TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

SEE SHT. IA FOR INDEX

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

TENN.	YEAR	SHEET NO.
	2014	1
FED. AID PROJ. NO.	STP-320(4)	
STATE PROJ. NO.	33057-3224(14)	

HAMILTON COUNTY

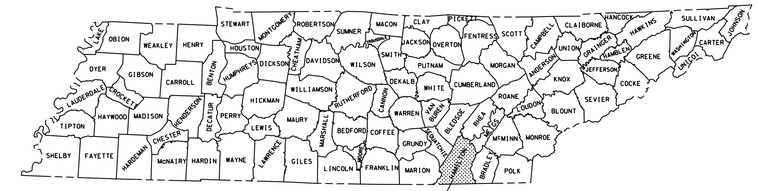
S.R. 320

FROM 325 FT EAST OF GRAYSVILLE RD.
TO 900 FT. EAST OF BELL-AIR ROAD.

CONSTRUCTION

GRADE, DRAIN, GUARDRAIL,
SIGN AND PAVE

STATE HIGHWAY NO. 320 F.A.H.S. NO. 320

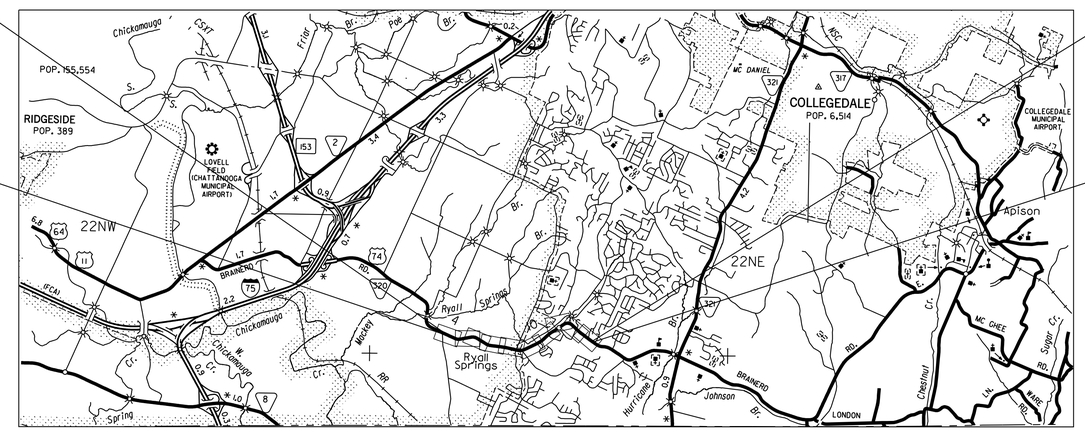


LOCATION MAP

NO EXCLUSIONS
NO EQUATIONS

STATE PROJ NO. 33057-3224(14) CONST.
BEGIN PROJ. NO. STP-320(4)
STA. 227+19.76

STATE PROJ NO. 33057-2222(14) R.O.W.
BEGIN PROJ. NO. STP-320(4)
STA. 227+19.76



STATE PROJ NO. 33057-3224(14) CONST.
END PROJ. NO. STP-320(4)
STA. 337+00.00

STATE PROJ NO. 33057-2222-(14) R.O.W.
END PROJ. NO. STP-320(4)
STA. 338+12.86

SEALED BY

JAMES H. GILLIAM III
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 103760
STATE OF TENNESSEE
10/20/14

N

0 5280 3 MI

SCALE: 1"= 5280'

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

DATE:

APPROVED:
JOHN SCHROER, COMMISSIONER

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 FEBRUARY 4, 2014 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS AND IN THE PROPOSAL CONTRACT

TDOT ROAD SP. SV. 2 ROBERT RODGERS, P.E.

DESIGNED BY HART FREELAND ROBERTS INC.

DESIGNER JIM GILLIAM P.E. CHECKED BY KEVIN COUNTS, P.E.

P.E. NO. 33057-1221-04 PIN NO. 101431.00

ROADWAY LENGTH	2.101 MILES
BRIDGE LENGTH	0.000 MILES
BOX BRIDGE LENGTH	0.000 MILES
R.O.W.PROJECT LENGTH	2.101 MILES
CONST.PROJECT LENGTH	2.079 MILES

TRAFFIC DATA	
ADT (2014)	19,860
ADT (2034)	29,410
DHV (2034)	3,235
D	60 - 40
T (ADT)	3 %
T (DHV)	2 %
V	45 MPH

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR DATE

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	1A

INDEX

SHEET NAME	SHEET NO.
Title Sheet	1
Roadway Index and Standard Drawing Index	1A – 1C
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Typical Sections and Paving Schedule	2C – 2F
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Private Drive and Field Ramp Profiles	15, 15A – 15M
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Utilities Index, Utility Owners, and Utility Sheets	U1-1

SHEET NOT USED: 2K

STANDARD ROADWAY DRAWINGS

STANDARD BRIDGE DRAWINGS

DWG. NO	REV.	DESCRIPTION
STD-9-1	10-07-08	REINFORCING BAR SUPPORT DETAILS FOR CONCRETE SLABS
STD-10-1	04-08-05	MISCELLANEOUS ABUTMENT AND DRAINAGE DETAILS
STD-15-1	11-06-08	INDEX OF DRAWINGS AND TERMINOLOGY
STD-15-2	03-28-08	GENERAL NOTES
STD-15-3	02-28-03	DESIGN SECTION LIMITS
STD-15-4	12-07-01	TYPICAL SECTION AND DETAILS
STD-15-5	02-28-03	TYPICAL ELEVATION
STD-15-6	03-28-08	CURB AND RAIL DETAILS - SKEW NOT LESS THAN 45 DEG.
STD-15-7	03-02-02	STANDARD EDGE BEAM DETAILS FOR FILLS GREATER THAN 3' - 8"
STD-15-8	12-07-01	INTERIOR WALL END TREATMENT
STD-15-9	02-28-03	TYPICAL WINGWALL DETAILS AND NOTES
STD-15-10	11-06-08	WINGWALL DIMENSIONS AND QUANTITIES
STD-15-11		WINGWALL DIMENSIONS AND QUANTITIES
STD-15-12	03-28-08	WINGWALL & SPECIAL RETAINING WALL DESIGN SECTION
STD-15-13		WINGWALL DESIGN SECTION
STD-15-14	06-01-11	BACKFILL AND DRAINAGE DETAILS
STD-15-15		BACKFILL AND DRAINAGE DETAILS
STD-15-16A		LOW FLOW CHANNEL CONSTRUCTION DETAILS FOR CULVERT INLET AND OUTLET
STD-15-19		SIDEWALK AND MISCELLANEOUS DETAILS
STD-15-20		WARPED SLOPE DETAIL
STD-15-21	03-02-02	STAGE CONSTRUCTION JOINT DETAIL (FILL ABOVE TOP OF SLAB NOT GREATER THAN 3'-8")
STD-15-24	12-07-01	END SECTION DETAILS
STD-15-25	11-01-10	PRECAST BOX CULVERT DETAILS
STD-15-26		PRECAST BOX CULVERT DETAILS
STD-15-27		PRECAST BOX CULVERT DETAILS
STD-15-28		PRECAST BOX CULVERT DETAILS
STD-15-29		PRECAST BOX CULVERT DETAILS
STD-15-35		BOX BRIDGE, 1 BARREL AT 6', CLEAR HTS. 3' – 6', 0' – 60' FILL
STD-15-36		BOX BRIDGE, 1 BARREL AT 8', CLEAR HTS. 3' – 4', 0' – 60' FILL
STD-15-55		BOX BRIDGE, 2 BARRELS AT 6', CLEAR HTS. 3' – 4', 0' – 60' FILL
STD-15-56		BOX BRIDGE, 2 BARRELS AT 8', CLEAR HTS. 3' – 4', 0' – 60' FILL
STD-15-107		SLAB BRIDGE, 1 BARREL AT 18', CLEAR HTS. 6' – 8', 0' – 60' FILL

ROADWAY DESIGN STANDARDS

DWG. NO	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	04-15-04	STANDARD LEGEND FOR SIGNALIZATION AND LIGHTING
RD-L-4	04-15-04	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
RD-UD-3	09-05-96	UNDERDRAIN DETAILS
RD01-S-11	04-04-03	DESIGN AND CONSTRUCTION DETAILS FOR ROADSIDE SLOPE DEVELOPMENT
RD01-S-11A	10-15-02	ROADSIDE DITCH DETAILS FOR DESIGN AND CONSTRUCTION
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
RD01-SE-2	10-15-02	URBAN SUPERELEVATION DETAILS
RD01-TS-1	10-15-02	DESIGN STANDARDS FOR LOCAL ROADS AND STREETS
RD01-TS-6	07-31-13	TYPICAL CURB AND GUTTER SECTIONS WITH SHOULDER
RD01-TS-6A	07-31-13	TYPICAL CURB AND GUTTER SECTIONS WITHOUT SHOULDERS

DRAINAGE - CULVERTS AND ENDWALL

DWG. NO	REV.	DESCRIPTION
D-PB-1	01-02-13	STANDARD DETAILS CLASS "B" BEDDING AND CULVERT EXCAVATION
D-PB-3		INDUCED TRENCH SOIL EMBANKMENT FOR PIPE CULVERT INSTALLATION
D-PE-4	01-15-13	STRAIGHT CONCRETE ENDWALL
D-PE-5	05-27-01	STANDARD WINGWALLS HORIZONTAL OVAL CONCRETE PIPES
D-PE-9	04-25-90	CONCRETE ENDWALLS TYPE "B" (FOR ROUND & SIDE TAPERED INLETS, PIPE SIZES 15" TO 78", ALL SKEWS, 2:1 AND 4:1 SLOPES)
D-PE-9A	10-25-82	GENERAL DIMENSION QUANTITIES ROUND PIPE CONCRETE ENDWALLS TYPE "B" (PIPE SIZES 15" TO 78", ALL SKEWS, 2:1 AND 4:1 SLOPES)
D-PE-18A	06-14-13	18" CONCRETE ENDWALL CROSS DRAIN
D-PE-18B		18" CONCRETE ENDWALL CROSS DRAIN
D-PE-24A	06-14-13	24" CONCRETE ENDWALL CROSS DRAIN
D-PE-24B		24" CONCRETE ENDWALL CROSS DRAIN
D-PE-42A	06-14-13	42" CONCRETE ENDWALL CROSS DRAIN WITH STEEL PIPE GRATE
D-PE-42B		42" CONCRETE ENDWALL CROSS DRAIN

DRAINAGE-CATCH BASINS AND MANHOLES

DWG. NO	REV.	DESCRIPTION
D-CB-10RA	03-11-14	STANDARD PRECAST 48" CIRCULAR NO. 10 CATCH BASIN (FOR USE WITH 6" NONMOUNTABLE CURB)
D-CB-12LP	08-01-12	LOW PROFILE 32" X 32" SQUARE CONCRETE NO. 12LP CATCH BASIN
D-CB-12P	03-11-14	STANDARD PRECAST RECTANGULAR CONCRETE NO. 12 CATCH BASIN
D-CB-12RA	03-11-14	STANDARD PRECAST 48" CIRCULAR NO. 12 CATCH BASIN (FOR USE WITH 6" NONMOUNTABLE CURB)
D-CB-12RB	03-11-14	STANDARD PRECAST 60" AND 72" CIRCULAR NO. 12 CATCH BASIN (FOR USE WITH 6" NONMOUNTABLE CURB)

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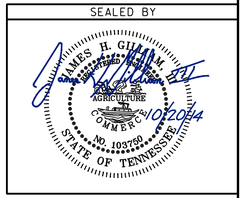

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

INDEX AND STANDARD DRAWINGS

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	1B

STANDARD ROADWAY DRAWINGS

DWG. NO	REV.	DESCRIPTION
DRAINAGE-CATCH BASINS AND MANHOLES (CONT.)		
D-CB-12S	03-11-14	STANDARD RECTANGULAR CONCRETE NO. 12 CATCH BASIN
D-CB-14S	03-11-14	STANDARD RECTANGULAR CONCRETE NO. 14 CATCH BASIN
D-CB-14SE	03-11-14	STANDARD 9' X 9' SQUARE CONCRETE NO. 14 CATCH BASIN
D-CB-16B	03-11-14	STANDARD RECTANGULAR CONCRETE NO. 16 CATCH BASIN
D-CB-16S	03-11-14	STANDARD RECTANGULAR CONCRETE NO. 16 CATCH BASIN
D-CB-38S	08-01-12	STANDARD 32" X 32" SQUARE CONCRETE NO. 38 CATCH BASIN
D-CB-39RB	03-11-14	STANDARD PRECAST CIRCULAR NO. 39 CATCH BASIN
D-CB-39S	08-01-12	STANDARD 4' X 4' SQUARE CONCRETE NO. 39 CATCH BASIN
D-CB-39SC	03-11-14	STANDARD 5'2" X 5'2" SQUARE CONCRETE NO. 39 CATCH BASIN
D-CB-40S	08-01-12	STANDARD 4' X 8' SQUARE CONCRETE NO. 40 CATCH BASIN
D-CB-42RB	03-11-14	STANDARD PRECAST CIRCULAR NO. 42 CATCH BASIN
D-CB-42S	08-01-12	STANDARD 32" X 32" SQUARE CONCRETE NO. 42 CATCH BASIN
D-CB-42SB	03-11-14	STANDARD 4' X 4' SQUARE CONCRETE NO. 42 CATCH BASIN
D-CBB-42	05-27-01	CAST IRON GRATE DETAILS FOR NOS. 42, 43 & 44 TYPE CATCH BASINS
D-JBS-1	08-01-12	STANDARD 32" X 32" SQUARE CONCRETE NO. 1 JUNCTION BOX
D-JBS-2	08-01-12	STANDARD 4' X 4' SQUARE CONCRETE NO. 2 JUNCTION BOX
D-MH-2	08-01-12	STANDARD MASONRY & PRECAST NO. 3 MANHOLE
D-MH-3	04-21-14	STANDARD PRECAST CIRCULAR LID DETAILS FOR NO. 3 MANHOLE
D-MH-4	08-01-12	STANDARD NO. 3 MANHOLE CASTINGS AND STEPS
D-SDS-1	08-01-12	STANDARD 32" X 32" SQUARE CONCRETE NO. 1 SPRING DRAIN BOX
D-SDS-2A	08-01-12	STANDARD 4' X 4' SQUARE CONCRETE NO. 2A SPRING DRAIN BOX
ROADWAY AND PAVEMENT APPURTENANCES		
RP-D-16	07-15-08	DETAILS OF LOWERED STANDARD CONCRETE DRIVEWAYS
RP-H-3	06-04-13	CURB RAMP AND TRUNCATED DOME SURFACE DETAIL
RP-H-5	06-04-13	PARALLEL CURB RAMP
RP-H-7	06-04-13	PERPENDICULAR CURB RAMP TYPE 1
RP-H-8	06-04-13	PERPENDICULAR CURB RAMP TYPE 2
RP-H-9	06-04-13	PARALLEL CURB RAMP TYPE 3 & 4
RP-I-5	12-18-96	EXAMPLES OF STREET AND ALLEY INTERSECTIONS
RP-J-9	02-02-12	CONTRACTION AND CONSTRUCTION JOINTS FOR CONCRETE PAVEMENT
RP-J-11	07-29-96	3/4" AND 1-3/4" EXPANSION AND EDGE PAVEMENT JOINTS
RP-J-13	03-20-91	3/4" AND 1-3/4" ELASTOMERIC COMPRESSION JOINT SEALS
RP-J-15	01-19-02	LONGITUDINAL CONTRACTION AND CONSTRUCTION JOINTS
RP-J-17	02-02-12	DOWEL ASSEMBLY DEVICES
RP-J-18	02-02-12	DOWEL ASSEMBLY DEVICES
RP-J-19	02-02-12	DOWEL ASSEMBLY DEVICES
RP-NMC-10	07-29-03	STANDARD VERTICAL (NONMOUNTABLE) CONCRETE CURBS AND CONCRETE CURBS AND GUTTERS
RP-S-7	06-04-13	DETAILS FOR STANDARD CONCRETE SIDEWALKS
RP-S-8	01-19-93	DETAILS FOR STANDARD CONCRETE PIPE HANDRAILS
SAFETY APPURTENANCES AND FENCE		
S-CZ-1		CLEAR ZONE CRITERIA
S-F-1	05-24-12	HIGH VISIBILITY FENCE
S-GR31-1		W-BEAM GUARDRAIL
S-GRA-1		GUARDRAIL ANCHOR FOR TYPE 12 TERMINAL
S-GRA-1A		GUARDRAIL ANCHOR FOR TYPE 12 TERMINAL (ALTERNATIVE)
S-GRA-3		GUARDRAIL ANCHOR FOR TYPE 21, 13, AND IN-LINE TERMINALS
S-GRC-1		GUARDRAIL CONNECTION TO BRIDGE ENDS OR BARRIER WALL
S-GRS-2		SPECIAL CASE: GUARDRAIL ATTACHMENT TO CONCRETE DECKS
S-GRT-2		TYPE 38 GUARDRAIL TERMINAL
S-GRT-2P		EARTH PAD FOR TYPE 38 TERMINAL
S-GRT-3		TYPE 21 GUARDRAIL TERMINAL
S-GRT-3D		TYPE 21 GUARDRAIL TERMINAL (DETAILS)
S-GRT-3P		EARTH PAD FOR TYPE 21 TERMINAL
S-GRT-4		TYPE 13 GUARDRAIL TERMINAL (TRAILING END)
S-PL-1		SAFETY PLAN AT ROADSIDE HAZARDS
S-PL-2		SAFETY PLAN AT SIDE ROADS OR PRIVATE DRIVES
S-PL-3		SAFETY PLAN: MINIMUM INSTALLATION AT BRIDGE ENDS
S-PL-6		SAFETY PLAN: SAFETY HARDWARE PLACEMENT
S-RP-2	01-19-99	STANDARD CONCRETE RIGHT-OF-WAY MARKERS
TRAFFIC CONTROL APPURTENANCES		
T-FAB-1	05-27-97	FLASHING YELLOW ARROW BOARD
T-M-1	11-01-11	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS AND MARKING ABBREVIATIONS
T-M-2	01-15-13	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS
T-M-3	09-19-91	MARKING STANDARDS FOR TRAFFIC ISLANDS, MEDIANS & PAVED SHOULDERS ON CONVENTIONAL ROADS
T-M-4	11-01-11	STANDARD INTERSECTION PAVEMENT MARKINGS
T-M-12	10-10-13	SIGNING AND PAVEMENT MARKINGS FOR BICYCLE LANES ON URBAN ROADWAYS
T-M-13		SIGNING AND PAVEMENT MARKINGS FOR BICYCLE LANES
T-M-14	11-01-11	SIGNING AND PAVEMENT MARKINGS FOR BICYCLE LANES AT INTERSECTIONS
T-PBR-1	06-30-09	INTERCONNECTED PORTABLE BARRIER RAIL
T-PBR-2	11-01-11	DETAIL FOR VERTICAL PANELS AND FLEXIBLE DELINEATORS
T-S-8	07-15-91	HIGHWAY SHIELDS USED ON STATE NUMBERED ROUTES AND ARROWS
T-S-9	11-01-11	STANDARD LAYOUT GROUND MOUNTED SIGNS
T-S-10	04-04-12	STANDARD MOUNTING DETAILS FLAT SHEET SIGNS ALUMINUM-STEEL DESIGN
T-S-12	05-27-03	STANDARD STEEL GROUND MOUNTED SIGNS, BREAK-AWAY TYPE POST FOOTING DETAILS, SQUARE TUBES
T-S-16	11-01-11	GROUND MOUNTED ROADSIDE SIGN AND DETAILS
T-S-16A	11-01-11	GROUND MOUNTED ROADSIDE SIGN PLACEMENT DETAILS
T-S-17	07-29-13	STANDARD GROUND MOUNTED SIGN USING PERFORATED/KNOCKOUT TUBE
T-S-18	02-14-14	END OF ROADWAY AND DEAD END SIGNS, METAL BARRICADES (TYPE III) & WORK ZONE SPEED SIGNS
T-S-19	07-19-13	STANDARD STEEL SIGN SUPPORTS
T-S-20	11-01-11	SIGN DETAILS
T-SG-1	11-01-11	WOOD POLE DETAILS FOR SPAN MOUNTED SIGNALS
T-SG-2	07-29-04	LOOP LEAD-INS, CONDUIT AND PULL BOXES
T-SG-3	11-11-04	STANDARD NOTES AND DETAILS OF INDUCTIVE LOOPS
T-SG-7	11-01-11	SIGNAL HEAD ASSEMBLIES AND PEDESTRIAN PUSH BUTTON SIGNS
T-SG-9A	12-04-13	MISCELLANEOUS SIGNAL DETAILS
T-SG-10	12-04-13	MAST ARM POLE AND STRAIN POLES FOUNDATION DETAILS
T-SG-11	07-29-04	MAINTENANCE OF EXISTING SIGNALS DURING HIGHWAY CONSTRUCTION
T-SG-12	11-01-11	TYPICAL WIRING FOR SIGNAL HEADS AND DETECTION LOOPS
T-WZ-10	04-02-12	ADVANCE ROADWAY SIGNING ON HIGHWAYS AND FREEWAYS
T-WZ-21	03-15-11	LANE CLOSURE WITH LEFT HAND MERGE AND LANE SHIFT
T-WZ-30	09-01-05	TRAFFIC CONTROL 2-LANE, 2-WAY DIVERSION (40 MPH OR LESS)
T-WZ-36	04-02-12	LANE CLOSURE ON LOW-VOLUME 2-LANE HIGHWAY
EROSION PREVENTION AND SEDIMENT CONTROL		
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	08-01-12	ROCK CHECK DAM
EC-STR-6A	08-01-12	ENHANCED ROCK CHECK DAM
EC-STR-12	08-01-12	ROCK SEDIMENT DAM
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-30		INSTREAM DIVERSION (WITHOUT TRAFFIC)

SEALED BY

JAMES H. GILLIAM III
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 103750
STATE OF TENNESSEE
10/20/14

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

INDEX AND STANDARD DRAWINGS

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	1C

STANDARD ROADWAY DRAWINGS

DWG. NO	REV.	DESCRIPTION

EROSION PREVENTION AND SEDIMENT CONTROL

EC-STR-30A		INSTREAM DIVERSION (WITH TRAFFIC)
EC-STR-31	08-01-12	TEMPORARY DIVERSION CHANNELS
EC-STR-31A	04-01-08	TEMPORARY DIVERSION CHANNEL DESIGN
EC-STR-32	08-01-12	TEMPORARY DIVERSION CULVERTS
EC-STR-34	08-01-12	EROSION CONTROL BLANKET FOR SLOPE INSTALLATION
EC-STR-36	08-01-12	TURF REINFORCEMENT MAT
EC-STR-37	08-01-12	SEDIMENT TUBE
EC-STR-39A	08-01-12	CURB INLET PROTECTION TYPE 3 & 4
EC-STR-41		CATCH BASIN FILTER ASSEMBLY (TYPE 1)
EC-STR-41A		CATCH BASIN FILTER ASSEMBLY (TYPE 1) SLIPCOVER DETAILS
EC-STR-42		CATCH BASIN FILTER ASSEMBLY (TYPE 2)
EC-STR-42A		CATCH BASIN FILTER ASSEMBLY (TYPE 2) SLIPCOVER DETAILS
EC-STR-43		CATCH BASIN FILTER ASSEMBLY (TYPE 3)
EC-STR-43A		CATCH BASIN FILTER ASSEMBLY (TYPE 3) SLIPCOVER DETAILS
EC-STR-46		CATCH BASIN FILTER ASSEMBLY (TYPE 6)
EC-STR-46A		CATCH BASIN FILTER ASSEMBLY (TYPE 6) SLIPCOVER DETAILS
EC-STR-47		CATCH BASIN FILTER ASSEMBLY (TYPE 7)
EC-STR-47A		CATCH BASIN FILTER ASSEMBLY (TYPE 7) SLIPCOVER DETAILS
EC-STR-48		CATCH BASIN FILTER ASSEMBLY (TYPE 8)
EC-STR-48A		CATCH BASIN FILTER ASSEMBLY (TYPE 8) SLIPCOVER DETAILS
EL-W-2	5-27-01	STANDARD GRAVITY- TYPE RETAINING WALLS

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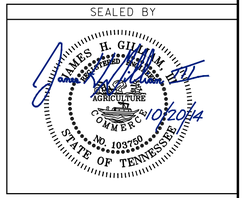

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

INDEX
AND
STANDARD
DRAWINGS

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	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
9	202-01	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	1
19	202-06.01	REMOVAL OF BUILDINGS (TRACT NO. 57)	LS	1
19	202-06.02	REMOVAL OF BUILDINGS (TRACT NO. 79 & 81)	LS	1
19	202-06.03	REMOVAL OF BUILDINGS (TRACT NO. 105)	LS	1
19	202-06.04	REMOVAL OF BUILDINGS (TRACT NO. 106)	LS	1
19	202-06.05	REMOVAL OF BUILDINGS (TRACT NO. 115)	LS	1
1	203-01	ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED)	C.Y.	196,382
17	203-02.01	BORROW EXCAVATION (GRADED SOLID ROCK)	TON	13,037
17	203-05	UNDERCUTTING	C.Y.	33,061
11	204-08	FOUNDATION FILL MATERIAL	C.Y.	495
10	204-08.01	BACKFILL MATERIAL (FLOWABLE FILL)	C.Y.	204
2	209-02.05	12" TEMPORARY SLOPE DRAIN	L.F.	50
2	209-02.06	15" TEMPORARY SLOPE DRAIN	L.F.	384
2	209-02.07	18" TEMPORARY SLOPE DRAIN	L.F.	569
	209-05	SEDIMENT REMOVAL	C.Y.	1,236
8	209-06.13	20IN DIA COIR LOG (IN STREAM)	L.F.	100
2,14	209-08.02	TEMPORARY SILT FENCE (WITH BACKING)	L.F.	10,737
2	209-08.03	TEMPORARY SILT FENCE (WITHOUT BACKING)	L.F.	12,655
2	209-08.07	ROCK CHECK DAM PER	EACH	39
2	209-08.08	ENHANCED ROCK CHECK DAM	EACH	18
2	209-09.01	SANDBAGS	BAG	2,015
2	209-09.04	SEDIMENT FILTER BAG(15' X 10')	EACH	4
	209-09.21	POLYACHLAMIDE GEL LOGS	EACH	19
	209-09.22	POLYACHLAMIDE POWDER	LB.	202
14	209-09.24	JUTE MESH FABRIC	S.Y.	2,875
	209-09.43	CURB INLET PROTECTION (TYPE 4)	EACH	61
	209-20.03	POLYETHYLENE SHEETING (6 MIL. MINIMUM)	S.Y.	54
	209-40.41	CATCH BASIN FILTER ASSEMBLY(TYPE 1)	EACH	15
	209-40.42	CATCH BASIN FILTER ASSEMBLY(TYPE 2)	EACH	26
	209-40.43	CATCH BASIN FILTER ASSEMBLY(TYPE 3)	EACH	6
	209-40.44	CATCH BASIN FILTER ASSEMBLY(TYPE 4)	EACH	2
	209-40.46	CATCH BASIN FILTER ASSEMBLY(TYPE 6)	EACH	115
	209-40.47	CATCH BASIN FILTER ASSEMBLY(TYPE 7)	EACH	6
	209-40.48	CATCH BASIN FILTER ASSEMBLY(TYPE 8)	EACH	6
6	303-01.01	GRANULAR BACKFILL (ROADWAY)	TON	2,906
5	303-10.01	MINERAL AGGREGATE (SIZE 57)	TON	233
15	604-01.01	CLASS A CONCRETE (ROADWAY)	C.Y.	542
15	604-01.02	STEEL BAR REINFORCEMENT (ROADWAY)	LB.	115,552
7	604-01.04	1-1/2" STEEL PIPE HANDRAIL	L.F.	1,247
	604-03.07	CLASS A CONCRETE (DITCHES)	C.Y.	166
3,16	604-07.01	RETAINING WALL (STA. 230+50 TO 231+13 SR 320)	S.F.	354
3	604-07.02	RETAINING WALL (STA. 1+00 TO 1+80 PVT. DRIVE SHT. 10B)	S.F.	382
3	604-07.03	RETAINING WALL (STA. 305+80 TO 306+40 SR 320)	S.F.	314
3	604-07.04	RETAINING WALL (BELL AIR ROAD)	S.F.	687
3	604-07.05	RETAINING WALL (STA. 324+36 TO 327+55 SR 320)	S.F.	3,053
3	604-07.06	RETAINING WALL (STA. 328+70.50 TO 333+54.49 SR 320)	S.F.	8,774
3	604-07.07	RETAINING WALL (HAMLET DRIVE)	S.F.	2,404
	604-10.51	SCARIFYING	S.Y.	1,082
12	606-24.12	TEMPORARY SHEET PILES	S.F.	1,250
	607-03.02	18" CONCRETE PIPE CULVERT (CLASS III)	L.F.	8,473
	607-05.02	24" CONCRETE PIPE CULVERT (CLASS III)	L.F.	3,315
	607-06.02	30" CONCRETE PIPE CULVERT (CLASS III)	L.F.	685

