City of Houston

Community Impact Assessment

Draft Report

Prepared by R&M Consultants, Inc. for the City of Houston

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DRAFT

City of Houston Community Impact Assessment

Executive Summary

The City of Houston is conducting a Community Impact Assessment in conjunction to the update of the city's Comprehensive Plan. The Matanuska-Susitna Borough wrote the city's Comprehensive Plan in 1999 and its amendment in 2003, and this is the first Community Impact Assessment (CIA) and Comprehensive Plan revision conducted by the City of Houston. Recent increases in population growth, demand for services, as well as major transportation infrastructure projects underway within or adjacent to the City of Houston have prompted the City to prepare and plan for the opportunities for change in the community's infrastructure, economy, and development. The following CIA will assist the planning process by analyzing potential impacts major transportation projects may have on the City of Houston and its quality of life. The evaluation will allow the city and its residents to prepare for positive impacts and mitigate any negative potential impacts within their community and assist Houston in maintaining its unique community character.

The process used to develop the CIA is based on the process defined in the US Department of Transportation Federal Highway Administration's (FHWA) "Community Impact Assessment; A Quick Reference for Transportation." The study area assessed is the City of Houston as defined by its existing boundaries, including the newly annexed Knikatnu Inc. land. A community profile and the existing conditions report on Houston are used as a baseline for considering impacts. Analysis of the relationship between the proposed transportation projects and the City of Houston consists of identifying and investigating impacts through eleven impact categories.

Categories used to assess impacts of the transportation projects include:

- social and psychological aspects;
- physical aspects;
- visual environment;
- land use;
- economic conditions;
- traffic and circulation;
- mobility and access;
- provision of public services;
- safety, displacement; and
- environmental justice.

Each category is assessed for direct (temporary and long-term), indirect, and cumulative impacts for each alternative and community goals and values identified through various public involvement outreach methods, including open houses and interviews, were considered whenever possible.

Four transportation alternatives are assessed in this CIA including a No Build Alternative. The No Build scenario, Alternative One in the CIA, is evaluated for the direct and indirect impacts that are incurred without action or development and serves as a standard with which to compare impacts of action alternatives to. The second project assessed is the Parks Highway Milepost 44-52

Upgrade. While the majority of the proposed upgrades are occurring outside City boundaries, the terminus of the project is at Big Lake Road where an intersection traffic light is proposed, is within City boundaries and has the potential to impact land use, traffic and circulation, economic conditions and more within Houston.

Alternative three in the CIA is the Port MacKenzie Rail Extension. Segments of the rail extension are currently in the construction phase and will connect Port MacKenzie to the ARRC mainline north of Miller's Reach Road in Houston upon its completion. Newly annexed Knikatnu Inc. land into Houston is crossed by the rail extension. Currently, the ARRC does not intend to develop any additional facilities in Houston other than the rail line, though it was expressed by ARRC that the idea of a loading facility would be entertained if private development initiated the establishment of such a facility. The fourth alternative analyzed in this CIA is a Port MacKenzie to Parks Highway Roadway Corridor. This alternative is conceptual but has been considered since the planning phases of the Port MacKenzie rail extension. The roadway corridor analyzed parallels the rail extension and is based on historical studies supporting the rail extensions development and the City of Houston's 1982 Transportation Plan Map.

The transportation alternatives were chosen for assessment based on their potential to have significant impacts on the City of Houston, both positive and negative. After analyzing each alternative using the FHWA based methodology, minimal to null impacts were identified at large for the City of Houston. The Rail Extension and the conceptual roadway corridor from Port MacKenzie to the Parks Highway would have minimal impacts for the City of Houston. This is largely because the rail extension and roadway corridor would be constructed on currently vacant land, resulting in minimal change. Additional facilities supporting economic growth and development are not a part of the rail extension. Services and amenities necessary for the local economy to benefit from increased traffic along the Parks Highway as a result of the Port-to-Parks roadway are not yet established. While the Parks Highway MP 44-52 Upgrade is proposed to improve travel time throughout that corridor, it does not have any cumulative impacts to the land use or development within Houston, according to FHWA guidelines. Significant adverse impacts were not identified for any of the alternatives.

Despite a lack of short-term direct impacts, members of the community and identified stakeholders believe the City of Houston is poised for expansion and has the right attributes to turn the community into a place that would attract residents, new business, and visitors. While the alternatives assessed may not directly produce a significant change in the community, the long-term cumulative impacts have the potential to be significant. Changes in land use and traffic volumes may encourage new business development, bring more residents and the Rail Extension could provide a more attractive market for industrial and natural resource development. Houston is becoming a key connection point for material goods as well as people traveling between Interior and Southcentral Alaska and that provides greater growth potential for the City. If new developments or information emerge pertaining to the alternatives assessed in this CIA, additional analysis will be conducted in order to provide the most reasonably to-date analysis on anticipated impacts for the City of Houston.

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1. INTRODUCTION

The City of Houston is conducting a Community Impact Assessment (CIA) to evaluate potential effects transportation projects could have on the community of Houston and its quality of life. The CIA will serve as a planning tool and reference for the City of Houston and the Matanuska-Susitna Borough by ensuring the needs, opinions, vision, and goals of the community are acknowledged and well documented to help guide compatible growth and development within and around Houston.

Transportation projects, hereafter referred to as alternatives, assessed in this CIA are: the Parks Highway Milepost (MP) 44-52 Upgrade project, the planned rail extension from Port Mackenzie to the existing Alaska Railroad mainline at Houston, and a conceptual roadway connection from Point MacKenzie Road to the Parks Highway at Houston.

Houston is a growing rural residential community which has developed around the Parks Highway, a National Highway Systems Highway bisecting the community. Each alternative has the potential to significantly impact the socioeconomics, physical environment, and future growth and development of Houston. The CIA will identify potential impacts and recommend mitigation to impacts that conflict with the needs and goals of the community. The documented findings will provide usable information for future development decisions-making processes that will help the community maintain its high quality rural residential living environment, and provide a useful tool for accommodating orderly growth.

1.1 Relationship to the Comprehensive Plan

In conjunction to the CIA, the City of Houston is in the process of updating its Comprehensive Plan and is conducting a Parks Highway Corridor Study in partnership with the Alaska Department of Transportation. Comprehensive Plans are a tool to plan for future growth, development, and constant change within a community. This CIA will support an effective comprehensive plan by providing city decision makers with information on potential positive and negative impacts major transportation projects could have on the city, assisting the development of effective policies that reflect the community's best interests.

Houston's natural resources provide countless recreational opportunities and attractions. Houston is defined by its rural-residential character and its abundance of available land, popular recreation sites within its "Lakes District", and proximity to the Mat-Su commercial center. There is potential for residential, commercial, and industrial development within Houston and residents are requesting an increase in services and amenities. Planning for development that aligns with the community's rural-residential character and improves residents' quality of life is the goal of the Comprehensive Plan update and the CIA.

1.2 Process Used in this Study

The process used to develop the City of Houston's Community Impact Assessment (CIA) is based on the process defined in the US Department of Transportation Federal Highway Administration's (FHWA) "Community Impact Assessment; A Quick Reference for Transportation". Generally, the process consists of defining the project area, developing a community profile of existing conditions, identifying alternatives, analyzing the impacts for each alternative, identifying solutions for any adverse impacts and documenting the findings.

Transportation alternatives were identified through research of current and planned major transportation infrastructure projects within or around Houston. They were selected for analysis based on their potential to have significant impacts on Houston and their proximity to the city. Impacts analyzed include changes in:

- social and psychological characteristics of the community;
- physical aspects;
- visual environment;
- land use;
- economic conditions;
- mobility;
- access;
- traffic and circulation;
- provision of public services; and
- safety.

The CIA will also analyze any environmental justice (EO 12898) concerns and the potential displacement of residents, businesses or facilities. Environmental justice is the fair and equal treatment and meaningful involvement of all peoples regardless of whom they are or where they come from with respect to development, implementation, and enforcement of policies, laws and regulations.

The public plays a crucial role throughout the process by serving as a dynamic source of information. Public involvement for the CIA included meetings with the City of Houston CIA and Comprehensive Plan Revision Steering Committee, public meetings and open houses, newsletters, and a project website. Interviews were conducted as part of the economic analysis for the CIA and Comprehensive Plan Revision and key stakeholders were actively involved in the assessment review process. *See Appendix A for Public Involvement materials.*

1.3 Study Area

The area of study for the Community Impact Assessment is the City of Houston as defined by its existing boundaries, from milepost 52 of the Parks Highway to milepost 62, and includes the newly annexed 1,555 acres of Knikatnu, Inc. land. See Figure 1 City of Houston. The annexation was approved by the Local Boundary Commission on April 15, 2015.

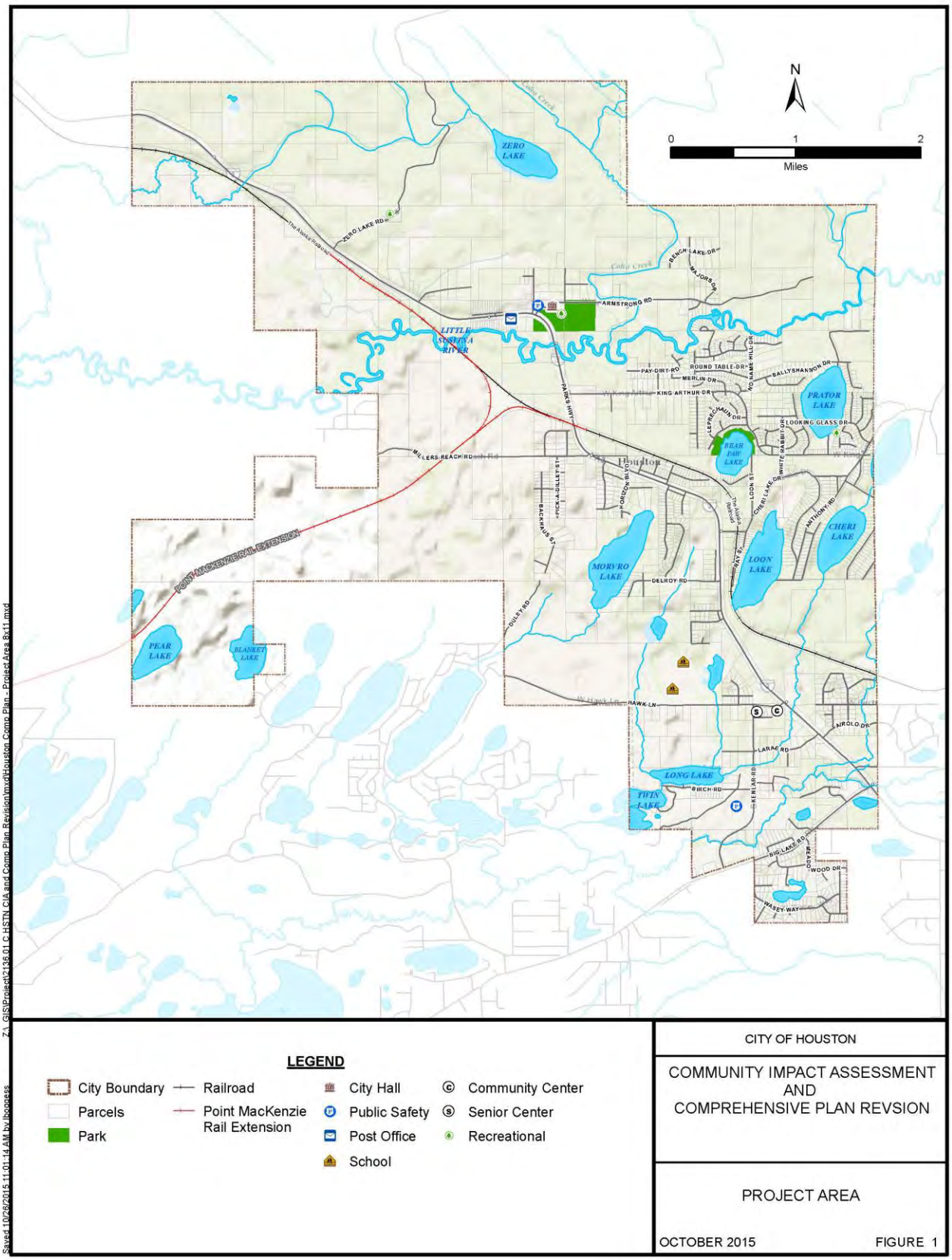


Figure 1 Study Area

2. COMMUNITY PROFILE

The community profile establishes an understanding of the City of Houston's history, existing conditions, anticipated conditions, and of the values residents of the community hold. An understanding of these community elements provides the basis for determining potential affects any given transportation action may have on the City of Houston.

2.1 Community History and Background

Houston, Alaska was first listed on a 1917 blueprint Alaska Railroad map as "Houston Siding," named after Tennessee Congressman William Cannon Houston. The City's origins began with natural resource development and the Herning Trail (now Willow Creek Sled Trail) for freighting supplies to the Willow Creek Mining District, according to the State of Alaska's Community and Regional Affairs database. Several coal mines were developed in the area in 1917-1918 and a railroad spur was constructed that supplied coal to Anchorage and the LaTouche Mining Company in Prince William Sound. The coal from Houston was heavily mined through World War II, after which the mine operations shut down. In 1953-1954 gravel roads and power lines were extended west of Wasilla, and Houston quickly settled. Houston incorporated as a third-class city in 1966 and was reclassified in 1973 to a second-class city.

2.2 Physical Environment

Soils

Soils in Houston generally range from well-drained, well-sorted gravel to hydric wetland soils. A number of small lakes dot the central and southern portions of the community limits and are bordered by glacial moraines consisting of non-sorted glacial till. In general, soils located south of the Little Susitna River and east of the Parks Highway are well drained sand and gravels of pitted outwash and till material. Larger intermittent areas of poorly drained soils and peat bogs occur to the west of the Parks Highway.

The northern topography is characterized by rolling hills and perched silty areas. These soils are fine grained and poorly draining. Development within the area is sparse with only a few gravel pits cut in glacial moraine and esker/kame complexes

Soils in the central portion of Houston are suitable for cultivated crops and agricultural development. Portions of these areas are presently zoned for low density residential and agricultural use.

Waterbodies

Approximately 864 acres, or 5%, of Houston consists of surface waters. The most notable is the Little Susitna River which crosses the Parks Highway in the middle of the community. This river originates in the Talkeetna Mountains in Hatcher Pass and flows southwest ultimately into Cook Inlet. The Little Susitna River, Coho Creek, and a number of contributing unnamed streams are listed in the Anadromous Waters Catalog.

Several popular lakes exist within the City limits including Zero Lake, Bear Paw Lake, Prator Lake, Frog Lake, Cheri Lake, Loon Lake and Morvro Lake. Bear Paw, Prator, Morvro, and Loon Lake are stocked annually with various fish species.

According to "Alaska's Final 2010 Integrated Water Quality Monitoring Report" (July 15, 2010), there are no designated "Impaired Waterbodies" within the city of Houston.

Wetlands

A number of riverine, lacustrine, and palustrine wetlands are present within Houston. Most wetlands are riparian buffers along the Little Susitna River, Coho Creek and surrounding ponds. Several other wetlands are present in low lying areas between Zero Lake and the Little Susitna River.

