



# Alaska Department of Transportation & Public Facilities

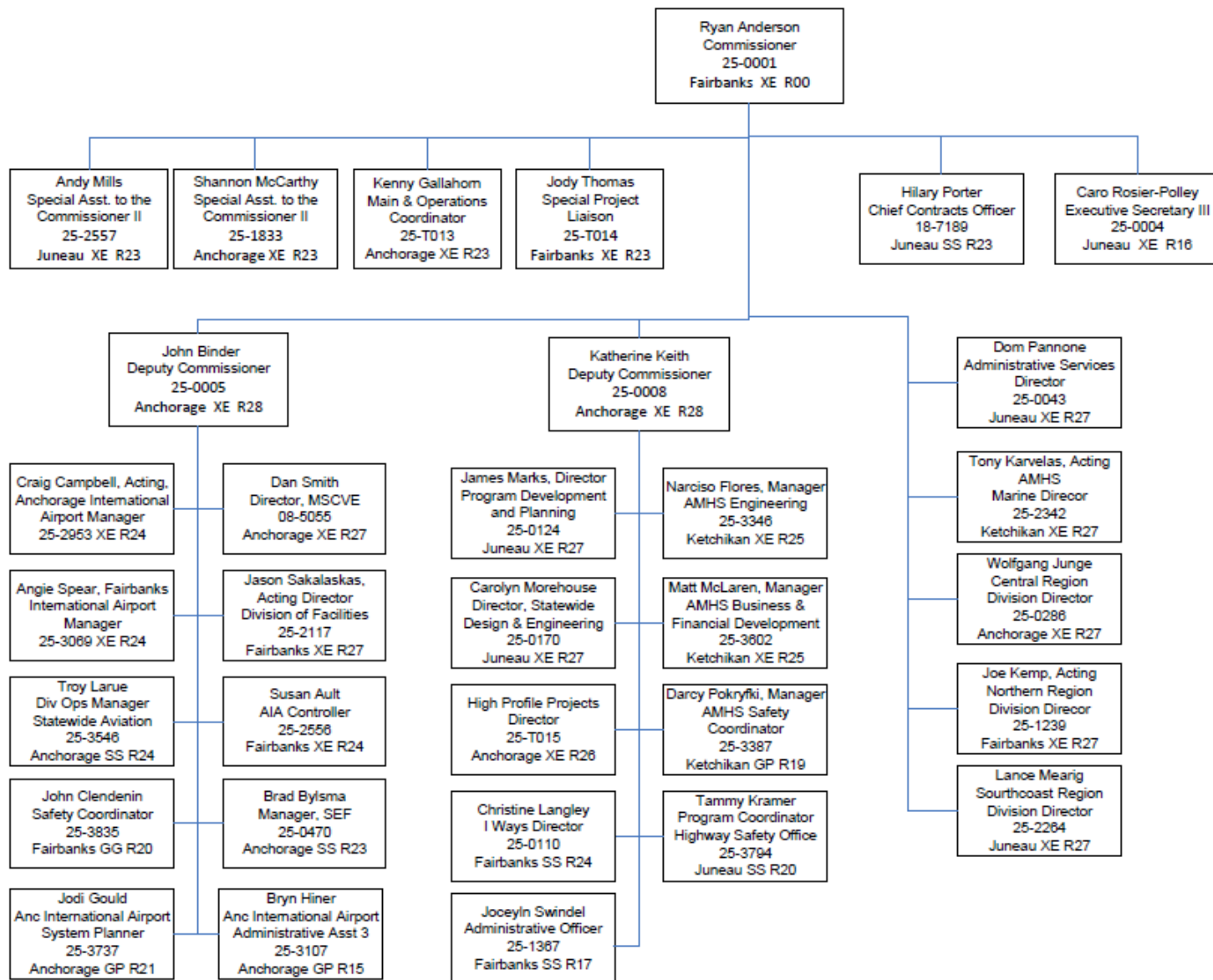
## Senate Transportation: Roads, Highways & Bridges

Katherine Keith, Deputy Commissioner  
Joe Kemp, Acting Northern Region Director  
Wolfgang Junge, Central Region Director  
Lance Mearig, Southcoast Region Director  
Leslie Daugherty, Bridge Design & Standards Group Chief

Feb. 21, 2023

Our mission is to **Keep Alaska Moving** through service and infrastructure.

# DOT & PF Organizational Charts





# Functional Resources

## Southcoast Region





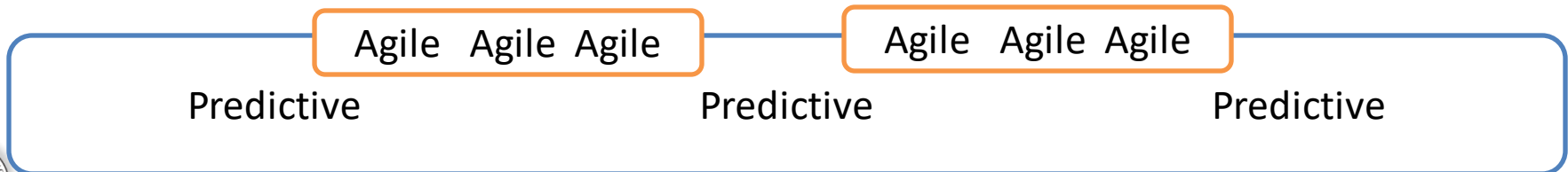
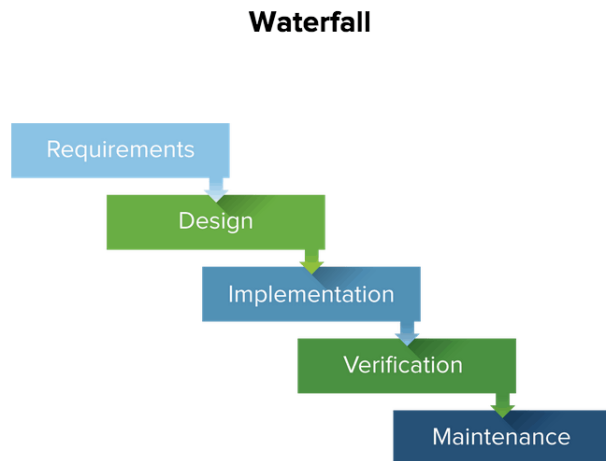
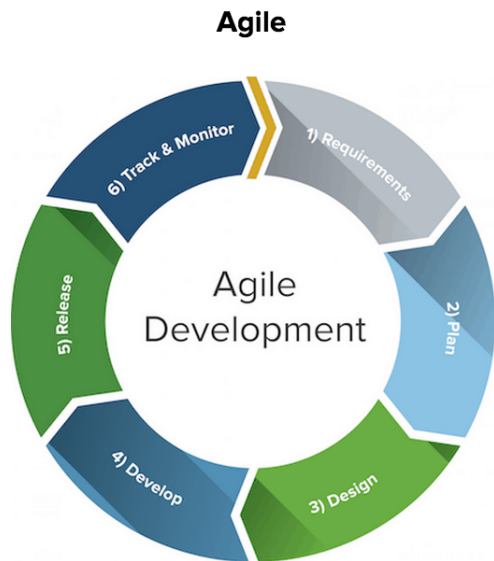


# Performance Management (EVM)



# Project Delivery Methods

## Agile Project Delivery in Multi-Modal Transportation (Transportation Research Board; NCHRP \$350,000)





# Cooperative Partnerships



## RPO

- Copper River Valley - RTP/O statutes
- Others on the way – FNSB, NSB, and more.