ESTIMATED ROADWAY QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
	607-07.02	36" CONCRETE PIPE CULVERT (CLASS III)	L.F.	145
	607-09.02	48" CONCRETE PIPE CULVERT (CLASS III)	L.F.	16
	607-16.01	23"X 14" HORIZONTAL OVAL CONCRETE PIPE CULVERT	L.F.	80
	607-16.04	38"X 24" HORIZONTAL OVAL CONCRETE PIPE CULVERT	L.F.	79
		ALT. "A" PAVEMENT DESIGN		
4	203-06	WATER	M.G.	3,145
13	303-01	MINERAL AGGREGATE, TYPE A BASE, GRADING D	TON	70,735
18	307-01.01	ASPHALT CONC. MIX (PG64-22) (BPMB-HM) GRADING A	TON	1,442
18	307-01.08	ASPHALT CONC. MIX (PG64-22) (BPMB-HM) GRADING B-M2	TON	2,504
	307-02.01	ASPHALT CONC. MIX (PG70-22) (BPMB-HM) GRADING A	TON	11,280
	307-02.02	ASPHALT CEMENT (PG70-22) (BPMB-HM) GRADING A-S	TON	275
	307-02.03	AGGREGATE (BPMB-HM) GRADING A-S MIX	TON	8,174
	307-02.08	ASPHALT CONC. MIX (PG70-22) (BPMB-HM) GRADING B-M2	TON	9,349
	313-03	TREATED PERMEABLE BASE	S.Y.	54
	402-01	BITUMINOUS MATERIAL FOR PRIME COAT (PC)	TON	166
	402-02	AGGREGATE FOR COVER MATERIAL (PC)	TON	657
	403-01	BITUMINOUS MATERIAL FOR TACK COAT (TC)	TON	45
	411-01.07	ACS MIX(PG64-22) GRADING E SHOULDER	TON	189
	411-01.10	ACS MIX (PG64-22) GRADING D	TON	2,013
	411-02.10	ACS MIX(PG70-22) GRADING D	TON	5,482
	415-01.01	COLD PLANING BITUMINOUS PAVEMENT	TON	300
	501-01.02	PORTLAND CEMENT CONCRETE PAVEMENT (PLAIN) 9"	S.Y.	479
		ALT. "B" PAVEMENT DESIGN		
4	203-06	WATER	M.G.	5,349
13	303-01	MINERAL AGGREGATE, TYPE A BASE, GRADING D	TON	40,389
18	307-01.01	ASPHALT CONC. MIX (PG64-22) (BPMB-HM) GRADING A	TON	1,442
18	307-01.08	ASPHALT CONC MIX (PG64-22) (BPMB-HM) GRADING B-M2	TON	2,504
	307-02.01	ASPHALT CONC. MIX (PG70-22) (BPMB-HM) GRADING A	TON	11,280
	307-02.02	ASPHALT CEMENT (PG70-22) (BPMB-HM) GRADING A-S	TON	275
	307-02.03	AGGREGATE (BPMB-HM) GRADING A-S MIX	TON	8,174
	307-02.08	ASPHALT CONC. MIX (PG70-22) (BPMB-HM) GRADING B-M2	TON	9,349
	309-01.01	MINERAL AGGREGATE (A-CBC)	TON	23,587
	309-01.02	PORTLAND CEMENT (A-CBC)	TON	911
	309-02	BITUMINOUS MATERIAL (A-CBC)	TON	71
	313-03	TREATED PERMEABLE BASE	S.Y.	54
	402-01	BITUMINOUS MATERIAL FOR PRIME COAT (PC)	TON	31
	402-02	AGGREGATE FOR COVER MATERIAL (PC)	TON	124
	403-01	BITUMINOUS MATERIAL FOR TACK COAT (TC)	TON	45
	411-01.07	ACS MIX (PG64-22) GRADING E SHOULDER	TON	189
	411-01.10	ACS MIX (PG64-22) GRADING D	TON	2,013
	411-02.10	ACS MIX(PG70-22) GRADING D	TON	5,482
	415-01.01	COLD PLANING BITUMINOUS PAVEMENT	TON	300
	501-01.02	PORTLAND CEMENT CONCRETE PAVEMENT (PLAIN) 9"	S.Y.	479
	607-39.02	18" PIPE CULVERT (SIDE DRAIN)	L.F.	587
	607-39.03	24" PIPE CULVERT (SIDE DRAIN)	L.F.	322
	607-39.04	30" PIPE CULVERT (SIDE DRAIN)	L.F.	100
	607-39.05	36" PIPE CULVERT (SIDE DRAIN)	L.F.	239
	607-57.02	REINFORCED CONCRETE PIPE ARCH (29" X 18")	L.F.	164
	607-50.60	THREE SIDED PRECAST CULVERT STRUCTURE - BARREL(28'x3'-9")	L.F.	14
	611-01.01	MANHOLES, > 0' - 4' DEPTH	EACH	1
	611-01.02	MANHOLES, > 4' - 8' DEPTH	EACH	1

FOOTNOTES:

1. REFER TO SPECIAL NOTES AND SHEET 4C.
2. SEE EROSION SUBSECTION 209.07 OF THE STANDARD SPECIFICATIONS FOR MAINTENANCE REPLACEMENT. (TO SEE WHICH ITEMS HAVE ADJUSTMENT FACTORS SEE EPSC SHEET). INCLUDES METAL STAKES WHERE NEEDED.
3. SEE TDOT'S EARTH RETAINING STRUCTURES MANUAL (2012) FOR COST INCLUSIONS. COST WILL BE SQUARE FOOTAGE MEASURED FROM GROUND LINE TO TOP OF RETAINING WALL.
4. INCLUDES
   1,000 M.G. EMBANKMENT
   1,270 M.G. SIDE ROADS BASE
   906 M.G. SR 320 BASE ALT. "A"
   3,110 M.G. SR 320 BASE ALT. "B"
   (CALCULATIONS INCREASED FOR URBAN PROJECT DUST CONTROL)
5. INCLUDES
   28 TON SEDIMENT FILTER BAG
   22 TON ROCK SEDIMENT DAM
   20 TON HANDRAIL DETAIL
   169 TON SINKHOLE
6. FOR BOX CULVERTS AND CONCRETE DITCHES.
7. SEE DETAIL SHEET, 2S, FOR LOCATION AND COLOR.
8. TO BE USED TO PLUG PIPES WHERE PIPE REMOVALS ARE INFEASIBLE, AND FOR LOW FLOW CHANNEL AT OUTLET OF BOX, STA. 281+72.24.
9. BID PRICE INCLUDES ALL SALVAGE VALUE OF MATERIAL. SEE TABULATED QUANTITIES SHEET NO. 2Q FOR REMOVAL OF BUILDINGS AND OBSTRUCTIONS DESCRIPTIONS BLOCK.
10. FOR PLUGGING PIPES UNDER ROADWAY THAT ARE NOT FEASIBLE TO BE REMOVED, QUANTITY MAY BE INCREASED, DECREASED OR ELIMINATED AS DIRECTED BY ENGINEER.
11. INCLUDES 130 ADDITIONAL TONS TO BE USED AS DIRECTED BY ENGINEER.
12. TO BE USED FOR CULVERTS AND CROSS DRAINS.
13. INCLUDES
    4542 TON TRAFFIC CONTROL (SEE SHT. 19A1)
    3527 TON PVT./BUS. DRIVES
14. SEE DETAIL ON SHEET 18AA.
15. INCLUDES
    1 CY FOR CONC. BAFFLE (ITEM 604-01.01)
    22 LBS FOR CONC. BAFFLE (ITEM 604-01.02)
16. SAW CUTTING FOR REMOVAL OF EXISTING RETAINING WALL AND PATIO AT R.O.W. LINE IS INCLUDED UNDER ITEM NO. 202-01 (REMOVAL OF STRUCTURES AND OBSTRUCTIONS).
17. INCLUDES QUANTITIES FOR STREAMS, SINKHOLE, WETLANDS AND POND (SEE DETAILS ON SHT. 2S2)
18. INCLUDES QUANTITIES FOR TRAFFIC CONTROL:
    858 TON FOR ITEM NO. 307-01.01
    562 TON FOR ITEM NO. 307-01.08
    (SEE SHEET 19A1)
19. BID PRICES INCLUDES ALL SALVAGE OF MATERIALS. SEE TABULATED SHEET NO. 2Q FOR REMOVAL OF BUILDINGS AND OBSTRUCTIONS DESCRIPTION BLOCK.

ALL QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER

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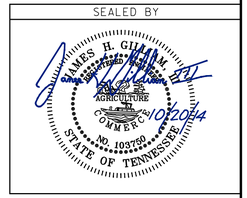

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ESTIMATED ROADWAY QUANTITIES

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	2A1

ESTIMATED ROADWAY QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
A22	611-02.01	SPRING DRAIN BOX, TYPE 1	EACH	2
A22	611-02.02	SPRING DRAIN BOX, TYPE 2A	EACH	1
	611-02.10	JUNCTION BOX, TYPE 1	EACH	2
	611-02.11	JUNCTION BOX, TYPE 2	EACH	2
	611-07.01	CLASS A CONCRETE (PIPE ENDWALLS)	C.Y.	57
	611-07.02	STEEL BAR REINFORCEMENT (PIPE ENDWALLS)	LB.	4,635
	611-10.01	CATCH BASINS, TYPE 10, > 0' - 4' DEPTH	EACH	2
	611-10.02	CATCH BASINS, TYPE 10, > 4' - 8' DEPTH	EACH	6
	611-12.01	CATCH BASINS, TYPE 12, 0' - 4' DEPTH	EACH	12
	611-12.02	CATCH BASINS, TYPE 12, > 4' - 8' DEPTH	EACH	81
	611-12.03	CATCH BASINS, TYPE 12, > 8' - 12' DEPTH	EACH	6
	611-14.02	CATCH BASINS, TYPE 14, > 4' - 8' DEPTH	EACH	3
	611-16.02	CATCH BASINS, TYPE 16, > 4' - 8' DEPTH	EACH	2
	611-39.01	CATCH BASINS, TYPE 39, 0' - 4' DEPTH	EACH	4
	611-39.02	CATCH BASINS, TYPE 39, > 4' - 8' DEPTH	EACH	2
	611-39.03	CATCH BASINS, TYPE 39, > 8' - 12' DEPTH	EACH	2
	611-40.01	CATCH BASINS, TYPE 40, 0' - 4' DEPTH	EACH	2
	611-40.02	CATCH BASINS, TYPE 40, > 4' - 8' DEPTH	EACH	1
	611-42.01	CATCH BASINS, TYPE 42, 0' - 4' DEPTH	EACH	5
	611-42.02	CATCH BASINS, TYPE 42, > 4' - 8' DEPTH	EACH	4
A17	621-03.03	24" TEMPORARY DRAINAGE PIPE	L.F.	40
A17	621-03.05	36" TEMPORARY DRAINAGE PIPE	L.F.	120
	701-01.03	CONCRETE SIDEWALK - 4 " (5.0 FT WIDE)	S.F.	92,949
	701-02	CONCRETE DRIVEWAY	S.F.	24,848
	701-02.03	CONCRETE CURB RAMP	S.F.	3,544
	702-03	CONCRETE COMBINED CURB & GUTTER	C.Y.	1,597
	703-01	CEMENT CONCRETE DITCH PAVING	C.Y.	166
	705-01.04	METAL BEAM GUARD FENCE	L.F.	33
	705-02.02	SINGLE GUARDRAIL (TYPE 2)	L.F.	503
	705-04.03	GUARDRAIL TERMINAL (TYPE 13)	EACH	7
	705-04.04	GUARDRAIL TERMINAL (TYPE 21)	EACH	3
	705-04.05	GUARDRAIL TERMINAL (TYPE-IN-LINE)	EACH	3
	705-04.07	TAN ENERGY ABSORBING TERM (NCHRP 350, TL3)	EACH	4
A1	705-08.51	PORTABLE IMPACT ATTENUATOR NCHRP350 TL-3	EACH	16
A16	706-01	GUARDRAIL REMOVED	L.F.	225
	707-08.11	HIGH-VISIBILITY CONSTRUCTION FENCE	L.F.	6,402
	708-02.01	MARKERS (CONCRETE R.O.W. POSTS)	EACH	219
A7	709-05.05	MACHINED RIP-RAP (CLASS A-3)	TON	169
	709-05.06	MACHINED RIP-RAP (CLASS A-1)	TON	482
A8	709-05.08	MACHINED RIP-RAP (CLASS B)	TON	301
	709-05.09	MACHINED RIP-RAP (CLASS C)	TON	347
	710-02	AGGREGATE UNDERDRAINS (WITH PIPE)	L.F.	16,900
A21	712-01	TRAFFIC CONTROL	LS	1
	712-02.02	INTERCONNECTED PORTABLE BARRIER RAIL	L.F.	3,399
	712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	EACH	624
	712-05.01	WARNING LIGHTS (TYPE A)	EACH	63
	712-05.03	WARNING LIGHTS (TYPE C)	EACH	196
A2	712-06	SIGNS (CONSTRUCTION)	S.F.	1,689
	712-06.01	VERTICAL PANELS	S.F.	1,056
	712-07.03	TEMPORARY BARRICADES (TYPE III)	L.F.	360
	712-08.03	ARROW BOARD (TYPE C)	EACH	2
A12	713-11.01	"U" SECTION STEEL POSTS	LB.	2,967
A12	713-11.02	PERFORATED/KNOCKOUT SQUARE TUBE POST	LB.	409
A12	713-13.02	FLAT SHEET ALUMINUM SIGNS (0.080" THICK)	S.F.	640
A12	713-13.03	FLAT SHEET ALUMINUM SIGNS (0.100" THICK)	S.F.	96
A11	713-15.02	REMOVAL & RELOCATION OF SIGN & SUPPORT	EACH	12
A23	713-15.40	SIGN INSTALLATION (AT TRAFFIC SIGNAL)	LS	1
	713-16.01	CHANGEABLE MESSAGE SIGN UNIT	EACH	4
A4	716-01.07	TEMPORARY RAISED PAVEMENT MARKER,YELLOW	EACH	525

ESTIMATED ROADWAY QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
	716-01.21	Snwplwble Pvmt Mrkrs (Bi-Dir)(1 Color)	EACH	601
	716-01.23	Snwplwble Pvmt Mrkrs (Bi-Dir)(2 Color)	EACH	483
A14	716-02.03	PLASTIC PAVEMENT MARKING (CROSS-WALK)	L.F.	258
A14	716-02.04	PLASTIC PAVEMENT MARKING(CHANNELIZATION STRIPING)	S.Y.	1,692
A3, A14	716-02.05	PLASTIC PAVEMENT MARKING (STOP LINE)	L.F.	868
A3, A14	716-02.06	PLASTIC PAVEMENT MARKING (TURN LANE ARROW)	EACH	111
A15	716-02.08	PLASTIC PAVEMENT MARKING (8" DOTTED LINE)	L.F.	105
A14	716-02.09	PLASTIC PAVEMENT MRKNG (LONGITUDINAL CROSS-WALK)	L.F.	1,190
A14	716-03.01	PLASTIC WORD PAVEMENT MARKING (ONLY)	EACH	3
A14	716-03.03	PLASTIC WORD PAVEMENT MARKING (STOP AHEAD)	EACH	1
A14	716-04.01	PLASTIC PAVEMENT MARKING (STRAIGHT-TURN ARROW)	EACH	5
A14	716-04.04	PLASTIC PAVEMENT MARKING (TRANSVERSE SHOULDER)	L.F.	555
A14	716-04.05	PLASTIC PAVEMENT MARKING (STRAIGHT ARROW)	EACH	12
A14	716-04.12	PLASTIC PAVEMENT MARKING (YIELD LINE)	S.F.	34
A14	716-04.14	PLASTIC PAVEMENT MARKING (LANE REDUCTION ARROW)	EACH	2
A14	716-04.15	PLASTIC PAVEMENT MARKING-BIKE SYMBOL/ARROW	EACH	32
A4	716-05.01	PAINTED PAVEMENT MARKING (4" LINE)	L.M.	6.6
A4	716-05.05	PAINTED PAVEMENT MARKING (STOP LINE)	L.F.	144
A4	716-05.06	PAINTED PAVEMENT MARKING (TURN LANE ARROW)	EACH	18
A4	716-05.20	PAINTED PAVEMENT MARKING (6" LINE)	L.M.	3.8
A4	716-05.49	PAINTED PAVEMENT MARKINGS(8" LINE)	L.M.	1.6
A4	716-08.01	REMOVAL OF PAVEMENT MARKING (LINE)	L.F.	7,300
	716-12.01	ENHANCED FLATLINE THERMO PVMT MRKNG (4IN LINE)	L.M.	8.2
	716-12.02	ENHANCED FLATLINE THERMO PVMT MRKNG (6IN LINE)	L.M.	3.9
	716-12.04	ENHANCED FLATLINE THERMO PVMT MRKNG (4IN DOTTED LINE)	L.F.	2,920
	716-12.05	ENHANCED FLATLINE THERMO PVMT MRKNG (6IN DOTTED LINE)	L.F.	2,002
	717-01	MOBILIZATION	LS	1
A18	740-06.01	GEOMEMBRANE	S.Y.	2,078
A20	740-07.02	GEOGRID REINFORCEMENT (SOIL SLOPES)	S.Y.	275
A5	740-10.03	GEOTEXTILE (TYPE III)(EROSION CONTROL)	S.Y.	1,357
A6	740-10.04	GEOTEXTILE (TYPE IV)(STABILIZATION)	S.Y.	44,749
	740-11.01	TEMPORARY SEDIMENT TUBE 8IN (DRIVEWAY DITCHES)	L.F.	74
	740-11.02	TEMPORARY SEDIMENT TUBE 12IN (SLOPES & DITCHES)	L.F.	3,496
	740-11.03	TEMPORARY SEDIMENT TUBE 18IN (SLOPES & DITCHES)	L.F.	5,797
	740-11.04	TEMPORARY SEDIMENT TUBE 20IN (DITCHES)	L.F.	229
A15	801-01.07	TEMPORARY SEEDING (WITH MULCH)	UNIT	539
A13	801-01.36	SPECIAL WETLAND SEED MIXTURE	UNIT	1
	801-01.65	TEMPORARY MULCH	UNIT	20
	801-02.08	TEMPORARY SEEDING (WITHOUT MULCH)	UNIT	180
A10	801-03	WATER (SEEDING & SODDING)	M.G.	831
	802-02.01	SEEDLINGS (ACER RUBRUM; RED MAPLE 18'-24" HT BR)	EACH	17
	802-02.02	SEEDLINGS (SALIX NIGRA; BLACK WILLOW, 18"-24" HT, BR)	EACH	17
	802-02.03	SEEDLINGS (PLANTUS OCCIDENTALIS; SYCAMORE, 18"-24" HT, BR)	EACH	16
	802-02.31	CUTTINGS: SALIX SERICEA (18IN-24IN)	EACH	13
	802-02.32	CUTTINGS: CORNUS AMOMUM (18IN-24IN)	EACH	12
	802-02.33	CUTTINGS: SAMBUCUS CANADENSIS (18IN-24IN)	EACH	11
	802-11.02	ACER RUBRUM (RED MAPLE 2-5FT CNTNR GRWN)	EACH	108
	802-11.03	ACER SACCHARINUM (SILVER MAPLE 2-5FT CNTNR GRWN)	EACH	106
	802-11.11	CERCIS CANADENSIS (REDBUD 2-5FT CNTNR GRWN)	EACH	17
	802-11.12	CORNUS FLORIDA (FLOWERING DOGWOOD 2-5FT CNTNR GRWN)	EACH	17
	802-12.11	CERCIS CANADENSIS (REDBUD SEEDLNG B.R.)	EACH	54
	802-12.59	PRUNUS AMERICANA (AMERICAN PLUM SEEDLING B.R.)	EACH	52
	802-13.02	CALYCANTHUS FLORIDUS (SWEETSHRUB 2-5FT CNTR GRWN)	EACH	55
	802-13.06	HYDRANGEA QUERCIFOLIA (OAKLF HYDRANGEA 2-5FT CNTNR GRWN)	EACH	17
	802-13.13	VACCINIUM STAMINEUM (DEERBERRY 2-5FT CNTNR GRWN)	EACH	69
	803-01	SODDING (NEW SOD)	S.Y.	79,519
A19	805-12.03	EROSION CONTROL BLANKET (TYPE III)	S.Y.	10,000
A9	806-02.03	PROJECT MOWING	CYCL	4

FOOTNOTES:

A1. THIS SHALL BE A PORTABLE ENERGY ABSORBING TERMINAL MEETING THE REQUIREMENTS OF NCHRP 350 FOR TEST LEVEL 5. THE PAY ITEM WILL INCLUDE FURNISHING AND INSTALLING ALL COMPONENTS AS SHOWN ON THE MANUFACTURER'S DRAWING.

A2. SEE SHEET 19A1 FOR TABULATIONS.

A3. INCLUDES:
144 L.F. FOR ITEM NO. 716-02.05
18 EACH FOR ITEM NO. 716-02.06
(SEE SHEET 19A1 FOR TABULATIONS)

A4. FOR TEMPORARY PAVEMENT AREAS.

A5. FOR SEDIMENT FILTER BAG, TEMPORARY CONSTRUCTION, & ROCK SEDIMENT DAM. (SEE EPSC SHEET)

A6. FOR ROCK SEDIMENT DAM, "V" RIP-RAP DITCH AND SWELL RIP-RAP. INCLUDES 11,330 S.Y. FOR SINKHOLE, STREAMS,WETLANDS AND POND. (SEE DETAILS ON SHT. 2S2)

A7. INCLUDES 169 TONS FOR EPSC.

A8. INCLUDES 268 TONS FOR EPSC.

A9. COST OF LITTER AND TRASH REMOVAL IS TO BE INCLUDED IN THE BID PRICE OF THIS ITEM.

A10. INCLUDES 53.7 THOUSAND GALLONS FOR EPSC.

A11. RELOCATION OF EXISTING STOP SIGNS FOR TRAFFIC CONTROL.

A12. SEE SHEETS 20K-20N FOR SIGN SCHEDULE.

A13. FOR LOW FLOW CHANNEL AT OUTLET OF BOX CULVERT, STA. 281+72.24 AND WETLANDS ON SHEET 10. SEE STANDARD BRIDGE DRAWING STD-15-16A FOR SEED TYPE.

A14. THE CONTRACTOR MAY ELECT TO SUBSTITUTE PREFORMED PLASTIC FOR THERMOPLASTIC, PREFORMED PLASTIC SHALL BE PAID FOR AT THE SAME UNIT PRICE AS BID FOR THERMOPLASTICS.

180 LF OF 12' WIDE CROSSWALK (716-02.03)
78 LF OF 10' WIDE CROSSWALK (716-02.03)

A15. FOR STOCKPILES, LAYDOWN AREAS AND OTHER TEMPORARILY ERODIBLE AREAS WHERE SOD HAS NOT YET BEEN INSTALLED TO FINAL GRADE.

A16. GUARDRAIL REMOVED SHALL BE DISPOSED OF BY THE CONTRACTOR. ALL COST IS TO BE INCLUDED IN THE PRICE BID FOR REMOVAL.

A17. FOR EPSC MEASURES.

A18. FOR CONCRETE DITCHES.

A19. TO BE WRAPPED OVER SPECIAL SEED MIX FOR LOW FLOW CHANNEL.

A20. TO BE USED ON SPECIAL DITCH REQUIRING GEOGRID REINFORCEMENT MAT. SEE SHEET 2V1 AND STD. DWG. EC-STR-36.

A21. INCLUDES SIGNAL HEAD ADJUSTMENTS FOR TRAFFIC CONTROL PHASING, TEMPORARY LOOP DETECTION, REMOVAL OF PAVEMENT MARKINGS AND LINES, AND REMOVAL OF TEMPORARY PAVEMENT.

A22. SEE SHEET 2P.

A23. SEE SHEETS 21 AND 21B.

ALL QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER

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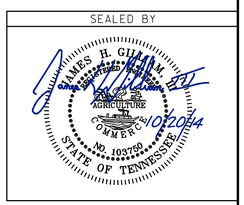

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ESTIMATED ROADWAY QUANTITIES

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	2A2

ESTIMATED SIGNAL QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
1	713-15.07	SUSPENDED FLAT SHEET ALUMINUM SIGN (0.080" THICK)	EACH	4
2	714-08.09	LIGHT STANDARDS (22' STEEL POLE)	EACH	4
3	730-01.02	REMOVAL OF SIGNAL EQUIPMENT	EACH	1
	730-02.09	SIGNAL HEAD ASSEMBLY (130 WITH BACKPLATE)	EACH	13
	730-02.17	SIGNAL HEAD ASSEMBLY (150 A2H WITH BACKPLATE)	EACH	5
4	730-02.30	SIGNAL HEAD ASSEMBLY (140A4 WITH BACKPLATE)	EACH	5
	730-02.31	SIGNAL HEAD ASSEMBLY (130 POLE MOUNTED)	EACH	2
	730-03.23	INSTALL PULL BOX (FIBER OPTIC-TYPE A)	EACH	20
	730-03.24	INSTALL PULL BOX (FIBER OPTIC-TYPE B)	EACH	3
5	730-05.01	ELECTRICAL SERVICE CONNECTION	EACH	2
	730-08.01	SIGNAL CABLE - 3 CONDUCTOR	L.F.	229
	730-08.02	SIGNAL CABLE - 5 CONDUCTOR	L.F.	980
	730-08.04	SIGNAL CABLE - 9 CONDUCTOR	L.F.	2483
6	730-09.01	SPAN WIRE ASSEMBLY(28,350 LBS.MIN.BRK STRENGTH)	L.F.	415
7	730-09.02	SPAN WIRE ASSEMBLY(18,715 LBS.MIN.BRK STRENGTH)	L.F.	353
	730-10.01	TETHER WIRE ASSEMBLY - 1/4" DIAMETER	L.F.	671
	730-12.01	CONDUIT 1" DIAMETER (PVC)	L.F.	1004
	730-12.02	CONDUIT 2" DIAMETER (PVC)	L.F.	
	730-12.08	CONDUIT 2" DIAMETER (RGS)	L.F.	835
8,9	730-13.08	VEHICLE DETECTOR (WIRELESS MAGNOMETER SENSOR)	EACH	41
8,10	730-13.09	VEHICLE DETECTOR (ACCESS POINTS)	EACH	2
8,11	730-13.10	VEHICLE DETECTOR (REPEATERS)	EACH	4
8	730-13.11	VEHICLE DETECTOR (CONTACT CLOSURE CARDS)	EACH	2
8	730-13.12	VEHICLE DETECTOR (ACCESS BOX INSTALLED)	EACH	2
12	730-15.32	CABINET (EIGHT PHASE BASE MOUNTED)	EACH	2
12,13	730-16.02	EIGHT PHASE ACTUATED CONTROLLER	EACH	2
14,19	730-23.01	STEEL STRAIN POLE (SIGNAL SUPPORT)	EACH	2
15,19	730-23.02	STEEL STRAIN POLE (SIGNAL SUPPORT)	EACH	1
16,19	730-23.03	STEEL STRAIN POLE (SIGNAL SUPPORT)	EACH	1
17	730-23.04	STEEL STRAIN POLE (SIGNAL SUPPORT)	EACH	3
18	730-23.05	STEEL STRAIN POLE (SIGNAL SUPPORT)	EACH	1
20	730-26.05	COUNTDOWN PEDESTRIAN SIGNAL	EACH	12
21	730-40	TEMPORARY TRAFFIC SIGNAL SYSTEM	EACH	1

FOOTNOTES

1. FOR R10-12 SIGN

2. TO BE USED FOR MOUNTING THE REPEATER FOR THE WIRELESS DETECTION SYSTEM. SEE STD. DWG. T-L-1 FOR STANDARD LIGHT FOUNDATION DETAIL (30'-50')

3. INCLUDES THE REMOVAL OF ALL SIGNAL POLES, SIGNAL HEADS, SIGNAL CABLES, CONTROLLER, AND ANY OTHER SIGNAL RELATED EQUIPMENT . ALSO TO INCLUDE THE ADJUSTMENT OF SIGNAL HEADS AS NEEDED FOR THE TRAFFIC CONTROL PLANS. (FOR USE AT THE HURRICANE CREEK/MORRIS HILL RD. INTERSECTION)

4. FLASHING YELLOW ARROW DISPLAY WITH R10-12 (MOD) SIGN

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

6. FOR HURRICANE CREEK/ MORRIS HILL RDS.

7. FOR BANKS RD.

FOOTNOTES CONTINUED

8. THE WIRELESS DETECTION SYSTEM SHALL BE A SENSYS NETWORK VDS240 WIRELESS VEHICLE DETECTION SYSTEM, OR EQUIVALENT. IT SHALL CONSIST OF ALL NECESSARY MATERIALS TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM PER CITY REQUIREMENTS.

9. FOR STOP BAR DETECTION, USE SENSYS VSN240-T SENSORS AND FOR ADVANCE DETECTION USE SENSYS VSN240-F SENSORS.

10. USE SENSYS AP240-E

11. USE SENSYS RP240-BH-LL

12. CABINETS AND CONTROLLERS SHALL BE DELIVERED TO TRAFFIC OPERATION SHOP 5 DAYS BEFORE INSTALLING IN THE FIELD TO TEST AND PUT TIMING PLAN IN THE CONTROLLER.

13. CONTROLLER TO BE EAGLE EPAC M52 W/ MMU CONFLICT MONITOR. CONTROLLER TO HAVE KEY DATA CAPABILITY.

14. FOR SIGNAL POLE NOS. 1 & 2 (HURRICANE CREEK RD./MORRIS HILL RD.)
MOMENT CAPACITY: 352,750 FT.-LBS
FOOTING DEPTH: 29'-0" FOOTING DIAMETER :3'-0"

15. FOR SIGNAL POLE NO. 3 (HURRICANE CREEK RD./MORRIS HILL RD.)
MOMENT CAPACITY: 393,000 FT.-LBS
FOOTING DEPTH: 30'-0" FOOTING DIAMETER: 3'-0"

16. FOR SIGNAL POLE NO. 4 (HURRICANE CREEK RD./MORRIS HILL RD.)
MOMENT CAPACITY: 301,550 FT.-LBS
FOOTING DEPTH: 26'-0" FOOTING DIAMETER: 3'-0"

17. FOR SIGNAL POLE NOS. 1, 3 & 4 (BANKS RD.)
MOMENT CAPACITY: 203,700 FT.-LBS
FOOTING DEPTH: 21'-0" FOOTING DIAMETER: 3'-0"

18. FOR SIGNAL POLE NO. 2 (BANKS RD.)
MOMENT CAPACITY: 144,200 FT.-LBS
FOOTING DEPTH: 18'-0" FOOTING DIAMETER: 3'-0"

19. SHAFT DIAMETER MUST BE MAINTAINED DUE TO R.O.W. CONSTRAINTS. THEREFORE, ANCHOR BOLT CIRCLE DIMENSION MUST BE LESS THAN OR EQUAL TO 25 INCHES.

20. INCLUDES PUSHBUTTONS AND R10-3E SIGNS.

21. INCLUDES 4 WOOD POLES, GUYING DEVICES, SPAN WIRE, CONDUIT RISERS, AND ANY OTHER SIGNAL EQUIPMENT NEEDED FOR 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) CIRCULAR INDICATIONS SHALL MEET “ITE VTCSH-LED CIRCULAR SIGNAL SUPPLEMENT” FOR EXPANDED/EXTENDED VIEW.

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

(4) 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

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

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

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

(8) ALL SIGNAL HEADS WITH LED LENSES SHALL INCLUDE SWIVEL BALANCE ADJUSTERS TO MAINTAIN THE PROPER VISIBILITY. COSTS OF ADJUSTERS TO BE INCLUDED IN COSTS OF SIGNAL HEADS.

(9) THE ATTACHMENT OF THE TETHER WIRE TO THE POLE SHALL BE LOCATED BELOW THE LOWEST ELEVATION OF THE SIGNAL HEADS.

