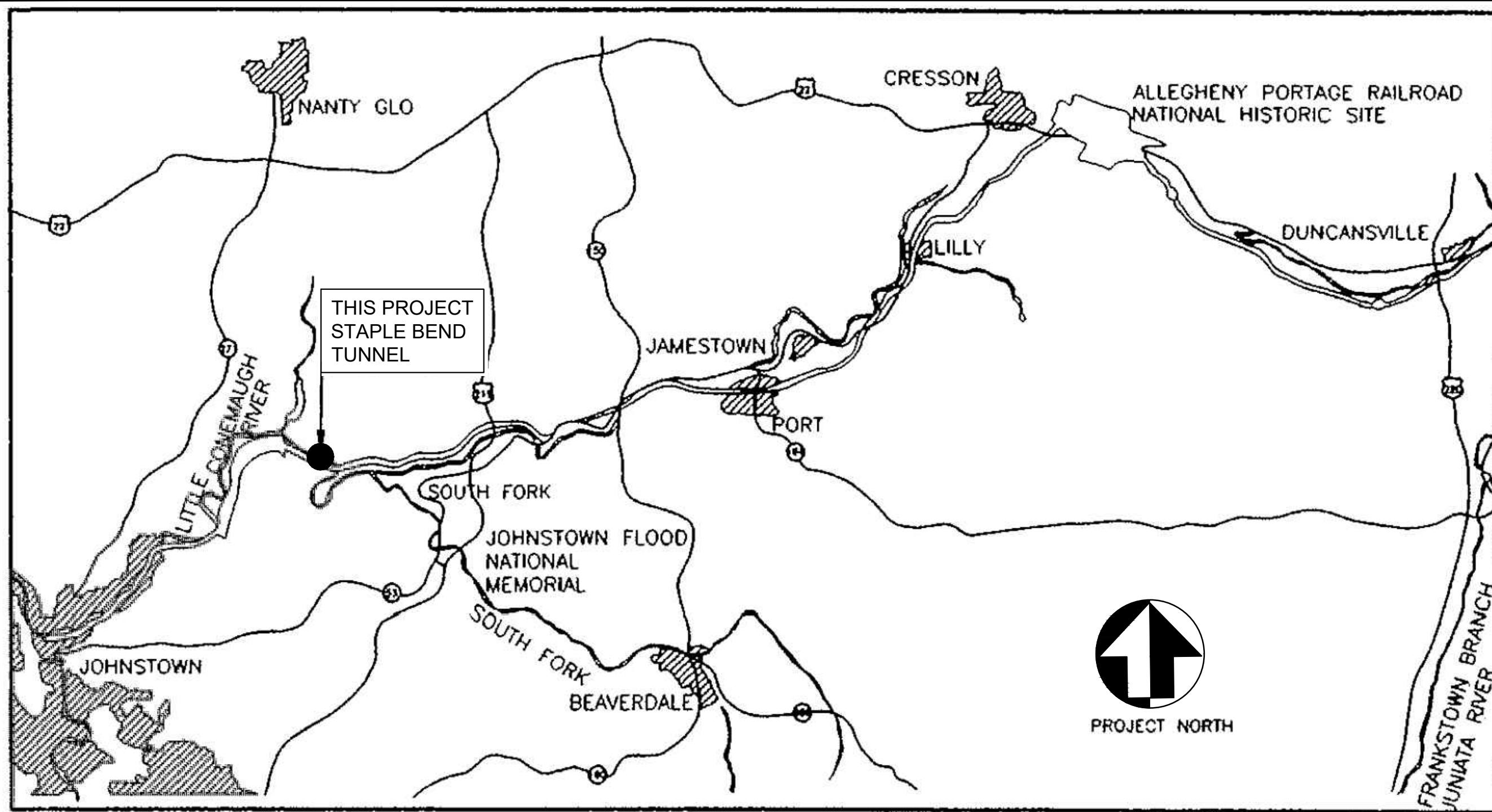
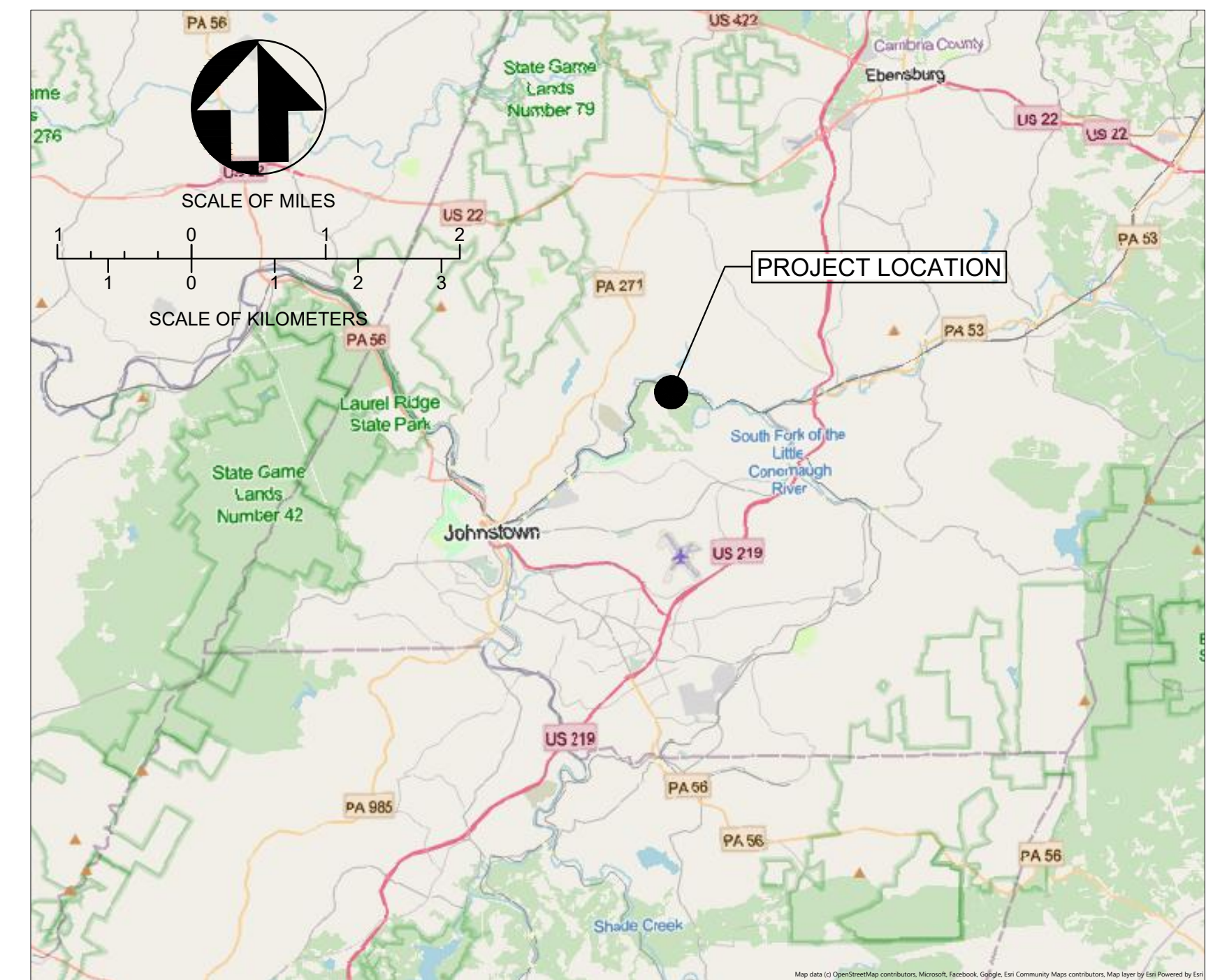




