

# Spokane County

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## Geiger Spur Transload Facility Supplemental Study (draft)



# **Geiger Spur Transload Facility Supplemental Study**

Prepared for the

**Washington State  
Department of Transportation**

By

**HDR Engineering, Inc.**

**June 2008**



**Washington State  
Department of Transportation**

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**Prepared by the State Rail Office, Freight Systems Division  
Washington State Department of Transportation**

June 2008

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*Photograph on the cover:  
The Geiger Spur, looking west, adjacent to West McFarlane Road.*

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# Executive Summary

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The 2006 Washington State Legislature provided the Washington State Department of Transportation (WSDOT) and Spokane County with \$60,000 to study the need for a new transload facility which allows freight to be transferred between trucks and trains.<sup>1</sup> The Geiger Spur Transload Facility Study (*July 2007 Study*) was completed in July of 2007. The study focused on an area near Airway Heights, known as the Geiger Spur, which has a concentration of industrial sites served by a rail spur track that connects with the national rail network. It examined the need for transloading capabilities in this area that could be served by the Geiger Spur. The study was intended to help decision makers evaluate the need for a new transload facility along the Geiger Spur. The study also identified possible locations for a new transload facility and provided important information regarding transload facility operations, land use implications, and commercial viability. For a reference to the locations of the proposed transload facilities, please refer to the Executive Summary (ES.1) in the *July 2007 Study*.

The purpose of this report, *Geiger Spur Transload Facility Supplemental Study* (supplemental study), is to consider a new candidate transload site that was not a candidate at the time of the original study. The property considered and discussed throughout this report is referred to as Site E and is located south of McFarlane Road and West of Craig Road (shown in Exhibit 5.5S).

## What is contained in this report?

Much of the contents of the *July 2007 Study* hold true to this supplemental study, therefore, were not reiterated. Following this summary, topics that *have* changed since the *July 2007 Study* and are discussed throughout this report include:

- Key findings
- How Site E has been identified as a potential transload facility
- Potential transload site design
- Potential environmental elements evaluated
- Potential impact to local roadways
- Conceptual construction cost estimate
- Benefits and drawbacks of Site E
- Recommendations

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<sup>1</sup>2006 Washington State Legislature, *Substitute Senate Bill 6241. PL, p. 39.*

The project location and existing rail line layout along with definitions and explanations of what a transload study is and is used for are all captured in Chapter One of the *July 2007 Study*. The purpose and need for this project is described in Chapter Two of the *July 2007 Study*, based on previous analysis conducted by Spokane County and other stakeholders. An overview of existing rail operations and businesses along the Geiger Spur is presented in Chapter Three of the *July 2007 Study*. Chapter Four of the *July 2007 Study* presents information regarding potential users and demand. Chapter Five of the *July 2007 Study* provides a discussion of potential transload locations, as well as the facility's design configurations. Conceptual cost estimates are also included in Chapter 5. Transload operations are discussed in Chapter Six of the *July 2007 Study*.

Technical appendices are also included in the *July 2007 Study*. Appendices contain interview results, conceptual cost estimates, and transload and rail design standards.

## **What are the key findings of this supplemental study?**

This supplemental study has the same key findings as listed in the *July 2007 Study*. Based on prior coordination with key stakeholders, as well as research and analysis of the rail facilities and potential sites in the Airway Heights area, the project team has concluded that:

- A transload facility on the Geiger Spur, located on the proposed Site E (shown in Exhibit 5.5S), could help support the economy of Spokane County by giving businesses more transportation options. Better connections between trucks and trains could help businesses reach more markets, provide greater flexibility in sourcing prime materials, and lower total transportation costs.
- There are approximately 245 acres of contiguous Spokane County owned available land zoned for light industrial uses within the proposed Site E. The available parcels do not have sewer services at this time. However, existing sewer exists 2,300 feet southwest of Site E. Water, power, and communications are available at the site.
- Based on prior shipper surveys, a new transload facility could generate additional inbound and outbound traffic consisting of automobiles, machinery, lumber, and other materials. A transload facility with two or three tracks could potentially increase rail traffic on the Geiger Spur to 800 to 1,150 carloads per year.
- Rail service at the transload facility would presumably be provided by three separate carriers:



- the BNSF Railway Company (BNSF) would be the long-distance carrier, interchanging with the Eastern Washington Gateway Railroad at Cheney;
  - the Eastern Washington Gateway Railroad would interchange at “Geiger Jct.” (near Medical Lake) with Western Rail Inc.;
  - Western Rail, Inc. would move cars between “Geiger Jct.” and the transload facility on the Geiger Spur.
- The project team identified a configuration for a transload facility within the proposed Site E (see the following section for a more detailed discussion of the site).
  - A well-used transload facility on the Geiger Spur may necessitate roadway improvements to handle greater volumes of truck traffic. South Craig Road and its connection with State Routes 2 and 902 may need to be modified at some time in the future.

The overall cost estimate for Site E is \$3,853,000 and includes two auto unloading tracks and one double sided track with side dock end ramp. Since Spokane County is the property owner of the parcels at the proposed Site and if they move forward with this transload facility, acquisition of right-of-way will not be required for Site E, presuming Spokane County would be interesting in owning a transload facility.

While all of the sites (A through E) should be considered to meet the needs of the potential Geiger Spur transload facility, the new Site E is as good or better than all other sites considered. (Site A was recommended previously.) Even though Site E it may be more expensive to construct than Site A, the advantages seem to outweigh the drawbacks. The real overall cost may be comparable depending on the costs of land for Site E versus Site A. Site E has become the recommended site because it is the most flexible and expandable site, has the best roadway access, has the least drawbacks.

