

UNMET TRANSPORTATION NEEDS

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Project: Coos County Transit Master Plan

Subject: Memorandum #4: Unmet Transportation Needs (Subtask 3.1)

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SUMMARY OF NEEDS

This memorandum summarizes unmet transportation needs within the Coos County Area Transportation District (CCAT) study area. These needs have been identified through a combination of:

- Comparing existing service to CCAT's goals and policies;
- Measuring the percentage of different transit-dependent populations that have access to fixed-route transit service;
- Identifying portions of the study area with sufficient population density, job density, or both, to support at least hourly weekday fixed-route transit service at present and in the year 2035;
- Evaluating intercity transit service needs to connect Coos County to neighboring counties, to the remainder of Oregon, and beyond;
- Conducting online, onboard, and operator surveys, and community outreach events; and
- Interviewing representatives of key stakeholder groups about needs related to their clients or members.

Given finite budget resources to provide transit service, this project will need to develop priorities for how service can be improved (e.g., expanding service into new areas versus using the same budget to provide more frequent service or longer service hours in areas already provided with service) which may include exploring different service

models, such as deviated routes. The needs identified in this memorandum will support the development of *Memorandum #5: Future Service Opportunities*.

NEEDS RELATED TO CCAT GOALS AND POLICIES

CCAT's goals are geared towards improving customer-focused services, accessibility and connectivity, coordination, health and sustainability. CCAT's policies focus on providing reliable public transportation (Policy 1A); improving existing services (Policy 2A); ensuring access to employment, education and health services (Policy 2B); and strengthening coordination with land use planning to support transit system and increase access (Policy 3E). Based on peer comparisons with similar transit providers described in *Memorandum #3: Transit Benchmarks and Monitoring Program*, CCAT's service utilization is lower than Curry County Public Transit, Tillamook County Transit District, and Lincoln County Transit District, which are peer agencies located on the Oregon Coast.

Based on an assessment of existing conditions and stakeholder input (*Memorandum 1: Existing System Conditions*), CCAT goals and policies (*Memorandum #2: Goals, Policies, and Practices*), and the proposed framework for performance monitoring (*Memorandum #3: Transit Benchmarks and Monitoring Program*), the following high-level needs have been identified:

- Improve service utilization, safety and security and resource utilization.
- Improve connectivity and service levels for frequent destinations and transit-dependent populations.
- Increase ridership with strategies related to communication, connectivity and accessibility.
- Improve route and service efficiency.
- Increase the service span to accommodate more work and school schedules.
- Service improvements specifically focused on serving Title VI populations will need to focus on key destinations rather than particular housing locations.

These high-level needs are described in greater detail in the following sections.

TRANSIT SUPPORTIVE AREA NEEDS

Figure 1 identifies the transit supportive areas (TSAs) identified under 2013 and projected 2035 conditions, respectively. Not every location identified as transit-supportive may be a good candidate for fixed-route service for a number of reasons, including cost, poor infrastructure, and difficult access. Although most existing and future TSAs are located within ¼ mile of fixed-route transit, there are opportunities to expand service to more-distant portions of these areas, either by modifying existing fixed routes or by converting fixed routes to deviated-route service.

NORTH BEND FINDINGS

- Existing unserved TSAs are located in the west, east (household growth)
- Future TSAs are expansions of already existing TSAs
- Poor street connectivity makes providing service difficult in the southwest part of North Bend
- Older adult population concentrations spread across the city

COOS BAY FINDINGS

- Existing unserved TSAs are located in the northeast (household growth and employment growth) and northwest (employment growth)
- Largest unserved future TSAs are in the south (household growth)
- Future TSAs are expansions of already existing TSAs
- Older population concentrations spread across the city

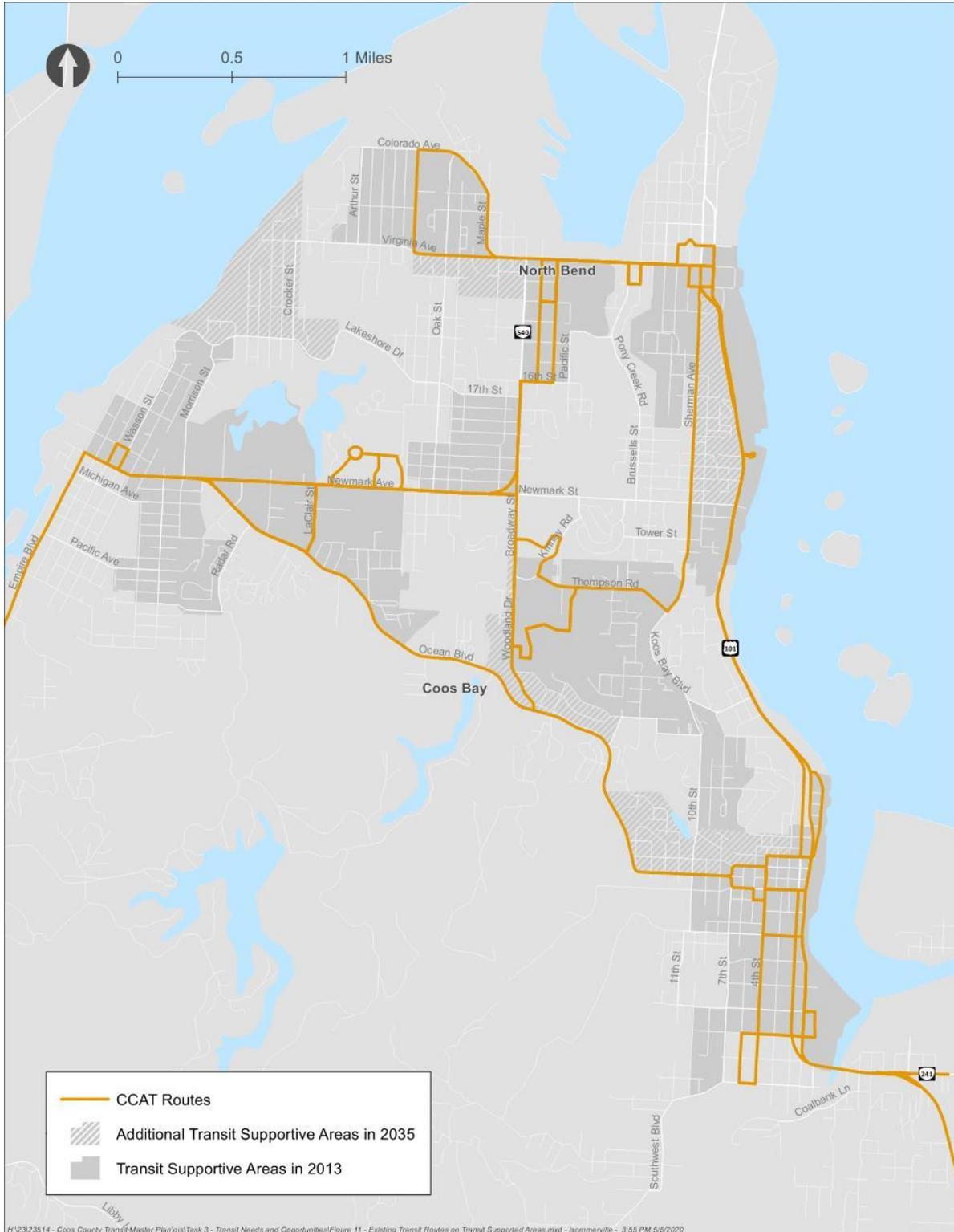
INTRACOUNTY FINDINGS

- The Timber Express, serving the Highway 42 corridor (Coquille, Myrtle Point), serves shorter-duration trips (e.g., shopping, medical, social), but an additional late-afternoon trip would make transit more feasible for employment- and education-related trips.
- Powers receives once-a-week lifeline service. The community's size (700 residents) and distance from other communities pose a challenge to increasing the amount of service provided.
- The time between the first and last trips of the day between Bandon and Coos Bay/North Bend is sufficient for shorter-duration trips, but not trips requiring being at the destination for most or all of the day.
- The time between the two Crab Express trips between Charleston and North Bend may be longer than desired for shorter-duration trips, but is not long enough to serve employment-related trips.
- Lakeside currently has no transit service, but will receive better service than previously existed when CCAT's new Coos Bay to Florence route begins service.

INTRACITY FINDINGS

- Coos County currently has no same-day intercity transit connections to the rest of Oregon, other than to Curry County.
- The new CCAT route to Florence (with an onward connection to Eugene) will restore connectivity to Amtrak and destinations in the Willamette Valley, but is only planned to operate four days a week.
- The new CCAT route to Roseburg offers the possibility of northbound and/or southbound connections to Greyhound, depending on how the route is scheduled. It is only planned to operate twice a week.

Figure 1. Transit Supportive Areas



STAKEHOLDER AND PUBLIC IDENTIFIED NEEDS

Needs identified to date by riders, social service providers, partner agencies, and the public at-large include are summarized below.

STAKEHOLDER INTERVIEWS

- Frequency and availability of Dial-A-Ride service need to be increased due to high demand and high number of people with disabilities and people in wheelchairs availing the service.
- Connections need to be provided to and from Lakeside.
- Transit connectivity needs to be improved between Star of Hope and The Mill Casino (Curry County Transit currently has a route that runs by Star of Hope).
- Training on basic transit travel that includes fare payment process and technology information needs to be provided to the public.
- An inter-governmental agreement needs to be sanctioned in the near future for the Florence to Coos Bay route.
- Connections need to be provided to and from Florence and Eugene to meet transit needs of the tribes, community members and employees in the area.
- Stop needs to be provided near Tribal Housing in North Bend near Airport eights as a fair share of the community members do not drive.
- Transit services should be improved to and from casinos to serve employees and colleges to serve students.
- Transit schedules need to be conducive to work schedules of employees in the region.
- Weekend service needs to be provided and made more frequent to run daily errands and visit key destinations (shopping, going to places of worship).
- Online transit bookings access and vanpool coordination from transfer spots need to be provided.
- Marketing and advertising of new online services need to be commenced once online tools are in place.

Additional outreach activities, focus group meetings and Board of Commissioners work sessions will be conducted during the next phase of outreach.

DRIVER SURVEY

- Improving transit vehicles ranked as the number one improvement if additional funding were to become available followed up improvements to existing transit service and transit stations/stops.
- New service and staffing needs were also noted as improvements for consideration such as additional dispatch support.
- The majority of additional recommendations voiced by operators included improvements to stop amenities, including signage, maps, seating and posted schedules to help increase visibility, awareness, and service knowledge.
- One operator identified the need for a transit station for transfers and another recommended coordinating with the State/County to issue senior/disability service cards for transit access.

ONBOARD RIDER SURVEY

- When asked about service improvements, riders identified increased frequency of service, extended service hours and weekend service as key improvements.

ONLINE SURVEY

Key findings related to needs from the online survey conducted during the summer of 2019 include the following:

- When asked what type of limitations prevented participants from making a trip due to lack of transportation, participants noted that CCAT doesn't run when they need to travel, CCAT doesn't go where they need to go, or they do not have a working motor vehicle.
- Riders indicated that real-time vehicle arrival information and online/mobile trip planning tools as the highest-interest tools for rider convenience.
- In ranking six options from low priority to high priority, 'Increase Frequency' received the highest number of #1 (high priority) ratings. 'New Service' had the highest average ranking.

IN-PERSON EVENTS

- Key themes voiced by community members at the Coos Bay Farmers Market included a desire for enhanced weekend service and extended hours of existing service.
- Key themes voiced by community members at the Bandon Farmers Market include:
 - Provide weekend service from Coos Bay/North Bend to Bandon
 - Provide a daily shuttle from Bandon to the Southwest Oregon Regional Airport
 - Provide connections between Bandon and Roseburg
- Greatest community support for transit improvements identified at the Coos County Fair & Rodeo was for increased frequency followed closely by weekend service, service to underserved populations, and technology.

TRANSPORTATION-DISADVANTAGED POPULATION NEEDS (TITLE VI ANALYSIS)

Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d-1) states that “no person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.” In combination with subsequent federal nondiscrimination statutes, agencies receiving federal financial aid are prohibited from discriminating based on race, color, national origin, age, economic status, disability, or sex (gender).

This section provides a baseline Title VI assessment for CCAT's existing service that will be used later in the project as a basis for comparison for potential service changes. This assessment compares the existing population, jobs, and percentage of the population made up of different demographic groups within a ¼ mile, ½ mile, and 1 mile of transit. This analysis was performed using Remix, a web-based tool for planning transit networks.

Table 1 summarizes the results of the Title VI analysis, showing the number of people overall, jobs overall, and persons in different transportation-disadvantaged groups who live within ¼, ½, and 1 mile of CCAT's existing fixed-route transit service. Figure 2 shows the percentage of the total population served within ¼, ½, and 1 mile of CCAT fixed-route service that are members of different transportation-disadvantaged groups. Because individuals can be members of multiple groups, the percentages total to more than 100%.

Table 1 shows that population and job density is highest within ¼ mile of existing service. Although roughly twice as many people and jobs are located within ½ mile of transit service, compared to ¼ mile, they are spread over an area four times as large and the resulting density is half the density of the area within ¼ mile. Similarly, although nearly three times as many people live within 1 mile of transit service, compared to ¼ mile, they are spread over an area 16 times as large. This result indicates that at a large scale, the existing service is doing a good job serving higher-density areas.

Table 1 and Figure 2 shown that the percentage of various transportation-disadvantaged populations served remains basically the same at different distances from transit service up to 1 mile. This result indicates that transportation-disadvantaged populations are evenly distributed throughout the service area. Therefore, improving service to the population in general will also improve service for Title VI populations. In addition, service improvements specifically focused on serving Title VI populations will need to focus on key destinations rather than particular housing locations.

Table 1. Title VI Analysis (2020)

	¼ Mile	½ Mile	1 Mile
Population	12,242	23,187	32,013
Jobs	1,995	3,910	5,794
% in poverty	22.3%	20.5%	19.4%
% in poverty 200%	44.1%	43.1%	45.5%
% in minority	20.7%	19.5%	18.2%
% seniors (65+)	21.6%	22.3%	22.7%
% youth (18-)	20.5%	20.7%	20.4%
% limited English	0.7%	0.6%	0.5%
% with disabilities	21.3%	21.7%	22.0%
% with no vehicles	12.6%	12.7%	12.5%

Note: Percentages are representative of the population within the stated distance of CCAT fixed-route service.

Figure 2. Percentage of population served at 1 mile, ½ mile and ¼ mile from existing CCAT fixed-route services

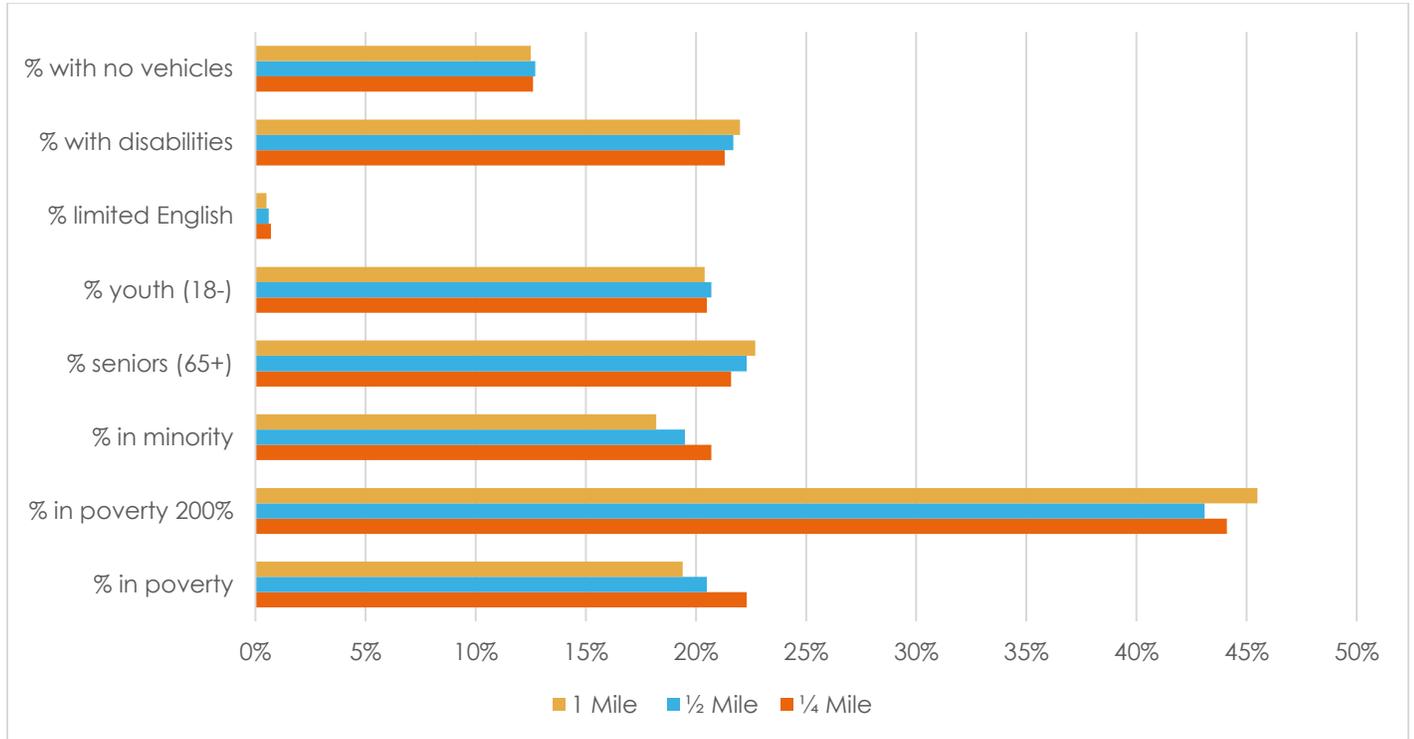


Table 2 shows the proportion of population served and jobs covered by each route. As shown, the Coos Bay Loop and North Bend Loop serve the largest proportion of the population within ¼ mile and ½ mile. The routes serve around 9,000 people within ¼ mile and 17,000 within ½ mile.

Table 2. Proportion of Population Served and Jobs Covered by CCAT Routes

Name		Every	Distance	Within 0.25 miles of Stops:		Within 0.5 miles of Stops:	
				Population	Jobs	Population	Jobs
Coos Bay Loop	Pirate Express	60 min	15.77 miles	5,221	567	11,013	1,466
North Bend Loop	Bulldog Express	60 min	10.14 miles	5,673	1,319	11,593	2,799
Coquille–Myrtle Point Intercity Connector	Timber Express	360 min	62.72 miles	1,671	236	6,064	807
Charleston Intercity Connector	Crab Express	360 min	17.03 miles	4,465	622	9,865	1,605
Bandon Loop	Cranberry Express	40 min	10.10 mi	870	16	2,031	44
Weekend Express	Weekend Express	32 min	8.71 mi	2,173	612	5,768	1,454

SERVICE TO TRANSIT-SUPPORTIVE AREAS

Transit-supportive areas are larger areas (e.g., census block groups) with population density, job density, or both capable of generating sufficient ridership to support at least hourly fixed-route transit service during the day on weekdays. Transit-supportive areas can also include specific destinations for transit passengers that may not otherwise meet the density criteria (e.g., a recreation center, an employment office). This section first discusses how the choice of service type (fixed-route versus deviated-route) may affect the definition of transit-supportive area. It then identifies characteristics making an area transit-supportive (or not), followed by an analysis of these factors for the Coos Bay/North Bend area. Other communities in Coos County are small enough such that any transit service provided will cover a large portion of the community.