Floodplains

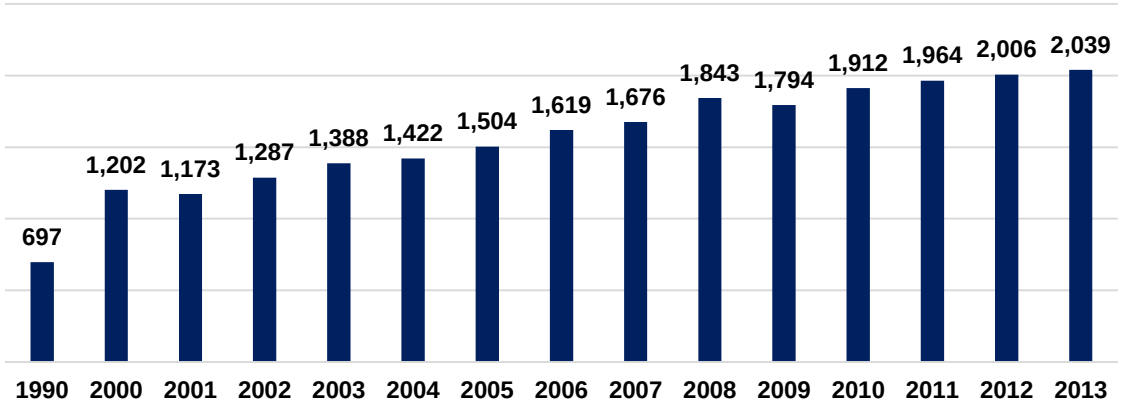
The Federal Emergency Management Agency (FEMA) completed a Flood Insurance Study and remapped the Special Flood Hazard Areas for the Mat-Su Borough. The Borough adopted the new floodplain mapping in 2011. The primary floodplain surrounds the Little Susitna River. A floodplain development permit form the Borough is required prior to building or development within a federally designated flood hazard area.

2.3 Population and Demographics

Trends in Population Growth and Demographics:

Houston has experienced steady population growth over the past two decades; its 2013 population of 2,039 is almost triple that of 1990 which had 697 residents (see figure 2). This growth rate is higher than that of the entire Mat- Su Borough, which grew 2.4 times in size from 1990 to 2013.

Figure 2. Houston Population, 1990 and 2000-2013

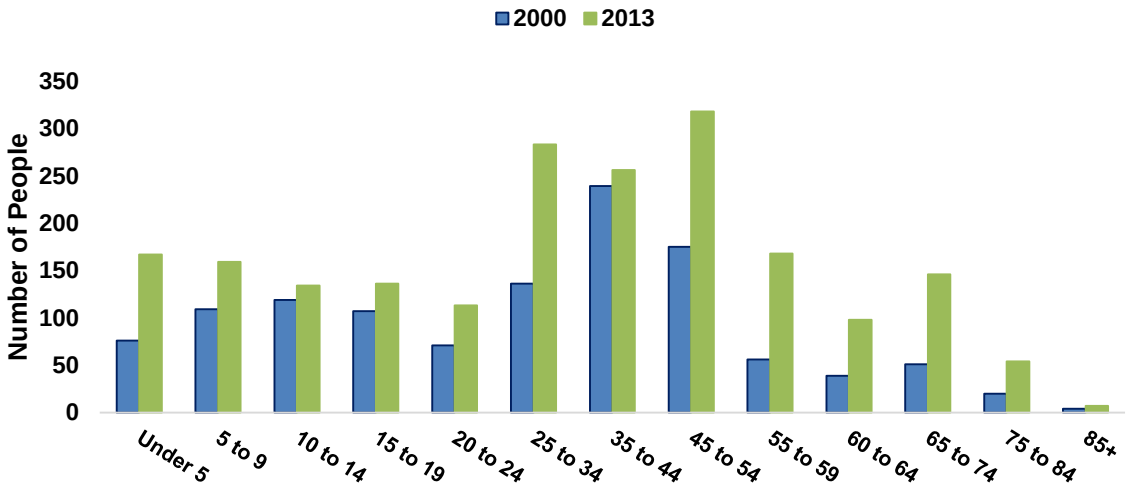


Population growth in the Mat-Su is projected to slow from the current annual growth rate of 3.6% to less than 2% by the year 2035. Since Houston is tied to the Mat-Su economy and has comparable demographics, McDowell Group projects that Houston's population growth will reflect that of the larger Mat-Su, growing approximately 2% over the current period to 2035. With this growth rate, the City of Houston would grow by about 50% of its current population level to slightly more than 3,100 residents in 2035.

Age

The median age of Houston residents in 2013 was just over 36 years of age. This is slightly higher than the average age for the Mat-Su Borough and Alaska, which have median ages of 35 and 34 years respectively. The majority of the population growth has occurred in the older age cohorts.

Figure 3. Houston Population by Age Category and Median Age, 2000 and 2013



Race

The majority of Houston's residents, 87%, self-identify as White. About 4% of Houston residents identify themselves as American Indian and Alaska Native and the remaining 9% of Houston residents identify as multi-racial. These categories reflect the five year average distribution from 2009-2012.

Household Income

The median household income in the City of Houston is almost $60,000, which is about $10,000 less than the median household income in the Mat-Su Borough and the state. Per capita income averaged slightly more than $25,000, less than the $30,000 found in the Mat-Su Borough and $32,000 for Alaska.

Approximately 12 percent of families and 16 percent of individuals in Houston live below the federal poverty line. According to 2014 Federal guidelines for Alaska, a household of four making less than $29,440 or an individual with an income of less than $14,350 are considered living in poverty. There are approximately 101 households that receive public assistance and 118 households utilize the Supplemental Nutrition Assistance Program (SNAP).

Educational Attainment

Availability of Facilities: Two schools are located in separate buildings within Houston: Houston Middle School and Houston High School. Elementary school age students currently take a bus to the nearby elementary schools, namely Big Lake Elementary and Willow Elementary School.

According to the U.S. Census and American Community Survey, approximately 90% of Houston's population had a high school degree or higher with 17% holding a bachelor's degree or higher. Educational attainment has increased since the 1990s, see Table 1.

The Household Opinion Survey conducted by the McDowell Group for the City of Houston Comprehensive Plan and CIA in 2014 suggests that 18% of Houston residents have a bachelor's degree.

Table 1. Houston Educational Attainment, Population 25 Years and Over, 2000 and 2008-2012 Five- Year Average

	2000	2008-2012	2008-2012 Margin of Error
High school, no diploma	16%	11%	+/-5%
High school diploma or GED		36	+/-6
Some college		31	+/-5
Associate's degree		5	+/-2
Bachelor's degree		9	+/-4
Graduate or professional degree		8	+/-4

Note: Columns may not add to 100 percent due to rounding.
Source: U.S. Census and American Community Survey.

Employment

In 2012, Alaska Department of Labor and Workforce Development (ADOLWD) estimated there were 768 residents over age 16 employed in Houston, with total annual wages of $26.5 million. Most workers were employed in the private sector (85 percent), followed by local government (11 percent), and state government (4 percent). The top four industries in terms of employment included Trade (retail and wholesale), Transportation and Utilities (22 percent), Education and Health Services (16 percent), and Construction (13 percent).

In addition to data compiled by the State of Alaska, the American Community Survey offers insight into employment in Houston. According to these data, 782 residents over age 16 were employed and 166 unemployed. The unemployment rate is estimated to be 18 percent. Private wage and salary workers made up 80 percent of employed, followed by government workers (19 percent) and self-employed workers (7 percent). The industries with the highest level of employment were Retail Trade (17 percent), Educational, Health and Social Services (13 percent), Arts, Entertainment, Recreation, Accommodation and Food Services (11 percent); and Agriculture, Foresting, Hunting and Fishing, and Mining (11 percent). Many residents are employed outside of Houston.

Disabled Groups

According to the American Community Survey, about 12% of the civilian population in the Mat-Su Borough is estimated to have a disability. It is assumed that Houston generally reflects the greater Mat-Su in this trend. Services for disabled groups are extremely limited with the City with most persons receiving care in Wasilla or Anchorage.

Alaska Native Entities

Knikatnu, Inc. and Cook Inlet Region, Inc. are adjacent land owners to the City of Houston. Some properties owned by CIRI and Knikatnu are within the City of Houston boundaries and the roadways on those properties are managed and owned by the City but are listed within the BIA TTP inventory.

2.4 Economics

Economic Base

The economic base for the City of Houston is made up of local tax revenues including sales tax, property tax, and motor vehicle tax, licenses and permits, service fees, and income from outside sources. Collectively the City of Houston has an annual budget of less than one million dollars. Houston's largest expenses are for road service and maintenance and providing fire services.

Seasonal tourism and travel along the Parks Highway provides increased revenue opportunities for the City of Houston. Increasing recreational tourism has been identified as a method of establishing a larger economic base, along with commercial and industrial development along transportation corridors.

Taxes

The City of Houston generates income from local sales taxes, property taxes, and motor vehicle taxes. The current sales tax rate is 2% and the City has budgeted for anticipated revenue of $151,500 in sales tax for the fiscal year 2015. Property taxes are anticipated to provide $361,607 in income to the City for the same fiscal year. Overall, the tax base in Houston is proposed to provide $526,007 in revenues to the City. Residents have stated that an appeal of Houston is its affordable property values; allowing first time homeowners and young families the opportunity to invest.

Houston Businesses

There are 82 business licenses that list their physical address in Houston and are considered active. When filing for a business license, a company determines the North American Industrial Classification System code that best fits with the service they plan to offer. While not completely accurate, this classification system offers some insight into the structure of a local private sector economy. See Table 2 for the composition of businesses in Houston by business type.

Table 2. Composition of Houston Businesses, 2014

2 Digit NAICS Code	Description	Number of Houston Businesses
11	Agriculture, Forestry, Fishing and Hunting	1
23	Construction	11
31	Manufacturing	4
42	Trade	15
48	Transportation and Warehousing	5
53	Real Estate, Rental and Leasing	5
54	Professional, Scientific and Technical Services	5
56	Administrative, Support, Waste Management and Remediation Services	6
61	Educational Services	1
62	Health Care and Social Assistance	3
71	Arts, Entertainment and Recreation	5
72	Accommodation and Food Services	4
81	Services	17
TOTAL		82

The North America Industrial Classification System (NAICS) is a taxonomy that categorizes businesses by sector of activity.

During the summer months, traffic through Houston tends to increase. A number of businesses are sustained by this traffic because some travelers stopped to eat a meal, to rent RV space, or purchase fireworks. The City of Houston has the largest concentration of businesses selling fireworks in Alaska. The Little Susitna River is an attraction for anglers as well as river adventurers during the summer months.

At this time, there is no grocery store in Houston: typically residents will travel to Wasilla or Big Lake for their shopping needs. No medical clinics or facilities are in operation within Houston. The closest hospital is Mat-Su Regional Medical Center in Wasilla, along with a full suite of dental, chiropractic and other health services. Currently no gas stations exist within the Houston City limits.

2.5 Physical and Social Community Characteristics

Community Values and Issues (from the 2003 Comprehensive Plan Update, Futures Workshop, Household Opinion Survey and Existing Conditions Report)

The City of Houston is a rural-residential community. Its abundance of available land, popular recreation sites within the "Lakes District" of Houston, and proximity to the commercial center of the Mat-Su Borough has made it a desirable area which has experienced consistent growth. There is potential for residential, commercial, and industrial development within Houston and residents are open to limited development of amenities to enhance their quality of life as long as the city maintains the rural-residential character and preserves the recreational opportunities and ecology within Houston. Finding a balance between development for amenities such as a medical facility, pharmacy, daycare provider, or grocery store and maintaining the current community character is a top priority for the City moving forward.

The City of Houston values its unique identity, independence, rural and recreational lifestyle, affordability, and family-friendliness.

Community Goals (from the 2003 Comprehensive Plan Update)

The goals and objectives of the community play a vital role in assessing the impacts of each alternative. The goals and objectives of the community, as stated in the amended City of Houston Comprehensive Plan (Mat-Su Borough 2003), are as follows:

Primary Goal:
To maintain the high quality residential living environment that currently exists in Houston and to continue to take advantage of the characteristics of the community's rural setting. The community should work toward encouraging a moderate level of growth which will provide an economic

base in Houston adequate to allow provision of employment opportunities in the area and to avoid becoming dependent upon external governmental or economic factors and activities.

Economic Goal:
To help develop a broadly-based economy that is responsive to the requirements of the community by providing opportunities for employment, commercial service and economic growth while maintaining an economical, aesthetically high standard of living not in conflict with established residential, commercial and industrial development goals.

Land Use Goal:
To develop a realistic and responsive land-use plan for Houston, based upon the goals and objectives of the community as well as the economic, environmental and social characteristics of the area.

Recreational Goal:
To provide a broad spectrum of recreational opportunities for all segments of the community and for visitors who come to the community for recreational purposes, while at the same time develop and maintain a neighborhood-scale recreational facilities system.

Governmental Organization Goals:
To assure that the local, borough, state and federal government agencies with jurisdiction in and around Houston are directed in a positive, creative and responsive manner when providing governmental services and facilities needed by the residents of Houston, as well as to ensure responsiveness to public concerns by providing for citizen participation in the planning process at all levels of government.

Environmental Goal:
To work actively toward ensuring that the natural environment of Houston, including but not limited to air and water quality, fish and wildlife habitat and natural vegetation, is enhanced and maintained by encouraging land uses and development that are consistent with the natural characteristics of the community.

Public Services Goal:
To take whatever actions are necessary to provide or encourage the provision of a broad variety of community services within the community on a quality rather than a quantity basis that will improve and enhance the already desirable living environment.

Historic Properties and Cultural Resources

According to the National Register of Historic Places (NR) maintained by the National Park Service and available to the public, there are no NR listed sites within the City of Houston. While there are no listed sites within city limits, there could be eligible sites present. The Matanuska-Susitna Borough established a Historic Preservation Commission by Ordinance of the Assembly in April 1982. The Commission is certified to carry out the purposes of the National Historic Preservation Act of 1966 and will aid in identification, evaluation, registration and protection of sites within the Borough.

Public Services

The City of Houston offers fire and road services. The Houston Emergency Services building houses the Fire Department, see Table 3 for response times of the Houston Fire Department. The City is in the process of constructing a new Fire Station 9-2 to support the function of the existing Interim Fire Station 9-2. At this time, no local police are active and law enforcement is handled by the Alaska State Troopers. The closest public libraries are located in Willow and Big Lake.

Table 3. Houston Fire Department Response Information 2007-2011

	2007	2008	2009	2010	2011
Total Call Volume	77	111	235	261	329
Average Response Time in Minutes	8:56	6:57	4:49	2:52	2:57
Percent of Response Under 2 Minutes	22	32	32	56	58
Percent of Response Under 8 Minutes	53	69	85	93	93

Source: Houston Fire Department

Public educational facilities within Houston include Houston High School and Houston Middle School. Currently elementary students attend schools in Big Lake or Willow.

Community Facilities

The Homesteaders Community Center provides a meeting place for the public and fellowship for area residents. The nonprofit organization, which started the Community Center in 1957, has over 50 members and is open to anyone in the community. The group organized social gatherings and holiday parties and also rents out the center for functions. The building is made available for the Mid-Valley Seniors, Inc. which provides fellowship, nutritional programs, and meal services to member seniors in the Big Lake, Houston, Meadow Lakes, and Willow areas.

