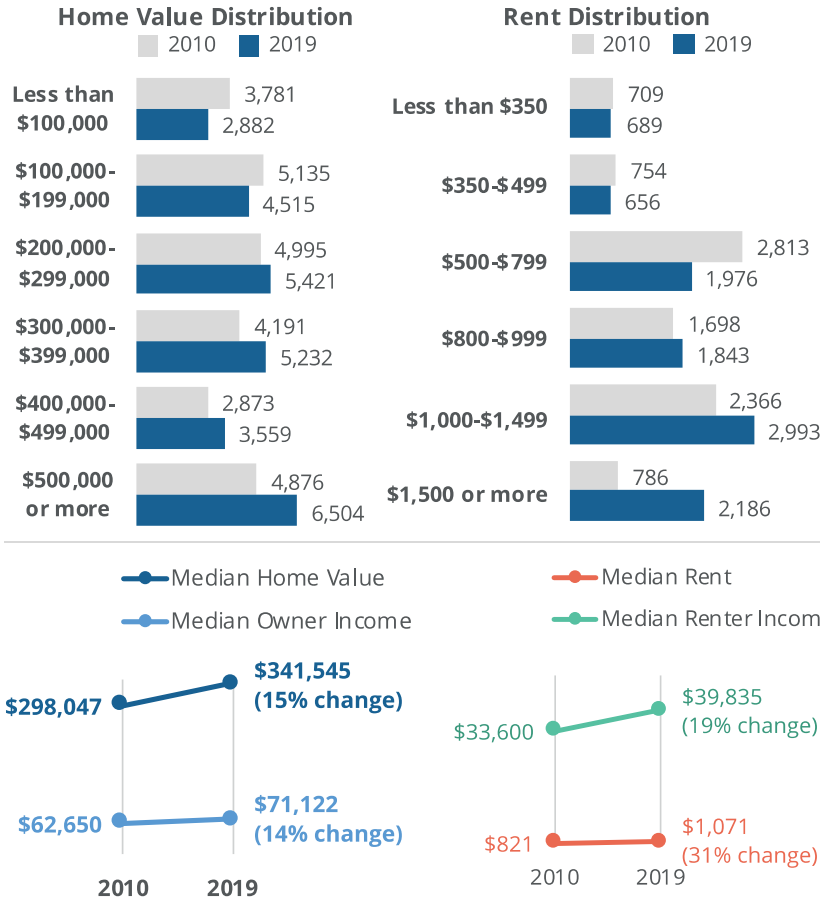
Between 2010 and 2019 housing costs shifted upwards for both owned homes and rentals—but mostly for rentals. Rental costs increased by 31 percent while renter incomes rose by 19 percent.

In 2010, the vast majority of rentals fell into the $500 to $799 per month rental category, the range affordable to low wage workers in key industries (restaurant and food service, housekeeping, tourism support). By 2019, most rentals fell in the $1,000 to $1,499 per month range, followed by rentals costing $1,500 per month and more.

Although home values shifted upwards as well, the changes were not as dramatic, and owner incomes increased at about the same rate.

Figure II-21 captures home values and rents of permanent residents; it does not include prices of seasonal and vacation homes or rentals.

Figure II-21.
Housing Price and Income Trends



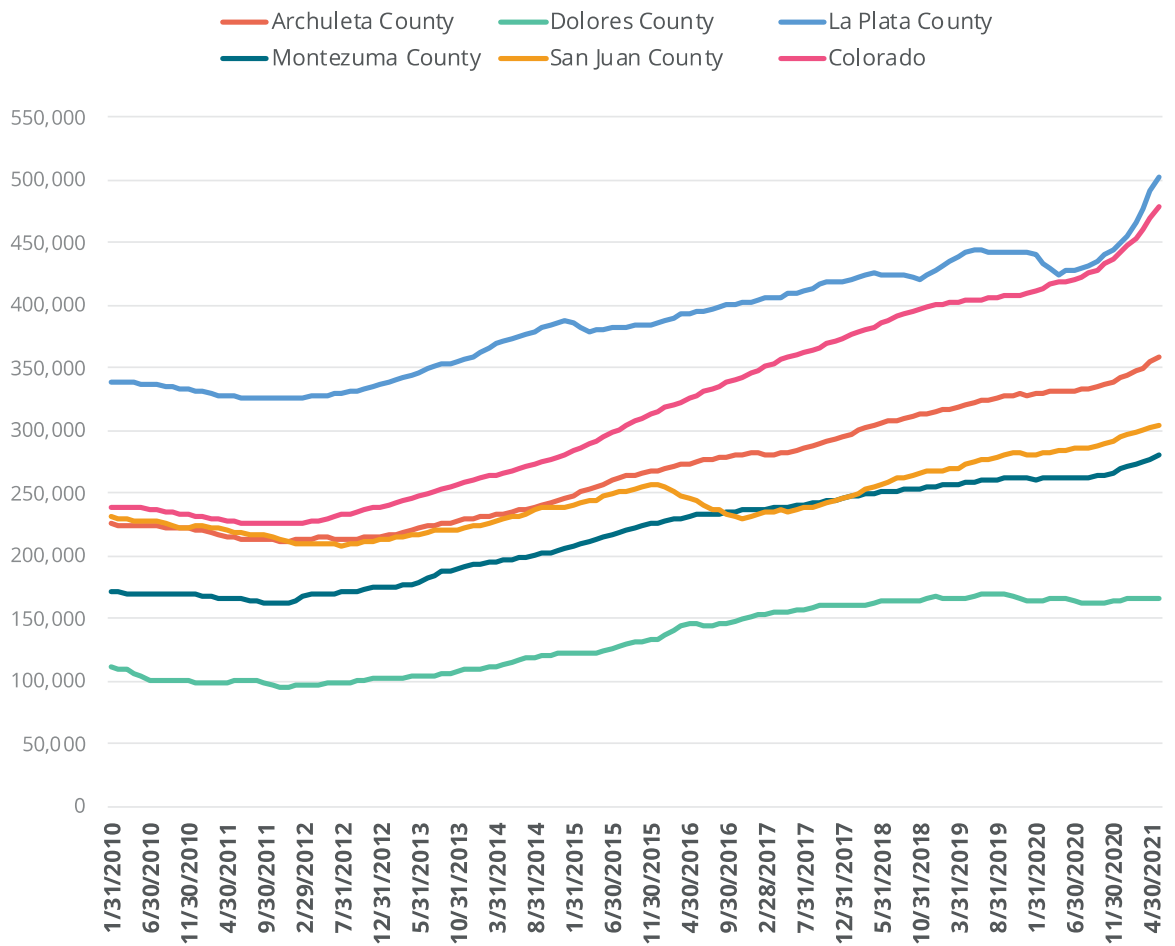
Source: 2010 and 2019 5-year ACS estimates and Root Policy Research.

Figure II-22, which relies on the price-tracking service Zillow, shows the rise in all home values, including homes occupied by permanent residents and seasonal and vacation homes, between 2010 and May 2021.

Home values in all counties except for La Plata have been lower than in the state as a whole, with this divergence becoming more pronounced after 2016. The relative affordability of the region compared to other Colorado communities inevitably increases demand in the region.

Except for Dolores County, where home values trends have been more even, the steepest increase in values occurred very recently—beginning in summer 2020.

Figure II-22.
Zillow Home Value Index



Source: Zillow.com.

Home sales and affordability. Multiple Listing Service (MLS) data and Home Mortgage Disclosure Act (HMDA) were used to assess trends in home sales prices. MLS data were available for La Plata and San Juan Counties and contain records through July 2021; HMDA data used for all other counties and contain through December 2020.

Since 2018, the values of sold homes have increased in all counties, with the most significant increases in San Juan (59%), Dolores County (46%) and La Plata (36% increase).

Figure II-23.
Increase in Median Value of Sold Homes, by County, 2018-2020 and 2018-2021

	Median Value of Sold Homes				Percent Increase, 2018-2020	Percent Increase, 2018-2021
	2018	2019	2020	2021		
Archuleta	$315,000	$355,000	$375,000		19%	
Dolores	$230,000	$210,000	$335,000		46%	
La Plata	$385,200	$385,000	$444,000	$525,000	15%	36%
Montezuma	$215,000	$250,000	$255,000		19%	
San Juan	$242,500	$272,000	$300,000	$385,000	24%	59%

Note: 2021 data were only available for La Plata and San Juan Counties.

Source: Home Mortgage Disclosure Act, CREN MLS, and Root Policy Research.

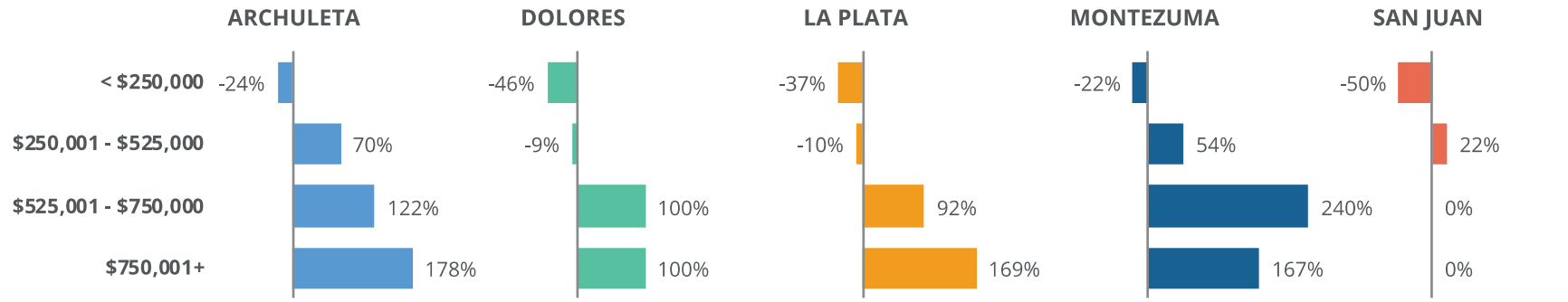
Figures II-24 and II-25 show changes in sales by price range. Home priced at $250,000 and less are roughly affordable to households earning 60 percent to 80 percent AMI depending on household size. Homes priced between $250,000 and $525,000 are affordable to a wide range of workforce households, including single-earner moderate wage households (most affordable homes) to double-income mixed wage households at the high end (more expensive homes).

Between 2018 and 2020 (2021 for La Plata and San Juan Counties), the number of homes for sale under $250,000 dropped by double-digit proportions. Home prices shifted upwards into higher sales price bands, with the largest shifts in homes priced at $525,000 and more.

If the 2021 trends exhibited by La Plata and San Juan Counties hold for other counties, affordable home sale inventory in 2021 could be at half to three-fourths of 2020 levels.

Figure II-24a and b.
Change in Sold Homes by Price Band, by County, 2018-2020 and 2018-2021

	# of Sales < $250,000				% Change	# of Sales $250,001 - $525,000				% Change	# of Sales $525,001 - $750,000				% Change	# of Sales $750,001+				% Change
	2018	2019	2020	2021		2018	2019	2020	2021		2018	2019	2020	2021		2018	2019	2020	2021	
Archuleta	109	77	83	N/A	-24%	162	219	276	N/A	70%	32	40	71	N/A	122%	18	30	50	N/A	178%
Dolores	13	10	7	N/A	-46%	11	6	10	N/A	-9%	0	1	0	N/A	100%	0	1	1	N/A	100%
La Plata	242	224	210	153	-37%	611	639	704	549	-10%	193	196	323	370	92%	111	107	230	298	169%
Montezuma	200	159	157	N/A	-22%	104	148	160	N/A	54%	5	8	17	N/A	240%	3	8	8	N/A	167%
San Juan	14	15	18	7	-50%	9	13	23	11	22%	1	4	6	1	0%	0	0	0	0	0%

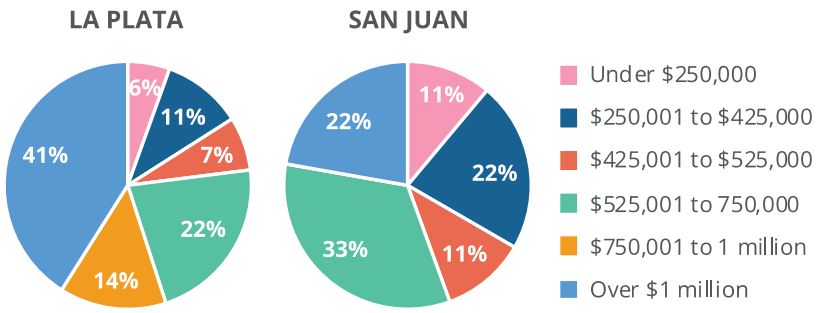


Note: 2021 data were only available for La Plata and San Juan Counties.

Source: Home Mortgage Disclosure Act, CREN MLS, and Root Policy Research.

As of July 2021, there were 200 active homes for sale in La Plata County and 11 in San Juan County. In La Plata County, **65 percent of those listings were priced at $750,000 and more**, with 41 percent at $1 million and more. This **compares to 22 percent of sold homes** priced at more than $750,000 in 2020.

Figure II-24c.
Price Distribution of Active Listings, La Plata and San Juan Counties, July 2021



Source: Home Mortgage Disclosure Act, CREN MLS, and Root Policy Research.

Figure II-25 shows, for La Plata County only, median sales prices by home type. Since 2015, appreciation has been strongest for condominiums and single family detached homes. The prices of townhomes, modular, and mobile/manufactured homes have also risen, but not as fast as single family detached homes or condominiums.

As home prices have increased and the inventory of more affordable homes has declined, government-backed mortgages that help low and moderate income and first time homebuyers have declined. As shown in the figure below, the decrease was largest in Dolores and San Juan Counties. Compared to other counties in the region.

Figure II-25.
Sold Price by Home Type and Percent Change, 2018-2021, La Plata County

	2018	2019	2020	2021	% Change
Single family detached	$448,400	$455,000	$515,000	$605,000	35%
Townhome	$362,000	$364,000	$423,500	$460,000	27%
Condominimum	$195,000	$224,000	$240,000	$302,500	55%
Manufactured/ Mobile home	$215,500	$199,950	$235,500	$239,000	11%
Modular home	$300,000	$297,400	$312,000	$385,000	28%

Source: Home Mortgage Disclosure Act, CREN MLS, and Root Policy Research.

La Plata County has a much smaller share of loans that are government-backed (an average of just 7 percent, compared to Montezuma County's much share of 37 percent.

The reason for the shift in loan products in San Juan County is related to cash sales (33% of loans were cash sales in 2021). This is not true of La Plata County; cash sales in La Plata County were unchanged between 2018 and 2021 at 28 percent of all loans.

Rents and affordability. Public investments in affordable rentals and tenant based rental assistance have helped stabilize the rental market for the region's extremely low income households. Since 2010, close to 300 affordable rentals

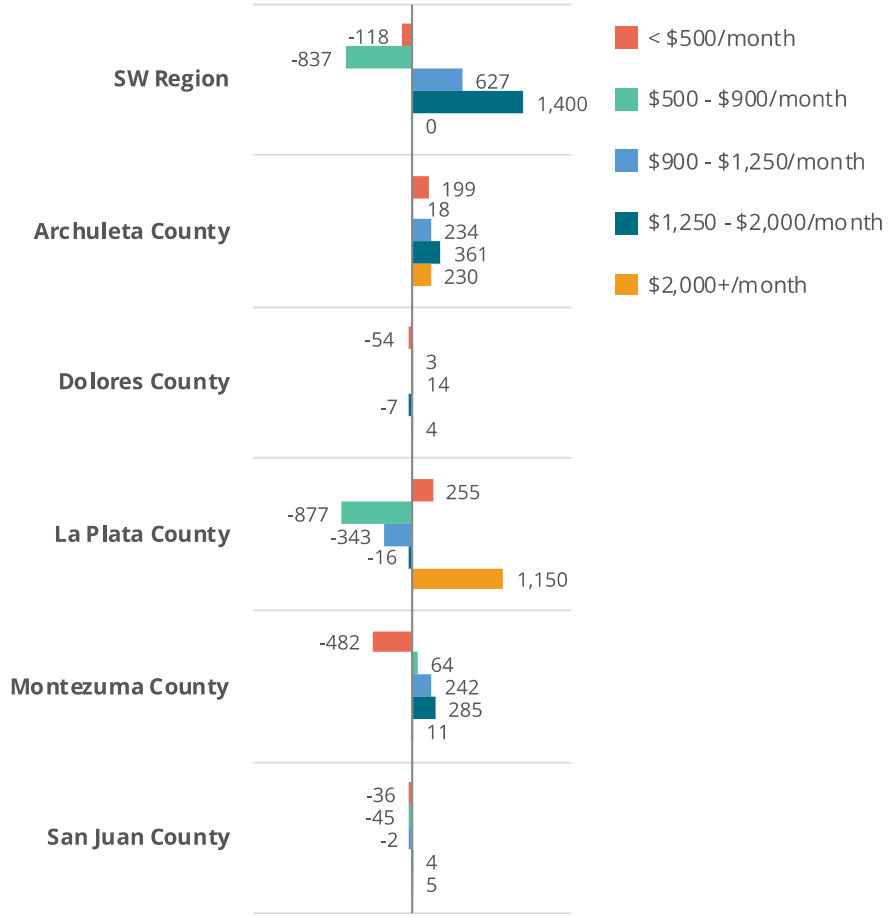
have been or are close to being developed, with the majority of those in La Plata County (Lumien Apartments, Senior Residences at Three Springs, and Espero), Montezuma County (Valley Sun Village, Calkins Common), and Archuleta County (Hot Springs Townhomes). Altogether, these represent 9 percent of all new housing units built since 2010.

Because of these investments, the inventory of deeply affordable housing has seen less fluctuation in reaction to market shifts than rentals priced for moderate income households in La Plata County. These units have not moved up in price as much as privately-provided units without affordability restrictions (also known as Naturally Occurring Affordable Housing, or NOAH).

Figure II-26 shows changes in rental units by rent range. In the regional overall, there was a net loss of units priced under $900 per month—roughly the rent that a household making $35,000 and less per year can afford—as those units shifted high rent brackets. This reduction was driven by a net loss of units in Montezuma County (units with rents of less than $500/month) and La Plata County (units with rents between $500 and $900/month).

Overall the region has nearly 1,000 fewer units renting for less than $900/month and 2,000 more renting at more than $900/month than in 2010. As discussed in the next section, some of these increases were absorbed by renters with higher incomes—yet the median-income renter saw rents rise much faster their incomes increased.

Figure II-26.
Change in Rental Housing by Price Range, 2010-2019

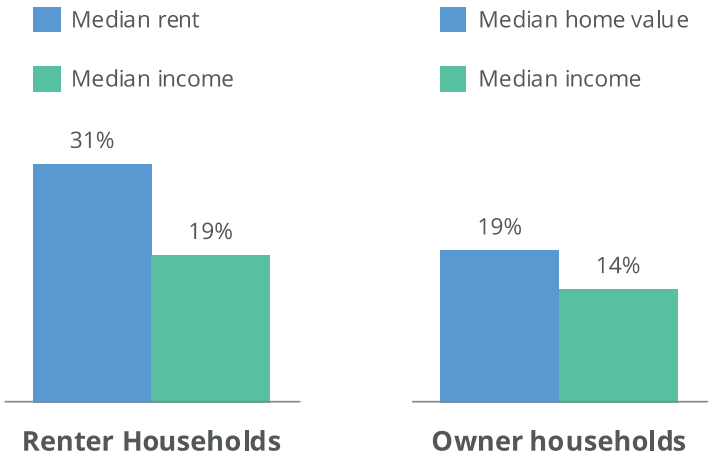


Source: 2010 and 2019 5-year ACS estimates and Root Policy Research.

Except for Archuleta and La Plata Counties, all counties experienced a decline in deeply affordable rental units, with Montezuma County's inventory of affordable rentals dropping by nearly 20 percent.

Incomes lag price increases. As demand for housing by high-income households and investors has grown, the market has behaved as would be expected—with price increases. Although some permanent resident households have seen their incomes increase, overall incomes have significantly lagged overall price increases as demonstrated in the figure below.

Figure II-27.
Change in Permanent Resident Renter and Owner Income v. Housing Costs, 2010-2019



Source: 2010 and 2019 t-year ACS estimates and Root Policy Research.

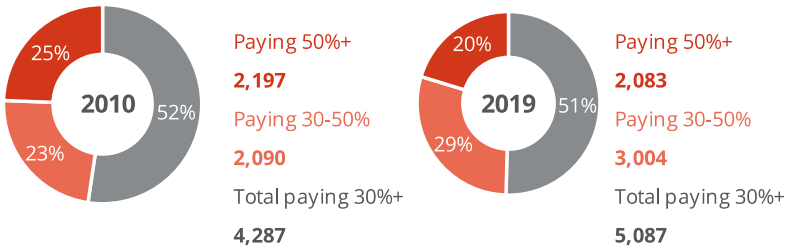
Cost burden. The result rental cost increases has been an increase in housing cost burden. Cost burdened households pay 30 percent or more of their gross household income in housing costs, which is above the industry standard for renting or homebuying. Those who pay more than 50 percent are "severely" cost burdened. The higher the cost burden, the greater the risk of eviction or foreclosure.

As of 2019, approximately 5,000 renters and 6,400 owners in the region were cost burdened.

The number of renters in the region who are cost burdened increased by 800 between 2010 and 2019 (4,287 in 2010 v. 5,087 in 2019).

The numbers and share of severely cost burdened renters decreased—a positive trend overall. However, at least some of the decrease is related to displacement of renters from the region.

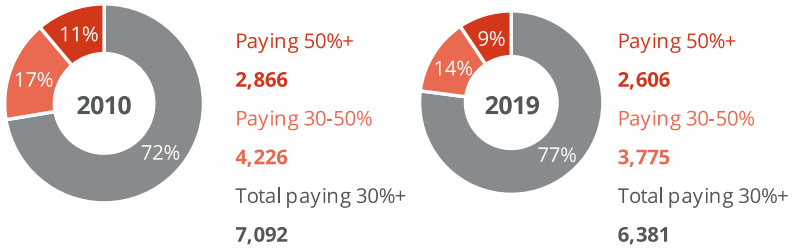
Figure II-28.
Renter Cost Burden



Source: 2010 and 2019 5-year ACS estimates and Root Policy Research.

As shown in the following figure, the overall number of cost burdened owners declined by 700 owners. This is likely related to an influx of higher income households who were better equipped than 2010 owners to manage the costs of ownership more so than an increase in owner income (see Figure II-27). .

Figure II-29.
Owner Cost Burden



Source: 2010 and 2019 5-year ACS estimates and Root Policy Research.

Housing Gaps

To determine the housing needed to accommodate future growth, a demand model was built for the region and each of the five counties included in this study.

In the SWCCOG region, housing demand is created primarily through:

1) New jobs that are filled by workers from outside of the region;
2) Non-worker households who do not own moving into the region; and
3) Seasonal and vacation owners.

The movement of current owners of units into the region permanently does not create new housing demand unless they are renting to workers who are displaced by their move.

Historical growth and needs. Since 2010, the region has added slightly more than 6,000 jobs and nearly 3,000 housing units. Ordinarily, this volume of development would meet workforce demand if each household averages two workers. However, the region's housing unit growth was inadequate to meet employment needs because many of those units were not occupied by workforce. Newly developed housing was instead purchased by seasonal and vacation owners.

Short term growth and needs. In order to meet the employment growth projected by Region 9 Economic Development, the region will need to add 775 new housing unit for workforce and 126 beds to accommodate seasonal employment surges.

The region should also address current unmet needs. The short term demand model assumes:

1) A 25 percent reduction in cost burdened households, and
2) Creation of units that enable 10 percent of moderate income renters to buy (thereby freeing up the rental units they currently occupy).

HOUSING NEEDS

Housing targets. Recommended housing targets for the next 3-5 years are based on:

- Units needed to address renter cost burden. These affordable rentals should ideally be priced at $625/month and less, the price point at which rental gaps are the most severe. This target accounts for affordable in the development pipeline;
- Seasonal surge beds to house peak period workforce;
- Rental units for low wage workforce. This assumes a 2-earner household with both low-wage earners (earning $35,000 per year and less);
- Rental units for new moderate wage workforce could be partially accommodated if a segment of moderate wage workers can find affordable homes to buy; and
- New ownership units for moderate wage workforce.

Meeting these targets would require an average annual development of about 310 units, with all of these units for permanent residents. Additional units for seasonal and vacation ownership would be in addition to these units.

These targets are twice as high than the average annual development in the past decade and do not account for seasonal and vacation unit development. As discussed in this section, historically, new housing has favored occupancy by seasonal and vacation owners.

Future growth. Based on forecasts by the Colorado State Demographer, by 2040, the region could reach 130,650 residents—31,457 more residents in the region than today. At 2.43 people per household (currently the regional average), approximately 18,142 housing units are needed to accommodate this growth. This is equivalent to an annual average of 907 units per year. This is much higher than historical volume because it accounts for seasonal and vacation demand and fully accommodates workforce.

As discussed above, growth will be largest in two age cohorts: 25 to 54 year olds, and 75+ year olds. These groups will have very different housing preferences and needs. Expansions in home health care, first floor units, and assisted living facilities will be needed to accommodate older seniors who choose to remain in the county. Working age adults with children typically prefer moderately sized, affordable homes with outdoor space—which both attached and detached products can accommodate.

The region will need to develop differently to manage this growth and meet other objectives—such as preservation of open space and protection of the environment. Land use modifications to allow denser, attached products coupled with programs (worker preference, first right of refusal) will be critical to ensure that the region maintains quality of life and needed services for permanent residents.

HOUSING NEEDS

Current and Future Housing Needs and Targets

	Region	Archuleta	Dolores	La Plata	Montezuma	San Juan /Silverton
Historical growth and needs: 2010-2019						
Change in jobs since 2010	6,108	1,563	297	3,587	560	101
Housing units needed to accommodate new jobs	3,054	782	149	1,794	280	51
Change in housing units	2,921	611	113	1,965	237	(5)
Change in occupied housing units	1,204	591	(140)	694	114	(55)
Short term needs: 2021-2023						
Housing needed to accommodate employment demand	775	201	38	453	70	13
Rentals (low wage jobs)	397	103	20	232	36	7
Rentals (moderate wage jobs)	189	49	9	111	17	3
Ownership (moderate wage jobs)	189	49	9	111	17	3
Seasonal surge beds	126	44	11	45	12	14
Housing targets for permanent resident units, 2021-2024						
Total new units for new employment + address 25% of existing needs	933	229	41	570	220	22
Net new units for 25% of renter households with unmet needs, < $625/month	152	28	3	118	-	3
New rentals for workforce, < $1,750 /month	398	103	20	232	36	7
New units for ownership, $380,000-$525,000	830	145	16	473	184	13
Average annual new units (3 years)	*311*	*76*	*14*	*190*	*73*	*7*
v. Average annual change in occupied units 2010-2019	*134*	*66*	*(16)*	*77*	*13*	*(6)*
Seasonal surge beds	126	44	11	45	12	14
Long term housing needs, employment+seasonal demand, 2020-2040						
Projected new permanent residents, 2040, State Demographer	31,457					
Total new units	18,142					
Worker and retiree demand	14,812					
Seasonal and vacation demand	3,330					
Average annual need	*907*					
v. Average annual change in occupied units 2010-2019	*134*					

SECTION III.

HOUSING STRATEGIES

HOUSING STRATEGIES

INTRODUCTION

This section of the Southwest Colorado Council of Governments (SWCCOG) and Housing Solutions for the Southwest's Regional Housing Needs Assessment & Strategy contains the consultant recommendations for addressing needs.

Most of the counties and major towns and cities in the region have conducted housing needs assessments—and some have developed strategic plans or roadmaps for addressing needs. These recommendations are intended to complement those plans and to facilitate a regional, coordinated approach, to addressing the region's housing challenges.

SHORT TERM NEEDS

The recent surge in demand for housing in the region is consistent across counties. Between 2010 and 2019, **no county was able to keep up** with demand for housing to accommodate employment growth and demand for seasonal and vacation housing.

Going forward, the region will need to develop differently:

1) Development planning will need to more intentionally consider the competing interests of workforce housing and seasonal and vacation homes.

2) Development planning will need to embrace land use alternatives as a solution to manage housing demand and meet other objectives of open space preservation and protection of the environment.

As discussed in Section II, in the next three to five years—between now and 2024—the region should, at a minimum, achieve the following housing targets:

- **Develop 152 deeply affordable rental units** to assist renters who are cost burdened and vulnerable to displacement and homelessness. These affordable rentals should ideally average $625/month, the price point at which rental gaps are the most severe, regardless of location within the region. This target number accounts for affordable in the development pipeline. This can be achieved by creating units that have housing subsidy attached or that are rented to households who were issued a Housing Choice Voucher, heavily subsidizing rent.

- **Preserve the 100 affordable rentals** whose affordability restrictions will expire in the 3-5 years. An estimated 100 affordable rental units currently have rent restrictions associated with their public subsidies that are set to expire between now and 2027. Plans for preserving these units should be developed now to ensure that funding is available to keep these units affordable.

- **Approach seasonal surge housing** through tiny home developments and repurposing of aging motels and hotels or similar structures. An estimated **126 beds** are needed regionwide to accommodate seasonal surges, with most—about 45 each—needed in Archuleta County and La

Plata County. These units differ from the deeply affordable rental units needed (prior bullet) in that they are not permanently income-restricted units. Instead, they are affordable due to their housing type (dormitory- or tiny home style housing) and restricted to workforce (via public or employer funding).

- **Create new moderate-priced multifamily rental developments** for low to moderate wage workforce. Nearly **400 units** are needed for a 2-earner household with both low-wage earners (earning $35,000 per year and less);

- **Focus on moderate wage ownership.** This could be accomplished by master-planned workforce communities, such as those developed other rural resort communities. Increasing ownership opportunities for workforce would help mitigate the acute need for affordable rental units. This study estimates that the region could absorb 830 ownership units priced between $380,000 and $525,000 for current moderate-wage renters who desire to become owners and new workforce. In addition, an opportunity exists to help transition mobile home parks to cooperative ownership by residents who own homes within the park.

Meeting these targets would require an average annual development of 310 units during the next 3 years, with all of these units for permanent residents. Units for seasonal and vacation ownership would be in addition to these units.

These targets are a little more than twice as high than the average annual development in the past decade; accounting for seasonal and vacation unit development adds to the target number of units. As discussed in this section, historically, new housing has favored occupancy by seasonal and vacation owners. A shift towards accommodating workforce is needed to improve the balance between jobs growth and housing.

LONG TERM NEEDS

Long term housing needs, based on forecasts by the Colorado State Demographer, are significant, and would require increasing annual residential development to about 900 units per year on average (compared to 130 per year between 2010 and 2019) to accommodate both workforce and seasonal/vacation demand.

A long term strategy should focus on utilizing land use reform and infrastructure expansions to catalyze more efficient and environmentally-friendly growth.

CONSULTANT RECOMMENDATIONS

This section contains recommendations for priority strategies employed by the five counties and cities in Colorado's the southwest region to address housing needs. These recommendations anticipate new funding sources from the state's Department of Local Affairs and Division of Housing (both federal flow-through and state-generated funds).

HOUSING STRATEGIES

Although this study did not include an evaluation of organization capacity, it did review the organizations the region that develop and manage affordable housing and which provide housing and supportive services. The region has a relatively traditional yet comprehensive network of housing and supportive service providers. The region's providers are also cohesive, there is little duplication of services, and all communities have invested in studies to understand needs. Many have been proactive in acquiring, repurposing, and/or preserving land for affordable housing. Stakeholders surveyed for this study rated organizational capacity as a moderate factor contributing to housing challenges. The region's housing challenges would be much worse without the organizational commitment and investments in housing.

That said, it is important to acknowledge that current housing challenges—and the state's housing market—is unlike anything experienced historically. **Additional staff capacity and funding resources**—within jurisdictions, within regional organizations, and for regional housing providers—**must be prioritized** to narrow the gaps between housing needs and housing supply.

Recommendation 1. Formalize a regional approach to addressing housing needs.

Southwest Colorado is home to a unique collection of communities that provide a wide spectrum of housing and community choices for residents, second homeowners, and visitors. Each community is facing growing challenges in the delivery of housing.

The increasingly cross-dependent nature of the region's housing market necessitates a stronger, more intentional approach to addressing housing needs.

Until recently, policymakers and stakeholders have not regularly convened to discuss regional housing needs and strategies. Instead, the counties and towns have developed strong independent plans and strategies to address housing needs. These plans all assess market conditions and estimate housing needs, but vary in their approaches to housing solutions. Implementation of the most ambitious and potentially most effective solutions require additional capacity and resources—which a coordinated approach could help achieve.

Formalizing a regional approach would consist of the following:

a. **Set regional housing goals.** Beginning with the estimates of housing need, by county, in the Housing Needs section of this report, establish annual and five-year goals for development of intentional workforce housing and seasonal surge beds. The goal could be stated as a proportion of new housing developed and all housing units overall. Then, set county and town/city goals and orient the regionwide action plan around those collective efforts.

CASE STUDY: The Boulder Valley Regional Partnership was developed through a strategic planning effort involving jurisdictional housing departments, human service departments, and housing authorities. Some of the communities in the Valley had set individual goals and housing plans, and the regional plan enabled them to align those goals and strategies to achieve a more coordinated approach.

b. **Develop a regionwide housing action plan.** Development of a regional action plan would begin by compiling the independent, local housing strategies and roadmaps for alignment and potential conflict. Counties and towns/cities would tailor their approach to meeting individual goals (and meeting the regional goal) to available resources, capacity, and political will.

c. **Formalize regional leadership.** The SWCCOG Board recently established a subcommittee to expand regional leadership for addressing housing needs. This subcommittee would be a natural body to facilitate and coordinate, and then manage implementation, of a regionwide housing action plan.

d. **Meet regularly.** Regional leadership should meet monthly to discuss progress toward achieving jurisdictional, county, and regional goals, share progress on local initiatives, coordinate on funding applications, collectively troubleshoot roadblocks, and coordinate on state and federal initiatives and policymaker communication.

For example, Durango's housing plan focuses on land use changes to accelerate production of units by the private market to serve workforce. Durango is also in the process of revising its inclusionary housing ordinance. As the largest city in the region, Durango has the ability to be a leader in land use changes to support affordable housing and its successes and challenges can serve as a framework for others.

Recommendation 2. Repurpose, acquire, and bank land.

The public sector has very limited control over prices set by the private market. One way to achieve price reductions is to require that affordable housing be part of private development when it is built on publicly owned land. Another method is to set aside public land specifically for affordable and mixed-income housing.

Many of the communities in the region have land banking in their housing plans, and these actions should be more concerted as regional (trust fund) or state funds become available.

Towns and cities should also consider requiring affordable units as part of developments built from annexations. In the Town of Breckenridge, annexed properties are required to

provide 80 percent of their project units in deed restricted housing in exchange for access to utilities.

Recommendation 3. Apply for state funds to make needed land use and zoning regulatory changes, identify public land, and qualify for additional funding to create affordable housing.

A new state funding source available from DOLA beginning in fall 2021 will help communities make investments, including updating land use regulations and zoning codes and identifying available public land, to facilitate affordable housing creation. Once such commitments are demonstrated, cities and counties are eligible to apply for additional and larger grants ("housing development incentives grant").

Land use and zoning changes to facilitate affordable housing are new in many high-cost communities. These changes can include density bonuses for certain housing types and/or in exchange for a share of affordable units; by-right Accessory Dwelling Units (ADUs); and by right attached housing products (townhomes, duplexes/triplexes, mixed-use development). To ensure that these changes produce workforce housing, they must be coupled with affordability requirements, as well as public subsidies to lower construction costs, first rights of refusal for workforce, and downpayment assistance for homeowners. Otherwise, such products will be unaffordable and/or built for seasonal and vacation use.

One of the biggest challenges in the southwest region is attracting developers to build a relatively small number of units and to navigate various regulatory codes and approval processes. If the region is able to come together and ensure developers volume, predictability, and efficiency, the region will be more competitive.

To that end, the region should apply for a state grant to identify, study, and entitle land for affordable and mixed-income development—a regionwide plan to transform that land into affordable housing communities.

Grant funds would be used to:

- Identify and assess the developability of land owned by the public sector or which could be relatively easily acquired by the public sector;
- Study the economic feasibility of building affordable and mixed income housing on the identified sites, including the programs that would need to be in place to ensure affordability; and
- Update city and county codes to ensure that development on the sites would occur in a streamlined fashion (e.g., administrative approval, by right zoning, through an affordable housing overlay).

A future incentive grant could then be used to:

- Master plan the communities, including extending and financing infrastructure;
- Create a design book of allowed housing prototypes, especially for attached housing products and ADUs;
- Design programs to ensure a balance of wealth-building and preservation of affordable housing; and
- Establish partnerships with developers.

CASE STUDY: The City of Austin's Affordability Unlocked program provides density bonuses and by-right development approval for development of low to moderate income housing. Since implementation, the program has generated permits for more than 2,000 affordable housing units.

Recommendation 4. Develop a regional trust fund, raise revenue, and leverage to get units on the ground quickly.

Both the City of Durango and Archuleta County's housing plans acknowledge the need for additional resources to support affordable housing and contain comprehensive assessments of potential funding sources. Archuleta County's plan examines the annual potential revenue from various sources; that analysis demonstrates that meaningful revenue levels are only possible through a large employer head tax ($725,000 annual revenue), a voter-approved large sales tax increase ($1 million annual revenue), or a voter-approved property tax increase ($1.6 million annual revenue).

Stakeholders engaged for this study agreed that new funding for affordable and workforce housing production is needed to have any significant impact on housing needs and create a more balanced housing stock. Ideally, this would be a regional dedicated source of flexible funding.

A regional funding source would have several advantages: It would generate a volume of funding that could provide meaningful support for affordable housing projects (v. generate smaller amounts of funding locally that are inadequate for gap financing); a voter-approved tax may be easier to pass at a regional level because it does not put any one community at an economic disadvantage; and regional resources will help secure state funding by providing funds to meet local "match" requirements.

For example, Bayfield is well positioned to increase its workforce housing stock—it has access to water, utilities, and some land. Development of workforce housing in Bayfield is constrained by funds to subsidize construction.

REVENUE CASE STUDIES: Summit County has voter-approved local sales tax. In 2017, $9.4 million was collected and distributed proportionally to each municipality in the county based on revenue generation.

Another revenue source for consideration would be a tax that targets high-value properties, many of which are kept for seasonal or vacation use. The Town of Snowmass imposes an excise tax on residential units that exceed 500 square feet

(some communities refer to such taxes as a "mansion tax") That fund generates between $250,000 and $1 million of revenue annually that is dedicated to workforce housing.

Recommendation 5. Develop workforce housing communities.

While not all policymakers embrace deed-restricted housing, in markets where costs are accelerating and development cannot keep up with demand, deed-restricted communities are a sure mechanism to provide workforce housing. Several could be supported in the region.

A study of the impact of workforce housing in Breckenridge found that the town's workforce housing accounted for 60 percent of growth in families with children; increased permanent resident occupancy; decreased in-commuting by 100,000 vehicle-miles each week; increased local expenditures; and provided locals with housing options that were more price-stable during recessionary periods.

The housing needs model built to support this study provides guidance on the types and price points of units that would be a target for workforce housing.

CASE STUDY: The Wellington and Lincoln deed-restricted communities in Breckenridge provides 226 deed-restricted and 56 market rate owner- and renter-occupied units. The land was originally dredge rock, annexed by the town; the town also provided $2.75 million in plant investment fees to support the development.

Recommendation 6. Incentivize property owners to rent long-term.

According to a 2021 survey of property owners in Colorado mountain communities,[1] the vast majority of property owners leave their units vacant when they are not occupying them. Only 1 percent of owners who occupy their units on a part-time basis rent their units long term (defined as more than 6 months at a time); another 4 percent rent between 1 and 6 months. Nearly one-quarter of part time residents rent short term (less than 1 month at a time).

When part-time residents were asked if they intend to change the use of their home in the next 3 years, the vast majority said they do not: 8 percent said they would change to rent short-term and only 2 percent said they would change to rent long-term.

The survey results suggest that some part-time owners may be incentivized to keep or convert their units into long term rentals—but the number of units that will produce is likely to be small. As such, the best strategy may be convincing property

[1] This survey represents residents in Eagle, Grand, Pitkin, Routt, San Miguel, and Summit Counties. SWCCOG counties were not included in the survey; however, the survey concludes that the data can provide "widespread insights for other high amenity places in the Mountain West."

owners of long term rentals to keep those units in long term rental status.

The region needs an incentive program that would make it easier for landlords with long term rentals to run their businesses including supplemental security deposits to insure against property damage; assisting tenants with first and last month rent deposits; supporting property management functions; and offering rehabilitation loans and direct payments to smaller (non-investor) landlords.

These should be coupled with disincentives for owners to keep their properties vacant or in STR status—e.g., license and annual fees and continued STR regulations that set caps, require applications, and set property quality standards.

The Colorado Division of Housing's (DOH) Strategic Housing Working Group recommended in July 2021 that DOH consider developing a program to provide funding for landlords to keep units in long-term rental status. Assistance from DOH would be provided in the form of assurance to a landlord for payment of last month's rent and security deposits. Participating landlords would be required to accept rental assistance, offer reasonable rents, carry a one-year lease, keep their property in good condition, and offer a transparent and friendly rental application. Local housing agencies with matching financial support would develop, implement, and administer a localized master lease program.

The region should apply for such funding when it becomes available. Alternatively, the region could establish a program and seek DOH funding once available.

APPENDIX.

COUNTY DATA

2021 Income Thresholds & Typical Housing Options

Income levels assume a 2-person household.

Income Threshold		Affordable Rents		Housing Options
"extremely" low income				
$17,650	Archuleta, Dolores, Montezuma, San Juan counties	**$441**/mo.		Rental tax credit developments, mobile homes, nonprofit housing providers.
$21,050	La Plata County	**$526**/mo.		
"very" low income				
$29,400	Archuleta, Dolores, Montezuma, San Juan counties	**$735**/mo.		Rental tax credit developments, mobile homes, nonprofit housing providers, employer assisted housing. Shared equity and land trust for homeownership.
$35,100	La Plata County	**$878**/mo.		
"low" income				
$47,050	Archuleta, Dolores, Montezuma, San Juan counties	**$1,176**/mo.		Privately provided rental housing if available. Ownership with shared equity, land trust, other deed-restricted products, attached homes, homes in outlying affordable areas.
$56,150	La Plata County	**$1,404**/mo.		
"moderate" income				
$47,051+	Archuleta, Dolores, Montezuma, San Juan counties	**>$1,176**/mo.		Privately provided rental housing if available. General target for homeownership programs; can buy without assistance in outlying affordable areas.
$56,151+	La Plata County	**>$1,404**/mo.		

APPENDIX: COUNTY DATA

CONTENT & PURPOSE

This appendix to the Housing Needs Assessment provides additional information on trends and needs for the five counties included in the SWCCOG region.

This appendix is complemented by a searchable and updatable data dashboard that contains key housing supply, demand, employment, and affordability metrics for:

- Archuleta County and Pagosa Springs;
- Dolores County and the Towns of Dove Creek and Rico;
- La Plata County and the Towns of Bayfield, Ignacio, and Durango;
- Montezuma County, the City of Cortez, and the Towns of Dolores and Mancos; and
- San Juan County and the Town of Silverton.

That dashboard can be found at this link and allows comparisons among counties, cities and towns, and to the region overall.

Data elements include:

- **Changes in Housing Units by Type**—compares growth in non-seasonal occupied units and seasonal unoccupied units and affordable rentals. The data in this tab provide inferences about how well the housing stock is accommodating the needs of workers relative to seasonal and vacation owners;
- **Short Term Rental (STR) Activity**—shows trends in units listed for second and investment properties;
- **Housing Costs and Household Income**—compares changes in income to changes in housing costs and shows how well renters and owners have been able to keep up with housing cost increases. Also reports the number and change in "cost burdened" renters and owners who are paying more than 30 percent of their incomes in housing costs;
- **Job Growth and Where Workers Live**—compares job growth to household growth and the resulting need for in-commuters to fill jobs.

The remainder of this report contains the primary takeaways from the housing needs assessment by county and primary city/town.

APPENDIX: COUNTY DATA

ARCHULETA COUNTY

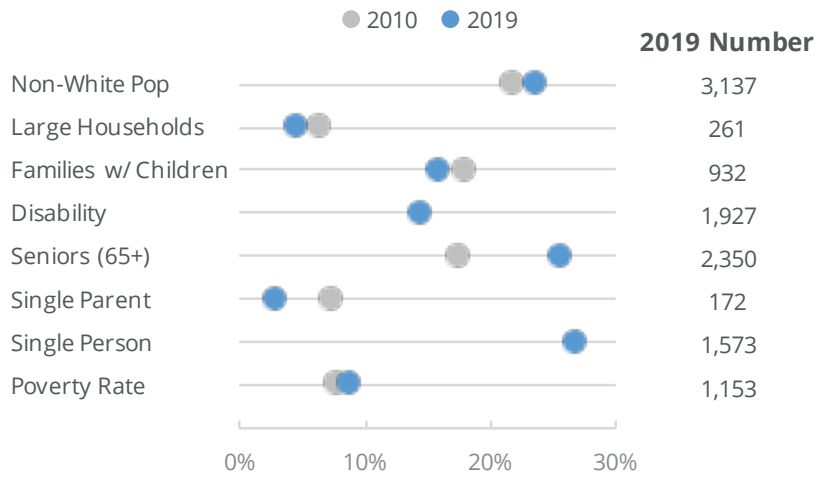
Compared to other counties in the SWCCOG region, Archuleta County demonstrated unique trends in demographics, household income distribution, and units occupied by permanent residents between 2010 and 2019.

Except for significant growth in the county's senior population and a slight proportional decline in single parent households, the county's socioeconomic make-up changed little between 2010 and 2019.

The county's income trends differ from other counties in the region in many ways:

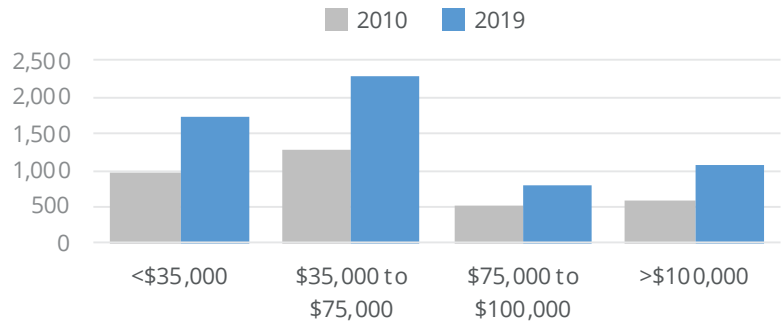
- The county's overall median income dropped between 2010 and 2019, from $61,969 to $52,221—a 16 percent decline. This was due to a **drop in the median income of owners**, which fell by 5 percent. The median income of renters increased significantly, by 29 percent.
- Archuleta County is the only county in the region that did not show a decline in households with incomes of less than $35,000 between 2010 and 2019. The most significant increase in households by income ranges was for the $35,000 to $75,000 cohort. In all other counties, the largest increases occurred in the $100,000+ income cohort.

Figure A-1.
Socioeconomic Make-up



Source: 2010 and 2019 5-year ACS estimates and Root Policy Research.

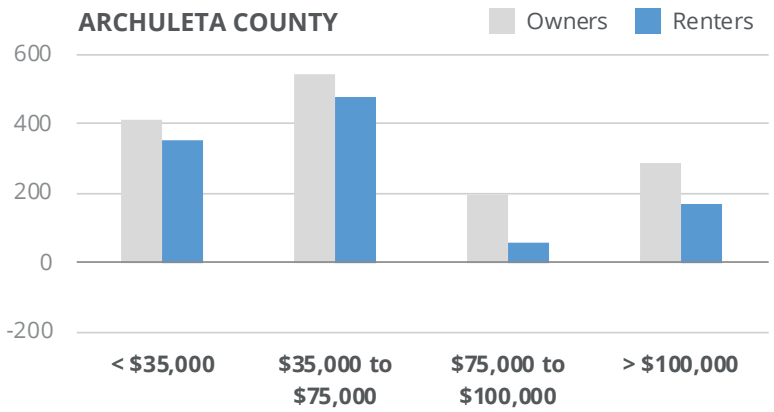
Figure A-2.
Household Income Distribution



Source: 2010 and 2019 5-year ACS estimates and Root Policy Research.

APPENDIX: COUNTY DATA

Figure A-3.
Shifts in Household Income Distribution by Tenure, 2010-2019

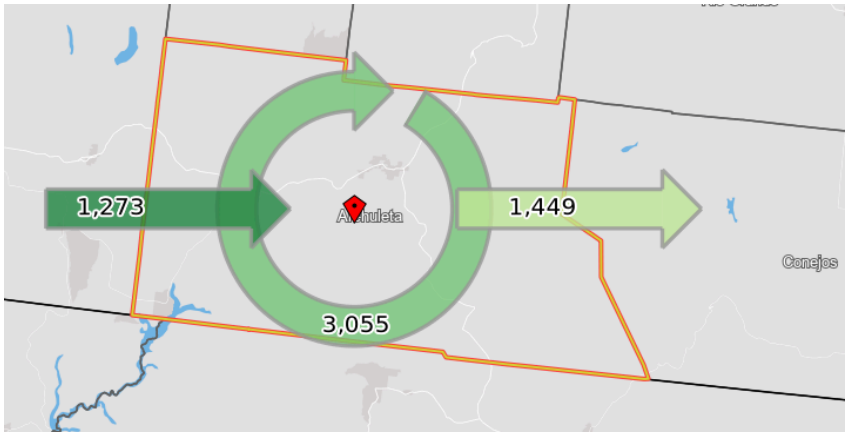


Source: 2010 and 2019 5-year ACS estimates and Root Policy Research.

As of 2018, the latest date for which in- and out-flow data are available, 4,328 workers were employed in Archuleta County. An estimated 1,273 lived outside of the county and commuted into jobs in the county. An estimated 1,449 county residents commuted to jobs outside of the county. And 3,055 were able to both live and work in the county, equal to 71 percent of workforce.

Compared to 2010, 624 more workers commute in and 251 more commute out, and 978 more workers are able to both live and work in the county. Overall, however, the share of workers who live and work in the county declined from 2010 (76% in 2010).

Figure A-4.
Worker In- and Out-Flows, 2018



Source: Longitudinal Employer-Household Dynamics, U.S. Census, 2018.

Archuleta County has 611 more housing units than in 2010 according to Census estimates, and the number of permanently occupied units grew by 591. The county's growth in permanent residents was higher than any other county in the region at 2 percent. Part of this change was due to second homeowner retirees moving into the county permanently.

Yet the **county still struggled to add enough units for workforce**. An estimated 800 additional units for permanent residents was needed to fully accommodate job growth and minimize in-commuting.

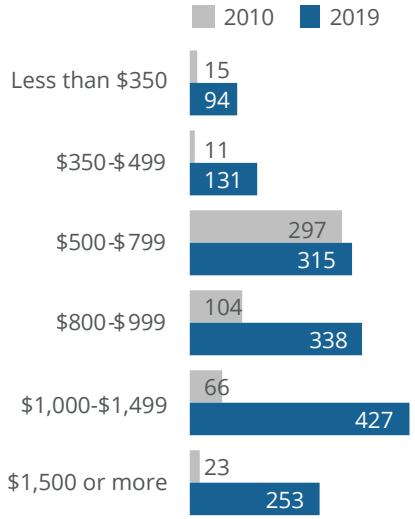
In sum, the county did a good job of increasing the share of units for workforce between 2010 and 2019—but more were needed to accommodate employment demand, including jobs related to growth of retirees and tourism.

APPENDIX: COUNTY DATA

Median rent increased by 28 percent between 2010 and 2019, from $753/month to $961/month. The median income of renters kept pace with this increase.

Yet renter **cost burden rose significantly**, as the lowest income renters had a hard time keeping up with shifting rents—even as the market added a significant number of affordable and market rate rentals, as shown below. There were 530 more cost burdened renters—those paying more than 30 percent of their incomes in housing costs—in 2019 than in 2010.

Figure A-5.
Rent Distribution



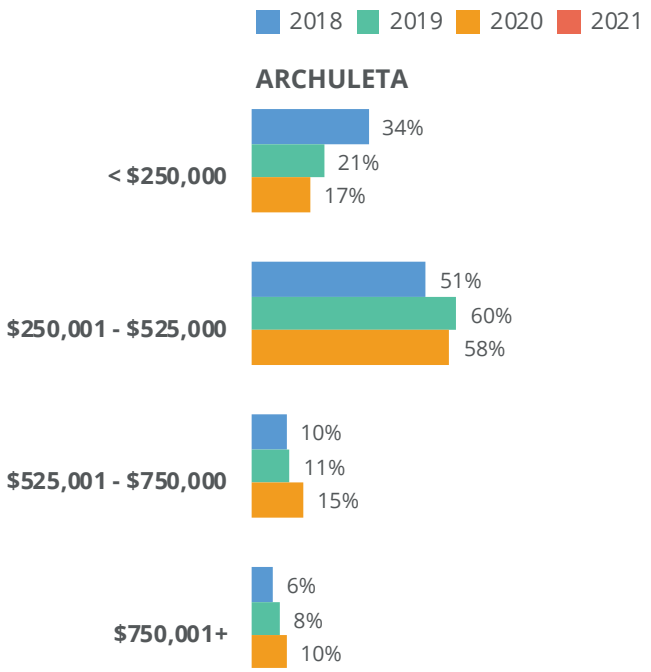
Source:
2010 and 2019 5-year ACS estimates and Root Policy Research.

Owner cost burden also rose between 2010 and 2019, by 435 households.

Between 2018 and 2020, the median value of sold homes in the county rose by 19 percent—about average for the region. The number of homes sold and priced between $250,000 and $500,000 rose by 70 percent, far higher than any other county (Montezuma County's inventory rose by 54%).

As shown in the figure on the next page, for sale home prices are shifting upwards overall, and, if current trends continue, 2021 will end with dramatic price increases and loss of affordable homeownership opportunities in the county. Compared to 2018, there are far fewer homes priced at less than $250,000 and far greater high cost homes.

Figure A-6.
Change in Sold Homes by Price Band, 2018-2020 and 2018-2021



Note: 2021 data were only available for La Plata and San Juan Counties.

Source: Home Mortgage Disclosure Act, CREN MLS, and Root Policy Research.

A **housing needs forecast** developed for this study projects that the county will need 229 new permanent units and 44 seasonal surge beds in the next 3-5 years to accommodate workforce growth and address some of the county's unmet housing needs. This is a little higher than the pace of housing growth the county has maintained since 2010. However, past growth has accommodated both workforce, seasonal/vacation homes, and retiree demand. Going forward, a stronger focus on accommodating workforce housing needs will be critical to sustain the county's level of service to permanent residents and tourists.

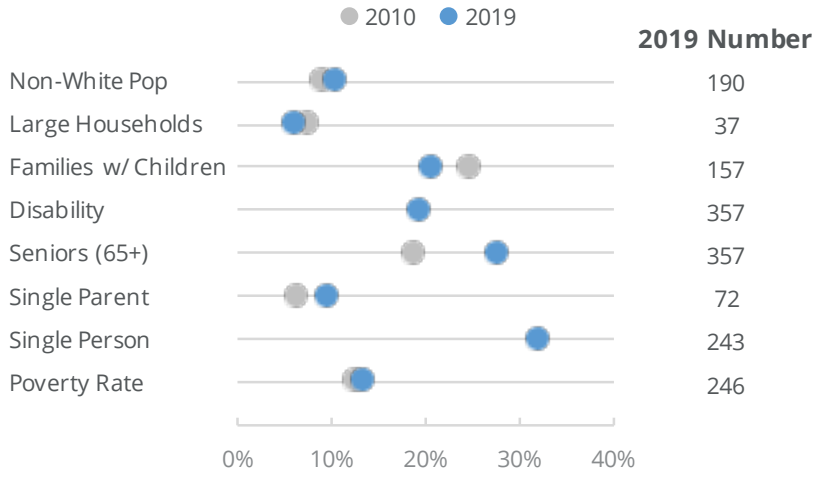
APPENDIX: COUNTY DATA

DOLORES COUNTY

The most significant changes in Dolores County between 2010 and 2019 were the growth of seniors and high income households and conversion of homes occupied by permanent residents into units for seasonal and recreational use. The county's housing unit growth was strong relative to other counties in the region, yet strong demand for seasonal and vacation use limited the benefit of unit growth for workforce.

Demographically, the county experienced **a large increase in its senior population**, a modest increase in single parent households, and a modest decline in the proportion of households who are families with children.

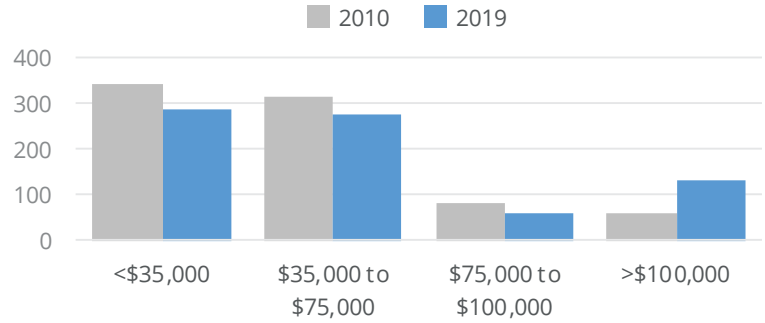
Figure A-7.
Socioeconomic Make-up



Source: 2010 and 2019 5-year ACS estimates and Root Policy Research.

Household incomes shifted upwards as higher income households moved into the county. Although the decline in the number of households with incomes of less than $100,000 could be due to permanent residents experiencing income increases and moving into upper income brackets, the drop across income cohorts suggests that some of this decrease was due to **low income households leaving the county**.

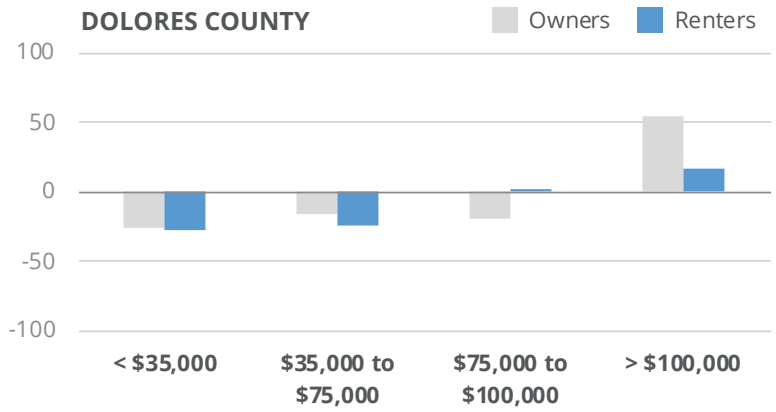
Figure A-8.
Household Income Distribution



Source: 2010 and 2019 5-year ACS estimates and Root Policy Research.

APPENDIX: COUNTY DATA

Figure A-9.
Shifts in Household Income Distribution by Tenure, 2010-2019

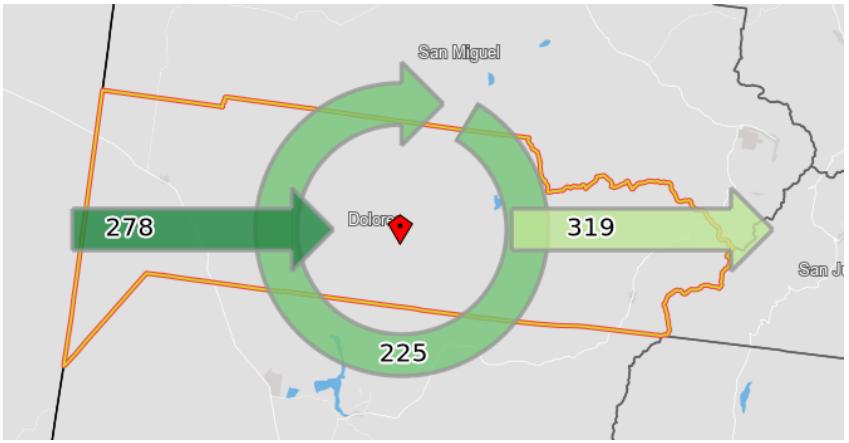


Source: 2010 and 2019 5-year ACS estimates and Root Policy Research.

As of 2018, the latest date for which in- and out-flow data are available, 503 workers were employed in Dolores County. An estimated 278 lived outside of the county and commuted into jobs located in the county. About 319 county residents commuted to jobs outside of the county. And 225 were able to both live and work in the county, equal to 45 percent of workforce. This is a much smaller "live and work" percentage than in other counties and is due to a combination of the county's relatively small employment base and the shortage of workforce housing in adjacent counties, including San Miguel County.

Compared to 2010, nearly 200 more workers commute in, fewer workers commute out, and about 20 more workers are able to both live and work in the county.

Figure A-10.
Worker In- and Out-Flows, 2018

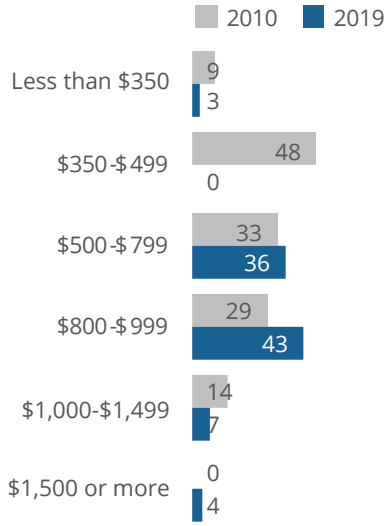


Source: Longitudinal Employer-Household Dynamics, U.S. Census, 2018.

The county has not been immune to affordable housing challenges despite the county's remote location and small size. Median rent increased by 48 percent between 2010 and 2019, and rentals priced less than $500/month diminished almost entirely.

APPENDIX: COUNTY DATA

Figure A-11.
Rent Distribution



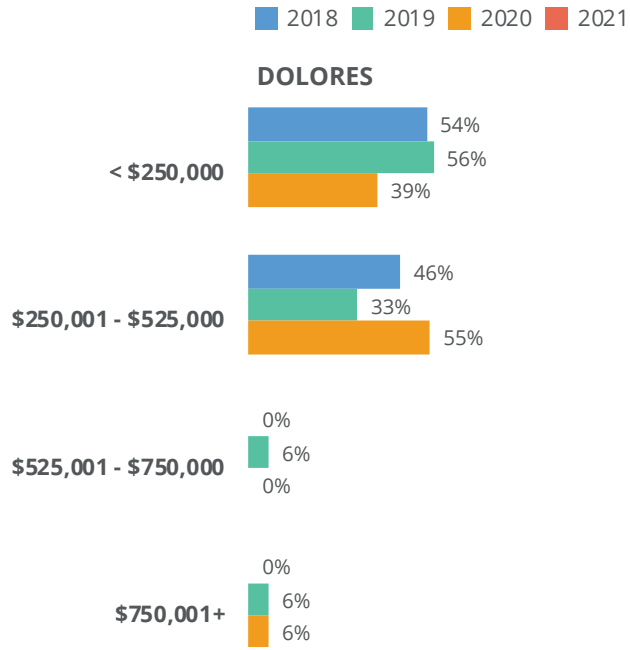
Source:
2010 and 2019 5-year ACS estimates and Root Policy Research.

Renter income failed to keep pace with rent increases: median renter income rose by just 12 percent. Ordinarily this would result in an increase in cost burdened renters. Instead, renter cost burden declined, meaning that renters who could not afford the rent increases left the county.

Household growth between 2010 and 2019 was driven by non-working households. Households with workers declined in Dolores County (as well as in Montezuma and San Juan Counties), related to the conversion of housing units occupied by permanent residents and workers into seasonal and vacation use. An estimated 47 additional units were needed between 2010 and 2019 to fully accommodate the county's employment growth and meet seasonal and vacation home demand.

The values of sold homes increased by 46 percent between 2018 and 2020, and the share of homes purchased through government-sponsored mortgages (e.g., FHA, VA) declined.

Figure A-12.
Change in Sold Homes by Price Band, 2018-2020 and 2018-2021



Note: 2021 data were only available for La Plata and San Juan Counties.
Source: Home Mortgage Disclosure Act, CREN MLS, and Root Policy Research.

Still, with a median sold home value of $335,000 as of 2020, and median rent of $871 as of 2019, the county remains relatively affordable compared to surrounding areas.

APPENDIX: COUNTY DATA

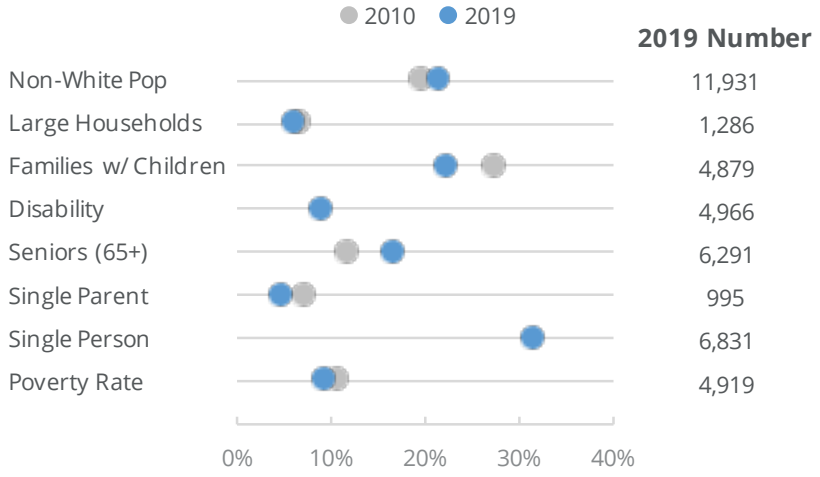
A **housing needs forecast** developed for this study projects that the county will need 41 new permanent units and 11 seasonal surge beds in the next 3-5 years to accommodate workforce growth and address some of the county's unmet housing needs. This is the same rate of growth the county maintained between 2010 and 2019. The difference is that these new units should be available for workforce (v. seasonal, vacation, or retiree use) in order to address housing challenges and fully accommodate the county's projected job growth.

LA PLATA COUNTY

Compared to 2010, La Plata County has:

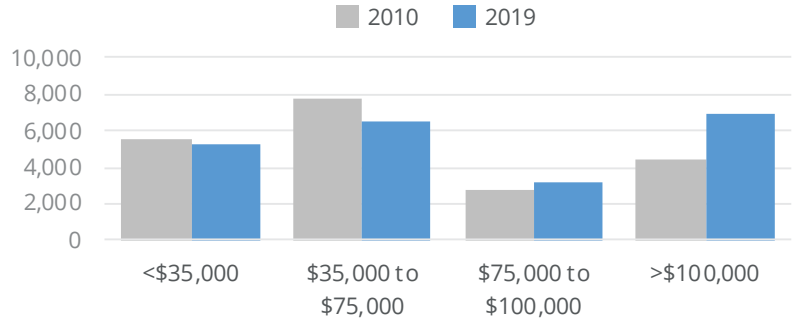
- **Fewer families with children** (a decline of 914 families) and fewer single parent households (a decline of 500) despite overall population growth. The county proportion of families with children dropped by 5 percentage points.
- **More seniors**—an increase in the county's senior population almost entirely offset the drop in families with children.
- **Many more higher income households.** Median household income in the county rose 15 percent from 2010, to $68,685. Conversely, the percentage of residents living in poverty dropped by 2 percentage points, from 11 percent to 9 percent.
  - The number of households earning less than $35,000 per year dropped by 326, either because they left the county or are earning more.
  - Households earning between $35,001 and $75,000 declined by 1,260.
  - Households earning $75,001 and more rose by 2,888, with the majority of those earning $100,000 and more.

Figure A-13.
Socioeconomic Make-up



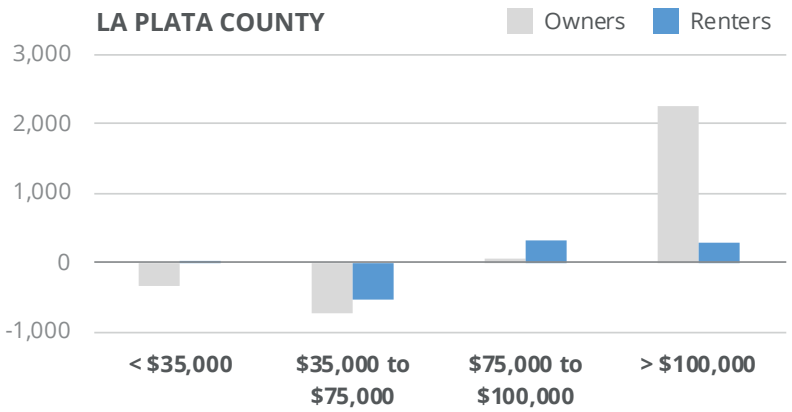
Source: 2010 and 2019 5-year ACS estimates and Root Policy Research..

Figure A-14.
Household Income Distribution



Source: 2010 and 2019 5-year ACS estimates and Root Policy Research.

Figure A-15.
Shifts in Household Income Distribution by Tenure, 2010-2019



Source: 2010 and 2019 5-year ACS estimates and Root Policy Research.

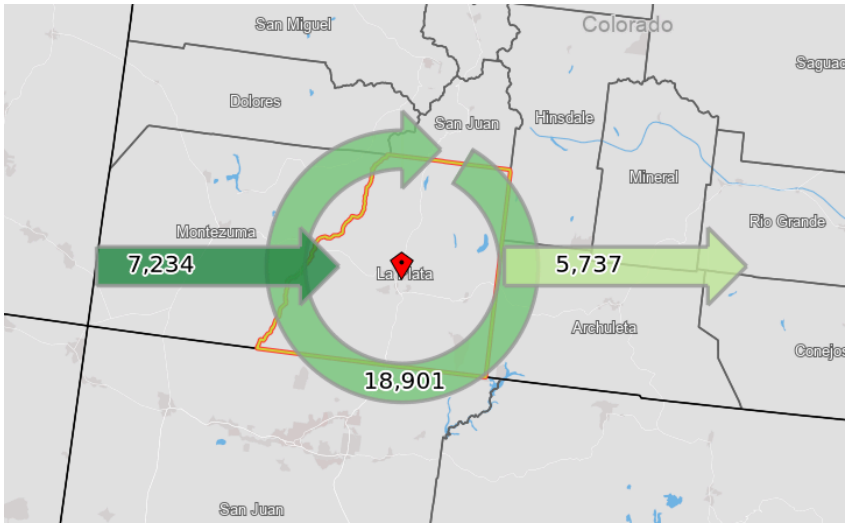
The county's robust employment growth has resulted in many jobs for locals and increased wages. Yet even though wages rose across the county's primary industries, what workers are paid remains well below what is needed to afford market rents, except for the professional services and education industry.

- **Wages have failed to keep up with price increases**. Renters saw their incomes rise by 5 percent between 2010 and 2019. But their rents increased by 22 percent—more than four times wage increases.
- **More renters struggle to make rent.** 1,700 renters pay more than 30 percent of their incomes in rent, an increase of 524, or 20 percent, from 2010.

As a result of the mismatch between earnings and housing costs, many more jobs are filled by in-commuters. Nearly 1,900 more workers commute into the county for work than in 2010.

As of 2018, the latest date for which in- and out-flow data are available, 26,135 workers were employed in La Plata County. An estimated 7,234 lived outside of the county and commuted into jobs in La Plata County. Another 5,737 county residents commuted to jobs outside of the county. And 18,901 were able to both live and work in the county, equal to 72 percent of workforce.

Figure A-16.
Worker In- and Out-Flows, 2018



Source: Longitudinal Employer-Household Dynamics, U.S. Census, 2018

APPENDIX: COUNTY DATA

Housing unit growth lagged employment growth—due to seasonal use. La Plata County has 1,965 more housing units in 2019 than in 2010. Of these, 19 percent are seasonal or vacation use, about the same share in the county overall. Although the county was able to develop enough housing to maintain its share of workers can live in the county, far more units were needed to house new workers who instead in-commute.

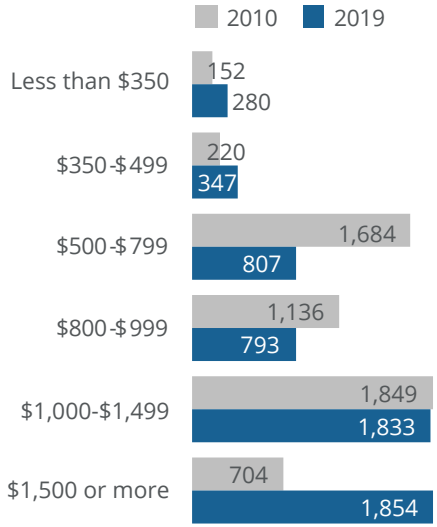
Since 2010, rents have increased by 22 percent, and the county's **stock of affordable rentals provided by the private sector has diminished**.

- In 2010, just 13 percent of non-seasonal rentals charged $1,500 and more. Today, 40 percent of non-seasonal rentals charge $1,500 and more.
- An estimated 600 rental units have converted from non-seasonal rentals to vacation rentals.

Housing needs would be more acute without the public investments in affordable rentals and tenant based rental assistance that have helped stabilize the rental market for the region's extremely low income households. La Plata County remains a regional leader in developing income-restricted rentals, with 60 percent of the region's income-restricted units located in the county—slightly more than the county's share of the region's population.

Figure A-17.
Rent Distribution

Source:
2010 and 2019 5-year ACS estimates and Root Policy Research.

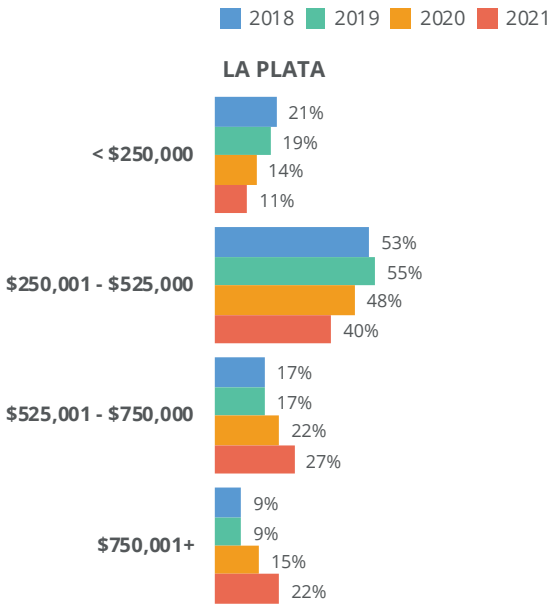


Fewer can afford to buy. The county's for sale market grew considerably more expensive between 2020 and 2021: the median value of sold homes jumped 20 percent in one year.

