

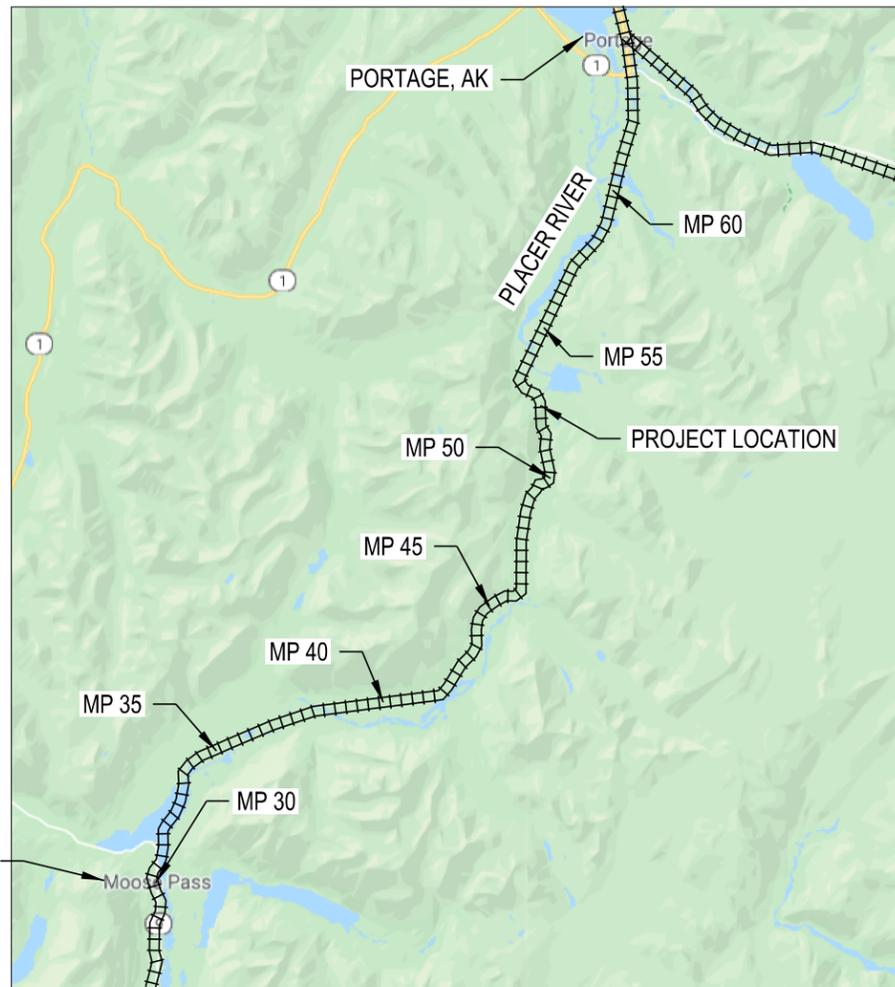


ALASKA RAILROAD CORPORATION
ENGINEERING SERVICES

P.O. BOX 107500, ANCHORAGE, ALASKA 99510-7500

MP 52.26 WASHOUT DAMAGE RETAINING WALL REPLACEMENT

MAY 2022



INDEX OF SHEETS

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*If this sheet is smaller than 22" x 34",
 it is a reduced print. adjust scale accordingly.*



REV.	DATE	BY	REVISION

ALASKA RAILROAD CORPORATION CAPITOL PROJECTS P.O. BOX 107500, ANCHORAGE, ALASKA 99510-7500			
PROJECT : MP 52.26 WASHOUT DAMAGE RETAINING WALL REPLACEMENT			
TITLE: TITLE SHEET			
DESIGNED BY: - JBT	SCALE: H: AS NOTED	-	AFE NO.:
DRAWN BY: - KRH	V: AS NOTED		ACAD FILE:
CHECKED BY: - KAG	DATE: 05/31/22		DWG NO.:
APPROVED BY: - AWK			1 of 10

PROJECT NOTES

1. ALL WORK MUST BE DONE IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, INCLUDING ASSOCIATED REGULATIONS AND PROJECT PERMIT STIPULATIONS.
2. CONTRACT WORK SHALL BE PERFORMED PER CURRENT AREMA MANUAL FOR RAILWAY ENGINEERING (MRE) OR AS MODIFIED BY THE SPECIFICATIONS.
3. ALL WORK SHALL COMPLY WITH APPLICABLE LOCAL AND STATE CODES AND ALL OTHER REGULATIONS OF AGENCIES HAVING JURISDICTION.
4. THE CONTRACTOR SHALL COORDINATE ALL WORK WITH ALASKA RAILROAD CORPORATION. CONSTRUCTION ACTIVITIES SHALL NOT DISRUPT RAILROAD OPERATIONS AND SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS. ALL WORK TO BE SCHEDULED IN ACCORDANCE WITH THE CONSTRUCTION SCHEDULE AND CONSTRUCTION STAGING PLANS.
5. AN ESTIMATED SIX (6) WEEK WINDOW OF TIME IS AVAILABLE FOR CONSTRUCTION. THE CONTRACTOR SHALL PLAN AND COORDINATE WORK TO BE COMPLETED WITHIN THIS TIME FRAME. PROJECT SITE WORK TO BE PERFORMED NIGHTLY, COMMENCING NO SOONER THAN 2030 MONDAY THRU SATURDAY, 2145 SUNDAY AND ENDING NO LATER THAN 0730 ALL DAYS.
6. ALL TRACK WORK ABOVE THE BALLAST SECTION IS TO BE PERFORMED BY ALASKA RAILROAD CORPORATION FORCES WITH ASSISTANCE FROM THE CONTRACTOR WHERE APPLICABLE AND IN ACCORDANCE WITH THE SPECIFICATIONS.
7. COORDINATES PROVIDED TO LOCATE PROPOSED WALL AND COMPONENTS ARE REFERENCED TO CONTROL POINTS ESTABLISHED IN 2019 (SEE SHEET 4/10). IN THE EVENT THE PREVIOUSLY ESTABLISHED CONTROL POINTS ARE MISSING OR OTHERWISE UNUSABLE, THE CONTRACTOR SHALL RE-ESTABLISH SURVEY WHILE MAINTAINING THE PLAN LOCATION OF COMPONENTS REFERENCED TO THE 2019 CONTROL POINTS.
8. DISPOSAL OF ALL MATERIALS SHALL BE IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS AT THE SITE AND MUST ADAPT THEIR WORK TO ACTUAL CONDITIONS IN A MANNER APPROVED BY THE ENGINEER.
10. UTILITY LOCATIONS SHOWN ON THESE PLANS MAY NOT BE CORRECT OR COMPLETE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY UTILITY LOCATIONS. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH THE RESPECTIVE UTILITY COMPANIES.
11. ALTERATIONS OF CONSTRUCTION PLANS AND DETAILS IS NOT PERMITTED WITHOUT EXPRESS WRITTEN PERMISSION FROM ALASKA RAILROAD CORPORATION.
12. SHALLOW OR EXPOSED BEDROCK IS PRESENT THROUGHOUT THE PROJECT AREA. MECHANICAL ROCK EXCAVATION OR BLASTING NECESSARY TO COMPLETE PROJECT EXCAVATIONS IS SUBSIDIARY TO PAY ITEM 3.

STRUCTURES

SCOPE:

THIS PROJECT CONSISTS OF CONSTRUCTING AN ANCHORED SOLIDER PILE WALL BELOW AN EXISTING WALL TO REMAIN IN SERVICE DURING ANCHORED WALL CONSTRUCTION AND THEN ABANDONED IN PLACE WITHIN THE ANCHORED WALL FILL. THE EXISTING WALL IS COMPOSED OF CANTILEVERED PILES WITH TIMBER LAGGING AND INCLUDES AN ANCHORED PORTION WITH TIMBER LAGGING CONSTRUCTED AS AN EMERGENCY REPAIR FOLLOWING A WASHOUT FLOOD EVENT ON OCTOBER 31, 2021. SEE SPECIAL CONDITIONS ON THIS SHEET FOR ADDITIONAL SCOPE INFORMATION.

DESIGN SPECIFICATIONS:

THE PROPOSED STRUCTURE CONFORMS TO THE 2020 AREMA MANUAL FOR RAILWAY ENGINEERING (MRE), AS SUPPLEMENTED OR AMENDED BY PROJECT SPECIFICATIONS.

DESIGN LOADING:

LIVE LOAD: COOPER E-80 WITHOUT IMPACT PER BOUSSINESQ EQUATION FOR STRIP LOADS (2020 AREMA MRE, CHAPTER 8, SECTION 20.3.2.2)

EARTH LOAD: HORIZONTAL APPARENT EARTH PRESSURE (MRE CHAPTER 8, SECTION 28.5.4)

HYDROSTATIC LOAD: DESIGN CONSIDERS HYDROSTATIC PRESSURE APPLIED TO ONE-THIRD OF WALL HEIGHT.

