

Existing Structure: Single Span Timber Deck on Steel Stringers with Open Concrete Abutments and Timber Wingwalls. An existing structure with closed concrete abutments is still intact and has been left in place underneath the structure. ±41'-0" Bk.-Bk. Abutments, ±15'-6" Face-Face of Railing. Steel Angle Railing. ±0' Skew. Existing Structure No. 066-4617

Benchmarks: BM #1 - Chiseled "□" on N.E. Abutment Cap
10' Rt. Sta. 4+26 El. 100.00 (Assumed)

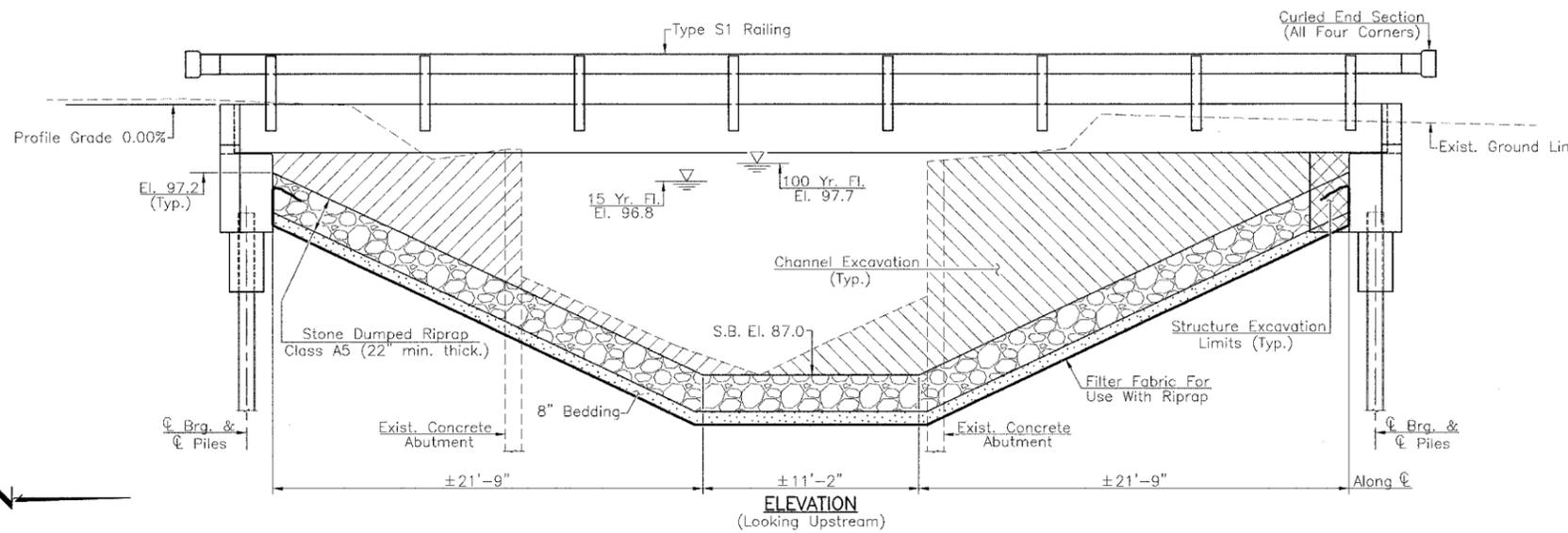
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|----------|---------|--|--------------|-----------|
| RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| T.R. 274 | * | MERCER | 9 | 4 |
| PROJECT | | * 02-14130-00-BR CONTRACT NO. 89378 | | |

TOTAL BILL OF MATERIAL

| Item | Super | Sub | Total |
|---|-------|------|-------|
| Channel Excavation | | | 378 |
| Stone Dumped Riprap, Class A5 | | | 531 |
| Filter Fabric For Use With Riprap | | | 531 |
| Removal of Existing Structures | | | 1 |
| Structure Excavation | | | 126 |
| Concrete Structures | | 27.8 | 27.8 |
| Precast Prestressed Concrete Deck Beams (27" Depth) | 1406 | | 1406 |
| Reinforcement Bars | | 2630 | 2630 |
| Steel Railing Type S1 | 120 | | 120 |
| Furnishing Steel Piles HP 10x42 | | 245 | 245 |
| Driving Steel Piles | | 245 | 245 |
| Test Pile, Steel HP 10x42 | | | 1 |
| Concrete Encasement | | 2.2 | 2.2 |
| Name Plates | | | 1 |

WATERWAY INFORMATION

| Drainage Area = 12.2 Sq. Miles | | Low Grade Elev. = 96.55 | | @ Sta. 7+30 | | |
|--------------------------------|-----------|-------------------------|----------------------|-------------|----------------------|------------------------|
| Flood | Freq. Yr. | Q C.F.S. | Opening Sq. Ft. | Nat. H.W.E. | Head-Ft. | Headwater El. |
| Design | 15 | 1452 | Exist. 156 Prop. 293 | 96.8 | Exist. 1.3 Prop. 0.4 | Exist. 98.1 Prop. 97.2 |
| Base | 100 | 2371 | 175 342 | 97.7 | 1.2 0.8 | 98.9 98.5 |
| Exist. Overtop | 8.9 | 1250 | | | | |
| Prop. Overtop | 14 | 1440 | | | | |
| Max. Calc. | 500 | 3140 | 190 371 | 98.2 | 1.2 0.9 | 99.4 99.1 |



| | |
|---------------------------|----------------------------------|
| FIELD UNITS | PRECAST PRESTRESSED UNITS |
| f _c = 1400 psi | f'c = 5000 psi |
| vc = 56.2 psi | f'ci = 4000 psi |
| fs = 24000 psi | f's = 270000 psi |
| n = 9 | 1/2" Strands f'si = 189000 psi |

GENERAL NOTES

See Proposal for Boring Data.
Reinforcement bars shall conform to the requirements of A.A.S.H.T.O. M-31, M-42, or M-53, Grade 60.
The layout of the riprap slopedwall may be varied to suit conditions in the field as determined by the engineer.
The contractor shall drive one test pile in a permanent location at the South Abutment as directed by the Engineer in the field prior to ordering the remainder of piles.

