Attachment C
Juneau Access Improvements Project
Highway Maintenance Cost Estimates

Prepared by Southeast Region Maintenance & Operations
Updated August 27, 2013

PURPOSE

The purpose of this document is to provide a basic concept and cost estimate for maintenance of new highway segments for the Juneau Access Improvement (JAI) Project alternatives. This report was originally prepared in 2003. This edition updates costs and eliminates Alternatives 2, 2A, and 2C.

A significant portion of the maintenance cost for the proposed highways is related to avalanche control and clean up. The costs of these activities are reported in the Juneau Access Improvements Snow Avalanche Report Update. Those costs are omitted from the cost calculations in this report, but are included in the final table on page 8.

MAINTENANCE CONCEPT

The basic concept for maintenance of a JAI highway is to use existing forces and equipment at the Juneau and Haines termini, and to establish and staff an intermediate maintenance station at the mid-point between Juneau and the Katzehin River marine terminal for Alternative 2B. For Alternative 3, a small maintenance facility would be established at the William Henry Bay terminal.

In general, a maintenance station can economically maintain a length of highway with a terminus of no more than 25 miles from its home facility. For Alternatives 2B and 3, an intermediate maintenance station is required. Alternatives 4B and 4D do not require an intermediate station: although the distance between Juneau station and the Sawmill Cove terminal is 38 miles, the terminal would not be used in winter.

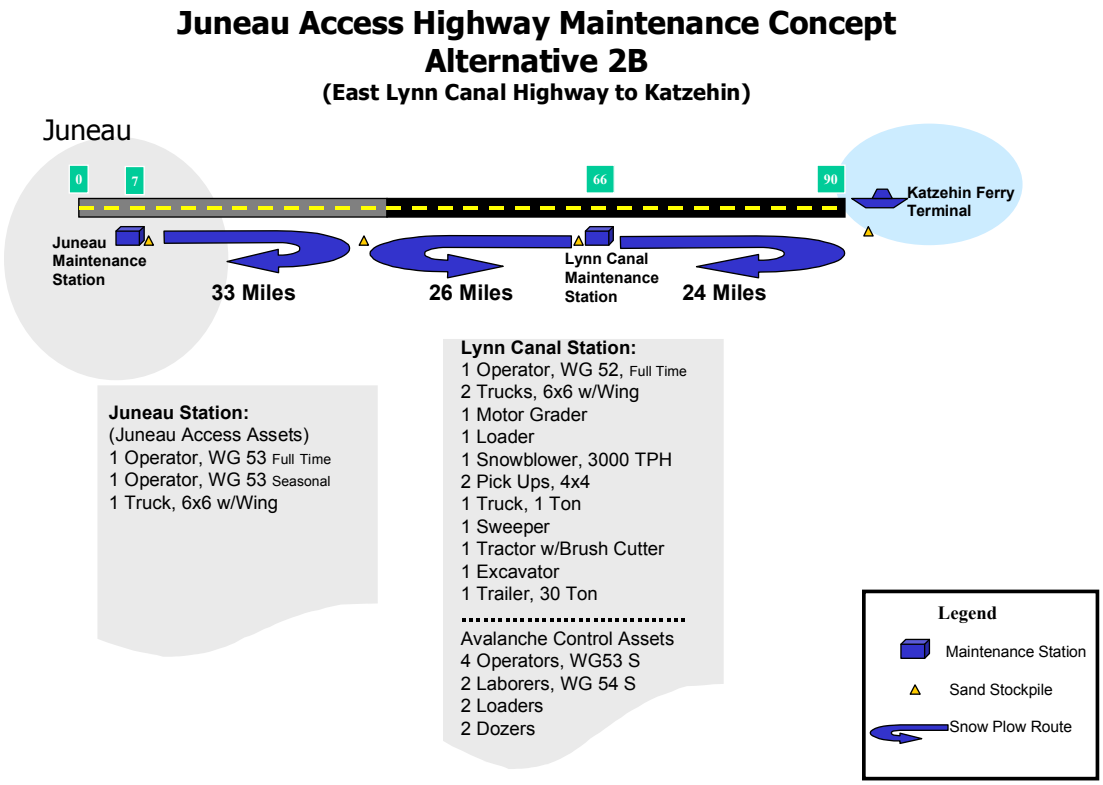
The cost of JAI highway maintenance is driven by the addition of new road miles and new maintenance facilities. Alternatives 1, 1B, 4A, and 4C have no new highway sections. Alternatives 2B, and 3 will have significant highway costs because of the new highway miles. Alternatives 4B and 4D have minimal costs, due to short sections of new highway. They are identical in highway maintenance cost.

The alternatives considered in this study, and the new miles of road for each alternative, are depicted in the chart below.

Alternative	Brief Description	New Road Miles
1, 1B	No construction specifically for Lynn Canal	0
2B	Highway, Echo Cove to Katzehin, with ferry terminal connection to Skagway and Haines	47
3	Highway, Echo Cove to Sawmill Cove, Ferry across Lynn Canal, Highway West Lynn Canal, William Henry Bay to Haines	41
4A & 4C	Ferry from Auke Bay	0
4B & 4D	Ferry from Sawmill Cove (summer only)	2

Alternative 2B – East Lynn Canal Highway to Katzehin

Alternative 2B proposes approximately 47 miles of new road (118 lane miles), from Cascade Point to Katzehin. Winter maintenance of Glacier Highway from Echo Cove to Cascade Point would also be increased (currently winter maintenance ends at Echo Cove). A Lynn Canal station would be established, and staffed and equipped as shown below.



A total of seven operators [2 full time (FT) and 5 part time (PT)] would be assigned to the new highway segment.

Alternative 2B Staffing Table

Station	No.	Job title	WG	Status
Lynn Canal	1	Equipment Operator, Foreman	52	FT
Lynn Canal	4	Equipment Operator (Avalanche Control)	53	PT
Juneau	1	Equipment Operator	53	FT
Juneau	1	Equipment Operator	53	PT

Maintenance of the East Lynn Canal highway would be provided by a new maintenance station located at approximately Mile Point 66. One full time foreman/operator and four seasonal positions (avalanche control staff) would be allocated to the new highway. The station would be augmented with two 6x6 plow trucks with wings, a motor grader, snow blower, a loader, an excavator, and various other pieces of equipment. Two loaders and two bulldozers, identified for avalanche control, will also be provided.

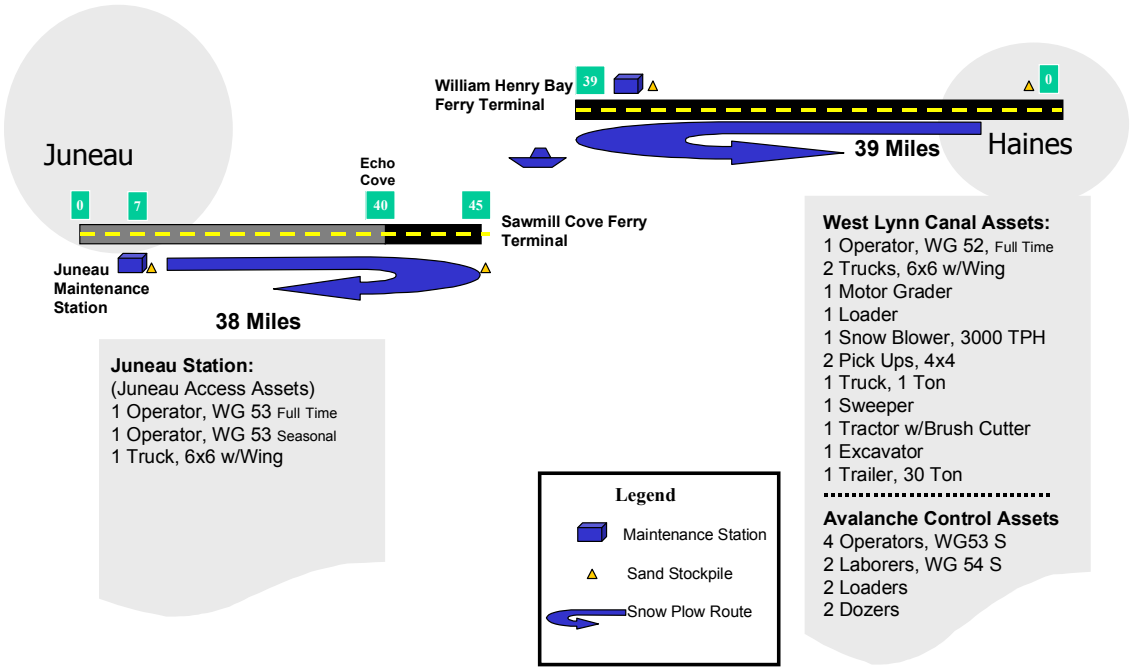
The Juneau Maintenance Station would be augmented with one full time operator and one seasonal position, to assist in maintaining the highway from Juneau to Cascade Point. Juneau Station would be required to place a higher priority on maintenance of the highway from Echo Cove to Cascade Point than they presently do. Current Juneau Station staffing allows only sporadic winter maintenance beyond Echo Cove. In effect, Juneau Station will take on three additional center line miles of high priority road maintenance. The Juneau station would be required to assist with avalanche clean up from time to time.

The total staffing increase for Alternative 2B is seven (2 FT; 5 PT). This level of staffing provides seven-day-a-week winter maintenance, including avalanche control and clean up, as well as summer maintenance activities. At 26.2 lane miles per operator, it affords a slightly better level of service than the regional average of 28.8 lane miles per operator.

Alternative 3 – West Lynn Canal Highway

Alternative 3 calls for construction of approximately 39 miles of new road (97.5 lane miles) between Haines and a ferry terminal at William Henry Bay. An additional two miles of road will be constructed between Cascade Point and a new ferry terminal at Sawmill Cove. Total road distance is 41 miles (102.5 lane miles).