EFFECT OF SERVICE TYPE ON TRANSIT-SUPPORTIVENESS

Under the requirements of the Americans with Disabilities Act (ADA), transit agencies that provide fixed-route transit service (not including intercity service) must also provide origin-to-destination “complementary paratransit” service for persons with disabilities that prevent them from accessing or using the fixed-route service. Among other conditions, this service must be available within $\frac{3}{4}$ mile of the fixed route during the same hours that fixed-route service operates. Demand-response (e.g., dial-a-ride) service generally has significantly lower demand than fixed-route service and therefore costs significantly more to operate per hour or trip than fixed-route service, even though agencies are allowed to charge up to twice the fixed-route fare.

To meet the ADA requirements while avoiding the additional cost of running two transit services in parallel, some small city and rural transit agencies use a hybrid of fixed-route and demand-response service known as “deviated-route.” This kind of service operates on a fixed route, but is allowed to deviate up to $\frac{3}{4}$ mile from the route to pick up or drop off passengers, usually with a limit on the number of allowed deviations per trip in order to maintain schedule reliability. Depending on the agency, deviations can be made only for ADA-eligible passengers or for any passenger willing to pay the extra fare. Deviated routes are operated with smaller buses capable of maneuvering on local streets. CCAT is in the process of considering converting its fixed routes to deviated routes and has been running them as deviated routes during the COVID-19 crisis.

The transit-supportive area for a deviated-route service that is intended to combine fixed-route and ADA complementary paratransit into a single service can be considered the same as that for fixed-route service. The route may gain a small number of passengers per trip (up to the number of allowed deviations per trip) due to the increased service area, but may also lose some passengers due to the longer trip time that must be built into the schedule to accommodate deviations and the potentially longer headway between trips that results. This approach has been taken for the analysis in this section, such that the identified transit-supportive areas are applicable to either fixed- or deviated-route service.

Deviated-route service can also be used to serve areas with densities lower than the minimum needed to support fixed-route service, when the agency is willing to accept lower route productivity (riders per hour) than fixed-route service but higher productivity than demand-responsive service for the general public. Research has been performed comparing the productivity of fixed-route to other service types in a suburban context (Reference 1) but

not for rural and small-city systems such as CCAT. However, a small-city route would be expected to have lower productivity than a suburban route, because suburban routes serve not only destinations within the suburb itself but also provide connections to other destinations within the metropolitan area.

CHARACTERISTICS DEFINING TRANSIT-SUPPORTIVENESS

Portions of the study area that have characteristics that can support fixed-route transit service were identified using the following key factors:

- **Land Use and Density.** At a relatively large (e.g., neighborhood) scale, evaluating the number of households and jobs per acre gives an indication of the areas capable of supporting at least hourly weekday fixed-route service. Areas with lower densities might be candidates for deviated-route or demand-responsive service. The locations of various types of higher-density development and essential destinations gives a finer-grained indication of an area's ridership potential.
 - Tools and sources include existing and future population and employment data by Transportation Analysis Zone (TAZ) from the travel demand model used by the cities of Coos Bay and North Bend.
- **Demographics.** An area's demographic characteristics, such as concentrations of older adults or zero-car households, can indicate a greater need for the area's residents to rely on transit service for their mobility needs.
 - Tools and sources include data from the US Census Bureau (decennial census and American Community Survey).
- **Growth Projections.** As the region grows, areas that are not currently transit-supportive may become transit-supportive, while areas currently served may be able to support increased service levels. The locations of planned major developments, as well as the area's zoning and comprehensive plan designations, indicate where growth may occur in the future.
 - Tools and sources include data from the Oregon Office of Economic Analysis, the Oregon Workforce and Economic Research Division, and city Transportation System Plans and Comprehensive Plans.

Not every location identified as transit-supportive based on the above characteristics may be a good candidate for fixed-route service for a number of reasons, including:

- **Cost.** Pockets of higher density located well away from other higher-density areas, where the cost of extending service would not be sufficiently offset by the area's ridership potential.
- **Poor Infrastructure.** Neighborhoods with poor pedestrian infrastructure that make it difficult for potential riders to access stops. Deviated-route or demand-response service may be an option.
- **Difficult Access.** Difficult transit vehicle access, due to poor street connectivity, steep grades, narrow streets, etc.

Given the budget resources available to provide transit service, this project will need to develop priorities for how service may be improved within transit-supportive areas (e.g., expanding service into new areas versus using the same budget to provide more frequent service or longer service hours in areas already provided with service) or

modifying the type of service provided to less transit-supportive areas. Technical Memorandum #5 will evaluate potential service enhancements, modifications, and opportunities.

LAND USE AND DENSITY ANALYSIS

The land use and density component of assessing transit supportive areas included the following:

- Locations of essential destinations as identified in the online and rider survey as top destinations for people riding transit to meet their daily needs including schools, shopping, and healthcare;
- Location and density of households and jobs (by transportation analysis zones (TAZs) in 2013 and 2035;
- Location of households without vehicles; and
- Population density.

Figure 3 shows a subset of destinations considered essential to meet people's daily needs. These include hospital and medical facilities, schools, places of worship, shopping destinations and social service destinations that include senior centers and job training centers. As shown in the figure, most of the places of worship are spread throughout North Bend and are close to CCAT transit (North Bend Loop). Schools are located within higher-density residential areas in North Bend and Coos Bay. Schools located near Michigan Ave in the west, namely, Sunset Junior High School and the Coos Bay School District and schools located near 10th Street in the east in northern Coos Bay, namely, Coos Bay Public School and Marshfield High School lack access to transit lines while schools in central North Bend, namely, North Bend High School, lack last-mile connectivity to transit service on Broadway Ave. Shopping centers are located in Coos Bay, west of North Bend and central North Bend while the hospital is located south of North Bend city limits. However, CCAT has limited to no service during the weekend and hence transit service is not available in the area for commuting to places of worship and the hospital during weekends.

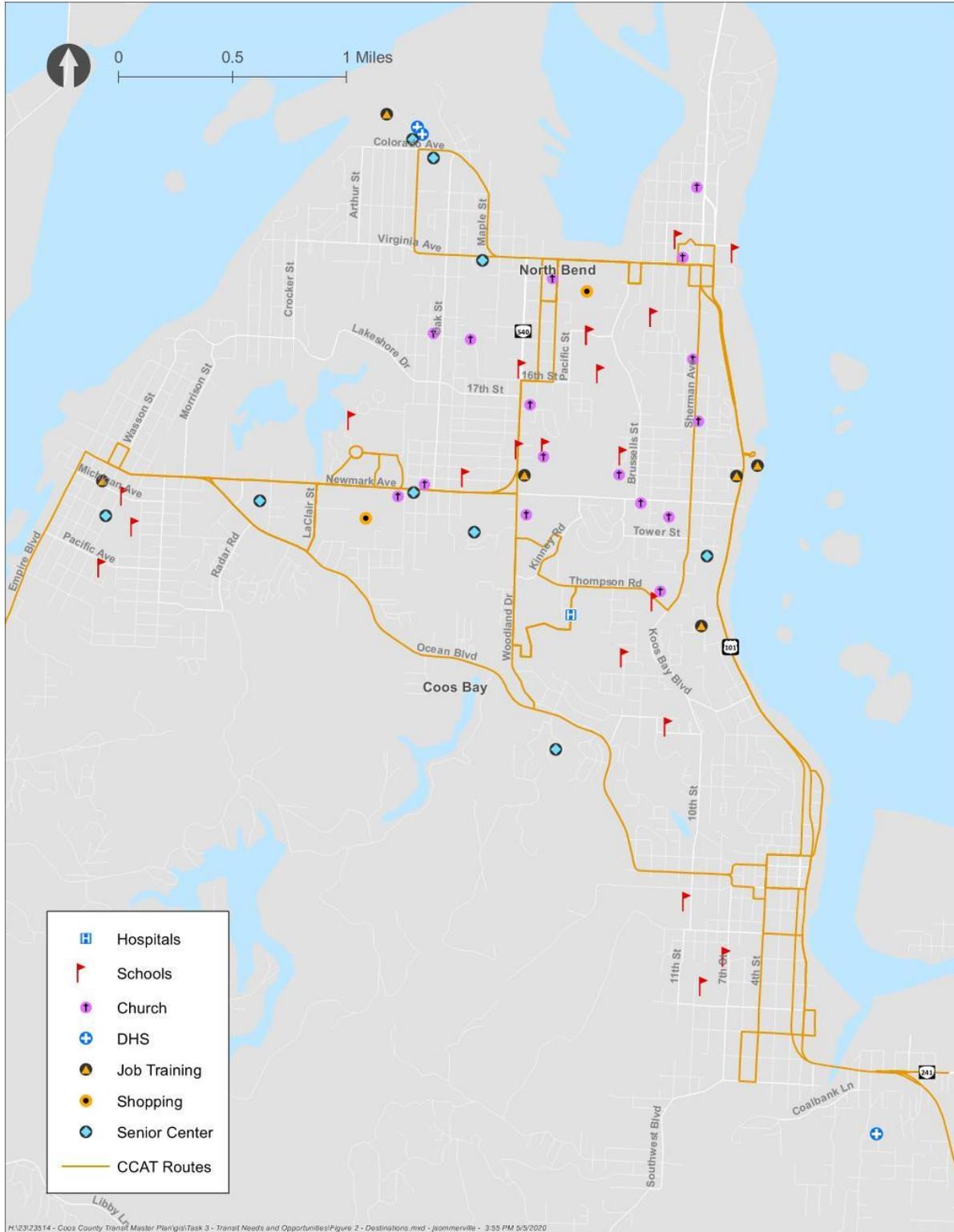
Figure 4 illustrates the location of TAZs with transit-supportive densities, defined as having 3 or more households per acre, 4 or more jobs per acre, or both, for 2013 and 2035. The northern and southern parts of North Bend and the southeastern parts of Coos Bay have the highest densities of households and jobs under existing conditions. According to 2035 forecasts, growth is expected in the eastern parts of North Bend, and the central and eastern parts of Coos Bay. As shown in the figure and as discussed above, there is a lack of connectivity to higher-density residential areas in northern Coos Bay near Michigan Ave and 10th Street where there is a concentration of housing and where schools are located.

Figure 5 shows the percentages of households without vehicles by census block group. As shown in the figure, more than 30% of households in Coos Bay in a neighborhood surrounding Michigan Ave in the western part of Coos Bay have no vehicles, and more than 20% of households along 10th Street in northeastern Coos Bay have no vehicles. Both of these areas have transit-supportive densities, based on Figure 4. Around 21% to 30% of households do not have vehicles in the eastern parts of North Bend where the Weekend Express runs only on Saturdays.

As previously illustrated and mentioned in *Memorandum 1: Existing System Conditions*, Coos County's population density is generally low. Population is concentrated in North Bend, Coos Bay, and the county's smaller cities. Transit connectivity, access, and last-mile connectivity can be improved in these areas, particularly where there is higher

household and jobs density, larger proportions of households with no vehicles, and a concentration of essential destinations.

Figure 3. Key Transit Destinations



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Figure 4. TAZs with Transit-Supportive Densities

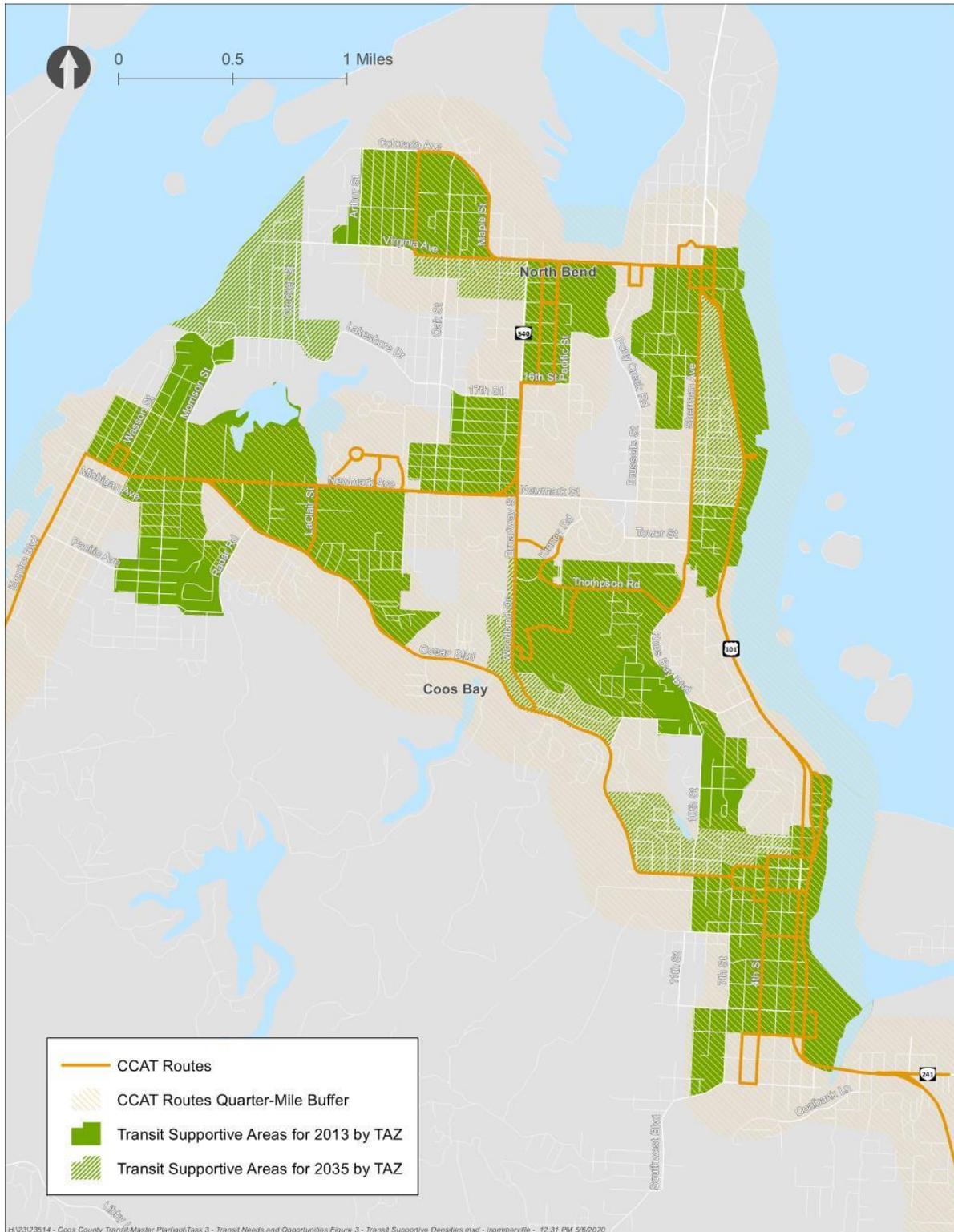
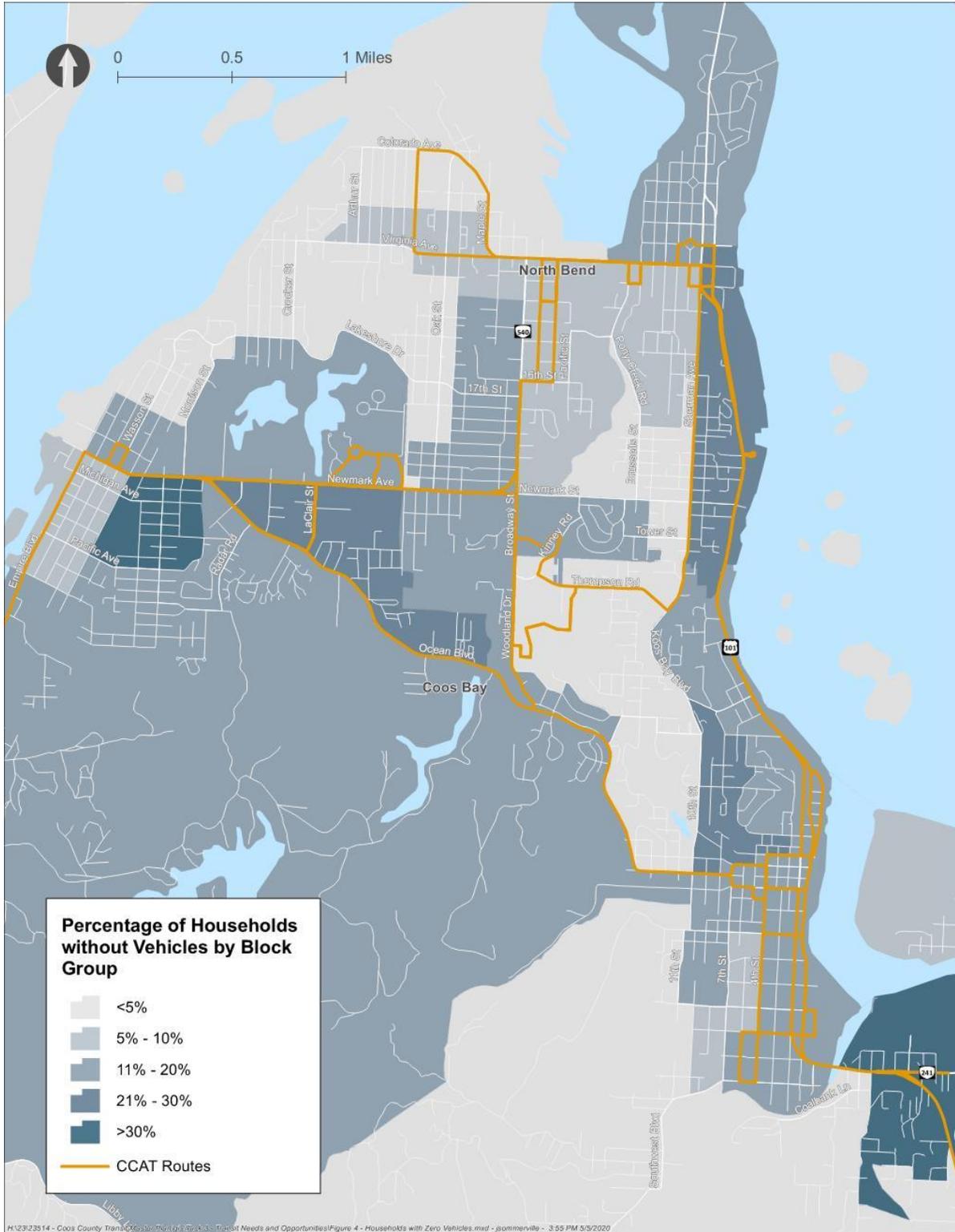


Figure 5. Zero-Vehicle Households



EXISTING DEMOGRAPHICS

Memorandum #1: Existing System Conditions presented detailed information about the county's existing demographic characteristics. Key demographic findings for the CCAT area were:

- Coos Bay and North Bend are the two largest cities, representing about 40.7% of Coos County's total population in 2018.
- All of Coos County's incorporated cities have slowly grown in population since 2000, with the exception of Coquille, with Bandon showing the highest growth at 1.3% annually.
- About 90% of people drive to work and only 2.9% of people do not have a vehicle.
- High concentrations of poverty are found in the southeast and northwest portions of the county.
- High concentrations of households with persons with disabilities are located in Bandon, Coquille, Myrtle Point and in the southwest quadrant of the county.
- Higher concentrations of older adults reside in the North Bend/Coos Bay area, with additional clusters located in Coquille, Bandon, and Myrtle Point.

Coos County has a relatively high proportion of potentially transit-dependent populations, including seniors, youth, people with low incomes, and persons with disabilities. In 2017, persons 59 and older represented 34% of Coos County's population (approximately 21,217 people) and persons under 18 represented 19% of the population (approximately 11,707 people).

Jobs and employment data were primarily developed from 2015 census information. The following lists the key findings from *Memorandum #1: Existing System Conditions*:

- Approximately 73.8% (16,145) of Coos County workers lived in Coos County.
- The most jobs are located in Coos Bay (4,235, 19.6%) and North Bend (3,092, 14.3%).

