Interagency Consultation

Richardson Highway MP346 Bridge Replacements

Meeting Agenda

Monday, February 26, 2024, 10:00 – 11:00 AM

100 Cushman Street, Suite 215 (Key Bank Building)

To join the Zoom Meeting via computer, go to: www.fastplanning.us/keepup/zoom

Zoom Meeting Phone Number: 1 (253) 215-8782, enter **Meeting ID:** 857-5847-1432

1. Call to Order
2. Introduction of Members & Attendees
3. Meeting Minutes from February 5, 2024
4. Public Comment Period
5. **Project Review:** Richardson Highway MP 346 Chena Bridges Replacement
6. Next Steps
7. Adjournment

Interagency Consultation
Fairbanks PM2.5 Area Conformity Freeze
Meeting Summary
February 5, 2024 – 10:00am to 12:00pm (AK Time)

Attendees

FAST Planning – Jackson Fox, Corey DiRutigliano
Federal Highway Administration (FHWA) – Julie Jenkins, Patrick Lentlie, Theresa Hutchins
Federal Transit Administration (FTA) – Ned Conroy
U.S. Environmental Protection Agency (EPA) – Tess Bloom, Claudia Vaupel, Aaron Letterly, Rudolph Kapichak, Matt Jentgen
Alaska Department of Transportation & Public Facilities (DOT&PF) – Randi Bailey, Adam Moser, Joseph Kemp, Lauren Little, Brett Nelson, Judy Chapman, Jennifer Wright, John Netardus
Alaska Department of Environmental Conservation (ADEC) – Adeyemi Alimi, Jason Olds, Nick Czarnecki
Fairbanks North Star Borough (FNSB) – Steven Hoke
Other Attendees – Mary Farrell, Barbara Schuhmann, Jon Cook, Travis Malin, Luke Hopkins, Greg Bringhurst, Patrice Lee, Jennifer Campbell, Patrick Gilchrist

Introduction & Public Comment

Jackson Fox (FAST Planning) led attendee introductions/roll call and asked if there were any members of the public present wishing to provide comment before discussion of the main agenda items.

Patrice Lee stated she appreciated all the work that went into FAST Planning and the degree of detail that has to be worked out. She added that everyone wants to have their Federal Highway dollars back, but we have known for years and years that if we did not clean up our air this was going to happen. She said it is of upmost concern to clean up our air and there are some important things people can support such as how we can use

renewable energy to offset how much fossil fuels we burn. She added there is a concept in environmental studies called "picking up the pennies" and every little bit of pollution you can offset brings us to a better place. She said if we take advantage of everything we can do we can clean up the air and we can get back to having our highway money available, undictated to, so what we can do what we need to do when we need do it.

Luke Hopkins stated he was particularly concerned following the presentation that was made to the FNSB Assembly during a work session where FAST Planning and other comments were made on the impact of restricted funds because of our air quality. He stated he certainly hopes that those issues are well understood and the votes that may be taken today beyond a presentation will so note that we have this very impactful EPA restriction on our transportation plans that are out here in public with FAST Planning. He added he looks forward to the discussion and hopes he can feel some relief from votes that might be taken today concerning these particular projects and the requirements that we are well aware of from the EPA.

Jon Cook stated he wanted to comment on the agenda items and a little bit of confusion as to why the Richardson Highway MP346 bridge replacement is in as well as the Steese Highway MP5 bridge replacement are in. He added that neither project received local planning approval to be added to the Statewide Transportation Improvement Program (STIP). The current draft of the STIP submitted by DOT&PF to FHWA does has the Steese Highway MP5 bridge in for illustrative purposes only and it has the Richardson Highway MP346 bridge replacement in, but again neither are allowed to be included in the document because they did not receive local planning approval. He stated he was not sure why they would even be placed on the agenda, as neither will be allowed in the final draft of the STIP. He added one thing he would add to the agency partners, because the conformity freeze does affect items being added to the STIP, is that the Deputy Commissioner of DOT&PF the other day told Fairbanks Chamber of Commerce Transportation Committee that they intended to add Steese Highway MP5 bridge via emergency bridge funding. He added that whether that's allowed or whether it is an available pot of funding is one question, but whether use of that funding could be subject to the air quality conformity freeze, he does not have any idea. He said that is for you all to know, but just looking at a different path that DOT&PF may intend to use if they cannot get that particular bridge into the STIP, he just thought he would bring that to this group's attention.

Overview of Conformity Freeze

Mr. Fox introduced a couple slides from the January 22nd training provided by Patrick Lentlie (FHWA) and thanked him for hosting the training for all the Federal, State, and local partners in the meeting. He reminded the group the Conformity Freeze took effect on January 4th and ADEC plans to resubmit their State Implementation Plan (SIP) to the EPA by July and the EPA has 18 months to review for approval. He added that from speaking the ADEC and EPA we should expect the review to take the full 18 months so the Conformity Freeze will likely last 24 months (2 years).

Mr. Fox then explained that under the Conformity Freeze, FAST Planning's long- and short-range transportation plans are frozen, but that does not necessarily mean that Federal Highway dollars are being withheld from our area at this time. The current program of projects that we have in those plans are allowed to move forward over the next four years as scheduled and as budgeted, but our ability to modify those plans is significantly hampered by the Conformity Freeze. He offered some examples that we can make some minor adjustments to projects, but we cannot add new Non-Exempt projects into our plans or approve any substantial funding increases or modify the original project intent or purpose and need of existing Non-Exempt projects. He then explained the differences between Exempt and Non-Exempt projects under 40 CFR 93.126-128. He stated FAST Planning could potentially move forward with Amendments to our long- and short-range transportation plans for Exempt projects, which generally include safety projects, transit related activities, air quality beneficial projects, and planning activities that do not lead directly to construction projects. He added that is why this Interagency Consultation meeting was important to do with our Federal and State partners to look at some specific projects of concern and see what we can or cannot do to move them forward under various provisions in the CFR. Mr. Fox then provided a brief overview and introduction to the four projects listed on the agenda for review later in the meeting.

Mr. Fox then introduced the 1996 guidance referenced in the January 22nd training – 'Exemption Criteria Policy for Highway Sanctions' [FHWA Docket No. 94-29; Federal Register, Vol. 61, No. 63, p. 14363-14372; April 1, 1996]. He stated that under this guidance there is an additional standard that needs to be met for Exempt projects under the Safety criteria from 40 CFR 93.126 that those projects must resolve a demonstrated safety problem and result in a significant reduction or avoidance of accidents. **Patrick Lentlie** [FHWA] clarified for the group this Federal Register notice was for a Highway Sanctions situation and Fairbanks is not yet in a sanctions situation. He added that everyone should be careful about use of the term Exempt and referred the group to the provision in 40 CFR 93.105 [Interagency Consultation Procedures] that talks about any project that is otherwise Exempt under 40 CFR 93.126 can be classified Non-Exempt if it has adverse impacts for any reason. **Rudolph Kapichak** [EPA] stated he agreed with Mr. Lentlie that we are not at a point where there are sanctions yet so right now what applies is the Exempt project criteria in the Transportation Conformity rule which largely is in 40 CFR 93.126 as noted. He added Mr. Lentlie was also right that there is a provision in 40 CFR 93.105 that talks about whether a given project, which would generally be Exempt from conformity, might have some impacts that need to be considered. He then stated the Interagency Consultation group should talk about that just to make sure a project actually is Exempt.

Select Project Review

Mr. Fox then led the group through a project-by-project review of the four projects listed on the agenda. Below are summaries of the group's discussion for each project.

Steese/Johansen Expressway Interchange

- Project replaces an at-grade intersection with a grade-separated interchange
- Project is Non-Exempt and included in FAST Planning's Metropolitan Transportation Plan (MTP) and Transportation Improvement Program (TIP)
- Project scope has not changed from MTP and TIP
- Construction cost increase requires redemonstration of fiscal constraint in MTP which triggers an Amendment [Mr. Fox added that the revenue forecasts for the MTP come from Alaska DOT&PF Planning as the basis for fiscal constraint]
- Amount of cost increase (>30%) triggers a TIP Amendment
- Moving construction phase from "beyond years" of TIP into one of the first four years of TIP triggers an Amendment
- **Conclusion**: Amendments for this Non-Exempt project triggers conformity per 40 CFR Part 93.104(b)(2), which is not allowed during Conformity Freeze.

Old Steese Highway Reconstruction

- Project reconstructs roadway, adds new sidewalks for pedestrians, and widens half of the length of the roadway from three to five lanes
- Project is Non-Exempt and included in FAST Planning's MTP and TIP
- Project scope has not changed from MTP and TIP
- Cost increase does not require redemonstration of fiscal constraint in MTP
- Amount of cost increase (>30%) triggers a TIP Amendment
- Moving construction phase from "beyond years" of TIP into one of the first four years of TIP triggers an Amendment
- **Conclusion**: Amendments for this Non-Exempt project triggers conformity per 40 CFR Part 93.104(b)(2), which is not allowed during Conformity Freeze.

Steese Highway MP 5 Bridge Replacement

- Project replaces existing bridge with a new bridge with no additional travel lanes, may increase load capacity, helps trucks avoid having to use at-grade bypass
- Project is not included in FAST Planning's MTP and TIP
- Project likely Exempt under 40 CFR Part 93.126 Safety criteria for 'reconstructing bridges (no additional travel lanes)'
- Need to consult at local level pursuant to 40 CFR Part 93.105(c)(iii) to confirm project is Exempt
- **Conclusion**: Group seemed leaning towards the project being Exempt, and if so this project can be added to MTP and TIP by Amendment if fiscal constraint and other planning requirements are met.

Richardson Highway MP 346 Chena Bridges Replacement

- Project replaces existing bridge with a new bridge with no additional travel lanes, may increase load capacity, helps trucks avoid having to use at-grade bypass
- Truck activity from mine is already accounted for in VMT estimates
- Project is not included in FAST Planning's MTP and TIP

- Project is not located entirely within FAST Planning's Metropolitan Planning Area boundary, but is partially and such projects typically are included in MTP and TIP; there was disagreement between Mr. Fox [FAST Planning] and Lauren Little [Alaska DOT&PF] about whether or not the project was within the FAST Planning boundary; regardless, project is located entirely within the PM2.5 Non-Attainment Area
- Project likely Exempt under 40 CFR Part 93.126 Safety criteria for 'reconstructing bridges (no additional travel lanes)'
- Need to consult at local level pursuant to 40 CFR Part 93.105(c)(iii) to confirm project is Exempt
- **Conclusion**: Group seemed leaning towards the project being Exempt, and if so this project can be added to MTP and TIP by Amendment if fiscal constraint and other planning requirements are met.

Next Steps & Adjournment

Mr. Fox thanked everyone for their attendance and input, and then asked what the process was for making the Exempt versus Non-Exempt determinations for these projects moving forward. **Adeyemi Alimi** [ADEC] said normally the Alaska DOT&PF is required to send the scoping documents of the individual projects to ADEC to look at the project level conformity determination. When they receive the scoping documents, they review the projects and if they believe it is actually an Exempt project, they seek consensus of the Federal partners. If the FHWA, FTA, and EPA believe that the project is Exempt, we provide the response back to Alaska DOT&PF. **Lauren Little** [Alaska DOT&PF] commented that for the bridge replacement projects part of this has been done through the scoping process with ADEC. **Julie Jenkins** [FHWA] responded by stating that yes, that sounds exactly like what FHWA would expect as they are looking for Alaska to make a recommendation and EPA to look at that recommendation and then provide us with their thoughts on that as well. **Tess Bloom** [EPA] added that just looking at the bridge replacement projects, it seems like at the surface they are Exempt, but without really looking at the very specific details of the project it would be difficult right now to make a determination. She added that she thinks going through the process that Mr. Alimi mentioned makes sense. It is her understanding that DOT&PF Northern Region will send an email with bridge project details to the Interagency Consultation partners as EPA was not consulted in the preliminary concurrence by ADEC on Exempt status.