DESIGN SPECIFICATIONS

2002 A.A.S.H.T.O. Specifications and 2003 Interim Specifications.

LOADING HS 20-44

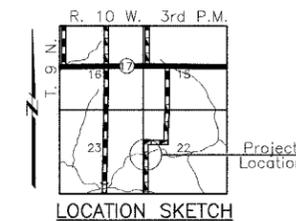
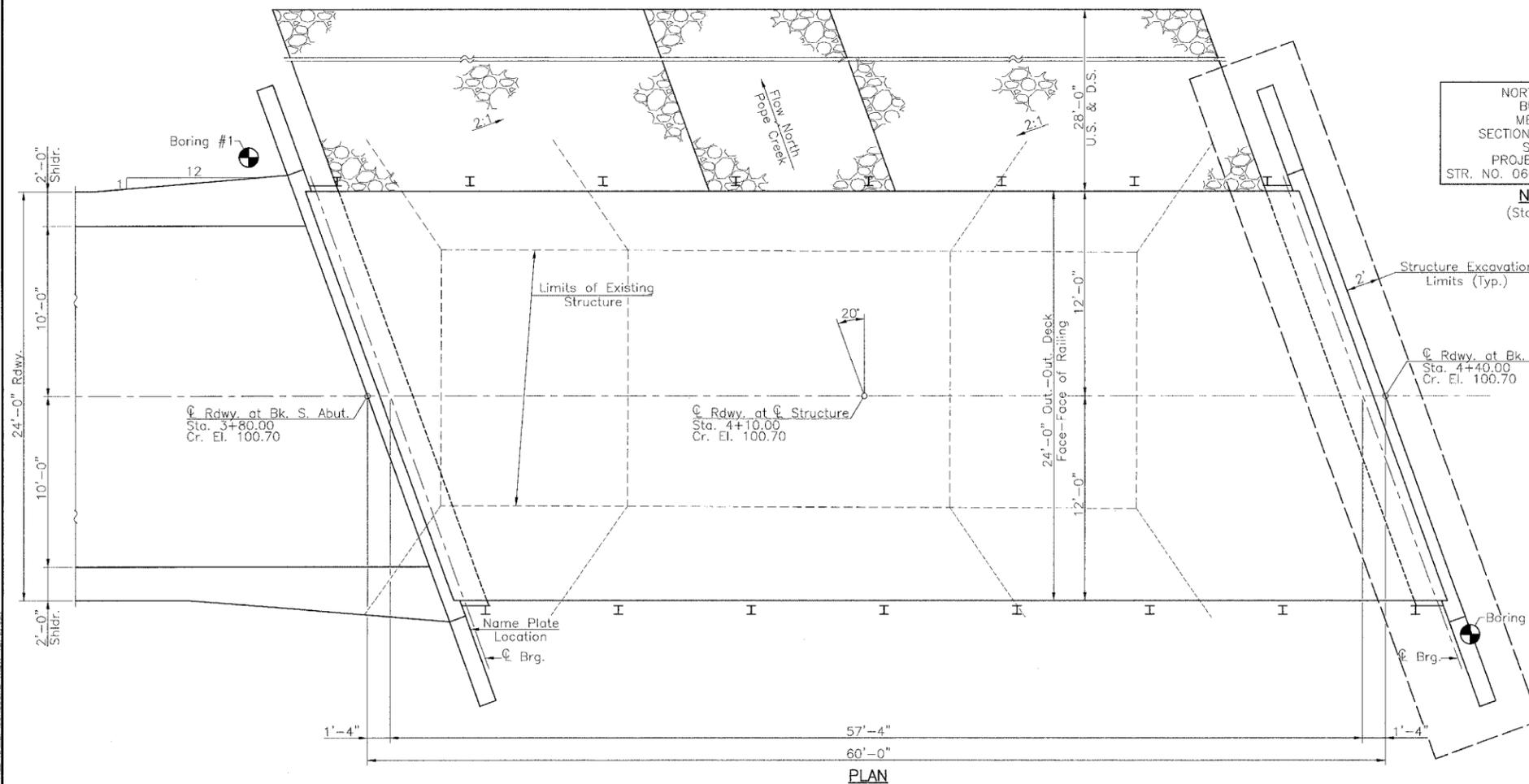
Allow 50#/sq. ft. for future wearing surface.

I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current "A.A.S.H.T.O. Standard Specifications For Highway Bridges".

M. Henderson 1/18/06
Expiration Date 11/30/2006



NORTH POPE CREEK
BUILT 200 BY
MERCER COUNTY
SECTION 02-14130-00-BR
STA. 4+10.00
PROJECT BROS-131(146)
STR. NO. 066-4624 LOADING HS20
NAME PLATE
(Standard 515001)



GENERAL PLAN & ELEVATION
T.R. 274 OVER NORTH POPE CREEK
SECTION 02-14130-00-BR
MERCER COUNTY