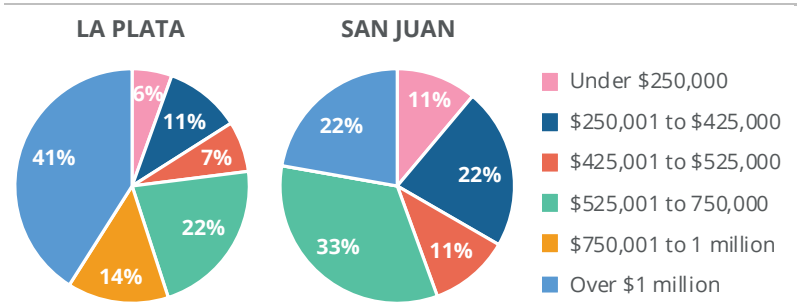
The number of homes sold for $750,000 and more increased 169 percent between 2018 and 2021 and the number of homes for sale priced less than $250,000 dropped by 37 percent.

The number of owners struggling to afford housing costs has declined as higher income buyers, who can afford the county's rising housing costs, have moved to the county.

Figure A-18.
Change in Sold Homes by Price Band, 2018-2020 and 2018-2021



Active Listings by Price Band, 2021



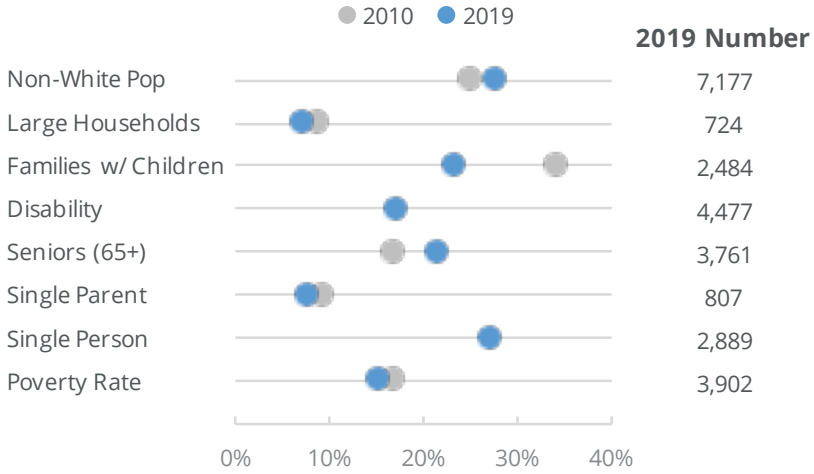
Source: Home Mortgage Disclosure Act, CREN MLS, and Root Policy Research.

A **housing needs forecast** developed for this study projects that the county will need 570 new permanent units and 45 seasonal surge beds in the next 3-5 years to accommodate workforce growth and address some of the county's unmet housing needs. This is more than twice the housing unit growth the county maintained between 2010 and 2019 and five times the growth in units occupied by permanent residents—emphasizing the need for a concerted effort to develop workforce-targeted housing.

MONTEZUMA COUNTY

The most significant change in the county's demographics between 2010 and 2019 was the **decline in the share of households with children**. This was partially due to growth in the county's senior population, as well as an influx of non-family workforce households from surrounding areas.

Figure A-19.
Socioeconomic Make-up

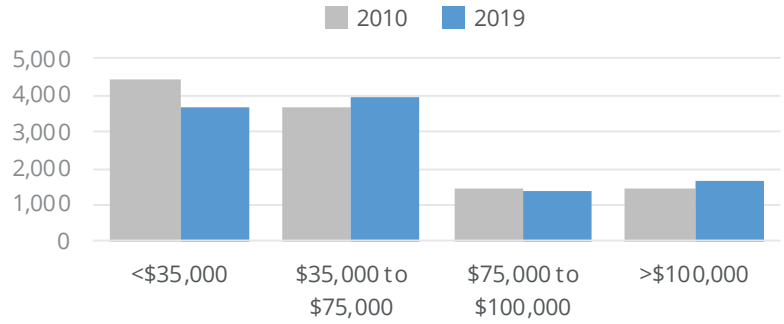


Source: 2010 and 2019 5-year ACS estimates and Root Policy Research..

Unlike other counties in the region, the household income distribution in Montezuma County changed only slightly. The most prominent change was a drop in low income households, offset by slight increases in moderate to high income households.

These changes were likely driven by **gains in household incomes** related to improved economic conditions in the county, an influx of workers employed in moderate-wage jobs in other counties, and some **displacement of low income households** because of rising housing costs.

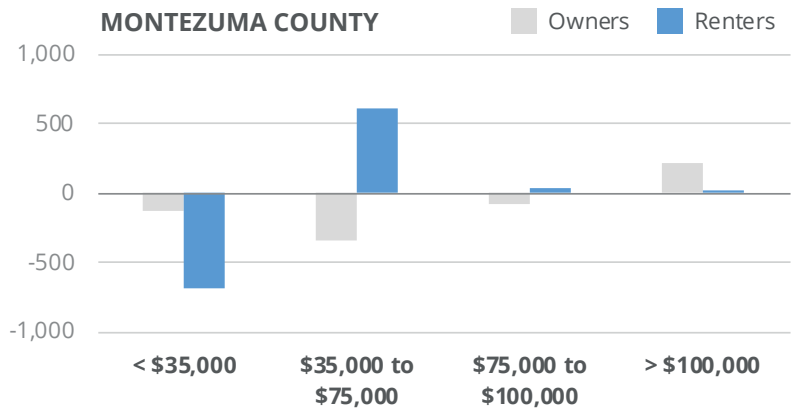
Figure A-20.
Household Income Distribution



Source: 2010 and 2019 5-year ACS estimates and Root Policy Research.

APPENDIX: COUNTY DATA

Figure A-21.
Shifts in Household Income Distribution by Tenure, 2010-2019

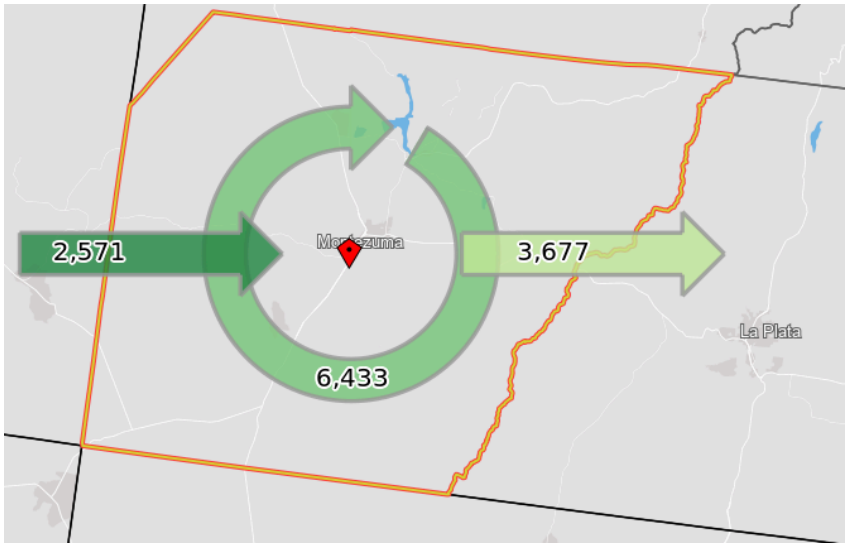


Source: 2010 and 2019 5-year ACS estimates and Root Policy Research.

As of 2018, the latest date for which in- and out-flow data are available, 9,000 workers were employed in Montezuma County. About 2,571 lived outside of the county and commuted into jobs located in the county. An estimated 3,677 county residents commuted to jobs outside of the county. And 6,433 were able to both live and work in the county, equal to 72 percent of workforce.

The largest change in commute patterns was in out-commuting: Compared to 2010, nearly 130 more workers commute in, 529 more workers commute out, and about 100 more workers are able to both live and work in the county.

Figure A-22.
Worker In- and Out-Flows, 2018



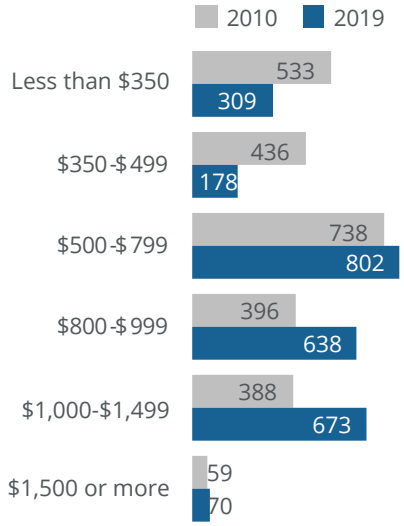
Source: Longitudinal Employer-Household Dynamics, U.S. Census, 2018

Median rent in the county increased by 37 percent between 2010 and 2019, from $593/month to $815/month. The median renter income rose by 55 percent—suggesting that **most renter households could manage rent increases.**

However, not all renters experienced income gains, and those reliant on low priced rentals saw the inventory decline significantly, as the market responded to higher income renter demand. As shown below, rental units priced under $500/month dropped by nearly 500.

APPENDIX: COUNTY DATA

Figure A-23.
Rent Distribution



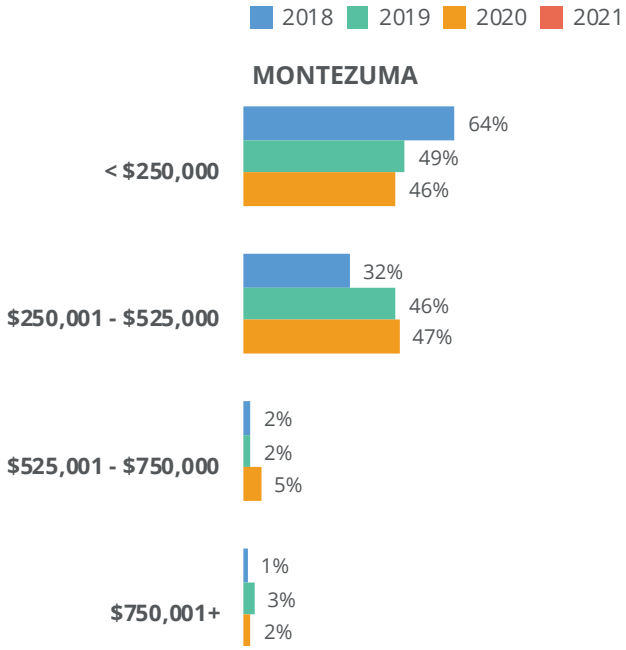
Source:
2010 and 2019 5-year ACS estimates and Root Policy Research..

Normally this shift would create an increase in cost burden. Instead, cost burdened declined as the **lowest income renters left the county for more affordable housing**.

The county saw less fluctuation in the homeownership market. Of all counties in the SWCCOG region, Montezuma County had the smallest decline between 2018 and 2020 in for sale homes priced at less than $250,000 (22% decline; Archuleta County was close at 24%)

Even with price increases, the median for sale home price in Montezuma County—$225,000 in 2020—remains well below the median in other counties.

Figure A-24.
Change in Sold Homes by Price Band, 2018-2020 and 2018-2021



Note: 2021 data were only available for La Plata and San Juan Counties.
Source: Home Mortgage Disclosure Act, CREN MLS, and Root Policy Research.

One reason for the county's relative affordability is due to the **conversion of unoccupied housing units into housing for permanent residents.** Montezuma County was the only county in the region where units for seasonal and vacation use declined between 2010 and 2019.

APPENDIX: COUNTY DATA

A **housing needs forecast** developed for this study projects a need for 220 new housing units over the next three to five years. Much of the new demand for housing created by workforce can be met if the county creates affordable ownership units for just 10 percent of its moderate income renters; this would free up units to meet moderate-wage workforce rental demand associated with projected employment growth.

If the county desires to continue to build its residential and permanent resident base by housing regional workforce, it should continue its development pace and seek opportunities to add to the housing stock of deeply affordable units as well as market rate rentals.

SAN JUAN COUNTY

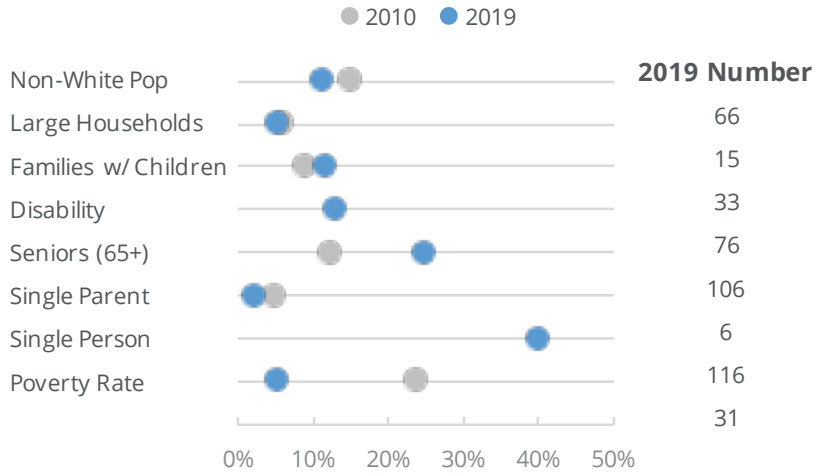
Similar to peer counties in the region, the proportion of seniors in San Juan County increased between 2010 and 2019. Unlike other counties, there were few changes in the share of families with children and single parents, meaning that the county was able to sustain its household composition despite increased housing costs.

The most notable change in San Juan County between 2010 and 2019 was the **considerable drop in poverty**. People living below the poverty line declined from 24 percent to 5 percent.

San Juan County's **median household income increased significantly** between 2010 and 2019, from $36,378 to $53,750. Median *family* income declined slightly. The county's income distribution shifted away from low and moderate income households to those with incomes of $100,000 and more.

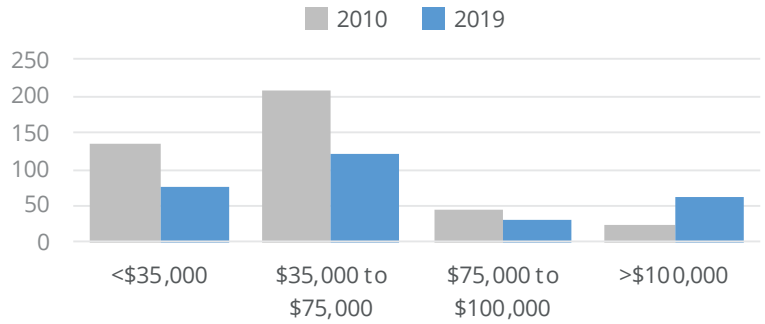
- The number of households earning less than $35,000 per year dropped by 59. This occurred because low wage households began earning more or because they left the county.
- Households earning between $35,001 and $75,000 declined by 86.
- Households earning $75,001 and more rose by 38.

Figure A-25.
Socioeconomic Make-up



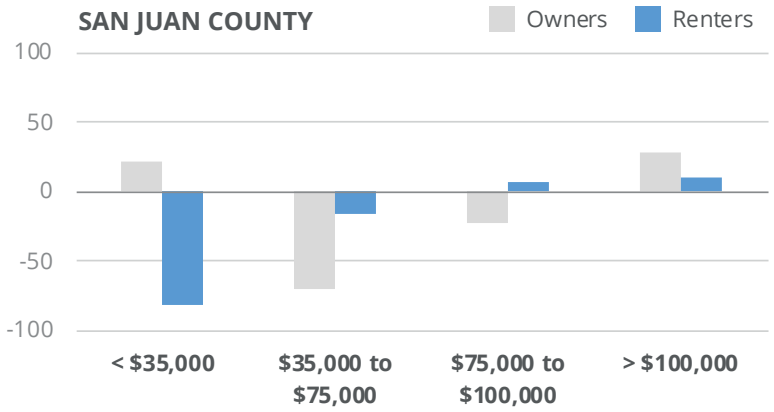
Source: 2010 and 2019 5-year ACS estimates and Root Policy Research.

Figure A-26.
Household Income Distribution



Source: 2010 and 2019 5-year ACS estimates and Root Policy Research..

Figure A-27.
Shifts in Household Income Distribution by Tenure, 2010-2019



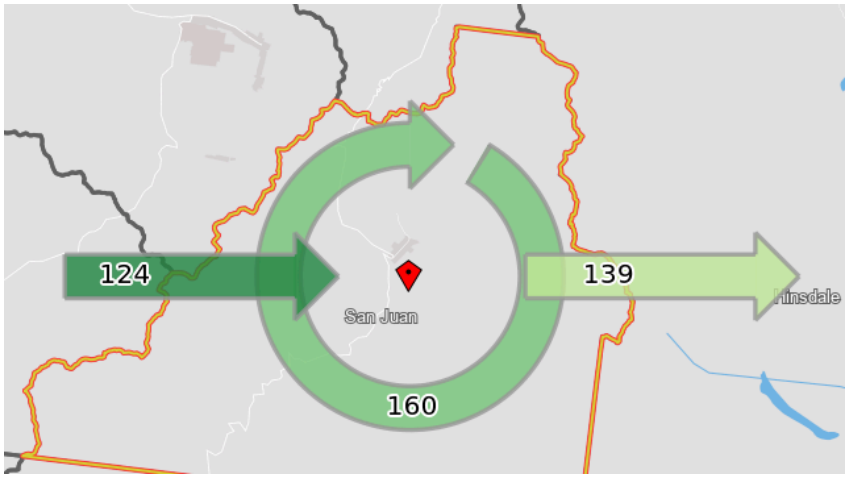
Source: 2010 and 2019 5-year ACS estimates and Root Policy Research.

Jobs grew by approximately 100 between 2010 and 2019. The lack of housing to workforce led to a **significant rise in in-commuting in the county.**

As of 2018, the latest date for which in- and out-flow data are available, 284 workers were employed in San Juan County. About 124 lived outside of the county and commuted into jobs located in the county. An estimated 139 county residents commuted to jobs outside of the county. And 160 were able to both live and work in the county, equal to 56 percent of workforce.

Compared to 2010, nearly 77 more workers commute in, 28 more workers commute out, and about 56 more workers are able to both live and work in the county.

Figure A-28.
Worker In- and Out-Flows, 2018



Source: Longitudinal Employer-Household Dynamics, U.S. Census, 2018

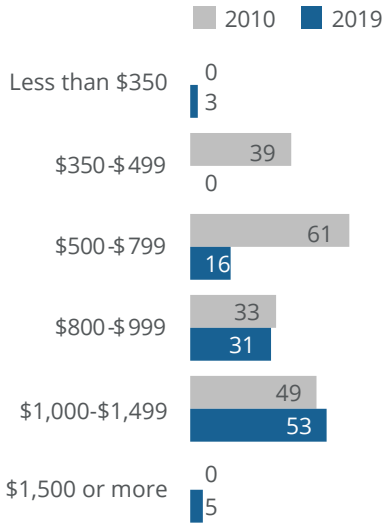
Renters residing in San Juan County in 2010 reported a median rent of $750/month. By 2019, this had risen by 36 percent—to $1,019/month.

The income of the median renter rose more quickly than rents—a 54 percent increase between 2010 and 2019—meaning that **most renters could keep up with the cost increases.** This is a very different trend than all other counties in the region except for Montezuma County, in which increases in renter incomes also kept pace with rising rental

costs. In La Plata County, for example, rent increases were four times as high renter income increases. In contrast, the median incomes of owners in San Juan County declined slightly, while home values increased.

The increase in rental cost all but eliminated deeply affordable rentals in the county. The 2019 Census estimates only 19 units rent for less than $800 per month, compared to 130 in 2010.

Figure A-29.
Rent Distribution



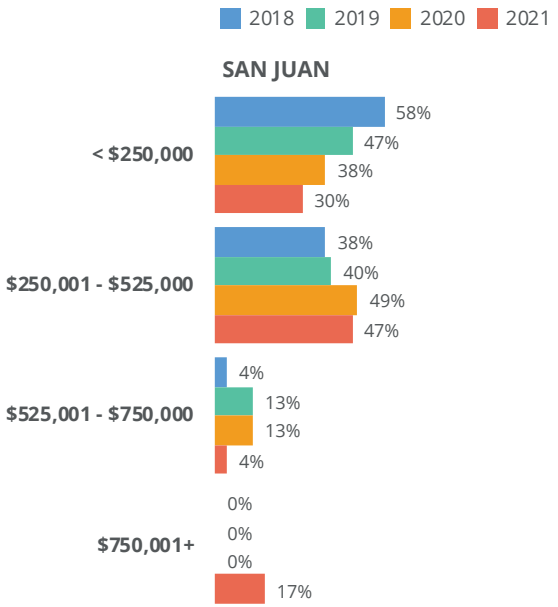
Source:
2010 and 2019 5-year ACS estimates and Root Policy Research.

As a result of these shifts in incomes relative to housing costs, the number of renters paying more than 30 percent of their incomes in housing costs declined significantly, from 113 in 2010 to just 35 in 2019. The number of cost burdened owners also fell, but by much less (47 cost burdened owners in 2010 to 39 in 2019).

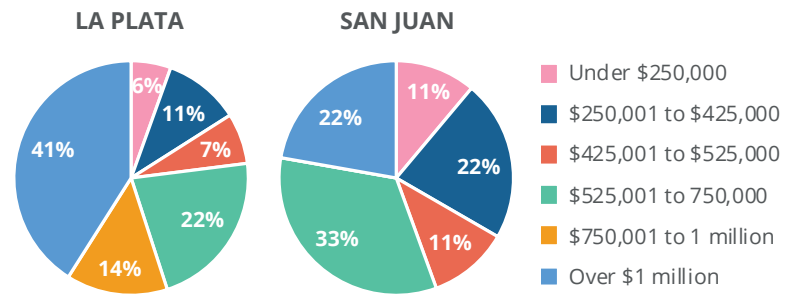
For sale home prices in San Juan County rose faster than in any other county between 2018 and 2020 at 59 percent The median price of sold homes in the county was $385,000 in 2021 compared to $242,500 in 2018. The inventory of homes priced at less than $250,000 declined by half, and were offset by a jump in homes priced at more than $750,000.

APPENDIX: COUNTY DATA

Figure A-30.
Change in Sold Homes by Price Band, 2018-2020 and 2018-2021



Active Listings by Price Band, 2021



Source: Home Mortgage Disclosure Act, CREN MLS, and Root Policy Research.

The Census estimates a **net loss in permanent resident households** between 2010 and 2019 and slight decline in total housing units. The county issued 25 building permits during the decade, but, due to the short construction season and limited labor, **new unit development significantly lagged demand.** The county needed to develop an estimated 82 units to adequately house workers and account for seasonal and vacation demand.

A **housing needs forecast** developed for this study projects a need for 22 new units for permanent residents and a seasonal surge capacity of 14 beds, based on job growth projected by Region 9 Economic Development. If the majority of these units could be affordable ownership units, this would free up rentals for new workforce. Ideally, about 13 units are affordable for sale, 9 are split between affordable and market rate rentals, and 14 are temporary units/beds for seasonal workforce. Reductions in in-commuting would require development of additional units.

It is important to note that town of Silverton employers surveyed for this study could provide a much larger number of jobs if housing were available: They project a need for 80 full time and 10 part time employees, which would require 45 more units for permanent residents.

San Luis Valley
Colorado Genuine

Housing Assessment Center

JULY 2021

WILLIFORD, LLC
land use & affordable housing

WSW CONSULTING

URBANrural continuum

Introduction

This report summarizes the housing market, community housing needs, opportunities, and recommendations for Center, Colorado. It builds upon the findings of the *San Luis Valley Housing Needs Assessment 2021* (available at www.slvhc.com), with further detail and insights from local stakeholders including business owners, residents, non-profit organizations and local government employees.

The report begins with the big picture trends in the San Luis Valley, then provides an overview of county-wide conditions, and concludes with local conditions and recommendations for the municipality. The data cited in the *San Luis Valley Housing Needs Assessment 2021* was used to generate this report, along with additional interviews, listening sessions, and a site visit in June 2021.

Based on the listening tour in June of 2021, the following actions to address housing needs in Center were prioritized. Timing and responsibilities will be established through the Action Plan process.

- Forge public/private partnerships to build affordable housing for sale and for rent. Homes are needed to address the need of both low and middle income households to support economic stability and growth. Strong leadership by Town of Center and/or the Center Housing Authority is needed in these efforts.
- Rehabilitate dilapidated buildings through incentives and SLV Housing Coalition programs.
- Consider measures that support housing affordability through the use of modular construction, pre-approved plans and energy efficiency measures.

Why is there a housing problem in the San Luis Valley?

Increasing Prices

Home Prices up 66%
Rents up 30% since 2009

High Construction Cost

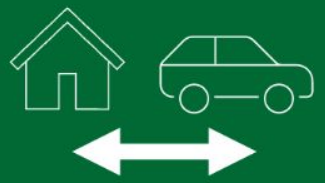
$190/SF to build
Too expensive for locals

High Housing Payments

47% of renters &
26% of owners pay more than 30% of their gross income on housing

Forced Commuting

$1,165/month to live in Saguache and work in Alamosa, for example



Residential Sprawl

73% of new homes are not in cities/towns

Limited Housing Choices

90% single-family and manufactured homes
250 Provisional Homes
>35% is over 50 yrs/old

Aging Population

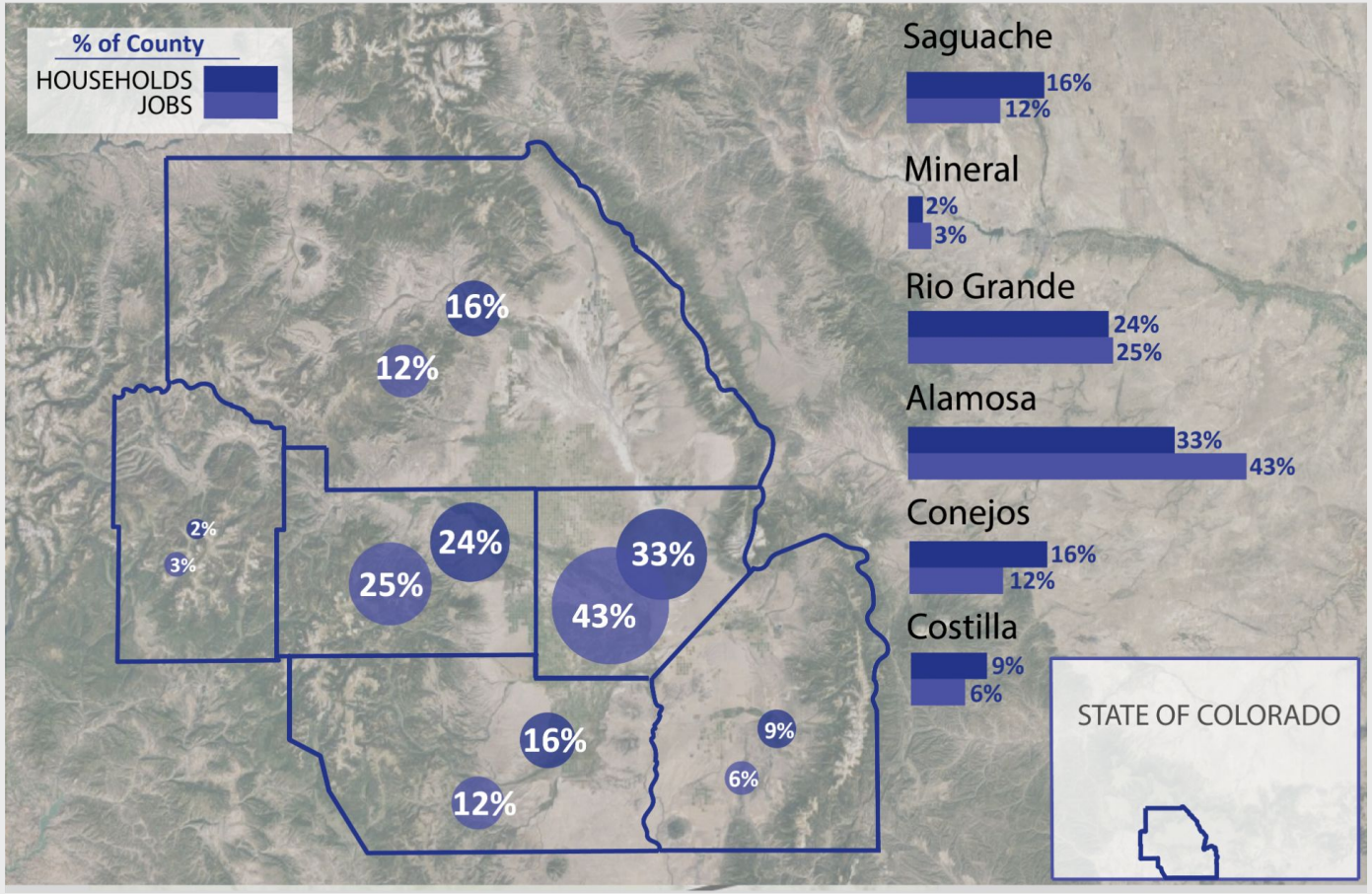
18% of people age 65+ and increasing; low maintenance housing options needed for seniors

Labor Shortage

Workers aged 25-44 are leaving. 900 workers to retire by 2026. Employers struggle to fill jobs

Jobs and Housing in the Valley

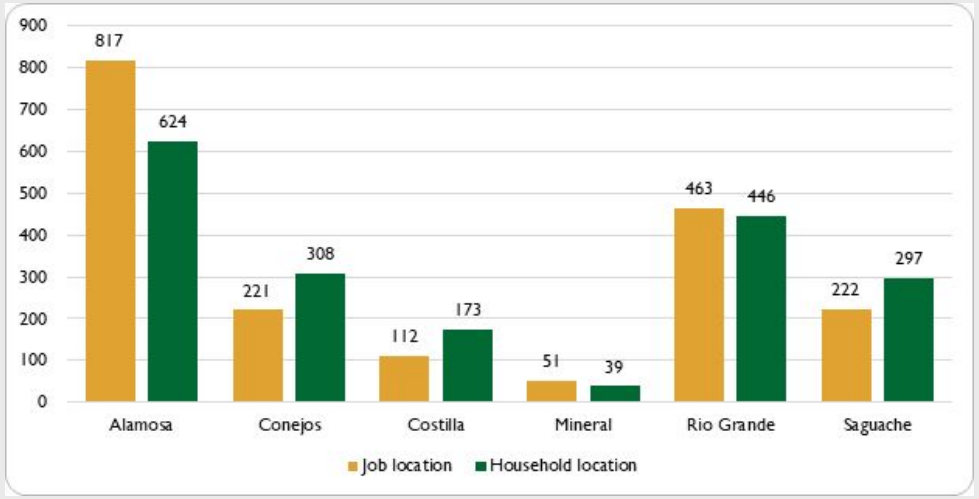
Where are jobs and households in the San Luis Valley?



Source: *San Luis Valley Housing Needs Assessment 2021*

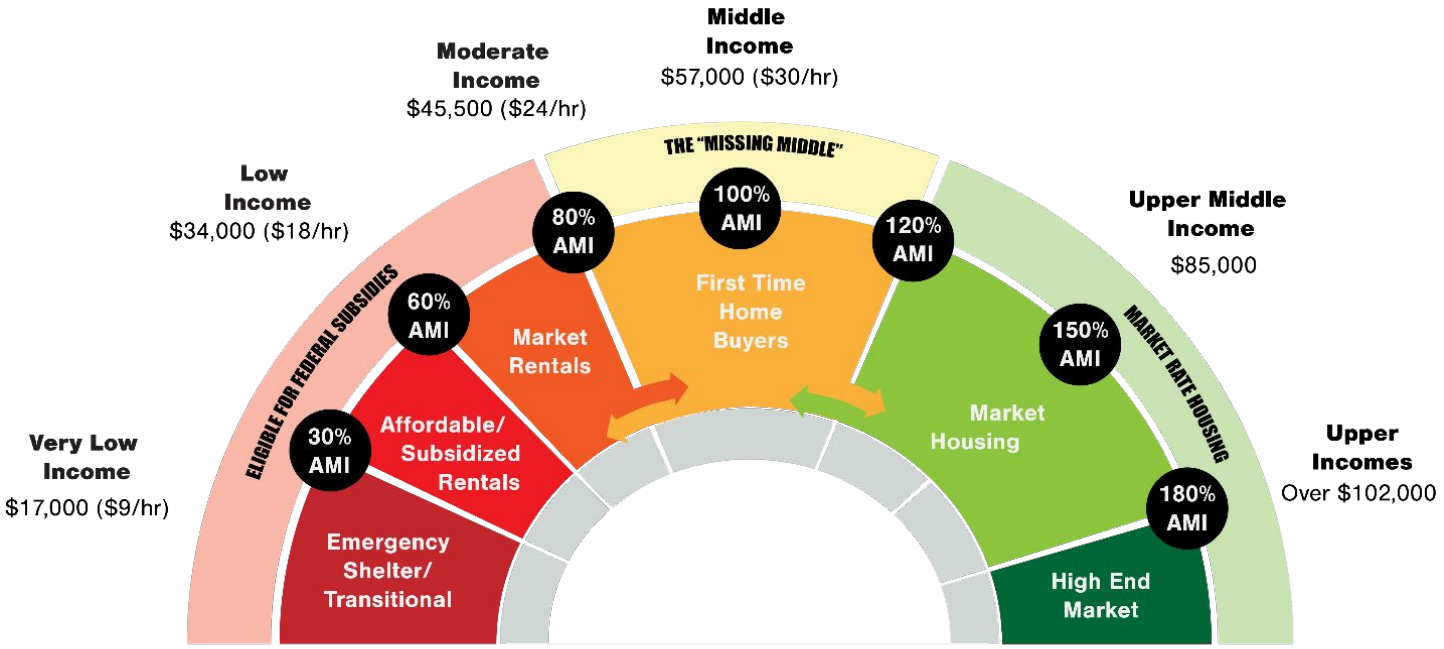
Housing Needs and Gaps

The *San Luis Valley Housing Needs Assessment 2021* estimated about 1,885 dwellings are needed to catch up and keep up with demand over the next five years. Housing units should not be evenly distributed throughout the Valley. The job centers in Alamosa county and Rio Grande county will need the largest share of units. The below chart shows how this distribution could vary depending upon whether housing units are constructed based solely on where jobs are located in each county, or if current commuting patterns are retained and units are constructed based on where employees presently live. What local policies are adopted and the rate of investment in housing will also play a significant role.



Source: *San Luis Valley Housing Needs Assessment 2021*

San Luis Valley Housing Bridge



Source: *San Luis Valley Housing Needs Assessment 2021*

There is a lack of diversity in the housing price points and types available across the valley. More housing choices are needed ranging from emergency shelter through market rate homeownership. Generally, the biggest gaps in the housing market are for units that serve smaller households, seniors, renters who can afford 1,135/month or lower (households below 80% AMI) and owners who can afford homes priced up to $300,000 (households below 120% AMI). This report provides more specific information for the community of Center.

Defining What Households Can Afford

This report centers on the understanding of what local households can afford to pay for housing. It uses the definition that housing is affordable when the monthly payment (rent or mortgage) is equal to no more than 30% of a household's gross income (i.e., income before taxes).

The affordable rents and purchase prices for two-person households are as follows.

Household Income (2 people)	Percent Area Median Income (AMI)	Max Rent	Max Purchase Price
$0 to $28,400	<50%	$710	$125,000
$28,401 to $45,400	50.1-80%	$1,135	$200,000
$45,401 to $68,200	80.1-120%	$1,705	$300,000
$68,201 to $113,600	120.1-200%	$2,840	$500,000
>$113,600	>200%		

Source: *San Luis Valley Housing Needs Assessment 2021*

Saguache County

Saguache county is the largest county, by land area, in the San Luis Valley. It has about 16% of the valley's households, and about 12% of the valley's jobs.

Saguache county has numerous challenges with regard to the current housing market:

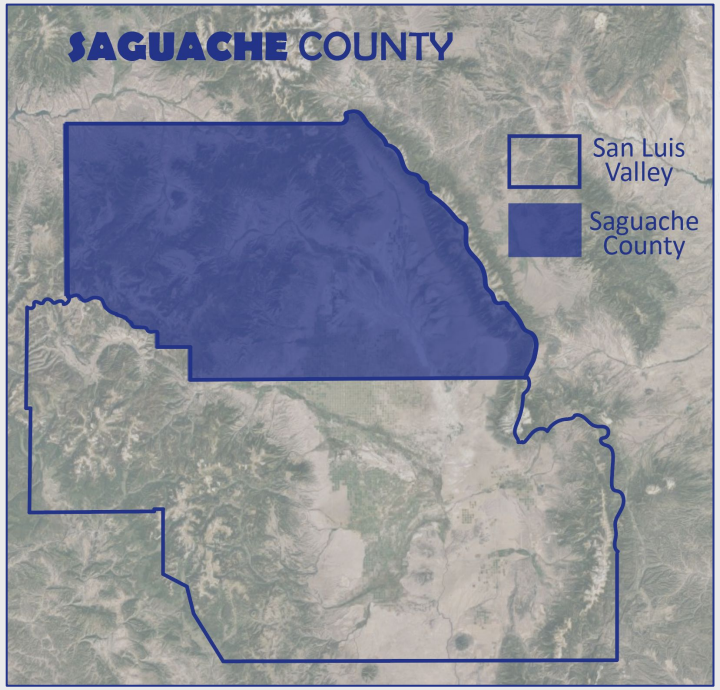
- Incomes are generally low, and the rate of poverty and public assistance is high compared to Colorado overall.
- Many residents are experiencing housing costs beyond their means (paying more than 30% of income on rent/mortgage/utilities) - 43% of renters and 26% of owners are cost burdened by housing.
- About one third (31%) of the housing stock is unoccupied; this includes second homes and homes that are vacant due to poor condition or abandonment.
- About 26% of county employers surveyed indicated that the availability of housing that is affordable to their employees is "the most critical problem in the region" and an additional 48% of employers found it to be "one of the more serious problems."
- Employers listed the lack of selection and variety of homes as the primary housing difficulty their employees encounter, followed by prices (for sale and rent) being too expensive.
- The majority of residential permits are being issued outside incorporated communities, requiring expensive wells and septic systems, long commutes for workers, and expensive road maintenance and emergency services for local government.
- People are occupying "provisional homes," meaning those without the components needed for a certificate of occupancy such as electrical inspection, septic, well, etc.
- The vast geographic nature of the county and sparse population makes regional coordination and resource sharing challenging.

Some bright spots in the housing landscape in Saguache county include:

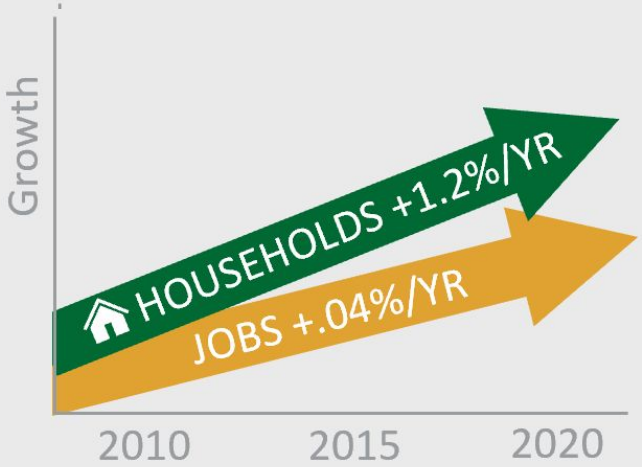
- Committed, experienced leaders who are taking a regional approach to bringing in funding and economic development.
- Housing prices have not yet accelerated to the unattainable levels of nearby communities outside the valley, such as Salida, Pagosa Springs, and Gunnison.
- Extensive access to public lands and beautiful natural resources.
- Rich cultural history, strong track record of community collaborations, agricultural hub, and ability to bring in funding and other resources.
- Experienced non-profit organizations and housing authorities that help improve existing housing and build new.

County Context: Saguache

Saguache County



Growth Rate



Tenure is 75% owner occupied/25% renter occupied

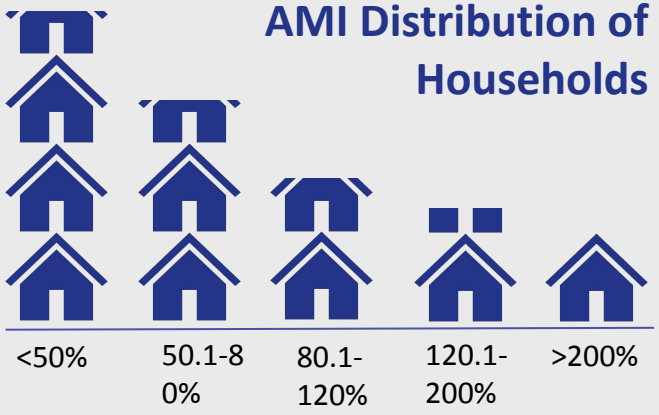
70%
OF JOBS FILLED BY COUNTY RESIDENTS

69%
OF RESIDENTS EMPLOYED WORK IN THE COUNTY

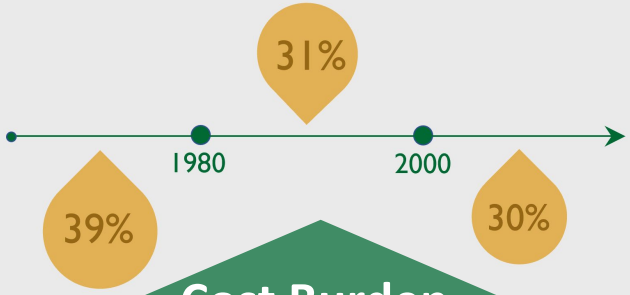
74%
OF SURVEY RESPONDENTS FIND THE **AVAILABILITY OF AFFORDABLE HOUSING** TO BE A ***SERIOUS PROBLEM***

2,663
TOTAL **JOBS** IN 2020

AMI Distribution of Households



Age of Homes: Distribution

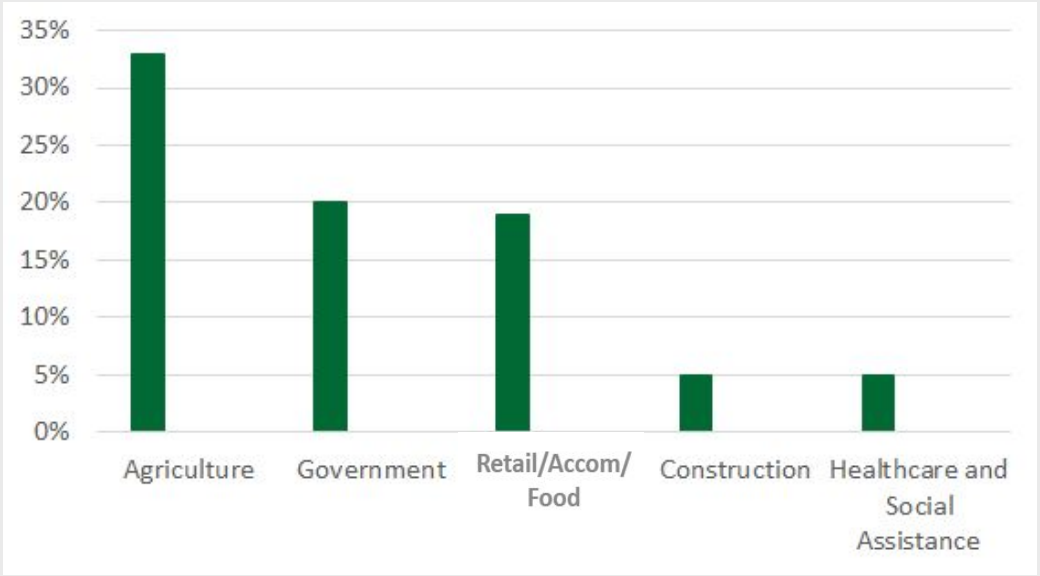


Cost Burden

26%
OF HOMEOWNERS ARE COST-BURDENED

43%
OF RENTERS ARE COST-BURDENED

Distribution of Jobs/Wages by Industry



**Retail/Accom/Food also includes Arts, Entertainment, and Recreation, and Other Services*

The Town of Center

The Town of Center is in the northern half of the San Luis Valley just east of the intersection of U.S. 285 and State Highway 112. Most of the town limits are in Saguache county, but a small portion of town lies south of State Highway 112 (Twelvemile Road) in Rio Grande county. Few residences are present south of the highway, but Tierra Nueva, a residential development serving low income agricultural workers is in Rio Grande county.

Center is the third most populous municipality in the San Luis Valley after Alamosa and Monte Vista with about 2,200 residents who are predominantly Hispanic (87%). Center has a high percentage of families with children (40% of households), which contributes to the lower median age (32) relative to Saguache (49) and Rio Grande (42) counties.

There are just under 800 households in Center and the distribution of owners and renters is fairly similar - 55% own and 45% rent. The percentage of renters is much higher than most towns in the valley, largely due to the nine rental properties (256 residential units) in town that are subsidized or income restricted, which represent about one third of all occupied housing units and over 70% of all rental units in town. Vacancy at subsidized properties is effectively zero, and many of the properties have significant waitlists.

Center has a more diverse housing stock than many towns in the valley. About 20% of homes (one in five) are attached product. Supply of homes is extremely limited, both for sale and for rent. Only two homes sold through in Center between Dec 2020 and May 2021. Both sold for low prices ($95 or less per square foot) but were old and in poor condition, if not abandoned.

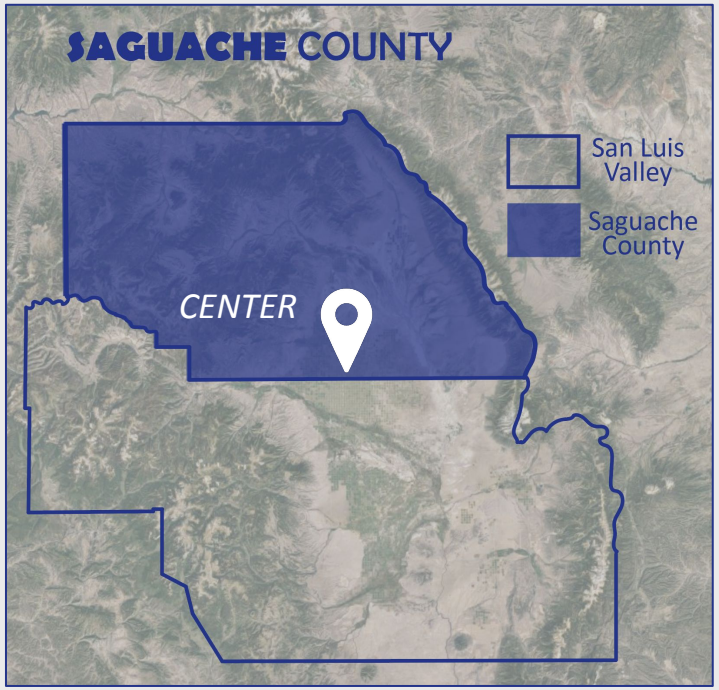
Homes in Center are relatively old and there has been little new construction over the past 20 years.

- Half (50%) of homes are more than 50 years old
- Just under half (47%) are 20 to 50 years old
- Only about 3% have been built since 2000

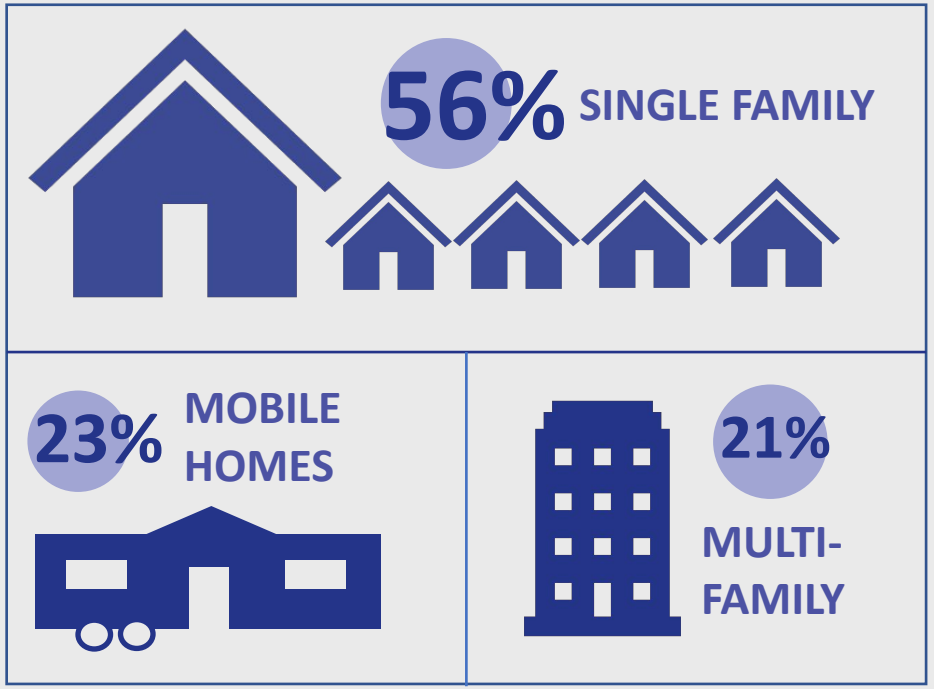
The local economy is dominated by jobs in agriculture and associated wholesale trade, health care and social assistance, and retail trade. A large percentage of employed residents commute elsewhere in the valley for work. Center's agricultural legacy and stature as a larger town offer the opportunity for economic growth and a strong sense of community identity moving forward. Downtown is seeing reinvestment, and there are some opportunities for residential use above commercial space.

The Town of Center

Town of Center

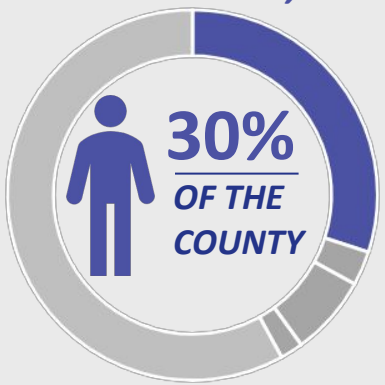


Mix of Homes

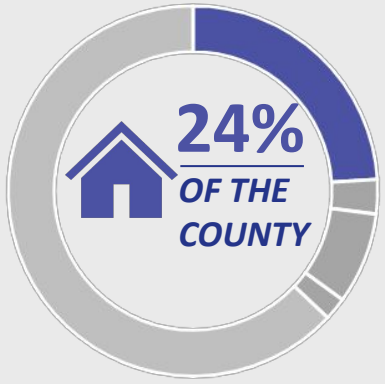


Housing Market

POPULATION: 2,230



HOUSEHOLDS: 792



> "My deputies are not able to find a place to live and are forced to commute long distances to serve the community."
>
> — Interview

The housing market is not functioning well.

- Vacancy for rental housing is functionally zero. No rental listings were found over a six month period.
- There is very limited for-sale housing market activity. Two homes were listed for sale in May 2021, with a median price of $92,500. Anecdotally, a few homes are being being purchased and sold without ever being listed on the realtor databases.
- In 2020, four homes sold. Median sale price was $150,000.
- Most locals looking to buy need homes priced between $125,000 and $300,000.
- About 14% of the housing stock is vacant, mostly due to abandonment.

The Town of Center

Community Strengths

- Third largest community in the valley and a regional hub for housing, agricultural product storage, processing, and distribution, and K-12 education.
- Strong track record in fundraising and implementation of grant driven projects.
- Close to, but not impacted by, U.S. Highway 285.
- Strong agricultural history and large Hispanic community.
- Many families with children, contributing to a young population for the valley.

Opportunities

- Several town-owned properties, including a 90 acre parcel, and downtown parcels. The 90 acre parcel presents extensive opportunity for growth.
- Housing Authority and CRHDC presence in the community.
- Town government spearheading downtown revitalization with recent outside investment. Downtown Colorado Inc. is focusing on Center as an innovation area.
- Redevelopment of Frontier Drive-In represents new investment in the area.
- Downtown has opportunities for redevelopment of older buildings, with residential on the second floor or in the back of the lot.

Challenges

- Higher percentage of households with lower incomes compared to nearby Alamosa.
- Presence of run down and abandoned homes and businesses.
- Few home sales, low prices and low quality of homes make establishing market value and demand challenging.
- Zero vacancy signals strong need for rental housing.

Building Activity

- Despite zero rental vacancy, there has been very little new residential construction in the past decade.
- The town recently sold a downtown lot to an individual who plans to build a single family home.

Affordable Housing Resources

- Approximately 290 units of rental housing serving low and moderate income households (below 60% AMI), including seniors, families, and agricultural workers. This is a major asset to the community, providing a stable stock of rental housing that is attainable for local residents.
- Center Housing Authority has property management experience and the ability to provide property tax exemption and housing choice vouchers.
- San Luis Valley Housing Coalition offers financial counseling and down payment assistance for first time homebuyers, and home renovation.
- Energy Resource Center offers home energy retrofits for qualified owners and renters.
- La Puente offers emergency housing and supportive services, including social enterprise, after school, energy bill assistance, emergency shelter, and rural outreach.
- San Luis Valley Behavioral Health Group offers behavioral health support and intervention, and in limited instances, support with housing.
- Volunteers of America offers rental assistance services referrals and coordination for veterans.

The Town of Center

Household Income Distribution and Price-Rent Affordability *

AMI	Household Income Range (2-person household)	Maximum Affordable Price	Owner Income Distribution	Maximum Affordable Rent	Renter Income Distribution
Under 50%	$0 to $28,400	Under $125,000	29%	$710	50%
50.1 - 80%	$28,401 to $45,400	$200,000	23%	$1,135	26%
80.1 - 120%	$45,401 to $68,200	$300,000	18%	$1,705	12%
120.1 - 200%	$68,201 to $113,600	$500,000	16%	$2,840	7%
Over 200%	>$113,600	Over $500,000	13%	Over $2,840	5%
Total	–	–	**100%**	–	**100%**

Greatest community housing need

small portion of Center is in Rio Grande county; owner/renter income distribution columns are for Saguache county

New Housing Needed by 2026

70-80 homes

The number of housing units needed based on the current share of county households.

125 homes

The number of housing units needed to begin to reverse residential sprawl by focusing development in Town.

Community Goal 30-35 Homes

Community leaders should set a housing goal somewhere close to 30-35 units over 5 years.

The Town of Center

Town of Center - housing need through 2026

- Between 70 and 80 homes are needed based on the town's share of Saguache and Rio Grande county households.
- A higher target of 125 homes will help place more of the needed homes in town, reducing sprawl, which is expensive for owners and renters and local government services.
- Based on historical rates of development and the challenges associated with high construction costs, among others, the recommended number of units over the next five years is 30-35 housing units, a significant portion of which need to be priced below current market prices. This target range can increase as development activity and capacity expands.
- Rental and ownership housing is needed at prices affordable to local residents.
    - Rental housing: about 20 year round units and 10 seasonal (agricultural) units with an emphasis on units affordable to households below 80% AMI, particularly units under $710/month.
    - Entry level ownership: 5 to 10 units priced from $125,000 to $300,000, with an emphasis on ownership under $200,000 for local residents.

Considerations

- Elected officials and Town staff can help to set the tone for the desired development and catalyze public/private partnerships to respond to the needs on town-owned land.
- Establishing market value for new homes will take time and presents risk based on the lack of strong market data. Extremely limited supply suggests there is market need.
- Start small and use partnerships, grants, and in-kind work to mitigate risk.
- Rentals for local workers are a top priority. Over six months of monitoring rental listings the consultant team found no units for rent.
- Ownership opportunities for local employees and residents are also needed to support economic growth and enable households to make a long term commitment to the area.
- Significant resources are needed to fill the gap between what local employees can afford and what homes cost to produce, both for sale and for rent.

The Town of Center

Potential Goals and Actions

- *Strengthen community vision around the importance of housing.* Grow community understanding and support for housing's role in economic development.
- *The community needs new housing and economic development in small increments over the next ten years*; these must go hand in hand to be successful.
- *Purchase and renovate or redevelop abandoned and run down homes.* San Luis Valley Housing Coalition is proposed to be a regional lead, creating a similar program to what is underway in Monte Vista. Project goals include:
    - completing two homes in each valley county by 2026,
    - reselling homes at prices that are affordable to households making local wages, or renting homes to local workers or retirees,
    - ensuring that most homes remain affordable to community members,
    - re-using the sale proceeds to cover staff costs and bring more run down and abandoned homes back into usefulness, and
    - the program could also potentially address residential uses upstairs or behind commercial uses in the downtown area.
- *Better use of existing resources* such as San Luis Valley Housing Coalition Home Rehabilitation Program and Energy Resource Center Energy Retrofits.
- *Build homes that are attainable for locals.* Carve out a small section of the 90 acre Town owned parcel to create a public/private partnership to build rental housing affordable to households below 60% AM and homes to own below 80% AMI. These units should be open to people of all ages (not senior housing), and should be designed with several units that are accessible to people with disabilities. Work with employers, Habitat for Humanity, and/or CRHDC to identify renters who are seeking to become owners in the community. The Center Housing Authority could be a special limited partner to provide sales and use tax exemption on materials, and an ongoing property tax exemption. The Housing Authority is also an experienced property manager, and could provide expertise in that role.

Several other communities in the valley need new rental housing at a similar scale and price point (Del Norte, Saguache, Creede, and South Fork, for example) and funding partners - Colorado Housing and Finance Authority and Colorado Division of Housing - have expressed interest in leveraging funding resources to build rental housing in several towns with coordinated funding.

- A bigger, regionally coordinated effort makes sense, as funding sources like the 9% Low Income Housing Tax Credit work better with developments at a scale of 50-70 units.
- But, a project like this needs a development lead coordinator, regardless of whether it is pursued as a standalone local project, or as part of a regionally coordinated effort.
- If the new housing is well received, a second phase could follow. Rental housing, homes for ownership, or a mix of rental and ownership could be considered for a second phase.

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San Luis Valley
Colorado Genuine

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Funding Provided by
Colorado Health Foundation, Colorado Division of Housing, Colorado Housing and Finance Authority
and local participating jurisdictions

Consultant Team

WILLIFORD, LLC
land use & affordable housing

WSW CONSULTING

URBANrural
continuum

San Luis Valley
Colorado Genuine

Housing Assessment
Del Norte

JULY 2021

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Introduction

This report summarizes the housing market, community housing needs, opportunities, and recommendations for Del Norte, Colorado. It builds upon the findings of the *San Luis Valley Housing Needs Assessment 2021* (available at www.slvhc.com), with further detail and insights from local stakeholders including business owners, residents, non-profit organizations and local government employees.

The report begins with the big picture trends in the San Luis Valley, then provides an overview of county-wide conditions, and concludes with local conditions and recommendations for the municipality. The data cited in the *San Luis Valley Housing Needs Assessment 2021* was used to generate this report, along with additional interviews, listening sessions, and a site visit in June 2021.

Some highlights from the listening tour in May of 2021 are listed below. Timing and responsibilities for specific items will be established through the Action Plan process.

- Fix up abandoned and run down homes; potentially model after Monte Vista program. Interest in looking at abandoned properties by looking at tax delinquencies.
- Need for rental housing for employees and seniors. Also interest in homes for first time buyers, people looking to stay in the community.
- Interest in accessory dwelling units, and how to add housing where Town already have streets and utilities.
- Adaptive re-use of existing buildings and public/private partnerships on smaller-scale housing development.
- Complexity of housing, and how to build local capacity. Could Del Norte pursue CHFA's Small Housing Innovation Program?
- Changes in water pricing to affect agriculture in this area.
- Interest and expertise around bringing local banks into the conversation.
- Partnering with local banks, the Colorado Housing and Finance Authority (CHFA) and the Colorado Department of Local Affairs, Division of Housing (DOH) on smaller-scale housing development.

Why is there a housing problem in the San Luis Valley?

Increasing Prices

Home Prices up 66%
Rents up 30% since 2009

High Construction Cost

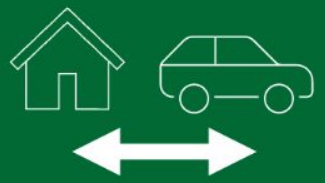
$190/SF to build
Too expensive for locals

High Housing Payments

47% of renters &
26% of owners pay more than 30% of their gross income on housing

Forced Commuting

$700/month to live in Del Norte and work in Alamosa



Residential Sprawl

73% of new homes are not in cities/towns

Limited Housing Choices

90% single-family and manufactured homes
250 Provisional Homes
>35% is over 50 yrs/old

Aging Population

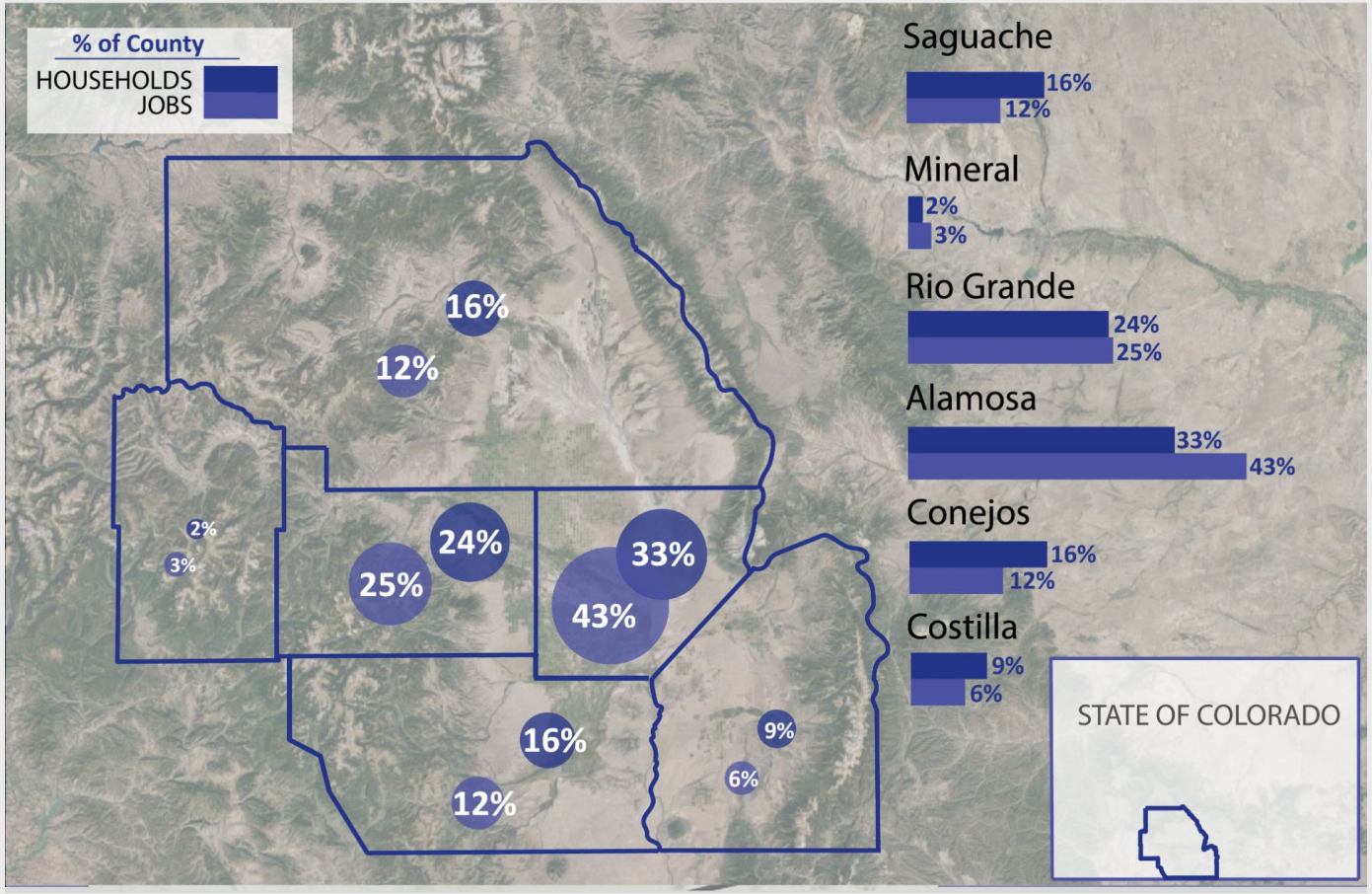
18% of people age 65+ and increasing; low maintenance housing options needed for seniors

Labor Shortage

Workers aged 25-44 are leaving. 900 workers to retire by 2026. Employers struggle to fill jobs

Jobs and Housing in the Valley

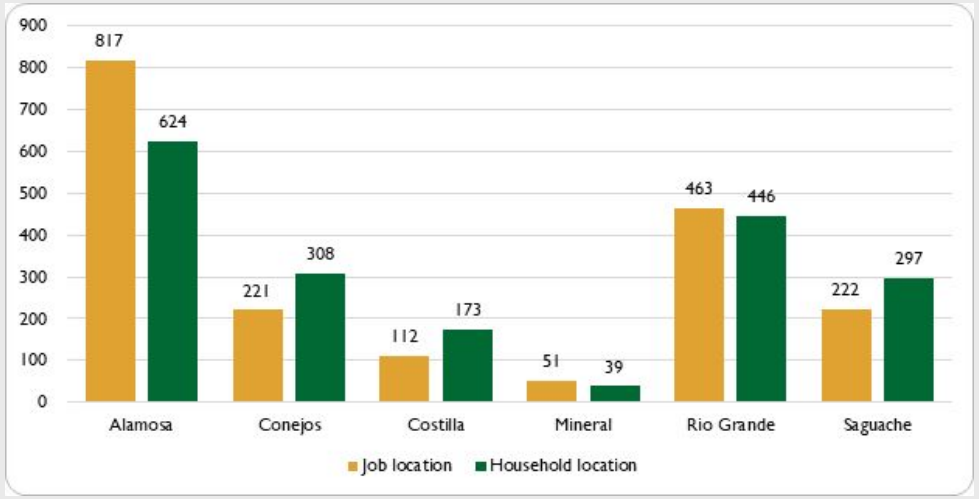
Where are jobs and households in the San Luis Valley?



Source: *San Luis Valley Housing Needs Assessment 2021*

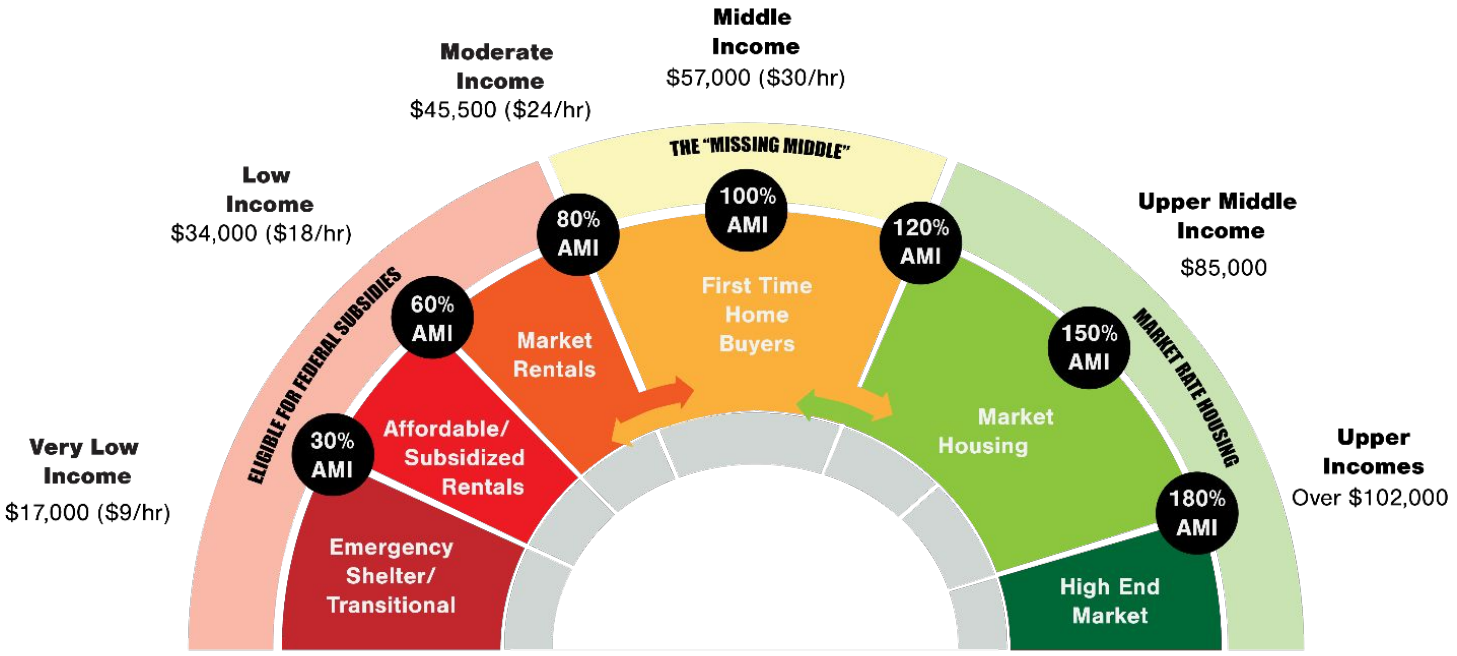
Housing Needs and Gaps

The *San Luis Valley Housing Needs Assessment 2021* estimated about 1,885 dwellings are needed to catch up and keep up with demand over the next five years. Housing units should not be evenly distributed throughout the Valley. The job centers in Alamosa County and Rio Grande County will need the largest share of units. The below chart shows how this distribution could vary depending upon whether housing units are constructed based solely on where jobs are located in each county, or if current commuting patterns are retained and units are constructed based on where employees presently live. What local policies are adopted and the rate of investment in housing will also play a significant role.



Source: *San Luis Valley Housing Needs Assessment 2021*

San Luis Valley Housing Bridge



Source: *San Luis Valley Housing Needs Assessment 2021*

There is a lack of diversity in the housing price points and types available across the valley. More housing choices are needed ranging from emergency shelter through market rate homeownership. Generally, the biggest gaps in the housing market are for units that serve smaller households, seniors, renters who can afford 1,135/month or lower (households below 80% AMI) and owners who can afford homes priced up to $300,000 (households below 120% AMI). This report provides more specific information for the community of Del Norte.

Defining What Households Can Afford

This report centers on the understanding of what local households can afford to pay for housing. It uses the definition that housing is affordable when the monthly payment (rent or mortgage) is equal to no more than 30% of a household's gross income (i.e., income before taxes).

The affordable rents and purchase prices for two-person households are as follows.

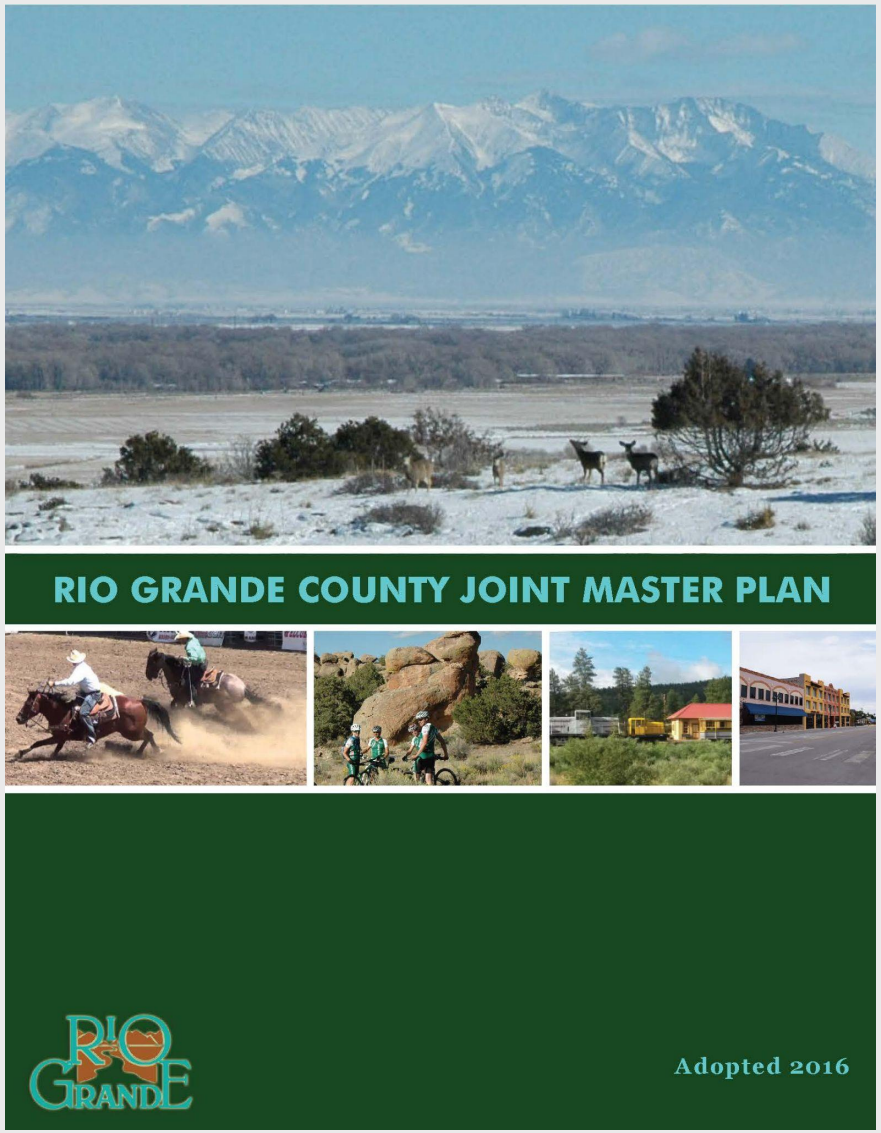
Household Income (2 people)	Percent Area Median Income (AMI)	Max Rent	Max Purchase Price
$0 to $28,400	<50%	$710	$125,000
$28,401 to $45,400	50.1-80%	$1,135	$200,000
$45,401 to $68,200	80.1-120%	$1,705	$300,000
$68,201 to $113,600	120.1-200%	$2,840	$500,000
>$113,600	>200%		

Source: *San Luis Valley Housing Needs Assessment 2021*

Rio Grande County

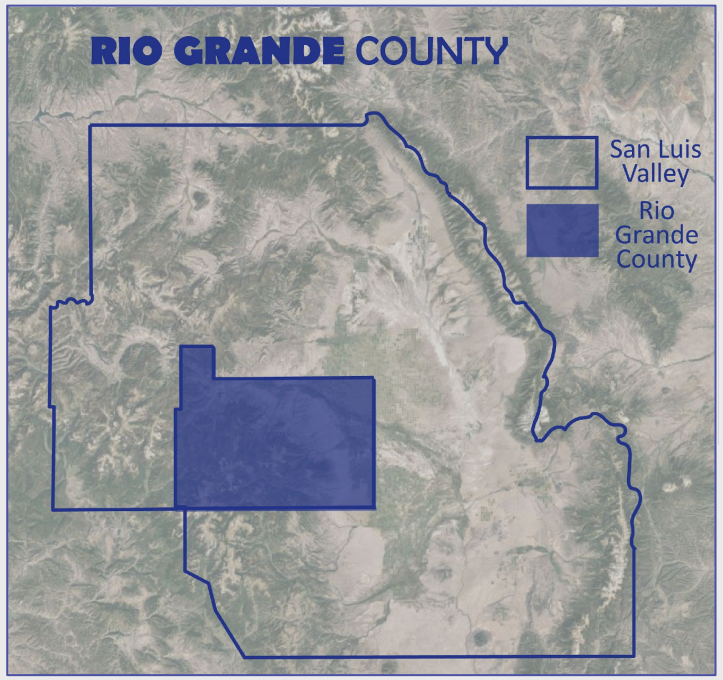
Rio Grande County is situated in the center of the San Luis Valley, stretching west into the Rio Grande National Forest.