Mr. Fox concluded the meeting by stating he would draft notes from the meeting to share with the group for review and editing or correction. The meeting ended at 11:16 am (Alaska Time).

§ 93.126 Exempt projects.

Notwithstanding the other requirements of this subpart, highway and transit projects of the types listed in table 2 of this section are exempt from the requirement to determine conformity. Such projects may proceed toward implementation even in the absence of a conforming transportation plan and TIP. A particular action of the type listed in table 2 of this section is not exempt if the MPO in consultation with other agencies (see § 93.105(c)(1)(iii)), the EPA, and the FHWA (in the case of a highway project) or the FTA (in the case of a transit project) concur that it has potentially adverse emissions impacts for any reason. States and MPOs must ensure that exempt projects do not interfere with TCM implementation. Table 2 follows:

Table 2—Exempt Projects

Safety

Railroad/highway crossing.
Projects that correct, improve, or eliminate a hazardous location or feature.
Safer non-Federal-aid system roads.
Shoulder improvements.
Increasing sight distance.
Highway Safety Improvement Program implementation.
Traffic control devices and operating assistance other than signalization projects.
Railroad/highway crossing warning devices.
Guardrails, median barriers, crash cushions.
Pavement resurfacing and/or rehabilitation.
Pavement marking.
Emergency relief (23 U.S.C. 125).
Fencing.
Skid treatments.
Safety roadside rest areas.
Adding medians.
Truck climbing lanes outside the urbanized area.
Lighting improvements.
Widening narrow pavements or reconstructing bridges (no additional travel lanes).
Emergency truck pullovers.

Richardson Hwy MP 346 Flood Control Bridges Replacement
Project Summary for Interagency Air Quality Consultation

Project Introduction

The project will replace the Northbound (NB) #1364 and Southbound (SB) #1866 Chena Flood Control Bridges. The bridges are located at milepost (MP) 346.8 of the Richardson Highway between North Pole and Moose Creek.

In the project area the Richardson Highway is a four-lane divided facility with 12-ft lanes, 4-ft inner shoulders and 10-ft outer shoulders. The bridges are narrow, each is comprised of two 12-ft lanes, 2.5-ft inner shoulders and 6.5-ft outer shoulders. The highway is classified as a Rural Interstate throughout the project area.

The existing bridges cross the Chena Flood Control Project, an initiative to prevent flooding after the 1967 flood, located between North Pole and Eielson Airforce Base. Both bridges are 14 span concrete girder bridges, approximately 982 feet long and 36 feet wide. The bridges were built in 1977 and are nearing the end of their design life of 50 years. The inventory load ratings of the NB #1364 and SB #1866 bridges are HS 14 and HS 13, respectively. These are some of the lowest load ratings on the North Richardson Highway. The shear capacity for both bridges is insufficient, and the structures are functionally obsolete. Both bridges do not meet current design standards for width, railing, and railing ends. A life cycle cost analysis was completed to determine if rehabilitation or reconstruction was most appropriate, and reconstruction was determined the most cost effective option.

Figure 1. Existing Bridges

Project Description

The preferred design alternative is full replacement for both NB #1364 and SB #1866 bridges with one bridge structure. The new bridge structure will be a multi-span concrete girder bridge. The net structure width and footprint of this option would be narrower and would allow for fewer piers and foundational elements. This will result in a larger net hydraulic opening, reduce overall construction time, and reduce the impact to the traveling public. This option is less costly over the life of the structures and will result in a structure that meets current design standards for structural capacity, barriers, and geometric standards.

The overall roadway typical section will remain unchanged by this project. The Richardson Highway consists of paved two 12-ft lanes in each direction with 10-ft outer shoulders and 4-ft inner shoulders. Along the proposed bridge the inner shoulders will be separated by a 2-ft wide concrete barrier. The pavement will be upgraded to accommodate projected traffic loading.

All work will be constructed within existing DOT&PF right-of-way. There is an existing utility line owned by ACS attached to the current southbound bridge which will be removed and relocated prior to demolition of the southbound structure. Road building material will come from existing commercial sources in the greater Fairbanks area, no new material site development is planned for this project.

Construction Traffic Impacts

This project is not considered significant for traffic control per DOT&PF's Policy and Procedure 05.05.015. The Richardson Highway is not in a Transportation Management Area, the AADT is less than 30,000 vehicles per day, and it is not expected to fully close the highway for more than one hour at a time.

A generalized construction/demolition sequence may consist of:

1. Divert traffic to one lane in each direction on the southbound bridge.
2. Construct half of the new bridge between the existing bridges.
3. Move northbound traffic to new bridge.
4. Remove existing northbound bridge.
5. Construct the second half of the new bridge.
6. Move all traffic to new bridge.
7. Remove existing southbound bridge.

Preliminary Construction Schedule

Work Scope	**Duration**
Install Southbound (SB) Bridge Foundation & Abutments	October 2024-July 2025 (9 months)
Traffic Diverted to SB Prism	May 2025-October 2025 (6 months)
Demolish Existing Northbound (NB) Bridge	May-July 2025 (2 months)
Install SB Bridge Girders	June-July 2025 (1.5 months)
Complete SB Bridge & Pavement	July-October 2025 (2 months)

Work Scope	**Duration**
Return Traffic to 2-lane NB/SB Configuration	October 2025
Install NB Bridge Foundation & Abutments	August 2025-December 2025 (5 months)
Winter Shutdown	**December 2025-April 2026**
Continue NB Bridge Foundation & Abutments	April 2026-June 2026 (3 months)
Traffic Diverted to new SB Prism	May 2026-October 2026 (6 months)
Construct NB Bridge	May 2026-October 2026 (6 months)
Return Traffic to 2-lane NB/SB Configuration	October 2026-May 2027
Winter Shutdown	**October 2026-May 2027**
Traffic Returned to Single Lane Each NB/SB	May 2027-August 2027 (4 months)
Demolish Existing SB Bridge	May 2027-August 2027 (4 months)
Final Grading & Paving	May 2027-August 2027 (4 months)
Project Complete	September 2027

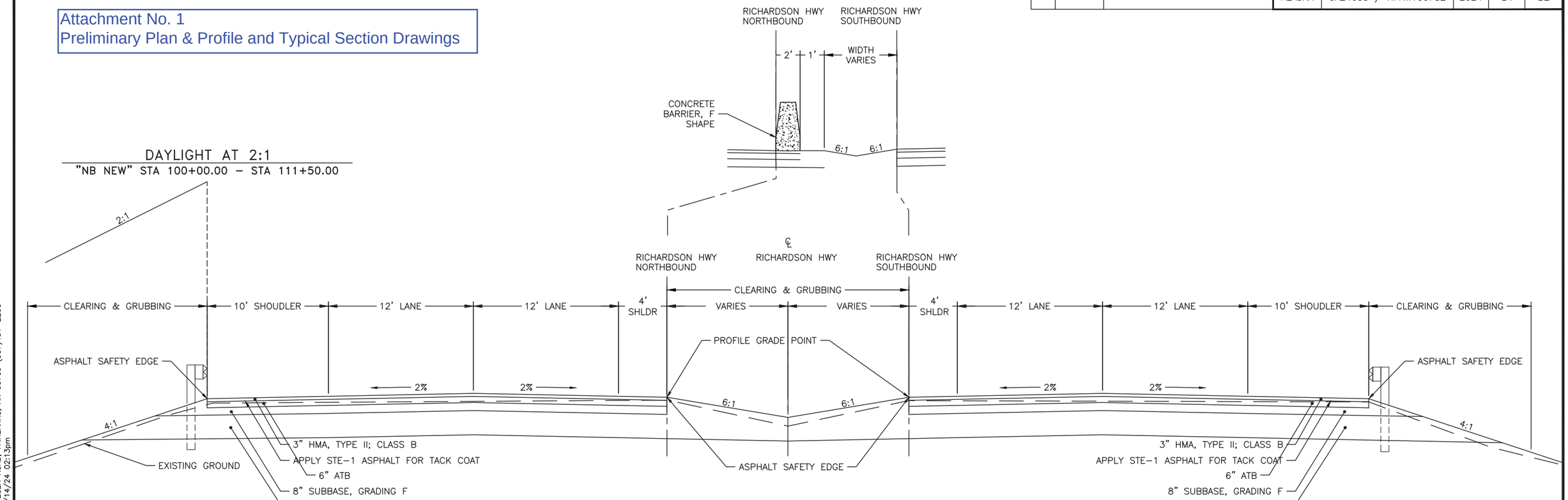
Total duration of traffic impacts is estimated to be 16 months with traffic returned to 2-lane NB/SB configuration each winter.

Attachments:
Preliminary Plan & Profile and Typical Section Drawings
Regional Traffic & Safety Engineer Analysis
CMGC Contractor Construction Sequence Proposal

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24035 / NFHWY00782	2024	B1	B2

Attachment No. 1
Preliminary Plan & Profile and Typical Section Drawings



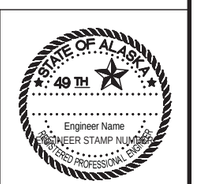
ROADWAY TYPICAL SECTION

"SB NEW" STA 300+00.00 – STA 311+50.00
"SB NEW" STA 321+45.00 – STA 332+00.00

EXCAVATION LIMIT SUMMARY			
STATION	STATION	LANE	THICKNESS (IN)

TYPICAL SECTION NOTES:

1. SEED ALL DISTURBED AREAS OR AS DIRECTED BY THE ENGINEER.
2. CLEARING LIMITS ARE 10FT PAST THE TOE OF SLOPE OR THE ROW, WHICHEVER IS CLOSER.
3. ALL WORK MUST STAY WITHIN RIGHT-OF-WAY.
4. SAW CUT ALL TRANSITIONS AND MATCH POINTS, APPLY STE-1 TACK COAT TO ALL SAW CUT FACES AND PRIOR TO PAVING. SAW CUTTING WILL NOT BE MEASURED OR PAID FOR DIRECTLY BUT IS SUBSIDIARY TO THE 401 PAY ITEMS.
5. APPLY STE-1 TACK COAT BETWEEN ATB AND HMA TYPE II: CLASS B.
6. INSTALL GUARDRAIL POST IN ACCORDANCE WITH STANDARD PLAN G-10.21. SEE PAGE E1 FOR ADDITIONAL GUARDRAIL NOTES

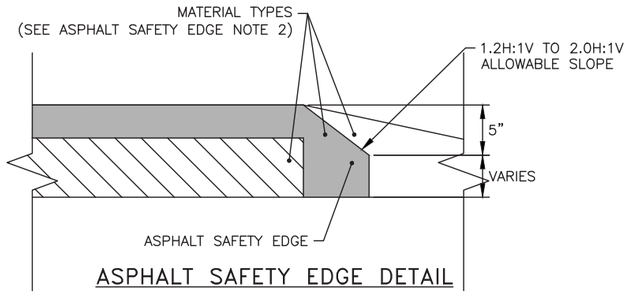


TYPICAL SECTION 1 OF 2

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
H:\Projects\Rich_Hwy\NFHWY00782_Rich_Floodplain_Bridge\9 Civil 3D\Planset\Plans_B-TYPICAL SECTION 1 OF 2 Wed, Feb/14/24 02:13pm

NO.	DATE	REVISION

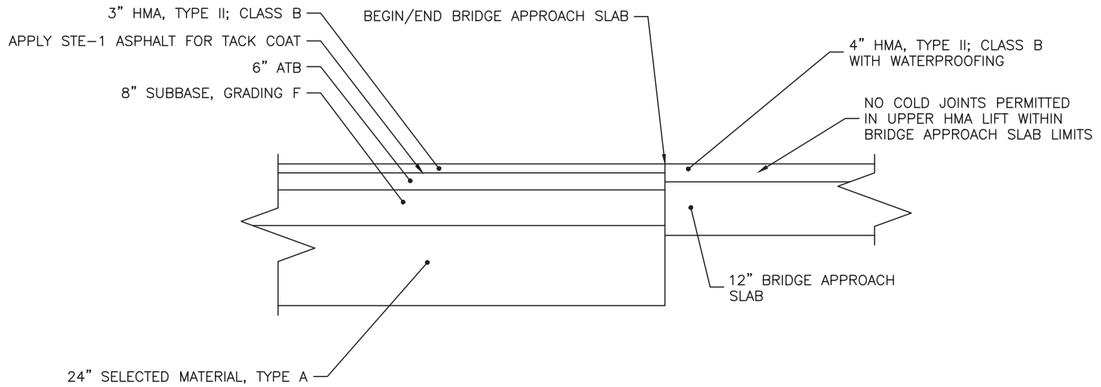
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24035 / NFHWY00782	2024	B2	B2