Juneau Access Highway Maintenance Concept
Alternative 3
(West Lynn Canal Highway)



Maintenance of the West Lynn Canal highway would be provided by the Haines Maintenance Station. One full time and four seasonal positions would be allocated to the new highway (this includes four seasonal positions identified for avalanche control). These personnel would operate out of the existing Haines station. The station would be augmented with two 6x6 plow trucks with wings, a motor grader, snow blower, a loader, and various other pieces of equipment. Two loaders and two bulldozers, designated for avalanche control, will also be provided.

An equipment shed and sand stockpile would be located near the William Henry Bay terminal. The shed would house equipment for highway maintenance and avalanche control. It would also provide emergency housing for highway maintenance and avalanche control crews.

The Juneau Maintenance Station would be augmented with one full time operator and one seasonal position, to assist in maintaining the new highway segment from Echo Cove to Cascade Point. In addition to maintaining the new two mile road segment, Juneau Station would be required to place a higher priority on maintenance of the highway from Echo Cove to Cascade Point than they presently do. Current Juneau Station staffing allows only sporadic winter maintenance beyond Echo Cove. In effect, Juneau Station will take on three additional center line miles of high priority road maintenance. The Juneau station may be required to assist with avalanche clean up from time to time.

The total staffing increase for Alternative 3 is seven (2 FT; 5 PT). This level of staffing provides seven-day-a-week winter maintenance, including avalanche control and clean up, as well as summer maintenance activities. At 24.4 lane miles per operator, it affords a slightly better level of service than the regional average of 28.8 lane miles per operator.

Alternative 3 Staffing Table

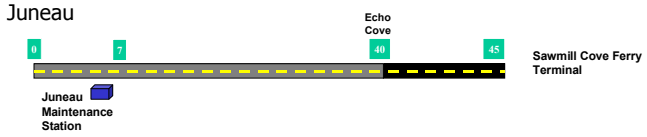
Station	No.	Job title	WG	Status
Haines	1	Equipment Operator	53	FT
Haines	4	Equipment Operator (Avalanche Control)	53	PT
Juneau	1	Equipment Operator	53	FT
Juneau	1	Equipment Operator	53	PT

Alternative 4B and 4D – Ferry Service from Sawmill Cove (Summer Only)

These alternatives call for construction of approximately two miles of road from Cascade Point to a new ferry terminal at Sawmill Cove. Because this is a summer only operation (ferry operates out of Auke Bay in winter), this alternative adds no appreciable winter maintenance responsibility. The road from Echo Cove to Sawmill Cove would have a low priority for maintenance in winter.

Based on this assumption, no additional maintenance personnel or equipment would be required. The Juneau Maintenance Station would absorb the additional workload associated with maintaining two miles of highway. This would be a low priority road in winter, as is the current section of Glacier Highway from Echo Cove to Cascade Point.

Juneau Access Highway Maintenance Concept
Alternative 4B &4D
(Road to Sawmill Cove)



No additional highway maintenance assets required for summer maintenance.
Five mile road from Echo Cove to Sawmill Cove low priority for winter maintenance.

MAINTENANCE COST ESTIMATES

Methodology

Maintenance costs for each alternative were estimated in the following manner:

Personal Service Costs (Budget Line 1000)

- Based on number of full time and seasonal positions by wage grade (WG) and location
- Salary and benefit costs based on FY13 budget costs for similar positions
- Includes approximately 24% additional for premium pay
- Seasonal positions funded for six months per year

Travel Costs (Budget Line 2000)

Based on FY13 costs for similar travel

Contractual Costs (Budget Line 3000)

- Equipment costs based on FY13 State Equipment Fleet rates for similar equipment
- Highway striping costs based on FY12 contract amounts
- Utilities costs based on similar sized station
- Miscellaneous costs of 10% added

Commodities Costs (Budget Line 4000)

Estimates itemized in major budget account categories and based on costs experienced at similar sized stations

Equipment (Budget Line 5000)

No equipment capital costs included. Equipment purchased with capital funds.

Management & Overhead

Management and overhead estimated at 8%, similar to actual Southeast Region Maintenance and Operations experience.

Cost Estimates for Alternatives

Based on the maintenance concepts described above, the cost estimates for each alternative are provided in the table below. A detailed breakout of costs for each alternative is attached.

Annual Highway Maintenance Costs

Alternative		Annual Maintenance Cost Estimate
2B	East Lynn to Katzehin	$1,091,469
3	West Lynn Canal Highway	$951,041
4B & 4D	Road to Sawmill Cove	$45,024

The table below shows the combined annual cost estimate of highway maintenance and avalanche control. Avalanche control cost estimates are taken from the Juneau Access Improvements Snow Avalanche Report, updated June 2013. The report provides several options and cost estimates, based on the type of control work provided. This table reflects the cost of the option that ADOT&PF considers most likely to be implemented.

Annual Highway & Avalanche Control Costs

Alternative	Highway Maintenance	Avalanche Control	Total Cost
2B	$1,091,469	$1,665,746	$2,752,215
3	$951,041	$1,384,025	$2,335,066
4B & 4D	$45,024	$0	$45,024

SUMMARY

For the East Lynn Canal and West Lynn Canal highway alternatives, total maintenance costs, including avalanche control, are $12,765 and $12,130 per lane mile, respectively. This is 11 to 15% higher than the average cost for highway maintenance throughout Southeast Alaska ($10,541). However, it reflects additional personnel and assets assigned to the highway to address the high snowfall and avalanche activity expected on these routes.

These cost estimates are intended to represent the cost of providing seven day per week highway maintenance during winter, and routine summer maintenance. Staffing and equipment levels include additional equipment operators to perform avalanche control and clean up on a frequent basis. Avalanche control asset costs are addressed in the Juneau Access Improvements Snow Avalanche Report Update, and those costs are not duplicated here, although the assets are

depicted. This is because when the avalanche control personnel are not performing avalanche control, they would be available to perform routine winter maintenance.

Staffing levels for each alternative are estimated to provide an adequate winter level of service, but do not provide active snow plowing and patrolling 24 hours per day. During major snow storms and heavy avalanches, staffing would not be adequate to ensure trafficable roads at all times, and highway closures for avalanche monitoring and clean-up will be necessary similar to existing State highways that experience heavy snowfall and avalanches.

All costs are based on current experiences where possible.

Updated 6/14/13

Alternative 2B

Budget Line	Description	Cost
Personal Services	1 Equipment Operator, WG 52, Full Time (Lynn Canal)	$116,995
	1 Equipment Operator, WG 53, Full Time (JNU)	$106,897
	1 Equipment Operator, WG 53, Seasonal (6 mo.) (JNU)	$65,173
		$289,065
	Note: Additional 4 equipment operators, WG 53, seasonal, and 2 laborers, seasonal, included in Snow Avalanche Report.	
Travel & Per Diem	Triennial avalanche control training for 3 operators (annual cost)	$1,380
Contractual	Equipment (See Equipment Table, below)	$282,744
	Utilities	$12,000
	Highway Striping	$109,250
	Training	$6,000
	Communications	$2,000
	Miscellaneous (@ 10% of above costs, except equipment)	$12,925
		$424,919
Supplies	Fuel (bulk)	$109,392
	Highway sand & aggregate	$96,320
	Winter chemicals	$26,000
	Blades & chains	$16,000
	Signs	$6,000
	Highway paint	$0
	Asphalt/oil	$6,000
	Office supplies	$2,100
	Household	$2,100
	Structural	$2,100
	Small Equipment	$5,000
	Miscellaneous (@ 15% of above costs)	$24,243
		$295,255

Sub Total	$1,010,619
Management & Overhead @ 8%	$80,850
Grand Total	**$1,091,469**
Cost per Lane Mile (216 lane miles):	$5,053

Avalanche Control Cost (from Avalanche Report):	$1,665,746
Total Operating Cost (includes Avalanche Control):	$2,757,215
Cost per Lane Mile (including Avalanche Control):	$12,764.88

Alternative 2B (Continued)

Equipment List*	Annual Operating and Replacement Cost	Capital Cost (First Year)
3 Truck, 6x6 (1 WX)	$83,940	$504,000
1 Motor Grader (WX)	$14,016	$0
1 Loader	$29,064	$306,000
1 Snowblower	$32,808	$560,000
2 Pick Up Truck (1 WX)	$6,624	$23,000
1 Truck, 1 1/2 T	$11,784	$70,000
1 Sweeper (WX)	$8,712	$0
1 Tractor/Brush Cutter	$13,776	$140,000
1 Excavator	$24,576	$225,000
1 Trailer, 30 T	$3,804	$33,000
	$229,104	
	Total Equipment Capital Cost:	$2,113,000

* Typically some equipment assigned to a new mission is "X" status, meaning it is kept after it has reached its assigned service life.
X equipment is normally in good condition with low operating hours when it is assigned the new mission.
The State has already paid for the equipment so there is no capital cost for procurement.