There are no public libraries in Houston, but there are libraries available to students at the Houston High School and Middle School. The Big Lake Country Club, founded in 2000, is a 24 hour services provider for developmentally delayed and emotionally challenged adults. The Country Club's main campus is in Houston and provides daily support, monitoring, and supervision for adults in need.

Parks and Recreational Facilities

The Little Susitna River provides outdoor recreation in the form of camping, boating, and fishing. On the east side of the Parks Highway, the City of Houston operates the Little Susitna Campground which is open 24 hours a day from Memorial Day to Labor Day weekends. The Campground provides a day use area, pavilion, playgrounds, defined camp sports, fire pits, restrooms, trash disposal and an RV pump station. The City also maintains a public day-use facility on the west side of the Parks Highway with access to the Little Susitna River that includes a

parking area suitable for boat trailers, restrooms and trash receptacles. The Riverside Camper Park is located in the core of Houston, adjacent to the Parks Highway and the Little Susitna River. This Camper Park provides shower and laundry facilities, electricity and a small concession store.

The Houston/Willow Creek Sled Trailhead and recreation area is located at mile 59 of the Parks Highway off Zero Lake Road, providing both day-use and overnight spaces for approximately 60 vehicles or RVs with trailers, picnic tables, BBQ grills, restrooms and trash disposal. There are permanent map signs for two trailheads that lead into Hatcher Pass recreation area.

Five local lakes are stocked with various fish species for recreational purposes, providing even more opportunity for anglers to enjoy Houston. Most trails within the community are informal and do not have clearly dedicated public access. Trails are utilized as transportation corridors for snow machines, ATVs, dog sleds, bikers, horses, pedestrians, and skiers. The Haessler-Norris Trail System is made up of 20 trails of various distances and a published map of this trail system was created for the Willow Dog Mushers Association in 2011.

The Hatcher Pass/Independence Mine, Big Lake, the Susitna Flats State Game Refuge, the Mat-Su Visitor's Center, and Nancy Lake Recreation Areas are all located near the community of Houston and offer various recreational opportunities to local residents as well as regional, out of state, and international tourists.

Infrastructure

There is no public utility system within Houston. Most homes and businesses have private wells and septic systems and some residents do not have indoor plumbing. Electricity is available through Matanuska Electric Association in most of Houston. Natural gas is available in several areas of the City, including areas as far northwest as the north end of Prator Lake on Ballyshonnon Drive, but has been identified by residents of Houston as a service they would like to see expanded. Increased accessibility to internet services has been identified by residents as well.

Transportation

The Parks Highway runs through the City of Houston from the southeast boundary to the northwest, bisecting the community. The Parks Highway serves statewide mobility for travel and freight transportation through the city limits of Houston for passage to Fairbanks and interior Alaska. The Alaska Railroad main line also runs through Houston in a route similar to the Parks Highway corridor.

The City of Houston's road network contains about 45 miles of road branching east and west from the Parks Highway, which operates as a backbone for the regional network. The Parks Highway is the only arterial level roadway within the city limits. The remaining roads are either local roads providing access to the surrounding lots or collector roads that provide access to and from the Parks Highway. The majority of roadway network in Houston has a gravel surface with only 10% of the roadways (mainly collector roads) being paved.

A majority of the parcels within the city limits of Houston access the Parks Highway within the city limits of Houston. Alternative access out of the city is available to the west via Kiowa Street which leads to Big Lake and King Arthur Drive to the east which accesses the Meadow Lakes Loop and Pittman Road areas. Additionally, Big Lake Road leads west into Big Lake. There are currently no signalized intersections within the city.

Public transportation services are limited in Houston to a single stop at Gorilla Fireworks for commuters heading south to Wasilla or on to Anchorage. This service began in August of 2014.

Land Use

Currently there are about 3,275 acres of developed land, making up 20% of the total 16,210 acres of land area of Houston. Approximately 12,961 acres or 80% of total land is undeveloped. Figure 4 graphically depicts existing land use including vacant land. The majority of Houston's land is privately owned and other large tract land owners include the City of Houston, the Mat-Su Borough and the State of Alaska. The Alaska Rail Road's rail line, including the Rail Extension from Port MacKenzie to Houston, will be using approximately 161 acres in the City of Houston once the Extension is constructed. This acreage does not include any support facilities such as maintenance buildings or access roads which may be built.

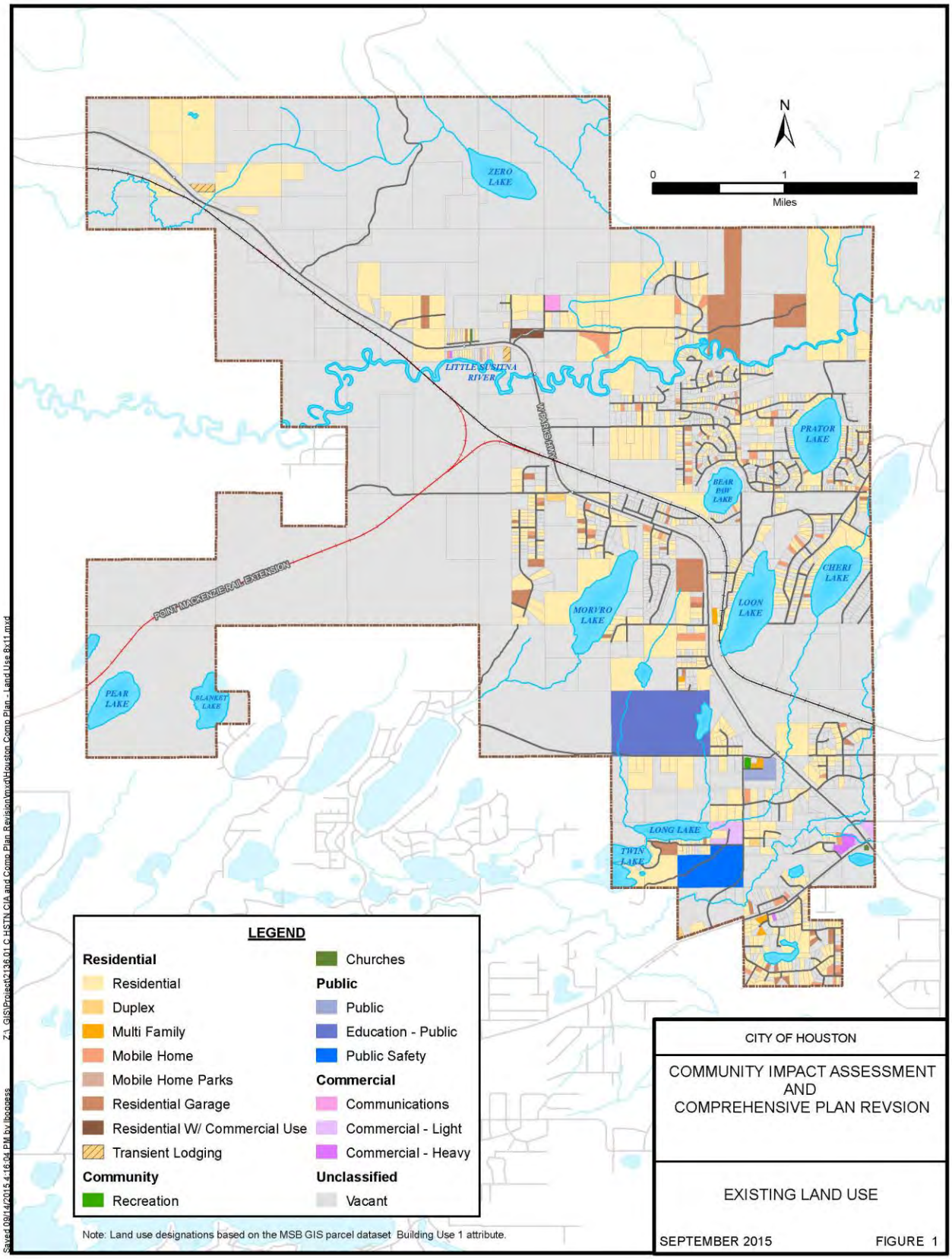


Figure 4. Current Land Use

Zoning Districts

The City of Houston has 11 distinct Zoning Districts that implement the policies of the Comprehensive Plan. The Zoning Districts are a part of the City of Houston's Municipal Land Use Regulations. Table 4 Existing Zoning Districts summarizes the City of Houston's zoning districts and their intent as a baseline for the Comprehensive Plan revision. Figure 5 shows the existing zoning for the City of Houston.

Table 4. Existing Zoning Districts

Zoning District	Zoning Designations
PLI	Public Lands and Institutions
R-1	Single-Family and Two-Family Residential District (low density)
MFR	Multifamily Residential District (medium density)
RA-2.5	Residential/Agriculture District
RA-5	Low-Density Residential Agricultural District
NC	Neighborhood Commercial District
C	Commercial District
LI	Light Industrial District
HI	Heavy Industrial District
H	Holding District
PH	Parks Highway District

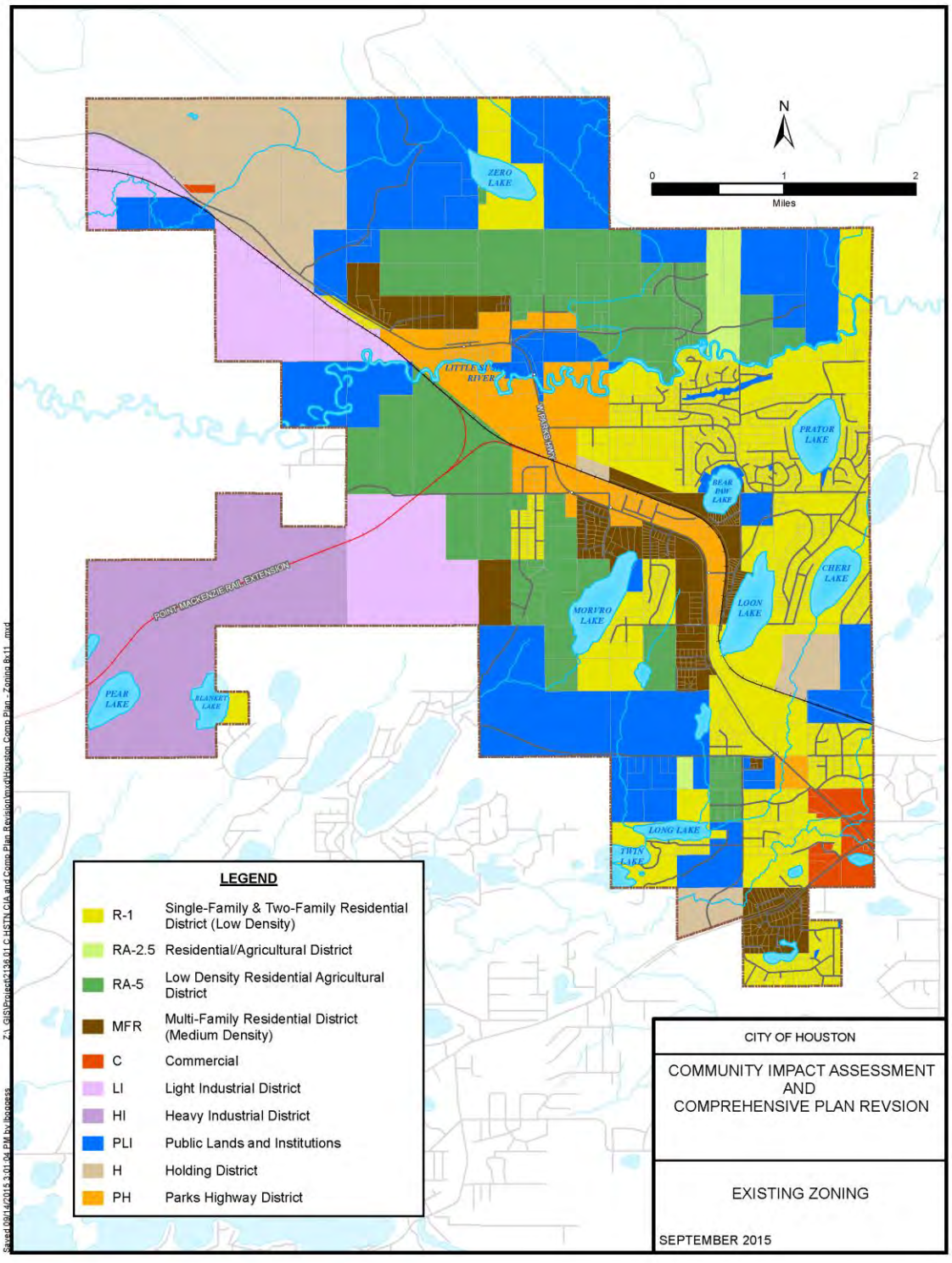


Figure 5. Current Zoning

2.6 Planned and Neighboring Community Development

Planned and Approved Future Development

The City of Houston recently received approval to have a 1,555-acre (2.4 sq. mi.) undeveloped, unincorporated parcel of land owned by Knikatnu Inc., a Wasilla-based Alaska Native village corporation, annexed into the City of Houston. The parcel adjoins other Knikatnu land that is within the existing City of Houston boundaries and road access is from Houston. Currently there are roads which are included in the Bureau of Indian Affairs (BIA) Tribal Transportation Program (TTP) inventory and are owned by the City of Houston. The City of Houston is in the process of designing and constructing a new Fire Station 9-2 to be located at 12176 W. Birch Road to replace the current interim Fire Station 9-2. The new station is intended to be safe, efficient, and provide a comfortable environment for emergency responders to work, train and stay.

Neighboring Community Activities

Wasilla is experiencing growth comparable to that of Houston and is continuing to develop along the Parks Highway. Roadways are being upgraded throughout the commercial district and safety improvements to the Parks Highway have been an Alaska DOT&PF priority for the area. The Alaska DOT&PF are working in partnership with the City of Wasilla and the Mat-Su Borough to conduct a study identifying alternative Parks Highway routes to move through traffic around Wasilla instead of through the City's core. The City of Wasilla is also working to implement the *Wasilla Downtown Area Plan* and is currently going through the approval process for the proposed Downtown Overlay District.

Big Lake is currently petitioning the Local Boundary Commission to incorporate into a second class city. In 2014, Big Lake completed a Community Impact Assessment which considered impacts to Big Lake that could result from different highway routes connecting the Port MacKenzie to the Parks Highway, at full build out of Port MacKenzie.

3. TRANSPORTATION ALTERNATIVES

The following transportation projects or plans are being assessed through the City of Houston's Community Impact Assessment. The alternatives have been chosen for the assessment based on their location within or adjacent to the City of Houston boundaries and the potential impacts that could occur to the community if or when these alternatives are implemented.

3.1 Alternative 1: No Build Alternative

The No Build Alternative assesses the existing conditions within the community and the potential impacts no development or action will have for the City of Houston. By preforming an impact analysis on the anticipated future without a major transportation action, a baseline is established to which impact analyses of other alternatives can adequately be compared. Although a No Build scenario is not a possible alternative for the community at this time due to proposed project already underway or in construction, the No Build alternative provides an informative summary of baseline conditions associated with no development.

3.2 Alternative 2: Parks Highway MP 44-52 Upgrade (Lucus Road through Big Lake Road)

The Parks Highway, from Lucus Road to Big Lake road is being upgraded by the Alaska Department of Transportation and Public Facilities (DOT&PF) to improve safety and congestion along the roadway. The project has been phased into three segments, the third of which begins at Pittman Road and ends at Big Lake Road, where the City of Houston boundary is, see Figure 6 Parks Highway Upgrade MP 44-54 Lucus Road to Big Lake Road.

