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Index Of Sheets
SEE SHEET NO. 1A

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

RUTHERFORD COUNTY

SR-96 FROM VETERANS PARKWAY TO EAST OF OVERALL CREEK

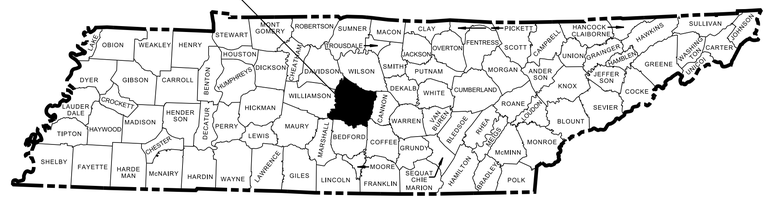
CONSTRUCTION

WIDEN TO 5-LANE C&G SECTION

STATE HIGHWAY NO. 96 F.A.H.S. NO. N/A

TENN.	YEAR	SHEET NO.
	2017	1
FED. AID PROJ. NO.	NH-96(48)	
STATE PROJ. NO.	75009-3238-14	

PROJECT LOCATION
BRIDGE ID. # 75SR0960011



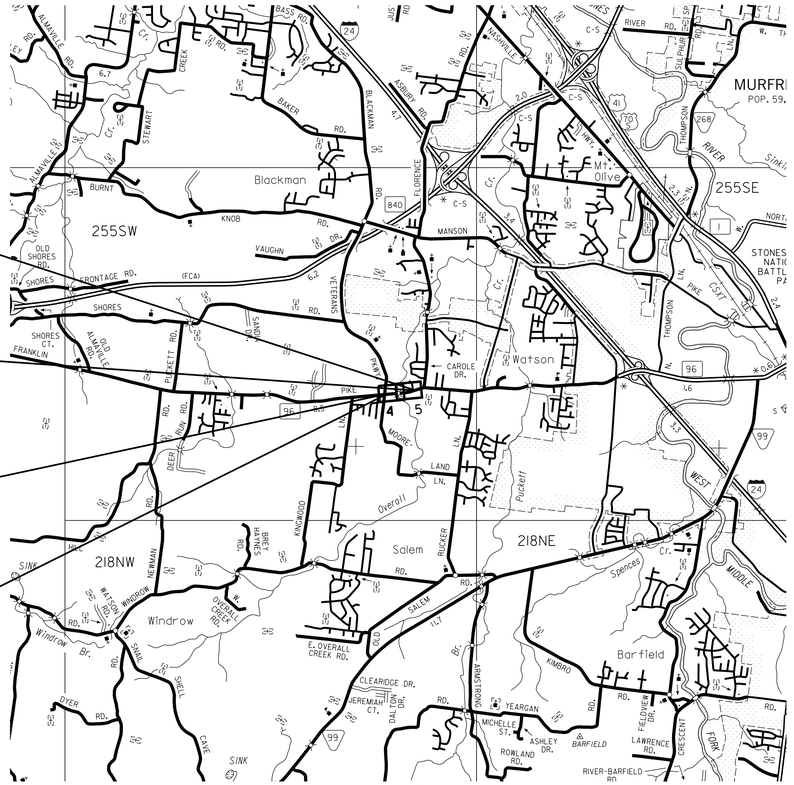
NO EXCLUSIONS

END PROJECT NO. 75009-2238-04 R.O.W.
STA. 78+30.00 S.R.-96
N 550192.5639 E 1824369.8716

END PROJECT NO. 75009-3238-14 NH-96(48) CONSTRUCTION
STA. 78+30.00 SR-96
N 550192.5639 E 1824369.8716

BEGIN PROJECT NO. 75009-2238-04 R.O.W.
STA. 59+72.96 S.R.-96
N 549977.4342 E 1822592.4372

BEGIN PROJECT NO. 75009-3238-14 NH-96(48) CONSTRUCTION
STA. 58+99.91 SR-96
N 549971.8741 E 1822456.6342



SPECIAL NOTES

PROPOSALS MAY BE REJECTED BY THE COMMISSIONER IF ANY OF THE UNIT PRICES CONTAINED THEREIN ARE OBVIOUSLY UNBALANCED, EITHER EXCESSIVE OR BELOW THE REASONABLE COST ANALYSIS VALUE.

THIS PROJECT TO BE CONSTRUCTED UNDER THE STANDARD SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION DATED JANUARY 1, 2015 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS AND IN THE PROPOSAL CONTRACT.

TDOT ROAD SP. SV. 2 : BRAD ABEL, P.E.
DESIGNER : JACOB BROOKS, P.E. CHECKED BY : DARRELL GRAY
P.E. NO. 75009-1238-04 (DESIGN)
PIN NO. 100282.02

ROADWAY LENGTH	0.338 MILES
BRIDGE LENGTH	0.027 MILES
BOX BRIDGE LENGTH	0.000 MILES
PROJECT LENGTH	0.365 MILES

TRAFFIC DATA	
ADT (2017)	12,230
ADT (2037)	25,160
DHV (2037)	3,046
D	65 - 35
T (ADT)	2 %
T (DHV)	1 %
V	40 MPH

SEALED BY
ROBERT RYAN SWEENEY
NO. 111998
07/26/2017

APPROVED: Paul D. Degges
PAUL D. DEGGES, CHIEF ENGINEER

DATE:

APPROVED:
JOHN SCHROER, COMMISSIONER

SURVEY 04-01-15	TRAFFIC DATA	
UPDATED 12-16-16	ADT (2017)	12,230
	ADT (2037)	25,160
	DHV (2037)	3,046
	D	65 - 35
	T (ADT)	2 %
	T (DHV)	1 %
	V	45 MPH

STATE PLANE COORDINATES ARE BASED ON GPS MEASUREMENTS OBTAINED 04-01-15 USING GEOID 1988 MODEL AND DATUM ADJUSTMENT FACTOR OF 1.00008

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR DATE

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-96(48)	1A

ROADWAY INDEX

NOTE: THE ALPHABETICAL LETTERS “I”, “O” & “Q” ARE NOT USED IN NUMBERING OF SHEETS.

STANDARD ROADWAY DRAWINGS

ROADWAY DESIGN STANDARDS

DWG.	REV.	DESCRIPTION
RD-A-1	12-18-99	STANDARD ABBREVIATIONS
RD-L-1	10-26-94	STANDARD LEGEND
RD-L-2	09-05-01	STANDARD LEGEND FOR UTILITY INSTALLATIONS
RD-L-3	03-16-17	STANDARD LEGEND FOR SIGNALIZATION AND LIGHTING
RD-L-4	03-16-17	STANDARD LEGEND FOR SIGNALIZATION AND LIGHTING
RD-L-5	05-01-08	STANDARD LEGEND FOR EROSION PREVENTION AND SEDIMENT CONTROL
RD-L-6	03-30-10	STANDARD LEGEND FOR EROSION PREVENTION AND SEDIMENT CONTROL
RD-L-7	05-24-12	STANDARD LEGEND FOR EROSION PREVENTION AND SEDIMENT CONTROL
RD01-TS-6	10-10-16	TYPICAL CURB AND GUTTER SECTIONS WITH SHOULDER
RD01-TS-6A	07-31-13	TYPICAL CURB AND GUTTER SECTIONS WITHOUT SHOULDER
RD01-TS-6B		TYPICAL CURB AND GUTTER FOR HIGH SPEED SUBURBAN ROADWAYS
RD01-SE-2	10-15-02	URBAN SUPERELEVATION DETAILS
RD01-S-11	04-04-03	DESIGN AND CONSTRUCTION DETAILS FOR ROADSIDE SLOPE DEVELOPMENT
RD01-SD-1		INTERSECTION SIGHT DISTANCE DESIGN AND GENERAL NOTES
RD01-SD-2		INTERSECTION SIGHT DISTANCE LANDSCAPE AND OBSTRUCTION
RD01-SD-3		INTERSECTION SIGHT DISTANCE 2-LANE ROADWAYS
RD01-SD-4		INTERSECTION SIGHT DISTANCE 5-LANE AND 4-LANE UNDIVIDED ROADWAYS

PIPE CULVERTS AND ENDWALLS

D-PB-1	03-16-17	STANDARD DETAILS FOR CONCRETE PIPE INSTALLATION
D-PG-3	04-15-97	FERROUS AND ALUMINUM CORRUGATED METAL PIPE
D-PE-24A	01-21-16	24” CONCRETE ENDWALL CROSS DRAIN (FOR 3:1, 4:1 & 6:1 SLOPES)
D-PE-24B		24” CONCRETE ENDWALL CROSS DRAIN (FOR 3:1, 4:1 & 6:1 SLOPES)
D-PE-30A	10-10-16	30” CONCRETE ENDWALL CROSS DRAIN WITH STEEL PIPE GRATE (FOR 3:1, 4:1 & 6:1 SLOPES)
D-PE-30B		30” CONCRETE ENDWALL CROSS DRAIN WITH STEEL PIPE GRATE (FOR 3:1, 4:1 & 6:1 SLOPES)
D-PE-36A	06-14-13	36” CONCRETE ENDWALL CROSS DRAIN WITH STEEL PIPE GRATE (FOR 3:1, 4:1 & 6:1 SLOPES)
D-PE-36B		36” CONCRETE ENDWALL CROSS DRAIN WITH STEEL PIPE GRATE (FOR 3:1, 4:1 & 6:1 SLOPES)
D-PE-1	02-12-76	TYPE “A” CONCRETE ENDWALL 2:1 SLOPE, 36” TO 78”

CATCH BASINS AND MANHOLES

D-CB-12RB	03-11-14	STANDARD PRECAST 60" AND 72" CIRCULAR NO. 12 CATCH BASIN (FOR USE WITH 6" NONMOUNTABLE CURB)
D-CB-12RC	03-11-14	STANDARD PRECAST 84" THRU 120" CIRCULAR NO. 12 CATCH BASIN (FOR USE WITH 6" NONMOUNTABLE CURB)
D-CB-12S	03-11-14	STANDARD RECTANGULAR CONCRETE N0. 12 CATCH BASIN
D-CB-12SB	03-11-14	STANDARD 4' X 4' SQUARE CONCRETE NO. 12 CATCH BASIN
D-CB-12SE	03-11-14	STANDARD 9' X 9' SQUARE CONCRETE NO. 12 CATCH BASIN
D-CB-14S	03-11-14	STANDARD RECTANGULAR CONCRETE NO. 14 CATCH BASIN

ROADWAY AND PAVEMENT APPURTENANCES

RP-D-15	04-08-16	DETAILS OF STANDARD CONCRETE DRIVEWAYS
RP-D-16	04-08-16	DETAILS OF LOWERED STANDARD CONCRETE DRIVEWAYS
RP-NMC-10	07-29-03	STANDARD VERTICAL (NONMOUNTABLE) CONCRETE CURBS AND CONCRETE CURBS AND GUTTERS
RP-NMC-11	02-28-02	STANDARD VERTICAL (NONMOUNTABLE) CONCRETE CURBS AND CONCRETE CURBS AND GUTTERS
RP-H-3	10-10-16	CURB RAMP AND TRUNCATED DOME SURFACE DETAIL
RP-H-5	10-10-16	PARALLEL CURB RAMP
RP-H-6	10-10-16	PEDESTRIAN REFUGE
RP-H-9	10-10-16	PARALLEL CURB RAMP IN CURVE
RP-S-7	02-05-16	DETAILS FOR CONCRETE SIDEWALKS

SAFETY DESIGN AND FENCES

S-CZ-1		CLEAR ZONE CRITERIA
S-PL-1		SAFETY PLAN AT ROADSIDE HAZARDS
S-PL-2	10-10-16	SAFETY PLAN AT SIDEROADS OR PRIVATE DRIVES
S-PL-3	10-10-16	SAFETY PLAN: MINIMUM INSTALLATION AT BRIDGE ENDS
S-GR31-1	03-28-17	W-BEAM GUARDRAIL
S-GR31-1A		W-BEAM BARRIER FASTENING HARDWARE
S-GRC-1	10-10-16	GUARDRAIL CONNECTION TO BRIDGE ENDS OR BARRIER WALL
S-GRT-2	03-28-17	TYPE 38 GUARDRAIL TERMINAL
S-GRT-2P	10-10-16	EARTH PAD FOR TYPE 38 AND TYPE 21 TERMINAL
S-F-1	05-24-12	HIGH VISIBILITY FENCE

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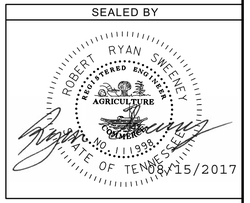

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ROADWAY INDEX AND STANDARD ROADWAY DRAWINGS

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-96(48)	1A1

STANDARD ROADWAY DRAWINGS CONT'D

DWG.	REV.	DESCRIPTION
DESIGN - TRAFFIC CONTROL		
T-M-1	07-24-14	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS AND MARKING ABBREVIATIONS
T-M-2	10-10-16	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS
T-M-3	07-24-14	MARKING STANDARDS FOR TRAFFIC ISLANDS, MEDIANS & PAVED SHOULDERS ON CONVENTIONAL ROADS
T-M-4	10-10-16	STANDARD INTERSECTION PAVEMENT MARKINGS
T-FAB-1	05-27-97	FLASHING YELLOW ARROW BOARD
T-PBR-1	03-16-17	INTERCONNECTED PORTABLE BARRIER RAIL
T-WZ-10	04-02-12	ADVANCE ROAD WORK SIGNING ON HIGHWAYS AND FREEWAYS
T-WZ-30	09-01-05	TRAFFIC CONTROL 2-LANE, 2-WAY DIVERSION (40 MPH OR LESS)
T-WZ-32	03-05-17	TRAFFIC CONTROL PLAN SIGNAL LAYOUT FOR TRAFFIC SIGNAL AT TWO LANE BRIDGE RECONSTRUCTION SITE
T-WZ-33	05-27-98	TRAFFIC CONTROL PLAN FOR CLOSE INTERSECTION CONDITIONS USING TRAFFIC SIGNAL AT TWO LANE BRIDGE RECONSTRUCTION SITE
T-WZ-34	09-01-05	TRAFFIC CONTROL PLAN GENERAL NOTES FOR TRAFFIC SIGNAL AT TWO LANE BRIDGE RECONSTRUCTION SITE
T-WZ-35	04-02-12	TRAFFIC CONTROL PLAN PAY ITEM AND SIGN DETAILS FOR TRAFFIC SIGNAL AT TWO LANE BRIDGE RECONSTRUCTION SITE
T-WZ-40	03-05-17	RIGHT LANE CLOSURES AT NEAR SIDE OF INTERSECTIONS
T-WZ-41	03-05-17	LEFT LANE CLOSURES AT NEAR SIDE OF INTERSECTIONS
T-WZ-42	03-05-17	CENTER LANE CLOSURES AT NEAR SIDE OF INTERSECTIONS
EROSION PREVENTION AND SEDIMENT CONTROL		
EC-STR-1	08-01-12	DEWATERING STRUCTURE
EC-STR-2	08-01-12	SEDIMENT FILTER BAG
EC-STR-3B	08-01-12	SILT FENCE
EC-STR-3C	08-01-12	SILT FENCE WITH WIRE BACKING
EC-STR-3E	04-01-08	SILT FENCE FABRIC JOINING DETAILS
EC-STR-6	05-06-16	ROCK CHECK DAM
EC-STR-6A	05-06-16	ENHANCED ROCK CHECK DAM
EC-STR-19	04-01-08	CATCH BASIN PROTECTION
EC-STR-25	08-01-12	TEMPORARY CULVERT CROSSING, CONSTRUCTION EXIT, CONSTRUCTION FORD
EC-STR-27	08-01-12	TEMPORARY SLOPE DRAIN AND BERM
EC-STR-30A		INSTREAM DIVERSION (WITH TRAFFIC)
EC-STR-39A	08-01-12	CURB INLET PROTECTION TYPE 3 & 4

SEALED BY

ROBERT RYAN SWEENEY
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 111938
STATE OF TENNESSEE
7/26/2017

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STANDARD ROADWAY DRAWINGS

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-96(48)	1A2

STANDARD TRAFFIC OPERATIONS DRAWINGS

DWG.	REV.	DESCRIPTION
SIGNALS		
T-SG-2	06-27-16	LOOP LEAD-INS, CONDUIT AND PULL BOXES
T-SG-3A	06-27-16	ALTERNATE DETECTION DETAILS
T-SG-5	06-27-16	CONTROLLER CABINET DETAILS
T-SG-6		PEDESTRIAN SIGNAL DETAILS
T-SG-7	06-27-16	SIGNAL HEAD ASSEMBLIES
T-SG-7D		TYPICAL SIGNAL HEAD PLACEMENT TWO-LANE APPROACHES
T-SG-7E		TYPICAL SIGNAL HEAD PLACEMENT THREE-LANE APPROACHES
T-SG-7F		TYPICAL SIGNAL HEAD PLACEMENT THREE-LANE APPROACHES
T-SG-7I		TYPICAL SIGNAL HEAD PLACEMENT FOUR-LANE APPROACHES
T-SG-9	06-27-16	DETAILS OF CANTILEVER SIGNAL SUPPORT
T-SG-9A	06-27-16	MISCELLANEOUS SIGNAL DETAILS
T-SG-10	06-27-16	MAST ARM POLE AND STRAIN POLES FOUNDATION DETAILS
T-SG-11	06-27-16	MAINTENANCE OF EXISTING SIGNALS DURING HIGHWAY CONSTRUCTION
T-SG-12	06-27-16	TYPICAL WIRING FOR SIGNAL HEADS AND DETECTION LOOPS

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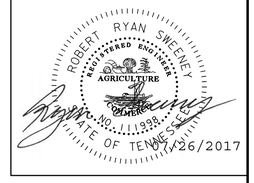


STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION

STANDARD TRAFFIC OPERATIONS DRAWINGS

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-96(48)	1B

PROJECT COMMITMENTS

COMMITMENT ID	SOURCE DIVISON	DESCRIPTION	STA. / LOCATION
EDHZ001	Environmental Division, Hazardous Materials	An Asbestos Containing Material (ACM) survey was conducted on Bridge No. 75SR0960011, SR-96 over Overall Creek, LM 6.28 (75-SR096-6.28). No ACM was detected. No special accommodations for demolition and waste disposal are anticipated for these structures and the material can be deposited in a C&D landfill. Prior to the demolition or rehabilitation of any structure (bridge or building), the contractor is required to submit the National Emission Standards for Hazardous Air Pollutants standard 10-day notice of demolition to the TDEC Division of Air Pollution Control (Standard Specifications for Road and Bridge Construction (January 1, 2015) Sections 107.08 D and 202.03).	Bridge No. 75SR0960011
EDEC001	Ecology	Per the Tennessee Wildlife Resources Agency (TWRA) coordination response dated March 5, 2015, TWRA requests that construction of the new structure crossing over Overall Creek be completed during the dry months of the year. Furthermore, if construction methodologies require in-stream explosives, TWRA requests that the project be reviewed again for concerns and comment.	New structure crossing Overall Creek

SEALED BY

ROBERT RYAN SWELENEY
REGISTERED ENGINEER
AGRICULTURE
No. 111938
STATE OF TENNESSEE
7/26/2017

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROJECT COMMITMENTS

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	2A
CONST.	2017	NH-96(48)	2A

ESTIMATED ROADWAY QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
	105-01	CONSTRUCTION STAKES, LINES AND GRADES	LS	1
	201-01	CLEARING AND GRUBBING	LS	1
	202-01	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	1
	202-02.21	REMOVAL OF PIPE (24" PIPE)	L.F.	1686
	202-02.22	REMOVAL OF PIPE (30" PIPE)	L.F.	102
10.	202-08.15	REMOVAL OF CURB AND GUTTER	L.F.	1357
4.	203-01	ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED)	C.Y.	19370
	203-02.01	BORROW EXCAVATION (GRADED SOLID ROCK)	TON	2771
	203-03	BORROW EXCAVATION (UNCLASSIFIED)	C.Y.	20253
	203-04	PLACING AND SPREADING TOPSOIL	C.Y.	8750
5.	203-50	CONSTRUCTION OF HAUL ROADS	LS	1
11.	204-08.01	BACKFILL MATERIAL (FLOWABLE FILL)	C.Y.	500
	209-05	SEDIMENT REMOVAL	C.Y.	100
3.	209-08.02	TEMPORARY SILT FENCE (WITH BACKING)	L.F.	1039
3.	209-08.03	TEMPORARY SILT FENCE (WITHOUT BACKING)	L.F.	3199
	209-08.07	ROCK CHECK DAM PER	EACH	28
3.	209-08.08	ENHANCED ROCK CHECK DAM	EACH	4
3.	209-09.04	SEDIMENT FILTER BAG(15' X 10')	EACH	2
3.	209-09.43	CURB INLET PROTECTION (TYPE 4)	EACH	28
3.	209-40.30	CATCH BASIN PROTECTION (TYPE A)	EACH	1
3.	209-40.33	CATCH BASIN PROTECTION (TYPE D)	EACH	16
	209-65.04	TEMPORARY IN STREAM DIVERSION	L.F.	145
2.	303-01	MINERAL AGGREGATE, TYPE A BASE, GRADING D	TON	8129
	303-10.01	MINERAL AGGREGATE (SIZE 57)	TON	89
	306-01.01	PORTLAND CEMENT CONCRETE BASE (PLAIN) 6"	S.Y.	187
	307-01.21	ASPHALT CONCRETE MIX (PG70-22) (BPMB-HM) GRADING A-S	TON	2778
	307-01.08	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING B-M2	TON	73
	307-02.01	ASPHALT CONCRETE MIX (PG70-22) (BPMB-HM) GRADING A	TON	2778
	307-02.08	ASPHALT CONCRETE MIX (PG70-22) (BPMB-HM) GRADING B-M2	TON	1820
	402-01	BITUMINOUS MATERIAL FOR PRIME COAT (PC)	TON	25
	402-02	AGGREGATE FOR COVER MATERIAL (PC)	TON	97
8.	403-01	BITUMINOUS MATERIAL FOR TACK COAT (TC)	TON	9
	411-01.10	ACS MIX(PG64-22) GRADING D	TON	114
9.	411-02.10	ACS MIX(PG70-22) GRADING D	TON	1238
	415-01.01	COLD PLANING BITUMINOUS PAVEMENT	TON	169
	604-01.01	CLASS A CONCRETE (ROADWAY)	C.Y.	10
	604-01.02	STEEL BAR REINFORCEMENT (ROADWAY)	LB.	800
	604-04.04	BRIDGE END DRAINS(4'X8')	EACH	4
	606-02.03	STEEL PILES (10 INCH)	L.F.	492
1.	606-24.13	TEMPORARY SHEET PILES	LS	1
6.	607-03.02	18" CONCRETE PIPE CULVERT (CLASS III)	L.F.	1087
	607-05.02	24" CONCRETE PIPE CULVERT (CLASS III)	L.F.	710
	607-06.02	30" CONCRETE PIPE CULVERT (CLASS III)	L.F.	880
	607-07.02	36" CONCRETE PIPE CULVERT (CLASS III)	L.F.	877
	611-12.01	CATCH BASINS, TYPE 12, 0' - 4' DEPTH	EACH	7
	611-12.02	CATCH BASINS, TYPE 12, > 4' - 8' DEPTH	EACH	15
	611-12.03	CATCH BASINS, TYPE 12, > 8' - 12' DEPTH	EACH	3
	611-14.02	CATCH BASINS, TYPE 14, > 4' - 8' DEPTH	EACH	4
	701-01.02	CONCRETE SIDEWALK (6 ")	S.F.	19500
	701-02.03	CONCRETE CURB RAMP	S.F.	738
	702-01	CONCRETE CURB	C.Y.	6
	702-03	CONCRETE COMBINED CURB & GUTTER	C.Y.	262
	705-01.01	GUARDRAIL AT BRIDGE ENDS	L.F.	320
	705-06.20	TANGENT ENERGY ABSORBING TERM MASH TL-3	EACH	4
	706-01	GUARDRAIL REMOVED	L.F.	301
	707-08.11	HIGH-VISIBILITY CONSTRUCTION FENCE	L.F.	412
	708-02.01	MARKERS (CONCRETE R.O.W. POSTS)	EACH	4

ESTIMATED ROADWAY QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
	709-05.05	MACHINED RIP-RAP (CLASS A-3)	TON	91
	709-05.06	MACHINED RIP-RAP (CLASS A-1)	TON	770
2.	709-05.08	MACHINED RIP-RAP (CLASS B)	TON	10
	710-02	AGGREGATE UNDERDRAINS (WITH PIPE)	L.F.	4075
	710-09.01	6" PERFORATED PIPE WITH VERTICAL DRAIN SYSTEM	L.F.	264
	710-09.02	6" PIPE UNDERDRAIN	L.F.	30
	712-01	TRAFFIC CONTROL	LS	1
	712-02.02	INTERCONNECTED PORTABLE BARRIER RAIL	L.F.	1500
	712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	EACH	200
	712-05.01	WARNING LIGHTS (TYPE A)	EACH	20
	712-06	SIGNS (CONSTRUCTION)	S.F.	420
	712-08.03	ARROW BOARD (TYPE C)	EACH	4
	713-11.01	"U" SECTION STEEL POSTS	LB.	80
	713-11.02	PERFORATED/KNOCKOUT SQUARE TUBE POST	LB.	350
	713-11.21	P POST SLIP BASE	EACH	4
	713-13.02	FLAT SHEET ALUMINUM SIGNS (0.080" THICK)	S.F.	40
	713-13.03	FLAT SHEET ALUMINUM SIGNS (0.100" THICK)	S.F.	90
	713-15.41	SIGN REMOVAL (DESCRIPTION)	LS	1
	713-16.01	CHANGEABLE MESSAGE SIGN UNIT	EACH	4
	716-01.21	SNWPLWBLE PVMT MRKRS (BI-DIR)(1 COLOR)	EACH	48
	716-01.22	SNWPLWBLE PVMT MRKRS (MONO-DIR)(1 COLOR)	EACH	62
	716-01.30	REMOVAL OF SNOWPLOWABLE REFLECTIVE MARKER	EACH	48
	716-02.03	PLASTIC PAVEMENT MARKING (CROSS-WALK)	L.F.	470
	716-02.04	PLASTIC PAVEMENT MARKING(CHANNELIZATION STRIPING)	S.Y.	20
	716-02.05	PLASTIC PAVEMENT MARKING (STOP LINE)	L.F.	50
	716-02.06	PLASTIC PAVEMENT MARKING (TURN LANE ARROW)	EACH	10
	716-03.01	PLASTIC WORD PAVEMENT MARKING (ONLY)	EACH	3
	716-04.05	PLASTIC PAVEMENT MARKING (STRAIGHT ARROW)	EACH	4
	716-05.01	PAINTED PAVEMENT MARKING (4" LINE)	L.M.	4
	716-12.02	ENHANCED FLATLINE THERMO PVMT MRKNG (6IN LINE)	L.M.	2
	716-12.03	ENHANCED FLATLINE THERMO PVMT MRKNG (8IN BARRIER LINE)	L.F.	177
	716-12.05	ENHANCED FLATLINE THERMO PVMT MRKNG (6IN DOTTED LINE)	L.F.	280
	717-01	MOBILIZATION	LS	1
7.	740-10.03	GEOTEXTILE (TYPE III)(EROSION CONTROL)	S.Y.	1638
	740-10.04	GEOTEXTILE (TYPE IV)(STABILIZATION)	S.Y.	2357
	801-01	SEEDING (WITH MULCH)	UNIT	315
	801-01.02	CROWN VETCH MIXTURE (WITH MULCH)	UNIT	28
	801-02	SEEDING (WITHOUT MULCH)	UNIT	250
	801-03	WATER (SEEDING & SODDING)	M.G.	3
	803-01	SODDING (NEW SOD)	S.Y.	2600
	806-02.03	PROJECT MOWING	CYCL	4

FOOTNOTES

1. FOR PHASE BRIDGE CONSTRUCTION TRAFFIC CONTROL.
2. TO BE USED FOR PAVING RIPRAP APPRONS.
3. SEE SUBSECTION 209.07 OF THE STANDARD SPECIFICATIONS FOR MAINTENANCE REPLACEMENT. ALL QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER.
4. INCLUDES 155 C.Y. FOR EROSION CONTROL.
5. INCLUDES INCLUDES 2771 TONS OF BORROW EXCAVATION (GRADED SOLID ROCK), ITEM NO. 203-02.01. INCLUDES 479 TONS OF MACHINED RIP-RAP (CLASS B) ITEM NO. 709-05.08, INCLUDES 1612 S.Y. OF GEOTEXTILE (TYPE IV)(STABILIZATION) ITEM NO. 740-10.04.
6. INCLUDES 401 L.F. FOR SIDE DRAINS.
7. INCLUDES 240 S.Y. FOR TEMPORARY CONSTRUCTION EXITS.
8. INCLUDES 2 TONS FOR MILL AND OVERLAY.
9. INCLUDES 171 TONS FOR MILL AND OVERLAY.
10. FROM EAST OF OVERALL CREEK TO CAROLE DRIVE.
11. TO BE USED AS DIRECTED BY THE ENGINEER.

SEALED BY

STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION

ESTIMATED ROADWAY QUANTITIES

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2017	75009-3238-04	2A1

ESTIMATED SIGNAL QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
(1)	713-14.21	STREET NAME SIGN (RIGID 0.100IN THICK	S.F.	36
(2)	713-15.07	SUSPENDED FLAT SHEET ALUMINUM SIGN (0.080" THICK)	EACH	4
(3)	730-01.02	REMOVAL OF SIGNAL EQUIPMENT	EACH	1
	730-02.09	SIGNAL HEAD ASSEMBLY (130 WITH BACKPLATE)	EACH	3
	730-02.17	SIGNAL HEAD ASSEMBLY (150 A2H WITH BACKPLATE)	EACH	6
	730-03.21	INSTALL PULL BOX (TYPE B)	EACH	6
(4)	730-05.01	ELECTRICAL SERVICE CONNECTION	EACH	1
	730-08.02	SIGNAL CABLE - 5 CONDUCTOR	L.F.	590
	730-08.03	SIGNAL CABLE - 7 CONDUCTOR	L.F.	1765
	730-12.02	CONDUIT 2" DIAMETER (PVC)	L.F.	152
	730-12.03	CONDUIT 3" DIAMETER (PVC)	L.F.	51
	730-12.13	CONDUIT 2" DIAMETER (JACK AND BORE)	L.F.	228
	730-12.14	CONDUIT 3" DIAMETER (JACK AND BORE)	L.F.	96
(5)	730-13.02	VEHICLE DETECTOR (VIDEO)	EACH	4
	730-15.32	CABINET (EIGHT PHASE BASE MOUNTED)	EACH	1
	730-16.02	EIGHT PHASE ACTUATED CONTROLLER	EACH	1
(6)	730-23.36	CANTILEVER SIGNAL SUPPORT (ONE ARM @ 50')	EACH	1
(6)	730-23.37	CANTILEVER SIGNAL SUPPORT (ONE ARM @ 56')	EACH	2
(7)	730-23.38	CANTILEVER SIGNAL SUPPORT (ONE ARM @ 80')	EACH	1
(8)	730-26.11	COUNTDOWN PED SGNL HEAD W/AUDIBLE PUSH BUTTON & 15IN SIGN	EACH	8
(9)	730-40	TEMPORARY TRAFFIC SIGNAL SYSTEM	EACH	1

FOOTNOTES

(1) TO INCLUDE 4 OVERHEAD STREET NAME SIGNS AND ALL NECESSARY HARDWARE. SIGNS TO BE INSTALLED ON THE MAST ARM BY THE CONTRACTOR. SEE SHEET 15 FOR DETAILS OF SIGNS.

(2) TO BE R10-12.

(3) INCLUDES THE REMOVAL OF ALL SIGNAL POLES, SPAN WIRE, SIGNAL HEADS, AND ANY OTHER SIGNAL RELATED EQUIPMENT AT THE INTERSECTION OF SR-96 AND VETERANS PARKWAY.

(4) THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE LOCAL UTILITY TO OBTAIN THE ESTIMATE FOR ANY CHARGES BY THE UTILITY FOR PROVIDING ELECTRICAL SERVICE TO THE TRAFFIC SIGNAL CONTROLLER. THESE CHARGES SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 730-05.01 FOR PAYMENT BY THE CONTRACTOR.

(5) VIDEO DETECTION SYSTEM INCLUDES FOUR (4) CAMERA SENSOR UNITS, ONE (1) PROCESSOR UNIT, HARDWARE, SOFTWARE, CAMERA MOUNTING ASSEMBLIES, POWER CABLING, COAXIAL CABLING, CONDUIT, SURGE PROTECTION, AND ALL RELATED EQUIPMENT TO PROVIDE ALL DETECTION ZONES AS INDICATED ON THE PLANS. MINIMUM MOUNTING HEIGHT IS 35 FT. REFER TO STD. DWG. T-SG-3A AND SPECIAL PROVISION 730V FOR DETAILS.

(6) USE A DRILLED SHAFT FOUNDATION 3'-0" IN DIAMETER WITH A 15'-0" DEEP SOIL SOCKET. IF SOUND BEDROCK IS ENCOUNTERED PRIOR TO ATTAINING THE REQUIRED 15'-0" DEPTH, SOCKET INTO THE ROCK TO A DEPTH OF 8'-0".

(7) USE A DRILLED SHAFT FOUNDATION 4'-0" IN DIAMETER WITH A 17'-0" DEEP SOIL SOCKET. IF SOUND BEDROCK IS ENCOUNTERED PRIOR TO ATTAINING THE REQUIRED 17'-0" DEPTH, SOCKET INTO THE ROCK TO A DEPTH OF 8'-0".

(8) PUSH BUTTONS SHALL PROVIDE TACTILE VIBRATION ARROW, AUDIBLE SOUND, AND SHALL MEET THE PROPOSED ACCESSIBILITY GUIDELINES FOR PEDESTRIAN FACILITIES. COST TO INCLUDE FRAME, SIGN (R10-3E), ADA COMPLIANT PUSH BUTTON, AND MOUNTING HARDWARE.

(9) TO BE USED AT THE INTERSECTION OF SR-96 AND VETERANS PARKWAY. SYSTEM SHOULD INCLUDE WOOD POLES, GUYING DEVICES, SPAN WIRE, CONDUIT RISERS, AND ANY OTHER SIGNAL RELATED EQUIPMENT NEEDED TO HAVE A FULLY OPERATIONAL TRAFFIC SIGNAL SYSTEM.

SPECIAL NOTES REGARDING SIGNAL HEADS

(1) ALL CIRCULAR AND ARROW INDICATIONS WITHIN ALL VEHICULAR SIGNAL HEADS PROPOSED FOR THIS PROJECT SHALL CONSIST OF AN LED (LIGHT EMITTING DIODE) SIGNAL MODULE UNLESS OTHERWISE NOTED IN THE PLANS.

(2) ALL PEDESTRIAN TRAFFIC CONTROL INDICATIONS, WHERE CALLED FOR, SHALL CONSIST OF LED MODULES DISPLAYING “WALKING PERSON” AND “HAND” SYMBOLS, ALONG WITH A PEDESTRIAN INTERVAL COUNTDOWN DISPLAY, WITHIN THE SAME FACE UNLESS OTHERWISE NOTED IN THE PLANS.

(3) CIRCULAR INDICATIONS SHALL MEET “ITE VTCSH-LED CIRCULAR SIGNAL SUPPLEMENT” FOR EXPANDED/EXTENDED VIEW.
ARROW INDICATIONS SHALL MEET “ITE VTCSH-3 LED ARROW SPECIFICATON” FOR EXPANDED/EXTENDED VIEW.
PEDESTRIAN INDICATIONS SHALL MEET “ITE PTCSI PART 2”.

(4) INCANDESCENT OR SCREW-IN MODULES ARE NOT ACCEPTABLE.

(5) COMPATABILITY WITH CONFLICT MONITORS AND LOAD SWITCHES SHALL BE TESTED AND CONFIRMED.

(6) MANUFACTURER SHALL PROVIDE A MINIMUM FIVE-YEAR WARRANTY FOR OPERATION OF THE UNIT.

(7) SIGNAL HEADS SHALL INCLUDE LOUVERED BACKPLATES WITH A 1” MINIMUM, 3” MAXIMUM YELLOW RETRO REFLECTIVE BORDER AROUND THE PERIMETER OF THE FACE OF THE BACKPLATE. THE RETRO REFLECTIVE BORDER IS TO BE MADE OF A TYPE III PRISMATIC OR BETTER MATERIAL.

SEALED BY

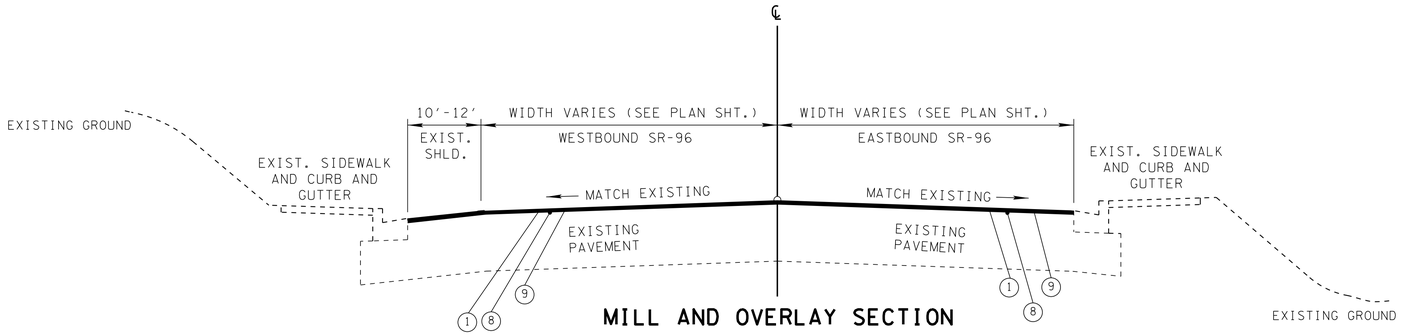
7/25/2017

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ESTIMATED SIGNAL QUANTITIES AND SPECIAL NOTES

25-JUL-2017 13:00
C:\1) Signal Projects\3) Region 3\Rutherford\SR96_VeteransPkwy-Morris\2A1.dgn

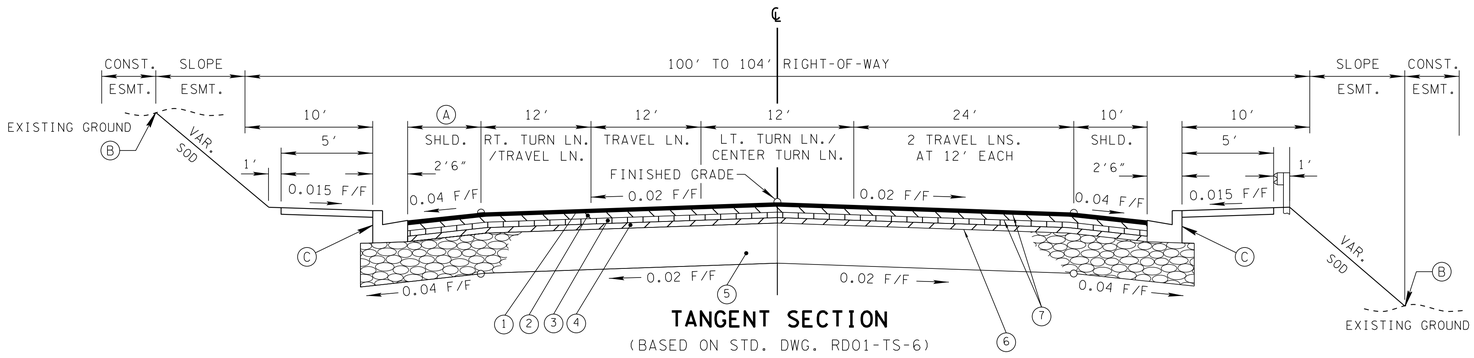
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	2B
CONST.	2017	NH-96(48)	2B



MILL AND OVERLAY SECTION

SR-96

STA. 57+58.11 TO STA. 58+99.91



TANGENT SECTION

(BASED ON STD. DWG. RD01-TS-6)

SR-96

STA. 58+99.91 TO STA. 68+22.79
STA. 69+62.79 TO STA. 74+79.51
STA. 76+06.99 TO STA. 78+30.00

(B) SEE STANDARD DRAWING NOS. RD01-S-11 AND RD01-S-11A FOR ROUNDING

(C) TYPE 6-30 CURB AND GUTTER SEE STD. DWG. RP-NMC-10

(A) SHOULDER WIDTH LEFT

FROM 12′ AT STA. 58+99.91 TO 12′ AT STA. 66+65.73
FROM 12′ AT STA. 66+65.73 TO 10′ AT STA. 67+61.73
FROM 10′ AT STA. 67+61.73 TO 10′ AT STA. 68+22.79
FROM 10′ AT STA. 69+62.79 TO 10′ AT STA. 74+79.51
FROM 10′ AT STA. 76+06.99 TO 10′ AT STA. 78+30.00

PROPOSED PAVEMENT SCHEDULE

(1) 1.25″ SURFACE MIX GRADING "D" @ 132.5 LB./S.Y. 411-02.10 ACS MIX(PG70-22) GRADING "D"	(4) 3.00″ BASE MIX GRADING "A-S" @ 270 LB./S.Y. 307-01.21 ASPHALT CEMENT (PG70-22) GRADING "A-S"	(7) TACK COAT (GENERAL USE) 403-01 BITUMINOUS MATERIAL FOR TACK COAT (TC) @ 0.05 - 0.10 GAL/S.Y.
(2) 2.00″ BASE MIX GRADING "BM-2" @ 226 LB./S.Y. 307-02.08 AC MIX (PG70-22) GRADING "BM-2"	(5) 8.00″ BASE GRADING "D" @ 0.46 TONS/C.Y. 303-01 MINERAL AGGREGATE BASE GRADING "D"	(8) TACK COAT (MILLING - COLD PLANE) 403-01 BITUMINOUS MATERIAL FOR TACK COAT (TC) @ 0.08 - 0.12 GAL/S.Y.
(3) 3.00″ BASE MIX GRADING "A" @ 318 LB./S.Y. 307-02.01 ACS MIX (PG70-22) GRADING "A"	(6) PRIME COAT 402-01 BITUMINOUS MATERIAL FOR PRIME COAT (PC) @ 0.30 - 0.35 GAL/S.Y. 402-02 AGGREGATE FOR COVER MATERIAL (PC) @ 8 - 12 LBS./S.Y.	(9) 1.25″ COLD PLANING @ 131.25 LB./S.Y. 415-01.01 COLD PLANING BITUMINOUS PAVEMENT

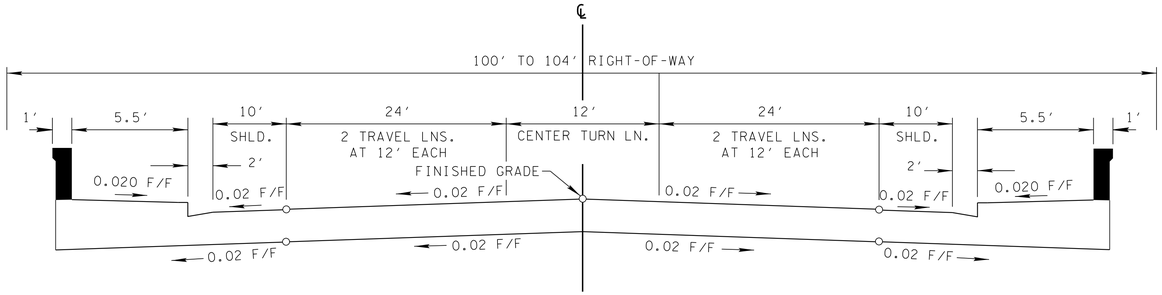
SEALED BY

ROBERT RYAN SWEENEY
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 111998
STATE OF TENNESSEE
7/26/2017

STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS AND PAVEMENT SCHEDULE

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	2C
CONST.	2017	NH-96(48)	2B1

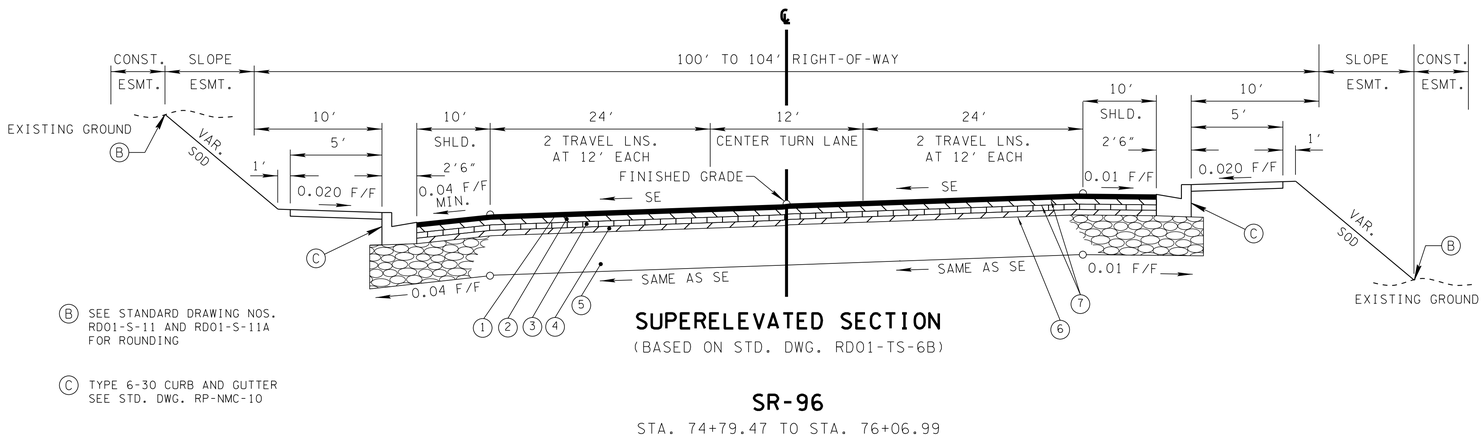


TANGENT SECTION
BRIDGE

(BASED ON STD. DWG. RD01-TS-6)

SR-96

STA. 68+22.79 TO STA. 69+62.79



Ⓑ SEE STANDARD DRAWING NOS. RD01-S-11 AND RD01-S-11A FOR ROUNDING

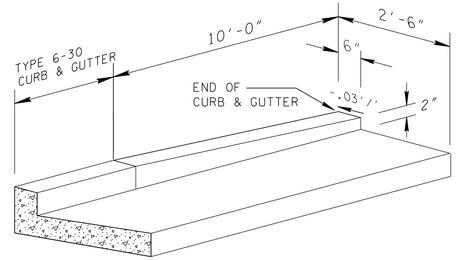
Ⓒ TYPE 6-30 CURB AND GUTTER SEE STD. DWG. RP-NMC-10

SUPERELEVATED SECTION

(BASED ON STD. DWG. RD01-TS-6B)

SR-96

STA. 74+79.47 TO STA. 76+06.99



TYPE 6-30 CURB & GUTTER TRANSITION DETAIL

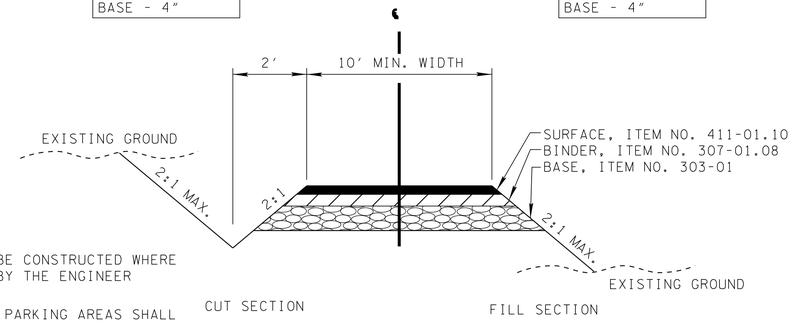
THIS DETAIL SHALL APPLY TO ALL ENDING SECTIONS OF TYPE 6-30 CURB & GUTTER

BUSINESS

SURFACE - 1¼″
BINDER - 1¾″
BASE - 4″

FIELD OR RESIDENTIAL

SURFACE - 1½″
BINDER - NONE
BASE - 4″



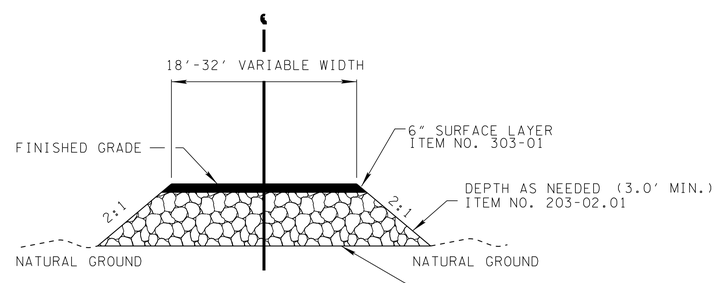
NOTE: DITCH TO BE CONSTRUCTED WHERE DIRECTED BY THE ENGINEER

SLOPES IN PARKING AREAS SHALL BE FLATTENED TO 12:1 AND DITCH IS TO BE ELIMINATED

FOR EXISTING CONCRETE DRIVE SUBSTITUTE 6″ CONCRETE FOR BASE AND SURFACE

TYPICAL SECTION

PRIVATE DRIVE TO BUSINESS, FIELD, OR RESIDENTIAL PROPERTY



TYPICAL SECTION

HAUL ROAD
ITEM NO. 203-50

S.W. CORNER OF BRIDGE (HAUL ROAD 1) — STA. 10+00.00 TO 14+52.11
N.E. CORNER OF BRIDGE (HAUL ROAD 2) — STA. 20+00.00 TO 24+11.35

HAUL ROADS TO BE PAID FOR AS LUMP SUM ITEMS.

SEE SHEET 2B FOR PAVEMENT SCHEDULE

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DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-96(48)	2C

GENERAL NOTES

GRADING

(1) ANY AREA THAT IS DISTURBED OUTSIDE LIMITS OF CONSTRUCTION DURING THE LIFE OF THIS PROJECT SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.

(2) CERTIFICATION FOR ALL BORROW PITS MUST BE OBTAINED IN ACCORDANCE WITH SUBSECTION 107.06 OF THE STANDARD SPECIFICATIONS.

(3) THE CONTRACTOR SHALL NOT DISPOSE OF ANY MATERIAL EITHER ON OR OFF STATE-OWNED R.O.W. IN A REGULATORY FLOOD WAY AS DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY WITHOUT APPROVAL BY SAME. ALL MATERIAL SHALL BE DISPOSED OF IN UPLAND (NON-WETLAND) AREAS AND ABOVE ORDINARY HIGH WATER OF ANY ADJACENT WATERCOURSE. THIS DOES NOT ELIMINATE THE NEED TO OBTAIN ANY OTHER LICENSES OR PERMITS THAT MAY BE REQUIRED BY ANY OTHER FEDERAL, STATE OR LOCAL AGENCY.

SEEDING AND SODDING

(1) ALL EXISTING ROADS WITHIN THE RIGHT-OF-WAY AND NOT IN THE GRADED AREA THAT ARE TO BE ABANDONED SHALL BE SCARIFIED, OBLITERATED, TOPSOILED AND SEEDED. SCARIFYING AND OBLITERATING THE PAVEMENT WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COST WILL BE INCLUDED IN THE COST OF OTHER ITEMS. TOPSOIL, IN ACCORDANCE WITH SECTION 203 OF THE STANDARD SPECIFICATIONS, WILL BE MEASURED AND PAID FOR UNDER ITEMS 203-04 AND/OR 203-07. SEEDING, IN ACCORDANCE WITH SECTION 801 OF THE STANDARD SPECIFICATIONS, WILL BE MEASURED AND PAID FOR UNDER ITEM 801-01.

(2) SOD SHALL BE PLACED AT LOCATIONS SHOWN ON THE PLANS TO PREVENT DAMAGE TO ADJACENT FACILITIES AND PROPERTY DUE TO EROSION ON ALL NEWLY GRADED CUT AND FILL SLOPES AS WORK PROGRESSES.

(3) ITEM NO. 801-01.02 SHALL BE USED ON SLOPES 3:1 OR STEEPER AND OTHER AREAS AS INDICATED IN THE PLANS THAT ARE INACCESSIBLE FOR MOWING.

(4) ITEM NO. 801-01, SEEDING (WITH MULCH), SHALL BE USED WHERE EROSION CONTROL BLANKET OR SOD ARE NOT APPLIED.

(5) ITEM NO. 801-02, SEEDING (WITHOUT MULCH) AND EROSION CONTROL BLANKET, SHALL BE PLACED AT LOCATIONS SHOWN ON THE PLANS AS WELL AS LOCATIONS DIRECTED BY THE ENGINEER.

GUARDRAIL

(6) THE PROPOSED GUARDRAIL, INCLUDING ANY ANCHOR SYSTEM, SHALL BE INSTALLED QUICKLY TO MINIMIZE TRAFFIC EXPOSURE TO ANY HAZARD. NO PAYMENT WILL BE MADE FOR A SECTION OF PROPOSED GUARDRAIL, INCLUDING ANCHORS, UNTIL IT IS COMPLETE IN PLACE.

(7) GUARDRAIL IS TO BE COMPLETE IN PLACE BEFORE THE MAINLINE ROADWAY IS OPENED TO TRAFFIC.

DRAINAGE

(1) THE CONTRACTOR SHALL SHAPE DITCHES TO THE SPECIFIED DESIGN. THIS WORK WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COST WILL BE INCLUDED IN THE COST OF OTHER ITEMS.

(2) THE CUTTING OF INLET AND OUTLET DITCHES WHERE SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER WILL BE MEASURED AND PAID FOR AS ITEM NO. 203-01 ROAD AND DRAINAGE EXCAVATION (UNCLASSIFIED).

(3) DURING CONSTRUCTION OF DRAINAGE STRUCTURES ALL COST ASSOCIATED WITH MAINTAINING THE FLOW OF WATER AND TRAFFIC, AT THESE STRUCTURES, DURING THE PHASED CONSTRUCTION OF THIS PROJECT ARE TO BE INCLUDED IN THE UNIT PRICE OF THE DRAINAGE STRUCTURES AND TRAFFIC CONTROL ITEMS.

(4) ALL EXISTING PIPES AS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER THAT ARE TO BE LEFT IN PLACE AND ABANDONED MUST BE BACKFILLED AND PLUGGED. ALL COST FOR THIS WORK SHALL BE INCLUDED IN ITEM NO. 204-08.01, BACKFILL MATERIAL (FLOWABLE FILL), C.Y.

MISCELLANEOUS

(1) ALL DETOUR, ACCESS, SERVICE AND FRONTAGE ROADS SHALL BE CONSTRUCTED WITH A MINIMUM OF ONE (1) COURSE OF BASE MATERIAL BEFORE TRAFFIC IS INTERRUPTED ON EXISTING ROADS.

(2) THE CONTRACTOR SHALL BE REQUIRED TO REMOVE AND RESET MAILBOXES WHERE AND AS DIRECTED BY THE ENGINEER.

(3) NOTHING IN THE GENERAL NOTES OR SPECIAL PROVISIONS SHALL RELIEVE THE CONTRACTOR FROM HIS RESPONSIBILITIES TOWARD THE SAFETY AND CONVENIENCE OF THE GENERAL PUBLIC AND THE RESIDENTS ALONG THE PROPOSED CONSTRUCTION AREA.

ROAD CLOSURE

(1) NO LESS THAN SEVEN (7) DAYS PRIOR TO THE CLOSURE OF THE ROAD, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING INDIVIDUALS OR AGENCIES COMPLETELY DESCRIBING THE AFFECTED ROADS AND THE APPROXIMATE DURATION OF THE CONSTRUCTION: THESE PARTIES INCLUDE, BUT ARE NOT LIMITED TO: (1) LOCAL LAW ENFORCEMENT OFFICE, (2) LOCAL FIRE DEPARTMENT, (3) AMBULANCE SERVICE, (4) LOCAL SCHOOL SUPERINTENDENT, (5) UNITED STATES POSTAL SERVICE, AND (6) LOCAL ROAD SUPERINTENDENT.

PAVEMENT MARKINGS

TEMPORARY PAVEMENT MARKINGS ON INTERMEDIATE LAYERS

(1) TEMPORARY PAVEMENT LINE MARKINGS ON INTERMEDIATE LAYERS OF PAVEMENT SHALL BE REFLECTIVE TAPE OR REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAYS WORK. SHORT, UNMARKED SECTIONS SHALL NOT BE ALLOWED. THESE MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-05.01, PAINTED PAVEMENT MARKING (4" LINE), L.M.

FINAL PAVEMENT MARKING

(2) PERMANENT PAVEMENT LINE MARKINGS SHALL BE 6" ENHANCED FLATLINE THERMOPLASTIC INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK. SHORT UNMARKED SECTIONS SHALL NOT BE ALLOWED. PAVEMENT MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-12.02, ENHANCED FLATLINE THERMO PVMT MRKNG (6IN LINE), L.M. THE CONTRACTOR SHALL HAVE THE OPTION OF USING REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK AND THEN INSTALLING THE PERMANENT MARKINGS AFTER THE PAVING OPERATION IS COMPLETED. THE TEMPORARY MARKINGS FOR THE FINAL SURFACE WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COSTS ARE TO BE INCLUDED IN THE PRICE BID FOR THE PERMANENT MARKINGS.

DETOURS, LANE SHIFTS AND MEDIAN CROSS-OVERS

(3) THE PAVEMENT MARKING ON THE LANE SHIFT FOR CENTERLINES, EDGELINES, AND LANE LINES WILL BE INSTALLED AND MAINTAINED TO THE SAME STANDARDS AS FOR PERMANENT MARKINGS ON THE MAIN ROADWAY. THESE MARKINGS SHALL BE IN PLACE PRIOR TO ALLOWING TRAFFIC ONTO THE PAVEMENT. THESE PAVEMENT MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-05.20 PAINTED PAVEMENT MARKING (6IN LINE), LIN. MI.

(4) BEFORE OPENING THE LANE SHIFT TO TRAFFIC, THE TRANSITIONAL MARKINGS ON THE EXISTING ROADWAY MUST BE IN PLACE. THESE MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 712-09.01, REMOVABLE PAVEMENT MARKING LINE, LIN. FT. ALL EXISTING MARKINGS IN THE AREA OF THESE TRANSITIONAL MARKINGS SHALL BE OBLITERATED AND ALL EXISTING RAISED PAVEMENT MARKERS SHALL BE REMOVED TO ELIMINATE CONFLICTING MARKINGS. REMOVAL OF THE EXISTING CONFLICTING MARKINGS AND RAISED PAVEMENT MARKERS WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COST WILL BE INCLUDED IN ITEM NO. 712-01, TRAFFIC CONTROL, LUMP SUM.

(5) BEFORE OPENING THE LANE SHIFT TO TRAFFIC, THE TRANSITIONAL MARKINGS ON THE EXISTING ROADWAY MUST BE IN PLACE. ALL EXISTING MARKINGS IN THE AREA OF THESE TRANSITIONAL MARKINGS SHALL BE OBLITERATED AND ALL EXISTING RAISED PAVEMENT MARKERS SHALL BE REMOVED TO ELIMINATE CONFLICTING MARKINGS. REMOVAL OF THE EXISTING CONFLICTING MARKINGS AND RAISED PAVEMENT MARKERS WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COST WILL BE INCLUDED IN ITEM NO. 712-01, TRAFFIC CONTROL, LUMP SUM.

PAVEMENT

PAVING

(1) THE CONTRACTOR SHALL BE REQUIRED TO PAVE IN THE DIRECTION OF TRAFFIC.

(2) THE CONTRACTOR SHALL BE REQUIRED TO COLD PLANE AND PAVE IN THE DIRECTION OF TRAFFIC.

(3) THE CONTRACTOR SHALL ATTACH A DEVICE TO THE SCREED OF THE PAVER SUCH THAT MATERIAL IS CONFINED AT THE END GATE AND EXTRUDES THE ASPHALT MATERIAL IN SUCH A WAY THAT RESULTS IN A CONSOLIDATED WEDGE-SHAPE PAVEMENT EDGE OF APPROXIMATELY 25 TO 30 DEGREES AS IT LEAVES THE PAVER (MEASURED FROM A LINE PARALLEL TO THE PAVEMENT SURFACE.) THE DEVICE SHALL MEET THE REQUIREMENTS THAT ARE CURRENTLY SET FORTH IN SPECIAL PROVISION 407SE.

SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-96(48)	2C1

GENERAL NOTES CONT'D

RIPRAP

(1) RIPRAP SHALL CONSIST OF FURNISHING AND PLACING EITHER RUBBLE STONES BY HAND OR MACHINED. RUBBLE STONE SHALL MEET THE REQUIREMENTS OF SECTION 709 OF THE STANDARD SPECIFICATIONS AND SHALL BE CLEAN (FREE FROM ORGANIC MATTER), DURABLE, ANGULAR WITH FRACTURED FACES, NEARLY RECTANGULAR IN SHAPE WITH A BREADTH OR THICKNESS AT LEAST ONE-THIRD ITS LENGTH.

(2) IF THE CONTRACTOR ELECTS TO USE MACHINED RIPRAP (CLASS A-1), IT SHALL BE IN ACCORDANCE WITH SECTION 709 OF THE STANDARD SPECIFICATIONS EXCEPT AS MODIFIED BY THIS NOTE. MACHINED RIPRAP SHALL BE CLEAN SHOT ROCK CONTAINING NO SAND, DUST, OR ORGANIC MATERIALS, AND SHALL VARY IN SIZE FROM 2" TO 6". THE STONE SIZES SHALL BE DISTRIBUTED UNIFORMLY THROUGHOUT THE SIZE RANGE WITH NO MORE THAN 20% OF THE MATERIAL (BY WEIGHT) LESS THAN 4". THE THICKNESS OF THE STONE LAYER SHALL BE 4" AND THE SIZE GRADATION SHALL BE UNIFORMLY DISTRIBUTED THROUGHOUT THE LAYER THICKNESS AND FROM TOP TO BOTTOM OF THE SLOPE. UPON COMPLETION OF THE PROJECT, A VISUAL INSPECTION SHALL REVEAL THAT APPROXIMATELY 50% OF THE SURFACE AREA CONSISTS OF STONES 2" OR LARGER. PAYMENT WILL BE MADE UNDER ITEM 709-05.05 AND QUANTITIES WILL BE BASED ON A THICKNESS OF 4".

(3) IF THE CONTRACTOR ELECTS TO USE MACHINED RIPRAP (CLASS A-3), IT SHALL BE IN ACCORDANCE WITH SECTION 709 OF THE STANDARD SPECIFICATIONS EXCEPT AS MODIFIED BY THIS NOTE. MACHINED RIPRAP SHALL BE CLEAN SHOT ROCK CONTAINING NO SAND, DUST, OR ORGANIC MATERIALS, AND SHALL VARY IN SIZE FROM 2" TO 1'- 4". THE STONE SIZES SHALL BE DISTRIBUTED UNIFORMLY THROUGHOUT THE SIZE RANGE WITH NO MORE THAN 20% OF THE MATERIAL (BY WEIGHT) LESS THAN 4". THE THICKNESS OF THE STONE LAYER SHALL BE 1'- 6" (+/-3") AND THE SIZE GRADATION SHALL BE UNIFORMLY DISTRIBUTED THROUGHOUT THE LAYER THICKNESS AND FROM TOP TO BOTTOM OF THE SLOPE. UPON COMPLETION OF THE PROJECT, A VISUAL INSPECTION SHALL REVEAL THAT APPROXIMATELY 50% OF THE SURFACE AREA CONSISTS OF STONES 2" OR LARGER. PAYMENT WILL BE MADE UNDER ITEM 709-05.06 AND QUANTITIES WILL BE BASED ON A THICKNESS OF 1'- 4".

(4) IF THE CONTRACTOR ELECTS TO USE MACHINED RIPRAP (CLASS B), IT SHALL BE IN ACCORDANCE WITH SECTION 709 OF THE STANDARD SPECIFICATIONS EXCEPT AS MODIFIED BY THIS NOTE. MACHINED RIPRAP SHALL BE CLEAN SHOT ROCK CONTAINING NO SAND, DUST, OR ORGANIC MATERIALS, AND SHALL VARY IN SIZE FROM 3" TO 2'- 4". THE STONE SIZES SHALL BE DISTRIBUTED UNIFORMLY THROUGHOUT THE SIZE RANGE WITH NO MORE THAN 20% OF THE MATERIAL (BY WEIGHT) LESS THAN 6". THE THICKNESS OF THE STONE LAYER SHALL BE 2'- 6" (+/-4") AND THE SIZE GRADATION SHALL BE UNIFORMLY DISTRIBUTED THROUGHOUT THE LAYER THICKNESS AND FROM TOP TO BOTTOM OF THE SLOPE. UPON COMPLETION OF THE PROJECT, A VISUAL INSPECTION SHALL REVEAL THAT APPROXIMATELY 50% OF THE SURFACE AREA CONSISTS OF STONES 3" OR LARGER. PAYMENT WILL BE MADE UNDER ITEM 709-05.08 AND QUANTITIES WILL BE BASED ON A THICKNESS OF 2'- 4".

SIGNING

(1) THE LETTERS, DIGITS, ARROWS, BORDERS, AND ALPHABET ACCESSORIES ON ALL FLAT SHEET SIGNS SHALL BE APPLIED BY SILK SCREENING PROCESS, EXCEPT THAT CUTOUT DIRECT APPLIED COPY SHALL BE USED ON ALL FLAT SHEET SIGNS WITH A GREEN BACKGROUND. THE LETTERS, DIGITS, ARROWS, BORDERS, AND ALPHABET ACCESSORIES ON ALL EXTRUDED PANEL SIGNS SHALL BE DEMOUNTABLE AND ATTACHED TO THE SIGN FACE, AS OUTLINED IN THE STANDARD SPECIFICATIONS. ALL SHIELDS ON GUIDE SIGNS SHALL BE DEMOUNTABLE AND ATTACHED TO THE SIGN FACE AS OUTLINED IN THE STANDARD SPECIFICATIONS.

(2) THE LENGTHS OF ALL SIGN SUPPORTS SHOWN ON THE SIGN SCHEDULE ARE APPROXIMATE AND ARE FOR ESTIMATING PURPOSES ONLY. THE LENGTHS WERE COMPUTED FROM THE CROSS-SECTIONS CONTAINED IN THE CONSTRUCTION PLANS. IN THE EVENT THE SUPPORT LENGTHS ARE 2 FEET SHORTER OR LONGER THAN SHOWN ON THE PLANS, THE ENGINEER SHALL VERIFY THE SUPPORT TYPE WITH THE TRAFFIC OPERATIONS DIVISION, SIGNING SECTION, TELEPHONE NO. (615)-741-0802. THE CONTRACTOR SHALL VERIFY ALL SUPPORT LENGTHS AT THE SITE PRIOR TO ORDERING MATERIAL.

(3) THE TOP OF THE SIGN FOOTINGS SHALL BE PLACED LEVEL WITH THE GROUND LINE.

(4) AFTER THE SIGN LOCATIONS HAVE BEEN STAKED, BUT PRIOR TO ORDERING ANY MATERIAL FOR THE SUPPORTS, THERE SHALL BE A FIELD INSPECTION AND APPROVAL BY THE REGIONAL CONSTRUCTION OFFICE.

(5) THE CONTRACTOR SHALL BE REQUIRED TO FURNISH LAYOUT DRAWINGS (3 SETS) OF ALL EXTRUDED PANEL SIGNS WITH SPACING OF ALL LETTERS, NUMERALS, SHIELDS, AND ARROWS. THE LAYOUT DRAWINGS SHALL BE SENT TO THE TRAFFIC OPERATIONS DIVISION, SIGNING SECTION, SUITE 1200, J. K. POLK BUILDING, NASHVILLE, TN 37243-1402.

(6) ALL SIGNS MARKED "TO BE REMOVED" ARE TO BE REMOVED BY THE CONTRACTOR AND PAID FOR UNDER ITEM 713-15 AND BECOME THE PROPERTY OF THE CONTRACTOR.

(7) THE EXISTING FOOTINGS ARE TO BE REMOVED 6 INCHES BELOW GROUND LINE.

(8) THE LETTERS, DIGITS, ARROWS, BORDERS, AND ALPHABET ACCESSORIES ON ALL FLAT SHEET SIGNS SHALL BE APPLIED BY SILK SCREENING PROCESS, EXCEPT THAT CUT-OUT DIRECT APPLIED COPY SHALL BE USED ON ALL FLAT SHEET SIGNS WITH A GREEN BACKGROUND, OR BROWN BACKGROUND.

(9) THE LENGTHS OF ALL SIGN SUPPORTS SHOWN ON THE SIGN SCHEDULE ARE APPROXIMATE AND ARE FOR ESTIMATING PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY ALL SUPPORT LENGTHS AT THE SITE PRIOR TO ERECTION.

(10) THE LETTERS, DIGITS, ARROWS, BORDERS, AND ALPHABET ACCESSORIES ON ALL FLAT SHEET SIGNS SHALL BE APPLIED BY SILK SCREENING PROCESS.

SIGNALIZATION

(11) EQUIPMENT AND INSTALLATION OF TRAFFIC SIGNALS SHALL COMPLY WITH TDOT STANDARD SPECIFICATIONS, SECTION 730.

(12) SALVAGEABLE EQUIPMENT SHALL BECOME THE PROPERTY OF THE CITY OF MURFREESBORO AND SHALL BE DELIVERED TO THE TRAFFIC SHOP, CITY OF MURFREESBORO, 311 OVERALL STREET, MURFREESBORO, TN 37129.

(13) IF RESURFACING IS INCLUDED IN THE PROJECT, SIGNAL DETECTION LOOPS SHALL BE INSTALLED BEFORE THE FINAL SURFACE IS APPLIED.

(14) ANY SIGNAL HEADS, WHEN VISIBLE TO DRIVERS BUT NOT OPERATIONAL, SHALL BE COMPLETELY COVERED.

(15) AN ADVANCE FLASH OPERATION PERIOD IS REQUIRED TO MAKE MOTORISTS AWARE OF THE PRESENCE OF NEW SIGNAL HEADS. NEW SIGNAL HEADS SHALL BE PUT IN FLASH OPERATION FOR MINIMUM OF SEVEN (7) CALENDAR DAYS UP TO FOURTEEN (14) CALENDAR DAYS PRIOR TO ACTIVATION OF NORMAL TRAFFIC SIGNAL OPERATION. OTHER FLASH OPERTATION TIME PERIODS MAY BE CONSIDERED UPON WRITTEN APPROVAL FROM THE REGIONAL TRAFFIC ENGINEER.

(16) THE CONTRACTOR SHALL CONTACT RAM BALACHANDRAN, CITY OF MURFREESBORO TRAFFIC ENGINEER (615)893-6441, A MINIMUM OF THIRTY (30) DAYS PRIOR TO ACTIVATION OF THE SIGNAL TO OBTAIN THE INITIAL SIGNAL TIMINGS.

(17) THE PROJECT ENGINEER SHALL NOTIFY THE LOCAL GOVERNMENTAL AGENCY RESPONSIBLE FOR TRAFFIC CONTROL MAINTENANCE AT LEAST ONE DAY IN ADVANCE OF THE COLD PLANING ACTIVITY AT SIGNALIZED INTERSECTIONS WHERE DETECTOR LOOPS ARE ON THE PAVEMENT. THE MAINTAINING AGENCY WILL THEN BE RESPONSIBLE FOR DISCONNECTING THE LOOP DETECTORS AND MAKING ANY NECESSARY TIMING ADJUSTMENTS IN THE SIGNAL CONTROLLER PRIOR TO THE CONSTRUCTION.

(18) THE PROJECT ENGINEER SHALL BE RESPONSIBLE FOR SUPPLYING THE CONTRACTOR WITH AS BUILT SIGNAL PLANS AT THE PRE-CONSTRUCTION CONFERENCE. THESE PLANS WILL PROVIDE THE CONTRACTOR WITH THE DESIRED LOCATION FOR DETECTOR LOOP REPLACEMENT.

CONSTRUCTION WORK ZONE & TRAFFIC CONTROL

(19) ADVANCED WARNING SIGNS SHALL NOT BE DISPLAYED MORE THAN FORTY-EIGHT (48) HOURS BEFORE PHYSICAL CONSTRUCTION BEGINS. SIGNS MAY BE ERECTED UP TO ONE WEEK BEFORE NEEDED, IF THE SIGN FACE IS FULLY COVERED.

(20) IF THE CONTRACTOR MOVES OFF THE PROJECT, HE SHALL COVER OR REMOVE ALL UNNEEDED SIGNS AS DIRECTED BY THE ENGINEER. COSTS OF REMOVAL, COVERING, AND REINSTALLING SIGNS SHALL NOT BE MEASURED AND PAID FOR SEPARATELY, BUT ALL COSTS SHALL BE INCLUDED IN THE ORIGINAL UNIT PRICE BID FOR ITEM NO 712-06, SIGNS (CONSTRUCTION) PER SQUARE FOOT.

(21) A LONG TERM BUT SPORADIC USE WARNING SIGN, SUCH AS A FLAGGER SIGN, MAY REMAIN IN PLACE WHEN NOT REQUIRED PROVIDED THE SIGN FACE IS FULLY COVERED.

(22) TRAFFIC CONTROL DEVICES SHALL NOT BE DISPLAYED OR ERECTED UNLESS RELATED CONDITIONS ARE PRESENT NECESSITATING WARNING.

(23) USE OF BARRICADES, PORTABLE BARRIER RAILS, VERTICAL PANELS, AND DRUMS SHALL BE LIMITED TO THE IMMEDIATE AREAS OF CONSTRUCTION WHERE A HAZARD IS PRESENT. THESE DEVICES SHALL NOT BE STORED ALONG THE ROADWAY WITHIN THIRTY (30) FEET OF THE EDGE OF THE TRAVELED WAY BEFORE OR AFTER USE UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL INCREASE TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADT'S OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE. THESE DEVICES SHALL BE REMOVED FROM THE CONSTRUCTION WORK ZONE WHEN THE ENGINEER DETERMINES THEY ARE NO LONGER NEEDED. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS REQUIRED SETBACK, THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.

(24) THE CONTRACTOR SHALL NOT BE PERMITTED TO PARK ANY VEHICLES OR CONSTRUCTION EQUIPMENT DURING PERIODS OF INACTIVITY, WITHIN THIRTY (30) FEET OF THE EDGE OF PAVEMENT WHEN THE LANE IS OPEN TO TRAFFIC UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL BE INCREASED TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADT'S OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE. PRIVATELY OWNED VEHICLES SHALL NOT BE ALLOWED TO PARK WITHIN THIRTY (30) FEET OF AN OPEN TRAFFIC LANE AT ANY TIME UNLESS PROTECTED AS DESCRIBED ABOVE FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL BE INCREASED TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADT'S OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS REQUIRED SETBACK, THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.

(25) ALL DETOUR AND CONSTRUCTION SIGNING SHALL BE IN STRICT ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

(26) ALL DETOURS SHALL BE PAVED, STRIPED, SIGNED AND THE VERTICAL PANELS ARE TO BE IN PLACE BEFORE IT IS OPENED TO TRAFFIC.

SEALED BY

ROBERT RYAN SWEENEY
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 111938
STATE OF TENNESSEE
7/26/2017

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

SHEET 2 OF 3

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CONST.	2017	NH-96(48)	2C2

GENERAL NOTES CONT'D

EROSION PREVENTION AND SEDIMENT CONTROL

NATURAL RESOURCES

I) SOIL MATERIALS MUST BE PREVENTED FROM ENTERING WATERS OF THE STATE/U.S. EPSC MEASURES TO PROTECT NATURAL RESOURCES AND WATER QUALITY SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. APPROPRIATE EPSC MEASURES MUST BE INSTALLED ALONG THE BASE OF ALL FILLS AND CUTS, ON THE DOWNHILL SIDE OF STOCKPILED SOIL, AND ALONG NATURAL RESOURCES IN CLEARED AREAS TO PREVENT SEDIMENT MIGRATION INTO STREAMS, WETLANDS OR OTHER NATURAL FEATURES IN ACCORDANCE WITH TDOT STANDARDS. EPSC MEASURES SHALL BE INSTALLED ON THE CONTOUR, ENTRENCHED AND STAKED, AND EXTEND THE WIDTH OF THE AREA TO BE CLEARED.

(2) NEW CHANNEL CONSTRUCTION SHALL BE COMPLETED IN THE DRY AND STABILIZED FOR AT LEAST 72 HOURS PRIOR TO DIVERTING WATER FROM THE EXISTING AND/OR TEMPORARY CHANNEL.

(3) INSTREAM EPSC DEVICES REQUIRE THE TDOT ENVIRONMENTAL DIVISION, PERMITS SECTION REVIEW AND MUST BE PROCESSED BY THE PERMITS SECTION TO OBTAIN WATER QUALITY PERMITS.

(4) THE OPERATION OF EQUIPMENT IN WATERS OF THE STATE/U.S., INCLUDING WETLANDS AND EPHEMERAL, INTERMITTENT, AND PERENNIAL STREAMS, IS NOT ALLOWED.

(5) THE WIDTH OF THE FILL ASSOCIATED WITH TEMPORARY CROSSINGS SHALL BE LIMITED TO THE MINIMUM NECESSARY FOR THE ACTUAL CROSSING, NOT TO EXCEED THE WIDTH SPECIFIED IN THE STANDARD DRAWING.

(6) STREAM BEDS SHALL NOT BE USED AS TRANSPORTATION ROUTES FOR CONSTRUCTION EQUIPMENT. TEMPORARY CULVERT CROSSINGS SHALL BE LIMITED TO ONE POINT PER STREAM AND EPSC MEASURES SHALL BE USED WHERE THE STREAM BANKS ARE DISTURBED. WHERE THE STREAMBED IS NOT COMPOSED OF BEDROCK, A PAD OF CLEAN ROCK SHALL BE USED AT THE CROSSING POINT AND CULVERTED TO PREVENT THE IMPOUNDMENT OF WATER FLOW. CLEAN ROCK IS ROCK OF VARIOUS TYPE AND SIZE, DEPENDING UPON APPLICATION, WHICH CONTAINS NO FINES, SOILS, OR OTHER WASTES OR CONTAMINANTS. OTHER MATERIALS USED FOR ALL TEMPORARY FILLS SHALL BE COMPLETELY REMOVED IN THEIR ENTIRETY AFTER THE WORK IS COMPLETED AND THE AFFECTED AREAS RETURNED TO PREEXISTING ELEVATIONS. ALL TEMPORARY CROSSINGS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. DWG. EC-STR-25 UNLESS SPECIFICALLY ADDRESSED IN THE EPSC PLANS. ALTERNATIVELY, PLACING A TEMPORARY BRIDGE (E.G. BAILEY BRIDGE OR EQUIVALENT, TIMBERS, ETC.) FROM TOP OF BANK TO TOP OF BANK OR THE APPROPRIATE USE OF BARGES AT THE CROSSING TO AVOID DISTURBANCE OF THE STREAMBED IS AN ACCEPTABLE OPTION.

(7) HEAVY EQUIPMENT WORKING IN WETLANDS WITH PERMITTED TEMPORARY IMPACTS SHALL BE PLACED ON MATS, OR OTHER MEASURES MUST BE TAKEN TO MINIMIZE SOIL DISTURBANCE AND COMPACTION UNLESS SPECIFICALLY ADDRESSED IN THE CONSTRUCTION PLANS. ANY MATS AND OTHER MEASURES USED FOR HEAVY EQUIPMENT SHALL BE REMOVED IN THEIR ENTIRETY AFTER THE WORK IS COMPLETED. ALL AFFECTED AREAS SHOULD BE RETURNED TO PRE-EXISTING CONDITIONS.

(8) WETLANDS SHALL NOT BE USED AS EQUIPMENT STORAGE, STAGING, OR TRANSPORTATION AREAS, UNLESS SPECIFICALLY PROVIDED FOR IN THE CONSTRUCTION PLANS AND PERMITS.

(9) THE CONTRACTOR SHALL TAKE APPROPRIATE STEPS PRIOR TO ANY CONSTRUCTION AND MAINTENANCE ACTIVITIES TO ENSURE THAT ENVIRONMENTAL FEATURES (E.G., STREAMS, WETLANDS, SPRINGS, ETC.) ARE NOT IMPACTED BEYOND PERMITTED LOCATIONS. IF THE CONTRACTOR OR TDOT INSPECTOR IS UNSURE OF THE IDENTITY OF AN ENVIRONMENTAL FEATURE, THE INSPECTOR SHALL CONTACT THE TDOT REGION ENVIRONMENTAL TECH GROUP IMMEDIATELY.

SPECIES

(10) NO ACTIVITY MAY SUBSTANTIALLY DISRUPT THE MOVEMENT OF THOSE SPECIES OF AQUATIC LIFE INDIGENOUS TO THE WATER BODY, INCLUDING THOSE SPECIES THAT NORMALLY MIGRATE THROUGH THE AREA.

(11) SHOULD CLIFF SWALLOW OR BARN SWALLOW NESTS, EGGS, OR BIRDS (YOUNG AND ADULTS) BE PRESENT, THE CONTRACTOR SHALL CONTACT THE REGIONAL ECOLOGY OFFICE TO DETERMINE IF SEASONAL RESTRICTIONS WILL BE NECESSARY. GENERALLY, BIRDS, NESTS, AND EGGS MAY NOT BE DISTURBED BETWEEN APRIL 15 AND JULY 31. FROM AUGUST 1 TO APRIL 14, NESTS CAN BE REMOVED OR DESTROYED SO LONG AS BIRDS OR EGGS ARE NOT PRESENT, AND MEASURES IMPLEMENTED TO PREVENT FUTURE NEST BUILDING AT THE SITE (I.E., CLOSING OFF AREA USING NETTING).

(12) IF THE REMOVAL OF ANY TREES WITH A DIAMETER AT BREAST HEIGHT (DBH) GREATER THAN 3 INCHES IS DEEMED NECESSARY THE TDOT SUPERVISOR SHALL CONTACT THE TDOT ENVIRONMENTAL DIVISION, ECOLOGY SECTION IMMEDIATELY.

INSPECTION, MAINTENANCE & REPAIR

(13) REFER TO THE STORM WATER POLLUTION AND PREVENTION PLAN SHEETS (S-1) FOR SWPPP, PERMITS, AND RECORDS NOTES.

PERMITS, PLANS & RECORDS

(14) THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR AND OBTAIN ANY NECESSARY ENVIRONMENTAL PERMITS OR APPROVALS, INCLUDING BUT NOT LIMITED TO ARCHAEOLOGY, ECOLOGY, HISTORICAL, HAZARDOUS MATERIALS, AIR AND NOISE, TDEC ARAP/401, USACE SECTION 404, TVA SECTION 26A, AND TDEC NPDES PERMITS, FROM FEDERAL, STATE AND/OR LOCAL AGENCIES REGARDING ANY MATERIAL AND STAGING AREAS AND THE OPERATION OF ANY PROJECT-DEDICATED ASPHALT AND/OR CONCRETE PLANTS TO BE USED. ANY SUCH PERMITS SHALL BE SUPPLIED TO THE TDOT PROJECT RESPONSIBLE PARTY PRIOR TO THE USE OF THE PERMITTED AREA(S).

(15) ANY DISAGREEMENT BETWEEN THE CONSTRUCTION PLANS, THE PROJECT AS CONSTRUCTED, AND THE PERMIT(S) ISSUED FOR THE PROJECT, SHALL BE BROUGHT TO THE ATTENTION OF THE TDOT PROJECT RESPONSIBLE PARTY. THE ENVIRONMENTAL DIVISION, DESIGN DIVISION, AND HEADQUARTERS CONSTRUCTION OFFICE SHALL BE CONTACTED IN THESE INSTANCES AND DECIDE WHICH HAS PRECEDENCE AND WHETHER PERMIT OR PLANS REVISIONS ARE NEEDED. IN GENERAL, PERMIT CONDITIONS WILL PREVAIL.

(16) IF A CHANGE IN PROJECT SCOPE OCCURS DURING CONSTRUCTION, INCLUDING VALUE ENGINEERING, THE TDOT PERMIT SECTION SHALL BE CONTACTED TO DETERMINE WHETHER PERMIT REVISIONS ARE NEEDED. THE ROADWAY DESIGN DIVISION SHALL BE CONTACTED TO DETERMINE IF ANY PLAN REVISIONS ARE NEEDED.

(17) THE CONTRACTOR SHALL REVIEW ALL EXISTING PERMITS TO ENSURE THAT WORK AT PERMITTED SITES DOES NOT EXCEED EXPIRATION DATE. IF WORK IS GOING TO BE CONTINUED AFTER EXPIRATION DATES, THE CONTRACTOR SHALL CONTACT THE TDOT PROJECT RESPONSIBLE PARTY TO COMMENCE PERMIT RENEWAL PROCESS.

(18) ALL WATER QUALITY PERMITS SHALL BE POSTED NEAR THE MAIN ENTRANCE OF THE CONSTRUCTION SITE ACCESSIBLE TO THE PUBLIC. THE NAME, COMPANY NAME, EMAIL ADDRESS, TELEPHONE NUMBER AND ADDRESS OF THE PROJECT SITE OWNER, OPERATOR, OR A LOCAL CONTACT PERSON WITH A BRIEF DESCRIPTION OF THE PROJECT SHALL ALSO BE POSTED. IF POSTING THIS INFORMATION NEAR A MAIN ENTRANCE IS INFEASIBLE, THE INFORMATION SHALL BE PLACED IN A PUBLICLY ACCESSIBLE LOCATION NEAR WHERE THE CONSTRUCTION IS ACTIVELY UNDERWAY AND MOVED AS NECESSARY. THIS LOCATION SHALL BE POSTED AT THE CONSTRUCTION SITE. ALL POSTINGS SHALL BE MAINTAINED IN LEGIBLE CONDITION.

GOOD HOUSEKEEPING MEASURES & WASTE DISPOSAL

(19) THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT LITTER AND CONSTRUCTION WASTES FROM ENTERING WATERS OF THE STATE/U.S. THESE MATERIALS SHALL BE REMOVED FROM STORMWATER EXPOSURE PRIOR TO ANTICIPATED STORM EVENTS OR BEFORE BEING CARRIED OFFSITE BY WIND, OR OTHERWISE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORMWATER DISCHARGES. AFTER USE, MATERIALS USED FOR EPSC SHALL BE REMOVED FROM THE SITE.

(20) THE CONTRACTOR SHALL TAKE APPROPRIATE STEPS TO ENSURE THAT PETROLEUM PRODUCTS OR OTHER CHEMICAL POLLUTANTS ARE PREVENTED FROM ENTERING WATERS OF THE STATE/U.S. ALL EQUIPMENT REFUELING, SERVICING, AND STAGING AREAS SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL LAWS, RULES, REGULATIONS, AND ORDINANCES, INCLUDING THOSE OF THE NATIONAL FIRE PROTECTION ASSOCIATION. APPROPRIATE CONTAINMENT MEASURES FOR THESE AREAS SHALL BE USED.

(21) CONTRACTORS SHALL PROVIDE DESIGNATED TRUCK WASHOUT AREAS ON THE SITE. THESE AREAS MUST BE SELF CONTAINED, NOT CONNECTED TO ANY STORMWATER OUTLET OF THE SITE, AND PROPERLY SIGNED. WASH DOWN OR WASTE DISCHARGE OF CONCRETE TRUCKS SHALL NOT BE PERMITTED ONSITE UNLESS PROPER SETTLEMENT AREAS HAVE BEEN PROVIDED IN ACCORDANCE WITH BOTH STATE AND FEDERAL REGULATIONS.

(22) WHEEL WASH WATER SHALL BE COLLECTED AND ALLOWED TO SETTLE OUT SUSPENDED SOLIDS PRIOR TO DISCHARGE. WHEEL WASH WATER SHALL NOT BE DISCHARGED DIRECTLY INTO ANY STORMWATER SYSTEM OR STORMWATER TREATMENT SYSTEM.

(23) IF PORTABLE SANITARY FACILITIES ARE PROVIDED ON CONSTRUCTION SITES, SANITARY WASTE SHALL BE COLLECTED FROM THE PORTABLE UNITS IN A TIMELY MANNER BY A LICENSED WASTE MANAGEMENT CONTRACTOR OR AS REQUIRED BY ANY REGULATIONS. THE CONTRACTOR SHALL OBTAIN ANY AND ALL NECESSARY PERMITS TO DISPOSE OF SANITARY WASTE.

(24) ONLY CONSTRUCTION PRODUCTS NEEDED SHALL BE STORED ONSITE BY THE CONTRACTOR. THE CONTRACTOR SHALL STORE ALL MATERIALS UNDER COVER AND IN APPROPRIATE CONTAINERS. PRODUCTS MUST BE STORED IN ORIGINAL CONTAINERS AND LABELED. MATERIAL MIXING SHALL BE CONDUCTED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE CONTRACTOR'S RESPONSIBLE PARTY SHALL INSPECT MATERIALS STORAGE AREAS REGULARLY TO ENSURE PROPER USE AND DISPOSAL.

(25) WHEN POSSIBLE, ALL PRODUCTS SHALL BE USED COMPLETELY BEFORE PROPERLY DISPOSING OF THE CONTAINER OFFSITE. THE MANUFACTURER'S DIRECTIONS FOR DISPOSAL OF MATERIALS AND CONTAINERS SHALL BE FOLLOWED.

(26) ALL PAINT CONTAINERS SHALL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT SHALL BE DISPOSED OF ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS AND APPLICABLE STATE AND LOCAL REGULATIONS.

(27) ALL HAZARDOUS WASTE MATERIALS SHALL BE DISPOSED OF IN A MANNER WHICH IS COMPLIANT WITH LOCAL OR STATE REGULATIONS. SITE PERSONNEL SHALL BE INSTRUCTED IN THESE PRACTICES, AND THE INDIVIDUAL DESIGNATED AS THE CONTRACTOR'S RESPONSIBLE PARTY SHALL BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED. THE CONTRACTOR SHALL OBTAIN ANY AND ALL NECESSARY PERMITS TO DISPOSE OF HAZARDOUS MATERIAL.

(28) OPEN BURNING IS PROHIBITED UNLESS IT IS SPECIFICALLY ALLOWED BY LAW. IF ALLOWED, NATURAL VEGETATION, TREES, AND UNTREATED LUMBER SHALL BE THE ONLY MATERIALS THAT CAN BE OPEN BURNED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL APPLICABLE STATE AND LOCAL PERMITS PRIOR TO ANY BURNING.

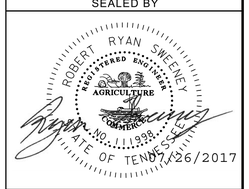
(29) DISPOSAL OF ONSITE VEGETATION AND TREES BY CHIPPING THEM INTO MULCH IS PREFERABLE TO OPEN BURNING. THIS MULCH MAY BE USED AS AN ONSITE SOIL STABILIZATION MEASURE WHERE APPROPRIATE.

(30) WASTE MATERIAL (EARTH, ROCK, ASPHALT, CONCRETE, ETC.) NOT REQUIRED FOR THE CONSTRUCTION OF THE PROJECT WILL BE DISPOSED OF BY THE CONTRACTOR. IMPACTS TO WATERS OF THE STATE/U.S. SHALL BE AVOIDED IF POSSIBLE. IF UNAVOIDABLE, THE CONTRACTOR WILL OBTAIN ANY AND ALL NECESSARY PERMITS INCLUDING, BUT NOT LIMITED TO NPDES, AQUATIC RESOURCES ALTERATION PERMIT(S), CORPS OF ENGINEERS SECTION 404 PERMITS, AND TVA SECTION 26A PERMITS TO DISPOSE OF WASTE MATERIALS.

SUPPORT ACTIVITIES

(31) MATERIALS AND STAGING AREAS SHALL NOT AFFECT ANY WATERS OF THE STATE/U.S. UNLESS THESE AREAS ARE SPECIFICALLY COVERED BY ENVIRONMENTAL PERMITS, OBTAINED SOLELY BY THE CONTRACTOR. THE CONTRACTOR SHALL REVIEW ALL EXISTING PERMITS TO ENSURE THAT WORK AT PERMITTED SITES DOES NOT EXCEED EXPIRATION DATES. IF WORK IS GOING TO BE CONTINUED AFTER EXPIRATION DATES, THE CONTRACTOR SHALL CONTACT THE TDOT PROJECT RESPONSIBLE PARTY TO COMMENCE PERMIT RENEWAL PROCESS.

SEALED BY



STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

SHEET 3 OF 3

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-96(48)	2D

SPECIAL NOTES

GRADING

(1) THE GRADING TABULATIONS AND RESULTING EARTHWORK ASSOCIATED BID QUANTITIES WERE PREPARED UTILIZING AVAILABLE GEOTECHNICAL INFORMATION AND/OR REPORTS PREPARED FOR THIS PROJECT. THIS INFORMATION IS PROVIDED FOR GENERAL INFORMATION AND ESTIMATION GUIDANCE ONLY.

(2) BORING DEPICTIONS SHOWN ON THE FOUNDATION DATA SHEETS, SOILS SHEETS, PLANS, AND CROSS-SECTIONS INDICATE SOIL AND ROCK CONDITIONS AT THE SPECIFIC BORING LOCATIONS. ANY SOIL PROFILE AND/OR ROCK LINE IS INTERPRETIVE BASED ON THE JUDGMENT OF THE GEOTECHNICAL ENGINEER/GEOLOGIST. THE TRANSITION BETWEEN BORINGS AND LAYERS MAY VARY SIGNIFICANTLY DEPENDING ON THE GEOLOGIC FORMATIONS ENCOUNTERED.

(3) TO ASSIST IN BID PREPARATION FOR EARTHWORK AND FOUNDATION CONSTRUCTION, DETAIL ROCK AND SOIL DESCRIPTION AND ON SOME PROJECTS, ROCK CORE SAMPLES ARE AVAILABLE FOR INSPECTION AT THE MATERIALS AND TESTS HEADQUARTERS AT 6601 CENTENNIAL BOULEVARD, NASHVILLE, TN OR AT THE TDOT REGION 1 BUILDING IN KNOXVILLE, TN.

(4) THE CONTRACTOR SHALL UTILIZE ALL INFORMATION PROVIDED IN THE PLANS, CROSS-SECTIONS AND CONTRACT DOCUMENTS INCLUDING ANY SPECIAL PROVISIONS AS WELL AS UTILIZING HIS PAST EXPERIENCE WITH PROJECTS OF SIMILAR NATURE, SCOPE AND LOCATION IN PREPARATION OF HIS BID FOR EARTHWORK ITEMS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE AND PROVIDE EQUIPMENT AND MEANS NECESSARY TO CONDUCT THE EXCAVATION ACTIVITIES IN ACCORDANCE WITH PLANS AND SPECIFICATIONS.

(5) EARTHWORK IS PAID FOR UNDER ITEM 203-01, ROAD AND DRAINAGE EXCAVATION (UNCLASSIFIED). NO ADDITIONAL PAYMENT WILL BE MADE FOR EARTHWORK QUANTITIES BASED SOLELY ON A CLAIM THAT THE QUANTITIES SHOWN IN THE GRADING TABULATION OR ELSEWHERE IN THE PLANS ARE INACCURATE WITH RESPECT TO THE TYPE OF MATERIALS ENCOUNTERED DURING CONSTRUCTION EXCEPT AS PROVIDED FOR BY SECTION 104.02 IN THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION OR AS AMENDED IN SUPPLEMENTAL SPECIFICATIONS.

DEMOLITION

DEMOLITION, REPAIR, OR REHABILITATION OF BRIDGES

(6) IF THE CONTRACTOR SHALL VERIFY THAT AN ASBESTOS SURVEY HAS BEEN COMPLETED PRIOR TO ANY DEMOLITION, REPAIR OR REHABILITATIONS ACTIVITIES (NOT INCLUDING ASPHALT MILLING OR OVERLAY).

(7) ASBESTOS-CONTAINING MATERIALS (ACM) ABATEMENT IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE COMPLETED PRIOR TO ANY DEMOLITION, REPAIR OR REHABILITATION OF BRIDGE(S). ABATEMENT SHOULD BE ACCOMPLISHED PER SP202ACM SPECIAL PROVISION REGARDING REMOVAL OF ASBESTOS-CONTAINING MATERIALS. STATE OF TENNESSEE ASBESTOS ACCREDITATION REQUIREMENTS (TCA 1200-01-20) MANDATE THAT ACM ABATEMENT WORK BE PERFORMED BY AN ACCREDITED FIRM (CONTRACTOR) USING ACCREDITED ABATEMENT WORKERS AND SUPERVISORS.

(8) THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING A NOTICE TO THE TDEC, DIVISION OF AIR POLLUTION CONTROL TEN (10) DAYS IN ADVANCE OF ANY ACM ABATEMENT, DEMOLITION, OR MAJOR REPAIR INVOLVING THE REMOVAL/REPLACEMENT OF A STRUCTURAL COMPONENT.

PAVEMENT

RESURFACING

(1) TRAFFIC WILL BE ALLOWED TO TEMPORARILY DRIVE ON THE MILLED SURFACE OF THE ROADWAY UNDER THE FOLLOWING CONDITIONS ONLY:

a. THE MILLED SURFACE IS FINE TEXTURED. THE FINE TEXTURE SHALL BE OBTAINED BY A MILLING MACHINE UTILIZING A MILLING HEAD WITH TEETH SPACING 3/8" OR LESS OPERATING AT LESS THAN 80 FEET PER MINUTE.

b. THE SURFACE SHALL BE SWEPT AND CLEANED OF ALL LOOSE MATERIALS.

c. THE DIFFERENCE IN ELEVATION BETWEEN THE MILLED SURFACE AND THE ADJACENT LANE SHALL NOT EXCEED 1 1/2 INCHES.

d. THE MILLED SURFACE SHALL BE PAVED WITHIN 72 HOURS IF THE CURRENT ADT IS ≥ 70,000 OR WITHIN 96 HOURS IF THE CURRENT ADT IS < 70,000.

e. RAIN OR INCLEMENT WEATHER IS NOT EXPECTED OR FORECASTED WITHIN 48 HOURS AFTER MILLING.

f. ALL APPLICABLE SIGNING IS INSTALLED IN ACCORDANCE WITH THE MUTCD SIGNING SHALL INCLUDE MOTORCYCLE WARNING SIGNS (TN-64) PLACED IN ADVANCE OF ANY MILLED AREAS.

g. IF MILLED SURFACE BEGINS TO DETERIORATE, PAVING TO COVER UP DETERIORATING MILLED SURFACES SHOULD OCCUR AS DIRECTED BY THE ENGINEER DURING THE NEXT WORKING DAY. IF SEVERE DISTRESS OCCURS, IMMEDIATE RESPONSE WILL BE REQUIRED.

h. ONLY ONE LANE IN EACH DIRECTION SHALL HAVE A MILLED SURFACE AT ONE TIME.

SIGNALIZATION

(1) THE DESIGN OF TRAFFIC SIGNAL SUPPORT POLES, MAST ARMS, STRAIN POLES, ETC. SHALL BE IN CONFORMANCE WITH THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, CURRENT EDITION. OVERHEAD CANTILEVERED TRAFFIC SIGNAL STRUCTURES SHALL BE DESIGNED FOR FATIGUE CATEGORY 1.

EROSION PREVENTION AND SEDIMENT CONTROL

ENVIRONMENTAL

(1) STAFF FROM THE TDOT ENVIRONMENTAL DIVISION COMPLIANCE AND FIELD SERVICES OFFICE SHALL BE INVITED TO ALL PRE-CONSTRUCTION MEETINGS.

ECOLOGY

(2) STAFF FROM THE TDOT ENVIRONMENTAL DIVISION OR A DESIGNEE SHALL ADVISE THE CONTRACTOR DURING THE PRE-CONSTRUCTION MEETING WHEN ENVIRONMENTAL DIVISION PERSONNEL OR A DESIGNATED CONSULTANT WILL NEED TO BE ONSITE FOR WORK BEING DONE WHICH COULD AFFECT WATERS OF THE STATE/U.S. OR SPECIES.

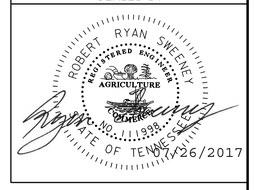
(3) STAFF FROM THE TDOT ENVIRONMENTAL DIVISION OR A DESIGNEE SHALL ATTEND THE PRE-CONSTRUCTION MEETING FOR ALL PROJECTS WHICH HAVE THREATENED OR ENDANGERED SPECIES OR CRITICAL HABITAT PROXIMAL TO SCHEDULED WORK. THIS WILL PROVIDE THE OPPORTUNITY TO ENSURE THAT PERSONNEL INCLUDING THE CONTRACTOR'S PERSONNEL AND SUBCONTRACTORS ARE MADE AWARE OF THE NECESSARY PRECAUTIONS THAT MUST BE FOLLOWED.

(4) ALL PROJECTS WITH LEGALLY PROTECTED SPECIES OR CRITICAL HABITAT IDENTIFIED SHALL HAVE MEASURES IN PLACE TO CONTAIN CONCRETE DUST, CEMENT DUST AND ALL OTHER MATERIALS. THESE MATERIALS ARE NOT ALLOWED TO ENTER WATERS OF THE STATE/U.S.

PROJECT COMMITMENTS

(5) SEE PROJECT COMMITMENTS, SHEET 1B, FOR DETAILS RELATING TO SPECIAL ENVIRONMENTAL COMMITMENTS REQUIRED BY THIS PROJECT.

SEALED BY



STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION

SPECIAL NOTES

SHEET 1 OF 1

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-96(48)	2E

PROPOSED GUARDRAIL

SHEET NO.	LOCATION	SIDE		STATION		GUARDRAIL				TERMINAL ANCHORS					REMARKS
		LT	RT	FROM	TO	BRIDGE ENDS 705-01.01 (L.F.)	BRIDGE PIERS 705-01.02 (L.F.)	SINGLE TYPE 2 705-02.02 (L.F.)	MEDIAN TYPE 2 705-03.03 (L.F.)	TYPE 12 705-04.02 (EACH)	TYPE 13 705-04.03 (EACH)	TYPE 21 705-04.04 (EACH)	TYPE IN-LINE 705-04.05 (EACH)	TYPE 38 705-06.20 (EACH)	
4B	S.R. 96	X		67+06	67+84	80								1	
4B	S.R. 96		X	67+60	68+39	80								1	
4B	S.R. 96	X		69+44	70+23	80								1	
4B	S.R. 96		X	69+99	70+78	80								1	
TOTALS						320	0	0	0	0	0	0	0	4	

PAVEMENT QUANTITIES

LOCATION	303-01 (TON)	306-01.01 (S.Y.)	307-01.08 (TON)	307-01.21 (TON)	307-02.01 (TON)	307-02.08 (TON)	402-01 (TON)	402-02 (TON)	403-01 (TON)	411-01.10 (TON)	411-02.10 (TON)
SR-96	7264			2778	2778	1820	25	97	14		1067
DRIVES	386	187	73							114	
TOTALS	7650.0	187.0	73.0	2778.0	2778.0	1820.0	25.0	97.0	14.0	114.0	1067.0

CATCH BASINS

SHEET NO.	LOCATION	STATION	OFFSET (FT.)	DRAINAGE CODE	GRATE/TOP ELEV.	STRUCTURE TYPE	INSIDE DIMENSION	DEPTH (FT.)	STANDARD DRAWINGS	TYPE 12 C.B. 611-12.01 0' - 4'	TYPE 12 C.B. 611-12.02 4' - 8'	TYPE 12 C.B. 611-12.03 8' - 12'	TYPE 14 C.B. 611-14.02 4' - 8'	REMARKS
4B	PROPSR96	59+70.00	-43.5	59L	610.08	#12	10' DIA	5.54	D-CB-12RC		1			
4B	PROPSR96	61+00.00	41.5	62R	608.93	#12	4X3	3.88	D-CB-12S	1				
4B	PROPSR96	61+68.00	-43.5	61L	608.57	#12	5' DIA	7.49	D-CB-12RB		1			
4B	PROPSR96	62+90.00	-43.5	62L	607.27	#14	8X3	7.09	D-CB-14S				1	
4B	PROPSR96	63+75.00	41.5	66R	606.02	#12	4X3	3.88	D-CB-12S	1				
4B	PROPSR96	63+87.50	-43.5	63L	606.23	#12	4X3	6.69	D-CB-12S		1			
4B	PROPSR96	64+51.50	-43.5	64L	605.65	#14	8X3	6.74	D-CB-14S				1	
4B	PROPSR96	65+70.00	41.5	67R	604.54	#12	4X3	3.88	D-CB-12S	1				
4B	PROPSR96	66+00.00	-43.5	66L	604.75	#12	4X3	6.73	D-CB-12S		1			
4B	PROPSR96	67+37.50	-40.1	68L	603.68	#12	9' DIA	6.69	D-CB-12RC		1			
4B	PROPSR96	67+85.00	41.5	68R	603.37	#12	9' DIA	11.33	D-CB-12RC			1		
4B	PROPSR96	70+50.00	-41.5	70L	601.92	#12	9X9	8.96	D-CB-12SE			1		
4B	PROPSR96	70+95.00	41.5	71R	601.69	#12	9' DIA	9.54	D-CB-12RC			1		
5B	PROPSR96	71+97.00	-41.5	71L	601.17	#12	4X3	7.11	D-CB-12S		1			
5B	PROPSR96	72+00.00	41.5	72R	601.13	#12	4X4	4.82	D-CB-12SB		1			
5B	PROPSR96	72+28.62	-41.5	72LL	601.06	#12	4X3	6.7	D-CB-12S		1			
5B	PROPSR96	72+26.81	41.5	72SL	601.04	#12	4X3	4.92	D-CB-12S		1			
5B	PROPSR96	72+68.62	-41.5	72L	601.01	#14	8X3	6.3	D-CB-14S				1	
5B	PROPSR96	72+74.00	41.5	72S	601.09	#14	8X3	4.1	D-CB-14S				1	
5B	PROPSR96	73+08.62	-41.5	72LR	601.04	#12	4X3	5.84	D-CB-12S		1			
5B	PROPSR96	73+14.00	41.5	72SR	601.45	#12	4X3	3.97	D-CB-12S	1				
5B	PROPSR96	73+37.50	-41.5	73L	601.12	#12	4X3	5.62	D-CB-12S		1			
5B	PROPSR96	73+40.00	41.5	73R	601.74	#12	4X4	3.88	D-CB-12SB	1				
5B	PROPSR96	74+00.00	-41.5	74L	601.45	#12	4X3	5.5	D-CB-12S		1			
5B	PROPSR96	74+30.00	41.5	74R	603.01	#12	4X4	3.88	D-CB-12SB	1				
5B	PROPSR96	77+00.00	-41.5	77L	604.43	#12	4X3	6.18	D-CB-12S		1			
5B	PROPSR96	78+23.21	-52.34	81L	606.09	#12	4X4	4.76	D-CB-12SB		1			
5B	PROPSR96	78+23.60	-41.5	80L	606.19	#12	7' DIA	7.17	D-CB-12RC		1			
5B	PROPSR96	78+27.49	41.5	78R	606.43	#12	4X3	3.88	D-CB-12S	1				
TOTALS										7	15	3	4	

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7/26/2017

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TABULATED QUANTITIES

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-96(48)	2F

STORM DRAINAGE PIPES

SHEET NO.	FROM CODE	FROM OUTLET ELEV.	TO CODE	TO INLET ELEV.	% GRADE	RCP CLASS III 607-03.02 18" (L.F.)	607-05.02 24" (L.F.)	607-06.02 30" (L.F.)	607-07.02 36" (L.F.)
4B	59L	604.54	61L	603.59	0.50			191	
4B	61L	601.09	62L	600.50	0.50			120	
4B	62L	600.17	63L	599.71	0.50			98	
4B	62R	605.05	66R	603.70	0.50	275			
4B	63L	599.54	64L	599.24	0.50			64	
4B	64L	598.91	66L	598.19	0.50			149	
4B	66L	598.02	68L	597.37	0.50			133	
4B	66R	602.14	67R	601.19	0.50	195			
4B	67R	600.66	68R	599.62	0.50	211			
4B	68L	596.99	68R	596.56	0.50			85	
4B	68R	592.04	69R	591.83	0.50			42	
4B	70L	592.97	71R	592.55	0.50				85
4B	71L	594.05	70L	593.35	0.50				141
4B	71R	592.17	70R	591.84	0.50				67
5B	72L	594.70	72LL	594.53	0.50				34
5B	72R	595.84	71R	595.33	0.50		101		
5B	72S	596.50	72SL	596.29	0.50		41		
5B	73L	595.49	72LR	595.37	0.50				25
5B	73R	597.32	72SR	597.20	0.52		22		
5B	74L	595.95	73L	595.66	0.50				58
5B	74R	598.59	73R	597.49	1.24		90		
5B	77L	598.26	74L	596.82	0.50				288
5B	78R	601.60	74R	598.76	0.71		400		
5B	80L	599.02	77L	598.43	0.50				118
5B	81L	601.33	80L	600.81	9.72	5			
5B	72LL	594.36	71L	594.22	0.50				28
5B	72LR	595.20	72L	595.03	0.50				34
5B	72SL	596.12	72R	596.01	0.50		23		
5B	72SR	597.03	72S	596.83	0.61		34		
TOTALS						686	710	880	877

ESTIMATED GRADING QUANTITIES

LOCATION	ROAD & DRAINAGE EXC. (UNCL.) C.Y.	BORROW EXCAVATION UNCL. - C.Y.	BORROW EXCAVATION S. ROCK - C.Y.	CHANNEL EXC. C.Y.	EXCESS EXC. WASTE C.Y.	EMB. C.Y.
S.R. 96 (OLD FORT PKWY)	171	14718	0	0	0	14889
PRIVATE DRIVES	712	4652				5364
TOTALS	**883**	**19370**	**0**	**0**	**0**	**20253**

SIDE DRAIN TABULATION

STATION	LOCATION LT.	LOCATION RT.	DESCRIPTION	SURFACE WIDTH FT.	SKEW	RCP CLASS III OR CMP 16 GA OR PVC OR SRTRP OR HDPE OR PP (L.F.) FILL HEIGHT ≤10 FT. 18"	24"	30"	36"	42"	48"	RCP CLASS III OR CMP 14 GA OR PVC OR SRTRP OR HDPE OR PP (L.F.) FILL HEIGHT > 10 FT. AND ≤ 16 FT 18"	24"	30"	36"	42"	48"	END TREATMENT INLET TYPE	INLET DRAWING NO.	OUTLET TYPE	OUTLET DRAWING NO.	REMARKS
61+31.39	X		S.R. 96 PRIVATE DRIVE	12	73°	24																
62+22.47	X		S.R. 96 BUSINESS DRIVE	28	80°	75																
65+21.47	X		S.R. 96 BUSINESS DRIVE	37	80°	87																
67+50.00		X	S.R. 96 PRIVATE DRIVE	12	46°	60																
71+67.99	X		S.R. 96 PRIVATE DRIVE	24	90°	31																
72+49.22	X		S.R. 96 PRIVATE DRIVE	10	90°	20																
72+51.52		X	S.R. 96 PRIVATE DRIVE	28	90°	39																
73+63.15	X		S.R. 96 PRIVATE DRIVE	14	90°	26																
74+75.89	X		S.R. 96 PRIVATE DRIVE	24	90°	39																
TOTALS						401	0	0	0	0	0	0	0	0	0	0	0	Pipe Tabulation For Private Drives, Business & Field Entrances				

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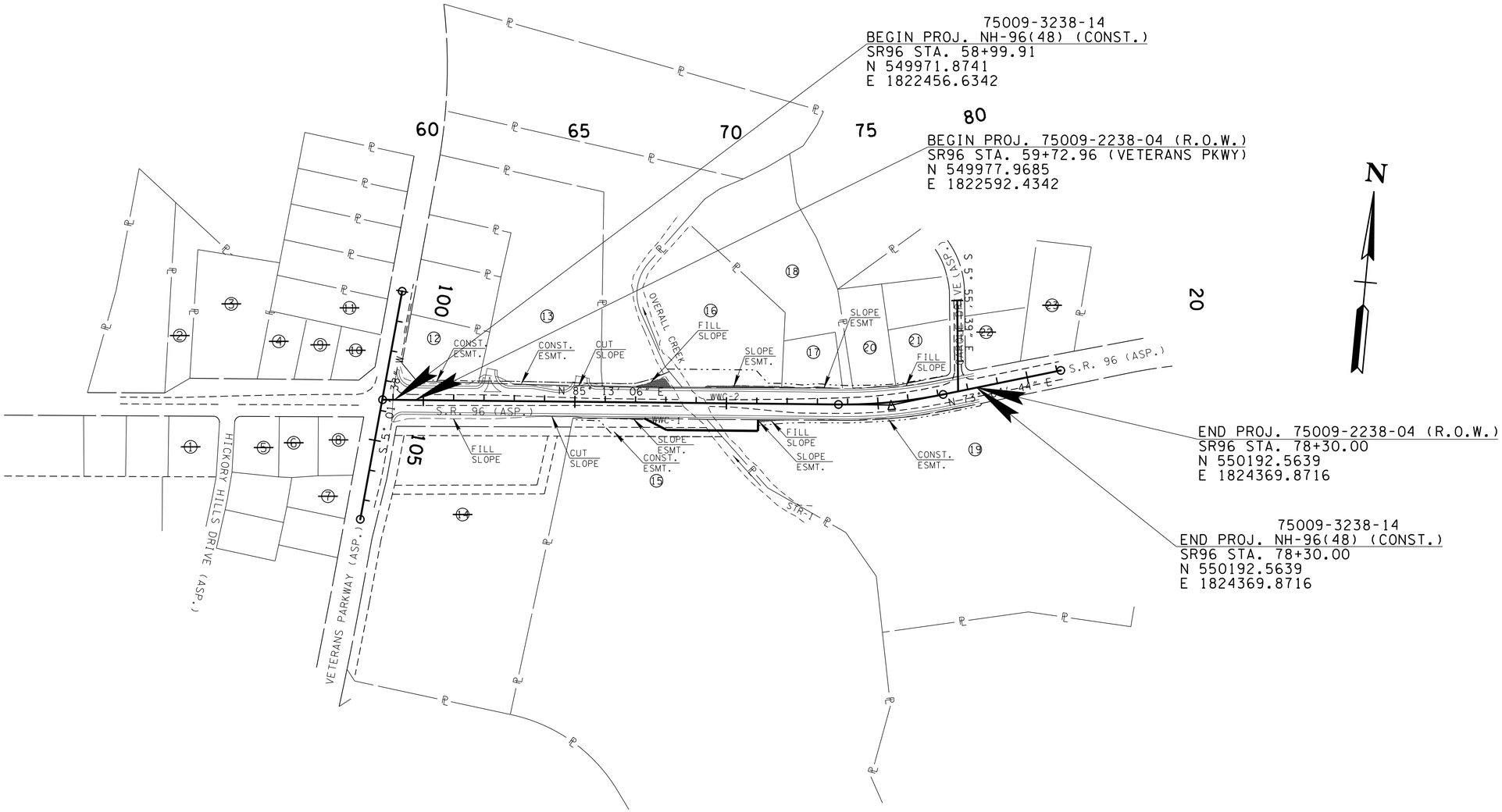
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TABULATED QUANTITIES

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	3
CONST.	2017	NH-96(48)	3



RIGHT - OF – WAY NOTES

(1) IT IS INTENDED THAT ALL BUILDINGS AND/OR PORTIONS OF BUILDINGS THAT ARE WITHIN THE PROPOSED RIGHT-OF-WAY AND/OR EASEMENT LINES FOR THE PROJECT BE REMOVED THERE FROM IN THE PROCESS OF RIGHT-OF-WAY ACQUISITION. IF ANY SUCH BUILDINGS OR IMPROVEMENTS ARE NOT REMOVED IN THE COURSE OF RIGHT-OF-WAY ACQUISITION, THE CIVIL ENGINEERING MANAGER 2, DESIGN DIVISION AND THE CIVIL ENGINEERING MANAGER 1, REGIONAL DESIGN OFFICE, ARE TO BE NOTIFIED IN SUFFICIENT TIME TO PERMIT HAVING SUCH REMOVALS DESIGNATED AS A PART OF THE CONSTRUCTION CONTRACT.

(2) ALL RAMPS MUST CONFORM TO THE DEPARTMENT'S "POLICY ON FINANCING CONSTRUCTION OF PUBLIC ROAD INTERSECTIONS AND DRIVEWAYS ON HIGHWAY RESURFACING, RECONSTRUCTION AND CONSTRUCTION PROJECTS ON NEW LOCATIONS", THE MANUAL ON RULES AND REGULATIONS FOR CONSTRUCTING DRIVEWAYS ON STATE HIGHWAY RIGHT-OF-WAY, STANDARD DRAWING RP-R-1, AND OTHER ACCEPTED DESIGN AND SAFETY STANDARDS.

(3) EXISTING PAVED DRIVEWAY PER TRACT REMAINDER WILL BE REPLACED IN KIND TO A TOUCHDOWN POINT.

(4) WHERE THE EXISTING DRIVEWAY IS UNPAVED AND THE PROPOSED DRIVEWAY EXCEEDS 7 PERCENT IN GRADE, EACH DRIVEWAY WILL BE PAVED TO A TOUCHDOWN POINT OR UNTIL THE GRADE IS LESS THAN 7 PERCENT.

(5) WHERE THE EXISTING DRIVEWAY IS UNPAVED AND THE PROPOSED DRIVEWAY IS LESS THAN 7 PERCENT IN GRADE, EACH DRIVEWAY WILL BE PAVED A SHOULDER WIDTH FROM THE EDGE OF PAVEMENT AND THE REMAINDER OF THAT DRIVEWAY REPLACED IN KIND TO A TOUCHDOWN POINT.

(6) ANY NECESSARY PAVING OF DRIVEWAYS WILL BE DONE DURING PAVING OPERATIONS ON THE MAIN ROADWAY.

(7) NEW DRIVEWAYS PROVIDED IN THE PLANS WILL BE PAVED BASED ON THE 7 PERCENT CRITERIA. THOSE 7 PERCENT OR STEEPER IN GRADE WILL BE PAVED AND THOSE FLATTER THAN 7 PERCENT WILL BE COVERED WITH BASE STONE.

(8) ON NON-STATE ROUTES, ADDITIONAL DRIVEWAYS AND FIELD ENTRANCES OTHER THAN THOSE PROVIDED IN THE PLANS SHALL REQUIRE A PERMIT ONLY IF THE LOCAL AGENCY SPECIFIES THE NEED FOR THAT PERMIT.

UTILITY NOTES

(1) THE LOCATIONS OF UTILITIES SHOWN WITHIN THESE PLANS ARE APPROXIMATE ONLY. EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD BY CONTACTING THE UTILITY COMPANIES INVOLVED. NOTIFICATION BY CALLING THE TENNESSEE ONE CALL SYSTEM, INC., AT 1-800-351-1111 AS REQUIRED BY TCA 65-31-106 WILL BE REQUIRED.