Avalanche Control Equipment (from Snow Avalanche Report)	Capital Cost (First Year)
2 Loaders	$612,000
2 Bull Dozers	$1,060,000
2 Pick Up Trucks (One WX)	$23,000
Total Equipment Capital Cost:	$1,695,000

Updated 6/14/13

Alternative 3

Budget Line	Description	Cost
Personal Services	2 Equipment Operators, WG 53, Full Time (1 HNS, 1 JNU)	$213,794
	1 Equipment Operator, WG 53, Seasonal (6 mo.) (HNS)	$65,173
		$278,967
	Note: Additional 4 equipment operators, WG 53, seasonal, and 2 laborers, seasonal, included in Snow Avalanche Report.	
Travel & Per Diem	Triennial avalanche control training for 5 operators (annual cost)	$2,300
Contractual	Equipment (See Equipment Table below)	$243,480
	Utilities	$6,000
	Highway Striping	$96,140
	Training	$6,000
	Communications	$2,000
	Miscellaneous (@ 10% of above costs, except equipment)	$2,230
		$355,850
Supplies	Fuel (bulk)	$94,077
	Highway sand & aggregate	$84,762
	Winter chemicals	$22,880
	Blades & chains	$5,000
	Highway paint	$0
	Asphalt/oil	$2,500
	Office supplies	$0
	Household	$0
	Structural	$0
	Small Equipment	$2,500
	Miscellaneous (@ 15% of above costs)	$31,758
		$243,477

Sub Total	$880,594
Management & Overhead @ 8%	$70,447
Grand Total	**$951,041**
Cost per Lane Mile (192.5 lane miles):	$4,940.47

Avalanche Control Cost (from Avalanche Report):	$1,384,025
Total Operating Cost (includes Avalanche Control):	$2,335,066
Cost per Lane Mile (including Avalanche Control):	$12,130

Alternative 3 (Continued)

Equipment List*	Annual Operating and Replacement Cost	Capital Cost (First Year)
3 Truck, 6x6 (1 WX)	$83,940	$504,000
1 Motor Grader (WX)	$14,016	$0
1 Loader	$29,064	$306,000
1 Snowblower	$32,808	$560,000
2 Pick Up Truck (1 WX)	$6,624	$23,000
1 Truck, 1 1/2 T	$11,784	$70,000
1 Sweeper (WX)	$8,712	$0
1 Tractor/Brush Cutter	$13,766	$140,000
1 Excavator	$24,576	$225,000
1 Trailer, 30 T	$3,804	$33,000
Annual Cost:	$229,094	
	Total Equipment Capital Cost:	$2,113,000

* Typically some equipment assigned to a new mission is "X" status, meaning it is kept after it has reached its assigned service life. X equipment is normally in good condition with low operating hours when it is assigned the new mission. The State has already paid for the equipment so there is no capital cost for procurement.

Avalanche Control Equipment (from Snow Avalanche Report)	Capital Cost (First Year)
2 Loaders	$612,000
2 Bull Dozers	$1,060,000
2 Pick Up Trucks (One WX)	$23,000
Total Equipment Capital Cost:	$1,695,000

Equipment Operating Costs

ALTERNATIVE 2B

Equipment	Op Cost	Rep Cost	Units	Monthly Cost	Annual Cost
Truck, 6x4	$1,301	$1,546	2	$5,694	$68,328
Truck, 6x4 (WX)	$1,301	$0	1	$1,301	$15,612
Motor Grader (WX)	$1,168	$0	1	$1,168	$14,016
Loader	$488	$1,934	1	$2,422	$29,064
Snowblower	$766	$1,968	1	$2,734	$32,808
Pick Up Truck, 4x4	$126	$300	1	$426	$5,112
Pick Up Truck, 4x4 (WX)	$126	$0	1	$126	$1,512
Truck, 1 1/2 T	$359	$623	1	$982	$11,784
Sweeper (WX)	$726	$0	1	$726	$8,712
Tractor/Brush Cutter	$787	$361	1	$1,148	$13,776
Excavator	$492	$1,556	1	$2,048	$24,576
Trailer, 30 T	$44	$273	1	$317	$3,804
			Total Monthly Equip Cost:	$19,092	
			Annual Cost:	$229,104	$229,104

Equipment provided for Avalanche Control (cost estimated under avalanche control costs)

	Op Cost	Rep Cost	Units	Monthly Cost	Annual Cost
Loader, 988	$817	$1,934	2	$5,502	$66,024
Dozer, D-8	$1,250	$5,160	2	$12,820	$153,840
Pick Up, 4x4	$210	$306	1	$516	$6,192
					$226,056

ALTERNATIVE 3

Equipment	Op Cost	Rep Cost	Units	Monthly Cost	Annual Cost
Truck, 6x4	$1,301	$1,546	2	$5,694	$68,328
Truck, 6x4 (WX)	$1,301	$0	1	$1,301	$15,612
Motor Grader (WX)	$1,168	$0	1	$1,168	$14,016
Loader	$488	$1,934	1	$2,422	$29,064
Snowblower	$766	$1,968	1	$2,734	$32,808
Pick Up Truck	$126	$300	1	$426	$5,112
Pick Up Truck, 4x4 (WX)	$126	$0	1	$126	$1,512
Truck, 1 1/2 T	$359	$623	1	$982	$11,784
Sweeper (WX)	$726	$0	1	$726	$8,712
Tractor/Brush Cutter	$787	$361	1	$1,148	$13,776
Excavator	$492	$1,556	1	$2,048	$24,576
Trailer, 30 T	$44	$273	1	$317	$3,804
			Total Monthly Equip Cost:	$19,092	
			Annual Cost:	$229,104	$229,104

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Attachment D
Juneau Access Improvements Project
Revised Marine Terminal Plans and Cost Update

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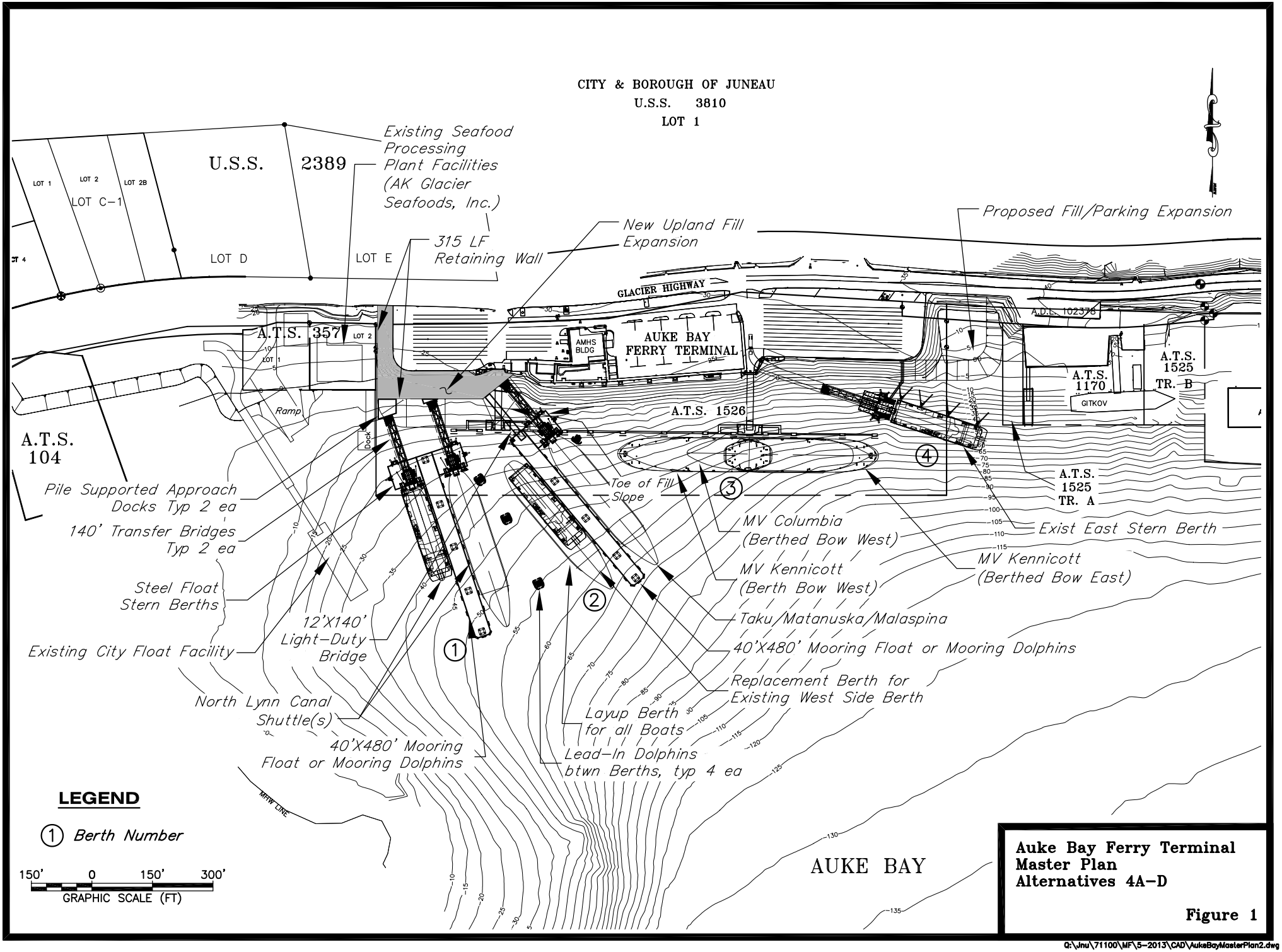

