

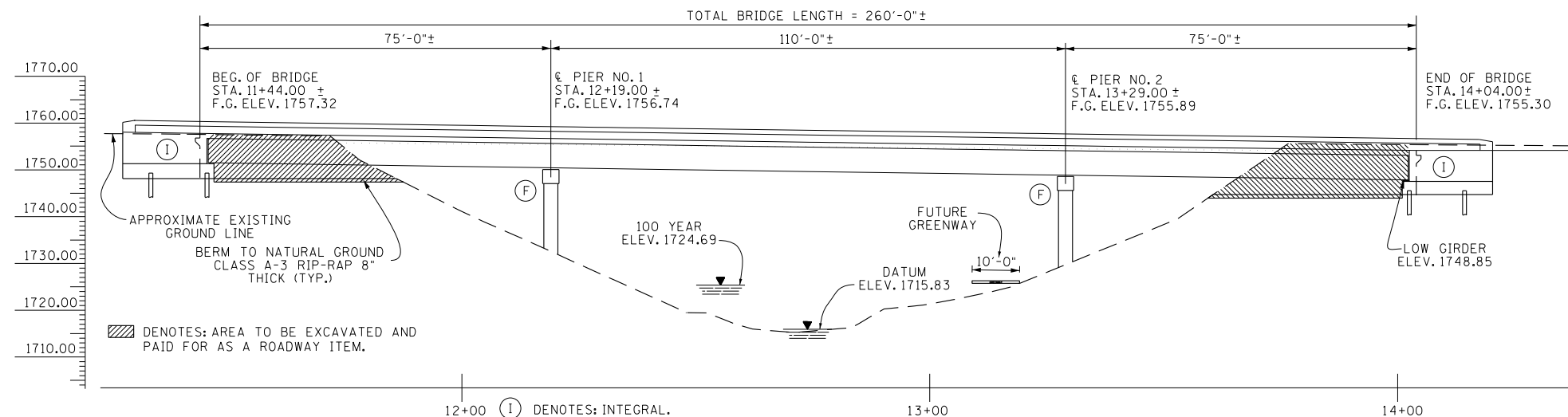
PROJECT NO.	YEAR	SHEET NO.
BR-NH-1(386)	2021	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
09-03-21	W.P.		REVISED HYDRAULIC DATA AND GRADE

EXISTING BRIDGE DRAWINGS

LAYOUT G-8-24
 DETAILS OF SPAN G-8-25
 ABUTMENTS NOS. 1 AND 2 G-8-26
 BENTS NOS. 1 THRU 6 G-8-27
 STANDARD CONCRETE HANDRAIL E-12-105
 BRIDGE REPAIR PLANS BR-6-5 THRU BR-6-10