SEISMIC: THE RETAINING WALL WAS DESIGNED FOR SEISMIC SITE CLASS B. MONONOBE-OKABE ACTIVE PRESSURE COEFFICIENT KAE = 0.48 CORRESPONDING TO KH = 0.36 AND KV = 0.0

DESIGN DATA:

IN-SITU ASSUMED SOIL PARAMETERS:
 UNIT WEIGHT = 135 PCF
 SATURATED UNIT WEIGHT = 148.5 PCF
 PHI = 40 DEGREES
 C = 0 PSF

POROUS GRANULAR FILL ASSUMED SOIL PARAMETERS:
 UNIT WEIGHT = 120 PCF
 SATURATED UNIT WEIGHT = 132 PCF
 PHI = 38 DEGREES
 C = 0 PSF

ALL STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 50 UNLESS OTHERWISE NOTED.

HP SOLDIER PILES AND HS SHEET PILE LAGGING SHALL BE ASTM A572 GRADE 50.

ALL STRUCTURAL STEEL, SOLIDIER PILES AND SHEET PILES SHALL BE HOT-DIP GALVANIZED.

ANCHOR RODS SHALL BE THREADED RODS MEETING THE CURRENT REQUIREMENTS OF ASTM A722 GRADE 150.

ALL STRUCTURAL HARDWARE, INCLUDING ANCHOR RODS, PLATES, HEAVY HEX NUTS AND HARDENED WASHERS ARE TO BE GALVANIZED PER ASTM A-153 OR B-695.

CEMENT GROUT FOR ROCK ANCHORS SHALL MEET THE REQUIREMENTS OF THE PROJECT SPECIFICATIONS, AND SHALL HAVE A MINIMUM:

- 1 DAY COMPRESSIVE STRENGTH OF 4,500 PSI
- 7 DAY COMPRESSIVE STRENGTH OF 11,000 PSI
- 28 DAY COMPRESSIVE STRENGTH OF 15,000 PSI

ALL CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4,000 PSI.

CONCRETE SURFACE SEALER SHALL BE APPLIED TO ALL EXPOSED SURFACES OF CONCRETE.

WELDING ELECTRODES FOR ARC WELDING SHALL MEET THE CURRENT REQUIREMENTS OF THE SPECIFICATIONS FOR MILD STEEL ARC-WELDING ELECTRODES SERIES E70, AWS 5.1, AND LOW HYDROGEN CLASSIFICATION FOR SMAW AND AWS 5.17 FOR SAW.

STRUCTURAL FASTENERS SHALL BE 7/8" DIAMETER ASTM A325 HIGH-STRENGTH BOLTS, UNLESS OTHERWISE NOTED, WHICH SHALL BE TIGHTENED USING THE TURN-OF-NUT METHOD TO OBTAIN A MINIMUM TENSION OF 39 KIPS, UNLESS OTHERWISE NOTED. ALL OPEN HOLES SHALL BE 15/16" FOR 7/8" DIAMETER BOLTS.

SPECIAL CONDITIONS:

EXPLORATORY DRILLING TO LOCATE BEDROCK AT EACH PROPOSED SOLIDER PILE LOCATION IS SPECIFIED. THE PLANS UTILIZE AN ASSUMED SHALLOW TOP OF ROCK ELEVATION. SPECIFICALLY, ALL PILE SOCKETS ARE DETAILED USING THE MINIMUM SOCKET LENGTH POSSIBLE CORRESPONDING TO TOP OF ROCK BEING COINCIDENT WITH SPECIFIED TOP OF SOCKET ELEVATION. PROVISION IS PROVIDED HEREIN TO LENGTHEN SOCKETS IN RESPONSE TO EXPLORATORY DRILLING FINDINGS. ANCHOR DESIGN LOADS SUPPLIED ON SHEET 9/10 ARE APPLICABLE FOR THE NOTED RANGE OF SOCKET LENGTHS SUPPLIED ON SHEET 7/10.

SITE SPECIFIC FIELD TESTING OF ANCHORS HAS BEEN CONDUCTED AS DOCUMENTED IN PROJECT MEMO "MP52.14 RETAINING WALL ROCK ANCHOR TESTING".

THE EXISTING WALL SHALL REMAIN FULLY FUNCTIONAL DURING THE PROPOSED WALL CONSTRUCTION TO SUPPORT RAIL TRAFFIC ON A DAILY BASIS. AS NOTED IN THE PLANS, THE EXISTING EMERGENCY REPAIR DEADMAN ANCHOR AND ACCESSIBLE WIRE TIES ARE TO BE REMOVED FOLLOWING COMPLETION AND ACCEPTANCE OF THE PROPOSED WALL. IN ADDITION, AND WITH THE APPROVAL OF THE ENGINEER ON SITE, REMOVE PORTIONS OF THE EXISTING WALL THAT CAN BE REMOVED WITHOUT COMPROMISING THE WALL'S ABILITY TO SUPPORT RAIL TRAFFIC THROUGH ALL PHASES OF PROPOSED WALL CONSTRUCTION. EXAMPLES OF REMOVABLE MATERIAL COULD INCLUDE (1) PORTIONS OF EXISTING Y-PILES PROJECTING ABOVE THE RETAINED SOIL MASS (2) EXISTING TIMBER LAGGING FULLY ABOVE THE RETAINED SOIL MASS (3) EXISTING TIMBER LAGGING DEEMED SAFE FOR REMOVAL IMMEDIATELY PRIOR TO PLACEMENT OF THE FINAL BACKFILL LIFT FULLY BURYING THE EXISTING WALL.

THE CONTRACTOR SHALL SUBMIT A PLAN DETAILING BACKFILL LIFT PLACEMENT AND ANCHOR STRESSING SEQUENCE WITH SUPPORTING DOCUMENTATION FOR REVIEW AND APPROVAL BY THE ENGINEER. BACKFILL UP TO A MINIMUM HEIGHT OF 4' ABOVE THE ANCHOR LOCATION, OR AS REQUIRED. TEMPORARY TOP OF PILE RESTRAINT, IF UTILIZED, SHALL NOT DISRUPT RAILROAD OPERATIONS.

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 ALASKA RAILROAD CORPORATION CAPITOL PROJECTS P.O. BOX 107500, ANCHORAGE, ALASKA 99510-7500			
PROJECT : MP 52.26 WASHOUT DAMAGE RETAINING WALL REPLACEMENT			
TITLE: GENERAL NOTES (SHEET 1 OF 2)			
DESIGNED BY: - JBT	SCALE: H: AS NOTED	-	AFE NO.:
DRAWN BY: - KRH	V: AS NOTED		ACAD FILE:
CHECKED BY: - KAG	DATE: 05/31/22		DWG NO.
APPROVED BY: - AWK			2 of 10

SEQUENCE OF OPERATIONS

THE FOLLOWING IS ONE POSSIBLE SEQUENCE OF OPERATIONS TO ENACT THE PROPOSED CONSTRUCTION. THE STEPS LISTED ARE GENERAL IN NATURE AND ARE NOT INTENDED TO DESCRIBE AND IDENTIFY ALL TASKS, STEPS, ETC. NECESSARY TO COMPLETE THE CONSTRUCTION IN FULL. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DEVELOP A DETAILED SEQUENCE OF OPERATIONS FOR REVIEW AND APPROVAL BY THE ENGINEER.

1. INSTALL APPROVED TEMPORARY WORKS AND FALL PROTECTION NEEDED TO SAFELY CONDUCT CONSTRUCTION OPERATIONS.
2. CONDUCT SPECIFIED EXPLORATORY DRILLING AT EACH PROPOSED SOLDIER PILE LOCATION. USING IDENTIFIED ROCKLINE ELEVATIONS, ESTABLISH BOTTOM OF SOCKET ELEVATIONS FOR REVIEW AND APPROVAL USING CRITERIA PROVIDED ON SHEET 9/10.
3. DRILL SOCKETS AND INSTALL SOCKETED PILES. MAINTAIN EXISTING WALL TOE.
4. INSTALL VERTICAL SHEET PILE LAGGING (WITH PRE-DRILLED WEEP HOLES) TO THE ELEVATIONS SHOWN ON THE PLANS. INSTALL CAP BEAM AND CONNECTIONS SHOWN ON THE PLANS.
5. EXCAVATE TOE SIDE OF PROPOSED WALL AS NEEDED TO INSTALL ANCHORS.
6. CUT LAGGING AT PLANNED ANCHOR LOCATIONS. WELD THE LAGGING INTERLOCK ABOVE AND BELOW CUT PORTION AS DETAILED IN THE PLANS.
7. DRILL ANCHOR HOLES, ADVANCING ANCHOR CASING TO FIELD-IDENTIFIED ROCKLINE.
8. CONDUCT SPECIFIED WATER TESTING, INCLUDING GROUT LINING AND REDRILLING WHERE REQUIRED.
9. INSTALL ANCHORS AND WALER.
10. ROCK-SOCKET CONCRETE SHALL DEVELOP A CAPACITY OF 0.8 F'C, OR WAIT A MINIMUM OF 21 CALENDAR DAYS, BEFORE TENSIONING INSTALLED ANCHORS.
11. IMPLEMENT APPROVED BACKFILL LIFT AND ANCHOR STRESSING PLAN.