Auke Bay Ferry Terminal
Master Plan
Alternatives 4A-D

Figure 1

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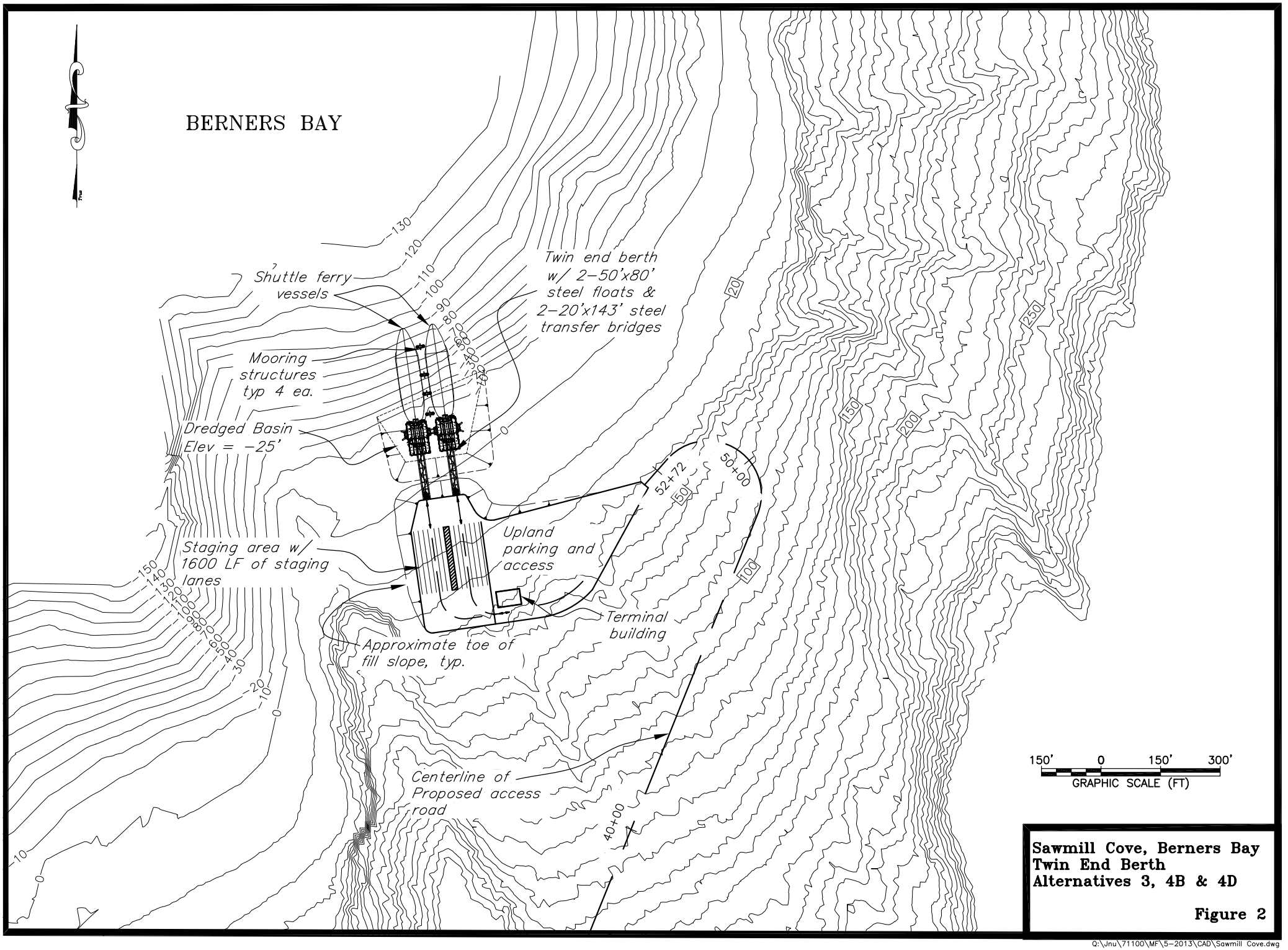

Sawmill Cove, Berners Bay
Twin End Berth
Alternatives 3, 4B & 4D

Figure 2

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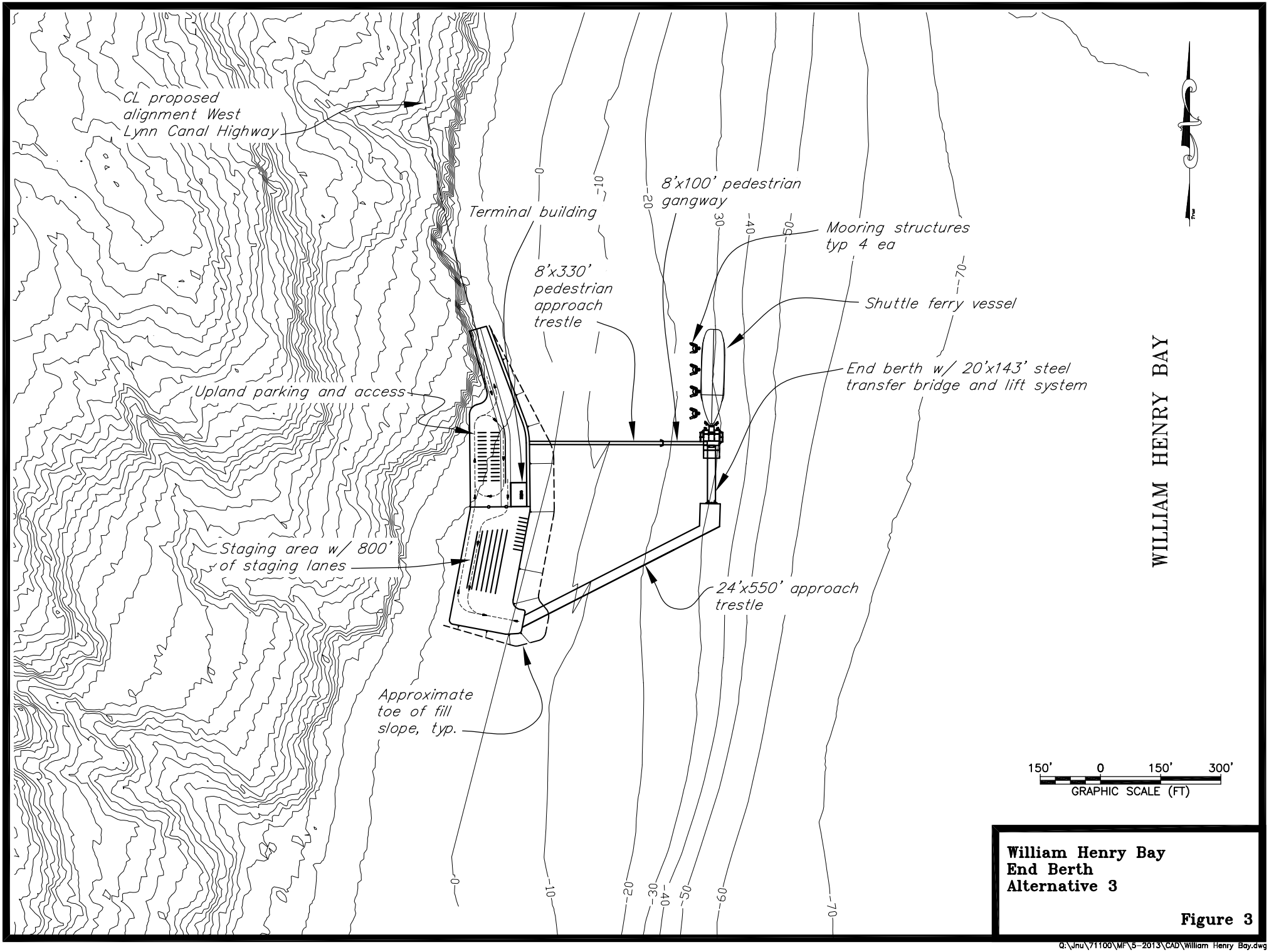