# Chapter One

## **Introduction**

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The contents of this chapter have not changed since the *July 2007 Study*.

## **Chapter Two**

# **Purpose and Need for this Project**

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The contents of this chapter have not changed since the *July 2007 Study*.

## **Chapter Three**

# **Existing Operations and Users along Geiger Spur**

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The contents of this chapter have not changed since the *July 2007 Study*.

## **Chapter Four**

# **Potential Users and Demand for Service**

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The contents of this chapter have not changed since the *July 2007 Study*.

## Chapter Five

# Potential Transload Site and Design

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The contents of this chapter have changed to some extent due to the addition of Site E. However, the generic features of an optimal transload facility have remained the same.

Based on customer interviews conducted for the *July 2007 Study*, it was determined that large machinery and automobiles could potentially be transported both inbound and outbound via a new transload facility on the Geiger Spur. As such, an appropriate site and design — to accommodate such shipments — is critical to the success of the facility.

### What would be the general configuration of this transload facility site evaluated in this supplemental study?

The *Transload Design Guide* (Appendix C of the *July 2007 Study*) was used as the basis for the development of the optimal transload facility and conceptual plan for each site evaluated. The design and conceptual plan was based on features identified by the potential operators and users. Tracks were generally designed based on the *BNSF Guidelines for the Construction of Industry Track* (discussed further in Chapter Five of the *July 2007 Study*).

**Exhibit 5.1**, of the *July 2007 Study*, summarizes the characteristics and features of an optimal transload facility, also discussed in the *July 2007 Study*, page 5-1.

**Exhibit 5.2**, of the *July 2007 Study*, illustrates an optimal perpendicular transload facility configuration for Site E. The following discusses Site E in more detail and presents a general layout for the facility.

#### **Site E: 245 acres (Parcel Numbers 15341.9002-9003, 15344.0102-0111, and 15344.0113)**

**Exhibit 5.6S** presents the general design for this site. The following presents general information about the parcel:

- This site is owned by Spokane County.
- This parcel is oriented to use a perpendicular configuration design. The lot is of sufficient size in length and width to accommodate every desired feature.

- Spokane County has indicated that the parcel was purchased to be used in conjunction with the Geiger Spur Project to provide industrial growth and economic development opportunities in the Airway heights industrial area.
- Road access is good with Craig Road to the east.
- Proximity to State Route 2 and Interstate 90 (via State Route 902) are very good.
- Although near Fairchild Air Force Base, the proposed site is not in restrictive easement zones.
- Connection (turnout at lead to new Geiger Spur) arrangement is limited. Operations may be negatively affected. Future tracks indicate how a double ended (run-around) track can be incorporated.

