Matanuska-Susitna Borough

SASS

Sub-Area Solutions Studies

Bogard-Seldon Existing Conditions Report

November 2022

Contents

1 Introduction 1

1.1 Project Overview 1

1.2 Project Goals 1

1.3 Planning Process 2

1.4 Study Area 2

2 Demographics 5

2.1 Population 5

2.2 Population Density 8

2.3 Age 10

2.4 Race/Ethnicity 11

2.5 Median Household Income 14

3 Land Use Plans 15

3.1 Borough-Wide Comprehensive Plan 15

3.2 MSB Core Area Plan 15

3.3 City of Palmer Comprehensive Plan 2006 17

3.4 Meadow Lakes Comprehensive Plan 2005 17

4 Existing Land Use 18

4.1 Residential 18

4.2 Commercial 18

4.3 Industrial 22

4.4 Parks and Open Space 22

4.5 Agriculture 22

4.6 Community Facilities 22

5 Future Land Use 25

5.1 Housing Growth 25

5.2 Retail, Industrial, and Office Space 28

5.3 Development Nodes 29

6 Subdivisions 31

7 Property Value 33

7.1 Redevelopment Potential 33
8 Land Ownership 36
8.1 Private and Public Lands 36
9 Zoning 36
9.1 MSB Zoning 36
9.2 City of Palmer Zoning 36
10 Transportation System 38
10.1 Existing Road Network 38
10.1.1 Glenn Highway to New Trunk Road Roundabout (MSB-owned) 38
10.1.2 New Trunk to Bogard Road/Seldon Road Intersection (DOT&PF-owned) 40
10.1.3 Seldon Road: Bogard Road/Seldon Road Intersection to Schrock Road (DOT&PF-owned) 41
10.1.4 Seldon Road: Schrock Road to Lucille Street (MSB-owned) 42
10.1.5 Seldon Road: Lucille Street to Church Road (MSB-owned) 42
10.1.6 Seldon Road: Church Road to Pittman Road (MSB-owned) 43
10.2 Existing Signals and Roundabouts 44
10.3 Traffic Volumes 45
10.4 Crashes 47
10.5 Transit 49
10.6 Non-Motorized 49
10.7 Aviation 51
10.8 Rail 51
10.9 Planned Improvements 51
10.9.1 Alaska Statewide Transportation Improvement Program 51
10.9.2 MSB Transportation Infrastructure Packages 52
10.10 Plans and Studies 54
10.10.1 MSB 2035 Long Range Transportation Plan 54
10.10.2 Coordinated Human Services Transportation Plan 55
10.10.3 Draft MSB 2022 Official Streets and Highway Plan 57

10.10.4 Safe Route to School Plans 59
11 Utilities 59
11.1 Water and Sewer 59
11.2 Other Utilities 60
12 Economy 60
12.1 Plans and Studies 60
12.1.1 2010 MSB Economic Development Strategic Plan 60
12.1.2 Fiscal Year 2023–2028 Borough Strategic Plan 61
12.2 Existing Economic Conditions and Trends 61
12.3 Major Employers 64
13 Environmental 65
13.1 Cultural Resources 65
13.2 Wetlands 65
13.3 Floodplains 67
13.4 Contaminated Sites 67

Figures

Figure 1. Planning Process 2
Figure 2. Study Area Map 4
Figure 3. MSB Population History and Projections, 1960–2050 6
Figure 4. Population by Block Group, 2020 7
Figure 5. Population Density by Block Group, 2020 9
Figure 6. Age of Bogard-Seldon Sub-Area Residents with Regional Comparison, 2020 10
Figure 7. Race and Ethnicity in the Bogard-Seldon Sub-Area with Regional Comparisons, 2020 12
Figure 8. Percent Minority, 2020 13
Figure 9. Household Income Distribution in the Bogard-Seldon Sub-Area with Regional Comparisons, 2022 14
Figure 10. MSB Core Area Plan, Land Use Plan Map 16
Figure 11. Current Land Use in the Bogard-Seldon Sub-Area, 2022 19
Figure 12. Multifamily Units in the Bogard-Seldon Sub-Area, 2022 20

Figure 13. Retail and Office Development in the Bogard-Seldon Sub-Area, 2022 21
Figure 14. Community Facilities 24
Figure 15. Housing Production in the MSB, 2011–2021 25
Figure 16. Median Monthly Sales Price in the MSB, 2012–2022 26
Figure 17. Rents in the MSB, 2010–2021 27
Figure 18. Development Nodes in the Bogard-Seldon Sub-Area 30
Figure 19. Subdivisions 32
Figure 20. Land and Building Value, 2022 34
Figure 21. Improvement to Land Value Ratio 35
Figure 22. City of Palmer Zoning Map 37
Figure 23. Existing Road Network 39
Figure 24. Average Daily Traffic Count, 2020 46
Figure 25. Known Crashes in Bogard-Seldon Sub-Area, 2016–2020 48
Figure 26. Strava Heat Map 50
Figure 27. Transportation Needs Index 56
Figure 28. Draft OS&HP Projects 58
Figure 29. Change in Number of Jobs in MSB and Alaska, 2011–2021 62
Figure 30. Public and Private Jobs in the MSB, 2011–2021 63
Figure 31. Top Private Job Sectors in the MSB, 2011–2021 64
Figure 32. Wetlands 66
Figure 33. Floodplains 68
Figure 34. Contaminated Sites 69

Tables

Table 1. Bogard-Seldon Sub-Area Crash Severity Summary Table, 2016–2020 47
Table 2. STIP Projects in the Bogard-Seldon Sub-Area 51
Table 3. 2018 MSB Road Bond Projects in the Bogard-Seldon Sub-Area 52
Table 4. 2021 MSB Road Bond Projects in the Bogard-Seldon Sub-Area 53
Table 5. LRTP-recommended Roadway Projects within the Bogard-Seldon Sub-Area 54
Table 6. Utility Providers 60
Table 7. MSB and Anchorage Commuting Patterns, 2015 and 2019 61

Appendices

Appendix A Existing Non-Infrastructure Policy and Codes

Acronyms/Abbreviations

ACS	American Community Survey
ADEC	Alaska Department of Environmental Conservation
CTP	Community Transportation Program
DOL&WD	Alaska Department of Labor and Workforce Development
DOT&PF	Alaska Department of Transportation and Public Facilities
FFY	Federal Fiscal Year
GIS	Geographic Information System
LRTP	Long Range Transportation Plan
MHI	Median Household Income
MSA	Metropolitan Statistical Area
MSB	Matanuska-Susitna Borough
OS&HP	*Official Streets and Highway Plan*
SASS	Sub-Area Solutions Studies
SCM	*Subdivision Construction Manual*
SpUD	Special Use District
STIP	Statewide Transportation Improvement Program
UMED	University Medical District

1 Introduction

1.1 Project Overview

The Matanuska-Susitna Borough (MSB) Assembly adopted their 2023–2028 Strategic Plan to focus on three key areas:

1. Foster economic growth and diversification within the MSB,
2. Support the delivery of high-quality MSB services, and
3. Help manage growth throughout the MSB.



As part of the implementation of the Strategic Plan, the MSB is developing the Sub-Area Solutions Studies (SASS) project, with the goal of supporting a safe, robust transportation system that can be a catalyst for economic growth and prosperity in the MSB.

A functioning transportation system is more than just a road network. While new or expanded roads can provide short-term solutions to transportation problems, they are most effective when paired with non-infrastructure programs and policies to protect the roadway network over the long term.

This project's purpose is to identify infrastructure and non-infrastructure solutions to transportation needs that address the MSB's Strategic Plan focus areas. Combining infrastructure and non-infrastructure-based transportation solutions can result in better mobility, which can lower business costs, improve freight movement, and provide better employment opportunities. It can also improve quality of life as residents can get places faster using a variety of travel options, making the MSB an even more desirable place people want to live.

The project consists of the following four sub-areas:

- UMED District Sub-Area
- Bogard-Seldon Sub-Area
- Fishhook Triangle Sub-Area
- Knik Goose Bay-Big Lake Sub-Area

1.2 Project Goals

The project's goals are to:

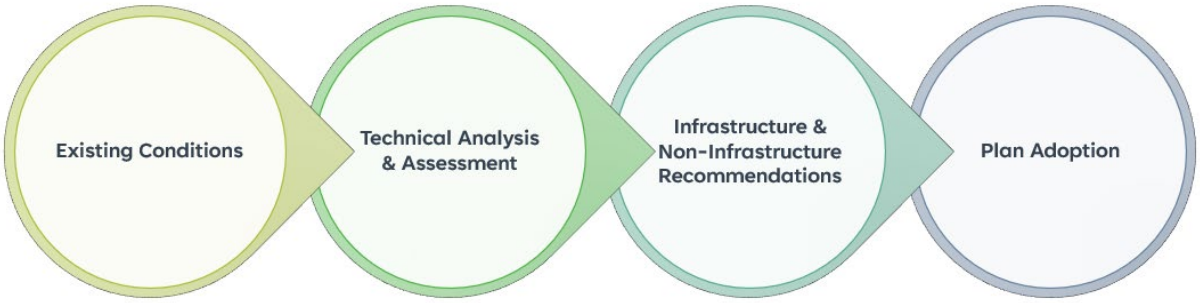
- Identify current and future transportation deficiencies
- Establish purpose and need for proposed solutions
- Prioritize the *Official Streets and Highway Plan* (OS&HP) corridor recommendations

- Promote comprehensive solutions to MSB's growth-related transportation issues
- Demonstrate the linkage between transportation, land use, and economic development

1.3 Planning Process

The planning process used to develop the study for each sub-area is shown in Figure 1.

Figure 1. Planning Process



Throughout the planning process, the MSB will engage with the public, stakeholders, and partner agencies. This input will guide the development of the study and establish public understanding of the relationship between transportation improvements and their functionality and safety with land use policies, as well as how transportation and land use are important to economic development and investments.

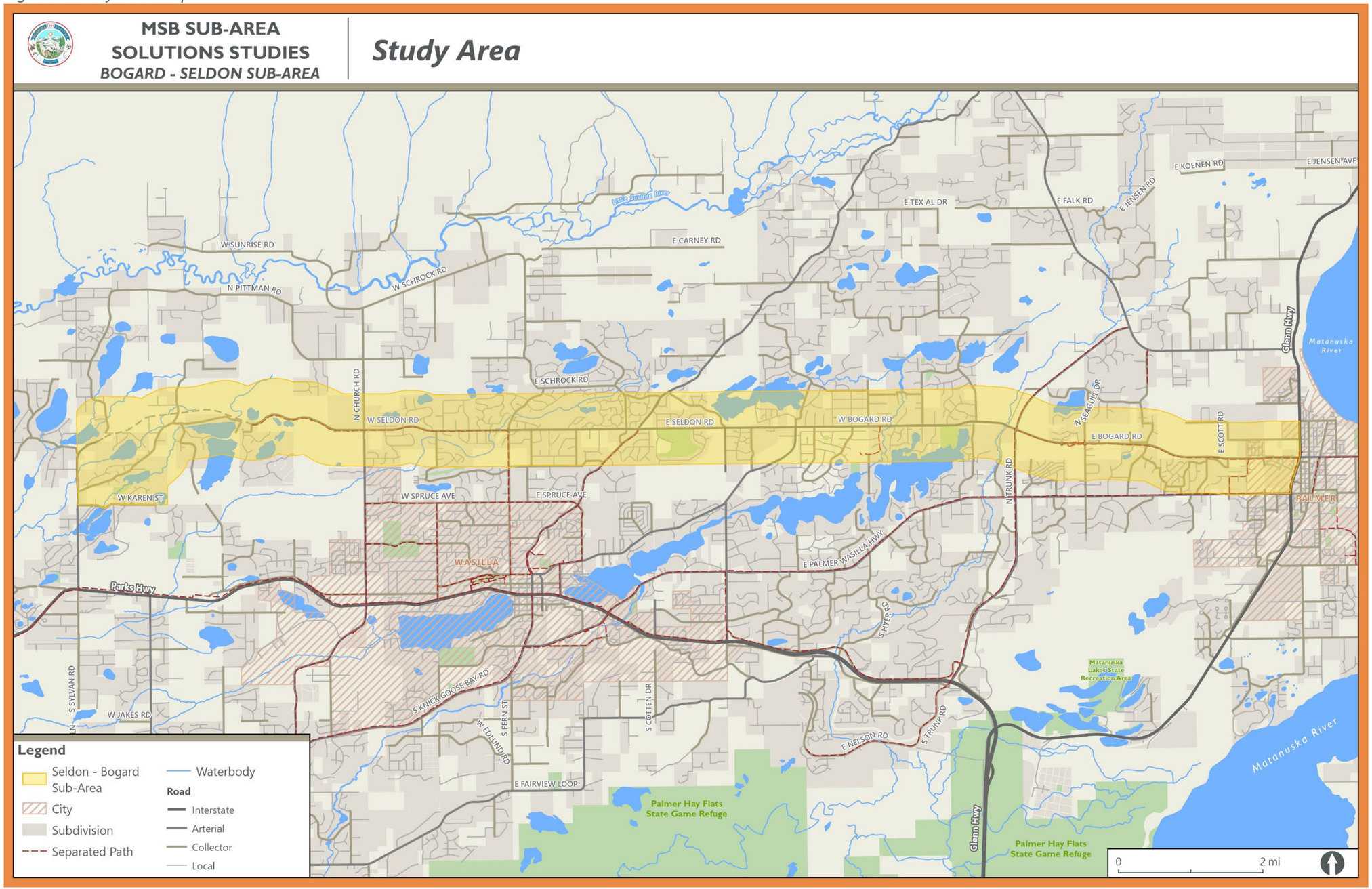
1.4 Study Area

The Bogard-Seldon Sub-Area is a 13-mile-long arterial corridor that starts in Palmer at the Glenn Highway and extends west, staying north of the Wasilla city limits, to Pittman Road in the Meadow Lakes area (see Figure 2). This corridor provides an alternative to the heavily used Palmer-Wasilla Highway and Parks Highway, allowing travelers to bypass heavy congestion through downtown Wasilla during peak traffic periods. The corridor is jointly owned by the MSB and Alaska Department of Transportation and Public Facilities (DOT&PF), with the state-owned and maintained section extending from Trunk Road west to Schrock Road. The easternmost portion of the corridor is located within the city limits of Palmer and is jointly maintained by the DOT&PF and MSB. The remaining segments are owned and maintained by the MSB.

Key transportation planning issues include implementing access management controls along the entire corridor, providing a continuous non-motorized pathway, identifying transit/paratransit improvements, improving road geometrics between Schrock Road and Lucille Street, and addressing several conflict points along the state-owned portion of the corridor between the Trunk Road/Seldon Road intersection. The sub-area includes parts

of the City of Palmer, along with the Greater Palmer, Gateway, Farm Loop, North Lakes, Tanaina, and Meadow Lakes Community Councils.

Figure 2. Study Area Map



2 Demographics

This section provides a demographic summary to provide context for the existing conditions and anticipated changes in the sub-area.

2.1 Population

Figure 3 shows the historic and projected future population of the MSB and Alaska. According to the Alaska Department of Labor and Workforce Development (DOL&WD),[1] both the state and MSB grew rapidly starting from the 1970s through the 2000s. Around 2010, the Alaskan population began to stabilize, growing only 3 percent between 2010 and 2022.

Much of Alaska's population growth and decline results from more significant in- and out-migration than in other states. Economic factors such as the volatility of the oil industry and recessions on national and state levels significantly impact the state's population. Readjustment of military personnel to bases in other states has also had notable impacts on Alaska's population.[2] The DOL&WD's most recent population forecast, published in 2021, assumes that slow growth in the state over the 2021 to 2050 horizon will be a result of an aging population, lower birth rates, and a net out-migration[3] of between -0.7 and -0.2 percent.[4] The rapid growth in the MSB is predicted to be offset by a net decrease in population in Anchorage, population decreases in other Southcentral communities and the Southeast region of the state, and stagnant population numbers in other regions.[5]

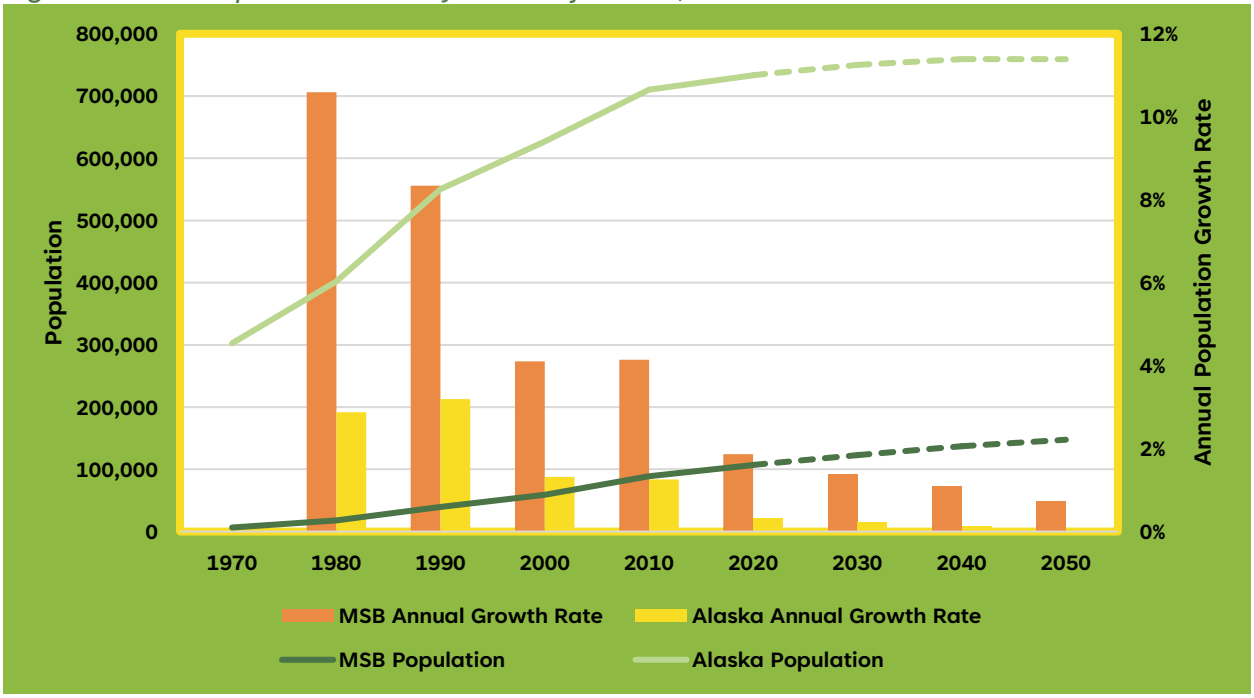


By contrast, the MSB population grew 22 percent over the same period. These trends are projected to continue, with the DOL&WD forecasting a 38 percent increase in population within the MSB by 2050, compared with only 4 percent statewide.[6] The MSB is growing

[1] DOL&WD, Alaska Population Estimates, 2021, https://live.laborstats.alaska.gov/pop/index.cfm
[2] DOL&WD, Alaska Population Overview: 2019 Estimates, December 2020
[3] Net out-migration refers to the difference between the number of people moving from an area compared to those moving to the area. Net outmigration means that more people are expected to move out of Alaska than into the state.
[4] DOL&WD, Alaska Population Estimates, 2021, https://live.laborstats.alaska.gov/pop/index.cfm
[5] DOL&WD, Alaska Population Projections: 2021 to 2050, June 2022
[6] DOL&WD, Alaska Population Estimates, 2021, https://live.laborstats.alaska.gov/pop/index.cfm

much faster than the Anchorage Metropolitan Statistical Area (MSA), of which the MSB is a part; the Anchorage MSA is expected to see a 4 percent decrease in population by 2050. More than half of the MSB's new residents are in-migrants from within Alaska, mostly from Anchorage. The MSB is one of only two regions in Alaska that has experienced net positive in-migration in the past 20 years. Families with children are particularly prominent in the demographic breakdown of residents moving from Anchorage to the MSB. Overall, this migration from other areas of the state is the main reason for the MSB's recent and continuing population growth.[7]

Figure 3. MSB Population History and Projections, 1960–2050



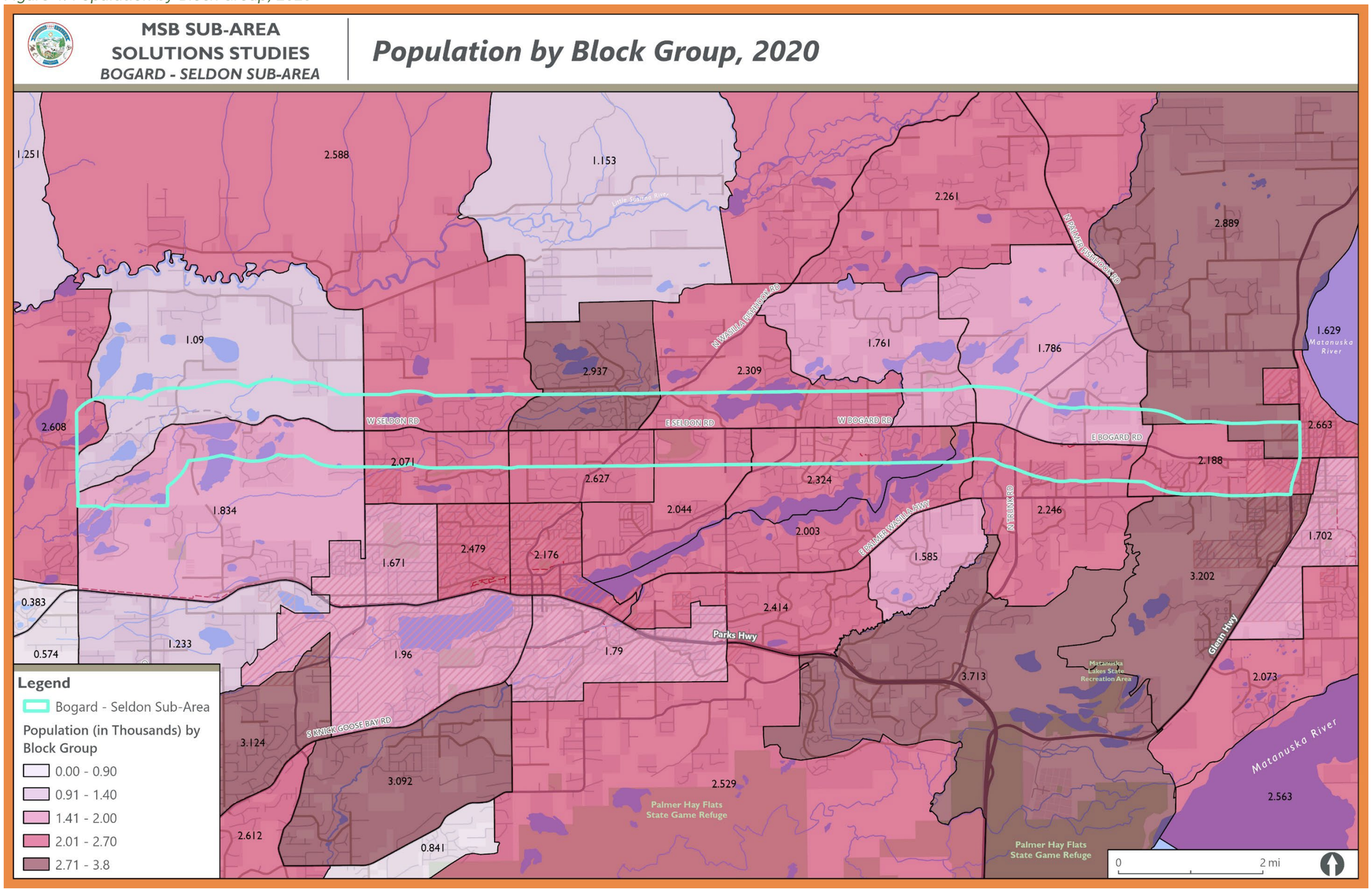
Source: DOL&WD, Alaska Population Estimates, 2021, https://live.laborstats.alaska.gov/pop/index.cfm

This rapid population increase affects many aspects of life in the MSB that are discussed throughout this report, including housing prices, residential and commercial development and real estate, traffic, transportation infrastructure and connectivity, school capacity, commuting patterns, and the regional economy.

In 2020, the Bogard-Seldon Sub-Area had a population of 12,183, which was approximately 11.3 percent of the MSB's total population.[8] Figure 4 shows the population distribution within the sub-area.