William Henry Bay
End Berth
Alternative 3

Figure 3

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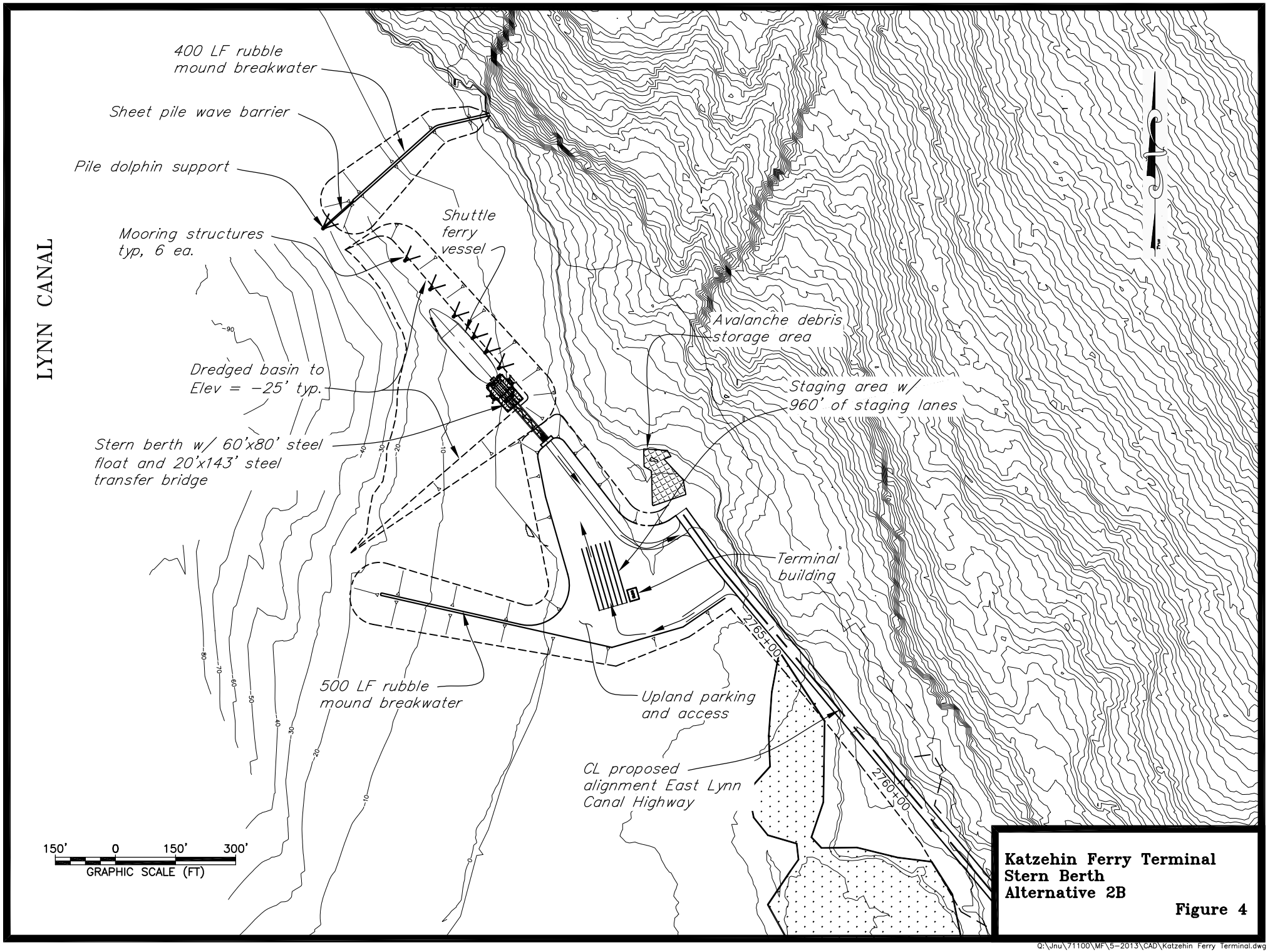
400 LF rubble mound breakwater
Sheet pile wave barrier
Pile dolphin support
Mooring structures typ, 6 ea.
Shuttle ferry vessel
LYNN CANAL
Avalanche debris storage area
Dredged basin to Elev = −25' typ.
Staging area w/ 960' of staging lanes
Stern berth w/ 60'x80' steel float and 20'x143' steel transfer bridge
Terminal building
2765+00
500 LF rubble mound breakwater
Upland parking and access
CL proposed alignment East Lynn Canal Highway
2760+00
150' 0 150' 300'
GRAPHIC SCALE (FT)
Katzehin Ferry Terminal
Stern Berth
Alternative 2B
Figure 4
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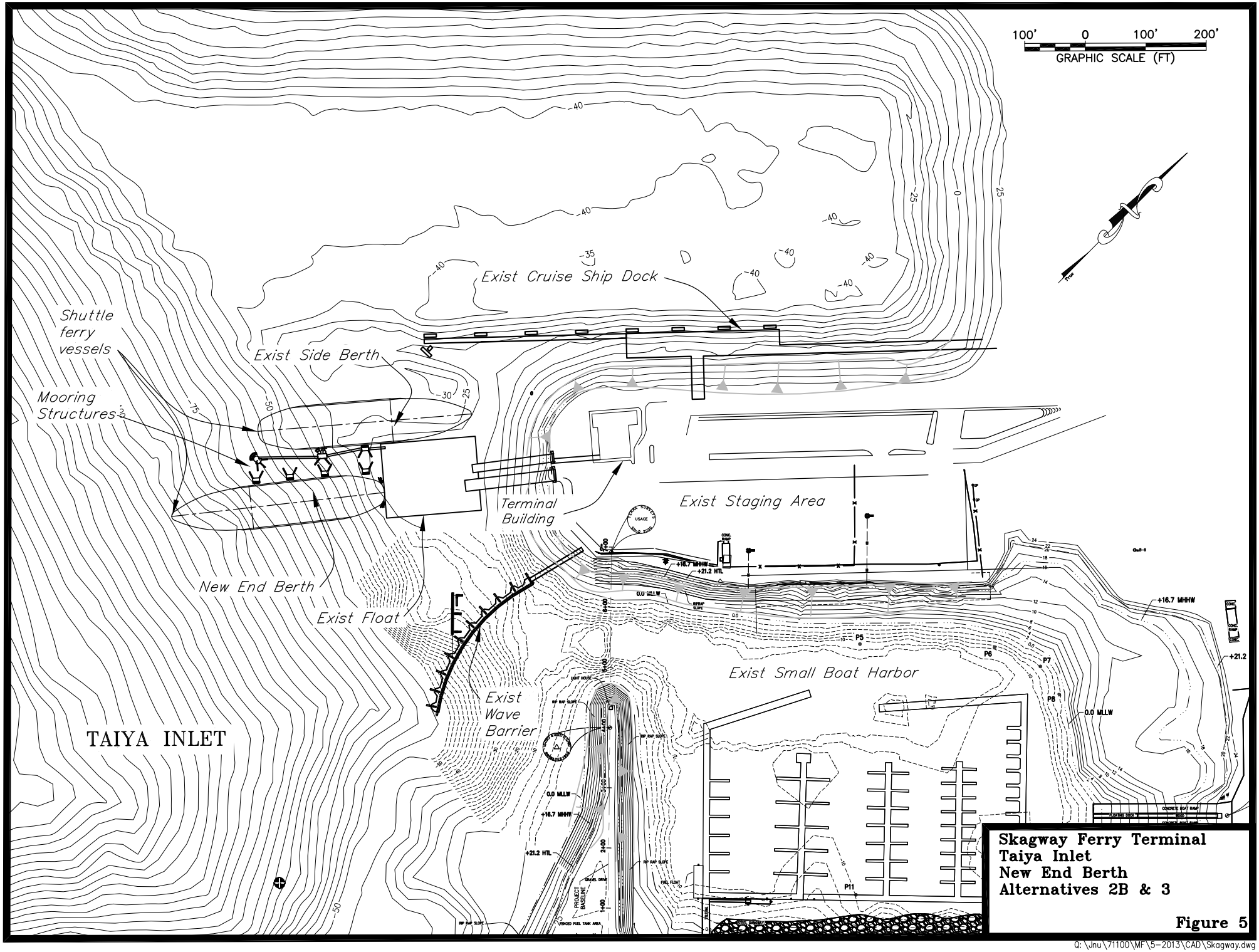

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SE Region - Marine Engineering

Project Construction Cost Estimate

PROJECT NUMBER: 71100
PROJECT TITLE: Auke Bay Ferry Terminal - Alternatives 4A-D (Figure 1)
DESCRIPTION: Juneau Access Ferry Terminals Double Twin Stern Berth

Item No.	Item	Unit	Unit Price	Quantity	Amount
1	***General***				
	Mobilization	LS	$750,000	All Req'd.	$750,000
	Temporary Erosion and Pollution Control	CS	$25,000	All Req'd.	$25,000
	Construction Surveying	LS	$50,000	All Req'd.	$50,000
	Traffic Maintenance and Control	LS	$12,500	All Req'd.	$12,500
	Furnish and Maintain Field Office	LS	$15,000	All Req'd.	$15,000
	Demolition & Removal	LS	$500,000	All Req'd.	$500,000
2	***Marine Facilities***				
	140' Steel Transfer Bridge w/ Apron	LS	$900,000	2	$900,000
	12'x140' Light-Duty Transfer Bridge to Layup Float	LS	$300,000	1	$300,000
	50'x60' Steel Bridge Float (3 each) w/ Intermediate Ramp, Apron & Fender Systems	SF	$450	9,000	$4,050,000
	4-Pile Stern Float Restraint Dolphins	EA	$250,000	6	$1,500,000
	3-Pile Float Restraint Dolphins	EA	$160,000	2	$320,000
	Lead In Stern Dolphin w/ Fender System	EA	$350,000	1	$350,000
	Berth Seperation Dolphins w/ Fender System	EA	$350,000	3	$1,050,000
	40'x480' Mooring Float or Mooring Dolphins (2 Rqd)	SF	$250	38,400	$9,600,000
	4-Pile, Mooring Float Restraint Dolphins	EA	$350,000	10	$3,500,000
	On-Float Fender Units	EA	$35,000	48	$1,680,000
	Pile Supported Bridge Access Docks (2 ea) Steel Piles / Prestressed Concrete Deck	SF	$300	2,000	$600,000
	Sanitary Sewer Pumpout Piping	LF	$65	600	$39,000
	Potable Water Supply Piping (Heat Trace, Arctic Pipe)	LF	$100	600	$60,000
	Fuel Supply Piping (Welded Steel/Corrosion Control Wrapped)	LF	$100	600	$60,000
	Electrical Power and Lighting System (Terminal)	LS	$500,000	All Req'd	$500,000
3	***Upland Improvements (West Staging Area)***				
	Sheet Pile Retaining Wall	SF	$75	13,125	$984,375
	Embankment - Borrow Type D	CY	$20	42,500	$850,000
	6" Crushed Aggregate Base Course	CY	$25	560	$14,000
	12" Subbase - Grading E	CY	$25	1,200	$30,000
	Asphalt Concrete Pavement (2" Thick)	TON	$200	350	$70,000
	Misc. Asphalt Concrete Replacement/Patching	SY	$100	150	$15,000
	Metal Beam Guardrail	LF	$50	420	$21,000
	Riprap for Slope Protection (Class IV)	CY	$50	2,500	$125,000
	Traffic Markings	LS	$15,000	All Req'd.	$15,000
	Electrical Power & Lighting System (Parking Lot)	LS	$200,000	All Req'd	$200,000

Item Totals	*$28,185,875*
Estimating & Construction Contingencies @ 10%	$2,818,587.50
Subtotal	**$31,004,463**
10% Design & Permitting	$3,100,446
15% Construction Engineering	$4,650,669
4.79% ICAP	$1,856,392.19
Project Total =	**$40,611,970**

Prepared by: KDM **Date:** 06/05/13
Checked by: KDM **Date:**

SE Region - Marine Engineering

Project Construction Cost Estimate

PROJECT NUMBER: 71100
PROJECT TITLE: Juneau Access Ferry Terminals
DESCRIPTION: Sawmill Cove Ferry Terminal - Twin Stern Berth For Alternatives 3, 4B + 4D (Figure 2)