**Exhibit 5.5S  
Location of Potential Transload Facility Sites**

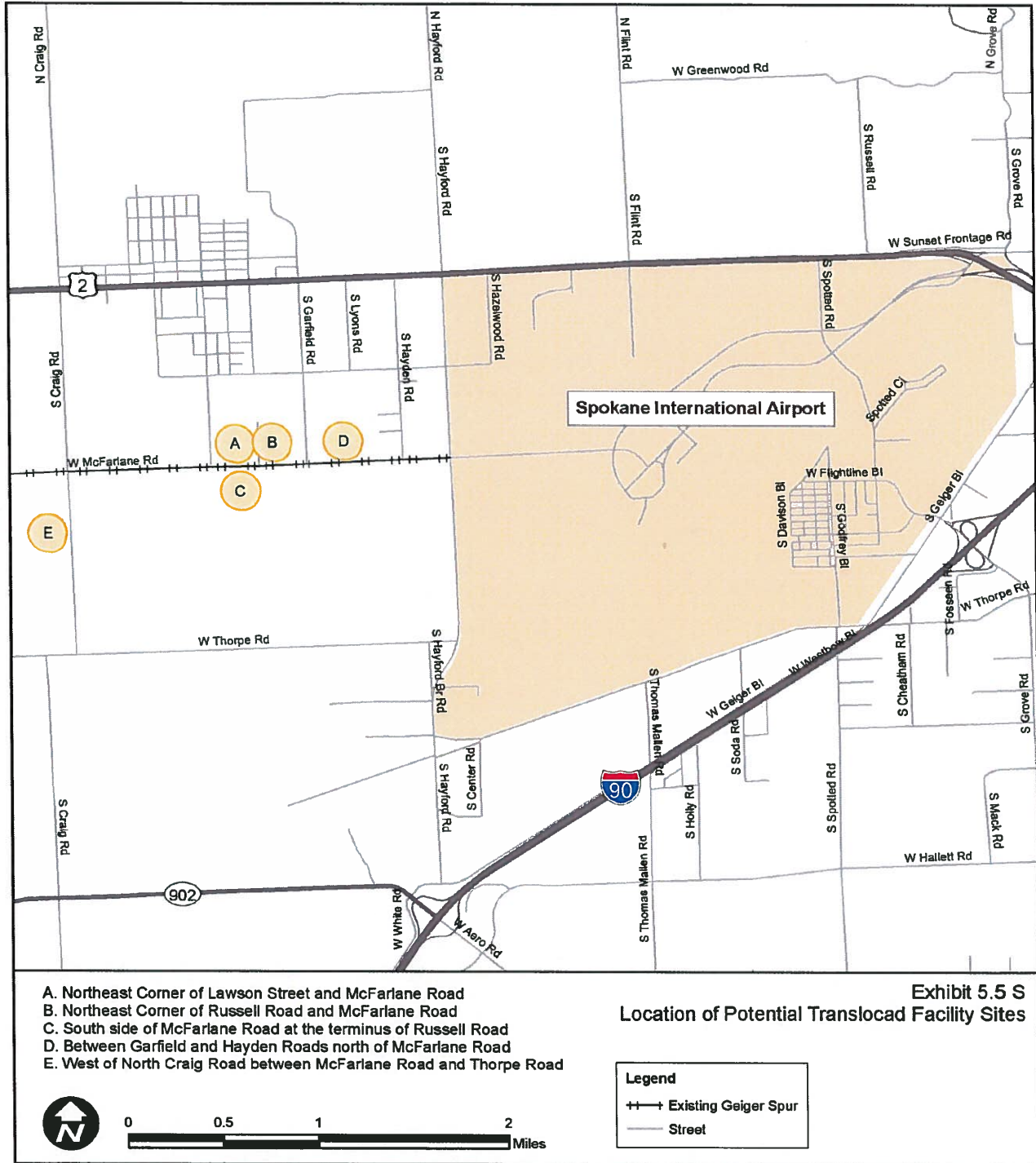
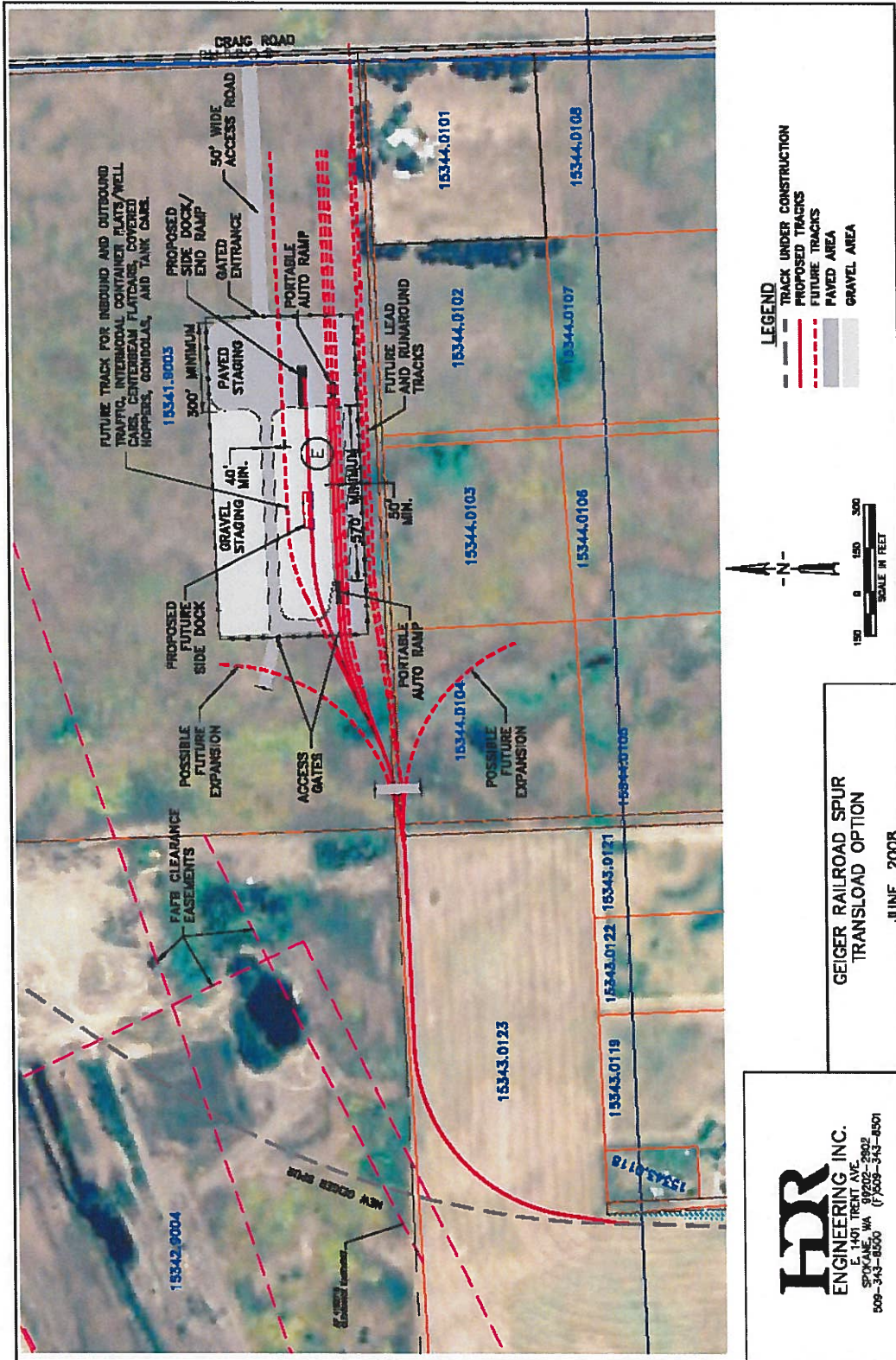




Exhibit 5.6S  
 Site E: Potential Configuration



## How was Site E identified as a potential transload facility?

This supplemental site has been identified similar to the four transload facility sites identified in the *July 2007 Study*.

