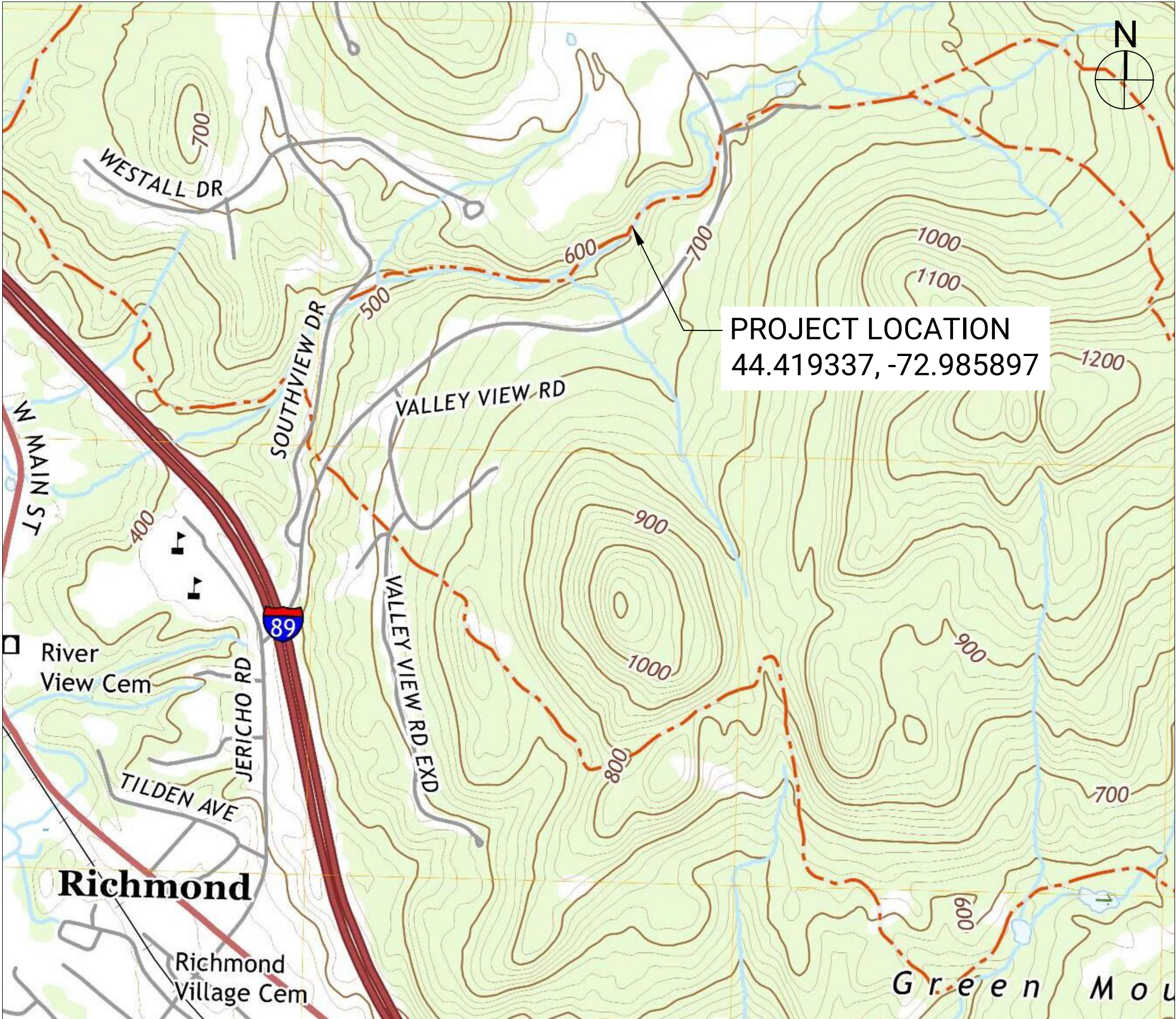


OLD JERICHO ROAD & PEDESTRIAN BRIDGE IMPROVEMENTS

TOWN MANAGMENT
JOSH ARNESON, MANAGER
DUNCAN WARDWELL, DEPUTY MANAGER


SELECTBOARD
ADAM WOOD, CHAIR
CAITLIN FILKINS, VICE-CHAIR
JAY FURR
BARD HILL
DAVID SANDER

TOWN HIGHWAY
PETE GOSSELIN



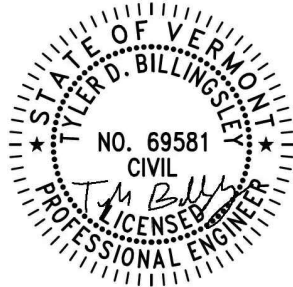
Sheet List Table	
Sheet	Sheet Title
G-1.0	TITLE PAGE
C-1.0	SITE PLANS
C-2.0	DETAILS
S-1	STRUCTURAL PLAN & DETAILS (USDA)

TOWN OF RICHMOND, VERMONT
NOVEMBER 2025



CIVIL INFRASTRUCTURE

(802) 989-6686
WWW.EASTENGINEERINGPLC.COM



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OWNER:

TOWN OF RICHMOND

203 BRIDGE STREET
RICHMOND, VT 05477
(802) 434-5170

PROJECT:

OLD JERICHO ROAD & PEDESTRIAN BRIDGE IMPROVEMENTS

ISSUED FOR:

BID & CONSTRUCTION

ISSUED DATE:

2025-11-17

PROJ. #: 006-32

REVISIONS

#	BY:	DATE:

TITLE SHEET

DRAWING NO:

G-1.0

GENERAL/CONSTRUCTION NOTES

1. TO CLARIFY THE PLANS, ALL EXISTING SITE FEATURES ARE SHOWN IN lowercase LETTERS AND ALL PROPOSED IMPROVEMENTS ARE SHOWN IN CAPITAL LETTERS.
2. THIS PLAN SHOWS APPROXIMATE SITE FEATURES, UTILITIES, TAX MAP BOUNDARY LINES, WALLS, CULVERTS, AND OTHER SITE FEATURES BASED ON A SURVEY COMPLETED BY EAST ENGINEERING IN FALL OF 2024. ADDITIONAL DEPICTIONS ARE BASED ON INFORMATION FROM THE VERMONT GEODATA PORTAL, OWNER, AND UTILITY COMPANIES. THIS IS NOT A BOUNDARY SURVEY.
3. TECHNICAL SPECIFICATIONS ACCOMPANY THE PLANS AND ARE ESSENTIAL FOR CONSTRUCTION. UNLESS OTHERWISE NOTED, THE "PUBLIC IMPROVEMENT STANDARDS AND SPECIFICATIONS" ADOPTED BY THE TOWN OF RICHMOND SHALL BE FOLLOWED. CONTRACTOR FIELD PERSONNEL SHALL HAVE THE PLANS, SPECIFICATIONS, AND BID DOCUMENTS IN THE FIELD DURING CONSTRUCTION.
4. ALL SITE SAFETY, SECURITY, MEANS AND METHODS ARE THE RESPONSIBILITY OF THE CONTRACTOR. ALL OSHA/VOSHA RULES AND REGULATIONS SHALL BE ADHERED TO AT ALL TIMES. AT THE END OF EACH WORKING DAY, CONTRACTOR SHALL SECURE ALL EQUIPMENT, MATERIALS, AND FACILITIES. ALL OPEN EXCAVATIONS SHALL BE BARRICADED, FENCED, PLATED, COVERED OR TEMPORARILY BACKFILLED.
5. ALL APPLICABLE PERMITTING CONDITIONS AND REGULATIONS SHALL BE MAINTAINED BY THE CONTRACTOR.
6. NO WORK OUTSIDE OF THE TOWN RIGHT-OF-WAY, OR TOWN OBTAINED EASEMENTS, UNLESS WRITTEN PERMISSION FROM BOTH THE LANDOWNER AND ENGINEER ARE OBTAINED.
7. ACCESS ROUTE TO SITES WILL BE FROM SOUTHVIEW DRIVE.
8. ALL DISTURBED AREAS SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITIONS OR BETTER. IF TURBID WATER IS FOUND TO BE LEAVING THE PROJECT AREA, THE CONTRACTOR SHALL IMPLEMENT ADDITIONAL EROSION PREVENTION AND SEDIMENT CONTROL DEVICES TO LIMIT THE DISCHARGE. DISCHARGES SHALL BE REPORTED TO THE ENGINEER WITHIN 24 HOURS.

EXISTING LEGEND :