(2) UNLESS OTHERWISE NOTED, ALL UTILITY ADJUSTMENTS WILL BE PERFORMED BY THE UTILITY OR IT'S REPRESENTATIVE. THE CONTRACTOR AND UTILITY OWNERS WILL BE REQUIRED TO COOPERATE WITH EACH OTHER IN ORDER TO EXPEDITE THE WORK REQUIRED BY THIS CONTRACT. ON CONTRACTS WHERE CONSTRUCTION STAKES, LINES, AND GRADES ARE CONTRACT ITEMS, THE CONTRACTOR WILL BE REQUIRED TO PROVIDE RIGHT-OF-WAY OR SLOPE STAKES, DITCH OR STREAM BED GRADES, OR OTHER ESSENTIAL SURVEY STAKING TO PREVENT CONFLICTS WITH THE HIGHWAY CONSTRUCTION. FREQUENTLY, THIS WILL BE REQUIRED AS THE FIRST ITEM OF WORK AND AT ANY LOCATION ON THE PROJECT DIRECTED BY THE ENGINEER.

(3) THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER AND AROUND THE UTILITIES, THE CONTRACTOR WILL BE REQUIRED TO FURNISH SUCH EQUIPMENT. THE COST OF PROTECTING UTILITIES FROM DAMAGE AND FURNISHING SPECIAL EQUIPMENT WILL BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF CONSTRUCTION.

(4) PRIOR TO SUBMITTING HIS BID, THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR CONTACTING OWNERS OF ALL AFFECTED UTILITIES IN ORDER TO DETERMINE THE EXTENT TO WHICH UTILITY RELOCATIONS AND/OR ADJUSTMENTS WILL HAVE UPON THE SCHEDULE OF WORK FOR THE PROJECT. WHILE SOME WORK MAY BE REQUIRED 'AROUND' UTILITY FACILITIES THAT WILL REMAIN IN PLACE, OTHER UTILITY FACILITIES MAY NEED TO BE ADJUSTED CONCURRENTLY WITH THE CONTRACTOR'S OPERATIONS. ADVANCE CLEAR CUTTING MAY BE REQUIRED BY THE ENGINEER AT ANY LOCATION WHERE CLEARING IS CALLED FOR IN THE SPECIFICATIONS AND CLEAR CUTTING IS NECESSARY FOR A UTILITY RELOCATION. ANY ADDITIONAL COST WILL BE INCLUDED IN THE UNIT PRICE BID FOR THE CLEARING ITEM SPECIFIED IN THE PLANS.

(5) THE CONTRACTOR SHALL NOTIFY EACH INDIVIDUAL UTILITY OWNER OF HIS PLAN OF OPERATION IN THE AREA OF THE UTILITIES. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL CONTACT THE UTILITY OWNERS AND REQUEST THEM TO PROPERLY LOCATE THEIR RESPECTIVE UTILITY ON THE GROUND. THIS NOTIFICATION SHALL BE GIVEN AT LEAST THREE (3) BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPERATIONS AROUND THE UTILITY IN ACCORDANCE WITH TCA 65-31-106.

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPERTY MAP

STA. 58+99.91 TO STA. 78+30.00

SCALE: 1"=200'

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	3A
CONST.	2017	NH-96(48)	3A

R.O.W. ACQUISITION TABLE

TRACT NO.	PROPERTY OWNERS	COUNTY RECORDS				TOTAL AREA ACRES			AREA TO BE ACQUIRED ACRES			AREA REMAINING ACRES		EASEMENT (SQUARE FEET)		
		TAX MAP NO.	PARCEL NO.	DEED DOCUMENT REFERENCE BK.	PAGE	LEFT	RIGHT	TOTAL	LEFT	RIGHT	TOTAL	LEFT	RIGHT	PERM. DRAINAGE	SLOPE	CONST.
~~1~~	~~HOUSEHOLD FINANCIAL CENTER, INC.~~	~~100C-A~~	~~27~~	~~468~~	~~514~~		~~0.756~~	~~0.756~~					~~0.756~~			
~~2~~	~~MIKE PEDONE~~	~~93~~	~~71.07~~	~~254~~	~~1351~~	~~1.137~~		~~1.137~~				~~1.137~~				
~~3~~	~~WRIGHT FAMILY REAL ESTATE~~	~~93~~	~~71.01~~	~~156~~	~~1611~~	~~2.307~~		~~2.307~~				~~2.307~~				
~~4~~	~~JOHN T. UNDERWOOD & RITA F. UNDERWOOD~~	~~93N-B~~	~~1~~	~~595~~	~~810~~	~~0.609~~		~~0.609~~				~~0.609~~				
~~5~~	~~SUE E. CHRISTIAN & NELLY M. FICKE~~	~~100C-A~~	~~11~~	~~417~~	~~1753~~		~~0.660~~	~~0.660~~					~~0.660~~			
~~6~~	~~MARY A. SWAN~~	~~100C-A~~	~~10~~	~~1018~~	~~3462~~		~~0.590~~	~~0.590~~					~~0.590~~			
~~7~~	~~MICHAEL A. HYATT & WF, BRENDA S. HYATT~~	~~100C-A~~	~~8~~	~~555~~	~~355~~		~~0.555~~	~~0.555~~					~~0.555~~			
~~8~~	~~PRADEEP AGNIHOTRI & RANJNA AGNIHOTRI~~	~~100C-A~~	~~9~~	~~1095~~	~~2246~~		~~0.589~~	~~0.589~~					~~0.589~~			
~~9~~	~~BAMA INVESTMENTS~~	~~93N-B~~	~~2~~	~~753~~	~~1759~~	~~0.519~~		~~0.519~~				~~0.519~~				
~~10~~	~~BAMA INVESTMENTS~~	~~93N-B~~	~~3~~	~~819~~	~~3412~~	~~0.492~~		~~0.492~~				~~0.492~~				
~~11~~	~~BAMA INVESTMENTS~~	~~93N-B~~	~~4~~	~~809~~	~~3464~~	~~1.026~~		~~1.026~~				~~1.026~~				
12	POLLYANNA JONES	93	31	301	203	1.156		1.156				1.156				1177 S.F.
13	KROGER LIMITED PARTNERSHIP I	93	28	1400	2508	14.080		14.080				14.08			1927 S.F.	0.169 AC
~~14~~	~~SWANSON DEVELOPMENTS, LP~~	~~100~~	~~6~~	~~1201~~	~~2638~~											
15	SWANSON IRREVOCABLE FAMILY TRUST	93	70	464	1914		36.579	36.579		0.157	0.157		36.422		305 S.F.	0.336 AC
16	VIRGINIA FRANCES HOBBS CLARK, DOYLE DWIGHT HOBBS & ROGER DWAIN HOBBS	93	35	141	2709	4.239		4.239				4.239			1558 S.F.	0.379 AC
17	STEVE MANICHANH & WF, JENNIFER MANICHANH	93	36.01	767	2265	0.726		0.726				0.726			471 S.F.	2005 S.F.
18	BURTON DYE	93	36	WB46	780	3.715		3.715				3.715				306 S.F.
19	SWANSON DEVELOPMENTS, LP	93M-B	26	424	2907		19.053	19.053		0.126	0.126		18.927		377 S.F.	0.137 AC
20	JOSEPH A. CLAGG & WF, SHERRY D. CLAGG	93	37	1024	1218	1.104		1.104				1.104				1046 S.F.
21	HERBERT L. WHITE & WF, BETTY SUE WHITE	93	38	369	524	0.821		0.821				0.821				433 S.F.
~~22~~	~~ANN B. HINKLEY~~	~~93~~	~~48~~	~~WB34~~	~~430~~	~~0.793~~		~~0.793~~				~~0.793~~				
~~23~~	~~WALTER GLENN SEWELL & WF, MARY EVELYN SEWEL~~	~~93~~	~~49.01~~	~~376~~	~~1072~~	~~1.514~~		~~1.514~~				~~1.514~~				
ACQUISITION TOTALS (ACRES)										0.283					0.106 AC	1.133 AC

DISTURBED AREA

IN BETWEEN SLOPE LINES	5.278 (AC)
10 FOOT WIDE STRIP (OUTSIDE SLOPE LINES)	0.966 (AC)
TOTAL DISTURBED AREA	6.244 (AC)

UTILITIES LIST FOR SR-96
RUTHERFORD COUNTY

WATER/ SEWER — CONSOLIDATED UTILITY DISTRICT
709 NEW SALEM HIGHWAY
MURFREESBORO, TN 37219
WILLIAM DUNNILL
615-278-6027

WATER/ SEWER — MURFREESBORO WATER & SEWER
220 NW BROAD STREET
MURFREESBORO, TN 37130
VALERIE SMITH
615-848-3200

GAS — ATMOS ENERGY
810 CRESENT CENTRE DRIVE
FRANKLIN, TN 37067
ROBERT ARNOLD
615-771-8311

ELECTRIC — MURFREESBORO ELECTRIC
205 N. WALNUT STREET
MURFREESBORO, TN 37129
CHRIS BARNES
615-494-0428

ELECTRIC — MIDDLE TENNESSEE ELECTRIC MEMBERSHIP CORPORATION
555 NEW SALEM ROAD
MURFREESBORO, TN 37129
MATHUE BEAN
615-494-1572

TELEPHONE — AT&T
116 SOUTH CANON AVE.
MURFREESBORO, TN 37129
KENNETH KORNEGAY
615-848-2082

FIBER — LEVEL3 COMMUNICATIONS
1025 ELDORADO BLVD. 43C-420
BLOOMFIELD CO, 80021
PATRICK PROVOST
720-888-7280

CABLE — COMCAST/XFINITY
660 MAINSTREAM DRIVE
NASHVILLE, TN 37228
JERRY STENDER
615-986-5126 EXT.1115139

ELECTRIC — TVA
1101 MARKET STREET, MR-4G
CHATTANOOGA, TN 37402-2801
SHANE BEASLEY
423-751-2213

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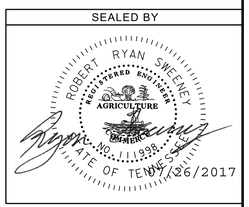

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RIGHT-OF-WAY ACQUISITION TABLE

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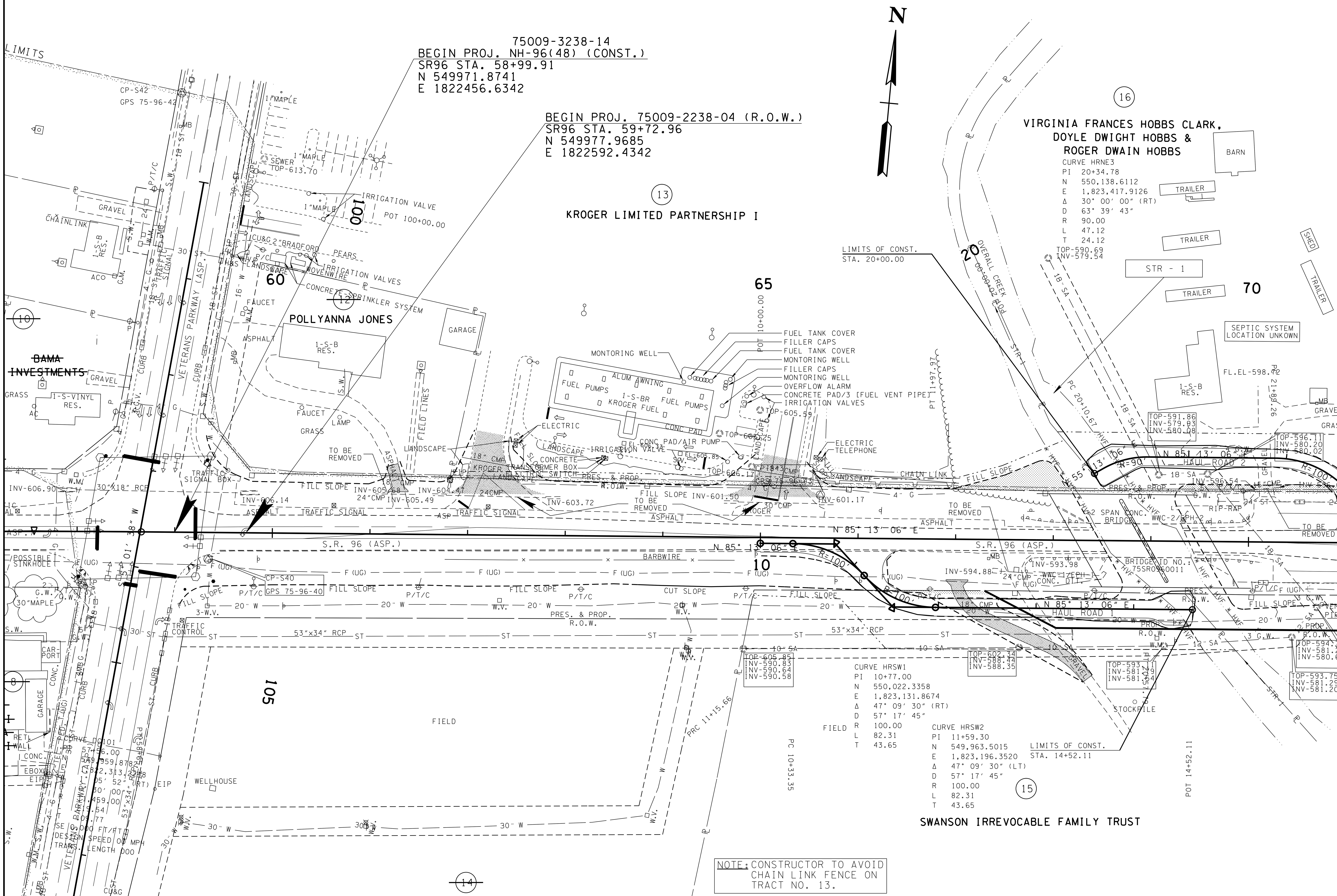
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	4
CONST.	2017	NH-96(48)	4



NOTE: CONSTRUCTOR TO AVOID CHAIN LINK FENCE ON TRACT NO. 13.

CONTROL POINTS

POINT	NORTH	EAST	ELEVATION	STATION	OFFSET	DESCRIPTION
S40	549947.5381	1822493.3526	610.7150	59+34.17	20.8931	75-96-40
S41	549576.5072	1822427.9968	613.5320	107+54.17	-40.96	75-96-41
S42	550420.7797	1822422.5339	612.1970	59+08.10	-456.9071	75-96-42
S43	550070.7731	1823111.9368	603.9860	65+61.28	-44.0029	75-96-43

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COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00008 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 58+99.91 TO STA. 71+00.00

SCALE: 1"= 50'

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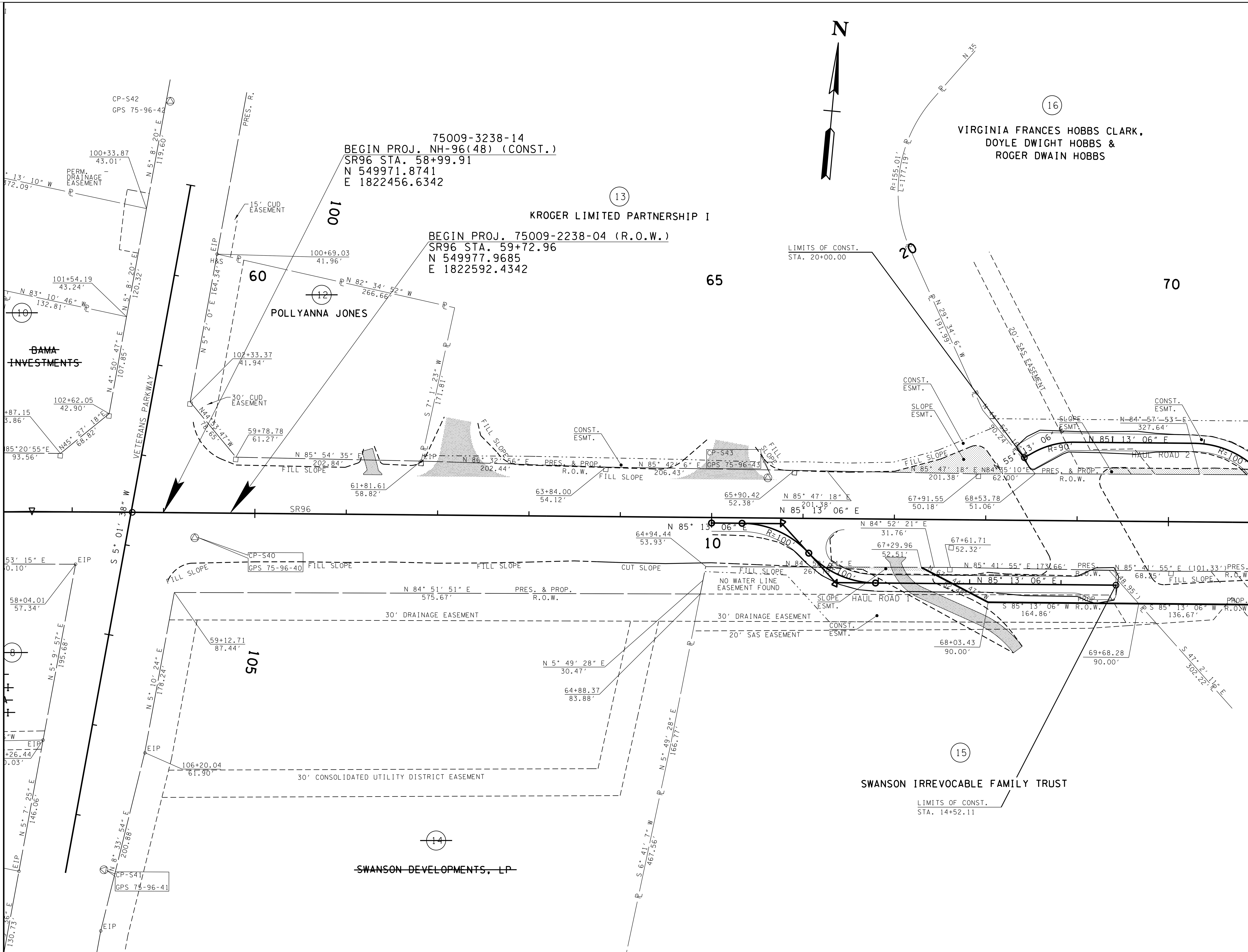
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	4A
CONST.	2017	NH-96(48)	4A



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REGISTERED ENGINEER
AGRICULTURE
NO. 111998
STATE OF TENNESSEE
7/26/2017

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RIGHT-OF-WAY DETAILS

STA. 58+99.91 TO STA. 71+00.00

SCALE: 1"= 50'

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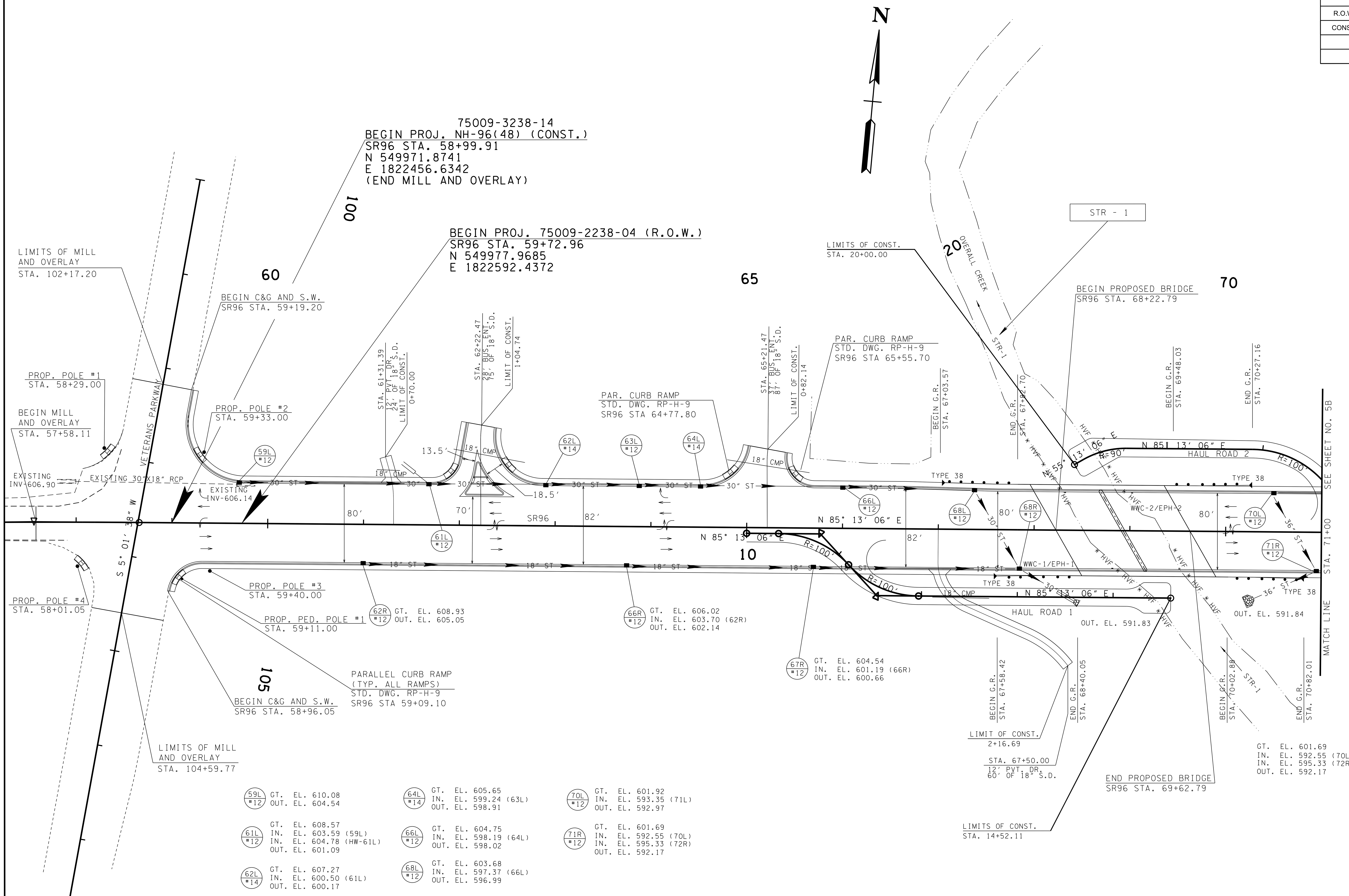
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	4B
CONST.	2017	NH-96(48)	4B



N
75009-3238-14
BEGIN PROJ. NH-96(48) (CONST.)
SR96 STA. 58+99.91
N 549971.8741
E 1822456.6342
(END MILL AND OVERLAY)
BEGIN PROJ. 75009-2238-04 (R.O.W.)
SR96 STA. 59+72.96
N 549977.9685
E 1822592.4372
100
60
65
70
20
105
10
LIMITS OF MILL AND OVERLAY
STA. 102+17.20
BEGIN C&G AND S.W.
SR96 STA. 59+19.20
PROP. POLE #1
STA. 58+29.00
PROP. POLE #2
STA. 59+33.00
BEGIN MILL AND OVERLAY
STA. 57+58.11
EXISTING INV-606.90
EXISTING 30"X18" RCP
EXISTING INV-606.14
VETERANS PARKWAY
S 5° 01' 38" W
STA. 61+31.39
12' PVT. DR.
24' OF 18" S.D.
LIMIT OF CONST.
0+70.00
STA. 62+22.47
28' BUS. ENT.
75' OF 18" S.D.
LIMIT OF CONST.
1+04.74
13.5'
18.5'
18" CMP
30" ST
70'
80'
82'
SR96
PAR. CURB RAMP
STD. DWG. RP-H-9
SR96 STA 64+77.80
STA. 65+21.47
37' BUS. ENT.
87' OF 18" S.D.
LIMIT OF CONST.
0+82.14
PAR. CURB RAMP
STD. DWG. RP-H-9
SR96 STA 65+55.70
LIMITS OF CONST.
STA. 20+00.00
OVERALL CREEK
STR - 1
STR-1
BEGIN PROPOSED BRIDGE
SR96 STA. 68+22.79
BEGIN G.R.
STA. 67+03.57
END G.R.
STA. 67+82.70
BEGIN G.R.
STA. 69+48.03
END G.R.
STA. 70+27.16
N 85° 13' 06" E
HAUL ROAD 2
R=90'
R=100'
TYPE 38
HVF
WWC-2/EPH-2
WWC-1/EPH-1
36" ST
SEE SHEET NO. 5B
STA. 71+00
MATCH LINE
R=100'
N 85° 13' 06" E
18" ST
HAUL ROAD 1
OUT. EL. 591.83
OUT. EL. 591.84
PROP. POLE #3
STA. 59+40.00
PROP. PED. POLE #1
STA. 59+11.00
PROP. POLE #4
STA. 58+01.05
GT. EL. 608.93
OUT. EL. 605.05
GT. EL. 606.02
IN. EL. 603.70 (62R)
OUT. EL. 602.14
GT. EL. 604.54
IN. EL. 601.19 (66R)
OUT. EL. 600.66
PARALLEL CURB RAMP
(TYP. ALL RAMPS)
STD. DWG. RP-H-9
SR96 STA 59+09.10
BEGIN C&G AND S.W.
SR96 STA. 58+96.05
LIMITS OF MILL AND OVERLAY
STA. 104+59.77
BEGIN G.R.
STA. 67+58.42
END G.R.
STA. 68+40.05
BEGIN G.R.
STA. 70+02.88
END G.R.
STA. 70+82.01
LIMIT OF CONST.
2+16.69
STA. 67+50.00
12' PVT. DR.
60' OF 18" S.D.
END PROPOSED BRIDGE
SR96 STA. 69+62.79
LIMITS OF CONST.
STA. 14+52.11
GT. EL. 601.69
IN. EL. 592.55 (70L)
IN. EL. 595.33 (72R)
OUT. EL. 592.17

Structure	Elevations
59L #12	GT. EL. 610.08 OUT. EL. 604.54
61L #12	GT. EL. 608.57 IN. EL. 603.59 (59L) IN. EL. 604.78 (HW-61L) OUT. EL. 601.09
62L #14	GT. EL. 607.27 IN. EL. 600.50 (61L) OUT. EL. 600.17
63L #12	GT. EL. 606.23 IN. EL. 599.71 (62L) OUT. EL. 599.54
64L #14	GT. EL. 605.65 IN. EL. 599.24 (63L) OUT. EL. 598.91
66L #12	GT. EL. 604.75 IN. EL. 598.19 (64L) OUT. EL. 598.02
68L #12	GT. EL. 603.68 IN. EL. 597.37 (66L) OUT. EL. 596.99
68R #12	GT. EL. 603.37 IN. EL. 599.62 (67R) IN. EL. 596.56 (68L) OUT. EL. 592.04
70L #12	GT. EL. 601.92 IN. EL. 593.35 (71L) OUT. EL. 592.97
71R #12	GT. EL. 601.69 IN. EL. 592.55 (70L) IN. EL. 595.33 (72R) OUT. EL. 592.17

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ROBERT RYAN SWEENEY, REGISTERED ENGINEER, AGRICULTURE, COMMERCE, NO. 111998, STATE OF TENNESSEE

07/26/2017

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00008 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 58+99.91 TO STA. 71+00.00

SCALE: 1"= 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	4C
CONST.	2017	NH-96(48)	4C

EARTHWORK BALANCES

EXC.(UNCL.) COMMON=19370 C.Y.

SHR.15%
SW. 15%

BORROW MATERIAL= 20253 C.Y.

HYDRAULIC DATA FOR BRIDGE

DRAINAGE AREA = 10.87 SQ. MILES

CONTRIBUTING DRAINAGE AREA = 9.07 SQ. MILES

DRAINAGE DISCHARGE (100 YR.) = 4870 CFS

WATER AREA PROVIDED BELOW EL. 594.13 = 621.25 FT.

100 YR. VELOCITY = 7.84 FPS

100 YR. BRIDGE BACKWATER = 0.57 FT. @ EL.594.55

ROADWAY OVERTOPPING EL. = 602.14

500 YR. DISCHARGE 6150 CFS @ EL.595.85 FT.

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NO. 111998
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**STATE OF TENNESSEE
DEPARTMENT OF
TRANSPORTATION**

PROFILE

STA. 58+99.91 TO STA. 71+00.00

SCALE: 1"= 50' HORIZ.
1"= 5' VERT.

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	4D
CONST.	2017	NH-96(48)	4D

75009-3238-14

BEGIN PROJ. NH-96(48) (CONST.)
SR96 STA. 58+99.91
N 549971.8741
E 1822456.6342

BEGIN PROJ. 75009-2238-04 (R.O.W.)
SR96 STA. 59+72.96
N 549977.9685
E 1822592.4342

STATE ROUTE 96 STA. 58+63.23=
VETERANS PARKWAY STA. 103+71.11

VC = 200.00'
K = 384
V = 60+ MPH

VC = 180.00'
K = 327
V = 60+ MPH

VPI 59+01.28
EL. 610.70

VPI 59+50.00
EL. 610.50

VPC 59+91.00
EL. 610.28

VPI 60+91.00
EL. 609.75

VPT 61+91.00
EL. 608.70

VPI 62+00.00
EL. 608.60

VPC 63+60.00
EL. 606.91

VPI 64+50.00
EL. 605.97

VPT 65+40.00
EL. 605.52

BEGIN PROPOSED BRIDGE
SR96 STA. 68+22.79

STATE ROUTE 96 STA. 68+92.74=
OVERALL CREEK STA. 205+36.48

END PROPOSED BRIDGE
SR96 STA. 69+62.79

SEE SHEET NO. 5D

59L ø12
61L ø12
62L ø14
63L ø12
64L ø14
66L ø12
68L ø12
68R ø12
70L ø12
71R ø12

-0.41%
-0.41%
-0.53%
-1.05%
-1.05%
-1.05%
-0.50%
-0.50%

EXISTING 30" ST

PROP. 30" RCP
-0.50%

PROP. 30" RCP
-0.50%

PROP. 30" RCP
-0.50%

PROP. 30" RCP
-0.50%

PROP. 30" RCP
-0.50%

PROP. 30" RCP
-0.50%

EXISTING GROUND

PROP. BRIDGE

EXIST. BRIDGE

PROP. 36" RCP
-0.50%

PROP. 36" RCP
-0.50%

MATCH LINE STA. 71+00

630
625
620
615
610
605
600
595
590
585
580

59+00 60+00 61+00 62+00 63+00 64+00 65+00 66+00 67+00 68+00 69+00 70+00 71+00

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REGISTERED ENGINEER
AGRICULTURE
No. 111958
STATE OF TENNESSEE
7/26/2017

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DRAINAGE PROFILE LEFT

STA. 58+99.91 TO STA. 71+00.00

SCALE: 1"= 50' HORIZ.
1"= 5' VERT.

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	4E
CONST.	2017	NH-96(48)	4E

75009-3238-14

BEGIN PROJ. NH-96(48) (CONST.)
SR96 STA. 58+99.91
N 549971.8741
E 1822456.6342

BEGIN PROJ. 75009-2238-04 (R.O.W.)
SR96 STA. 59+72.96
N 549977.9685
E 1822592.4342

STATE ROUTE 96 STA. 58+63.23=
VETERANS PARKWAY STA. 103+71.11

VC = 200.00'
K = 384
V = 60+ MPH

VC = 180.00'
K = 327
V = 60+ MPH

VPI 59+01.28
EL. 610.70

VPI 59+50.00
EL. 610.50

VPC 59+91.00
EL. 610.28

VPI 60+91.00
EL. 609.75

VPT 61+91.00
EL. 608.70

VPI 62+00.00
EL. 608.60

VPC 63+60.00
EL. 606.91

VPI 64+50.00
EL. 605.97

VPT 65+40.00
EL. 605.52

BEGIN PROPOSED BRIDGE
SR96 STA. 68+22.79

STATE ROUTE 96 STA. 68+92.74=
OVERALL CREEK STA. 205+36.48

END PROPOSED BRIDGE
SR96 STA. 69+62.79

SEE SHEET NO. 5D

MATCH LINE STA. 71+00

-0.41% -0.41% -0.53% -1.05% -1.05% -1.05% -0.50% -0.50%

66R #12 67R #12 68R #12 71R #12

PROP. 18" RCP -0.50%

PROP. 18" RCP -0.50%

PROP. 18" RCP -0.50%

EXISTING GROUND

PROP. BRIDGE

EXIST. BRIDGE

PROP. 30" RCP -0.50%

PROP. 36" RCP -0.50%

MACHINED CLASS "B" RIPRAP

MACHINED CLASS "B" RIPRAP

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REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 111938
STATE OF TENNESSEE
7/26/2017

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DRAINAGE PROFILE RIGHT

STA. 58+99.91 TO STA. 71+00.00

SCALE: 1"= 50' HORIZ.
1"= 5' VERT.

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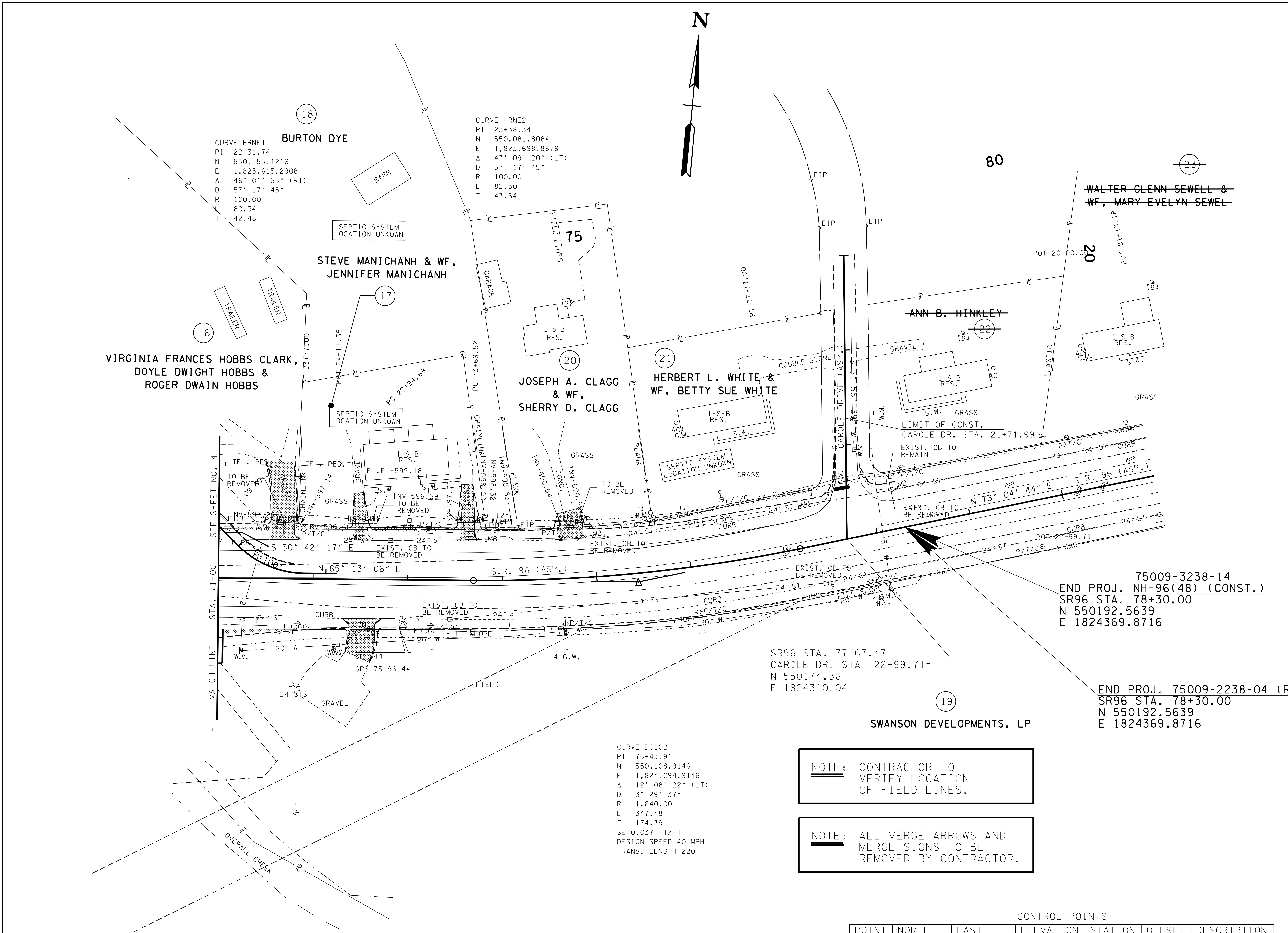
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	5
CONST.	2017	NH-96(48)	5



N
CURVE HRNE1
PI 22+31.74
N 550,155.1216
E 1,823,615.2908
Δ 46° 01′ 55″ (RT)
D 57° 17′ 45″
R 100.00
L 80.34
T 42.48
CURVE HRNE2
PI 23+38.34
N 550,081.8084
E 1,823,698.8879
Δ 47° 09′ 20″ (LT)
D 57° 17′ 45″
R 100.00
L 82.30
T 43.64
18
BURTON DYE
BARN
SEPTIC SYSTEM LOCATION UNKOWN
STEVE MANICHANH & WF. JENNIFER MANICHANH
17
16
TRAILER
TRAILER
VIRGINIA FRANCES HOBBS CLARK, DOYLE DWIGHT HOBBS & ROGER DWAIN HOBBS
GARAGE
FIELD LINES
75
2-S-B RES.
20
JOSEPH A. CLAGG & WF. SHERRY D. CLAGG
21
HERBERT L. WHITE & WF. BETTY SUE WHITE
80
23
WALTER GLENN SEWELL & WF. MARY EVELYN SEWEL
ANN B. HINKLEY
22
POT 20+00.00
POT 81+13.18
1-S-B RES.
CAROLE DRIVE (ASP.)
LIMIT OF CONST. CAROLE DR. STA. 21+71.99
EXIST. CB TO REMAIN
EXIST. CB TO BE REMOVED
N 73° 04′ 44″ E
S.R. 96 (ASP.)
S 50° 42′ 17″ E
N 85° 13′ 06″ E
S.R. 96 (ASP.)
SEE SHEET NO. 4
MATCH LINE
STA. 71+00
GPS 75-96-44
GRAVEL
FIELD
OVERALL CREEK
75009-3238-14
END PROJ. NH-96(48) (CONST.)
SR96 STA. 78+30.00
N 550192.5639
E 1824369.8716
SR96 STA. 77+67.47 =
CAROLE DR. STA. 22+99.71=
N 550174.36
E 1824310.04
END PROJ. 75009-2238-04 (R.O.W.)
SR96 STA. 78+30.00
N 550192.5639
E 1824369.8716
19
SWANSON DEVELOPMENTS, LP
CURVE DC102
PI 75+43.91
N 550,108.9146
E 1,824,094.9146
Δ 12° 08′ 22″ (LT)
D 3° 29′ 37″
R 1,640.00
L 347.48
T 174.39
SE 0.037 FT/FT
DESIGN SPEED 40 MPH
TRANS. LENGTH 220

NOTE: CONTRACTOR TO VERIFY LOCATION OF FIELD LINES.

NOTE: ALL MERGE ARROWS AND MERGE SIGNS TO BE REMOVED BY CONTRACTOR.

CONTROL POINTS

POINT	NORTH	EAST	ELEVATION	STATION	OFFSET	DESCRIPTION
S44	550040.2749	1823851.1635	600.7830	72+95.24	48.0823	75-96-44

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ROBERT RYAN SWEENEY, REGISTERED ENGINEER, AGRICULTURE COMMERCE, No. 111998, STATE OF TENNESSEE

07/26/2017

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00008 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 71+00.00 TO STA. 78+30.00

SCALE: 1"= 50'

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	5A
CONST.	2017	NH-96(48)	5A

N

18
BURTON DYE

N 52° 40' 36" W
419.51'

N 27° 44' 13" W
182.36'

N 77° 50' 33" E
145.57'

75

N 13° 22' 43" W
155.30'

N 14° 5' 29" W
330.05'

STEVE MANICHANH & WF,
JENNIFER MANICHANH

17

16
VIRGINIA FRANCES HOBBS CLARK,
DOYLE DWIGHT HOBBS &
ROGER DWAIN HOBBS

N 2° 40' 8" W
94.02'

S 74° 50' 48" W
172.14'

8" E 154.99'

20
JOSEPH A. CLAGG
& WF,
SHERRY D. CLAGG

21
HERBERT L. WHITE &
WF, BETTY SUE WHITE

R=1587.51'
L=12.93'

73+82.88
53.56'

73+69.51
53.54'

S 12° 47' 12" E 186.55'

R=1587.51'
L=33.99'

R=1587.51'
L=141.85'

S 13° 21' 9" E
185.00'

EIP

S 6° 21' 23" E
89.97'

N 74° 29' 54" E
207.35'

20+60.65
24.92'

N 6° 34' 52" W
82.95' PRES. R.O.W.

S 5° 53' 58" E
168.08' PRES. R.O.W.

CAROLE DRIVE

S 5° 55' 39" E
159.35'

80

23
~~WALTER GLENN SEWELL &~~
~~WF, MARY EVELYN SEWEL~~

S 2° 16' 22" E
22.1'

20

20+52.21
25.09'

N 76° 25' 5" E
208.77'

~~ANN B. HINKLEY~~

22

S 2° 16' 5" W
179.64'

LIMIT OF CONST.
CAROLE DR. STA. 21+71.99

22+11.56
25.01'

R=20.00'
L=33.90'

N 73° 38' 51" E
161.61'

79+88.66
56.35'

N 74° 6' 34" E
179.89'

78+27.06
57.96'

22+28.72
25.00'

R=20.00'
L=25.36'

77+39.18
58.25'

CONST. ESMT.

PRES. & PROP. R.O.W.

N 73° 04' 44" E

N 72° 59' 30" E
611.14'

PRES. R.O.W.

SEE SHEET NO. 4A

71+81.42
52.51'

SLOPE ESMT.

FILL SLOPE

PRES. & PROP. R.O.W.

S 54° 16' E
188.10'

S 50° 42' 17" E

R=100'

N 85° 13' 06" E

S.R. 96

74+17.88
53.69'

75+64.65
53.11'

77+17.84
54.42'

FILL SLOPE

STA. 71+00

MATCH LINE

71+05.00
53.78'

73+69.44
52.20'

N 84° 52' 54" E
264.45'

PRES. & PROP. R.O.W. R=1692.91'
L=359.70'

NO WATER LINE
EASEMENT FOUND

GPS 75-96-44

S 4° 46' 54" E
36.22'

71+05.00
90.00'
TO SAS EASEMENT

75' POWERLINE EASEMENT

N 65° 38' 2"
296.93'

SR96 STA. 77+67.47 =
CAROLE DR. STA. 22+99.71=
N 550174.36
E 1824310.04

19
SWANSON DEVELOPMENTS, LP

75009-3238-14
END PROJ. NH-96(48) (CONST.)
SR96 STA. 78+30.00
N 550192.5639
E 1824369.8716

END PROJ. 75009-2238-04 (R.O.W.)
SR96 STA. 78+30.00
N 550192.5639
E 1824369.8716

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ROBERT RYAN SWEENEY
REGISTERED ENGINEER
AGRICULTURE
LIC. NO. 111238
STATE OF TENNESSEE
10/26/2017

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00008 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RIGHT-OF-WAY DETAILS

STA. 71+00.00 TO STA. 78+30.00

SCALE: 1"= 50'

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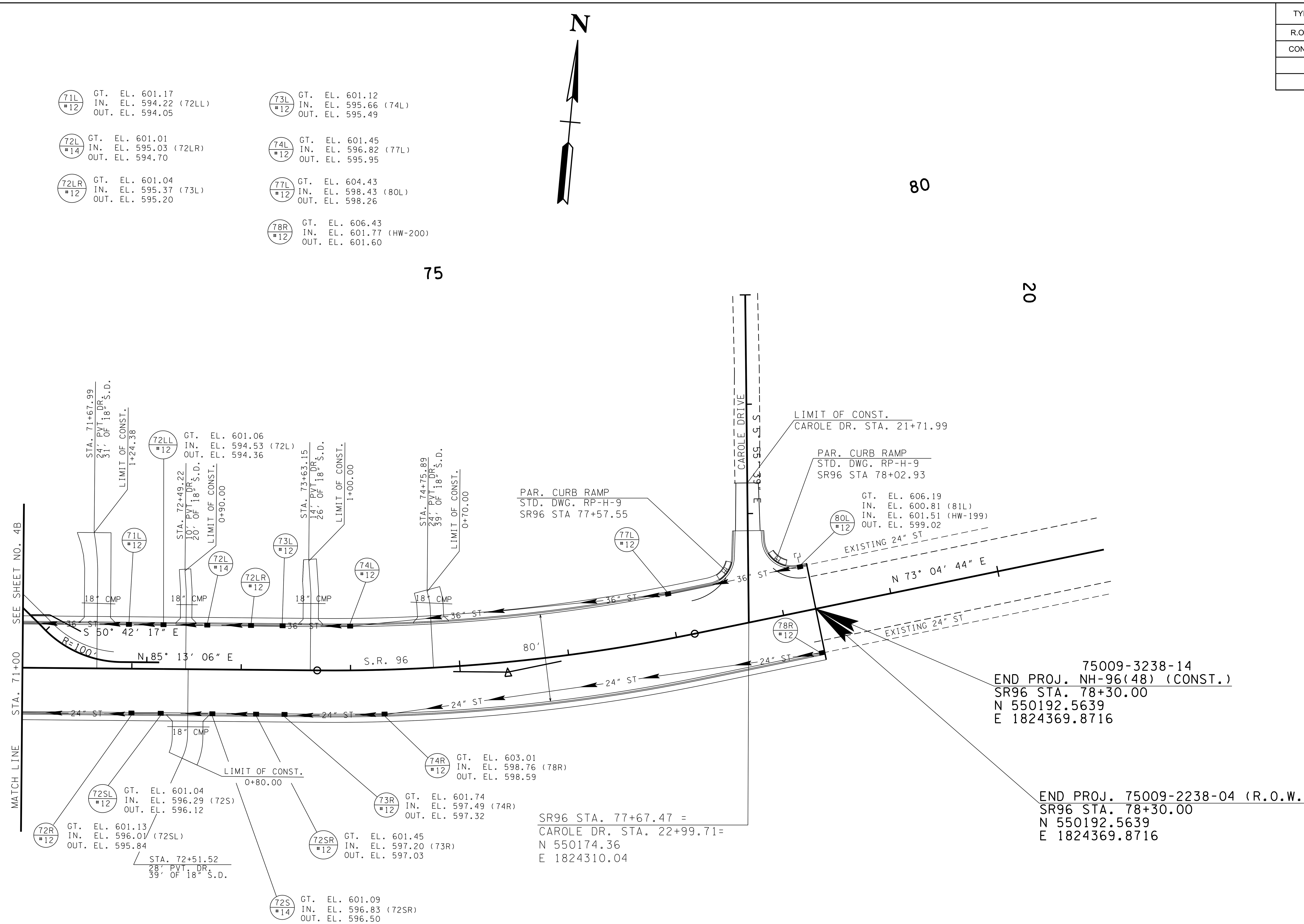
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	5B
CONST.	2017	NH-96(48)	5B



N
71L #12 GT. EL. 601.17 IN. EL. 594.22 (72LL) OUT. EL. 594.05
72L #14 GT. EL. 601.01 IN. EL. 595.03 (72LR) OUT. EL. 594.70
72LR #12 GT. EL. 601.04 IN. EL. 595.37 (73L) OUT. EL. 595.20
73L #12 GT. EL. 601.12 IN. EL. 595.66 (74L) OUT. EL. 595.49
74L #12 GT. EL. 601.45 IN. EL. 596.82 (77L) OUT. EL. 595.95
77L #12 GT. EL. 604.43 IN. EL. 598.43 (80L) OUT. EL. 598.26
78R #12 GT. EL. 606.43 IN. EL. 601.77 (HW-200) OUT. EL. 601.60
75
80
20
72LL #12 GT. EL. 601.06 IN. EL. 594.53 (72L) OUT. EL. 594.36
STA. 71+67.99 24' PVT. DR. 31' OF 18" S.D.
LIMIT OF CONST. 1+24.38
STA. 72+49.22 10' PVT. DR. 20' OF 18" S.D.
LIMIT OF CONST. 0+90.00
STA. 73+63.15 14' PVT. DR. 26' OF 18" S.D.
LIMIT OF CONST. 1+00.00
STA. 74+75.89 24' PVT. DR. 39' OF 18" S.D.
LIMIT OF CONST. 0+70.00
PAR. CURB RAMP STD. DWG. RP-H-9 SR96 STA 77+57.55
CAROLE DRIVE
S 5° 55' 39" E
LIMIT OF CONST. CAROLE DR. STA. 21+71.99
PAR. CURB RAMP STD. DWG. RP-H-9 SR96 STA 78+02.93
80L #12 GT. EL. 606.19 IN. EL. 600.81 (81L) IN. EL. 601.51 (HW-199) OUT. EL. 599.02
EXISTING 24" ST
N 73° 04' 44" E
EXISTING 24" ST
SEE SHEET NO. 4B
STA. 71+00
MATCH LINE
18" CMP
36" ST
S 50° 42' 17" E
R=100'
N 85° 13' 06" E
S.R. 96
80'
24" ST
18" CMP
75009-3238-14
END PROJ. NH-96(48) (CONST.)
SR96 STA. 78+30.00
N 550192.5639
E 1824369.8716
74R #12 GT. EL. 603.01 IN. EL. 598.76 (78R) OUT. EL. 598.59
LIMIT OF CONST. 0+80.00
73R #12 GT. EL. 601.74 IN. EL. 597.49 (74R) OUT. EL. 597.32
72SL #12 GT. EL. 601.04 IN. EL. 596.29 (72S) OUT. EL. 596.12
72R #12 GT. EL. 601.13 IN. EL. 596.01 (72SL) OUT. EL. 595.84
STA. 72+51.52 28' PVT. DR. 39' OF 18" S.D.
72SR #12 GT. EL. 601.45 IN. EL. 597.20 (73R) OUT. EL. 597.03
72S #14 GT. EL. 601.09 IN. EL. 596.83 (72SR) OUT. EL. 596.50
SR96 STA. 77+67.47 = CAROLE DR. STA. 22+99.71= N 550174.36 E 1824310.04
END PROJ. 75009-2238-04 (R.O.W.)
SR96 STA. 78+30.00
N 550192.5639
E 1824369.8716

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REGISTERED ENGINEER
AGRICULTURE COMMERCE
NO. 111998
STATE OF TENNESSEE
07/26/2017

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STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 71+00.00 TO STA. 78+30.00

SCALE: 1"= 50'

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	5C
CONST.	2017	NH-96(48)	5C

75009-3238-14
END PROJ. NH-96(48) (CONST.)
SR96 STA. 78+30.00
N 550192.5639
E 1824369.8716

END PROJ. 75009-2238-04 (R.O.W.)
SR96 STA. 78+30.00
N 550192.5639
E 1824369.8716

VC = 300.00'
K = 181
V = 60+ MPH

⊙ OH WIRE
STA. 71+81.24
LOW WIRE EL.620.39'
5 POWER
1 CABLE

⊙ OH WIRE
STA. 74+62.94
LOW WIRE EL.626.38'
6 GUY WIRE

SEE SHEET NO. 4C

MATCH LINE STA. 71+00

STA 71+00.00

VPC 71+77.71
EL. 602.33

VPT 74+77.71
EL. 603.30

VPI 77+00.00
EL. 605.86

VPI 77+50.00
EL. 606.51

STATE ROUTE 96 STA. 77+67.42=
CAROLE DRIVE STA. 20+00.00

VPI 78+00.00
EL. 607.07

VPI 78+30.00
EL. 607.40

EXIST. GROUND

-0.50%
-0.50%
1.15%
1.15%
1.15%
1.31%
1.12%
1.10%

FINISHED GRADE

8" WATER LINE
71+35.05

6" WATER LINE
78+05.99

CB -
STA. 72+81.35
41.29' (LT)
TOP 599.70
INVERT 593.76

VPI 73+27.71
EL. 601.58

CB -
STA. 73+45.05
41.39' (RT)
TOP 601.06
INVERT 596.93

CB -
STA. 75+09.13
41.54' (LT)
TOP 601.96
INVERT 597.28

CB -
STA. 77+36.72
41.21' (RT)
TOP 605.39
INVERT 600.78

CB -
STA. 78+23.41
41.60' (LT)
TOP 606.11
INVERT 601.61

CB -
STA. 80+02.74
41.36' (LT)
TOP 607.80
INVERT 603.49

CB -
STA. 80+96.57
41.21' (RT)
TOP 609.02
INVERT 604.16

GPS 75-96-44
STA. 72+95.24, 48.08'(RT)
N 550040.2749
E 1823851.1635
ELEV 600.78
ALUM. DISK

STA 72+59.47
STA 74+79.47
STA 76+06.95
STA 78+30.00

+0.020
220' TRANS.
+0.037
223' TRANS.

71+00 72+00 73+00 74+00 75+00 76+00 77+00 78+00 79+00 80+00 81+00

630 625 620 615 610 605 600 595 590 585 580 575

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REGISTERED ENGINEER
AGRICULTURE
No. 111938
STATE OF TENNESSEE
7/26/2017

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE

STA. 71+00.00 TO STA. 78+30.00

SCALE: 1"= 50' HORIZ.
1"= 5' VERT.

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	5D
CONST.	2017	NH-96(48)	5D

75009-3238-14
END PROJ. NH-96(48) (CONST.)
SR96 STA. 78+30.00
N 550192.5639
E 1824369.8716

END PROJ. 75009-2238-04 (R.O.W.)
SR96 STA. 78+30.00
N 550192.5639
E 1824369.8716

VC = 300.00'
K = 181
V = 60+ MPH

SEE SHEET NO. 4D

MATCH L NE STA. 71+00

VPC 71+77.71
EL. 602.33

VPT 74+77.71
EL. 603.30

VPI 73+27.71
EL. 601.58

VPI 77+00.00
EL. 605.86

VPI 77+50.00
EL. 606.51

STATE ROUTE 96 STA. 77+61.42=
CAROLE DRIVE STA. 20+00.00

VPI 78+00.00
EL. 607.07

VPI 78+30.00
EL. 607.40

71L
=12

72LL
=12

72L
=14

72LR
=12

73L
=12

74L
=2

80L
=12

-0.50%
-0.50%
1.15%
1.15%
1.31%
1.12%
1.10%

PROP. 36" RCP
-0.50%

PROP. 36" RCP
-0.50%

PROP. 36" RCP
-0.50%

PROP. 36" RCP
-0.50%

PROP. 36" RCP
-0.50%

PROP. 36" RCP
-0.50%

EXIST. GROUND

EXISTING 24" ST

CB -
STA. 80+02.74
41.36' (LT)
TOP 607.80
INVERT 603.49

630 625 620 615 610 605 600 595 590 585 580 575

71+00 72+00 73+00 74+00 75+00 76+00 77+00 78+00 79+00 80+00 81+00

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REGISTERED ENGINEER
AGRICULTURE
MEMBER
NO. 111998
STATE OF TENNESSEE
7/26/2017

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00008 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DRAINAGE PROFILE LEFT

STA. 71+00.00 TO STA. 78+30.00

SCALE: 1"= 50' HORIZ.
1"= 5' VERT.

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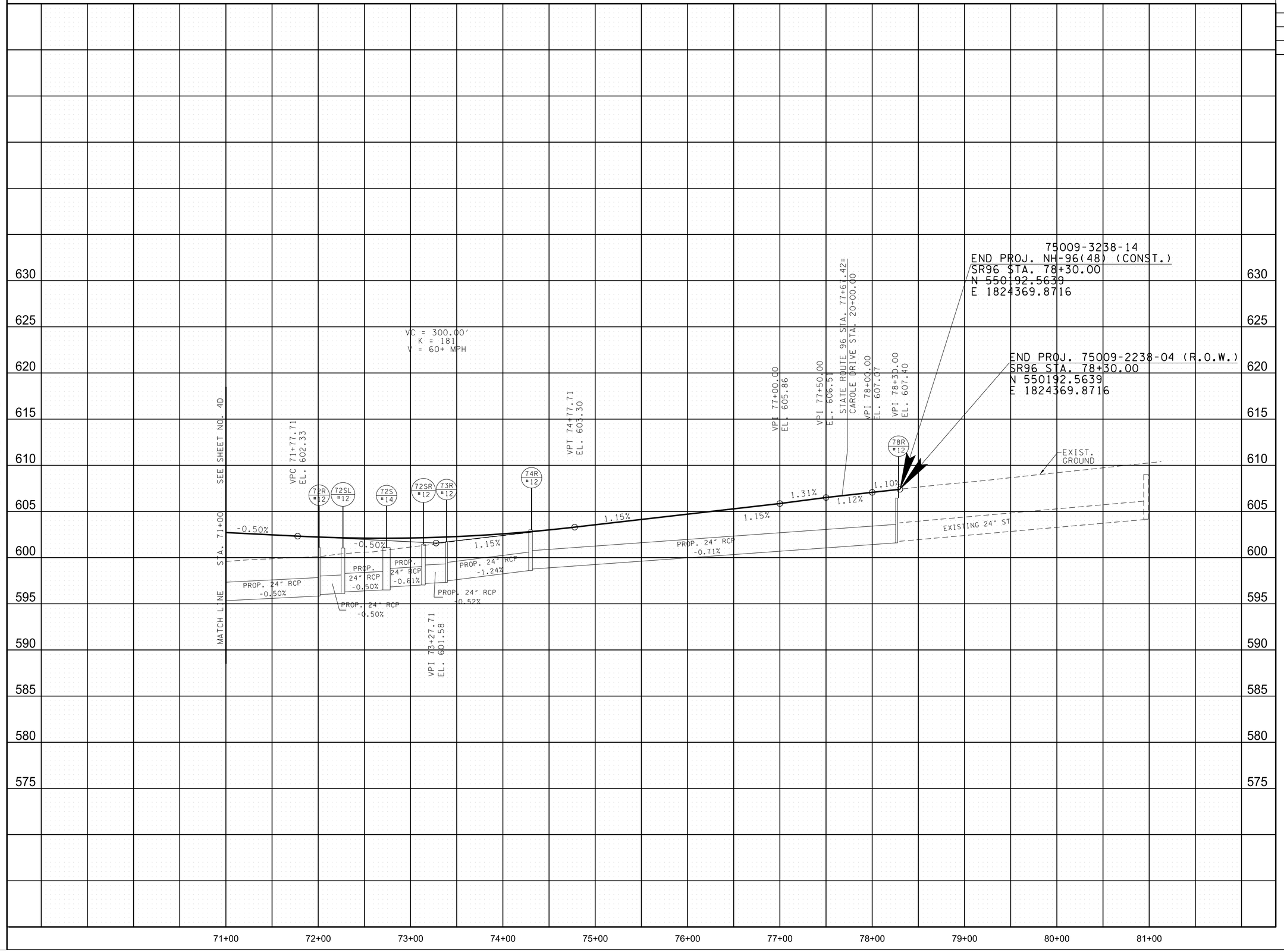
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	5E
CONST.	2017	NH-96(48)	5E



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NO. 111958
STATE OF TENNESSEE
7/26/2017

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00008 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DRAINAGE PROFILE RIGHT

STA. 71+00.00 TO STA. 78+30.00

SCALE: 1"= 50' HORIZ.
1"= 5' VERT.

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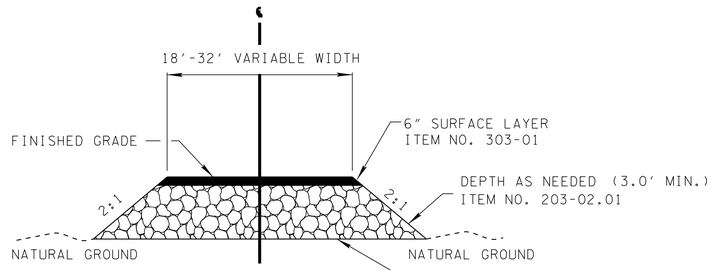
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	6
CONST	2017	NH-96(48)	6



TYPICAL SECTION

HAUL ROAD
ITEM NO. 203-50

S.W. CORNER OF BRIDGE (HAUL ROAD 1) — STA. 10+00.00 TO 14+52.11
N.E. CORNER OF BRIDGE (HAUL ROAD 2) — STA. 20+00.00 TO 24+11.35

NOTE: GEOTEXTILE TO BE EXTENDED PAST TOE OF HAUL ROAD SLOPES FOR STABILIZATION.

NOTE: HAUL ROADS TO BE REMOVED AND AREA TO BE RETURNED TO EXISTING CONDITION UPON COMPLETION OF EACH PHASE OF WORK WHICH HAUL ROADS ARE REQUIRED.

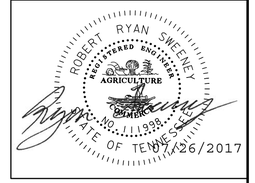
NOTE: NOTICE TO CONTRACTOR, CLASS C MACHINED RIP-RAP SHALL BE THE MATERIAL USED TO CONSTRUCT HAUL ROAD INSTEAD OF GRADED SOLID ROCK BEGINNING AT A POINT 100' PRIOR TO THE STREAM BANK AND EXTENDING TO THE LIMIT OF THE HAUL ROAD IN THE RIVER.

HAUL ROADS TO BE PAID FOR AS LUMP SUM ITEMS.

HAUL ROAD 1 PROFILE

HAUL ROAD 2 PROFILE

SEALED BY

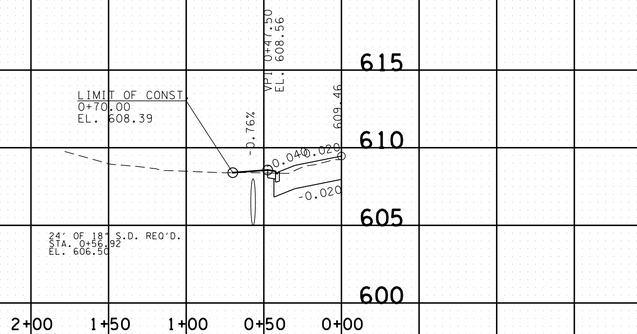


STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

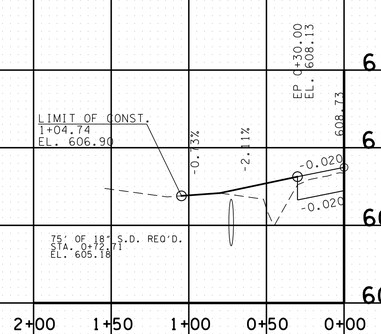
HAUL ROAD PROFILES

SCALE: 1"= 50' HORIZ.
1"= 5' VERT.

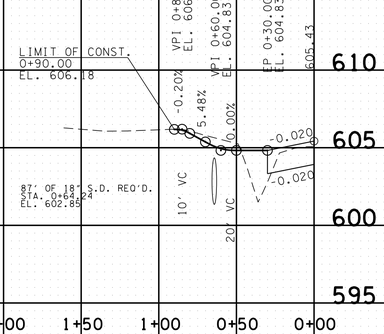
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	6A
CONST.	2017	NH-96(48)	6A



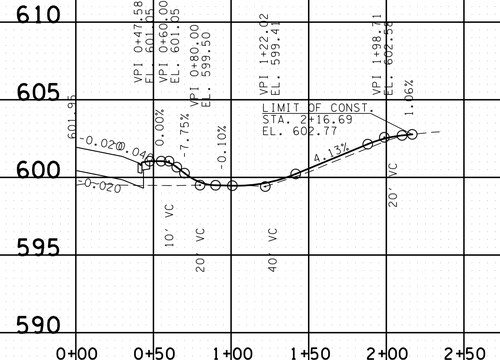
12' PVT. DR. LT. 61+31.39
TRACT NO. 12
S.R. 96



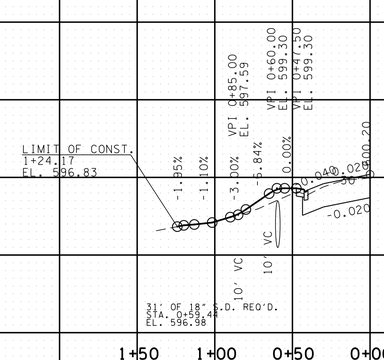
27' BUS. ENT. LT. 62+22.47
TRACT NO. 13
S.R. 96



36.5' BUS. ENT. LT. 65+21.47
TRACT NO. 13
S.R. 96



12' PVT. DR. RT. 67+50.00
TRACT NO. 15
S.R. 96



24' PVT. DR. LT. 71+67.99
TRACT NO. 16
S.R. 96

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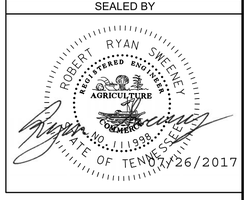

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRIVATE
DRIVE
PROFILES

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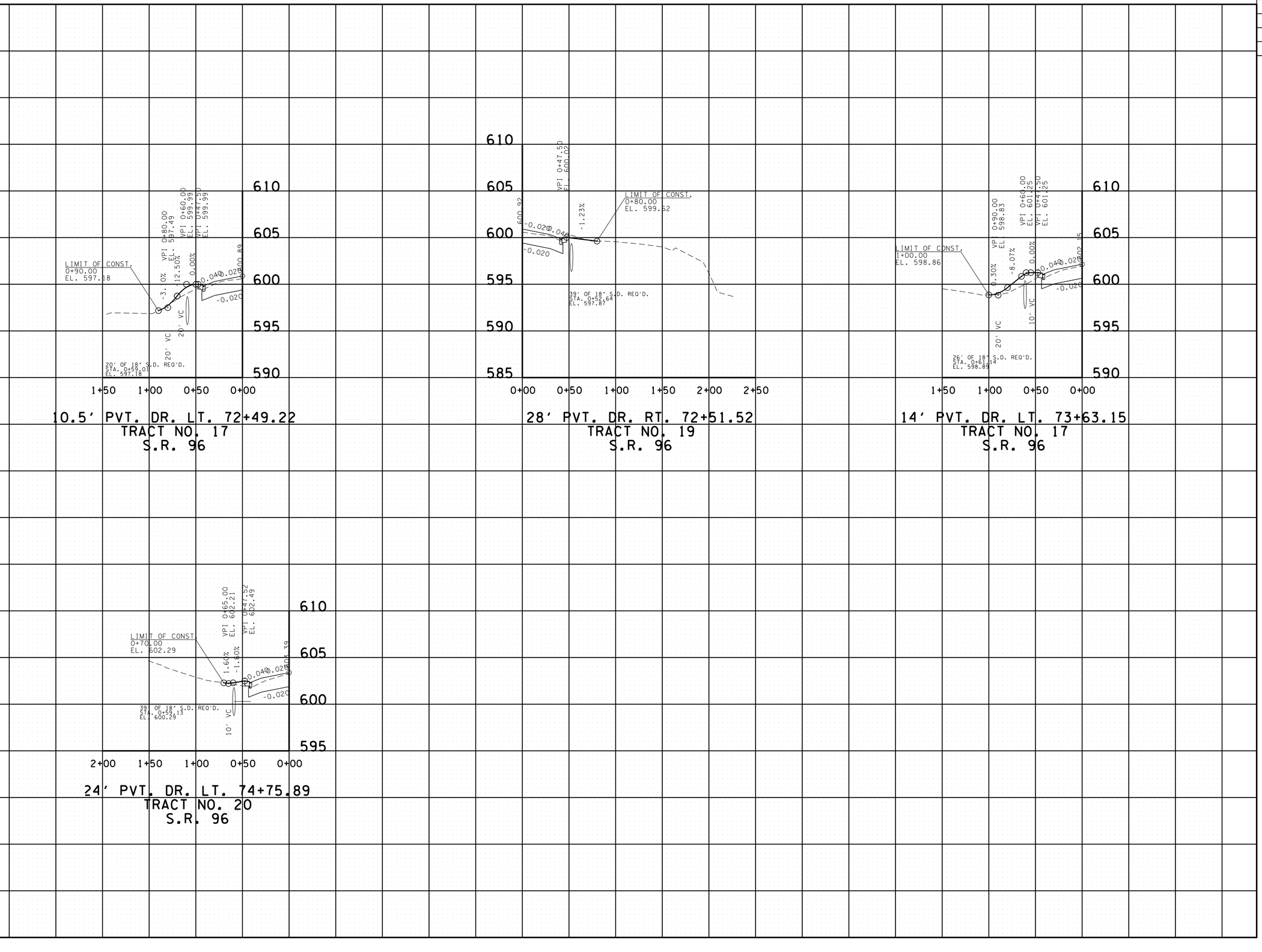

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	6B
CONST.	2017	NH-96(48)	6B

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STATE OF TENNESSEE
7/26/2017

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRIVATE DRIVE PROFILES

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	7
CONST.	2017	NH-96(48)	7

END PROJ. 75009-2238-04 (CONST.)
SR-96 STA. 78+30.00
N 550192.5639
E 1824369.8716

60 65 70 75 80

STA. 100+72.96
30" RCP FL LT
DA. 10.304 AC. ROLLING

STA. 103+21.48
30" X 18" RCP FL LT
DA. 9.430 AC. FLAT

STA. 104+65.29
53" X 34" RCP FL RT
DA. 99.425 AC. ROLLING

STA. 68+92.74
2 SPAN BRIDGE FL LT
DA. 6890.043 AC. ROLLING

VETERANS PKWY.

CAROLE DRIVE

S.R.-96

END PROJ. 75009-2238-04 (R.O.W.)
SR96 STA. 78+30.00
N 550192.5639
E 1824369.8716

75009-3238-14
END PROJ. NH-96(48) (CONST.)
SR96 STA. 78+30.00
N 550192.5639
E 1824369.8716

75009-3238-14
BEGIN PROJ. NH-96(48) (CONST.)
SR96 STA. 58+99.91
N 549971.8741
E 1822456.6342

BEGIN PROJ. 75009-2238-04 (R.O.W.)
SR96 STA. 59+72.96
N 549977.9685
E 1822592.4342

PROJECT LOCATION

INSET SCALE: 1" = 5280'

SEALED BY

ROBERT RYAN SWEENEY
REGISTERED ENGINEER
AGRICULTURE
No. 111998
STATE OF TENNESSEE
7/26/2017

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DRAINAGE MAPS

STA. 58+99.91 TO STA. 78+30.00

SCALE: 1"=200'

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EROSION PREVENTION AND SEDIMENT CONTROL NOTES

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	8
CONST.	2017	NH-96(48)	8

STREAMS, WETLANDS & BUFFER ZONES

(1) ANY WORK WITHIN THE STREAM CHANNEL AREA (E.G., PIER FOOTING, RIP-RAP PLACEMENT, CULVERT/BRIDGE CONSTRUCTION, ETC.) SHALL BE SEPARATED FROM FLOWING WATER OR EXPECTED FLOW PATH AND PERFORMED DURING LOW FLOW CONDITIONS. ALL ITEMS USED WITHIN THE STREAM CHANNEL AREA FOR DIVERSION OF FLOW (OR EXPECTED FLOW), UNLESS SPECIFIED IN THE PLANS, SHALL NOT BE PAID FOR DIRECTLY BUT SHALL BE INCLUDED IN THE COST OF OTHER ITEMS. THIS NOTE EXCLUDES ANY ITEMS SPECIFIED IN THE PLANS FOR THE TEMPORARY DIVERSION CHANNELS (EC-STR-31) AND TEMPORARY DIVERSION CULVERTS (EC STR-32) FOR SINGLE BARREL CULVERT CONSTRUCTION.

ENVIRONMENTAL

(2) EXCEPT AS OTHERWISE SPECIFIED, THERE ARE NO KNOWN SPECIAL ENVIRONMENTAL FACTORS PRESENT ON THIS PROJECT THAT INDICATE A NEED FOR SEASONAL LIMITATIONS ON THE CLEARING, GRUBBING, EXCAVATION, GRADING, CUTTING OR FILLING OPERATIONS OR ON THE TOTAL AREA OF EXPOSED SOIL.

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1
	SEDIMENT FILTER BAG	EC-STR-2
* SF * SF * SF *	SILT FENCE	EC-STR-3B
* SFB * SFB * SFB *	SILT FENCE WITH WIRE BACKING	EC-STR-3C
	ROCK CHECK DAM (V-DITCH)	EC-STR-6
	ENHANCED ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6A
	CATCH BASIN PROTECTION (TYPE A)	EC-STR-19
	CATCH BASIN PROTECTION (TYPE D)	EC-STR-19
	TEMPORARY CONSTRUCTION EXIT	EC-STR-25
	CURB INLET PROTECTION (TYPE 4)	EC-STR-39A
—IN— DIV—	INSTREAM DIVERSION	EC-STR-30 EC-STR-30A

OUTFALL TABLE

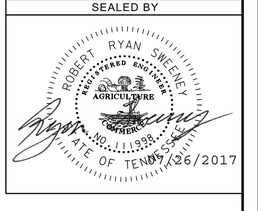
OUTFALL NO.	SLOPE (%)	DRAINAGE AREA (ACRES)
1	2.20	1.554
2	1.09	1.441
3	1.27	1.540
4	1.88	1.389

CHECK DAM WEIR HEIGHT = 2.0 FT.

ROAD	STATION		SIDE		SLOPE (%)	CHECK DAM SPACING (FT.)
	FROM	TO	LT	RT		
S.R.96	60+57	68+07	X		0.77	180
S.R.96	64+85	68+52		X	0.50	180
S.R.96	69+29	76+82	X		0.50	180
S.R.96	69+77	77+26		X	0.50	180

NOTE: CATCH BASIN PROTECTION TO BE REPLACED WITH CURB INLET PROTECTION UPON COMPLETION OF EPSC PLANS STAGE II AND STAGE III SUBSEQUENTLY.

SEALED BY



STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION & SEDIMENT CONTROL (EPSC) NOTES

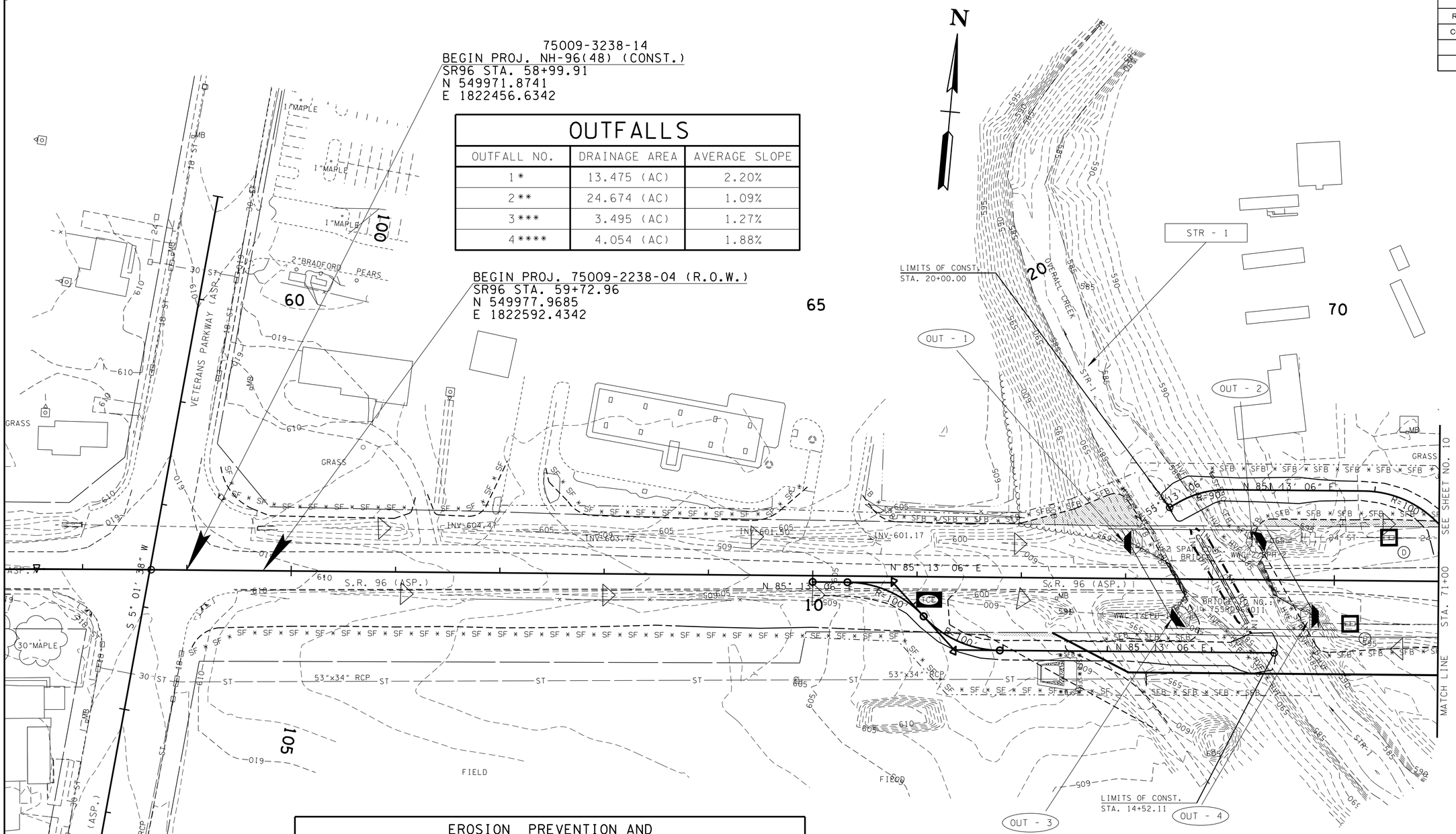
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	9
CONST.	2017	NH-96(48)	9

75009-3238-14
BEGIN PROJ. NH-96(48) (CONST.)
SR96 STA. 58+99.91
N 549971.8741
E 1822456.6342

BEGIN PROJ. 75009-2238-04 (R.O.W.)
SR96 STA. 59+72.96
N 549977.9685
E 1822592.4342

OUTFALLS

OUTFALL NO.	DRAINAGE AREA	AVERAGE SLOPE
1*	13.475 (AC)	2.20%
2**	24.674 (AC)	1.09%
3***	3.495 (AC)	1.27%
4****	4.054 (AC)	1.88%



EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.	SYMBOL	ITEM	STD. DWG.
* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1	A	CATCH BASIN PROTECTION (TYPE A)	EC-STR-19
SFB SFB SFB SFB	SEDIMENT FILTER BAG	EC-STR-2	D	CATCH BASIN PROTECTION (TYPE D)	EC-STR-19
* SF * SF * SF *	SILT FENCE	EC-STR-3B	TCE	TEMPORARY CONSTRUCTION EXIT	EC-STR-25
* SFB * SFB * SFB *	SILT FENCE WITH WIRE BACKING	EC-STR-3C	4	CURB INLET PROTECTION (TYPE 4)	EC-STR-39A
	ROCK CHECK DAM (V-DITCH)	EC-STR-6	IN DIV	INSTREAM DIVERSION	EC-STR-30 EC-STR-30A
	ENHANCED ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6A			

NOTE: ALL SILT FENCE AND SILT FENCE WITH BACKING SHALL BE INSTALLED ON CONTOUR OR HAVE J-HOOKS ADDED.

NOTE: EPSC MEASURES FROM PREVIOUS STAGE ARE TO REMAIN IN PLACE UNTIL AREA IS PEMANENTLY STABILIZED.

NOTE: TEMPORARY CONSTRUCTION EXITS TO BE LOCATED AS DIRECTED BY THE ENGINEER.

EPSC STAGE I: CLEARING AND GRUBBING

SEALED BY

ROBERT RYAN SWEENEY
REGISTERED ENGINEER
AGRICULTURE
No. 111998
STATE OF TENNESSEE
7/26/2017

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00008 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLANS

BEGIN PROJ. TO STA. 71+00

SCALE: 1"= 50'

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	9A
CONST.	2017	NH-96(48)	9A

75009-3238-14
BEGIN PROJ. NH-96(48) (CONST.)
SR96 STA. 58+99.91
N 549971.8741
E 1822456.6342

OUTFALLS

OUTFALL NO.	DRAINAGE AREA	AVERAGE SLOPE
1A*	13.475 (AC)	2.20%
2A**	24.674 (AC)	1.09%
3A***	3.495 (AC)	1.27%
4A****	4.054 (AC)	1.88%

BEGIN PROJ. 75009-2238-04 (R.O.W.)
SR96 STA. 59+72.96
N 549977.9685
E 1822592.4342

LIMITS OF CONST.
STA. 20+00.00

LIMITS OF CONST.
STA. 14+52.11

MATCH LINE STA. 71+00 SEE SHEET NO. 10A

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.	SYMBOL	ITEM	STD. DWG.
* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1	A	CATCH BASIN PROTECTION (TYPE A)	EC-STR-19
SFB SFB SFB	SEDIMENT FILTER BAG	EC-STR-2	D	CATCH BASIN PROTECTION (TYPE D)	EC-STR-19
* SF * SF * SF *	SILT FENCE	EC-STR-3B	TCE	TEMPORARY CONSTRUCTION EXIT	EC-STR-25
* SFB * SFB * SFB *	SILT FENCE WITH WIRE BACKING	EC-STR-3C	4	CURB INLET PROTECTION (TYPE 4)	EC-STR-39A
	ROCK CHECK DAM (V-DITCH)	EC-STR-6	IN DIV	INSTREAM DIVERSION	EC-STR-30 EC-STR-30A
	ENHANCED ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6A			

NOTE: ALL SILT FENCE AND SILT FENCE WITH BACKING SHALL BE INSTALLED ON CONTOUR OR HAVE J-HOOKS ADDED.

NOTE: EPSC MEASURES FROM PREVIOUS STAGE ARE TO REMAIN IN PLACE UNTIL AREA IS PEMANENTLY STABILIZED.

NOTE: TEMPORARY CONSTRUCTION EXITS TO BE LOCATED AS DIRECTED BY THE ENGINEER.

PROPOSED CONTOURS SHOWN

EPSC STAGE II: INTERMEDIATE GRADING

SEALED BY

ROBERT RYAN SWEENEY
REGISTERED ENGINEER
AGRICULTURE
NO. 111998
STATE OF TENNESSEE
7/26/2017

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00008 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

BEGIN PROJ. TO STA. 71+00

SCALE: 1"= 50'

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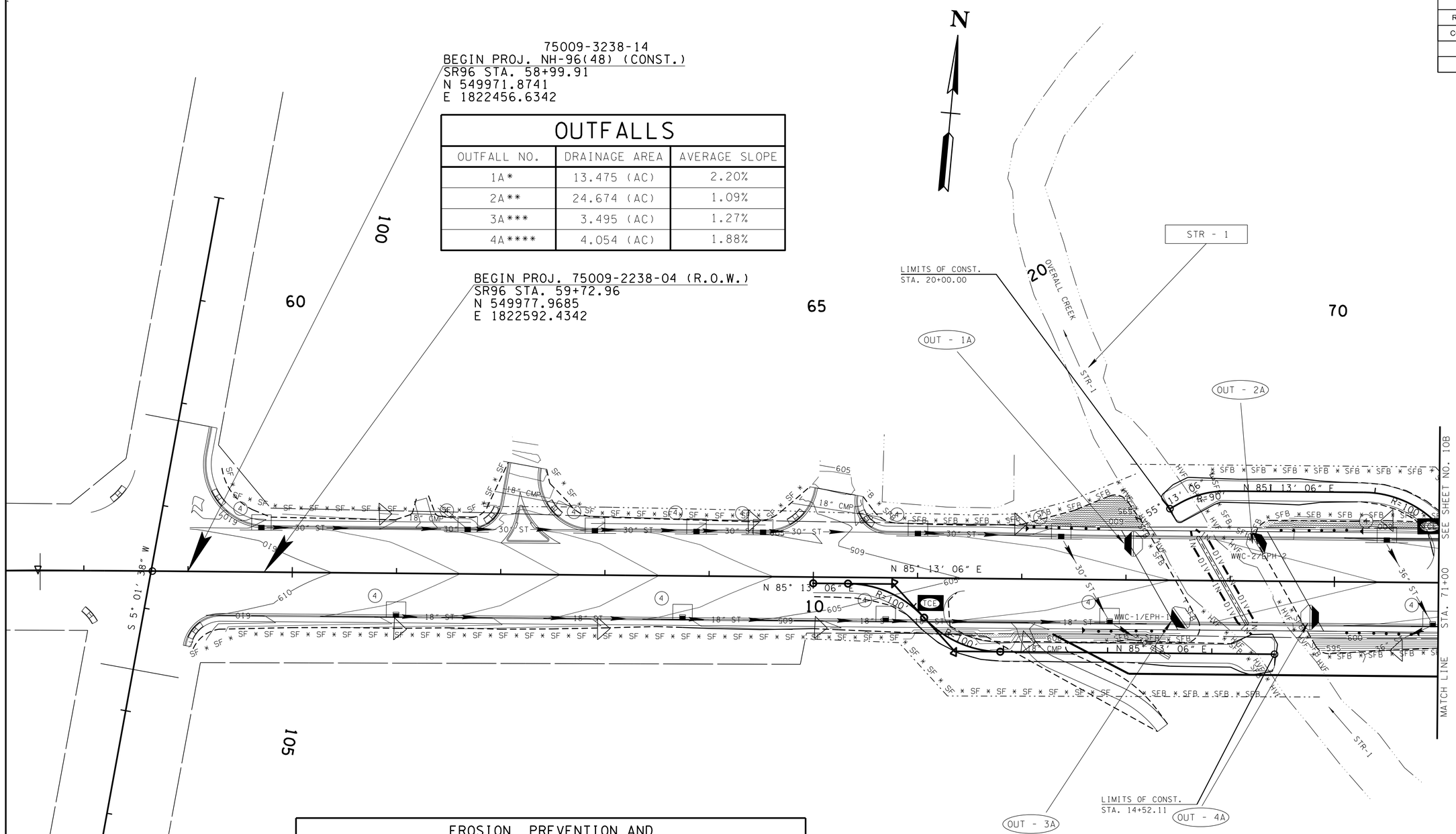
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	9B
CONST.	2017	NH-96(48)	9B

75009-3238-14
BEGIN PROJ. NH-96(48) (CONST.)
SR96 STA. 58+99.91
N 549971.8741
E 1822456.6342

OUTFALLS		
OUTFALL NO.	DRAINAGE AREA	AVERAGE SLOPE
1A*	13.475 (AC)	2.20%
2A**	24.674 (AC)	1.09%
3A***	3.495 (AC)	1.27%
4A****	4.054 (AC)	1.88%

BEGIN PROJ. 75009-2238-04 (R.O.W.)
SR96 STA. 59+72.96
N 549977.9685
E 1822592.4342



EROSION PREVENTION AND SEDIMENT CONTROL LEGEND					
SYMBOL	ITEM	STD. DWG.	SYMBOL	ITEM	STD. DWG.
* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1	(A)	CATCH BASIN PROTECTION (TYPE A)	EC-STR-19
SFB SFB SFB SFB	SEDIMENT FILTER BAG	EC-STR-2	(D)	CATCH BASIN PROTECTION (TYPE D)	EC-STR-19
* SF * SF * SF *	SILT FENCE	EC-STR-3B	TCE	TEMPORARY CONSTRUCTION EXIT	EC-STR-25
* SFB * SFB * SFB *	SILT FENCE WITH WIRE BACKING	EC-STR-3C	(4)	CURB INLET PROTECTION (TYPE 4)	EC-STR-39A
	ROCK CHECK DAM (V-DITCH)	EC-STR-6	IN DIV	INSTREAM DIVERSION	EC-STR-30 EC-STR-30A
	ENHANCED ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6A			

NOTE: ALL SILT FENCE AND SILT FENCE WITH BACKING SHALL BE INSTALLED ON CONTOUR OR HAVE J-HOOKS ADDED.

NOTE: EPSC MEASURES FROM PREVIOUS STAGE ARE TO REMAIN IN PLACE UNTIL AREA IS PEMANENTLY STABILIZED.

NOTE: TEMPORARY CONSTRUCTION EXITS TO BE LOCATED AS DIRECTED BY THE ENGINEER.

PROPOSED CONTOURS SHOWN

EPSC STAGE III: FINAL CONSTRUCTION

SEALED BY

ROBERT RYAN SWEENEY
REGISTERED ENGINEER
AGRICULTURE
No. 111998
STATE OF TENNESSEE
7/26/2017

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00008 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

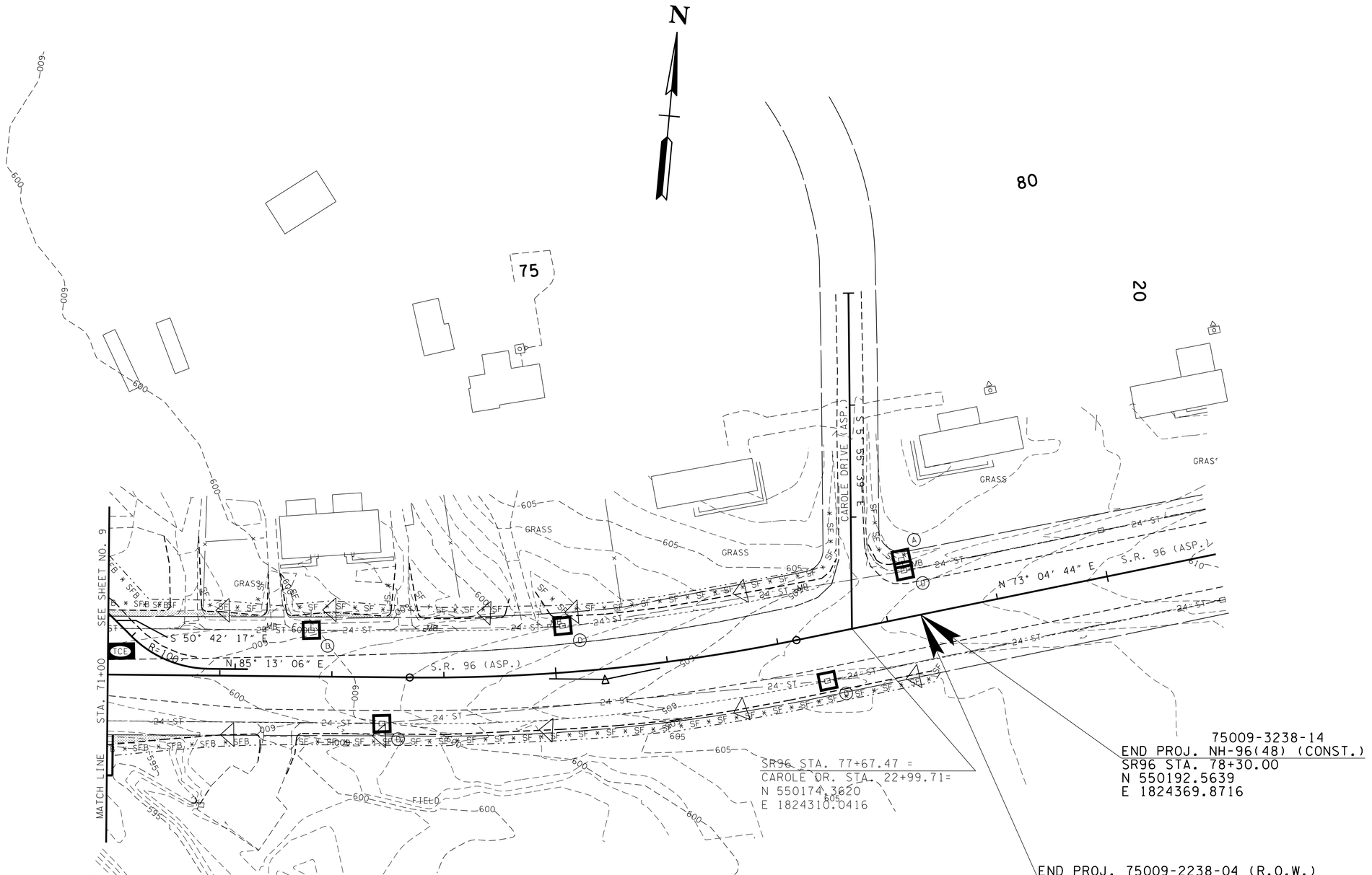
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

BEGIN PROJ. TO STA. 71+00

SCALE: 1"= 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	10
CONST.	2017	NH-96(48)	10



EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.	SYMBOL	ITEM	STD. DWG.
* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1	(A)	CATCH BASIN PROTECTION (TYPE A)	EC-STR-19
SFB SFB SFB SFB	SEDIMENT FILTER BAG	EC-STR-2	(D)	CATCH BASIN PROTECTION (TYPE D)	EC-STR-19
* SF * SF * SF *	SILT FENCE	EC-STR-3B	TCE	TEMPORARY CONSTRUCTION EXIT	EC-STR-25
* SFB * SFB * SFB *	SILT FENCE WITH WIRE BACKING	EC-STR-3C	(4)	CURB INLET PROTECTION (TYPE 4)	EC-STR-39A
	ROCK CHECK DAM (V-DITCH)	EC-STR-6	IN DIV	INSTREAM DIVERSION	EC-STR-30 EC-STR-30A
	ENHANCED ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6A			

NOTE: ALL SILT FENCE AND SILT FENCE WITH BACKING SHALL BE INSTALLED ON CONTOUR OR HAVE J-HOOKS ADDED.

NOTE: EPSC MEASURES FROM PREVIOUS STAGE ARE TO REMAIN IN PLACE UNTIL AREA IS PEMANENTLY STABILIZED.

NOTE: TEMPORARY CONSTRUCTION EXITS TO BE LOCATED AS DIRECTED BY THE ENGINEER.

EPSC STAGE I: CLEARING AND GRUBBING

SEALED BY

ROBERT RYAN SWEENEY
REGISTERED ENGINEER
AGRICULTURE
NO. 111938
STATE OF TENNESSEE
7/26/2017

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00008 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 71+00 TO END PROJ

SCALE: 1"= 50'

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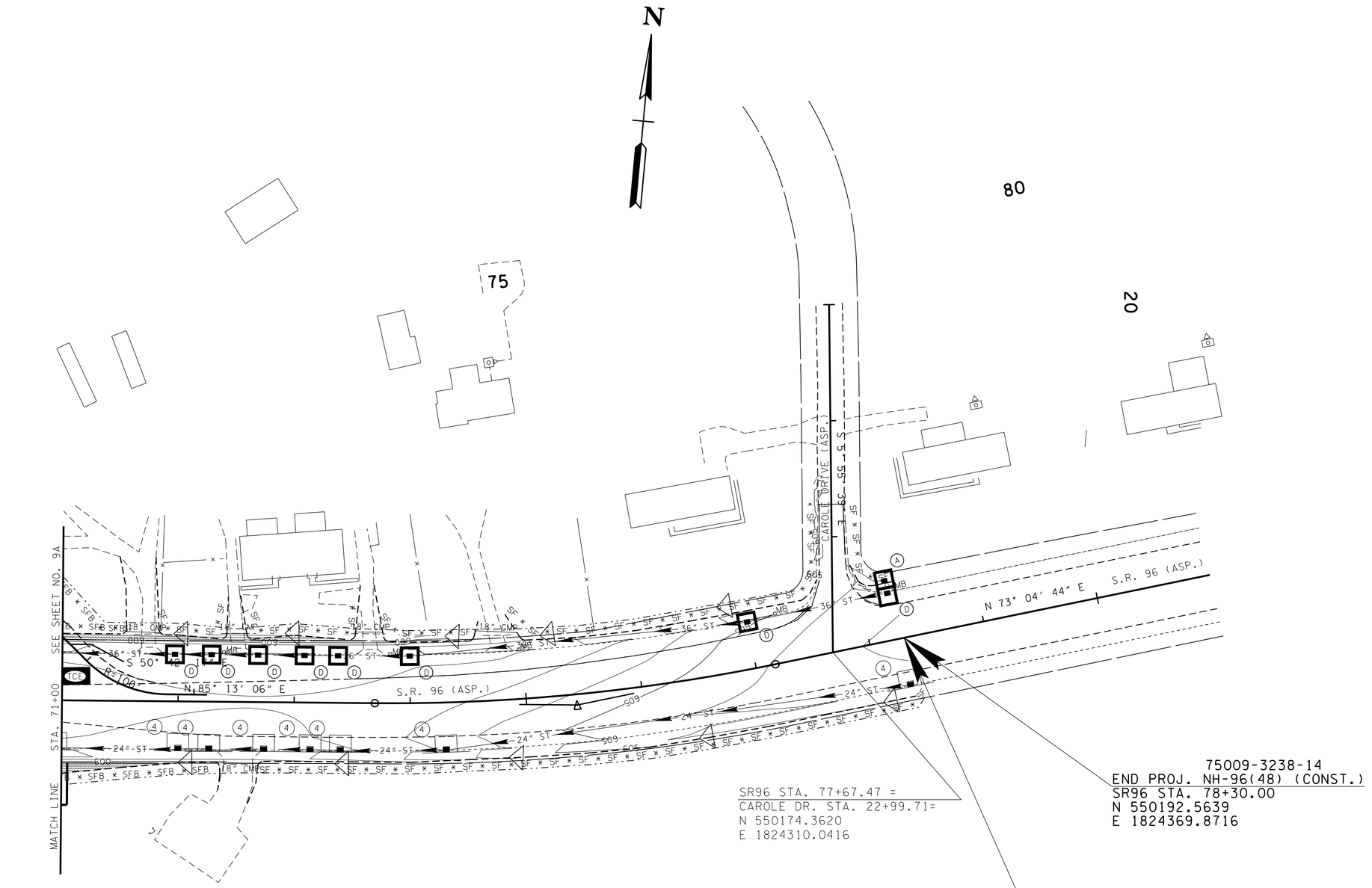
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	10A
CONST.	2017	NH-96(48)	10A



OVERALL CREEK

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.	SYMBOL	ITEM	STD. DWG.
* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1	A	CATCH BASIN PROTECTION (TYPE A)	EC-STR-19
SFB SFB SFB SFB	SEDIMENT FILTER BAG	EC-STR-2	D	CATCH BASIN PROTECTION (TYPE D)	EC-STR-19
* SF * SF * SF *	SILT FENCE	EC-STR-3B	TCE	TEMPORARY CONSTRUCTION EXIT	EC-STR-25
* SFB * SFB * SFB *	SILT FENCE WITH WIRE BACKING	EC-STR-3C	4	CURB INLET PROTECTION (TYPE 4)	EC-STR-39A
	ROCK CHECK DAM (V-DITCH)	EC-STR-6	IN DIV	INSTREAM DIVERSION	EC-STR-30 EC-STR-30A
	ENHANCED ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6A			

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NOTE: EPSC MEASURES FROM PREVIOUS STAGE ARE TO REMAIN IN PLACE UNTIL AREA IS PEMANENTLY STABILIZED.

NOTE: TEMPORARY CONSTRUCTION EXITS TO BE LOCATED AS DIRECTED BY THE ENGINEER.

PROPOSED CONTOURS SHOWN.

EPSC STAGE II: INTERMEDIATE GRADING

SEALED BY

ROBERT RYAN SWEENEY
REGISTERED ENGINEER
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COMMERCE
NO. 111938
STATE OF TENNESSEE
7/26/2017

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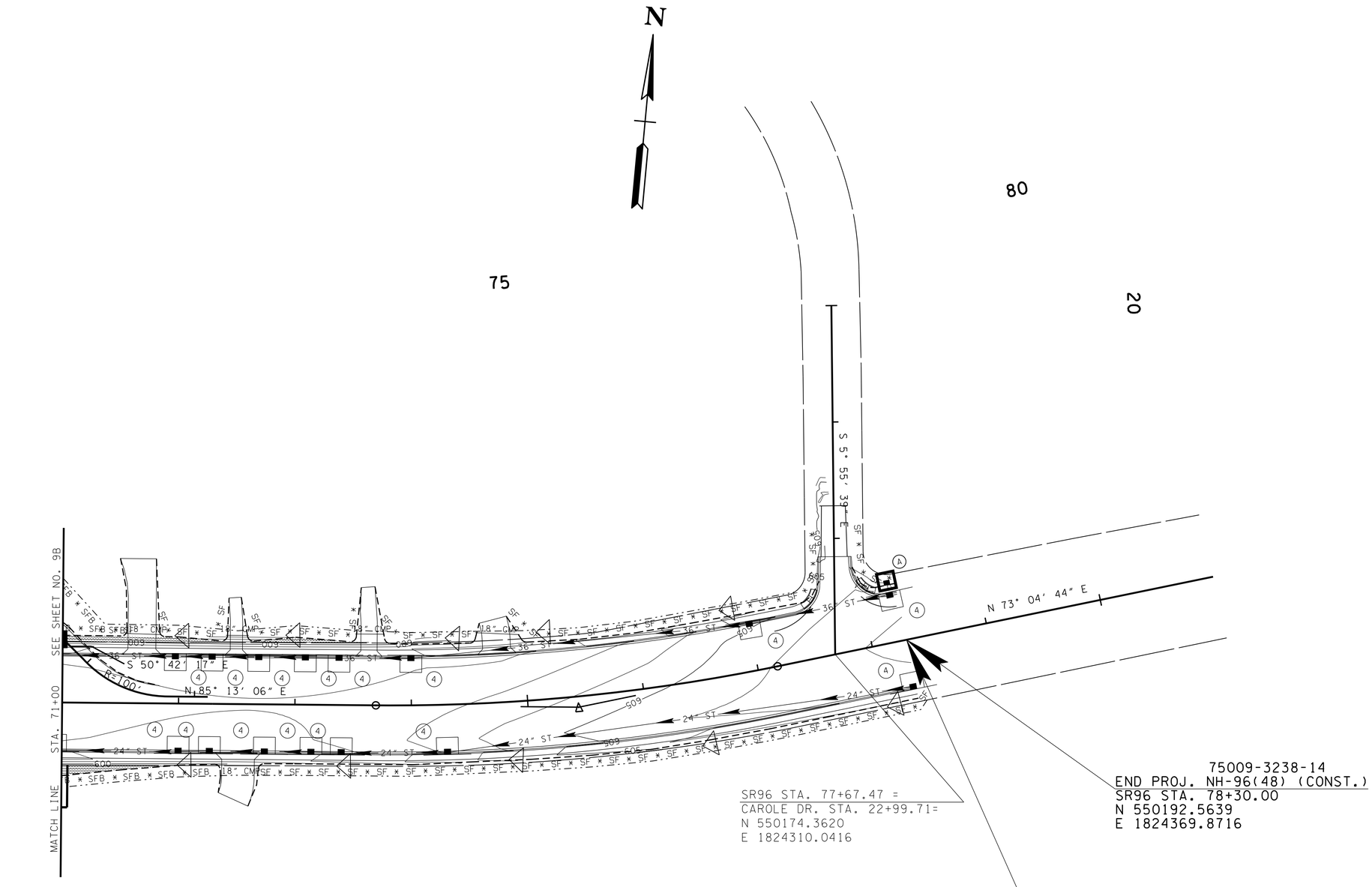
STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 71+00 TO END PROJ.

SCALE: 1"= 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	10B
CONST.	2017	NH-96(48)	10B



OVERALL CREEK

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.	SYMBOL	ITEM	STD. DWG.
* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1	A	CATCH BASIN PROTECTION (TYPE A)	EC-STR-19
SFB SFB	SEDIMENT FILTER BAG	EC-STR-2	D	CATCH BASIN PROTECTION (TYPE D)	EC-STR-19
* SF * SF * SF *	SILT FENCE	EC-STR-3B	TCE	TEMPORARY CONSTRUCTION EXIT	EC-STR-25
* SFB * SFB * SFB *	SILT FENCE WITH WIRE BACKING	EC-STR-3C	4	CURB INLET PROTECTION (TYPE 4)	EC-STR-39A
	ROCK CHECK DAM (V-DITCH)	EC-STR-6	IN DIV	INSTREAM DIVERSION	EC-STR-30 EC-STR-30A
	ENHANCED ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6A			

NOTE: ALL SILT FENCE AND SILT FENCE WITH BACKING SHALL BE INSTALLED ON CONTOUR OR HAVE J-HOOKS ADDED.

NOTE: EPSC MEASURES FROM PREVIOUS STAGE ARE TO REMAIN IN PLACE UNTIL AREA IS PEMANENTLY STABILIZED.

NOTE: TEMPORARY CONSTRUCTION EXITS TO BE LOCATED AS DIRECTED BY THE ENGINEER.

PROPOSED CONTOURS SHOWN.

EPSC STAGE III: FINAL CONSTRUCTION

SEALED BY

ROBERT RYAN SWEENEY
REGISTERED ENGINEER
AGRICULTURE COMMERCE
NO. 111938
STATE OF TENNESSEE
7/26/2017

COORDINATES ARE NAD/83(1995). ARE DATUM ADJUSTED BY THE FACTOR OF 1.0000 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 71+00 TO END PROJ.

SCALE: 1"= 50'

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-96(48)	11

PAVEMENT EDGE DROP-OFF TRAFFIC CONTROL NOTES

A. DIFFERENCES IN ELEVATION BETWEEN ADJACENT TRAFFIC LANES OR TRAFFIC LANE AND SHOULDER WHERE THE TRAFFIC LANE IS BEING USED BY TRAFFIC, CAUSED BY BASE, PAVING OR RESURFACING:

1. DIFFERENCES IN ELEVATION BETWEEN ADJACENT ROADWAY ELEMENTS GREATER THAN 0.75 INCH AND NOT EXCEEDING 2 INCHES:

   a. WARNING SIGNS, UNEVEN LANES (W8-11) AND/OR SHOULDER DROP-OFF WITH PLAQUE (W8-17 AND W8-17P), SHALL BE PLACED IN ADVANCE OF AND THROUGHOUT THE EXPOSED AREA. MAXIMUM SPACING BETWEEN SIGNS SHALL BE 2,000 FEET WITH A MINIMUM OF 2 SIGNS PER EXPOSED AREA. WHERE UNEVEN PAVEMENT IS ENCOUNTERED, SIGNS SHALL BE PLACED ON EACH SIDE OF THE ROADWAY.

   b. DIFFERENCES IN ELEVATION BETWEEN ADJACENT TRAFFIC LANES BEING UTILIZED BY TRAFFIC CAUSED BY ADDED PAVEMENT SHALL BE ELIMINATED WITHIN THREE WORKDAYS.

   c. DIFFERENCES IN ELEVATION BETWEEN ADJACENT TRAFFIC LANES BEING UTILIZED BY TRAFFIC CAUSED BY COLD PLANING SHALL BE ELIMINATED WITHIN THREE WORKDAYS.

   d. WHEN THE DIFFERENCE IN ELEVATION IS BETWEEN THE TRAFFIC LANE BEING UTILIZED BY TRAFFIC AND SHOULDER THE DIFFERENCE IN ELEVATION SHALL BE ELIMINATED WITHIN SEVEN WORKDAYS AFTER THE CONDITION IS CREATED.

2. DIFFERENCES IN ELEVATION BETWEEN ADJACENT ROADWAY ELEMENTS GREATER THAN 2 INCHES AND NOT EXCEEDING 6 INCHES. TRAFFIC IS NOT TO BE ALLOWED TO TRAVERSE THIS DIFFERENCE IN ELEVATION.

   a. SEPARATION SHALL BE ACCOMPLISHED BY DRUMS, BARRICADES OR OTHER APPROVED DEVICES IN ACCORDANCE WITH THE FOLLOWING:

      (1) WHERE POSTED SPEEDS ARE 50 MPH OR GREATER, SPACING OF THE PROTECTIVE DEVICES SHALL NOT EXCEED 100 FEET.

      (2) WHERE POSTED SPEEDS ARE LESS THAN 50 MPH, THE MAXIMUM SPACING OF THE PROTECTIVE DEVICES IN FEET SHALL NOT EXCEED TWICE THE POSTED SPEED IN MILES PER HOUR OR 50 FEET, WHICHEVER SPACING IS GREATER.

   b. IF THE DIFFERENCE IN ELEVATION IS ELIMINATED OR DECREASED TO 2 INCHES OR LESS BY THE END OF EACH WORKDAY, CONES MAY BE USED DURING DAYLIGHT HOURS IN LIEU OF DRUMS, BARRICADES OR OTHER APPROVED PROTECTIVE DEVICES MENTIONED IN PARAGRAPH a, PROVIDED WARNING SIGNS ARE ERECTED. WARNING SIGNS (UNEVEN LANES AND/OR SHOULDER DROP-OFF) SHALL BE PLACED IN ADVANCE OF AND THROUGHOUT THE EXPOSED AREA. MAXIMUM SPACING BETWEEN SIGNS SHALL BE 2,000 FEET WITH A MINIMUM OF 2 SIGNS PER EXPOSED AREA. WHERE UNEVEN PAVEMENT IS ENCOUNTERED, SIGNS SHALL BE PLACED ON EACH SIDE OF THE ROADWAY.

   c. WHEN THE DIFFERENCE IN ELEVATION IS BETWEEN THE THROUGH TRAFFIC LANE AND THE SHOULDER AND THE ELEVATION DIFFERENCE IS LESS THAN 3.5 INCHES, THE CONTRACTOR MAY USE WARNING SIGNS AND/OR PROTECTIVE DEVICES AS APPLICABLE AND APPROVED BY THE ENGINEER. SEE PARAGRAPH a REGARDING USE OF DRUMS, BARRICADES OR OTHER APPROVED PROTECTIVE DEVICES. WARNING SIGNS (UNEVEN LANES AND/OR SHOULDER DROP-OFF) WILL BE PLACED IN ADVANCE OF AND THROUGHOUT THE EXPOSED AREA. MAXIMUM SPACING BETWEEN SIGNS SHALL BE 2,000 FEET WITH A MINIMUM OF 2 SIGNS PER EXPOSED AREA. WHERE UNEVEN PAVEMENT IS ENCOUNTERED, SIGNS SHALL BE PLACED ON EACH SIDE OF THE ROADWAY.

   IN THESE SITUATIONS, THE CONTRACTOR SHALL LIMIT HIS OPERATIONS TO ONE WORK ZONE NOT EXCEEDING 2 MILES IN LENGTH UNLESS OTHERWISE NOTED ON THE PLANS OR APPROVED BY THE ENGINEER. ONCE THE CONTRACTOR BEGINS WORK IN A WORK ZONE, A CONTINUOUS OPERATION SHALL BE MAINTAINED UNTIL THE DIFFERENCE IN ELEVATION IS ELIMINATED. SIMULTANEOUS WORK ON SEPARATE ROADWAYS OF DIVIDED HIGHWAYS WILL BE CONSIDERED INDEPENDENTLY IN REGARD TO RESTRICTION OF WORK ZONE ACTIVITY.

3. DIFFERENCES IN ELEVATION BETWEEN ADJACENT ROADWAY ELEMENTS GREATER THAN 6 INCHES BUT NOT EXCEEDING 18 INCHES, THE CONTRACTOR, WITH THE ENGINEER'S APPROVAL, MAY UTILIZE ONE OF THE FOLLOWING:

   a. THE CONTRACTOR SHALL ACCOMPLISH SEPARATION BY DRUMS, BARRICADES OR OTHER APPROVED DEVICES IN ACCORDANCE WITH THE FOLLOWING:

      (1) WHERE POSTED SPEEDS ARE 50 MPH OR GREATER, SPACING OF THE PROTECTIVE DEVICES SHALL NOT EXCEED 100 FEET.

      (2) WHERE POSTED SPEEDS ARE LESS THAN 50 MPH, THE MAXIMUM SPACING OF THE PROTECTIVE DEVICES IN FEET SHALL NOT EXCEED TWICE THE POSTED SPEED IN MILES PER HOUR OR 50 FEET, WHICHEVER SPACING IS GREATER.

   IN ORDER TO USE THIS METHOD, THE CONTRACTOR MUST REDUCE THE DIFFERENCE IN ELEVATION TO 6 INCHES OR LESS BY THE END OF THE WORKDAY THAT THE CONDITION IS CREATED.

   b. THE CONTRACTOR SHALL PROVIDE DRUMS, BARRICADES OR OTHER APPROVED SEPARATION DEVICES AS SPECIFIED IN PARAGRAPH a, AND CONSTRUCT A STONE WEDGE WITH A 4:1 SLOPE, OR FLATTER, TO ELIMINATE THE VERTICAL OFFSET IF THE LOWER ELEVATION IS AT OR BELOW SUBGRADE AT THE END OF EACH DAY.

   c. THE CONTRACTOR SHALL PROVIDE DRUMS, BARRICADES OR OTHER APPROVED SEPARATION DEVICES AS SPECIFIED IN PARAGRAPH a AND IF THE LOWER ELEVATION IS BASE STONE OR ASPHALT PAVEMENT, PLACEMENT OF SUBSEQUENT LAYERS OF PAVEMENT MUST BEGIN THE NEXT WORK DAY AND PROGRESS CONTINUOUSLY UNTIL THE DIFFERENCE IN ELEVATION IS ELIMINATED OR REDUCED TO SIX INCHES OR LESS.

   d. THE CONTRACTOR SHALL PROVIDE SEPARATION BY PORTABLE BARRIER RAIL.

   FOR PRECEDING CONDITIONS a, b, AND c, THE CONTRACTOR SHALL USE THE SHOULDER DROP-OFF WARNING SIGN WITH PLAQUE (W8-17 AND W8-17P). IT SHALL BE PLACED IN ADVANCE OF AND THROUGHOUT THE EXPOSED AREA. MAXIMUM SPACING BETWEEN THE SIGNS SHALL BE 2,000 FEET WITH A MINIMUM OF 2 SIGNS PER EXPOSED AREA. IN THESE SITUATIONS, THE CONTRACTOR SHALL LIMIT HIS OPERATIONS TO ONE WORK ZONE NOT EXCEEDING 1 MILE IN LENGTH UNLESS OTHERWISE NOTED ON THE PLANS OR APPROVED BY THE ENGINEER. ONCE THE CONTRACTOR BEGINS WORK IN A WORK ZONE, A CONTINUOUS OPERATION SHALL BE MAINTAINED UNTIL THE DIFFERENCE IS ELIMINATED. SIMULTANEOUS WORK ON SEPARATE ROADWAYS OF DIVIDED HIGHWAYS WILL BE CONSIDERED INDEPENDENTLY IN REGARD TO RESTRICTION OF WORK ZONE ACTIVITY.

4. FOR DIFFERENCES IN ELEVATION BETWEEN ADJACENT ROADWAY ELEMENTS GREATER THAN 18 INCHES.

   SEPARATION WILL BE PROVIDED BY USE OF PORTABLE BARRIER RAIL.

   IN THIS SITUATION THE CONTRACTOR SHALL LIMIT HIS OPERATIONS TO ONE WORK ZONE NOT EXCEEDING 1 MILE IN LENGTH UNLESS OTHERWISE NOTED ON THE PLANS OR APPROVED BY THE ENGINEER. ONCE THE CONTRACTOR BEGINS WORK IN A WORK ZONE, A CONTINUOUS OPERATION SHALL BE MAINTAINED UNTIL THE DIFFERENCE IN ELEVATION IS ELIMINATED. SIMULTANEOUS WORK ON SEPARATE ROADWAYS OF DIVIDED HIGHWAYS WILL BE CONSIDERED INDEPENDENTLY IN REGARD TO RESTRICTION OF WORK ZONE ACTIVITY.

B. IF THE DIFFERENCE IN ELEVATION IS WITHIN 30 FEET OF THE NEAREST TRAFFIC LANE BEING USED BY TRAFFIC CAUSED BY GRADING, EXCAVATION FOR UTILITIES, DRAINAGE STRUCTURES, UNDERCUTTING, ETC.:

1. IF THE DIFFERENCE IN ELEVATION IS WITHIN 8 FEET OF THE NEAREST TRAFFIC LANE WITH DIFFERENCE IN ELEVATION GREATER THAN 3/4 INCH AND NOT EXCEEDING 2 INCHES.

   a. WARNING SIGNS (UNEVEN LANES AND/OR SHOULDER DROP-OFF) SHALL BE PLACED IN ADVANCE OF AND THROUGHOUT THE EXPOSED AREA. MAXIMUM SPACING BETWEEN SIGNS SHALL BE 2,000 FEET WITH A MINIMUM OF 2 SIGNS PER EXPOSED AREA. WHERE UNEVEN PAVEMENT IS ENCOUNTERED, SIGNS SHALL BE PLACED ON EACH SIDE OF THE ROADWAY.

2. IF THE DIFFERENCE IN ELEVATION IS WITHIN 8 FEET OF THE NEAREST TRAFFIC LANE WITH DIFFERENCE IN ELEVATION GREATER THAN 2 INCHES AND NOT EXCEEDING 6 INCHES:

   a. SEPARATION SHALL BE ACCOMPLISHED BY DRUMS, BARRICADES OR OTHER APPROVED DEVICES IN ACCORDANCE WITH THE FOLLOWING:

      (1) WHERE POSTED SPEEDS ARE 50 MPH OR GREATER, SPACING OF THE PROTECTIVE DEVICES SHALL NOT EXCEED 100 FEET.

      (2) WHERE POSTED SPEEDS ARE LESS THAN 50 MPH THE MAXIMUM SPACING OF THE PROTECTIVE DEVICES IN FEET SHALL NOT EXCEED TWICE THE POSTED SPEED IN MILES PER HOUR OR 50 FEET, WHICHEVER SPACING IS GREATER.

3. IF THE DIFFERENCE IN ELEVATION IS WITHIN 8 FEET OF THE NEAREST TRAFFIC LANE WITH DIFFERENCE IN ELEVATION GREATER THAN 6 INCHES:

   a. SEPARATION SHALL BE ACCOMPLISHED BY DRUMS, BARRICADES OR OTHER APPROVED DEVICES IN ACCORDANCE WITH THE FOLLOWING:

      (1) WHERE POSTED SPEEDS ARE 50 MPH OR GREATER, SPACING OF THE PROTECTIVE DEVICES SHALL NOT EXCEED 100 FEET.

      (2) WHERE POSTED SPEEDS ARE LESS THAN 50 MPH THE MAXIMUM SPACING OF THE PROTECTIVE DEVICES IN FEET SHALL NOT EXCEED TWICE THE POSTED SPEED IN MILES PER HOUR OR 50 FEET, WHICHEVER SPACING IS GREATER.

   b. ELIMINATE VERTICAL OFFSET BY CONSTRUCTING A STONE WEDGE OR GRADING TO A 4:1 SLOPE, OR FLATTER, OR USE PORTABLE BARRIER RAIL.

   THE CONTRACTOR SHALL SCHEDULE THE WORK SO AS TO MINIMIZE THE TIME TRAFFIC IS EXPOSED TO AN ELEVATION DIFFERENCE. ONCE THE CONTRACTOR BEGINS AN ACTIVITY THAT CREATES AN ELEVATION DIFFERENCE WITHIN 8 FEET OF A TRAFFIC LANE, THE ACTIVITY SHALL BE PURSUED AS A CONTINUOUS OPERATION UNTIL THE ELEVATION DIFFERENCE IS ELIMINATED.