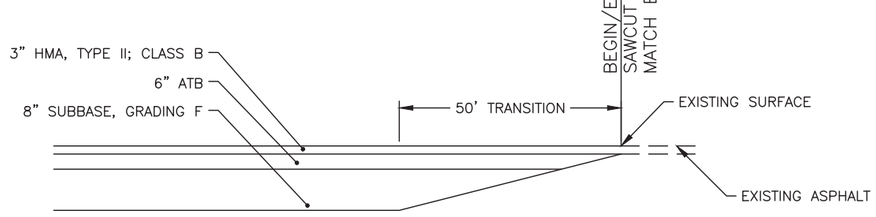
ASPHALT SAFETY EDGE DETAIL

ASPHALT SAFETY EDGE NOTES:

1. DO NOT CONSTRUCT THE SAFETY EDGE ACROSS DRIVEWAYS, BRIDGE, OR APPROACH SLABS.
2. REFER TO TYPICAL SECTIONS FOR MATERIAL TYPES AND THICKNESS TO BE USED.
3. MATERIAL WILL BE MEASURED AND PAID FOR UNDER THEIR RESPECTIVE PAY ITEMS.
4. LABOR AND EQUIPMENT REQUIRED TO CONSTRUCT THE SAFETY EDGE IS SUBSIDIARY TO THE RESPECTIVE MATERIAL PAY ITEMS



APPROACH SLAB/PAVEMENT TRANSITION DETAILS



BOP AND EOP TRANSITION DETAILS

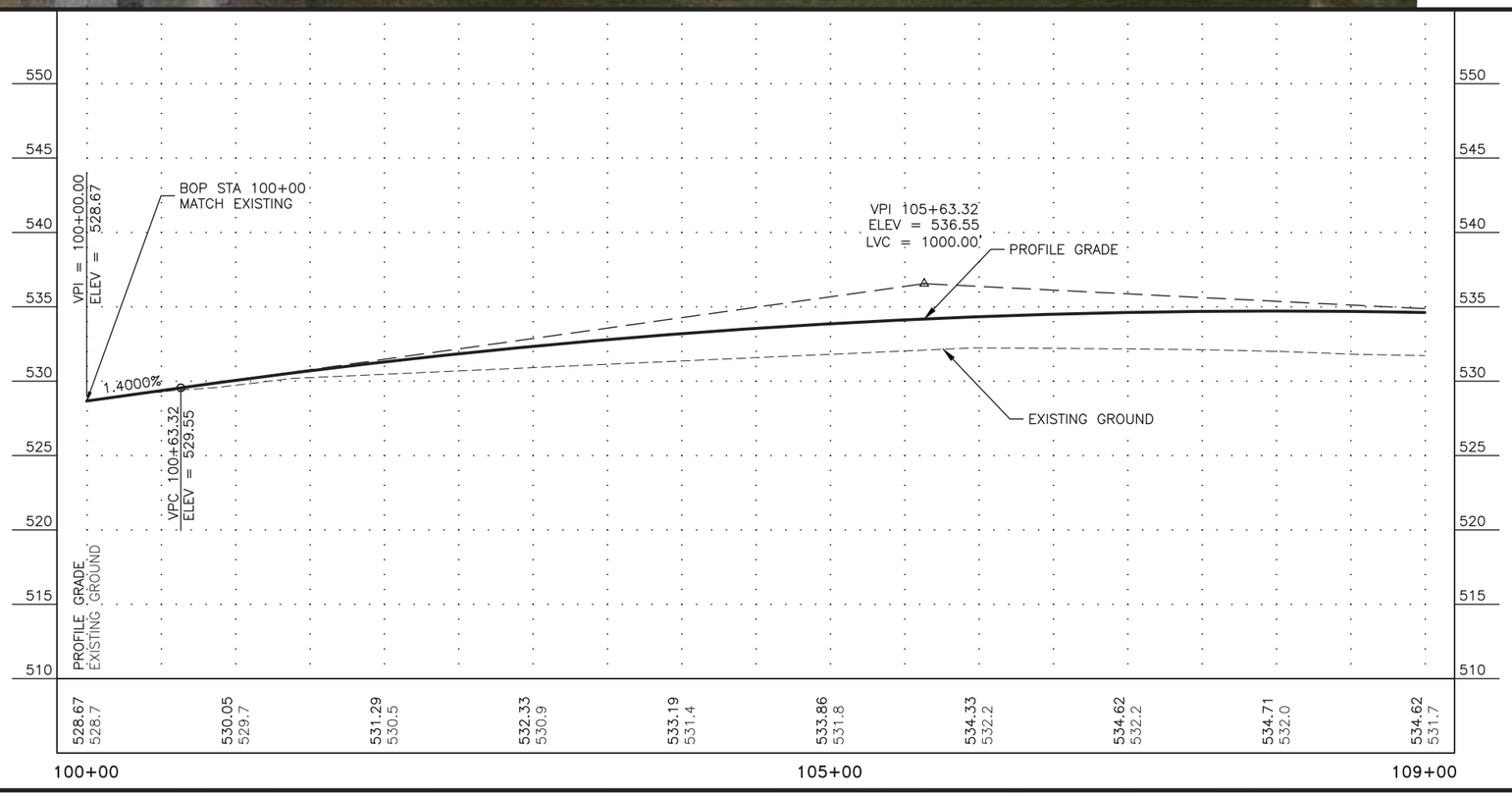
TYPICAL SECTIONS 2 OF 2

STATE OF ALASKA
49 TH
Engineer Name
ENGINEER STAMP NUMBER
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
H:\Projects\Rich_Hwy\NFHWY00782_Rich_Floodplain_Bridge\9 Civil 3D\Planset\Plans_B-TYPICAL SECTIONS 2 OF 2 Wed, Feb/14/24 02:13pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24035 / NFHWY00782	2024	F1	F6



STATE OF ALASKA 49TH
####
####
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
H:\Projects\Rich_Hwy\NFHWY00782_Rich_Floodplain_Bridge\9 Civil 3D\Working\00782_P&P-100+00.00-109+00.00 Wed, Feb/14/24 02:14pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24035 / NFHWY00782	2024	F2	F6

"NB_NEW"110+69.58 PI
Δ = 1°19'10"
D = 0°52'53"
T = 74.85'
L = 149.70'
R = 6500.00'
S = 3.0 %

MATCH "NB_NEW" 109+00 LINE

"NB_NEW"109+94.73 PC
RC: "NB_NEW"109+95
BFS: "NB_NEW"110+20
110+00
EFS: "NB_NEW"111+25
"NB_NEW"111+44.43 PT
RC: "NB_NEW"111+50
R/W
115+00
120+00
RC: "NB_NEW"121+45
"NB_NEW"121+73.34 PC
BFS: "NB_NEW"122+10
MATCH "NB_NEW" 124+00 LINE
≈ 202.05'
S 52°31'26" E ≈ 1028.91'
BRIDGE START STA. 111+50
END BARRIER, F SHAPE
RUN
BRIDGE END STA 121+45
BEGIN BARRIER, F SHAPE RUN
R/W
FO

STATE OF ALASKA
49 TH
####
####
REGISTERED PROFESSIONAL ENGINEER

VPI = 111+50.00
ELEV = 533.62
VPT 110+63.32
ELEV = 534.05
VPI = 121+45.00
ELEV = 528.65
VPC 121+86.95
ELEV = 528.44
−0.5000%
−0.5000%
−0.5000%
PROFILE GRADE
EXISTING GROUND
PROFILE GRADE
EXISTING GROUND