PARK MAP

SCALE: NTS

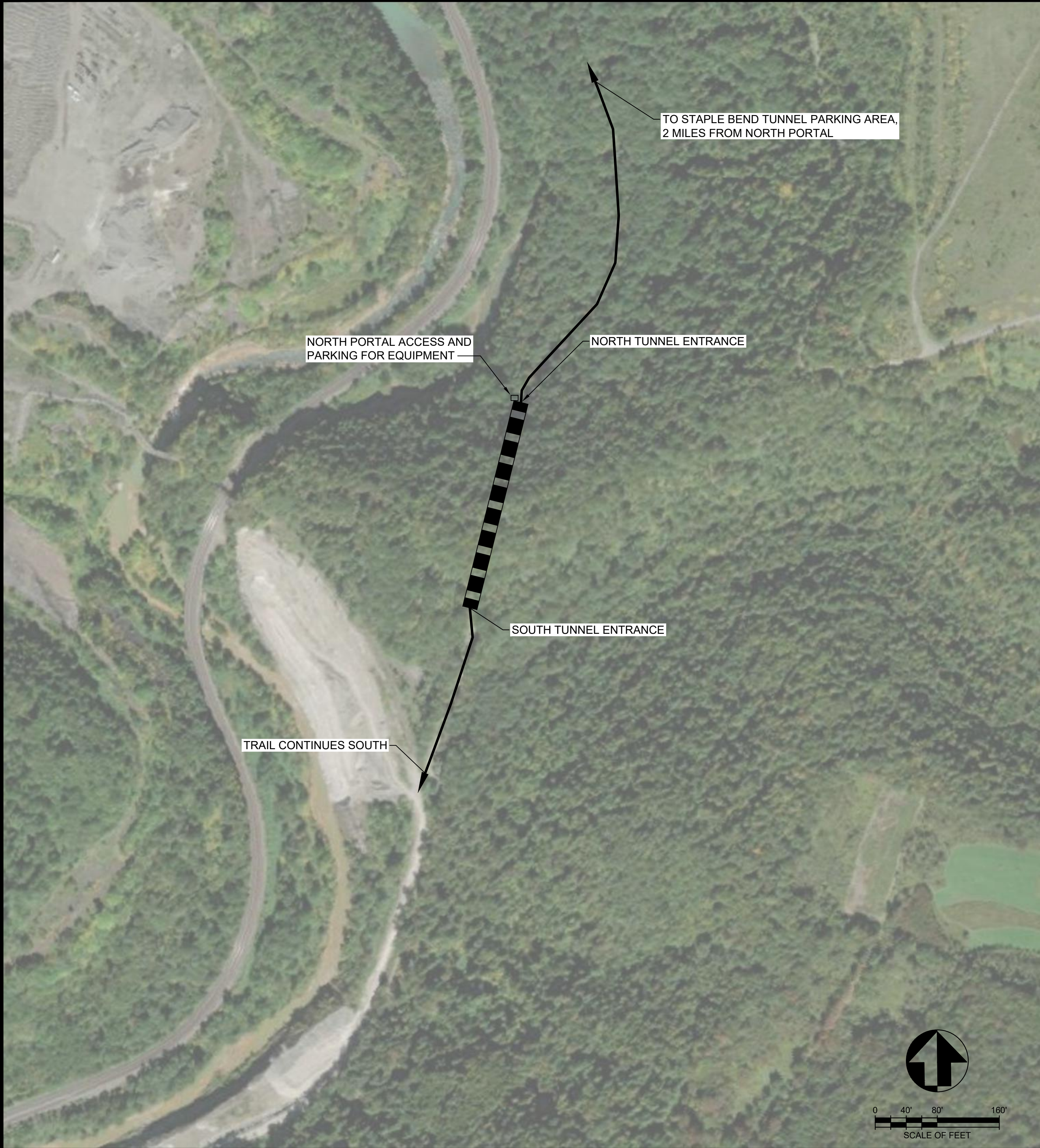


VICINITY MAP

SHEET	SUB SHEET	SHEET TITLE
1	G1	COVER SHEET
2	G2	STAGING PLAN
3	S1	SITE LAYOUT
4	S2	PROPOSED & EXISTING MITIGATIONS STA 1+00 TO STA 3+00
5	S3	PROPOSED & EXISTING MITIGATIONS STA 3+00 TO STA 5+00
6	S4	PROPOSED & EXISTING MITIGATIONS STA 5+00 TO STA 7+00
7	S5	PROPOSED & EXISTING MITIGATIONS STA 7+00 TO STA 8+00
8	S6	ROCK BOLT & SHORING LOCATION PLAN
9	S7	ROCK BOLT & SHORING DETAILS
10	S8	NORTH & SOUTH TUNNEL ENTRANCES

TETRA TECH - 140P2021D0008		MARK	SHEET	DESCRIPTION	DATE	INITIAL	QUALITY DESIGN CERTIFICATION ☐ PREPARED IN ACCORDANCE WITH DESIGN DEVELOPMENT (TITLE I) OR ☐ VARIANCE FROM DESIGN DEVELOPMENT (TITLE I) APPROVED BY SUPERINTENDENT ON _____ OR ☐ CONSTRUCTION DRAWING NOT PRECEDED BY DESIGN DEVELOPMENT (TITLE I) PROJECT MANAGER _____ DATE _____				CONSTRUCTION DRAWINGS UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE DENVER SERVICE CENTER		TITLE OF PROJECT STABILIZE STAPLE BEND TUNNEL LOCATION WITHIN PARK STAPLE BEND TUNNEL NAME OF PARK ALLEGHENY PORTAGE RAILROAD NATIONAL HISTORIC SITE (ALPO) REGION N. ATLANTIC COUNTY CAMBRIA STATE PENNSYLVANIA			DRAWING NO. 423 196450 PKG NO. 215 SHEET 161 OF 10	
PRIME: GEOTECHNICAL: TETRA TECH HELENA, MT ENNIS, MT 																	

8/1/2025 11:26:13 AM - Autodesk Civil 3D 2025 - C:\Users\BRADY.GROVE\OneDrive - Tetra Tech, Inc\NPS STAPLE BEND TUNNEL - TO SUBMIT\FUIFU CD PACKAGE\INDIVIDUAL CD\STAPLE BEND TUNNEL - ACAD FILES\G2 STG PLAN.DWG - GROVE, BRADY



OVERALL SITE PLAN



NORTH TUNNEL ENTRANCE

SCALE: NTS



SOUTH TUNNEL ENTRANCE

SCALE: NTS

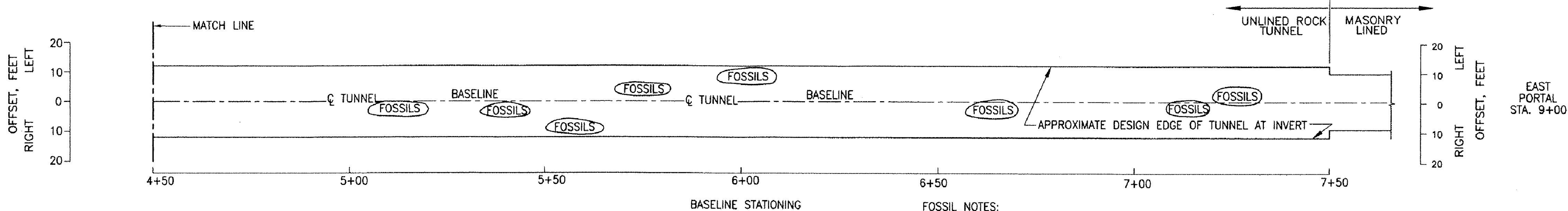
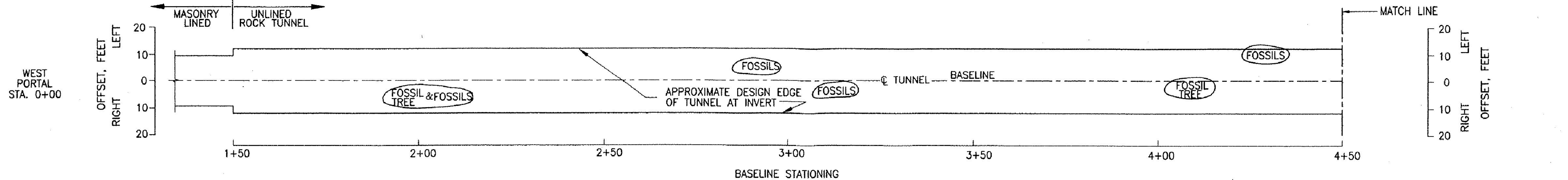
NOTES:

- CONTRACTOR SHALL ESTABLISH SAFETY BARRIERS FOR PEDESTRIANS AND EMPLOYEES BASED ON STAGING AREA LOCATIONS.
- CONTRACTOR SHALL ESTABLISH AN EMERGENCY ACTION PLAN MEETING AREA.
- ALL EQUIPMENT AND MATERIALS PLACEMENT SHALL BE COORDINATED WITH AND APPROVED BY THE CO.CONTRACTOR SHALL KEEP ALL CONSTRUCTION EQUIPMENT, STAGING, AND MATERIALS AWAY FROM STAPLE BEND TRAIL AREA EXCEPT WHEN IN USE WITHIN THE TUNNEL.CONTRACTOR SHALL PROTECT LAWN AND NEARBY VEGETATION THROUGH PRIOR APPROVED SITE MOBILIZATION PLAN.
- CONTRACTOR SHALL KEEP STAGING AREA CLEAN AND MATERIALS ORGANIZED AS DEFINED IN SPECIFICATION 017419 .
- THE NEAREST BATHROOM FACILITIES ARE LOCATED AT THE STAPLE BEND TRAILHEAD.
- IF STAGING IS REQUIRED AT BOTH ENDS OF THE TUNNEL, CONTRACTOR SHALL ESTABLISH COMMUNICATIONS THROUGHOUT TO ENSURE BOTH AREAS ARE MAINTAINED AND SAFETY IS ESTABLISHED THROUGHOUT THE CONSTRUCTION PROJECT.
- IF PALEONTOLOGICAL RESOURCES ARE FOUND DURING CONSTRUCTION, WORK SHALL BE REDIRECTED TO ANOTHER AREA NEARBY SO THAT THE FIND MAY BE ASSESSED FOR SIGNIFICANCE. CONSTRUCTION MONITORS SHALL NOTIFY THE COMPANY AND THE ONSITE CONSTRUCTION MONITORING COORDINATOR. AS PART OF THE MONITORING PROCEDURES, A PALEONTOLOGIST APPROVED BY THE NPS WITH REGIONAL EXPERIENCE SHALL THEN BE CONTACTED TO ASSESS THE SIGNIFICANCE OF THE FIND AND TO RECOMMEND ADDITIONAL MITIGATION MEASURES IF NECESSARY. THE PALEONTOLOGIST SHALL BE PAID HOURLY AND RETAINED BY THE CONTRACTOR TO PERFORM INSPECTION OF THE EXCAVATION AND TO SET A WORKING SETBACK DISTANCE.
- SEVERAL BAT SPECIES ARE LISTED AS ENDANGERED IN THE AREA OF CONSTRUCTION. BAT EXCLUSION MEASURES WILL BE REQUIRED PRIOR TO START OF CONSTRUCTION WHERE A DEVICE IS INSTALLED ALLOWING BATS TO EXIT BUT NOT ENTER. ALL AREAS SHALL BE CHECKED TO ENSURE THERE ARE NO BATS PRESENT PRIOR TO PREPARATION AND CLOSURE OF ANY VOID SPACES. SEASONAL RESTRICTIONS WILL BE IN PLACE DURING THE CONSTRUCTION, AND WILL BE DEFINED BY NPS CONTRACT.

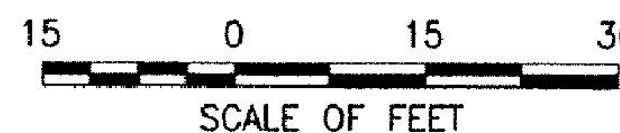
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PRIME: GREAT WEST ENGINEERING HELENA, MT	GEOTECHNICAL: TETRA TECH ENNIS, MT	S. GARLAND	G2		STAGING PLAN	423		
		CADD				196450		
		R. WOOLSEY				PMIS/PKG NO.		
		TECH REVIEW				215161		
		B. GROVE				SHEET		
		DATE						
		07/31/2025			ALLEGHENY PORTAGE RAILROAD HISTORIC SITE (ALPO)		<u>2</u> OF <u>10</u>	

Bar measures 1 inch, otherwise drawing not to scale

8/1/2025 11:28:13 AM - Autodesk Civil 3D 2025 - C:\USERS\BRADY.GROVE\ONE DRIVE - TETRA TECH, INC\NPS STAPLE BEND TUNNEL - ACAD FILES\ST1 TNL ORL.DWG - GROVE, BRADY

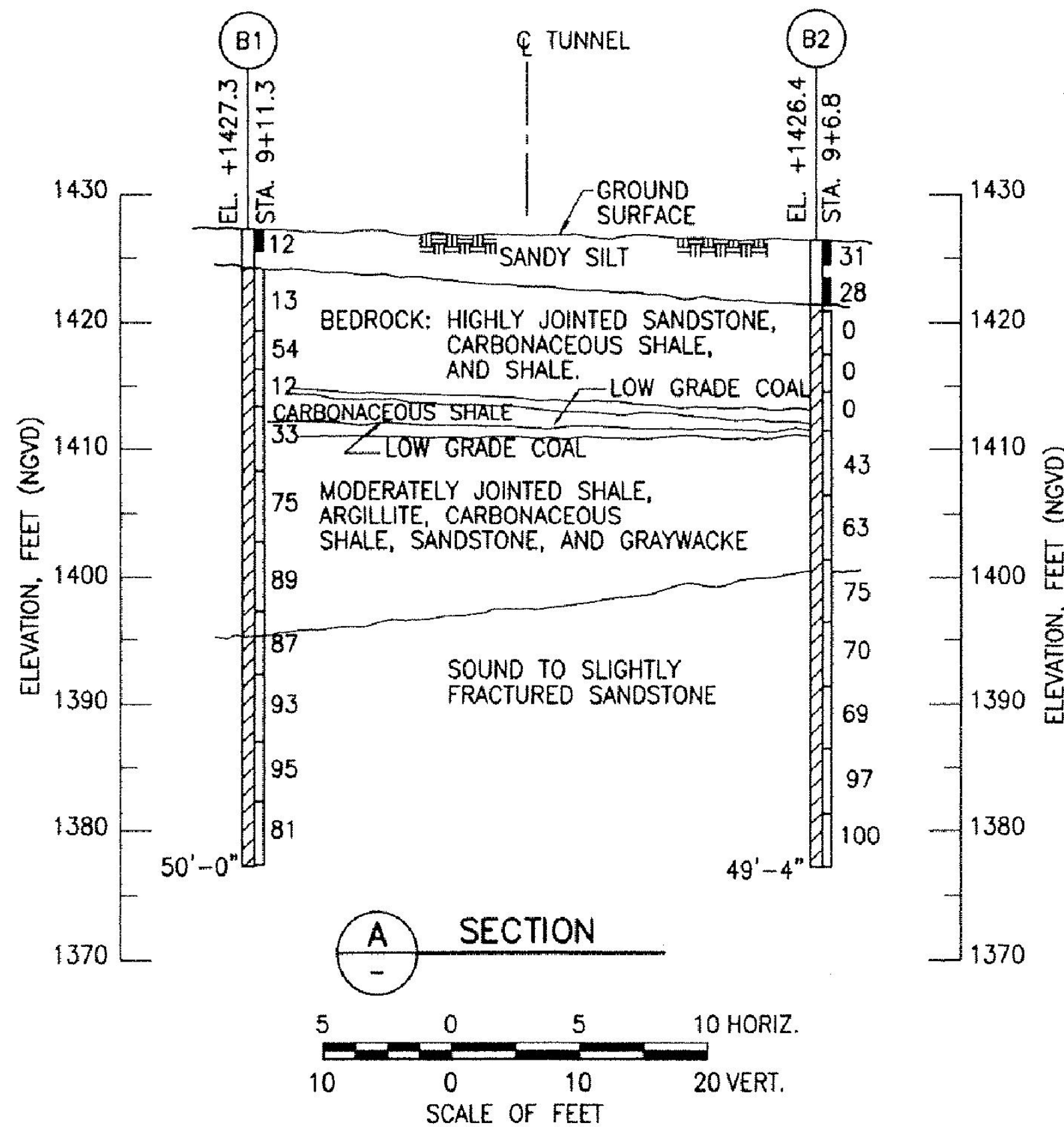


PLAN - FOSSIL LOCATIONS



FOSSIL NOTES:

- FOSSILS ARE LOCATED IN CROWN OF TUNNEL.
- RETAIN AND PROTECT FOSSILS DURING THE WORK. REPORT CONFLICTS TO CONTRACTING OFFICER.



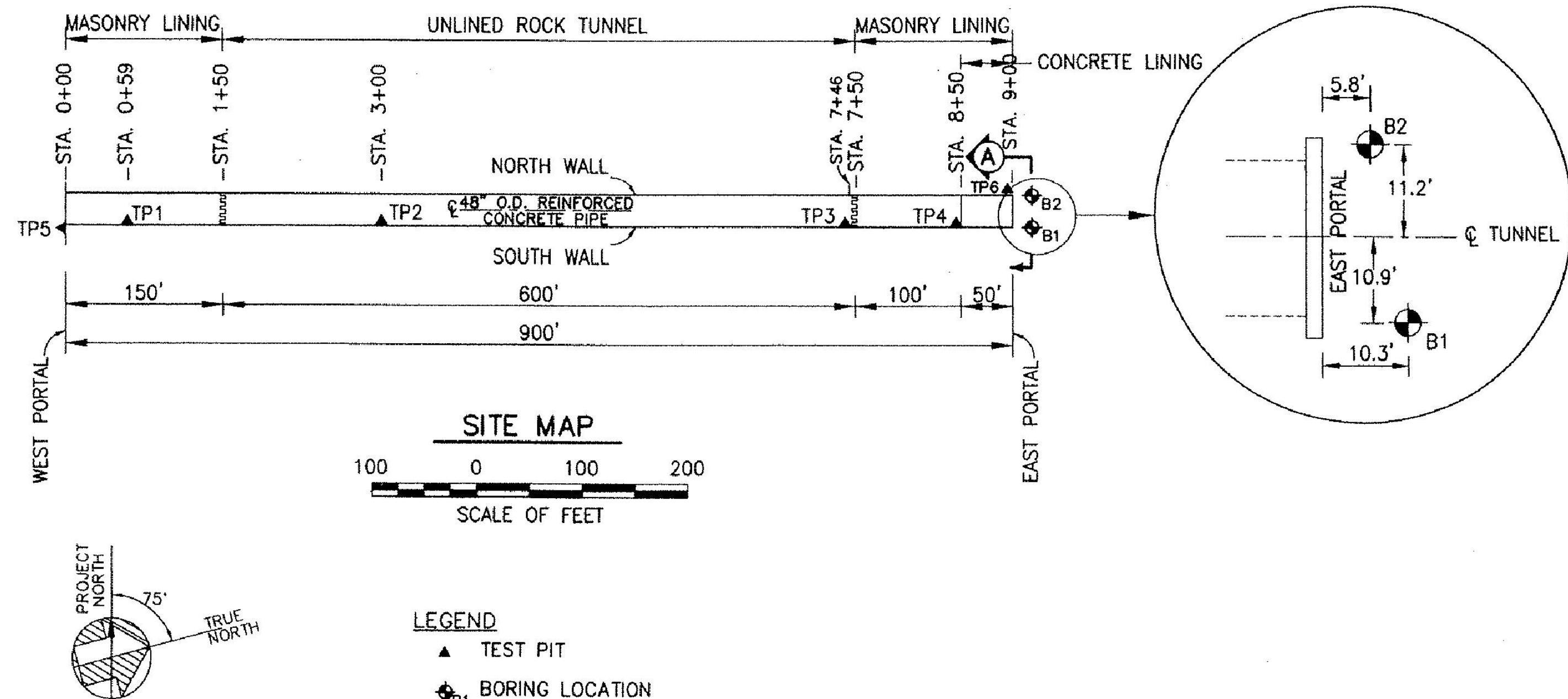
LEGEND:

- B1
- BORING NUMBER
- APPROXIMATE ELEVATION OF GROUND SURFACE AND STATION LOCATION
- APPROXIMATE GROUND SURFACE AT BORING
- LOCATION OF SPLIT SPOON SAMPLE WITH STANDARD PENETRATION RESISTANCE, BLOWS PER FOOT
- APPROXIMATE LOCATION OF STRATUM CHANGE
- LOCATION OF ROCK CORE SAMPLE WITH RQD, PERCENTAGE (SEE NOTE 3)
- BOTTOM OF BORING DEPTH

NOTES:

- BORINGS B1 AND B2 WERE PERFORMED OUTSIDE THE EAST PORTAL OF THE TUNNEL.
- THE TRANSITION BETWEEN STRATUM CHANGES AT BORING LOCATIONS MAY BE GRADUAL. THE LOCATION OF STRATUM CHANGES BETWEEN BORING LOCATIONS ARE BASED ON INTERPOLATION AND ARE APPROXIMATE ONLY.

3. RQD = $\frac{\text{LENGTHS OF SOUND CORES} > 4 \text{ INCHES}}{\text{LENGTH CORED}} \times 100\%$



SITE MAP



LEGEND

- ▲ TEST PIT
- ◆ B1 BORING LOCATION

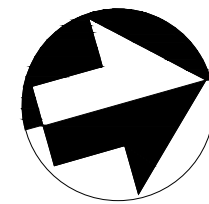
NOTES:

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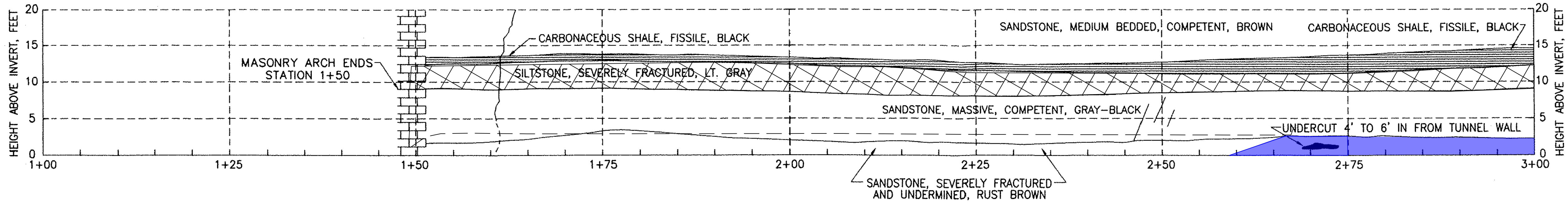
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PRIME: GREAT WEST ENGINEERING HELENA, MT	GEOTECHNICAL: TETRA TECH ENNIS, MT	S. GARLAND	S1	TUNNEL ORIENTATION AND DETAILS	ALLEGHENY PORTAGE RAILROAD HISTORIC SITE (ALPO)	423
		CADD				196450
		R. WOOLSEY				PMIS/PKG NO.
		TECH REVIEW				215161
B. GROVE	SHEET					
		DATE				3 OF 10
		07/31/2025				

Bar measures 1 inch, otherwise drawing not to scale

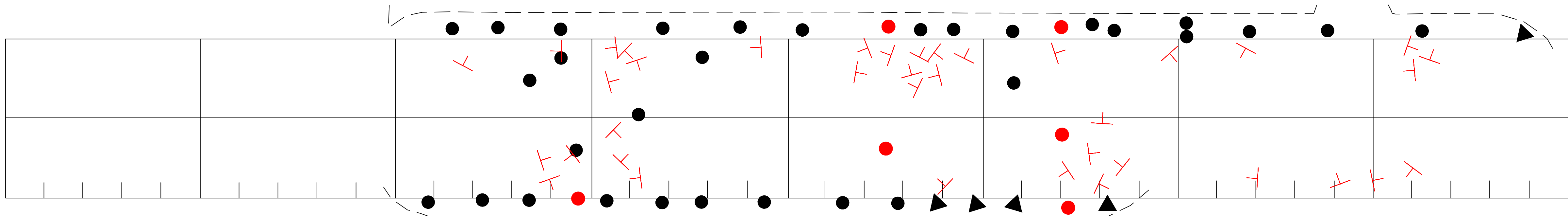
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WEST WALL PROFILE

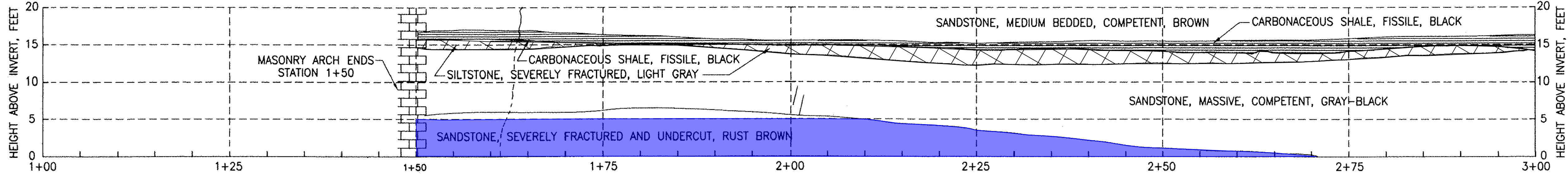


WEST WALL PLAN



EAST WALL PLAN

EAST WALL PROFILE



LEGEND

- EXISTING ROCK BOLT
- PROPOSED ROCK BOLT
- ▲ EXISTING SHORING POST
- ⊥ STRIKE AND DIP MEASUREMENT
- EXISTING VOID - PROPOSED VOID FILL CONCRETE (REFER TO SUB SHEET S7 FOR DETAIL)
- PROPOSED WALL STABILIZATION

NOTES:

- DRAWING INFORMATION EXTRACTED FROM GEI CONSULTANTS GEOTECHNICAL REPORT, PROJECT 90259, DATED 03/29/91.
- REFER TO SUB SHEET S5 FOR SCHEDULE OF ROCK ANCHORS.



TETRA TECH - 140P2021D0008		DESIGNED	SUB SHEET NO.	TITLE OF DRAWING		DRAWING NO.	
PRIME: GREAT WEST ENGINEERING HELENA, MT	GEOTECHNICAL: TETRA TECH ENNIS, MT	S. GARLAND	S2	PROPOSED & EXISTING MITIGATIONS STA 1+00 TO STA 3+00	ALLEGHENY PORTAGE RAILROAD HISTORIC SITE (ALPO)	423	
		CADD				196450	
		R. WOOLSEY				PMIS/PKG NO.	
		TECH REVIEW				215161	
		B. GROVE				SHEET	
		DATE				4 OF 10	
		07/31/2025					

Bar measures 1 inch, otherwise drawing not to scale



- LEGEND**
- | | |
|---|----------------------------|
|  | EXISTING ROCK BOLT |
|  | PROPOSED ROCK BOLT |
|  | EXISTING SHORING POST |
|  | STRIKE AND DIP MEASUREMENT |

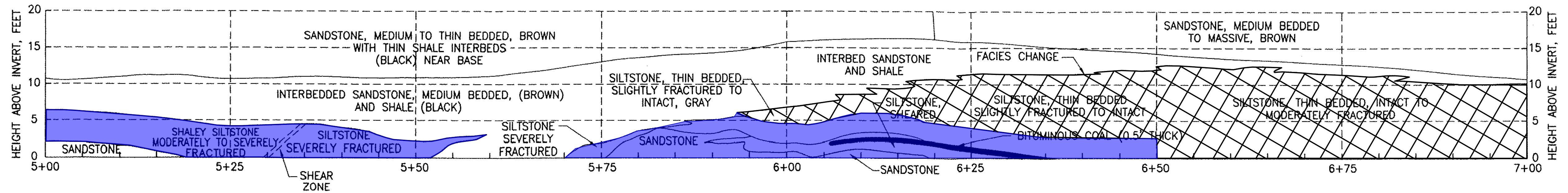
1. DRAWING INFORMATION EXTRACTED FROM GEI CONSULTANTS
GEOTECHNICAL REPORT, PROJECT 90259, DATED 03/29/91.
2. REFER TO SUB SHEET S5 FOR SCHEDULE OF ROCK ANCHORS.