## AML MOU

- Clearinghouse “The HUB”
- AML Hosting NHI Courses

## State Agencies

- AEA MOA - NEVI Plan & STEP
- DNR MOA – ASTAR PEL

## Business Partnership

- AGC
- ACEC
- Labor Unions

## Team-Embedded Consultants

## Federal Land Managers

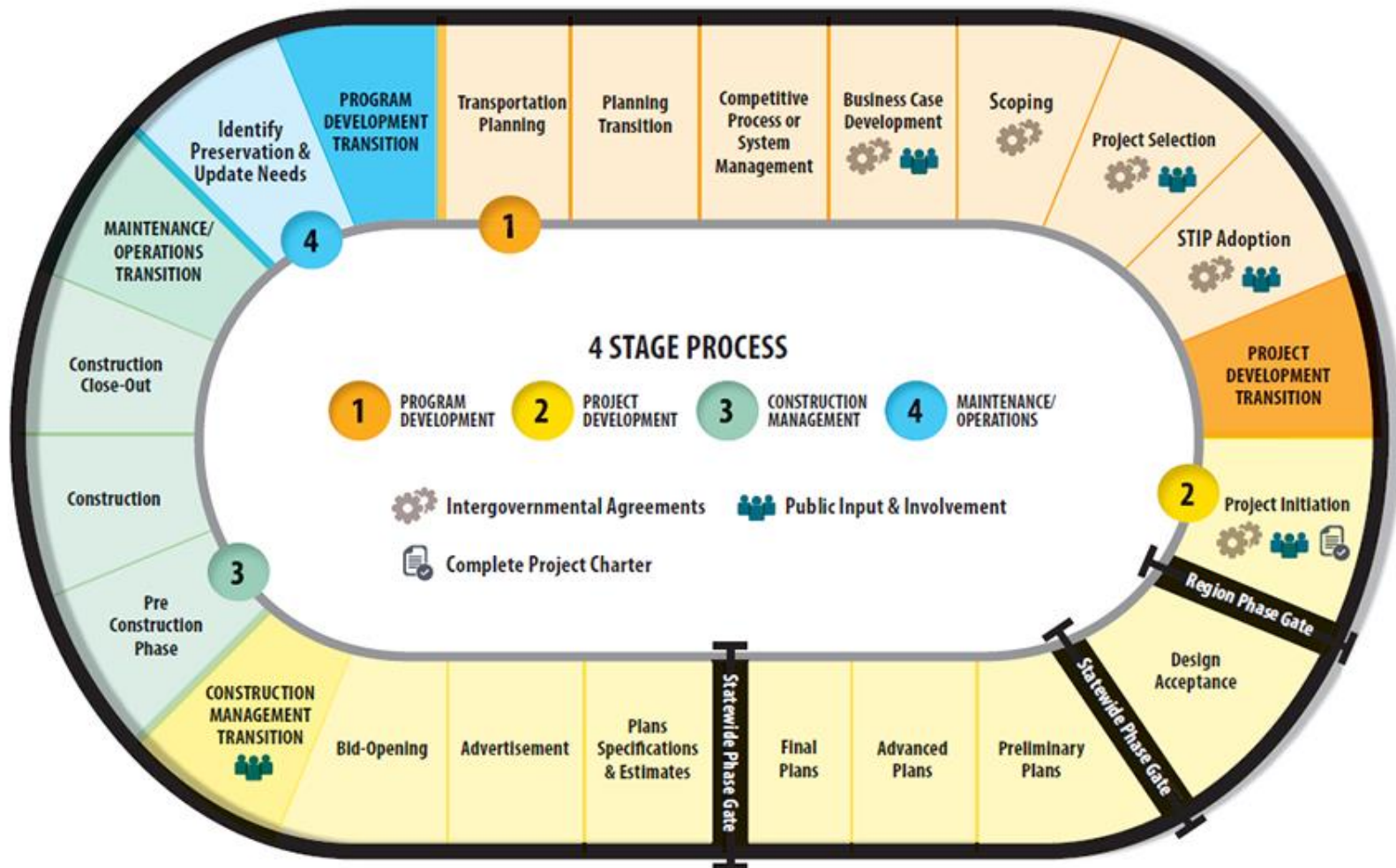
## More Local Planning

- Coordinate with land-use, ‘Plan for People’

## Looking for more Partners!

# Roadmap of Transportation Project

## TRANSPORTATION SYSTEM PROJECT LIFECYCLE







# Bridges: Alaska Statistics



**DOT&PF inspects 1,055 bridges and 4 tunnels on publicly owned roads.**

- **851 bridges owned by DOT&PF**
- **87 culverts 20' or greater in diameter**
- **24 transfer bridges at AMHS terminals**
- **3 bridges owned by other state agencies**
- **171 bridges owned by cities and boroughs**
- **1 Railroad tunnel**
- **3 DOT&PF tunnels**



# Bridges: Federal Requirements

- Inspect all bridges open to the public (except federal ownership) at a minimum every 24 months
- Inspection results entered in Bridge Management System
- Report to FHWA annually on 21 Bridge Metrics
- States set their own targets for % poor and good bridges

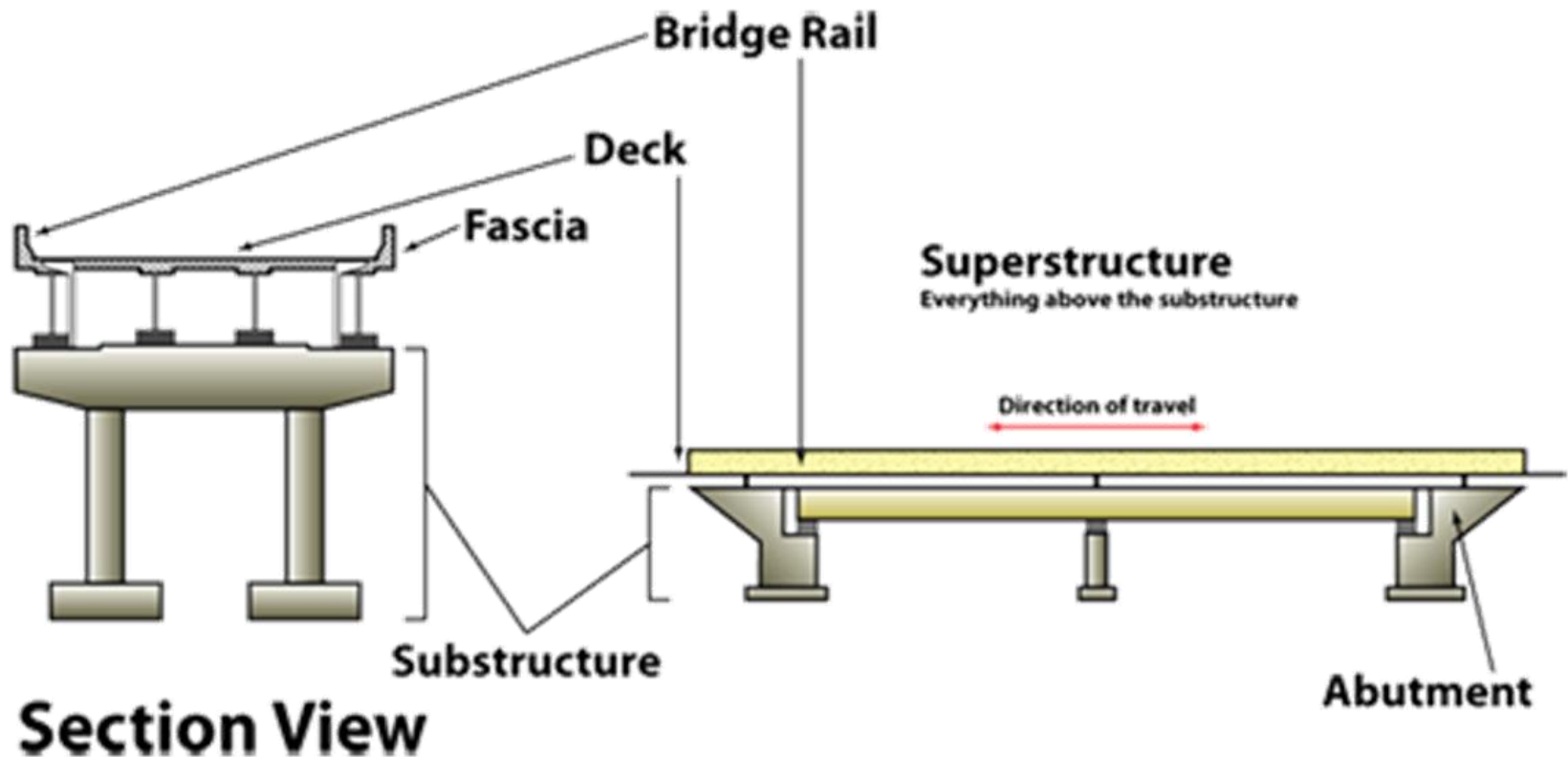
**Alaska targets for National Highway System (NHS) by deck area:**

