

Wasilla Main Street Rehabilitation Project *DRAFT* Environmental Assessment

Prepared for:



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Wasilla Main Street Rehabilitation Project

Environmental Assessment

Project No. STP-0001(408)/60077

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U.S. Department of Transportation,
Federal Highway Administration, and
State of Alaska Department of Transportation and Public Facilities

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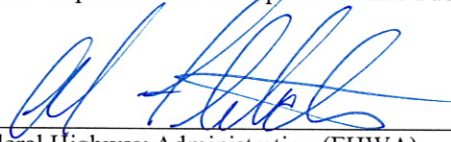
Date of Approval



Alaska Department of Transportation and Public Facilities (DOT&PF)

10-30-2013

Date of Approval



Federal Highway Administration (FHWA)

The project proposes to rehabilitate Main Street and nearby roadways in downtown Wasilla, Alaska. Two alternatives are being carried forward in this Environmental Assessment (EA) – the No Action alternative and a single Build Alternative. Alternatives considered in previous studies were not advanced for further analysis as they did not fulfill the project purpose and need. The Proposed Action consists of a one-way couplet with a southbound corridor along Main Street/KGB Road and a northbound corridor on the Yenlo Street/Talkeetna Street corridor. The typical section would be two- and three-lane one-way legs, with turning lanes as needed. An at-grade intersection would be constructed at the intersections of the Yenlo Street/Talkeetna Street corridor with the Parks Highway and the Alaska Railroad, and traffic signals would be installed and replaced along several intersections. This project is part of the Statewide Transportation Improvement Program.

Comments on this EA are due by December 6, 2013 and should be sent to:

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Executive Summary

The Alaska Department of Transportation and Public Facilities (DOT&PF), in cooperation with the Alaska Division of the Federal Highway Administration (FHWA) proposes to rehabilitate Main Street and nearby roadways in downtown Wasilla, Alaska. The proposed Wasilla Main Street Rehabilitation project consists of improvements and traffic pattern changes to Main Street, Knik-Goose Bay (KGB) Road, Yenlo Street, and Talkeetna Street in downtown Wasilla.

Purpose and Need

The purpose of this proposed project is to *improve mobility for people and freight* within the downtown core of Wasilla. Mobility in this area is constrained by the major highway and railroad corridors bisecting downtown Wasilla, which limits north-south connectivity. This project is intended to address a number of transportation needs caused by the existing roadway configuration and traffic patterns, including:

- **Poor system connectivity caused by a lack of north-south corridor capacity**
Main Street/KGB Road is the only north-south corridor crossing the railroad in the downtown Wasilla area; it does not have the capacity to carry current and forecasted traffic volumes.
- **Intersection configurations that contribute to congestion**
Congestion at the Parks Highway and Main Street/KGB Road intersection continues to grow, with vehicle queues spilling back within the downtown area and impeding circulation, causing more delays. The close proximity of the railroad tracks to the highway contributes to the congestion.
- **Safety issues**
High intersection crash rates and roadway/railroad intersection configuration are a safety concern within the project area.

Existing Conditions

The project area is centered on the Main Street/KGB Road corridor, and bounded by Knik Street to the west, the Yenlo Street/Talkeetna Street corridor to the east, Bogard Road to the north, and the Palmer-Wasilla Highway to the south. Main Street/KGB Road is a high-traffic-volume corridor carrying the major portion of trips with downtown Wasilla as a destination, and providing significant intra-area travel between the core business district and the outlying residential areas. The corridor connects to the Parks Highway (Urban Interstate), the Palmer-Wasilla Highway (Urban Principal Arterial), and Bogard Road (Urban Minor Arterial). Most other roads in the project area are two-way, two-lane roads functionally classified by DOT&PF as Local Roads, except for Railroad Avenue, which was reclassified as an Urban Collector in 2011. The City of Wasilla classifies Swanson and Susitna Avenues as Major Collector Roads. Their function is to provide for intra-city movement, access to arterial roads, and moving traffic to

and from residential areas. Herning Avenue, Railroad Avenue, Boundary Street, and Lakeview Street are classified by the city as Commercial Roads. Their function is to provide access to, and movement through, the business and commercial areas.

Alternatives Considered

Several previous studies and proposed projects have been initiated to address the issue, including an environmental assessment (EA) in 1993 that proposed a two-way couplet using Main Street and Knik Street as the preferred alternative. Subsequent study showed that alternative had substantial right-of-way (ROW) impacts to public and private property and businesses, and the project stalled. As an interim solution, Main Street was converted to a three-lane road with a travel lane in each direction and a two-way center left-turn lane (TWCLTL) through a re-striping project.

Implementing a one-way couplet was proposed in 2001 as a new alternative that may provide safe and efficient means of at-grade transportation across the Parks Highway. A 2006 Traffic Study showed that both the two-way couplet using Main Street and Knik Street and a one-way couplet using Main Street and Yenlo Street met capacity and safety considerations. Since the 1993 EA did not consider the one-way couplet, the finding of no significant impact (FONSI) no longer applied, and a new EA process was initiated.

As part of this new EA process, the 2006 Traffic Study was updated in 2012, improving upon the traffic models used in the original report and extended traffic projections out to the new design year (2035). The 2012 update confirmed the 2006 Traffic Study's finding that the one-way couplet concept is the most successful in terms of addressing traffic capacity and safety; however, it found that the two-way couplet no longer provided sufficient capacity through the new design year.

This EA considers the No Action alternative and a single Build Alternative – the One-Way Couplet at Main Street – Yenlo Street. Alternatives considered in previous studies were not advanced for further analysis as they did not fulfill the project purpose and need.

The Proposed Action consists of a one-way couplet with a southbound corridor along Main Street/KGB Road and a northbound corridor on the Yenlo Street/Talkeetna Street corridor. It was identified as Modified Alternative D in the 2006 Traffic Study and as Alternative D, Option 2 in the 2012 Traffic Study. The typical section would be two- and three-lane one-way legs, with turning lanes as needed. An at-grade intersection would be constructed at the intersections of the Yenlo Street/Talkeetna Street corridor with the Parks Highway and the Alaska Railroad, and traffic signals would be installed and replaced along several intersections.

Environmental Consequences

Under the No Build Alternative, the existing roadways would remain unchanged. Congestion on the roadways would continue to deteriorate and worsen over time. Congestion and delay would persist, ultimately reaching unacceptable levels.

The Proposed Action would improve reduce congestion, improve system connectivity, and improve safety within the project area. Impacts associated with the Proposed Action include acquisition of additional right-of-way, changes to traffic and driveway access, increased traffic noise along the Yenlo Street/Talkeetna Street corridor, and increased impervious surfaces within the project area. Construction of the Proposed Action would cause temporary effects, including increases in noise levels, minor degradation of air and water quality, traffic delays, and changes in accessibility to businesses. A comparison of the environmental consequences resulting from the No Build and the Proposed Action is shown in Table A.

Table A: Comparison of Environmental Consequences

Environmental Consequences	Proposed Action Alternative	No Build
Farmland	No effect	No effect
Air Quality	No effect	No effect
Floodplains	No effect	No effect
Wild & Scenic Rivers	No effect	No effect
Coastal Barriers	No effect	No effect
Coastal Resources	No effect	No effect
Section 4(f) Properties	No effect	No effect
Wetlands and Water bodies	No effect	No effect
Fish and Wildlife	No effect	No effect
Threatened and Endangered Species	No effect	No effect
Visual Effects	No effect	No effect
Right of Way and Relocation	Acquisition of additional ROW from approximately 34 parcels; Driveway access changes; No relocations of residences or businesses	No effect
Local Land Use and Transportation Plans	Consistent	No effect
Socioeconomics	Improve mobility and safety	No improvement to mobility and safety; conditions would continue to deteriorate
Environmental Justice	No disproportionate effect	No effect
Considerations Relating to Pedestrians and Bicyclists	Improvements	No effect

Environmental Consequences	Proposed Action Alternative	No Build
Noise	Increased traffic noise in some sections	No effect
Cultural Resources	No Adverse Effect	No effect
Hazardous Waste	Minimal risk	No effect
Water Quality	Minimal effect due to increased impervious area	No effect
Invasive and Noxious Plants	Risk for introduction and spreading mitigated by Best Management Practices	No effect
Energy	No effect	No effect
Construction Impacts	Temporary air quality, water quality, and noise impacts; temporary traffic detours and delays; temporary business access changes	No effect

Regulatory Permits

The construction of the Proposed Action would require an Alaska Department of Environmental Conservation (ADEC) Alaska Pollutant Discharge Elimination System (APDES) General Permit for Large and Small Construction Activities in Alaska.

Scoping and Public Involvement

Federal, State, and local regulatory agencies; local governments; Tribal organizations; and the public were consulted about the proposed project and asked to help identify potential concerns, mitigating measures, and alternatives. Outreach included a public scoping meeting, presentations to community groups, city and stakeholder interviews. The Proposed Action is widely supported by most of the community. Local users consistently express frustration with mobility problems within the project area, and relief that the project is moving forward. Opposition to the Proposed Action is primarily from property owners impacted by right-of-way acquisition needs and business owners who are concerned that their businesses may suffer as a result of changed access and parking. DOT&PF plans to consult and coordinate design features and construction plans with the City and local stakeholders, and will continue public involvement activities through project construction.

Table of Contents

1. Purpose and Need	1
1.1. Corridor History	1
1.2. Project Area	1
1.2.1. Existing Roadways.....	3
1.2.2. Existing ARRC Facilities.....	3
1.2.3. Existing Pedestrian and Bicycle Facilities	4
1.2.4. Planning Studies.....	4
1.3. Purpose of the Action	5
1.4. Need for the Action	5
1.4.1. Need 1 - Congestion.....	6
1.4.2. Need 2 – System Connectivity.....	9
1.4.3. Need 3 - Safety.....	10
1.5. Project Objectives.....	13
1.5.1. Objective 1 – Reduce Congestion.....	13
1.5.2. Objective 2 – Improve System Connectivity	13
1.5.3. Objective 3 – Improve Safety	13
2. Alternatives	15
2.1. History of Alternative Development	15
2.2. Couplet Concept	16
2.3. Proposed Action: Main/KGB – Yenlo/Talkeeta One-Way Couplet.....	16
2.4. No Build Alternative	19
2.5. Alternatives Considered but Not Carried Forward.....	21
2.5.1. Widen Main Street to Three Lanes	21
2.5.2. Widen Main Street to Five Lanes	22
2.5.3. Main–Knik Street Two-Way Couplet	23
2.5.4. Main Street–Yenlo Street One-Way Couplet with North Extension	24
2.5.5. Main Street–Boundary One-Way Couplet.....	24
2.5.6. Main Street–Willow Street One-Way Couplet	25
2.5.7. Transportation System Management Alternative	25
3. Environmental Consequences	27
3.1. Environmental Categories Without Project-Imposed Consequences	27
3.2. Right-of-Way and Relocation Impacts	29
3.2.1. Existing Conditions.....	29
3.2.2. Environmental Consequences	29
3.3. Local Land Use and Transportation Plans.....	32
3.3.1. Existing Land Ownership, Uses and Zoning	32
3.3.2. Existing Land Use and Transportation Plans.....	32
3.3.3. Environmental Consequences	35
3.4. Socioeconomics.....	36
3.4.1. General Characteristics	36
3.4.2. Neighborhoods and Communities.....	39

3.4.3. Environmental Consequences	42
3.5. Environmental Justice.....	45
3.5.1. Minority Populations	45
3.5.2. Income and Poverty Levels.....	47
3.5.3. Environmental Consequences	48
3.6. Considerations Relating to Pedestrians and Bicyclists	49
3.6.1. Environmental Consequences	49
3.7. Noise.....	49
3.7.1. Noise Abatement Criteria	50
3.7.2. Study Area	51
3.7.3. Analysis Methodology	51
3.7.4. Existing Conditions.....	52
3.7.1. Environmental Consequences	52
3.8. Cultural Resources.....	54
3.8.1. Study Area	54
3.8.2. Analysis Methodology	55
3.8.3. Consultation Process.....	55
3.8.4. Environmental Consequences	55
3.9. Hazardous Waste	56
3.9.1. Phase I Environmental Site Assessment	56
3.9.2. Environmental Consequences	57
3.10. Water Quality	59
3.10.1. Existing Conditions.....	59
3.10.2. Environmental Consequences	60
3.11. Invasive and Noxious Plants.....	61
3.11.1. Existing Conditions.....	61
3.11.2. Environmental Consequences	62
3.11.3. Mitigation Measures for the Proposed Action	62
3.12. Permits and Authorizations.....	63
3.13. Energy.....	63
3.13.1. Environmental Consequences	63
3.14. Construction Impacts	64
3.14.1. Air Quality	64
3.14.2. Water Quality.....	65
3.14.3. Hazardous Materials	65
3.14.4. Noise	66
3.14.5. Traffic and Accessibility.....	66
3.14.6. Wildlife	67
3.15. The Relationship Between Local Short-term Uses of Man’s Environment and the Maintenance and Enhancement of Long-term Productivity	67
3.16. Any Irreversible Commitment of Resources	68
3.17. Cumulative Effects	68
3.17.1. Geographic Scope and Timeframe for Cumulative Effects	69

3.17.2. Past and Present Actions.....	69
3.17.3. Reasonably Foreseeable Future External Actions.....	70
3.17.4. Cumulative Effects Analysis.....	72
4. Comments and Coordination	75
4.1. Scoping	75
4.1.1. Agency Scoping	75
4.1.2. Section 106 Consultation	76
4.1.3. Public Involvement Activities.....	76
4.1.4. Comments	78
5. List of Preparers	79
6. References	81

List of Tables

Table 1: Project Area Traffic Volumes: Existing and Forecast for 2025 and 2035.....	7
Table 2: Intersections Crash Rate Summary.....	11
Table 3: Anticipated ROW Acquisition.....	30
Table 4: Project Region Historic Population Trends	38
Table 5: Employment by Industry for the Matanuska-Susitna Borough and Wasilla, 2011.....	39
Table 6: Community Facilities in the Project Area and Vicinity.....	41
Table 7: Minority and Low-Income Populations by Census Blocks, 2010	46
Table 8: 2012 DHHS Poverty Guidelines for Alaska	47
Table 9: FHWA Noise Abatement Criteria.....	50
Table 10: Public Outreach Activities.....	77

List of Figures

Figure 1: Project Area.....	2
Figure 2: Intersection Level of Service.....	8
Figure 3: Intersection Crash Rates	12
Figure 4: Proposed Action, One-Way Couplet	17
Figure 5: Right-of-Way Impacts	31
Figure 6: City of Wasilla Zoning Districts.....	33
Figure 7: Land Use.....	34
Figure 8: Socio-Economic Study Area and Census Boundaries.....	37
Figure 9: Community Facilities	40
Figure 10: Noise Impacts	53
Figure 11: Hazardous Materials, Recognized Environmental Conditions (REC)	58

Appendices

Appendix A: Traffic Study Update 2012

Appendix B: Agency and Public Coordination Records

Appendix C: Preliminary Right-of-Way Impacts Report

Appendix D: Technical Noise Report

Appendix E: Phase 1 Environmental Site Assessment

Acronyms and Abbreviations

AADT	Annual Average Daily Traffic
ACMP	Alaska Coastal Management Program
ACS	American Community Survey
ADA	Americans with Disabilities Act
ADEC	Alaska Department of Environmental Conservation
ADF&G	Alaska Department of Fish and Game
ADOL&WD	Alaska Department of Labor and Workforce Development
AHRS	Alaska Heritage Resource Survey
ALARI	Alaska Local and Regional Information
ANCSA	Alaska Native Claims Settlement Act
ANHP	Alaska Natural Heritage Program
APE	Area of Potential Effect
ARRC	Alaska Railroad Corporation
BG	Block Group
BMP	Best Management Practices
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CO	carbon monoxide
CT	Census Tract
dB	decibels
dBA	A-weighted decibels
DHHS	Department of Health and Human Services
DOT&PF	Alaska Department of Transportation and Public Facilities
EA	environmental assessment
EFH	Essential Fish Habitat
EO	Executive Order
ESCP	Erosion and Sediment Control Plan
FEMA	Federal Emergency Management Agency
FHWA	Federal Highways Administration
FIRM	Flood Insurance Rate Maps
FONSI	Finding of No Significant Impact
KGB Road	Knik-Goose Bay Road
Leq(h)	hourly equivalent noise level
LOS	Level of Service
L RTP	Long Range Transportation Plan
LUST	Leaking Underground Storage Tank
MSB	Matanuska-Susitna Borough
NAC	Noise Abatement Criteria
NEPA	National Environmental Policy Act
NOx	nitrogen oxide
NRCS	National Resource Conservation Service
NRHP	National Register of Historic Places

Parks Highway	George Parks Highway
PUD	Plan Unit Development
REC	Recognized Environmental Condition
RFFA	Reasonably Foreseeable Future Actions
ROW	right-of-way
SHPO	State Historic Preservation Officer
STIP	Alaska Statewide Transportation Improvement Program
SWPPP	Storm Water Pollution Prevention Plan
TCP	Traffic Control Plan
TMDL	Total Maximum Daily Load
TNM	Traffic Noise Model
TWCLTL	two-way center left-turn lane
USFWS	U.S. Fish and Wildlife Service
UST	Underground Storage Tank
vpd	vehicles per day
VRS	Valley Residential Services

1. Purpose and Need

1.1. Corridor History

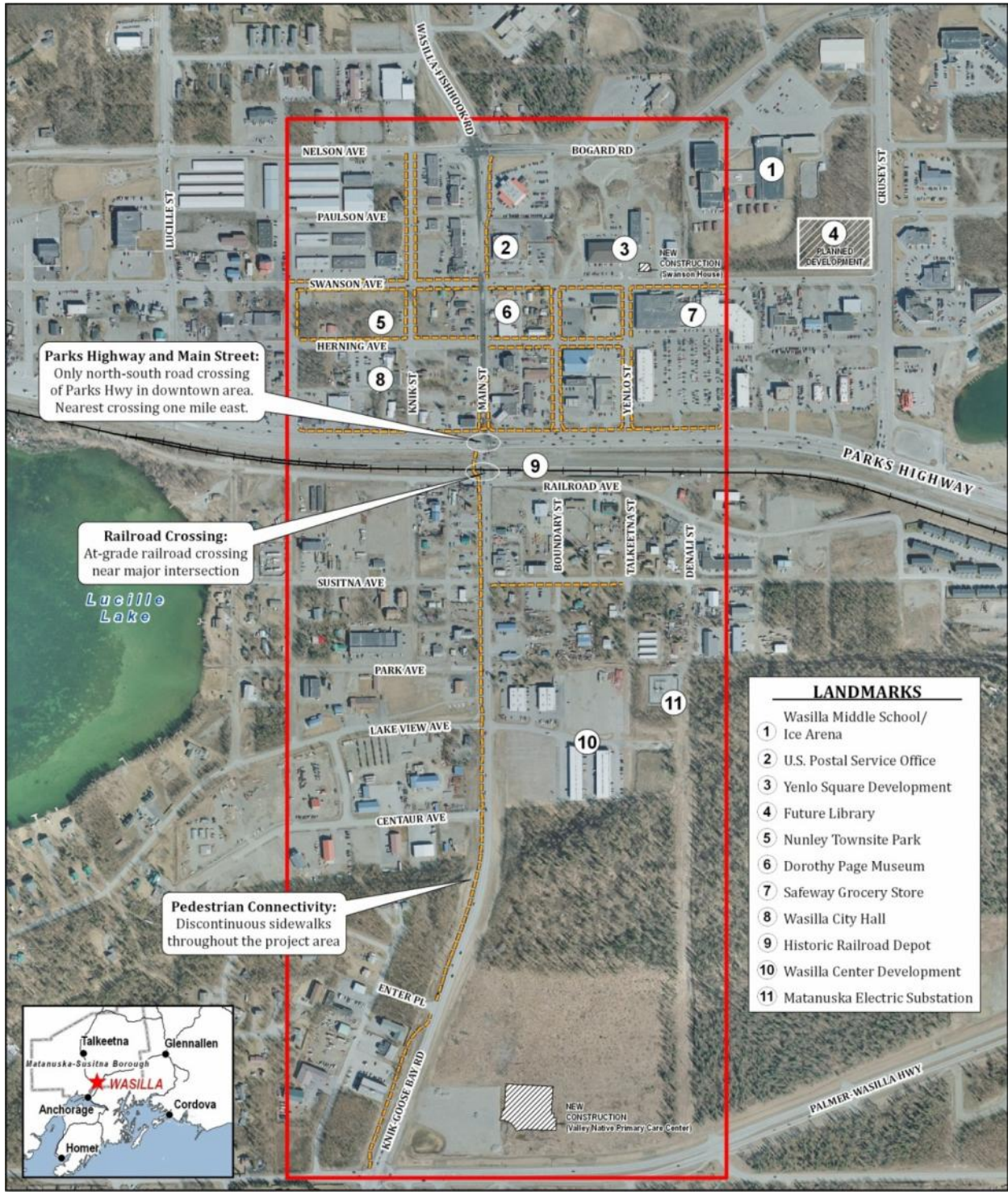
The City of Wasilla originated in the early 1900s as a trading post, train stop, and supply center for mining activities in the Hatcher Pass and Willow areas. The town, located in Southcentral Alaska, was established at the intersection of the Carle Wagon Road and the newly constructed railroad, now the Alaska Railroad Corporation (ARRC) tracks. Downtown Wasilla developed between Wasilla Lake and Lake Lucille, with the junction of Main Street/Knik-Goose Bay (KGB) Road, formerly Carle Wagon Road, and what is now the George Parks (Parks) Highway as its main intersection.

Wasilla is the largest incorporated city in the Matanuska-Susitna Borough (MSB). Wasilla and the MSB have the highest population growth rates in Alaska. From 2000 to 2010, the population of Wasilla increased 44 percent from 5,469 to 7,831. It is the regional commercial and retail hub with several stores, commercial properties, medical services, and professional offices located within or near the downtown area. Several schools are located just north of the downtown area. The city estimates that an additional 44,000 MSB residents living in and around surrounding communities of Palmer, Meadow Lakes, Big Lake, Knik-Fairview, and Fishhook use downtown city services and amenities such as the library, retail centers, medical facilities, and schools (City of Wasilla 2011). Main Street/KGB Road is the only north-south roadway crossing the railroad tracks in the downtown area, making it critical to downtown traffic circulation.

1.2. Project Area

The project area is centered on the Main Street/KGB Road corridor, and bounded by Knik Street to the west, the Yenlo Street/Talkeetna Street corridor to the east, Bogard Road to the north, and the Palmer-Wasilla Highway to the south (Figure 1: Project Area). North of the Parks Highway, Main Street is a three-lane road, beginning at its intersection with the Parks Highway and continuing north a quarter mile to Bogard Road. Beyond the project boundary, the alignment continues as Wasilla-Fishhook Road, a two lane facility running north through residential areas to Palmer-Fishhook and Hatcher Pass Roads.

South of the Parks Highway, the alignment continues as KGB Road. It crosses the ARRC tracks, then continues south for three-quarters of a mile through mixed retail, commercial, and residential development to its intersection with the Palmer-Wasilla Highway. Beyond the project boundary, KGB Road continues south, through residential developments and agricultural lands as it heads toward Point MacKenzie.