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

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ESTIMATED SIGNAL QUANTITIES AND SPECIAL NOTES

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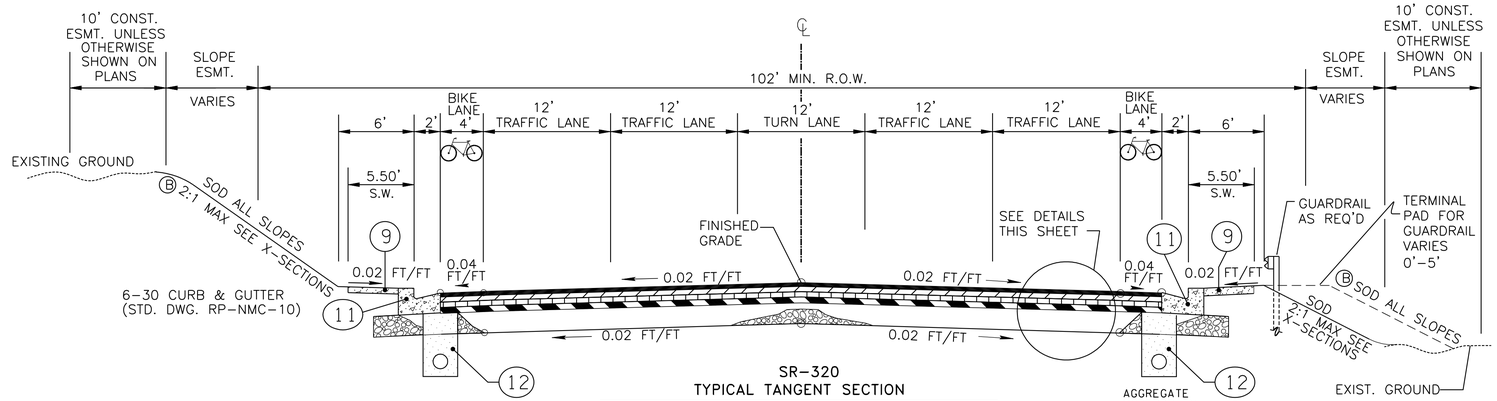
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	2
CONST.	2014	STP-320(4)	2C

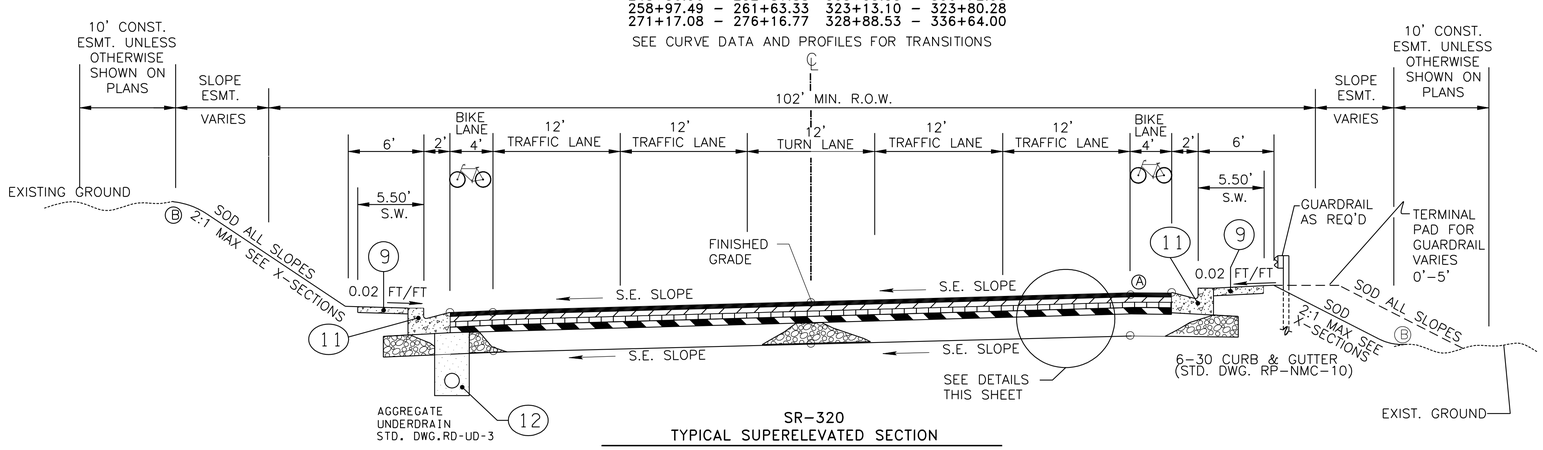


SR-320
TYPICAL TANGENT SECTION

(COORDINATE WITH STANDARD DRAWING NO. RD01-TS-6)

FROM	TO	FROM	TO
227+19.76	229+75.46	283+02.59	290+33.80
236+24.69	240+97.62	297+97.81	300+30.89
248+36.96	252+81.88	305+03.33	306+72.95
258+97.49	261+63.33	323+13.10	323+80.28
271+17.08	276+16.77	328+88.53	336+64.00

SEE CURVE DATA AND PROFILES FOR TRANSITIONS



SR-320
TYPICAL SUPERELEVATED SECTION

(COORDINATE WITH STANDARD DRAWING NO. RD01-TS-6)

FROM	TO	FROM	TO
229+75.46	236+24.69	290+33.80	297+97.81
240+97.62	248+36.96	300+30.89	305+03.33
252+81.88	258+97.49	306+72.95	323+13.10
261+63.49	271+17.08	323+80.28	328+88.53
276+16.77	283+02.59		

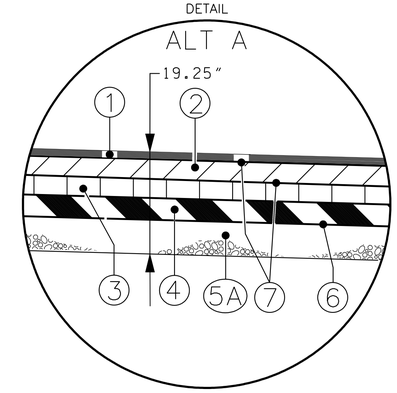
SEE CURVE DATA AND PROFILES FOR TRANSITIONS

NOTES:

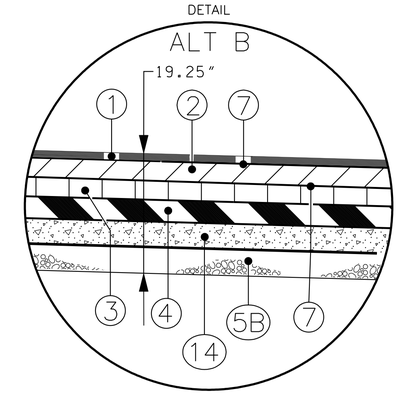
(A) THE SLOPES OF THE SHOULDER AND ROADWAY PAVEMENT SHALL NOT EXCEED AN ALGEBRAIC DIFFERENCE OF 0.07.

(B) SEE STD. DWG. RD01-S-11, 11A FOR ROUNDING DETAILS

DETAIL
ALT A



DETAIL
ALT B



PROPOSED PAVEMENT SCHEDULE

(1) SURFACE 1.25" THICK @ 132.5 LBS/S.Y.
411-02.10 ASPHALTIC CONCRETE SURFACE MIX (PG70-22) GRADING "D"
-MAINLINE, MORRIS HILL ROAD
411-01.10 ASPHALTIC CONCRETE SURFACE MIX (PG64-22) GRADING "D"
-ALL OTHER SIDE ROADS EXCEPT BRENTLY WOODS DRIVE

(2) BINDER 2.00" THICK @ 226 LBS/S.Y.
307-02.08 ASPHALT CONCRETE MIX (PG70-22)(BPMB-HM) GRADING B-M2
-MAINLINE, MORRIS HILL ROAD
307-01.08 ASPHALT CONCRETE MIX (PG64-22)(BPMB-HM) GRADING B-M2
-ALL OTHER SIDE ROADS EXCEPT BRENTLY WOODS DRIVE: CONCRETE
-GIVENS ROAD: 2.50" @ 282.50 LBS/S.Y.
-BANKS ROAD: 3.00" @ 339 LBS/S.Y.

(3) BITUMINOUS BASE:
307-02.01 ASPHALT CONCRETE MIX (PG70-22)(BPMB-HM) GRADING A
-MAINLINE: 3.00" THICK @ 345 LBS/S.Y.
-MORRIS HILL ROAD: 3.75" @ 431.25 LBS/S.Y.

(4) BITUMINOUS BASE 3.00" THICK @ 270 LBS/S.Y. (MAINLINE)
307-02.02 ASPHALT CEMENT (PG70-22)(BPMB-HM) GRADING A-S
307-02.03 AGGREGATE (BPMB-HM) GRADING A-S MIX

(5) MINERAL AGGREGATE BASE: 2.03 TON/C.Y.
303-01 MINERAL AGGREGATE TYPE A BASE GRADING D:
-MORRIS HILL ROAD: 10" THICK
-GIVENS ROAD: 12" THICK
-ALL OTHER SIDE ROADS: 10" THICK, SHOULDER: 11.75" THICK

(5A) MINERAL AGGREGATE BASE: 2.03 TON/C.Y.
303-01 MINERAL AGGREGATE TYPE A BASE GRADING D: 10" THICK MAINLINE

(5B) MINERAL AGGREGATE BASE: 2.03 TON/C.Y.
303-01 MINERAL AGGREGATE TYPE A BASE GRADING D: 5" THICK MAINLINE

(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.

(7) TACK COAT
403-01 BITUMINOUS MATERIAL FOR TACK COAT (TC) @ 0.07 GAL/S.Y.

(8) CONCRETE PAVEMENT
501-01.02 PORTLAND CEMENT CONCRETE PAVEMENT (PLAIN)):
-BRENTLY WOODS DRIVE: 9" THICK

(9) SIDE WALK
701-01.03 CONCRETE SIDE WALK 4" (5' WIDE)

(10) SURFACE (SHOULDER) 1.5" THICK @ 154.5 LBS/S.Y.
411-01.07 ASPHALTIC CONCRETE SURFACE (SHOULDER) GRADING "E" :

(11) CURB & GUTTER
702-03 6" CONCRETE COMBINED CURB & GUTTER TYPE 6-30
STD. DWG. RP-NMC-10 @ 0.006409 C.Y./FT.

(12) UNDER DRAINS
710-02 AGGREGATE UNDER DRAIN (WITH PIPE) DETAIL "A" OR "D"
STD. DWG. RD-UD-3

(13) PERMEABLE BASE
313-03 TREATED PERMEABLE BASE: 4" THICK (BRENTLY WOODS DRIVE)

(14) AGGREGATE CEMENT BASE (LIMESTONE)
5" 309-01.01 MINERAL AGGREGATE (A-CBC): 1.9456 TON/C.Y. (MAINLINE)
309-01.02 CEMENT PORTLAND (A-CBC): 0.0751 TON/C.Y. (MAINLINE)
309-02 BITUMINOUS MATERIAL (A-CBC): 0.20 GAL/S.Y. (MAINLINE)

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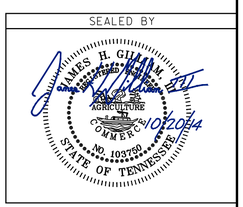

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

MAINLINE TYPICAL AND PAVEMENT SCHEDULE

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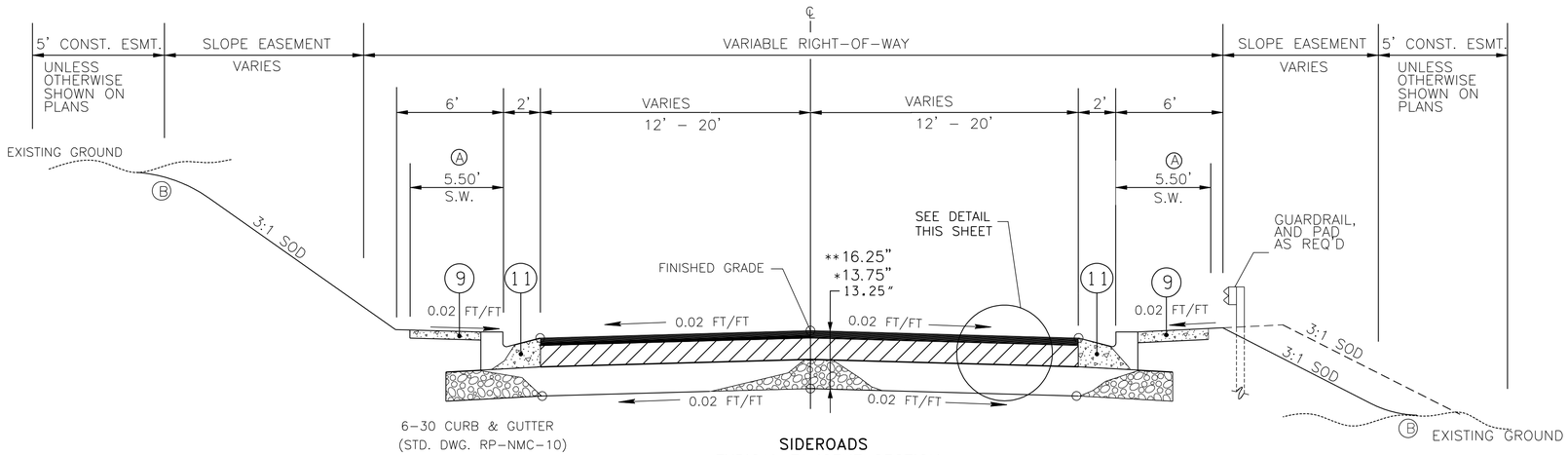
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	2A
CONST.	2014	STP-320(4)	2D



SIDEROADS
TYPICAL TANGENT SECTION

(COORDINATE WITH STANDARD DRAWING NO. RD01-TS-6A)

KINSEY DRIVE, STA. 0+00.00 = STA. 231+59.49 (S.R. 320)
STA. 0+00.00 TO STA. 1+55.00

GRAYS DRIVE, STA. 0+00.00 = STA. 233+36.56 (S.R. 320)
STA. 0+00.00 TO STA. 2+00.00

McNICHOL LANE, STA. 0+00.00 = STA. 241+63.17 (S.R. 320)
STA. 0+00.00 TO STA. 2+55.00

GREENS ROAD, STA. 0+00.00 = STA. 243+03.10 (S.R. 320)
STA. 0+00.00 TO STA. 1+75.00

McDONALD DRIVE, STA. 0+00.00 = STA. 246+52.21 (S.R. 320)
STA. 0+00.00 TO STA. 1+46.00

* GIVENS ROAD, STA. 0+00.00 = STA. 248+15.89 (S.R. 320)
STA. 0+00.00 TO STA. 1+95.00

SHADY REST ROAD, STA. 0+00.00 = STA. 257+09.62 (S.R. 320)
STA. 0+00.00 TO STA. 2+25.00

HEATON DRIVE, STA. 0+00.00 = STA. 261+29.47 (S.R. 320)
STA. 0+00.00 TO STA. 2+00.00

MORRIS LANE, STA. 0+00.00 = STA. 272+11.54 (S.R. 320)
STA. 0+00.00 TO STA. 2+50.00

HURRICANE CREEK ROAD STA. 0+00.00 = STA. 275+63.59 (S.R. 320)
STA. 0+00.00 TO STA. 1+00.00
STA. 3+50.00 TO STA. 4+00.00
(SEE CROSS SECTIONS AND ALIGNMENTS FOR OFFSET CROWN)

FULLER ROAD, STA. 0+00.00 = STA. 280+52.05 (S.R. 320)
STA. 0+00.00 TO STA. 0+30.00
STA. 2+38.99 TO STA. 3+10.00

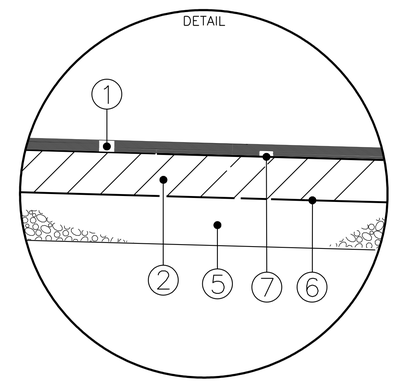
SPRINGVIEW DRIVE, STA. 0+00.00 = STA. 302+05.62 (S.R. 320)
STA. 0+00.00 TO STA. 0+72.79

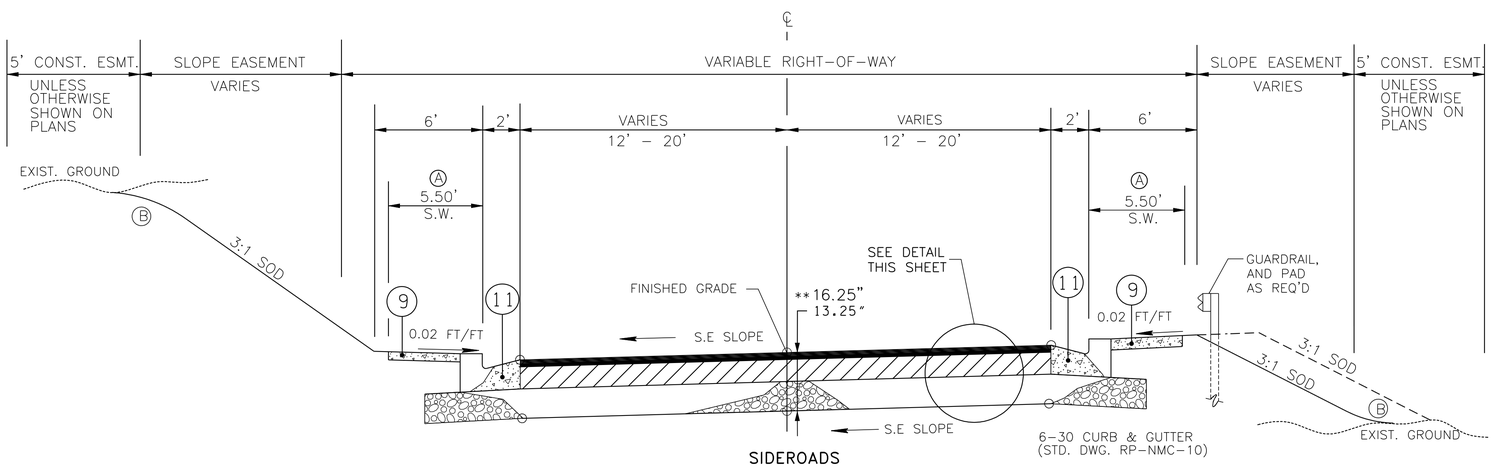
EVERETT DRIVE #1, STA. 0+00.00 = STA. 310+88.91 (S.R. 320)
STA. 0+00.00 TO STA. 1+55.00

** BANKS ROAD, STA. 0+00.00 = STA. 317+20.14 (S.R. 320)
STA. 0+00.00 TO STA. 0+30.00
STA. 2+47.82 TO STA. 3+29.00

EVERETT DRIVE #2, STA. 0+00.00 = STA. 323+83.71 (S.R. 320)
STA. 0+00.00 TO STA. 2+50.00

HAMLET DRIVE, STA. 0+00.00 = STA. 334+19.53 (S.R. 320)
STA. 0+00.00 TO STA. 0+48.30
STA. 3+01.22 TO STA. 3+41.00





SIDEROADS
TYPICAL SUPERELEVATED SECTION

(COORDINATE WITH STANDARD DRAWING NO. RD01-TS-6A)

FULLER ROAD, STA. 0+00.00 = STA. 280+52.05 (S.R. 320)
STA. 0+30.00 TO STA. 2+38.99

SPRINGVIEW DRIVE, STA. 0+00.00 = STA. 302+05.62 (S.R. 320)
STA. 0+72.79 TO STA. 3+00.00

** BANKS ROAD, STA. 0+00.00 = STA. 317+20.14 (S.R. 320)
STA. 0+30.00 TO STA. 2+47.82

HAMLET DRIVE, STA. 0+00.00 = STA. 334+19.53 (S.R. 320)
STA. 0+48.30 TO STA. 3+01.22

HURRICANE CREEK ROAD, STA. 0+00.00 = STA. 275+63.59 (S.R. 320)
STA. 1+00.00 TO STA. 3+50.00
(SEE CROSS SECTIONS FOR RIGHT TURN LANE SLOPE)

NOTES:

Ⓐ NO SIDEWALK
SHADY REST ROAD
STA. 0+85.65 TO STA. 1+50.00

BANKS ROAD
STA. 1+10.00 TO STA. 3+00.00

HAMLET DRIVE
STA. 0+62.11 TO END (RT.)
STA. 0+78.00 TO END (LT.)

Ⓑ SEE STD. DWG. RD01-S-11, 11A FOR ROUNDING DETAILS

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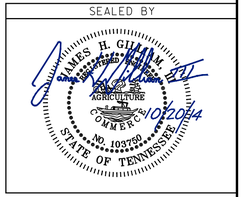

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS SIDE ROADS

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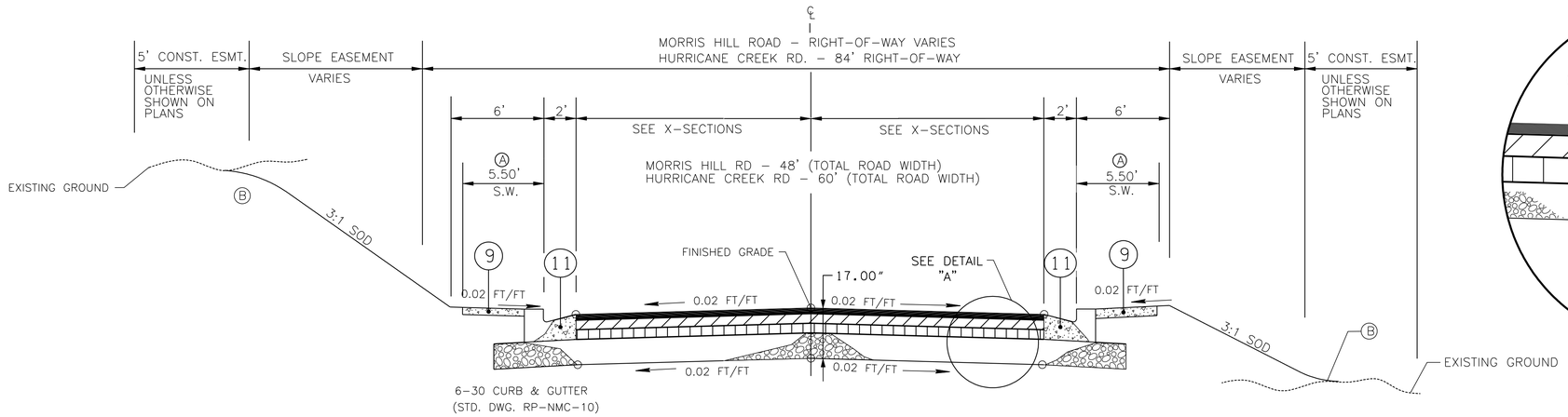
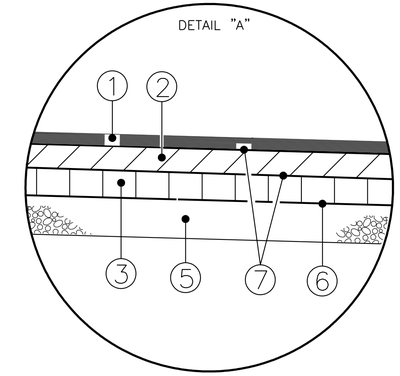
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2006	STP-320(4)	2B
CONST.	2014	STP-320(4)	2E





SIDEROADS
TYPICAL TANGENT SECTION

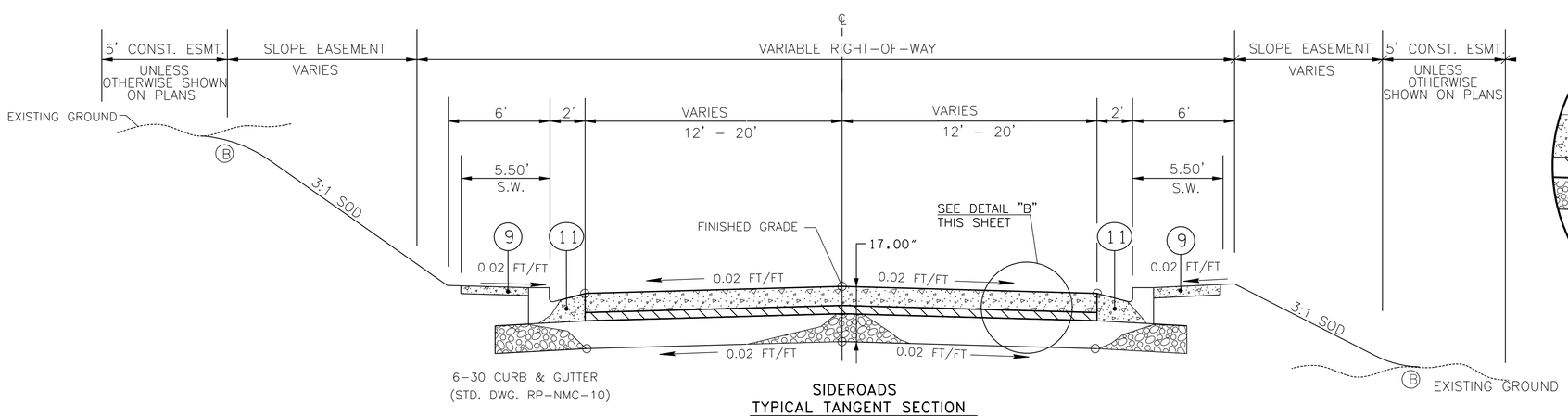
(COORDINATE WITH STANDARD DRAWING NO. RD01-TS-6A)

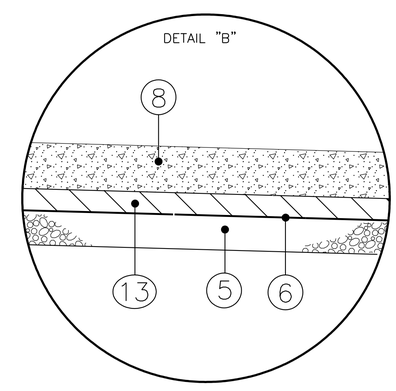
MORRIS HILL ROAD, STA. 0+00.00 = STA. 272+63.59 (S.R. 320)
STA. 0+00.00 TO STA. 3+00.00

NOTES:

Ⓐ NO SIDEWALK MORRIS HILL STA. 0+79.94 TO STA. 3+00.00

Ⓑ SEE STD. DWG. RD01-S-11, 11A FOR ROUNDING DETAILS





SIDEROADS
TYPICAL TANGENT SECTION

(COORDINATE WITH STANDARD DRAWING NO. RD01-TS-6A)
BRENTLY WOODS DRIVE, STA. 0+00.00 = STA. 293+67.64 (S.R. 320)
STA. 0+00.00 TO STA. 1+25.00

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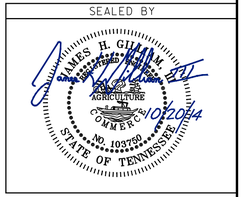

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS SIDE ROADS

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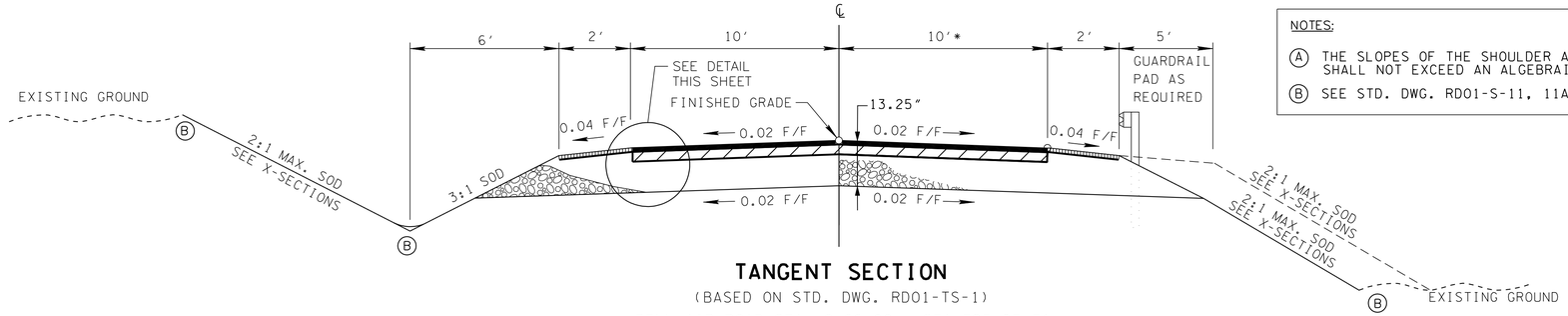
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	2C
CONST	2014	STP-320(4)	2F

NOTES:

(A) THE SLOPES OF THE SHOULDER AND ROADWAY PAVEMENT SHALL NOT EXCEED AN ALGEBRAIC DIFFERENCE OF 0.07.

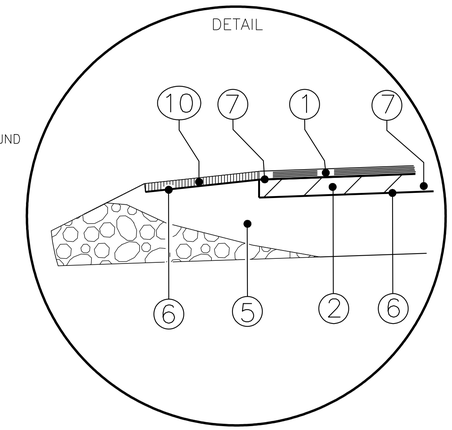
(B) SEE STD. DWG. RD01-S-11, 11A FOR ROUNDING DETAILS

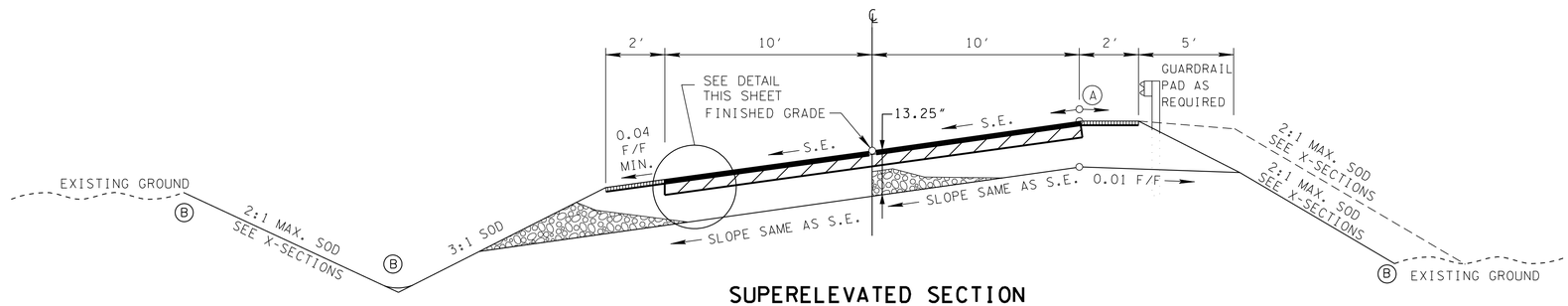


TANGENT SECTION

(BASED ON STD. DWG. RD01-TS-1)

BELL AIR ROAD STA. 0+00.00 = STA.323+83.71
STA. 0+00.00 TO STA. 0+94.56
STA. 2+69.07 TO STA. 3+48.00

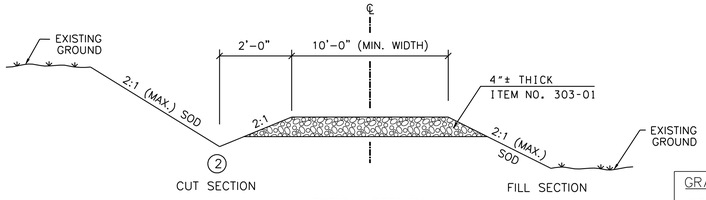




SUPERELEVATED SECTION

(BASED ON STD. DWG. RD01-TS-1)

BELL AIR ROAD STA. 0+00.00 = STA.323+83.71
STA. 0+94.56 TO STA. 2+69.07

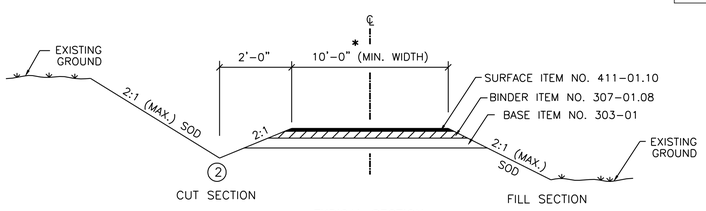


TYPICAL SECTION

PRIVATE DRIVE and/or FIELD ENTRANCE
GRAVEL

GRAVEL DRIVEWAY NOTES:

GRAVEL ENTRANCES ARE TO BE PAVED WITH ASPHALT TO A POINT 51' FROM THE CENTER LINE OR TO THE R.O.W. LINE, WHICHEVER THE DISTANCE IS SHORTER.