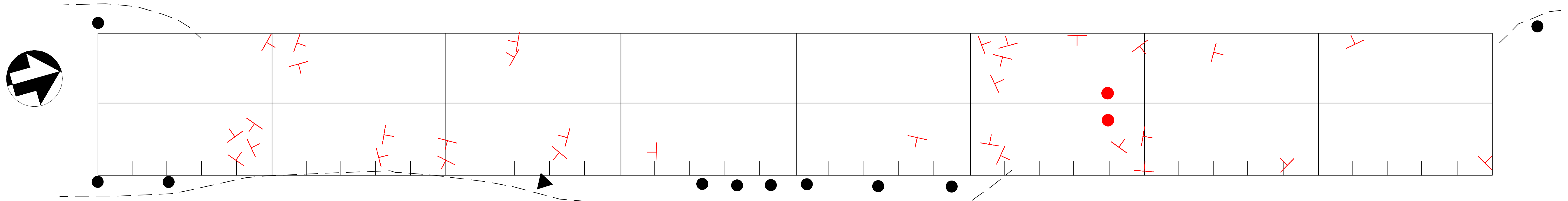
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PRIME: GREAT WEST ENGINEERING HELENA, MT	GEOTECHNICAL: TETRA TECH ENNIS, MT 	S. GARLAND			423
		CADD			196450
		R. WOOLSEY			PMIS/PKG NO.
		TECH REVIEW			215161
B. GROVE	DATE	S3	PROPOSED & EXISTING MITIGATIONS STA 3+00 TO STA 5+00 ALLEGHENY PORTAGE RAILROAD HISTORIC SITE (ALPO)	SHEET	
07/31/2025				5 OF 10	

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WEST WALL PROFILE

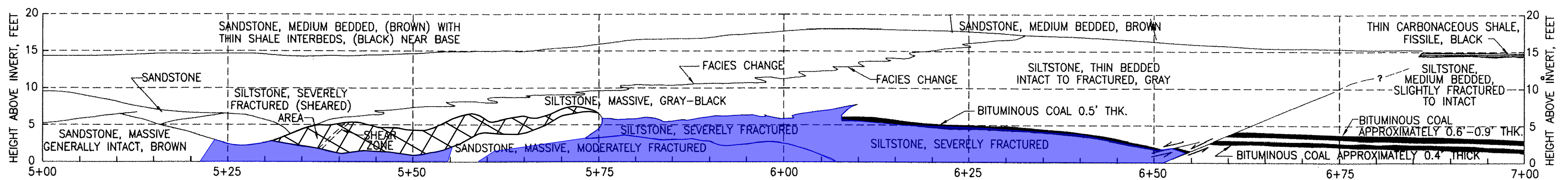


WEST WALL PLAN



EAST WALL PLAN

EAST WALL PROFILE

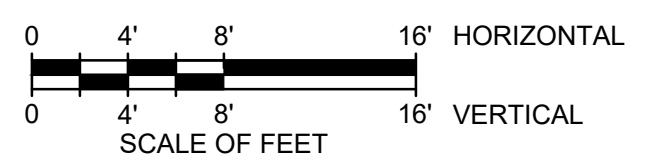


LEGEND

- EXISTING ROCK BOLT
- PROPOSED ROCK BOLT
- ▲ EXISTING SHORING POST
- ⊥ STRIKE AND DIP MEASUREMENT
- EXISTING VOID - PROPOSED VOID FILL CONCRETE (REFER TO SUB SHEET S7 FOR DETAIL)
- ▨ PROPOSED WALL STABILIZATION

NOTES:

- DRAWING INFORMATION EXTRACTED FROM GEI CONSULTANTS GEOTECHNICAL REPORT, PROJECT 90259, DATED 03/29/91.
- REFER TO SUB SHEET S5 FOR SCHEDULE OF ROCK ANCHORS.

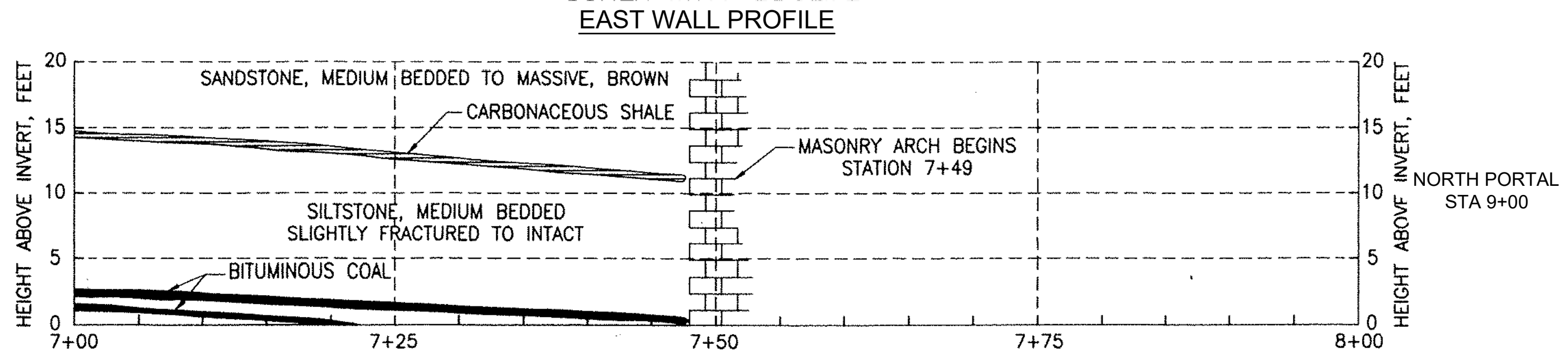
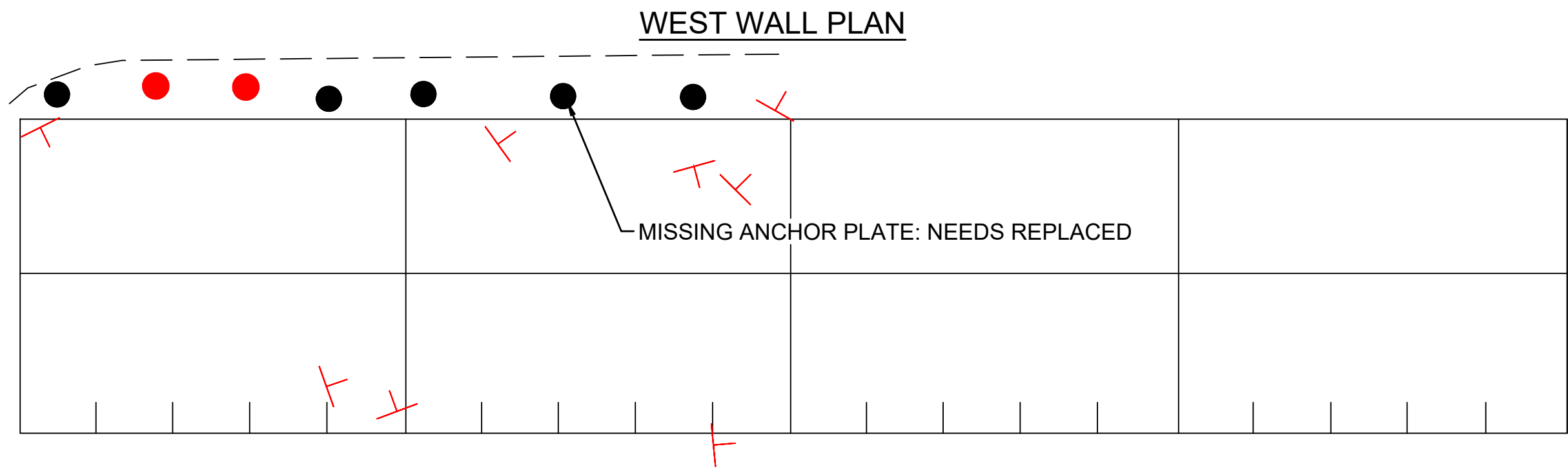
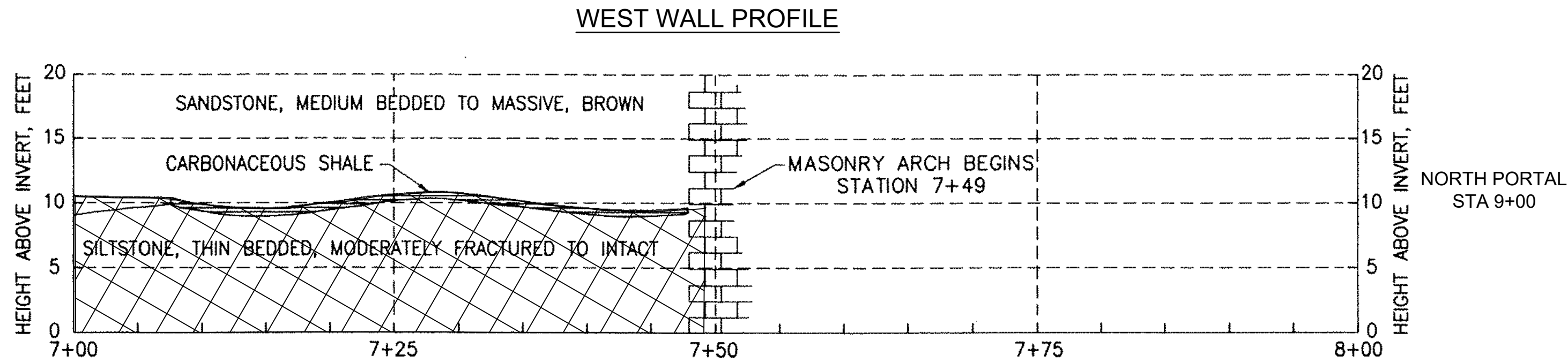