LEGEND

	Pedestrian Facilities		Project Area
	Railroad		New Construction (2012)
	Project Area Landmark		

Projection: AK Stateplane Zone 4, NAD 83 FT
Aerial Image: May 3, 2010, Kodlak Mapping, Inc.
Source: ADOT&PE, MSB GIS, HDR
Date: April 18, 2013

**FIGURE 1:
PROJECT AREA**

1.2.1. Existing Roadways

The Alaska Department of Transportation and Public Facilities (DOT&PF) functional classification for the Main Street/KGB Road segments between Bogard Road and the Palmer Wasilla Highway is Urban Principal Arterial. Consistent with the Federal Highway Administration (FHWA) Functional Classification Guidelines for principal arterials, Main Street/KGB Road is a high traffic volume corridor carrying the major portion of trips with downtown Wasilla as a destination, and providing significant intra-area travel between the core business district and the outlying residential areas. The corridor connects to the Parks Highway (Urban Interstate), the Palmer-Wasilla Highway (Urban Principal Arterial), and Bogard Road (Urban Minor Arterial). Most other roads in the project area are two-way, two-lane roads functionally classified by DOT&PF as Local Roads, except for Railroad Avenue, which was reclassified as an Urban Collector in 2011. The City of Wasilla classifies Swanson and Susitna Avenues as Major Collector Roads. Their function is to provide for intra-city movement, access to arterial roads, and moving traffic to and from residential areas. Herning Avenue, Railroad Avenue, Boundary Street, and Lakeview Street are classified by the city as Commercial Roads. Their function is to provide access to, and movement through, the business and commercial areas.

1.2.2. Existing ARRC Facilities

ARRC facilities in the project area include the mainline track connecting Anchorage to Fairbanks and an at-grade crossing located on KGB Road. Within the project area, the ARRC track alignment runs parallel to the Parks Highway alignment. The center of the tracks is located approximately 100 feet south of the outer edge of the Parks Highway travel lanes. As shown in the photo below, the crossing at KGB Road includes overhead flashing lights, automatic gates, warning signs, and a separate pedestrian crossing.



KGB Road @ ARRC crossing – facing north towards Parks Highway

1.2.3. Existing Pedestrian and Bicycle Facilities

Pedestrian facilities in the project area are discontinuous and many are deteriorating. Sidewalk exists on the north side of the Parks Highway, and on both sides of Main Street for a few hundred feet north of the Parks Highway. A multi-use pathway exists on the east side of Main Street, between Swanson Avenue and Bogard Road. As shown on Figure 1, most other roads in the downtown area north of the Parks Highway have sidewalks on both sides except for Paulson Avenue, Knik Street and Herning Avenue. Existing curb ramps do not meet current Americans with Disabilities Act (ADA) standards. No bicycle facilities exist in the project area north of the highway except for the pathway on Main Street, north of Swanson Avenue. South of the Parks Highway, a multi-use pathway is located along the west shoulder of KGB Road between the Parks and Palmer Wasilla Highways. Most of the roadways south of the Parks Highway do not have sidewalks, except for Susitna Avenue, which has a short section of sidewalk on the south side.

1.2.4. Planning Studies

Planning studies adopted at the State and local level that document the problems with this corridor and support for this project are listed below:

- The 2012–2015 Alaska Statewide Transportation Improvement Program (STIP)
- The 2007 MSB Long-Range Transportation Plan (LRTP)
- The City of Wasilla 2011 Comprehensive Plan

Consideration of a project in downtown Wasilla began almost thirty years ago with preliminary planning efforts leading to the 1993 DOT&PF Wasilla-Fishhook Road Rehabilitation Project which included improvements in the downtown area. The project was not advanced to final design. The project corridor was divided into segments to allow phased improvements. Construction on the segment of Wasilla-Fishhook Road from Bogard Road north to Seldon Road was completed in January 2008. As an interim solution to improve downtown traffic flow, Main Street was converted to a three lane typical section in 2001, providing one travel lane in each direction and a center two-way left-turn lane.

1.3. Purpose of the Action

The purpose of this proposed project is to *improve mobility for people and freight* within the downtown core of Wasilla. Mobility in this area is constrained by the major highway and railroad corridors bisecting downtown Wasilla, which limits north-south connectivity. DOT&PF, in cooperation with FHWA, is proposing a project to improve mobility within the downtown traffic grid.

In reference to a roadway, the term mobility is defined by the FHWA as “the ability [of traffic] to move or be moved from place to place.” This ability is not mode-dependent but applies to vehicles, transit, pedestrians, and bicyclists. According to the FHWA, mobility can be measured in terms of “travel times, level of traffic congestion, or duration of congestion, all of which focus on how long it takes to get from place to place.”

The proposed project seeks to:

- Reduce congestion
- Improve system connectivityEnhance safety

1.4. Need for the Action

The Parks Highway and the ARRC tracks were initially planned and constructed to connect Southcentral Alaska with Interior Alaska. As regional transportation corridors, their primary function is to move high volumes of people and cargo over long distances. While having both facilities run through the center of the community helped spur the early growth of Wasilla, the proximity of these corridors limits access and circulation within the downtown area (2006 Traffic Study). The Parks Highway provides access to local roads and businesses, which conflicts with its primary function. Queues of vehicles on side streets attempting to access or cross the Parks Highway corridor spill back across Herning and Swanson Avenues along Main Street to the north and across Railroad and Susitna Avenues along KGB Road to the south. As the city and the borough have grown, the increased north-south traffic crossing the highway and railroad corridors and increased east-west traffic on the highway have resulted in significant intersection congestion. The Alaska Division of Labor and Workforce Development (ADOL&WD) forecasts population for Wasilla and the MSB will close to double by 2035 (ADOL&WD 2012), which will increase traffic volumes and exacerbate current congestion issues.

This project is intended to address a number of transportation needs caused by the existing roadway configuration and traffic patterns including:

- Intersection configurations and railroad track that contribute to congestion

- Poor system connectivity caused by a lack of north-south corridor capacity

These needs are detailed in the following subsections.

1.4.1. Need 1 - Congestion

Motorists in downtown Wasilla currently experience excessive congestion resulting in long delays in the project area. Congestion at the Parks Highway and Main Street/KGB Road intersection continues to grow as traffic volumes grow, with vehicle queues spilling back within the downtown area and impeding circulation, causing more delays.

The ARRC mainline track, which intersects KGB Road at-grade just south of the Parks Highway and Main Street/KGB Road intersection, contributes to the congestion. The crossing is equipped with overhead flashing lights, automatic gates, signing, and railroad preemption connected to the Parks Highway traffic signal to prevent westbound highway traffic from making a left turn while a train is occupying the crossing. The roadway length available for storage of northbound vehicles on KGB Road between the Parks Highway crosswalk and the ARRC crossing gate is 45 feet, enough for approximately two vehicles. Additional vehicles waiting to cross or turn onto the Parks Highway must queue 50 feet further south beyond the ARRC crossing behind a stop bar. When trains are occupying the tracks in the project area, all northbound traffic along KGB Road southbound through traffic on Main Street is halted. The vehicle queues spill back through the project area intersections and side streets, further exacerbating the congestion.

Given the tight spacing of the intersections in the project area, the 2006 Traffic Study and the 2012 Update Reports conclude that downtown traffic flow is controlled by intersection congestion rather than roadway segment capacity. Reducing intersection congestion is required to address overall system congestion and traffic delays.

Congestion at intersections is defined in terms of the average delay experienced by approaching vehicles and is expressed using a measure called Level of Service (LOS). LOS criteria for signalized intersections describe conditions ranging from free flow at LOS A to forced flow (jammed) at LOS F.

- From LOS A to LOS B, traffic is light to moderate with flow conditions ranging from free flow to stable flow. In the LOS A/B range, motorists experience slight delays, but don't wait longer than one light cycle before proceeding.
- From LOS C to LOS D, traffic congestion begins changing conditions from stable flow to unstable flow. In the LOS C/D range, motorists experience acceptable or tolerable delays occasionally having to wait through more than one light cycle before proceeding.

- From LOS E to LOS F, traffic is heavy with congested conditions ranging from unstable flow to forced flow. In the LOS E/F range, motorists experience intolerable delays and frequently wait through several light cycles before proceeding.

Volume of traffic approaching an intersection is a major factor in determining LOS. Table 1 summarizes traffic volumes forecasted within the project area. For purposes of the project traffic analysis, the current or “existing” year is 2010, a construction year of 2015 is assumed, and the future or “design” year is 2035.

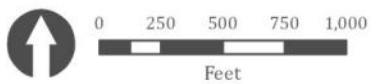
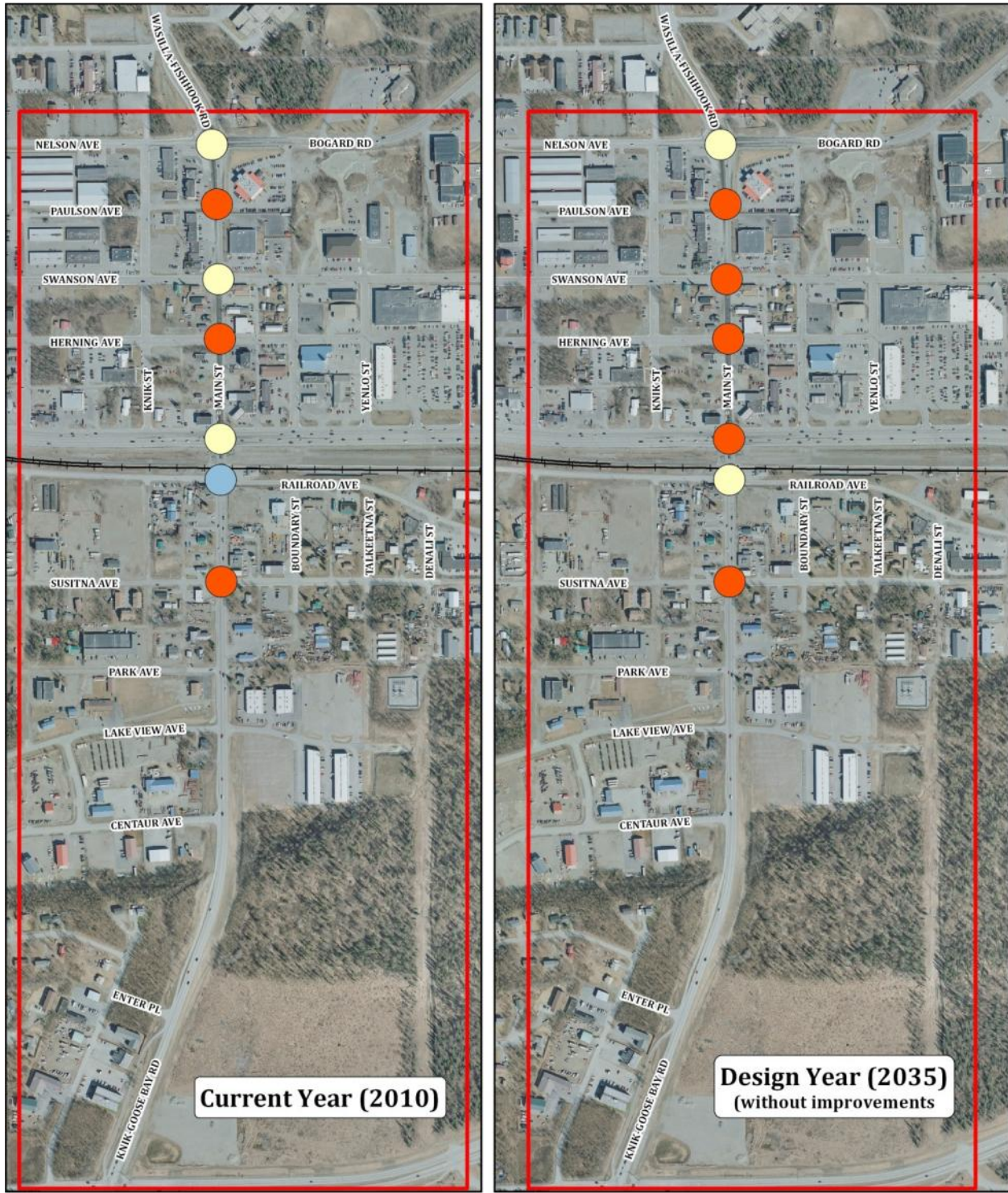
Table 1: Project Area Traffic Volumes: Existing and Forecast for 2025 and 2035

Road Segment	Annual Average Daily Traffic (AADT) Vehicles Per Day		
	2010 (Existing Year)	2025 (Mid-Year)	2035 (Design Year)
Main Street (Parks Hwy to Bogard Road)	9,480	10,895	12,645
KGB Road (Parks Hwy to Palmer-Wasilla Hwy)	10,015	10,184	10,353
Parks Highway (Crusey Street to Main Street)	28,330	37,163	41,492
Parks Highway (Main Street to Lucille Street)	31,220	35,752	43,130

Source: 2010 data (DOT&PF); 2025 and 2035 forecast data from 2012 Traffic Study Update (Kinney).

The roadway segment capacity of the Parks Highway within the project area is estimated to be 35,000 vpd. Traffic volumes on the Parks Highway are forecast to exceed this level by the year 2020 (2012 Traffic Study). For purposes of this intersection capacity analysis, Parks Highway segment volumes were limited to the estimated capacity on the corridor because modeling an intersection with a volume that exceeds the capacity of a roadway would skew the results for the associated intersections. If modeled with the forecast volumes, the results would not accurately reflect potential congestion relief along the Main Street/KGB Road corridor. Regardless of the configuration modeled, the overwhelming majority of the green signal time would be assigned to the Parks Highway movements, leaving insufficient time for traffic movement on the Main Street/KGB Road corridor (Figure 2: Intersection Level of Service).

The LOS for traffic movements at the Main Street/KGB Road intersections through the downtown area was determined for the current and design years, assuming the roadway system is not improved. For



Projection: AK Stateplane Zone 4, NAD 83 FT
Aerial Image: May 3, 2010, Kodiak Mapping, Inc.
Source: ADOT&PF, MSB GIS, HDR
Date: April 18, 2013

LEGEND

- | | |
|------------------------|----------------|
| Level of Service (LOS) | — Railroad |
| ● LOS A/B | ▭ Project Area |
| ● LOS C/D | |
| ● LOS E/F | |

**FIGURE 2:
INTERSECTION
LEVEL OF SERVICE**

intersections where failure is anticipated before the design year, the failure year was also predicted. Traffic analyses were performed for each intersection with and without the Parks Highway Alternative Corridor (often referred to as the Wasilla Bypass, it is a long-considered proposal to reroute through traffic of the Parks Highway around downtown Wasilla); for intersections in the project area there was no significant difference in the LOS with a bypass.

Within the project area, the entire Main Street/KGB corridor is impacted by poor LOS. Currently, three of the seven intersections (Paulson Avenue, Herning Avenue, and Susitna Avenue) are operating in the LOS E/F range. By the design year, if no improvements are made, two additional intersections are predicted to fail. The Parks Highway and Main Street/KGB Road intersection is currently operating at LOS D; without improvements, it is projected to decline to LOS F by 2020, and continue to degrade through 2035. Similarly, the Main Street and Swanson Avenue intersection is currently operating at LOS C and is projected to decline to LOS F by 2025 if no improvements are made.

1.4.2. Need 2 – System Connectivity

The project area has businesses and services located on both sides of the Parks Highway and railroad corridor. Several residential neighborhoods are located south of the Parks Highway, and the schools are on the north side. KGB Road/Main Street is the only road crossing of the railroad in the area, and it does not have the capacity to carry current and forecasted traffic volumes.

Downtown Wasilla is bounded by lakes – Wasilla Lake to the east and Lake Lucille to the west – that constrain constructing other, nearby north-south travel options. The nearest north-south corridor alternative to drivers – the Palmer-Wasilla Highway – intersects the Parks Highway one mile east of the project area. An ongoing project to extend South Mack Drive would provide a new north-south corridor at the intersection of the Parks Highway with Church Road and South Mack Drive, two miles west of the project area. While these roadways may provide alternative traffic routes, they do not sufficiently address the existing bottleneck occurring downtown at Main Street/KGB Road. If not addressed, the lack of north-south connections will increasingly aggravate congested conditions as traffic volumes increase.

The 2010 Annual Average Daily Traffic (AADT) count on Main Street was almost 9,500 vehicles per day (vpd) and on KGB Road it was slightly higher, just over 10,000 vpd. Traffic modeling forecasts the Parks Highway AADT to exceed the roadway capacity (35,100 vpd) by 2020. When volume exceeds capacity on a section of roadway, drivers typically begin to seek alternative routes, change the time of their travel, or simply choose not to make the trip. This project scope does not address Parks Highway capacity issues. However, ongoing traffic modeling for other projects suggests the concepts under consideration to reduce the Parks Highway congestion, including the Parks Highway Alternative Corridor and the Knik

Arm Crossing, would not sufficiently address the capacity problems associated with the Main Street/KGB corridor. Additional north-south capacity is needed in the downtown Wasilla area to improve the system connectivity.

Incomplete Pedestrian and Bicycle Facilities

Pedestrians trying to access local businesses encounter inadequate and incomplete pedestrian facilities throughout the project area. Pedestrian facilities on the Main Street/KGB Road corridor are limited to a short section of sidewalk on Main Street north of the Parks Highway intersection, a section of pathway on the east side of Main Street between Swanson and Bogard Road, and a pathway along the west shoulder of KGB Road between the Parks and Palmer Wasilla Highways. KGB Road/Main Street is the only road crossing of the railroad in the area. Lack of continuous pedestrian facilities connecting residential development and the senior center to downtown creates unsafe conditions for pedestrians from these areas who wish to access downtown businesses and services. Discontinuous bicycle facilities in the project area force bicyclists onto the already congested roadway and into the traffic stream.

1.4.3. Need 3 - Safety

Safety concerns within the project area include the close proximity of the railroad tracks to the highway and high intersection crash rates.

Railroad Conflict

Trains occupying the tracks, from either thru-travel or passenger loading and unloading at the Wasilla Historic Depot located on Railroad Avenue increase travel delays through the project area. Such delays contribute to driver frustration and can result in increased risk taking to cross intersections in advance of oncoming trains. There is also a risk the lowered gates and signals could trap a vehicle on the tracks should northbound drivers fail to stop to provide the necessary clearance on the tracks. Additionally, the gates do not provide full closure of the roadway approach due to the lack of a median on KGB Road. No fatalities have occurred to date; however, City planners, emergency personnel, and the railroad have long been concerned about the potential risks.

Intersection Crash Rates

Ten years (1999–2008) of crash data were reviewed for 26 intersections within the project area, identifying seven intersections with crash rates above the statewide average for similar intersections (Table 2). Traffic and safety engineers consider an above average crash rate “critical” if statistical analyses indicate the intersection has a crash rate likely to be higher than other similar intersections, rather than elevated due to random chance. Five of the seven intersections have above average crash rates

that exceed the “critical” threshold. The intersections with above average crash rates are clustered around the Parks Highway and Main Street/KGB Road intersection (Figure 3: Intersection Crash Rates). Crash analyses indicate congestion is likely a contributing factor in these crashes. Data suggest many of the crashes attributed to the Parks Highway and Boundary Street intersection are rear-end crashes of westbound traffic due to backup from the Parks Highway and Main Street Intersection.

Table 2: Intersections Crash Rate Summary

Intersections with Crash Rates Above Statewide Average	Intersection Crashes 1999-2008	Crashes Per Million Entering Vehicles (MEV)	Statewide Average by Intersection Type (Crashes/MEV)	Critical Limit (Crashes/MEV)
Knik Street @ Herning Avenue	7	1.559	0.669	1.415
Main Street @ Herning Avenue	41	1.102	0.669	0.906
Parks Highway @ Main Street/KGB Road	224	1.639	1.395	1.565
KGB Road @ Railroad Ave	30	0.795	0.669	0.901
Boundary Street @ Herning Avenue	18	1.179	0.669	1.046
Parks Highway @ Boundary Street	74	0.661	0.535	0.653
Parks Highway @ Yenlo Street	63	0.555	0.535	0.652

NOTE: Shaded rows indicate “critical” intersections. The “critical limit” is determined by statistical analyses that indicate whether the intersection crash rate is likely to be higher than other similar intersections, rather than elevated due to random chance. Intersections that exceed the critical limit are identified as critical intersections.

Source: Kinney, 2012.



Projection: AK Stateplane Zone 4, NAD 83 FT
Aerial Image: May 3, 2010, Kodiak Mapping, Inc.
Source: ADOT&PF, MSB GIS, HDR
Date: April 18, 2013

LEGEND

- | | |
|-------------------------|--------------|
| Intersection Crash Rate | — Railroad |
| Below Average | Project Area |
| Above Average | |
| Critical | |

**FIGURE 3:
INTERSECTION
CRASH RATES**

1.5. Project Objectives

The following objectives were developed based on the purpose and needs identified in the previous sections.

1.5.1. Objective 1 – Reduce Congestion

- Reduce congestion in the design year for users at intersections along Main Street/KGB Road

1.5.2. Objective 2 – Improve System Connectivity

- Increase north-south corridor capacity
- Decrease travel time for local trips
- Remove pedestrians and bicyclists from the traffic stream

1.5.3. Objective 3 – Improve Safety

- Reduce intersection crash rates
- Minimize the roadway-railroad conflicts

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2. Alternatives

2.1. History of Alternative Development

The Main Street/Parks Highway intersection congestion has been an identified problem in Wasilla's road grid since the early 1980s. Several previous studies and proposed projects have been initiated to address the issue. The 1993 DOT&PF Wasilla-Fishhook Road Rehabilitation Project included this project area, and its stated purpose and need was to provide an upgraded facility that complies with current design standards, improves capacity, and enhances traffic safety. The Environmental Assessment (EA) for that project presented a Proposed Action – a two-way couplet – consisting of:

- A three-lane Main Street with at-grade crossings at the Parks Highway and the Alaska Railroad
- A three-lane Knik Street with a bridge over the Parks Highway and the Alaska Railroad

While a finding of no significant impact (FONSI) was made, the Proposed Action was not advanced to final design. When the selected alternative was reconsidered in 2001 by the Wasilla City Council, additional details in the design identified the footprint of the bridge abutments and road embankments along Knik Street. The impacts associated with the bridge, which included property impacts to several businesses and the City Hall property, were considered excessive and intolerable to the City.

The city council then passed a resolution in 2001 supporting a three-lane section along Main Street as an interim solution to some of the existing problematic issues. Main Street was converted to a three-lane road with a travel lane in each direction and a two-way center left-turn lane (TWCLTL) during the late summer of 2001 through a re-striping project.

DOT&PF recognized that this temporary measure would not solve the underlying issue of insufficient north-south connectivity, and continued to look for a more permanent solution for the downtown area. The project corridor was divided into segments to allow phased improvements, and construction on the segment of Wasilla-Fishhook Road from Bogard Road north to Seldon Road was completed in January 2008.

The concept of implementing a one-way couplet was proposed in 2001 as a new alternative that may provide safe and efficient means of at-grade transportation across the Parks Highway. The DOT&PF then commissioned a traffic study in 2004 to determine which road alternatives would alleviate Main Street's congestion issues and included the one-way couplet concept in this analysis.

The Wasilla Main Street Traffic Study was completed in 2006 (Tryck Nyman Hayes, 2006) and found that the two-way couplet using Main Street/KGB Road and Knik Street corridors and the one-way couplet

using Main Street/KGB Road and Talkeetna/Yenlo Street corridors would both provide acceptable levels of service through the 2025 design year. However, the one-way couplet would have fewer right-of-way (ROW) impacts than other alternatives (see Section 2.5 for more information about other alternatives considered). The Wasilla City Council passed a resolution in support of the one-way couplet in the summer of 2006. As the DOT&PF prepared to move forward into the design stage of the project, it became apparent that a new EA would be required. Since the 1993 EA did not consider the one-way couplet, the FONSI no longer applied, and a new EA process was initiated.