TYPICAL SECTION

PRIVATE DRIVE TO BUSINESS, FIELD
OR RESIDENTIAL PROPERTY

BUSINESS

SURFACE - 1 1/4″±
BINDER - 1 3/4″±
BASE - 4″±

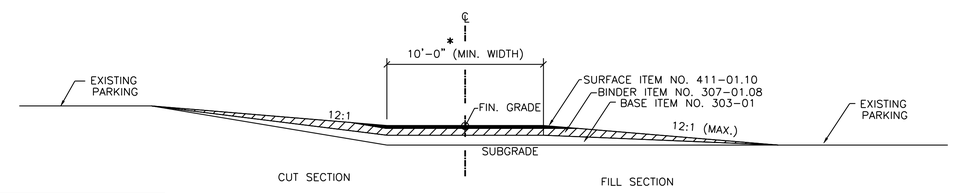
* BUSINESS ENTRANCE
13.0′ MINIMUM WIDTH

FIELD OR RESIDENTIAL

SURFACE - 1 1/2″±
BINDER - NONE
BASE - 4″±

DRIVEWAY NOTES:

1) WHERE SURFACE OF EXISTING DRIVE IS CONCRETE, SUBSTITUTE 6 INCHES OF CONCRETE FOR BASE AND SURFACE.
2) DITCH TO BE CONSTRUCTED WHERE DIRECTED BY ENGINEER.
3) SEE SHEET 3D FOR ADDITIONAL INFORMATION CONCERNING DRIVEWAYS.



TYPICAL SECTION

PRIVATE DRIVE INTO BUSINESSES
WITH STRIPED PARKING SPACES

PROPOSED PAVEMENT SCHEDULE BELL-AIR RD.

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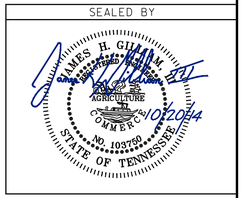

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIDE ROAD
TYPICAL
AND PAVEMENT
SCHEDULE

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	2G

GENERAL NOTES

GRADING

(1) ANY AREA THAT IS DISTURBED OUTSIDE LIMITS OF CONSTRUCTION DURING THE LIFE 0F 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.

GUARDRAIL

(1) THE CONTRACTOR SHALL NOT REMOVE ANY SECTIONS OF EXISTING GUARDRAIL TO REWORK SHOULDERS OR FLATTEN SLOPES UNTIL THE ENGINEER CONCURS IN THE NECESSITY OF REMOVAL DUE TO CONSTRUCTION REQUIREMENTS AND THE APPROPRIATE WARNING DEVICES ARE INSTALLED. 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.

(2) IF ANY APPROACH END OF A SECTION OF GUARDRAIL OR BRIDGE RAIL MUST TEMPORARILY BE LEFT INCOMPLETE AND EXPOSED TO TRAFFIC, THE CONTRACTOR SHALL USE TWO (2) TEMPRARY BARRICADES OR DRUMS WITH TYPE A LIGHTS AND ROUNDED END ELEMENTS AS MINIMUM MEASURES TO PROTECT TRAFFIC FROM THE HAZARD OF AN EXPOSED END. ALL COST OF FURNISHING AND INSTALLING A TEMPRARY ROUNDED END ELEMENT SHALL BE INCLUDED IN THE COST OF THE PROPOSED GUARDRAIL.

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) EXCAVATION FOR CULVERTS WILL NOT BE MEASUREED AND PAID FOR DIRECTLY, BUT WILL BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF PIPE (PIPE CULVERTS, STORM SEWERS, CONDUITS, ALL OTHER CUVERTS AND MINOR STRUCTURES).

(3) CULVERT EXCAVATION FOR CONCRETE BOX OR SLAB TYPE CULVERTS OR BRIDGES WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COST WILL BE INCLUDED IN THE COST OF OTHER ITEMS.

(4) 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).

(5) WHERE A CULVERT (PIPE, SLAB OR BOX) IS MOVED TO A NEW LOCATION OTHER THAN THAT SHOWN ON THE PLANS, INCREASING OR DECREASING THE AMOUNT OF CULVERT EXCAVATION, NO INCREASE OR DECREASE IN THE AMOUNT OF PAYMENT WILL BE MADE DUE TO SUCH CHANGE.

(6) 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.

UTILITIES

(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.

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.

RIGHT-OF-WAY

SEE RIGHT OF WAY NOTES ON SHEET 3D.

PAVEMENT MARKINGS

TEMPORARY PAVEMENT MARKING 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. 716-05.20, PAINTED PAVEMENT MARKING (6" LINE), L.M.

FINAL PAVEMENT MARKING IF 4" ENHANCED FLATLINE THERMOPLASTIC IS USED

(2) PERMANENT PAVEMENT LINE MARKINGS SHALL BE 4" 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. 716-12.01, ENHANCED FLATLINE THERMO PVMT MRKNG (4IN 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.

FINAL PAVEMENT MARKING IF 6" ENHANCED FLATLINE THERMOPLASTIC IS USED

(3) 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

(4) THE PAVEMENT MARKING ON THE LANE SHIFT FOR 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, LIN. MI.

PAVEMENT

PAVING

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

(2) 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.

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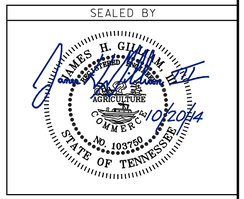

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	STP-320(4)	2H

GENERAL NOTES

GRADED SOLID ROCK

(1) THE ROCK FILL (GRADED SOLID ROCK) MATERIAL SHALL CONSIST OF SOUND, NON-DEGRADABLE LIMESTONE OR SANDSTONE WITH A MAXIMUM SIZE OF 3'-0". AT LEAST 50% (BY WEIGHT) OF THE ROCK SHALL BE UNIFORMLY DISTRIBUTED BETWEEN 1'-0" AND 3'-0" IN DIAMETER, AND NO GREATER THAN 10% (BY WEIGHT) SHALL BE LESS THAN 2" IN DIAMETER. THE MATERIAL SHALL BE ROUGHLY EQUIDIMENSIONAL; THIN, SLABBY MATERIALS WILL NOT BE ACCEPTED. THE CONTRACTOR SHALL BE REQUIRED TO PROCESS THE MATERIAL WITH AN ACCEPTABLE MECHANICAL MEANS (A SCREENING PROCESS CAPABLE OF PRODUCING THE REQUIRED GRADATION). THE ROCK SHALL BE APPROVED BY A REPRESENTATIVE OF THE DIVISION OF MATERIALS AND TESTS BEFORE USE.

(2) THIS GRADED SOLID ROCK MATERIAL SHALL BE PLACED IN LAYERS NOT EXCEEDING FIVE FEET IN DEPTH.

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 ROADWAY DESIGN DIVISION, SIGNING AND MARKING SECTION, TELEPHONE NO. (615)-741-0982. 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) 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.

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

(7) 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.

(8) 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.

SIGNALIZATION

(1) EQUIPMENT AND INSTALLATION SHALL COMPLY WITH THE TDOT "SPECIAL PROVISIONS REGARDING SECTION 730C-TRAFFIC SIGNALS."

(2) SALVAGEABLE EQUIPMENT SHALL BECOME THE PROPERTY OF THE CITY OF CHATTANOOGA AND SHALL BE STOCKPILED AT A LOCATION DESIGNATED BY THE ENGINEER FOR PICKUP BY THE CITY OF CHATTANOOGA.

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

(4) SIGNAL HEADS SHALL FLASH A MINIMUM OF SEVEN (7) DAYS PRIOR TO ACTIVATION OF THE SIGNAL.

(5) 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.

CONSTRUCTION WORK ZONE & TRAFFIC CONTROL

(1) 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.

(2) 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.

(3) 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.

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

(5) 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.

(6) 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 A 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.

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

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

EROSION PREVENTION AND SEDIMENT CONTROL

DISTURBED AREA

(1) . AREAS TO BE UNDISTURBED SHALL BE CLEARLY MARKED IN THE FIELD BEFORE CONSTRUCTION ACTIVITIES BEGIN.

(2) PRE-CONSTRUCTION VEGETATIVE GROUND COVER SHALL NOT BE DESTROYED, REMOVED OR DISTURBED (I.E. CLEARING AND GRUBBING INITIATED) MORE THAN 15 CALENDAR DAYS PRIOR TO GRADING OR EARTH MOVING ACTIVITIES UNLESS THE AREA IS MULCHED, SEEDED WITH MULCH, OR OTHER TEMPORARY COVER IS INSTALLED.

(3) CLEARING, GRUBBING, AND OTHER DISTURBANCE TO RIPARIAN VEGETATION SHALL BE LIMITED TO THE MINIMUM NECESSARY FOR SLOPE CONSTRUCTION AND EQUIPMENT OPERATIONS. EXISTING VEGETATION SHOULD BE PRESERVED TO THE MAXIMUM EXTENT POSSIBLE. UNNECESSARY VEGETATION REMOVAL IS PROHIBITED.

(4) ALL DISTURBED AREAS SHALL BE PROPERLY STABILIZED AS SOON AS PRACTICABLE. PRIORITY SHALL BE GIVEN TO FINISHING OPERATIONS AND PERMANENT EPSC MEASURES OVER TEMPORARY EPSC MEASURES ON ALL PROJECTS.

(5) CONSTRUCTION SHALL BE SEQUENCED AND STAGED TO MINIMIZE THE EXPOSURE TIME OF GRADED OR DENUDED SOIL AREAS, PRESERVE TOPSOIL, AND MINIMIZE SOIL COMPACTION.

(6) NO MORE THAN 50 ACRES OF ACTIVE SOIL DISTURBANCE IS ALLOWED AT ANY TIME DURING THE CONSTRUCTION OF THE PROJECT. OFF-SITE BORROW OR WASTE AREAS ARE TO BE INCLUDED IN THE TOTAL DISTURBED AREA IF THE BORROW OR WASTE AREA IS EXCLUSIVE TO THE PROJECT PER TDOT'S WASTE AND BORROW MANUAL.

SEDIMENT CONTROL

(7) EPSC MEASURES SHALL BE INSTALLED AND FUNCTIONAL PRIOR TO ANY EARTH MOVING OPERATIONS, AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.

(8) THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT THE OFF-SITE MIGRATION OR DEPOSIT OF SEDIMENT ON ROADWAYS USED BY THE GENERAL PUBLIC. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFF-SITE ACCUMULATIONS OF SEDIMENT THAT HAVE NOT REACHED A STREAM MUST BE REMOVED AT A FREQUENCY 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.

(9) WATER PUMPED FROM WORK AREAS AND EXCAVATION MUST BE HELD IN SETTLING BASINS OR TREATED BY FILTRATION OR CHEMICAL TREATMENT PRIOR TO ITS DISCHARGE INTO SURFACE WATERS. ALL PHYSICAL AND/OR CHEMICAL TREATMENT WILL BE APPLIED IN ACCORDANCE WITH MANUFACTURER'S GUIDELINES AND FULLY DESCRIBED IN THE EPSC PLANS. WATER MUST BE HELD IN SETTLING BASINS UNTIL AT LEAST AS CLEAR AS THE RECEIVING WATERS. SETTLING BASINS SHALL NOT BE LOCATED CLOSER THAN 20 FEET FROM THE TOP BANK OF A STREAM. SETTLING BASINS AND SEDIMENT TRAPS SHALL BE PROPERLY DESIGNED ACCORDING TO 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. DISCHARGES FROM BASINS AND IMPOUNDMENTS SHALL UTILIZE OUTLET STRUCTURES THAT ONLY WITHDRAW WATER FROM NEAR THE SURFACE OF THE BASIN OR IMPOUNDMENT. DISCHARGES MUST NOT CAUSE AN OBJECTIONABLE COLOR CONTRAST WITH THE RECEIVING STREAM.

(10) CHECK DAMS SHALL BE USED WHERE RUNOFF IS CONCENTRATED. CLEAN ROCK, BRUSH, GABION, OR SANDBAG CHECK DAMS SHALL BE PROPERLY CONSTRUCTED TO REDUCE VELOCITY AND CONTROL EROSION.

(11) FOR AN OUTFALL IN A DRAINAGE AREA OF 10 ACRES OR MORE, 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. 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.

(12) IF PERMANENT OR TEMPORARY VEGETATION IS TO BE USED AS AN EPSC MEASURE, THEN THE TIMING OF PLANTING OF VEGETATION SHALL BE SHOWN IN THE SWPPP. DELAYING PLANTING OF COVER VEGETATION UNTIL WINTER MONTHS OR DRY MONTHS SHOULD BE AVOIDED, IF POSSIBLE.

(13) OFFSITE VEHICLE TRACKING OF SEDIMENTS AND THE GENERATION OF DUST SHALL BE MINIMIZED. A STABILIZED CONSTRUCTION ACCESS (A POINT OF ENTRANCE/EXIT TO THE CONSTRUCTION PROJECT) SHALL BE PROVIDED, AS NEEDED, TO REDUCE THE TRACKING OF MUD AND DIRT ONTO PUBLIC ROADS BY CONSTRUCTION VEHICLES.

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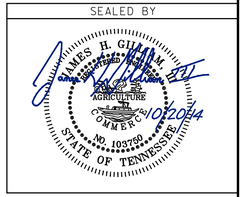

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	21

GENERAL NOTES

SEDIMENT CONTROL (CONT.)

(14) TEMPORARY EPSC MEASURES MAY BE REMOVED AT THE BEGINNING OF THE WORKDAY, BUT MUST BE REPLACED AT THE END OF THE WORKDAY.

STREAM/WETLAND

(15) SOIL MATERIALS MUST BE PREVENTED FROM ENTERING WATERS OF THE STATE/U.S. EPSC MEASURES TO PROTECT WATER QUALITY MUST 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 STREAM BANKS IN CLEARED AREAS TO PREVENT SEDIMENT MIGRATION INTO STREAMS IN ACCORDANCE WITH TDOT STANDARDS. THEY MUST BE INSTALLED ON THE CONTOUR, ENTRENCHED AND STAKED, AND EXTEND THE WIDTH OF THE AREA TO BE CLEARED.

(16) 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.

(17) INSTREAM EPSC DEVICES REQUIRE THE ENVIRONMENTAL DIVISION'S PERMITS SECTION REVIEW AND MUST BE PROCESSED BY THE PERMITS SECTION TO OBTAIN TDEC, USACE, AND TVA PERMITS.

(18) THE OPERATION OF EQUIPMENT IN WATERS OF THE STATE/U.S., INCLUDING WETLANDS, SHALL BE ONLY AS SHOWN ON THE PROJECT PLANS AND/OR AS SO SPECIFIED IN THE ARAP/401, SECTION 404 PERMIT(S) AND/OR TVA26(A), IF APPLICABLE. ANY ADDITIONAL PERMITS REQUIRED BY THE CONTRACTOR'S METHOD OF OPERATION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN, AFTER RECEIVING THE APPROVAL OF TDOT ENVIRONMENTAL DIVISION.

(19) THE WIDTH OF THE FILL ASSOCIATED WITH TEMPORARY CROSSINGS SHALL BE LIMITED TO THE MINIMUM NECESSARY FOR THE ACTUAL CROSSING.

(20) STREAM BEDS SHALL NOT BE USED AS TRANSPORTATION ROUTES FOR CONSTRUCTION EQUIPMENT. TEMPORARY CROSSINGS MUST BE LIMITED TO ONE POINT PER STREAM AND EPSC MEASURES MUST BE USED WHERE THE STREAM BANKS ARE DISTURBED. WHERE THE STREAMBED IS NOT COMPOSED OF BEDROCK, A PAD OF CLEAN ROCK MUST 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 MUST BE COMPLETELY REMOVED IN THEIR ENTIRETY AFTER THE WORK IS COMPLETED AND THE AFFECTED AREAS RETURNED TO THEIR PREEXISTING ELEVATION. ALL TEMPORARY CROSSINGS MUST BE CONSTRUCTED IN ACCORDANCE WITH STD. DWG. EC-STR-25 UNLESS SPECIFICALLY ADDRESSED IN THE EPSC PLANS. ALTERNATIVELY, PLACING A TEMPORARY BRIDGE (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.

(21) HEAVY EQUIPMENT WORKING IN WETLANDS MUST BE PLACED ON MATS, OR OTHER MEASURES MUST BE TAKEN TO MINIMIZE SOIL DISTURBANCE UNLESS SPECIFICALLY ADDRESSED IN THE EPSC PLANS. ANY MATS AND OTHER MEASURES USED FOR HEAVY EQUIPMENT MUST BE REMOVED IN THEIR ENTIRETY AFTER THE WORK IS COMPLETED.

(22) WETLANDS SHALL NOT BE USED AS EQUIPMENT STORAGE, STAGING, OR TRANSPORTATION AREAS, UNLESS PROVIDED FOR IN THE PLANS.

SPECIES

(23) 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. THE SWPPP SHALL BE MODIFIED TO INCLUDE EPSC MEASURES TO PREVENT NEGATIVE IMPACTS TO LEGALLY PROTECTED STATE OR FEDERAL FAUNA OR FLORA OR AS INDICATED IN THE ECOLOGICAL STUDIES OR ON THE PERMIT(S).

INSPECTION, MAINTENANCE, REPAIR

(24) EPSC CONTROLS WILL BE MAINTAINED IN ACCORDANCE WITH TDOT STANDARD DRAWINGS AND GOOD ENGINEERING PRACTICES.

(25) INSPECTION, REPAIR, AND MAINTENANCE OF EPSC MEASURES/STRUCTURES IS TO BE PERFORMED ON A REGULAR BASIS. SEDIMENT SHALL BE REMOVED FROM SEDIMENT CONTROL STRUCTURES WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT (50%). DURING SEDIMENT REMOVAL, THE CONTRACTOR SHALL TAKE CARE TO ENSURE THAT STRUCTURAL COMPONENTS OF EPSC MEASURES ARE NOT DAMAGED AND THUS MADE INEFFECTIVE. IF DAMAGE DOES OCCUR, THE CONTRACTOR SHALL REPAIR THE STRUCTURES AT THE CONTRACTOR'S OWN EXPENSE.

(26) SEDIMENT REMOVED FROM SEDIMENT CONTROL STRUCTURES SHALL BE PLACED AND BE TREATED IN A MANNER SO THAT THE SEDIMENT IS CONTAINED WITHIN THE PROJECT LIMITS AND DOES NOT MIGRATE INTO WATERS OF THE STATE/U.S. COST FOR THIS TREATMENT IS TO BE INCLUDED IN PRICE BID FOR ITEM NO. 209-05 SEDIMENT REMOVAL, C.Y.

(27) THE CONTRACTOR SHALL INSTALL A RAIN GAUGE EVERY LINEAR MILE AT ALL SITES WHERE CLEARING, GRUBBING, EXCAVATION, GRADING CUTTING OR FILLING IS BEING ACTIVELY PERFORMED, OR EXPOSED SOIL HAS NOT YET BEEN PERMANENTLY STABILIZED. IF THE PROJECT LENGTH IS LESS THAN ONE LINEAR MILE, ONE RAIN GAUGE SHALL BE INSTALLED AT THE CENTER OF THE PROJECT OR AS INDICATED BY THE TDOT EPSC INSPECTOR. THE CONTRACTOR SHALL ENSURE THAT EACH GAUGE IS MAINTAINED IN GOOD WORKING CONDITION. TDOT AND/OR THE CONTRACTOR SHALL RECORD DAILY PRECIPITATION AND FORECASTED PERCENTAGE OF PRECIPITATION IN DETAILED RECORDS OF RAINFALL EVENTS INCLUDING DATES, AMOUNTS OF RAINFALL PER GAUGE, THE ESTIMATED DURATION (OR STARTING AND ENDING TIMES), AND FORECASTED PERCENTAGE OF PRECIPITATION FOR THE PROJECT. THIS INFORMATION SHALL BE PROVIDED TO THE ENGINEER ON A MONTHLY BASIS. THE COST FOR THE RAIN GAUGES IS TO BE INCLUDED IN THE UNIT BID PRICES FOR OTHER ITEMS. RAIN GAUGES SHALL BE AS SPECIFIED IN THE APPROVED TDOT RAINFALL MONITORING PLAN.

(28) INSPECTION OF EPSC MEASURES SHALL BE DONE AT LEAST TWICE PER CALENDAR WEEK AT LEAST 72 HOURS APART. A CALENDAR WEEK IS DEFINED AS SUNDAY THROUGH SATURDAY. QUALITY ASSURANCE/QUALITY CONTROL SITE ASSESSMENT OF EPSC SHALL BE PERFORMED PER THE TDOT ENVIRONMENTAL DIVISION'S COMPREHENSIVE INSPECTION OFFICE GUIDELINES.

(29) OUTFALL POINTS SHALL BE INSPECTED TO ASCERTAIN WHETHER EPSC MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO SURROUNDING WATERS. WHERE DISCHARGE LOCATIONS ARE INACCESSIBLE, NEARBY DOWNSTREAM LOCATIONS SHALL BE INSPECTED. LOCATIONS WHERE VEHICLES ENTER AND EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFF-SITE ROADWAY SEDIMENT TRACKING.

(30) 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 TIMEFRAME, WRITTEN DOCUMENTATION MUST BE PROVIDED IN THE FIELD BOOK AND AN ESTIMATED REPAIR, REPLACEMENT OR MODIFICATION SCHEDULE SHALL BE DOCUMENTED WITHIN 24 HOURS AFTER IDENTIFICATION.

(31) THE TDOT PROJECT SUPERVISOR (OR THEIR DESIGNEE) AND THE CONTRACTOR'S SITE SUPERINTENDENT ARE RESPONSIBLE FOR INSPECTIONS. MAINTENANCE AND REPAIR ACTIVITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE TDOT PROJECT SUPERVISOR OR THEIR DESIGNEE WILL COMPLETE THE INSPECTION REPORTS AND DISTRIBUTE COPIES PER THE CONTRACT.

MATERIALS

(32) WASTE AND BORROW AREAS SHALL BE LOCATED IN NON-WETLAND AREAS AND ABOVE THE 100-YEAR, FEDERAL EMERGENCY MANAGEMENT AGENCY FLOODPLAIN. BORROW AND WASTE DISPOSAL AREAS SHALL NOT AFFECT ANY WATERS OF THE STATE/U.S. UNLESS THESE AREAS ARE SPECIFICALLY COVERED BY AN ARAP, 404, OR NPDES PERMIT, OBTAINED SOLELY BY THE CONTRACTOR.

SWPPP, PERMITS, PLANS, RECORDS

(33) THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR AND OBTAIN ANY NECESSARY ENVIRONMENTAL PERMITS OR APPROVALS, INCLUDING BUT NOT LIMITED TO TDEC ARAP/401, USACE SECTION 404, TVA SECTION 26A, AND TDEC NPDES PERMITS, FROM FEDERAL, STATE AND/OR LOCAL AGENCIES REGARDING THE OPERATION OF ANY PROJECT-DEDICATED ASPHALT AND/OR CONCRETE PLANTS.

(34) ANY DISAGREEMENT BETWEEN THE PROJECT PLANS, THE PROJECT AS CONSTRUCTED, AND THE PERMIT(S) ISSUED FOR THE PROJECT, SHALL BE BROUGHT TO THE ATTENTION OF THE TDOT PROJECT ENGINEER. THE ENVIRONMENTAL DIVISION, ROADWAY 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.

(35) THE FOLLOWING INFORMATION SHALL BE MAINTAINED ON OR NEAR THE SITE: DATES THAT MAJOR GRADING ACTIVITIES OCCUR, DATES WHERE CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE, DATES WHEN STABILIZATION MEASURES ARE INITIATED, EPSC INSPECTION RECORDS, QUALITY ASSURANCE SITE ASSESSMENT RECORDS, PRECIPITATION RECORDS, SWPPP, PROJECT ENVIRONMENTAL PERMITS, AND A COPY OF THE PROJECT EPSC INSPECTOR'S TDEC LEVEL 1 CERTIFICATION.

(36) ALL WATER QUALITY AND STORM WATER PERMITS, INCLUDING A COPY OF THE NOC WITH NPDES PERMIT TRACKING NUMBER AND THE LOCATION OF THE SWPPP, 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 BREIF 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.

(37) IF A CHANGE IN PROJECT SCOPE OCCURS DURING CONSTRUCTION, INCLUDING VALUE ENGINEERING, THE ENVIRONMENTAL DIVISION SHALL BE CONTACTED TO DETERMINE WHETHER PERMIT REVISIONS OR MODIFICATIONS OF THE SWPPP ARE NEEDED. THE ROADWAY DESIGN DIVISION SHALL BE CONTACTED TO DETERMINE IF ANY PLAN REVISIONS ARE NEEDED.

(38) THE SWPPP SHALL BE UPDATED BY CONSTRUCTION WHENEVER EPSC INSPECTIONS INDICATE, OR WHERE STATE OR FEDERAL 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 STORM WATER DISCHARGES ASSOCIATED WITH THE CONSTRUCTION ACTIVITY. THE ENVIRONMENTAL DIVISION SHALL BE CONTACTED WHEN MAJOR ROADWAY DESIGN REVISIONS ARE REQUESTED BY CONSTRUCTION. THE ENVIRONMENTAL DIVISION MAY BE CONTACTED FOR GUIDANCE ON SPECIFIC SWPPP NEEDS. A COPY OF ANY CORRESPONDENCE REGARDING THE EFFECTIVENESS OF THE SWPPP OR EPSC CONTROLS SHALL BE RETAINED IN THE SWPPP.

(39) THE SWPPP SHALL BE UPDATED BY CONSTRUCTION WHENEVER A CHANGE IN CHEMICAL TREATMENT METHODS IS MADE INCLUDING USE OF A DIFFERENT CHEMICAL, DIFFERENT DOSAGE OR APPLICATION RATE, OR A DIFFERENT AREA OF APPLICATION.

(40) IF A TMDL IS DEVELOPED FOR THE RECEIVING WATERS FOR A POLLUTANT OF CONCERN (SILTATION AND/OR HABITAT ALTERATION) THE SWPPP SHALL BE MODIFIED OR UPDATED.

(41) PROJECT INSPECTORS AND SUPERVISORS (INCLUDING TDOT STAFF, CONSULTANTS AND CONTRACTOR STAFF) RESPONSIBLE FOR THE IMPLEMENTATION AND MAINTENANCE OF EPSC PLANS SHALL SUCCESSFULLY COMPLETE THE TDEC "LEVEL 1 - FUNDAMENTALS OF EROSION PREVENTION AND SEDIMENT CONTROL FOR CONSTRUCTION SITES" COURSE AND ANY REFRESHER COURSES AS REQUIRED TO MAINTAIN CERTIFICATION. A COPY OF CERTIFICATION RECORDS FOR THE COURSES SHALL BE KEPT ON SITE AND AVAILABLE UPON REQUEST.

LITTER, DEBRIS, WASTE, PETROLEUM

(42) THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION WASTES FROM ENTERING WATERS OF THE STATE/U.S. THESE MATERIALS WILL BE PICKED UP AND REMOVED FROM STORMWATER EXPOSURE PRIOR TO ANTICIPATED STORM EVENTS. AFTER USE, MATERIALS USED FOR EPSC WILL BE REMOVED FROM THE SITE.

(43) 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 (NFPA). APPROPRIATE CONTAINMENT MEASURES FOR THESE AREAS SHALL BE USED. 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.

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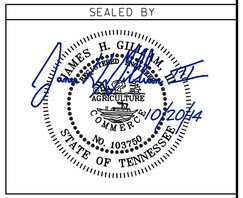

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	2J

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.

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, AND SODDED. 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.

(2) SOD SHALL BE PLACED PROMPTLY THROUGHOUT PROJECT LIMITS ON ALL FINAL GRADES REQUIRING PERMANENT VEGETATION IN ORDER TO PREVENT DAMAGE TO ADJACENT FACILITIES AND PROPERTY DUE TO EROSION.

(3) CONTRACT PROVISIONS FOR PROTECTING ERODIBLE SLOPES WHERE FINAL GRADES HAVE NOT BEEN ESTABLISHED AS WELL AS LOCATIONS DIRECTED BY ENGINEER INCLUDE 1) ITEM NO. 801-01.07, TEMPORARY SEEDING (WITH MULCH) AND 2) ITEM NO. 801-02.08 TEMPORARY SEEDING (WITHOUT MULCH) USE WITH ITEM NO. 805-12.03 EROSION CONTROL BLANKET (TYPE III).

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.

ENVIRONMENTAL

ECOLOGY

(1) STAFF FROM THE TDOT ENVIRONMENTAL DIVISION OR A DESIGNEE WILL ADVISE THE CONTRACTOR DURING THE PRE-CONSTRUCTION MEETING CONCERNING WHEN ENVIRONMENTAL DIVISION PERSONNEL OR DESIGNATED CONSULTANT WILL NEED TO BE ON-SITE FOR WORK BEING DONE WHICH COULD AFFECT THE STREAM OR SPECIES.

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

(3) ALL BRIDGE PROJECTS WITH THREATENED OR ENDANGERED SPECIES OR CRITICAL HABITAT IDENTIFIED MUST HAVE MEASURES IN PLACE TO CONTAIN CONCRETE DUST, CEMENT DUST AND ALL OTHER MATERIALS. THESE MATERIALS ARE NOT ALLOWED TO ENTER THE STREAM.

(4) SEE SHEET 18A FOR INFORMATION ON CHIKAMAGUA CRAYFISH SWEEPING.

SPRINGS

(5) ROB HOWARD 615-253-8690 OF THE TDOT ENVIRONMENTAL DIVISION SHALL BE NOTIFIED FOUR(4) WEEKS BEFORE ANY SPRING BOX OR FRENCH DRAIN SYSTEM IS INSTALLED SO THAT THE SPRING HEAD LOCATION SHOWN ON THE PLANS CAN BE VERIFIED.

HIGH VISIBILITY FENCE

(6) HIGH VISIBILITY FENCE SHALL BE PLACED AROUND ALL NON-IMPACTED SECTIONS OF WATER QUALITY FEATURES.

WETLANDS

(7) THE CONTRACTOR SHALL USE ANY MEASURE NECESSARY TO ENSURE THAT THE REMAINING WETLAND WILL NOT BE DISTURBED AND IS PROTECTED FROM SEDIMENT AND OTHER POLLUTANTS.

(8) TEMPORARY WETLAND IMPACTS MUST BE LIMITED TO 10 – 15 FEET BEYOND THE TOE OF SLOPE.

STREAM RELOCATION

(9) ONCE WATER IS DIVERTED INTO A NEWLY CONSTRUCTED AND STABILIZED RELOCATED STREAM / CHANNEL THE ECOLOGY SECTION MUST BE NOTIFIED. THE STREAM NAME, STREAM NUMBER, AND DATE THE WATER WAS DIVERTED INTO THE STREAM / CHANNEL IS TO BE SUPPLIED WITH THE NOTIFICATION.

SWPP, PERMITS, PLANS, RECORDS

SEE SHEET 18.