Item No.	Item	Units	Unit Price	Quantity	Amount
1	***General***				
	Mobilization/Demobilization	LS	$700,000	1	$700,000
	Temporary Erosion and Pollution Control	CS	$250,000	1	$250,000
	Construction Surveying	LS	$75,000	1	$75,000
	Construction Camp Facilities	LS	$125,000	1	$125,000
2	***Dredged Mooring Basin***				
	Dredged Mooring Basin	CY	$15.00	16,000	$240,000
	(Includes placement as upland fill or disposal)				
3	***Marine Facilities***				
	Pile Supported Bridge Approach Abutment	EA	$80,000	2	$160,000
	20'x142' Steel Transfer Bridge	EA	$900,000	2	$1,800,000
	50'x80' Steel Bridge Float	EA	$1,800,000	2	$3,600,000
	(w/ Intermediate Ramp, Apron & Fenders)				
	4-Pile Bridge Float Restraint Dolphins	EA	$325,000	3	$975,000
	6-Pile Double Sided Breasting Dolphins	EA	$450,000	4	$1,800,000
	Electrical Power and Lighting System (Terminal)	LS	$300,000	1	$300,000
3	***Upland Improvements (Access/Staging Area)***				
	Embankment (Local Excavation)	CY	$8.00	68,000	$544,000
	Riprap Slope Protection	CY	$50	5,500	$275,000
	12" Aggregate Surface Course	CY	$20.00	5,000	$100,000
	(Approx 135,000sf)				
	Asphalt Concrete Surfacing (2" thick)	Ton	$200.00	1,500	$300,000
	(Approx 135,000 sf)				
	Metal Beam Guardrail	LF	$50	950	$47,500
	Potable Water Supply (Well & Piping)	LS	$200,000	1	$200,000
	Sanitary Sewer (Pkg Treatment Plant/Outfall)	LS	$300,000	1	$300,000
	Diesel Generator System, Bldg & Fuel Storage Tank	LS	$600,000	1	$600,000
	Electrical Power Supply & Area Lighting System	LS	$350,000	1	$350,000
5	***Building Structures***				
	Terminal Building (24'x40')	SF	$450	960.00	$432,000

Item Totals	*$13,173,500*
Estimating & Construction Contingencies @ 10%	$1,317,350
Construction Subtotal	***$14,490,850***
10% Design & Permitting	$1,449,085
15% Construction Engineering	$2,173,628
4.79% ICAP	$867,639.64
Project Total =	***$18,981,202***

Prepared by: KDM **Date:** 06/05/13
Checked by: KDM **Date:**

SE Region - Marine Engineering

Project Construction Cost Estimate

PROJECT NUMBER: 71100
PROJECT TITLE: Juneau Access Ferry Terminals
DESCRIPTION: William Henry Bay Ferry Terminal - Side Berth w/ Lift Bridge For Alternative 3 (Figure 3)

Item No.	Item	Units	Unit Price	Quantity	Amount
1	***General***				
	Mobilization/Demobilization	LS	$700,000	1	$700,000
	Temporary Erosion and Pollution Control	CS	$50,000	1	$50,000
	Construction Surveying	LS	$75,000	1	$75,000
	Construction Camp Facilities	LS	$200,000	1	$200,000
2	***Marine Facilities***				
	Pile Supported Bridge Approach Abutment	LS	$80,000	1	$80,000
	24' x 550' Pile Supported Approach Trestle	SF	$250	13,200	$3,300,000
	20'x143' Steel Transfer Bridge	LS	$900,000	1	$900,000
	Bridge Lift Towers & Syncro Lift or Float System	EA	$1,000,000	2	$2,000,000
	5-Pile Breasting Dolphins	EA	$350,000	3	$1,050,000
	Electrical Power and Lighting System (Terminal)	LS	$350,000	1	$350,000
3	***Upland Improvements (Access/Staging Area)***				
	Clearing & Grubbing	LS	$60,000	1	$60,000
	Embankment (Local Excavation)	CY	$15.00	30,000	$450,000
	Riprap Slope Protection	CY	$65	6,200	$403,000
	12" Aggregate Surface Course (Approx 96,500 sf)	CY	$20.00	3,600	$72,000
	Asphalt Concrete Surfacing (2" thick) (Approx 96,500 sf)	Ton	$200.00	1,200	$240,000
	Metal Beam Guardrail	LF	$50	750	$37,500
	Potable Water Supply (Well & Piping)	LS	$250,000	1	$250,000
	Sanitary Sewer (Pkg Treatment Plant/Outfall)	LS	$325,000	1	$325,000
	Diesel Generator System, Bldg & Fuel Storage Tank	LS	$650,000	1	$650,000
	Electrical Power Supply & Area Lighting System	LS	$400,000	1	$400,000
4	***Building Structures***				
	Terminal Building (24'x40')	SF	$450	960.00	$432,000

Item Totals	*$12,024,500*
Estimating & Construction Contingencies @ 10%	$1,202,450
Construction Subtotal	***$13,226,950***
10% Design & Permitting	$1,322,695.00
15% Construction Engineering	$1,984,043
4.79% ICAP	$791,963.63
Project Total =	***$17,325,651***

Prepared by: KDM **Date:** 06/05/13
Checked by: KDM **Date:**

SE Region - Marine Engineering

Project Construction Cost Estimate

PROJECT NUMBER: 71100
PROJECT TITLE: Juneau Access Ferry Terminals
DESCRIPTION: Katzehin Ferry Terminal (North & South Breakwaters) For Alternative 2B (Figure 4)

Item No.	Item	Units	Unit Price	Quantity	Amount
1	***General***				
	Mobilization/Demobilization	LS	$900,000	1	$900,000
	Temporary Erosion and Pollution Control	CS	$350,000	1	$350,000
	Construction Surveying	LS	$200,000	1	$200,000
	Construction Camp Facilities	LS	$350,000	1	$350,000
2	***Mooring Basin & Breakwaters***				
	Dredged Mooring Basin	CY	$15.00	40,000	$600,000
	(Includes placement as upland/breakwater fill where usable)				
	North Rubble Mound Breakwater	LF	$2,000	400	$800,000
	North Sheet Pile Wave Barrier	LF	$2,000	110	$220,000
	Protection Dolphin at Wave Barrier End	EA	$350,000	1	$350,000
	South Rubble Mound Breakwater	LF	$2,000	500	$1,000,000
	Navigational Aids	EA	$10,000	2	$20,000
3	***Marine Facilities***				
	Pile Supported Bridge Approach Abutment	LS	$100,000	1	$100,000
	20'x150' Steel Transfer Bridge	LS	$900,000	1	$900,000
	50'x80' Steel Bridge Float	LS	$1,800,000	1	$1,800,000
	(w/ Intermediate Ramp & Apron)				
	4-Pile Bridge Float Restraint Dolphins	EA	$350,000	2	$700,000
	5-Pile Breasting Dolphins	EA	$400,000	6	$2,400,000
	Electrical Power and Lighting System (Terminal)	LS	$350,000	1	$350,000
3	***Upland Improvements (Access/Staging Area)***				
	Import Embankment - Borrow	CY	$12.00	50,000	$600,000
	(Classified Materials)				
	Riprap Slope Protection (NIC Breakwaters)	CY	$50	6,000	$300,000
	12" Aggregate Surface Course	CY	$20.00	4,000	$80,000
	(Approx 103,000 sf)				
	Asphalt Concrete Surfacing (2" thick)	Ton	$200.00	1,200	$240,000
	(Approx 103,000 sf)				
	Metal Beam Guardrail	LF	$50	850	$42,500
	Potable Water Supply (Well & Piping)	LS	$200,000	1	$200,000
	Sanitary Sewer (Pkg Treatment Plant/Outfall)	LS	$300,000	1	$300,000
	Diesel Generator System, Bldg & Fuel Storage Tank	LS	$600,000	1	$600,000
	Electrical Power Supply & Area Lighting System	LS	$300,000	1	$300,000
4	***Building Structures***				
	Terminal Building (24'x40')	SF	$450	960.00	$432,000

Item Totals	*$14,134,500*
Estimating & Construction Contingencies @ 10%	$1,413,450
Construction Subtotal	***$15,547,950***
10% Design & Permitting	$1,554,795
15% Construction Admin	$2,332,193
4.79% ICAP	$744,746.81
Project Total =	***$20,179,684***

Prepared by: KDM **Date:** 06/05/13
Checked by: KDM **Date:**

SE Region - Marine Engineering

Project Construction Cost Estimate

PROJECT NUMBER: 71100
PROJECT TITLE: Juneau Access Ferry Terminals
DESCRIPTION: Skagway Ferry Terminal - End Berth For Alternatives 2B & 3 (Figure 5)

Item No.	Item	Units	Unit Price	Quantity	Amount
1	***General***				
	Mobilization/Demobilization	LS	$600,000	1	$600,000
	Temporary Erosion and Pollution Control	CS	$50,000	1	$50,000
	Construction Surveying	LS	$75,000	1	$75,000
2	***Marine Facilities***				
	Pile Supported Bridge Approach Abutment	LS	$80,000	1	$80,000
	Access Catwalks & Gangways	EA	$100,000	4	$400,000
	New Breasting Dolphin Structures	EA	$800,000	4	$3,200,000
	Vehicle Apron & Hydraulic Systems	LS	$100,000	1	$100,000
	Electrical Power and Lighting System (Terminal)	LS	$450,000	1	$450,000
	Potable Water Utilities	LS	$500,000	1	$500,000
	Sanitary Sewer Utilities	LS	$500,000	1	$500,000

Item Totals	*$5,955,000*
Estimating & Construction Contingencies @ 10%	$595,500
Construction Subtotal	***$6,550,500***
10% Design & Permitting	$655,050.00
15% Construction Engineering	$982,575
4.79% ICAP	$392,211.19
Project Total =	***$8,580,336***

Prepared by: KDM **Date:** 06/05/13

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Attachment E
Juneau Access Improvements Project
Revised Engineer's Estimate

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ENGINEER'S ESTIMATE State of Alaska Department of Transportation & Public Facilities Southeast Region	JNU - LYNN CANAL HIGHWAY, ECHO COVE TO KATZEHIN TERMIN FULL BUILDOUT (Alt. 2B) 2012 update AKSAS No.: 71100 Federal No.: Version ID: 38169 Printed: 8/19/2013 2:44:45 PM