In fall of 2006, the project team was asked to consider possible transload facility sites in and around the city of Airway Heights and the industrial area along Geiger Spur. The project team reviewed existing aerial maps, topographic data and county parcel maps. In addition, project team engineers visited the sites and reviewed the general setting of each parcel. Spokane County developed a preliminary list of possible sites, and developed a second, revised list of five potential sites in the spring of 2007. The project team then applied site and design criteria to the final five sites offered by the County. **Exhibit 5.4**, of the *July 2007 Study*, lists these criteria.

Four of the five sites identified by Spokane County met the basic criteria developed by the project team and, therefore, were carried forward for further analysis in the *July 2007 Study*. Following the *July 2007 Study*, Spokane County requested, in early 2008, that WSDOT evaluate this supplemental site, Site E. Site E meets the basic criteria set forth by the project team. However, out of the four remaining sites identified, Site A was recommended to be carried forward in this supplemental study because it was the least expensive to construct, has the best roadway access, has the fewest drawbacks, and can be expanded to accommodate additional transload services.

The site evaluated along Craig Road is zoned for light industrial use. Exhibit 5.5S presents the location of the proposed Site E under consideration as part of this supplemental study. Appendix D-S shows all parcels available under consideration for locating Site E.

## Were potential environmental elements evaluated?

Site E is located at the perimeter of an industrial area and is zoned for light industrial. Prior to conducting a site review of the area, project planners and scientists reviewed GIS maps prepared by the Spokane County Department of Building and Planning. Maps reviewed included: *Fish and Wildlife Critical Areas Map*, *County Wetlands Map*, and the *Washington Department of Natural Resources Stream Types Map*. Soils surveys, topographic maps and aerial photographs were also reviewed in an effort to identify any regional conflicts that might represent a significant environmental or community impact and be incompatible with the

proposed project. The project team then visited the project area and evaluated existing conditions at the potential site. This review did not include detailed site investigations such as soil probes or sampling of any kind. The work concentrated on evaluation of the proposed site. The review resulted in a general environmental overview that is presented below. Potential environmental concerns have been identified on some of the proposed parcels, but none of the conditions observed were deemed to represent fatal flaws for the project, generally because the area has been disturbed and because the area lacks any high quality natural resources.

### **Site E**

Site E is a large series of vacant parcels located south of McFarlane Road and directly west of Craig Road. A gravel mining operation has been developed on the parcel directly west of the site and vacant land occurs to the east. A low density residential area is located south (approximately 2000') of the proposed site E and vacant land is located north of the proposed site. Two small, isolated wetlands have developed in the south half of the site (totaling approximately 1/2 acre). These wetlands appear to have formed within areas that were excavated. No surface water connections to other water bodies is present. The bulk of the land is vegetated with native and non-native herbaceous plants and scattered shrubs. Shrubs present are dominated by green and gray rabbitbrush (*Chrysothamnus* spp.) which tend to become established following disturbance. Many of the plant species present at the site are not native to the region, also indicating that the site has been disturbed somewhat recently.

Critical Areas Maps, developed by the Spokane County Department of Building and Planning, show a Type 4 stream on the parcel west of the site. This stream is supported by stormwater collected and discharged as part of the Fairchild Airforce Base facilities. This stream does not have a direct surface water connection to any regional waterbodies. The stream flows south and then east before all of the flow infiltrates into surrounding soils near Craig Road. Site E is mapped as Prairies and Steppes by Spokane County. Habitat conditions at the site appear to be disturbed, however, and high quality habitat features are not likely.

The site vegetation appears to have been altered, but it does not appear that extensive excavation, grading, or filling has occurred at the site. Most likely the site has been used as pasture. Cultural resources surveys may be required, prior to initiating ground disturbing activities.