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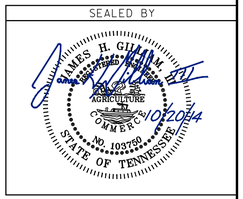

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SPECIAL NOTES

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	2L

CROSS DRAIN TABULATION

STATION	RCP CLASS III FILL HEIGHT < OR = 18 FT. (L.F.)					HORCP (L.F.)	RCAP (L.F.)	SKEW	END TREATMENT INLET		END TREATMENT OUTLET		CLASS "A" CONC.	REINF. STEEL	STRUC. STEEL	REMARKS
	607-03.02	607-05.02	607-06.02	607-07.02	607-09.02	607-16.04	607-57.03						611-07.01	611-07.02	611-07.03	
	18"	24"	30"	36"	48"	38" X 24"	36" X 23"		TYPE	DRAWING NO.	TYPE	DRAWING NO.	(C.Y.)	(LB.)	(LB.)	
0+68.29	80							86°45' LT	CB	D-CB-42S	JB	D-JBS-1				FULLER ROAD
0+68.29	23							86°45' LT	JB	D-JBS-1	U	D-PE-18A,18B	1.08	98.00	-	FULLER ROAD
2+50.00	52							90°00'	U	D-PE-18A,18B	U	D-PE-18A,18B	1.74	158.00	-	FULLER ROAD
2+50.00	52							90°00'	U	D-PE-18A,18B	U	D-PE-18A,18B	1.74	158.00	-	FULLER ROAD
0+56.00		68						78°33' LT	U	D-PE-24A,24B	JB	D-JBS-2	1.61	153.00	-	BRENTLEY WOODS DR
0+56.00		20						78°33' LT	JB	D-JBS-2	U	D-PE-24A,24B	1.61	153.00	-	BRENTLEY WOODS DR
300+98.70						14		89°40' RT	B	D-PE-9	CB	D-CB-12RB	3.65	368.00	-	S.R. 320
300+98.70						65		89°40' RT	CB	D-CB-12RB	CB	D-CB-12RB				S.R. 320
300+98.70					16			89°40' RT	CB	D-CB-12RB	U	D-PE-9	3.65	368.00	-	S.R. 320
1+34.60		9						63°48' RT	B*	D-PE-9	CB	D-CB-12S	2.31	263.00	-	BANKS ROAD
1+34.60		44						63°48' RT	CB	D-CB-12S	CB	D-CB-12S				BANKS ROAD
1+34.60		28						63°48' RT	CB	D-CB-12S	U	D-PE-24A,24B	1.28	124.00	-	BANKS ROAD
0+61.00		111						62°16' LT	CB	D-CB-39S	CB	D-CB-39SC				BELL AIR ROAD
327+79.32				9				90°00'	U	D-PE-36A,36B	CB	D-CB-12RB	2.43	210.00	-	S.R. 320
327+79.32				82				60°20' LT	CB	D-CB-12RB	CB	D-CB-12RB				S.R. 320
327+79.32				32				60°20' LT	CB	D-CB-12RB	U	D-PE-48A,48B	3.79	333.00	-	S.R. 320
TOTALS	207	280	0	123	16	79	0						24.89	2,386.00	0.00	

R.O.W. MARKERS

SHEET NO.	QUANTITIES "A"	"B"	"C"	TOTALS
4A	1	7	14	**22**
5A	2	2	10	**14**
6A	3	4	12	**19**
7A	4	6	12	**22**
8A	10	8	22	**40**
9A	3	6	6	**15**
10A	6	10	9	**25**
11A	4	9	19	**32**
12A	1	7	12	**20**
13A	2	4	4	**10**
TOTALS	**36**	**63**	**120**	**219**

BOX CULVERT TABULATION

STATION	LOCATION	SPAN	HEIGHT	LENGTH FT.	SKEW	DRAINAGE AREA ACRES	BOX CULVERT BOX CLASS "A" CONC. CU. YD.	BOX REINF. STEEL LBS.	WINGWALLS CLASS "A" CONC. CU. YD.	WINGWALLS WIRE FABRIC LBS.	WINGWALLS STEEL BAR REINF. LBS.	CLASS "A" CONCRETE 604-01.01 CU. YD.	REINF. STEEL 604-01.02 LBS.	CULVERT EXC. CU. YD.	DRAWING NO.	BACKFILLING DWG. STD-10-1 303-01.01 TONS	FOUNDATION FILL MATERIAL 204-08 CU. YD.
240+51.87	S.R. 320	8'	3'	238	60°11' RT	178	157.08	40,460.00	3.95		447.00	161.72	41,485.46		STD-15-36	889.74	128.71
281+72.24		8'	4'	95	85°32' RT	360	70.30	15,770.00	8.90		1,065.00	79.89	17,413.46		STD-15-36	461.96	55.20
310+48.40		8'	3'	188	34°57' RT	90.5	124.08	31,960.00	8.15		908.00	132.92	33,446.46		STD-15-36	712.78	102.21
0+65.00	EVERETT DR #2	6'	3'	87	71°58' LT	54	46.11	10,353.00	7.20		861.00	53.85	11,668.46		STD-15-35	306.88	42.61
DRIVEWAYS	**S.R. 320**																
0+62.75	304+06.60 LT	28'	3'-9"	14	90°	1.32 SQ MI	SEE SHEET 2A FOR ITEM # 607-50.60										
0+60.55	312+15.91 RT	6'	3'	16	87°31' RT	66	8.48	2,192.00	4.10		694.00	13.12	3,340.46		STD-15-26	62.37	9.74
0+70.15	314+23.23 RT	6'	3'	51	79°37' LT	66	27.03	6,987.00	4.70		710.00	32.27	8,151.46		STD-15-26	182.03	26.17
TOTALS												**473.77**	**115,505.76**	**0.0**		**2,615.76**	**364.64**

NOTE: CULVERT EXCAVATION FOR CONCRETE BOX OR SLAB TYPE CULVERTS OR BRIDGES WILL NOT BE MEASURED AND PAID DIRECTLY, BUT THE COST WILL BE INCLUDED IN THE COST OF OTHER ITEMS.

NOTES:

BEDDING MATERIAL SHALL BE INCLUDED IN THE COST OF PROPOSED PIPE CULVERT.

THE COST FOR EXCAVATION OF CULVERTS WILL BE INCLUDED IN THE PRICE BID PER LINEAR FOOT.

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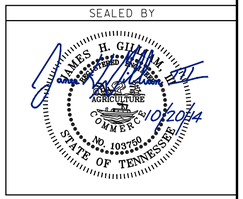

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TABULATED QUANTITIES

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	2M

ESTIMATED GRADING QUANTITIES

ROADWAY	ROAD AND DRAINAGE EXCAVATION (UNCL.) COMMON (C.Y.)	ROCK (C.Y.)	BORROW COMMON (C.Y.)	ROCK (C.Y.)	EMBANKMENT (C.Y.)	EXCESS (C.Y.)	TOPSOIL (C.Y.)	CHANNEL EXC. (C.Y.)	REMARKS
SR 320	169,298				29,073	134,410			
EROSION	1,124				0	1,124			
SIDE ROADS									
KINSEY ROAD	633				0	633			
GRAYS ROAD	683				12	669			
GREENS ROAD	64				332	-334			
McNICHOL LANE	478				33	438			
McDONALD DRIVE	313				12	299			
GIVENS ROAD	305				121	160			
SHADY REST RD.	534				70	450			
HEATON ROAD	1,176				0	1,176			
MORRIS LANE	1,298				0	1,298			
HURRICANE CREEK RD.	2,033				2	2,031			
MORRIS HILL	367				165	169			
FULLER ROAD	868				868	-174			
BENTLEY WOODS ROAD	1,498				0	1,498			
SPRINGVIEW DRIVE	1,732				56	1,665			
EVERETT DRIVE	713				0	713			
BANKS ROAD	154				1,653	-1,830			
EVERETT (2) DRIVE	400				573	-288			
BELLAIR	9,057				109	8,926			
HAMLET ROAD	3,588				170	3,384			
TOTALS	**196,316**	**0**	**0**	**0**	**33,249**	**156,417**	**0**	**0**	

SHRINKAGE 20%
SWELL 20%

STORM DRAINAGE ENDWALLS

SHEET NO.	LOCATION	STATION	OFFSET (FT.)	DRAINAGE CODE	STRUCTURE TYPE	STANDARD DRAWING	CLASS A CONC. 611-07.01 (C.Y.)	REINF. STEEL 611-07.02 (LB.)	STRUC. STEEL 611-07.03 (LB.)
8B	FULLER ROAD	0+75.92	37.24	H2A	"STR" EW	D-PE-4	1.04	-	-
9B	S.R. 320	287+35.83	66.08 LT	J6	"B" EW	D-PE-9,9A	3.06	321.5	-
9B	S.R. 320	294+07.95	48.93 LT	L1	"U" EW	D-PE-24A,24B	1.28	124	-
10B	SPRINGVIEW	0+46.27	43.77 LT	L9	"B" EW	D-PE-9,9B	3.29	345	-
10B	S.R. 320	303+50.00	50.15 RT	L10	"STR" EW	D-PE-4	1.04	-	-
10B	S.R. 320	304+50.00	50.34 LT	M1	"STR" EW	D-PE-4	1.04	-	-
11B	S.R. 320	311+95.00	50.00 RT	N4a	"U" EW	D-PE-18A,18B	0.87	79	
11B	S.R. 320	313+73.34	54.28 RT	N5a	"U" EW	D-PE-18A,18B	1.08	98	
11B	S.R. 320	315+94.00	57.68 RT	N7	"U" EW	D-PE-18A,18B	1.08	98	-
11B	S.R. 320	318+18.00	62.75 RT	N9	"U" EW	D-PE-18A,18B	1.08	98	-
11B	S.R. 320	320+45.00	56.26 RT	N11	"U" EW	D-PE-18A,18B	0.87	79	-
12B	S.R. 320	322+36.08	70.54 RT	Q1	"U" EW	D-PE-24A,24B	1.61	153	-
12B	S.R. 320	323+45.20	53.30 RT	Q5	"U" EW	D-PE-24A,24B	1.28	124	-
12B	EVERETT #2	2+06.00	24.66 RT	R5	"U" EW	D-PE-18A,18B	0.87	79	-
TOTALS							**19.49**	**1,598.5**	**0**

SIDE DRAIN TABULATION

	STATION	LOCATION LT	LOCATION RT	LOCATION	SURFACE WIDTH (L.F.)	RCP CLASS III OR CMP 16 GA. OR HDPE (L.F.) FILL HEIGHT < OR = 10 FT. 607-39.02 18"	607-39.03 24"	607-39.04 30"	607-39.05 36"	HORCP (L.F.) 607-16.01 23" X 14"	END TREATMENT TYPE	DRAWING NO.	CLASS A CONC. 611-07.01 (C.Y.)	REINF. STEEL 611-07.02 (LB.)	STRUC. STEEL 611-07.03 (LB.)	REMARKS
	1+04.70	X		McDONALD DRIVE	10	18										PRIVATE
	1+07.72		X	McDONALD DRIVE	26	38										PRIVATE
	1+42.47	X		GIVENS ROAD	12	22										PRIVATE
	1+91.86	X		MORRIS LANE	30					38						BUSINESS
	1+23.00		X	FULLER ROAD	20	32										BUSINESS
	1+76.44		X	FULLER ROAD	14	24										PRIVATE
	3+10.00	X		FULLER ROAD	40	46										PRIVATE
1	282+81.03		X	S.R. 320	40				57							PRIVATE
1	285+76.90		X	S.R. 320	30				40							PRIVATE
1	287+77.57		X	S.R. 320	10				26							PRIVATE
1	290+60.50		X	S.R. 320	40				48							BUSINESS
	302+96.04		X	S.R. 320	40		52									BUSINESS
	303+92.04		X	S.R. 320	40		52									BUSINESS
	1+11.11	X		S.R. 320	11					18						EXIT. LT. (304+06.60 PVT. LT.)
	1+11.11		X	S.R. 320	11					24						EXIT. RT. (304+06.60 PVT. LT.)
1	305+68.48		X	S.R. 320	13		127									BUSINESS
1	307+01.83		X	S.R. 320	20	135										PRIVATE
	308+36.95		X	S.R. 320	10	20										PRIVATE
	1+25.00	X		EVERETT DRIVE #1	20		59				B	D-PE-9	7.02	704.00	-	PRIVATE
	310+93.36	X		S.R. 320	20	30										BUSINESS
	312+19.91	X		S.R. 320	40	56										BUSINESS
	313+63.23	X		S.R. 320	20	30										BUSINESS
	318+55.48	X		S.R. 320	14		32									PRIVATE
	3+87.18		X	BELL AIR ROAD	10	22										PRIVATE
	2+50.00		X	EVERETT DRIVE #2	10	24					L	D-PE-4	2.56	-	-	PRIVATE
	325+73.00		X	S.R. 320	10				28							PRIVATE
	326+34.00		X	S.R. 320	20				40							PRIVATE
	328+30.02	X		S.R. 320	18	34						D-PE-18A,18B,D-PE-4	2.03	119.00		BUSINESS
	0+94.23	X		BUS. ENT. (328+30.02)	10	34						D-PE-4	2.32	80.00		BUSINESS
	0+94.23		X	BUS. ENT. (328+30.02)	10	22						D-PE-4	2.32	80.00		PRIVATE
	328+56.00		X	S.R. 320	14			42								PRIVATE
	329+11.00		X	S.R. 320	10			30								PRIVATE
	329+67.00		X	S.R. 320	10			28								PRIVATE
	TOTALS					**587**	**322**	**100**	**239**	**80**			**16.25**	**983.00**	**0.00**	

1. CONCRETE PIPES WILL BE REQUIRED

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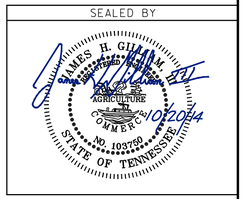

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TABULATED QUANTITIES

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	2N

STORM DRAINAGE PIPES

SHEET NO.	STATION (APPROX.)	LOCATION	FROM CODE	FROM OUTLET ELEV.	TO CODE	TO INLET ELEV.	% GRADE	RCP - CLASS III (L.F.) 607-03.02 18"	607-05.02 24"	607-06.02 30"	607-07.02 36"	607-57.02 29" X 18"	BEDDING MATERIAL (CY)
4B	229+35.00	S.R. 320	A11	711.74	A4	708.00	3.20	117					24.80
4B	229+75.00	S.R. 320	A6	713.03	A5	712.10	1.41	66					13.99
4B	231+00.00	S.R. 320	A7	716.08	A6	713.13	2.42	122					25.86
4B	231+90.44	S.R. 320	A10	717.60	A7	716.18	1.71	83					17.60
4B	232+27.86	S.R. 320	A8	718.20	A10	717.65	1.67	33					7.00
4B	0+87.00	KINSEY DRIVE	A9a	720.44	A9	719.70	4.35	17					3.60
4B	0+67.00	KINSEY DRIVE	A9	719.42	A10	717.65	7.08	25					5.30
5B	237+20.00	S.R. 320	B1a	716.68	B1	713.62	1.49	206					43.67
5B	239+30.00	S.R. 320	B1	713.52	B2	711.94	3.85	41					8.69
5B	239+75.00	S.R. 320	B2	711.68	B3	710.00	3.36	50					10.60
5B	241+14.81	S.R. 320	B5	714.27	B4	710.00	5.41	79					16.75
5B	1+00.00	McNICHOL LANE	B6	715.87	B5	714.37	2.31	65					13.78
5B	1+00.00	McNICHOL LANE	B7	716.52	B6	715.97	0.96	57					12.08
5B	242+10.00	S.R. 320	B8	717.39	B5	714.37	3.21	94					19.93
5B	237+25.00	S.R. 320	C1b	717.99	C1	713.62	2.17	201					42.61
5B	239+30.00	S.R. 320	C1a	713.74	C1	713.62	1.00	12					2.54
5B	239+30.00	S.R. 320	C1	713.52	C2	712.93	1.11	53					11.24
5B	239+89.00	S.R. 320	C2	712.85	C3	711.79	2.65	40					8.48
5B	240+35.00	S.R. 320	C3	711.69	C4	711.00	2.16	32					6.78
5B	242+50.00	S.R. 320	C6	716.99	C5	711.10	3.49	169					35.83
5B	244+50.00	S.R. 320	C7	726.00	C6	717.09	4.82	185					39.22
5B - 6B	245+75.00	S.R. 320	D1	731.77	C7	726.10	4.93	115					24.38
6B	247+00.00	S.R. 320	D2	735.85	D1	731.87	3.46	115					24.38
6B	248+00.00	S.R. 320	D4	744.61	D5	743.89	0.73	98					20.78
6B	248+85.00	S.R. 320	D3	741.76	D2	735.95	3.21	181					38.37
6B	249+00.00	S.R. 320	D5	743.79	D3	741.86	2.72	71					15.05
6B	252+80.00	S.R. 320	D6	755.88	D5	743.89	3.17	378					80.14
7B	260+50.00	S.R. 320	E1	759.32	E2	758.30	0.57	178					37.74
7B	260+00.00	S.R. 320	E3a	759.57	E3	759.14	0.75	57					12.08
7B	260+60.00	S.R. 320	E3	759.04	E4	757.57	0.87	168					35.62
7B	262+30.00	S.R. 320	E2	758.20	E4	757.57	0.91	69					14.63
7B	262+30.00	S.R. 320	E4	757.47	E5	755.51	1.17	167					35.40
7B	264+00.00	S.R. 320	E5	754.26	E6	752.65	1.27	127					26.92
7B	265+30.00	S.R. 320	E6	751.81	E7	749.35	0.92		267				71.02
7B - 8B	268+00.00	S.R. 320	E7	749.25	F1	747.29	0.99		197				52.40
8B	270+00.00	S.R. 320	F1	747.19	F2	746.06	0.88		128				34.05
8B	271+30.00	S.R. 320	F2	745.96	F3	744.83	0.92		123				32.72
8B	0+69.01	MORRIS LANE	F3a	745.70	F3	745.48	0.69	32					6.78
8B	0+78.00	MORRIS LANE	F2a	746.22	F3a	745.80	0.59	71					15.05
8B	1+55.00	MORRIS LANE	F5	746.90	F4	746.46	0.80	55					11.66
8B	1+55.00	MORRIS LANE	F4	746.33	F3a	745.80	0.61	87					18.44
8B	272+50.00	S.R. 320	G1	746.07	G2	744.64	0.80	178					37.74
8B	272+55.00	S.R. 320	F3	744.73	F6	743.77	0.51			188			60.35
8B	274+30.00	S.R. 320	G2	744.54	G3	743.73	1.45	56					11.87
8B	274+45.50	S.R. 320	F7	744.70	F6	743.77	11.63		8				2.13
8B	274+45.50	S.R. 320	F6	743.67	F8	743.44	0.66			35			11.24
8B	274+85.00	S.R. 320	F8	743.34	G3	742.90	0.56			79			25.36
8B	274+90.00	S.R. 320	G3	742.80	G4	742.19	0.63			97			31.14
8B	0+80.00	HURRICANE CREEK	F9	744.11	F8	743.44	1.22	55					11.66
8B	0+64.00	HURRICANE CREEK	F10	744.83	F9	744.21	1.02	61					12.93
8B	2+00.00	HURRICANE CREEK	F11	747.65	F10	744.90	2.05	134					28.41
8B	2+95.00	HURRICANE CREEK	F13	751.36	F9	744.21	3.25	220					46.64
8B	2+98.00	HURRICANE CREEK	F12	750.95	F11	747.80	3.50	90					19.08
8B	0+55.23	MORRIS HILL ROAD	G8a	742.91	G7a	742.60	0.58		53				14.10
8B	1+10.00	MORRIS HILL ROAD	G4	742.09	G5	741.74	0.65				54		20.52
8B	1+10.00	MORRIS HILL ROAD	G7	742.90	G7a	742.60	2.00	15					3.18
8B	1+10.00	MORRIS HILL ROAD	G7a	742.55	G4	742.19	0.75		48				12.77
8B	2+10.00	MORRIS HILL ROAD	G6	743.18	G7a	742.60	0.59	99					20.99
8B	276+30.00	S.R. 320	F14	746.08	F10	745.00	1.80	60					12.72
8B	276+50.00	S.R. 320	G8	743.41	G8a	743.01	0.78		51				13.57
8B	278+30.00	S.R. 320	G9	744.44	G8	743.51	0.54		172				45.75
8B	279+44.00	S.R. 320	H1	745.78	G10	745.19	0.68		87				23.14
8B	279+50.00	S.R. 320	G10	745.09	G9	744.54	0.50		111				29.53
8B	0+75.92	FULLER ROAD	H2A	749.40	H2	749.18	1.22	18					3.82
SUBTOTALS (A)								**4,702**	**1,245**	**399**	**54**	**0**	**1,476.59**

STORM DRAINAGE PIPES

SHEET NO.	STATION (APPROX.)	LOCATION	FROM CODE	FROM OUTLET ELEV.	TO CODE	TO INLET ELEV.	% GRADE	RCP - CLASS III (L.F.) 607-03.02 18"	607-05.02 24"	607-06.02 30"	607-07.02 36"	607-57.02 29" X 18"	BEDDING MATERIAL (CY)
8B	2+00.00	FULLER ROAD	H4	749.40	H3	748.80	0.50	121					25.65
8B	280+80.00	S.R. 320	G11	748.50	G12	748.40	0.26	38					8.06
8B-9B	282+15.00	S.R. 320	J2	748.83	J1	748.65	0.45		40				10.64
8B-9B	283+50.00	S.R. 320	K2	750.30	K1	748.92	0.80	172					36.46
9B	283+79.00	S.R. 320	J3	749.99	J2	748.93	0.65		162				43.09
9B	283+79.00	S.R. 320	J4	751.05	J3	750.76	2.23	13					2.76
9B	285+47.00	S.R. 320	J5	751.58	J3	750.09	0.90	166					35.19
9B	285+47.00	S.R. 320	K3	751.58	K2	750.40	0.61	195					41.34
9B	287+36.00	S.R. 320	J7	752.29	J6	751.11	3.81		31				8.25
9B	287+85.00	S.R. 320	K4	753.17	K3	751.68	0.61	246					52.15
9B	289+00.00	S.R. 320	J8	753.35	J7	752.39	0.59		162				43.09
9B	291+00.00	S.R. 320	J9	754.49	J8	753.45	0.53		198				52.67
9B	292+50.00	S.R. 320	J10	755.35	J9	754.59	0.52		146				38.84
9B	0+71.00	BRENTLEY WOODS DR.	K8	760.40	K7	759.13	6.68	19					4.03
9B	0+76.00	BRENTLEY WOODS DR.	K9	760.86	K8	760.56	0.71	42					8.90
9B	296+50.00	S.R. 320	L2	755.75	L1	755.61	1.08		13				3.46
9B-10B	296+50.00	S.R. 320	L3	757.76	L2	755.85	0.81		236				62.78
10B	298+35.00	S.R. 320	L4	759.21	L3	757.86	0.74		182				48.41
10B	298+35.00	S.R. 320	L5	759.65	L4	759.31	0.49	69					14.63
10B	0+49.72	SPRINGVIEW DR.	L7	761.70	L6	761.36	0.68	50					10.60
10B	0+35.58	SPRINGVIEW DR.	L8	761.88	L6a	760.87	0.67					151	31.11
10B	0+46.78	SPRINGVIEW DR.	L9	762.05	L8	761.98	0.54					13	2.68
10B	303+50.00	S.R. 320	L11	763.58	L10	763.48	0.67	15					3.18
10B	305+44.00	S.R. 320	L12	764.97	L11	763.68	0.68	189					40.07
10B	304+50.00	S.R. 320	M2	761.50	M1	760.50	5.00	20					4.24
10B	305+50.00	S.R. 320	M3	765.01	M2	761.60	3.44	99					20.99
10B	307+50.00	S.R. 320	L13	766.72	L12	765.07	0.82	202					42.82
10B-11B	308+50.00	S.R. 320	M4	767.95	M3	765.11	0.95	298					63.18
11B	0+40.10	EVERETT DR #1	N1	773.61	N2	773.45	0.55	29					6.15
11B	312+02.19	S.R. 320	N4	776.21	N4a	776.06	1.50	10					2.12
11B	313+75.00	S.R. 320	N5	779.82	N5a	779.55	1.42	19					4.03
11B	315+94.00	S.R. 320	N6	788.69	N7	788.44	1.14	22					4.66
11B	318+18.00	S.R. 320	N8	797.28	N9	796.74	2.00	27					5.72
11B	320+45.00	S.R. 320	N10	804.85	N11	804.45	1.90	21					4.45
12B	322+36.00	S.R. 320	Q2	809.20	Q1	808.50	1.94		36				9.58
12B	322+50.00	S.R. 320	Q3	810.64	Q2	809.26	1.97		70				18.62
12B	322+82.22	S.R. 320	Q4	811.27	Q3	810.72	1.49		37				9.84
12B	323+46.17	S.R. 320	Q6	813.04	Q5	812.61	1.07		40				10.64
12B	323+55.52	S.R. 320	Q7	813.54	Q6	813.24	4.29	7					1.48
12B	323+59.76	S.R. 320	Q8	813.79	Q7	813.69	3.33	3					0.64
12B	1+40.00	EVERETT DR #2	R3	820.00	R2	814.19	9.22	63					13.36
12B	1+41.00	EVERETT DR #2	R4	820.65	R3	820.25	0.98	41					8.69
12B	2+06.00	EVERETT DR #2	R5	833.61	R4	820.75	19.78	65					13.78
12B	324+30.00	S.R. 320	S2	815.77	S1	813.86	6.59	29					6.15
12B	324+61.00	S.R. 320	S5	823.26	S1	813.89	17.35	54					11.45
12B	326+15.00	S.R. 320	S3	824.55	S2	817.13	3.77	197					41.76
12B	330+85.00	S.R. 320	T2	849.89	T1	831.58	5.63	325					68.90
12B	330+90.00	S.R. 320	S9	842.95	S8	833.71	3.23			286			91.81
12B-13B	332+85.00	S.R. 320	T3	860.79	T2	849.99	5.45	198					41.98
12B-13B	333+50.00	S.R. 320	S10	860.87	S9	843.05	6.91		258				68.63
13B	0+54.43	HAMLET DRIVE	U1	866.44	S10	860.97	16.58	33					7.00
13B	0+87.24	HAMLET DRIVE	U2	868.20	U1	866.54	5.35	31					6.57
13B	334+68.04	S.R. 320	S11	866.53	S10	860.97	4.88		114				30.32
13B	0+44.65	HAMLET DRIVE	U4	867.13	S11	866.63	3.13		16				4.26
13B	0+64.23	HAMLET DRIVE	U5	872.66	U4	867.23	13.92		39				10.37
13B	0+49.61	HAMLET DRIVE	U3	867.78	U4	867.23	3.67	15					3.18
13B	335+00.00	S.R. 320	T4	872.38	T3	860.89	5.39	213					45.16
13B	335+83.00	S.R. 320	S12	875.20	S11	866.63	7.65	112					23.74
13B	335+83.00	S.R. 320	S13	876.10	S12	875.60	4.17		12				3.19
13B	336+00.00	S.R. 320	T5	877.52	T4	872.48	5.25	96					20.35
13B	336+00.00	S.R. 320	T6	878.00	T5	877.62	2.00		19				5.05
SUBTOTALS (B)								**3,443**	**1,811**	**286**	**0**	**164**	**1,337.23**
GRAND TOTALS (A+B)								**8,145**	**3,056**	**685**	**54**	**164**	**2,813.83**

