Ship Creek
Intermodal Transportation Center

NEPA ENVIRONMENTAL ASSESSMENT

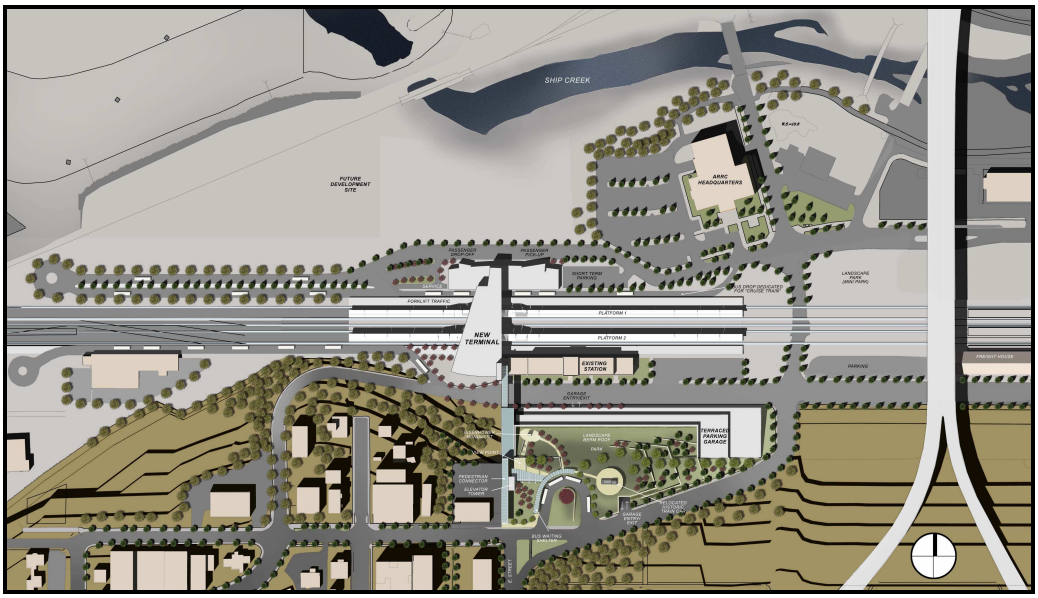
Submitted pursuant to 42 U.S.C. 4332(2)(c), 23 CFR Part 771

by the

Federal Transit Administration

and

Alaska Railroad Corporation



April 2003

SHIP CREEK INTERMODAL TRANSPORTATION CENTER

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Submitted pursuant to 42 U.S.C 4332(2)(c), 23 CFR Part 771

Prepared for:

Federal Transit Administration
915 Second Avenue, Suite 3142
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and

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April 2003

U.S. Department
of Transportation
**Federal Transit
Administration**

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Alaska, Idaho, Oregon,
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APR 9 2003

Patrick Gamble
President & CEO
Alaska Railroad Corporation
327 W. Ship Creek Avenue
Anchorage, AK 99501

RE: **Authorization to Finalize Environmental Assessment**
Air Quality Finding of Conformity
Ship Creek Intermodal Trasnportation Center
AK-03-0035

Dear Mr. Gamble:

This office has reviewed the draft Environmental Assessment for the Ship Creek Intermodal Transportation Center, dated April 2003 (the EA). The Region 10 office finds that the EA, as revised and supplemented, provides a complete, objective and technically sufficient analysis of the potential impacts on the human, economic, and social environment. It properly examines potential impacts from construction as well as operation and maintenance of the facility, and it explains why the project will not result in any significant adverse effects.

An air quality hot spot analysis was also performed for this project and submitted as an appendix to the EA. FTA finds that the project conforms to State of Alaska Air Quality Plan as required under Section 176(C)(4) of the Clean Air Act, as amended in 1990. See attached conformity determination.

This letter serves as your authorization to proceed with printing the Final EA. As you know, the availability of the EA must be advertised to the public and to other interested agencies, and comments accepted for 30 days, pursuant to 23 Code of Federal Regulations 771.119-121.

Please contact Jennifer Bowman (206/220-7953) if you have any questions.

Sincerely,

R.F. Krochalis
Regional Administrator

cc: Wayne Elson, EPA
Barbara Shepherd, ADEC
Steve Morris, MOA
Barbara Hotchkin, ARRC

Finding of Conformity

The Federal Transit Administration has determined that the proposed ARRC Ship Creek Intermodal Transportation Center, located in Anchorage, Alaska conforms to the State of Alaska Air Quality Plan as required under Section 176(C)(4) of the Clean Air Act, as amended in 1990. This conformity determination is based on the latest planning assumptions and uses the latest available vehicle emissions data and air quality modeling information for Anchorage.

The completed report entitled, "Ship Creek Intermodal Transportation Center Air Quality Analysis Report," (HDR, March 2003) demonstrates that the project will not cause or contribute to any new localized carbon monoxide violation or increase the frequency of any existing carbon monoxide violations in the Anchorage Carbon Monoxide Non-attainment Area.

This determination was made in consultation with the Environmental Protection Agency, the Federal Transit Administration, the Alaska Department of Environmental Conservation, the Municipality of Anchorage Department of Health and Human Services, and the Alaska Railroad Corporation as required under 40 CFR 51.402 and 18 AAC 50.720.

This project is identified in the Anchorage Bowl Long Range Transportation Plan (AMATS, 2001 LRTP, p.19). This plan has been approved by the Anchorage Metropolitan Area Transportation Improvement (AMATS). The Air Quality Conformity Determination report done for the plan "concluded that the 2001 Bowl Long Range Transportation Plan is in conformity with the Federal Clean Air Act as amended in 1990." Furthermore, it was determined "that the 2001 LRTP will not undermine the ability of the Municipality of Anchorage to achieve compliance with the EPA carbon monoxide standards" (AMATS, 2001 LRTP, p.52).

Ship Creek
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by the

Federal Transit Administration

and

Alaska Railroad Corporation

4/9/03

Date of Approval

R.F. Krochalis
Regional Administrator
Federal Transit Administration

The following persons may be contacted for additional information concerning this document:

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1.0 INTRODUCTION

1.1 Purpose and Need

The Alaska Railroad Corporation (ARRC), in cooperation with the Federal Transit Administration (FTA), proposes to construct an Intermodal Transportation Center (ITC) and associated improvements (e.g., pedestrian amenities, transit, parking, rail track changes) in the Ship Creek area of Anchorage, Alaska. Figure 1.1 depicts the project area. The purpose of this Environmental Assessment (EA) is to present and analyze the environmental impacts of the proposed action and reasonable alternatives in accord with the National Environmental Policy Act (NEPA).

1.1.1 Purpose

The primary purpose of the ITC is to facilitate connections from one transportation mode to another (rail, bus, public transit, air, taxi, private vehicle, and pedestrian) and improve links to Anchorage's central business district (CBD) to meet transit passenger needs over the next 20 to 30 years. The facility would:

1. Provide adequate track and platform capacity for current and future passenger demand;

2. Provide convenient and safe intermodal passenger boarding areas, with well-defined and adequately sized arrival and departure areas that serve rail, pedestrian, transit buses, and other rubber-tired vehicles;

3. Provide improved baggage handling with adequate capacity, separate from passenger areas;

4. Provide transit-oriented retail and office space that complements transit ridership (such as newsstands, beverages, drugstores, etc.);

5. Improve pedestrian connections between the Ship Creek ITC area and the downtown Anchorage CBD to allow pedestrians with all levels of mobility to "bridge" the horizontal and vertical gap between downtown and the Ship Creek area;

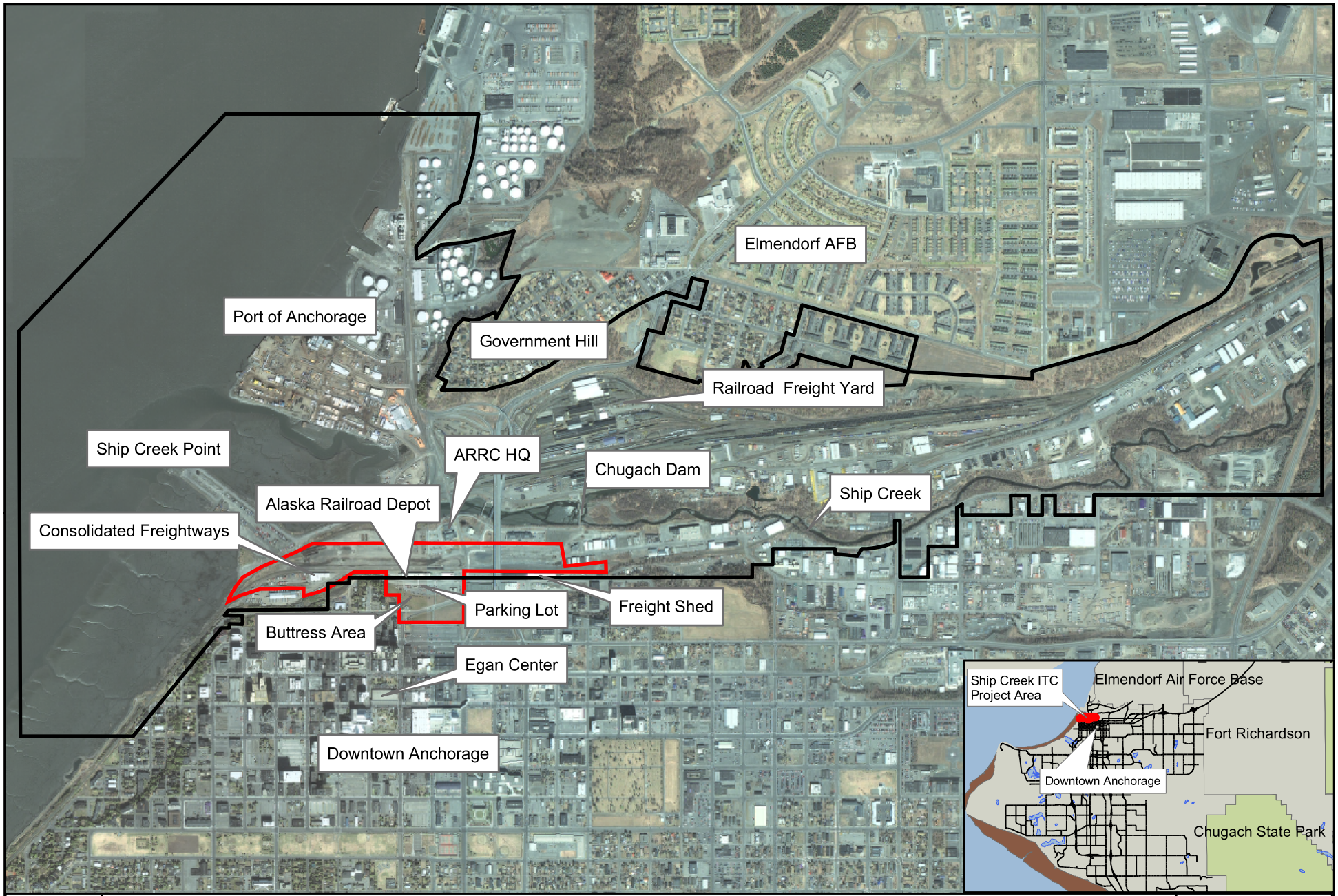
6. Provide adequate public parking to serve transit users and employees in the ITC;

7. Improve queuing and circulation for vehicles providing dropoff and pickup for ITC users;

8. Enhance pedestrian facilities to serve ITC users, keep pedestrians safely separated from road vehicles and trains, and connect to the existing pedestrian/trail network.

1.1.2 Need

ARRC's current depot was constructed in 1942 and was designed and sized to handle the trains, traffic, and demand of that time. Some 60 years later, the depot is undersized and poorly configured to accommodate the current and projected demands placed upon it and the changed nature of the rail passenger traffic in the Anchorage area. The depot has insufficient capacity, unsafe and inadequate pedestrian access, inefficient baggage handling, insufficient parking, and poor traffic circulation. The forecast of rail passenger growth will continue to exacerbate the



0 1,000 2,000 Feet

Ship Creek Intermodal Transportation Center
Environmental Assessment

Legend
Project Area
Approximate ARRC Reserve

N

Figure 1.1

Vicinity Map

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already unacceptable conditions. The following paragraphs detail the deficiencies with the existing facility.

Insufficient Capacity. The existing depot is undersized to handle current passenger demand, a factor that is anticipated to worsen with the forecasted growth. The depot has a passenger arrival and departure area that is sized to handle approximately 300 people. There is only one siding track and platform off the main track for loading and unloading passengers and a forecast need of three additional passenger siding tracks. The track and platform experience congestion during an early morning period during the summer when scheduled intercity service and special trains prepare to depart. Baggage handling, lack of a platform for more than one track, and lack of a means to safely cross to the second track currently create inefficiencies.

The ARRC is forecasting a need substantial increase in passenger demand over the next 20 years. The 2022 design year estimate is based on the following considerations:

- Over the next 20 years, ARRC's strategic plan estimates that mass transit is expected to grow at a Compound Annual Growth Rate of 3.0%, largely due to the initiation of train service to Ted Stevens International Airport (TSIA) and the development of commuter service to the Matanuska-Susitna (Mat-Su) Valley.

- The ARRC anticipates the number of summer intercity rail passengers to grow from 2,520 per day to 4,920 per day between 2002 and 2022 — a 95% increase.

- A Downtown Anchorage to TSIA rail shuttle could add 48 trains per day by 2022, all using the Ship Creek depot as an arrival/departure point. This service is expected to add seven trains during the already busy morning peak period.

- Potential future commuter rail service to the Mat-Su Valley may handle up to 2,500 passengers per day by 2022.

- Pull contractor passengers are forecasted to increase from 2,080 to 3,840 passengers per day. This translates into an 85% increase over existing levels.

With these projected increases in passenger rail traffic, the existing conflicts will increase in the future, and the level of service for ARRC customers will decline. The anticipated increase in passenger rail service will entail multiple trains on the platform, which can only be served by providing additional tracks and improvements in passenger access to allow passengers to board any one of several trains, without walking across the tracks at ground level. For additional information on rail passenger demand assumptions see Appendix A.

Unsafe and Inadequate Pedestrian Access. Passenger access between the depot and downtown is from a steep, long set of stairs involving a 60-foot elevation difference and considerable horizontal distance. Despite being covered, the stairs offer no protection from the cold or wind. Passengers carry their bags up or down the stairs when walking between the downtown hotel and office district and the train depot. The stairs do not comply with the Americans with Disabilities Act (ADA) requirements. When using the stairs, pedestrians must cross two roads, and walk among buses, taxis, and other vehicles. A sidewalk along West 2nd Avenue provides access to the depot with a longer, winding route that is steep and icy in winter. Studies done by the ARRC, and planning documents from the Municipality of Anchorage (MOA), have identified the need to remedy this physical and psychological barrier as part of the ITC project.

Inadequate Baggage Handling. Bags are currently handled in the metal building directly east of the existing depot. The building is in poor condition and has exceeded its useful life. Passengers transport their bags into the building where they are transferred to ARRC personnel on folding tables. From there, bags are placed in large bins and transferred by forklift onto the baggage cars. The building has insufficient capacity to handle all of the bags. On the platform, the forklifts transferring baggage must traverse the same platform being used by pedestrians to access the trains. This is both inefficient and unsafe.

Inadequate Vehicle Parking and Circulation. The existing depot is served by a 180-car surface parking lot, which is often at capacity. During summer peak periods, some passengers must park away from the depot (some of them up the 60-foot high hill in downtown Anchorage). With the forecast for additional passenger services, the ARRC is anticipating the need for the ability to park approximately 650 cars to serve the ITC. A component of the parking demand is anticipated to be from commuter rail service. A likely scenario is for some commuters to drive vehicles into Anchorage at the beginning of the workweek, travel back and forth between the Mat-Su Valley and Anchorage during the week on the train, and then return to the Mat-Su Valley in their private vehicles at the end of the week. The current parking in the immediate depot and Ship Creek area is already limited and cannot support the anticipated increase in demand.

The traffic flow in front of the depot has not been designed to handle the current mix of pick-up and drop-off traffic. There is inadequate space for buses to pull out, no taxi queue lanes, and poor or nonexistent pedestrian amenities to safely accommodate the mix of vehicles and pedestrians. The rail passengers represented by the above growth projections must be able to make efficient intermodal transfers to reach their homes, work places, the airport, and the businesses they will patronize. The current depot was designed as a passenger waiting area. The increased demands will include “pass-through” traffic that will be transferring from trains to public transit buses and other types of private or public transit conveyances (private buses, vanpools, taxicabs). The pedestrian and vehicle traffic circulation infrastructure needed to support these types of intermodal transfers is not available inside or in front of the current depot.

1.2 Project Development

The Ship Creek ITC has been part of the visions and plans for the Ship Creek and downtown areas for several years. This section summarizes the most recent evaluations, planning processes, and plans that have led to ARRC’s proposed development of the ITC.

In 1998, the Ship Creek Site Assessment (Land Design North, 1998) identified existing land uses and conditions in the Ship Creek area. Following that assessment, the ARRC and a mayoral task force formulated a Ship Creek Strategic Action Plan. Stakeholder and public comments were brought into the process and a Draft Ship Creek Master Development Plan was created by the ARRC.

The ITC was identified and recommended in the Ship Creek Multimodal Transportation Plan, which was developed in conjunction with a citizen task force and adopted by the MOA in December 2000. This plan calls for direct multimodal access to the Ship Creek area with recommendations including improved vehicle circulation, uninterrupted truck routes, and improved pedestrian facilities (MOA, 2000a).

The Anchorage 2020 Anchorage Bowl Comprehensive Plan adopted in 2001 addresses the downtown/midtown and Ship Creek areas by stating that downtown should connect to a redeveloped Ship Creek area and that a multi-choice transportation system should be provided (MOA, 2001).

ARRC is currently working with the MOA, Anchorage Downtown Partnership, and other organizations to implement the vision for downtown Anchorage and Ship Creek. The proposed ITC is compatible with the vision for the area and would complement other projects, such as E Street pedestrian improvements and transit oriented development, which would be developed by other entities (e.g., Alaska Department of Transportation and Public Facilities [ADOT&PF], MOA, private developers) within the next 10 to 15 years. The ITC, however, has independent utility and is not dependent on the development of those other projects. In 1999, the U.S. Congress appropriated funding for this project, through the FTA, allowing planning and preliminary engineering of an ITC to commence.

1.3 NEPA Process

In accordance with the NEPA, FTA must determine if the proposed project would have significant impacts on area resources. NEPA is a nationwide mandate for the protection of the environment and applies to all federally funded projects and projects that require federal permits or other approval actions. The purpose of NEPA is to provide public disclosure of the environmental impacts associated with federal actions. The NEPA process enables public officials to make decisions that are based on an objective understanding of environmental consequences, and take actions that protect, restore, and enhance the environment. It also provides the opportunity for public comment.

Scoping is the first step in the NEPA process and is designed to identify alternatives to the proposed action and environmental concerns or issues that should be addressed in the EA. Agency and public scoping for this project were conducted in September and October 2002. More details on the scoping process and other consultation and coordination are provided in Section 5 of the EA and in the Scoping Summary Report (HDR Alaska, 2002). Scoping identified the following issues that must be addressed in this EA.

- Noise Impacts
- Air Quality Impacts
- Effects on Historic Resources
- Transportation Impacts
- Land Use Effects
- Secondary and Cumulative Impacts
- Park and Trail Impacts
- Utility Conflicts
- Geotechnical Constraints

This EA evaluates the potential impacts of this project and alternatives on the physical, biological, and human resources in the area. If significant impacts are identified in the EA, a more detailed Environmental Impact Statement (EIS) will be prepared. If FTA decides that impacts would not be significant, it will prepare and sign a Finding of No Significant Impact (FONSI). This finding would allow ARRC to proceed with the proposed project.

1.4 Project Authorizations

Various federal, state, and local permits and clearances may be required before construction and operation of the proposed project can begin. The following is a list of potential permit or environmental compliance requirements. See more in Section 4.9.

- U.S. Army Corps of Engineers (USACE), Section 404 Permit
- Alaska Department of Environmental Conservation (ADEC), Water Quality Certification (Section 401)
- Alaska Division of Governmental Coordination (DGC) or Alaska Department of Natural Resources (DNR), Alaska Coastal Management Program Consistency Determination
- Alaska State Historic Preservation Officer (SHPO), Compliance with Section 106 of the National Historic Preservation Act
- Environmental Protection Agency (EPA) and ADEC, National Pollutant Discharge Elimination System General Permit for Storm Water Discharges from Construction Sites
- MOA, Flood Hazard Permit
- MOA, Building Permit
- MOA, Planned Community Site Master Plan
- Joint use agreement or permit with MOA and ADOT&PF for use of a portion of Quyana Park

2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

2.1 Proposed Action

The ARRC is proposing to develop a new ITC in the Ship Creek area. The new ITC would facilitate connections from one transportation mode to another (rail, air, bus, taxi, private vehicle, and pedestrian) and improve links to Anchorage's CBD to meet transit passenger needs over the next 20 to 30 years. The ITC would include an intermodal station with improved baggage and passenger services, additional passenger siding tracks adjacent to the existing siding, and a parking garage. The proposed ITC would provide intermodal passenger boarding with well-defined arrival and departure areas, security, and retail and office space to complement ridership. The new ITC design would also include vehicular traffic circulation improvements and improved pedestrian connections to Anchorage's downtown CBD and to area sidewalks and trails.

A no-action (Alternative 1) and two build alternatives (Alternatives 2 and 3) are considered. The two build alternatives under consideration vary primarily in the location of the intermodal station building. Under the Northside Alternative (Alternative 2 and ARRC proposed alternative), the ITC building would be developed on the north side of the existing passenger mainline and would include pedestrian connections to the platforms, the existing depot, parking facilities, and the downtown business district over the tracks on sky bridges. Under the Southside Alternative (Alternative 3), the ITC building would be constructed south of the existing passenger mainline to the east of the existing depot (on the site now occupied by the baggage storage building). With either alternative, the new passenger tracks and platforms would be identical and a parking garage would be constructed on the current ARRC parking lot and adjacent hillside across West 1st Avenue from the existing depot. Both build alternatives also include pedestrian connections and improvements.

The following sections provide additional detail about the alternatives being evaluated.

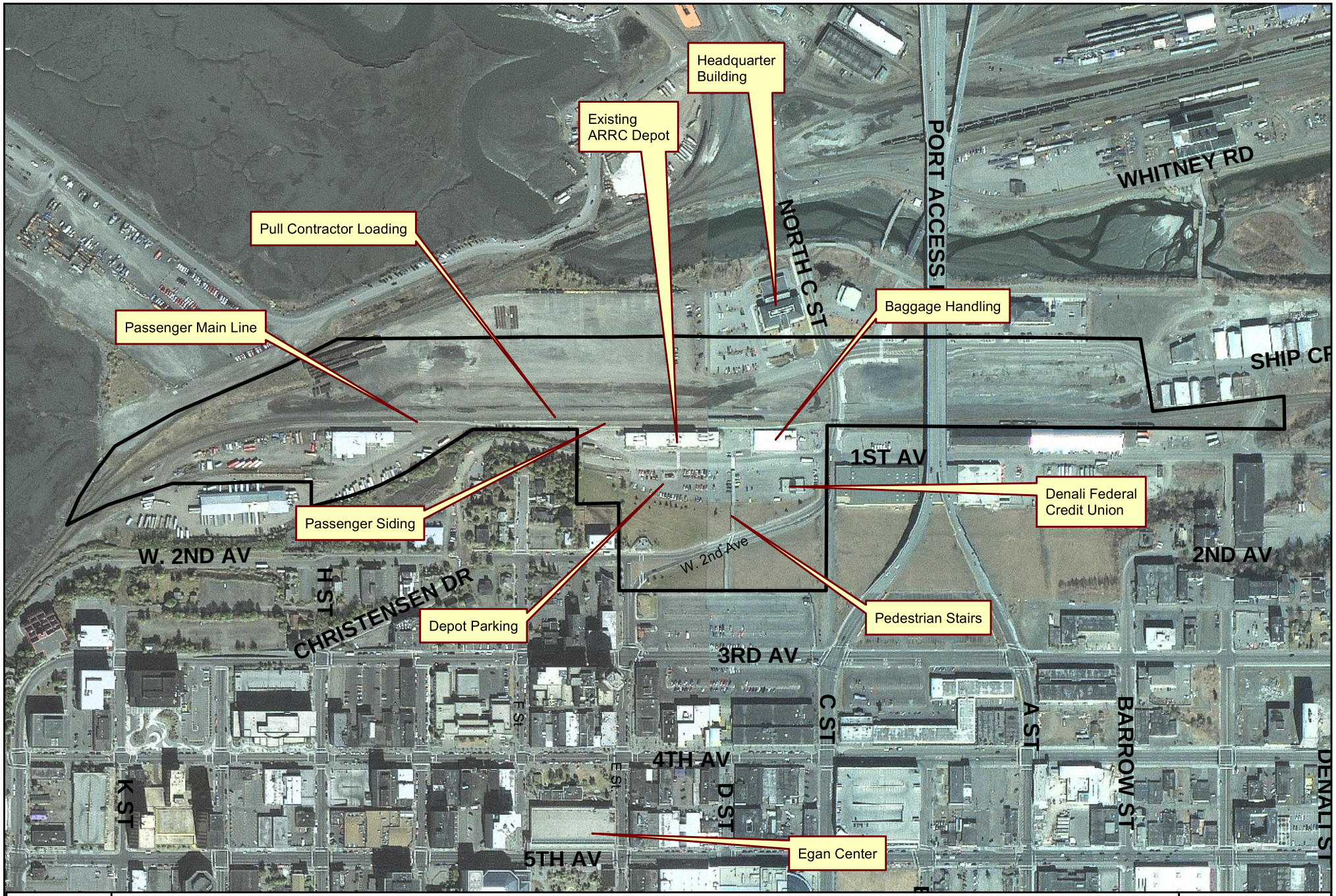
2.2 Alternatives Considered for Detailed Study

2.2.1 Alternative 1: No Action Alternative

Under the No Action Alternative (see Figure 2.1), the proposed ITC (and associated track work, parking garage, baggage handling improvements, and pedestrian connections) would not be constructed.