<10% poor

>40% good



# Bridges: Components



**Targets National Highway System (NHS) by deck area:**

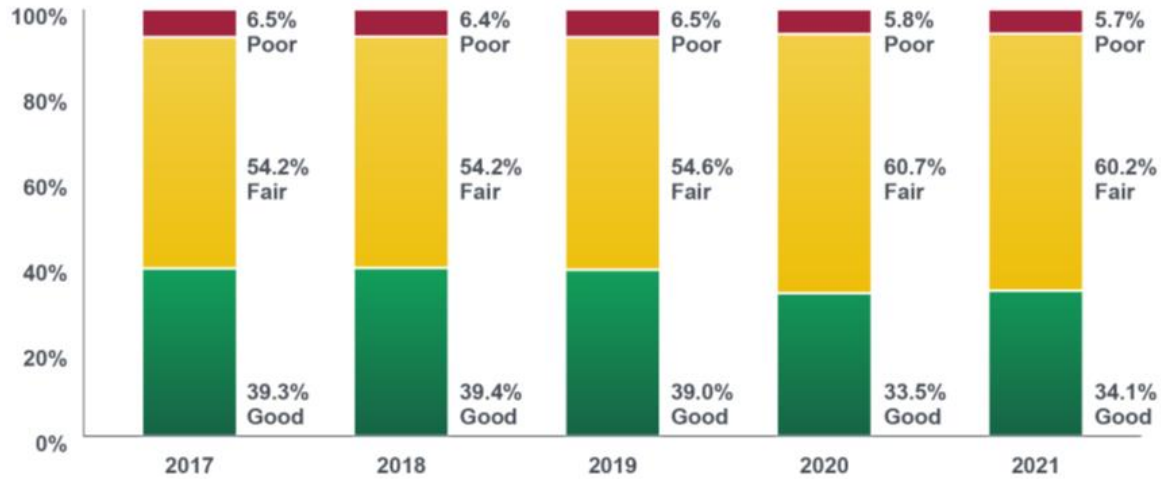
<10% poor

>40% good

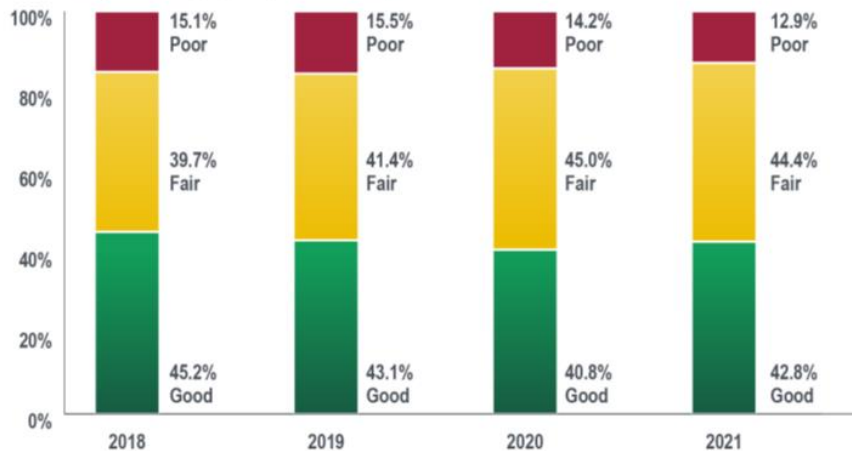


# Bridges: Condition Data

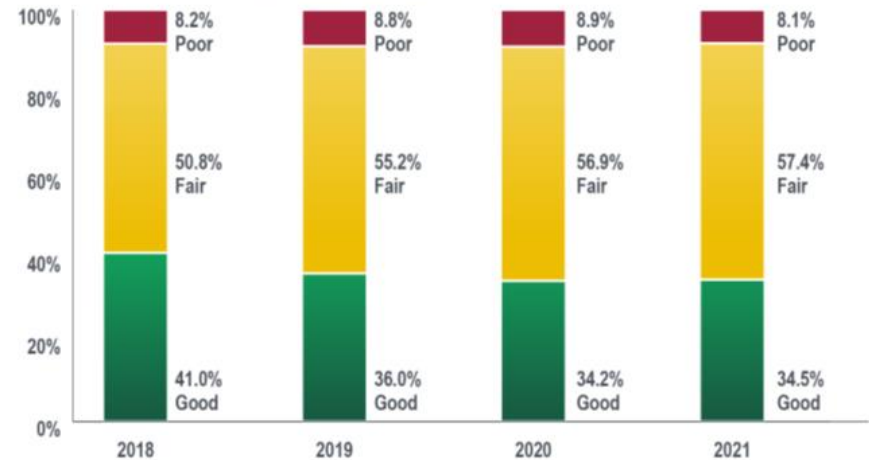
NHS Bridges | Bridge Condition by Deck Area



Off-System Bridges | Bridge Condition by Deck Area



Non-NHS Bridges | Bridge Condition by Deck Area



# Bridge Design: Spotlight

## Sterling Highway 45-60 Bypass

Likely to be the longest, fully erected, **launched** bridge in the nation and state's highest crossing & longest main span bridge (922') built in the state in over 40 years.







# Bridge Strikes: Spotlight

## 15 Significant vehicle strikes in last 10 years

(+ Gastineau Channel Bridge barge strikes)

### Anchorage Urban

- Hillcrest OC, Dimond Blvd OC, Huffman Rd. UC NB, 23rd Ave. OC A St., Tudor Rd.

### Glenn Highway

- Hiland Dr OC, Artillery Rd OC, Eklutna OC, Tudor Rd OC

### Richardson Highway

- E-N Loop Ramp,  
C-N Ramp OC,  
W-W Ramp OC

### Eagle River Urban

- Peters Creek UC - NB

### Alaska Highway

- Johnson River,  
Gerstle River



# Bridges: More Information

## DOT&PF's bridge inventory:

[dot.alaska.gov/stwddes/desbridge/assets/pdf/2019bridgeinventory.pdf](https://dot.alaska.gov/stwddes/desbridge/assets/pdf/2019bridgeinventory.pdf)

## FHWA's bridge condition website:

[infobridge.fhwa.dot.gov](https://infobridge.fhwa.dot.gov)

Bridge Selection and Mapping About

Show Bridges 1,626 of 620,669 bridges Advanced Find Map Find Chart Find Clear "Find" Options

Selected Bridges Map Performance History Performance Forecast

This feature displays the selected bridges on a map. Please use Google Chrome or Microsoft Edge for better user experience.

Map Satellite White alaska Search

**Bridge Detail**

State Name (1):	2-Alaska
Structure Number (8):	1367
Owner (22):	1-State Highway Agency
Kind of Material/Design (43A):	5-Prestressed Concrete
Type of Design/Construction (43B):	4-Tee Beam
Structure Length, ft (49):	120.1
Year Built (27):	1981
Bridge Page:	<a href="#">Link</a>
Street View:	<a href="#">Street View</a>

Keyboard shortcuts Map data ©2023 Google Terms of Use



# ANCHORAGE MUNICIPALITY

## 2023 CONSTRUCTION

### AREA-WIDE PROJECTS

27 28 29

- 13** | Reeve Blvd, 5th Avenue to Post Road Pavement Preservation (AMATS)
- 14** | A Street, Northern Lights Blvd to 40th Avenue Pavement Preservation
- 15** | A Street, Midtown Couplet Overhead Signal Indication
- 16** | Minnesota Drive: Tudor to 15th Avenue Pavement Preservation
- 17** | Anchorage International Airport - Multiple Projects
- 18** | Muldoon Road, Debarr Road to E 36th Avenue Pavement Preservation
- 19** | Chugach Foothills Connector, Phase II (AMATS)
- 20** | Elmore Road Pavement Preservation: Abbott Road to Providence
- 21** | Dowling Road and Seward Highway Interchange Reconstruction
- 22** | Seward Highway: O'Malley to Dimond Reconstruction
- 23** | O'Malley Road Reconstruction, Livingston St to Hillside Dr, Phase II
- 24** | De Armoun Road, E 140th Avenue to Hillside Drive Pavement Preservation
- 25** | McHugh Road Weather Information System Tower Upgrade
- 26** | Hiland Road MP 0-3.2 Pavement Preservation (AMATS)
- 27** | Anchorage Area Drainage Improvements FY 2019
- 28** | Anchorage District, Group B – Nov 2018 Earthquake
- 29** | HSIP: Central Region Guardrail Inventory & Upgrade



# Seward Highway O'Malley Road to Dimond Boulevard



- Improve safety throughout the corridor
- Improve connections between both sides of the highway

- New bike and pedestrian routes
- Increase capacity at O'Malley interchange
- Expand from two to three lanes in each direction



# Seward Highway O'Malley Road to Dimond Boulevard

## Risks/Challenges

- Increased costs due to inflation
- Travel impacts
- Unanticipated utility relocations