- About 24% of households in the San Luis Valley live in Rio Grande County. The median age of residents is 42 and 34% of county households are comprised of one person living alone.
- Rio Grande County has the second highest percentage of jobs of all counties in the San Luis Valley (25%). Despite relatively recent emphasis on increasing the area's attraction as a recreational hub, jobs are concentrated in a few sectors - agriculture, retail, and government.
- Jobs in the county have declined since 2010, as has the resident population and number of households.
- What is on the rise, however, are the number of second homeowners in the county. Since 2010, the percentage of homes in the county that are not occupied by resident households has grown from 28% to 35%. Most of these homes are owned by second homeowners.
- The county also houses many employees that work in other areas of the Valley, including Alamosa. About 30% of residents commute out of the county for work. It costs households close to $700 per month to travel the 31-miles to Alamosa from Del Norte each day for work, factoring in field and vehicle costs (insurance, maintenance, etc.).
- County households have the second highest median income in the Valley ($39,000) and jobs in the county pay the second highest average wage ($40,000).
- There is a big discrepancy, however, between local incomes and home prices in the county. It would take almost four average wages to afford to purchase the median priced home listed in January 2021 ($615,000).
- Home sale prices and rents have grown rapidly in recent years, far outstripping local wages. While the growing recreational focus brings in more visitors for businesses and creates jobs, the jobs created are relatively low paying service jobs that cannot compete for homes with higher income second homeowners and visitors. A conscious effort to improve housing affordability for local employees is needed to ensure they can retain a foothold in their communities.

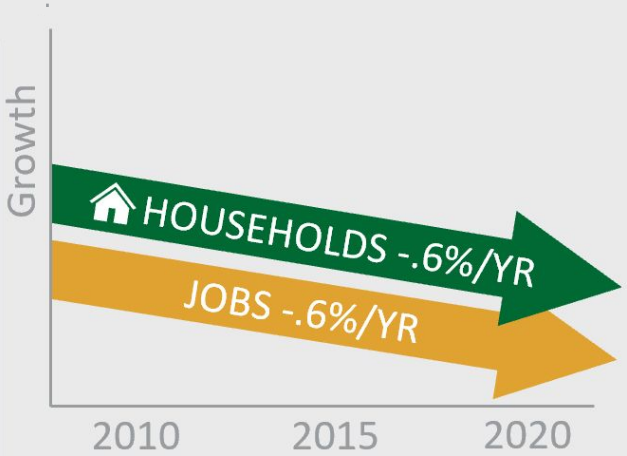


County Context: Rio Grande

Rio Grande County



Growth Rate



Tenure is 66% owner occupied/34% renter occupied

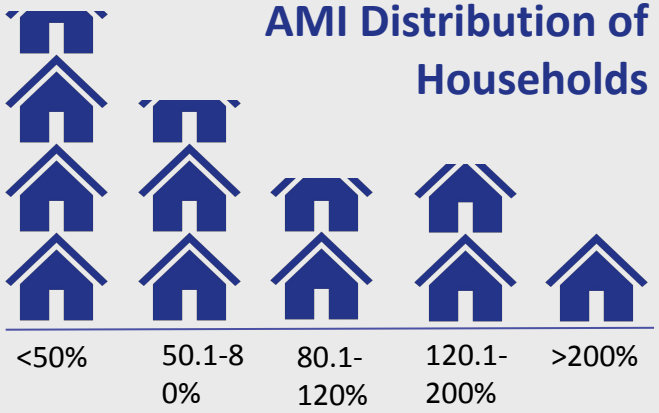
63% OF JOBS FILLED BY COUNTY RESIDENTS

72% OF RESIDENTS EMPLOYED WORK IN THE COUNTY

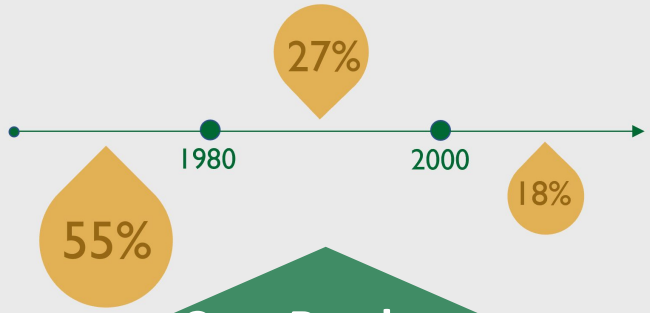
43% OF SURVEY RESPONDENTS FIND THE **AVAILABILITY OF AFFORDABLE HOUSING** TO BE A ***SERIOUS PROBLEM***

5,547 TOTAL **JOBS** IN 2020

AMI Distribution of Households



Age of Homes: Distribution

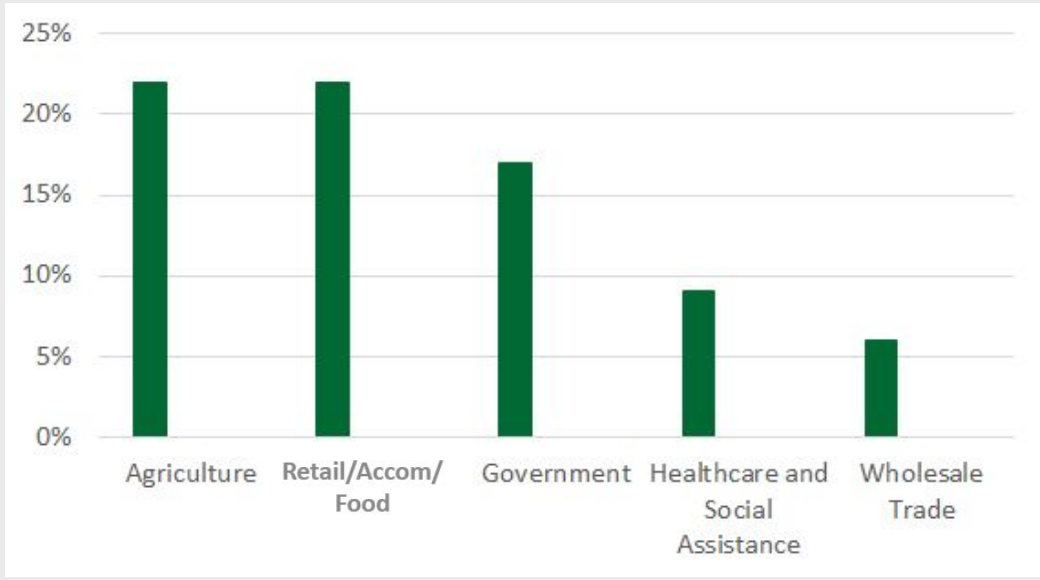


Cost Burden

19% OF HOMEOWNERS ARE COST-BURDENED

39% OF RENTERS ARE COST-BURDENED

Distribution of Jobs/Wages by Industry



**Retail/Accom/Food also includes Arts, Entertainment, and Recreation, and Other Services*

The Town of Del Norte

- About 14% of households in Rio Grande County live in Del Norte.
- The population has declined by about 8% since 2010. Limited housing stock does not help – population cannot grow/recover if there are no homes to move into.
- About 28% of homes are not occupied by residents; many are owned by second homeowners. The number of buyers from out of the area (e.g., Salida) has been growing.
- About two-thirds of residents own their homes.
- About 17% of Del Norte's housing stock is not single family or mobile homes. This is due in large part to the 76 multifamily rental units that are income restricted or subsidized for families, seniors, and people with disabilities. Yet, a focus on increasing the variety in housing type and price is needed. As the community expands its recreational visitor attractions, ensuring a stable rental inventory (i.e., apartments) and homes priced for residents making their living locally is necessary.
- Housing supply is limited and most is expensive for local residents. The town had zero homes for sale in January 2021 and 4 in May 2021, ranging from $215,000 to $500,000. Homes for sale near Del Norte mostly exceed $500,000. Few rentals were available (est. 4% vacancy) and most available rentals were too expensive for local wages.
- There is little remaining developable land in town other than infill lots and some redevelopment opportunities. There is potential for annexation.

"It is difficult to keep organizational consistency and a career path for skilled professionals due to the underlying problems addressed in this [housing] survey. It also affects the quality of life of the residents of this area."

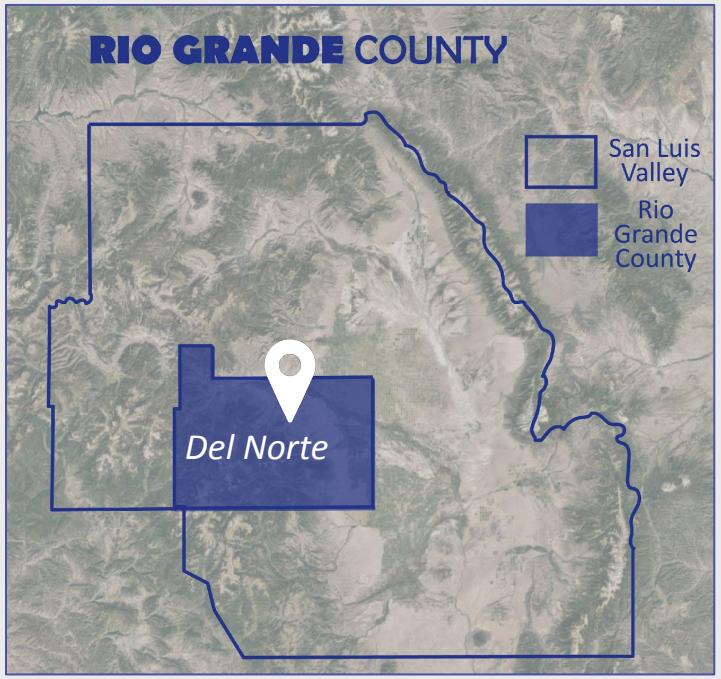
-Employer survey comment

About 40% of employers responding to a survey about housing felt that the availability of housing for their employees is a serious problem. This is reflected in the ability to attract and keep skilled labor. Employers report:

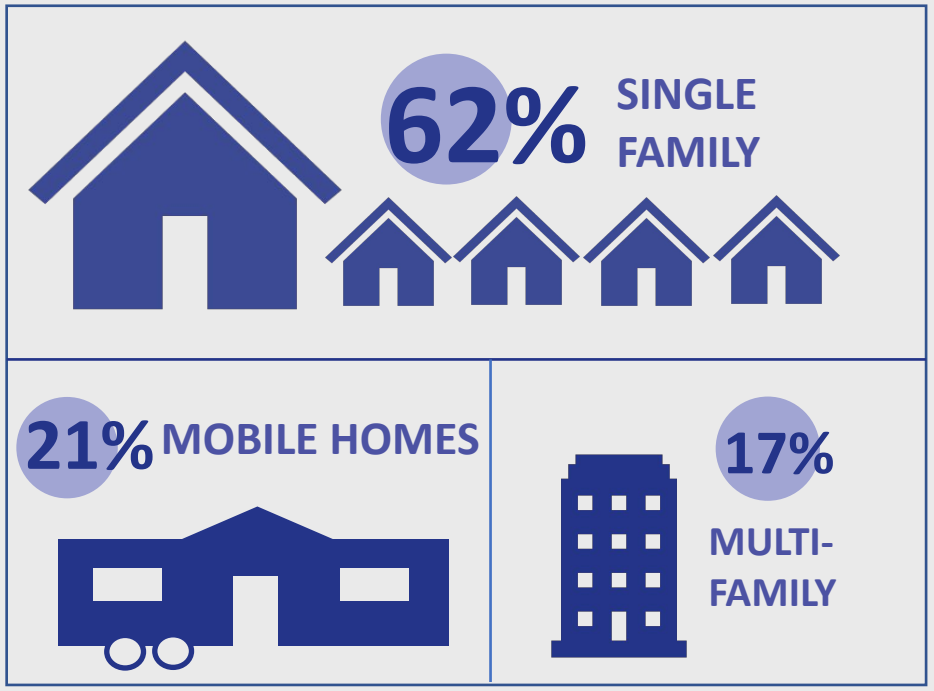
- Difficulty recruiting for jobs due to too few applicants, unskilled applicants, work ethic, and drug problems.
- Rents being too high for local wages, lack of availability and variety of homes, and poor home condition/quality.
- Skilled labor and young professionals were felt to have the most difficulty locating satisfactory housing in Del Norte.

The Town of Del Norte

Town of Del Norte

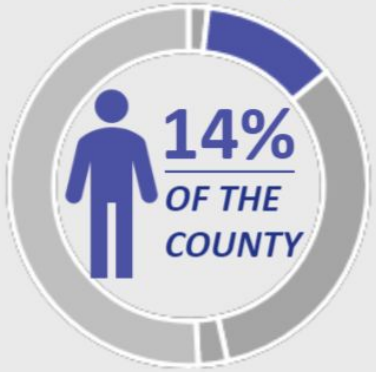


Mix of Homes

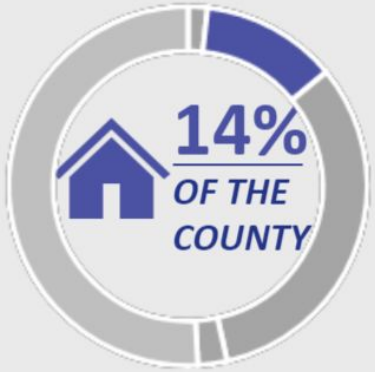


Housing Market

POPULATION: 1,547



HOUSEHOLDS: 624



> "Rents for homes are oddly high for the area's income levels relative to the condition and size of the property being rented."
>
> —Employer Survey

The housing market is not functioning well.

- Vacancy for rental housing is 4%. Over a six month period, nine rental listings were located. 23% if the housing stock is vacant.
- Average asking rent was $1,088.
- All but one rental listings were single family homes.
- There is very limited for-sale housing market activity. No homes were listed in January 2021.
- In 2020, 28 homes sold. Median sale price was $228,500.
- Most locals looking to buy need a home priced below $250,000.

The Town of Del Norte

Community Strengths

- Quality of life amenities for residents and visitors: historic downtown, shops, medical center, grocers, Riverwalk/park improvements, new school building.
- Investment in downtown/community assets.
- More job diversity (service, skilled, and professional) than many other Valley communities. Tourism development, recreation attraction is growing.
- Active organizations building regional collaboration and momentum (e.g. Upper Rio Grande Economic Development).

Opportunities

- Infill sites in town. Small casitas or accessory dwelling units/guesthouses potential.
- Redevelopment opportunities/repurposing underutilized buildings or lots, including former school campus.
- Annexation potential.

Challenges

- High home prices, and little to no home selection for local and Valley employees. The homes that are priced affordable to locals are of low quality/condition.
- Increasing competition with out of area buyers. The community is in transition with changing demographics, which is attracting more interest from outside the community and bringing in "trendy" services. Managing growth and change without pricing out current residents and essential employees will be hard and will require deliberate foresight, investment, and planning.
- Short term rentals are not yet a problem, but is on the horizon given Del Norte's proximity to South Fork and growing recreational amenities that is increasing the area's appeal. Proactive preparation could prevent significant impacts in the future.
- Infrastructure to accommodate growth – water/sewer, roads, parking.

Building Activity

- Since 2015, an average of one home/year has been built in town – single family and mobile homes.
- Former nursing home building being repurposed – residential (up to 8 units) and commercial.

Affordable Housing Resources

- 76 affordable rental units serving families, people with disabilities, and seniors (incomes below 60% AMI) at three sites.
- San Luis Valley Housing Coalition: financial counseling and down payment assistance for first time homebuyers; home renovation loans and grants.
- Energy Resource Center offers home energy retrofits for qualified owners and renters.
- La Puente: emergency housing and supportive services, including social enterprise, after school, energy billaid, emergency shelter, and rural outreach.
- San Luis Valley Behavioral Health Group offers behavioral health support and intervention, and in limited instances, support with housing.
- Volunteers of America offers rental assistance services referrals and coordination for veterans.

The Town of Del Norte

Household Income Distribution and Housing Affordability - Rio Grande County

AMI	Household Income Range (2-person household)	Maximum Affordable Price	Owner Income Distribution	Maximum Affordable Rent	Renter Income Distribution
Under 50%	$0 to $28,400	Under $125,000	25%	$710	50%
50.1 - 80%	$28,401 to $45,400	$200,000	23%	$1,135	24%
80.1 - 120%	$45,401 to $68,200	$300,000	19%	$1,705	10%
120.1 - 200%	$68,201 to $113,600	$500,000	20%	$2,840	9%
Over 200%	>$113,600	Over $500,000	12%	Over $2,840	6%
Total	–	–	**100%**	–	**100%**

◁ Greatest community housing need

New Housing Needed by 2026

60-65 homes

The number of housing units needed based on the current share of county households.

90-95 homes

The number of housing units needed to begin to reverse residential sprawl by focusing development in Town.

→

Community Goal 30 homes

Community leaders should set a housing goal of at least 30 housing units over 5 years.

The Town of Del Norte

Town of Del Norte - core housing need through 2026

- About 14% of Rio Grande County's total need, or 60 to 65 homes, is needed based on the town's share of county households.
- But, to begin to re-balance the amount of development that has been occurring in the nearby unincorporated areas, 90-95 units would be the target to aim for.
- Based on historical rates of development and the challenges associated with high construction costs, among others, the recommended number of units over the next five years is no less than 30 housing units, a significant portion of which need to be priced below current market prices. But, community leaders should increase this target number as development capacity and activity rises.

Diversity of Type and Price

There is a need for a variety of housing types and price points, for rent and for sale. Some community goals could be:

- Seasonal rentals: about 5 units
- Year-round rentals: 20-25 units, under $1,000/month, with an emphasis on under $700/month
- Ownership: 5 to 10 units, $175,000 to $300,000

Considerations

- Del Norte is being discovered by by other San Luis Valley employees and people from the Salida area, among others, which is driving up home prices.
- Significant resources are needed to fill the gap between what local employees can afford and what homes cost to produce.
- Ownership options are needed for professional employees in town (e.g. health care, schools, government, etc.).
- Rental options are needed. Wages are low in comparison to rising home prices; ensure affordable housing options exist and are retained as the area increases in popularity and prices continue to rise.

The Town of Del Norte

Potential Actions

Seasonal rentals:

- Permit ADUs in town – consider limiting to long term rental only to protect against future short term rental pressures.
- Consider permitting mobile RVs, tiny homes, mobile units as ADUs during summer months.
- Hotel or other building renovation for dorm-style housing.

Year round rentals:

- Development code incentives, fee reductions, land dedication reductions, etc. Developers need a reason and the ability to build more in town.
- Increase maximum density above 6-units (R2 zone) to encourage/attract apartments. Use existing land more efficiently rather than continuing to sprawl.
- Permit/encourage residential over commercial.

Ownership opportunities:

- Diversity of product – single family, townhome/attached.
- Self-help and Habitat programs for lower priced homes (e.g., $150,000)
- Build or buy-down existing homes for homes for young professionals (e.g., $200,000 to $300,000).
- Deed-restrict homes to retain the benefit of any public subsidy or incentives given to produce homes at below-market prices.

Improve condition of homes:

- Renovation/weatherization – promote programs for existing owners and new local buyers through San Luis Valley Housing Coalition and Energy Resource Center.
- Work with San Luis Valley Housing Coalition to establish a program to repair and reuse dilapidated and abandoned homes.

Land opportunities:

- Explore land/redevelopment options – town owned, private/partnership potential, and annexation potential
- Consider requiring a portion of residences be affordable for local employees as a condition of annexation (e.g., plan now to ensure that housing stock for local employees will exist in the community and be protected from gentrification). Inclusionary zoning was a consideration raised in the 2016 Rio Grande County Joint Master Plan, p. 8-5.

Short term rentals:

- Consider adopting a permitting, monitoring, and tax collection program now, before short term rentals increase.

Local Leader Contact Information
Bernadette Martinez
Town Manager
Town of Del Norte
delnorte1860@outlook.com

San Luis Valley
Colorado Genuine

Community Outreach and Coordination
Dawn Melgares
SLV Housing Coalition
Executive Director
(719) 587-9807
dawn@slvhc.com

Funding Provided by
Colorado Health Foundation, Colorado Division of Housing, Colorado Housing and Finance Authority
and local participating jurisdictions

Consultant Team

WILLIFORD, LLC
land use & affordable housing

WSW CONSULTING

URBANrural
continuum

CITY OF CORTEZ
123 ROGER SMITH AVENUE
CORTEZ, CO 81321

September 6, 2022 Agenda Item: 4. e.

MEMO TO: Planning and Zoning Commission

FROM:

SUBJECT: Resolution No 8, Series 2022, Champion Xpress Car Wash

BACKGROUND
see attached

RECOMMENDATION
Planning and Zoning Commission will consider approving Resolution No 8, Series 2022

Attachments

Resolution No 8, Series 2022, CX Car Wash

City of Cortez Planning and Building
123 Roger Smith Avenue
Cortez, CO 81321

Item No: 4e
Meeting Date: September 6, 2022
Project No. F22-000397

STAFF REPORT

TO: Members of the Cortez Planning and Zoning Commission

FROM: Nancy Dosdall, Contract City Planner

SUBJECT: Public Hearing on an Application for a site plan/Conditional Use Permit for a 3,537 sq. ft. car wash (Champion Xpress) to be located on 1.58 acres located at 699 Canyon Dr. and 313 S Broadway/zoned C Commercial Highway.

APPLICANT: 7B Building and Development
OWNER: DOB LLC
AGENT: Baseline Engineering

ATTACHMENTS: P&Z Resolution No. 8, Series 2022
Project Narrative
Civil Site Plans
Building
Renderings Traffic
Impact Study Title
Report

BACKGROUND

7B Building and Development, is proposing a conditional use permit and site plan to construct a new 3,537 sq. ft. car wash to be located on two parcels totaling 1.58 acres (consolidation will be required) located at 699 Canyon Dr. and 313 S. Broadway. Access is proposed off Canyon Dr. The property is zoned commercial highway (C) and is currently vacant. Car washes are considered a conditional use in the C zone.

The site is bounded on the south by commercially zoned land that include other auto oriented land uses. Family Dollar is located across Broadway. Properties to the north and west are residential, zone R-1. The property to the north along Canyon Dr. is developed with single family homes. The property to the west is a mobile home park.

DEVELOPMENT STANDARDS

Development Standard	C Zone Requirement	Proposed
Min. lot area (sq. ft.)	3,000	68,824
Min. front yard (ft.)	10’	40’ approx
Min. side yard (ft)	7’	30’ approx
Min. rear yard (ft)	20’	120’ approx
Max. lot coverage	50%	5%
Min. floor area	n/a	n/a
Max height (ft)	50’	18’
Parking	11 spaces	17 spaces
Landscaping	10% or 6,882 sq. ft.	36,079 sq. ft.

Signs		
Height	25’	45’ exceeds requirement
Area	200 sq. ft.	110 sq. ft pole sign, 86’ on building

ISSUES

The purpose of the site plan review is to ensure compliance with all regulations and to protect the public health, safety and welfare, to promote balanced growth, to ensure adequate provision of public services and facilities and to guide the character of the city. Section 6-14.12 (f) states:

> The Planning Commission in its consideration shall use the standards set forth in Chapter 5 of this code and shall include paving and layout of streets, alleys and sidewalks, means of ingress and egress, provisions for drainage, parking spaces, areas designated for landscaping, and other aspects deemed by the planning commission necessary to consider in the interest of promoting the public health, safety, order, convenience, prosperity and general welfare.

A conditional use is a use that may be permitted subject to conditions imposed upon the approval of the use that are designed to reasonably mitigate any adverse impacts upon surrounding properties. Both the planning commission and the city council shall use the following criteria in reviewing conditional use permit requests. It is specifically understood that certain criteria listed below may not apply to a particular application. The applicant shall adequately demonstrate that the applicable criteria have been met:

> (1) The proposed conditional use is compatible with adjacent existing uses and other allowed uses in the zoning district. Such compatibility shall be expressed in terms of appearance, architectural scale and features, site design and scope, landscaping, as well as the control of adverse impacts including noise, vibration, smoke, fumes, gas dust, odor, lighting, glare, traffic circulation, parking, or other undesirable or hazardous conditions.
> (2) The proposed conditional use has incorporated design features sufficient to protect adjacent uses including but not limited to: service areas, pedestrian and vehicular circulation, safety provisions, access ways to and from the site, buffering, fencing and site building placement.
> (3) All proposed accessory uses must demonstrate that they are necessary and desirable. All proposed accessory uses shall comply with the requirements of subsections(f)(1) and (2) of this section. Undesirable impacts created by these uses shall be controlled or eliminated.
> (4) Adequate public services (such as: streets, off-street parking, pedestrian facilities, water, sewer, gas, electricity, police and fire protection) must be available without the reduction of services to other existing uses.
> (5) Provisions for proper maintenance of the building, parking and loading areas, drives, lighting, signs, landscaping, etc. shall be provided.
> (6) The proposed conditional use shall conform to adopted plans, hours of operation, polices and requirements for parking and loading, signs, highway access, and all other applicable regulations of this code and other applicable regulations.

DISCUSSION

The project as submitted appears to meet all development standards with two exceptions, the height of the sign which, as proposed, significantly exceeds the height requirement and must be lowered by 20’ and provision of sidewalks along all street frontages. Comments below and suggested conditions will ensure adequate access, drainage, and all other aspects to promote the public health, safety, order, convenience, prosperity and general welfare.

The conditional use presents more issues regarding the potential impact on adjacent residential properties. Of particular concern are the single family homes on Canyon Dr. These existing homes are fenced with wood privacy fences at this time. A car wash is however, likely to be loud and difficult to mitigate when located in such close proximity to residences. The vacuum station is located particularly close to residential properties. The applicants have proposed to locate the vacuum structure in a masonry building and have added additional fencing and landscaping to the residential fences that already exist. Hours of operation are proposed for 8:00am to 8:00pm, seven days a week. Start up and closing will begin at 7:30am and cease at approximately 8:30pm.

LUC Sec. 5.07(d) states that noise shall not create a nuisance at the property line. The State of Colorado mitigates noise and defines noise as a nuisance at the following levels:
C.R.S. 25-12-103. Maximum Permissible noise levels.
1) Every activity to which this article is applicable shall be conducted in a manner so that any noise produced is not objectionable due to intermittence, beat frequency, or shrillness. Sound levels of noise radiating from a property line at a distance of twenty-five feet or more therefrom in excess of the db(A) established for the following time periods and zones shall constitute prima facie evidence that such noise is a public nuisance:

Zone	7:00 a.m. to next 7:00 p.m.	7:00 p.m. to next 7:00 a.m.
Residential	55 db(A)	50 db(A)
Commercial	60 db(A)	55 db(A)
Light industrial	70 db(A)	65 db(A)
Industrial	80 db(A)	75 db(A)

AGENCY REVIEW

GIS Coordinator (Doug Roth)
- 699 Canyon Drive address can be retained for project unless driveway access point changes.
- Considerations should be made to isolate adjoining residences from the visual and noise effects of the car wash operation, especially the vacuum stall area.

Cortez City Engineer
If the city is to provide trash service, they may want to relocate or re-orient the trash enclose so the truck won't be blocking main traffic during collection times. They will have to back in as there is no turn around area on the property. Colby says they pick up 3-4 times per week at other car wash locations.
It appears, from document text, they are aware of the setbacks for commercial use, I just didn't see any distances on the site plan relating to that.
I believe there will be some cross-connection requirements with the 2" water tap. I forwarded the contact information on to Tony Hernandez and he is going to contact them for verification.

Cortez Sanitation District (Jim Webb)
After reviewing the attached plans for this car wash we noticed a couple notables as far as the Sanitation District is concerned. First off we noted in the plans that a 2" water meter is proposed for the project, if in fact this is true we feel they should be aware that the sewer tap fee is based on the size of the water tap which equates out to be $40,000. To be paid prior to tapping out sewer main. Secondly, The plans are showing a 4" sewer tap in a manhole inside of Sikis village property. The District does not allow tapping into manholes. They would be required to tap no closer than 10' of the proposed manhole in the 8" PVC sewer line downstream of the manhole they are wanting to tap. Thirdly, they will be required to install a sand/oil trap somewhere in the service line system prior to the drainage reaching our sewer main. Lastly, The Drawings are showing 2 manholes and a sewer line in West 4th St., Just to clear up any confusion these are not the property of the District, but are in fact privately owned by The Napa retail store.

Cortez General Services (Rick Smith)
The City fiber system would like to request the opportunity at the appropriate time of bringing fiber communications along south Broadway into the new building. Hopefully during the construction document time.

Cortez Building Department (Sean Canada)
The Building Department has no concerns on the Champion Express Car Wash based on the conceptual plans. For permit review, I will need three (3) sets of full-size wet-stamped prints. We are looking at a minimum of ten working days for review.

ALTERNATIVES

1. The Commission can recommend that the Council approve the conditional use permit and site development plan for Champion Xpress Car Wash on property located at 699 Canyon Dr, in the C zone, as submitted by 7B Building

and Development;

2. The Commission can recommend denial of the application for the site development plan and state their reasons;
3. The Commission can ask for more information and table the application; or
4. The Commission can recommend that Council approve the conditional use permit and site development plan, and state any conditions they feel would be necessary to ensure compliance with the Land Use Code.

RECOMMENDATION

Staff recommends Alternative "4" above, approval of the conditional use permit and site development plan through P&Z Resolution No. 8**,** Series 2022, with 7 conditions.

If the Planning and Zoning Commission so chooses to follow the recommendation of Staff, the Commission can **make the motion to recommend that Council approve the conditional use permit and site development plan for Champion Xpress Car wash on property located at 699 Canyon Dr., in the Commercial Highway (C) zone, as submitted by 7B Building and Development through P&Z Resolutions No. 8, Series 2022, with the following conditions:**

1. All requirements of utility providers, City departments, CDOT and affected districts must be satisfied, as outlined in adopted City Codes and other regulatory documents. Specifically, all public improvements shall comply with the minimum requirements of the 2009 City of Cortez Construction Design Standards and Specifications.
2. The appropriate construction drawings and reports for the project, signed and stamped by a Colorado licensed architect or engineer, must be approved by the Building Official and City Engineer, and a building permit obtained prior to any construction on site.
3. The landscaping improvements shall be installed prior to issuances of a Certificate of Occupancy. Irrigation and maintenance must be provided. In the event that construction of the building and all other requirements are met prior to the installation of the landscaping, and the applicant desires a Certificate of Occupancy, the applicant may choose to provide a financial surety and obtain a CO in advance of completing the landscaping improvements. In this event, the applicant shall provide an assurance bond, letter of credit, or other financial security agreed to by both parties, providing a guarantee of installation of the landscaping within a time frame approved by the City of Cortez.
4. Prior to issuance of a certificate of occupancy, the applicant shall vacate the existing lot line and consolidate the properties.
5. Prior to issuance of a building permit, the applicant shall revise the plans to provide sidewalks meeting all City standards along all street frontages.
6. Prior to issuance of a sign permit, the proposed pole sign shall be revised to meet standards.
7. Operation of the car wash shall not exceed CRS 25-12-103, maximum permissible noise levels. Specifically, from 7:00am to 7:00pm noise levels shall not exceed 55 db(A) at the property line. From 7:00pm to 7:00am noise levels shall not exceed 50 db(A) at the property line.

ALTA COMMITMENT FOR TITLE INSURANCE

ISSUED BY
STEWART TITLE GUARANTY COMPANY

NOTICE

IMPORTANT - READ CAREFULLY: THIS COMMITMENT IS AN OFFER TO ISSUE ONE OR MORE TITLE INSURANCE POLICIES. ALL CLAIMS OR REMEDIES SOUGHT AGAINST THE COMPANY INVOLVING THE CONTENT OF THIS COMMITMENT OR THE POLICY MUST BE BASED SOLELY IN CONTRACT.

THIS COMMITMENT IS NOT AN ABSTRACT OF TITLE, REPORT OF THE CONDITION OF TITLE, LEGAL OPINION, OPINION OF TITLE, OR OTHER REPRESENTATION OF THE STATUS OF TITLE. THE PROCEDURES USED BY THE COMPANY TO DETERMINE INSURABILITY OF THE TITLE, INCLUDING ANY SEARCH AND EXAMINATION, ARE PROPRIETARY TO THE COMPANY, WERE PERFORMED SOLELY FOR THE BENEFIT OF THE COMPANY, AND CREATE NO EXTRACONTRACTUAL LIABILITY TO ANY PERSON, INCLUDING A PROPOSED INSURED.

THE COMPANY'S OBLIGATION UNDER THIS COMMITMENT IS TO ISSUE A POLICY TO A PROPOSED INSURED IDENTIFIED IN SCHEDULE A IN ACCORDANCE WITH THE TERMS AND PROVISIONS OF THIS COMMITMENT. THE COMPANY HAS NO LIABILITY OR OBLIGATION INVOLVING THE CONTENT OF THIS COMMITMENT TO ANY OTHER PERSON.

COMMITMENT TO ISSUE POLICY

Subject to the Notice; Schedule B, Part I - Requirements; Schedule B, Part II - Exceptions; and the Commitment Conditions, STEWART TITLE GUARANTY COMPANY, a Texas corporation (the "Company"), commits to issue the Policy according to the terms and provisions of this Commitment. This Commitment is effective as of the Commitment Date shown in Schedule A for each Policy described in Schedule A, only when the Company has entered in Schedule A both the specified dollar amount as the Proposed Policy Amount and the name of the Proposed Insured.

If all of the Schedule B, Part I - Requirements have not been met within six months after the Commitment Date, this Commitment terminates and the Company's liability and obligation end.

Countersigned by:

Misty M Kvasnicka

Authorized Countersignature
Misty M. Kvasnicka, License #: 113762

Mon Do Title Co., Inc.
Company Name

Cortez, CO 81321
City, State

Frederick H. Eppinger
President and CEO

David Hisey
Secretary

This page is only a part of a 2016 ALTA® Commitment for Title Insurance. This Commitment is not valid without the Notice; the Commitment to Issue Policy; the Commitment Conditions; Schedule A; Schedule B, Part I - Requirements; and Schedule B, Part II - Exceptions; and a countersignature by the Company or its issuing agent that may be in electronic form.

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File No.: _____

COMMITMENT CONDITIONS

1. DEFINITIONS

(a) "Knowledge" or "Known": Actual or imputed knowledge, but not constructive notice imparted by the Public Records.

(b) "Land": The land described in Schedule A and affixed improvements that by law constitute real property. The term "Land" does not include any property beyond the lines of the area described in Schedule A, nor any right, title, interest, estate, or easement in abutting streets, roads, avenues, alleys, lanes, ways, or waterways, but this does not modify or limit the extent that a right of access to and from the Land is to be insured by the Policy.

(c) "Mortgage": A mortgage, deed of trust, or other security instrument, including one evidenced by electronic means authorized by law.

(d) "Policy": Each contract of title insurance, in a form adopted by the American Land Title Association, issued or to be issued by the Company pursuant to this Commitment.

(e) "Proposed Insured": Each person identified in Schedule A as the Proposed Insured of each Policy to be issued pursuant to this Commitment.

(f) "Proposed Policy Amount": Each dollar amount specified in Schedule A as the Proposed Policy Amount of each Policy to be issued pursuant to this Commitment.

(g) "Public Records": Records established under state statutes at the Commitment Date for the purpose of imparting constructive notice of matters relating to real property to purchasers for value and without Knowledge.

(h) "Title": The estate or interest described in Schedule A.

2. If all of the Schedule B, Part I - Requirements have not been met within the time period specified in the Commitment to Issue Policy, this Commitment terminates and the Company's liability and obligation end.

3. The Company's liability and obligation is limited by and this Commitment is not valid without:

(a) the Notice;
(b) the Commitment to Issue Policy;
(c) the Commitment Conditions;
(d) Schedule A;
(e) Schedule B, Part I - Requirements;
(f) Schedule B, Part II - Exceptions; and
(g) a countersignature by the Company or its issuing agent that may be in electronic form.

4. COMPANY'S RIGHT TO AMEND

The Company may amend this Commitment at any time. If the Company amends this Commitment to add a defect, lien, encumbrance, adverse claim, or other matter recorded in the Public Records prior to the Commitment Date, any liability of the Company is limited by Commitment Condition 5. The Company shall not be liable for any other amendment to this Commitment.

5. LIMITATIONS OF LIABILITY

(a) The Company's liability under Commitment Condition 4 is limited to the Proposed Insured's actual expense incurred in the interval between the Company's delivery to the Proposed Insured of the Commitment and the delivery of the amended Commitment, resulting from the Proposed Insured's good faith reliance to:
  (i) comply with the Schedule B, Part I - Requirements;
  (ii) eliminate, with the Company's written consent, any Schedule B, Part II - Exceptions; or
  (iii) acquire the Title or create the Mortgage covered by this Commitment.

(b) The Company shall not be liable under Commitment Condition 5(a) if the Proposed Insured requested the amendment or had Knowledge of the matter and did not notify the Company about it in writing.

(c) The Company will only have liability under Commitment Condition 4 if the Proposed Insured would not have incurred the expense had the Commitment included the added matter when the Commitment was first delivered to the Proposed Insured.

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(d) The Company's liability shall not exceed the lesser of the Proposed Insured's actual expense incurred in good faith and described in Commitment Conditions 5(a)(i) through 5(a)(iii) or the Proposed Policy Amount.
(e) The Company shall not be liable for the content of the Transaction Identification Data, if any.
(f) In no event shall the Company be obligated to issue the Policy referred to in this Commitment unless all of the Schedule B, Part I - Requirements have been met to the satisfaction of the Company.
(g) In any event, the Company's liability is limited by the terms and provisions of the Policy.

6. LIABILITY OF THE COMPANY MUST BE BASED ON THIS COMMITMENT

(a) Only a Proposed Insured identified in Schedule A, and no other person, may make a claim under this Commitment.
(b) Any claim must be based in contract and must be restricted solely to the terms and provisions of this Commitment.
(c) Until the Policy is issued, this Commitment, as last revised, is the exclusive and entire agreement between the parties with respect to the subject matter of this Commitment and supersedes all prior commitment negotiations, representations, and proposals of any kind, whether written or oral, express or implied, relating to the subject matter of this Commitment.
(d) The deletion or modification of any Schedule B, Part II - Exception does not constitute an agreement or obligation to provide coverage beyond the terms and provisions of this Commitment or the Policy.
(e) Any amendment or endorsement to this Commitment must be in writing and authenticated by a person authorized by the Company.
(f) When the Policy is issued, all liability and obligation under this Commitment will end and the Company's only liability will be under the Policy.

7. IF THIS COMMITMENT HAS BEEN ISSUED BY AN ISSUING AGENT

The issuing agent is the Company's agent only for the limited purpose of issuing title insurance commitments and policies. The issuing agent is not the Company's agent for the purpose of providing closing or settlement services.

8. PRO-FORMA POLICY

The Company may provide, at the request of a Proposed Insured, a pro-forma policy illustrating the coverage that the Company may provide. A pro-forma policy neither reflects the status of Title at the time that the pro-forma policy is delivered to a Proposed Insured, nor is it a commitment to insure.

9. ARBITRATION

The Policy contains an arbitration clause. All arbitrable matters when the Proposed Policy Amount is $2,000,000 or less shall be arbitrated at the option of either the Company or the Proposed Insured as the exclusive remedy of the parties. A Proposed Insured may review a copy of the arbitration rules at <http://www.alta.org/arbitration>.

STEWART TITLE GUARANTY COMPANY

All notices required to be given the Company and any statement in writing required to be furnished the Company shall be addressed to it at P.O. Box 2029, Houston, Texas 77252-2029.

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COMMITMENT FOR TITLE INSURANCE

SCHEDULE A

Transaction Identification Data for reference only:
Issuing Agent: Mon Do Title Co., Inc.
Issuing Office: 236 W. North St, Cortez, CO 81321
ALTA® Universal ID: 1135005
Loan ID Number:
Issuing Office File Number: 2022-01-08
Property Address: 313 South Broadway, Cortez, CO 81321 and 699 Canyon Drive, Cortez, CO 81321
Revision Number: 3

1. Effective Date: 01/07/2022 at 8:00 AM

2. Policy or Policies To Be Issued:

   a. ALTA Owners Policy

Proposed Insured:	**VIA Real Estate, LLC**
Amount of Insurance:	**$175,000.00**
Policy Premium:	**$745.00**
Endorsements:	NONE

3. The estate or interest in the land described or referred to in this Commitment is:
   Property 1: fee simple, and title to the estate or interest in the land is at the Effective Date vested in DOB, L.L.C., a Colorado Limited Liability Company by deed from Larry Leighton dated 04/07/2004 and recorded with Montezuma County Recording Office on 04/16/2004 as Instrument #521899.
   Property 2: fee simple, and title to the estate or interest in the land is at the Effective Date vested in DOB, L.L.C., a Colorado Limited Liability Company by deed from Gregg M. Leighton dated 04/07/2004 and recorded with Montezuma County Recording Office on 04/09/2004 as Instrument #621768.

4. The land referred to in this Commitment is described as follows:
   The land is described as set forth in Exhibit A attached hereto and made a part hereof.

Misty M Kvasnicka

By: _____
Authorized Countersignature
Misty M. Kvasnicka, License #: 113762
Mon Do Title Co., Inc., 403909
(This Schedule A valid only when Schedule B is attached)

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COMMITMENT FOR TITLE INSURANCE

SCHEDULE B
Part I - Requirements

File No.: 2022-01-08 **Loan No.:**

The following are the requirements to be complied with:

1. The Proposed Insured must notify the Company in writing of the name of any party not referred to in this Commitment who will obtain an interest in the Land or who will make a loan on the Land. The Company may then make additional Requirements or Exceptions.

2. Pay the agreed amount for the estate or interest to be insured.

3. Pay the premiums, fees, and charges for the Policy to the Company.

4. Documents satisfactory to the Company that convey the Title or create the Mortgage to be insured, or both, must be properly authorized, executed, delivered, and recorded in the Public Records.

   Duly authorized and executed Deed from DOB, L.L.C., a Colorado Limited Liability Company, to VIA Real Estate, LLC, a Wyoming Limited Liability Company, to be executed and recorded at closing.

5. Statement of Authority pursuant to the provisions of Section 38-30-172, C.R.S. for VIA Real Estate, LLC disclosing the name of the Member(s)/Manager(s), and the name(s), address and position of each person authorized to execute instruments conveying, encumbering, or otherwise affecting title to Real Property.

6. Statement of Authority pursuant to the provisions of Section 38-30-172, C.R.S. for DOB, L.L.C. disclosing the name of the Member(s)/Manager(s), and the name(s), address and position of each person authorized to execute instruments conveying, encumbering, or otherwise affecting title to Real Property.

7. Delivery to the Company of an executed copy of the Articles of Organization for DOB, L.L.C. for inspection and approval prior to issuing any policies. Subject to any additional requirements deemed necessary by the company upon review of said Articles of Organization.

   NOTE: No certification is made as to status of ad valorem taxes due to the fact that the Montezuma County Treasurer is unable to issue current tax information until the new tax rolls are complete, Per the Montezuma County Assessor's Office taxes for 2021 are estimated to be $4,017.32 as of January 10, 2021. Tax Certificate information will be provided once it is received from the Montezuma County Treasurer's office, as to property 1.

   NOTE: No certification is made as to status of ad valorem taxes due to the fact that the Montezuma County Treasurer is unable to issue current tax information until the new tax rolls are complete, Per the Montezuma County Assessor's Office taxes for 2021 are estimated to be $1,269.76 as of January 11, 2022. Tax Certificate information will be provided once it is received from the Montezuma County Treasurer's office, as to property 2.

   NOTE: C.R.S. §30-10-40 requires that all documents received for recording or filing in the Clerk & Recorder's office shall contain a top margin of at least one inch and a left, right, and bottom margin of at least one half inch. The Clerk & Recorder may refuse or file any document that does not conform, except that, the requirement for the top margin shall not apply to documents using forms on which space is provided for recording or filing information at the top margin of the document. Regulations of County Clerk and Recorder's offices require that all documents submitted for recording must contain a return address on the front page of every document being recorded.

   NOTE: If the transaction includes sale of the property and the price exceeds $100,000.00, the seller must

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comply with the disclosure/withholding provisions of C.R.S. §39-22-604.5 (non-resident withholding)

NOTE: C.R.S. §39-14-102 requires that a real property transfer declaration accompany any conveyance document presented for recordation in the State of Colorado. Said declaration shall be completed and signed be either the grantor or grantee.

NOTE: Notwithstanding to the contrary in this commitment, if the policy to be issued is other than an ALTA Owner's Policy (6/17/06), the policy may not contain an arbitration clause, or the terms of the arbitration clause may be different from those set forth in this Commitment. If the Policy does contain an arbitration clause, and the amount of insurance is less than the amount, if any, set forth in the arbitration clause, all arbitrable matters shall be arbitrated at the option of either the Company or the Insured as the exclusive remedy of the parties.

NOTE: Please be aware that due to conflict between federal and state laws concerning the cultivation, distribution, manufacture or sale of marijuana, the company is not able to close or insure any transaction involving land that is associated with these activities.
Nothing herein contained will be deemed to obligate the company to provide any of the coverages referred to herein unless the above conditions are fully satisfied.

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COMMITMENT FOR TITLE INSURANCE

SCHEDULE B
Part II – Exceptions

File No.: 2022-01-08 **Loan No.:**

THIS COMMITMENT DOES NOT REPUBLISH ANY COVENANT, CONDITION, RESTRICTION, OR LIMITATION CONTAINED IN ANY DOCUMENT REFERRED TO IN THIS COMMITMENT TO THE EXTENT THAT THE SPECIFIC COVENANT, CONDITION, RESTRICTION, OR LIMITATION VIOLATES STATE OR FEDERAL LAW BASED ON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, GENDER IDENTITY, HANDICAP, FAMILIAL STATUS, OR NATIONAL ORIGIN.

The Policy will not insure against loss or damage resulting from the terms and provisions of any lease or easement identified in Schedule A, and will include the following Exceptions unless cleared to the satisfaction of the Company:

1. Any defect, lien, encumbrance, adverse claim, or other matter that appears for the first time in the Public Records or is created, attached, or is disclosed between the Commitment Date and the date on which all of the Schedule B, Part I — Requirements are met.

2. Right or claims of parties in possession not show by the public records.

3. Easements, liens or encumbrances or claims thereof, which are not shown by the public record.

4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments and any facts which a correct survey and inspection of the premises would disclose and which are not shown by public records.

5. Any lien, or right to a lien, for services, labor or material heretofore furnished, imposed by law and not shown by public records.

6. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Act authorizing issuance thereof; (c) water, rights, claims or title to water; (d) Minerals of whatsoever kind, subsurface and surface substances, in, on, under and that may be produced from the land, together with all rights, privileges, and immunities relating thereto, whether or not the matters excepted under (a), (b), (c) or (d) are shown by the Public Records or listed in Schedule B.

7. Assessments, taxes, fees or charges arising pursuant to the inclusion of the land in one or more special districts or municipalities, including but not limited to order of inclusion into the Cortez Sanitation District recorded in Book 257 at Page 87; Resolution from the Montezuma County Commissioners for inclusion in the Cortez Cemetery District recorded in Book 197 at Page 198, Petition recorded in Book 197 at Page 394 and Order for inclusion into the Mosquito Control District recorded in Book 385 at Page 153; and the terms, conditions, provisions and obligations as contained therein.

8. Montezuma County Regulations for Subdivisions as recorded February 1, 1972 in Book 426 at page 379 including amendments; and the terms, conditions, regulations and restrictions set forth therein.

9. Taxes and assessments for the year 2021 and subsequent years.

   Affecting Property 1:

10. Easement to Empire Electric Association, Inc., recorded on June 15, 1959 in Book 272, Page 240 in the official records, in instrument recorded on November 8, 1963 in Book 324, Page 407 in the official records, in instrument recorded on May 25, 1969 in Book 392, Page 207 in the official records, and in instrument recorded on February 26, 1979 in Book 498, Page 915 in the official records of Montezuma County Clerk & Recorder; for an easement to construct, operate and maintain an electric transmission or distribution line or system, and to cut and trim trees and shrubbery to the extent necessary to keep them clear of said electric line or system; and the terms, conditions, obligations, and restrictions with respect thereto.

11. Easement from Ralph and Evelyn Odell Tanner to the Cortez Sanitation District as described in instrument recorded on January 6, 1975 in Book 452, Page 322 in the official records of Montezuma County Clerk & Recorder; and the terms, conditions, obligation and restrictions with respect thereto.

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12. An easement for purposes of a sewer line as set forth in document recorded on May 9, 1980 in Book 513, Page 628 in the official records; and recorded, on May 9, 1980 in Book 513, Page 630 in the official records and recorded on May 9, 1980 in Book 513, Page 632 in the official records of Montezuma County Clerk & Recorder; and the terms, agreements, provisions, conditions, and obligations, as contained therein.

13. An easement for purposes of a roadway as set forth in instrument recorded on October 16, 1981 in Book 531, Page 456 in the official records of Montezuma County Clerk & Recorder; and the terms, conditions, obligation and restrictions with respect thereto.

14. An easement for purposes of a water line as described in instrument recorded on May 9, 1980 in Book 513, Page 626 in the official records of Montezuma County Clerk & Recorder; and the terms, conditions, obligation and restrictions with respect thereto.

15. Agreement for upkeep and snow removal for street easement as set forth in instrument recorded on July 20, 1982 in Book 540, Page 358 in the official records of Montezuma County Clerk & Recorder; and the terms, conditions, obligation and restrictions with respect thereto.

16. Deed to The Department of Highways, State of Colorado for each and every right or rights of access of the Grantor or Grantors to and from any part of the right-of-way for Colorado State Highway, a freeway established according to the laws of the State of Colorado, and from and to any part of said Real Property of the Grantor or Grantors abutting upon said Highway, along or across the access line or lines as described in Deed recorded on March 4, 1958 in Book 251, Page 79 in the official records and in Deed recorded on March 4, 1958 in Book 251, Page 81 in the official records and in Deed recorded on August 11, 1958 in Book 258, Page 293 in the official records of Montezuma County Clerk & Recorder; and the terms, conditions, provisions and obligations as contained therein.

    Affecting Property 2:

17. Easements, Plat Notes, Notices, Building Setbacks, General Dedications, Rights of Ways, Restrictions and Reservations as shown on the plat of Pinon Grove Subdivision recorded on February 4, 1950 in Book 6, Page 3 in the official records of Montezuma County Clerk & Recorder.

18. Right of Way to the The Town of Cortez for water lines and water mains as set forth in instrument recorded on January 10, 1950 in Book 137, Page 241 in the official records of Montezuma County Clerk & Recorder; and the terms, conditions, obligation and restrictions with respect thereto.

19. Access from the insured property to Highway 491 is subject to compliance with all federal and state regulations governing said highway.

    NOTE: The policy(s) of insurance may contain a clause permitting arbitration of claims at the request of either the Insured or the Company. Upon request, the Company will provide a copy of this clause and the accompanying arbitration rules prior to the closing of the transaction.

    NOTE: Our Privacy Policy is stated as follows: We do not reveal nonpublic, personal customer information to any external non affiliated organization or person unless authorized to do so by said customer, or are required to do so by law or court order.

    EXCEPTIONS NUMBERED NONE ARE HEREBY OMITTED

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Exhibit A

File No.: 2022-01-08 **Loan No.:**

Property 1:
A Tract of land in Tracts 18 and 19A, Payson Townsite, City of Cortez, also being within the SE¼ of Section 27, Township 36 North, Range 16 West, N.M.P.M., being more particularly described as follows:

Beginning at a point on the West right of way line of U.S. Highway 491 (formerly known as Highway 666) in Tract 19A of Payson Townsite, City of Cortez, also being within the SE¼ of Section 27, Township 36 North, Range 16 West, N.M.P.M., from which point the SE Corner of said Section 27 bears South 49°52'02" East a distance of 1973.33 feet; thence, South 88°27'18" West a distance of 315.89 feet; thence, South 65°38'14" West a distance of 148.14 feet; thence, North a distance of 160.94 feet; thence, North 88°42'00" East a distance of 298.00 feet; thence, North 89°26'38" East a distance of 209.61 feet to the West right of way line of U.S. Highway 491 (formerly know as Highway 666); thence, South 29°34'00" West a distance of 115.10 feet along the West right of way line of U.S. Highway 491 (formerly know as Highway 666) to the point of beginning.
County of Montezuma,
State of Colorado.

Property 2:
TRACT II:

All of Lots 81, 82, 83 and 84, of Pinon Grove Subdivision, being part of the Hartman Addition to the City of Cortez, as per the plat thereof filed for record February 4, 1950 in Book 6 at Page 3 in the office of the Montezuma County, State of Colorado Clerk and Recorder.

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Chain of Title

File No.: 2022-01-08 **Loan No.:**

The only conveyances affecting said land, which recorded within twenty-four (24) months of the date of this report, are as follows:

Property 1:

1. Larry Leighton to DOB, L.L.C., a Colorado Limited Liability Company by deed dated 04/07/2004 and recorded on 04/16/2004 as Instrument Number 521899 in the Official Records of the Montezuma County Recording Office.

2. Glenn R. Leighton to DOB, L.L.C., a Colorado Limited Liability Company by deed dated 04/07/2004 and recorded on 04/16/2004 as Instrument Number 521898 in the Official Records of the Montezuma County Recording Office.

3. Gregg M. Leighton to DOB, L.L.C., a Colorado Limited Liability Company by deed dated 04/07/2004 and recorded on 04/16/2004 as Instrument Number 521897 in the Official Records of the Montezuma County Recording Office.

Property 2:

1. Gregg M. Leighton to DOB, L.L.C., a Colorado Limited Liability Company by deed dated 04/07/2004 and recorded on 04/09/2004 as Instrument Number 621768 in the Official Records of the Montezuma County Recording Office.

2. Glenn R. Leighton to DOB, L.L.C., a Colorado Limited Liability Company by deed dated 04/07/2004 and recorded on 04/09/2004 as Instrument Number 521769 in the Official Records of the Montezuma County Recording Office.

3. Larry Leighton to DOB, L.L.C., a Colorado Limited Liability Company by deed dated 04/07/2004 and recorded on 04/09/2004 as Instrument Number 521770 in the Official Records of the Montezuma County Recording Office.

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DISCLOSURES

File No.: 2022-01-08

Pursuant to C.R.S. 10-11-122, notice is hereby given that:

A. THE SUBJECT REAL PROPERTY MAY BE LOCATED IN A SPECIAL TAXING DISTRICT;
B. A CERTIFICATE OF TAXES DUE LISTING EACH TAXING JURISDICTION SHALL BE OBTAINED FROM THE COUNTY TREASURER OR THE COUNTY TREASURER'S AUTHORIZED AGENT;
C. INFORMATION REGARDING SPECIAL DISTRICTS AND THE BOUNDARIES OF SUCH DISTRICTS MAY BE OBTAINED FROM THE BOARD OF COUNTY COMMISSIONERS, THE COUNTY CLERK AND RECORDER, OR THE COUNTY ASSESSOR

Note: Colorado Division of Insurance Regulations 8-1-2, Section 5, Paragraph G requires that "Every title entity shall be responsible for all matters which appear of record prior to the time of recording whenever the title entity conducts the closing and is responsible for recording or filing of legal documents resulting from the transaction which was closed." Provided that Title Company conducts the closing of the insured transaction and is responsible for recording the legal documents from the transaction, exception number 1 will not appear on the Owner's Title Policy and the Lender 's Title Policy when issued.

Note: Affirmative Mechanic's Lien Protection for the Owner may be available (typically by deletion of Exception No. 5 of Schedule B, Section 2 of the Commitment from the Owner's Policy to be issued) upon compliance with the following conditions:

A. The land described in Schedule A of this commitment must be a single-family residence, which includes a condominium or townhouse unit.
B. No labor or materials have been furnished by mechanics or materialmen for purposes of construction on the land described in Schedule A of this Commitment within the past 6 months.
C. The Company must receive an appropriate affidavit indemnifying the Company against unfiled Mechanic's and Materialmen's Liens.
D. The Company must receive payment of the appropriate premium.
E. If there has been construction, improvements or major repairs undertaken on the property to be purchased, within six months prior to the Date of the Commitment, the requirements to obtain coverage for unrecorded liens will include: disclosure of certain construction information; financial information as to the seller, the builder and/or the contractor; payment of the appropriate premium; fully executed Indemnity agreements satisfactory to the company; and, any additional requirements as may be necessary after an examination of the aforesaid information by the Company.

No coverage will be given under any circumstances for labor or material for which the insured has contracted for or agreed to pay.

To comply with the provisions of C.R.S. 10-11-123, the Company makes the following disclosure:

a. That there is recorded evidence that a mineral estate has been severed, leased or otherwise conveyed from the surface estate and that there is a substantial likelihood that a third party holds some or all interest in oil, gas, other minerals, or geothermal energy in the property; and
b. That such mineral estate may include the right to enter and use the property without the surface owner's permission.

NOTE: THIS DISCLOSURE APPLIES ONLY IF SCHEDULE B, SECTION 2 OF THE TITLE COMMITMENT HEREIN INCLUDES AN EXCEPTION FOR SEVERED MINERALS.

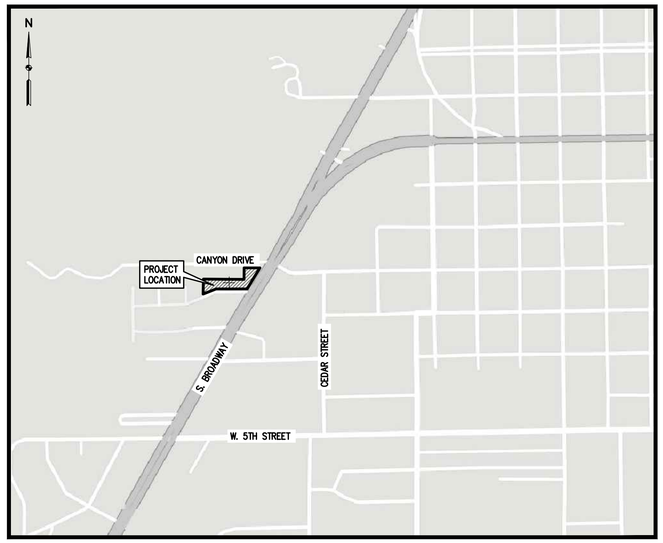
Notice of Availability of a Closing Protection Letter: Pursuant to Colorado Division of Insurance Regulation 8-1-3, Section 5, Paragraph C (11)(f), a closing protection letter is available to the consumer.

NOTHING HEREIN CONTAINED WILL BE DEEMED TO OBLIGATE THE COMPANY TO PROVIDE ANY OF THE COVERAGES REFERRED TO HEREIN, UNLESS THE ABOVE CONDITIONS ARE FULLY SATISFIED.

811 Know what's **below.** **Call** before you dig.

SITE DEVELOPMENT PLANS
CHAMPION XPRESS CAR WASH

LOCATED IN SECTION 27, TOWNSHIP 36 NORTH, RANGE 16 WEST OF THE 6th PRINCIPAL MERIDIAN
CITY OF CORTEZ, MONTEZUMA COUNTY, STATE OF COLORADO



VICINITY MAP
SCALE: 1" = 1000'

SHEET INDEX

CONTACTS:

DEVELOPER
7B BUILDING AND DEVELOPMENT
13105 DOVER AVENUE
LUBBOCK, TX 79424
CONTACT: STEPHEN SNELSON
TELEPHONE: (806) 368-7843

CIVIL ENGINEER
BASELINE ENGINEERING
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GOLDEN, CO 80403
TELEPHONE: (303) 940-9966
CONTACTS: LUKE MYERS, PE

ARCHITECT
C.L. HELT ARCHITECT, INC
6405 W. WILKINSON BLVD., SUITE 100
BELMONT, NC 28012
TELEPHONE: (704) 342-1686
CONTACTS: BEN WOODS

MUNICIPALITY
CITY OF CORTEZ, CO.
TELEPHONE:
CONTACT:

FIRE DISTRICT
CORTEZ FIRE PROTECTION DISTRICT
TELEPHONE:
CONTACT:

WATER
MOCTEZUMA WATER COMPANY
209 CENTRAL AVE. DOLORES
CO 81323
TELEPHONE: (970) 882-2226
CONTACT:

SANITARY
CORTEZ SANITATION DISTRICT
P.O DRAWER 730
CORTEZ, CO, 81321
TELEPHONE: (970) 565-3962
CONTACT:

BASELINE
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P: 3039403966 · F: 3039403959 · www.baselinecorp.com

DESIGNED BY LTV | DRAWN BY LAR | CHECKED BY LRM

REVISION DESCRIPTION	PREPARED BY	DATE
SUBMITTAL #1	LTV	6/10/2022

7B BUILDING & DEVELOPMENT
CITY OF CORTEZ — MONTEZUMA COUNTY
CORTEZ CAR WASH
CANYON DRIVE & S. BROADWAY
COVER SHEET

PREPARED UNDER THE DIRECT SUPERVISION OF

PRELIMINARY NOT FOR CONSTRUCTION

FOR AND ON BEHALF OF BASELINE CORPORATION

INITIAL SUBMITTAL	6/10/2022
DRAWING SIZE	24" X 36"
SURVEY FIRM	SURVEY DATE
BEC	3/2/2022
JOB NO.	488 7B
DRAWING NAME	488 SDP_Cover.dwg
SHEET 1 OF 11	

C1.0

N:\PLANNING LLC\488 7B Development - Cortez Site\Drawings\Planning Documents\Site Plan\488 SDP_Cover.dwg, 6/13/2022 2:38:11 PM, Laura Rios

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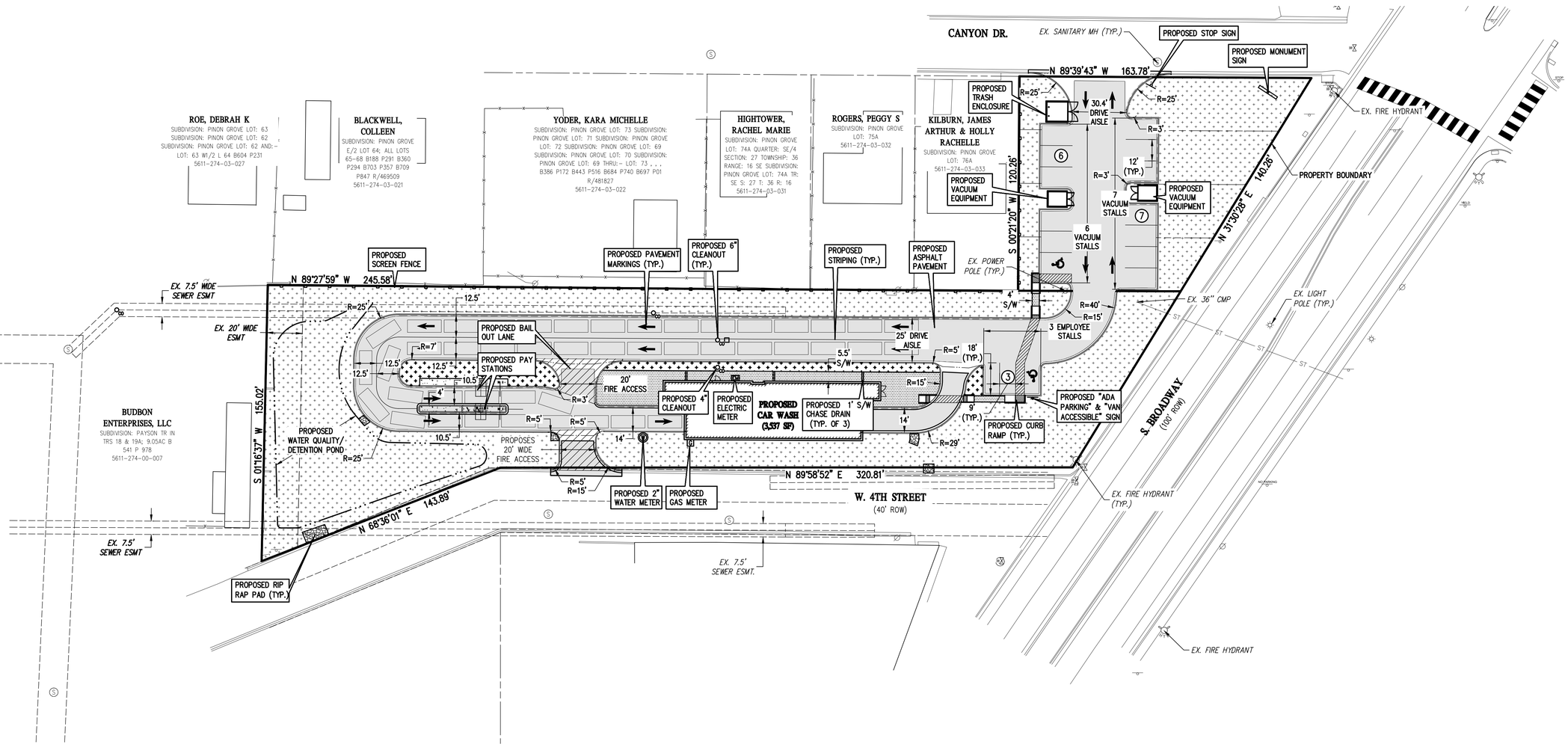
SITE DEVELOPMENT PLANS
CHAMPION XPRESS CAR WASH

LOCATED IN SECTION 27, TOWNSHIP 36 NORTH, RANGE 16 WEST OF THE 6th PRINCIPAL MERIDIAN
CITY OF CORTEZ, MONTEZUMA COUNTY, STATE OF COLORADO



LEGEND

EXISTING LINETYPES / PROPOSED LINETYPES

- PROPERTY BOUNDARY
- EASEMENT
- BUILDING SETBACK
- EDGE OF ASPHALT
- EDGE OF GRAVEL
- CURB AND GUTTER (SPILL/CATCH)
- EDGE OF BUILDING
- WIRE FENCE
- SOUND WALL
- ST — ST — STORM SEWER

EXISTING SYMBOLS / PROPOSED SYMBOLS

- WATER METER
- WATER MANHOLE
- FIRE HYDRANT
- IRRIGATION METER
- ADA PARKING STALL
- SIGN
- DOWNSPOUT
- LIGHT POLE

PROPOSED HATCES

- ASPHALT PAVING – REFER TO SOILS REPORT FOR PAVING SECTION
- SIDEWALK PAVING
- CONCRETE PAVING
- LANDSCAPING
- 19' × 7' VEHICLE TRACKING – PASSENGER CAR
- BAIL OUT LANE
- DETENTION/WATER QUALITY POND

SITE DATA

LOT SIZE	± 1.58 ACRES
BUILDING AREA	3,537 SF
PAVEMENT AREA	27,656 SF
LANDSCAPE AREA	36,079 SF
VACUUM PARKING	13 SPACES
EMPLOYEE PARKING	3 SPACES
ADA VAN PARKING	2 SPACE
ZONING	C, COMMERCIAL HIGHWAY
FEMA FIRM MAP	08083C0801C (ZONE X)

N

GRAPHIC SCALE
30 0 30 60
(IN FEET)
1 INCH = 30 FT

1 C2.0 C2.0 SITE PLAN

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LTV	LAR	LRM

REVISION DESCRIPTION	PREPARED BY	DATE
SUBMITTAL #1	LTV	6/10/2022

7B BUILDING & DEVELOPMENT
CITY OF CORTEZ MONTEZUMA COUNTY
CORTEZ CAR WASH
CANYON DRIVE & S. BROADWAY
SITE PLAN

PREPARED UNDER THE DIRECT SUPERVISION OF
PRELIMINARY NOT FOR CONSTRUCTION
FOR AND ON BEHALF OF BASELINE CORPORATION

INITIAL SUBMITTAL	6/10/2022
DRAWING SIZE	24" X 36"
SURVEY FIRM	BEC
SURVEY DATE	3/2/2022
JOB NO.	488 7B
DRAWING NAME	488 SDP_Site Plan.dwg
SHEET	2 OF 11

C2.0

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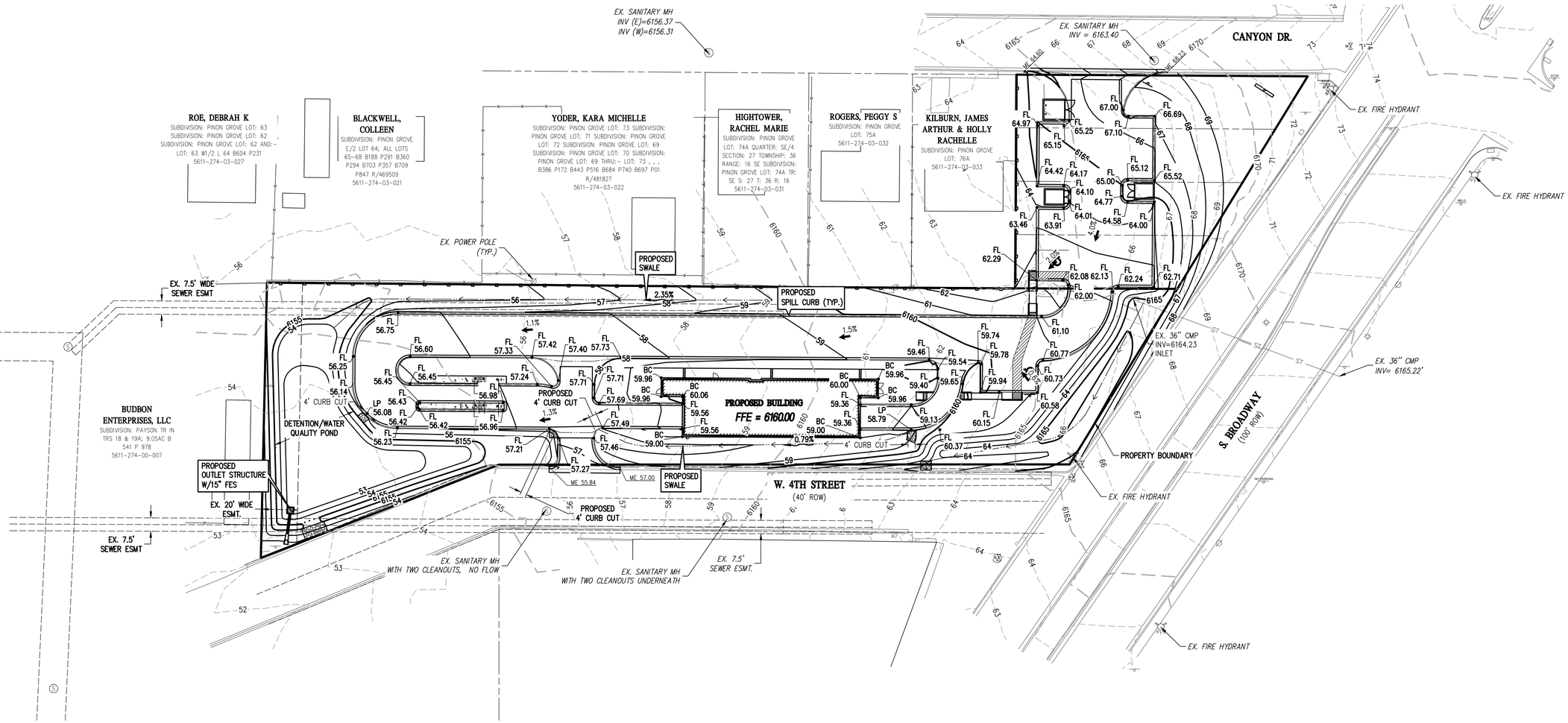
CHAMPION XPRESS CAR WASH

LOCATED IN SECTION 27, TOWNSHIP 36 NORTH, RANGE 16 WEST OF THE 6th PRINCIPAL MERIDIAN
CITY OF CORTEZ, MONTEZUMA COUNTY, STATE OF COLORADO



LEGEND

EXISTING LINETYPES	PROPOSED LINETYPES	
5280	5280	MAJOR CONTOUR (5' INTERVAL)
81	81	MINOR CONTOUR (1' INTERVAL)
		PROPERTY BOUNDARY
		EASEMENT
		BUILDING SETBACK
		EDGE OF ASPHALT
		EDGE OF GRAVEL
		CURB AND GUTTER (SPILL/CATCH)
		EDGE OF BUILDING
		SOUND WALL
		WIRE FENCE

EXISTING SYMBOLS	PROPOSED SYMBOLS	
		ADA PARKING STALL
		SIGN
DS	DS	DOWNSPOUT
		WATER VALVE
W	W	WATER METER
S	S	SANITARY MANHOLE
	CO	CLEANOUT
		LIGHT POLE
		CONCRETE FLARED END SECTION
		FOUND PROPERTY PIN AS DESCRIBED
25.44	25.36	SPOT ELEVATION
3:1	3:1	NOMINAL SLOPE ON CUT OR FILL
		FLOW DIRECTION, TYPICALLY ON PAVED SURFACES
		FLOW DIRECTION, TYPICALLY IN FLOWLINE

PROPOSED HATCES

RIPRAP

N

GRAPHIC SCALE
30 0 30 60
(IN FEET)
1 INCH = 30 FT

1 C3.0 C3.0 GRADING PLAN

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REVISION DESCRIPTION	PREPARED BY	DATE
SUBMITTAL #1	LTV	6/10/2022

DESIGNED BY LTV | DRAWN BY LAR | CHECKED BY LRM

7B BUILDING & DEVELOPMENT
CITY OF CORTEZ MONTEZUMA COUNTY

CORTEZ CAR WASH
CANYON DRIVE & S. BROADWAY
GRADING PLAN

PREPARED UNDER THE DIRECT SUPERVISION OF
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FOR AND ON BEHALF OF BASELINE CORPORATION

INITIAL SUBMITTAL	6/10/2022
DRAWING SIZE	24" X 36"
SURVEY FIRM	SURVEY DATE
BEC	3/2/2022
JOB NO.	488 7B
DRAWING NAME	488 SDP_Grading Plan.dwg
SHEET 3 OF 11	