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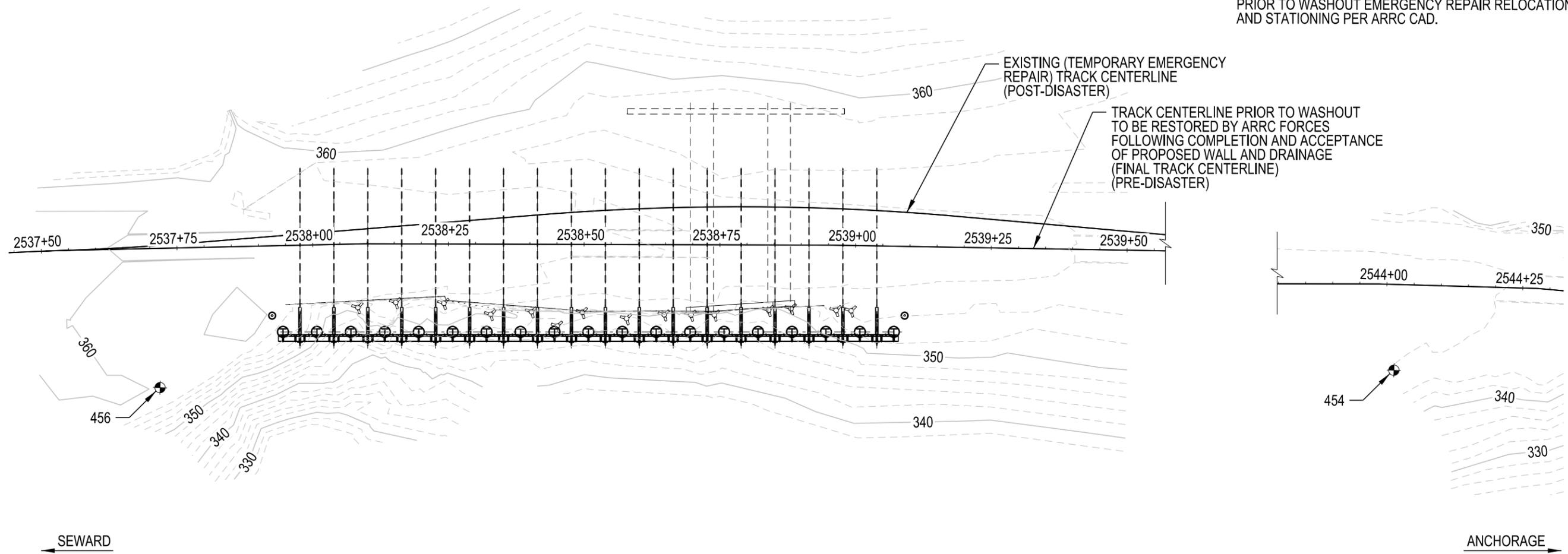
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PROJECT : MP 52.26 WASHOUT DAMAGE RETAINING WALL REPLACEMENT			
TITLE: GENERAL NOTES (SHEET 2 OF 2)			
DESIGNED BY:	- JBT	SCALE:	-
DRAWN BY:	- KRH	H: AS NOTED	
CHECKED BY:	- KAG	V: AS NOTED	
APPROVED BY:	- AWK	DATE:	05/31/22
			AFE NO.:
			ACAD FILE:
			DWG NO.
			3 OF 10



NOTES:

1. HORIZONTAL AND VERTICAL DATUM IS ALASKA STATE PLANE ZONE 4, GEOID128 PER SERVBASE CONTROL.
2. TOPOGRAPHIC INFORMATION GATHERED JUNE 10TH, 2020.
3. CONTOURS SHOWN PER NOV. 2018 UAV DIGITAL SERVICE MODEL. ELEVATIONS SHOWN ARE TO THE TOP OF VEGETATION, BUILDINGS, CARS AND OTHER ELEVATED FEATURES.
4. EXISTING TRACK CENTERLINE PER ARRC CAD SHOWS EMERGENCY REPAIR TRACK LOCATION.
5. FINAL TRACK CENTERLINE RESTORES TRACK TO ORIGINAL LOCATION PRIOR TO WASHOUT EMERGENCY REPAIR RELOCATION. CENTERLINE AND STATIONING PER ARRC CAD.



PLAN VIEW

SCALE 1" = 10'

2019 CONTROL POINT LIST

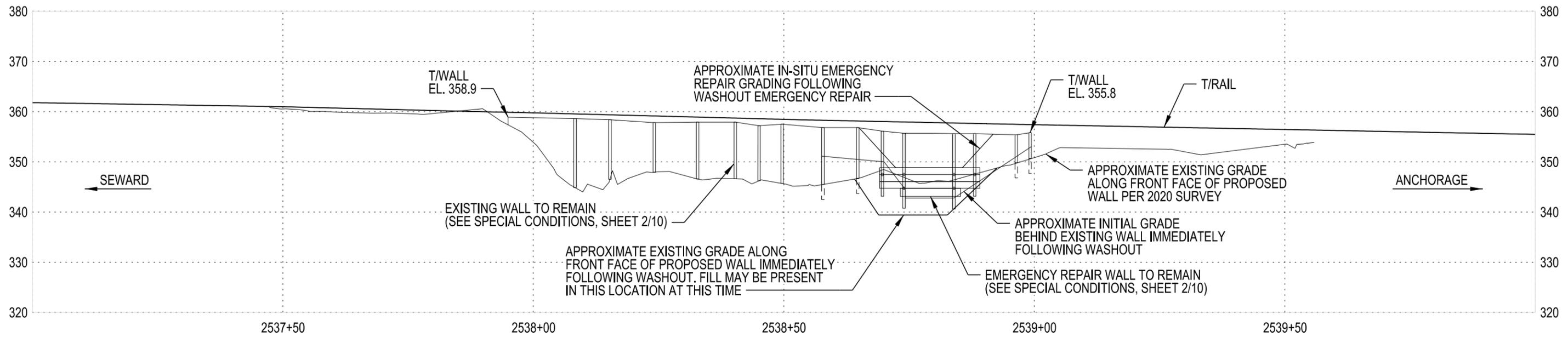
POINT	NORTHING	EASTING	STATION	OFFSET	ELEVATION	DESCRIPTION
454	2442530.93	1811007.03	2544+1.59	15.81 RT	345.91	FND. YPC-RBR 8201
456	2441907.56	1811093.19	2537+71.31	25.60 RT	359.71	FND. YPC-RBR 8201

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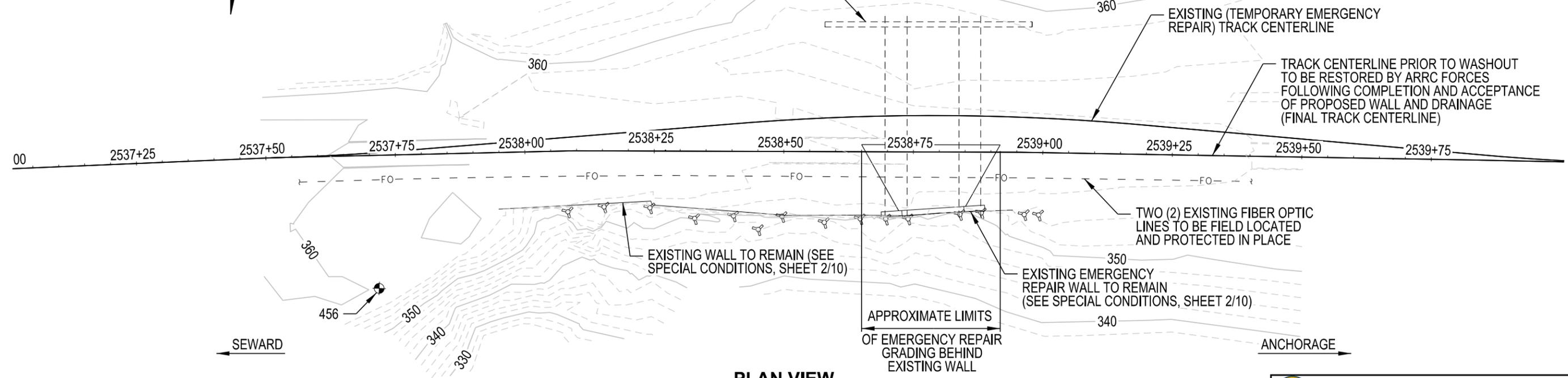
ALASKA RAILROAD CORPORATION CAPITOL PROJECTS <small>P.O. BOX 107500, ANCHORAGE, ALASKA 99510-7500</small>	
PROJECT : MP 52.26 WASHOUT DAMAGE RETAINING WALL REPLACEMENT	
TITLE: SITE PLAN	
DESIGNED BY: - JBT DRAWN BY: - KRH CHECKED BY: - KAG APPROVED BY: - AWK	SCALE: H: AS NOTED V: AS NOTED DATE: 05/31/22
AFE NO.: - ACAD FILE: DWG NO.: 4 OF 10	