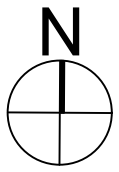
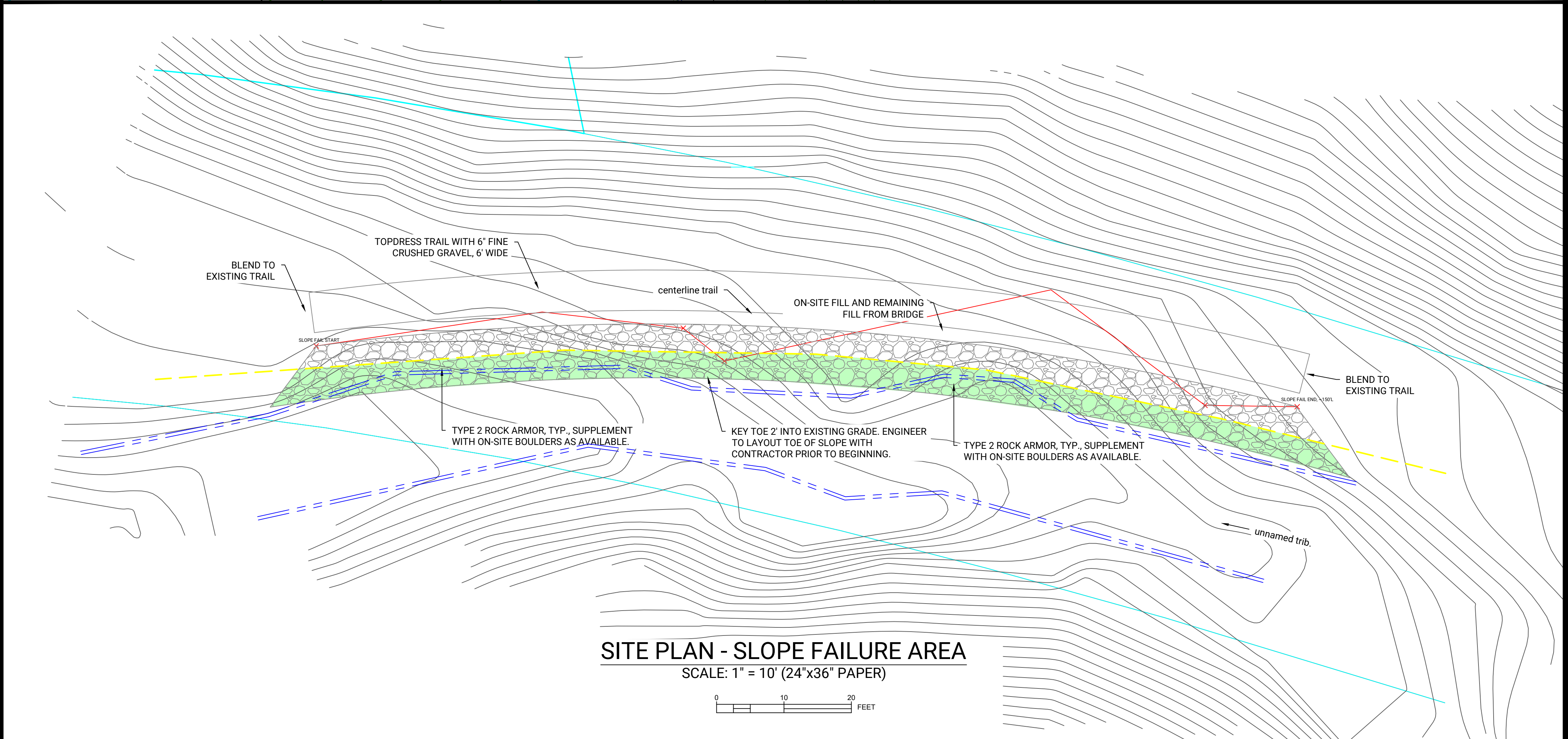
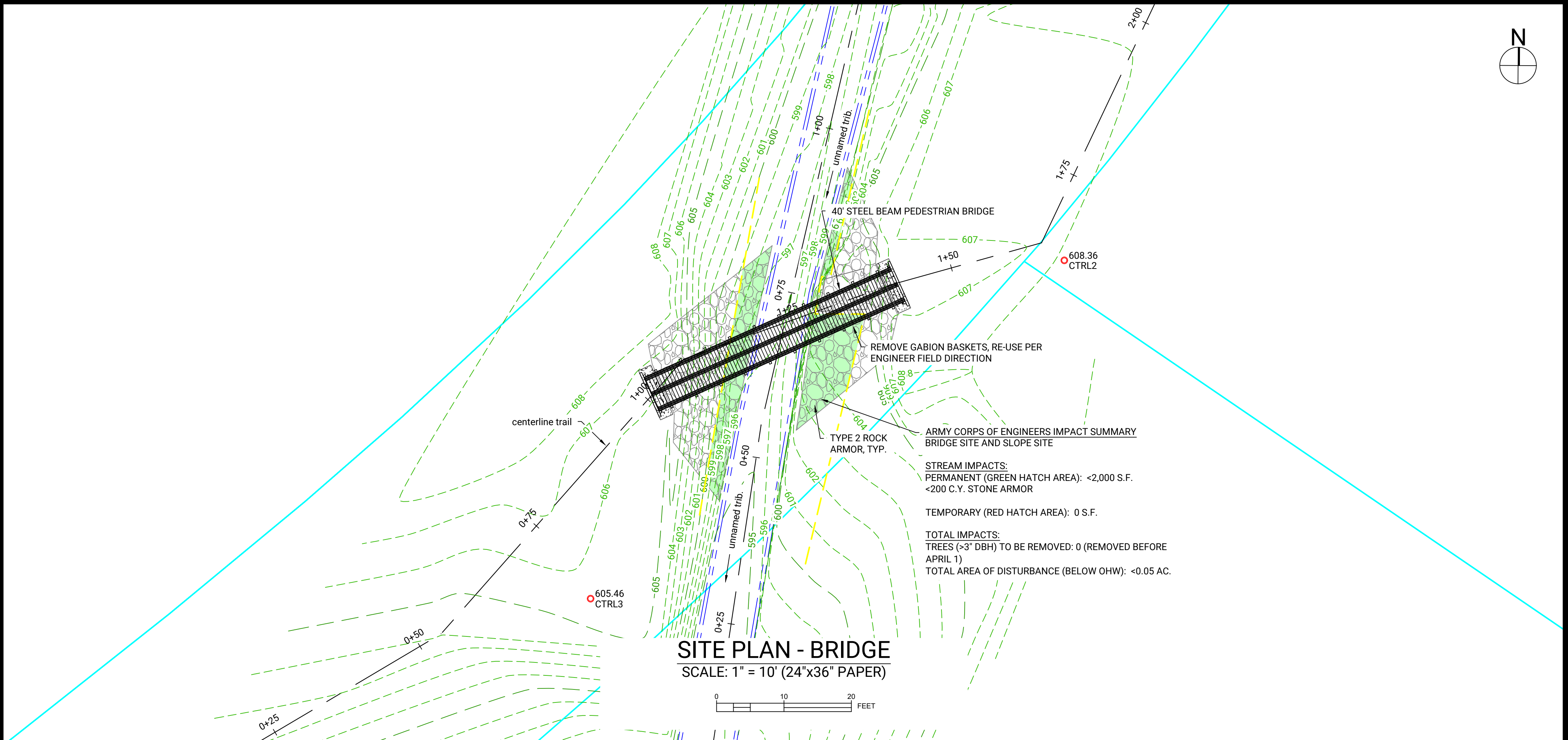
- tel underground telecom
- ohw overhead wires
- utility pole
- fence/guardrail
- sign
- trees/vegetation
- wetland limit
- road right-of-way / tax map
- elevation contour
- edge of water
- ACOE ohw
- town easement