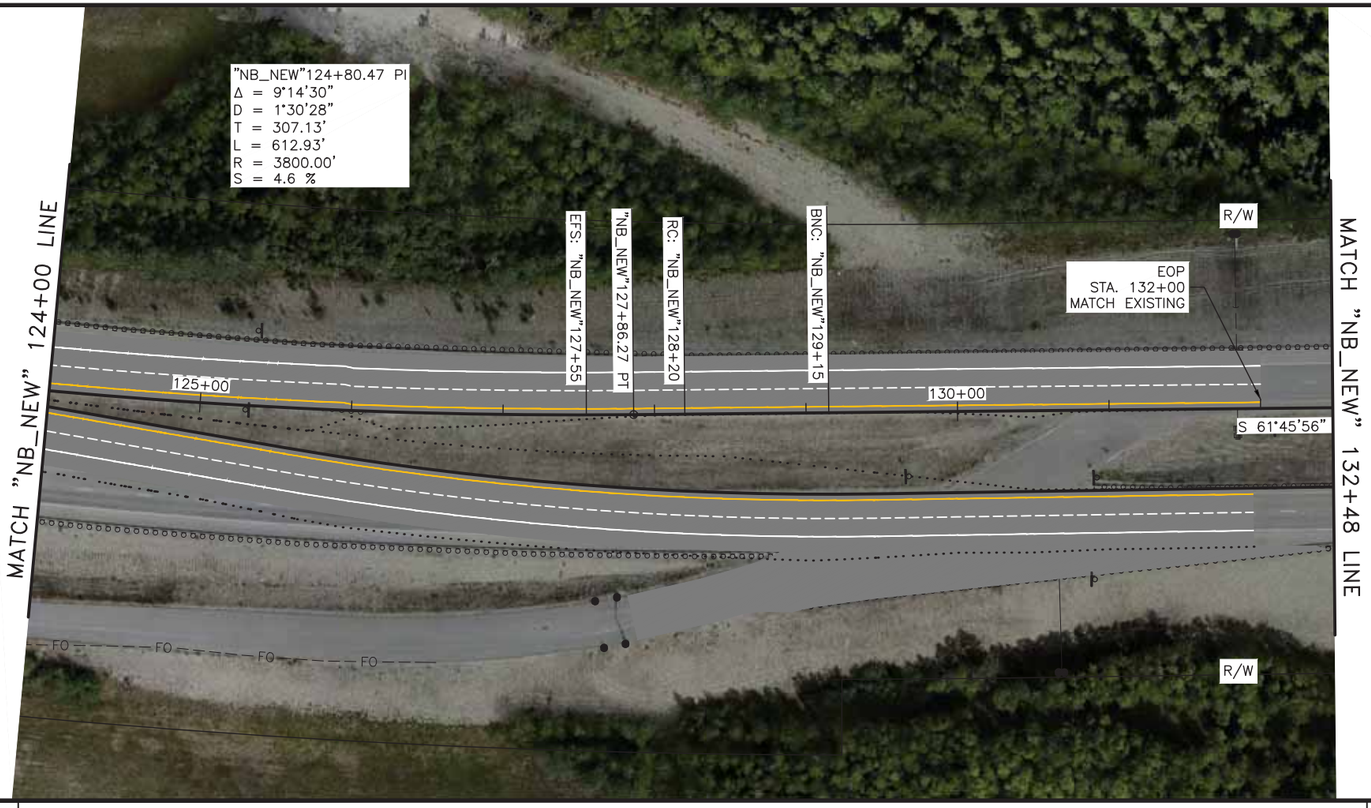
545 540 535 530 525 520 515 510 505

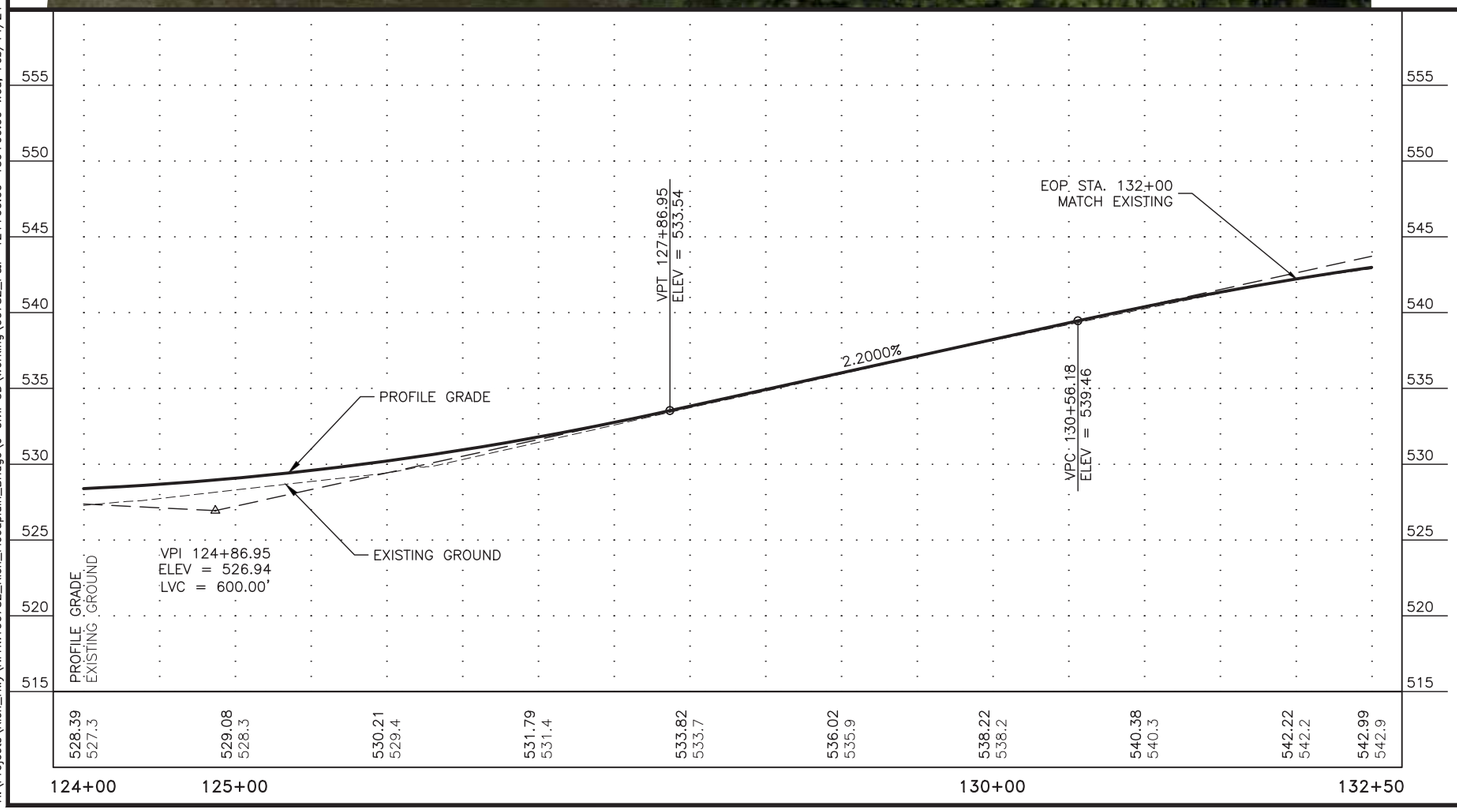
534.62 531.7 | 534.33 531.5 | 533.87 531.4 | 533.37 513.1 | 532.87 506.6 | 532.37 506.4 | 531.87 506.1 | 531.37 506.2 | 530.87 506.1 | 530.37 506.5 | 529.87 506.5 | 529.37 506.1 | 528.87 509.5 | 528.37 526.0 | 528.16 526.5 | 528.39 527.3

109+00 110+00 115+00 120+00 124+00

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24035 / NFHWY00782	2024	F3	F6



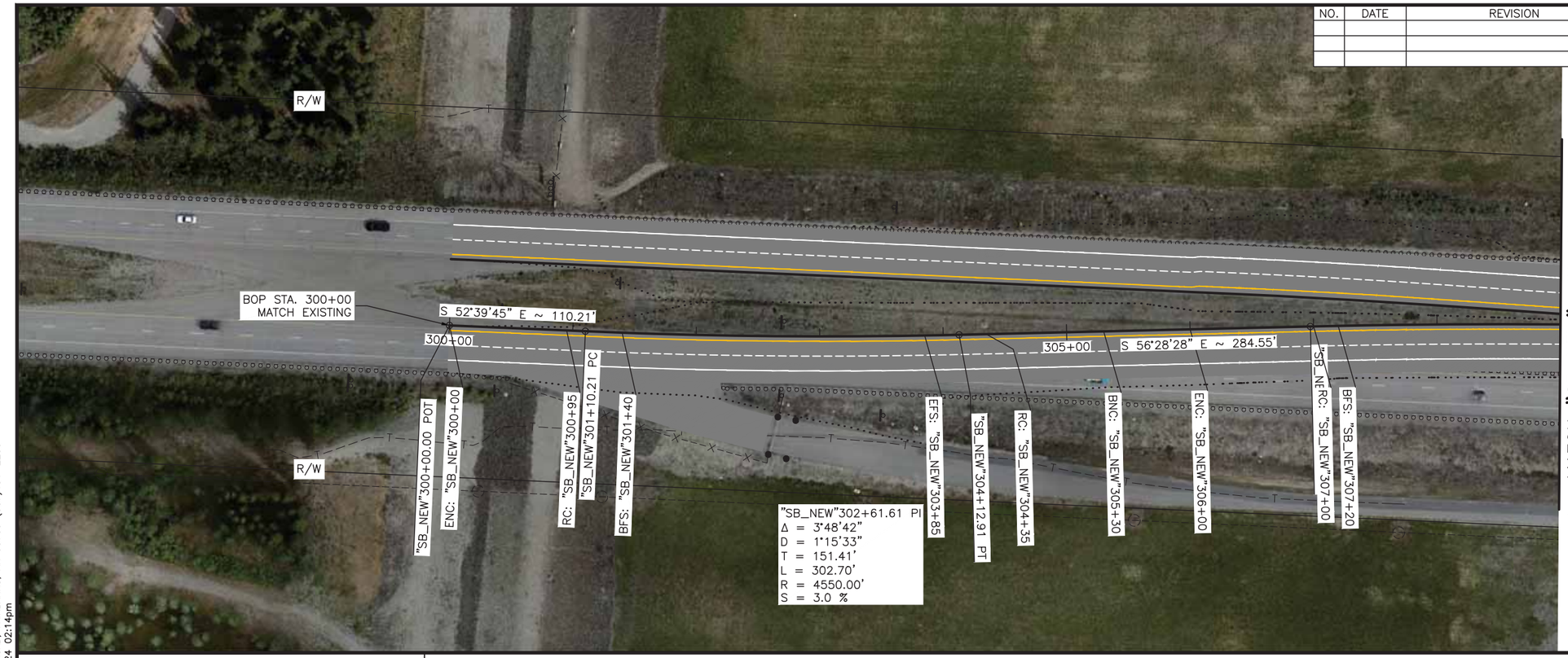


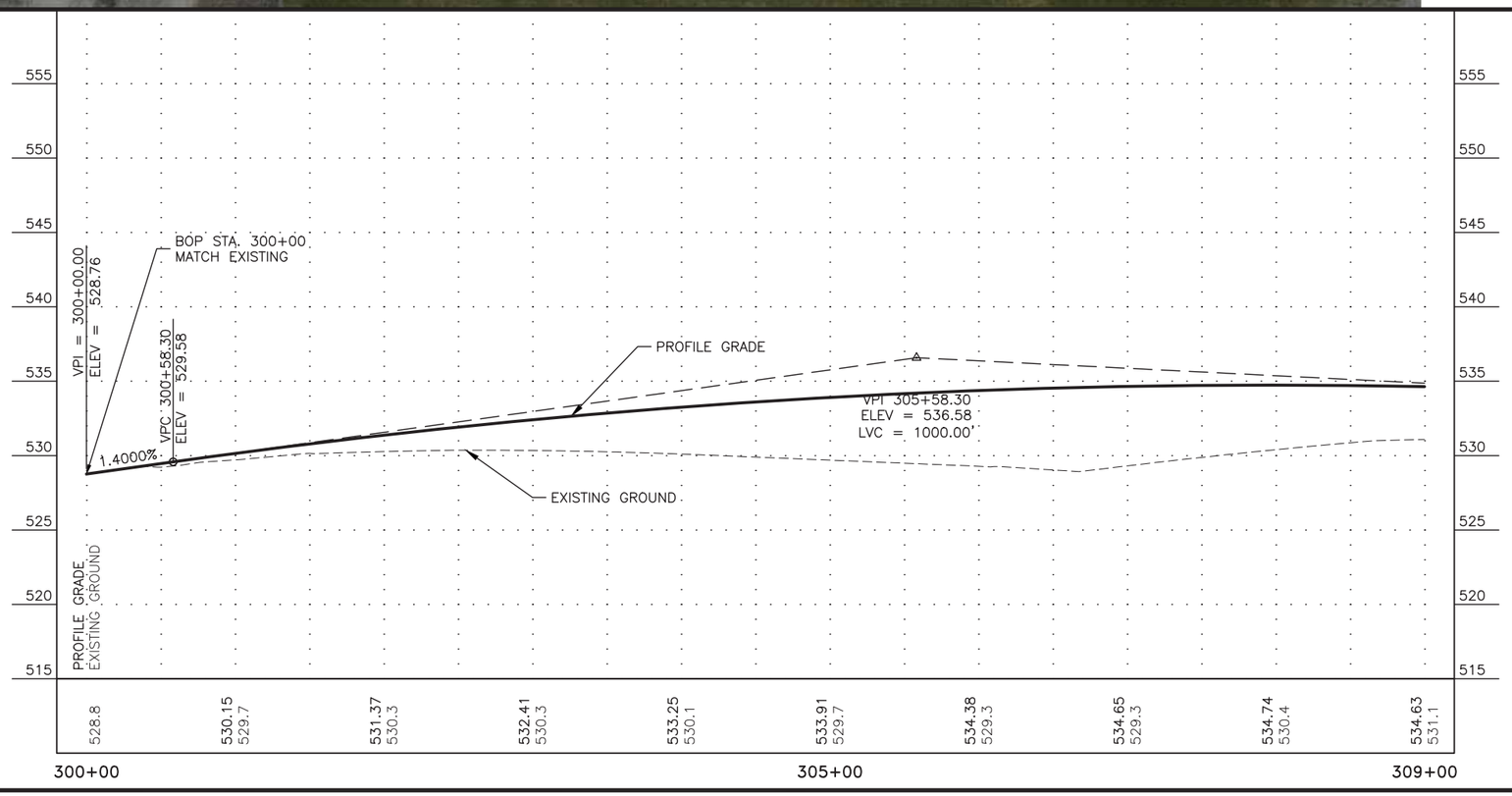
STATE OF ALASKA
49 TH
####
####
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
H:\Projects\Rich_Hwy\NFHWY00782_Rich_Floodplain_Bridge\9 Civil 3D\Working\00782_P&P-124+00.00-139+00.00 Wed, Feb/14/24 02:14pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24035 / NFHWY00782	2024	F4	F6