PROFILE VIEW
SCALE 1" = 10'



EXISTING EMERGENCY REPAIR STEEL BEAM DEADMAN ANCHOR WITH STEEL WIRE TIES. REMOVE DEADMAN ANCHOR AND AS MUCH OF THE TIE WIRE AS IS ACCESSIBLE WITHOUT DISRUPTING RAILROAD OPERATIONS FOLLOWING COMPLETION AND ACCEPTANCE OF PROPOSED WALL.



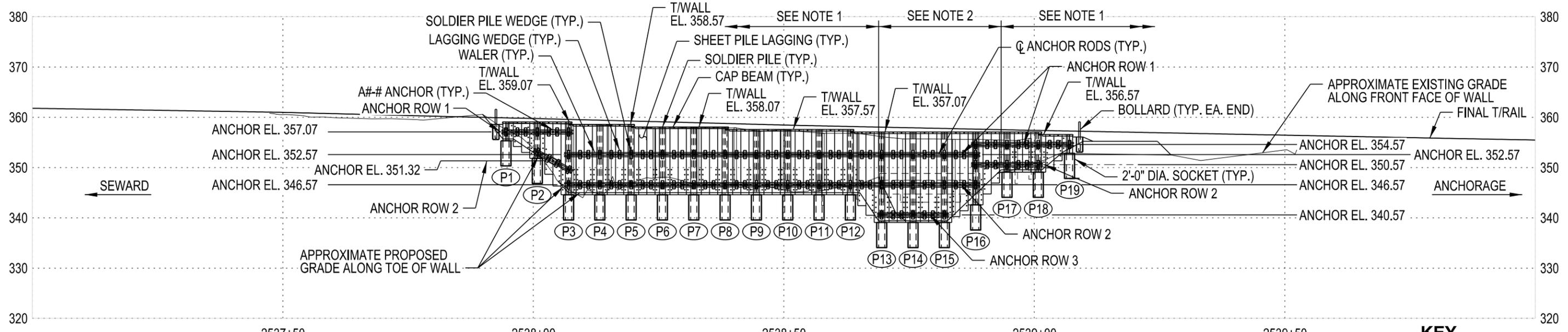
PLAN VIEW
SCALE 1" = 10'

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PROJECT :		MP 52.26 WASHOUT DAMAGE RETAINING WALL REPLACEMENT	
TITLE:		EXISTING CONDITIONS OF WALL	
DESIGNED BY: - JBT	SCALE: H: AS NOTED V: AS NOTED	-	AFE NO.:
DRAWN BY: - KRH	DATE: 05/31/22		ACAD FILE:
CHECKED BY: - KAG			DWG NO.
APPROVED BY: - AWK			5 OF 10



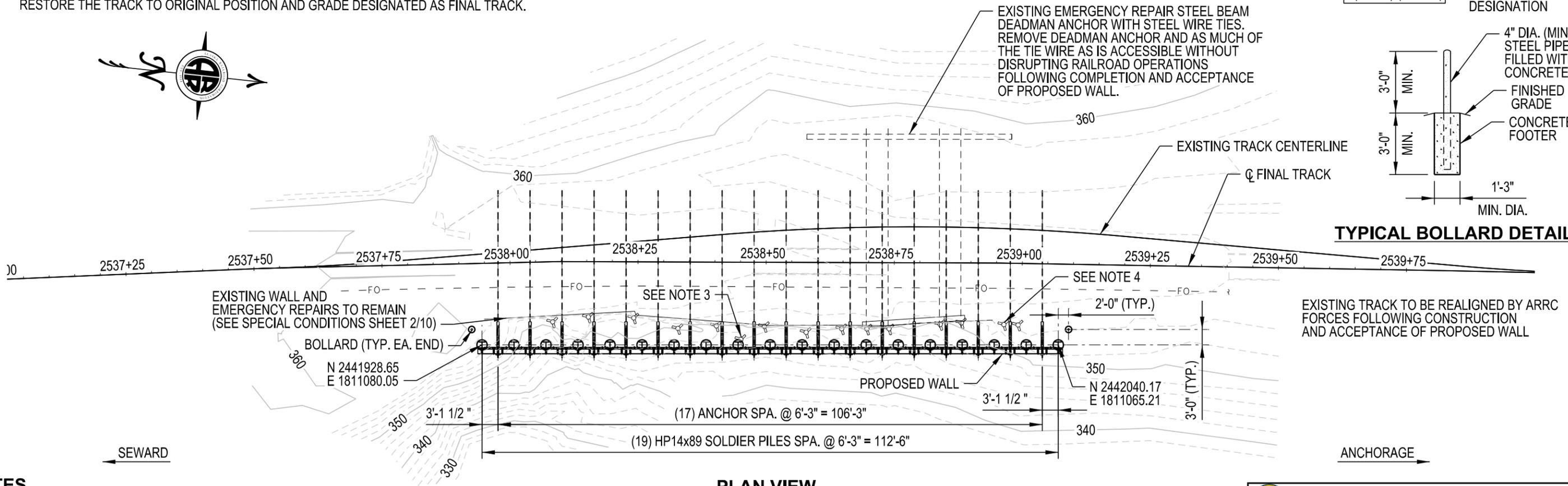
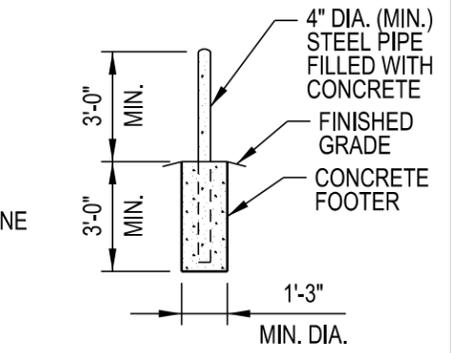
PROFILE VIEW
SCALE 1" = 10'

KEY
 (P#) = SOLDIER PILE DESIGNATION
 A(BAY #)-(ROW #) = ANCHOR DESIGNATION

NOTE: STATIONING IS RETAINED FROM PROJECT MP52.14 FOR REFERENCE ONLY. LOCATE PROPOSED WALL AND DRAINAGE USING SUPPLIED NE COORDINATES. TOP OF RAIL IS RETAINED FROM PROJECT MP52.14 REPRESENTING THE THEN-EXISTING TRACK LOCATION. FOLLOWING COMPLETION AND ACCEPTANCE OF THE PROPOSED WALL AND DRAINAGE IMPROVEMENTS, ARRC FORCES WILL RESTORE THE TRACK TO ORIGINAL POSITION AND GRADE DESIGNATED AS FINAL TRACK.



EXISTING EMERGENCY REPAIR STEEL BEAM DEADMAN ANCHOR WITH STEEL WIRE TIES. REMOVE DEADMAN ANCHOR AND AS MUCH OF THE TIE WIRE AS IS ACCESSIBLE WITHOUT DISRUPTING RAILROAD OPERATIONS FOLLOWING COMPLETION AND ACCEPTANCE OF PROPOSED WALL.



PLAN VIEW
SCALE 1" = 10'

NOTES

- APPROXIMATE EXISTING GRADE ALONG FRONT FACE OF PROPOSED WALL PER 2020 SURVEY ASSUMED TO BE UNDISTURBED FOLLOWING WASHOUT EVENT.
- APPROXIMATE GRADE ALONG FRONT FACE OF PROPOSED WALL FOLLOWING WASHOUT EVENT. FILL MAY BE PRESENT IN THIS VICINITY AT THIS TIME.
- EXISTING PILE DENOTED "SEE NOTE 3" IS ROTATED EASTWARD. ADJUST AS NEEDED AS APPROVED BY THE ENGINEER TO CONSTRUCT PROPOSED WALL.
- EXISTING PILE DENOTED "SEE NOTE 4" IS ROTATED NORTHWARD. ADJUST AS NEEDED AS APPROVED BY THE ENGINEER TO CONSTRUCT PROPOSED WALL.
- SEE SHEET 7/10 FOR SOLDIER PILE LOCATION AND ELEVATIONS TABLE.
- SEE SHEET 7/10 FOR WALER AND LAGGING LAYOUT DETAILS.
- SEE SHEET 10/10 FOR SOLDIER PILE WEDGE, LAGGING WEDGE AND CAP BEAM DETAILS.
- SEE SHEET 10/10 FOR WEEPHOLE AND BACKFILL DETAILS.