PROPOSED LEGEND :

- 454 PROPOSED CONTOUR
- STONE ARMORING
- CONCRETE
- ROCK/BOULDER
- GEOGRID
- GEOTEXTILE
- SIGN/TYPE
- SPOT ELEVATION
- WETLAND TEMP/PERM IMPACT
- ACOE TEMPORARY IMPACT
- ACOE PERMANENT IMPACT
- SILT FENCE

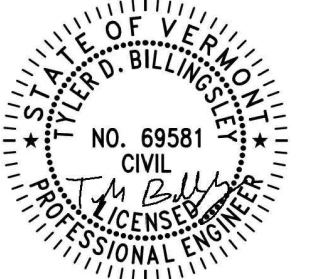
ABBREVIATIONS:

- | | |
|--------|---------------------------------------|
| HDPE | HIGH DENSITY POLYETHYLENE |
| CONC | CONCRETE |
| DI | DUCTILE IRON |
| PVC | POLYVINYL CHLORIDE |
| CMP | CORRUGATED METAL PIPE |
| VTRANS | VERMONT AGENCY OF TRANSPORTATION |
| MUTCD | MANUAL ON UN. TRAFFIC CONTROL DEVICES |
| TYP | TYPICAL |
| TEMP | TEMPORARY |
| MIN | MINIMUM |
| MAX | MAXIMUM |
| TBR | TO BE REMOVED |
| TBA | TO BE ABANDONED |
| APPROX | APPROXIMATE |
| EL | ELEVATION |
| ROW | RIGHT-OF-WAY |
| CTRL | CONTROL POINT |
| NTS | NOT TO SCALE |
| N/F | NOW OR FORMERLY |



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ISSUED FOR:
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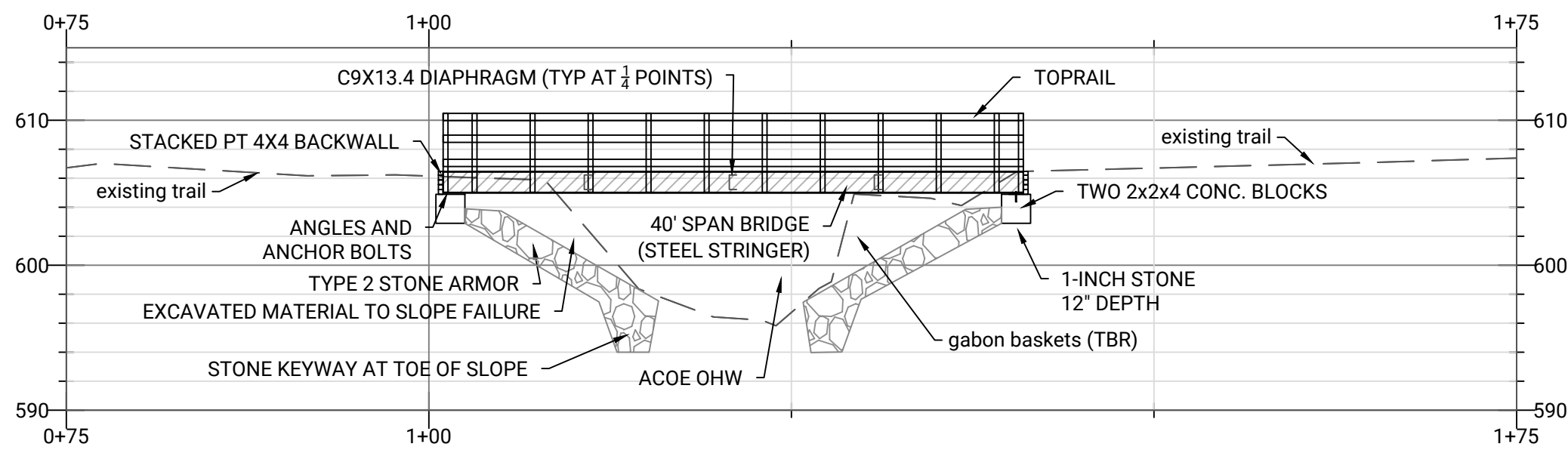
REVISIONS

#	BY:	DATE:

SITE PLANS

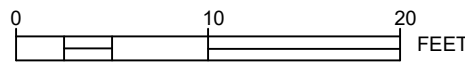
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C-1.0