Basic Bid

Item Number	*Description*	*Quantity*	*Unit*	*Unit Price*	*Amount*
201(1A)	Clearing	483	Acre	7,500.00	3,622,500.00
201(1B)	Clearing - Zones 2,3 & 5	169	Acre	5,800.00	980,200.00
201(6)	Selective Tree Removal	350	Each	350.00	122,500.00
202(4)	Removal of Culvert Pipe	530	Linear Foot	16.50	8,745.00
203(2)	Rock Excavation	4,910,510	Cubic Yard	13.00	63,836,630.00
203(3)	Unclassified Excavation	1,104,460	Cubic Yard	5.50	6,074,530.00
203(5)	Borrow	242,500	Cubic Yard	4.50	1,091,250.00
203(10)	Controlled Blasting	238,780	Square Yard	21.00	5,014,380.00
203(12)	Drain Holes	29,077	Linear Foot	3.50	101,769.50
203(13)	Stabilization - Rock Bolt	5,378	Each	1,625.00	8,739,250.00
203(19)	Barrier Rocks	4,000	Linear Foot	9.00	36,000.00
205(3)	Foundation Fill	7,951	Cubic Yard	27.00	214,677.00
301(1)	Aggregate Base Course, Grading ___	221,795	Ton	27.00	5,988,465.00
306(1)	Asphalt Treated Base	103,589	Ton	46.00	4,765,094.00
401(1)	Asphalt Concrete, Type II; Class B	109,740	Ton	55.00	6,035,700.00
401(2)	Asphalt Cement, Grade 58-28	11,258	Ton	760.00	8,556,080.00
402(1)	STE-1 Asphalt For Tack Coat	259	Ton	760.00	196,840.00
501(1)	Class A Concrete	All required	Lump Sum	10,843,000.00	10,843,000.00
501(2)	Class A-A Concrete	All required	Lump Sum	1,418,000.00	1,418,000.00
501(7A)	Precast Concrete Member (128' Decked Bulb Tee)	18	Each	65,250.00	1,174,500.00
501(7B)	Precast Concrete Member (144' Decked Bulb Tee)	228	Each	76,100.00	17,350,800.00
501(7C)	Precast Concrete Member (118' Decked Bulb Tee)	12	Each	65,250.00	783,000.00

Basic Bid

Item Number	*Description*	*Quantity*	*Unit*	*Unit Price*	*Amount*
501(8)	Concrete Price Adjustment	All required	Contingent Sum	0.00	0.00
501(9)	Bridge Expansion Joint	660	Linear Foot	1,200.00	792,000.00
501(10)	Screening Structure	6,510	Linear Foot	160.00	1,041,600.00
501(11)	Precast Concrete Headwall	14	Each	5,500.00	77,000.00
501(13a)	Zone 4 Bridges, Standard	1,080	Linear Foot	9,000.00	9,720,000.00
501(13b)	Zone 4 Bridges, Special	592	Linear Foot	12,500.00	7,400,000.00
501(13c)	Zone 4 Bridges, Heavy Duty	1,822	Linear Foot	18,000.00	32,796,000.00
501(14)	Katzehin Bridge	2,590	Linear Foot	9,000.00	23,310,000.00
501(15)	Snow Shed	1,500	Linear Foot	17,000.00	25,500,000.00
507(6)	Safety Railing	39,465	Linear Foot	4.00	157,860.00
503(1)	Reinforcing Steel	All required	Lump Sum	3,198,350.00	3,198,350.00
503(2)	Epoxy-Coated Reinforcing Steel	All required	Lump Sum	1,448,825.00	1,448,825.00
504(2)	Structural Steel	1,150,000	Pound	2.75	3,162,500.00
505(5A)	Furnish Structural Steel Piles - HP14X117	787.5	Linear Foot	71.00	55,912.50
505(5B)	Furnish Structural Steel Pipe Piles - 24 in	6,668	Linear Foot	135.00	900,180.00
505(5C)	Furnish Structural Steel Pipe Piles - 48 in dia	15,161.4	Linear Foot	545.00	8,262,963.00
505(6A)	Drive Structural Steel Piles - HP14X117	6	Each	5,450.00	32,700.00
505(6b)	Drive Structural Steel Pipe Piles - 24 in dia	78	Each	8,150.00	635,700.00
505(6C)	Drive Structural Steel Pipe Piles - 48 in dia	111	Each	27,000.00	2,997,000.00
505(9)	Structural Steel Sheet Piles	3,200	Square Foot	50.00	160,000.00
507(1)	Steel Bridge Railing	14,135	Linear Foot	245.00	3,463,075.00
511(1)	Mechanically Stabilized Earth Wall	860,536	Square Foot	54.50	46,899,212.00
514(1)	Tunnel, Dual Lane/Bi-Directional (300' to <800')	1,250	Linear Foot	10,000.00	12,500,000.00
515(1)	Debris Flow Mitigation Structure	18	Each	275,000.00	4,950,000.00
602(3A)	Structural Plate Arch 20' Span, 8'3 1/2" Rise, 7 Gage	50	Linear Foot	2,305.00	115,250.00
602(3B)	Structural Plate Arch 31'9" Span, 10'2" Rise, 7 Gage	624	Linear Foot	4,240.00	2,645,760.00

Basic Bid

Item Number	*Description*	*Quantity*	*Unit*	*Unit Price*	*Amount*
603(17-24)	24 Inch Pipe	26,877	Linear Foot	85.00	2,284,545.00
603(17-36)	36 Inch Pipe	15,852	Linear Foot	155.00	2,457,060.00
603(17-48)	48 Inch Pipe	3,924	Linear Foot	210.00	824,040.00
603(17-60)	60 Inch Pipe	1,774	Linear Foot	315.00	558,810.00
603(17-72)	72 Inch Pipe	814	Linear Foot	380.00	309,320.00
603(17-144)	144 Inch Pipe	370	Linear Foot	815.00	301,550.00
606(1)	W-beam Guardrail	102,057	Linear Foot	30.00	3,061,710.00
606(12)	Guardrail/bridge Rail Connection	36	Each	3,500.00	126,000.00
606(13)	Parallel Guardrail Terminal	185	Each	3,000.00	555,000.00
610(3)	Ditch Lining	25	Station	815.00	20,375.00
611(1A)	Riprap, Class II	3,885	Cubic Yard	11.00	42,735.00
611(1B)	Riprap, Class IV	122,000	Cubic Yard	11.00	1,342,000.00
611(3)	Riprap Slope Stabilization	32,022	Square Yard	11.50	368,253.00
615(1)	Standard Sign	3,872	Square Foot	60.00	232,320.00
618(1)	Seeding	206	Acre	2,350.00	484,100.00
619(2)	Matting	59,000	Square Yard	3.00	177,000.00
630(1)	Geotextile, Separation	176,000	Square Yard	3.00	528,000.00
631(2)	Geotextile, Erosion Control, Class 1	3,740	Square Yard	2.50	9,350.00
633(1)	Silt Fence	72,000	Linear Foot	4.50	324,000.00
637(1)	Reinforced Soil Slope	500	Square Foot	22.00	11,000.00
640(1)	Mobilization And Demobilization	All required	Lump Sum	35,704,000.00	35,704,000.00
640(4)	Worker Meals and Lodging, or Per Diem	All required	Lump Sum	1,620,000.00	1,620,000.00
641(1)	Erosion And Pollution Control Administration	All required	Lump Sum	86,550.00	86,550.00
641(2)	Temporary Erosion And Pollution Control	All required	Contingent Sum	2,207,000.00	2,207,000.00
641(6)	Withholding	All required	Contingent Sum	0.00	0.00
641(8)	Preliminary Seeding	47	Acre	2,750.00	129,250.00

Basic Bid

Item Number	*Description*	*Quantity*	*Unit*	*Unit Price*	*Amount*
641(9)	Temporary Rock Check Dam	540	Each	110.00	59,400.00
641(10)	Settling Pool	8	Each	580.00	4,640.00
642(1)	Construction Surveying	All required	Lump Sum	1,708,000.00	1,708,000.00
642(3)	Three Person Survey Party	700	Hour	275.00	192,500.00
642(13)	Monumentation with case	190	Each	575.00	109,250.00
644(1)	Field Office	3	Each	27,500.00	82,500.00
644(2)	Field Laboratory	3	Each	27,500.00	82,500.00
644(3)	Curing Shed	All required	Lump Sum	5,800.00	5,800.00
644(8a)	Vehicle, 4X4 SUV	216	Each/Month	435.00	93,960.00
644(8b)	Vehicle, 4X4 ATV	288	Each/Month	165.00	47,520.00
644(15)	Nuclear Testing Equipment Storage Shed	All required	Lump Sum	90,000.00	90,000.00
644(16)	Storage Container	All required	Lump Sum	18,000.00	18,000.00
645(1)	Training Program, 2 Trainees/Apprentices	3,000	Labor Hour	11.00	33,000.00
646(1)	CPM Scheduling	All required	Lump Sum	58,000.00	58,000.00
670(1)	Painted Traffic Markings	All required	Lump Sum	279,000.00	279,000.00
670(8)	Recessed Pavement Marker	4,891	Each	38.00	185,858.00
PROJECT Summary	Pay Items:	90 Items		Subtotal:	395,989,694.00
	Construction Engineering (Percentage)	6%		CENG Subtotal	23,759,381.64 419,749,075.64
	Indirect Cost Allocation Plan (ICAP)	4.79%			20,105,980.72
	TOTAL PARTICIPATING				439,855,056.36