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PRIME: GREAT WEST ENGINEERING HELENA, MT	GEOTECHNICAL: TETRA TECH ENNIS, MT	S. GARLAND			423
		CADD			196450
		R. WOOLSEY			PMIS/PKG NO.
		TECH REVIEW			215161
		B. GROVE	SHEET		
		DATE	6		
		07/31/2025	OF 10		
			S4	PROPOSED & EXISTING MITIGATIONS STA 5+00 TO STA 7+00	
				ALLEGHENY PORTAGE RAILROAD HISTORIC SITE (ALPO)	

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F
E
D
C
B
A



- LEGEND**
- EXISTING ROCK BOLT
 - PROPOSED ROCK BOLT
 - EXISTING SHORING POST
 - STRIKE AND DIP MEASUREMENT
 - EXISTING VOID - PROPOSED VOID FILL CONCRETE (REFER TO SUB SHEET S7 FOR DETAIL)
 - PROPOSED WALL STABILIZATION

- NOTES:**
- DRAWING INFORMATION EXTRACTED FROM DRAWING NO. 423, SUB SHEET NO. T3, DATED 07/07/92 BY SELLARDS & GRIGG, INC.
 - BOLTS SHALL GENERALLY BE DRILLED AT AN AZIMUTH 105° ON THE EAST WALL AND 285° ON THE WEST WALL. ANGLE SHALL BE MEASURED FROM THE HORIZONTAL. SEE ROCK BOLTING SCHEDULE 10° FROM HORIZONTAL.

SCHEDULE OF ROCK BOLTS (SEE NOTE 2)			
STATION (FT)	LOCATION	LENGTH (FT.)	ANGLE (DEGREES)
1+75	EAST SHOULDER	10	10
2+15	EAST CROWN	10	10
2+15	WEST SHOULDER	10	10
2+35.5	EAST CROWN	10	10
2+36	WEST SHOULDER	10	10
2+36	EAST SHOULDER	10	10
3+38	WEST CROWN	10	10
4+30	WEST CENTRAL CROWN	30	10
4+30	EAST CENTRAL CROWN	10	10
4+45	WEST SHOULDER	10	10
4+68	WEST SHOULDER	10	10
4+89	WEST SHOULDER	10	10
4+91	EAST SHOULDER	10	10
6+45	WEST CENTRAL CROWN	10	10
6+45	EAST CENTRAL CROWN	10	10
7+10	WEST SHOULDER	10	10
7+15	WEST SHOULDER	10	10

17 TOTAL PROPOSED ROCK BOLTS



TETRA TECH - 140P2021D0008 PRIME: GREAT WEST ENGINEERING HELENA, MT GEOTECHNICAL: TETRA TECH ENNIS, MT 	DESIGNED S. GARLAND CADD R. WOOLSEY TECH REVIEW B. GROVE DATE 07/31/2025	SUB SHEET NO. S5	TITLE OF DRAWING PROPOSED & EXISTING MITIGATIONS STA 7+00 TO STA 8+00 ALLEGHENY PORTAGE RAILROAD HISTORIC SITE (ALPO)	DRAWING NO. 423 196450 PMIS/PKG NO. 215161 SHEET 7 OF 10
	Bar measures 1 inch, otherwise drawing not to scale			

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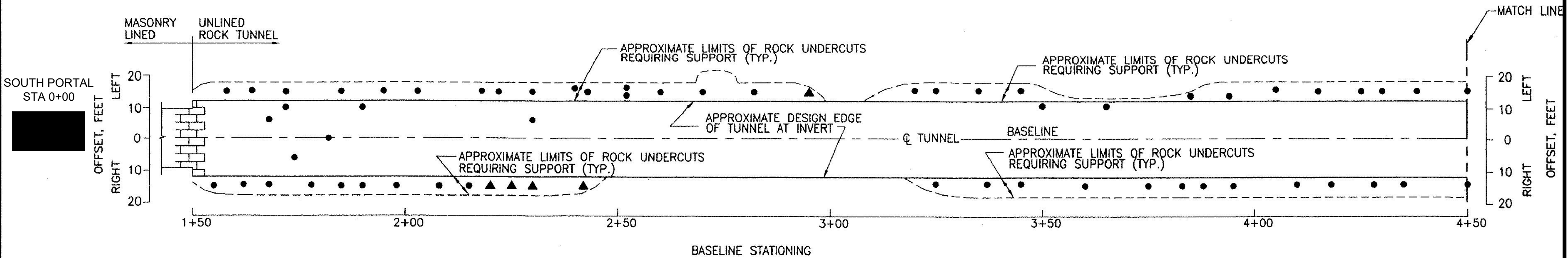
STATION	BOLT = B		LOCATION CROWN = C		LENGTH	ANGLE	COMMENTS
	POST= P	SHOULDER = S	FT.	DEGREES			
1+58	B	S	10	10			INSTALL BOLT IN CENTER OF ROCK BLOCK
1+64	B	S	10	10			
1+68	B	S	15	10			
1+72	B	S	10	15			
1+72	B	C	15	10			
1+82	B	C	10	10			
1+85	B	S	10	10			
1+90	B	C	10	10			
1+95	B	S	10	10			
2+03	B	S	10	10			
2+18	B	S	10	10			
2+22	B	S	10	10			
2+30	B	S	10	10			
2+30	B	C	15	10			
2+40	B	S	10	10			
2+43	B	S	10	10			SCALE THIN SLABS BEFORE BOLTING LIMITED HEADROOM TO DRILL LIMITED HEADROOM TO DRILL SCALE LOOSE ROCK BEFORE BOLTING SCALE LOOSE ROCK BEFORE BOLTING
2+52	B	S	10	10			
2+52	B	S	10	10			
2+60	B	S	15	10			
2+70	B	S	15	10			
2+82	B	S	15	10			
2+95	P	S	3	VERTICAL			
3+20	B	S	15	10			
3+25	B	S	15	10			
3+35	B	S	15	10			
3+45	B	S	15	10			
3+50	B	C	10	10			
3+65	B	C	10	10			
3+85	B	S	15	10			
3+94	B	S	15	10			
4+05	B	S	15	10			SCALE THIN SLABS BEFORE BOLTING LIMITED HEADROOM TO DRILL LIMITED HEADROOM TO DRILL SCALE LOOSE ROCK BEFORE BOLTING SCALE LOOSE ROCK BEFORE BOLTING
4+15	B	S	15	10			
4+25	B	S	15	20			
4+30	B	S	10	20			
4+38	B	S	15	10			
4+50	B	S	10	10			
4+55	B	S	10	10			
4+60	B	S	10	20			
4+83	B	S	10	20			
4+92	B	S	10	20			
5+00	B	S	10	20			
7+03	B	S	10	15			
7+20	B	S	10	15			
7+26	B	S	10	15			
7+35	B	S	10	15			
7+43	B	S	10	15			