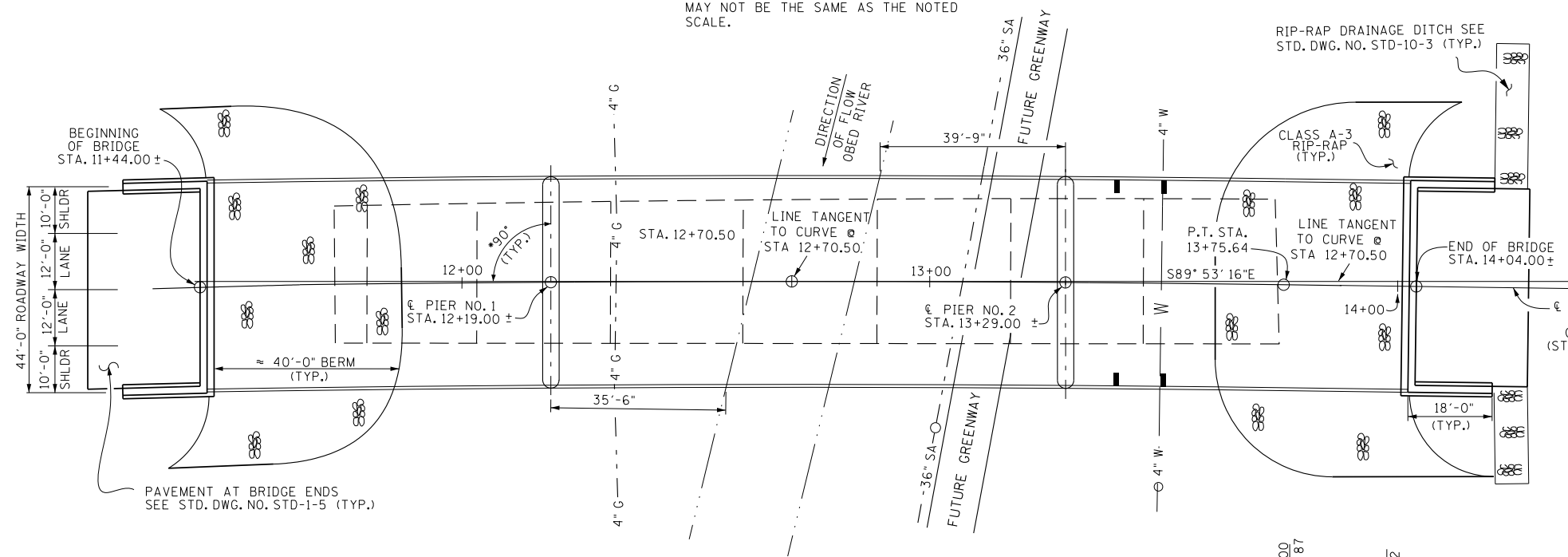


GENERAL NOTES

- CONSTRUCTION SPECIFICATIONS: TENNESSEE DEPARTMENT OF TRANSPORTATION STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION. (JANUARY 1, 2021 EDITION).
- DESIGN SPECIFICATIONS: 9TH EDITION (2020) AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS AND THE 2ND EDITION (2011) AASHTO GUIDE SPECIFICATIONS FOR LRFD SEISMIC BRIDGE DESIGN (WITH INTERIMS).
- LOADING: HL-93 LIVE LOADING; LAT. 35°57'40", LONG. 85°03'04.27". SEISMIC ZONE "I", SITE CLASS "B", WITH PGA = 0.09, SS = 0.194, S1 = 0.066 (1000 YEAR RETURN PERIOD). DEAD LOAD INCLUDES 35 LB/SO. FT. FOR FUTURE WEARING SURFACE.
- CONCRETE: CLASS "A" F'C = 3,000 PSI, BRIDGE DECK CLASS "D" F'C = 4,000 PSI.
- REINFORCING STEEL: TO BE ASTM A615 GRADE 60. (EPOXY COAT ALL SLAB STEEL).
- SUPERSTRUCTURE: TO CONSIST OF 3 SPANS OF CONTINUOUS PRECAST, PRESTRESSED CONCRETE 63" BULB TEE BEAM WITH COMPOSITE DECK SLAB.
- USE STD-1-1SS PARAPETS.
- TEXTURE COATING: TO BE GRAY (36440) EXCEPT TRAFFIC FACE & TOP OF PARAPET TO BE WHITE (37886).
- EXCAVATION: TO BE BASED ON FINAL PROFILE AT ABUTMENTS AND EXISTING GROUNDLINE AT PIERS.
- BRIDGE DECK SURFACE FINISH: TO BE IN ACCORDANCE WITH METHOD 1 IN ARTICLE 604.22 OF THE STANDARD SPECIFICATIONS.
- EXISTING BRIDGE NO. 18SR0010005 (BR LOC. NO. 18-SR001-12.70) AND APPROACHES TO BE REMOVED TO NATURAL GROUND BETWEEN STATIONS 11+46.81 AND 14+00.34
- BRIDGE DECK DRAINS ARE REQUIRED.
- RIP-RAP FLUMES REQUIRED ON BOTH SIDES AT ABUTMENT 2 AS PER STD-10-3.
- MACHINED RIP-RAP SHALL BE CLASS "A-3" IN ACCORDANCE WITH SECTION 709 OF THE STANDARD SPECIFICATIONS AND SHALL BE PAID FOR UNDER ROADWAY ITEM 709-05.05.
- OUR EXISTING BRIDGE DRAWINGS, INSPECTION REPORTS, OR ACM (ASBESTOS CONTAINING MATERIAL) SURVEY INDICATE THIS BRIDGE CONTAINS ELEMENTS WITH ACM. TO MINIMIZE THE AMOUNT OF HAZARDOUS MATERIAL WASTE, THE ELEMENTS CONTAINING ASBESTOS SHALL BE REMOVED PRIOR TO DEMOLITION OF THE ENTIRE STRUCTURE. THE CONTRACTOR IS REQUIRED TO TAKE ALL MANDATORY SAFEGUARDS PRESCRIBED BY STATE AND FEDERAL LAW FOR BOTH WORKER PROTECTION AND HAZARDOUS MATERIALS DISPOSAL.
- EXISTING BRIDGE DESCRIPTION: 199'-6", 34'-6" OUT-TO-OUT, 7 SPANS AT 28'-6" CONTINUOUS CONCRETE DECK GIRDER BRIDGE WITH CONCRETE SUBSTRUCTURE, 18SR0010005, G-8-24.