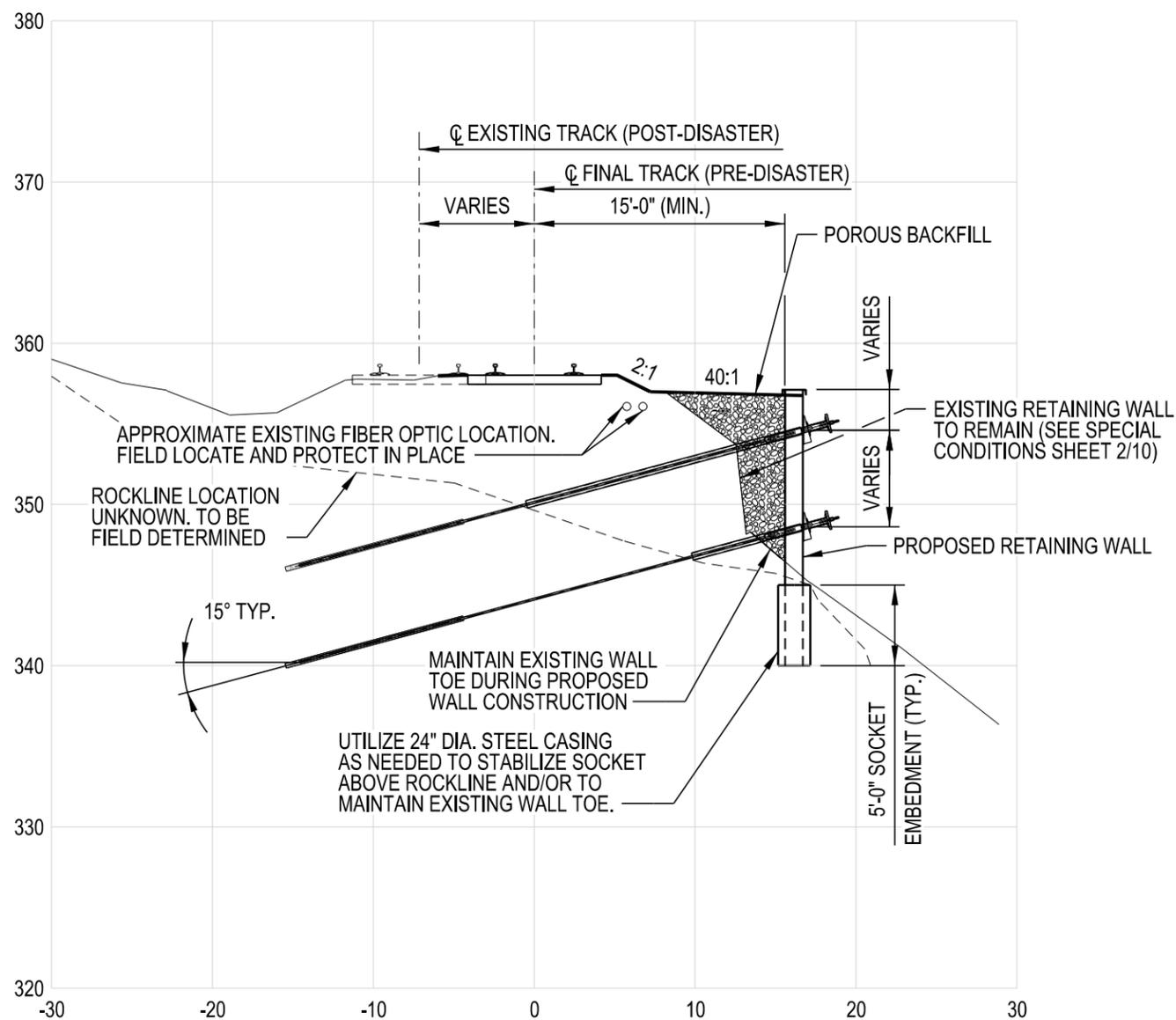
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PROJECT : MP 52.26 WASHOUT DAMAGE RETAINING WALL REPLACEMENT			
TITLE: FINAL CONDITIONS OF WALL			
DESIGNED BY: - JBT	SCALE: H: AS NOTED	-	AFE NO.:
DRAWN BY: - KRH	V: AS NOTED		ACAD FILE:
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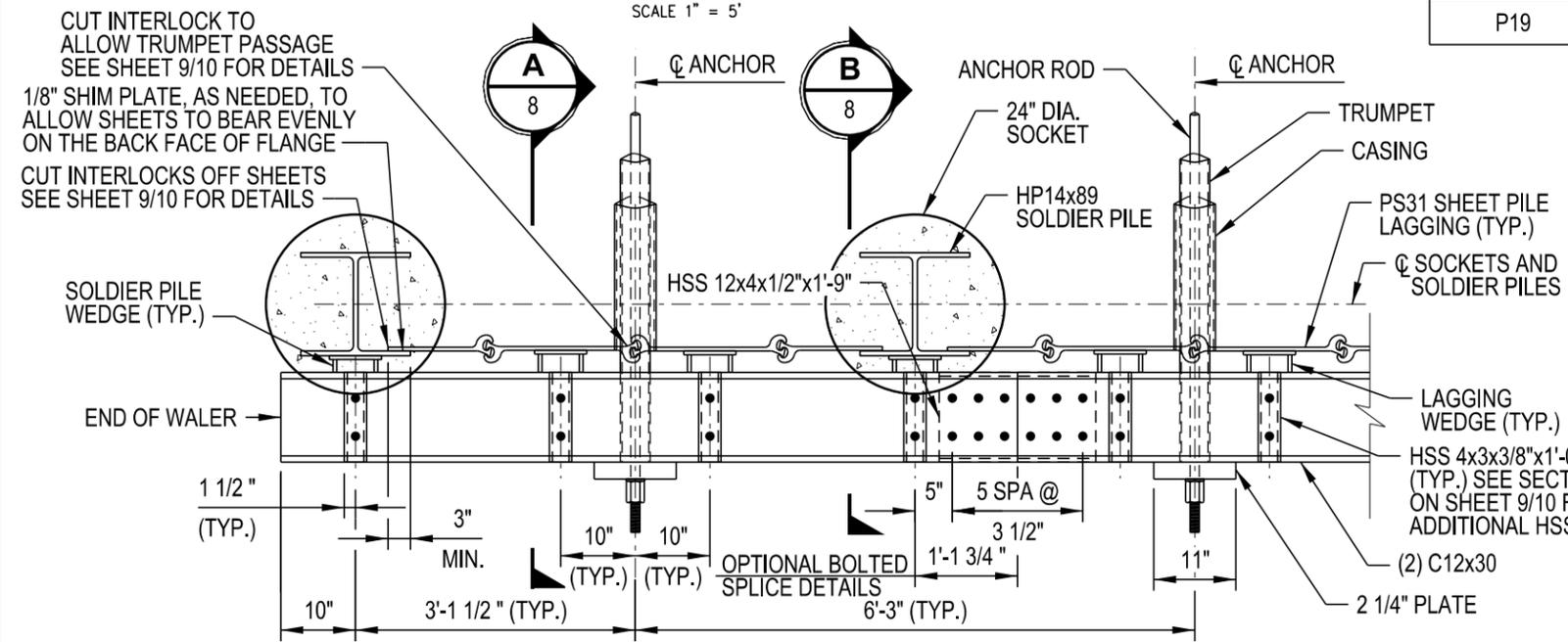
- NOTES:**
- SEE SHEET 9/10 FOR SECTION A-A AND SECTION B-B.
 - SEE SHEET 9/10 FOR ANCHOR ROD DETAIL.
 - SEE SHEET 10/10 FOR LAGGING WEDGE AND SOLDIER PILE WEDGE DETAILS



GENERIC CROSS SECTION
SCALE 1" = 5'