C3.0

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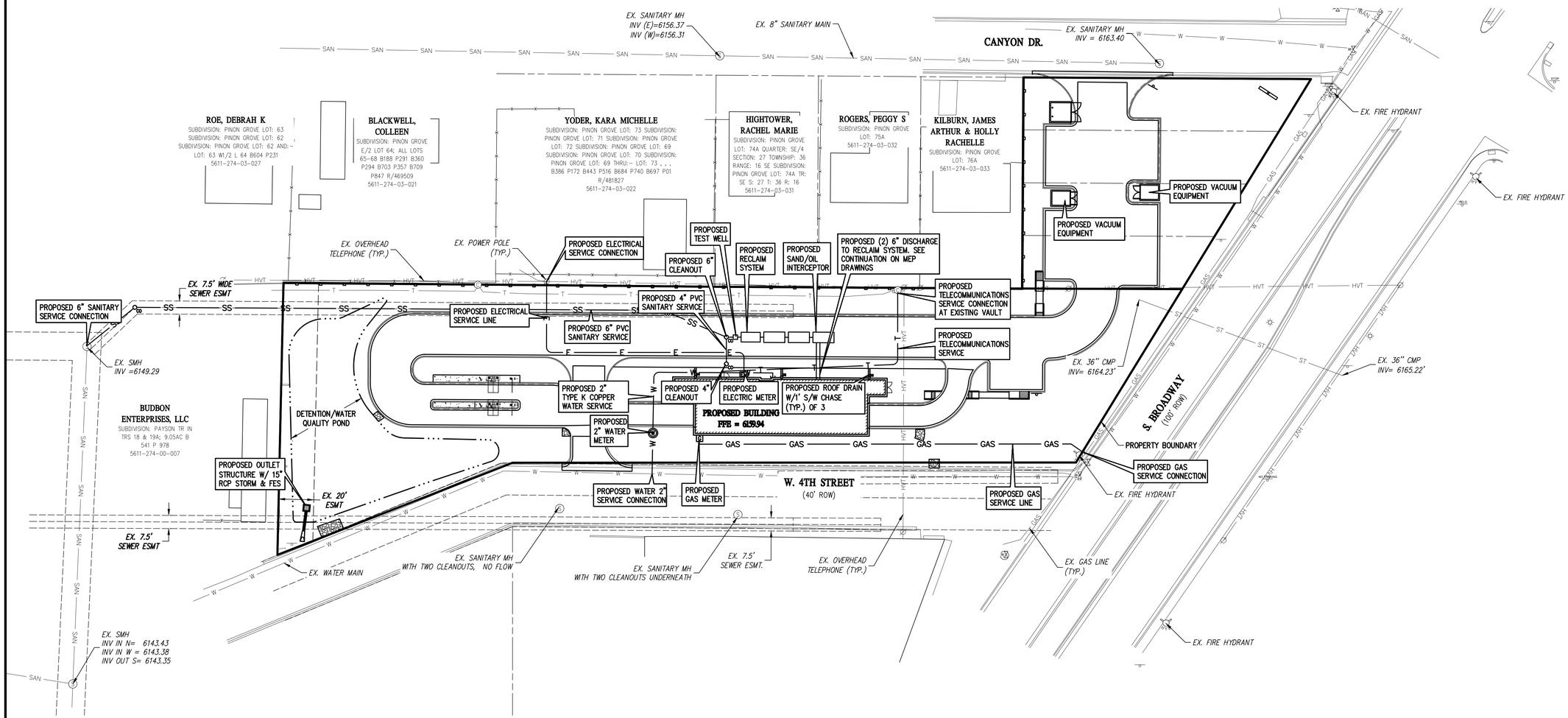
SITE DEVELOPMENT PLANS
CHAMPION XPRESS CAR WASH

LOCATED IN SECTION 27, TOWNSHIP 36 NORTH, RANGE 16 WEST OF THE 6th PRINCIPAL MERIDIAN
CITY OF CORTEZ, MONTEZUMA COUNTY, STATE OF COLORADO



LEGEND

EXISTING LINETYPES	PROPOSED LINETYPES	
		PROPERTY BOUNDARY
		EASEMENT
		BUILDING SETBACK
		EDGE OF ASPHALT
		CURB AND GUTTER (SPILL/CATCH)
		EDGE OF BUILDING
W	W	WATER LINE
WS	WS	WATER SERVICE
IRR	IRR	IRRIGATION LINE
SAN	SAN	SANITARY SEWER MAIN
SS	SS	SANITARY SEWER SERVICE
ST	ST	STORM SEWER
GAS	GAS	GASLINE
E	E	UNDERGROUND ELECTRIC
T	T	UNDERGROUND TELEPHONE

EXISTING SYMBOLS	PROPOSED SYMBOLS	
		FIRE HYDRANT
		WATER VALVE
		WATER METER
		SANITARY MANHOLE
		CLEANOUT
		DOWNSPOUT
		TYPE 'C' INLET
		CONCRETE FLARED END SECTION
		LIGHT POLE
		FOUND PROPERTY PIN AS DESCRIBED

N

GRAPHIC SCALE
30 0 30 60
(IN FEET)
1 INCH = 30 FT

1 / C4.0 | C4.0 UTILITY PLAN

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REVISION DESCRIPTION	PREPARED BY	DATE
SUBMITTAL #1	LTV	6/10/2022

7B BUILDING & DEVELOPMENT
CITY OF CORTEZ — MONTEZUMA COUNTY
CORTEZ CAR WASH
CANYON DRIVE & S. BROADWAY
UTILITY PLAN

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FOR AND ON BEHALF OF BASELINE CORPORATION

INITIAL SUBMITTAL	6/10/2022
DRAWING SIZE	24" X 36"
SURVEY FIRM	SURVEY DATE
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JOB NO.	488 7B
DRAWING NAME	488 SDP_Utility Plan.dwg
SHEET 4 OF 11	

C4.0

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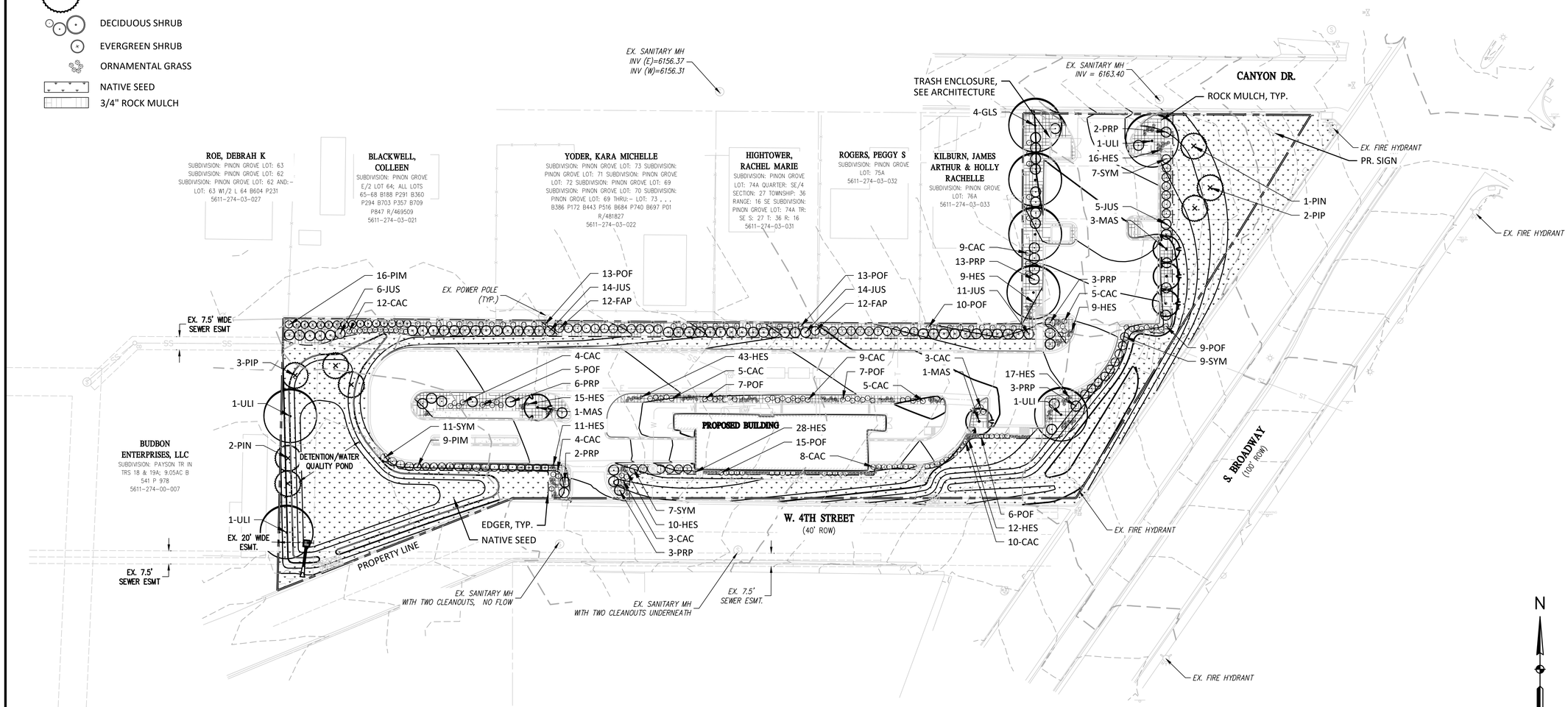
CHAMPION XPRESS CAR WASH

LOCATED IN SECTION 27, TOWNSHIP 36 NORTH, RANGE 16 WEST OF THE 6th PRINCIPAL MERIDIAN
CITY OF CORTEZ, MONTEZUMA COUNTY, STATE OF COLORADO

LEGEND

- LIMIT OF WORK
- EASEMENT
- METAL EDGER
- DECIDUOUS CANOPY TREE
- ORNAMENTAL TREE
- EVERGREEN TREE
- DECIDUOUS SHRUB
- EVERGREEN SHRUB
- ORNAMENTAL GRASS
- NATIVE SEED
- 3/4" ROCK MULCH



N

GRAPHIC SCALE
30 0 30 60
(IN FEET)
1 INCH = 30 FT

1 / L1.0 | L1.0 LANDSCAPE PLAN

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DESIGNED BY	DRAWN BY	CHECKED BY
KLH	KLH	SRA

REVISION DESCRIPTION	PREPARED BY	DATE
SUBMITTAL #1	LTV	6/10/2022

7B BUILDING & DEVELOPMENT
CITY OF CORTEZ — MONTEZUMA COUNTY
CORTEZ CAR WASH
CANYON DRIVE & S. BROADWAY
LANDSCAPE PLAN

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FOR AND ON BEHALF OF BASELINE CORPORATION

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DRAWING SIZE	24" X 36"
SURVEY FIRM	BEC
SURVEY DATE	3/2/2022
JOB NO.	488 7B
DRAWING NAME	488 SDP_Landscape Plan.dwg
SHEET	5 OF 11

L1.0

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SITE DEVELOPMENT PLANS
CHAMPION XPRESS CAR WASH

LOCATED IN SECTION 27, TOWNSHIP 36 NORTH, RANGE 16 WEST OF THE 6th PRINCIPAL MERIDIAN
CITY OF CORTEZ, MONTEZUMA COUNTY, STATE OF COLORADO

LANDSCAPE NOTES

GENERAL
1. ALL LANDSCAPING SHALL BE INSTALLED PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY, UNLESS EXCEPTION HAS BEEN GRANTED BY THE MUNICIPALITY OR COUNTY OFFICIALS.
2. THE LANDSCAPE PLANS AND SPECIFICATIONS SHOULD BE FOLLOWED AS CLOSELY AS POSSIBLE. THE OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT SHOULD BE NOTIFIED IF ANY SUBSTITUTIONS OR ALTERATIONS ARE NEEDED.
3. THE CONTRACTOR SHALL COORDINATE INSPECTION AND APPROVAL OF ALL MATERIALS AND PRODUCTS PRIOR TO INSTALLATION.
4. THE CONTRACTOR IS EXPECTED TO KNOW AND UNDERSTAND ANY LOCAL MUNICIPAL AND COUNTY CODES AND SPECIFICATIONS FOR LANDSCAPE AND IRRIGATION. IN CASES OF DISCREPANCIES THE HIGHER OF THE TWO STANDARDS SHALL HAVE PRECEDENCE.
5. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL EXISTING VEGETATION (EXCEPT WHERE NOTED TO REMAIN). THE CONTRACTOR SHALL MARK ALL UTILITIES BEFORE BEGINNING PLANTING AND IRRIGATION OPERATIONS. SHOULD ACTUAL UTILITY LOCATION BE SUBSTANTIALLY DIFFERENT THAN THOSE SHOWN ON THE PLANS, THE CONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR AND OWNER FOR DIRECTION BEFORE PROCEEDING FURTHER.
6. THE LANDSCAPE CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE EXISTS IN ALL LANDSCAPE AREAS. ALL LANDSCAPE AREAS SHALL MAINTAIN SLOPE AWAY FROM FOUNDATIONS PER GEOTECHNICAL REPORT RECOMMENDATIONS. SURFACE DRAINAGE SHALL NOT FLOW TOWARD STRUCTURES AND FOUNDATIONS. NO DAMMING OF WATER SHOULD OCCUR AGAINST SIDEWALKS, CURBS, TURF THATCH, OR OTHER LANDSCAPE MATERIALS. MINIMUM SLOPES ON LANDSCAPE AREAS SHALL BE 2%; MAXIMUM SLOPE SHALL BE 25% UNLESS SPECIFICALLY IDENTIFIED ON THE PLANS OR APPROVED BY THE OWNER'S REPRESENTATIVE.
7. INSTALLATION, MAINTENANCE, AND REPLACEMENT OF ALL IMPROVEMENTS SHOWN ON THE APPROVED LANDSCAPE PLAN IN THE PLANNING DEPARTMENT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER, HIS SUCCESSORS AND DELEGATES.
8. LANDSCAPING SHALL NOT INTERFERE WITH TRAFFIC VISIBILITY AND THE GENERAL FUNCTION AND SAFETY OF ANY GAS, ELECTRIC, WATER, SEWER, TELEPHONE, CABLE, OR OTHER UTILITY EASEMENT.

WARRANTY
1. UNLESS SPECIFIED IN THE CONTRACT DOCUMENTS OR SPECIFICATIONS, THE CONTRACTOR SHALL WARRANTY ALL CONTRACTED WORK AND MATERIALS FOR A PERIOD OF ONE (1) YEAR AFTER SUBSTANTIAL COMPLETION HAS BEEN ISSUED FOR THE PROJECT BY THE OWNER'S REPRESENTATIVE.
2. CONTRACTOR SHALL PROVIDE LANDSCAPE PROTECTION, MAINTENANCE, AND IRRIGATION INCLUDING SUPPLEMENTAL WATERING PER SPECIFICATIONS UNTIL SUBSTANTIAL COMPLETION HAS BEEN ISSUED UNLESS OTHERWISE INSTRUCTED PER OWNER'S REPRESENTATIVE.

PLANTS
1. THE PLANT SCHEDULE IS FOR CONTRACTOR'S CONVENIENCE ONLY. PLANT QUANTITIES SHOULD BE VERIFIED BY THE CONTRACTOR. GRAPHIC QUANTITIES TAKE PRECEDENCE OVER WRITTEN QUANTITIES. OVERALL PLANT QUANTITY AND QUALITY SHALL BE CONSISTENT WITH THE PLANS.
2. THE OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT RETAIN THE RIGHT TO INSPECT AND TAG ALL PLANT MATERIAL PRIOR TO SHIPPING TO THE SITE. THE OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT MAY REJECT PLANT MATERIAL IF IT IS DAMAGED, DISEASED, OR DECLINING IN HEALTH. PLANT MATERIAL SHALL BE HEALTHY, WELL-BRANCHED, AND WELL PROPORTIONED, FREE FROM DISEASE, INJURY, INSECTS, AND WEED ROOTS.
3. ALL PLANT MATERIAL SHALL MEET OR EXCEED CURRENT AMERICAN STANDARD FOR NURSERY STOCK ISSUED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC. (ANSI Z60.1-1990) AND THE COLORADO NURSERY ACT AND ACCOMPANYING RULES AND REGULATIONS. PLANT MATERIAL GROWN IN USDA HARDINESS ZONES 1, 2, 3, 4, AND 5 IS PREFERRED.
4. THE CONTRACTOR SHALL VERIFY PLANT MATERIAL SIZES WITH OWNER'S REPRESENTATIVE PRIOR TO PURCHASING, SHIPPING OR STOCKING OF PLANT MATERIALS. PLANTS SHALL EQUAL OR EXCEED THE MEASUREMENTS SPECIFIED IN THE PLANT LIST, WHICH ARE MINIMUM ACCEPTABLE SIZES.
5. THE OWNER'S REPRESENTATIVE MAY OPT TO DOWN OR UPSIZE THE PLANT MATERIAL AT THEIR DISCRETION BASED ON SELECTION, AVAILABILITY, OR ENHANCEMENTS TO THE PROJECT. ALL CHANGES, INCLUDING RE-STOCKING CHARGES, SHALL BE APPROVED IN WRITING PRIOR TO INSTALLATION THROUGH A CHANGE ORDER REQUEST TO OWNER'S REPRESENTATIVE FOR APPROVAL.
6. ALL PLANT LOCATIONS ARE DIAGRAMMATIC. ACTUAL LOCATIONS SHALL BE VERIFIED WITH THE LANDSCAPE ARCHITECT OR DESIGNER PRIOR TO PLANTING. THE LANDSCAPE CONTRACTOR SHALL ENSURE THAT ALL REQUIREMENTS OF THE PERMITTING AUTHORITY ARE MET (I.E., MINIMUM PLANT QUANTITIES, PLANTING METHODS, TREE PROTECTION METHODS, ETC.)
7. NO SUBSTITUTIONS OF PLANT MATERIALS SHALL BE ALLOWED WITHOUT THE WRITTEN PERMISSION OF THE LANDSCAPE ARCHITECT. IF SOME OF THE PLANTS ARE NOT AVAILABLE, THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT IN WRITING (VIA PROPER CHANNELS).

IRRIGATION
1. ALL PROPOSED LANDSCAPE AREAS SHALL BE IRRIGATED BY AN AUTOMATIC UNDERGROUND IRRIGATION SYSTEM. REFER TO IRRIGATION PLANS FOR TYPES AND LIMITS OF IRRIGATION. THE SYSTEM SHALL BE PROPERLY ZONED TO SEPARATE PLANT REQUIREMENTS, TURF ZONES, AND NATIVE SEED AREAS.
2. CONTRACTOR SHALL REVIEW AND COMPLY WITH ALL GEOTECHNICAL REPORT STIPULATIONS KEEPING ALL IRRIGATION LINES, HEADS, AND EMITTERS OUTSIDE THE MINIMUM DISTANCES SPECIFIED. IN NO CASE SHALL IRRIGATION BE EMITTED WITHIN THE MINIMUM DISTANCES OF BUILDING OR WALL FOUNDATIONS.
3. CONTRACTOR SHALL COORDINATE ALL INSTALLATION OF IRRIGATION EQUIPMENT AND LINES SO THAT IT DOES NOT INTERFERE WITH PLANTING LOCATIONS. LANDSCAPE MATERIAL LOCATIONS SHALL HAVE PRECEDENCE OVER IRRIGATION LINES AND EQUIPMENT. IF INSTALLED IN LOCATIONS OBSTRUCTING THE INTENDED USE, THE IRRIGATION EQUIPMENT SHALL BE RELOCATED.
4. IRRIGATION ADJACENT TO EXISTING TREES AND LANDSCAPE TO REMAIN SHALL BE HAND DUG.
5. EVERGREEN TREES SHALL BE LOCATED A MINIMUM OF FIFTEEN FEET (15') AWAY FROM IRRIGATION ROTOR HEADS.

SOIL PREPARATION
1. BEFORE COMMENCING WORK, THE LANDSCAPE CONTRACTOR SHALL ENSURE THAT ALL SEWER, WATER, IRRIGATION, GAS, ELECTRIC, CABLE, PHONE AND OTHER PIPELINES OR CONDUITS AND EQUIPMENT ARE LOCATED ON SITE.
2. SURFACE GRADING TO INCLUDE REMOVAL OF EXISTING VEGETATION, WEEDS, DEBRIS, CLODS AND ROCKS LARGER THAN 2" FROM THE SITE. DISPOSE OF ACCUMULATED DEBRIS AS DIRECTED BY THE OWNER OR OWNER'S REPRESENTATIVE.
3. THE CONTRACTOR SHALL TAKE MEASURES AND ASSUME MAINTENANCE AND MANAGEMENT OF EROSION CONTROL, SURFACE RUNOFF, AND SOIL EROSION AND SEDIMENT FROM THE SITE PER STORM WATER MANAGEMENT PLANS / PROGRAMS IN PLACE.
4. THE CONTRACTOR SHALL INSPECT ALL CONDITIONS FOR RETENTION OF WATER IN PLANTING AREAS TO MAKE SURE THERE IS ADEQUATE DRAINAGE IN ALL LANDSCAPE AREAS.
5. THE SITE SHOULD BE PROVIDED TO THE CONTRACTOR WITHIN +/- 0.1 FOOT OF FINISH GRADE. CONTRACTOR SHALL VERIFY THE ROUGH GRADING AND SITE CONDITIONS.
7. ALL GRADES SHALL BE WITHIN +/- 1/8" OF FINISHED GRADES AS SHOWN ON THE PLANS.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CREATING SUITABLE SOIL MEDIUM THAT ENSURES HEALTHY PLANT GROWTH. SOIL SAMPLES ARE RECOMMENDED FOR ANALYSIS OF ORGANIC MATTER RECOMMENDATIONS REQUIRED FOR THE SOIL FOR HEALTHY PLANT GROWTH.
9. TO THE MAXIMUM EXTENT FEASIBLE, TOPSOIL THAT IS REMOVED DURING CONSTRUCTION ACTIVITY SHALL BE CONSERVED FOR LATER USE ON AREAS REQUIRING REVEGETATION AND LANDSCAPING.
10. BEFORE PLANTS ARE INSTALLED, ALL LANDSCAPE AREAS SHALL BE THOROUGHLY LOOSENED TO A DEPTH OF 8"-12" AND AMENDED PER SPECIFICATIONS AND MUNICIPAL REQUIREMENTS.
11. ALL LANDSCAPE AREAS SHALL RECEIVE ORGANIC SOIL PREPARATION AT 5 cu.yrds/1,000sf OR AS NOTED IN THE SOIL SAMPLE ANALYSIS.

TREES
1. TREES SHALL NOT BE LOCATED IN DRAINAGE SWALES, DRAINAGE AREAS, OR UTILITY EASEMENTS. CONTACT OWNER'S REPRESENTATIVE FOR RELOCATION OF PLANTS IN QUESTIONABLE AREAS PRIOR TO INSTALLATION.
2. TREE CENTERS SHALL NOT BE PLACED CLOSER THAN EIGHT FEET (8') FOR EVERGREEN TREES AND SIX FEET (6') FOR ORNAMENTAL TREES FROM A SIDEWALK, PARKING, STREET OR DRIVE LANE. NOTIFY OWNER'S REPRESENTATIVE IF TREE LOCATIONS CONFLICT WITH THESE STANDARDS.
3. EVERGREEN TREES SHALL NOT BE USED IN THE TREE LAWN OR WITHIN EIGHT FEET (8') OF A PUBLIC WALK.
4. ALL TREES ARE TO BE STAKED AND GUYED FOR A PERIOD OF ONE (1) YEAR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING STAKES AT THE END OF ONE (1) YEAR FROM ACCEPTANCE OF LANDSCAPE INSTALLATION PER APPROVAL BY OWNER'S REPRESENTATIVE.
5. ALL TREES IN SEED OR TURF AREAS SHALL RECEIVE MULCH RINGS. ALL TREE RINGS AND PERENNIAL BEDS SHALL BE MULCHED WITH A 3" DEPTH OF GORILLA HAIR CEDAR MULCH.

MULCH & EDGING
1. PRIOR TO THE PLACEMENT OF MULCH AND WEED FABRIC, A GRANULAR, PRE-EMERGENT, WEED CONTROL AGENT SHALL BE ADDED TO ALL PLANTING BEDS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTION, EXCEPT AROUND ORNAMENTAL GRASSES.
2. SHRUB, GROUNDCOVER AND PERENNIAL BEDS ARE TO BE CONTAINED BY 4" x 14 GAUGE GALVANIZED, GREEN, ROLL TOP, INTERLOCKING TYPE EDGER, SURE-LOC OR APPROVED EQUAL. EDGER IS NOT REQUIRED WHEN ADJACENT CURBS, WALLS, WALKS OR SOLID FENCES WITHIN 3" OF PRE-MULCHED FINAL GRADE. EDGER SHALL NOT BE REQUIRED TO SEPARATE MULCH TYPES UNLESS SPECIFIED ON THE PLANS. PERFORATED EDGER IS ONLY USED BETWEEN SOD/NATIVE GRASS AND MULCH AREAS WHERE PONDING OF WATER OCCURS. EDGER SHALL NOT RESTRICT THE FREE FLOW OF DRAINAGE OR DAM WATER IN ANY CASE.
3. ALL SHRUB BEDS ARE TO BE MULCHED WITH MIN. FOUR INCH (4") DEPTH OF 1"-2" ROUNDED RIVER ROCK MULCH OVER SPECIFIED GEOTEXTILE WEED CONTROL FABRIC (RE: PLANS). NO WEED CONTROL FABRIC IS REQUIRED IN GROUNDCOVER, ANNUAL OR PERENNIAL AREAS. CONTRACTOR TO SUBMIT SAMPLE OF ALL MULCHES TO LANDSCAPE ARCHITECT AND OWNER FOR APPROVAL PRIOR TO CONSTRUCTION.
4. ALL 5' NON-IRRIGATED CLEAR BOUNDARY ZONES SHOULD BE MULCHED WITH A FOUR INCH (4") DEPTH OF ROUNDED RIVER ROCK MULCH OVER SPECIFIED GEOTEXTILE WEED CONTROL FABRIC.
5. NO EXPOSED GROUND SHALL BE LEFT SHOWING ANYWHERE ON THE PROJECT AFTER MULCH HAS BEEN INSTALLED.
6. SHREDDED CEDAR WOOD MULCH SHALL BE INSTALLED AT THE BASE OF EACH PLANT AS FOLLOWS: TREES, 48" DIAMETER CIRCLE; SHRUBS, 18" DIAMETER CIRCLE AT A 3" DEPTH.

PLANT SCHEDULE

QTY.	SYM.	BOTANICAL NAME	COMMON NAME	MINIMUM SIZE	MATURE SIZE (HT X W)	WATER USE (X, L, M, H)
DECIDUOUS CANOPY TREES						
4	GLS	GLEDITSIA TRIACANTHOS INERMIS 'SHADEMASTER'	SHADEMASTER LOCUST	1.5" CAL. B&B	50' X 35'	L
4	ULJ	ULMUS JAPONICA X WILSONIANA	ACCOLADE ELM	1.5" CAL. B&B	40' X 40'	L
DECIDUOUS ORNAMENTAL TREES						
5	MAS	MALUS X 'SPRING SNOW'	SPRING SNOW CRAB	1.5" CAL. B&B	20' X 15'	L
EVERGREEN TREES & UPRIGHT JUNIPERS						
5	PIP	PICEA PUNGENS VAR GLAUCA	COLORADO BLUE SPRUCE	5' HT B&B	30' X 20'	L
3	PIN	PINUS NIGRA	AUSTRIAN PINE	5' HT B&B	50' X 20'	X
DECIDUOUS SHRUBS						
77	CAC	CARYOPTERIS X CLANDONENSIS	BLUE MIST SPIREA	#5 CONT.	3' X 3'	X
24	FAP	FALLUGIA PARADOXA	APACHE PLUME	#5 CONT.	5' X 5'	X
85	POF	POTENTILLA FRUTICOSA 'GOLD DROP'	GOLD DROP POTENTILLA	#5 CONT.	3' X 3'	L
32	PRP	PRUNUS BESSEYI 'PAWNEE BUTTES'	PAWNEE BUTTES SAND CHERRY	#5 CONT.	18" X 6'	X
34	SYM	SYRINGA PATULA 'MISS KIM'	MISS KIM LILAC	#5 CONT.	5' X 5'	L
EVERGREEN SHRUBS						
50	JUS	JUNIPERUS SABINA 'BUFFALO'	BUFFALO JUNIPER	#5 CONT.	12" X 6'	X
24	PIM	PINUS MUGO 'SLOWMOUND'	SLOWMOUND MUGO PINE	#5 CONT.	4' X 5'	L
ORNAMENTAL GRASSES						
170	HES	HELICTOTRICHON SEMPERVIRENS	BLUE AVENA	#1 CONT.	3' X 3'	X

MATERIAL SCHEDULE

NATIVE SEED
27,570 SF NATIVE SEED SHALL BE LOW GROW MIX BY ARKANSAS VALLEY SEED (OR APPROVED EQUAL)

ROCK MULCH
11,317 SF ROCK MULCH SHALL BE 3/4" - 1-1/2" MOUNTAIN GRANITE BY PIONEER SAND (OR APPROVED EQUAL)

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DESIGNED BY KLH | DRAWN BY KLH | CHECKED BY SRA

REVISION DESCRIPTION	PREPARED BY	DATE
SUBMITTAL #1	LTV	6/10/2022

7B BUILDING & DEVELOPMENT
CITY OF CORTEZ — MONTEZUMA COUNTY
CORTEZ CAR WASH
CANYON DRIVE & S. BROADWAY
LANDSCAPE NOTES

PREPARED UNDER THE DIRECT SUPERVISION OF
PRELIMINARY NOT FOR CONSTRUCTION
FOR AND ON BEHALF OF BASELINE CORPORATION

INITIAL SUBMITTAL	6/10/2022
DRAWING SIZE	24" X 36"
SURVEY FIRM	SURVEY DATE
BEC	3/2/2022
JOB NO.	488 7B
DRAWING NAME	488 SDP_Landscape Plan.dwg
SHEET 6 OF 11	

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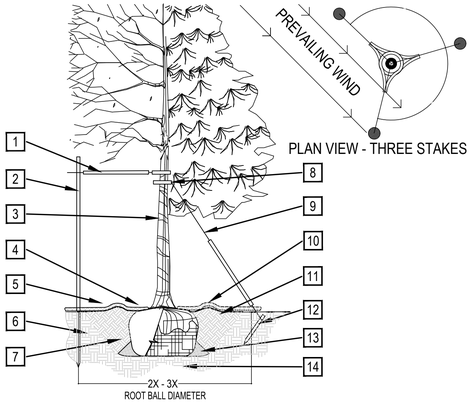
SITE DEVELOPMENT PLANS
CHAMPION XPRESS CAR WASH

LOCATED IN SECTION 27, TOWNSHIP 36 NORTH, RANGE 16 WEST OF THE 6th PRINCIPAL MERIDIAN
CITY OF CORTEZ, MONTEZUMA COUNTY, STATE OF COLORADO



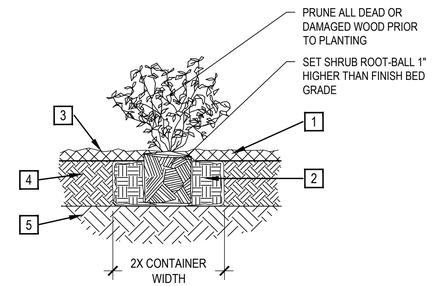
PRUNING NOTES:
1. ALL PRUNING SHALL COMPLY WITH ANSI A300 STANDARDS.
2. DO NOT HEAVILY PRUNE THE TREE AT PLANTING. PRUNE ONLY CROSSOVER LIMBS, CO-DOMINANT LEADERS AND BROKEN BRANCHES. SOME INTERIOR TWIGS AND LATERAL BRANCHES MAY BE PRUNED. HOWEVER, DO NOT REMOVE THE TERMINAL BUDS OF BRANCHES THAT EXTEND TO THE EDGE OF THE CROWN.

STAKING NOTES:
1. STAKE TREES PER FOLLOWING SCHEDULE, THEN REMOVE AT END OF FIRST GROWING SEASON.
2. 1.1 1-½" CALIPER SIZE - MIN. 1 STAKE ON SIDE OF PREVAILING WIND (GENERALLY N.W. SIDE)
   1.2 1-½" - 3" CALIPER SIZE - MIN. 2 STAKES - ONE ON N.W. SIDE, ONE ON S.W. SIDE (OR PREVAILING WIND SIDE AND 180° FROM THAT SIDE)
   1.3 3" CALIPER SIZE AND LARGER - 3 STAKES PER DIAGRAM
3. WIRE OR CABLE SHALL BE MIN. 12 GAUGE, TIGHTEN WIRE OR CABLE ONLY ENOUGH TO KEEP FROM SLIPPING. ALLOW FOR SOME TRUNK MOVEMENT. NYLON STRAPS SHALL BE LONG ENOUGH TO ACCOMMODATE 1-½" OF GROWTH AND BUFFER ALL BRANCHES FROM WIRE.

1. PLACE MIN. 2" PVC PIPE AROUND EACH WIRE. EXPOSED WIRE SHALL BE MAX. 2" EACH SIDE
2. 6 FT. UNTREATED WOOD POST (MIN. 1.5" DIAMETER). ALL SHALL BE DRIVEN OUTSIDE ROOTBALL AND IN UNDISTURBED SOIL.
3. TREE WRAP TO BE INSTALLED ONLY FROM OCTOBER 1 THROUGH APRIL 30. (DECIDUOUS ONLY)
4. PLANT TREE SO THAT FIRST ORDER MAJOR ROOT IS 1"-2" ABOVE FINAL GRADE.
5. 3" DEEP WOOD MULCH RING PLACED A MINIMUM OF 4 FT. IN DIAMETER. DO NOT PLACE MULCH IN CONTACT WITH TREE TRUNK (FINISHED GRADE REFERENCES TOP OF MULCH).
6. 1:1 SLOPE ON SIDES OF PLANTING HOLE.
7. REMOVE ALL TWINE, ROPE, BURLAP AND WIRE FROM ENTIRE ROOT BALL AND TRUNK
8. GROMMETED NYLON STRAPS
9. GALVANIZED WIRE, MIN. 12 GAUGE CABLE - TWIST WIRE ONLY TO KEEP FROM SLIPPING.
10. 4-6" HIGH WATER SAUCER IN NON-TURF AREAS.
11. BACKFILL WITH BLEND OF EXISTING SOIL AND A MAXIMUM 20% (BY VOLUME) ORGANIC MATERIAL. WATER THOROUGHLY WHEN BACKFILLING
12. 2 FT. STEEL T-POST. ALL SHALL BE DRIVEN BELOW GRADE AND OUTSIDE ROOTBALL IN UNDISTURBED SOIL.
13. PLACE SOIL AROUND ROOT BALL FIRMLY, DO NOT COMPACT OR TAMP. SETTLE SOIL WITH WATER TO FILL ALL AIR POCKETS.
14. PLACE ROOT BALL ON UNDISTURBED SOIL TO PREVENT SETTLEMENT.

1 TREE PLANTING DETAIL

SCALE: 3/16" = 1'-0"

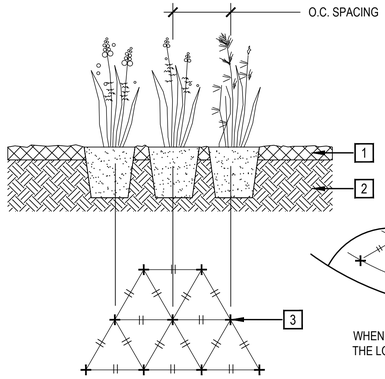


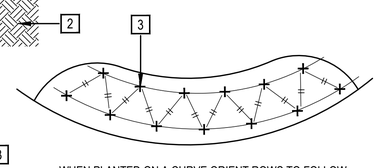
1. SPECIFIED MULCH
2. AMENDED SOIL IN PLANTING BED PER SPECIFICATIONS. TILL SOIL TO A DEPTH OF EIGHT INCHES.
3. FINISH GRADE (TOP OF MULCH)
4. AMENDED TOPSOIL
5. EXISTING SUBGRADE

NOTE:
1. BROKEN OR CRUMBLING ROOT-BALLS WILL BE REJECTED
2. CARE SHOULD BE TAKEN NOT TO DAMAGE THE SHRUB OR ROOT-BALL WHEN REMOVING IT FROM ITS CONTAINER
3. ALL JUNIPERS SHOULD BE PLANTED SO THE TOP OF THE ROOT-BALL OCCURS ABOVE THE FINISH GRADE OF THE MULCH LAYER
4. DIG PLANT PIT TWICE AS WIDE AND HIGH AS THE CONTAINER

2 SHRUB PLANTING

SCALE: 1-1/2" = 1'-0"



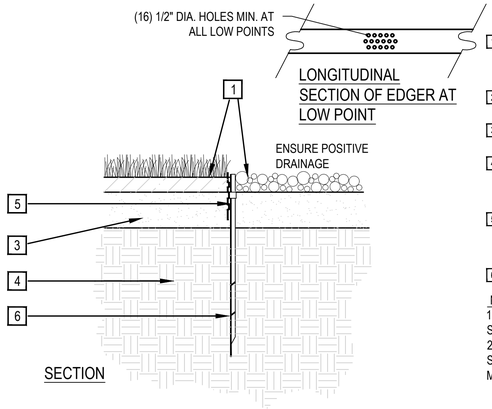


WHEN PLANTED ON A CURVE ORIENT ROWS TO FOLLOW THE LONG AXIS OF AREAS WHERE PLANTS ARE MASSED.

1. SPECIFIED MULCH TO A DEPTH OF 4"
2. AMENDED PLANTING BED TILLED TO A DEPTH OF 6"
3. CENTER OF PLANT

3 ORNAMENTAL GRASS LAYOUT

SCALE: 1" = 1'-0"



1. FINISHED GRADE - TOP OF SOD THATCH LAYER AND TOP OF MULCH OR CRUSHER FINES SHALL BE FLUSH WITH TOP OF EDGER
2. TURF THATCH
3. AMENDED SOIL PER SPECIFICATIONS
4. SUBGRADE
5. STEEL EDGER - DRILL (16) 1/2" DIA. HOLES 1" O.C. MIN. AT ALL LOW POINTS OR POORLY DRAINING AREAS IN ORDER TO ENSURE ADEQUATE DRAINAGE
6. EDGER STAKE

NOTES:
1. THERE SHALL BE NO EXPOSED SHARP / JAGGED EDGES.
2. CONTRACTOR SHALL INSTALL STAKES AS REQUIRED BY THE MANUFACTURER.

4 METAL EDGER

SCALE: 1" = 1'-0"

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DESIGNED BY KLH | DRAWN BY KLH | CHECKED BY SRA

REVISION DESCRIPTION	PREPARED BY	DATE
SUBMITTAL #1	LTV	6/10/2022

7B BUILDING & DEVELOPMENT
CITY OF CORTEZ | MONTEZUMA COUNTY

CORTEZ CAR WASH
CANYON DRIVE & S. BROADWAY
LANDSCAPE DETAILS

PREPARED UNDER THE DIRECT SUPERVISION OF

PRELIMINARY NOT FOR CONSTRUCTION

FOR AND ON BEHALF OF BASELINE CORPORATION

INITIAL SUBMITTAL	6/10/2022
DRAWING SIZE	24" X 36"
SURVEY FIRM / SURVEY DATE	BEC / 3/2/2022
JOB NO.	488 7B
DRAWING NAME	488 SDP_Landscape Plan.dwg
SHEET	7 OF 11

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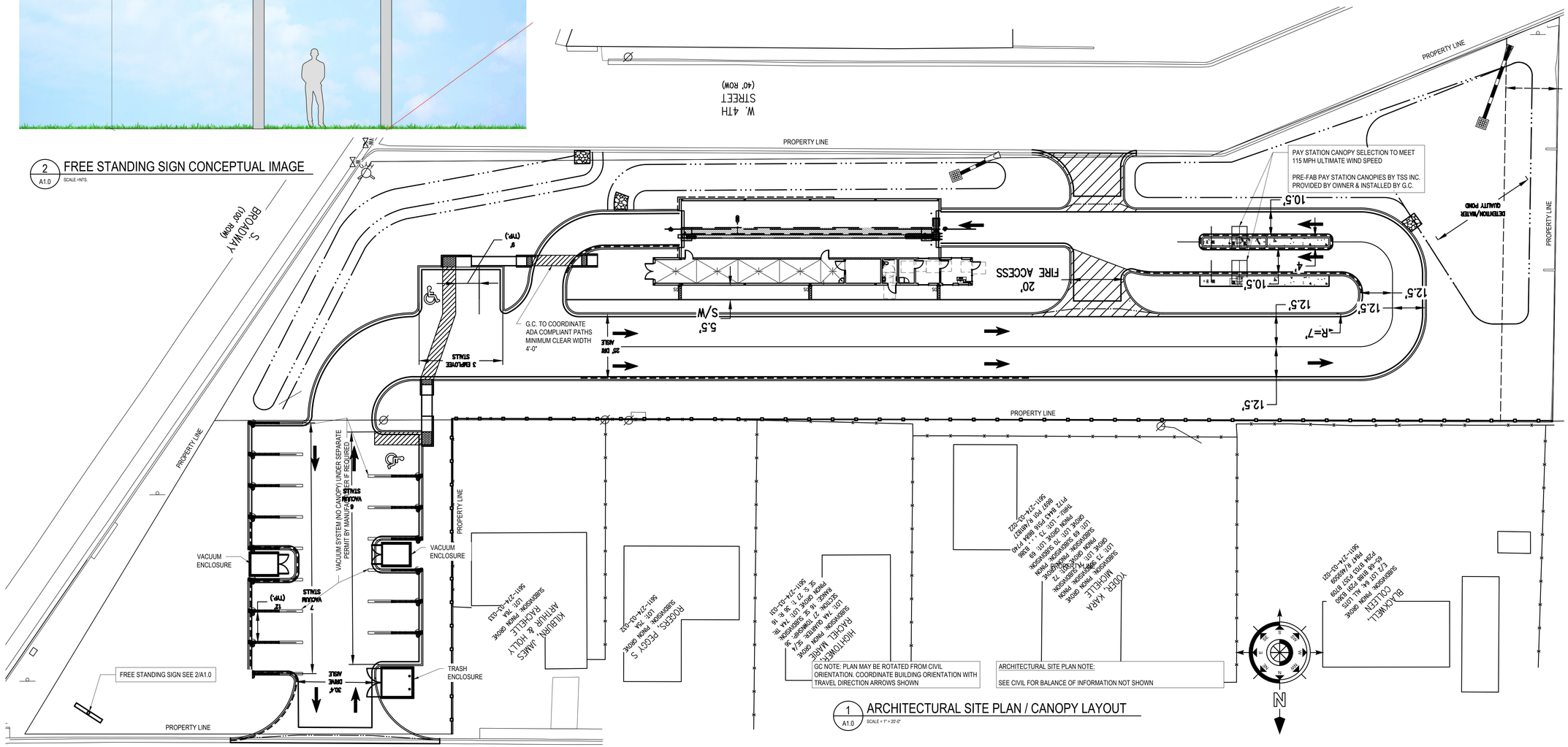
SITE DEVELOPMENT PLANS
CHAMPION XPRESS CAR WASH

LOCATED IN SECTION 27, TOWNSHIP 36 NORTH, RANGE 16 WEST OF THE 6th PRINCIPAL MERIDIAN
CITY OF CORTEZ, MONTEZUMA COUNTY, STATE OF COLORADO

2 A1.0 FREE STANDING SIGN CONCEPTUAL IMAGE
SCALE =NTS.



1 A1.0 ARCHITECTURAL SITE PLAN / CANOPY LAYOUT
SCALE = 1" = 20'-0"

C.L. Helt, Architect Inc.

DESIGNED BY V.RAMON | DRAWN BY V.RAMON | CHECKED BY D.MYERS

PREPARED BY V. RAMON DATE 6/9/2022

REVISION	DESCRIPTION
SDP	SUBMITTAL

7B BUILDING & DEVELOPMENT
CITY OF CORTEZ

CORTEZ CAR WASH
CANYON DRIVE & S. BROADWAY
MONTEZUMA COUNTY
ARCHITECTURAL SITE PLAN

PREPARED UNDER THE DIRECT SUPERVISION OF:

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DRAWING SIZE	24" X 36"
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DRAWING NAME	CX-CO-Cortez (Canyon).dwg
SHEET	8 OF 11

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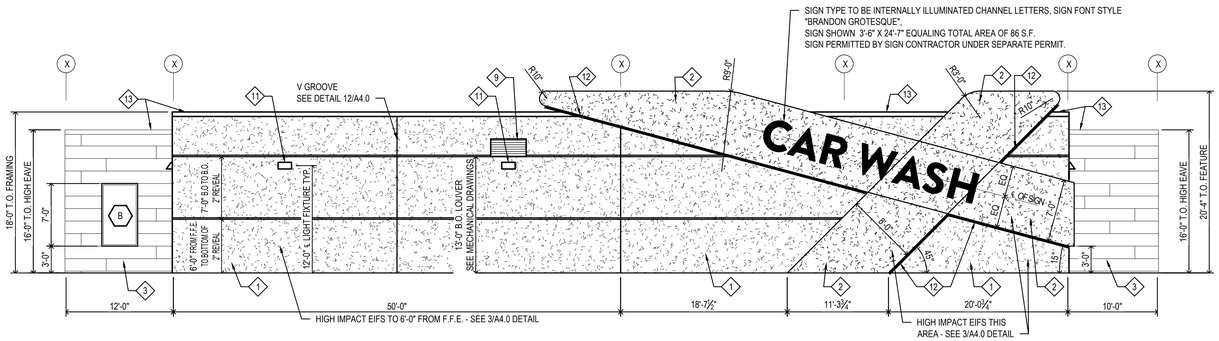
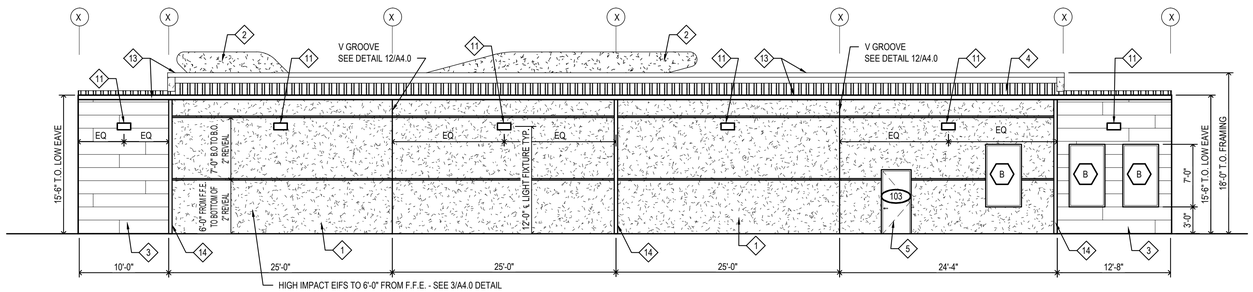
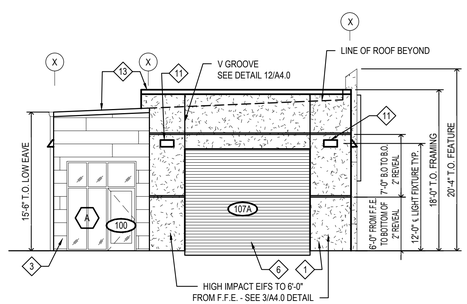


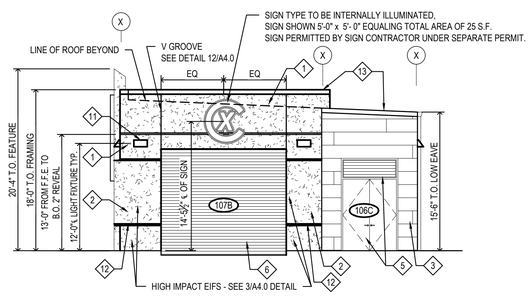
1 A1.1 W 4TH STREET ELEVATION
SCALE = 1/8" = 1'-0"



2 A1.1 REAR ELEVATION
SCALE = 1/8" = 1'-0"



3 A1.1 ENTRANCE ELEVATION
SCALE = 1/8" = 1'-0"



4 A1.1 EXIT ELEVATION
SCALE = 1/8" = 1'-0"

LEGEND

000	WINDOW TYPE. SEE WINDOW GLAZING ELEVATION ON SHEET A5.0
000	DOOR TYPE. SEE DOOR SCHEDULE ON SHEET A5.0
000	FINISH TYPE. SEE EXTERIOR FINISH SPEC. LEGEND

EXTERIOR FINISH SPEC. LEGEND

NOTE: SAMPLES SHALL BE SUBMITTED TO OWNER FOR APPROVAL PRIOR TO INSTALLATION

1	EIFS WALL SYSTEM MANUF: STO OR EQUAL COLOR: STO 37110 TEXTURE: STOLIT 1.5 (MEDIUM)
2	EIFS WALL SYSTEM AT "X" MANUF: STO OR EQUAL COLOR: STO 35140 TEXTURE: 81130 STOLIT 1.0 DARK GLOSSY
3	FIBER CEMENT SIDING MANUF: NICHIHA SERIE: CORBOSA CONCRETE SERIES COLOR: SHADOW
4	MAIN BUILDING ROOF PANEL MANUF: WHIRLWINDSTEEL COLOR: GALVALUME PLUS STYLE: SUPER SPAN X
5	PAINT FINISH DOORS, LOUVER IN HOLLOW METAL DOOR FRAME, AND LOUVERS AT NICHIHA FIBER CEMENT SIDING MANUF: SHERWIN WILLIAMS COLOR: SW 7675 (1 PRIME + 2 COATS COLOR) NAME: SEALSKIN
6	PAINT FINISH (1 PRIME + 2 COATS COLOR) MANUF: IFS COATING COLOR: RAL 90333 CRYSTAL WHITE PRODUCT#: PLSF 80037PAINT FINISH
7	GATE FRAME PRIMED AND PAINTED TO MATCH STO 37110
8	7.2 METAL PANEL VERTICAL SIDING (24 GA) W/ TRIM ON TOP, BOTTOM, AND SIDES PREFINISHED TO MATCH SW7653 SILVERPOINTE
9	LOUVERS TO MATCH EIFS COLOR MANUF: SHERWIN WILLIAMS COLOR: SW 7653 (1 PRIME + 2 COATS COLOR) NAME: SILVERPOINTE
10	VACUUM BOOM FRAME MANUF: SONNY COLOR: SILVER
11	WALL PACK - SEE ELECTRICAL CENTER BETWEEN EIFS GROVE TYP.
12	COVE LIGHTING FEATURE - SEE ELECTRICAL
13	COPING CAP,GUTTER, TRIM, AND ACCESORIES MANUF: WHIRLWINDSTEEL COLOR: BURNISHED SLATE
14	DOWNSPOUT BY PEMB COLOR: POLAR WHITE

NOTE: SIGN CONTRACTOR SHALL ENGINEER ATTACHMENT OF SIGN TO BUILDING STRUCTURE AND DETERMINE NUMBER OF FASTENERS, SIZE OF FASTENERS, AND ATTACHMENT POINTS. FASTENERS SHALL BE BLIND TO BE INSTALLED FROM EXTERIOR ONLY. PROVIDE PIPE SPACER TO AVOID CRUSHING WALL FINISH. SEAL ALL PENETRATION WATERTIGHT.

C.L. Helt, Architect Inc.

REVISION DESCRIPTION	PREPARED BY	DATE
SDP SUBMITTAL	V. RAMON	6/9/2022

DESIGNED BY V.RAMON
DRAWN BY V.RAMON
CHECKED BY D.MYERS

7B BUILDING & DEVELOPMENT
CITY OF CORTEZ

CORTEZ CAR WASH
CANYON DRIVE & S. BROADWAY
MONTEZUMA COUNTY
ARCHITECTURAL ELEVATIONS

PREPARED UNDER THE DIRECT SUPERVISION OF
PRELIMINARY NOT FOR CONSTRUCTION
FOR AND ON BEHALF OF BASELINE CORPORATION

INITIAL SUBMITTAL	XXXXX
DRAWING SIZE	24" X 36"
SURVEY FIRM	SURVEY DATE
BEC	3/2/2022
JOB NO.	488 7B
DRAWING NAME	CX-CO-Cortez (Canyon).dwg
SHEET 9 OF 11	

A1.1

811 Know what's **below.** **Call** before you dig.

SITE DEVELOPMENT PLANS
CHAMPION XPRESS CAR WASH

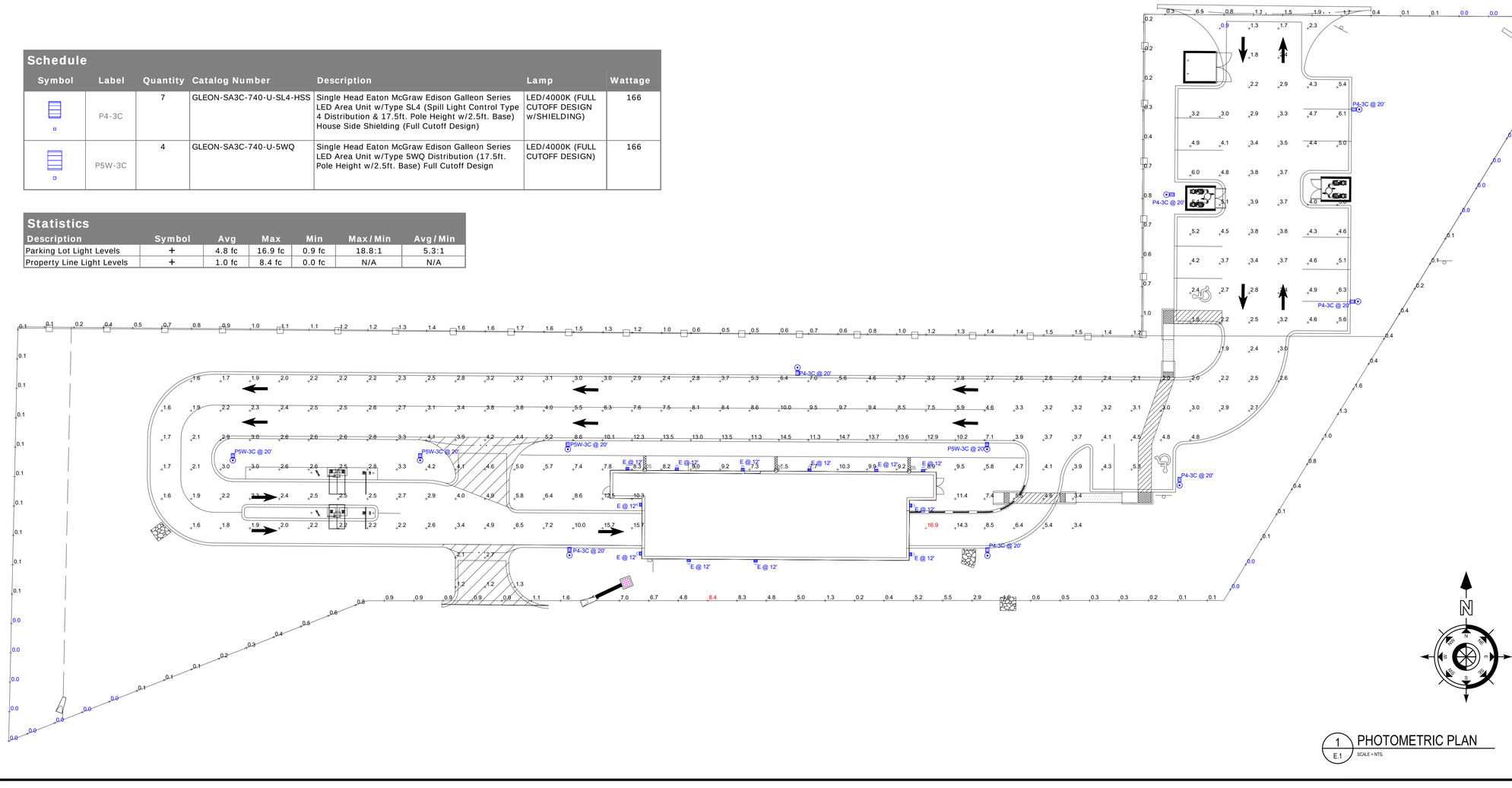
LOCATED IN SECTION 27, TOWNSHIP 36 NORTH, RANGE 16 WEST OF THE 6th PRINCIPAL MERIDIAN
CITY OF CORTEZ, MONTEZUMA COUNTY, STATE OF COLORADO

Schedule

Symbol	Label	Quantity	Catalog Number	Description	Lamp	Wattage
	P4-3C	7	GLEON-SA3C-740-U-SL4-HSS	Single Head Eaton McGraw Edison Galleon Series LED Area Unit w/Type SL4 (Spill Light Control Type 4 Distribution & 17.5ft. Pole Height w/2.5ft. Base) House Side Shielding (Full Cutoff Design)	LED/4000K (FULL CUTOFF DESIGN w/SHIELDING)	166
	P5W-3C	4	GLEON-SA3C-740-U-5WQ	Single Head Eaton McGraw Edison Galleon Series LED Area Unit w/Type 5WQ Distribution (17.5ft. Pole Height w/2.5ft. Base) Full Cutoff Design	LED/4000K (FULL CUTOFF DESIGN)	166

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Parking Lot Light Levels	+	4.8 fc	16.9 fc	0.9 fc	18.8:1	5.3:1
Property Line Light Levels	+	1.0 fc	8.4 fc	0.0 fc	N/A	N/A



1 E1 PHOTOMETRIC PLAN
SCALE = NTS.

C.L. Helt. Architect Inc.

DESIGNED BY V.RAMON
DRAWN BY V.RAMON
CHECKED BY D.MYERS

REVISION	DESCRIPTION	PREPARED BY	DATE
SDP	SUBMITTAL	V. RAMON	6/9/2022

7B BUILDING & DEVELOPMENT
CITY OF CORTEZ
MONTEZUMA COUNTY
CORTEZ CAR WASH
CANYON DRIVE & S. BROADWAY
PHOTOMETRICS PLAN

PREPARED UNDER THE DIRECT SUPERVISION OF

PRELIMINARY NOT FOR CONSTRUCTION

FOR AND ON BEHALF OF BASELINE CORPORATION

INITIAL SUBMITTAL	XXXXX
DRAWING SIZE	24" X 36"
SURVEY FIRM	SURVEY DATE
BEC	3/2/2022
JOB NO.	488 7B
DRAWING NAME	CX-CO-Cortez (Canyon).dwg
SHEET 10 OF 11	

E1.0

Project		Catalog #		Type	
Prepared by		Notes		Date	

McGraw-Edison

GLEON Galleon

Area / Site Luminaire

Product Features

LumenSafe Technology

Light ARchitect™

Product Certifications

Interactive Menu

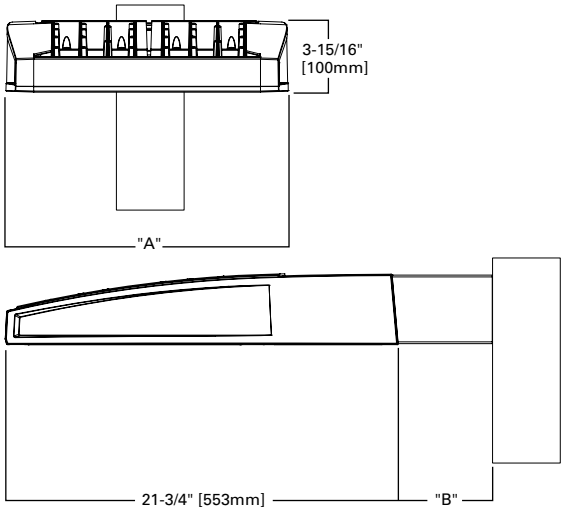
Quick Facts

- Lumen packages range from 4,200 - 80,800 (34W - 640W)
- Efficacy up to 156 lumens per watt
- Options to meet Buy American and other domestic preference requirements

Connected Systems

- WaveLinx
- Enlighted

Dimensional Details



NOTES:
1. Visit https://www.designlights.org/search/ to confirm qualification. Not all product variations are DLC qualified.
2. IDA Certified for 3000K CCT and warmer only.

Number of Light Squares	"A" Width	"B" Standard Arm Length	"B" Extended Arm Length [1]	"B" Quick Mount Arm Length	"B" Quick Mount Extended Arm Length
1-4	15-1/2"	7"	10"	10-5/8"	16-9/16"
5-6	21-5/8"	7"	10"	10-5/8"	16-9/16"
7-8	27-5/8"	7"	13"	10-5/8"	--
9-10	33-3/4"	7"	16"	--	--

NOTES:
For arm selection requirements and additional line art, see Mounting Details section.

Ordering Information

SAMPLE NUMBER: **GLEON-SA4C-740-U-T4FT-GM**

Product Family [1, 2]	Light Engine		Color Temperature	Voltage	Distribution	Mounting	Finish
	Configuration	Drive Current					
GLEON=Galleon **BAA-GLEON**=Galleon, Buy American Act Compliant [35] **TAA-GLEON**=Galleon, Trade Agreements Act Compliant [35]	**SA1**=1 Square **SA2**=2 Squares **SA3**=3 Squares **SA4**=4 Squares **SA5**=5 Squares [4] **SA6**=6 Squares **SA7**=7 Squares [5] **SA8**=8 Squares [5] **SA9**=9 Squares [6] **SA0**=10 Squares [6]	**A**=600mA **B**=800mA **C**=1000mA **D**=1200mA [16]	**722**=70CRI, 2200K **727**=70CRI, 2700K **730**=70CRI, 3000K **735**=70CRI, 3500K **740**=70CRI, 4000K **750**=70CRI, 5000K **760**=70CRI, 6000K **827**=80CRI, 2700K **830**=80CRI, 3000K **AMB**=Amber, 590nm [14, 16]	**U**=120-277V **1**=120V **2**=208V **3**=240V **4**=277V **8**=480V [7, 8] **9**=347V [7]	**T2**=Type II **T2R**=Type II Roadway **T3**=Type III **T3R**=Type III Roadway **T4FT**=Type IV Forward Throw **T4W**=Type IV Wide **5NQ**=Type V Narrow **5MQ**=Type V Square Medium **5WQ**=Type V Square Wide **SL2**=Type II w/Spill Control **SL3**=Type III w/Spill Control **SL4**=Type IV w/Spill Control **SLL**=90° Spill Light Eliminator Left **SLR**=90° Spill Light Eliminator Right **RW**=Rectangular Wide Type I **AFL**=Automotive Frontline	**[Blank]**=Arm for Round or Square Pole **EA**=Extended Arm [9] **MA**=Mast Arm Adapter [10] **WM**=Wall Mount **QM**=Quick Mount Arm (Standard Length) [11] **QML**=Quick Mount Arm (Standard Length, Large) [37] **QMEA**=Quick Mount Arm (Extended Length) [12]	**AP**=Grey **BZ**=Bronze **BK**=Black **DP**=Dark Platinum **GM**=Graphite Metallic **WH**=White **RALXX**=Custom Color

Options (Add as Suffix)

DIM=External 0-10V Dimming Leads [19, 20]
F=Single Fuse (120, 277 or 347V Specify Voltage)
FF=Double Fuse (208, 240 or 480V Specify Voltage)
20K=Series 20kV UL 1449 Surge Protective Device
2L=Two Circuits [17, 18]
HA=50°C High Ambient
HSS=Installed House Side Shield [28]
GRSBK=Glare Reducing Shield, Black [23]
GRSWH=Glare Reducing Shield, White [23]
LCF=Light Square Trim Painted to Match Housing [27]
MT=Installed Mesh Top
TH=Tool-less Door Hardware
CC=Coastal Construction finish [3]
L90=Optics Rotated 90° Left
R90=Optics Rotated 90° Right
CE=CE Marking [29]
AHD145=After Hours Dim, 5 Hours [22]
AHD245=After Hours Dim, 6 Hours [22]
AHD255=After Hours Dim, 7 Hours [22]
AHD355=After Hours Dim, 8 Hours [22]
DALI=DALI Drivers

Controls and Systems Options (Add as Suffix)

BPC=Button Type Photocontrol
PR=NEMA 3-PIN Photocontrol Receptacle
PR7=NEMA 7-PIN Photocontrol Receptacle [21]
SPB2=Dimming Occupancy Sensor with Bluetooth Interface, 8' - 20' Mounting [34]
SPB4=Dimming Occupancy Sensor with Bluetooth Interface, 21' - 40' Mounting [34]
MS-L20=Motion Sensor for ON/OFF Operation, 9' - 20' Mounting Height [24]
MS-L40W=Motion Sensor for ON/OFF Operation, 21' - 40' Mounting Height [24]
MS/X-L20=Bi-Level Motion Sensor, 9' - 20' Mounting Height [24, 25]
MS/X-L40W=Bi-Level Motion Sensor, 21' - 40' Mounting Height [24, 25]
MS/DIM-L20=Motion Sensor for Dimming Operation, 9' - 20' Mounting Height [24]
MS/DIM-L40W=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height [24]
ZW=WaveLinx Module and 4-PIN Receptacle
ZD=WaveLinx Module with DALI driver and 4-PIN Receptacle
SWPD4XX=WaveLinx Sensor Only, 7'-15' [13, 32, 33]
SWPD5XX=WaveLinx Sensor Only, 15'-40' [13, 32, 33]
WOBXX=WaveLinx Sensor with Bluetooth, 7'-15' [13, 32]
WOFXX=WaveLinx Sensor with Bluetooth, 15'-40' [13, 32]
LWR-LW=Enlighted Sensor, 8'–16' Mounting Height [26]
LWR-LN=Enlighted Sensor, 16'–40' Mounting Height [26]
DIM10-MS/DIM-L08=Synapse Occupancy Sensor (<8' Mounting) [19]
DIM10-MS/DIM-L20=Synapse Occupancy Sensor (9'-20' Mounting) [19]
DIM10-MS/DIM-L40=Synapse Occupancy Sensor (21'-40' Mounting) [19]

Accessories (Order Separately) [35]

OA/RA1016=NEMA Photocontrol Multi-Tap - 105-285V
OA/RA1027=NEMA Photocontrol - 480V
OA/RA1201=NEMA Photocontrol - 347V
OA/RA1013=Photocontrol Shorting Cap
OA/RA1014=120V Photocontrol
MA1252=10kV Surge Module Replacement
MA1036-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon
MA1037-XX=2@180° Tenon Adapter for 2-3/8" O.D. Tenon
MA1197-XX=3@120° Tenon Adapter for 2-3/8" O.D. Tenon
MA1188-XX=4@90° Tenon Adapter for 2-3/8" O.D. Tenon
MA1189-XX=2@90° Tenon Adapter for 2-3/8" O.D. Tenon
MA1190-XX=3@90° Tenon Adapter for 2-3/8" O.D. Tenon
MA1191-XX=2@120° Tenon Adapter for 2-3/8" O.D. Tenon
MA1038-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon
MA1039-XX=2@180° Tenon Adapter for 3-1/2" O.D. Tenon
MA1192-XX=3@120° Tenon Adapter for 3-1/2" O.D. Tenon
MA1193-XX=4@90° Tenon Adapter for 3-1/2" O.D. Tenon
MA1194-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon
MA1195-XX=3@90° Tenon Adapter for 3-1/2" O.D. Tenon
FSIR-100=Wireless Configuration Tool for Occupancy Sensor [24]
GLEON-MT1=Field Installed Mesh Top for 1-4 Light Squares
GLEON-MT2=Field Installed Mesh Top for 5-6 Light Squares
GLEON-MT3=Field Installed Mesh Top for 7-8 Light Squares
GLEON-MT4=Field Installed Mesh Top for 9-10 Light Squares
GLEON-QM=Quick Mount Arm Kit [11]
GLEON-QMEA=Quick Mount Extended Arm Kit [12]
LS/HSS=Field Installed House Side Shield [28, 30]
LS/GRSBK=Glare Reducing Shield, Black [23, 30]
LS/GRSWH=Glare Reducing Shield, White [23, 30]
LS/PFS=Perimeter Shield, Black [15]
WOLC-7P-10A=WaveLinx Outdoor Control Module [19, 31]
SWPD4-XX=Wavelinx Wireless Sensor, 7'–15' Mounting Height [13, 19, 32, 33]
SWPD5-XX=Wavelinx Wireless Sensor, 15'–40' Mounting Height [13, 19, 32, 33]

NOTES:

1. Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our white paper WP513001EN for additional support information.
2. DesignLights Consortium® Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
3. Coastal construction finish salt spray tested to over 5,000-hours per ASTM B117, with a scribe rating of 9 per ASTM D1654. Not available with TH option.
4. Not compatible with MS/4-LXX or MS/1-LXX sensors.
5. Not compatible with extended quick mount arm (QMEA).
6. Not compatible with standard quick mount arm (QM) or extended quick mount arm (QMEA).
7. Requires the use of an internal step down transformer when combined with sensor options. Not available with sensor at 1200mA. Not available in combination with the HA high ambient and sensor options at 1A.
8. 480V must utilize Wye system only. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems.)
9. May be required when two or more luminaires are oriented on a 90° or 120° drilling pattern. Refer to arm mounting requirement table.
10. Factory installed.
11. Maximum 8 light squares.
12. Maximum 6 light squares.
13. Requires ZW or ZD receptacle.
14. Narrow-band 590nm +/- 5nm for wildlife and observatory use. Choose drive current A; supplied at 500mA drive current only. Available with 5WQ, 5MQ, SL2, SL3 and SL4 distributions. Can be used with HSS option.
15. Set of 4 pcs. One set required per Light Square.
16. Not available with HA option.
17. 2L is not available with MS, MS/X or MS/DIM at 347V or 480V. 2L in SA2 through SA4 requires a larger housing, normally used for SA5 or SA6. Extended arm option may be required when mounting two or more fixtures per pole at 90° or 120°. Refer to arm mounting requirement table.
18. Not available with Enlighted wireless sensors.
19. Cannot be used with other control options.
20. Low voltage control lead brought out 18" outside fixture.
21. Not available if any "MS" sensor is selected. Motion sensor has an integral photocell.
22. Requires the use of BPC photocontrol or the PR7 or PR photocontrol receptacle with photocontrol accessory. See After Hours Dim supplemental guide for additional information.
23. Not for use with T4FT, T4W or SL4 optics. See IES files for details.
24. The FSIR-100 configuration tool is required to adjust parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative at Cooper Lighting Solutions for more information.
25. Replace X with number of Light Squares operating in low output mode.
26. Enlighted wireless sensors are factory installed only requiring network components LWP-EM-1, LWP-GW-1 and LWP-PoE8 in appropriate quantities.
27. Not available with house side shield (HSS).
28. Not for use with 5NQ, 5MQ, 5WQ or RW optics. A black trim plate is used when HSS is selected.
29. CE is not available with the LWR, MS, MS/X, MS/DIM, BPC, PR or PR7 options. Available in 120-277V only.
30. One required for each Light Square.
31. Requires PR7.
32. Replace XX with sensor color (WH, BZ or BK.)
33. WAC Gateway required to enable field-configurability: Order WAC-PoE and WPOE-120 (10V to PoE injector) power supply if needed.
34. Smart device with mobile application required to change system defaults. See controls section for details.
35. Only product configurations with these designated prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or Trade Agreements Act of 1979 (TAA), respectively. Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be separately analyzed under domestic preference requirements.
36. For BAA or TAA requirements, Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information.
37. Available for 7-10 squares.

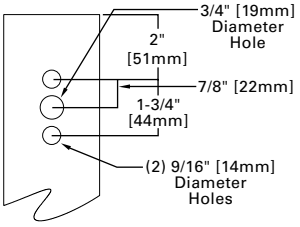
LumenSafe Integrated Network Security Camera Technology Options (Add as Suffix)

Product Family	Camera Type	Data Backhaul	
L=LumenSafe Technology	**D**=Standard Dome Camera **H**=Hi-Res Dome Camera **Z**=Remote PTZ Camera	**C**=Cellular, No SIM **A**=Cellular, AT&T **V**=Cellular, Verizon **S**=Cellular, Sprint	**R**=Cellular, Rogers **W**=Wi-Fi Networking w/ Omni-Directional Antenna **E**=Ethernet Networking

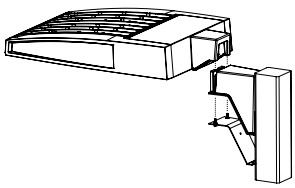
Mounting Details

Standard Arm (Drilling Pattern)

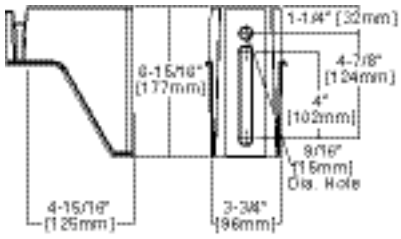
TYPE "N"



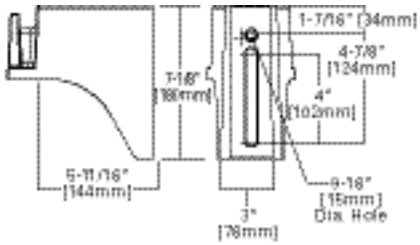
Quick Mount Arm (Includes fixture adapter)



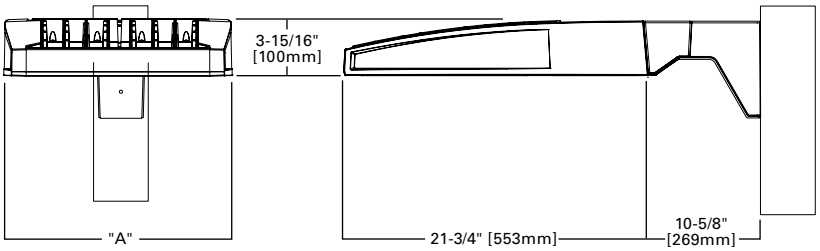
QM and QMEA Pole Mount



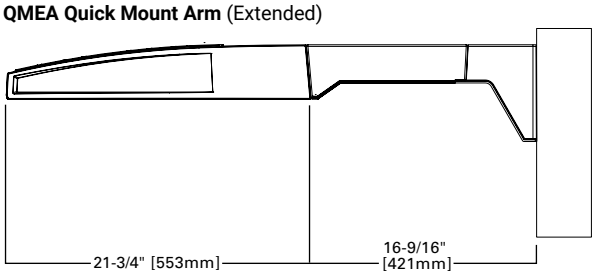
QML Pole Mount



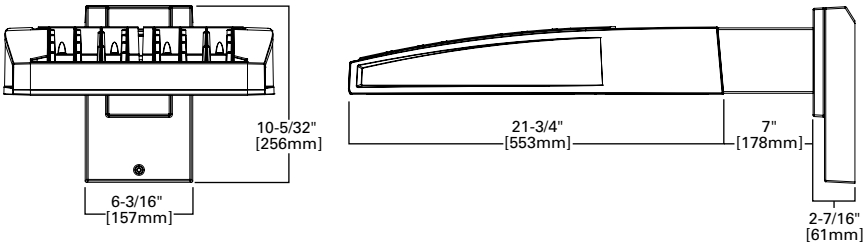
QM Quick Mount Arm (Standard)



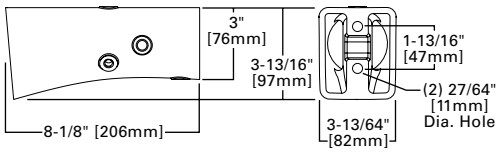
QMEA Quick Mount Arm (Extended)



Standard Wall Mount

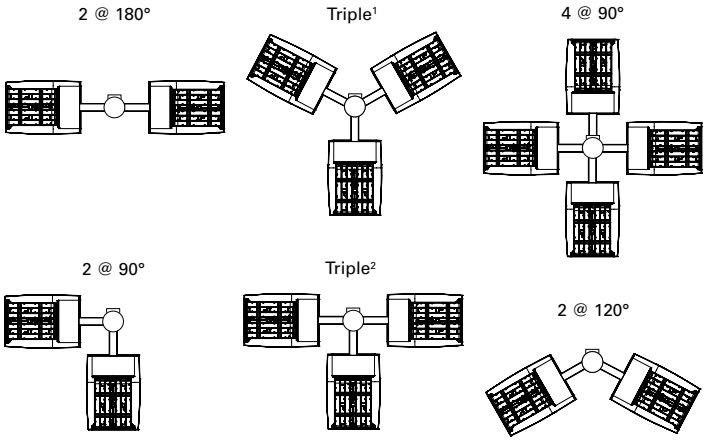


Mast Arm Mount



Arm Mounting Requirements

Number of Light Squares	Standard Arm @ 90° Apart	Standard Arm @ 120° Apart	Quick Mount Arm @ 90° Apart	Quick Mount Arm @ 120° Apart
1	Standard	Standard	QM Extended	Quick Mount
2	Standard	Standard	QM Extended	Quick Mount
3	Standard	Standard	QM Extended	Quick Mount
4	Standard	Standard	QM Extended	Quick Mount
5	Extended	Standard	QM Extended	Quick Mount
6	Extended	Standard	QM Extended	Quick Mount
7	Extended	Extended	--	Quick Mount
8	Extended	Extended	--	Quick Mount
9	Extended	Extended	--	--
10	Extended	Extended	--	--



NOTES: 1 Round poles are 3 @ 120°. Square poles are 3 @ 90°. **2** Round poles are 3 @ 90°. **3** Shown with 4 square configurations.