SEALED BY

JAMES H. GILLIAM, III
REGISTERED ENGINEER
AGRICULTURE COMMERCE
NO. 103750
STATE OF TENNESSEE
10/20/14

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TABULATED QUANTITIES

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	20

CATCH BASINS

SHEET NO.	LOCATION	STATION	OFFSET (FT.)	DRAINAGE CODE	GRATE/TOP ELEV.	STRUCTURE TYPE	INSIDE DIMENSIONS (INCHES)	DEPTH (FT.)	STANDARD DRAWING	PAY ITEMS																			REMARKS
										TYPE 10 611-10.02 4' - 8'	TYPE 12 611-12.01 0' - 4'	TYPE 12 611-12.02 4' - 8'	TYPE 12 611-12.03 8' - 12'	TYPE 14 611-14.02 4' - 8'	TYPE 16 611-16.02 4' - 8'	TYPE 39 611-39.01 0' - 4'	TYPE 39 611-39.02 4' - 8'	TYPE 39 611-39.03 8' - 12'	TYPE 40 611-40.01 0' - 4'	TYPE 40 611-40.02 4' - 8'	TYPE 42 611-42.01 0' - 4'	TYPE 42 611-42.02 4' - 8'	MANHOLE 611-01.01 0' - 4'	SPR. BOX 611-02.01 TYPE 1	SPR. BOX 611-02.02 TYPE 2A	JUNCT. BOX 611-02.10 TYPE 1	JUNCT. BOX 611-02.11 TYPE 2	
4B	S.R. 320	225+33.58	29.09 RT	A2	703.90	EXIST.	-	5.30	-																				
4B	S.R. 320	225+98.87	28.59 LT	A3	705.40	EXIST.	-	4.60	-																				
4B	S.R. 320	228+13.97	29.13 RT	A4	711.60	EXIST.	-	4.20	-																				ADD INLET
4B	S.R. 320	229+07.66	27.92 LT	A5	715.30	MH	48	3.57	D-MH-2														1						
4B	S.R. 320	229+75.00	36.00 LT	A6	717.28	12	48 x 36	4.25	D-CB-12S			1																	
4B	S.R. 320	231+00.00	36.00 LT	A7	722.58	12	48 x 36	6.50	D-CB-12S			1																	
4B	S.R. 320	232+27.86	36.00 LT	A8	725.68	12	60	8.30	D-CB-12RB				1																
4B	KINSLEY DRIVE	0+87.00	30.00 RT	A9a	724.36	42	48 X 48	3.92	D-CB-42SB												1								
4B	KINSLEY DRIVE	0+67.00	30.00 RT	A9	724.32	12	48	4.90	D-CB-12RA			1																	
4B	S.R. 320	231+90.44	36.91 LT	A10	721.56	JBS-1	32 x 32	3.96	D-JBS-1																	1			
4B	S.R. 320	229+35.00	30.00 RT	A11	715.99	12	48 x 36	4.25	D-CB-12S			1																	
5B	S.R. 320	237+20.00	36.00 LT	B1a	721.82	12	48 x 36	5.14	D-CB-12S			1																	
5B	S.R. 320	239+30.00	36.00 LT	B1	717.77	12	48 x 36	4.25	D-CB-12S			1																	
5B	S.R. 320	239+75.00	36.00 LT	B2	717.63	14	96 x 48	5.95	D-CB-14S					1															
5B	S.R. 320	240+27.20	35.00 LT	B3		CONN.																							
5B	S.R. 320	240+36.51	35.01 LT	B4		CONN.																							
5B	S.R. 320	241+14.81	36.78 LT	B5	718.98	12	60	4.71	D-CB-12RB			1																	
5B	McNICHOL LANE	1+00.00	28.73 LT	B6	719.70	38	32 x 32	3.83	D-CB-38S		1																		
5B	McNICHOL LANE	1+00.00	28.73 RT	B7	719.70	38	32 x 32	3.18	D-CB-38S		1																		
5B	S.R. 320	242+10.24	36.72 LT	B8	722.05	12	48 x 36	4.66	D-CB-12S			1																	
5B	S.R. 320	239+78.75	127.70 LT	B9	713.88	39	48 x 48	3.07	D-CB-39S							1													
5B	S.R. 320	240+16.00	62.79 LT	B10	714.15	39	48 x 48	0.89	D-CB-39S							1													BOX CULV
5B	S.R. 320	237+25.00	36.00 RT	C1b	721.73	12	32 x 32	3.74	D-CB-12LP		1																		
5B	S.R. 320	239+30.00	36.00 RT	C1	717.81	12	48 x 36	4.25	D-CB-12S			1																	
5B	S.R. 320	239+30.00	48.52 RT	C1a	716.70	42	32 x 32	2.96	D-CB-42S										1										
5B	S.R. 320	239+89.00	36.00 RT	C2	717.64	14	96 x 36	4.81	D-CB-14S					1															
5B	S.R. 320	240+35.00	36.00 RT	C3	717.87	12	48 x 36	6.18	D-CB-12S			1																	
5B	S.R. 320	240+82.18	52.96 RT	C3a	716.15	40	48 x 96	5.96	D-CB-40S											1									
5B	S.R. 320	240+67.19	35.00 RT	C4		CONN.																							
5B	S.R. 320	240+76.60	34.96 RT	C5		CONN.																							
5B	S.R. 320	242+50.00	36.00 RT	C6	722.16	12	60	5.17	D-CB-12RB			1																	
5B	S.R. 320	244+50.00	36.00 RT	C7	730.25	12	60	4.25	D-CB-12RB			1																	
6B	S.R. 320	245+75.00	36.00 RT	D1	736.02	12	48 x 36	4.25	D-CB-12S			1																	
6B	S.R. 320	247+00.00	36.00 RT	D2	743.20	12	48 x 36	7.35	D-CB-12S			1																	
6B	S.R. 320	248+85.00	36.00 RT	D3	752.38	12	48 x 36	10.62	D-CB-12S				1																
6B	S.R. 320	248+00.00	36.00 LT	D4	748.87	12	48 x 36	4.26	D-CB-12S			1																	
6B	S.R. 320	249+00.00	36.00 LT	D5	753.00	12	48 x 36	9.21	D-CB-12S				1																
6B	S.R. 320	252+80.00	36.00 LT	D6	760.13	12	48 x 36	4.25	D-CB-12S			1																	
7B	S.R. 320	260+50.00	36.00 LT	E1	763.57	12	48 x 36	4.25	D-CB-12S			1																	
7B	S.R. 320	262+30.00	36.00 LT	E2	763.24	12	48 x 36	5.04	D-CB-12S			1																	
7B	S.R. 320	260+00.00	36.00 RT	E3a	763.82	12	48 x 36	4.25	D-CB-12S			1																	
7B	S.R. 320	260+60.00	37.84 RT	E3	763.54	10	48	4.50	D-CB-10RA	1																			
7B	S.R. 320	262+30.00	36.00 RT	E4	762.67	12	48 x 36	5.20	D-CB-12S			1																	
7B	S.R. 320	264+00.00	36.00 RT	E5	761.81	12	48 x 36	7.55	D-CB-12S			1																	
7B	S.R. 320	265+30.00	36.00 RT	E6	760.60	12	48 x 36	8.79	D-CB-12S			1																	
7B	S.R. 320	268+00.00	45.85 RT	E7	755.59	12	48 x 36	6.34	D-CB-12S			1																	
8B	S.R. 320	270+00.00	48.00 RT	F1	751.94	12	48 x 36	4.75	D-CB-12S			1																	
8B	S.R. 320	271+30.00	48.00 RT	F2	750.71	12	48 x 36	4.75	D-CB-12S			1																	
8B	MORRIS LANE	0+78.00	26.77 RT	F2a	749.96	12	32 x 32	3.74	D-CB-12LP		1																		
8B	S.R. 320	272+55.00	48.00 RT	F3	750.06	12	48 x 36	5.33	D-CB-12S			1																	
8B	MORRIS LANE	0+69.01	46.15 LT	F3a	749.03	JBS-2	48 x 48	3.33	D-JBS-2																			1	
8B	MORRIS LANE	1+55.00	27.70 LT	F4	750.74	42	32 x 32	4.41	D-CB-42S													1							
8B	MORRIS LANE	1+55.00	27.70 RT	F5	749.90	42	32 x 32	3.00	D-CB-42S												1								
8B	S.R. 320	274+45.50	48.00 RT	F6	749.10	12	48 x 36	5.43	D-CB-12S			1																	
8B	S.R. 320	274+45.50	65.31 RT	F7	750.70	EXIST.																							
8B	S.R. 320	274+85.00	48.00 RT	F8	749.01	16	96 x 48	5.67	D-CB-16S						1														
8B	HURRICANE CREEK	0+80.00	30.02 RT	F9	749.29	12	48 x 36	5.18	D-CB-12S			1																	
8B	HURRICANE CREEK	0+64.00	32.36 LT	F10	749.50	12	48	4.67	D-CB-12RA			1																	
8B	HURRICANE CREEK	2+00.00	31.87 LT	F11	752.10	12	48 x 36	4.45	D-CB-12S			1																	
8B	HURRICANE CREEK	2+98.00	23.15 LT	F12	755.20	12	48 x 36	4.25	D-CB-12S			1																	
8B	HURRICANE CREEK	2+95.00	22.18 RT	F13	755.10	12	32 x 32	3.74	D-CB-12LP		1																		
SUBTOTALS (A)										**1**	**5**	**31**	**3**	**2**	**1**	**2**	**0**	**0**	**1**	**1**	**2**	**1**	**1**	**0**	**0**	**1**	**1**		

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TABULATED QUANTITIES

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	2P

CATCH BASINS

SHEET NO.	LOCATION	STATION	OFFSET (FT.)	DRAINAGE CODE	GRATE/TOP ELEV.	STRUCTURE TYPE	INSIDE DIMENSIONS (INCHES)	DEPTH (FT.)	STANDARD DRAWING	PAY ITEMS TYPE 10 611-10.01 0' - 4'	TYPE 10 611-10.02 4' - 8'	TYPE 12 611-12.01 0' - 4'	TYPE 12 611-12.02 4' - 8'	TYPE 12 611-12.03 8' - 12'	TYPE 16 611-16.02 4' - 8'	TYPE 39 611-39.01 0' - 4'	TYPE 39 611-39.02 4' - 8'	TYPE 39 611-39.03 8' - 12'	TYPE 40 611-40.01 0' - 4'	TYPE 40 611-40.02 4' - 8'	TYPE 42 611-42.01 0' - 4'	TYPE 42 611-42.02 4' - 8'	MANHOLE 611-01.02 4' - 8'	SPR. BOX 611-02.01 TYPE 1	SPR. BOX 611-02.02 TYPE 2A	JUNCT. BOX 611-02.10 TYPE 1	JUNCT. BOX 611-02.11 TYPE 2	REMARKS
8B	S.R. 320	276+50.00	36.00 RT	F14	750.33	12	48 x 36	4.25	D-CB-12S				1															
8B	S.R. 320	272+50.00	36.00 LT	G1	750.32	12	48 x 36	4.25	D-CB-12S				1															
8B	S.R. 320	274+30.00	36.00 LT	G2	749.42	12	48 x 36	4.88	D-CB-12S				1															
8B	S.R. 320	274+90.00	36.00 LT	G3	749.23	16	96 x 48	6.43	D-CB-16S						1													
8B	MORRIS HILL ROAD	1+10.00	38.00 LT	G4	748.12	12	48 x 48	6.03	D-CB-12SB				1															
8B	MORRIS HILL ROAD	1+64.50	37.33 LT	G5	745.60	EXIST.																						
8B	MORRIS HILL ROAD	2+10.00	24.68 RT	G6	746.14	42	32 x 32	2.96	D-CB-42S												1							
8B	MORRIS HILL ROAD	1+10.00	31.39 RT	G7	747.57	42	48 x 48	4.37	D-CB-42SB													1						
8B	MORRIS HILL ROAD	1+10.00	14.00 RT	G7a	748.61	12	48 x 48	6.11	D-CB-12SB				1															
8B	S.R. 320	276+50.00	48.00 LT	G8	749.80	12	48 x 36	6.39	D-CB-12S				1															
8B	MORRIS HILL ROAD	0+55.23	21.90 RT	G8a	749.61	MH	60	6.70	D-MH-2														1					
8B	S.R. 320	278+30.00	40.03 LT	G9	750.53	12	48 x 36	6.09	D-CB-12S				1															
8B	S.R. 320	279+50.00	36.00 LT	G10	751.37	12	48 x 36	6.28	D-CB-12S				1															
8B	S.R. 320	281+25.00	36.00 LT	G11	752.75	12	48 x 36	4.25	D-CB-12S				1															
8B	S.R. 320	281+64.87	35.00 LT	G12		CONN.																						
8B	S.R. 320	279+44.00	53.75 RT	H1	752.32	42	48 x 48	6.54	D-CB-42SB													1						
8B	FULLER ROAD	0+65.96	54.54 RT	H2	752.04	42	32 x 32	2.96	D-CB-42S												1							
8B	FULLER ROAD	0+69.83	27.99 LT	H3	752.09	JB	32 x 32	3.29	D-JBS-1																	1		
8B	FULLER ROAD	2+00.00	22.00 LT	H4	753.21	12	32 x 32	3.81	D-CB-12LP			1																
8B	S.R. 320	281+73.73	35.00 LT	J1		CONN.																						
9B	S.R. 320	282+15.00	36.00 LT	J2	753.68	12	48 x 36	4.85	D-CB-12S				1															
9B	S.R. 320	283+79.00	36.00 LT	J3	754.74	12	48 x 36	4.75	D-CB-12S				1															
9B	S.R. 320	283+79.00	50.50 LT	J4	754.01	42	32 x 32	2.96	D-CB-42S												1							
9B	S.R. 320	285+47.00	36.00 LT	J5	755.83	12	48 x 36	4.25	D-CB-12S				1															
9B	S.R. 320	287+36.00	36.00 LT	J7	757.04	12	48 x 36	4.75	D-CB-12S				1															
9B	S.R. 320	289+00.00	36.00 LT	J8	758.10	12	48 x 36	4.75	D-CB-12S				1															
9B	S.R. 320	291+00.00	36.00 LT	J9	759.39	12	48 x 36	4.90	D-CB-12S				1															
9B	S.R. 320	292+50.00	36.00 LT	J10	760.06	12	48 x 36	4.71	D-CB-12S				1															
8B	S.R. 320	281+78.90	35.00 RT	K1		CONN.																						
9B	S.R. 320	283+50.00	36.00 RT	K2	754.55	12	48 x 36	4.25	D-CB-12S				1															
9B	S.R. 320	285+47.00	36.00 RT	K3	755.83	12	48 x 36	4.25	D-CB-12S				1															
9B	S.R. 320	287+95.00	36.00 RT	K4	757.42	12	48 x 36	4.25	D-CB-12S				1															
9B	S.R. 320	291+57.58	0.70 LT	K6	760.97	SPR DR	32 x 32	3.17	D-SDS-1															1				
9B	BRENTLEY WOODS	0+51.51	21.40 RT	K7	762.86	JBS-2	48 x 48	3.83	D-JBS-2																		1	
9B	BRENTLEY WOODS	0+71.00	22.00 RT	K8	765.40	12	60 X 48	5.00	D-CB-12P				1															
9B	BRENTLEY WOODS	0+76.02	22.29 LT	K9	765.40	12	60 X 48	4.54	D-CB-12P				1															
10B	S.R. 320	294+07.95	36.00 LT	L2	761.08	12	48 x 36	5.33	D-CB-12S				1															
10B	S.R. 320	296+50.00	36.00 LT	L3	762.84	12	48 x 36	5.08	D-CB-12S				1															
10B	S.R. 320	298+35.00	36.00 LT	L4	764.14	12	48 x 36	4.93	D-CB-12S				1															
10B	S.R. 320	298+35.00	36.00 RT	L5	764.14	12	48 x 36	4.49	D-CB-12S				1															
10B	S.R. 320	300+98.92	36.00 RT	L6	765.85	12	60	4.89	D-CB-12RB				1															
10B	S.R. 320	300+98.49	36.00 LT	L6a	766.42	12	60	6.16	D-CB-12RB				1															
10B	SPRINGVIEW DRIVE	0+49.77	43.77 RT	L7	766.05	10	48	4.35	D-CB-10RA		1																	
10B	SPRINGVIEW DRIVE	0+35.58	34.67 LT	L8	766.18	10	48	4.30	D-CB-10RA		1																	
10B	S.R. 320	303+50.00	36.00 RT	L11	767.32	12	32 x 32	3.74	D-CB-12LP			1																
10B	S.R. 320	305+44.00	36.00 RT	L12	768.71	12	32 x 32	3.74	D-CB-12LP			1																
10B	S.R. 320	307+50.00	36.00 RT	L13	772.52	12	48 x 36	5.80	D-CB-12S				1															
10B	S.R. 320	305+83.76	52.76 RT	L14	769.31	42	32 x 32	4.18	D-CB-42S													1						
10B	S.R. 320	304+50.00	36.00 LT	M2	768.57	12	48 x 36	7.07	D-CB-12S				1															
10B	S.R. 320	305+50.00	36.00 LT	M3	768.75	12	32 x 32	3.74	D-CB-12LP			1																
11B	S.R. 320	308+50.00	36.00 LT	M4	773.72	12	48 x 36	5.77	D-CB-12S				1															
11B	S.R. 320	309+97.54	36.00 LT	M4a	776.68	12	48 x 36	0.47	D-CB-12S			1																
11B	EVERETT DRIVE #1	0+40.92	41.03 RT	N1	777.35	10	48 x 36	3.74	D-CB-10S	1																		
11B	S.R. 320	310+64.09	15.88 RT	N2		CONN.																						
11B	EVERETT DRIVE #1	0+50.31	32.91 LT	N3	778.88	10	48 x 36	1.80	D-CB-10S	1																		
11B	S.R. 320	311+95.00	36.00 RT	N4	780.14	12	32 x 32	3.93	D-CB-12LP			1																
11B	S.R. 320	313+75.03	36.00 RT	N5	783.56	12	32 x 32	3.74	D-CB-12LP			1																
11B	S.R. 320	315+94.00	36.00 RT	N6	792.94	12	48 x 36	4.25	D-CB-12S				1															
11B	S.R. 320	318+18.00	36.00 RT	N8	802.19	12	48 x 36	4.91	D-CB-12S				1															
SUBTOTALS (B)										**2**	**2**	**7**	**32**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**3**	**3**	**1**	**1**	**0**	**1**	**1**	

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	2P1

CATCH BASINS

SHEET NO.	LOCATION	STATION	OFFSET (FT.)	DRAINAGE CODE	GRATE/TOP ELEV.	STRUCTURE TYPE	INSIDE DIMENSIONS (INCHES)	DEPTH (FT.)	STANDARD DRAWING	PAY ITEMS																						REMARKS
										TYPE 10 611-10.01 0' - 4'	TYPE 10 611-10.02 4' - 8'	TYPE 12 611-12.01 0' - 4'	TYPE 12 611-12.02 4' - 8'	TYPE 12 611-12.03 8' - 12'	TYPE 14 611-14.02 4' - 8'	TYPE 16 611-16.02 4' - 8'	TYPE 39 611-39.01 0' - 4'	TYPE 39 611-39.02 4' - 8'	TYPE 39 611-39.03 8' - 12'	TYPE 40 611-40.01 0' - 4'	TYPE 40 611-40.02 4' - 8'	TYPE 42 611-42.01 0' - 4'	TYPE 42 611-42.02 4' - 8'	MANHOLE 611-01.01 0' - 4'	MANHOLE 611-01.02 4' - 8'	SPR. BOX 611-02.01 TYPE 1	SPR. BOX 611-02.02 TYPE 2A	JUNCT. BOX 611-02.10 TYPE 1	JUNCT. BOX 611-02.11 TYPE 2	
11B	S.R. 320	320+45.00	36.00 RT	N10	809.39	12	48 x 36	4.54	D-CB-12S				1																		
11B	BANKS ROAD	1+24.75	22.00 LT	P1	799.60	12	48 x 36	9.00	D-CB-12S					1																	
11B	BANKS ROAD	1+45.45	22.00 RT	P2	797.64	12	48 x 36	5.98	D-CB-12S				1																		
12B	S.R. 320	322+36.00	36.00 RT	Q2	815.72	12	48 x 36	6.52	D-CB-12S				1																		
12B	S.R. 320	322+50.00	36.00 LT	Q3	816.70	12	48	6.06	D-CB-12RA				1																		
12B	BELL-AIR ROAD	1+52.54	52.62 LT	Q4	815.85	39	62 x 62	4.58	D-CB-39SC									1													
12B	S.R. 320	323+46.17	12.85 RT	Q6	817.04	SPR DR	48 x 48	5.04	D-SDS-2A																		1				
12B	S.R. 320	323+55.52	12.42 RT	Q7	817.19	SPR DR	32 x 32	5.19	D-SDS-1																	1					
12B	S.R. 320	323+59.76	11.45 RT	Q8	817.29	SPR DR	32 x 32	4.54	D-SDS-1																	1					
12B	EVERETT DRIVE #2	0+58.45	22.00 RT	R1	820.02	14	96 x 36	7.99	D-CB-14S						1																
12B	EVERETT DRIVE #2	0+74.47	26.96 LT	R2	820.54	12	62 x 62	6.66	D-CB-12SC				1																		
12B	EVERETT DRIVE #2	1+40.00	22.00 LT	R3	825.00	12	48 x 36	5.00	D-CB-12S				1																		
12B	EVERETT DRIVE #2	1+40.00	22.00 RT	R4	825.00	12	48 x 36	4.35	D-CB-12S				1																		
12B	BELL-AIR ROAD	0+49.85	31.75 RT	S1	818.00	39	48 x 48	4.18	D-CB-39S									1													
12B	S.R. 320	324+15.00	36.00 LT	S2	821.10	12	48 x 36	5.33	D-CB-12S				1																		
12B	S.R. 320	326+15.00	36.00 LT	S3	828.80	12	48 x 36	4.25	D-CB-12S				1																		
12B	S.R. 320	324+61.02	56.01 LT	S5	833.14	39	48 x 48	9.88	D-CB-39S										1												
12B	S.R. 320	328+00.00	36.00 LT	S8	838.69	12	72	6.26	D-CB-12RB				1																		
12B	S.R. 320	330+90.00	36.00 LT	S9	854.41	12	48 x 36	11.46	D-CB-12S					1																	
13B	S.R. 320	333+50.00	36.00 LT	S10	868.50	12	60	7.63	D-CB-12RB				1																		
13B	S.R. 320	334+68.04	36.00 LT	S11	874.90	12	60	8.37	D-CB-12RB					1																	
13B	S.R. 320	335+83.00	36.00 LT	S12	881.12	10	48	5.92	D-CB-10RA		1																				
13B	S.R. 320	335+83.00	49.36LT	S13	880.00	39	48X48	3.90	D-CB-39S								1														
12B	S.R. 320	327+59.21	36.00 RT	T1	837.01	12	72	6.88	D-CB-12RB				1																		
12B	S.R. 320	330+85.00	36.00 RT	T2	854.14	12	48 x 36	4.25	D-CB-12S				1																		
13B	S.R. 320	332+85.00	36.00 RT	T3	864.98	12	48 x 36	4.25	D-CB-12S				1																		
13B	S.R. 320	335+00.00	36.00 RT	T4	876.63	12	48 x 36	4.25	D-CB-12S				1																		
13B	S.R. 320	336+00.00	36.00 RT	T5	882.02	12	48X36	4.50	D-CB-12S				1																		
13B	S.R. 320	336+00.00	13.00 RT	T6	881.50	39	48X48	3.50	D-CB-39S								1														
13B	HAMLET DRIVE	0+54.23	30.28 LT	U1	871.71	10	48	5.27	D-CB-10RA		1																				
13B	HAMLET DRIVE	0+87.24	24.38 LT	U2	872.61	12	48 x 48	4.41	D-CB-12S				1																		
13B	HAMLET DRIVE	0+49.61	22.80 RT	U3	872.03	10	48	4.25	D-CB-10RA		1																				
13B	HAMLET DRIVE	0+44.64	39.61 RT	U4	871.80	40	96 x 48	4.67	D-CB-40S											1											
13B	HAMLET DRIVE	0+64.23	25.93 RT	U5	880.67	39	48 x 48	8.01	D-CB-39S										1												
SUBTOTALS (C)										**0**	**3**	**0**	**17**	**3**	**1**	**0**	**2**	**2**	**2**	**1**	**0**	**0**	**0**	**0**	**0**	**2**	**1**	**0**	**0**	
GRAND TOTALS (A+B+C)										**2**	**6**	**12**	**80**	**6**	**3**	**2**	**4**	**2**	**2**	**2**	**1**	**5**	**4**	**1**	**1**	**3**	**1**	**2**	**2**	

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	20

PROPOSED GUARDRAIL

SHEET NO.	LOCATION	SIDE LT	SIDE RT	STATION FROM	STATION TO	GUARDRAIL BRIDGE ENDS 705-01.01 (L.F.)	GUARDRAIL SINGLE TYPE 1 705-01.04 (L.F.)	GUARDRAIL SINGLE TYPE 2 705-02.02 (L.F.)	TERMINAL TYPE 12 705-04.02 (EACH)	TERMINAL TYPE 13 705-04.03 (EACH)	TERMINAL TYPE 21 705-04.04 (EACH)	TERMINAL TYPE IN-LINE 705-04.05 (EACH)	TERMINAL TYPE 38 705-04.07 (EACH)	REMARKS
8B-9B	S.R. 320		X	281+15.00	282+02.50		9.33	28.17		1			1	OVER BOX CULVERT
8B-9B	S.R. 320	X		281+54.00	282+54.00		9.33	40.67		1			1	OVER BOX CULVERT
10B	S.R. 320		X	300+71.00	301+27.00			56.00		1		1		OVER CULVERT
10B	S.R. 320	X		300+86.00	301+59.00			23.00		1			1	OVER CULVERT
11B	S.R. 320	X		309+47.80	310+68.38		14.33	106.25		1		1		OVER BOX CULVERT
11B-12B	BELL AIR ROAD	X		2+45.00	3+45.00			50.00			2			FRONT OF RETAINING WALL
12B	S.R. 320		X	322+34.00	323+47.80			63.80				1	1	CLEAR ZONE PROTECTION
12B	EVERETT DRIVE #2		X	0+23.00	1+00.00			54.68			1			CLEAR ZONE PROTECTION
12B	PVT. DR. #3		X	0+78.65	1+73.53			79.68		2				SLOPE PROTECTION
TOTALS						**0.00**	**32.99**	**502.25**	**0**	**7**	**3**	**3**	**4**	

PLANTING - CUTTINGS, SEEDLING, SHRUB (SEE SHT. 2T & 2U)

SHEET NO.	LOCATION	SIDE LT	SIDE RT	STATION FROM	STATION TO	CUTTINGS *SALIX SERICEA* 18" - 24" 802-02.31 (EACH)	CUTTINGS *CORNUS AMOMUM* 18" - 24" 802-02.32 (EACH)	CUTTINGS *SAMBUCUS CANADENSIS* 18" - 24" 802-02.33 (EACH)	SEEDLINGS *ACER RUBRUM* 18" - 24" HT, BR 802-02.01 (EACH)	SEEDLINGS *PLANTUS OCCIDENTALS* 18" - 24" HT, BR 802-02.02 (EACH)	SEEDLINGS *SALIX NIGRA* 18" - 24" HT, BR 802-02.03 (EACH)	SEEDLINGS *CERCIS CANADENSIS* SEEDLNG B.R. 802-12.11 (EACH)	SEEDLINGS *PRUNUS AMERICANA* SEEDLNG B.R. 802-12.59 (EACH)	TREES *ACER RUBRUM* 2-5 FT CNTNR GRWN 802-11.02 (EACH)	TREES *ACER SACCHARUM* 2-5 FT CNTNR GRWN 802-11.03 (EACH)	TREES *CERCIS CANADENSIS* 2-5 FT CNTNR GRWN 802-11.11 (EACH)	TREES *CORNUS FLORIDA* 2-5 FT CNTNR GRWN 802-11.12 (EACH)	SHRUBS *CALYCANTHUS FLORIDUS* 2'-5' CNTNR GRWN 802-13.02 (EACH)	SHRUBS *HYDRANGEA QUERCIFOLIA* 2'-5' CNTNR GRWN 802-13.06 (EACH)	SHRUBS *VACCINIUM STAMINEUM* 2'-5' CNTNR GRWN 802-13.13 (EACH)
8B	S.R. 320		X	281+08	281+78	3	3	2								4	4		4	3
8B-9B	S.R. 320		X	281+78	285+00	10	9	9								13	13		13	13
10B	S.R. 320	X		296+06	298+19				17	17	16									
11B	S.R. 320	X		309+12	309+78							3	2	7	5			4		3
11B-12B	S.R. 320		X	311+48	323+61							51	50	101	101			51		50
TOTALS						**13**	**12**	**11**	**17**	**17**	**16**	**54**	**52**	**108**	**106**	**17**	**17**	**55**	**17**	**69**

RETAINING WALL

SHEET NO.	LOCATION	SIDE LT	SIDE RT	STATION FROM	STATION TO	RETAINING WALL #1 (SR320) 604-07.01 (S.F.)	RETAINING WALL #2 (PVT. DRIVE) 604-07.02 (S.F.)	RETAINING WALL #3 (BELL AIR) 604-07.03 (S.F.)	RETAINING WALL #4 (SR320) 604-07.04 (S.F.)	RETAINING WALL #5 (SR320) 604-07.05 (S.F.)	RETAINING WALL #6 (SR320) 604-07.06 (S.F.)	RETAINING WALL #7 (HAMLET) 604-07.07 (S.F.)	REMARKS
4B	S.R. 320		X	230+50.00	231+13.00	354							
10B	PVT. DRIVE		X	1+00.00	1+80.00		382						STA. 304+06.60 LT S.R. 320
10B	S.R. 320	X		305+80.00	306+40.00			314					
12B	BELL AIR ROAD	X		2+60.00	3+45.00				686				
12B	S.R. 320	X		324+36.00	327+55.00					3,053			
12B-13B	S.R. 320	X		328+70.50	333+54.49						8,773		
13B	HAMLET DRIVE		X	0+66.39	3+05.00							2,251	
13B	S.R. 320	X		334+34.09	334+55.74							153	
TOTAL						**354**	**382**	**314**	**686**	**3,053**	**8,773**	**2,403**	

REMOVAL OF STRUCTURES AND OBSTRUCTIONS ITEM NO. 202-01

SHEET NO.	STATION	LOCATION	DESCRIPTION	REMARKS
4	229+07.66	SR 320	MANHOLE (REMOVED AND REPLACED)	LT.
4	230+87.94	SR 320	50 LF OF RETAINING WALL	RT.
8	TO L.O.C	HURRICANE CREEK ROAD	C&G, SIDEWALKS	LT. & RT. SIDES
8	TO L.O.C	MORRIS HILL	C&G	LT. SIDE
4,8		S.R. 320	C&G	LT. & RT. SIDES
9	285+43.50	S.R. 320	17 LF OF ROCK WALL	RT. SIDE
9	286+75.00	S.R. 320	204 LF OF ROCK WALL	RT. SIDE
9	288+45.00	S.R. 320	103 LF OF ROCK WALL	RT. SIDE
9	0+43.00	BRENTLEY WOODS DRIVE	C&G	LT. SIDE
13	0+84.33	HAMLET ROAD	30 LF OF 2.5' CONCRETE DITCH (OFF. 0.00)	LT. SIDE
13	TO L.O.C	HAMLET RD.	C&G	LT. & RT. SIDES

REMOVAL OF BUILDINGS AND OBSTRUCTIONS DESCRIPTION BLOCK

PAY ITEM	TRACT NO.	DESCRIPTION
202-06.01	57	TWO SIDED BLOCK DISPLAY SIGN
202-06.02	79 & 81	TWO BRICK SUBDIVISION ENTRANCE SIGNS
202-06.03	105	TWO STORY DUPLEX
202-06.04	106	BRENTLEY WOODS SUBDIVISION SIGN
202-06.05	115	ONE STORY FRAME RESIDENCE

NO ADDITIONAL COMPENSATION WILL BE MADE FOR THESE REMOVALS.