POPULATION AND EMPLOYMENT GROWTH FORECASTS

POPULATION GROWTH

Coos County experienced an average annual population growth rate of 0.1% between 2010 and 2018. Based on population forecasts from Portland State University (PSU) (Table 3), the county population is expected to remain stable through 2043, with a forecasted 2043 population of 62,747. Unincorporated areas of the county, as well as the city of Coquille, are expected to slightly decline in population, offset by small increases in population elsewhere in the county.

Table 3. Coos County and Sub Areas – Historical and Forecast Populations, and Average Annual Growth Rates

	Historical			Forecast	
	2010	2018	AAGR (2010-2018)	2043	AAGR (2018-2043)
Coos County	63,043	63,471	0.1%	62,747	0.0%
Bandon	3,333	3,422	0.3%	3,934	0.6%
Coos Bay	15,967	16,824	0.6%	18,393	0.4%
Coquille	3,963	3,950	0.0%	3,031	-1.4%
Lakeside	1,699	1,696	0.0%	2,376	1.4%
Myrtle Point	2,553	2,575	0.1%	2,734	0.2%
North Bend	9,717	9,919	0.0%	10,108	0.2%
Powers	707	707	0.0%	741	0.2%
Outside UGBs	25,104	24,378	-0.4%	20,429	-0.7%

Source: Coordinated Population Forecast 2018 Through 2068. Coos County. PSU Population Research Center.

TAZ data were provided by the Oregon Employment Department (OED) for base year 2013 and forecast year 2035; TAZ data were only available for the urbanized areas of North Bend and Coos Bay. Figure 6 shows existing households per acre by TAZ, Figure 7 shows forecasted households per acre by TAZ, and Figure 8 shows the forecasted increase in households by TAZ from 2013 to 2035. The greatest growth is expected in northwestern North Bend and adjacent portions of Coos Bay, along the Cape Arago Highway between Coos Bay and Charleston, and in areas west, south, and east of downtown Coos Bay. With the exception of the Cape Arago Highway, most of these areas are more than ¼ mile from the closest existing transit service. Future household density in downtown North Bend and along Highway 101 is expected to increase as shown in Figure 7.

EMPLOYMENT GROWTH

OED data by TAZ for Coos Bay and North Bend were also used to assess employment growth. Figure 9 shows existing employment density by TAZ. As shown in the figure, concentrations of jobs include the downtowns of Coos Bay and North Bend, Pony Village Mall, Southwestern Oregon Community College, Walmart, the hospital, the area south of the airport, and the casinos. All of these areas, with the exception of most of North Bend's waterfront, have nearby weekday transit service.

Figure 10 shows forecast employment density in 2035, while Figure 11 depicts the change in number of employees by TAZ from 2013 to 2035. OED forecasts job growth of more than 1,800 employees by 2035 in the area between Isthmus Slough and Catching Slough southeast of downtown Coos Bay. This area currently has no transit service, and other areas along Coos Bay's southwestern edge that are also forecast to experience significant job growth are also unserved by transit at present. Future employment density in downtown Coos Bay is expected to increase as show in Figure 10. Job growth is also expected around the hospital, while North Bend is forecast to experience only modest gains in employment.

OED also publishes medium-range employment projections for regions throughout the state. While general, this information can give an indication of growth sectors that could influence future land uses and transit attractors in Coos County. Generally:

- Overall employment is expected to increase modestly during the 10-year horizon.
- Private educational and health services account for the largest numerical growth in the forecast.
- Construction accounts for the largest percentage growth in the forecast.
- Other growth sectors include trade, transportation, and utilities; leisure and hospitality; and self-employment.

OED forecasts that employment will increase by 3,445 jobs between 2013 and 2035, an average annual growth rate of 1.0 percent. Household growth is forecasted to increase by 1,071 households between 2013 and 2035, an average annual growth rate of 0.3 percent.

PLANNED AREAS FOR GROWTH

City and County comprehensive plan maps and County parcel-level tax lot data also provide indications of where future growth will occur. A review of these sources is provided in Appendix A. Key findings and observations include:

- The City of Bandon zoning map indicates a significant number of vacant residential parcels that are platted outside the current city limits but within the city's urban growth boundary (UGB). Hence, it is reasonable to assume that residential growth in Bandon will include gradual buildout of these large-parcel residential areas, along with modest infill in other parts of the city. New jobs are likely to be located in the existing employment-zoned portions of the city. Industrial uses and the Bandon State Airport occupy the area in the southeastern portion of the UGB, and could also see employment growth in the future.
- The City of Coos Bay Comprehensive Plan map shows large undeveloped areas that are designated for higher-density residential uses; however, these areas appear to be steeply sloped and may not result in a significant amount of new development. Large parcels in the northeastern most portion of the city (across Coos River and not connected by land) that are planned and zoned for residential use, but are currently undeveloped.
- Coos Bay's Front Street Action Plan (2017) focuses on increasing connectivity, fostering community access to the waterfront, attracting private investment, and diversifying Coos Bay's economy. The plan notes that no public transit is provided to the Front Street area; today, it is served only by the Weekend Express route.
- Coos Bay has two Urban Renewal Districts, the Downtown District and the Empire District in northwest, where the city desires additional growth and redevelopment.
- The Georgia Pacific site, located near the Coquille River west of the city of Coquille is zoned for future commercial retail and light industrial uses.
- Lakeside's comprehensive plan contains policy language that supports "efforts to maintain and increase commercial bus service and other mass-transit from Lakeside to regional destinations that provide connections and services."

- The Myrtle Point Community Plan (2013) expresses a desire for expanded local transit service, including a dedicated South County transit loop, with more frequent service between Powers, Myrtle Point, and Coquille; as well as a regular, express connector to the Coos Bay Area.
- The North Bend Comprehensive Plan (2019) recognizes the need for additional types of housing, including apartments, duplex dwellings, row houses, condominiums, and cluster housing, among others. The plan states that multi-family residential zoning may be permitted immediately adjacent to general commercial shopping areas as appropriate. This may result in densification of residential areas in the City over time.