SOLDIER PILE	NORTHING	EASTING	TOP OF SOLDIER PILE ELEVATION	TOP OF SOCKET ELEVATION	SEE NOTE A		SEE NOTES B AND C	
					MINIMUM SOCKET LENGTH	MAXIMUM BOTTOM OF SOCKET ELEVATION	MAXIMUM SOCKET LENGTH	MINIMUM BOTTOM OF SOCKET ELEVATION
P1	2441928.65	1811080.05	359.03	355.32	5	350.32	9	346.32
P2	2441934.84	1811079.23	359.03	351.82	5	346.82	13	338.82
P3	2441941.04	1811078.40	359.03	344.57	5	339.57	18	326.57
P4	2441947.23	1811077.58	358.53	344.57	5	339.57	18	326.57
P5	2441953.43	1811076.75	358.53	344.57	5	339.57	18	326.57
P6	2441959.63	1811075.93	358.03	344.57	5	339.57	18	326.57
P7	2441965.82	1811075.11	358.03	344.57	5	339.57	18	326.57
P8	2441972.02	1811074.28	358.03	344.57	5	339.57	18	326.57
P9	2441978.21	1811073.46	357.53	344.57	5	339.57	18	326.57
P10	2441984.41	1811072.63	357.53	344.57	5	339.57	18	326.57
P11	2441990.60	1811071.81	357.53	344.57	5	339.57	18	326.57
P12	2441996.8	1811070.98	357.53	344.57	5	339.57	18	326.57
P13	2442002.99	1811070.16	357.03	339.07	5	334.07	5	334.07
P14	2442009.19	1811069.34	357.03	339.07	5	334.07	5	334.07
P15	2442015.68	1811068.51	357.03	339.07	5	334.07	5	334.07
P16	2442021.58	1811067.69	357.03	342.57	5	337.57	18	324.57
P17	2442027.78	1811066.86	357.03	349.07	5	344.07	13	336.07
P18	2442033.97	1811066.04	357.03	349.07	5	344.07	13	336.07
P19	2442040.17	1811065.21	356.53	352.82	5	347.82	9	343.82

SOLDIER PILE LOCATION AND ELEVATIONS



WALER AND LAGGING LAYOUT DETAILS

- NOTE A:** TOP OF ROCK IS ASSUMED TO COINCIDE WITH THE TOP OF SOCKET ELEVATION AND CONTINUE TO THE BOTTOM OF SOCKET ELEVATION.
- NOTE B:** IN THE EVENT SPECIFIED PRE-DRILLING REVEALS TOP OF ROCK IS ENCOUNTERED AT AN ELEVATION LOWER THAN THE SPECIFIED TOP OF SOCKET ELEVATION, MAINTAIN TOP OF CAST-IN-PLACE CONCRETE AT THE SPECIFIED TOP OF SOCKET ELEVATION WHILE LENGTHENING THE SOCKET. THE SOCKET SHALL BE LENGTHENED TO THE CONTROLLING OF (A) DEPTH NEEDED TO ENSURE THE BOTTOM 5 FEET OF THE LENGTHENED SOCKET IS IN ROCK, OR (B) THE SPECIFIED MAXIMUM SOCKET LENGTH.
- NOTE C:** FOR PILE P13, P14, AND P15 THE ASSUMPTION OF TOP OF ROCK COINCIDENT WITH TOP OF SOCKET IS MAINTAINED BASED ON FIELD OBSERVATION FOLLOWING WASHOUT EVENT. IF SOCKET LENGTHENING IS REQUIRED TO CONFORM WITH NOTE B, COORDINATE WITH ENGINEER.

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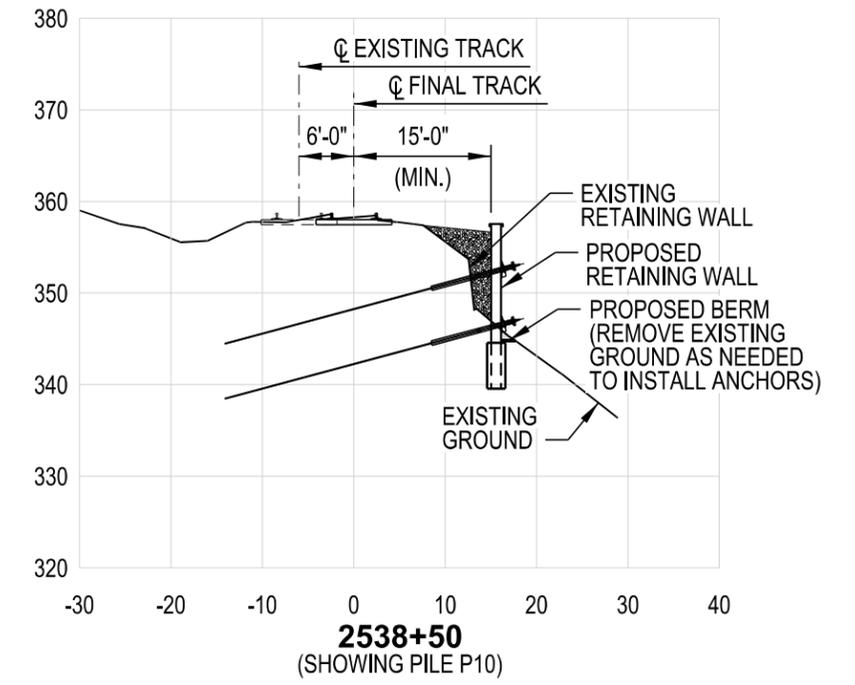
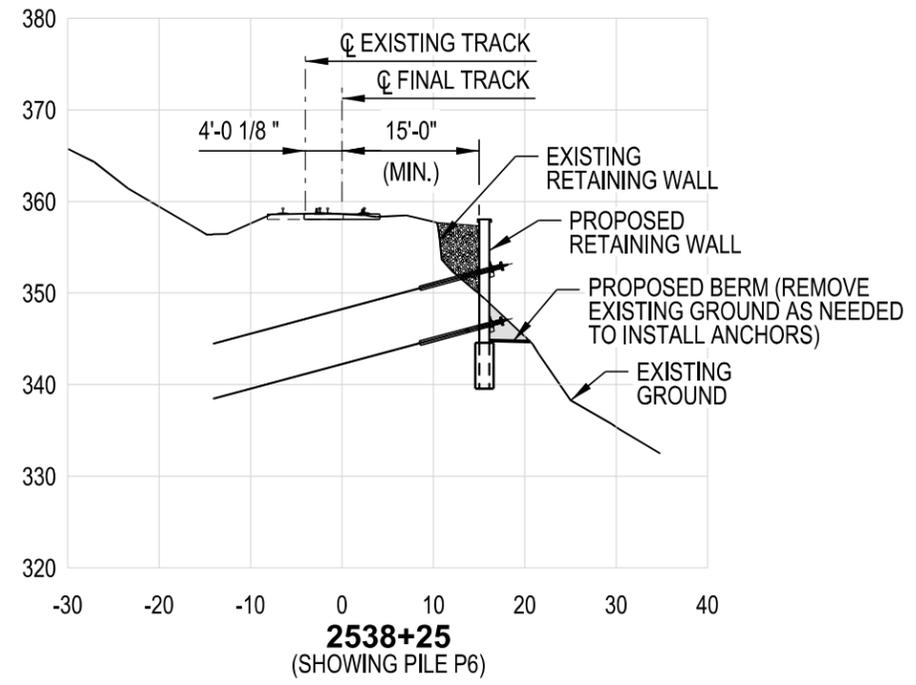
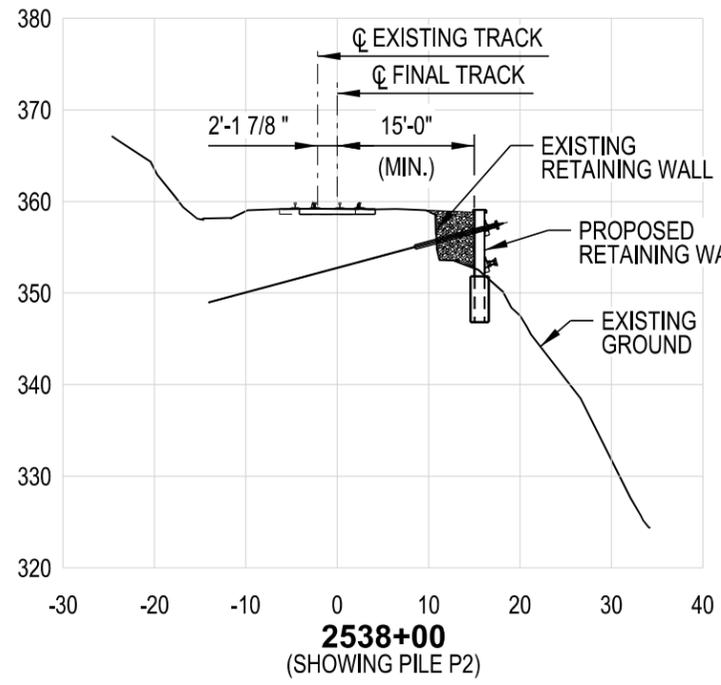
ALASKA RAILROAD CORPORATION
CAPITOL PROJECTS
P.O. BOX 107500, ANCHORAGE, ALASKA 99510-7500