SOUTH WALL							
STATION	BOLT = B		LOCATION CROWN = C		LENGTH	ANGLE	COMMENTS
	POST= P	SHOULDER = S	FT.	DEGREES			
1+55	B	S	15	10			INSTALL METAL STRAP BETWEEN BOLTS @ STATIONS 4+28 AND 4+35
1+62	B	S	15	10			
1+68	B	S	15	10			
1+74	B	C	10	10			
1+78	B	S	15	10			
1+85	B	S	15	10			
1+90	B	S	15	10			
1+98	B	S	15	10			
2+08	B	S	10	10			
2+15	B	S	10	10			
2+20	P	S	6	VERTICAL			
2+25	P	S	5	VERTICAL			
2+30	P	S	5	VERTICAL			
2+42	P	S	3	VERTICAL			
3+25	B	S	15	10			
3+37	B	S	15	10			WILL REQUIRE SIGNIFICANT ROCK CHIPPING
3+45	B	S	15	10			
3+60	B	S	15	10			
3+75	B	S	15	10			
3+83	B	S	15	10			
3+88	B	S	15	10			
3+95	B	S	15	10			
4+10	B	S	15	10			
4+18	B	S	10	10			
4+28	B	S	10	10			
4+35	B	S	10	10			
4+50	B	S	10	10			
4+55	B	S	10	10			
4+65	B	S	15	10			
4+78	B	S	15	10			
4+87	B	S	15	10			
5+00	B	S	10	10			
5+10	B	S	10	20			
5+63	P	S	6	VERTICAL			
5+85	B	S	10	20			
5+90	B	S	10	20			
5+95	B	S	10	20			
6+00	B	S	10	20			
6+10	B	S	10	20			
6+20	B	S	10	20			

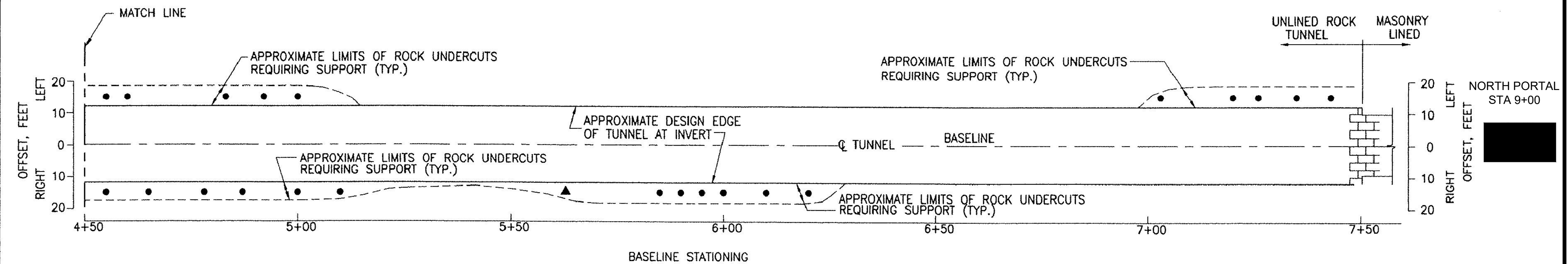
NOTES: 1. ROCK BOLT ANGLES MEASURED AS A DEPARTURE FROM VERTICAL, ANGLED AWAY FROM CROWN.
2. SHORING POST LENGTHS MEASURED FROM EXISTING GRADE TO OVERHANGING ROCK ACTUAL LENGTH WILL BE LONGER.
3. ACTUAL LOCATIONS WERE PAINTED ON TUNNEL SURFACE, APRIL 1999.

NOTES: 1. DRAWING INFORMATION EXTRACTED FROM GEI CONSULTANTS GEOTECHNICAL REPORT, PROJECT 90259, DATED 03/29/91.
2. INSTALLATION OF THE SHORING POSTS WILL BE AS NEEDED IN ACCORDANCE WITH SECTION 31-40-00 OF THE PROJECT SPECIFICATIONS.

AT THE FOLLOWING LOCATIONS.	
2+78	SHOULDER OF NORTH WALL
2+22	SHOULDER OF SOUTH WALL
2+80	SHOULDER OF SOUTH WALL



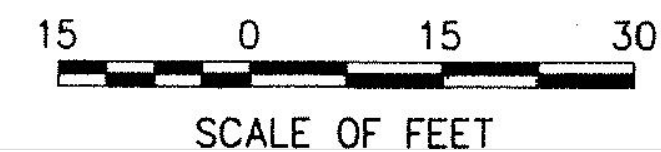
PLAN VIEW OF EXISTING ROOF ROCK BOLTS AND SHORING POSTS



PLAN VIEW OF EXISTING ROOF ROCK BOLTS AND SHORING POSTS

NOTES:
1. FOR POST AND BOLT DETAILS SEE SHEET T5.

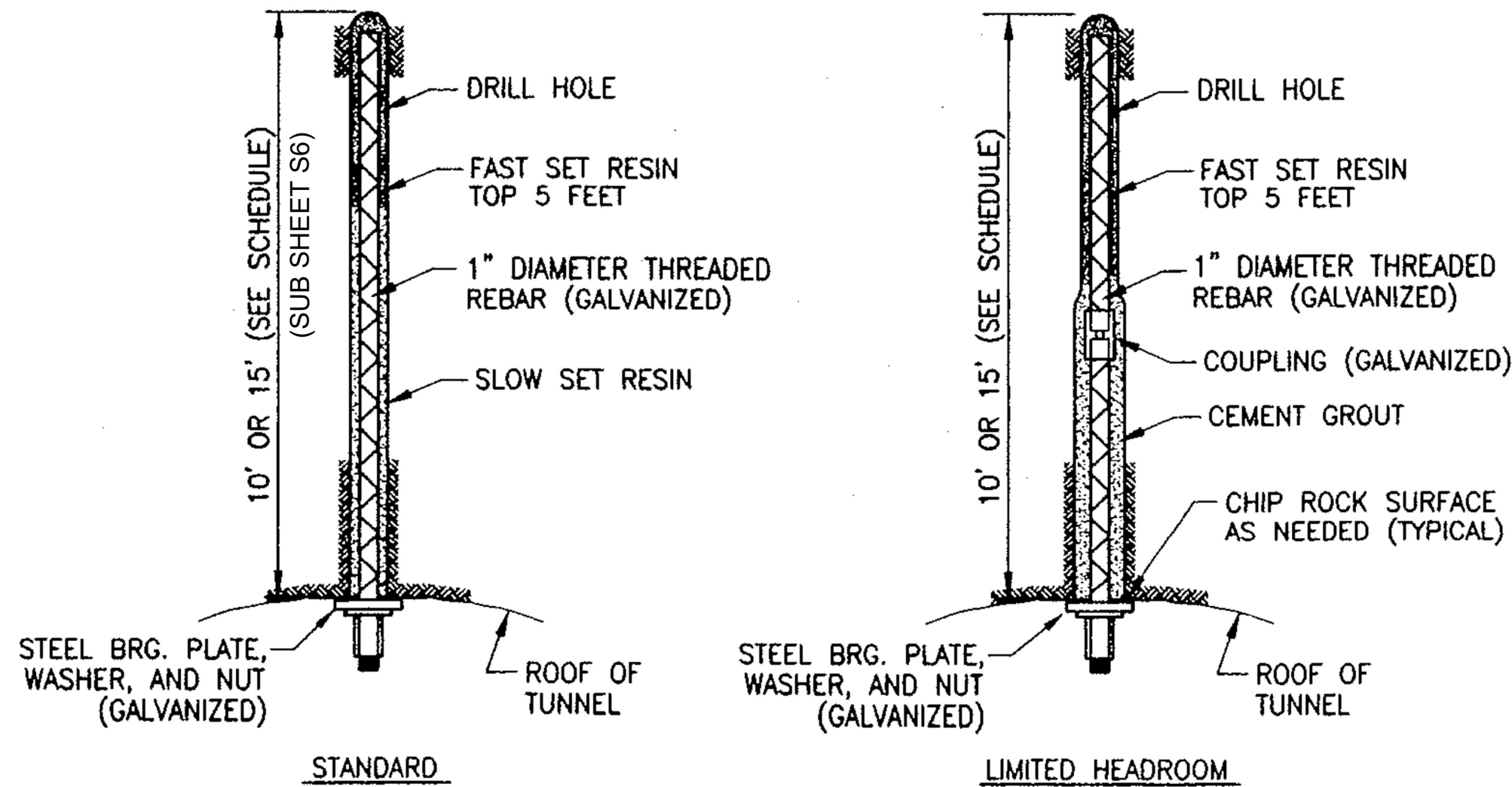
LEGEND:
● - EXISTING ROOF ROCK BOLT
▲ - EXISTING SHORING POST



TETRA TECH - 140P2021D0008		DESIGNED S. GARLAND CADD	SUB SHEET NO. S6	TITLE OF DRAWING ROCK BOLT AND SHORING POST LOCATIONS	DRAWING NO. 423 196450
PRIME: GREAT WEST ENGINEERING HELENA, MT		GEOTECHNICAL: TETRA TECH ENNIS, MT	R. WOOLSEY TECH REVIEW B. GROVE DATE 07/31/2025	ALLEGHENY PORTAGE RAILROAD HISTORIC SITE (ALPO)	PMIS/PKG NO. 215161 SHEET 8 OF 10