Figure 7. Future Households per Acre by TAZ

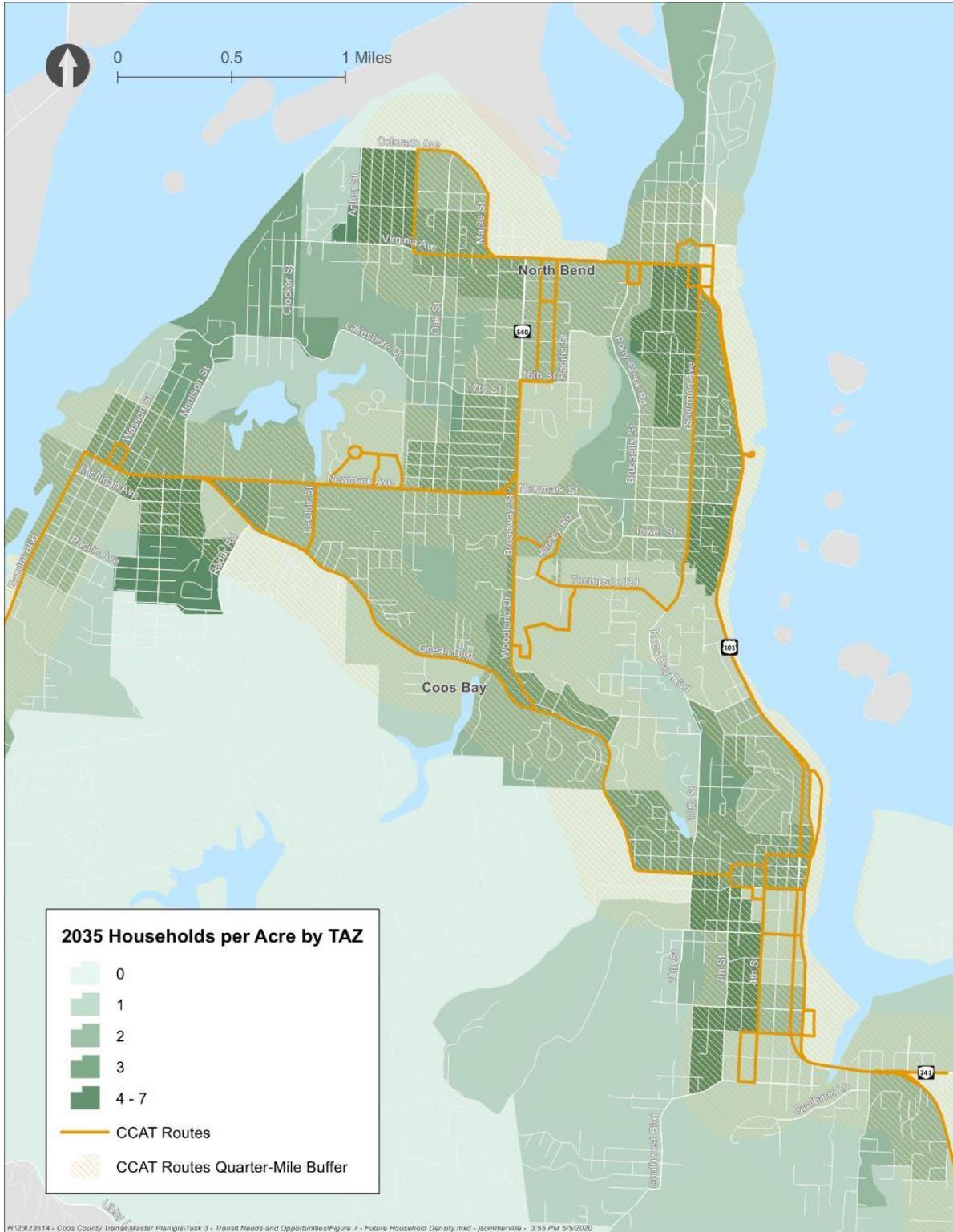


Figure 8. Forecasted Increase of Households per Acre by TAZ from 2013 to 2035

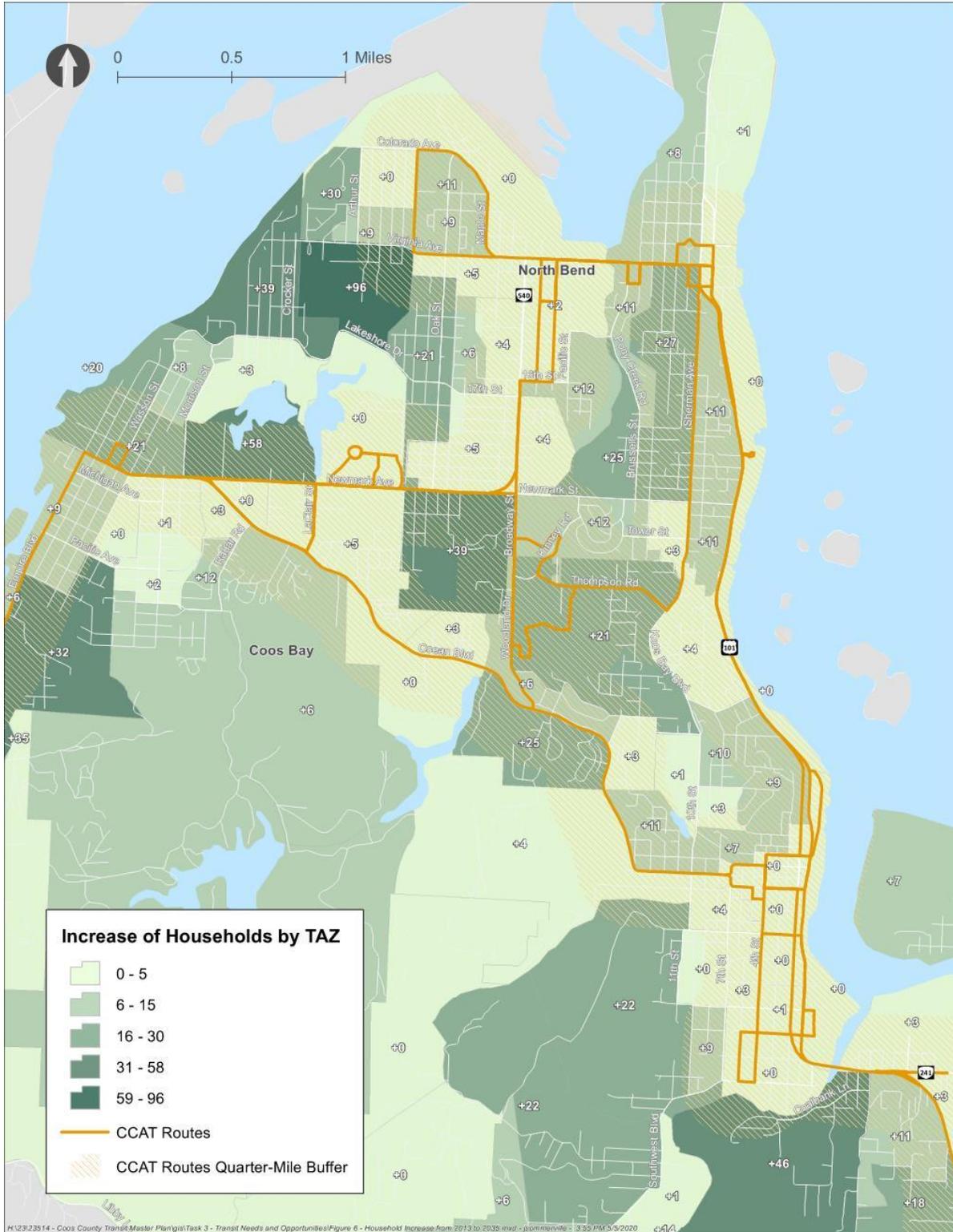


Figure 9. Existing Employment per Acre by TAZ

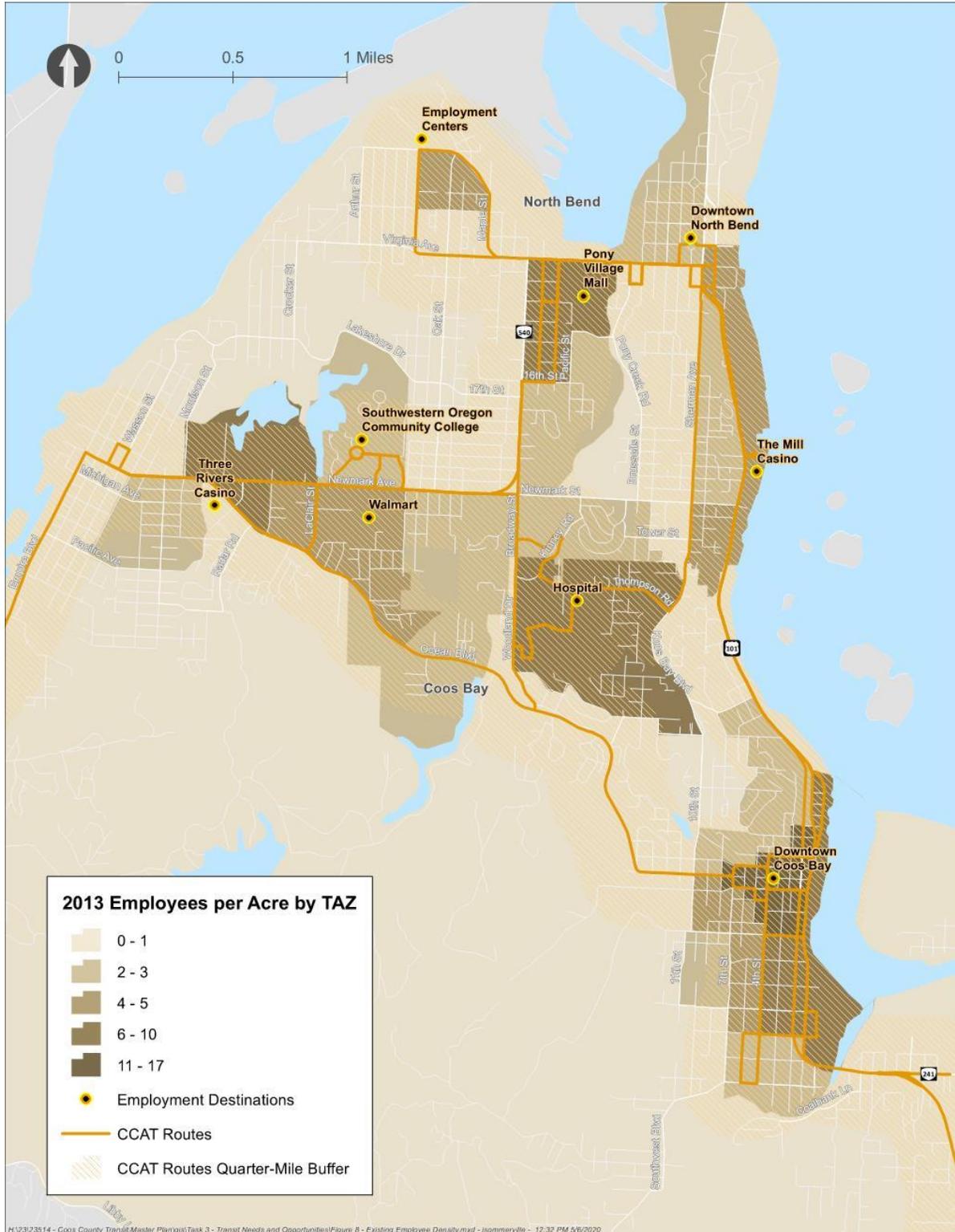


Figure 10. Future Employment per Acre by TAZ

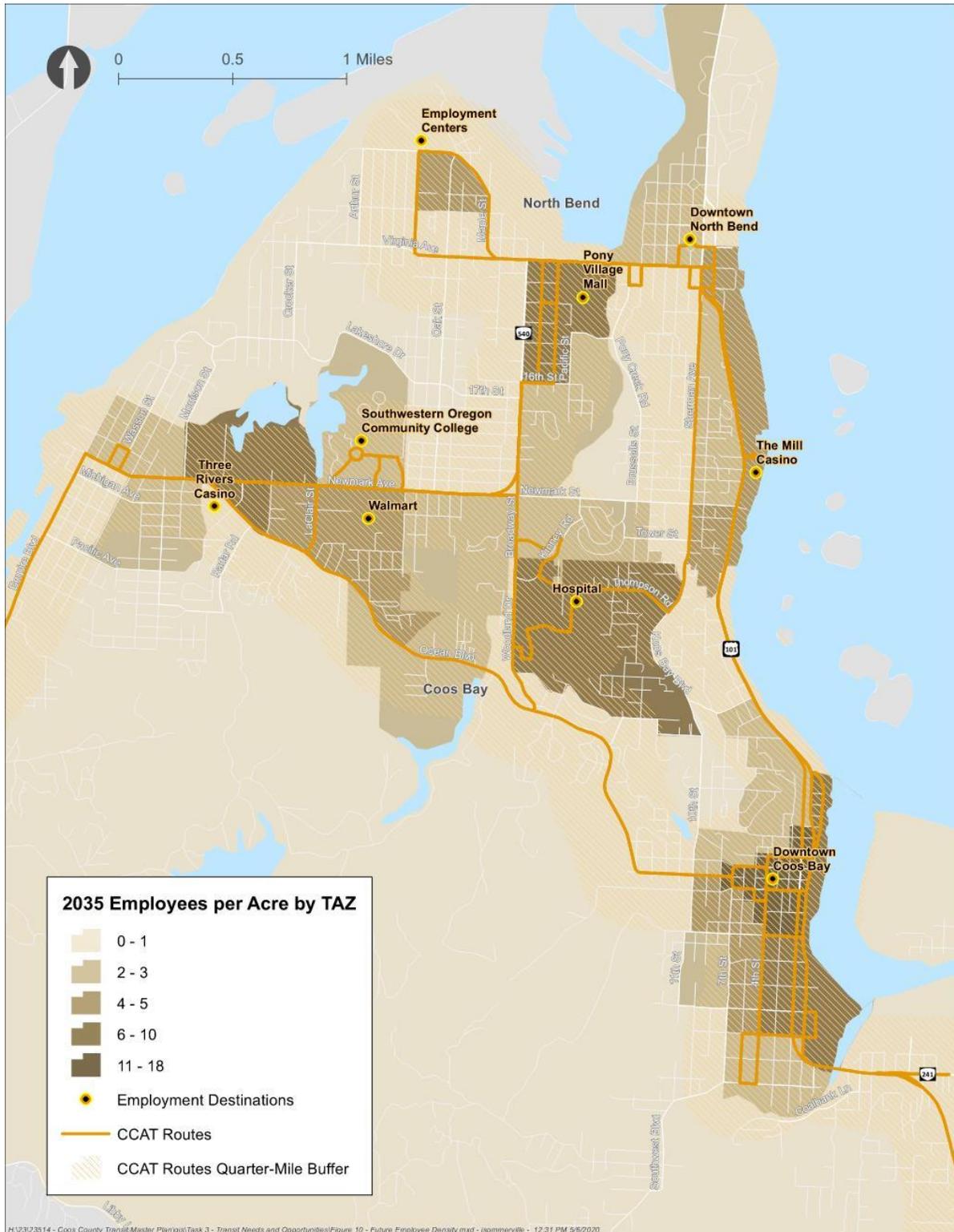
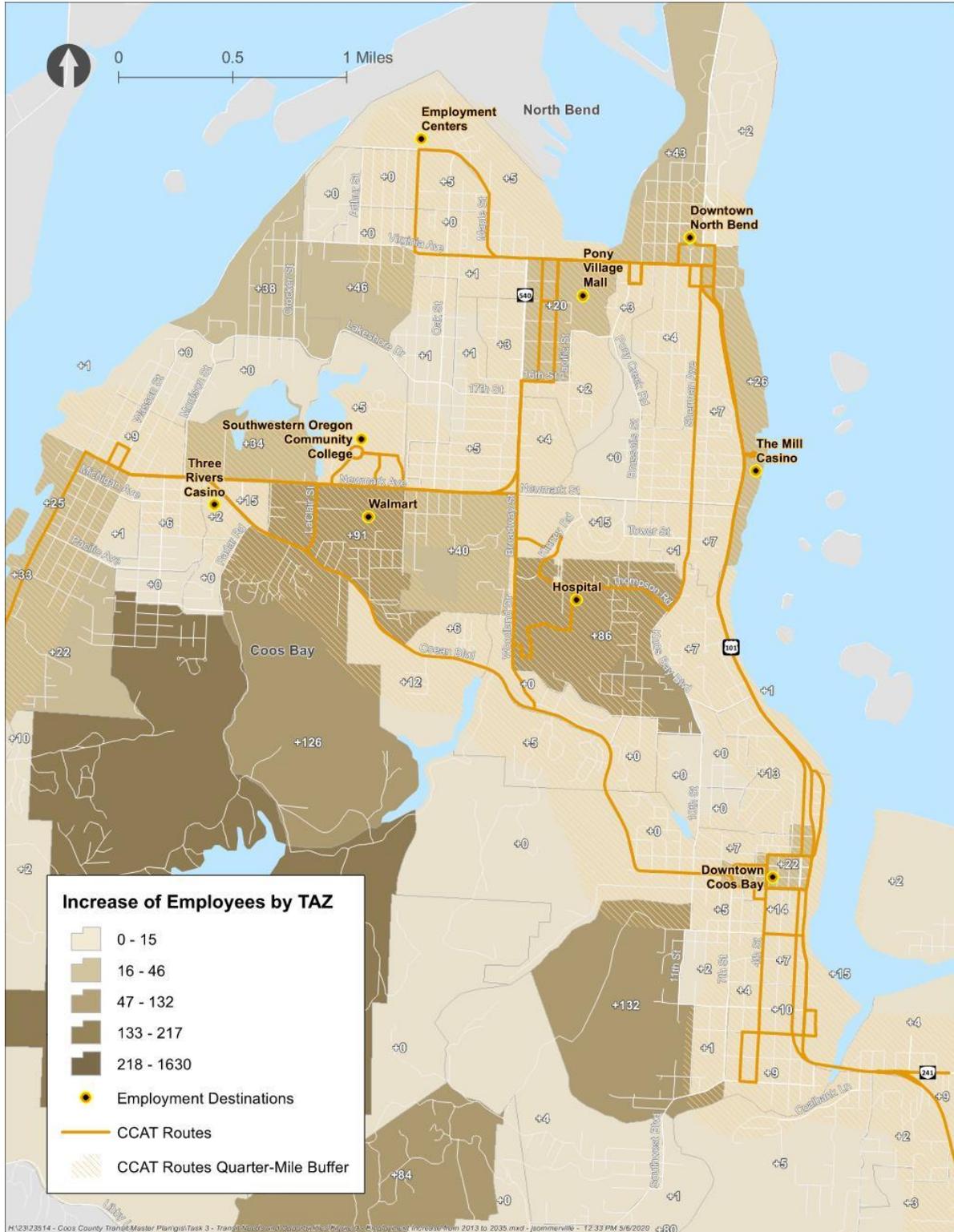


Figure 11. Forecasted Increase of Employment per Acre by TAZ from 2013 to 2035



INTRACOUNTY SERVICE

CCAT provides two round trips per day between North Bend/Coos Bay, Coquille, and Myrtle Point, departing in the morning and the early afternoon. CCAT's Powers Stage operates on a similar route, but continues on to Powers once a week on Thursdays as well as on the second Tuesday of each month. The addition of a late-afternoon trip along the Highway 42 corridor would make the service usable for a broader range of trips, including employment- and education-related trips.

Bandon is connected to Coos Bay and North Bend via Curry County's Coastal Express Route, with three round trips per day Monday to Saturday. The first northbound trip arrives in North Bend at 10:35 am, while the last southbound trip departs at 2:30 pm, which limits the kinds of trips that are feasible by transit between these communities. Round-trip travel by transit between Bandon and the county seat in Coquille is not possible under current schedules.

CCAT provides two round trips a day between Charleston and the Pony Village Mall in North Bend. The length of time between the morning trip and afternoon trip is long for medical, shopping, and social trips, but not long enough for employment trips.

Lakeside currently has no service but, as described below, will be served by a new CCAT route connecting Coos Bay/North Bend with Florence three times a day, four days a week.

INTERCITY SERVICE

Passenger air service at Southwest Oregon Regional Airport has not been available since mid-2017. As of late February 2020, the only intercity connection available from Coos County was provided by Curry County's Coastal Express Route, which operates three trips a day Monday to Saturday south to Brookings. From Brookings, Curry County provides service to Smith River, CA, where a connection can be made with Redwood Coast Transit to Crescent City and Arcata, CA. ODOT's Southwest POINT to Medford and Klamath Falls also serves Brookings, but an overnight stay is required in either direction in Brookings to connect to this service.

Pacific Crest Lines, operating as Amtrak Thruway, provided one round trip daily from Coos Bay to Eugene and Bend, with onward connections available in both cities. However, the Coos Bay–Eugene portion of the service was discontinued effective February 18, 2020. As a replacement, the Lane Council of Governments (LCOG) provides two round trips per day between Eugene and Florence, while CCAT has received an Oregon Statewide Transportation Improvement Fund (STIF) grant to operate three round trips per day four times a week between Coos Bay and Florence. A connection can also be made in Florence with LCOG's bus Florence–Yachats bus, which connects in Yachats to Lincoln County's bus service. The CCAT service has not yet started due to the coronavirus situation.

CCAT has also received a STIF grant to operate a new route once a day, two days a week between North Bend, Coos Bay, and Roseburg via Highway 42. A Veterans Administration hospital is located in Roseburg, and one or two Greyhound trips per day (depending on the direction of travel) also stop in Roseburg. Planning for this route is currently underway, including addressing the possibility of operating two trips per day.

RECOMMENDATION

Based on feedback from the CCAT board meeting held on September 14, 2020, the need for a formal bus stop at Charleston Visitor Center has been identified. The following amenities are recommended to be provided at the bus stop:

- Designated bus stop with signage
- Brochures and printed bus schedules at the stop showing bus opportunities
- Designated area where riders can board the bus

NEXT STEPS

The transit supportive areas will be reviewed with the Project Management Team and will be used in developing the Service Opportunities Memo. Service changes that will be considered in this memo include:

- Converting fixed routes to deviated routes
- Modifying fixed or deviated routes to better serve passenger travel needs
- Changing service frequencies or service hours for service in Coos Bay and North Bend
- Changing the number of trips per day and/or the timing of intracounty trips to better serve passenger travel needs
- Investigating the possibility of using intercity trips to supplement intracounty trips.
- Exploring Infrastructure and technological improvements to improve service quality

REFERENCES

1. Transportation Research Board. "Transit Cooperative Research Program Report 116: Guidebook for Evaluating, Selecting, and Implementing Suburban Transit Services", 2006.

**APPENDIX A ADDITIONAL INFORMATION ON GROWTH
AREAS BY CITY**

APPENDIX A – ADDITIONAL INFORMATION ON GROWTH AREAS BY CITY

This document provides additional information about growth patterns of cities in Coos County.

POPULATION AND EMPLOYMENT FORECASTS

The following section describes the demographics, employment, and commuting patterns in the CCAT service area.

POPULATION FORECASTS

Population forecasts for Coos County were prepared by Portland State University (PSU) in 2018 as part of the Oregon Population Forecast Program. Table 1 shows forecasted population through 2068. Overall, the population of Coos County is expected to remain stable, declining somewhat in the long-term. Areas outside of UGBs are projected to experience the greatest decline overall as the communities of Bandon, Coos Bay, and Lakeside experience modest growth.

Table 1. Forecasted Population

	Historical			Forecast					
	2000	2010	AAGR (2000-2010)	2018	2043	2068	AAGR (2010-2018)	AAGR (2018-2043)	AAGR (2043-2068)
Coos County	62,779	63,043	0.0%	63,471	62,747	60,157	0.1%	0.0%	-0.1%
Bandon	3,104	3,333	0.7%	3,422	3,934	4,319	0.3%	0.6%	0.4%
Coos Bay	15,376	15,967	0.4%	16,824	18,393	19,300	0.6%	0.4%	0.2%
Coquille	4,358	3,963	-0.9%	3,950	4,031	4,061	0.0%	0.1%	0.0%
Lakeside	1,371	1,699	2.2%	1,696	2,376	2,984	0.0%	1.4%	0.9%
Myrtle Point	2,485	2,553	0.3%	2,575	2,734	2,836	0.1%	0.2%	0.1%
North Bend	9,537	9,717	0.2%	9,919	10,108	9,989	0.2%	0.1%	0.0%
Powers	743	707	-0.5%	707	741	756	0.0%	0.2%	0.1%
Outside UGBs	25,805	25,104	-0.3%	24,378	20,429	15,912	-0.4%	-0.7%	-1.0%

Sources: U.S. Census Bureau, 2000 and 2010 Censuses; Forecast by Population Research Center (PRC).

Note: For simplicity each UGB is referred to by its primary city's name.

As part of this forecasting effort, PSU surveys communities on various topics related to population growth. Frequent comments from Coos County survey responses include:

- Aging population
- Little new housing production seen in recent years.
- North Bend seeing increase in young families and kindergarten students

EMPLOYMENT FORECAST

The State of Oregon Employment Department publishes employment projections for regions throughout the state. The projections for Coos, Curry, and Douglas counties are shown in Table 2. This data provides a general forecast for the three-county area, not specific information for the cities within the Coos County Transit Master Plan. While general, this information can give an indication of growth sectors that could influence future land uses and transit attractors in Coos County. Generally:

- Overall employment is expected to increase modestly during the 10-year horizon
- Private educational and health services account for the largest numerical growth in the forecast.

- Construction accounts for the largest percentage growth in the forecast.
- Other growth sectors include trade, transportation, and utilities; leisure and hospitality; and self-employment.

Table 2. Industry Employment Forecast, 2017-2027; Coos, Curry, and Douglas Counties

	2017	2027	Change	% Change
Total Employment	72,550	77,290	4,740	7%
Total payroll employment	68,600	72,940	4,340	6%
Total private	54,600	58,670	4,070	7%
Natural resources and mining	3,490	3,650	160	5%
Mining and logging	1,650	1,660	10	1%
Construction	2,830	3,340	510	18%
Manufacturing	7,140	7,390	250	4%
Durable goods	6,240	6,410	170	3%
Wood product manufacturing	4,500	4,570	70	2%
Nondurable goods	900	990	90	10%
Trade, transportation, and utilities	12,190	12,680	490	4%
Wholesale trade	1,060	1,100	40	4%
Retail trade	8,580	8,990	410	5%
Food and beverage stores	1,990	2,090	100	5%
General merchandise stores	2,200	2,250	50	2%
Transportation, warehousing, and utilities	2,550	2,590	40	2%
Information	520	470	-50	-10%
Financial activities	2,490	2,620	130	5%
Professional and business services	6,170	6,540	370	6%
Private educational and health services	9,800	11,140	1,340	14%
Leisure and hospitality	7,270	7,850	580	8%
Food services and drinking places	6,770	7,300	530	8%
Other services and private households	2,700	2,990	290	11%
Government	14,000	14,270	270	2%
Federal government	1,850	1,870	20	1%
State government	1,230	1,280	50	4%
Local government	10,920	11,120	200	2%
Local education	4,140	4,030	-110	-3%
Self-employment	3,950	4,350	400	10%

Contact: Annette Shelton-Tideman, Annette.I.SheltonTideman@oregon.gov, 541-252-2047. Published June 26, 2018

LAND USE EVALUATION OF INCORPORATED COMMUNITIES

Information about the communities within the Coos County TMP boundary is provided below, based on readily available information such as comprehensive plan and zoning maps, approved master plans, GIS data from the Oregon Geospatial Database, and Urban Footprint's nationwide parcel canvas.¹ Understanding where people reside within these communities, where jobs are located, and where there may be opportunities for residential and employment growth provides some insight into where future transit service might be viable or needed. Existing transit service figures from are included to provide a helpful comparison when considering options for future transit.

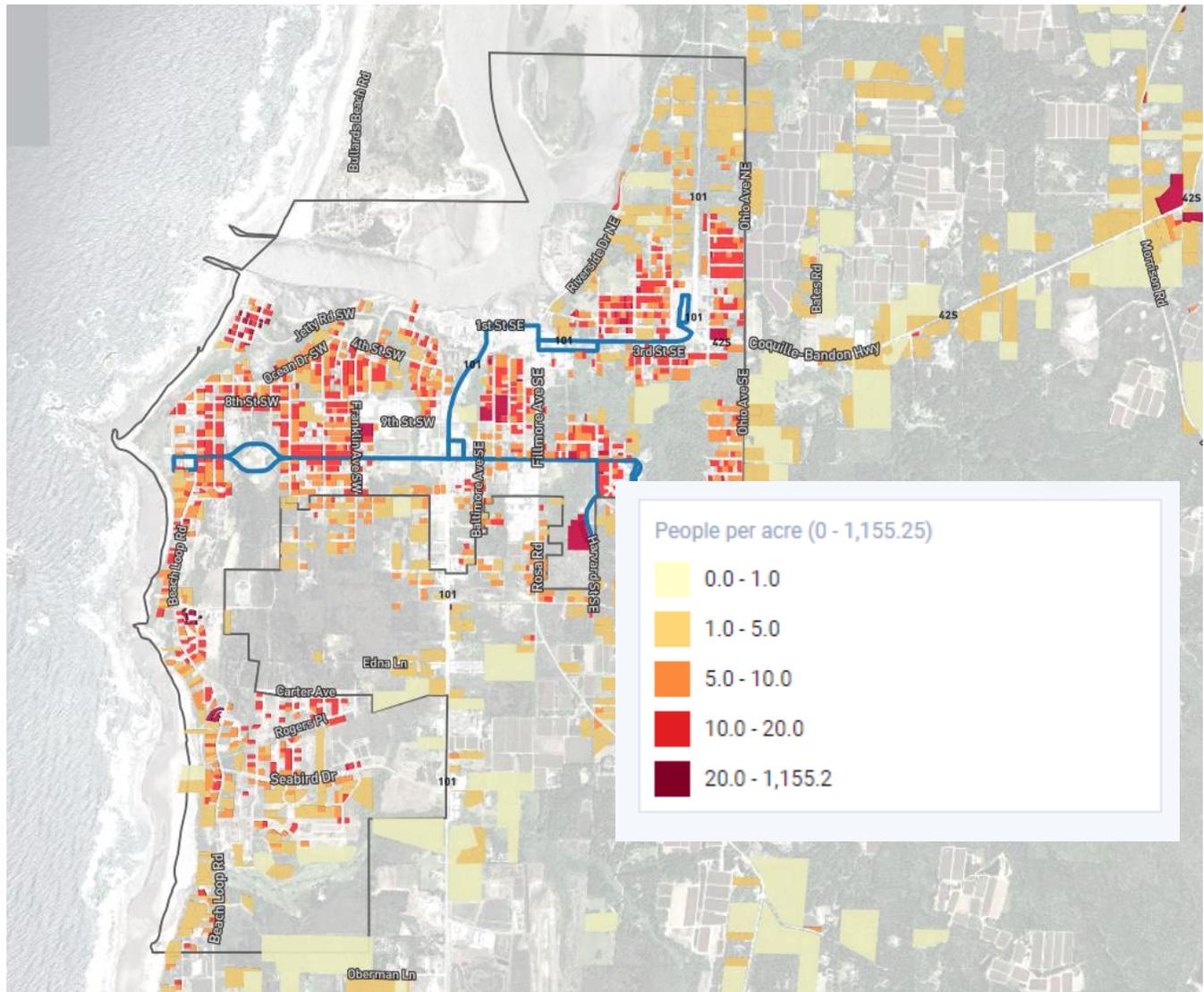
¹ Methodology available at <https://urbanfootprint.com/wp-content/uploads/2019/05/Parcel-Canvas-Creation-Methodology.pdf>

BANDON

Existing Development Patterns

The population of Bandon is roughly 3,500. Existing residential density is shown in Figure 1, with darker red parcels containing a greater population per acre than lighter parcels. Existing transit service in Bandon is shown in blue.