Phase 3 is currently moving towards Final Design and Right of Way acquisitions, with construction anticipated for 2017-2018. All information on the project is sourced from the 2013 Design Plans made publically available. Proposed improvements for Phase 3, Pittman Road to Big Lake Road include:

- Stop light controlled intersection with the Parks Highway at Big Lake Road including a crosswalk and pedestrian island;
- Four-lane divided highway which returns to a two-lane highway after Forest Lake Drive;
- New lighting is proposed down a portion of Big Lake Road and on the Parks Highway;
- Pedestrian pathway is to be realigned along the Parks Hwy and Big Lake Road;
- Driveway consolidation throughout project corridor;
- Stoplight controlled intersection at the Parks Highway and S Johnson Road (outside of Houston city limits);
- Add a S Johnsons Frontage road (outside of Houston city limits);
- Continue Winter Way west towards the Parks Highway (outside of Houston city limits); and
- Extend Margin Way to Spring Drive (outside of Houston city limits).

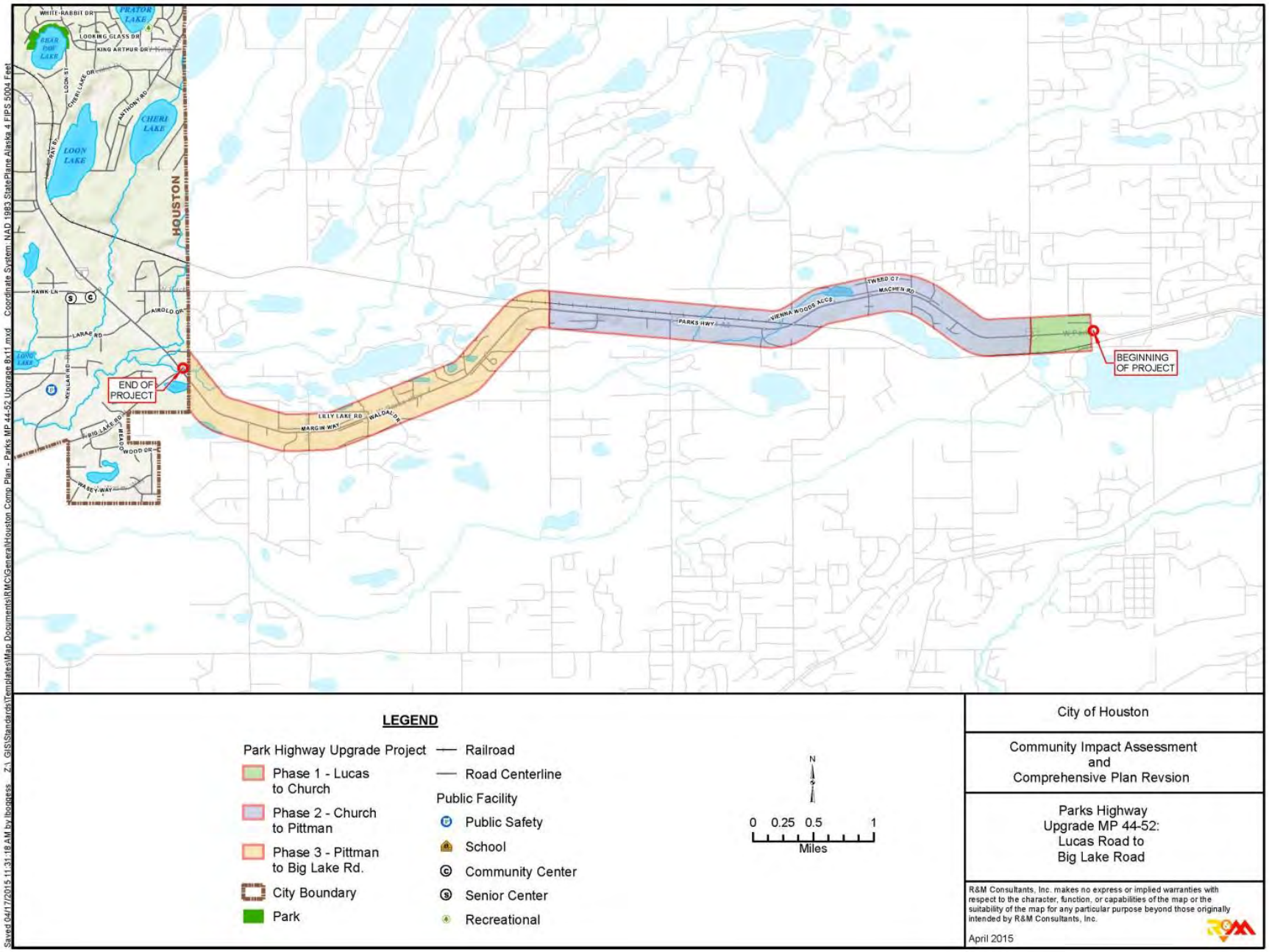


Figure 6. Parks Highway Upgrade MP 44-52 Project Area

3.3 Alternative 3: Port MacKenzie Rail Extension

The Port Mackenzie Rail Extension is a 32-mile extension of the ARRC system that travels from the Port facility north and connects to the mainline in the City of Houston. The Rail Extension will connect with ARRC mainline north of Miller's Reach Road, cross Miller's Reach Road and continue southwest through the annexed area of Knikatnu Inc. land, see Figure 7. The Matanuska-Susitna Borough is the co-manager of the rail extension and the operator of Port MacKenzie. Port MacKenzie is a deep-water port with the capacity to handle bulk commodities and is closer to Interior Alaska than the Port of Anchorage. The rail extension will provide for more efficient movement of freight that is currently moved by a combination of rail and truck and has the potential to make the development of Interior Alaska's natural resources more economically feasible.

The Port MacKenzie Rail Extension route was developed from the 2003 Matanuska-Susitna Borough Rail Corridor Study, the 2007 Port MacKenzie Rail Corridor Study, and the 2011 Environmental Impact Statement which recommended the proposed route for the Rail Extension.

Construction of the Extension began in 2013 and in 2014 the embankment was complete and rail was installed for Section 6 of the Extension, from Miller's Reach Road to the ARRC mainline, see Figure 8. Segment 5 of the Rail Extension, beginning north of Muleshoe Lake and connecting to Segment 6 at Miller's Reach Road, passes Houston Lake Loop Trail, Horseshoe Lake and a private access road. This segment is fully funded and embankment construction is anticipated to be completed in the fall of 2015.

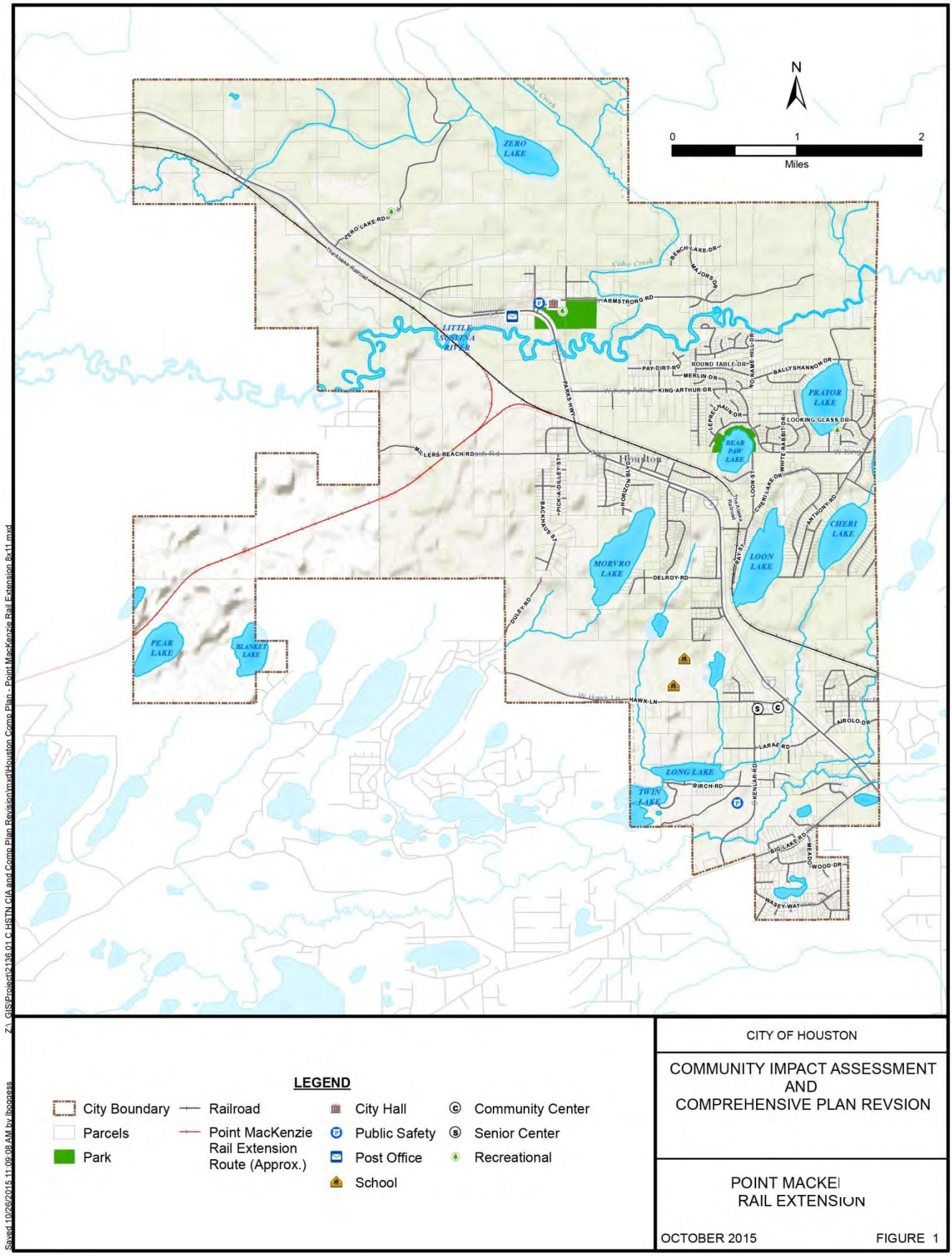


Figure 7. Port MacKenzie Rail Extension in Houston

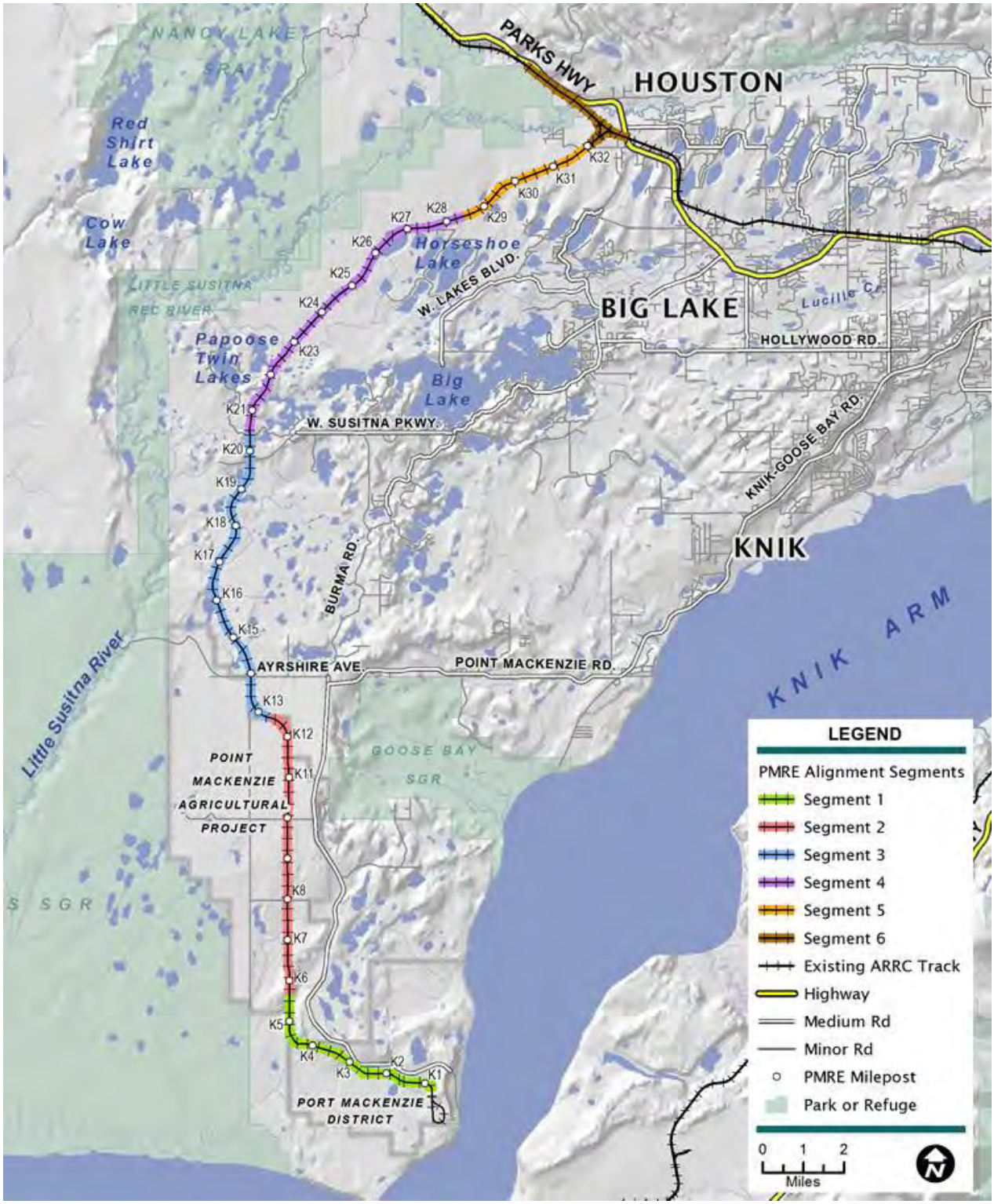


Figure 8. Port MacKenzie Rail Extension Project, sourced from portmacrail.com

3.4 Alternative 4: Port MacKenzie to Parks Highway Roadway Corridor

Introduction and Background

Port MacKenzie is a growing facility and economic asset to the Mat-Su Borough, Anchorage Municipality, and the state of Alaska. Surface transportation access is essential for the port's success and a rail line extension from Point MacKenzie to the Alaska Railroad's (ARR) mainline is being developed. The rail extension's terminus with the ARR mainline is in the City of Houston. A roadway corridor from Port MacKenzie to the Parks Highway has not yet been decided and the City of Houston's CIA will assess a roadway alternative included in past corridor studies which falls within city boundaries.

Sources of historical routes for the Port to Parks Roadway Alternatives include:

- Matanuska-Susitna Borough (MSB) Long Range Transportation Plan 2007 Update
- Port MacKenzie Rail Corridor Study (ARRC 2007)
- Matanuska- Susitna Borough Rail Corridor Study (Tryck Nyman Hayes, 2003)
- City of Houston Comprehensive Plan
- 2010 Big Lake Community Council Transportation Projects Location Map

The 2003 Rail Corridor Study analyzed corridors for a new roadway and railway. The study recommended Corridor 3 for the railway, which terminated in Willow, and Corridor 7 for the roadway, which terminated at the Parks Highway via South Big Lake Road, see Figure 9. For the description of the study area and route options analyzed, see pages 9-17 of the Matanuska-Susitna Borough Rail Corridor Study 2003, prepared by Tryck Nyman Hayes, Inc.