C. IF THE DIFFERENCE IN ELEVATION IS FARTHER THAN 8 FEET FROM THE NEAREST TRAFFIC LANE BUT NOT MORE THAN 30 FEET FROM THE NEAREST TRAFFIC LANE:

SEPARATION SHALL BE ACCOMPLISHED BY DRUMS, BARRICADES OR OTHER APPROVED DEVICES IN ACCORDANCE WITH THE FOLLOWING:

1. WHERE POSTED SPEEDS ARE 50 MPH OR GREATER, SPACING OF THE PROTECTIVE DEVICES SHALL NOT EXCEED 100 FEET.

2. WHERE POSTED SPEEDS ARE LESS THAN 50 MPH, THE MAXIMUM SPACING OF THE PROTECTIVE DEVICES IN FEET SHALL NOT EXCEED TWICE THE POSTED SPEED IN MILES PER HOUR OR 50 FEET, WHICHEVER SPACING IS GREATER.

THE CONTRACTOR SHALL SCHEDULE THE WORK SO AS TO MINIMIZE THE TIME TRAFFIC IS EXPOSED TO AN ELEVATION DIFFERENCE. ONCE THE CONTRACTOR BEGINS AN ACTIVITY THAT CREATES AN ELEVATION DIFFERENCE, THE ACTIVITY SHALL BE PURSUED AS A CONTINUOUS OPERATION UNTIL THE ELEVATION DIFFERENCE IS ELIMINATED.

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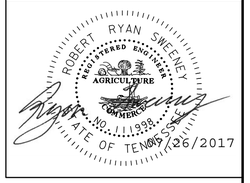

STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL NOTES

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-96(48)	11A

TABULATED TRAFFIC CONTROL QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
712-01	TRAFFIC CONTROL	LS	1
712-02.02	INTERCONNECTED PORTABLE BARRIER RAIL	L.F.	1500
712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	EACH	200
712-05.01	WARNING LIGHTS (TYPE A)	EACH	20
712-06	SIGNS (CONSTRUCTION)	S.F.	420
712-08.03	ARROW BOARD (TYPE C)	EACH	4

GENERAL TRAFFIC CONTROL NOTES

- THE CONSTRUCTION SIGNING PLAN IS TO SERVE AS A GUIDE ONLY. OTHER SIGNS MAY BE REQUIRED DURING VARIOUS PHASES OF CONSTRUCTION.
- THE TRAFFIC CONTROL PLAN DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF INSTALLING TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE CURRRENT EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- PORTABLE SIGNS MAY BE USED AT SOME LOCATIONS WITH THE EINGINEER'S APPROVAL. THE CONTRACTOR SHALL REFER TO SECTION 6 OF THE MUTCD REGARDING PORTABLE SIGNS.
- PRIOR TO COMMENCEMENT OF ANY WORK, ALL NECESSARY ADVANCE WARNING SIGNS AND TRAFFIC CONTROL DEVICES SHALL BE ERECTED AS SHOWN IN THE PLANS AND IN ACCORDANCE WITH THE MUTCD AND TDOT STANDARD DRAWINGS.
- DURING CONSTRUCTION PHASING NO CONSTRUCTION SIGN OR PERMANENT SIGN SHALL BE LEFT UNCOVERED OR IN PLACE WHICH MAY GIVE CONFLICTING DIRECTION OR INFORMATION TO MOTORISTS
- ANY AND ALL NECESSARY EROSION AND SEDIMENT OCNTROL DEVISCES AS SHOWN IN THE EROSION AND SEDIMENT CONTROL PLANS AND IN ACCORDANCE WITH TDOT STANDARD DRAWINGS, TDOT DRAINAGE MANUAL CHAPTER 10 AND ANY PERMIT REQUIREMENTS MUST BE IN PLACE AND PROPERLY MAINTAINED AND INSPECTED AT ALL TIMES.
- ACCESS TO PROPERTIES MUST BE MAINTAINED AT ALL TIMES.

SR 96 TRAFFIC CONTROL

PHASE 1

- REMOVE EXISTING BRIDGE PAVEMENT MARKINGS AND INSTALL TEMPORARY PAVEMENT MARKING UNDER TRAFFIC USING TEMPORARY LANE CLOSURES.
- SHIFT TRAFFIC NORTH ON EXISTING BRIDGE TO PROVIDE TWO 11' TRAVEL LANES.
- PLACE TEMPORARY MEDIAN BARRIER ON EXISTING BRIDGE PER BRIDGE PHASE 1 PLAN.
- INSTALL HAUL ROAD 1.
- DEMOLISH EXISTING BRIDGE STRUCTURES AS SHOWN IN BRIDGE PHASE 1 PLAN.
- INSTALL NEW BRIDGE, ABUTMENTS, AND PIER AS SHOWN IN BRIDGE PHASE 1 PLAN.
- BEGIN CONSTRUCTION OF SOUTH PORTION OF PROPOSED ROADWAY. THIS WORK INCLUDES GRADING, DRAINAGE PIPE AND STRUCTURES, ROADWAY, SHOULDER, CURB AND GUTTER, SIDEWALK, AND DRIVEWAYS.
- PAVE ALL WORK THROUGH B-M2 LAYER AND STRIP LANES WITH PAINTED PAVEMENT MARKING FOR PHASE 2 TRAFFIC.

PHASE 2

- SHIFT TRAFFIC SOUTH TO THE AREAS COMPLETED IN PHASE 1. PROVIDE TWO 12' TRAVEL LANES ON THE NEW BRIDGE AND 1.125' OF SHY DISTANCE BETWEEN NEW BRIDGE RAIL AND TEMPORARY MEDIAN BARRIER.
- INSTALL HAUL ROAD 2.
- DEMOLISH EXISTING BRIDGE STRUCTURES AS SHOWN IN BRIDGE PHASE 2 PLAN.
- INSTALL NEW BRIDGE, ABUTMENTS, AND PIER AS SHOWN IN BRIDGE PHASE 2 PLAN.
- BEGIN CONSTRUCTION OF NORTH PORTION OF PROPOSED ROADWAY. THIS WORK INCLUDES GRADING, DRAINAGE PIPE AND STRUCTURES, ROADWAY, SHOULDER, CURB AND GUTTER, SIDEWALK, AND DRIVEWAYS.
- PAVE ALL WORK THROUGH B-M2 LAYER.
- COMPLETE TIE IN TO EXISTING.
- COMPLETE FINAL SURFACE COURSE AND PERMANENT PAVEMENT MARKING UNDER TRAFFIC USING TEMPORARY LANE CLOSURES DURING OFF-PEAK HOURS AS APPROVED BY THE ENGINEER.

SIGNS (CONSTRUCTION) 712-06

QUANTITY	M.U.T.C.D. NO.	DESCRIPTION	SIZE	712-06 S.F.
2	G20-1	ROAD WORK NEXT 1 MILE	64 x 24	21.3
5	G20-2	END ROAD WORK	48 x 24	40
1	W4-2L	LANE REDUCTION (GRAPHIC)	36 x 36	9
1	W4-2R	LANE REDUCTION (GRAPHIC)	36 x 36	9
2	W20-1	ROAD WORK 500 FT	48 x 48	32
2	W20-1	ROAD WORK 1000 FT	48 x 48	32
2	W20-1	ROAD WORK 1500 FT	48 x 48	32
5	W20-1	ROAD WORK AHEAD	48 x 48	80
1	W20-1	MERGE NOW (LEFT ARROW)	48 x 48	16
1	W20-1	MERGE NOW (RIGHT ARROW)	48 x 48	16
2	W16-2	SUPPLEMENTAL PLATE	24 x 18	6
1	W20-5L	LEFT LANE CLOSED 1500 FT	36 x 36	9
1	W20-5R	RIGHT LANE CLOSED 1500 FT	36 x 36	9
2	W21-2	FRESH OIL - PORTABLE	36 x 36	18
2	W21-5	SHOULDER WORK - PORTABLE	36 x 36	18
2	W8-9a	SHOULDER DROP-OFF - PORTABLE	36 x 36	18
6	W8-11	UNEVEN LANES - PORTABLE	36 x 36	54
TOTAL S.F.				**419.3**

OTHER SIGNS, AS DIRECTED BY THE ENGINEER MAY BE REQUIRED DURING VARIOUS PHASES OF CONSTRUCTION AND WILL BE MEASURED AND PAID FOR AT THE UNIT BID PRICE. SEE CURRENT M.U.T.C.D. FOR STANDARDS AND TYPICAL APPLICATIONS.

TRAFFIC CONTROL LEGEND	
SYMBOL	ITEM
	WORK ZONE
	FLEXIBLE DRUMS (CHANNELIZING)
	SIGN (CONSTRUCTION)
→	TRAFFIC FLOW
	PORTABLE BARRIER RAIL
	TEMPORARY ATTENUATOR
	ARROW BOARD TYPE C

NOTE: WESTBOUND TRAFFIC FLOW AT SR96/VETERANS PARKWAY MUST MAINTAIN A DESIGNATED LEFT TURN LANE AND A DESIGNATED STRAIGHT-RIGHT TURN LANE AT ALL TIMES DURING CONSTRUCTION.

NOTE: EAST ENTRANCE INTO TRACT NO. 13 (KROGER LIMITED PARNERSHIP I) TO BE CLOSED DURING PHASE II. WEST ENTRANCE TO REMAIN OPEN.

SEALED BY

ROBERT RYAN SWEENEY
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 111938
STATE OF TENNESSEE
7/26/2017

STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PHASING NOTES, LEGEND AND TABULATION

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-96(48)	12

N
75009-3238-14
BEGIN PROJ. NH-96(48) (CONST.)
SR96 STA. 58+99.91
N 549971.8741
E 1822456.6342
BEGIN PROJ. 75009-2238-04 (R.O.W.)
SR96 STA. 59+72.96
N 549977.9685
E 1822592.4342
55
60
65
70
75
80
100
105
20
VETERANS PARKWAY (ASP.)
CAROLE DRIVE (ASP.)
OVERALL CREEK
STR-1
S.R. 96 (ASP.)
N 84° 07' 14" E
N 85° 13' 06" E
N 73° 07' 44" E
S 5° 01' 38" W
S 5° 55' 39" E
W20-1
48" X 48"
ROAD WORK AHEAD
ROAD WORK 500 FT
ROAD WORK 1000 FT
ROAD WORK 1500 FT
G20-1
48" X 24"
ROAD WORK NEXT 1 MILE
G20-2
48" X 24"
END ROAD WORK
W4-2L
36" X 36"
W20-5L
36" X 36"
LEFT LANE CLOSED 1500 FT
MERGE NOW
SPECIAL.
SEE STD.
DWG. T-WZ-21
48" X 48"
500'
WWC-1
WWC-2
END PROJ. 75009-2238-04 (R.O.W.)
SR96 STA. 78+30.00
N 550192.5639
E 1824369.8716
75009-3238-14
END PROJ. NH-96(48) (CONST.)
SR96 STA. 78+30.00
N 550192.5639
E 1824369.8716

TRAFFIC CONTROL LEGEND	
SYMBOL	ITEM
▨	WORK ZONE
◑	FLEXIBLE DRUMS (CHANNELIZING)
⊢	SIGN (CONSTRUCTION)
→	TRAFFIC FLOW
═	PORTABLE BARRIER RAIL
◁	TEMPORARY ATTENUATOR
⁝	ARROW BOARD TYPE C

NOTE: WESTBOUND TRAFFIC FLOW AT SR96/VETERANS PARKWAY MUST MAINTAIN A DESIGNATED LEFT TURN LANE AND A DESIGNATED STRAIGHT-RIGHT TURN LANE AT ALL TIMES DURING CONSTRUCTION.

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STATE OF TENNESSEE
07/26/2017

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN PHASE I

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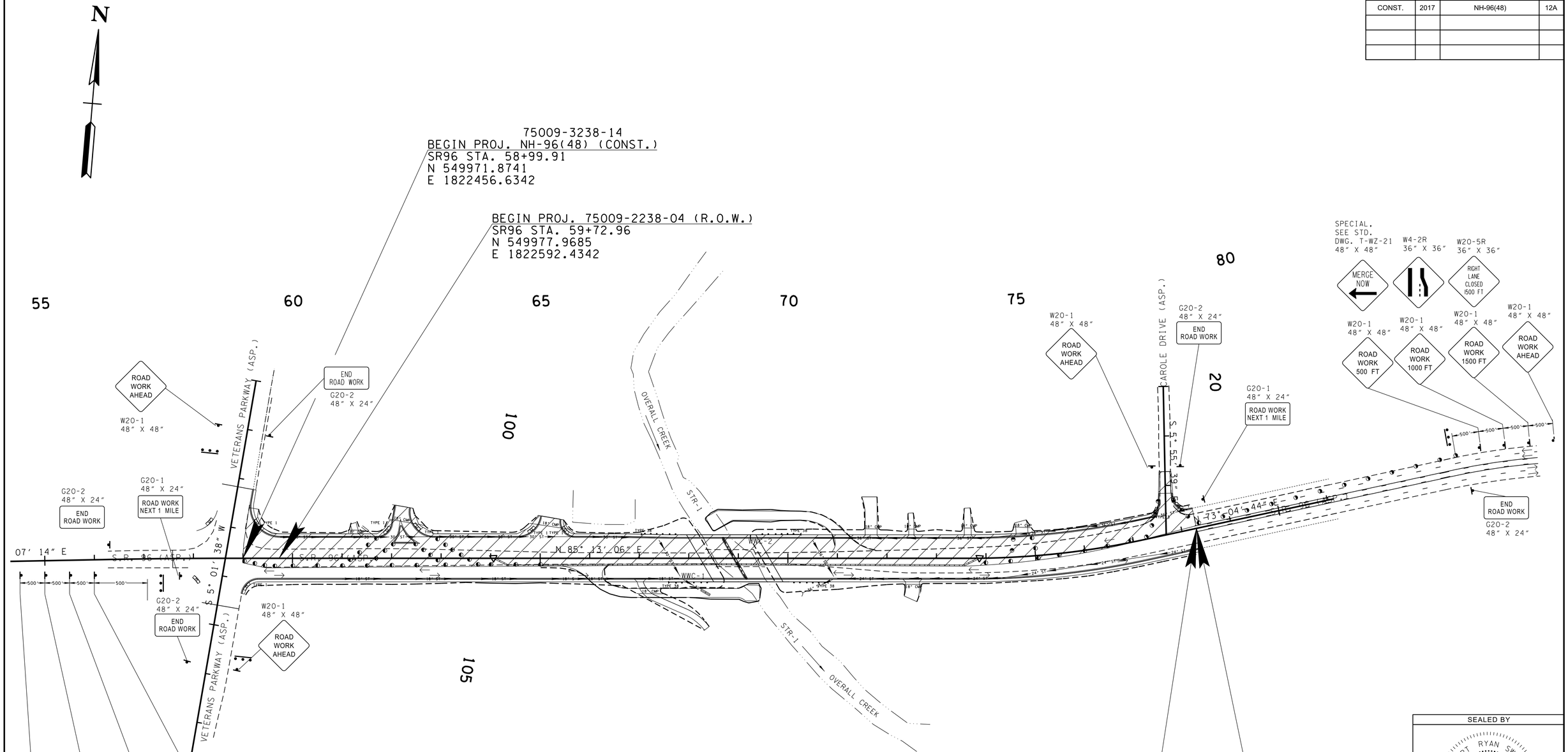
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-96(48)	12A



TRAFFIC CONTROL LEGEND	
SYMBOL	ITEM
	WORK ZONE
	FLEXIBLE DRUMS (CHANNELIZING)
	SIGN (CONSTRUCTION)
→	TRAFFIC FLOW
	PORTABLE BARRIER RAIL
	TEMPORARY ATTENUATOR
	ARROW BOARD TYPE C

NOTE: WESTBOUND TRAFFIC FLOW AT SR96/VETERANS PARKWAY MUST MAINTAIN A DESIGNATED LEFT TURN LANE AND A DESIGNATED STRAIGHT-RIGHT TURN LANE AT ALL TIMES DURING CONSTRUCTION.

NOTE: EAST ENTRANCE INTO TRACT NO. 13 (KROGER LIMITED PARNERSHIP I) TO BE CLOSED DURING PHASE II. WEST ENTRANCE TO REMAIN OPEN.

END PROJ. 75009-2238-04 (R.O.W.)
SR96 STA. 78+30.00
N 550192.5639
E 1824369.8716

75009-3238-14
END PROJ. NH-96(48) (CONST.)
SR96 STA. 78+30.00
N 550192.5639
E 1824369.8716

SEALED BY

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6/26/2017

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN PHASE II

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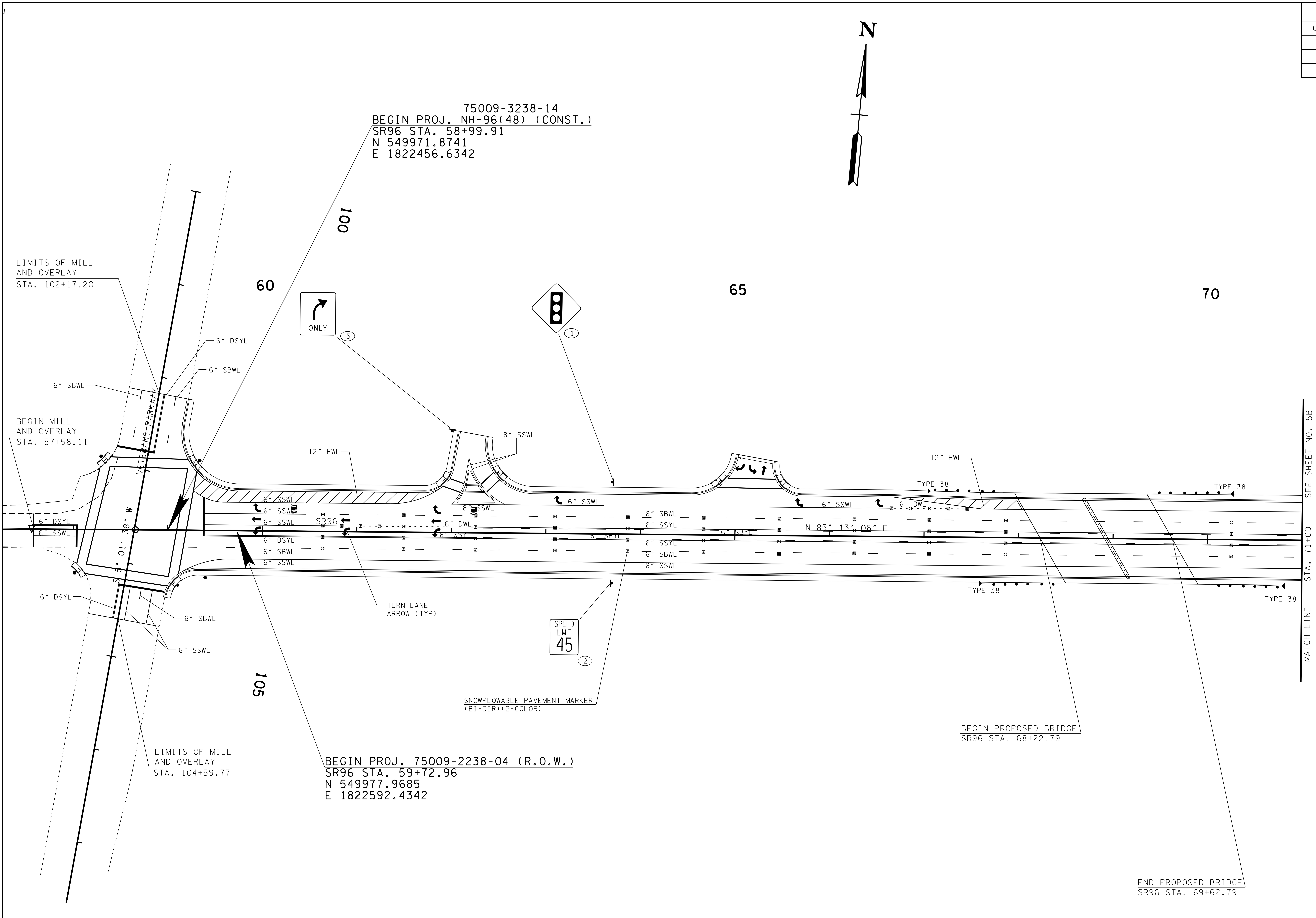
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-96(48)	13



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STATE OF TENNESSEE
07/26/2017

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00008 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGNING AND PAVEMENT MARKING

STA. 58+99.91 TO STA. 71+00.00

SCALE: 1"= 50'

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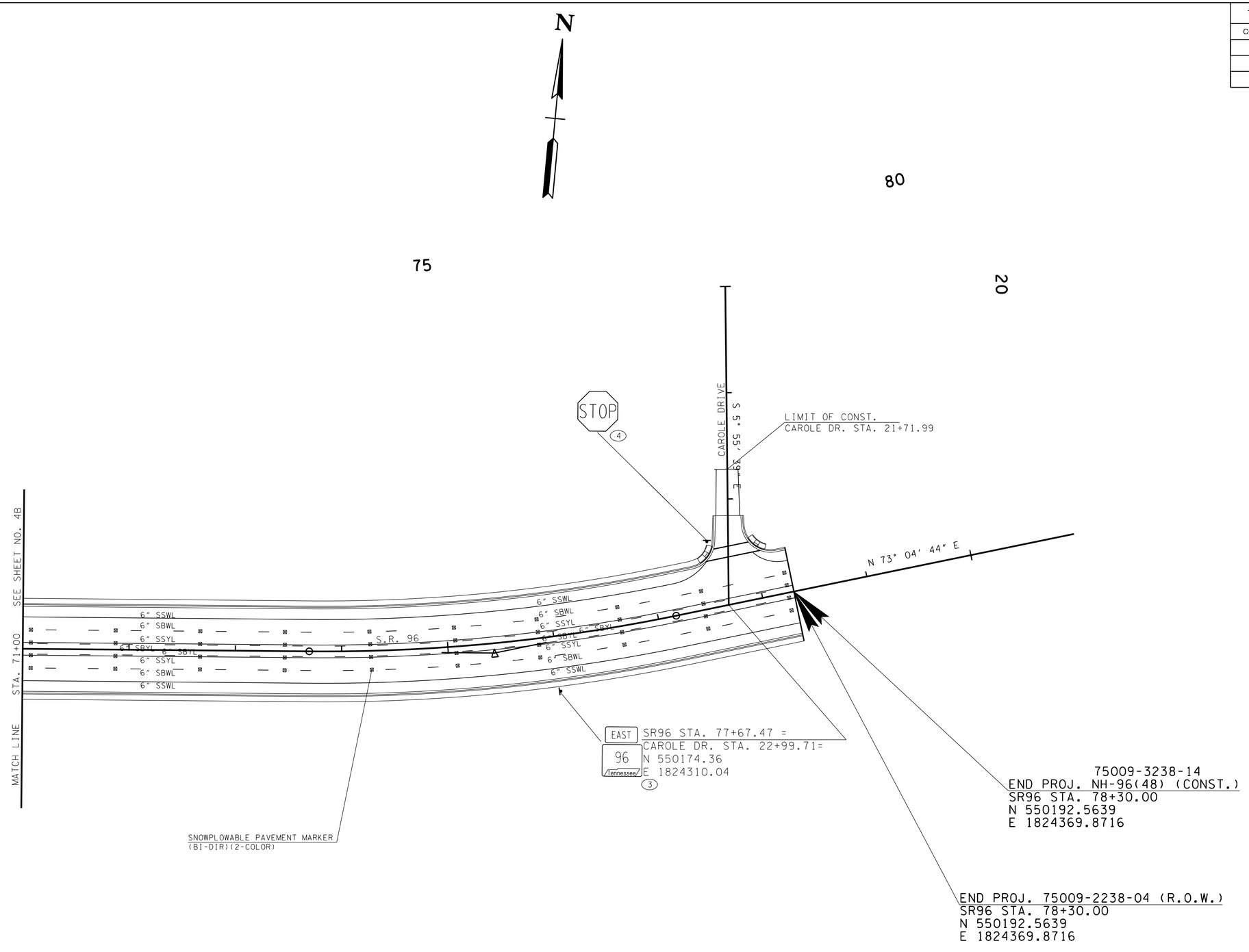
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-96(48)	14



SEALED BY

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00008 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGNING AND PAVEMENT MARKING

STA. 71+00.00 TO STA. 78+30.00

SCALE: 1"= 50'

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ALL SIGNS SHOWN WITH DESIGNATIONS ARE TO BE FABRICATED AS DETAILED IN THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (CURRENT EDITION)

SEE STD. DWG. NO. T-S-19

SIGN NO	LEGEND	SHEET NO	SIZE				COPY				SHIELD	ARROW	SIGN FACE			STEEL DESIGN (BREAK-AWAY)					MINIMUM VERTICAL CLEARANCE	REMARKS
			LENGTH	HEIGHT	RADIUS	BORDER WIDTH	CAPITAL	LOWER CASE	NUMERAL	SERIES			COPY	BACKGROUND	MATERIAL	SUPPORT TYPE	SUPPORT LENGTH	FOOTING	CONC. CU. YD.	REIN STEEL LBS.		
1	W3-3	13	36"	36"									BLACK RED (REF.) GREEN (REF.)	YELLOW (REF.)	0.100" SHEET ALUMINUM	P8	h =13'-6"				5'-0"	
2	SPEED LIMIT 45 R2-1	13	30"	36"									BLACK	WHITE (REF.)	0.080" SHEET ALUMINUM	P8	h =12'-6"				5'-0"	
3	EAST M3-2 96 Tennessee TN-6C	14	24" 30"	12" 24"									BLACK	WHITE (REF.)	0.080" SHEET ALUMINUM	P2	h= 13'-0"				7'-0"	
4	STOP R1-1	14	36"	36"									WHITE (REF.)	RED (REF.)	0.080" SHEET ALUMINUM	P8	h =12'-6"				5'-0"	
5	ONLY R3-5R	13	30"	36"									BLACK	WHITE (REF.)	0.080" SHEET ALUMINUM	P8	h= 11'-0"				5'-0"	
6	OLD FORT PKWY	16	72"	18"	2.5"	1"							WHITE (REF.)	GREEN (REF.)	0.100" SHEET ALUMINUM							
7	VETERANS PKWY	16	72"	18"	2.5"	1"							WHITE (REF.)	GREEN (REF.)	0.100" SHEET ALUMINUM							

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-96(48)	15

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STATE OF TENNESSEE
7/26/2017

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGN SCHEDULE

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	75009-3238-04	16

SIGNAL SUPPORT POLE DATA

POLE NO.	NORTHING	EASTING	GRND ELEV @ POLE	ARM LENGTH
1	550043.0919	1822379.2731	610.21'	80.0'
2	550048.3661	1822483.4408	609.57'	56.0'
3	549925.3630	1822500.7499	610.29	50.0'
4	549917.6648	1822362.6738	610.91	56.0'

NOTE: POLE LENGTHS MUST BE FIELD VERIFIED PRIOR TO FABRICATION.

55

60

105

N

VETERANS PARKWAY

S.R. 96 (OLD FORT PARKWAY)

N 84° 07' 14" E

S 5° 01' 38" W

ONE WAY

PROPOSED MAST ARM POLE #1
STA. 58+29.00, 77.50' LT
TYPE B
3" C (PVC)
2@ 2" C (PVC)
2" C (PVC)
TYPE B
2" C (JACKED OR BORED)

PROPOSED MAST ARM POLE #2
STA. 59+33.00, 74.00' LT
3" C (JACKED OR BORED)
TYPE B
3" C (PVC)
2" C (PVC)
TYPE B

PROPOSED MAST ARM POLE #4
STA. 58+01.50, 46.00' RT
TYPE B
2" C (PVC)

PROPOSED MAST ARM POLE #3
STA. 59+40.00, 50.00' RT
TYPE B
2" C (PVC)

2" C (JACKED OR BORED)

2" C (PVC)

PROPOSED PEDESTAL POLE #1
STA. 59+11.00, 58.50' RT

Old Fort Pkwy — S1
Veterans Pkwy — S2

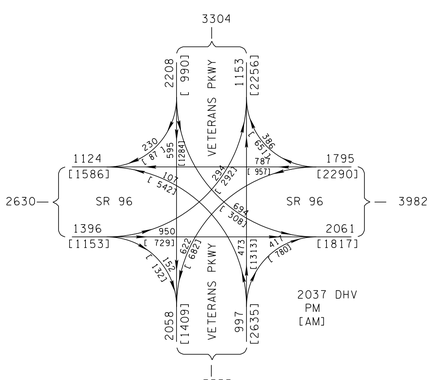
PROPOSED STREET NAME SIGNS. SEE SIGN SCHEDULE SHEET FOR DETAILS.

4.0'
LEFT TURN YIELD ON GREEN
A
1,3,4
1L,2L,3L,4L
2R,3R

PROPOSED SIGNAL HEADS W/ BACKPLATES

C1,C2,C3,C4
VIDEO DETECTION CAMERA

P1,P2,P3,P4
PROPOSED COUNTDOWN PEDESTRIAN HEADS



SEALED BY

STEPHEN K. BRYAN
REGISTERED ENGINEER
STATE OF TENNESSEE
7/25/2017

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00008 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED SIGNAL LAYOUT
INTERSECTION OF SR-96 AND VETERANS PARKWAY

SCALE: 1"=30 '

25-JUL-2017 13:00
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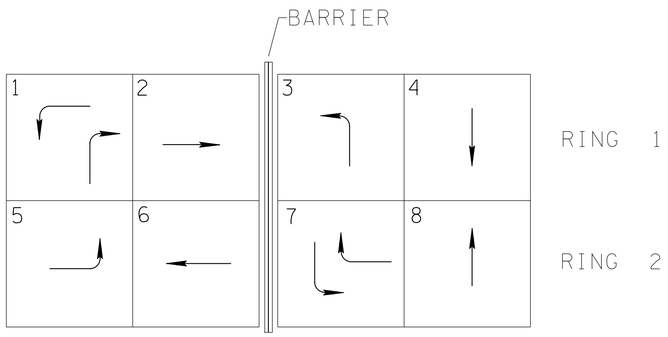
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	75009-3238-04	16A



NEMA EIGHT PHASE DESIGNATIONS

☐ ACTIVE PHASE

☒ INACTIVE PHASE (NOT USED)

- OPERATION IS DUAL ENTRY MODE, FULL SKIP CAPABILITY
- SINGLE DIRECTION, LAGGING LEFT TURN PHASES ARE NOT ALLOWED
- ALL SIGNAL DISPLAYS AND CLEARANCES SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
- SPECIAL SEQUENCING

LEAD - LAG LEFT TURNS (LIST)

THE CONTRACTOR SHALL CONTACT RAM BALACHANDRAN WITH THE CITY OF MURFREESBORO AT (615) 893-6441 A MINIMUM OF THRITY (30) DAYS PRIOR TO THE ACTIVATION OF THE SIGNALS TO OBTAIN THE INITIAL SIGNAL TIMINGS.

BASIC OR SEMI - ACTUATED TIMING (SECS)

PHASE	INITIAL INTERVAL	VEHICLE INTERVAL	MAX I	MAX II	CLEARANCE		PEDESTRIAN		RECALL TO	MEMORY POSITION (1)	LEFT TURN OPERATION (2)
					YELLOW	ALL RED	WALK	FLASHING DONT WALK			
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-

(1) NL = NONLOCK
L = LOCK

(2) PERM = PERMITTED
PROT = PROTECTED
P + P = PROT/PERM

VOLUME - DENSITY TIMING (SECS)

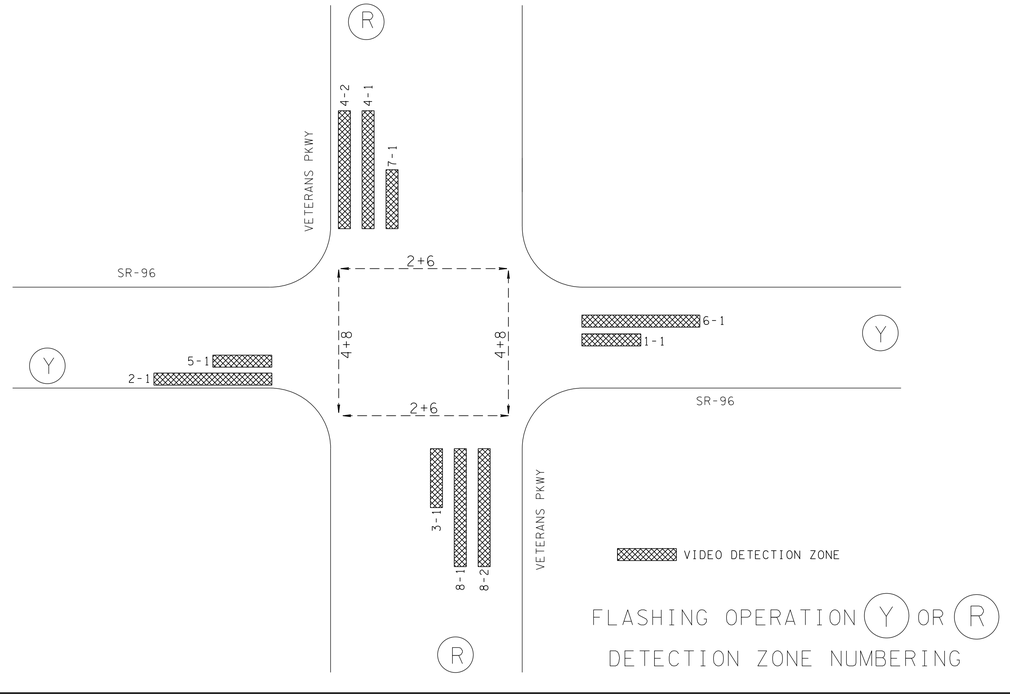
PHASE	INITIAL INTERVAL	ADDED INITIAL PER ACTUATION	PASSAGE TIME	MINIMUM GAP	TIME BEFORE REDUCTION	TIME TO REDUCE	MAX I	MAX II	CLEARANCE		PEDESTRIAN		RECALL TO	MEMORY POSITION (1)
									YELLOW	ALL RED	WALK	FLASHING DONT WALK		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

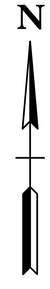
THESE TIMINGS ARE INITIAL AND MAY BE ADJUSTED BY THE CONTRACTOR BASED ON FIELD OBSERVATIONS TO PROVIDE EFFICIENT OPERATION.

VIDEO DETECTOR TARGET ASSIGNMENT

TARGET AREA #	CAMERA #	TARGET AREA (FT)	ASSOC. Ø	COMMENTS
1-1	2	1@6x50	1	
2-1	1	1@6x100	2	
3-1	3	1@6x50	3	
4-1	4	1@6x100	4	
4-2	4	1@6x100	4	
5-1	1	1@6x50	5	
6-1	2	1@6x100	6	
7-1	4	1@6x50	7	
8-1	3	1@6x100	8	
8-2	3	1@6x100	8	

DETECTION ZONE DIAGRAM





EIGHT PHASE

SEALED BY

7/25/2017

INTERSECTION OF SR-96 WITH VETERANS PKWY

STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION

PHASING, TIMING, DETECTOR ASSIGNMENT

25-JUL-2017 13:00
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SHT1173.DGN

PIN. NO. 100282.02

CONST. NO. 75009-3238-14

TYPE	YEAR	PROJECT NO.	SHEET NO.
	2017	NH-96(48)	2

RUTHERFORD COUNTY

X081
STATE ROUTE 96 OVER OVERALL CREEK BR. I.D. NO. 75SR0960011 STATION 68+92.79 LOG MILE 6.29 CONTINUOUS PRECAST PRESTRESSED CONCRETE I-BEAM WITH COMPOSITE CONCRETE DECK SLAB 2 SPAN BRIDGE SPAN NO. 1 = 70'-0" SPAN NO. 2 = 70'-0" TOTAL LENGTH = 140'-0" 84'-0" ROADWAY W/ 5'-6" SIDEWALKS AND STD-11-1 BRIDGE RAILING W/ STRUCTURAL TUBING 60°00'00" SKEW LAYOUT DWG. NO. U-80-124

ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	QUANTITIES	UNIT
202-04.01	REMOVAL OF STRUCTURES (EXIST. BR. NO. 75SR0960011)	1	L.S.
204-02.01	DRY EXCAVATION (BRIDGES)	348	C.Y.
204-03.01	WET EXCAVATION (BRIDGES)	117	C.Y.
204-04.01	ROCK EXCAVATION (BRIDGES)	122	C.Y.
204-05	ROCK DRILLING (BRIDGES)	54	L.F.
204-10.01	FOUNDATION PREPARATION (PIER NO. 1-STATION 68+92.79)	1	L.S.
303-01.02	GRANULAR BACKFILL (BRIDGES)	64	TON
604-02.03	EPOXY COATED REINFORCING STEEL	146,024	LB.
604-03.01	CLASS 'A' CONCRETE (BRIDGES)	494	C.Y.
604-03.02	STEEL BAR REINFORCEMENT (BRIDGES)	49,365	LB.
604-03.04	PAVEMENT AT BRIDGE ENDS	506	S.Y.
604-03.32	CLASS 'DS' CONCRETE (BRIDGE DECK)	368	C.Y.
604-04.01	APPLIED TEXTURE FINISH (NEW STRUCTURES)	1,006	S.Y.
604-04.41	THREE STAR STATE EMBLEM	2	EACH
604-05.31	BRIDGE DECK GROOVING (MECHANICAL)	1,713	S.Y.
606-02.03	STEEL PILES (10 INCH)	492	L.F.
606-02.06	PILE TIPS (STEEL PILES 10 INCH)	34	EACH
610-10.45	DECK DRAINS (GRATE TYPE 2) (STD-1-2)	4	EACH
615-01.03	PRESTRESSED CONCRETE I-BEAM (TYPE III)	1,340	L.F.
617-02	BRIDGE DECK CRACK SEALING	188	L.F.
617-05	SEALANT (HMWM)	1.0	GAL.
620-05	CONCRETE PARAPET WITH STRUCTURAL TUBING (STD-11-1)	335	L.F.
710-09.01	6" PERF. PIPE WITH VERTICAL DRAIN SYSTEM	264	L.F.
710-09.02	6" PIPE UNDERDRAIN	30	L.F.
714-01.01	STRUCTURAL LIGHTING	1	L.S.

LIST OF DRAWINGS

TITLE	DWG. NO.	LAST REV. DATE
LAYOUT OF BRIDGE	U-80-124	
THRU	THRU	
BILL OF STEEL	U-80-145	

LIST OF STANDARD DRAWINGS

	DWG. NO.	LAST REV. DATE
SLIDER PLATE AND DECK DRAINS	STD-1-2	03-28-08
PAVEMENT AT BRIDGE ENDS	STD-1-5	03-26-14
STANDARD PRECAST, PRESTRESSED BRIDGE DECK PANELS GENERAL DETAILS	STD-4-1	04-08-05
STANDARD PRECAST, PRESTRESSED BRIDGE DECK PANELS DESIGN CRITERIA	STD-4-2	04-08-05
STANDARD PRECAST, PRESTRESSED BRIDGE DECK PANELS GENERAL DETAILS	STD-4-3	03-02-02
STANDARD PRECAST, PRESTRESSED BRIDGE DECK PANELS CONSTRUCTION DETAILS	STD-4-4	06-10-96
STANDARD PILE DETAILS	STD-5-1	10-25-93
STANDARD PILE DETAILS	STD-5-2	05-01-14
STANDARD SEISMIC DETAILS	STD-6-1	11-01-10
STANDARD SEISMIC DETAILS	STD-6-2	11-07-94
LIGHT STANDARD SUPPORT DETAILS	STD-8-2	11-01-10
REINFORCING BAR SUPPORT DETAILS FOR CONCRETE SLAB	STD-9-1	10-07-08
MISCELLANEOUS ABUTMENT AND DRAINAGE DETAILS	STD-10-1	04-08-05
BRIDGE RAILING W/STRUCTUAL TUBING	STD-11-1	05-01-14
STANDARD DETAILS AND INTERMEDIATE DIAPHRAGMS FOR I-BEAMS	STD-14-2	11-01-10

LIST OF SPECIAL PROVISIONS

	PROV. NO.	LAST REV. DATE
REGARDING BRIDGE DECK CRACK SEALANT	604CR	02-19-96

LIST OF REFERENCE DRAWINGS

	DWG. NO.
LAYOUT OF BRIDGE	M-142-114
THRU	THRU
BILL OF STEEL	M-142-127

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ESTIMATED BRIDGE QUANTITIES

DRAWN BY C. BERNATEK 06/17

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LAY1173.DGN

PIN NO. 100282.02

CONST. NO. 75009-3238-14

PROJECT NO.	YEAR	SHEET NO.
NH-96(48)	2017	

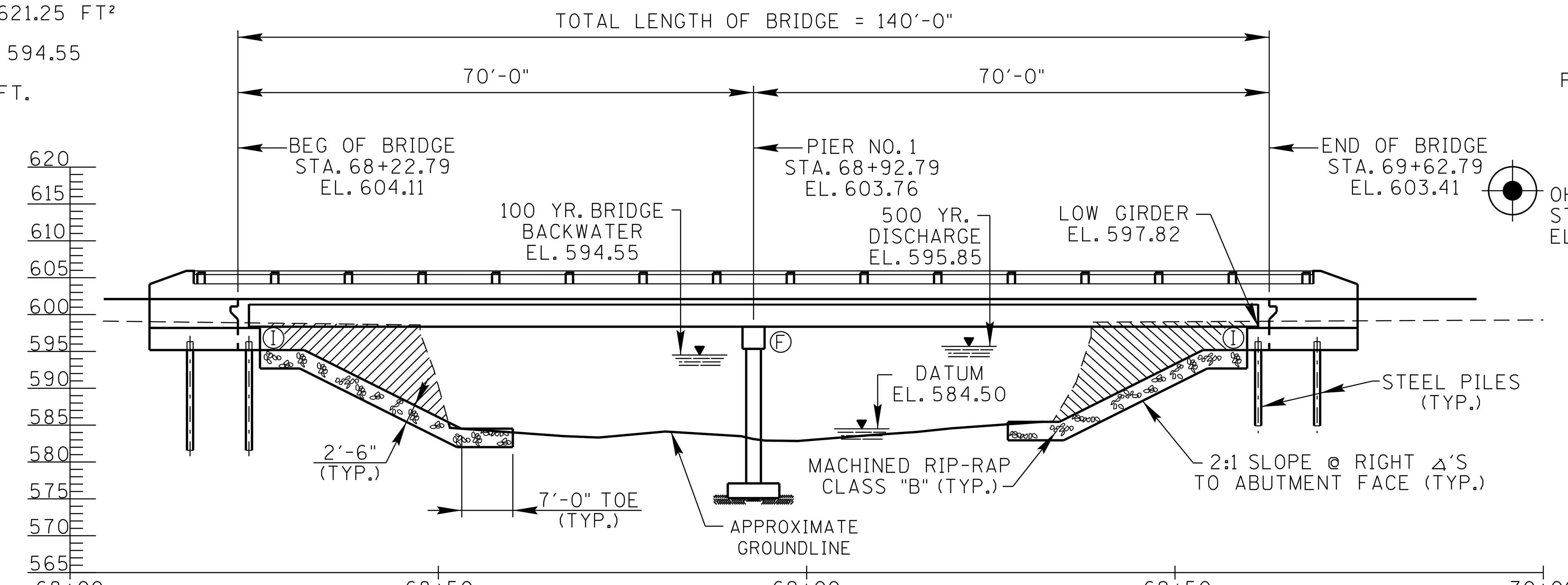
REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

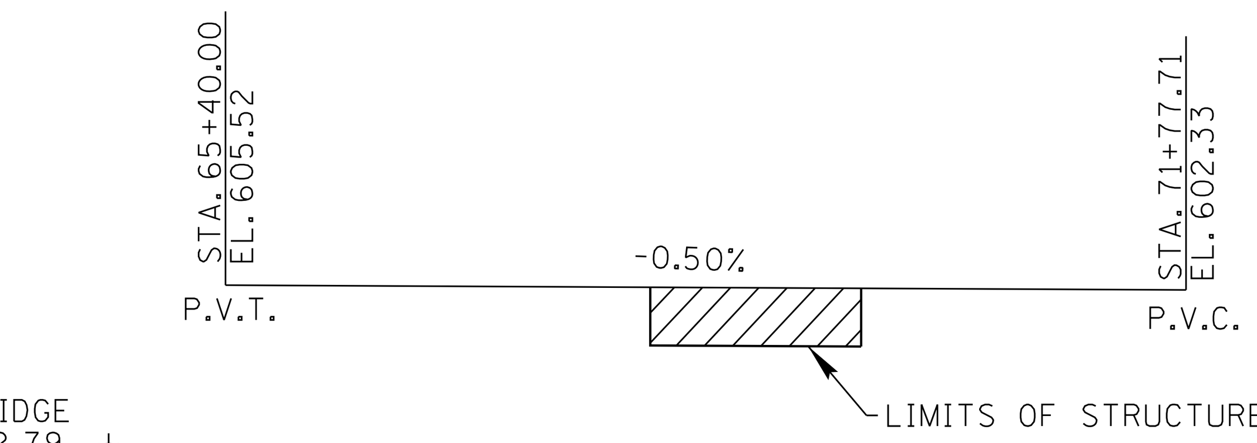
HYDRAULIC DATA

DRAINAGE AREA = 10.87 MI.²
CONTRIBUTING DRAINAGE AREA = 9.07 MI.²
DESIGN DISCHARGE (100 YR.) = 4870 CFS
WATER AREA PROVIDED BELOW EL. 594.13 = 621.25 FT²
100 YR. VELOCITY = 7.84 FPS
100 YR. BRIDGE BACKWATER = 0.57 FT. @ EL. 594.55
ROADWAY OVERTOPPING EL. = 602.14
500 YR. DISCHARGE 6150 CFS @ EL. 595.85 FT.

Ⓘ DENOTES: INTEGRAL
Ⓕ DENOTES: FIXED
DENOTES: HATCHED AREA TO BE EXCAVATED AND PAID FOR AS A ROADWAY ITEM.



ELEVATION VIEW
SCALE: 1" = 15'-0"



GRADE SKETCH
STATE ROUTE 96
N.T.S.

LIST OF DRAWINGS

LIST OF DRAWINGS	DWG. NO.	LAST REV. DATE
LAYOUT OF BRIDGE	U-80-124	----
GENERAL NOTES AND ESTIMATED QUANTITIES	U-80-125	----
FOUNDATION DATA	U-80-126	----
FOUNDATION DATA	U-80-126A	----
SUPERSTRUCTURE	U-80-127	----
SUPERSTRUCTURE	U-80-128	----
SUPERSTRUCTURE DETAILS	U-80-129	----
SUPERSTRUCTURE DETAILS	U-80-130	----
SUPERSTRUCTURE DETAILS	U-80-131	----
SUPERSTRUCTURE DETAILS	U-80-132	----
SUPERSTRUCTURE DETAILS	U-80-133	----
SUPERSTRUCTURE DETAILS	U-80-133A	----
PRESTRESSED I-BEAM DETAILS SPANS NO. 1 AND NO. 2	U-80-134	----
ABUTMENT NO. 1	U-80-135	----
ABUTMENT NO. 1	U-80-136	----
ABUTMENT NO. 1 DETAILS	U-80-137	----
ABUTMENT NO. 2	U-80-138	----
ABUTMENT NO. 2	U-80-139	----
ABUTMENT NO. 2 DETAILS	U-80-140	----
PIER NO. 1	U-80-141	----
PIER NO. 1 DETAILS	U-80-142	----
PIER NO. 1 DETAILS	U-80-143	----
FINAL FOUNDATION DATA	U-80-144	----
BILL OF STEEL	U-80-145	----

LIST OF STANDARD DRAWINGS

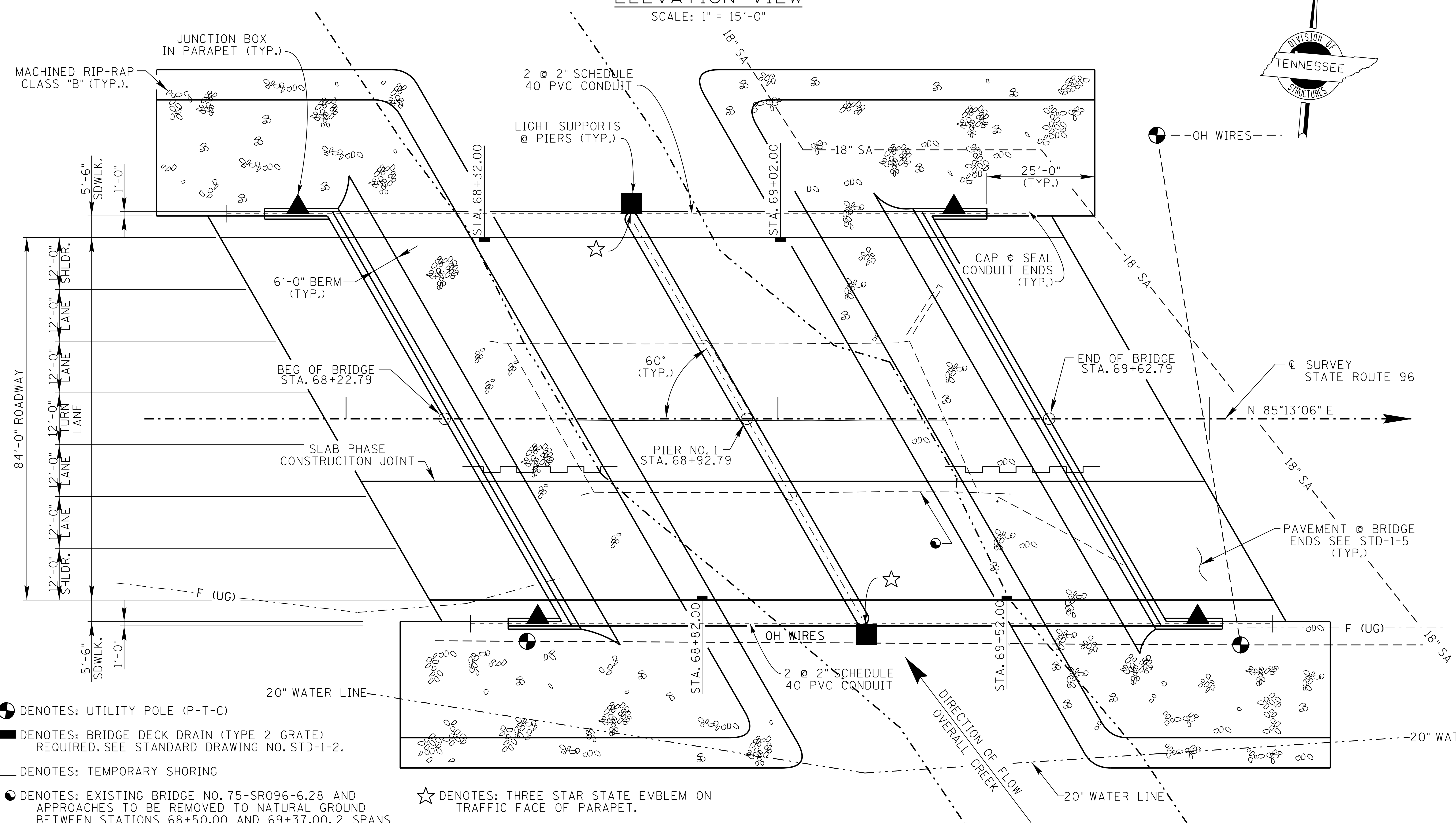
LIST OF STANDARD DRAWINGS	DWG. NO.	LAST REV. DATE
SLIDER PLATE AND DECK DRAINS	STD-1-2	03-28-08
PAVEMENT AT BRIDGE ENDS	STD-1-5	03-26-14
STANDARD PRECAST, PRESTRESSED BRIDGE DECK PANELS GENERAL DETAILS	STD-4-1	04-08-05
STANDARD PRECAST, PRESTRESSED BRIDGE DECK PANELS DESIGN CRITERIA	STD-4-2	04-08-05
STANDARD PRECAST, PRESTRESSED BRIDGE DECK PANELS GENERAL DETAILS	STD-4-3	03-02-02
STANDARD PRECAST, PRESTRESSED BRIDGE DECK PANELS CONSTRUCTION DETAILS	STD-4-4	06-10-96
STANDARD PILE DETAILS	STD-5-1	10-25-93
STANDARD PILE DETAILS	STD-5-2	05-01-14
STANDARD SEISMIC DETAILS	STD-6-1	11-01-10
STANDARD SEISMIC DETAILS	STD-6-2	11-07-94
LIGHT STANDARD SUPPORT DETAILS	STD-8-2	11-01-10
REINFORCING BAR SUPPORT DETAILS FOR CONCRETE SLAB	STD-9-1	10-07-08
MISCELLANEOUS ABUTMENT AND DRAINAGE DETAILS	STD-10-1	04-08-05
BRIDGE RAILING WITH STRUCTURAL TUBING	STD-11-1	05-01-14
STANDARD DETAILS AND INTERMEDIATE DIAPHRAGMS FOR I-BEAMS	STD-14-2	11-01-10

LIST OF SPECIAL PROVISIONS

LIST OF SPECIAL PROVISIONS	PROV. NO.	LAST REV. DATE
REGARDING BRIDGE DECK CRACK SEALANT	604CR	02-19-96

LIST OF REFERENCE DRAWINGS

LIST OF REFERENCE DRAWINGS	DWG. NO.
LAYOUT OF BRIDGE THRU BILL OF STEEL	M-142-114 THRU M-142-127



DENOTES: UTILITY POLE (P-T-C)
DENOTES: BRIDGE DECK DRAIN (TYPE 2 GRATE) REQUIRED. SEE STANDARD DRAWING NO. STD-1-2.
DENOTES: TEMPORARY SHORING
DENOTES: EXISTING BRIDGE NO. 75-SR096-6.28 AND APPROACHES TO BE REMOVED TO NATURAL GROUND BETWEEN STATIONS 68+50.00 AND 69+37.00. 2 SPANS OF 43'-1½" USING 24" X 48" BOX BEAMS.
☆ DENOTES: THREE STAR STATE EMBLEM ON TRAFFIC FACE OF PARAPET.

PLAN VIEW
SCALE: 1" = 15'-0"

ANY WORK WITHIN THE STREAM CHANNEL AREA (E.G., FOR PIER FOOTING, RIP-RAP PLACEMENT, MULTI-BARREL CULVERT/BRIDGE CONSTRUCTION, ETC.) SHALL BE SEPARATED FROM FLOWING WATER OR EXPECTED FLOW PATH AND PERFORMED DURING LOW FLOW CONDITIONS. ALL ITEMS USED WITHIN THE STREAM CHANNEL AREA FOR DIVERSION OF FLOW (OR EXPECTED FLOW), UNLESS SPECIFIED IN THE PLANS, SHALL NOT BE PAID FOR DIRECTLY BUT SHALL BE INCLUDED IN THE COST OF OTHER ITEMS. THIS NOTE EXCLUDES ANY ITEMS SPECIFIED IN THE PLANS FOR THE TEMPORARY DIVERSION CHANNELS, EC-STR-31 AND TEMPORARY DIVERSION CULVERTS, EC-STR-32 FOR SINGLE BARREL CULVERT CONSTRUCTION.

2037 ADT = 25,160
84'-0" ROADWAY W/5'-6" SIDEWALKS
STD-11-1 BRIDGE RAILING W/STRUCTURAL TUBING
DESIGN SPEED = 60 mph

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

LAYOUT OF BRIDGE
STATE ROUTE 96
OVER
OVERALL CREEK
BRIDGE I.D. NO. 75SR0960011
STATION 68+92.79
LOG MILE 6.29
RUTHERFORD COUNTY
2017

JOHN HOUSTON WALKER — STATE OF TENNESSEE — 7/25/2017

CORRECT ______ ENGINEER OF STRUCTURES

DESIGNED BY	BART ROMANO	DATE	06-17
DRAWN BY	(A.P.H.) T. WISEMAN	DATE	06-17
SUPERVISED BY	MBC / JHW	DATE	06-17
CHECKED BY	SCOTT STEPP	DATE	07-17

U-80-124

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TEMPORARY MEDIAN BARRIER = 188 L.F.   MACHINED RIP-RAP CLASS "B" = 540 TONS

GENERAL NOTES:

SPECIFICATIONS: STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION (JANUARY 1, 2015 EDITION).

LOADING: HL-93 LIVE LOADING; SITE CLASS "B", SEISMIC CATEGORY "A" WITH A_S = 0.077, S_{DS} =0.189, S_{D1} =0.073, (1000 YEAR RETURN PERIOD). DEAD LOAD INCLUDES 35 LB./SQ. FT. FOR FUTURE WEARING SURFACE.

DESIGN SPECIFICATIONS: AASHTO LRFD SEVENTH EDITION, 2014, AND THE 2011 AASHTO GUIDE SPECIFICIATIONS FOR LRFD SEISMIC BRIDGE DESIGN, EDITION 2 (WITH INTERIMS.)

CONCRETE: TO BE CLASS "A" (CAST IN PLACE). f'c = 3,000 PSI. EXCEPT AS NOTED OTHERWISE.

CLASS "DS" CONCRETE FOR BRIDGE DECKS SHALL BE IN ACCORDANCE WITH SECTION 604 OF THE STANDARD SPECIFICATIONS. CLASS "A" CONCRETE IN PAVEMENT AT BRIDGE ENDS SHALL HAVE SURFACE AGGREGATE IN ACCORDANCE WITH ARTICLE 903.24 OF THE SPECIFICATIONS.

BRIDGE DECK SURFACE FINISH: TO BE IN ACCORDANCE WITH METHOD 3 IN ARTICLE 604.22 OF THE STANDARD SPECIFICATIONS.

BRIDGE DECK FORMS: BRIDGE DECK FORMS FOR CONCRETE DECKS SHALL BE CONSTRUCTED USING EITHER REMOVABLE FORMS OR PERMANENT FORMS. PERMANENT FORMS MAY BE EITHER REMAIN-IN PLACE STEEL OR PRECAST, PRESTRESSED CONCRETE PANELS. IN EITHER CASE, FORMS SHALL BE ATTACHED BY MEANS OTHER THAN WELDING TO MAIN STRUCTURAL MEMBERS OR REINFORCING STEEL. TEMPORARY ERECTION DIAPHRAGMS MUST BE USED AT THE ENDS OF PRECAST CONCRETE GIRDERS WHERE END DIAPHRAGMS, SUPPORT DIAPHRAGMS, OR ABUTMENT BACKWALLS ARE TO BE POURED CONCURRENTLY WITH THE DECK AND SHALL BE PROVIDED ELSEWHERE IN ACCORDANCE WITH THE SPECIFICATIONS TO PREVENT GIRDER ROTATION. SEE STANDARD DRAWINGS STD-4-1 THRU 4, STD-14-2 AND ARTICLE 604.05 OF THE STANDARD SPECIFICATIONS.

REINFORCING STEEL: SHALL BE ASTM A615 GRADE 60 UNLESS NOTED OTHERWISE. SEE SECTION 604 AND 907 OF THE STANDARD SPECIFICATIONS.

FOUNDATION PREPARATION: SEE SECTION 204 OF THE STANDARD SPECIFICATIONS. IF COFFERDAMS ARE REQUIRED, THEY SHALL BE IN ACCORDANCE WITH SECTION 204.09 OF THE STANDARD SPECIFICATIONS.

SPECIAL NOTE-FOOTING FOR PIERS: AFTER EXCAVATION TO COMPETENT ROCK FOR FOOTING HAS BEEN COMPLETED, HOLES 6' DEEP SHALL BE DRILLED AT POINTS DESIGNATED BY THE ENGINEER. FROM THE RESULTS OBTAINED, THE ENGINEER SHALL DETERMINE THE FINAL FOOTING ELEVATIONS. NO REINFORCING STEEL FOR PIER COLUMNS OR FOOTINGS SHALL BE ORDERED UNTIL FINAL FOOTING ELEVATIONS HAVE BEEN DETERMINED.

PILES: TO BE HP 10X42 DRIVEN TO REFUSAL ON ROCK OR A MINIMUM BEARING OF 55 TONS FOR THE ABUTMENTS.

PILE TIP: PILES SHALL BE EQUIPPED WITH CAST STEEL POINTS. SEE STANDARD DRAWING STD-5-1 FOR ADDITIONAL NOTES.

NOTE: THE FILLS AT THE ENDS OF THE BRIDGE SHALL BE IN PLACE AND THOUROUGHLY COMPACTED BEFORE ANY ABUTMENT PILES ARE DRIVEN.

BRIDGE RAIL SYSTEM: BUILD BRIDGE RAILINGS ACCORDING TO STANDARD DRAWING STD-11-1. THE RAILING SHALL BE FORMED AND CAST PLUMB, NOT PERPENDICULAR TO THE SLAB. THE DIMENSIONS AT THE TRAFFIC FACE SHALL BE KEPT CONSTANT, WITH VARIATION DUE TO CROSS SLOPE ACCOMMODATED AT THE REAR FACE.

NOTE: THE CONTRACTOR SHALL PROVIDE 100% CONVENTIONAL FALL PROTECTION FOR WORKERS INSTALLING DECKING ABOVE 15 FEET.

SHOP DRAWINGS: SECTION 105.02 OF THE STANDARD SPECIFICATIONS.

RIP-RAP: MACHINED RIP-RAP SHALL BE CLASS "B" IN ACCORDANCE WITH SECTION 709 OF THE STANDARD SPECIFICATIONS AND SHALL BE MEASURED AND PAID FOR UNDER ROADWAY ITEM 709-05.08.

VALUE ENGINEERING ALTERNATE BRIDGE DESIGN CRITERIA: ALTERNATE BRIDGE DESIGN PROPOSALS MAY NOT DIMINISH THE FUNCTIONAL OR STRUCTURAL EQUIVALENCY OF THE BRIDGE AND MUST MEET OR EXCEED BOTH THE SERVICE LEVEL AND ULTIMATE CAPACITIES OF THE CONTRACT PLANS STRUCTURE. ADDITIONALLY, THE WATERWAY OPENING AND FLOOD CLEARANCES MAY NOT BE REDUCED; FOR GRADE SEPARATIONS, THE HORIZONTAL CLEARANCES MAY NOT BE REDUCED, NOR MAY THE VERTICAL CLEARANCES BE LESS THAN THE MINIMUM ACCEPTABLE FOR THE TYPE FACILITY CROSSED.

REQUIREMENTS AND RESTRICTIONS FOR PHASE CONSTRUCTION

1. THE STAGE CONSTRUCTION SEQUENCE MAY PROHIBIT THE EXTRACTION OF SOME COFFERDAM SHEET PILING. ALL COSTS ASSOCIATED WITH SHEET PILING SHALL BE INCLUDED IN THE LUMP SUM BID PRICE FOR FOUNDATION PREPARATION.
2. THE LOCATION OF LONGITUDINAL CONSTRUCTION JOINTS SHALL NOT BE CHANGED TO ACCOMMODATE REMAIN-IN-PLACE FORMS.
3. NO SHEET PILES OR BEARING PILES MAY BE DRIVEN FROM THE EXISTING OR PROPOSED STRUCTURE.
4. TWO TRAFFIC LANES (11'-0" MIN.) SHALL BE MAINTAINED AT ALL TIMES.

FINISHING CONCRETE SURFACES: CONCRETE FINISHING SHALL BE IN ACCORDANCE WITH SECTION 604.21 OF THE TENNESSEE STANDARD SPECIFICATION. A CLASS I FINISH FOLLOWED BY AN APPLIED TEXTURE FINISH SHALL BE USED IN LIEU OF A CLASS II FINISH. NO TEXTURE FINISH SHALL BE APPLIED PRIOR TO COMPLETION OF PAVING AND HAULING OPERATIONS AT THE BRIDGE SITE. THE APPLIED TEXTURE FINISH SHALL BE MEASURED AND PAID FOR UNDER ITEM NO. 604-04.01.

SPECIAL NOTE FOR UTILITIES: IT IS INTENDED THAT THE COST OF MATERIALS AND LABOR NECESSARY FOR THE COMPLETE INSTALLATION OF UTILITIES SHALL BE BORNE BY OTHERS AND SHALL NOT BE PAID FOR AS A PART OF THIS CONTRACT. THE CONTRACTOR SHALL COOPERATE WITH OTHERS IN THE INSTALLATION OF UTILITIES WITH NO ADDITIONAL COMPENSATION ALLOWED THE CONTRACTOR AS A RESULT.

CONST. NO. 75009-3238-14

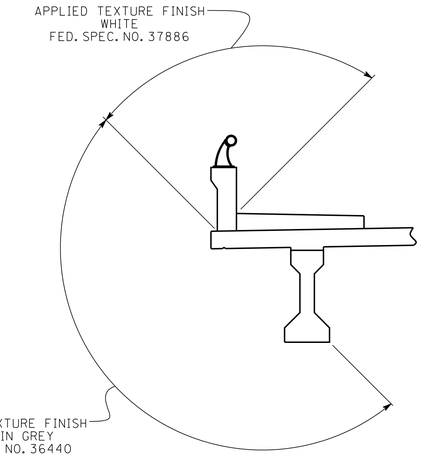
PROJECT NO.	YEAR	SHEET NO.
NH-96(48)	2017	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

ESTIMATED QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	TOTAL	SUPERSTRUCTURE	ABUTMENT NO. 1	PIER NO. 1	ABUTMENT NO. 2
(2)	202-04.01	REMOVAL OF STRUCTURES (EXIST. BR. NO. 75SR0960011)	L.S.	1				
(3)	204-02.01	DRY EXCAVATION (BRIDGES)	C.Y.	348		174		174
(3)	204-03.01	WET EXCAVATION (BRIDGES)	C.Y.	117			117	
(10)(3)	204-04.01	ROCK EXCAVATION (BRIDGES)	C.Y.	122			122	
	204-05	ROCK DRILLING (BRIDGES)	L.F.	54			54	
(4)	204-10.01	FOUNDATION PREPARATION (PIER NO. 1-STATION 68+92.79)	L.S.	1			1	
(7)	303-01.02	GRANULAR BACKFILL (BRIDGES)	TON	64		32		32
	604-02.03	EPOXY COATED REINFORCING STEEL	LB.	146,024	139,080	3,472		3,472
(9)	604-03.01	CLASS 'A' CONCRETE (BRIDGES)	C.Y.	494	47	91	265	91
	604-03.02	STEEL BAR REINFORCEMENT (BRIDGES)	LB.	49,365	2,246	10,483	26,153	10,483
(1)	604-03.04	PAVEMENT AT BRIDGE ENDS	S.Y.	506		253		253
	604-03.32	CLASS 'DS' CONCRETE (BRIDGE DECK)	C.Y.	368	368			
	604-04.01	APPLIED TEXTURE FINISH (NEW STRUCTURES)	S.Y.	1,006	520	50	386	50
	604-04.41	THREE STAR STATE EMBLEM	EACH	2				
	604-05.31	BRIDGE DECK GROOVING (MECHANICAL)	S.Y.	1,713	1,713			
	606-02.03	STEEL PILES (10 INCH)	L.F.	492		202		290
(11)	606-02.06	PILE TIPS (STEEL PILES 10 INCH)	EACH	34		17		17
	610-10.45	DECK DRAINS (GRATE TYPE 2) (STD-1-2)	EACH	4				
(5)	615-01.03	PRESTRESSED CONCRETE I-BEAM (TYPE III)	L.F.	1,340				
(12)	617-02	BRIDGE DECK CRACK SEALING	L.F.	188				
	617-05	SEALANT (HMWM)	GAL.	1.0				
	620-05	CONCRETE PARAPET WITH STRUCTURAL TUBING (STD-11-1)	L.F.	335				
(6)	710-09.01	6" PERF. PIPE WITH VERTICAL DRAIN SYSTEM	L.F.	264		132		132
	710-09.02	6" PIPE UNDERDRAIN	L.F.	30		15		15
(13)	714-01.01	STRUCTURAL LIGHTING	L.S.	1				



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APPLIED TEXTURE FINISH SKETCH

NOTE: IN ADDITION TO THE SURFACES SHOWN IN THE APPLIED TEXTURE FINISH SKETCH ALL EXPOSED SURFACES OF THE WINGWALLS, ABUTMENT BEAMS, PIER AND EXTERIOR PORTIONS OF ENDWALLS ARE TO RECIEVE AN APPLIED TEXTURE FINISH (MOUNTAIN GREY, FED. SPEC. NO. 36440).

(1) NOTE: PRIOR TO CONSTRUCTION OF THE PAVEMENT AT BRIDGE ENDS, THE CONTRACTOR SHALL SUBMIT A PROPOSED BILL OF STEEL TO THE ENGINEER FOR APPROVAL.

(2) NOTE: LUMP SUM: EXISTING BRIDGE NO. 75-SR096-6.28 AND APPROACHES TO BE REMOVED TO NATURAL GROUND BETWEEN STA. 68+50.00 AND STA. 69+37.00. EXISTING BRIDGE CONSISTS OF 2 SPANS @ 43'-1½" WITH 24" × 48" BOX BEAMS, FLARED CLOSED ABUTMENTS AND WALL PIERS.

(3) EXCAVATION BASED ON FINAL PROFILE AT ABUTMENTS AND EXISTING GROUNDLINE AT PIER.

(4) NOTE: SEE FOUNDATION PREPARATION NOTE THIS SHEET.

(5) NOTE: COST OF ELASTOMERIC PADS AND RUBBER BONDING CEMENT TO BE INCLUDED IN THE UNIT PRICE BID FOR THE PRESTRESSED BEAM.

(6) NOTE: COST OF POLYETHYLENE SHEETING AND ALL MISCELLANEOUS ITEMS NECESSARY FOR INSTALLATION TO BE INCLUDED IN THE UNIT PRICE BID FOR PERFORATED PIPE.

(7) NOTE: GRANULAR BACKFILL SHALL BE CLASS "A" GRADING "D" MATERIAL. SEE STANDARD DRAWING STD-10-1.

(8) NOTE: THE COST OF BITUMINOUS-FIBERBOARD AND ALL MISCELLANEOUS JOINT MATERIAL TO BE INCLUDED IN THE UNIT PRICE BID FOR OTHER ITEMS.

(9) NOTE: THE COST OF ALL MATERIALS AND LABOR NECESSARY FOR THE INSTALLATION OF 20 ANCHOR BOLT ASSEMBLIES SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CLASS "A" CONCRETE (BRIDGES), ITEM NO. 604-03.01.

(10) NOTE: AT PIER NO. 1, APPROXIMATELY 3'-6" OF WEATHERED ROCK LAYER TO BE EXCAVATED TO REACH COMPETENT ROCK.

(11) NOTE: THE UNIT PRICE BID FOR THE CAST STEEL POINTS SHALL INCLUDE FURNISHING AND INSTALLATION TO THE PILES.

(12) INCLUDES ALL COST FOR INSTALLING THE BRIDGE DECK CRACK SEALER (HMWM) INCLUDING CRACK PREPARATION, CLEANING, LABOR AND ALL MISCELLANEOUS MATERIALS REQUIRED TO SEAL THE LONGITUDINAL CONSTRUCTION JOINT ACCORDING TO SPECIAL PROVISION 604CR AND MANUFACTURER'S SPECIFICATIONS. CRACK SEALING SHALL BE DONE AT THE END OF CONSTRUCTION TO ALLOW SHRINKAGE OF DECK CONCRETE CAUSING THE CRACK TO OCCUR.

(13) NOTE: LUMP SUM FOR STRUCTURE LIGHTING, ITEM NO. 714-01.01 INCLUDES 810 FT. 2" ø SCH. 40 PVC CONDUIT WITH PULL WIRES, 4 PARAPET JUNCTION BOXES, 2 SETS OF ANCHOR BOLTS AND ALL NECESSARY MATERIALS FOR INSTALLATION OF STRUCTURE LIGHTING.

DESIGNED BY B.G. ROMANO DATE 07-16
DRAWN BY C. BERNATEK DATE 06-17
SUPERVISED BY M.B.C./J.H.W. DATE 06-17
CHECKED BY S. STEPP DATE 07-17

JOHN HOUSTON WALKER — LICENSED — AGRICULTURE — STATE OF TENNESSEE — 7/25/2017

CORRECT — ENGINEER OF STRUCTURES

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES AND ESTIMATED QUANTITIES
STATE ROUTE 96
OVER
OVERALL CREEK
STATION 68+92.79
LOG MILE 6.29
RUTHERFORD COUNTY
2017

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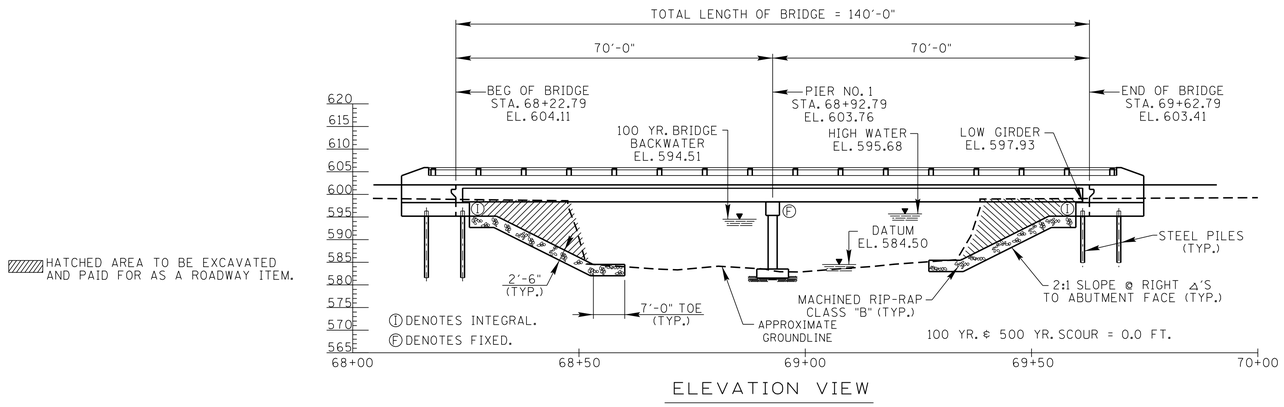
PIN. NO. 100282.02

CONST. NO. 75009-3238-14

PROJECT NO.	YEAR	SHEET NO.
NH-96(48)	2017	

REVISIONS

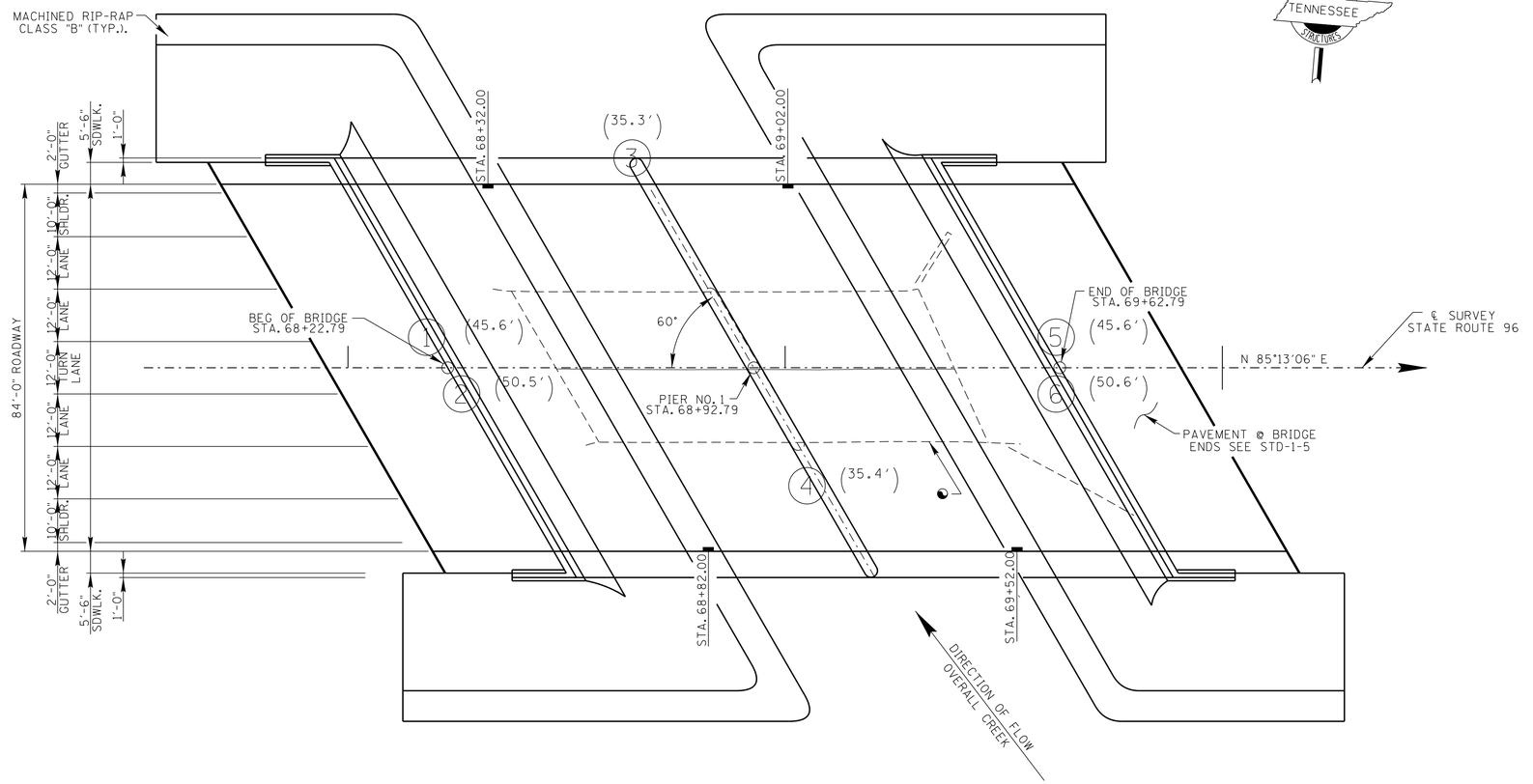
NO.	DATE	BY	BRIEF DESCRIPTION



ELEVATION VIEW

BORING NO.	STATION	OFFSET	GROUND ELEVATION	ROCK ELEVATION	TOTAL DEPTH
1	68+18.00	LT 7.0'	599.00	586.10	45.6'
2	68+26.00	RT 6.0'	599.00	587.40	50.5'
3	68+65.00	LT 48.0'	582.00	578.30	35.3'
4	69+05.00	RT 27.0'	582.50	579.20	35.4'
5	69+62.00	LT 7.0'	598.50	579.80	45.6'
6	69+62.00	RT 6.0'	599.00	581.9	50.6'

NOTE:
BORING DEPICTIONS SHOWN ON FOUNDATION DATA SHEET INDICATE GENERAL SOIL AND ROCK TYPES AT THE SPECIFIC BORING LOCATIONS.



PLAN VIEW

LEGEND

(1) (24.5') — BORING LOCATION TERMINATION DEPTH (NO REFUSAL)

NOTE: THIS DRAWING IS FOR FOUNDATION DATA ONLY AND IS NOT TO BE USED AS A LAYOUT.

■ DENOTES: BRIDGE DECK DRAIN (TYPE 2 GRATE) REQUIRED. SEE STANDARD DRAWING NO. STD-1-2.

◔ DENOTES EXISTING BRIDGE NO. 75SR0960011 AND APPROACHES TO BE REMOVED TO NATURAL GROUND BETWEEN STATIONS 68+50.00 AND 69+37.00.

DESIGNED BY B. ROMANO DATE 09-16
DRAWN BY M. DYE (APH) DATE 09-16
SUPERVISED BY M.B.C./JHW DATE 09-16
CHECKED BY S. STEPP DATE 07-17

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
FOUNDATION DATA
STATE ROUTE 96
OVER
OVERALL CREEK
BRIDGE I.D. NO. 75SR0960011
STATION 68+92.79
LOG MILE 6.29
RUTHERFORD COUNTY
2017

CORRECT Jed A. Kniazewycz
ENGINEER OF STRUCTURES

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CONST. NO. 75009-3238-14

PROJECT NO.	YEAR	SHEET NO.
NH-96(48)	2017	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

DEFINTION OF EARTHWORK TERMS

THE TERMS AND DEFINITIONS BELOW SHALL CHARACTERIZE THE MATERIAL TYPE THAT WILL BE ENCOUNTERED DURING EXCAVATION AND GRADING. SEE TYPE MATERIAL REFERENCE IN TYPICAL SECTIONS LEGEND.

A. SOIL MATERIAL

SOIL MATERIAL IS MATERIAL THAT IS PREDOMINANTLY MADE UP OF NATURALLY OCCURRING MINERAL PARTICLES WHICH ARE FAIRLY READILY SEPARATED INTO RELATIVELY SMALL PIECES, AND IN WHICH THE MASS MAY CONTAIN AIR, WATER OR ORGANIC MATERIALS. THIS MATERIAL MAY CONTAIN ROCK PIECES IN THE FORM OF DISCONNECTED SLABS, LENSES, OR BOULDERS OF LESS THAN APPROXIMATELY 0.5 CUBIC YARDS. THE MAIN SOIL GROUPS CONSIST OF CLAY, SILT, SAND, GRAVEL, COBBLES, BOULDERS (LESS THAN 0.5 CUBIC YARD VOLUME) OR A COMBINATION OF ANY OF THE CONSTITUENTS. FOR CONSTRUCTION PURPOSES, THIS MATERIAL WOULD TYPICALLY BE CONSIDERED TO BE EXCAVATABLE BY CONVENTIONAL EXCAVATION MACHINERY SUCH AS PANS, TRACK HOES, OR FRONT END EXCAVATORS/LOADERS. THIS MATERIAL WOULD HAVE A SHRINK FACTOR AS GIVEN IN THE SHRINK FACTORS SHOWN IN SECTION 2-145.10 OF THE DESIGN GUIDELINES OR AS RECOMMENDED BY THE GEOTECHNICAL ENGINEERING SECTION OF THE MATERIALS AND TESTS DIVISION.

B. SOLID ROCK MATERIAL

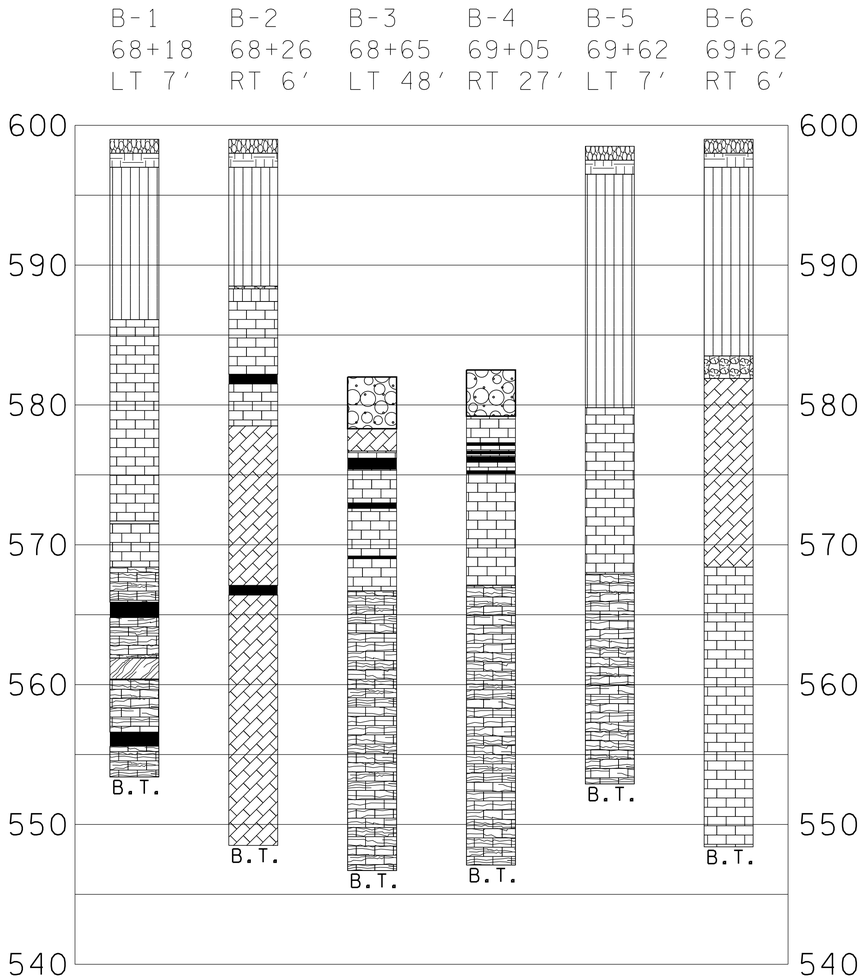
SOLID ROCK MATERIAL IS THAT NATURALLY OCCURRING MATERIAL COMPOSED OF MINERAL PARTICLES SO FIRMLY BONDED TOGETHER THAT RELATIVELY GREAT EFFORT IS REQUIRED TO SEPARATE THE PARTICLES (I.E. BLASTING OR HEAVY CRUSHING FORCES). FOR CONSTRUCTION PURPOSES, THIS MATERIAL WOULD TYPICALLY HAVE TO BE BLASTED TO SEPARATE INTO PIECES SMALL ENOUGH TO LOAD AND TRANSPORT ON EARTH MOVING TRUCKS AND WHICH WHEN SUBJECTED TO PROPER PRE-SPLIT AND PRODUCTION BLASTING WOULD RESULT IN A UNIFORM STABLE ROCK CUT FACE. NOTE THAT THIS MATERIAL WOULD NOT BY DEFINITION NECESSARILY BE A PROVEN SOURCE OF ANY ROCK TYPE AGGREGATE SUCH AS SOLID ROCK, GRADED SOLID ROCK, RIP RAP, OR OTHER ROCK AGGREGATE CONSTRUCTION PRODUCTS. THIS MATERIAL WOULD HAVE A SIGNIFICANT SWELL FACTOR AS GIVEN IN SWELL FACTORS SHOWN IN SECTION 2-145.10 OF THE DESIGN GUIDELINES OR AS RECOMMENDED BY THE GEOTECHNICAL ENGINEERING SECTION OF THE MATERIALS AND TESTS DIVISION.

C. SOFT ROCK OR DEGRADABLE ROCK

THIS MATERIAL IS THAT NATURALLY OCCURRING MATERIAL COMPOSED OF MINERAL PARTICLES THAT ARE SO FIRMLY BONDED SUCH THAT THEY ARE NOT FAIRLY READILY SEPARATED INTO SMALL PIECES YET HAS SUCH RELATIVELY LOW BONDING STRENGTH THAT WOULD ALLOW FOR SEPARATING INTO SMALL PIECES THROUGH MODERATE TO HEAVY CRUSHING FORCES. FOR CONSTRUCTION PURPOSES THIS MATERIAL WOULD HAVE TO BE SUBJECTED TO RIPPING TYPE EQUIPMENT, HOE RAMS, OR RUGGED USE OF A LARGE BULLDOZER IN ORDER TO SEPARATE THE MATERIAL SUCH THAT IT CAN BE READILY LOADED INTO EARTH MOVING TRUCKS. THESE MATERIALS WOULD TYPICALLY BE SHALES, CLAYSTONES, SILTSTONES, WEATHERED SANDSTONES, WEATHERED SCHIST AND WEATHERED GNEISS. THIS MATERIAL WOULD HAVE A RELATIVELY SMALL SHRINK OR SWELL FACTOR DEPENDING ON THE TYPE MATERIAL AND THE DEGREE OF WEATHERING, DISINTEGRATION, OR DEGRADATION.

D. TRANSITIONAL MATERIALS

THIS MATERIAL IS THAT MATERIAL COMPRISED OF A COMBINATION OF SOIL AND ROCK (MATERIALS A, B, AND C AS DEFINED IN SECTION 4-203.02) OCCURRING IN EITHER NON-UNIFORM INTERBEDDED LAYERS OF THE ABOVE MATERIALS (I.E. SHALE MATERIAL WITH RELATIVELY THIN LAYERS OF SOLID ROCK SUCH AS HARD LIMESTONE) OR ERRATIC LOCALIZED CHANGES OF MATERIAL TYPES BOTH LATERALLY AND WITH DEPTH (SUCH AS A GEOLOGIC FORMATION RESULTING IN PINNACLED ROCK COLUMNS, FLOATING BOULDERS OR LENSES INTERCALATED WITH CLAY SOIL, A COMMON OCCURRENCE IN CERTAIN REGIONS OF TENNESSEE). FOR CONSTRUCTION PURPOSES, THIS MATERIAL MAY HAVE TO BE EXCAVATED USING A COMBINATION OF EXCAVATION METHODS SUCH AS BLASTING OF ROCK PINNACLES, LAYERS OR BOULDERS ALONG WITH A RIPPING OF WEATHERED ROCK AND EXCAVATING OF SOIL WITH TRACK HOES OR LOADERS ALL WITHIN A LOCALIZED AREA. THIS MATERIAL WOULD NOT BE SUITABLE FOR THE USE OF EXCAVATING PAN TYPE EQUIPMENT.



LEGEND

- ASPHALT
- FILL
- VOID
- BOULDERS
- TYPE A MATERIAL — GRAVEL AND SAND
- SILT
- TYPE B MATERIAL — LIMESTONE
- WEATHERED LIMESTONE
- LIMESTONE WITH SHALE
- TYPE C MATERIAL — WEATHERED SHALE

TYPE MATERIAL-SEE DEFINITION OF EARTHWORK TERMS.
B.T.= BORING TERMINATED

NOTE: THIS DRAWING IS FOR FOUNDATION DATA ONLY AND IS NOT TO BE USED AS A LAYOUT.

2037 ADT = 25,160
84'-0" ROADWAY W/5'-0" SIDEWALKS
WITH STD-11-1 BRIDGERAIL
DESIGN SPEED = 60 mph

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

FOUNDATION DATA
STATE ROUTE 96
OVER
OVERALL CREEK
BRIDGE I.D. NO. 75SR0960011
STATION 68+92.79
LOG MILE 6.29
RUTHERFORD COUNTY
2017

CORRECT Jed A. Kniazewycz
ENGINEER OF STRUCTURES

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PIN. NO. 100282.02

CONST. NO. 75009-3238-14

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NH-96(48)	2017	

REVISIONS

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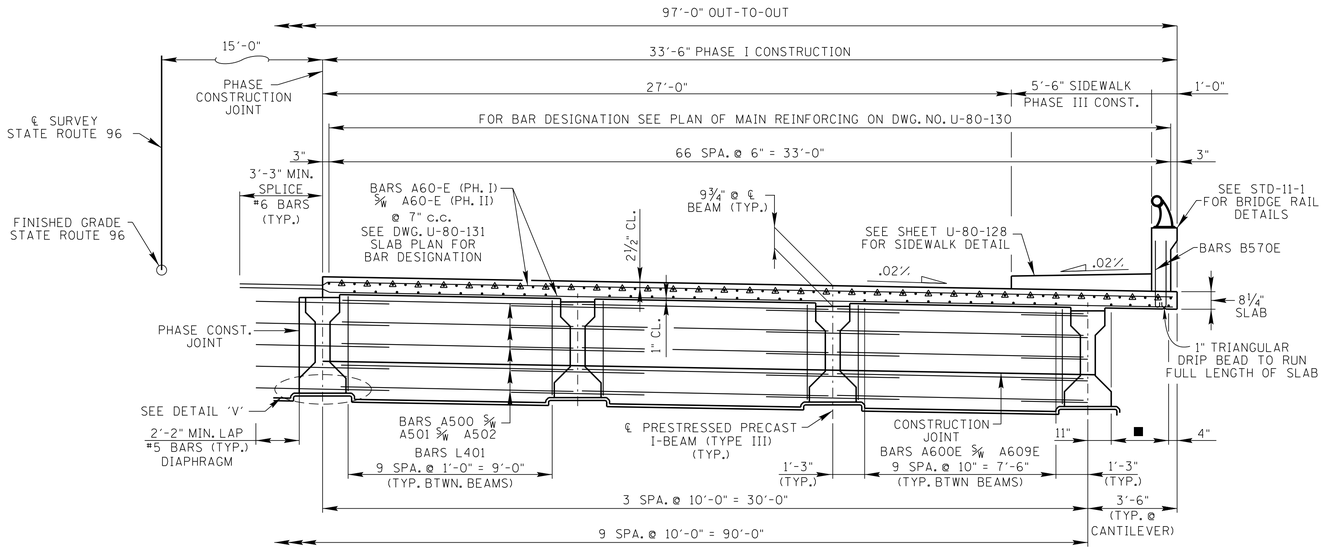


TYPICAL CROSS SECTION PHASE I

(LOOKING FORWARD ON SURVEY)

■ DENOTES: BARS A600E 5/8" A609E - 3 SPA. @ 9" = 2'-3"
▲ DENOTES: CUT-OFF BARS

SUPERSTRUCTURE NOTES:

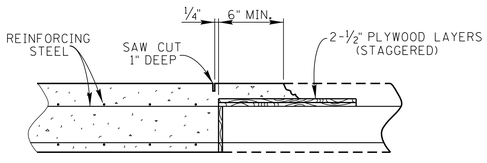
NOTE: NO PORTION OF THE PARAPET SHALL BE POURED UNTIL THE ENTIRE DECK SLAB IS IN PLACE.

NOTE: WHEN POURING SLAB, PROVISIONS SHALL BE MADE FOR SETTING REINFORCING STEEL FOR PARAPET. THE PARAPET SHALL NOT BE POURED UNTIL THE SLAB IS POURED AND CURED. WHEN POURING PARAPET, PROVISIONS SHALL BE MADE FOR SETTING ANCHOR BOLTS FOR PARAPET RAILS. ALSO SEE DRAWING NO. STD-11-1.

NOTE: CONTRACTOR SHALL OFFSET ANY REINFORCEMENT NECESSARY TO MAINTAIN 2" CLEARANCE TO PHASE CONSTRUCTION JOINT.

NOTE: THE CONTRACTOR IS SOLELY RESPONSIBLE FOR SUPPORTING THE BEAMS TO PREVENT DAMAGE DUE TO TWISTING OR OVERTURNING DURING ALL PHASES OF CONSTRUCTION. IT IS STRONGLY RECOMMENDED THAT THE TEMPORARY ERECTION DIAPHRAGMS BE INSTALLED PRIOR TO PLACING ANY LOADS ON THE GIRDERS. HOWEVER, TEMPORARY ERECTION DIAPHRAGMS MUST BE IN PLACE IN THE SPAN AT THE TIME THE SLAB IS POURED IN SAID SPAN.

NOTE: THE SUPPORT DIAPHRAGM AT THE PIER SHALL BE FORMED AND THE BOTTOM 15 INCHES POURED AS SOON AS POSSIBLE AFTER THE BEAMS HAVE BEEN SET. THE REMAINDER OF THE DIAPHRAGM SHALL BE POURED CONCURRENTLY WITH THE DECK SLAB. THE BEAMS SHALL ATTAIN AN AGE OF AT LEAST 90 DAYS PRIOR TO POURING THE REMAINDER OF THE SUPPORT DIAPHRAGM AND DECK SLAB. ALL DIAPHRAGM CONCRETE SHALL BE INCLUDED IN THE QUANTITY FOR ITEM 604-03.32.

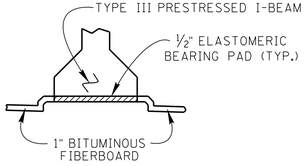


SLAB CONSTRUCTION JOINT DETAIL

DECK CONCRETE POURING SEQUENCE: SLAB CONSTRUCTION JOINTS MAY BE LOCATED AT THE CONTRACTOR'S OPTION SUBJECT TO THE FOLLOWING:

1) NO CONSTRUCTION JOINT MAY BE LOCATED CLOSER THAN 10 FEET OR FURTHER THAN 15 FEET FROM AN INTERIOR SUPPORT.
2) THE SLAB IN THE MIDDLE SECTION OF BOTH ADJACENT SPANS MUST BE POURED TO WITHIN AT LEAST 15 FEET OF THE SUPPORTS EITHER PRIOR TO OR CONCURRENTLY WITH THE SLAB OVER AN INTERIOR SUPPORT.

ALL SLAB CONSTRUCTION JOINTS SHALL BE IN ACCORDANCE WITH THE "SLAB CONSTRUCTION JOINT DETAIL" SHOWN ABOVE.



DETAIL "V"

ESTIMATED QUANTITIES

CLASS 'A' CONCRETE (BRIDGES) C.Y.	CLASS 'DS' CONCRETE (BRIDGE DECK) C.Y.	EPOXY COATED REINFORCING STEEL LBS.	STEEL BAR REINFORCEMENT (BRIDGES) LBS.
47	368	139,080	2,246

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE
STATE ROUTE 96
OVER
OVERALL CREEK
STATION 68+92.79
LOG MILE 6.29
RUTHERFORD COUNTY
2017

JOHN HOUSTON WALKER — Licensed Professional Engineer — AGRICULTURE — STATE OF TENNESSEE

7/25/2017

CORRECT Ted A Kniazewycz
ENGINEER OF STRUCTURES

DESIGNED BY B. ROMANO DATE 06-17
DRAWN BY ANGELA HUNTER DATE 06-17
SUPERVISED BY M.B.C./J.H.W. DATE 06-17
CHECKED BY S. STEPP DATE 07-17

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PIN. NO. 100282.02

CONST. NO. 75009-3238-14

PROJECT NO.	YEAR	SHEET NO.
NH-96(48)	2017	

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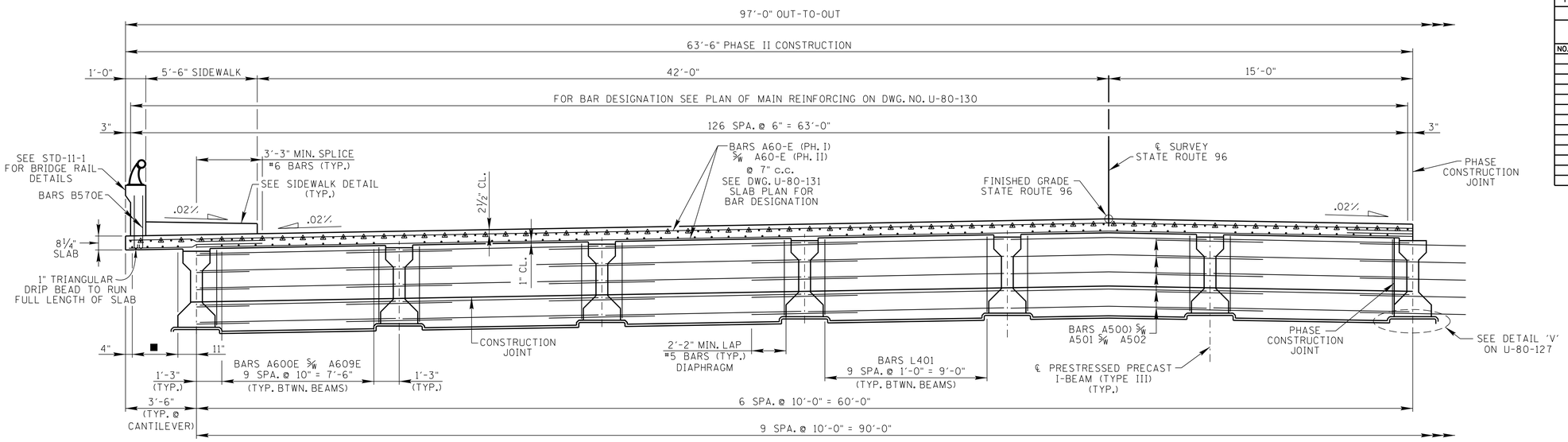
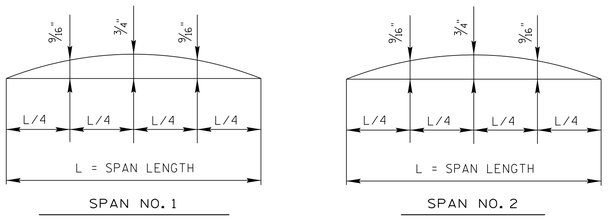


■ DENOTES: BARS A600E ⅝" A609E - 3 SPA. @ 9" = 2'-3"
⚠ DENOTES: CUT-OFF BARS

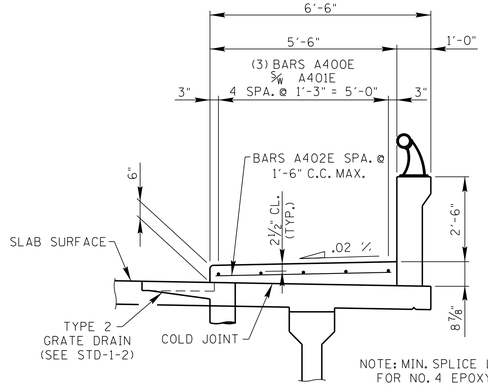
TYPICAL CROSS SECTION PHASE II

(LOOKING FORWARD ON SURVEY)



DEAD LOAD CORRECTION CURVES

DEAD LOAD CORRECTION CURVE: THIS CURVE IS FOR DEAD LOAD SLAB AND ALL DEAD LOADS THAT ARE APPLIED AFTER SLAB IS IN PLACE. IF PRESTRESSED DECK PANELS ARE USED AND THE BEAMS ARE PROFILED AFTER PANELS ARE IN PLACE, REDUCE THE DEAD LOAD CORRECTION VALUES SHOWN BY 25%.



NOTE: MIN. SPLICE LENGTH = 2'-0" FOR NO. 4 EPOXY BARS IN SIDEWALK.

SIDEWALK DETAIL

(TYP. EACH SIDEWALK)
(FOR CLARITY, OTHER SLAB & PARAPET REINFORCEMENT NOT SHOWN.)

NOTE: SIDEWALKS TO EXTEND ALONG PAVEMENT AT BRIDGE ENDS. ALL SIDEWALK CONCRETE SHALL BE INCLUDED IN THE QUANTITY FOR ITEM 604-03.01 CLASS 'A' CONCRETE (BRIDGES).

NOTE: NO PORTION OF THE SIDEWALK SHALL BE POURED UNTIL THE ENTIRE PARAPET IS IN PLACE. THE LEFT LANE SIDEWALK SHALL BE POURED IN PHASE II. THE RIGHT LANE SIDEWALK SHALL BE POURED IN PHASE III.

PARAPET TO BE CONSTRUCTED IN ACCORDANCE WITH STD-11-1, EXCEPT AS MODIFIED AT LEFT. CLASS "A" CONCRETE QUANTITY INCREASES 0.022 C.Y. PER L.F.

NOTE: THE APPLIED TEXTURE FINISH QUANTITY FOR THE PARAPETS IS LIMITED TO THE SECTIONS BETWEEN THE BEGINNING OF BRIDGE AND THE END OF BRIDGE.

NOTE: FOR DRAIN LOCATIONS, SEE "LAYOUT OF BRIDGE" ON DWG. NO. U-80-124.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE STATE ROUTE 96 OVER OVERALL CREEK STATION 68+92.79 LOG MILE 6.29 RUTHERFORD COUNTY 2017

JOHN HOUSTON WALKER — STATE OF TENNESSEE — DEPARTMENT OF AGRICULTURE

7/25/2017

CORRECT _____ ENGINEER OF STRUCTURES

DESIGNED BY	B. ROMANO	DATE 06-17
DRAWN BY	ANGELA HUNTER	DATE 06-17
SUPERVISED BY	M.B.C./J.H.W.	DATE 06-17
CHECKED BY	S. STEPP	DATE 07-17

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SUP1173.DGN

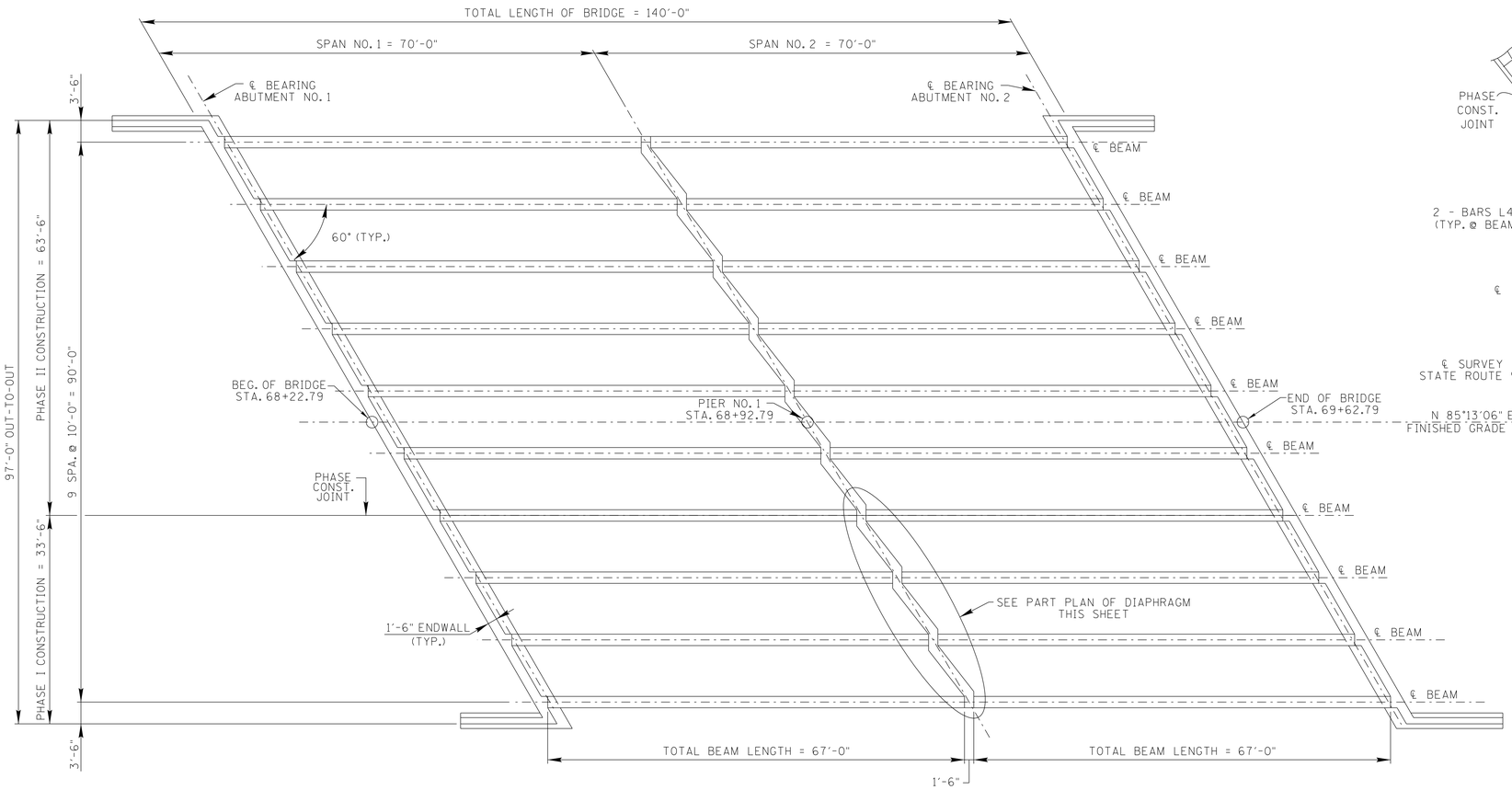
PIN. NO. 100282.02

CONST. NO. 75009-3238-14

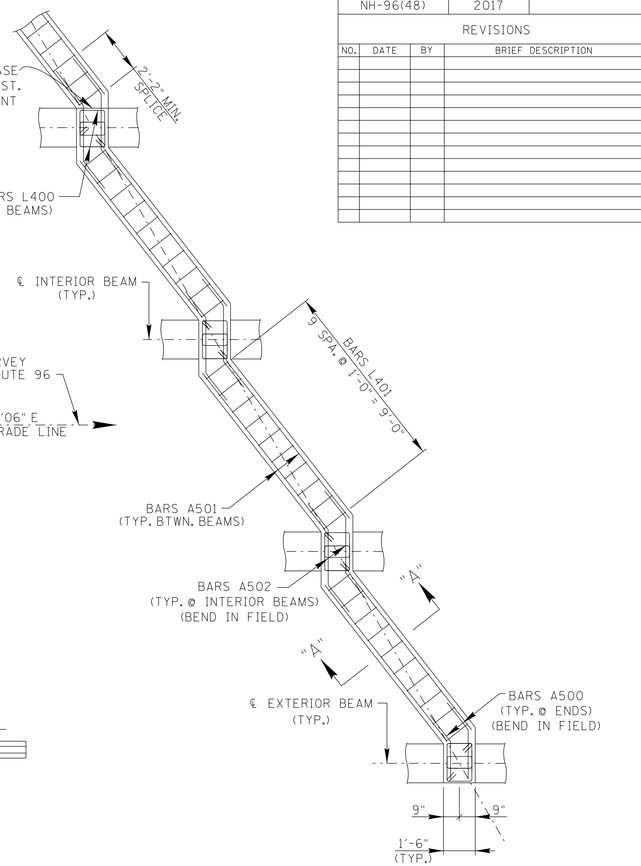
PROJECT NO.	YEAR	SHEET NO.
NH-96(48)	2017	

REVISIONS

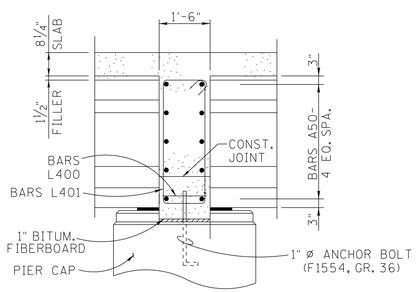
NO.	DATE	BY	BRIEF DESCRIPTION



FRAMING PLAN



PART PLAN OF DIAPHRAGM



SECTION "A" - "A"

SPECIAL NOTE FOR ANCHOR BOLTS AT PIER: ANCHOR BOLT ASSEMBLIES AT PIER SHALL BE IN ACCORDANCE WITH STANDARD DRAWING STD-6-1.