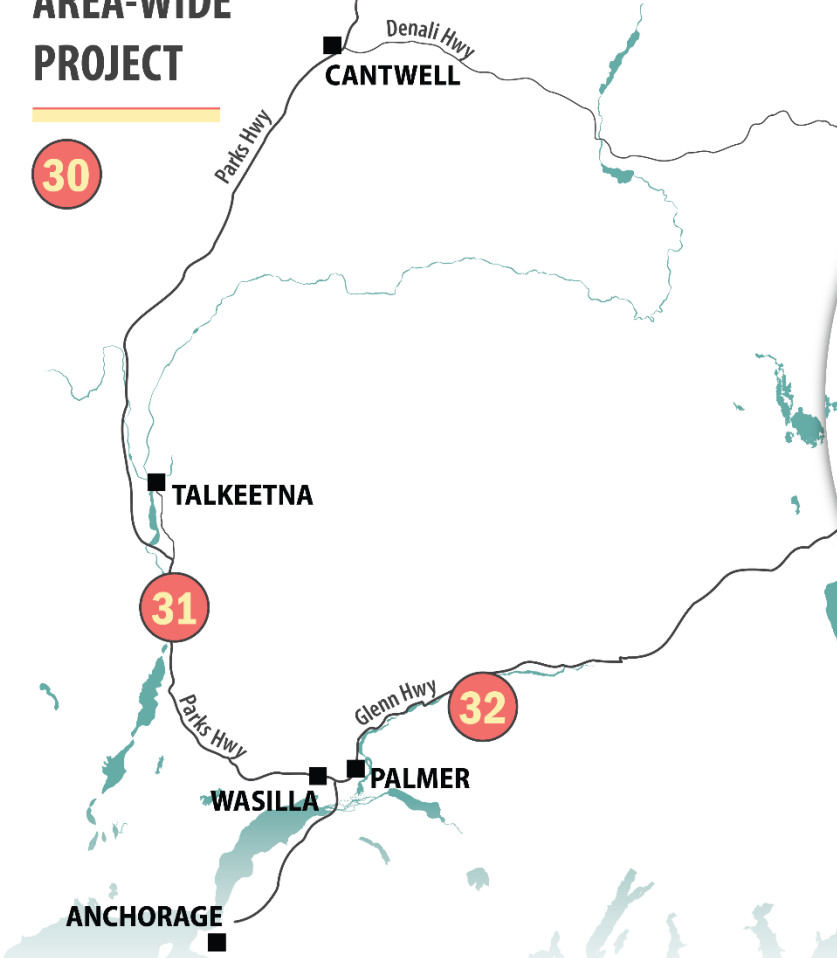
## Opportunities/Solutions

- Collaboration to minimize travel impacts
- Public communication
- Process for addressing unknown utilities



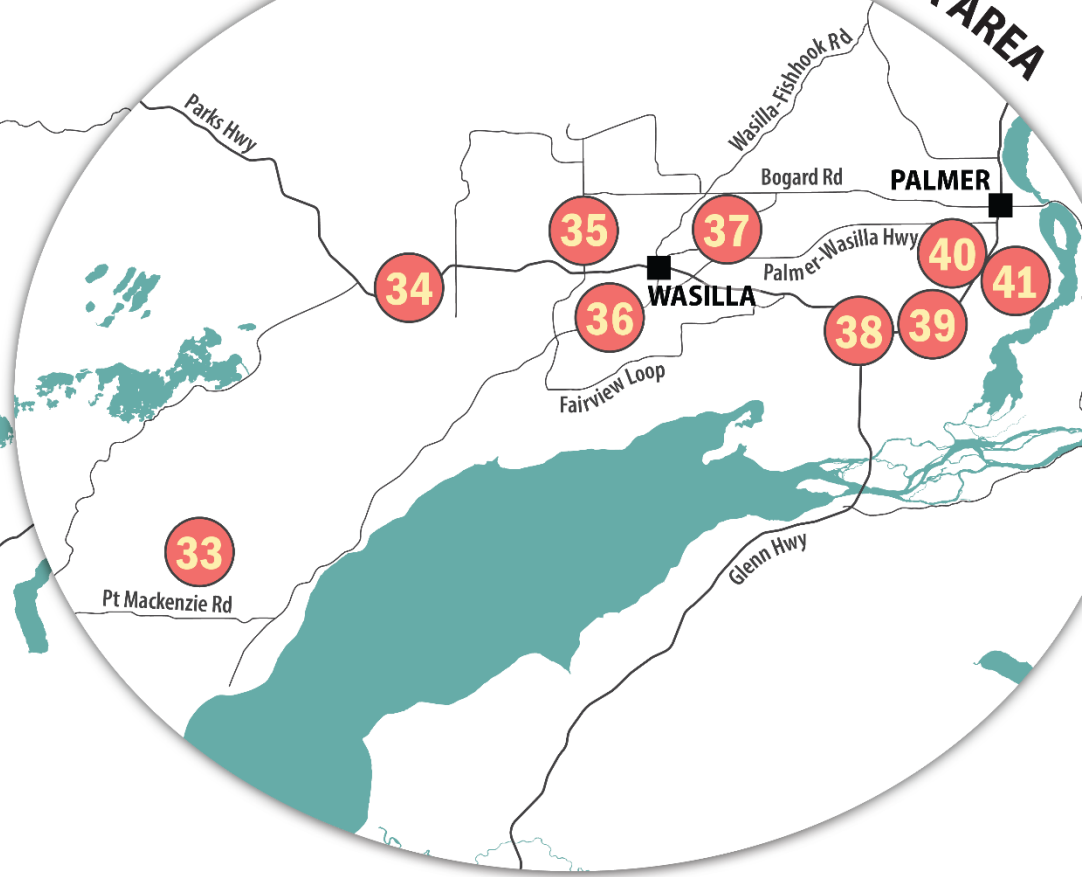
# MAT-SU AREA | 2023 CONSTRUCTION

## AREA-WIDE PROJECT



- 30** | HSIP: Central Region Guardrail Inventory and Upgrade (North)
- 31** | Parks Hwy Bridge Replacements at Montana, Sheep, & Goose Creeks
- 32** | Kings River Bridge
- 33** | Mat-Su Borough Road Repairs - Nov 2018 Earthquake
- 34** | Parks Highway MP 48.8 to 52.3 Reconstruction

## WASILLA - PALMER AREA



- 35** | Church Road and Spruce Avenue Intersection Flashing Beacon
- 36** | Knik Goose Bay Road, Fairview Loop to Palmer-Wasilla Highway, Phase I
- 37** | Seward Meridian Pkwy Rd Improvements, Phase II Palmer-Wasilla Hwy to Seldon Rd
- 38** | Glenn Highway & Parks Highway Interchange Repairs - Nov 2018 Earthquake
- 39** | Glenn Highway, Colleen Street Intersection & Frontage Road
- 40** | Glenn Highway: Parks Highway to S. Inner Springer Loop, Phase II
- 41** | Glenn Highway: Parks Highway to S. Inner Springer Loop Pathway, Phase II