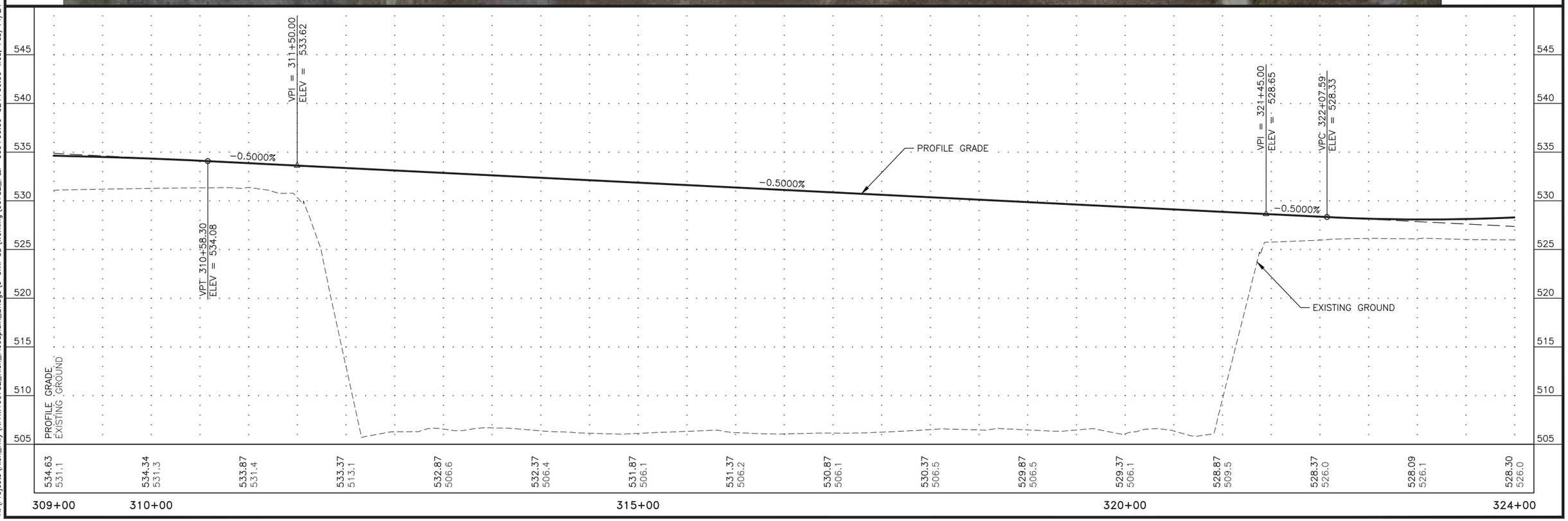


STATE OF ALASKA
49TH
####
####
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
H:\Projects\Rich_Hwy\NFHWY00782_Rich_Floodplain_Bridge\9 Civil 3D\Working\00782_P&P-300+00.00-309+00.00 Wed, Feb/14/24 02:14pm

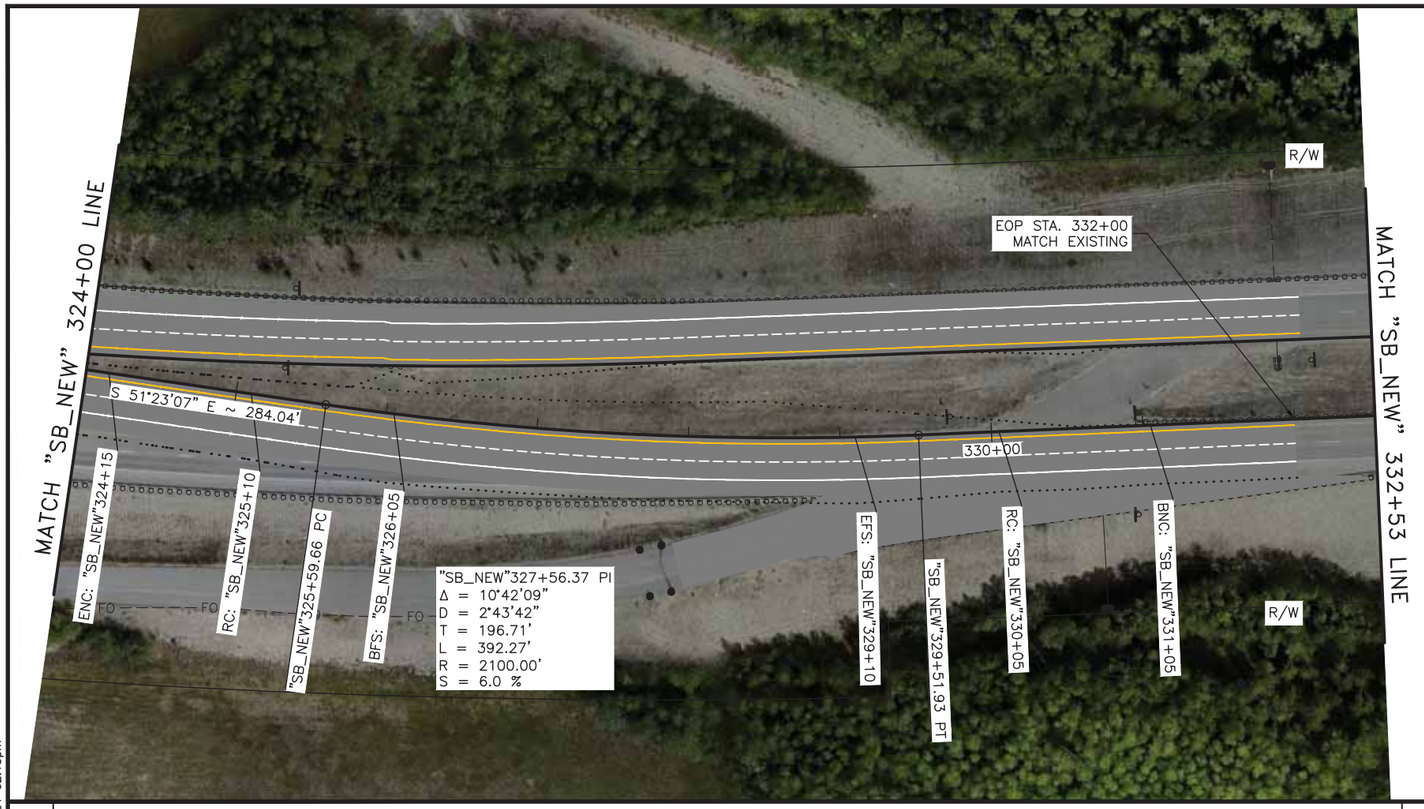
NO.	DATE	REVISION

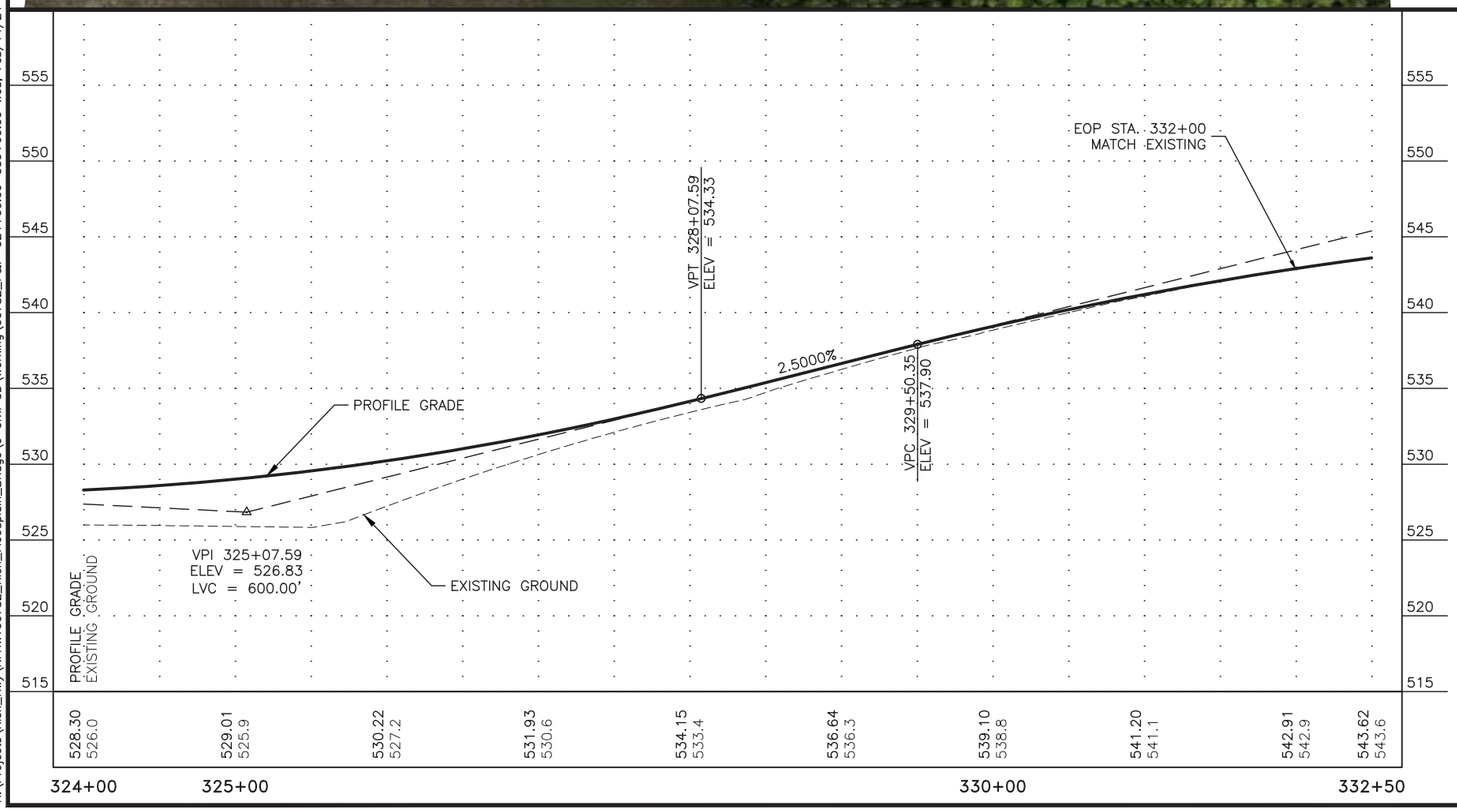
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24035 / NFHWY00782	2024	F5	F6



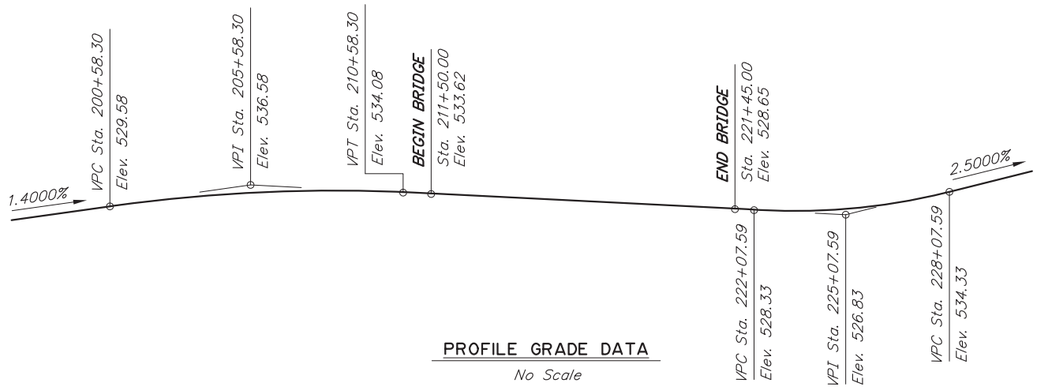
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A24035 / NFHWY00782	2024	F6	F6