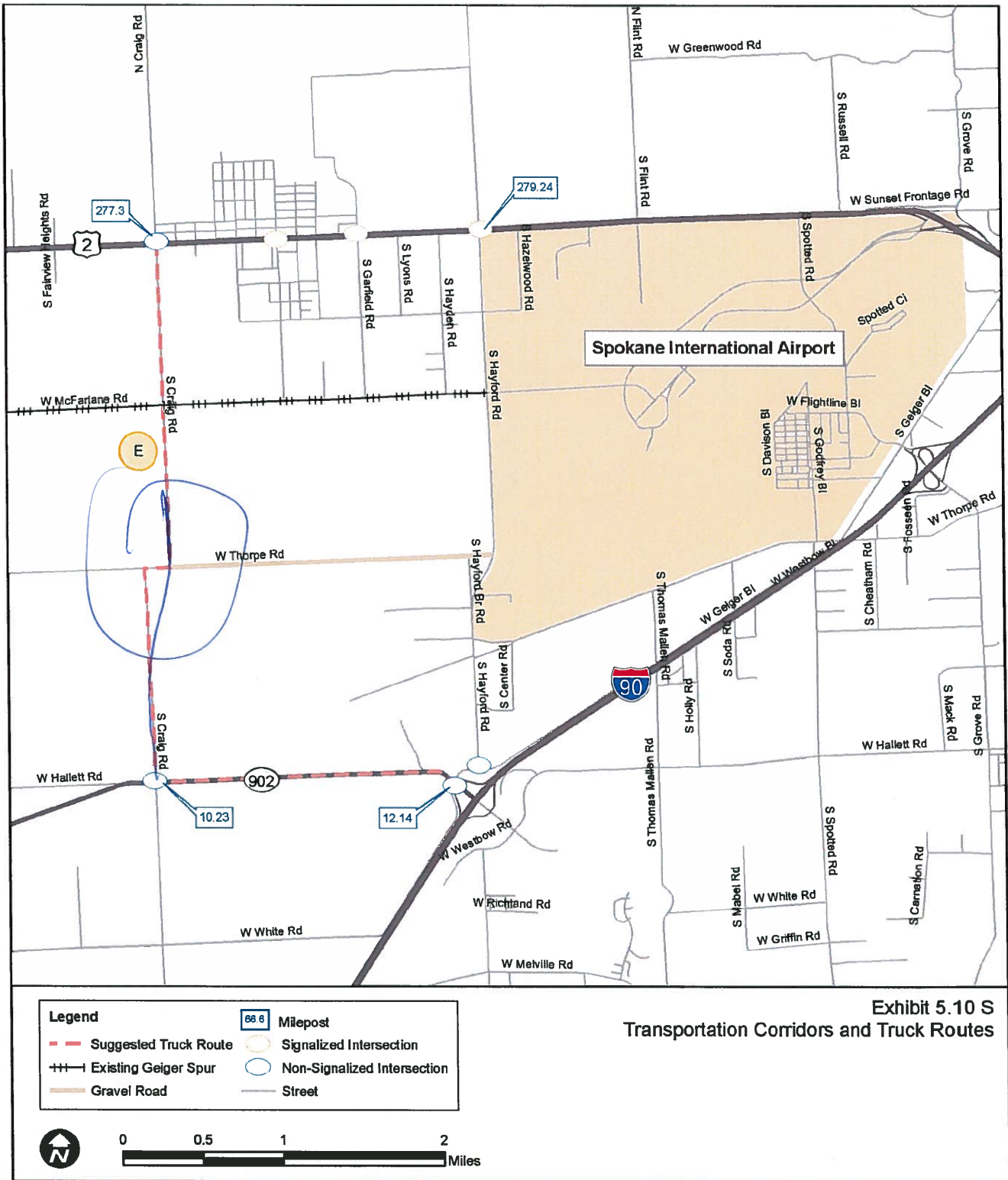
### **What would be the potential impact to local roadways?**

As the area has existing industrial activity, truck traffic already exists. Vehicle access to Site E was assumed to be from Craig Road. State Route

2 is less than two miles away from Site E to the South. The most suitable truck route to State Route 2 would be via Craig Road directly north to State Route 2.

Interstate 90 is less than five miles away from Site E. The most suitable and efficient route to Site E would be via State Route 902 to Craig Road. It should be noted that the non-signalized intersections of Craig Road at State Route 2 and State Route 902) may need to be improved in the future in order to accommodate an increase of truck traffic caused by industrial development along the Geiger Spur. **Exhibit 5.10S** presents the location of the major truck routes in the area.

**Exhibit 5.10S  
Transportation Corridors and Truck Routes**



## How much would it cost to build the transload facility and necessary rail improvements?

A cost estimate of probable construction costs was prepared for the Site E parcel. Costs were developed using 2008 dollars, and are presented in **Exhibit 5.11S**. We have included revised costs for site A so that they represent 2008 dollars. Site A is shown to be escalated 5.0 percent from 2007 to 2008 Dollars. Cost estimates presented in this study are conceptual. Foundations for the cost estimates for Sites A and E are included in **Appendix E-S**.

The specifics of construction are not available during the conceptual stage of engineering. The unknown site-specific information will cause the cost of the individual items to vary. Some items may cost less at completion and some more. Experience indicates that for the level of detail of the available information, a contingency<sup>2</sup> of 30 percent is sufficient for the cost-increasing details to be found during engineering in the corridor and the cost of environmental mitigation will generally be 10 to 20 percent of the construction total. This environmental contingency is used to ensure that any mitigation that may be necessary is accounted for in the conceptual cost. At the conceptual level, it is rarely known what, if any, mitigation would be required.

The estimates can also be affected by time. There can be significant unpredictable factors in addition to the normally predictable effect of inflation. In recent years, the costs of building materials, notably steel, concrete, and fuel have been volatile. As development spreads, property values for vacant land may increase considerably or land that was vacant at the time of the estimate may have been developed. Site E is attractive given that a very large contiguous group of parcels are owned by one party (Spokane County) with the idea of industrial development.

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<sup>2</sup>Contingency is an amount intended to mitigate the unknown. As the level of detail in project plans increases, the contingency in the estimate is reduced because there is less that is unknown. The contingency in the final engineered estimate is small because the estimate includes all information that it is possible to know without beginning construction. There are almost always surprises, but their effect is generally small enough to fall within the contingency amount. Occasionally, a surprise such as the discovery of historical artifacts or underground water can have an impact that exceeds the amount estimated for contingency.

**Exhibit 5.11S**  
**Conceptual Construction Costs in 2008 Dollars**

Site	Description	Estimated Cost <sup>1</sup>
A	2 – Auto Unloading Tracks, 1 – Double sided track with side dock end ramp	<b>\$3,353,000</b>
E	2 – Auto Unloading Tracks, 1 – Double sided track with side dock end ramp	<b>\$3,853,000</b>

<sup>1</sup>These costs do not include the cost of preparing environmental (National Environmental Policy Act (NEPA) or State Environmental Policy Act (SEPA)) documentation.

**What is included in the cost estimate for Sites A and E?**

Costs were developed using 2008 dollars, and include:

- Track-Related Earthwork
- Track
- Structures
- Striping
- Paving
- Security
- Drainage
- Utilities
- Fencing

The estimated cost of right of way acquisition was not included in the cost estimate. Mobilization,<sup>3</sup> 30 percent contingency, environmental mitigation (at an assumed rate of one percent of costs), engineering design, and construction management are also part of the estimates and varied based on the specific site. Sales tax of 8.6 percent was also applied to each estimate.