As part of this new EA process, the 2006 Traffic Study was updated in 2012 (Kinney, 2012), improving upon the traffic models used in the original report and extended traffic projections out to the new design year (2035). The 2012 update confirmed the 2006 Traffic Study's finding that the one-way couplet concept is the most successful in terms of addressing traffic capacity and safety, however found that the two-way couplet no longer provided sufficient capacity through the new design year.

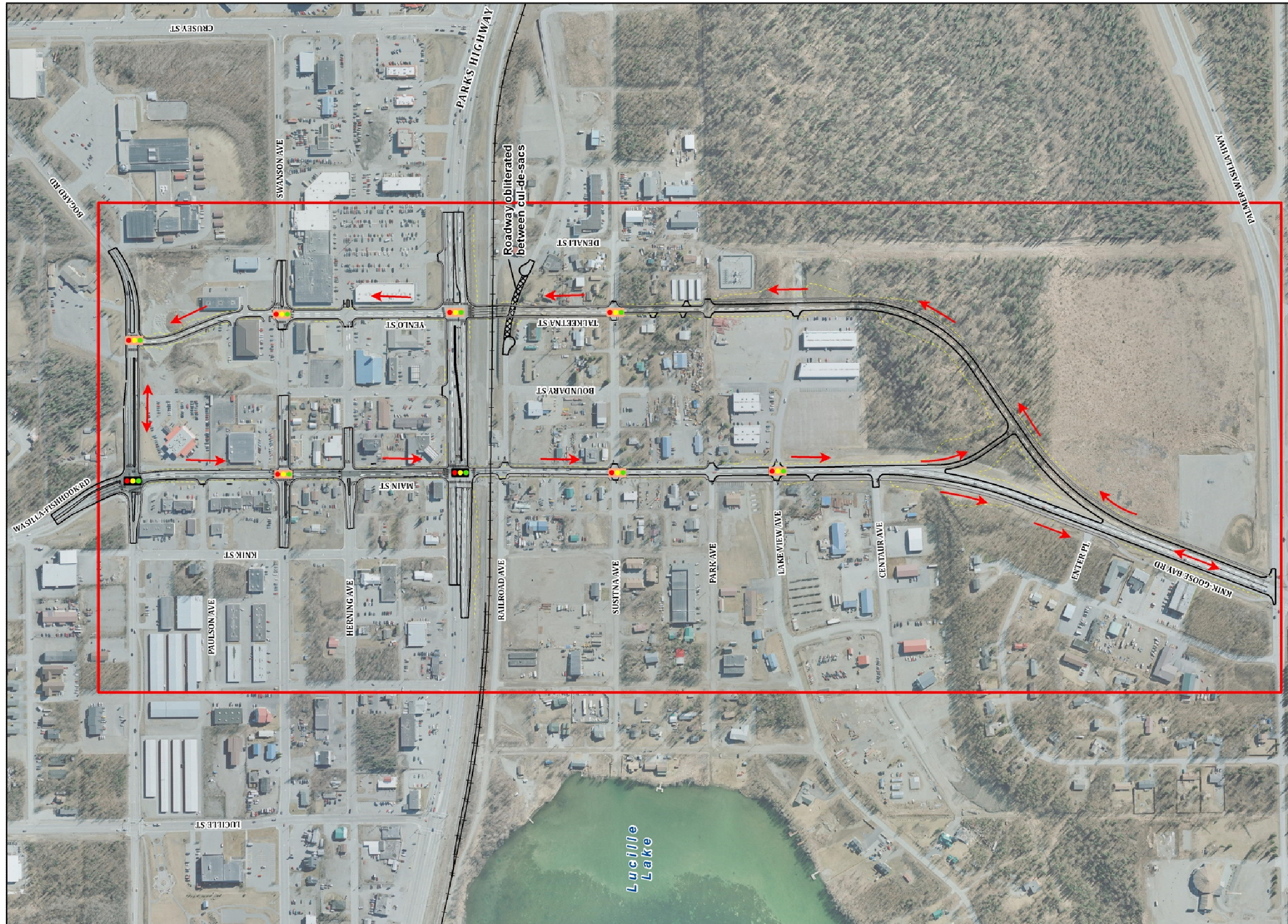
2.2. Couplet Concept

One-way couplets are pairs of one-way parallel streets with opposite traffic flow that function as a single higher-capacity street. One way streets offer greater traffic capacity than two-way streets. Because all traffic is flowing in the same direction on each street, average speeds can increase and congestion decrease.

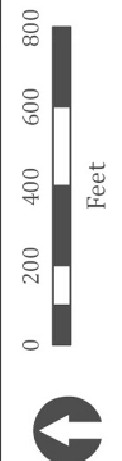
A couplet may reduce the number of intersection crashes in the area or reduce the severity of crashes, since one-way streets remove the conflict of opposing left-turn movements. Crash analyses performed as part of the 2012 Traffic Study Update (see Appendix A) project that the one-way couplet concept would improve safety in the area—along with achieving the primary goals of improving mobility, increasing north-south capacity and connectivity, and reducing congestion.

2.3. Proposed Action: Main/KGB – Yenlo/Talkeeta One-Way Couplet

The Proposed Action consists of a one-way couplet with a southbound corridor along Main Street/KGB Road and a northbound corridor on the Yenlo Street/Talkeetna Street corridor. It was identified as Modified Alternative D in the 2006 Traffic Study and as Alternative D, Option 2 in the 2012 Traffic Study. The typical section would be two and three lane one-way legs, with turning lanes as needed. An at-grade intersection would be constructed at the intersections of Yenlo Street/Talkeetna Street corridor with the Parks Highway and the Alaska Railroad, and traffic signals would be installed and replaced along several intersections. Figure 4 provides a detailed schematic of the proposed improvements.



LEGEND



- Existing Signal
- Future Signal
- Curb/Edge of Pavement
- Cut/Fill Limits
- Traffic Direction
- Sidewalk
- Road Removal
- Alaska Railroad
- Project Area

**FIGURE 4:
PROPOSED ACTION,
ONE-WAY COUPLET**

Projection: AK Stateplane Zone 4, NAD 83 FT
Aerial Image: May 3, 2010, Kodak Mapping, Inc.
Source: AUCT&P, MS&P, HDR
Date: May 7, 2013

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The Yenlo Street/Talkeetna Street corridor would also need to be extended at both the north and south ends of the existing roads. A southern expansion would start from KGB Road near Enter Way and connect into the existing Talkeetna Street dead-end at Park Avenue. A northern expansion would extend Yenlo Street to Bogard Road. The new roadway segments would be approximately one-third mile (south end) and one-tenth mile (north end).

Other alternatives were considered in the 1993 EA, 2006 and 2012 Traffic Studies, and prior planning studies (see Section 2.5). This alternative was chosen as the preferred route for several reasons including:

- Only alternative providing an acceptable level of service for the study area through the 2035 design year, regardless of whether or not the Parks Highway bypass has been built
- Allows full control of traffic at the railroad crossings by providing complete gate arm coverage with a relatively short gate
- Crash Analysis suggests a nine percent crash rate reduction across all affected intersections in study area, as well as a nine percent crash rate reduction at intersections with crash rates greater than the average rate
- Minimizes ROW impacts to business and residential properties

This alternative would also provide facilities to separate pedestrians and bicyclists from vehicle traffic and provide opportunities for downtown core area enhancements, consistent with the City Comprehensive Plan.

2.4. No Build Alternative

Evaluation of a No Build Alternative is required under National Environmental Policy Act (NEPA) regulations as a baseline for comparing the effects associated with the build alternatives. The No Build Alternative uses the existing roadway with no capital improvement, meaning only routine activities such as road maintenance and repair would occur during the next 20 years along the corridor. The No Build



Alternative does assume that other projects (ongoing or planned) within the project area or vicinity would proceed.

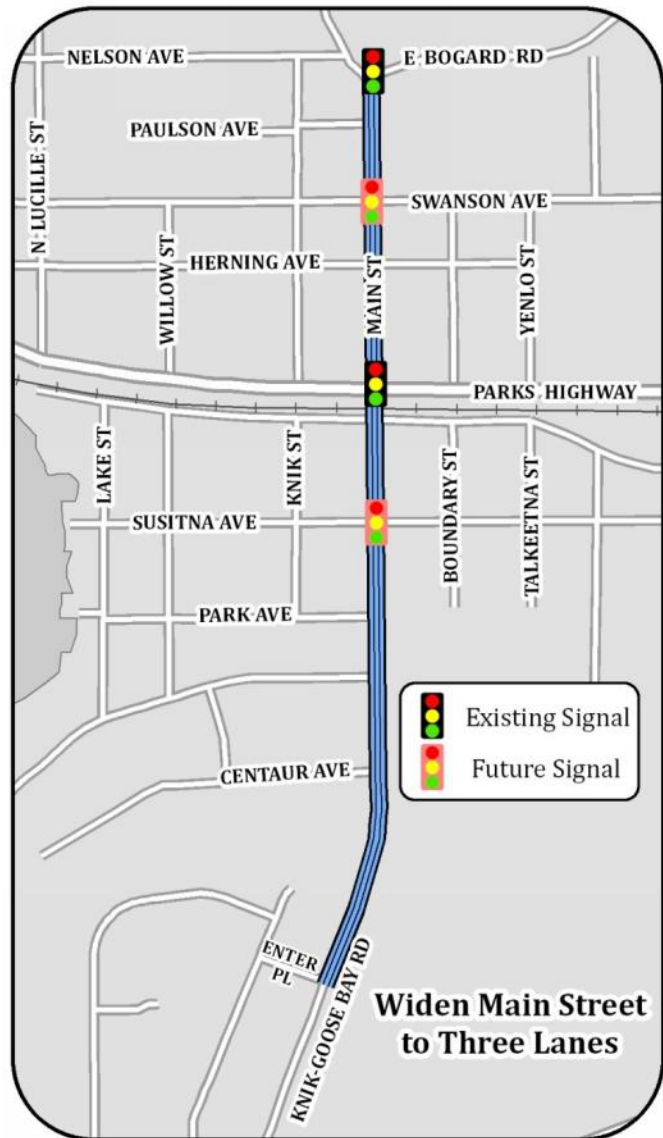
Under the No Build Alternative, the existing roads would remain unchanged with no improvements. Main Street would retain its existing at-grade crossing of the Parks Highway and three-lane typical section. No improvements to any of the other downtown roads would be made. Consequences of taking no action would be increased congestion and occasional immobility during peak traffic periods. The LOS rating would degrade to “F” and the capacity of roads and intersections would be exceeded. The crash rates for the involved intersections would continue to increase and longer queues would become inevitable.

Because the No Build Alternative does not reduce congestion along the corridor(s), address any of the intersection safety concerns, traffic delays, or reduce potential vehicle conflicts with trains, it does not meet the purpose and need for the proposed project and is not recommended.

2.5. Alternatives Considered but Not Carried Forward

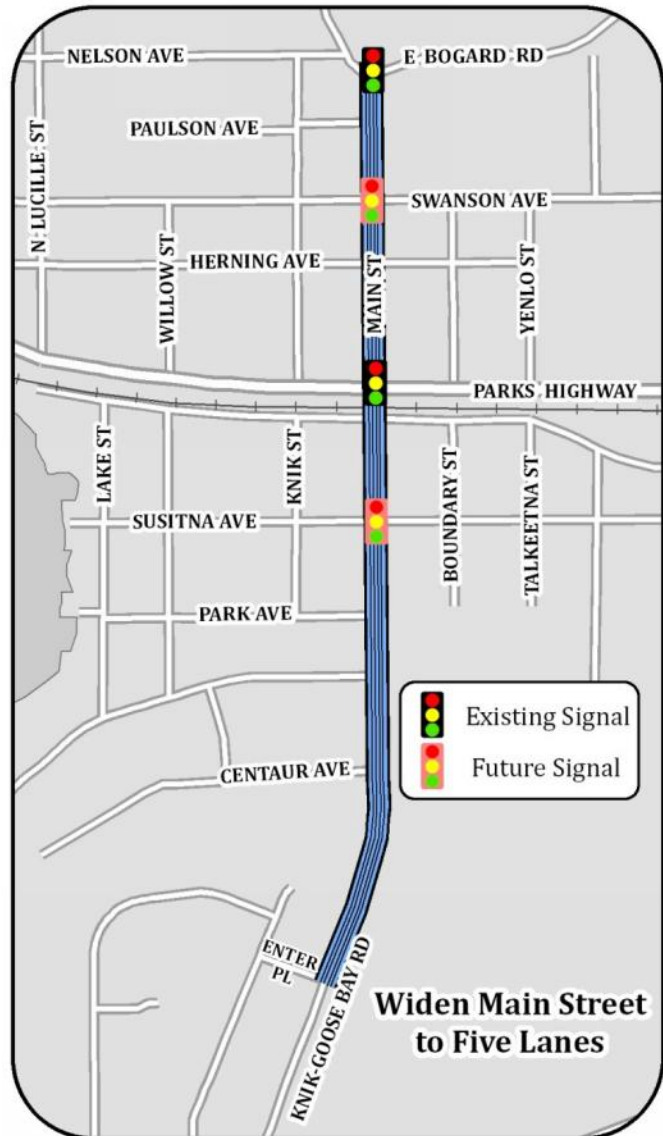
2.5.1. Widen Main Street to Three Lanes

Under this alternative, known as Alternative A in the 2006 and 2012 Traffic Studies, Main Street/KGB Road would be converted to a three-lane section (one lane in each direction with a TWCLTL) between Bogard Road and Susitna Avenue. Main Street is already three-lanes between Bogard and Parks Highway. Future traffic volumes and roadway capacity in this scenario would be similar to those under a No-Build condition. Although this scenario is the least expensive and least disruptive to current development, it was rated the lowest in capacity. The ROW acquisitions under this alternative would be minimal but the resulting congestion has been considered unacceptable. Since Main Street is currently a three-lane facility between the Parks Highway and Bogard Road, the addition of a center turn lane through Susitna Avenue does not add a great deal of capacity and is considered an ineffective alternative.



2.5.2. Widen Main Street to Five Lanes

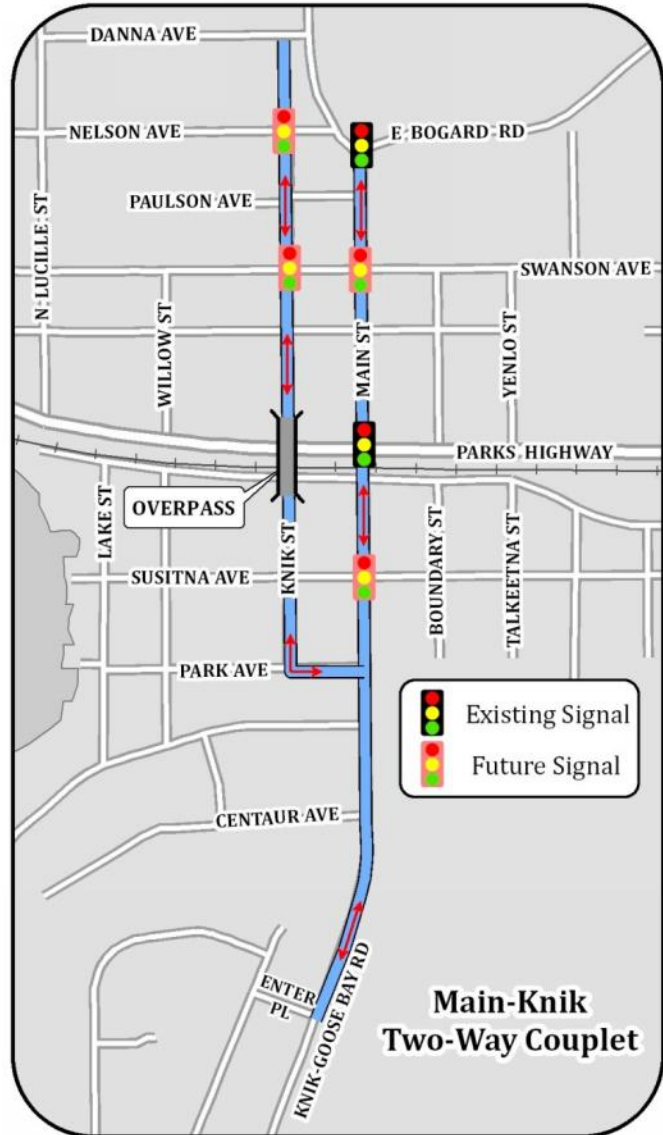
This Alternative, known as Alternative B in the Traffic Studies, would widen Main Street/KGB Road to five lanes, two lanes in each direction with a TWCLTL, between Bogard Road and Susitna Avenue. This scenario would not provide the minimum LOS for the intersections involved. More turning conflicts at the Parks Highway intersection would result, as well as conflicts within the TWCLTL. It would create pedestrian/vehicle conflicts when pedestrians cross five lanes of traffic. It also has detrimental ROW acquisitions in downtown Wasilla. The business frontage along Main Street would be nearly eliminated by this alternative's widening requirements. This would diminish the small town atmosphere of the city center.



2.5.3. Main-Knik Street Two-Way Couplet

The Main Street/KGB Road–Knik Street two-way couplet has been evaluated several times in the past, and was the Proposed Action identified in the 1993 EA and FONSI. It is identified as Alternative C in the traffic studies. The 2006 Traffic Study identified that it provided acceptable level of service improvements, however the 2012 update to the model identified that the intersection of Parks Highway and Main Street/KGB Road would be LOS D in 2035, and LOS E if there was a delay constructing the proposed Parks Highway Bypass (see Section 3.17 for more discussion of the Parks Highway Alternative Corridor in cumulative impacts). Knik Street goes through a more industrial portion of Wasilla which would minimize future economic possibilities such as storefront businesses, walking and shopping opportunities, and creating a downtown atmosphere.

The path that this alternative followed impacted several businesses west of Main Street and would likely impact a known historic site. The grade separated crossing of the Parks Highway at Knik Street required a very large embankment, the footprint of which actually covered portions of several businesses and City Hall property. Business owners and the City Administration were also concerned about the impact to the view (blocking sight) and the shadowing that would be created by the embankment. Although this alternative does not sufficiently meet the project’s capacity need, it was dismissed primarily due to its extensive impact to the city, businesses, and surrounding property owners.



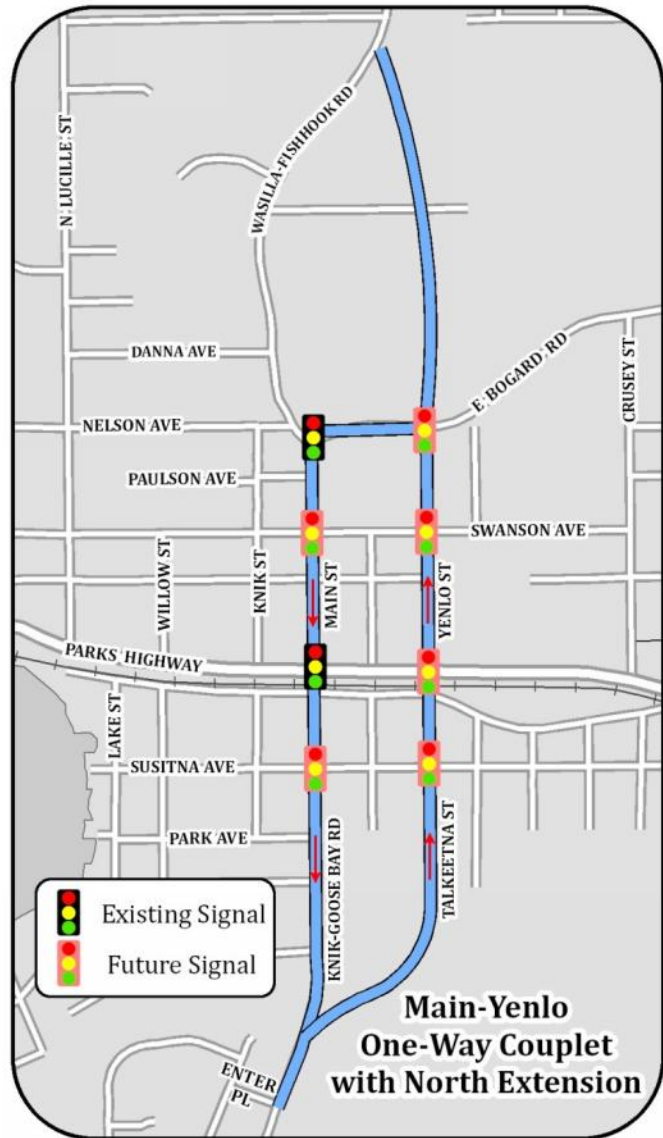
2.5.4. Main Street–Yenlo Street One-Way Couplet with North Extension

This alternative is the same as the Proposed Action except it continues across Bogard Road and links back into Fishhook Road. It is identified as Alternative D in the 2006 Traffic Study and Alternative D, Option 2 in the 2012 Traffic Study. This alternative would require two additional total property takes: Good Shepherd Lutheran Church and Iditarod Elementary School. The additional ROW requirements would not be offset by additional improvements to capacity or safety compared to the Proposed Action. This alternative was therefore dismissed from further consideration.

2.5.5. Main Street–Boundary One-Way Couplet

The Main Street–Boundary Street couplet, like the Proposed Action, would convert two existing parallel, two-way roads into two, one-way roads to form a one-way couplet. The concept has typically considered a bridge over the Parks Highway along Boundary Street. This alternative was not analyzed in the 2006 or 2012 Traffic Study, but is defined here because the alignment is often brought up by the general public.

Boundary Street’s close proximity to Wasilla’s historic district and a historic train depot would adversely impact these historic resources. The ROW acquisition needs for this alternative are almost double those of the Proposed Action and would negatively affect many businesses throughout its route placement. There are some very small parcels along Boundary Street and the ROW required would take out enough parking that the parcels might have to be acquired in whole. Boundary Street’s northern intersection with Bogard Road would be very near the Bogard Road/Main Street intersection and a functioning traffic system



would be difficult to achieve. With only a block separation, there is insufficient room for queuing of traffic between the two legs of the couplet. This alternative was dismissed due to its potential impacts on historic properties, its ROW impacts, and its lower functionality as a couplet.

2.5.6. Main Street–Willow Street One-Way Couplet

The Main Street–Willow Street couplet, like the Proposed Action, would convert two existing parallel, two-way roads into two, one-way roads to form a one-way couplet. Similar to the Main Street–Boundary Street couplet above, this alternative was not analyzed in the 2006 or 2012 Traffic Study, but is defined here because the alignment is often brought up by the general public.

Willow Street is in a more industrial and undeveloped part of Wasilla, which would minimize future economic possibilities such as storefront businesses, walking and shopping opportunities, and creation of a downtown atmosphere. These economic opportunities are all goals of the City of Wasilla’s 2011 Comprehensive Plan. Willow Street and Main Street are separated by three city blocks, which would be too great a distance to function effectively as a couplet due to interconnection complications between the road corridors.

This alternative also included a grade-separated crossing of the Parks Highway that resulted in significant ROW impacts to adjacent property owners and increased construction costs. Once this crossing was in place, it would limit the ability of DOT&PF to widen the Parks Highway due to the high cost of moving the support structures (abutments, etc.). This alternative was dismissed from further consideration due to its impacts to the city, businesses, and surrounding property owners, and its lower functionality as a couplet.

2.5.7. Transportation System Management Alternative

The purpose of a Transportation System Management (TSM) Alternative is to maximize the efficiency of the existing roadway by using optimization methods such as ride-sharing, high-occupancy vehicle lanes, bus lanes, rail service, alternative transportation modes, or resurfacing, restoring, and rehabilitating the existing roadway.