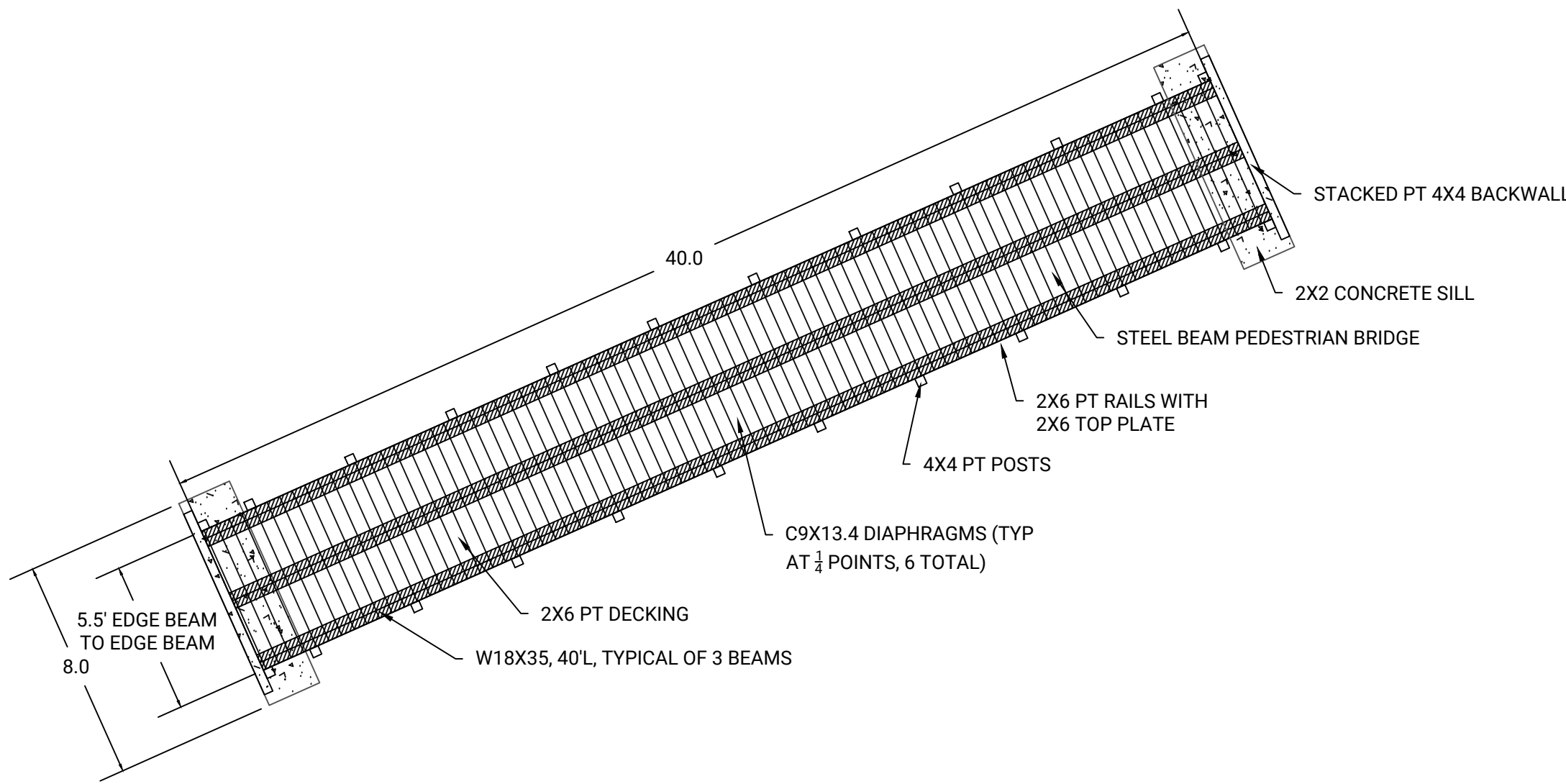


BRIDGE PROFILE AT CENTERLINE AND TRIB. CROSS SECTION

SCALE: 1" = 10' (24"x36" PAPER)

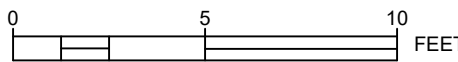


THIS SPACE INTENTIONALLY BLANK



PEDESTRIAN BRIDGE DETAIL

SCALE: 1" = 5' (24"x36" PAPER)



THIS SPACE INTENTIONALLY BLANK

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RICHMOND, VT 05477
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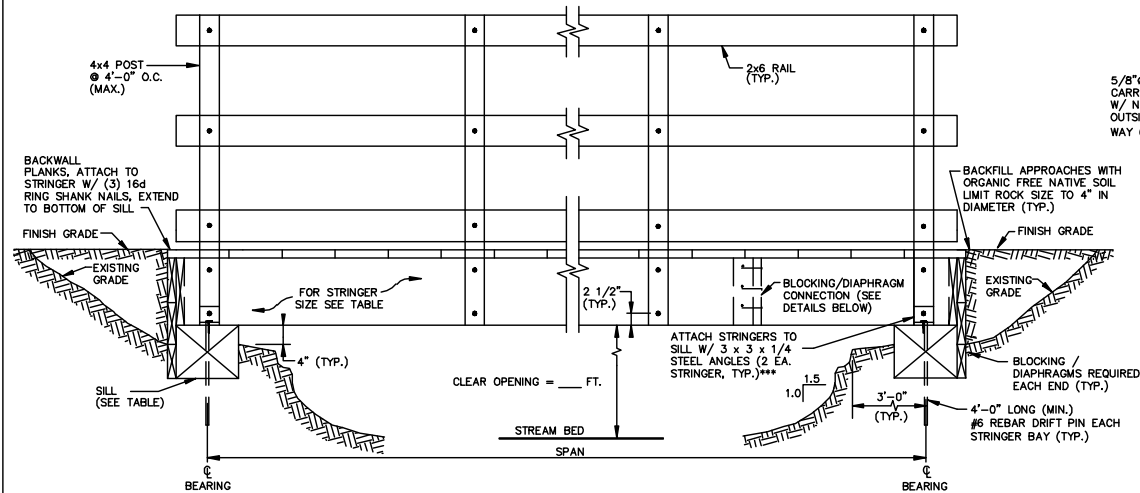
REVISIONS