**What is not included in this cost estimates?**

The cost estimate presented in this document does not include the cost of preparing environmental (National Environmental Policy Act (NEPA) or State Environmental Policy Act (SEPA)) documentation. Since both of these cost items will need to be negotiated and identified by the appropriate federal and state agencies, it was determined that their range

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<sup>3</sup>Before the work can progress, the contractor must mobilize the necessary workers, equipment and supplies required to construct the rail line. Staging areas need to be set up and materials need to be brought to the construction area.

of costs could vary significantly and therefore should not be included in the estimates.

### **What are the benefits and drawbacks of Site E?**

Similar to the four sites evaluated in the *July 2007 Study*, Site E meets the minimum requirements identified earlier in this chapter. However, Site E does have its own merits, potential problems, and expansion opportunities. **Exhibit 5.12S** presents a qualitative summary of Site E's benefits and drawbacks.



**Exhibit 5.12S  
Potential Benefits and Drawbacks of Each Site**

<b>Transload Facility at Site E</b>	
<b>Benefits</b>	<b>Drawbacks</b>
<ul style="list-style-type: none"> <li>• Efficient use of lot space</li> <li>• Site is expandable in all directions</li> <li>• No new required public at grade railroad/highway crossings</li> <li>• Track geometry would be the same as Site A which is better than the other site options (9°30' curves versus 12°30' curves)</li> <li>• Straightforward access to Craig Road</li> <li>• Owned by Spokane County and intended for industrial development</li> <li>• Direct "tie-in" to the new "286k" capable Geiger Spur verses "tie-in" to the outdated track on the existing Geiger Spur.</li> </ul>	<ul style="list-style-type: none"> <li>• Long lead track required to reach site (approx. 1500 ft.)</li> <li>• Residence to the south and east of the proposed location</li> <li>• Proposed location does not have access to direct sewer service.</li> <li>• Not the least expensive potential site.</li> </ul>

**What are the additional recommendations to Site E?**

**Site E Recommendation**

While all of the sites (A though E) should be considered to meet the needs of the potential Geiger Spur transload facility, the new Site E is as good or better than all other sites considered, including the recommended Site A of the *July 2007 Study*. Even though Site E it may be more expensive to construct than Site A, the advantages seem to outweigh the drawbacks. The real overall cost may be comparable depending on the costs of land for Site E verses Site A. Site E has become the recommended site because it is the most flexible and expandable site, has the best roadway access, has the least drawbacks. It is anticipated that Site E would be operated in the same fashion as indicated in the *July 2007 Study*.

Its estimated cost without contingency is \$2,964,000 in 2008 dollars. With a contingency of 30 percent, the upper range of construction is estimated to be \$3,853,000. In comparison, the former recommended site, (Site A) has an estimated cost without contingency of \$2,579,000 in 2008 dollars. With a contingency of 30 percent, the upper range of construction is estimated to be \$3,353,000.

## **Chapter Six**

# **Transload Facility Operations**

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The contents of this chapter have not changed since the *July 2007 Study*.

# **Appendix A-S**

## **Spokane County Fact Sheet**

### **Geiger Spur Transload Facility Supplemental Study**

# Appendix A-S Spokane County Fact Sheet

Fact Sheet not complete yet

## Employment

Population 16-years and over - 323,980  
 In labor force - 210,968  
 Civilian Labor Force - 207,865  
 Armed Forces - 3,103

## Income

Median Household Income - \$40,526  
 Number of Households - 163,611

## Facts

Land Area - 1,764 sq. mi (237 persons/sq. mi)

Government -

U.S. Congressional District - 5th

Representative - Cathy McMorris, R

Senators - Maria Cantwell, D  
 Patty Murray, D

W.S. Legislative District - 7th

Senator - Bob Morton, R

Representatives - Bob Stump, R

Joel Kretz, R

School District - Cheney

Sewer -

Water -

Police -

Fire -

## Demographics

(U.S. Census Bureau 2006 estimate)

Total Population - 446,706 (100%)

Male - 219,333 (49.1%)

Female - 227,373 (50.9%)

Median Age -

### Age Structure

Under 5 years - 27,696 (6.2%)

18 years and over - 229,160 (51.3%)

65 years and over - 55,838 (12.5%)

### Race Categories

White - 410,523 (91.9%)

Black or African Am. - 594 (1.7%)

Am. Indian & Alaska Nat. - 6,701 (1.5%)

Asian, Haw. & Pac. Is. - 10,274 (2.3%)

Hispanic or Latino - 15,188 (3.4%)