Resurfacing, restoring, and rehabilitating the existing facility would not provide the upgrades needed in the urban section of the roadway, such as street lighting, curb and gutter, and storm drains. Ride-sharing has limited potential for reducing congestion because of the population distribution. Mass transit systems have been occasionally adopted as an alternative to new highway projects, but only in areas with large, densely concentrated populations, not in sparsely populated areas such as along the project corridor. Mass

transit options are being explored to provide additional commuter options into Anchorage but are unlikely to relieve congestion issues in this project area. There is no intercity bus service in Wasilla.

Improved pedestrian and bicycle facilities may encourage commuting within the project area; however, the overall impact to vehicle reduction would be negligible. Bicycle commuting would generally be limited to the summer months.

A TSM Alternative would not meet the purpose and need of the project and was eliminated from further consideration.

3. Environmental Consequences

3.1. Environmental Categories Without Project-Imposed Consequences

The following environmental impact categories are not present within the proposed project area or would not be affected by the proposed project.

Farmland: No prime, unique or farmland of statewide importance has been designated in Alaska. The National Resource Conservation Service (NRCS) has identified soils of local importance within the project area. DOT&PF provided maps of the proposed project to NRCS to determine whether the proposed project would have an impact on locally important farmland. Their analysis determined that the percentage of land to be converted was 0.003 percent of the farmland in the Matanuska-Susitna Borough. The total site assessment criteria score for the project was below 100 points. The NRCS-CPA-106 form was not resubmitted for further review, based on regulation 7 CFR 658.4, which provides “sites receiving a total score of less than 160 points be given minimal level of consideration for protection and no additional sites need to be evaluated.”

Joint Development: The proposed project would not be developed or constructed in conjunction with any other projects.

Air Quality Conformity: The MSB is in attainment for air pollutants that are monitored by the U.S. Environmental Protection Agency (EPA) to evaluate air quality.

Floodplains: The proposed project area is included in Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) Panels 02170C8080E and 02170C8085E. These panels indicate the proposed project is in Zone X, which means it is outside the 0.2 percent annual chance floodplain. On November 15, 2012, the DOT&PF consulted the MSB Planning and Land Use Department to confirm this data. The MSB indicated that the proposed project area is not in a regulatory floodplain and would not cause adverse impacts to floodplains. The MSB also stated that no Flood Hazard Development permit is required for the proposed project. See Appendix B for consultation.

Wild and Scenic Rivers: No waterways within the proposed project area or vicinity are on the National Park Service’s online list of Wild and Scenic Rivers.

Coastal Barriers: No coastline, landforms, or coastal barriers that provide protection for diverse aquatic habitats are within the project vicinity.

Coastal Resources: As of July 1, 2011, the authorities of Alaska Coastal Management Program (ACMP) were repealed. As of that date, related regulations and the local coastal management plans are without

statutory authority and therefore unenforceable. While some boroughs are continuing to implement their coastal district enforceable policies at a local level, the MSB is no longer reviewing projects for consistency with the MSB coastal management plan or enforceable policies¹.

Section 4(f) Resources: Section 4(f) requires consideration of park and recreational lands, refuges and historic sites in transportation project development. There are no Section 4(f) resources affected by this project. Historic properties are very close to the project area. FHWA determined, and the State Historic Preservation Officer (SHPO) concurred, that the project would not impact these properties. See Section 3.8.

Wetlands and Water Bodies: There are no wetlands in the project area. The DOT&PF project team, including two environmental impact specialists with wetlands training conducted a site visit and did not see any areas with vegetation or hydrologic indicators of the presence of wetlands. KGB Road is about 1,400 feet east of Lucille Lake at its closest point, and Yenlo Street is 1,600 feet west of Wasilla Lake. MSB wetlands mapping data identify a spring fen wetland about 1,600 feet southwest of the KGB Road intersection with the Palmer-Wasilla Highway. Cottonwood Creek flows southeast of the project area edge, approximately a half-mile away. At this time, neither wetlands nor any waters of the U.S. are expected to be directly impacted; and no work in or discharge of fill material would be placed below ordinary high water. For storm water and water quality issues, see Section 3.10.

Fish and Wildlife: The Alaska Department of Fish and Game (ADF&G) *Catalog of Waters Important to the Spawning, Rearing or Migration of Anadromous Fishes* does not list any anadromous fish streams in the project area. Essential Fish Habitat (EFH) does not occur in the project area. ADF&G confirmed that there are no specified fish streams or resident fish streams in the projected area of the project, and therefore a Fish Habitat permit is not required pursuant to the Fish Passage Act (AS 16.05.841) or the Anadromous Fish Act (16.05.871). See Appendix B for consultation.

Due to the minor amount of natural habitats in the project area, few vertebrate wildlife species use the area. Species most likely to occur in the undeveloped areas include moose, snowshoe hare, northern red-backed vole, Cinereus shrew, pygmy shrew, Canada goose, mew gull, downy woodpecker, hairy woodpecker, black-billed magpie, common raven, tree swallow, violet-green swallow, black-capped chickadee, American robin, yellow-rumped warbler, dark-eyed junco, and common redpoll. According to U.S. Fish and Wildlife Service (USFWS) listings, it is unlikely that birds identified as a USFWS Bird of Management Concern or Bird of Conservation Concern occur in the project area.

¹ Lee, Susan. September 23, 2011. E-mail correspondence between MSB planner Susan Lee and HDR planner Leslie Robbins regarding coastal management consistency.

Threatened and Endangered Species. The USFWS, National Oceanic and Atmospheric Administration (NOAA), and ADF&G lists of Threatened and Endangered Species indicate no threatened or endangered species or critical habitats are present within the proposed vicinity of the project. On November 28, 2012, USFWS concurred that no listed or designated habitats are present in the project area (see Appendix B).

Visual Impacts. The visual environment of the project area is dominated by commercial and residential buildings, with roadways, railroad tracks, and utility lines present and visible. The southeast segment of the project area is undeveloped and heavily vegetated commercial property. In general, the project area is flat. It does not offer views or overlooks to other parts of town, nor is it highly visible from surrounding areas. Viewers would notice the wider road corridor and changes in vegetation, particularly in the south Talkeetna extension, but the viewshed would still include commercial and residential land uses along with the roadways, railroad tracks, and utility lines. A landscaping plan would be developed during the design phase of the proposed project and incorporated into the project plans to lessen any effects on the visual environment.

3.2. Right-of-Way and Relocation Impacts

3.2.1. Existing Conditions

Main Street's existing ROW is 80 feet wide and the road is generally centered within the ROW. All other existing roads in downtown Wasilla have a 60-foot ROW width and are generally centered on their ROW.

3.2.2. Environmental Consequences

No Build Alternative

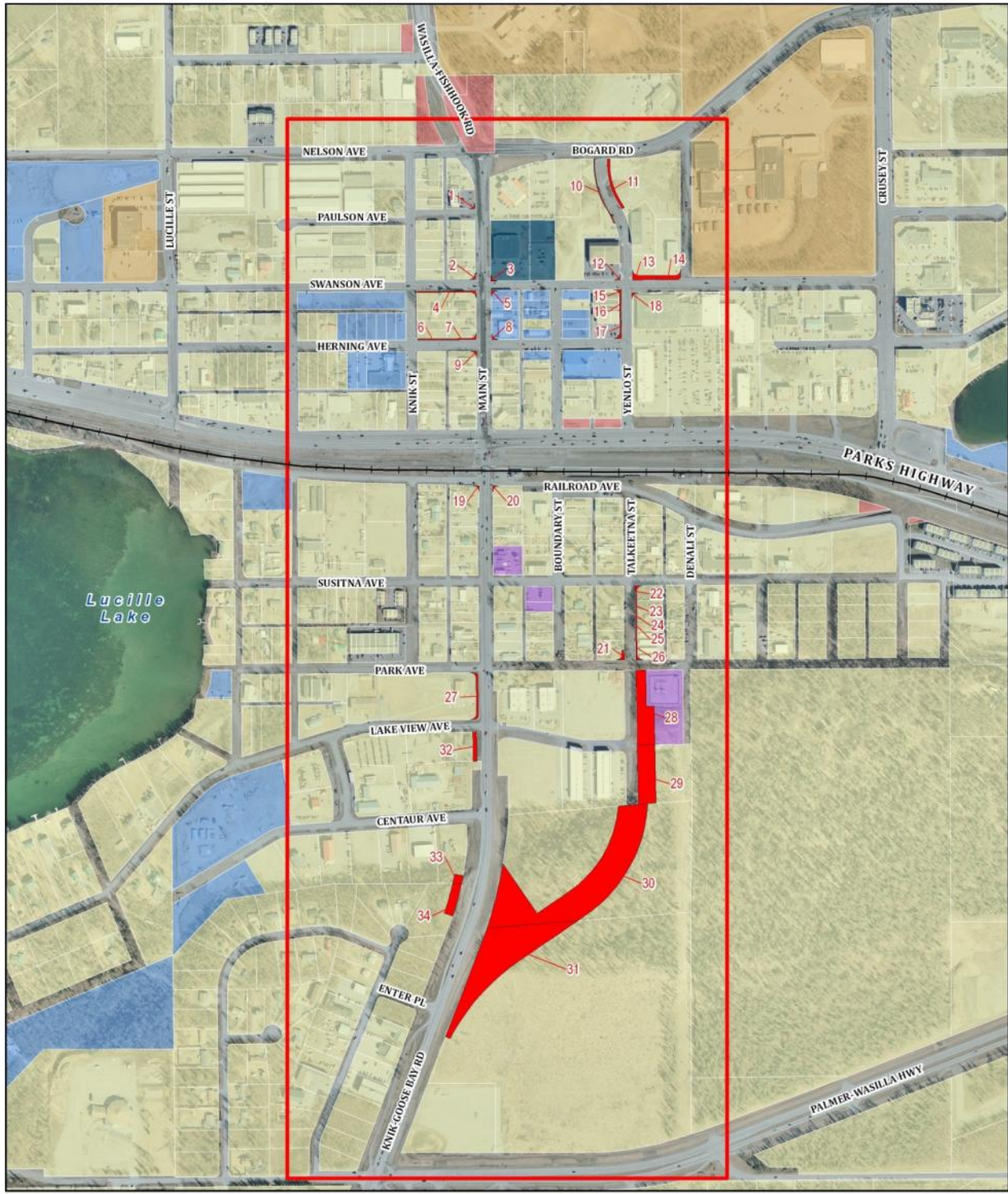
The No Build Alternative would not require ROW acquisitions or relocation of residences or businesses.

Proposed Action

The Proposed Action would require acquisition of approximately 8 acres of additional ROW to accommodate the expansion of the existing roadways and the extension of new roadways. ROW would be acquired from approximately 34 properties (see Figure 5 and Table 3), all of which would be partial acquisitions. Many of these acquisitions would be less than 0.1 acres which represent less than 10 percent of the parcel (see Table 3). There would be no total acquisitions required by this alternative.

Table 3: Anticipated ROW Acquisition

	Parcel ID	Total Parcel Area (acres)	Area Acquired (acres)	% of Parcel Being Acquired
1	590070000000_S	0.25	0.0045	1.8
2	51004B01L001	0.16	0.0045	2.8
3	217N01W10B022	1.42	0.0045	0.3
4	52638B07L004A	0.69	0.0459	6.6
5	51066B08L006	0.16	0.0045	2.8
6	52638B07L010A	0.17	0.0207	12.2
7	52638B07L001A	0.17	0.0252	14.8
8	51066B08L008	0.48	0.0045	0.9
9	51066B02L010	0.13	0.0045	3.5
10	55926B01L001	2.15	0.0323	1.5
11	55926B02L001	2.31	0.0803	3.5
12	591010000000_S	0.62	0.0045	0.7
13	56698B02L002B	0.35	0.0641	18.3
14	55371000L004	0.91	0.0670	7.4
15	51015B2EL005	0.16	0.0103	6.4
16	51015B2EL004	0.16	0.0059	3.7
17	590090000000_S	0.32	0.0230	7.2
18	52959000T00A2	4.86	0.0045	0.1
19	51032B11L007	0.33	0.0043	1.3
20	53759B12L009A	0.17	0.0047	2.8
21	51032B02L001	0.13	0.0161	12.4
22	51032B01L005	0.26	0.0155	6.0
23	51032B01L006	0.16	0.0069	4.3
24	51032B01L007	0.16	0.0069	4.3
25	51032B01L008	0.16	0.0069	4.3
26	56674B01L009A	0.48	0.0251	5.2
27	53395000T00B-1	3.73	0.0613	1.6
28	217N01W10C011	2.1	0.621	29.6
29	59108000U007	1.88	0.624	33.2
30	217N01W10C012	12.82	3.63	28.3
31	55970000T00A	30.51	2.3	7.5
32	217N01W10C003	0.36	0.07	19.4
33	52524B01L001	1.01	0.05	4.9
34	51261B03L023	1.22	0.17	13.9
	Total		8.02	



Projection: AK Stateplane Zone 4, NAD 83 FT
Aerial Image: May 3, 2010, Kodiak Mapping, Inc.
Source: ADOT&PF, MSB GIS, HDR
Date: April 18, 2013

LEGEND

- | | |
|---------------------------|-------------|
| Right-of-Way Acquisition* | Borough |
| Private | Cooperative |
| City | State |
| Federal | No Data |

* Refer to Table 3 for descriptions of affected parcels

**FIGURE 5:
RIGHT-OF-WAY
IMPACTS**

The proposed improvements for Main and Yenlo streets would overlay much of the roads' existing footprints. The majority of ROW acquisitions would be narrow strip takes along the existing ROW. The road extensions for a southern continuation of Talkeetna Street to connect to KGB Road would also require ROW acquisition of about 6 acres across two large private parcels. This estimate conservatively includes about 3 acres that would need to be graded to match the roadway embankments. While some property rights might be needed to construct and maintain the Proposed Action in these areas, it may not be necessary to fully acquire all 6 acres. Additional survey and design may further reduce the ROW impacts.

Because the Proposed Action does not require any total acquisitions of any residential or commercial properties, no households, businesses, farms, and nonprofit organizations would be displaced as a result of this project. See Appendix C for the Preliminary ROW Impacts Report conducted in December 2012 to identify impacts associated with the Proposed Action.

All ROW acquisitions would be conducted in accordance with the provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended in 1987.

3.3. Local Land Use and Transportation Plans

The City of Wasilla has jurisdiction over land management for the project area. The City of Wasilla is subject to local zoning ordinances and land use regulations.

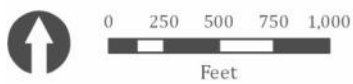
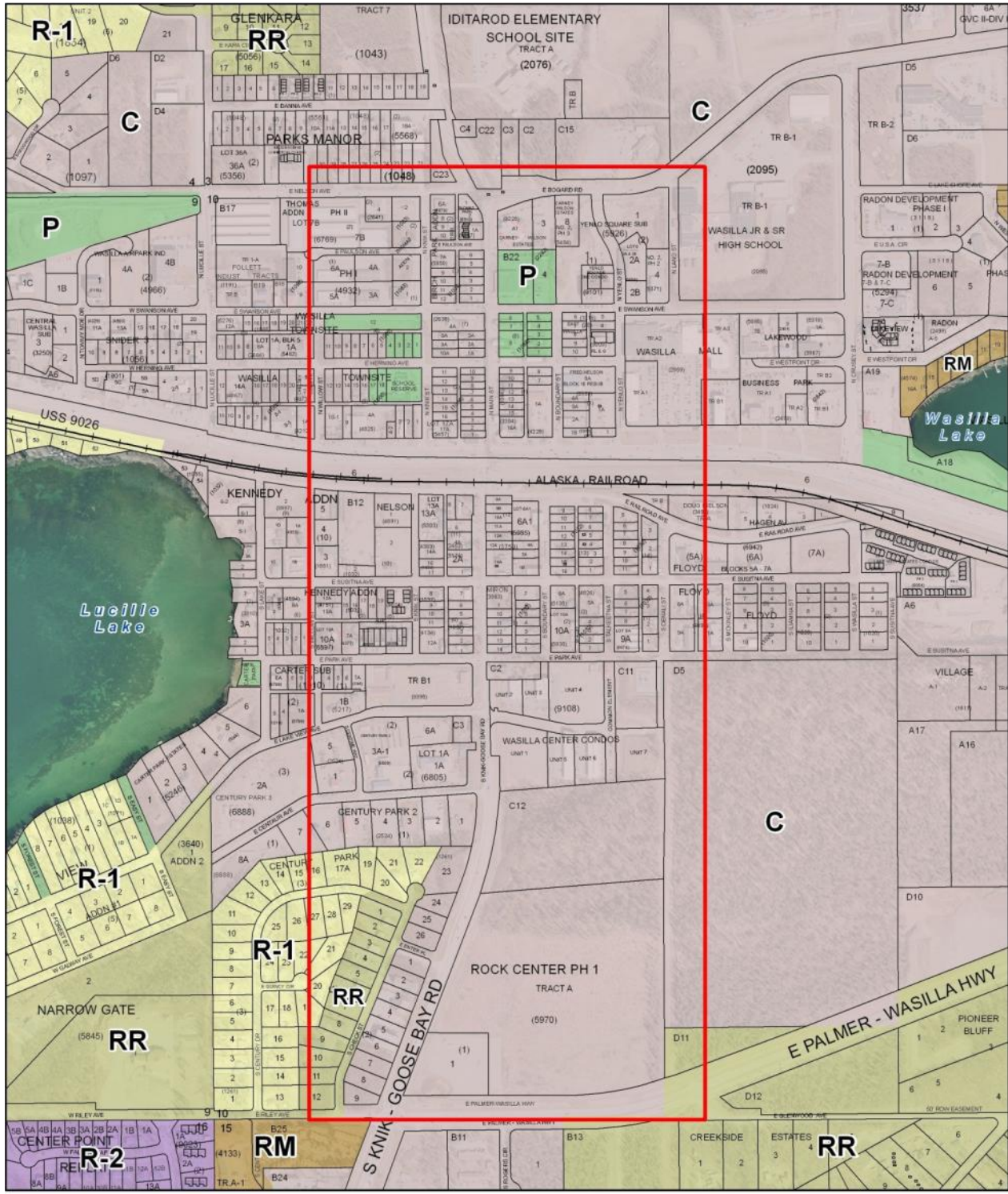
3.3.1. Existing Land Ownership, Uses and Zoning

The entire project area is located within the city limits of Wasilla. The majority of the land in the study area is owned by private entities. The dominant zoning in the study area is commercial, with some public service uses (Figure 6: City of Wasilla Zoning Districts). The MSB parcel data identifies more uses, including residential, recreation and industrial uses for parcels (Figure 7: Land Use). Much of the land at the southeast end of the project area is undeveloped.

3.3.2. Existing Land Use and Transportation Plans

The State of Alaska, MSB, and the City of Wasilla have land management and transportation plans that assess current development trends, list specific goals and objectives, and identify road improvement projects needed to ensure future transportation infrastructure meets the needs of the growing population. The following plans address land management and development in the proposed project area.

2012-2015 Alaska Statewide Transportation Improvement Program (STIP): The STIP identifies developing a one-way couplet in downtown Wasilla bounded by Bogard Road, KGB Road/Main Street,

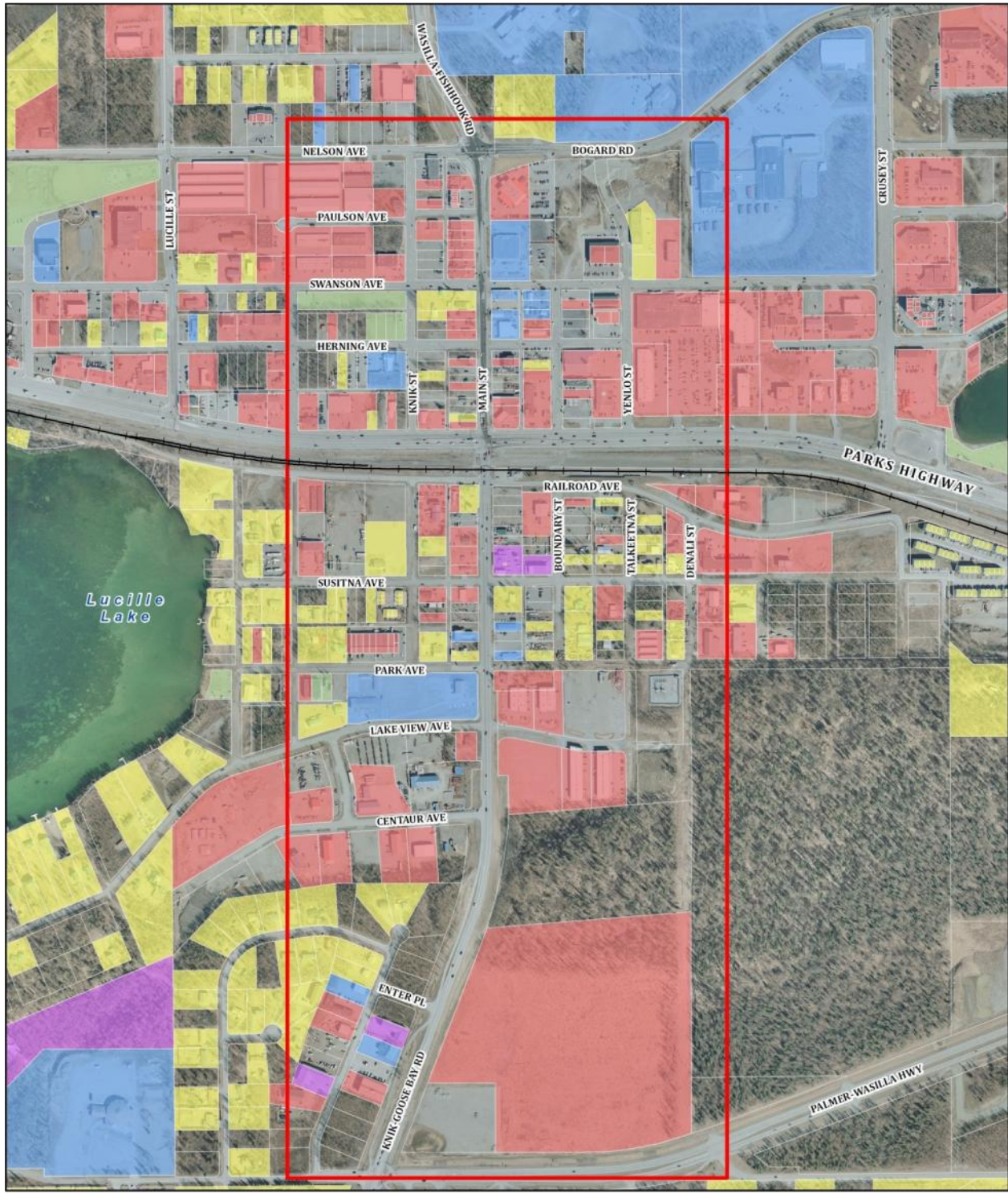


LEGEND

- C - Commercial
- P - Public
- R-1 - Single-Family Residential
- R-2 - Residential
- RM - Multi-Family Residential
- RR - Rural Residential
- Railroad
- Project Area

Projection: AK Stateplane Zone 4, NAD 83 FT
Source: ADOT&PF, MSB GIS, City of Wasilla, HDR
Date: April 18, 2013

**FIGURE 6:
CITY OF WASILLA
ZONING DISTRICTS**



Projection: AK Stateplane Zone 4, NAD 83 FT
Aerial Image: May 3, 2010, Kodiak Mapping, Inc.
Source: ADOT&PF, MSB GIS, HDR
Map Note: Land use classified by MSB building use code
Date: April 18, 2013

LEGEND

- | | |
|-------------|----------------|
| Land Use | Public |
| Residential | Recreation |
| Commercial | Vacant/No Data |
| Industrial | Railroad |
| | Project Area |

**FIGURE 7:
LAND USE**

Yenlo Street/Talkeetna Street and the Palmer-Wasilla Highway to mitigate traffic congestion in Downtown Wasilla. It is the initial effort to begin addressing the capacity and safety needs of the Knik-Goose Bay corridor. Knik-Goose Bay Road is a designated Safety Corridor.