[8] American Community Survey, 5-year Estimates, 2020, via ESRI's ACS Population Summary, 2022

Figure 4. Population by Block Group, 2020



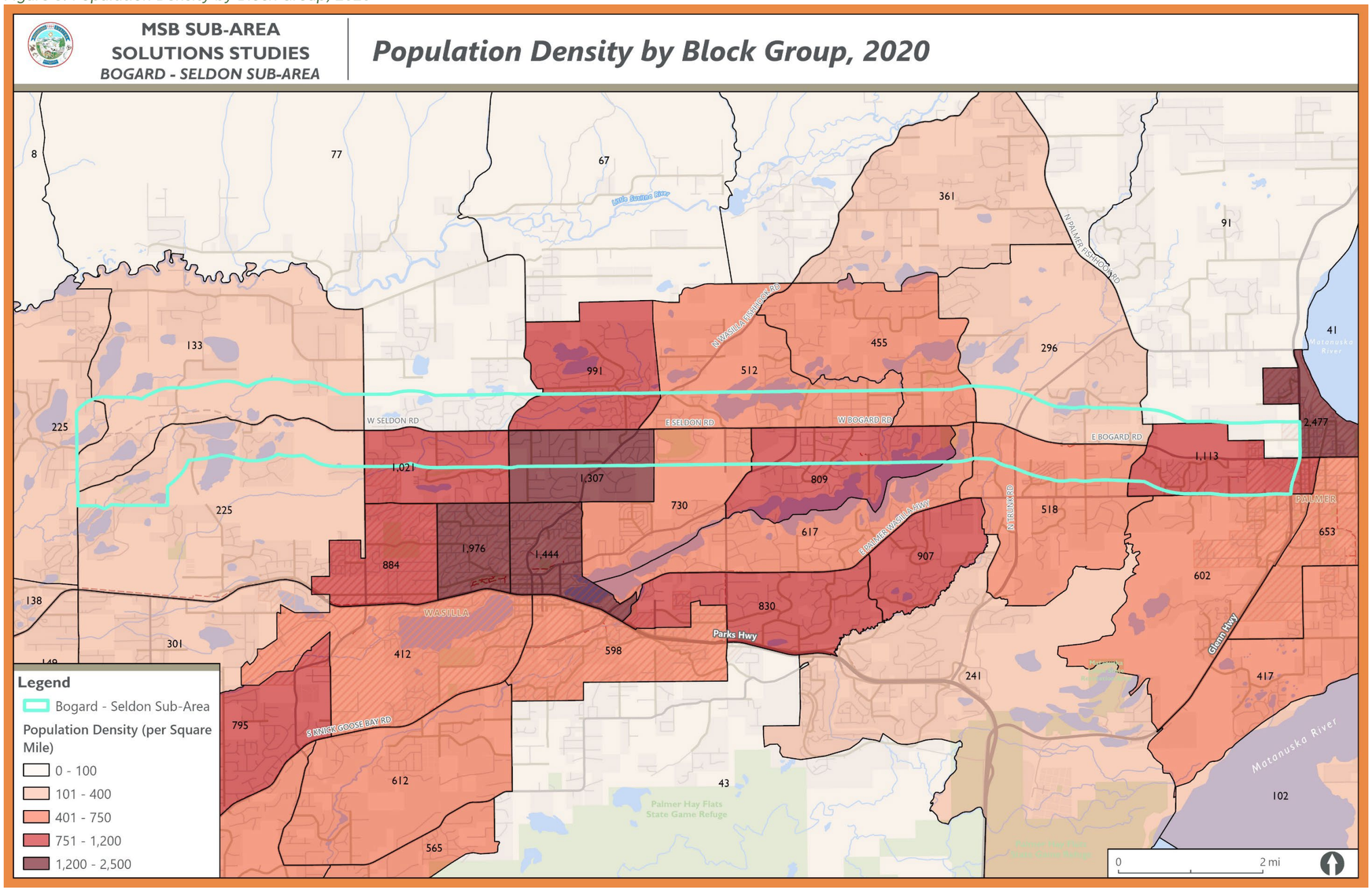
Source: American Community Survey, 2016–2020 5-year Estimates Summary

2.2 Population Density

The average population density in the Bogard-Seldon Sub-Area is 671 people per square mile.[9] This is considerably denser than the MSB and the other sub-areas, due to the comparatively denser development along the corridor. The densest block group is around the Wasilla-Fishhook Road/Seldon Road intersection, which contains a substantial amount of multifamily housing, as shown in Figure 12, included in Section 4.1. Figure 5 shows population density in the sub-area.

[9] American Community Survey 5-year estimates, 2020, via ESRI's ACS Population Summary, 2022

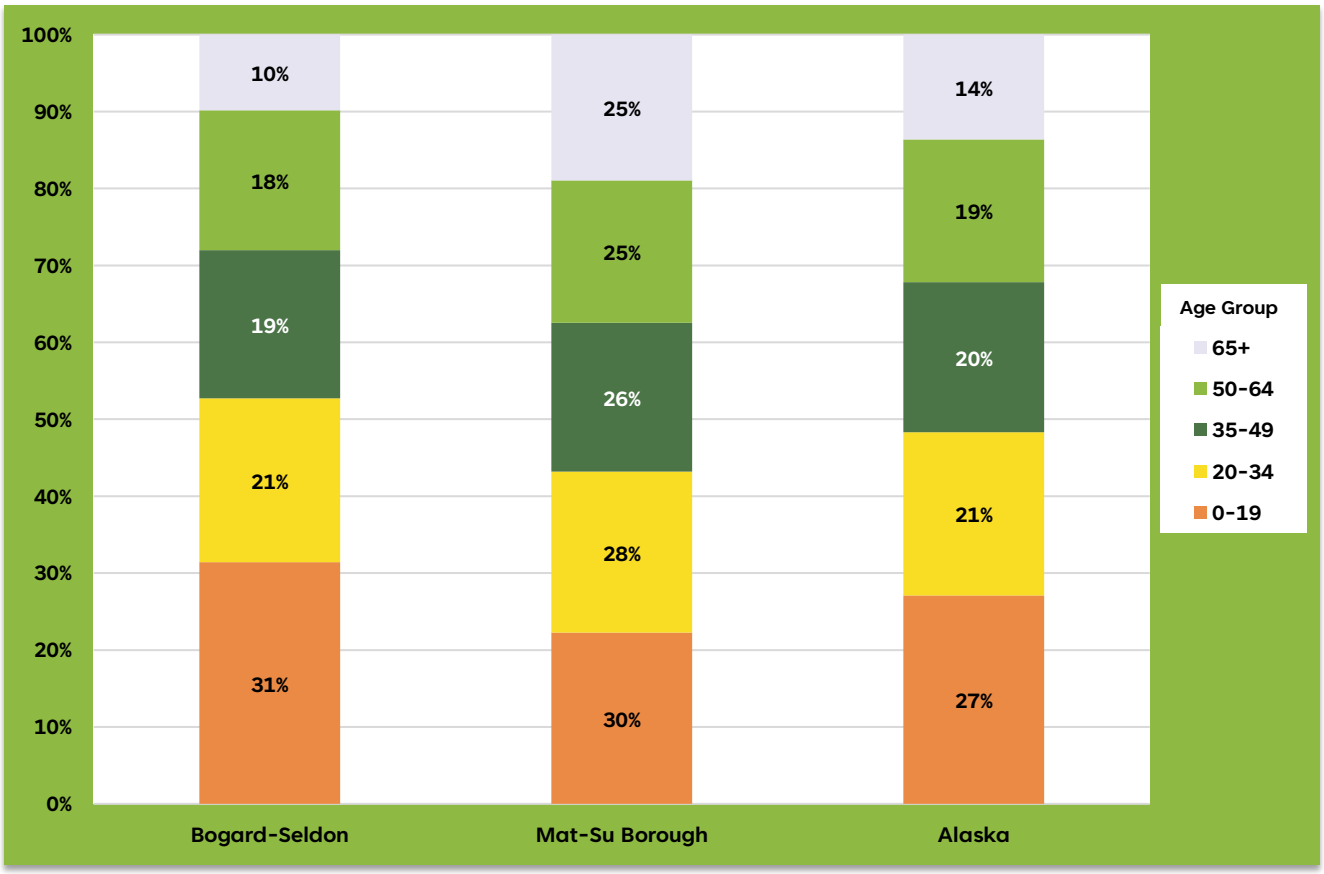
Figure 5. Population Density by Block Group, 2020



2.3 Age

Bogard-Seldon Sub-Area residents are younger than the MSB and statewide averages, as shown in Figure 6. In 2020, 31 percent of the population was under age 19, and 21 percent was between the ages of 20 and 34.[10] Only 10 percent of the Bogard-Seldon population was over age 65, compared to 25 percent MSB-wide. This younger population may reflect a large share of families with children in the sub-area and the large share of family households discussed below.

Figure 6. Age of Bogard-Seldon Sub-Area Residents with Regional Comparison, 2020



Source: American Community Survey, 2016–2020 5-year Estimates; DOL&WD, Alaska Population by Age and Sex, 2010, 2020 to 2021, 2021, https://live.laborstats.alaska.gov/pop/estimates/data/AgeBySexAK.xls

According to the 2020 American Community Survey,[11] the average household size within the Bogard-Seldon Sub-Area is 3.0 people per household. This is similar to the MSB, though slightly more than the statewide average of 2.7 people per household. Approximately 76 percent of the households in the Bogard-Seldon Sub-Area are family

[10] U.S. Census 2022

[11] American Community Survey 5-year estimates, 2020, via ESRI's ACS Population Summary, 2022

households,[12] compared with 71 percent within the MSB overall and 65 percent statewide. Additionally, 40 percent of households in the Bogard-Seldon Sub-Area have children under age 18, compared with 35 percent within the MSB and 34 percent statewide. This large share of family households and households with children helps explain the larger-than-average household size and the number of young residents within the area. It also demonstrates the continued demand for schools within the sub-area and the need for road safety, connectivity, and transit service, particularly for children too young to drive.

2.4 Race/Ethnicity

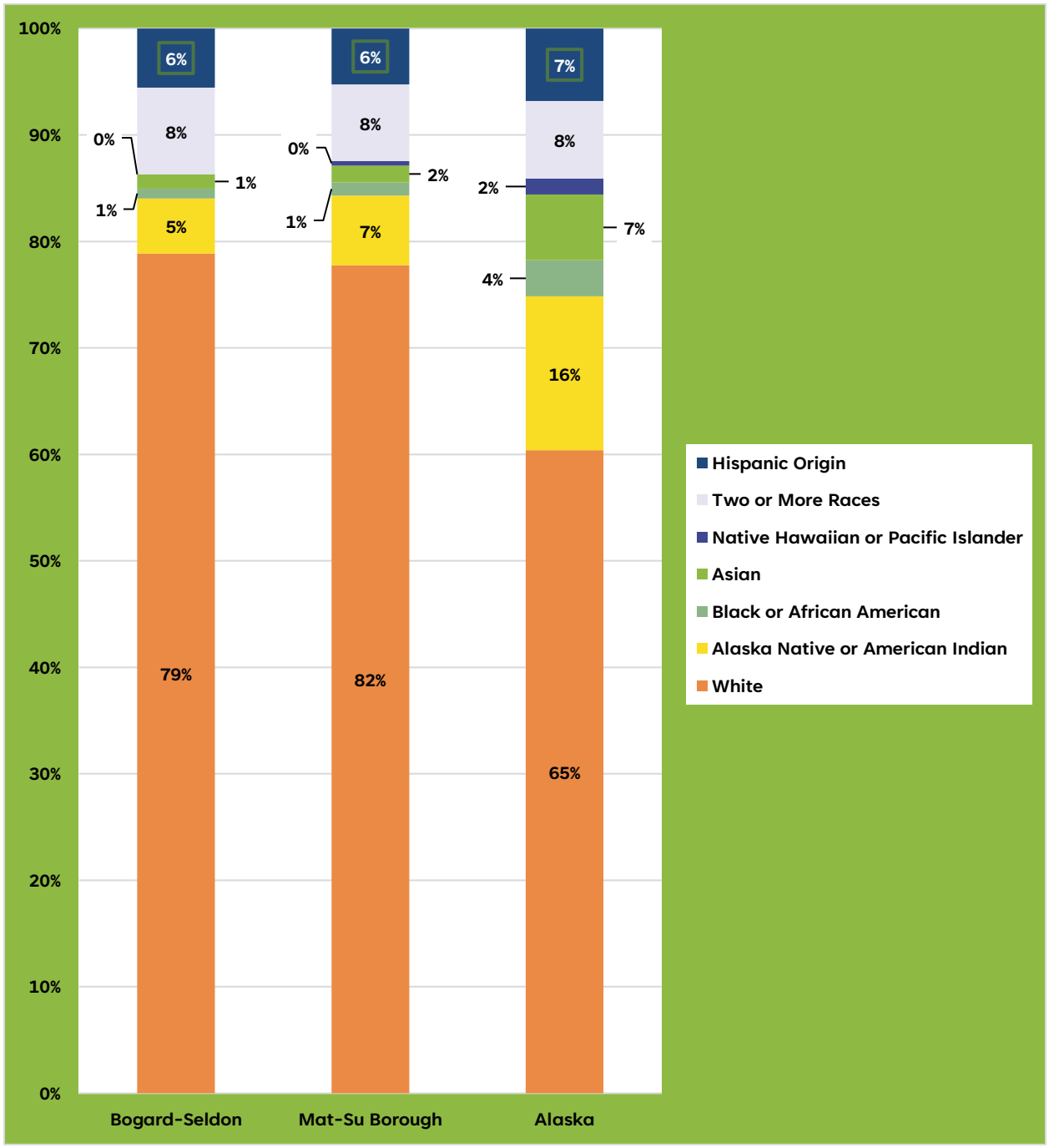
The Bogard-Seldon Sub-Area is similar in race and ethnicity to the MSB as a whole, though less diverse than statewide averages, as shown in Figure 7. The 2020 American Community Survey[13] reported that 79 percent of the sub-area's population identified as white, 8 percent as two or more races, and 5 percent as Alaska Native or American Indian. MSB-wide, the 2020 American Community Survey reported that 82 percent of residents identified as white, 7 percent as Alaska Native or American Indian, and 8 percent as two or more races. Statewide, the 2020 American Community Survey reported that 65 percent of residents identified as white; 15 percent as Alaska Native or American Indian, approximately twice the share of the MSB population; and 8 percent as two or more races.

Figure 8 shows the geographic distribution of minority populations in the Bogard-Seldon Sub-Area. Approximately 15 to 20 percent of the population identifies with a race or ethnicity other than white.

[12] A family household refers to a household that is composed of a family (i.e., a group of two or more people related by birth, marriage, or adoption and residing together). It includes any unrelated people who may be residing there.

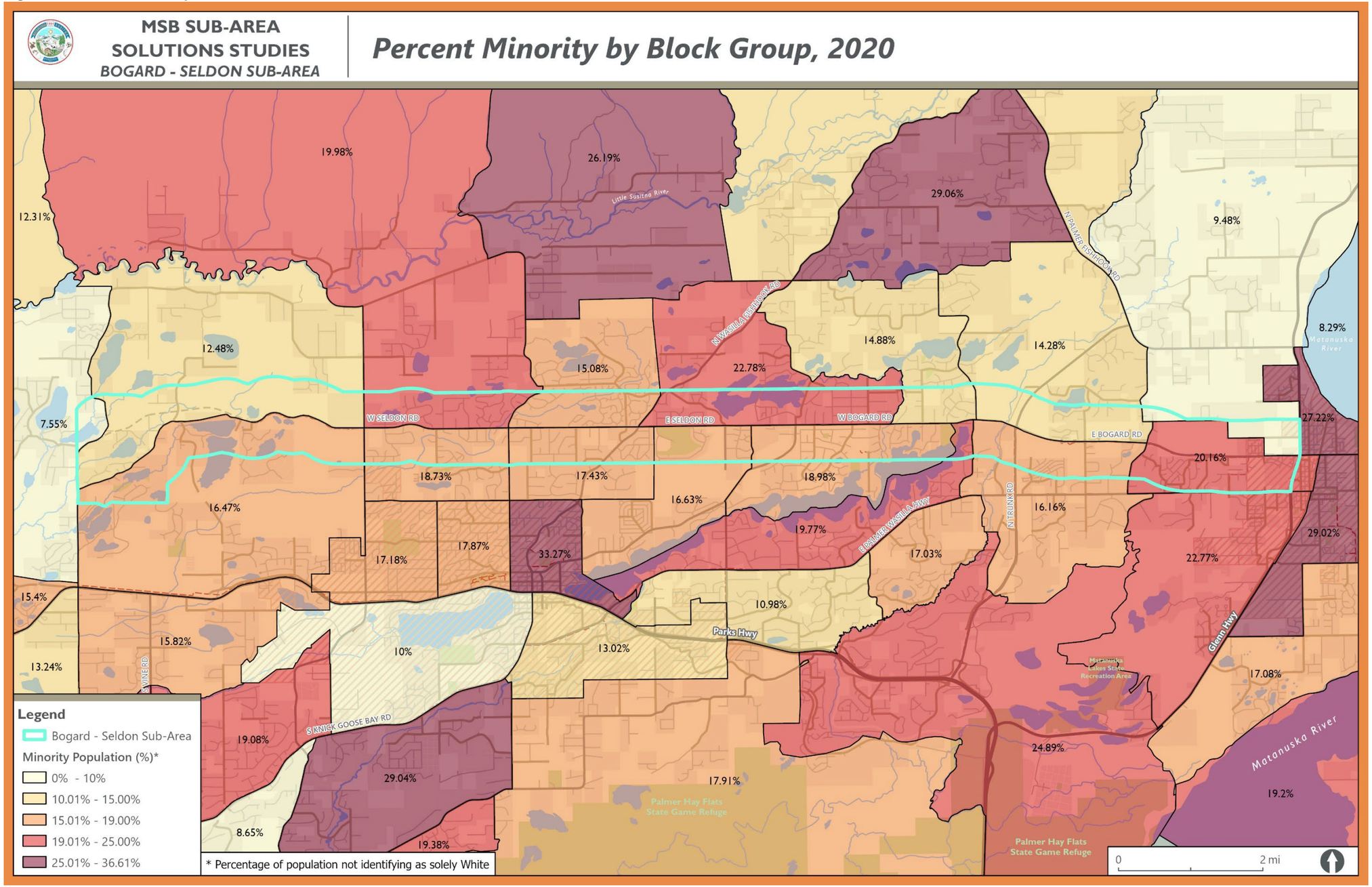
[13] American Community Survey 5-year estimates, 2020, via ESRI's ACS Population Summary, 2022

Figure 7. Race and Ethnicity in the Bogard-Seldon Sub-Area with Regional Comparisons, 2020



Source: DOL&WD, Alaska Population by Race and Hispanic Origin, 2020 to 2021, 2021, https://live.laborstats.alaska.gov/pop/estimates/data/RaceHispAK.xls; American Community Survey 5-Year Estimates, 2020

Figure 8. Percent Minority, 2020



Source: American Community Survey, 2016–2020 5-year Estimates Summary

2.5 Median Household Income

In 2022, ESRI[14] reports that the Bogard-Seldon Sub-Area has a Median Household Income (MHI) of $82,253. This is higher than the MSB's MHI of $76,316 and the statewide MHI of $77,141. When broken down by income bracket, as shown in Figure 9, households in the Bogard-Seldon Sub-Area are earning relatively similar amounts to households in the MSB and statewide, with a slightly larger amount of very high income households earning over $200,000 at 13.2 percent, compared with about 10 percent MSB- and statewide.

Figure 9. Household Income Distribution in the Bogard-Seldon Sub-Area with Regional Comparisons, 2022



Source: ESRI Market Profiles for Bogard-Seldon District, MSB, State of Alaska, 2022

[14] A leading provider of Geographic Information Systems (GIS) software and datasets, ESRI uses Census, U.S. Post Office, and other data to create population and economic estimates across the United States.

3 Land Use Plans

This section summarizes the land use plans that cover the Bogard Seldon Sub-Area.

3.1 Borough-Wide Comprehensive Plan

The *Matanuska Susitna Borough Comprehensive Development Plan*[15] provides general goals and policy recommendations to guide the MSB's future development in a manner that improves quality of life, public health, safety, and welfare. Implementation of the plan is done in many ways, including Title 17 Zoning Ordinances, which include the ability to establish Special Use Districts (SpUDs), subdivision regulations, capital improvement programs, specific ordinances, and general policy. The plan is updated whenever a community comprehensive plan, lake management plan, regional plan, asset plan, or other specialty plan is adopted by the MSB Assembly.

3.2 MSB Core Area Plan

The *Matanuska-Susitna Borough Core Area Comprehensive Plan*[16] established goals and policies to guide the Core Area's development to enhance the quality of life and the public health, safety, and welfare of residents. This plan established a framework to guide public and private decisions about land use and public infrastructure within the Core Area.

The Bogard-Seldon Sub-Area either borders or bisects the following community councils:

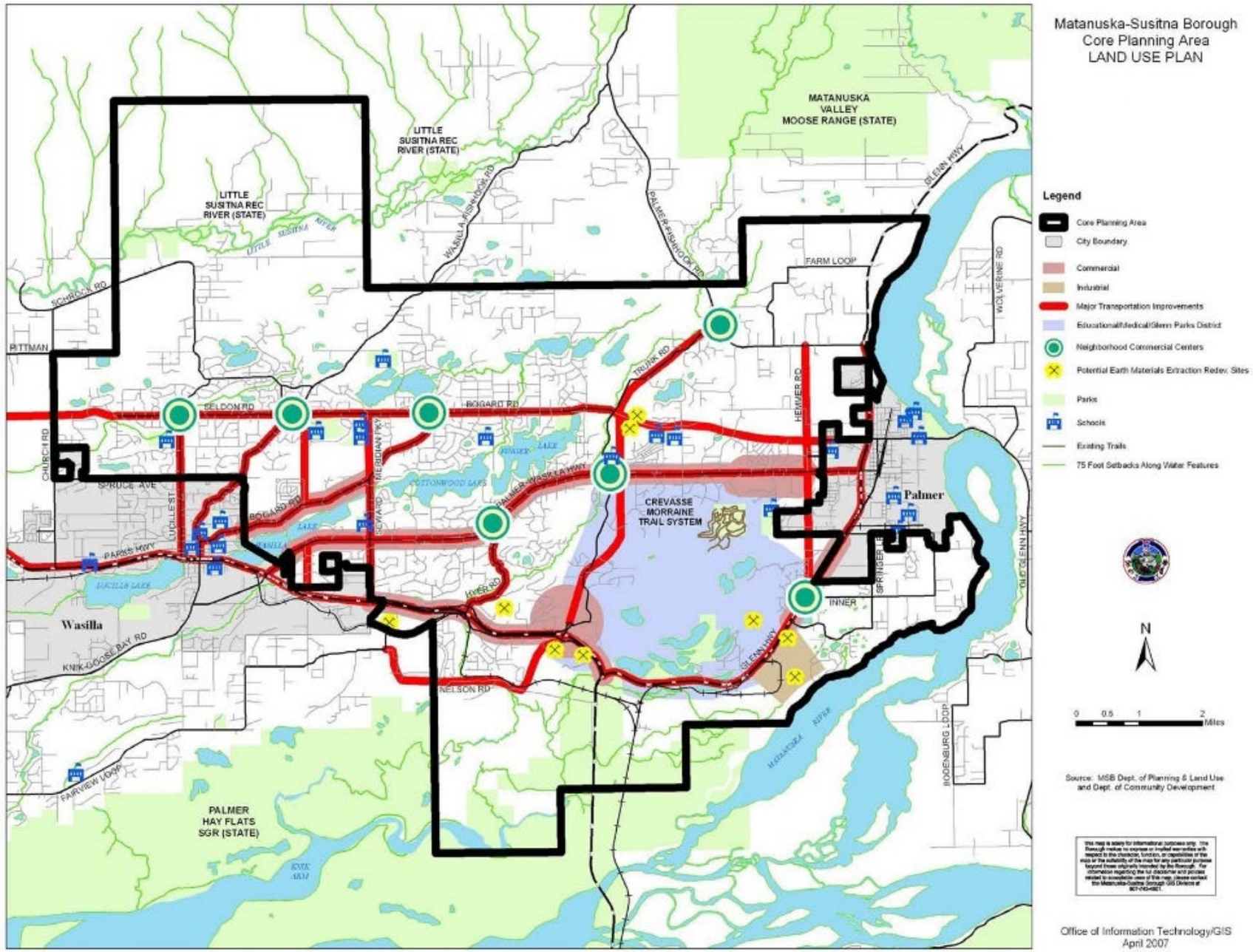
- Greater Palmer
- Farm Loop
- Gateway
- North Lakes
- Tanaina
- Meadow Lakes

The Core Area plan's land use plan map (see Figure 10) identified conceptual locations for different types of development.

[15] MSB, *Matanuska-Susitna Borough Comprehensive Development Plan*, https://matsugov.us/plans/borough-wide-comprehensive-plan

[16] MSB, *Matanuska-Susitna Borough Core Area Comprehensive Plan*, 2007 Update, https://matsugov.us/plans/core-area-comprehensive-plan

Figure 10. MSB Core Area Plan, Land Use Plan Map



Source: MSB, Matanuska-Susitna Borough Core Area Comprehensive Plan, 2007 Update. https://matsugov.us/plans/core-area-comprehensive-plan

The Core Area plan identified needed transportation improvements based on the *2007 Long Range Transportation Plan* (LRTP). Those projects are not listed here, as the MSB updated its LRTP in 2017 (see Section 10.1.1 for LRTP project recommendations). The Core Area plan was last updated in 2007. Certain plan recommendations have been implemented through Title 17.61 Core Area of the MSB's Zoning Code. The Core Area plan will likely be updated in the near future, as part of the MSB is expected to be designated an urban area by the U.S. Census Bureau in late 2022.