#	BY:	DATE:

DETAILS

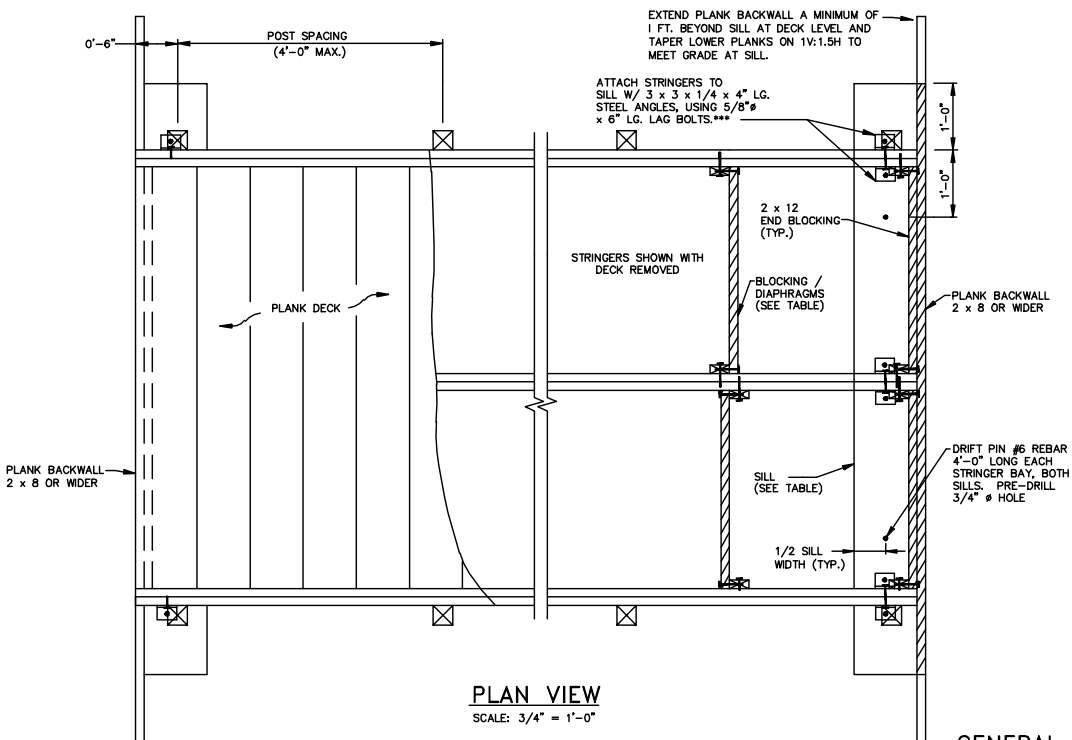
DRAWING NO:

C-2.0



ELEVATION OF STRUCTURE

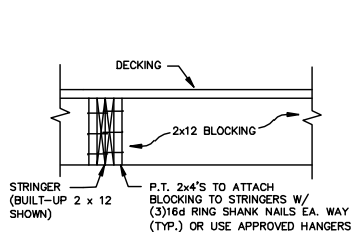
SCALE: 3/4" = 1'-0"



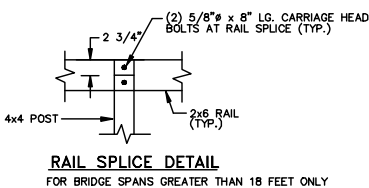
PLAN VIEW

SCALE: 3/4" = 1'-0"

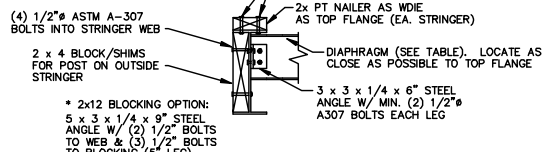
*** FOR STEEL STRINGERS DRILL BOTTOM FLANGE FOR 5/8" LAG BOLTS TO SILLS IN LIEU OF USING 3X3X1/4 ANGLES. SLOT HOLES IN FLANGES TO ALLOW FOR TEMPERATURE MOVEMENT.



After gluing nail stringers together as follows:
 (2) 2x12's TYP. EA. ADDITIONAL 2x12
 12d ring shank nails @ 12" O.C. staggered top & bottom ea. side



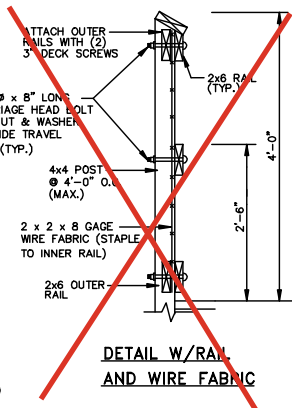
RAIL SPLICE DETAIL
FOR BRIDGE SPANS GREATER THAN 18 FEET ONLY



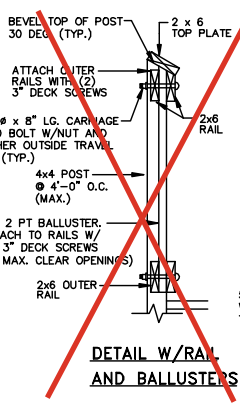
STEEL STRINGER/NAILER & DIAPHRAGM DETAIL