Corridor 3 (rail) to Willow was recommended for the Port MacKenzie Rail Extension but the alternatives developed in 2007 Rail Corridor Study recommended a Houston South route. The 2007 Houston South route is currently being developed as the ARRC Rail Extension. The Rail Extension has begun construction but some segments of the project have not been established due to pending easements and additional funding (see Figure 8).

In 2014 the community of Big Lake completed a Community Impact Assessment analyzing possible route alternatives for the Port to Parks roadway connection. The 2014 Big Lake Assessment routes are similar to the corridor alternatives studied in the Matanuska-Susitna Borough Rail Corridor Study (2003) that studied roadway and railway corridor alternatives. The Big Lake CIA chose an alternative which used Knik Goose Bay Road as a connecting point to the Parks Highway as the baseline alternative in its study for comparisons because that was the route previously studied by DOT&PF in 2007.

Figure 9. 2003 Rail Corridor Study Alternatives

Highway Corridors to be assessed in the City of Houston's CIA

The City of Houston's CIA will analyze a roadway corridor route, adjusted to known transportation projects, based on the 2003 Rail Corridor Study and the Port MacKenzie Rail Extension, see Figure 10. The Port to Parks roadway alternative also includes the elements shown on the Transportation Element Map in the City of Houston's Comprehensive Development Plan in 1982 (see Figure 11), excluding the Parks Highway Bypass. The Parks Highway Corridor Bypass shown in the 1982 Transportation Plan Map will not be included in the Port to Parks Roadway Corridor assessment, but will be a part of the Parks Highway Corridor Study that will occur in concurrence with this effort.

The City of Houston's CIA will assess a roadway route following the determined Port MacKenzie Rail Extension from Point MacKenzie to Houston. This route was reflected in Alternative 2 of the Big Lake CIA. The roadway alternative, which would parallel the rail line, incorporates the route elements shown in the City of Houston's 1982 Transportation Element Map. The road section is planned and modeled as a two-lane undivided road with a design speed of 65 mph in accordance with assumptions in the 2003 and 2007 planning studies. The City of Houston recently annexed 1,500 acres of Knikatnu. Inc. land into the City and zoned the properties to accommodate railroad reliant development at the request of the landowner. This roadway alternative would pass through that land. Houston could be impacted by the development of the rail extension and by the potential development of the roadway corridor which connects to the Parks Highway within its boundaries. As the ARRC constructs the rail extension, right-of-way will be established making a parallel roadway a logical choice for the Port MacKenzie to Parks Highway roadway corridor.

The City of Houston's CIA is not assessing the other corridors analyzed in the Big Lake CIA because they are outside of the determined study area and the impacts to wetlands and existing trail networks make them unreasonable for further study. The development of Alternative 7 of the 2003 Rail Corridor Study and comparable Alternative 3 of the Big Lake CIA, which uses Big Lake Road as the connection to the Parks Highway, would have little impacts upon the City of Houston as this roadway currently exists. The only anticipated change is the project travel on this roadway which will be included in this CIA through the traffic analysis.

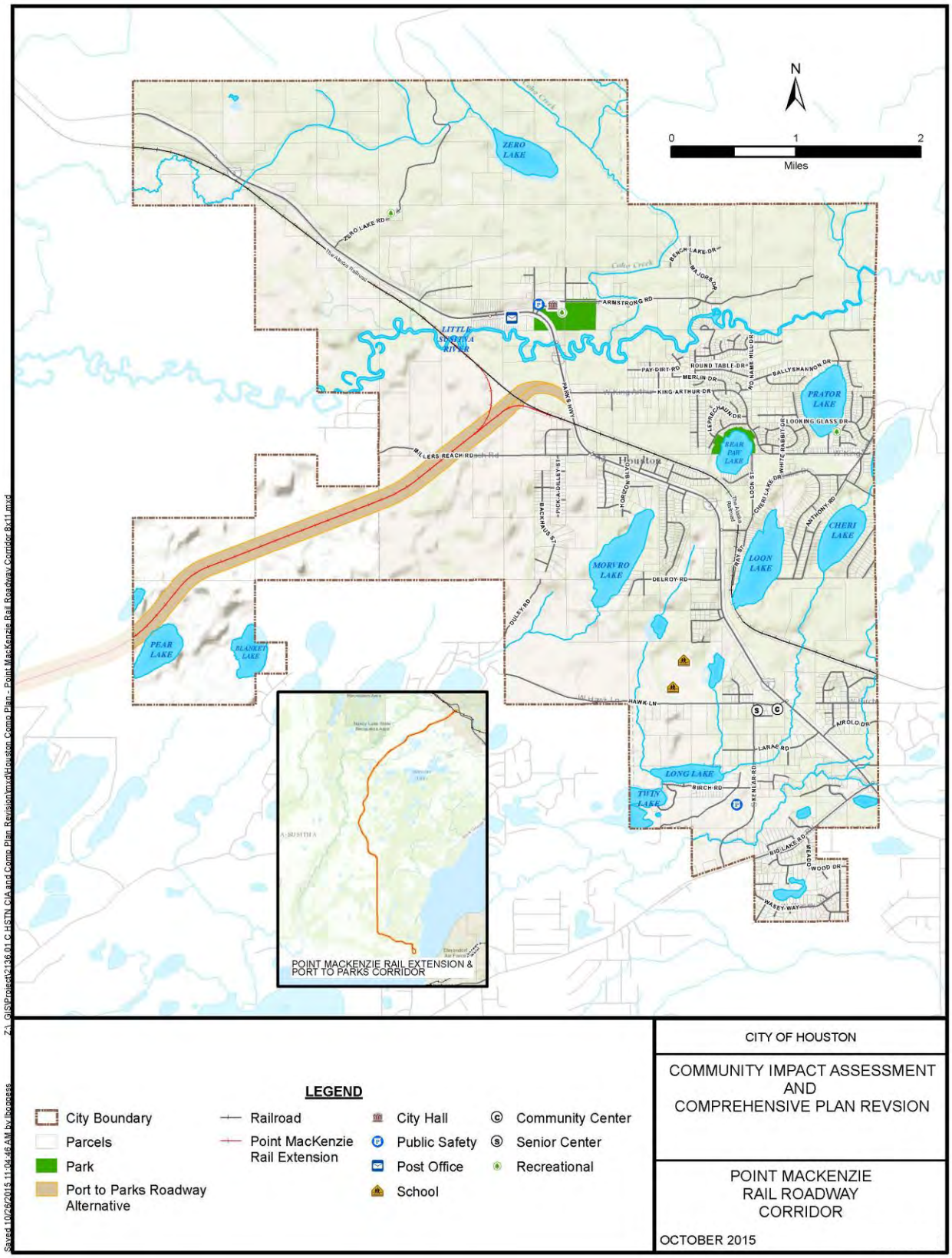


Figure 10. Port MacKenzie to Parks Highway Roadway Corridor

City of Houston 1982 Plan Map

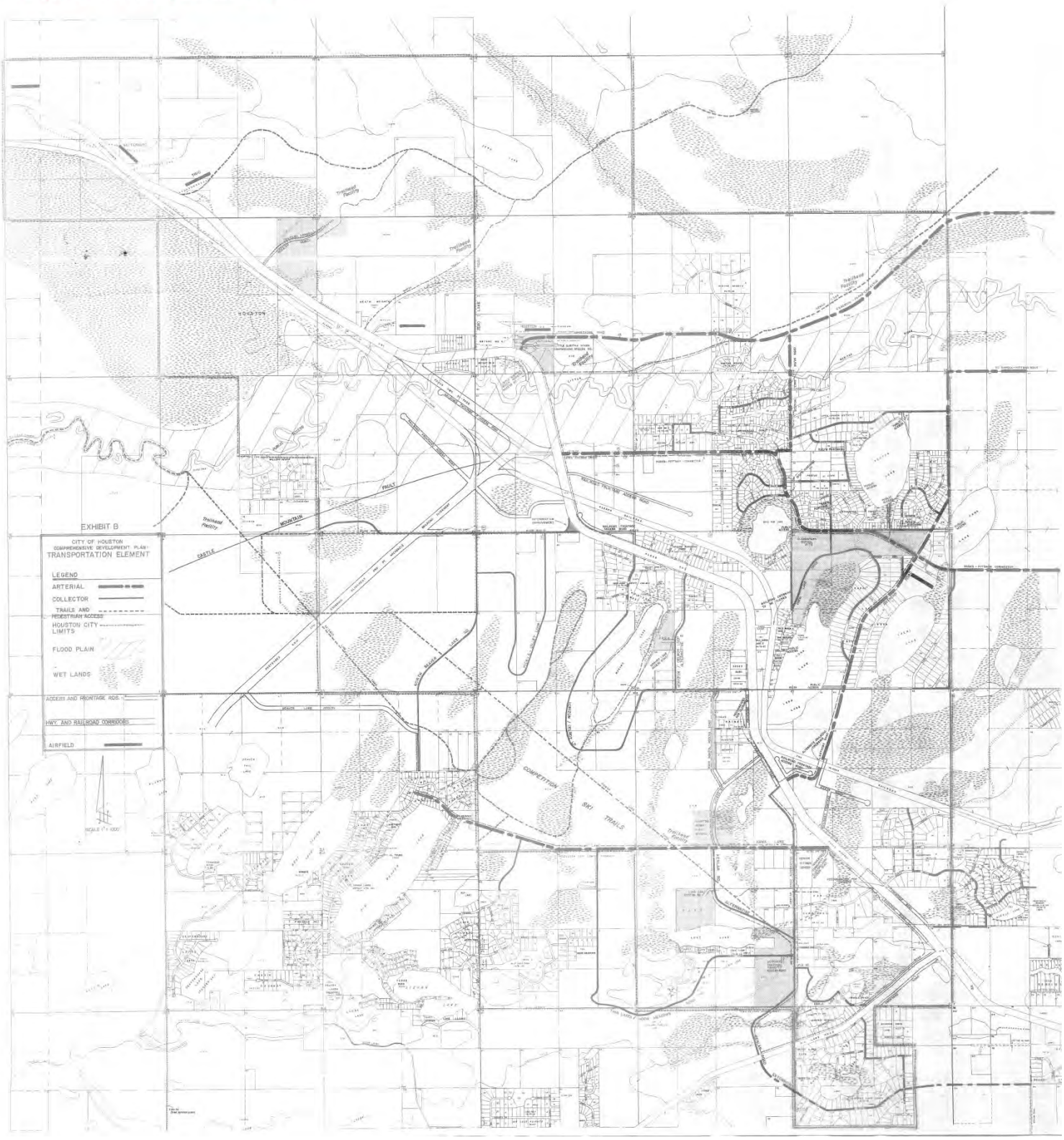


Figure 11. City of Houston 1982 Transportation Plan Map

4. ALTERNATIVES ANALYSIS METHODOLOGY

The Alternatives Analysis Section of this document will explore and document the relationship between the proposed transportation projects and the City of Houston. This section will identify and investigate impacts of the proposed transportation projects through ten different impact categories.

Community impact assessment, like the National Environmental Policy Act (NEPA) process, includes analysis of direct (temporary and long-term), indirect and cumulative impacts per 40 CFR §§ 1508.7 and 1508.8. The community impact assessment is an integral part of the transportation development process and combined with other relevant environmental studies help shape project decisions and outcomes under NEPA. Direct, indirect, and cumulative impacts will be addressed for each impact category.

4.1 The No Build Alternative

The positive and negative impacts of a no-build alternative have also been assessed and presented in this section. The No Build Alternative analyzed in this section is technically not feasible as portions of both the Parks Highway MP 44-52 Upgrade and the Port MacKenzie Rail Extension are in the final design or preliminary construction phase. However, for purposes of this Community Impact Assessment, a No Build scenario is evaluated for direct and indirect impacts to capture the types of positive and negative impacts that are incurred without action or development.

4.2 Impact Categories

Ten impact categories identified in the FHWA Community Impact Assessment reference guide (FFHWA 1996) were included in this study, see Table 5 below.

Table 5. Impact Categories Used in Alternatives Assessment

Social and Psychological Aspects	Mobility and Access
Physical Aspects	Provision of Public Services
Visual Environment	Safety
Land Use	Displacement
Economic Conditions	Environmental Justice

This CIA will also be assessing Traffic and Circulation impacts in the alternative assessments. Each impact category has been assessed for direct (temporary and long-term), indirect and cumulative impacts for each alternative including a no-build alternative. Both positive and negative impacts have been included. Community goals and values identified through public involvement and community outreach were considered whenever possible.

4.3 Assessing Impact Categories

A comprehensive approach identified and investigated anticipated project impacts. Relevant data gathered during the existing conditions identification process supports the analysis of the potential project impacts on the community of Houston. As the following sections outline, the potential impacts are based on the likelihood, severity, scale, and length of the impacts. Impact determinations are based on community input, best professional judgment, and by analyzing impacts upon other communities with similarities of size and/or location. Data gathering techniques included research, modeling, mapping, interviews with community stakeholders, public involvement, and household surveys. This methodology assessed the potential impacts for the three build and one no build alternatives to Houston. The FHWA guide provides the framework for identifying effects within each impact category.

1. Social and Psychological Aspects

Impacts examined include changes in population or the redistribution of the population, if the alternative would isolate certain people and if the project could cause a change in community values. This section also considers community cohesion and interaction and assess if the alternative would impact social relationships and patterns or alter the quality of life perceived by residents of the community.

2. Physical Aspects

Assessing impacts on physical aspects includes the examination of noise or vibration, walls, barriers or fencing, or other physical intrusions such as an increase in dust or odor that would result from the transportation alternative.

3. Visual Environment

Impacts are assessed for this category based on the aesthetics of the community and if there will be a change in the character of those aesthetics. It also considers the alternative's compatibility with community plans, goals and design standards.

4. Land Use

Impacts to land use include any changes in land use patterns such as loss of agricultural land use areas, changes in areas open for development and changes in density of an area. Land use assessment also considers the consistency of the alternative with local land use plans and zoning.

5. Economic Impacts Analysis

Impacts to economic conditions include the alternative's ability to encourage or discourage businesses to move to the area, the relocation of businesses within the community or to move outside the area, the visibility of businesses, alterations in the tax base or property values, and short term effects such as economic changers like job creation and loss during construction activities.

Working closely with the City of Houston Community Impact Assessment and Comprehensive Plan Revision Steering Committee, McDowell Group developed a list of contacts that represented a cross-section of business and community groups and interests related to Houston, including tribal organizations, nonprofits, business leaders, school district officials, utility representatives, and others and conducted interviews with those identified. *See Appendix B Economic Development Opportunities: Perspectives of Community Stakeholders*. An interview protocol was designed and adjusted to best capture the interests, experience, and expertise of individual stakeholders. They were asked about the potential of various infrastructure and business opportunities to create employment, generate city revenue, improve community assets, and how Houston's vision responds to growth and change.

Further analysis will be conducted as more information on conceptual projects and events become available.