2007 MSB LRTP: The LRTP calls for improvements at the KGB Road/railroad crossing.

2011 City of Wasilla Comprehensive Plan: The transportation chapter of this plan discusses the current conditions and trends, and calls out the challenges that the existing City road network imposes on development. The goals of the plan are to provide a street and highway network that provides mobility, connectivity, and access to present and future residents, and to develop a street and highway network supportive of economic development and growth. The plan identifies Parks Highway issues and area roadway connectivity, capacity and safety improvements as the top priority for the City and the plan to address. It identifies the Main Street couplet as a future transportation project that is needed.

DOT&PF Parks Highway Visioning Document, May 2006: The DOT&PF developed a long-range plan to facilitate planning efforts, describe the DOT&PF future expectations for the Parks Highway, and foster decisions about forthcoming highway projects. The document discusses creating a multi-lane, controlled-access highway facility, bypassing the project area around downtown Wasilla, as well as rerouting the railroad tracks. The document lists several “Programmed Projects” which includes the Wasilla Fishhook/Main Street project.

2011 Port MacKenzie Master Plan Update: This update identifies port development, construction of a proposed railroad extension to connect to the mainline west of Wasilla, and transit services to and from the Port.

3.3.3. Environmental Consequences

No Build Alternative

The No Build Alternative would not change the existing land use and zoning in the area. Without improvements, congestion would likely worsen as development continues in the area, resulting in lower mobility. The No Build Alternative is not consistent with area land use and transportation plans, which specifically identify addressing the congestion and at-grade crossing of the railroad and the Parks Highway.

Proposed Action

The Proposed Action would require acquisition of approximately 8 acres of ROW from lands that are currently undeveloped or used for residential/commercial purposes (refer to Section 3.2: Right-of-Way and Relocation Impacts for more information on anticipated ROW acquisitions). The land use designations for the acquired lands would permanently change to a transportation use.

The Proposed Action may facilitate commercial and residential development in the area by adding additional access to undeveloped commercial lands in the southeast section of the project area. On the north end of the project area, the Yenlo Square residential development between Bogard Road and Swanson Avenue was planned around the proposed Yenlo Street extension to Bogard Road and reserved the road ROW for that purpose. Improvements of the pedestrian pathways would allow for safer access to and from neighborhoods, commercial areas and businesses.

The Proposed Action is consistent with and supports the goals and management objectives outlined in the local land use and transportation plans.

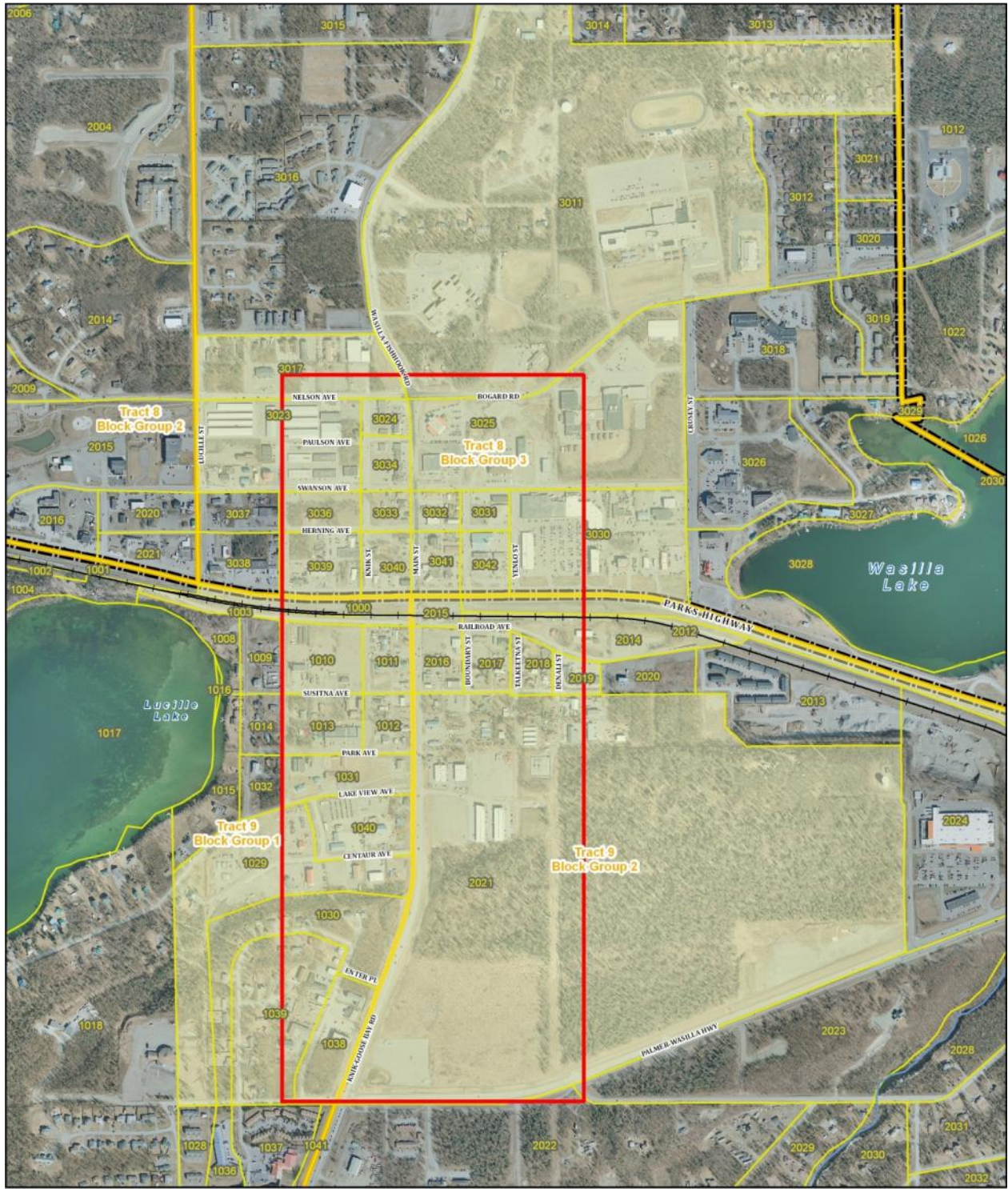
3.4. Socioeconomics

The DOT&PF conducted an analysis of regional and community growth, business and employment, housing, and the neighborhood and community environment within the proposed project area. Studying the social and economic effects of the proposed project is important to maintaining the area's living and business environments. This EA relies on data from the 2010 Census, 2006–2010 American Community Survey (ACS), and Alaska Department of Labor and Workforce Development (ADOL&WD), Alaska Local and Regional Information (ALARI). Data are compiled at the census block, block group, and tract levels. Because the census geographies do not correspond to the study area boundary, the study area includes the census geographies that intersect the project area. Figure 8 shows the census geographies used in this analysis. For comparison purposes, population and census information is also provided for the Project Region. The Project Region includes the MSB and the City of Wasilla. For other sections of the socioeconomics section, the term “project vicinity” refers to the study area and immediate areas beyond, generally the City of Wasilla.

3.4.1. General Characteristics

Population

According to the ADOL&WD, the project region has grown significantly since 1990. Alaska's population grew from 550,043 in 1990 to 710,231 in 2010 (29.1%). The MSB grew from 39,683 in 1990 to 88,995 in



Projection: AK Stateplane Zone 4, NAD 83 FT
Aerial Image: May 3, 2010, Kodiak Mapping, Inc.
Source: U.S. Census Bureau, MSB GIS, HDR
Date: April 18, 2013

LEGEND

- Socio-economic Study Area
- Census Block
- Census Block Group
- Census Tract
- Railroad
- Project Area

**FIGURE 8:
SOCIO-ECONOMIC
STUDY AREA AND
CENSUS BOUNDARIES**

2010 (124.3%), and the City of Wasilla population grew from 4,028 in 1990 to 7,831 in 2010 (94.4%). Table 4 shows historical population trends for the Project Region. The population in the study area identified in Figure 7 was approximately 554 in the 2010 Census. The ADOL&WD baseline population projection has the 2035 population of Alaska increasing to 915,211 while the MSB’s population increases to 160,693 (ADOL&WD 2012). ADOL&WD did not publish a projection for the City of Wasilla.

Table 4: Project Region Historic Population Trends

Location	Median Age in 2010	Population			Percent Change		
		1990	2000	2010	1990-2000	2000-2010	1990-2010
City of Wasilla	32.2	4,028	5,469	7,831	35.8	43.2	94.4
MSB	34.8	39,683	59,322	88,995	49.5	50.0	124.3
State of Alaska	33.8	550,043	636,932	710,231	15.8	11.5	29.1

Source: U.S. Census Bureau, 2010.

Housing

According to the 2010 Census, there are approximately 251 housing units in the study area. Of these, 22 (8.8 percent) were classified as vacant. Most of the land in the study area is zoned commercial. There are several residentially zoned parcels near the study area that could be developed for residential use. Elsewhere within the City of Wasilla, there are parcels that are available for development, including single- and multi-family residential.

Business and Employment

The ADOL&WD, ALARI² reports that companies located within Wasilla employed approximately 3,366 people, while approximately 37,259 worked in the MSB in 2011. Table 5 shows the number of employees by industry for 2011 in the MSB and Wasilla.

ACS (2005–2009) reported the median household income in Wasilla was \$53,977. It was estimated that approximately 45 percent of MSB residents commuted to jobs elsewhere in the state, with 32 percent (12,192 commuters) of those commuting to Anchorage, in 2008. The percentage of workers commuting to Anchorage was the same as 2000.

² ADOL&WD, ALARI reports data by place of residence. It should be considered a snapshot of an area’s resident workforce rather than an area’s economy.

Table 5: Employment by Industry for the Matanuska-Susitna Borough and Wasilla, 2011

Industry Sector	Matanuska-Susitna Borough		Wasilla	
	Number of Workers	Percent (%)	Number of Workers	Percent (%)
Natural Resources and Mining	2,887	7.7	249	7.4
Construction	4,014	10.8	386	11.5
Manufacturing	519	1.4	29	0.9
Trade, Transportation, and Utilities	7,811	21.0	742	22.0
Information	999	2.7	105	3.1
Financial Activities	1,242	3.3	97	2.9
Professional and Business Services	3,086	8.3	278	8.3
Educational and Health Services	5,628	15.1	566	16.8
Leisure and Hospitality	3,503	9.4	358	10.6
State Government	2,268	6.1	164	4.9
Local Government	4,279	11.5	317	9.4
Other	1,000	2.7	72	2.1
Unknown	23	0.1	3	0.1
Total	37,259	N/A	3,366	N/A

Source: ADOL&WD, ALARI 2012

Note: Alaska Local and Regional Information captures data for workers in private sector, State and local government covered by unemployment insurance within Alaska. Federal workers, military, and the self-employed are not included.

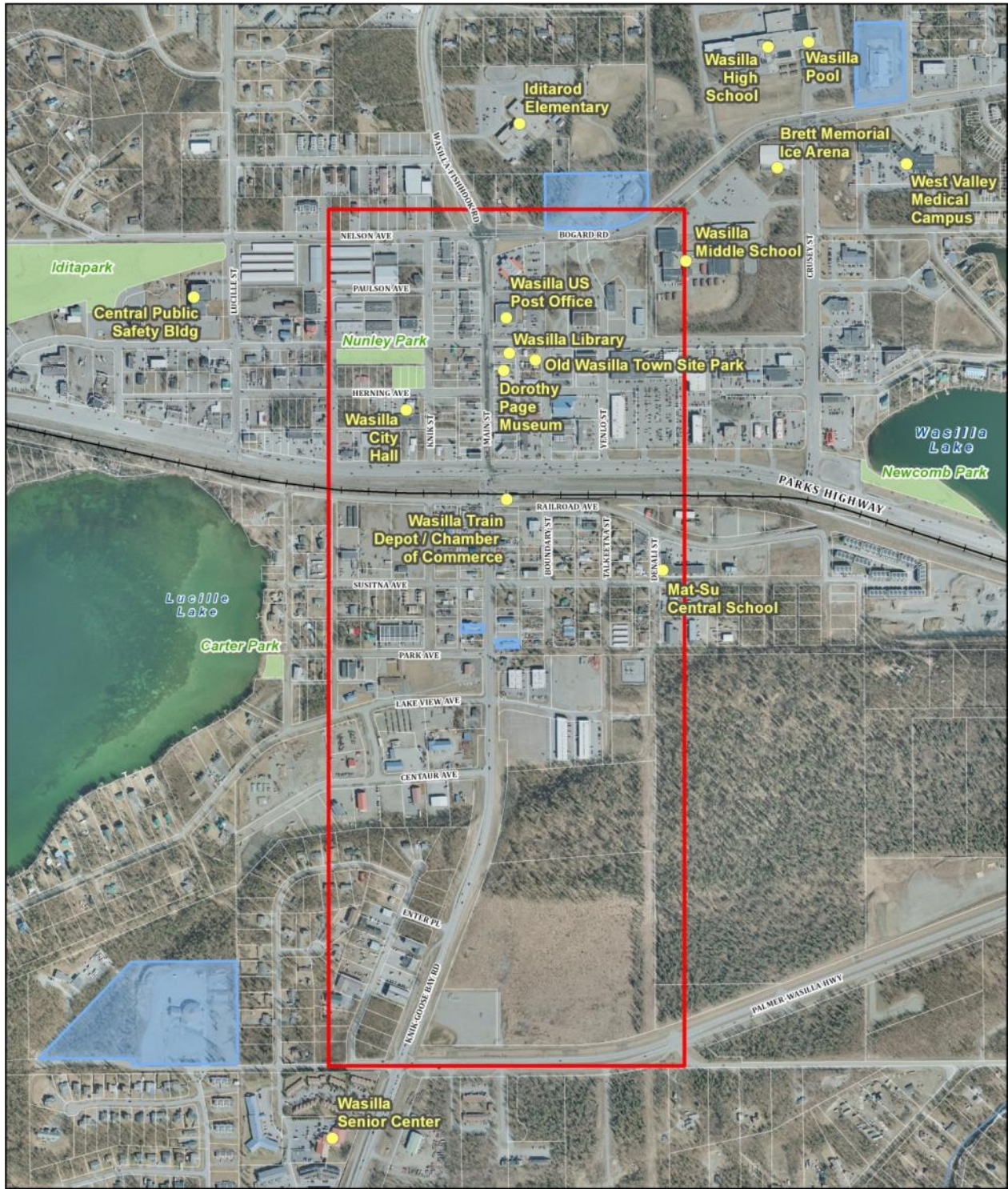
3.4.2. Neighborhoods and Communities

The project area is a mix of commercial, residential, industrial, public and recreational land. Currently, the Parks Highway and ARRC tracks serve as barriers separating the existing north and south neighborhoods in the area. KGB Road/Main Street also separates neighborhoods to the east and west.

Community Facilities

Community facilities generally include (but are not limited to) schools, parks, trails, churches, law-enforcement facilities, fire stations, and government offices. Table 6 and Figure 9 show the community facilities in the project area. Other public facilities that are located nearby and attract traffic to the area, include Iditarod Elementary, Wasilla Middle School, Wasilla High School, Wasilla Pool, Brett Memorial Ice Arena and the Wasilla Senior Center.

Public safety and emergency services within the project area and vicinity are provided by the City of Wasilla Police Department, the Mat-Su Fire Department, and the Alaska State Troopers. The closest



Projection: AK Stateplane Zone 4, NAD 83 FT
Aerial Image: May 3, 2010, Kodiak Mapping, Inc.
Source: MSB GIS, ADOT&PF, HDR
Date: April 18, 2013

LEGEND

- Public Facility
- Church
- Park
- Railroad
- Project Area

**FIGURE 9:
COMMUNITY
FACILITIES**

Table 6: Community Facilities in the Project Area and Vicinity

Facility Type	Facility Name	Address
Public Library	Wasilla Meta-Rose Public Library	391 Main Street
Museum	Dorothy Page Museum & Historic Town Site	323 Main Street
Public Transportation	Wasilla Train Depot	415 E. Railroad Avenue
Government	City Hall	290 E. Herning Avenue
	Post Office	401 Main Street
	Wasilla Chamber of Commerce	415 E. Railroad Avenue
School	Iditarod Elementary School	801 Wasilla Fishhook Road
	Wasilla Middle School	650 Bogard Road
	Wasilla High School	701 E. Bogard Road
	Mat-Su Central School	600 E. Railroad Avenue
Park and Recreation	Nunley Park	250 E. Swanson Avenue
	Newcomb (Wasilla Lake) Park	891 E. Parks Highway
	Carter Park	600 S. Lake Street
	Iditapark	500 W. Nelson Avenue
	Brett Memorial Ice Arena	746 E. Bogard Road
	Wasilla Pool	701 E. Bogard Road

hospital to the project area is the Mat-Su Regional Medical Center located near the intersection of the Parks Highway and Trunk Road. There are smaller medical facilities such as medical and dental offices located in the project area. The Mat-Su Regional West Valley Medical Campus facility is located just east of the project area on Bogard Road, and the new Valley Native Primary Care Center is located at the intersection of KGB Road and Palmer-Wasilla Highway Extension.

Churches in the project area include the Good Shepherd Lutheran Church. Several other churches, including Sacred Heart Catholic Church, First Presbyterian Church, First Baptist Church-Wasilla, are located within the project vicinity.

Nunley Park is located within the project area and offers picnic tables, benches, tennis courts, playground equipment, and restroom facilities. Other parks and recreational opportunities in downtown Wasilla area include the Iditapark, Carter Park, and Newcomb (Wasilla Lake) Park. These offer a wide variety of outdoor recreational activities such as volleyball, basketball, swimming, playground, and skateboarding.

Travel Patterns

The Parks Highway is currently experiencing access and congestion problems during peak travel times when traffic volumes are highest and vehicles are frequently waiting at intersections. There is a substantial amount of Wasilla's commercial/retail development concentrated along the Parks Highway making it a popular transportation corridor. The Parks Highway is also the primary route for drivers going to other communities including Anchorage and Fairbanks.

Some of the higher volume intersections along the corridor have dedicated turn lanes, but at most intersections and access points only the thru lanes are available. Drivers wishing to turn left must wait for sufficient gaps in oncoming traffic. Drivers wishing to make right turns do not block thru traffic, but they do slow traffic. Similarly, drivers wishing to access the highway from side streets and driveways must wait for sufficient gaps in traffic to turn onto the highway. Drivers wishing to travel to downtown Wasilla facilities and businesses, or access businesses or neighborhoods south of town need to cross the Parks Highway and Railroad tracks at Main Street/KGB Road or travel to the Palmer-Wasilla Highway (located approximately 1 mile east). Other crossings of the Parks Highway west of the project area such as Lucille Street, Lucas Road, and Church Road do not provide connections through to the road networks south. The next connection between KGB Road and the Parks Highway, over 5 miles west of Main Street, is Vine Road which does not continue north of the highway. During peak travel times, when congestion is at its worst, these waits can be long, increasing driver frustration. Delays and congestion are also worsened when trains block KGB Road.

3.4.3. Environmental Consequences

No Build Alternative

The No Build Alternative would not change the current socioeconomic conditions of the area. Knik Goose Bay Road/Main Street would retain its existing configuration along its current alignment. There would be no new crossing of the Parks Highway or the Alaska Railroad. In addition, there would be no ROW acquisitions.

Mobility, congestion and safety issues in the project area would continue to deteriorate. Local travel and access to businesses within downtown Wasilla would become increasingly difficult.

Proposed Action

General Characteristics

The Proposed Action may have minor socioeconomic impacts, due to the acquisition of residential and commercial parcels for additional roadway ROW. No residences or businesses are expected to be relocated; therefore, an economic loss is not anticipated.

During construction of the proposed project, access to adjacent and nearby businesses would become slightly more circuitous, causing some customers to temporarily go elsewhere or postpone their trips. Some travelers may choose alternative routes to avoid construction activity. Detours and delays would be short in duration and highly localized. They are not anticipated to affect social interaction or the long-term economic vitality within the project area. Construction practices that minimize construction related impacts to traffic and business access are addressed in Section 3.14.5.

Workers employed during the construction phase of the proposed project are expected to be locally available. The local availability of workers within commuting distance from the City of Wasilla indicates that no impacts to housing are anticipated. In addition, because the City of Wasilla has local sales taxes, and the proposed project may increase the number of City retail purchases such as lunch meals and groceries, the Proposed Action may increase tax revenue collected by the City of Wasilla. Construction of the Proposed Action may also create seasonal jobs and result in increased revenues for local businesses.

The Proposed Action would change access to the commercial area by altering the existing traffic pattern, relocating driveways and changing how people can access local businesses. It is assumed that drivers may currently avoid visiting local businesses along congested roadways especially during peak traffic periods. If people perceive access to be improved, they may change their shopping patterns and visit local businesses more often. The Proposed Action is expected to improve access to adjacent businesses and may result in increased economic activity.

Properties may increase in value because they have improved access. Any changes in value would be dictated by market demand for those properties and changes in value to eventually lead to increases or decreases in property values.

Reductions in congestion and improved access may reduce cars using others roads in the project area as short-cuts. Providing a high-capacity, safe access point to the Parks Highway should improve the mobility of commuters in the project area and may reduce commute times to Anchorage. The reduction in travel time would be a positive economic benefit because of the opportunity cost of that time.

Neighborhoods and Communities

The Proposed Action would not divide or fragment neighborhoods or impact community cohesion. It is anticipated that the improvements would improve community cohesion by improving the traffic grid and circulation, and adding pedestrian facilities. Railroad Avenue would no longer connect to Talkeetna Street due to proposed grade changes. The proposed cul-de-sacs would truncate the road, which would direct more thru traffic onto Susitna Avenue. Railroad Avenue would continue to provide access to commercial and residential properties along either side of Talkeetna Street using Boundary Street and Denali Street.

There are no relocations anticipated as part of the project and the Parks Highway would continue to separate the north and south neighborhoods. One property along Talkeetna Street would need to have its driveway moved from Talkeetna Street to Railroad Avenue. This would be a notable change for the property owner, but reasonable with access to the couplet via Denali Street and Susitna Avenue.

The Proposed Action would not increase the width of the Parks Highway but would make it easier to cross and may result in an improvement in cohesiveness but this effect is not anticipated to be substantial. Improvements to Talkeetna Street/Yenlo Street would increase traffic in this corridor but would reduce traffic on KGB/Main Street. This is not anticipated to have a substantial effect on community cohesiveness.

Neighborhoods throughout the project area and in nearby areas would benefit from the Proposed Action because it would reduce congestion in the area and allow improved access to the downtown Wasilla area. Periods of congestion would be shortened where vehicles wait at intersection to turn onto the Parks Highway or wait for gaps in traffic to make turns. Residential properties and other noise sensitive land uses may experience increased traffic and noise during and after construction (see Section 3.7 for further information on noise impacts).