# Knik Goose Bay Road Reconstruction



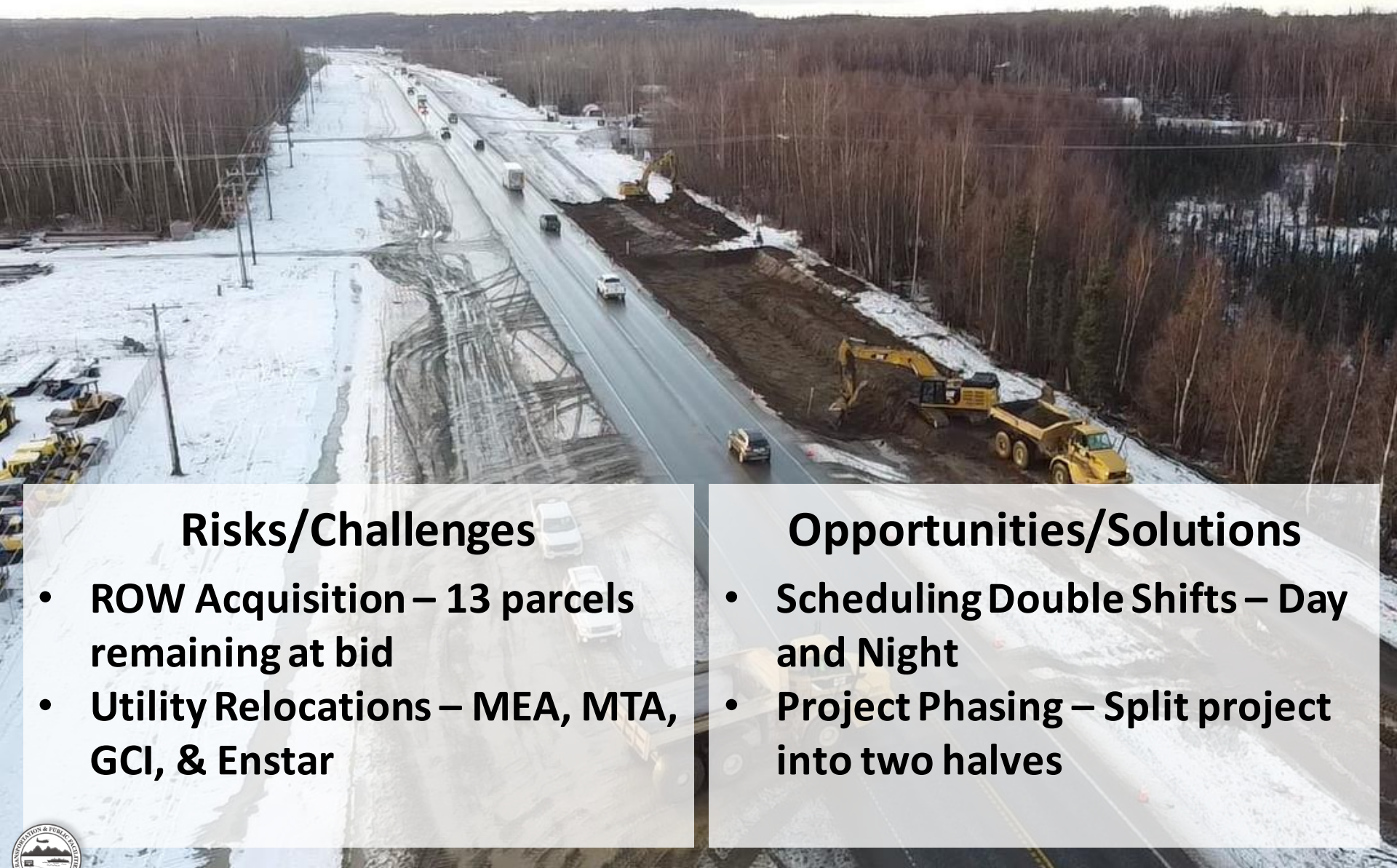
**Phase I construction started in summer 2022**

- Centaur Avenue to Fairview Loop

**Phase II anticipated to start in 2025**

- Fairview Loop to Settlers Bay Drive

# Knik Goose Bay Road Reconstruction



## Risks/Challenges

- ROW Acquisition – 13 parcels remaining at bid
- Utility Relocations – MEA, MTA, GCI, & Enstar

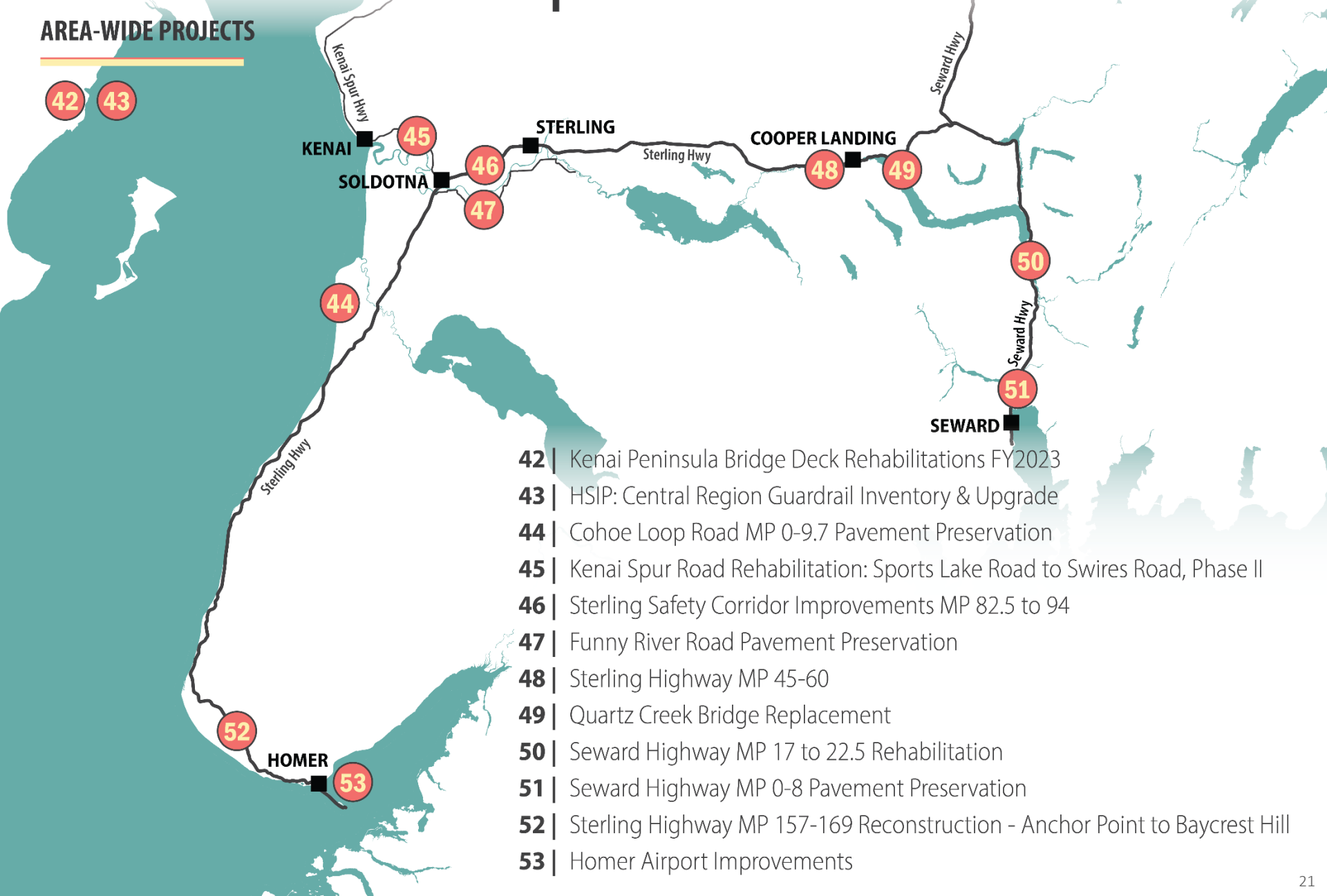
## Opportunities/Solutions

- Scheduling Double Shifts – Day and Night
- Project Phasing – Split project into two halves



# KENAI PENINSULA | 2023 CONSTRUCTION

## AREA-WIDE PROJECTS



- 42 | Kenai Peninsula Bridge Deck Rehabilitations FY2023
- 43 | HSIP: Central Region Guardrail Inventory & Upgrade
- 44 | Cohoe Loop Road MP 0-9.7 Pavement Preservation
- 45 | Kenai Spur Road Rehabilitation: Sports Lake Road to Swires Road, Phase II
- 46 | Sterling Safety Corridor Improvements MP 82.5 to 94
- 47 | Funny River Road Pavement Preservation
- 48 | Sterling Highway MP 45-60
- 49 | Quartz Creek Bridge Replacement
- 50 | Seward Highway MP 17 to 22.5 Rehabilitation
- 51 | Seward Highway MP 0-8 Pavement Preservation
- 52 | Sterling Highway MP 157-169 Reconstruction - Anchor Point to Baycrest Hill
- 53 | Homer Airport Improvements