DESIGNED BY B. ROMANO DATE 06-17
DRAWN BY ANGELA HUNTER DATE 06-17
SUPERVISED BY M.B.C./J.H.W. DATE 06-17
CHECKED BY S. STEPP DATE 07-17

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS STATE ROUTE 96 OVER OVERALL CREEK STATION 68+92.79 LOG MILE 6.29 RUTHERFORD COUNTY 2017

JOHN HOUSTON WALKER — STATE OF TENNESSEE — DEPARTMENT OF AGRICULTURE

7/25/2017

CORRECT

ENGINEER OF STRUCTURES

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CONST. NO. 75009-3238-14

PROJECT NO.	YEAR	SHEET NO.
NH-96(48)	2017	

REVISIONS

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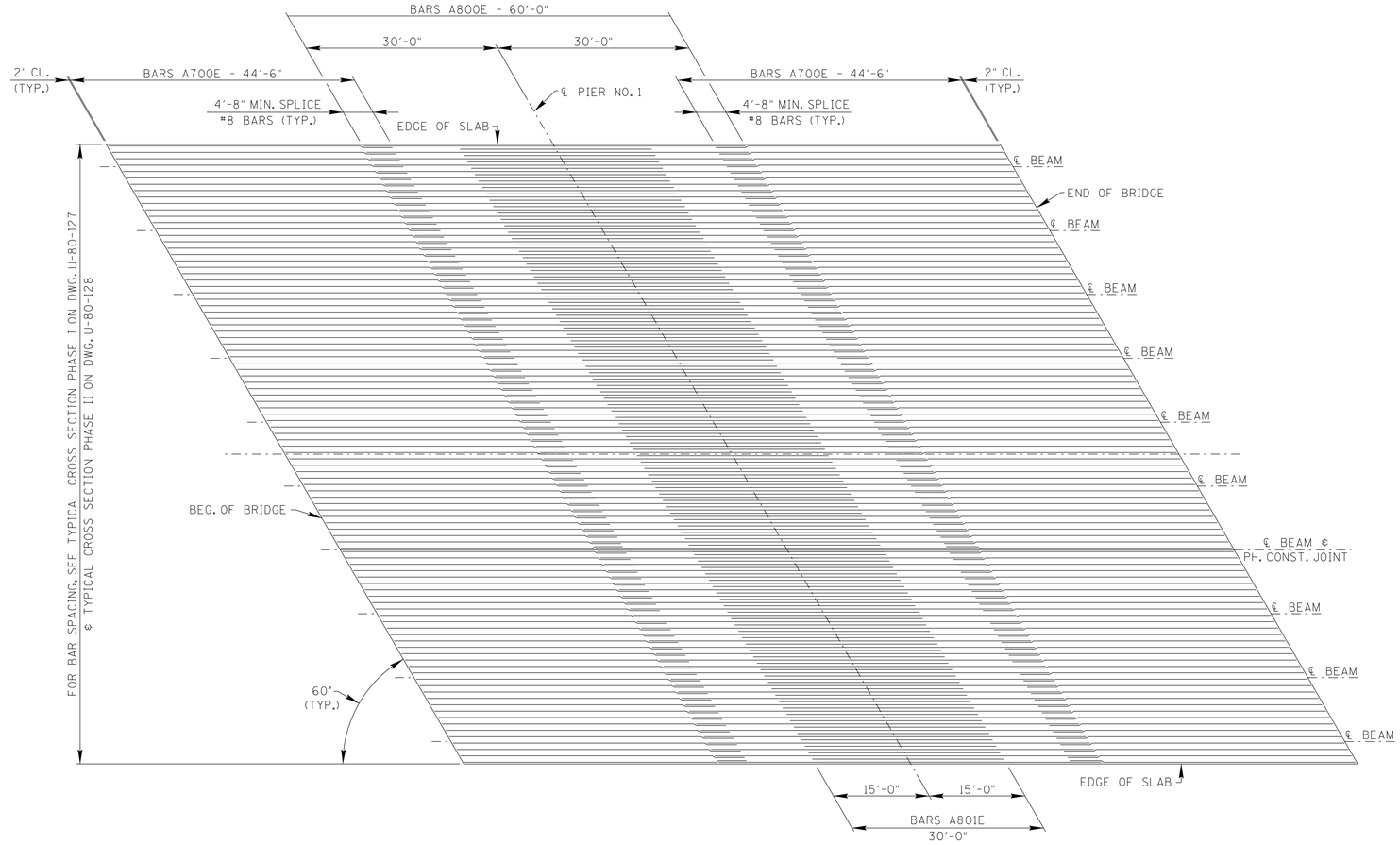

PLAN OF MAIN REINFORCING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS
STATE ROUTE 96
OVER
OVERALL CREEK
STATION 68+92.79
LOG MILE 6.29
RUTHERFORD COUNTY
2017

JOHN HOUSTON WALKER
STATE OF TENNESSEE
DEPARTMENT OF AGRICULTURE
1854

7/25/2017

CORRECT _____
ENGINEER OF STRUCTURES

DESIGNED BY B. ROMANO DATE 06-17
DRAWN BY ANGELA HUNTER DATE 06-17
SUPERVISED BY M.B.C./J.H.W. DATE 06-17
CHECKED BY S. STEPP DATE 07-17

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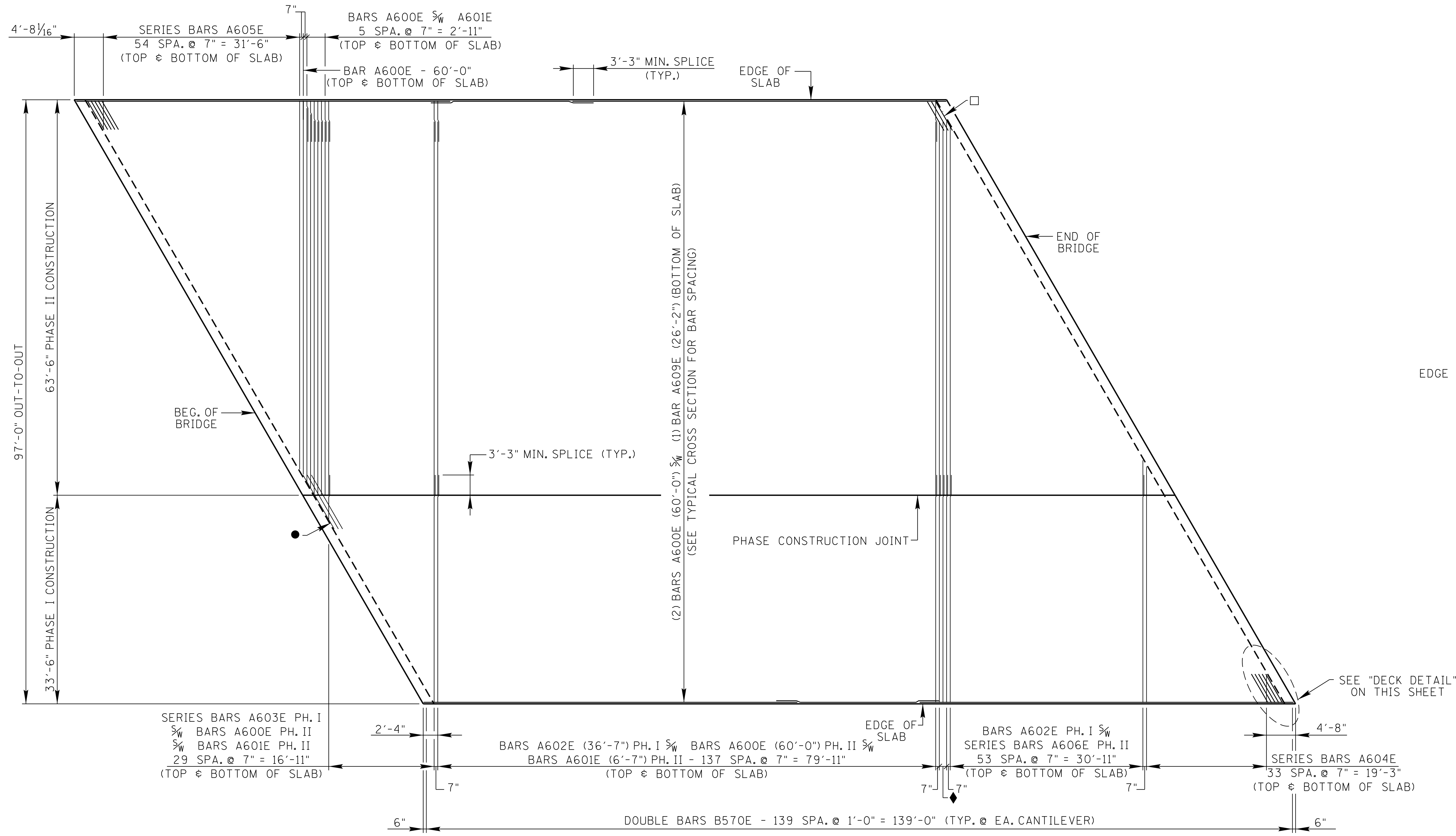
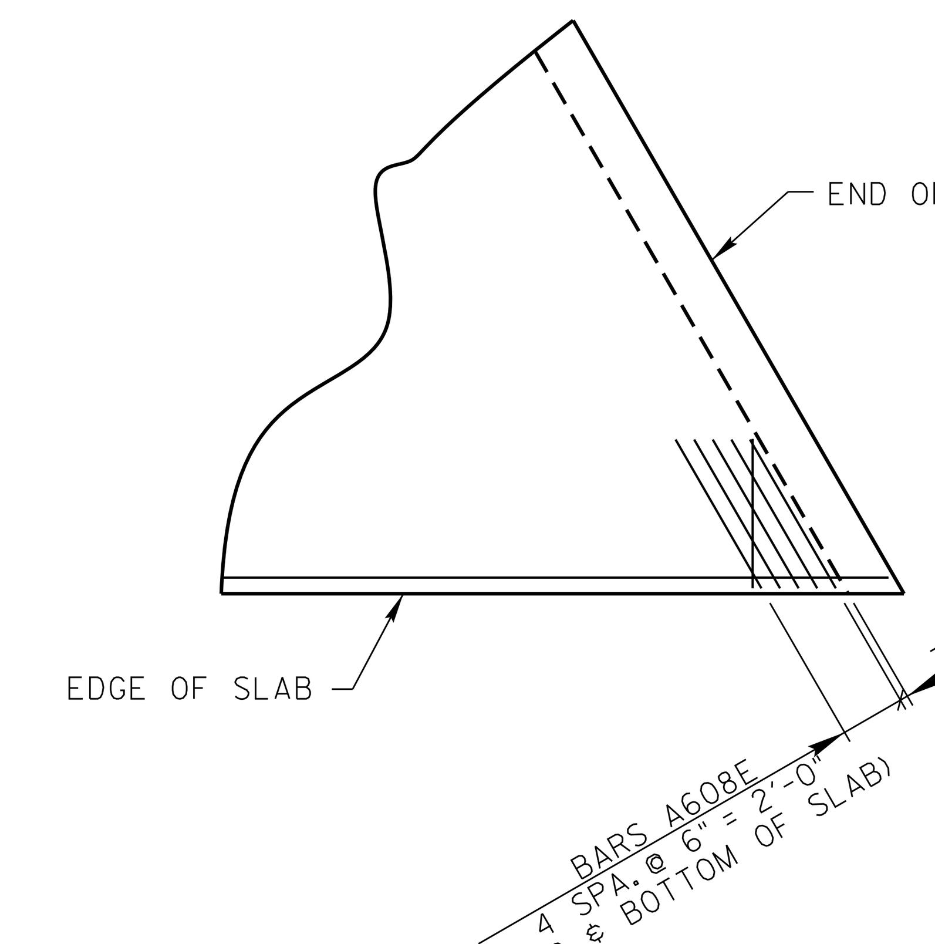
CONST. NO. 75009-3238-14

PROJECT NO.	YEAR	SHEET NO.
NH-96(48)	2017	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION





DECK DETAIL

(SHOWING REINFORCING AT DECK CORNERS)

SLAB PLAN

◆ DENOTES: BARS A602E PH. I & A600E PH. II
2 SPA. @ 7" = 1'-2" (TOP & BOTTOM OF SLAB)

● DENOTES: (3) BARS A607E (10'-7")
(TOP & BOTTOM OF SLAB)

□ DENOTES: (3) BARS A608E (4'-11")
(TOP & BOTTOM OF SLAB)

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS
STATE ROUTE 96
OVER
OVERALL CREEK
STATION 68+92.79
LOG MILE 6.29
RUTHERFORD COUNTY
2017

JOHN HOUSTON WALKER — STATE OF TENNESSEE — AGRICULTURE COMMERCE 1796
7/25/2017

CORRECT [signature]
ENGINEER OF STRUCTURES

DESIGNED BY	B. ROMANO	DATE	06-17
DRAWN BY	ANGELA HUNTER	DATE	06-17
SUPERVISED BY	M.B.C./J.H.W.	DATE	06-17
CHECKED BY	S. STEPP	DATE	07-17

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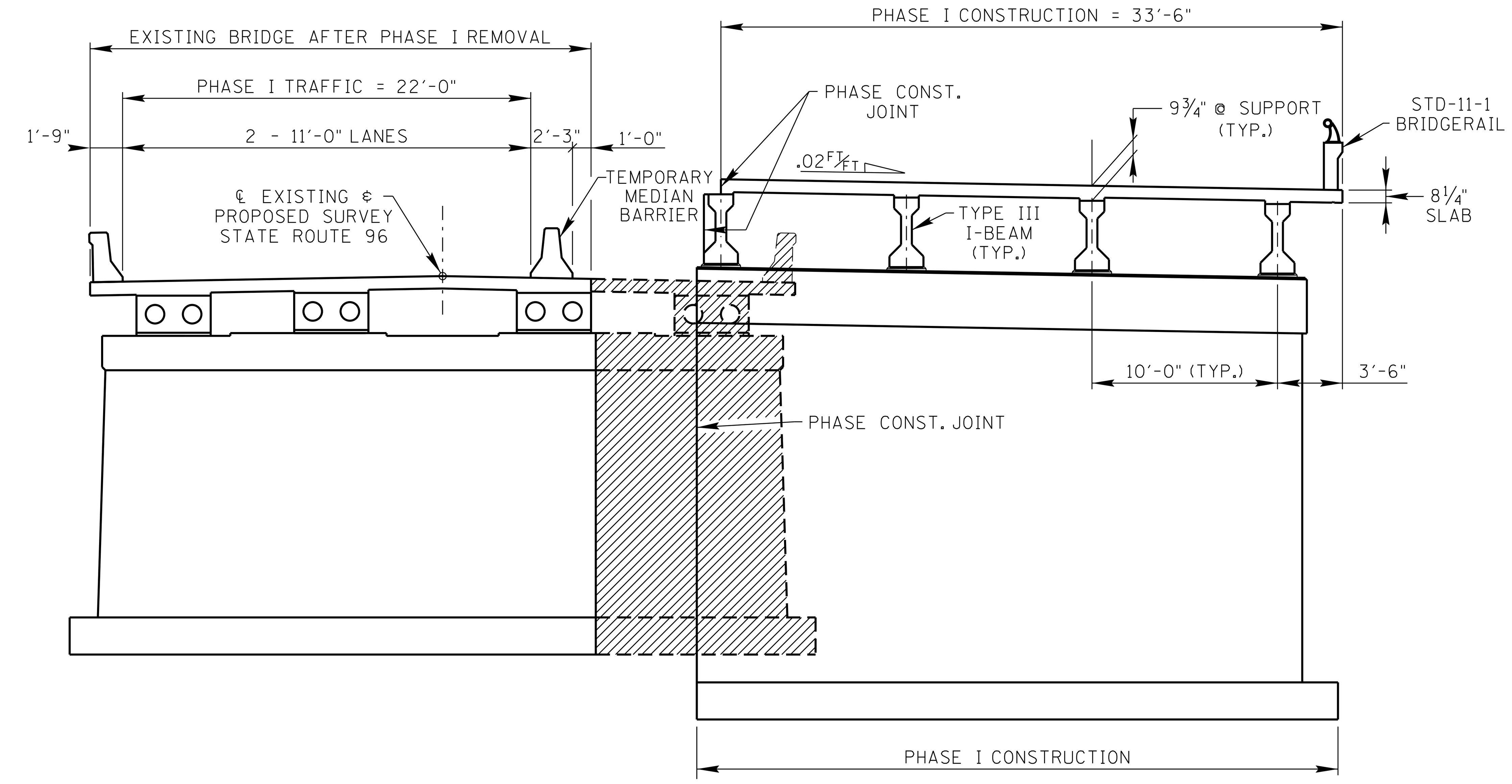
CONST. NO. 75009-3238-14

PROJECT NO.	YEAR	SHEET NO.
NH-96(48)	2017	

REVISIONS

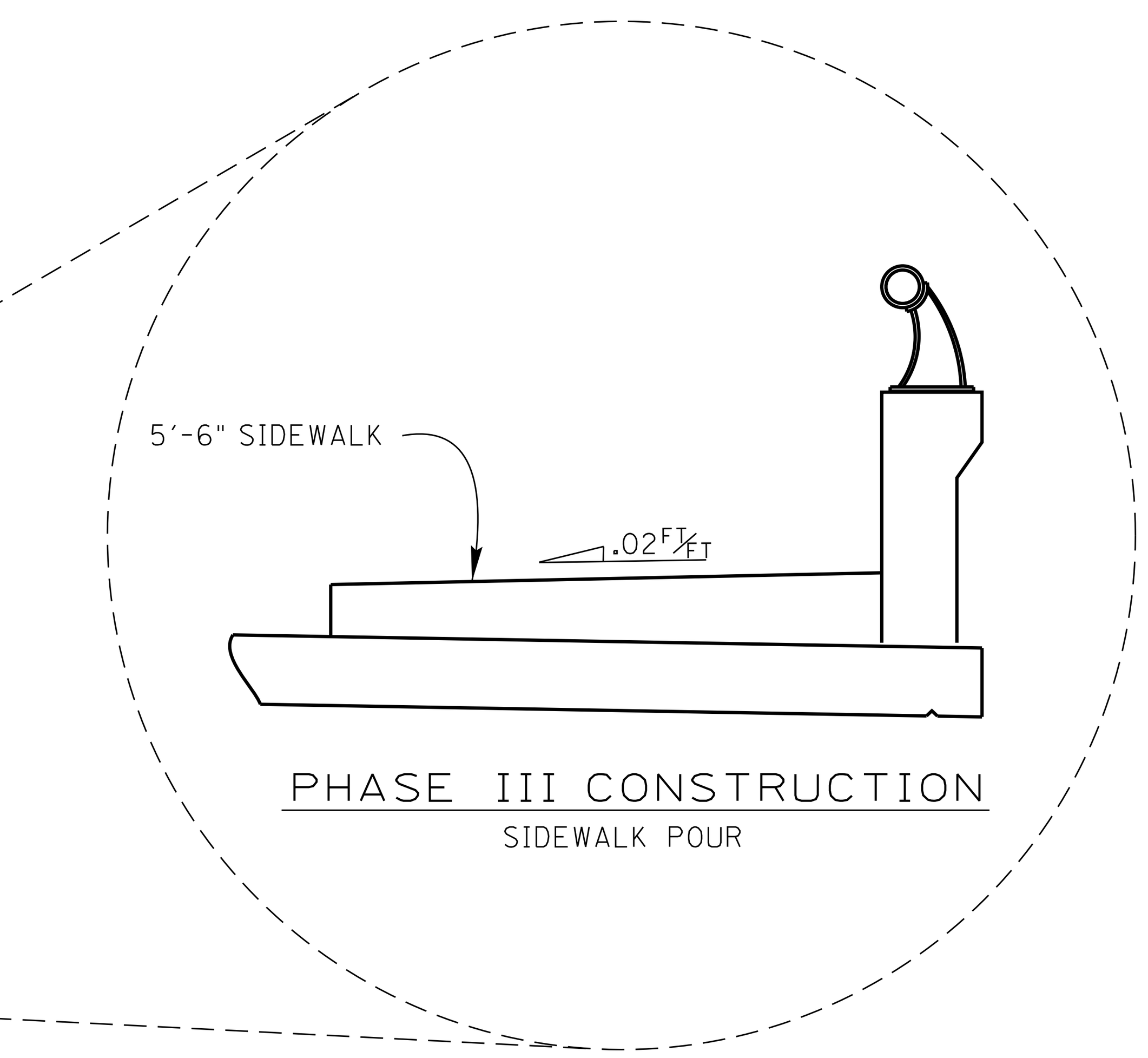
NO.	DATE	BY	BRIEF DESCRIPTION



PHASE I

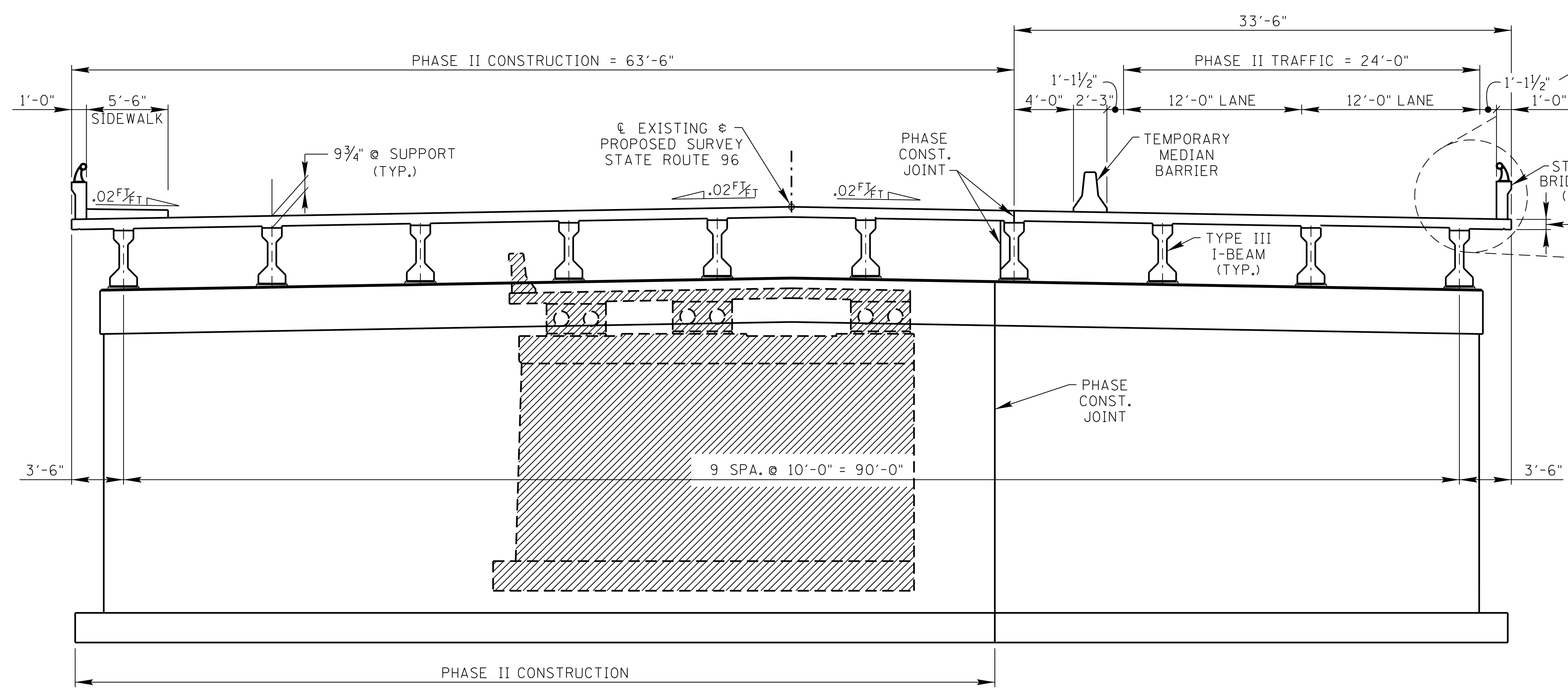
(LOOKING FORWARD ON SURVEY)

DENOTES: PORTION OF EXISTING BRIDGE DECK, BOX BEAMS AND WALL PIER TO BE REMOVED.



PHASE III CONSTRUCTION

SIDEWALK POUR



PHASE II

(LOOKING FORWARD ON SURVEY)

PHASE CONSTRUCTION SEQUENCE SKETCHES

DESIGNED BY	B. ROMANO	DATE	06-17
DRAWN BY	ANGELA HUNTER	DATE	06-17
SUPERVISED BY	M.B.C./J.H.W.	DATE	06-17
CHECKED BY	S. STEPP	DATE	07-17

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS
STATE ROUTE 96
OVER
OVERALL CREEK
STATION 68+92.79
LOG MILE 6.29
RUTHERFORD COUNTY
2017

JOHN HOUSTON WALKER — STATE OF TENNESSEE (seal)

7/25/2017

CORRECT

ENGINEER OF STRUCTURES

U-80-132

SUP1173.DGN

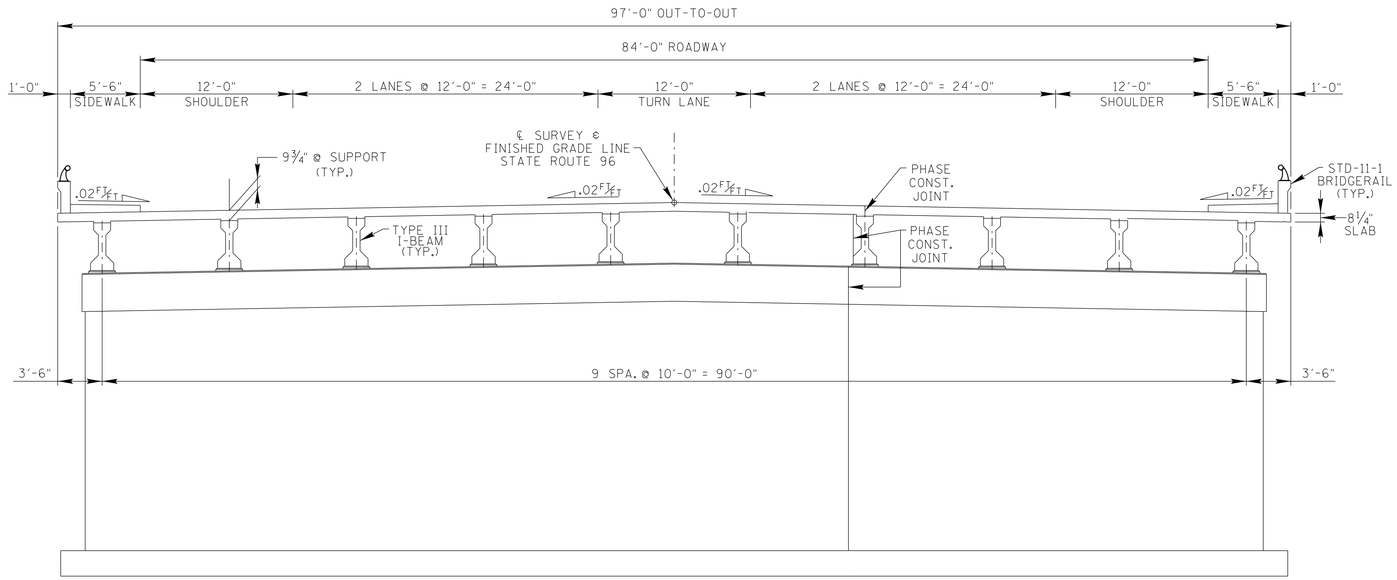
PIN. NO. 100282.02

CONST. NO. 75009-3238-14

PROJECT NO.	YEAR	SHEET NO.
NH-96(48)	2017	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



FINAL CONSTRUCTION

(LOOKING FORWARD ON SURVEY)

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS
STATE ROUTE 96
OVER
OVERALL CREEK
STATION 68+92.79
LOG MILE 6.29
RUTHERFORD COUNTY
2017

JOHN HOUSTON WALKER
STATE OF TENNESSEE
DEPARTMENT OF AGRICULTURE
1854

7/25/2017

CORRECT _____
ENGINEER OF STRUCTURES

DESIGNED BY B. ROMANO DATE 06-17
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SUPERVISED BY M.B.C./J.H.W. DATE 06-17
CHECKED BY S. STEPP DATE 07-17

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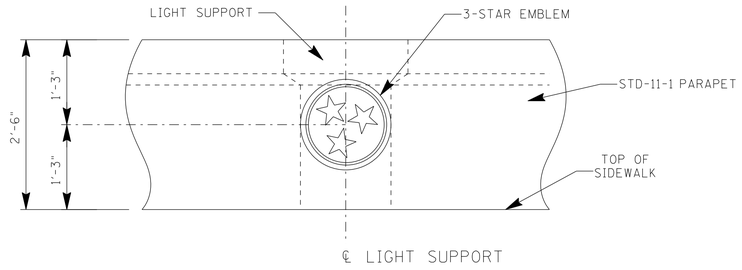
CONST. NO. 75009-3238-14

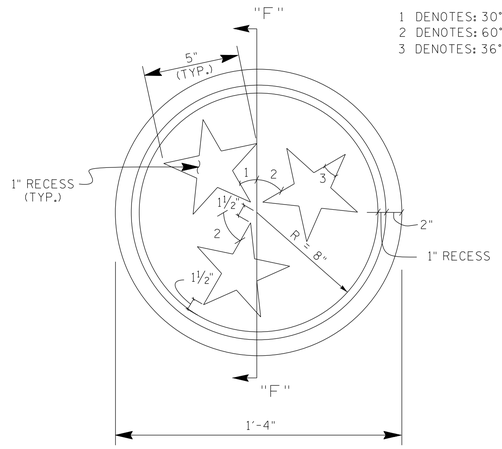
PROJECT NO.	YEAR	SHEET NO.
NH-96(48)	2017	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

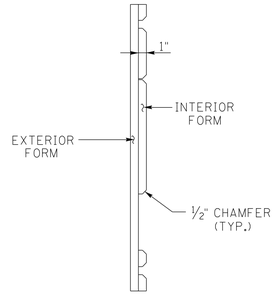


PARAPET TREATMENT
ON TRAFFIC FACE OF PARAPET

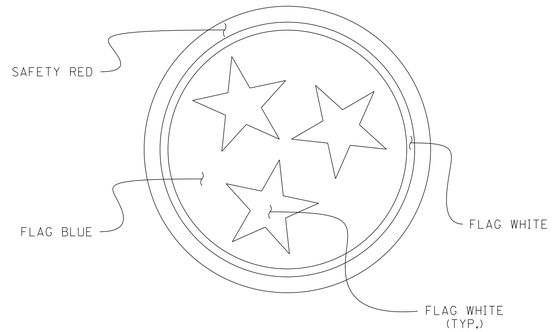


1 DENOTES: 30°
2 DENOTES: 60°
3 DENOTES: 36° (TYP.)

ARCHITECTURAL TREATMENT
3 STAR SYMBOL FORM DETAIL



SECTION "F"-"F"



PAINTING DETAIL
LOCATION OF COLORS

NOTES:

STATE SYMBOL TO BE "EMBOSSED" INTO THE CONCRETE.

STATE SYMBOL IS TO BE PAINTED.

PAINTING STATE SEAL:

THE STATE SEAL SHALL BE PAINTED WITH A MARINE ACRYLIC GLOSS PAINT IN COLORS AS NOTED BELOW. A COLOR SAMPLE SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. THE COST OF THE PREPARATION OF SURFACES TO INCLUDE EMBOSSING, PAINT, SEALER, SEALING THE PAINTED SURFACES, AND ALL LABOR REQUIRED FOR PAINTING THE STATE SEAL SHALL BE INCLUDED IN ITEM NO. 604-04.41. THREE STAR STATE EMBLEM.

RED	FEDERAL SPEC. NO. 11350
WHITE	FEDERAL SPEC. NO. 17925
BLUE	FEDERAL SPEC. NO. 15095
CLEAR COAT	WATERBORNE ACRYLIC CLEAR COAT CLEAR GLOSS

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS
STATE ROUTE 96
OVER
OVERALL CREEK
STATION 68+92.79
LOG MILE 6.29
RUTHERFORD COUNTY
2017

JOHN HOUSTON WALKER — REGISTERED — AGRICULTURE — 1926 — STATE OF TENNESSEE
7/25/2017

CORRECT _____
ENGINEER OF STRUCTURES

DESIGNED BY B. ROMANO DATE 06-17
DRAWN BY ANGELA HUNTER DATE 06-17
SUPERVISED BY M.B.C./J.H.W. DATE 06-17
CHECKED BY S. STEPP DATE 07-17

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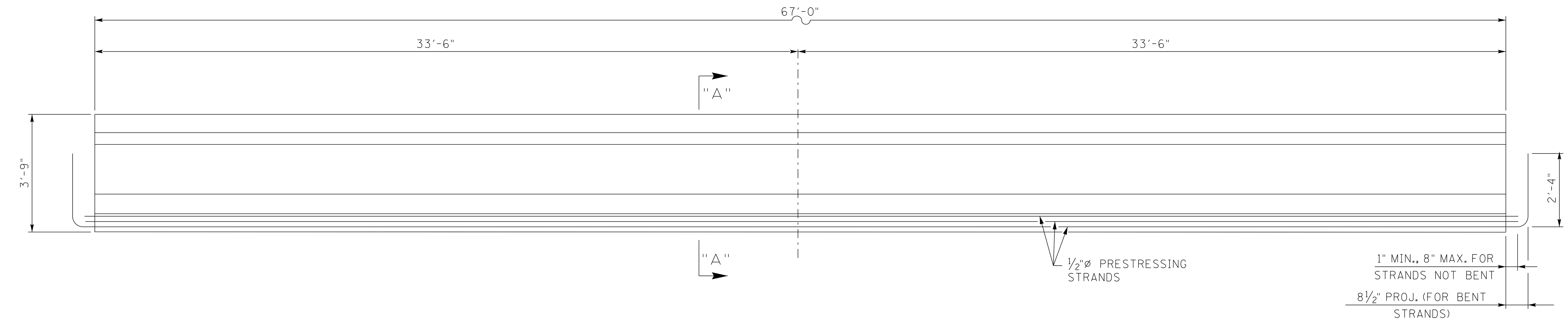
PIN. NO. 100282.02

CONST. NO. 75009-3238-14

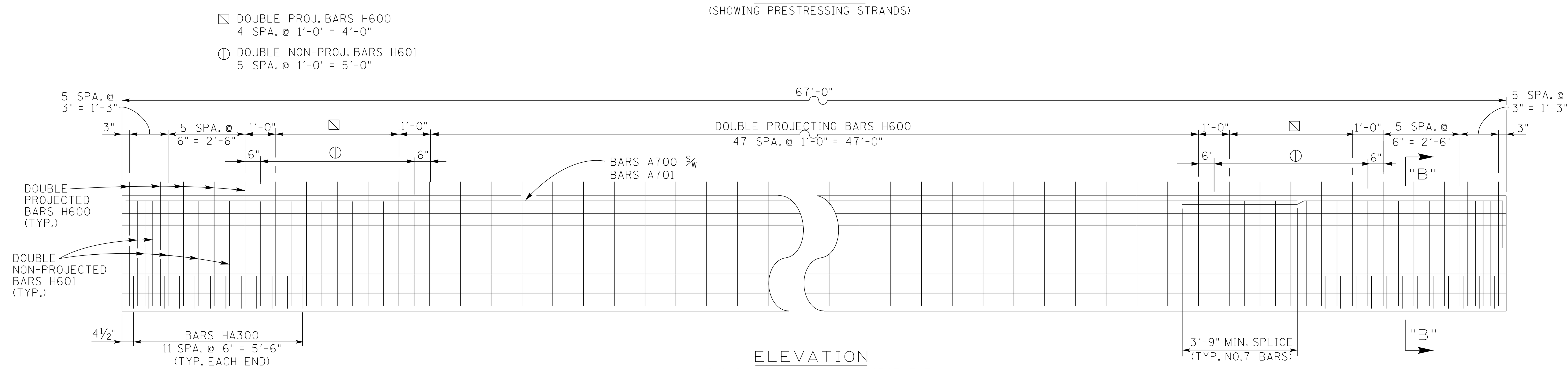
PROJECT NO.	YEAR	SHEET NO.
NH-96(48)	2017	

REVISIONS

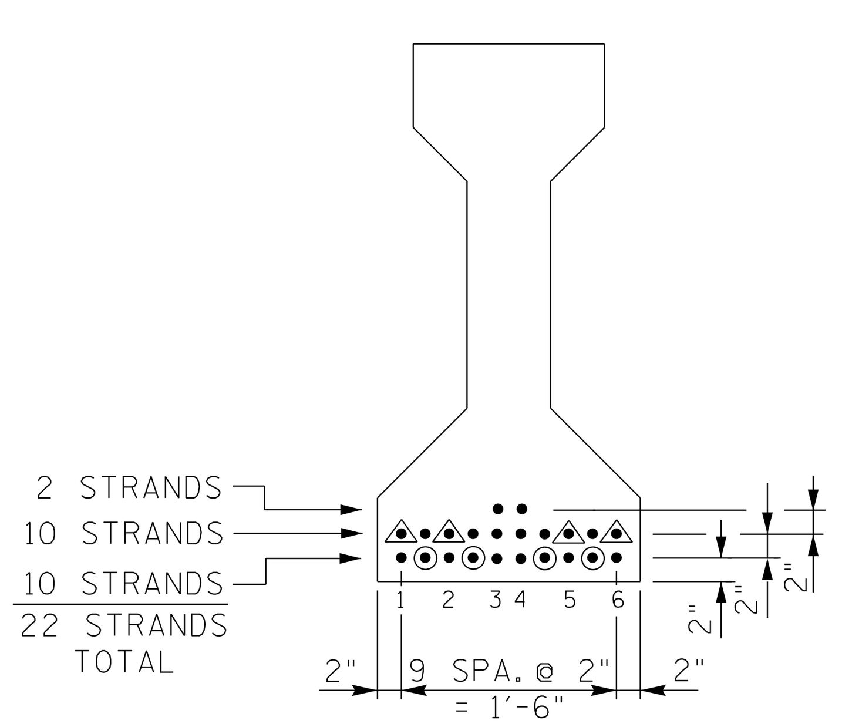
NO.	DATE	BY	BRIEF DESCRIPTION



ELEVATION
(SHOWING PRESTRESSING STRANDS)



ELEVATION
(SHOWING STEEL BAR REINFORCEMENT)

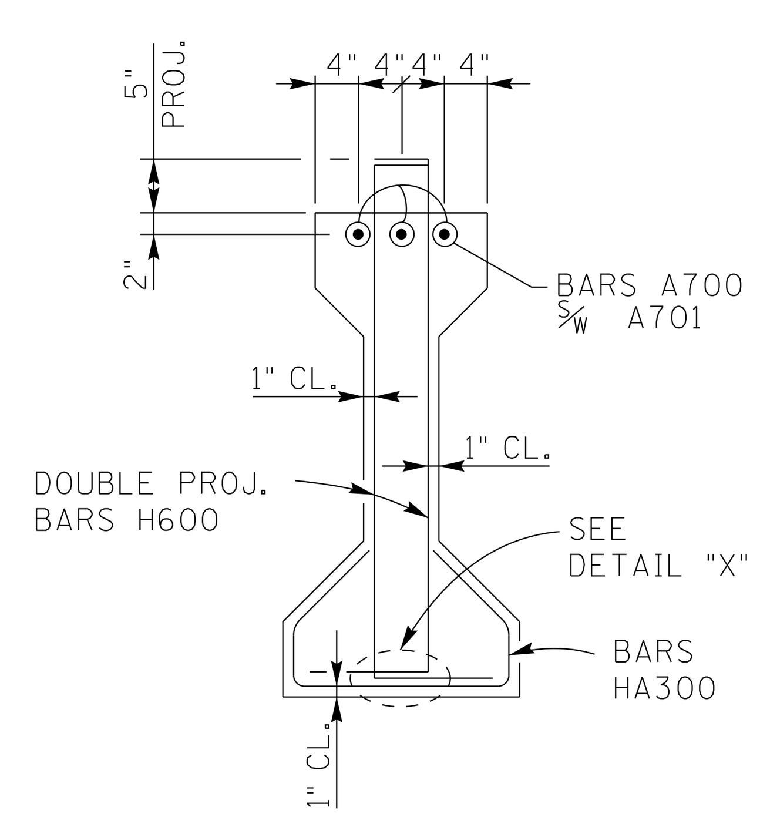


SECTION A-A

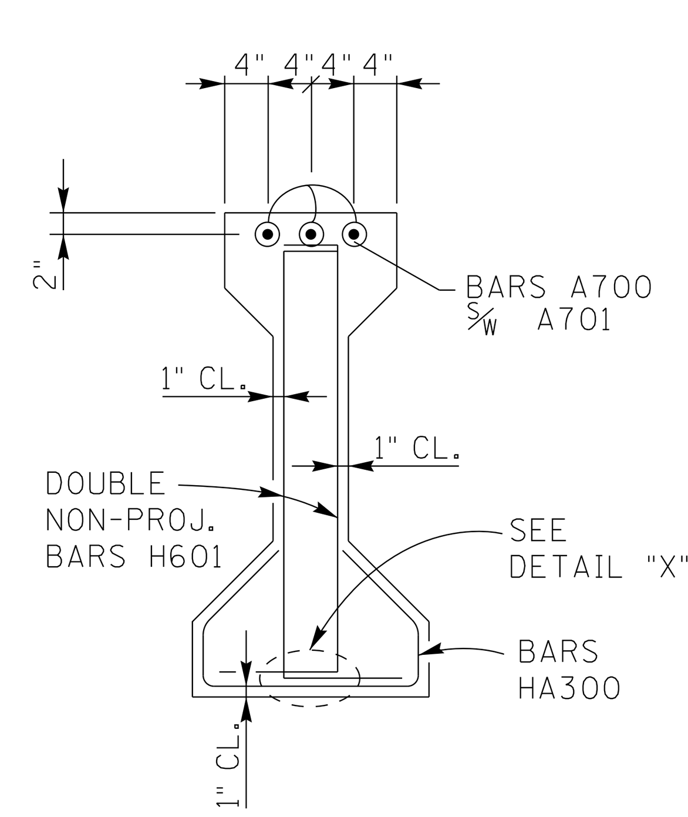
⦿ DENOTES: BOND BREAK @ 6'-0" FROM END OF BEAM

△ DENOTES: BOND BREAK @ 4'-0" FROM END OF BEAM

NOTE: STARTING WITH THE FIRST STRAND ON THE LEFT BOTTOM ROW, BEND STRANDS AS NUMBERED 1 THRU 6.

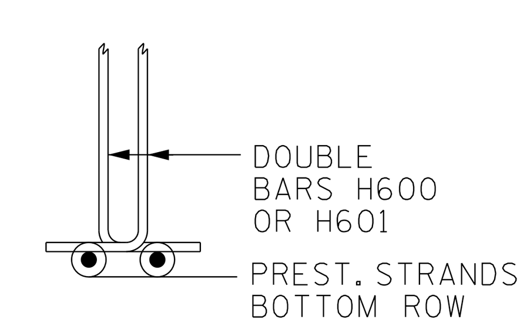


SHOWING PROJECTING BARS



SHOWING NON-PROJECTING BARS

SECTION B-B



DETAIL "X"

NOTES:

1) THE CONCRETE FOR THIS CONSTRUCTION SHALL BE OF SUCH PROPERTIES AS TO ATTAIN A COMPRESSIVE STRENGTH OF NOT LESS THAN 7,000 PSI AT THE AGE OF 28 DAYS AND STRESS TRANSFER SHALL NOT BE MADE TO THE BRIDGE MEMBER UNTIL THE TEST SPECIMENS INDICATE THAT THE CONCRETE HAS REACHED A COMPRESSIVE STRENGTH OF AT LEAST 6,000 PSI. SEE GENERAL NOTES FOR CONCRETE FINISHING NOTE.

2) ALL BEAMS ARE AASHTO - PCI STANDARD TYPE III.

3) SEE STD-14-2 FOR I-BEAM STANDARD DETAILS, NOTES AND REINFORCING.

4) ALL PRESTRESSING STRANDS SHOWN ARE 270 KSI LO-LAX, HAVING A ½" DIA., AN AREA OF 0.153 IN.² AND A JACKING LOAD OF 31,000 LB.

5) NOTE: THE PRESTRESSED BEAMS SHALL ATTAIN AN AGE OF AT LEAST 90 DAYS PRIOR TO POURING THE SUPPORT DIAPHRAGMS (EXCLUDING THE BOTTOM 15 INCHES) AND DECK SLAB.

PRESTRESSED BEAM DESIGN DATA - PER BEAM

LIVE LOAD DISTRIBUTION FACTOR MOMENT = .900 LANES
SHEAR = 1.039 LANES

COMPOSITE DEAD LOAD: DC = 184.6 LB/FT
COMPOSITE DEAD LOAD: DW = 294 LB/FT
COMPOSITE SLAB DESIGN STRENGTH: f'c = 3000 psi
NOTE: DOWNWARD DEFLECTION UNDER TOTAL DL IS NOT ALLOWED.

ESTIMATED QUANTITIES - PER BEAM

NO. BEAMS REQ'D	PRESTRESSING STRANDS (LOW RELAXATION) LB.	CLASS "A" CONCRETE C.Y.	REINFORCING STEEL LB.
20	798	10	1,936

BILL OF STEEL PER BEAM

BAR	SIZE	NO. REQ'D	LENGTH
A500	5	6	5'-6"
A700	7	3	60'-0"
A701	7	3	10'-5"
H600	6	136	5'-4"
H601	6	48	4'-9"
HA300	3	24	4'-3"

DESIGNED BY B.G. ROMANO DATE 07-16
DRAWN BY G.BONDS DATE 06-17
SUPERVISED BY M.B.C/J.H.W. DATE 06-17
CHECKED BY S. STEPP DATE 07-17

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
PRESTRESSED I-BEAM DETAILS
SPANS NO. 1 AND NO. 2
STATE ROUTE 96
OVER
OVERALL CREEK
STATION 68+92.79
LOG MILE 6.29
RUTHERFORD COUNTY
2017

JOHN HOUSTON WALKER — STATE OF TENNESSEE 7/25/2017

CORRECT ____ ENGINEER OF STRUCTURES

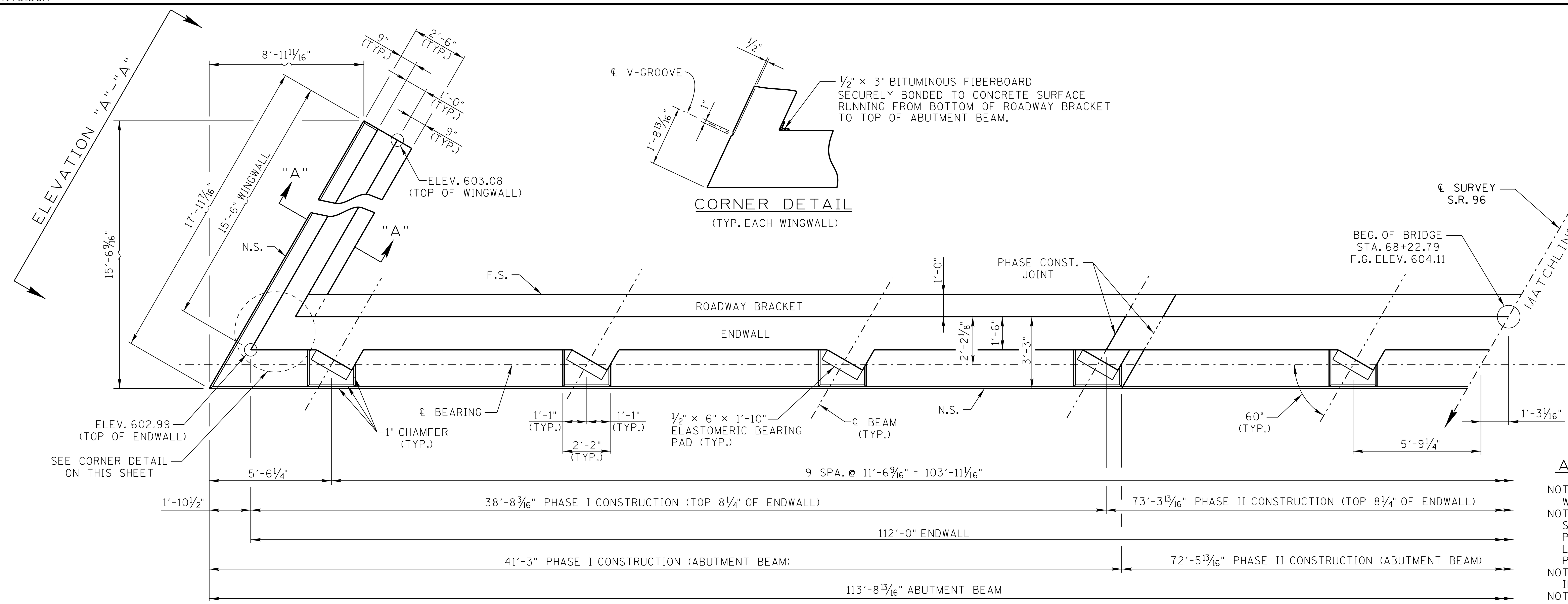
U-80-134

CONST. NO. 75009-3238-14

PROJECT NO.	YEAR	SHEET NO.
NH-96(48)	2017	

REVISIONS

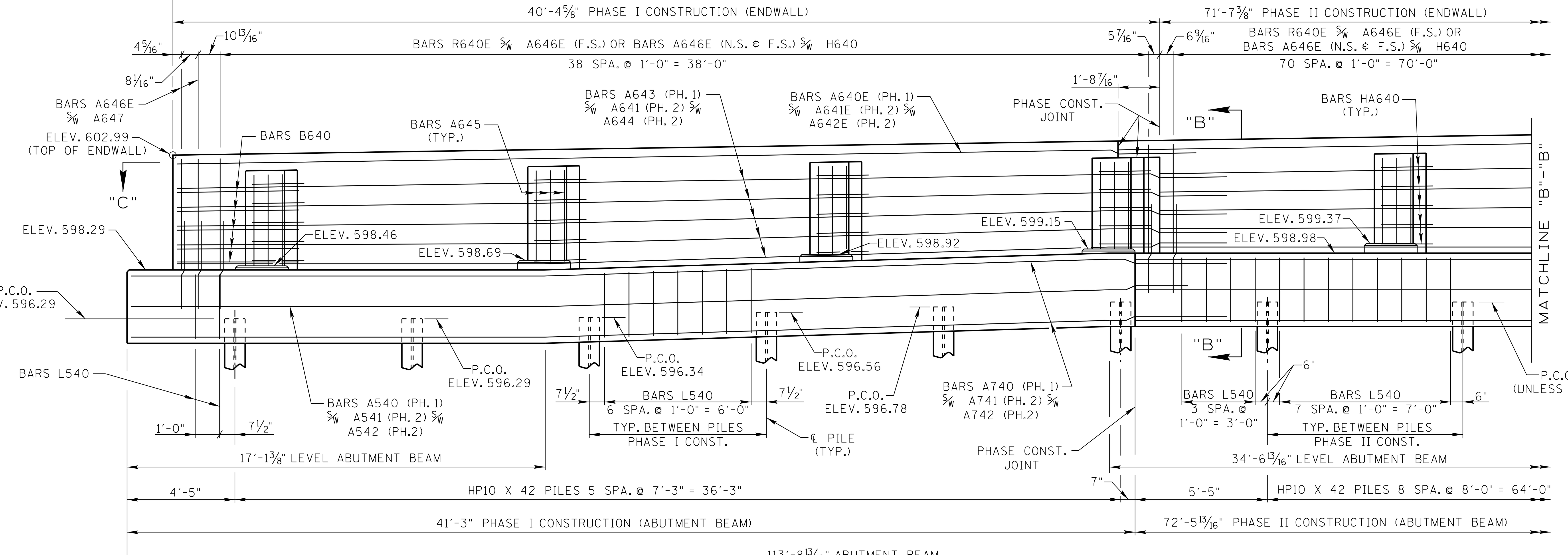
NO.	DATE	BY	BRIEF DESCRIPTION



PLAN

CORNER DETAIL
(TYP. EACH WINGWALL)

N.S. DENOTES NEAR SIDE
F.S. DENOTES FAR SIDE
PH. 1 DENOTES PHASE 1 CONSTRUCTION
PH. 2 DENOTES PHASE 2 CONSTRUCTION



ELEVATION
(LOOKING BACK ON € SURVEY)

ABUTMENT GENERAL NOTES

NOTE: RISER BLOCKS SHALL BE POURED MONOLITHICALLY WITH THE ABUTMENT BEAM.
NOTE: NOT LESS THAN HALF OF THE SLAB IN THE END SPAN SHALL BE POURED PRIOR TO, OR CONCURRENTLY WITH, PLACEMENT OF ANY PART OF THE ABUTMENT BACKWALL. AT LEAST THE TOP 12 INCHES OF THE BACKWALL SHALL BE POURED CONCURRENTLY WITH THE END OF SLAB.
NOTE: COST OF BRIDGE RAIL AND POST IS TO BE INCLUDED IN THE UNIT PRICE BID FOR THE BRIDGE RAIL SYSTEM.
NOTE: ELASTOMERIC PADS SHALL BE IN PLACE A MINIMUM OF ONE DAY BEFORE BEING DISTURBED BY SETTING BEAMS. PLACE RUBBER BONDING CEMENT IN SUCH A WAY THAT VISIBLE CONCRETE SURFACES WILL NOT BE STAINED.
NOTE: WHEN POURING WINGWALLS, PROVISIONS SHALL BE MADE FOR SETTING REINFORCING STEEL FOR WINGPOSTS AND PARAPETS. FOR DETAILS OF PARAPET SEE STD. DWG. NO. STD-11-1.
NOTE: WINGBEAM PILES SHALL BE DRIVEN TO REFUSAL. SEISMIC ATTACHMENT IS NOT REQUIRED FOR WINGBEAM PILES.
NOTE: CONTRACTOR MAY ADJUST SPACING OF REINFORCING STEEL 2" DUE TO PHASE CONSTRUCTION JOINT.

SPLICE LENGTH:
#5 BARS = 2'-2"
#6 BARS = 2'-9"
#6 EPOXY BARS = 3'-2"
#7 BARS = 3'-9"

ESTIMATED QUANTITIES

CLASS "A" CONCRETE C.Y.	STEEL BAR REINFORCEMENT LB.	EPOXY COATED REINFORCING STEEL LB.
91	10,483	3,472

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ABUTMENT NO. 1
STATE ROUTE 96
OVER
OVERALL CREEK
STATION 68+92.79
LOG MILE 6.29
RUTHERFORD COUNTY
2017

JOHN HOUSTON WALKER — STATE OF TENNESSEE — 7/25/2017

CORRECT [signature] ENGINEER OF STRUCTURES

DESIGNED BY	B. G. ROMANO	DATE	7-16
DRAWN BY	STEVEN STEELE	DATE	6-17
SUPERVISED BY	M.B.C. / J.H.W.	DATE	6-17
CHECKED BY	S. STEPP	DATE	7-17

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PROJECT NO.	YEAR	SHEET NO.
NH-96(48)	2017	

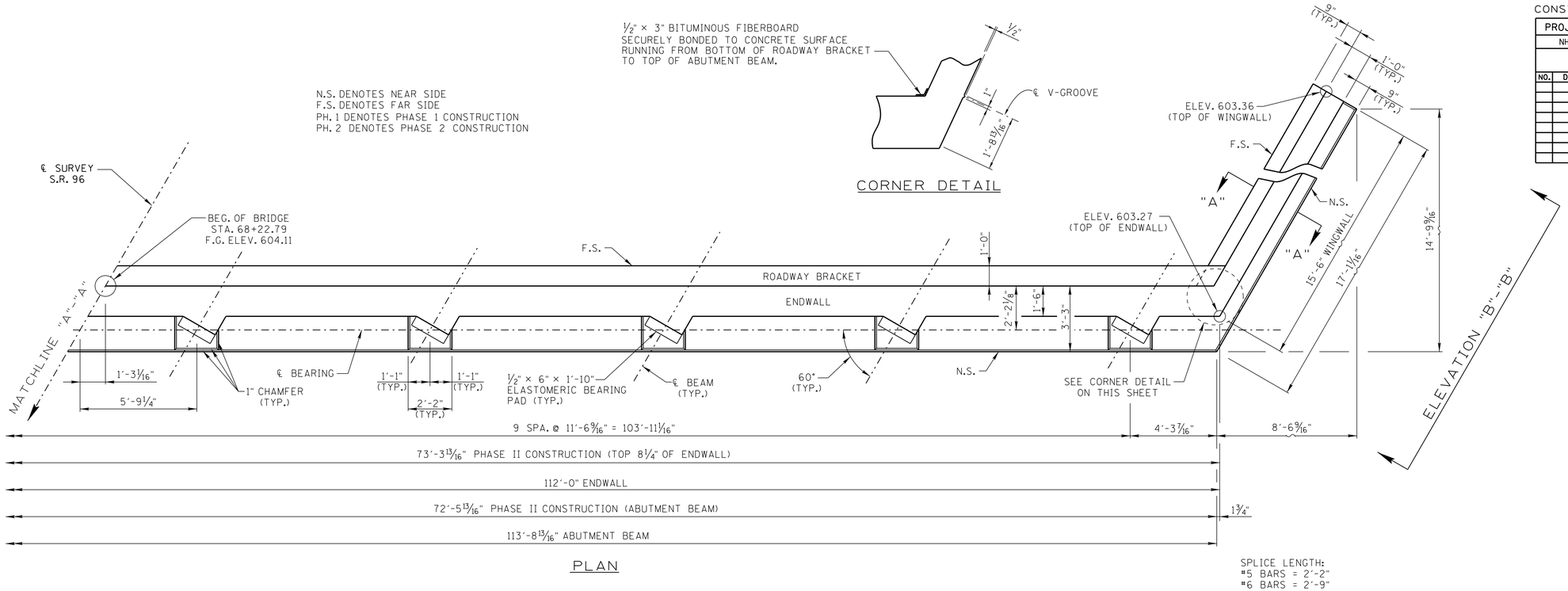
REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

N.S. DENOTES NEAR SIDE
F.S. DENOTES FAR SIDE
PH. 1 DENOTES PHASE 1 CONSTRUCTION
PH. 2 DENOTES PHASE 2 CONSTRUCTION

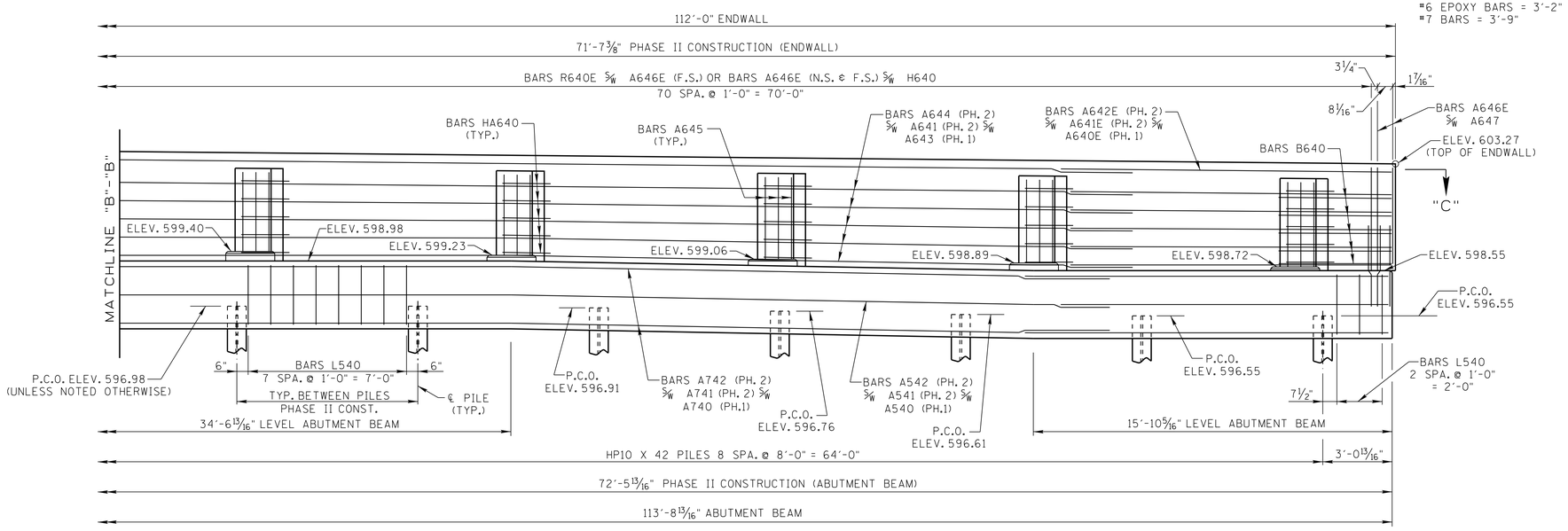
½" × 3" BITUMINOUS FIBERBOARD SECURELY BONDED TO CONCRETE SURFACE RUNNING FROM BOTTOM OF ROADWAY BRACKET TO TOP OF ABUTMENT BEAM.

CORNER DETAIL



PLAN

SPLICE LENGTH:
#5 BARS = 2'-2"
#6 BARS = 2'-9"
#6 EPOXY BARS = 3'-2"
#7 BARS = 3'-9"



ELEVATION
(LOOKING BACK ON ℄ SURVEY)

DESIGNED BY	B. G. ROMANO	DATE 7-16
DRAWN BY	STEVEN STEELE	DATE 6-17
SUPERVISED BY	M.B.C. / J.H.W.	DATE 6-17
CHECKED BY	S. STEPP	DATE 7-17

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ABUTMENT NO. 1
STATE ROUTE 96
OVER
OVERALL CREEK
STATION 68+92.79
LOG MILE 6.29
RUTHERFORD COUNTY
2017

JOHN HOUSTON WALKER — STATE OF TENNESSEE — DIRECTOR OF STRUCTURES — 1895 — 7/25/2017

CORRECT Ted A Kniazewycz
ENGINEER OF STRUCTURES

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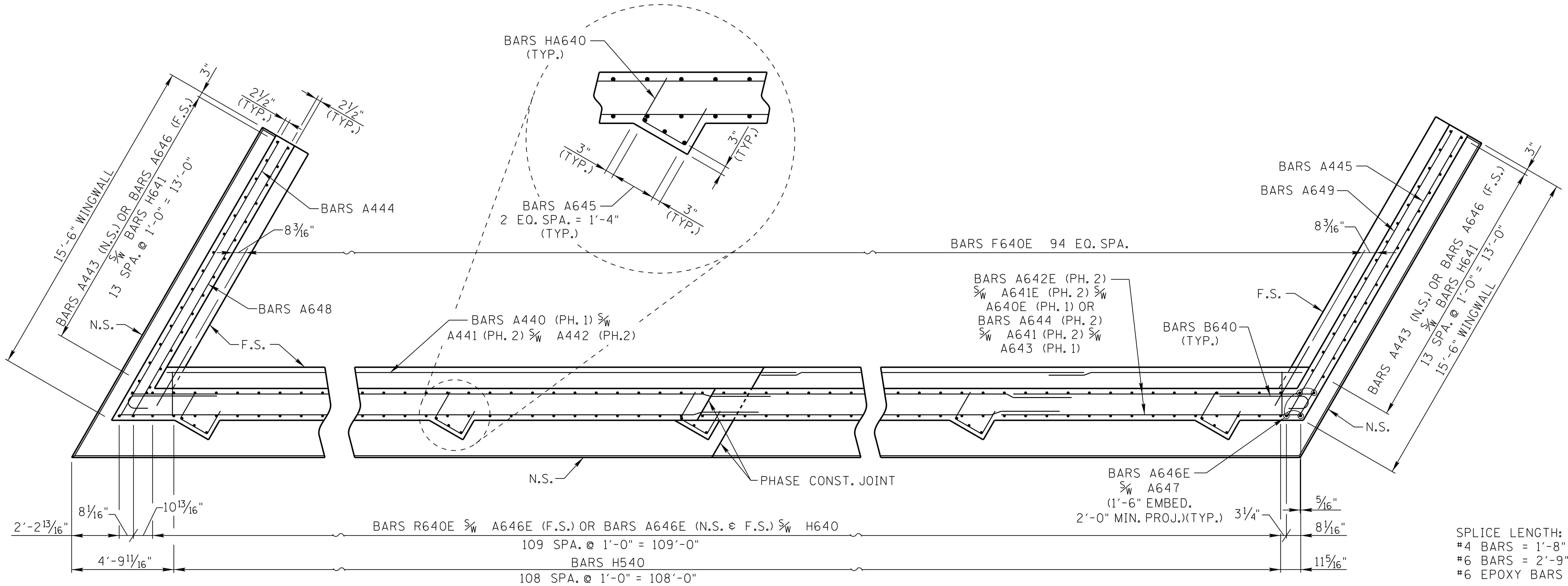
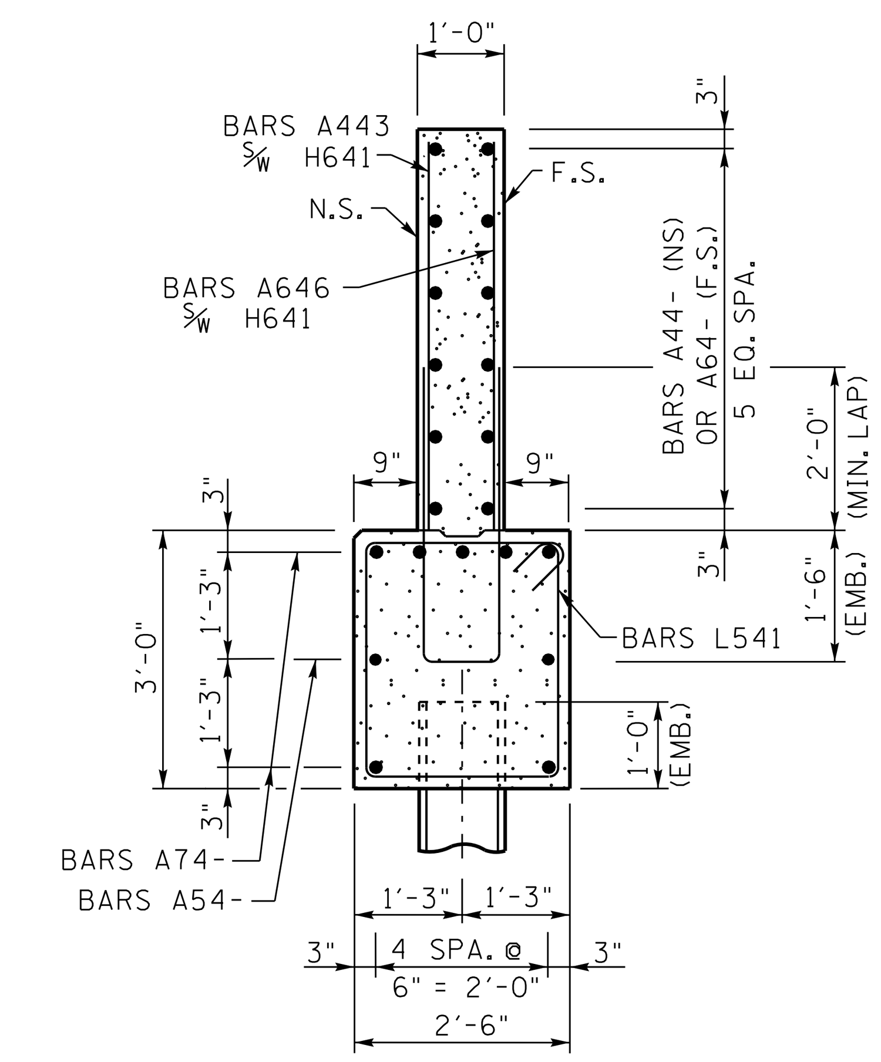
PROJECT NO.	YEAR	SHEET NO.
NH-96(48)	2017	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

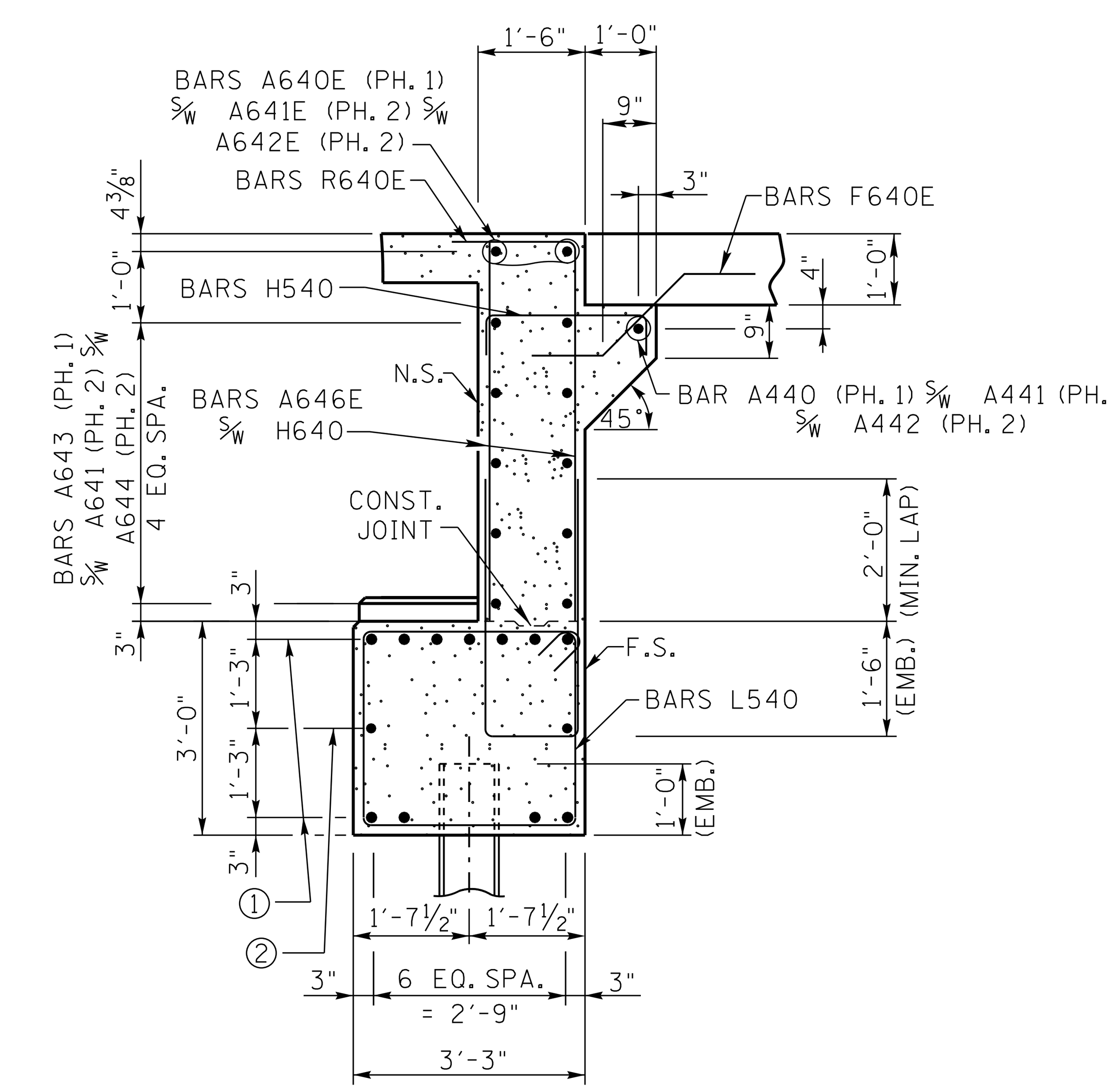


SECTION "C"-"C"



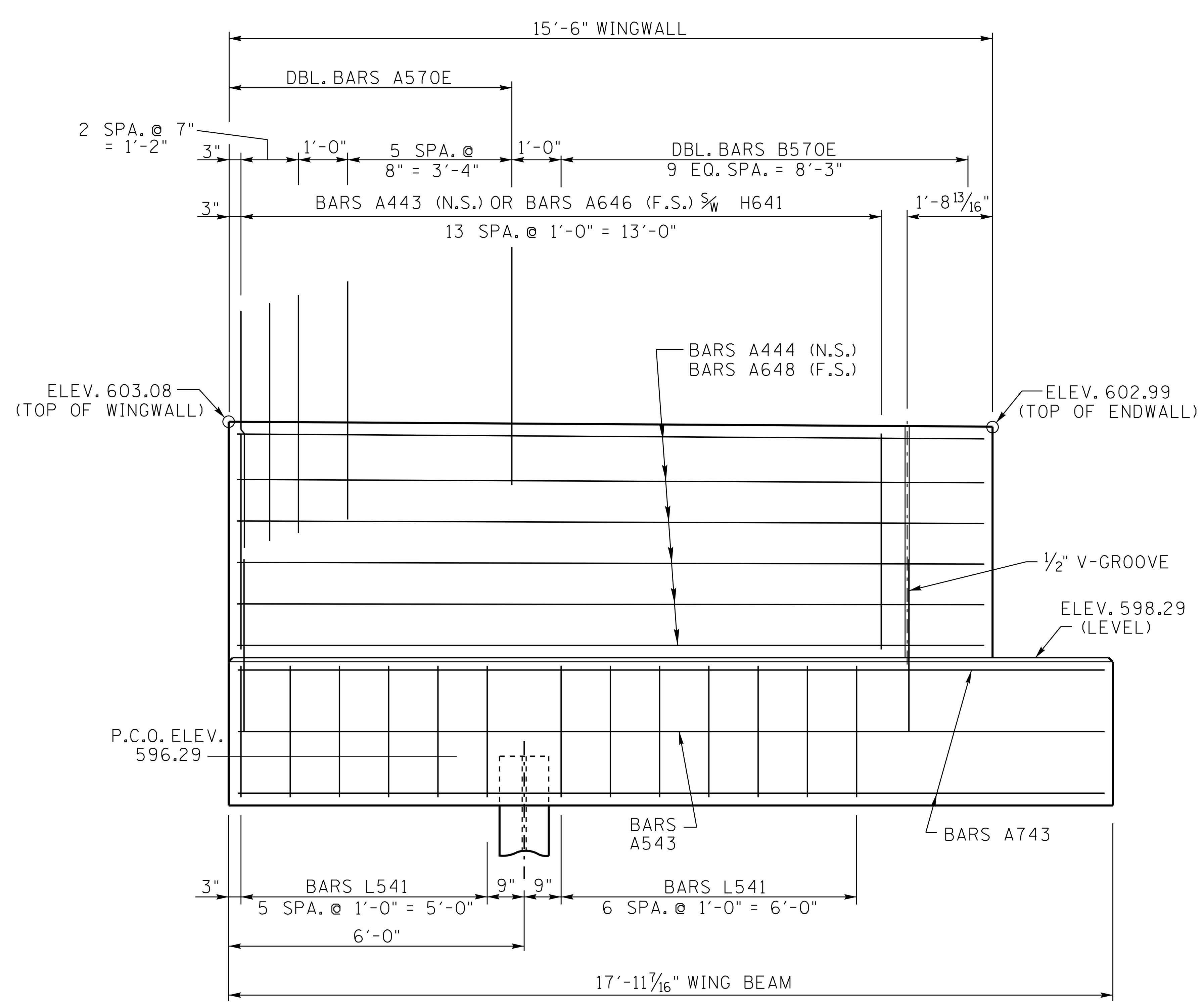
SECTION "A"-"A"

SPLICE LENGTH:
#4 BARS = 1'-8"
#6 BARS = 2'-9"
#6 EPOXY BARS = 3'-2"

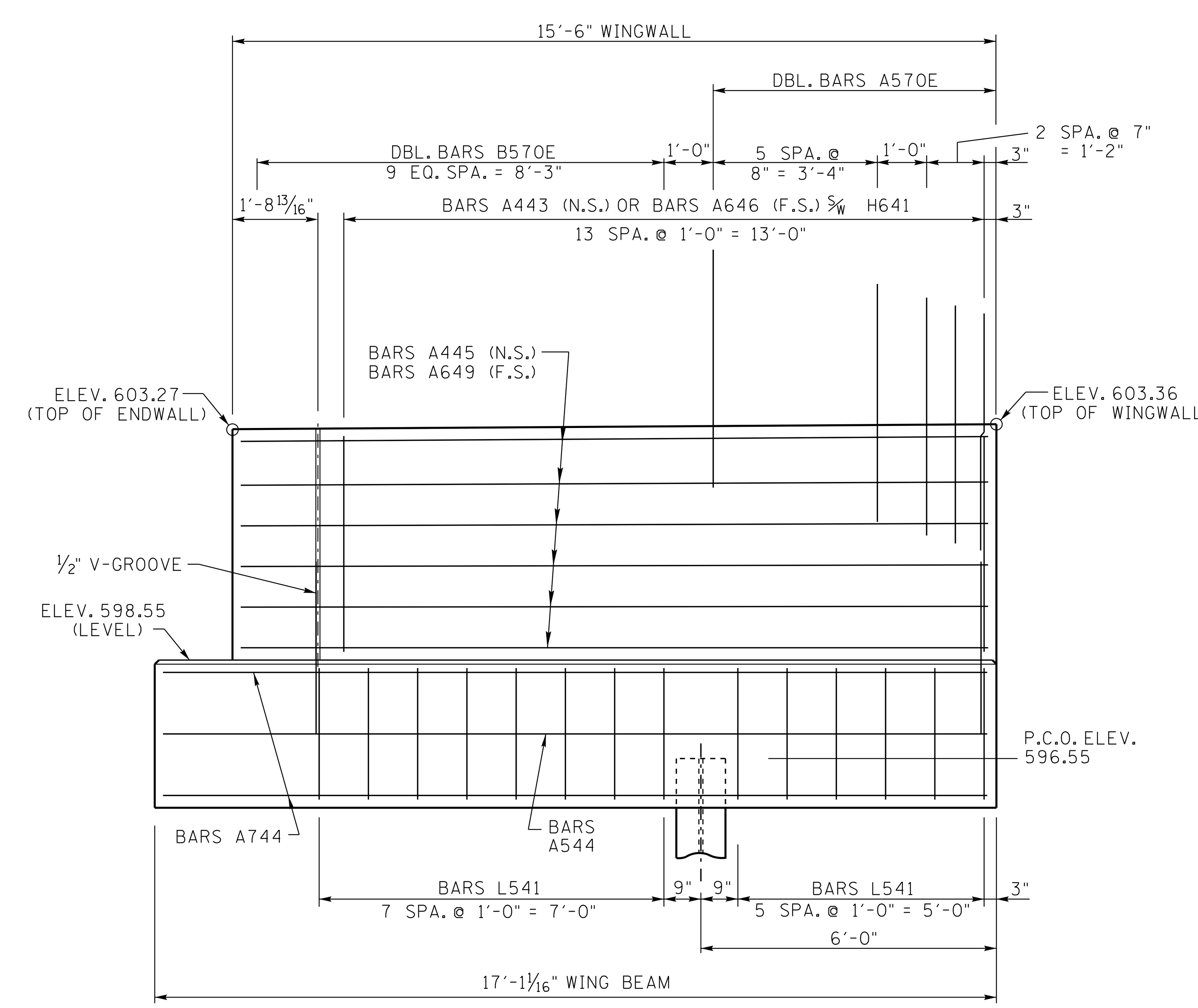


SECTION "B"-"B"

① DENOTES BARS A740 (PH. 1) ⅝ A741 (PH. 2) ⅝ A742 (PH. 2)
② DENOTES BARS A540 (PH. 1) ⅝ A541 (PH. 2) ⅝ A542 (PH. 2)



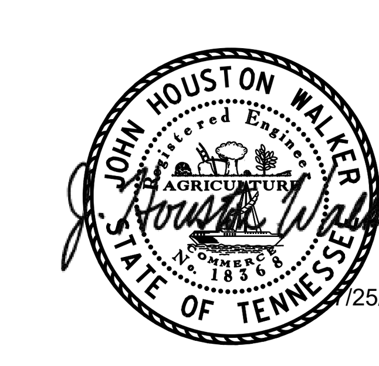
ELEVATION "A"-"A"



ELEVATION "B"-"B"

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ABUTMENT NO. 1 DETAILS
STATE ROUTE 96
OVER
OVERALL CREEK
STATION 68+92.79
LOG MILE 6.29
RUTHERFORD COUNTY
2017



CORRECT ____ ENGINEER OF STRUCTURES

DESIGNED BY B. G. ROMANO DATE 7-16
DRAWN BY STEVEN STEELE DATE 6-17
SUPERVISED BY M.B.C. / J.H.W. DATE 6-17
CHECKED BY S. STEPP DATE 7-17

7/25/2017 8:24:05 AM
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U-80-137

ABT1173.DGN

PIN NO. 100282.02

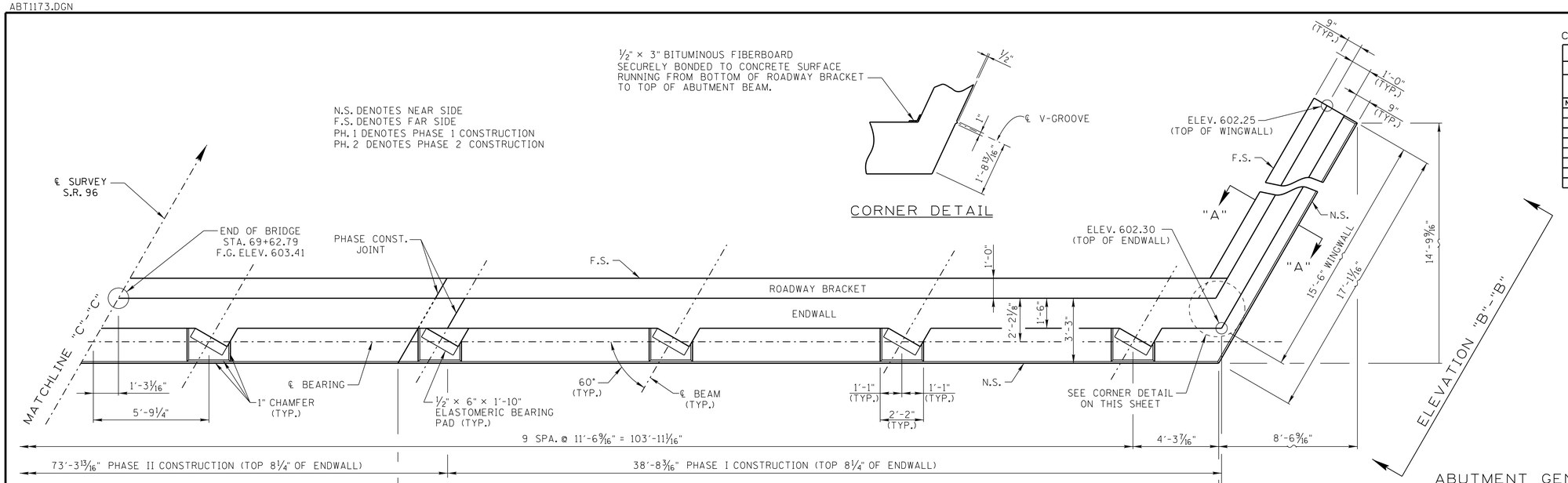
CONST. NO. 75009-3238-14

PROJECT NO.	YEAR	SHEET NO.
NH-96(48)	2017	

REVISIONS

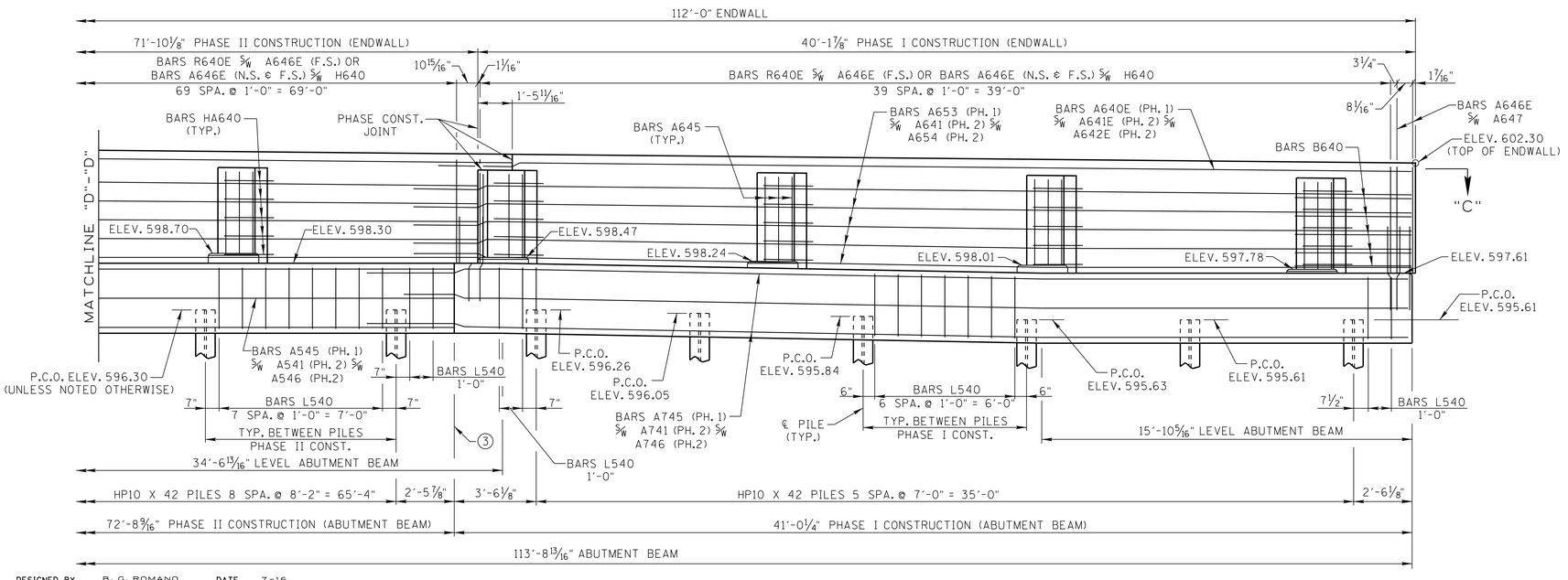
NO.	DATE	BY	BRIEF DESCRIPTION

N.S. DENOTES NEAR SIDE
F.S. DENOTES FAR SIDE
PH. 1 DENOTES PHASE 1 CONSTRUCTION
PH. 2 DENOTES PHASE 2 CONSTRUCTION



PLAN

CORNER DETAIL



ELEVATION
(LOOKING FORWARD ON ℄ SURVEY)

③ DENOTES PHASE CONSTRUCTION JOINT

ABUTMENT GENERAL NOTES

NOTE: RISER BLOCKS SHALL BE POURED MONOLITHICALLY WITH THE ABUTMENT BEAM.
NOTE: NOT LESS THAN HALF OF THE SLAB IN THE END SPAN SHALL BE POURED PRIOR TO, OR CONCURRENTLY WITH, PLACEMENT OF ANY PART OF THE ABUTMENT BACKWALL. AT LEAST THE TOP 12 INCHES OF THE BACKWALL SHALL BE POURED CONCURRENTLY WITH THE END OF SLAB.
NOTE: COST OF BRIDGE RAIL AND POST IS TO BE INCLUDED IN THE UNIT PRICE BID FOR THE BRIDGE RAIL SYSTEM.
NOTE: ELASTOMERIC PADS SHALL BE IN PLACE A MINIMUM OF ONE DAY BEFORE BEING DISTURBED BY SETTING BEAMS. PLACE RUBBER BONDING CEMENT IN SUCH A WAY THAT VISIBLE CONCRETE SURFACES WILL NOT BE STAINED.
NOTE: WHEN POURING WINGWALLS, PROVISIONS SHALL BE MADE FOR SETTING REINFORCING STEEL FOR WINGPOSTS AND PARAPETS. FOR DETAILS OF PARAPET SEE STD. DWG. NO. STD-11-1.
NOTE: WINGBEAM PILES SHALL BE DRIVEN TO REFUSAL. SEISMIC ATTACHMENT IS NOT REQUIRED FOR WINGBEAM PILES.
NOTE: CONTRACTOR MAY ADJUST SPACING OF REINFORCING STEEL 2" DUE TO PHASE CONSTRUCTION JOINT.

SPLICE LENGTH:
#5 BARS = 2'-2"
#6 BARS = 2'-9"
#6 EPOXY BARS = 3'-2"
#7 BARS = 3'-9"

ESTIMATED QUANTITIES

CLASS "A" CONCRETE C.Y.	STEEL BAR REINFORCEMENT LB.	EPOXY COATED REINFORCING STEEL LB.
91	10,483	3,472

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ABUTMENT NO. 2
STATE ROUTE 96
OVER
OVERALL CREEK
STATION 68+92.79
LOG MILE 6.29
RUTHERFORD COUNTY
2017

JOHN HOUSTON WALKER — STATE OF TENNESSEE — 7/25/2017

CORRECT _____ ENGINEER OF STRUCTURES

U-80-138

DESIGNED BY	B. G. ROMANO	DATE	7-16
DRAWN BY	STEVEN STEELE	DATE	6-17
SUPERVISED BY	M.B.C. / J.H.W.	DATE	6-17
CHECKED BY	S. STEPP	DATE	7-17

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PIN NO. 100282.02

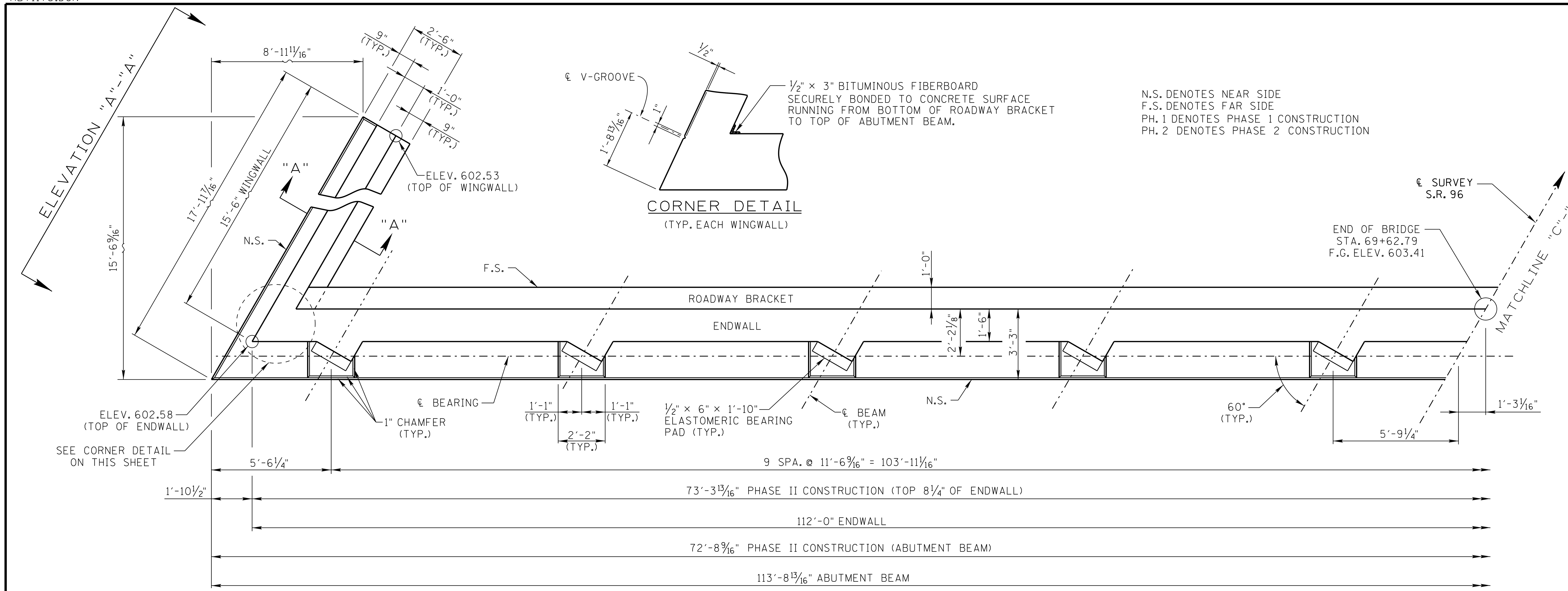
CONST. NO. 75009-3238-14

PROJECT NO.	YEAR	SHEET NO.
NH-96(48)	2017	

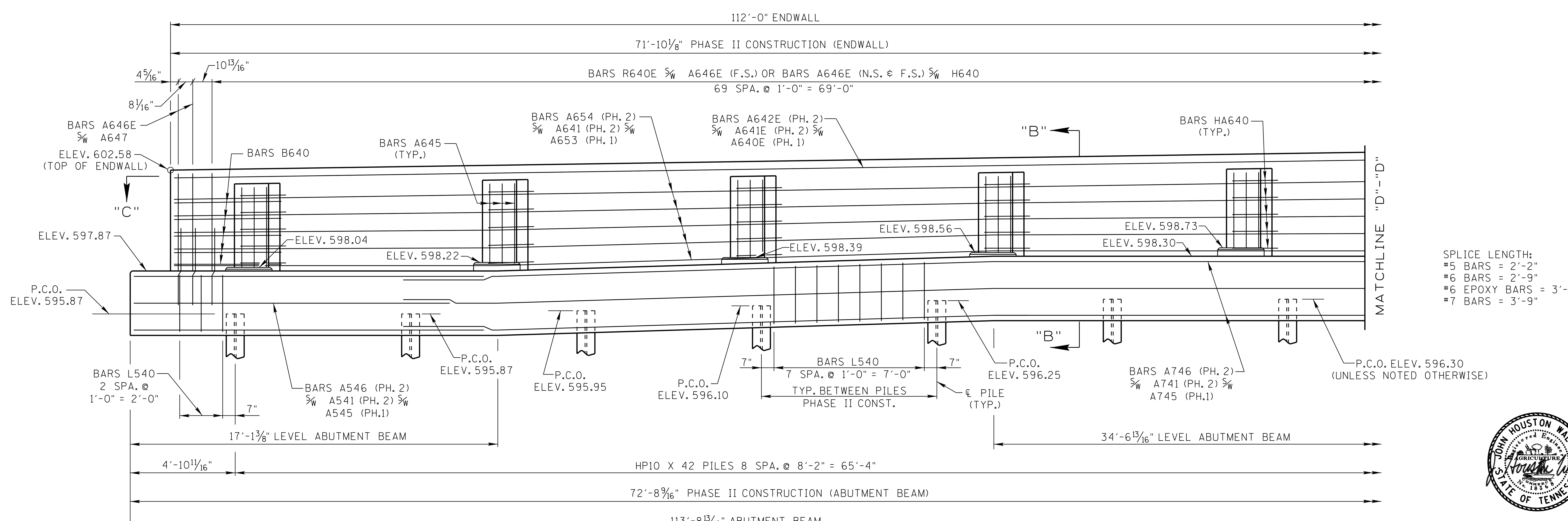
REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

N.S. DENOTES NEAR SIDE
F.S. DENOTES FAR SIDE
PH. 1 DENOTES PHASE 1 CONSTRUCTION
PH. 2 DENOTES PHASE 2 CONSTRUCTION



PLAN



ELEVATION
(LOOKING FORWARD ON ℄ SURVEY)

SPLICE LENGTH:
#5 BARS = 2'-2"
#6 BARS = 2'-9"
#6 EPOXY BARS = 3'-2"
#7 BARS = 3'-9"

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ABUTMENT NO. 2
STATE ROUTE 96
OVER
OVERALL CREEK
STATION 68+92.79
LOG MILE 6.29
RUTHERFORD COUNTY
2017

JOHN HOUSTON WALKER — STATE OF TENNESSEE (seal) 7/25/2017

CORRECT ______ ENGINEER OF STRUCTURES

DESIGNED BY	B. G. ROMANO	DATE	7-16
DRAWN BY	STEVEN STEELE	DATE	6-17
SUPERVISED BY	M.B.C. / J.H.W.	DATE	6-17
CHECKED BY	S. STEPP	DATE	7-17

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ABT1173.DGN

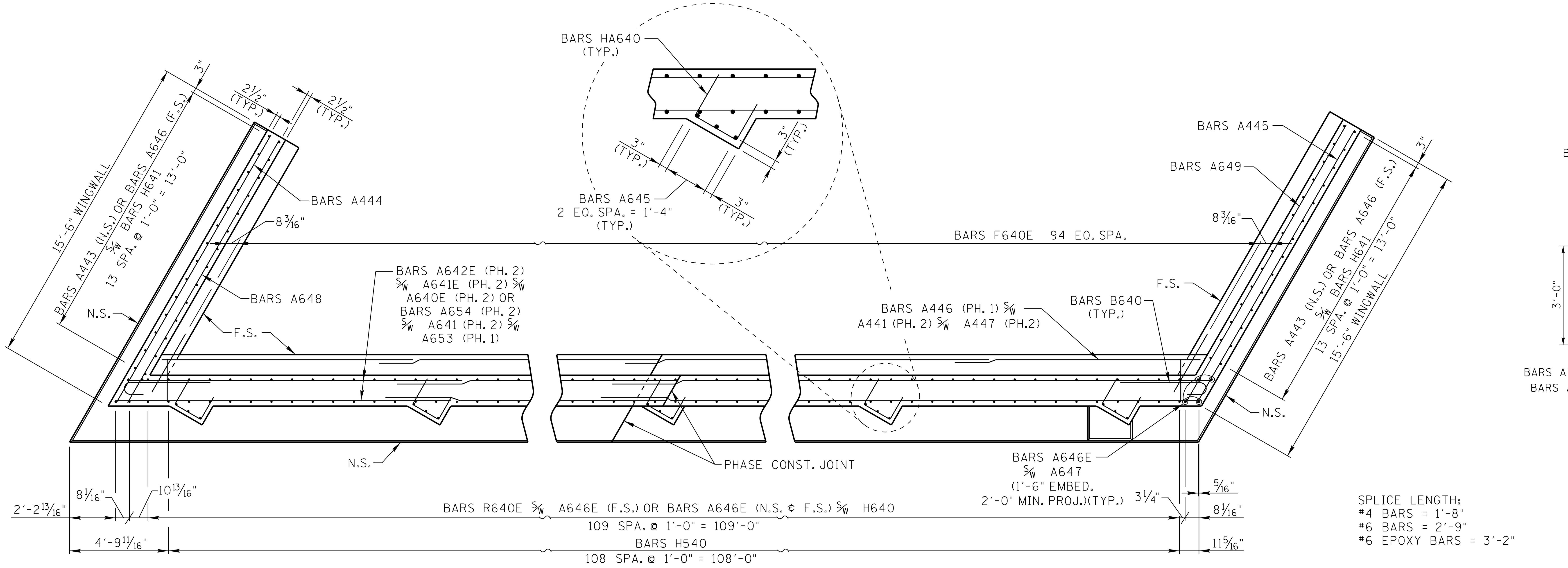
PIN NO. 100282.02

CONST. NO. 75009-3238-14

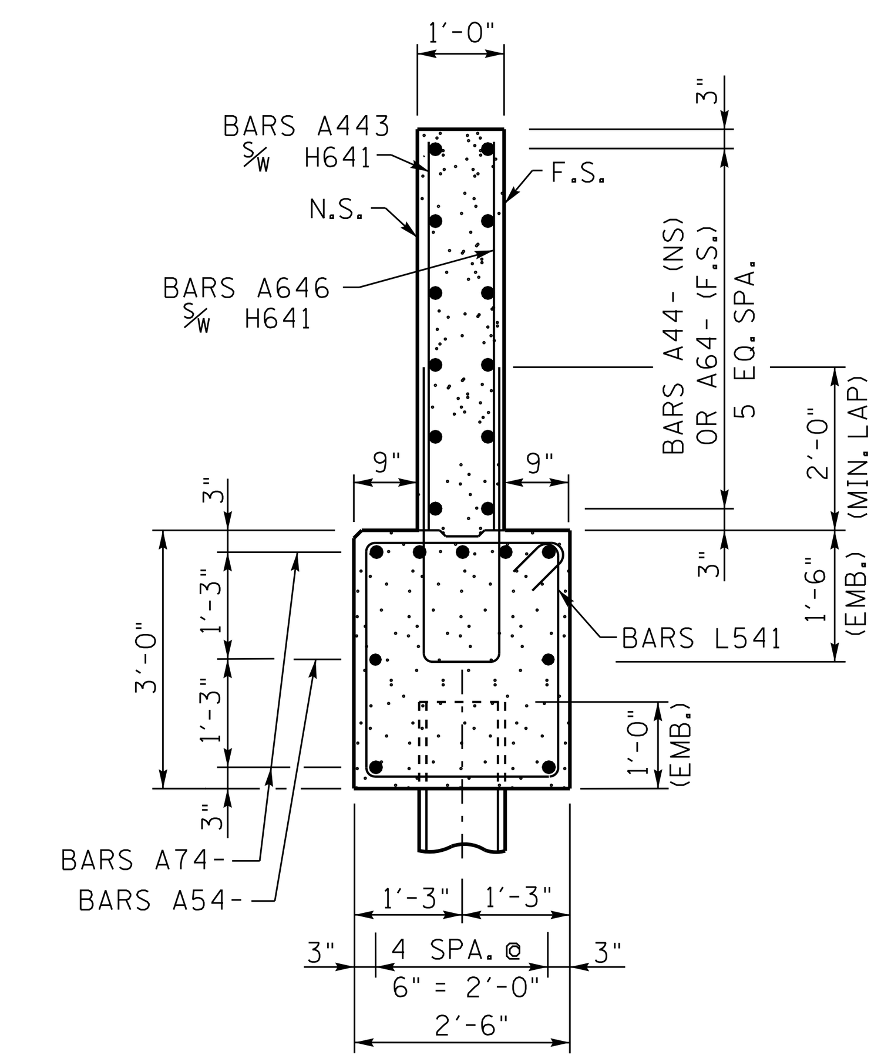
PROJECT NO.	YEAR	SHEET NO.
NH-96(48)	2017	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

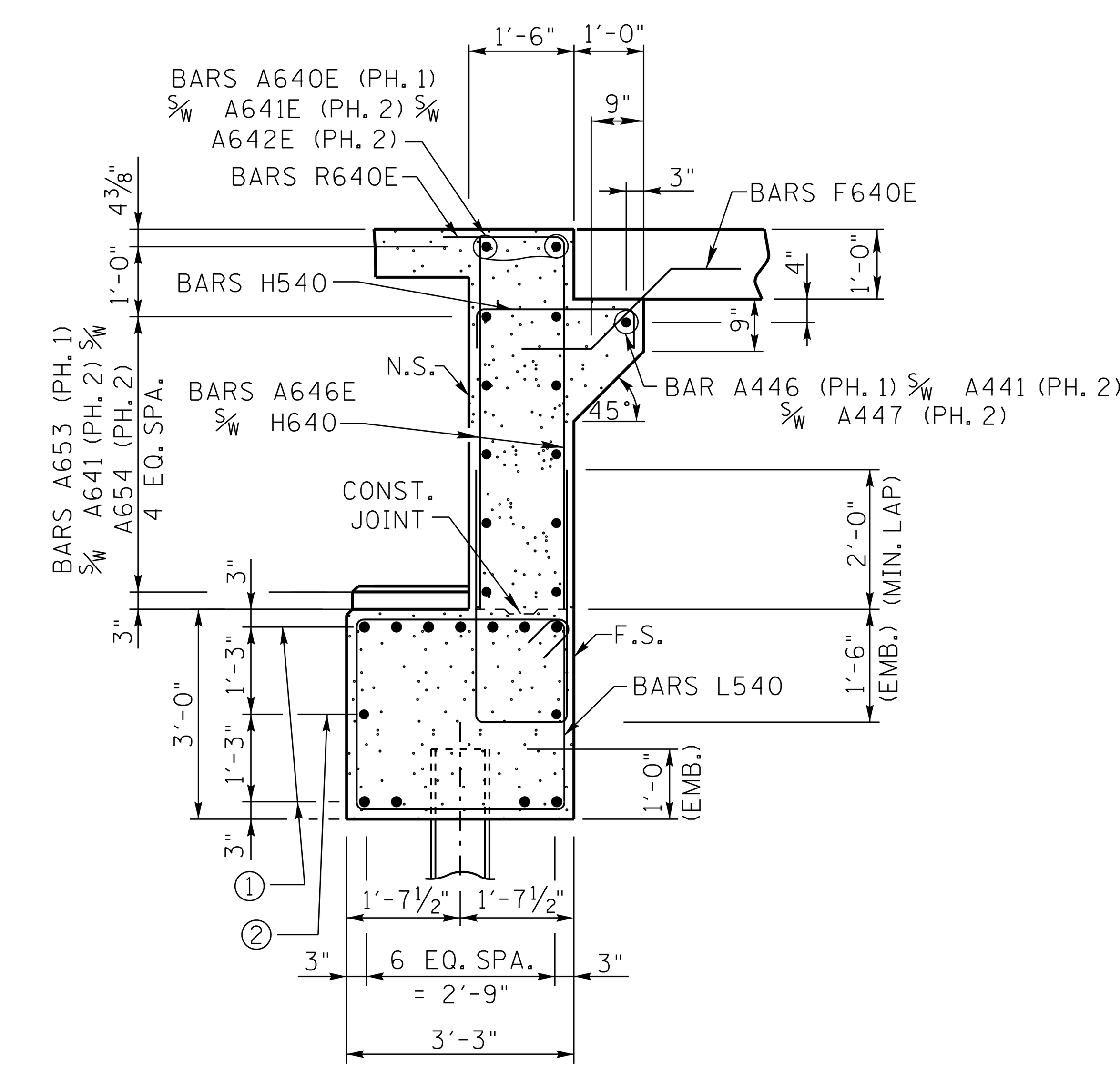


SECTION "C"-"C"



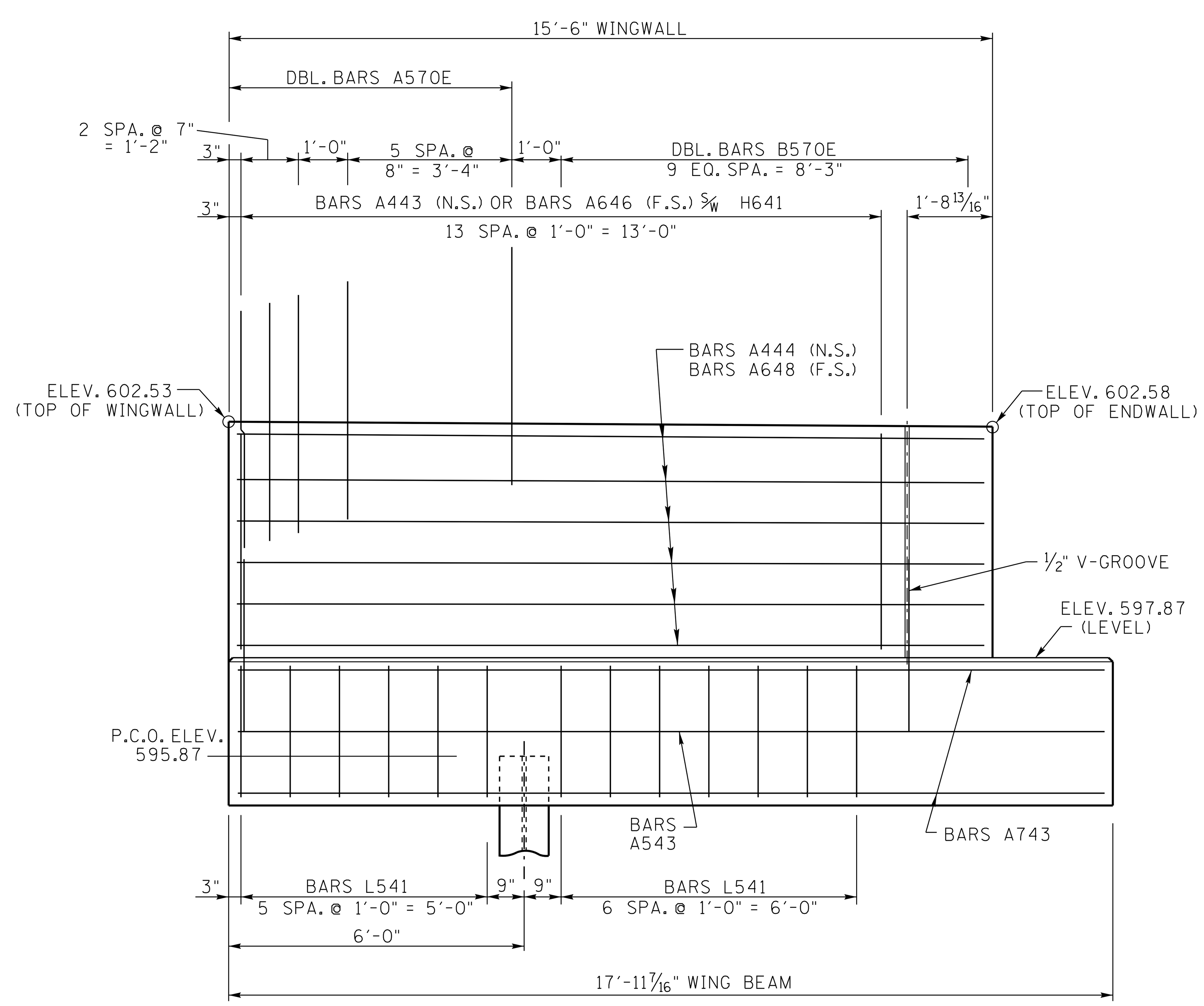
SECTION "A"-"A"

SPLICE LENGTH:
#4 BARS = 1'-8"
#6 BARS = 2'-9"
#6 EPOXY BARS = 3'-2"

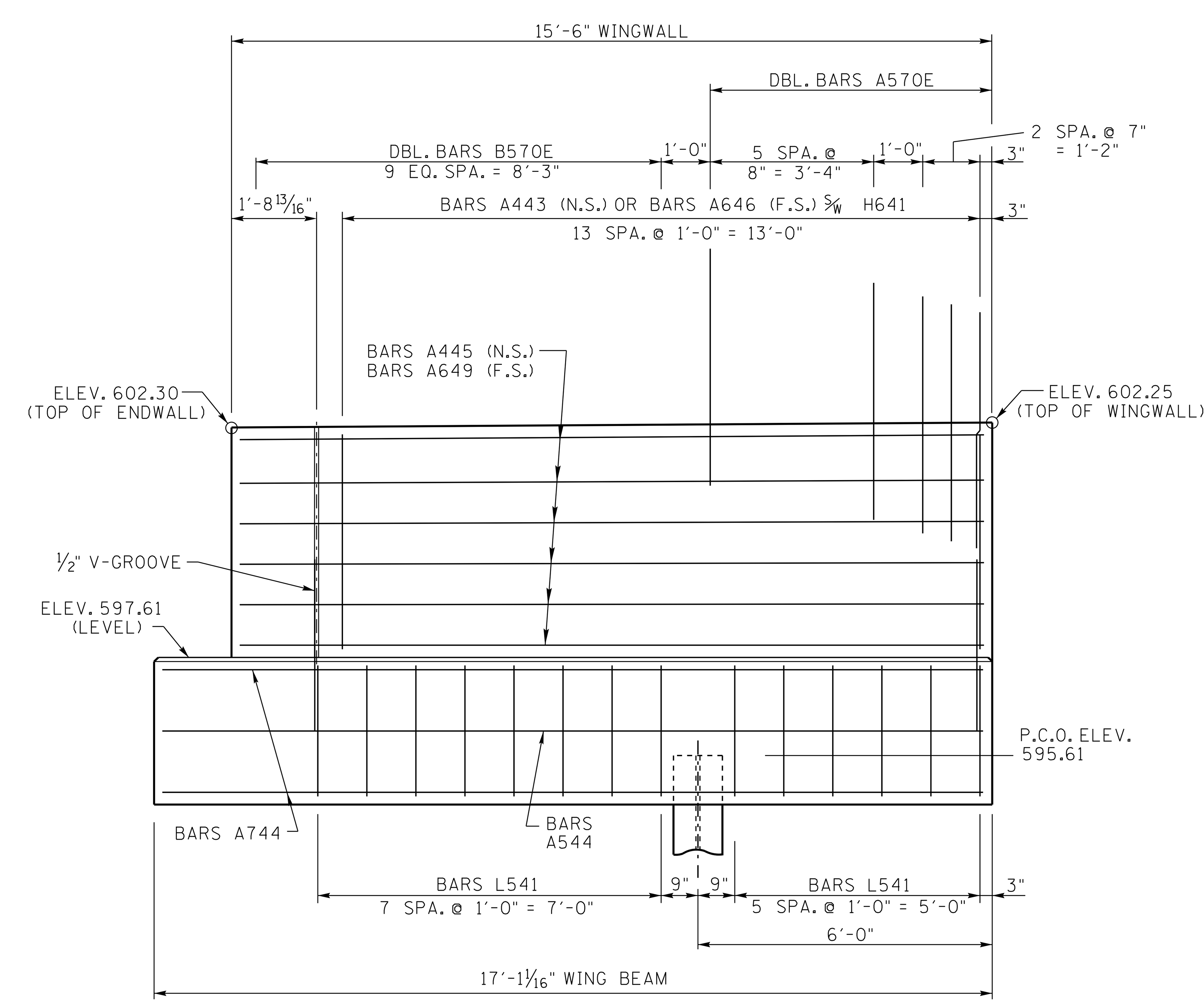


SECTION "B"-"B"

① DENOTES BARS A745 (PH. 1) ⅝ A741 (PH. 2) ⅝ A746 (PH. 2)
② DENOTES BARS A545 (PH. 1) ⅝ A541 (PH. 2) ⅝ A546 (PH. 2)



ELEVATION "A"-"A"



ELEVATION "B"-"B"

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ABUTMENT NO. 2 DETAILS
STATE ROUTE 96 OVER OVERALL CREEK
STATION 68+92.79
LOG MILE 6.29
RUTHERFORD COUNTY
2017

JOHN HOUSTON WALKER — STATE OF TENNESSEE — 7/25/2017

CORRECT ______ ENGINEER OF STRUCTURES

DESIGNED BY	B. G. ROMANO	DATE	7-16
DRAWN BY	STEVEN STEELE	DATE	6-17
SUPERVISED BY	M.B.C. / J.H.W.	DATE	6-17
CHECKED BY	S. STEPP	DATE	7-17

7/25/2017 8:25:18 AM
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PER1173.DGN

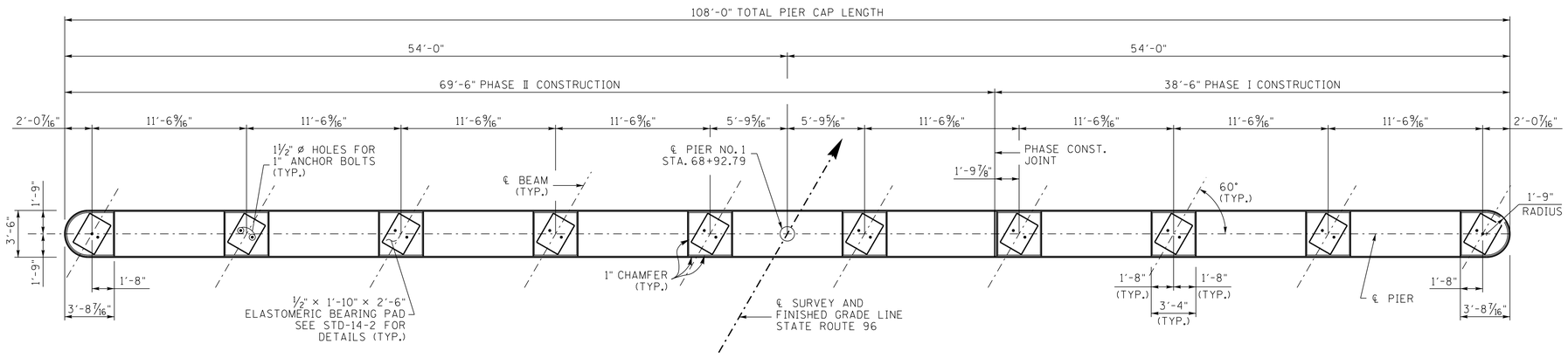
PIN NO. 100282.02

CONST. NO. 75009-3238-14

PROJECT NO.	YEAR	SHEET NO.
NH-96(48)	2017	

REVISIONS

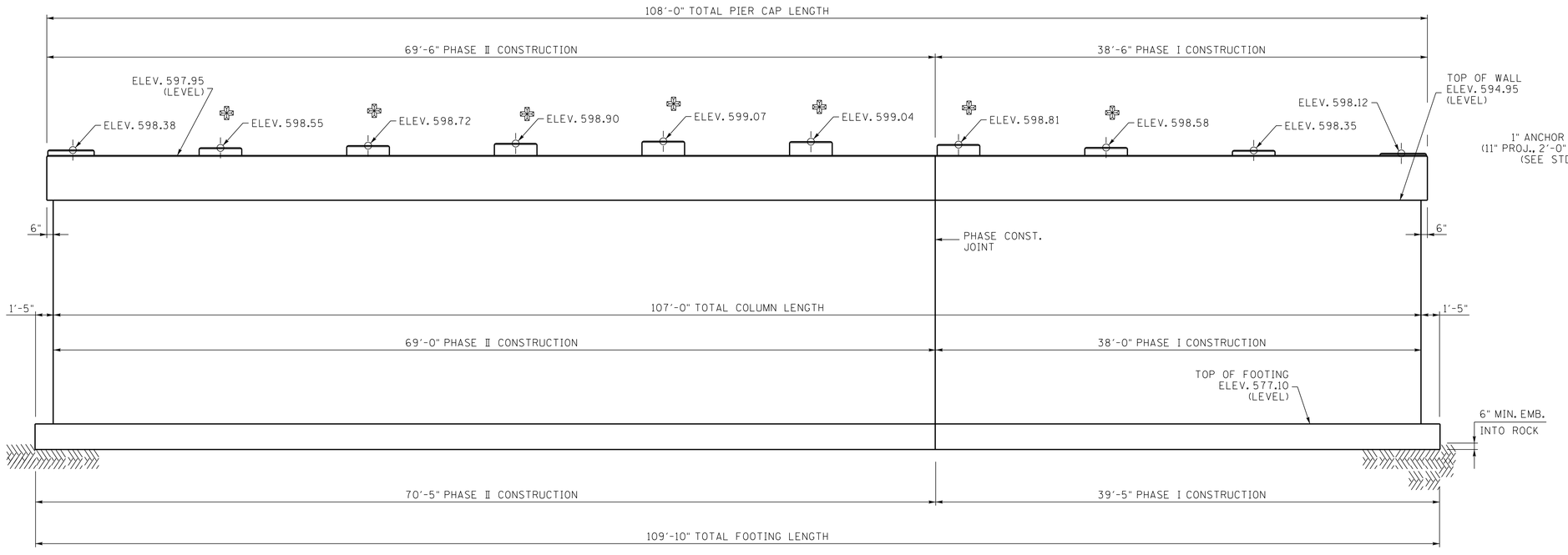
NO.	DATE	BY	BRIEF DESCRIPTION



PLAN

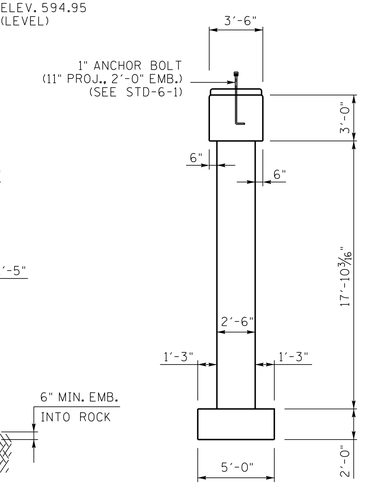
✣ DENOTES: RISER BLOCK REQUIRES REINFORCEMENT. SEE DETAILS ON DWG. NO. U-80-143.

ESTIMATED QUANTITIES	
CLASS "A" CONCRETE (BRIDGES) C.Y.	REINFORCING STEEL (BRIDGES) LB.
265	26,153



ELEVATION

(LOOKING FORWARD ON SURVEY)
(SHOWING DIMENSIONS ℄ ELEVATIONS)



END ELEVATION

NOTE: WHEN POURING CAP BEAM, PROVISIONS SHALL BE MADE FOR SETTING ANCHOR BOLTS. SEE STANDARD DRAWING STD-6-1. BOLT PROJECTION 11".

NOTE: RISER BLOCKS TO BE POURED MONOLITHICALLY WITH CAP BEAM.

NOTE: ELASTOMERIC PADS SHALL BE IN PLACE A MINIMUM OF ONE DAY BEFORE BEING DISTURBED BY SETTING BEAMS ON CONCRETE. PLACE RUBBER BONDING CEMENT IN SUCH A WAY THAT VISIBLE CONCRETE SURFACES WILL NOT BE STAINED.

NOTE: SEE STANDARD DRAWING STD-6-1 FOR PILE DETAILS AND NOTES.

NOTE: THE CONTRACTOR SHALL OFF-SET ANY REINFORCEMENT NECESSARY TO MAINTAIN A 2" CLEARANCE TO PHASE CONSTRUCTION JOINT.

NOTE: COLUMN STEEL TO EXTEND 2'-4" INTO CAP BEAM.

NOTE: SEE STANDARD DRAWING STD-6-2 FOR SUPPLEMENTARY REINFORCEMENT DETAILS AND NOTES.

JOHN HOUSTON WALKER — 118 — LICENSED PROFESSIONAL ENGINEER — STATE OF TENNESSEE — 1895 — 7/25/2017

CORRECT _____ ENGINEER OF STRUCTURES

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PIER NO. 1
STATE ROUTE 96
OVER
OVERALL CREEK
STATION 68+92.79
LOG MILE 6.29
RUTHERFORD COUNTY
2017

U-80-141

DESIGNED BY B.G. ROMANO DATE 07-16
DRAWN BY P. MOSHER DATE 06-17
SUPERVISED BY MBC/JHW DATE 06-17
CHECKED BY S. STEPP DATE 07-17

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PER1173.DGN

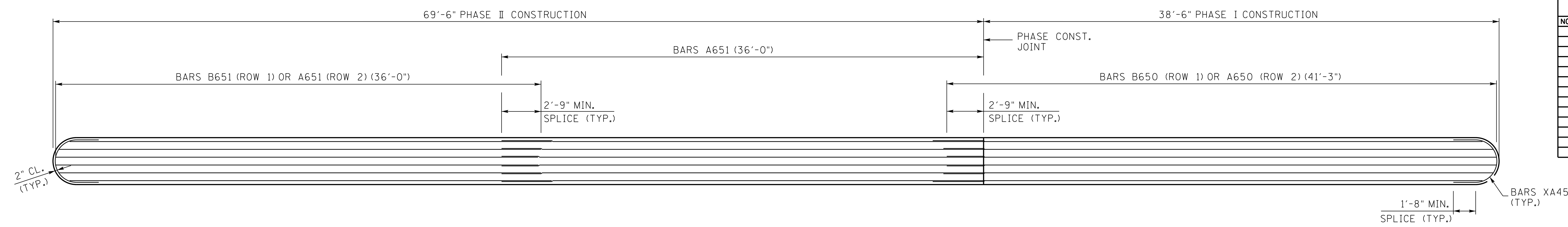
PIN NO. 100282.02

CONST. NO. 75009-3238-14

PROJECT NO.	YEAR	SHEET NO.
NH-96(48)	2017	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

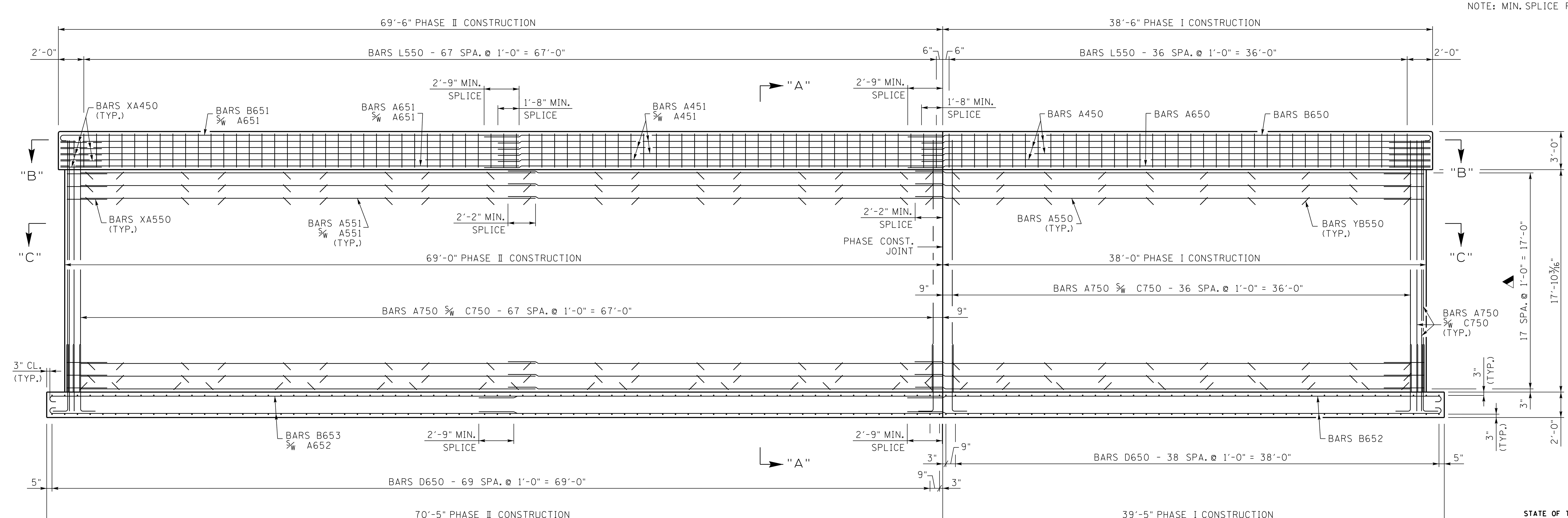


SECTION "B"-"B"

NOTE: FOR SECTIONS "A"-"A", "C"-"C" & "PLAN OF FOOTING" SEE DWG. NO. U-80-143.

▲ DENOTES: FOR BAR DESIGNATIONS, SEE SECTION "C"-"C" ON DWG. NO. U-80-143.

NOTE: MIN. SPLICE FOR NO. 7 BARS IS 3'-9".