Figure 1. Existing People Per Acre - Bandon



(Note: Employment data is incomplete for several small communities in the study area and not included here)

Zoning Map (2009)

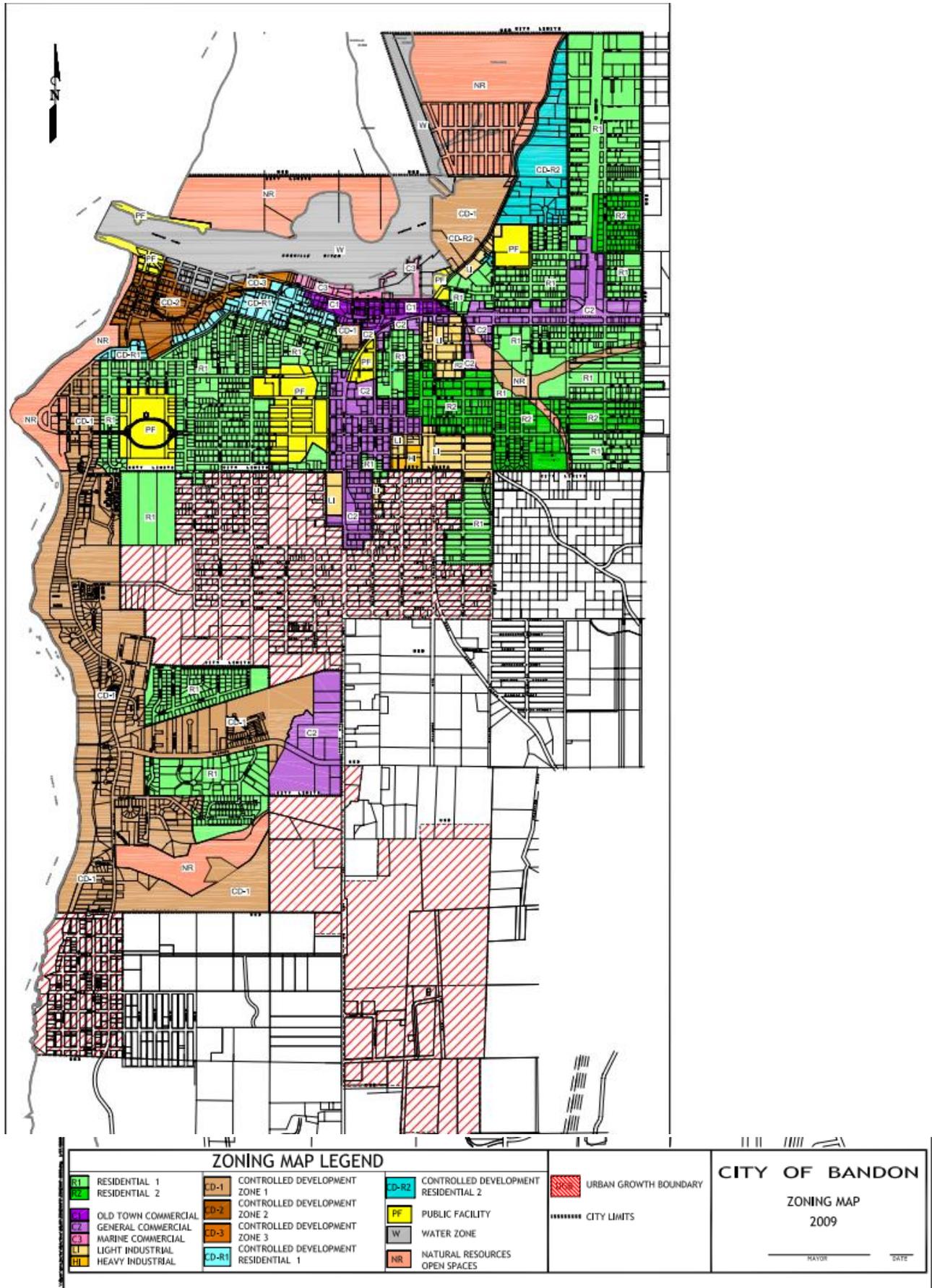
The City of Bandon zoning map is available online² and is shown in Figure 2. A review of zoning designations and aerial photography indicates a significant number of vacant residential parcels within the City, many of which are already platted – particularly in the southern portion of the City near Beach Loop Rd. and Seabird Dr. Outside the City Limits but within the UGB, there are many more platted lots that are currently vacant. It is reasonable to assume

² Available at <https://www.cityofbandon.org/general/page/zoning-map>

that residential growth in Bandon will include gradual buildout of these large parcel residential areas, along with modest infill in other parts of the City.

Employment areas of Bandon appear have development potential – new jobs are likely to locate in the existing employment-zoned portions of the City. Industrial uses and the Bandon State Airport occupy the area in the southeastern portion of the UGB, and could see employment growth in the future.

Figure 2. City of Bandon Zoning Map



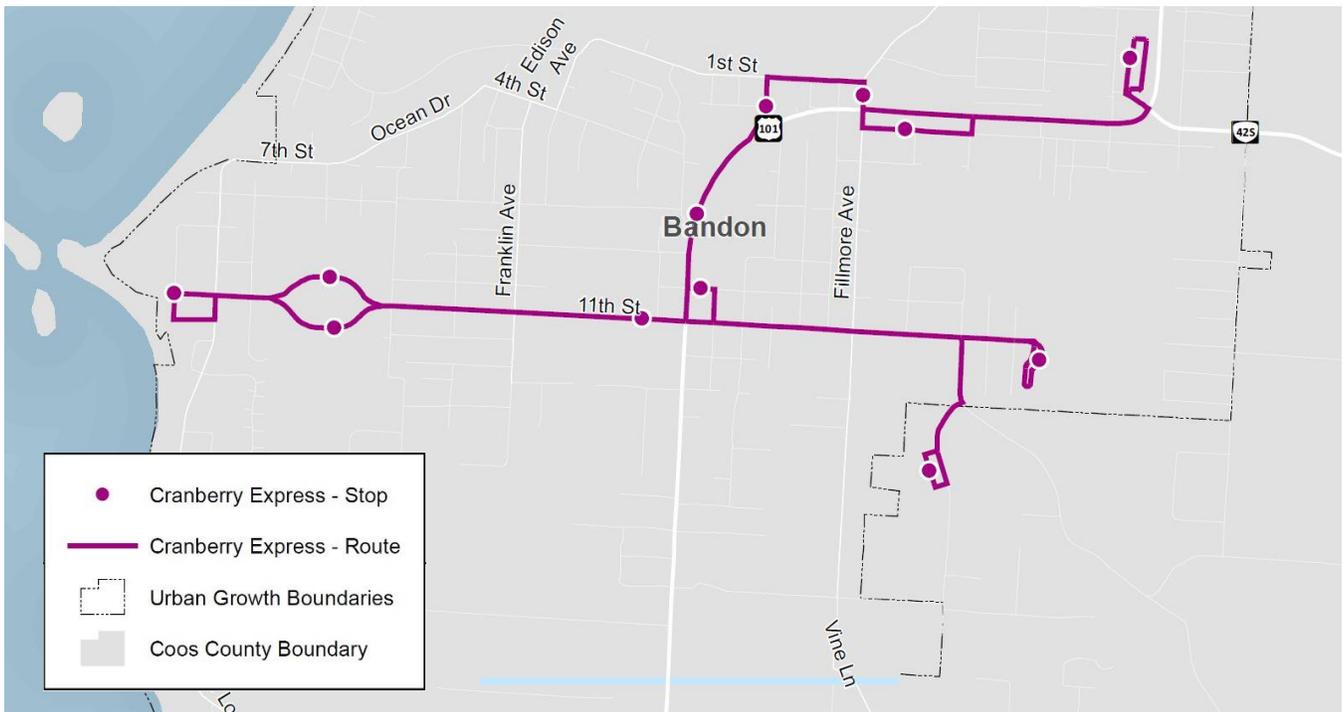
CITY OF BANDON
ZONING MAP
2009

____ RAYOR _____ DATE _____

Existing Transit Service

Existing transit service in Bandon is shown in Figure 3, serving the major commercial areas and civic hub of the City with a connection to the coast.

Figure 3: Bandon Loop – Cranberry Express

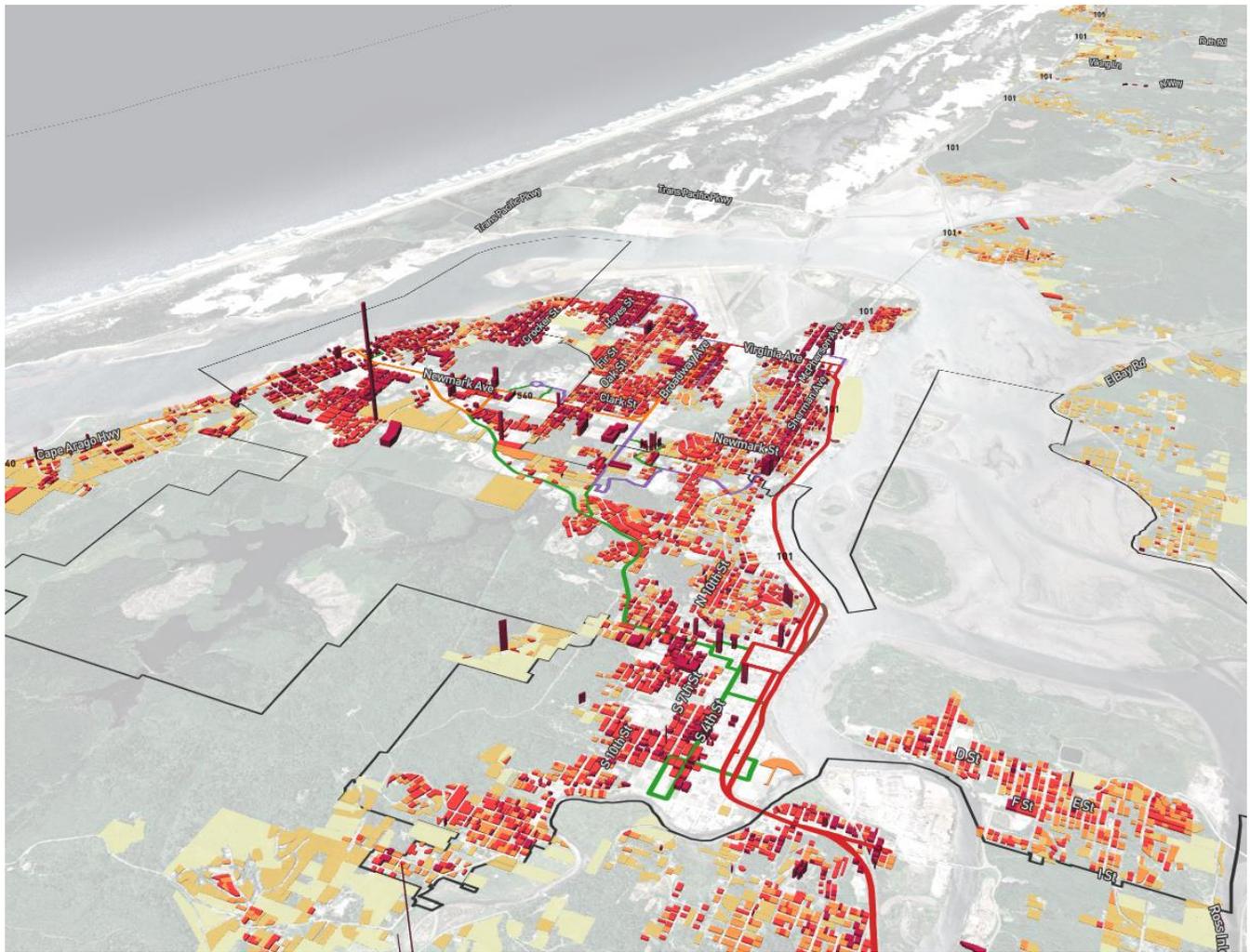


COOS BAY

Existing Development Patterns

Coos Bay is the most populous city in Coos County, with a population of roughly 17,000. Existing residential density in Coos Bay is shown in Figure 4. Existing jobs in Coos Bay are shown in Figure 5.

Figure 4. Existing People Per Acre – Coos Bay



People per acre (0 - 1,155.25)

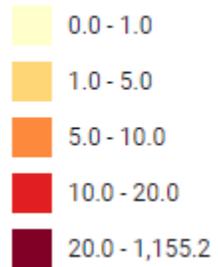
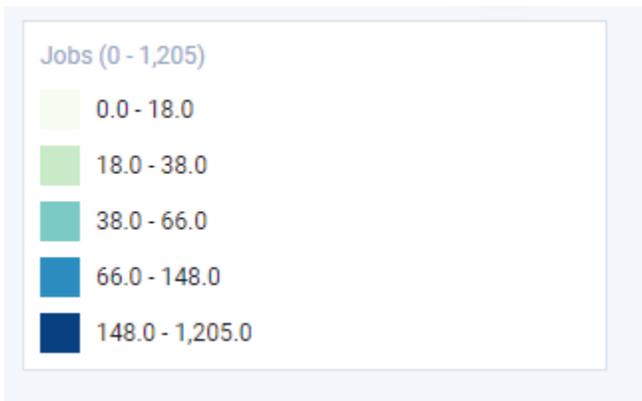


Figure 5. Existing Employment – Coos Ba

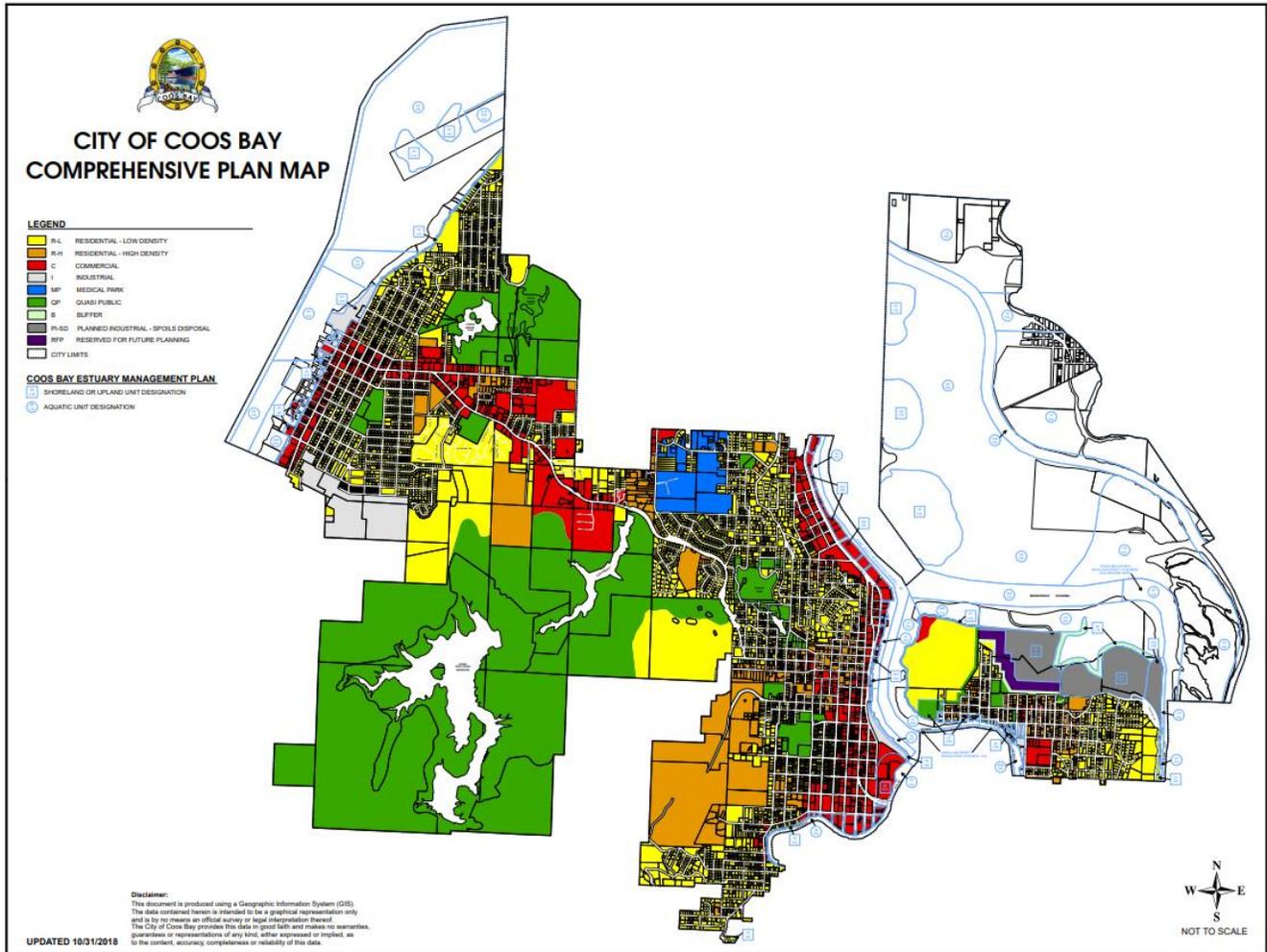


Coos Bay Comprehensive Plan

The City of Coos Bay Comprehensive Plan Map is shown in Figure 6. This map generally indicates the City's desired locations of residential, employment, and other land uses in the long term. Given the land use designations and general knowledge of development use patterns and topography, the following is an indication of potential future growth:

- There are large undeveloped areas designated for higher-density residential uses, however these areas appear to be steeply sloped and may not result in a significant amount of new development.
- There are large parcels in the eastern portion of the City (across the river and not connected by land) that are planned and zoned for residential use and currently undeveloped.

Figure 6. City of Coos Bay Comprehensive Plan Map

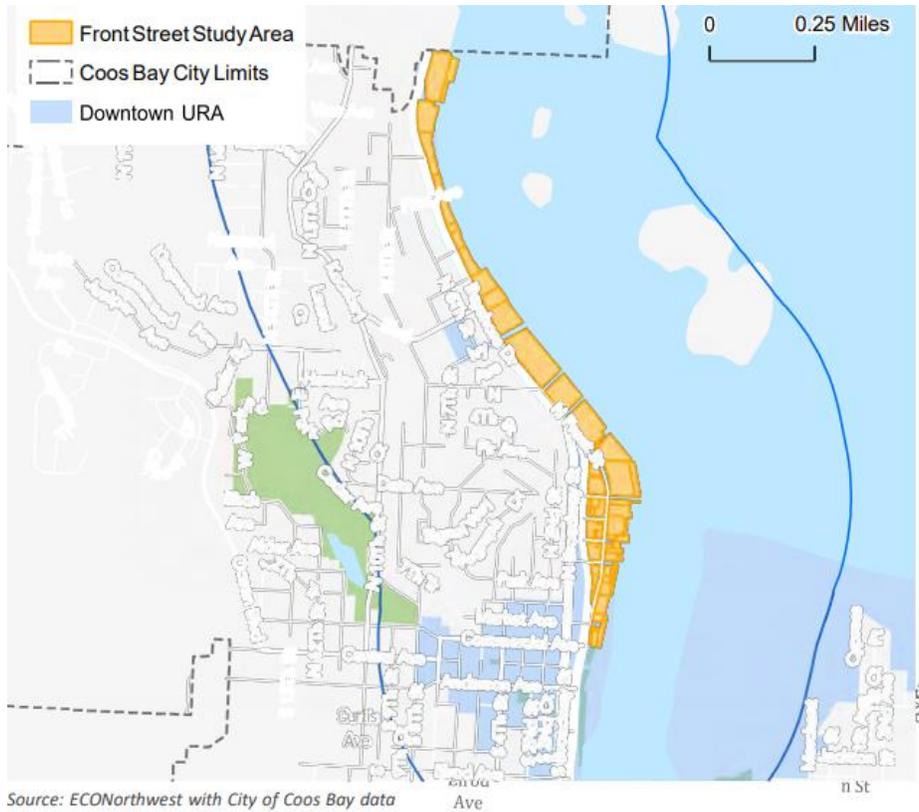


Front Street Action Plan (2017)

The Coos Bay's Front Street Action Plan³ identifies actionable items relevant to the Front Street area shown in Figure 7 that could increase connectivity, foster community access to the waterfront, attract private investment, and diversify Coos Bay's economy. The plan notes that there is no public transit to the Front Street area; today it is served by the Weekend Express route).