3.3 City of Palmer Comprehensive Plan 2006

Adopted in 2006, the *City of Palmer Comprehensive Plan*[17] documents the city's vision for community growth. The plan identifies the following transportation improvements in the sub-area:

- Extend Bogard Road eastward to connect with the Glenn Highway and continue into the greater downtown area. This project has been constructed.
- Work with the State of Alaska and MSB to reserve land for other key transportation-related improvements, including reserving routes for collector streets on an approximately 0.5-mile grid and reserving or acquiring property to expand key intersections. This is an ongoing effort.
- Maintain and improve community sidewalks and trails. This is an ongoing effort.
- Work on a regional basis to expand and improve transit service. This is an ongoing effort.

3.4 Meadow Lakes Comprehensive Plan 2005

The 2005 *Meadow Lakes Comprehensive Plan*[18] established goals in part to maintain its rural character, establish a pedestrian-friendly environment, create a mixed-use town center, concentrate and screen commercial developments along the Parks Highway, maintain green space, establish land use districts, and retain and improve its trail system.

The plan established the following transportation goals:

- Create a controlled-access Parks Highway through the community
- Retain Schrock, Church, and Pittman Roads as collectors
- Plan for the future of the residential road system
- Identify new roads to serve as collectors

[17] City of Palmer, Palmer Planning Team, and Agnew::Beck Consulting, *City of Palmer Comprehensive Plan*, September 2006, https://www.palmerak.org/community-development/page/comprehensive-plan
[18] MSB, Agnew::Beck Consulting, LLC, and Land Design North, *Meadow Lakes Comprehensive Plan*, October 2005, https://matsugov.us/plans/meadow-lakes-comprehensive-plan

4 Existing Land Use

Figure 11 shows the existing land uses within the Bogard-Seldon Sub-Area.

4.1 Residential

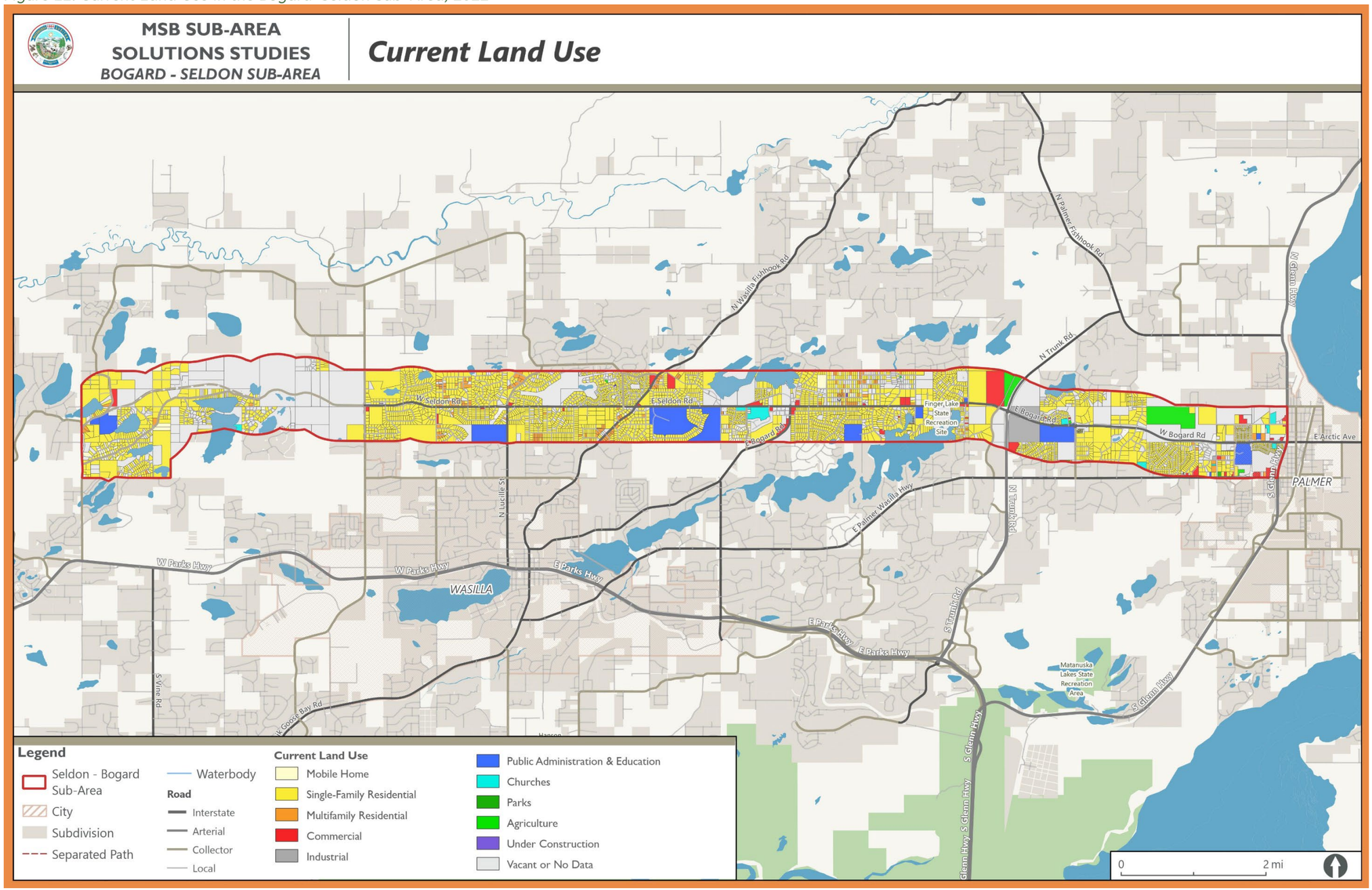
Single-family residential comprises the majority of housing in the Bogard-Seldon Sub-Area. The eastern end of the sub-area within the Palmer city limits is served by city-owned water and sewer services, allowing for higher-density development. Outside Palmer city limits, larger lot, single-family residential is the most common, with most lots being 40,000 square feet, the minimum size necessary to allow on-site well and septic systems. The Equestrian Acres Subdivision, located just west of the Palmer city limits, has a community water system, allowing 0.5-acre lots with on-site septic. Several multifamily developments are located within the sub-area and are depicted on Figure 12.

The City of Palmer extended a water main along Bogard Road from Palmer to Colony High and Middle Schools, but it is not currently in service. The city's intent is to create a loop pipe system extending from the water main west to Trunk Road along Bogard Road and then south along Trunk Road to connect with the existing water main that ends approximately 0.5 mile south of the Palmer-Wasilla Highway. There are no immediate plans to complete this loop, but its completion will be demand-driven. Once operational, it is expected to encourage higher-density development in the area.

4.2 Commercial

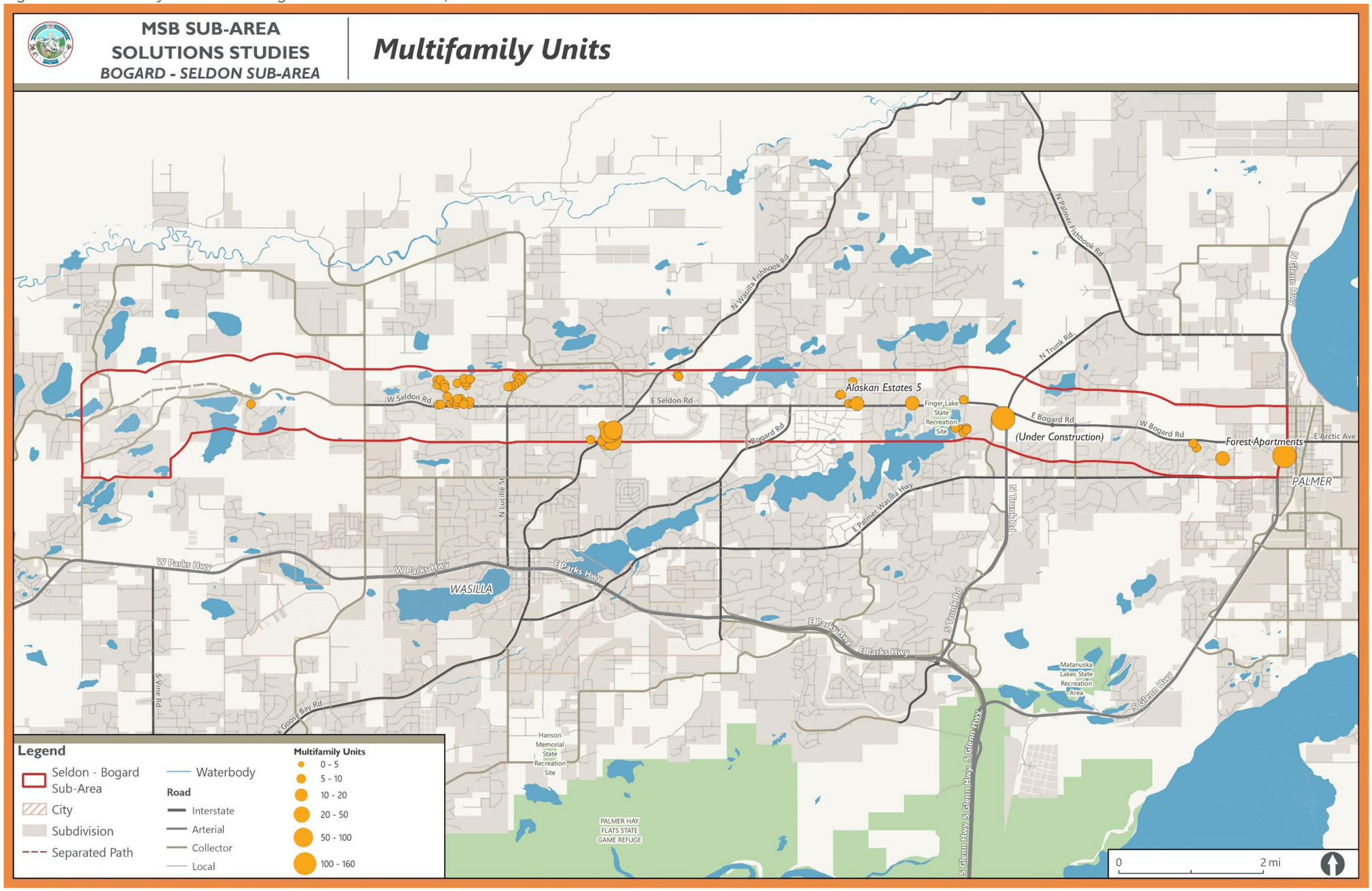
Clusters of small commercial operations are located along the corridor (see Figure 13). These are typically at main intersections and consist of gas stations with attached convenience stores.

Figure 11. Current Land Use in the Bogard-Seldon Sub-Area, 2022



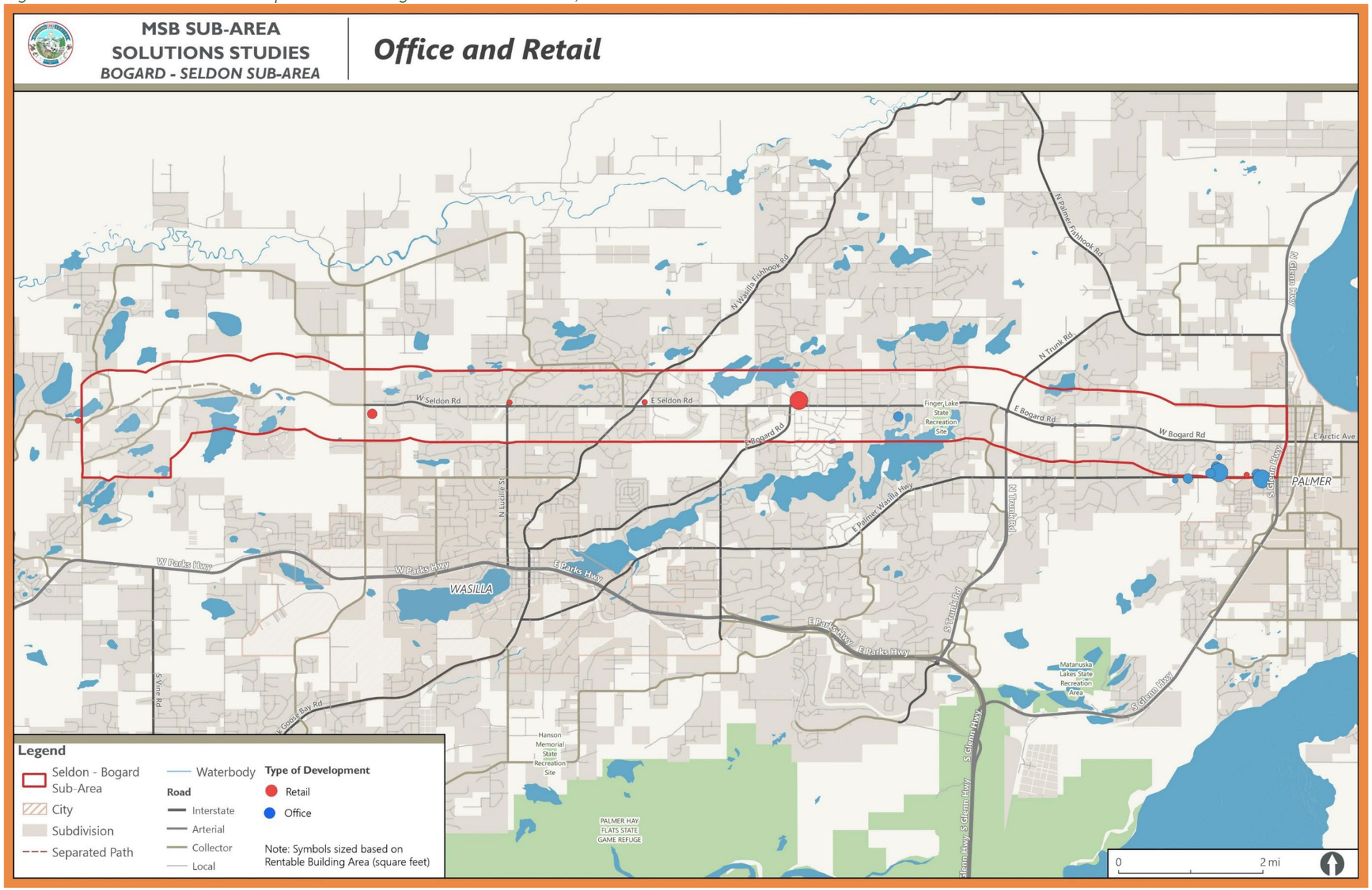
Source: MSB Assessor Data, 2022

Figure 12. Multifamily Units in the Bogard-Seldon Sub-Area, 2022



Source: Costar, Leland Consulting Group, 2022

Figure 13. Retail and Office Development in the Bogard-Seldon Sub-Area, 2022



Source: Costar, Leland Consulting Group, 2022

4.3 Industrial

Industrial activities are limited to a few gravel operations, with a major gravel operation located at the southeastern corner of Bogard and Trunk Roads and smaller operations located at the southwestern corner of Bogard and Seldon Roads and the southeastern corner of Seldon and Church Roads.

4.4 Parks and Open Space

Alaska State Parks Mat-Su Region Headquarters and Finger Lake State Wayside are co-located on the northeastern end of Finger Lake and are accessed from Bogard Road west of Engstrom Road. The Alcantra Athletic Complex and Trail System is located off Seldon Road at the end of Larson Elementary School Road.

4.5 Agriculture

Two large farms are located between Trunk and Engstrom Roads, with access from the northern side of Bogard Road. These farms primarily raise hay. The Havemeister Dairy recently closed its dairy operation.

4.6 Community Facilities

The Bogard-Seldon Sub-Area includes the following public schools, learning centers, recreation facilities, and fire stations:

- High Schools:
    - Palmer High School
    - Colony High School
    - Mat-Su Career and Tech High School
- Middle Schools:
    - Colony Middle School
    - Teeland Middle School
- Elementary Schools:
    - Finger Lake Elementary School
    - Larson Elementary School
    - Tanaina Elementary School
    - Meadow Lakes Elementary School
- Charter Schools and Learning Centers:
    - CCS Early Learning – Palmer Center
    - Fronteras Spanish Immersion Charter School

    - Twindly Bridge Charter School

- Fire Stations:

    - Central Mat-Su Fire Station 5-2, Engstrom and Bogard Roads
    - West Lakes Fire Station 7-2, Pittman Road

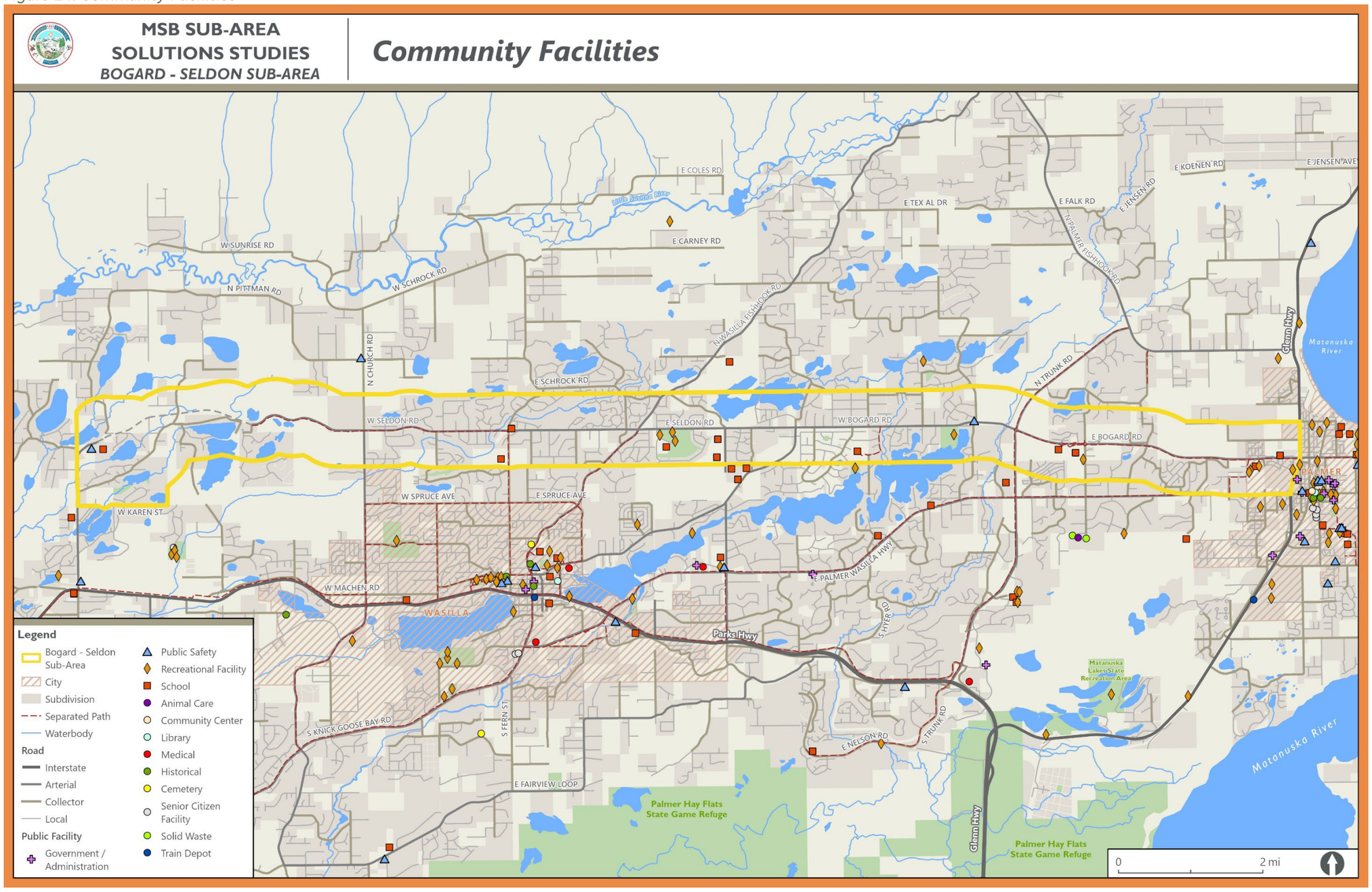
- Recreation Facilities:

    - Palmer Swimming Pool collocated with Palmer High School
    - Finger Lake State Wayside
    - MSB Alcantra Athletic Complex and Trail System

Police services are provided by the Palmer Police Department within Palmer's city limits and the Alaska State Troopers within the remainder of the sub-area.

Figure 14 shows the community facilities in the Bogard-Seldon Sub-Area.

Figure 14. Community Facilities

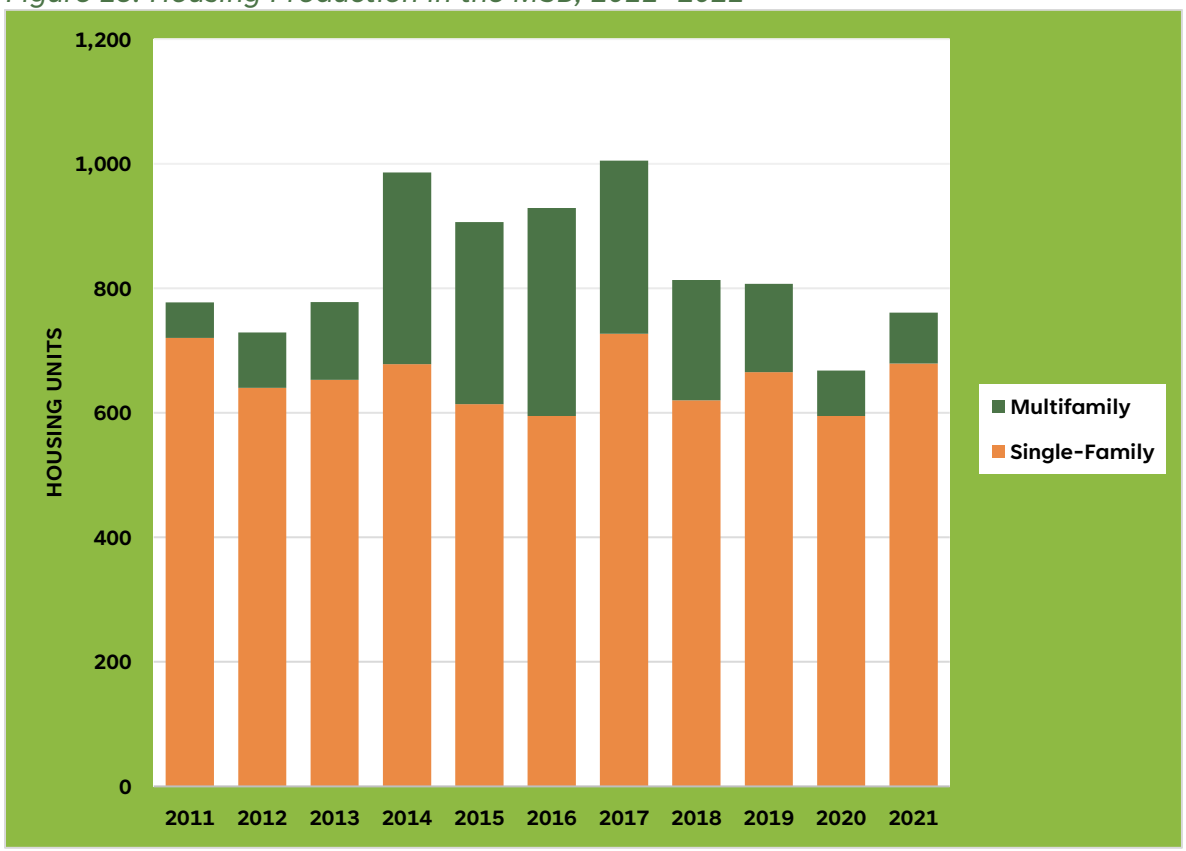


5 Future Land Use

5.1 Housing Growth

The MSB has seen a large amount of housing development over the last decade to serve the influx of new residents, as shown in Figure 15. Although most of the development has been single-family homes on large lots, there has been some multifamily construction as well, primarily duplexes, fourplexes, and some apartment complexes.