6. Traffic and Circulation Impacts

Kinney Engineering projected average annual daily traffic (AADT) volumes for the horizon year 2035 using an area travel demand model (TDM), which includes all current planned and funded transportation projects. The models used in this analysis were developed by the Alaska Department of Transportation and Public Facilities (ADOT&PF) in conjunction with the Municipality of Anchorage (MOA) and the Matanuska Susitna Borough (MSB). The extents of the model include the entire network of the MSB and MOA from north of Willow all the way to Girdwood and east as far as the community of Sutton on the Glenn Highway. This model has been used to analyze the traffic impacts of the proposed Knik Arm bridge project as well as the Highway-to-Highway project in downtown Anchorage and various Wasilla Bypass alternative corridors.

The model generates traffic volumes based on socio-economic background data, such as population, income level, employment in various work sectors, and school enrollment, as well as a number of special generators such as hotels and airports. The results of the model were used as a baseline for recommendations and for judging project impacts. Since this baseline includes all current planned and funded transportation projects, excluding the Port MacKenzie to Parks Highway Roadway Corridor, the model's traffic volumes can be considered cumulative. *See Appendix C Traffic Impacts of Major Planning Projects*

7. Mobility and Access

Assessing impacts to mobility and access include examination of pedestrian and bicycle access and how the alternative affects non-motorized access to destinations such as businesses, public services and schools. It also considers shifts in traffic, public transportation, and vehicular access and parking.

8. Provision of Public Services

Impacts to the provision of public services include changes in the use of public facilities, displacement of public facilities, or the introduction to new facilities.

9. Traffic Safety

Impacts to safety are assessed by the ability of the proposed action to affect the likelihood of accidents for non-motorized and motorized travel, changes in the nature and frequency of crime in the community, as well as changes in emergency response time.

4.4 Public Involvement

Throughout the CIA and Comprehensive Plan Revision process, numerous outreach and public involvement activities were conducted. Feedback and input from Houston residents is essential for a complete comprehensive plan or CIA. Public Involvement techniques used to support the CIA and Comprehensive Plan Update include:

- Steering Committee – Community members serving as the planning advisory committee to the CIA and comprehensive plan revision process.
- Project Website
- E-newsletter updates
- Open Houses and Workshop
- Household Opinion Survey sent to all residents and property owners
- Stakeholder interviews

A CIA specific Open House was held on June 4th, 2015. Members of the public reviewed three graphics depicting the impacts identified in the CIA. Each graphic showed the impacts identified for the alternatives assessed for one of three impact categories: Transportation, Land Use, and Economic Impacts. Copies of each graphic were on tables for members of the public to write their feedback directly onto. Attendees were asked to provide the project team with any information they felt was missing from the impact analysis and if there were additional impacts they foresaw that were not shown on the maps (See Figures 13, 14, and 15).

After the CIA Open House, the project website and Steering Committee meetings continued to support the development of the final CIA and public feedback on the CIA was accepted at any time during the process. The summary of the CIA Open House can be found in Appendix A.

4.5 Regulatory Framework

Several laws, regulations and Executive Orders apply to the CIA process; these include the National Environmental Policy Act (NEPA), Title VI of the Civil Rights Act, Executive Order 12898 (Environmental Justice), Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, and The Americans with Disabilities Act (ADA) of 1990.

4.6 Direct Impacts (Temporary and Long-term)

NEPA defines direct effects as those caused by the action and occur at the same time and place. Direct impacts to each impact category will be assessed for each alternative including the no-

build alternative. Assessment will include both positive and negative temporary and long-term impacts.

4.7 Indirect Impacts

NEPA defines indirect effects as those caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth-related effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and other related effects.

4.8 Cumulative Impacts

Cumulative impacts are the impacts that result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of the agency or parties responsible for the action (40 CFR 1508.7). Cumulative impacts can result from individually minor but collectively substantial actions occurring over a period of time within the potentially affected area.

For the purpose of the cumulative impacts analysis, the following projects will be considered:

- Any identifiable existing infrastructure
- All projects in the final design or construction phase including:
    - Parks Highway MP 44-52 Upgrade (Lucus Road to Big Lake Road)
    - Port MacKenzie Rail Extension
- Projects in the conceptual or preliminary design phase:
    - Port MacKenzie to Parks Highway Roadway Corridor

5. ALTERNATIVES ANALYSIS:

This section summarized the socioeconomic impacts for the alternatives studied in the CIA.

5.1 Alternative 1: No Build Alternative

NEPA requires the comparison of impacts associated with proposed alternatives against anticipated effects of the No Build scenario. Thus the No Build Alternative serves as a baseline to compare the impacts of the proposed or anticipated alternatives. Although the No Build Alternative is not a possible option at this time with portions of proposed projects already underway, this brief impacts analysis provides an informative summary of baseline conditions and the often overlooked positive and negative impacts associated with no development.

Social and Psychological Aspects, Displacement, Environmental Justice

The No Build Alternative would have minimal impacts on the social and psychological aspects of the community structure. Without the construction of new transportation projects, the City of Houston would not incur the typical positive and negative impacts associated with such projects. Population would likely not increase as transportation in and out of the community would not be altered under the No-Build. Without a notable increase in population, community characteristics such as cohesion and interaction, social values, and quality of life would also remain the same. There would be no direct or indirect impacts to neighborhoods as the No Build Alternative does not require residential, business, or farm displacement. The No Build Alternative complies with executive order 12898 regarding Environmental Justice, as this alternative would not result in a disproportionately high and adverse human health and environmental effect on minority and low-income populations.

Physical Aspects

There would be no new impacts to the physical aspects of the community structure. No sound barriers or walls are currently needed within the community as there would be no elevation in noise sources or receivers. Other physical changes such as dust, odor, or shadow effect are not anticipated.

Visual Environment

There would be no new impacts to the visual and aesthetic character of the community.

Land Use

Under the No Build alternative, there would be no direct or indirect impacts to current land-use patterns such as loss of farmland or density of development. The community has been developing community goals to guide future planning efforts (see Community Profile, Physical and Social Community Characteristis). Although the No Build Alternative would not prohibit the achievement of Houston's Primary Goal, it would not facilitate a "moderate level of growth." As a result, the

No Build alternative does not comply with the community's established goals and therefore could have negative impacts on the community.

Economic Impacts Analysis

The No Build Alternative would have minimal to no impacts on the economic condition in the City of Houston. Assuming the steady population growth the City has been experiencing continues, proportional increases in the tax base are expected.

Mobility and Access

There would be no impact to mobility and access within the City of Houston. Pedestrian and bicycle access and facilities would not be improved upon or negatively affected by development. Public transportation services and facilities as well as vehicular access would not be affected under the No Build Alternative.

Traffic and Circulation Impacts

There would be minor impacts to traffic and circulation under the No Build alternative. There will be continued increase in traffic volumes in relation to the community's steady population increase. Traffic counts recorded by the Alaska Department of Transportation and Public Facilities (ADOT&PF) and the Matanuska Susitna Borough from 1997 to 2012 reflect a growth trend in traffic volumes of 2.6% along the Parks Highway from Pittman Road to Big Lake Road, a 2.7% increase in volume on the Parks Highway from Big lake Road to Little Susitna Bridge, and a 0.6% increase from Little Susitna Bridge to Nancy Lake Parkway along the Parks Highway. Under the No Build alternative these trends are expected to continue.

Provision of Public Services

The population of Houston is such that public facilities such as schools and recreational facilities are not currently overcrowded. The No Build alternative would therefore not have an effect on public facilities within the community.

Safety

The No Build alternative would not consider new transportation projects and the associated safety concerns with new road and railway corridors.

5.2 Alternative 2: Parks Highway MP 44-52 Upgrade

Social and Psychological Aspects, Displacement, Environmental Justice

Direct and Indirect Impacts
This alternative would have negligible impacts on the social and psychological aspects of the community structure as the proposed road upgrades would occur primarily outside Houston's city limits. This alternative improves an existing highway facility and is not anticipated to result in a notable increase in population, or community characteristics such as cohesion and interaction; social values, and quality of life are also not anticipated to be negatively impacted by this alternative. There would be no direct or indirect impacts to neighborhoods, as this alternative does not require residential, business, or farm displacement. This alternative is consistent with EO 12898 Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. As is documented in this section, this alternative would have no high and adverse impact to any impact category; therefore no disproportionately high and adverse human health or environmental effects on minority and low-income populations are expected. Potential impacts from the alternative would have the same social effects regardless of race or income level; therefore minority or low-income populations would not be disproportionately affected, see Community Profile, Population and Demographics.

Cumulative Impacts
This alternative would have no adverse cumulative social and psychological impacts or result in cumulative effects to minority or low-income populations when considering past, present, and reasonably foreseeable future actions.

Physical Aspects

Direct and Indirect Impacts
This alternative would have minimal impacts to the physical aspects of the community structure. A new traffic signal would be installed at the intersection of the Parks Highway with Big Lake Road which could have minor noise, dust, or odor associated with idling traffic at this intersection. The impacts are anticipated to be minor as the project will upgrade the condition of the roadway and make safety and traffic efficiency improvements without projected increases in traffic volumes.

Cumulative Impacts
The minor direct and indirect impacts would only result in temporary, highly localized effects to air quality and the noise environment of Houston; therefore the cumulative impacts resulting from previous, current, and other reasonably foreseeable projects would not be significant.

Visual Environment

Direct and Indirect Impacts
The Parks Highway MP 44-52 Upgrade would have minor impacts to the visual and aesthetic character of the community. The new signalized intersection would be the first within the community of Houston and some residents may find this addition an adverse visual effect. Although this alternative has the potential for minor visual effects, the location is near the city limits at a heavily trafficked intersection where such modern traffic signals are appropriate.

Cumulative Impacts
The incremental contribution to cumulative visual effects from this alternative would be negligible. The proposed new infrastructure would be consistent with the existing highway corridor and would not contribute to new effects when considering other past, present and reasonably foreseeable actions.

Land Use

Direct and Indirect Impacts
Proposed improvements associated with this project would result in minor land use impacts. The intersection improvements will require temporary and permanent right-of-way acquisitions and/or easements from private property owners to accommodate cut/fill slopes. Changes at the intersection may require the reconfiguration and possible realignment of parking and vehicular access on adjacent properties. Direct or indirect impacts to farmland or density of development are not anticipated. This alternative is consistent with the community's goals and plans.

Members of the public in attendance at the CIA Open House concurred with the anticipated land use impacts.

Cumulative Impacts
The Parks Highway MP 44-52 Upgrade would have minor cumulative impacts on land use compatibility when considering past, present, and reasonably foreseeable future actions.

Economic Impacts Analysis

Direct and Indirect Impacts
The Parks Highway Upgrade will have minimal impacts on the economic conditions in Houston. With the Parks Highway bisecting the City of Houston, its effect was a common theme heard throughout stakeholder interviews; most residents view the Parks Highway as a potential economic benefit, even with growing congestion. Significant increases in traffic in recent years, resulting in longer commute times to Wasilla or Anchorage, was noted by a few residents. This alternative is designed to alleviate some of that congestion. However, even with the economic potential residents see the Parks Highway having and the proposed traffic improvements to MP 44-52, there are no current plans for development along this section of the Parks Highway, resulting in minimal impacts to the existing conditions. *See Appendix B Economic Development Opportunities: Perspectives of Community Stakeholders.*

Cumulative Impacts
This alternative will have minor direct and indirect impacts for Houston's economic condition, and there will be minor cumulative impacts considering the historic and current trends and reasonably foreseeable future actions. If speculated opportunities for development evolve into more concrete plans, the economic analysis will be updated.

Mobility and Access

Direct and Indirect Impacts
There would be negligible impacts to mobility and access within the City of Houston. Pedestrian and bicycle access and facilities would not be improved upon or negatively affected by

development. However, a positive impact on mobility and access may be realized after construction of the Big Lake Road and Parks Highway intersection and associated pedestrian island and crosswalk. Potential impacts to vehicular traffic and safety for non-motorists is expanded upon below (Traffic and Circulation Impacts). Public transportation services and facilities as well as vehicular access would not be affected under this alternative.

Cumulative Impacts

The Parks Highway MP 44-52 Upgrade would have no cumulative impacts on mobility and access within the community of Houston when considering past, present, and reasonably foreseeable future actions.

Traffic and Circulation Impacts

Direct and Indirect Impacts

The Parks Highway MP 44-52 Upgrade will alleviate congestion by increasing estimated segment Average Annual Daily Traffic (AADT) capacity, resulting in faster and more consistent trips between Houston and the city of Wasilla. This could impact economic development in both communities. Additionally, the project would include frontage roads and additional intersection signals, which would also affect economic development along the corridor. Due to the scheduled completion date of this project, it is already included in the base traffic volume forecast for the horizon year 2035; *see Appendix C Traffic Impacts of Major Planning Projects.*

Cumulative Impacts

Likely effects of this alternative include an increase in the number of recreational trips to the City of Houston from Wasilla and surrounding communities; however, local traffic growth as a result of population increase is expected to continue at a steady pace. Increases in population growth and traffic through Houston may impact economic development and land use.

The Travel Demand Model projected traffic volumes for cumulative impacts as it included currently planned and future projects, including this alternative. One key impact and concern which arose from this analysis is the potential traffic volumes between Big Lake Road and King Arthur Road for the Future Planning year of 2035. The travel demand model used in this analysis indicates that the volumes north of Big Lake will grow to about 18,500 AADT in the future planning year. Currently these road segments carry 7,000 AADT. This increase is partial a result of the inclusion of a constructed Knik Arm Bridge and the Wasilla Bypass Road alternatives which would pull additional traffic from Anchorage and Wasilla to attractions in Houston and north on the Parks.

The approximate capacity of the Parks Highway through Houston is 16,500 AADT to achieve a level of service of "D", which is the limit of what is recommended by the American Association of State Highway and Transportation Officials. The projected volumes would be at or above this approximate capacity threshold, which suggests that if growth occurs in accordance with the TDM it will likely result in congestion on the Parks Highway between Big Lake Road and King Arthur Road.

Note that this scenario is currently taking place further east on the Parks Highway between Vine Street and Pittman Road, where the current road design and traffic volumes are similar to what is projected in 2035 between Big Lake Road and King Arthur. This indicates that if traffic growth

matches the modeled trends, there may possibly be issues of congestion and severe crashes similar to what is currently being seen in the Parks Highway MP 44-52 4-lane divided upgrade project. *See Appendix C Traffic Impacts of Major Planning Projects*

Provision of Public Services

Direct and Indirect Impacts
Public facilities such as schools and recreational facilities, are not currently at capacity or over capacity given the relatively low population of Houston. There are currently no public water or wastewater services in Houston and the Parks Highway Upgrade does not impact the demand for public utility services. The construction of the proposed new Fire Station 9-2 will not be impacted by this transportation alternative. The Parks Highway Upgrade would therefore not have an effect on public facility density within the community.

Cumulative Impacts
This alternative would have no cumulative impacts on public facilities within the community of Houston when considering past, present, and reasonably foreseeable future actions.

Safety

Direct and Indirect Impacts
The safety improvements associated with this alternative along with the new traffic signal and crossing facilities would have a direct positive impact on the safety of pedestrians, bicycles, and motorized traffic. With proper signal timing, emergency vehicles passing through this intersection may be able to respond quicker to emergencies resulting in additional positive impacts.

Cumulative Impacts
This alternative would not contribute cumulatively to safety impacts within the community of Houston when considering past, present, and reasonably foreseeable future actions.