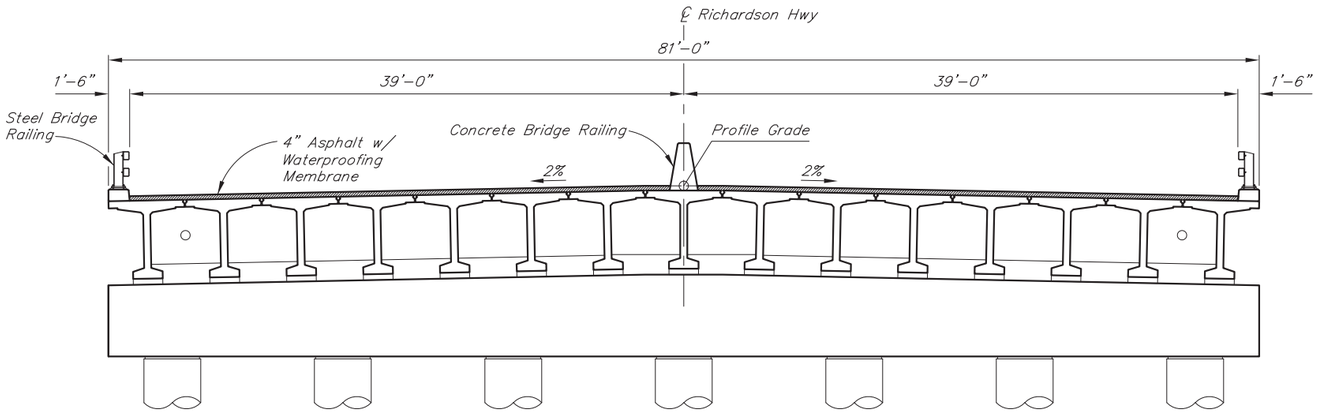


STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	ProjectNo	2023	N1	TtlShts



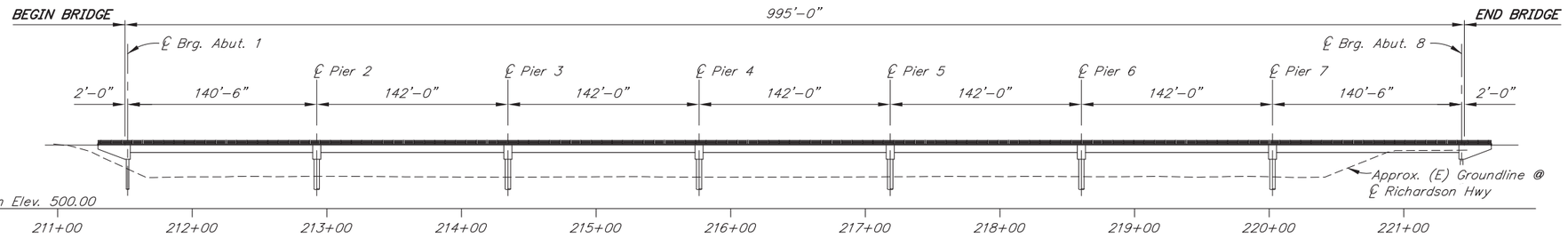
PROFILE GRADE DATA

No Scale



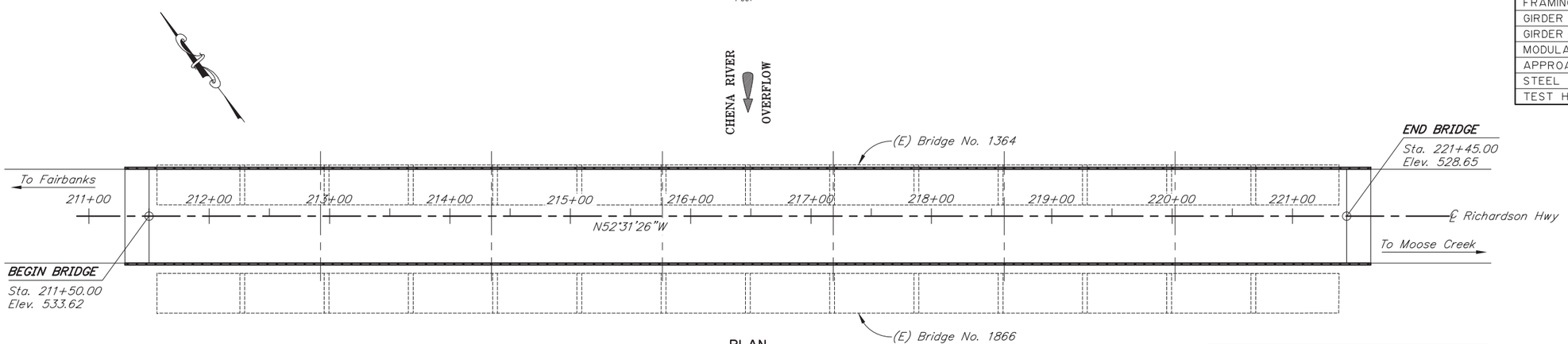
TYPICAL SECTION

12 0 5 10 In. Feet



ELEVATION

20 10 0 50 100 Feet



PLAN

20 10 0 50 100 Feet

PRELIMINARY PLAN

BRIDGE DRAWING INDEX

NOTES:

(1) *Denotes location of bridge number plate.*

DESIGNED BY:	*Designer*	CHECKED:	*Checker*	LAYOUT BY:	*Designer*	CHECKED BY:	*Checker*
DRAWN BY:	*Drafter*	CHECKED:	*Designer*	SPECIFICATIONS BY:	*Designer*	P S & E COMPARED:	*Checker*
QUANTITIES BY:	*Designer*	CHECKED:	*Checker*	APPROVAL RECOMMENDED BY:			*Engineer*

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
BRIDGE SECTION
3132 Channel Drive
Juneau, Alaska 99801
907-465-2975

CHENA FLOOD CONTROL BRIDGE

RICHARDSON HIGHWAY

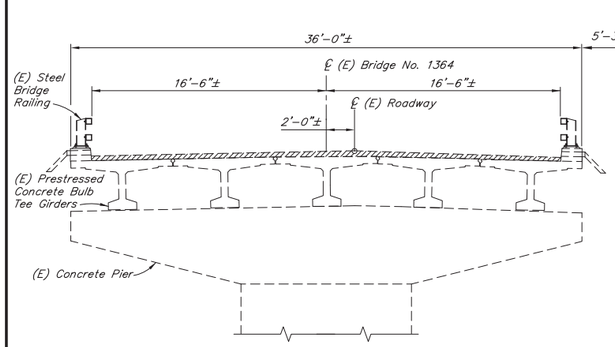
GENERAL LAYOUT

BRIDGE NO. 1364

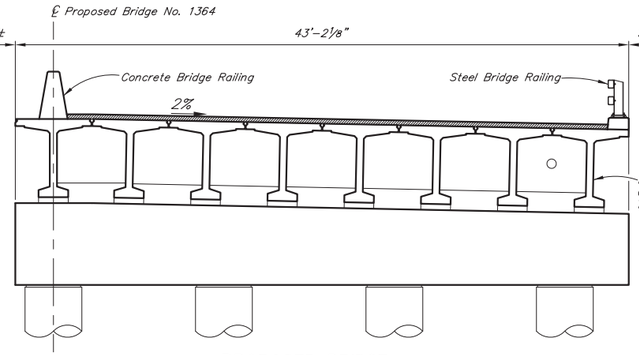
DWG. NO. 1

H:\User\Bridge\Local CAD\1364\1364-GEN Thu, Nov/02/23 03:54pm

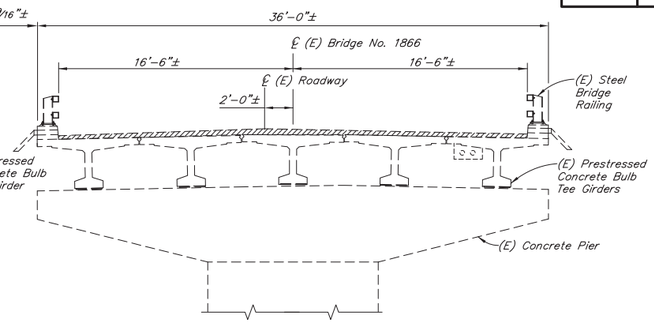
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	ProjectNo	2023	N2	TtlShts



EXISTING NB BRIDGE



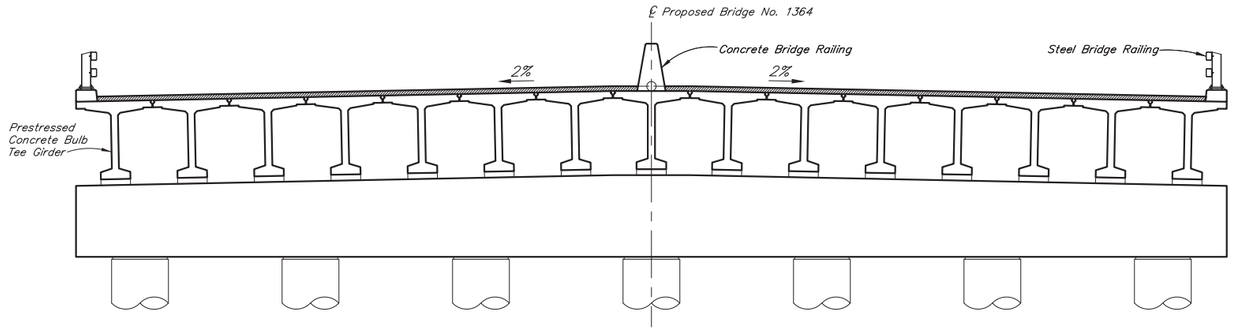
PROPOSED BRIDGE



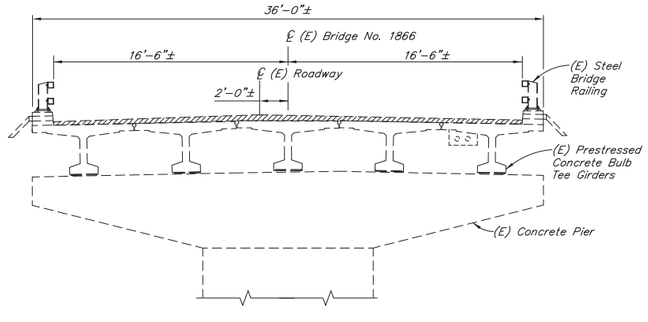
EXISTING SB BRIDGE

STAGE 1

12 0 5 10
In. Feet



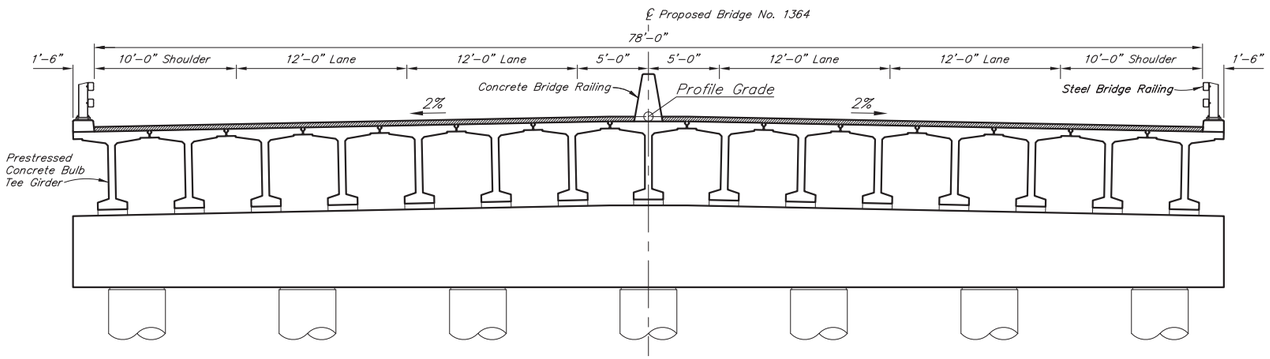
PROPOSED BRIDGE



EXISTING SB BRIDGE

STAGE 2

12 0 5 10
In. Feet



PROPOSED BRIDGE

STAGE 3

12 0 5 10
In. Feet

STAGED CONSTRUCTION NOTES

1. Notes

DESIGNED BY: Designer	CHECKED: Checker	STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES BRIDGE SECTION 3132 Channel Drive Juneau, Alaska 99801 907-465-2975	CHENA FLOOD CONTROL BRIDGE RICHARDSON HIGHWAY STAGE CONSTRUCTION
DRAWN BY: Drafter	CHECKED: Designer		BRIDGE NO. 1364 DWG. NO. 2
QUANTITIES BY: Designer	CHECKED: Checker		

H:\User\Bridge\Local CAD\1364\1364-STAGE Thu, Nov/02/23 03:54pm

Attachment No. 2
Regional Traffic & Safety Engineer Analysis

From: Stephan, Nathan J (DOT)
To: Little, Lauren M (DOT)
Subject: RE: traffic analysis question
Date: Thursday, February 15, 2024 5:50:08 PM

The Alaska Department of Transportation and Public Facilities (DOT&PF) adopted the Transportation Research Board Special Report 209, Highway Capacity, 2010, (HCM) as policy. The HCM is a tool for calculating capacity.