Figure 15. Housing Production in the MSB, 2011–2021

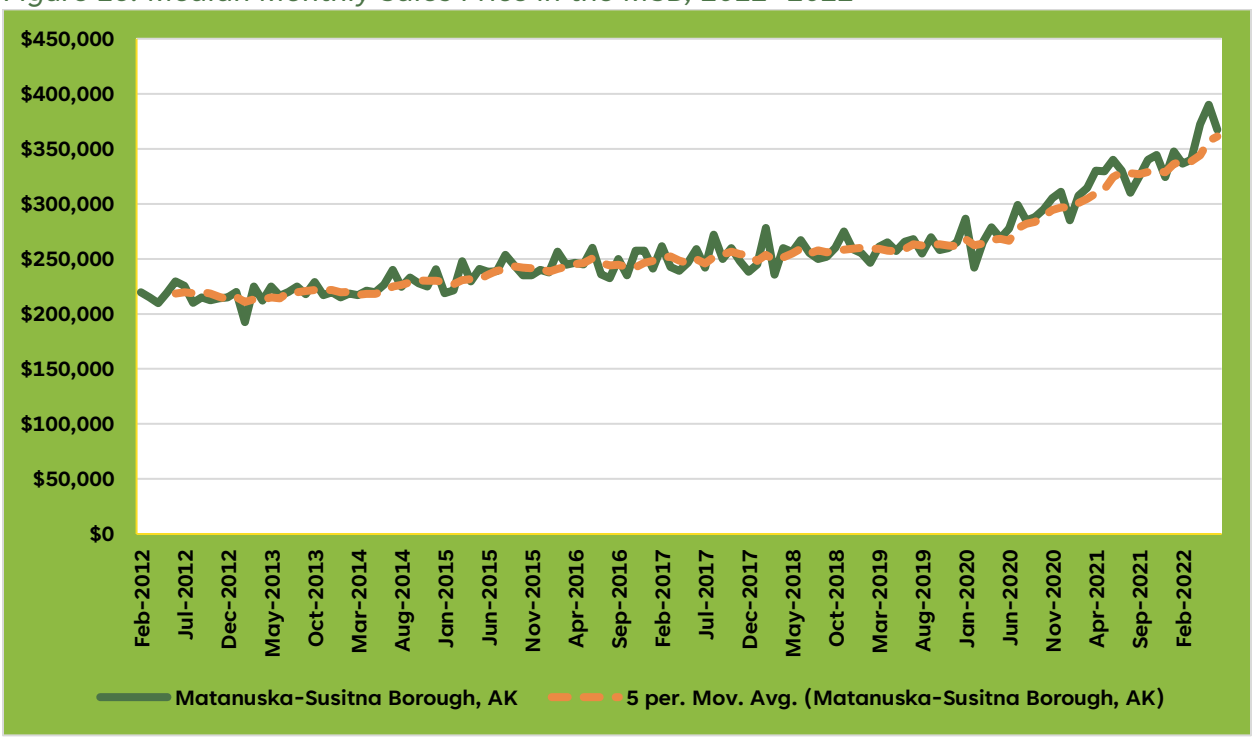


Source: DOL&WD, Department of Labor Research and Analysis, Alaska New Housing Units, 2022, https://live.laborstats.alaska.gov/housing/new.html

Even with this significant amount of housing production, there has been increasing pressure on the housing market in the MSB. Housing prices have been rising consistently since 2012, and the rate of increase has been larger since the onset of the COVID-19 pandemic in 2020, as shown in Figure 16. Despite these increases, the DOL&WD reports that housing affordability in the MSB has remained relatively consistent since 2019, based on the Alaska Affordability Index, a ratio of household income to housing costs used to track housing affordability in the state.[19]

[19] Kreiger, Rob, Housing market tightens further, *Alaska Economic Trends,* June 2022

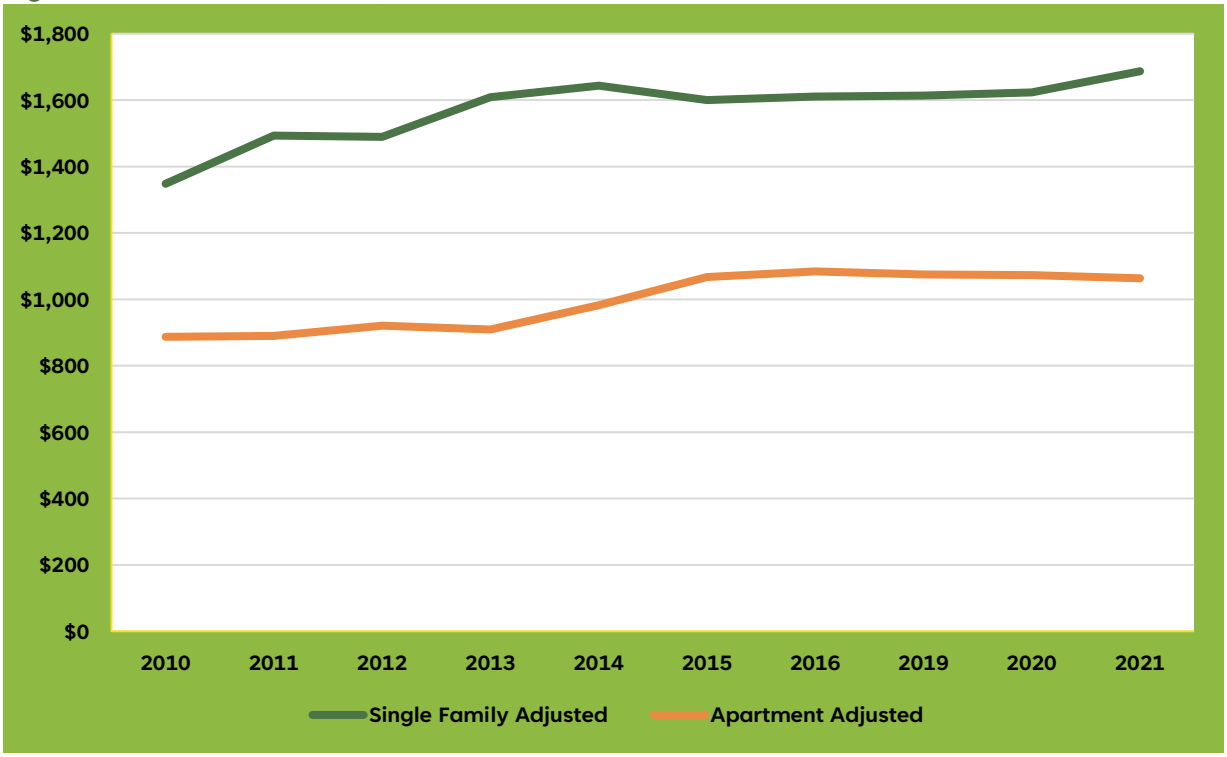
Figure 16. Median Monthly Sales Price in the MSB, 2012–2022



Source: Redfin Monthly Downloadable Housing Market Data, 2022, https://www.redfin.com/news/data-center/

The DOL&WD reports that rents in the MSB have remained relatively consistent since 2015; however, rents for single-family homes have increased recently, as shown in Figure 17.

Figure 17. Rents in the MSB, 2010–2021



Source: DOL&WD, Department of Labor Research and Analysis, Alaska Rental Costs and Vacancy Rates, All Units, Selected Areas, 2010–2021, 2022, https://live.laborstats.alaska.gov/housing/rentall.html
Note: Rents have been adjusted for utility costs.

Overall, the rapidly escalating housing costs seen nationally in recent years have been more muted in the MSB, but recent increases in housing costs and community concerns heard during interviews by the SASS project team in July 2022 suggest increasing pressure on the housing market in the MSB. *Alaska Economic Trends* reports that "Anchorage wages were 32 percent higher than Mat-Su in 2021 while Mat-Su's average home price was 18 percent lower."[20] This creates strong market pressure for Anchorage workers to move to the MSB, where they can buy larger homes on more land than they can in Anchorage. As long as this dynamic remains, demand for housing in the MSB will remain high, and a sustained level of housing production will be required to meet the needs of the population without a significant increase in housing costs. If housing costs increase significantly in the coming decades, this may deter potential new residents drawn to the lower costs of living in the MSB. The MSB is also attractive to families who work remotely in the oil, mining, and fishing industries.

[20] Kreiger, Rob, Housing market tightens further, *Alaska Economic Trends,* June 2022

5.2 Retail, Industrial, and Office Space

Even before the COVID-19 pandemic, online shopping caused significant declines in brick and mortar retail nationally and in Alaska, with the loss of approximately 2,000 jobs statewide between 2015 and 2019. The pandemic accelerated this trend nationally and statewide, with a 7.3 percent decrease in retail jobs in Alaska from 2019 to 2020. However, the MSB was an outlier, adding 187 retail jobs in 2020, due to the growing population throughout 2020, the lack of store closures, and the propensity for MSB residents to spend more retail dollars closer to home since fewer were commuting to Anchorage.[21] With increasing population and the potential to work from home, more retail development seems likely in the coming years in the MSB. CoStar, a national provider of commercial real estate data, reports that retail vacancies have dropped, and rents have increased in the MSB between 2021 and 2022.[22] Interviews of developers, realtors, and public officials by the SASS project team in July 2022 confirmed recent and planned retail developments in the MSB, particularly in small strip centers with good visibility and convenient access to major roadways.

Warehousing, which has seen significant increases since the onset of the COVID-19 pandemic nationally, is a strong sector in the Municipality of Anchorage due to the importance of the Ted Stevens Anchorage International Airport as a regional hub for freight transportation. CoStar reports that the majority of industrial buildings in the MSB are warehouses, and demand for warehouse space has been relatively high in 2021 and 2022.[23]

In addition to warehousing, gravel mining is a common industrial use throughout the MSB. The Matanuska Electrical Association reports that gravel pits are one of the region's largest electricity users.[24] Many of these gravel pits are converted into development sites when exhausted and transition to retail or residential uses over time.

The future of office development has been thrown into question following the rise of remote work during the COVID-19 pandemic. Many MSB residents commuted to Anchorage prior to the pandemic, and the opportunity to reduce commute time through long-term hybrid or remote work presents a unique opportunity for the region. The future of office use and remote work is multifaceted. Even as more employees shift to permanent hybrid arrangements, there remains a demand for flexible office space as companies and employees negotiate the optimal balance between in-person

[21] Fried, Neal, Retail faces a trio of pressures, *Alaska Economic Trends,* April 2021
[22] Costar, *Mat-Su Business Region Retail Submarket Report,* August 2022
[23] Costar, *Mat-Su Business Region Industrial Submarket Report,* August 2022
[24] Personal communication with John Sinclair, Matanuska Electric Corporation, July 2022

collaboration and flexibility.[25] Conversations with stakeholders by the SASS project team in July 2022 confirmed a variety of views on the future of hybrid work, but one theme that emerged was the desirability of Anchorage businesses employing large numbers of MSB residents to open small, flexible, satellite offices in the MSB to facilitate hybrid work without long commutes.

5.3 Development Nodes

Within the MSB, current and likely future developments are clustered in a number of important intersection areas. Within the Bogard-Seldon Sub-Area, one major development node is centered on Trunk Road between the Palmer-Wasilla Highway and Bogard Road (see Figure 18).

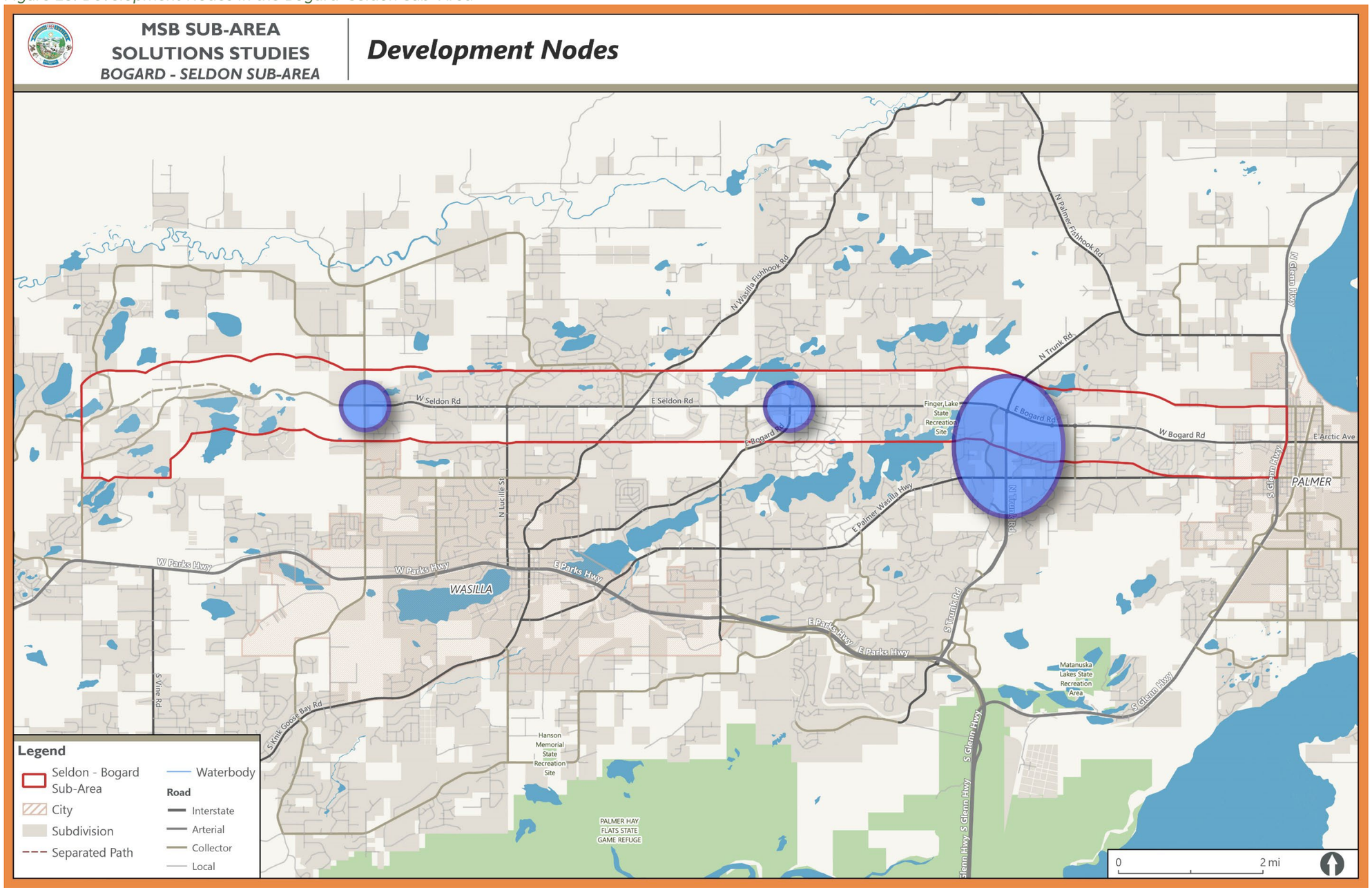
A great deal of development is already occurring in this area. A local developer is building 80 subsidized, affordable apartments on the southwestern corner of the Bogard Road/ Trunk Road intersection. This development would occur in two phases of 10 fourplexes each, with communal areas, and would be targeted at residents earning 30 to 60 percent of the MSB's median income. The development would also include market rate and affordable senior units as well as a gas station. Additionally, Cook Inlet Region, Inc., owns a large parcel at the southwestern corner of Trunk Road/Palmer-Wasilla Highway intersection, on which Three Bears is planning to build a new supermarket (as of August 2022). There is potential for other development on that site in the future. The large gravel pit on the southeastern corner of the Trunk Road/Bogard Road intersection is nearly fully expended and was identified in stakeholder interviews as another potential development location in the coming decade.



Overall, Trunk Road between the Palmer-Wasilla Highway and Bogard Road is considerably less developed than other high-traffic intersections in the MSB, and it represents an opportunity for concentrated commercial and residential development, particularly considering its central location on commuting routes to Anchorage from many other parts of the MSB. Currently, no sewer and water utilities are provided along this section of Trunk Road; however, the southern terminus of the water main is within 0.25 mile of the Palmer-Wasilla Highway and its eastern terminus is within 0.66 mile of the Trunk/Bogard roundabout at the Colony Schools.

[25] Cushman & Wakefield, Office of the Future Revisited, 2022

Figure 18. Development Nodes in the Bogard-Seldon Sub-Area



Source: Leland Consulting Group, 2022

A second potential development node identified by stakeholders is the Seldon Road/ Bogard Road intersection. The southeastern side of this intersection has a small store, and the northeastern side has a number of retail and commercial uses as well as an electrical substation. The northwestern corner is currently undeveloped. The southwestern corner has a gravel operation that is transitioning to a commercial development, which currently has one office building housing a dental office. Given the increasing road improvements being made to the Seldon-Bogard Road corridor, increasing population in the Fishhook Triangle, and proximity of several schools, this intersection could be an attractive place for future neighborhood-level commercial development.

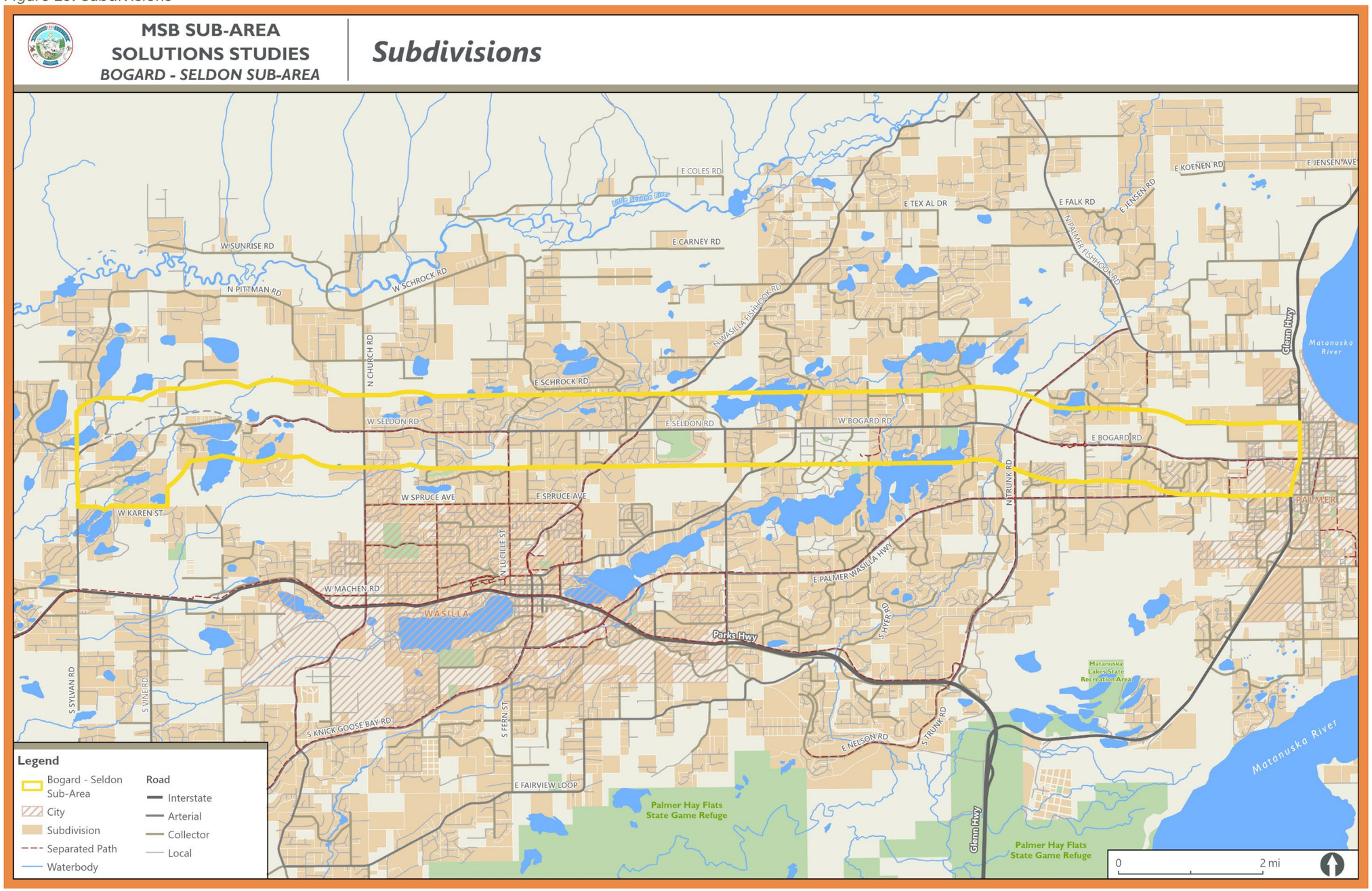
Finally, a third, smaller node was identified at the Seldon Road/Church Road intersection. There is currently a gas station at this intersection as well as a gravel pit and some undeveloped land on the northwestern corner. The southwestern corner is owned by the Alaska Mental Health Trust, and they are planning an eventual development of 600 units on the property, according to stakeholder interviews in summer 2022. This would greatly increase demand for a small store, market, or other commercial uses at this intersection. Additionally, the forthcoming improvements to the Seldon Road corridor would boost traffic to this intersection, increasing commercial demand as well.

6 Subdivisions

A subdivision refers to a tract of land that has been divided into lots. The subdivisions in the Bogard-Seldon Sub-Area are shown in Figure 19. This process is governed by the MSB Title 43 Subdivision Code. For additional information about this code, please see Appendix A.

Subdivision access and inter-connectivity are concerns. Many subdivisions have only one access point, which hinders evacuations or public safety responses during an emergency. Adjacent subdivisions often are not connected by local or collector roads, requiring people exiting their subdivision to use an arterial road to travel a short distant or many miles to visit an adjacent subdivision. Developing a more complete collector road network will improve connectivity and enhance the overall road system.

Figure 19. Subdivisions



7 Property Value

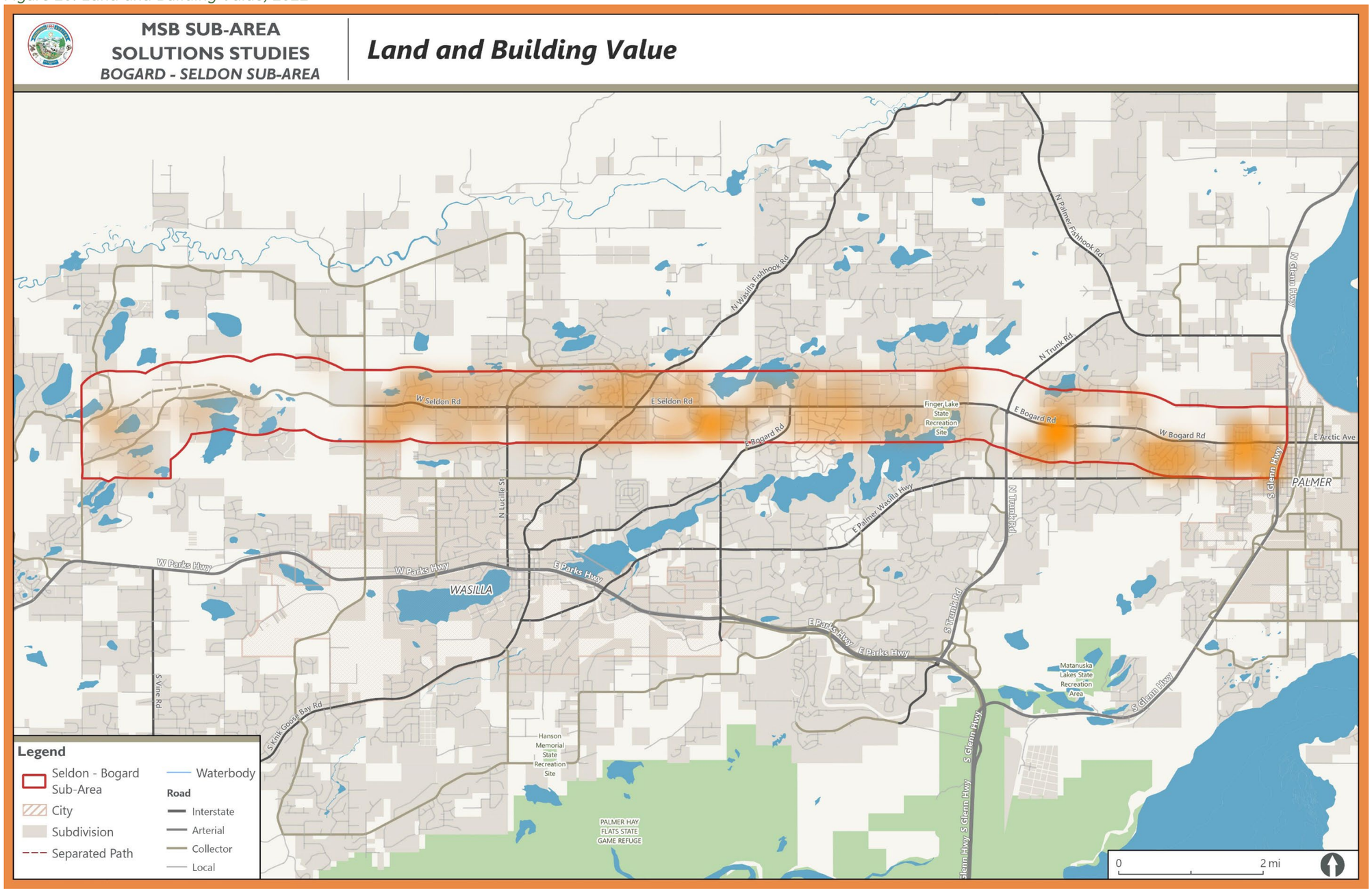
Combined land and building (improvement) value as determined by the MSB Assessor are shown in the heatmap in Figure 20. The highest-value land and buildings are in the southeastern corner of the sub-area at Bogard Road and 49th State Street, including Colony High and Middle School, a church, and several other commercial uses. Farther east along the corridor is another cluster of more valuable buildings and land near the intersection with the Glenn Highway, including Palmer High School, a commercial area that includes Carrs and Fred Meyer, and several churches. Teeland Middle School and Mat-Su Career and Tech High School off Bogard Road and the Seward Meridian Parkway also show as high-value properties. The subdivisions along the corridor have varying property and building values, with lower value areas in the less-developed eastern section of the corridor.