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STATE OF TENNESSEE
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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	2R

RIP-RAP QUANTITIES

LOCATION					CULVERT OUTLET			BASIN DIMENSIONS (FT.)						RIP-RAP	CLASS A-3	CLASS A-1	CLASS B	CLASS C	GEOTEXTILE	REMARKS
ROADWAY	STATION	OFFSET DISTANCE (FT.)	OFFSET DIRECTION LT	OFFSET DIRECTION RT	NO. OF BBLS.	SIZE	LENGTH (FT.)	W1	W2	W3	L1	L2	L3	DEPTHS (FT.)	(1.5') 709-05.05 (TON)	(1.5') 709-05.06 (TON)	(2.5') 709-05.08 (TON)	(3.5') 709-05.09 (TON)	TYPE III 740-10.03 (S.Y.)	
S.R. 320	240+51.87	148.96	X		1	8' X 3'	238	22.5	8	8	7	10		1.5	0.00	14.29	0.00	0.00	21.00	CROSS DRAIN
S.R. 320	300+98.70	53.31	X		1	48"	16	6	16	4	20	20		2.5	0.00	0.00	32.00	0.00	28.00	CROSS DRAIN
S.R 320	310+48.40	53.31	X		1	8' X 3'	188	20	8	8	8	8		3.5	0.00	0.00	0.00	36.00	25.00	CROSS DRAIN
S.R 320	323+60.00	65.43		X	1	6' X 3'								3.5	0.00	0.00	0.00	18.00	10.00	CROSS DRAIN
S.R. 320	327+79.32	68.18		X	1	36"	37	17	4		25	13		3.5	0.00	0.00	0.00	114.00	97.00	CROSS DRAIN
S.R. 320	333+58.00	63.50	X		0	38" X 24"		5	21	23	18	10	6	1.5	0.00	35.64	0.00	0.00	27.00	RETAINING WALL
FULLER ROAD	2+35.00	29.00		X	1			14	14		8	11		1.5	0.00	18.09	0.00	0.00	34.92	END OF C&G
FULLER ROAD	2+35.00	29.00	X		1			16	14		6	11		1.5	0.00	17.57	0.00	0.00	34.08	END OF C&G
PVT (S.R. 320	0+61.50		X		2	18"	65							3.5				178.99	139.00	SIDE DRAIN
328+30.36 LT.)																				
TOTAL															**0.00**	**85.58**	**32.00**	**346.99**	**416.01**	

PAVEMENT QUANTITIES

LOCATION	PAY ITEMS																			
	303-01 (TON) ALT. "A"	303-01 (TON) ALT. "B"	307.01.01 (TON)	307-01.08 (TON)	307-02.01 (TON)	307-02.02 (TON)	307-02.03 (TON)	307-02.08 (TON)	309-01.01 (TON) ALT. "B"	309-01.02 (TON) ALT. "B"	309-02 (TON) ALT. "B"	313-03 (C.Y.)	402-01 (TON) ALT. "A"	402-02 (TON) ALT. "A"	403-01 (TON)	411-01.07 (TON)	411-01.10 (TON)	411-02.10 (TON)	501-01.02 (S.Y.)	701-02 (S.Y.)
S.R. 320	50,577.39	20,230.95			10,795.08	274.57	8,173.75	9,183.47	23,586.88	910.45	70.44		123.89	490.60	57.16			5,384.11		
SIDE ROADS																				
KINSEY ROAD	398.42	398.42		65.25									1.04	4.12	0.17	8.42	38.26			
GRAYS ROAD	533.66	533.66		86.73									1.39	5.51	0.23	11.70	50.85			
GREENS ROAD	643.26	643.26		97.27									1.66	6.59	0.26	18.31	57.03			
McNICHOL LANE	375.79	375.79		60.38									0.98	3.87	0.16	8.59	35.40			
McDONALD DRIVE	374.21	374.21		61.13									0.98	3.87	0.16	8.00	35.84			
GIVENS ROAD	497.91	497.91		99.23									1.29	5.09	0.21	11.31	46.54			
SHADY REST ROAD	596.63	596.63		96.52									1.56	6.16	0.26	13.34	56.59			
HEATON ROAD	475.09	475.09		74.78									1.23	4.87	0.20	11.57	52.61			
MORRIS LANE	606.46	606.46		96.99									1.58	6.25	0.26	14.21	56.86			
HURRICANE CREEK ROAD	1,282.91	1,282.91		257.09									3.45	13.65	0.69		150.73			
MORRIS HILL ROAD	996.08	996.08			484.16			165.45					1.54	8.79	1.36			97.00		
FULLER ROAD	877.80	877.80		142.67									2.29	9.07	0.38	19.27	83.64			
BENTLEY WOODS ROAD	107.98	107.98										53.19	0.73	2.87					478.72	
SPRINGVIEW DRIVE	618.35	618.35		100.14									1.61	6.38	0.27	13.73	58.71			
EVERETT DRIVE	407.50	407.50		70.42									1.07	4.25	0.19	6.54	41.29			
BANKS ROAD	1,130.38	1,130.38		259.38									2.49	9.87	0.46	8.81	101.38			
BELL-AIR ROAD	672.15	672.15		100.66									1.73	6.87	0.27	19.57	59.02			
EVERETT (2) DRIVE	889.39	889.39		152.23									2.34	9.26	0.41	15.11	89.25			
HAMLET ROAD	604.61	604.61		121.16									1.62	6.43	0.32		71.03			
MISCELLANEOUS																				
FIELD ENT./ PRIVATE DRIVES	3,526.62	3,526.62	583.75														927.33			24,847.36
TEMPORARY PAVEMENT	5,248.00	5,248.00	817.00	544.00									10.61	42.02						
TOTALS	**71,440.59**	**41,094.15**	**1,400.75**	**2,486.03**	**11,279.24**	**274.57**	**8,173.75**	**9,348.92**	**23,586.88**	**910.45**	**70.44**	**53.19**	**165.08**	**656.39**	**63.42**	**188.48**	**2,012.36**	**5,481.11**	**478.72**	**24,847.36**

SEALED BY

JAMES H. GILLIAM
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 103750
STATE OF TENNESSEE
10/20/2014

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TABULATED QUANTITIES

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	2R1

SPECIAL DITCHES

LOCATION	STATION FROM	STATION TO	SIDE LT	SIDE RT	SLOPE FORE (H/V)	SLOPE BACK (H/V)	GRANULAR BACKFILL 303-01.01 (TON)	CLASS "A" CONCRETE 604-01.01 (C.Y.)	STEEL BAR REINF. 604-01.02 (LB)	CEMENT CONCRETE DITCH PAVING 703-01 (C.Y.)	RIP-RAP (CLASS A-1) 709-05.06 (TON)	GEOMEMBRANE (60 MIL) 740-06.01 (S.Y.)	GEOGRID REINF. 740-07.02 (S.Y.)	GEOTEXTILE TYPE IV 740-10.04 (S.Y.)	SODDING 803-01 (S.Y.)	REMARKS
4' WIDE RIP-RAP SWELL																
S.R. 320	318+85.00	318+88.00		X							22.94			39		
S.R. 320	321+37.59	321+50.87		X							16.72			29		
BELL-AIR RD.	0+97.00	2+55.00		X							61.44			105		
"V" RIP-RAP DITCH																
S.R. 320	301+00.00	301+40.40		X	3:1	3:1					24.84			37		
S.R. 320	322+56.44	322+79.64	X		3:1	3:1					14.27			21		
S.R. 320	322+79.15	322+83.00	X		2:1	2:1					8.70			14		
S.R. 320	330+80.00	330+84.00		X	2:1	2:1					7.39			12		
SPRINGVIEW DR.	0+79.00	1+60.00		X	3:1	3:1					49.81			75		
"V" CONCRETE DITCH																
PVT. DR.	0+61.00	1+60.00	X		2:1	2:1	9.57	0.02	2.20	5		71				287+77.57 S.R.320
PVT. DR.	0+79.20	1+60.00		X	2:1	2:1	7.81	0.02	2.20	4		58				287+77.57 S.R.320
PVT. DR.	0+54.00	1+74.00	X		2:1	2:1	11.59	0.02	2.20	7		86				300+51.03 S.R.320
PVT. DR.	0+54.00	1+74.00		X	2:1	2:1	11.59	0.02	2.20	7		86				300+51.03 S.R.320
PVT. DR.	0+51.00	1+70.00	X		2:1	2:1	11.50	0.02	2.20	7		86				335+68.69 S.R.320
PVT. DR.	0+51.00	1+70.00		X	2:1	2:1	11.50	0.02	2.20	7		86				335+68.69 S.R.320
PVT. DR.	0+14.00	1+14.00	X		2:1	2:1	9.66	0.02	2.20	6		72				2+50.00 EVERETT #2
PVT. DR.	0+24.00	1+23.00		X	2:1	2:1	9.57	0.02	2.20	5		71				2+50.00 EVERETT #2
PVT. DR.	0+18.00	1+20.00	X		2:1	2:1	9.86	0.02	2.20	6		73				3+87.18 BELL-AIR RD.
PVT. DR.	0+18.00	1+00.00		X	2:1	2:1	7.92	0.02	2.20	5		59				3+87.18 BELL-AIR RD.
HAMLET DR.	2+45.00	2+95.00		X	2:1	2:1	4.83	0.02	2.20	3		36				
CONCRETE SWELL																
S.R. 320	315+00.00	321+50.00		X			42.13			24		361				
1' "T" CONCRETE DITCH (BEHIND WALL)																
S.R. 320	324+50.00	327+00.00	X		3:1	3:1	39.56			23		259				
2' "T" CONCRETE DITCH (BEHIND WALL)																
S.R. 320	328+80.28	333+54.49	X		3:1	2:1	75.80			43		495				
HAMLET DR.	1+50.00	2+45.00		X	2:1	2:1	13.28			8		89				
3' "T" CONCRETE DITCH (BEHIND WALL)																
HAMLET DR.	0+66.39	1+50.00		X	2:1	2:1	13.50			9		88				
"V" SOD DITCH																
S.R. 320	286+00.00	287+36.00	X		3:1	2:1									82	
S.R. 320	287+36.00	287+37.74	X		2:1	2:1									131	
S.R. 320	294+08.19	295+43.36	X		2:1	2:1									106	
S.R. 320	294+32.00	300+40.00		X	3:1	2.5:1									396	
S.R. 320	300+70.00	301+00.00		X	3:1	3:1									21	
S.R. 320	302+50.00	304+56.67		X	3:1	3:1									145	
S.R. 320	307+18.91	308+50.00		X	3:1	3:1									92	
S.R. 320	315+39.79	315+50.25	X		3:1	3:1									29	
S.R. 320	318+19.17	320+18.00	X		4:1	3.5:1									172	
S.R. 320	327+28.00	333+69.69		X	3:1	2:1									385	
S.R. 320	327+47.43	328+00.00	X		3:1	2:1									32	
S.R. 320	328+50.00	333+38.46	X		3:1	3:1									343	
S.R. 320	334+59.00	336+64.00	X		3:1	2:1									123	
FULLER RD.	0+72.00	2+82.00	X		3:1	3:1									148	
FULLER RD.	1+43.00	2+83.00		X	3:1	3:1									98	
BANKS RD.	1+57.00	1+80.00		X	2:1	3:1									14	
2' "T" SOD DITCH																
S.R. 320	285+00.00	293+30.00		X	3:1	2:1									867	
S.R. 320	316+50.00	316+84.00	X		3:1	3:1									39	
S.R. 320	317+67.13	318+19.17	X		6:1	4:1									82	
S.R. 320	324+48.00	327+11.00		X	3:1	2:1								274.64		
TOTALS							**289.66**	**0.19**	**24.19**	**167**	**206.11**	**2,078**	**275**	**334**	**3,303**	

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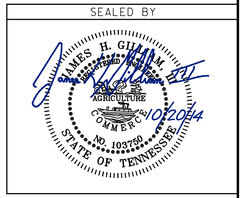

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TABULATED QUANTITIES

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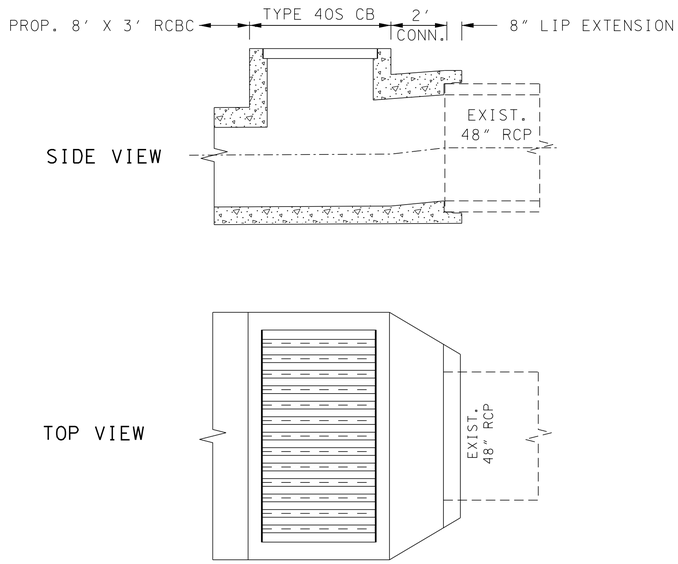
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	2E
CONST.	2014	STP-320(4)	2S

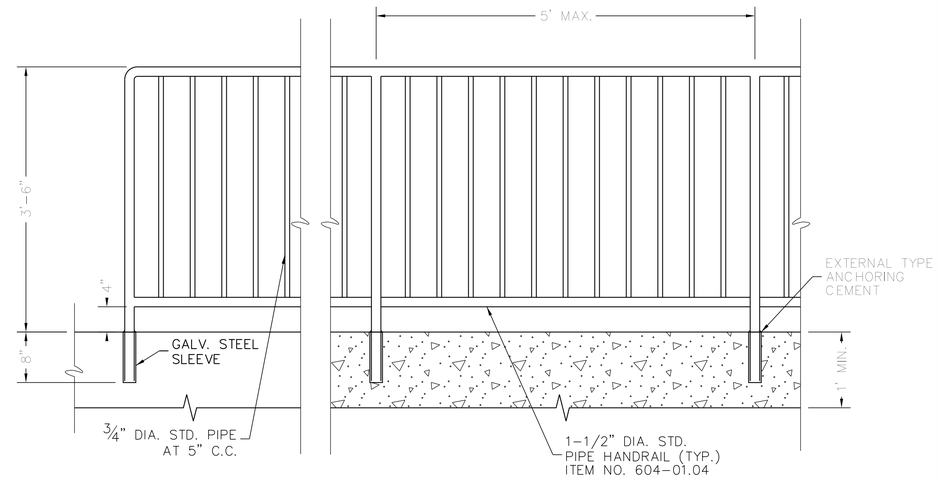
REV.05-19-2010: ADDED SHEET.

CULVERT STA. 240+51.87
CONNECTION TO EXISTING 48" RCP

THE 2'-0" CONNECTOR WILL BE CAST IN-PLACE.
SEE STANDARD DRAWING STD-15-36 FOR ADDITIONAL DETAILS.

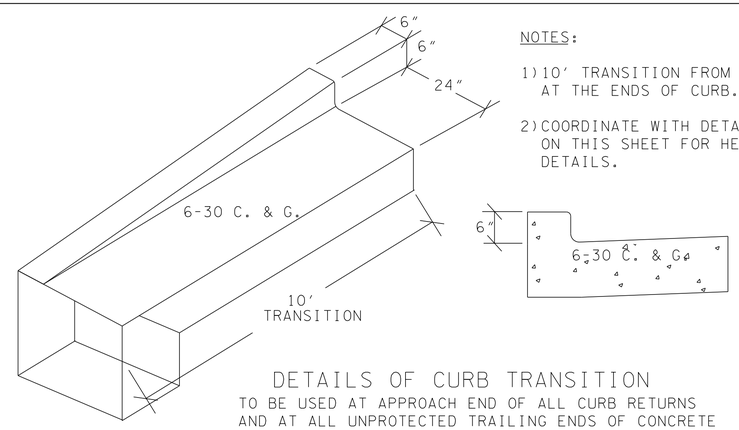


NOTE: HANDRAIL SHALL BE POWDER COATED, GENTIAN BLUE (RAL 5010) IN COLOR.



HANDRAIL DETAIL

STA. 230+50± RT. TO STA. 231+13± RT. (S.R. 320 - RETAINING WALL #1)
STA. 1+00± LT. TO STA. 1+80± LT. (PVT. DR. STA. 2+31.66 LT. - RETAINING WALL #2)
STA. 305+80± LT. TO STA. 306+40± LT. (S.R. 320 - RETAINING WALL #3)
STA. 324+36± LT. TO STA. 327+55± LT. (S.R. 320 - RETAINING WALL #5)
STA. 328+70.5± LT. TO STA. 333+54.5± LT. (S.R. 320 - RETAINING WALL #6)
STA. 0+59± RT. TO 3+00± RT. (HAMLET DRIVE - RETAINING WALL #7)



NOTES:

1) 10' TRANSITION FROM 6" TO 0" AT THE ENDS OF CURB.

2) COORDINATE WITH DETAIL NO. 3 ON THIS SHEET FOR HEADER DETAILS.

DETAILS OF CURB TRANSITION

TO BE USED AT APPROACH END OF ALL CURB RETURNS AND AT ALL UNPROTECTED TRAILING ENDS OF CONCRETE CURB AND GUTTER. COST TO BE INCLUDED IN THE UNIT PRICE FOR CURB AND GUTTER, ITEM NO. 702-03.

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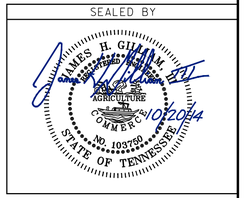

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DETAIL SHEET

NOT TO SCALE

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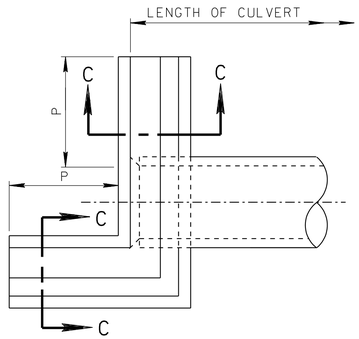
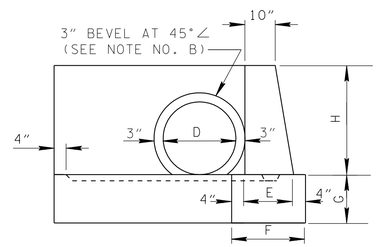
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	SPP-320(4)	2S1



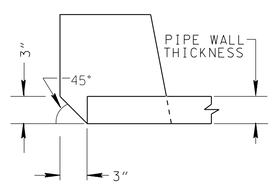
PLAN



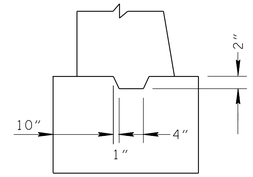
FRONT ELEVATION

" L " TYPE CONCRETE ENDWALL

TABLE OF DIMENSIONS						
DIMENSIONS						
OPENING		WALL			FOOTING	
D	AREA	P	H	E	F	G
1'-6"	1.77	2'-3"	2'-6"	1'-3"	1'-11"	1'-3"
2'-0"	3.14	3'-0"	3'-0"	1'-4"	2'-0"	1'-4"
2'-6"	4.91	3'-9"	3'-6"	1'-6"	2'-2"	1'-6"



DETAIL OF BEVEL



SECTION C- C
SHOWING CONSTRUCTION JOINT

ESTIMATED QUANTITIES FOR ONE "L" TYPE CONCRETE ENDWALL
CONCRETE (CUBIC YARDS)
1.28
1.91
2.90

NOTE:

ENDWALL WILL BE USED FOR PRIVATE DRIVEWAY ON EVERETT DRIVE #2 AT STA. 2+50.00 RT.

GENERAL NOTES

(A) CONCRETE ENDWALL SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARD SPECIFICATION, SECTION 611. AND/OR SPECIAL PROVISIONS.

(B) "L "TYPE CONCRETE ENDWALLS ON INLET END OF PIPE, AND AT 90° SKEW SHALL BE BEVELED AT 3" AT 45° ANGLE. BEVEL WILL NOT BE REQUIRED WHEN ENDWALL IS CONSTRUCTED ON THE "BELLED "END OF CONCRETE PIPE.

(C) PAYMENT FOR ENDWALLS WILL BE MADE FOLLOWS:

ITEM 611-07.01, CLASS "A" CONCRETE (PIPE ENDWALLS)----CUBIC YARD.

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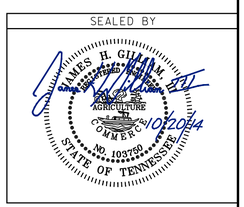

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SPECIAL DETAIL
HISTORIC "L "TYPE
CONCRETE ENDWALL

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO. TYPE YEAR	SHEET NO.
CONST.	2014	STP-320(4)	2S2

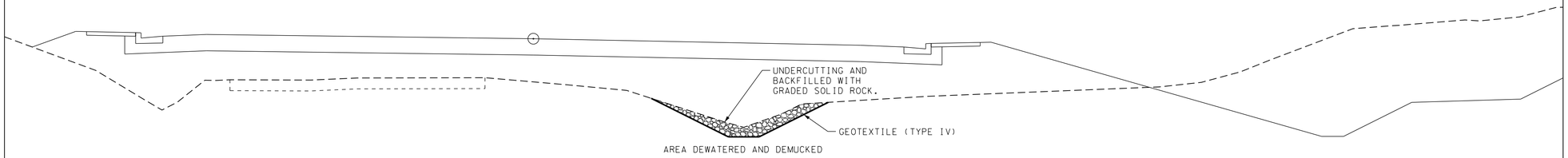
ESTIMATED QUANTITIES FOR GEOTECHNICAL REMEDIATION

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
	203-05	UNDERCUTTING	C.Y.	5,056
*	203-02.01	BORROW EXCAVATION (GRADED SOLID ROCK)	TON	11,558
*	303-10.01	MATERIAL AGGREGATE (SIZE 57)	TON	169
*	740-10.04	GEOTEXTILE (TYPE IV)(STABILIZATION)	S.Y.	9,901

* INCLUDE FOR SINKHOLE: ITEM 203-02.01= 95 C.Y, ITEM 303-10.01= 169 TON, ITEM 740-10.04= 204 S.Y.

NOTES

1. ONCE AREA IS CLEARED OF SOFT SOILS BY UNDERCUTTING, TYPE IV GEOTEXTILE FABRIC SHOULD THEN BE PLACED. THE AREA CAN THEN BE BACKFILLED WITH PROPERLY CONSOLIDATED SOLID ROCK.
2. WHERE REMEDIATION OCCURS IN AREAS OF CROSS DRAINS, CONTRACTOR SHALL USE FOUNDATION FILL IN LIEU OF GRADED SOLID ROCK.
3. DIMENSIONS OF GEOTEXTILE AND GRADED SOLID ROCK WILL VARY BASED ON SPECIFIC LOCATION.



TYPICAL SECTION FOR GEOTECHNICAL REMEDIATION.

(AREAS INCLUDE ALL STREAMS, SINKHOLE AS SHOWN ON PLANS)

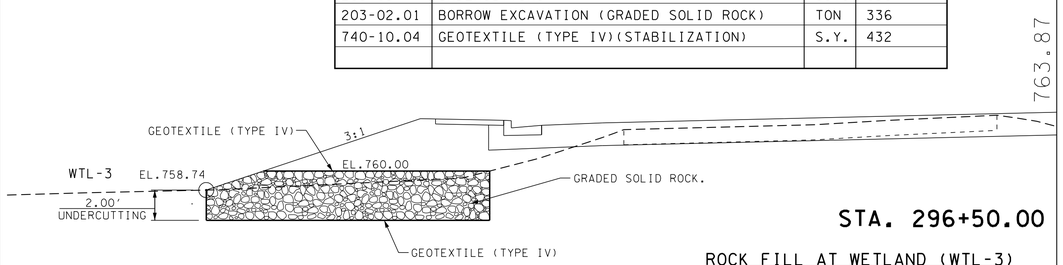
STREAMS: STR-2A, STR-3, STR-5.

WWC'S: WWC-3, WWC-4, WWC-5, WWC-7, WWC-9, WWC-10, WWC-11, WWC-12, WWC-13, WWC-16, WWC-17, WWC-19.

SINKHOLE: SNK-1 (SEE SHEET 22 FOR TREATMEN DETAIL)

ESTIMATED QUANTITIES AT WETLAND (WTL-3)

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
203-05	UNDERCUTTING	C.Y.	156
203-02.01	BORROW EXCAVATION (GRADED SOLID ROCK)	TON	336
740-10.04	GEOTEXTILE (TYPE IV)(STABILIZATION)	S.Y.	432



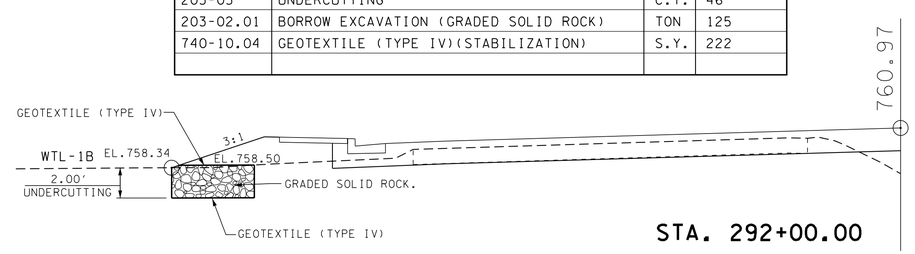
STA. 296+50.00

ROCK FILL AT WETLAND (WTL-3)

LEFT STA. 295+90 TO 297+10

ESTIMATED QUANTITIES AT WETLAND (WTL-1B)

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
203-05	UNDERCUTTING	C.Y.	46
203-02.01	BORROW EXCAVATION (GRADED SOLID ROCK)	TON	125
740-10.04	GEOTEXTILE (TYPE IV)(STABILIZATION)	S.Y.	222



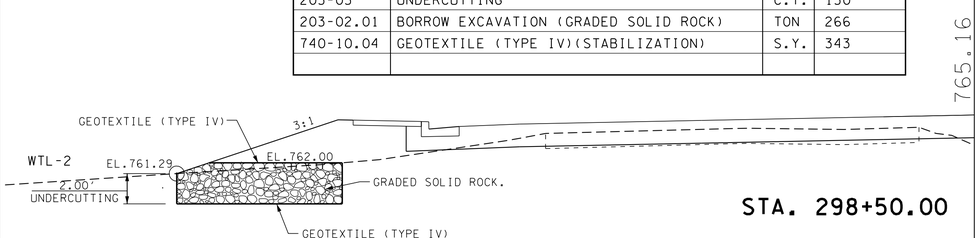
STA. 292+00.00

ROCK FILL AT WETLAND (WTL-1B)

LEFT STA. 291+49 TO 292+63

ESTIMATED QUANTITIES AT WETLAND (WTL-2)

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
203-05	UNDERCUTTING	C.Y.	130
203-02.01	BORROW EXCAVATION (GRADED SOLID ROCK)	TON	266
740-10.04	GEOTEXTILE (TYPE IV)(STABILIZATION)	S.Y.	343



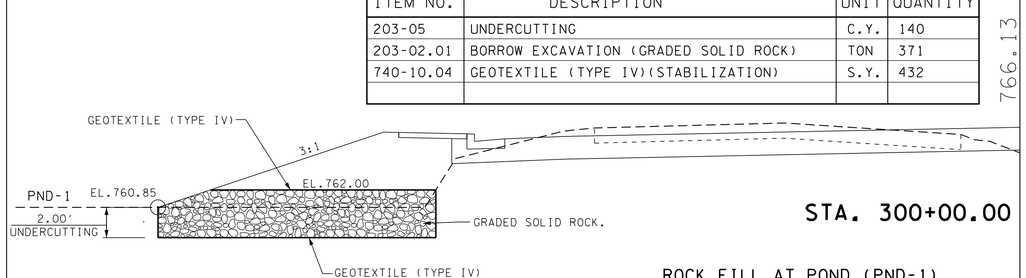
STA. 298+50.00

ROCK FILL AT WETLAND (WTL-2)

LEFT STA. 298+00 TO 299+13

ESTIMATED QUANTITIES AT POND (PND-1)

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
203-05	UNDERCUTTING	C.Y.	140
203-02.01	BORROW EXCAVATION (GRADED SOLID ROCK)	TON	371
740-10.04	GEOTEXTILE (TYPE IV)(STABILIZATION)	S.Y.	432



STA. 300+00.00

ROCK FILL AT POND (PND-1)

LEFT STA. 299+65 TO 300+59

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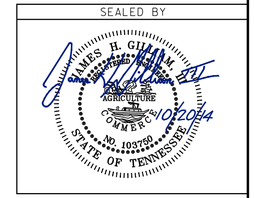

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GEOTECHNICAL REMEDIATION & ROCK FILL DETAILS

S.R. 320

NOT TO SCALE

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2000	STP-320(4)	2D
CONST.	2014	STP-320(4)	2T

REV.05-19-2010: ADDED SHEET.

STANDARD STREAM MITIGATION (IF REQUIRED)

APPLY THESE MEASURES TO ALL APPLICABLE STREAMS LISTED IN FORM J. DUPLICATE THE LENGTH, BOTTOM CHANNEL WIDTH, ELEVATIONS, SIDE SLOPES, MEANDER WAVELENGTH, AND CURVATURE OF THE EXISTING CHANNELS TO THE EXTENT POSSIBLE. EACH CHANNEL SHOULD TRANSITION SMOOTHLY FROM ITS BEGINNING ELEVATION TO ITS TIE-IN ELEVATION IN THE RECEIVING STREAM, WITHOUT PROFILE DROPS OR JUMPS. LOCATE THE NEW CHANNELS IN AS FLAT AN AREA AS POSSIBLE TO AVOID UNUSUALLY HIGH SIDE SLOPES; THIS MAY REQUIRE SOME ADDITIONAL RIGHT-OF-WAY. CHANNEL LENGTH PLACED IN SPRING-BOXES OR CULVERTS COUNTS AS PART OF THE NEW CHANNEL LENGTH (BUT MAY REQUIRE OFF-SITE COMPENSATORY MITIGATION THAT WOULD NOT BE REQUIRED FOR AN OPEN CHANNEL). CHANNEL SIDE SLOPES SHOULD MIMIC EXISTING CHANNEL SIDE SLOPES, UNLESS OTHERWISE INDICATED, AND BE STABILIZED USING APPROPRIATE BMPS - THE USE OF RIP-RAP SHOULD BE AVOIDED IF POSSIBLE. IF RIP-RAP IS REQUIRED, THE RIP-RAP SHOULD BE EMBEDDED BELOW THE SOIL SUCH THAT (1) THE TOP OF THE RIP-RAP AND SOIL IS FLUSH WITH BOTTOM AND SIDES OF THE CHANNEL, (2) THE VOIDS ARE FILLED WITH MATERIAL SIMILAR TO THE ORIGINAL CHANNEL BOTTOM, AND (3) WATER WILL FLOW ON TOP OF THE EMBEDDED RIP-RAP AND SOIL MATERIAL IS TO ENABLE THE WATER TO BE VISIBLE.

PLANT TWO ALTERNATING ROWS OF TREE OR SHRUB SPECIES ON BOTH SIDES OF THE NEW CHANNELS; THE FIRST ROW SHALL BE BARE ROOT SEEDLINGS THAT ARE PLANTED ON THE CHANNEL SLOPE, CENTERED ON THE MIDPOINT OF THE SLOPE. ALONG TOP OF BANK, TWO TO FIVE FOOT (2-5 FT) CONTAINER TREES ARE TO BE PLANTED WITHIN ONE FOOT OF THE TOP OF BANK. IF NEEDED, BLACK WILLOW (SALIX NIGRA) WILL BE INSTALLED ALONG THE EDGE OF WATER IN THE NEW CHANNEL. THE STAKES WILL BE FRESH MATERIAL CUT IN APPROXIMATELY ONE (1) FOOT LENGTHS. THE STAKES WILL BE INSTALLED ON APPROXIMATELY FIVE (5) FOOT CENTERS AT THE EDGE OF WATER IN THE NEW CHANNEL. THE STAKES ARE TO BE DRIVEN IN SUCH THAT APPROXIMATELY SIX (6) INCHES OF THE STAKE ARE LEFT ABOVE GROUND. THE BARE ROOT SEEDLINGS WILL BE THE SAME SPECIES AS THE TREES, UNLESS OTHERWISE INDICATED.

RIP-RAP, IF REQUIRED, SHOULD BE LIMITED TO ENDS OF CULVERTS. ALL RELOCATED CHANNELS AND THEIR ACCOMPANYING MITIGATION FEATURES, INCLUDING TREES, ARE TO BE PLACED IN RIGHT-OF-WAY RATHER THAN EASEMENTS; THIS MAY REQUIRE ACQUISITION OF ADDITIONAL RIGHT-OF-WAY. USE THE FOLLOWING SPECIFICATIONS FOR PLANTED SPECIES.

STANDARD ON-SITE MITIGATION FOR TEMPORARY WETLAND IMPACT AREAS (IF REQUIRED)

APPLY THESE MEASURES TO ALL APPLICABLE TEMPORARY WETLAND IMPACT AREAS LISTED IN FORM J. FOR TEMPORARY WETLAND IMPACT AREAS, REMOVE THE TOP 12" OF TOPSOIL AND STOCKPILE IT UNTIL CONSTRUCTION IS COMPLETE. ONCE CONSTRUCTION ACTIVITIES ARE COMPLETE, RESTORE ALL TEMPORARY WETLAND IMPACT AREAS TO PRE-CONSTRUCTION CONDITIONS. THIS INCLUDES REMOVING HAUL ROADS (IF APPLICABLE), RESTORING THE SITE TO THE ORIGINAL (PRE-CONSTRUCTION) ELEVATION AND SPREADING STOCKPILED TOPSOIL BACK OVER THE WETLAND SITE. THE AREA OF TEMPORARY IMPACTS WILL THEN BE SEEDED, COVERED WITH STRAW, AND PLANTED WITH TREE SEEDLINGS TO STABILIZE THE SITE. SEEDLINGS WILL BE PLANTED ON 10-FOOT CENTERS.

TOPSOIL IS TO BE REMOVED FROM ALL AREAS OF TEMPORARY WETLAND IMPACTS AND STOCKPILED PRIOR TO CONSTRUCTION.