ELEVATION

(LOOKING FORWARD ON SURVEY)
(SHOWING REINFORCEMENT & DIMENSIONS)

SPLICE LENGTH:
#4 BARS = 1'-8"
#5 BARS = 2'-2"
#6 BARS = 2'-9"

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PIER NO. 1 DETAILS
STATE ROUTE 96
OVER
OVERALL CREEK
STATION 68+92.79
LOG MILE 6.29
RUTHERFORD COUNTY
2017

JOHN HOUSTON WALKER — STATE OF TENNESSEE — 7/25/2017

CORRECT _______ ENGINEER OF STRUCTURES

DESIGNED BY	B.G. ROMANO	DATE	07-16
DRAWN BY	P. MOSHER	DATE	06-17
SUPERVISED BY	MBC/JHW	DATE	06-17
CHECKED BY	S. STEPP	DATE	07-17

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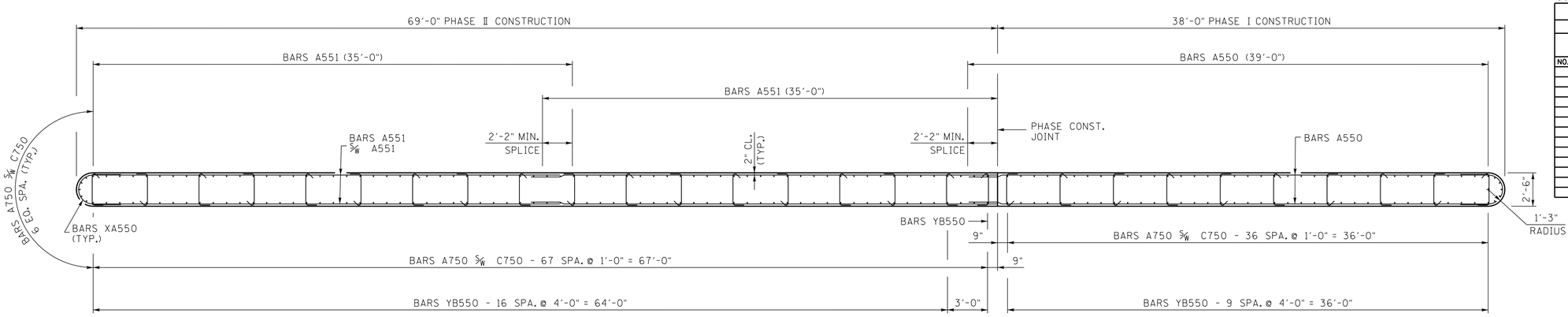
U-80-142

CONST. NO. 75009-3238-14

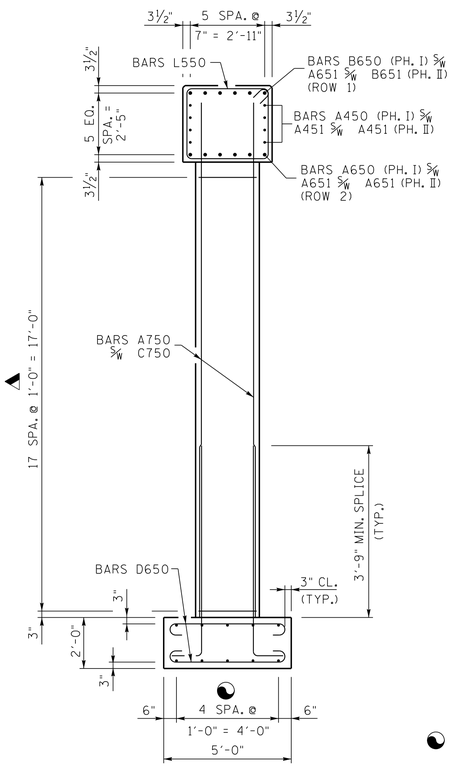
PROJECT NO.	YEAR	SHEET NO.
NH-96(48)	2017	

REVISIONS

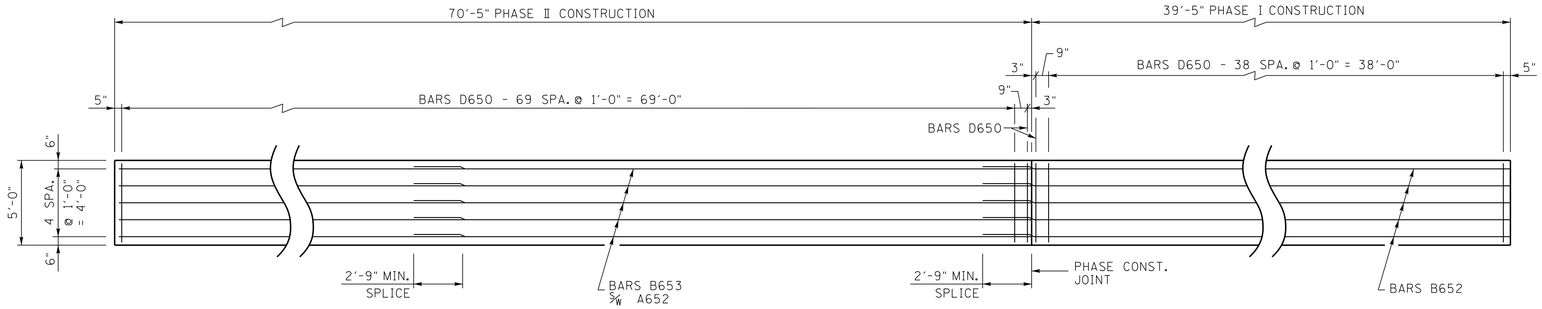
NO.	DATE	BY	BRIEF DESCRIPTION



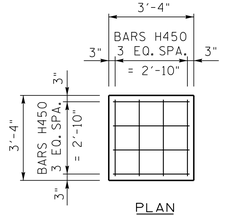
SECTION "C"-"C"



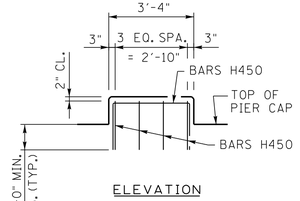
SECTION "A"-"A"



PLAN OF FOOTING



PLAN



ELEVATION

RISER BLOCK REINFORCING DETAIL

SPLICE LENGTH:
#5 BARS = 2'-2"
#6 BARS = 2'-9"

DENOTES: BARS B652 (PH. I) #5
BARS A652 #5 B653 (PH. II)
(TOP & BOTTOM MATS)

DENOTES: BARS A550 (PH. I) #5
BARS A551 #5 A551 (PH. II) OR
BARS YB550 OR BARS XA550

DESIGNED BY B.G. ROMANO DATE 07-16
DRAWN BY P. MOSHER DATE 06-17
SUPERVISED BY MBC/JHW DATE 06-17
CHECKED BY S. STEPP DATE 07-17

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PIER NO. 1 DETAILS STATE ROUTE 96 OVER OVERALL CREEK STATION 68+92.79 LOG MILE 6.29 RUTHERFORD COUNTY 2017

JOHN HOUSTON WALKER — REGISTERED ENGINEER — STRUCTURES — STATE OF TENNESSEE — 7/25/2017

CORRECT _____ ENGINEER OF STRUCTURES

U-80-143

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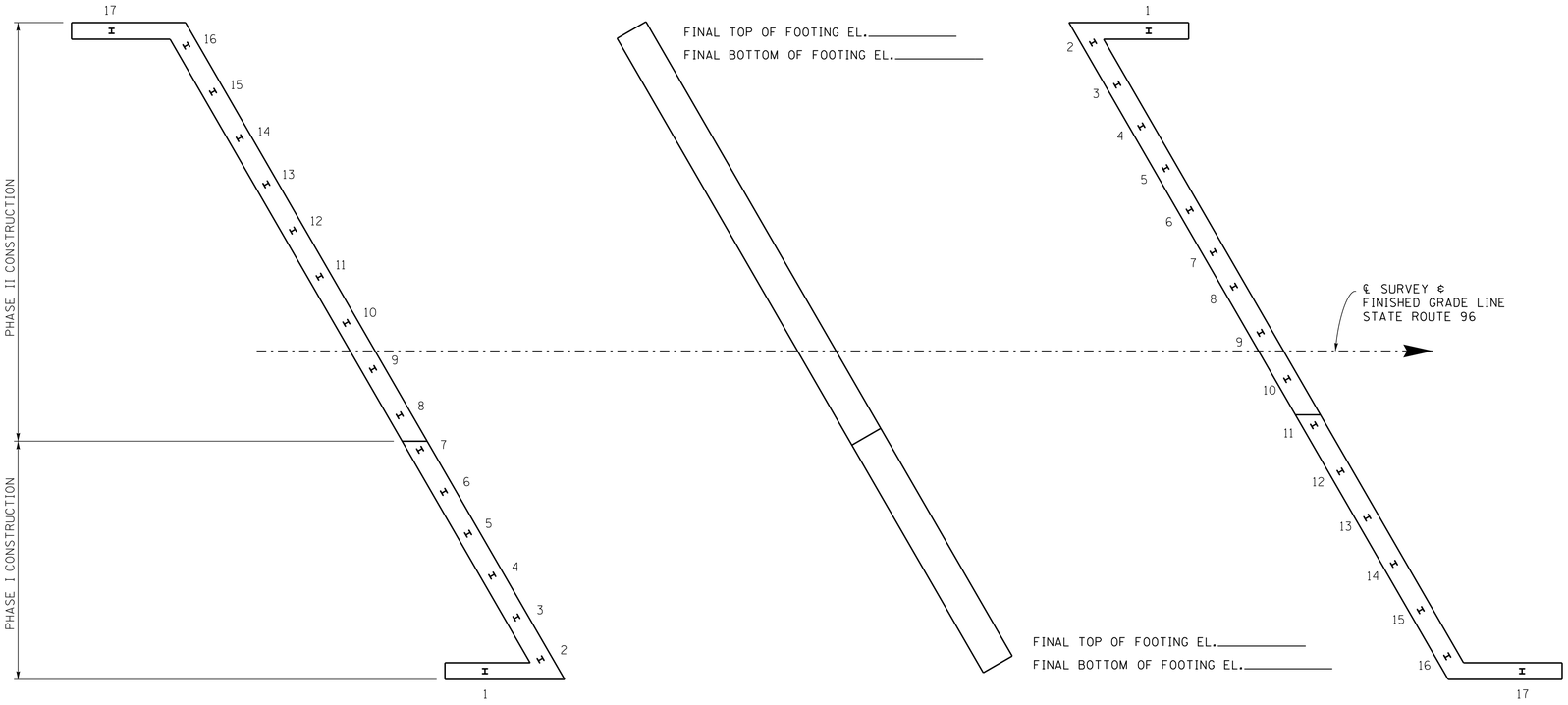
PIN NO. 100282.02

CONST. NO. 75009-3238-14

PROJECT NO.	YEAR	SHEET NO.
NH-96(48)	2017	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



ABUTMENT NO. 1 PIER NO. 1 ABUTMENT NO. 2

PLAN

TABLE OF PILE DATA

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
ABUTMENT NO. 1	PILE CUT-OFF ELEV.																	
	PILE TIP ELEV.																	
	IN PLACE PILE LENGTH																	
ABUTMENT NO. 2	PILE CUT-OFF ELEV.																	
	PILE TIP ELEV.																	
	IN PLACE PILE LENGTH																	

NOTE TO CONTRACTOR AND CONSTRUCTION OFFICE:
THE BLANKS ON THIS SHEET ARE TO BE FILLED IN BY THE CONSTRUCTION OFFICE AND/OR FIELD ENGINEER GIVING AS BUILT CONDITIONS. AFTER COMPLETION, IT IS TO BE SENT TO THE DIVISION OF STRUCTURES TO BECOME PART OF FINAL BRIDGE DOCUMENTS.

DESIGNED BY B.G. ROMANO DATE 07-16
DRAWN BY C. BERNATEK DATE 06-17
SUPERVISED BY M.B.C./J.H.W. DATE 06-17
CHECKED BY S. STEPP DATE 07-17

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

FINAL FOUNDATION DATA
STATE ROUTE 96
OVER
OVERALL CREEK
STATION 68+92.79
LOG MILE 6.29
RUTHERFORD COUNTY
2017

CORRECT
ENGINEER OF STRUCTURES

U-80-144

BOS1173.DGN

PIN NO.100282.02

BILL OF STEEL

SUPERSTRUCTURE

BAR	LOCATION	SIZE	NO. REQ'D	BENDING DIMENSIONS A	B	C	D	LENGTH
A500	DIAPHRAGM	5	20					4'-0"
A501	DIAPHRAGM	5	90					9'-4"
A502	DIAPHRAGM	5	80					7'-2"
L400	DIAPHRAGM	4	20	1'-2"	1'-2"			5'-5"
L401	DIAPHRAGM	4	90	1'-2"	3'-7"			10'-3"

SUPERSTRUCTURE EPOXY

A400E	SIDEWALK	4	30					60'-0"
A401E	SIDEWALK	4	10					13'-8"
A402E	SIDEWALK	4	252					5'-2"
A600E	SLAB	6	552					60'-0"
A601E	SLAB (PH.I)	6	348					6'-7"
A602E	SLAB (PH.I)	6	390					36'-7"
SERIES A603E	SLAB (PH.I)	6	2	LENGTH VARIES FROM 7'-1¾" TO 36'-5⅜" IN INC. OF 1'-0⅛" (30 BARS)				653'-11"
SERIES A604E	SLAB (PH.I)	6	2	LENGTH VARIES FROM 4'-7⅛" TO 37'-11¼" IN INC. OF 1'-0⅛" (34 BARS)				723'-0"
SERIES A605E	SLAB (PH.II)	6	2	LENGTH VARIES FROM 4'-7⅛" TO 59'-1⅜" IN INC. OF 1'-0⅛" (55 BARS)				1,752'-10"
SERIES A606E	SLAB (PH.II)	6	2	LENGTH VARIES FROM 5'-7⅜" TO 59'-2" IN INC. OF 1'-0⅛" (54 BARS)				1,749'-1"
A607E	SLAB	6	6					10'-7"
A608E	SLAB	6	26					4'-11"
A609E	SLAB	6	98					26'-2"
A700E	SLAB	7	196					44'-6"
A800E	SLAB	8	98					60'-0"
A801E	SLAB	8	96					30'-0"
B570E	PARAPET/SLAB	5	560	3'-4"				3'-11"

ABUTMENT NO. 1

BAR	LOCATION	SIZE	NO. REQ'D	BENDING DIMENSIONS A	B	C	D	LENGTH
A440	ROADWAY BRACKET	4	1					40'-9"
A441	ROADWAY BRACKET	4	1					60'-0"
A442	ROADWAY BRACKET	4	1					11'-11"
A443	WINGWALLS	4	28					4'-6"
A444	LT. WINGWALL	4	6					15'-0"
A445	RT. WINGWALL	4	6					15'-4"
A540	ABUTMENT BEAM	5	2					43'-3"
A541	ABUTMENT BEAM	5	2					60'-0"
A542	ABUTMENT BEAM	5	2					14'-6"
A543	LT. WING BEAM	5	2					16'-2"
A544	RT. WING BEAM	5	2					16'-9"
A641	ENDWALL	6	10					60'-0"
A643	ENDWALL	6	10					43'-0"
A644	ENDWALL	6	10					14'-2"
A645	BEAM STOP	6	30					3'-10"
A646	WINGWALLS	6	28					4'-6"
A647	ABUT. BEAM/ENDWALL	6	8					3'-6"
A648	LT. WINGWALL	6	6					14'-9"
A649	RT. WINGWALL	6	6					15'-7"
A740	ABUTMENT BEAM	7	11					44'-10"
A741	ABUTMENT BEAM	7	11					60'-0"
A742	ABUTMENT BEAM	7	11					16'-1"
A743	LT. WING BEAM	7	7					16'-2"
A744	RT. WING BEAM	7	7					16'-9"
B640	ENDWALL	6	10	5'-0"				5'-8"
H540	ENDWALL	5	109	2'-2"	6"			3'-2"
H640	ABUT./ENDWALL	6	110	1'-2"	4'-0"			9'-2"
H641	WINGWALLS	6	28	8"	3'-7"			7'-10"
HA640	ENDWALL	6	50	1'-5"	1'-2"	1'-5"		4'-0"
L540	ABUT. BEAM	5	108	2'-11"	2'-8"			12'-2"
L541	WING BEAMS	5	27	2'-2"	2'-8"			10'-8"

ABUTMENT NO. 1 EPOXY

A570E	WINGWALLS/PARAPETS	5	36					4'-10"
A640E	ENDWALL	6	2					41'-8"
A641E	ENDWALL	6	2					60'-0"
A642E	ENDWALL	6	2					16'-4"
A646E	ENDWALL	6	228					4'-6"
B570E	WINGWALLS/PARAPETS	5	40	3'-4"				3'-11"
F640E	ENDWALL/PVMT. @ BR. ENDS	6	95	1'-1"	1'-3"	1'-1"	1'-3"	4'-0"
R640E	ENDWALL/SLAB	6	110	2'-0"	2'-0"			4'-0"

ABUTMENT NO. 2

BAR	LOCATION	SIZE	NO. REQ'D	BENDING DIMENSIONS A	B	C	D	LENGTH
A441	ROADWAY BRACKET	4	1					60'-0"
A443	WINGWALLS	4	28					4'-6"
A444	LT. WINGWALL	4	6					15'-0"
A445	RT. WINGWALL	4	6					15'-4"
A446	ROADWAY BRACKET	4	1					40'-6"
A447	ROADWAY BRACKET	4	1					12'-3"
A541	ABUTMENT BEAM	5	2					60'-0"
A543	LT. WING BEAM	5	2					16'-2"
A544	RT. WING BEAM	5	2					16'-9"
A545	ABUTMENT BEAM	5	2					43'-0"
A546	ABUTMENT BEAM	5	2					14'-9"
A641	ENDWALL	6	10					60'-0"
A645	BEAM STOP	6	30					3'-10"
A646	WINGWALLS	6	28					4'-6"
A647	ABUT. BEAM/ENDWALL	6	8					3'-6"
A648	LT. WINGWALL	6	6					14'-9"
A649	RT. WINGWALL	6	6					15'-7"
A653	ENDWALL	6	10					42'-9"
A654	ENDWALL	6	10					14'-5"
A741	ABUTMENT BEAM	7	11					60'-0"
A743	LT. WING BEAM	7	7					16'-2"
A744	RT. WING BEAM	7	7					16'-9"
A745	ABUTMENT BEAM	7	11					44'-7"
A746	ABUTMENT BEAM	7	11					16'-4"
B640	ENDWALL	6	10	5'-0"				5'-8"
H540	ENDWALL	5	109	2'-2"	6"			3'-2"
H640	ABUT./ENDWALL	6	110	1'-2"	4'-0"			9'-2"
H641	WINGWALLS	6	28	8"	3'-7"			7'-10"
HA640	ENDWALL	6	50	1'-5"	1'-2"	1'-5"		4'-0"
L540	ABUT. BEAM	5	108	2'-11"	2'-8"			12'-2"
L541	WING BEAMS	5	27	2'-2"	2'-8"			10'-8"

ABUTMENT NO. 2 EPOXY

A570E	WINGWALLS/PARAPETS	5	36					4'-10"
A640E	ENDWALL	6	2					41'-8"
A641E	ENDWALL	6	2					60'-0"
A642E	ENDWALL	6	2					16'-4"
A646E	ENDWALL	6	228					4'-6"
B570E	WINGWALLS/PARAPETS	5	40	3'-4"				3'-11"
F640E	ENDWALL/PVMT. @ BR. ENDS	6	95	1'-1"	1'-3"	1'-1"	1'-3"	4'-0"
R640E	ENDWALL/SLAB	6	110	2'-0"	2'-0"			4'-0"

PIER NO. 1

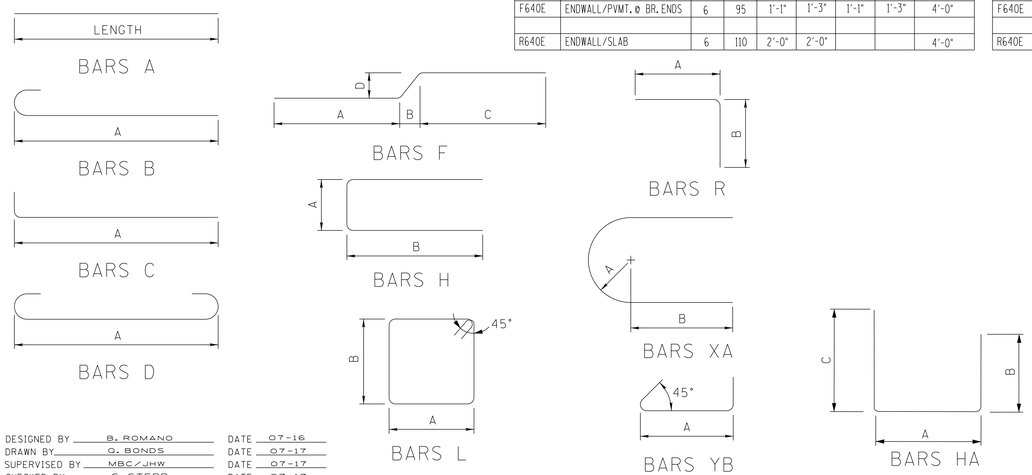
BAR	LOCATION	SIZE	NO. REQ'D	BENDING DIMENSIONS A	B	C	D	LENGTH
A450	PIER CAP (PH.I)	4	8					39'-2"
A451	PIER CAP (PH.II)	4	16					35'-0"
A550	COLUMN (PH.I)	5	36					39'-0"
A551	COLUMN (PH.II)	5	72					35'-0"
A650	PIER CAP (PH.I)	6	6					41'-3"
A651	PIER CAP (PH.II)	6	18					36'-0"
A652	FOOTING (PH.II)	6	10					36'-6"
A750	COLUMNS/PIER CAP	7	220					20'-2"
B650	PIER CAP (PH.I)	6	6	41'-3"				41'-11"
B651	PIER CAP (PH.II)	6	6	36'-0"				36'-8"
B652	FOOTING (PH.I)	6	10	42'-0"				42'-8"
B653	FOOTING (PH.II)	6	10	36'-6"				37'-2"
C750	COLUMN/FOOTING	7	220	5'-5"				6'-7"
D650	FOOTING	6	222	4'-6"				5'-10"
L550	PIER CAP	5	105	3'-1"	2'-7"			12'-3"
XA450	PIER CAP	4	10	1'-7"	1'-8"			8'-4"
XA550	COLUMN	5	36	1'-1"	2'-2"			7'-9"
YB550	COLUMN	5	504	2'-3"				3'-4"
H450	RISER BLOCKS	4	56	3'-0"	2'-0"			7'-0"

CONST. NO. 75009-3238-14

PROJECT NO.	YEAR	SHEET NO.
NH-96(48)	2017	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



REINFORCING STEEL CODE

TYPE	SIZE	SERIES
A	5	06

NOTE: DIMENSIONS SHOWN ON THIS SHEET ARE OUTSIDE TO OUTSIDE OF BAR. STANDARD C.R.S.I. HOOK DETAILS SHALL APPLY, EXCEPT AS NOTED.

NOTE: THE SUFFIX E FOR BARS SO MARKED DENOTES EPOXY COATED REINFORCEMENT.

DESIGNED BY B. ROMANO DATE 07-16
DRAWN BY O. BONDS DATE 07-17
SUPERVISED BY MBC/JHW DATE 07-17
CHECKED BY S. STEPP DATE 07-17

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BILL OF STEEL
STATE ROUTE 96
OVER
OVERALL CREEK
STATION 68+92.79
LOG MILE 6.29
RUTHERFORD COUNTY
2017

JOHN HOUSTON WALKER — REGISTERED ENGINEER — AGRICULTURE — STATE OF TENNESSEE — 7/25/2017

CORRECT

ENGINEER OF STRUCTURES

U-80-145

7/25/2017 1:59:32 PM
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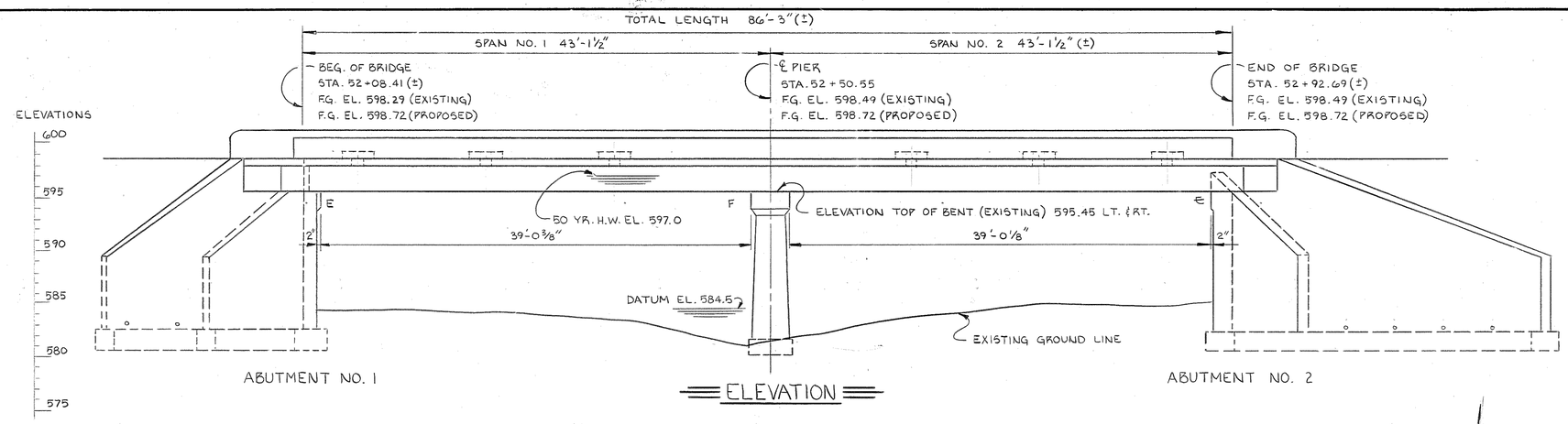
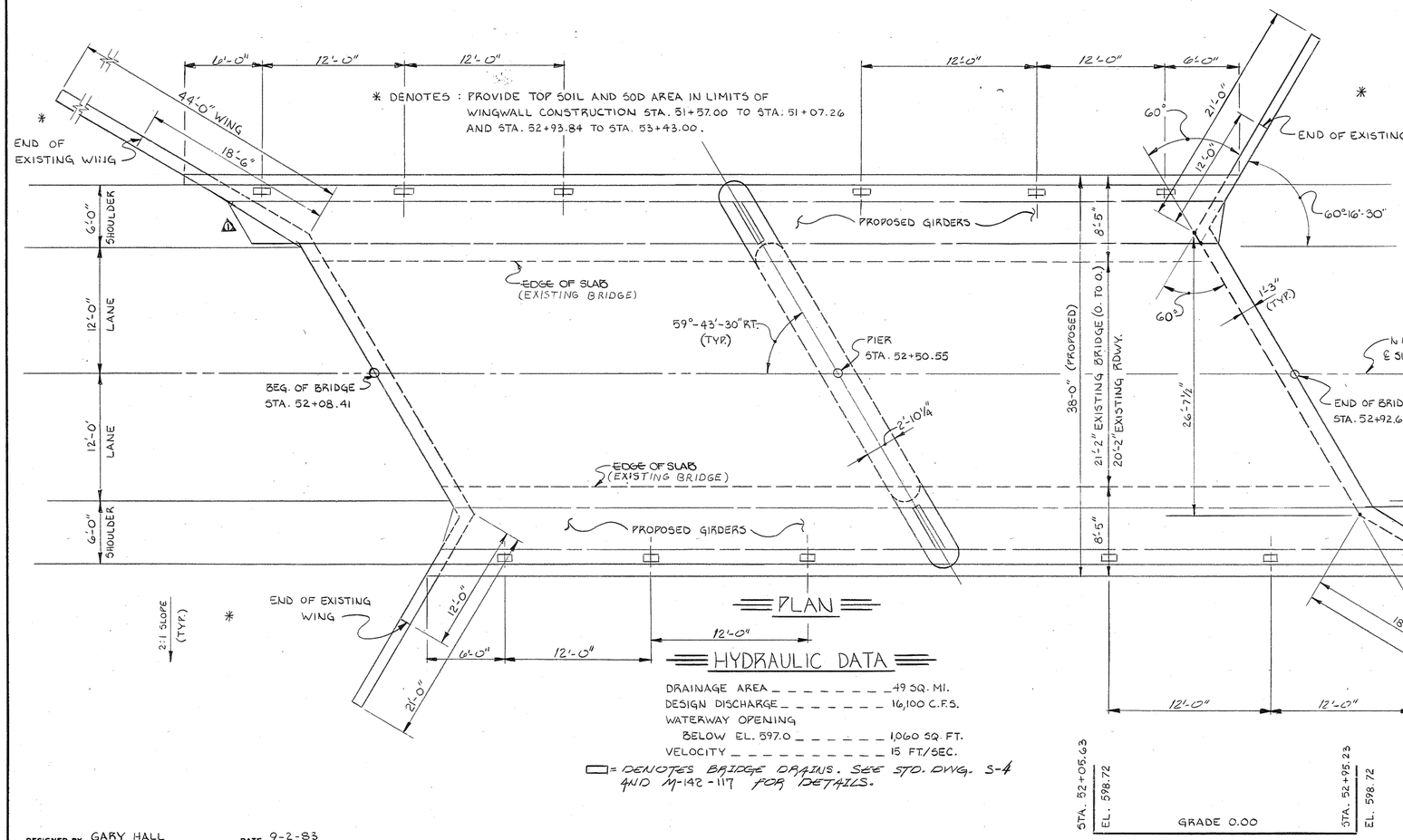
CONST. NO. 75009-3219-94

PROJECT NO.	YEAR	SHEET NO.
BHF-96 (1)	1984	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	8-14-84	HALL	REVISED LENGTH OF GIRDERS 1 & 2





HYDRAULIC DATA

DRAINAGE AREA	49 SQ. MI.
DESIGN DISCHARGE	16,100 C.F.S.
WATERWAY OPENING BELOW EL. 597.0	1,060 SQ. FT.
VELOCITY	15 FT/SEC.

□ = DENOTES BRIDGE DRAINS. SEE STD. DWG. S-4 AND M-142-117 FOR DETAILS.

DESIGNED BY	GARY HALL	DATE	9-2-83
DRAWN BY	RON KAUFMAN	DATE	1-26-84
SUPERVISED BY	DON HARBISON	DATE	1-26-84
CHECKED BY	GARY HALL	DATE	2-25-84

LIST OF DRAWINGS

	Dwg. No.	Last Rev. Date
LAYOUT	M-142-114	8-14-84
GENERAL NOTES & ESTIMATED QUANTITIES	M-142-115	8-14-84
SUPERSTRUCTURE	M-142-116	
SUPERSTRUCTURE DETAILS	M-142-117	8-14-84
PRESTRESSED BOX BEAM	M-142-118	8-14-84
PRESTRESSED BOX BEAM	M-142-119	
PRESTRESSED BOX BEAM	M-142-120	
ABUTMENT NO. 1	M-142-121	
ABUTMENT NO. 1 DETAILS	M-142-122	
PIER NO. 1	M-142-123	
ABUTMENT NO. 2	M-142-124	
ABUTMENT NO. 2 DETAILS	M-142-125	
BILL OF STEEL	M-142-126	
BILL OF STEEL	M-142-127	

LIST OF STANDARD DRAWINGS

	Dwg. No.	Last Rev. Date
REINFORCING BAR SUPPORT	K-80-14	8-27-76
MISC. ABUT. & DRAINAGE DETAIL	K-85-150	1-9-75
BRIDGE RAILING CONCRETE PARAPET	M-28-1	7-17-81
PRESTRESSED BRIDGE DECK PANALS	M-103-149:8150	4-21-83

LIST OF SPECIAL PROVISIONS

	Dwg. No.	Last Rev. Date
APPROVAL OF SHOP DRAWINGS	105A	9-8-81
CLASS 'A' CONC. BRIDGE DECKS	604A	12-20-82
EPOXY COATED REINFORCING STEEL	907A	9-8-81

36' ROADWAY WITH M-28-1 PARAPET

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

LAYOUT OF BRIDGE
STATE ROUTE 96 OVER OVERALL CREEK
STATION 52+50.55
RUTHERFORD COUNTY
1984

CORRECT Clellon L. Loveall
ENGINEER OF STRUCTURES

APPROVED Lewis Evans
DIRECTOR OF HIGHWAYS

M-142-114

CLASS "A" GRADING "D" 20. C.Y.

CONST. NO. 75009-3219-94

PROJECT NO.	YEAR	SHEET NO.
BHF-96(1)	1984	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	8-14-84	G. HALL	REVISED LENGTH OF GIRDER 1 & 8

ESTIMATED QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	TOTAL	SUPERSTRUCTURE	ABUTMENT NO. 1	PIER NO. 1	ABUTMENT NO. 2
⑥	202-04.01	REMOVAL OF STRUCTURES	L.S.	1				
①	204-02.01	DRY EXCAVATION (BRIDGES)	C.Y.	269		134.5		134.5
	604-01.12	CLASS "A" CONCRETE (BRIDGE DECK)	C.Y.	93.9	93.9			
	604-02.03	EPOXY COATED REINFORCING STEEL	LBS.	25,876	25,168	354		354
	604-03.01	CLASS "A" CONCRETE (BRIDGES)	C.Y.	160.6		65	30.6	65
	604-03.02	STEEL BAR REINFORCEMENT (BRIDGES)	LBS.	10,379	228	4,178	2,395	4,178
	604-03.03	LINSEED OIL TREATMENT	S.Y.	336				
	604-04.01	APPLIED TEXTURE FINISH (NEW STRUCTURES)	S.Y.	405				
④	615-02.28	PRESTRESSED CONCRETE BOX BEAM (24"x 48")	L.F.	345.9 ⚠1				
③	620-03	CONCRETE PARAPET (M-28-1)	L.F.	202				
②	710-10	6" PERF. C.M. PIPE (18 GA.) W/POROUS BACKFILL	L.F.	180		90		90
	710-11	6" C.M. PIPE UNDERDRAINS (18 GA.)	L.F.	82		41		41
	204-03.01	WET EXCAVATION (BRIDGES)	C.Y.	125		54	17	54
	204-04.01	ROCK EXCAVATION (BRIDGES)	C.Y.	38		18	2	18
	204-05	ROCK DRILLING	L.F.	36		12	12	12
	204-09.01	COFFERDAM - (STA. 52+50.55)	L.S.	1			1	
	604-04.02	APPLIED TEXTURE FINISH (EXISTING STRUCTS)	S.Y.	219				

① EXCAVATION BASED ON EXISTING GROUND LINE.

② COST OF POLYETHYLENE SHEETING AND ALL MISCELLANEOUS ITEMS NECESSARY FOR INSTALLATION TO BE INCLUDED IN COST OF PERFORATED C.M. PIPE.

③ ALL REINFORCING STEEL IN THE TRAFFIC FACE OF PARAPETS SHALL BE EPOXY COATED. COST TO BE INCLUDED IN THE PRICE BID FOR ITEMS 620-03.

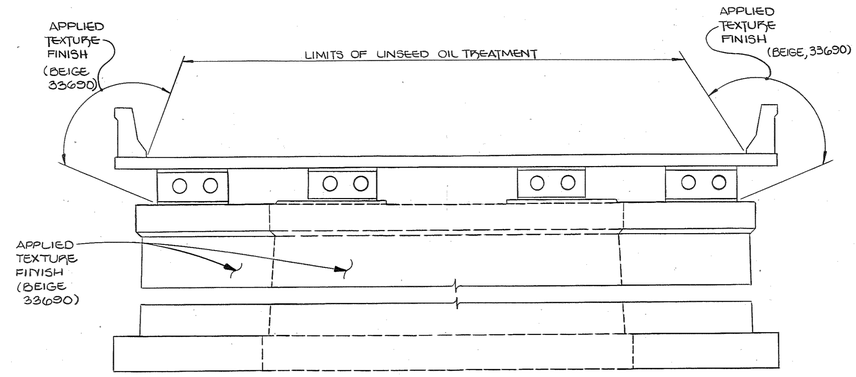
④ THE COST OF ELASTOMERIC PADS, RUBBER BONDING CEMENT, DOWEL BARS, THREADED STEEL INSERTS, AND THREADED RODS, TO BE INCLUDED IN THE COST OF PRESTRESSED BEAM.

⑤ NOTE: THE COST OF BITUMINOUS - FIBERBOARD, WATER STOPS AND ALL MISCELLANEOUS JOINT MATERIAL TO BE INCLUDED IN BRIDGE ITEMS BID ON.

⑥ NOTE: LUMP SUM: THE REMOVAL OF SUPERSTRUCTURE, PORTIONS OF BENT, ABUTMENTS AND WINGWALLS. ALL SALVABLE MATERIAL SHALL BECOME PROPERTY OF THE CONTRACTOR.

⑦ NOTE: COST OF 12 BRIDGE DECK DRAINS TO BE INCLUDED IN THE UNIT PRICE BID FOR CLASS "A" CONCRETE.

⑧ THE COST OF 4 THREADED STEEL INSERTS AND 16 7/8"Φ x 4" HEX HEAD BOLTS, (A307), TO BE INCLUDED IN BRIDGE ITEMS BID ON.



APPLIED TEXTURE FINISH DETAIL

GENERAL NOTES

SPECIFICATIONS: STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION (MARCH 1981 EDITION)

LOADING: HS20-44

CONCRETE: TO BE CLASS "A" F'C = 3,000 P.S.I.

NOTE: CLASS "A" CONCRETE FOR BRIDGE DECKS SHALL BE IN ACCORDANCE WITH SECTION 604 OF THE STANDARD SPECIFICATIONS EXCEPT AS MODIFIED BY SPECIAL PROVISION 604A. PAYMENT WILL BE UNDER ITEM 604-01.12.

NOTE: THE CONTRACTOR SHALL CHECK THE LOCATION OF ALL EXISTING SUBSTRUCTURES AND VERIFY SPAN LENGTHS BEFORE FABRICATING GIRDERS.

BRIDGE DECK FORMS: BRIDGE DECK FORMS FOR CONCRETE DECKS SHALL BE CONSTRUCTED USING EITHER REMOVABLE FORMS OR PERMANENT FORMS. PERMANENT FORMS MAY BE EITHER REMAIN-IN-PLACE STEEL OR PRECAST, PRESTRESSED CONCRETE PANELS. IN EITHER CASE, FORMS SHALL BE ATTACHED BY MEANS OTHER THAN WELDING TO SUPPORT MEMBERS. THE CONTRACTOR SHALL TAKE STEPS TO ASSURE THE STABILITY OF THE EXTERIOR GIRDER AGAINST TWISTING OR OVERTURNING DURING SLAB POURING OPERATIONS.

REINFORCING STEEL: TO BE ASTM A615 GRADE 60. STANDARD CRSI HOOK DETAILS APPLY UNLESS OTHERWISE NOTED ON BILL OF STEEL. BENDING DIMENSIONS SHOWN ARE GRADE 60. SPACING DIMENSIONS ARE CENTER TO CENTER UNLESS OTHERWISE NOTED ON DETAIL DRAWINGS. (THE SUFFIX "E" FOR BARS SO MARKED, DENOTES EPOXY COATED REINFORCEMENT. SEE SPECIAL PROVISION 907A.

BRIDGE RAIL SYSTEM: BUILD PARAPETS ACCORDING TO STANDARD DRAWING M-28-1.

SHOP DRAWINGS: SEE SPECIAL PROVISION NO. 105A.

LINSEED OIL PROTECTIVE TREATMENT: SURFACES RECEIVING AN APPLIED TEXTURE FINISH SHALL NOT RECEIVE A LINSEED OIL TREATMENT. SEE APPLIED TEXTURE FINISH DETAIL THIS SHEET.

NON-PAY ITEMS: ONLY ITEMS SHOWN ON THE PROPOSAL AS PAY ITEMS WILL BE PAID FOR. COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, EQUIPMENT AND INCIDENTALS FOR THE ENTIRE CONTRACT SHALL BE INCLUDED IN THE PRICE BID FOR PAY ITEMS.

FINISHING CONCRETE SURFACES: CONCRETE FINISHING SHALL BE IN ACCORDANCE WITH SECTION 604.22 OF THE TENNESSEE STANDARD SPECIFICATION. AN APPLIED TEXTURE FINISH SHALL BE USED IN LIEU OF A CLASS 2 FINISH. THE COLOR OF THE FINISH SHALL BE SIMILAR TO BEIGE, FEDERAL SPECIFICATION NO. 33690, FEDERAL COLOR STANDARD NO. 595A, AND A COLOR SAMPLE SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. NO TEXTURE FINISH SHALL BE APPLIED PRIOR TO COMPLETION OF PAVING AND HAULING OPERATIONS AT THE BRIDGE SITE. PAYMENT FOR THE APPLIED TEXTURE FINISH SHALL BE UNDER ITEM 604-04.01.

NOTE: ALL EXPOSED SURFACES OF BENT AND ABUTMENTS SHALL RECEIVE AN APPLIED TEXTURE FINISH (BEIGE, 33690)

SPECIAL NOTE - FOOTING ELEVATIONS: AFTER EXCAVATION TO ROCK FOR FOOTING HAS BEEN COMPLETED, HOLES 6' DEEP SHALL BE DRILLED AT POINTS DESIGNATED BY THE ENGINEER. FROM THE RESULTS OBTAINED, THE ENGINEER SHALL DETERMINE THE FINAL FOOTING ELEVATIONS. NO REINFORCING STEEL FOR WINGWALLS & COLUMNS SHALL BE ORDERED UNTIL FINAL FOOTING ELEVATIONS HAVE BEEN DETERMINED.

FOUNDATION PREPARATION: THE LUMP SUM BID FOR COFFERDAM ITEMS SHALL BE FULL COMPENSATION TO THE CONTRACTOR FOR THE PREPARATION OF FOUNDATIONS PRIOR TO POURING CONCRETE FOR FOOTINGS. THE CONTRACTOR SHALL BE PAID FOR EXCAVATION IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS AND THE CONTRACT UNIT BID PRICE FOR EACH EXCAVATION ITEM, EXCEPT THAT NO PERCENT INCREASE WILL BE ALLOWED, FOR EXTRA DEPTH EXCAVATION. IF COFFERDAMS ARE REQUIRED, THEY SHALL BE IN ACCORDANCE WITH SECTION 204.05 OF THE STANDARD SPECIFICATIONS. REGARDLESS OF WHETHER COFFERDAMS ARE USED, THE CONTRACTOR SHALL BE PAID FOR ITEM 204-09.01. THE COST OF SEAL CONCRETE, IF REQUIRED, IS TO BE INCLUDED IN THE COFFERDAM LUMP SUM BIDS.

GROUTED BARS IN DRILLED HOLES: HOLES FOR GROUTED BARS ARE TO BE DRILLED 1/2 INCH IN DIAMETER LARGER THAN THE BAR. AFTER CLEANING HOLE, PACK WITH GROUT AND DRIVE BAR TO ITS SEAT. APPROVED GROUTS ARE: EPI TOP 100 (CELANESE COATING CO.); COLMA-DUR OR SIKASTIX 370 (SIKA CHEMICAL CORP.); FX-75 HYDRO-ESTER BONDING AGENT (FOX INDUSTRIES) AND FEL-POXY 102 (FEL-PRO BUILDING PRODUCTS, INC.)

DESIGNED BY GARY HALL DATE 9-83
DRAWN BY M. FRANKENFIELD DATE 1-84
SUPERVISED BY DON HARRISON DATE 1-84
CHECKED BY GARY HALL DATE 3-84

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

GENERAL NOTES
AND
ESTIMATED QUANTITIES
WIDENING OF STATE ROUTE 96 OVER
OVERALL CREEK
STATION 52+50.55
RUTHERFORD COUNTY
1984

CORRECT Clellon L. Loveall
ENGINEER OF STRUCTURES

APPROVED Lewis Evans
DIRECTOR OF HIGHWAYS

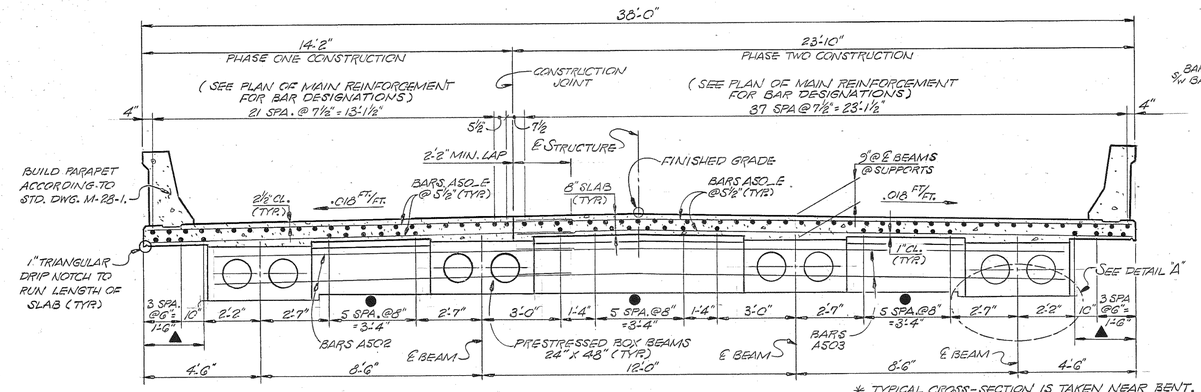
M-142-115

Construction No. 75009-3219-94

PROJECT NO.	YEAR	SHEET NO.
BHF-96(1)	1984	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

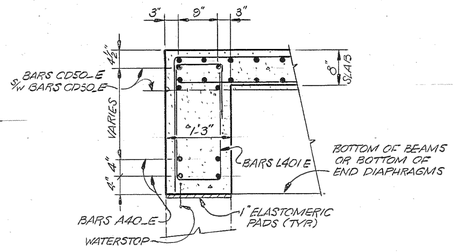


DESIGNATIONS FOR BOTTOM OF SLAB BARS:
▲ BAR AS05E #4 BARS AS04E #4 BAR AS05E
● BARS AS04E #4 BARS AS04E

TYPICAL CROSS-SECTION *

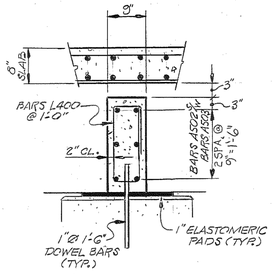
LOOKING FORWARD ON SURVEY

* TYPICAL CROSS-SECTION IS TAKEN NEAR BENT. TO DETERMINE WHICH MAIN REINFORCEMENT IS CONTINUOUS, SEE PLAN OF MAIN REINFORCEMENT THIS SHEET.



SECTION Z-Z

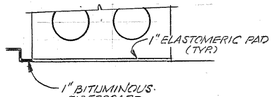
TYP. BETWEEN INTERIOR GIRDERS ONLY



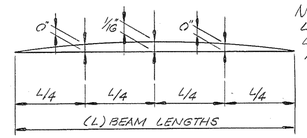
SECTION THRU SUPPORT DIAPHRAGM

ALSO SEE ELEVATION A-A ON DWG. NO. M-1

SPECIAL NOTE FOR DOWEL BARS @ BENTS:
TOPS OF DOWELS TO BE COVERED WITH ½" OF COMPRESSIBLE MATERIAL AND THE 6" PROJECTION WRAPPED WITH TWO LAYERS OF WATERPROOF PAPER.

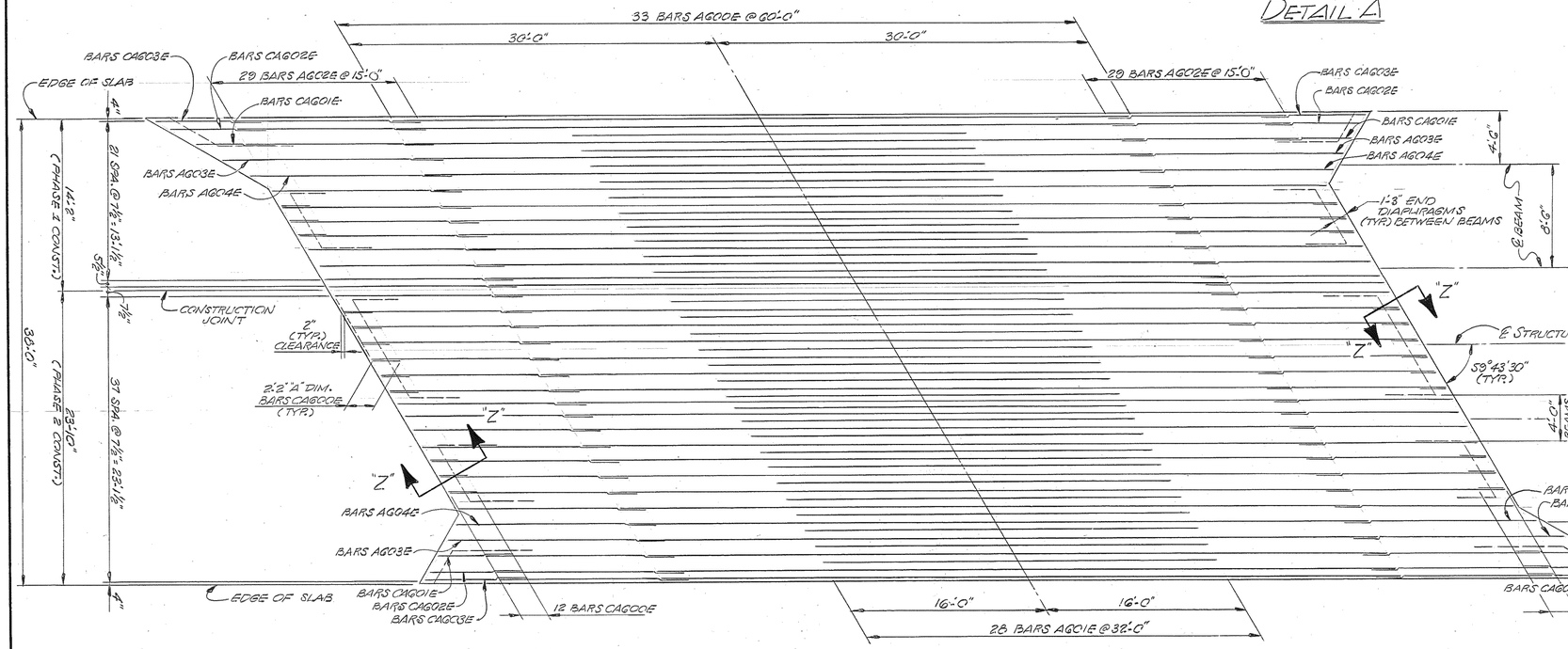


DETAIL "A"



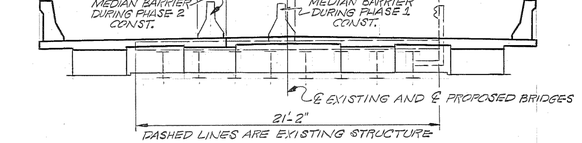
DEAD LOAD CORRECTION CURVE

NOTE: THIS CURVE IS FOR DEAD LOAD SLAB AND ALL DEAD LOADS THAT ARE APPLIED AFTER THE SLAB IS IN PLACE.



PLAN OF MAIN REINFORCEMENT

BARS IN TOP OF SLAB.



PHASE CONSTRUCTION SEQUENCE

LOOKING FORWARD ON SURVEY

ESTIMATED QUANTITIES

ITEM	CLASS "A" CONCRETE (BRIDGE DECK) C.Y.	EPOXY COATED REINFORCING STEEL LBS.	STEEL BAR REINFORCEMENT
QTY.	93.9	25,168	228

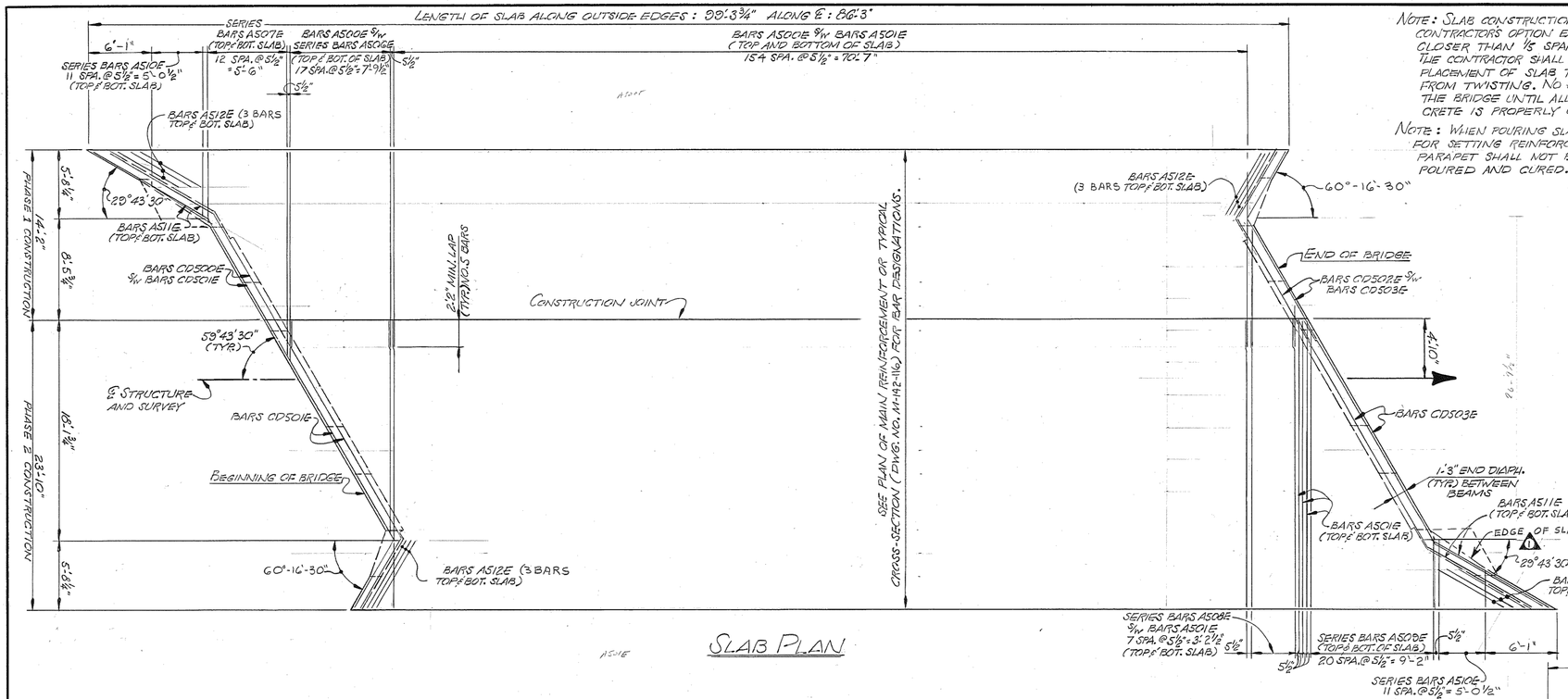
DESIGNED BY Gary Hall DATE 2-83
DRAWN BY Mike Childress DATE 2-84
SUPERVISED BY Von Harbison DATE 2-84
CHECKED BY Gary Hall DATE 2-84

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

SUPERSTRUCTURE STATE ROUTE 96 OVER OVERALL CREEK STATION 52+50.55 RUTHERFORD COUNTY 1984

CORRECT Clellon L. Loveall
ENGINEER OF STRUCTURES
APPROVED Lewis Evans
DIRECTOR OF HIGHWAYS

M-142-116



SLAB PLAN

NOTE: SLAB CONSTRUCTION JOINTS MAY BE LOCATED AT THE CONTRACTORS OPTION EXCEPT NO JOINT MAY BE LOCATED CLOSER THAN 1/5 SPAN LENGTH FROM AN INTERIOR SUPPORT. THE CONTRACTOR SHALL MAKE ADEQUATE PROVISIONS DURING PLACEMENT OF SLAB TO PREVENT THE EXTERIOR BEAM FROM TWISTING. NO EQUIPMENT SHALL BE PERMITTED ON THE BRIDGE UNTIL ALL POURS ARE MADE AND THE CONCRETE IS PROPERLY CURED.

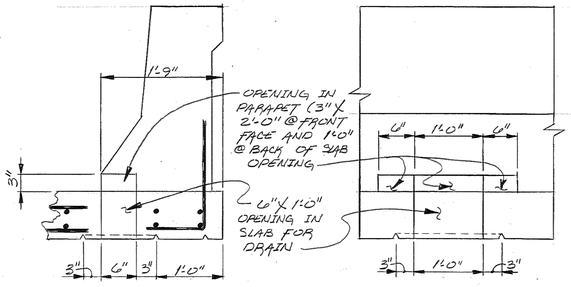
NOTE: WHEN POURING SLAB, PROVISIONS SHALL BE MADE FOR SETTING REINFORCING STEEL FOR PARAPET. THE PARAPET SHALL NOT BE POURED UNTIL THE SLAB IS POURED AND CURED.

CONSTRUCTION NO. 75009-3219-94

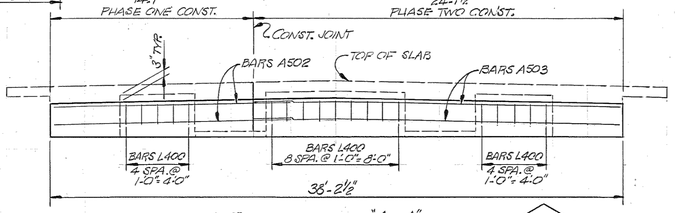
PROJECT NO.	YEAR	SHEET NO.
BHF-96 (1)	1984	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	8-14-84	G. HALL	REVISED LENGTH OF GIRDERS 1 & 8

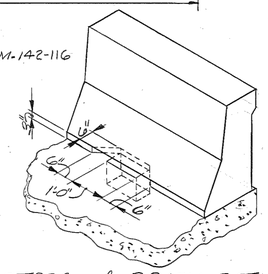


BRIDGE DECK DRAINS DETAILS

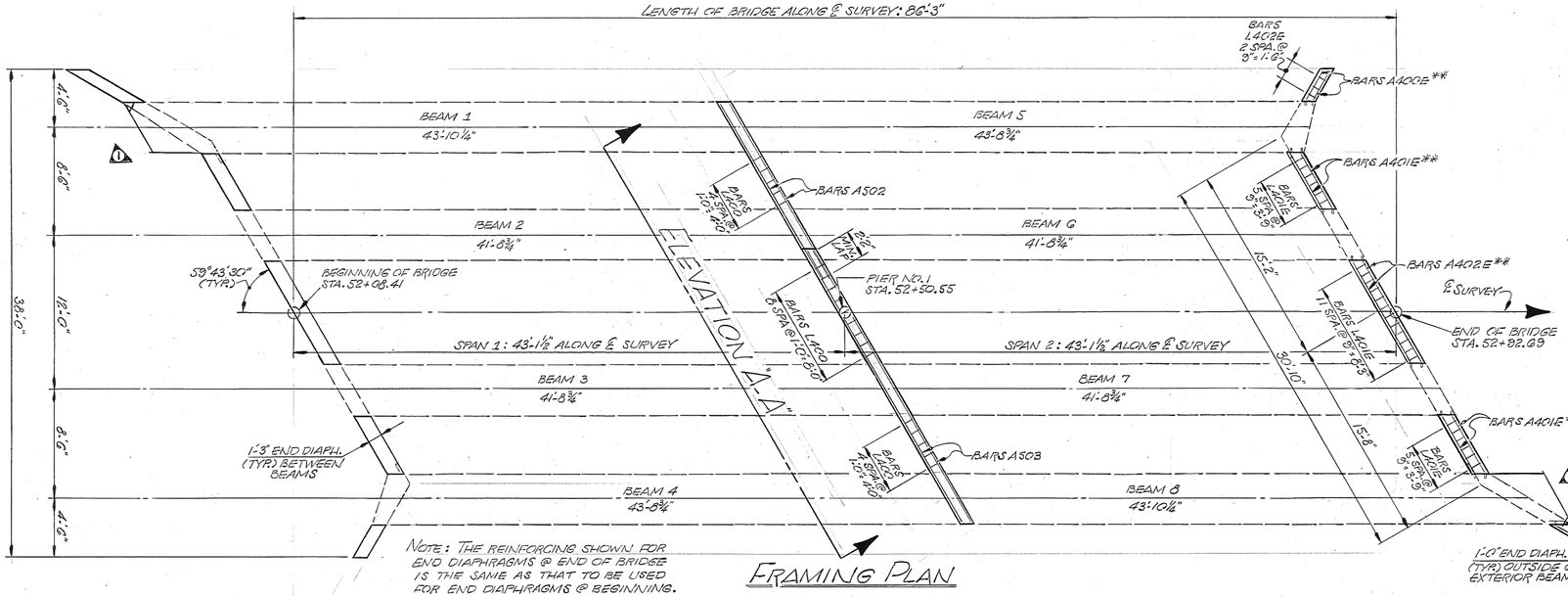


ELEVATION "A-A"

@ SUPPORT DIAPHRAGM. SEE DWG. NO. M-142-116 FOR SECTION THRU



ISOMETRIC of DRAIN DETAILS



NOTE: THE REINFORCING SHOWN FOR END DIAPHRAGMS @ END OF BRIDGE IS THE SAME AS THAT TO BE USED FOR END DIAPHRAGMS @ BEGINNING.

FRAMING PLAN

** NOTE: BARS A402E THRU BARS A403E WILL LAP SPLICE WITH THREADED RODS (2'-0" MIN. LAP) WHICH ARE ENIBEDDED INTO THE BOX BEAMS. THE COST OF THE THREADED RODS AND THEIR THREADED STEEL INSERTS TO BE PAID FOR UNDER PRE-STRESSED BOX BEAM ITEM NO. 615-02.28.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

SUPERSTRUCTURE DETAILS
STATE ROUTE 96 OVER
OVERALL CREEK
STATION 52+50.55
RUTHERFORD COUNTY
198

DESIGNED BY	GARY HALL	DATE	9-83
DRAWN BY	MIKE CHILDRESS	DATE	2-84
SUPERVISED BY	TOM HARRISON	DATE	2-84
CHECKED BY	GARY HALL	DATE	2-84

CORRECT Gilbert L. Lovell
ENGINEER OF STRUCTURES

APPROVED Lewis Evans
DIRECTOR OF HIGHWAYS

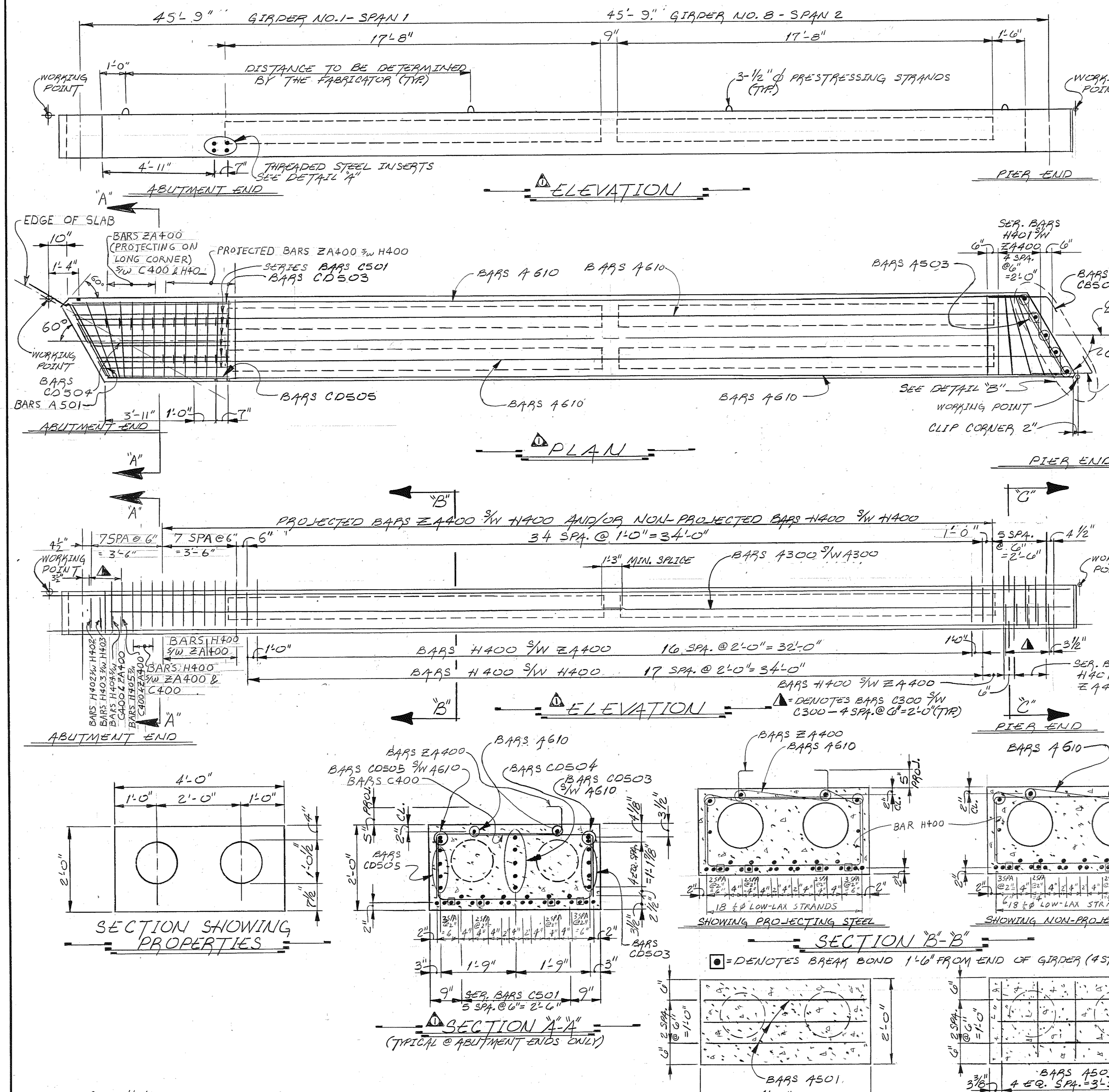
M-142-117

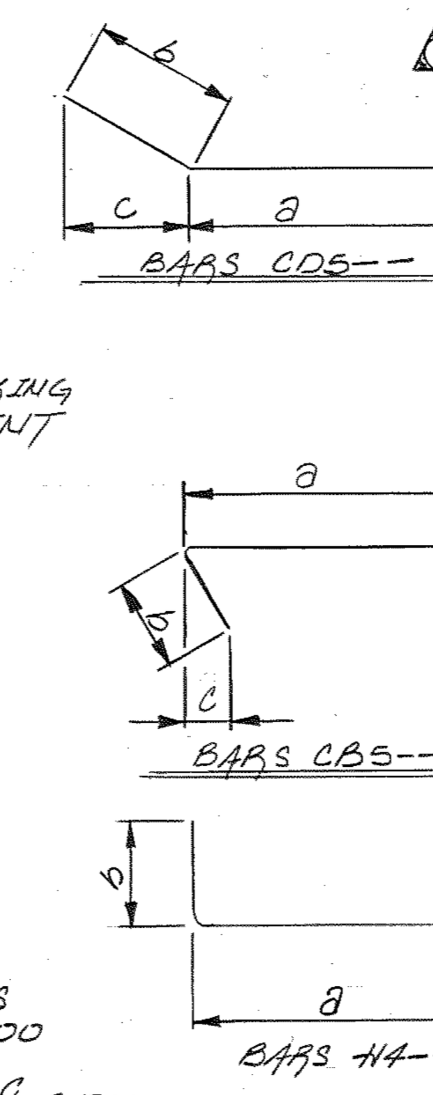
Const. No. 75009-3219-94

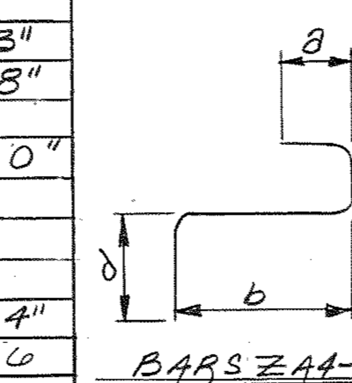
PROJECT NO.	YEAR	SHEET NO.
BHF-96 (1)	1984	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	8-13-84	G. HALL	REVISED GIRDER @ ABUT END

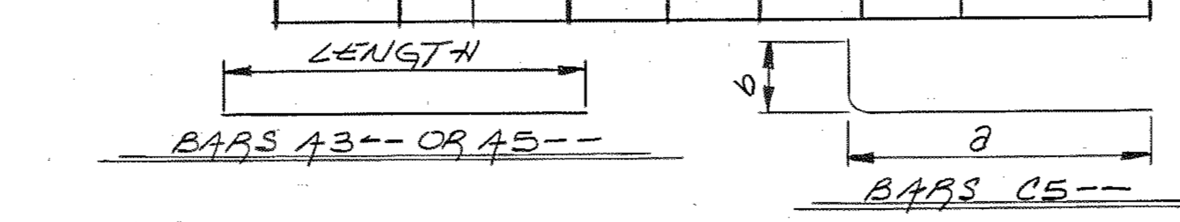






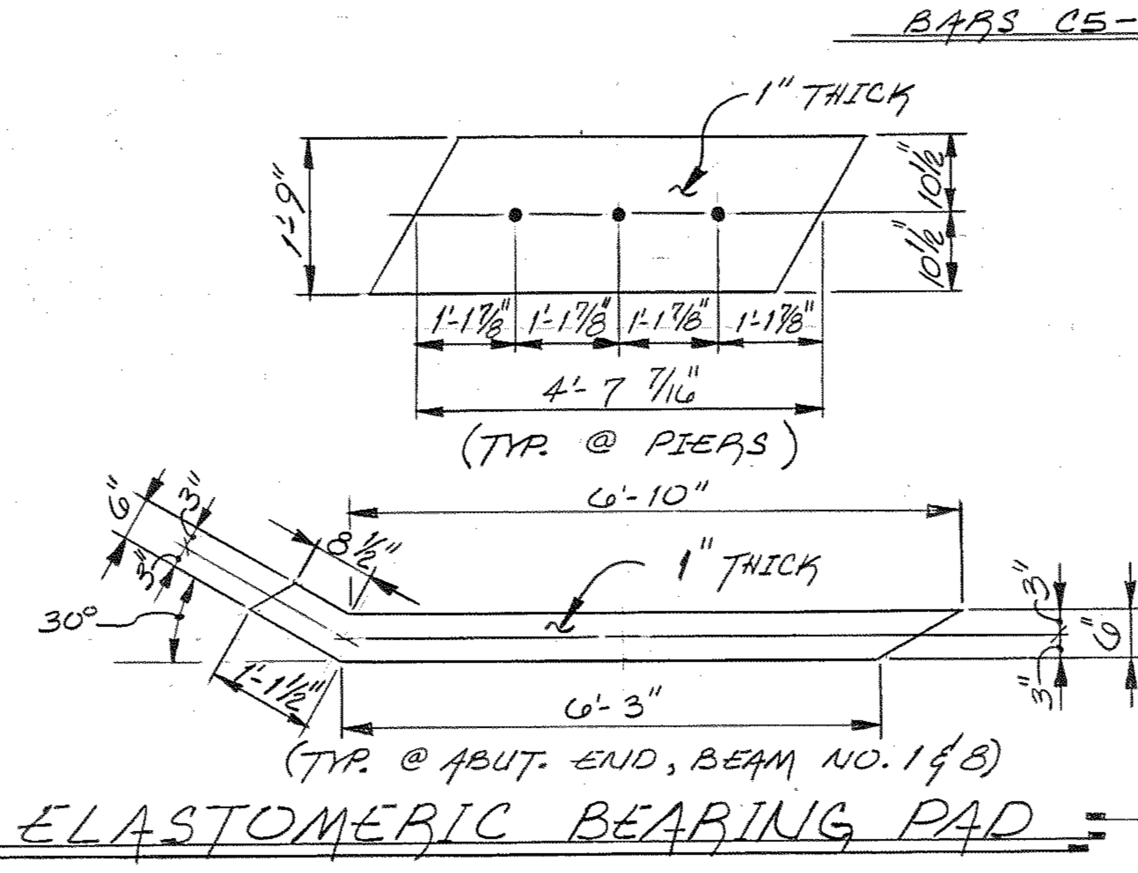
BILL of STEEL = PER BEAM

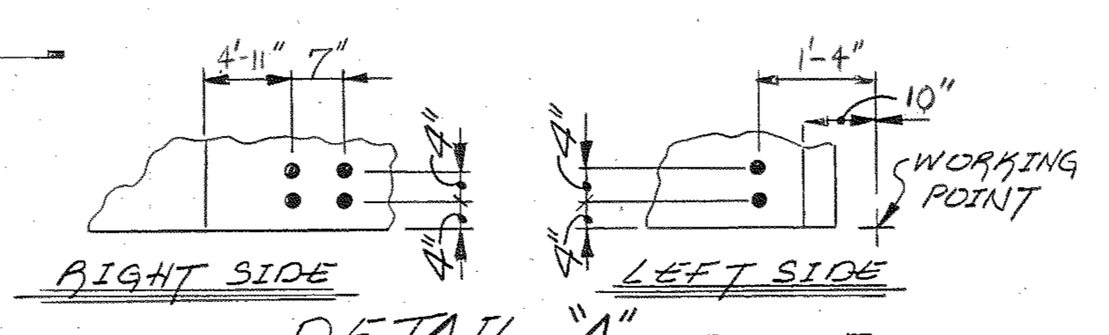
BARS	SIZE	NO. REQ'D	BENDING DIMENSIONS a	b	c	d	LENGTH
A300	3	4					23'-2"
A501	5	6					4'-3"
A503	5	5					1'-8"
A610	6	4					45'-0"
C300	3	20	2'-5"	1'-0"			3'-4"
C500	5	6	2'-9"	10"			3'-6
SER.			DIM. "A" VARIES FROM 8'-5"				
C501	5	1	TO 9'-8" IN INC. OF 3"				54'-3"
			DIM. "B" = 1'-8" (6 BARS)				
CB500	5	5	2'-9"	10"	5"		3'-6"
CD500	5	5	2'-9"	10"	5"		3'-6"
CD503	5	5	10'-3"	2'-2"	1'-10 1/2"		12'-5"
CD504	5	5	9'-2	10"	5"		10'-0"
CD505	5	5	8'-2"	10"	5"		9'-0"
H400	4	66	3'-7 1/2"	1'-8"			6'-11"
C400	4	5	3'-3"	1'-8"			4'-11"
SER.			DIM. "A" VARIES FROM 3'-7 1/2"				
H401	4	1	TO 4'-1" IN INC. OF 1 3/8"				35'-6"
			DIM. "B" = 1'-8" (5 BARS)				
ZA400	4	67	4"	2'-10"	7 1/2"	1'-6"	5'-2"
H402	4	2	4'-1"	1'-8"			7'-4"
H403	4	2	4'-0	1-8			7'-3"
H404	4	1	3-11	1-8			7'-2"
H405	4	1	3-9	1-8			7-0



GENERAL NOTES

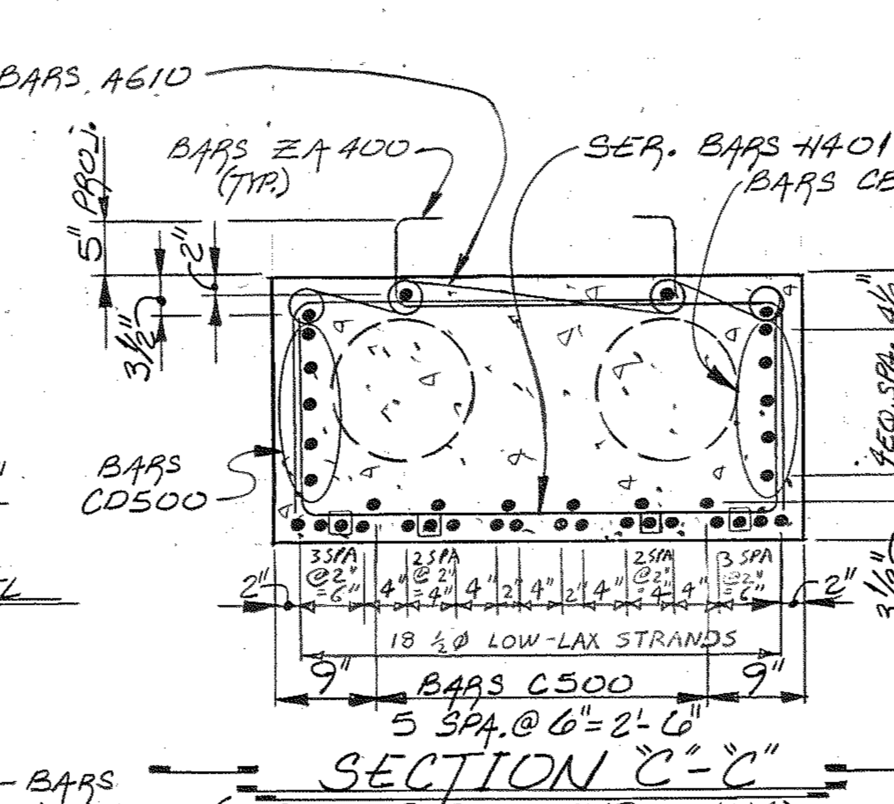
1. THE TOP OF ALL BEAMS ARE TO BE ROUGH FLOATED. AT APPROXIMATELY THE TIME OF INITIAL SET, THE TOP OF THE BEAMS WILL ALSO BE SCRUBBED TRANSVERSLY WITH A COARSE WIRE BRUSH TO REMOVE ALL LAITANCE AND PROVIDE A ROUGH SURFACE. WHERE PRECAST SLAB PANELS ARE TO BE USED AND SET ON FELT PADS, THE OUTER TWO INCHES OF THE TOP FLANGE MAY BE TROWELED.
2. MILD STEEL REINFORCING SHALL BE ASTM A615 GRADE 60.
3. ALL PRESTRESSING STRANDS TO BE 1/2" Φ HIGH STRENGTH 7-WIRE UNCOATED STRESS RELIEVED TYPE LO-LAX ASTM A-416.
4. AN INITIAL FORCE OF 31,000 LBS. SHALL BE APPLIED TO EACH STRAND IN ALL BEAMS.
5. AFTER THE BEAM IS REMOVED FROM THE PRESTRESSING BED, BARS C500 AND CD500 SHALL BE BENT A SUFFICIENT AMOUNT SO AS TO PERMIT THE "C" BARS OF ADJOINING BEAM TO MESH WHEN IN THE ERECTED POSITION.
6. AT THE PIER END OF THE GIRDER, THE PRESTRESSING STRANDS SHALL BE LEFT PROJECTING 3"± FROM THE ENDS OF THE BEAMS. THERE SHALL NOT BE ANY PROTECTIVE COATING PLACED ON THE ENDS OF THE BEAMS OR ON THE PROJECTING STRANDS. AT THE ABUTMENT END OF THE GIRDER THE PRESTRESSING STRANDS SHALL BE CUT FLUSH. THERE SHALL BE A PROTECTIVE COATING PLACED ON THE PRESTRESSING STRANDS.
7. ELASTOMERIC PADS TO BE 1" THICK AT ABUTMENT ENDS AND 1" THICK WITH 1 1/4" Φ HOLES AT BENTS.
8. THE CONCRETE FOR THIS CONSTRUCTION SHALL BE OF SUCH PROPERTIES AS TO ATTAIN A COMPRESSIVE STRENGTH OF NOT LESS THAN 5,000 P.S.I. AT THE AGE OF 28 DAYS AND STRESS TRANSFER SHALL NOT BE MADE TO THE BRIDGE MEMBER UNTIL THE TEST SPECIMENS INDICATE THAT THE CONCRETE HAS REACHED A COMPRESSIVE STRENGTH OF AT LEAST 4,000 P.S.I.. SEE GEN. NOTES SHEET FOR CONCRETE FINISHING NOTE.
9. 1" WEEP HOLES REQUIRED AT LOW POINT OF EACH CELL.
10. EACH CELL SHALL BE VENTED, (DURING THE FABRICATION PHASE), IN SUCH A MANNER SO AS NOT TO ALLOW EXTERNAL WATER TO ENTER CELL.
11. INSERTS FOR THE END WALL ARE TO BE THREADED TYPE (CAST-IN-PLACE). 3/4" Φ THREADED RODS FOR INSERTS ARE TO PROVIDE 2'-0" SPLICE WITH ENDWALL REINFORCEMENT.

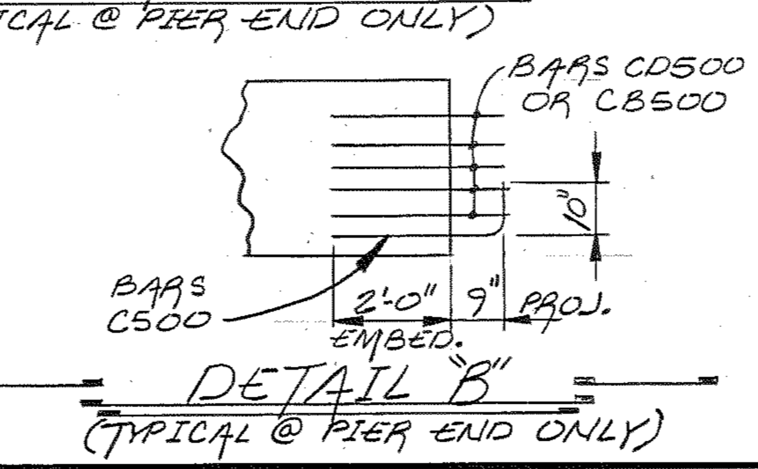




ESTIMATED QUANTITIES ITEM	LOCATION	NO. BEAMS	CLASS "A" CONCRETE C.Y.	PRESTRESSING STRANDS	STEEL BAR REINFORCEMENT LBS.
BEAM NO. 1	SPAN 1	1	11.3	437	1,251
BEAM NO. 8	SPAN 2	1	11.3	437	1,251

NOTE: COST OF ELASTOMERIC PADS, DOWEL BARS, RUBBER BONDING CEMENT, AND PROTECTIVE COATING ON ABUTMENT END OF STRANDS TO BE INCLUDED IN COST OF PRESTRESSED BEAM.





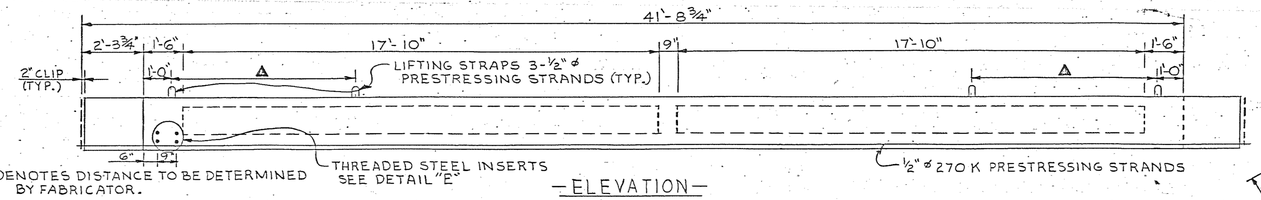
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PRESTRESSED BOX BEAM
BEAM NO. 1, SPAN 1 and BEAM NO. 8, SPAN 2
STATE ROUTE 96 Over OVERALL CREEK
STATION 52+50.55
RUTHERFORD COUNTY
1984

DESIGNED BY Gary Hall DATE 10-83
DRAWN BY Grant Leroy Lloyd DATE 2-84
SUPERVISED BY R.L.H. and H.M.B. DATE 2-84
CHECKED BY GARY HALL DATE 2-84

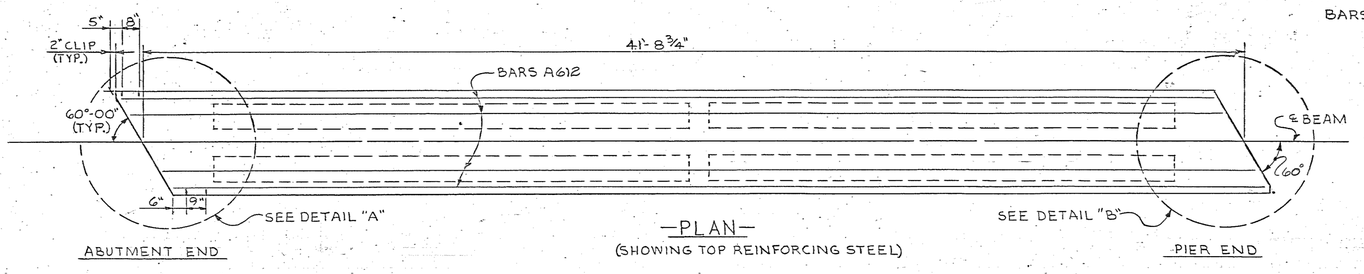
CORRECT Clellon L Loveall — ENGINEER OF STRUCTURES
APPROVED Lewis Evans — DIRECTOR OF HIGHWAYS

M-142-118

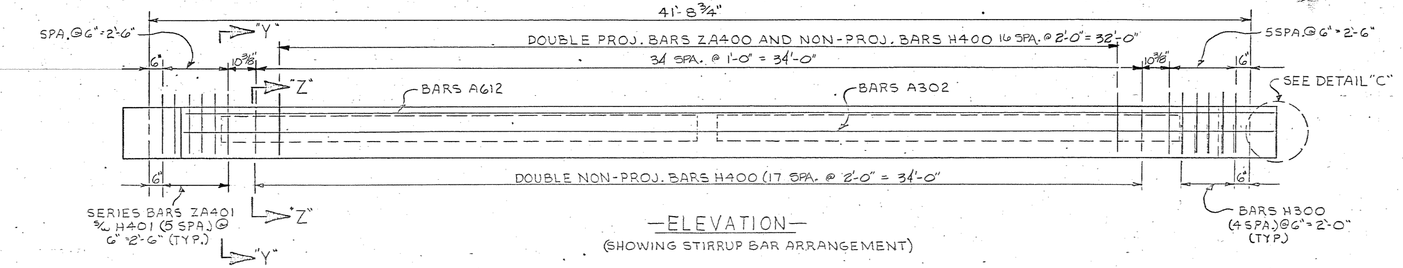


△ DENOTES DISTANCE TO BE DETERMINED BY FABRICATOR.

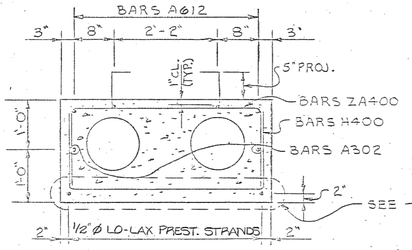
—ELEVATION—



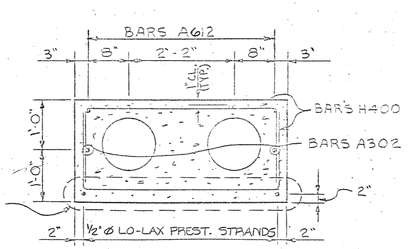
—PLAN—
(SHOWING TOP REINFORCING STEEL)



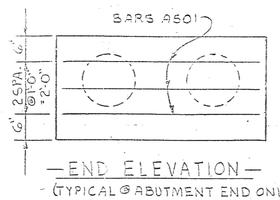
—ELEVATION—
(SHOWING STIRRUP BAR ARRANGEMENT)



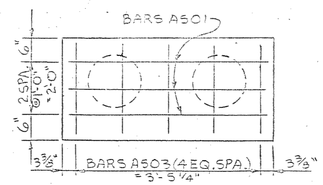
SECTION "Y"-"Y"
(SHOWING PROJECTING BARS)



SECTION "Z"-"Z"
(SHOWING NON-PROJECTING BARS)



—END ELEVATION—
(TYPICAL @ ABUTMENT END ONLY)



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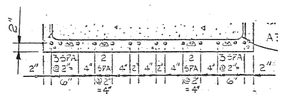
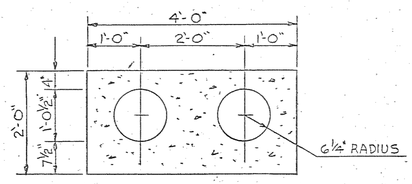
(TYPICAL @ PIER END ONLY)

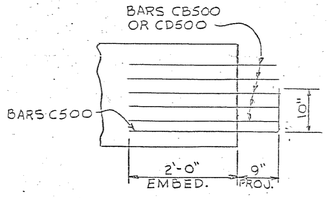


—DETAIL "D"—
(SHOWING 18 1/2" ø LO-LAX PRESTRESSING STRANDS

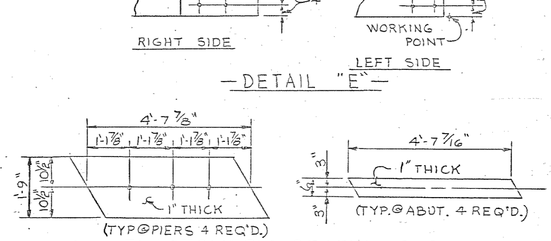
△ DENOTES: BREAK BOND 1'-6" FROM END OF BEAM, 4 STRANDS.



TYPICAL SECTION
(SHOWING BEAM PROPERTIES)



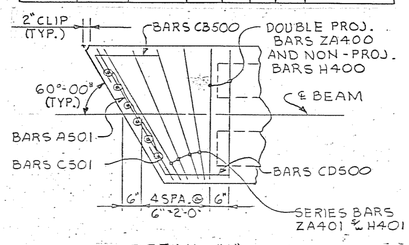
—DETAIL "C"—
(TYPICAL @ PIER ONLY)



—ELASTOMERIC BEARING PAD—

BILL OF STEEL ~ PER BEAM

BAR	SIZE	NO. REQ'D.	BENDING DIMENSIONS a	b	c	d	LENGTH
A302	3	2					41'-4"
A612	6	4					41'-4"
A501	5	6					4'-3"
A503	5	5					1'-8"
C500	5	6	2'-9"	10"			3'-6"
C8500	5	10	2'-9"	10"	5"		3'-6"
CD500	5	10	2'-9"	10"	5"		3'-6"
H400	4	53	3'-7 1/2"	1'-8"			6'-11"
SERIES H401	4	2		1'-8"			35'-6"
			DIM. "A" VARIES IN LENGTH FROM 3'-7 1/2" TO 4'-1" IN ING. OF 1 3/8". (5 BARS)				35'-6"
ZA400	4	42	4"	2'-10"	7 1/2"	1'-6"	5'-2"
SERIES ZA401	4	4	DIM. "B" VARIES IN LENGTH FROM 3'-0" TO 3'-3" IN ING. OF 1" (4 BARS)				21'-10"
C300	3	20	2'-5"	1'-0"			3'-4"
C501	5	6	2'-9"	1'-8"			4'-4"



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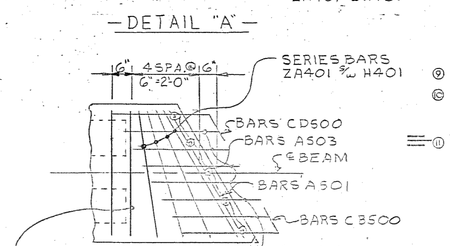

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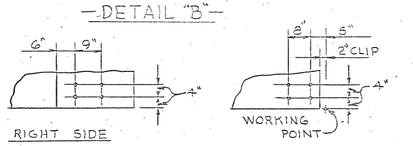
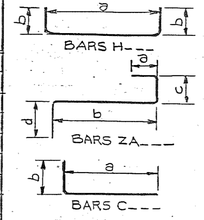


—DETAIL "E"—



CONST. NO. 75009-3219-94

PROJECT NO.	YEAR	SHEET NO.
BHF-96(1)	1984	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

GENERAL NOTES

① THE TOP OF ALL BEAMS ARE TO BE ROUGH FLOATED. AT APPROXIMATELY THE TIME OF INITIAL SET, THE TOP OF THE BEAMS WILL ALSO BE SCRUBBED TRANSVERSELY WITH A COARSE WIRE BRUSH TO REMOVE ALL LAITANCE AND PRODUCE A ROUGH SURFACE. WHERE PRECAST SLAB PANELS ARE TO BE USED AND SET ON FELT PADS, THE OUTER TWO INCHES OF THE TOP FLANGE MAY BE TROWELED.

② MILD STEEL REINFORCING SHALL BE ASTM A615 GRADE 60.

③ ALL PRESTRESSING STRANDS TO BE 1/2" ø HIGH STRENGTH 7 WIRE UNCOATED STRESS-RELIEVED TYPE LO-LAX ASTM A416.

④ AN INITIAL FORCE OF 31,000 LBS. SHALL BE APPLIED TO EACH STRAND IN ALL BEAMS.

⑤ AFTER THE BEAM IS REMOVED FROM THE PRESTRESSING BED, BARS C500, C8500, & CD500 SHALL BE BENT A SUFFICIENT AMOUNT SO AS TO PERMIT THE "C" BARS OF ADJOINING BEAM TO MESH WHEN IN THE ERECTED POSITION.

⑥ AT THE PIER END OF THE GIRDER, THE PRESTRESSING STRANDS SHALL BE LEFT PROJECTING 3" ± FROM THE ENDS OF THE BEAMS. THERE SHALL NOT BE ANY PROTECTIVE COATING PLACED ON THE ENDS OF THE BEAMS OR ON THE PROJECTING STRANDS. AT THE ABUTMENT END OF THE GIRDER, THE PRESTRESSING STRANDS SHALL BE CUT FLUSH, THERE SHALL BE A PROTECTIVE COATING PLACED ON THE PRESTRESSING STRANDS

⑦ ELASTOMERIC PADS TO BE 1"x 4'-7 7/16" x 6" AT ABUTMENT ENDS, AND 1" x 4'-7 7/16" x 1'-9", WITH 1 1/4" ø HOLES AT PIERS.

⑧ THE CONCRETE FOR THIS CONSTRUCTION SHALL BE OF SUCH PROPERTIES AS TO ATTAIN A COMPRESSIVE STRENGTH OF NOT LESS THAN 3,000 ± PSI AT THE AGE OF 28 DAYS, AND STRESS TRANSFER SHALL NOT BE MADE TO THE BRIDGE MEMBER UNTIL THE TEST SPECIMENS INDICATE THAT THE CONCRETE HAS REACHED A COMPRESSIVE STRENGTH OF AT LEAST 4,000 PSI. SEE GENERAL NOTES SHEET FOR CONCRETE FINISHING NOTE.

⑨ 1" ø WEEP HOLES REQUIRED AT LOW POINT OF EACH CELL.

Ⓒ EACH CELL SHALL BE VENTED, (DURING THE FABRICATION PHASE), IN SUCH A MANNER SO AS NOT TO ALLOW EXTERNAL WATER TO ENTER THE CELL

⑪ INSERTS FOR THE ENDWALL ARE TO BE THREADED TYPE (CAST-IN-PLACE) 3/4" ø THREADED RODS FOR INSERTS ARE TO PROVIDE 24" SPLICE WITH THE ENDWALL REINFORCEMENT.

ESTIMATED QUANTITIES ~ PER BEAM

ITEM	NO. REQD.	CLASS "A" CONCRETE C.Y.	STEEL BAR REINFORCEMENT LBS.	PRESTRESSING STRANDS LBS.
BEAM NO. 4	1	10.1	957	397
BEAM NO. 5	1	10.1	957	397

NOTE: THE COST OF ELASTOMERIC PADS, DOWEL BARS, RUBBER BONDING CEMENT, AND PROTECTIVE COATING ON ABUTMENT END OF STRANDS, TO BE INCLUDED IN COST OF PRESTRESSED BEAM.

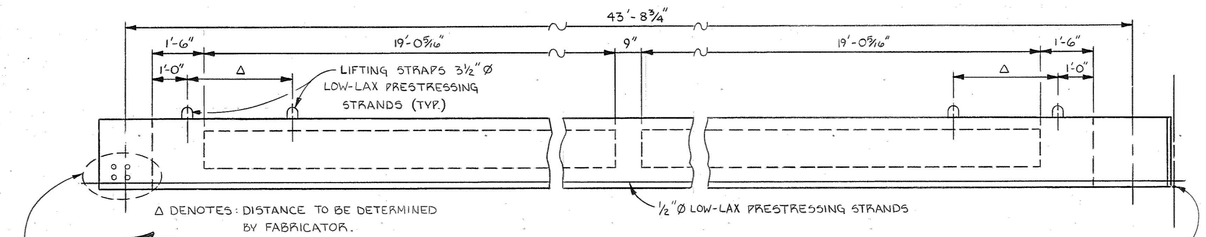
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PRESTRESSED BOX BEAM
BEAM No. 2 & 3, SPAN 1 AND BEAM 6 & 7, SPAN 2
STATE ROUTE 96 OVER OVERALL CREEK
STATION 52+50.55
RUTHERFORD COUNTY
1984

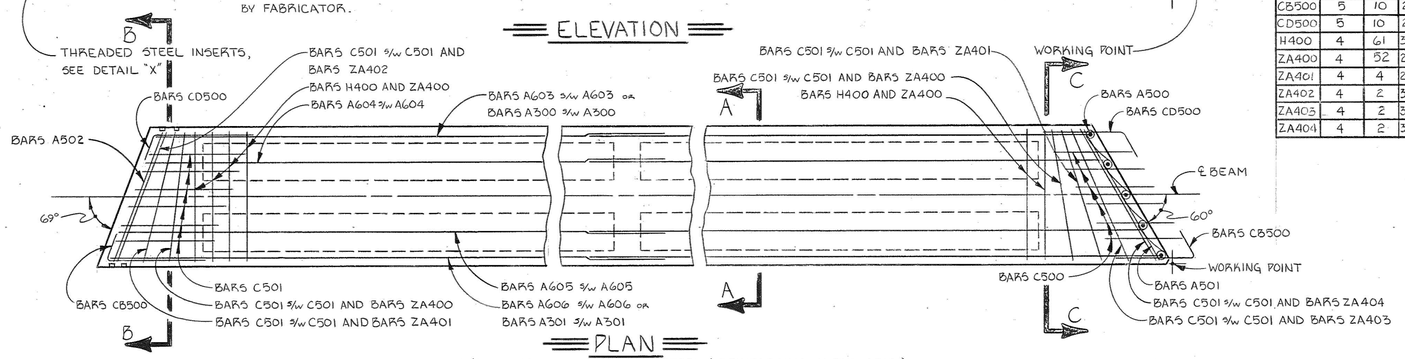
CORRECT Clellon L Loveall
ENGINEER OF STRUCTURES
APPROVED Lewis Evans
DIRECTOR OF HIGHWAYS

M-142-119

DESIGNED BY GARY HALL DATE 10-83
DRAWN BY FRANK E. FROST DATE 2-84
SUPERVISED BY HARRISON & BROOKS DATE 2-84
CHECKED BY GARY HALL DATE 2-23-84

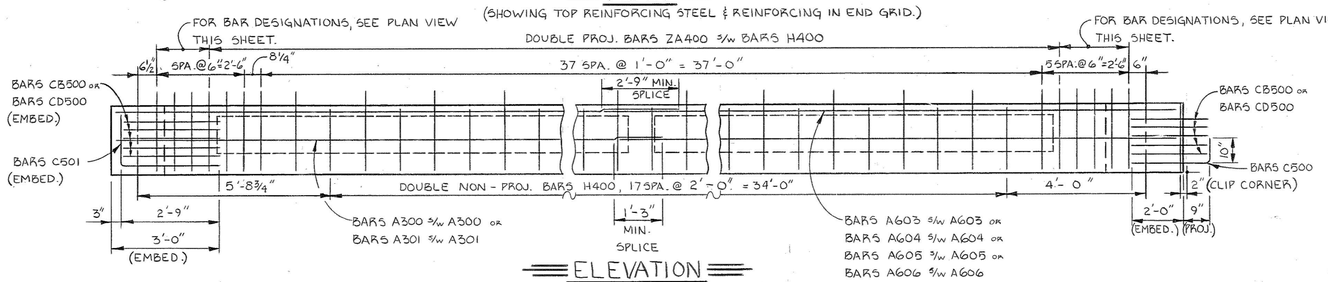


ELEVATION



PLAN

(SHOWING TOP REINFORCING STEEL & REINFORCING IN END GRID.)

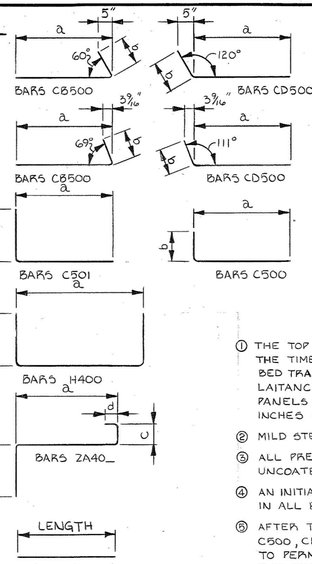


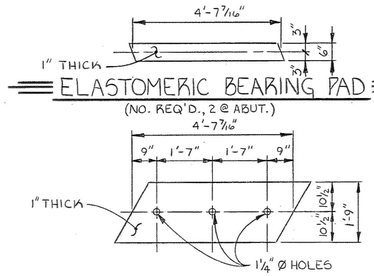
ELEVATION

(SHOWING STIRRUP BAR ARRANGEMENT.)

BILL OF STEEL ~ PER BEAM

BAR	SIZE	NO. REQ'D.	BENDING DIMENSIONS a	b	c	d	LENGTH
A300	3	2					21'-6"
A301	3	2					23'-2"
A500	5	3					1'-8"
A501	5	3					4'-3"
A502	5	5					3'-11"
A603	6	2					22'-3"
A604	6	2					22'-6"
A605	6	2					23'-9"
A606	6	2					23'-11"
C500	5	6	2'-9"	10"			3'-6"
C501	5	20	2'-9"	1'-6"			4'-2"
CB500	5	10	2'-9"	10"			3'-6"
CD500	5	10	2'-9"	10"			3'-6"
H400	4	61	3'-1½"	1'-6"			6'-6"
ZA400	4	52	2'-10"	1'-6"	7⅞"	4"	5'-2"
ZA401	4	4	2'-11⅝"	1'-6"	7⅞"	4"	5'-3"
ZA402	4	2	3'-0⅞"	1'-6"	7⅞"	4"	5'-4"
ZA403	4	2	3'-0⅞"	1'-6"	7⅞"	4"	5'-5"
ZA404	4	2	3'-1⅜"	1'-6"	7⅞"	4"	5'-7"





ELASTOMERIC BEARING PAD

(NO. REQ'D., 2 @ ABUT.)

ELASTOMERIC BEARING PAD

(NO. REQ'D., 2 @ PIERS)

GENERAL NOTES

① THE TOP OF ALL BEAMS ARE TO BE ROUGH FLOATED. AT APPROXIMATELY THE TIME OF INITIAL SET, THE TOP OF THE BEAMS WILL ALSO BE SCRUBBED TRANSVERSELY WITH A COARSE WIRE BRUSH TO REMOVE ALL LAITANCE AND PRODUCE A ROUGH SURFACE. WHERE PRECAST SLAB PANELS ARE TO BE USED AND SET ON FELT PADS, THE OUTER TWO INCHES OF THE TOP FLANGE MAY BE TROWELED.

② MILD STEEL REINFORCING SHALL BE ASTM A615 GRADE 60.

③ ALL PRESTRESSING STRANDS TO BE ½" Ø HIGH STRENGTH 7 WIRE UNCOATED STRESS-RELIEVED TYPE LO-LAX ASTM A416.

④ AN INITIAL FORCE OF 31,000 LBS. SHALL BE APPLIED TO EACH STRAND IN ALL BEAMS.

⑤ AFTER THE BEAM IS REMOVED FROM THE PRESTRESSING BED, BARS C500, CB500, & CD500 SHALL BE BENT A SUFFICIENT AMOUNT SO AS TO PERMIT THE "C" BARS OF ADJOINING BEAM TO MESH WHEN IN THE ERECTED POSITION.

⑥ AT THE PIER END OF THE GIRDER, THE PRESTRESSING STRANDS SHALL BE LEFT PROJECTING 3" ± FROM THE ENDS OF THE BEAMS. THERE SHALL NOT BE ANY PROTECTIVE COATING PLACED ON THE ENDS OF THE BEAMS OR ON THE PROJECTING STRANDS. AT THE ABUTMENT END OF THE GIRDER, THE PRESTRESSING STRANDS SHALL BE CUT FLUSH, THERE SHALL BE A PROTECTIVE COATING PLACED ON THE PRESTRESSING STRANDS

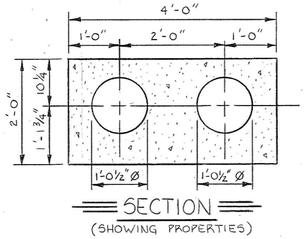
⑦ ELASTOMERIC PADS TO BE 1"x 4'-3⅛6"x 6" AT ABUTMENT ENDS, AND 1"x 4'-7⅞"x 1'-9", WITH 1¼"Ø HOLES AT PIERS.

⑧ THE CONCRETE FOR THIS CONSTRUCTION SHALL BE OF SUCH PROPERTIES AS TO ATTAIN A COMPRESSIVE STRENGTH OF NOT LESS THAN 3,000 + PSI AT THE AGE OF 28 DAYS, AND STRESS TRANSFER SHALL NOT BE MADE TO THE BRIDGE MEMBER UNTIL THE TEST SPECIMENS INDICATE THAT THE CONCRETE HAS REACHED A COMPRESSIVE STRENGTH OF AT LEAST 4000 PSI. SEE GENERAL NOTES SHEET FOR CONCRETE FINISHING NOTE.

⑨ 1" Ø WEEP HOLES REQUIRED AT LOW POINT OF EACH CELL.

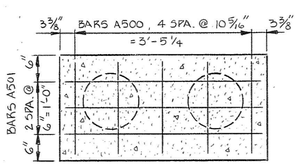
⑩ EACH CELL SHALL BE VENTED, (DURING THE FABRICATION PHASE), IN SUCH A MANNER SO AS NOT TO ALLOW EXTERNAL WATER TO ENTER THE CELL

⑪ INSERTS FOR THE ENDWALL ARE TO BE THREADED TYPE (CAST-IN-PLACE) ¾" Ø THREADED RODS FOR INSERTS ARE TO PROVIDE 2'-0" SPLICE WITH THE ENDWALL REINFORCEMENT.



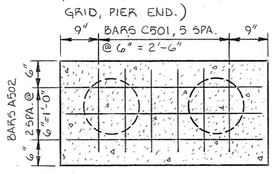
SECTION

(SHOWING PROPERTIES)



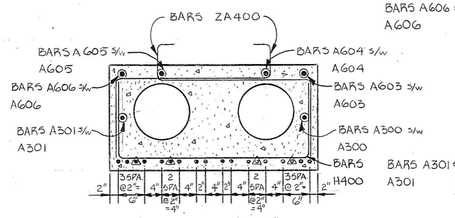
SECTION

(SHOWING REINFORCING IN END GRID, PIER END.)



SECTION

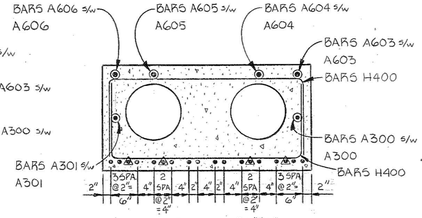
(SHOWING REINFORCING IN END GRID, ABUT. END.)



SECTION "A"-"A"

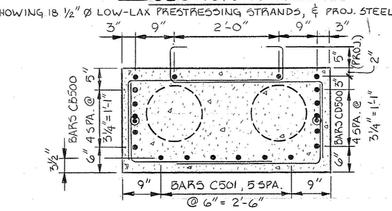
(SHOWING 18 ½" Ø LOW-LAX PRESTRESSING STRANDS, & PROJ. STEEL.)

▲DENOTES: BREAK BOND 1'-6" FROM END OF BEAM, 4 STRANDS.



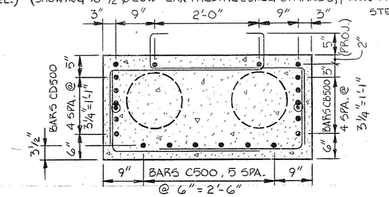
SECTION "A"-"A"

(SHOWING 18 ½" Ø LOW-LAX PRESTRESSING STRANDS, & NON-PROJ. STEEL.)



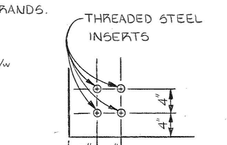
SECTION "B"-"B"

(ABUT. END)



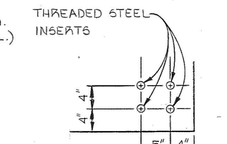
SECTION "C"-"C"

(PIER END)



DETAIL "X"

(ABUT. END OF BEAM)
(LONG SIDE)



DETAIL "X"

(ABUT. END OF BEAM)
(SHORT SIDE)

ESTIMATED QUANTITIES ~ PER BEAM

ITEM	NO. REQD.	CLASS "A" CONCRETE C.Y.	STEEL BAR REINFORCEMENT LBS.	PRESTRESSING STRANDS LBS.
BEAM NO. 4	1	10.6	1,015	416
BEAM NO. 5	1	10.6	1,015	416

NOTE: THE COST OF ELASTOMERIC PADS, DOWEL BARS, RUBBER BONDING CEMENT, AND PROTECTIVE COATING ON ABUTMENT END OF STRANDS, TO BE INCLUDED IN COST OF PRESTRESSED BEAM.

CONST. NO. T5009-3219-94

PROJECT NO.	YEAR	SHEET NO.
BHF-96 (1)	1984	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PRESTRESSED BOX BEAMS
BEAM NO. 4, SPAN NO. 1; BEAM NO. 5, SPAN NO. 2
STATE ROUTE 96 OVER
OVERALL CREEK
STATION 52+50.55
RUTHERFORD COUNTY

CORRECT Edellon L Lovvorn 1984
ENGINEER OF STRUCTURES
APPROVED Lewis Evans
DIRECTOR OF HIGHWAYS

M-142-120

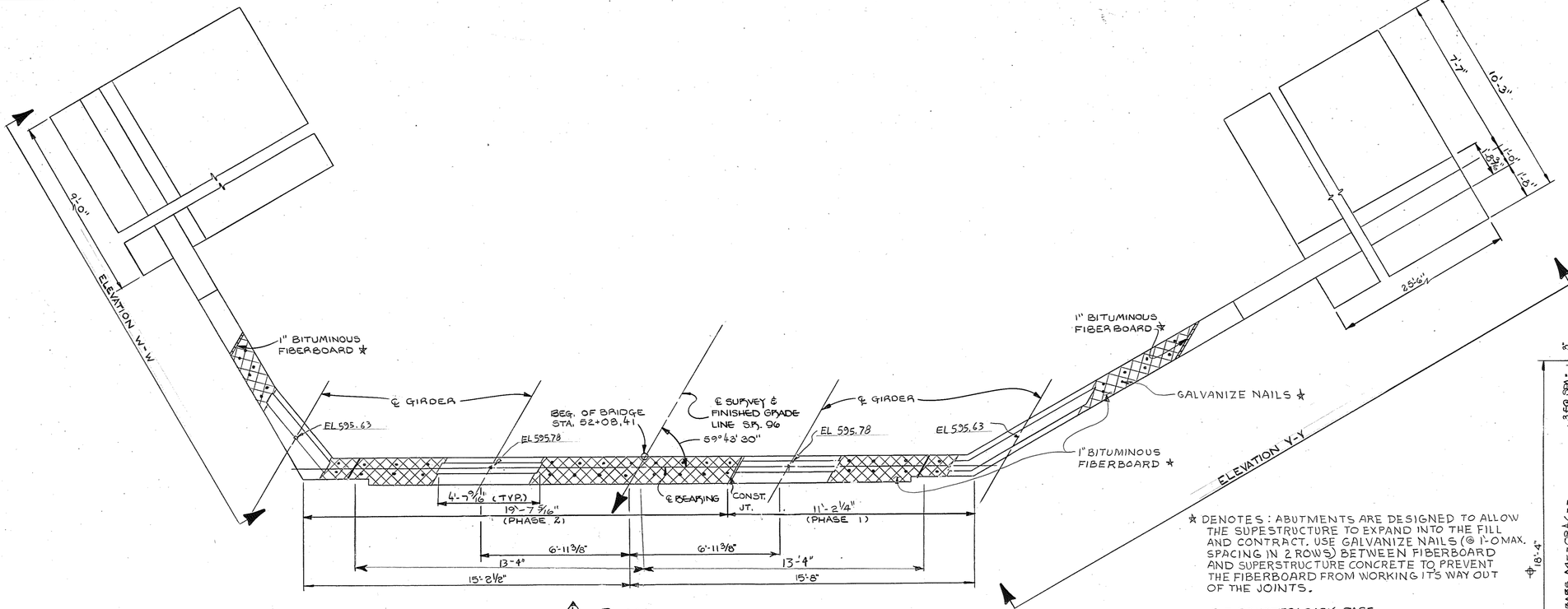
DESIGNED BY	GARY HALL	DATE 9-2-83
DRAWN BY	RON KAUFMAN	DATE 2-9-84
SUPERVISED BY	R.L.H. & MWB	DATE 2-9-84
CHECKED BY	GARY HALL	DATE 2-23-84

CONST. No. 75009-3219-94

PROJECT NO.	YEAR	SHEET NO.
BHF-96(1)	1983	

REVISIONS

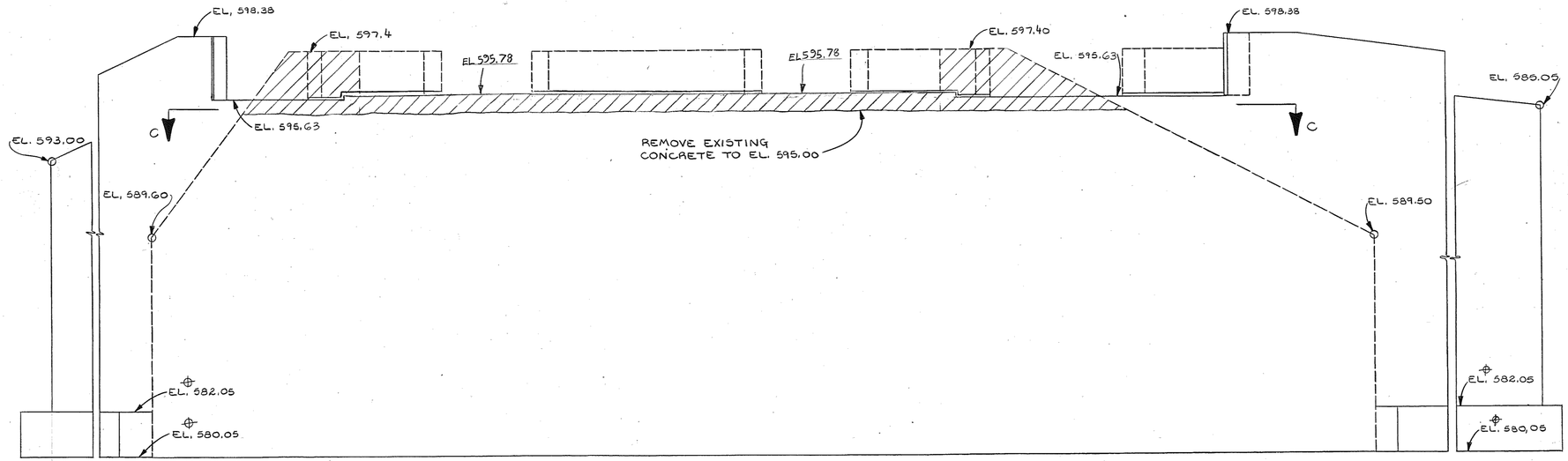
NO.	DATE	BY	BRIEF DESCRIPTION
1	10-30-84	G. HALL	ADDED BRIDGE SEATS & ELEVATIONS



1 PLAN

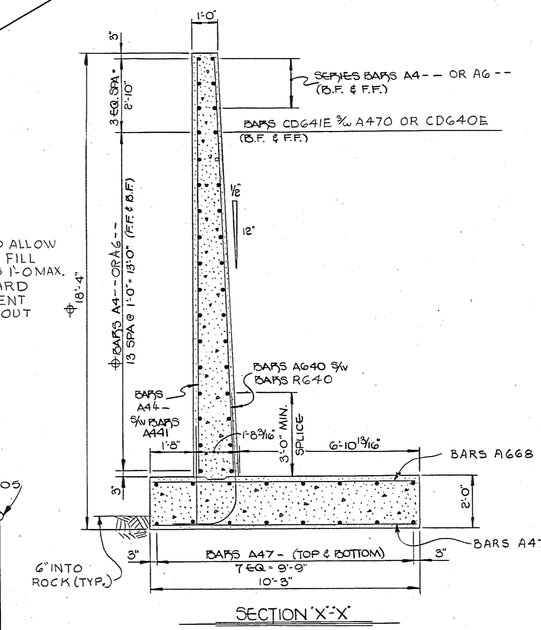
☆ DENOTES: ABUTMENTS ARE DESIGNED TO ALLOW THE SUPESTRUCTURE TO EXPAND INTO THE FILL AND CONTRACT. USE GALVANIZE NAILS (@ 1'-0 MAX. SPACING IN 2 ROWS) BETWEEN FIBERBOARD AND SUPERSTRUCTURE CONCRETE TO PREVENT THE FIBERBOARD FROM WORKING ITS WAY OUT OF THE JOINTS.

B.F. DENOTES: BACK FACE
F.F. DENOTES: FRONT FACE



2 ELEVATION
(LOOKING BACK ON SURVEY)

⊕ SPECIAL NOTE - FOOTING FOR ABUTMENTS: AFTER EXCAVATION TO ROCK FOR FOOTING HAS BEEN COMPLETED, HOLES 6" DEEP SHALL BE DRILLED AT POINTS DESIGNATED BY THE ENGINEER. FROM THE RESULTS OBTAINED, THE ENGINEER SHALL DETERMINE THE FINAL FOOTING ELEVATIONS. NO REINFORCING STEEL FOR WINGWALL SHALL BE ORDERED UNTIL FINAL FOOTING ELEVATIONS HAVE BEEN DETERMINED.