7.1 Redevelopment Potential

To identify parcels with redevelopment potential, the ratio of land value to building value was calculated (see Figure 21). This ratio helps paint a picture of areas where it would potentially make financial sense to redevelop. A low ratio, below 1.0 (shown in Figure 21 in shades of brown), indicates that the building is worth less than the underlying land. In this situation, the parcel is considered underutilized, since the value of the land can be maximized by a more valuable building; it is financially feasible to replace the low-value building with a higher-value use given the underlying value of the land. On the other hand, ratios above 1.0, shown in Figure 21 in shades of green, indicate it would be unlikely that a developer would choose to replace the building, given its higher value when compared to the underlying land.

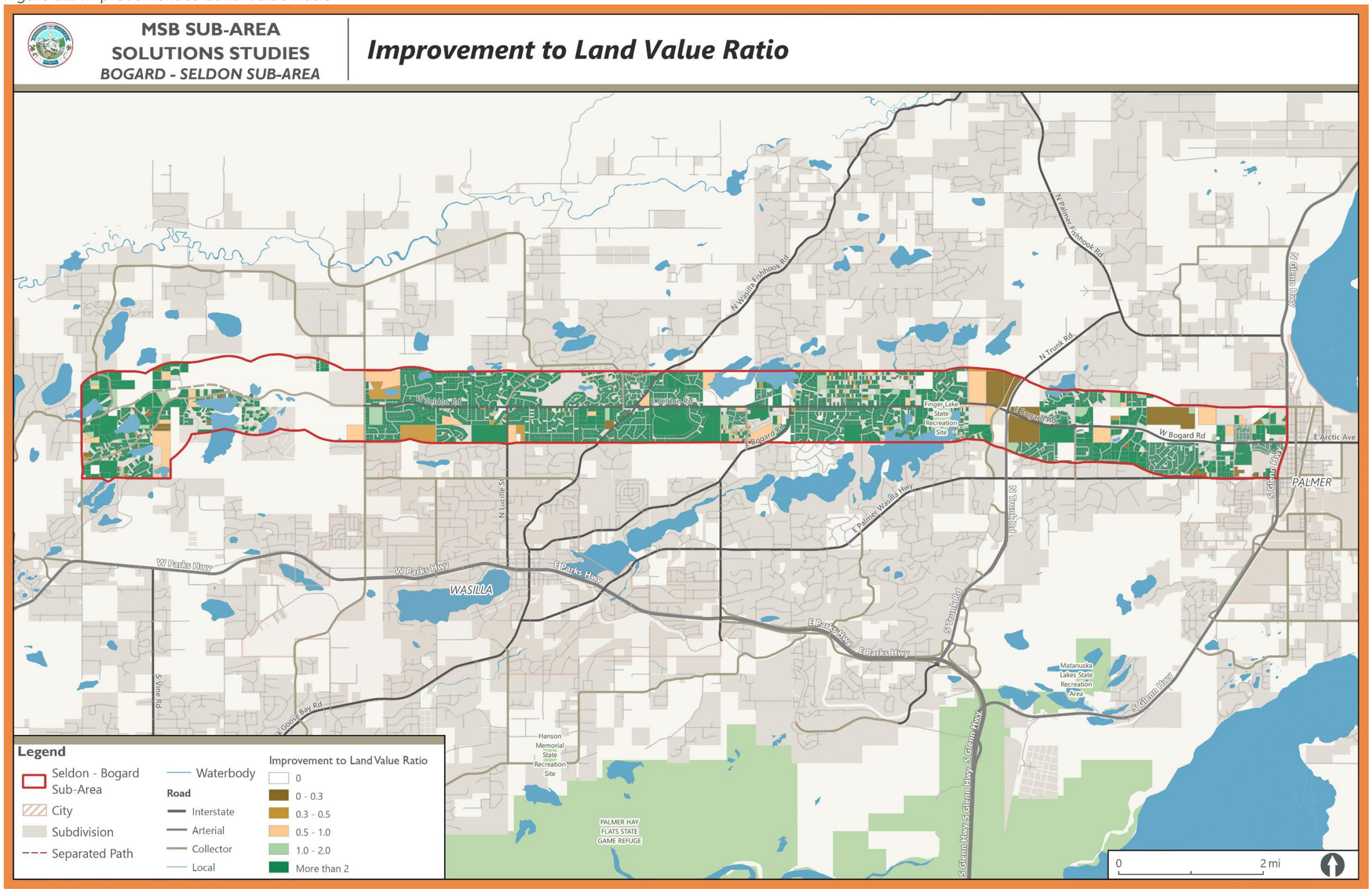
This analysis shows that the majority of parcels in the sub-area are not likely to be redeveloped into more intensive uses. However, there are several clusters of underutilized parcels in the western portion of the sub-area between Church and Pittman Roads that are more likely to redevelop in the future. In the eastern portion of the sub-area, a large farm north of Bogard Road between the Glenn Highway and Arabian Lane as well as the parcels around the Trunk Road/Bogard Road roundabout have a higher potential for redevelopment. The area of Trunk Road between Bogard Road and south of the Palmer-Wasilla Highway is emerging as an important development node in the MSB.

Figure 20. Land and Building Value, 2022



Source: MSB Assessor Data, 2022

Figure 21. Improvement to Land Value Ratio



Source: MSB Assessor Data, 2022; Leland Consulting Group, 2022

8 Land Ownership

8.1 Private and Public Lands

Most lands in the Bogard-Seldon Sub-Area are privately owned. The Alaska Mental Health Trust owns a large parcel of property in the southwestern corner of the Church Road/Seldon Road intersection, with plans for residential development. Schools and their associated facilities as well as undeveloped land at the northwestern corner of the Church Road/Seldon Road intersection are owned by the MSB. The Finger Lake State Wayside is owned by the State of Alaska Division of Parks and Outdoor Recreation.

9 Zoning

9.1 MSB Zoning

Properties outside the Palmer city limits fall under MSB jurisdiction and must comply with the land use requirements in MSB Title 17 Zoning (see Appendix A for more detail). Title 17 establishes minimal permit requirements for development to ensure that structures meet setback requirements from rights-of-way, easements, and property lines. It establishes what uses and activities require Conditional Use Permits prior to initiation. It also identifies a limited number of activities that require administrative permits.

The MSB conducts zoning through SpUDs, which restrict land use within its boundary. The types of SpUDs include:

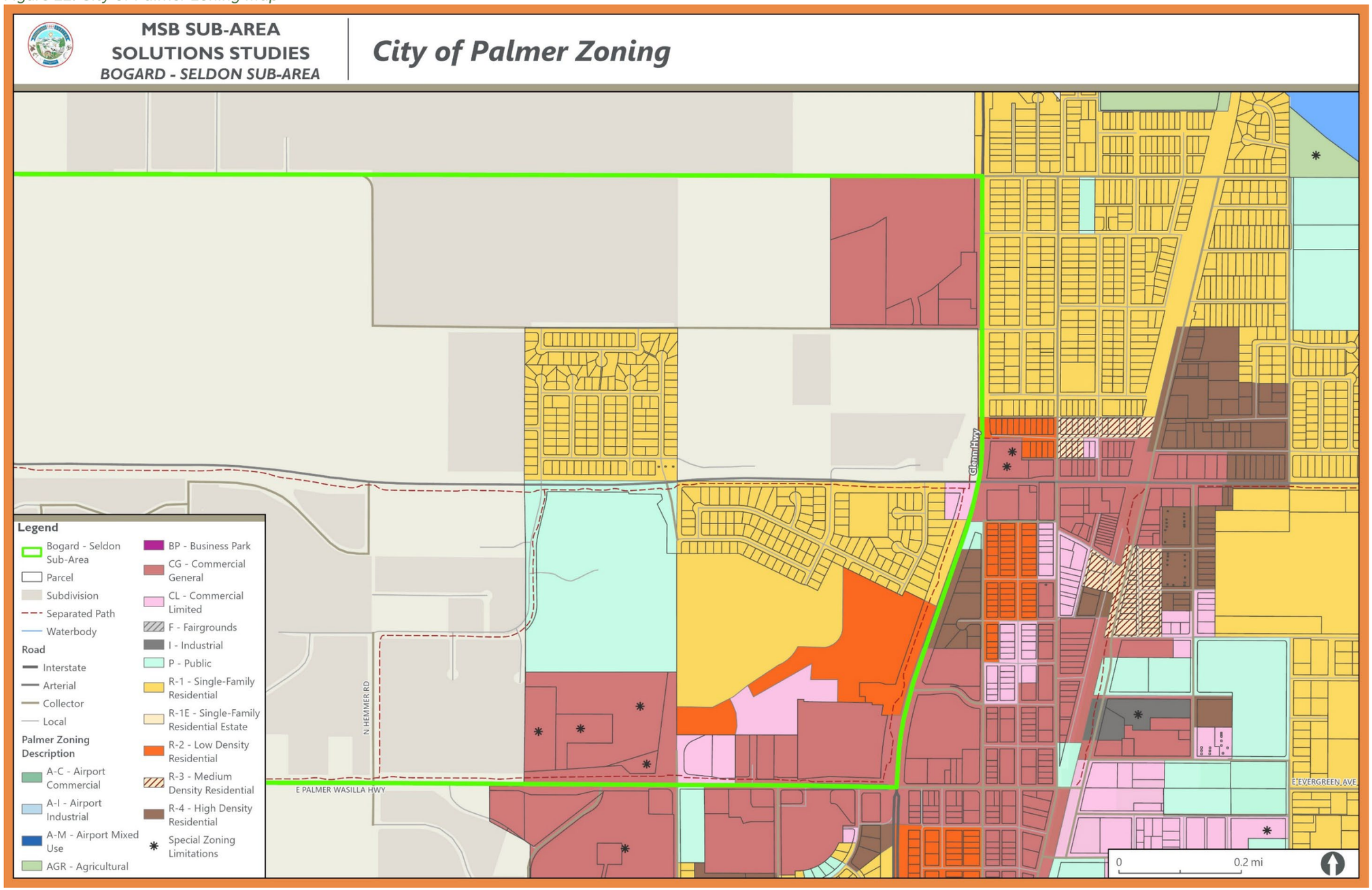
- Large-Lot, Single-Family Residential Land Use District
- Single-Family Residential Land Use District
- Residential Land Use District
- Interim Materials District
- Special Land Use District
- Overlay District

A map showing the SpUDs in the Bogard-Seldon sub-area is available at https://msb.maps.arcgis.com/apps/webappviewer/index.html?id=4cd76b7861f348e68afd5cc934524a5f.

9.2 City of Palmer Zoning

The City of Palmer has zoned all property within its city limits. The portion of the City of Palmer included in the Bogard-Seldon Sub-Area is zoned general commercial, limited commercial, single-family residential, low-density residential, and public (Palmer High School and Pool) as shown in Figure 22.

Figure 22. City of Palmer Zoning Map



Source: City of Palmer, 2017

10 Transportation System

10.1 Existing Road Network

The Bogard-Seldon Sub-Area road network is shown on Figure 23. The Bogard-Seldon Road corridor is being developed as a vital east-west corridor to provide congestion relief to the Palmer-Wasilla Highway and to provide residents with a northern alternative to the Parks Highway. The corridor has been built in stages, extending eastward and westward from the pre-statehood Trunk Road to Seldon Road segment. The following presents a high-level look at the corridor and its needs, starting at its eastern terminus in Palmer and ending with the yet-to-be-constructed segment from the corridor's intersection with Beverly Lakes Road to Pittman Road.

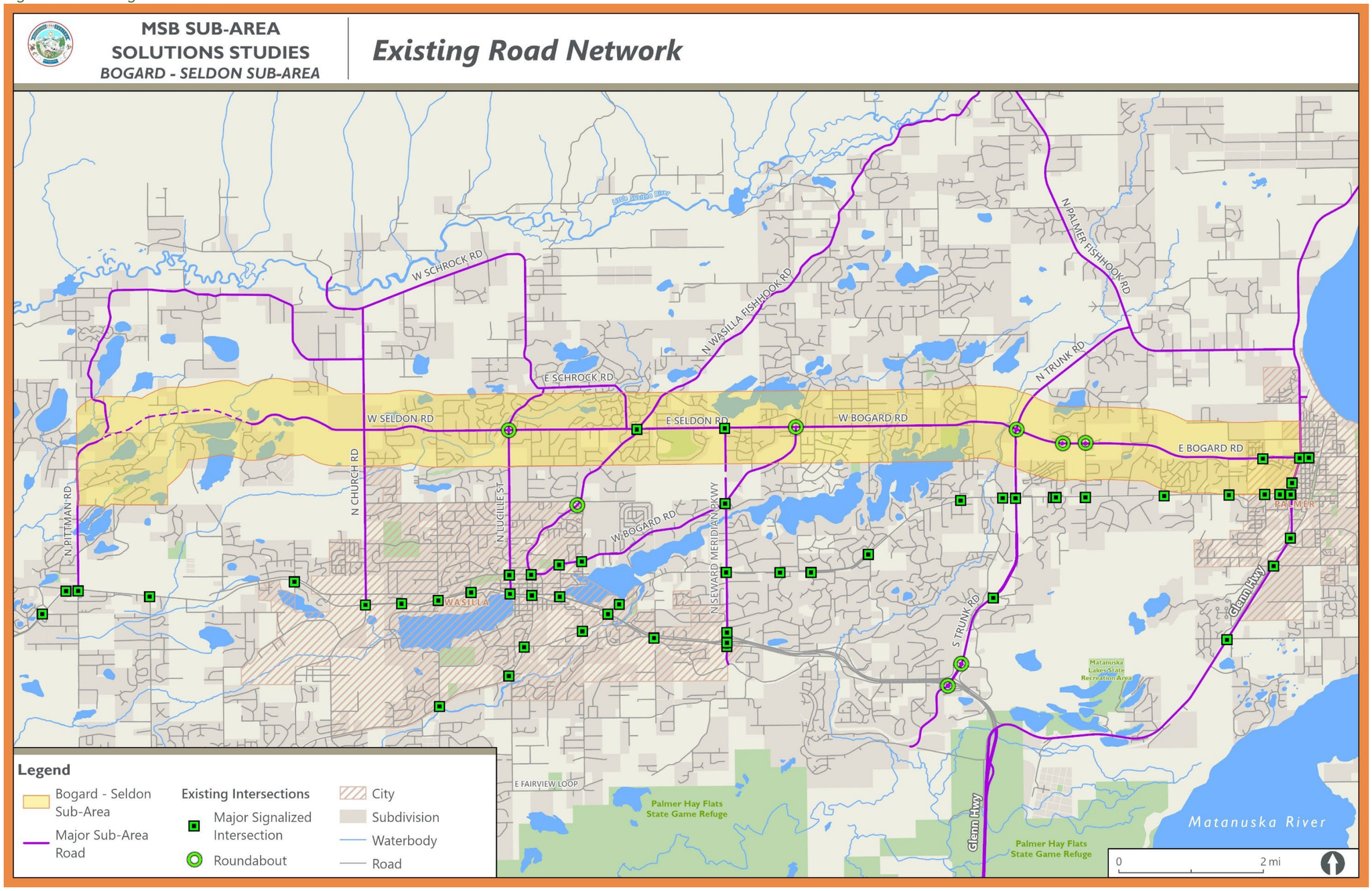
The Bogard-Seldon Road Corridor has limited options to use annual U.S. Department of Transportation formula funds allocated to DOT&PF. The Bogard-Seldon Road is only eligible for Community Transportation Program (CTP) funds through DOT&PF's Statewide Transportation Improvement Program (STIP). CTP projects are currently limited to $15 million of federal formula funds per project. This requires that projects along this corridor must identify other funding sources such as State General Funds or MSB Road Bond Funding to piece together sufficient dollars to fund the high costs related to upgrading these segments. The Bogard-Seldon Road Corridor will no longer be eligible for CTP funds once the Metropolitan Planning Organization is formed.

10.1.1 Glenn Highway to New Trunk Road Roundabout (MSB-owned)

The corridor begins in Palmer at the Glenn Highway and leaves the Palmer city limits at Hemmer Road. The Palmer portion of the corridor is jointly managed by the City of Palmer and MSB since it provides the boundary between city property to the south and MSB lands to the north of the corridor.

There are large parcels of farmland and undeveloped property north of the corridor between Hemmer Road and 49th State Street. If these lands are subdivided into residential lots, there will be significant pressure to allow more access to the corridor. Access decisions need to be well thought out to avoid losing the corridor's ability to safely function as an arterial roadway. The corridor is not currently protected by an access management plan. Any new subdivisions should be designed to provide interior connections to collector roads, limiting direct access to established intersections. Direct driveway access should be avoided.

Figure 23. Existing Road Network



Once leaving the Palmer city limits, the corridor is MSB-owned right-of-way until it connects with the state-owned New Trunk Road. This upgraded/new 4-mile segment of the corridor opened in 2015. It is a two-lane minor arterial with pedestrian facilities. Sufficient 200 feet of right-of-way was purchased to allow expansion to four lanes. It features roundabouts at 49th State Street and at the main entrance to Colony Middle and High School. A pedestrian underpass connects the school to the northern side of Bogard Road. The MSB design included limited access points.

10.1.2 New Trunk to Bogard Road/Seldon Road Intersection (DOT&PF-owned)

This 3-mile section of the original Bogard Road was constructed pre-statehood and was paved in the early 1980s. It is a two-lane road with 4- to 6-foot shoulders and no pedestrian facilities and is classified as a minor arterial. A roundabout was constructed within the existing right-or-way at the Bogard Road/Seldon Road intersection to provide an interim solution to traffic backup and delays caused by the original four-way stop. It has all major utilities located within or along its narrow right-of-way. It is a high-volume, two-lane roadway averaging between 8,500 and 9,500 vehicles per day. It serves many large subdivisions, has areas of poor sight distance, and has many conflict points caused by direct access driveways, offset road intersections, and lack of subdivision connectivity to other major roadways. These conflict points and unprotected turning movements create safety issues, contribute to the high number of traffic accidents, reduce roadway capacity, and limit the ability of the road to move traffic effectively.



This corridor segment is reaching its capacity as a two-lane facility. Its narrow right-of-way, the large number of utility relocations, and the need to reduce the number of conflict points make upgrading this corridor segment to four lanes very expensive. Preliminary estimates place upgrade costs at a minimum of $50 million, depending on project scope.

The Engstrom Road/ Bogard Road/Green Forest Drive offset intersection is a major choke point with significant delays entering and exiting Bogard Road. This is caused in part by sight distant issues, an offset intersection between Engstrom Road and Green Forest Drive, high peak hour traffic volumes on Bogard and Engstrom Roads, and the lack of connections of upper Engstrom Road to either Trunk Road or Palmer-Fishhook Road. This lack of connectivity results in traffic from the many large subdivisions off Engstrom Road being funneled to the Engstrom Road/Bogard Road intersection. DOT&PF is designing a roundabout, as a Highway Safety Improvement Program project, at this intersection to help improve traffic flow.

10.1.3 Seldon Road: Bogard Road/Seldon Road Intersection to Schrock Road (DOT&PF-owned)

This 2.33-mile section of the corridor was constructed in the 1980s through a state grant and is owned by the DOT&PF. Seldon Road extends westward to Wasilla-Fishhook Road and beyond Church Road, while Bogard Road turns southwestward and terminates at Main Street in Wasilla.

Seldon Road is a two-lane facility with 8-foot-wide shoulders and no pedestrian facilities, and is classified as a minor arterial. All major utilities are located within its right-of-way. It averages between 5,900 and 6,700 vehicles per day, resulting in less impact to its function. There are traffic issues at the Seward Meridian Parkway intersection during morning and afternoon student drop off and pick up times at the three nearby schools. The Seldon Road/Wasilla-Fishhook Road intersection was signalized by DOT&PF as part of the Wasilla-Fishhook Nelson Road to Seldon Road Reconstruction project.

This section of Seldon Road is the primary access for four schools, three by way of Seldon Road via the northern segment of the Seward Meridian Parkway. The fourth school is accessed by Larson Elementary School Drive. Seldon Road's intersection at Bogard Road has experienced congestion, leading the DOT&PF to install a roundabout to improve traffic flow. There is a traffic signal at Seward Meridian Parkway to help facilitate traffic movement to Teeland Middle School, Mat-Su Career and Tech High School, and Fronteras Spanish Immersion Charter School. Tait Drive provides a north-south connection to Bogard Road. There is a second traffic signal at Wasilla-Fishhook Road. State ownership ends 1/3 mile west at Schrock Road.



The Seward Meridian Parkway extension from Bogard Road to Seldon Road is in the final stages of design and right-of-way acquisition, with construction planned to start in summer 2023 if right-of-way receives certification. Seward Meridian Parkway will provide through access to the Palmer-Wasilla and Parks Highways. Traffic patterns are likely to shift, with more traffic coming from the west, north, and east areas to access these highways in part to avoid going through Wasilla or driving all the way to Trunk Road to access the Parks Highway. This new connection may provide some relief to the New Trunk Road to Bogard Road/Seldon Road intersection corridor segment. Analysis should occur to determine if roadway improvements are needed to accommodate the potential increase in traffic on Seldon Road because of the Seward Meridian Parkway connection.

10.1.4 Seldon Road: Schrock Road to Lucille Street (MSB-owned)

The MSB owns the 1.60-mile segment of Seldon Road between Schrock Road and Lucille Street. This corridor segment was strip paved in the early 1990s to provide a connection from Wasilla-Fishhook Road and Lucille Street. The Schrock Road to Snow Goose Drive section is a narrow but relatively flat grade with four intersecting streets and several intersecting driveways. Some of the driveways can be realigned to access side streets. The section from Snow Goose Drive to Lochcarron Drive drops off steeply between these roads to a low swampy area before gaining elevation again. At its low point, there are drainage issues. Intersecting roads and driveways may be impacted if the road elevation is raised. It has relatively good grade between Lochcarron Drive and Lucille Street. The right-of-way width varies. The MSB replaced the two-way stop intersection with a roundabout at the Seldon Road/Lucille Street intersection to address difficulties vehicles had entering the intersection from Seldon Road.



This segment of the corridor is not built to arterial or collector standards and has several intersecting roads and direct access private driveways, no shoulders, narrow right-of-way, utilities, and terrain and grade issues. It carries 2,690 vehicles per day, which is a significantly lower amount than its adjoining segments. This corridor segment requires upgrade to collector or arterial standards to allow the entire Bogard-Seldon Road Corridor to function as a true east-west cross-borough collector/arterial road.

10.1.5 Seldon Road: Lucille Street to Church Road (MSB-owned)

The 1-mile section between Lucille Street and Wards Drive was paved with 4-foot shoulders and a pedestrian trail on the southern side of Seldon Road using MSB 2011 Road Bond Funds. No access consolidation occurred. The Seldon Road/Lucille Street roundabout was constructed with this project.

Wards Drive to Church Road was constructed to major collector standards with 8-foot shoulders and a separated pathway using state grant funds. Sufficient right-of-way was purchased to support future expansion to four lanes. There are no direct access residential driveways, one commercial driveway near Church Road, and only four intersecting roads.



Access management is a key issue to protect the function of this corridor. Direct access driveways should only be permitted when there is no other feasible alternative access. Consideration should be given to consolidate or reroute driveways between Lucille Street and Wards Drive.

Traffic volumes for the entire 2-mile segment are higher and range between 3,660 and 4,800 average daily traffic compared to the Schrock Road to Lucille Street segment.

10.1.6 Seldon Road: Church Road to Pittman Road (MSB-owned)

The final link to Pittman Road was funded initially with 2011 MSB Road Bond Funds. The first phase of this project was constructed to the intersection with Beverly Lakes Road and included two 12-foot travel lanes, 8-foot shoulders, and a pedestrian pathway, and it is protected by the adopted MSB *Corridor Access Management Plan: Seldon Road Extension Church Road to Pittman Road*.[26]



The Church Road to Pittman segment is a new roadway through large tracts of undeveloped lands. The MSB had the foresight to adopt a corridor management plan to address access concerns to maintain the corridor's function as a major collector/arterial. There is a large area of Mental Health Trust Lands at the southwest corner of Seldon Road and Church Road on which the Trust is proposing a 600-lot residential subdivision. The corridor management plan will establish requirements to address collector road intersection spacing and limit or disallow direct residential driveway access. The adopted corridor management plan should guide any subdivision design and platting approvals.