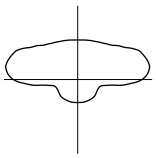
Fixture Weights and EPAs

Number of Light Squares	Weight with Standard and Extended Arm (lbs.)	EPA with Standard and Extended Arm (Sq. Ft.)	Weight with QM Arm (lbs.)	EPA with QM Arm (Sq. Ft.)	Weight with QML (lbs.)	EPA with QML (Sq. Ft.)	Weight with QMEA (lbs.)	EPA with QMEA (Sq. Ft.)
1-4	33	0.96	35	1.11	--	--	38	1.11
5-6	44	1.00	46	1.11	--	--	49	1.11
7-8	54	1.07	56	1.11	58	1.11	--	--
9-10	63	1.12	--	--	67	1.11	--	--

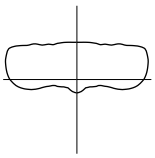
Optical Distributions

Asymmetric Area Distributions

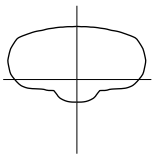
T2 (Type II)



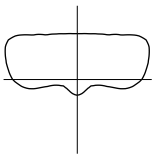
SL2 (Type II with Spill Control)



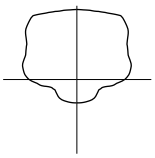
T3 (Type III)



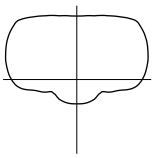
SL3 (Type III with Spill Control)



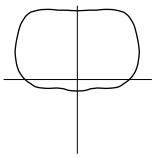
T4FT (Type IV Forward Throw)



T4W (Type IV Wide)

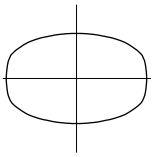


SL4 (Type IV with Spill Control)

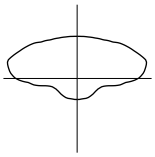


Asymmetric Roadway Distributions

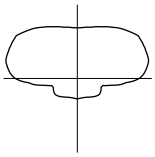
RW (Rectangular Wide Type I)



T2R (Type II Roadway)

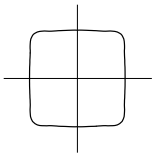


T3R (Type III Roadway)

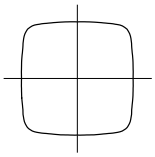


Symmetric Distributions

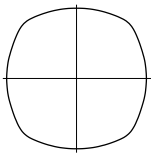
5NQ (Type V Square Narrow)



5MQ (Type V Square Medium)

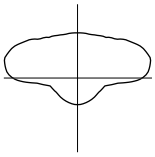


5WQ (Type V Square Wide)

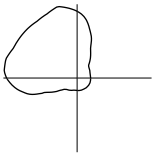


Specialized Distributions

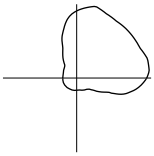
AFL (Automotive Frontline)



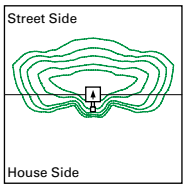
SLL (90° Spill Light Eliminator Left)



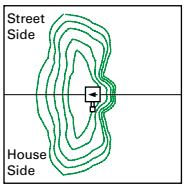
SLR (90° Spill Light Eliminator Right)



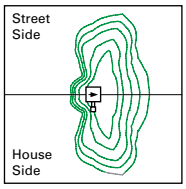
Rotated Optics



Standard



Optics Rotated Left @ 90° [L90]



Optics Rotated Right @ 90° [R90]

Product Specifications

Construction

- Extruded aluminum driver enclosure
- Heavy-wall, die-cast aluminum end caps
- Die-cast aluminum heat sinks
- Patent pending interlocking housing and heat sink

Optics

- Patented, high-efficiency injection-molded AccuLED Optics technology
- 16 optical distributions
- 3 shielding options including HSS, GRS and PFS
- IDA Certified (3000K CCT and warmer only)

Electrical

- LED drivers are mounted to removable tray assembly for ease of maintenance
- Standard with 0-10V dimming
- Standard with Cooper Lighting Solutions proprietary circuit module designed to withstand 10kV of transient line surge
- Suitable for operation in -40°C to 40°C ambient environments. Optional 50°C high ambient (HA) configuration.

Mounting

- Standard extruded arm includes internal bolt guides and round pole adapter
- Extended arms (EA and QMEA) may be required in 90° or 120° pole mount configurations, see arm mounting requirements table
- Mast arm (MA) factory installed
- Wall mount (WM) option available
- Quick mount arm (QM and QMEA) includes pole adapter and factory installed fixture mount for fast installation to square or round poles

Finish

- Super housing durable TGIC polyester powder coat paint, 2.5 mil nominal thickness
- Heat sink is powder coated black
- RAL and custom color matches available
- Coastal Construction (CC) option available

Warranty

- Five year warranty

Energy and Performance Data

Lumen Maintenance (TM-21)

Drive Current	Ambient Temperature	25,000 hours*	50,000 hours*	60,000 hours*	100,000 hours**	Theoretical L70 hours**
Up to 1A	25°C	99.4%	99.0%	98.9%	98.3%	> 2.4M
	40°C	98.7%	98.3%	98.1%	97.4%	> 1.9M
	50°C	98.2%	97.2%	96.8%	95.2%	> 851,000
1.2A	25°C	99.4%	99.0%	98.9%	98.3%	> 2.4M
	40°C	98.5%	97.9%	97.7%	96.7%	> 1.3M

* Supported by IES TM-21 standards
** Theoretical values represent estimations commonly used; however, refer to the IES position on LED Product Lifetime Prediction, IES PS-10-18, explaining proper use of IES TM-21 and LM-80.

Lumen Multiplier

Ambient Temperature	Lumen Multiplier
0ºC	1.02
10ºC	1.01
25ºC	1.00
40ºC	0.99
50ºC	0.97

View GLEON IES files

Nominal Power Lumens (1.2A)

Supplemental Performance Guide**

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		67	129	191	258	320	382	448	511	575	640
Input Current @ 120V (A)		0.58	1.16	1.78	2.31	2.94	3.56	4.09	4.71	5.34	5.87
Input Current @ 208V (A)		0.33	0.63	0.93	1.27	1.57	1.87	2.22	2.52	2.8	3.14
Input Current @ 240V (A)		0.29	0.55	0.80	1.10	1.35	1.61	1.93	2.18	2.41	2.71
Input Current @ 277V (A)		0.25	0.48	0.70	0.96	1.18	1.39	1.69	1.90	2.09	2.36
Input Current @ 347V (A)		0.20	0.39	0.57	0.78	0.96	1.15	1.36	1.54	1.72	1.92
Input Current @ 480V (A)		0.15	0.30	0.43	0.60	0.73	0.85	1.03	1.16	1.28	1.45
Optics											
T2	4000K Lumens	7,972	15,580	23,245	30,714	38,056	45,541	53,857	61,024	68,072	75,366
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	119	121	122	119	119	119	120	119	118	118
T2R	4000K Lumens	8,462	16,539	24,680	32,609	40,401	48,348	57,176	64,783	72,266	80,010
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	126	128	129	126	126	127	128	127	126	125
T3	4000K Lumens	8,125	15,879	23,693	31,307	38,787	46,417	54,893	62,197	69,381	76,818
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	121	123	124	121	121	122	123	122	121	120
T3R	4000K Lumens	8,306	16,232	24,220	32,001	39,651	47,447	56,114	63,580	70,924	78,523
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	124	126	127	124	124	124	125	124	123	123
T4FT	4000K Lumens	8,173	15,970	23,831	31,488	39,014	46,686	55,212	62,558	69,783	77,261
	BUG Rating	B1-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	122	124	125	122	122	122	123	122	121	121
T4W	4000K Lumens	8,067	15,764	23,522	31,080	38,510	46,082	54,499	61,751	68,881	76,263
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B5-U0-G5
	Lumens per Watt	120	122	123	120	120	121	122	121	120	119
SL2	4000K Lumens	7,958	15,552	23,206	30,662	37,989	45,462	53,763	60,920	67,952	75,235
	BUG Rating	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	119	121	121	119	119	119	120	119	118	118
SL3	4000K Lumens	8,124	15,877	23,690	31,302	38,784	46,410	54,885	62,189	69,372	76,805
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	121	123	124	121	121	121	123	122	121	120
SL4	4000K Lumens	7,719	15,085	22,510	29,741	36,850	44,097	52,148	59,089	65,913	72,977
	BUG Rating	B1-U0-G3	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	115	117	118	115	115	115	116	116	115	114
5NQ	4000K Lumens	8,380	16,375	24,436	32,287	40,003	47,870	56,610	64,144	71,552	79,221
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
	Lumens per Watt	125	127	128	125	125	125	126	126	124	124
5MQ	4000K Lumens	8,534	16,676	24,885	32,881	40,739	48,752	57,653	65,326	72,868	80,679
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	127	129	130	127	127	128	129	128	127	126
5WQ	4000K Lumens	8,556	16,723	24,951	32,968	40,847	48,881	57,808	65,499	73,063	80,894
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	128	130	131	128	128	128	129	128	127	126
SLL/ SLR	4000K Lumens	7,140	13,951	20,817	27,506	34,081	40,783	48,231	54,649	60,959	67,492
	BUG Rating	B1-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	107	108	109	107	107	107	108	107	106	105
RW	4000K Lumens	8,304	16,228	24,215	31,994	39,641	47,437	56,100	63,566	70,907	78,504
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5
	Lumens per Watt	124	126	127	124	124	124	125	124	123	123
AFL	4000K Lumens	8,335	16,287	24,302	32,110	39,784	47,610	56,303	63,796	71,163	78,790
	BUG Rating	B1-U0-G1	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G5
	Lumens per Watt	124	126	127	124	124	125	126	125	124	123

*** Nominal data for 70 CRI. ** For additional performance data, please reference the Galleon Supplemental Performance Guide.**

Nominal Power Lumens (1A)

Supplemental Performance Guide**

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		59	113	166	225	279	333	391	445	501	558
Input Current @ 120V (A)		0.51	1.02	1.53	2.03	2.55	3.06	3.56	4.08	4.60	5.07
Input Current @ 208V (A)		0.29	0.56	0.82	1.11	1.37	1.64	1.93	2.19	2.46	2.75
Input Current @ 240V (A)		0.26	0.48	0.71	0.96	1.19	0.41	1.67	1.89	2.12	2.39
Input Current @ 277V (A)		0.23	0.42	0.61	0.83	1.03	1.23	1.45	1.65	1.84	2.09
Input Current @ 347V (A)		0.17	0.32	0.50	0.64	0.82	1.00	1.14	1.32	1.50	1.68
Input Current @ 480V (A)		0.14	0.24	0.37	0.48	0.61	0.75	0.91	0.99	1.12	1.28
Optics											
T2	4000K Lumens	7,267	14,201	21,190	28,000	34,692	41,515	49,096	55,627	62,053	68,703
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	123	126	128	124	124	125	126	125	124	123
T2R	4000K Lumens	7,715	15,077	22,497	29,725	36,829	44,073	52,122	59,056	65,876	72,937
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	131	133	136	132	132	132	133	133	131	131
T3	4000K Lumens	7,408	14,475	21,598	28,539	35,358	42,313	50,039	56,698	63,246	70,024
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	126	128	130	127	127	127	128	127	126	125
T3R	4000K Lumens	7,571	14,798	22,078	29,172	36,145	43,253	51,153	57,959	64,653	71,581
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	128	131	133	130	130	130	131	130	129	128
T4FT	4000K Lumens	7,451	14,559	21,725	28,703	35,564	42,558	50,330	57,027	63,613	70,430
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	126	129	131	128	127	128	129	128	127	126
T4W	4000K Lumens	7,354	14,371	21,442	28,333	35,105	42,007	49,681	56,291	62,792	69,521
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	125	127	129	126	126	126	127	126	125	125
SL2	4000K Lumens	7,254	14,178	21,155	27,951	34,631	41,443	49,011	55,533	61,944	68,584
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	123	125	127	124	124	124	125	125	124	123
SL3	4000K Lumens	7,406	14,474	21,596	28,534	35,355	42,307	50,033	56,690	63,237	70,014
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	126	128	130	127	127	127	128	127	126	125
SL4	4000K Lumens	7,037	13,751	20,519	27,112	33,592	40,198	47,538	53,864	60,087	66,524
	BUG Rating	B1-U0-G3	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5
	Lumens per Watt	119	122	124	120	120	121	122	121	120	119
5NQ	4000K Lumens	7,640	14,928	22,275	29,431	36,465	43,637	51,606	58,472	65,226	72,218
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
	Lumens per Watt	129	132	134	131	131	131	132	131	130	129
5MQ	4000K Lumens	7,779	15,203	22,684	29,973	37,137	44,441	52,555	59,549	66,427	73,545
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	132	135	137	133	133	133	134	134	133	132
5WQ	4000K Lumens	7,800	15,243	22,744	30,052	37,236	44,560	52,697	59,708	66,603	73,742
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	132	135	137	134	133	134	135	134	133	132
SLL/ SLR	4000K Lumens	6,510	12,719	18,977	25,075	31,067	37,176	43,967	49,817	55,569	61,525
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	110	113	114	111	111	112	112	112	111	110
RW	4000K Lumens	7,570	14,793	22,073	29,165	36,137	43,243	51,140	57,945	64,637	71,564
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5
	Lumens per Watt	128	131	133	130	130	130	131	130	129	128
AFL	4000K Lumens	7,598	14,847	22,154	29,272	36,267	43,400	51,326	58,156	64,872	71,824
	BUG Rating	B1-U0-G1	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4
	Lumens per Watt	129	131	133	130	130	130	131	131	129	129

*** Nominal data for 70 CRI. ** For additional performance data, please reference the Galleon Supplemental Performance Guide.**

Nominal Power Lumens (800mA)

Supplemental Performance Guide**

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		44	85	124	171	210	249	295	334	374	419
Input Current @ 120V (A)		0.39	0.77	1.13	1.54	1.90	2.26	2.67	3.03	3.39	3.80
Input Current @ 208V (A)		0.22	0.44	0.62	0.88	1.06	1.24	1.50	1.68	1.87	2.12
Input Current @ 240V (A)		0.19	0.38	0.54	0.76	0.92	1.08	1.30	1.46	1.62	1.84
Input Current @ 277V (A)		0.17	0.36	0.47	0.72	0.83	0.95	1.19	1.31	1.42	1.67
Input Current @ 347V (A)		0.15	0.24	0.38	0.49	0.63	0.77	0.87	1.01	1.15	1.52
Input Current @ 480V (A)		0.11	0.18	0.29	0.37	0.48	0.59	0.66	0.77	0.88	0.96
Optics											
T2	4000K Lumens	5,871	11,474	17,121	22,622	28,029	33,542	39,667	44,944	50,134	55,508
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	133	135	138	132	133	135	134	135	134	132
T2R	4000K Lumens	6,233	12,181	18,176	24,016	29,756	35,608	42,111	47,714	53,224	58,929
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5
	Lumens per Watt	142	143	147	140	142	143	143	143	142	141
T3	4000K Lumens	5,986	11,695	17,450	23,057	28,568	34,186	40,430	45,809	51,099	56,576
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	136	138	141	135	136	137	137	137	137	135
T3R	4000K Lumens	6,117	11,955	17,838	23,569	29,203	34,946	41,328	46,827	52,235	57,832
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	139	141	144	138	139	140	140	140	140	138
T4FT	4000K Lumens	6,019	11,763	17,551	23,190	28,734	34,384	40,663	46,074	51,396	56,904
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	137	138	142	136	137	138	138	138	137	136
T4W	4000K Lumens	5,942	11,610	17,324	22,891	28,363	33,940	40,138	45,480	50,732	56,169
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	135	137	140	134	135	136	136	136	136	134
SL2	4000K Lumens	5,862	11,454	17,091	22,583	27,980	33,484	39,598	44,867	50,048	55,411
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	133	135	138	132	133	134	134	134	134	132
SL3	4000K Lumens	5,985	11,694	17,447	23,053	28,565	34,182	40,424	45,804	51,092	56,568
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5
	Lumens per Watt	136	138	141	135	136	137	137	137	137	135
SL4	4000K Lumens	5,685	11,111	16,577	21,905	27,140	32,478	38,409	43,520	48,546	53,748
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	129	131	134	128	129	130	130	130	130	128
5NQ	4000K Lumens	6,172	12,061	17,997	23,778	29,462	35,256	41,694	47,242	52,699	58,347
	BUG Rating	B2-U0-G1	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
	Lumens per Watt	140	142	145	139	140	142	141	141	141	139
5MQ	4000K Lumens	6,285	12,283	18,328	24,217	30,004	35,907	42,462	48,112	53,669	59,421
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5
	Lumens per Watt	143	145	148	142	143	144	144	144	144	142
5WQ	4000K Lumens	6,303	12,317	18,377	24,281	30,085	36,001	42,575	48,241	53,812	59,579
	BUG Rating	B3-U0-G1	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	143	145	148	142	143	145	144	144	144	142
SLL/ SLR	4000K Lumens	5,260	10,276	15,332	20,259	25,101	30,037	35,522	40,249	44,898	49,708
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	120	121	124	118	120	121	120	121	120	119
RW	4000K Lumens	6,116	11,952	17,834	23,563	29,196	34,938	41,317	46,817	52,224	57,819
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4
	Lumens per Watt	139	141	144	138	139	140	140	140	140	138
AFL	4000K Lumens	6,139	11,996	17,899	23,650	29,302	35,064	41,468	46,987	52,412	58,030
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4
	Lumens per Watt	140	141	144	138	140	141	141	141	140	138

*** Nominal data for 70 CRI. ** For additional performance data, please reference the Galleon Supplemental Performance Guide.**

Nominal Power Lumens (600mA)

Supplemental Performance Guide**

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		34	66	96	129	162	193	226	257	290	323
Input Current @ 120V (A)		0.30	0.58	0.86	1.16	1.44	1.73	2.03	2.33	2.59	2.89
Input Current @ 208V (A)		0.17	0.34	0.49	0.65	0.84	0.99	1.14	1.30	1.48	1.63
Input Current @ 240V (A)		0.15	0.30	0.43	0.56	0.74	0.87	1.00	1.13	1.30	1.43
Input Current @ 277V (A)		0.14	0.28	0.41	0.52	0.69	0.81	0.93	1.04	1.22	1.33
Input Current @ 347V (A)		0.11	0.19	0.30	0.39	0.49	0.60	0.69	0.77	0.90	0.99
Input Current @ 480V (A)		0.08	0.15	0.24	0.30	0.38	0.48	0.53	0.59	0.71	0.77
Optics											
T2	4000K Lumens	4,787	9,357	13,961	18,448	22,856	27,353	32,347	36,651	40,884	45,265
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	141	142	145	143	141	142	143	143	141	140
T2R	4000K Lumens	5,083	9,934	14,822	19,585	24,266	29,038	34,341	38,911	43,404	48,055
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5
	Lumens per Watt	150	151	154	152	150	150	152	151	150	149
T3	4000K Lumens	4,880	9,537	14,231	18,803	23,296	27,878	32,970	37,358	41,671	46,137
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5
	Lumens per Watt	144	145	148	146	144	144	146	145	144	143
T3R	4000K Lumens	4,988	9,749	14,547	19,220	23,814	28,497	33,703	38,188	42,598	47,162
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	147	148	152	149	147	148	149	149	147	146
T4FT	4000K Lumens	4,909	9,591	14,312	18,911	23,432	28,040	33,161	37,574	41,913	46,404
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5
	Lumens per Watt	144	145	149	147	145	145	147	146	145	144
T4W	4000K Lumens	4,845	9,468	14,128	18,668	23,130	27,678	32,732	37,088	41,371	45,805
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	143	143	147	145	143	143	145	144	143	142
SL2	4000K Lumens	4,779	9,341	13,937	18,416	22,818	27,305	32,292	36,589	40,813	45,188
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	141	142	145	143	141	141	143	142	141	140
SL3	4000K Lumens	4,879	9,536	14,229	18,800	23,294	27,874	32,965	37,351	41,666	46,130
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	144	144	148	146	144	144	146	145	144	143
SL4	4000K Lumens	4,637	9,059	13,519	17,863	22,132	26,486	31,322	35,490	39,589	43,831
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G4	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	136	137	141	138	137	137	139	138	137	136
5NQ	4000K Lumens	5,033	9,835	14,676	19,392	24,026	28,751	34,002	38,526	42,975	47,581
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3
	Lumens per Watt	148	149	153	150	148	149	150	150	148	147
5MQ	4000K Lumens	5,126	10,015	14,946	19,747	24,468	29,281	34,628	39,236	43,766	48,457
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
	Lumens per Watt	151	152	156	153	151	152	153	153	151	150
5WQ	4000K Lumens	5,139	10,043	14,985	19,801	24,533	29,359	34,721	39,339	43,883	48,586
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5
	Lumens per Watt	151	152	156	153	151	152	154	153	151	150
SLL/ SLR	4000K Lumens	4,289	8,380	12,502	16,520	20,469	24,494	28,967	32,823	36,613	40,537
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	126	127	130	128	126	127	128	128	126	126
RW	4000K Lumens	4,987	9,746	14,543	19,215	23,808	28,491	33,695	38,178	42,587	47,151
	BUG Rating	B2-U0-G1	B3-U0-G1	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
	Lumens per Watt	147	148	151	149	147	148	149	149	147	146
AFL	4000K Lumens	5,007	9,782	14,597	19,285	23,896	28,594	33,817	38,317	42,742	47,322
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3
	Lumens per Watt	147	148	152	149	148	148	150	149	147	147

*** Nominal data for 70 CRI. ** For additional performance data, please reference the Galleon Supplemental Performance Guide.**

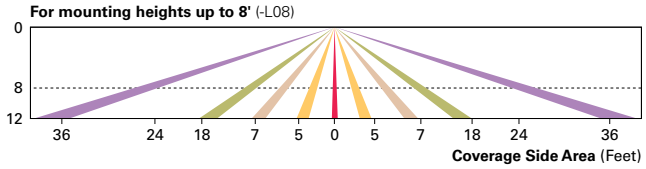
Control Options

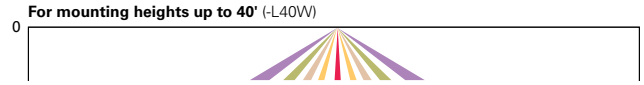
0-10V (DIM)
This fixture is offered standard with 0-10V dimming driver(s). The DIM option provides 0-10V dimming wire leads for use with a lighting control panel or other control method.

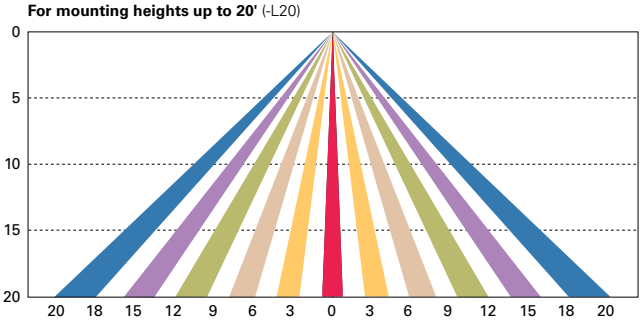
Photocontrol (BPC, PR and PR7)
Optional button-type photocontrol (BPC) and photocontrol receptacles (PR and PR7) provide a flexible solution to enable "dusk-to-dawn" lighting by sensing light levels. Advanced control systems compatible with NEMA 7-pin standards can be utilized with the PR7 receptacle.

After Hours Dim (AHD)
This feature allows photocontrol-enabled luminaires to achieve additional energy savings by dimming during scheduled portions of the night. The dimming profile will automatically take effect after a "dusk-to-dawn" period has been calculated from the photocontrol input. Specify the desired dimming profile for a simple, factory-shipped dimming solution requiring no external control wiring. Reference the After Hours Dim supplemental guide for additional information.

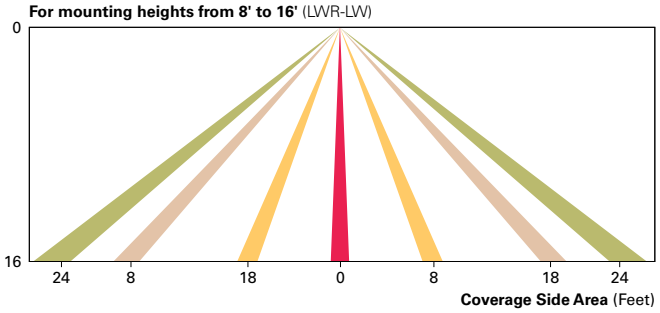
Dimming Occupancy Sensor (SPB, MS/DIM-LXX, MS/X-LXX and MS-LXX)
These sensors are factory installed in the luminaire housing. When the SPB or MS/DIM sensor options are selected, the occupancy sensor is connected to a dimming driver and the entire luminaire dims when there is no activity detected. When activity is detected, the luminaire returns to full light output. The MS/DIM sensor is factory preset to dim down to approximately 50 percent power with a time delay of five minutes. The MS-LXX sensor is factory preset to turn the luminaire off after five minutes of no activity. The MS/X-LXX is also preset for five minutes and only controls the specified number of light engines to maintain steady output from the remaining light engines. SPB motion sensors require the Sensor Configuration mobile application by Wattstopper to change factory default dimming level, time delay, sensitivity and other parameters. Available for iOS and Android devices. The SPB sensor is factory preset to dim down to approximately 10% power with a time delay of five minutes. The MS/DIM occupancy sensors require the FSIR-100 programming tool to adjust factory defaults.

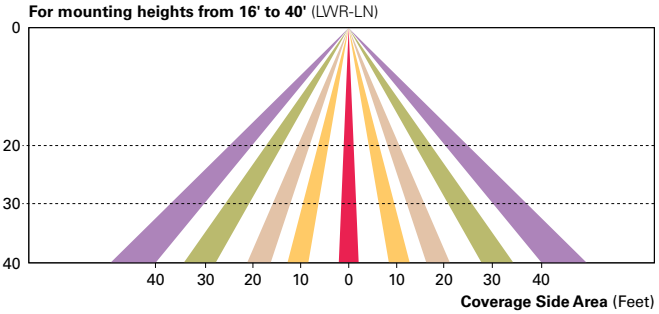






Enlighted Wireless Control and Monitoring System (LWR-LW and LWR-LN)
Enlighted is a connected lighting solution that combines a broad selection of energy-efficient LED luminaires with a powerful integrated wireless sensor system. The sensor controls the lighting system in compliance with the latest energy codes and collects valuable data about building performance and use. Software applications turn the granular data into information through energy dashboards and specialized apps that make it simple and help optimize the use of building resources, beyond lighting.





WaveLinx Wireless Outdoor Lighting Control Module (WOLC-7P-10A)
The 7-pin wireless outdoor lighting control module enables WaveLinx to control outdoor area, site and flood lighting. WaveLinx controls outdoor lighting using schedules to provide ON, OFF and dimming controls based on astronomic or time schedules based on a 7 day week.

LumenSafe Integrated Network Security Camera (LD)
Cooper Lighting Solutions brings ease of camera deployment to a whole new level. No additional wiring is needed beyond providing line power to the luminaire. A variety of networking options allows security integrators to design the optimal solution for active surveillance. As the ideal solution to meet the needs for active surveillance, the LumenSafe integrated network camera is a streamlined, outdoor-ready fixed dome that provides HDTV 1080p video. This IP camera is optimally designed for deployment in the video management system or security software platform of choice.

Synapse (DIM10)
SimplySNAP integrated wireless controls system by Synapse. Includes factory installed DIM10 Synapse control module and MS/DC motion sensor; requires additional Synapse system components for operation. Contact Synapse at www.synapsewireless.com for product support, warranty and terms and conditions.

Cooper Lighting Solutions
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Specifications and dimensions
subject to change without notice.

Steel Poles

SSS SQUARE STRAIGHT STEEL

Catalog #		**Type**	
Project			
Comments		**Date**	
Prepared by			

FEATURES
- ASTM Grade steel base plate with ASTM A366 base cover
- Hand hole assembly 3" x 5" on 5" and 6" pole; and 2" x 4" on 4" pole
- 10'-39' mounting heights
- Drilled or tenon (specify)

DESIGN CONSIDERATIONS - VIBRATIONS AND NON-GROUND MOUNTED INSTALLATIONS

The information contained herein is for general guidance only and is not a replacement for professional judgment. Design considerations for wind-induced vibrations and non-ground mounted installations (e.g., installations on bridges or buildings) are not included in this document. Consult with a professional, and local and federal standards, before ordering to ensure product is appropriate for the intended purpose and installation location. Refer to the Cooper Lighting Solutions Light Pole White Paper for risk factors and design considerations. Learn more.

NOTE: The Limited Warranty for this product specifically excludes fatigue failure or similar damage resulting from vibration, harmonic oscillation or resonance.

Specifications and dimensions subject to change without notice. Consult your lighting representative at Cooper Lighting Solutinos or visit www.cooperlighting.com for available options, accessories and ordering information.

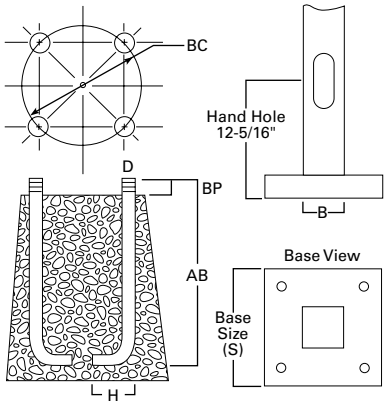
ORDERING INFORMATION

SAMPLE NUMBER: SSA5A20SFM1XG

Product Family	Shaft Size (Inches)[1]	Wall Thickness (Inches)	Mounting Height (Feet)	Base Type	Finish	Mounting Type	Number and Location of Arms	Arm Lengths (Feet)	Options (Add as Suffix)
SSS=Square Straight Steel	**4**=4" **5**=5" **6**=6"	**A**=0.120" **M**=0.188" **X**=0.250"	**10**=10' **15**=15' **20**=20' **25**=25' **30**=30' **35**=35' **39**=39'	**S**=Square Steel Base	**F**=Dark Bronze **G**=Galvanized Steel **J**=Summit White **K**=Carbon Bronze **L**=Dark Platinum **R**=Hartford Green **S**=Silver **T**=Graphite Metallic **V**=Grey **W**=White **X**=Custom Color **Y**=Black	**2**=2-3/8" O.D. Tenon (4" Long) **3**=3-1/2" O.D. Tenon (5" Long) **4**=4" O.D. Tenon (6" Long) **9**=3" O.D. Tenon (4" Long) **6**=2-3/8" O.D. Tenon (6" Long) **7**=4" O.D. Tenon (10" Long) **A**=Type A Drilling **C**=Type C Drilling **E**=Type E Drilling **F**=Type F Drilling **G**=Type G Drilling **J**=Type J Drilling **K**=Type K Drilling **M**=Type M Drilling **N**=Type N Drilling **R**=Type R Drilling **S**=Standard Upsweep Arm[6] **Z**=Type Z Drilling	**1**=Single **2**=2 at 180° **3**=Triple[2] **4**=4 at 90° **5**=2 at 90° **X**=None	**X**=None **2**=2' **3**=2.5' **4**=4' **6**=6' **8**=8'	**A**=1/2" Tapped Hub[3] **B**=3/4" Tapped Hub[3] **C**=Convenience Outlet[4] **E**=GFCI Convenience Outlet[4] **G**=Ground Lug **H**=Additional Hand Hole[5] **V**=Vibration Dampener

NOTES: 1. All shaft sizes nominal. **2.** Square poles are 3 at 90°, round poles are 3 at 120°. **3.** Tapped Hub is located 5' below the pole top and on the same side of pole as hand hole, unless specified otherwise. **4.** Outlet is located 4' above base and on same side of pole as hand hole, unless specified otherwise. Receptacle not included, provision only. **5.** Additional hand hole is located 12" below pole top and 90° from standard hand hole location, unless otherwise specified. **6.** Arm must be ordered separately.

ANCHORAGE DATA



See technical information.

Pole	Template Number	Bolt Number	Bolt Circle (inches)	Number of Bolts	Bolt Size (inches)
SSS4	TMP1	AB1	8.5 - 11.0	4	3/4 x 25 x 3
SSS5	TMP1	AB1	11.0	4	3/4 x 25 x 3
SSS6	TMP2	AB3	12.5	4	1 x 36 x 4

EFFECTIVE PROJECTED AREA (At Pole Top)

Mounting Height (Feet)	Catalog Number [1, 2]	Wall Thickness (Inches)	Base Square [3] (Inches)	Bolt Circle Diameter (Inches)	Anchor Bolt Projection [3] (Inches)	Shaft Size [3] (Inches)	Anchor Bolt Diameter x Length x Hook (Inches)	Net Weight (Pounds)	Maximum Effective Projected Area (Square Feet) [4]				Max. Fixture Load - Includes Bracket (Pounds)
MH			**S**	**BC**	**BP**	**B**	**D x AB x H**		**80 mph**	**90 mph**	**100 mph**	**110 mph**	
10	SSS4A10S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	85	30.0	22.0	17.0	13.0	100
15	SSS4A15S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	118	15.0	11.5	8.7	6.5	100
20	SSS4A20S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	150	8.7	5.9	3.9	2.5	150
20	SSS5A20S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	183	15.4	11.1	7.9	5.5	150
25	SSS4A25S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	181	3.7	1.7	0.3	--	200
25	SSS5A25S	0.120	10-1/2	11	5	5	3/4 x 25 x 3	222	9.3	6.0	3.5	1.6	200
25	SSS6A25S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	284	9.9	6.1	3.5	1.2	200
30	SSS5A30S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	260	4.7	2.1	--	--	200
30	SSS5M30S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	392	10.4	6.4	3.5	1.5	200
30	SSS6A30S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	330	4.3	1.4	--	--	200
30	SSS6M30S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	489	19.0	13.0	8.7	5.6	200
35	SSS5M35S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	453	5.8	2.8	--	--	200
35	SSS6M35S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	564	12.8	7.2	3.7	1.0	200
35	SSS6X35S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	738	16.5	11.0	6.8	3.5	200
39	SSS6M39S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	618	7.3	3.0	--	--	300
39	SSS6X39S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	816	13.0	7.0	3.7	0.8	300

EFFECTIVE PROJECTED AREA (Two Feet Above Pole Top)

Mounting Height (Feet)	Catalog Number [1, 2]	Wall Thickness (Inches)	Base Square [3] (Inches)	Bolt Circle Diameter (Inches)	Anchor Bolt Projection [3] (Inches)	Shaft Size [3] (Inches)	Anchor Bolt Diameter x Length x Hook (Inches)	Net Weight (Pounds)	Maximum Effective Projected Area (Square Feet) [4]				Max. Fixture Load - Includes Bracket (Pounds)
MH			**S**	**BC**	**BP**	**B**	**D x AB x H**		**80 mph**	**90 mph**	**100 mph**	**110 mph**	
10	SSS4A10S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	85	23.0	17.5	14.0	11.0	100
15	SSS4A15S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	118	13.4	10.0	7.5	5.7	100
20	SSS4A20S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	150	7.6	5.2	3.4	2.1	150
20	SSS5A20S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	183	13.8	9.9	7.1	4.9	150
25	SSS4A25S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	181	3.4	1.6	0.3	--	200
25	SSS5A25S	0.120	10-1/2	11	5	5	3/4 x 25 x 3	222	8.5	5.5	3.2	1.5	200
25	SSS6A25S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	284	9.1	5.6	3.0	1.2	200
30	SSS5A30S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	260	1.8	--	--	--	200
30	SSS5M30S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	392	9.6	5.9	1.9	0.2	200
30	SSS6A30S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	330	4.1	1.3	--	--	200
30	SSS6M30S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	489	18.5	12.5	8.4	5.3	200
35	SSS5M35S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	453	5.5	2.4	--	--	200
35	SSS6M35S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	564	11.8	7.0	3.5	1.0	200
35	SSS6X35S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	738	16.0	10.5	6.4	3.4	200
39	SSS6M39S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	618	7.0	2.4	--	--	300
39	SSS6X39S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	816	12.0	6.7	3.0	0.5	300

NOTES:

1. Catalog number includes pole with hardware kit. Anchor bolts not included. Before installing, make sure proper anchor bolts and templates are obtained.
2. Tenon size or machining for rectangular arms must be specified. Hand hole position relative to drill location.
3. Shaft size, base square, anchor bolts and projections may vary slightly. All dimensions nominal.
4. EPAs based on shaft properties with wind normal to flat. EPAs calculated using base wind velocity as indicated plus 30% gust factor.

VIBRATION

Vibrations may cause damage to structures, including poles. Vibrations are unpredictable, and there are many factors and variables that can cause damaging vibrations. Many wind conditions exist that can create damaging vibrations to poles and luminaires, such as constant winds between 10-30 mph. Although all pole types can experience vibration, straight square poles seem to be most prone. Vibration dampers and/or a round tapered design may be used to mitigate damage from vibrations, but there is no guarantee damaging vibrations will be prevented. Vibration dampers are not included with this pole but can be ordered separately. Consult with a professional, and local and federal standards, to ensure this pole is appropriate for the intended purpose and installation location. Refer to Cooper Lighting Solutions' Light Pole White Paper for risk factors and design considerations.

MAINTENANCE

Perform inspections periodically. A prudent inspection schedule would be: one week after installation, one month after installation, yearly after installation, and following any major wind event. During the inspection, check the poles for cracks. If cracks are detected, remedial action is required. Recheck anchor bolt torques and re-tighten according to the recommended torque values. Check for missing covers and pole caps and replace as necessary. Check the pole for corrosion and deterioration of the finish. Should there be corrosion or deterioration, take remedial action to correct.

WARNING: Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to pole white paper WP513001EN for additional support information. Before installing, make sure proper anchor bolts and templates are obtained. The use of unauthorized accessories such as banners, signs, cameras or pennants for which the pole was not designed voids the pole warranty and may result in pole failure causing serious injury or property damage. Information regarding total loading capacity can be supplied upon request. The pole warranty is void unless poles are used and installed as a complete pole and luminaire combination. This warranty specifically excludes failure as the result of a third party act or omission, misuse, unanticipated uses, fatigue failure or similar phenomena resulting from induced vibration, harmonic oscillation or resonance associated with movement of air currents around the product.

Specifications and dimensions subject to change without notice. Consult your lighting representative at Cooper Lighting Solutions or visit www.cooperlighting.com for available options, accessories and ordering information.

HUBBELL Outdoor Lighting

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

RATIO Wall

RWL1/RWL2 LED WALLPACK

FEATURES

- Low profile LED wall luminaire with a variety of IES distributions for lighting applications such as retail, commercial and industrial building mount
- Featuring Micro Strike Optics which maximizes target zone illumination with minimal losses at the house-side, reducing light trespass issues
- Visual comfort standard
- Control options including photo control, occupancy sensing, NX Distributed Intelligence™, Wiscape and 7-Pin with networked controls
- Battery Backup options available for emergency code compliance
- Quick-mount adapter allows easy installation/maintenance
- 347V and 480V versions for industrial applications and Canada
- Stock versions available in 3500lm and 5500lm configurations at 4000K

C US

BUY AMERICAN SOLUTIONS See Certification Specifications

DLC QPL LISTED

DLC QPL LISTED PREMIUM

RELATED PRODUCTS

Ratio Family | Ratio Area | Ratio Flood

CONTROL TECHNOLOGY

SiteSync LIGHTING CONTROL | NX DISTRIBUTED INTELLIGENCE™ | wiSCAPE™

SPECIFICATIONS

CONSTRUCTION

- Die-cast housing with hidden vertical heat fins that are optimal for heat dissipation while keeping a clean smooth outer surface
- Corrosion resistant, die-cast aluminum housing with powder coat paint finish
- Powder paint finish provides durability in outdoor environments. Tested to meet 1000 hour salt spray rating.

OPTICS

- Entire optical aperture illuminates to create a larger luminous surface area resulting in a low glare appearance without sacrificing optical performance
- 48 or 160 midpower LEDs
- 3000K, 4000K or 5000K (70 CRI/80 CRI) CCT
- Zero uplight distributions
- LED optics provide IES type II, III and IV distributions. Type II only available in RWL2 configurations.

INSTALLATION

- Quick-mount adapter provides easy installation to wall or to recessed junction boxes (4" square junction box)
- Designed for direct j-box mount.
- Integral back box contains 1/2" conduit hubs
- Integral back box standard with Dual Driver, Dual Power Feed, NX, Wiscape and battery versions (battery versions for RWL1 only)

ELECTRICAL

- 120V-277V universal voltage 50/60Hz 0-10V dimming drivers
- 347V and 480V dimmable driver option for all wattages above 35W.

ELECTRICAL (CONTINUED)

- Ambient operating temperature -40˚C to 40˚C
- Drivers have greater than .90 power factor and less than 20% Total Harmonic Distortion
- Driver RoHS and IP66
- Field replaceable surge protection device provides 20kA protection meeting ANSI/IEEE C62.41.2 Category C High and Surge Location Category C3; Automatically takes fixture off-line for protection when device is compromised
- Dimming drivers are standard and dimming leads are extended out of the luminaire unless control options require connection to the dimming leads. Must specify if wiring leads are to be greater than 6" standard.

CONTROLS

- Photo control, occupancy sensor and wireless available for complete on/off and dimming control
- Button photocontrol is suitable for 120-277V operation
- 7-pin ANSI C136.41-2013 photocontrol receptacle option available for twist lock photocontrols or wireless control modules (control accessories sold separately)
- NX Distributed Intelligence™ available with in fixture wireless control module, features dimming and occupancy sensor wiSCAPE® available with in fixture wireless control module, features dimming and occupancy sensor
- Integral Battery Backup provides emergency lighting for the required 90 minute path of egress
- Battery Backup suitable for operating temperatures -25˚C to 40˚C

CONTROLS (CONTINUED)

- Dual Driver and Dual Power Feed options creates product configuration with 2 internal drivers for code compliance
- Please consult brand or sales representative when combining control and electrical options as some combinations may not operate as anticipated depending on your application.

CERTIFICATIONS

- Listed to UL1598 and CSAC22.2#250.0-24 for wet locations
- IP65 rated housing
- This product qualifies as a "designated country construction material" per FAR 52.225-11 Buy American-Construction Materials under Trade Agreements effective 04/23/2020. See Buy American Solutions
- DLC® (DesignLights Consortium Qualified), with some Premium Qualified configurations. Please refer to the DLC website for specific product qualifications at www.designlights.org

WARRANTY

- 5 year limited warranty
- See HLI Standard Warranty for additional information

KEY DATA	
Lumen Range	1,300–18,800
Wattage Range	10–155
Efficacy Range (LPW)	119–148
Fixture Projected Life (Hours)	L70>60K
Weights lbs. (kg)	6.5/16.5 (2.9/7.5)

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HUBBELL Lighting

HUBBELL Outdoor Lighting

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

RATIO WALL

RWL1/RWL2 LED WALLPACK

ORDERING GUIDE

Example: RWL1–48L-10–3K7–2–UNV–BLS–E

CATALOG #

ORDERING INFORMATION

Series		# LEDs - Wattage		CCT/CRI		Distribution		Voltage		Color	
RWL1	Ratio Wall 1	**48L-10**	1,000 Lumens[4]	**3K7**	3000K, 70 CRI	**2**	IES TYPE II[1]	**UNV**	120-277V	**BLT**	Black Matte Textured
		48L-15	2,000 Lumens[4]	**4K7**	4000K, 70 CRI	**3**	IES TYPE III	**120**	120V	**BLS**	Black Gloss Smooth
		48L-20	2,500 Lumens[4]	**5K7**	5000K, 70 CRI	**4W**	IES TYPE IV	**208**	208V	**DBT**	Dark Bronze Matte Textured
		48L-25	3,500 Lumens[4]					**240**	240V	**DBS**	Dark Bronze Gloss Smooth
		48L-35	4,500 Lumens					**277**	277V	**GTT**	Graphite Matte Textured
		48L-45	5,500 Lumens					**347**	347V	**LGS**	Light Grey Gloss Smooth
RWL2	Ratio Wall 2	**160L-45**	6,500 Lumens					**480**	480V	**LGT**	Light Grey Matte Textured
		160L-50	7,500 Lumens							**PSS**	Platinum Silver Smooth
		160L-65	9,500 Lumens							**WHT**	White Matte Textured
		160L-80	11,000 Lumens							**WHS**	White Gloss Smooth
		160L-95	13,000 Lumens							**VGT**	Verde Green Textured
		160L-115	15,000 Lumens							**Color Option**	
		160L-135	17,500 Lumens							**CC**	Custom Color
		160L-155	19,500 Lumens								

Control Options Network		Options	
NXWE	NX Wireless Enabled (module + radio)[4,7]	**F**	Fusing[3]
NXSPW_F	NX Wireless, PIR Occ. Sensor, Daylight Harvesting[4,5,7]	**E**	Emergency Battery Backup[7,8,9]
NXSP_F	NX, PIR Occ. Sensor, Daylight Harvesting[4,5,7]	**EH**	Emergency Battery w/ Heater Option[7,8]
WIR	Wireless Controls, wiSCAPE™[2,6]	**2DR**	Dual Driver[4,6]
Stand Alone Sensors		**2PF**	Dual Power Feed[4,6]
SCP-8F	Remote control programmable line voltage sensor[3,4]	**PC**	Button Photocontrol[8]
SCP-20F	Remote control programmable line voltage sensor[3,4]		
Control Options			
7PR_	7-Pin Receptacle[6]		

Notes:
1. Only available with RWL2
2. wiSCAPE Gateway required for system programming
3. Specific voltage selection is required
4. Not available with 347/480V
5. Replace "_" with "14" for up to 14' mounting height, "40" for up to 40' mounting height
6. This item is located in the integral backbox which will be automatically added onto the fixture if chosen.
7. This item is located in the integral backbox for RWL1 configurations only.
8. Option only available at 120 or 277V

STOCK ORDERING INFORMATION

Catalog Number	Lumens	Wattage	LED Count	CCT/CRI	Voltage	Distribution	Finish
RWL1-48L-25-4K-3	3500lm	25	48L	4000K/70CRI	120-277V	Type III	Dark Bronze Textured
RWL1-48L-25-4K-4W	3500lm	25	48L	4000K/70CRI	120-277V	Type IV Wide	Dark Bronze Textured
RWL1-48L-45-4K-3	5500lm	45	48L	4000K/70CRI	120-277V	Type III	Dark Bronze Textured
RWL1-48L-45-4K-4W	5500lm	45	48L	4000K/70CRI	120-277V	Type IV Wide	Dark Bronze Textured

CONTROLS

Control Options	
Standalone	
SCPREMOTE	Order at least one per project location to program and control

ACCESSORIES AND REPLACEMENT PARTS - MADE TO ORDER

	Catalog Number	Description
☐	**WP-BB-XXX**	Accessory for conduit entry[1]

Notes:
1. replace "xxx" with color option

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HUBBELL Lighting

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

RATIO WALL

RWL1/RWL2 LED WALLPACK

PERFORMANCE DATA

Description	Nominal Wattage	System Watts	Dist. Type	5K (5000K NOMINAL 70 CRI)					4K (4000K NOMINAL 70 CRI)					3K (3000K NOMINAL 70 CRI)				
				Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G
RWL1	10	10.1	3	1362	135	0	0	1	1355	134	0	0	1	1303	129	0	0	1
			4W	1343	133	0	0	1	1336	132	0	0	1	1285	127	0	0	1
	15	14.5	3	1972	136	1	0	1	1962	135	1	0	1	1887	130	1	0	1
			4W	1945	134	0	0	1	1935	133	0	0	1	1861	128	0	0	1
	20	19.9	3	2722	137	1	0	1	2709	136	1	0	1	2605	131	1	0	1
			4W	2685	135	1	0	1	2672	134	1	0	1	2569	129	1	0	1
	25	28.0	3	3749	134	1	0	1	3732	133	1	0	1	3588	128	1	0	1
			4W	3698	132	1	0	1	3680	131	1	0	1	3538	126	1	0	1
	35	36.9	3	4751	129	1	0	2	4728	128	1	0	2	4546	123	1	0	1
			4W	4685	127	1	0	2	4663	126	1	0	2	4483	121	1	0	2
	45	46.5	3	5812	125	1	0	2	5784	124	1	0	2	5562	120	1	0	2
			4W	5731	123	1	0	2	5704	123	1	0	2	5485	118	1	0	2
RWL2	45	46.1	2	6701	145	1	0	2	6668	145	1	0	2	6412	139	1	0	2
			3	6812	148	1	0	2	6780	147	1	0	2	6519	141	1	0	2
			4W	6678	145	1	0	2	6646	144	1	0	2	6390	139	1	0	2
	50	54.0	2	7747	143	1	0	2	7710	143	1	0	2	7413	137	1	0	2
			3	7876	146	1	0	2	7838	145	1	0	2	7537	140	1	0	2
			4W	7720	143	1	0	2	7683	142	1	0	2	7388	137	1	0	2
	65	67.2	2	9539	142	1	0	2	9494	141	1	0	2	9129	136	1	0	2
			3	9699	144	2	0	2	9652	144	2	0	2	9281	138	2	0	2
			4W	9507	141	2	0	2	9461	141	2	0	2	9097	135	2	0	2
	80	80.8	2	11228	139	2	0	2	11174	138	2	0	2	10745	133	2	0	2
			3	11416	141	2	0	2	11361	141	2	0	2	10924	135	2	0	2
			4W	11190	138	2	0	2	11136	138	2	0	2	10708	133	2	0	2
	95	93.2	2	13148	141	2	0	2	13085	140	2	0	2	12582	135	2	0	2
			3	13368	143	2	0	2	13304	143	2	0	2	12792	137	2	0	2
			4W	13103	141	2	0	2	13040	140	2	0	2	12539	135	2	0	2
	115	109.8	2	15102	138	2	0	3	15030	137	2	0	3	14452	132	2	0	3
			3	15354	140	2	0	3	15281	139	2	0	3	14693	134	2	0	3
			4W	15050	137	2	0	3	14978	136	2	0	3	14402	131	2	0	3
	135	137.1	2	17533	128	2	0	3	17449	127	2	0	3	16778	122	2	0	3
			3	17826	130	2	0	3	17740	129	2	0	3	17058	124	2	0	3
			4W	17473	127	2	0	3	17389	127	2	0	3	16720	122	2	0	3
	155	156.8	2	19495	124	2	0	3	19402	124	2	0	3	18656	119	2	0	3
			3	19821	126	2	0	3	19726	126	2	0	3	18967	121	2	0	3
			4W	19542	125	2	0	3	19448	124	2	0	3	18700	119	2	0	3

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HUBBELL Outdoor Lighting

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

RATIO WALL

RWL1/RWL2 LED WALLPACK

LUMINAIRE AMBIENT TEMPERATURE FACTOR (LATF)

Ambient Temperature		Lumen Multiplier
0°C	32°F	1.03
10°C	50°F	1.01
20°C	68°F	1.00
25°C	77°F	1.00
30°C	86°F	0.99
40°C	104°F	0.98
50°C	122°F	0.97

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

PROJECTED LUMEN MAINTENANCE

Ambient Temperature	OPERATING HOURS					
	0	25,000	TM-21-11 L90 36,000	50,000	100,000	L70 (Hours)
25°C / 77°F	1.00	0.97	0.96	0.95	0.91	408,000
40°C / 104°F	0.99	0.96	0.95	0.94	0.89	356,000

ELECTRICAL DATA

# OF LEDS	Nominal Wattage	Input Voltage	Oper. Current (Amps)	System Power (Watts)
RWL1	10	120	0.08	10.1
		208	0.05	
		240	0.04	
		277	0.04	
		347	0.03	
		480	0.02	
	15	120	0.12	14.5
		208	0.07	
		240	0.06	
		277	0.05	
		347	0.04	
		480	0.03	
	20	120	0.17	19.9
		208	0.10	
		240	0.08	
		277	0.07	
		347	0.06	
		480	0.04	
	25	120	0.23	28.0
		208	0.13	
		240	0.12	
		277	0.10	
		347	0.08	
		480	0.06	
	35	120	0.31	36.9
		208	0.18	
		240	0.15	
		277	0.13	
		347	0.11	
		480	0.08	
	45	120	0.39	46.5
		208	0.22	
		240	0.19	
		277	0.17	
		347	0.13	
		480	0.10	

# OF LEDS	Nominal Wattage	Input Voltage	Oper. Current (Amps)	System Power (Watts)
RWL2	45	120	0.38	46.1
		208	0.22	
		240	0.19	
		277	0.17	
		347	0.13	
		480	0.10	
	50	120	0.45	54.0
		208	0.26	
		240	0.23	
		277	0.19	
		347	0.16	
		480	0.11	
	65	120	0.56	67.2
		208	0.32	
		240	0.28	
		277	0.24	
		347	0.19	
		480	0.14	
	80	120	0.67	80.8
		208	0.39	
		240	0.34	
		277	0.29	
		347	0.23	
		480	0.17	
	95	120	0.78	93.2
		208	0.45	
		240	0.39	
		277	0.34	
		347	0.27	
		480	0.19	
	115	120	0.92	109.8
		208	0.53	
		240	0.46	
		277	0.40	
		347	0.32	
		480	0.23	
	135	120	1.14	137.1
		208	0.66	
		240	0.57	
		277	0.49	
		347	0.40	
		480	0.29	
	155	120	1.31	156.8
		208	0.75	
		240	0.65	
		277	0.57	
		347	0.45	
		480	0.33	

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HUBBELL Lighting

HUBBELL Outdoor Lighting

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

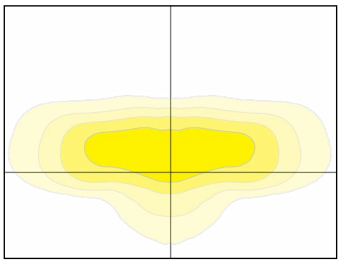
RATIO WALL

RWL1/RWL2 LED WALLPACK

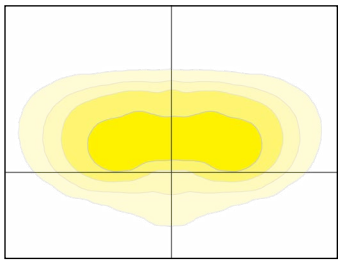
PHOTOMETRY

MountingHeight:30ft

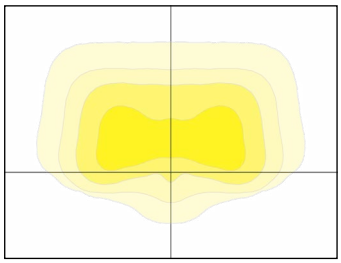
Type II



Type III

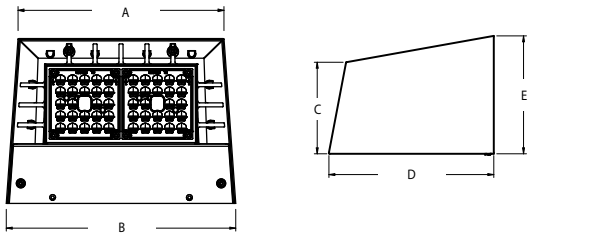


Type VI



DIMENSIONS

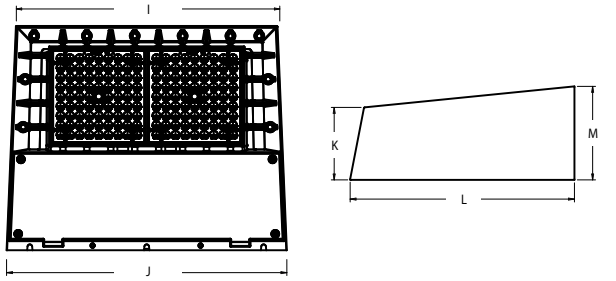
RWL1



A	B	C	D	E
8.7"	9.7"	3.9"	7.0"	5.0"
221mm	246mm	99mm	178mm	127mm

Weight
6.5 lbs (2.95 kgs)

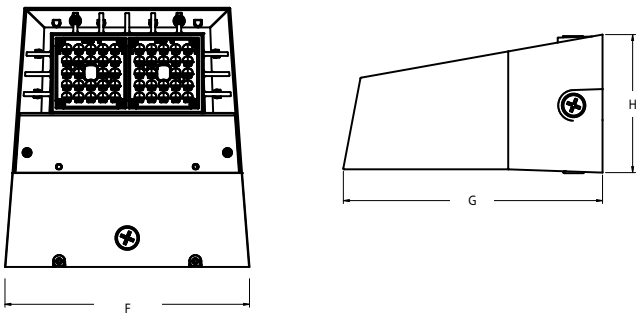
RWL2



I	J	K	L	M
14.0"	15.0"	3.9"	12.0"	5.0"
356mm	381mm	99mm	305mm	127mm

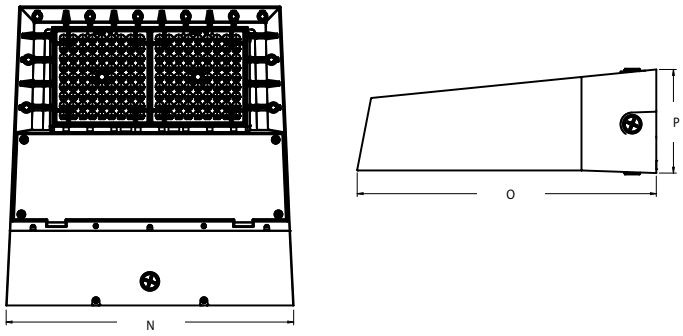
Weight
16.5 lbs (7.48 kgs)

RWL1 with Integral Back Box



F	G	H
10.4"	11.0"	5.9"
264mm	279mm	150mm

RWL2 with Integral Back Box



N	O	P
15.4"	16.0"	5.5"
391mm	406mm	140mm

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HUBBELL Outdoor Lighting

DATE: LOCATION:

TYPE: PROJECT:

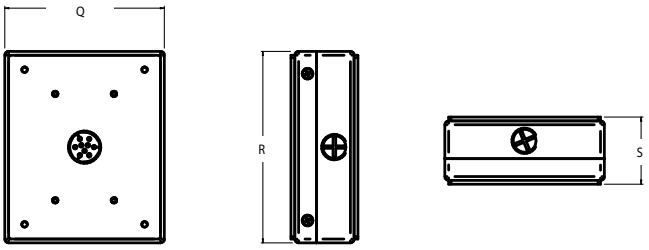
CATALOG #:

RATIO WALL

RWL1/RWL2 LED WALLPACK

DIMENSIONS (CONTINUED)

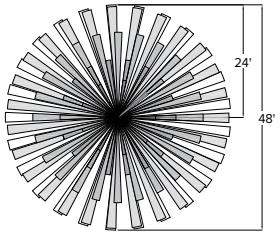
Back Box Accessory

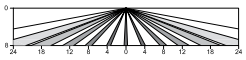


Q	R	S
4.9" 124mm	5.9" 150mm	2.1" 53mm

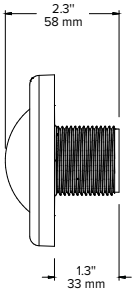
ADDITIONAL INFORMATION

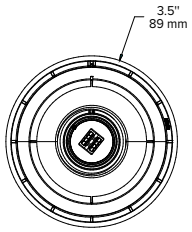
NXSP-14F



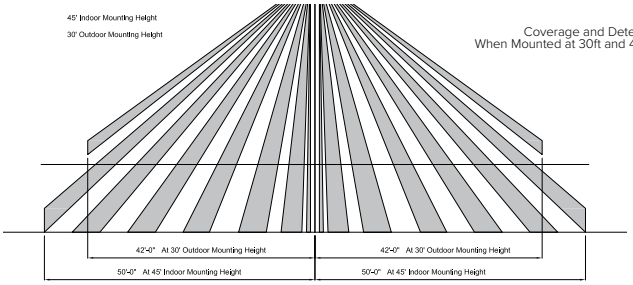


Sensor Lens Coverage and Detection Patterns
When Mounted at 8ft with Low Mount Lens

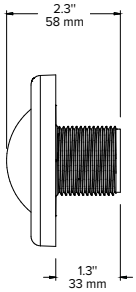


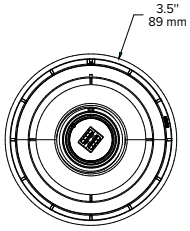


NXSP-40F

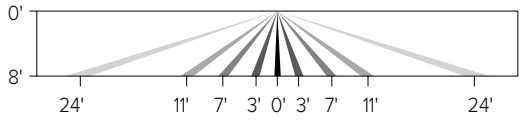


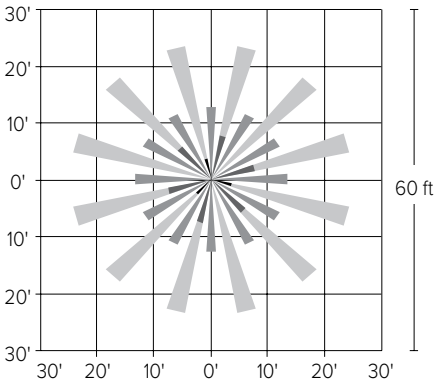
Coverage and Detection Patterns
When Mounted at 30ft and 45ft with Standard Lens

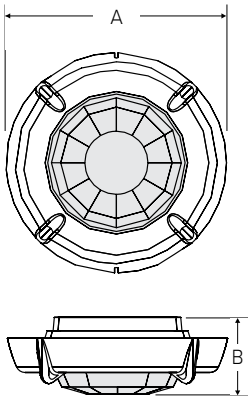




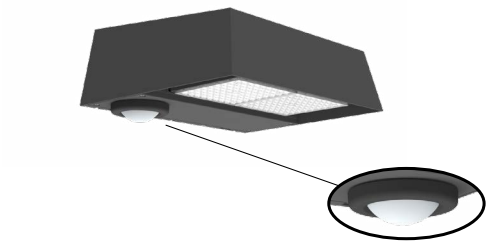
SCP-8F







A	B
2.3" (59mm)	.8" (20mm)



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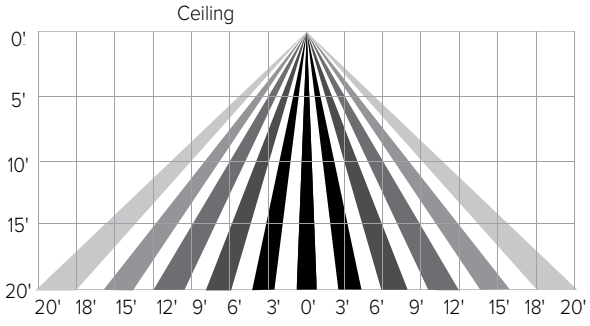
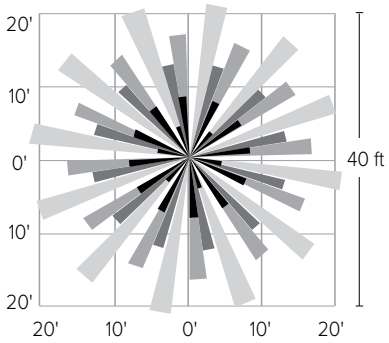
HUBBELL Lighting

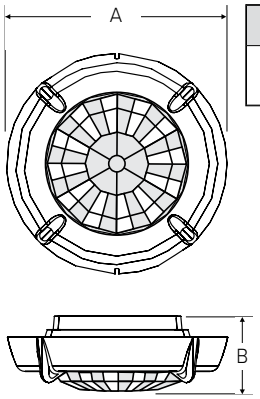
RATIO WALL

RWL1/RWL2 LED WALLPACK

SCP-20F

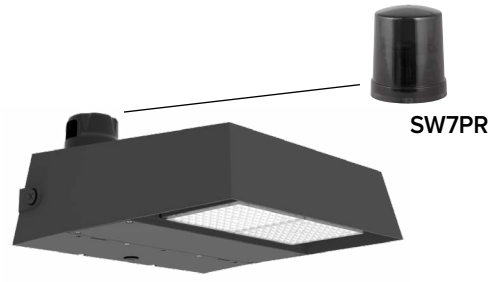






A	B
2.3" (59mm)	.8" (20mm)

SITESYNC 7-PIN MODULE



SW7PR

SiteSync LIGHTING CONTROL

- SiteSync features in a new form
- Available as an accessory for new construction or retrofit applications (with existing 7-Pin receptacle)

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Project		Catalog #		Type	
Prepared by		Notes		Date	

McGraw-Edison

GLEON Galleon

Area / Site Luminaire

Product Features

LumenSafe Technology

Light ARchitect™

Product Certifications

Interactive Menu

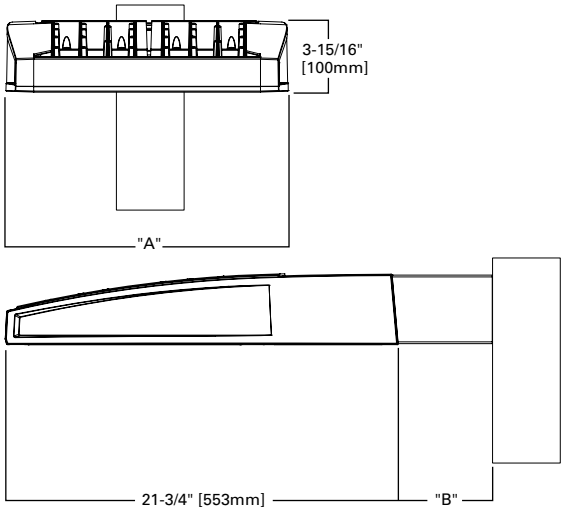
Quick Facts

- Lumen packages range from 4,200 - 80,800 (34W - 640W)
- Efficacy up to 156 lumens per watt
- Options to meet Buy American and other domestic preference requirements

Connected Systems

- WaveLinx
- Enlighted

Dimensional Details



NOTES:
1. Visit https://www.designlights.org/search/ to confirm qualification. Not all product variations are DLC qualified.
2. IDA Certified for 3000K CCT and warmer only.

Number of Light Squares	"A" Width	"B" Standard Arm Length	"B" Extended Arm Length [1]	"B" Quick Mount Arm Length	"B" Quick Mount Extended Arm Length
1-4	15-1/2"	7"	10"	10-5/8"	16-9/16"
5-6	21-5/8"	7"	10"	10-5/8"	16-9/16"
7-8	27-5/8"	7"	13"	10-5/8"	--
9-10	33-3/4"	7"	16"	--	--

NOTES:
For arm selection requirements and additional line art, see Mounting Details section.

Ordering Information

SAMPLE NUMBER: **GLEON-SA4C-740-U-T4FT-GM**

Product Family [1, 2]	Light Engine		Color Temperature	Voltage	Distribution	Mounting	Finish
	Configuration	Drive Current					
GLEON=Galleon **BAA-GLEON**=Galleon, Buy American Act Compliant [35] **TAA-GLEON**=Galleon, Trade Agreements Act Compliant [35]	**SA1**=1 Square **SA2**=2 Squares **SA3**=3 Squares **SA4**=4 Squares **SA5**=5 Squares [4] **SA6**=6 Squares **SA7**=7 Squares [5] **SA8**=8 Squares [5] **SA9**=9 Squares [6] **SA0**=10 Squares [6]	**A**=600mA **B**=800mA **C**=1000mA **D**=1200mA [16]	**722**=70CRI, 2200K **727**=70CRI, 2700K **730**=70CRI, 3000K **735**=70CRI, 3500K **740**=70CRI, 4000K **750**=70CRI, 5000K **760**=70CRI, 6000K **827**=80CRI, 2700K **830**=80CRI, 3000K **AMB**=Amber, 590nm [14, 16]	**U**=120-277V **1**=120V **2**=208V **3**=240V **4**=277V **8**=480V [7, 8] **9**=347V [7]	**T2**=Type II **T2R**=Type II Roadway **T3**=Type III **T3R**=Type III Roadway **T4FT**=Type IV Forward Throw **T4W**=Type IV Wide **5NQ**=Type V Narrow **5MQ**=Type V Square Medium **5WQ**=Type V Square Wide **SL2**=Type II w/Spill Control **SL3**=Type III w/Spill Control **SL4**=Type IV w/Spill Control **SLL**=90° Spill Light Eliminator Left **SLR**=90° Spill Light Eliminator Right **RW**=Rectangular Wide Type I **AFL**=Automotive Frontline	**[Blank]**=Arm for Round or Square Pole **EA**=Extended Arm [9] **MA**=Mast Arm Adapter [10] **WM**=Wall Mount **QM**=Quick Mount Arm (Standard Length) [11] **QML**=Quick Mount Arm (Standard Length, Large) [37] **QMEA**=Quick Mount Arm (Extended Length) [12]	**AP**=Grey **BZ**=Bronze **BK**=Black **DP**=Dark Platinum **GM**=Graphite Metallic **WH**=White **RALXX**=Custom Color

Options (Add as Suffix)

DIM=External 0-10V Dimming Leads [19, 20]
F=Single Fuse (120, 277 or 347V Specify Voltage)
FF=Double Fuse (208, 240 or 480V Specify Voltage)
20K=Series 20kV UL 1449 Surge Protective Device
2L=Two Circuits [17, 18]
HA=50°C High Ambient
HSS=Installed House Side Shield [28]
GRSBK=Glare Reducing Shield, Black [23]
GRSWH=Glare Reducing Shield, White [23]
LCF=Light Square Trim Painted to Match Housing [27]
MT=Installed Mesh Top
TH=Tool-less Door Hardware
CC=Coastal Construction finish [3]
L90=Optics Rotated 90° Left
R90=Optics Rotated 90° Right
CE=CE Marking [29]
AHD145=After Hours Dim, 5 Hours [22]
AHD245=After Hours Dim, 6 Hours [22]
AHD255=After Hours Dim, 7 Hours [22]
AHD355=After Hours Dim, 8 Hours [22]
DALI=DALI Drivers

Controls and Systems Options (Add as Suffix)

BPC=Button Type Photocontrol
PR=NEMA 3-PIN Photocontrol Receptacle
PR7=NEMA 7-PIN Photocontrol Receptacle [21]
SPB2=Dimming Occupancy Sensor with Bluetooth Interface, 8' - 20' Mounting [34]
SPB4=Dimming Occupancy Sensor with Bluetooth Interface, 21' - 40' Mounting [34]
MS-L20=Motion Sensor for ON/OFF Operation, 9' - 20' Mounting Height [24]
MS-L40W=Motion Sensor for ON/OFF Operation, 21' - 40' Mounting Height [24]
MS/X-L20=Bi-Level Motion Sensor, 9' - 20' Mounting Height [24, 25]
MS/X-L40W=Bi-Level Motion Sensor, 21' - 40' Mounting Height [24, 25]
MS/DIM-L20=Motion Sensor for Dimming Operation, 9' - 20' Mounting Height [24]
MS/DIM-L40W=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height [24]
ZW=WaveLinx Module and 4-PIN Receptacle
ZD=WaveLinx Module with DALI driver and 4-PIN Receptacle
SWPD4XX=WaveLinx Sensor Only, 7'-15' [13, 32, 33]
SWPD5XX=WaveLinx Sensor Only, 15'-40' [13, 32, 33]
WOBXX=WaveLinx Sensor with Bluetooth, 7'-15' [13, 32]
WOFXX=WaveLinx Sensor with Bluetooth, 15'-40' [13, 32]
LWR-LW=Enlighted Sensor, 8'–16' Mounting Height [26]
LWR-LN=Enlighted Sensor, 16'–40' Mounting Height [26]
DIM10-MS/DIM-L08=Synapse Occupancy Sensor (<8' Mounting) [19]
DIM10-MS/DIM-L20=Synapse Occupancy Sensor (9'-20' Mounting) [19]
DIM10-MS/DIM-L40=Synapse Occupancy Sensor (21'-40' Mounting) [19]

Accessories (Order Separately) [35]

OA/RA1016=NEMA Photocontrol Multi-Tap - 105-285V
OA/RA1027=NEMA Photocontrol - 480V
OA/RA1201=NEMA Photocontrol - 347V
OA/RA1013=Photocontrol Shorting Cap
OA/RA1014=120V Photocontrol
MA1252=10kV Surge Module Replacement
MA1036-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon
MA1037-XX=2@180° Tenon Adapter for 2-3/8" O.D. Tenon
MA1197-XX=3@120° Tenon Adapter for 2-3/8" O.D. Tenon
MA1188-XX=4@90° Tenon Adapter for 2-3/8" O.D. Tenon
MA1189-XX=2@90° Tenon Adapter for 2-3/8" O.D. Tenon
MA1190-XX=3@90° Tenon Adapter for 2-3/8" O.D. Tenon
MA1191-XX=2@120° Tenon Adapter for 2-3/8" O.D. Tenon
MA1038-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon
MA1039-XX=2@180° Tenon Adapter for 3-1/2" O.D. Tenon
MA1192-XX=3@120° Tenon Adapter for 3-1/2" O.D. Tenon
MA1193-XX=4@90° Tenon Adapter for 3-1/2" O.D. Tenon
MA1194-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon
MA1195-XX=3@90° Tenon Adapter for 3-1/2" O.D. Tenon
FSIR-100=Wireless Configuration Tool for Occupancy Sensor [24]
GLEON-MT1=Field Installed Mesh Top for 1-4 Light Squares
GLEON-MT2=Field Installed Mesh Top for 5-6 Light Squares
GLEON-MT3=Field Installed Mesh Top for 7-8 Light Squares
GLEON-MT4=Field Installed Mesh Top for 9-10 Light Squares
GLEON-QM=Quick Mount Arm Kit [11]
GLEON-QMEA=Quick Mount Extended Arm Kit [12]
LS/HSS=Field Installed House Side Shield [28, 30]
LS/GRSBK=Glare Reducing Shield, Black [23, 30]
LS/GRSWH=Glare Reducing Shield, White [23, 30]
LS/PFS=Perimeter Shield, Black [15]
WOLC-7P-10A=WaveLinx Outdoor Control Module [19, 31]
SWPD4-XX=Wavelinx Wireless Sensor, 7'–15' Mounting Height [13, 19, 32, 33]
SWPD5-XX=Wavelinx Wireless Sensor, 15'–40' Mounting Height [13, 19, 32, 33]

NOTES:

1. Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our white paper WP513001EN for additional support information.
2. DesignLights Consortium® Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
3. Coastal construction finish salt spray tested to over 5,000-hours per ASTM B117, with a scribe rating of 9 per ASTM D1654. Not available with TH option.
4. Not compatible with MS/4-LXX or MS/1-LXX sensors.
5. Not compatible with extended quick mount arm (QMEA).
6. Not compatible with standard quick mount arm (QM) or extended quick mount arm (QMEA).
7. Requires the use of an internal step down transformer when combined with sensor options. Not available with sensor at 1200mA. Not available in combination with the HA high ambient and sensor options at 1A.
8. 480V must utilize Wye system only. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems.)
9. May be required when two or more luminaires are oriented on a 90° or 120° drilling pattern. Refer to arm mounting requirement table.
10. Factory installed.
11. Maximum 8 light squares.
12. Maximum 6 light squares.
13. Requires ZW or ZD receptacle.
14. Narrow-band 590nm +/- 5nm for wildlife and observatory use. Choose drive current A; supplied at 500mA drive current only. Available with 5WQ, 5MQ, SL2, SL3 and SL4 distributions. Can be used with HSS option.
15. Set of 4 pcs. One set required per Light Square.
16. Not available with HA option.
17. 2L is not available with MS, MS/X or MS/DIM at 347V or 480V. 2L in SA2 through SA4 requires a larger housing, normally used for SA5 or SA6. Extended arm option may be required when mounting two or more fixtures per pole at 90° or 120°. Refer to arm mounting requirement table.
18. Not available with Enlighted wireless sensors.
19. Cannot be used with other control options.
20. Low voltage control lead brought out 18" outside fixture.
21. Not available if any "MS" sensor is selected. Motion sensor has an integral photocell.
22. Requires the use of BPC photocontrol or the PR7 or PR photocontrol receptacle with photocontrol accessory. See After Hours Dim supplemental guide for additional information.
23. Not for use with T4FT, T4W or SL4 optics. See IES files for details.
24. The FSIR-100 configuration tool is required to adjust parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative at Cooper Lighting Solutions for more information.
25. Replace X with number of Light Squares operating in low output mode.
26. Enlighted wireless sensors are factory installed only requiring network components LWP-EM-1, LWP-GW-1 and LWP-PoE8 in appropriate quantities.
27. Not available with house side shield (HSS).
28. Not for use with 5NQ, 5MQ, 5WQ or RW optics. A black trim plate is used when HSS is selected.
29. CE is not available with the LWR, MS, MS/X, MS/DIM, BPC, PR or PR7 options. Available in 120-277V only.
30. One required for each Light Square.
31. Requires PR7.
32. Replace XX with sensor color (WH, BZ or BK.)
33. WAC Gateway required to enable field-configurability: Order WAC-PoE and WPOE-120 (10V to PoE injector) power supply if needed.
34. Smart device with mobile application required to change system defaults. See controls section for details.
35. Only product configurations with these designated prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or Trade Agreements Act of 1979 (TAA), respectively. Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be separately analyzed under domestic preference requirements.
36. For BAA or TAA requirements, Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information.
37. Available for 7-10 squares.