Depot. The existing depot, built in 1942, would continue to be used for all passenger services. It would continue to house passenger service personnel, ticketing, offices, and limited retail services. The current passenger waiting area, which has an approximate 300-person capacity, would continue to function as the only covered waiting and train boarding area. No transit-oriented retail space would be constructed.

Trackside Improvements. The existing siding track off the passenger mainline would continue to be used for loading and unloading passengers and baggage. No new tracks or platforms would be constructed. Passengers and baggage handling would continue to share the same platform space, creating unsafe conflicts with passenger movements. Baggage would continue to be loaded and unloaded by forklift, and transported down the platform to the existing baggage handling building.



Ship Creek Intermodal Transportation Center
Environmental Assessment

Legend
Ship Creek ITC Project Area

0 250 500Feet

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Figure 2.1

Alternative 1
No Action
Alternative

Baggage Handling. Under the no-action alternative, no capacity or functional improvement for bag handling would be provided. Baggage would continue to be processed through the baggage handling building (directly east of the existing depot). Bags would continue to be checked in at the building, stored in bins (pallets), and transported by forklift along the platform through the cross-traffic of loading and unloading passengers.

Access, Circulation, and Parking. Pedestrians from downtown would continue to access the depot from the parking lot on 3rd Avenue (down the steep, covered stairs) or on the sidewalk along West 2nd Avenue. The stairs would remain covered but would not be heated or enclosed. The public would continue to park in the surface parking lot across from the depot (180-vehicle capacity). Employees would park on the east or west sides of the existing depot and baggage handling building, and in the headquarters lot across the tracks to the north. The existing depot parking lot, and areas east and west of the depot, would continue to reach their limit and overflow parking would continue to occur on nearby sidewalks and in no-parking zones. Taxis and drop-off traffic would continue to use 1st Avenue. Pull-contractors would still use the unimproved gravel lot between Ship Creek Avenue and the passenger main line, and their passengers would continue to walk through the gravel lot to reach the trains.

Train Operations. Table 2-1 below lists the 2002 train activity and schedules during the peak summer season. Additional details on existing and future demand findings can be reviewed in Appendix A *Conceptual Design Details*. Under the no-build alternative, operations are constrained and would remain similar to existing activity with only minor growth. An airport shuttle and commuter train, if developed, could operate, but not during peak times because there would be insufficient room on the existing siding. There would be no depot for them to use in the summer, making the services inconvenient. Because of these severe limitations no airport shuttle or commuter service is assumed to develop.

Table 2-1. 2002 Train Activity, Schedules, and Depot Demand During Peak Summer Season

Time	Arrival or Departure	Train	Number of Coaches	Number of Passengers (ARRC)	Number of Passengers (Pull-Contract)	Depot Demand
6:45	Departure	Seward Coastal	6	360		360
8:15	Departure	Denali Star 1	19	420	1,040	524
10:00	Departure	Whittier	2	120		120
11:30	Arrival	Seward Daily 1	6	360		360
13:00	Departure	Seward Daily 1	6	360		360
20:00	Arrival	Denali Star 1	19	420	1,040	524
20:30	Arrival	Whittier	2	120		120
22:00	Arrival	Seward Coastal	6	360		360
Total			66	2,520	2,080	2,728

Source: *Volume I Executive Summary November 1999 Anchorage/Fairbanks Yard and Terminal Plan and Strategic Traffic Estimate with updates from ARRC consultations.*

The depot passenger area, office areas, baggage areas, and parking facilities are at or over capacity when serving the rail service loads listed in the above table. The tracks may be able to handle a minor amount of growth with schedule changes and track improvements, but the improvements would not handle the demand projected for 2022 (see Section 2.2.2).

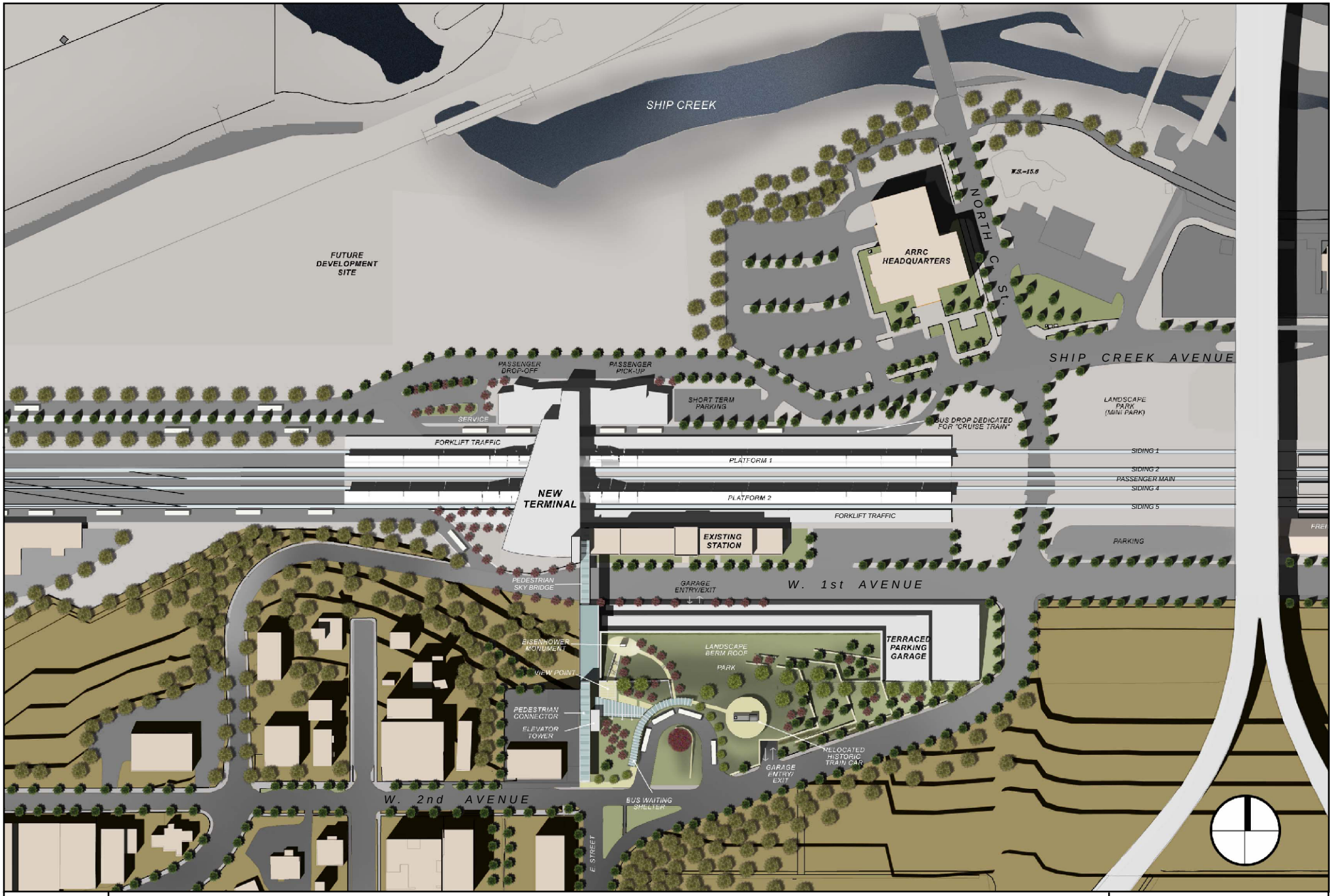
2.2.2 Alternative 2: Northside Alternative (Proposed Alternative)

The features of the Northside Alternative are shown on Figure 2.2.

Intermodal Terminal. Under the Northside Alternative, a two-story ITC building with approximately 38,000 square feet of space would be constructed on the north side of the passenger main line, north and slightly west of the existing depot on a gravel lot that is currently used to support freight transfer operations. The first floor of the building would be constructed parallel to the rail tracks and the second story would be partly bridged on piers, 23 feet over and perpendicular to the tracks. Escalators and elevators would transport arriving and departing passengers to the platforms and trains below. A pedestrian sky bridge would connect to the terraced parking garage and to the west end of the existing depot. An elevator would connect the existing station to the pedestrian sky bridge and to the new terminal's arrival and waiting lounge. A platform and passenger siding would still be accessible from the current depot, which would continue to be used as the ticketing and waiting area for some trains, such as special charter trains, and for ARRC and lessee office space.

Trackside Improvements. Three new passenger siding tracks would be constructed to allow the simultaneous loading and unloading of passengers without tying up the passenger main track. The new tracks would be approximately 3,500 feet long. They would tie into the existing passenger main and southbound mainline track near Cook Inlet on the west end of the project area with a series of crossovers and switches. To the east, the new passenger siding tracks would tie into the existing passenger main near Cordova Street. Two new passenger platforms (approximately 800 feet by 20 feet each) would be constructed to the inside of the two outer passenger sidings. Each new platform would be able to accommodate approximately nine rail coach cars on each side (18 rail cars total). Where the new tracks intersect North C Street, gates and signals would be reconfigured to accommodate the additional tracks.

Baggage and Passenger Loading/Unloading. Baggage handling and bag matching would occur on the first floor of the ITC building. Within the building, there would be a bag check and baggage claim area with sufficient storage capacity to accommodate the forecasted passenger loads. Conveyor belts and carousels may be installed to move bags and increase the efficiency within the building. Bags would continue to be loaded and unloaded from the baggage cars by forklift; however, with the additional sidings and platforms, the ARRC would have the flexibility to separate the baggage handling activity from the passenger boarding activity. With the new track and platform configuration, the outside siding tracks (tracks 1 and 5) would be used for inter-city trains requiring baggage handling. A paved forklift operating area would provide access to the trains. Passengers would board from the platforms accessed via escalator from the overhead terminal. One platform would be situated between and serve tracks 1 and 2. The other platform would be situated between and serve tracks 4 and 5. Such a configuration would allow baggage operations to continue using forklift operations but also completely separate this activity from the passenger-loading platforms. The trains would act as buffers between the passenger loading platform and the forklift operation area. Twenty feet of clearance would be provided to allow sufficient space for forklift clearance and baggage crate storage during the loading and unloading process. Providing baggage handling on both the north and south sides of the station



Ship Creek Intermodal Transportation Center
Environmental Assessment

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Figure 2.2

Alternative 2
Northside Alternative
(Proposed Alternative)

Data Source: ARRC, Kumin Associates, Inc.

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on two tracks would double the area available for baggage handling. The existing baggage handling building, which is not historically significant, would be demolished.

Commuter passengers and airport shuttles would arrive on the inner passenger siding tracks (tracks 2 and 4) and would access the terminal via the same escalators as inter-city passengers and thus avoid any baggage operation.

Track 3, the center track, would be the mainline track for through trains. Boarding would not occur on the mainline. The center track would be buffered from the passenger platforms by tracks 2 and 4.

Access, Circulation, and Parking. Road access to the terminal would be from an extension of Ship Creek Avenue, which would be primarily for passenger pickup and drop-off. Passenger pickup and drop-off would also continue to be available on 1st Avenue in front of the existing depot. An approximately 7,400-square-foot short-term parking area would be constructed just east of the building. Taxi and bus queuing lanes would be constructed adjacent to the building. Door-to-door pull-contractor bus service would occur on a bus-only, one-way roadway with sidewalks adjacent to the tracks, east of the new ITC building.

A traffic signal and left turn pocket would be installed at the intersection of North C Street and 1st Avenue as well as North C Street and Ship Creek Avenue to accommodate projected traffic to the facility and to improve safety at the wider crossing.

An approximately 650-space parking garage, terraced up the hillside, would be constructed on the existing depot parking lot, Denali Federal Credit Union lease, and adjacent hillside (Quyana Park). The parking garage would have four levels for parking. The fourth level would be approximately 30 feet above 1st Avenue. Public open space and viewing areas would be constructed at the top level of the parking structure approximately 40 feet above the 1st Avenue elevation. To address the pedestrian access problems associated with the steep hillside and horizontal distance separating downtown from the facility, an elevated walkway would extend from the parking garage to the ITC. This would reduce the psychological barrier[1] created by the horizontal and vertical distance currently experienced by pedestrians accessing the existing depot from downtown.

The top of the parking garage would be a landscaped park and public plaza area. An enclosed elevated walkway would connect to the garage and the ITC building. This interior walkway would ensure pedestrians would have weather-protected access from near 2nd Avenue at E Street and the ITC. Vehicles would be able to enter the parking garage from West 2nd Avenue on the top level or from West 1st Avenue on the bottom level. At the request of the MOA, a bus turnout for public transit would be provided on the top floor of the garage. All pedestrian improvements would be ADA accessible. The project would provide connections to the existing sidewalks/trail network to serve pedestrians and bicyclists and keep them safely separated from road vehicles and trains.

Train Operations. Table 2-2 below lists the train activity and schedules projected for the 2022 peak summer season. Additional details on existing and future demand assumptions can be

[1] National studies have shown that pedestrians are less likely to make walking trips if they perceive the distance as too great or uninteresting (psychological barriers). Breaking up the expanse visually, with points of interest, nodes of activity, etc. can enhance the pedestrian experience and facilitate walking.

reviewed in Appendix A, *Conceptual Design Details*. Under the proposed alternative, demand in 2022 would be accommodated. Through trains could be added. An airport shuttle and commuter train, if developed, would be able to operate year around.

Table 2-2. 2022 Train Activity, Schedules, and Depot Demand During Peak Summer Season (Average Day)

Time	Arrival or Departure	Train	Number of Coaches	Number of Passengers (ARRC)	Number of Passengers (Pull-Contract)	Projected Depot Passenger Demand
6:42	Arrival	Mat-Su Commuter	3	180		180
6:45	Departure	Seward Coastal	9	540		540
6:50	Arrival	Mat-Su Commuter	3	180		180
7:20	Arrival	Mat-Su Commuter	3	180		180
7:50	Arrival	Mat-Su Commuter	3	180		180
8:15	Departure	Denali Star 1	20	600	800	680
8:20	Arrival	Mat-Su Commuter	3	180		180
8:33	Departure	Mat-Su Commuter	3	180		180
9:15	Departure	Denali Star 2	14	0	1,120	112
10:00	Departure	Whittier	4	240		240
11:30	Arrival	Seward Daily 1	9	540		540
11:50	Arrival	Mat-Su Commuter	3	180		180
12:30	Arrival	Seward Daily 2	9	540		540
13:00	Departure	Seward Daily 1	9	540		540
13:33	Departure	Mat-Su Commuter	3	180		180
14:00	Departure	Seward Daily 2	9	540		540
16:30	Departure	Mat-Su Commuter	3	180		180
16:50	Arrival	Mat-Su Commuter	3	180		180
17:15	Departure	Mat-Su Commuter	3	180		180
18:00	Departure	Mat-Su Commuter	3	180		180
18:45	Departure	Mat-Su Commuter	3	180		180
20:00	Arrival	Denali Star 1	20	600	800	680
21:00	Arrival	Denali Star 2	14	0	1,120	112
20:30	Arrival	Whittier	4	240		240
22:00	Departure	Mat-Su Commuter	3	180		180
22:00	Arrival	Seward Coastal	9	540		540
Total			130	7,440	3,840	7,824

Source: *Volume I Executive Summary November 1999 Anchorage/Fairbanks Yard and Terminal Plan and Strategic Traffic Estimate with updates from ARRC consultations.*
Note: Airport Rail Shuttles would operate two each hour, arriving on the hour and departing for the airport on the half hour.

The ARRC has identified Alternative 2 as their proposed alternative for the following reasons: (1) having the ITC on the same street and same side of the tracks as the parking garage and existing depot would create too much activity (vehicles, pedestrians, taxis, etc) in too concentrated an area (2) the north side alternative offers better operational ability for handling two large trains simultaneously (3) Alternative 2 has better, more efficient pedestrian access with downtown by keeping the pedestrian connection aligned with E Street; (4) the vacant area on the

north side of the tracks provides better opportunity for future expansion of the ITC should that ever become necessary.

2.2.3 Alternative 3: Southside Alternative

The features of the Southside Alternative are shown on Figure 2.3.

Intermodal Terminal. With the Southside Alternative, the ITC building would be constructed on the south side of the passenger main line directly east of the existing depot. Construction at this location would entail demolition of the existing baggage handling building. The building concepts described for the Proposed Alternative (Northside Alternative) are the same as under the Southside Alternative except for the orientation. As under the Proposed Alternative, the Southside Alternative would also have 38,000 square feet of space with the departure lounge bridging the new tracks. One difference would be that the elevated pedestrian sky bridge would connect from the parking garage's northeast corner and tie into the second floor of the ITC. The space between the existing depot and new ITC building would become a plaza area.

Trackside Improvements. The proposed trackside improvements are identical to those described in the Proposed Alternative.

Baggage and Passenger Loading/Unloading. Baggage handling and bag matching are identical to the improvements proposed in the Proposed Alternative.

Access, Circulation, and Parking. Access, circulation, and parking are identical to the Proposed Alternative with the following exceptions: (1) Passenger pickup and drop-off would occur south of the existing tracks on West 1st Avenue. Curb cuts and sidewalks would be designed to allow curbside drop-off in front of the building. (2) Door-to-door pull-contractor bus service would occur on a bus-only, one-way roadway with sidewalks adjacent to the tracks along an extension Ship Creek Avenue west of North C Street. (3) A pedestrian sky bridge would connect over West 1st Avenue from the northeast corner of the parking garage to the southwest corner of the ITC building. A pedestrian sky bridge would also be provided west of the parking garage over the tracks.

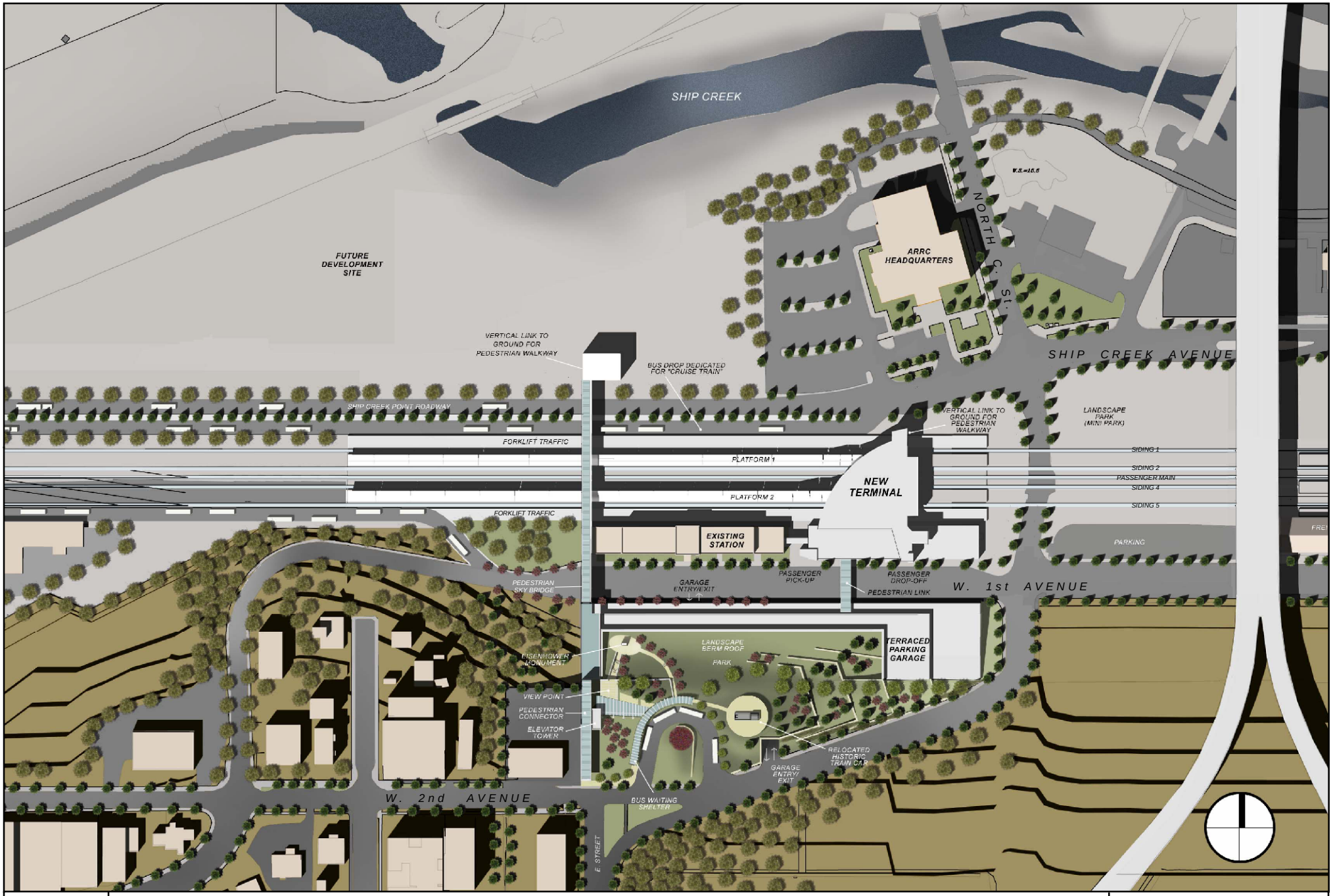
Train Operations. The ability to accommodate projected rail service growth is identical to the Proposed Alternative.

2.3 Alternatives Considered but Eliminated from Detailed Study

The following alternatives were considered but eliminated from further consideration. Their locations are shown on Figure 1.1, Vicinity Map.

2.3.1 Freight Shed

This alternative would have involved renovating the Freight Shed as the new ITC. Located at 153 West 1st Avenue, this long, single-story wood-framed warehouse is oriented west to east along the north side of 1st Avenue in the industrial area at the foot of the bluff north of downtown Anchorage. This alternative was eliminated from further consideration for the following reasons.



Ship Creek Intermodal Transportation Center
Environmental Assessment

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Figure 2.3

Alternative 3
Southside Alternative

Data Source: ARRC, Kumin Associates, Inc.

Date: 02/21/03 | File: x:\09585\shipcreekitc\mapdocs\Alternative-2.mxd

1. The ability to effectively serve pedestrians from both this site and the existing depot would be difficult. The site is not centrally located relative to the existing depot and downtown core, making pedestrian connections between the two buildings and to downtown more difficult, more extensive, and therefore, more costly.

2. Local traffic circulation would be adversely affected. The site is located between North C Street and Cordova Street, so longer trains stopped at the building for loading would block one road or the other.

3. Adverse impacts on historic resources may occur. The Freight Shed is over 50 years old and is eligible for the National Register of Historic Places (NRHP). Remodeling of the structure from its current and historical use as a freight warehouse to an ITC could affect its historic integrity. This site also has limited opportunities to complement the historic railroad depot (also listed on the NRHP) and retain its function.

2.3.2 Consolidated Freightways Site

This alternative would have involved developing the ITC on the Consolidated Freightways site, placing it further west toward Cook Inlet and closer to the bluff on the edge of downtown than the reasonable alternatives. This alternative was eliminated from further consideration due to the poor opportunity to provide pedestrian connections, poor road connections, and safety conflicts that would have occurred between road, track, and bluff in providing access to the site. Road vehicles could only access it via West 1st Avenue. Like the Freight Shed alternative, this site is too far removed from the central hub of downtown pedestrian traffic to be effective. The building would be too far along the west end of the new tracks for passengers to conveniently access the trains. The steep bluff and track location near the toe of the bluff would make safe public road access to the site difficult. In addition, the building is currently leased and in use, so the ARRC would not control the property until the lease expires, or project costs would be higher due to the need to buy out the lease.

2.3.3 Northside Parking Garage

This alternative would have involved developing the parking garage on the north side of the tracks as a design variation of the Proposed Northside Alternative (Alternative 2). Essentially, all new buildings would have been north of the tracks. This alternative included vehicular circulation around the parking structure and new ITC building on the north side from North C Street. The existing stairway or a similarly graded stairway constructed west of the existing stairway would have provided pedestrians access to 1st Avenue and the depot. There would have been an elevated walkway extending from the depot over the tracks, past the new ITC building, over the passenger drop off area and to the parking garage. With such a layout, the pedestrian connections into the ITC would have had to span across the park into the ITC building itself, without the structural support of the parking garage. The distance of the span was not feasible from an engineering perspective without placing piers into the park. That is, while it would have minimized the footprint of the actual take of park property, it would not have been technically feasible to avoid the park altogether. Also, extending the facilities further north would have increased the distance between downtown and the ITC facilities and exacerbated the psychological and physical distance between the two.

3.0 AFFECTED ENVIRONMENT

This section discusses the relevant existing environmental conditions in the general project area potentially affected by the proposed action. The project vicinity is shown on Figure 1.1. This discussion focuses only on those aspects potentially subject to impacts. Resources covered in this review include the physical environment, biological resources, and the human environment.