The Beverly Lakes Road to Pittman Road section is being funded using a combination of 2018 MSB Road Bond funds and matching DOT&PF CTP federal funds. DOT&PF is managing the project and is reviewing the design to ensure that it meets federal requirements. This project, when constructed, will complete the Seldon-Bogard Road Corridor. The project will extend the two 12-foot travel lanes, 8-foot shoulders, and a pedestrian pathway through to Pittman Road on a new alignment north

[26] Stantec, *Corridor Access Management Plan: Seldon Road Extension Church Road to Pittman Road*, January 2017, https://matsugov.us/component/cck/?task=download&collection=file_upload_x&xi=0&file=file_upload&id=13435

of the existing Beverly Lakes Road and will connect to Pittman Road north of Meadow Lakes Elementary School. It will also be protected by the MSB *Corridor Access Management Plan: Seldon Road Extension Church Road to Pittman Road*.[27]

The establishment of large residential subdivisions along this section of the roadway, especially if it includes multifamily units, will add significant traffic to the corridor, likely stressing the existing Seldon Road/Church Road intersection and requiring future intersection improvements to facilitate safe traffic flow.

10.2 Existing Signals and Roundabouts

The sub-area includes several roundabouts, and traffic signals have been installed to improve safety and traffic flow (see Figure 23).

Traffic signals are located at:

- Bogard Road/Glenn Highway
- Bogard Road and Felton/Anna Streets
- Bogard and Seward Meridian Parkway
- Seldon Road/Wasilla-Fishhook Road

Roundabouts are located at:

- Bogard Road/49th State Street
- Bogard Road/Colony Schools Access
- Bogard Trunk Road
- Bogard Road/Seldon Road
- Seldon Road/Lucille Street

DOT&PF is designing a roundabout at the Bogard Road/Engstrom Road intersection.

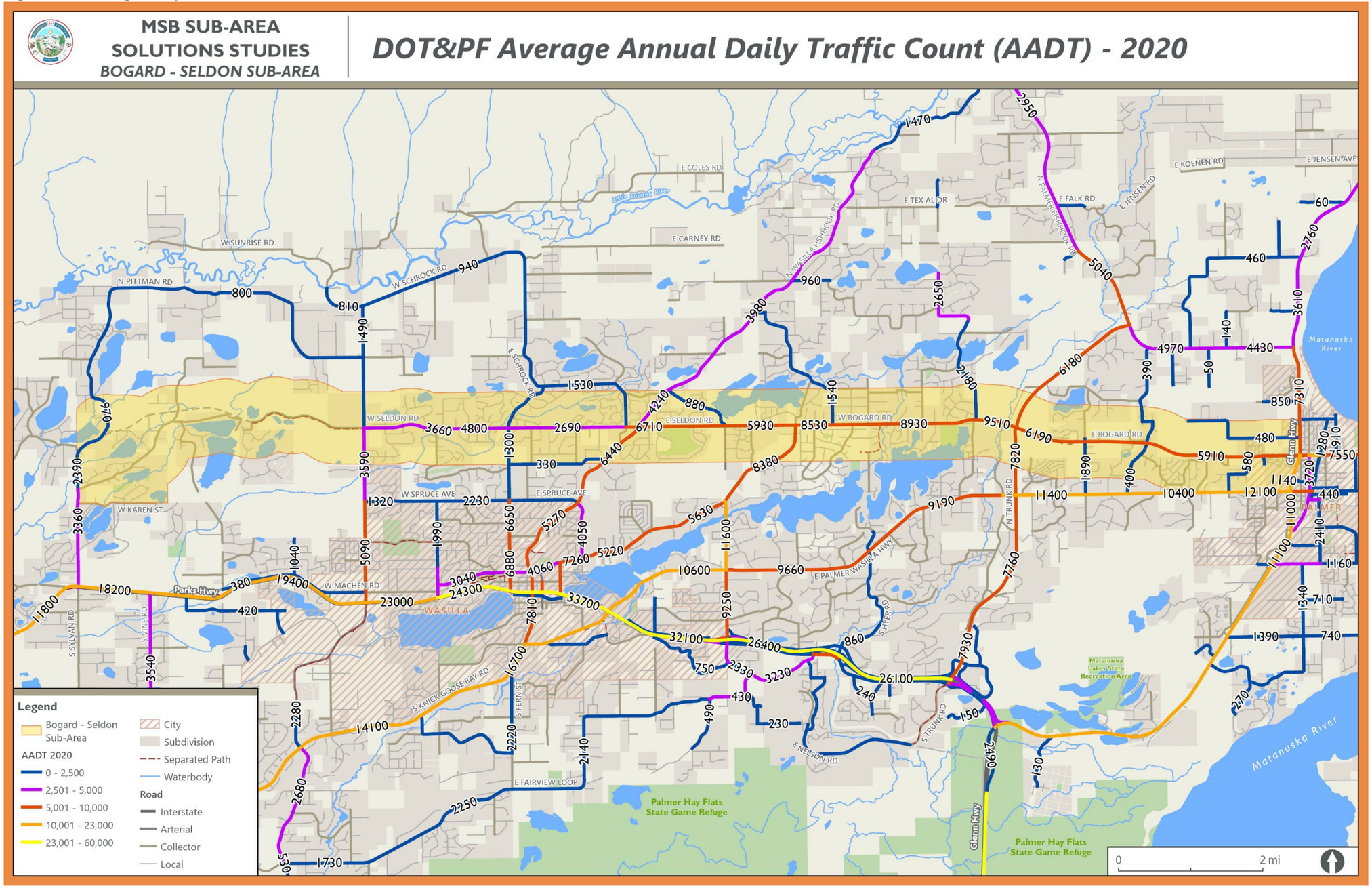
[27] Stantec, *Corridor Access Management Plan: Seldon Road Extension Church Road to Pittman Road*, January 2017, https://matsugov.us/component/cck/?task=download&collection=file_upload_x&xi=0&file=file_upload&id=13435

10.3 Traffic Volumes

Bogard Road between Trunk Road and the Bogard Road/Seldon Road intersection has the highest traffic volumes between 8,500 and 9,500 average annual daily traffic. The Glenn Highway to Trunk Road is the next-heaviest traveled with average daily traffic between 5,900 and 6,100 vehicles. Figure 24 provides traffic volumes for the entire Bogard-Seldon Sub-Area.

Traffic volumes are one indication of a roadway's function and capacity. The number of conflict points impacts the ability to move traffic safely and efficiently. Examples of well-functioning two-lane roads include the Bogard East Road between 49th State Street and the Glenn Highway. This road segment was designed with 8-foot-wide shoulders, pedestrian facilities, and limited access points to reduce conflicts. Bogard Road between Trunk and Seldon Roads is an example of a poorly functioning road and has 4- to 6-foot shoulders, no pedestrian facilities, and several conflict points. Access management, road design, and sound land use decisions all aid in improving a roadway's ability to carry traffic.

Figure 24. Average Daily Traffic Count, 2020



Source: DOT&PF 2022

10.4 Crashes

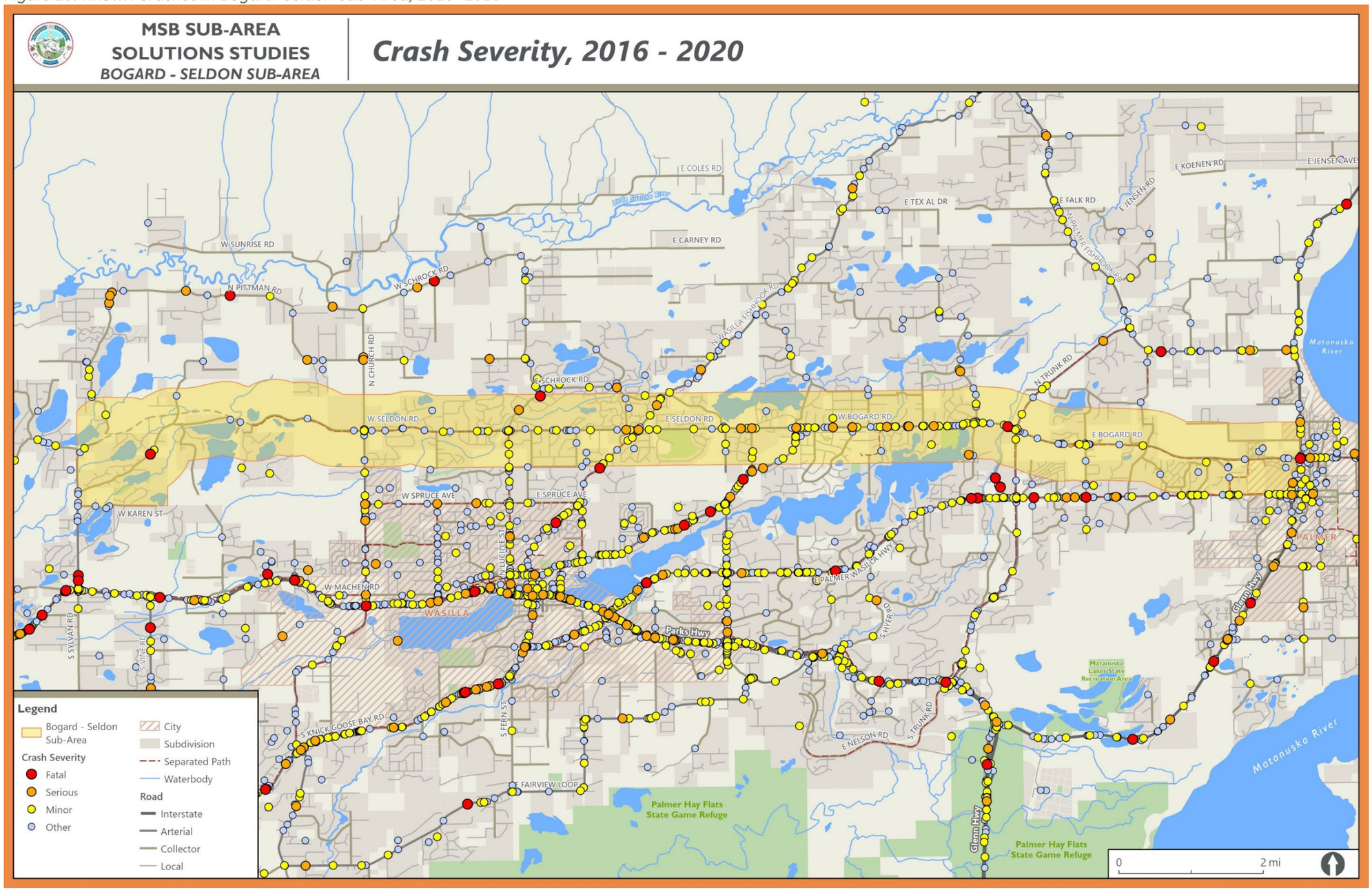
The 2016–2020 crash data[28] is summarized in Table 1 and shown on Figure 25. Since 2016, a total of 590 crashes have occurred in the sub-area.

Table 1. Bogard-Seldon Sub-Area Crash Severity Summary Table, 2016–2020

Year	Bogard-Seldon Sub-Area Crash Severity				Total Number of Crashes
	Fatal	Serious Injury	Minor Injury	Other	
2016	1	6	31	87	125
2017	1	1	31	97	130
2018	2	5	30	68	105
2019	0	4	32	75	111
2020	0	4	40	75	119

[28] Crash data was provided by DOT&PF based on Alaska Department of Motor Vehicle reports and is the best-known information available to DOT&PF Central Region as of August 2022.

Figure 25. Known Crashes in Bogard-Seldon Sub-Area, 2016–2020



10.5 Transit

Valley Transit is a non-profit organization that provides transit service in the MSB. They offer a fixed route between the MSB and Anchorage, as well as demand-response service within the MSB. They provide transit services Monday through Saturday.

Chickaloon Area Transit System, operated by the Chickaloon Native Village, offers demand and response services within the Glenn Highway area between the Palmer area and Chickaloon community, at Mile 70 of the Glenn Highway.

Sunshine Transit services the Susitna Valley communities of Trapper Creek, Talkeetna, Sunshine, Willow, and Houston with twice-weekly service to Wasilla and demand-response services for Medicaid-eligible patients to medical facilities in the University Medical District (UMED) Sub-Area, as well as other Palmer and Wasilla locations.

Mat-Su Senior Services also offers transportation in the Mat-Su Valley and Anchorage area to eligible individuals. As of September 2022, rides are limited to medical needs only.[29]

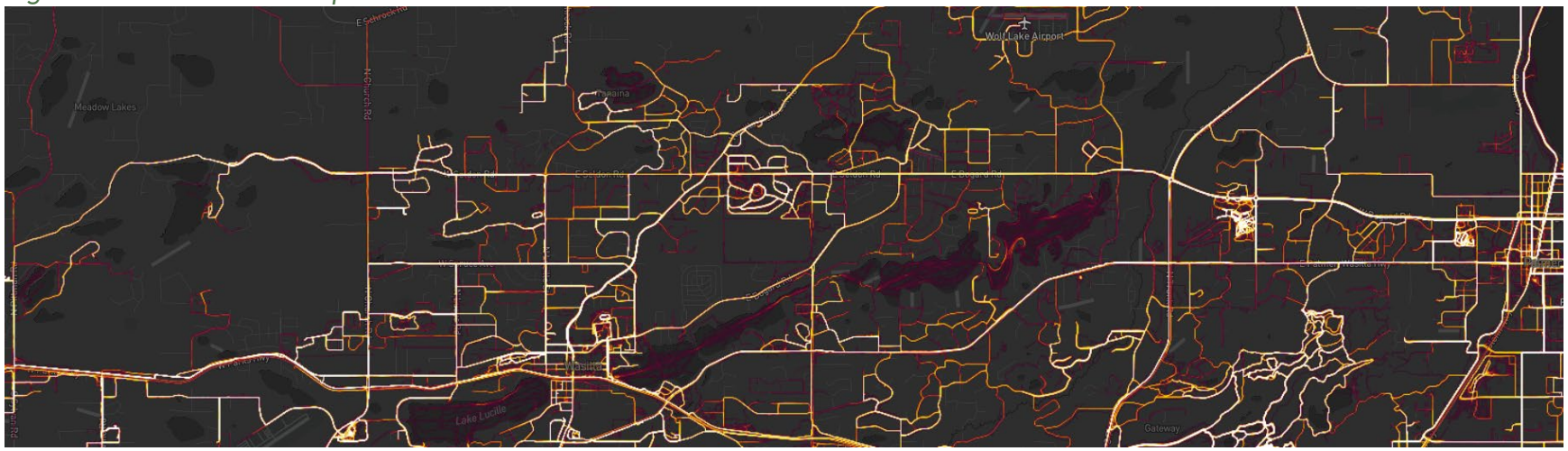
10.6 Non-Motorized

Separated pathways exist between the Glenn Highway and New Trunk Road, Lucille Street to Church Road, and Church Road to Beverly Lake Road. There will be a separated trail included between Beverly Lake and Pittman Roads when it is constructed. Strava is a fitness-tracking and social media app designed to allow users to track their fitness activities. Strava produces heat maps that show the most active areas for Strava users over the past year. These heat maps reflect aggregated, public activities that were recorded by Strava (see Figure 26). Lighter colors indicate more users than darker colors on the map. As the heat maps report only Strava users, they underestimate non-motorized use in the sub-area; however, the maps can provide a general estimate of where people are walking and biking compared to other areas.

The MSB is in the process of developing a Bike and Pedestrian Plan that will identify and prioritize needed non-motorized infrastructure throughout the MSB. The plan is anticipated to be completed by June 2023.

[29] Mat-Su Senior Services, https://www.matsuseniors.com/transportation

Figure 26. Strava Heat Map



Source: Strava, 2022, https://www.strava.com/heatmap#12.23/-149.35961/61.60319/hot/all

10.7 Aviation

The Seldon-Bogard Road Corridor provides access to Shaw Tri-Lakes airpark. Several nearby lakes provide float plane access. There is one private airstrip located north of Bogard Road between Scott Road and Arabian Lane.

10.8 Rail

One railroad operates within the MSB. The Alaska Railroad is owned by the State of Alaska and operated as a state-owned corporation. It provides regular freight and passenger services between Seward and North Pole. No rail lines occur within the Bogard-Seldon Sub-Area. The train station closest to the sub-area is the historic depot in Wasilla.

10.9 Planned Improvements

10.9.1 Alaska Statewide Transportation Improvement Program

The Alaska STIP[30] is the state's 4-year program for transportation system preservation and development. The STIP must include all surface transportation improvements for which partial or full federal funding is anticipated and that are expected to occur during the STIP's 4-year duration. The 2020–2023 STIP projects in the Bogard-Seldon Sub-Area are listed in Table 2.

Table 2. STIP Projects in the Bogard-Seldon Sub-Area

Project	Cost Estimate	Functional Classification	Status	Description
Seldon Road Upgrade and Extension	FFY 2023 Design $50,000 After 2023 $9,625,000	Minor Arterial	In design	The project extends Seldon Road on a new alignment to the north from its current terminus at Beverly Lake Road (a residential subdivision road) and connects to Pittman Road. Project development includes completion of design and right-of-way along with full construction of a new arterial-level facility with separated bike path.

[30] DOT&PF, Alaska Statewide Transportation Improvement Program, 2022, https://dot.alaska.gov/stwdplng/cip/stip/

Project	Cost Estimate	Functional Classification	Status	Description
Seward Meridian Road Improvements	FFY 2022 Construction $42,000,000 Utilities $8,200,000 After 2023 $38,207,400	Minor Arterial	Under construction (anticipated summer 2023)	This is the final phase of the Seward Meridian Parkway project and consists of upgrading the Seward Meridian Highway to four lanes with a center turn lane, and a pathway from the Palmer-Wasilla Highway to Bogard Road and extends the Seward Meridian Highway to connect with Seldon Road, including upgrading the existing 0.6 mile of the existing road serving Teeland Middle School, Mat-Su Career and Tech High School, and Fronteras K-8 school. The project also includes installation of a signal at the intersection with Seldon Road.
Hemmer Road Upgrade and Extension (pending the adoption of STIP Amendment 4)	FFY 2022 Design $430,000 After 2023 $5,575,000	Minor Arterial	In design	Provides a north-south connection between the Palmer-Wasilla Highway and Bogard Road with a pedestrian pathway and signals at Palmer-Wasilla Highway and Bogard Road; construction after 2023.

Source: DOT&PF, 2022, https://dot.alaska.gov/stwdplng/cip/stip/
Notes: FFY = Federal Fiscal Year; completed STIP projects are not listed in this table.

10.9.2 MSB Transportation Infrastructure Packages

The MSB funds many of its road improvement projects using road bonds. The roads in the Bogard-Seldon Sub-Area that are included in the MSB's 2018 and 2021 Transportation Infrastructure Package are listed in Table 3 and Table 4, respectively.

Table 3. 2018 MSB Road Bond Projects in the Bogard-Seldon Sub-Area

Project	Cost Estimate	Functional Classification	Status	Description
Hemmer Road Upgrade	$5,200,000	Minor Arterial	Design	Project would provide connection from Bogard Road with the Palmer-Wasilla Highway near Palmer High School.

Table 4. 2021 MSB Road Bond Projects in the Bogard-Seldon Sub-Area

Project	Cost Estimate	Functional Classification	Status	Description
Engstrom Road to Trunk Road Corridor	$2,500,000	Minor Collector	Design	Project would provide a connection from Engstrom Road to Trunk Road connecting to a segment of Homestead Road north of the Trunk Road/Bogard Road roundabout, reducing heavy traffic on Engstrom Road.
49th State Street Pathway	$1,000,000	Minor Collector	Design	Project would construct a pathway adjacent to 49th State Street from Bogard Road to the Palmer-Wasilla Highway, providing a pathway connection between two major highway corridors.
Lucille Street and Pathway Upgrade	$4,900,000	Major Collector	Design	Project would upgrade Lucille Street and the pathway from Spruce Street to Seldon Road and provide a turn lane for Tanaina Elementary School.
Seward Meridian Parkway-Tambert Traffic Signal	$1,500,000	Minor Arterial	Design	Project would provide a safe crossing of the Seward Meridian Parkway for students.
Felton Street Connection Palmer-Wasilla Highway to Bogard/Arctic	$3,200,000	Minor Collector	Under construction	Project constructed using MSB Road Bond and state grant funds. Project provides a north-south connection from the Palmer-Wasilla Highway to Bogard/Arctic and Palmer High School.
Hemmer Road Extension South	$4,500,000	Major Collector	Design	Project improves safety and traffic access to the Valley Pathways School and a large residential subdivision by extending Hemmer Road south of the Palmer-Wasilla Highway.

Source: MSB Ordinance Serial Number 21-076, adopted August 17, 2021

10.10 Plans and Studies

10.10.1 MSB 2035 Long Range Transportation Plan

The MSB's *2035 Long Range Transportation Plan* (LRTP)[31] update is a fiscally constrained policy document that established transportation goals and objectives to guide the MSB's multimodal transportation system, including road, bike and pedestrian, trail, transit, aviation, and port improvements through 2035. It established the following goals:

- Goal One: Improve Transportation and Land Use Connection
- Goal Two: Provide Transportation Choices
- Goal Three: Improve Connectivity
- Goal Four: Improve Mobility
- Goal Five: Make Transportation Safer
- Goal Six: Support Economic Vitality
- Goal Seven: Enhance Environmental Quality

Table 5 lists the LRTP-recommended roadway projects within the Bogard-Seldon Sub-Area.

Table 5. LRTP-recommended Roadway Projects within the Bogard-Seldon Sub-Area

Project Name	Project Status
Engstrom Road Congestion Relief: Assess various alternatives to relieve congestion on Engstrom Road at the Bogard Road intersection and provide connection to Trunk Road and/or Palmer-Fishhook Road	State is designing a roundabout at the Engstrom Road, Bogard Road, and Green Forest Drive intersections. MSB conducting an analysis of the best Trunk Road and Palmer-Fishhook Road connections
Engstrom Road Tex-Al Road Connections	Project is under development
Bogard Road Between Seldon and Trunk Roads: Widen to four lanes to accommodate increased traffic and provide pedestrian facilities	No activity
Seward Meridian Parkway: Reconstruct Seward Meridian Parkway between the Palmer-Wasilla Highway and Bogard Road to a four-lane arterial with pedestrian facilities; extend Seward Meridian Parkway to Seldon Road as a two-lane arterial with pedestrian facilities	Funded for construction in 2023 pending certification of right-of-way
Seldon Road Upgrade – Wasilla Fishhook to Snow Goose Drive: Reconstruct to minor arterial standards	No activity
Seldon Road Upgrade – Snow Goose Drive to Lucille Street: Reconstruct to minor arterial standards	No activity

[31] MSB, *2035 Long Range Transportation Plan,* December 2017, https://matsugov.us/docs/general/13985/Combined-Document.pdf

Project Name	Project Status
Seldon Road – Church to Pittman Road New Construction	Church Road to Beverly Lakes Road intersection constructed; Beverly Lakes Road to Pittman funded and under design review; combination of MSB Bond Funds and DOT&PF CTP funds will be used to fund the construction

Source: MSB,2035 Long Range Transportation Plan, December 2017, https://matsugov.us/docs/general/13985/Combined-Document.pdf

The LRTP identified the following non-infrastructure strategies to complement roadway improvements:

- Create a transportation partnership with other transportation providers, including the DOT&PF, cities, and Tribes.
- Create safety education school and adult education programs with the Highway Safety Office, public safety agencies, and cities to promote defensive driving as well as pedestrian and bike safety.
- Promote a well-functioning and connected collector road network in part by updating platting regulations and the MSB *Subdivision Construction Manual*[32] to preserve corridors and the construction of collector roads.
- Establish an Asset Management Program to preserve the roadway system condition and its performance. This includes developing a system to manage and monitor driveway and roadway access to major collectors and arterials to improve safety, preserve functionality, and protect the public's investment in the roadway system.

Other non-infrastructure codes and policies are contained in Appendix A.