SECTION 'X'-'X'

ESTIMATED QUANTITIES

CLASS "A" CONCRETE C.Y.	STEEL BAR REINFORCEMENT LBS.	EPOXY COATED REINFORCING STEEL LBS.
65.0	4,178	354

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

ABUTMENT NO. 1
WIDENING OF STATE ROUTE 96 OVER OVERALL CREEK
STATION 52+50.55
RUTHERFORD COUNTY
1984

DESIGNED BY GARY HALL DATE 11-83
DRAWN BY REPRODUCTION DATE 2-84
SUPERVISED BY RLH HMB DATE 2-84
CHECKED BY GARY HALL DATE 2-84

CORRECT Clellon L Fouse
ENGINEER OF STRUCTURES
APPROVED Lewis Evans
DIRECTOR OF HIGHWAYS

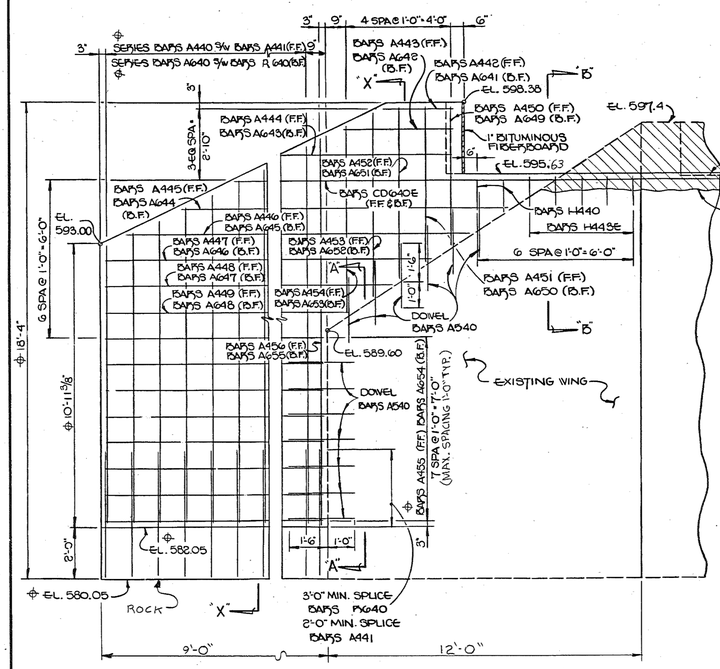
M-142-121

CONST. No. 75009-3219-94

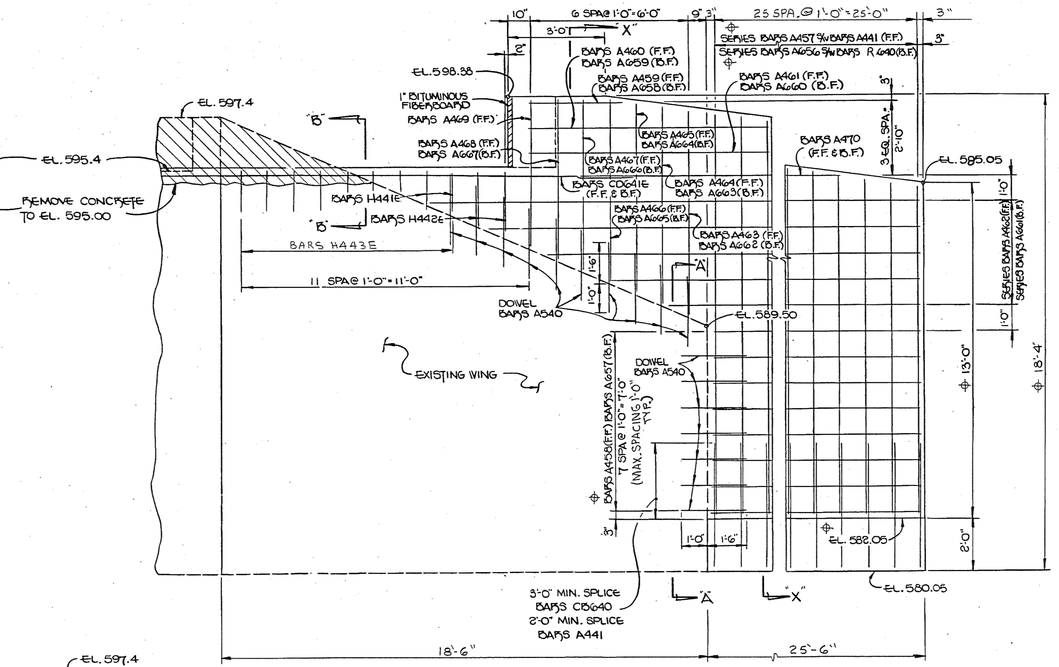
PROJECT NO.	YEAR	SHEET NO.
BHF-96(1)	1984	

REVISIONS

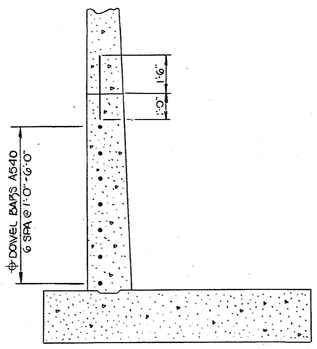
NO.	DATE	BY	BRIEF DESCRIPTION



ELEVATION W-W

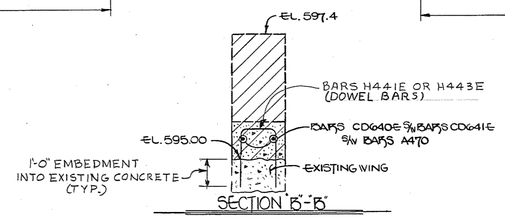


ELEVATION Y-Y

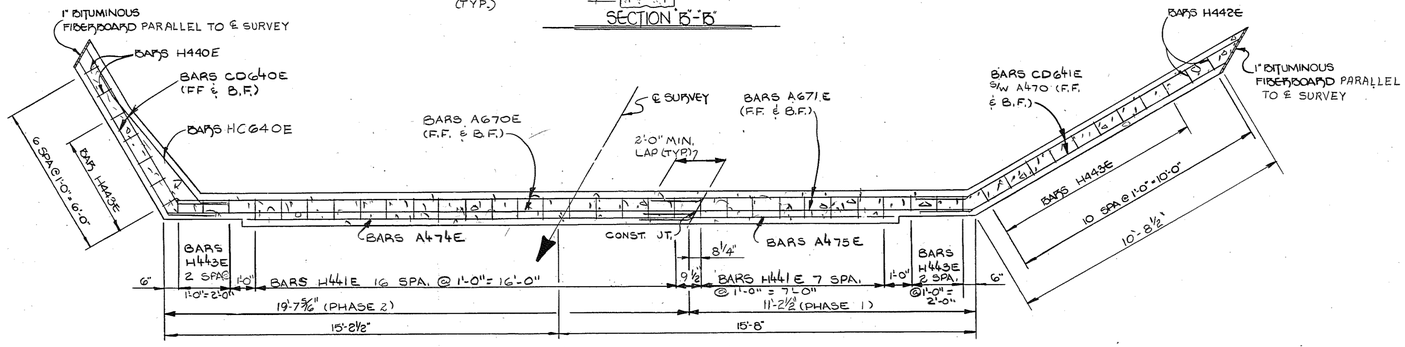


SECTION "A"-"A"

B.F. DENOTES: BACK FACE
F.F. DENOTES: FRONT FACE



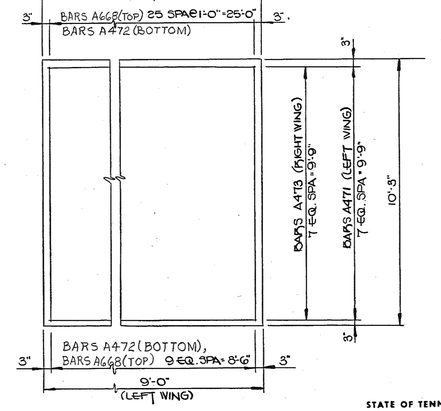
SECTION B-B



SECTION C-C

NOTE : THIS ABUTMENT IS DESIGNED TO ALLOW THE SUPERSTRUCTURE TO EXPAND THE FILL AND CONTRACT.

⌖ DENOTES SEE "SPECIAL NOTE" ON DWG. M-142-121



PLAN OF FOOTING
SHOWING RIGHT WING & LEFT WING FOOTINGS

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

ABUTMENT NO. 1 DETAILS
WIDENING OF STATE ROUTE 96 OVER OVERALL CREEK
STATION 52+50.55
RUTHERFORD COUNTY
1984

DESIGNED BY GARY HALL DATE 11-83
DRAWN BY REPRODUCTION DATE 2-84
SUPERVISED BY RLH & HMB DATE 2-84
CHECKED BY GARY HALL DATE 2-84

CORRECT Clellon L Loveless
ENGINEER OF STRUCTURES
APPROVED Lewis Evans
DIRECTOR OF HIGHWAYS

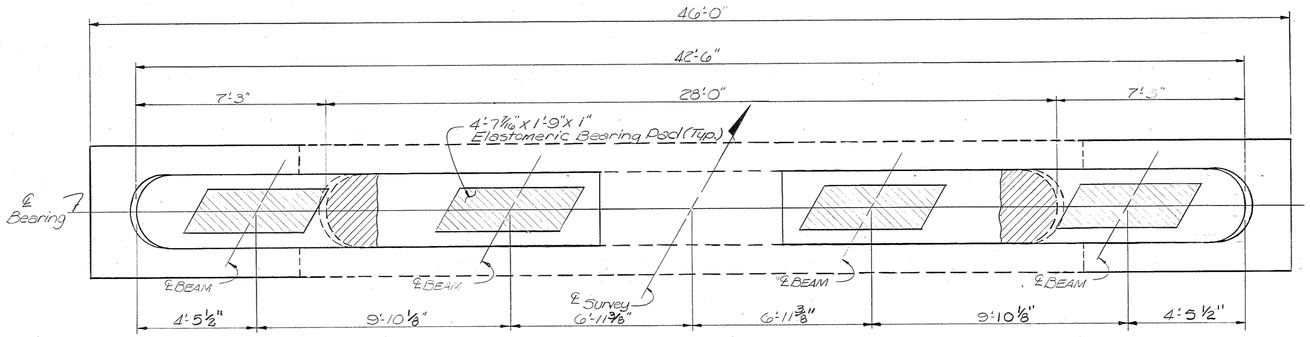
M-142-122

Const. No. 75009-3219-94

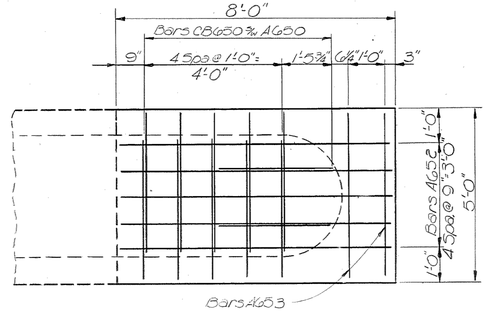
PROJECT NO.	YEAR	SHEET NO.
BHF-96(1)	1984	

REVISIONS

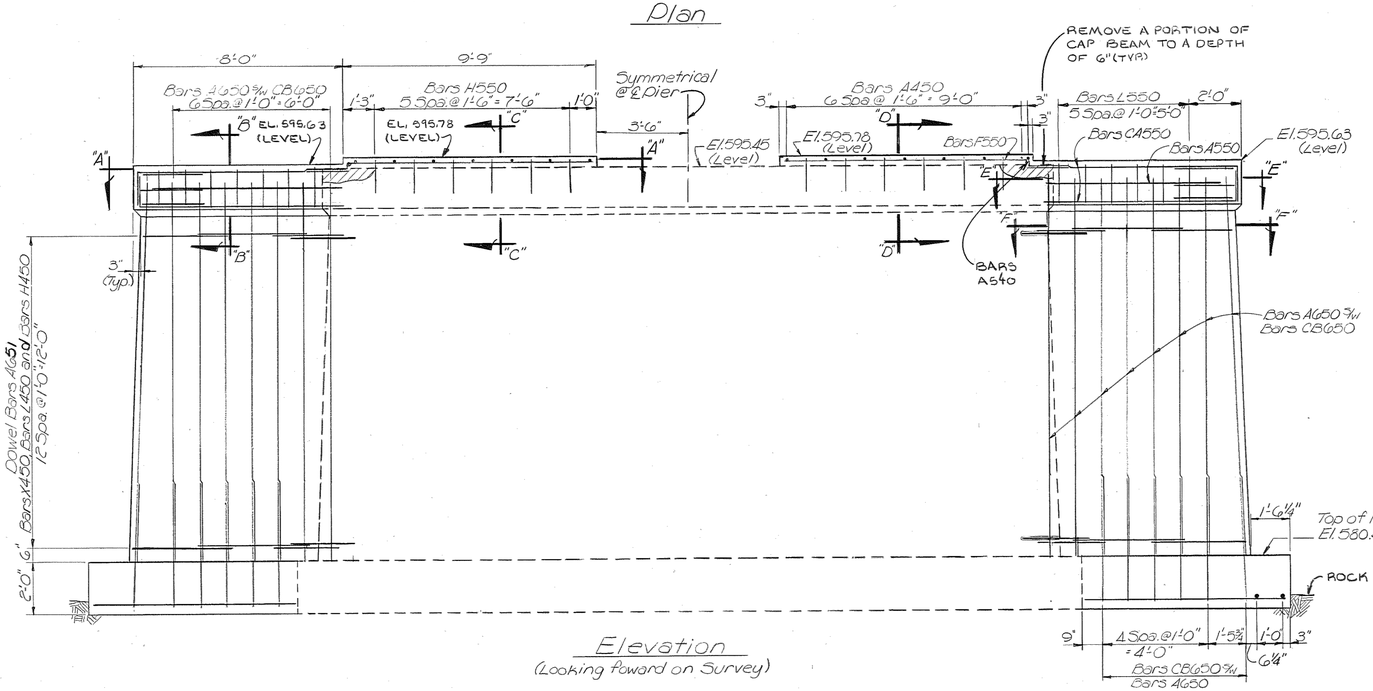
NO.	DATE	BY	BRIEF DESCRIPTION



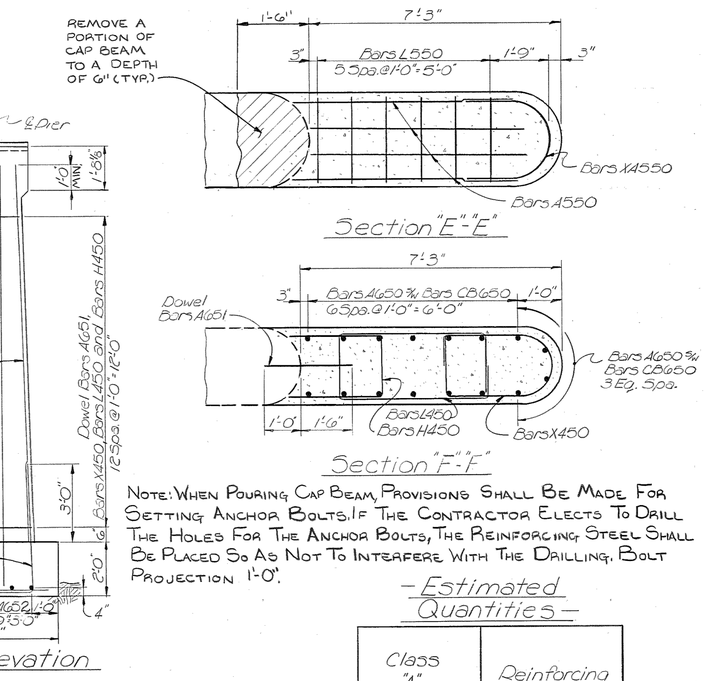
Plan



Plan of Footing



Elevation
(Looking Foward on Survey)



End Elevation

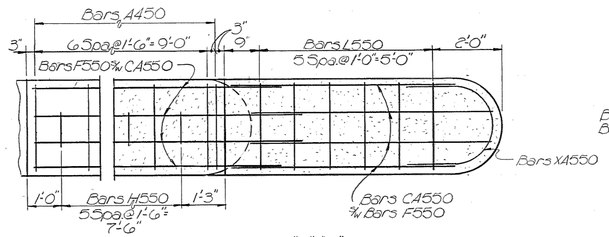
Section "E"-"E"

Section "F"-"F"

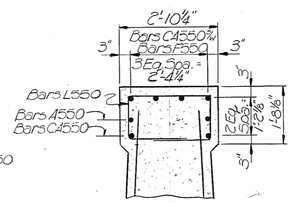
NOTE: WHEN POURING CAP BEAM, PROVISIONS SHALL BE MADE FOR SETTING ANCHOR BOLTS. IF THE CONTRACTOR ELECTS TO DRILL THE HOLES FOR THE ANCHOR BOLTS, THE REINFORCING STEEL SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE DRILLING. BOLT PROJECTION 1'-0".

Estimated Quantities

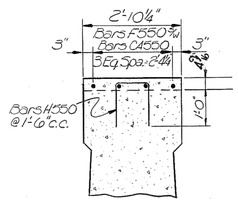
Class "A" Concrete C.Y.	Reinforcing Steel lbs.
30.6	2,395



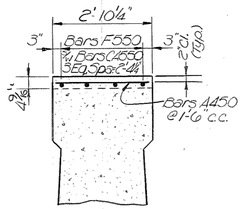
Section "A"-"A"



Section "B"-"B"



Section "C"-"C"



Section "D"-"D"

✛✛ SPECIAL NOTE: FOOTING FOR PIER-EXTENSIONS: AFTER EXCAVATION TO ROCK FOR FOOTING HAS BEEN COMPLETED, HOLES 6'-0" DEEP SHALL DRILLED AT POINT DESIGNATED BY THE ENGINEER. FROM THE RESULTS OBTAINED, THE ENGINEER SHALL DETERMINE THE FINAL FOOTING ELEVATIONS. NO REINFORCING STEEL FOR THE PIER'S FOOTING AND SHAFT SHALL BE ORDERED UNTIL FINAL FOOTING ELEVATIONS HAVE BEEN DETERMINED.

DESIGNED BY Gary Hall DATE 3-2-83
DRAWN BY Dennit Jackson DATE 2-84
SUPERVISED BY HMB-DLH DATE 2-84
CHECKED BY GARY HALL DATE 2-23-84

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

Pier No. 1
Widening of State Route 96
over Overall Creek
Station 52+50.55
Rutherford County
1984

CORRECT C. Allen L. Lovell
ENGINEER OF STRUCTURES
APPROVED Lewis Evans
DIRECTOR OF HIGHWAYS

M-142-123

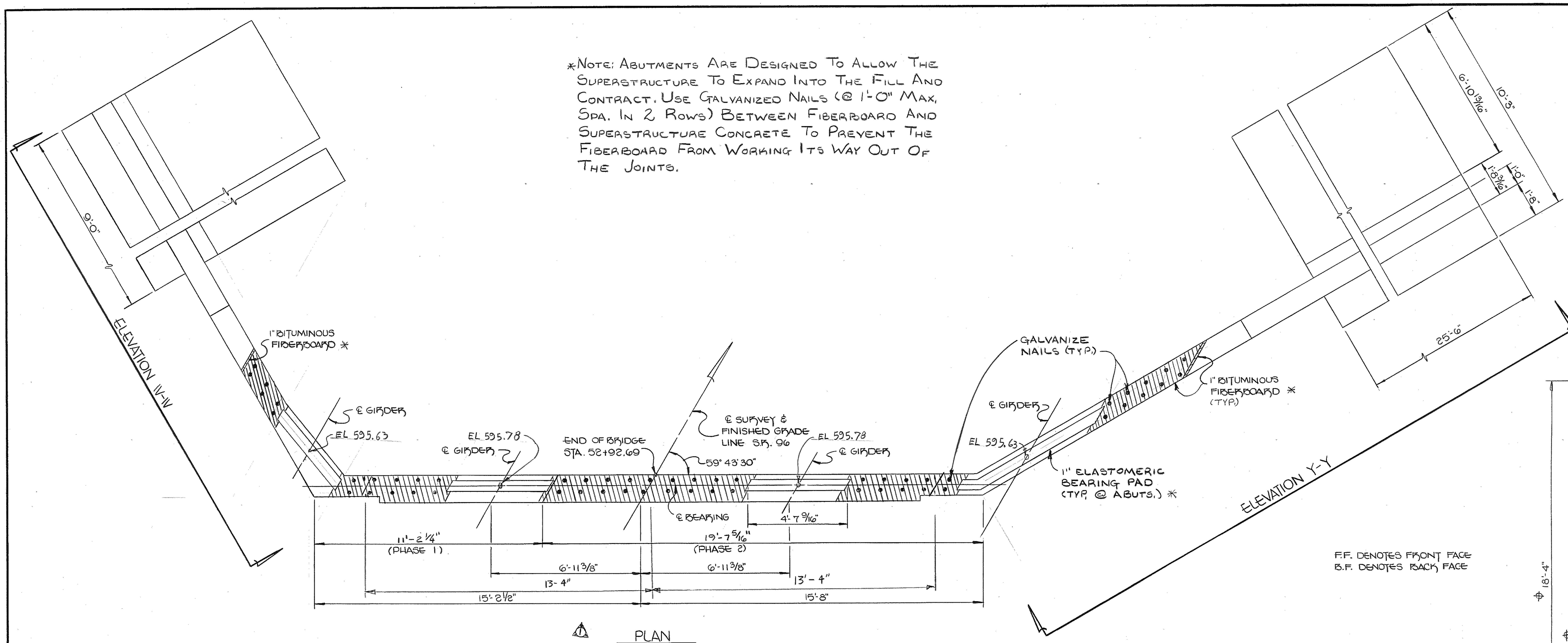
CONST. NO. 75009-3219-94

PROJECT NO.	YEAR	SHEET NO.
BHF-96 (1)	1984	

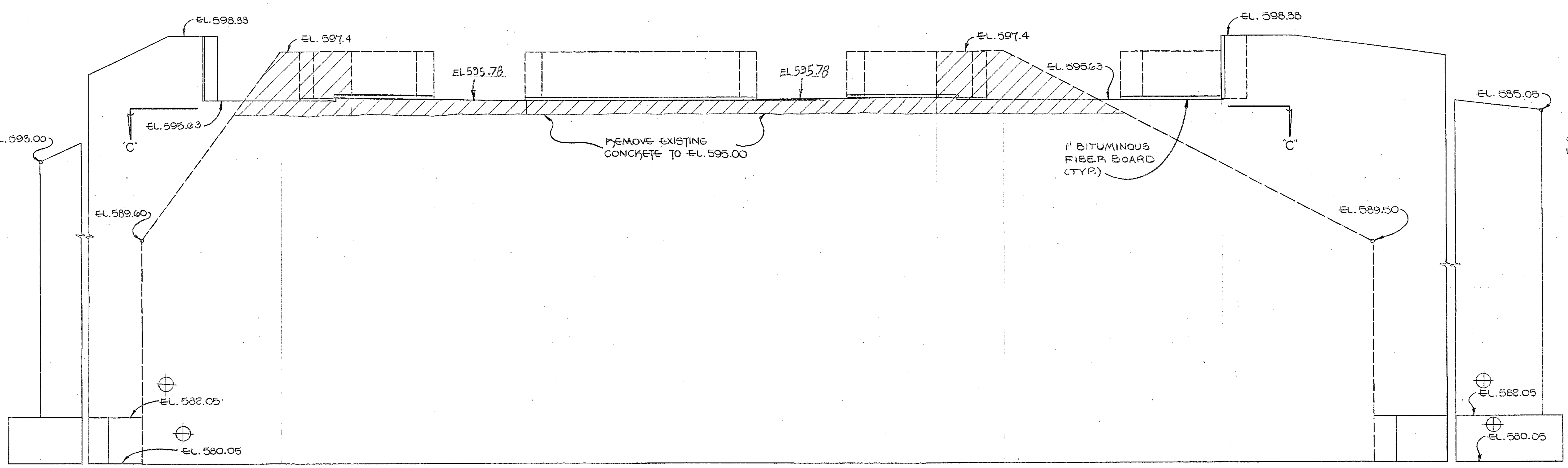
REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	10-31-84	G. HALL	ADDED BRIDGE SEATS & ELEVATIONS

*Note: Abutments Are Designed To Allow The Superstructure To Expand Into The Fill And Contract. Use Galvanized Nails (@ 1'-0" Max. Spa. In 2 Rows) Between Fiberboard And Superstructure Concrete To Prevent The Fiberboard From Working Its Way Out Of The Joints.

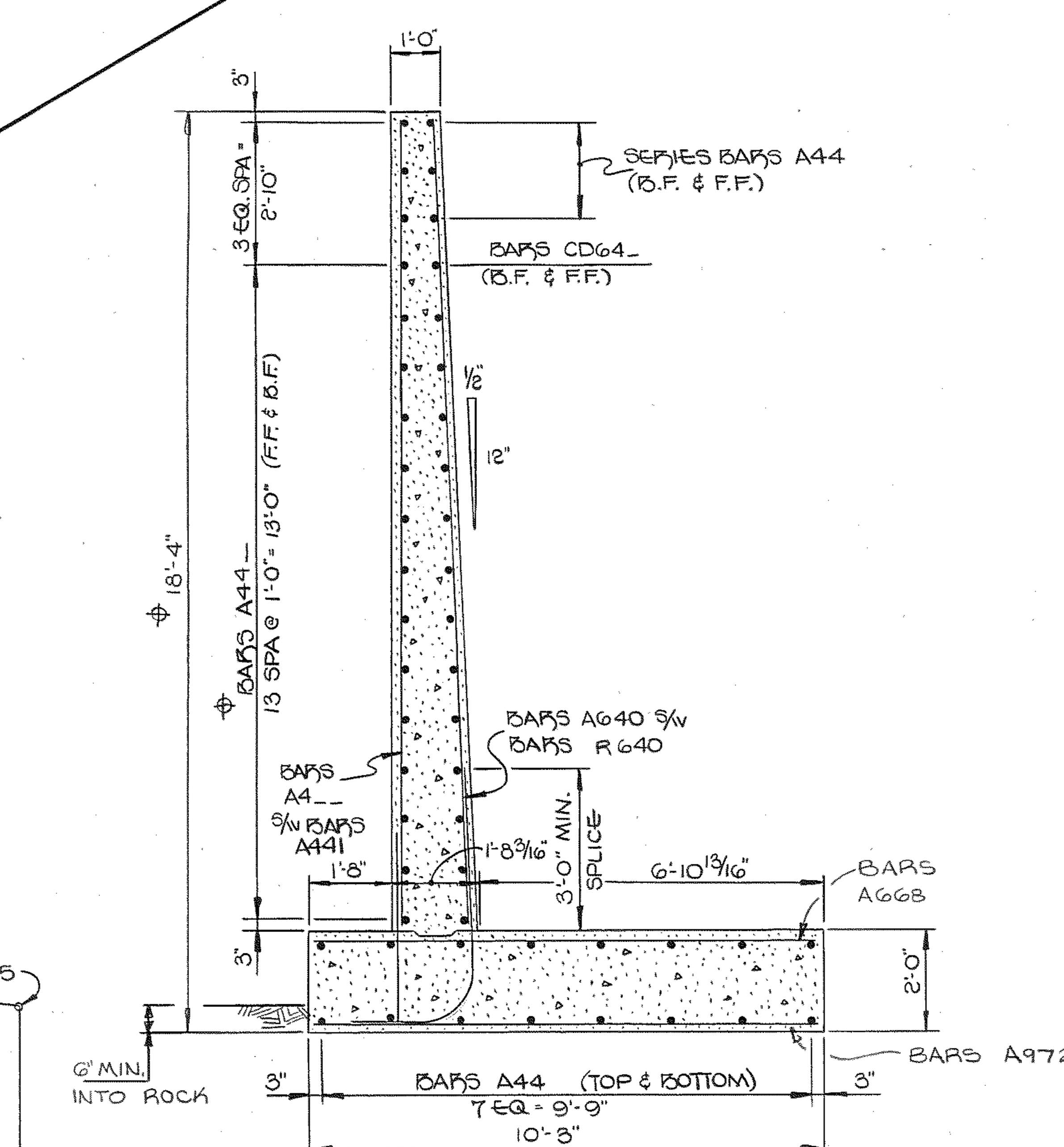


PLAN



ELEVATION
(LOOKING FORWARD ON SURVEY)

⊕ Note: See "Special Note" On Dwg. No. M-142-121.



SECTION "X"-"X"

F.F. DENOTES FRONT FACE
B.F. DENOTES BACK FACE

ESTIMATED QUANTITIES

CLASS "A" CONCRETE C.Y.	STEEL BAR REINFORCEMENT LBS.	EPOXY COATED REINFORCING STEEL LBS.
65.0	4,178	354

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

ABUTMENT NO. 2
WIDENING OF STATE ROUTE 96 OVER OVERALL CREEK
STATION 52+50.55
RUTHERFORD COUNTY
1984

DESIGNED BY GARY HALL — DATE 9-83
DRAWN BY K. FRANKENFIELD — DATE 2-84
SUPERVISED BY DON HARBISON — DATE 2-84
CHECKED BY GARY HALL — DATE 2-84

CORRECT Clellon L. Loveall — ENGINEER OF STRUCTURES
APPROVED Lewis Evans — DIRECTOR OF HIGHWAYS

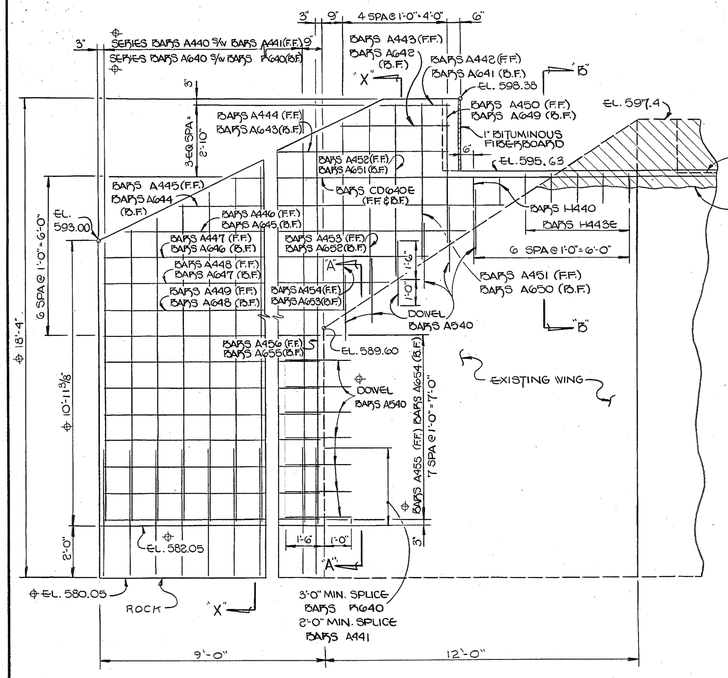
M-142-124

CONST. NO. T5009-3219-94

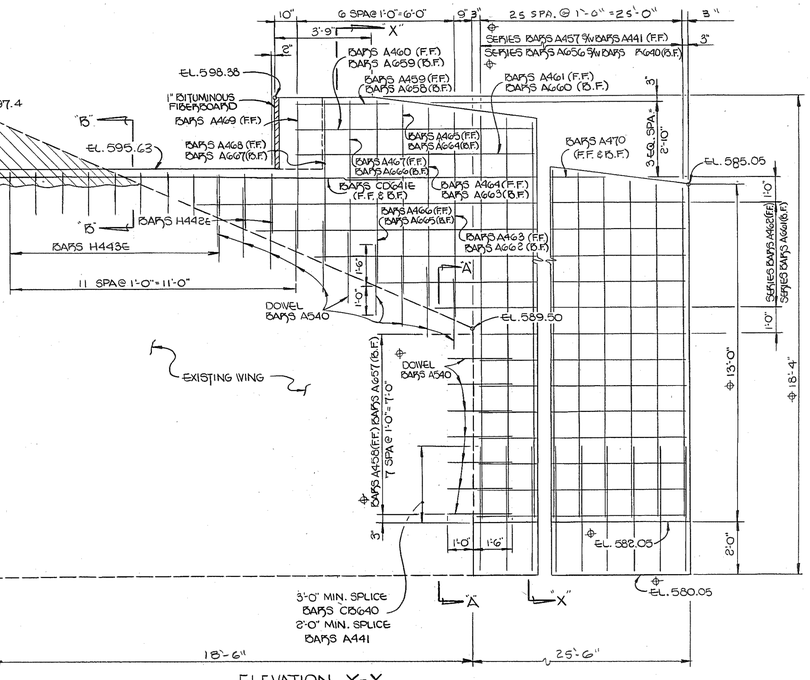
PROJECT NO.	YEAR	SHEET NO.
BHF-96(1)	1984	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

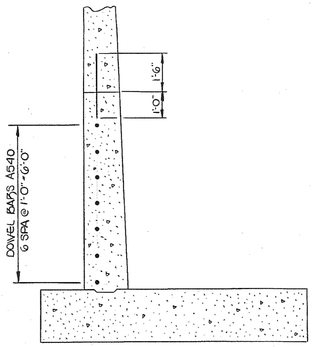


ELEVATION W-W

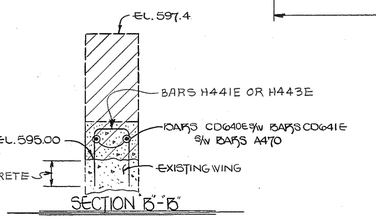


ELEVATION Y-Y

F.F. DENOTES FRONT FACE
B.F. DENOTES BACK FACE



SECTION "A"-"A"



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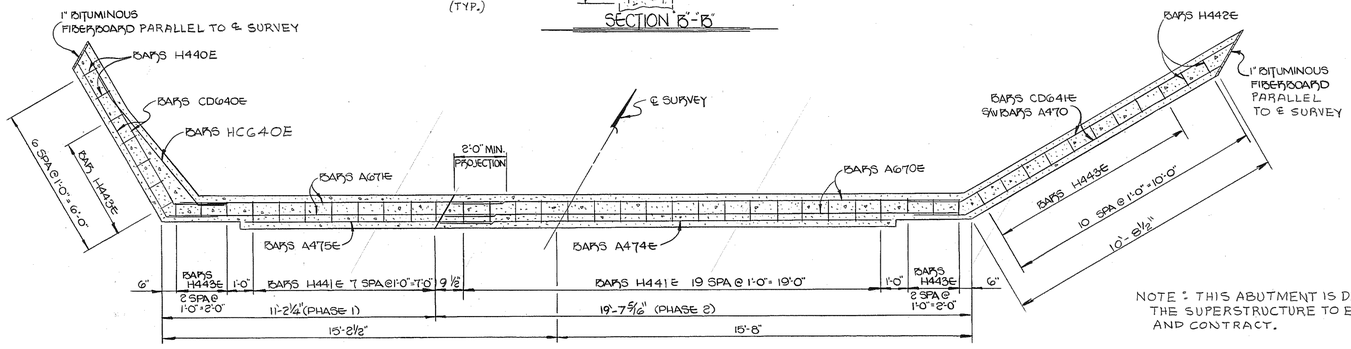
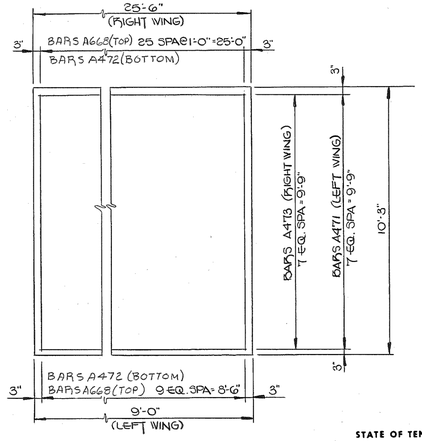


SECTION C-C

NOTE : THIS ABUTMENT IS DESIGNED TO ALLOW THE SUPERSTRUCTURE TO EXPAND INTO THE FILL AND CONTRACT.

℄ DENOTES SEE "SPECIAL NOTE" ON DWG. M-142-121.



PLAN OF FOOTING
SHOWING RIGHT WING & LEFT WING FOOTINGS

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

ABUTMENT NO. 2 DETAILS
WIDENING OF STATE ROUTE 96 OVER OVERALL CREEK
STATION 52+50.55
RUTHERFORD COUNTY
1984

DESIGNED BY	GARY HALL	DATE	9-83
DRAWN BY	S. FRANKENFIELD	DATE	2-84
SUPERVISED BY	DON HARRISON	DATE	2-84
CHECKED BY	GARY HALL	DATE	2-84

CORRECT Clellon L Loveless
ENGINEER OF STRUCTURES

APPROVED Lewis Evans
DIRECTOR OF HIGHWAYS

M-142-125

BILL OF STEEL

CONST. NO. 75009-3219-94

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN.	BHF-96(1)	1984		

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

SUPERSTRUCTURE

BAR	LOCATION	SIZE	NO. REQ'D	BENDING DIMENSIONS a	b	c	d	LENGTH
A502	SUPPORT DIAPH.	5	4					16'-1"
A503	SUPPORT DIAPH.	5	4					23'-10"
L400	SUPPORT DIAPH.	4	19	5"	1'-0"	1'-7"		4'-10"
	EPOXY COATED							
A400E	END DIAPHS.	4	12					2'-8"
A401E	END DIAPHS.	4	24					5'-1"
A402E	END DIAPHS	4	12					9'-0"
A403E	END DIAPHS	4	12					4'-11"
A500E	SLAB	5	346					16'-2"
A501E	SLAB	5	332					23'-7"
A504E	SLAB	5	84					30'-0"
A505E	SLAB	5	16					8'-0"
SERIES	SLAB	5	2	LENGTH VARIES FROM				
A506E				16'-6" TO 3'-2 9/16" IN INC. OF				
				9 3/8" (18 BARS)				177'-5"
SERIES	SLAB	5	2	LENGTH VARIES FROM				
A507E				16'-0" TO 6'-7 1/2" IN INC. OF				
				9 3/8" (13 BARS)				147'-1"
SERIES	SLAB	5	2	LENGTH VARIES FROM				
A508E				9'-2 1/2" TO 3'-9" IN INC. OF				
				9 3/8" (8 BARS)				51'-6"
SERIES	SLAB	5	2	LENGTH VARIES FROM				
A509E				22'-5 1/2" TO 6'-10" IN INC.				
				OF 9 3/8" (21 BARS)				307'-7"
SERIES	SLAB	5	4	LENGTH VARIES FROM				
A510E				6'-0" TO 3'-2" IN INC. OF				
				3/8" (12 BARS)				55'-0"
A511E	SLAB	5	8					12'-6"
A512E	SLAB	5	24					6'-2"
A600E	SLAB	6	33					60'-0"
A601E	SLAB	6	28					32'-0"
A602E	SLAB	6	58					15'-0"
A603E	SLAB	6	4					18'-0"
A604E	SLAB	6	4					16'-6"
CA600E	SLAB	6	84	2'-8"	2'-6"			4'-7"
CA601E	SLAB	6	4	7 1/10"	2'-6"			10'-3"

SUPERSTRUCTURE CONT.

BAR	LOCATION	SIZE	NO. REQ'D	BENDING DIMENSIONS a	b	c	d	LENGTH
CA602E	SLAB	6	4	9'-9"	8'-6"			12'-2"
CA603E	SLAB	6	4	10'-4"	2'-6"			12'-9"
CD500E	SLAB	5	4	10'-6"	10'-10"	5'-4 1/2"		21'-4"
CD501E	SLAB	5	4	21'-0"	6'-4"	5'-5 1/2"		27'-4"
CD502E	SLAB	5	4	10'-6"	6'-4"	5'-5 1/2"		16'-10"
CD503E	SLAB	5	4	21'-0"	10'-10"	5'-4 1/2"		31'-10"
L401E	END DIAPHS.	4	48	10"	1'-0"	2'-2"		6'-10"
L402E	END DIAPHS.	4	16	8"	1'-0"	2'-2"		6'-6"

ABUTMENT NO. 1 & 2 (EACH)

BAR	LOCATION	SIZE	NO. REQ'D	BENDING DIMENSIONS a	b	c	d	LENGTH
SERIES	WING	4	1	LENGTH VARIES FROM				
A440				14'-7 1/8" TO 10'-9" IN INC.				
				OF 5 1/8" (10 BARS)				126'-9"
A441	WING	4	36					4'-0"
A442	WING	4	1					2'-9"
A443	WING	4	1					4'-2"
A444	WING	4	1					6'-5"
A445	WING	4	1					12'-11"
A446	WING	4	1					13'-4"
A447	WING	4	1					12'-10"
A448	WING	4	1					11'-4"
A449	WING	4	1					9'-6"
A450	WING	4	1					5'-4"
A451	WING	4	1					6'-0"
A452	WING	4	1					6'-7"
A453	WING	4	1					7'-1"
A454	WING	4	1					7'-5"
A455	WING	4	8					8'-8"
A456	WING	4	1					14'-10"
SERIES	WING	4	1	LENGTH VARIES FROM				
A457				15'-5" TO 12'-8" IN INC. OF				
				19/16" (26 BARS)				365'-1"
A458	WING	4	8					25'-2"
A459	WING	4	1					3'-6"
A460	WING	4	1					12'-2"
A461	WING	4	1					20'-9"
SERIES	WING	4	1	LENGTH VARIES FROM				
A462				36'-0" TO 26'-9" IN INC. OF				
				2-3 3/4" (5 BARS)				156'-10"
A463	WING	4	1					7'-10"
A464	WING	4	1					7'-7"
A465	WING	4	1					7'-4"
A466	WING	4	1					7'-0"
A467	WING	4	1					6'-7"
A468	WING	4	1					6'-1"
A469	WING	4	1					5'-8"
A470	WING	4	2					27'-0"
A471	FOOTING (TOP & BOT.)	4	16					8'-8"
A472	FOOTING (BOTTOM)	4	36					9'-9"
A473	FOOTING (TOP & BOT)	4	16					25'-2"
A540	WING (DOWELS)	5	30					2'-6"

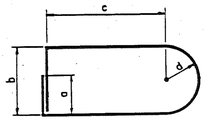
ABUTMENT NO. 1 & 2 CONT.

BAR	LOCATION	SIZE	NO. REQ'D	BENDING DIMENSIONS a	b	c	d	LENGTH
SERIES	WING	6	1	LENGTH VARIES FROM				
A640				14'-7 1/8" TO 10'-9" IN INC.				
				OF 5 1/8" (10 BARS)				126'-9"
A641	WING	6	1					2'-6"
A642	WING	6	1					3'-9"
A643	WING	6	1					6'-2"
A644	WING	6	1					12'-11"
A645	WING	6	1					13'-4"
A646	WING	6	1					12'-10"
A647	WING	6	1					11'-4"
A648	WING	6	1					9'-9"
A649	WING	6	1					5'-4"
A650	WING	6	1					6'-0"
A651	WING	6	1					6'-7"
A652	WING	6	1					7'-1"
A653	WING	6	1					7'-3"
A654	WING	6	8					8'-8"
A655	WING	6	1					14'-10"
SERIES	WING	6	1	LENGTH VARIES FROM				
A656				15'-5" TO 12'-8" IN INC. OF				
				19/16" (26 BARS)				365'-1"
A657	WING	6	8					25'-2"
A658	WING	6	1					2'-6"
A659	WING	6	1					11'-2"
A660	WING	6	1					19'-9"
SERIES	WING	6	1	LENGTH VARIES FROM				156'-10"
A661				36'-0" TO 26'-9" IN INC. OF				
				2-3 3/4" (5 BARS)				
A662	WING	6	1					7'-10"
A663	WING	6	1					7'-7"
A664	WING	6	1					7'-4"
A665	WING	6	1					7'-0"
A666	WING	6	1					6'-7"
A667	WING	6	1					6'-1"
A668	FOOTING (TOP)	6	36					9'-9"
R640	WING	6	36	9"	5'-0"	3'-1"		7'-9"
	EPOXY COATED							
A474E	ABUT.	4	1					18'-0"
A475E	ABUT.	4	1					10'-3"

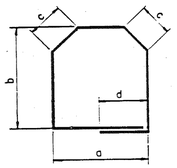
REINFORCING STEEL CODE

TYPE	SIZE	SERIES
A	5	06

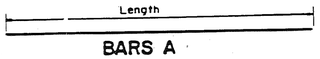
NOTE Dimensions shown on this sheet are outside to outside of bar
Standard C R S I. Hook Details Shall Apply, Except As Noted.



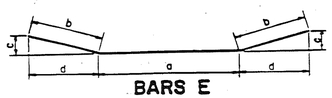
BARS X



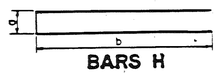
BARS M



BARS A



BARS E



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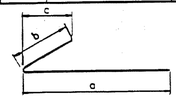
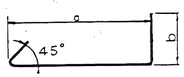
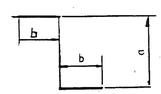


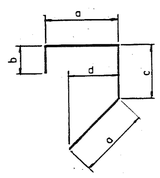
BARS CB



BARS YB

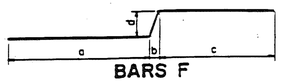


BARS Z

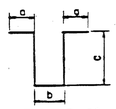


BARS J

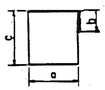
BARS B



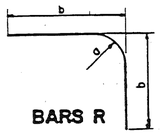
BARS F



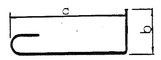
BARS K



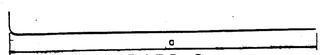
BARS L



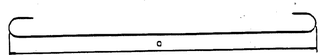
BARS R



BARS YA



BARS C



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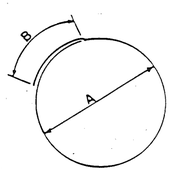
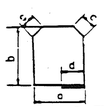
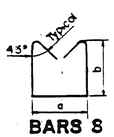


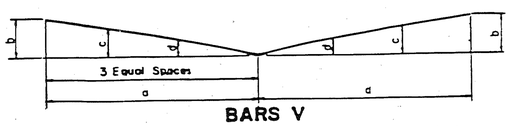
BARS T



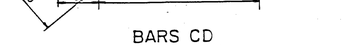
BARS ■M



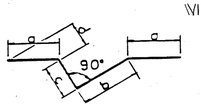
BARS S



BARS V



BARS CD



BARS JX

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

BILL OF STEEL

WIDENING OF STATE ROUTE 96 OVER OVERALL CREEK
STATION 52+50.55
RUTHERFORD COUNTY
1984

DESIGNED BY GARY HALL DATE 9-83
DRAWN BY D. FRANKENFIELD DATE 2-84
SUPERVISED BY DON HARRISON DATE 2-84
CHECKED BY GARY HALL DATE 2-84

CORRECT Clellon L. Foveall
ENGINEER OF STRUCTURES
APPROVED Lewis Evans
DIRECTOR OF HIGHWAYS

M-142-126

5-0-2

BILL OF STEEL

CONST. NO. 75009-3219-94

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN.	BHF-96(1)	1984		

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

ABUTMENT NO. 1 & 2 CONT.

BAR	LOCATION	SIZE	NO REQ'D	BENDING DIMENSIONS a	b	c	d	LENGTH
A6T0E	ABUT.	6	2					20'-0"
A6T1E	ABUT.	6	2					18'-3"
CD640E	WING	6	2	15'-9"	2'-10"	1'-5"		18'-7"
CD641E	WING	6	2	16'-0"	2'-10"	2'-6"		18'-10"
H440E	WING	4	2	8"	1'-0"			2'-7"
H441E	WING (DOWELS)	4	25	9"	1'-5"			3'-6"
H442E	WING	4	2	8"	2'-0"			4'-7"
H443E	WING (DOWELS	4	18	6"	1'-6"			3'-5"
HC640E	ABUT.	6	1	2'-6"	6'-0"	5"	2'-0"	11'-0"

PIER NO. 1

BAR	LOCATION	SIZE	NO. REQ'D	BENDING DIMENSIONS a	b	c	d	LENGTH
A450	BENT CAP	4	16					2'-6"
A550	BENT CAP	5	4					7'-3"
A650	COLUMN	6	32					14'-7"
A651	COLUMN (DOWEL)	6	26					2'-6"
A652	FOOTING	6	10					7'-8"
A653	FOOTING	6	4					4'-8"
CA550	CAPBEAM	5	12	7'-3"	1'-4"			8'-6"
CB650	FOOTING	6	32	4'-10"	3'-9"	1/2"		8'-6"
F550	CAPBEAM	5	8	9'-5"	8"	3'-6"		13'-0"
SERIES H450	COLUMN	4	2"	DIM "A" VARIES FROM 2'-0" TO 3'-0" IN INC. OF 1" DIM "B" 2'-6" (13 BARS)				96'-5"
H550	CAPBEAM	5	12	10 1/2"	1'-2"			3'-1"
SERIES L450	COLUMN	4	2	4'-2"	1'-0"	DIM "C" VARIES FROM 2'-0" TO 3'-0" IN INC. OF 1" (13 BARS)		184'-2"
L550	CAPBEAM	5	12	2'-6"	1'-0"	1'-4"		8'-6"
SERIES X450	COLUMN	4	2	1'-0"	DIM "B" VARIES FROM 2'-0" TO 3'-0" IN INC. OF 1" DIM "C" 2'-0" DIM "D" VARIES FROM 1'-0" TO 1'-6" IN INC. OF 1/2" (13 BARS)			147'-4"
XA550	CAPBEAM	5	6	2'-6"	1'-3 1/8"			8'-11

BAR	LOCATION	SIZE	NO REQ'D	BENDING DIMENSIONS a	b	c	d	LENGTH

BAR	LOCATION	SIZE	NO REQ'D	BENDING DIMENSIONS a	b	c	d	LENGTH

REINFORCING STEEL CODE

TYPE	SIZE	SERIES
A	5	06

NOTE Dimensions shown on this sheet are outside to outside of bar. Standard C R S. I. Hook Details Shall Apply, Except As Noted.

BARS HC

BARS X

BARS XA

BARS M

BARS A

BARS E

BARS H

BARS CB

BARS YB

BARS Z

BARS J

BARS B

BARS F

BARS K

BARS L

BARS R

BARS YA

BARS CD

BARS C

BARS D

BARS T

BARS ■M

BARS S

BARS V

BARS JX

DESIGNED BY GARY HALL DATE 9-83
DRAWN BY K. FRANKENFIELD DATE 2-84
SUPERVISED BY DON HARRISON DATE 2-84
CHECKED BY GARY HALL DATE 2-84

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

BILL OF STEEL

WIDENING OF STATE ROUTE 96 OVER OVERALL CREEK
STATION 52+50.55
RUTHERFORD COUNTY
1984

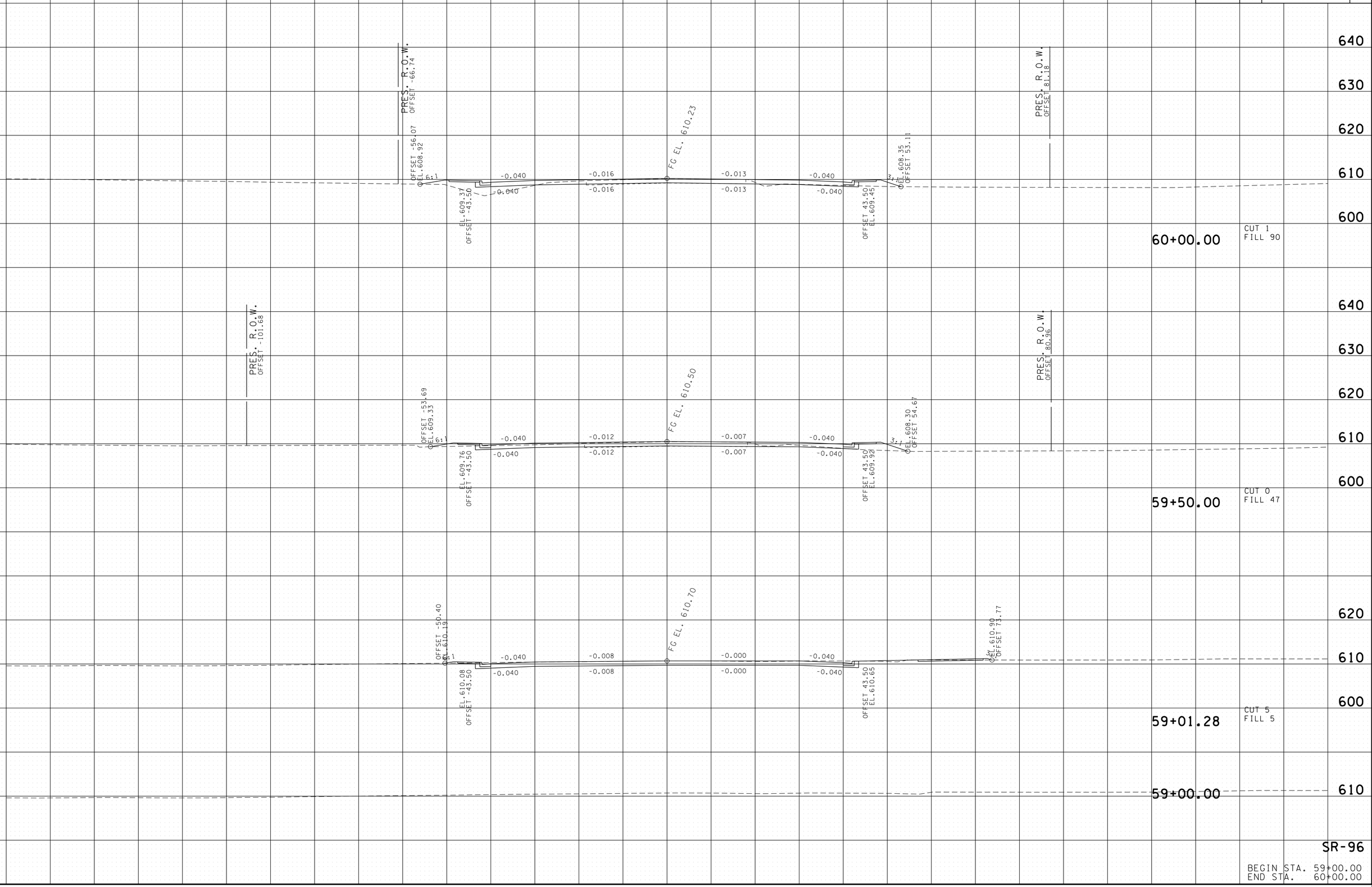
CORRECT Charles L. Foreall
ENGINEER OF STRUCTURES

APPROVED Lewis Evans
DIRECTOR OF HIGHWAYS

M-142-127

5-0-2

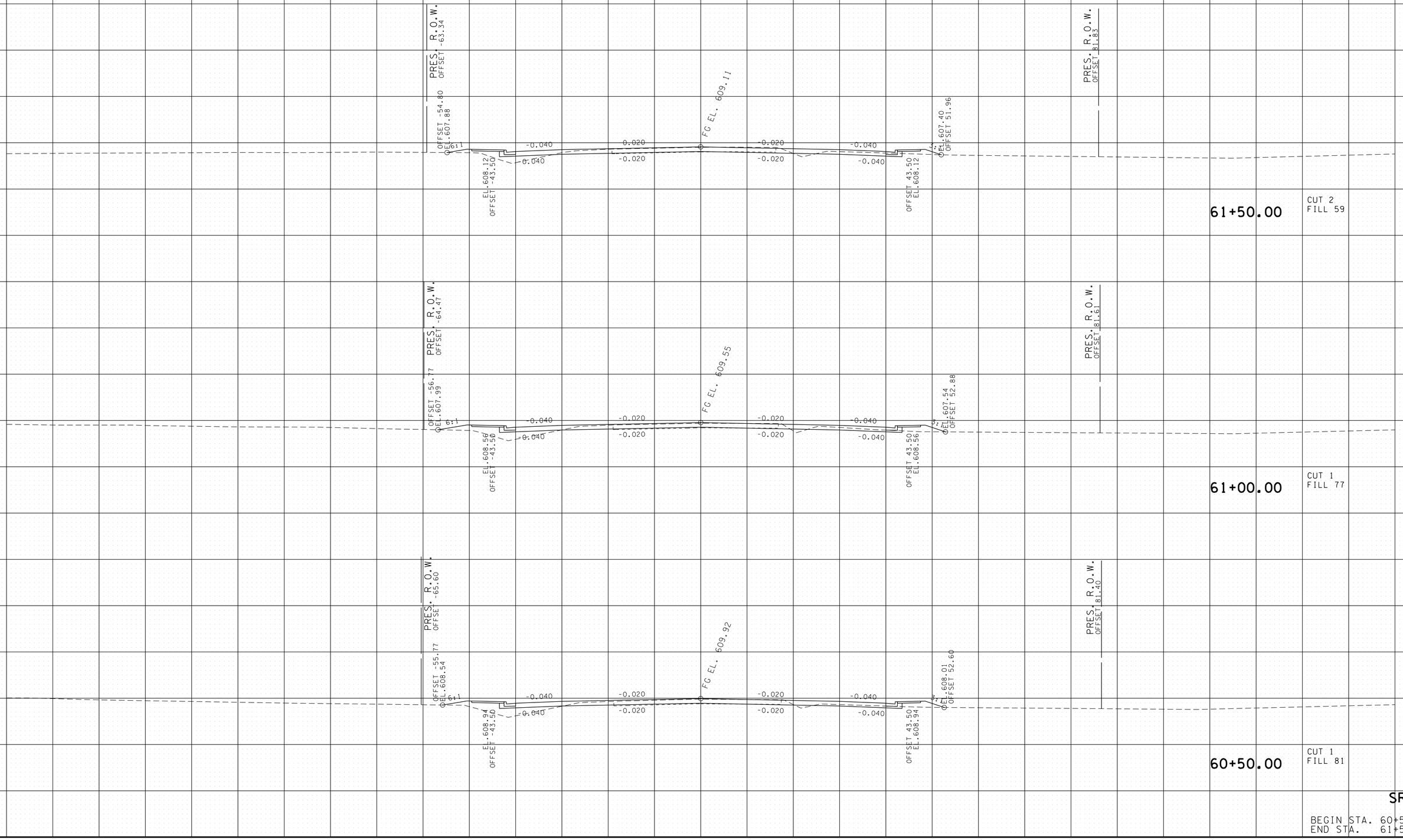
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	11
CONST.	2017	NH-96(48)	17



SR-96

BEGIN STA. 59+00.00
END STA. 60+00.00

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	12
CONST.	2017	NH-96(48)	18



SR-96

BEGIN STA. 60+50.00
END STA. 61+50.00

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	13
CONST.	2017	NH-96(48)	19

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	14
CONST.	2017	NH-96(48)	20

SR-96

BEGIN STA. 63+50.00
END STA. 64+50.00

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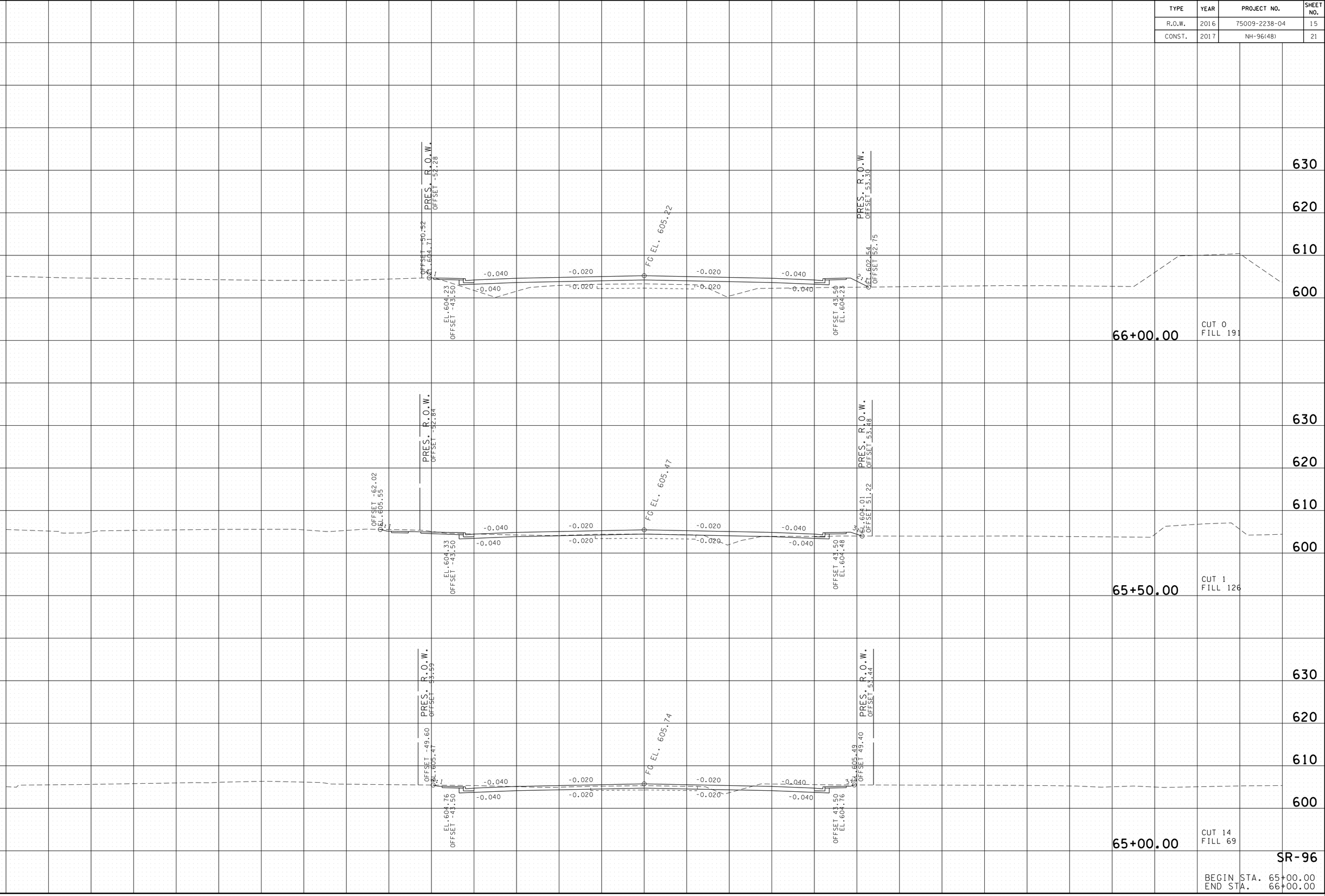
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	15
CONST.	2017	NH-96(48)	21



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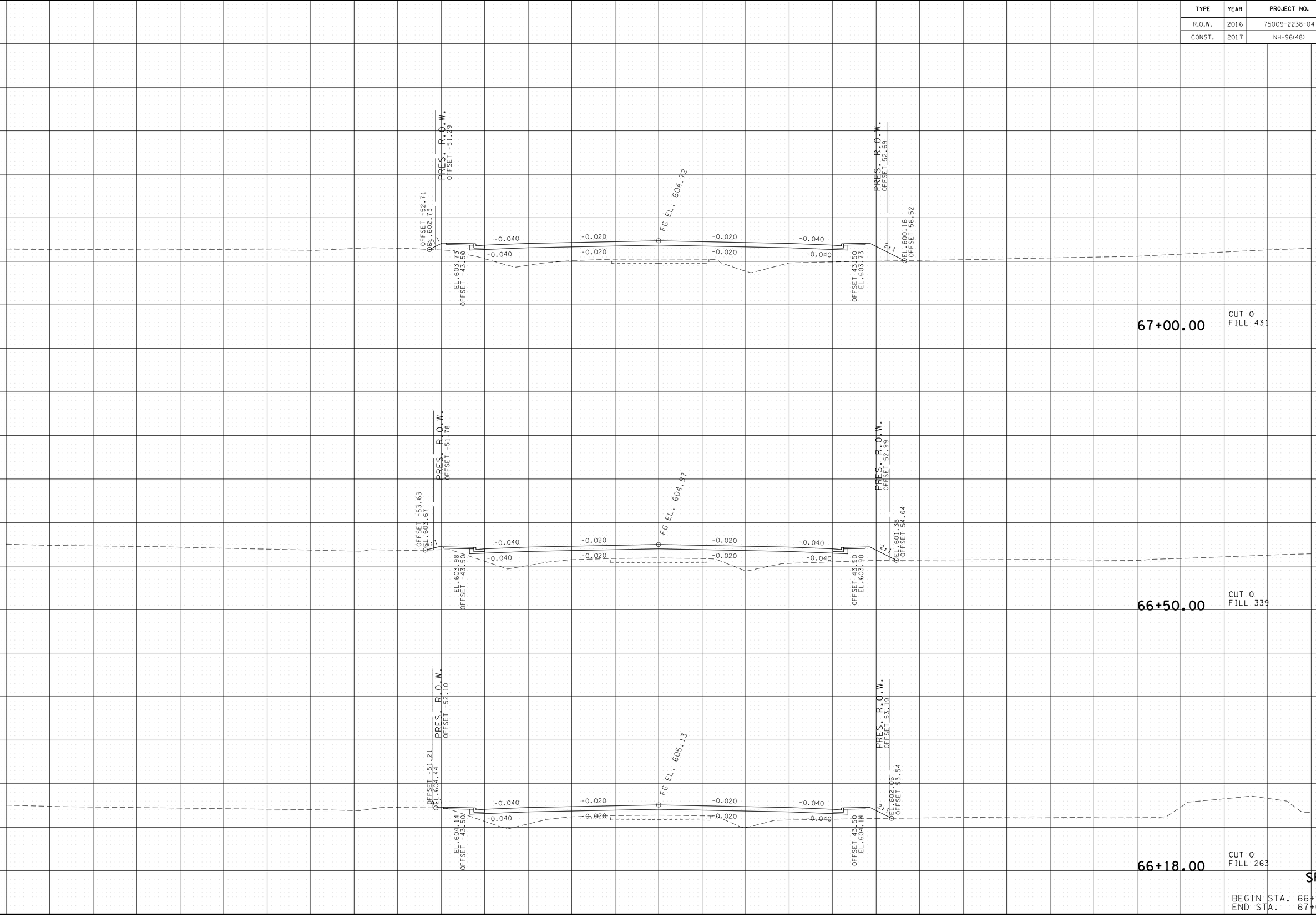
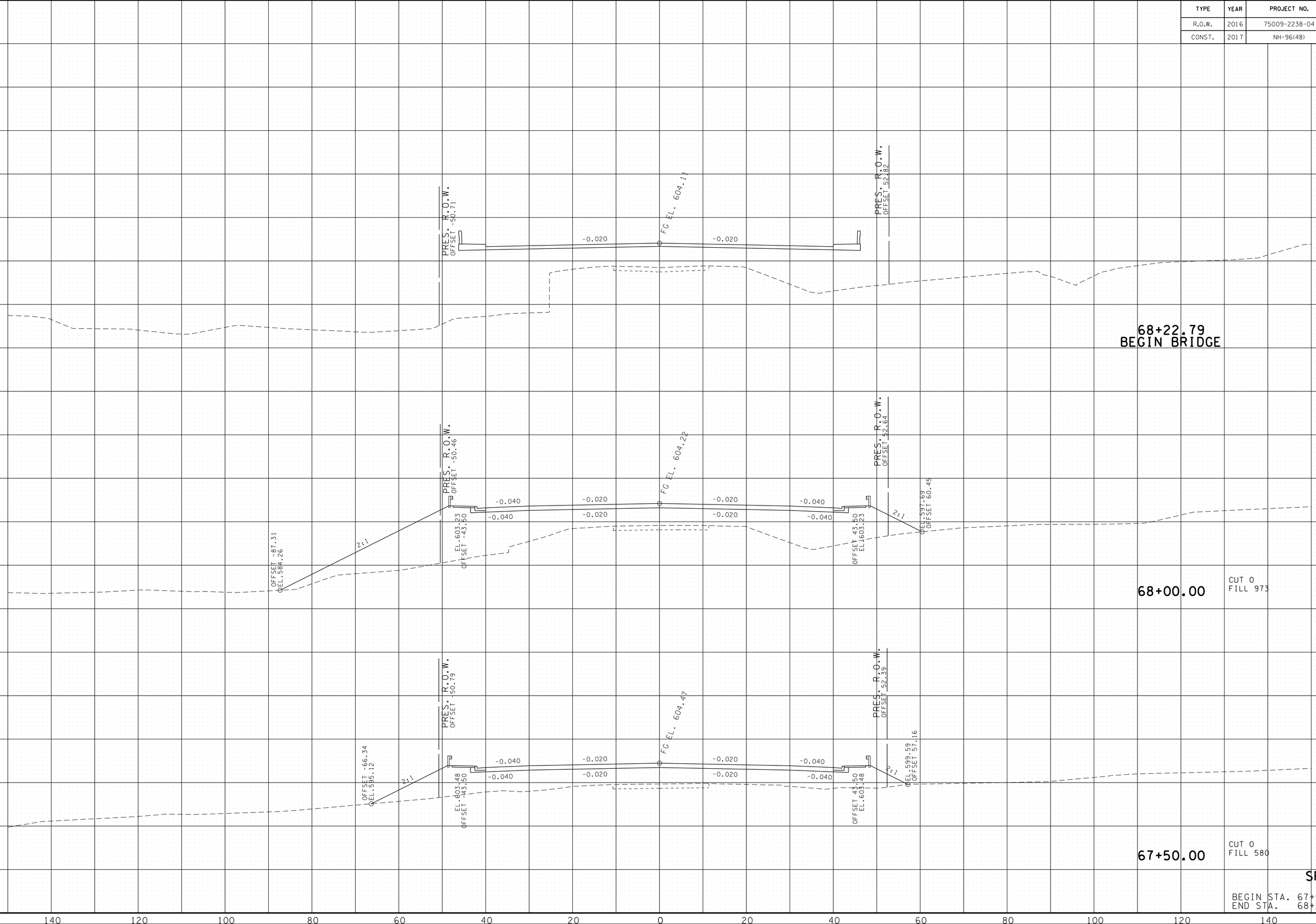
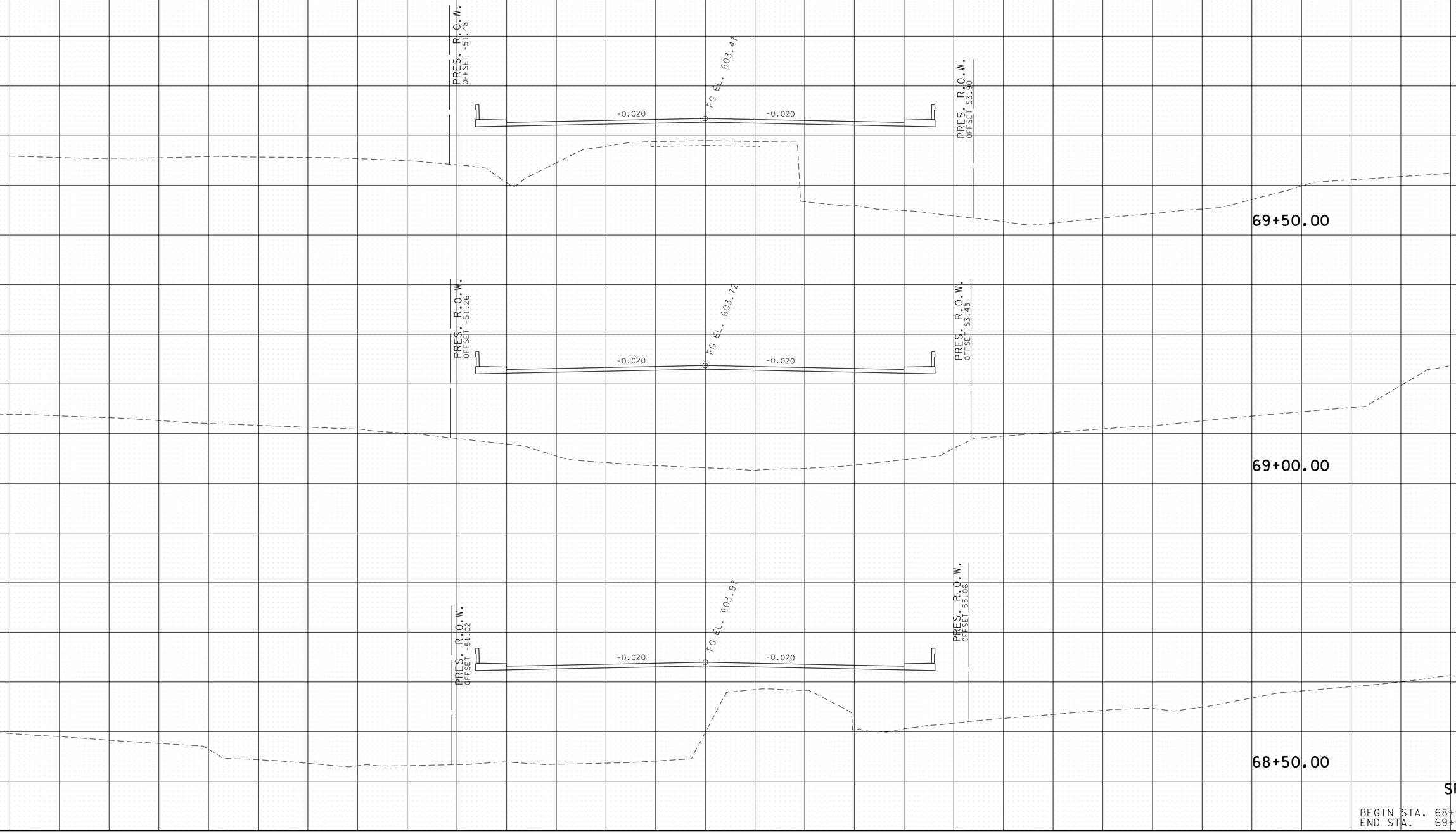
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	16
CONST.	2017	NH-96(48)	22



TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	17
CONST.	2017	NH-96(48)	23



TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	18
CONST.	2017	NH-96(48)	24



SR-96

BEGIN STA. 68+50.00
END STA. 69+50.00

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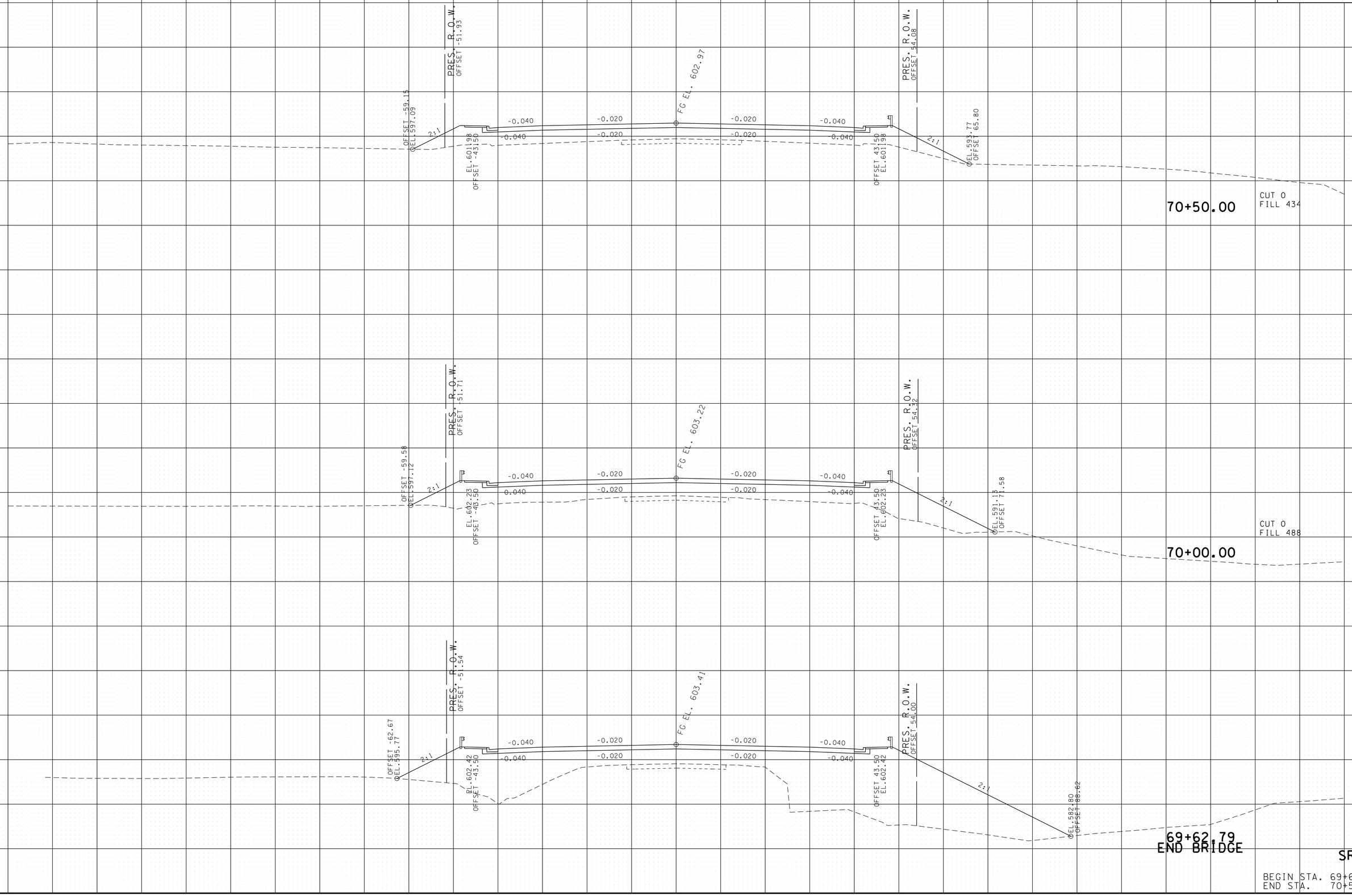
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	19
CONST.	2017	NH-96(48)	25



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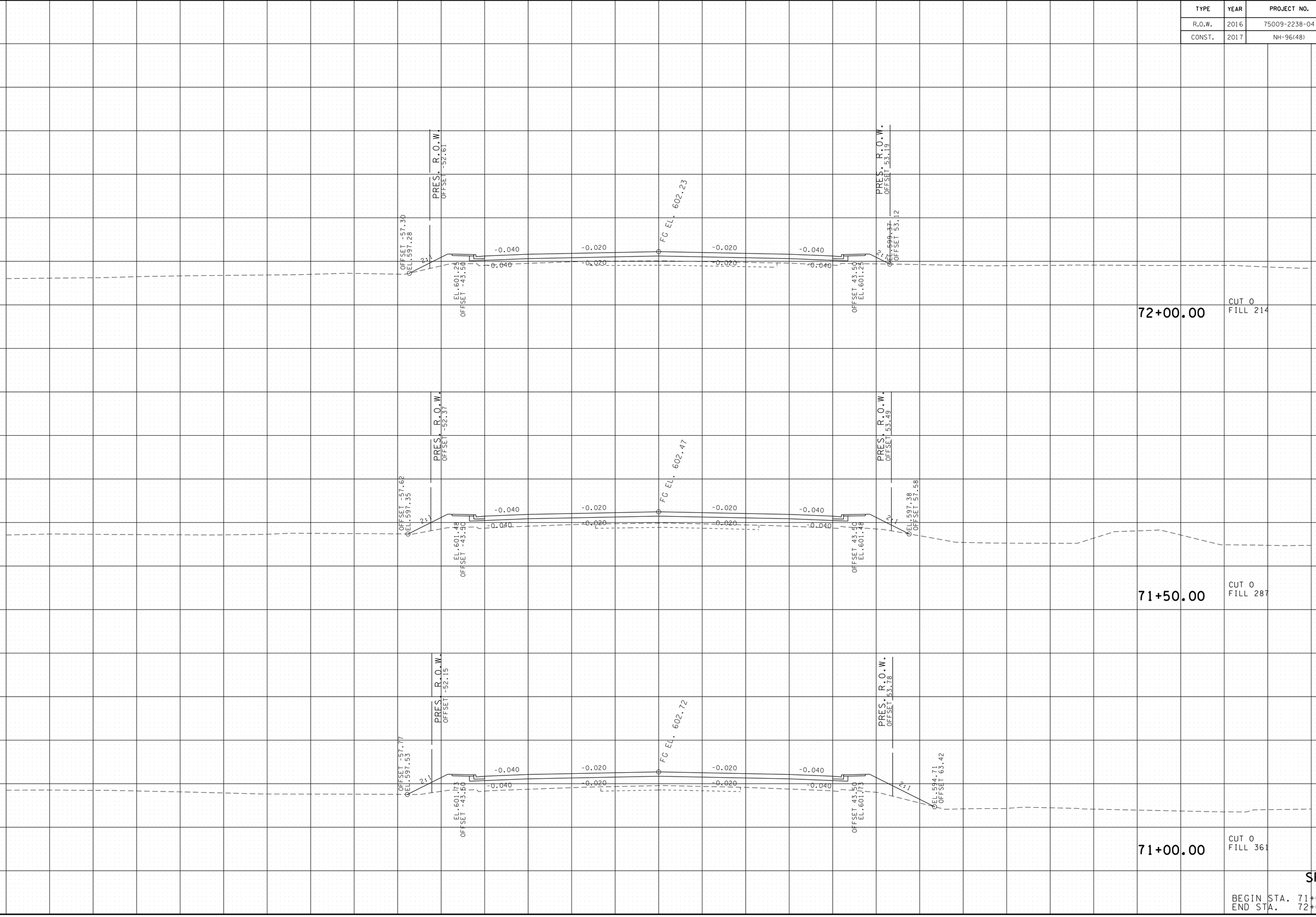
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	20
CONST.	2017	NH-96(48)	26



SR-96

BEGIN STA. 71+00.00
END STA. 72+00.00

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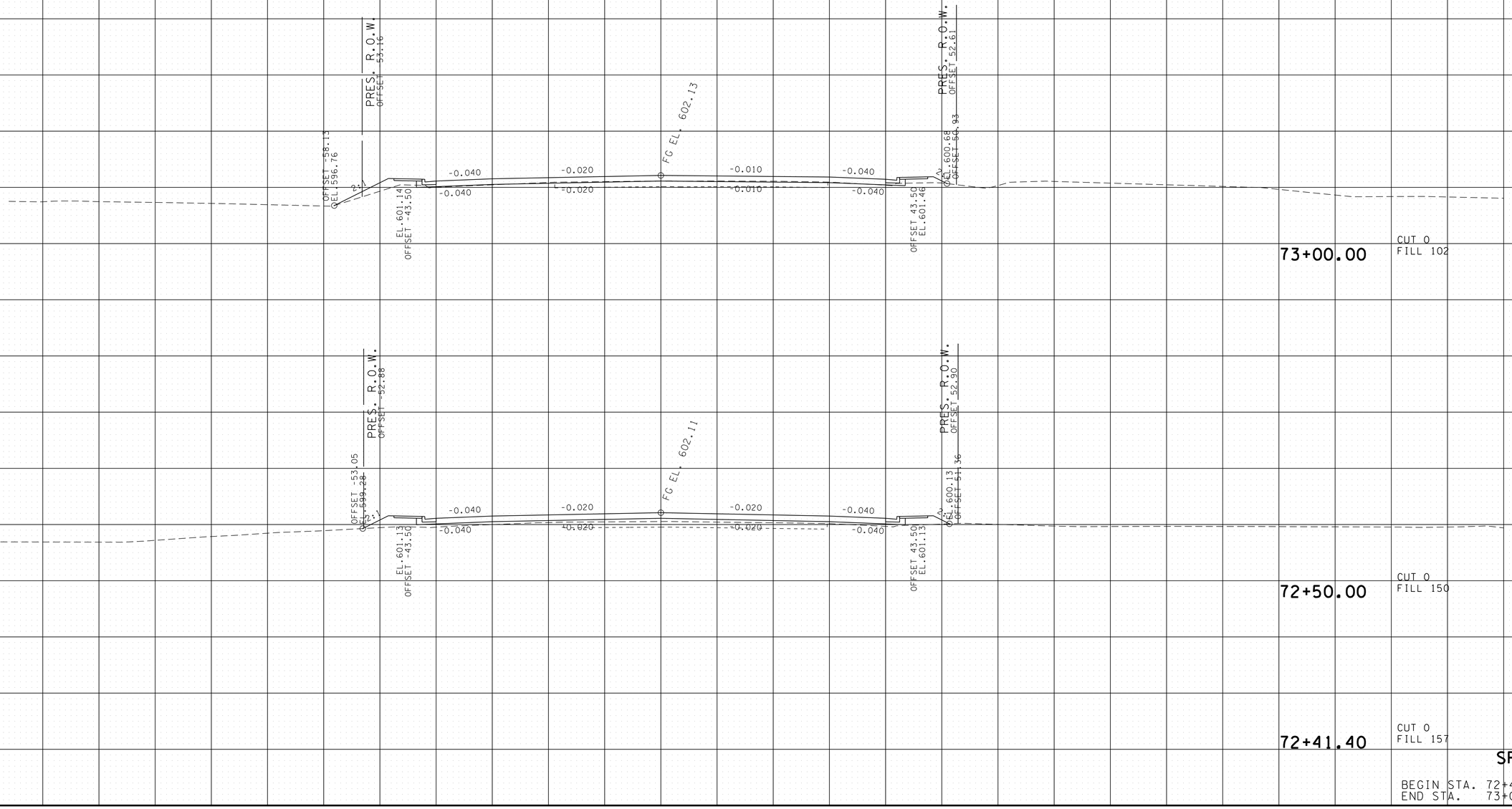
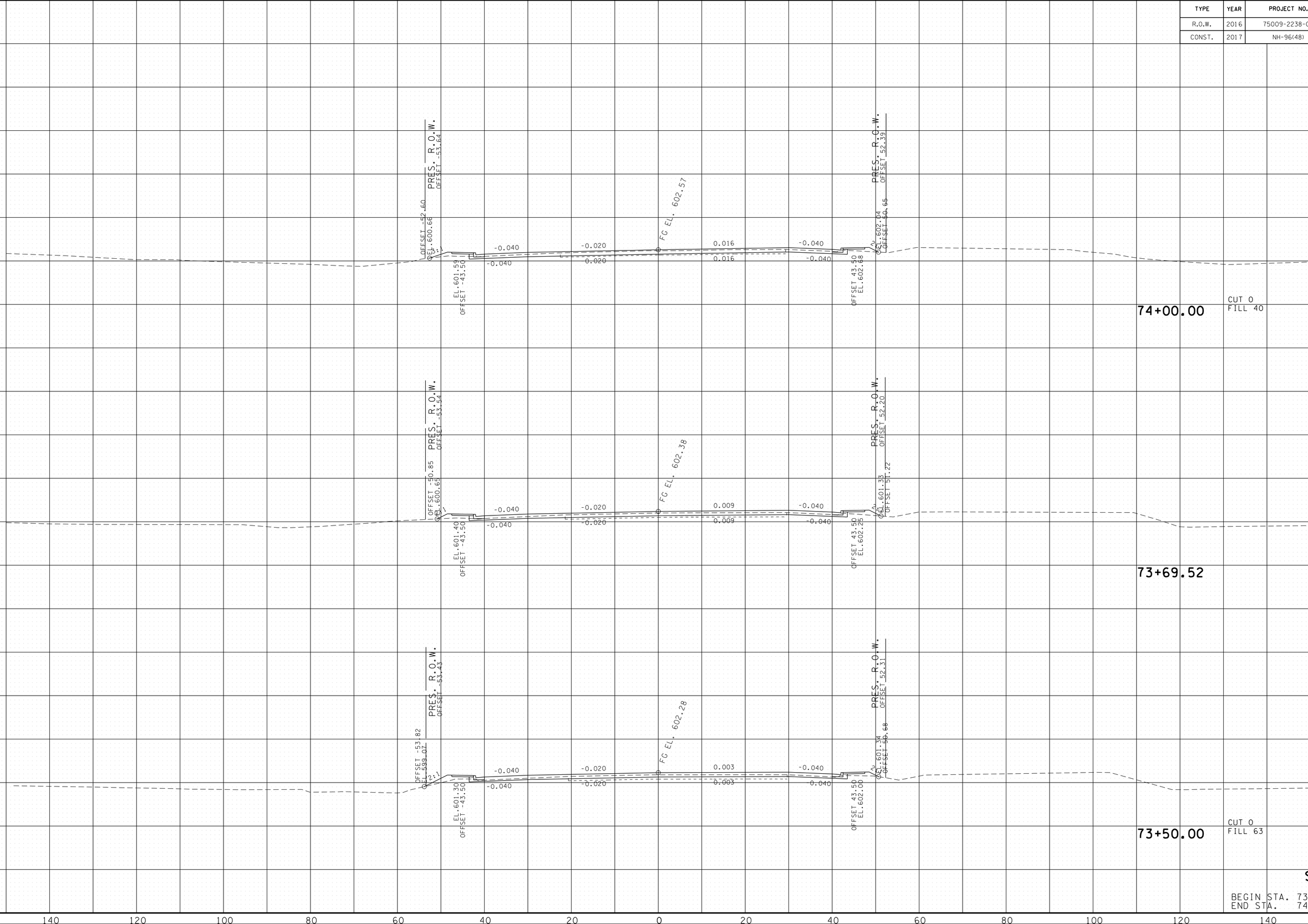
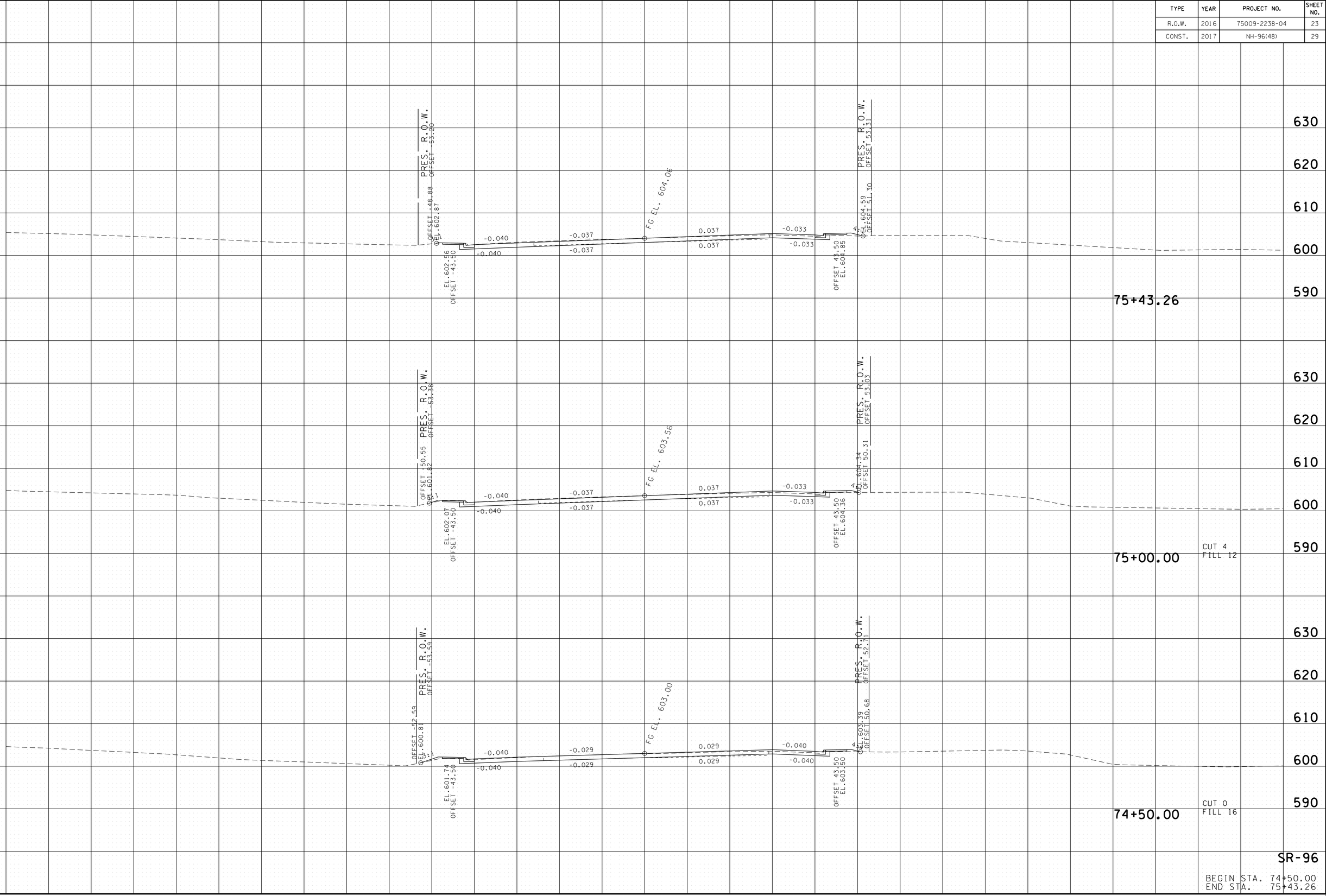
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	21
CONST.	2017	NH-96(48)	27



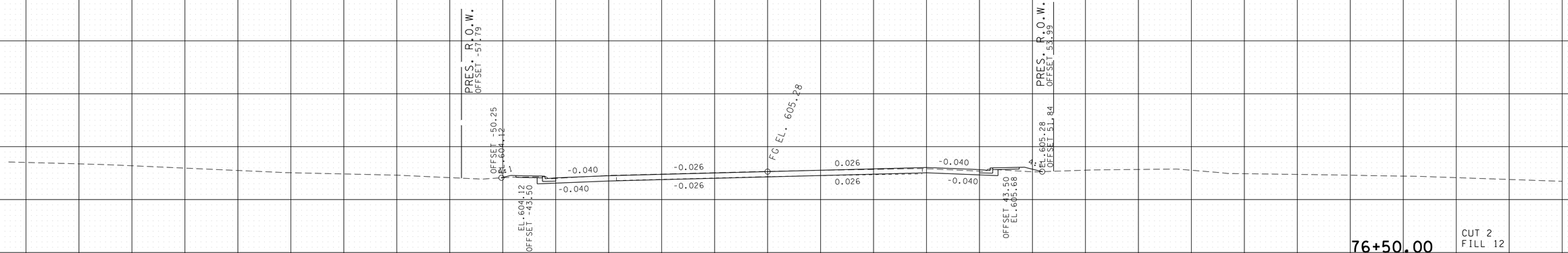
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	22
CONST.	2017	NH-96(48)	28

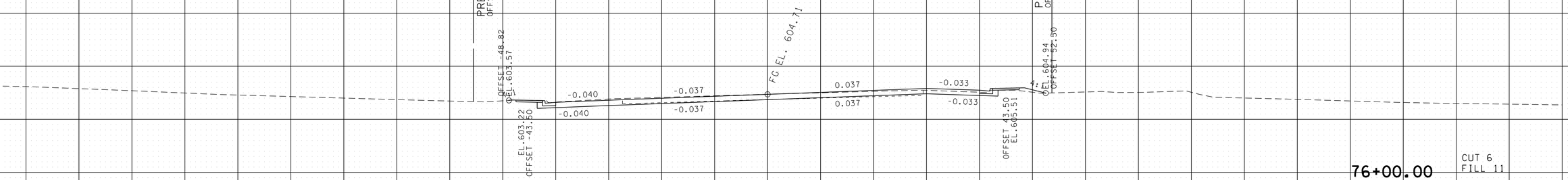


TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	23
CONST.	2017	NH-96(48)	29



TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	24
CONST.	2017	NH-96(48)	30





SR-96

BEGIN STA. 75+50.00
END STA. 76+50.00

140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	25
CONST.	2017	NH-96(48)	31

630
620
610
600

PRES. R.O.W.
OFFSET -59.17
EL. 605.11

-0.040
-0.020
0.000
-0.040
-0.040
-0.020
0.000
-0.040

FG EL. 606.51

EL. 604.91
OFFSET -53.23

OFFSET 43.50
EL. 606.14

PRES. R.O.W.
OFFSET 54.37
EL. 605.85
OFFSET 51.41

77+50.00

CUT 0
FILL 15

630
620
610
600

PRES. R.O.W.
OFFSET -58.47

OFFSET -50.00
EL. 605.16

-0.040
-0.020
0.009
-0.040
-0.040
-0.020
0.009
-0.040

FG EL. 606.08

EL. 605.10
OFFSET -43.50

OFFSET 43.50
EL. 605.96

PRES. R.O.W.
OFFSET 54.41
EL. 605.63
OFFSET 51.59

77+17.00

630
620
610
600

PRES. R.O.W.
OFFSET -58.54

OFFSET -50.35
EL. 604.85

-0.040
-0.020
0.013
-0.040
-0.040
-0.020
0.013
-0.040

FG EL. 605.86

EL. 604.88
OFFSET -43.50

OFFSET 43.50
EL. 605.87

PRES. R.O.W.
OFFSET 54.31
EL. 605.55
OFFSET 51.53

77+00.00

CUT 2
FILL 11

SR-96

BEGIN STA. 77+00.00
END STA. 77+50.00

140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	26
CONST.	2017	NH-96(48)	32

78+50.00

78+30.00

78+00.00

CUT 3
FILL 8

SR-96

BEGIN STA. 78+00.00
END STA. 78+50.00

PRES. R.O.W.
OFFSET 57.93

PRES. R.O.W.
OFFSET 54.25

PRES. R.O.W.
OFFSET 54.29

OFFSET -62.26
EL. 606.37

EL. 605.82
OFFSET -56.80

FG EL. 607.07

EL. 605.80
OFFSET 52.29

OFFSET 43.50
EL. 606.32

-0.040
-0.040
-0.020
-0.020
-0.012
-0.012
-0.040
-0.040

630
620
610
600

140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

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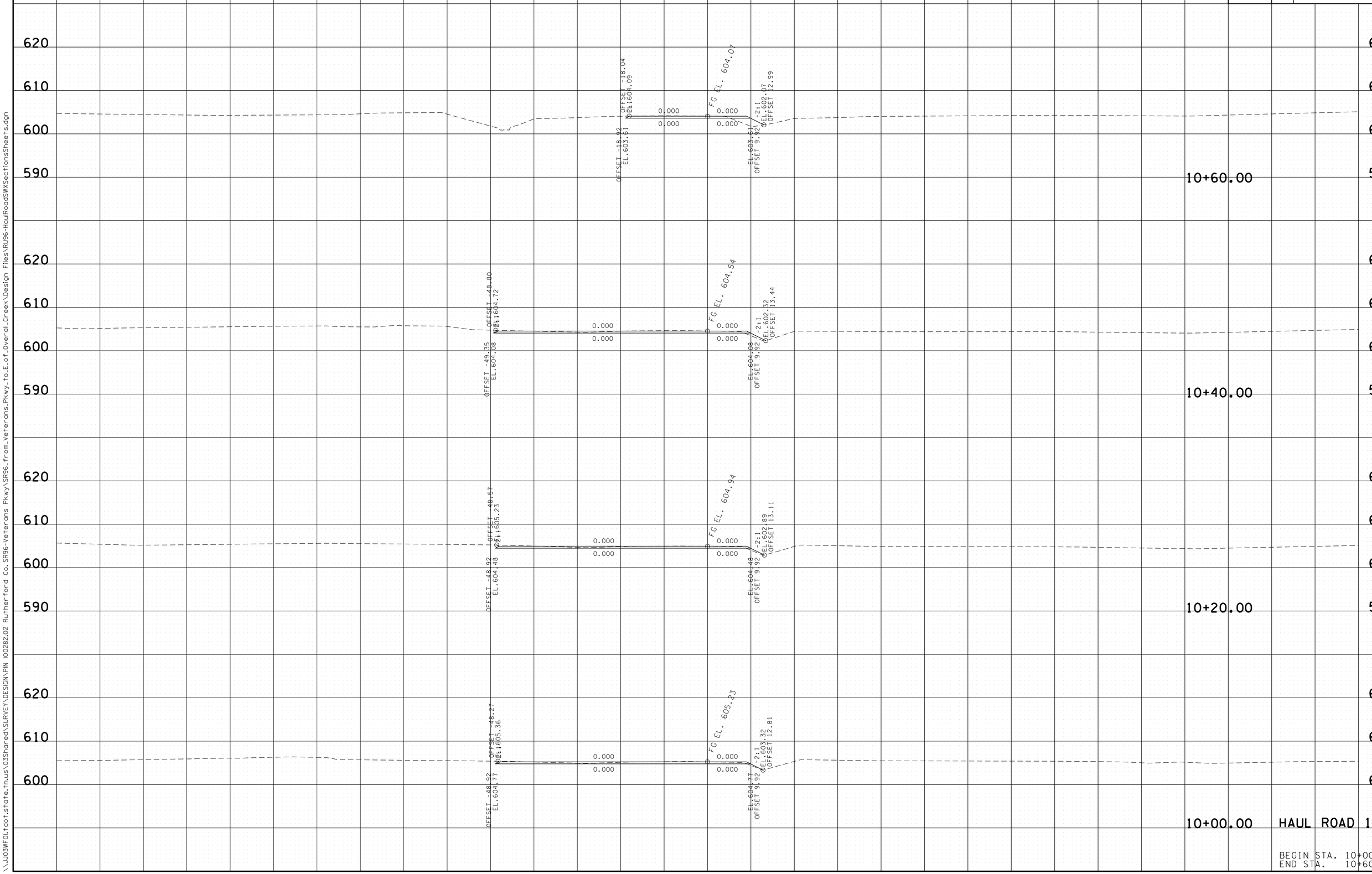
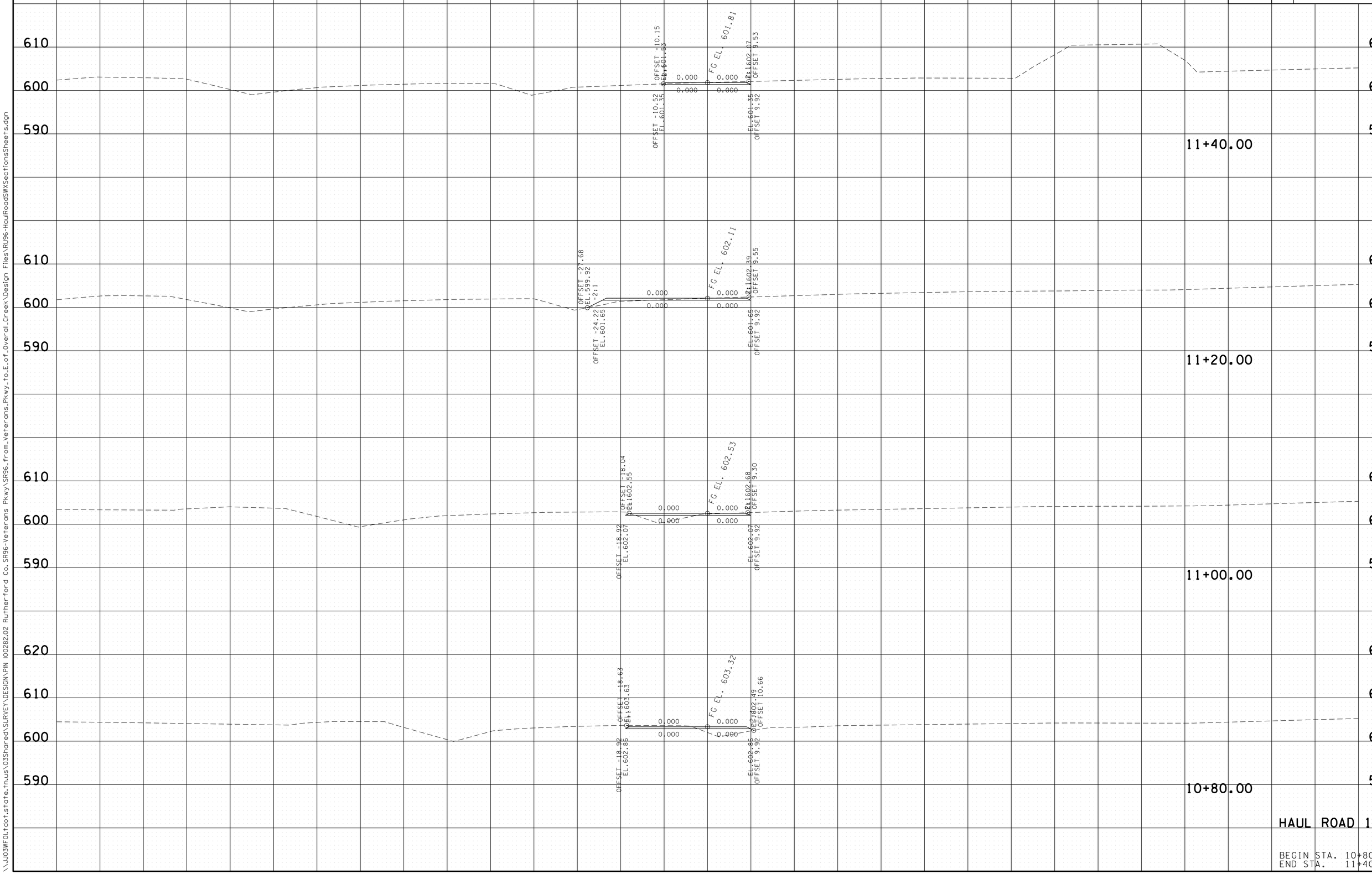
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-96(48)	33

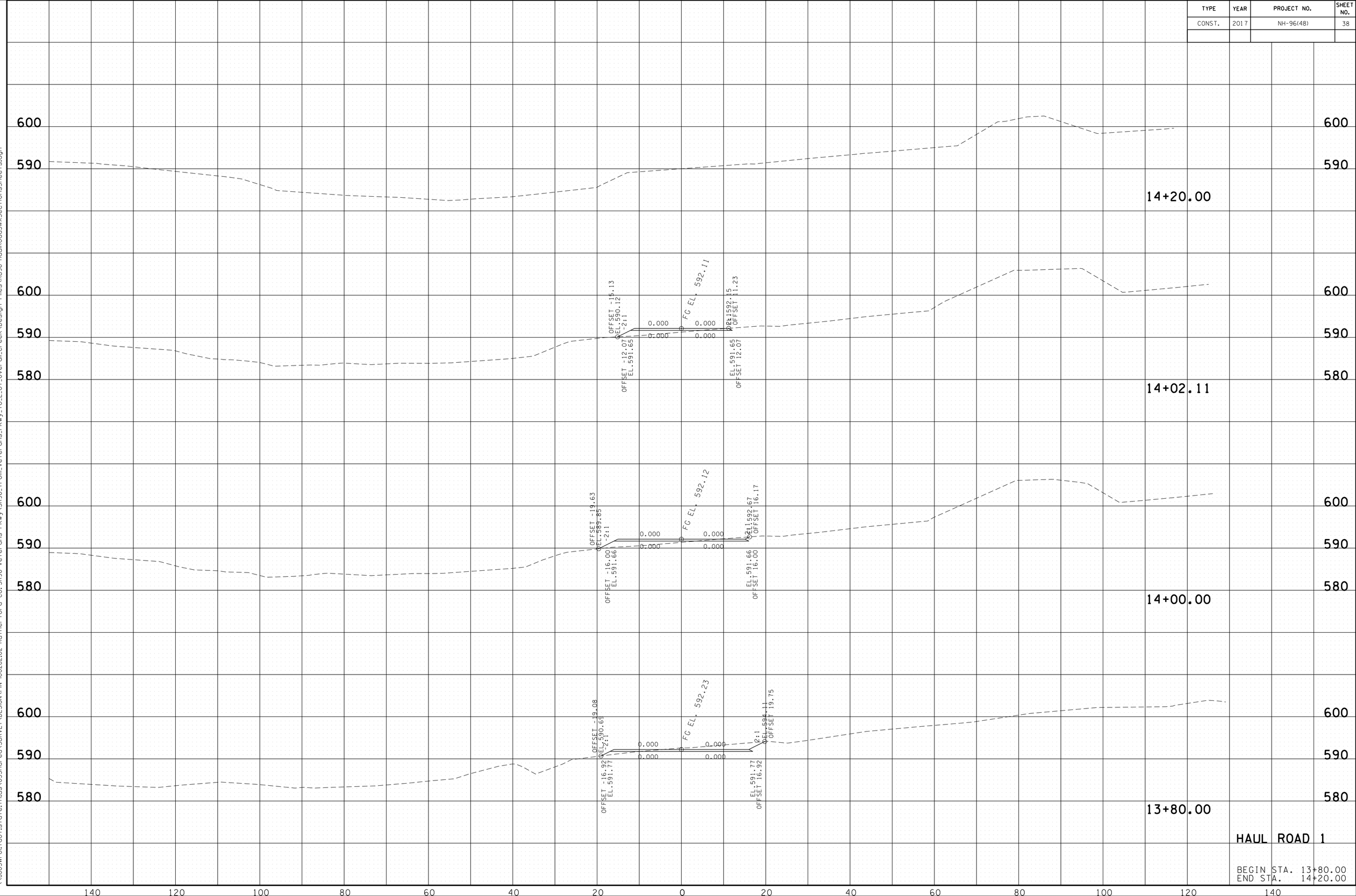


BEGIN STA. 10+00.00
END STA. 10+60.00

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-96(48)	34



TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-96(48)	38



HAUL ROAD 1

BEGIN STA. 13+80.00
END STA. 14+20.00

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-96(48)	35

610
600
590

12+20.00

OFFSET -9.85
EL. 600.16
OFFSET -9.92
EL. 600.15
0.000
0.000
0.000
0.000
FG EL. 600.59
EL. 600.51
OFFSET 9.16
EL. 600.43
OFFSET 9.92

610
600
590

12+00.00

OFFSET -9.41
EL. 600.63
OFFSET -9.92
EL. 600.44
0.000
0.000
0.000
0.000
FG EL. 600.90
EL. 600.85
OFFSET 9.09
EL. 600.77
OFFSET 9.92

610
600
590

11+80.00

OFFSET -9.22
EL. 601.09
OFFSET -9.92
EL. 600.74
0.000
0.000
0.000
0.000
FG EL. 601.20
EL. 601.26
OFFSET 9.12
EL. 600.74
OFFSET 9.92

610
600
590

11+60.00

OFFSET -9.20
EL. 601.40
OFFSET -9.92
EL. 601.04
0.000
0.000
0.000
0.000
FG EL. 601.50
EL. 601.64
OFFSET 9.27
EL. 601.04
OFFSET 9.92

HAUL ROAD 1

BEGIN STA. 11+60.00
END STA. 12+20.00

140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

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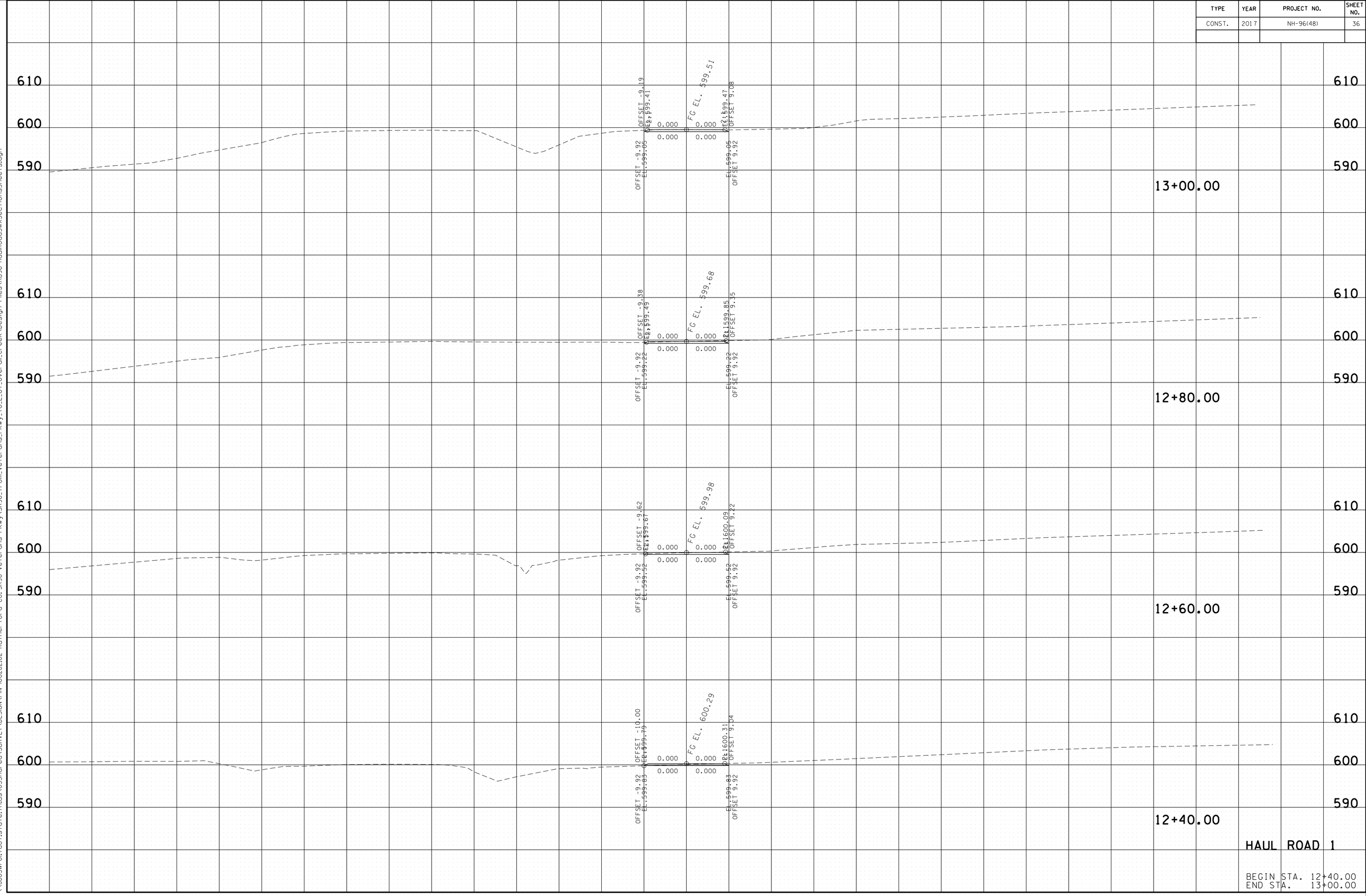
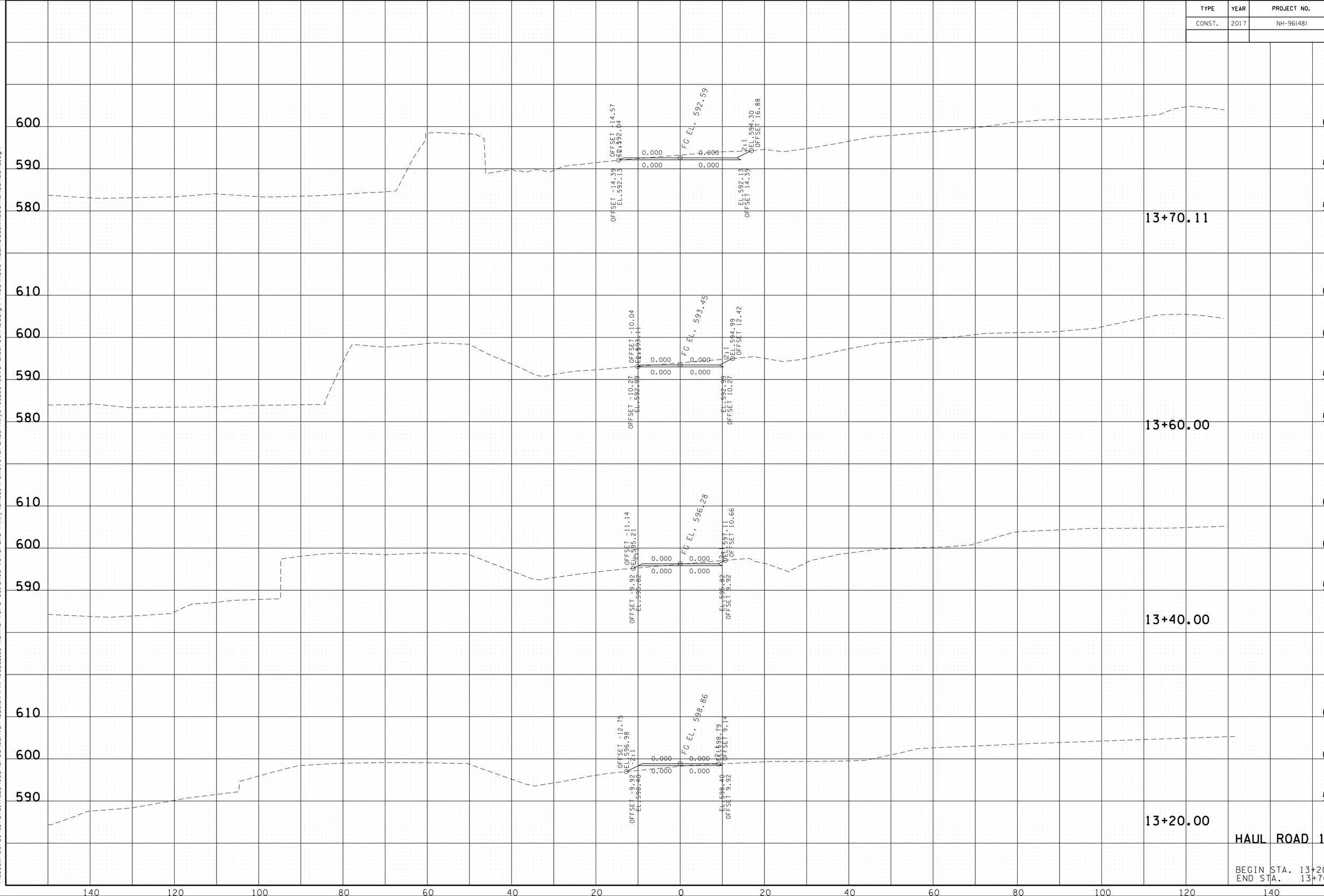
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-96(48)	36



HAUL ROAD 1

BEGIN STA. 12+40.00
END STA. 13+00.00

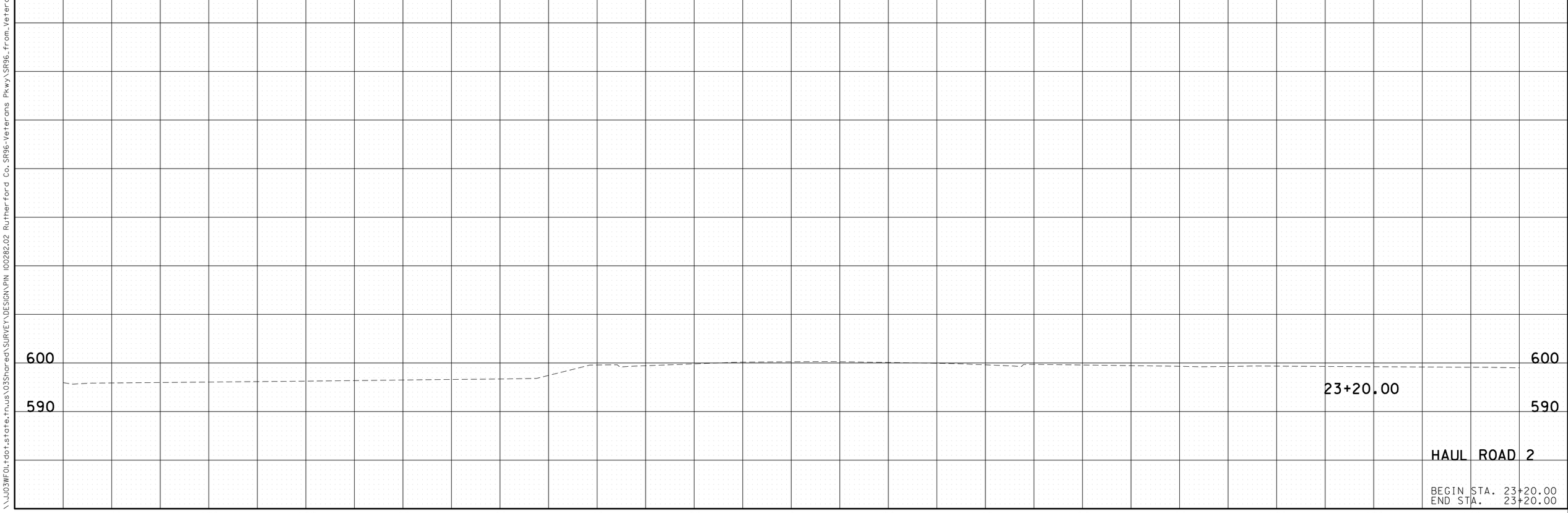
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-96(48)	37



HAUL ROAD 1

BEGIN STA. 13+20.00
END STA. 13+70.11

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-96(48)	44



HAUL ROAD 2

BEGIN STA. 23+20.00
END STA. 23+20.00

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-96(48)	39

600
590
580

OFFSET -18.61
EL. 594.30
2:1
0.000
0.000
0.000
0.000
FG EL. 593.00
2:1
EL. 593.15
OFFSET 16.31
OFFSET -16.92
EL. 592.54
EL. 592.54
OFFSET 16.92
20+00.00

600
590
580

OFFSET -16.68
EL. 593.25
2:1
0.000
0.000
0.000
0.000
FG EL. 592.92
2:1
EL. 592.01
OFFSET 17.82
OFFSET -16.92
EL. 592.46
EL. 592.46
OFFSET 16.92
19+84.00

590

19+80.00

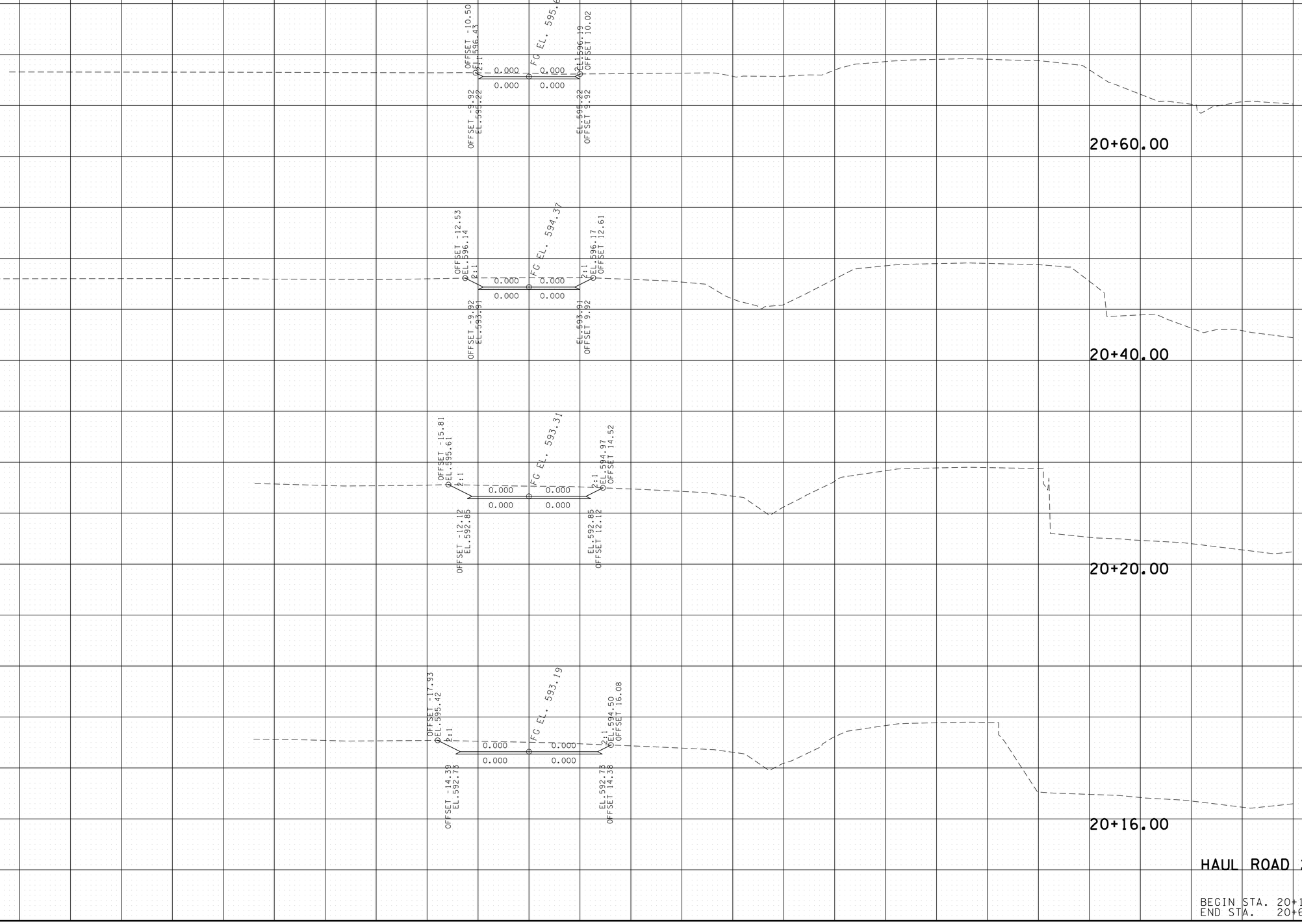
590

HAUL ROAD 2

BEGIN STA. 19+80.00
END STA. 20+00.00

140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

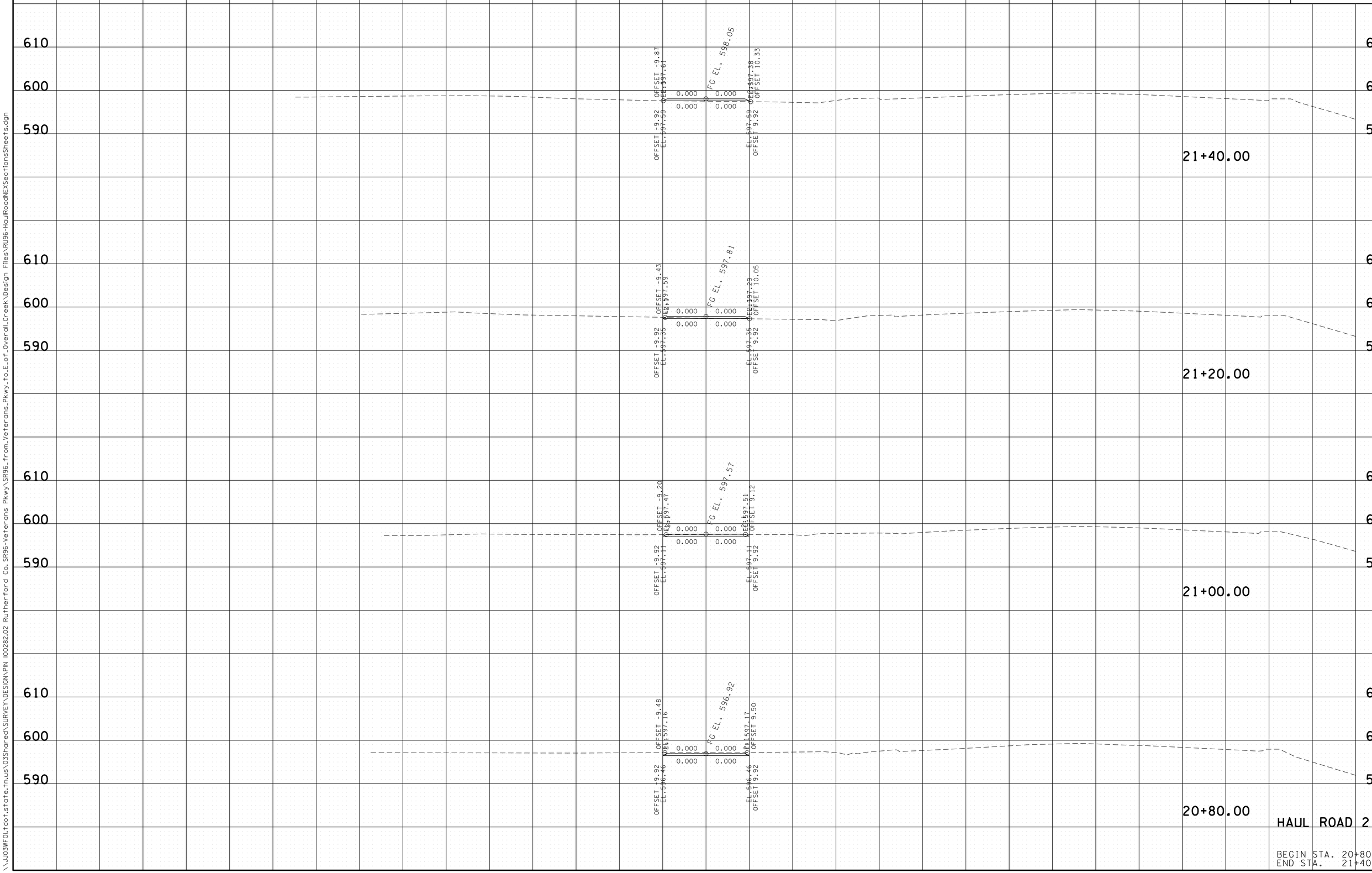
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-96(48)	40



HAUL ROAD 2

BEGIN STA. 20+16.00
END STA. 20+60.00

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-96(48)	41



HAUL ROAD 2

BEGIN STA. 20+80.00
END STA. 21+40.00

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-96(48)	42

610
600
590

OFFSET -9.90
EL. 598.70
OFFSET -9.92
EL. 598.70
0.000
0.000
FG EL. 599.16
0.000
0.000
EL. 599.34
OFFSET 18.37
EL. 598.70
OFFSET 18.92

22+20.00

610
600
590

OFFSET -9.95
EL. 598.31
OFFSET -9.92
EL. 598.33
0.000
0.000
FG EL. 598.79
0.000
0.000
EL. 598.90
OFFSET 24.34
EL. 598.33
OFFSET 25.03

22+00.00

610
600
590

OFFSET -10.96
EL. 597.54
OFFSET -9.82
EL. 598.06
0.000
0.000
FG EL. 598.52
0.000
0.000
EL. 598.37
OFFSET 12.09
EL. 598.06
OFFSET 12.72

21+80.00

610
600
590

OFFSET -10.21
EL. 597.68
OFFSET -9.82
EL. 597.82
0.000
0.000
FG EL. 598.28
0.000
0.000
EL. 597.51
OFFSET 10.75
EL. 597.82
OFFSET 10.13

21+60.00

HAUL ROAD 2

BEGIN STA. 21+60.00
END STA. 22+20.00

140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-96(48)	43

610
600
590

23+00.00

OFFSET -18.92
EL. 599.67

OFFSET -18.78
EL. 599.74

0.000
0.000

FG EL. 600.13

0.000
0.000

EL. 599.92
OFFSET 18.40

EL. 599.67
OFFSET 18.92

610
600
590

22+80.00

OFFSET -9.92
EL. 599.51

OFFSET -9.17
EL. 599.89

0.000
0.000

FG EL. 599.97

0.000
0.000

EL. 599.75
OFFSET 18.44

EL. 599.51
OFFSET 18.92

610
600
590

22+60.00

OFFSET -9.92
EL. 599.35

OFFSET -9.42
EL. 599.60

0.000
0.000

FG EL. 599.81

0.000
0.000

EL. 599.79
OFFSET 18.04

EL. 599.35
OFFSET 18.92

610
600
590

22+40.00

OFFSET -9.92
EL. 599.08

OFFSET -9.49
EL. 599.29

0.000
0.000

FG EL. 599.54

0.000
0.000

EL. 599.79
OFFSET 18.51

EL. 599.08
OFFSET 18.92

140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

HAUL ROAD 2

BEGIN STA. 22+40.00
END STA. 23+00.00

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TENNESSEE D.O.T. | DESIGN DIVISION | FILE NO.