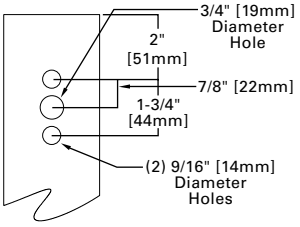
LumenSafe Integrated Network Security Camera Technology Options (Add as Suffix)

Product Family	Camera Type	Data Backhaul	
L=LumenSafe Technology	**D**=Standard Dome Camera **H**=Hi-Res Dome Camera **Z**=Remote PTZ Camera	**C**=Cellular, No SIM **A**=Cellular, AT&T **V**=Cellular, Verizon **S**=Cellular, Sprint	**R**=Cellular, Rogers **W**=Wi-Fi Networking w/ Omni-Directional Antenna **E**=Ethernet Networking

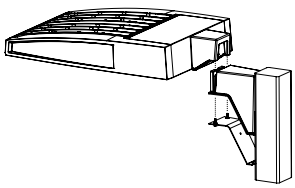
Mounting Details

Standard Arm (Drilling Pattern)

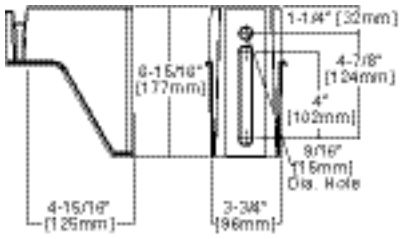
TYPE "N"



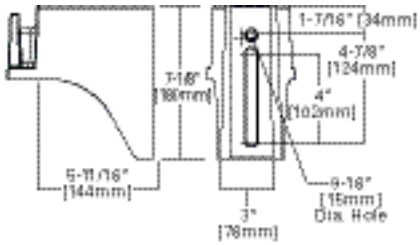
Quick Mount Arm (Includes fixture adapter)



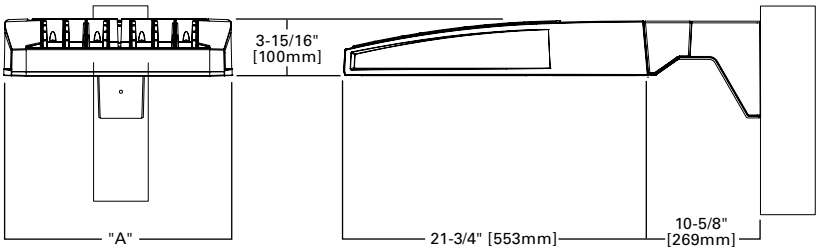
QM and QMEA Pole Mount



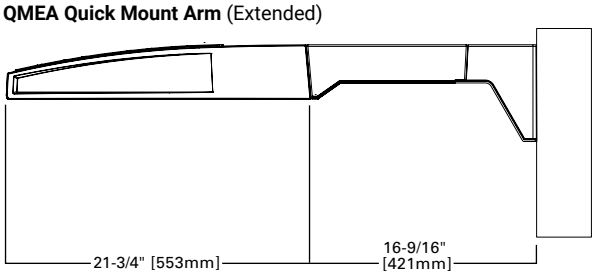
QML Pole Mount



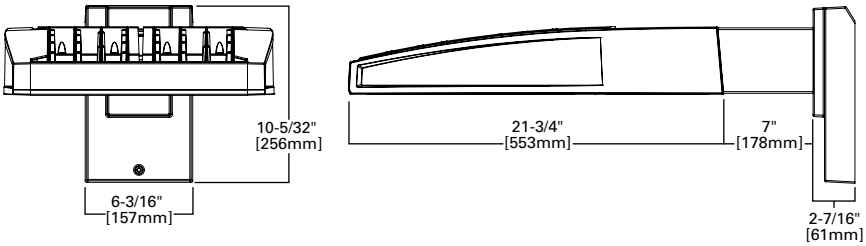
QM Quick Mount Arm (Standard)



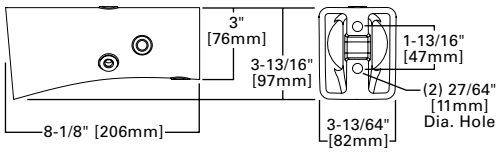
QMEA Quick Mount Arm (Extended)



Standard Wall Mount

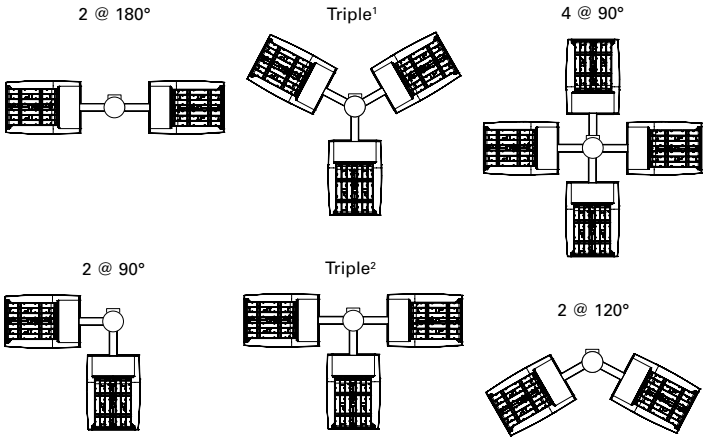


Mast Arm Mount



Arm Mounting Requirements

Number of Light Squares	Standard Arm @ 90° Apart	Standard Arm @ 120° Apart	Quick Mount Arm @ 90° Apart	Quick Mount Arm @ 120° Apart
1	Standard	Standard	QM Extended	Quick Mount
2	Standard	Standard	QM Extended	Quick Mount
3	Standard	Standard	QM Extended	Quick Mount
4	Standard	Standard	QM Extended	Quick Mount
5	Extended	Standard	QM Extended	Quick Mount
6	Extended	Standard	QM Extended	Quick Mount
7	Extended	Extended	--	Quick Mount
8	Extended	Extended	--	Quick Mount
9	Extended	Extended	--	--
10	Extended	Extended	--	--



NOTES: 1 Round poles are 3 @ 120°. Square poles are 3 @ 90°. **2** Round poles are 3 @ 90°. **3** Shown with 4 square configurations.

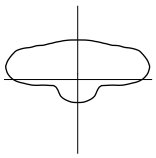
Fixture Weights and EPAs

Number of Light Squares	Weight with Standard and Extended Arm (lbs.)	EPA with Standard and Extended Arm (Sq. Ft.)	Weight with QM Arm (lbs.)	EPA with QM Arm (Sq. Ft.)	Weight with QML (lbs.)	EPA with QML (Sq. Ft.)	Weight with QMEA (lbs.)	EPA with QMEA (Sq. Ft.)
1-4	33	0.96	35	1.11	--	--	38	1.11
5-6	44	1.00	46	1.11	--	--	49	1.11
7-8	54	1.07	56	1.11	58	1.11	--	--
9-10	63	1.12	--	--	67	1.11	--	--

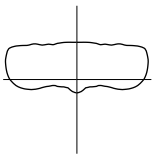
Optical Distributions

Asymmetric Area Distributions

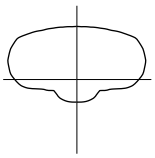
T2 (Type II)



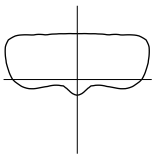
SL2 (Type II with Spill Control)



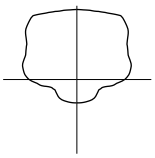
T3 (Type III)



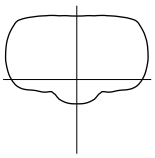
SL3 (Type III with Spill Control)



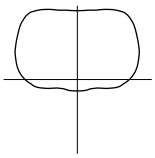
T4FT (Type IV Forward Throw)



T4W (Type IV Wide)

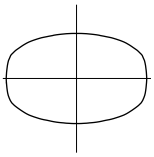


SL4 (Type IV with Spill Control)

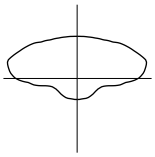


Asymmetric Roadway Distributions

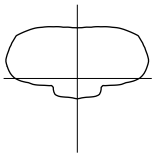
RW (Rectangular Wide Type I)



T2R (Type II Roadway)

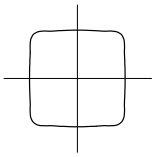


T3R (Type III Roadway)

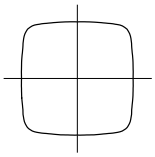


Symmetric Distributions

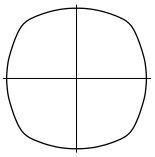
5NQ (Type V Square Narrow)



5MQ (Type V Square Medium)

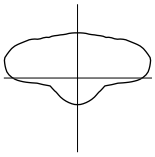


5WQ (Type V Square Wide)

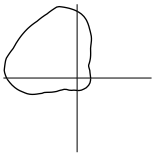


Specialized Distributions

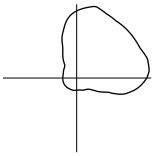
AFL (Automotive Frontline)



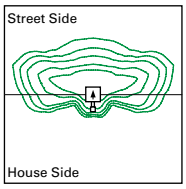
SLL (90° Spill Light Eliminator Left)



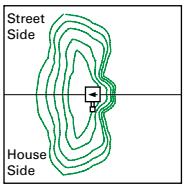
SLR (90° Spill Light Eliminator Right)



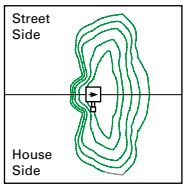
Rotated Optics



Standard



Optics Rotated Left @ 90° [L90]



Optics Rotated Right @ 90° [R90]

Product Specifications

Construction

- Extruded aluminum driver enclosure
- Heavy-wall, die-cast aluminum end caps
- Die-cast aluminum heat sinks
- Patent pending interlocking housing and heat sink

Optics

- Patented, high-efficiency injection-molded AccuLED Optics technology
- 16 optical distributions
- 3 shielding options including HSS, GRS and PFS
- IDA Certified (3000K CCT and warmer only)

Electrical

- LED drivers are mounted to removable tray assembly for ease of maintenance
- Standard with 0-10V dimming
- Standard with Cooper Lighting Solutions proprietary circuit module designed to withstand 10kV of transient line surge
- Suitable for operation in -40°C to 40°C ambient environments. Optional 50°C high ambient (HA) configuration.

Mounting

- Standard extruded arm includes internal bolt guides and round pole adapter
- Extended arms (EA and QMEA) may be required in 90° or 120° pole mount configurations, see arm mounting requirements table
- Mast arm (MA) factory installed
- Wall mount (WM) option available
- Quick mount arm (QM and QMEA) includes pole adapter and factory installed fixture mount for fast installation to square or round poles

Finish

- Super housing durable TGIC polyester powder coat paint, 2.5 mil nominal thickness
- Heat sink is powder coated black
- RAL and custom color matches available
- Coastal Construction (CC) option available

Warranty

- Five year warranty

Energy and Performance Data

Lumen Maintenance (TM-21)

Drive Current	Ambient Temperature	25,000 hours*	50,000 hours*	60,000 hours*	100,000 hours**	Theoretical L70 hours**
Up to 1A	25°C	99.4%	99.0%	98.9%	98.3%	> 2.4M
	40°C	98.7%	98.3%	98.1%	97.4%	> 1.9M
	50°C	98.2%	97.2%	96.8%	95.2%	> 851,000
1.2A	25°C	99.4%	99.0%	98.9%	98.3%	> 2.4M
	40°C	98.5%	97.9%	97.7%	96.7%	> 1.3M

* Supported by IES TM-21 standards
** Theoretical values represent estimations commonly used; however, refer to the IES position on LED Product Lifetime Prediction, IES PS-10-18, explaining proper use of IES TM-21 and LM-80.

Lumen Multiplier

Ambient Temperature	Lumen Multiplier
0ºC	1.02
10ºC	1.01
25ºC	1.00
40ºC	0.99
50ºC	0.97

View GLEON IES files

Nominal Power Lumens (1.2A)

Supplemental Performance Guide**

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		67	129	191	258	320	382	448	511	575	640
Input Current @ 120V (A)		0.58	1.16	1.78	2.31	2.94	3.56	4.09	4.71	5.34	5.87
Input Current @ 208V (A)		0.33	0.63	0.93	1.27	1.57	1.87	2.22	2.52	2.8	3.14
Input Current @ 240V (A)		0.29	0.55	0.80	1.10	1.35	1.61	1.93	2.18	2.41	2.71
Input Current @ 277V (A)		0.25	0.48	0.70	0.96	1.18	1.39	1.69	1.90	2.09	2.36
Input Current @ 347V (A)		0.20	0.39	0.57	0.78	0.96	1.15	1.36	1.54	1.72	1.92
Input Current @ 480V (A)		0.15	0.30	0.43	0.60	0.73	0.85	1.03	1.16	1.28	1.45
Optics											
T2	4000K Lumens	7,972	15,580	23,245	30,714	38,056	45,541	53,857	61,024	68,072	75,366
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	119	121	122	119	119	119	120	119	118	118
T2R	4000K Lumens	8,462	16,539	24,680	32,609	40,401	48,348	57,176	64,783	72,266	80,010
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	126	128	129	126	126	127	128	127	126	125
T3	4000K Lumens	8,125	15,879	23,693	31,307	38,787	46,417	54,893	62,197	69,381	76,818
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	121	123	124	121	121	122	123	122	121	120
T3R	4000K Lumens	8,306	16,232	24,220	32,001	39,651	47,447	56,114	63,580	70,924	78,523
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	124	126	127	124	124	124	125	124	123	123
T4FT	4000K Lumens	8,173	15,970	23,831	31,488	39,014	46,686	55,212	62,558	69,783	77,261
	BUG Rating	B1-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	122	124	125	122	122	122	123	122	121	121
T4W	4000K Lumens	8,067	15,764	23,522	31,080	38,510	46,082	54,499	61,751	68,881	76,263
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B5-U0-G5
	Lumens per Watt	120	122	123	120	120	121	122	121	120	119
SL2	4000K Lumens	7,958	15,552	23,206	30,662	37,989	45,462	53,763	60,920	67,952	75,235
	BUG Rating	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	119	121	121	119	119	119	120	119	118	118
SL3	4000K Lumens	8,124	15,877	23,690	31,302	38,784	46,410	54,885	62,189	69,372	76,805
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	121	123	124	121	121	121	123	122	121	120
SL4	4000K Lumens	7,719	15,085	22,510	29,741	36,850	44,097	52,148	59,089	65,913	72,977
	BUG Rating	B1-U0-G3	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	115	117	118	115	115	115	116	116	115	114
5NQ	4000K Lumens	8,380	16,375	24,436	32,287	40,003	47,870	56,610	64,144	71,552	79,221
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
	Lumens per Watt	125	127	128	125	125	125	126	126	124	124
5MQ	4000K Lumens	8,534	16,676	24,885	32,881	40,739	48,752	57,653	65,326	72,868	80,679
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	127	129	130	127	127	128	129	128	127	126
5WQ	4000K Lumens	8,556	16,723	24,951	32,968	40,847	48,881	57,808	65,499	73,063	80,894
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	128	130	131	128	128	128	129	128	127	126
SLL/ SLR	4000K Lumens	7,140	13,951	20,817	27,506	34,081	40,783	48,231	54,649	60,959	67,492
	BUG Rating	B1-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	107	108	109	107	107	107	108	107	106	105
RW	4000K Lumens	8,304	16,228	24,215	31,994	39,641	47,437	56,100	63,566	70,907	78,504
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5
	Lumens per Watt	124	126	127	124	124	124	125	124	123	123
AFL	4000K Lumens	8,335	16,287	24,302	32,110	39,784	47,610	56,303	63,796	71,163	78,790
	BUG Rating	B1-U0-G1	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G5
	Lumens per Watt	124	126	127	124	124	125	126	125	124	123

*** Nominal data for 70 CRI. ** For additional performance data, please reference the Galleon Supplemental Performance Guide.**

Nominal Power Lumens (1A)

Supplemental Performance Guide**

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		59	113	166	225	279	333	391	445	501	558
Input Current @ 120V (A)		0.51	1.02	1.53	2.03	2.55	3.06	3.56	4.08	4.60	5.07
Input Current @ 208V (A)		0.29	0.56	0.82	1.11	1.37	1.64	1.93	2.19	2.46	2.75
Input Current @ 240V (A)		0.26	0.48	0.71	0.96	1.19	0.41	1.67	1.89	2.12	2.39
Input Current @ 277V (A)		0.23	0.42	0.61	0.83	1.03	1.23	1.45	1.65	1.84	2.09
Input Current @ 347V (A)		0.17	0.32	0.50	0.64	0.82	1.00	1.14	1.32	1.50	1.68
Input Current @ 480V (A)		0.14	0.24	0.37	0.48	0.61	0.75	0.91	0.99	1.12	1.28
Optics											
T2	4000K Lumens	7,267	14,201	21,190	28,000	34,692	41,515	49,096	55,627	62,053	68,703
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	123	126	128	124	124	125	126	125	124	123
T2R	4000K Lumens	7,715	15,077	22,497	29,725	36,829	44,073	52,122	59,056	65,876	72,937
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	131	133	136	132	132	132	133	133	131	131
T3	4000K Lumens	7,408	14,475	21,598	28,539	35,358	42,313	50,039	56,698	63,246	70,024
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	126	128	130	127	127	127	128	127	126	125
T3R	4000K Lumens	7,571	14,798	22,078	29,172	36,145	43,253	51,153	57,959	64,653	71,581
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	128	131	133	130	130	130	131	130	129	128
T4FT	4000K Lumens	7,451	14,559	21,725	28,703	35,564	42,558	50,330	57,027	63,613	70,430
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	126	129	131	128	127	128	129	128	127	126
T4W	4000K Lumens	7,354	14,371	21,442	28,333	35,105	42,007	49,681	56,291	62,792	69,521
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	125	127	129	126	126	126	127	126	125	125
SL2	4000K Lumens	7,254	14,178	21,155	27,951	34,631	41,443	49,011	55,533	61,944	68,584
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	123	125	127	124	124	124	125	125	124	123
SL3	4000K Lumens	7,406	14,474	21,596	28,534	35,355	42,307	50,033	56,690	63,237	70,014
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	126	128	130	127	127	127	128	127	126	125
SL4	4000K Lumens	7,037	13,751	20,519	27,112	33,592	40,198	47,538	53,864	60,087	66,524
	BUG Rating	B1-U0-G3	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5
	Lumens per Watt	119	122	124	120	120	121	122	121	120	119
5NQ	4000K Lumens	7,640	14,928	22,275	29,431	36,465	43,637	51,606	58,472	65,226	72,218
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
	Lumens per Watt	129	132	134	131	131	131	132	131	130	129
5MQ	4000K Lumens	7,779	15,203	22,684	29,973	37,137	44,441	52,555	59,549	66,427	73,545
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	132	135	137	133	133	133	134	134	133	132
5WQ	4000K Lumens	7,800	15,243	22,744	30,052	37,236	44,560	52,697	59,708	66,603	73,742
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	132	135	137	134	133	134	135	134	133	132
SLL/ SLR	4000K Lumens	6,510	12,719	18,977	25,075	31,067	37,176	43,967	49,817	55,569	61,525
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	110	113	114	111	111	112	112	112	111	110
RW	4000K Lumens	7,570	14,793	22,073	29,165	36,137	43,243	51,140	57,945	64,637	71,564
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5
	Lumens per Watt	128	131	133	130	130	130	131	130	129	128
AFL	4000K Lumens	7,598	14,847	22,154	29,272	36,267	43,400	51,326	58,156	64,872	71,824
	BUG Rating	B1-U0-G1	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4
	Lumens per Watt	129	131	133	130	130	130	131	131	129	129

*** Nominal data for 70 CRI. ** For additional performance data, please reference the Galleon Supplemental Performance Guide.**

Nominal Power Lumens (800mA)

Supplemental Performance Guide**

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		44	85	124	171	210	249	295	334	374	419
Input Current @ 120V (A)		0.39	0.77	1.13	1.54	1.90	2.26	2.67	3.03	3.39	3.80
Input Current @ 208V (A)		0.22	0.44	0.62	0.88	1.06	1.24	1.50	1.68	1.87	2.12
Input Current @ 240V (A)		0.19	0.38	0.54	0.76	0.92	1.08	1.30	1.46	1.62	1.84
Input Current @ 277V (A)		0.17	0.36	0.47	0.72	0.83	0.95	1.19	1.31	1.42	1.67
Input Current @ 347V (A)		0.15	0.24	0.38	0.49	0.63	0.77	0.87	1.01	1.15	1.52
Input Current @ 480V (A)		0.11	0.18	0.29	0.37	0.48	0.59	0.66	0.77	0.88	0.96
Optics											
T2	4000K Lumens	5,871	11,474	17,121	22,622	28,029	33,542	39,667	44,944	50,134	55,508
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	133	135	138	132	133	135	134	135	134	132
T2R	4000K Lumens	6,233	12,181	18,176	24,016	29,756	35,608	42,111	47,714	53,224	58,929
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5
	Lumens per Watt	142	143	147	140	142	143	143	143	142	141
T3	4000K Lumens	5,986	11,695	17,450	23,057	28,568	34,186	40,430	45,809	51,099	56,576
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	136	138	141	135	136	137	137	137	137	135
T3R	4000K Lumens	6,117	11,955	17,838	23,569	29,203	34,946	41,328	46,827	52,235	57,832
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	139	141	144	138	139	140	140	140	140	138
T4FT	4000K Lumens	6,019	11,763	17,551	23,190	28,734	34,384	40,663	46,074	51,396	56,904
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	137	138	142	136	137	138	138	138	137	136
T4W	4000K Lumens	5,942	11,610	17,324	22,891	28,363	33,940	40,138	45,480	50,732	56,169
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	135	137	140	134	135	136	136	136	136	134
SL2	4000K Lumens	5,862	11,454	17,091	22,583	27,980	33,484	39,598	44,867	50,048	55,411
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	133	135	138	132	133	134	134	134	134	132
SL3	4000K Lumens	5,985	11,694	17,447	23,053	28,565	34,182	40,424	45,804	51,092	56,568
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5
	Lumens per Watt	136	138	141	135	136	137	137	137	137	135
SL4	4000K Lumens	5,685	11,111	16,577	21,905	27,140	32,478	38,409	43,520	48,546	53,748
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	129	131	134	128	129	130	130	130	130	128
5NQ	4000K Lumens	6,172	12,061	17,997	23,778	29,462	35,256	41,694	47,242	52,699	58,347
	BUG Rating	B2-U0-G1	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
	Lumens per Watt	140	142	145	139	140	142	141	141	141	139
5MQ	4000K Lumens	6,285	12,283	18,328	24,217	30,004	35,907	42,462	48,112	53,669	59,421
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5
	Lumens per Watt	143	145	148	142	143	144	144	144	144	142
5WQ	4000K Lumens	6,303	12,317	18,377	24,281	30,085	36,001	42,575	48,241	53,812	59,579
	BUG Rating	B3-U0-G1	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	143	145	148	142	143	145	144	144	144	142
SLL/ SLR	4000K Lumens	5,260	10,276	15,332	20,259	25,101	30,037	35,522	40,249	44,898	49,708
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	120	121	124	118	120	121	120	121	120	119
RW	4000K Lumens	6,116	11,952	17,834	23,563	29,196	34,938	41,317	46,817	52,224	57,819
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4
	Lumens per Watt	139	141	144	138	139	140	140	140	140	138
AFL	4000K Lumens	6,139	11,996	17,899	23,650	29,302	35,064	41,468	46,987	52,412	58,030
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4
	Lumens per Watt	140	141	144	138	140	141	141	141	140	138

*** Nominal data for 70 CRI. ** For additional performance data, please reference the Galleon Supplemental Performance Guide.**

Nominal Power Lumens (600mA)

Supplemental Performance Guide**

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		34	66	96	129	162	193	226	257	290	323
Input Current @ 120V (A)		0.30	0.58	0.86	1.16	1.44	1.73	2.03	2.33	2.59	2.89
Input Current @ 208V (A)		0.17	0.34	0.49	0.65	0.84	0.99	1.14	1.30	1.48	1.63
Input Current @ 240V (A)		0.15	0.30	0.43	0.56	0.74	0.87	1.00	1.13	1.30	1.43
Input Current @ 277V (A)		0.14	0.28	0.41	0.52	0.69	0.81	0.93	1.04	1.22	1.33
Input Current @ 347V (A)		0.11	0.19	0.30	0.39	0.49	0.60	0.69	0.77	0.90	0.99
Input Current @ 480V (A)		0.08	0.15	0.24	0.30	0.38	0.48	0.53	0.59	0.71	0.77
Optics											
T2	4000K Lumens	4,787	9,357	13,961	18,448	22,856	27,353	32,347	36,651	40,884	45,265
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	141	142	145	143	141	142	143	143	141	140
T2R	4000K Lumens	5,083	9,934	14,822	19,585	24,266	29,038	34,341	38,911	43,404	48,055
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5
	Lumens per Watt	150	151	154	152	150	150	152	151	150	149
T3	4000K Lumens	4,880	9,537	14,231	18,803	23,296	27,878	32,970	37,358	41,671	46,137
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5
	Lumens per Watt	144	145	148	146	144	144	146	145	144	143
T3R	4000K Lumens	4,988	9,749	14,547	19,220	23,814	28,497	33,703	38,188	42,598	47,162
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	147	148	152	149	147	148	149	149	147	146
T4FT	4000K Lumens	4,909	9,591	14,312	18,911	23,432	28,040	33,161	37,574	41,913	46,404
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5
	Lumens per Watt	144	145	149	147	145	145	147	146	145	144
T4W	4000K Lumens	4,845	9,468	14,128	18,668	23,130	27,678	32,732	37,088	41,371	45,805
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	143	143	147	145	143	143	145	144	143	142
SL2	4000K Lumens	4,779	9,341	13,937	18,416	22,818	27,305	32,292	36,589	40,813	45,188
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	141	142	145	143	141	141	143	142	141	140
SL3	4000K Lumens	4,879	9,536	14,229	18,800	23,294	27,874	32,965	37,351	41,666	46,130
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	144	144	148	146	144	144	146	145	144	143
SL4	4000K Lumens	4,637	9,059	13,519	17,863	22,132	26,486	31,322	35,490	39,589	43,831
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G4	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	136	137	141	138	137	137	139	138	137	136
5NQ	4000K Lumens	5,033	9,835	14,676	19,392	24,026	28,751	34,002	38,526	42,975	47,581
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3
	Lumens per Watt	148	149	153	150	148	149	150	150	148	147
5MQ	4000K Lumens	5,126	10,015	14,946	19,747	24,468	29,281	34,628	39,236	43,766	48,457
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
	Lumens per Watt	151	152	156	153	151	152	153	153	151	150
5WQ	4000K Lumens	5,139	10,043	14,985	19,801	24,533	29,359	34,721	39,339	43,883	48,586
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5
	Lumens per Watt	151	152	156	153	151	152	154	153	151	150
SLL/ SLR	4000K Lumens	4,289	8,380	12,502	16,520	20,469	24,494	28,967	32,823	36,613	40,537
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	126	127	130	128	126	127	128	128	126	126
RW	4000K Lumens	4,987	9,746	14,543	19,215	23,808	28,491	33,695	38,178	42,587	47,151
	BUG Rating	B2-U0-G1	B3-U0-G1	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
	Lumens per Watt	147	148	151	149	147	148	149	149	147	146
AFL	4000K Lumens	5,007	9,782	14,597	19,285	23,896	28,594	33,817	38,317	42,742	47,322
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3
	Lumens per Watt	147	148	152	149	148	148	150	149	147	147

*** Nominal data for 70 CRI. ** For additional performance data, please reference the Galleon Supplemental Performance Guide.**

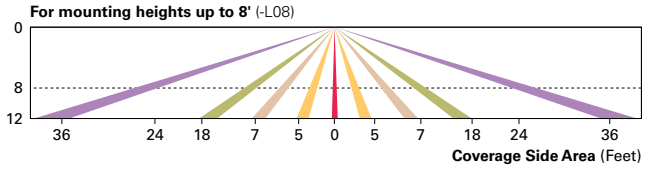
Control Options

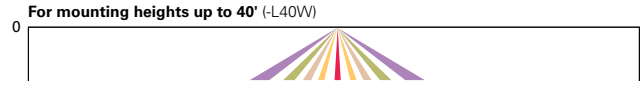
0-10V (DIM)
This fixture is offered standard with 0-10V dimming driver(s). The DIM option provides 0-10V dimming wire leads for use with a lighting control panel or other control method.

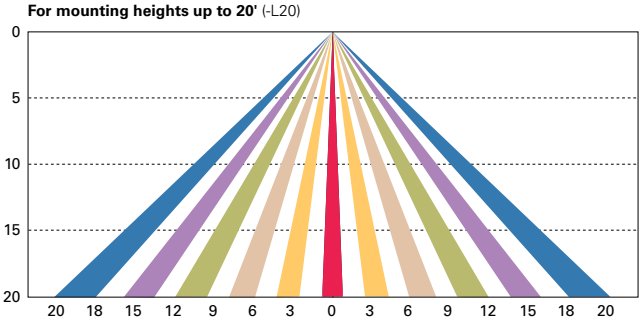
Photocontrol (BPC, PR and PR7)
Optional button-type photocontrol (BPC) and photocontrol receptacles (PR and PR7) provide a flexible solution to enable "dusk-to-dawn" lighting by sensing light levels. Advanced control systems compatible with NEMA 7-pin standards can be utilized with the PR7 receptacle.

After Hours Dim (AHD)
This feature allows photocontrol-enabled luminaires to achieve additional energy savings by dimming during scheduled portions of the night. The dimming profile will automatically take effect after a "dusk-to-dawn" period has been calculated from the photocontrol input. Specify the desired dimming profile for a simple, factory-shipped dimming solution requiring no external control wiring. Reference the After Hours Dim supplemental guide for additional information.

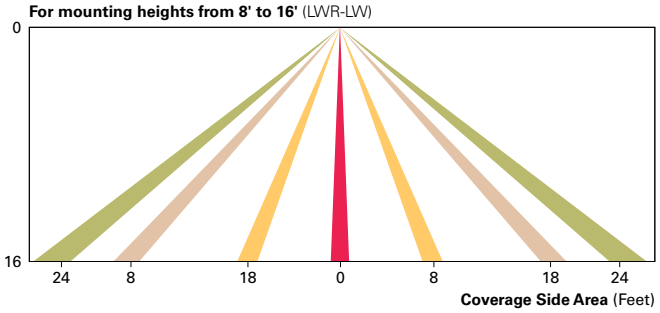
Dimming Occupancy Sensor (SPB, MS/DIM-LXX, MS/X-LXX and MS-LXX)
These sensors are factory installed in the luminaire housing. When the SPB or MS/DIM sensor options are selected, the occupancy sensor is connected to a dimming driver and the entire luminaire dims when there is no activity detected. When activity is detected, the luminaire returns to full light output. The MS/DIM sensor is factory preset to dim down to approximately 50 percent power with a time delay of five minutes. The MS-LXX sensor is factory preset to turn the luminaire off after five minutes of no activity. The MS/X-LXX is also preset for five minutes and only controls the specified number of light engines to maintain steady output from the remaining light engines. SPB motion sensors require the Sensor Configuration mobile application by Wattstopper to change factory default dimming level, time delay, sensitivity and other parameters. Available for iOS and Android devices. The SPB sensor is factory preset to dim down to approximately 10% power with a time delay of five minutes. The MS/DIM occupancy sensors require the FSIR-100 programming tool to adjust factory defaults.

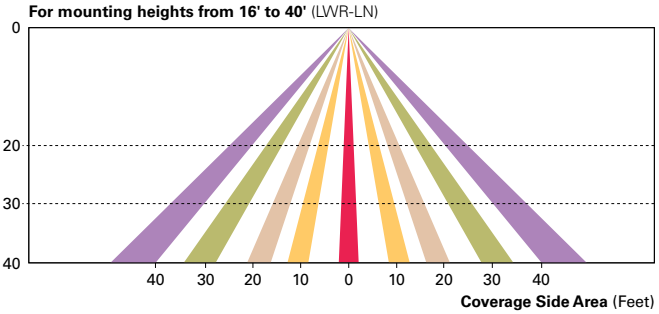






Enlighted Wireless Control and Monitoring System (LWR-LW and LWR-LN)
Enlighted is a connected lighting solution that combines a broad selection of energy-efficient LED luminaires with a powerful integrated wireless sensor system. The sensor controls the lighting system in compliance with the latest energy codes and collects valuable data about building performance and use. Software applications turn the granular data into information through energy dashboards and specialized apps that make it simple and help optimize the use of building resources, beyond lighting.





WaveLinx Wireless Outdoor Lighting Control Module (WOLC-7P-10A)
The 7-pin wireless outdoor lighting control module enables WaveLinx to control outdoor area, site and flood lighting. WaveLinx controls outdoor lighting using schedules to provide ON, OFF and dimming controls based on astronomic or time schedules based on a 7 day week.

LumenSafe Integrated Network Security Camera (LD)
Cooper Lighting Solutions brings ease of camera deployment to a whole new level. No additional wiring is needed beyond providing line power to the luminaire. A variety of networking options allows security integrators to design the optimal solution for active surveillance. As the ideal solution to meet the needs for active surveillance, the LumenSafe integrated network camera is a streamlined, outdoor-ready fixed dome that provides HDTV 1080p video. This IP camera is optimally designed for deployment in the video management system or security software platform of choice.

Synapse (DIM10)
SimplySNAP integrated wireless controls system by Synapse. Includes factory installed DIM10 Synapse control module and MS/DC motion sensor; requires additional Synapse system components for operation. Contact Synapse at www.synapsewireless.com for product support, warranty and terms and conditions.

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Specifications and dimensions
subject to change without notice.

Steel Poles

SSS SQUARE STRAIGHT STEEL

Catalog #		**Type**	
Project			
Comments		**Date**	
Prepared by			

FEATURES
- ASTM Grade steel base plate with ASTM A366 base cover
- Hand hole assembly 3" x 5" on 5" and 6" pole; and 2" x 4" on 4" pole
- 10'-39' mounting heights
- Drilled or tenon (specify)

DESIGN CONSIDERATIONS - VIBRATIONS AND NON-GROUND MOUNTED INSTALLATIONS

The information contained herein is for general guidance only and is not a replacement for professional judgment. Design considerations for wind-induced vibrations and non-ground mounted installations (e.g., installations on bridges or buildings) are not included in this document. Consult with a professional, and local and federal standards, before ordering to ensure product is appropriate for the intended purpose and installation location. Refer to the Cooper Lighting Solutions Light Pole White Paper for risk factors and design considerations. Learn more.

NOTE: The Limited Warranty for this product specifically excludes fatigue failure or similar damage resulting from vibration, harmonic oscillation or resonance.

Specifications and dimensions subject to change without notice. Consult your lighting representative at Cooper Lighting Solutinos or visit www.cooperlighting.com for available options, accessories and ordering information.

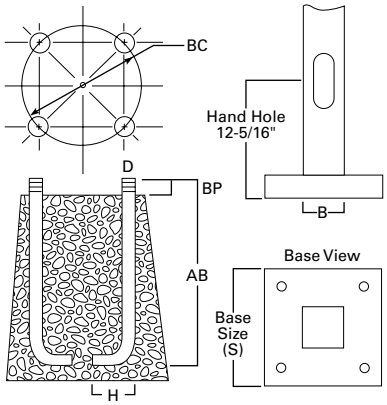
ORDERING INFORMATION

SAMPLE NUMBER: SSA5A20SFM1XG

Product Family	Shaft Size (Inches)[1]	Wall Thickness (Inches)	Mounting Height (Feet)	Base Type	Finish	Mounting Type	Number and Location of Arms	Arm Lengths (Feet)	Options (Add as Suffix)
SSS=Square Straight Steel	**4**=4" **5**=5" **6**=6"	**A**=0.120" **M**=0.188" **X**=0.250"	**10**=10' **15**=15' **20**=20' **25**=25' **30**=30' **35**=35' **39**=39'	**S**=Square Steel Base	**F**=Dark Bronze **G**=Galvanized Steel **J**=Summit White **K**=Carbon Bronze **L**=Dark Platinum **R**=Hartford Green **S**=Silver **T**=Graphite Metallic **V**=Grey **W**=White **X**=Custom Color **Y**=Black	**2**=2-3/8" O.D. Tenon (4" Long) **3**=3-1/2" O.D. Tenon (5" Long) **4**=4" O.D. Tenon (6" Long) **9**=3" O.D. Tenon (4" Long) **6**=2-3/8" O.D. Tenon (6" Long) **7**=4" O.D. Tenon (10" Long) **A**=Type A Drilling **C**=Type C Drilling **E**=Type E Drilling **F**=Type F Drilling **G**=Type G Drilling **J**=Type J Drilling **K**=Type K Drilling **M**=Type M Drilling **N**=Type N Drilling **R**=Type R Drilling **S**=Standard Upsweep Arm[6] **Z**=Type Z Drilling	**1**=Single **2**=2 at 180° **3**=Triple[2] **4**=4 at 90° **5**=2 at 90° **X**=None	**X**=None **2**=2' **3**=2.5' **4**=4' **6**=6' **8**=8'	**A**=1/2" Tapped Hub[3] **B**=3/4" Tapped Hub[3] **C**=Convenience Outlet[4] **E**=GFCI Convenience Outlet[4] **G**=Ground Lug **H**=Additional Hand Hole[5] **V**=Vibration Dampener

NOTES: 1. All shaft sizes nominal. **2.** Square poles are 3 at 90°, round poles are 3 at 120°. **3.** Tapped Hub is located 5' below the pole top and on the same side of pole as hand hole, unless specified otherwise. **4.** Outlet is located 4' above base and on same side of pole as hand hole, unless specified otherwise. Receptacle not included, provision only. **5.** Additional hand hole is located 12" below pole top and 90° from standard hand hole location, unless otherwise specified. **6.** Arm must be ordered separately.

ANCHORAGE DATA



See technical information.

Pole	Template Number	Bolt Number	Bolt Circle (inches)	Number of Bolts	Bolt Size (inches)
SSS4	TMP1	AB1	8.5 - 11.0	4	3/4 x 25 x 3
SSS5	TMP1	AB1	11.0	4	3/4 x 25 x 3
SSS6	TMP2	AB3	12.5	4	1 x 36 x 4

EFFECTIVE PROJECTED AREA (At Pole Top)

Mounting Height (Feet)	Catalog Number [1, 2]	Wall Thickness (Inches)	Base Square [3] (Inches)	Bolt Circle Diameter (Inches)	Anchor Bolt Projection [3] (Inches)	Shaft Size [3] (Inches)	Anchor Bolt Diameter x Length x Hook (Inches)	Net Weight (Pounds)	Maximum Effective Projected Area (Square Feet) [4]				Max. Fixture Load - Includes Bracket (Pounds)
MH			**S**	**BC**	**BP**	**B**	**D x AB x H**		**80 mph**	**90 mph**	**100 mph**	**110 mph**	
10	SSS4A10S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	85	30.0	22.0	17.0	13.0	100
15	SSS4A15S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	118	15.0	11.5	8.7	6.5	100
20	SSS4A20S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	150	8.7	5.9	3.9	2.5	150
20	SSS5A20S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	183	15.4	11.1	7.9	5.5	150
25	SSS4A25S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	181	3.7	1.7	0.3	--	200
25	SSS5A25S	0.120	10-1/2	11	5	5	3/4 x 25 x 3	222	9.3	6.0	3.5	1.6	200
25	SSS6A25S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	284	9.9	6.1	3.5	1.2	200
30	SSS5A30S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	260	4.7	2.1	--	--	200
30	SSS5M30S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	392	10.4	6.4	3.5	1.5	200
30	SSS6A30S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	330	4.3	1.4	--	--	200
30	SSS6M30S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	489	19.0	13.0	8.7	5.6	200
35	SSS5M35S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	453	5.8	2.8	--	--	200
35	SSS6M35S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	564	12.8	7.2	3.7	1.0	200
35	SSS6X35S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	738	16.5	11.0	6.8	3.5	200
39	SSS6M39S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	618	7.3	3.0	--	--	300
39	SSS6X39S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	816	13.0	7.0	3.7	0.8	300

EFFECTIVE PROJECTED AREA (Two Feet Above Pole Top)

Mounting Height (Feet)	Catalog Number [1, 2]	Wall Thickness (Inches)	Base Square [3] (Inches)	Bolt Circle Diameter (Inches)	Anchor Bolt Projection [3] (Inches)	Shaft Size [3] (Inches)	Anchor Bolt Diameter x Length x Hook (Inches)	Net Weight (Pounds)	Maximum Effective Projected Area (Square Feet) [4]				Max. Fixture Load - Includes Bracket (Pounds)
MH			**S**	**BC**	**BP**	**B**	**D x AB x H**		**80 mph**	**90 mph**	**100 mph**	**110 mph**	
10	SSS4A10S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	85	23.0	17.5	14.0	11.0	100
15	SSS4A15S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	118	13.4	10.0	7.5	5.7	100
20	SSS4A20S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	150	7.6	5.2	3.4	2.1	150
20	SSS5A20S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	183	13.8	9.9	7.1	4.9	150
25	SSS4A25S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	181	3.4	1.6	0.3	--	200
25	SSS5A25S	0.120	10-1/2	11	5	5	3/4 x 25 x 3	222	8.5	5.5	3.2	1.5	200
25	SSS6A25S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	284	9.1	5.6	3.0	1.2	200
30	SSS5A30S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	260	1.8	--	--	--	200
30	SSS5M30S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	392	9.6	5.9	1.9	0.2	200
30	SSS6A30S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	330	4.1	1.3	--	--	200
30	SSS6M30S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	489	18.5	12.5	8.4	5.3	200
35	SSS5M35S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	453	5.5	2.4	--	--	200
35	SSS6M35S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	564	11.8	7.0	3.5	1.0	200
35	SSS6X35S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	738	16.0	10.5	6.4	3.4	200
39	SSS6M39S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	618	7.0	2.4	--	--	300
39	SSS6X39S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	816	12.0	6.7	3.0	0.5	300

NOTES:

1. Catalog number includes pole with hardware kit. Anchor bolts not included. Before installing, make sure proper anchor bolts and templates are obtained.
2. Tenon size or machining for rectangular arms must be specified. Hand hole position relative to drill location.
3. Shaft size, base square, anchor bolts and projections may vary slightly. All dimensions nominal.
4. EPAs based on shaft properties with wind normal to flat. EPAs calculated using base wind velocity as indicated plus 30% gust factor.

VIBRATION

Vibrations may cause damage to structures, including poles. Vibrations are unpredictable, and there are many factors and variables that can cause damaging vibrations. Many wind conditions exist that can create damaging vibrations to poles and luminaires, such as constant winds between 10-30 mph. Although all pole types can experience vibration, straight square poles seem to be most prone. Vibration dampers and/or a round tapered design may be used to mitigate damage from vibrations, but there is no guarantee damaging vibrations will be prevented. Vibration dampers are not included with this pole but can be ordered separately. Consult with a professional, and local and federal standards, to ensure this pole is appropriate for the intended purpose and installation location. Refer to Cooper Lighting Solutions' Light Pole White Paper for risk factors and design considerations.

MAINTENANCE

Perform inspections periodically. A prudent inspection schedule would be: one week after installation, one month after installation, yearly after installation, and following any major wind event. During the inspection, check the poles for cracks. If cracks are detected, remedial action is required. Recheck anchor bolt torques and re-tighten according to the recommended torque values. Check for missing covers and pole caps and replace as necessary. Check the pole for corrosion and deterioration of the finish. Should there be corrosion or deterioration, take remedial action to correct.

WARNING: Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to pole white paper WP513001EN for additional support information. Before installing, make sure proper anchor bolts and templates are obtained. The use of unauthorized accessories such as banners, signs, cameras or pennants for which the pole was not designed voids the pole warranty and may result in pole failure causing serious injury or property damage. Information regarding total loading capacity can be supplied upon request. The pole warranty is void unless poles are used and installed as a complete pole and luminaire combination. This warranty specifically excludes failure as the result of a third party act or omission, misuse, unanticipated uses, fatigue failure or similar phenomena resulting from induced vibration, harmonic oscillation or resonance associated with movement of air currents around the product.

Specifications and dimensions subject to change without notice. Consult your lighting representative at Cooper Lighting Solutions or visit www.cooperlighting.com for available options, accessories and ordering information.

HUBBELL Outdoor Lighting

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

RATIO Wall

RWL1/RWL2 LED WALLPACK

FEATURES

- Low profile LED wall luminaire with a variety of IES distributions for lighting applications such as retail, commercial and industrial building mount
- Featuring Micro Strike Optics which maximizes target zone illumination with minimal losses at the house-side, reducing light trespass issues
- Visual comfort standard
- Control options including photo control, occupancy sensing, NX Distributed Intelligence™, Wiscape and 7-Pin with networked controls
- Battery Backup options available for emergency code compliance
- Quick-mount adapter allows easy installation/maintenance
- 347V and 480V versions for industrial applications and Canada
- Stock versions available in 3500lm and 5500lm configurations at 4000K

C US

BUY AMERICAN SOLUTIONS See Certification Specifications

DLC QPL LISTED

DLC QPL LISTED PREMIUM

RELATED PRODUCTS

Ratio Family | Ratio Area | Ratio Flood

CONTROL TECHNOLOGY

SiteSync LIGHTING CONTROL | NX DISTRIBUTED INTELLIGENCE™ | wiSCAPE™

SPECIFICATIONS

CONSTRUCTION

- Die-cast housing with hidden vertical heat fins that are optimal for heat dissipation while keeping a clean smooth outer surface
- Corrosion resistant, die-cast aluminum housing with powder coat paint finish
- Powder paint finish provides durability in outdoor environments. Tested to meet 1000 hour salt spray rating.

OPTICS

- Entire optical aperture illuminates to create a larger luminous surface area resulting in a low glare appearance without sacrificing optical performance
- 48 or 160 midpower LEDs
- 3000K, 4000K or 5000K (70 CRI/80 CRI) CCT
- Zero uplight distributions
- LED optics provide IES type II, III and IV distributions. Type II only available in RWL2 configurations.

INSTALLATION

- Quick-mount adapter provides easy installation to wall or to recessed junction boxes (4" square junction box)
- Designed for direct j-box mount.
- Integral back box contains 1/2" conduit hubs
- Integral back box standard with Dual Driver, Dual Power Feed, NX, Wiscape and battery versions (battery versions for RWL1 only)

ELECTRICAL

- 120V-277V universal voltage 50/60Hz 0-10V dimming drivers
- 347V and 480V dimmable driver option for all wattages above 35W.

ELECTRICAL (CONTINUED)

- Ambient operating temperature -40˚C to 40˚C
- Drivers have greater than .90 power factor and less than 20% Total Harmonic Distortion
- Driver RoHS and IP66
- Field replaceable surge protection device provides 20kA protection meeting ANSI/IEEE C62.41.2 Category C High and Surge Location Category C3; Automatically takes fixture off-line for protection when device is compromised
- Dimming drivers are standard and dimming leads are extended out of the luminaire unless control options require connection to the dimming leads. Must specify if wiring leads are to be greater than 6" standard.

CONTROLS

- Photo control, occupancy sensor and wireless available for complete on/off and dimming control
- Button photocontrol is suitable for 120-277V operation
- 7-pin ANSI C136.41-2013 photocontrol receptacle option available for twist lock photocontrols or wireless control modules (control accessories sold separately)
- NX Distributed Intelligence™ available with in fixture wireless control module, features dimming and occupancy sensor wiSCAPE® available with in fixture wireless control module, features dimming and occupancy sensor
- Integral Battery Backup provides emergency lighting for the required 90 minute path of egress
- Battery Backup suitable for operating temperatures -25˚C to 40˚C

CONTROLS (CONTINUED)

- Dual Driver and Dual Power Feed options creates product configuration with 2 internal drivers for code compliance
- Please consult brand or sales representative when combining control and electrical options as some combinations may not operate as anticipated depending on your application.

CERTIFICATIONS

- Listed to UL1598 and CSAC22.2#250.0-24 for wet locations
- IP65 rated housing
- This product qualifies as a "designated country construction material" per FAR 52.225-11 Buy American-Construction Materials under Trade Agreements effective 04/23/2020. See Buy American Solutions
- DLC® (DesignLights Consortium Qualified), with some Premium Qualified configurations. Please refer to the DLC website for specific product qualifications at www.designlights.org

WARRANTY

- 5 year limited warranty
- See HLI Standard Warranty for additional information

KEY DATA	
Lumen Range	1,300–18,800
Wattage Range	10–155
Efficacy Range (LPW)	119–148
Fixture Projected Life (Hours)	L70>60K
Weights lbs. (kg)	6.5/16.5 (2.9/7.5)

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HUBBELL Lighting

HUBBELL Outdoor Lighting

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

RATIO WALL

RWL1/RWL2 LED WALLPACK

ORDERING GUIDE

Example: RWL1–48L-10–3K7–2–UNV–BLS–E

CATALOG #

ORDERING INFORMATION

Series		# LEDs - Wattage		CCT/CRI		Distribution		Voltage		Color	
RWL1	Ratio Wall 1	**48L-10**	1,000 Lumens[4]	**3K7**	3000K, 70 CRI	**2**	IES TYPE II[1]	**UNV**	120-277V	**BLT**	Black Matte Textured
		48L-15	2,000 Lumens[4]	**4K7**	4000K, 70 CRI	**3**	IES TYPE III	**120**	120V	**BLS**	Black Gloss Smooth
		48L-20	2,500 Lumens[4]	**5K7**	5000K, 70 CRI	**4W**	IES TYPE IV	**208**	208V	**DBT**	Dark Bronze Matte Textured
		48L-25	3,500 Lumens[4]					**240**	240V	**DBS**	Dark Bronze Gloss Smooth
		48L-35	4,500 Lumens					**277**	277V	**GTT**	Graphite Matte Textured
		48L-45	5,500 Lumens					**347**	347V	**LGS**	Light Grey Gloss Smooth
RWL2	Ratio Wall 2	**160L-45**	6,500 Lumens					**480**	480V	**LGT**	Light Grey Matte Textured
		160L-50	7,500 Lumens							**PSS**	Platinum Silver Smooth
		160L-65	9,500 Lumens							**WHT**	White Matte Textured
		160L-80	11,000 Lumens							**WHS**	White Gloss Smooth
		160L-95	13,000 Lumens							**VGT**	Verde Green Textured
		160L-115	15,000 Lumens							**Color Option**	
		160L-135	17,500 Lumens							**CC**	Custom Color
		160L-155	19,500 Lumens								

Control Options Network	
NXWE	NX Wireless Enabled (module + radio)[4,7]
NXSPW_F	NX Wireless, PIR Occ. Sensor, Daylight Harvesting[4,5,7]
NXSP_F	NX, PIR Occ. Sensor, Daylight Harvesting[4,5,7]
WIR	Wireless Controls, wiSCAPE™[2,6]
Stand Alone Sensors	
SCP-8F	Remote control programmable line voltage sensor[3,4]
SCP-20F	Remote control programmable line voltage sensor[3,4]
Control Options	
7PR_	7-Pin Receptacle[6]

Options	
F	Fusing[3]
E	Emergency Battery Backup[7,8,9]
EH	Emergency Battery w/ Heater Option[7,8]
2DR	Dual Driver[4,6]
2PF	Dual Power Feed[4,6]
PC	Button Photocontrol[8]

Notes:
1. Only available with RWL2
2. wiSCAPE Gateway required for system programming
3. Specific voltage selection is required
4. Not available with 347/480V
5. Replace "_" with "14" for up to 14' mounting height, "40" for up to 40' mounting height
6. This item is located in the integral backbox which will be automatically added onto the fixture if chosen.
7. This item is located in the integral backbox for RWL1 configurations only.
8. Option only available at 120 or 277V

STOCK ORDERING INFORMATION

	Catalog Number	Lumens	Wattage	LED Count	CCT/CRI	Voltage	Distribution	Finish
☐	**RWL1-48L-25-4K-3**	3500lm	25	48L	4000K/70CRI	120-277V	Type III	Dark Bronze Textured
☐	**RWL1-48L-25-4K-4W**	3500lm	25	48L	4000K/70CRI	120-277V	Type IV Wide	Dark Bronze Textured
☐	**RWL1-48L-45-4K-3**	5500lm	45	48L	4000K/70CRI	120-277V	Type III	Dark Bronze Textured
☐	**RWL1-48L-45-4K-4W**	5500lm	45	48L	4000K/70CRI	120-277V	Type IV Wide	Dark Bronze Textured

CONTROLS

Control Options	
Standalone	
SCPREMOTE	Order at least one per project location to program and control

ACCESSORIES AND REPLACEMENT PARTS - MADE TO ORDER

	Catalog Number	Description
☐	**WP-BB-XXX**	Accessory for conduit entry[1]

Notes:
1. replace "xxx" with color option

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HUBBELL Lighting

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

RATIO WALL

RWL1/RWL2 LED WALLPACK

PERFORMANCE DATA

Description	Nominal Wattage	System Watts	Dist. Type	5K (5000K NOMINAL 70 CRI)					4K (4000K NOMINAL 70 CRI)					3K (3000K NOMINAL 70 CRI)				
				Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G
RWL1	10	10.1	3	1362	135	0	0	1	1355	134	0	0	1	1303	129	0	0	1
			4W	1343	133	0	0	1	1336	132	0	0	1	1285	127	0	0	1
	15	14.5	3	1972	136	1	0	1	1962	135	1	0	1	1887	130	1	0	1
			4W	1945	134	0	0	1	1935	133	0	0	1	1861	128	0	0	1
	20	19.9	3	2722	137	1	0	1	2709	136	1	0	1	2605	131	1	0	1
			4W	2685	135	1	0	1	2672	134	1	0	1	2569	129	1	0	1
	25	28.0	3	3749	134	1	0	1	3732	133	1	0	1	3588	128	1	0	1
			4W	3698	132	1	0	1	3680	131	1	0	1	3538	126	1	0	1
	35	36.9	3	4751	129	1	0	2	4728	128	1	0	2	4546	123	1	0	1
			4W	4685	127	1	0	2	4663	126	1	0	2	4483	121	1	0	2
	45	46.5	3	5812	125	1	0	2	5784	124	1	0	2	5562	120	1	0	2
			4W	5731	123	1	0	2	5704	123	1	0	2	5485	118	1	0	2
RWL2	45	46.1	2	6701	145	1	0	2	6668	145	1	0	2	6412	139	1	0	2
			3	6812	148	1	0	2	6780	147	1	0	2	6519	141	1	0	2
			4W	6678	145	1	0	2	6646	144	1	0	2	6390	139	1	0	2
	50	54.0	2	7747	143	1	0	2	7710	143	1	0	2	7413	137	1	0	2
			3	7876	146	1	0	2	7838	145	1	0	2	7537	140	1	0	2
			4W	7720	143	1	0	2	7683	142	1	0	2	7388	137	1	0	2
	65	67.2	2	9539	142	1	0	2	9494	141	1	0	2	9129	136	1	0	2
			3	9699	144	2	0	2	9652	144	2	0	2	9281	138	2	0	2
			4W	9507	141	2	0	2	9461	141	2	0	2	9097	135	2	0	2
	80	80.8	2	11228	139	2	0	2	11174	138	2	0	2	10745	133	2	0	2
			3	11416	141	2	0	2	11361	141	2	0	2	10924	135	2	0	2
			4W	11190	138	2	0	2	11136	138	2	0	2	10708	133	2	0	2
	95	93.2	2	13148	141	2	0	2	13085	140	2	0	2	12582	135	2	0	2
			3	13368	143	2	0	2	13304	143	2	0	2	12792	137	2	0	2
			4W	13103	141	2	0	2	13040	140	2	0	2	12539	135	2	0	2
	115	109.8	2	15102	138	2	0	3	15030	137	2	0	3	14452	132	2	0	3
			3	15354	140	2	0	3	15281	139	2	0	3	14693	134	2	0	3
			4W	15050	137	2	0	3	14978	136	2	0	3	14402	131	2	0	3
	135	137.1	2	17533	128	2	0	3	17449	127	2	0	3	16778	122	2	0	3
			3	17826	130	2	0	3	17740	129	2	0	3	17058	124	2	0	3
			4W	17473	127	2	0	3	17389	127	2	0	3	16720	122	2	0	3
	155	156.8	2	19495	124	2	0	3	19402	124	2	0	3	18656	119	2	0	3
			3	19821	126	2	0	3	19726	126	2	0	3	18967	121	2	0	3
			4W	19542	125	2	0	3	19448	124	2	0	3	18700	119	2	0	3

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HUBBELL Outdoor Lighting

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

RATIO WALL

RWL1/RWL2 LED WALLPACK

LUMINAIRE AMBIENT TEMPERATURE FACTOR (LATF)

Ambient Temperature		Lumen Multiplier
0°C	32°F	1.03
10°C	50°F	1.01
20°C	68°F	1.00
25°C	77°F	1.00
30°C	86°F	0.99
40°C	104°F	0.98
50°C	122°F	0.97

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

PROJECTED LUMEN MAINTENANCE

Ambient Temperature	OPERATING HOURS					
	0	25,000	TM-21-11 L90 36,000	50,000	100,000	L70 (Hours)
25°C / 77°F	1.00	0.97	0.96	0.95	0.91	408,000
40°C / 104°F	0.99	0.96	0.95	0.94	0.89	356,000

ELECTRICAL DATA

# OF LEDS	Nominal Wattage	Input Voltage	Oper. Current (Amps)	System Power (Watts)
RWL1	10	120	0.08	10.1
		208	0.05	
		240	0.04	
		277	0.04	
		347	0.03	
		480	0.02	
	15	120	0.12	14.5
		208	0.07	
		240	0.06	
		277	0.05	
		347	0.04	
		480	0.03	
	20	120	0.17	19.9
		208	0.10	
		240	0.08	
		277	0.07	
		347	0.06	
		480	0.04	
	25	120	0.23	28.0
		208	0.13	
		240	0.12	
		277	0.10	
		347	0.08	
		480	0.06	
	35	120	0.31	36.9
		208	0.18	
		240	0.15	
		277	0.13	
		347	0.11	
		480	0.08	
	45	120	0.39	46.5
		208	0.22	
		240	0.19	
		277	0.17	
		347	0.13	
		480	0.10	

# OF LEDS	Nominal Wattage	Input Voltage	Oper. Current (Amps)	System Power (Watts)
RWL2	45	120	0.38	46.1
		208	0.22	
		240	0.19	
		277	0.17	
		347	0.13	
		480	0.10	
	50	120	0.45	54.0
		208	0.26	
		240	0.23	
		277	0.19	
		347	0.16	
		480	0.11	
	65	120	0.56	67.2
		208	0.32	
		240	0.28	
		277	0.24	
		347	0.19	
		480	0.14	
	80	120	0.67	80.8
		208	0.39	
		240	0.34	
		277	0.29	
		347	0.23	
		480	0.17	
	95	120	0.78	93.2
		208	0.45	
		240	0.39	
		277	0.34	
		347	0.27	
		480	0.19	
	115	120	0.92	109.8
		208	0.53	
		240	0.46	
		277	0.40	
		347	0.32	
		480	0.23	
	135	120	1.14	137.1
		208	0.66	
		240	0.57	
		277	0.49	
		347	0.40	
		480	0.29	
	155	120	1.31	156.8
		208	0.75	
		240	0.65	
		277	0.57	
		347	0.45	
		480	0.33	

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HUBBELL Outdoor Lighting

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

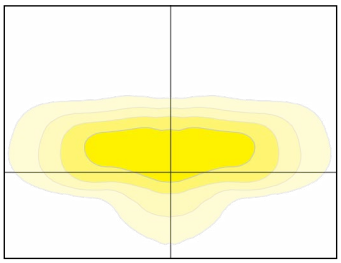
RATIO WALL

RWL1/RWL2 LED WALLPACK

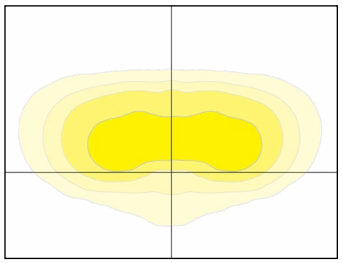
PHOTOMETRY

MountingHeight:30ft

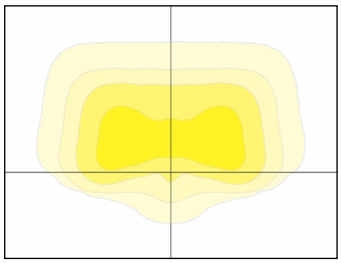
Type II



Type III

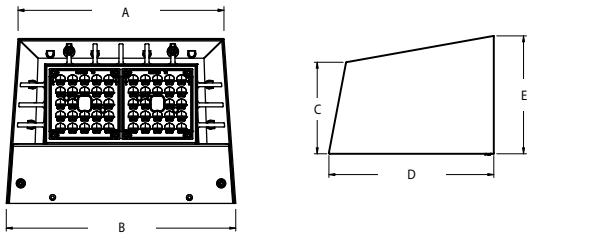


Type VI



DIMENSIONS

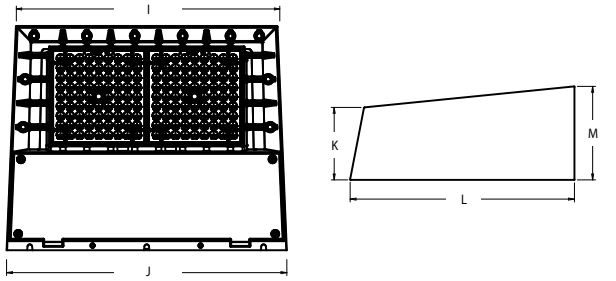
RWL1



A	B	C	D	E
8.7"	9.7"	3.9"	7.0"	5.0"
221mm	246mm	99mm	178mm	127mm

Weight
6.5 lbs (2.95 kgs)

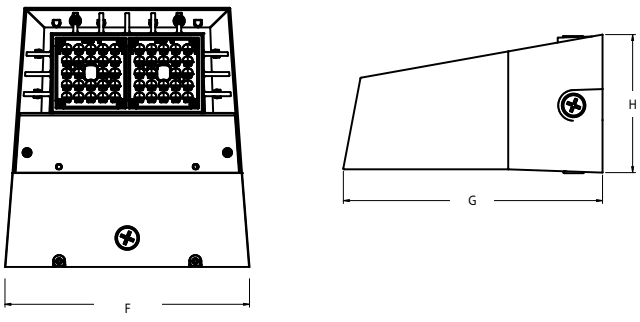
RWL2



I	J	K	L	M
14.0"	15.0"	3.9"	12.0"	5.0"
356mm	381mm	99mm	305mm	127mm

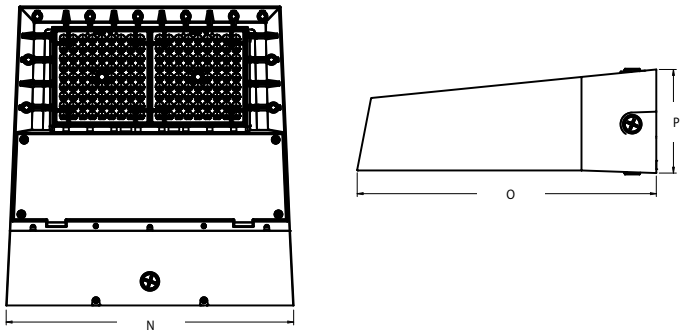
Weight
16.5 lbs (7.48 kgs)

RWL1 with Integral Back Box



F	G	H
10.4"	11.0"	5.9"
264mm	279mm	150mm

RWL2 with Integral Back Box



N	O	P
15.4"	16.0"	5.5"
391mm	406mm	140mm

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DATE: LOCATION:

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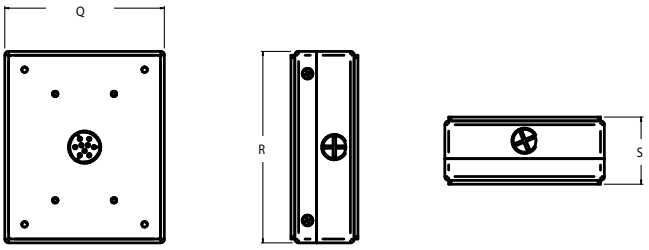
RATIO WALL

RWL1/RWL2 LED WALLPACK

DIMENSIONS (CONTINUED)

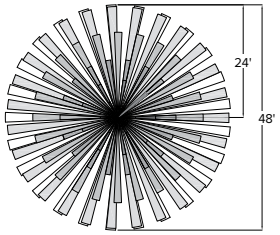
Back Box Accessory

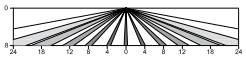


Q	R	S
4.9" 124mm	5.9" 150mm	2.1" 53mm

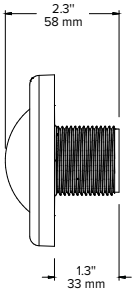
ADDITIONAL INFORMATION

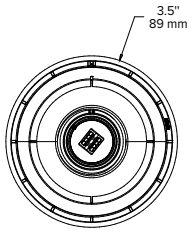
NXSP-14F





Sensor Lens Coverage and Detection Patterns
When Mounted at 8ft with Low Mount Lens





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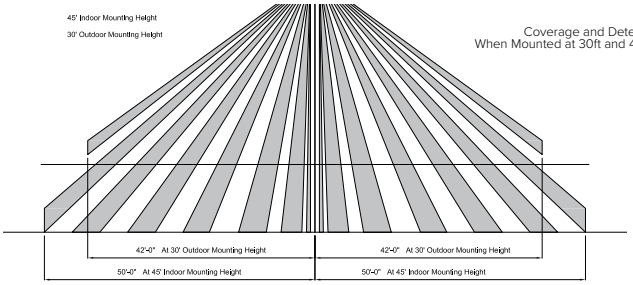
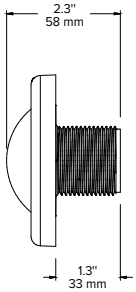
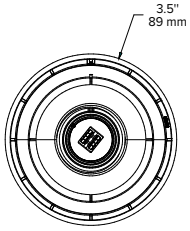


Coverage and Detection Patterns
When Mounted at 30ft and 45ft with Standard Lens





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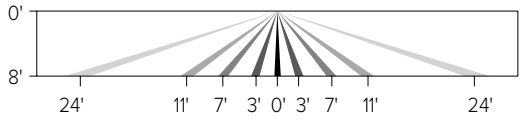
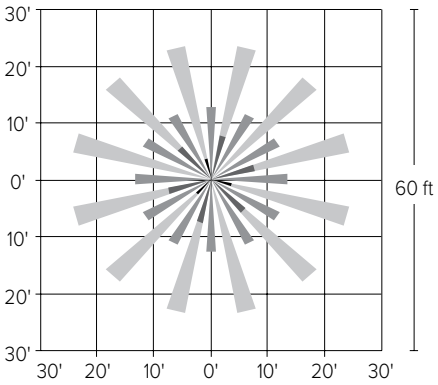
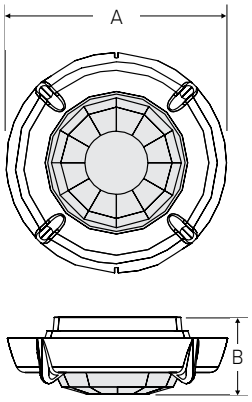
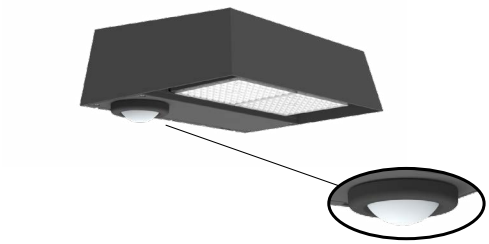






A	B
2.3" (59mm)	.8" (20mm)



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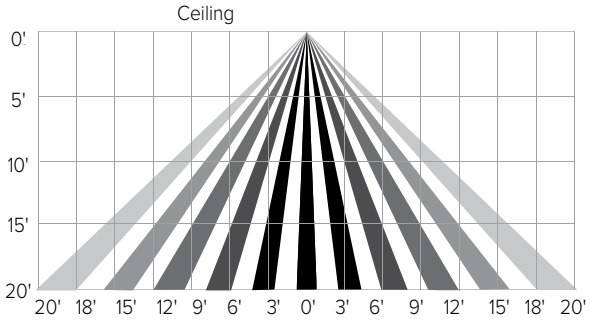
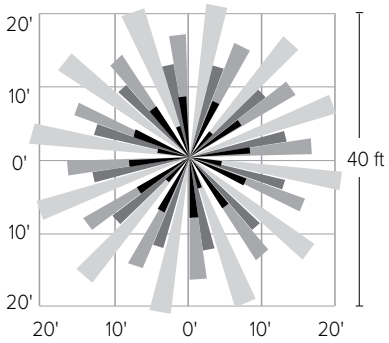
HUBBELL Lighting

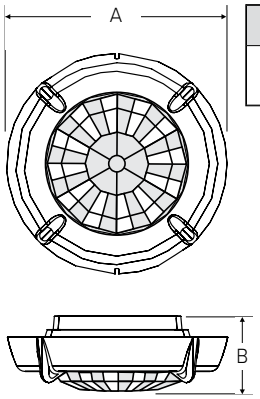
RATIO WALL

RWL1/RWL2 LED WALLPACK

SCP-20F

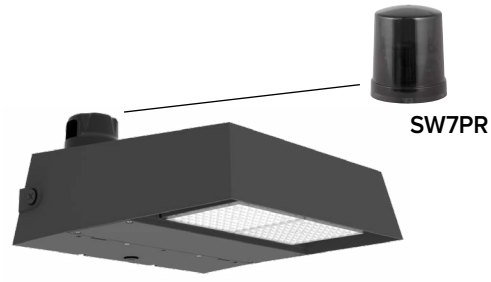






A	B
2.3" (59mm)	.8" (20mm)

SITESYNC 7-PIN MODULE



SW7PR

SiteSync LIGHTING CONTROL

- SiteSync features in a new form
- Available as an accessory for new construction or retrofit applications (with existing 7-Pin receptacle)

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CL Helt Architect Inc.
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Exit View Champion Xpress-CO-Cortez (Canyon)

CHAMPION
XPRESS

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Entrance View Champion Xpress-CO-Cortez (Canyon)

CHAMPION XPRESS

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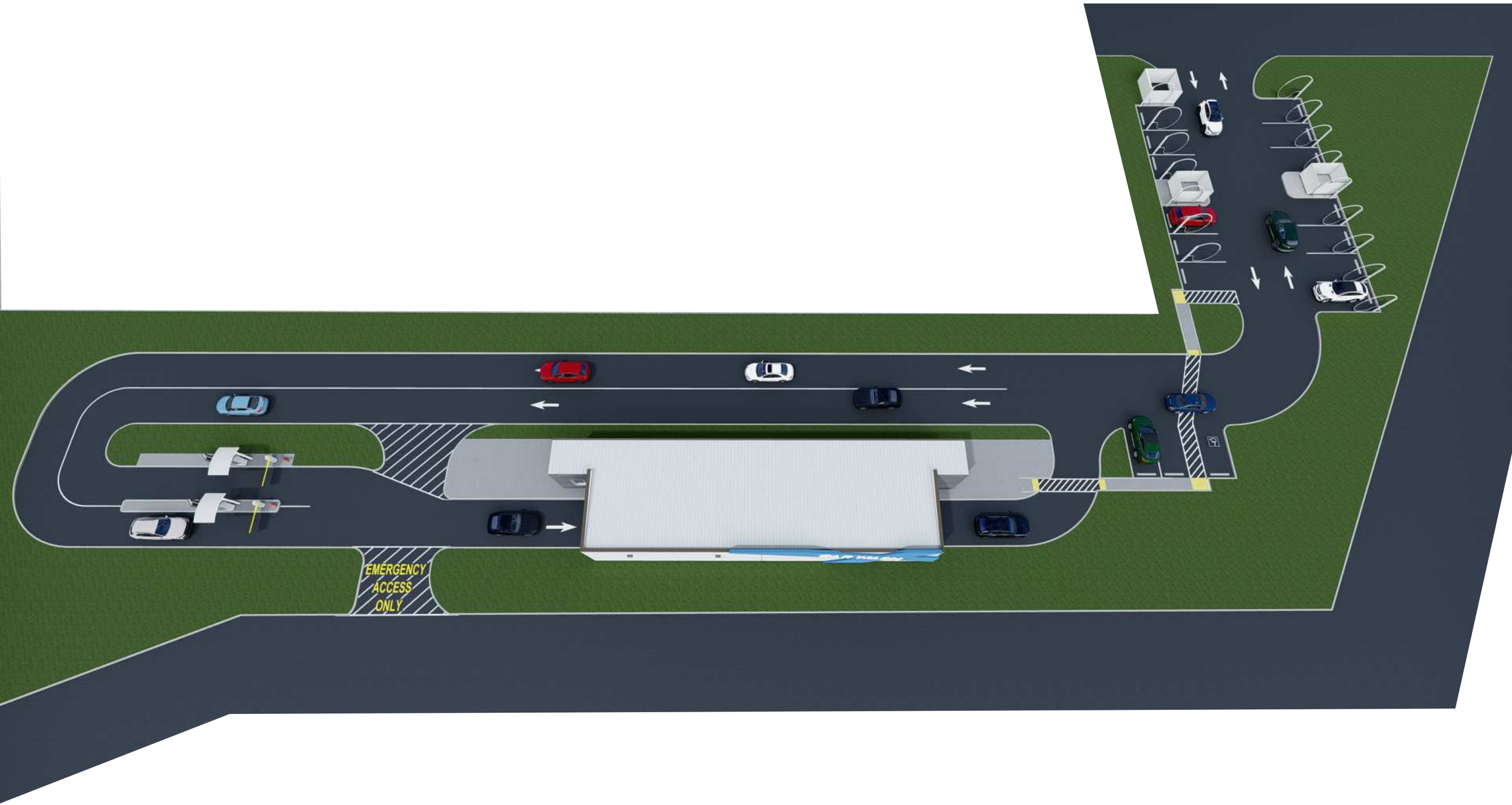
Side View Champion Xpress-CO-Cortez (Canyon)

CHAMPION XPRESS



CL Helt Architect Inc.
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Aerial View Champion Xpress-CO-Cortez (Canyon)

CHAMPION
XPRESS

TRAFFIC IMPACT STUDY

For

Champion Xpress Car Wash
Cortez, Colorado

May 2022

Prepared for:

7B Building & Development
13105 Dover Avenue
Lubbock, Texas 79424

Prepared by:

SM ROCHA, LLC
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22-041638

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I. Introduction

Project Overview

This traffic impact study is provided as a planning document and addresses the capacity, geometric, and control requirements associated with the development entitled Champion Xpress Car Wash.