5.3 Alternative 3: Port MacKenzie Rail Extension

Social and Psychological Aspects, Displacement, Environmental Justice

Direct and Indirect Impacts

This alternative would have minor impacts on the social and psychological aspects of the community structure as the proposed railroad extension would traverse through previously undeveloped areas between two existing residential neighborhoods. The railroad addition could affect community characteristics such as cohesion and interaction, social values, and quality of life for rural residences in the vicinity. Direct impacts to neighborhoods are anticipated to be minor as this alternative does not require residential or business relocations within Houston's city limits. Displacement of farm land required for construction of this alternative are also considered to be minor given the availability of land allowing agricultural development outside of this project area, yet still within the community of Houston.

This alternative is consistent with Executive Order (EO) 12898 Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. As is documented in this section, this alternative would have no high and adverse impact to any impact category; therefore no disproportionately high and adverse human health or environmental effects on minority and low-income populations are expected. Potential impacts from the alternative would have the same social effects regardless of race or income level; therefore, minority or low-income populations would not be disproportionately affected (refer to Population and Demographics Section).

Cumulative Impacts

For the City of Houston, the railroad extension would have a minor contribution to cumulative social and psychological impacts based on past, present, and reasonably foreseeable actions. This alternative would have no adverse cumulative effects to minority or low-income populations when considering past, present, and reasonably foreseeable future actions.

Physical Aspects

Direct and Indirect Impacts

This alternative would result in minor impacts to the physical aspects of the community. This alternative would have minor long and short-term noise and air quality (dust) impacts associated with increased train traffic at this new intersection. A sound barrier is not proposed as part of the railway connection as the noise analysis prepared to support the project specific EIS determined that noise and vibration impacts were not substantial enough to necessitate mitigation in the form of noise walls/barriers (EIS Source). No other physical intrusions or shadowing effects are anticipated. Temporary noise impacts during construction would be associated with the use of heavy construction equipment and potentially due to pile driving during the new rail bridge construction.

Cumulative Impacts

The minor direct and indirect impacts would not result in anything other than temporary, highly localized effects to air quality and the noise environment of Houston but would not constitute physical alterations to the community; therefore the cumulative impacts resulting from previous, current, and other reasonably foreseeable projects would not be significant.

Visual Environment

Direct and Indirect Impacts
This alternative would result in minor impacts to the visual environment of the community. The construction of a new rail track intersection within the city limits would constitute a visual change but the connection is to an existing rail track and would be compatible with current transportation based land use. This alternative does not include construction of any associated appurtenances, whistle stop locations, or railroad support facilities. The new railway bridge over the Little Susitna River has been constructed adjacent to the existing railway bridge to minimize visual impacts. This alternative would involve construction within previously undeveloped areas and could have minor visual impacts to existing recreational users (hikers, hunters, snow machining, etc.) at grade-separated crossings.

Cumulative Impacts
The minor or negligible direct and indirect impacts incurred by this project, would not incrementally contribute to cumulative visual effects when considering other past, present and reasonably foreseeable projects.

Land Use

The Rail Extension will be built on land that is currently unclassified vacant land near the connection to the ARRC mainline, zoned as RA-5 Low Density Residential Agricultural District, and will go through a privately owned vacant R-1 Single-Family and Two-family Residential District (Low Density) area before continuing south into Knikatnu, Inc. land annexed into the City of Houston.

Direct and Indirect Impacts
The 2011 EIS evaluated anticipated land use impacts for a number of potential alternative route and alignment combinations. A five mile radius from the proposed project Right-of-Way was evaluated for consistency with existing land use objectives. The segments passing through Houston city limits may incur the following land use impacts: "The need to acquire land within the proposed rail line ROW from existing land owners; the conversion of lands within the rail line ROW, including agricultural lands, to rail line use; and the restriction of access within the ROW without an ARRC entry permit." (Cite EIS). Given the small number of residential displacements, difficulty in identifying and providing comparable nearby housing would not be expected. In accordance with Section 4(f) of the Department of Transportation Act, ROW acquisitions and/or easements would not occur on any 4(f) resources identified within Houston (EIS). These resources would include public parks, recreational areas, wildlife and waterfowl refuges, or public and private historical sites. Construction of this alignment would provide opportunity for future moderate growth and economic development for the City and is therefore compatible with the community goals outlined in section 2.5 *Physical and Social Community Characteristics* as part of Houston's Comprehensive Plan Update. This alternative would incur moderate impacts to land use as most of the acreage required for this project will need to be acquired and converted.

Cumulative Impacts
The railroad extension would have a moderate contribution to cumulative land use impacts based on past, present, and reasonably foreseeable actions. Construction of this railroad extension directly contributes to the potential impacts associated with the Port MacKenzie to Parks Highway

roadway corridor (Alternative 4). Although the roadway corridor is still conceptual from a design perspective, the establishment and construction a road from the Port to the Parks has been included in community and borough planning documents for decades and would have potential impacts on land use (see section 3.4 Alternative 4: Port MacKenzie to Parks Highway Roadway Corridor).

Economic Impacts Analysis

Direct and Indirect Impacts

The Rail Extension is viewed by many in the community as an opportunity for Houston. This extension could decrease transportation costs between Southcentral and Interior Alaska, in turn encouraging development of natural resources and similar activities in the area. A 2007 report commissioned by the Mat-Su Borough that examined the benefits of a similar rail extension concluded:

The quantifiable benefits from the Port MacKenzie to Willow rail link with respect to resource development can be divided into the following two major categories:

- *Benefits in the form of rail freight savings derived from the reduced haulage distances from natural resource production sites to tidewater at Port MacKenzie relative to the Ports of Anchorage, Whittier, and Seward.*
- *Benefits to the Rail Belt communities in the form of enhanced economic diversification and economic development as a consequent of increases in natural resource production.*

Interviewees for this CIA study saw great potential in having the connection between the new and existing rail line located in Houston as the extension is viewed as a factor increasing the likelihood of manufacturing, resource export, or transportation activity taking place in Houston.

While many interviewees were optimistic about the long-term effects of the rail extension, ARRC indicated there are few marketable ideas in the short to near-term that would warrant additional investment. "There really needs to be a reason for us to build anything beyond just the new tracks," an ARRC representative said. "If it is clear a loading facility or other infrastructure is needed in the future, we will deal with that then. Until that happens, we see minimal impact on Houston and its economy." *See Appendix B Economic Development Opportunities: Perspectives of Community Stakeholders.*

Cumulative Impacts

This alternative would have minor impacts to the economic conditions in Houston given the past, present, and reasonably foreseeable future actions. If private sector development which would use the rail line, such as freight loading-off loading facility, expressed intent to establish in Houston, then cumulative economic impacts could be analyzed further.

At the public open house, there was discussion on the potential development that could occur around the new Port-MacKenzie Rail Extension, including zoinng parts of the annexed area for industrial development and Knikatnu Inc developing an LED Assembly Facility south of Millers Reach Road. This type of activitiy would prompt more long-term economic development. Based on discussions at the public meeting and the conducted interviews, the potential future economic impacts driven by the Rail Extension would allign with the goals and opinions of the community, so long as this development allows the rest of the community to retain its rural residential character.

Mobility and Access

Direct and Indirect Impacts

Mobility and access would remain largely unchanged as a result of the railroad extension. There are no proposed pedestrian, commuter, or recreational aspects to this alternative; as such, potential positive impacts to public transportation and non-motorist access are not anticipated. As no support facilities are proposed, there are no anticipated parking impacts. Grade-separated crossings are proposed as needed to avoid negative impacts to vehicular access through Houston. ARRC does not propose to provide crossings for all unofficial trails and therefore the rail line would block some trails and associated recreational access to these areas. Anticipated adverse impacts to mobility and access are anticipated to be minor.

Cumulative Impacts

This alternative would have only minor direct and/or indirect land use impacts and would therefore not contribute to cumulative impacts on mobility and access within the community of Houston when considering past, present, and reasonably foreseeable future actions.

Traffic and Circulation Impacts

Direct and Indirect Impacts

The Alaska Railroad does not currently have any plans to construct facilities or base any operations at the new railroad junction In Houston. Therefore direct socioeconomic impacts and traffic impacts due to the rail line project alone are considered to be minimal and traffic and circulation would remain largely unchanged as a result of the Rail Extension. However, the ARR has expressed a willingness to accommodate loading facilities at the junction for private development. This may have a considerable impact on the percentage of trucks and freight in the local road network. Private development to support this type of activity is not foreseen in the near future. *See Appendix C Traffic Impacts of Major Planning Projects.* If economic conditions were to change, the rail junction could be considered for a loading site for material currently being driven by truck north from Big Lake to Fairbanks. Therefore, trips that currently exist from the travel lanes on the Parks Highway and Big Lake Road would now be turning in and out of a railroad access point at or near Millers Reach Road. Accommodations for these truck traffic maneuvers would include turn lane construction and providing adequate sight distance for trucks leaving the access road.

Cumulative Impacts

This alternative would have only minor impacts to traffic and circulation considering the past, present, and reasonably foreseeable future actions. This transportation alternative was included in the TDM for the horizon year 2035 and so is reflected in the baseline traffic volume projection discussed in the Alternative 2: Parks Highway MP 44-52 Upgrade Traffic and Circulation analysis. *See Appendix B Traffic Impacts of Major Planning Projects.* If the ARR Extension were to serve loading facilities within Houston, land use, economic development, and the transportation network may be affected.

Provision of Public Services

Direct and Indirect Impacts

Public facilities such as schools and recreational facilities are not currently at capacity or over capacity given the relatively low population of Houston. There are currently no public water or wastewater facilities in Houston and no public facilities are proposed for construction within Houston as part of the railway extension; therefore, an effect on public facility density within the community is not expected.

Cumulative Impacts

This alternative would have no cumulative impacts on public facilities within the community of Houston when considering past, present, and reasonably foreseeable future actions.

Safety

Direct and Indirect Impacts

Safety measures for this alternative have been incorporated into the design of the rail alignment and road/trail intersection lighting and signals. Most importantly, grade-separated crossings have been designed for roads and designated multi-use trails that intersect the new alignment. This alternative would have no direct or indirect impacts to criminal activity or emergency response within the community.

Cumulative Impacts

This alternative would not contribute cumulatively to safety impacts within the community of Houston when considering past, present, and reasonably foreseeable future actions.

5.4 Alternative 4: Port Mackenzie to Parks Highway Roadway Corridor

Social and Psychological Aspects, Displacement, Environmental Justice

Direct and Indirect Impacts
This alternative would have minor impacts on the social and psychological aspects of the community structure similar to the proposed railroad extension (Alternative 2). However, social impacts associated with construction of a new transportation corridor through previously undeveloped areas between two existing residential neighborhoods would have already been incurred under Alternative 2. Construction of the roadway corridor within the ARRC ROW would substantially reduce the degree of adverse effect on the community of Houston. The expansion of the transportation corridor to include a roadway within the vicinity of these rural residences could affect community characteristics such as cohesion and interaction, social values, and quality of life. Direct impacts to neighborhoods are anticipated to be minor as this alternative does not require residential or business relocations within Houston's city limits and construction would occur within an existing transportation corridor. Additional displacement of farm land required is not anticipated.

This alternative is consistent with EO 12898 Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. As is documented in this section, this alternative would have no high and adverse impact to any impact category; therefore no disproportionately high and adverse human health or environmental effect on minority and low-income populations are to be expected. Potential impacts from the alternative would have the same social effects regardless of race or income level; therefore minority or low-income populations would not be disproportionately affected (refer to Population and Demographics Section).

Cumulative Impacts
Construction of this railroad extension directly contributes to the potential impacts associated with the railroad corridor (Alternative 2). For this alternative, the railroad extension would contribute to minor cumulative social and psychological impacts based on past, present, and reasonably foreseeable actions.

This alternative would have no adverse cumulative effects to minority or low-income populations when considering past, present, and reasonably foreseeable future actions.

Physical Aspects

Direct and Indirect Impacts
This alternative would result in minor impacts to the physical character of the community associated with increased vehicular traffic along the road corridor. A sound barrier will likely not be proposed to mitigate the road corridor noise impacts as it was not required for the railroad extension. No other physical intrusions or shadowing effects would result from construction of the road corridor itself. Temporary and minor noise impacts associated with the use of heavy equipment and air quality (dust) impacts during construction are anticipated. Assuming the road will be paved, no long-term air-quality issues associated with dust are expected and no other physical intrusions have been identified.

Cumulative Impacts

The anticipated minor impacts could contribute to minor cumulative impacts resulting from previous, current, and other reasonably foreseeable projects. Construction of the roadway corridor would change the physical aspect of this transportation corridor when considering the past construction of the railroad extension and the likely development of commercial, residential, industrial or recreational facilities along the corridor.

Visual Environment

Direct and Indirect Impacts

This alternative would result in minor impacts to the visual environment of the community. The construction of a road paralleling the new rail track would constitute a visual change, but the initial construction of the rail track would incur a majority of these impacts to the visual setting. This alternative does not include construction of any associated appurtenances, whistle stop locations, or railroad support facilities or any other secondary development. The new road corridor is proposed within the ARR ROW to minimize social and environmental impacts in general, including visual. This alternative would involve construction within previously undeveloped areas and could have minor visual impacts to recreational users (hikers, hunters, snow machining, etc.).

Cumulative Impacts

The minor direct and indirect impacts incurred by this project could have a minor contribution to cumulative visual effects when considering other past, present and reasonably foreseeable projects. Construction of this roadway corridor would further change the visual setting of this previously undeveloped area of Houston. The potential for additional development is possible, but is not considered in this cumulative impacts assessment as there are currently no funded projects of this nature.

Land Use

Direct and Indirect Impacts

Anticipated land use impacts for a number of potential railroad alternative route and alignment combinations were identified in the Rail Extension's environmental document. The adverse impacts that were identified in the EIS would be directly related to construction of the railroad and acquiring the necessary ROW. As a result, associated direct and indirect land use impacts resulting from construction of the roadway within the ARR ROW would result in negligible impacts. Construction of this roadway would provide opportunity for future moderate growth and economic development for the City and is therefore compatible with the community goals, outlined in section 2.5 *Physical and Social Community Characteristics*, as part of Houston's Comprehensive Plan Update. The potential for moderate growth and development was reviewed by members of the public at the CIA Open House and encouraged the potential controlled moderate growth.

Cumulative Impacts

Construction of this railroad corridor directly contributes to the anticipated impacts incurred by the railroad extension project (Alternative 2). This alternative would incur minor cumulative impacts to land use when considering past, present, and reasonably foreseeable future.

Economic Impacts Analysis

Direct and Indirect Impacts

The establishment of a roadway from Port MacKenzie to the Parks Highway in Houston would have minor impacts on the economic conditions in Houston. While more traffic may be traveling through the community, current lacks of services and amenities such as a gas station, grocery store, or other attractions limit the additional traffic's contribution to the local economy.

Cumulative Impacts

Because this alternative would only have minor direct and indirect impacts, cumulative impacts on the City's economic condition would also be minimal considering the past, present, and reasonably foreseeable future actions within Houston. If plans for development (including natural resource development, natural gas expansion or transportation, or business development) became more concrete initiatives, then further economic analysis could be conducted.