3.1 Physical Environment

3.1.1 Air Quality

The National Ambient Air Quality Standards (NAAQS) established by the Environmental Protection Agency (EPA) focus on six pollutants: carbon monoxide (CO), particulate matter (PM), lead (Pb), sulfur dioxide (SO_2), ozone (O_3), and nitrogen dioxide (NO_2). The NAAQS represent maximum concentrations above which adverse effects on human health may occur. Areas of the country where air pollution levels persistently exceed the NAAQS may be designated as non-attainment areas.

The Anchorage area meets the NAAQS for four of the six criteria pollutants. Airborne concentrations of Pb, SO_2, O_3, and NO_2 are currently below the established NAAQS for each of these pollutants. Eagle River, located approximately 10 miles north of downtown Anchorage, is currently designated as a non-attainment area for PM_{10}. A portion of the Anchorage Bowl, including part of the Ship Creek area and part of downtown, is a non-attainment area for CO (ADEC, 2002a).

The NAAQS are summarized in the Air Quality Analysis Technical Report in Appendix B (HDR 2003). A summary of recent available air quality data for monitors nearest the project area is provided in Appendix B. The available, recent monitoring data include only CO and PM_{10}. There have been no measured violations of NAAQS for PM_{10} in the three most recent complete years of data available. At two monitoring sites in downtown Anchorage, there were measured violations (based on the 2nd maximum concentration) of the 8-hour NAAQS for CO in 1999. In 2000 and 2001, these sites, as well as other sites in all years listed, show compliance with the CO NAAQS.

In July 1998, the EPA reclassified the same portion of Anchorage from a moderate to serious CO non-attainment area. Although CO-related air quality has improved substantially over the past 15 years, Anchorage was reclassified in 1998 as a consequence of three events when maximum limits for CO were exceeded. Based on recent monitoring data showing compliance with NAAQS for CO, the MOA is currently preparing a request to EPA to redesignate the area as in attainment/maintenance for CO. If approved, the maintenance area status would require the MOA to implement a maintenance plan to ensure that the area does not revert to non-attainment for CO.

Motor vehicles are the primary source of CO in the Anchorage area. The highest levels of CO are emitted by motor vehicles in the first 5 to 10 minutes after start-up while the vehicle engine is cold. Anchorage's cold winter temperatures increase the number of "cold-start" emissions. Railroad emissions are not considered a significant source of CO.

The winter climate of Anchorage, with its relative lack of sunshine, promotes surface temperature inversions. These inversions tend to limit vertical mixing of the atmosphere near the ground,

trapping vehicle emissions near the ground, and promoting drainage flows of the cold air into low areas. Therefore, air analysis of CO emissions from vehicles and other near-surface emission sources is generally focused on wintertime conditions.

3.1.2 Soils and Geology

The ground surface of the project area is typically covered with granular material that provides a level surface for the existing developments. The granular material originated from Ship Creek alluvium, glacial outwash from the slopes above Ship Creek, or man-made fill. The granular soil is predominantly sand that is typically medium dense to dense, varies from clean to silty, and has a locally variable amount of gravel. Beneath the fill, there are typically three major soil units: mud flat estuarine silts, a discontinuous stratum of sand and gravel, and clays.

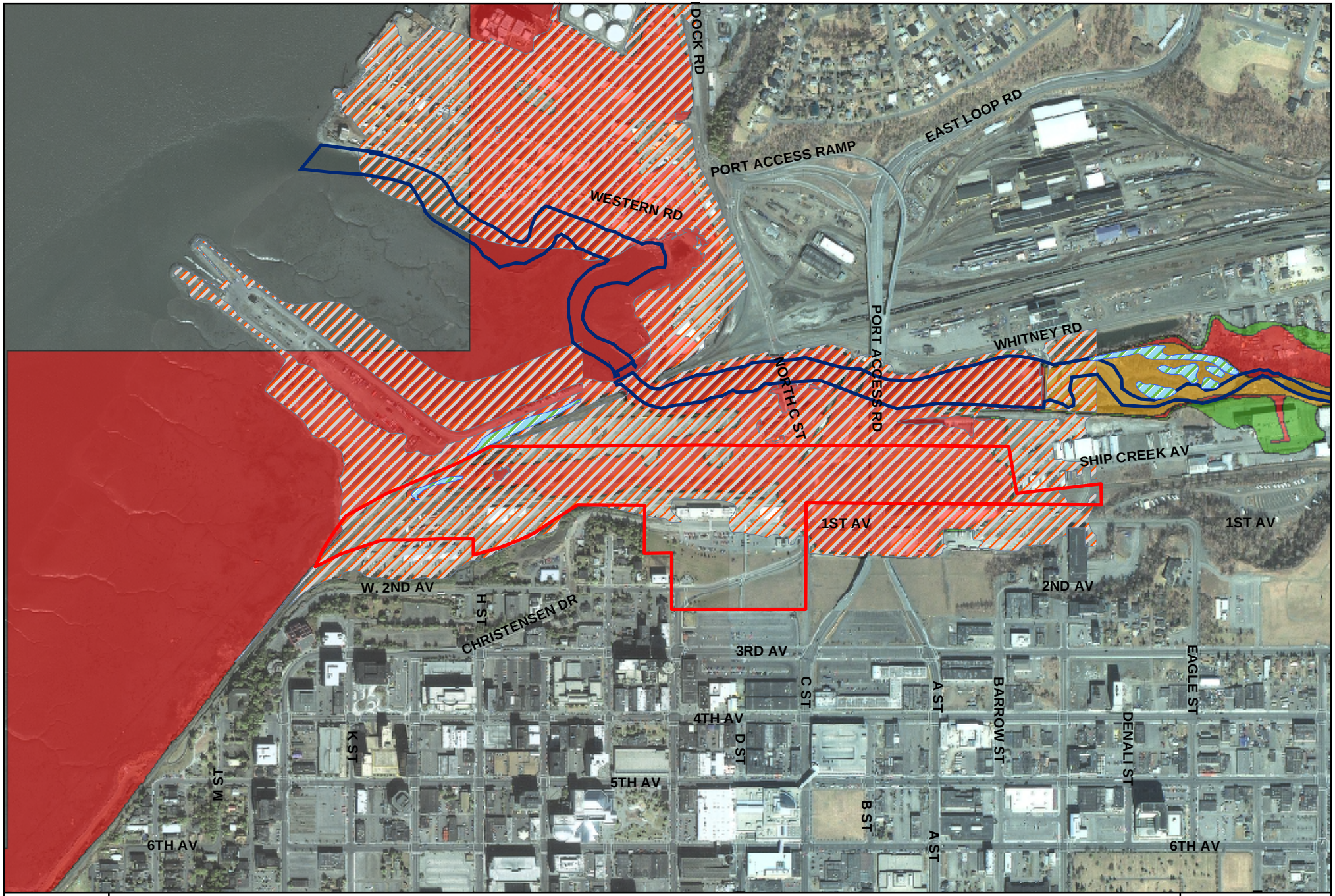
The center south edge of the project site is commonly referred to as the "4th Avenue Slide" or "buttress" area. The crest of the slide area slumped and moved laterally northward about 15 feet during the 1964 Good Friday Earthquake. A buttress was constructed across the slide path to improve the stability of the slope and provide protection for businesses above. The Geotechnical Report prepared for the EA (Shannon and Wilson) in Appendix C discusses seismic considerations for structure location and design.

3.1.3 Hydrology, Flood Zones, and Water Quality

Upper Cook Inlet, west and northwest of the project area, experiences the second highest tidal range in North America: 39 feet. Ship Creek, immediately north of the project area, drains westward from the Chugach Mountains. Several dams, one of which is located just north of the project area (the Chugach Electric Association (CEA) dam) affect its hydrology. Upstream of the dam, Ship Creek is a regulatory floodway. Downstream of that dam, the creek is subject to tidal influences and is not identified as a regulatory floodway. At low tide, the Ship Creek main channel meanders across the flat gravel bed.

The Federal Emergency Management Agency (FEMA) has mapped the expected 100-year floodplain (any area that has a 1% or greater chance of flooding in any given year) for Ship Creek, as shown in Figure 3.1. Areas north of the existing passenger main line and the depot, as well as an area east of North C Street and south of 1st Avenue, have been identified as within the 100-year floodplain. There is a small area west of North C Street that is also within the 100-year floodplain, including the existing baggage storage building. The existing depot is not located within the 100-year flood zone. The source of floodwater within the project area is coastal flooding from Cook Inlet.

The U.S. Army Corps of Engineers (2002) completed a preliminary study of the coastal flooding along the Ship Creek estuary and the waterfront of the Port of Anchorage. This study has not yet been adopted by FEMA but Jack Puff, the MOA Floodplain Administrator, stated the MOA is using this new study to evaluate flood hazards in the Ship Creek intertidal area. The extent of flood prone area in the new study is more extensive than is shown on the existing FEMA flood hazard maps, as shown in Figure 3.1. According to the new study, the base flood elevation (BFE) of the 100-year flood zone is 19 feet MSL. This zone completely surrounds the existing depot, although the depot itself is outside the 100-year flood zone. This study shows the depot within the 500-year flood zone, which is not regulated. MOA requires, based on FEMA regulations, habitable structures to be built 1 foot above the BFE, 19-feet MSL, or above 20 feet MSL.



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0 500 1,000 Feet

Data Source: National Wetland Inventory, FEMA, HDR wetland delineation, ARRC
Date: 02/21/03 File: x:\09585\shipcreekitc\mapdocs\Fig3_1wetlands.mxd

Legend

- Ship Creek ITC Project Area
- Ship Creek Channel
- Wetland

USACE Floodplain Mapping

- 100 Year

FEMA Floodplain Mapping

- 100 Year
- 500 Year
- Floodway

N

Figure 3.1

Wetlands and Floodplains

The water quality of Ship Creek is degraded as it flows from its source to its mouth. Urban runoff from storm drain outfalls and industrial activity are thought to be the major contributors to the degradation. Ship Creek, from the Glenn Highway bridge to the mouth of the creek, appears on the Alaska Clean Water Act Section 303(d) list of impaired water bodies because of high levels of fecal coliform, biological community alteration, and petroleum hydrocarbons (ADECb, 2002).

3.1.4 Coastal Zone

The Federal Coastal Zone Management Act authorizes the state to review federal activities and federally permitted activities within or affecting the coastal zone. The ITC project is located in the MOA Coastal District. Projects that occur within the Alaska Coastal Boundary, as defined by the Alaska Coastal Management Act, are subject to a review to determine if they are consistent with the state and local coastal management programs only if certain state or federal permits are required. If no authorizations or environmental permits are needed for the project, a consistency review is not required.

The Anchorage Coastal Management Plan designates the Port of Anchorage, including the northwest part of the project area, as an Area Meriting Special Attention (AMSA). The draft AMSA plan (MOA 1991a) was never adopted, but it describes some community expectations for the area. Proposed standards and policies include:

- A setback shall be maintained along lower Ship Creek. Activities in that setback must have direct public need and no prudent and feasible alternatives. (Note: the actual setback that applies according to municipal code is 25 feet.)

- Public access to lower Ship Creek shall be organized and controlled to minimize vegetation and stream bank disturbance, and for safety related to the area's proximity to actively used railroad tracks.

- New Ship Creek development shall be configured in such a manner that creates or enhances a more people-oriented site with visual or physical access to the Knik Arm and waterfront viewsheds.

- A Ship Creek greenbelt should be established.

3.2 Biotic Communities

The lower Ship Creek valley is predominantly an urban/industrial environment with few remaining undeveloped estuarine areas upstream of the railroad crossing of Ship Creek in the vicinity of the project area. Adjacent to the project area, the mudflats and the Ship Creek channel provide habitat for fish and wildlife species. The project area consists of gravel lots and pavement in an industrial/urban setting and supports limited vegetation communities and wildlife populations.

3.2.1 Vegetation and Habitat

The project area is an industrial/urban setting and supports limited vegetation or wildlife habitat. The project area itself is almost entirely gravel fill, paved roads and parking areas, or buildings. A

ditch-type vegetated wetland exists at the west end of the project area (see below), and Quyana Park is a grass lawn with a small number of ornamental trees. The following describes wildlife habitat adjacent to the project area (MOA, 1991):

3.2.1.1 Intertidal Marsh

Intertidal marsh exists immediately west of the freight main line west of the project area. It supports a dense cover of sedges (*Carex* species) and arrowgrass (*Triglochin maritimum*).

3.2.1.2 Riparian Habitat

Ship Creek, north of the project area, meanders across a braided channel with a substrate of silt and gravel. Slight benches above the creek are covered with silt deposits and grasses such as beach wild rye (*Leymus mollis*) and blue joint (*Calamagrostis canadensis*). The slopes above these tide-flooded areas support grasses and such shrubs as willow (*Salix* species) and alder (*Alnus* species). Upstream of the CEA dam, the freshwater riparian vegetation includes a slender band of woodlands and a wetland with thick cover of sedges, alder, and willow.

3.2.1.3 Wooded Slopes

A wooded slope occurs outside of the project boundaries immediately southwest of the existing railroad depot. Paper birch (*Betula papyrifera*) and balsam poplar (*Populus balsamifera*) dominate this area.

3.2.1.4 Wetlands

National Wetland Inventory (NWI) maps and MOA wetlands maps (MOA, 1996) indicate that there are no wetlands in the project area vicinity. However, in a recent field study for the Ship Creek Culvert Removal Project, narrow wetlands (0.16 acre total) were identified on both sides of the freight main at the west end of the project area. These wetlands, depicted in Figure 3.1, are vegetated with herbs and grass-like species and may be tidally influenced (estuarine, emergent vegetation [E2EM] in NWI terms). These wetlands may be under the jurisdiction of the U.S. Army Corps of Engineers (USACE), and if so, a wetland permit would be required before they could be filled. Downstream of the railroad's freight line bridge, Ship Creek is classified as a subtidal estuarine waterway with an unconsolidated bottom (E1UB). Upstream of the bridge, Ship Creek is classified as a tidal river with an unconsolidated bottom and shore (R1UB and R1US).

3.2.1.5 Fish and Essential Fish Habitat

All waters that support anadromous fish species are considered Essential Fish Habitat (EFH) by the National Marine Fisheries Service (NMFS). EFH is defined as "waters necessary to fish for spawning, breeding, feeding, or growth to maturity" by the Magnuson-Stevens Fishery Conservation and Management Act. No EFH is located within the project area, although Ship Creek, located just north of the project area, is considered EFH. The Catalog of Waters Important for the Spawning, Rearing or Migration of Anadromous Fishes documents the presence of chinook (*Oncorhynchus tshawytscha*), coho (*O. kisutch*), pink (*O. gorbuscha*), and chum (*O. keta*) salmon at the mouth of Ship Creek (ADF&G 2001).

3.2.2 Wildlife

The project area is a highly developed industrial/urban setting, which does not contain habitat to support wildlife populations. Adjacent to the project area, gulls, shorebirds, and waterfowl can be found along Ship Creek and in the estuarine marsh habitat. Raptors and songbirds occur within the Ship Creek basin area but are generally less common and confined to the upland areas and wooded slopes surrounding the basin. In the summer and fall, gulls, eagles and fish-eating ducks gather at Ship Creek during salmon spawning (MOA 1991a). Ducks use lower Ship Creek year-round.

It is highly unlikely that any mammal species would be found in the project area due to lack of suitable habitat and cover. Coyotes (*Canis latrans*), red fox (*Vulpes vulpes*), and moose (*Alces alces*) may occasionally pass through the Ship Creek corridor but would most likely travel along the riparian and wooded bluff areas. The riparian habitat upstream of the CEA dam supports snowshoe hare (*Lepus americanus*), beaver (*Castor canadensis*), and occasionally moose.

3.2.3 Protected Species

The U.S. Fish and Wildlife Service (USFWS) and the NMFS indicate that Ship Creek is not within the breeding range of any threatened or endangered species, and that there are no known resident species on the federal list of threatened or endangered species in the project area (Personal Communication, Lance 2002; Personal Communication, Berg 2002).

The Cook Inlet stock of beluga whales (*Delphinapterus leucas*) is designated as depleted under the Marine Mammal Protection Act. Beluga whales have been observed in the marine waters near the mouth of Ship Creek in late summer when salmon concentrations provide feeding opportunities (MOA, 1991a). Beluga whales have been reported to travel into the Ship Creek channel only as far up as the cement barge well downstream of the freight line bridge (Mahoney, 2003).

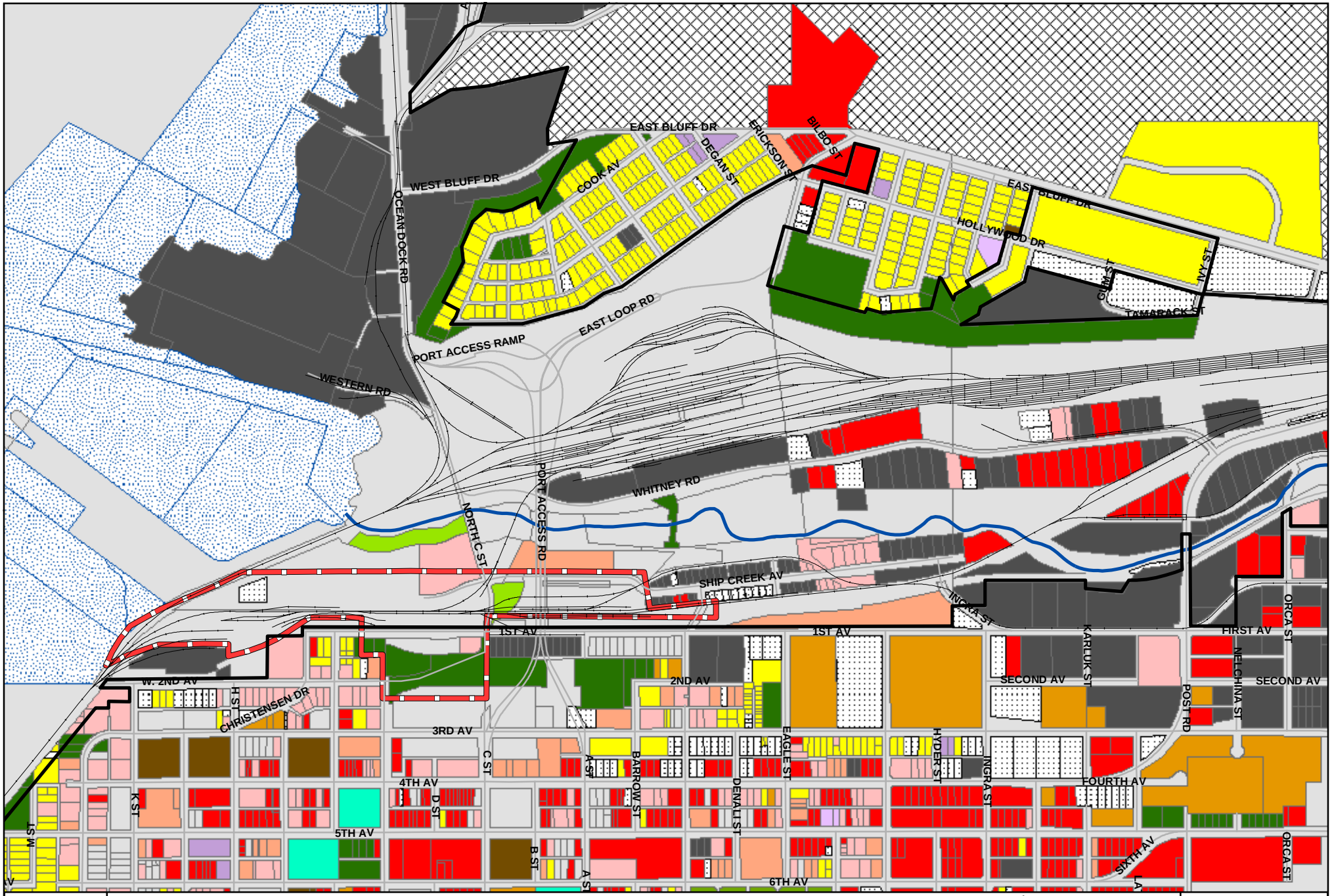
The Bald Eagle (*Haliaeetus leucocephalus*) is a commonly observed raptor within the Anchorage area. It is not listed in Alaska nor is it a candidate for listing as threatened or endangered, but it is federally protected in Alaska under the Bald and Golden Eagle Protection Act. No Bald Eagle nests have been identified within the immediate vicinity of the proposed project (HDR 2002; Conner 2003). Bald Eagles can be found roosting in cottonwood trees on the wooded bluffs outside of the project boundaries and can be seen feeding along the Ship Creek channel year-round and scavenging throughout the Anchorage Bowl (ADF&G, 2000; Conner 2003).

3.3 Human Environment

3.3.1 Existing and Planned Land Uses and Zoning

3.3.1.1 Comprehensive Planning and Zoning Districts

According to the Anchorage Bowl Comprehensive Plan (MOA, 2001), the existing land use of the ARRC property within the project area is transportation. As shown on Figure 3.2, parkland exists within the project area south of the depot. There are no farmlands, schools, or places of public assembly in or adjacent to the project area. The ARRC headquarters lie just north of the project area. There is one small gift shop in the ARRC depot, and the upper floors of the depot serve as offices for ARRC and other organizations.



Ship Creek Intermodal Transportation Center
Environmental Assessment

0 500 1,000 Feet

Date: 02/21/03 Data Source: MOA (1998, with some HDR updates)

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Legend

- Railroad
- Road
- Stream
- Approximate ARRC Reserve
- Ship Creek ITC Project Area

Land Use

- Cemetary
- Open Space
- Park
- Waterway
- Commercial
- Residential
- Cultural Facility
- Church
- Office/Commercial
- Overnight Lodging
- School
- Government Facility
- Institutional
- Hospital
- Transportation
- Industrial
- Vacant
- Military

N

Figure 3.2

Land Use

Lands north of the project area to the base of Government Hill and east and west of the project area are primarily used for transportation and industry. Government Hill is primarily residential. South of the project area, land in the Ship Creek basin is vacant or used for industry. On the slopes adjacent and above the south side of the project area, land uses include commercial, office, institutional, park, and residential. This area comprises the central business district of downtown Anchorage. The planned land use for the ARRC property where the railroad tracks exist is industrial (MOA, 2001). The area around Port Access Road, North C Street, and south of the project area to 5th Avenue and downtown is planned for redevelopment/mixed use.

The zoning for the ARRC property is Planned Community District (PC), as shown on Figure 3.3. The zoning designations of the surrounding properties are Light Industrial (I-1), Marine Commercial District (MC), and Public Lands and Institutions District (PLI). The PC designation is generally given to large parcels or groups of parcels under unified development control. The PC District allows for the owner to submit a master development plan for the area. According to the MOA Planning Division, the most recent master plan adopted was the "Lo Patin Master Plan" in 1994 (Autor, 2003). The Lo Patin plan lays out a site plan for the Ship Creek PC zone that would have provided a place for small tourist-oriented projects and the possible inclusion of larger, more community-wide uses as well as meeting spaces, cultural, recreational and other tourist oriented uses with a strong focus on pedestrian improvements. The Lo Patin Plan does not specifically identify ITC development. The ARRC would be required to reapply for revision to the PC zoning with an updated master plan for the project area.

3.3.1.2 Land Ownership

The ARRC has full and continuing control and equitable title to the majority of the land in and adjacent to the project area under the terms of the Alaska Railroad Transfer Act of 1982, Public Law 97-468, and the Exclusive License issued pursuant to that Act on January 5, 1985 and recorded at Book 1212, Page 297, Anchorage Recording District. The ARRC's reserve area is approximately 950 acres. Within the project area boundary (42 acres), the ARRC controls all but the parcels comprising the hillside below Third Avenue. This hillside is owned and managed by the MOA Parks and Recreation Department (2.3 acres), MOA Parking Authority (1.2 acres) and ADOT&PF (3.1 acres). The Parks and Recreation, ARRC, and ADOT&PF parcels on the hillside comprise Quyana Park.