³ Available at <http://coosbay.org/uploads/PDF/Plans/Front Street Action Plan Dec 2017 Final.pdf>

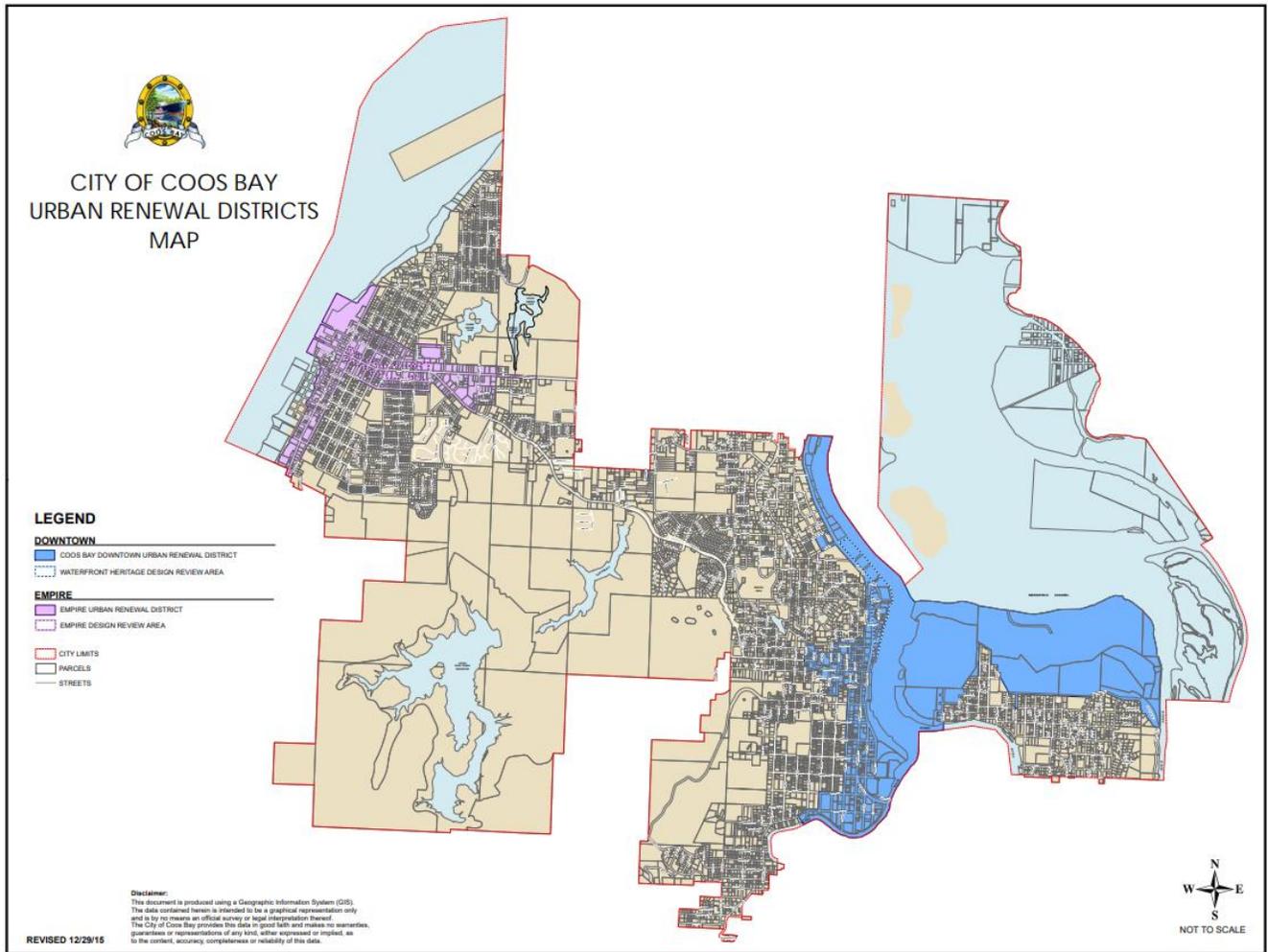
Figure 7. Front Street Action Plan Study Area



Urban Renewal Districts

There are two urban renewal districts in Coos Bay as shown in Figure 8 - the Downtown District shown in blue and the Empire District shown in Purple. This analysis does not provide a detailed review of the programs of these districts, but their location may indicate areas where the City of Coos Bay desires additional growth and redevelopment which may be more supportive of transit services.

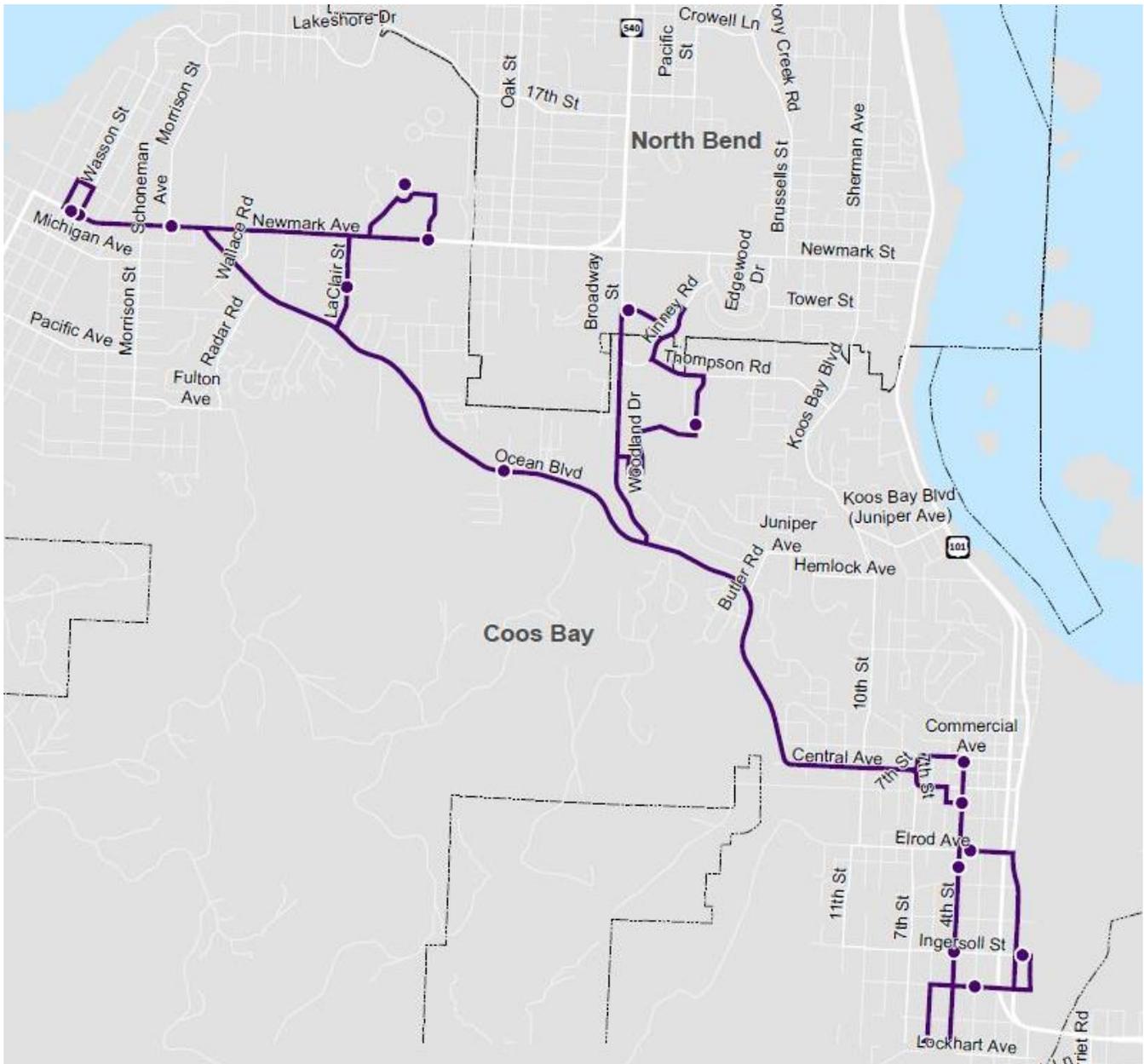
Figure 8. Coos Bay Urban Renewal Districts



Existing Transit Service

Existing transit service in Coos Bay (Pirate Express) is shown in Figure 9.

Figure 9. Coos Bay Loop – Pirate Express

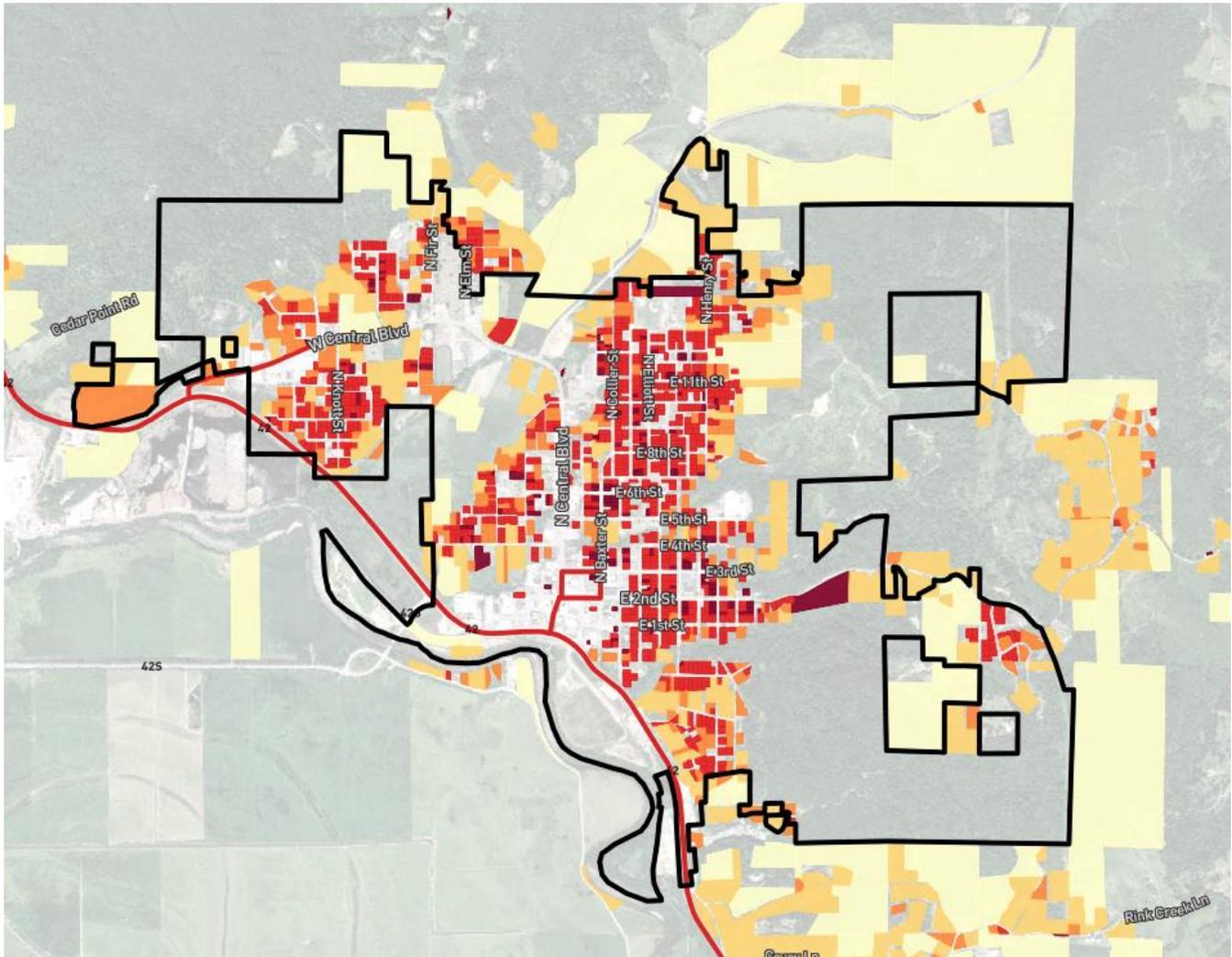


COQUILLE

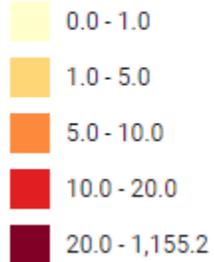
Existing Development Patterns

Existing residential density is shown in Figure 10, with darker red parcels containing a greater population per acre than lighter parcels. Existing transit service to Coquille (the Coquille/Myrtle Point Connector) is shown as a red line.

Figure 10. Existing People Per Acre – Coquille



People per acre (0 - 1,155.25)



Zoning Map (2009)

The Coquille zoning map⁴ is shown in Figure 11. There is a significant amount of land within the UGB and City Limits on the eastern edge of the City, however topography and infrastructure provision may limit growth in these areas.

⁴ Available at http://www.cityofcoquille.org/document/public_works.php

Flood plains, wetlands, and drainages are also significant constraints for much of the City (see green areas in Figure 12). However, PSU population forecasts indicate little to no net growth within the City over the long term.

Figure 11. Coquille Zoning Map

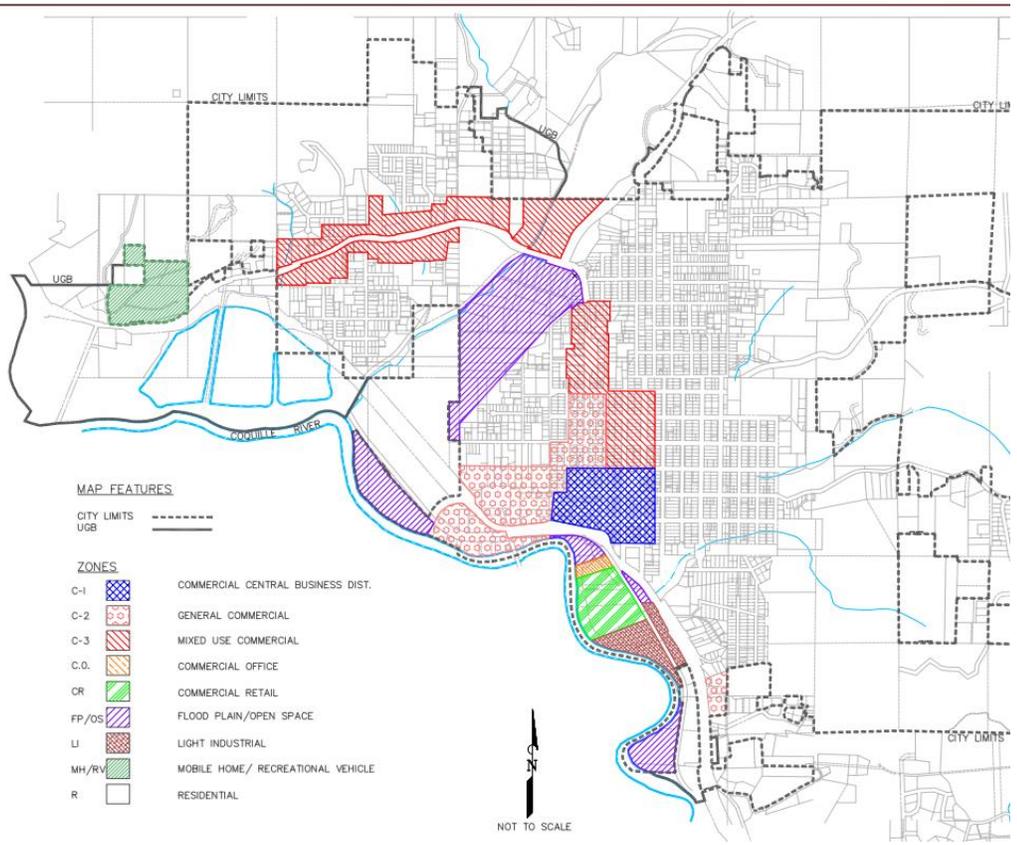
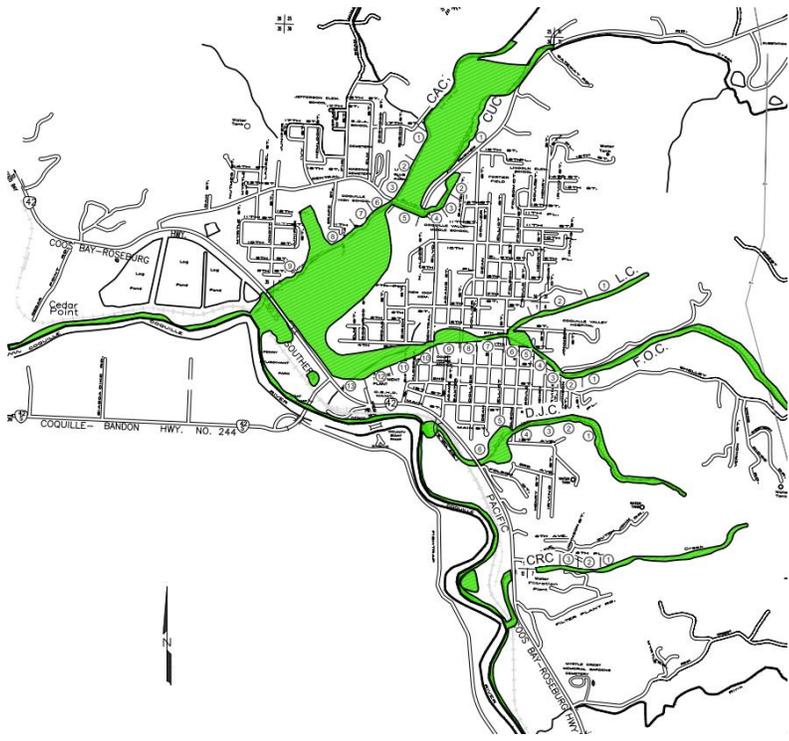


Figure 12. Floodplains, Wetlands and Drainages in the area



Georgia Pacific Site

The City is seeking buyers for this 20+ acre site (Figure 13) south of the intersection of S Adams Street and Mill Street, which is zoned Commercial Retail and Light Industrial. Depending on the ultimate use of this site, it may be the location of significant number of new employees.

Figure 13. General location of Georgia Pacific Site in Coquille, OR

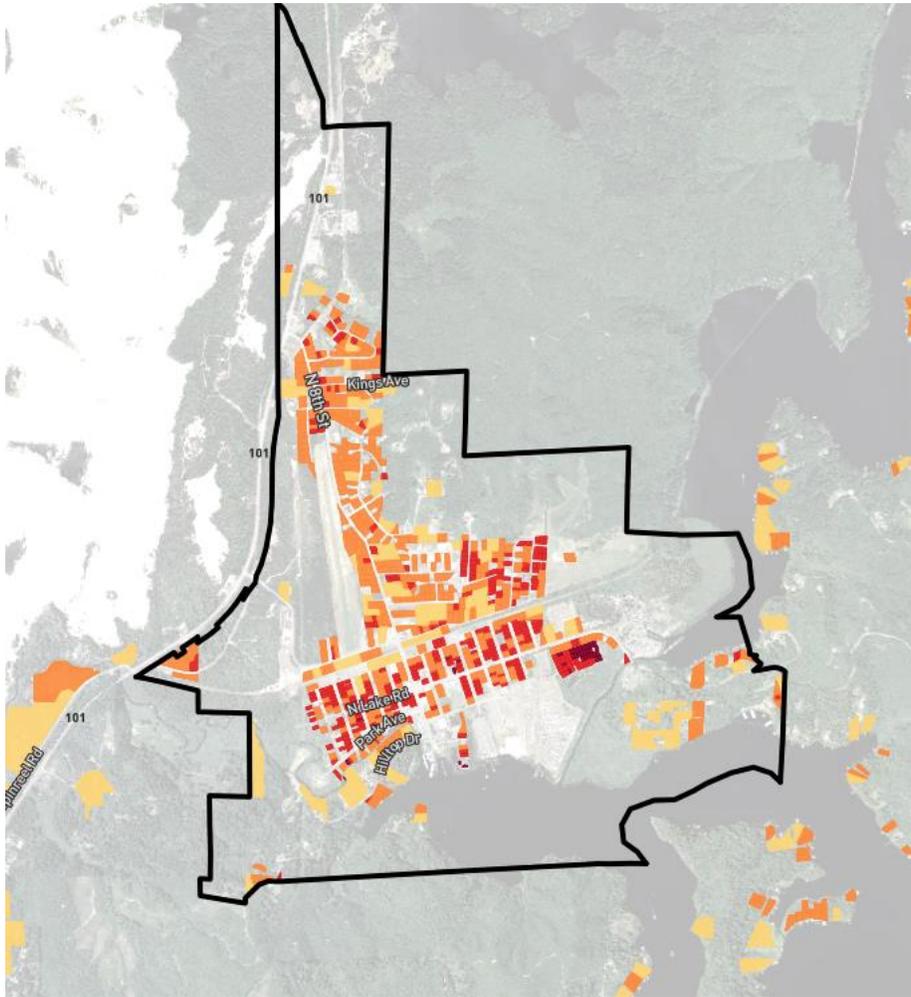


LAKESIDE

Existing Development Patterns

Existing residential density is shown in Figure 14, with darker red parcels containing a greater population per acre than lighter parcels.