ENGINEER'S ESTIMATE State of Alaska Department of Transportation & Public Facilities Southeast Region	JNU - LYNN CANAL HIGHWAY, ECHO COVE TO KATZEHIN TERMIN FULL BUILDOUT (Alt. 2B) 2012 update AKSAS No.: 71100 Federal No.: Version ID: 38169 Printed: 8/19/2013 2:44:45 PM

Basic Bid

Item Number	*Description*	*Quantity*	*Unit*	*Unit Price*	*Amount*
	ADDED COSTS (Not part of the Contract)				
	Contingency (5% Z 1,2,3,5 , 10% Z 4)				31,379,721.00
	Camp Costs				23,153,100.00
	Glacier Highway Extension Credit				-3,874,000.00
	Preliminary Development				15,000,000.00
	Mitigation				3,500,000.00
	Right of Way				1,700,000.00
	Maintenance Building				1,300,000.00
	Avalanche Control CIP				8,603,893.00
	Highway M&O Equipment CIP				2,113,000.00
	PROJECT TOTAL				522,730,770.36

ENGINEER'S ESTIMATE State of Alaska Department of Transportation & Public Facilities Southeast Region	JNU - LYNN CANAL HIGHWAY, WEST SIDE ALTERNATIVE (ALT. 3) 2012 Update AKSAS No.: 71100 Federal No.: Version ID: 38172 Printed: 6/19/2013 11:04:20 AM

Basic Bid

Item Number	*Description*	*Quantity*	*Unit*	*Unit Price*	*Amount*
201(1B)	Clearing	All required	Lump Sum	800,000.00	800,000.00
203(2)	Rock Excavation	4,060,000	Cubic Yard	13.00	52,780,000.00
203(3)	Unclassified Excavation	2,118,000	Cubic Yard	5.50	11,649,000.00
203(10)	Controlled Blasting	77,918	Square Yard	21.00	1,636,278.00
203(12)	Drain Holes	9,490	Linear Foot	3.50	33,215.00
203(13)	Stabilization - Rock Bolt	1,755	Each	1,625.00	2,851,875.00
301(2)	Aggregate Base Course, Grading ___	183,815	Ton	27.00	4,963,005.00
306(1)	ATB	85,846	Ton	46.00	3,948,916.00
401(1)	Asphalt Concrete, Type II; Class B	90,948	Ton	55.00	5,002,140.00
401(2)	Asphalt Cement, Grade 58-28	9,331	Ton	760.00	7,091,560.00
402(1)	STE-1 Asphalt For Tack Coat	218	Ton	760.00	165,680.00
501(13a)	Bridge Structure	15,885	Linear Foot	9,000.00	142,965,000.00
511(1)	Mechanically Stabilized Earth Wall	77,446	Square Foot	54.50	4,220,807.00
602(2)	Structural Plate Pipe-Arch ___ Span, ___ Rise, ___ Gage	2,232	Linear Foot	4,240.00	9,463,680.00
603(17-24)	24 Inch Pipe	14,088	Linear Foot	85.00	1,197,480.00
603(17-36)	36 Inch Pipe	13,026	Linear Foot	155.00	2,019,030.00
603(17-48)	48 Inch Pipe	3,560	Linear Foot	210.00	747,600.00
603(17-72)	72 Inch Pipe	3,844	Linear Foot	380.00	1,460,720.00
606(1)	W-beam Guardrail	8,900	Linear Foot	30.00	267,000.00
606(13)	Parallel Guardrail Terminal	130	Each	3,000.00	390,000.00
611(1)	Riprap, Class ___	164,500	Cubic Yard	11.00	1,809,500.00
615(1)	Standard Sign	3,400	Square Foot	60.00	204,000.00
618(1)	Seeding	All required	Lump Sum	300,000.00	300,000.00

ENGINEER'S ESTIMATE State of Alaska Department of Transportation & Public Facilities Southeast Region	JNU - LYNN CANAL HIGHWAY, WEST SIDE ALTERNATIVE (ALT. 3) 2012 Update AKSAS No.: 71100 Federal No.: Version ID: 38172 Printed: 6/19/2013 11:04:20 AM

Basic Bid

Item Number	*Description*	*Quantity*	*Unit*	*Unit Price*	*Amount*
633(1)	Silt Fence	206,000	Linear Foot	4.50	927,000.00
640(1)	Mobilization And Demobilization	All required	Lump Sum	14,800,000.00	14,800,000.00
640(4)	Worker Meals and Lodging, or Per Diem	All required	Lump Sum	1,490,000.00	1,490,000.00
641(1)	Erosion And Pollution Control Administration	All required	Lump Sum	20,400.00	20,400.00
641(2)	Temporary Erosion And Pollution Control	All required	Contingent Sum	520,000.00	520,000.00
641(6)	Withholding	All required	Contingent Sum	0.00	0.00
642(1)	Construction Surveying	All required	Lump Sum	1,950,000.00	1,950,000.00
642(13)	Monumentation with case	208	Each	575.00	119,600.00
670(1)	Painted Traffic Markings	All required	Lump Sum	230,000.00	230,000.00
670(8)	Recessed Pavement Marker	4,052	Each	38.00	153,976.00
PROJECT Summary	Pay Items:	33 Items		Subtotal:	276,177,462.00
	Construction Engineering (Percentage)	6%		CENG	16,570,647.72
				Subtotal	292,748,109.72
	Indirect Cost Allocation Plan (ICAP)	4.79%			14,022,634.46
	TOTAL PARTICIPATING				306,770,744.18
	ADDED COSTS (Not part of the Contract)				
	Contingency (5% East, 30% West)				80,350,712.00
	Mitigation				3,600,000.00
	Right of Way				1,500,000.00
	Maintenance Building				1,300,000.00
	Glacier Highway Extension Credit				-3,874,000.00
	Preliminary Development				10,200,000.00
	Camp Costs				11,576,550.00
	Avalanche Control CIP				8,025,234.00
	Highway M&O Equipment CIP				2,113,000.00
	PROJECT TOTAL				421,562,240.18

ENGINEER'S ESTIMATE State of Alaska Department of Transportation & Public Facilities Southeast Region	JNU - LYNN CANAL HIGHWAY (Alt. 4B,D) 2012 Update AKSAS No.: 71100 Federal No.: Version ID: 39333 Printed: 6/3/2013 9:14:27 AM

Basic Bid

Item Number	*Description*	*Quantity*	*Unit*	*Unit Price*	*Amount*
201(1B)	Clearing	All required	Lump Sum	15,000.00	15,000.00
203(2)	Rock Excavation	270,500	Cubic Yard	13.00	3,516,500.00
203(3)	Unclassified Excavation	270,500	Cubic Yard	5.50	1,487,750.00
203(10)	Controlled Blasting	15,400	Square Yard	21.00	323,400.00
203(12)	Drain Holes	1,876	Linear Foot	3.50	6,566.00
203(13)	Stabilization - Rock Bolt	347	Each	1,625.00	563,875.00
301(2)	Aggregate Base Course, Grading ___	17,179	Ton	27.00	463,833.00
306(1)	ATB	8,023	Ton	46.00	369,058.00
401(1)	Asphalt Concrete, Type II; Class B	8,500	Ton	55.00	467,500.00
401(2)	Asphalt Cement, Grade 58-28	872	Ton	760.00	662,720.00
402(1)	STE-1 Asphalt For Tack Coat	20	Ton	760.00	15,200.00
501(13a)	Bridge Structure	100	Linear Foot	9,000.00	900,000.00
511(1)	Mechanically Stabilized Earth Wall	350	Square Foot	54.50	19,075.00
603(17-24)	24 Inch Pipe	2,560	Linear Foot	85.00	217,600.00
603(17-36)	36 Inch Pipe	908	Linear Foot	155.00	140,740.00
603(17-48)	48 Inch Pipe	444	Linear Foot	210.00	93,240.00
603(17-72)	72 Inch Pipe	132	Linear Foot	380.00	50,160.00
606(1)	W-beam Guardrail	630	Linear Foot	30.00	18,900.00
606(13)	Parallel Guardrail Terminal	6	Each	3,000.00	18,000.00
611(1)	Riprap, Class ___	1,000	Cubic Yard	11.00	11,000.00
615(1)	Standard Sign	200	Square Foot	60.00	12,000.00
618(1)	Seeding	All required	Lump Sum	15,000.00	15,000.00
633(1)	Silt Fence	20,000	Linear Foot	4.50	90,000.00

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Basic Bid

Item Number	*Description*	*Quantity*	*Unit*	*Unit Price*	*Amount*
640(1)	Mobilization And Demobilization	All required	Lump Sum	255,000.00	255,000.00
640(4)	Worker Meals and Lodging, or Per Diem	All required	Lump Sum	150,000.00	150,000.00
641(1)	Erosion And Pollution Control Administration	All required	Lump Sum	1,200.00	1,200.00
641(2)	Temporary Erosion And Pollution Control	All required	Contingent Sum	30,000.00	30,000.00
641(6)	Withholding	All required	Contingent Sum	0.00	0.00
642(1)	Construction Surveying	All required	Lump Sum	30,000.00	30,000.00
642(13)	Monumentation with case	30	Each	575.00	17,250.00
670(1)	Painted Traffic Markings	All required	Lump Sum	37,000.00	37,000.00
670(8)	Recessed Pavement Marker	330	Each	38.00	12,540.00
PROJECT Summary	Pay Items:	32 Items		Subtotal:	10,010,107.00
	Construction Engineering (Percentage)	6%		CENG Subtotal	600,606.42 10,610,713.42
	Indirect Cost Allocation Plan (ICAP)	4.79%			508,253.17
	TOTAL PARTICIPATING				11,118,966.59
	ADDED COSTS (Not part of the Contract) Mitigation Construction Contingency (5%) Glacier Highway Extension Credit Preliminary Development				 36,000.00 500,505.00 -3,874,000.00 240,000.00
	PROJECT TOTAL				8,021,471.59

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