Access to public facilities would be temporarily affected while the Proposed Action is being constructed. Access would be maintained but detours, delays and potentially greater emergency response times may occur during construction. These delays and disruptions to the traveling public would cease once construction is complete (see Section 3.14.5 for further discussion on construction impacts on traffic and accessibility). Emergency service response times, especially south of the Parks Highway, are expected to improve after the completion of the project. In addition, the new additional ARRC crossing provides an alternative route if the KGB Road crossing is blocked. School buses would experience detours and delays potentially affecting school bus routing and timing. Once the project is completed, the school district is likely to experience a positive impact because the school buses would be travelling through less congestion.

The proposed project would change existing travel patterns. Traffic on KGB/Main Street between Bogard Road and Entry Place would only go southbound; all northbound traffic would use Talkeetna Street/Yenlo Street. The proposed project would provide a multi-use pathway/sidewalk for the length of the project. This is likely to improve walkability and pedestrian safety in the area because the existing pedestrian network is discontinuous. It may also promote additional recreational use by cyclists and walkers.

Effects of the proposed project on neighborhoods, community cohesion, and local businesses would be mitigated by the DOT&PF through continued involvement and working closely with the City of Wasilla and the affected property owners and tenants through the design and construction of the proposed project.

3.5. Environmental Justice

Executive Order (EO) 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, directs each Federal agency to “promote nondiscrimination in Federal programs substantially affecting human health and the environment, and to provide minority and low-income communities access to public information on, and an opportunity for public participation in, matters relative to human health or the environment” and “make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies and activities on minority populations and low-income populations.” The FHWA has defined disproportionately high and adverse human health or environmental effects as adverse effects that:

1. Are predominately borne by a minority population and/or a low-income population, or
2. Will be suffered by the minority population and/or low-income populations and are appreciably more severe or greater in magnitude than the adverse effects that will be suffered by the non-minority population and/or non-low income populations.

3.5.1. Minority Populations

The study area is comprised of the individual census blocks that are within and immediately adjacent the project area (refer to Figure 8 for study area census boundaries). More specifically, the study area is comprised of 15 individual blocks within Census Tract (CT) 8, Block Group (BG) 3; 12 individual blocks within CT 9, BG 1; and 8 individual blocks within CT 9, BG 2. In total, in 2010, approximately 554 people live within the study area as compared to a population of 4,425 for the three block groups. Statistics for the Project Region (City of Wasilla and the MSB) have been included in this study for

comparison purposes. Table 7 compares minority status of the study area to those for the State and Project Region.

Table 7: Minority and Low-Income Populations by Census Blocks, 2010

Census Geography	Population	White (% of population)	African American (%)	American Indian or AK Native (%)	Asian (%)	Hispanic (%)	Other ^a (%)	Median Household Income (\$) ^b
Tract 8, Block Group 3	1,881	1,453 (77)	32 (2)	93 (5)	42 (2)	96 (5)	165 (9)	50,802
Tract 9, Block Group 1	1,329	1,107 (83)	12 (1)	56(4)	60 (5)	33(2)	61 (5)	64,750
Tract 9, Block Group 2	1,215	1,027 (85)	12 (1)	66 (5)	24 (2)	40 (3)	46 (4)	64,750
Study Area Total^c	554	429 (77)	10 (2)	42 (8)	19 (3)	18 (3)	36 (6)	-
Project Region								
City of Wasilla	7,831	6,368 (81)	98 (1)	388 (5)	164 (2)	333 (4.3)	480 (6)	53,433
MSB	88,995	73,676 (83)	817 (1)	4,735 (5)	1,075 (1)	3,301 (4)	5,391 (6)	70,343
State								
Alaska	710,231	455,320 (64)	21,949 (3)	102,556 (14)	37,459 (5)	39,249 (6)	53,698 (8)	69,014

Source: U.S. Census Bureau, 2010

^a“Other” includes the categories of Native Hawaiian and other Pacific Islander alone; some other race alone, and two or more races, and excludes all Hispanic or Latino populations.

^b Source: American Community Survey (ACS) 2007-2011 5-Year Estimates. Median incomes are reported at the Census Tract level.

^cTotal/Average for the Study Area is for individual blocks within the project area, not the entire block groups.

As defined by the Council on Environmental Quality (CEQ), a minority population is defined as either: (a) the minority population of the affected area exceeds 50 percent, or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population, or other appropriate geographical analysis. On average, there is a smaller percentage of ethnic minorities in the study area than that in the state. When compared to the Project Region, the percentage of ethnic minorities in the study area is slightly higher than both the City of Wasilla and the MSB. This is attributed partly to the overall low sample size of population located within the study area. Table 7 shows that the population living within the project area in 2010 is primarily comprised of White persons (77 percent) with 23 percent being of minority origin. There are no CTs and/or BGs within the study area that have a minority population of 50 percent or higher. Although minority populations are

found within the census blocks of the study area, the demographic profile of the populations within most blocks is predominately white.

3.5.2. Income and Poverty Levels

The FHWA Order 6640.23 defines “low-income” as a person whose household income is at or below the Department of Health and Human Services (DHHS) poverty guidelines. On average, the median household income in the study area is slightly lower than in the state and the Project Region. However, median household income levels vary dramatically between CT 8 and CT 9, as shown in Table 8.

Low-income status varies with household size.

Table 8 shows the 2012 DHHS Alaska poverty guidelines for different household sizes. In Wasilla, the average household size reported in 2010 is 2.6. Therefore, households in the study area must have a median household income below \$23,870 to be considered a low-income population. All census tracts that include parts of the study area have a median household income above \$23,870.

Yenlo Square is a 3-acre residential site development along the north side of the Yenlo Street and Swanson Avenue intersection. The City of Wasilla required the developers to maintain a 60-foot-wide ROW for the proposed Yenlo Street extension as part of their approved site plan. Yenlo Condos offer 20 units, Yenlo Apartments offer 14 units, and Swanson House has 10 units, for a total of 44 units of affordable housing to low- and very low-income level people.

Table 8: 2012 DHHS Poverty Guidelines for Alaska

Size of Family Unit	Poverty Guidance (\$)
1	\$13,970
2	18,920
3	23,870
4	28,820
5	33,770
6	38,720
7	43,670
8	48,620

For families/households with more than 8 persons, add \$4,950 for each additional person.
Source: *Federal Register*, Vol. 77, No. 17, January 26, 2012, pp. 4034-4035.

3.5.3. Environmental Consequences

No Build Alternative

The No Build Alternative would not change current conditions for low-income and minority populations; therefore, no human health or environmental impacts are anticipated from the proposed project.

Proposed Action

The Proposed Action would not disproportionately affect low-income and minority populations. The race/ethnicity composition of the study area is comparable to those in the state and Project Region. The study area has a slightly lower percentage of minorities than in the state and about the same as the Project Region. Median household income levels in 2011 for CT 8 and CT 9 vary between \$50,802 and \$64,750, respectively. The median household income in both CT 8 and CT 9³ are below the state average. The median income in both census tracts exceeds the poverty guideline for the average household size (2.6) in Wasilla. The data does not demonstrate the presence of a defined minority or low-income populations within the project area.

The Yenlo Street extension would bisect the Yenlo Square development located north of Swanson Avenue. This development is designed and managed for low-income and very low-income residents. It is reasonable to consider its presence an indicator of a low-income population in the study area.

The site developers and the City of Wasilla incorporated the requirement of a 60-foot ROW into their Plan Unit Development (PUD). Their approved PUD planned the residential development around the proposed Yenlo Street extension alignment. Small property slivers would need to be acquired to expand the intersection at Swanson Avenue. Residents of the site would be impacted by the increased vehicle traffic and traffic noise. The traffic signal at the intersection of Swanson Avenue and Yenlo Street with curb ramps will enhance the walkability and safety aspects desired by the Yenlo Square developers and residents. The new road connection between Swanson Avenue and Bogard Road would be a two-lane, 25 MPH urban roadway as it passes through Yenlo Square. Vehicle queues waiting at the Bogard Road intersection are not anticipated to extend back to the residential buildings. The additional vehicle traffic would generate more traffic noise, but the noise assessment model does not show the increase reaching the threshold of a significant level (see Section 3.7).

³ Median household income by block group is not available from the 2010 Census. The American Community Survey provides median household income in 2010 but the information is not available at census geographies below the census tract level.

Impacts to Yenlo Square residents are similar or less to residents along the entire Talkeetna Street/Yenlo Street road corridor. Consequently, the proposed project would not result in disproportionately high and adverse effects to minority or low-income populations.

3.6. Considerations Relating to Pedestrians and Bicyclists

Pedestrian facilities on the Main Street/KGB Road corridor are limited to a short section of sidewalk on Main Street north of the Parks Highway intersection, a section of pathway on the east side of Main Street between Swanson Avenue and Bogard Road, and a pathway along the west shoulder of KGB Road between the Parks and Palmer-Wasilla highways. Lack of continuous pedestrian facilities connecting residential development and the senior center to downtown creates unsafe conditions for pedestrians from these areas who wish to access downtown businesses and services. Discontinuous bicycle facilities in the project area force bicyclists onto the already-congested roadway and into the traffic stream.

3.6.1. Environmental Consequences

No Build Alternative

The No Build Alternative would not increase safety for pathway users. Discontinuous and non-ADA-compliant pedestrian facilities would remain. The existing pedestrian safety issue at the Main Street/KGB Road intersection with both the Parks Highway and the ARRC tracks – a lack of pedestrian refuge or crossing procedures – would remain.

Proposed Action

The Proposed Action would construct continuous, ADA-compliant pedestrian facilities along the proposed couplet corridor. The number of potential conflicts with motor vehicles would be reduced by providing and identifying pedestrian and bicycle crossing areas at the Main Street/KGB Road and Talkeetna/Yenlo Street intersections with the Parks Highway and the ARRC tracks. The pathways would encourage non-motorized vehicle use for local travelers, a goal outlined in the City Comprehensive Plan.

3.7. Noise

A Technical Noise Report was completed to identify existing and predicted future traffic noise levels (Appendix D). This noise analysis is in compliance with the FHWA noise abatement regulations in the U.S. Code of Federal Regulations 23 CFR § 772, *Procedures for Abatement of Highway Traffic Noise and Construction Noise*. This assessment is also in compliance with the DOT&PF *Noise Policy* dated April 2011, which describes the implementation of the FHWA noise regulations in Alaska.

Noise is measured in decibels (dB) on a logarithmic scale. Because human hearing is not equally sensitive to all frequencies of sound, certain frequencies are given more or less “weight.” The A-weighted scale, denoted as dBA, corresponds to the sensitivity range for human hearing. The hourly equivalent noise level [$L_{eq(h)}$] is used to analyze traffic noise levels and identify noise impacts. The $L_{eq(h)}$ is defined as the equivalent steady-state sound level which, in a stated period of time, contains the same acoustic energy as the time-varying sound level during the same period. Therefore, for the purposes of this analysis, L_{eq} can be considered the average sound level, and $L_{eq(h)}$ can be considered the average sound level occurring over a one-hour period. It is representative of the overall (average) traffic-generated noise level expressed on an hourly basis.

3.7.1. Noise Abatement Criteria

For the purpose of determining noise impacts, FHWA assigns different types of land uses to different activity categories based on the type of activities occurring in each respective land use (e.g., residences, schools, churches, commercial land, and undeveloped land). Noise Abatement Criteria (NAC) are assigned to each activity category. These NAC represent the maximum traffic noise levels that allow uninterrupted use within each activity category. Table 9 lists the seven land use categories and the NAC associated with each.

The noise analysis modeled noise levels at receptors in the project area for Activity Category B (residential), Activity Category C (campsites, churches and schools), Activity Category E (commercial) and Activity Category G (undeveloped) land uses. The FHWA definition of a traffic noise impact (23 CFR § 772) contains two criteria. Only one criterion has to be met to be considered an impact. Traffic noise impacts occur when the predicted traffic noise levels:

- Approach within 1 dBA or exceed the noise abatement criteria given in Table 9, or,
- Substantially exceed the existing noise levels.

The DOT&PF defines “approach” as within 1 dBA of the NAC (DOT&PF 2011). For example, a traffic noise impact would occur when noise levels at Activity Category B and C land uses are greater than or

Table 9: FHWA Noise Abatement Criteria

Activity Category	$L_{eq(h)}$	Description of Activity Category
A	57 dBA (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.

Activity Category	$L_{eq(h)}$	Description of Activity Category
B ¹	67 dBA (Exterior)	Residential.
C	67 dBA (Exterior)	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52 dBA (Interior)	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E	72 dBA (Exterior)	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A–D or F.
F	None	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing.
G	None	Undeveloped lands that are not permitted.

Source: Federal Highway Administration regulations 23 CFR 772, Table 1

¹ Includes undeveloped lands permitted for this activity category.

equal to 66 dBA, and at Activity Category E land uses when noise levels are greater than or equal to 71 dBA. There are no NAC for lands classified as Activity Category G. The DOT&PF policy defines a substantial increase in noise levels as a 15-dBA increase over existing noise levels.

3.7.2. Study Area

The study area included all noise sensitive receiver locations adjacent to the proposed roadwork planned within the project area. Land uses throughout the project area vary between Activity Category B (residential), Activity Category C (campsites, churches and schools), Activity Category E (commercial), and Activity Category G (undeveloped parcels).

3.7.3. Analysis Methodology

Traffic noise level measurements and concurrent traffic counts were collected at eleven representative locations throughout the project area to establish existing conditions and validate the noise model. The traffic noise study evaluated noise levels using simulations performed with the FHWA Traffic Noise Model (TNM), Version 2.5. TNM is a three-dimensional computer model that calculates traffic noise levels using the following types of information:

- Vehicle mix and volume, using five default vehicle types;

- Vehicle speeds;
- Roadway geometry;
- Receptor locations; and
- Ground cover types and topographic terrain between roadway and receptors.

Worst-case hour traffic data was used to predict existing noise levels (2011), and future design year (2035) worst case hour traffic data were used to predict the future No Build and future Build Alternative noise levels at each modeled receptor in the study area.

3.7.4. Existing Conditions

The results for the existing condition predict that peak noise levels at modeled receptors would range from 48 to 72 dBA. One residential and one commercial receptor are predicted to have noise levels greater than or equal to the applicable NAC under the existing condition. See Figure 10.

3.7.1. Environmental Consequences

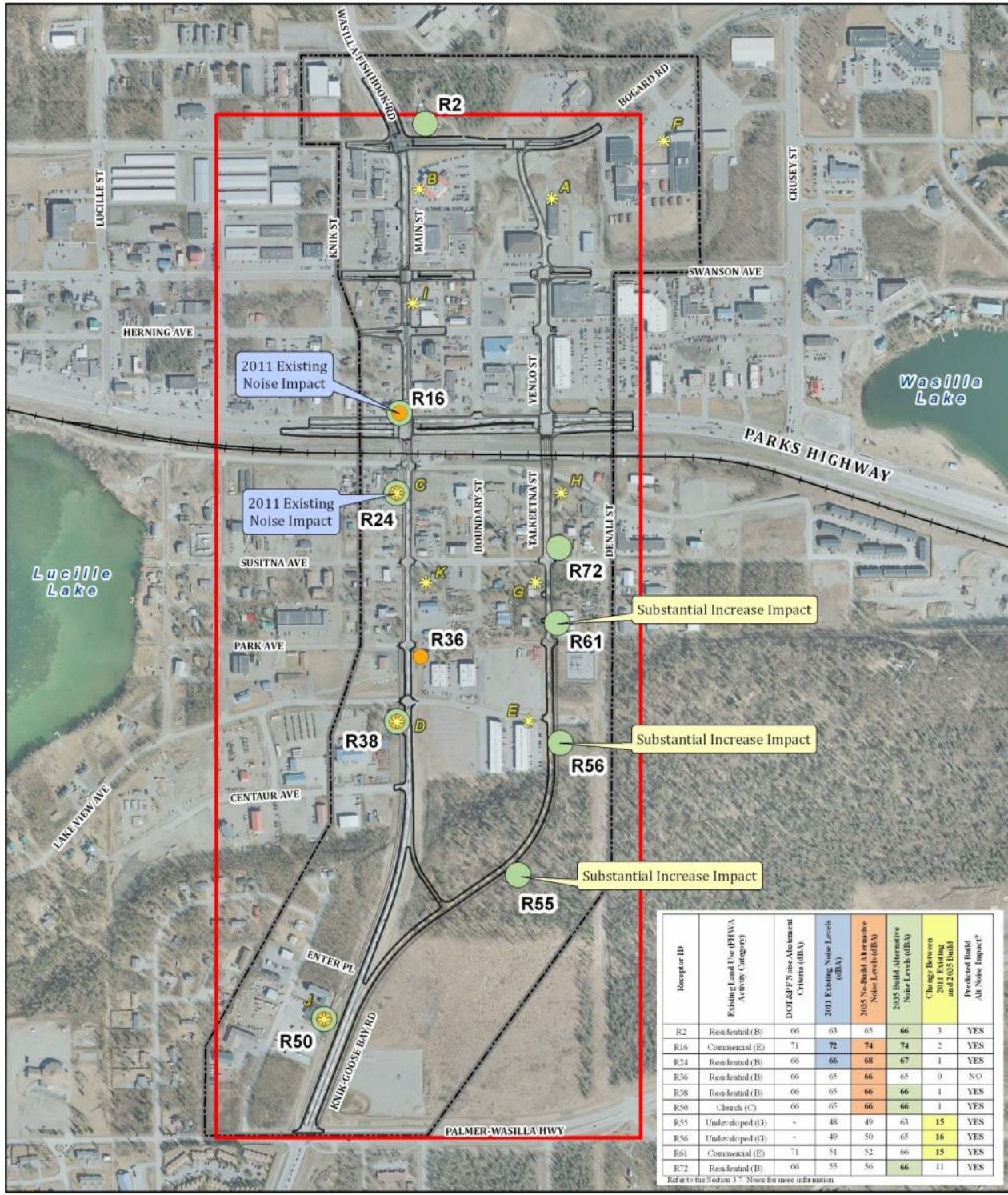
No Build

Results for the No Build Alternative predict that peak noise levels at modeled receptors would range from 49 to 74 dBA. Changes in noise levels between the existing condition and the No Build Alternative at specific receptors range from 0 to 2 dBA, and are due to changes in traffic volumes predicted to occur between 2011 and 2035. Three residential, one church, and one commercial receptor are predicted to have noise levels greater than or equal to the applicable NAC under the No Build Alternative.

While noise impacts were identified at some receptors under existing conditions and the 2035 No Build Alternative, no noise abatement is proposed. The DOT&PF does not have a retrofit noise barrier (Type II) program.

Proposed Action

Under the Build Alternative, noise levels at modeled receptors are predicted to be between 53 and 74 dBA. The changes in noise levels between the existing condition and the Build Alternative at modeled receptors range from a reduction of 2 dBA to an increase of 16 dBA. Changes in noise levels between the No Build Alternative and the Build Alternative at modeled receptors range from a reduction of 3 dBA (along the Main Street corridor) to an increase of 16 dBA (along the Talkeetna Street extension). Changes



Projection: AK Stateplane Zone 4, NAD 83 FT
Aerial Image: May 3, 2010, Kodiak Mapping, Inc.
Source: ADOT&PF, MSB GIS, HDR
Date: April 18, 2013

LEGEND

- 2035 No-Build Alternative Noise Impact
- 2035 Build Alternative Noise Impact
- ★ Monitoring Location (Site A-K)
- Study Area Boundary
- Project Area

**FIGURE 10:
NOISE IMPACTS**

in noise levels between the existing condition and No Build Alternative, and the Build Alternative are due to changes in traffic volumes, changes in roadway alignments, and changes in shielding.

Four residential properties, one church, and one commercial property are predicted to have 2035 noise levels greater than or equal to the NAC under the Build Alternative. One commercial property and two undeveloped properties are predicted to have noise levels that substantially exceed existing levels in 2035 under the Build Alternative. See Figure 10.

Noise abatement measures are considered in areas where predicted traffic noise levels approach or exceed the FHWA NAC, or when the predicted traffic noise levels substantially exceed the existing noise levels. Abatement measures are considered for these receptors consistent with the DOT&PF guidelines.

Noise abatement, in the form of noise barriers, was considered for the five of the nine receptor locations predicted to be impacted under the project Build alternatives. For each of these locations, TNM was used to determine whether a barrier could provide the minimum noise reduction goal of 7 dBA while staying below the allowable cost per benefitted residence of \$32,000 determined to be reasonable by the DOT&PF Noise policy. None of the barriers modeled could meet both of these goals. Details can be found in the Technical Noise Report in Appendix D.

Barriers were not modeled for the two undeveloped parcels, nor for the Category E property where an unmanned storage business is located. These properties are not considered noise sensitive and it is not DOT&PF policy to provide noise abatement to properties that are not considered noise-sensitive. An additional Category E property did not contain sufficient space for a barrier to be constructed between the sidewalk and the front of the building.

As a result of the mitigation analysis, the DOT&PF finds that noise mitigation for isolated impacts is not able to meet DOT&PF feasibility and reasonableness criteria. Therefore, noise abatement measures are not recommended.

Noise impacts associated with construction activities are discussed in Section 3.14.4.

3.8. Cultural Resources

In fall 2011, a Cultural Resources Survey was conducted to identify archaeological and cultural resources of significance in the project area.

3.8.1. Study Area

The Area of Potential Effect (APE) included the project footprint and staging areas for equipment and materials, and takes into account potential indirect effects such as the introduction of audible and visual

elements, as well as changes in traffic patterns which may occur as a result of the project. A windshield survey was conducted in a study area two blocks wider than the APE, in order to determine the potential for a historic district that may incorporate portions of the APE.

3.8.2. Analysis Methodology

The survey consisted of a literature review and a field evaluation. The literature review included an examination of historical and archeological developments, prior archaeological research conducted in the area, and Native land use. Sources of information included published and unpublished documents, the Alaska Heritage Resource Survey (AHRS) library, the MSB tax account database, the Department of Natural Resources and Bureau of Land Management's Alaska Spatial Data Management System, and personal communications with local cultural resources specialists. The field surveys consisted of windshield and pedestrian surveys of the APE, as well as the broader study area. No subsurface testing was done as part of the reconnaissance survey, as the area exhibited extensive disturbance. Additionally, a previous survey in the area in 2004 identified the area as having low potential for containing cultural resources due to previous disturbance.

The literature review identified 15 previously recorded sites within or in close proximity to the project's APE. The field investigation identified an additional 18 buildings as being at least 45 years of age, for a total of 33 potentially historic buildings in the APE. All identified buildings and previously recorded unevaluated sites were evaluated for eligibility for listing in the National Register of Historic Places (NRHP), of which six buildings are listed or recommended as eligible for listing in the NRHP.

3.8.3. Consultation Process

On December 5, 2011, the FHWA sent an *Initiation of Consultation* letter to the SHPO, two locally recognized Tribes, and certified local government requesting information regarding places of traditional, religious and cultural importance. One Tribe responded and stated they would defer to the other; however, the referenced Tribe did not respond. No additional comments were received. The FHWA sent the Cultural Resources Survey and National Register Evaluations to the SHPO, who concurred with its findings of eligibility. FHWA subsequently sent a Finding of No Adverse Effect on August 9, 2012, and the SHPO concurred with the findings on August 16, 2012 (see Appendix B).

3.8.4. Environmental Consequences

No Build Alternative

This alternative would not construct or alter the project area. There would be no impact to historic properties.

Proposed Action

The SHPO reviewed the undertaking for potential impacts to historic and archaeological resources pursuant to Section 106 of the National Historic Preservation Act, and concurred with FHWA's finding that no historic properties will be adversely affected on August 16, 2012 (See consultation in Appendix B).