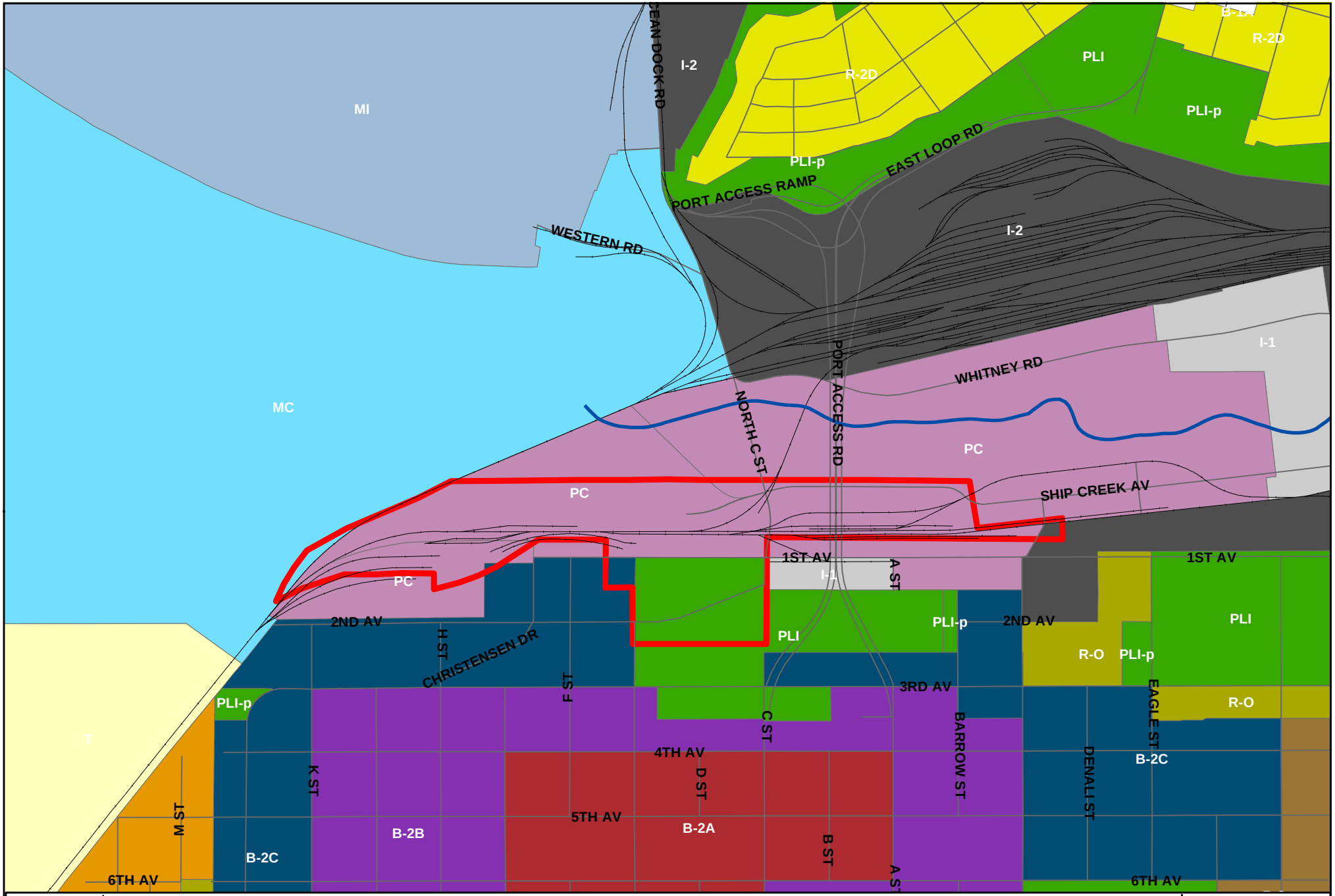
3.3.2 Socioeconomics

With a population exceeding 260,000, Anchorage is Alaska's largest city and home to more than 40% of Alaska residents. It is also Alaska's commercial and financial center. The maturing Anchorage economy is diverse and no longer dependent on one or two industries.

The ARRC is headquartered in Anchorage, with its main offices and staging areas located within the Ship Creek basin. Additionally, several barge and trucking companies operate out of the port area. The Port of Anchorage handles 85% of the general cargo and serves 80% of Alaska's populated areas by rail, road, and air.

3.3.2.1 Demographics

To characterize the demographics of the potentially affected area, certain U.S. Census block data were used to estimate nearby populations: the blocks that directly intersect the ITC study area



Ship Creek Intermodal Transportation Center
Environmental Assessment

0 250 500 1,000 Feet

Date: 02/13/03 | Data Source: MOA

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Stream
Road
Railroad
Ship Creek ITC Project Area

Zoning Designation

- B-2A CBD Core
- B-2B CBD Intermediate
- B-2C CBD Periphery
- B-3 General Business District
- I-1 Light Industrial
- I-2 Heavy Industrial
- MC Marine Commercial
- MI Marine Industrial
- PC Planned Community
- PLI Public Lands and Institutions
- PLI-p PLI-Park
- R-2D Two-Family Residential
- R-3 Multiple Family
- R-4 Multiple Family
- R-O Residential Office
- T Transition

N

Figure 3.3

Zoning

and the blocks that border the directly intersecting blocks. According to the 2000 census data, there are no residents in the blocks directly intersecting the project boundary. (Although one person is identified as residing in the area, it is either a data error or in a part of the block outside the project area.) There is no residential structure within the project limits. Figure 3.4 shows the census blocks used for population data and highlights those blocks with population greater than one person. A total of 313 people reside in the blocks that border the project area, or are adjacent to blocks directly intersecting the project area boundary.

Population, race, and income data are provided in Table 3-1, which also includes comparable race and income data for the MOA and Alaska. U.S. Census block groups were used to obtain the economic and race data. Unemployment data were not available at the block group level, but were available in the next geographic level, census tracts. Therefore, the unemployment numbers are listed for the census tracts containing the block groups. Figure 3.5 shows the block group locations. The block groups extend anywhere from 0.5 to over 2 miles outside the project area.

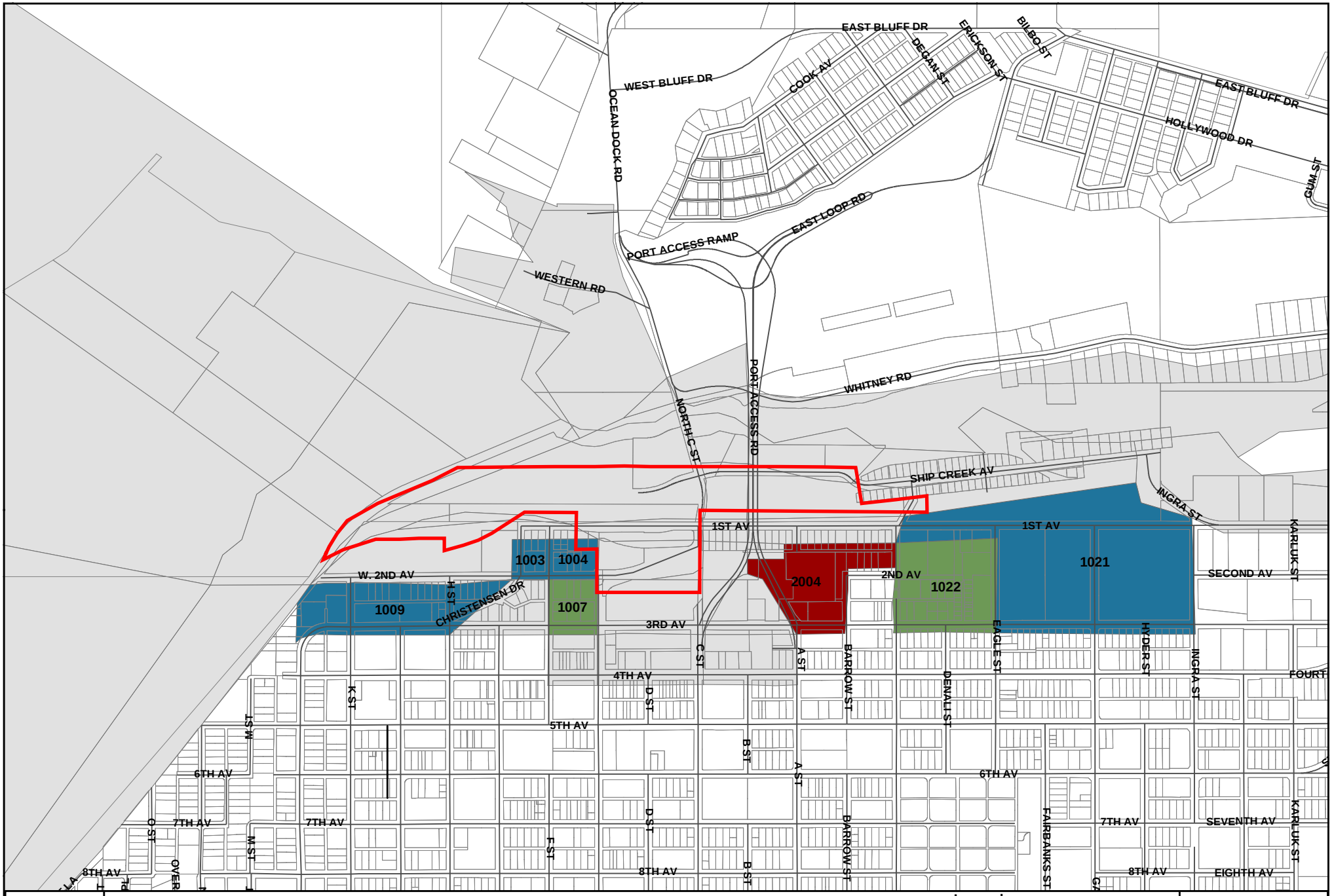
Table 3-1. Key Demographic and Economic Data

	State of Alaska	**Municipality of Anchorage**	**Block Group 04001**	**Block Group 05001**	**Block Group 05002**	**Block Group 06001**	**Block Group 11001**	**Block Group 11002**
RACE								
Percent White	74	77.2	77.2	72.7	46.5	36.6	65.5	52.5
Percent Black	4.3	7.2	12.3	6.2	8.0	8.8	3.8	11.8
Percent Alaskan Native and American Indian	19	10.4	0.7	9.3	9.0	40.1	11.1	23.6
Percent Asian	5.2	7.1	2.8	2.4	19.6	1.4	6.1	1.7
Percent Other races	3.3	4.7	7.0	9.3	17.0	13.0	13.4	10.4
Total Number	**626,932**	**260,283**	**6,626**	**792**	**1,156**	**284**	**261**	**1,197**
ECONOMIC DATA								
Average per capita income (in 1999)	$22,660	$25,287	$13,194	$24,800	$16,161	$12,595	$41,186	$16,292
Percent of civilian labor force unemployed in census tract[1]	9.0	6.8	4.3	4.6	4.6	16.6	35.3	35.3
Percent of individuals below poverty level	9.4	7.3	3.5	4.8	12.2	48.5	11.5	38.1

[1]*Census tracts are the smallest census unit for which unemployment information is available in the MOA.*
Source: U.S. Bureau of Census, 2000 American Fact Finder

3.3.3 Environmental Justice

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority and Low-Income Populations, issued in 1994, directs federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and adverse effects of federal projects on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law. The ethnicity and poverty status in the census block groups and tracts around the project area were compared to data for the MOA population to determine if any minority or low-income communities exist in the area that could be disproportionately affected by the proposed action. Data used to assess environmental justice considerations were discussed in Section 3.3.2.1 above.



Ship Creek Intermodal Transportation Center Environmental Assessment

Legend

- Road
- Ship Creek ITC Project Area
- Parcel Background

Block Population

- 0 - 1
- 2 - 35
- 36 - 99
- 100 - 139
- 140 - 174

N

0 500 1,000 Feet

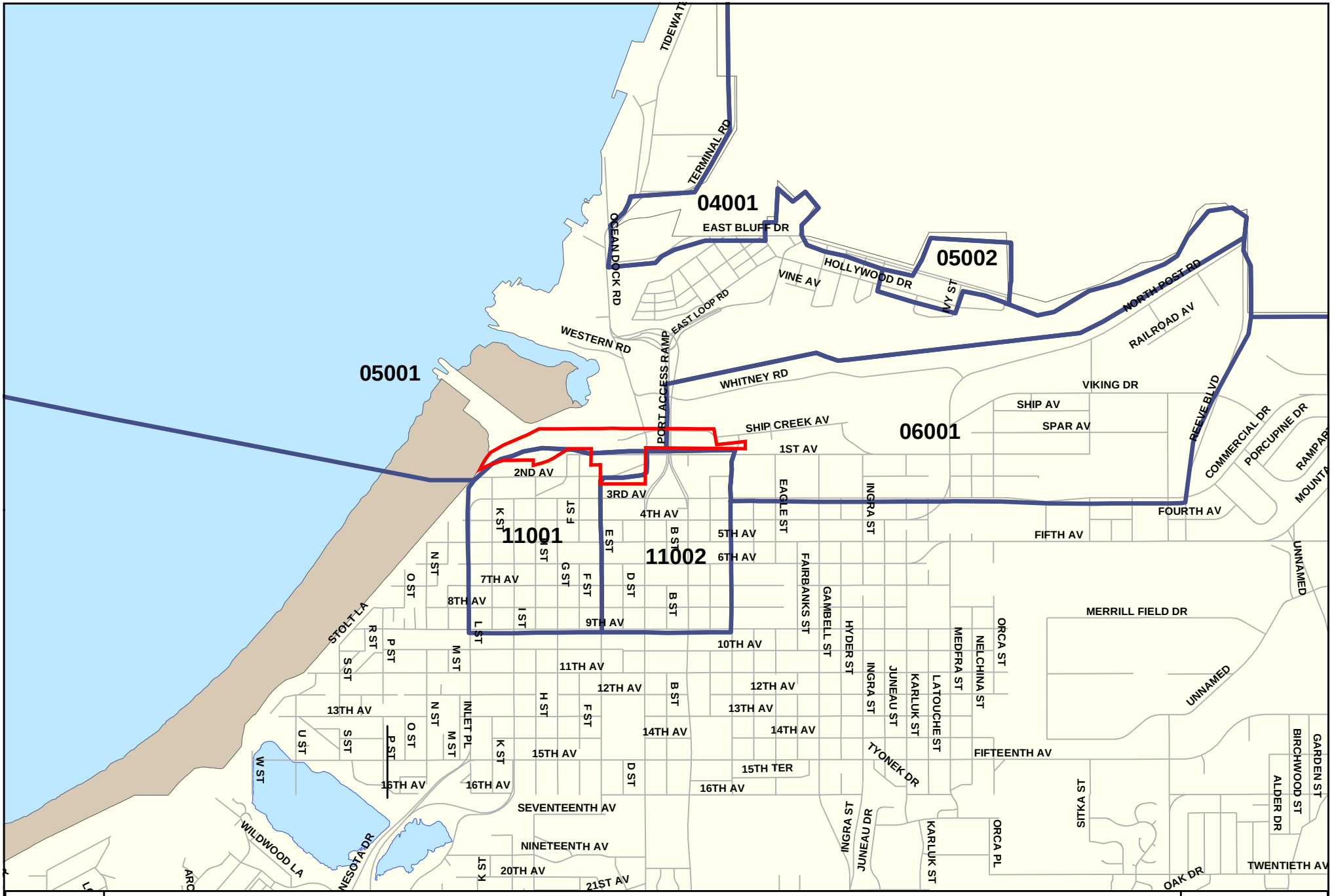
Date: 02/21/03 | Data Source: U.S. Tiger Census 2000

File: x:\09585\shipcreekitc\mapdocs\Figure3_4BlockPop

* Only blocks in or adjacent to the project area are depicted

Figure 3.4

Census Block Population*



0 1,000 2,000 3,000 Feet

Date: 02/14/03 | Data Source: U.S. Tiger Census 2000
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Ship Creek Intermodal Transportation Center Environmental Assessment

Legend

- Road
- Ship Creek ITC Project Area
- Block Group (Demographic Data)

* Only block groups in or adjacent to the project area are depicted

N

Figure 3.5

Census Block Groups*

Based on the data in Table 3-1, all but one block group (05001) have low-income or minority populations or both. Figure 3.4 shows that the blocks with population greater than one are outside of the project area. Comparing the land use map in Figure 3.2 with the block group locations in Figure 3.5 shows that the residential areas excluding the CBD are a substantial distance from the project area (approximately 0.25 miles to 2 miles). Because the block groups extend as far as 2 miles outside the project area, and the project and surrounding areas are mainly industrial and central business district, the potential environmental justice populations were determined to reside outside the project area.

3.3.4 Transportation Systems

A network of roadways comprised of principal arterials, minor arterials, and collectors interconnects the Ship Creek basin. Figure 3.6 illustrates the existing roadway network. The roadway network surrounding the study area includes:

Port Access Road (A Street/C Street) overpass - Principal Arterial
Ocean Dock and Loop Roads – Minor Arterials
Whitney Road – East-west Collector
E Street – Principal Arterial
North C Street – Collector
West 3rd Avenue – Principal Arterial
West 2nd and West 1st Avenues – East-west Collector
Ship Creek Avenue – East-west Collector

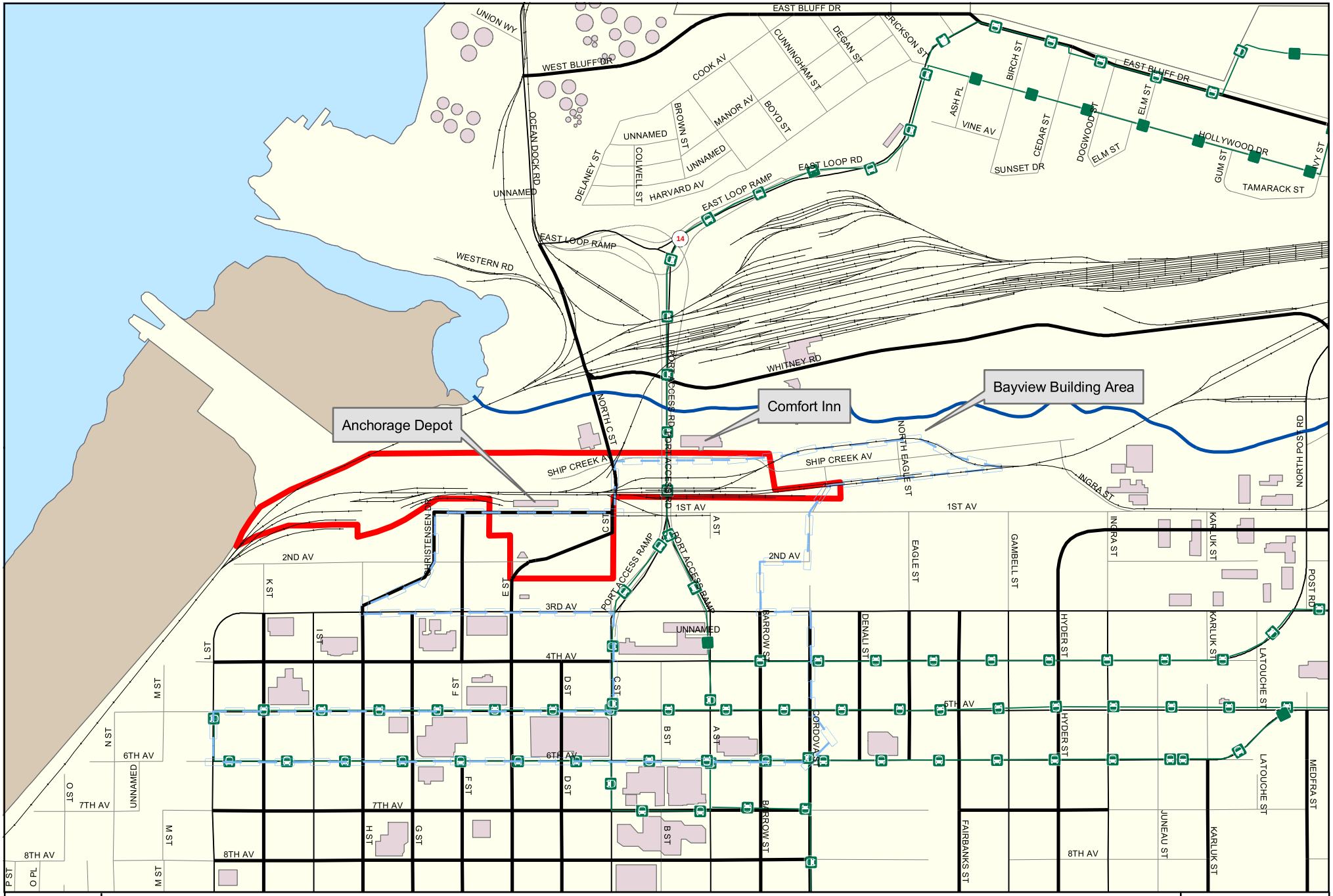
In addition to the roadways, there are also rail lines, pedestrian/bicycle trails, and a variety of docks. Automobiles, trucks, buses, bicycles, trains, ships, and pedestrians use these facilities daily. Due to the overall industrial nature of the area, most of the roads accommodate a proportionately high number of trucks. Most of the vehicles and trucks accessing Ship Creek, the Port, or the Government Hill/Elmendorf area use the bridge that spans the Ship Creek valley (the Port Access Road). Ocean Dock Road and the Port Access Road serve the majority of truck traffic (MOA, 2000a). The roads in the immediate project area serve local traffic traveling to businesses in the Ship Creek area and at the Port, and recreational activities along Ship Creek. Tourists, fishermen, and buses substantially increase traffic congestion during the summer months. Formal trails are discussed in Section 3.3.8.

3.3.4.1 Public Transit

The nearest public transit service is Route 14 – Government Hill, which provides daily service from the Transit Center on 6th Avenue across the Port Access Road to Government Hill and Elmendorf Air Force Base. In addition, the Ship Creek Shuttle provides transit transportation to the Ship Creek Waterfront area daily from 7:30 am to 5:30 pm and weekends from Memorial Day to Labor Day. This shuttle leaves from the downtown Transit Center and has drop offs at the Bayview Building, Comfort Inn, and ARRC depot.

3.3.4.2 Rail Lines

The project area includes the west end of the active railroad yard. The main freight line skirts the project area on its north and west sides. This freight main is used by all freight traffic running between Anchorage and points south, as well as for multiple daily switching operations. In



Ship Creek Intermodal Transportation Center
Environmental Assessment

0 1,000 2,000 Feet

Date: 02/21/03 Data Source: MOA
File: x:\09585\shipcreekitc\mapdocs\Figure3_6Zoning.mxd

Legend

- Stream
- Local Road
- Railroad
- Building
- Ship Creek ITC Project Area
- Arterial
- Collector
- Bus Routes
- Ship Creek Shuttle Route (Approx.)

N

Figure 3.6

Transportation Facilities

combination with the track leading to the Port, it is used to turn trains around. Trains move through the project area at a restricted speed (5 to 15 mph), in part because of the high pedestrian and vehicle activity. The main passenger line traverses the south side of the project area. It serves all passenger trains and main freight trains bypassing the freight yard as they pass through Anchorage.

3.3.4.3 Planned Transportation Projects

The Matanuska-Susitna Borough and the MOA have initiated planning and environmental analysis for a ferry system between Port MacKenzie and Anchorage. The purpose of the project is to construct ferry landings and operate a year-round ferry between the east and west sides of Knik Arm. The Knik Arm ferry would primarily serve commuters and commercial trucks traveling from the Mat-Su Borough to Anchorage and commuters traveling to Port MacKenzie (MOA, 2000b).

The Draft Ship Creek Development Master Plan (ARRC, 1999) outlines a plan for pedestrian connections and a public activity corridor in the form of a waterfront "esplanade" and an E Street Pedestrian Mall. Ship Creek development is also discussed in the Downtown Partnership Plan, which includes development of improved pedestrian friendly street level connections along E Street from Delaney Park Strip to Ship Creek. The plan calls for the further development of the pedestrian link through the sloping (buttress) area connecting downtown to Ship Creek and the ARRC depot. As of 2003, implementation of the different components of the corridor plans is at the conceptual design and comment stage.

The MOA Ship Creek Multi-Modal Transportation Plan (2000a) identifies several projects in the area. One project provides direct access from the Port of Anchorage to the A/C Street couplet via elevated ramps that cross the existing Ocean Dock Road/Port Access ramps intersection. Another project plans to realign Whitney Road so it is further away from the north bank of Ship Creek. The road would be improved to meet commercial/industrial collector standards and includes improvements to the intersection with North C Street. Extending the Ingra/Gambell Street couplet over the rail yard to connect to East Loop Road is also part of the plan. The extension would include providing access to Ship Creek Avenue and Whitney Road and to a separated pedestrian/bicycle trail/sidewalk.

In addition, ARRC is considering its needs for rail capacity improvements on its tracks stretching south from the project area. Improved capacity is needed along this 4-mile-long segment to support existing freight and passenger operations and growing passenger service. Improvements may include adding automated switches and signals, a siding, or extending the double track that presently runs through south Anchorage.

Each of the projects identified in this section will be subject to separate environmental review.

3.3.5 Noise and Vibration

3.3.5.1 Noise

The immediate project vicinity encompasses an area with primarily industrial or commercial land uses and relatively high ambient noise levels. Highway vehicles and railroad activity account for the majority of the noise. Aircraft operations associated with the neighboring Elmendorf Air Force Base and private aircraft also produce notable noise at certain times. The Ship Creek area

has been the main rail yard for the ARRC for more than 80 years. Locomotive fans and gears, diesel engines, and rail/wheel interactions generate noise as trains idle and travel through the yard during passenger and freight operations and switching. Trains sound their whistles when departing the passenger depot, and at all road crossings. Truck traffic through this area, primarily to and from the Port of Anchorage, also contributes to ambient noise.