# **Sterling Highway MP 45-60 (Cooper Landing)**

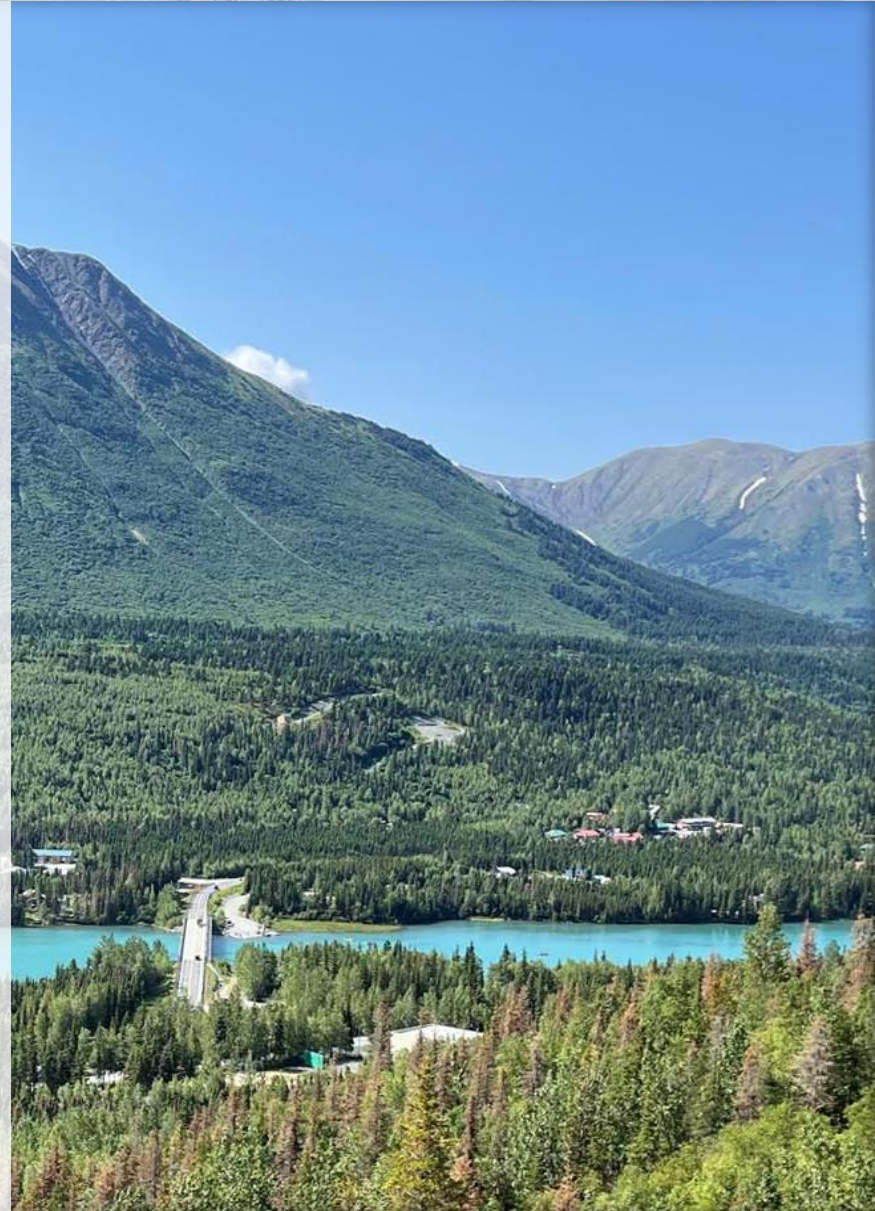
**CMGC: Phase 1-6 from 2021 to 2027**

**New CMGC contractor March 2022**

**Cost Estimate: \$690 million**

**Phase 1A under construction-west end, creating Alaska's first wildlife overcrossing, bringing highway up to modern design**

**Phase 1B-east end is scheduled to start in 2024 with completion in 2026**







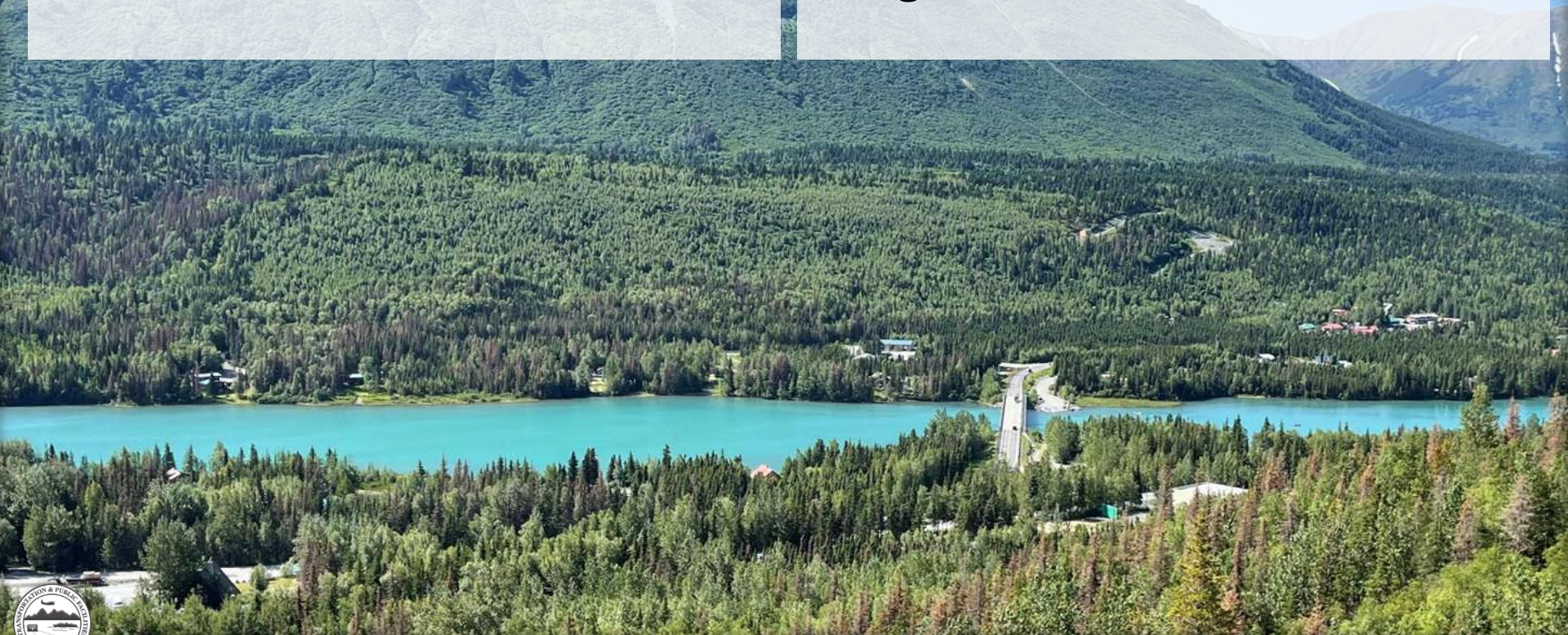
# **Sterling Highway MP 45-60 (Cooper Landing)**

## **Risks/Challenges**

- Increased costs due to inflation
- Short construction season in the Pass

## **Opportunities/Solutions**

- Collaboration with local planning and development
- Collaboration with other agencies