TENN.	YEAR	SHEET NO.
	2017	U1-1
STATE PROJ. NO.	75009-3238-04	
FED. AID PROJ. NO.	NH-SIP-96(48)	

REV 08-07-2017: ADDED ADDITIONAL ENVIRONMENTAL NOTES TO "NOTES TO CONTRACTORS"

Index Of Sheets

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RUTHERFORD COUNTY

FROM VETERANS PARKWAY TO EAST OVERALL CREEK

STATE HIGHWAY SR - 96

NOTE TO CONTRACTORS

DIRECTIONAL BORING MUST BE PLACED A MINIMUM OF 50 FEET AWAY FROM STREAM BANKS.

ALL UNDERGROUND UTILITIES (ATMOS AND LEVEL 3) MUST BE DIRECTIONAL BORED UNDER ALL STREAMS IDENTIFIED IN THE PLANS.

STANDARD LEGEND

EXISTING UTILITES

POWER		POWER POLE	
TELEPHONE		TELEPHONE POLE	
WATER		POWER/TELEPHONE POLE	
CABLE TV		MANHOLE	
SANITARY SEWER		WATER METER	W.M.
UNDERGROUND TELEPHONE		WATER VALVE	W.V.
GAS		LIGHT POLE	
FORCE MAIN SEWER			
UNDERGROUND POWER			
UNDERGROUND FIBER OPTIC			

PROPOSED UTILITIES & MODIFICATIONS

POWER		POWER POLE	P
UNDERGROUND POWER			
TELEPHONE		TELEPHONE POLE	T
WATER		WATER METER	W.M.
CABLE TV			
UNDERGROUND TELEPHONE			
GAS			
FORCE MAIN SEWER			
UNDERGROUND FIBER OPTIC			
EX. WATER LINE (RETIRED IN PLACE)	6" W RIP		
EX.GAS LINE (RETIRED IN PLACE)	8" G RIP		
EX.SEWER LINE (RETIRED IN PLACE)	8" FMS RIP		
EX.TELEPHONE LINE (RETIRED IN PLACE)	T(UG) RIP		

(R) REMOVE (A) ABANDON

SPECIAL NOTES

SOME UTILITIES CAN BE LOCATED BY CALLING THE TENNESSEE ONE CALL SYSTEM, INC. AT 1-800-351-1111

UTILITY OWNERS AND CONTACTS:

TELEPHONE: AT&T
NO COST
116 SOUTH CANON AVE.
MURFREESBORO, TN. 37129
KENNETH KORNEGAY
KK4096@ATT.COM
O: 615-848-2082
C:615-631-7221

POWER: MURFREESBORO ELECTRIC DEPT.
NO CONFLICT
205 N. WALNUT ST.
MURFREESBORO, TN 37129
CHRIS BARNS
CBARNS@MEDTN.COM
O: 615-494-0428

SEWER: MURFREESBORO WATER & SEWER
NO CONFLICT
220 N W BROAD ST.
MURFREESBORO, TN 37130
VALERIE SMITH
VSMITH@MURFREESBOROTN.GOV
O: 615-848-3200

(MIS) MTEMC
555 NEW SALEM ROAD
MURFREESBORO, TN. 37129
MATHUE BEAN
MBEAN@MTEMC.COM
O: 615-494-1572

WATER: CONSOLIDATED UTILITY DIST.
NO CONFLICT
709 NEW SALEM HWY
MURFREESBORO, TN 37129
WILLIAM DUNNILL
WDUNNILL@CUDRC.COM
O: 615-278-6027
F: 615-893-4913

CABLE: COMCAST / XFINITY
NO COST DUE TO NO RESPONSE
660 MAINSTREAM DRIVE
NASHVILLE, TN. 37228
LARRY WINBURN
LARRY_WINBURN@CABLE.COMCAST.COM
O: 615-244-7462 EXT. 1115251
C: 615-290-2372

GAS: (MIS)
ATMOS ENERGY
810 CRESCENT CENTRE DR. SUITE 600
FRANKLIN, TN. 37067
ROBERT ARNOLD
ROBERT.ARNOLD@ATMOSENERGY.COM
O: 615-771-8311
C: 615-310-3020

FIBER OPTIC: (MIS)
LEVEL 3 COMMUNICATIONS
1025 ELDORADO BLVD., 43C-420
BROOMFIELD, CO. 80021
PATRICK PROVOST
RELO@LEVEL3.COM
O: 720-888-0336

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	75009-3238-14	U1-2

BEGIN PROJ. 75009-3238-04 CONST.
SR96 STA. 58+99.91
N 549971.8741
E 1822456.6342

STATION 1+04
CONNECT TO EXISTING
6" MDPE

STATION 1+31.71
45° ELBOW

EXISTING 6" GAS LINE
TO BE RETIRED

FIELD VERIFY LOCATION
OF EXISTING FIELD LINES
BEFORE INSTALLATION;
REPORT ANY CONFLICTS
TO ENGINEER PRIOR TO
INSTALLATION

PROPOSED 6" MDPE
GAS LINE

EXISTING VALVE FOR ISOLATION;
COORDINATE WITH ATMOS
ANY SHUTDOWNS

LIMITS OF CONSTRUCTION
STA. 19+83.87

EXTEND RIP-RAP (EC-STR-27) OVER
DISTURBED AREA OF BANK

SILT FENCE WITH BACKING
AT TOP OF BANK

STA. 9+00 TO STA. 10+30
OPEN CUT STREAM CROSSING;
MIN. DEPTH OF 5' FROM TOB TO TOB
(SEE DETAIL ON SHEET U3-07)

EXTEND RIP-RAP (EC-STR-27)
OVER DISTURBED AREA OF BANK

PROPOSED 6" MDPE
GAS LINE

STA. 11+40.37
INSTALL 6" TO 4"
REDUCER

STATION 11+78.01
48"BEND

PROPOSED
4" MDPE
GAS LINE

STATION
12+43.17
45"BEND

STATION 7+50.66
INSTALL 6" PE ISOLATION VALVE

STATION 7+40.53
CONNECT TO EXISTING
2" HDPE SERVICE WITH
6"x2" TEE, 2" POLYVALVE,
COUPLING AS REQUIRED AND
RECONNECT TRACER WIRE

LEVEL 3 WILL BURY PROPOSED
(2) 1.5" HDPE & (4) 1.25" HDPE
E/W (1) 96FOC 1' INSIDE BACK
OF R/W @ 42" MIN DEPTH FROM
FINAL GRADE.

LEVEL 3 WILL TIE IN
TO EXISTING FIBER AT
STATION 57+00

BORE 48" UNDER WATER
FROM APPROXIMATELY
STA. 68+00 TO 70+00

(10) EXISTING VALVE FOR ISOLATION; COORDINATE WITH ATMOS ANY SHUTDOWNS — BAMA INVESTMENTS

(12) POLLYANNA JONES

(13) KROGER LIMITED PARTNERSHIP I

(16) VIRGINIA FRANCES HOBBS CLARK, DOYLE DWIGHT HOBBS & ROGER DWAIN HOBBS

(15) SWANSON IRREVOCABLE FAMILY TRUST

(14) SWANSON DEVELOPMENTS, LP

(8)

LIMITS OF CONSTRUCTION
STA. 14+03.56

NOTES:

1. COORDINATE SERVICE INTERUPTIONS WITH ATMOS ENERGY AND CUSTOMER. NO SHUTDOWN SHOULD EXCEED 4 HOURS.

2. MATERIAL: 6" IPS, PE 2708, MEDIUM DENSITY POLYETHYLENE (MDPE) SDR11

3. MATERIAL: 4" IPS, PE 2708, MEDIUM DENSITY POLYETHYLENE (MDPE) SDR11

SEALED BY

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

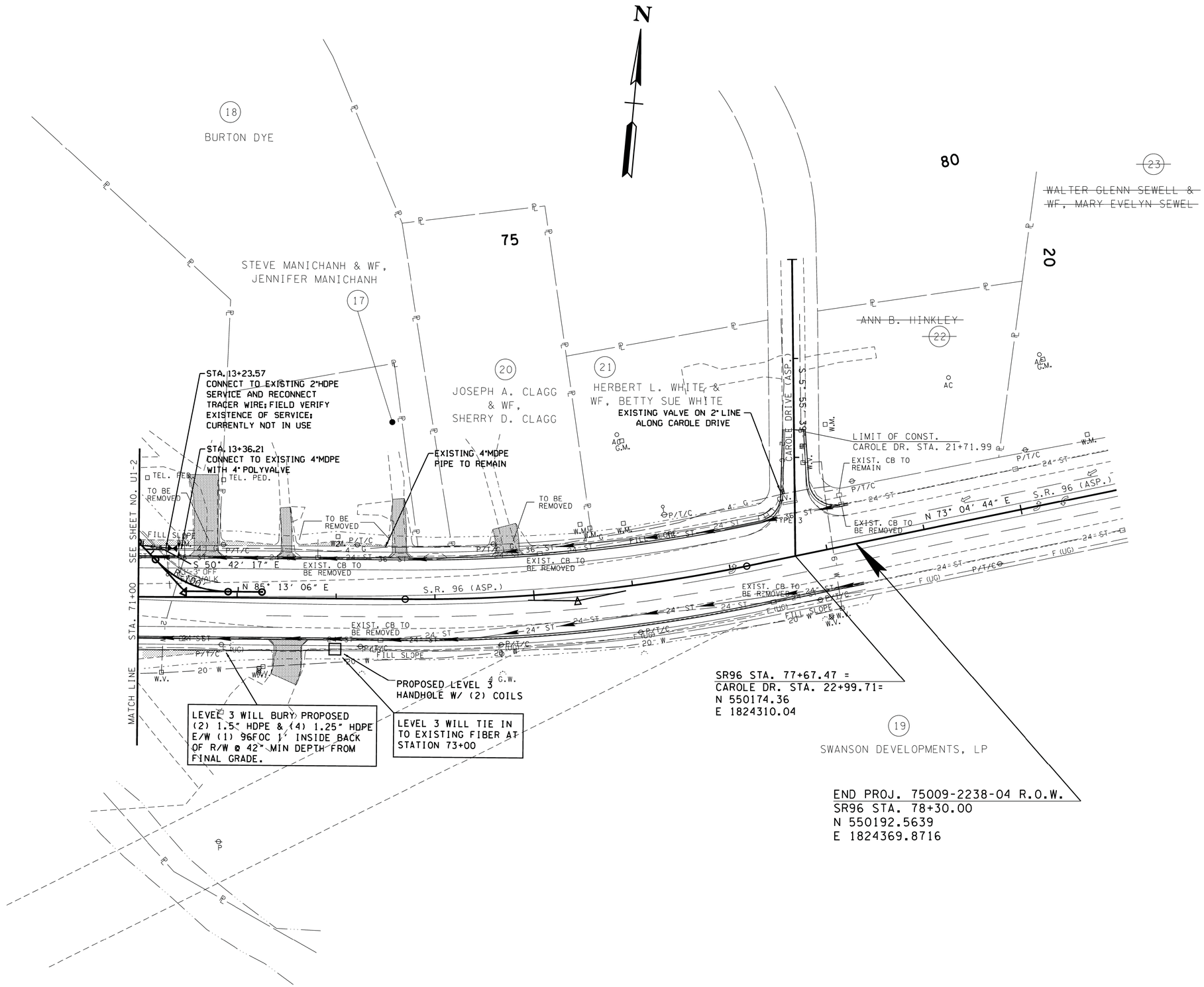
UTILITY SHEET

STA. 58+99.91 TO STA. 71+00.00

SCALE: 1"= 50'

SEE SHEET NO. U1-3

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	75009-3238-14	U1-3



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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

UTILITY SHEET

STA. 71+00.00 TO STA. 78+30.00

SCALE: 1"= 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
	2017	75009-3238-04	U2-1

UTILITIES INDEX

SHEET NAME	SHEET #
ESTIMATED UTILITY QUANTITIES & TITLE PAGE	U2-1
SPECIFICATIONS	U2-2
CONSTRUCTION DRAWINGS	U2-3 THRU U2-4

TDOT #75009-3238-04 SR 96 ESTIMATED UTILITY QUANTITIES

203-01.51 TRENCHING	L.F.	96'
714-04.03 CONDUIT (4) 1.25" HDPE	L.F.	96'
714-04.04 CONDUIT (2) 1.5" HDPE	L.F.	96'
714-04.05 - CONDUIT (DIRECTIONAL BORE (4) 1.25" HDPE)	L.F.	1605'
714-04.06 - CONDUIT (DIRECTIONAL BORE (2) 1.5" HDPE)	L.F.	1605'
798-06.11 - FIBER OPTIC CABLE (96ct)	L.F.	2101'
714-06.08 - CABLE (REPOSITION EXISTING CABLE)	L.F.	200'
798-06.15 - FIBER OPTIC CABLE (REMOVE OLD FIBER)	L.F.	1416'
714-05.05 - PULL BOXES (24"x36"x36")	EACH	4
793-11.19 MARKER POST	EACH	4

TOTAL MATERIAL LIST:

96 CT Armored Fiber = 2101'
1.25" HDPE = 6804'
1.5" HDPE = 3402'
2'x3'x3' Handholes = 4 EA.
Marker Posts = 4 EA.

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SEALED BY

MICHAEL GARDINA
NO. 107931

7/24/17

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JEFFREY CANNON - LEVEL 3
(615) 419-6617
jeffrey.cannon@level3.com

Level(3)
COMMUNICATIONS

FIBER
RELOCATION

SR 96

TYPE	YEAR	PROJECT NO.	SHEET NO.
·	·	75009-2238-04	U2-2
·	·	·	·
·	·	·	·
·	·	·	·

1.Contractor must obtain locates prior to disturbing the ground.

2.Contractor must have a copy of the approved permit from the appropriate agency on the jobsite at all times.

3.All cable will be placed at standard minimum depth. (LEVEL 3 standard is 36" deep unless otherwise directed by a LEVEL 3 representative.)

4. Any landscaping will be replaced to equal or better than that which existed prior to work.

5.Project site will be properly secured prior to the end of each day.

6.All work is to be in accordance with all authorities having jurisdiction in the work zone.

7.Contractors are advised to contact LEVEL 3 for any additional information or clarification concerning scope of work or the requirements necessary for project completion.

8.Contractor is responsible to field verify all dimensions, quantities and existing conditions prior to construction. If a significant change to the running line is needed, please contact your LEVEL 3 representative before proceeding.

9.Before construction begins, contractor shall take appropriate precautions to avoid any potential obstructions prior to proceeding with work.

10.No construction on private property will commence until approval is given by the appropriate LEVEL 3 employee.

11.Contractor shall not proceed with work until they have received a Purchase Order and have been directed to do so by an authorized LEVEL 3 representative.

12.Contractor shall not exceed the Purchase Order value without authorization in writing from the appropriate LEVEL 3 representative.

13.As-Builts will be required for each project including cable footage sequentials at every access point, slack loop, splice location, pole and termination point. Contractor should also provide notes of all changes in depths, running lines, mh/hh locations, and any other applicable notes to depict the work that took place. NOTE: All major changes need to be pre-approved by an authorized LEVEL 3 employee prior to starting the work.

14. The contractor shall verify the road right of way and easements prior to commencing work. NO facilities should be placed of private property unless otherwise specified.

15.The contractor shall determine the exact location of all underground facilities before commencing work and agree to be fully responsible for all damages caused by his failure to exactly locate and preserve all underground facilities.

16.Contractor shall be responsible for damages to existing water, wastewater and storm drainage lines. Damages shall e repaired in accordance with the City's Department of Public Works and Engineering Standard Construction Specifications for wastewater collection systems, water lines, storm drainage, and street paving and standard construction details fro wastewater collection systems.

17.No more than one trench opened at one time than can be backfilled and compacted in 10" lifts at the end of each day. (no trench left opened overnight).

18.All excess excavation to be removed from the road right-of -way at the end of each day.

19.Adequate drainage shall be maintained at all times during construction and any drainage ditch or structure disturbed during construction shall be restored to existing conditions or better.

20. Road must be kept open to traffic and contractor must provide adequate flagmen, signals, etc., to provide complete safety to the public.

21. If it becomes necessary for equipment to operate on a portion of the pavement, precautions must be taken to prevent any damage whatsoever to the pavement.

22. Condition of road upon completion of job shall be as good or better than prior to starting.

23. Contractor shall comply with latest edition of OSHA regulations and the State of Tennessee laws concerning excavation.

24. Any landscaping will be replaced to equal or better than that which existed prior to work.

25. Contractor shall take necessary precautions to protect root systems of shrubs, plants, and trees along the area of excavation.

26. Project site will be properly secured prior to the end of each day.

27. All work is to be in accordance with the standards of all authorities having jurisdiction in the work zone.

28. Contractor will complete all work per "LEVEL 3" Construction Specifications.

29. Contractor shall maintain a set of redline drawings recording as-built conditions during construction. These redlind marked up drawings will be submitted to the design consultant who will make the changes on the asbuilt record drawings.

Michael A. Gardina, PE
8211 Avanti Dr.
Waxhaw, NC 28173

SEALED BY

MICHAEL A. GARDINA
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 107931
STATE OF TENNESSEE
7/24/17

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Level (3) COMMUNICATIONS

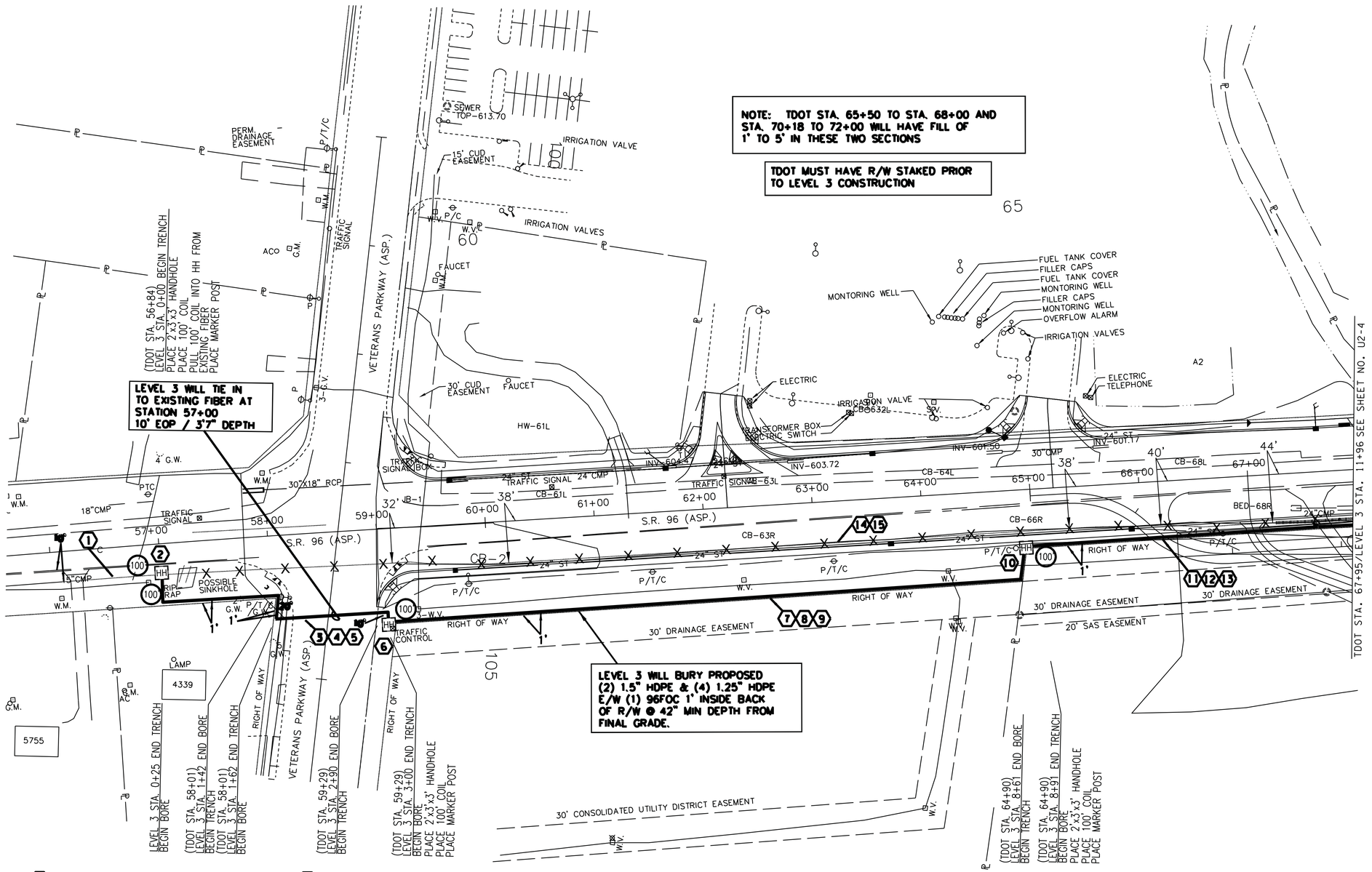
FIBER SPECIFICATIONS

SR 96

$$$$SYTIME$$$$$$$
$$$$DGNSPEC$$$$$$$

TYPE	YEAR	PROJECT NO.	SHEET NO.
.	.	75009-2238-04	U2-3
.	.	.	.
.	.	.	.
.	.	.	.

ALL DMENSIONS NOTED ARE FROM EXISTING DRAWINGS OR ABOVE GROUND OBSERVATION. ALL MEASUREMENTS WERE TAKEN WITH A HAND HELD TAPE MEASURE AND NOT SURVEYED OR VERIFIED. USE EXTREME CAUTION BEFORE YOU DIG. ENGINEER ASSUMES NO RESPONSIBILITY FOR ACCURACY OR LOCATION OF ANY ITEMS SHOWN.



1. EXISTING 96CT FIBER
2. PROPOSED LEVEL 3 HANDHOLE 2'x3'x3'
3. CONDUIT OWNER: LEVEL 3
   CONDUIT LENGTH: 300'
   CONDUIT QTY: 2
   CONDUIT SIZE: 1.5"
   CONDUIT TYPE: HDPE
4. CONDUIT OWNER: LEVEL 3
   CONDUIT LENGTH: 300'
   CONDUIT QTY: 4
   CONDUIT SIZE: 1.25"
   CONDUIT TYPE: HDPE
5. CABLE FIBERS: 96 ARMORED
   CABLE OWNER: LEVEL 3
   CABLE LENGTH: 400'
6. PROPOSED LEVEL 3 HANDHOLE 2'x3'x3'
7. CONDUIT OWNER: LEVEL 3
   CONDUIT LENGTH: 591'
   CONDUIT QTY: 2
   CONDUIT SIZE: 1.5"
   CONDUIT TYPE: HDPE
8. CONDUIT OWNER: LEVEL 3
   CONDUIT LENGTH: 591'
   CONDUIT QTY: 4
   CONDUIT SIZE: 1.25"
   CONDUIT TYPE: HDPE
9. CABLE FIBERS: 96 ARMORED
   CABLE OWNER: LEVEL 3
   CABLE LENGTH: 691'
10. PROPOSED LEVEL 3
    HANDHOLE 2'x3'x3'
11. CONDUIT OWNER: LEVEL 3
    CONDUIT LENGTH: 305'
    CONDUIT QTY: 2
    CONDUIT SIZE: 1.5"
    CONDUIT TYPE: HDPE
12. CONDUIT OWNER: LEVEL 3
    CONDUIT LENGTH: 305'
    CONDUIT QTY: 4
    CONDUIT SIZE: 1.25"
    CONDUIT TYPE: HDPE
13. CABLE FIBERS: 96 ARMORED
    CABLE OWNER: LEVEL 3
    CABLE LENGTH: 405'
14. EXISTING LEVEL 3(2) 1.5" & (4) 1.25" HDPE TO BE ABANDONED IN PLACE.
15. REMOVE 96CT FIBER 995'

LEVEL 3 FIBER ROUTE SHEET TOTALS

UGB-30020 – Trench up to 1500': Trench 48" minimum cover	FOOT	85'
UGB-30140 – Place 1 – HDPE conduit in open trench up to 2"	FOOT	85'
UGB-30150 – Place additional HDPE in open trench conduit up to 2"	FOOT	425'
UGB-30540 – Directional Bore up to 1500': Additional HDPE conduit up to 2"	FOOT	3333'
UGB-30550 – Directional Bore up to 1500': 3 HDPE conduits up to 2" (on one reel)	FOOT	1111'
UGB-30980 – Place up to 288 count FOC in conduit, greater than 1500'	FOOT	1496'
UGB-31040 – Reposition Slack in existing cable up to 288 count FOC	FOOT	100'
UGB-31060 – Remove and dispose of cable	FOOT	1011'
UGB-31250 – Place New – 24"x36"x36" – Non-concrete Manhole / Handhole	EACH	3
UGB-31990 – Place Locate Marker Post	EACH	3

Michael A. Gardina, PE
8211 Avanti Dr.
Waxhaw, NC 28173

SEALED BY

MICHAEL GARDINA
NO. 107931

7/24/17

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Level(3)
COMMUNICATIONS

FIBER
RELOCATION

SR 96
STA. 56+74 TO 67+95
SCALE: 1"= 100'

$$$$SYTIME$$$$$$
$$$$DGNSPEC$$$$$$

TYPE	YEAR	PROJECT NO.	SHEET NO.
		75009-2238-04	U2-4

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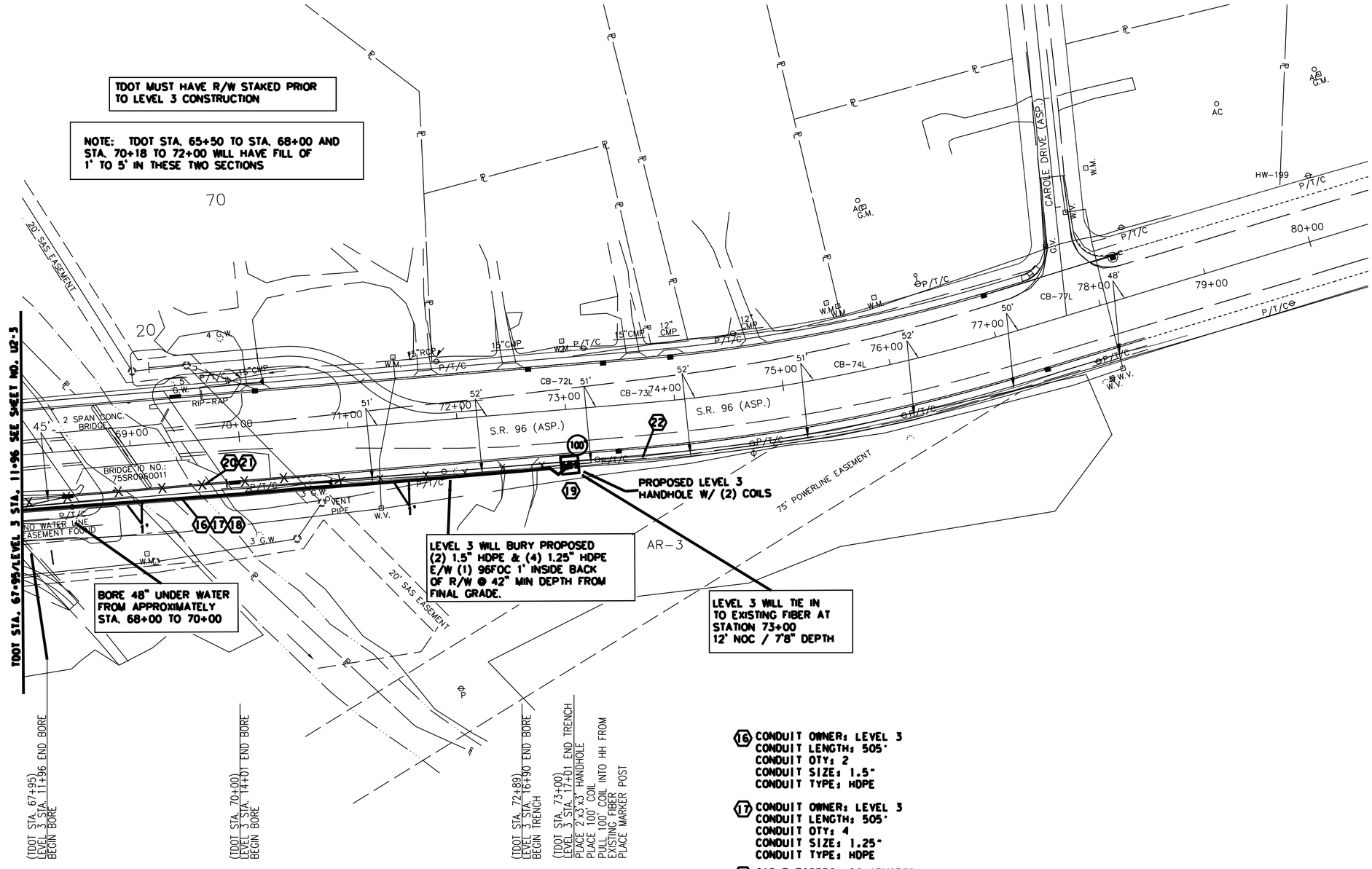

TDOT STA. 67+95/LEVEL 3 STA. 11+96 SEE SHEET NO. U2-3

TDOT MUST HAVE R/W STAKED PRIOR TO LEVEL 3 CONSTRUCTION

NOTE: TDOT STA. 65+50 TO STA. 68+00 AND STA. 70+18 TO 72+00 WILL HAVE FILL OF 1' TO 5' IN THESE TWO SECTIONS

BORE 48" UNDER WATER FROM APPROXIMATELY STA. 68+00 TO 70+00

LEVEL 3 WILL BURY PROPOSED (2) 1.5" HDPE & (4) 1.25" HDPE E/W (1) 96FOC 1' INSIDE BACK OF R/W @ 42" MIN DEPTH FROM FINAL GRADE.

PROPOSED LEVEL 3 HANDHOLE W/ (2) COILS

LEVEL 3 WILL TIE IN TO EXISTING FIBER AT STATION 73+00 12' NOC / 7'8" DEPTH

(TDOT STA. 67+95)
LEVEL 3 STA. 11+96 END BORE
BEGIN BORE

(TDOT STA. 70+00)
LEVEL 3 STA. 14+01 END BORE
BEGIN BORE

(TDOT STA. 72+89)
LEVEL 3 STA. 16+90 END BORE
BEGIN TRENCH

(TDOT STA. 73+00)
LEVEL 3 STA. 17+01 END TRENCH
PLACE 2'x3'x3' HANDHOLE
PLACE 100' COIL
PULL 100' COIL INTO HH FROM
EXISTING FIBER
PLACE MARKER POST

LEVEL 3 FIBER ROUTE SHEET TOTALS

UGB-30020 – Trench up to 1500': Trench 48" minimum cover	FOOT	11'
UGB-30140 – Place 1 – HDPE conduit in open trench up to 2"	FOOT	11'
UGB-30150 – Place additional HDPE in open trench conduit up to 2"	FOOT	55'
UGB-30540 – Directional Bore up to 1500': Additional HDPE conduit up to 2"	FOOT	1482'
UGB-30550 – Directional Bore up to 1500': 3 HDPE conduits up to 2" (on one reel)	FOOT	494'
UGB-30980 – Place up to 288 count FOC in conduit, greater than 1500'	FOOT	605'
UGB-31040 – Reposition Slack in existing cable up to 288 count FOC	FOOT	100'
UGB-31060 – Remove and dispose of cable	FOOT	405'
UGB-31250 – Place New – 24"x36"x36" – Non-concrete Manhole / Handhole	EACH	1
UGB-31650 – Excavate Large Pit: 10'X6'x5'	EACH	1
UGB-31990 – Place Locate Marker Post	EACH	1

(16) CONDUIT OWNER: LEVEL 3
CONDUIT LENGTH: 505'
CONDUIT OTY: 2
CONDUIT SIZE: 1.5"
CONDUIT TYPE: HDPE

(17) CONDUIT OWNER: LEVEL 3
CONDUIT LENGTH: 505'
CONDUIT OTY: 4
CONDUIT SIZE: 1.25"
CONDUIT TYPE: HDPE

(18) CABLE FIBERS: 96 ARMORED
CABLE OWNER: LEVEL 3
CABLE LENGTH: 605'

(19) PROPOSED LEVEL 3 HANDHOLE 2'x3'x3'

(20) EXISTING LEVEL 3(2) 1.5" & (4) 1.25" HDPE TO BE ABANDONED IN PLACE.

(21) REMOVE 96CT FIBER 405'

(22) EXISTING 96CT FIBER

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NO. 107931

7/24/17

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Level(3)® COMMUNICATIONS

FIBER
RELOCATION

SR 96
STA. 67+95 TO 73+00
SCALE: 1"= 100'

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-96(48)	U3-01

75009-3238-04 RUTHERFORD COUNTY

INDEX OF DRAWINGS

FOOTNOTES:

1. INCLUDES ALL MATERIALS INCLUDING SAND/STONE BEDDING, FLOWABLE FILL, TEMPORARY PAVEMENT IN OR OUT OF ROW, LABOR, EQUIPMENT FOR COMPLETE INSTALLATION OF PIPE INCLUDING BUT NOT LIMITED TO TRAFFIC CONTROL, EXCAVATION INCLUDING DIRT/ROCK, BACKFILLING, CREEK CROSSINGS PER SWPPP,COUPLINGS, FITTINGS, PIPE FUSION, APPURTENANCES, TRACER WIRE, WARNING TAPE, MAINTAINING THE TRENCH, PURGE POINT INSTALLATION, TESTING BY UTILITY SPECIFICATIONS TO INCLUDE BUT NOT LIMITED TO AIR, NITROGEN, HYDROSTATIC OR X-RAY, DEW POINT OR DRYING , AND ANY OTHER LABOR OR MATERIAL REQUIRED TO COMPLETE THE WORK AS SPECIFIED ON THE PLANS.

2. INCLUDES ALL MATERIALS, LABOR, AND EQUIPMENT, NECESSARY FOR CONNECTING TO EXISTING GAS LINE INCLUDING TRAFFIC CONTROL.

3. INCLUDES TRANSITION FITTINGS, VALVES, VALVE BOX, BOX ADJUSTMENT, VALVE BOX COLLAR, VALVE MARKER, EXCAVATION, BEDDING, BACKFILL, COUPLINGS, FUSION TEES, TAP OF EXISTING LINE, AND ALL OTHER NECESSARY MATERIALS AND LABOR FOR COMPLETE INSTALLATION OF ASSEMBLY INCLUDING TRAFFIC CONTROL.

4. INCLUDES ALL MATERIALS, PARTS, LABOR, EQUIPMENT, MACHINERY, TOOLS, OR APPARATUS NECESSARY FOR INSTALLATION OF GAS SERVICE ASSEMBLIES AS DESCRIBED IN THE PLANS AND SPECS. INSTALLATION FOR LONG SIDE AND SHORT SIDE APPLICATIONS. SERVICE PIPE SHALL BE PAID PER LINEAR FOOT INSTALLED. ALSO INCLUDES RECONNECTION TO EXISTING SERVICE PIPE.

5. INCLUDES ALL MATERIALS, PARTS, LABOR, EQUIPMENT, MACHINERY, TOOLS, OR APPARATUS NECESSARY FOR INSTALLATION OF GAS SERVICE ASSEMBLIES AS DESCRIBED IN THE PLANS AND SPECS. INSTALLATION FOR LONG SIDE AND SHORT SIDE APPLICATIONS. SERVICE PIPE SHALL BE PAID PER LINEAR FOOT INSTALLED AND INCLUDES TRACER WIRE.

6. INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT, SETUP AND TRAFFIC CONTROL

7. INCLUDES ALL MATERIALS, LABOR, AND EQUIPMENT FOR RETIREMENT OF ITEM INCLUDING STABLIZING THE ITEM OF PLANT PER UTILITY SPECIFICATIONS.

ESTIMATED QUANTITIES

	ITEM NUMBER	TDOT DESCRIPTION	UTILITY DESCRIPTION	UNITS	QUANITITY
	209-08.02	TEMPORARY SILT FENCE (WITH BACKING)	SILT FENCE WITH BACKING	LF	120
	709-05.06	MACHINED RIP-RAP (CLASS A-1)	RIP-RAP	TON	4
①	791-02.04	4IN MDPE GAS MAIN	4" GAS LINE	L.F.	220
①	791-02.05	6IN MDPE GAS MAIN	6" GAS LINE	L.F.	1065
②	791-06.24	CONNECT TO 4IN EX. PE MAIN	CONNECT TO 4" GAS LINE	EACH	1
②	791-06.25	CONNECT TO 6IN EX. PE MAIN	CONNECT TO 6" GAS LINE	EACH	1
③	791-07.01	2IN PE GAS VALVE ASSEMBLY	2" PE GAS VALVE ASSEMBLY	EACH	1
③	791-07.02	4IN PE GAS VALVE ASSEMBLY	4" PE GAS VALVE ASSEMBLY	EACH	1
③	791-07.03	6IN PE GAS VALVE ASSEMBLY	6" PE GAS VALVE ASSEMBLY	EACH	1
④	791-08.05	2IN SERVICE ASSEMBLY	2" SERVICE ASSEMBLY	EACH	2
⑤	791-08.10	2IN PE SERVICE PIPE	2" GAS SERVICE LINE	L.F.	15
⑥	791-09.07	RESTORE GRAVEL	RESTORE GRAVEL	S.Y.	55
⑦	791-10.10	RETIRE GAS MAIN	RETIRE GAS LINE	EACH	1

UTILITY INFORMATION

ATMOS ENERGY CORPORATION
810 CRESCENT CENTRE DR, SUITE 600
FRANKLIN, TN 37067-6226
CONTACT: ROBERT ARNOLD
PHONE: (615)771-8311
EMAIL: robert.arnold@atmosenergy.com

REBECCA JEAN CLAY
REGISTERED ENGINEER
DEPARTMENT OF AGRICULTURE
COMMERCE
STATE OF TENNESSEE
No. 115864
05-19-17

ATMOS energy

JOB NUMBER:	40230.05
DESIGNED:	RAY
DRAWN:	RKC
CHECKED:	RJC
SCALE	DATE
N.T.S.	05.19.17

GRESHAM, SMITH AND PARTNERS
G S & P
2095 LAKESIDE CENTRE WAY, SUITE 120
KNOXVILLE, TENNESSEE 37922
(865) 521-6777 (866) 539-7192

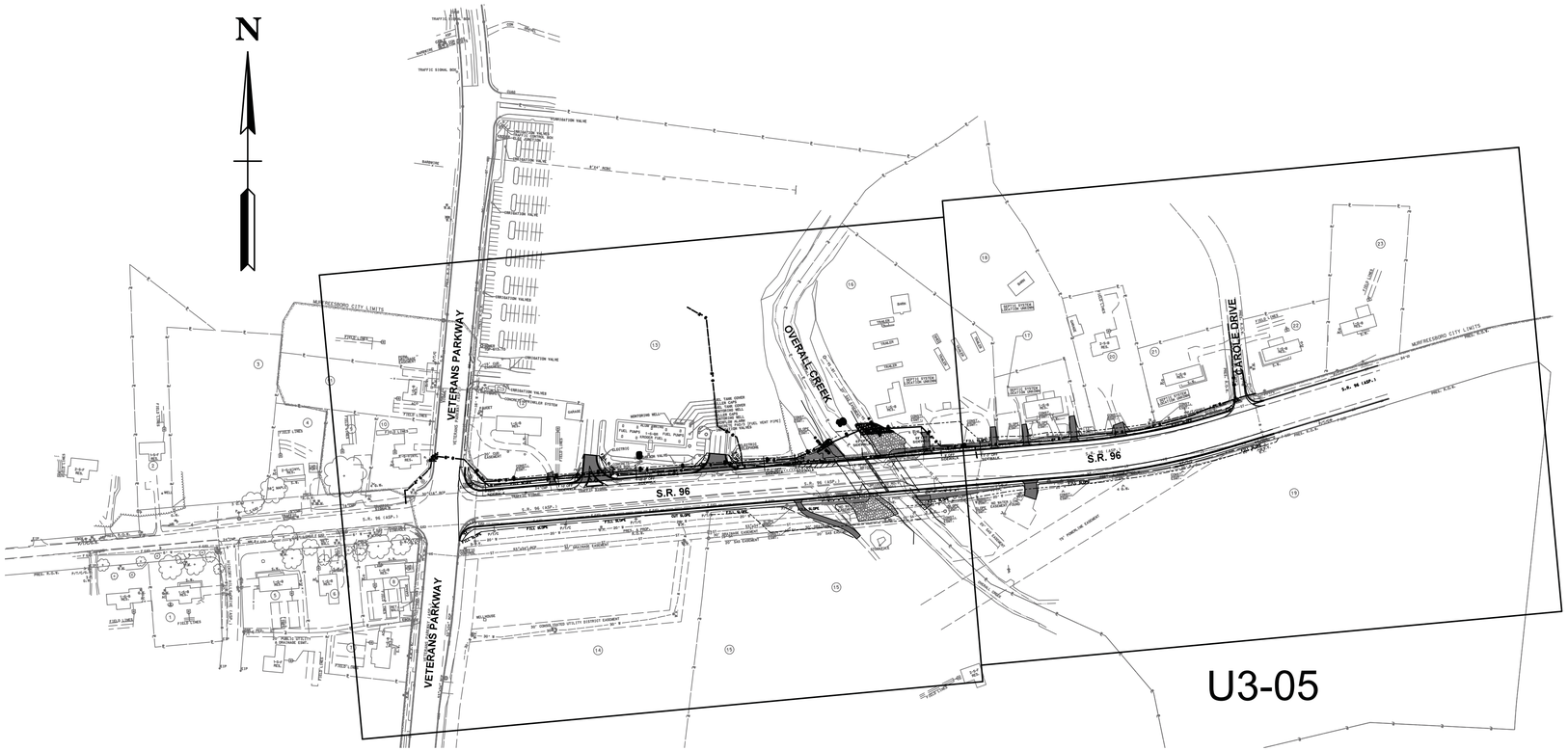
NATURAL GAS RELOCATION
ESTIMATED QUANTITIES AND DRAWING INDEX

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-96(48)	U3-02

75009-3238-04 RUTHERFORD COUNTY

RUTHERFORD COUNTY

SR-96 FROM VETERANS PARKWAY (L.M. 6.081) TO EAST OF OVERALL CREEK (L.M. 6.452).



LEGEND

6" G	EXISTING GAS LINE
6" G	PROPOSED GAS LINE
GS	GAS SERVICE
	PROPOSED GAS VALVE
	PROPOSED GAS REDUCER
	PROPOSED TEE
	PROPOSED CASING PIPE

REBECCA JEAN CLAY REGISTERED ENGINEER DEPARTMENT OF AGRICULTURE COMMERCE No. 115854 STATE OF TENNESSEE 05-19-17

ATMOS energy

JOB NUMBER:	40230.05
DESIGNED:	RAY
DRAWN:	RKC
CHECKED:	RJC
SCALE	DATE
N.T.S.	05.19.17

GRESHAM, SMITH AND PARTNERS

2095 LAKESIDE CENTRE WAY, SUITE 120
KNOXVILLE, TENNESSEE 37922
(865) 521-6777 (866) 539-7192

NATURAL GAS RELOCATION
VICINITY MAP AND LEGEND

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-96(48)	U3-03

75009-3238-04 RUTHERFORD COUNTY

GENERAL CONSTRUCTION NOTES

1. SOME NOTES MAY NOT BE APPLICABLE TO THIS PROJECT BECAUSE OF PIPE MATERIALS USED.

2. THE CONTRACTOR RESPONSIBLE FOR PERFORMING THE GAS PIPELINE CONSTRUCTION AND RELOCATION FOR THIS PROJECT MUST BE AN APPROVED ATMOS CONTRACTOR AND IS REQUIRED TO FOLLOW AND ADHERE TO ALL ATMOS ENERGY AND TDOT PROCEDURES AND GUIDELINES. AT A MINIMUM, ALL WORK PERFORMED IN THE CONSTRUCTION OF THIS PROJECT MUST MEET THE REQUIREMENTS OF THE FOLLOWING CODES:
   * CODE OF FEDERAL REGULATIONS – TITLE 49, PARTS 191 AND 192, "TRANSMISSION OF NATURAL GAS AND OTHER GAS BY PIPELINE";
   * CODE OF FEDERAL REGULATIONS – TITLE 49, PART 199, "DRUG AND ALCOHOL TESTING";
   * ANSI – B31.8, "GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS";
   * ASTM D2513, "STANDARD SPECIFICATION FOR THERMOPLASTIC GAS PRESSURE PIPING SYSTEMS"; AND
   * ASTM D3261, "STANDARD SPECIFICATION FOR BUTT HEAT FUSION POLYETHYLENE (PE) PLASTIC FITTINGS FOR POLYETHYLENE (PE) PLASTIC PIPE AND FITTINGS".

3. TO ENSURE COMPLIANCE WITH THE CODE OF FEDERAL REGULATIONS, TITLE 49, PARTS 191, 192 AND 199, THE CONTRACTOR MUST BE A SUBSCRIBER TO ISNETWORLD (ISN).

4. TO COMPLY WITH THE CODE OF FEDERAL REGULATIONS (CFR) TITLE 49, PART 199, DRUG AND ALCOHOL TESTING, THE CONTRACTOR MUST SUBMIT THEIR SUBSTANCE ABUSE PLAN TO NATIONAL COMPLIANCE MANAGEMENT SERVICE, INC. (NCMS) FOR REVIEW AND APPROVAL.
   NATIONAL COMPLIANCE MANAGEMENT SERVICE, INC.
   7 COMPOUND DRIVE
   HUTCHINSON, KANSAS 67502
   PHONE: (620) 669–0954
   FAX: (620) 669–8430
   www.nationalcompliance.com

5. ANY DEVIATIONS FROM THE PLANS AND/OR SPECIFICATIONS MUST BE APPROVED IN WRITING BY ATMOS ENERGY PRIOR TO THE WORK TAKING PLACE. FAILURE TO DO SO MAY RESULT IN ALL WORK BEING STOPPED AND REJECTION OF THE WORK UNTIL ALL DEFICIENCIES ARE CORRECTED AND ACCEPTED BY ATMOS ENERGY.

6. PERFORM ALL WORK IN A SAFE, THOROUGH, AND WORKMAN–LIKE MANNER IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND ALL APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS.

7. THE CONTRACTOR MUST HAVE AND FOLLOW AN OPERATOR QUALIFICATION (OQ) PLAN AND USE THE SERVICES OF AN APPROVED (OQ) ASSESSMENT PROVIDER TO ADMINISTER AND MANAGE THEIR TRAINING AND QUALIFICATION ASSESSMENT PROCESS.

8. THE FOLLOWING (OQ) ASSESSMENT PROVIDERS ARE APPROVED BY ATMOS ENERGY:

ENERGY WORLDNET, INC.	GAJESKE OQ SERVICES	MIDWEST ENERGY ASSOCIATION
(940) 626–1941	(972) 314–8100	(615) 289–9600 EXT 101
www.energyworldnet.com	www.gajeske.com	www.midwestenergy.com

9. THE FOLLOWING OPERATOR QUALIFICATIONS REQUIRE CERTIFICATIONS TO BE ADMINISTERED BY ATMOS ENERGY: (1) WELDING OF STEEL PIPELINES AND (2) JOINING PLASTIC PIPE. THESE CERTIFICATIONS WILL BE ADMINISTERED AND PROVIDED BY ATMOS ENERGY. TO SCHEDULE THE CERTIFICATIONS, CONTACT ATMOS ENERGY AT THE ADDRESS GIVEN ON SHEET U3–01.

10. AS REQUIRED BY LAW, PRIOR TO CONSTRUCTION NOTIFY TENNESSEE 811, THE UNDERGROUND UTILITY NOTIFICATION CENTER FOR TENNESSEE (1–800–752–6007).

11. INSTALL THE PIPELINES AT OR BELOW THE MINIMUM DEPTH OF 2.5 FEET OR AT THE ELEVATIONS SHOWN ON THE DRAWINGS. HORIZONTAL AND VERTICAL CONTROL ARE THE CONTRACTOR'S RESPONSIBILITY.

WELDING OF GAS PIPELINES

1. CONTRACTOR MUST SUBMIT CREDENTIALS FOR THEIR NON–DESTRUCTIVE TESTING (NDT) SUBCONTRACTORS TO ATMOS ENERGY AT THE ADDRESS GIVEN ON SHEET U3–01 PRIOR TO BEGINNING WORK.

2. ALL BUTT WELDS MUST BE TESTED BY RADIOGRAPHIC EXAMINATION AND FILLET WELDS (e.g., TIE–INS) MUST BE TESTED VIA MAGNETIC PARTICLE FLUX EXAMINATION. FABRICATOR TO PROVIDE PROTECTION FOR OPEN ENDS OF ASSEMBLIES.

3. ALL CONTRACTOR PERSONNEL (WELDERS) PERFORMING WELDS TO JOIN STEEL PIPE MUST BE CERTIFIED IN ACCORDANCE WITH AMERICAN PETROLEUM INSTITUTE (API) STANDARD 1104 – WELDING OF PIPELINES AND RELATED FACILITIES. WELDING SPECIFICATIONS ARE AS FOLLOWS:
   * BUTT WELDS: WPS–S62GA;
   * FILLET WELDS FOR LINESTOPPERS: WPS–S62FA; AND
   * FILLET WELDS FOR TAPPING TEES: WPS–S62FA.

4. WELDED JOINTS MUST BE SANDBLASTED PER THE NATIONAL ASSOCIATION OF CORROSION ENGINEERS (NACE) STANDARD NO. 2 SSPC–SP10, NEAR–WHITE BLAST CLEANING BY THE USE OF ABRASIVES. JOINTS MUST BE COVERED USING A TWO–PART EPOXY APPLIED PER THE MANUFACTURER RECOMMENDATIONS.

5. TAPPING FITTINGS MUST BE CLEANED WITH A POWER BRUSH, PRIMED WITH WAX TAPE PRIMER AND WRAPPED WITH WAX TAPE OR COVERED USING AN APPROVED TWO–PART EPOXY.

6. THOROUGHLY JEEP ALL BELOW GRADE PIPE WITH A MEDIUM VOLTAGE HOLIDAY DETECTOR ROUTINELY BEFORE AND AFTER LOWERING THE PIPE INTO THE TRENCH. LOCATE ANY HOLIDAYS AND PATCH WITH A MATERIAL COMPATIBLE WITH THE PIPE COATING AND RETEST.

7. SET THE HOLIDAY DETECTOR AT THE APPROPRIATE VOLTAGE TO BE VERIFIED BY THE CORROSION INSPECTOR. PRIOR TO USE EACH DAY, CHECK THE VOLTAGE WITH A VOLT METER.

TIE-INS TO EXISTING PIPE

1. CONTRACTOR IS RESPONSIBLE FOR ALL TAPPING AND TIE–N OPERATIONS; PREFERRED METHODS ARE AS FOLLOWS:
   * NEW PE TO EXISTING RE: ELECTRO OR BUTT–FUSION FOR JOINING;ELECTRO OR SADDLE–FUSION FOR TAPS. ANY MECHANICAL FITTINGS MUST BE APPROVED BY ATMOS ENERGY. REFERENCE CHAPTER 3 OF ATMOS ENERGY'S CONSTRUCTION.
   * NEW PE TO EXISTING STEEL: FACTORY FABRICATED TRANSITION FITTING; ARC WELDED TO STEEL PIPE AND HEAT OR BUTT FUSED TO PE PIPE;

2. SQUEEZE OFF TOOLS MUST COMPLY WITH ASTM F1563, "STANDARD FOR TOOLS TO SQUEEZE–OFF POLYETHYLENE (PE) GAS PIPE OR TUBING. RE–ROUND PIPE AND INSTALL TWO PIECE CLAMP AT SQUEEZE–OFF POINT.

3. ALL TIE–INS TO EXISTING MAINS MUST BE PERFORMED IN THE PRESENCE OF AN ATMOS ENERGY INSPECTOR; NO EXCEPTIONS WILL BE MADE.

4. MAKE ALLOWANCES FOR UNRESTRAINED POLYETHYLENE PIPE TO CONTRACT BY 'SNAKING' PIPE FROM ONE SIDE OF THE TRENCH TO THE OTHER. DURING WARM WEATHER, KEEP PIPE IN A COMPRESSIVE STATE (WHEN POSSIBLE) AND ALLOW PIPE TO COOL TO GROUND TEMPERATURE BEFORE MAKING FINAL TIE–IN.

5. THE ATMOS INSPECTOR WILL DETERMINE THAT ALL AIR AND TEST MEDIUM IS PURGED FROM THE PIPELINE AND NO HAZARDOUS GAS–AIR MIXTURE IS PRESENT.

6. ATMOS ENERGY WILL BE RESPONSIBLE FOR TURNING GAS SERVICES BACK ON TO THE EXISTING CUSTOMERS. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH ATMOS ENERGY'S INSPECTOR TO RESTORE SERVICES IN A SAFE AND TIMELY MANNER.

7. CONNECT NEW TRACER WIRE TO EXISTING TRACER WIRE WHEN TYING INTO EXISTING PE MAINS OR SERVICES.

BENDS AND ELBOWS

1. FOR ANY CHANGE IN DIRECTION 15 DEGREES OR GREATER, USE AN ELBOW TRIMMED TO FIT. FOR CHANGES IN DIRECTION LESS THAN 15 DEGREES, BEND USING A BENDING MACHINE. THIS INCLUDES BUT IS NOT LIMITED TO SIDE BENDS, OVERBENDS AND SAG BENDS.

2. PREVENT WRINKLE BENDS; WRINKLE BENDS WILL NOT BE ALLOWED.

3. WHEN TRIMMING AN ELBOW, MAINTAIN A MINIMUM ARC LENGTH OF ONE (1) INCH, MEASURED ALONG THE CROTCH.

TRENCHING PROCEDURES

1. MAINTAIN A MINIMUM OF TWO AND A HALF (2.5) FEET OF COVER FROM FINISHED GRADE TO THE TOP OF PIPE FOR ALL PIPE BEING INSTALLED UNLESS OTHERWISE SHOWN ON THE DRAWINGS. WHERE TWO GAS LINES ARE LOCATED WITHIN THE SAME TRENCH, PROVIDE ONE FOOT OF SEPARATION (MINIMUM) BETWEEN THE PIPES.

2. IN AREAS OF CUT AND FILL, COORDINATE INSTALLATION OF THE PIPELINES WITH EARTH MOVING ACTIVITIES TO ENSURE THE MINIMUM AMOUNT OF COVER IS MAINTAINED OVER THE PIPE.

3. INSTALL PIPE ON UNDISTURBED OR WELL COMPACTED SOIL, WITH NO CLOTS OR ROCKS.

4. WHEN ROCK IS ENCOUNTERED, IT MUST BE REMOVED FOR A DISTANCE OF SIX (6) INCHES BELOW AND ON EITHER SIDE OF THE PIPE. PROVIDE SUITABLE PADDING (e.g., SAND) FOR A DEPTH OF SIX (6) INCHES MINIMUM PRIOR TO PLACEMENT OF THE PIPE. INSTALL ROCKSHIELD AS DIRECTED BY ATMOS ENERGY.

5. BACKFILL MATERIAL MUST BE FREE FROM ROCKS FOR AT LEAST THE FIRST TWELVE (12) INCHES COVERING THE PIPE.

6. WHEN COMPACTING BACKFILL, PREVENT DAMAGE TO THE PIPE FROM HEAVY EQUIPMENT BY PROVIDING A CUSHION OF TWENTY–FOUR (24) INCHES.

PIPELINE COATING

1. CONTRACTOR MUST FOLLOW AND ADHERE TO MANUFACTURER'S SPECIFICATIONS, AND SUGGESTED INSTALLATION AND HANDLING PROCEDURES FOR ALL FUSION BONDED EPOXY (FBE) AND EQUIVALENT COATING APPLICATIONS. FBE COATING SHALL BE SCOTCHKOTE 323/323i LIQUID EPOXY COATINGS AND/OR EQUIVALENT AS APPROVED BY ATMOS ENERGY.

2. CONTRACTOR IS RESPONSIBLE FOR OBTAINING SPECIFICATIONS, MAINTAINING, STORING, AND INSTALLING ALL COATING PRODUCTS PER THE SPECIFIC MANUFACTURER'S RECOMMENDED SPECIFICATIONS.

3. DURING INSTALLATION, ALL BARE PIPE MUST BE SANDBLASTED PER NACE STANDARD NO. 2 SSPC–SP10, NEAR–WHITE BLAST CLEANING BY THE USE OF ABRASIVES. JOINTS MUST BE COVERED WITH FBE (14–16 MIL) PER THE MANUFACTURER'S RECOMMENDATION.

PIPELINE TESTING

1. THE TEST MEDIUM FOR ALL STEEL PIPE SHALL BE NITROGEN UNLESS SPECIFIED OTHERWISE.

2. PRIOR TO TESTING, CLEAN THE PIPELINE BY BLOWING PIGS WITH COMPRESSED AIR A SUFFICIENT NUMBER OF TIMES TO ENSURE THE REMOVAL OF ALL CONSTRUCTION DIRT, RUST, SCALE AND ALL FOREIGN MATTER IN THE PIPELINE.

3. CONTACT ATMOS ENERGY FOR TEST PRESSURE FOR STEEL PIPE.
   a. THE CONTRACTOR MUST USE A TEST PROCEDURE TO ENSURE DISCOVERY OF ALL LEAKS IN THE SEGMENT BEING TESTED; AND
   b. DURING THE TEST, IF NATURAL GAS, INERT GAS, OR AIR IS IN THE TEST MEDIUM, A LEAK TEST MUST BE PERFORMED AT A PRESSURE BETWEEN 100 PSIG AND 375 PSIG or THE LINE MUST BE WALKED TO CHECK FOR LEAKS WHILE THE TEST PRESSURE IS HELD AT APPROXIMATELY 375 PSIG.

4. THE RECORDING CHART MUST REFLECT THE PRESSURE INCREASE AS THE LINE IS BEING PRESSURIZED AND PRESSURE DECREASE AFTER THE TEST IS DEEMED SUCCESSFUL BY ATMOS ENERGY.

5. THE TEST PRESSURE FOR POLYETHYLENE (PE) PIPE SHALL BE 150 PSIG (+25, –0) FOR 12 HOURS AND INCLUDE A RECORDING CHART. THE RECORDING CHART MUST SHOW THE PRESSURE INCREASE FROM ZERO TO THE TEST PRESSURE AND THE DECREASE BACK TO ZERO AFTER THE TEST IS DEEMED SUCCESSFUL BY ATMOS ENERGY.

6. THE TEST PRESSURE FOR EXISTING PE SERVICE LINES SHALL BE 150 PSIG (+5, –0) FOR AT LEAST FIFTEEN (15) MINUTES. COORDINATE WITH THE ATMOS INSPECTOR FOR GUIDANCE ON TESTING EXISTING SERVICE LINES.

CATHODIC PROTECTION

1. ATMOS ENERGY WILL INSTALL CATHODIC TEST STATIONS, COORDINATE AS NECESSARY.

2. CONTACT ATMOS ENERGY TO SCHEDULE THE INSTALLATION OF THE TEST STATIONS. DO NOT BACKFILL THE AREAS FOR THE TEST STATIONS SHOWN ON THE DRAWINGS UNTIL INSTALLATION IS COMPLETE.

STATIC ELECTRIC DISCHARGE FOR PE PIPE

1. TAKE PRECAUTIONS TO REDUCE THE POTENTIAL FOR STATIC ELECTRIC DISCHARGES WHERE HAZARDOUS ATMOSPHERE'S MAY EXIST BY APPLYING AN ANTI–STATIC SOLUTION.

2. FOLLOW THE PRECAUTIONS RECOMMENDED BY THE AMERICAN GAS ASSOCIATION (AGA) IN THE LATEST EDITION OF THE 'PLASTIC PIPE MANUAL FOR GAS SERVICE.'

3. DO NOT VENT GAS USING UNDERGROUND PLASTIC PIPE OR TUBING. IF VENTING IS NECESSARY, VENT DOWN–WIND AT A LOCATION AWAY FROM PERSONNEL AND FLAMMABLE MATERIALS.

REBECCA JEAN CLAY
REGISTERED ENGINEER
DEPARTMENT OF AGRICULTURE & COMMERCE
No. 115864
05-19-17
STATE OF TENNESSEE

ATMOS energy

JOB NUMBER:	40230.05
DESIGNED:	RAY
DRAWN:	RKC
CHECKED:	RJC
SCALE: N.T.S.	DATE: 05.19.17

GRESHAM, SMITH AND PARTNERS
G S & P
2095 LAKESIDE CENTRE WAY, SUITE 120
KNOXVILLE, TENNESSEE 37922
(865) 521-6777 (866) 539-7192

NATURAL GAS RELOCATION
GENERAL NOTES

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-96(48)	U3-04

75009-3238-04 RUTHERFORD COUNTY

EXISTING VALVE FOR ISOLATION; COORDINATE WITH ATMOS ANY SHUTDOWNS

STATION 1+04
CONNECT TO EXISTING 6" MDPE

STATION 1+31.71
45° ELBOW

PROPOSED 6" MDPE GAS LINE

FIELD VERIFY LOCATION OF EXISTING FIELD LINES BEFORE INSTALLATION; REPORT any CONFLICTS TO ENGINEER PRIOR TO INSTALLATION

PROPOSED 6" MDPE GAS LINE

EXTEND RIP-RAP (EC-STR-27) OVER DISTURBED AREA OF BANK

SILT FENCE WITH BACKING AT TOP OF BANK

PROPOSED 6" MDPE GAS LINE

STA. 9+00 TO STA. 10+30
OPEN CUT STREAM CROSSING;
MIN. DEPTH OF 5' FROM TOB TO TOB
(SEE DETAIL ON SHEET U3-07)

SILT FENCE WITH BACKING AT TOP OF BANK

EXTEND RIP-RAP (EC-STR-27) OVER DISTURBED AREA OF BANK

PROPOSED 6" MDPE GAS LINE

STA. 11+40.37
INSTALL 6" TO 4" REDUCER

STATION 11+78.01
48°BEND

PROPOSED 4" MDPE GAS LINE

STATION 12+43.17
45°BEND

13'-5" OFF SIDEWALK

10' OFF SIDEWALK

10'-2" OFF SIDEWALK

7'-3" OFF SIDEWALK

7'-4" OFF SIDEWALK

63' OFF SIDEWALK

59' OFF SIDEWALK

9' OFF SIDEWALK

EXISTING 6" GAS LINE TO BE RETIRED

STATION 7+50.66
INSTALL 6" PE ISOLATION VALVE

STATION 7+40.53
CONNECT TO EXISTING 2" HDPE SERVICE WITH 6"x2" TEE, 2" POLYVALVE, COUPLING AS REQUIRED AND RECONNECT TRACER WIRE

SEE SHEET NO. U3-05

MATCH LINE STA. 71+00

Know what's below. Call 811 before you dig.

REBECCA JEAN CLAY
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 115854
STATE OF TENNESSEE
05-19-17

NOTES:

1. COORDINATE SERVICE INTERUPTIONS WITH ATMOS ENERGY AND CUSTOMER. NO SHUTDOWN SHOULD EXCEED 4 HOURS.

2. MATERIAL: 6" IPS, PE 2708, MEDIUM DENSITY POLYETHYLENE (MDPE) SDR11

3. MATERIAL: 4" IPS, PE 2708, MEDIUM DENSITY POLYETHYLENE (MDPE) SDR11

ATMOS energy

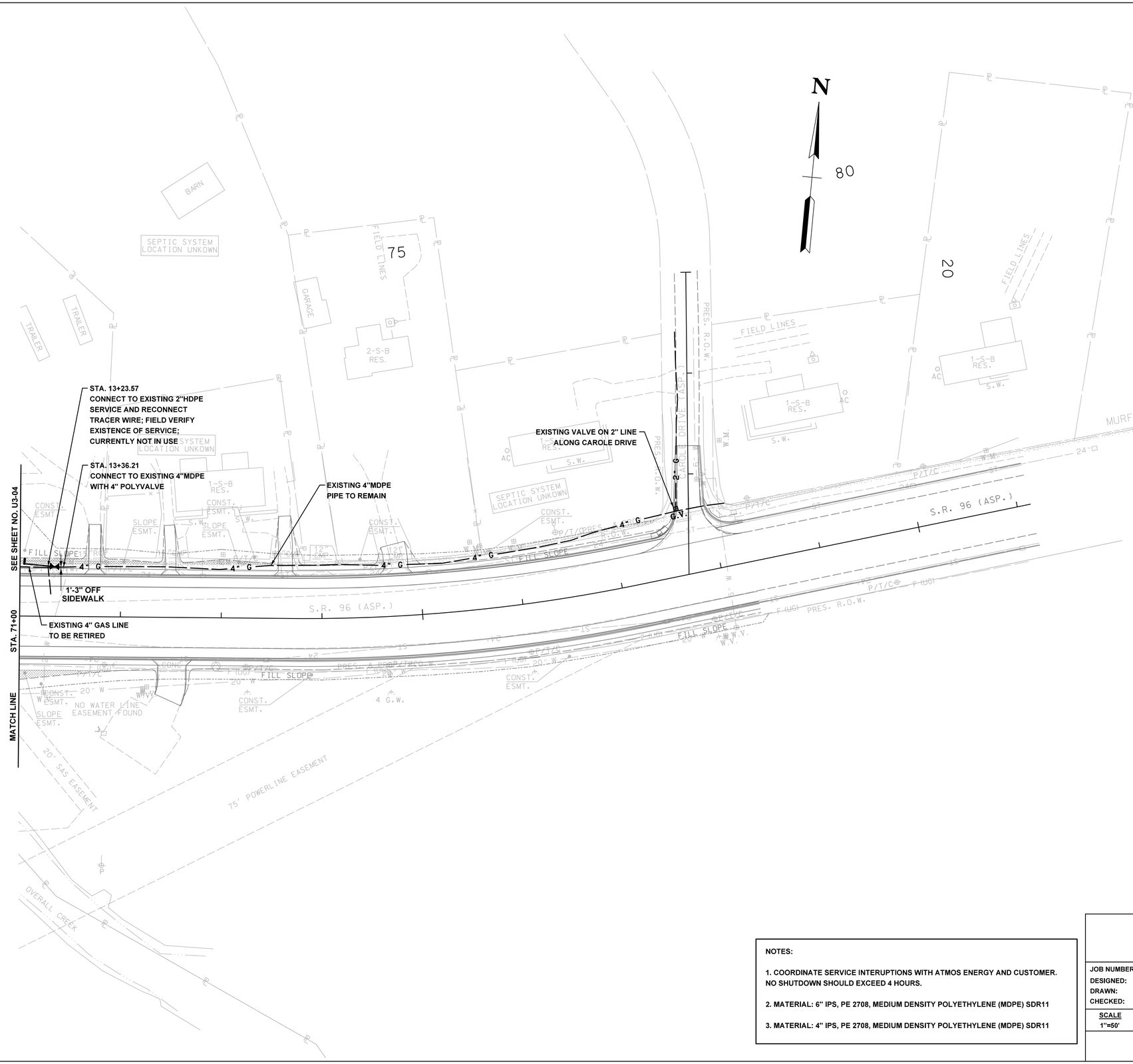
JOB NUMBER:	40230.05
DESIGNED:	RAY
DRAWN:	RKC
CHECKED:	RJC
SCALE	DATE
1"=50'	05.19.17

GRESHAM, SMITH AND PARTNERS
GS&P
2095 LAKESIDE CENTRE WAY, SUITE 120
KNOXVILLE, TENNESSEE 37922
(865) 521-6777 (866) 539-7192

NATURAL GAS RELOCATION
BEGIN TO STA. 71+00

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-96(48)	U3-05

75009-3238-04 RUTHERFORD COUNTY



NOTES:

1. COORDINATE SERVICE INTERUPTIONS WITH ATMOS ENERGY AND CUSTOMER. NO SHUTDOWN SHOULD EXCEED 4 HOURS.

2. MATERIAL: 6" IPS, PE 2708, MEDIUM DENSITY POLYETHYLENE (MDPE) SDR11

3. MATERIAL: 4" IPS, PE 2708, MEDIUM DENSITY POLYETHYLENE (MDPE) SDR11

811 Know what's below. Call 811 before you dig.

REBECCA JEAN CLAY REGISTERED ENGINEER AGRICULTURE COMMERCE NO. 115854 STATE OF TENNESSEE 05-19-17

ATMOS energy

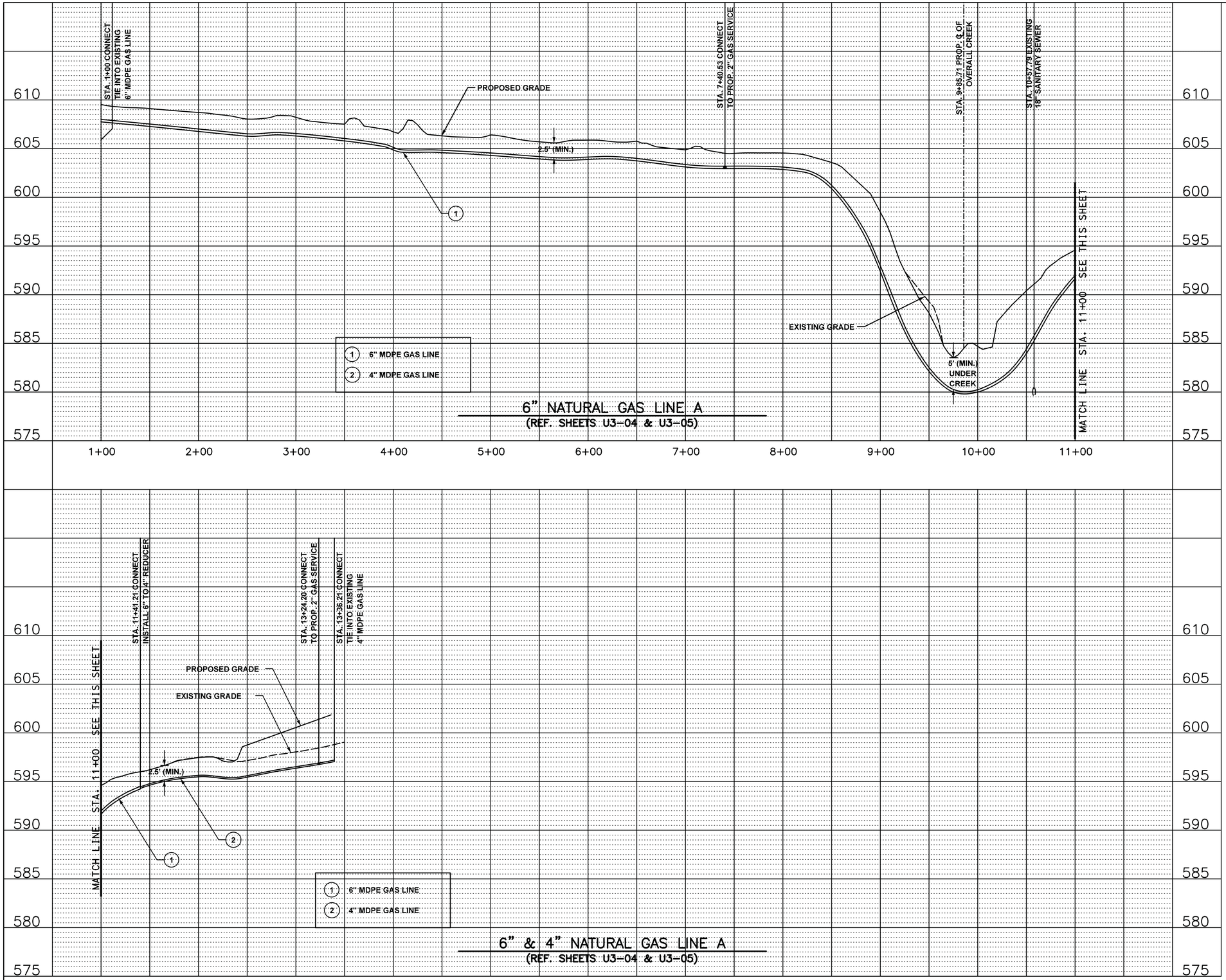
JOB NUMBER:	40230.05
DESIGNED:	RAY
DRAWN:	RKC
CHECKED:	RJC
SCALE	DATE
1"=50'	05.19.17

GRESHAM, SMITH AND PARTNERS
2095 LAKESIDE CENTRE WAY, SUITE 120
KNOXVILLE, TENNESSEE 37922
(865) 521-6777 (866) 539-7192

NATURAL GAS RELOCATION
FROM STA. 71+00 TO STA. 78+30

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-96(48)	U3-06

75009-3238-04 RUTHERFORD COUNTY



6" NATURAL GAS LINE A
(REF. SHEETS U3-04 & U3-05)

6" & 4" NATURAL GAS LINE A
(REF. SHEETS U3-04 & U3-05)

REBECCA JEAN CLAY
REGISTERED ENGINEER
DEPARTMENT OF AGRICULTURE
DEPARTMENT OF COMMERCE
05-19-17
No. 115859
STATE OF TENNESSEE

ATMOS energy

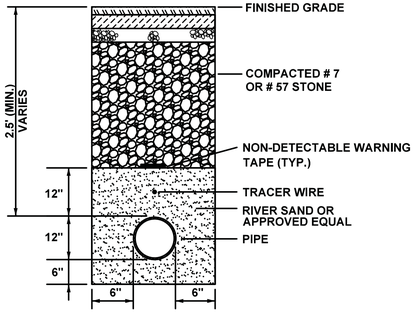
JOB NUMBER:	40230.05
DESIGNED:	RAY
DRAWN:	RKC
CHECKED:	RJC
SCALE H: 1"=50' V: 1"=10'	DATE 05.19.17

GRESHAM, SMITH AND PARTNERS
2095 LAKESIDE CENTRE WAY, SUITE 120
KNOXVILLE, TENNESSEE 37922
(865) 521-6777 (866) 539-7192

NATURAL GAS RELOCATION
PROFILE

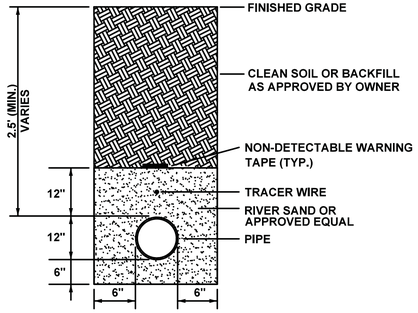
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-96(48)	U3-07

75009-3238-04 RUTHERFORD COUNTY



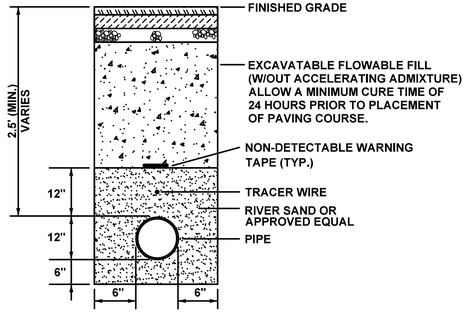
EXCAVATION

TRENCH SECTION (PAVED AREAS) | DETAIL: PAVED TRENCHED



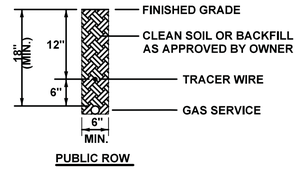
EXCAVATION

TRENCH SECTION (NON-PAVED AREAS) | DETAIL: NON-PAVED TRENCH

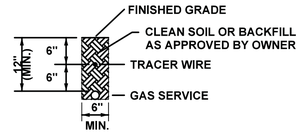


EXCAVATION

TRENCH SECTION (FLOWABLE FILL) | DETAIL: FLOWABLE FILL TRENCH



PUBLIC ROW



PRIVATE PROPERTY

TRENCH SECTION (SERVICES) | DETAIL: TRENCH SECTION

PIPE Ø	MIN. RADIUS (NO FUSION)	MIN. RADIUS (FUSION)
1/2"	1'9"	8'9"
3/4"	2'2"	10'8"
1"	3'6"	17'4"
1 1/4"	5'	24'9"
2"	7'4"	36'6"
3"	9'6"	46'11"
4"	13'10"	69'
6"	18'	89'10"
8"	22'5"	112'
10"	26'7"	133'
12"		

MINIMUM POLYETHYLENE BEND RADIUS

NOTE:
1. IF MINIMUM RADIUS CANNOT BE MAINTAINED, ELBOW FITTINGS MUST BE INSTALLED.
2. DO NOT INSTALL SERVICE SADDLES OR HIGH-VOLUME TAP TEES IN BENDS.

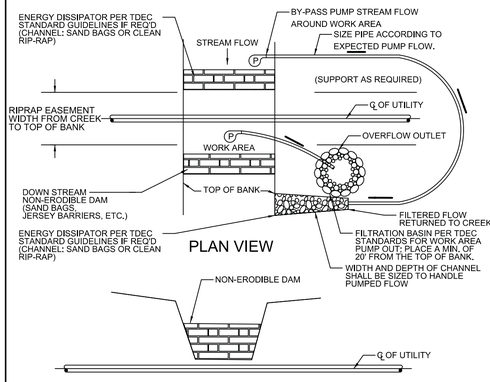
MINIMUM PE BEND RADIUS | DETAIL: BEND RADIUS

PIPE Ø	WIDTH
1 1/4"	6"
2"	8"
3"	12"
4"	12"
6"	14"
8"	18"

MINIMUM TRENCH WIDTHS

NOTE:
FOR PIPES LARGER THAN 8" IN DIAMETER, MAINTAIN 6" (MIN.) OF CLEARANCE ON BOTH SIDES OF PIPE.

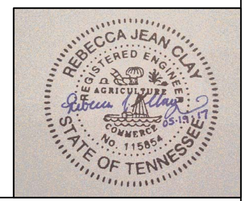
MINIMUM TRENCH WIDTHS | DETAIL: TRENCH WIDTHS



NOTES:
1. UTILITY TRENCH EXCAVATION THROUGH OVERALL CREEK SHALL BE DONE "IN THE DRY" AT ALL TIMES.
2. MINIMIZE BANK DISTURBANCE.
3. MINIMIZE STREAM SILTATION (MUDDY WATER).
4. REMOVE INSTREAM DAMS IMMEDIATELY AFTER CONSTRUCTION IS COMPLETE.
5. CONCRETE SHALL BE PLACED 24 HOURS BEFORE BACKFILL IS PLACED AND IN SUCH A MANNER AS TO PREVENT PIPE FROM FLOATING.

1. ALL SURFACE WATER FLOWING TOWARD THE EXCAVATION OR FILL WORK SHALL BE DIVERTED, PIPED OR FLUMED TO THE DOWNSTREAM SIDE OF THE WORK. THIS CAN BE ACCOMPLISHED THROUGH UTILIZATION OF COFFERDAMS OR CONSTRUCTED BERMS IN CONJUNCTION WITH A PIPE OR FLUME. COFFERDAMS MUST BE CONSTRUCTED OF SAND BAGS, CLEAN ROCK, STEEL SHEETING OR OTHER NON-ERODIBLE MATERIAL.
2. TEMPORARY EROSION CONTROL MEASURES MUST BE IN PLACE BEFORE EARTH MOVING OPERATIONS BEGIN. MAINTAIN THROUGHOUT THE CONSTRUCTION PERIOD AND REPAIR, IF NECESSARY AFTER RAINFALL. TYPE 'C' SILT FENCE BACKFILL WITH #57 STONE MUST BE INSTALLED ALONG THE BASE OF ALL FILLS AND CUTS, ON THE DOWNHILL SIDE OF STOCKPILED SOIL, AND ALONG STREAM BANKS IN CLEARED AREAS TO PREVENT EROSION INTO STREAMS. IT MUST BE INSTALLED PARALLEL TO THE STREAM CHANNEL, ENTRENCHED, STAKED, AND EXTEND THE WIDTH OF THE AREA TO BE CLEARED.
3. BACKFILL ACTIVITIES MUST BE ACCOMPLISHED IN A MANNER WHICH STABILIZES THE STREAM BED AND BANKS TO PREVENT EROSION. BACKFILL MATERIALS SHALL CONSIST OF SUITABLE MATERIALS FREE OF CONTAMINANTS. ALL CONTOURS MUST BE RETURNED TO PRE-CONSTRUCTION CONDITIONS. THE COMPLETED WORK MAY NOT DISRUPT OR IMPOUND STREAM FLOW.
4. SLURRY WATER PUMPED FROM WORK AREAS AND EXCAVATIONS MUST BE HELD IN SETTLING BASINS OR TREATED BY FILTRATION PRIOR TO INITIAL DISCHARGE INTO SURFACE WATERS. WATER MUST BE HELD IN SEDIMENT BASINS UNTIL AT LEAST AS CLEAR AS THE RECEIVING WATERS. SEDIMENTATION BASINS SHALL NOT BE LOCATED CLOSER THAN 20 FEET FROM THE TOP BANK OF A STREAM. SEDIMENT BASINS AND TRAPS SHALL BE PROPERLY DESIGNED ACCORDING TO THE SIZE OF THE DRAINAGE AREAS OR VOLUME OF WATER TO BE TREATED.
5. CHECKDAMS SHALL BE UTILIZED WHERE RUNOFF IS CONCENTRATED. CLEAN ROCK, SANDBAGS OR STONE CHECKDAMS SHALL BE PROPERLY CONSTRUCTED TO DETAIN RUNOFF AND TRAP SEDIMENT.
6. CLEARING, GRUBBING AND OTHER DISTURBANCE TO RIPARIAN VEGETATION SHALL BE LIMITED TO THE MINIMUM NECESSARY FOR SLOPE CONSTRUCTION AND EQUIPMENT OPERATIONS. UNNECESSARY VEGETATION REMOVAL IS PROHIBITED. ALL DISTURBED AREAS MUST BE PROPERLY STABILIZED WITHIN 5 WORKING DAYS AFTER CONSTRUCTION IS COMPLETE.
7. STREAMS SHALL NOT BE USED AS TRANSPORTATION ROUTES FOR HEAVY EQUIPMENT. CROSSINGS MUST BE LIMITED TO ONE POINT AND EROSION CONTROL MEASURES MUST BE UTILIZED WHERE THE STREAM BANKS ARE DISTURBED. WHERE THE STREAM BED IS NOT COMPOSED OF ROCK, A PAD OF CLEAN ROCK MUST BE USED AT THE CROSSING POINT. ALL TEMPORARY FILL MUST BE COMPLETELY REMOVED AFTER THE WORK IS COMPLETED.
8. CONSTRUCTION DEBRIS MUST BE KEPT FROM ENTERING THE STREAM CHANNEL.
9. ALL SPILLS OF PETROLEUM PRODUCTS OR OTHER POLLUTANTS MUST BE REPORTED TO THE APPROPRIATE EMERGENCY MANAGEMENT AGENCY AND MEASURES SHALL BE TAKEN IMMEDIATELY TO PREVENT THE POLLUTION OF WATERS OF THE STATE, INCLUDING GROUNDWATER.
10. UPON ACHIEVEMENT OF FINAL GRADE, THE DISTURBED STREAMBANK SHALL BE STABILIZED WITH RIP-RAP. ALL OTHER DISTURBED SOILS MUST BE PERMANENTLY STABILIZED AND RE-VEGETATED WITHIN 30 DAYS BY SODDING OR SEEDING AND MULCHING. SEED TO BE UTILIZED SHALL INCLUDE A COMBINATION OF ANNUAL GRAINS AND GRASSES, LEGUMES, AND PERENNIAL GRASSES. LIME AND FERTILIZER SHALL BE APPLIED AS NEEDED TO ACHIEVE A VEGETATIVE COLOR.
11. UPON COMPLETION OF CONSTRUCTION, THE STREAM SHALL BE RETURNED AS NEARLY AS POSSIBLE TO ITS ORIGINAL, NATURAL CONDITION.

CONVENTIONAL CREEK CROSSING DETAIL | DETAIL: CREEK CROSSING



ATMOS energy

JOB NUMBER:	40230.05
DESIGNED:	RAY
DRAWN:	RKC
CHECKED:	RJC
SCALE: N.T.S.	DATE: 05.19.17

GRESHAM, SMITH AND PARTNERS
2095 LAKESIDE CENTRE WAY, SUITE 120
KNOXVILLE, TENNESSEE 37922
(865) 521-6777 (866) 539-7192

NATURAL GAS RELOCATION
CONSTRUCTION DETAILS

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	U4-1
CONST.	2017	75009-3238-04	U4-1

INDEX OF DRAWINGS

ESTIMATED UTILITY QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	MTEMC UNIT	QUANTITY	% Utility Betterment	%Project Public	%Project Private
790-08.04	POLE 65FT CLASS H2 METAL	EA		1	0%	100%	0%
790-26.24	3Ø VERTICAL DEAD END LRG COND 25KV	EA	VC5-1LX	2	0%	100%	0%
790-26.26	3Ø CROSSARM DEAD END 25KV	EA	VC7HDFX-1	1	0%	100%	0%
790-32.01	DOWN GUY , THROUGH BOLT TYPE	EA	VE1-2AX	2	0%	100%	0%
790-32.03	DOWN GUY , THROUGH BOLT ST PL	EA	VE1-2A	4	0%	100%	0%
790-32.19	DN GUY HVY CONST , 1 PREFORM	EA	VE3-5	4	0%	100%	0%
790-33.19	ROCK ANCHOR TRIPLE EYE 53IN EXPANDING	EA	F7-6A	2	0%	100%	0%
790-33.21	ANCHOR TWIN EYE POWER INSTALLED	EA	F6-7	3	0%	100%	0%
790-68.11	DEAD END SHOE	EA	M5-1	2	0%	100%	0%
790-69.12	GROUND ASSEMBLY GROUND PLATE TYPE	EA	VM2-11SP	1	0%	100%	0%
790-98.02	REMOVE POLES	EA		1	0%	100%	0%
790-98.03	REMOVE FRAMING/ASSOCIATED APPARATUS	EA		20	0%	100%	0%

M.T.E.M.C. LEGEND

- POLE - TO BE REPLACED
- POLE - OWNED BY M.E.D.
- ANCHOR - TO BE INSTALLED
- ANCHOR - TO BE REMOVED
- ANCHOR - TO REMAIN
- LINE - TO REMAIN

UTILITY INFORMATION

MIDDLE TENNESSEE ELECTRIC MEMBERSHIP COOPERATION
555 NEW SALEM ROAD
MURFREESBORO, TN 37128
CONTACT: CHRIS WEAVER
PHONE: 615-494-1068
EMAIL: Chris.Weaver@mtemc.com

Survey & Design Division

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

INDEX AND ESTIMATED QUANTITIES

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	U4-2
CONST.	2017	75009-3238-04	U4-2

GENERAL CONSTRUCTION NOTES:

1. THE FOLLOWING INFORMATION APPLIES TO THE UTILITY CONTRACTOR RESPONSIBLE FOR THE RELOCATION OF THE ELECTRICAL FACILITIES ALONG THIS PROJECT, AS WELL AS THE CONTRACTOR RESPONSIBLE FOR THE CLEARING/CUTTING OF REQUIRED AREAS OUTSIDE OF THE TDOT RIGHT-OF-WAY WHEN REQUIRED FOR THE INSTALLATION OF THE ELECTRICAL FACILITIES ALONG THIS PROJECT.

2. ANY DEVIATION OF THE CONDITIONS LISTED MUST BE APPROVED BY THE UTILITY PRIOR TO THE DEVIATION TAKING PLACE ON THE PROJECT. FAILURE BY THE UTILITY CONTRACTOR OR SUBCONTRACTORS TO FOLLOW THESE CONDITIONS AS LISTED WILL RESULT IN REFUSAL OF ACCEPTANCE BY THE UTILITY OWNER TO ACCEPT THE PROJECT AT ITS COMPLETION UNTIL SUCH TIME AS ANY DEFICIENCIES ARE CORRECTED TO THE SATISFACTION OF THE UTILITY.

3. ALL WORK SHALL BE DONE IN A SAFE, THOROUGH AND WORKMAN-LIKE MANNER IN ACCORDANCE WITH THE PLAN SHEETS, CONSTRUCTION DETAILS AND TECHNICAL SPECIFICATIONS AS WELL AS ANY AND ALL APPLICABLE SAFETY CODES, INCLUDING, BUT NOT LIMITED TO, THE NATIONAL ELECTRICAL SAFETY CODE (NESC), AND ANY OTHER STATE AND LOCAL CODES THAT ARE REQUIRED FOR THE TYPE OF UTILITY RELOCATION THAT IS BEING PERFORMED AS PART OF THIS CONTRACT.

4. THE UTILITY CONTRACTOR SHALL EXERCISE ALL STANDARD SAFETY PRACTICES WHEN WORKING ON ENERGIZED ELECTRICAL LINES (e.g. RUBBER GOODS INSPECTIONS, GROUNDING OF LINES AND VEHICLES / EQUIPMENT, TOOL INSPECTIONS, ADEQUATE SUPERVISION, ETC.)

5. THE UTILITY CONTRACTOR SHALL BEAR THE RESPONSIBILITY FOR THE SAFETY OF ITS EMPLOYEES AND SHALL ENSURE THAT THEY ABIDE BY ALL STATE, FEDERAL AND LOCAL REGULATIONS REGARDING SAFE WORK PRACTICES IF SUCH REGULATIONS ARE VIOLATED, THE UTILITY OWNER SHALL MAINTAIN THE RIGHT TO STOP WORK ON THEIR FACILITIES UNTIL SUCH CONDITIONS ARE CORRECTED.

6. IN GENERAL, THE UTILITY CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIALS, METHODS, AND/OR INTEGRAL MATERIALS OUTLINED IN THE UTILITY CONSTRUCTION DRAWINGS AND THE TECHNICAL SPECIFICATIONS THAT IS NECESSARY TO PROVIDE A COMPLETE AND FUNCTIONAL INSTALLATION OF THE UTILITY FACILITIES BEING RELOCATED.

7. THE ELECTRICAL FACILITIES ALONG THIS PROJECT OPERATE AT A NOMINAL PHASE-TO-PHASE VOLTAGE RATING OF 24,940 VOLTS. ALL WORK DONE BY THE UTILITY CONTRACTOR IS TO BE PERFORMED WHILE THE EXISTING FACILITIES ARE ENERGIZED, REQUIRING THE UTILITY CONTRACTOR TO USE PROPER HOT LINE WORKING TECHNIQUES. THE UTILITY OPERATES A 24-HOUR/365-DAY CONTROL CENTER THROUGH WHICH THE UTILITY CONTRACTOR SHALL COORDINATE ALL REQUESTS FOR CAUTION ORDERS.

8. THE UTILITY OWNER IS SUBJECT TO THE REQUIREMENTS OF THE RURAL UTILITIES SERVICE (RUS) BRANCH OF THE USDA, UTILITY CONSTRUCTION DRAWINGS ARE INCLUDED AS PART OF THE DRAWING PACKET AND MUST BE ADHERED TO DURING ALL PHASES OF CONSTRUCTION.

9. ALL MATERIALS TO BE USED BY THE UTILITY CONTRACTOR ON THE PROJECT MUST BE NEW MATERIALS AND MUST BE APPROVED BY THE UTILITY OWNER PRIOR TO PURCHASE OR USE. A PROPOSED LIST OF MATERIALS SHALL BE SUBMITTED TO THE UTILITY OWNER AS NOTED IN THE TECHNICAL SPECIFICATIONS FOR THE PROJECT. NO MATERIAL SUBSTITUTIONS ARE ALLOWED WITHOUT THE PRIOR CONSENT OF THE UTILITY OWNER. STORAGE LOCATION OF MATERIALS ON THE PROJECT SITE MUST BE A SECURE ENVIRONMENT. THE UTILITY CONTRACTOR IS RESPONSIBLE FOR ANY LOST, STOLEN, OR DAMAGED MATERIALS ON THE PROJECT.

10. THE UTILITY CONTRACTOR IS REQUIRED TO MAINTAIN COMMUNICATION WITH THE UTILITY OWNER'S CONTROL CENTER USING TWO-WAY RADIO AND TELEPHONE COMMUNICATIONS. THE UTILITY CONTRACTOR SHALL PURCHASE OR LEASE FROM THE UTILITY OWNER THE REQUIRED TWO-WAY RADIOS NECESSARY TO COMMUNICATE WITH THE CONTROL CENTER. THE UTILITY CONTRACTOR MUST CONTACT THE CONTROL CENTER DAILY BEFORE THEY BEGIN WORK ON THE PROJECT IN ORDER TO OBTAIN ANY CAUTION ORDERS AND TO INFORM THE UTILITY WHAT PORTION OF THE WORK IS GOING TO BE DONE. CAUTION ORDERS MUST BE RELEASED AT THE END OF EACH WORKDAY.

11. THE UTILITY CONTRACTOR IS TO PERFORM ALL REQUIRED WORK IN SUCH A MANNER AS TO NOT CAUSE UNINTENTIONAL OUTAGES TO THE CUSTOMERS ALONG THE PROJECT. ALL PLANNED OUTAGES MUST BE COORDINATED WITH THE UTILITY OWNER A MINIMUM OF 48 HOURS PRIOR TO THE PLANNED OUTAGE TO ALLOW TIME FOR THE CUSTOMER TO BE NOTIFIED BY THE UTILITY. LARGE SCALE OUTAGES ARE NOT ALLOWED.

12. IF FIELD CONDITIONS ARISE WHICH PREVENT THE CONSTRUCITON ON THE PROJECT FROM PROCEEDING AS DESIGNED, THE UTILITY CONTRACTOR WILL COORDINATE WITH THE UTILITY OWNER/ENGINEER TO RESOLVE THE ISSUES SO THAT CONSTRUCTION CAN CONTINUE.

13. TO DECREASE THE POTENTIAL FOR OUTAGES, THE UTILITY CONTRACTOR SHALL NOT HAVE MORE THAN ONE (1) MILE OF ELECTRICAL LINE LAID OUT UNDER CONSTRUCTION WITH TEMPORARY LAYOUT ARMS AT ANY ONE TIME.

14. THE UTLITY CONTRACTOR SHALL COMPLY WITH ALL TDOT REGULATIONS, PERMITS, AND TRAFFIC CONTROL GUIDELINES AS REQUIRED.

15. THE LOCATIONS OF EXISTING UTILITIES SHOWN WITHIN THESE DRAWINGS ARE BASED ON INFORMATION PROVIDED BY TDOT, AND SHALL BE VERIFIED BY THE UTILITY CONTRACTOR PRIOR TO CONSTRUCTION. THE UTILITY CONTRACTOR SHALL NOTIFY EACH UTILITY OWNER OF HIS PLAN OF OPERATION IN THE AREA OF THE UTILITIES AND REQUEST THAT THE ULTITY OWNERS PROPERLY LOCATE AND MARK THEIR PERSPECTIVE UTILITY ON THE GROUND.

16. THE UTILITY CONTRACTOR SHALL REQUEST UTILITY LOCATIONS A MINIMUM OF THREE (3) BUSINESS DAYS PRIOR TO BEGINNING ANY CONSTRUCTION IN THE AREA OF THE UTILITIES IN QUESTION.

17. THE TDOT PRIME CONTRACTOR WILL BE RESPONSIBLE FOR ANY EXCAVATION WORK REQUIRED TO LOCATE EXISTING UNDERGROUND UTILITIES. THE PRIME CONTRACTOR IS ALSO REQUIRED TO NOTIFY ANY EXISTING UTILITY OWNER PRIOR TO DIGGING, IN THE EVENT THAT THERE IS ANY DAMAGE TO OR INTERRUPTION OF EXISTING FACILITIES, THE PRIME CONTRACTOR WILL BE RESPONSIBLE FOR ANY COST INCURRED FROM THE EVENT.

18. SOME EXISTING UTILITIES CAN BE LOCATED BY CALLING TENNESSEE ONE-CALL SYSTEMS, INC. AT "811".

19. THE UTILITY CONTRACTOR SHALL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES FROM DAMAGE DURING THE CONSTRUCTION OF THE PROJECT. IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER AND AROUND EXISITING UTILITIES, THE UTILITY CONTRACTOR SHALL BE REQUIRED TO FURNISH THE EQUIPMENT NECESSARY TO COMPLETE THE WORK.

20. THE UTILITY CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY DAMAGE CAUSED BY ITS EMPLOYEES IN AREAS OUTSIDE OF TDOT ROW ALONG THE LENGTH OF THE PROJECT. THE UTILITY CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR RESOLVING ALL COMPLAINTS THAT MAY ARISE FROM ITS ACTIVITIES, AND SHALL PROMPTLY REPORT SUCH COMPLAINTS TO THE UTILITY OWNER AS TO WHETHER OR NOT IT HAS BEEN RESOLVED.

21. GROUND AND AERIAL INSPECTION OF INSTALLED FACILITIES ONCE COMPLETED SHALL BE THE RESPONSIBILITY OF THE UTILITY CONTRACTOR. ANY CORRECTIONS THAT ARE REQUIRED SHALL BE DONE DURING THE CONSTRUCTION OF THE PROJECT AND VERIFIED BY THE UTILITY OWNER/ENGINEER.

22. WHILE SOME WORK MAY ONLY BE REQUIRED "AROUND" OTHER UTILITY FACILITIES, SOME WORK MAY NEED TO BE DONE CONCURRENTLY WITH THE OPERATIONS OF OTHER UTILITY CONTRACTORS. IT IS THE RESPONSIBILITY OF THE TDOT PRIME CONTRACTOR TO ENSURE THAT ALL UTILITY COORDINATION BE ADDRESSED DURING THE CONSTRUCTION OF THE PROJECT.

23. THE UTILITY CONTRACTOR IS RESPONSIBLE FOR INSTALLING ALL FACILITIES INDICATED WITHIN THESE DRAWINGS AT "FINAL GRADE" AS SHOWN. ANY TEMPORARY INSTALLATIONS THAT ARE NOT SPECIFICALLY NOTED WITHIN THESE DRAWINGS AND THAT ARE NOT ADDRESSED AND COORDINATED PRIOR TO CONSTRUCTION OF THE PROJECT WILL BE THE RESPONSIBILTY OF THE TDOT PRIME CONTRACTOR.

24. CONSTRUCTION OF RELOCATED FACILITIES IS NOT CONSIDERED TO BE COMPLETE UNTIL THE UTILITY CONTRACTOR HAS ENERGIZED THE LINES AT THE FINAL OPERATING VOLTAGE IN ACCORDANCE WITH REA/RUS SPECIFICATIONS.

25. PERSONNEL CHANGES ARE TO BE KEPT TO A MINIMUM DURING THE CONSTRUCTION OF THE PROJECT AS TO REDUCE UNFAMILIAR PERSONNEL TO BE WORKING ON THE FACILITIES OF THE UTILITY OWNER.

26. THE TDOT PRIME CONTRACTOR IS RESPONSIBLE FOR THE LAYOUT OF ALL UTILITY FACILITIES THAT ARE TO BE RELOCATED WITHIN THE PROJECT.

27. WHERE EROSION CONTROL MEASURES ARE NEEDED FOR THE UTILITY WORK OCCURING OUTSIDE THE STATE RIGHT-OF-WAY, THE UTILITY CONTRACTOR SHALL SUBMIT A PROPOSED EROSION AND SEDIMENT CONTROL PLAN TO THE TDOT PROJECT SUPERVISOR FOR APPROVAL PRIOR TO BEGINNING WORK.

28. THE DISTANCES THAT ARE SHOWN ON THE DRAWINGS ARE HORIZONTAL DISTANCES ONLY, AND DO NOT ALLOW FOR ANY CHANGES IN ELEVATION THAT EXIST ALONG THE PROJECT.

29. ALL OIL-FILLED EQUIPMENT, INCLUDING RECLOSERS AND TRANSFORMERS, SHALL BE PROVIDED BY THE UTILITY OWNER. THE LABOR COST, AND MINOR MATERIALS REQUIRED TO INSTALL THESE UNITS SHALL BE INCLUDED IN THE BID FROM THE UTILITY CONTRACTOR.

30. THE UTILITY CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL TANGENT STRUCTURES ARE PROPERLY ALIGNED AFTER SETTING ANGLE POLES OR STRUCTURES. AT JUNCTION POLES AND OTHER CONTROL LOCATIONS, THE PROPOSED POLE LOCATION SHALL NOT BE FARHTER THAN TWENTY-FOUR (24) INCHES FROM THE EXISTING POLE WITHOUT APPROVAL FROM THE UTILITY OWNER. THE UTILITY CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE BACK AND/OR FORWARD SPAN TANGENT POLE ALIGNMENT.

31. POLE DRILLING TO BE INCLUDED IN THE LABOR AND MATERIAL COST FOR THE POLE.

32. THE UTILITY CONTRACTOR IS RESPONSIBLE FOR CHECKING AND ENSURING THE PROPER PHASE ROTATION OF ALL THREE-PHASE MOTORS, ALONG WITH VOLTAGE AND PHASING TO OTHER LOADS, BEFORE AND AFTER CONSTRUCTION OF NEW FACILITIES. THE UTILITY CONTRACTOR SHALL MAINTAIN EXISTING PHASE CONNECTION FOR ALL CONDUCTORS, TRANSFORMERS, ETC. UNLESS OTHERWISE INDICATED ON THE DRAWINGS OR WITH THE CONSENT OF THE UTILITY OWNER/ENGINEER.

33. LOCKNUTS SHALL BACK UP ALL NUTS ON THREADED BOLTS SUCH AS MACHINE BOLTS, DOUBLE ARMING BOLTS, UPSET BOLTS, INSULATOR PINS, ETC. EXISTENCE OF LOCKNUTS WILL BE CLOSELY EXAMINED BY THE UTILITY OWNER DURING CONSTRUCTION. BOLTS SHALL NOT EXTEND MORE THAN TWO (2) INCHES FROM NUTS.

34. BULLDOG TYPE GRIPS SHALL NOT BE USED FOR PULLING DOWNGUYS.

35. THE UTILITY CONTRACTOR SHALL INSTALL ALL DOWNGUYS AT LENGTHS AS INDICATED ON THE DRAWINGS UNLESS OTHERWISE DISCUSSED WITH AND APPROVED BY THE UTILITY OWNER/ENGINEER.

36. THE UTILITY CONTRACTOR SHALL INSTALL FIBERGLASS INSULATOR GUYLINKS ON ALL DOWNGUYS WITHIN TWO (2) FEET OF PRIMARY CONDUCTORS.

37. WHEN WOOD POLES ARE BEING UTILIZED, THE UTILITY CONTRACTOR MUST INSPECT AND TEST ALL POLES BEFORE CLIMBING.

38. ANCHORS THAT ARE TO BE RETIRED SHALL HAVE THE ROD UNSCREWED AND REMOVED, OR BE CUT OFF AT LEAST EIGHTEEN (18) INCHES BELOW FINAL GRADE.

39. ALL GROUND RODS TO BE REMOVED SHALL BE PULLED, NOT CUT OFF.

40. ALL MOUNTING HARDWARE REQUIRED FOR INSTALLING NEW TRANSFOMERS SHALL BE INCLUDED IN THE UNIT FOR THE TRANSFORMER AS INDICATED BY THE TDOT STANDARD ITEM NUMBER FOR THOSE UNITS. IN ADDITION, THE UTILITY CONTRACTOR WILL BE REQUIRED TO CHANGE OUT ALL EXISTING PORCELIAN LIGHTNING ARRESTORS WITH POLYMER ARRESTORS.

41. STAND ALONE 8-FOOT CROSSARM IS DESIGNATED AS "VG5H" IN THE CONSTRUCTION DETAILS. IF THE CROSSARM IS TO BE A DIFFERENT SIZE, THEN THERE WILL BE A NUMBER DESIGNATION NEXT TO THE "VG5H"THAT WILL DESIGNATE THE CROSSARM LENGTH.

42. GUY MARKERS ARE TO BE INSTALLED ON ALL NEW AND EXISTING-TO-REMIAN DOWN GUYS REQUIRED FOR THE PROJECT.

43. CONDUCTOR SPLICING SHALL BE KEPT TO A MINIMUM. THERE SHALL BE NO MORE THAN ONE SPLICE PER SPAN PER CONDUCTOR, AND NO SPLICES ARE ALLOWED CLOSER THAN TEN (10) FEET FROM ANY SUPPORT.

44. THE UTILITY OWNER WILL PROVIDE ALL STAKING DATA, DESIGN TENSION AND SAG DATA AS REQUIRED, AFTER NEW FACILITIES ARE INSTALLED. UTILITY OWNER WILL VERIFY SAG ON INSTALLED CONDUCTOR.

45. THE UTILITY CONTRACTOR SHALL COORDINATE WITH THE UTILITY OWNER FOR VERIFICATION OF ALL POLE STAKING LOCATIONS PRIOR TO ANY POLE INSTALLATION ON THE PROJECT.

46. THE UTILITY CONTRACTOR SHALL PROVIDE THE UTILITY OWNER WITH ONE (1) SET OF CLEAN, CLEARLY MARKED "AS-BUILT"DRAWINGS AT THE COMPLETION OF THE PROJECT. THESE DRAWINGS SHALL REFLECT ANY AND ALL CHANGES THAT WERE MADE TO THE FACILITIES DURING CONSTRUCTION.

47. THE UTILITY CONTRACTOR IS RESPONSIBLE FOR REVIEWING ALL CONSTRUCTION DRAWINGS AND TECHNICAL SPECIFICATIONS FOR THE RELOCATION OF FACILITIES PRIOR TO BIDDING THE PROJECT. ANY QUESTIONS CONCERNING INFORMATION SHOWN IN THE CONTRACT DOCUMENTS SHALL BE ADDRESSED TO THE UTILITY OWNER/ENGINEER PRIOR TO BIDDING ON THE PROJECT.

48. ALL INSTALLED POLES SHALL HAVE A POLE TAG WITH THE NAME OF THE UTILITY OWNER AFFIXED TO THE POLE. IN ADDITION, ANY EXISTING POLES THAT ARE REMOVED FROM THE PROJECT SHALL HAVE THE EXISTING POLE TAGS REMOVED.

49. ALL WOOD POLES SHALL HAVE "SOFT"CCA TREATMENT DENOTED AS CCA-ET OR CCA CLAW.

50. ALL PRIMARY AND SECONDARY CONDUCTORS, CONNECTORS, JUMPERS, ETC. SHALL BE THOROUGHLY WIRE BRUSH CLEANED OF FOREIGN MATTER. AN OXIDATION INHIBITOR, AS APPROVED BY THE UTILITY OWNER, SHALL BE APPLIED TO WIRE ENDS. CONDUCTOR SHALL BE LAID STRAIGHT BEFORE CONNECTING AND/OR INSTALLING ANY CONNECTOR OR CLAMP.

51. UTILITY CONTRACTOR WILL BE RESPONSIBLE FOR INSPECTING EACH REEEL OF CONDUCTOR FOR THE PROJECT. ANY DAMAGE TO THE CONDUCTOR SHALL BE REMOVED AND SPLICED AS REQUIRED. ALL CONDUCTOR SHALL BE PROTECTED FROM EQUIPEMENT OR VEHICLE TRAFFIC WHILE BEING INSTALLED.

52. ROLLERS AND BLOCKS SHALL BE INSPECTED PRIOR TO INSTALLATION OF CONDUCTOR TO PREVENT BINDING OR ANY OTHER DAMAGE DURING STRINGING.

CLEARING AND TRIMMING

1. UTILITY CONTRACTOR SHALL PROVIDE ALL NECESSARY TOOLS, EQUIPMENT, AND MATERIALS NECESSARY TO CUT, TRIM, AND/OR REMOVE REQUIRED TREES IN AREAS OUTSIDE OF TDOT RIGHT-OF-WAY AS INDICATED ON THE DRAWINGS. DEBRIS RESULTING FROM SUCH WORK SHALL BE DISPOSED OF DAILY FROM THE PROJECT SITE. DEBRIS SHALL INCLUDE BUT NOT BE LIMITED TO BRUSH, WOOD, LIMBS, LOGS, AND LEAVES.

2. UTILITY CONTRACTOR SHALL PERFORM ALL WORK TO THE SATISFACTION OF THE UTILITY OWNER AND IN ACCORDANCE WITH ALL FEDERAL, STATE, AND COUNTY, MUNICIPAL AND OTHER LOCAL LAWS, ORDINANCES, RULES AND REGULATIONS APPLICABLE TO THE WORK BEING PERFORMED, AS WELL AS WITH THE AMERICAN NATIONAL STANDARDS INSTITUTE Z133.1 AND A300.

3. TREE TRIMMING AND CUTTING SHALL BE DONE IN ORDER TO OBTAIN TWENTY (20) FEET OF CLEARANCE ON BOTH SIDES OF THE PRIMARY LINE FROM THE GROUND TO THE SKY EXCEPT WHERE OTHERWISE SPECIFIED WITHIN THE CONTRACT DOCUMENTS.

4. ALL GROWTH SHALL BE CLEARED WITHIN FIVE (5) FEET OF ALL SERVICE CONDUCTORS WITH THE USE OF LATERAL PRUNING ONLY, UNLESS OTHERWISE INSTRUCTED BY THE UTLITY OWNER.

5. ALL STRUCTURES SHALL BE CLEARED WITHIN A TEN (10) FOOT RADIUS OF THE STRUCTURE. ALL DOWN GUYS, ANCHORS, SPAN GUYS, ETC. SHALL BE CLEARED WITHIN A FIVE (5) FOOT RADIUS OF THE STRUCTURE.

6. FOR ALL TREES THAT ARE CUT, THE UTILITY CONTRACTOR SHALL ENSURE THAT THE TREES ARE CUT FLUSH WITH THE GROUND.

7. UTILITY CONTRACTOR SHALL PERFORM ALL WORK IN A REASONABLE, SAFE, AND SECURE FASHION TO COMPLY, AT A MINIMUM, WITH ALL SAFETY AND SECURITY REQUIREMENTS OF ALL GOVERNMENT AUTHORITIES AND TO PERFORM THE WORK IN SUCH A MANNER AS TO PREVENT ACCIDENTS TO THE PUBLIC OR ANY DAMAGE TO PROPERTY.