Bar measures 1 inch, otherwise drawing not to scale

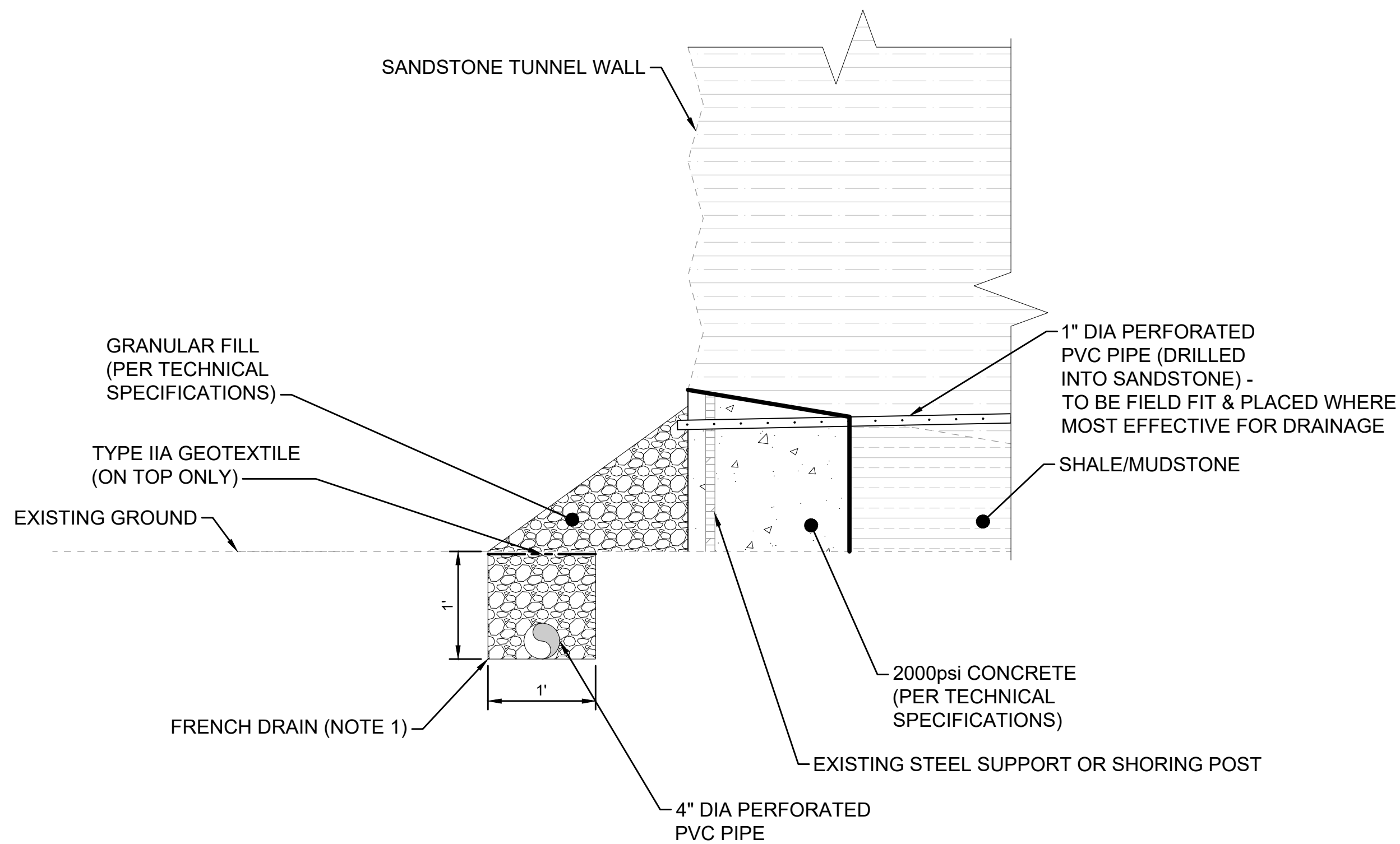
8/5/2025 8:20:05 AM - Autodesk Civil 3D 2025 - C:\USERS\BRADY.GROVE\ONE\DRIVE - TETRA TECH, INC\NPS STAPLE BEND TUNNEL - TO SUBMIT\IFUFD CD PACKAGE\INDIVIDUAL CD\STAPLE BEND TUNNEL - ACAD FILES\S7 RB & SHORTING DTL.DWG - GROVE, BRADY



NOTES:

1. TENSION BOLTS TO A LOCK-OFF LOAD OF 10 KIPS.
2. DETAILS FOR BOTH EXISTING AND PROPOSED ROCK BOLTS.
3. INSTALLATION OF LIMITED HEADROOM BOLTS AS NEEDED.

ROOF ROCK BOLT DETAILS
NOT TO SCALE



VOID FILL CONCRETE DETAIL
SCALE: NTS

NOTES:

1. THE FRENCH DRAINS SHOULD CROSS OVER THE END OF THE TUNNEL ON BOTH SIDES TO CREATE A 900-FOOT RECTANGLE. THE DRAINS SHOULD THEN BE EXTENDED ON THE OUTSIDE OF THE TUNNEL, PENDING THE DOWNHILL DIRECTION OF FURTHER FLOWS.
2. ROOF ROCK BOLT DETAILS EXTRACTED FROM GEI CONSULTANTS GEOTECHNICAL REPORT, PROJECT 90259, DATED 03/29/91.
3. WALL STABILIZATION INCLUDING MESH AND GUNITES WILL BE INCLUDED IN THESE DRAWINGS BUT CAN BE INSTALLED AS NEEDED IN ACCORDANCE WITH SECTIONS 13-09-01 AND 13-09-02 PROJECT SPECIFICATIONS.
4. PLACEMENT AND INSTALLATION OF SIGNPOSTS WILL NOT BE INCLUDED IN THESE DRAWINGS BUT WILL BE DIRECTED BY PARK PERSONNEL DURING CONSTRUCTION.
5. INSTALLATION OF THE SHORING POSTS WILL BE AS NEEDED IN ACCORDANCE WITH SECTION 31-40-00 OF THE PROJECT SPECIFICATIONS.

TETRA TECH - 140P2021D0008		DESIGNED	SUB SHEET NO.	TITLE OF DRAWING	DRAWING NO.
PRIME: GREAT WEST ENGINEERING HELENA, MT	GEOTECHNICAL: TETRA TECH ENNIS, MT	S. GARLAND			423
		CADD			196450
		R. WOOLSEY			PMIS/PKG NO.
		TECH REVIEW	S7	ROCK BOLT & VOID FILL DETAILS	215161
		B. GROVE			SHEET
		DATE			
		07/31/2025		ALLEGHENY PORTAGE RAILROAD HISTORIC SITE (ALPO)	9 OF 10

Bar measures 1 inch, otherwise drawing not to scale

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8/1/2025 1:48:51 PM - Autodesk Civil 3D 2025 - C:\USERS\BRADY.GROVE\ONE\DRIVE - TETRA TECH, INC\NPS STAPLE BEND TUNNEL - TO SUBMIT\JUFU CD PACKAGE\INDIVIDUAL CD\STAPLE BEND TUNNEL - ACAD FILES\S8 TYP TNL ENT.DWG - GROVE, BRADY



NORTH TUNNEL ENTRANCE
SCALE: NTS



NORTH TUNNEL ENTRANCE (INTERIOR)
SCALE: NTS



SOUTH TUNNEL ENTRANCE
SCALE: NTS



SOUTH TUNNEL ENTRANCE (INTERIOR)
SCALE: NTS



NORTH TUNNEL ENTRANCE (LEFT)
SCALE: NTS



NORTH TUNNEL ENTRANCE (RIGHT)
SCALE: NTS



SOUTH TUNNEL ENTRANCE (LEFT)
SCALE: NTS



SOUTH TUNNEL ENTRANCE (RIGHT)
SCALE: NTS

TETRA TECH - 140P2021D0008		DESIGNED	SUB SHEET NO.	TITLE OF DRAWING		DRAWING NO.
PRIME: GREAT WEST ENGINEERING HELENA, MT	GEOTECHNICAL: TETRA TECH ENNIS, MT	S. GARLAND	S8	NORTH & SOUTH TUNNEL ENTRANCE PHOTOS		423
		CADD				196450
		R. WOOLSEY				PMIS/PKG NO.
		TECH REVIEW				215161
		B. GROVE				SHEET
		DATE				10 OF 10
		07/31/2025	ALLEGHENY PORTAGE RAILROAD HISTORIC SITE (ALPO)			

Bar measures 1 inch, otherwise drawing not to scale

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