Mobility and Access

Direct and Indirect Impacts

The potential impacts to mobility and non-motorized access are unknown at this time. There is no current project design and the inclusion of multi-use pathways or trail systems is not currently known. Construction of the roadway corridor would provide additional access to Port MacKenzie facilities and thus could have a positive impact on commute traffic and possibly public transportation if such facilities such as bus service are provided for during the design. As no support facilities are proposed, there are no anticipated parking impacts.

Cumulative Impacts

This alternative would have only minor direct and/or indirect impacts and would therefore not contribute to cumulative impacts on mobility and access within the community of Houston when considering past, present, and reasonably foreseeable future actions.

Traffic and Circulation Impacts

Direct and Indirect Impacts

The traffic impacts would not be highly significant when compared to the current system. The existing distance from Millers Reach Road to the intersection of Purinton and Burma is approximately 15 miles via Big Lake Road. The alternative corridor between these same two points would be approximately 16 miles. Therefore, the benefit for travel would be exclusively based on the fact that the new route would have a design speed of 65 mph, compared to Big Lake Road which is currently posted at 55 mph, and the reduced turbulence of adjacent access along Big Lake Road and the avoidance of existing and future traffic signals or roundabouts in Big Lake. See Figure 12 below.

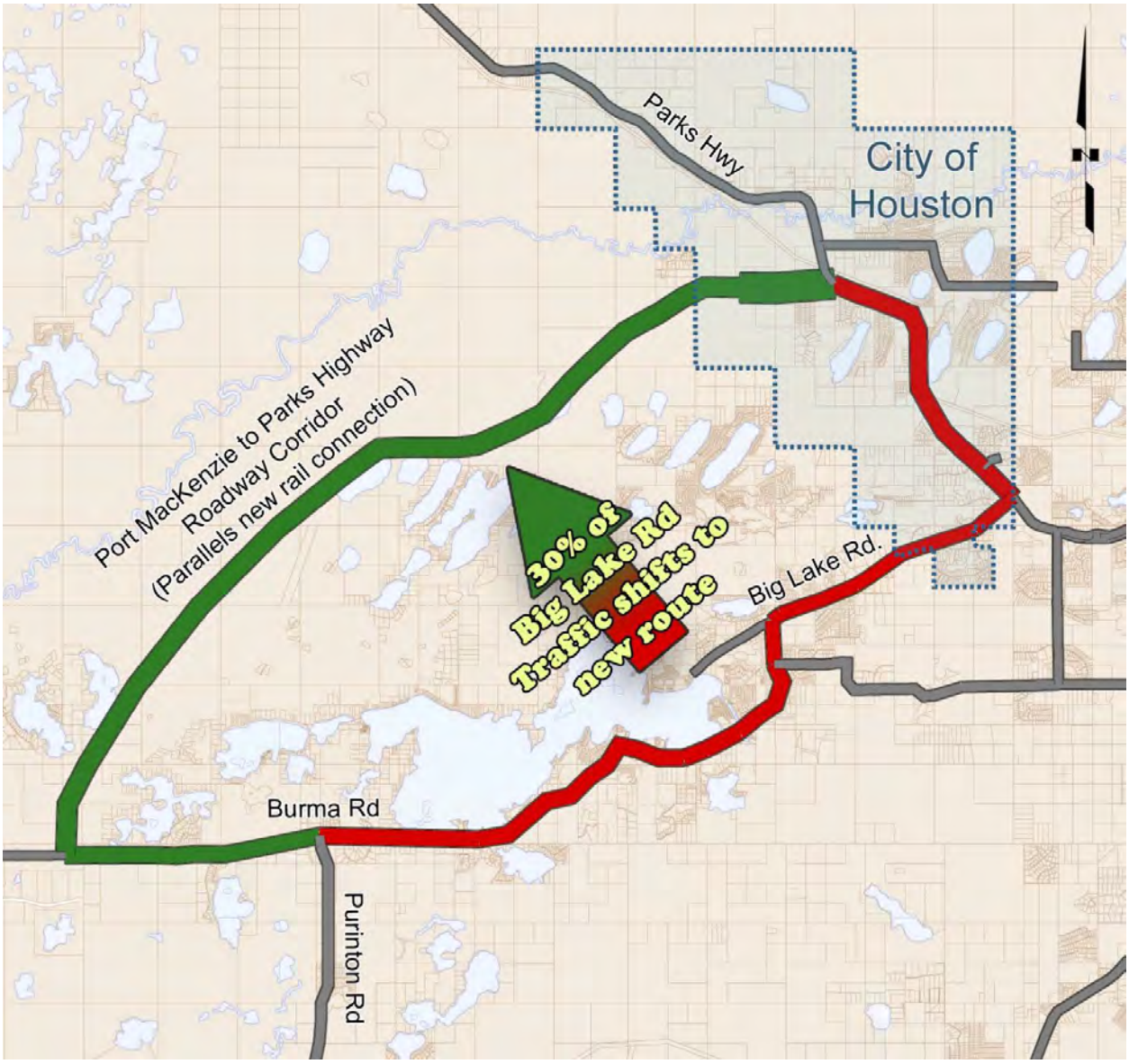


Figure 12. Port MacKenzie to Parks Highway Roadway Corridor Traffic Shift

Likely effects of a new and improved route between Port MacKenzie and Houston include a shift of traffic volumes from Big Lake to Houston of about 4,000 vehicles per day, which is approximately 30% of the daily traffic on Big Lake Road. A large percentage of the heavy 10 vehicle trips on Big Lake Road would be included in this shifted traffic, particularly after the construction of the proposed Knik Arm Bridge. The decrease in travel time using the new route, if the travel speed is 65 mph, is approximately 5 minutes, considering side street friction and intersection delay due to signals and roundabouts. *See Appendix C Traffic Impacts of Major Planning Projects*

Cumulative Impacts
This alternative could result in changes in economic development and land use based on the projected travel along the corridor. Increased traffic volumes through Houston may allow for greater interest in development along the corridor and Parks Highway.

Provision of Public Services

Direct and Indirect Impacts
Public facilities such as schools and recreational facilities are not currently at capacity or over capacity given the relatively low population of Houston. The change in demand for additional public services is minimal or null as a result of the roadway corridor. There is no existing public water or wastewater service in Houston and no public facilities are proposed for construction within Houston as part of this alternative; therefore no effect on public facility density within the community is anticipated. At this point, the roadway corridor would be providing access to industrial facilities at Port MacKenzie; therefore, impacts to public facilities in Houston are not anticipated.

Cumulative Impacts
This alternative would have no cumulative impacts on public facilities within the community of Houston when considering past, present, and reasonably foreseeable future actions.

Safety

Direct and Indirect Impacts
Impacts to transportation safety for this alternative are anticipated to be minor. Although safety measures have been incorporated into the design of the railroad corridor (i.e. road/trail crossing indicators and grade-separated crossings), the potential conflict between roadway users and the railroad is possible. Emergency vehicles requiring access to Port MacKenzie may be able to respond quicker to emergencies resulting in additional positive impacts. This alternative is not expected to have any direct or indirect impacts to criminal activity within the community.

Cumulative Impacts
This alternative would not contribute cumulatively to safety impacts within the community of Houston when considering past, present, and reasonably foreseeable future actions.

6. Opportunities, Limitations and Mitigations Identified:

The City of Houston's rural setting and character is perceived as both an opportunity and a limitation when considering future development of the community. There is ample land availability that could support industrial, commercial, and residential of development. The existing Parks Highway, which bisects the community, as well as the construction of the Rail Extension could further encourage development in Houston. The Extension is viewed as a catalyst for increasing the likelihood of manufacturing, mineral export, or transportation activity taking place in Houston due to its location between the Interior and Southcentral Alaska (see Appendix B). In the short-term, though, the lack of any clear reason or need for Alaska Railroad to invest in infrastructure other than the tracks, such as a loading facility which would support the transportation of any natural resource production, will limit any such development.

Port MacKenzie currently offers minimal infrastructure and associated economic activity, but combined with investment in rail access, a possible gas pipeline, and additional private investment, the Port is viewed as a factor positively impacting the entire region. There is opportunity for the City of Houston to capitalize on growing activity at Port MacKenzie. Possibilities include the potential to host an export facility for coal, gravel, timber, and other natural resources or serve as a staging area for movement of construction materials for oil and natural gas or other major infrastructure projects. These opportunities could become more likely with the completion of the Rail Extension or the construction of a Port MacKenzie to Parks Highway Roadway Corridor in Houston. The key for activities like this to develop in Houston will be action initiation and investment by the private sector.

The increasing traffic volumes on the Parks Highway may provide an opportunity for development along the Highway corridor and if the Port to Parks Roadway Corridor were to be constructed in Houston, use of the Parks Highway would continue to increase. The tourism industry in Houston could benefit from increases in traffic and capitalize on the Little Susitna River which runs through the Houston City limits, as well as summer use of the lakes for fishing and recreation and the multi-use trails in the winter. Two limiting factors for growth of tourism around the Little Susitna River, however, are access and reduced salmon runs. There currently is no formal boat launch and so boaters use a number of ad-hoc launches along the Parks Highway. Continuing reductions in salmon numbers limits the amount of potential tourism by fishermen, who are the main users of the Little Susitna River.

While land may be plentiful and potential for growth seemingly high, a limitation in development is the low penetration of utilities throughout the community. While there are opportunities to develop relatively large lots that offer privacy, the cost of extending natural gas and electricity utilities can be prohibitive. Population density is the most significant factor reducing availability of natural gas in Houston, especially for residential customers. For this reason, natural gas is unavailable to many residential homes, underlying the reliance on expensive heating oil or wood-burning stoves, which could continue to limit development.

The City of Houston could consider a few approaches if the expansion of utilities became a community priority, including (See Appendix B, Economic Opportunities Report):

- Local Taxation
- Bonding
- State Funding
- Partnering with a Native Organization
- Improvement Districts

Opportunities for new businesses to develop in Houston are supported by the need for amenities such as a gas station or grocery store within the community, the availability of land, increasing traffic along the Parks Highway, and the Park Highway upgrades. The limitations for commercial development reflect similar limitations encountered by industrial and residential development; limited access to utilities, high energy costs, and a small low-density population. However, with the Parks Highway MP 44-52 Upgrade improving access and safety at the intersection of Big Lake Road and the Parks Highway, the potential for new businesses to develop around that location might increase.

During discussions with stakeholders in April, 2015, a number of individuals noted the possibility of Houston becoming a center for both retail marijuana sales and wholesale growing and processing facilities. With the passage of a ballot measure in the fall of 2014 legalizing marijuana in the state and municipalities like Anchorage and Wasilla starting to restrict the use and sale of marijuana, stakeholders thought Houston would benefit if it could position itself as the market for marijuana. While some viewed marijuana as a benefit to the community, a small number of interviewees disapproved of the encouragement of legal marijuana-related activities in Houston. Pointing to the possible social costs of drug use, these stakeholders said they would support restrictions on the local sale and growing of marijuana. On October 6, 2015 Houston voters failed a measure to prohibit commercial marijuana facilities.

When any new development or major action is taken within the City of Houston, the consideration of the action's consistency with community character is essential. The City's Comprehensive Plan outlines goals and policies which are designed to maintain community character and guide desired development with the City. Mitigation between economic development and the maintenance of community character as defined by the policies and goals in the Comprehensive Plan will be essential for successful development within the City of Houston.

7. SUMMARY:

The CIA assessed potential impacts three transportation projects could have on the City of Houston. The Parks Highway MP 44-52 Upgrade will result in minimal short-term direct impacts to the city. Changes in intersection alignment, property access, and vehicle and pedestrian safety and facilities may result in slight land use changes or development of land around the intersection of Big Lake Road and the Parks Highway in the future. Cumulative impacts to the City of Houston due to the Upgrade will be minimal.

The construction of the Rail Extension from Port MacKenzie to the main line in Houston will have moderate land use impacts for the City of Houston, but minimal short-term direct impacts for all other impact categories. The conversion of vacant land to railroad use will not have significant impacts on residents or use of the vacant land, but has the potential to support the changes of land use around the new Rail Extension in the future to non-residential types of development. Long-term cumulative impacts from the Rail Extension could include development that supports industrial activities, commercial development, and support additional transportation facilities such as roadways. Industrial and natural resource development around the new rail junction could have impacts to Houston's economy, but due to the lack of reasonably foreseeable future actions which could be analyzed the impacts are not able to be identified.

The conceptual Port MacKenzie to Parks Highway Roadway Corridor, connecting to the Parks Highway in Houston near the new rail junction, would have moderate direct traffic impacts for the City of Houston. If the conceptual project were to be built, the projected traffic volumes would shift about 30% of anticipated traffic on Burma Road and Big Lake Road to the new corridor. This traffic would then continue along the Parks Highway through Houston. Direct short-term impacts, other than that to traffic, would be minimal. However, cumulative future impacts could include changes in land use from vacant to that which would support development along the roadway corridor, as well as the more heavily trafficked Parks Highway. Development and higher traffic volumes may initiate changes in Houston's economy.

Many individuals stated during interviews, the CIA open house, and through the household survey that they felt Houston was poised for expansion and had the right attributes to turn the community into a place that would attract residents, new business, and visitors. Most saw Houston being perfectly situated to benefit from a variety of large infrastructure projects such as the development of Port MacKenzie and the accompanying Rail Extension, improvements to the Parks Highway, interim solutions to provide the Interior with natural gas, and the eventual final goal of construction of a natural gas pipeline from the North Slope. While the ideas and long-term visions are numerous, concrete initiatives have not been developed beyond speculation. A possible slowed growth of Houston could include the limited access to natural gas, a relatively small low-density population, growing congestion on the Parks Highway, difficulties in attracting tourism and new businesses to the area, and the possibility that nearby large infrastructure projects may have minimal effect on the city's economy.

Although the alternatives assessed may not directly produce a significant change in the community, the long-term cumulative impacts could be significant. Houston has the potential to emerge as a key connection point for material goods as well as people traveling between Interior and Southcentral Alaska, all of which provides greater growth potential for the City. It should be expected that the City will continue to experience steady population growth and see an increase in the potential for economic development. Maintenance of Houston's unique community character will need to be a priority when considering development actions as well as compliance with the city's goals and policies as defined by its Comprehensive Plan.

8. FUTURE IMPACTS ASSESSMENT RECOMMENDATIONS:

If a significant action was taken by a public or private entity, such as the construction of the Port MacKenzie to Parks Highway Roadway Corridor in Houston or development of a large industrial facility, it is recommended that the City of Houston conduct an economic analysis and potential update of the Community Impact Assessment. A significant industrial development within the City could produce changes in employment availability, transportation routes and modes frequently used, and land use. Because of this possibility, an update to the CIA would be recommended in order to more adequately support future planning processes undertaken by the City of Houston.

9. REFERENCES:

Federal Highway Administration, U.S. Department of Transportation (FHWA 1996). Community Impacts Assessment – A Quick Reference for Transportation. Publication No. FHWA-PD-96-036. September 1996.

Surface Transportation Board, Final Environmental Impact Statement, Alaska Railroad Corporation Construction and Operation of a Rail Line Extension to Port MacKenzie, Alaska. Docket No. FD 35095. March 2011.

APPENDIX A: PUBLIC INVOLVEMENT SUMMARY

APPENDIX B: ECONOMIC DEVELOPMENT OPPORTUNITIES: PERSPECTIVES OF COMMUNITY STAKEHOLDERS

APPENDIX C: TRAFFIC IMPACTS OF MAJOR PLANNING PROJECTS