Chapter 15 of the HCM addresses Two-Lane Highways. For Rural Two-Way, Two-Lane Highways, the HCM methodology reports *single-direction* capacities, with a flow rate of 1,700 pc/h used as the capacity under base conditions, with a limit of 3,200 pc/h for the total of the two directions.

In order to compare calculated capacity vs existing conditions, the Alaska Traffic Data website was utilized to select traffic count stations near the projects in question:

Chena Flood Control Bridge Project:
Richardson Hwy @ Moose Creek (MP 346)
https://alaskatrafficdata.drakewell.com/sitedashboard.asp?node=AKDOT_CCS&cosit=000013920528

Steese MP 5 (CHSR Overcrossing):
Steese Expwy North of Farmers Loop Rd
https://alaskatrafficdata.drakewell.com/sitedashboard.asp?node=AKDOT_ST&cosit=000039206003

	Highest Observed Hourly Flow (2023)		HCM Capacity for a Two-Lane Highway	
	Both Directions pc/h	Single Direction pc/h	Both Directions pc/h	Single Direction pc/h
Richardson Hwy @ Moose Creek (MP 346)	1,498	1,229	3,200	1,700
Steese Expwy North of Farmers Loop Rd	1,297	833	3,200	1,700

When comparing the highest observed hourly flow at each site vs. the HCM criteria for a Two-Lane highway capacity, the data shows that both locations are fully capable to handle the capacity for both single direction travel, and combined travel, for a one-lane in each direction configuration.

From: Little, Lauren M (DOT) <lauren.little@alaska.gov>
Sent: Thursday, February 15, 2024 10:20 AM
To: Stephan, Nathan J (DOT) <nathan.stephan@alaska.gov>
Subject: RE: traffic analysis question

Can you send me a quick white paper summarizing the volumes, the criteria and a statement that one-lane in each direction is within tolerable limits per the MUTCD (or whatever the reference is)?

Thanks,
L

From: Stephan, Nathan J (DOT) <nathan.stephan@alaska.gov>
Sent: Thursday, February 15, 2024 9:59 AM
To: Little, Lauren M (DOT) <lauren.little@alaska.gov>
Subject: RE: traffic analysis question

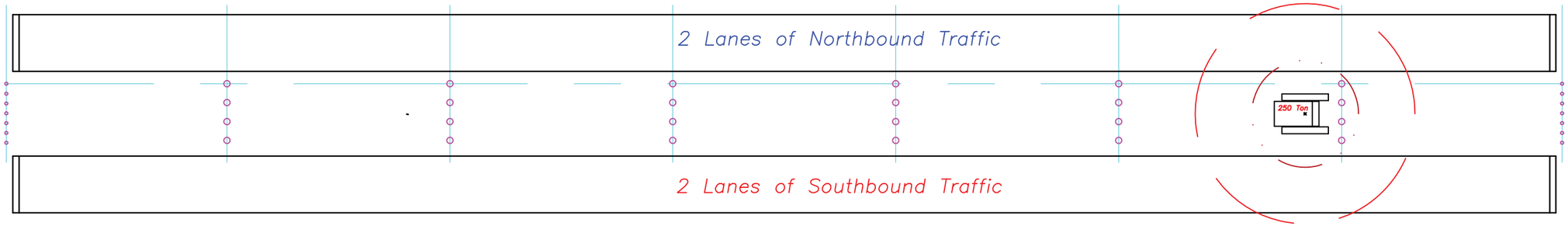
Yes

From: Little, Lauren M (DOT) <lauren.little@alaska.gov>
Sent: Thursday, February 15, 2024 9:59 AM

Attachment No. 3
CMGC Contractor Construction Sequence Proposal

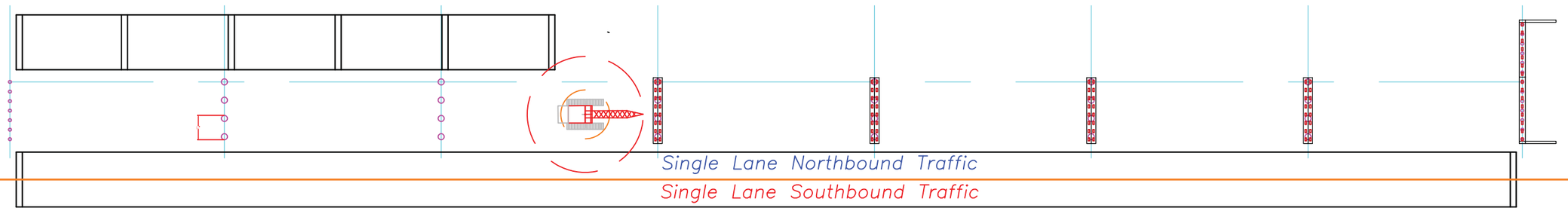
Stage 1 – Drive Center Structure Pier Pile. Traffic in 2 lanes each direction. Duration – October 2024 – April 2025

Abutment #1	Pier #2	Pier #3	Pier #4	Pier #5	Pier #6	Pier #7	Abutment #8
Sta. 211+52.00	Sta. 212+92.50	Sta. 214+34.5	Sta. 215+76.5	Sta. 217+18.5	Sta. 218+60.5	Sta. 220+02.5	Sta. 221+43.00



Stage 2 – Shift all traffic to southbound bridge, single lane each direction. Demo existing NB bridge while construction crews build substructure. Duration – April 2025 – June 2025

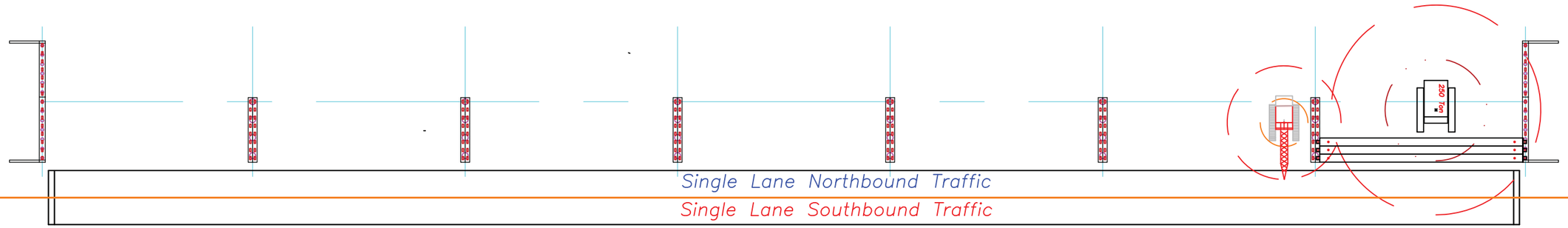
Abutment #1	Pier #2	Pier #3	Pier #4	Pier #5	Pier #6	Pier #7	Abutment #8
Sta. 211+52.00	Sta. 212+92.50	Sta. 214+34.5	Sta. 215+76.5	Sta. 217+18.5	Sta. 218+60.5	Sta. 220+02.5	Sta. 221+43.00



Project: Chena Flood Control Bridge Replacement – FAB2 Phase 1 Construction Sequence	Drawing No. 1 of 6
	Drawn By: ADD | Date: 12/18/2023

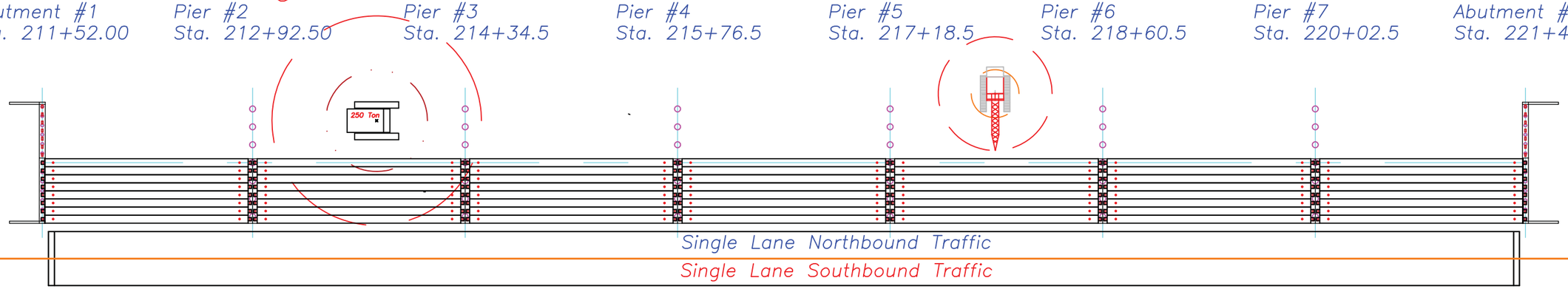
Stage 3 – Girder crew sets all spans with 2 cranes. Completes shear tabs and keyway grout.
Duration – June 2025 – July 2025

Abutment #1 Sta. 211+52.00 | Pier #2 Sta. 212+92.50 | Pier #3 Sta. 214+34.5 | Pier #4 Sta. 215+76.5 | Pier #5 Sta. 217+18.5 | Pier #6 Sta. 218+60.5 | Pier #7 Sta. 220+02.5 | Abutment #8 Sta. 221+43.00



Stage 4 – After girders are complete, 250 ton crane move to driving remaining pier pile. Carpenter crews complete pier closures and bridge barrier.
Duration – August 2025 – October 2025

Abutment #1 Sta. 211+52.00 | Pier #2 Sta. 212+92.50 | Pier #3 Sta. 214+34.5 | Pier #4 Sta. 215+76.5 | Pier #5 Sta. 217+18.5 | Pier #6 Sta. 218+60.5 | Pier #7 Sta. 220+02.5 | Abutment #8 Sta. 221+43.00



Project: Chena Flood Control Bridge Replacement – FAB2
Phase 1 Construction Sequence

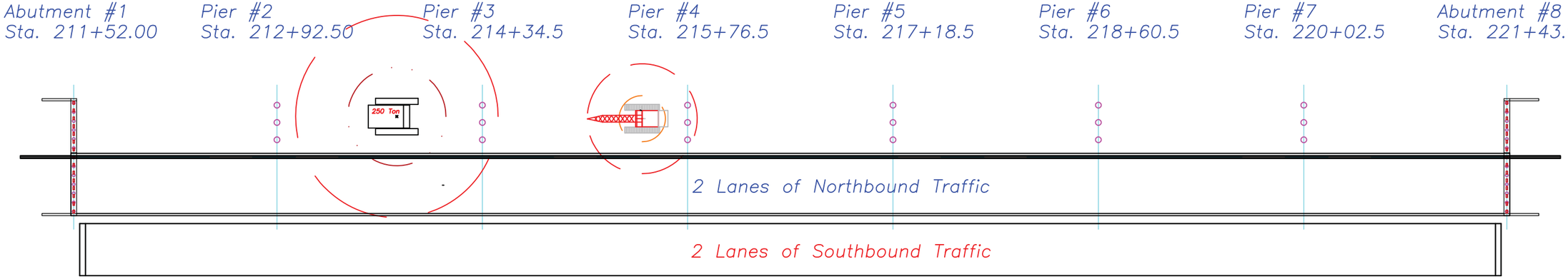
Drawing No. 2 of 6

Drawn By: ADD | Date: 12/18/2023

Stage 5 – Concrete crews complete center superstructure and open bridge to traffic. Pile driving crew continues to install piling until all pier structures are driven out.