10.10.2 Coordinated Human Services Transportation Plan

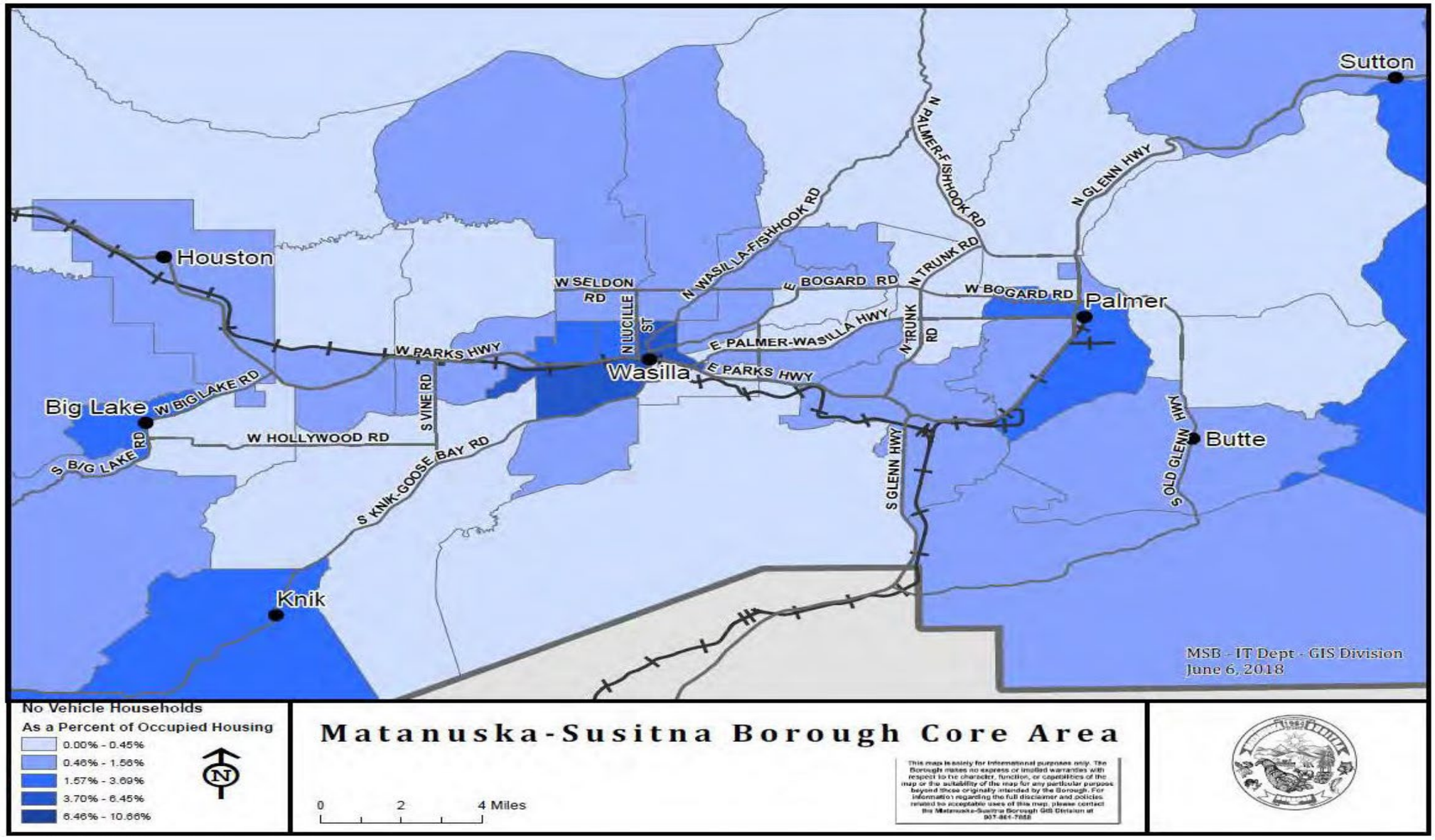
The *MSB Coordinated Human Services Transportation Plan 2018–2022*[33] coordinates transit agencies and other transportation providers to better meet the needs of older adults, people with disabilities, and low-income households. It is required to access specific funding programs offered through the Federal Transit Administration.

The plan assessed transportation needs in the MSB by combining information about densities of the older adult population, households below the poverty line, and zero-vehicle households to create an overview of which transit needs are greatest. The results are presented in Figure 27. In the Bogard-Seldon Sub-Area, the needs are some of the highest in the MSB.

[32] MSB, *Subdivision Construction Manual,* 2020, https://matsugov.us/49-documents/21522-2020-subdivision-construction-manual

[33] MSB and Mat-Su Health Foundation, *MSB Coordinated Human Services Transportation Plan 2018–2022,* 2018, https://dot.alaska.gov/stwdplng/transit/pub/Coorplan-MSB_2018.pdf

Figure 27. Transportation Needs Index



Source: MSB and Mat-Su Health Foundation, MSB Coordinated Public Services Transportation Plan 2018–2022, 2018, https://dot.alaska.gov/stwdplng/transit/pub/Coorplan-MSB_2018.pdf

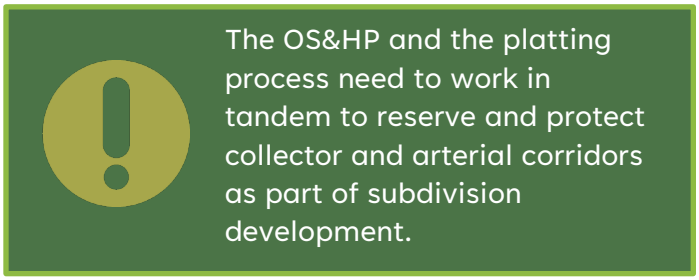
The plan identified several ways to improve coordination and services, including:

- Centralize mobility management services
- Reduce operations costs while maintaining service levels
- Determine the appropriate combination of transit services
- Generate new revenue
- Improve information access and quality
- Improve the Medicaid approval process for providers and recipients
- Improve service availability
- Improve marketing

For additional information, please see the *MSB Coordinated Public Services Transportation Plan 2018–2022*[34].

10.10.3 Draft MSB 2022 Official Streets and Highway Plan

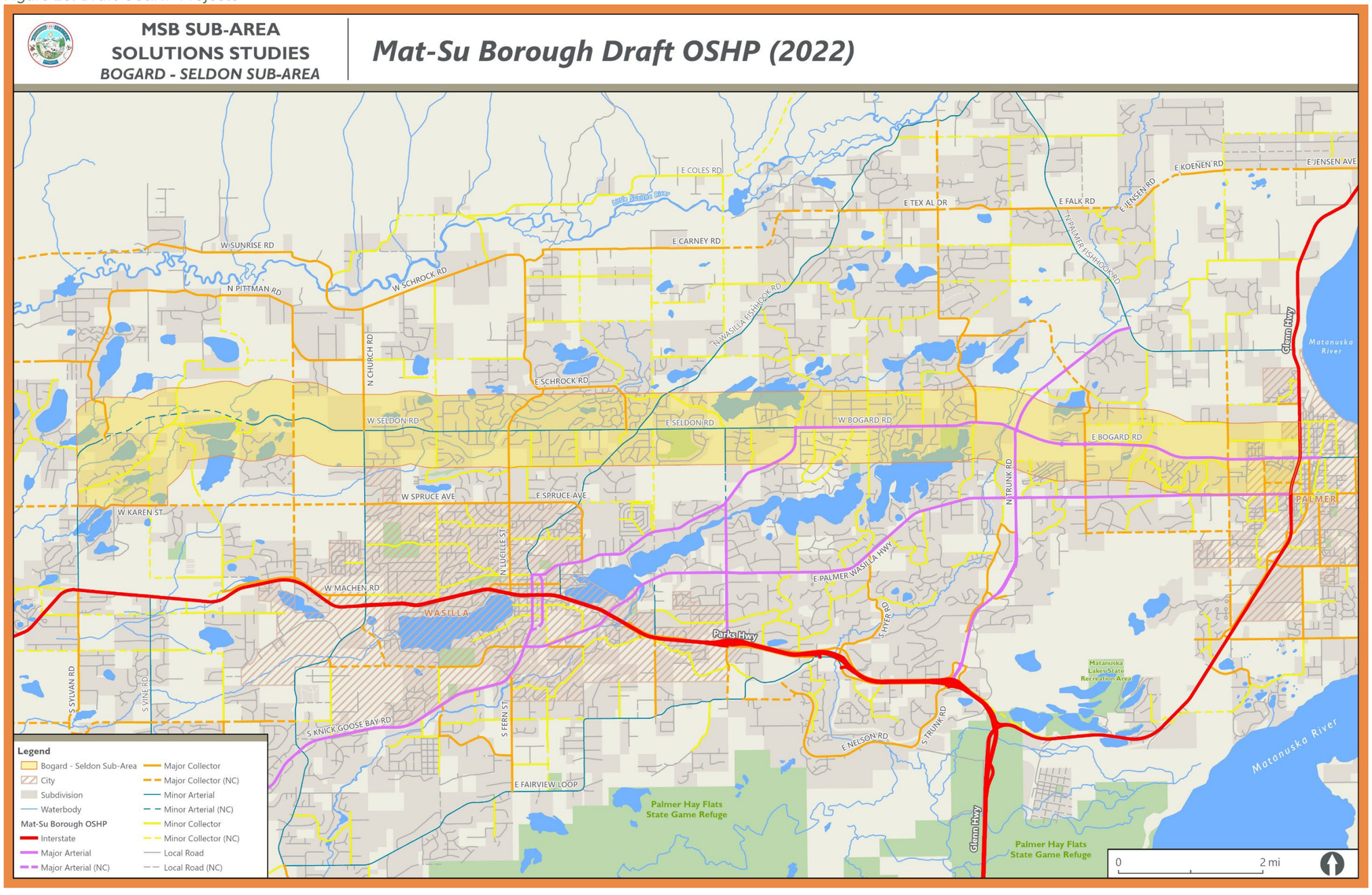
The MSB is updating its OS&HP.[35] The OS&HP is a planning tool for the MSB to identify and reserve future road corridors and future road network improvements to help provide transportation infrastructure to support residential, commercial, institutional, and industrial developments. The OS&HP is not fiscally constrained and does not establish project priorities. The goal is to establish within the MSB a proposed hierarchical road network where local roads connect to collector roads, which in turn connect to arterial roads that ultimately connect to the Interstate Highway System. A well-connected road network improves safety, reduces travel time, improves emergency response times, provides safe evacuation routes, and reduces carbon emissions.



The draft OS&HP identifies where current roadway connectivity deficiencies exist or where future arterial and collector roadways are needed to create a viable and safe road network to serve the residents of the MSB. The draft OS&HP identifies roadway connections within the Bogard-Seldon Sub-Area (see Figure 28).

[34] MSB and Mat-Su Health Foundation, *MSB Coordinated Human Services Transportation Plan 2018–2022,* 2018, https://dot.alaska.gov/stwdplng/transit/pub/Coorplan-MSB_2018.pdf.
[35] MSB, Official Streets and Highway Plan website, 2022, https://oshp-msb.hub.arcgis.com/; MSB, *Official Streets and Highway Plan, Technical Report and Implementation Plan,* Draft, May 2022

Figure 28. Draft OS&HP Projects



10.10.4 Safe Route to School Plans

The purpose of the Safe Routes to Schools Program is to improve safety and mobility for children and enable them to walk and bike to school. The *Matanuska Susitna Borough Safe Routes to School Walk Zone Inventory and Recommendations*[36] made recommendations for four elementary and two middle schools within the Bogard-Seldon Sub-Area. It did not make recommendations for either Colony or Mat-Su Career and Tech High Schools; however, it can be assumed that similar recommendations made for Colony Middle and Teeland Middle Schools are applicable due to their close proximity. Recommendations generally focused on three areas:

1. Improving circulation and parking related to student drop-off and pickup areas
2. Developing separated pedestrian trails along roadways accessing schools
3. Improving lighting both within the school property and along roadways and pathways

The Bogard East Extension project constructed several pedestrian safety improvements, including trails, a pedestrian undercrossing, and roundabout access with crosswalks servicing Colony Middle and High School. Palmer High School was not included in the study but is serviced by pathways and sidewalks.

11 Utilities

11.1 Water and Sewer

Municipal water and sewer utilities are limited to the portion of the sub-area within the City of Palmer. The City of Palmer did extend a water line as part of the Bogard East Extension to Colony Middle and High Schools for future use. Palmer has no immediate plans to complete the water system "loop" by extending the Bogard Road segment west to



Access to water and sewer determines housing density and are key to higher density development. Developers can opt to provide community water with on-site septic that allows single family residential development on 20,000-square-foot (0.5-acre) lots. Multifamily developments require larger septic systems and well capacity. In lieu of being able to connect to a water and sewer utility or community water systems, single-family residential homes are limited to 40,000-square-foot (1-acre) lots to achieve minimum separation distances between individual well and septic systems.

[36] PDC Inc. Engineers, *Matanuska Susitna Borough Safe Routes to School Walk Zone Inventory and Recommendations,* December 2014, https://matsugov.us/docs/general/16869/msb-srts_final-inventoryrecommendations_final_14y12m02d_smaller.pdf

Trunk Road and then south to connect with the Trunk Road pipe 0.25 mile south of the Palmer-Wasilla Highway. The completion of the "loop" will be demand driven as development occurs and customers indicate that they want to connect.

11.2 Other Utilities

Other utilities provide more than sufficient service to existing developments in the sub-area and have the capacity to accommodate continued existing development patterns or a change to higher-density development. Solid waste disposal is through the MSB-owned and operated central landfill and through transfer stations. There are several solid waste haulers that provide curbside services. The landfill has adequate space to accommodate additional development in the MSB. Utility providers are summarized in Table 6.

Table 6. Utility Providers

Utility	Provider
Electric	Matanuska Electric Association
Natural Gas	ENSTAR
Telecommunications	A variety of providers, including Matanuska Telephone Association, GCI, AT&T, Verizon, etc.
Internet and Broadband	A variety of providers
Solid Waste	Matanuska Susitna Borough Central Landfill
Water and Sewer	City of Palmer (limited)
Storm Water System	City of Palmer (limited)

12 Economy

12.1 Plans and Studies

12.1.1 2010 MSB Economic Development Strategic Plan

In 2010, the MSB engaged TIP Strategies to develop an economic development strategic plan to help position the MSB for long-term economic vitality. The 2010 MSB *Economic Development Strategic Plan's*[37] vision statement is that "The Mat-Su Borough is the premier destination for quality development and jobs in Alaska," which is supported by five main goals:

1. Position the MSB for sustainable economic growth and vitality
2. Build capacity to conduct economic development within the MSB
3. Expand the MSB's economic development infrastructure
4. Attract, retain, and engage talent
5. Raise awareness of economic development opportunities

[37] TIP Strategies, Inc., *Matanuska-Susitna Borough, Alaska, Economic Development Strategic Plan,* April 22, 2010, https://matsugov.us/plans/economic-development-strategic-plan

The plan identified seven priority strategies with varying degrees of specificity. The top strategy was to establish a university-medical district within the MSB to attract high-level jobs and facilities. Other goals of the 2010 plan included building greater awareness of the MSB as a destination for new investment among Anchorage employers; establishing an MSB-wide economic development partnership; facilitating communication between business, workforce training, and educational communities; investing in tourism infrastructure and marketing; developing multimodal transportation infrastructure at Port MacKenzie; and updating the MSB planning code.

12.1.2 Fiscal Year 2023–2028 Borough Strategic Plan

The recently released *Matanuska-Susitna Borough Strategic Plan*[38] contains a variety of goals around economic growth and diversification. One of the three focus areas within the plan is to implement the vision of the MSB as "the greatest community in Alaska to live, work, and play." The economic goals include protecting affordable housing, developing a regionally driven economic development planning process, promoting an apprenticeship program, developing future port prospects, supporting development of Hatcher Pass tourism opportunities, and hosting the 2024 Arctic Winter Games.

12.2 Existing Economic Conditions and Trends

The MSB has traditionally been seen as a "bedroom community" of Anchorage, with between 30 to 35 percent of its residents commuting to Anchorage for employment. Table 7 shows the commuting patterns to and from Anchorage for MSB residents. Approximately 60 percent of MSB residents both live and work in the borough, and approximately 30 percent of MSB residents commute to Anchorage for work. Conversely, only a small number of Anchorage residents commute to the MSB for work (approximately 4 percent of all MSB employees).

Table 7. MSB and Anchorage Commuting Patterns, 2015 and 2019

Commuting Direction	2015	2019	% Change
Live in Anchorage, Work in MSB	2,045	2,288	12
Live and Work in MSB	23,558	25,237	7
Live in MSB, Work in Anchorage	12,720	12,819	1

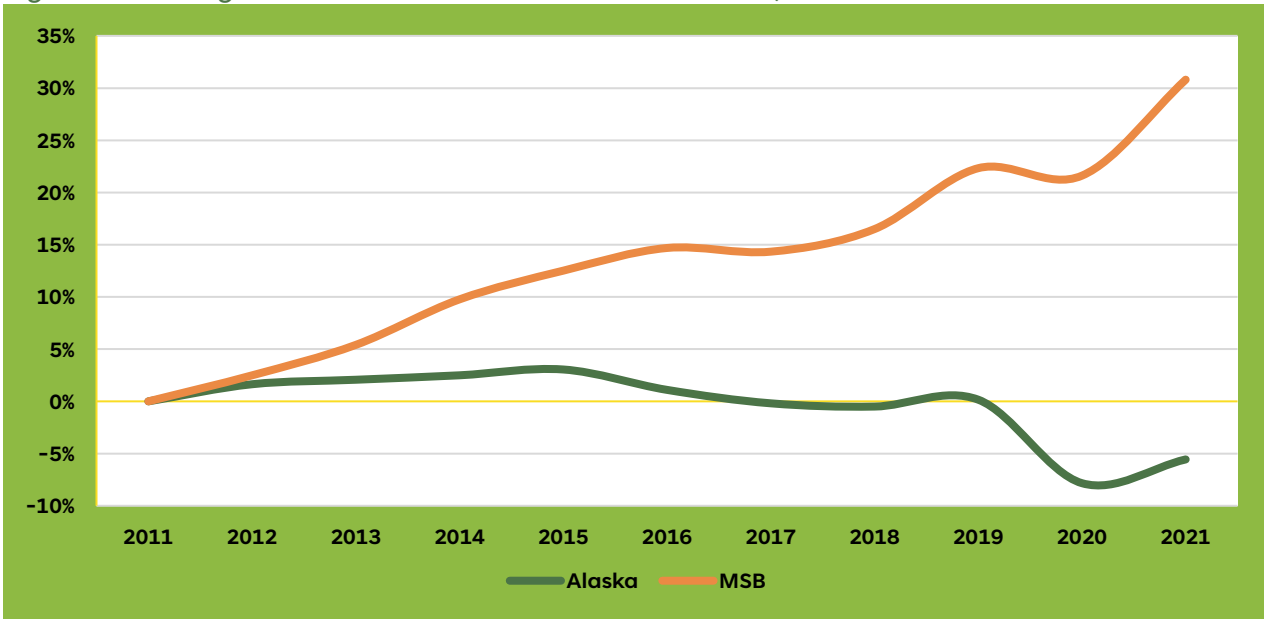
Source: DOL&WD data provided by Neal Fried, State Economist, 2022

As the MSB's population has grown, the number of jobs in the MSB itself has increased, defying all statewide economic trends, including the Alaskan recession of 2017–2019. As shown in Figure 29, the number of jobs statewide was relatively stagnant between 2011 and the onset of the COVID-19 pandemic in 2020. By contrast, the MSB added jobs every

[38] MSB, *Matanuska-Susitna Borough Strategic Plan*, February 15, 2022, https://portmackenzie.org/docs/general/22341/FY-2023-2028-Strategic-Plan-FINAL.PDF

year except 2017, at the onset of Alaska's recession, and even the dip in jobs caused by the COVID-19 pandemic was relatively minimal. As of 2021, the MSB had more than 30 percent more jobs than a decade prior. This suggests that the MSB is rapidly maturing from a bedroom community to developing more substantial economic activity. Wages in the MSB increased 13 percent from 2010 to 2020, in line with statewide trends, to an average of $48,420 in 2020. The job sectors that have seen the most growth, shown in Figure 30, vary in average wages. Healthcare and construction jobs are higher-earning, paying between $65,000 and $80,000, whereas retail and food service jobs are less lucrative, with salaries in the $25,000 to $30,000 range.[39]

Figure 29. Change in Number of Jobs in MSB and Alaska, 2011–2021

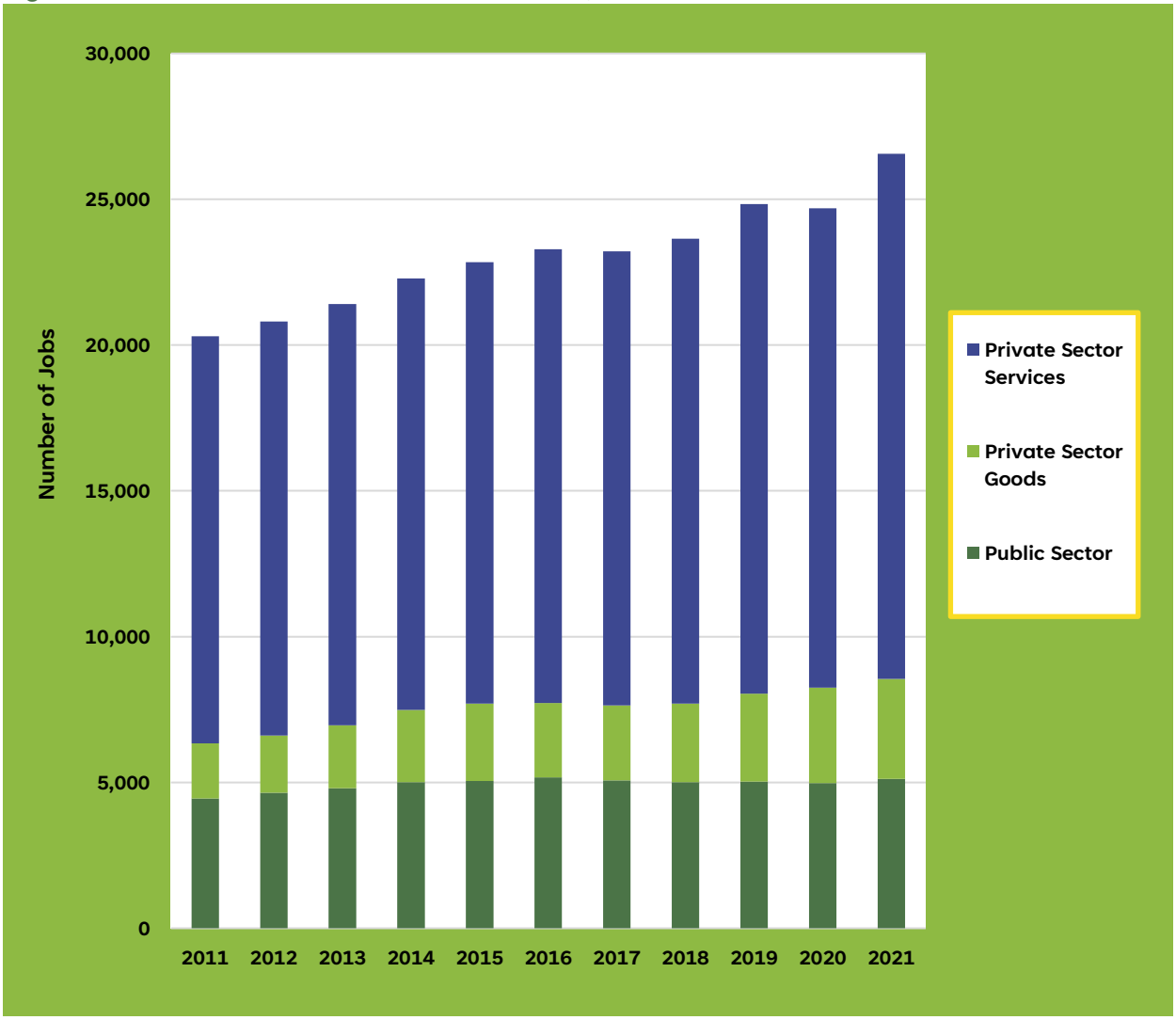


Source: DOL&WD, Quarterly Census of Employment and Wages, 2011–2021, 2022, https://live.laborstats.alaska.gov/qcew/index.html

The DOL&WD reports that approximately 5,000 jobs in the MSB are public sector jobs, approximately half of which are in local government and the remainder in state and federal governments. The number of public sector jobs has not appreciably changed in the past decade, but the number of private sector jobs has substantially increased, particularly in service-oriented jobs, as shown in Figure 30. As of 2021, there were 18,003 service jobs (retail, health care, management, knowledge industries, etc.), 3,426 goods-producing jobs (manufacturing, agriculture, mining, etc.), and 5,127 public jobs in the MSB.