PROJECT: **MP 52.26 WASHOUT DAMAGE RETAINING WALL REPLACEMENT**

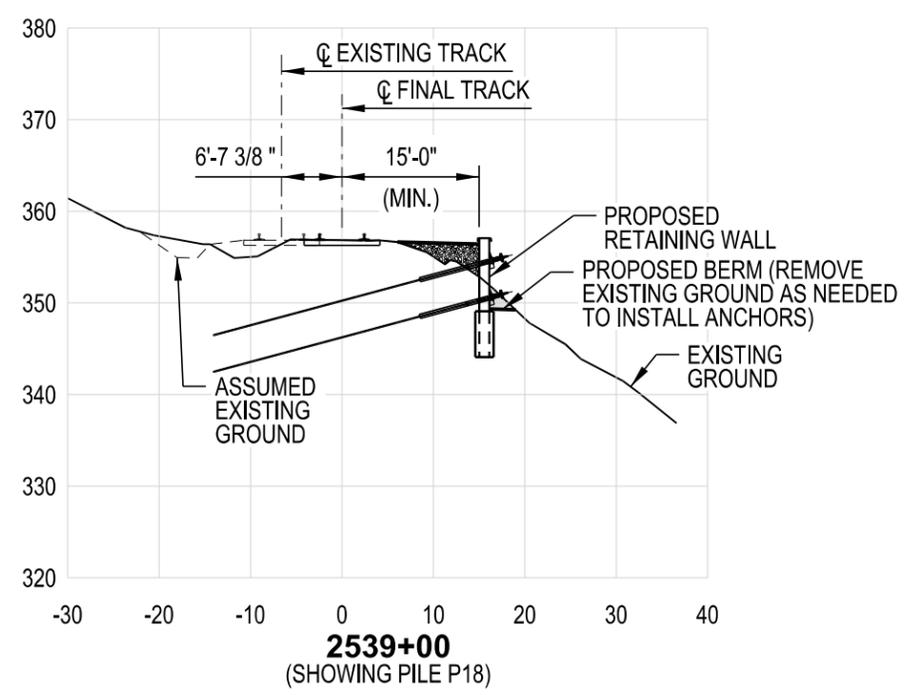
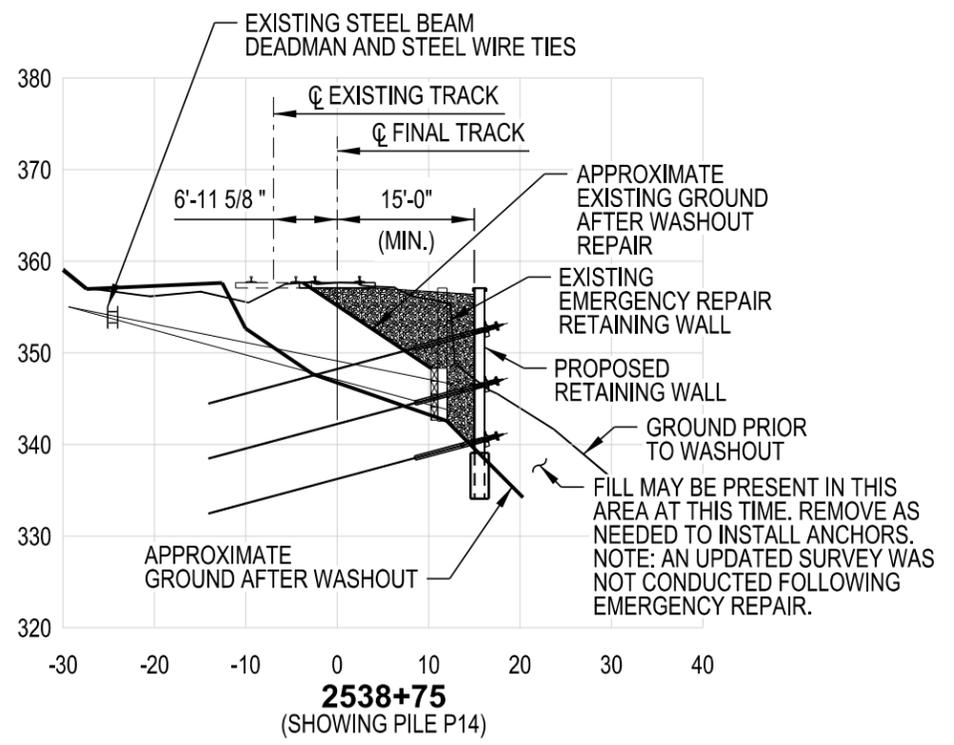
TITLE: **TYPICAL DETAILS OF WALL**

DESIGNED BY: - JBT	SCALE: H: AS NOTED V: AS NOTED	AFE NO.:
DRAWN BY: - KRH	DATE: 05/31/22	ACAD FILE:
CHECKED BY: - KAG		DWG NO. 7 OF 10
APPROVED BY: - AWK		





NOTE:
GROUND LINE SHOWN IS APPROXIMATE. LOCATION OF ROCKLINE IS TO BE DETERMINED VIA EXPLORATORY DRILLING. SOCKET AND SOLDIER PILE LENGTHS TO BE DETERMINED USING PARAMETERS SUPPLIED ON SHEET 7/10.

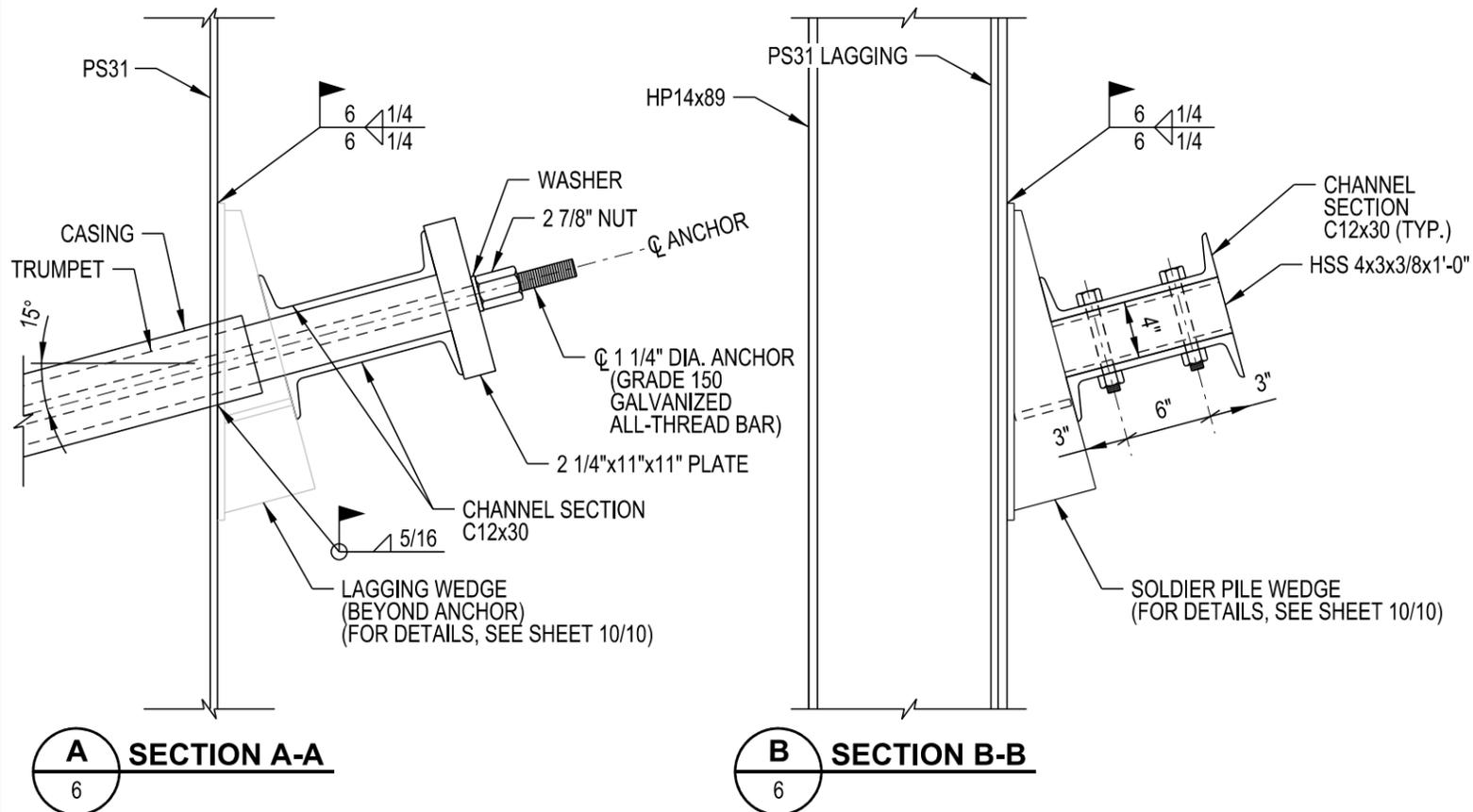


If this sheet is smaller than 22" x 34", it is a reduced print. adjust scale accordingly.