3.9. Hazardous Waste

A Phase I Environmental Site Investigation was conducted in 2011 to identify any existing, potential, or suspect conditions resulting from the use, handling, and disposal of hazardous substances in or near the project area (Appendix E). The study area encompasses the properties directly adjacent to the footprint of the Proposed Action alignment, following both the Main Street/KGB Road corridor and the Talkeetna Street/Yenlo Street corridor. The investigation consisted of a review of historical records and aerial photos, State and Federal databases containing information about contaminated sites, interviews with property owners when possible, and field investigations.

3.9.1. Phase I Environmental Site Assessment

The following databases were reviewed to determine if any new potentially contaminated sites had been discovered since the re-evaluation was completed:

- National Priorities List
- Alaska Hazardous Waste Sites
- Comprehensive Environmental Response, Compensation, and Liability Information System List
- Emergency Response Notification System List
- Alaska Leaking Underground Storage Tank Database
- Alaska Underground Storage Tank Report

A discussion of these databases can be found in the Phase I Environmental Site Assessment Report, Section 4.3: Regulatory Database Search (Appendix E). A visual site reconnaissance was conducted on August 3, 2011.

A Recognized Environmental Condition (REC) is the presence or likely presence of a hazardous substance or petroleum product under conditions that indicate an existing release, a past release, or a material threat of a release into structures on the project area or into the project area's ground,

groundwater, or surface water. The 2011 assessment revealed no evidence of RECs in connection with the project area and the surrounding parcels except the following (see Figure 11):

On-Site REC

- Surface stains observed on Talkeetna Street, in the vicinity of 450 Talkeetna Street, where heavy machinery was stored and between East Railroad Avenue and East Susitna Avenue. Whether this staining is the result of released contaminants is unknown. If it is, the impact or source of released contaminated to the subsurface is also unknown.

Off-Site REC

- Tesoro Filling Station at 211 N. Main Street (adjacent to project area). This site constitutes a REC because of documented past releases of petroleum hydrocarbons and because it poses a material threat of a release.
- Holiday Filling Station at 225 N. Boundary Street (90 ft west of Yenlo Street). This site constitutes a REC because it poses a material threat of a release.

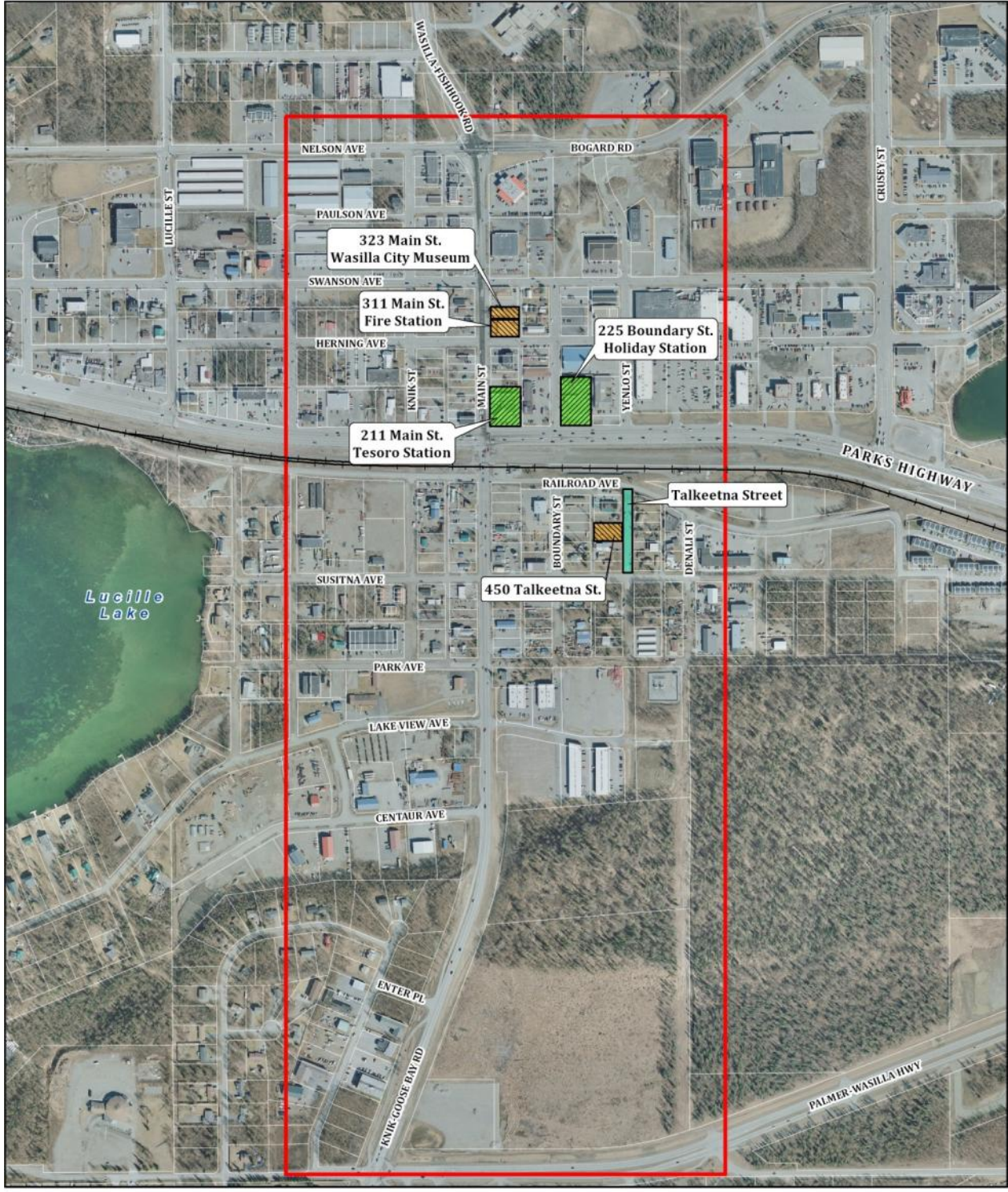
Off-Site Historic REC

- Tesoro Filling Station at 211 N. Main Street (see above)
- Wasilla Fire Station located at Main Street and Herning Avenue. This site was added to the Alaska Department of Environmental Conservation (ADEC) LUST database in 1991 after a release from a UST was confirmed. Cleanup was initiated in the same year. Site closure was approved in 1992.
- A & B Tool Equipment Rental at 450 Railroad Avenue, adjacent to KGB Road. This site was added to the ADEC LUST database on November 20, 1990. According to the database report, 67 cubic yards of contaminated soil was excavated and spread onsite. The site was closed on November 22, 1990.
- Wasilla City Museum at 323 North Main Street. According to the ADEC contaminated sites database, the site was added in September 1990 after diesel contamination of the soil was encountered during the removal of a heating oil tank. The site was “closed” by the ADEC in November 1990 after soil samples confirmed contamination levels below the ADEC cleanup levels.

3.9.2. Environmental Consequences

No Build Alternative

The No Build Alternative would not involve construction or ground disturbing activities; therefore, no potential for encountering hazardous materials would exist.



Projection: AK Stateplane Zone 4, NAD 83 FT
Aerial Image: May 3, 2010, Kodiak Mapping, Inc.
Source: ADOT&PF, MSB GIS, HDR
Date: April 18, 2013

LEGEND

- On-Site REC
- Off-Site REC
- Off-Site Historic REC
- Railroad
- Project Area

* REC = Recognized Environmental Conditions

**FIGURE 11:
HAZARDOUS MATERIALS,
RECOGNIZED
ENVIRONMENTAL
CONDITIONS (REC)**

Proposed Action Alternative

The Proposed Action would require excavation and construction activities along Talkeetna Street between Railroad Avenue and Susitna Avenue, which was identified as an on-site REC. The other 32 narrow strip takes along existing ROW are anticipated be low-risk sites. Impacts associated with the use and storage of hazardous materials during construction are addressed in Section 3.14.3.

3.10. Water Quality

3.10.1. Existing Conditions

The project area is located within Lucille Creek and Cottonwood Creek watersheds. In 1994, Lake Lucille was determined to be impaired and placed on the Section 303(d) list for low dissolved oxygen and nutrients. In 2002, the EPA approved a Total Maximum Daily Load (TMDL) for nutrients, and Lake Lucille was removed from the Section 303(d) list in 2002/2003. Between 2004 and 2006, the ADEC collected water quality data and found dissolved oxygen levels to be within water quality standard ranges during open water conditions, but below standard ranges when frozen over. It is listed currently as a Category 4a water body, which means it is impaired but does not need a TMDL, and/or a TMDL has been completed. Cottonwood Creek, which flows through Wasilla Lake east and south of the project area, is listed as a Category 5 impaired water body on the State of Alaska 303(d) List.

Downtown Wasilla has a discontinuous storm water collection system north of the Parks Highway. There are sections of curb and gutter, and the remainder of the study area consists primarily of shallow ditches on either side of the roadway with small culverts under access points. Until several years ago, runoff simply infiltrated the soil of nearby vacant properties, but recent developments have eliminated most permeable surfaces in the area.

The City of Wasilla has identified Iditapark, a 30-acre park southwest of Nelson Avenue and Lucille Street, as the city's primary storm water disposal site. The City has developed a portion of the park into a three-celled storm water storage and treatment area. At the request of the City in 2002, DOT&PF provided partial construction funding to construct a tie-in with the city storm drain system for storm water requirements associated with the Wasilla-Fishhook Road and Main Street improvements. The storm drain system conveys water from Main Street along Swanson Avenue and Tommy Moe Drive to Iditapark for treatment and infiltration.

City streets east of Main Street also have curb and gutter with individual drainfields under the pavement as discharge points above groundwater. The exception is Swanson Avenue east of Main Street that was reconstructed 2 years ago with a storm drain that ties into the State storm drain along Crusey Street that is

connected to the Parks Highway storm drain, which daylights into a ditch along the ARRC tracks. The flow runs east through State DOT&PF property and into Cottonwood Creek.

Roads south of the Parks Highway do not have storm drain facilities, with the exception of Susitna Avenue for a few blocks east of KGB Road. This has curb and gutter with drywells and discharge points. The remaining City roads have roadside ditches for collection and infiltration. KGB Road is a breakpoint with ditch flow west running towards Lake Lucille and ditch flow east running north and east to ARRC ROW. Because much of the surrounding terrain is generally flat, much of the runoff is filtered through grasses and/or other vegetation then infiltrates the ground before reaching any receiving waters.

3.10.2. Environmental Consequences

No Build Alternative

The No Build Alternative would not alter current water quality conditions or increase the amount of impervious surface area in the proposed project area. It would not construct any improvements to the existing system.

Proposed Action

The Proposed Action would increase the impervious road surface area within the project area from 14.9 acres to 20.0 acres, an increase of 5.1 acres (34 percent). This increase would be minor in nature and would not alter existing overall drainage patterns. Most of the new impervious road surface (4.2 acres) is south of the Parks Highway where Talkeetna Street is widened and extended. Runoff would continue to sheet flow off of the pavement and filter through vegetated swales before reaching surface waters.

Construction of the Proposed Action would require the implementation of a curb and gutter/storm sewer system in some areas where there are presently roadside ditches. A continuous storm drainage system would be integrated into the road design in all urban road sections north of the Parks Highway. Storm water runoff along Main Street south of Herning Avenue would flow south and run into pipes that drain into swales along the Parks Highway. Storm water runoff along Main Street between Bogard Street and Herning Avenue would be connected to the storm drain system under Knik Street, which outlets for treatment and infiltration at Iditapark.

Curb and gutter catchment systems would be used along the Yenlo Street corridor as well. Such a system is currently in place, but will need to be upgraded to accommodate the proposed improvements. The system would be extended north to the intersection of Yenlo Street and Bogard Road. The storm water flows south to the Parks Highway ultimately to Cottonwood Creek.

South of the Parks Highway, additional curb and gutter catchment system would be integrated into the urban road system along KGB Road and Talkeetna Street to Park Avenue. The flows would be directed into roadside ditches for infiltration. Where rural road sections are designed, KGB Road (south of Park Avenue) and Talkeetna Street (south of Park Avenue) would not have a buried drainage catchment system. While minor ditching may be required in specific locations to prevent excessive ponding, it is anticipated that soil conditions are sufficient to allow most stormwater to simply flow off the road surface and infiltrate naturally.

To the south of the intersection between Yenlo Street/Talkeetna Street and the Parks Highway, a new embankment would be constructed where the street rises to meet the railroad at-grade. This fill would block the flow of runoff through the swale, and hydraulic studies would be conducted to determine requirements for culvert sizing in this location.

Construction activities would cause a temporary degradation of water quality. Clearing and grading activities would expose soils to wind and rain erosion until those areas can be temporarily or permanently stabilized. New ground disturbance could increase sedimentation and increase turbidity of all receiving waters. Surface runoff could carry additional nutrients or contaminants from cars and construction equipment. See Section 3.14.3 for further discussion of construction related water quality impacts.

Water quality is expected to return to background levels after construction.

3.11. Invasive and Noxious Plants

3.11.1. Existing Conditions

Invasive and noxious weeds are those species introduced from another region that become established and often overcome native species. Once established, they can permanently change the structure and function of ecosystems by hybridizing with native species, altering soil and water composition, and degrading water quality. In aquatic systems, established invasive plants can restrict or impede fish migration and damage fish habitat. Alaska has been largely unaffected by invasive species infestations, however, over 157 non-native species have been established in the state. The majority of invasive species have been identified near populated areas. As people and equipment move about, roadway systems often provide a way to transport invasive species to new locations and spread throughout the landscape.

Several State and Federal organizations and regional community groups are working to identify, control, and prevent the spread of invasive and noxious weeds in Alaska. The Alaska Natural Heritage Program (ANHP) maintains the Alaska Exotic Plants Information Clearinghouse database which contains information on more than 330 non-native plant species tracked in the state. The State of Alaska regulates

and manages the spread of invasive and noxious weed species that could pose a public health risk or harm the agricultural industry. The State has prohibited 14 and restricted 9 noxious weeds. Prohibited species are harmful to public health and the environment and are often very difficult to control or eradicate. Prohibited species cannot be sold or grown in the state. Restricted species are generally considered as nuisances or economically detrimental, but can be controlled more easily.

3.11.2. Environmental Consequences

No Build Alternative

The No Build Alternative would not change the current status of non-native plant species in the project corridor. No invasive species would be introduced into the proposed project area as a result of new road construction. Existing invasive species could easily continue to grow unchecked and be transported throughout the state on vehicles, people, or wildlife travelling through the area.

Proposed Action

The Proposed Action could provide a means of transporting invasive species throughout the project corridor and the state. Invasive species could be inadvertently introduced during construction as fill material and other construction materials are brought from borrow sites or other locations. Similarly, seed mixes or landscaping materials brought from other states could contain invasive species. Invasive species and/or seeds can easily be transported on the wheels of construction equipment.

The Proposed Action would cause the permanent loss of some native vegetation adjacent to the existing roadways. This loss could change the composition of vegetation and alter ecological integrity. This alteration could provide a more suitable environment for invasive species and enable them to dominate remaining native species.

3.11.3. Mitigation Measures for the Proposed Action

The following actions are typical construction methods employed by DOT&PF to avoid and minimize the introduction and spread of invasive species in compliance with EO 13112. These measures are typically included in soil stabilization and revegetation plans identified in the contractor's Storm Water Pollution Prevention Plan (SWPPP) and required by the Construction General Permit (see Section 3.12):

- All construction equipment and vehicles would be washed before being brought on site to remove dirt, seeds, roots, and other plant fragments to prevent any invasive species from being brought onto the project.
- Any erosion control materials made from straw or hay (e.g. wattles, bales of hay, etc.) would be made from certified weed free straw or hay. If certified materials are not available, locally

produced products would be used to minimize potential importation of new weed propagules from outside Alaska.

- All disturbed areas would be reseeded with certified weed-free seed and vegetated with native species per Alaska Department of Natural Resources' *A Revegetation Manual for Alaska*.

3.12. Permits and Authorizations

There would be no permits or authorizations required by the No Build Alternative. Construction of the Proposed Action would require the following permit:

Alaska Pollutant Discharge Elimination System (APDES) General Permit for Large and Small Construction Activities in Alaska. This permit is authorized by the Clean Water Act and regulates point sources that discharge pollutants into Waters of the United States. ADEC administers and enforces this program. Potential water quality impacts would be minimized through the use of Best Management Practices (BMPs) and implementation of a DOT&PF-approved Storm Water Pollution Prevention Plan (SWPPP). DOT&PF and the contractor would both notify the ADEC of their intent to use the permit prior to construction.

3.13. Energy

Roadway energy consumption manifests itself in the raw materials and fuels used to construct, operate, and maintain a road facility. Construction energy is comprised of the raw materials and equipment necessary to build and maintain the highway. Fuel consumption is affected by the type of vehicle using the roadway, the travel speed, geometry, congestion and condition. The recent and projected growth within the vicinity of the proposed project ensures an increase in energy use, therefore increasing consumption of fuels, oils, and other energy-related products.

3.13.1. Environmental Consequences

No Build Alternative

The No Build Alternative would not change the existing highway or the amount of energy consumption. Energy consumption would continue to rise in conjunction with rapid growth and development in the area.

Proposed Action

The Proposed Action is expected to result in a minor increase in energy consumption. This increase would be offset by a reduction in fuel consumption resulting from decreasing congestion and limiting traffic delays. Energy consumption would temporarily increase during construction and continue to

increase as a result of road maintenance, lighting, and increased vehicle use. As the surrounding areas are developed, those properties would use additional energy during construction and when operational.

3.14. Construction Impacts

Construction of the Proposed Action would involve reconstruction of the existing lanes, intersections, approaches, shoulders, and pathways, construction of additional lanes, and replacing traffic signals and culverts. Purchase of additional ROW and relocation of existing utilities would be required prior to construction. Construction staging would likely include maintaining traffic on existing lanes while new road segments are constructed and diverting traffic to the new lanes while any required improvements are made to existing lanes.

Anticipated construction-related impacts include a minor deterioration of air and water quality, potential risks associated with the use and storage of hazardous materials, increased noise, limited accessibility to businesses and residences, and altered traffic patterns and delays. These potential construction-related impacts would temporarily disturb local residents and commuters in the area. Mitigation measures aimed at avoiding and minimizing potential impacts are proposed for each potential impact and would be implemented in accordance with Federal, State, and local laws, permit stipulations, and contract specifications. Public involvement measures would continue through the environmental process and during construction.

3.14.1. Air Quality

Construction-related impacts to air quality would result from increased dust and particulate matter contained in vehicle and equipment emissions. Dust from dirt, rock, and other fine materials can become airborne when being transported in uncovered trucks to and from the site and when trucks track the materials on and off the site. Trucks, heavy equipment, and other construction equipment generate emissions from burning gasoline and diesel fuels, which contain air pollutants such as carbon monoxide (CO) and nitrogen oxides (NO_x). At high concentrations, these chemicals may affect human health and ecosystems. Ambient CO and NO_x levels are expected to increase during construction, but are not expected to exceed local air quality standards.

Mitigation Measures

Several mitigation measures would be used to minimize adverse air quality impacts during construction, as required by the APDES Construction General Permit. Airborne dust would be minimized by application of water, periodic sweeping and proper disposal of solid materials, and stabilization of all disturbed soils, entrances and exits, as needed. The specific BMPs proposed and their frequency of use

would be determined by the contractor, and outlined in the project SWPPP. Additional BMPs typically identified in the SWPPP that may minimize air quality impacts during construction include maintaining routine maintenance and servicing schedules on construction equipment, and identifying contractor operating procedures to avoid unnecessary idling by vehicles, trucks and heavy equipment.

3.14.2. Water Quality

Construction-related impacts to water quality would result from discharge of storm water from the site, and accidental spills or leaks from vehicles or heavy equipment. Storm water, water from dust abatement, and any other water from the project site would be channeled through roadside ditches or through a storm drain system into Lucille Lake. Accidental spills of petroleum or other toxic chemicals could contaminate waters that eventually flow into Lake Lucille.

Mitigation Measures

Mitigation measures would be implemented to prevent and minimize potential impacts to water quality in accordance with the DOT&PF contract specifications, and conditions and stipulations of the APDES Construction General Permit. The following measures, described below, are standard DOT&PF construction and design procedures that meet requirements of the APDES Construction General Permit.

The DOT&PF would prepare and provide the contractor with an Erosion and Sediment Control Plan (ESCP). The contractor would be required to prepare a SWPPP, using the ESCP as a guide, and submit it to the DOT&PF for approval prior to construction. The SWPPP would identify all receiving waters and specify the structural and procedural BMPs to be utilized during construction to prevent erosion and untreated runoff from reaching nearby water bodies. All vehicles, trucks, and heavy equipment would be kept within construction limits and operated in a manner that limits unnecessary ground disturbance. Equipment would be routinely inspected and serviced to prevent leaks and accidental spills. The SWPPP would also include a Hazardous Material Control Plan, which includes established procedures for responding to accidental spills. If a release containing a hazardous substance occurs, the ADEC will be notified in accordance with the requirements of 40 CFR Part 110, 117, and 302 as soon as site staff has knowledge of the discharge. All contaminated material and soils would be contained and disposed of offsite in an approved location.

3.14.3. Hazardous Materials

Construction equipment and activities can use and store hazardous materials such as petroleum products, within construction areas. The following practices outline the procedures used by DOT&PF and the contractor to minimize the occurrence of spills and establish a process should one occur.

Mitigation Measures

Detailed BMPs and housekeeping measures regarding hazardous materials would be outlined in a site-specific Hazardous Material Control Plan, which is a required part of the contractor's SWPPP. The contractor would be required to practice proper hazardous material storage and handling and adhere to the DOT&PF emergency response procedures, which stipulate that all work must stop immediately and the site secured to prevent unauthorized access if hazardous materials are encountered. In addition, the appropriate regulatory authorities must be notified immediately. Phone numbers of the National Response Center and 911 emergency services would be made accessible at work sites. If contamination is encountered unexpectedly during construction activities, the ADEC would be notified and the response efforts would be handled in accordance with an ADEC-approved Corrective Action Plan.

3.14.4. Noise

Construction-related increases in the noise levels would result from operation of construction equipment and increased traffic to and from the project site.

Mitigation Measures

Trucks and heavy equipment going to and from the project site would be equipped with mufflers and routed away from residential areas to the extent practicable. Operation of construction equipment would be limited to daytime hours when possible. If work during nighttime hours is necessary, the contractor would be required to comply with all local noise ordinances. The public would be notified in advance of construction activities.

3.14.5. Traffic and Accessibility

Construction-related activities would result in altered traffic patterns, traffic delays and limited accessibility to businesses and residences. Public services would be temporarily impacted due to delays and detours. Work within the railroad ROW would require a halt of all rail traffic. These construction activities would need to be coordinated with ARRC to ensure minimal interruption of operations.

Standard DOT&PF procedures minimize the impacts of construction on traffic flow and residential and business access. The contractor would be required to prepare and implement a Traffic Control Plan (TCP). This is a requirement on all highway projects where work occurs in a State-maintained ROW (DOT&PF, 2012b). A TCP would identify what traffic control devices would be used and identify their location and operations in a work zone to ensure traffic flow through the project corridor. TCPs include phased staging and traffic routing plans, and may include a public information plan. The contractor would be required to maintain access to businesses throughout the construction period, as feasible, and make

provisions for posting appropriate signs to communicate the necessary information to potential customers. The contractor would keep daytime street closures to a minimum. If the closure of local streets is required during construction, detour routes would be provided and clearly marked.

Businesses and residences would retain access during construction; however, limiting or altering access may result in minor economic losses to businesses during construction. Business owners, the public, affected local schools, public service organizations and emergency personnel would be notified in advance of construction activities and potential road closures.