2 X 12/PSL STRINGER / BLOCKING DETAILS

NTS



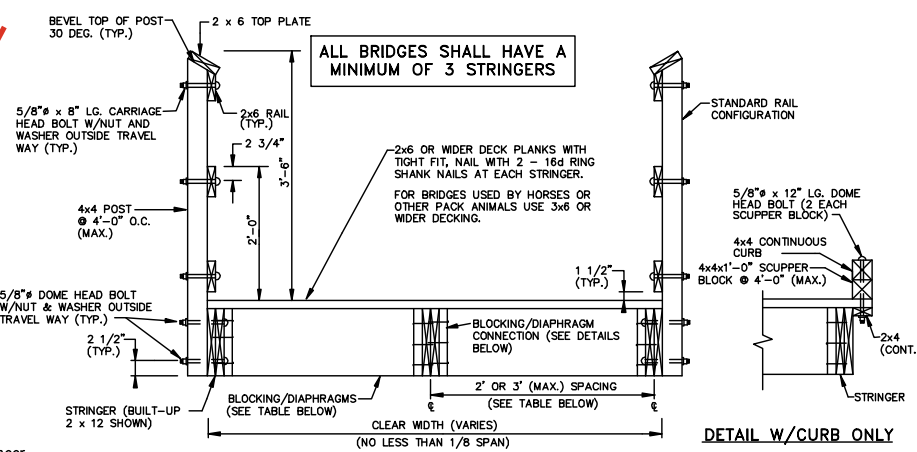
DETAIL W/RAIL AND WIRE FABRIC



DETAIL W/RAIL AND BALLUSTERS

RAILING NOTE:

Rail details shown above shall be used as determined by the Forest Engineer. Railing shall be required on all structures unless waived by the Forest Engineer. All structures without rail shall have 4x4 continuous curbing.



BRIDGE CROSS-SECTION

SCALE: 3/4" = 1'-0"

STRINGER OPTION TABLE																							
SPAN (FT.)	DIM. LUMBER ** 2 FT. SPACING	WEIGHT (LBS.)	DIM. LUMBER ** 3 FT. SPACING	WEIGHT (LBS.)	BLK. PTS.	BLK. REQ'D	SILL REQ'D	PSL (PARALLAM) 2 FT. SPACING	WEIGHT (LBS.)	PSL (PARALLAM) 3 FT. SPACING	WEIGHT (LBS.)	BLK. PTS.	BLK. REQ'D	SILL REQ'D	STEEL BEAMS 2 FT. SPACING	WGT. (LBS.)	STEEL BEAMS 3 FT. SPACING	WGT. (LBS.)	DIA. PTS.	DIA. REQ'D	SILL REQ'D		
8 or less	(1) 2 x 12 int. (1) 2 x 12 ext.	38 38	(2) 2 x 12 int. (1) 2 x 12 ext.	75 38	1/2	2 x 12	8 x 8																
10	(1) 2 x 12 int. (1) 2 x 12 ext.	47 47	(2) 2 x 12 int. (1) 2 x 12 ext.	94 47	1/2	2 x 12	8 x 8																
12	(2) 2 x 12 int. (1) 2 x 12 ext.	113 56	(2) 2 x 12 int. (2) 2 x 12 ext.	169 113	1/2	2 x 12	8 x 8																
14	(2) 2 x 12 int. (2) 2 x 12 ext.	131 131	(3) 2 x 12 int. (2) 2 x 12 ext.	197 131	1/2	2 x 12	8 x 8																
16	(3) 2 x 12 int. (2) 2 x 12 ext.	225 150	(3) 2 x 12 int. (2) 2 x 12 ext.	225 150	1/2	2 x 12	8 x 8																
18	(3) 2 x 12 int. (2) 2 x 12 ext.	253 169	(4) 2 x 12 int. (3) 2 x 12 ext.	338 253	1/3	2 x 12	8 x 8	3-1/2 x 12 int. 3-1/2 x 12 ext.	272 272	3-1/2 x 14 int. 3-1/2 x 14 ext.	320 320	1/3	2 x 12	8 x 8	W 10 x 12	218	W 12 x 14	252	1/2	C6x10.5	8 x 8		
20	(4) 2 x 12 int. (2) 2 x 12 ext.	375 188	(5) 2 x 12 int. (3) 2 x 12 ext.	469 281	1/3	2 x 12	8 x 8	3-1/2 x 14 int. 3-1/2 x 14 ext.	356 356	3-1/2 x 14 int. 3-1/2 x 14 ext.	356 356	1/3	2 x 12	8 x 8	W 10 x 12	240	W 12 x 14	280	1/2	C6x10.5	8 x 8		
22								3-1/2 x 14 int. 3-1/2 x 14 ext.	392 392	3-1/2 x 16 int. 3-1/2 x 16 ext.	447 447	1/3	2 x 12	8 x 8	W 12 x 14	308	W 12 x 22	308	1/2	C6x10.5	8 x 8		
24								3-1/2 x 16 int. 3-1/2 x 16 ext.	487 487	3-1/2 x 18 int. 3-1/2 x 18 ext.	547 547	1/3	2 x 12	10 x 10	W 12 x 14	336	W 12 x 22	528	1/2	C6x12.5	10 x 10		
26								3-1/2 x 16 int. 3-1/2 x 16 ext.	528 528	5-1/4 x 16 int. 3-1/2 x 16 ext.	793 528	1/4	2 x 12	10 x 10	W 12 x 22	572	W 14 x 26	676	1/3	C8x11.5	10 x 10		
28								5-1/4 x 16 int. 3-1/2 x 16 ext.	854 568	5-1/4 x 18 int. 3-1/2 x 18 ext.	960 638	1/4	2 x 12	10 x 10	W 12 x 22	618	W 14 x 26	728	1/3	C8x11.5	10 x 10		
30								5-1/4 x 16 int. 3-1/2 x 16 ext.	915 609	7 x 18 int. 3-1/2 x 18 ext.	1332 684	1/4	2 x 12	10 x 10	W 12 x 22	660	W 14 x 26	780	1/3	C8x11.5	10 x 10		
32								5-1/4 x 18 int. 3-1/2 x 18 ext.	1098 730			1/4	2 x 12	10 x 10	W 14 x 26	832	W 16 x 31	992	1/3	C8x11.5	10 x 10		
34								7 x 18 int. 3-1/2 x 18 ext.	1510 775			1/4	2 x 12	10 x 10	W 14 x 26	884	W 16 x 31	1054	1/3	C8x11.5	10 x 10		
36															W 16 x 31	1118	W 18 x 35	1260	1/3	C9x13.4	10 x 10		
38															W 16 x 31	1178	W 18 x 35	1330	1/3	C9x13.4	10 x 10		
40															W 16 x 31	1240	W 18 x 35	1400	1/4	C9x13.4	12 x 12*		
42															W 18 x 35	1470	W 21 x 44	1848	1/4	C10x15.3	12 x 12*		
44															W 18 x 35	1540	W 21 x 44	1936	1/4	C10x15.3	12 x 12*		
46															W 21 x 44	2024	W 24 x 55	2530	1/4	C12x20.7	12 x 12*		
48															W 21 x 44	2112	W 24 x 55	2640	1/4	C12x20.7	12 x 12*		
50															W 21 x 44	2200	W 24 x 55	2750	1/4	C12x20.7	12 x 12*		