8. ALL WORK IS TO BE DONE WHILE THE FACILITIES ARE ENERGIZED, AND THEREFORE, THE UTILITY CONTRACTOR SHALL GUARD AGAINST INTERFERENCE WITH THE NORMAL OPERATION OF THE ELECTRICAL FACILITIES TO ENSURE THERE IS NO DAMAGE TO ENERGIZED CIRCUITS.

9. THE UTILITY OWNER WILL PROVIDE AN ARBORIST TO SUPERVISE ANY NECESSARY TREE TRIMMING, IN ORDER TO ENSURE THAT THE WORK IS BEING DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE UTIITY OWNER AS WELL AS THE CUSTOMERS THAT ARE AFFECTED.

10. UTILITY CONTRACTOR IS REQUIRED TO MEET WITH THE ARBORIST ASSIGNED TO THE PROJECT BY THE UTILITY OWNER FOR THE FACILITIES THAT ARE BEING RELOCATED PRIOR TO ANY TREE TRIMMING OFF OF STATE RIGHT-OF-WAY ALONG THE PROJECT.

CAUTION ORDERS

1. ALL CAUTION ORDERS SHALL BE REQUESTED AND ISSUED THROUGH THE UTILITY OWNER'S CONTROL CENTER VIA TWO-WAY RADIO. IF RADIO TRANSMISSIONS ARE WEAK OR INAUDIBLE, CAUTION ORDERS CAN BE REQUESTED BY CALLING THE CONTROL CENTER AT (615) 217-5111.

2. UTILITY CONTRACTOR SHALL PROVIDE THE FOLLOWING INFORMATION WHEN REQUESTING A CAUTION ORDER:
-NAME OF EMPLOYEE
-VEHICLE NUMBER
-POLE TOP BREAKER NUMBER
-UTILITY OWNER EMPLOYEE GRANTING PERISSION TO WORK ON CIRCUIT
-WHETHER SCADA CONTROLLED OR "ONE SHOT POSITION AND TAGGED" IF NOT SCADA CONTROLLED
-WORK LOCATION

3. ONCE THE CAUTION ORDER IS REQUESTED, THE UTILITY CONTRACTOR SHALL VERIFY TO THE CONTROL CENTER THAT THE INFORMATION PROVIDED IS CORRECT. ONCE THE INFORMATION IS VERIFIED, THE CONTROL CENTER WILL PROCESS THE CAUTION ORDER. THE CONTROL CENTER WILL THEN PROVIDE THE CONTRACTOR WITH A CAUTION ORDER NUMBER. THE UTILITY CONTRACTOR MUST CONFIRM RECEIPT OF THE NUMBER BEFORE THE PROCESS IS COMPLETE.

4. WHEN A CAUTION ORDER IS RELEASED, THE UTILITY CONTRACTOR SHALL CONTACT THE CONTROL CENTER VIA TWO-WAY RADIO AND USE THEIR VEHICLE NUMBER FOR CONFIRMATION. THE UTILITY CONTRACTOR MUST REQUEST RELEASE OF THE CAUTION ORDER BY PROVIDING THE CONTROL CENER THE NUMBER ASSIGNED TO THE CAUTION ORDER, AND THAT THE POLE TOP IS BACK IN THE NORMAL POSITION WITH THE TAG REMOVED. ONCE THE CONTROL CENTER VERIFIES ALL OF THE INFORMATION, THEY WILL PROCESS THE RELEASE OF THE CAUTION ORDER. ONCE THE CAUTION ORDER IS RELEASED, THE UTILITY CONTRACTOR MUST ACKNOWLEDGE AND CONFIRM THE RELEASE.

5. CAUTION ORDERS MUST BE RELEASED WHEN CREWS LEAVE THE WORK LOCATION DURING LUNCH BREAK.

6. NO CAUTION ORDERS CAN BE EXTENDED ONE WORKING DAY.

7. IN THE EVENT OF INCLIMATE WEATHER, THE CONTROL CENTER WILL CONTACT THE UTILITY CONTRACTOR AND REQUEST THE RELEASE OF ANY CAUTION ORDERS THAT ARE IN EFFECT. IF THREE (3) ATTEMPTS ARE MADE TO CONTRACT THE UTILITY CONTRACTOR, AND THEY FAIL TO RESPOND, THE UTILITY'S OPERATIONS SUPERVISOR WILL BE NOTIFIED IMMEDIATELY.

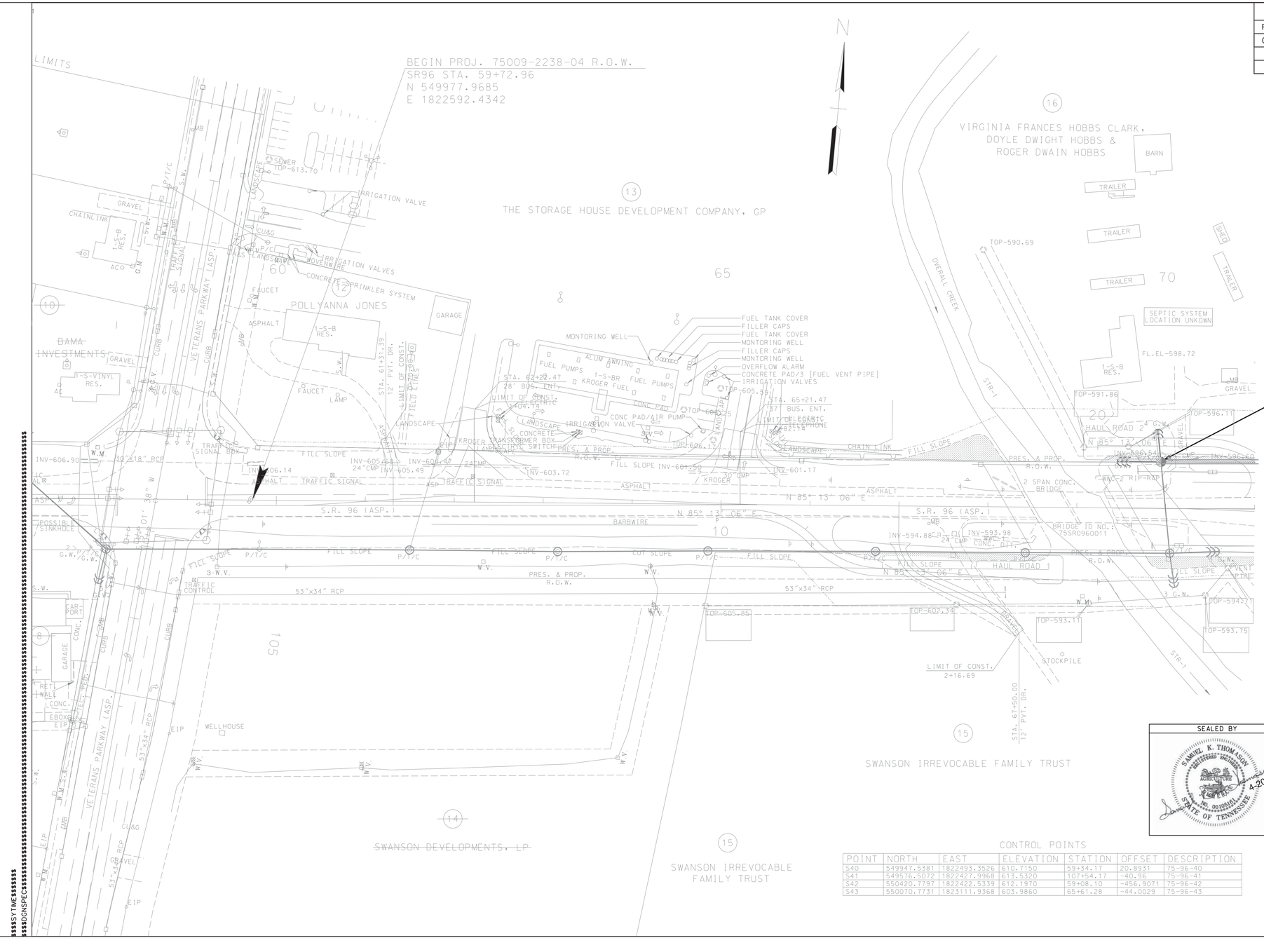
Survey & Design Division

SAMUEL K. THOMASON
LICENSED
PROFESSIONAL
ENGINEER
No. 0010161
STATE OF TENNESSEE
4-20-17

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

GENERAL NOTES

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	U4-3
CONST.	2017	75009-3238-04	U4-3



CONTROL POINTS

POINT	NORTH	EAST	ELEVATION	STATION	OFFSET	DESCRIPTION
S40	549947.5381	1822493.3526	610.7150	59+34.17	20.8931	75-96-40
S41	549576.5072	1822427.9968	613.5320	107+54.17	-40.96	75-96-41
S42	550420.7797	1822422.5339	612.1970	59+08.10	-456.9071	75-96-42
S43	550070.7731	1823111.9368	603.9860	65+61.28	-44.0029	75-96-43

M.T.E.M.C. LEGEND

- ◐ POLE - TO BE REPLACED
- ○ POLE - OWNED BY M.E.D.
- ANCHOR - TO BE INSTALLED
- ANCHOR - TO BE REMOVED
- ANCHOR - TO REMAIN
- LINE - TO REMAIN

SEALED BY

SAMUEL K. THOMASON
NO. 00105161
4-20-17

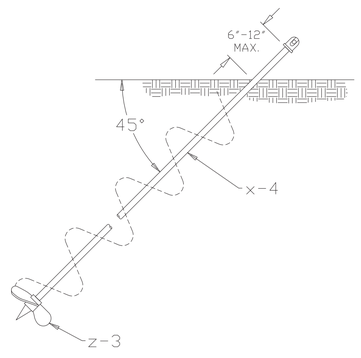
COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00008 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

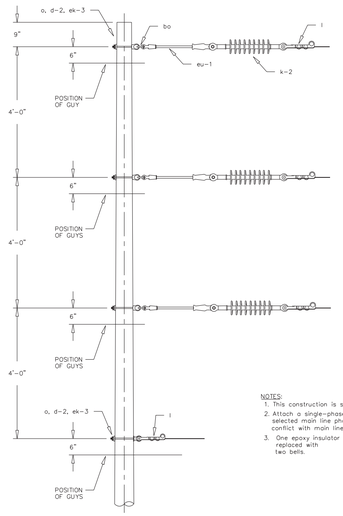
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

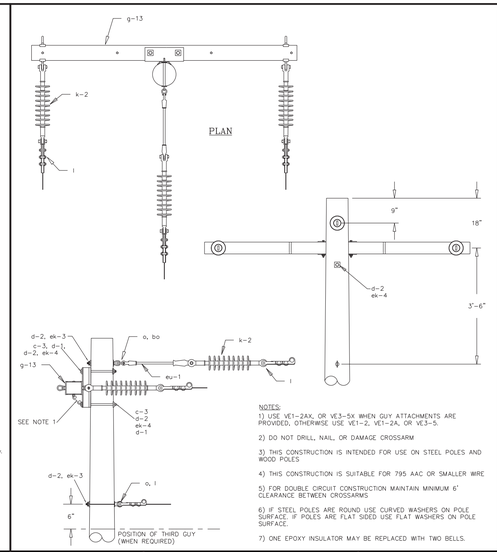
ELECTRIC RELOCATION

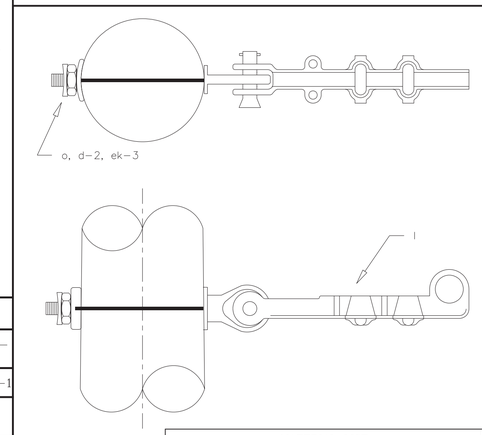
STA. 59+72.96 TO STA. 71+00.00

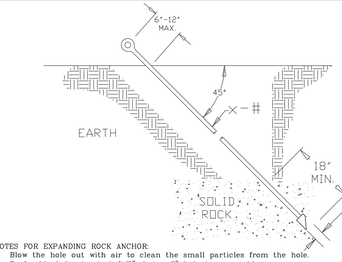
SCALE: 1" = 50'











TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	U4-4
CONST.	2017	75009-3238-04	U4-4

MATERIAL LIST

ITEM	CONTROL NUMBER	F6-6	F6-7	DESCRIPTION
z-3	1482	1	–	Anchor, 14" Power Installed
z-3	1306	–	1	Anchor, 10" Power Installed
ck-4	1453	–	1	Bonging Clamp for Twin Eye PISA Rod
ck-5	1454	1	–	Bonging Clamp for Triple Eye PISA Rod
x-4	1343	–	1	Rod, Anchor, 3/4" x 7' PISA w/ Twin Eye
x-4	1483	1	–	Rod, Anchor, 1" x 7' PISA w/ Triple Eye

MIDDLE
TENNESSEE
ELECTRIC
MEMBERSHIP
CORPORATION

POWER INSTALLED
SCREW ANCHOR

REVISED: 4-13-11
DES.: DL APPR.: ____
DRAWN: K.KESLER
F6-6, F6-7

NOTES:
1. This construction is suitable for steel poles.
2. Attach a single-phase tap 6" below or above selected main line phase except when tap will conflict with main line; adjust guys accordingly.
3. One epoxy insulator may be replaced with two bells.

MIDDLE
TENNESSEE
ELECTRIC
MEMBERSHIP
CORPORATION

THREE PHASE
VERTICAL CONSTRUCTION
MEDIUM/LARGE CONDUCTORS
DEADEND STRUCTURE
EPOXY INSULATOR

REVISED: 02-01-17
DES.: TS APPR.: ____
DRAWN: K.KESLER
VC5-1L, VC5-1LX

NOTES:
1) USE VE1-2AX, OR VE3-5X WHEN GUY ATTACHMENTS ARE PROVIDED, OTHERWISE USE VE1-2, VE1-2A, OR VE3-5.

2) DO NOT DRILL, NAIL, OR DAMAGE CROSSARM

3) THIS CONSTRUCTION IS INTENDED FOR USE ON STEEL POLES AND WOOD POLES

4) THIS CONSTRUCTION IS SUITABLE FOR 795 AAC OR SMALLER WIRE

5) FOR DOUBLE CIRCUIT CONSTRUCTION MAINTAIN MINIMUM 6' CLEARANCE BETWEEN CROSSARMS

6) IF STEEL POLES ARE ROUND USE CURVED WASHERS ON POLE SURFACE. IF POLES ARE FLAT SIDED USE FLAT WASHERS ON POLE SURFACE.

7) ONE EPOXY INSULATOR MAY BE REPLACED WITH TWO BELLS.

MIDDLE
TENNESSEE
ELECTRIC
MEMBERSHIP
CORPORATION

8 FT. FIBERGLASS
CROSSARM CONSTRUCTION
THREE PHASE
SINGLE DEADEND STRUCTURE
BRACELESS

REVISED: 02-01-17
DES.: G.S. APPR.: ____
DRAWN: A.N.L.
VC7HDF-1, VC7HDFX-1

MATERIAL LIST

ITEM	CONTROL NUMBER	QUANTITY	DESCRIPTION
d-2	0620A	1	Washer, Curved, 3" x 3" x 1/4", 13/16" Hole
ek-3	9746	1	Locknut, 5/8"
l	1910	1	Clamp, Deadend, Primary
o	0320	1	Bolt, Eye, Oval, Size as Required

NOTE: STYLE OF "l" MAY VARY BY MANUFACTURER

MIDDLE
TENNESSEE
ELECTRIC
MEMBERSHIP
CORPORATION

NEUTRAL DEADEND

REVISED: 6-20-06
DES.: CWB APPR.: ____
DRAWN: K.KESLER
M5-1

NOTES FOR EXPANDING ROCK ANCHOR:
1. Blow the hole out with air to clean the small particles from the hole.
2. Preferable hole size is 1-7/8", but a 2" hole is acceptable.
3. Chance recommends filling the hole with a nonshrinking grout.
4. Only 2 guys should be attached to a 3/4" rod, no matter how many positions are available on the eye.

NOTE FOR GROUTED ROCK ANCHORS:
Install anchor perpendicular to ground, 18" into solid rock, and bend into direction of applied strain.

MATERIAL LIST

ITEM	CONTROL NUMBER	F5-2	F5-6A	F5-7	F5-10	F7-6A	F7-6B	DESCRIPTION
ck-1	1455A	1	–	–	–	–	–	Bonding Clamp for Single Eye Rod
ck-2	1455B	–	–	1	–	–	–	Bonding Clamp for Twin Eye Rod
ck-3	1455C	–	–	–	1	1	1	Bonding Clamp for Triple Eye Rod
ck-5	1454	–	1	–	–	–	–	Bonding Clamp for Triple Eye PISA Rod
x-1	1350A	1	–	–	–	–	–	Rod, Anchor, 5/8" x 6' Single Eye
x-2	1342	–	–	1	–	–	–	Rod, Anchor, 3/4" x 8' Twin Eye
x-3	1343A	–	1	–	–	–	–	Rod, Anchor, 1" x 7' Triple Eye
x-4	1351	–	–	–	–	1	–	Rod, Expanding Anchor, 1"x 53" Triple Eye
x-5	1351B	–	–	–	–	–	1	Rod, Expanding Anchor, 1"x 72" Triple Eye
x-6	1340A	–	–	–	1	–	–	Rod, Anchor, 1" x 10' Triple Eye

MIDDLE
TENNESSEE
ELECTRIC
MEMBERSHIP
CORPORATION

ROCK
ANCHOR

REVISED: 12-02-15
DES.: D.L. APPR.: ____
DRAWN: A.N.L.
F5-2, F5-6A, F5-7,
F5-10, F7-6A, F7-6B

MATERIAL LIST

ITEM	CONTROL NUMBER	QUANTITY VC5-1L	QUANTITY VC5-1LX	DESCRIPTION
bo	1825A	3	3	Shackle, Anchor
d-2	0620A	4	3	Washer, Curved, 3" x 3" x 1/4", 13/16" Hole
ek-3	9746	4	3	Locknut, 5/8"
eu-1	1130A	3	3	Link, Extension, Fiberglass
k-2	1121	3	3	Epoxy, Deadend Insulator
l	1910	4	3	Clamp, deadend, primary
o	0320	4	3	Bolt, eye, oval, size as required

MIDDLE
TENNESSEE
ELECTRIC
MEMBERSHIP
CORPORATION

THREE PHASE
VERTICAL CONSTRUCTION
MEDIUM/LARGE CONDUCTORS
DEADEND STRUCTURE
EPOXY INSULATOR

REVISED: 02-01-17
DES.: TS APPR.: ____
DRAWN: K.KESLER
VC5-1L, VC5-1LX

MATERIAL LIST

ITEM	ITEM NUMBER	SAP NUMBER	VC7HDF-1 QUANTITY	VC7HDFX-1 QUANTITY	DESCRIPTION
bo	1825A	1230	1	1	Shackle, Anchor
c-3	0390	–	2	2	Bolt, Machine, 3/4" x Required Length
d-1	9782	10181	2	2	Washer, Flat, 2 1/4" x 2 1/4", 13/16" Hole
d-2	0620A	10027	4	3	Washer, Curved, 3" x 3", 13/16" Hole
ek-3	9746	10124	2	1	Locknut, 5/8"
ek-4	9750	10135	2	2	Locknut, 3/4"
eu-1	1130A	1194	1	1	Link, Extension, Fiberglass
g-13	0731	1165	1	1	Crossarm, Fiberglass, 3 5/8" x 4 5/8" x 8'; Dead-end, Braceless
k-2	1121	–	3	3	Epoxy, Deadend Insulator
l	1910	–	3	3	Clamp, Deadend, Primary
o	0320	10010	2	1	Bolt, Oval Eye, 5/8", Length as Required

MIDDLE
TENNESSEE
ELECTRIC
MEMBERSHIP
CORPORATION

8 FT. FIBERGLASS
CROSSARM CONSTRUCTION
THREE PHASE
SINGLE DEADEND STRUCTURE
BRACELESS

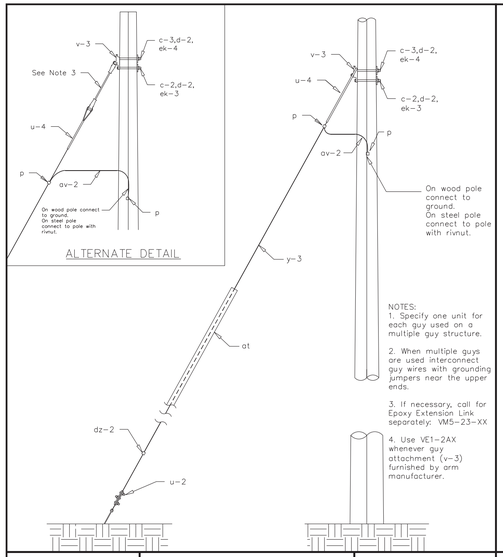
REVISED: 02-01-17
DES.: G.S. APPR.: ____
DRAWN: A.N.L.
VC7HDF-1, VC7HDFX-1

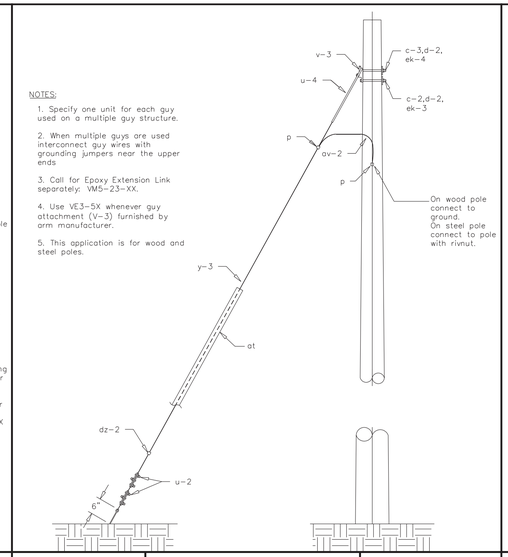
SAMUEL K. THOMASON
NO. 00105161
4-20-17

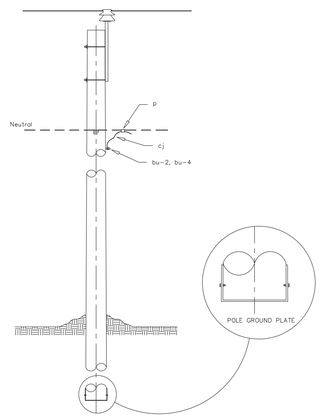
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DETAILS
ELECTRICAL
INSTALLATION
SPECIFICATIONS

`$$$$SYTIME$$$$`
`$$$$DGNSPEC$$$$`







TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	75009-2238-04	U4-5
CONST.	2017	75009-3238-04	U4-5

On wood pole connect to ground.
On steel pole connect to pole with rivnut.

NOTES:
1. Specify one unit for each guy used on a multiple guy structure.

2. When multiple guys are used interconnect guy wires with grounding jumpers near the upper ends.

3. If necessary, call for Epoxy Extension Link separately: VM5-23-XX

4. Use VE1-2AX whenever guy attachment (v-3) furnished by arm manufacturer.

MIDDLE
TENNESSEE
ELECTRIC
MEMBERSHIP
CORPORATION

DOWN GUY
THROUGH BOLT TYPE
WOOD POLE CONSTRUCTION
STEEL POLE CONSTRUCTION

REVISED: 10-15-15
DES.: CB APPR.: ____
DRAWN: WD

VE1-2A, VE1-2AX

NOTES:

1. Specify one unit for each guy used on a multiple guy structure.

2. When multiple guys are used interconnect guy wires with grounding jumpers near the upper ends

3. Call for Epoxy Extension Link separately: VM5-23-XX.

4. Use VE3-5X whenever guy attachment (V-3) furnished by arm manufacturer.

5. This application is for wood and steel poles.

On wood pole connect to ground.
On steel pole connect to pole with rivnut.

MIDDLE
TENNESSEE
ELECTRIC
MEMBERSHIP
CORPORATION

HEAVY CONSTRUCTION
DOWN GUY ASSEMBLY

REVISED: 10-15-15
DES.: CG APPR.: ____
DRAWN: RS

VE3-5, VE3-5X

NOTES:
1. This assembly is ONLY to be used for grounding steel poles that are equipped with a galvanized ground plate (by manufacturer)
2. For steel poles without ground plates, use VM2-11S (ground rod type)

MIDDLE
TENNESSEE
ELECTRIC
MEMBERSHIP
CORPORATION

GROUNDING ASSEMBLY-
GALVANIZED PLATE TYPE

REVISED: 2-1-08
DES.: DLH APPR.: ____
DRAWN: RDR

VM2-11SP

MATERIAL LIST

ITEM	CONTROL NUMBER	QUANTITY VE1-2A	QUANTITY VE1-2AX	SAP NUMBER	DESCRIPTION
at	9835	1	1	10242	Guy Marker (guy guard)
av-2	2120A	–	–	1254	Conductor, No. 4 BC, Soft Drawn (Size as required)
c-2	0370	1	–	–	Bolt, Machine, 5/8" x Required Length
c-3	0390	1	–	–	Bolt, Machine, 3/4" x Required Length
d-2	0620A	2	–	10027	Washer, Curved, 3" x 3" x 1/4", 13/16" hole
dz-2	1430B	1	1	10035	Clip, Guy Wire, 3/8"
ek-3	9746	1	–	10124	Locknut, 5/8"
ek-4	9750	1	–	10135	Locknut, 3/4"
p	–	–	–	–	Connectors as required
u-2	1440B	1	1	1218	Clamp, 3 bolt, heavy
u-4	1435B	1	1	1217	Deadend, guy strand, Formed type, 3/8"
v-3	1466C	1	–	1221	Guy Attachment, Multiple Application
y-3	1410A	50'	50'	1216	Guy Wire, 3/8" Hi-Strength

MIDDLE
TENNESSEE
ELECTRIC
MEMBERSHIP
CORPORATION

DOWN GUY
THROUGH BOLT TYPE
WOOD POLE CONSTRUCTION
STEEL POLE CONSTRUCTION

REVISED: 10-15-15
DES.: CB APPR.: ____
DRAWN: WD

VE1-2A, VE1-2AX

MATERIAL LIST

ITEM	CONTROL NUMBER	QUANTITY VE3-5	QUANTITY VE3-5X	SAP NUMBER	DESCRIPTION
at	9835	1	1	10242	Guy Marker (guy guard)
av-2	2120A	–	–	1254	Conductor, No. 4 BC, Soft Drawn (Size as required)
c-2	0370	1	–	–	Bolt, Machine, 5/8" x Required Length
c-3	0390	1	–	–	Bolt, Machine, 3/4" x Required Length
d-2	0620A	2	–	10027	Washer, Curved, 3" x 3" x 1/4", 13/16" hole
dz-2	1430B	1	1	10035	Clip, Guy Wire, 3/8"
ek-3	9746	1	–	10124	Locknut, 5/8"
ek-4	9750	1	–	10135	Locknut, 3/4"
p	–	–	–	–	Connectors as required
u-2	1440B	2	2	1218	Clamp, 3-Bolt, Heavy
u-4	1435B	1	1	1217	Deadend, Guy Strand, Formed Type, 3/8"
v-3	1466C	1	–	1221	Guy Attachment, Multiple Application
y-3	1410A	50'	50'	1216	Guy Strand, 3/8", Hi-Strength

MIDDLE
TENNESSEE
ELECTRIC
MEMBERSHIP
CORPORATION

HEAVY CONSTRUCTION
DOWN GUY ASSEMBLY

REVISED: 10-15-15
DES.: CG APPR.: ____
DRAWN: RS

VE3-5, VE3-5X

MATERIAL LIST

ITEM	CONTROL NUMBER	QUANTITY	DESCRIPTION
cj	2110A	10'	Conductor, no. 6 copper, hard-drawn
bu-2	9675	1	Service Post Connector
bu-4	11011	1	Rivnut
p	–	–	Connectors as required

NOTES:

MIDDLE
TENNESSEE
ELECTRIC
MEMBERSHIP
CORPORATION

GROUNDING ASSEMBLY-
GROUND PLATE TYPE

REVISED: 2-1-08
DES.: DLH APPR.: ____
DRAWN: RDR

VM2-11SP

SAMUEL K. THOMASON
NO. 00105161
4-20-17

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DETAILS
ELECTRICAL
INSTALLATION
SPECIFICATIONS

TENNESSEE D.O.T. | DESIGN DIVISION | FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
P.E.	2017	75009-1231-04	
CONST.	2017	NH-96(48)	S-1

SWPPP INDEX OF SHEETS

NOTE: CITATIONS IN PARENTHESIS INDICATE SECTIONS OF THE CURRENT CGP.

1. SWPPP REQUIREMENTS (3.0)

1.1. HAS THE SWPPP TEMPLATE BEEN PREPARED BY AN INDIVIDUAL THAT HAS THE FOLLOWING LICENSING AND/OR CERTIFICATIONS (3.1.1)?

☒ YES (CHECK ALL THAT APPLY BELOW) OR ☐ NO

- ☒ CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC)
- ☒ A TN LICENSED PROFESSIONAL ENGINEER OR LANDSCAPE ARCHITECT
- ☐ HAS SUCCESSFULLY COMPLETED TDEC LEVEL II COURSE

1.2. DO THE EPSC PLANS INVOLVE STRUCTURAL DESIGN, HYDRAULIC, HYDROLOGIC OR OTHER ENGINEERING CALCULATIONS FOR EPSC STRUCTURAL MEASURES (E.G. SEDIMENT BASINS) (3.1.1)? YES ☒ NO ☐

IF YES, HAVE THE EPSC PLANS BEEN PREPARED, STAMPED AND CERTIFIED BY A TN LICENSED PROFESSIONAL ENGINEER OR LANDSCAPE ARCHITECT? ☒ YES ☐ NO

1.3. DO THE PROJECT STORMWATER OUTFALLS DIRECTLY DISCHARGE INTO THE FOLLOWING (5.4.1)? ☐ YES (CHECK ALL THAT APPLY BELOW) ☒ NO

- ☐ WATERS WITH UNAVAILABLE PARAMETERS (303d FOR SILTATION OR HABITAT ALTERATION)
- ☐ EXCEPTIONAL TENNESSEE WATERS

IF YES TO SECTION 1.3, HAS THE SWPPP TEMPLATE BEEN PREPARED BY AN INDIVIDUAL THAT HAS THE FOLLOWING LICENSING AND/OR CERTIFICATIONS (5.4.1.b)?

☐ YES (CHECK ALL THAT APPLY BELOW) ☐ NO

- ☐ CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC)
- ☐ A TN LICENSED PROFESSIONAL ENGINEER OR LANDSCAPE ARCHITECT
- ☐ HAS SUCCESSFULLY COMPLETED TDEC LEVEL II COURSE

2. SITE DESCRIPTION (3.5.1)

2.1. PROJECT LIMITS (3.5.1.h): REFER TO TITLE SHEET

2.2. PROJECT DESCRIPTION (3.5.1.a):

TITLE: SR-96 FROM VETERANS PARKWAY (LM 6.08) TO EAST OF OVERALL CREEK (LM 6.42)
COUNTY: RUTHERFORD
PIN: 100282.02

2.3. SITE MAP(S) (2.6.2.): REFER TO TITLE SHEET

2.4. DESCRIPTION OF EXISTING SITE TOPOGRAPHY (3.5.1.d): REFER TO EXISTING CONTOURS SHEET(S) 9, DRAINAGE MAP SHEET(S) 7, USGS QUAD MAP, AND THE OUTFALL TABLE IN SECTION 4.3.

2.5. MAJOR SOIL DISTURBING ACTIVITIES (3.5.1.b) (CHECK ALL THAT APPLY):

- ☒ CLEARING AND GRUBBING
- ☒ EXCAVATION
- ☒ CUTTING AND FILLING
- ☒ FINAL GRADING AND SHAPING
- ☐ UTILITIES
- ☐ OTHER (DESCRIBE): _____

2.6. TOTAL PROJECT AREA (3.5.1.c): 6.313 ACRES

2.7. TOTAL AREA TO BE DISTURBED (3.5.1.c): 6.244 ACRES

2.8. NO MORE THAN 50 ACRES OF ACTIVE SOIL DISTURBANCE IS ALLOWED AT ANY TIME DURING THE CONSTRUCTION OF THE PROJECT.

2.9. ARE THERE ANY SEASONAL LIMITATIONS ON WORK? ☒ YES ☐ NO

IF YES, LIST THE CORRESPONDING PLAN SHEET: 1B

2.10. WAS ROW FINALIZED PRIOR TO FEBRUARY 1, 2010 (4.1.2.2)?

☐ YES _____ (DATE) ☒ NO

IF ROW WAS FINALIZED PRIOR TO FEBRUARY 1, 2010, THIS PROJECT IS CONSIDERED A PRE-APPROVED SITE (4.1.2.2)

2.11. SOIL PROPERTIES (3.5.1.f) (4.1.1).

SOIL PROPERTIES FOR THE PRIMARY SOILS ARE LISTED IN THE TABLE BELOW.

SOIL PROPERTIES

PRIMARY SOIL NAME	HSG	% OF SITE	ERODIBILITY (k value)
BRADYVILLE SILT LOAM (BrA)	C	5.8	0.37
BRADYVILLE SILT LOAM (BrB)	C	16.8	0.43
HARPETH SILT LOAM (HcA)	B	70.9	0.43
LOMOND SILT LOAM (LoB)	B	2.1	0.37
WATER	N/A	4.4	N/A

2.12. IS ACID PRODUCING ROCK (APR) (i.e. PYRITE) LOCATED WITHIN THE PROJECT LIMITS? ☐ YES ☒ NO

2.12.1. IF YES TO SECTION 2.13, HAVE APR LOCATIONS BEEN IDENTIFIED WITHIN THE CONSTRUCTION PLANS AND/OR THE GEOTECHNICAL REPORT? ☐ YES ☐ NO; AND

2.12.2. IF YES TO SECTION 2.12.1, HAS A SPECIAL HANDLING PLAN AND/OR ADAPTIVE MANAGEMENT PLAN (AMP) BEEN PREPARED FOR THE PROJECT? ☐YES ☐ NO ☐ N/A (TDOT SP107L WILL BE APPLIED.)

2.13. PROJECT RUNOFF COEFFICIENTS AND AREA PERCENTAGES (3.5.1.g).

RUNOFF COEFFICIENTS FOR EXISTING CONDITIONS

AREA TYPE	AREA(AC)	PERCENTAGE OF TOTAL AREA (%)	RUNOFF CN	C FACTOR
IMPERVIOUS	2.34	37		0.95
PERVIOUS	3.72	59		0.40
WATER	0.25	4		N/A
WEIGHTED CURVE NUMBER OR C-FACTOR =				0.59

RUNOFF COEFFICIENTS FOR POST-CONSTRUCTION CONDITIONS

AREA TYPE	AREA(AC)	PERCENTAGE OF TOTAL AREA (%)	RUNOFF CN	C FACTOR
IMPERVIOUS	4.43	70		0.95
PERVIOUS	1.63	26		0.40
WATER	0.25	4		N/A
WEIGHTED CURVE NUMBER OR C-FACTOR =				0.77

3. ORDER OF CONSTRUCTION ACTIVITIES (3.5.1.b, 3.5.2.a)

CONSTRUCTION SHALL BE SEQUENCED AND STAGED TO: MINIMIZE THE EXPOSURE TIME OF GRADED OR DENUDED SOIL AREAS, PRESERVE TOPSOIL, AND MINIMIZE SOIL COMPACTION. NO WORK SHALL BE STARTED UNTIL THE CONTRACTOR'S PLAN FOR THE STAGING OF THEIR OPERATIONS, INCLUDING THE PLAN FOR STAGING OF TEMPORARY AND PERMANENT EPSC MEASURES, HAS BEEN ACCEPTED BY THE ENGINEER. THE CONTRACTOR'S EPSC PLAN SHALL INCORPORATE AND SUPPLEMENT, AS ACCEPTABLE, THE ORDER OF CONSTRUCTION ACTIVITIES AND THE BASIC EPSC DEVICES DEPICTED ON THE EPSC PLAN CONTAINED WITHIN THE APPROVED SWPPP.

3.1. SPECIAL SEQUENCING REQUIREMENTS (SEE SHEETS 2D)
3.2. INSTALL STABILIZED CONSTRUCTION EXITS.
3.3. INSTALL PERIMETER PROTECTION WHERE RUNOFF SHEET FLOWS FROM THE SITE.
3.4. INSTALL INITIAL EPSC MEASURES BEFORE CLEARING, GRUBBING, EXCAVATION, GRADING, CULVERT OR BRIDGE CONSTRUCTION, CUTTING, FILLING, OR ANY OTHER EARTHWORK OCCURS, EXCEPT AS SUCH WORK MAY BE NECESSARY TO INSTALL EPSC MEASURES.
3.5. PERFORM CLEARING AND GRUBBING (NOT MORE THAN 14 DAYS PRIOR TO GRADING OR EARTH-MOVING. REFER TO THE STABILIZATION PRACTICES BELOW.).
3.6. REMOVE AND STORE TOPSOIL.
3.7. STABILIZE DISTURBED AREAS WITHIN 14 DAYS OF COMPLETING ANY STAGE AND/OR PHASE OF ACTIVITY.
3.8. INSTALL, STORM SEWERS AND CULVERTS.
3.9. INSTALL INLET AND CULVERT PROTECTION ONCE STRUCTURES ARE IN PLACE AND CAPABLE OF INTERCEPTING FLOW.
3.10. PERFORM FINAL GRADING AND INSTALL BASE STONE.
3.11. COMPLETE FINAL PAVING AND SEALING OF CONCRETE.
3.12. INSTALL TRAFFIC CONTROL AND PROTECTION DEVICES.
3.13. COMPLETE FINAL STABILIZATION (TOPSOIL, SEEDING, MULCH, EROSION CONTROL BLANKET, SOD, ETC.)
3.14. REMOVE TEMPORARY EROSION CONTROLS AND ACCUMULATED SEDIMENT FROM AREAS THAT HAVE ESTABLISHED AT LEAST 70 PERCENT UNIFORM PERMANENT VEGETATIVE COVER.
3.15. RE-STABILIZE AREAS DISTURBED BY REMOVAL ACTIVITIES.

4. STREAM, OUTFALL, WETLAND, TMDL AND ECOLOGY INFORMATION

4.1. STREAM INFORMATION (3.5.1.j, 3.5.1.k)

4.1.1. WILL CONSTRUCTION AND/OR EROSION PREVENTION AND SEDIMENT CONTROLS IMPACT ANY STREAMS WITHIN THE PROJECT LIMITS? ☒ YES ☐ NO

IF YES, THE IMPACT(S) HAVE BEEN INCLUDED IN THE TOTAL PROJECT IMPACTS AND HAVE BEEN INCLUDED IN THE WATER QUALITY PERMITS.

4.1.2. HAVE ANY OF THE RECEIVING STATE WATERS LESS THAN OR EQUAL TO 1 FLOW MILE DOWN GRADIENT OF THE PROJECT LIMITS BEEN CLASSIFIED BY TDEC AS FOLLOWS (CHECK ALL THAT APPLY):

- ☐ 303d WITH UNAVAILABLE PARAMETERS FOR SILTATION
- ☐ 303d WITH UNAVAILABLE PARAMETERS FOR HABITAT ALTERATION
- ☐ EXCEPTIONAL TENNESSEE WATERS (ETW)

4.1.3. RECEIVING WATERS OF THE STATE (3.5.1.k).

RECEIVING WATERS OF THE STATE INFORMATION

TDOT STATE WATER LABEL FROM EBR	NAME OF RECEIVING STATE WATER	303d WITH UNAVAILABLE PARAMETERS FOR SILTATION OR HABITAT ALTERATION (YES OR NO)	ETW (YES OR NO)	LOCATED WITHIN PROJECT LIMITS (YES OR NO)	LOCATED WITHIN ≤ 1 FLOW MILE DOWN GRADIENT OF PROJECT LIMITS (YES OR NO)
STR-1	OVERALL CREEK	NO	NO	YES	YES

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STORMWATER POLLUTION PREVENTION PLAN

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
P.E.	2017	75009-1231-04	
CONST.	2017	NH-96(48)	S-2

4.1.4. ARE THERE ANY WATER QUALITY RIPARIAN BUFFER ZONES REQUIRED FOR WATERS OF THE STATE? (4.1.2, 5.4.2)

☐ YES ☒ NO

BUFFER ZONE REQUIREMENTS ARE NOT REQUIRED FOR PRE-APPROVED SITES (4.1.2.2.)

IF YES, THEY HAVE BEEN INCLUDED ON PLAN SHEET(S) 10A.

IF YES, CHECK THE APPROPRIATE BOX BELOW FOR SIZE OF BUFFER.

☐ 60-FEET FOR WATERS WITH UNAVAILABLE PARAMETERS AND EXCEPTIONAL TENNESSEE WATERS (AVERAGE WIDTH PER SIDE WITH A MINIMUM OF 30-FEET).

A 60 FOOT NATURAL WATER QUALITY RIPARIAN BUFFER ZONE ADJACENT TO AND ON BOTH SIDES OF THE RECEIVING STATE STREAM WITH THIS DESIGNATION SHALL BE PRESERVED TO THE MAXIMUM EXTENT PRACTICABLE DURING CONSTRUCTION ACTIVITIES AT THE SITE. THE 60 FOOT CRITERION FOR THE WIDTH OF THE BUFFER ZONE CAN BE ESTABLISHED ON AN AVERAGE WIDTH BASIS AT A PROJECT, AS LONG AS THE MINIMUM WIDTH OF THE BUFFER ZONE IS MORE THAN 30 FEET AT ANY MEASURED LOCATION. IF THE CONSTRUCTION SITE ENCOMPASSES BOTH SIDES OF A STREAM, BUFFER AVERAGING CAN BE APPLIED TO BOTH SIDES, BUT MUST BE APPLIED INDEPENDENTLY.

☐ 30-FEET FOR ALL OTHER STREAMS (AVERAGE WIDTH PER SIDE WITH A MINIMUM OF 15-FEET).

A 30 FOOT NATURAL WATER QUALITY RIPARIAN BUFFER ZONE ADJACENT TO AND ON BOTH SIDES OF THE RECEIVING STATE STREAM SHALL BE PRESERVED TO THE MAXIMUM EXTENT PRACTICABLE DURING CONSTRUCTION ACTIVITIES AT THE SITE. THE 30 FOOT CRITERION FOR THE WIDTH OF THE BUFFER ZONE CAN BE ESTABLISHED ON AN AVERAGE WIDTH BASIS AT A PROJECT, AS LONG AS THE MINIMUM WIDTH OF THE BUFFER ZONE IS MORE THAN 15 FEET AT ANY MEASURED LOCATION. IF THE CONSTRUCTION SITE ENCOMPASSES BOTH SIDES OF A STREAM, BUFFER AVERAGING CAN BE APPLIED TO BOTH SIDES, BUT MUST BE APPLIED INDEPENDENTLY.

4.1.5. ARE THERE ANY WATER QUALITY RIPARIAN BUFFER ZONES NOT REQUIRED FOR STATE WATERS DUE TO A TDEC ARAP? (9.0)

☒ YES ☐ NO

4.1.6. ARE THERE WATER QUALITY RIPARIAN BUFFER ZONE EXEMPTIONS? (4.1.2.1) ☐ YES ☒ NO

IF YES, EXISTING CONDITIONS DESCRIPTION:_____

4.1.7. EVERY ATTEMPT SHOULD BE MADE FOR CONSTRUCTION ACTIVITIES TO NOT TAKE PLACE WITHIN THE WATER QUALITY RIPARIAN BUFFER ZONE AND FOR EXISTING FORESTED AREAS TO BE PRESERVED. (5.4.2.)

4.1.8. BECAUSE OF HEAVY SEDIMENT LOAD ASSOCIATED WITH CONSTRUCTION SITE RUNOFF, WATER QUALITY RIPARIAN BUFFER ZONES ARE NOT SEDIMENT CONTROL MEASURES AND SHOULD NOT BE RELIED UPON AS PRIMARY SEDIMENT CONTROL MEASURES. THE WATER QUALITY RIPARIAN BUFFER ZONE SHALL BE ESTABLISHED BETWEEN THE TOP OF THE STREAM BANK AND THE DISTURBED CONSTRUCTION AREA.

4.1.9. WHERE IT IS NOT PRACTICABLE TO MAINTAIN A FULL WATER QUALITY RIPARIAN BUFFER, BEST MANAGEMENT PRACTICES (BMPS) PROVIDING EQUIVALENT PROTECTION AS THE NATURAL RIPARIAN ZONE MUST BE USED. A JUSTIFICATION FOR USE AND DESIGN EQUIVALENCY SHALL BE DOCUMENTED WITHIN THE SWPPP. THE ENVIRONMENTAL AND ROADWAY DESIGN DIVISIONS SHALL REVIEW AND APPROVE THIS REVISION OF THE SWPPP BEFORE DISTURBANCE OF THE SITE PROCEEDS, UNLESS PREVIOUSLY EXEMPT IN THE NPDES CGP. WHERE ISSUED, ARAP/401 REQUIREMENTS WILL PREVAIL IF IN CONFLICT WITH THESE BUFFER ZONE REQUIREMENTS.

4.2. RECEIVING WATERS OF THE UNITED STATES (WOTUS) (EPHEMERAL)

WILL CONSTRUCTION AND/OR EROSION AND SEDIMENT CONTROLS

RECEIVING WOTUS (EPHEMERAL) INFORMATION

TDOT WOTUS LABEL	LOCATED WITHIN PROJECT LIMITS (YES OR NO)	LOCATED WITHIN 15-FT OF THE PROJECT LIMITS (YES OR NO)
WWC-1/EPH-1	YES	YES
WWC-2/EPH-2	TES	YES

4.2.1. ARE WATER QUALITY RIPARIAN BUFFER ZONES REQUIRED FOR WOTUS (4.1.2)? ☐ YES ☒ NO

IF YES, A 15 FOOT NATURAL WATER QUALITY RIPARIAN BUFFER ZONE ADJACENT TO AND ON BOTH SIDES OF THE RECEIVING EPHEMERAL STREAM IDENTIFIED AS A WOTUS (EPHEMERAL) BY THE U.S. ARMY CORPS OF ENGINEERS (USACE) OR THE ENVIRONMENTAL PROTECTION AGENCY SHALL BE PRESERVED TO THE MAXIMUM EXTENT PRACTICABLE DURING CONSTRUCTION ACTIVITIES AT THE SITE.

IF YES, THEY HAVE BEEN INCLUDED ON PLAN SHEET(S) _____

4.2.2. ARE THERE ANY WATER QUALITY RIPARIAN BUFFER ZONES NOT REQUIRED FOR WOTUS (EPHEMERAL) DUE TO A USACE PERMIT?

☐ YES ☒ NO

4.3. OUTFALL INFORMATION

4.3.1. OUTFALL TABLE (3.5.1.e). SEE SWPPP SHEET S-8 FOR OUTFALL INFORMATION.

4.3.2. HAVE ALL OUTFALLS BEEN LABELED ON THE EPSC PLAN SHEETS (3.5.1.h)? ☒ YES ☐ NO

4.3.3. HAVE ALL OUTFALLS BEEN LABELED ON A USGS TOPOGRAPHIC MAP INCLUDED IN THE "DOCUMENTATION AND PERMITS" BINDER (2.6.2)? ☒YES ☐ NO

4.3.4. WHERE POSSIBLE, HAS NON-PROJECT RUN-ON BEEN DIVERTED AROUND OR THROUGH THE PROJECT TO ELIMINATE CONTACT WITH DISTURBED AREAS OF THE PROJECT AND SEPARATE IT FROM PROJECT RUN-OFF THEREBY REDUCING THE DRAINAGE AREA OF TO THE OUTFALLS IN THIS AREA?

☒ YES ☐ NO ☐ N/A

4.3.5. ARE EQUIVALENT MEASURES BEING SUBSTITUTED FOR A SEDIMENT BASIN(S)? ☐ YES ☐ NO ☒ N/A

4.3.6. A SEDIMENT BASIN OR EQUIVALENT MEASURE(S) WILL BE PROVIDED FOR ANY OUTFALL IN A DRAINAGE AREA:

OF TEN ACRES OR MORE FOR AN OUTFALL(S) THAT DOES NOT DISCHARGE TO A STATE STREAM WITH UNAVAILABLE PARAMETERS OR EXCEPTIONAL TENNESSEE WATERS. A TEMPORARY (OR PERMANENT) SEDIMENT BASIN OR EQUIVALENT CONTROL MEASURES THAT PROVIDES STORAGE FOR A CALCULATED VOLUME OF RUNOFF FROM A MINIMUM 2-YEAR/ 24-HOUR STORM EVENT, SHALL BE PROVIDED UNTIL FINAL STABILIZATION OF THE SITE. (3.5.3.3)

OR

OF FIVE ACRES OR MORE FOR AN OUTFALL(S) THAT DISCHARGES TO A STATE STREAM WITH UNAVAILABLE PARAMETERS OR EXCEPTIONAL TENNESSEE WATERS. A TEMPORARY (OR PERMANENT) SEDIMENT BASIN THAT PROVIDES STORAGE FOR A CALCULATED VOLUME OF RUNOFF FROM A 5-YEAR/ 24-HOUR STORM EVENT AND RUNOFF FROM EACH ACRE DRAINED, OR EQUIVALENT CONTROL MEASURES, SHALL BE PROVIDED UNTIL FINAL STABILIZATION OF THE SITE. (5.4.1.g).

IN BOTH INSTANCES, THE ENVIRONMENTAL AND ROADWAY DESIGN DIVISIONS MAY BE CONTACTED TO REVIEW AND CONCUR WITH ANY REVISION OF THE SWPPP BEFORE DISTURBANCE OF THE OUTFALL PROCEEDS.

4.4. WETLAND INFORMATION

WILL CONSTRUCTION AND/OR EROSION AND SEDIMENT CONTROLS

WETLAND INFORMATION

TDOT WETLAND LABEL	FROM STATION LT OR RT	TO STATION LT OR RT	TEMPORARY IMPACTS (AC)	PERMANENT IMPACTS (AC)

4.5. TOTAL MAXIMUM DAILY LOADS (TMDL) INFORMATION (3.5.10)

4.5.1. IS THIS PROJECT LOCATED IN A HUC-8 WATERSHED THAT MAINTAINS AN EPA APPROVED TMDL FOR SILTATION AND HABITAT ALTERATION?

☒YES ☐ NO

4.5.2. IF YES, IS THIS PROJECT LOCATED WITHIN A HUC-12 SUBWATERSHED WITH A WASTE LOAD ALLOCATION (WLA)?

☒ YES ☐ NO

4.5.3. IF YES, DOES THE PROJECT HAVE A DIRECT DISCHARGE TO A 303(d) LISTED STREAM FOR SILTATION OR HABITAT ALTERATION?

☐ YES ☒ NO

4.5.4. IF YES, HAS A SUMMARY OF THE CONSULTATION LETTER BEEN SUBMITTED/RECEIVED?

☐ YES ☐ NO

4.6. ECOLOGY INFORMATION (3.5.5.e)

DOES THE TDOT ENVIRONMENTAL BOUNDARIES REPORT SPECIFY SPECIAL NOTES TO BE ADDED TO THE PLAN SHEETS?

☐ YES ☒ NO

IF YES, THEY HAVE BEEN INCLUDED ON PLAN SHEET(S) 1B.

4.7. ENVIRONMENTAL COMMITMENTS

ARE THERE ANY NOTES ON THE ENVIRONMENTAL COMMITMENT SHEET?

☒ YES ☐ NO

IF YES, THEY HAVE BEEN INCLUDED ON PLAN SHEET(S) 1B

5. EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) MEASURES (3.5.3)

5.1. EPSC MEASURES MUST BE DESIGNED, INSTALLED AND MAINTAINED TO CONTROL STORMWATER VOLUME AND VELOCITY WITHIN THE SITE TO MINIMIZE EROSION (4.1.1).

5.2. EPSC MEASURES MUST CONTROL STORMWATER DISCHARGES, INCLUDING BOTH PEAK FLOWS AND TOTAL STORMWATER VOLUME, TO MINIMIZE EROSION AT OUTLETS, STREAM CHANNELS, AND STREAM BANKS. (4.1.1)

5.3. HAVE THE CONTROL MEASURES BEEN DESIGNED PER THE SIZE AND SLOPE OF THE DISTURBED DRAINAGE AREA (3.5.3.3)?

☒YES ☐ NO

5.4. THE CONTROL MEASURES HAVE, AT A MINIMUM, BEEN DESIGNED FOR THE 5-YEAR, 24 HOUR STORM EVENT (3.5.3.3, 5.4.1.a).

5.5. ARE THE LIMITS OF DISTURBANCE CLEARLY MARKED ON THE EPSC PLANS (3.5.1.h)? ☒ YES ☐ NO

5.6. AREAS TO BE UNDISTURBED SHALL BE CLEARLY MARKED IN THE FIELD BEFORE CONSTRUCTION ACTIVITIES BEGIN.

5.7. UNLESS OTHERWISE NOTED IN THE PLANS, THE CONTRACTOR SHALL NOT CLEAR/DISTURB ANY AREA BEYOND 15 FEET FROM SLOPE LINES OR ROW/ EASEMENT LINE, WHICHEVER IS LESSER.

5.8. CLEARING, GRUBBING, AND OTHER DISTURBANCE TO RIPARIAN VEGETATION SHALL BE LIMITED TO THE MINIMUM NECESSARY FOR SLOPE CONSTRUCTION AND EQUIPMENT OPERATIONS. EXISTING VEGETATION, INCLUDING STREAM AND WETLAND BUFFERS (UNLESS PERMITTED), SHOULD BE PRESERVED TO THE MAXIMUM EXTENT POSSIBLE. UNNECESSARY VEGETATION REMOVAL IS PROHIBITED.

5.9. HAVE STAGED EPSC PLANS BEEN PREPARED FOR THE PROJECT (3.5.2)?

YES ☒ NO ☐ (IF YES, CHECK ONE BELOW)

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DESIGN DIVISION
FILE NO.

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5.10. STEEP SLOPES ARE DEFINED AS A NATURAL OR CREATED SLOPE OF 35% GRADE OR GREATER REGARDLESS OF HEIGHT. HAVE STEEP SLOPES BEEN MINIMALLY DISTURBED AND/OR PROTECTED BY CONVEYING RUNOFF NON-EROSIVELY AROUND OR OVER THE SLOPE (3.5.3.2) (10. "STEEP SLOPE")? ☐ YES ☐ NO ☒ N/A

5.11. THE STRUCTURAL EPSC MEASURES HAVE BEEN INCLUDED IN THE TOTAL PROJECT IMPACTS AND HAVE BEEN INCLUDED IN THE AQUATIC RESOURCE ALTERATION (ARAP) PERMIT OR SECTION 401 CERTIFICATION (3.5.1.j). REFER TO THE LIST OF APPLICABLE ENVIRONMENTAL PERMITS LOCATED ON SWPPP SHEET S-7. ALL PERMITS WILL BE MAINTAINED ON SITE WITHIN THE "DOCUMENTATION AND PERMITS" BINDER.

5.12. THE EPSC CONTROL MEASURES LISTED IN THE QUANTITIES TABLE ON SHEET 10 HAVE BEEN SELECTED IN ACCORDANCE WITH TDOT STANDARD DRAWINGS AND GOOD ENGINEERING PRACTICES (3.5.3.1.b).

5.13. EPSC MEASURES SHALL BE INSTALLED PER TDOT STANDARDS (i.e. STANDARD DRAWINGS) AND SHALL BE FUNCTIONAL PRIOR TO ANY EARTH MOVING OPERATIONS.

5.14. EPSC MEASURES WILL NOT BE INSTALLED WITHIN A STREAM WITHOUT FIRST OBTAINING APPROVAL FROM THE PERMITS SECTION.

5.15. TEMPORARY EPSC MEASURES MAY BE REMOVED AT THE BEGINNING OF THE WORKDAY, BUT MUST BE REINSTALLED AT THE END OF THE WORKDAY OR BEFORE A PRECIPITATION EVENT.

5.16. EPSC MEASURES LOCATED IN WOTUS (EPHEMERAL STREAMS) MUST BE CONSIDERED TEMPORARY AND SHALL BE REMOVED AT THE END OF CONSTRUCTION.

5.17. THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT THE OFF-SITE MIGRATION OR DEPOSIT OF SEDIMENT OFF THE PROJECT LIMITS (E.G. R.O.W., EASEMENTS, ETC.), INTO WATERS OF THE STATE/U.S., OR ONTO ROADWAYS USED BY THE PUBLIC. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFF-SITE ACCUMULATIONS OF SEDIMENT THAT HAVE NOT REACHED A STREAM MUST BE REMOVED TO A LEVEL SUFFICIENT TO MINIMIZE OFF-SITE IMPACTS (E.G., FUGITIVE SEDIMENT THAT HAS ESCAPED THE CONSTRUCTION SITE AND HAS COLLECTED IN A STREET MUST BE REMOVED SO THAT IT IS NOT SUBSEQUENTLY WASHED INTO STORM SEWERS AND STREAMS BY THE NEXT RAIN AND/OR SO THAT IT DOES NOT POSE A SAFETY HAZARD TO USERS OF PUBLIC STREETS). ARRANGEMENTS CONCERNING REMOVAL OF SEDIMENT ON ADJOINING PROPERTY MUST BE SETTLED WITH THE ADJOINING PROPERTY OWNER BEFORE REMOVAL OF SEDIMENT. SEDIMENT THAT MIGRATES INTO WATERS OF THE STATE/US SHALL NOT BE REMOVED WITHOUT GUIDANCE FROM TDOT ENVIRONMENTAL PERSONNEL.

5.18. OFFSITE VEHICLE TRACKING OF SEDIMENTS AND THE GENERATION OF DUST SHALL BE MINIMIZED. A STABILIZED CONSTRUCTION EXIT (A POINT OF ENTRANCE/EXIT TO THE CONSTRUCTION PROJECT) SHALL BE PROVIDED TO REDUCE THE TRACKING OF MUD AND DIRT ONTO PUBLIC ROADS BY CONSTRUCTION VEHICLES.

5.19. THE QUANTITIES REQUIRED FOR STABILIZED CONSTRUCTION EXITS PER TDOT STANDARDS HAVE BEEN SPECIFIED ON SHEET 2A (3.5.3.1.n).

5.20. DISCHARGES FROM DEWATERING ACTIVITIES ARE PROHIBITED UNLESS MANAGED BY APPROPRIATE CONTROLS THAT PROVIDE THE LEVEL OF TREATMENT (FILTRATION) NECESSARY TO COMPLY WITH PERMIT REQUIREMENTS. (4.1.4).

5.21. SETTLING BASINS AND SEDIMENT TRAPS SHALL BE PROPERLY DESIGNED PER THE SIZE OF THE DRAINAGE AREAS OR VOLUME OF WATER TO BE TREATED. TREATED WATER MUST BE DISCHARGED THROUGH A PIPE OR WELL VEGETATED OR LINED CHANNEL, SO THAT THE DISCHARGE DOES NOT CAUSE EROSION OR SEDIMENT TRANSPORT.

5.22. DISCHARGES FROM SEDIMENT BASINS AND IMPOUNDMENTS SHALL UTILIZE OUTLET STRUCTURES THAT ONLY WITHDRAW WATER FROM NEAR THE SURFACE OF THE BASIN OR IMPOUNDMENT. TREATED WATER MUST BE DISCHARGED THROUGH A PIPE, WELL- VEGETATED AND/OR LINED CHANNEL, SO THAT THE DISCHARGE DOES NOT CAUSE EROSION OR SEDIMENT TRANSPORT. (4.1.7).

5.23. THE DEWATERING OF WORK AREAS, TRENCHES, FOUNDATIONS, EXCAVATIONS, ETC. THAT HAVE COLLECTED STORMWATER, WATER FROM VEHICLE WASH AREAS, OR GROUNDWATER SHALL BE EITHER HELD IN RESOURCE. WATER MUST BE HELD WITHIN SETTLING BASINS UNTIL IT IS AT LEAST AS CLEAR AS THE RECEIVING WATERS.

5.25. DEWATERING STRUCTURES, SEDIMENT FILTER BAGS, SEDIMENT BASINS AND TRAPS SHALL NOT BE LOCATED CLOSER THAN 30 FEET (60 FEET DESIRABLE VEGETATIVE BUFFER) FOR WATERS WITH UNAVAILABLE PARAMETERS AND EXCEPTIONAL TENNESSEE WATERS AND 15 FEET (30 FEET DESIRABLE VEGETATIVE BUFFER) FOR ALL OTHER FEATURES FROM THE TOP BANK OF A STREAM, WOTUS (EPHEMERAL), WETLAND OR OTHER NATURAL RESOURCE AND SHALL BE PROPERLY DESIGNED PER THE SIZE OF THE DRAINAGE AREAS OR VOLUME OF WATER TO BE TREATED.

5.26. STABILIZATION PRACTICES: PRE-CONSTRUCTION VEGETATIVE COVER WILL NOT BE DESTROYED, REMOVED OR DISTURBED MORE THAN 14 DAYS PRIOR TO GRADING OR EARTH MOVING UNLESS THE AREA WILL BE SEEDED AND/OR MULCHED OR OTHER TEMPORARY COVER IS INSTALLED (3.5.3.1.h).

5.27. STABILIZATION MEASURES WILL BE INITIATED AS SOON AS POSSIBLE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED. TEMPORARY OR PERMANENT STABILIZATION WILL BE COMPLETED WITHIN 14 DAYS AFTER ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED IN THAT AREA. PERMANENT STABILIZATION WILL REPLACE TEMPORARY MEASURES AS SOON AS PRACTICABLE (3.5.3.2).

5.28. PRIORITY SHALL BE GIVEN TO FINISHING OPERATIONS AND PERMANENT EPSC MEASURES OVER TEMPORARY EPSC MEASURES ON ALL PROJECTS. UNPACKED GRAVEL CONTAINING FINES (SILT AND CLAY SIZED PARTICLES) OR CRUSHER-RUN WILL NOT BE CONSIDERED A NON-ERODIBLE SURFACE

5.29. DELAYING THE PLANTING OF COVER VEGETATION UNTIL WINTER MONTHS OR DRY MONTHS SHOULD BE AVOIDED, IF POSSIBLE.

5.30. A SOIL ANALYSIS SHALL BE PERFORMED PRIOR TO THE APPLICATION OF FERTILIZERS TO ANY PORTION OF THE STE. SOILS SHOULD BE ANALYZED FOR pH, BUFFER VALUE, PHOSPHOROUS, POTASSIUM, CALCIUM AND MAGNESIUM. SOIL SAMPLES SHOULD BE REPRESENTATIVE OF THE AREA FOR WHICH FERTILIZER WILL BE APPLIED. SAMPLE TYPE SHOULD BE COLLECTED AND ANALYZED IN ACCORDANCE WITH THE UT EXTENSION "SOIL TESTING" BROCHURE PB1061. (4.1.5.)

5.31. FERTILIZERS SHALL BE APPLIED ONLY IN THE AMOUNTS SPECIFIED FROM THE ANALYSES. ONCE APPLIED, FERTILIZERS SHALL BE WORKED INTO THE SOIL TO LIMIT THE EXPOSURE TO STORMWATER.

5.32. STEEP SLOPES SHALL BE TEMPORARILY STABILIZED NOT LATER THAN 7 DAYS AFTER CONSTRUCTION ACTIVITY ON THE SLOPE HAS TEMPORARILY OR PERMANENTLY CEASED. (3.5.3.2).

6. FLOCCULANTS (3.5.3.1.b)

IS ADDITIONAL PHYSICAL OR CHEMICAL TREATMENT OF STORMWATER RUNOFF NECESSARY (5.4.1.a)? ☐ YES ☒ NO

IF YES, THE FOLLOWING NOTES APPLY:

6.1. POLYACRYLAMIDES (PAM) SHALL BE OF THE ANIONIC OR NEUTRALLY CHARGED TYPE ONLY. PAM REQUIREMENTS ARE AS FOLLOWS:

6.1.1. CATIONIC PAM IS NOT ALLOWED BECAUSE OF ITS TOXICITY TO FISH AND AQUATIC LIFE.

6.1.2. ANIONIC AND NEUTRALLY CHARGED PAM SHALL MEET THE EPA AND FDA ACRYLAMIDE MONOMER LIMITS OF EQUAL TO OR LESS THAN 0.05% BY WEIGHT ACRYLAMIDE MONOMER.

6.1.3. ANIONIC AND NEUTRALLY CHARGED PAM SHALL HAVE A DENSITY OF 10% TO 55% BY WEIGHT AND A MOLECULAR WEIGHT OF 16 TO 24 MG/MOLES.

6.1.4. PAM MIXTURES SHALL BE NON-COMBUSTIBLE.

6.1.5. PAM SHALL CONTAIN ONLY MANUFACTURER-RECOMMENDED ADDITIVES.

6.2. ALL PHYSICAL AND/OR CHEMICAL TREATMENT WILL BE RESEARCHED, APPLIED IN ACCORDANCE WITH MANUFACTURE'S GUIDELINES AND FULLY DESCRIBED ON THE EPSC PLANS (3.5.3.1.b).

SUPPLY A WRITTEN TOXICITY REPORT FOR BOTH ACUTE AND CHRONIC TOXICITY TESTS WHICH VERIFIES THAT THE FLOCCULANT EXHIBITS ACCEPTABLE TOXICITY PARAMETERS WHICH MEET OR EXCEED THE EPA REQUIREMENTS FOR THE STATE AND FEDERAL WATER QUALITY STANDARDS. WHOLE EFFLUENT TESTING DOES NOT MEET THIS REQUIREMENT AS PRIMARY REACTIONS HAVE OCCURRED AND TOXIC POTENTIALS HAVE BEEN REDUCED.

6.5. DO NOT APPLY FLOCCULANTS DIRECTLY TO, OR WITHIN 60 FEET, OF ANY STREAMS, WETLANDS, OR OTHER NATURAL WATER RESOURCE LOCATED ON OR ADJACENT TO THE CONSTRUCTION SITE. DO NOT APPLY FLOCCULANTS DIRECTLY INTO WATERS CONTAINED WITHIN SEDIMENT PONDS OR TO SLOPES THAT PRODUCE RUNOFF DIRECTLY INTO A STREAM, WETLAND, OR OTHER NATURAL WATER RESOURCE. DO NOT APPLY FLOCCULANTS IMMEDIATELY AT A STORMWATER OUTFALL WHERE RUNOFF LEAVES THE PROJECT LIMITS.

6.6. BEFORE FLOCCULANTS CAN BE USED ON A CONSTRUCTION PROJECT, SITE-SPECIFIC SOIL SAMPLES MUST BE OBTAINED AND TESTED BY THE MANUFACTURER OR THEIR REPRESENTATIVE, TO IDENTIFY THE OPTIMUM FLOCCULANT TYPE AND APPLICATION RATE. SINCE FLOCCULANT EFFICACY IS HIGHLY DEPENDENT ON SOIL TYPE, SOIL SAMPLES WILL NEED TO BE OBTAINED FROM EACH SOIL HORIZON THAT WILL BE ACCESSED DURING EXCAVATION. FLOCCULANTS SHOULD BE APPLIED ON A CONSTRUCTION SITE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED APPLICATION OR DOSAGE RATE. APPLICATION METHOD SHALL ENSURE UNIFORM COVERAGE TO THE TARGET AREA. DO NOT APPLY EMULSION FORMS OF FLOCCULANTS DIRECTLY TO STORMWATER RUNOFF OR TO STREAMS, WETLANDS, OR OTHER WATER RESOURCES DUE TO SURFACTANT TOXICITY.

6.7. FLOCCULANT POWDER MAY BE APPLIED BY A HAND SPREADER OR A MECHANICAL SPREADER. IF APPROVED BY THE MANUFACTURER, FLOCCULANT MAY BE MIXED WITH DRY SILICA SAND, FERTILIZER, SEED, OR OTHER SOIL AMENDMENTS TO AID IN SPREADING. FLOCCULANTS MAY ALSO BE APPLIED WITH A WATER TRUCK OR AS PART OF HYDRO-SEEDING. APPLICATION METHOD SHALL ENSURE UNIFORM COVERAGE TO THE TARGET AREA.

6.8. MANUFACTURER'S GUIDANCE SHOULD BE FOLLOWED FOR BLOCK, LOG AND SOCK SPACING CONFIGURATIONS. BEFORE FLOCCULANTS CAN BE USED ON A CONSTRUCTION PROJECT, SITE-SPECIFIC SOIL SAMPLES MUST BE OBTAINED AND TESTED BY THE MANUFACTURER OR THEIR REPRESENTATIVE, TO IDENTIFY THE OPTIMUM FLOCCULANT TYPE AND APPLICATION RATE. SINCE FLOCCULANT EFFICACY IS HIGHLY DEPENDENT ON SOIL TYPE, SOIL SAMPLES WILL NEED TO BE OBTAINED FROM EACH SOIL HORIZON THAT WILL BE ACCESSED DURING EXCAVATION. FLOCCULANTS SHOULD BE APPLIED ON A CONSTRUCTION SITE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED APPLICATION OR DOSAGE RATE.

7. UTILITY RELOCATION

ARE UTILITIES INCLUDED IN THE CONTRACT? ☐ YES ☒ NO

IF YES, THE FOLLOWING APPLY:

7.1. STORMWATER WHICH COLLECTS IN THE UTILITY TRENCH SHALL BE PUMPED INTO A DEWATERING STRUCTURE OR SEDIMENT FILTER BAG AND TREATED PRIOR TO DISCHARGE.

7.2. SILT FENCE SHALL BE INSTALLED ON THE DOWNGRADIENT SIDE OF STOCKPILED SOIL. ANY TRENCHING ACROSS WET WEATHER CONVEYANCES SHALL BE DONE DURING DRY CONDITIONS, REMOVED AND STABILIZED BY THE END OF THE WORK DAY.

7.3. UTILITY CROSSINGS IN ENVIRONMENTAL FEATURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH TDOT STANDARDS AND NO WORK SHALL BE CONDUCTED IN FLOWING WATERS. ENVIRONMENTAL PERMITS APPLY TO UTILITIES IN THIS PROJECT. THE STATE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE PERMITS.

7.4. IT IS THE RESPONSIBILITY OF THE STATE UTILITY CONTRACTOR TO PROTECT EXPOSED EARTH FROM EROSION AND TO PROVIDE FOR CONTAINMENT OF SEDIMENT THAT MAY RESULT FROM THEIR WORK. PRIOR TO BEGINNING WORK, ADEQUATE EPSC MEASURES MUST BE IN PLACE TO TRAP ANY SEDIMENT THAT MAY TRAVEL OFF-SITE IN THE EVENT OF RAIN. DURING THE PROGRESSION OF THEIR WORK, EXPOSED EARTH AREAS SHALL BE STABILIZED AS SOON AS POSSIBLE TO PREVENT

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DAILY IF POSSIBLE, BUT NO LATER THAN FOURTEEN DAYS AFTER BEING BACKFILLED. ANY TEMPORARY SPOILS OF EXCAVATED EARTH SHALL BE LOCATED WITHIN TDOT EPSC MEASURES OR RECEIVE SEPARATE EPSC MEASURES. IF TRENCHES ARE NOT BACKFILLED OVERNIGHT, APPROPRIATE EPSC MEASURES WILL BE INSTALLED BY THE STATE UTILITY CONTRACTOR UNTIL THE TRENCH IS BACKFILLED.

7.6. IN REGARDS TO EPSC, TDEC REGULATIONS APPLY TO THE STATE UTILITY CONTRACTORS ON THIS PROJECT. THE STATE CONTRACTOR IS RESPONSIBLE FOR EPSC MEASURES RELATED TO UTILITY CONSTRUCTION INCLUDED IN THE STATE CONTRACT.

7.7. TRENCHES FORMED FOR THE INSTALLATION OF BURIED UTILITIES MAY CAUSE STORMWATER RUNOFF TO CONCENTRATE AT THE TRENCH LINE. ADDITIONAL EPSC MEASURES MAY BE REQUIRED TO BE INSTALLED AS APPROVED BY THE TDOT PROJECT ENGINEER.

7.8. FOR THE INSTALLATION OF UNDERGROUND UTILITIES OUTSIDE OF THE TDOT RIGHT-OF-WAY, EPSC MEASURES SHALL BE INSTALLED PRIOR TO CLEARING (TRENCHING AND ASSOCIATED BLASTING) IN THOSE AREAS NECESSARY TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION AREA. THESE EPSC MEASURES SHALL REMAIN UNTIL THE BACKFILLED TRENCH IS STABILIZED WITH FINAL VEGETATIVE COVER.

7.9. THE UTILITY CONTRACTOR SHALL RESTORE ALL AFFECTED WET WEATHER CONVEYANCES TO THE EXISTING TOPOGRAPHIC CONDITIONS AS APPROVED BY THE TDOT RESPONSIBLE PARTY.

7.10. THE UTILITY CONTRACTOR WILL PROVIDE APPROPRIATE EPSC MEASURES TO REPLACE ONSITE EPSC MEASURES REMOVED TO FACILITATE THE INSTALLATION OF UTILITIES. REPLACEMENT OF EPSC MEASURES WILL BE COORDINATED WITH THE TDOT ENGINEER BEFORE COMMENCING WORK.

7.11. FOR UTILITY CROSSINGS THAT UTILIZE HORIZONTAL DIRECTIONAL DRILLING THE FOLLOWING SHALL APPLY:

7.11.1. THE ENTRY AND EXIT POINTS SHALL BE AT LEAST 50 FEET FROM THE STREAM BANK OR WETLAND BOUNDARY.

7.11.2. THE DEPTH OF BORE BELOW THE STREAMBED IS SUFFICIENT TO PREVENT RELEASE OF DRILLING FLUID, BASED ON THE PARENT MATERIAL.

7.11.3. A SITE-SPECIFIC CONTINGENCY AND CONTAINMENT PLAN FOR INADVERTENT RELEASE OF DRILLING FLUID SHALL BE ESTABLISHED PRIOR TO COMMENCEMENT OF WORK. THIS PLAN SHALL BE SUBMITTED TO THE TDOT PROJECT ENGINEER AND THE TDOT ENVIRONMENTAL DIVISION PERMITS AND/OR COMPLIANCE AND FIELD SERVICES OFFICE FOR REVIEW AND APPROVAL.

8. MAINTENANCE AND INSPECTION

8.1. INSPECTION PRACTICES (3.5.8)

8.1.1. PROJECT EPSC INSPECTORS AND ENGINEERS (INCLUDING TDOT STAFF, CONSULTANTS AND CONTRACTOR STAFF) RESPONSIBLE FOR THE INSPECTION, IMPLEMENTATION, MAINTENANCE. AND/OR REPAIR OF EPSC MEASURES SHALL MEET ONE OF THE FOLLOWING REQUIREMENTS (3.5.8.1.):

8.1.1.1. SUCCESSFULLY COMPLETED THE TDOT EPSC INSPECTIONS TRAINING AND ANY RECERTIFICATION COURSE AS REQUIRED.

8.1.1.2. SUCCESSFULLY COMPLETED THE TDEC "LEVEL I - FUNDAMENTALS OF EROSION PREVENTION AND SEDIMENT CONTROL" COURSE AND ANY RECERTIFICATION COURSES AS REQUIRED

8.1.1.3. BE A CURRENT TN LICENSED PROFESSIONAL ENGINEER OR LANDSCAPE ARCHITECT.

8.1.1.4. BE A CURRENT CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC).

8.1.1.5. SUCCESSFULLY COMPLETED TDEC "LEVEL II – DESIGN PRINCIPLES FOR EROSION PREVENTION AND SEDIMENT CONTROL FOR CONSTRUCTION SITES" COURSE AND ANY RECERTIFICATION COURSE AS REQUIRED.

8.1.2. THE TDOT CONSTRUCTION ENGINEER (OR THEIR DULY AUTHORIZED REPRESENTATIVE) AND THE CONTRACTOR'S SITE

8.1.3. THE INSPECTOR SHALL CONDUCT PRE-CONSTRUCTION INSPECTIONS TO VERIFY AREAS THAT ARE NOT TO BE DISTURBED HAVE BEEN MARKED IN THE SWPPP AND IN THE FIELD BEFORE LAND DISTURBANCE ACTIVITIES BEGIN AND INITIAL MEASURES HAVE BEEN INSTALLED (10 "INSPECTOR") (3.5.1.o).

8.1.4. EPSC CONTROLS SHALL BE INSPECTED TO VERIFY MEASURES HAVE BEEN INSTALLED AND MAINTAINED IN ACCORDANCE WITH TDOT STANDARD DRAWINGS, SPECIFICATIONS, AND GOOD ENGINEERING PRACTICES. EPSC INSPECTIONS SHALL BE DOCUMENTED ON THE TDOT EPSC INSPECTION REPORT FORM AND THE TDEC CONSTRUCTION STORMWATER INSPECTION CERTIFICATION (TWICE-WEEKLY INSPECTIONS) FORM.

8.1.5. OUTFALL POINTS SHALL BE INSPECTED TO ASCERTAIN WHETHER EPSC MEASURES ARE EFFECTIVE IN PREVENTING EROSION AND CONTROLLING SEDIMENT INCLUDING SIGNIFICANT IMPACTS TO SURROUNDING STATE WATERS, WOTUS (EPHEMERAL), WETLANDS, OTHER NATURAL RESOURCES AND ADJACENT PROPERTY OWNERS. WHERE DISCHARGE LOCATIONS ARE INACCESSIBLE, NEARBY DOWN GRADIENT LOCATIONS SHALL BE INSPECTED. LOCATIONS WHERE VEHICLES ENTER AND EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFF-SITE ROADWAY SEDIMENT TRACKING.

8.1.6. INSPECTIONS WILL BE CONDUCTED AT LEAST TWICE EVERY CALENDAR WEEK AND AT LEAST 72 HOURS APART (3.5.8.2.a). A CALENDAR WEEK IS DEFINED AS SUNDAY THROUGH SATURDAY. QUALITY ASSURANCE INSPECTIONS OF TDOT EPSC, NPDES AND WATER QUALITY PERMIT REQUIREMENTS SHALL BE PERFORMED PER THE TDOT ENVIRONMENTAL DIVISION COMPLIANCE AND FIELD SERVICES OFFICE.

8.1.7. THE FREQUENCY OF EPSC INSPECTIONS MAY BE REDUCED TO ONCE A MONTH WHERE SITES OR PORTIONS OF SITES HAVE BEEN TEMPORARILY STABILIZED UNTIL CONSTRUCTION ACTIVITIES RESUME WITH WRITTEN NOTIFICATION BY THE TDOT REGIONAL ENGINEER TO TDEC NASHVILLE CENTRAL OFFICE AND SUBSEQUENT TDEC APPROVAL. WRITTEN NOTIFICATION MUST INCLUDE THE INTENT TO CHANGE FREQUENCY AND JUSTIFICATION (3.5.8.2.a).

8.1.8. ALL DISTURBED AREAS OF THE SITE THAT HAVE NOT BEEN FINALLY STABILIZED, AREAS USED FOR MATERIAL STORAGE THAT ARE EXPOSED TO PRECIPITATION, STRUCTURAL CONTROL MEASURES, AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE, AND EACH OUTFALL WILL BE INSPECTED (3.5.8.2.b).

8.1.9. THE INSPECTOR WILL OVERSEE THE REQUIREMENTS OF OTHER CONSTRUCTION-RELATED WATER QUALITY PERMITS (I.E. TDEC ARAP, USACE SECTION 404, AND TVA SECTION 26a PERMITS) FOR CONSTRUCTION ACTIVITIES AROUND WATERS OF THE STATE (10 "INSPECTOR").

8.1.10. THE SWPPP WILL BE REVISED AS NECESSARY BASED ON THE RESULTS OF THE INSPECTION. REVISION(S) WILL BE RECORDED WITHIN 7 DAYS OF THE INSPECTION. REVISION(S) WILL BE IMPLEMENTED WITHIN 14 DAYS OF THE INSPECTION (3.5.8.2.e AND 3.5.8.2.f).

8.1.11. DOCUMENTATION OF INSPECTIONS WILL BE MAINTAINED ON SITE IN THE "DOCUMENTATION AND PERMITS" BINDER. REPORTS WILL BE SUBMITTED TO THE TDOT PROJECT ENGINEER PER THE CONTRACT.

8.1.12. THESE INSPECTION REQUIREMENTS DO NOT APPLY TO DEFINABLE AREAS OF THE SITE THAT HAVE MET FINAL STABILIZATION REQUIREMENTS AND HAVE BEEN NOTED IN THE SWPPP.

8.1.13. TRAINED CERTIFIED INSPECTORS SHALL COMPLETE INSPECTION TO THE BEST OF THEIR ABILITY. FALSIFYING INSPECTION RECORDS OR OTHER DOCUMENTATION OR FAILURE TO COMPLETE INSPECTION DOCUMENTATION SHALL RESULT IN A VIOLATION OF THIS PERMIT AND ANY OTHER APPLICABLE ACTS OR RULES (3.5.8.2.h).

8.2. DULY AUTHORIZED REPRESENTATIVE (7.7.3)

THE PROJECT ENGINEER MAY DELEGATE AN INDIVIDUAL AND/OR CONSULTANT TO SIGN EPSC INSPECTIONS REPORTS, FOR SATISFYING

8.3.1. ALL CONTROLS WILL BE MAINTAINED IN GOOD AND EFFECTIVE OPERATING ORDER AND IN ACCORDANCE WITH TDOT STANDARD DRAWINGS AND GOOD ENGINEERING PRACTICES. (3.5.3.1.b)

8.3.2. MAINTENANCE AND REPAIR ACTIVITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR.

8.3.3. UPON CONCLUSION OF THE INSPECTIONS, EPSC MEASURES FOUND TO BE INEFFECTIVE SHALL BE REPAIRED, REPLACED, OR MODIFIED BEFORE THE NEXT RAIN EVENT, IF POSSIBLE, BUT IN NO CASE, MORE THAN 24 HOURS AFTER THE INSPECTION OR WHEN THE CONDITION IS IDENTIFIED. IF THE REPAIR, REPLACEMENT OR MODIFICATION IS NOT PRACTICAL WITHIN THE 24-HOUR TIMEFRAME, WRITTEN DOCUMENTATION PROVIDED BY THE CONTRACTOR SHALL BE PLACED IN THE FIELD DIARY AND EPSC INSPECTION REPORT. AN ESTIMATED REPAIR, REPLACEMENT OR MODIFICATION SCHEDULE SHALL BE DOCUMENTED WITHIN 24 HOURS AFTER IDENTIFICATION. (3.5.8.2.e).

8.3.4. SEDIMENT SHALL BE REMOVED FROM SEDIMENT CONTROL STRUCTURES (SEDIMENT TRAPS, SILT FENCE, SEDIMENT BASINS, OTHER CONTROLS, ETC.) WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT (50%). (3.5.3.1.e).

8.3.5. DURING SEDIMENT REMOVAL, THE CONTRACTOR SHALL TAKE STEPS TO ENSURE THAT STRUCTURAL COMPONENTS OF EPSC MEASURES ARE NOT DAMAGED AND THUS MADE INEFFECTIVE. IF DAMAGE DOES OCCUR, THE CONTRACTOR SHALL REPAIR THE EPSC MEASURES AT THE CONTRACTOR'S OWN EXPENSE.

8.3.6. CHECK DAMS WILL BE INSPECTED FOR STABILITY. SEDIMENT WILL BE REMOVED WHEN DEPTH REACHES ONE-HALF (½) THE HEIGHT OF THE DAM.

8.3.7. SEDIMENT REMOVED FROM SEDIMENT CONTROL STRUCTURES SHALL BE PLACED AND TREATED IN A MANNER SO THAT THE SEDIMENT IS CONTAINED WITHIN THE PROJECT LIMITS, DOES NOT MIGRATE INTO FEATURES REMOVED FROM, AND DOES NOT MIGRATE ONTO ADJACENT PROPERTIES AND/OR INTO WATERS OF THE STATE/U.S.

8.3.8. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER WILL BE PICKED UP AND REMOVED FROM STORMWATER EXPOSURE PRIOR TO ANTICIPATED STORM EVENTS OR BEFORE BEING CARRIED OFF THE SITE BY WIND, OR OTHERWISE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORMWATER DISCHARGES. AFTER USE, MATERIALS USED FOR EROSION CONTROL WILL BE REMOVED (3.5.3.1.f).

8.3.9. ALL SEEDED AREAS WILL BE CHECKED FOR BARE SPOTS, EROSION WASHOUTS, AND VIGOROUS GROWTH FREE OF SIGNIFICANT WEED INFESTATIONS.

9. SITE ASSESSMENTS (3.1.2)

QUALITY ASSURANCE SITE ASSESSMENTS OF EROSION PREVENTION AND SEDIMENT CONTROLS SHALL BE PERFORMED PER THE TDOT ENVIRONMENTAL DIVISION COMPLIANCE AND FIELD SERVICES OFFICE GUIDELINES.

10. STORMWATER MANAGEMENT (3.5.4)

10.1. STORMWATER MANAGEMENT WILL BE HANDLED BY TEMPORARY CONTROLS OUTLINED IN THIS SWPPP AND ANY PERMANENT CONTROLS NEEDED TO MEET PERMANENT STORMWATER MANAGEMENT NEEDS IN THE POST CONSTRUCTION PERIOD. PERMANENT CONTROLS WILL BE DEPICTED ON THE PLANS AND NOTED AS PERMANENT.

10.2. DESCRIBE ANY SPECIFIC POST-CONSTRUCTION MEASURES THAT WILL CONTROL VELOCITY, POLLUTANTS, AND/OR EROSION (3.5.4): BRUSH MATTRESS, RIP-RAP, SOD

10.3. OTHER ITEMS NEEDING CONTROL (3.5.5)

CONSTRUCTION MATERIALS: THE FOLLOWING MATERIALS OR SUBSTANCES ARE EXPECTED TO BE PRESENT ON THE SITE DURING THE CONSTRUCTION PERIOD. (CHECK ALL THAT APPLY).

☒ LUMBER, GUARDRAIL, TRAFFIC CONTROL DEVICES

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☐ ROCK
☒ CURING COMPOUND
☐ EXPLOSIVES
☐ OTHER _____

THESE MATERIALS WILL BE HANDLED AS NOTED IN THIS SWPPP.

10.4. WASTE MATERIALS (3.5.5.b)

WASTE MATERIAL (EARTH, ROCK, ASPHALT, CONCRETE, ETC.) NOT REQUIRED FOR THE CONSTRUCTION OF THE PROJECT WILL BE DISPOSED OF BY THE CONTRACTOR IN ACCORDANCE WITH THE TDOT CONSTRUCTION CONTRACT AND FEDERAL AND STATE REGULATIONS. IMPACTS TO WATERS OF THE STATE/U.S. SHALL BE AVOIDED IF POSSIBLE. IF UNAVOIDABLE, THE CONTRACTOR WILL OBTAIN ALL NECESSARY PERMITS INCLUDING, BUT NOT LIMITED TO NPDES, AQUATIC RESOURCES ALTERATION PERMIT(S) CORPS OF ENGINEERS SECTION 404 PERMITS, AND TVA SECTION 26A PERMITS TO DISPOSE OF WASTE MATERIALS.

10.5. HAZARDOUS WASTE (3.5.5.c) (7.9)

ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN A MANNER WHICH IS COMPLIANT WITH LOCAL OR STATE REGULATIONS. SITE PERSONNEL WILL BE INSTRUCTED IN THESE PRACTICES, AND THE INDIVIDUAL DESIGNATED AS THE CONTRACTOR'S ON-SITE REPRESENTATIVE WILL BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED. THE CONTRACTOR WILL OBTAIN ALL NECESSARY PERMITS TO DISPOSE OF HAZARDOUS MATERIAL.

10.6. SANITARY WASTE (3.5.5.b)

PORTABLE SANITARY FACILITIES WILL BE PROVIDED ON ALL CONSTRUCTION SITES. SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS IN A TIMELY MANNER BY A LICENSED WASTE MANAGEMENT CONTRACTOR OR AS REQUIRED BY ANY LOCAL REGULATIONS. THE CONTRACTOR WILL OBTAIN ALL NECESSARY PERMITS TO DISPOSE OF SANITARY WASTE.

10.7. OTHER MATERIALS

THE FOLLOWING MATERIALS OR SUBSTANCES ARE EXPECTED TO BE PRESENT ON THE SITE DURING THE CONSTRUCTION PERIOD. (CHECK ALL THAT APPLY).

☒ FERTILIZERS AND LIME
☐ PESTICIDES AND/OR HERBICIDES
☒ DIESEL AND GASOLINE
☒ MACHINERY LUBRICANTS (OIL AND GREASE)

THESE MATERIALS WILL BE HANDLED AS NOTED IN THIS SWPPP.

11. <u>NON-STORMWATER DISCHARGES</u> (3.5.9)

11.1. THE FOLLOWING NON-STORMWATER DISCHARGES ARE ANTICIPATED DURING THE CONSTRUCTION OF THIS PROJECT (CHECK ALL THAT APPLY):

☒ DEWATERING OF WORK AREAS OF COLLECTED STORMWATER AND GROUND WATER.
☒ WATERS USED TO WASH VEHICLES (OF DUST AND SOIL) WHERE DETERGENTS ARE NOT USED AND DETENTION AND/OR FILTERING IS PROVIDED BEFORE THE WATER LEAVES THE SITE.
☒ WATER USED TO CONTROL DUST. (3.5.3.1.n)
☐ POTABLE WATER SOURCES INCLUDING WATERLINE FLUSHING FROM WHICH CHLORINE HAS BEEN REMOVED TO THE MAXIMUM EXTENT PRACTICABLE.
☐ UNCONTAMINATED GROUNDWATER OR SPRING WATER.
☐ FOUNDATION OR FOOTING DRAINS WHERE FLOWS ARE NOT CONTAMINATED WITH POLLUTANTS.
☐ OTHER: _____

11.2. ALL ALLOWABLE NON-STORMWATER DISCHARGES WILL BE DIRECTED TO STABLE DISCHARGE STRUCTURES PRIOR TO LEAVING THE SITE. FILTERING OR CHEMICAL TREATMENT MAY BE NECESSARY PRIOR TO DISCHARGE. ALL CHEMICAL TREATMENTS MUST BE APPLIED PER SECTION 6 FLOCCULANTS.

11.3. THE DESIGN OF ALL IMPACTED EPSC MEASURES RECEIVING FLOW FROM

11.5. ARE ANY DISCHARGES ASSOCIATED WITH INDUSTRIAL (NON-CONSTRUCTION STORMWATER) ACTIVITY EXPECTED (3.5.1.i)?

☐ YES ☒ NO

IF YES, SPECIFY THE LOCATION OF THE ACTIVITY AND ITS PERMIT NUMBER: _____

12. <u>SPILL PREVENTION, MANAGEMENT AND NOTIFICATION</u> (3.5.5.c, 5.1)

12.1. SPILL PREVENTION (3.5.5.c)

12.1.1. CONTRACTOR'S BULK FUEL AND PETROLEUM PRODUCTS STORED ON-SITE OR ADJACENT TO THE R.O.W. IN ABOVE GROUND STORAGE TANKS WITH AGGREGATE STORAGE CAPACITY IN EXCESS OF 1,320 GALLONS SHALL HAVE SECONDARY CONTAINMENT.

12.1.2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING A SPILL PREVENTION CONTROL AND COUNTERMEASURE (SPCC) PLAN AS REQUIRED BY TDOT SPECIAL PROVISION 107FP (REGARDING WATER QUALITY AND STORM WATER PERMITS) AND THE LAW.

12.1.3. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR OBTAINING ANY NECESSARY LOCAL, STATE, AND FEDERAL PERMITS. THE SPCC PLAN AND/OR PERMITS SHALL BE KEPT ON-SITE AND A COPY PROVIDED TO THE TDOT CONSTRUCTION ENGINEER.

12.2. MATERIAL MANAGEMENT

12.2.1. HOUSEKEEPING

ONLY NEEDED PRODUCTS WILL BE STORED ON-SITE BY THE CONTRACTOR. EXCEPT FOR BULK MATERIALS THE CONTRACTOR WILL STORE ALL MATERIALS UNDER COVER AND IN APPROPRIATE CONTAINERS. PRODUCTS MUST BE STORED IN ORIGINAL CONTAINERS AND LABELED. MATERIAL MIXING WILL BE CONDUCTED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. WHEN POSSIBLE, ALL PRODUCTS WILL BE USED COMPLETELY BEFORE PROPERLY DISPOSING OF THE CONTAINER OFF SITE. THE MANUFACTURER'S DIRECTIONS FOR DISPOSAL OF MATERIALS AND CONTAINERS WILL BE FOLLOWED. THE CONTRACTOR'S SITE SUPERINTENDENT WILL INSPECT MATERIALS STORAGE AREAS REGULARLY TO ENSURE PROPER USE AND DISPOSAL. DUST GENERATED WILL BE CONTROLLED IN AN ENVIRONMENTALLY SAFE MANNER. VEGETATION AREAS NOT ESSENTIAL TO THE CONSTRUCTION PROJECT WILL BE PRESERVED AND MAINTAINED AS NOTED ON THE PLANS.

12.2.2. HAZARDOUS MATERIALS

PRODUCTS WILL BE KEPT IN ORIGINAL CONTAINERS UNLESS THE CONTAINER IS NOT RE-SEALABLE. ORIGINAL LABELS AND MATERIAL SAFETY DATA SHEETS WILL BE RETAINED IN A SAFE PLACE TO RELAY IMPORTANT PRODUCT INFORMATION. IF SURPLUS PRODUCT MUST BE DISPOSED OF, MANUFACTURER'S LABEL DIRECTIONS FOR DISPOSAL WILL BE FOLLOWED. MAINTENANCE AND REPAIR OF ALL EQUIPMENT AND VEHICLES INVOLVING OIL CHANGES, HYDRAULIC SYSTEM DRAIN DOWN, DE-GREASING OPERATIONS, FUEL TANK DRAIN DOWN AND REMOVAL, AND OTHER ACTIVITIES WHICH MAY RESULT IN THE ACCIDENTAL RELEASE OF CONTAMINANTS WILL BE CONDUCTED ON AN IMPERVIOUS SURFACE AND UNDER COVER DURING WET WEATHER TO PREVENT THE RELEASE OF CONTAMINANTS INTO THE GROUND. WHEEL WASH WATER WILL BE COLLECTED AND ALLOWED TO SETTLE OUT SUSPENDED SOLIDS PRIOR TO DISCHARGE. WHEEL WASH WATER WILL NOT BE DISCHARGED DIRECTLY INTO ANY STORMWATER SYSTEM OR STORMWATER TREATMENT SYSTEM. POTENTIAL pH-MODIFYING MATERIALS SUCH AS: BULK CEMENT, CEMENT KILN DUST, FLY ASH, NEW CONCRETE WASHINGS AND CURING WATERS, CONCRETE PUMPING, AND MIXER WASHOUT WATERS WILL BE COLLECTED ON SITE AND MANAGED TO PREVENT CONTAMINATION OF STORMWATER RUNOFF.

12.3. PRODUCT SPECIFIC PRACTICES

12.3.1. PETROLEUM PRODUCTS: ALL ON-SITE VEHICLES WILL BE

THE EXPOSURE TO STORMWATER. FERTILIZERS WILL BE STORED IN AN ENCLOSED AREA UNDER COVER. THE CONTENTS OF PARTIALLY USED FERTILIZER BAGS WILL BE TRANSFERRED TO SEALABLE CONTAINERS TO AVOID SPILLS.

12.3.3. PAINTS: ALL CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. THE EXCESS WILL BE DISPOSED OF PER THE MANUFACTURER'S INSTRUCTIONS AND APPLICABLE STATE AND LOCAL REGULATIONS.

12.3.4. CONCRETE TRUCKS: CONTRACTORS WILL PROVIDE DESIGNATED TRUCK WASHOUT AREAS ON THE SITE. THESE AREAS MUST BE SELF CONTAINED AND NOT CONNECTED TO ANY STORMWATER OUTLET OF THE SITE. UPON COMPLETION OF CONSTRUCTION WASHOUT AREAS WILL BE PROPERLY STABILIZED.

12.4. SPILL MANAGEMENT

IN ADDITION TO THE PREVIOUS HOUSEKEEPING AND MANAGEMENT PRACTICES, THE FOLLOWING PRACTICES WILL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP IF NECESSARY:

12.4.1. FOR ALL HAZARDOUS MATERIALS STORED ON SITE, THE MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEAN UP WILL BE CLEARLY POSTED. SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATIONS OF THE INFORMATION AND CLEANUP SUPPLIES.

12.4.2. APPROPRIATE CLEANUP MATERIALS AND EQUIPMENT WILL BE MAINTAINED BY THE CONTRACTOR IN THE MATERIALS STORAGE AREA ON-SITE AND UNDER COVER. AS APPROPRIATE, EQUIPMENT AND MATERIALS MAY INCLUDE ITEMS SUCH AS BOOMS, DUST PANS, MOPS, RAGS, GLOVES, GOGGLES, KITTY LITTER, SAND, SAWDUST, AND PLASTIC AND METAL TRASH CONTAINERS SPECIFICALLY FOR CLEAN UP PURPOSES.

12.4.3. ALL SPILLS WILL BE CLEANED IMMEDIATELY AFTER DISCOVERY AND THE MATERIALS DISPOSED OF PROPERLY. THE SPILL AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.

12.4.4. THE CONTRACTOR'S RESPONSIBLE PARTY WILL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THE SITE SUPERINTENDENT HAS HAD APPROPRIATE TRAINING FOR HAZARDOUS MATERIALS HANDLING, SPILL MANAGEMENT, AND CLEANUP.

12.4.5. IF SPILLS REPRESENT AN IMMINENT THREAT OF ESCAPING THE SITE AND ENTERING RECEIVING WATERS, PERSONNEL WILL RESPOND IMMEDIATELY TO CONTAIN THE RELEASE AND NOTIFY THE SUPERINTENDENT AFTER THE SITUATION HAS BEEN STABILIZED.

12.4.6. IF AN OIL SHEEN IS OBSERVED ON SURFACE WATER (E.G. SETTLING PONDS, DETENTION PONDS, SWALES), ACTION WILL BE TAKEN IMMEDIATELY TO REMOVE THE MATERIAL CAUSING THE SHEEN. THE CONTRACTOR WILL USE APPROPRIATE MATERIALS TO CONTAIN AND ABSORB THE SPILL. THE SOURCE OF THE OIL SHEEN WILL ALSO BE IDENTIFIED AND REMOVED OR REPAIRED AS NECESSARY TO PREVENT FURTHER RELEASES.

12.4.7. IF A SPILL OCCURS THE CONTRACTOR'S SITE SUPERINTENDENT SHALL BE RESPONSIBLE FOR COMPLETING THE SPILL REPORTING FORM AND FOR REPORTING THE SPILL TO THE TDOT CONSTRUCTION ENGINEER AND/OR PROJECT ENGINEER. ALL SPILLS MUST BE REPORTED TO THE APPROPRIATE AGENCY, AND MEASURES SHALL BE TAKEN IMMEDIATELY TO PREVENT THE POLLUTION OF WATERS OF THE STATE/U.S., INCLUDING GROUNDWATER, SHOULD A SPILL OCCUR.

12.4.8. APPROPRIATE CLEANUP MATERIALS AND EQUIPMENT SHALL BE MAINTAINED BY THE CONTRACTOR IN THE MATERIALS STORAGE AREA ON-SITE AND UNDER COVER. SPILL RESPONSE EQUIPMENT SHALL BE INSPECTED AND MAINTAINED BY THE CONTRACTOR AS NECESSARY TO REPLACE ANY MATERIALS USED IN SPILL RESPONSE ACTIVITIES.

12.5. SPILL NOTIFICATION (5.1)

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TRANSPORTATION ENVIRONMENTAL STUDIES SPECIALIST) AS SOON AS HE OR SHE HAS KNOWLEDGE OF THE DISCHARGE.

12.5.2. THE TDOT REGIONAL PROJECT DEVELOPMENT OFFICE WILL NOTIFY THE LOCAL TDEC ENVIRONMENTAL FIELD OFFICE AND ANY OTHER APPLICABLE REGULATORY AGENCIES WITHIN 24 HOURS OF THE SPILL.

12.5.3. IN ADDITION TO ANY FOLLOW UP NOTIFICATIONS REQUIRED BY FEDERAL LAW, A WRITTEN DESCRIPTION OF THE RELEASE, DATE OF RELEASE AND CIRCUMSTANCES LEADING TO THE RELEASE, WHAT ACTIONS WERE TAKEN TO MITIGATE EFFECTS OF THE RELEASE, AND STEPS TAKEN TO MINIMIZE THE CHANCE OF FUTURE OCCURRENCES WILL BE SUBMITTED TO THE APPROPRIATE TDEC ENVIRONMENTAL FIELD OFFICE WITHIN 14 DAYS OF KNOWLEDGE OF THE RELEASE.

12.5.4. THE SWPPP MUST BE MODIFIED WITHIN 14 DAYS OF KNOWLEDGE OF THE RELEASE PROVIDING A DESCRIPTION OF THE RELEASE, CIRCUMSTANCES LEADING TO THE RELEASE, AND THE DATE OF RELEASE. THE SWPPP WILL BE REVIEWED AND MODIFIED AS NECESSARY TO IDENTIFY MEASURES TO PREVENT THE REOCCURRENCE OF SUCH RELEASES AND TO RESPOND TO SUCH RELEASES.

13. RECORD-KEEPING

13.1. REQUIRED RECORDS

TDOT OR THEIR DULY AUTHORIZED REPRESENTATIVE WILL MAINTAIN AT THE SITE THE FOLLOWING RECORDS OF CONSTRUCTION ACTIVITIES (3.5.3.1.m) (4.1.5.) (6.2.1):

13.1.1. THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR.

13.1.2. THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE.

13.1.3. THE DATES WHEN STABILIZATION MEASURES ARE INITIATED.

13.1.4. RECORDS EPSC INSPECTION REPORTS AND CORRECTIVE MEASURES.

13.1.5. RECORDS OF QUALITY ASSURANCE SITE ASSESSMENTS.

13.1.6. COPY OF SITE EPSC INSPECTOR'S CERTIFICATION AND/OR LICENSING

13.1.7. COPY OF REQUIRED SOIL ANALYSIS

13.1.8. A COPY OF ANY REGULATORY CORRESPONDENCE REGARDING THE EFFECTIVENESS OF THE *SWPPP* OR EPSC CONTROLS.

13.2. RAINFALL MONITORING PLAN (3.5.3.1.o):

13.2.1. EQUIPMENT
AT A MINIMUM, THE CONTRACTOR WILL INSTALL A FENCE POST TYPE RAIN GAUGE TO MEASURE RAINFALL. THE STANDARD FENCE POST RAIN GAUGE WILL BE A WEDGE-SHAPED GAUGE THAT MEASURES UP TO 6 INCHES OF RAINFALL. AN ENGLISH SCALE WILL BE PROVIDED ON ONE FACE, WITH A METRIC SCALE ON THE OTHER FACE. GRADUATION WILL BE PERMANENTLY MOLDED IN DURABLE WEATHER-RESISTANT PLASTIC. THE MINIMUM GRADUATION WILL BE 0.01 INCH (OR 0.1MM). AN ALUMINUM BRACKET WITH SCREWS MAY BE USED TO MOUNT THE GAUGE ON A WOODEN SUPPORT.

13.2.2. LOCATION
THE RAIN GAUGE WILL BE LOCATED AT OR ALONG THE PROJECT SITE, AS DEFINED IN THE NOI OF THE NPDES PERMIT, IN AN OPEN AREA SUCH THAT THE MEASUREMENT WILL NOT BE INFLUENCED BY OUTSIDE FACTORS (I.E. OVERHANGS, GUTTER, TREES, ETC.). AT LEAST ONE RAIN GAUGE PER LINEAR MILE IS REQUIRED ALONG (AS MEASURED ALONG THE CENTERLINE OF THE PRIMARY ALIGNMENT) THE PROJECT WHERE CLEARING, GRUBBING, EXCAVATION, GRADING, CUTTING OR FILLING IS ACTIVELY PERFORMED, OR EXPOSED SOIL HAS NOT YET BEEN PERMANENTLY STABILIZED.

13.2.3. METHODS
RAINFALL MONITORING WILL BE INITIATED PRIOR TO CLEARING.

13.2.4. EACH RAIN GAUGE WILL BE READ (FOR DETAILED RECORDS OF RAINFALL) AND EMPTIED AFTER EVERY RAINFALL EVENT OCCURRING ON THE PROJECT SITE AT APPROXIMATELY THE SAME TIME OF THE DAY (DURING NORMAL BUSINESS HOURS). DURING PERIODS OF DRY CONDITIONS, IT WILL NOT BE NECESSARY TO READ THE RAIN GAUGE EVERY DAY. IN LIEU OF THIS REQUIREMENT ON WEEKENDS AND ON STATE HOLIDAYS, THE RAIN GAUGES CAN BE EMPTIED THE NEXT BUSINESS DAY AND A REFERENCE SITE USED FOR A RECORD OF DAILY AMOUNT OF PRECIPITATION FOR THOSE DAYS. A REFERENCE SITE IS THE DOCUMENTATION FROM THE CLOSEST GAUGE WITHIN PROXIMITY OF THE PROJECT FROM A RECOGNIZED SOURCE SUCH AS THE NOAA NATIONAL WEATHER SERVICE.

13.2.5. DETAILED RECORDS WILL BE RECORDED OF RAINFALL EVENTS INCLUDE DATES, AMOUNTS OF RAINFALL, AND THE APPROXIMATE DURATION (OR THE STARTING AND ENDING TIMES). THE RAINFALL RECORDS SHALL BE RECORDED ON THE TDOT RAINFALL RECORD SHEET AND SHALL BE MAINTAINED IN THE "DOCUMENTATION AND PERMITS" BINDER.

13.2.6. IF THE RAINFALL EVENT IS STILL IN PROGRESS AT THE DAILY RECORDING TIME, THE GAUGE WILL BE EMPTIED AND THE RECORD WILL INDICATE THAT THE STORM EVENT WAS STILL IN PROGRESS.

13.2.7. RAIN GAUGE INFORMATION (DETAILED RECORDS), INCLUDING THE LOCATION OF THE NEAREST OUTFALL, WILL BE RECORDED ON THE EPSC INSPECTION REPORT FORMS AT THE TIME OF MEASUREMENT.

13.3. KEEPING PLANS CURRENT (3.4)

13.3.1. THE EPSC PLAN IS TO SERVE AS AN INITIAL GUIDE FOR SITE PERSONNEL AS THE CONSTRUCTION PROCESS DEVELOPS. IT MUST BE AMENDED, MODIFIED, AND UPDATED WHENEVER EPSC INSPECTIONS INDICATE, OR WHERE STATE OR FEDERAL REGULATORY OFFICIALS DETERMINE EPSC MEASURES ARE PROVING INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANT SOURCES OR ARE OTHERWISE NOT ACHIEVING THE GENERAL OBJECTIVES OF CONTROLLING POLLUTANTS IN STORMWATER DISCHARGES ASSOCIATED WITH THE CONSTRUCTION ACTIVITY.

13.3.2. THE STAGES DEPICTED WITHIN THE EPSC PLANS MAY NOT COINCIDE WITH THE ACTUAL STAGES OF CONSTRUCTION ESTABLISHED BY THE CONTRACTOR DURING CONSTRUCTION. MODIFICATIONS WILL BE REQUIRED TO ENSURE THE EPSC PLAN IS MAINTAINED TO DEPICT CURRENT SITE CONDITIONS. IT SHOULD BE MAINTAINED SUCH THAT IT WILL ALWAYS REFLECT THE MEASURES THAT ARE INSTALLED DURING THE VARIOUS STAGES OF CONSTRUCTION. IT IS IMPRACTICAL TO DETERMINE ALL THE INTERMEDIATE STAGES OF CONSTRUCTION THAT WILL OCCUR, THUS THESE DOCUMENTS MUST BE UPDATED THROUGHOUT THE LIFE OF THE CONSTRUCTION PROJECT.

13.3.3. THE TDOT EPSC INSPECTOR OR THEIR DULY AUTHORIZED REPRESENTATIVE WILL MODIFY AND UPDATE THE SWPPP WHEN ANY OF THE FOLLOWING CONDITIONS APPLY:

13.3.3.1. WHENEVER THERE IS A CHANGE IN THE SCOPE OF THE PROJECT THAT WOULD BE EXPECTED TO HAVE A SIGNIFICANT EFFECT ON THE DISCHARGE OF POLLUTANTS TO THE WATERS OF THE STATE AND WHICH HAS NOT OTHERWISE BEEN ADDRESSED IN THE SWPPP;

13.3.3.2. WHENEVER INSPECTIONS OR INVESTIGATIONS BY SITE OPERATORS, LOCAL, STATE, OR FEDERAL OFFICIALS INDICATE THE SWPPP IS PROVING INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANTS FROM CONSTRUCTION ACTIVITY SOURCES, OR IS OTHERWISE NOT ACHIEVING THE GENERAL OBJECTIVES OF CONTROLLING POLLUTANTS IN STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY; WHERE LOCAL, STATE, OR FEDERAL OFFICIALS DETERMINE THAT THE SWPPP IS INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANT SOURCES, A COPY OF ANY CORRESPONDENCE TO THAT EFFECT MUST BE RETAINED IN THE SWPPP;

13.3.3.5. WHEN THERE IS A CHANGE IN CHEMICAL TREATMENT METHODS INCLUDING: USE OF DIFFERENT TREATMENT CHEMICALS, DIFFERENT DOSAGE OR APPLICATION RATES OR A DIFFERENT AREA OF APPLICATION NOT SPECIFIED ON THE EPSC PLANS.

13.3.3.6. ALL SWPPP REVISION(S) SHALL BE RECORDED WITHIN 7 DAYS BY THE PROJECT EPSC INSPECTOR.

13.3.3.7. WHEN A TMDL IS DEVELOPED FOR THE RECEIVING WATERS FOR A POLLUTANT OF CONCERN (SILTATION AND/OR HABITAT ALTERATION), CONSTRUCTION SHALL NOTIFY THE PERMITS SECTION FOR PROPER COORDINATION.

13.4. MAKING PLANS ACCESSIBLE

13.4.1. TDOT WILL RETAIN A COPY OF THIS SWPPP (INCLUDING A COPY OF THE "DOCUMENTATION AND PERMITS" BINDER AT THE CONSTRUCTION SITE (OR OTHER LOCATION ACCESSIBLE TO TDEC AND THE PUBLIC) FROM THE DATE CONSTRUCTION COMMENCES TO THE DATE OF FINAL STABILIZATION. TDOT WILL HAVE A COPY OF THE SWPPP AVAILABLE AT THE LOCATION WHERE WORK IS OCCURRING ON-SITE FOR THE USE OF OPERATORS AND THOSE IDENTIFIED AS HAVING RESPONSIBILITIES UNDER THE SWPPP WHENEVER THEY ARE ON THE CONSTRUCTION SITE (6.2).

13.4.2. PRIOR TO THE INITIATION OF LAND DISTURBING ACTIVITIES AND UNTIL THE SITE HAS MET THE FINAL STABILIZATION CRITERIA, TDOT OR THEIR DULY AUTHORIZED REPRESENTATIVE WILL POST A NOTICE NEAR THE MAIN ENTRANCE OF THE CONSTRUCTION SITE WITH THE FOLLOWING INFORMATION (3.3.3) (6.2.1):

13.4.2.1. A COPY OF THE NOTICE OF COVERAGE (NOC) WITH THE NPDES PERMIT NUMBER FOR THE PROJECT;

13.4.2.2. THE INDIVIDUAL NAME, COMPANY NAME, E-MAIL ADDRESS (IF APPLICABLE) AND TELEPHONE NUMBER OF THE LOCAL PROJECT SITE OWNER AND OPERATOR CONTACT;

13.4.2.3. A BRIEF DESCRIPTION OF THE PROJECT; AND

13.4.2.4. THE LOCATION OF THE SWPPP.

13.4.3. ALL INFORMATION DESCRIBED IN SECTION 13.4.2 MUST BE MAINTAINED IN LEGIBLE CONDITION. IF POSTING THIS INFORMATION NEAR A MAIN ENTRANCE IS INFEASIBLE DUE TO SAFETY CONCERNS, THE NOTICE SHALL BE POSTED IN A LOCAL BUILDING. THE NOTICE MUST BE PLACED IN A PUBLICLY ACCESSIBLE LOCATION WHERE CONSTRUCTION IS ACTIVELY UNDERWAY AND MOVED AS NECESSARY.

13.5. NOTICE OF TERMINATION (8.0)

13.5.1. WHEN ALL STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES THAT ARE AUTHORIZED BY THE PERMIT ARE ELIMINATED BY FINAL STABILIZATION, THE TDOT REGIONAL ENGINEER WILL SUBMIT A NOTICE OF TERMINATION (NOT) THAT IS SIGNED IN ACCORDANCE WITH THE PERMIT TO THE TDEC CENTRAL OFFICE IN NASHVILLE, TN.

13.5.2. FOR THE PURPOSES OF THE CERTIFICATION REQUIRED BY THE NOT, THE ELIMINATION OF STORMWATER DISCHARGES ASSOCIATED WITH THE CONSTRUCTION ACTIVITY MEANS THE

13.5.2.1. ALL EARTH-DISTURBING ACTIVITIES ON THE SITE ARE COMPLETED AND ALL DISTURBED SOILS AT THE PORTION OF THE CONSTRUCTION SITE WHERE THE OPERATOR HAD CONTROL HAVE BEEN FINALLY STABILIZED; AND

13.5.2.2. ALL CONSTRUCTION MATERIALS, WASTE AND WASTE HANDLING DEVICES, AND ALL EQUIPMENT, AND VEHICLES THAT WERE USED DURING CONSTRUCTION HAVE BEEN REMOVED AND PROPERLY DISPOSED; AND

13.5.2.3. ALL STORMWATER CONTROLS THAT WERE INSTALLED AND MAINTAINED DURING CONSTRUCTION, EXCEPT THOSE THAT ARE INTENDED FOR LONG-TERM USE FOLLOWING TERMINATION OF PERMIT COVERAGE, HAVE BEEN REMOVED; AND

13.5.2.4. ALL POTENTIAL POLLUTANTS AND POLLUTANT

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13.5.2.6. TEMPORARY EPSC MEASURES HAVE BEEN OR WILL BE REMOVED AT AN APPROPRIATE TIME TO ENSURE FINAL STABILIZATION IS MAINTAINED; AND

13.5.2.7. ALL STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES FROM THE IDENTIFIED SITE THAT ARE AUTHORIZED BY A NPDES GENERAL PERMIT HAVE OTHERWISE BEEN ELIMINATED FROM THE PORTION OF THE CONSTRUCTION SITE WHERE THE OPERATOR HAD CONTROL.

13.6. RETENTION OF RECORDS (6.2)

TDOT WILL RETAIN COPIES OF THE SWPPP, ALL REPORTS REQUIRED BY THE PERMIT, AND RECORDS OF ALL DATA USED TO COMPLETE THE NOTICE OF INTENT FOR THE PROJECT FOR A PERIOD OF AT LEAST THREE (3) YEARS FROM THE DATE THE NOT WAS FILED.

14. SITE WIDE/PRIMARY PERMITTEE CERTIFICATION (7.7.5)

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED BY ME, OR UNDER MY DIRECTION OR SUPERVISION. THE SUBMITTED INFORMATION IS TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. AS SPECIFIED IN TENNESSEE CODE ANNOTATED SECTION 39-16-702(a)(4), THIS DECLARATION IS MADE UNDER PENALTY OF PERJURY.

Anthony R. Myers

AUTHORIZED TDOT PERSONNEL SIGNATURE (3.3.1)

Anthony R. Myers

PRINTED NAME

Transportation Manager 2

TITLE

07/28/2017

DATE

15. SECONDARY PERMITTEE (OPERATOR) CERTIFICATION (7.7.6)

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE REVIEWED THIS DOCUMENT, ANY ATTACHMENTS, AND THE SWPPP REFERENCED ABOVE. BASED ON MY INQUIRY OF THE CONSTRUCTION SITE OWNER/DEVELOPER IDENTIFIED ABOVE AND/OR MY INQUIRY OF THE PERSON DIRECTLY RESPONSIBLE FOR ASSEMBLING THIS NOI AND SWPPP, I BELIEVE THE INFORMATION SUBMITTED IS ACCURATE. I AM AWARE THAT THIS NOI, IF APPROVED, MAKES THE ABOVE-DESCRIBED CONSTRUCTION ACTIVITY SUBJECT TO NPDES PERMIT NUMBER TNR100000, AND THAT CERTAIN OF MY ACTIVITIES ONSITE ARE THEREBY REGULATED. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS, AND FOR FAILURE TO COMPLY WITH THESE PERMIT REQUIREMENTS. AS SPECIFIED IN TENNESSEE CODE ANNOTATED SECTION 39-16-702(a)(4), THIS DECLARATION IS MADE UNDER PENALTY OF PERJURY.

AUTHORIZED TDOT PERSONNEL SIGNATURE (3.3.1)

PRINTED NAME

TITLE

DATE

16. ENVIRONMENTAL PERMITS (9.0)

ENVIRONMENTAL PERMITS			
PERMIT	**YES OR NO**	**PERMIT OR TRACKING NO.**	**EXPIRATION DATE***
TDEC ARAP			
CORPS OF ENGINEERS (USACE)			
TVA 26A			
TDEC CGP			
OTHER:			

*THE TDOT ENVIRONMENTAL DIVISION MUST BE NOTIFIED SIX MONTHS PRIOR TO PERMIT EXPIRATION DATE.

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OUTFALL TABLE (3.5.1.d, 5.4.1.g)

EPSC STAGE	OUTFALL LABEL	SUB OUT-FALL	STATION CL, LT OR RT	SLOPE WITHIN ROW (%)	STAGE 1 DRAINAGE AREA (AC)	STAGE 2 DRAINAGE AREA (AC)	SEDIMENT BASIN OR EQUIVALENT MEASURE(S) (YES, NO OR N/A)	RECEIVING RESOURCE (TDOT EBR LABEL) OR OTHER	COMMENTS
1	OUT-1		68+00 LT	2.20	13.457		Yes	STR-1	
3		OUT-1A	68+00 LT	2.20		13.475	Yes	STR-1	
1	OUT-2		69+21 LT	1.09	24.674		Yes	STR-1	
2,3		OUT-2A	69+21 LT	1.09		24.674	Yes	STR-1	
1	OUT-3		68+42 RT	1.27	3.495		N/A	STR-1	
3		OUT-3A	68+42 RT	1.27		3.495	N/A	STR-1	
1	OUT-4		69+76 RT	1.88	4.054		N/A	STR-1	
3		OUT-4A	69+76 RT	1.88		4.054	N/A	STR-1	

ALL UNUSED FIELDS WITHIN THE OUTFALL TABLE ARE TO BE SHADED, HATCHED, OR REMOVED TO INDICATE THEIR NON-USAGE.