Figure 14. Existing Residential Density in Lakeside



People per acre (0 - 1,155.25)

- 0.0 - 1.0
- 1.0 - 5.0
- 5.0 - 10.0
- 10.0 - 20.0
- 20.0 - 1,155.2

Comprehensive Plan (2013 update)

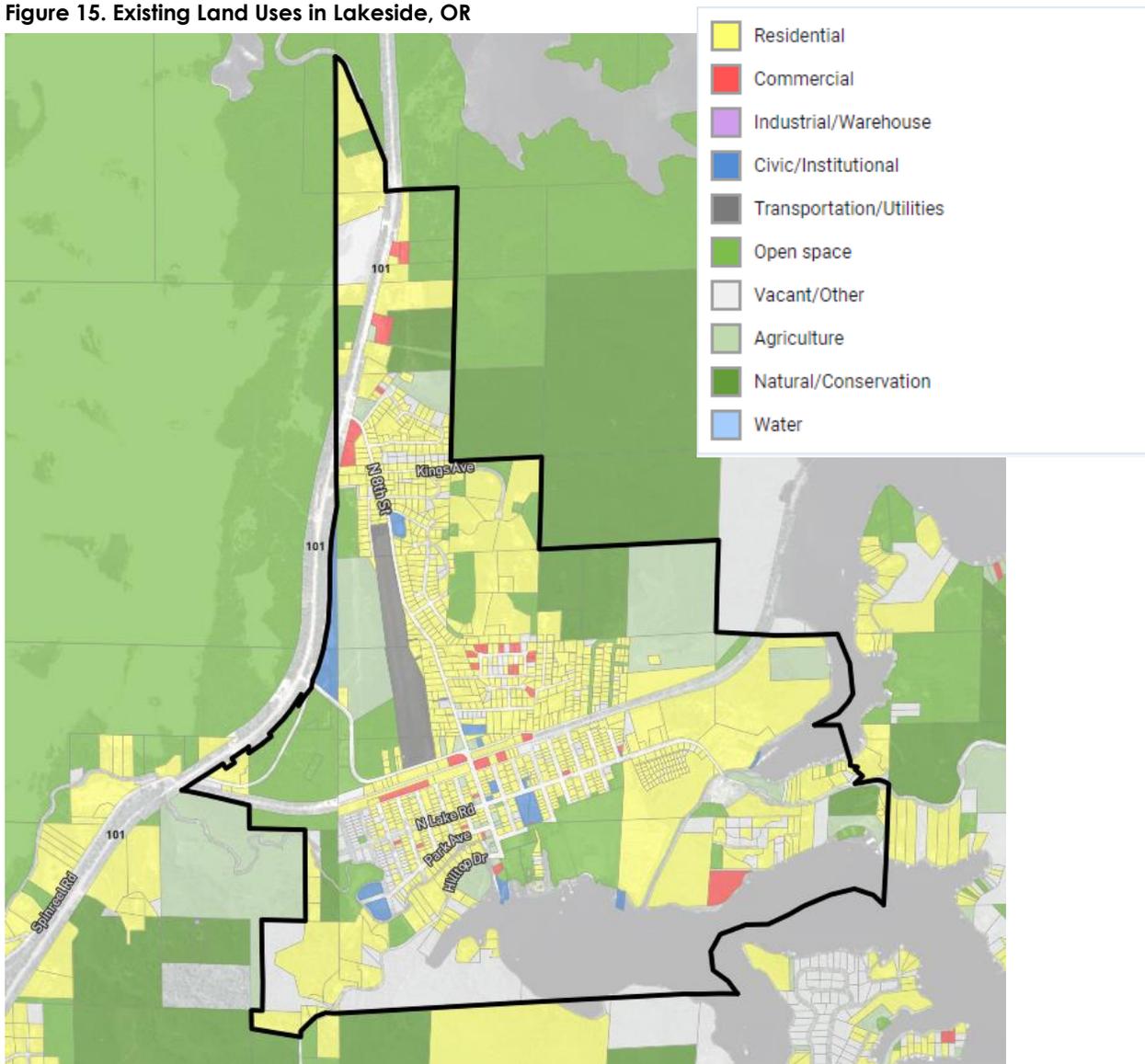
The Lakeside comprehensive plan⁵ contains policy language that supports “efforts to maintain and increase commercial bus service and other mass-transit from Lakeside to regional destinations that provide connections and services.”

⁵ Available at https://www.cityoflakeside.org/sites/default/files/fileattachments/city_council/page/1191/2013_10-3_complnlpoliciesproposed.pdf

Zoning Designations

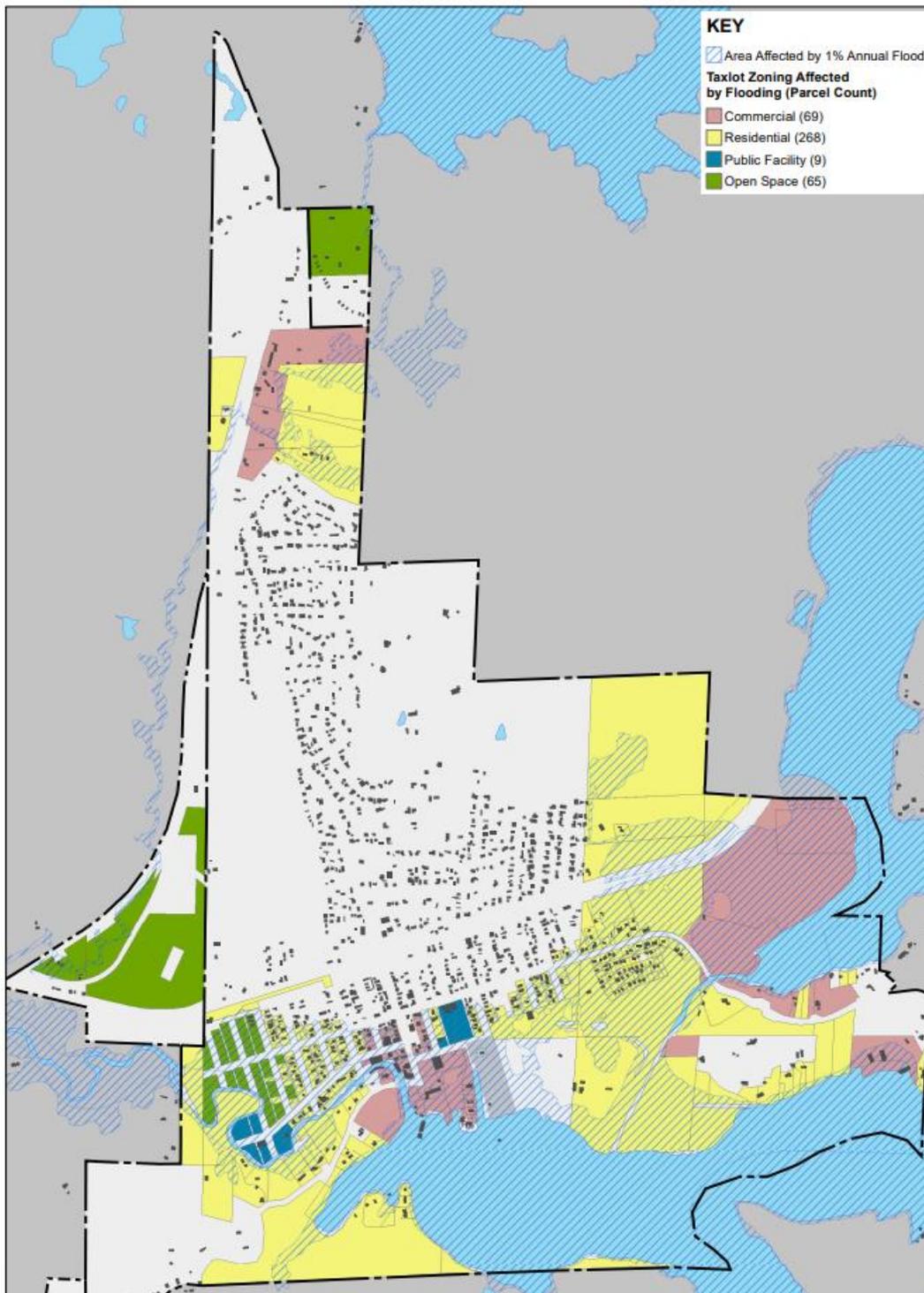
Zoning information for the City of Lakeside is not readily available. Existing land use data is shown in Figure 15 below. There is likely sufficient land in existing residential areas to accommodate the community's growth, though floodplains do affect much of the City as shown in Figure 16.

Figure 15. Existing Land Uses in Lakeside, OR



(Source: Urban Footprint Parcel Canvas Base)

Figure 16. Floodplain in Lakeside, OR



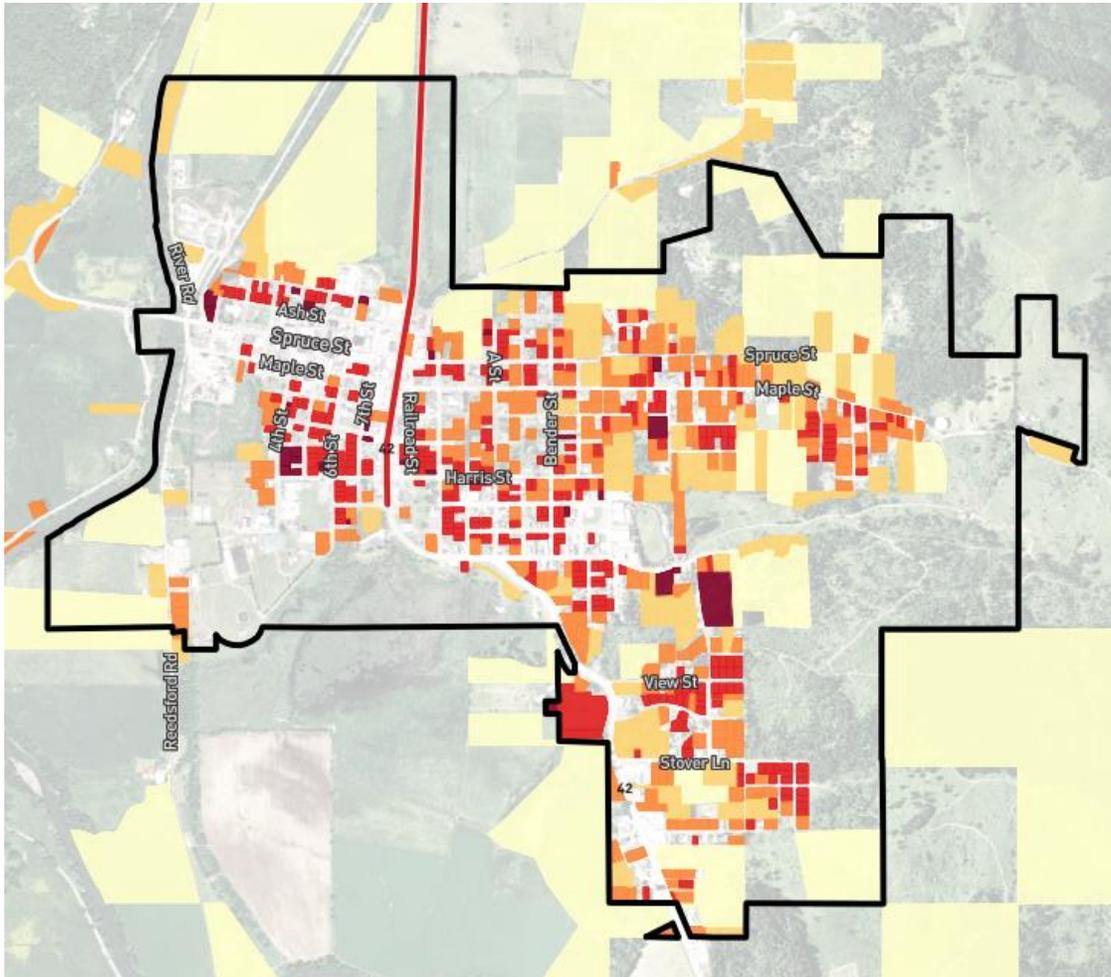
(Source: DOGAMI FEMA Flood Zone Change Map, 2010, <https://www.oregongeology.org/pubs/ofr/O-10-15.pdf>)

MYRTLE POINT

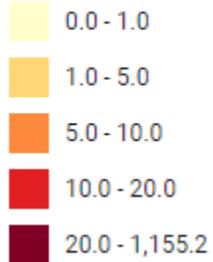
Existing Development Patterns

Existing residential density is shown in Figure 17, with darker red parcels containing a greater population per acre than lighter parcels. Existing transit service to Myrtle Point (the Coquille/Myrtle Point Connector) is shown as a red line.

Figure 17. Existing People Per Acre – Myrtle Point



People per acre (0 - 1,155.25)



Community Plan (2013)

The 2013 Myrtle Point Community Plan⁶ addresses economic development, education, community facilities, human services, and quality of life within the City.

- The City is home to the Coquille Valley Enterprise Zone, which incentivizes additional employment uses in the area shown in Figure 18.
- Community members expressed a desire to grow the downtown area as an employment district.
- A new community center is among the recommendations for community facilities within the plan, though its location is undetermined.
- The plan expresses desire for expanded local transit service, including a dedicated South County transit loop, with more frequent service between Powers, Myrtle Point, and Coquille; as well as a regular, express connector to the Coos Bay Area.

Figure 18. Coquille Valley Enterprise Zone in Myrtle Point



NORTH BEND

Existing Development Patterns

Zoning in North Bend is shown in Figure 19. Existing residential density in North Bend is shown in Figure 20, along with several existing transit routes. Existing jobs in North Bend are shown in Figure 21.

⁶ Available at <https://www.ci.myrtlepoint.or.us/general/page/planning-and-zoning>

Figure 19. North Bend Zoning

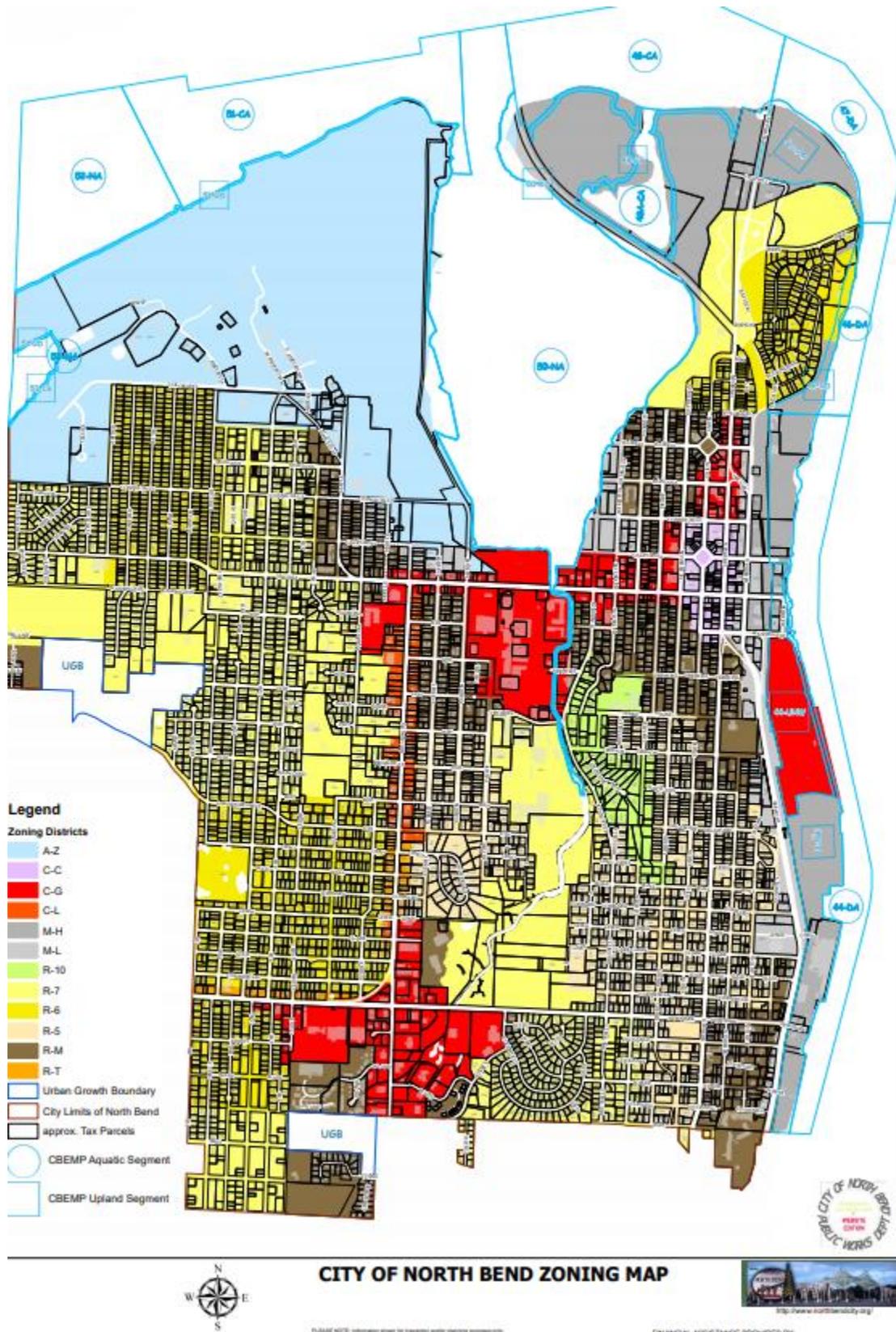
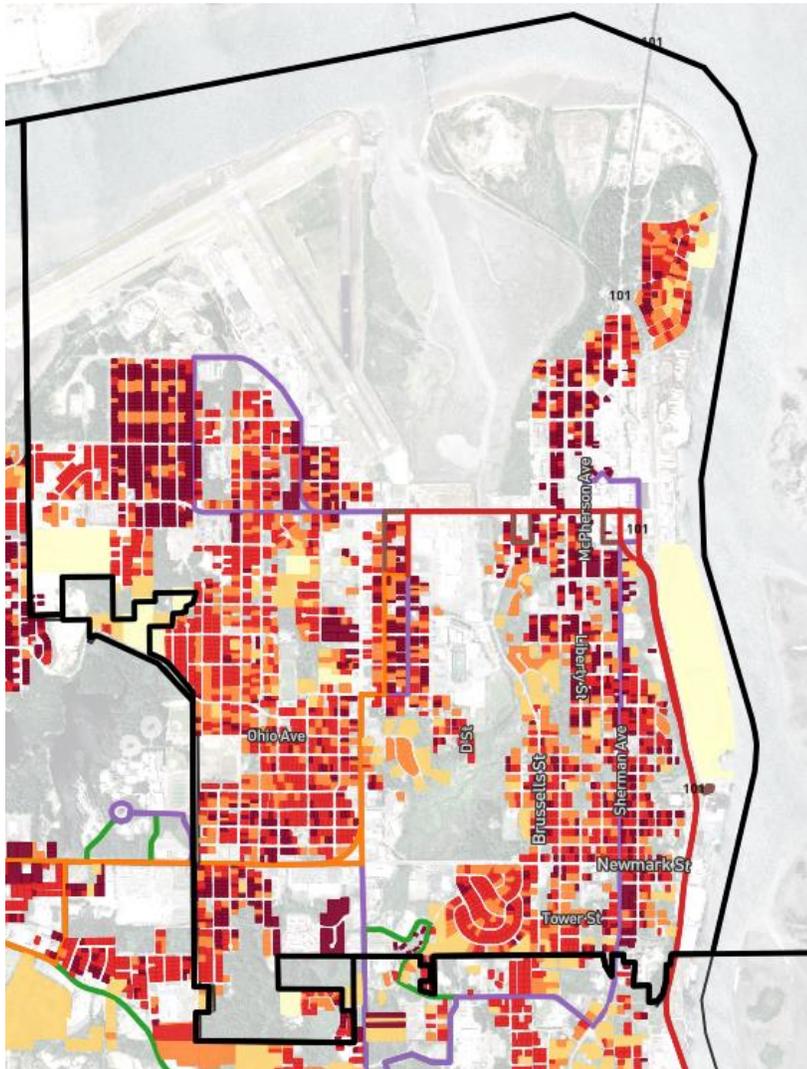