3.14.6. Wildlife

The Bald and Golden Eagle Protection Act provides for the protection of the bald eagle and the golden eagle by prohibiting, except under certain specified conditions, the taking, possession, and commerce of such birds. The USFWS developed the national bald eagle management guidelines in May 2007, which should be followed to comply with the Eagle Act. A survey conducted by the USFWS in 2003 did not document any bald eagle nests. According to the USFWS Alaska Bald Eagle Nest Atlas, no nest are recorded within the project area. A survey for bald eagle nests would be done prior to construction.

3.15. The Relationship Between Local Short-term Uses of Man's Environment and the Maintenance and Enhancement of Long-term Productivity

Construction projects often result in some degree of impact to the natural and man-made environment, such as increases in noise levels, degradation of local air quality, changes in travel patterns and accessibility, and increased storm water runoff. An important component of any construction project is creating a balance between the project's benefits and any potential impacts to the environment. The project's benefits must outweigh any adverse affects for the project to be justified. Congestion within downtown Wasilla has been a long standing frustration for local residents and businesses, as well as through traffic drivers. Crash rates within the project area are higher than average. The proposed project is expected to increase system connectivity, reduce those crashes and improve safety for all roadway users.

The predicted impacts associated with the proposed project, such as ROW acquisitions, changes in access, and increases in energy consumption are common components of transportation projects. These impacts are minor in comparison to the benefits associated with increased capacity, and especially, improved safety in the project area.

3.16. Any Irreversible Commitment of Resources

Construction of the proposed project would require the use of and irretrievable commitment of environmental, financial, and human resources. Raw materials, such as gravel and aggregate surface course materials, and energy would be used to complete the project. Because much of the project footprint is existing roadways, only a limited amount of additional land would be required for the roadway extensions and minor widening. This conversion of land is irretrievable while it is being used as a transportation facility.

The Proposed Action would require irretrievable expenditure of Federal, State and city funds, which is estimated to total approximately \$22,000,000 in current year dollars. After construction, continual State funding would be required to adequately maintain the roads. The proposed project would also require a significant amount of human resources including hours spent in planning, construction, inspection and oversight of the project.

The proposed project would also require raw materials and energy to complete. Preliminary estimates indicate the project would require approximately 52,000 cubic yards of borrow materials, 16,000 cubic yards of base course materials, 7,000 cubic yards of asphalt, and 90,000 cubic yards of excavation. These types of construction materials are usually readily available and are not likely to become scarce.

3.17. Cumulative Effects

Federal regulations implementing NEPA (40 CFR 1508.7) define a cumulative effect (cumulative impact) as “the impact on the environment, which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.” The following section identifies and describes potential cumulative effects that could result from the Proposed Action in combination with other past, present, or reasonably foreseeable future human actions or natural events near the project area in downtown Wasilla. The other actions and events are called *external actions* because they take place independently from the Proposed Action. By considering external actions that could interact with the Proposed Action, the cumulative effects analysis allows for potential unintended consequences of the Proposed Action to be identified.

The methodology for determining the cumulative effects analysis includes:

- Definition of spatial (geographic) and temporal (time frame) boundaries of the analysis

- Identification of past, present, and reasonably foreseeable future actions (RFFAs) that could produce additive or synergistic environmental effects when combined with potential direct or indirect impacts of the Proposed Action
- Description and discussion of potential cumulative effects of the Proposed Action on each environmental resource category

Last, it is appropriate to discuss the No Build Alternative as it relates to cumulative effects because the following conditions would continue even if the proposed project is not built. The existing condition, with its road links, bottleneck, traffic congestion, discontinuous or no pedestrian facilities, and railroad conflicts would still occur. Both commercial development and residential development would continue and will add additional traffic through the project corridor.

3.17.1. Geographic Scope and Timeframe for Cumulative Effects

The CEQ states that a cumulative effects analysis should be conducted within the context of resource, ecosystem, and human community thresholds. Each resource, ecosystem, and human community should be analyzed in terms of its capacity to accommodate additional effects, based on its own time and geographic space parameters.

The time frame for cumulative impacts analysis includes past and future time periods in addition to the present. The time period for consideration of past actions is approximately 30 years, as it was about 30 years ago that the planning efforts initially identified the need to rehabilitate the Wasilla-Fishhook Road. It is also important to recognize the construction of the Alaska Railroad mainline and the Parks Highway through the project area was completed well before this time frame. The time frame for consideration of future cumulative impacts is approximately 20 years. This time frame is chosen because typical transportation planning horizons and comprehensive land use plans are approximately 20 years. The future traffic forecast used for this project was 20 years.

For the purposes of this cumulative effects analysis, the geographic area is generally the downtown Wasilla vicinity study area and nearby transportation infrastructure that makes up the Wasilla area transportation network that would be directly and indirectly impacted by the proposed project.

3.17.2. Past and Present Actions

Past actions that have shaped the baseline condition, and in some cases continue to exert a persisting influence on the baseline condition, include:

- Construction of the Alaska Railroad, 1913–1923
- Founding of Wasilla, 1917

- Completion of the George Parks Highway, 1971
- The Parks Highway was reconstructed to a four-lane highway from the Parks/Glenn Highway Interchange through Wasilla, 1980s through early 2000s
- The Palmer-Wasilla Highway extension between the Parks Highway and KGB Road, completed in 2002
- Wasilla Fishhook Road: Bogard Road to Seldon Road, 2008
- The Port MacKenzie Industrial Port/Park Deepwater Dock constructed, 2004
- Major residential and commercial growth in the Wasilla area and the MSB. This is also a reasonably foreseeable action as continued growth is anticipated especially due to the availability of developable land.

3.17.3. Reasonably Foreseeable Future External Actions

RFFAs are likely to occur within the planning horizon of the Proposed Action. The RFFAs that are likely to affect study area resources are listed below. For the most part, these actions are projects planned by the MSB, City of Wasilla, or the State of Alaska (which includes the Alaska Railroad). Sources for these actions include a number of planning documents, including the latest DOT&PF STIP (2012–2015), the City of Wasilla Comprehensive Plan (2011), plans as identified by the Alaska Railroad, the 2007 MSB LRTP, and the 2011 Port MacKenzie Master Plan Update.

Transportation Projects

A number of transportation improvement projects have been programmed for development, as identified in the 2012–2015 STIP. These projects are independent of the proposed project, but with past and present actions, the proposed project may contribute to a cumulative impact on resources in the study area. These projects include:

- **Seward Meridian Road Improvements** (STIP NEED ID 2481). This project would upgrade Seward Meridian Road to four lanes, a center turn lane, and a pathway from Parks Highway to Seldon Road. *Located east of downtown Wasilla, this project may alleviate some of the north-southbound traffic congestion in downtown Wasilla.*
- **Lucus Road Improvements** (11721). Improve Lucus Road between Parks Highway and Spruce Avenue to an upgraded two lane facility with shoulders, turning lanes, pedestrian facilities, landscaping and drainage improvements. *This project is located west of downtown Wasilla.*
- **Parks Highway MP 43.5-52.3 Reconstruction - Lucus Road to Big Lake Cutoff** (11961). Widen Parks Highway to four lanes with attendant traffic and safety improvements between Wasilla and the Big Lake Cutoff. *This project is located 1.3 miles west of the project area.*
- **KGB Road Widening** (23616 and 24596). Project consists of widening the KGB Road to a divided four-lane facility beyond the Palmer-Wasilla Highway intersection. Scope includes

separated bike/pedestrian facilities and appropriate safety engineering strategies such as rumble strips and reducing/combining access points that are determined to be most effective at reducing crashes along the road.

- **Bogard Road Extension** (23228). Construct a two-lane limited-access arterial road from the Glenn Highway to Trunk Road.
- **Knik Arm Crossing Anchorage Access Connections** (20255/20256). The project would connect the MOA to the MSB via a bridge across the Knik Arm from the Port of Anchorage to the Port at Point MacKenzie. *The crossing may decrease traffic volume levels along the Parks Highway through the proposed project area. Construction of the Knik Arm Crossing does not reduce or remove Wasilla Main Street Project need or future improvements to the Parks Highway in the Wasilla area.*
- **Port MacKenzie to Willow: Highway/Railroad Corridor Construction** (18820), known as the Port MacKenzie Rail Extension project. Construct a new 32.5-mile rail line to connect Port MacKenzie to the Anchorage Railroad Corporation's existing mainline track at a location in the City of Houston. *May decrease rail traffic through the project area.*
- **Parks Highway Alternative Corridor**, known as the Wasilla Bypass, is an ongoing planning effort to divert Parks Highway traffic around the center of Wasilla. This project has been in various stages of planning for decades. Although it is not funded or identified within the STIP, the traffic modeling for the Wasilla Main Street project used scenarios to analyze each alternative both “with and without the Bypass.” *Construction of the Alternative Corridor does not reduce or remove the Wasilla Main Street project need.*

Residents of the Matanuska Susitna Borough voted in 2011 to issue \$32.2 million in bonds for transportation improvements throughout the MSB. These funds were matched with \$32.2 million in State General Funds as part of the 2013 State Capital Budget. Bond projects that will affect traffic in the downtown Wasilla include.

- **South Mack Drive Extension** provides a new north-south connection between KGB Road and the Parks Highway at Church Road. *This project is 2 miles west of the project area.*
- **Seldon Road Extension to Beverly Lakes** continues the expansion to the Seldon Road/Bogard Road east-west corridor by connecting to the Meadow Lakes Area and Pittman Road.
- **Vine Road Reconstruction** will connect the KGB Road to the Parks Highway in the Meadow Lakes area. This will provide an improved connection for southbound Interior commercial Parks Highway traffic to access Port MacKenzie and the proposed Knik Arm Crossing without going through Wasilla. *This project is more than 6 miles west of the project area.*

The ARRC is planning the following projects:

- **Realign approximately four miles of track** in South Wasilla to improve safety. Once constructed, it would improve conditions for future development of commuter rail service between the Mat-Su Valley and Anchorage. *This project is located east of the project area.*

- **Port MacKenzie Rail Extension Project**, which would be located south and west of Wasilla. This project could result in reducing freight rail traffic through downtown Wasilla. This project is also identified in the MSB's 2007 LRTP.

Continued development at the port facility at Point MacKenzie has a significant regional effect on transportation. Continued development at the port facility is likely to increase truck traffic along KGB Road until other potential options, like upgrading the Point MacKenzie Road and Burma Road to controlled access are constructed. Transit services such as bus and share-a-ride van pools to/from the Port and area businesses are planned in the Port MacKenzie Master Plan Update adopted in 2011.

Continued Residential and Commercial Growth

As the amount of available land in the greater Anchorage area decreases, growth has extended northward. The Mat-Su Valley is one of the fastest growing regions in Alaska. Over the next ten years, it is anticipated that vacant property within the Mat-Su Valley would continue to be developed by additional residential and commercial development.

3.17.4. Cumulative Effects Analysis

Long-term development in the Wasilla region dates back to the construction of the Alaska Railroad and Parks Highway and has had a significant cumulative impact on the environment. The Proposed Action's contribution to cumulative effects is most related to the human environment rather than the physical or biological environment as the immediate project area is located in a mostly built up environment. The Proposed Action would have no disproportionate effect on minority or low-income populations or any impacts to historic properties, farmlands, floodplains, wild and scenic rivers, coastal barriers, coastal resources, wetlands/waterbodies, and fish and wildlife; therefore, cumulative impacts to these resources would not occur.

Cumulative Effects on the Human Environment

Local Land Use and Transportation: The Proposed Action in combination with past and present actions and RFFAs, would have a positive and noticeable cumulative impact on land use and transportation. This action, when incrementally combined with transportation-related RFFAs, would increase system connectivity, reduce congestion, and improve safety. Many of the transportation-related RFFAs aim to achieve these results for the local population as well as for the through-travelling traffic. The 2006 and 2012 Traffic Studies take most of these projects into account in their traffic model and projections. Overall, these changes, coupled with the implementation of other RFFAs, would improve mobility.

The impact to rail transportation from the Proposed Action's new at-grade road crossing at Talkeetna Street may be negligible after the rail extension between the track mainline and Port MacKenzie is constructed.

While some of the other RFFAs, like the Parks Highway Alternative Corridor or the Port MacKenzie Rail extension, have the potential to require a large amount of new ROW outside of the downtown Wasilla, the relatively small amount of ROW required from the several dozen properties for the Proposed Action would have an inconsequential cumulative ROW impact when considering the greater area.

The Proposed Action may lead to additional development in the southeast end of the project area where it is currently undeveloped. Additional development in the Wasilla area is expected with or without the Proposed Action. Induced growth from this project and all other projects is accounted for in local planning documents.

Noise: Future growth projections for the Wasilla area means continued residential and commercial development. As traffic volumes have increased, so has the associated noise levels. The Proposed Action would generally decrease noise levels along Main Street/KGB Road and increase noise levels along Talkeetna Street and its southern extension. Cumulative impacts with other projects are anticipated to be an overall decrease in noise as Parks Highway and intersection congestion decreases and freight rail traffic decreases through downtown Wasilla.

Cumulative Effects on the Physical Environment

Water Quality: Water resources in the Wasilla region have been persistently affected by land development over time. A large portion of the project area contains impervious surface because it is a mostly built up environment in downtown Wasilla. Prior development in the Wasilla area has resulted in clearing of vegetated areas, filling or bisecting wetlands, increasing impervious surface areas, soil erosion, and sedimentation. Pollutants potentially contained in untreated runoff that may reach the waterways include petroleum products from cars, particulates from vehicle emissions, and gravel/sediments.

As land development continues, waterways and water quality will be increasingly affected. The cumulative effects of the Proposed Action with past and future development will continue to turn natural soils into impermeable surfaces and reduce flood storage capacities of existing wetlands. The Proposed Action could contribute to a temporary minor cumulative impact on water quality as a result of construction activities. Construction-related impacts to water quality would be mitigated as detailed in

section 3.10. In the immediate project area, water quality is expected to return to background levels after construction.

Cumulative Effects on the Biological Environment

Invasive Species: The construction of past projects without awareness and precautions against the introduction and spread of invasive and noxious plants have allowed these species to establish themselves on disturbed ground throughout Alaska. This project and RFFAs do have the potential to increase the opportunity for invasive and noxious plants to establish and spread. However, the risk is reduced with the Proposed Action because mitigation measures would be followed. Other DOT&PF projects would incorporate similar measures, to reduce the risk of spreading invasive species.

4. Comments and Coordination

4.1. Scoping

During the initial stage of the Wasilla Main Street environmental process, Federal, State, and local regulatory agencies; local government; Alaska Native organizations; and the public were consulted about the project to identify potential concerns, measures of mitigation, and alternatives. Outreach included scoping letter packages, Section 106 Consultation, a public meeting, and presentations at local events.

A project mailing list of 2,844 names was developed for agencies and the public. The agency list included contact information for regulatory agency representatives who might have a permitting responsibility, concern about, or interest in the project. The public list contained names and addresses for businesses and the public in Wasilla, Palmer, Anchorage, other cities in Alaska, and cities in the Lower 48.

A project website (www.wasillamainstreetproject.com) was launched in March 2012 to provide information to the public about the proposed project and the development of the EA. The website was hosted on the State of Alaska DOT&PF website, and maintained by DOT&PF staff. The site provided an overview of the proposed project, including a project study area map, a description of the project's purpose and need, a proposed schedule and timeline, pertinent project-related transportation and traffic documents (such as studies and reports), Open House materials, and contact information for project staff. The website was also utilized to inform the public of any upcoming meetings or events at which people could learn more about the project. The website is updated as new information becomes available.

4.1.1. Agency Scoping

A scoping package was sent to 12 Federal, State, and local agencies in April 2012 that provided information and solicited comments regarding the proposed project. The package described the project's purpose and need, the project area, and preliminary research and findings, and comments were requested. A copy of the agency scoping package can be found in the Scoping Summary Report (Appendix B).

Alaska Department of Fish and Game responded by letter, noting that there are no fish streams in the project area, and therefore no fish habitat permit is required for the project. USFWS provided an email confirming that no threatened or endangered species are present in the project area. An indication of support came from the City of Wasilla and Matanuska-Susitna Borough Transportation Planner during informal team meetings, but no formal response was received. No other comments or responses have been received as a result of the scoping package mailing.

4.1.2. Section 106 Consultation

In March 2012, Initiation of Consultation letters were sent to the SHPO and to Alaska Native Claims Settlement Act (ANCSA) parties, Tribes, and other involved parties. The letters also included a project description, project area map, and map of the preliminary Area of Potential Effect. The ANCSA parties and Tribes also received a Project Consultation Options Form, to be returned to the FHWA if desired. A copy of the letters and accompanying materials, as well as a list of the recipients, is included in the Scoping Summary Report (Appendix B).

One Consultation Options Form was returned, from the Chickaloon Village Traditional Council; they indicated no further need for consultation and support of any response from the Knik Tribal Council. No other responses or comments were received.

FHWA sent SHPO a letter and report titled Wasilla Main Street Rehabilitation Cultural Resources Survey & National Register Evaluations. SHPO responded on August 16, 2012, concurring with the FHWA finding that no historic properties would be adversely affected by the project.

4.1.3. Public Involvement Activities

An open house and project kickoff meeting was held on April 4, 2012, at Fire Station #61 in Wasilla. The public was notified of the meeting through a mailed postcard, newspaper advertisements in local newspapers (*Mat-Su Frontiersman* and *Anchorage Daily News*), a public service announcement on local radio stations (KAYO and KMBQ in Wasilla), and an event flyer that was distributed to local businesses, government offices, and local organizations. All advertising materials are included in Appendix B.

The meeting included a presentation that introduced the project and its purpose and need, reviewed the project history and current status, outlined the next steps in the process, and solicited questions and comments from attendees. Alternatives (both recommended and dismissed) and the 2012 Wasilla Main Street Traffic Study report were discussed, and a project Fact Sheet was distributed. Comments were solicited from attendees, and comment forms were distributed.

The project was also discussed at the May 29, 2012, Wasilla Chamber of Commerce meeting. Project Manager Murph O'Brien of HDR and Ron Martindale of Kinney Engineering made a PowerPoint presentation, after which attendees' questions and concerns were discussed. Murph O'Brien made a follow up appearance at the June 19, 2012 Chamber meeting to answer questions. The project team was invited by the Chamber to return regularly at future meetings.

Murph O'Brien discussed the project at a November 11, 2012, City of Wasilla Planning Commission Meeting and at a December 19, 2012, Matanuska Susitna Borough Transportation Advisory Board

meeting. Mr. O'Brien met with three representatives of Valley Residential Services (VRS) organization to discuss the extension of Yenlo Street between Swanson and Bogard roads and its footprint in relationship to adjacent VRS properties.

Mr. O'Brien participated in the August 7, 2013 Matanuska Susitna Borough Transportation Fair where he staffed a table dedicated to the Wasilla Main Street Rehabilitation Project. He had over 60 interested persons inquire about the project with all but one person in favor of the Main Street/Yenlo couplet concept.

Table 10 provides a chronological list of all public outreach activities.

Table 10: Public Outreach Activities

Date	Activity	Purpose
Ongoing	Internet Site www.wasillamainstreetproject.com	Provide vehicle for public/team communications
Ongoing	Receive and respond to public questions and comments; document for project record	Continue dialogue with public throughout project development
March 19, 2012	Postcard announcing April 4 Open House mailed	Provide notice of public meeting
March 22	Public Service Announcements to announce April 4 Open House begin on KMBQ and KAYO radio	Provide notice of public meeting
March 22-23, 2012	Flyers announcing April 4 Open House dropped at local businesses in project area	Provide notice of public meeting
March 23, 2012	Open House advertisement published in <i>Mat-Su Frontiersman</i>	Provide notice of public meeting
March 26, 2012	Article published in <i>Mat-Su Frontiersman</i> : "Wasilla Talk Couplet at April 4 Open House"	Provide notice of public meeting
March 28, 2012	Community Presentation at MSB Transportation Advisory Board	Provide information and solicit input from stakeholders
March 30, 2012	Open House advertisement published in <i>Mat-Su Frontiersman</i>	Provide notice of public meeting
April 4, 2012	Public Open House and Project Kick-Off	Provide information and solicit input from stakeholders
May 29, 2012	Presentation at Greater Wasilla Chamber of Commerce Meeting	Provide information and solicit input from stakeholders
June 19, 2012	Presentation at Greater Wasilla Chamber of Commerce Meeting	Provide information and solicit input from stakeholders

Date	Activity	Purpose
August 9, 2012	Open House Booth at Mat-Su Transportation Fair	Provide information and solicit input from stakeholders
November 11, 2012	Presentation to City of Wasilla's Planning Commission	Provide project status update and solicit input from stakeholders
December 13, 2012	Met with Valley Residential Services staff	Provide project status update and solicit input from stakeholders
December 19, 2012	Community Presentation to MSB Transportation Advisory Board	Provide project status update and solicit input from stakeholders
August 7, 2013	Open House Booth at Mat-Su Transportation Fair	Provide information and solicit input from stakeholders

4.1.4. Comments

Eighteen written comment documents were submitted during the spring 2012 scoping period, sixteen of which used the public meeting comment form and two received via email. Two additional comment letters were submitted several months later. Copies of the public comments are in Appendix B.

Many of the comment letters expressed support for the project, and some specifically for the Main Street-Yenlo Street one-way couplet (Proposed Action). Opposition and concern centered on ROW acquisition impacts to private property, the potential for loss of on-street parking, and changes to business access. Additional concerns include potential for decreased business during construction, interest in a connection of Lakeview Avenue with the proposed Talkeetna extension, potential congestion caused by traffic lights at KGB Road/Swanson Avenue, potential congestion between Yenlo Street and Wasilla-Fishhook Road, and interest in improved pedestrian and bicycle facilities throughout the project area.

Responses to each comment have been provided in the comment summary included in Appendix B.

5. List of Preparers

Name	Affiliation	Profession/Experience
Kelly Petersen, P.E.	DOT&PF Project Manager	Project Manager 11 years experience
Brian Elliott	DOT&PF Regional Environmental Manager	Environmental Analyst/Regulator 14 years experience
Alvin Talbert, L.S.I.T.	DOT&PF Designer	Consultant Coordinator 5 years experience
Mark Dalton	HDR Alaska, Inc.	Environmental Analysis 28 years experience
Murph O'Brien	HDR Alaska, Inc.	Transportation Planner 35 years experience
Linda Smith	HDR Alaska, Inc.	Environmental Planner 9 years experience
Leslie Robbins	HDR Alaska, Inc.	Planner 11 years experience
Tina Adair	HDR Alaska, Inc.	Technical Editor 25 years of experience
Carol Snead	HDR Alaska, Inc.	Environmental Planner 27 years of experience
Stafford Glashan, P.E.	Shannon & Wilson Phase 1 ESA	Civil Engineering 17 years experience
Christopher Hughes, P.E.	HDR Alaska, Inc. Design Engineer	Transportation Engineering 11 years experience
Rick Kauzlarich	HDR Alaska, Inc. Right of Way Analysis	Right of Way Coordinator 40 years experience
Randall Kinney, P.E.	Kinney Engineering Traffic Modeling and Analysis	Transportation Engineering 30 years experience
Ron Martindale	Kinney Engineering Crash Analysis	Transportation Engineering 30 years experience
Chris Melander, P.E.	HDR Alaska, Inc. Design Engineer	Transportation Engineering 10 years experience
Craig Milliken	HDR, Inc. Traffic Noise Analysis	Acoustics 17 years experience
RaeShaun Schmidt	HDR Alaska, Inc. Public Involvement Coordinator	Public Involvement 10 years experience

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