This proposed service retail development is understood to entail the new construction of an approximate 3,320 square foot, single tunnel, automated car wash with outdoor vacuum bays. The development is located near the southwest corner of S Broadway and Canyon Drive in Cortez, Colorado.

Study Area Boundaries

The study area to be examined in this analysis was coordinated with Stolfus & Associates, Inc., on behalf of CDOT Staff, and encompasses the Canyon Drive intersections with S Broadway and proposed site access.

Figure 1 illustrates location of the site and study intersections.

Site Description

Land for the development is currently vacant and surrounded by a mix of residential, commercial, lodging, and institutional land uses.

The proposed development is understood to entail the new construction of an approximate 3,320 square foot, single tunnel, automated Champion Xpress Car Wash facility with associated outdoor vacuum stalls.

Proposed access to the development is provided via one full-movement access onto Canyon Drive (referred to as Site Access).

For purposes of this study, it is anticipated that development construction would be completed by end of Year 2024.

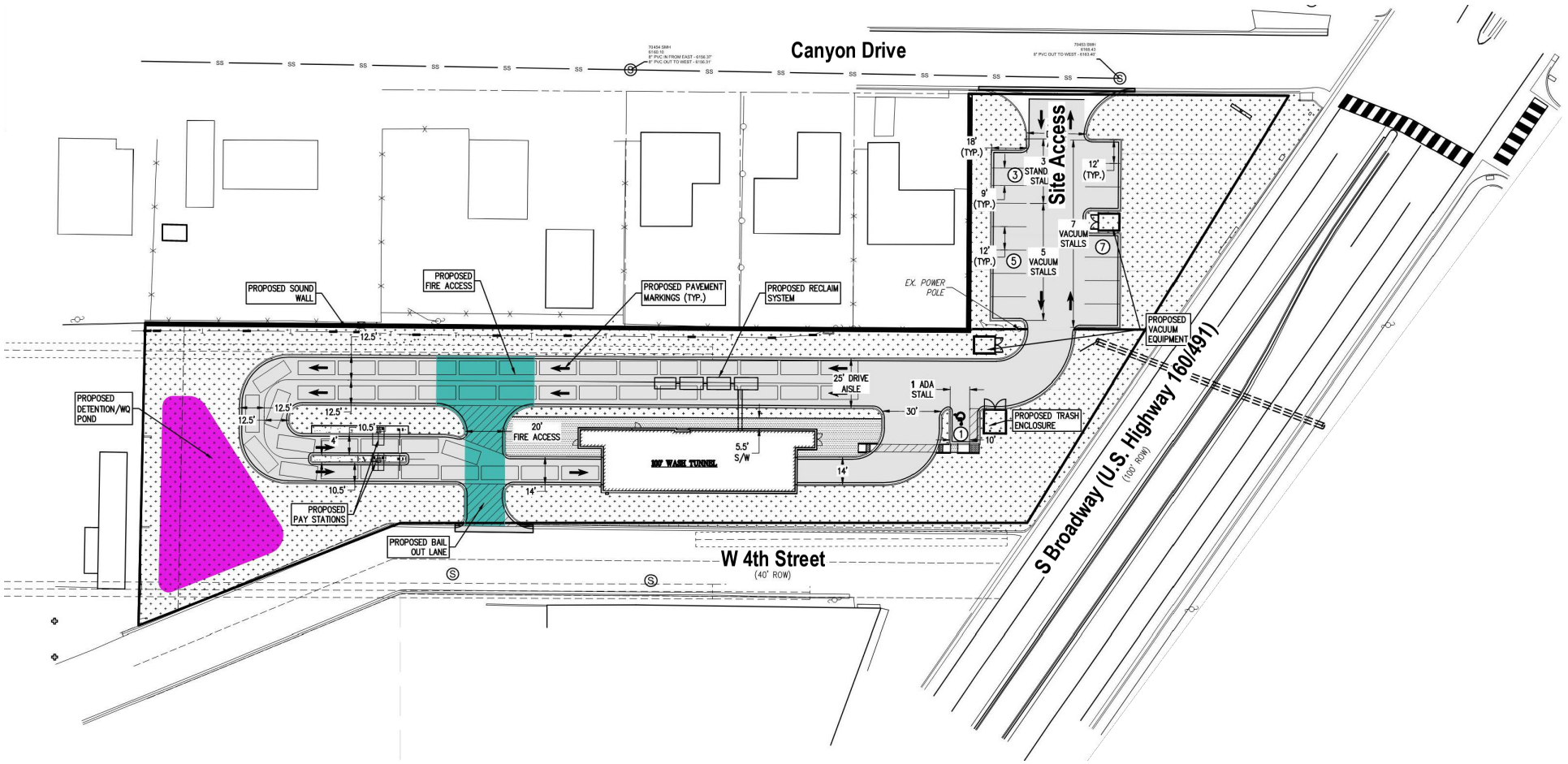
General site and access locations are shown on Figure 1.

A preliminary site plan, as prepared by Baseline Engineering Corporation, is shown on Figure 2. This plan is provided for illustrative purposes only.


North
Not to Scale
W Main Street (U.S. Highway 160)
S Broadway (U.S. Highway 491)
S Maple Street
Development Site
Canyon Drive
W 3rd Street
W 4th Street
S Broadway (U.S. Highway 160/491)
S Oak Street
W 7th Street

North

Not to Scale



Existing and Committed Surface Transportation Network

Within the study area, Canyon Drive is the primary roadway that will accommodate traffic to and from the proposed development. The secondary roadway includes S Broadway. A brief description of both roadways, based on the City of Cortez Master Street Plan[1], is provided below:

> Canyon Drive is an east-west local roadway having two through lanes (one lane in each direction) with shared turn lanes at the intersection within the study area. Canyon Drive provides a posted speed limit of 20 MPH. Canyon Drive ends at S Broadway and continues east as W 3rd Street with a collector roadway classification.
>
> S Broadway is a north-south state and federal roadway (U.S. Highway 160) having four through lanes (two lanes in each direction) with a combination of shared and exclusive turn lanes at the intersection within the study area. The Colorado Department of Transportation (CDOT) categorizes the adjacent segment of S Broadway (U.S. Highway 160) as a Non-Rural Arterial (NR-B) and provides a posted speed limit of 40 MPH.

The study intersection of Canyon Drive and S Broadway is unsignalized and operates under stop-controlled conditions for the eastbound and westbound approaches. A stop-controlled intersection is defined as a roadway intersection where vehicle rights-of-way are controlled by one or more "STOP" signs. S Broadway is a free-flow condition with the exception that there are existing warning signs with supplemental Rapid Repeating Flashing Beacons (RRFB) and pedestrian push buttons serving the marked crosswalk on the south side of the intersection. RRFB provide additional visual warning to the presence of a pedestrian traveling within the marked crosswalk.

No regional or specific improvements for the above-described roadways are known to be planned or committed at this time. The study area roadways appear to be built to their ultimate cross-sections.

[1] City of Cortez Master Street Plan, City of Cortez, August 2021.

II. Existing Traffic Conditions

Afternoon (PM) peak hour traffic counts were collected on both a weekday and Saturday at the intersection of Canyon Drive and S Broadway. Average daily traffic (ADT) volumes were collected over a 24-hour period during the week on S Broadway. Counts were collected on Thursday, April 28, 2022, with PM peak hour counts being collected during the period of 4:00 p.m. to 6:00 p.m. Weekend peak hour counts were collected on Saturday, April 30, 2022, during the period of 11:00 a.m. to 1:00 p.m.

Existing volumes and intersection geometry are shown on Figure 3. Traffic count data is included for reference in Appendix A.

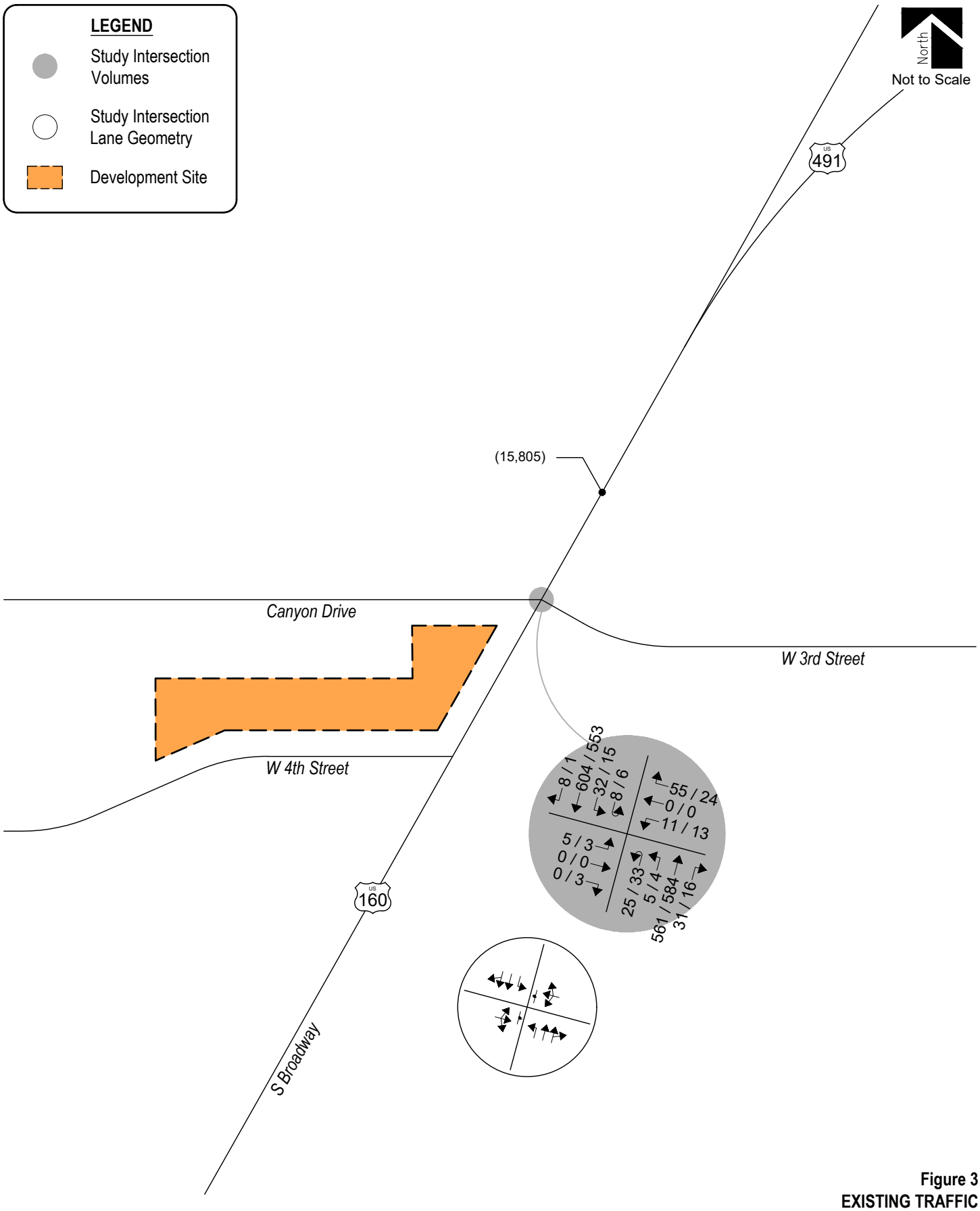


Figure 3
EXISTING TRAFFIC
Volumes & Intersection Geometry
PM / Saturday Peak Hour
(ADT) : Average Daily Traffic

Peak Hour Intersection Levels of Service – Existing Traffic

The Unsignalized Intersection Analysis technique, as published in the Highway Capacity Manual (HCM), 6th Edition, by the Transportation Research Board and as incorporated into the SYNCHRO computer program, was used to analyze the study intersection for existing and future traffic conditions. This nationally accepted technique allows for determination of intersection level of service (LOS) based on the congestion and delay of each traffic movement.

Level of service is a method of measurement used by transportation professionals to quantify a driver's perception of travel conditions that include travel time, number of stops, and total amount of stopped delay experienced on a roadway network. The HCM categorizes level of service into a range from "A" which indicates little, if any, vehicle delay, to "F" which indicates a level of operation considered unacceptable to most drivers. These levels of service grades with brief descriptions of the operating condition, for unsignalized and signalized intersections, are included for reference in Appendix B and have been used throughout this study.

The level of service analyses results for existing conditions are summarized in Table 1.

Intersection capacity worksheets developed for this study are provided in Appendix C.

Table 1 – Intersection Capacity Analysis Summary – Existing Traffic

INTERSECTION	LEVEL OF SERVICE	
LANE GROUPS	PM PEAK HOUR	SATURDAY PEAK HOUR
Canyon Drive / S Broadway (Stop-Controlled)		
Eastbound Left, Through and Right	D	C
Westbound Left, Through and Right	C	C
Northbound Left	B	B
Southbound Left	A	A

Key: Stop-Controlled Intersection: Level of Service

Existing Traffic Analysis Results

Under existing conditions, operational analysis shows that the stop-controlled intersection of Canyon Drive with S Broadway has turning movement operations at or better than LOS D during the weekday afternoon peak traffic hour and LOS C or better during the Saturday peak traffic hour.

III. Future Traffic Conditions Without Proposed Development

Background traffic is the traffic projected to be on area roadways without consideration of the proposed development. Background traffic includes traffic generated by development of vacant parcels in the area.

To account for projected increases in background traffic for Years 2024 and 2042, a compounded annual growth rate was determined using historical traffic data along the adjacent segment of S Broadway (U.S. Highway 160) provided by CDOT's Online Transportation Information System (OTIS), which indicates a 20-year growth rate of less than one percent. Therefore, in order to provide for a conservative analysis, a growth rate of one percent was applied to existing traffic volumes. This annual growth rate is assumed to account for regional growth projections and the level of in-fill development expected within the area.

It is important to note that ingress and egress traffic volumes at the Canyon Drive and S Broadway intersection are not subject to annual growth patterns since this west leg of the intersection does not provide connection to other roadways, and therefore does not serve regional traffic. However, application of the one percent growth rate continues to provide for a conservative analysis.

Pursuant to the area roadway improvements discussed in Section I, Year 2024 and Year 2042 background traffic conditions assume no roadway improvements to accommodate regional transportation demands. This assumption provides for a conservative analysis.

Projected background traffic volumes and intersection geometry for Years 2024 and 2042 are shown on Figure 4 and Figure 5, respectively.

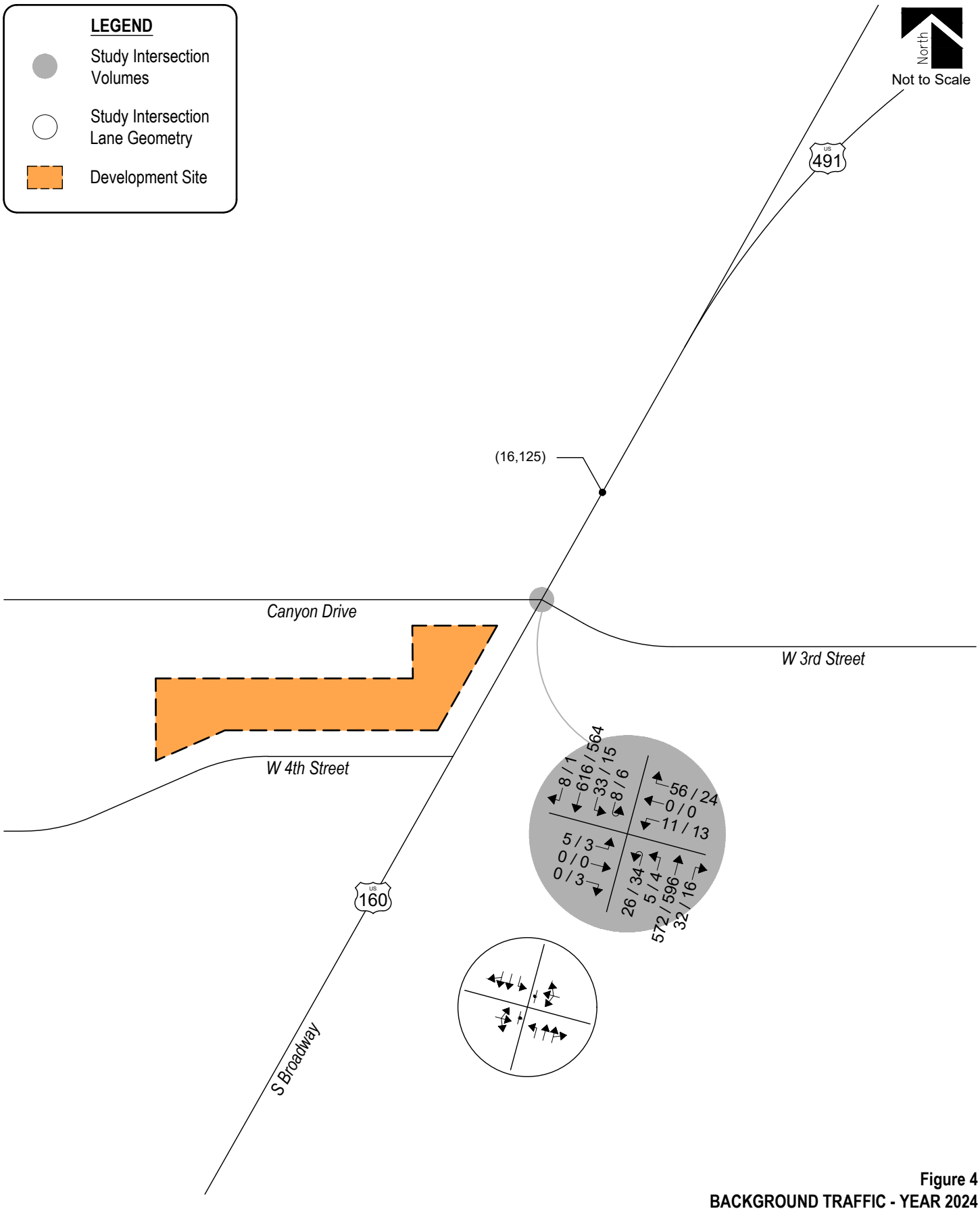


Figure 4
BACKGROUND TRAFFIC - YEAR 2024
Volumes & Intersection Geometry
PM / Saturday Peak Hour
(ADT) : Average Daily Traffic

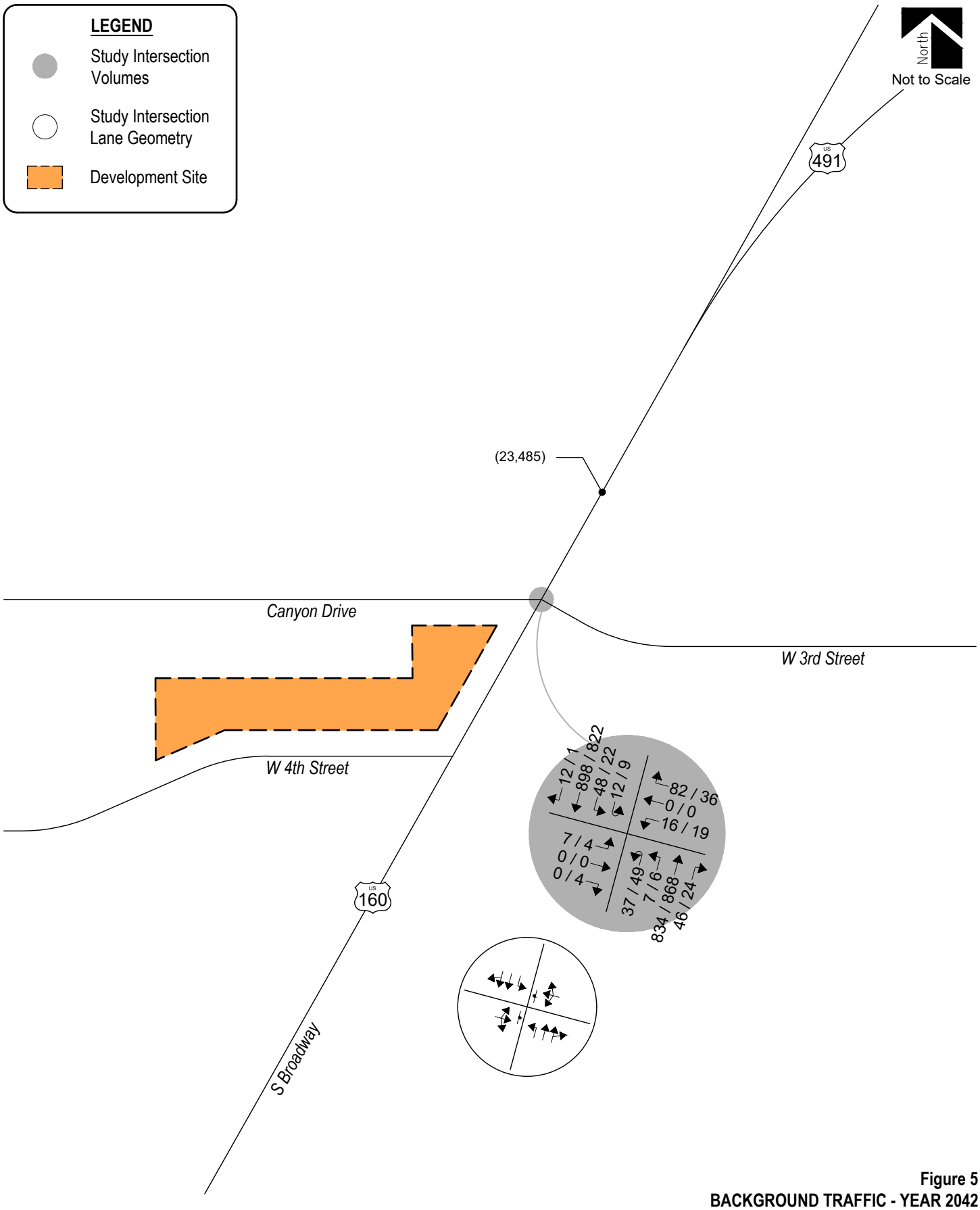


Figure 5
BACKGROUND TRAFFIC - YEAR 2042
Volumes & Intersection Geometry
PM / Saturday Peak Hour
(ADT) : Average Daily Traffic

Peak Hour Intersection Levels of Service – Background Traffic

As with existing traffic conditions, the operations of study intersections were analyzed under background conditions, without the proposed development, using the SYNCHRO computer program.

Background traffic level of service analysis results for Year 2024 are listed in Table 2. Year 2042 operational results are summarized in Table 3.

Definitions of levels of service are given in Appendix B. Intersection capacity worksheets are provided in Appendix C.

Table 2 – Intersection Capacity Analysis Summary – Background Traffic – Year 2024

INTERSECTION	LEVEL OF SERVICE	
LANE GROUPS	PM PEAK HOUR	SATURDAY PEAK HOUR
Canyon Drive / S Broadway (Stop-Controlled)		
Eastbound Left, Through and Right	D	C
Westbound Left, Through and Right	C	C
Northbound Left	B	B
Southbound Left	A	A

Key: Stop-Controlled Intersection: Level of Service

Background Traffic Analysis Results – Year 2024

Year 2024 background traffic analysis indicates that the stop-controlled intersection of Canyon Drive with S Broadway experiences turning movement operations at or better than LOS D during the weekday afternoon peak traffic hour and LOS C or better during the Saturday peak traffic hour.

Table 3 – Intersection Capacity Analysis Summary – Background Traffic – Year 2042

INTERSECTION LANE GROUPS	LEVEL OF SERVICE PM PEAK HOUR	 SATURDAY PEAK HOUR
Canyon Drive / S Broadway (Stop-Controlled)		
Eastbound Left, Through and Right	F	E
Westbound Left, Through and Right	E	E
Northbound Left	C	C
Southbound Left	B	B

Key: Stop-Controlled Intersection: Level of Service

Background Traffic Analysis Results – Year 2042

By Year 2042 and without the proposed development, the study intersection of Canyon Drive with S Broadway anticipates LOS C or better turning movement operations during the weekday afternoon and Saturday peak traffic hours. Exceptions would include the eastbound and westbound turning movements which operate at LOS E and LOS F during their respective peak hours. The LOS E and LOS F operations are attributed to the through traffic volume along S Broadway and the stop-controlled nature of the intersection.

It is to be noted that it is not uncommon for unsignalized movements to or from an arterial roadway, in urban areas, to operate with noticeable delays during peak traffic hours. It is, however, likely that turn movements will operate better than the results obtained with this HCM Two-Way Stop-Control (TWSC) level of service analysis would indicate, as the HCM analysis may not accurately account for the effect of vehicle platooning and gaps caused by upstream signals.

IV. Proposed Project Traffic

Trip Generation

Standard traffic generation characteristics compiled by the Institute of Transportation Engineers (ITE) in their report entitled Trip Generation Manual, 11th Edition, were applied to the proposed land use in order to estimate average daily traffic (ADT), PM Peak Hour, and Saturday Peak Hour vehicle trips. A vehicle trip is defined as a one-way vehicle movement from a point of origin to a point of destination.

The ITE land use code 948 (Automated Car Wash) was used for estimating trip generation because of its conservative rates and best fit to the proposed land use description.

Trip generation rates used in this study are presented in Table 4.

Table 4 – Trip Generation Rates

			TRIP GENERATION RATES						
ITE			24	PM PEAK HOUR			SATURDAY PEAK HOUR		
CODE	LAND USE	UNIT	HOUR	ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
948	Automated Car Wash	WS	592.50	38.75	38.75	77.50	18.86	22.14	41.00

Key: WS = Wash Stalls.

Table 5 illustrates projected ADT, weekday PM Peak Hour, and Saturday PM Peak Hour traffic volumes likely generated by the proposed development upon build-out.

Table 5 – Trip Generation Summary

			TOTAL TRIPS GENERATED						
ITE			24	PM PEAK HOUR			SATURDAY PEAK HOUR		
CODE	LAND USE	SIZE	HOUR	ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
948	Automated Car Wash	1 WS	593	39	39	78	19	22	41
		Total:	*593*	*39*	*39*	*78*	*19*	*22*	*41*

Key: WS = Wash Stalls.
Note: All data and calculations above are subject to being rounded to nearest value.

Upon build-out, Table 5 illustrates that the proposed development has the potential to generate approximately 593 daily vehicle trips with 78 of those occurring during the weekday afternoon peak hour and 41 during the Saturday afternoon peak hour.

Adjustments to Trip Generation Rates

A development of this type is likely to attract trips from within area land uses as well as pass-by trips from the adjacent roadway system. ITE defines a pass-by trip as an intermediate stop on the way from an origin to a primary trip destination without a route diversion. Due to this behavior, pass-by trips are not considered as "new" traffic generated by the development since the trips are already present on the roadway network enroute to their primary destination.

However, ITE's Trip Generation Manual, 3rd Edition, does not provide pass-by trip data for the proposed land use. Upon consideration of the proposed land use description, an estimated 10 percent reduction was applied in order to account for the probability of pass-by trip generation.

Table 6 illustrates projected ADT, weekday PM Peak Hour, and Saturday PM Peak Hour traffic volumes likely generated by the proposed development upon build-out with a reduction applied due to the probability of pass-by trips.

Table 6 – Trip Generation Summary with Pass-By Trip Reductions

ITE			TOTAL NEW TRIPS GENERATED						
			24	PM PEAK HOUR			SATURDAY PEAK HOUR		
CODE	LAND USE	SIZE	HOUR	ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
948	Automated Car Wash	1 WS	593	39	39	78	19	22	41
	Pass-By Trip Reduction:		*10%*	*10%*	*10%*	*10%*	*10%*	*10%*	*10%*
	Total New Trips:		*533*	*35*	*35*	*69*	*17*	*20*	*37*

Key: WS = Wash Stalls.
Note: All data and calculations above are subject to being rounded to nearest value.

Upon build-out and with consideration for pass-by trip reductions, Table 6 illustrates that the proposed development has the potential to generate approximately 533 new daily trips with 69 of those occurring during the weekday afternoon peak hour and 37 during the Saturday afternoon peak hour.

Trip Distribution

The overall directional distribution of site-generated traffic was determined based on the location of development site within the City, proposed and existing area land uses, allowed turning movements, available roadway network, distribution patterns of existing traffic count data, and in reference to historical traffic count data provided by CDOT's Traffic Count Database System (TCDS)[2].

[2] Transportation Data Management System, MS2, 2022.

Additional pass-by trip distribution is assumed to include vehicle routes heading north-south along S Broadway. Distribution percentages utilized for pass-by trips are assumed to be approximately 50 percent from the north and south.

Overall trip distribution patterns for the development are shown on Figure 6.

Trip Assignment

Traffic assignment is how generated and distributed vehicle trips are expected to be loaded onto the available roadway network.

Applying trip distribution patterns to site-generated traffic provides the overall site-generated trip assignments shown on Figure 6.

It is to be noted that the overall site-generated trip assignments shown on Figure 6 represent the combination of both primary trip generation and pass-by trips. Due to the application of pass-by trips, some negative site-generated trips may be shown at the study intersections. These negative trips are the result of redistributing existing through volumes along S Broadway to site-generated ingress volumes.

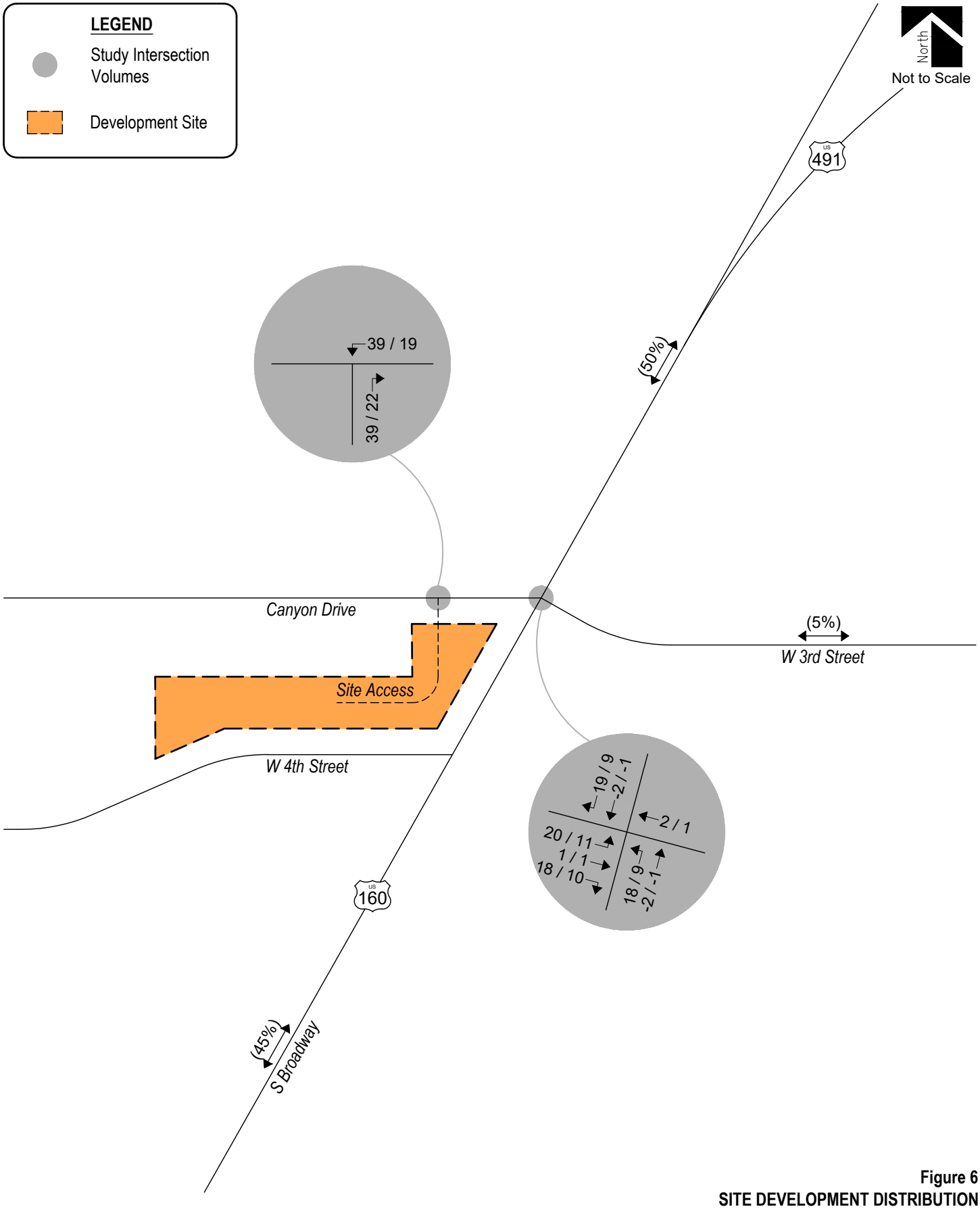


Figure 6
SITE DEVELOPMENT DISTRIBUTION
(%) : Overall
SITE-GENERATED
PM / Saturday Peak Hour

V. Future Traffic Conditions With Proposed Developments

Total traffic is the traffic projected to be on area roadways with consideration of the proposed development. Total traffic includes background traffic projections for Years 2024 and 2042 with consideration of site-generated traffic. For analysis purposes, it was assumed that development construction would be completed by end of Year 2024.

Year 2024 and Year 2042 total traffic conditions assume no roadway improvements to accommodate regional transportation demands. Roadway improvements associated with site development are expected to be limited to site access and frontage as required by the governing agency.

Projected Year 2024 total traffic volumes and intersection geometry are shown in Figure 7.

Figure 8 shows projected total traffic volumes and intersection geometry for Year 2042.

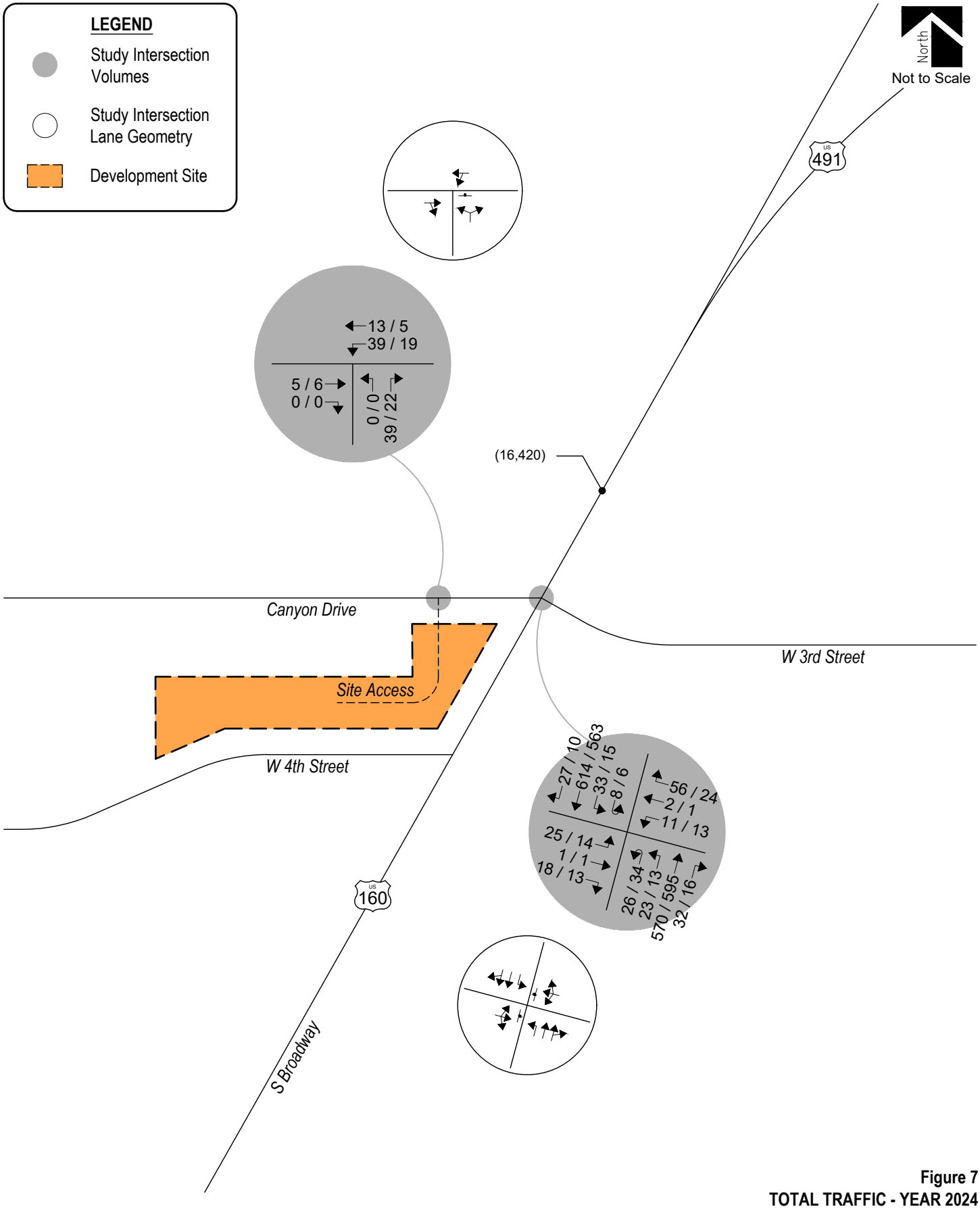


Figure 7
TOTAL TRAFFIC - YEAR 2024
Volumes & Intersection Geometry
PM / Saturday Peak Hour
(ADT) : Average Daily Traffic

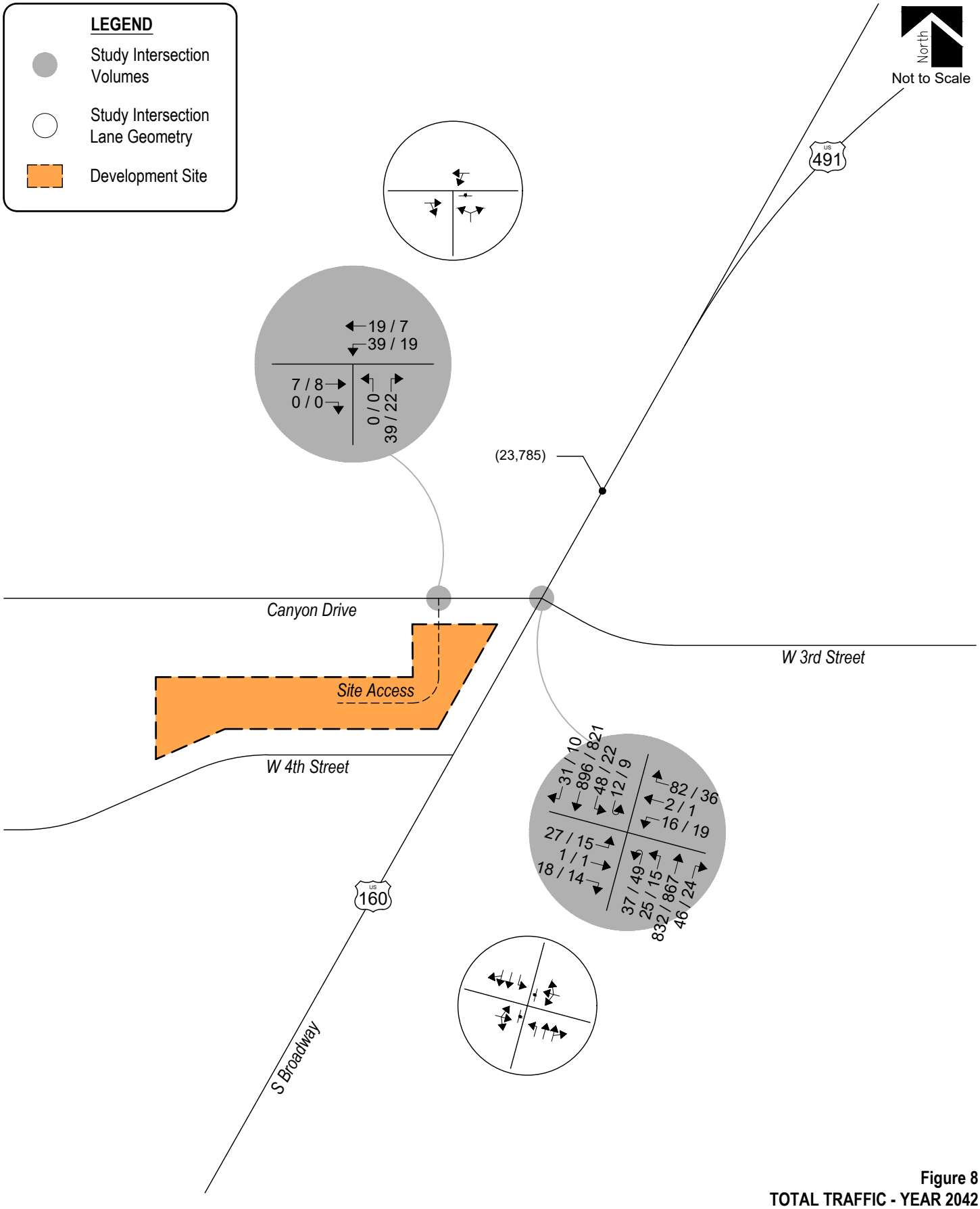


Figure 8
TOTAL TRAFFIC - YEAR 2042
Volumes & Intersection Geometry
PM / Saturday Peak Hour
(ADT) : Average Daily Traffic

VI. Project Impacts

The analyses and procedures described in this study were performed in accordance with the latest edition of the HCM and are based upon the worst-case conditions that occur during a typical weekday and Saturday upon build-out of site development and analyzed land uses. Therefore, study intersections are likely to operate with traffic conditions better than those described within this study, which represent the peak hours of weekday and weekend operations only.

Peak Hour Intersection Levels of Service – Total Traffic

As with background traffic, the operations of the study intersections were analyzed under projected total traffic conditions using the SYNCHRO computer program. Total traffic level of service analysis results for Years 2024 and 2042 are summarized in Table 7 and Table 8, respectively.

Definitions of levels of service are given in Appendix B. Intersection capacity worksheets are provided in Appendix C.

Table 7 – Intersection Capacity Analysis Summary – Total Traffic – Year 2024

INTERSECTION	LEVEL OF SERVICE	
LANE GROUPS	PM PEAK HOUR	SATURDAY PEAK HOUR
Canyon Drive / S Broadway (Stop-Controlled)		
Eastbound Left, Through and Right	D	C
Westbound Left, Through and Right	C	C
Northbound Left	B	B
Southbound Left	A	A
Canyon Drive / Access A (Stop-Controlled)		
Westbound Left and Through	A	A
Northbound Left and Right	A	A

Key: Stop-Controlled Intersection: Level of Service

Table 8 – Intersection Capacity Analysis Summary – Total Traffic – Year 2042

INTERSECTION LANE GROUPS	LEVEL OF SERVICE PM PEAK HOUR	 SATURDAY PEAK HOUR
Canyon Drive / S Broadway (Stop-Controlled)		
Eastbound Left, Through and Right	F	F
Westbound Left, Through and Right	F	F
Northbound Left	C	C
Southbound Left	B	B
Canyon Drive / Access A (Stop-Controlled)		
Westbound Left and Through	A	A
Northbound Left and Right	A	A

Key: Stop-Controlled Intersection: Level of Service

Total Traffic Analysis Results Upon Development Build-Out

Table 8 illustrates how, by Year 2042 and upon development build-out, the stop-controlled intersection of Canyon Drive with S Broadway is projected to have turning movement operations at or better than LOS C during the weekday afternoon and Saturday peak traffic hours. Exceptions still include the eastbound and westbound turning movements which are projected to operate at LOS F during both peak hours. Similar to background traffic conditions, the poor operations are attributed to the through traffic volume along S Broadway and the stop-controlled nature of the intersection.

The stop-controlled intersection of Canyon Drive with Site Access is projected to have turning movement operations at LOS A during both peak traffic hours.

It is to be noted that it is not uncommon for unsignalized movements to or from an arterial roadway, in urban areas, to operate with noticeable delays during peak traffic hours. It is, however, likely that turn movements will operate better than the results obtained with this HCM Two-Way Stop-Control (TWSC) level of service analysis would indicate, as the HCM analysis may not accurately account for the effect of vehicle platooning and gaps caused by upstream signals.

These intersection operations are similar to background conditions.

Total Traffic Auxiliary Lane Analysis

Auxiliary lanes for the S Broadway and Canyon Drive intersection are to be based on CDOT's State Highway Access Code (SHAC)[3].

Considering development build-out, an evaluation of auxiliary lane requirements, pursuant to Section 3.11(4)(b) of the State's SHAC, reveals that a southbound right turn deceleration lane at Canyon Drive along S Broadway is not required since the development's projected peak hour right turn ingress volume does not exceed CDOT's threshold of 50 vehicles per hour.

Queue Length Analysis – S Broadway & Canyon Drive

Queue lengths for the existing intersection with S Broadway with Canyon Drive was analyzed using Year 2042 total traffic conditions. The analysis yields estimate of 95th percentile queue lengths, which have only a five percent probability of being exceeded during the analysis time period. Queue lengths were modeled and are included with the Synchro worksheets in Appendix C.

No significant vehicle queuing at the intersection was indicated during the Saturday peak traffic hour. However, the afternoon weekday peak traffic hour indicates the potential for 95th percentile queues to be approximately three to four vehicles for the eastbound approach, or approximately 100 feet. Review of the preliminary site plan, as shown in Figure 2, indicates this projected queue length will not block the proposed Site Access intersection, nor negatively impact the operations of S Broadway.

Additionally, 95th percentile queue length estimates shown in Appendix C indicate that the existing northbound and southbound left turn lanes along S Broadway are of sufficient length to accommodate long-term projected vehicle volumes and queuing, and no improvements are recommended.

Car Wash Queuing Analysis

Vehicle storage associated with the proposed car wash self-pay stations was evaluated against ITE research, publications and recommendations.

ITE research and associated publications recommend 140 feet of drive-through lane for car wash establishments. This drive-through length provides for seven cars of total storage and is based on an 85th percentile queue which has a fifteen percent chance of occurring. It is noted that ITE analysis assumes a typical car length of 20 feet.

In order to provide a conservative drive-through queuing analysis, a typical vehicle length of 25 feet was applied. Review of the preliminary site plan, as shown in Figure 2, indicates approximately 950 feet of total drive-through storage, or approximately 38 vehicles. It is therefore concluded that the proposed development provides adequate on-site vehicle queuing to accommodate typical site traffic demand. A drive-through storage length exhibit is included for reference in Appendix D.

[3] State Highway Access Code, The Transportation Commission of Colorado, March 2002.

VII. Conclusion

This traffic impact study is provided as a planning document and addressed the capacity, geometric, and control requirements associated with the development entitled Champion Xpress Car Wash. This proposed service retail development is understood to entail the new construction of an approximate 3,320 square foot, single tunnel, automated car wash with outdoor vacuum stalls. The development is located near the southwest corner of S Broadway and Canyon Drive in Cortez, Colorado.

The study area examined in this analysis was coordinated with Stolfus & Associates, Inc., on behalf of CDOT Staff, and encompassed the Canyon Drive intersections with S Broadway and proposed site access.

Analysis was conducted for critical weekday PM Peak Hour and Saturday PM Peak Hour traffic operations for existing traffic conditions, Year 2024 and Year 2042 background traffic conditions, and Year 2024 and Year 2042 total traffic conditions.

Analysis of existing traffic conditions indicates that the stop-controlled intersection of Canyon Drive with S Broadway has turning movement operations at or better than LOS D during the weekday afternoon peak traffic hour and LOS C or better during the Saturday peak traffic hour.

Without the proposed development, Year 2024 background operational analysis shows that the stop-controlled intersection of Canyon Drive with S Broadway experiences turning movement operations at or better than LOS D during the weekday afternoon peak traffic hour and LOS C or better during the Saturday peak traffic hour.

By Year 2042 and without the proposed development, the study intersection of Canyon Drive with S Broadway anticipates LOS C or better turning movement operations during the weekday afternoon and Saturday peak traffic hours. Exceptions would include the eastbound and westbound turning movements which operate at LOS E and LOS F during their respective peak hours. The LOS E and LOS F operations are attributed to the through traffic volume along S Broadway and the stop-controlled nature of the intersection.

It is to be noted that it is not uncommon for unsignalized movements to or from an arterial roadway, in urban areas, to operate with noticeable delays during peak traffic hours. It is, however, likely that turn movements will operate better than the results obtained with this HCM Two-Way Stop-Control (TWSC) level of service analysis would indicate, as the HCM analysis may not accurately account for the effect of vehicle platooning and gaps caused by upstream signals.

Analysis of future traffic conditions indicates that the addition of site-generated traffic is expected to create minimal negative impact to traffic operations for the existing and surrounding roadway system. With all conservative assumptions defined in this analysis, the study intersection is projected to operate at future levels of service comparable to Year 2042 background traffic conditions. Proposed site access has long-term operations at LOS A during peak traffic periods and upon build-out.

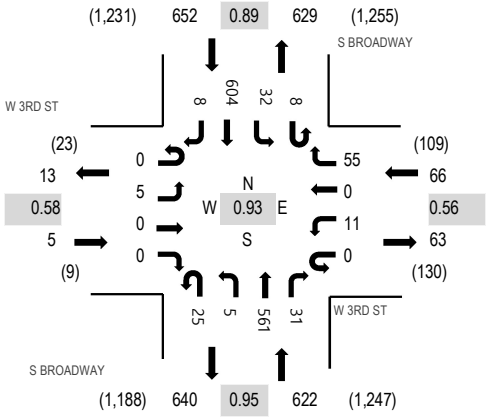
APPENDIX A

Traffic Count Data

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

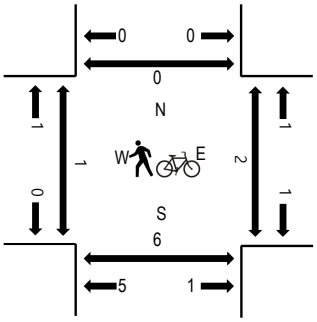
Location: 1 S BROADWAY & W 3RD ST PM
Date: Thursday, April 28, 2022
Peak Hour: 04:15 PM - 05:15 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



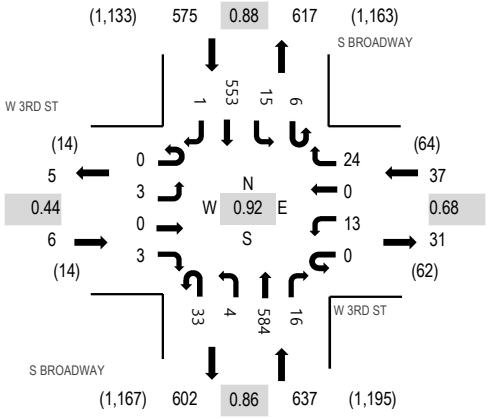
Traffic Counts

Interval Start Time	W 3RD ST Eastbound				W 3RD ST Westbound				S BROADWAY Northbound				S BROADWAY Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	0	0	0	0	0	0	13	3	0	129	9	2	8	134	0	298	1,283	0	0	0	0
4:15 PM	0	1	0	0	0	2	0	29	8	3	135	11	0	9	150	2	350	1,345	0	0	2	0
4:30 PM	0	1	0	0	0	4	0	13	4	1	134	3	3	6	144	0	313	1,301	1	0	0	0
4:45 PM	0	1	0	0	0	1	0	7	7	0	142	10	2	7	142	3	322	1,325	0	0	1	0
5:00 PM	0	2	0	0	0	4	0	6	6	1	150	7	3	10	168	3	360	1,313	0	0	0	0
5:15 PM	0	1	0	2	0	0	0	4	3	1	164	5	5	10	107	4	306		0	0	1	0
5:30 PM	0	0	0	1	0	1	0	12	9	0	145	10	4	10	144	1	337		0	0	0	0
5:45 PM	0	0	0	0	0	0	0	13	5	2	133	7	1	8	139	2	310		0	0	0	0
Count Total	0	6	0	3	0	12	0	97	45	8	1,132	62	20	68	1,128	15	2,596		1	0	4	0
Peak Hour	0	5	0	0	0	11	0	55	25	5	561	31	8	32	604	8	1,345		1	0	3	0

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

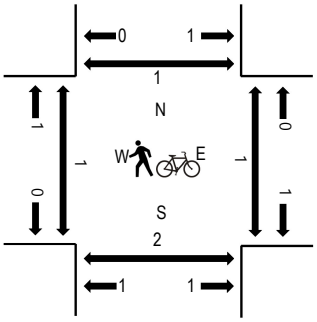
Location: 1 S BROADWAY & W 3RD ST Noon
Date: Saturday, April 30, 2022
Peak Hour: 11:30 AM - 12:30 PM
Peak 15-Minutes: 11:45 AM - 12:00 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	W 3RD ST Eastbound				W 3RD ST Westbound				S BROADWAY Northbound				S BROADWAY Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
11:00 AM	0	2	0	2	0	2	0	2	7	2	114	3	1	8	132	0	275	1,216	0	0	0	0
11:15 AM	0	1	0	0	0	2	0	4	6	1	121	4	0	7	123	1	270	1,244	0	0	0	0
11:30 AM	0	1	0	1	0	4	0	6	4	1	144	5	1	1	163	0	331	1,255	0	0	0	1
11:45 AM	0	0	0	0	0	6	0	0	13	0	170	4	0	2	145	0	340	1,218	0	0	1	0
12:00 PM	0	1	0	1	0	3	0	11	7	3	138	5	3	7	124	0	303	1,190	0	1	0	0
12:15 PM	0	1	0	1	0	0	0	7	9	0	132	2	2	5	121	1	281		1	0	1	0
12:30 PM	0	0	0	0	0	1	0	9	4	2	153	1	0	2	121	1	294		0	0	0	0
12:45 PM	0	1	0	2	0	3	0	4	5	1	131	3	3	3	155	1	312		0	0	0	0
Count Total	0	7	0	7	0	21	0	43	55	10	1,103	27	10	35	1,084	4	2,406		1	1	2	1
Peak Hour	0	3	0	3	0	13	0	24	33	4	584	16	6	15	553	1	1,255		1	1	2	1

All Traffic Data Services, LLC

www.alltrafficdata.net

Site Code: 2
Station ID:
S BROADWAY N.O. W 3RD ST

Latitude: 0' 0.0000 Undefined

Start Time	28-Apr-22 Thu	NB	SB							Total
12:00 AM		34	48							82
01:00		34	31							65
02:00		27	19							46
03:00		34	28							62
04:00		51	37							88
05:00		125	112							237
06:00		173	175							348
07:00		317	362							679
08:00		415	389							804
09:00		513	493							1006
10:00		559	568							1127
11:00		**578**	**598**							**1176**
12:00 PM		**655**	**652**							**1307**
01:00		583	576							1159
02:00		550	559							1109
03:00		568	573							1141
04:00		612	612							1224
05:00		643	619							1262
06:00		407	436							843
07:00		352	357							709
08:00		264	328							592
09:00		157	213							370
10:00		99	141							240
11:00		57	73							130
Total		7807	7999							15806
Percent		49.4%	50.6%							
AM Peak	-	11:00	11:00	-	-	-	-	-	-	11:00
Vol.	-	578	598	-	-	-	-	-	-	1176
PM Peak	-	12:00	12:00	-	-	-	-	-	-	12:00
Vol.	-	655	652	-	-	-	-	-	-	1307
Grand Total		7807	7999							15806
Percent		49.4%	50.6%							
ADT		ADT 15,806		AADT 15,806						

APPENDIX B

Level of Service Definitions

The following information can be found in the Highway Capacity Manual, Transportation Research Board, 2016: Chapter 19 – Signalized Intersections and Chapter 20 – Two-Way Stop Controlled Intersections.

Automobile Level of Service (LOS) for Signalized Intersections

Levels of service are defined to represent reasonable ranges in control delay.

LOS A

Describes operations with a control delay of 10 s/veh or less and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If it is due to favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.

LOS B

Describes operations with control delay between 10 and 20 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.

LOS C

Describes operations with control delay between 20 and 35 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when progression is favorable or the cycle length is moderate. Individual *cycle failures* (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.

LOS D

Describes operations with control delay between 35 and 55 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.

LOS E

Describes operations with control delay between 55 and 80 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.

LOS F

Describes operations with control delay exceeding 80 s/veh or a volume-to-capacity ratio greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.

Level of Service (LOS) for Unsignalized TWSC Intersections

Level of Service (v/c ≤ 1.0)	Average Control Delay (s/veh)
A	0 - 10
B	> 10 - 15
C	> 15 - 25
D	> 25 - 35
E	> 35 - 50
F	> 50

APPENDIX C

Capacity Worksheets

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Traffic Vol, veh/h	5	0	0	11	0	55	25	5	561	31	8	32	604	8
Future Vol, veh/h	5	0	0	11	0	55	25	5	561	31	8	32	604	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	-	None
Storage Length	-	-	-	-	-	-	-	65	-	-	-	75	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	0	12	0	60	27	5	610	34	9	35	657	9

Major/Minor	Minor2			Minor1			Major1				Major2			
Conflicting Flow All	1119	1458	333	1108	1445	322	665	666	0	0	643	644	0	0
Stage 1	750	750	-	691	691	-	-	-	-	-	-	-	-	-
Stage 2	369	708	-	417	754	-	-	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	6.44	4.14	-	-	6.44	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.52	2.22	-	-	2.52	2.22	-	-
Pot Cap-1 Maneuver	161	128	663	164	131	674	544	919	-	-	562	937	-	-
Stage 1	369	417	-	401	444	-	-	-	-	-	-	-	-	-
Stage 2	623	436	-	584	415	-	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-			-	-
Mov Cap-1 Maneuver	135	114	663	151	117	674	584	584	-	-	806	806	-	-
Mov Cap-2 Maneuver	135	114	-	151	117	-	-	-	-	-	-	-	-	-
Stage 1	348	395	-	378	419	-	-	-	-	-	-	-	-	-
Stage 2	536	411	-	553	393	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	32.8	15.1	0.6	0.6
HCM LOS	D	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	584	-	-	135	427	806	-	-
HCM Lane V/C Ratio	0.056	-	-	0.04	0.168	0.054	-	-
HCM Control Delay (s)	11.5	-	-	32.8	15.1	9.7	-	-
HCM Lane LOS	B	-	-	D	C	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.1	0.6	0.2	-	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Traffic Vol, veh/h	3	0	3	13	0	24	33	4	584	16	6	15	553	1
Future Vol, veh/h	3	0	3	13	0	24	33	4	584	16	6	15	553	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	-	None
Storage Length	-	-	-	-	-	-	-	65	-	-	-	75	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	0	3	14	0	26	36	4	635	17	7	16	601	1

Major/Minor	Minor2			Minor1			Major1				Major2			
Conflicting Flow All	1046	1380	301	1071	1372	326	602	602	0	0	652	652	0	0
Stage 1	648	648	-	724	724	-	-	-	-	-	-	-	-	-
Stage 2	398	732	-	347	648	-	-	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	6.44	4.14	-	-	6.44	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.52	2.22	-	-	2.52	2.22	-	-
Pot Cap-1 Maneuver	183	143	695	175	145	670	596	971	-	-	554	930	-	-
Stage 1	425	464	-	383	429	-	-	-	-	-	-	-	-	-
Stage 2	599	425	-	642	464	-	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-			-	-
Mov Cap-1 Maneuver	163	130	695	162	132	670	619	619	-	-	767	767	-	-
Mov Cap-2 Maneuver	163	130	-	162	132	-	-	-	-	-	-	-	-	-
Stage 1	397	450	-	358	401	-	-	-	-	-	-	-	-	-
Stage 2	538	397	-	620	450	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	19	17.9	0.7	0.4
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	619	-	-	264	319	767	-	-
HCM Lane V/C Ratio	0.065	-	-	0.025	0.126	0.03	-	-
HCM Control Delay (s)	11.2	-	-	19	17.9	9.8	-	-
HCM Lane LOS	B	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.1	0.4	0.1	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Traffic Vol, veh/h	5	0	0	11	0	56	26	5	572	32	8	33	616	8
Future Vol, veh/h	5	0	0	11	0	56	26	5	572	32	8	33	616	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	-	None
Storage Length	-	-	-	-	-	-	-	65	-	-	-	75	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	0	12	0	61	28	5	622	35	9	36	670	9

Major/Minor	Minor2			Minor1			Major1				Major2			
Conflicting Flow All	1142	1488	340	1131	1475	329	678	679	0	0	657	657	0	0
Stage 1	765	765	-	706	706	-	-	-	-	-	-	-	-	-
Stage 2	377	723	-	425	769	-	-	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	6.44	4.14	-	-	6.44	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.52	2.22	-	-	2.52	2.22	-	-
Pot Cap-1 Maneuver	155	123	656	158	125	667	534	909	-	-	550	926	-	-
Stage 1	362	410	-	393	437	-	-	-	-	-	-	-	-	-
Stage 2	616	429	-	578	409	-	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-			-	-
Mov Cap-1 Maneuver	129	109	656	144	111	667	572	572	-	-	796	796	-	-
Mov Cap-2 Maneuver	129	109	-	144	111	-	-	-	-	-	-	-	-	-
Stage 1	341	387	-	370	411	-	-	-	-	-	-	-	-	-
Stage 2	527	404	-	545	386	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	34.1	15.4	0.6	0.6
HCM LOS	D	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	572	-	-	129	418	796	-	-
HCM Lane V/C Ratio	0.059	-	-	0.042	0.174	0.056	-	-
HCM Control Delay (s)	11.7	-	-	34.1	15.4	9.8	-	-
HCM Lane LOS	B	-	-	D	C	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.1	0.6	0.2	-	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Traffic Vol, veh/h	3	0	3	13	0	24	34	4	596	16	6	15	564	1
Future Vol, veh/h	3	0	3	13	0	24	34	4	596	16	6	15	564	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	-	None
Storage Length	-	-	-	-	-	-	-	65	-	-	-	75	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	0	3	14	0	26	37	4	648	17	7	16	613	1

Major/Minor	Minor2			Minor1			Major1				Major2			
Conflicting Flow All	1066	1407	307	1092	1399	333	614	614	0	0	665	665	0	0
Stage 1	660	660	-	739	739	-	-	-	-	-	-	-	-	-
Stage 2	406	747	-	353	660	-	-	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	6.44	4.14	-	-	6.44	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.52	2.22	-	-	2.52	2.22	-	-
Pot Cap-1 Maneuver	177	138	689	169	139	663	586	961	-	-	544	920	-	-
Stage 1	418	458	-	375	422	-	-	-	-	-	-	-	-	-
Stage 2	593	418	-	637	458	-	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-			-	-
Mov Cap-1 Maneuver	158	125	689	156	126	663	608	608	-	-	757	757	-	-
Mov Cap-2 Maneuver	158	125	-	156	126	-	-	-	-	-	-	-	-	-
Stage 1	390	444	-	350	394	-	-	-	-	-	-	-	-	-
Stage 2	531	390	-	615	444	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	19.4	18.3	0.7	0.4
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	608	-	-	257	310	757	-	-
HCM Lane V/C Ratio	0.068	-	-	0.025	0.13	0.03	-	-
HCM Control Delay (s)	11.3	-	-	19.4	18.3	9.9	-	-
HCM Lane LOS	B	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.1	0.4	0.1	-	-

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Traffic Vol, veh/h	7	0	0	16	0	82	37	7	834	46	12	48	898	12
Future Vol, veh/h	7	0	0	16	0	82	37	7	834	46	12	48	898	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	-	None
Storage Length	-	-	-	-	-	-	-	65	-	-	-	75	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	0	0	17	0	89	40	8	907	50	13	52	976	13

Major/Minor	Minor2			Minor1			Major1				Major2			
Conflicting Flow All	1663	2166	495	1646	2147	479	989	989	0	0	957	957	0	0
Stage 1	1113	1113	-	1028	1028	-	-	-	-	-	-	-	-	-
Stage 2	550	1053	-	618	1119	-	-	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	6.44	4.14	-	-	6.44	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.52	2.22	-	-	2.52	2.22	-	-
Pot Cap-1 Maneuver	64	46	520	65	48	533	337	695	-	-	354	714	-	-
Stage 1	222	282	-	251	310	-	-	-	-	-	-	-	-	-
Stage 2	487	301	-	443	280	-	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-			-	-
Mov Cap-1 Maneuver	44	35	520	53	37	533	367	367	-	-	560	560	-	-
Mov Cap-2 Maneuver	44	35	-	53	37	-	-	-	-	-	-	-	-	-
Stage 1	193	249	-	218	269	-	-	-	-	-	-	-	-	-
Stage 2	353	262	-	392	248	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	103.2	37.1	0.8	0.8
HCM LOS	F	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	367	-	-	44	215	560	-	-
HCM Lane V/C Ratio	0.13	-	-	0.173	0.495	0.116	-	-
HCM Control Delay (s)	16.3	-	-	103.2	37.1	12.3	-	-
HCM Lane LOS	C	-	-	F	E	B	-	-
HCM 95th %tile Q(veh)	0.4	-	-	0.6	2.5	0.4	-	-

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations		↔			↔			↰	↑↱			↰	↑↱	
Traffic Vol, veh/h	4	0	4	19	0	36	49	6	868	24	9	22	822	1
Future Vol, veh/h	4	0	4	19	0	36	49	6	868	24	9	22	822	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	-	None
Storage Length	-	-	-	-	-	-	-	65	-	-	-	75	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	0	4	21	0	39	53	7	943	26	10	24	893	1

Major/Minor	Minor2			Minor1			Major1				Major2			
Conflicting Flow All	1554	2051	447	1591	2038	485	895	894	0	0	970	969	0	0
Stage 1	962	962	-	1076	1076	-	-	-	-	-	-	-	-	-
Stage 2	592	1089	-	515	962	-	-	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	6.44	4.14	-	-	6.44	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.52	2.22	-	-	2.52	2.22	-	-
Pot Cap-1 Maneuver	77	55	559	72	56	528	388	755	-	-	347	707	-	-
Stage 1	275	332	-	234	294	-	-	-	-	-	-	-	-	-
Stage 2	460	290	-	511	332	-	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-			-	-
Mov Cap-1 Maneuver	60	44	559	60	45	528	407	407	-	-	526	526	-	-
Mov Cap-2 Maneuver	60	44	-	60	45	-	-	-	-	-	-	-	-	-
Stage 1	234	310	-	199	250	-	-	-	-	-	-	-	-	-
Stage 2	363	247	-	474	310	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	41.2	47.2	0.9	0.4
HCM LOS	E	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	407	-	-	108	143	526	-	-
HCM Lane V/C Ratio	0.147	-	-	0.081	0.418	0.064	-	-
HCM Control Delay (s)	15.4	-	-	41.2	47.2	12.3	-	-
HCM Lane LOS	C	-	-	E	E	B	-	-
HCM 95th %tile Q(veh)	0.5	-	-	0.3	1.8	0.2	-	-

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Traffic Vol, veh/h	25	1	18	11	2	56	26	23	570	32	8	33	614	27
Future Vol, veh/h	25	1	18	11	2	56	26	23	570	32	8	33	614	27
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	-	None
Storage Length	-	-	-	-	-	-	-	65	-	-	-	75	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	1	20	12	2	61	28	25	620	35	9	36	667	29

Major/Minor	Minor2			Minor1			Major1				Major2			
Conflicting Flow All	1189	1533	348	1168	1530	328	697	696	0	0	654	655	0	0
Stage 1	772	772	-	744	744	-	-	-	-	-	-	-	-	-
Stage 2	417	761	-	424	786	-	-	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	6.44	4.14	-	-	6.44	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.52	2.22	-	-	2.52	2.22	-	-
Pot Cap-1 Maneuver	143	115	648	149	116	668	519	896	-	-	553	928	-	-
Stage 1	358	407	-	373	420	-	-	-	-	-	-	-	-	-
Stage 2	584	412	-	578	401	-	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-			-	-
Mov Cap-1 Maneuver	115	100	648	128	100	668	635	635	-	-	799	799	-	-
Mov Cap-2 Maneuver	115	100	-	128	100	-	-	-	-	-	-	-	-	-
Stage 1	328	384	-	342	385	-	-	-	-	-	-	-	-	-
Stage 2	484	378	-	527	379	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	33.8	17.4	0.8	0.6
HCM LOS	D	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	635	-	-	172	364	799	-	-
HCM Lane V/C Ratio	0.084	-	-	0.278	0.206	0.056	-	-
HCM Control Delay (s)	11.2	-	-	33.8	17.4	9.8	-	-
HCM Lane LOS	B	-	-	D	C	A	-	-
HCM 95th %tile Q(veh)	0.3	-	-	1.1	0.8	0.2	-	-

Intersection	
Int Delay, s/veh	6.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	5	0	39	13	0	39
Future Vol, veh/h	5	0	39	13	0	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	0	42	14	0	42

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	5	0	103	5
Stage 1	-	-	-	-	5	-
Stage 2	-	-	-	-	98	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1616	-	895	1078
Stage 1	-	-	-	-	1018	-
Stage 2	-	-	-	-	926	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1616	-	872	1078
Mov Cap-2 Maneuver	-	-	-	-	872	-
Stage 1	-	-	-	-	1018	-
Stage 2	-	-	-	-	902	-

Approach	EB	WB	NB
HCM Control Delay, s	0	5.5	8.5
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1078	-	-	1616	-
HCM Lane V/C Ratio	0.039	-	-	0.026	-
HCM Control Delay (s)	8.5	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Traffic Vol, veh/h	14	1	13	13	1	24	34	13	595	16	6	15	563	10
Future Vol, veh/h	14	1	13	13	1	24	34	13	595	16	6	15	563	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	-	None
Storage Length	-	-	-	-	-	-	-	65	-	-	-	75	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	1	14	14	1	26	37	14	647	17	7	16	612	11