Duration – October 2025 – December 2025

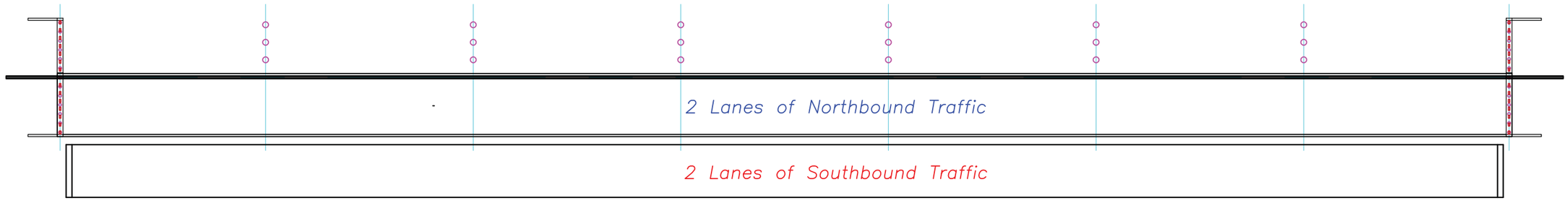
Abutment #1	Pier #2	Pier #3	Pier #4	Pier #5	Pier #6	Pier #7	Abutment #8
Sta. 211+52.00	Sta. 212+92.50	Sta. 214+34.5	Sta. 215+76.5	Sta. 217+18.5	Sta. 218+60.5	Sta. 220+02.5	Sta. 221+43.00



Stage 6 – Winter Shutdown #1, Traffic to remain in 2 lane configuration throughout winter of 2025 to spring of 2026.

Duration – December 2025 – April 2026

Abutment #1	Pier #2	Pier #3	Pier #4	Pier #5	Pier #6	Pier #7	Abutment #8
Sta. 211+52.00	Sta. 212+92.50	Sta. 214+34.5	Sta. 215+76.5	Sta. 217+18.5	Sta. 218+60.5	Sta. 220+02.5	Sta. 221+43.00

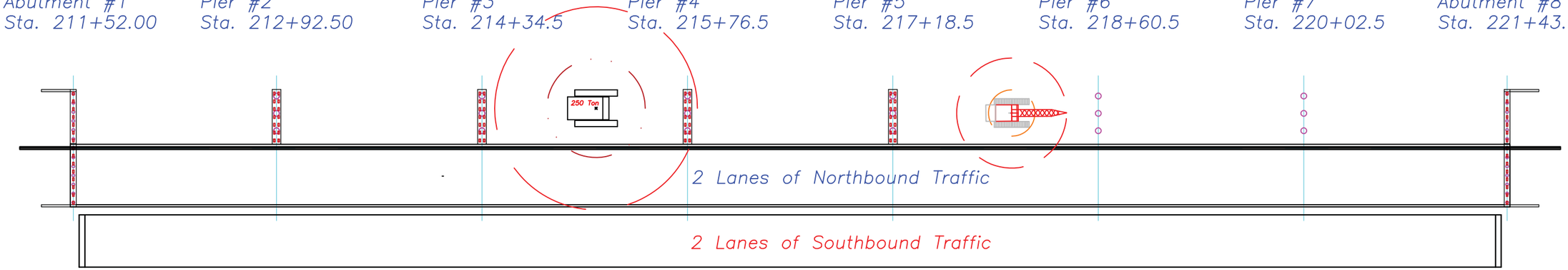


Project: Chena Flood Control Bridge Replacement – FAB2 Phase 1 Construction Sequence	Drawing No. 3 of 6
	Drawn By: ADD | Date: 12/18/2023

Stage 1 – Concrete Crews begin forming pier falsework and casting pier caps.

Duration – April 2026 – June 2026

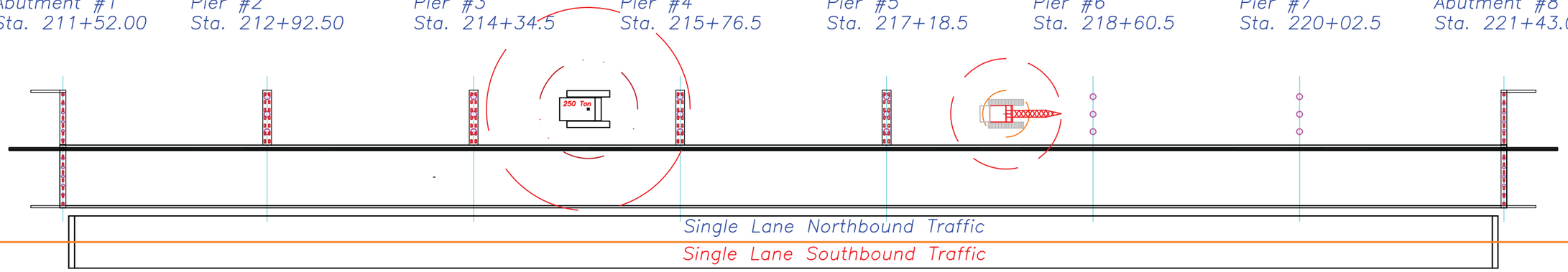
Abutment #1 Sta. 211+52.00 | Pier #2 Sta. 212+92.50 | Pier #3 Sta. 214+34.5 | Pier #4 Sta. 215+76.5 | Pier #5 Sta. 217+18.5 | Pier #6 Sta. 218+60.5 | Pier #7 Sta. 220+02.5 | Abutment #8 Sta. 221+43.00



Stage 2 – Traffic configuration is moved to Southbound bridge with one lane in each direction. Traffic pattern maintained until H20 membrane is complete.

Duration – May 2026 – July 2026

Abutment #1 Sta. 211+52.00 | Pier #2 Sta. 212+92.50 | Pier #3 Sta. 214+34.5 | Pier #4 Sta. 215+76.5 | Pier #5 Sta. 217+18.5 | Pier #6 Sta. 218+60.5 | Pier #7 Sta. 220+02.5 | Abutment #8 Sta. 221+43.00



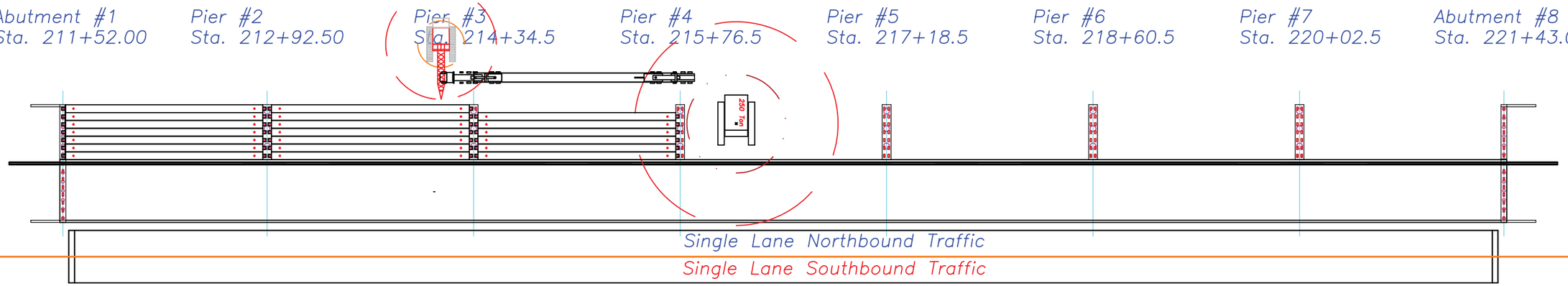
Project: Chena Flood Control Bridge Replacement – FAB2
Phase 2 Construction Sequence

Drawing No. 4 of 6

Drawn By: ADD | Date: 12/18/2023

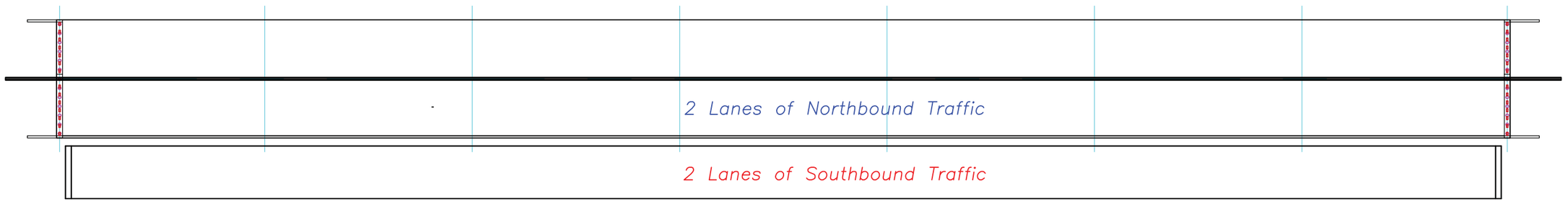
Stage 3 – Girder crew set all spans, weld shear tabs and grout keyways. Carpenter crews follow each girder span and cast diaphragms.
Duration – June 2026 – Octoberber 2026

Abutment #1 Sta. 211+52.00 | Pier #2 Sta. 212+92.50 | Pier #3 Sta. 214+34.5 | Pier #4 Sta. 215+76.5 | Pier #5 Sta. 217+18.5 | Pier #6 Sta. 218+60.5 | Pier #7 Sta. 220+02.5 | Abutment #8 Sta. 221+43.00



Stage 4 – Winter Shutdown
Traffic is returned into a 2 lane configuration for winter.
Duration – October 2026 – May 2027

Abutment #1 Sta. 211+52.00 | Pier #2 Sta. 212+92.50 | Pier #3 Sta. 214+34.5 | Pier #4 Sta. 215+76.5 | Pier #5 Sta. 217+18.5 | Pier #6 Sta. 218+60.5 | Pier #7 Sta. 220+02.5 | Abutment #8 Sta. 221+43.00



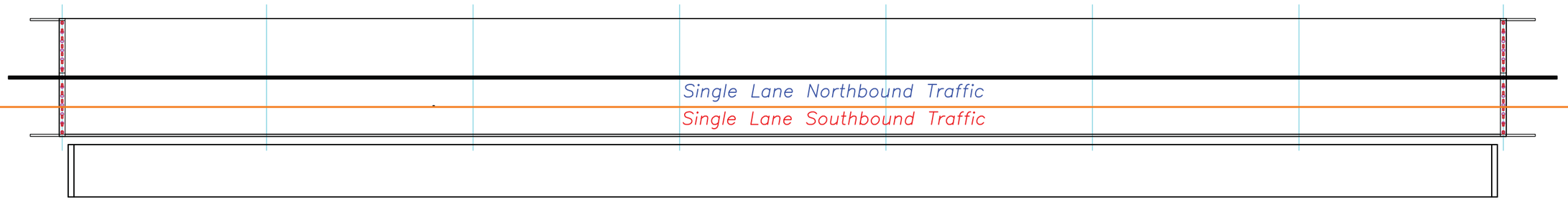
Project: Chena Flood Control Bridge Replacement – FAB2
Phase 2 Construction Sequence

Drawing No. 5 of 6

Drawn By: ADD | Date: 12/18/2023

Stage 1 – Single lane each direction onto new southbound bridge. Overlay begin work on northbound structure. Demo of southbound bridge begins. Duration – May 2027 – August 2027

Abutment #1	Pier #2	Pier #3	Pier #4	Pier #5	Pier #6	Pier #7	Abutment #8
Sta. 211+52.00	Sta. 212+92.50	Sta. 214+34.5	Sta. 215+76.5	Sta. 217+18.5	Sta. 218+60.5	Sta. 220+02.5	Sta. 221+43.00



Stage 2 – Traffic is moved into final configuration, temporary lanes closures will be active while final striping, signing, and guardrail are completed. Duration – July 2027 – September 2027

Abutment #1	Pier #2	Pier #3	Pier #4	Pier #5	Pier #6	Pier #7	Abutment #8
Sta. 211+52.00	Sta. 212+92.50	Sta. 214+34.5	Sta. 215+76.5	Sta. 217+18.5	Sta. 218+60.5	Sta. 220+02.5	Sta. 221+43.00

Project: Chena Flood Control Bridge Replacement – FAB2 Phase 3 Construction Sequence	Drawing No. 6 of 6
	Drawn By: ADD | Date: 12/18/2023