In accordance with FTA's Transit Noise and Vibration Impact Assessment guidance manual, an assessment was conducted to determine if any noise-sensitive land uses occurred within specified screening distances of the project. See Appendix D. The following sensitive land uses located on the bluffs to the north and south are present within the screening distances:

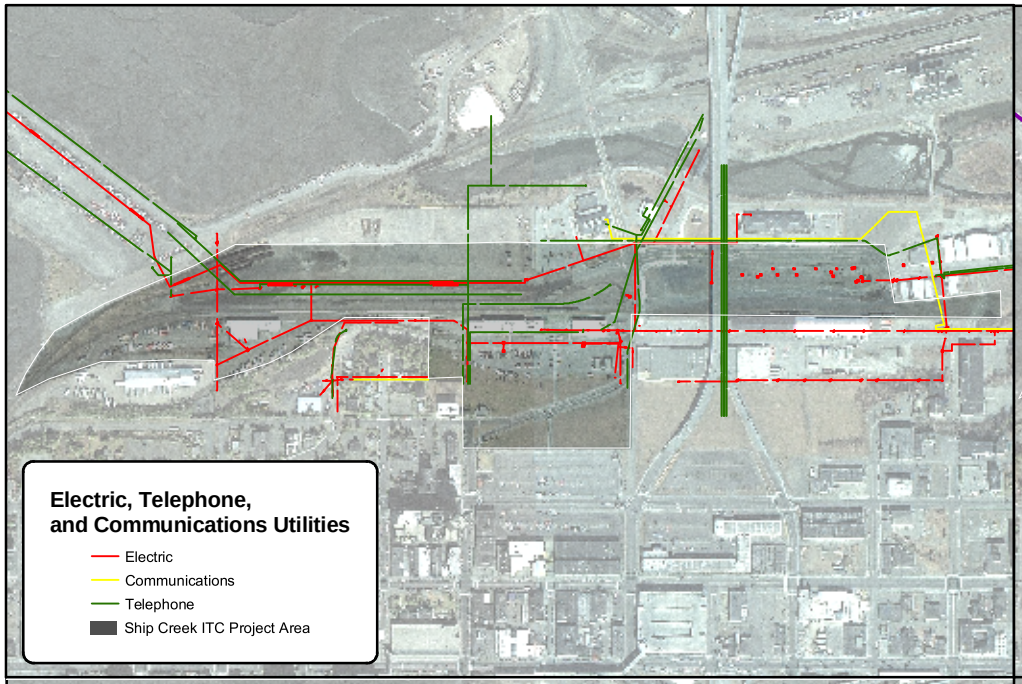
- Two residential properties are located east of K Street on 2nd Avenue.
- A number of residential structures (8 parcels) and a hotel (Anchorage Grand Hotel) are located north of 2nd Avenue on F Street. These buildings are within the screening distances of the track work, parking garage, and Proposed Northside Alternative. These are older structures, built after the rail yard was established. These structures sit on a bluff approximately 50 feet above the existing rail yard.
- Several lodging facilities and residential structures are within the screening distance of sidings for the commuter tracks. The hotels/sleeping accommodations are the Uptown Suites and the Yukon Vista Hotel, which is currently under construction and located on Barrow and 3rd Avenue.
- The Comfort Inn, located on Ship Creek Avenue on the north side of the proposed development, is within 375 feet of the proposed track improvements. It is not screened by intervening buildings and is at the same elevation as the proposed track.

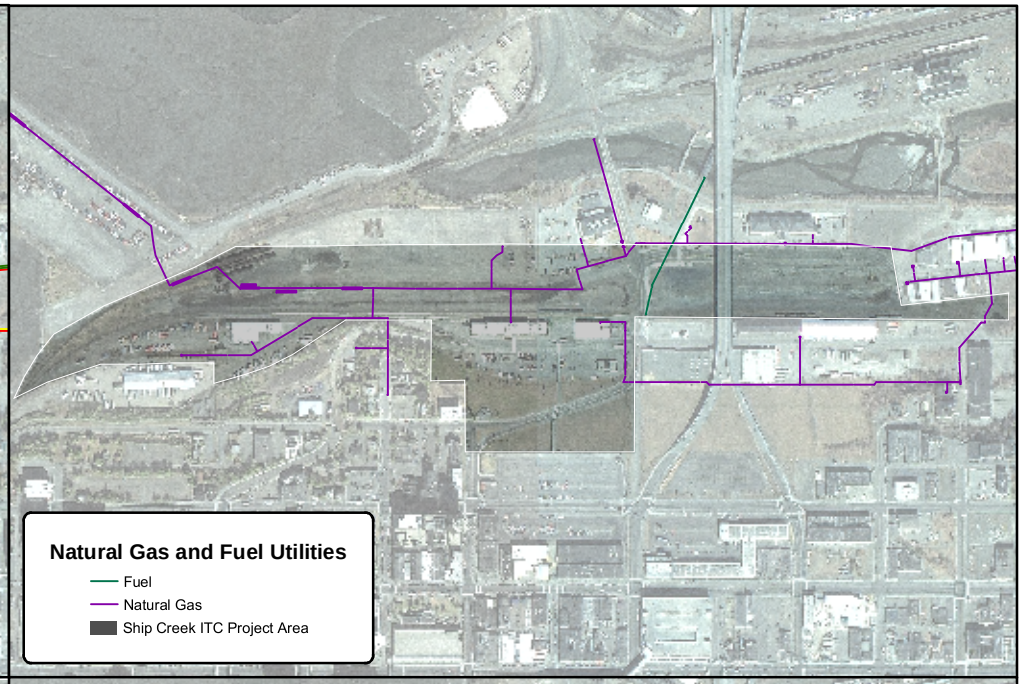
3.3.5.2 Vibration

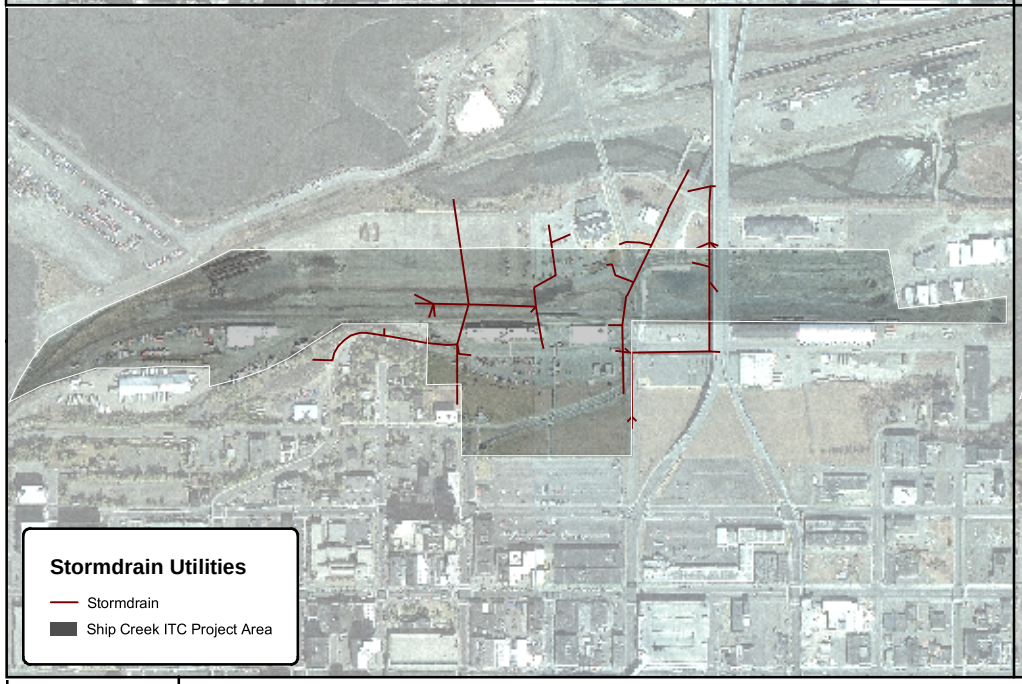
The primarily industrial or commercial nature of the project area also results in ground-borne vibration. Ground-borne vibration is the oscillatory motion of the ground about some equilibrium position, and it is described in terms of displacement (the distance an object moves), velocity (the speed the object moves), or acceleration (the rate of change in velocity). The response of humans, buildings, and equipment to vibration is best described using velocity because sensitivity to vibration has typically been found to correspond to a constant level of vibration velocity amplitude within the low frequency range of most concern for environmental vibration (roughly 5-100 Hz). Common and long-standing sources of this vibration in the project area include roadways and train activity, particularly from the movement of freight trains and intercity passenger trains. Appendix D contains additional information on the vibration analysis conducted as part of the project.

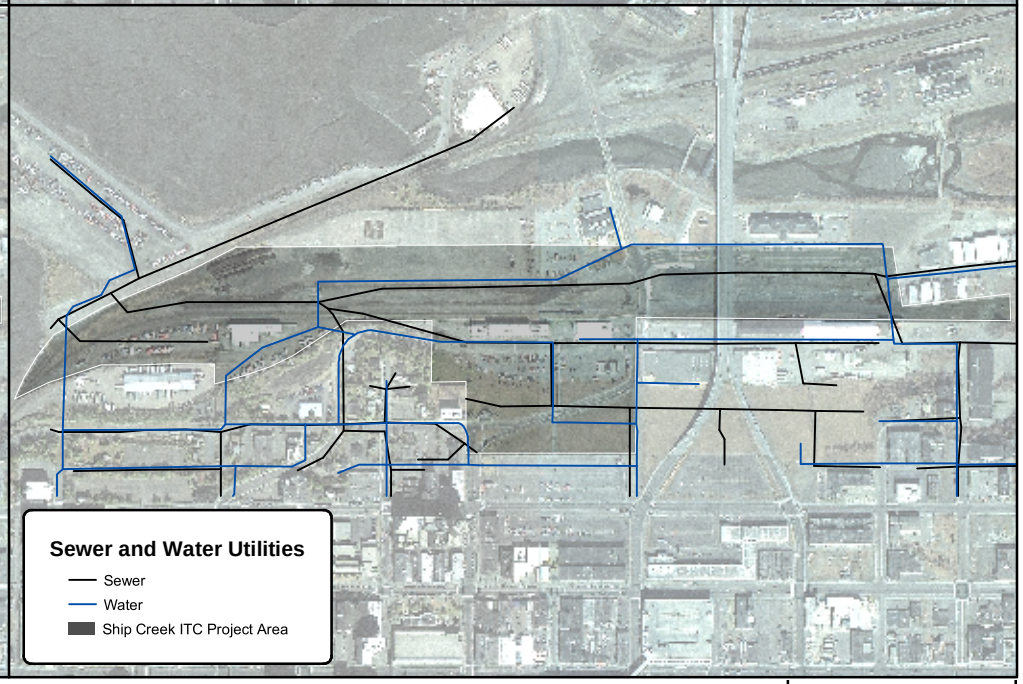
3.3.6 Utilities

Multiple sewer, water, and gas mains and overhead and buried electrical, lighting, and communication utilities exist throughout the project area. Figure 3.7 shows utility layouts from data gathered during a previous evaluation for ARRC (DOWL Engineers, 2002) and the MOA (CH2MHill, 2002). As with the majority of Anchorage, the Anchorage Water and Wastewater Utility (AWWU) provides the water distribution and the wastewater collection systems. Anchorage Municipal Light and Power provides electricity and Enstar Natural Gas Company provides natural gas.









0 500 1,000 Feet

Date: 02/21/03 | Source: MOA, ARRC

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Ship Creek Intermodal Transportation Center
Environmental Assessment

N

Figure 3.7

Utility Locations

There are three drainage systems in the Ship Creek area of downtown. These storm drain lines consist of the ARRC Line, the Covered Bridge Line, and the C Street Line. The ARRC Line includes the west parking lot of ARRC Headquarters and the area surrounding the Depot. The ARRC storm drain system consists of 8 manholes and approximately 2,020 feet of piping consisting of 12-, 18-, 24-, and 36-inch CMP. The ARRC line discharges directly into Ship Creek near the ARRC steel truss bridge. The Covered Bridge storm drain system runs along North C Street from West 1st Avenue to its discharge point at the banks of Ship Creek. This system consists of five manholes and approximately 1,250 feet of 36-inch CMP, discharges directly to Ship Creek at an outfall located between the covered bridge and wooden ARRC Bridge. The C Street storm drain system contains 11 manholes and approximately 1,475 feet of CMP ranging from 12-inch to 24-inch. The C Street storm drain system starts on the abandoned section of North C Street, heads east along West 1st Avenue, then continues north under the AC Bridge until it terminates at Ship Creek. The C Street line discharges to Ship Creek at an outfall located under the C Street Bridge, upstream of the covered bridge (MOA, 2002a). The drainage system is shown on Figure 3.7.

3.3.7 Archeological and Historic Sites

As a federally funded undertaking, the proposed project is subject to the review process of Section 106 of the National Historic Preservation Act (NHPA) (36 CFR 800) and the Alaska Historic Preservation Act. Cultural Resources Consultants conducted a survey to identify and describe potential historic and cultural resources in the Area of Potential Effect (APE). For this project, the APE includes an area surrounding the Anchorage Depot, bounded generally by Ship Creek and West Ship Creek Avenue to the north; West 1st Avenue and the buttress area up to West 3rd Avenue to the south; the intersection of Christensen Drive and West 1st Avenue to the west; and A Street to the east, including the Freight Shed on West 1st Avenue. In addition, it includes the footprint of the new commuter spur tracks that would extend to the east to about Cordova Street and to the west past Christensen Drive toward Cook Inlet. The APE is depicted on Figure 1 in Ship Creek ITC Cultural Resources Report in Appendix E.

The new ITC would be constructed near the Anchorage Depot (ANC-0362), which is listed in the National Register of Historic Places (NRHP). Four other potentially historic properties are within the APE (Alaska Railroad No. 1 [ANC-1228], the Alaska Railroad Freight Shed [ANC-1227], the Nagley House [ANC- 663], and Anchorage Grand Hotel [ANC-1226]). Their locations are shown on Figure 3.8. Determinations of eligibility for the NRHP were conducted for these four properties.

In a letter dated March 7, 2003, SHPO agreed that the Grand Hotel and Alaska Railroad No. 1 are not eligible for listing in the NRHP, and that the Nagley House is not individually eligible for listing on the NRHP. Therefore, they are not considered "historic properties" under 36 CFR 800.4(c). However, the Freight Shed is eligible for listing in the NRHP. Details on the historic and cultural sites are provided in the Historic Resources Technical Report in Appendix E.

Ultimately, whether or not archeological material persists in this area depends on several factors, such as the nature and duration of its use, how old buildings were demolished, and what happened after the 1964 earthquake. Despite their rather vacant appearance today, the areas west, south, and southeast of the depot have a complex building history. Historic photographs and maps show a succession of shops, storage buildings, offices, and houses in this vicinity. However, of these, the only structures that survived until 1962 were the existing depot; an Alaska Road Commission office constructed sometime before 1927 at the corner of 1st Avenue and C Street; and a storage

Ship Creek Intermodal Transportation Center
Environmental Assessment

0 250 500Feet

Date: 02/21/03 | Data Source: HDR, MOA

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Legend

Area of Potential Effect

N

Figure 3.8

Historically Evaluated Features

building dating to the mid 1920s that was in the center of what is now the depot parking lot. Of these, only the depot still remains. In general, however, the few residential houses were gone by the late 1920s and most of the commercial buildings lasted for less than 20 years.

3.3.8 Recreation

Recreational opportunities associated with Ship Creek and Ship Creek Point, public parks, and trails in the vicinity of the project are described below. Figure 3.9 depicts parks and trail corridors in the project vicinity.

3.3.8.1 Ship Creek and Ship Creek Point

Only a short walk or drive from downtown, many tourists travel to Ship Creek and Ship Creek Point to view salmon, fishermen, boaters, and Cook Inlet. Winter duck viewing and feeding by local residents occur in the lower Ship Creek area near the dam. Bird and whale watching from Ship Creek Point is also a popular mid summer and fall activity. Ship Creek Point supports the only major public boat launch ramp in the Anchorage area. Recreational boaters and fishermen, commercial fishermen, and duck hunters are the main users of the boat launch.

Due to its hatchery-supported salmon runs and close proximity to the large city population, Ship Creek is heavily used during the summer months by sport anglers. Each year, the only two metropolitan salmon derbies in the world are held at Ship Creek: the King Salmon Derby held in June and the Silver Salmon Derby held in August. In 2000, there were 62,000 angler days on Ship Creek, with an estimated 12,000 king salmon and 21,000 silver salmon caught (ADF&G, June 2002).

3.3.8.2 Public Parks

Figure 3.9 shows the parks and trails in the project vicinity. Quyana Park, a portion of which is located within the project area, consists of 10.92 acres of open space within the downtown area, adjacent to the Ship Creek industrial area. The park, which is bisected by a public road, consists of a grass-covered lawn and a small wooded area. It is mainly used by downtown residents, daytime business people, and tourists as an overlook. Ship Creek Overlook Park, located on Ship Creek at the CEA dam, provides visitors with an unobstructed view of the creek and migrating salmon. Barrow Park is also located within view of, but not within, the project area.

3.3.8.3 Trails

No trails exist in the project area. The current end of the Coastal Trail is located immediately south of the west end of the project area. An MOA, multi-use trail has been proposed to traverse the area. A multi-use paved trail is a trail for pedestrian type uses to include bicycling, jogging, skating, cross-country skiing, and skijoring. Multi-use paved trails are not typically used by motorized vehicles or sled dogs except for special events. The most recent proposed trail alignment for the trail runs along 2nd Avenue and North C Street from the terminus of the Coastal Trail to an alignment following along the south side of Ship Creek.

The other trails shown in Figure 3.9 in the Quyana Park area are proposed multi-use trails overhead on Port Access Road.

*The proposed trail data does not represent the final design concepts as they are currently being reviewed and updated by MOA.

ALASKA RAILROAD CORPORATION ESTABLISHED 1914

0 1,000 2,000 Feet

Date: 02/14/03 | Data Source: MOA

File: x:\09585\shipcreekitc\mapdocs\Figure_ParksTrails.mxd

Ship Creek Intermodal Transportation Center Environmental Assessment

Legend

- Ship Creek ITC Project Area
- Park

Existing and Proposed Trails

- Existing
- Proposed

N

Figure 3.9

Parks and Trail Corridors*

In 2002, the first 600 feet of the Ship Creek Trail was constructed beginning at the CEA dam. Further construction is proposed just north of the project area. When completed, Ship Creek Trail would extend from the ARRC headquarters building to Tyson Elementary School in the Mountain View neighborhood. It would be constructed in phases over several years.

3.3.9 Section 4(f) Properties

Section 4(f) of the Department of Transportation Act of 1966 as amended by 49 U.S.C. 303 was adopted to protect the natural beauty of the countryside and public parks and recreation lands, wildlife and waterfowl refuges, and historic sites. Federally funded transportation programs and projects requiring the use of any of these lands are allowable only if there is no other prudent and feasible alternative. The project must include all possible planning to minimize harm to these areas. Federally funded projects that may use areas protected under Section 4(f) require an evaluation to document the effects, alternatives and means of minimizing impacts. Use occurs when land from a Section 4(f) property is acquired, when temporary occupancy has adverse effects, or when proximity impacts of the project on the Section 4(f) property are so great that the purposes for which the Section 4(f) site exists are substantially impaired.

Quyana Park is a Section 4(f) park property. The Anchorage Depot is an historic site listed on the NRHP and is also subject to Section 4(f) if it is determined that the project would have an adverse impact on it. These properties are described in greater detail in Appendices E and F, respectively. There are a number of other parks in the vicinity of the project but no direct or constructive use of those parks is proposed. Moreover, parks and trails that have been established on railroad property have been allowed only if they serve a transportation related purpose and have been expressly identified as not constituting a Section 4(f) use.

3.3.10 Contaminated Sites

A Phase I Environmental Site Assessment of the study area was conducted (Shannon & Wilson, 2003) to identify known or potential contamination of the project area. The site assessment included records review, environmental database review, site visits, and personal interviews. Records review included aerial photographs, lease histories, utility history, and the 1991 site assessment of the ARRC headquarters building. The databases reviewed include the Underground Storage Tank (UST) Database, the Leaking Underground Storage Tank (LUST) Database, and the Contaminated Sites Database as well as the EPA Databases and the Anchorage Fire Department (AFD) Hazardous Conditions List.

The assessment discovered 20 registered USTs, 12 LUSTs, and 8 contaminated sites within 0.25 miles of the project site. Most are unlikely to affect the study area. The Odom Corporation LUST site and the contaminated site at 200 North C Street have the potential to have effects in the project area. An excavation confirmed that the UST listed at the Freight Shed was never installed. ARRC submitted a request to ADEC in 1998 to remove the tank from the registered UST list (Shannon & Wilson, 2003b).

3.3.11 Visual

The project area is not highly visible because it is lower than most of the surrounding area including downtown and Government Hill. From downtown, the project area is visible from 2nd Avenue and 3rd Avenue as well as on the upper floors of some high-rises. The project area is more

visible from the Ship Creek area, which has the same elevation. Presently, the most visible features in the project area are the Depot, the Baggage Handling Building, and the Freight Shed.

Other surrounding features include a hotel, the ARRC Headquarters building, parking areas, and warehouse-type structures. To the southwest of the project area, up on a bluff, a residential area exists but is partially obscured from view by trees growing on the bluff. Few of the downtown buildings are visible from areas around the project. The most important views occur from Quyana Park and 3rd Avenue looking down at the historic ARRC Depot and across the Ship Creek Valley/Cook Inlet at mountains in the Alaska Range (e.g. Sleeping Lady).

3.3.12 Energy

Energy usage for this area is not atypical. Current energy uses include energy for lighting and heating purposes, diesel fuel for the locomotives, and automobile fuel. Energy usage does vary from summer to winter as passenger travel increases significantly during the summer months.

4.0 ENVIRONMENTAL CONSEQUENCES

This chapter of the Environmental Assessment discusses the probable beneficial and adverse environmental, social, and economic effects, including direct and indirect effects, of each of the alternatives described in Chapter 2.0. The alternatives evaluated include Alternative 1 (the No Action Alternative); Alternative 2 (the Proposed Alternative), which includes development of the ITC building on the north side of the existing tracks; and Alternative 3 (the Southside Alternative), which includes development of the ITC building on the south side of the existing tracks. The discussion also identifies the measures proposed to mitigate adverse impacts to reduce effects on the environment.

4.1 Impacts to the Physical Environment

4.1.1 Air Quality

Alternative 1 (No Action Alternative). Without additional rail sidings, parking capacity, or station capacity, very little increase in passenger train activity and subsequent traffic would occur with the No Action Alternative. No significant increase in carbon monoxide (CO) from buses or automobiles associated with the project would occur. Alternative 1 would not cause air quality to exceed any National Ambient Air Quality Standards (NAAQS).

Alternative 2 (Proposed Alternative) and Alternative 3. Project improvements under the build alternatives include CO generating activities associated with the parking garage, increased bus traffic, and an overall increase in automobile traffic accessing the facility. The parking garage and roadway intersections are particular areas where CO is of concern. The air quality impacts of activities associated with the build alternatives have been evaluated both quantitatively and qualitatively as documented in the Air Quality Analysis Report (Appendix B). Because Alternatives 2 and 3 would have identical train schedules and passenger demands they would have identical bus and automobile demands. Due to their close proximity and use of the same parking garage concept, they would have nearly identical automobile traffic and air quality impacts. For these reasons, only one build alternative was modeled and evaluated for air quality purposes. Intersections and the parking garage were both evaluated.

As a proposed project with funding to be contributed by the FTA, the ITC project is subject to the air quality analysis requirements of Transportation Conformity rules under 40 CFR 93, Subpart A. The relevant portions of these rules, with respect to the MOA nonattainment area for CO, are the sections dealing with CO hot-spot analysis for intersections. Under these rules, any intersection impacted by the project which currently operates at Level of Service (LOS) “D” or worse (“E” or “F”) or which would degrade in LOS to “D” or worse due to the project, must be analyzed for CO impact. Based on the traffic forecast and including the traffic flow improvements to be made to intersections adjacent to the project (North C Street/West First Avenue and North C Street/Ship Creek Avenue), all project area intersections are anticipated to operate at LOS C or better under either build alternative in both the opening year (2007) and the design year (2022). Based on that analysis, no specific intersection CO analysis is required and roadway traffic associated with the project would not cause or contribute to violation of the NAAQS. For more information on traffic impacts see Section 4.3.4.

Based on coordination with the MOA, Department of Health and Human Services, the Alaska Department of Environmental Conservation, and the Environmental Protection Agency, the CO

effects of vehicles, in particular cold start emissions, from the parking garage were modeled and analyzed for the opening year (2007) and the design year (2022). The results of the parking garage CO analysis are summarized in Table 4-1. The estimated total 1-hour and 8-hour CO parking garage concentrations (with background concentrations) are less than the respective NAAQS.

Table 4-1. Parking Garage CO Impact Analysis

	1-hour CO	8-hour CO
Concentration Component or Standard	(ppm)	(ppm)
2007		
Background Concentration	4.29	3.00
Garage Box Model CO Concentration	9.03	3.08
Total CO Concentration	**13.31**	**6.38**
2022		
Background Concentration	4.29	3.00
Garage Box Model CO Concentration	7.45	2.79
Total CO Concentration	**11.74**	**5.79**
National Ambient Air Quality Standard	35	9

Source: Air Quality Analysis Report. ITC Environmental Assessment Technical Appendices. HDR February, 2003

Neither Alternative 2 nor 3 would have significant adverse impact on air quality as a result of CO emissions.

As described in the technical report, locomotive emissions are not anticipated to cause significant air quality impacts given the relatively short, light trains, the engine loads, fuel usage, and new EPA rules governing the manufacture and remanufacture of locomotive engines. Given the proposed ITC project size, construction related emissions are expected to be quite limited, consisting of exhaust emissions from construction equipment and perhaps some fugitive dust, depending on soil moisture conditions present during earthmoving operations. Any fugitive dust emissions can be mitigated, if necessary, through application of water or other dust suppressants.

Because the project vicinity meets the NAAQS for airborne concentrations of Pb, SO_2, O_3, PM_{10} and $NO_{2,}$, no further analysis of these criteria pollutants is required. However, consideration has been given to the potential for increased emissions of these pollutants due to the project and no impact is anticipated.

4.1.2 Soils, Geology, and Seismic Considerations

Alternative 1 (No Action Alternative). Under this alternative, no changes to the existing environment would occur, and no impacts would be anticipated.

Alternative 2 (Proposed Alternative) and Alternative 3. Grading and construction would be the sources of potential impacts to the geological environment associated with the two build alternatives. Minor alteration of the existing topography is anticipated, especially in the area of Quyana Park. Geological limitations to the build alternatives for the new terminal vary with the amount of structure loading and frost conditions. A geotechnical report (Appendix C) conducted for this EA (Shannon & Wilson, 2003a) found that, in general, conventional foundations can be

used for lightly loaded structures and heavily loaded structures may be constructed on driven piles or deep foundations.