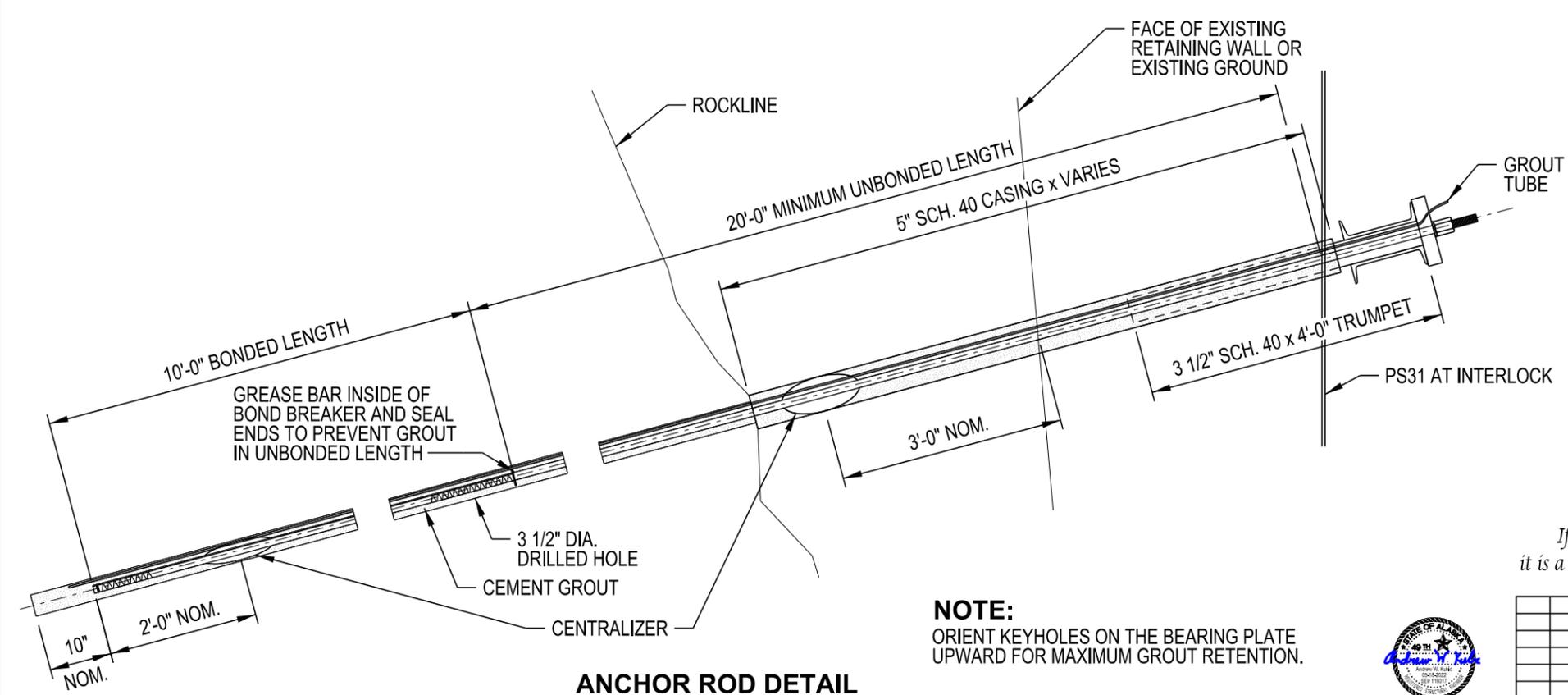
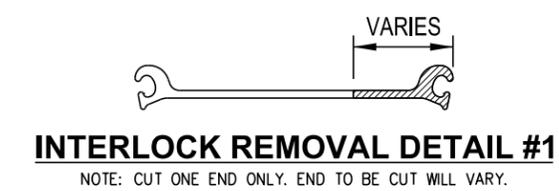


REV.	DATE	BY	REVISION

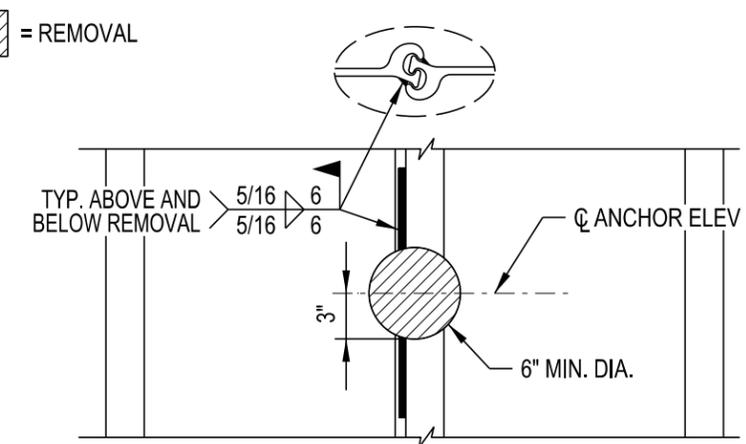
 ALASKA RAILROAD CORPORATION CAPITOL PROJECTS P.O. BOX 107500, ANCHORAGE, ALASKA 99510-7500			
PROJECT : MP 52.26 WASHOUT DAMAGE RETAINING WALL REPLACEMENT			
TITLE: CROSS SECTIONS OF WALL			
DESIGNED BY: - JBT	SCALE: H: AS NOTED	-	AFE NO.:
DRAWN BY: - KRH	V: AS NOTED		ACAD FILE:
CHECKED BY: - KAG	DATE: 05/31/22		DWG NO.
APPROVED BY: - AWK			8 OF 10



ANCHOR DATA TABLE											
1ST ROW				2ND ROW				3RD ROW			
ANCHOR	ELEV.	DESIGN LOAD (K)	LOCK-OFF LOAD (K)	ANCHOR	ELEV.	DESIGN LOAD (K)	LOCK-OFF LOAD (K)	ANCHOR	ELEV.	DESIGN LOAD (K)	LOCK-OFF LOAD (K)
A1-1	357.07	6	6	-	-	-	-	-	-	-	-
A2-1	357.07	11	11	A2-2	351.32	23	23	-	-	-	-
A3-1	352.57	11	11	A3-2	346.57	35	35	-	-	-	-
A4-1	352.57	48	48	A4-2	346.57	35	35	-	-	-	-
A5-1	352.57	48	48	A5-2	346.57	35	35	-	-	-	-
A6-1	352.57	48	48	A6-2	346.57	35	35	-	-	-	-
A7-1	352.57	48	48	A7-2	346.57	35	35	-	-	-	-
A8-1	352.57	48	48	A8-2	346.57	35	35	-	-	-	-
A9-1	352.57	48	48	A9-2	346.57	35	35	-	-	-	-
A10-1	352.57	48	48	A10-2	346.57	35	35	-	-	-	-
A11-1	352.57	48	48	A11-2	346.57	35	35	-	-	-	-
A12-1	352.57	48	48	A12-2	346.57	35	35	-	-	-	-
A13-1	352.57	48	48	A13-2	346.57	24	24	A13-3	340.57	56	56
A14-1	352.57	48	48	A14-2	346.57	24	24	A14-3	340.57	56	56
A15-1	352.57	48	48	A15-2	346.57	35	35	-	-	-	-
A16-1	354.57	28	28	A16-2	350.57	33	33	-	-	-	-
A17-1	354.57	13	13	A17-2	350.57	26	26	-	-	-	-
A18-1	354.57	6	6	-	-	-	-	-	-	-	-



= REMOVAL



NOTE:
ORIENT KEYHOLES ON THE BEARING PLATE UPWARD FOR MAXIMUM GROUT RETENTION.

If this sheet is smaller than 22" x 34", it is a reduced print. adjust scale accordingly.

REV.	DATE	BY	REVISION

ALASKA RAILROAD CORPORATION
CAPITOL PROJECTS
P.O. BOX 107500, ANCHORAGE, ALASKA 99510-7500

PROJECT: **MP 52.26 WASHOUT DAMAGE RETAINING WALL REPLACEMENT**

TITLE: **WALL DETAILS (SHEET 1 OF 2)**

DESIGNED BY: - JBT	SCALE: H: AS NOTED	AFE NO.:
DRAWN BY: - KRH	V: AS NOTED	ACAD FILE:
CHECKED BY: - KAG	DATE: 05/31/22	DWG NO.:
APPROVED BY: - AWK		9 OF 10