Figure 20. ting People Per Acre – North Bend



People per acre (0 - 1,155.25)

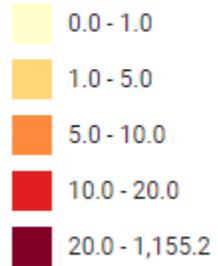
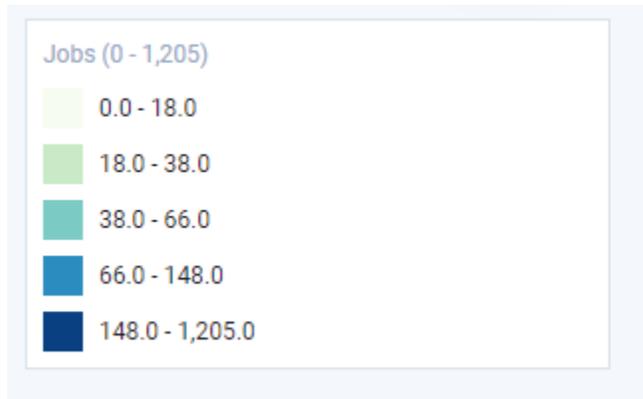
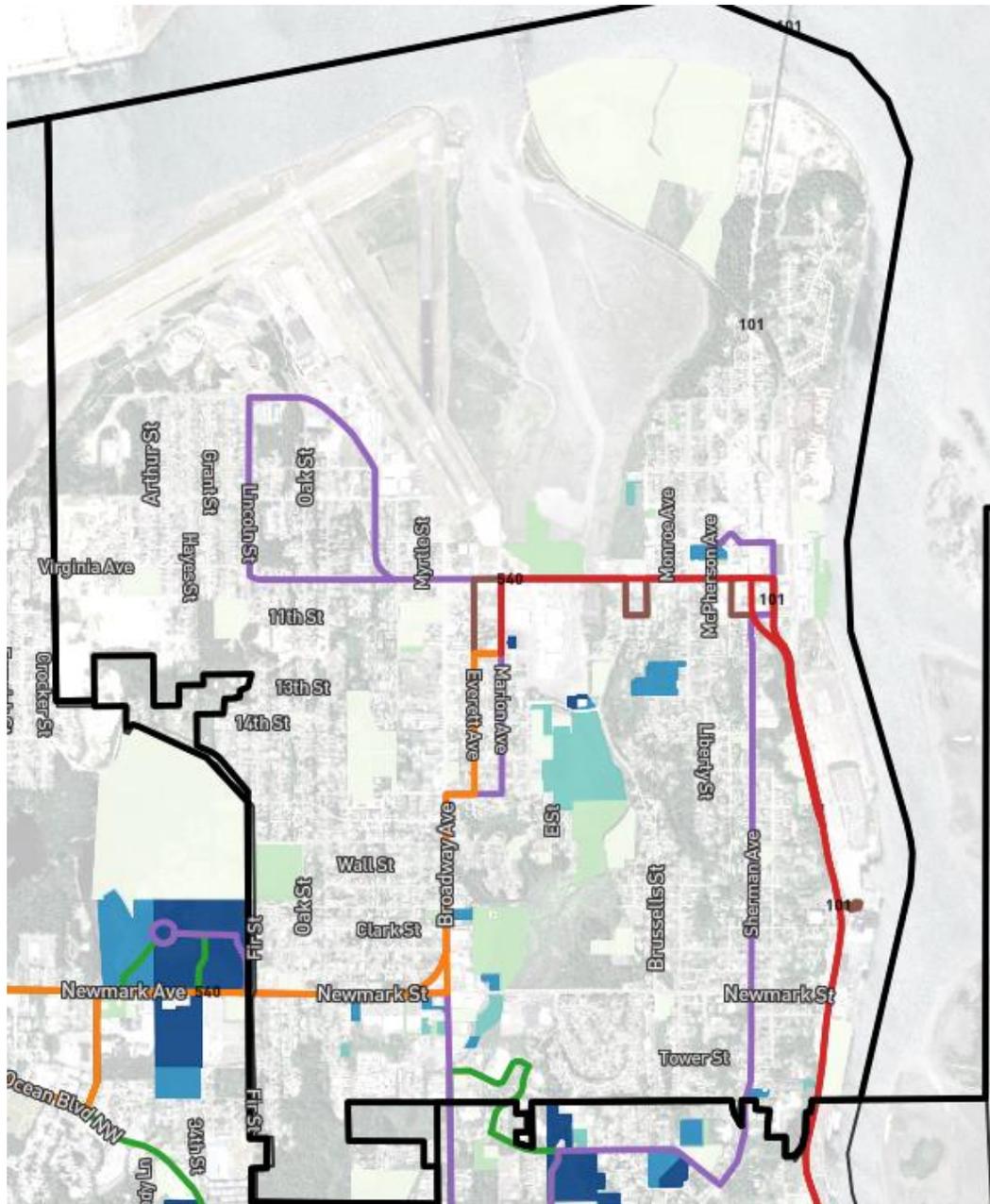


Figure 21. Existing Employment – North Bend



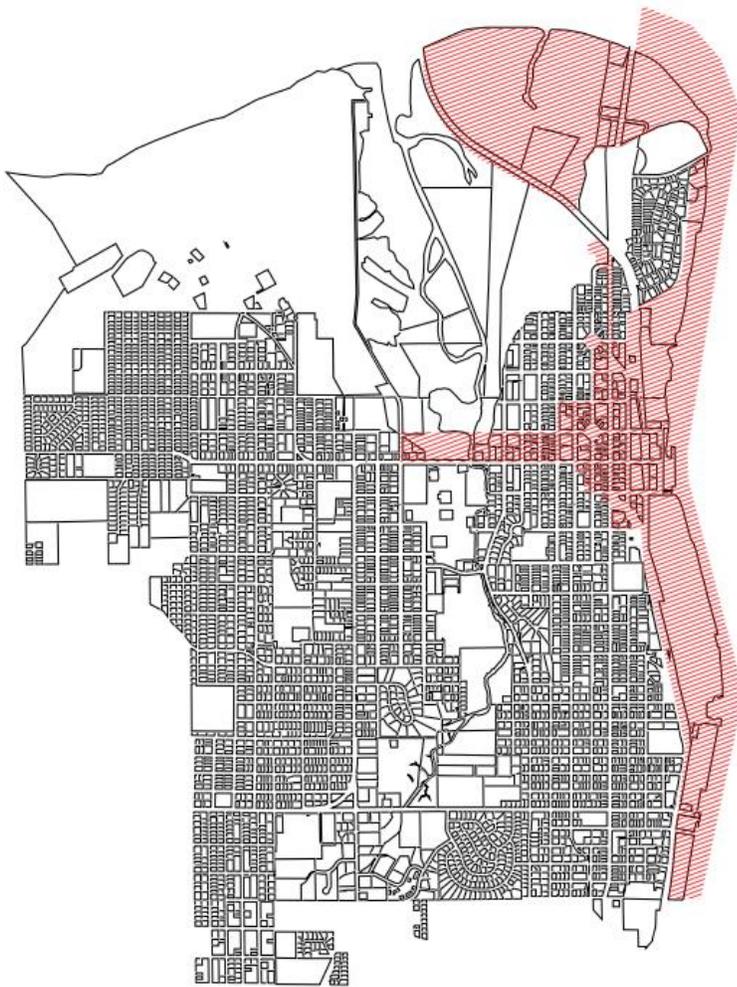
Comprehensive Plan (2019)

- The City's housing goals, objectives, and policies (Chapter 4) recognize a need for additional types of housing including apartments, duplex dwellings, row houses, condominiums, cluster housing, among others. The plan states that multi-family residential zoning may be permitted immediately adjacent to general commercial shopping areas as appropriate. It may be reasonable to expect modest densification of residential areas in the City over time.

Urban Renewal District

The North Bend Urban Renewal District is shown in red hatch marks on Figure 22. This analysis does not provide a detailed review of the programs of this district, but its location indicates areas where the City of North Bend desires additional growth and redevelopment, which may in turn increase transit demand.

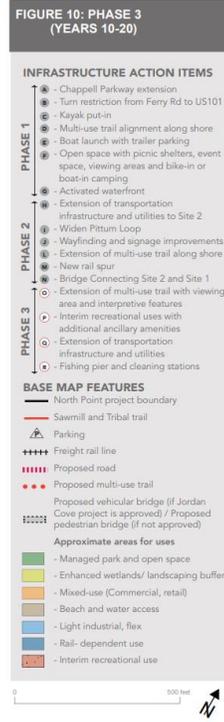
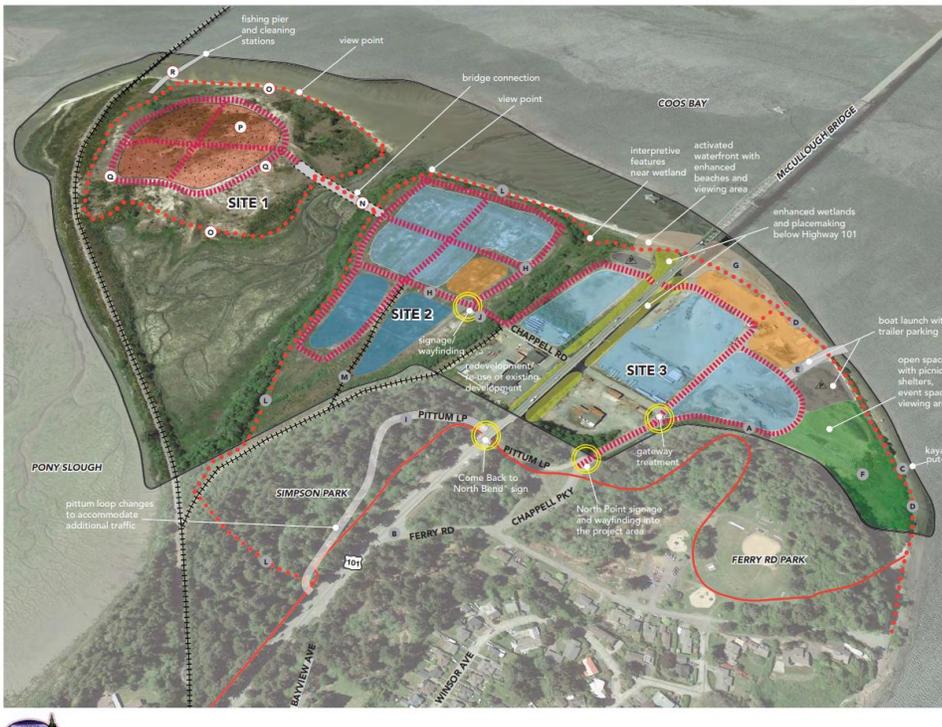
Figure 22. North Bend Urban Renewal District



North Point Area Master Plan

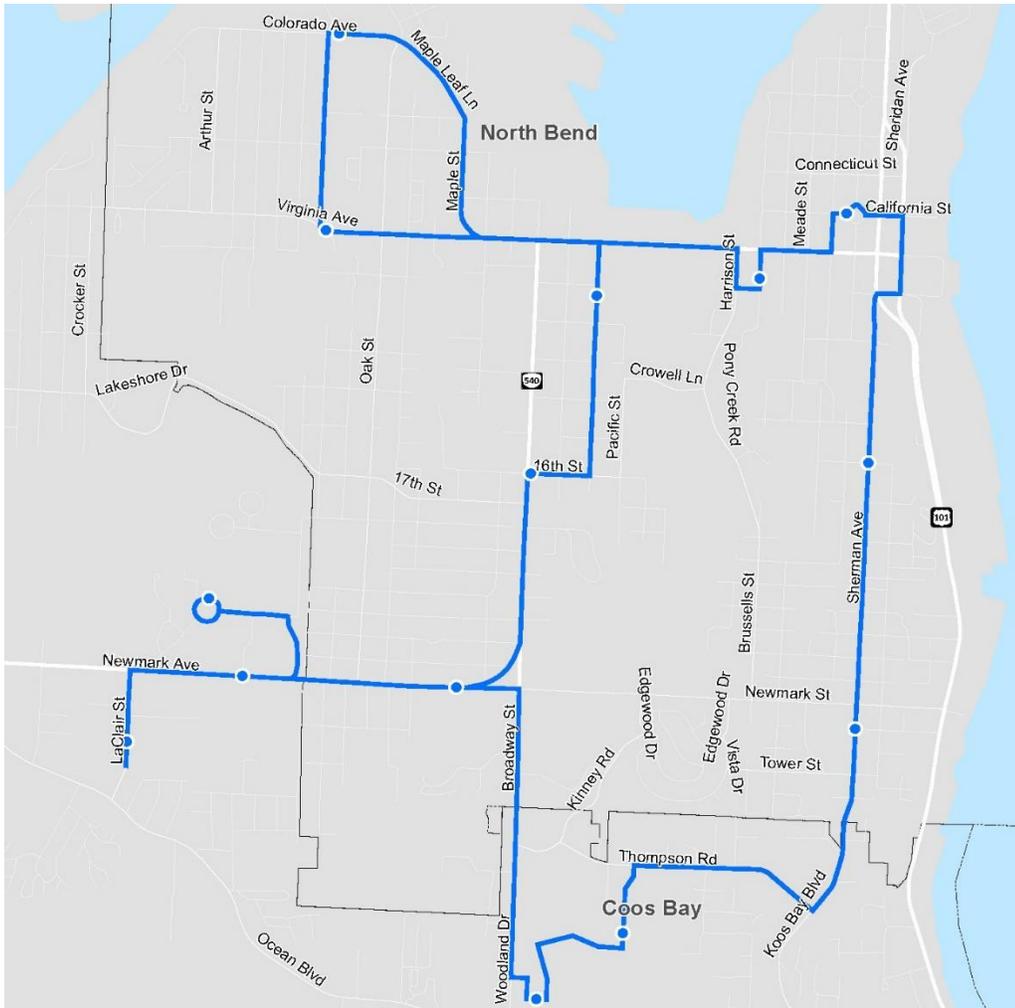
The northern portion of the City has been the subject of a master planning effort to provide a mix of industrial, recreational, ecological, and commercial uses in the area for the long term. The plan notes that public transit access to the site is currently more than 1 mile away (see Figure 23).

Figure 23. Location of the closest CCAT transit line



Existing Transit Service

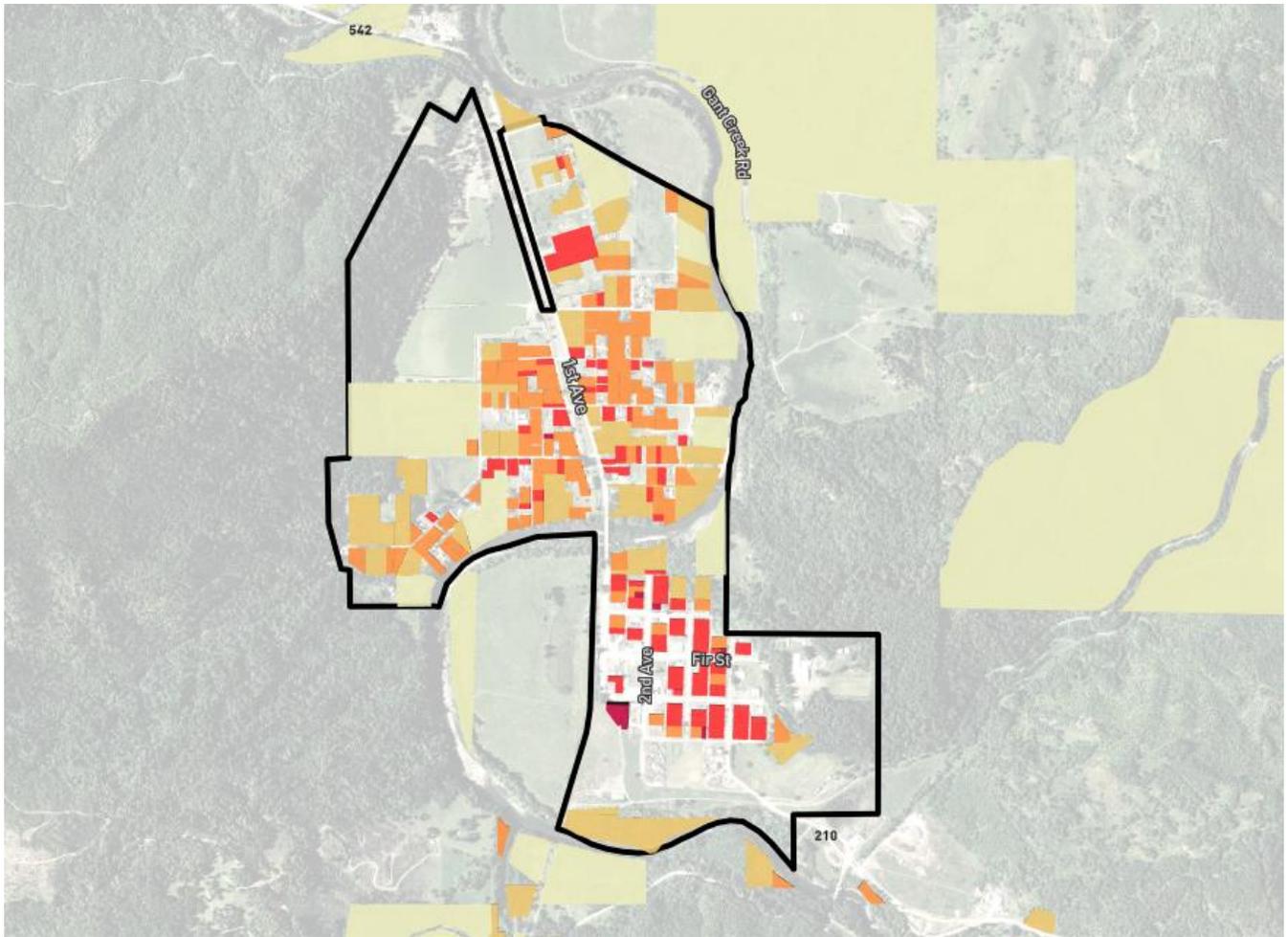
Figure 24. North Bend Loop - Existing Transit Service



POWERS

Powers is a very small community at the entrance to the Siskiyou National Forest. No adopted plans or zoning information is available on the City's website. There appears to be a significant amount of vacant land within the City's urban growth boundary – any modest growth that the City may experience in the future can be expected to occur within the City's current footprint and be similar to neighboring development.

Figure 25. Existing People Per Acre - Powers



People per acre (0 - 1,155.25)

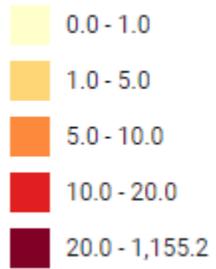


Figure 26. Existing Land Uses - Powers