In both build alternatives, construction of the parking garage would occur on a geologically sensitive slope known as the "buttress." Geological limitations include the potential for lateral movement during an earthquake of the size and intensity of the 1964 Earthquake. The primary concerns are the effect that construction of the build alternatives could have on the stability of the buttressed slope (during an earthquake) and the subsequent potential effects to existing downtown infrastructure or to the parking garage itself. The geotechnical report found that geotechnical limitations of constructing on the buttress area could be overcome with proper design. The effects of construction could be mitigated by maintaining or improving current stability conditions by filling and buttressing the toe of the slope and cutting or unweighting the upper parts of the slope as recommended in the geotechnical report (Shannon & Wilson, 2003a).

Site-specific geotechnical explorations would be undertaken to determine the structural bearing support capabilities of the soils and to aid appropriate engineering design. With further geotechnical investigation and proper engineering design based on those investigations, the project would not adversely affect the structural capability of the buttress. With proper design, there would not be significant impacts to existing or planned improvements under the build alternatives due to geologic, soils, or seismic conditions. The seismic design elements would comply with all applicable MOA building codes and would be reviewed by the MOA as part of the building permit process. The governing structural code provisions are in the 2000 International Building Code, as amended and adopted by the MOA.

Pile driving during construction may result in vibratory impacts and possibly minor short-term settlement of adjacent loose sand materials. However, these vibrations and settlements, if any, are not expected to result in significant geologic impacts. Disturbance of soil during construction may increase the potential for short-term erosion and sedimentation. A storm water pollution prevention plan (SWPPP) would be prepared and implemented as part of the National Pollutant Discharge Elimination System (NPDES) permit required for the project (General Permit for Storm Water Discharges from Construction Sites). Best Management Practices (BMPs) would be employed during construction to minimize the potential for erosion and sedimentation.

4.1.3 Hydrology and Flood Zones

Executive Order 11988, "Floodplain Management," and implementing USDOT Order 5650.2, "Floodplain Management and Protection," establish federal policy for the protection of floodplains and floodways. The intent of these regulations is to avoid, to the extent practicable, adverse impacts to floodplains, flood risks related to property loss and hazard to life, and to avoid supporting land use development that is incompatible with natural and beneficial floodplain values. Where avoidance is not practicable, these policies require appropriate consideration of methods to minimize adverse impacts. In this EA, the floodplain analysis is based on published FEMA mapping and the floodplain delineated in the recent USACE Ship Creek floodplain study (2002). The MOA uses the USACE study to evaluate and manage flood hazards in the coastal area of Ship Creek as it is more current.

Alternative 1 (No Action Alternative). Under this alternative, there would be no development in the existing coastal flood zone, and therefore, no adverse impact. No flood hazard permitting would be necessary.

Alternative 2 (Proposed Alternative). Alternative 2 would locate the new terminal building, siding tracks, and platforms within the FEMA and the USACE 100-year floodplain, as shown on Figure 3.1. The project area is located within a developed industrial yard, and therefore, the surrounding area is not a natural flood storage area and does not support natural and beneficial floodplain values. There would be no impact on natural and beneficial floodplain values.

Since the project area is only subject to coastal flooding during extreme high tide events, development of the proposed project would not result in a significant encroachment on the floodplain. The waterbody that may cause coastal flooding (Cook Inlet/Knik Arm) is extremely large, and therefore, the volume of fill or the structures placed within the flood prone area for this project would not cause an increase in water surface elevation during floods. The fill/structures would essentially have to raise the level of the ocean to result in significant encroachment. The project also would not result in increased risk of flood damage to existing nearby development in the flood zone. The project was discussed with the MOA Flood Hazard Administrator at a meeting on January 22, 2003. The MOA Flood Hazard Administrator concurred that the proposed improvements associated with Alternative 2 would not constitute a significant floodplain encroachment and would not impact a regulatory floodway. However, a flood hazard permit would be required for the proposed development in the 100-year flood zone.

Complete avoidance of the floodplain is not practicable with Alternative 2 due to the location and layout of the existing ARRC facilities into which the proposed improvements are to be incorporated. The proposed facilities must be located adjacent to the existing rail lines, which are completely in the floodplain, to operate efficiently. Locating the ITC out of the floodplain would require building the structure on the hillside south of the existing depot. Not only would this not be practicable for serving passenger rail, it would further impact Quyana Park, a Section 4(f) resource. Alternative 2 is consistent with components of the MOA's Comprehensive Land Use Plan (Anchorage 2020) and the Ship Creek Multi-modal Transportation Plan, and would not foster incompatible uses.

Construction in the coastal floodplain suggests the potential for risk of damage to the buildings or loss of human life. These risks would be minimized through appropriate design and construction. Constructing the first habitable floor of the new building above the base flood elevation (BFE) would minimize the risk of damage or loss of human life if flooding occurred. The adjacent floodplain in this area is designated as Zone A with a BFE in the recent USACE study of 19 feet MSL. By maintaining the lowest habitable floor elevation of the new terminal building at least one foot above the BFE, the risk of flood damage or loss of life would be minimized. Further, although some facilities associated with the ITC (e.g., siding tracks and platforms) would be below the BFE, the majority of the ITC building would be on piers above the track, minimizing the potential risk of property damage and loss of life. The parking garage is outside the 100-year floodplain.

Development in the coastal floodplain would not increase or change the flood elevations and/or limits and no significant encroachment would occur. No adverse effects would occur to natural and beneficial floodplain values. Floodplain risks and impacts would be minimized by strict adherence to flood design standards, constructing the habitable floors of the new terminal building above the BFE, and complying with Flood Hazard Permit requirements, as directed by the MOA Flood Hazard Administrator. Since this project would have minimal risk and impact, no further evaluation is required at this stage of project development and the proposed action is in compliance with Executive Order 11988 and USDOT Order 5650.2.

Alternative 3. Under the southside alternative, the eastern portion of the new terminal would be within the FEMA-prescribed floodplain and the entire terminal would be within the USACE-prescribed floodplain. Similar to Alternative 2, with implementation mitigating measures, there would be no significant floodplain encroachment and the project would not foster incompatible uses.

4.1.4 Water Resources

Surface drainage in the project area is generally by sheet flow or percolation to the underlying soils. Some storm water runoff collects in the storm water drainage systems that discharge to Ship Creek. See Figures 4.1 and 4.2.

Alternative 1 (No Action Alternative). The relatively flat unpaved areas around the depot would allow for continued infiltration of storm water. Minor amounts of sediment in storm water runoff would continue to make its way to Ship Creek. No major changes to water quality would occur and no significant impacts are anticipated.

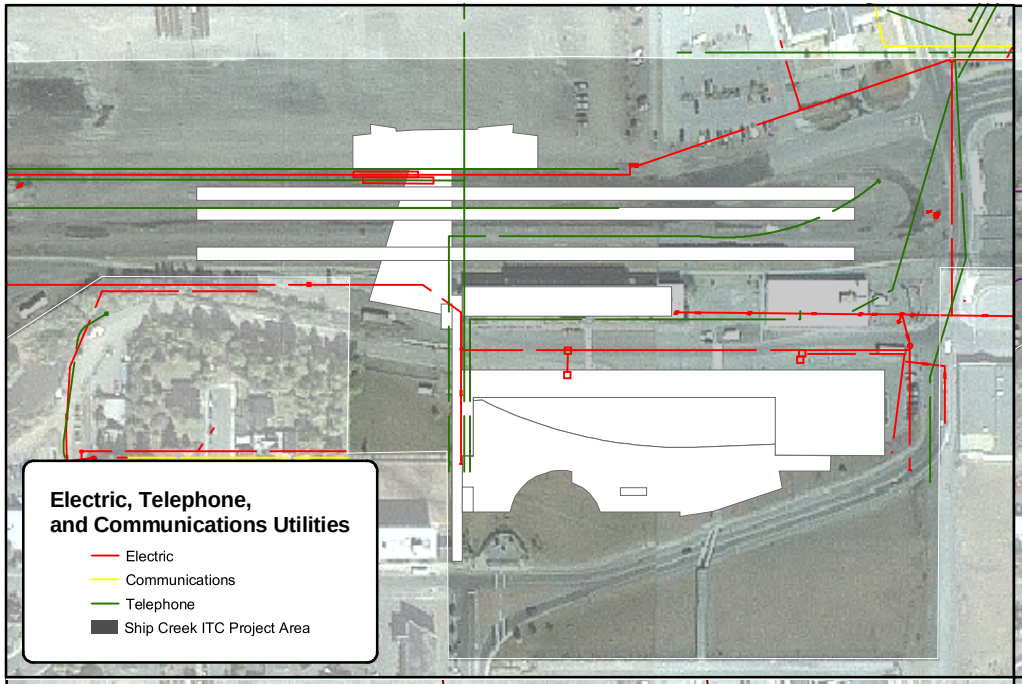
Alternative 2 (Proposed Alternative). Alternative 2 would increase the amount of impervious surface in the project area for the parking garage, roadways, sidewalks, new terminal, and platforms. The increase in impervious surfaces would reduce infiltration and groundwater recharge. However, groundwater would not be adversely affected, since groundwater from the project area flows into Ship Creek or Cook Inlet. There are no drinking water wells in the area, so there is no potential for reduced infiltration to affect drinking water sources.

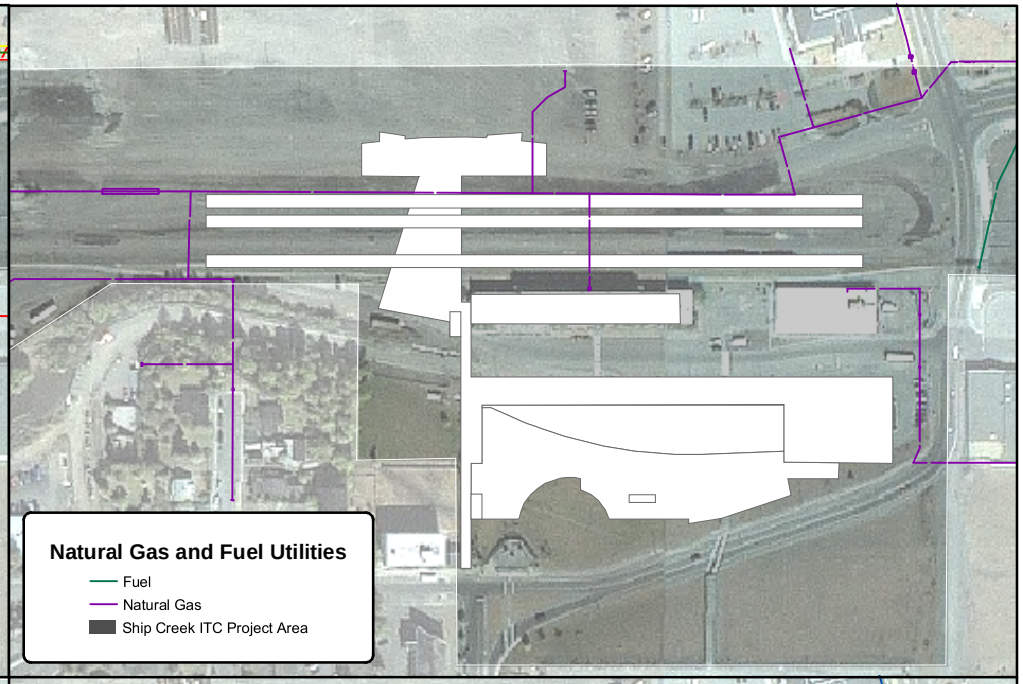
Roadway, parking lot and railroad operation and maintenance activities can generate storm water runoff containing heavy metals, hydrocarbons, deicing chemicals, and sediment that can affect the quality of surface waters. The project would be designed and constructed to comply with the MOA, Department of Public Works Design Criteria Manual. As such, the project would include the design of drainage facilities to minimize pollution of water sources by storm or snowmelt runoff. Site drainage would be designed to maintain existing drainage patterns and use existing storm drain systems. The runoff would be collected and treated by appropriate management practices as required in the manual. As previously indicated, a SWPPP would be prepared and implemented as part of the NPDES general permit for the project. BMPs would be employed during construction. Dewatering is not expected to be required for construction of the proposed facility. Therefore, no long-term adverse impacts to surface water resulting from the project are anticipated.

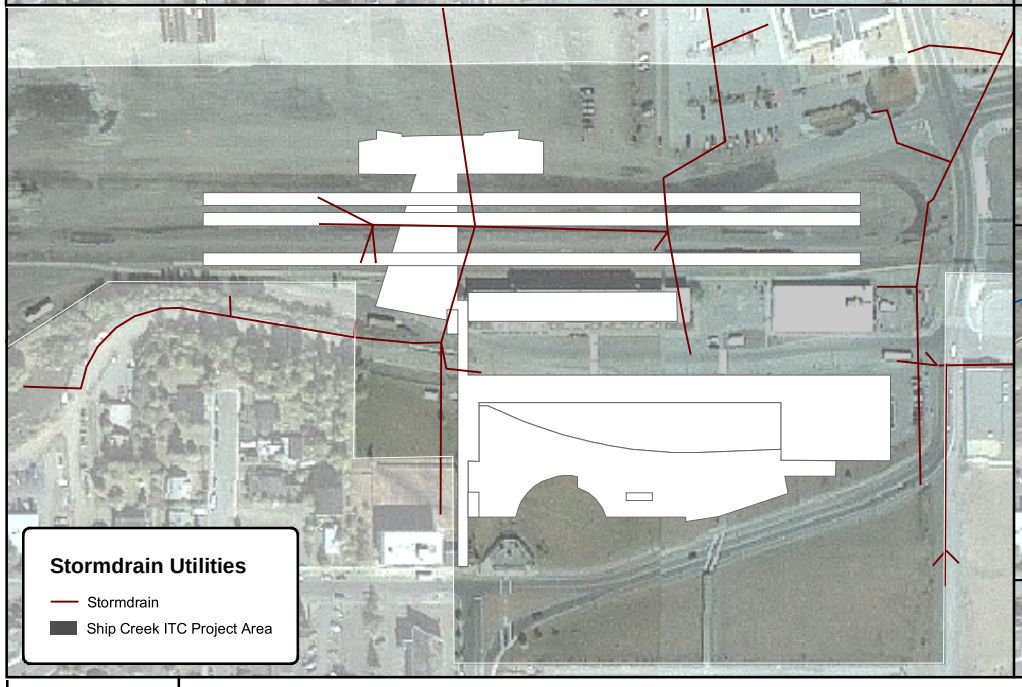
Alternative 3. Under Alternative 3, the ITC building would be located approximately 675 feet from Ship Creek. All other components of the alternative would be the same as the proposed alternative. This alternative would have the same water quality impacts as Alternative 2.

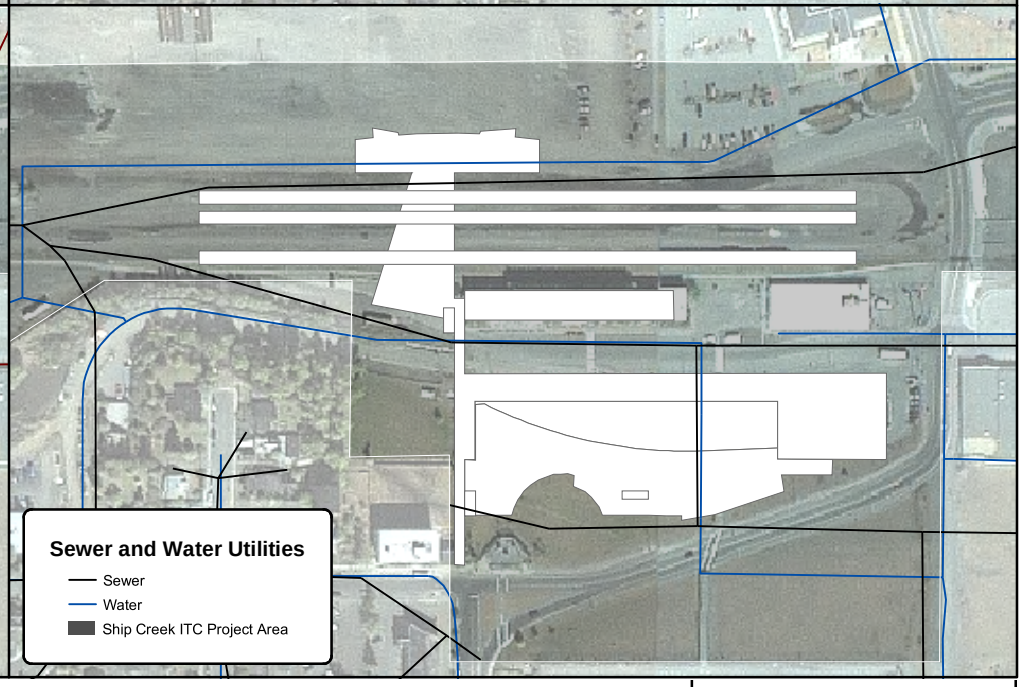
4.1.5 Coastal Zone Management

Projects that occur within the Alaska Coastal Boundary, as defined by the Alaska Coastal Management Act, are subject to a review to determine if they are consistent with the state and local coastal management programs if certain state or federal authorizations or environmental permits are needed for the project (such as a USACE Section 404 permit). The project area is located within the coastal zone and is governed by the ACMP as well as the Anchorage Coastal Management Program.









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Ship Creek Intermodal Transportation Center Environmental Assessment

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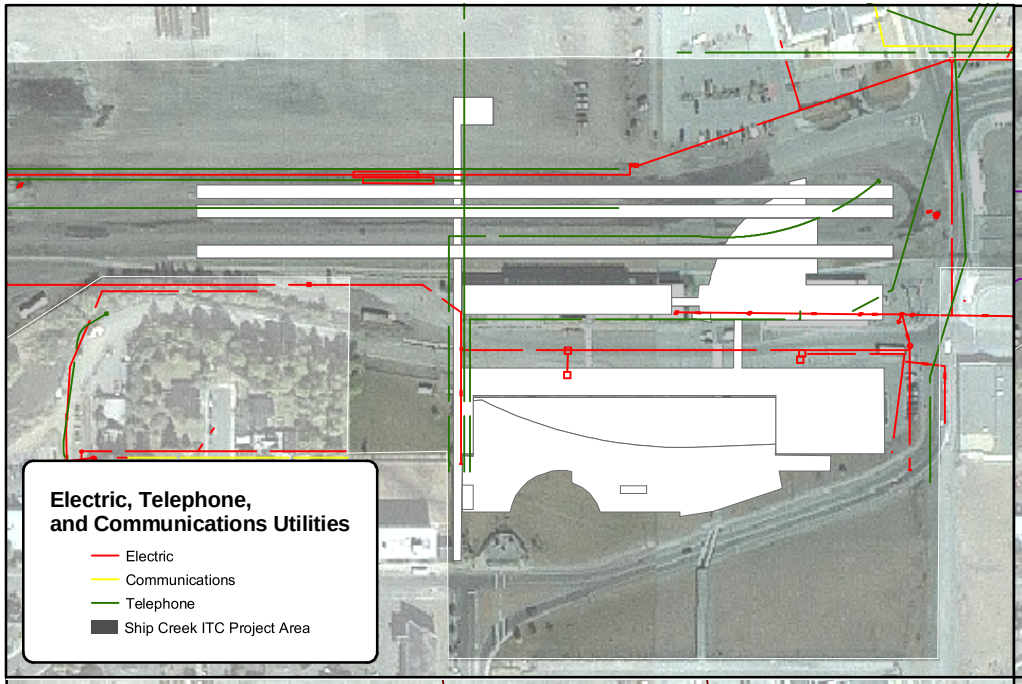
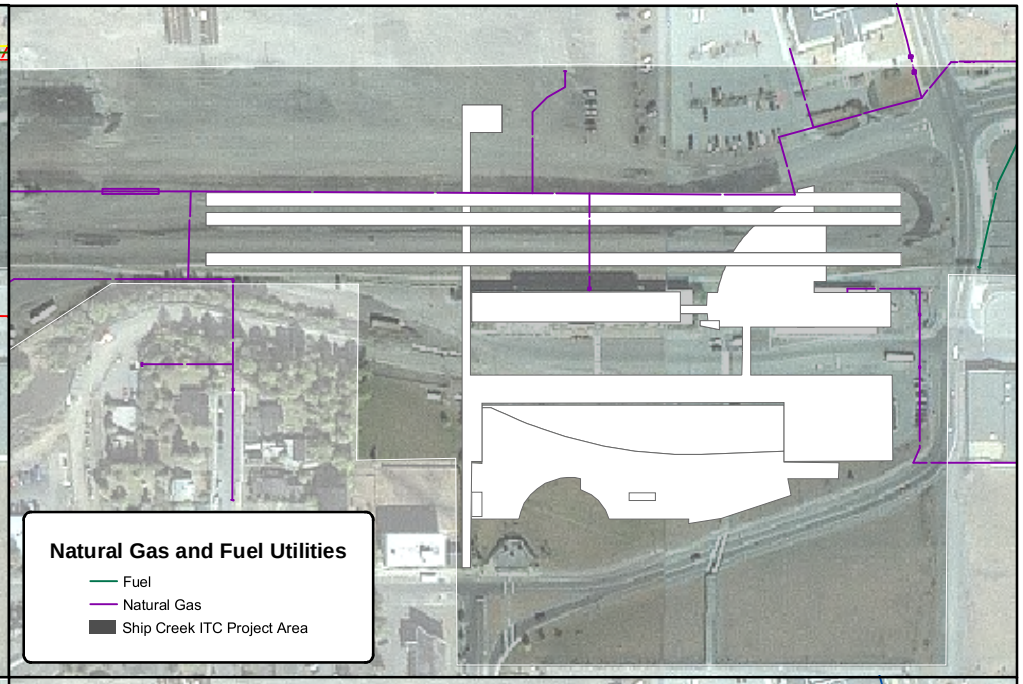
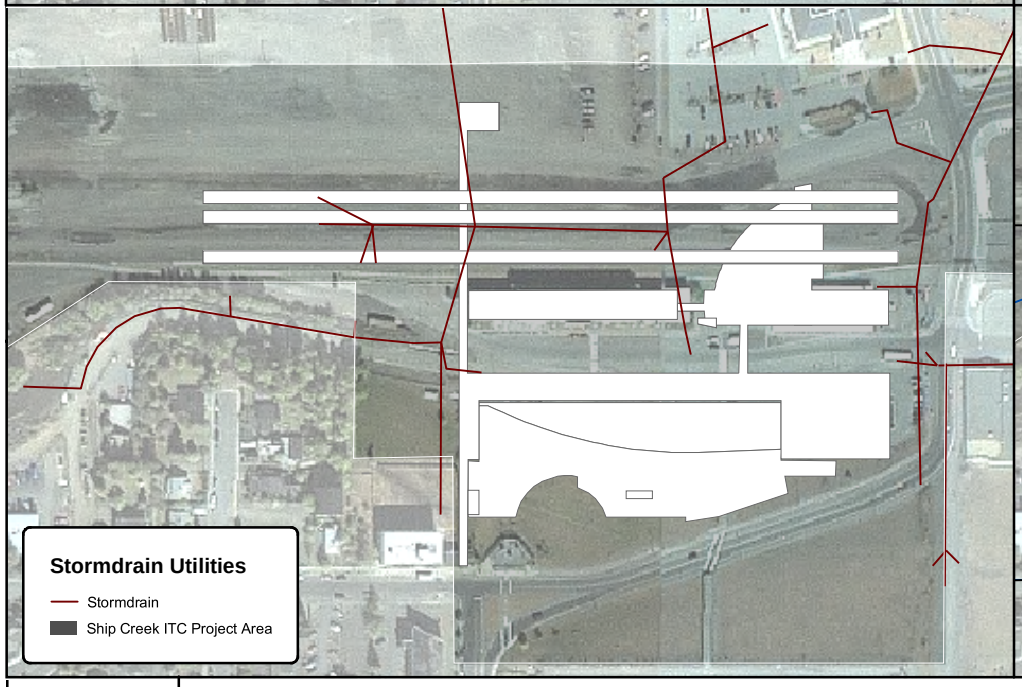
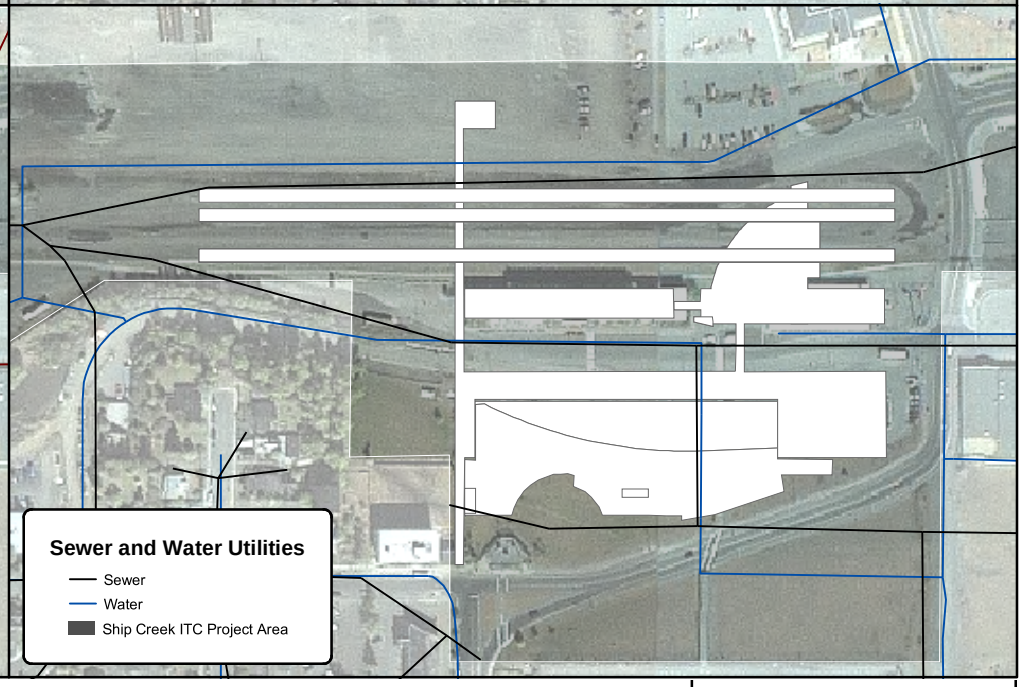
Figure 4.1

Alternative 2 Utility Impacts









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Ship Creek Intermodal Transportation Center Environmental Assessment

N

Figure 4.2

Alternative 3 Utility Impacts

Alternative 1 (No Action Alternative). Under this alternative, no changes to the existing environment would occur, and no effect on coastal resources would result.