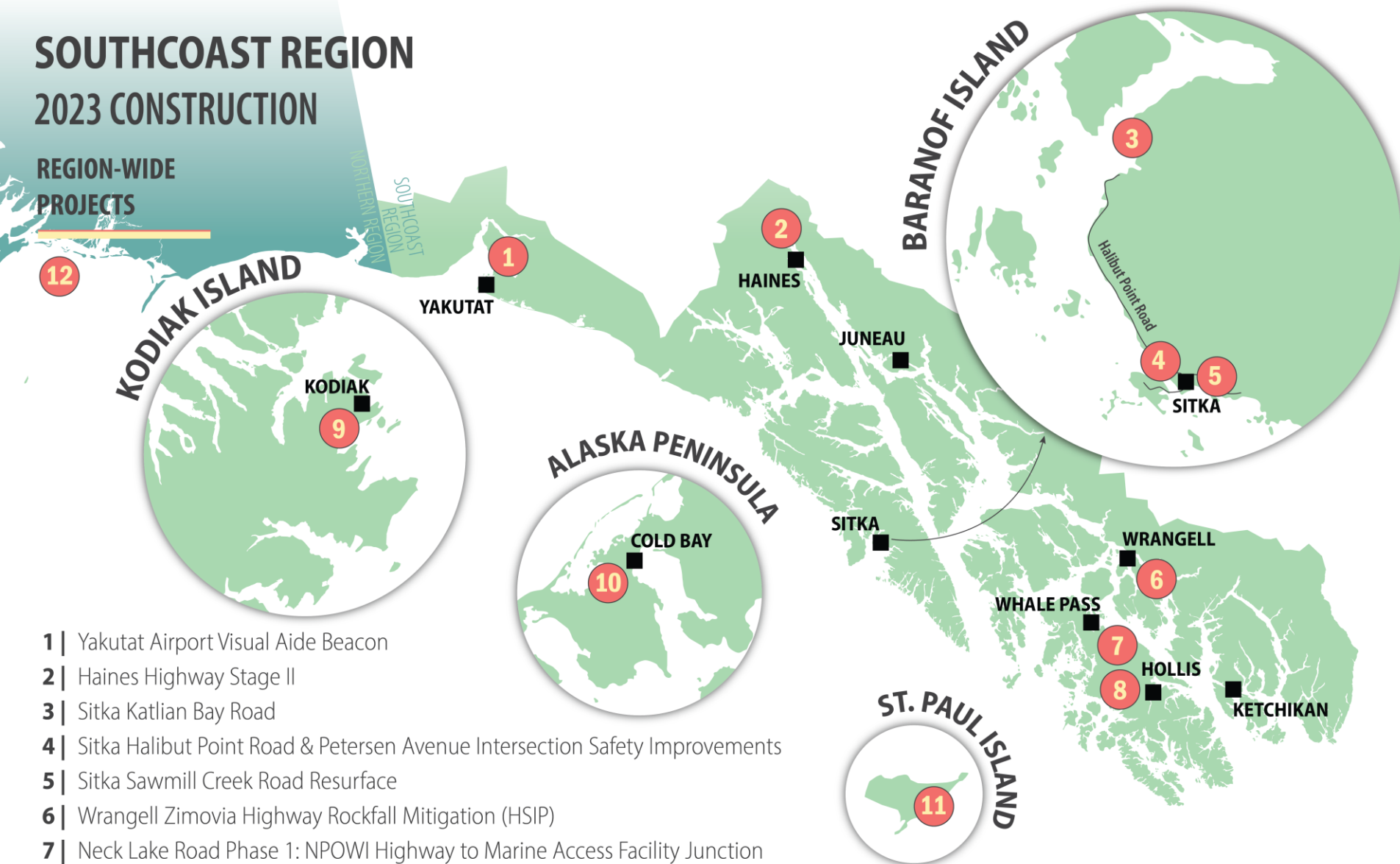




# SOUTHCOAST REGION

## 2023 CONSTRUCTION

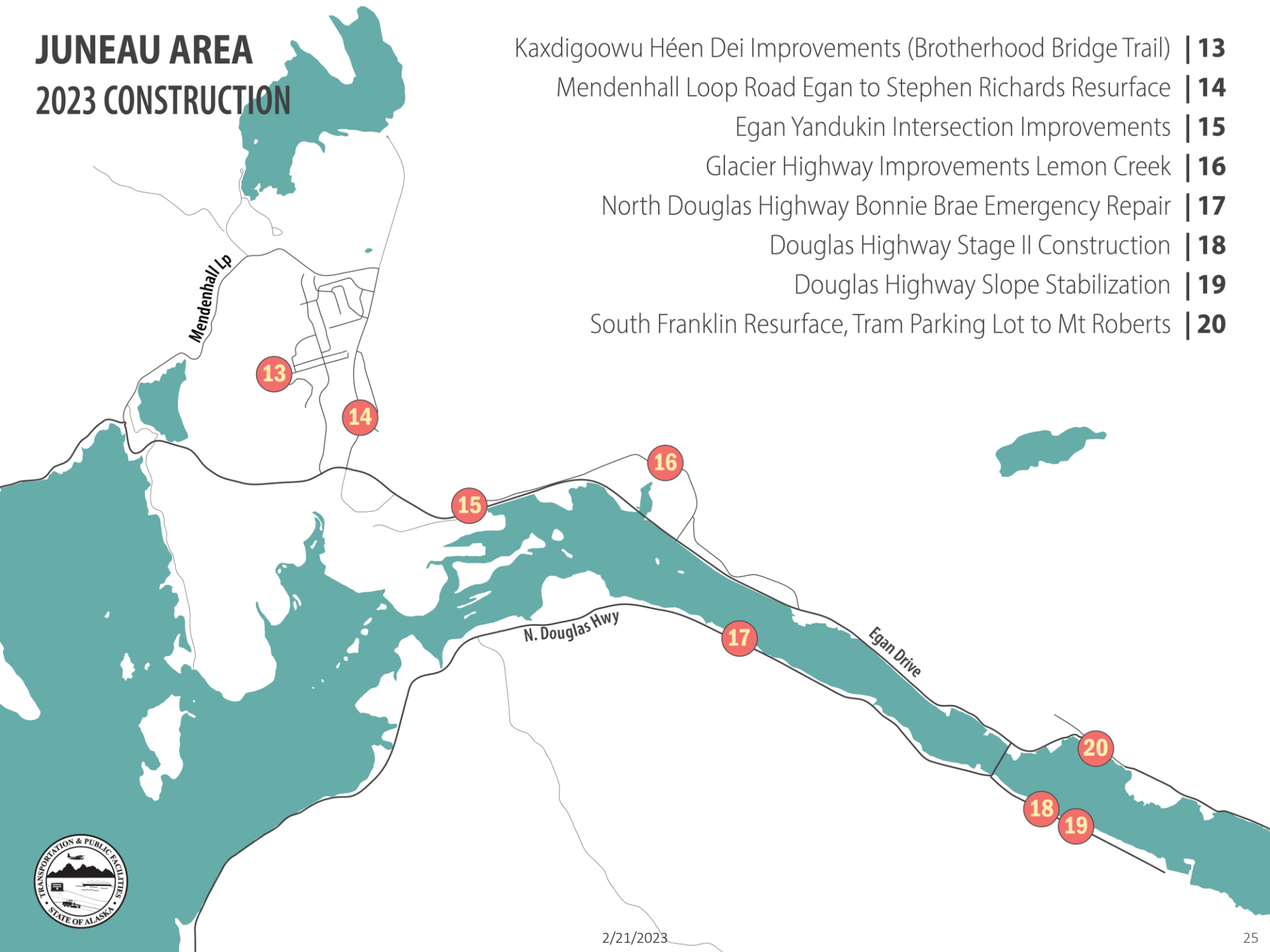
### REGION-WIDE PROJECTS





# JUNEAU AREA

## 2023 CONSTRUCTION



- Kaxdigoowu Héen Dei Improvements (Brotherhood Bridge Trail) | **13**
- Mendenhall Loop Road Egan to Stephen Richards Resurface | **14**
- Egan Yandukin Intersection Improvements | **15**
- Glacier Highway Improvements Lemon Creek | **16**
- North Douglas Highway Bonnie Brae Emergency Repair | **17**
- Douglas Highway Stage II Construction | **18**
- Douglas Highway Slope Stabilization | **19**
- South Franklin Resurface, Tram Parking Lot to Mt Roberts | **20**



## KETCHIKAN AREA 2023 CONSTRUCTION



- 21** | Wolfe Point Slope Stability Improvements
- 22** | Gravina New Ferry Berth, Upland Improvements & Refurbish Existing Berth
- 23** | Gravina Airport Ferry Layup Facility & Freight Facility
- 24** | Revilla New Ferry Berth, Upland Improvements & Refurbish Existing Berth
- 25** | Tongass Avenue Improvements
- 26** | Water Street Trestle No. 1 Improvement
- 27** | Stedman & Deermount Streets Intersection Safety Improvements
- 28** | Herring Cove Bridge Replacement





# Haines Highway Reconstruction

**Project constructed in three phases from MP3.5 to MP25:**

- Phase I – MP3.5 to MP12 (completed)
- Phase II – MP12 to MP20 (underway)
- Phase III – MP20 to MP25 (2024 const.)

**Total project cost ~\$120 million  
(Phase III estimate \$40 to \$50 million)**

The Project widens shoulders, realigns most curves, and improves sight distance to provide more passing zones. The project will improve recreation access and make improvements to protect the highway from debris and flood flows.







# Haines Highway Reconstruction

## Risks/Challenges

- Protect wildlife, large debris flows, armoring a braided glacier river, allow for tourism activities during construction, eagle preserve management, and cultural and archeological discoveries in the project corridor

## Opportunities/Solutions

- Close coordination with resource agencies, tribes, local government and businesses.
- Reduce ongoing maintenance costs with debris flow structures



# Kodiak Airport Perimeter Fencing Upgrade

**Construction to begin in 2024**

**Estimated project cost: \$6 million**

**Scope:** Replace existing gates and fencing to FAA standards. The project also improves the operability for M&O staff and provides remote gate operation capability as well as increased security redundancy for access.