## Housing

Total Housing Units - 191,767

Occupied Housing Units - 163,611

Owner Occupied - 107,203

Renter Occupied - 56,408

## Information

Housing & Community Dev. Dept. - 509-477-2521

Building & Planning Department - 509-477-3675

Police Department - 509-477-5980

Fire Department - 509-928-1700

Community Services - 509-477-5722

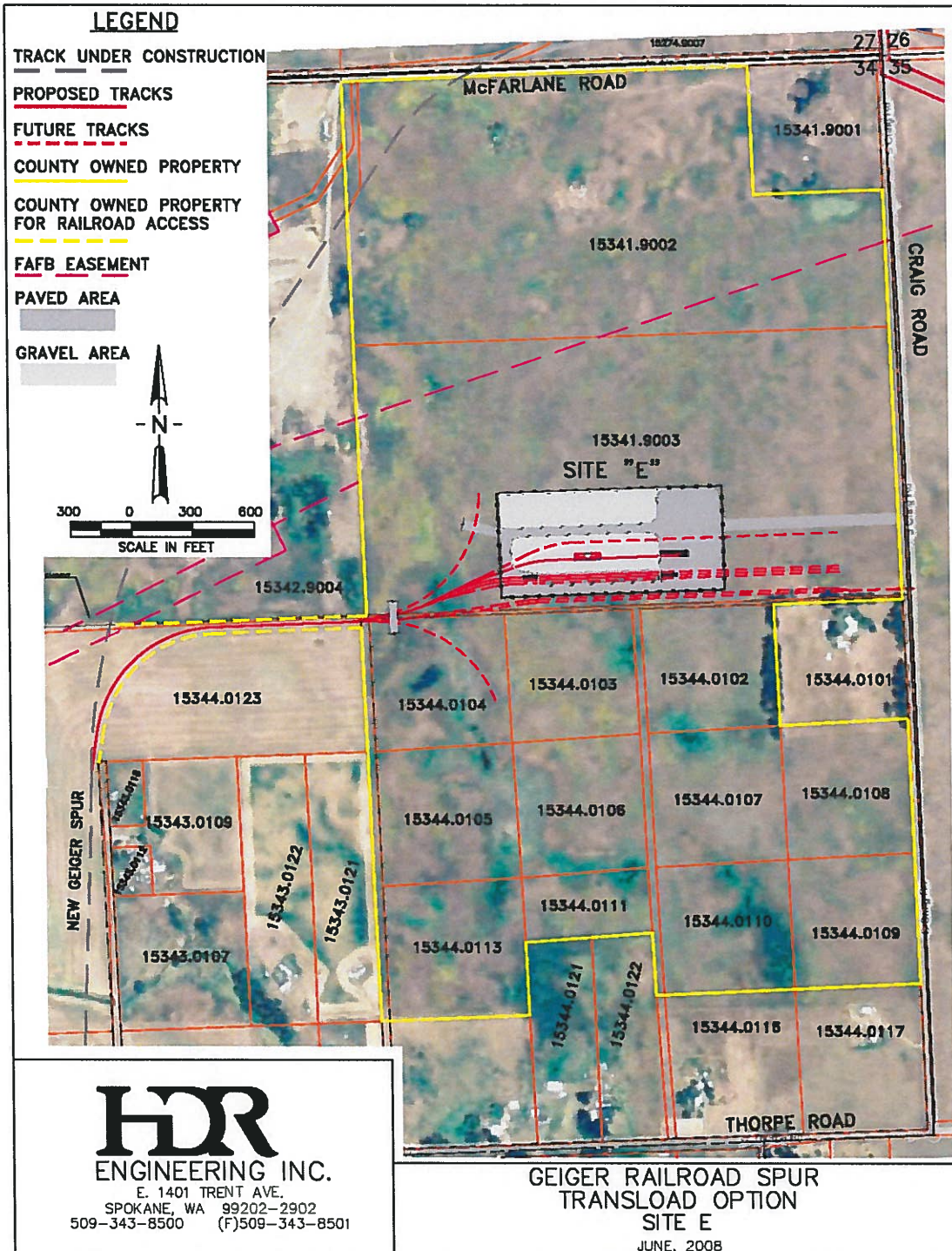
Public Works Dept. - 509-477-7267

## **Appendix D-S**

### **Locations of Parcels in Relation to Geiger Spur**

**Geiger Spur  
Transload Facility Supplemental Study**

# Appendix D-S Locations of Parcels in Relation to Geiger Spur



# **Appendix E-S**

## **Foundation for Conceptual Construction Costs**

### **Geiger Spur Transload Facility Supplemental Study**

# Appendix E-S Foundation for Conceptual Construction Costs

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Item #	Description	Unit	Unit Cost	Site A	Item Total	Item Total
<b>Project Items</b>						
1	Mobilization @ 3%	LS	3%		\$ 57,183.93	1 \$ 67,515.45
2	Performance and Payment Bonds @ 2%	LS	2.0%		\$ 38,122.62	1 \$ 45,010.30
3	Railroad Protective Liability Insurance	LS	\$ 4,500.00		-	0 \$ -
4	Construction Surveying	LS	\$ 35,000.00	0.5	\$ 17,500.00	0.5 \$ 17,500.00
				<b>\$17,500</b>		<b>\$17,500</b>
<b>Roadway - Civil Items</b>						
5	Cleaning and Grubbing	AC	\$ 2,000.00	16.5	\$ 33,000.00	13.75 \$ 27,500.00
6	Removal of Structure and Obstruction	LS	\$ 2,000.00		-	0 \$ -
7	Removing Asphalt Conc Pavement	SY	\$ 9.00		-	0 \$ -
8	Removal of Fence	LF	\$ 3.00		-	0 \$ -
9	Excavation including Haul	CY	\$ 6.00	13330	\$ 79,980.00	16800 \$ 100,800.00
10	Unsuitable Foundation Excavation Incl. Haul	CY	\$ 6.00	85	\$ 510.00	85 \$ 510.00
11	Common Borrow including Haul	CY	\$ 4.00		-	0 \$ -
12	Embankment Compaction	CY	\$ 2.00	13330	\$ 26,660.00	16800 \$ 33,600.00
13	Dig and Verify	EA	\$ 200.00		-	0 \$ -
14	Construction Entrance	SY	\$ 14.00	225	\$ 3,150.00	225 \$ 3,150.00
15	CMP Culv. Pipe 18 in. Diam.	LF	\$ 65.00		-	0 \$ -
16	CMP Culv. Pipe 24 in. Diam. Under Railroad	LF	\$ 95.00	50	\$ 4,750.00	50 \$ 4,750.00
17	Schedule B Culv. Pipe 12 in. Diam.	EA	\$ 5,000.00	5	\$ 25,000.00	5 \$ 25,000.00
18	Storm Drainage Features (Allowance)	CY	\$ 26.00	14021	\$ 364,546.00	13145 \$ 341,770.00
19	Crushed Surfacing Base Course	TON	\$ 85.00	5620	\$ 477,400.00	3675 \$ 311,625.00
20	Crushed Surfacing Top Course	TON	\$ 85.00	5620	\$ 477,400.00	3675 \$ 311,625.00
21	HMA Cl. 3/4 in. PG 64-28	SY	\$ 30.00	2000	\$ 60,000.00	2000 \$ 60,000.00
22	Concrete Pavement	AC	\$ 2,000.00	0.15	\$ 300.00	0.15 \$ 300.00
23	Seeding, Fertilizing and Mulching	LS	\$ 5,000.00		-	0 \$ -
24	Erosion/Water Pollution Control	LS	\$ 3,000.00		-	0 \$ -