Alternative 2 (Proposed Alternative) and Alternative 3. Each of the build alternatives occurs within the coastal zone and would be subject to the policies of the State ACMP and the Anchorage Coastal Management plan. The area to be developed within the Ship Creek Valley is primarily vacant railroad yard and has no identified coastal resource values that would be affected. A portion of the project area overlaps with the Ship Creek AMSA boundary. Although never adopted, both build alternatives appear consistent with the draft AMSA plan polices. Neither of the build alternatives comes within 25 feet of a proposed setback from Ship Creek and neither would have an adverse effect on public access or to potential future greenbelts along the creek. Improved pedestrian connections and improved park and viewpoints that are a part of the project would have positive benefits related to one of the draft policies by "creating and enhancing a more people-oriented site with visual or physical access to the Knik Arm and waterfront viewsheds."

4.2 Impacts to Biotic Communities

This section describes the environmental impacts to the existing vegetation and habitat, wetlands, fish and essential fish habitat, wildlife, and protected species within and surrounding the project area. Temporary impacts are discussed in Section 4.4 (Construction Impacts).

4.2.1 Vegetation and Habitat

Alternative 1 (No Action Alternative). The No Action alternative would have no impact on vegetation communities or habitat.

Alternative 2 (Proposed Alternative) and Alternative 3. Development of the proposed ITC at either of the alternative locations would have no impact on vegetation communities or wildlife habitat. Both ITC building sites occur in a highly developed industrial area and have been cleared of vegetation. Both alternatives would require the removal of a grass lawn and some ornamental trees at Quyana Park for construction of the parking garage and rooftop park/plaza, which would be landscaped with grass, shrubs, and trees. Neither the existing lawn nor the proposed rooftop park/plaza represents valuable wildlife habitat.

4.2.2 Wetlands

Alternative 1 (No Action Alternative). This alternative would have no impact on wetlands.

Alternative 2 (Proposed Alternative) and Alternative 3. Installation of additional tracks connecting to the freight line at the project area's west end would require filling a small ditch-type wetland. This wetland has negligible value because of its small size (0.16 ac), its isolation from other wetlands or riparian systems, and its location within an active industrial area. If this wetland is determined to be under the jurisdiction of the USACE, a wetland permit would be required before it could be filled.

4.2.3 Fish and Essential Fish Habitat

Alternative 1 (No Action Alternative). The No Action Alternative would have no impact on fish or essential fish habitat.

Alternative 2 (Proposed Alternative) and Alternative 3. Ship Creek is considered essential fish habitat for four species of salmon. The nearest improvement to Ship Creek is the proposed circulation road for buses (approximately 300 feet south of the creek). According to NMFS, development of the proposed facility at either of the alternative locations would have no impact on fish or essential fish habitat since both alternatives are well outside of the Ship Creek stream corridor. There would be no in-water work and no changes in stream flow or other alterations that might affect fish or fish habitat. See Section 4.1.4 for a discussion of potential water quality effects.

4.2.4 Wildlife

Alternative 1 (No Action Alternative). This alternative would have no impact on birds or mammals.

Alternative 2 (Proposed Alternative) and Alternative 3. Development of the proposed ITC at either of the alternative locations would have no impact on birds or mammals in the project area. Both alternatives occur within a highly disturbed industrial area that has been previously cleared of all natural vegetation. The existing lawn and ornamental trees in the location of the proposed parking garage offer negligible wildlife habitat.

4.2.5 Protected Species

All Alternatives. Coordination with the USFWS and NMFS indicates that no protected species exist in or near the project area (Personal Communication: Lance 2002; Berg 2002). None of the alternative would have an effect on populations or habitat of species listed as threatened or endangered under the Endangered Species Act. While Bald Eagles forage in Ship Creek, evaluated alternatives would have no effect on Bald Eagles because no resources critical to eagles are found in the project area itself.

4.3 Impacts to Human Environment

4.3.1 Planned Land Use and Zoning

Alternative 1 (No Action Alternative). Under the No Action Alternative, no changes to the existing environment would occur, and land use would remain as described in Section 3.3.1. Pedestrian improvements to better connect Ship Creek with downtown Anchorage, as called for in both MOA and ARRC planning documents, would not occur. Commuter rail transit improvements envisioned in Anchorage 2020 would not occur.

Alternative 2 (Proposed Alternative) and Alternative 3. In general, the proposed uses (rail, depot, roads, parking, and pedestrian improvements) are consistent and compatible with the existing land uses in the area (rail, depot road, parking, and pedestrian improvements). Both alternatives are consistent with future visions articulated for the area in the MOA's Anchorage 2020 comprehensive land use plan (MOA, 2001)), the 2001 Long Range Transportation Plan (MOA, 2001) and the *Ship Creek Multi-modal Transportation Plan* (MOA, 2000).

Reapplication for a change to the "Planned Community" (PC) zoning would be required under the two build alternatives because the development of the PC zoned property must be consistent with

the latest site master plan adopted by MOA. The latest adopted planned community site plan, known as the Lo Patin Plan, does not specifically identify the ITC alternatives. This site plan is outdated for use in guiding development of the ITC and surrounding areas. Either build alternative would be required to submit and obtain approval of an updated site plan for the PC zone with the MOA.

Joint planning conducted in the Ship Creek area by the ARRC and MOA since the Lo Patin Plan, has resulted in a common vision for the area, indicating adoption of a new planned community site plan would be relatively straightforward. Two updated plans have been drafted: *The Draft Ship Creek Development Master Plan,* and *Ship Creek Center: A Transportation-Oriented Development.* The ARRC is currently working with the MOA to update retail and transit-oriented design standards with these two documents. Once completed, the standards would be used to revise the two draft plans into a new site plan for the PC-zoned property, based largely on the design of the ITC.

The Public Land and Institution (PLI) zoning of the Quyana Park parcel allows for parking structures as a conditional use. A conditional use permit would be required to construct the parking garage that is a component of both of the build alternatives. The ARRC has proposed mitigating impacts to the PLI-zoned park property by designing a more accessible park/plaza as the top level of the terraced parking structure. Further details on the park property and impacts to the park are discussed in the Section 4(f) Evaluation prepared for this EA (Appendix F). A joint use agreement or permit may be required for the use of the MOA and ADOT&PF-owned parcels in Quyana Park.

A parcel at the southwest intersection of 1st Avenue and North C Street is leased from ARRC by Denali Federal Credit Union. The lease expires in 2006. This property would be used a part of the proposed parking garage. The lease would be allowed to expire or ARRC would need to buy out the lease. Informal discussions indicate that the credit union is interested in relocating. There is ample office space of a suitable type to accommodate the relocation of the credit union with no impact on the overall supply in the market and with little impact on the credit union. Additional information is provided in Section 4.3.2.

4.3.2 Socioeconomic Impacts

Alternative 1 (No Action Alternative). The No Action Alternative would have adverse effects on socioeconomic conditions by hindering the railroad's ability to meet existing and projected future passenger services needs in the Ship Creek area. This would limit the transportation and economic benefits that likely would occur if ARRC were to accommodate forecast demand. In addition, being unable to accommodate passenger demand at the Anchorage depot could dampen growth in the tourism sector of the Anchorage economy.

Alternative 2 (Proposed Alternative) and Alternative 3. Development of the proposed Ship Creek ITC is consistent with, and would not adversely impact, the community character of the area, which is already rail-transit oriented. The area would be enhanced by improved pedestrian and transit facilities and connections between the downtown and Ship Creek areas. These improvements would have a positive benefit on the overall character of the Ship Creek area.

There would be increased employment in the transit-oriented retail/commercial space in the ITC and for ARRC personnel working on the trains and ITC operations. There may also be increased employment in the tourism sector associated with the downtown hotel district, which would bring

money into the Anchorage economy. Both alternatives would enhance commercial activity in the area by improving access for residents and tourists. Both alternatives would create temporary employment for the duration of construction activities. Project construction would temporarily increase local expenditures on services, wages, and materials. These increases would be short-term, but would have a positive economic effect on the Anchorage economy.

Neither build alternative would affect the population or housing supply of the greater Anchorage area. There are no relocation impacts to any residents for either build alternative. Community cohesion would remain unchanged. Both build alternatives may require relocation of the Denali Federal Credit Union in the event the parcel on which it is located is needed before the lease expires in 2006. If relocation is necessary, it will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended.

Both build alternatives would have long-term beneficial impacts from increased transportation options, increased passenger safety, and improved pedestrian, bicycle, and vehicular access. Developing a pedestrian friendly area to accommodate rail service growth improves the economic outlook for the area residents. Both alternatives would provide facilities enabling future commuter rail service for commuters, thereby reducing impacts associated with automobile traffic.

4.3.3 Environmental Justice

All Alternatives. Based on the data in Table 3-1, all but one block group (05001) have low-income or minority populations or both. Figure 3.4 shows that the blocks with population greater than one are outside of the project boundary. Those surrounding populations are mainly downtown residents that would receive long-term benefits from the ITC development with increased employment opportunities, transportation options, pedestrian improvements and connectivity to the Ship Creek redevelopment area. Since the block groups extend as far as two miles outside the project area, and the project and surrounding areas are mainly industrial and central business district, the potential low income and minority populations were determined to reside outside any areas of impact. The MOA Community Development Department (Personal Communication, Boehm, February 2003) concurred that the project would not disproportionately or adversely impact the low income or minority residents in the neighborhoods surrounding the project area since there were no residential properties in the project area and no relocations. None of the evaluated alternatives would have disproportionately high and adverse effects on minority or low-income populations.

4.3.4 Transportation Systems and Facilities

A Transportation Impact Analysis (HDR, 2003) was prepared to analyze projected traffic impacts of the Ship Creek Intermodal Transportation Center (ITC). See Appendix G. The report documents existing, opening year, and design year traffic conditions and analyzes roadway traffic congestion with and without the ITC project. Traffic forecasts recommended by the MOA Transportation Planning Department from the Ship Creek Multi-modal Transportation Plan (MOA, 2000) were used. For both signalized and unsignalized intersections within the study area, a traffic analysis software package (Synchro) was used to determine Level of Service (LOS).

LOS refers to the degree of congestion on a roadway or at an intersection, measured in average control delay, and is based on the methodologies provided in the 2000 Highway Capacity Manual

(Transportation Research Board, 2000). Operations at intersections are ranked from LOS A to LOS F. LOS A represents free-flow conditions (motorists experience little or no delay and traffic levels are well below roadway capacity); LOS F represents forced-flow conditions (motorists experience long delays and traffic levels exceed roadway capacity). LOS B to E represents decreasingly desirable conditions. The MOA has established level of service D as an acceptable target level of service for roadway and intersection improvements (2001 Long Range Transportation Plan, MOA, 2001).

Alternative 1 (No Action Alternative). The purpose and need for the project of increased operational efficiencies and safety in facilitating connections among intermodal transportation systems would not be realized with the No Action Alternative. Transportation problems identified in Chapter 2 would continue. Traffic from other Ship Creek area development is anticipated to adversely affect the intersection of North C Street and Ship Creek Avenue by 2022. The level of service at that intersection is anticipated to operate at LOS E, which is below the MOA goal. Improvements to this intersection would not occur as part of this project.

Table 4-2. No Action Alternative: A.M. Peak Hour Traffic Conditions, 2007 and 2022

Intersection	2007			2022		
	Control Type[1]	Delay[2]	LOS[3]	Control Type[1]	Delay[2]	LOS[3]
A Street/West 3rd Avenue	Signal	8.1	A	Signal	10.4	B
C Street/West 3rd Avenue	Signal	12.8	B	Signal	13.9	B
E Street/West 3rd Avenue	Signal	10.4	B	Signal	9.4	A
H Street/West 3rd Avenue	Signal	16.0	B	Signal	20.3	C
E Street/West 2nd Avenue	TWSC	10.1	B	TWSC	10.8	B
Christensen Drive/West 2nd Avenue	TWSC	11.2	B	TWSC	12.5	B
North C Street/West 1st Avenue	TWSC	13.9	B	TWSC	19.2	C
North C Street/Ship Creek Avenue	TWSC	20.7	C	**TWSC**	**43.7**	**E**
North C Street/Whitney Road	Signal[4]	7.7	A	Signal[4]	8.4	A
Ocean Dock Rd/Port Access Rd	Signal[4]	9.9	A	Signal[4]	10.8	B

Notes:

1. Signal = signalized intersection, TWSC = two-way stop controlled intersection
2. Delay, or control delay, is measured in seconds per vehicle, and is a measure of all the delay contributable to traffic control measures, such as signals or stop signs. At signalized intersections, the reported delay is the average of all the control delay experienced for all movements. At two-way stop-controlled intersections, the reported delay is for only one movement, the movement experiencing the worst control delay, which is typically one of the stop-controlled side street approaches. The control delay reported at two-way stop-controlled intersections is not a valid indication of the operations of the entire intersection.
3. LOS refers to Level of Service and is based on the methodologies outlined in the 2000 *Highway Capacity Manual*. LOS is rated from "A" (low delay) to "F" (delay in excess of 80 seconds per vehicle at signalized intersections, and 50 seconds at unsignalized intersections).
4. Improvement programmed in the Statewide Transportation Improvement Program or the AMATS Transportation Improvement Program.

Alternative 2 (Proposed Alternative) and Alternative 3. The purpose and need for the project of increased operational efficiencies and safety in facilitating connections among intermodal transportation systems would be realized with the build alternatives. The ITC development would have long-term positive impacts on the current and planned transportation systems in the Ship Creek area and for the ARRC's passenger rail system. Among the transportation benefits that would be realized with either build alternatives are improved connectivity to existing and

planned facilities, better and safer pedestrian connections to downtown Anchorage, and more efficient circulation for buses, taxis, and automobiles accessing the ITC. Connections to the existing sidewalks/trail network would be a benefit to pedestrians and bicyclists and keep them safely separated from road vehicles and trains.

Serving greater numbers of rail passengers would increase the numbers of buses, taxis, and automobiles accessing the area. As part of the project, a traffic signal and left turn pocket would be installed at the intersection of North C Street and 1st Avenue as well as North C Street and Ship Creek Avenue to accommodate projected traffic to the facility and to improve safety at the wider crossing. Because the build alternatives are in such close proximity, traffic impacts were deemed to be the same. Table 4-3 shows the anticipated LOS conditions for the opening year (2007) and the design year (2022) for alternatives 2 and 3. All intersections would operate at LOS C or better. No adverse traffic impacts would occur.

Table 4-3. Alternatives 2 and 3: A.M. Peak Hour Traffic Conditions, 2007 and 2022

Intersection	2007			2022		
	Control Type[1]	Delay[2]	LOS[3]	Control Type[1]	Delay[2]	LOS[3]
A Street/West 3rd Avenue	Signal	8.6	A	Signal	10.9	B
C Street/West 3rd Avenue	Signal	12.6	B	Signal	13.6	B
E Street/West 3rd Avenue	Signal	11.1	B	Signal	12.1	B
H Street/West 3rd Avenue	Signal	16.6	B	Signal	22.4	C
E Street/West 2nd Avenue	TWSC	10.5	B	TWSC	11.5	B
Christensen Drive/West 2nd Avenue	TWSC	11.8	B	TWSC	13.6	B
North C Street/West 1st Avenue	Signal[5]	8.1	A	Signal[5]	8.0	A
North C Street/Ship Creek Avenue	Signal[5]	8.7	A	Signal[5]	10.5	B
North C Street/Whitney Road	Signal[4]	6.5	A	Signal[4]	6.9	A
Ocean Dock Rd/Port Access Rd	Signal[4]	9.5	A	Signal[4]	10.8	B

Notes:

1. Signal = signalized intersection, TWSC = two-way stop controlled intersection
2. Delay, or control delay, is measured in seconds per vehicle, and is a measure of all the delay contributable to traffic control measures, such as signals or stop signs. At signalized intersections, the reported delay is the average of all the control delay experienced for all movements. At two-way stop-controlled intersections, the reported delay is for only one movement, the movement experiencing the worst control delay, which is typically one of the stop-controlled side street approaches. The control delay reported at two-way stop-controlled intersections is not a valid indication of the operations of the entire intersection.
3. LOS refers to Level of Service and is based on the methodologies outlined in the 2000 *Highway Capacity Manual*. LOS is rated from "A" (low delay) to "F" (delay in excess of 80 seconds per vehicle at signalized intersections, and 50 seconds at unsignalized intersections).
4. Improvement programmed in the Statewide Transportation Improvement Program or the AMATS Transportation Improvement Program.
5. Traffic signal and intersection improvement proposed as part of the ITC project.

4.3.5 Noise and Vibration

Experience suggests that noise and vibration associated with an intermodal project containing a railroad component can be of concern to the public. A technical report (Appendix D) was prepared to specifically assess the potential noise and vibration impacts of the planned ITC project at community locations adjacent to the proposed project. Noise and vibration impacts for the project are based on the criteria described in the FTA guidance manual entitled "Transit Noise and Vibration Impact Assessment" (FTA, 1995). The FTA noise impact criteria are founded on well-documented research on community reaction to noise and are based on change in noise exposure using a sliding scale. Although more transit noise is allowed in neighborhoods with high levels of existing noise, smaller increases in total noise exposure are allowed with increasing levels of existing noise. The FTA ground-borne vibration impact criteria are based on land use and train frequency.

Alternative 1 (No Action Alternative). Under the No Action Alternative there would be little to no change in train or bus activities that would affect noise levels. No noise or vibration impact would occur.

Alternative 2 (Proposed Alternative) and Alternative 3. Alternatives 2 and 3 have the same train and bus operating schedule and assumptions. Changing the location of the terminal building would not affect noise or vibration, and therefore, the noise and vibration effects of Alternatives 2 and 3 are the same and reported together in this section.

This assessment of noise and vibration impacts from ITC operations for Alternatives 2 and 3 is based on a comparison of existing and projected future noise and vibration exposure at potentially sensitive land uses in the project area (receptors). The identified receptors are primarily single and multi-family residences and a few are hotels, all falling under FTA Category 2 Land Uses. Category 2 land uses are defined as buildings where people normally sleep and include residences, hospitals, and hotels where nighttime sensitivity is assumed to be of utmost importance.

Projections of future ITC operational noise at the sensitive receptors were developed based on distance from the tracks and depot and the projection and schedule of train operation (Appendix A of this EA). The existing noise exposure at the identified receptors was estimated based on the ambient noise measurements. The existing noise environment at locations near the project area is dominated by noise from railroad operations, motor vehicle traffic on nearby and distant roads, aircraft, and general community noise. The analysis shows that there would be no noise impact to any of the noise-sensitive land uses based on FTA criteria.

The approach used to assess vibration impact consisted of using data on the project design and planned operational characteristics with models of train vibration to project future vibration levels. Ground-borne vibration propagation characteristics were measured at a nearby site with similar soil conditions to characterize the existing vibration propagation associated with locomotives in the ITC project area. The projected train vibration at each sensitive receptor was then compared to the FTA impact criteria. Based on the analysis, no vibration impact would occur, as all levels fall below the applicable FTA criteria.

4.3.6 Utilities

Figures 4.1 and 4.2 show the locations of the existing and proposed utility lines in the project area. There are water, natural gas, and sewer mains throughout the project area.

Alternative 1 (No Action Alternative). Under the No Action Alternative there would be no ground disturbing activities that would disrupt or require alteration of existing utility lines or services.

Alternative 2 (Proposed Alternative). Water, sewer, electrical and gas service is available nearby. Temporary disruption of utility service may occur in the immediate vicinity as the new facility is hooked up to the various utilities.

Construction and ground disturbing activities would affect a number of existing utility lines that run through the project area. The following utilities would be affected.

- 12" Ductile iron pipe (water line)
- 8" cast iron pipe (water line)
- 2" Plastic pipe (Natural gas)
- 1" Plastic Pipe (Natural gas)
- Three storm drains
- 24" Ductile iron pipe (sewer line)
- 12" concrete pipe (sewer line)
- 8" concrete pipe (sewer line)
- Two Underground electric lines
- Three underground telephone lines

The footprint of the proposed project relative to the identified utilities is depicted in Figure 3.7. Construction of the proposed alternative would require the relocation and or replacement of most of the identified utilities. Further evaluation and field identification of all utilities would be performed prior to construction. The ARRC will work with the utility companies and their clients that may be affected by utility disruptions to provide notice and determine amenable timing for utility disruptions to minimize impacts.

Alternative 3-Southside. Alternative 3, which is located south of the existing rail line, has a similar effect on utilities as Alternative 2. The following utilities would likely need to be relocated and or replaced.

- 12" Ductile iron pipe (water line)
- 8" cast iron pipe (water line)
- 7/8" natural gas line
- 2" Plastic Pipe (Natural gas)
- 1" Plastic Pipe (Natural gas)
- Three storm drains
- 24" Ductile iron pipe (sewer line)
- 12" concrete pipe (sewer line)
- 8" concrete pipe (sewer line)
- Two underground electric lines
- Three underground telephone lines

Similar to Alternative 2, the utility impacts would be short-term and temporary and would be mitigated in the same manner.

4.3.7 Archeological and Historic Sites

The National Historic Preservation Act of 1966 and its implementing regulation found at 36 CFR 800, require that federally assisted projects take into account the possible effects on properties that are listed on or are eligible for listing on the National Register of Historic Places (NRHP). These protected resources can be affected by actions that alter in any way the attributes that might

qualify the resources for inclusion on the NRHP. Adverse effects can result when a resource's significant characteristics are diminished. This section is a summary of a detailed technical report that examines the effects on cultural, historic, and archeological resources (Appendix E).

Alternative 1 (No Action Alternative). The No Action Alternative would have no impact on archeological or historic sites.

Alternative 2 (Proposed Alternative) and Alternative 3. Both build alternatives would occur directly within the view shed of the depot (listed on the National Register of Historic Places) and Freight Shed (eligible for listing on the National Register of Historic Places), potentially affecting their historic character. Per SHPO's letter dated March 7, 2003 (Appendix H), the project would have no adverse effect on the Freight Shed. Consultation with SHPO has indicated that the build alternatives would have no adverse effect on the depot, assuming compatible design (attention to scale, massing, and form) and integration of the existing depot to preserve its functionality. To insure that no significant impacts occur to the depot, ARRC will continue consultation with the SHPO throughout the planning and final design stages. SHPO will be contacted to provide design review at appropriate intervals to ensure that any potential effects are mitigated. In addition, should previously undiscovered cultural material be found during construction, potentially harmful activity would be stopped and the SHPO notified immediately.

4.3.8 Recreation

Alternative 1 (No Action Alternative). The No Action alternative would have no significant impact on recreational activities in the Ship Creek area. However, the beneficial impacts associated with the proposed alternative would not be realized.

Alternative 2 (Proposed Alternative) and Alternative 3. The build alternatives would have favorable impacts on recreation mainly due to improved access and upgrade of Quyana Park. The use of part of Quyana Park would be offset by the creation of the rooftop park/plaza, resulting in a net gain of park space. More details relating to Quyana Park can be reviewed in the Ship Creek ITC Section 4(f) Evaluation (ARRC, 2003) (Appendix F). There would be no adverse impacts on nearby recreational activities, including fishing activities at Ship Creek, use of nearby trails and sidewalks, or on other nearby parks (Ship Creek Overlook Park and Barrow Park). The trail connection between the Coastal Trail and Ship Creek Trail is planned to run down Second Avenue and to cross at-grade at the North C Street crossing of the passenger main. The proposed trail would not impact the ITC and the ITC would not pose a safety problem for trail users. With the additional siding tracks, this crossing would be wider and would experience an increase in train traffic. As part of the project, the ARRC will be putting in traffic signals and reconfiguring the gates at the North C Street crossing, which would enhance pedestrian safety at the crossing and would minimize potential affects on pedestrians. The pedestrian enhancements and rooftop park associated with the project may provide a beneficial impact on recreation. Potential short-term adverse impacts may occur in the form of temporary disruptions of road access to the Ship Creek area during construction. However, alternate access routes would be available.

4.3.9 Section 4(f) Property Impacts

Alternative 1 (No Action Alternative). The No Action Alternative requires no use of Section 4(f) property.