[39] Fried, Neil, Average wages grew over decade, *Alaska Economic Trends,* March 2022

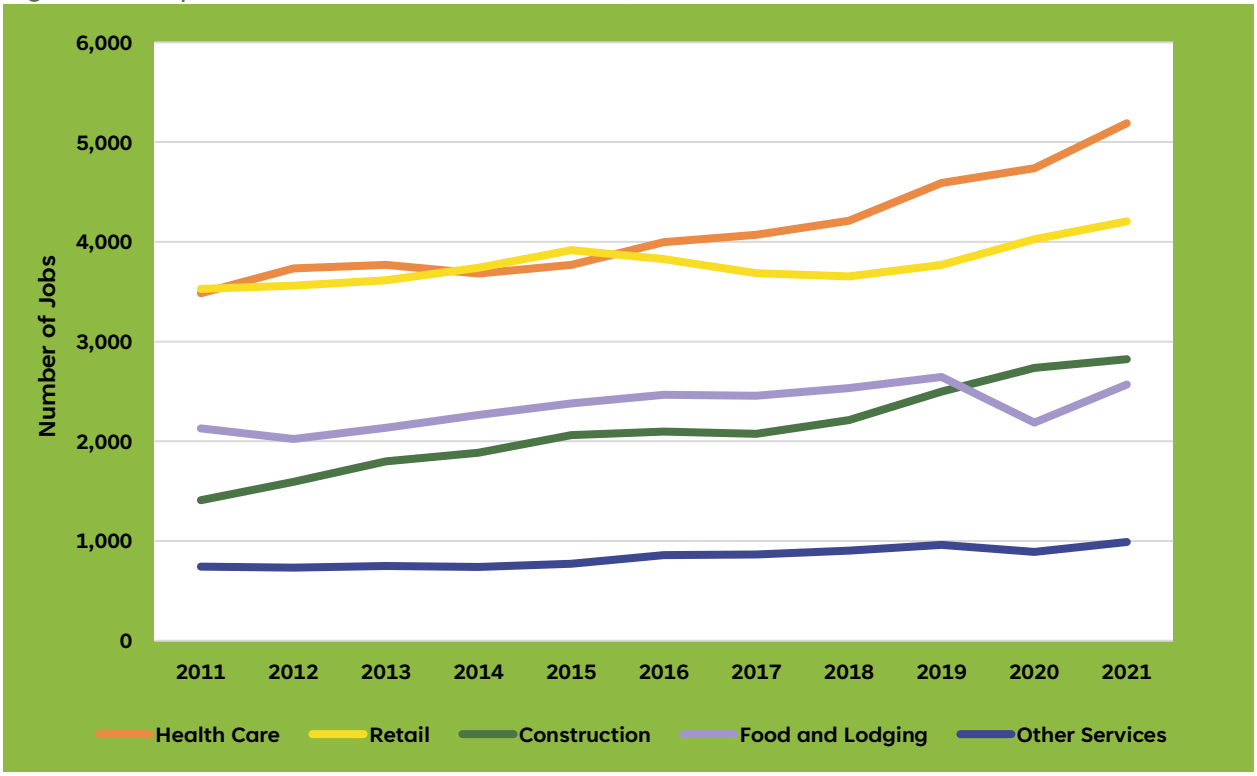
Figure 30. Public and Private Jobs in the MSB, 2011–2021



Source: DOL&WD, Quarterly Census of Employment and Wages, 2011–2021, 2022, https://live.laborstats.alaska.gov/qcew/index.html

Figure 31 shows the top five job sectors in the MSB and their changes over time. The health care and construction industries have seen the greatest growth in the past decade, with a 49 percent increase in health care jobs and a doubling in the number of construction jobs from 2011 to 2021. This reflects the explosive housing growth in the region. The food and lodging industries took an unsurprising hit from the COVID-19 pandemic but have since rebounded significantly as tourism has returned to the MSB. Retail jobs have also been relatively steady, despite the serious setbacks for the industry posed by both e-commerce and the COVID-19 pandemic over the past decade.

Figure 31. Top Private Job Sectors in the MSB, 2011–2021



Source: DOL&WD, Quarterly Census of Employment and Wages, 2011–2021, 2022, https://live.laborstats.alaska.gov/qcew/index.html

The growth of health care employment in the MSB parallels the rise of the industry as the leading sector statewide and one of the leading economic drivers nationally. Other major industries in Alaska that have seen notable growth in recent decades are also reflected in the MSB, such as restaurants and tourism-related jobs.[40] From the perspective of the economic future of MSB residents, these are promising trends. Health care jobs in Alaska pay more than in any other state, as of 2018, with an average salary of $98,020.[41] Notwithstanding a future pandemic or other catastrophe, tourism in Alaska looks to remain a strong sector, and community members interviewed by the SASS project team specifically spoke about new recreational and tourism opportunities opening up in the Hatcher Pass area. The MSB was recently awarded a grant for the construction of the new Mat-Su Gateway Visitor Center, which will help increase tourism employment.

12.3 Major Employers

The Bogard-Seldon Sub-Area contains a number of retail clusters as well as several schools. The Fred Meyer in Palmer and the surrounding retail cluster is a major employment center. There are also small stores such as the Valley Country Store and

[40] Fried, Neal, Industry winners and losers, *Alaska Economic Trends,* February 2019
[41] Zaguirre, Aiko, How healthcare wages in Alaska rank, *Alaska Economic Trends,* December 2018

coffee kiosks along the corridor, and there is a medical office as well as several dentists in the sub-area south of its intersection with Seldon Road.

However, schools are the major employer in the sub-area. There are numerous schools along the corridor, including Colony High and Middle Schools; Palmer High School; Teeland Middle School; Finger Lake, Meadow Lakes, Larson, and Tanaina Elementary schools; Fronteras Charter School; and the Mat-Su Career and Tech High School. The MSB School District is the borough's largest public employer, with more than 2,000 employees boroughwide across all its schools.[42]

13 Environmental

This section summarizes the existing environmental conditions and resources in the Bogard-Seldon Sub-Area. Understanding the existing environmental conditions and cultural resources are important for several reasons: they help determine which improvements may be challenging or more expensive to construct, which level of environmental documentation is needed, where additional agency coordination may be needed, and where there are opportunities for avoidance and mitigation.

13.1 Cultural Resources

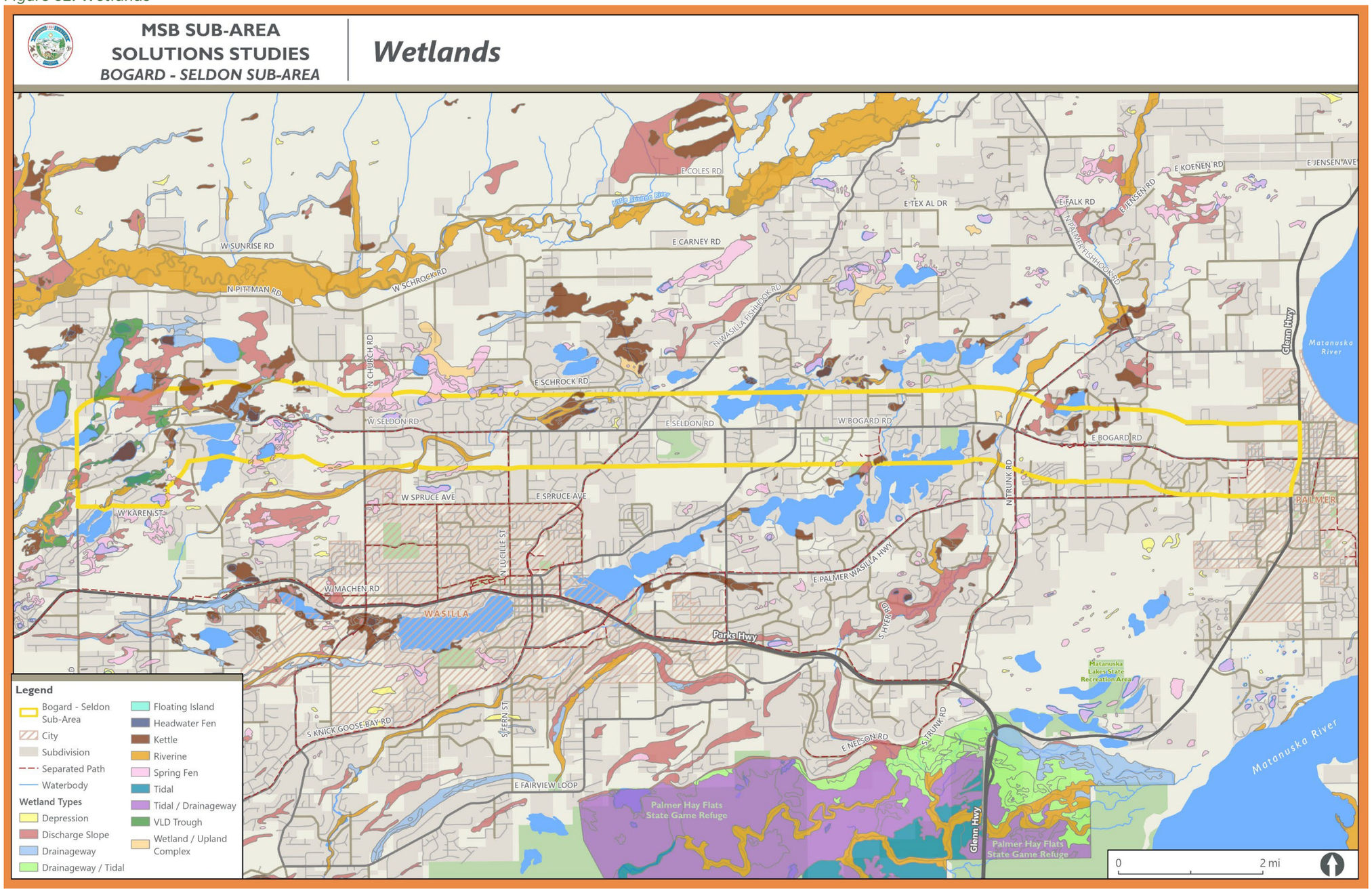
A July 2022 review of the Alaska Heritage Resources Survey database indicated 38 cultural resources located in the Bogard-Seldon Sub-Area. Of these, two are eligible for listing in the National Register of Historic Places. The remaining sites are either not eligible, unevaluated, or an evaluation is pending. Several laws and regulations, such as regulations implementing Section 106 of the National Historic Preservation Act,[43] govern the process to be followed if a cultural resource may be impacted as the result of a federal undertaking. Potential impacts to cultural resources should be considered as part of the project development process because it may increase the project cost and schedule.

13.2 Wetlands

Figure 32 shows the location of wetlands identified within the Bogard-Seldon Sub-Area based on the MSB wetlands GIS data. The majority of wetlands are located between Church and Pittman Roads in the Meadow Lakes area with another concentration between 49th State Street and Trunk Road.

[42] MSB School District, About Us, 2022, https://www.matsuk12.us/domain/3379
[43] 36 Code of Federal Regulations Part 800

Figure 32. Wetlands



Source: MSB GIS, 2022

13.3 Floodplains

Floodplains are land areas of low-lying ground adjacent to a waterbody that are subject to inundation by floodwaters during times of heavy rain, snowmelt, or high tides (for coastal areas). They can act as reservoirs that temporarily store waters, slowing down their speed and reducing the impact of erosion downstream. They typically are important habitats for fish, birds, and wildlife. Managing development or encroachments to floodplains reduces the impacts of flooding on the built environment, sustains healthy ecosystems, and supports local economic and recreation opportunities.

The only mapped floodplain within the Bogard-Seldon Sub-Area occurs where Wasilla Creek crosses the corridor (see Figure 33). Construction within floodplains would have to comply with appropriate floodplain regulations.

13.4 Contaminated Sites

A July 2022 review of the Alaska Department of Environmental Conservation (ADEC) Contaminated Sites Database[44] indicated no known active contaminated sites in the Bogard-Seldon Sub-Area. There are multiple sites that have been previously addressed (see Figure 34).

[44] ADEC, Contaminated Sites, 2022, https://dec.alaska.gov/spar/csp.aspx

Figure 33. Floodplains

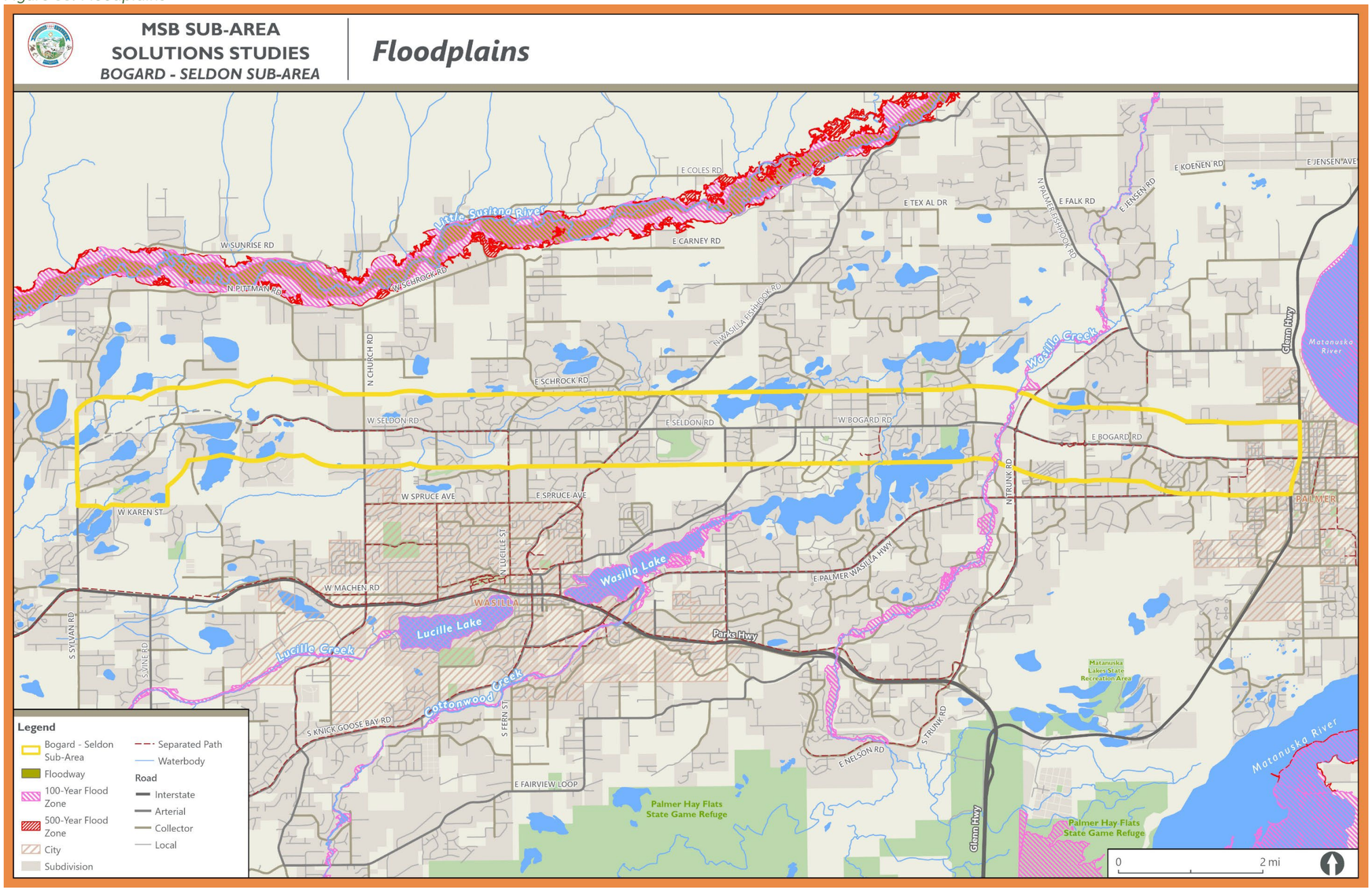
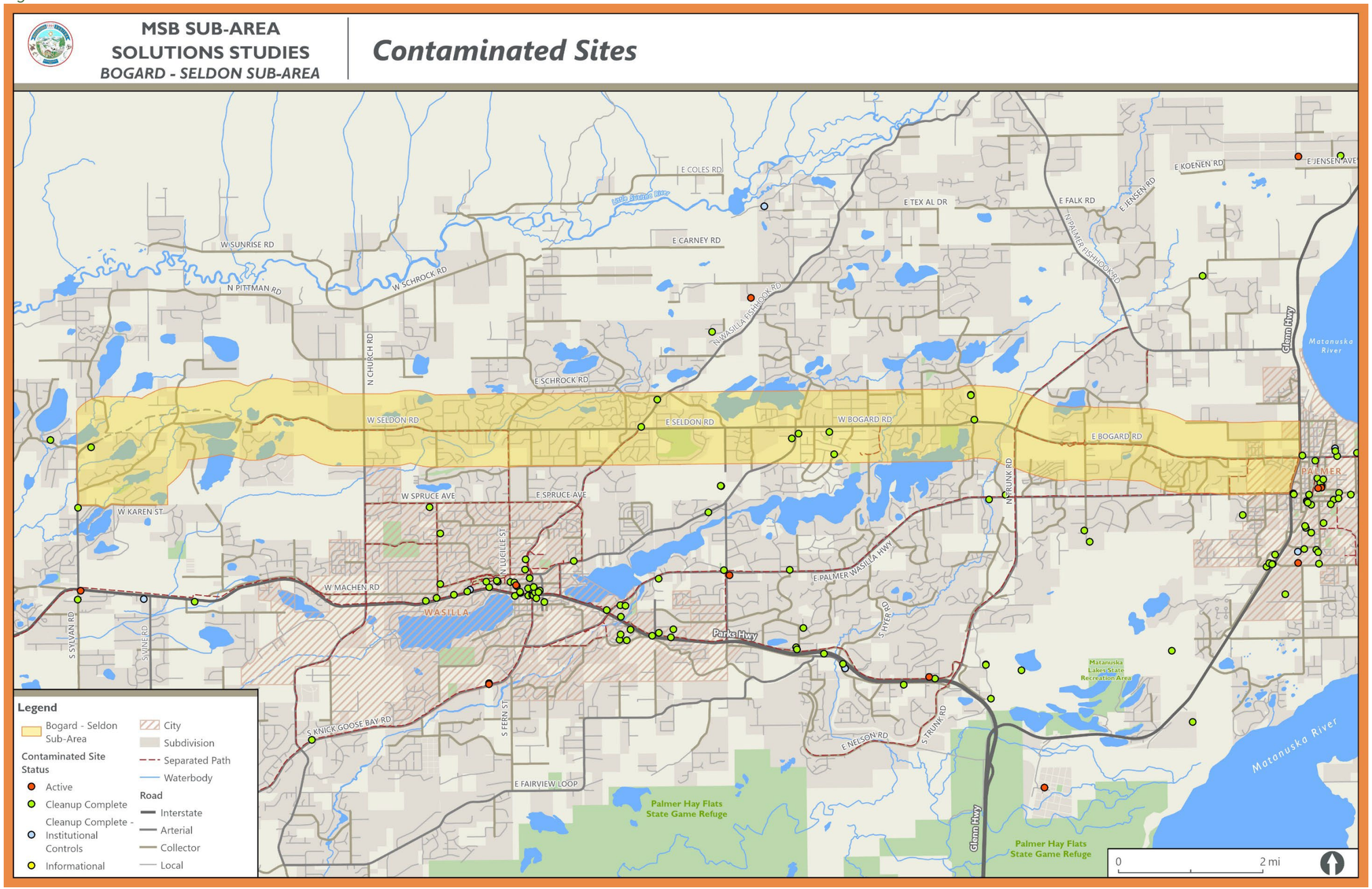


Figure 34. Contaminated Sites



Source: ADEC, Contaminated Sites, 2022, https://dec.alaska.gov/spar/csp.aspx

Appendix A Existing Non-Infrastructure Policy and Codes

A.1 Subdivision Construction Manual

The Matanuska Susitna Borough (MSB) Assembly approved the updated *Subdivision Construction Manual* (SCM)[45] by adopting ordinance Serial Number 20-15 that amended MSB 43.05.015(b)(3) to replace the SCM in Borough Code. The SCM provides designs standards to developers for the design and construction of roads whose ownership will be transferred to the MSB for long-term maintenance, repair, and upgrade. It is important that all roads constructed by developers meet appropriate standards prior to the transfer of ownership to the MSB.

The SCM goals are to:

1. Establish standards for the design and construction of transportation networks throughout the MSB
2. Provide information and guidelines for the design, construction, and upgrade of roads, drainage facilities, and utilities within rights-of-way
3. Develop and maintain a safer and more efficient transportation system
4. Minimize operation and maintenance efforts



The SCM annual average daily traffic levels defining local roads are much higher than national standards, leading to the potential under design of local roads.

A.2 Title 43 Subdivisions (see MSB Code[46] for all code requirements contained in this Title)

MSB Code Title 43 Subdivisions regulates the development of subdivisions within the MSB. This Title identifies subdivision design standards and the responsibilities of property owners, developers, and the MSB. These regulations establish the Platting Board and defines members responsibilities. It addresses plat approval, abbreviated plats, and vacations; existing plat status and validation; reconsideration and appeals; and subdivision agreements.

[45] MSB, *Subdivision Construction Manual,* 2020, https://matsugov.us/49-documents/21522-2020-subdivision-construction-manual

[46] MSB Code, Title 43, https://www.codepublishing.com/AK/MatanuskaSusitnaBorough/#!/MatanuskaSusitnaBorough43/MatanuskaSusitnaBorough4305.html#43.05.015

Issue: Platting decisions historically have defined land use within the MSB without assessing impacts to the existing and future road networks.

Most of the property within the Bogard-Seldon Sub-Area is in the unincorporated area of the MSB. These lands comprise a portion of what is known as the Core Area of the MSB, where the majority of the MSB's population is located. The *Core Area Comprehensive Plan*[47] established planning goals and objectives within the Core Area. These goals and objectives are implemented in part by MSB Code Section 17.61 Core Area, with certain developments or activities requiring a Conditional Use Permit and/or a Traffic Impact Analysis with Mitigation prior to project initiation.

A.3 Applicable MSB Development Codes

Additionally, all areawide code requirements are applicable within the Bogard-Seldon Sub-Area, including the following Titles that address residential, commercial, institutional, and industrial development:

- **MSB Code Title 8 Health and Welfare**[48]**:** Title 8 identifies health and safety standards related to construction by formally adopting the International Mechanical Code, International Building Code, Uniform Plumbing Code, National Electrical Code, International Fire Code, and International Fuel and Gas Code for all construction within the MSB. It also establishes standards for sewer and septic systems, including sizing and separation from wells and water bodies. Sewer and septic systems must meet Alaska Department of Environmental Conservation requirements.
- **MSB Code Title 11 Roads, Streets, Sidewalks and Trails**[49]**:** Title 11 establishes standards for roads, streets, sidewalks, and trails. These standards are implemented through the MSB's SCM[50], which contains all relevant standards. This Title also defines encroachments and remedies. It establishes driveway standards and permits and states when Traffic Impact Analyses and Traffic Impact Mitigations are required.

[47] MSB, Core Area Comprehensive Plan, 2007 Update, https://matsugov.us/docs/plans/14442/sandy-formatted-core-area-comp-plan1.pdf
[48] MSB Code, Title 8, https://www.codepublishing.com/AK/MatanuskaSusitnaBorough/#!/MatanuskaSusitnaBorough08/MatanuskaSusitnaBorough08.html
[49] MSB Code, Title 11, https://www.codepublishing.com/AK/MatanuskaSusitnaBorough/#!/MatanuskaSusitnaBorough11/MatanuskaSusitnaBorough11.html
[50] MSB, *Subdivision Construction Manual,* 2020, https://matsugov.us/49-documents/21522-2020-subdivision-construction-manual

- **Title 15 Planning[51]:** Title 15 establishes the role and function of the MSB Planning Commission as an advisory body to the MSB Assembly with respect to proposed ordinances and plans and that serves in a quasi-judicial function related to the approval or denial of Conditional Use Permits. This Title establishes MSB Assembly functions related to zoning, comprehensive planning, lake management plans, and amending state management plans affecting MSB lands. Chapter 15.30 establishes the Official Streets and Highway Plan as the official map that shows the location of present and future road construction projects throughout the MSB. This Title establishes the Board of Adjustment and Appeals as a process for residents to appeal decisions made by the MSB Administration, Boards, and Commissions.
- **Title 17 Zoning[52]:** Title 17 establishes areawide and special use district zoning requirements throughout the MSB:
    - Establishes 13 Special Land Use Districts throughout the MSB that require additional development standards or limitations to address community or agency goals.
    - Requires conditional use permits for a variety of activities prior to their initiation, including a public process.
    - Establishes setbacks from lot lines, water courses, water bodies, rights-of-way, and screening easements.
    - Creates aviation overlay districts for commercial service airports, public airports, and privately owned public use airports.
    - Addresses flood damage prevention.
    - Provides regulations and permit requirements related to materials extraction and the establishment of Interim Material Districts.
    - Establishes standards for multifamily development and mobile home parks.
    - Provides a process to establish single-family and large-lot, single-family districts.
    - Regulates adult businesses, waste incinerators, nonconforming structures, racetracks, and tall structures.
    - Establishes conditional use permit requirements and noise, traffic, and hazardous materials standards within the Core Area of the MSB.
    - Establishes a public and permit process for the placement of essential service utilities within the MSB.
    - Establishes procedures to address variances.

[51] MSB Code, Title 15, https://www.codepublishing.com/AK/MatanuskaSusitnaBorough/#!/MatanuskaSusitnaBorough15/MatanuskaSusitnaBorough15.html

[52] MSB Code, Title 17, https://www.codepublishing.com/AK/MatanuskaSusitnaBorough/#!/MatanuskaSusitnaBorough17/MatanuskaSusitnaBorough17.html

- Establishes fees.

The Cities of Palmer, Wasilla, and Houston as well as the Port MacKenzie Special Use District are often exempted from Title 17 regulations, and a thorough review of the regulations are needed to determine applicability.