ELEVATION

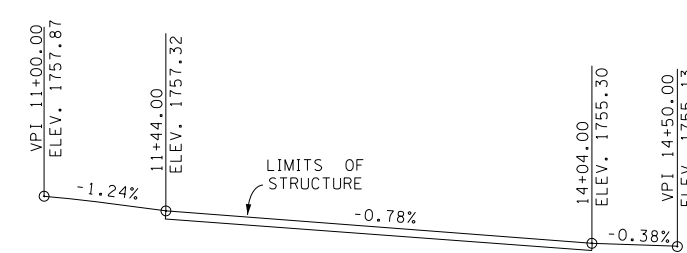
(SCALE 1" = 15'-0")
 NOTE: ELEVATION VIEW IS PROJECTED FROM PLAN VIEW BELOW. DIMENSIONS MAY NOT BE THE SAME AS THE NOTED SCALE.



PLAN

(SCALE 1" = 15'-0")

■ DENOTES PARAPET DRAIN AT STATIONS 13+40.00 AND 13+50.00 (TYP.) (SEE STANDARD DWG. NO. STD-1-2SS)



PROPOSED GRAPHICAL GRADE

(STATE ROUTE 1)

HYDRAULIC DATA

DRAINAGE AREA	12.46 SQ. MI.
DESIGN DISCHARGE (100YR)	1571 CFS
WATER AREA PROVIDED BELOW ELEV. 1724.43	343.03 FT ²
100 YR BACKWATER	0.21 FT @ ELEV. 1724.43
100 YR VELOCITY	4.58 FPS
ROADWAY OVERTOPPING ELEV.	1758.00
500 YR DISCHARGE	2208 CFS @ ELEV. 1725.37

NOTE: ANY EXCAVATION OF THE STREAM CHANNEL AREA (E.G., FOR PIER FOOTING OR RIP-RAP PLACEMENT) SHALL BE SEPARATED FROM FLOWING WATER OR EXPECTED FLOW PATH AND PERFORMED DURING LOW FLOW CONDITIONS. THIS SHALL BE ACCOMPLISHED BY THE USE OF SHEET PILES, FLUMES, DIVERSION PIPE WITH SAND BAG DAM AT PIPE INLET, LINED DIVERSION CHANNEL WITH SAND BAG OR CLEAN ROCK BERM, JERSEY BARRIERS, ETC. ALL WORK FOR EXCAVATION IN THE STREAM CHANNEL AREA INCLUDING EROSION PREVENTION AND SEDIMENT CONTROL AND DIVERSION, UNLESS SPECIFICALLY SHOWN ON EROSION PREVENTION AND SEDIMENT CONTROL PLAN, SHALL BE PAID FOR UNDER ITEM NO. 209-65.2X, SEQUENCING FOR CONSTRUCTION IN THE DRY (DESCRIPTION), L.S. THIS ITEM SHALL INCLUDE ALL COST FOR MATERIALS, LABOR, MAINTENANCE, REMOVAL, SITE RESTORATION, AND OTHER MISCELLANEOUS ITEMS, ADDITIONALLY ANY EXCAVATION NOT DESIGNATED AS BRIDGE EXCAVATION 204-XX IS TO BE INCLUDED IN THIS ITEM AND FOOTNOTED "EXCAVATION INCLUDED IN THIS ITEM IS UNSUITABLE FOR ROADWAY FILL MATERIAL".

DESIGNED BY H. GASH DATE 08-21
 DRAWN BY J.W.S./T.C.J. DATE 08-21
 SUPERVISED BY G.K./D. SPINKS DATE 08-21
 CHECKED BY W. PECK DATE 08-21

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION
 HYDRAULIC LAYOUT
 STATE ROUTE 1
 OVER
 OBED RIVER
 BRIDGE ID. NO. 18SR0010005
 LOG MILE 12.72
 STATION 12+74.00
 CUMBERLAND COUNTY
 2021

CORRECT *Jed A. Kingery*
 ENGINEER OF STRUCTURES

MACHINED RIP-RAP (CLASS A-3) = 515 TONS