

**SUBJECT:** Authorizing the use of an additional \$176,050 from the Bridge and Railroad Crossing Major Maintenance and Repair, Project 35000 for the Lynx Lake Grade Crossing Panel Upgrade project, Fund 410, Project 30042.

**AGENDA OF:** August 2, 2022

**ASSEMBLY ACTION:**

Approved Under the Consent  
Agenda 8-2-22 *[Signature]*

**MANAGER RECOMMENDATION:** Present to the Assembly for consideration.

**APPROVED BY MICHAEL BROWN, BOROUGH MANAGER:** *[Signature]*

Route To:	Department/Individual	Initials	Remarks
	Originator	Jennifer Ballinger <small>Digitally signed by Jennifer Ballinger Date: 2022.07.20 08:27:07 -0800</small>	
	Public Works Director	Tom Adams <small>Digitally signed by Tom Adams Date: 2022.07.20 09:36:22 -0800</small>	
	Finance Director	<i>[Signature]</i>	
	Borough Attorney	<i>[Signature]</i>	
	Borough Clerk	<i>[Signature]</i>	

**ATTACHMENT(S):** Fiscal Note: Yes \_\_\_\_\_ No X  
Alaska Railroad Project Cost (4pp)

**SUMMARY STATEMENT:** As part of the blanket agreement executed January 5, 1989 between the Alaska Railroad and the Matanuska-Susitna Borough (MSB), the MSB is required to maintain and upgrade permitted crossings. Assembly approved AM 22-009, a Utility Reimbursable Services Agreement for \$417,100 for the Lynx Lake Grade Crossing Panel Upgrade project. Resolution 22-013 approved the scope of work and budget.

We received a revised budget from the Alaska Railroad. The project bid came in at \$593,100. Previous budget was 50% or \$208,550 funded by the Bridge and Railroad Crossing Major Maintenance and Repair, Project 35000 and 50% or \$208,550 funded from the road service area, Project 30042. As project 30042 does not have further funding, we need project 35000 to fund \$384,550 of the \$593,100 project total.

**RECOMMENDATION OF ADMINISTRATION:** Authorize the use of an additional \$139,200 from the Bridge and Railroad Crossing Major Maintenance and Repair, Project 35000 to fund the Lynx Lake Grade Crossing Panel Upgrade project, Project 30038.



## Lynx Lake Concrete Panel Upgrade

Scope: At-grade 32 ft, site triangle clearing/leveling,

Version: V2  
Prepared by: MM  
Date: 06.23.22

### Assumptions and Scope

Assume 32 ft concrete modular crossing.

Assume cost escalation at 5% per year.

The AKDOT anticipated overhead rate for 2022 is shown. This number is adjusted annually.

The AKDOT audited overhead rate at the time of construction will apply.

Assume NO PROFIT is included.

Assume by ARRC, incidental signal work, NO signal conduit, NO signal wire, NO J-Box

Assume by ARRC, traffic control plan.

Assume by ARRC, agency road closure permits.

Assume by ARRC, temporary detour signs, cones and barriers.

Assume by ARRC, D1 placement for approach paving.

Assume by ARRC, Clearing and Leveling

Assume by ARRC, Hydroseeding

Assume by ARRC, SWPPP

Assume by ARRC, asphalt paving, 30 ft. pull-back on both sides of the crossing, with a level road approach prior to the concrete panels.

Assume by ARRC, remove and dispose existing D1

Assume by ARRC, remove old crossing panels, rail & ties, excavate, place geotextile, place signal conduits, CMP drains, backfill with mainline ballast.

Assume by ARRC, install track panel, new 10 ft. ties throughout, on 19-1/2" centers, new pandrol plates, new pandrol screws and new 115RE rail.

Assume by ARRC, company work train delivers Curry ballast to the crossing site.

Assume by ARRC, surfacing through the crossing.

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# ALASKA RAILROAD

## Lynx Lake Concrete Panel Upgrade

Scope: At-grade 32 ft, site triangle clearing/leveling,

Version: V2  
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Date: 06.23.22