25	Project Temporary Traffic Control	LS	\$ 2,500.00		-	0 \$ -
26	Permanent Signs and Road Markings	EA	\$ 5,000.00	12	\$ 60,000.00	10 \$ 50,000.00
27	Furnish and Install Luminaires	LF	\$ 3620	\$ 72,400.00	3145	\$ 62,900.00
28	Furnish and Install Chain Link Fence	LF	\$ 20.00	70	\$ 1,400.00	70 \$ 1,400.00
29	Furnish and Install Chain Link Gates	EA	\$ 15,000.00		-	1 \$ 15,000.00
30	Provide Utilities to Property Line (Water, Sewer & Fire)	EA	\$ 20,000.00		-	1 \$ 20,000.00
31	Landscaping Allowance	EA	\$ 20,000.00		-	1 \$ 20,000.00
				<b>\$1,209,566</b>		<b>\$1,209,566</b>



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Item #	Description	Unit	Unit Cost	Site A	Item Total	Site E	Item Total
<b>Railroad Items</b>							
25	Remove Track	TF	\$ 9.00	120	\$ 1,080.00	120	\$ 1,080.00
26	Furnish and Install Subballast	CY	\$ 27.00	1350	\$ 36,450.00	2375	\$ 64,125.00
27	Furnish and Install New Track	TF	\$ 115.00	2947	\$ 338,905.00	5180	\$ 595,700.00
28	Furnish and Install Sliding Derail	EA	\$ 6,500.00	1	\$ 6,500.00	1	\$ 6,500.00
29	Furnish and Install New #9 Turnout	EA	\$ 41,000.00	3	\$ 123,000.00	3	\$ 123,000.00
30	Surface Line and Dress	TF	\$ 6.50	0	\$ -	0	\$ -
31	Furnish and Install Compromise Arrangement	PR	\$ 850.00	2	\$ 1,700.00	2	\$ 1,700.00
32	Furnish and Install Concrete Panel Crossings	TF	\$ 500.00	32	\$ 16,000.00	0	\$ -
33	Furnish and Install Walkway Rock	TF	\$ 11.00	330	\$ 3,630.00	330	\$ 3,630.00
34	Furnish and Install Wheel Stops (Pair)	EA	\$ 900.00	2	\$ 1,800.00	3	\$ 2,700.00
35	Furnish and Install Concrete End/Side Ramp	EA	\$ 150,000.00	1	\$ 150,000.00	1	\$ 150,000.00
36	Furnish and Install Crossing Signal	EA	\$ 230,000.00	0	\$ -	0	\$ -
	<b>SUBTOTAL OF RAILROAD ITEMS</b>				<b>\$679,065</b>		<b>\$948,435</b>
	SUBTOTAL OF BID ITEMS (EXCLUDING MOB and P&P BOND)				\$1,906,131		\$2,250,515
	<b>SUBTOTAL OF BID ITEMS (INCLUDING MOB and BOND)</b>				<b>\$2,001,438</b>		<b>\$2,363,041</b>
<b>Additional Project Items</b>							
	Engineering and CM*			12.00%	\$240,173	9.00%	\$212,874
	Environmental Mitigation			1.00%	\$20,014	1.00%	\$23,630
	<b>SUBTOTAL OF ADDITIONAL PROJECT ITEMS</b>				<b>\$260,187</b>		<b>\$236,304</b>
	Tax (8.6% of bid items and additional items)		8.60%		\$194,500		\$223,544
	<b>TOTAL (BID ITEMS, ADDITIONAL, TAX)</b>				<b>\$2,456,124</b>		<b>\$2,922,889</b>
	30% Contingency				\$736,837.24		\$846,866.54
	<b>GRAND TOTAL - 2007 DOLLARS</b>				<b>\$3,192,961</b>		<b>\$3,669,755</b>
	<b>GRAND TOTAL - 2008 DOLLARS**</b>				<b>\$3,352,609</b>		<b>\$3,853,243</b>

\* Engineering and CM reduced as the site engineering is comparable to Site A.

\*\* 2008 Dollars in the Supplement Report are considered to be 5 % inflated over 2007 Dollars.