# Kodiak Airport Perimeter Fencing Upgrade

## Risks/Challenges

- PFAS was discovered at the project site during conclusion of the first advertisement of the project
- Inflation and PFAS complications could result in significantly higher bid

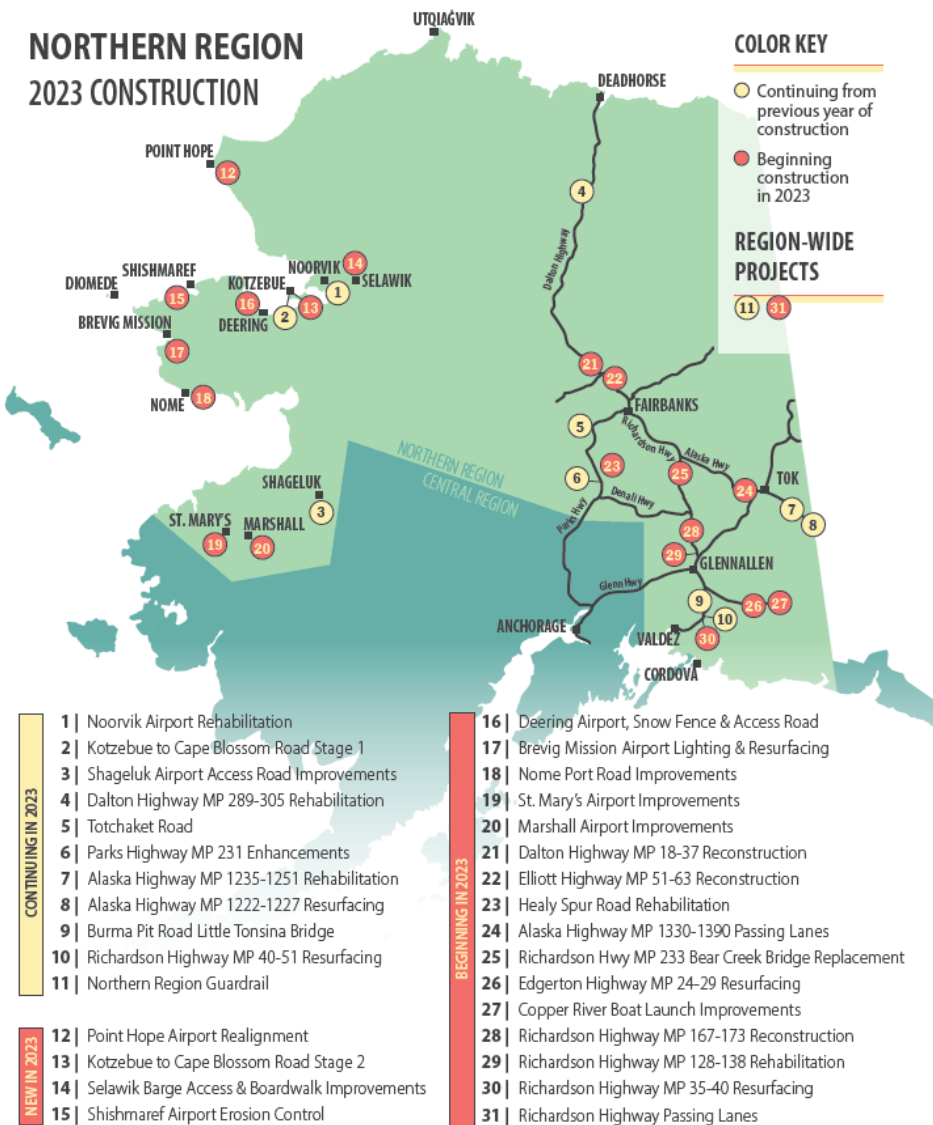
## Opportunities/Solutions

- Collaboration with USCG (land owner), DEC, EPA, FAA
- Preconstruction sampling of post-hole locations to help determine materials handling in the absence of established guidelines from EPA and DEC for PFAS handling

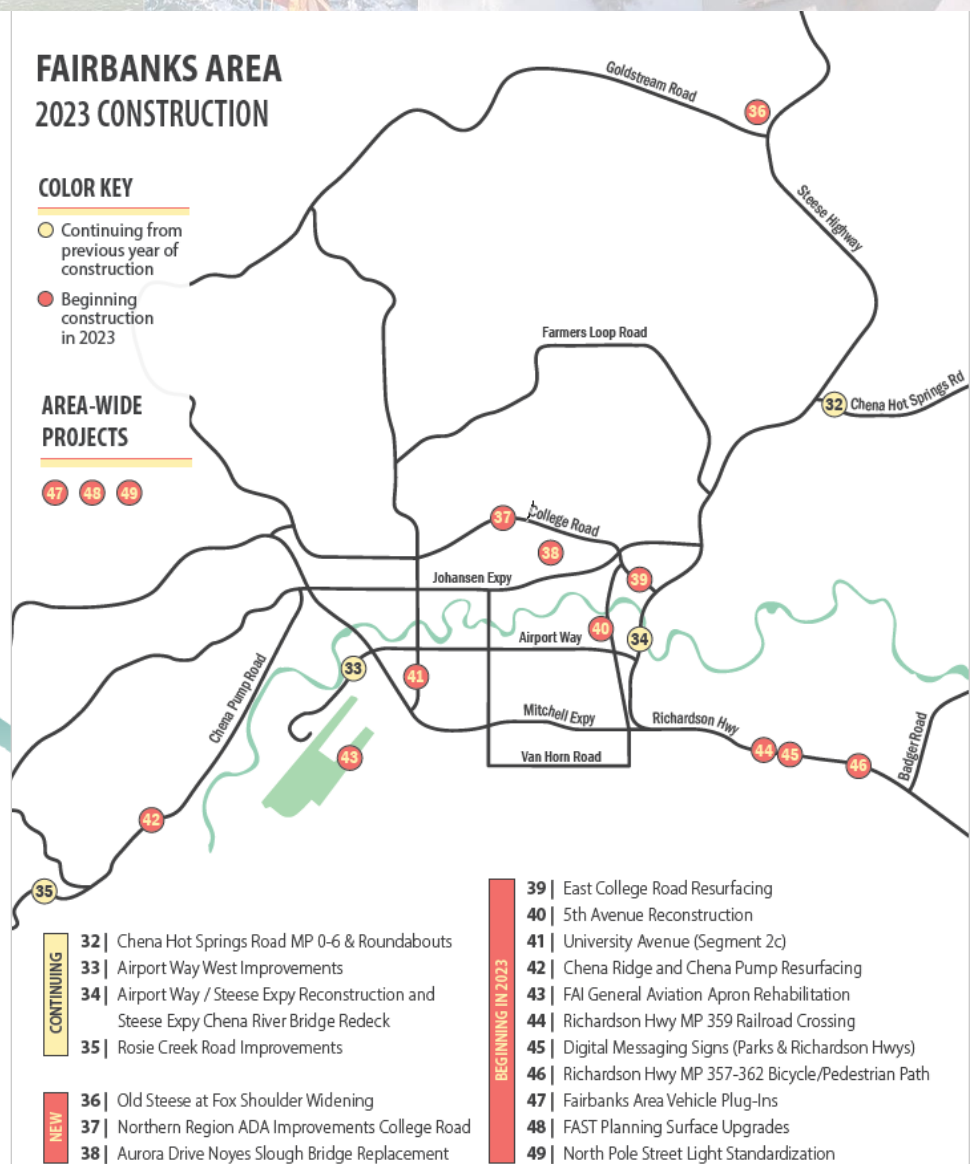


# Northern Region 2023 Construction

## NORTHERN REGION 2023 CONSTRUCTION



## FAIRBANKS AREA 2023 CONSTRUCTION





# Bear Creek washout – Richardson Hwy MP 233.5

## Previously identified at-risk corridor

### PEL Study in process at time of storm (July '22)

- Allowed design already under way to be fast tracked to completion and 2023 construction
- Emergency Repair funding used for 2023 work
  - Saves STIP funding for other at-risk bridges along Richardson MP 206-233 corridor





# Kotzebue – Cape Blossom Road

**Community led project to reduce freight costs for Kotzebue and other NW Arctic Borough communities.**

- 11.2 miles of two-lane gravel road connecting city to better beach landing area
- Required 9% local funding match
  - Match came from community through use of materials site stockpile





# Thank You. Questions?

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2019/07/13