Description	Qty	Unit	Unit Price	Total	Notes / Comments
<b>Construction</b>					
Flagging & Inspection				\$ 8,100	
Equipment			Subtotal	\$ 1,625	
Rental Equipment, Hy-Rail	7	MD	\$ 200.00	\$ 1,400	Assume a leased hy-rail vehicle, includes operating cost
ARRC Equipment, pickup	3	MD	\$ 75.00	\$ 225	Assume V1373 or Equal
Labor			Subtotal	\$ 6,160	
Labor, Flagman	7	MD	\$ 550.00	\$ 3,850	Assume ARW 06, Step G, 12 hours / day
Per Diem, Flagman	7	MD	\$ 90.00	\$ 630	Assume flagman is eligible for per diem
Labor, Inspection	3	MD	\$ 560.00	\$ 1,680	Assume ARRC inspector throughout project
Per Diem, Flagman	3	MD	\$ 90.00	\$ 270	Assume flagman is eligible for per diem
Crossing Construction				\$ 319,100	
Equipment			Subtotal	\$ 16,860	
ARRC Equipment	6	DY	\$ 200	\$ 1,200	Hy-rail or equal (includes operating rate)
ARRC Equipment	6	DY	\$ 200	\$ 1,200	Hy-rail or equal (includes operating rate)
ARRC Equipment	3	DY	\$ 400	\$ 1,200	SSL1 skid steer or equal (includes operating rate)
ARRC Equipment	3	DY	\$ 500	\$ 1,500	V1301 tractor or equal, with trailer (includes operating rate)
ARRC Equipment	3	DY	\$ 1,000	\$ 3,000	EX1 CAT 320L or equal (includes operating rate)
ARRC Equipment	1	DY	\$ 2,000	\$ 2,000	ET19 tamper or equal (includes operating rate)
ARRC Equipment	1	DY	\$ 1,600	\$ 1,600	BR20 ballast regulator or equal (includes operating rate)
ARRC Equipment	1	DY	\$ 500	\$ 500	TF-19 forklift or equal, TOFC, load material (includes operating rate)
ARRC Equipment	1	DY	\$ 200	\$ 200	V1115 truck or equal, TOFC, load material (includes operating rate)
Rental Equipment	3	DY	\$ 300	\$ 900	R-3130 CAT 563D compactor or equal
Rental Equipment	3	DY	\$ 300	\$ 900	R-1011 Volvo 120, loader, or equal
Rental Equipment	3	DY	\$ 200	\$ 600	Water truck, R3131 or equal
Rental Equipment	1	DY	\$ 200	\$ 200	R-841 Welding truck, or equal
Rental Equipment Op \$	12	HR	\$ 15	\$ 180	R-841 Op Cost, Welding truck (Assume 12hours per day)
Rental Equipment Op \$	24	HR	\$ 25	\$ 600	R-3130 CAT 563D compactor or equal (Assume 8hours per day)
Rental Equipment Op \$	24	HR	\$ 25	\$ 600	R-1011 Volvo 120, loader, or equal (Assume 8hours per day)
Rental Equipment Op \$	24	HR	\$ 20	\$ 480	Water truck, R3131 or equal (Assume 8hours per day)
Labor			Subtotal	\$ 24,600	

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Labor, ST	4	DY	\$ 2,500	\$ 10,000	Construction gang, ST (Foreman, 2 op, 4 lab)
Labor, OT	4	DY	\$ 1,500	\$ 6,000	Construction gang, OT
Labor, ST	1	DY	\$ 1,300	\$ 1,300	Surfacing gang, ST (3)
Labor, OT	1	DY	\$ 800	\$ 800	Surfacing gang, OT
Labor, ST	1	DY	\$ 1,300	\$ 1,300	Welding gang, ST (3)
Labor, OT	1	DY	\$ 800	\$ 800	Welding gang, OT
Labor, ST	1	DY	\$ 1,700	\$ 1,700	TOFC crew, ST, load material
Per Diem	30	MD	\$ 90	\$ 2,700	assume the 1/2 gang is eligible for per diem
<b>Materials</b>		<b>Subtotal</b>	<b>\$</b>	<b>41,305</b>	
Crossing Panel, Concrete, Gauge	4	EA	\$ 1,200	\$ 4,800	Concrete modular crossing panels
Crossing Panel, Concrete, Field	8	EA	\$ 700	\$ 5,600	"
Crossing Panel, Concrete, Ramp, LT	2	EA	\$ 350	\$ 700	"
Crossing Panel, Concrete, Ramp, RT	2	EA	\$ 350	\$ 700	"
Crossing Panel, Concrete, Ramp, CT	2	EA	\$ 350	\$ 500	"
Screws, Torx Concrete Crossing	2	BOX	\$ 70	\$ 140	Torx screws, concrete crossing, 3/4" Ø x 12", fifty (50) screws per box
Ties, 10 ft. Crossing	50	EA	\$ 250	\$ 12,500	Ties, 10 ft., for track panel
Plates, Pandrol	100	EA	\$ 20	\$ 2,000	Plates, pandrol, 115RE, 5-1/2" base
E-clips, Pandrol	8	BAG	\$ 60	\$ 480	E-clips, two (2) per Pandrol plate, 25 per bag
Screws, Pandrol	10	PAIL	\$ 90	\$ 900	Pandrol screws, 5/16" Ø x 6", forty (40) screws per box
Spikes	1	KEG	\$ 40	\$ 40	Assume miscellaneous spikes, 61 spikes per keg
Anchors	8	BAG	\$ 50	\$ 400	Anchors, box anchor crossing panel, 28 anchors per bag
Tie Plugs	1	BNDL	\$ 25	\$ 25	Cedar tie plugs, 500 plugs per bundle
Bits, Ship Auger, 3/4" x 17"	1	EA	\$ 40	\$ 40	Drill bits, pilot holes, for Pandrol screws in 10 ft. ties, assume wear, breakage
Bits, Ship Auger, 9/16" x 17"	1	EA	\$ 40	\$ 40	Drill bits, pilot holes, for concrete crossing, Torx screws, assume wear, breakage
Socket, Torx Drive	1	EA	\$ 50	\$ 50	Socket, 1" sq. drive x 5/8" TX-70 Torx head
Angle Bars, 115RE	4	PR	\$ 120	\$ 480	Angle bars, 115RE, six hole, track panel ends
Planks, Timber	24	EA	\$ 200	\$ 4,800	
Screws, Torx Timber	2	BOX	\$ 200	\$ 400	
Bolts, Track	2	PAIL	\$ 130	\$ 260	Bolt, nut and washer assembly, 20 bolts per pail
Rail, 115RE	160	LF	\$ 25	\$ 4,000	Rail, 115RE, new, track panel
Fabric, Geotextile	0.5	ROLL	\$ 500	\$ 250	Geotextile fabric, ballast protection
Weld Kit, Thermite	6	EA	\$ 200	\$ 1,200	4 each mainline track panel, 2 extra
TOFC material	1	LS	\$ 1,000	\$ 1,000	Straps, binders, dunnage timber (as needed)