* Sills and bridge foundation require design by Forest Engineer

** Use full length stringers, no splices allowed.

GENERAL NOTES AND SPECIFICATIONS

Loading & Design Criteria

- USE OF THIS PLAN; DETERMINATION OF STRINGER LENGTH, TYPE, AND SPACING; RAILING REQUIREMENTS; AND STRUCTURE HEIGHT ABOVE STREAM BED SHALL BE AS APPROVED BY THE FOREST ENGINEER. ANY MODIFICATIONS TO THIS PLAN MUST BE APPROVED BY THE REGIONAL BRIDGE ENGINEER.
- Ground Snow Load - $P_g = 70$ PSF (reduced in combination with Pedestrian Load).
- Deck Live Load - Pedestrian (AASHTO) = 85 PSF.
- Posts & Rails - Post & Rails designed for AASHTO Pedestrian Load only.
- Stringer Live Load Deflection Limits - Steel = $L/500$, Lumber = $L/360$.
- Bridge structure shall meet ADA accessibility requirements for trails. Structure shall have a level cross slope with no more than a 5% grade along its length, minimum 36" clear width, minimum 42" rail height, minimum 3" curb height (if no rail), and minimum 80" overhead clearance. Spacing between decking planks shall not exceed 1/2" after seasoning. The maximum vertical elevation change between deck planks is 1/2". There shall be a smooth transition from the approach onto the bridge.

Specifications

- AASHTO Standard Specification for Highway Bridges, 1996, 16th Edition.
- IBC 2000 International Building Code, 2000 Edition.
- National Design Specification for Wood Construction, 1997 Edition, by National Forest Products Assoc.
- American Wood Preservers Association Standards, Waterborne Preservative Standard P5 Type A, Standard C2, and Standard C14.

Lumber

- Lumber for solid sawn stringers, deck, backwall, rail, ballusters, posts, curbs, and mud sill shall be No. 2 or better Southern Yellow Pine pressure treated per AWPA Standards.
- Drawings are prepared using S4S finished dimensions unless noted otherwise. If rough sawn lumber is used adjust dimensions as required.
- All lumber shall be sawn and fabricated prior to pressure treatment with respective preservative.
- PSL (parallel strand lumber) shall be Wolmanized Parallam type, service level 2, and CCA pressure treated to 0.60 pcf or approved equal.

Steel

- Steel for stringers, and other structural sections, shall conform to ASTM A572 Grade 50. Steel angles shall meet ASTM A36. Shop prime with two coats of zinc oxide primer, after fabrication.
- Once steel is situated in field, apply zinc oxide primer to all areas where primer had been removed due to placement.

Hardware

- All bolts, washers, nuts and miscellaneous metal hardware shall be ASTM A307 hot dipped galvanized.
- Fasteners shall be hot dipped galvanized ring shank nails or wood screws. Drift pins for sill shall be deformed No. 6 reinforcing bars meeting ASTM A615.

Glue

- Apply glue between each lamination using a waterproof exterior adhesive compatible with the preservative treatment such as PL-500 by Contech or approved equal. Apply 3/8" continuous bead @ 1 1/2" o.c.

Construction

- Clear opening of bridge above the stream bed shall be determined by the Forest Engineer and approved by the governing Federal and State agencies as required.
- Mud sills shall bear on native soil or ledge rock free from compressible organic material and capable of supporting the bridge under full load. Provide uniform bearing under entire length of sill. Other foundation conditions require approval by a Forest Engineer.
- Stringers with camber shall be positioned so that camber is up and knots near the edge will be in the top half of the stringers.
- Deck planks shall be laid heart side down.
- Railing shall be required on all structures unless waived by Forest En

General Notes

U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE



R-9

EASTERN REGION

Project Name

STANDARD PEDESTRIAN AND CC SKI TRAIL BRIDGE

CON

Drawing Title

STRUCTURAL PLAN & DETAILS

Drawn	J. W. Kamb	Project	Standard
Checked	J. S. Granier	Drawing No.	
CAD File No.	FBSTDTRAILBRDG.dwg		
Date	April 17, 2003		
Scale	as noted		

S-1