Alternative 2 (Proposed Alternative) and Alternative 3. The build alternatives would involve use of a portion of Quyana Park, a Section 4(f) resource. The Section 4(f) Evaluation (Appendix F) found that no other prudent and feasible alternative to the proposed alternative exists. With the build alternatives, construction of the parking garage would require use of a portion of Quyana Park and would change the use and function of the terrain in that portion of the park. These alternatives use the proposed terraced parking structure to achieve integral components of the purpose and need for the project, namely facilitating pedestrian connections between downtown Anchorage and the Ship Creek ITC. The footprint of the impact would use approximately 1.62 acres of the 10.92-acre park on park's lower elevations (below North C Street). Approximately 0.52 additional acres would be temporarily affected during construction, but would be returned to park use after construction. In total, 2.14 acres of the park would be affected.

To offset the use of the park, approximately 2.35 acres of park would be replaced on the roof of the parking garage. The replacement park area would be flat to gently sloping. The upper reaches of the park (above North C Street) would remain unchanged and would still provide opportunity for users to sit on the grassy slope and eat lunch. Below North C Street, the park would be developed for public space with courtyards, viewing platforms, benches, vegetation and other amenities. The net affect, with the rooftop park replacement, would be 11.1 acres of park space after construction. At the request of MOA transit department, a bus pullout has been incorporated into the design on the top floor of the parking garage. The replacement park acreage quoted here did not include the area for the bus pullout requested by MOA transit. Without that area included, the net gain in functional public space is approximately 0.21 acres.

Use of the park for eating lunch, reading, and passive recreation would still be possible. With its flat to gentle sloping environment and improved amenities, the lower reaches of the park would provide an improved passive park experience. Skiing and sledding on this part of the park would not be possible. Given the small current amount of such use and the remaining acreage available for such uses, the effect would be minimal. The net impact on this currently underutilized park would be beneficial, with the additional park acreage and proposed amenities.

The Section 4(f) Evaluation does not address the historic Anchorage Depot (Alaska Heritage Resources Survey #ANC-0362), which is listed on the National Register of Historic Properties (NRHP). The proposed action occurs on sites adjacent to the existing depot, but does not change the existing depot's use or impair its vital functions. The build alternatives are compatible with the function and intended use of the existing depot, which would continue to be owned and managed by the ARRC and function as it does now—as a railroad depot and offices for lessees and ARRC personnel. Consultation with the State Historic Preservation Officer (SHPO) has indicated that the proposed project would have no adverse effect on the depot (from a Section 106 perspective), assuming compatible architectural design (attention to scale, massing, and form) and integration with the existing depot to preserves its functionality. ARRC has committed to continued consultation with the SHPO throughout final design to ensure that potential adverse effects are mitigated. In the event that completion of the Section 106 process does not result in a finding of no adverse effect on the depot, another Section 4(f) Evaluation would need to be completed.

4.3.10 Contaminated Sites

Alternative 1 (No Action Alternative). This alternative would have no impacts relating to site contamination.

Alternative 2 (Proposed Alternative) and Alternative 3. The Phase I Environmental Site Assessment (Shannon & Wilson, 2003) indicates that the primary potential for encountering contaminated soil or groundwater at the site appears to be due to the industrial use of the Ship Creek area and the fill material placed in the buttress area following the 1964 earthquake. In addition, former UST and leaking UST sites as well as other contaminated sites are present near the project area but not in the area directly in the footprint of the either project alternative. Contamination at some of these sites that could potentially migrate to the project area from the source areas would most likely be contained to road and utility rights-of-way. The potential for encountering contaminated soil and groundwater and asbestos containing materials (e.g., in the Denali Federal Credit Union building or subsurface utilities) should be considered during construction planning. Contamination discovered during construction would be addressed in a manner consistent with applicable state and federal laws.

4.3.11 Visual Impacts

Alternative 1 (No Action Alternative). There would be no change to the viewshed in the project area.

Alternative 2 (Proposed Alternative) Views of the historic depot from the upper elevations of the park would change to include a parking garage/parking garden in the foreground. A new viewing area would be created along the edge of the park, overlooking the existing depot and new ITC. Views of the rail yard, Ship Creek industrial area, Ship Creek, Mount Susitna, and Denali would remain unchanged with the exception that the new ITC would be in the lower foreground. The rooftop park, terraced parking, Alaska Railroad Engine Number 1, and enclosed skybridges would provide a new high quality public space with added pedestrian and overlook safety as well as improved public space affording views of the historic depot and mountains beyond.

Alternative 3-Southside. Alternative has similar visual impacts as Alternative 2. The primary difference is that Alternative 3 would change the view east and north of the depot by demolishing the current baggage claim building and constructing the new ITC on that property.

4.3.12 Energy

Alternative 1 (No Action Alternative). The No Action Alternative would not accommodate the demand for rail passenger service, and as such, it would result in overall greater numbers of automobile trips and higher energy usage for fuel as compared to the build alternatives.

Alternative 2 (Proposed Alternative) and Alternative 3. The two build alternatives would increase energy usage for lighting and heating purposes as well as fuel usage for additional trains and train cars. Energy use during construction would increase, but it would be a short-term increase and would not affect overall energy supplies. Development of an ITC would support rail mass transit, which would decrease energy required to fuel cars by offering an alternate mode of transportation. The comparison of increased energy usage by the ITC as compared to the overall supply of energy is small. Adverse impacts to energy supply are not anticipated.

4.4 Construction

Alternative 1 (No Action Alternative). The No Action Alternative would have no adverse impacts due to construction.

Alternative 2 (Proposed Alternative) and Alternative 3. The build alternatives would create minor adverse impacts during construction, including increased noise and dust, and temporary local effects on air quality. Air quality impacts would not affect compliance with air quality standards, because heavy equipment burning diesel fuel does not emit large quantities of carbon monoxide, the pollutant for which Anchorage is not in attainment. Construction noise would be minor in this industrial area and would be temporary in duration. Construction contractors would be required to comply with local ordinances that limit nighttime noise.

Other minor adverse construction impacts include short-term delays for users of the depot, intermittent delays in traffic to move large machinery around the site, and temporary closure of a portion of Quyana Park. Temporary traffic delays and detours would inconvenience the traveling public for short times during construction, but appropriate signage would be used to direct drivers to alternative routes. First Avenue and 2nd Avenue could be temporarily closed during construction of the parking garage with either alternative. To ensure adequate traffic mobility, both roads will not be closed at the same time. Closures and detours of North C Street would be required during track construction across this roadway. Rail operations and passengers would experience potential delays during construction of the track work. Traffic delays would be mitigated through development of traffic control plans and timing construction to shoulder or winter seasons to minimize the disruption to non-peak seasons. Appropriate signage would be used to direct travelers to alternative routes. The ARRC will work with local businesses that may be affected by road closures to minimize impacts.

Disruption to utility service is likely during construction. Service disruption would short-term and temporary. The effects of service disruption would be minimized though construction planning, public notification, and such techniques as relocating utilities first and switching service to the new line before disconnecting the old service line. The ARRC will work with the utility companies and their clients that may be affected by utility disruptions to minimize impacts.

Pile driving during construction may result in vibration impacts and possibly short-term settlement of adjacent loose sand materials. However, these vibrations and settlements, if any, are expected to be minor temporary impacts.

Soil erosion within the construction zones of the project area would be short-lived, with minimal impact. A Storm Water Pollution Prevention Plan (SWPPP) would be prepared and implemented as part of an NPDES General Permit for Storm Water Discharges from Construction Sites. BMPs would be employed throughout the proposed project to control soil erosion and sedimentation. No significant impacts to soils within or adjacent to the proposed project area are expected from the build alternatives.

4.5 Cumulative Effect

NEPA requires analysis of the cumulative impacts from the proposed action when added to past, present, future, and reasonably foreseeable future impacts (40 CFR 1508.7). Cumulative impacts to be considered are based on the following criteria: 1) effects occur but are not localized to the same general area; 2) effects to a resource are similar in nature; and 3) effects are long-term rather than short-term in nature. Cumulative effects can result from several individually minor impacts, which may be collectively significant over time.

Several other developments in the Ship Creek area have been proposed that could potentially contribute to cumulative effects on resources. Table 4-4 describes the reasonably foreseeable

future projects and their current status. This section considers the cumulative effects of the project as compared to the No Action Alternative when combined with projects identified in Table 4-4.

Although the Ship Creek ITC project would support future development of commuter rail service to the Matanuska-Susitna valley and shuttle service to the TSIA, development of these services is not guaranteed. If federal funding is obtained to facilitate development of either commuter rail or TSIA shuttle service, additional environmental impact analyses would need to be conducted before those services could be implemented.

4.5.1 Cumulative Effects to the Physical Environment

Air Quality. Secondary and cumulative effects to air quality have been analyzed in the technical report prepared for this EA (Appendix B). Traffic from reasonably foreseeable planned development in the area was analyzed for traffic impacts. In turn, the air quality impacts were based on the projected traffic effects. Finally, the air quality impacts from the parking garage and intersections were added together. The modeled concentrations of CO are well below the NAAQS.

Geology and Soils. When mitigation measures included in the proposed action are taken into account, no geology and soils impacts are anticipated.

Hydrology, Flood Zones, and Water Quality. Cumulative impacts to aquatic resources would occur primarily from soil erosion and sedimentation. When mitigation measures for the build alternatives are taken into account, the incremental impact of the build alternatives with other reasonably foreseeable development on hydrology and water quality would be minimal. Cumulative impacts on coastal flood zones would also be minimal, since the development would not be sufficient to raise sea levels and significantly encroach on the coastal flood zone

4.5.2 Cumulative Effects to the Biological Environment

Wetlands. Nearly all of the original wetlands that were once found in the project area were filled long ago to develop the rail yard and commercial and industrial uses that now dominate the area. Filling in the small, isolated wetland would have little to no cumulative impact as compared to the No Action Alternative.

Vegetation and Habitat, Wildlife, Protected Species, Fish and Essential Fish Habitat. No impacts to vegetation, wildlife, protected species, habitat, fish or essential fish habitat are expected from either of the build alternatives. Therefore, the cumulative effects on these resources would be negligible as compared to the No Action Alternative.

Table 4-4. Plans and Probable Future Projects Considered in Cumulative Impact Analysis

Plan or Project Name/Agency	Description	Status
Anchorage Rail Yard Improvements - ARRC	Various yard improvements to increase efficiency.	Ongoing
Anchorage Yard Passenger Car Shop - ARRC	Construction of a new facility with repair equipment and up to five tracks entering the facility.	Concept design stage
Anchorage Yard Locomotive Fueling System - ARRC	Upgrading the existing locomotive fueling facility, and reducing on-site storage.	Final design and permitting is scheduled for 2003.
ARRC Anchorage Operations Center - ARRC	Construction of a new operations center in the existing rail yard	Draft EA completed in 2002. Final design to be completed spring 2003 and construction scheduled for late 2003/2004.
Capacity Improvements between the Mile 110 to 114 - ARRC	Analysis of alternatives for improving capacity in this four-mile corridor (adding sidings, installing automated signals and switches, and extending the double track).	Preliminary noise and vibration studies and public and agency scoping completed. Efforts will continue in 2003.
Pedestrian Safety and Amenities Project - ARRC	Improves pedestrian access to the Ship Creek area by adding/ refurbishing sidewalks, providing pedestrian crossing panels over the track on North C Street, and lighting, landscaping, and interpretive signs.	Final design to be completed spring 2003.
Leasing/Development - ARRC	Leasing land for mixed use development	On-going
Various Road Improvement Projects – AMATS	Improvements to Whitney Road, Ocean Dock Road, and Ship Creek Avenue, and extension of Ingra/Gamble couplet to Ship Creek Avenue and Whitney Road.	Programmed for improvements in the next 6 years.
Tony Knowles Coastal Trail – Ship Creek Trail Connection - MOA	Connect the Coastal Trail to the Ship Creek Trail.	Project would be completed in phases with constructing beginning in 2003 and ending in 2006
Ship Creek Pedestrian Trail - MOA	Build a trail along Ship Creek.	In 2002, first 600 feet constructed, beginning at the CEA dam. Further construction will be done in phases over several years.
Ship Creek Culvert Removal Project – MOA/NMFS	Reconstructing or relocating the existing embankment, road, culverts, and utilities associated with a new Ship Creek bridge.	Environmental Assessment complete, design underway, construction begins 2003.
Ship Creek Watershed Improvements/Restoration – MOA/USACE/Anchorage Waterways Council	Various improvements such as salmon viewing improvements, and other water quality improvements are planned over the next few years.	Ongoing
Port of Anchorage Expansion - MOA	The Port is planning various expansion projects for Port infrastructure and intermodal capability over the next 5 to 7 years	Ongoing
Knik Arm Ferry – Mat-Su Borough	Project would entail ferry-landing development in the Port/Ship Creek area and the Port Mackenzie side.	Draft Environmental Assessment expected Spring 2003.
Knik Arm Power Plant Project - Private Developer	Repowering Knik Arm Power Plant as a new facility to generate and supply electric power and steam heat for uses in the vicinity of downtown Anchorage	Permit application submitted to ADEC in July 2000. Preliminary Technical Analysis Report completed March 2002. Some uncertainty as to whether the project will go forward.

4.5.3 Cumulative Effects to the Human Environment

Land Use and Zoning. Additional development in the Ship Creek and downtown areas is expected to occur with or without the proposed ITC. If rail service expands and brings more workers and tourists to the area, the rate of development could increase in the area. Each of the identified projects that would contribute to cumulative effects on land use and zoning would be implemented in accordance with adopted land use plans. As such, the cumulative impact would be negligible as compared to the No Action Alternative.

Socioeconomic Impacts. The build alternatives would result in a small increase in employment and income in the greater Anchorage area. The increase in travel efficiency and development of the ITC may benefit the local economy. The project would support future development of commuter rail service to the Matanuska-Susitna valley and shuttle service to the TSIA, but further environmental analysis would be conducted prior to initiating that service. Therefore, no adverse cumulative impacts are anticipated.

Environmental Justice. No impacts to minority or low-income populations have been identified for either build alternative. In addition, no foreseeable future impacts are expected for the surrounding community. Therefore, cumulative impacts to minority or low-income populations would be negligible as compared to the No Action Alternative.

Transportation Systems and Facilities. The proposed build alternatives have been evaluated in a context that includes other reasonably foreseeable development in the area. If the Municipality's programmed and planned transportation improvements are implemented, no cumulative impacts would be anticipated.

Noise and Vibration. The proposed action is not anticipated to have any effects on sensitive land uses. The project would support future development of commuter rail service to the Matanuska-Susitna valley and shuttle service to the TSIA. Additional environmental analyses would be conducted prior to initiating this service.

Archaeological and Historical Sites. No impacts are expected to occur to cultural or historic sites as a result of the project, and therefore, the project would not contribute to cumulative effects on these resources as compared to the No Action Alternative.

Recreation and Section 4(f) Property. Use of the Section 4(f) resource could result in a net gain of accessible open space by incorporating a landscaped, pedestrian-friendly park/plaza as the top of the parking structure proposed on part of the Section 4(f) resource.

Visual Impacts. As mentioned above, the view of the depot area from 3rd Avenue is expected to change with the ITC development. The type of surrounding development that is anticipated (with or without the ITC project) is transit-oriented or transportation-related (port improvements, ferry landings etc.). Such development is compatible with existing land uses and the existing viewshed, which is largely industrial and transportation-related in nature. Some would consider the changing viewshed to be improved with the ITC and planned development. None of the planned surrounding development is anticipated to dominate the viewshed or obscure views of the existing depot or distant mountains. The cumulative visual impacts would be minor.

Energy. Cumulative impacts to the energy supply are expected to be minor and are not anticipated to have an adverse effect on the overall energy supply.

4.6 Irretrievable and Irreversible Commitment of Resources

NEPA requires a review of significant irreversible and irretrievable effects that occur from development of the proposed action (40 CFR 1502.16). Irretrievable effects apply to losses of production or commitment of renewable natural resources. Irreversible effects apply primarily to the use of non-renewable resources, such as minerals or cultural resources, or to those factors that are renewable over long periods of time, such as soil productivity. Irreversible effects also include the loss of future options.

Alternative 1 (No Action Alternative). The No Action Alternative would have no significant adverse impacts on the commitment of resources.

Alternative 2 (Proposed Alternative) and Alternative 3. Development of the build alternatives would require the commitment of land, fuel, and labor resources. The commitment of energy and labor for construction is irretrievable and irreversible, but is not a significant impact.

4.7 Local Short-Term Uses verses Long-Term Productivity

NEPA requires a review of the balance between short-term uses and long-term productivity of resources within the project area (40 CFR 1502.16). The definitions of short-term and long-term are specific to each project. Generally, short-term refers to the useful life of the development. Long-term refers to the time beyond the lifetime of the project. Those impacts that narrow the range of beneficial uses to the environment are of primary concern. Potential impacts include selecting a development option that reduces the ability to pursue other possibilities, or committing a piece of land or other resources to a particular use that eliminates possibilities of additional uses being performed on this site.

Since both build alternatives would construct the ITC in an area historically and currently used for transportation and rail operations, they would not limit beneficial uses of the environment. However, they would facilitate connections from one transportation mode to another, improve links to Anchorage's central business district and nearby pedestrian facilities, increase operational safety and efficiency, and make future passenger rail service more feasible.

4.8 Mitigation

An EA is intended to focus on relevant issues and impacts; therefore only topics with potential associated issues are discussed in this section. The ARRC incorporated in the proposed alternative appropriate mitigation measure designed to minimize or compensate for environmental consequences. For additional details on planned mitigation as part of the proposed action, please refer to each specific section found earlier in the chapter. The following paragraphs summarize the mitigation information from the preceding sections of the EA and from the EA's appendices.

4.8.1 Soils and Geology

In both build alternatives, construction of the parking garage occurs on a geologically sensitive slope known as the "buttress." Geological limitations include the potential for lateral movement during an earthquake of the size and intensity of the 1964 Earthquake. The primary concern is that construction of the parking garage could affect the integrity of the buttressed slope and consequently compromise existing downtown infrastructure or the parking garage itself.

The geotechnical report found that geotechnical limitations of constructing on the buttress area could be overcome with proper design. The effects of construction could be mitigated by maintaining or improving current stability conditions by filling and buttressing the toe of the slope and cutting or unweighting the upper parts of the slope as recommended in the geotechnical report (Shannon & Wilson, 2003).

A SWPPP would be prepared and implemented as part of the NPDES general permit for the project, and BMPs would be employed to minimize the potential for erosion and sedimentation during construction.

4.8.2 Hydrology and Flood Zones

Both build alternatives are located within a 100-year floodplain requiring coordination with the MOA's Flood Hazard Administrator for a Flood Hazard Permit. The MOA would require that the new ITC building be designed so that the lowest habitable floor is at least one foot above the base flood elevation (BFE) of 19 feet MSL. The ARRC would design the ITC such that the lowest habitable floor elevation is at a minimum of 20 feet MSL to minimize the potential for flood damage to life and property.

4.8.3 Water Quality

The proposed alternative would be designed and constructed to comply with the MOA, Department of Public Works Design Criteria Manual. As such, the project would include the design of drainage facilities to minimize pollution of water sources by storm or snowmelt runoff. The runoff would be collected and treated by appropriate management practices as required in the manual. A SWPPP would be prepared and implemented as part of the NPDES general permit for the project, and BMPs would be employed to minimize the potential for erosion and sedimentation during construction.

4.8.4 Section 4(f) Mitigation/Minimization

The proposed alternative includes a parking structure and an open plaza that will require use of a portion of Quyana Park. Through its early planning efforts and coordination with the MOA during the environmental review process, the following measures to minimize harm were identified and have been incorporated into the design.

- Minimize the footprint of the parking structure on Quyana Park by maximizing use of the existing parking lot and adjacent Denali Federal Credit Union lease area.

- Minimize the viewshed impacts from 3rd Avenue by terracing the parking structure to fit the natural contour of the slope and keeping the structure as low as possible by using the Denali Federal Credit Union lease.

- Replace an amount of park/open space equal to or greater than the amount used for the parking garage. Quyana Park is currently 10.92 acres. As proposed, Quyana Park with the rooftop park after construction is approximately 11.1 acres.

- Explore the opportunity of relocating the Engine No. 1 monument from the middle of the depot parking lot to a prominent location in the rooftop park.

- Enhance and relocate the Eisenhower Memorial to a prominent place in the park with a better north-facing vista.

- Create a park/public space with improved vistas of the mountains and historic rail depot.

- Provide improved walking, resting, and viewing areas within the park on a more amenable slope, including landscaping, paths, and benches to enhance utilization.

- Keep the enhanced pedestrian corridor in line with E Street extended, in accordance with the MOA's vision for an E Street pedestrian corridor.

- Create a bus drop-off area on the roof of the parking structure to eliminate the need for city buses to descend into the Ship Creek valley.

4.8.5 Utilities

Both build alternatives would likely require several utility relocations. During construction and relocation, the contractor would be required to incorporate standard BMPs to mitigate any impacts from relocation and minimize disruptions of service.

4.8.6 Section 106

Construction of the Proposed and Southside Alternatives would occur directly within the view shed of the depot, potentially affecting its historic character. Early consultation with SHPO has indicated that the build alternatives would have no adverse effect on cultural resources, assuming compatible design (attention to scale, massing, and form) and integration of the existing depot to preserve its functionality.

Consultation with the SHPO will continue throughout the planning and final design stages. SHPO will be contacted to provide design review at appropriate intervals to ensure that any potential effects are mitigated. Consistent with 36 CFR 800.1 (c), the Section 106 process will be complete prior to the commitment of federal funds for construction. Also, should previously undiscovered cultural material be found during construction, potentially harmful activity should be stopped and the SHPO notified immediately.

4.8.7 Visual

The visual impacts would be mitigated through designs that minimize obscuring views of the depot and enhance other views of the area. SHPO would be involved with the project through final design to ensure that the building designs minimize the visual impacts to the historic depot.

4.9 Project Authorizations

Both build alternatives would require the same authorizations, as listed in Table 4-5. These authorizations would be obtained by ARRC during final design or by the construction contractor.

Table 4-5. Project Authorizations

Authorization Type	Administering Agency	Notes
Department of the Army Permit (Section 404 Permit)	USACE	The USACE will determine its jurisdiction over the one potentially affected wetland during summer 2003. If it asserts jurisdiction, this permit will be required.
Water Quality Certification (Section 401)	ADEC	If the USACE determines that no Section 404 permit is required, this authorization will not be needed.
Alaska Coastal Management Program Consistency Determination	ADGC and ADNR (1)	If the USACE determines that no Section 404 permit is required, this authorization will not be needed.
Flood Hazard Permit	MOA	This permit would be obtained by ARRC during final design.
Building Permit	MOA	The building would comply with mechanical and electrical codes, comply with storm water runoff requirements, and be designed for seismic stability.
Concurrence with Section 106 of the National Historic Preservation Act	SHPO	Coordination with the SHPO is underway. The project would comply with the law through a Finding of No Adverse Effect on Historic Properties or by development of a Memorandum of Agreement between SHPO and ARRC. SHPO confirmation of compliance may not be obtained until final design begins.
NPDES	EPA	The construction contractor would be required to obtain and comply with the conditions of this general permit.
Planned Community Site Plan	MOA	The permit application has been initiated and is part of a larger effort to develop design guidelines and a master plan for transit-oriented development in the Ship Creek area.
Joint Use Agreement	MOA and ADOT&PF	An agreement may be needed with the MOA and ADOT&PF for Quyana Park and long-term maintenance of the new park/plaza area.

(1) The entity responsible for verifying consistency with the ACMP is presently in transition.

5.0 CONSULTATION AND COORDINATION

During the preparation of this EA, federal, state, and local agencies, governments, tribal organizations, and the public were consulted to obtain pertinent information, identify issues and mitigating measures, and assist in the development of reasonable alternatives. Initial outreach methods included newspaper advertisements, mailings to businesses, and hand-delivered flyers announcing the public meeting; an open house public meeting; an interagency scoping meeting; and telephone interviews of key stakeholders. The initial coordination for the project is described in the project's Scoping Summary Report (HDR Alaska, 2002). Consultation has continued with various agencies regarding specific issues.

Organizations that have been contacted about this project are listed below.

Federal Agencies

- Federal Transit Administration, Region X, Seattle, WA
- National Marine Fisheries Service
- U.S. Army Corps of Engineers, Regulatory Branch
- U.S. Fish and Wildlife Service, Ecological Services Office
- U.S. Environmental Protection Agency
- National Park Service
- Bureau of Indian Affairs
- Bureau of Land Management
- United States Geological Services

State Agencies

- Alaska Department of Environmental Conservation, Division of Air and Water
- Alaska Department of Fish and Game, Habitat and Restoration Division
- Alaska Division of Governmental Coordination
- Alaska Department of Natural Resources, Division of Mining, Land, and Water
- Alaska Department of Natural Resources, State Historic Preservation Officer
- Ted Stevens International Airport

Local Agencies

- MOA Cultural and Recreational Services Department, Parks and Recreation
- MOA Planning Department
- MOA Coastal Management Coordinator
- MOA Project Management and Engineering Department, Parks and Trails Project Management
- MOA Traffic Department, Transportation Planning Division
- MOA People Mover (public transit)
- MOA, Department of Health and Human Services, Environmental Services Division
- MOA Heritage Land Bank
- Port of Anchorage
- Office of the Mayor

Tribal Organizations

- Cook Inlet Region, Inc.
- Native Village of Eklutna
- Eklutna, Inc.
- Village of Tyonek
- Tyonek Native Corporation
- Knik Tribe
- Knikatnu, Inc.

Community Councils

- Community Councils Center
- Government Hill Community Council
- Downtown Community Council

Other Organizations

- Anchorage Waterways Council
- Anchorage Convention and Visitors Bureau

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