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**ALASKA**  
RAILROAD

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Contracts		Subtotal		\$ 236,285	
Asphalt, Contractor Mob	1	LS	\$ 4,000	\$ 4,000	Asphalt, contractor, mobilization
Asphalt, Paving, Road	70	TN	\$ 500	\$ 35,000	Asphalt, purchased, haul and placed, 4" thick, 150 pcf, 50 ft. pullback, both sides
D1, Sub-base	150	TN	\$ 94	\$ 14,100	D1, delivered and placed, placed by ARRC 4" thick, 25% swell, for pullback, both sides of road
D1, Sub-base, Haul	6	HR	\$ 150	\$ 900	Contract trucking, 20 TN / truck, ballast, one (1) hour per turn
Timber Crossing	1	LS	\$ 25,000	\$ 25,000	Install and remove detour approaches
Ballast, Commercial	75	TN	\$ 50	\$ 3,750	Assume commercial ballast, 1.35 TN / CY, crossing, track run-out
Trucking, Ballast Haul	6	HR	\$ 150	\$ 900	Contract trucking, 20 TN / truck, ballast, one (1) hour per turn
Equipment Mobe Demobe	8	EA	\$ 2,000	\$ 16,000	Equipment Mobe and Demobe (ea is one way)
SWPPP - Plan and BMPs	1	LS	\$ 12,500	\$ 12,500	Contractor to create and maintain
Clearing and Grubbing	2	ACRE	\$ 55,000	\$ 82,500	Moving material from the North side of the road to the South. Includes engineering costs
Hydroseed	100	LB	\$ 100	\$ 10,000	Seeding all disturbing area within the project
Ditch Grading	1	LS	\$ 15,000	\$ 15,000	culvert along the East side of the tracks needs improving
Traffic Control	7	SH	\$ 1,000	\$ 7,000	Assume 1 TCS per 12 hours.
Striping	500	LF	\$ 5	\$ 2,500	Assume 2 FOG lines, double yellow center, and stop bars
Striping Mobe	1	LS	\$ 6,110	\$ 6,110	Mobe / demobe
Dumpster	1	EA	\$ 300	\$ 300	Site delivery, pick up, disposal
Landfill Fees	7	TN	\$ 75	\$ 525	Disposal of existing ties, wet ties at 250 LB / tie, tipping fees at \$75 / TN
Portable Toilet	1	EA	\$ 200	\$ 200	Portable toilet during construction
Construction Total				\$ 327,150	
Design & Support					
Management					
Project Management	3.00%	%	\$ 327,150	\$ 9,815	ARRC PM Coordination
Project Management Support	1.00%	%	\$ 327,150	\$ 3,272	ARRC PM Coordination
Construction Management	3.00%	%	\$ 327,150	\$ 9,815	ARRC CM Coordination
Construction Management Support	1.00%	%	\$ 327,150	\$ 3,272	ARRC CM Coordination
Design & Support Total				\$ 26,172	
Project Subtotal				\$ 353,322	
Overhead	67.85%	%	\$ 353,322	\$ 239,729	AKDOT Anticipated Overhead Rate for 2022 shown
Grand Total (Rounded)				\$ 593,100	

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