Major/Minor	Minor2			Minor1			Major1				Major2			
Conflicting Flow All	1090	1430	312	1111	1427	332	623	623	0	0	664	664	0	0
Stage 1	664	664	-	758	758	-	-	-	-	-	-	-	-	-
Stage 2	426	766	-	353	669	-	-	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	6.44	4.14	-	-	6.44	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.52	2.22	-	-	2.52	2.22	-	-
Pot Cap-1 Maneuver	170	133	684	164	134	664	578	954	-	-	545	921	-	-
Stage 1	416	456	-	365	413	-	-	-	-	-	-	-	-	-
Stage 2	577	410	-	637	454	-	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-			-	-
Mov Cap-1 Maneuver	149	119	684	146	120	664	639	639	-	-	758	758	-	-
Mov Cap-2 Maneuver	149	119	-	146	120	-	-	-	-	-	-	-	-	-
Stage 1	383	442	-	336	380	-	-	-	-	-	-	-	-	-
Stage 2	509	377	-	603	440	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	22.9	19.8	0.8	0.3
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	639	-	-	231	285	758	-	-
HCM Lane V/C Ratio	0.08	-	-	0.132	0.145	0.03	-	-
HCM Control Delay (s)	11.1	-	-	22.9	19.8	9.9	-	-
HCM Lane LOS	B	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0.3	-	-	0.4	0.5	0.1	-	-

Intersection	
Int Delay, s/veh	6.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	6	0	19	5	0	22
Future Vol, veh/h	6	0	19	5	0	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	0	21	5	0	24

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	7	0	54	7
Stage 1	-	-	-	-	7	-
Stage 2	-	-	-	-	47	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1614	-	954	1075
Stage 1	-	-	-	-	1016	-
Stage 2	-	-	-	-	975	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1614	-	942	1075
Mov Cap-2 Maneuver	-	-	-	-	942	-
Stage 1	-	-	-	-	1016	-
Stage 2	-	-	-	-	962	-

Approach	EB	WB	NB
HCM Control Delay, s	0	5.7	8.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1075	-	-	1614	-
HCM Lane V/C Ratio	0.022	-	-	0.013	-
HCM Control Delay (s)	8.4	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	7.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations		↔			↔			↰	↑↱			↰	↑↱	
Traffic Vol, veh/h	27	1	18	16	2	82	37	25	832	46	12	48	896	31
Future Vol, veh/h	27	1	18	16	2	82	37	25	832	46	12	48	896	31
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	-	None
Storage Length	-	-	-	-	-	-	-	65	-	-	-	75	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	29	1	20	17	2	89	40	27	904	50	13	52	974	34

Major/Minor	Minor2			Minor1			Major1				Major2			
Conflicting Flow All	1708	2209	504	1681	2201	477	1008	1008	0	0	954	954	0	0
Stage 1	1121	1121	-	1063	1063	-	-	-	-	-	-	-	-	-
Stage 2	587	1088	-	618	1138	-	-	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	6.44	4.14	-	-	6.44	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.52	2.22	-	-	2.52	2.22	-	-
Pot Cap-1 Maneuver	59	44	513	62	44	534	328	683	-	-	355	716	-	-
Stage 1	220	280	-	238	298	-	-	-	-	-	-	-	-	-
Stage 2	463	290	-	443	275	-	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-			-	-
Mov Cap-1 Maneuver	37	32	513	46	32	534	403	403	-	-	561	561	-	-
Mov Cap-2 Maneuver	37	32	-	46	32	-	-	-	-	-	-	-	-	-
Stage 1	183	248	-	198	249	-	-	-	-	-	-	-	-	-
Stage 2	319	242	-	375	243	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	194.3	53.2	1	0.7
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	403	-	-	58	177	561	-	-
HCM Lane V/C Ratio	0.167	-	-	0.862	0.614	0.116	-	-
HCM Control Delay (s)	15.7	-	-	194.3	53.2	12.3	-	-
HCM Lane LOS	C	-	-	F	F	B	-	-
HCM 95th %tile Q(veh)	0.6	-	-	3.9	3.4	0.4	-	-

Intersection	
Int Delay, s/veh	5.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	7	0	39	19	0	39
Future Vol, veh/h	7	0	39	19	0	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	0	42	21	0	42

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	8	0	113	8
Stage 1	-	-	-	-	8	-
Stage 2	-	-	-	-	105	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1612	-	884	1074
Stage 1	-	-	-	-	1015	-
Stage 2	-	-	-	-	919	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1612	-	861	1074
Mov Cap-2 Maneuver	-	-	-	-	861	-
Stage 1	-	-	-	-	1015	-
Stage 2	-	-	-	-	895	-

Approach	EB	WB	NB
HCM Control Delay, s	0	4.9	8.5
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1074	-	-	1612	-
HCM Lane V/C Ratio	0.039	-	-	0.026	-
HCM Control Delay (s)	8.5	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations		↔			↔			↰	↑↱			↰	↑↱	
Traffic Vol, veh/h	15	1	14	19	1	36	49	15	867	24	9	22	821	10
Future Vol, veh/h	15	1	14	19	1	36	49	15	867	24	9	22	821	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	-	None
Storage Length	-	-	-	-	-	-	-	65	-	-	-	75	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	1	15	21	1	39	53	16	942	26	10	24	892	11

Major/Minor	Minor2			Minor1			Major1				Major2			
Conflicting Flow All	1576	2072	452	1608	2064	484	903	903	0	0	968	968	0	0
Stage 1	966	966	-	1093	1093	-	-	-	-	-	-	-	-	-
Stage 2	610	1106	-	515	971	-	-	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	6.44	4.14	-	-	6.44	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.52	2.22	-	-	2.52	2.22	-	-
Pot Cap-1 Maneuver	74	53	555	70	54	529	383	749	-	-	348	707	-	-
Stage 1	273	331	-	229	288	-	-	-	-	-	-	-	-	-
Stage 2	448	284	-	511	329	-	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-			-	-
Mov Cap-1 Maneuver	56	41	555	55	42	529	423	423	-	-	526	526	-	-
Mov Cap-2 Maneuver	56	41	-	55	42	-	-	-	-	-	-	-	-	-
Stage 1	228	309	-	191	240	-	-	-	-	-	-	-	-	-
Stage 2	345	237	-	463	308	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	62.4	56.3	1	0.4
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	423	-	-	94	128	526	-	-
HCM Lane V/C Ratio	0.164	-	-	0.347	0.476	0.064	-	-
HCM Control Delay (s)	15.2	-	-	62.4	56.3	12.3	-	-
HCM Lane LOS	C	-	-	F	F	B	-	-
HCM 95th %tile Q(veh)	0.6	-	-	1.4	2.2	0.2	-	-

Intersection	
Int Delay, s/veh	5.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	8	0	19	7	0	22
Future Vol, veh/h	8	0	19	7	0	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	0	21	8	0	24

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	9	0	59	9
Stage 1	-	-	-	-	9	-
Stage 2	-	-	-	-	50	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1611	-	948	1073
Stage 1	-	-	-	-	1014	-
Stage 2	-	-	-	-	972	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1611	-	936	1073
Mov Cap-2 Maneuver	-	-	-	-	936	-
Stage 1	-	-	-	-	1014	-
Stage 2	-	-	-	-	959	-

Approach	EB	WB	NB
HCM Control Delay, s	0	5.3	8.4
HCM LOS			A

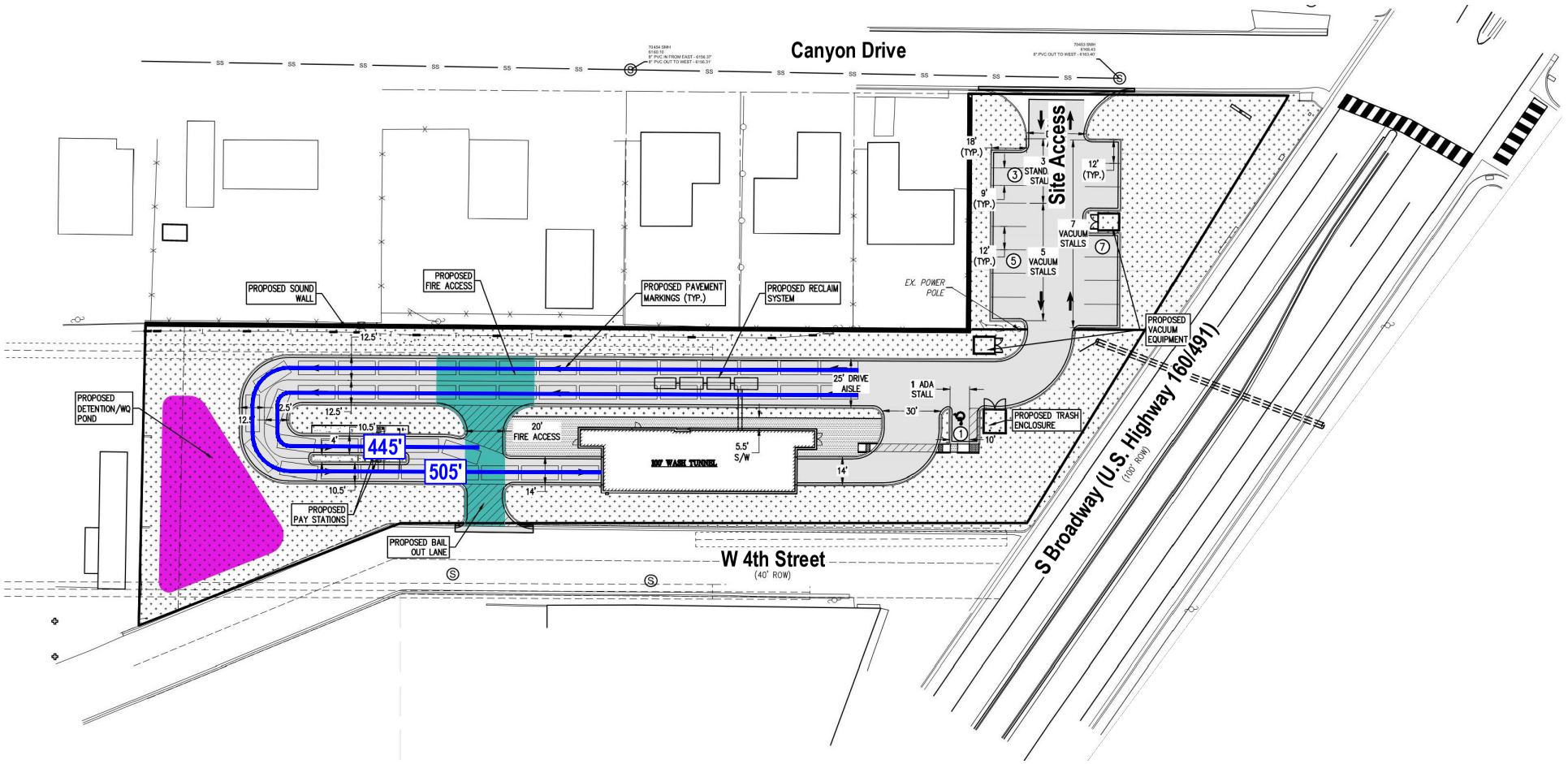
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1073	-	-	1611	-
HCM Lane V/C Ratio	0.022	-	-	0.013	-
HCM Control Delay (s)	8.4	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

APPENDIX D

Drive-Through Storage Length Exhibit

North

Not to Scale



CHAMPION XPRESS CAR WASH
Traffic Impact Study

DRIVE-THROUGH STORAGE LENGTH EXHIBIT

SM ROCHA, LLC
Traffic and Transportation Consultants

May 2022

CITY OF CORTEZ
PLANNING AND ZONING COMMISSION
RESOLUTION NO. 8, SERIES 2022

A Resolution Recommending Approval of a Site Development Plan and Conditional Use Permit for the Construction of a car wash (Champion Xpress) at 699 Canyon Dr., Located in the Commercial Highway (C) Zoning District

WHEREAS, applicant 7B Building and Development has applied for review of a site development plan and conditional use permit for the construction of a 3,537 sq. ft. car wash on property at 699 Canyon Dr., Cortez, Colorado and more particularly described as:

WHEREAS, the Owner/applicant has applied to the City for review of a site development plan and conditional use permit for the construction of a new building and associated development on said property; and,

WHEREAS, the Owner/applicant presented a site plan and necessary submittal items for review by the City Planning and Zoning Commission at a regular meeting held on September 6, 2022; and,

WHEREAS, Land Use Code Section 6.14, Site Plans and 6.10 Conditional Use Permits, indicates that the owner or developer of the property may request an application of these site plan requirements for development on property located in the Commercial Business (C) Zoning District; and,

WHEREAS, the Planning and Zoning Commission reviewed the site plan for a car wash for the same property and is recommending approval of the development on said property, as evidenced in the adoption of P&Z Resolution No. 8, Series 2022; and,

WHEREAS, the Owner/applicant has held legal ownership of the property subsequent to the adoption of said P&Z Resolution No.8, Series 2022, and is interested in further development of this property; and,

WHEREAS, based on the evidence and testimony presented at said meeting, the Planning and Zoning Commission and the Owner have agreed to certain conditions of approval for the development; and,

WHEREAS, it appears that all requirements of Chapters 5.00 and 6.00 of the City's Land Use Code for development of this site have been or can be met.

NOW, THERFORE, BE IT RESOLVED BY THE CITY OF CORTEZ PLANNING AND ZONING COMMISSION:

THAT, P&Z Resolution No. 8, Series 2022, establishes the conditions of approval for the development on the afore-mentioned property; and,

THAT, the site plan and full application for said property are hereby recommended to Council for approval, subject to the following conditions to ensure compliance with the standards in the land use code for a site development plan and conditional use permit:

1. All requirements of utility providers, City departments, CDOT and affected districts must be satisfied, as outlined in adopted City Codes and other regulatory documents. Specifically, all public improvements shall comply with the minimum requirements of the 2009 City of Cortez Construction Design Standards and

CITY OF CORTEZ
PLANNING & ZONING COMMISSION
RESOLUTION NO. 8, SERIES 2022
CHAMPION XPRESS CAR WASH
699 CANYON DR.

Specifications.

2. The appropriate construction drawings and reports for the project, signed and stamped by a Colorado licensed architect or engineer, must be approved by the Building Official and City Engineer, and a building permit obtained prior to any construction on site.
3. The landscaping improvements shall be installed prior to issuances of a Certificate of Occupancy. Irrigation and maintenance must be provided. In the event that construction of the building and all other requirements are met prior to the installation of the landscaping, and the applicant desires a Certificate of Occupancy, the applicant may choose to provide a financial surety and obtain a CO in advance of completing the landscaping improvements. In this event, the applicant shall provide an assurance bond, letter of credit, or other financial security agreed to by both parties, providing a guarantee of installation of the landscaping within a time frame approved by the City of Cortez.
4. Prior to issuance of a certificate of occupancy, the applicant shall vacate the existing lot line and consolidate the properties.
5. Prior to issuance of a building permit, the applicant shall revise the plans to provide sidewalks meeting all City standards along all street frontages.
6. Prior to issuance of a sign permit, the proposed pole sign shall be revised to meet standards.
7. Operation of the car wash shall not exceed CRS 25-12-103, maximum permissible noise levels. Specifically, from 7:00am to 7:00pm noise levels shall not exceed 55 db(A) at the property line. From 7:00pm to 7:00am noise levels shall not exceed 50 db(A) at the property line.

AND THAT, the Owner/applicant are to coordinate with City staff to ensure that these conditions are fully met.

MOVED, SECONDED, AND ADOPTED THIS 6TH DAY OF SEPTEMBER, 2022

_____

Robert Rime, Chairman

ATTEST:

_____

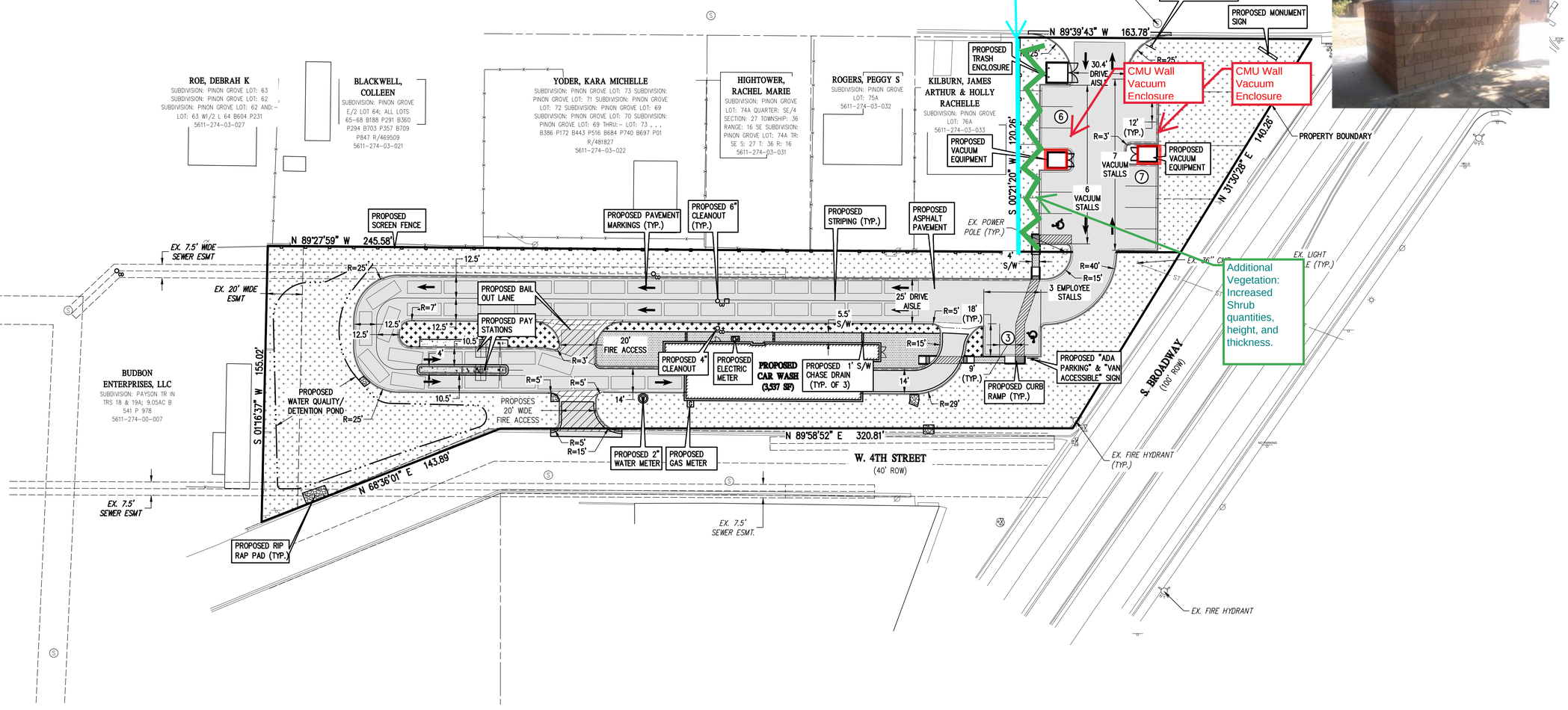
Cheryl Lindquist, Deputy City Clerk

811 Know what's below. Call before you dig.

SITE DEVELOPMENT PLANS
CHAMPION XPRESS CAR WASH

LOCATED IN SECTION 27, TOWNSHIP 36 NORTH, RANGE 16 WEST OF THE 6th PRINCIPAL MERIDIAN
CITY OF CORTEZ, MONTEZUMA COUNTY, STATE OF COLORADO

CMU Enclosure Example: COLORS AND BLOCK TYPE ARE NOT EXACT



LEGEND

EXISTING LINETYPES / PROPOSED LINETYPES

- PROPERTY BOUNDARY
- EASEMENT
- BUILDING SETBACK
- EDGE OF ASPHALT
- EDGE OF GRAVEL
- CURB AND GUTTER (SPILL/CATCH)
- EDGE OF BUILDING
- WIRE FENCE
- SOUND WALL
- ST — ST — STORM SEWER

EXISTING SYMBOLS / PROPOSED SYMBOLS

- WATER METER
- WATER MANHOLE
- FIRE HYDRANT
- IRRIGATION METER
- ADA PARKING STALL
- SIGN
- DOWNSPOUT
- LIGHT POLE

PROPOSED HATCES

- ASPHALT PAVING – REFER TO SOILS REPORT FOR PAVING SECTION
- SIDEWALK PAVING
- CONCRETE PAVING
- LANDSCAPING
- 19' × 7' VEHICLE TRACKING – PASSENGER CAR
- BAIL OUT LANE
- DETENTION/WATER QUALITY POND

SITE DATA

LOT SIZE	± 1.58 ACRES
BUILDING AREA	3,537 SF
PAVEMENT AREA	27,656 SF
LANDSCAPE AREA	36,079 SF
VACUUM PARKING	13 SPACES
EMPLOYEE PARKING	3 SPACES
ADA VAN PARKING	2 SPACE
ZONING	C, COMMERCIAL HIGHWAY
FEMA FIRM MAP	08083C0801C (ZONE X)

N

GRAPHIC SCALE
30 0 30 60
(IN FEET)
1 INCH = 30 FT

1 C2.0 C2.0 SITE PLAN

BASELINE
Engineering · Planning · Surveying
122 N. RUBEY DRIVE, SUITE 210 • GOLDEN, COLORADO 80403
P: 3035403868 • F: 3035403869 • www.baselinecorp.com

REVISION DESCRIPTION	PREPARED BY	DATE
SUBMITTAL #1	LTV	6/10/2022

DESIGNED BY LTV · DRAWN BY LAR · CHECKED BY LRM

7B BUILDING & DEVELOPMENT

CORTEZ CAR WASH
CANYON DRIVE & S. BROADWAY
SITE PLAN

CITY OF CORTEZ · MONTEZUMA COUNTY

PREPARED UNDER THE DIRECT SUPERVISION OF

PRELIMINARY NOT FOR CONSTRUCTION

FOR AND ON BEHALF OF BASELINE CORPORATION

INITIAL SUBMITTAL	6/10/2022
DRAWING SIZE	24" X 36"
SURVEY FIRM	BEC
SURVEY DATE	3/2/2022
JOB NO.	488 7B
DRAWING NAME	488 SDP_Site Plan.dwg
SHEET	2 OF 11

C2.0

N:\PLANNING LLC\488 7B Development – Cortez Site\Drawings\Planning Documents\Site Plan\488 SDP_Site Plan.dwg, 6/13/2022 2:38:39 PM, Laura Rios

CITY OF CORTEZ
123 ROGER SMITH AVENUE
CORTEZ, CO 81321

September 6, 2022 Agenda Item: 4. f.

MEMO TO: Planning and Zoning Commission

FROM:

SUBJECT: Resolution No 9, Series 2022, CBERT, LLC

BACKGROUND
see attached

RECOMMENDATION
Planning and Zoning Commission will consider approving Resolution No 9, Series 2022, CBERT, LLC

Attachments

Resolution No 9, Series 2022, CBERT

City of Cortez Planning and Building
123 Roger Smith Avenue
Cortez, CO 81321

Item No: 4f
Meeting Date: September 6, 2022
Project No. F21-000462

MEMO

TO: Members of the Cortez Planning and Zoning Commission

FROM: Nancy Dosdall, Contract City Planner

SUBJECT: Public Hearing on an Application for a preliminary plat for a 3 lot subdivision

APPLICANT: CBERT Cortez, LLC

OWNER: CBERT Cortez, LLC

ATTACHMENTS: P&Z Resolution No. 9, Series 2022
Project Narrative
Plat
Title Report

BACKGROUND

CBERT Cortez, LLC, is proposing a three lot subdivision. The property is zoned commercial highway (C). American Family Care Clinic was recently constructed on the proposed Lot 1, proposed lot 2 is a small commercial lot. Parking and access improvements have already been constructed on Lot 1 and 2. The proposed Tract 1 is 15.91 acres and currently vacant. No plans or uses have been proposed for Tract 1.

The site is bounded on the south by Highway 160/E. Main St. and an existing motel. Cortez Plaza (old Walmart site) is to the east. To the west are a mix of single family homes, vacant properties and commercial properties.

DEVELOPMENT STANDARDS

Development Standard	C Zone Requirement	Proposed
Min. lot area (sq. ft.)	3,000	10,103 (lot 2)
Min. front yard (ft.)	10’	
Min. side yard (ft)	7’	
Min. rear yard (ft)	20’	
Max. lot coverage	50%	
Min. floor area	n/a	
Max height (ft)	50’	
Parking	18 spaces	
Landscaping	10% or 4,051 sq. ft.	

ISSUES

The planning commission shall, in its action on the preliminary plat, consider the physical arrangement of the subdivision, and determine the adequacy of street rights-of-way and alignment and the compliance with the Cortez thoroughfare plan, the street standards of the city, the existing street pattern in the area and with all applicable provisions of the comprehensive plan. The planning commission shall also ascertain that adequate easements for proposed or future utility service and surface drainage are provided, and that the lot size and area are adequate to comply with the minimum requirements for the underlying zone district and for the type of sanitary sewage disposal proposed.

The proposed lot 2 is small but meets the C district standards for minimum lot size. Creating a lot for the existing clinic also appears to fully meet all requirements for landscaping, lot coverage and parking. Adequate cross easements for access and parking and covenants for shared maintenance of the parking for lots 1 and 2 must be provided. Lot 2 will also be subject to all site development requirements at the time of construction.

The major issues with the requested subdivision concern adequate easements and compliance with the Major Street Plan. There are multiple future streets proposed through the proposed Tract 1 including the extension of Texas Street, extension of Montezuma Ave and the extension of Kansas Street to connect with Hawkins.

The project as submitted appears to meet all development standards. Conditions below and suggested conditions will ensure adequate access, drainage, and all other aspects to promote the public health, safety, order, convenience, prosperity and general welfare.

ALTERNATIVES

1. The Commission can recommend that the Council approve the preliminary plat for the CBERT Subdivision
2. The Commission can recommend denial of the application for the preliminary plat and state their reasons;
3. The Commission can ask for more information and table the application; or
4. The Commission can recommend that Council approve the preliminary plat, and state any conditions they feel would be necessary to ensure compliance with the Land Use Code.

RECOMMENDATION

Staff recommends Alternative "4" above, approval of the preliminary plat through P&Z Resolution No. 9**,** Series 2022, with conditions.

If the Planning and Zoning Commission so chooses to follow the recommendation of Staff, the Commission can **make the motion to recommend that Council approve the preliminary plat for the CBERT LLC Subdivision on property located in**

the E ½, SW ¼ NE ¼ of Section 25, T36N R 16W, NMPM, in the Commercial Highway (C) zone, as submitted by CBERT Cortez, LLC, through P&Z Resolutions No. 9, Series 2022, with the following conditions:

1. All requirements of utility providers, City departments, CDOT and affected districts must be satisfied, as outlined in adopted City Codes and other regulatory documents.
2. Prior to recordation of the final plat, the plat shall be revised to dedicate all property directly west of the two outlots and east of North Texas Street to the City of Cortez for right of way purposes and to ensure adequate public access to the lots.
3. Prior to recordation of the final plat, the plat shall be revised to be compliant with the Master Street Plan by dedicating right of way for the future locations of Montezuma Ave and North Kansas Street.

CITY OF CORTEZ
PLANNING AND ZONING COMMISSION
RESOLUTION NO. 9, SERIES 2022

A Resolution Recommending Approval of a Preliminary Plat for CBERT Cortez LLC Subdivision, a 3 lot Subdivision located in the E ½, SW ¼ NE ¼, S25, T36N, R16W, N.M.P.M, Located in the Commercial Highway (C) Zoning District

WHEREAS, owner/applicant CBERT Cortez LLC has applied for review of a preliminary plat for to divide a 16.54 acre tract into 2 lots and 1 tract located in the E ½, SW ¼ NE ¼, S25, T36N, R16W, N.M.P.M Colorado; and,

WHEREAS, the Owner/applicant has applied to the City for review of a preliminary plat on said property; and,

WHEREAS, the Owner/applicant presented a preliminary plat and other submittal items for review by the City Planning and Zoning Commission at a regular meeting held on September 6, 2022; and,

WHEREAS, Land Use Code Section 6.04, Preliminary Plat, indicates that the owner or developer of the property may request a subdivision pursuant to all code requirements; and,

WHEREAS, the Planning and Zoning Commission reviewed the preliminary plat for a 2 lot and 1 tract subdivision for the same property and is recommending approval of the preliminary plat on said property, as evidenced in the adoption of P&Z Resolution No. 9, Series 2022; and,

WHEREAS, the Owner/applicant has held legal ownership of the property subsequent to the adoption of said P&Z Resolution No. 9, Series 2022, and is interested in further development of this property; and,

WHEREAS, based on the evidence and testimony presented at said meeting, the Planning and Zoning Commission and the Owner have agreed to certain conditions of approval for the development; and,

WHEREAS, it appears that all requirements of Chapters 4.00 and 6.00 of the City's Land Use Code for subdivision of this site have been or can be met.

NOW, THERFORE, BE IT RESOLVED BY THE CITY OF CORTEZ PLANNING AND ZONING COMMISSION:

THAT, P&Z Resolution No. 9, Series 2022, establishes the conditions of approval for the subdivision on the afore-mentioned property; and,

THAT, the preliminary plat and full application for said property are hereby recommended to Council for approval, subject to the following conditions to ensure compliance with the standards in the land use code for a preliminary plat:

1. All requirements of utility providers, City departments, CDOT and affected districts must be satisfied, as outlined in adopted City Codes and other regulatory documents.
2. Prior to recordation of the final plat, the plat shall be revised to dedicate all property directly west of the two outlots and east of North Texas Street to the City of Cortez for right of way purposes and to ensure adequate public access to the lots.
3. Prior to recordation of the final plat, the plat shall be revised to be compliant with the Master Street Plan by

dedicating right of way for the future locations of Montezuma Ave and North Kansas Street.

AND THAT, the Owner/applicant are to coordinate with City staff to ensure that these conditions are fully met.

MOVED, SECONDED, AND ADOPTED THIS 6th DAY OF SEPTEMBER, 2022

_____

Robert Rime, Chairman

ATTEST:

_____

Cheryl Lindquist, Deputy City Clerk

CBERT Cortez, LLC Subdivision

Located in E1/2 SW1/4 NE1/4, S25, T36N, R16W, N.M.P.M.

City of Cortez, Montezuma County, Colorado

Vicinity Map - Scale: 1" = 5'

Scale : 1 inch = 60 feet
Lineal Units are U.S. Survey Feet
Contour Interval = 1 Foot
Basis of Bearings: Bearings are based on the assumption that the east line of the Southwest 1/4 Northeast 1/4 of Section 25, bears South 00°03'34" East, monumented as shown hereon

60 0 60

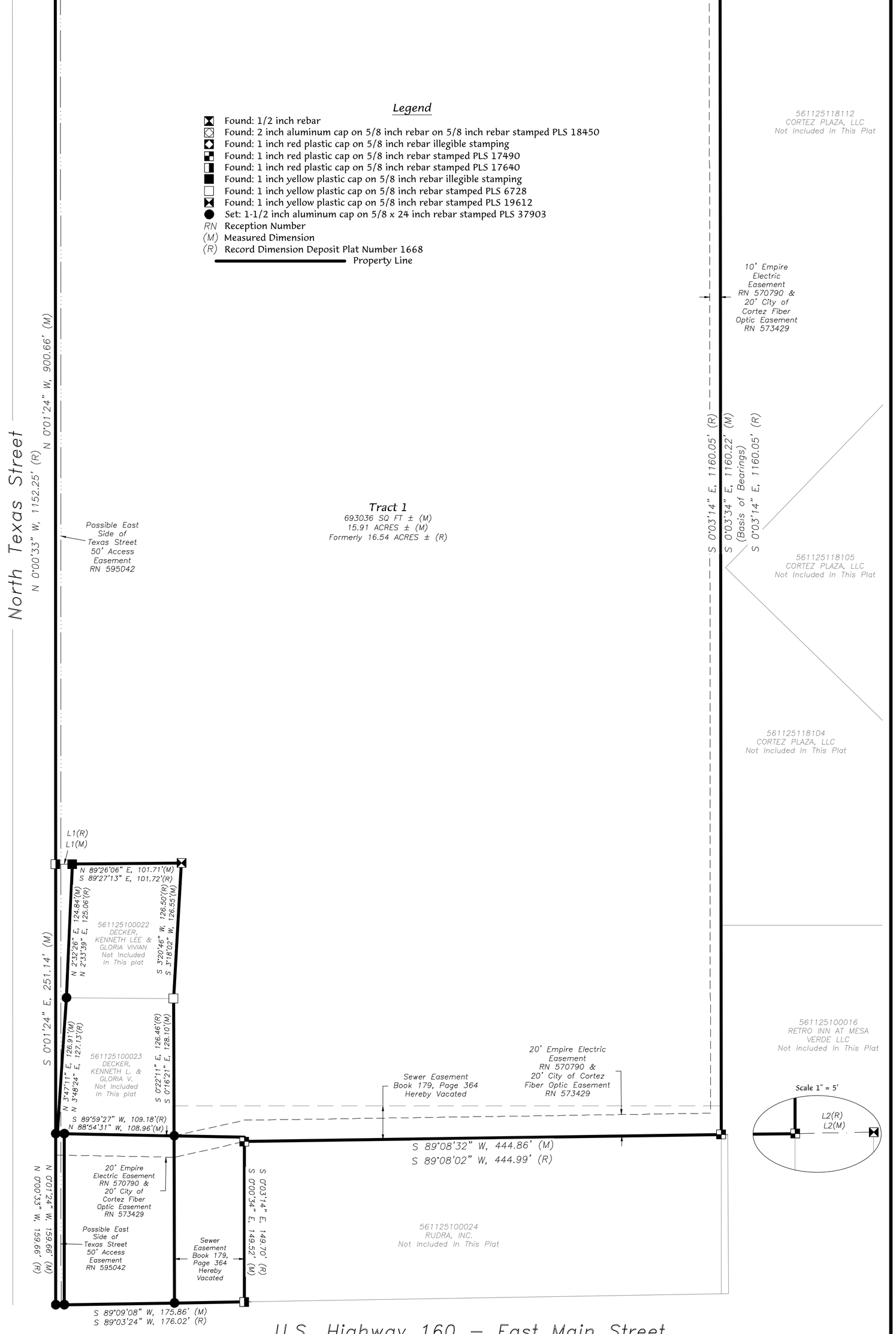
N

Land Use Table

Original
PAAS - CBERT 16.54 Acres (M) ±

Subdivision
Tract 1 = 15.91 Acres (M) ±
Tract A = 0.03 Acres (M) ±
Lot 1 = 0.37 Acres (M) ±
Lot 2 = 0.23 Acres (M) ±
Total 16.54 Acres (M) ±

Line Table		
L#	Direction	Length
L1(M)	S 89°20'20" W	15.69'
L1(R)	N 89°27'13" W	15.74'
L2(M)	N 89°02'25" E	6.09'
L2(R)	S 75°23'05" E	5.82'



Legend

- Found: 1/2 inch rebar
- Found: 2 inch aluminum cap on 5/8 inch rebar on 5/8 inch rebar stamped PLS 18450
- Found: 1 inch red plastic cap on 5/8 inch rebar illegible stamping
- Found: 1 inch red plastic cap on 5/8 inch rebar stamped PLS 17490
- Found: 1 inch red plastic cap on 5/8 inch rebar stamped PLS 17640
- Found: 1 inch yellow plastic cap on 5/8 inch rebar illegible stamping
- Found: 1 inch yellow plastic cap on 5/8 inch rebar stamped PLS 6728
- Found: 1 inch yellow plastic cap on 5/8 inch rebar stamped PLS 19612
- Set: 1-1/2 inch aluminum cap on 5/8 x 24 inch rebar stamped PLS 37903
- RN Reception Number
- (M) Measured Dimension
- (R) Record Dimension Deposit Plat Number 1668
- Property Line

CERTIFICATE OF SURVEYOR

I hereby state that this survey and plat was prepared by me or under my direct responsibility, supervision and checking, and that, in my professional opinion, they are true and correct to the best of my knowledge, belief and information based on the applicable standards of practice of Professional Land Surveyors in the State of Colorado. I also state that this survey and plat is not a guaranty or warranty, either expressed or implied.

PRELIMINARY

Joshua J. Casselberry, P.L.S.
Colorado Registration No. 37903

1. SURVEY CONTROL NOTE: Location of improvements is based upon found survey monuments as shown hereon.
2. TITLE RESEARCH: Title Research - Title, easement and Right-of-Way research was conducted by Stewart Title Guaranty Company A Colorado Limited Liability Company per File No.: 2019-10-10 effective date December 19, 2019 at 2:41 PM and not from research conducted by Moreno Surveying & Geographics, Inc. Any and all parties having interest in subject tracts of land are hereby referred to said title commitments and any title policies issued at a later date.
3. According to Colorado law you must commence any legal action based upon any defect in the this survey within three (3) years after you first discovered such defect. In no event may any action based upon any defect in this survey be commenced more than ten (10) years from the date of the certification shown hereon.
4. Any encroachment of fences across property may indicate possessory rights are accruing.

CERTIFICATE OF DEDICATION AND OWNERS

That CBERT Cortez, LLC, A Colorado Limited Liability Company, whose legal address is 50 Henry Street, Cortez, Colorado 81321, being the legal and record owner of one parcel of land located in E1/2SW1/4NE1/4, S25, T36N, R16W, N.M.P.M., being more particularly as follows:

Beginning at the NE 1/16 corner of said Section 25; thence, South 00°03'14" East a distance of 1160.05 feet along the East line of said SW1/4NE1/4 of said Section 25; thence, South 89°08'02" West a distance of 444.99 feet along the North line of that property recorded in Book 457 at Page 738; thence, South 00°03'14" East a distance of 149.70 feet along the West line of that property described in Book 457 at Page 738; thence, South 89°03'24" West a distance of 176.02 feet along the North right of way line of US Highway 160; thence, North 00°00'33" West a distance of 159.66 feet along the East line of the West 40.00 feet of said E1/2SW1/4NE1/4 of said Section 25; thence, North 89°59'27" East a distance of 110.85 feet; thence, North 00°22'11" West a distance of 126.46 feet; thence, North 03°20'46" East a distance of 126.50 feet; thence, North 89°27'13" West a distance of 101.72 feet; thence, South 02°33'39" West a distance of 125.06 feet; thence, South 03°48'24" West a distance of 127.13 feet; thence, South 89°59'27" West a distance of 1.67 feet to a point on the East line of the West 40.00 feet of said E1/2SW1/4NE1/4 of said Section 25; thence, North 00°00'33" West a distance of 1152.25 feet along said East line of the West 40.00 feet of said E1/4SW1/4NE1/4 of said Section 25; thence, North 89°18'33" East a distance of 619.96 feet along the North line of said E1/2SW1/4NE1/4 of said Section 25, back to the point of beginning.
SUBJECT TO all easements of record or prescriptive.

County of Montezuma,
State of Colorado.

Hereby certify that they have caused the same to be platted into tracts and lots as shown on this plat under the name and style of CBERT Cortez, LLC Subdivision, consisting of two tracts, Tract A, and Tract 1, and two lots named Lot 1 and Lot 2;
Hereby dedicate to the City of Cortez and to the public utilities, Tract A, for public right-of-way and public utilities;
Hereby dedicate a 24 foot Access and Utility Easement to the public and public utilities;
Hereby dedicate to the public utilities those portions labeled but not limited to, electric lines, gas lines, telephone lines, sewer lines, water lines and communications cables. Also, a perpetual easement for the installation and maintenance of utilities and drainage facilities is reserved and dedicated to the public utilities over and through the private roads and streets within this subdivision, and according to the easements as shown on this plat; together with the right to trim interfering trees and shrubs; together with perpetual rights of ingress and egress for installation, maintenance, and replacement of such lines. Landowner use of said utility easement areas shall be restricted as to maintaining the easement area clear of all buildings structures or other obstructions. Other easements, if any, are as shown on this plat. Said easements and rights shall be utilized in a reasonable and prudent matter.

Hereby Vacate the Sewer Easement recorded at Book 179, Page 364 on April 27, 1953, as shown hereon.

THIS PLAT IS HEREBY EXECUTED BY THE FOLLOWING PARTIES:

By _____,
_____, Owner of CBERT Cortez, LLC, a Colorado Limited Liability Company

STATE OF COLORADO]
SS]
COUNTY OF MONTEZUMA]

Subscribed and sworn to before me this _____ day of _____, 2022, by _____, Owner of CBERT Cortez, LLC, a Colorado Limited Liability Company.

Witness my hand and seal.

_____ _____
Notary Public My Commission Expires

Reviewed and Recommended for approval by the Planning and Zoning Commission, City of Cortez.

By_____ _____
Chairman City Clerk

Reviewed and Accepted by the City of Cortez, Montezuma County, Colorado this _____ day of _____ , 2022.

_____ _____
Mayor, City of Cortez City Clerk

STATE OF COLORADO]
SS]
COUNTY OF MONTEZUMA]

Subscribed and sworn to before me this _____ day of _____, 2022, by _____, Mayor, and _____, City Clerk for the City of Cortez, Colorado

Witness my hand and seal.

_____ _____
Notary Public My Commission Expires

CERTIFICATE OF MORTGAGEE

Per Deed of Trust recorded December 19, 2019 at Instrument Number 626877, in the Montezuma County Recording Office, the following party, having a secured interest in the subject property, does hereby consent to the recording of, and agrees not to disturb the easements set forth on, this plat.

By_____
First National Bank, Cortez

This plat was filed for record in the office of the County Clerk and Recorder of Montezuma County Colorado at _____ M. on the _____ day of _____ , and duly filed under Reception Number_____;
Plat Book _____ , Page _____

_____
Montezuma County Clerk and Recorder

CERTIFICATE OF SURVEYOR

I hereby state that this survey and plat was prepared by me or under my direct responsibility, supervision and checking, and that, in my professional opinion, they are true and correct to the best of my knowledge, belief and information based on the applicable standards of practice of Professional Land Surveyors in the State of Colorado. I also state that this survey and plat is not a guaranty or warranty, either expressed or implied.

Joshua J. Casselberry, P.L.S.
Colorado Registration No. 37903

PRELIMINARY

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EASEMENTS ACCEPTED AND APPROVED:

_____ _____
City of Cortez Date
(as to water lines)

_____ _____
Cortez Sanitation District Date
(as to sewer lines)

_____ _____
Empire Electric Association Date

_____ _____
Atmos Energy Corporation Date

_____ _____
Qwest Date

_____ _____
RUDRA, Inc. Date

CBERT Cortez, LLC Subdivision

Located in E1/2 SW1/4 NE1/4 S25, T36N, R16W, N.M.P.M.
City of Cortez
Montezuma County, Colorado

Moreno & Surveying Geographics
635 East 2nd Ave, Durango, CO (970) 385-8535

DATE: 6/29/2022 SCALE: 1 inch = 60 feet
DRAWN BY: JM CHECKED BY: JC JOB NO.: 2020-125

CBERT Cortez, LLC Subdivision

Located in E1/2 SW1/4 NE1/4, S25, T36N, R16W, N.M.P.M.

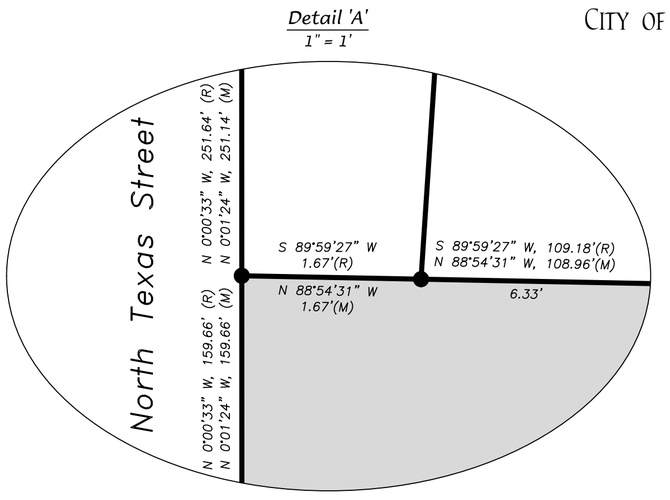
City of Cortez, Montezuma County, Colorado

10 0 10

Scale : 1 inch = 10 feet
Lineal Units are U.S. Survey Feet
Basis of Bearings: Bearings are based on the assumption that the east line of the Southwest 1/4 Northeast 1/4 of Section 25, bears South 00°03'34" East, monumented as shown hereon.

N

Detail 'A'
1" = 1'



N 0°01'24" W, 251.64' (R)
N 0°01'24" W, 251.14' (M)

N 3°47'11" E, 126.91'(M)
N 3°48'24" E, 127.13'(R)

S 0°22'11" E, 126.46'(R)
S 0°16'21" E, 128.10'(M)

Tract 1
693036 SQ FT ± (M)
15.91 ACRES ± (M)
Formerly 16.54 ACRES ± (R)

See Detail 'A'

561125100023
DECKER, KENNETH L. & GLORIA V.
Not Included In This plat

S 89°59'27" W, 109.18'(R)
N 88°54'31" W, 108.96'(M)

Sewer Easement Book 179, Page 364 Hereby Vacated

S 88°54'31" E, 65.28'

4.19'
5.90'(M)
438.96'(M)

S 89°08'32" W
444.86' (M)
S 89°08'02" W
444.99' (R)

20' Empire Electric Easement RN 570790 & 20' City of Cortez Fiber Optic Easement RN 573429

24' Access and Utility Easement Hereby Dedicated

Tract A
1276 SQ FT ±
0.03 ACRES ±

Lot 1
16175 SQ FT ±
0.37 ACRES ±

Lot 2
10103 SQ FT ±
0.23 ACRES ±

N 0°00'59" W, 155.92'

S 0°00'34" E, 153.71'

S 0°03'14" E, 149.70' (R)
S 0°00'34" E, 149.52' (M)

561125100024
RUDRA, INC.
Not Included In This Plat

North Texas Street

N 0°01'24" W, 159.66' (M)
N 0°00'33" W, 159.66' (R)

S 0°01'24" E, 159.39'

Possible East Side of Texas Street 50' Access Easement RN 595042

Sewer Easement Book 179, Page 364 Hereby Vacated

8.00'

102.60'

S 89°09'08" W, 175.86' (M)
S 89°03'24" W, 176.02' (R)

65.26'

6.65'(M)
N 89°12'59" E

U.S. Highway 160 – East Main Street

Legend

- Found: 1/2 inch rebar
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Joshua J. Casselberry, P.L.S.
Colorado Registration No. 37903

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CBERT Cortez, LLC Subdivision

Located in E1/2 SW1/4 NE1/4 S25, T36N, R16W, N.M.P.M.
City of Cortez
Montezuma County, Colorado

Moreno & Surveying Geographics
635 East 2nd Ave, Durango, CO (970) 385-8535

Sheet 2 of 2

DATE: 6/29/2022 SCALE: 1 inch = 10 feet
DRAWN BY: JM CHECKED BY: JC JOB NO.: 2020-125

CITY OF CORTEZ
123 ROGER SMITH AVENUE
CORTEZ, CO 81321

September 6, 2022 Agenda Item: 6. a.

MEMO TO: Planning and Zoning Commission

FROM: Cheryl Lindquist, Permit Technician/Deputy City Clerk

SUBJECT: Resolution No 10, Series 2022, an encroachment for 102 E. North St., Patricia Berens.

BACKGROUND
see attached

RECOMMENDATION
Planning & Zoning Commissioners will consider approving Resolution No 10, Series 2022, an encroachment for 102 E. North St., Patricia Berens.

Attachments

Resolution No 10, Series 2022, Berens

6City of Cortez Planning and Building
123 Roger Smith Avenue
Cortez, CO 81321

Item No: 6a
Meeting Date: September 6, 2022
Project No. F22-000500

MEMO

TO: Members of the Cortez Planning and Zoning Commission

FROM: Nancy Dosdall, Contract City Planner

SUBJECT: Public Hearing on an Application for an encroachment permit of .6' into Beech St ROW

APPLICANT: Patricia L. Berens

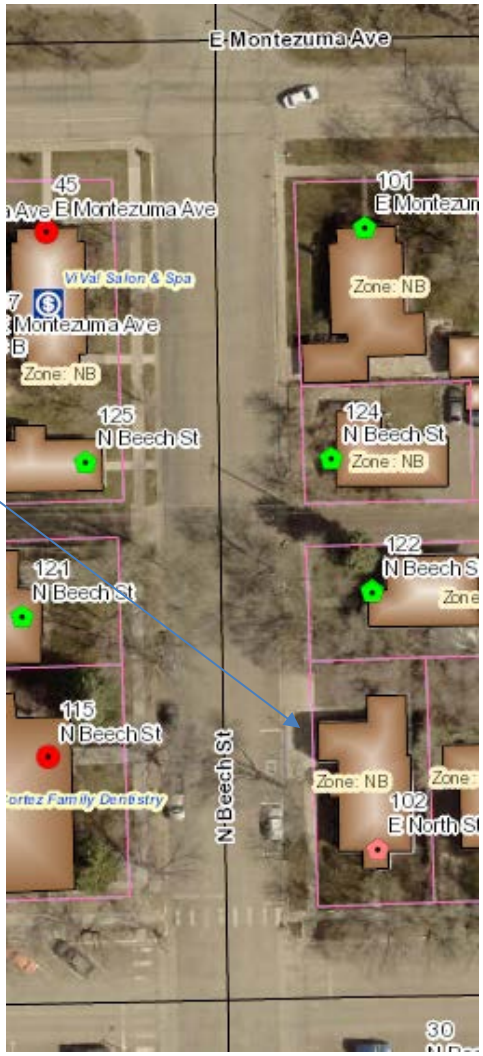
OWNER: Patricia L. Berens

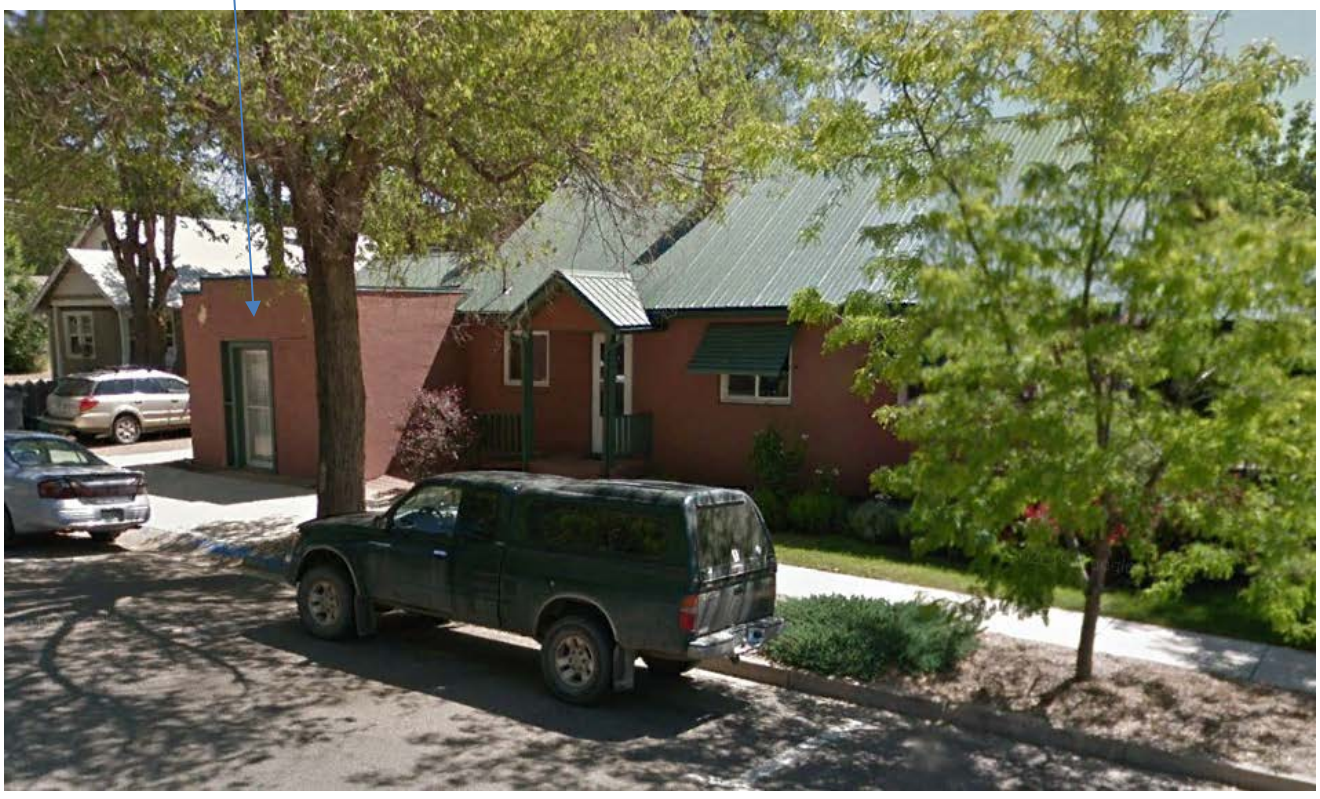
ATTACHMENTS: Application package

BACKGROUND
102 E. North St. is an existing property recently purchased by Patricia L. Berens. The property is zoned NB and has been used variously as a residence and commercial office. Ms. Berens wishes to use it as a residence. County records indicate that it was constructed in 1943. A recent survey showed an encroachment into the Beech St. ROW of .6' or 7.2 inches (see attached survey.

REQUEST
Section 6.26 Encroachment Permits, of the land use code allows for the granting of an encroachment permit when it is identified as an inadvertent encroachment by an existing building that was contracted prior to city regulations for setback requirements or inspections. The structure was constructed in 1943, according to County records, although the area of encroachment appears to be an add-on, it does not appear to be recent. A 7' side yard setback is required in the NB zone, the structure will continue to be legally non-conforming, no variance is required for existing development.

Area of encroachment





DISCUSSION

The following criteria apply for Encroachment Permits:

1. The proposed encroachment is compatible with adjacent existing uses and construction in the zoning district. Compatibility shall be expressed in terms of appearance, architectural scale and features, site design and scope, as well as the control of adverse impacts including noise, vibration, smoke, fumes, gas, dust, odor, lighting, glare, traffic circulation, parking, or other undesirable or hazardous conditions.
2. The proposed encroachment has incorporated design features sufficient to protect adjacent uses including but not limited to: service areas, pedestrian and vehicular circulation, safety provisions, access ways to and from the site.
3. Proposed structures must demonstrate that they are necessary and desirable. Undesirable impacts created by these structures shall be controlled or eliminated.
4. Provisions for proper maintenance of the structure, parking and loading areas, drives, lighting, and signs, shall be provided.
5. The proposed encroachment shall not prove to be a restriction on safety, city or other business, or impact adjacent businesses and properties. Potential safety hazards, adequate protection of pedestrian traffic and benefits to the downtown area must be assessed during the review process.
6. The council must determine whether this proposed awning is in keeping with city policy that has been applied to other encroachment permits for similar applications.
7. The encroachment into the right-of-way does not interfere with any city function, or with neighboring residents. There will be sufficient head-room above the sidewalk area as indicated on the submitted drawing and the encroachment is minimal and will not impose a lighting problem for the walking surface.

The encroachment is existing, integral to the structure and has been in place for many years without issue or safety hazard. The structure does not interfere with the existing sidewalk.

ALTERNATIVES

1. The Commission can recommend that the Council approve the encroachment permit for 102 E North St;
2. The Commission can recommend denial of the application for the encroachment permit and state their reasons;
3. The Commission can ask for more information and table the application; or
4. The Commission can recommend that Council approve the encroachment permit, and state any conditions they feel would be necessary to ensure compliance with the Land Use Code.

RECOMMENDATION

Staff recommends Alternative "1" above, approval of the encroachment permit through P&Z Resolution No. 10**, S**eries 2022.

If the Planning and Zoning Commission so chooses to follow the recommendation of Staff, the Commission can **make the motion to recommend that Council approve the encroachment permit for 102 E. North St to encroach .6' into the Beech St. ROW, as submitted by Patricia L Berens through P&Z Resolutions No. 10, Series 2022.**

Encroachment Permit Application Checklist

August 8, 2022
Date

APPLICANT: Patricia L. Berens

ADDRESS: 102 E. North St., Cortez, Colorado 81321

PHONE/FAX: 719-542-1439

FOR: 102 E. North St., Cortez, CO

Submittal Requirements:

_____ Application

_____ Letter of petition requesting encroachment permit

_____ Title certificate from licensed title company or attorney listing:
- The name of the property owner(s)
- All liens
- All easements and judgments of record affecting the subject property

The Petition Shall Show or be Accompanied By:

_____ Street address and legal description of the property

_____ Any and all plans, information, operating data and expert evaluation necessary to clearly explain the location, function & characteristics of any building or proposed use

_____ Filing fee ($100) to cover the costs of review in accordance with the current adopted fee schedule

_____ Site plan showing encroachment structure, existing sidewalks, buildings, etc.

_____ Narrative describing and demonstrating the need for the encroachment. The Planning and Zoning Commission and City Council will review the encroachment using the criteria listed in Chapter 6.26(f) (attached). The narrative should discuss items 1-7 in the review criteria.

Letter of Petition Requesting Encroachment Permit

I am requesting an Encroachment Permit for my home at
102 E. North Street, Cortez, Colorado 81321

Lots 15-18, Block 18
Cortez Original Townsite
County of Montezuma
State of Colorado

Thank you

Patricia L Berens Aug. 8 2022

Patricia L. Berens

Narrative describing and demonstrating the need for encroachment permit:

The problem identified in the ILC (Improvement Location Certificate) for 102 E. North Street, dated March 31, 2022 by William Brian McLaughlin is the following:

Wall appears to be encroached into Beech Street R.O.W. 0.6" +/

The wall referred to appears to have converted a garage, connected to the house and extending out from the house, into an enclosed room. This appears to be a conversion made a long time ago. The wall is necessary for the existence of the room. The wall is 15 feet 6 inches long. The wall stops 17 inches back from the current sidewalk along Beech Street. The wall does not interfere with parking or traffic on the street or sidewalk. It does not interfere with exit or entrance to the house or neighboring homes or businesses. It does not interfere with street lighting. There are no plans to extend the wall. The only lien is the mortgage currently held by Chase. There are no or judgments of record affecting the property. The house will be used as a personal residence.

There is a history that the problem of construction not aligning with the original city plat occurs all along Beech Street and has required allowances on other properties in the past. Because of this ILC finding, to complete the sale of this home required finding a willing title insurer. In this case the insurer was more expensive and willing to insure only the title company, but not the buyer.

Attachments:

Title Certificate
Filing Fee - $100
ILC map of the property showing encroachment

ILC – THE PATRICIA L. BERENS LIVING TRUST
LENDER – ALPINE BANK
ATTENTION: PHILLIP SCHOON
APRIL 19, 2022
File# SS22-04-105

COMMITMENT FOR TITLE INSURANCE
Order No. MO22201275
Effective Date: March 31, 2022
Colorado Title and Closing Services, LLC

Improvement Location Certificate of

The Land referred to in this Commitment is located in the City of Cortez, County of Montezuma, State of Colorado and described as follows:

The West 45 feet of Lots 15,16,17, and 18 Block 18, THE TOWN OF CORTEZ AND CHAMBERLIN'S ADDITION TO THE CITY OF CORTEZ, according to the plat thereof filed for record August 20 1890 in Book 3 at Page 36

Notes;

1)EXCEPTIONS IN TITLE POLICY DO NOT APPLY TO THIS ILC EXCEPT AS SHOWN HEREON.

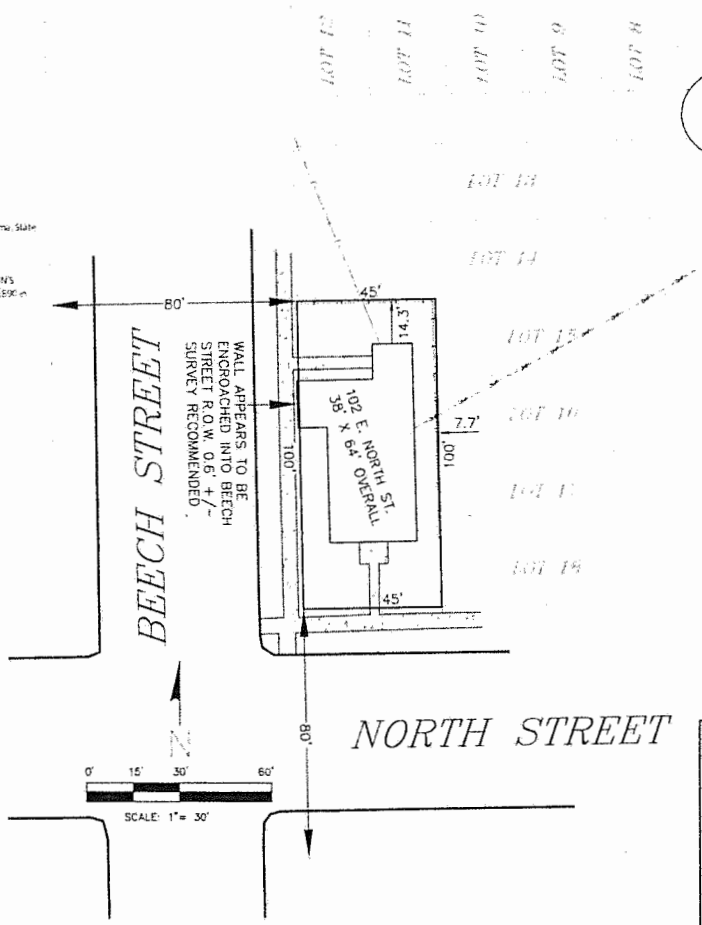
2)FENCE LINES MAY HAVE BEEN ACCEPTED AS BOUNDARIES BY ADJOINERS AND PREVIOUS OWNERS.

IMPROVEMENT LOCATION CERTIFICATE

I hereby certify that this improvement location certificate was prepared for THE PATRICIA L. BERENS LIVING TRUST, that it is not a land survey plat nor improvement survey plat and that it is not to be relied upon for establishment of fence, building, or other future improvements or lines.

I further certify that the improvements on the above described parcel on the date of April 19, 2022 except utility connections are entirely within the boundaries of the parcel, except as shown hereon, that there are no encroachments upon the described premises by improvements on any adjoining premises , except as indicated and that there is no apparent evidence or sign of any easement crossing or burdening any party of said parcel, except as noted.

WILLIAM BRIAN McLAUGHLIN P.L.S. 38411



SURVEY STANDARD LLC
COLORADO
25 N. Mildred St. – Cortez, CO 81321
Phone (970)739-3312
Email: brian@4corners-survey.com

E RECORDED DATE 5/24/22
COUNTY Montezuma
REC. NO. 645336

SPECIAL WARRANTY DEED

THIS DEED, Made this 24th Day of May, 2022

Between **CORTEZ PARTNERS, LLC**

of the County of Montezuma and State of Colorado, grantor

and **PATRICIA L. BERENS**

whose legal address is 3520 North Kingswood Dr
Boise, ID 83704

of the County of Ada and State of Idaho, grantee

State Documentary Fee
Date: 5/24/22
$ 28.50

WITNESSETH, That the grantor for and in consideration of the sum of
----------TEN DOLLARS AND OTHER GOOD AND VALUABLE CONSIDERATION----------
the receipt and sufficiency of which is hereby acknowledged, has granted, bargained, sold and conveyed, and by these presents does grant, bargain, sell, convey and confirm, unto the grantee, its successors and assigns forever, all the real property together with improvements, if any, situate, lying and being in the County of Montezuma and State of Colorado described as follows:

The West 45 feet of Lots 15, 16, 17 and 18, Block 18, THE TOWN OF CORTEZ AND CHAMBERLIN'S ADDITION TO THE CITY OF CORTEZ, according to the plat thereof filed for record August 20, 1890 in Book 3 at Page 36.

As known by street and number as: 102 E. North St.
Cortez, CO 81321

TOGETHER with all and singular the hereditaments and appurtenances thereunto belonging, or in anywise appertaining, and the reversion and reversions, remainder and remainders, rents, issues and profits thereof, and all the estate, right, title, interest, claim and demand whatsoever of the grantor, either in law or equity, of, in and to the above bargained premises, with the hereditaments and appurtenances.

TO HAVE AND TO HOLD the said premises above bargained and described, with the appurtenances, unto the grantee, its successors and assigns forever. The grantor, for itself, its successors does covenant, and agree that the grantor shall and will WARRANT AND FOREVER DEFEND the above bargained premises in the quiet and peaceable possession of the grantee, its successors and assigns, against all and every person or persons lawfully claiming the whole or any part thereof, by, through or under the grantor, except: 2022 taxes due and payable in the year 2023. Subject to Statutory Exceptions as defined in CRS § 38-30-113(5).

The singular number shall include the plural, the plural the singular, and the use of any gender shall be applicable to all genders.

IN WITNESS WHEREOF, the grantor has executed this deed on the date set forth above.

CORTEZ PARTNERS, LLC
BY: Charles Mitchell Toms for Cortez Partners LLC
CHARLES MITCHELL TOMS, JR., MANAGING MEMBER

STATE OF COLORADO
COUNTY OF MONTEZUMA

The foregoing instrument was acknowledged before me this 24th Day of May, 2022

By: CHARLES MITCHELL TOMS, JR. AS MANAGING MEMBER OF CORTEZ PARTNERS, LLC

My commission expires: 2/7/24

LIZ GAGNEAUX
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID #19964001609
My Commission Expires February 7, 2024

Witness my hand and official seal

Notary Public

SPECIAL WARRANTY DEED

MN02220275

T.C. & CLOSING SERVICES CTS Since 1946

DEPARTMENT OF PLANNING & BUILDING
123 ROGER SMITH AVE, CORTEZ, CO 81321
PH. 970-565-3402 FAX 970-565-8172
24 HR. INSPECTION LINE: 970-564-4071

City of Cortez File Number: 22-000500	Encroachment Permit LU22-000018

Project Address: 102 East North Street
Legal Description:

Owner:
Name: Patricia Berens
Address: 102 E. North St.
Cortez, CO 81321

Phone:

Project Description: Patricia Berens

Special Conditions: Note: This is a receipt only -- The Site Plan is subject to approval by the City of Cortez

Fees:

Description	Total Cost
Encroachment Permit Fee	100.00
Total:	**100.00**
Total Paid:	**100.00**
Balance Due:	**0.00**

Payments:

Date	Type	Reference	Receipt	ReceivedFrom	Amount
08/08/2022	Check	1062	219	Patricia Berens	100.00

DEPARTMENT OF PLANNING & BUILDING
123 ROGER SMITH AVE, CORTEZ, CO 81321
PH. 970-565-3402 FAX 970-565-8172

CORTEZ

City of Cortez
RECEIPT

August 08, 2022

Permit Applicant:	Patricia Berens
Permit Number:	LU22-000018
Site Address:	102 East North Street Cortez, CO 81321
Property Owner:	Patricia Berens

PERMIT FEES:

Description	**Total Cost**
Encroachment Permit Fee	100.00

TOTAL PERMIT FEES: 100.00

AMOUNT PAID:

Date	Type	Reference	Receipt	Received From	Amount
08/08/2022	Check	1062	219	- Patricia Berens	$100.00

BALANCE DUE: 0.00

CITY OF CORTEZ
PLANNING AND ZONING COMMISSION
RESOLUTION NO. 10, SERIES 2022

A Resolution Recommending Approval of an Encroachment Permit for 102 E. North St. to encroach a total of .6' into Beech St. Right of Way

WHEREAS, owner/applicant Patricia Berens has applied for an Encroachment Permit for the property located at 102 E. North St, Cortez, Colorado and more particularly described as:

The west 45 feet of Lots 15, 16, 17 and 18, Block 18 The Town of Cortez and Chamberlin's Addition to the Cit of Cortez, according to the plat thereof filed for record August 20, 1890, in Book 3 at Page 36., County of Montezuma, State of Colorado.

WHEREAS, the Owner/applicant has applied to the City for review of an encroachment permit for an existing structure that encroaches into the Beech Street Right of Way; and,

WHEREAS, the Owner/applicant presented a survey and necessary submittal items for review by the City Planning and Zoning Commission at a regular meeting held on September 6, 2022; and,

WHEREAS, Land Use Code Section 6.26, Encroachment Permits, indicates that the owner or developer of the property may request an encroachment permit for inadvertent encroachment by an existing building that was constructed prior to city regulations for setback requirements or inspections or unknowingly constructed so as the encroach into a public right-of-way; and,

WHEREAS, the Planning and Zoning Commission reviewed the request and is recommending approval of the encroachment permit, as evidenced in the adoption of P&Z Resolution No. 10, Series 2022; and,

WHEREAS, the Owner/applicant has held legal ownership of the property subsequent to the adoption of said P&Z Resolution No. 10, Series 2022; and,

WHEREAS, it appears that all requirements of Section 6.26 of the City's Land Use Code for issuance of the encroachment permit have been met.

NOW, THERFORE, BE IT RESOLVED BY THE CITY OF CORTEZ PLANNING AND ZONING COMMISSION:

THAT, the requested .6 foot encroachment permit for said property is hereby recommended to Council for approval.

CITY OF CORTEZ
PLANNING & ZONING COMMISSION
RESOLUTION NO. 10, SERIES 2022
102 E. NORTH ST ENCROACHMENT
INTO BEECH ST

MOVED, SECONDED, AND ADOPTED THIS 6th DAY OF SEPTEMBER 2022

_____

Robert Rime, Chairman

ATTEST:

_____

_ Cheryl Lindquist, Deputy City Clerk

CITY OF CORTEZ
123 ROGER SMITH AVENUE
CORTEZ, CO 81321

September 6, 2022 Agenda Item: 7. a.

MEMO TO: Planning and Zoning Commission

FROM:

SUBJECT: August 2022 Building Permits

BACKGROUND
see attached

RECOMMENDATION
Planning and Zoning Commission may comment on August 2022 Building Permits

Attachments

August 2022 Permits Issued

Permit Type	Sub Type	Permit#	Address	Issue Date
Building	Accessory Structure	B22-000107	1006 South Market Street	08/17/2022
Building Total	**Accessory Structure Total**			**1**
Building	Manufactured Home	B22-000103	405 West 7th Street	08/11/2022
Building Total	**Manufactured Home Total**			**1**
Building	New Residential	B22-000078	1720 KALEIGH Circle SOUTH	08/15/2022
Building Total	**New Residential Total**			**1**
Building	Other	B22-000108	112 West Main Street	08/22/2022
Building	Other	B22-000099	406 North Texas Street	08/01/2022
Building	Other	B22-000102	2306 Pelota Drive	08/03/2022
Building	Other	B22-000109	24 North CHESTNUT Street	08/25/2022
Building	Other	B22-000105	609 North Colorado Street	08/16/2022
Building	Other	B22-000113	1718 Center Street	08/31/2022
Building	Other	B22-000110	305 East Montezuma Avenue	08/25/2022
Building	Other	B22-000104	227 North MARKET Street	08/16/2022
Building Total	**Other Total**			**8**
Building	Residential Remodel	B22-000112	910 South MARKET Street	08/30/2022
Building	Residential Remodel	B22-000101	205 South MAPLE Street	08/16/2022
Building Total	**Residential Remodel Total**			**2**
Building Total				**13**
Burn Permit	Bonfire	BRN22-000025	515 North Park Street	08/25/2022
Burn Permit Total	**Bonfire Total**			**1**
Burn Permit	Debris	BRN22-000013	1014 East 2nd Street	08/26/2022
Burn Permit Total	**Debris Total**			**1**
Burn Permit	Disposal	BRN22-000024	850 Cherry Street	08/24/2022
Burn Permit Total	**Disposal Total**			**1**
Burn Permit Total				**3**
Demolition	Demolition	D22-000003	401 South OAK Street	08/11/2022
Demolition Total	**Demolition Total**			**1**
Demolition Total				**1**
Plumbing	Commercial	P22-000046	124 North Pinon Street	08/04/2022
Plumbing	Commercial	P22-000048	77 West Main Street	08/01/2022
Plumbing	Commercial	P22-000055	210 East 1ST Street	08/17/2022
Plumbing Total	**Commercial Total**			**3**
Plumbing	Residential	P22-000052	402 East North Street	08/15/2022

Plumbing	Residential	P22-000054	121 East Carpenter Street	08/15/2022
Plumbing	Residential	P22-000045	1004 South Chestnut Street	08/04/2022
Plumbing	Residential	P22-000053	2021 Golf Course Lane	08/15/2022
Plumbing	Residential	P22-000051	143 East North Street	08/08/2022
Plumbing	Residential	P22-000049	428 PARK Drive	08/04/2022
Plumbing	Residential	P22-000050	1893 Golf Course Lane	08/05/2022
Plumbing Total	**Residential Total**			**7**
Plumbing Total				**10**
Right of Way	Public Right-of-Way	ROW22-000042	1720 KALEIGH Circle SOUTH	08/15/2022
Right of Way	Public Right-of-Way	ROW22-000054	Various	08/04/2022
Right of Way	Public Right-of-Way	ROW22-000067	610 North Madison Street	08/16/2022
Right of Way	Public Right-of-Way	ROW22-000052	Various Start East of E. 3rd St. & A	08/04/2022
Right of Way	Public Right-of-Way	ROW22-000070	Various	08/30/2022
Right of Way	Public Right-of-Way	ROW22-000063	428 PARK Drive	08/01/2022
Right of Way	Public Right-of-Way	ROW22-000064	Various	08/01/2022
Right of Way	Public Right-of-Way	ROW22-000061	1004 South Chestnut Street	08/02/2022
Right of Way	Public Right-of-Way	ROW22-000069	1309 Acoma Drive	08/22/2022
Right of Way	Public Right-of-Way	ROW22-000065	36 North Maple Street	08/09/2022
Right of Way Total	**Public Right-of-Way Total**			**10**
Right of Way Total				**10**
Sign	Billboard	S22-000011	Broadway and Main Billboards	08/11/2022
Sign	Billboard	S22-000012	Broadway and Main Billboards	08/11/2022
Sign	Billboard	S22-000014	Broadway and Main Billboards	08/11/2022
Sign	Billboard	S22-000015	Broadway and Main Billboards	08/18/2022
Sign Total	**Billboard Total**			**4**
Sign Total				**4**
Water Tap	3/4 inch	WT22-000016	1720 KALEIGH Circle SOUTH	08/15/2022
Water Tap	3/4 inch	WT22-000021	26833 Road L	08/24/2022
Water Tap	3/4 inch	WT22-000022	2310 La Plata Street	08/24/2022
Water Tap	3/4 inch	WT22-000023	11061 Road 26.8	08/19/2022
Water Tap Total	**3/4 inch Total**			**4**
Water Tap Total				**4**
All Permits Total				**45**