UPON COMPLETION OF CONSTRUCTION ACTIVITIES, TEMPORARY HAUL ROADS ARE TO BE REMOVED. EXCAVATED MATERIAL FROM THE HAUL ROADS IS TO BE DISPOSED OF AS DIRECTED BY THE ENGINEER.

UPON COMPLETION OF CONSTRUCTION ACTIVITIES, ALL TEMPORARY WETLAND IMPACT AREAS ARE TO BE RESTORED TO PRE-CONSTRUCTION CONTOURS AND THE STOCKPILED WETLAND TOPSOIL SPREAD TO RESTORE THESE AREAS TO PRE- CONSTRUCTION ELEVATION.

CHANNEL RELOCATION SEQUENCE AND IMPLEMENTATION NOTES FOR RELOCATED STREAM CHANNELS (IGNORE REFERENCES TO ITEMS NOT SPECIFIED).

1. THE NEW CHANNEL SHALL BE EXCAVATED AND STABILIZED DURING A LOW-WATER PERIOD. RIP-RAP (ONLY AS SHOWN ON PLANS), SEEDING, AND SOD SHALL BE INSTALLED IMMEDIATELY FOLLOWING CHANNEL COMPLETION. TREES SHALL BE INSTALLED IN THE FIRST PLANTING SEASON FOLLOWING CHANNEL EXCAVATION. WATER SHALL BE DIVERTED INTO THE NEW CHANNEL ONLY AFTER IT IS COMPLETELY STABILIZED, AND ONLY DURING A LOW WATER PERIOD. STABILIZED MEANS THAT ALL SPECIFIED ROCK AND EROSION CONTROL BLANKET OR FLEXIBLE CHANNEL LINER IS IN PLACE, AND SEEDING AND SOD ARE IN PLACE AND ESTABLISHED.

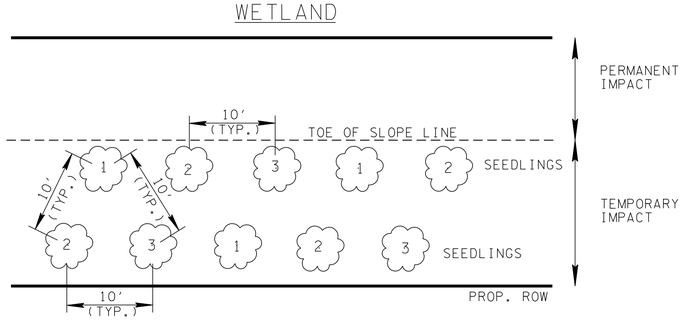
2. CHANNEL RELOCATION SEQUENCE

   A. FLAG EDGE OF THE NEW CHANNEL TOP BANK PRIOR TO CLEARING. DO NOT CLEAR LARGE TREES IN POSITION TO SHADE THE NEW CHANNEL. LEAVE AS MANY TREES AND SHRUBS AS POSSIBLE BETWEEN TOE OF THE NEW HIGHWAY SLOPE AND THE STREAM.
   B. EXCAVATE THE NEW CHANNEL "IN THE DRY" BY LEAVING AREAS OF UNDISTURBED EARTH (DIVERSION BERMS) IN PLACE AT BOTH ENDS.
   C. SHAPE CHANNEL TO SPECIFICATIONS SHOWN. REMOVE LOOSE SOILS AND DEBRIS.
   D. PLACE TOPSOIL, EROSION CONTROL BLANKET OR FLEXIBLE CHANNEL LINER, SEED, AND SOD AS SPECIFIED.
   E. REMOVE DIVERSION BERMS, BEGINNING WITH THE MOST DOWNSTREAM, BANKS AND BOTTOM ELEVATION OF THE OLD CHANNEL SHOULD TRANSITION SMOOTHLY INTO THE NEW CHANNEL. THE ELEVATIONS OF THE NEW CHANNEL BOTTOM AT EACH END OF THE RELOCATION SEQUENCE SHOULD MATCH THE ELEVATIONS OF THE EXISTING CHANNEL, AND A STEADY PERCENT SLOPE SHOULD BE MAINTAINED THROUGHOUT THE RELOCATED CHANNEL CENTERLINE OR AS SPECIFIED.
   F. INSTALL TREES ACCORDING TO STANDARD SPECIFICATIONS SECTION 802.

3. ONLY RIP-RAP SHOWN ON PLANS SHOULD BE USED IN THE RELOCATED CHANNEL REACH. ANY OTHER PROPOSED RIP-RAP SHOULD BE COORDINATED WITH THE ENVIRONMENTAL DIVISION THROUGH THE T.D.O.T. HEADQUARTERS CONSTRUCTION OFFICE.

4. REQUESTS BY ANY AGENCY THAT WOULD REQUIRE THE MODIFICATION OF CHANNELS, DITCHES, ELEVATIONS, RIP-RAP OR ANY OTHER STREAM MITIGATION ITEMS ASSOCIATED WITH THE CHANNEL RELOCATIONS SHALL BE REFERRED TO THE T.D.O.T. ENVIRONMENTAL DIVISION VIA THE HEADQUARTERS CONSTRUCTION OFFICE FOR COORDINATION WITH ALL INVOLVED AGENCIES AND T.D.O.T. DIVISIONS.

WETLAND



SEE TABULATED QUANTITIES FOR ITEMS, DESCRIPTIONS, AND LOCATIONS.

DETAIL "B"

TREES

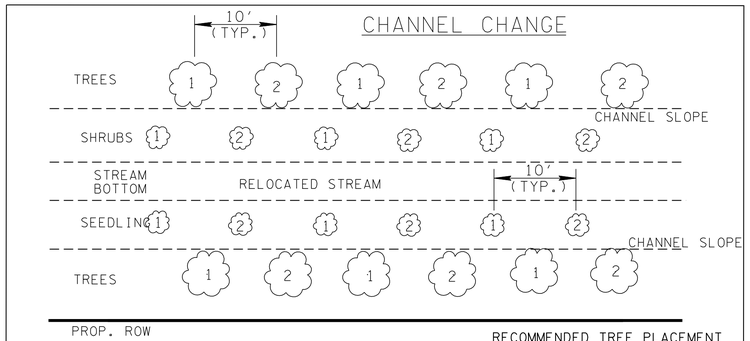
NO SUBSTITUTIONS OF TREE SPECIES OR SIZES SHALL BE ALLOWED WITHOUT THE WRITTEN APPROVAL OF T.D.O.T. ENVIRONMENTAL DIVISION. CONCERNING STREAM MITIGATION, TREES SHALL BE OF THE VARIETY REQUESTED, BETWEEN 2 AND 5 FEET IN HEIGHT, CONTAINERIZED, AND FIRST QUALITY. CONCERNING TEMPORARY WETLAND MITIGATION, TREES SHALL BE OF THE VARIETY REQUESTED, WELL BRANCHED, BARE ROOTS (ROOTS MUST BE KEPT MOIST AT ALL TIMES), AND FIRST QUALITY. NO CLONES OR CULTIVARS WILL BE ACCEPTED. ANY FOUND TO BE INCORRECT SPECIES OR IMPROPERLY PLANTED AT ANY TIME PRIOR TO TERMINATION OF THE CONTRACT SHALL BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE. STAKES AND WIRES SHALL BE REMOVED IMMEDIATELY PRIOR TO CONTRACT TERMINATION, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHOULD ARRANGE SEVERAL MONTHS AHEAD OF TIME TO OBTAIN THE CORRECT TREE SPECIES, AS SOME MAY REQUIRE SOME TIME TO LOCATE.

ALL TREES PLANTED SHALL BE WRAPPED AS PER SECTION 802-07 OF T.D.O.T. STANDARD SPECIFICATIONS FOR THE ROAD AND BRIDGE CONSTRUCTION.

TREES SHALL BE WATERED AS REQUIRED THROUGH THE PERIOD OF ESTABLISHMENT TO ENSURE SURVIVAL.

CHANNEL CHANGE

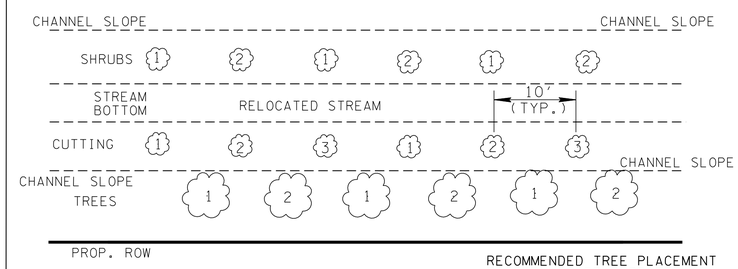


DETAIL A

RECOMMENDED TREE PLACEMENT PATTERN TO BE REPEATED AS NECESSARY

SEE TABULATED QUANTITIES FOR ITEMS, DESCRIPTIONS AND LOCATIONS.

CHANNEL CHANGE



DETAIL A1

RECOMMENDED TREE PLACEMENT PATTERN TO BE REPEATED AS NECESSARY

SEE TABULATED QUANTITIES FOR ITEMS, DESCRIPTIONS AND LOCATIONS.

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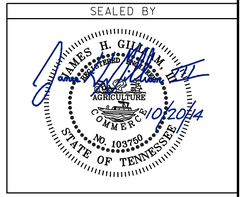

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CHANNEL CHANGE, TREES & WETLAND NOTES

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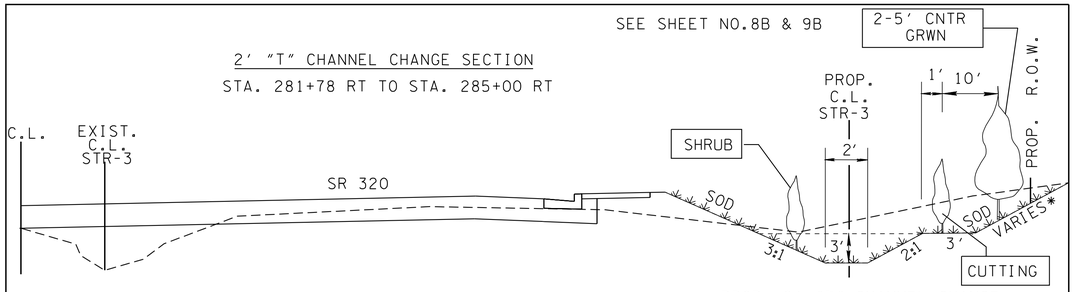
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2000	STP-320(4)	2E
CONST.	2014	STP-320(4)	2U



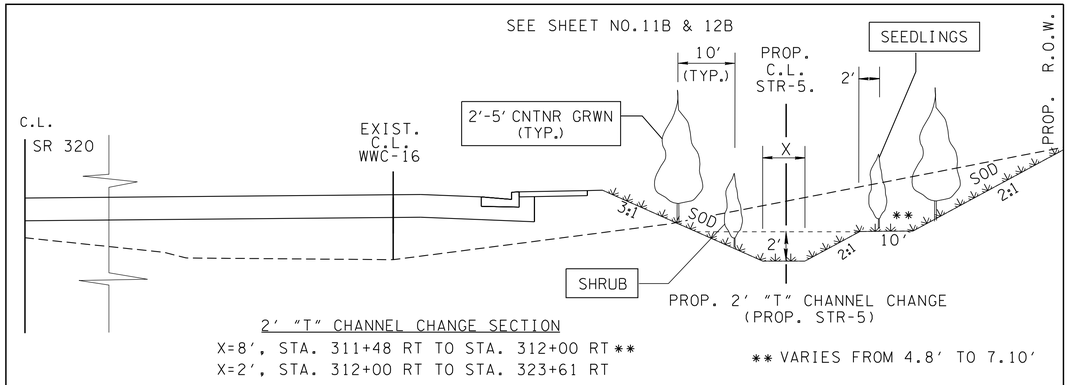
USE DETAIL "A1" FOR TREE PLACEMENT FROM SHEET 2T

ESTIMATED TREE QUANTITIES FOR STREAM MITIGATION STR-3

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
802-02.31	CUTTINGS; SALIX SERICEA (SILKY WILLOW, 18IN-24IN)	10	EACH
802-02.32	CUTTINGS: CORNUS AMOMUM (SILKY DOGWOOD, 18IN-24IN)	9	EACH
802-02.33	CUTTINGS: SAMBUCUS CANADENSIS (ELDERBERRY, 18 IN-24 IN)	9	EACH
802-11.11	TREES: CERCIS CANADENSIS (REDBUD 2-5 FT CNTNR GRWN)	13	EACH
802-11.12	TREES: CORNUS FLORIDA (FLOWERING DOGWOOD 2-5 FT CNTNR GRWN)	13	EACH
802-13.06	SHRUBS: HYDRANGEA QUERCIFOLIA (OAKLF HYDRANGEA 2-5 FT CNTNR GRWN)	13	EACH
802-13.13	SHRUBS: VACCINIUM STAMINEUM (DEERBERRY 2-5 FT CNTNR GRWN)	13	EACH

CNTNR GRWN = CONTAINER GROWN

NOTE:
* SEE CROSS SECTIONS

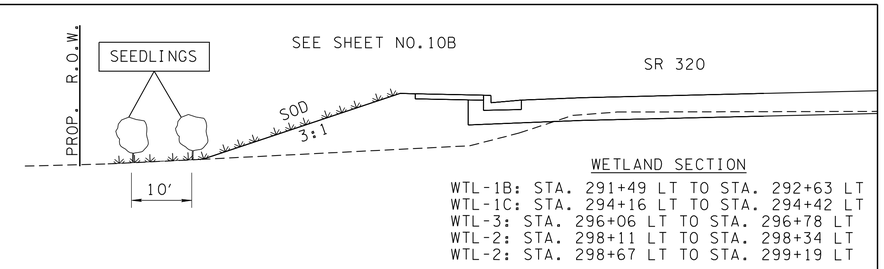


USE DETAIL "A" FOR TREE PLACEMENT FROM SHEET 2T

ESTIMATED TREE QUANTITIES FOR STREAM MITIGATION STR-5 RT.

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
802-11.02	TREES: ACER RUBRUM (RED MAPLE 2-5 FT CNTNR GRWN)	101	EACH
802-11.03	TREES: ACER SACCHARUM (SUGAR MAPLE 2-5 FT CNTNR GRWN)	101	EACH
802-12.11	SEEDLINGS: CERCIS CANADENSIS (RED BUD SEEDLING BR)	51	EACH
802-12.59	SEEDLINGS: PRUNUS AMERICANA (AMERICAN PLUM SEEDLING BR)	50	EACH
802-13.02	SHRUBS: CALYCANTHUS FLORIDUS (SWEETSHRUB 2-5 CNTNR GRWN)	51	EACH
802-13.13	SHRUBS: VACCINIUM STAMINEUM (DEERBERRY 2-5 FT CNTNR GRWN)	50	EACH

CNTNR GRWN = CONTAINER GROWN BR = BARE ROOT



USE DETAIL "B" FOR TREE PLACEMENT FROM SHEET 2T

ESTIMATED TREE QUANTITIES FOR WETLAND MITIGATION

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
802-02.01	SEEDLINGS (ACER RUBRUM; RED MAPLE, 18"- 24" HT, BR)	17	EACH
802-02.02	SEEDLINGS (SALIX NIGRA; BLACK WILLOW, 18"-24" HT, BR)	17	EACH
802-02.03	SEEDLINGS (PLANTUS OCCIDENTALIS; SYCAMORE, 18"-24" HT, BR)	16	EACH

HT = HEIGHT, BR= BARE ROOT

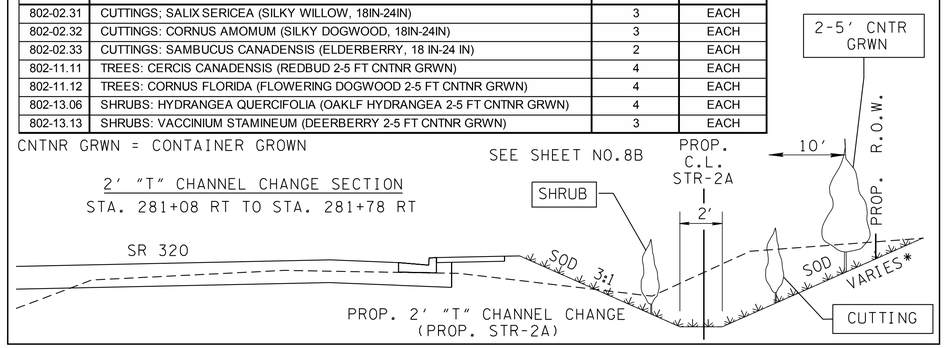
USE DETAIL "A1" FOR TREE PLACEMENT FROM SHEET 2T

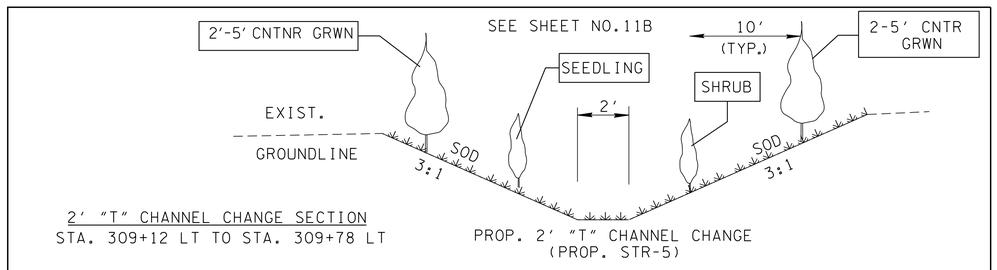
ESTIMATED TREE QUANTITIES FOR STREAM MITIGATION STR-2A

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
802-02.31	CUTTINGS; SALIX SERICEA (SILKY WILLOW, 18IN-24IN)	3	EACH
802-02.32	CUTTINGS: CORNUS AMOMUM (SILKY DOGWOOD, 18IN-24IN)	3	EACH
802-02.33	CUTTINGS: SAMBUCUS CANADENSIS (ELDERBERRY, 18 IN-24 IN)	2	EACH
802-11.11	TREES: CERCIS CANADENSIS (REDBUD 2-5 FT CNTNR GRWN)	4	EACH
802-11.12	TREES: CORNUS FLORIDA (FLOWERING DOGWOOD 2-5 FT CNTNR GRWN)	4	EACH
802-13.06	SHRUBS: HYDRANGEA QUERCIFOLIA (OAKLF HYDRANGEA 2-5 FT CNTNR GRWN)	4	EACH
802-13.13	SHRUBS: VACCINIUM STAMINEUM (DEERBERRY 2-5 FT CNTNR GRWN)	3	EACH

CNTNR GRWN = CONTAINER GROWN

NOTE:
* SEE CROSS SECTIONS





USE DETAIL "A" FOR TREE PLACEMENT FROM SHEET 2T

ESTIMATED TREE QUANTITIES FOR STREAM MITIGATION STR-5 LT.

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
802-11.02	TREES: ACER RUBRUM (RED MAPLE 2-5 FT CNTNR GRWN)	7	EACH
802-11.03	TREES: ACER SACCHARUM (SUGAR MAPLE 2-5 FT CNTNR GRWN)	5	EACH
802-12.11	SEEDLINGS: CERCIS CANADENSIS (RED BUD SEEDLING BR)	3	EACH
802-12.59	SEEDLINGS: PRUNUS AMERICANA (AMERICAN PLUM SEEDLING BR)	2	EACH
802-13.02	SHRUBS: CALYCANTHUS FLORIDUS (SWEETSHRUB 2-5 CNTNR GRWN)	4	EACH
802-13.13	SHRUBS: VACCINIUM STAMINEUM (DEERBERRY 2-5 FT CNTNR GRWN)	3	EACH

CNTNR GRWN = CONTAINER GROWN BR = BARE ROOT

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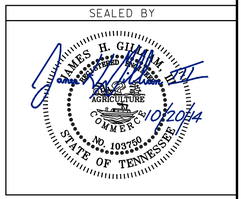

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CHANNEL CHANGE, WETLAND AND TREE QUANTITIES

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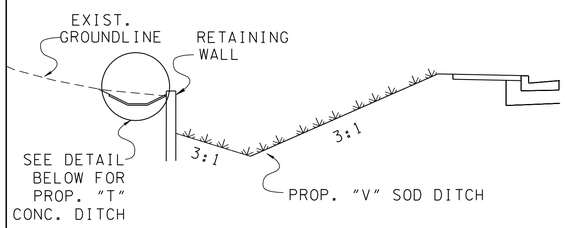
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	2V

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

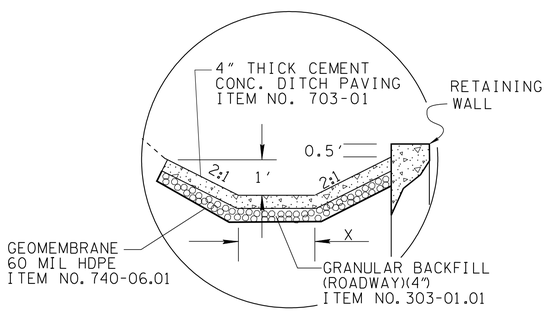
PROP. "T" CONCRETE DITCH



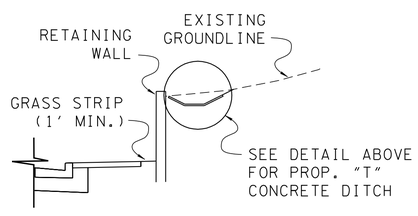
S.R. 320
2' "T" CONCRETE DITCH
X=2', STA. 328+80.28 LT TO STA. 333+54.49 LT

S.R. 320
"V" SOD DITCH
STA. 328+50.00 LT TO STA. 333+38.46 LT

DETAIL FOR PROP. "T" CONCRETE DITCH

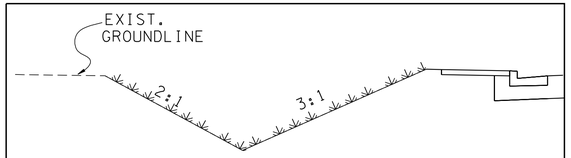


PROP. "T" CONCRETE DITCH



HAMLET RD.
X=3', STA. 0+87 RT TO STA. 2+50 RT
X=1', STA. 2+50 RT TO STA. 3+00 RT

S.R. 320
X=1', STA. 324+50 LT TO STA. 327+00 LT

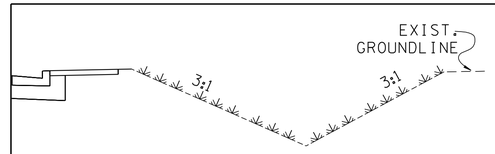


PROP. "V" SOD DITCH

S.R. 320
STA. 286+00 LT TO STA. 287+36 LT
STA. 327+50 LT TO STA. 328+00 LT
STA. 334+59 LT TO STA. 336+64 LT

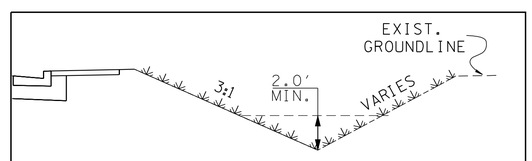
PROP. "V" SOD DITCH

S.R. 320
STA. 315+39.79 LT TO STA. 315+50.25 LT
STA. 318+19.17 LT TO STA. 320+18.00 LT
BANKS ROAD
STA. 1+57 RT TO STA. 1+80 RT



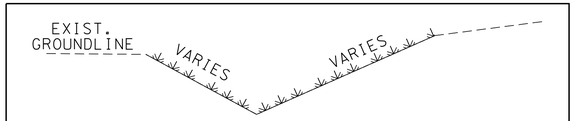
PROP. "V" SOD DITCH

S.R. 320
STA. 298+00 RT TO STA. 300+40 RT
STA. 300+70 RT TO STA. 301+00 RT
STA. 302+50 RT TO STA. 308+50 RT
FULLER ROAD
STA. 0+72 LT TO STA. 2+50 LT
STA. 1+43 RT TO STA. 2+50 RT



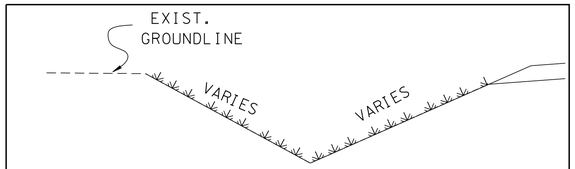
PROP. "V" SOD DITCH

S.R. 320
STA. 294+32.00 RT TO STA. 298+00.00 RT
STA. 327+28.00 RT TO STA. 333+69.69 RT



PROP. "V" SOD DITCH

S.R. 320
FROM OUTLET OF CULVERT @ STA. 287+36 LT TO STR-4
FROM OUTLET OF CULVERT @ STA. 294+08 LT TO STR-4



PROP. "V" SOD DITCH

FULLER ROAD
STA. 2+50 LT TO STA. 2+82 LT
STA. 2+50 RT TO STA. 2+83 RT

FOR DETAILS NOT SHOWN SEE STD DWG NO. RD01-S-11A

"T" DITCH = TRAPEZOID DITCH

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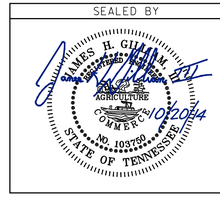

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SPECIAL DITCH DETAIL

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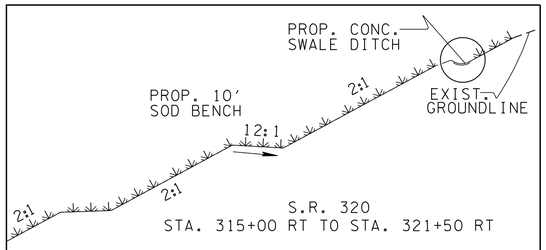
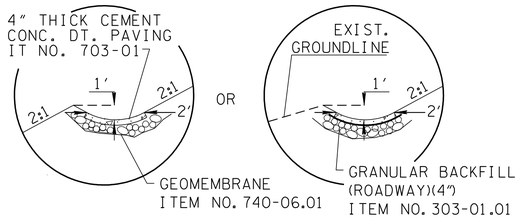
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

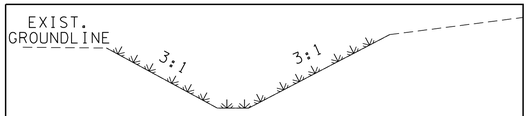
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	2V1



S.R. 320
STA. 315+00 RT TO STA. 321+50 RT

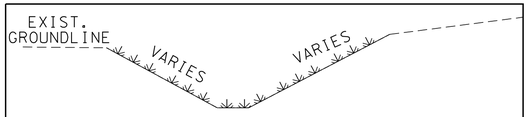
CONCRETE LINED SWALE TO BE CONSTRUCTED 4' TO 6' BEYOND TOP OF CUT.





PROP. 2' "T" SOD DITCH

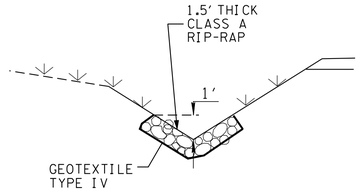
S.R. 320
STA. 285+00.00 RT TO STA. 293+30.00 RT
STA. 309+12.07 LT TO STA. 309+78.11 LT
STA. 316+50.00 LT TO STA. 316+84.00 LT
STA. 317+67.13 LT TO STA. 318+19.17 LT



PROP. 2' "T" GEOGRID REINFORCEMENT SOD DITCH

S.R. 320
STA. 324+48 RT TO STA. 327+11 RT

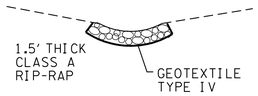
PROP. "V" RIP-RAP DITCH



S.R. 320
STA. 301+00.00 RT TO STA. 301+40.40 RT
STA. 322+56.44 LT TO STA. 322+79.64 LT
STA. 322+79.15 LT TO STA. 322+83.00 LT
STA. 330+80.00 RT TO STA. 330+84.00 RT
SPRINGVIEW DRIVE
STA. 0+79 RT TO STA. 1+60 RT

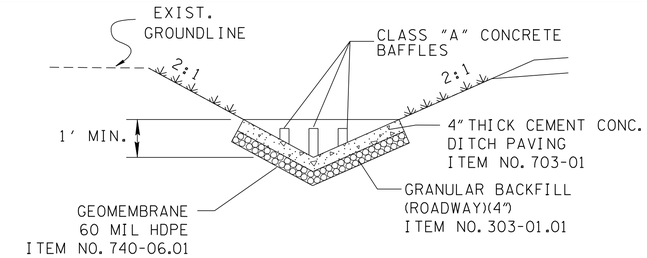
NOTE:
SEE SPECIAL DITCH TABULATION (SHT. 2R1) FOR "V" RIP-RAP DITCH SLOPES.

PROP. 4' WIDE RIP-RAP SWELL



S.R. 320
STA. 318+85.00 RT TO STA. 318+88.00 RT
STA. 321+37.59 RT TO STA. 321+50.87 RT
BELL AIR ROAD
STA. 0+97 RT TO STA. 2+55 RT

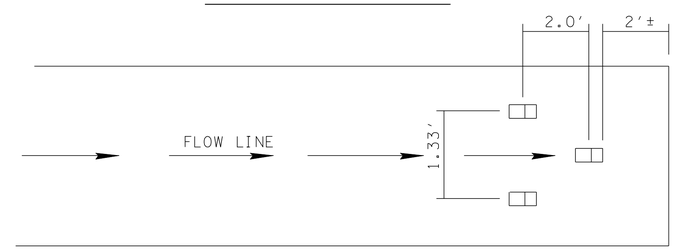
FOR DETAILS NOT SHOWN SEE STD DWG NO. RD01-S-11A



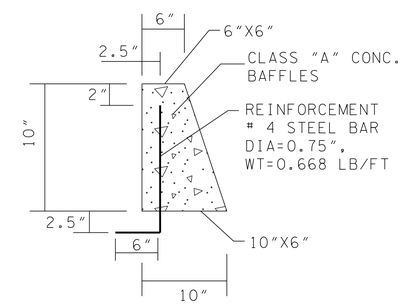
PROP. "V" CONCRETE DITCH

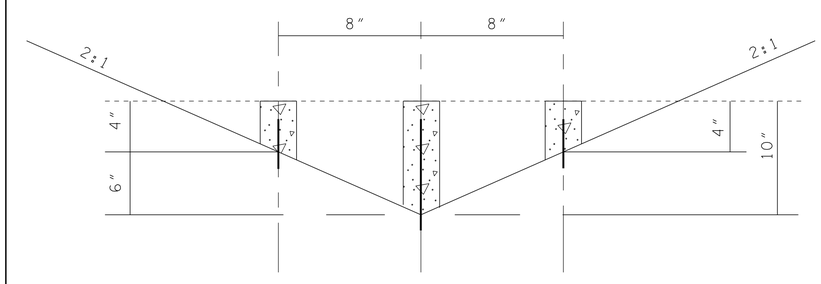
PRIVATE DRIVES
STA. 0+61 LT TO STA. 1+60 LT (287+77.57 S.R.320)
STA. 0+79 RT TO STA. 1+60 RT (287+77.57 S.R.320)
STA. 0+54 LT TO STA. 1+74 LT (300+51.03 S.R.320)
STA. 0+54 RT TO STA. 1+74 RT (300+51.03 S.R.320)
STA. 0+51 LT TO STA. 1+70 LT (335+68.69 S.R.320)
STA. 0+51 RT TO STA. 1+70 RT (335+68.69 S.R.320)
STA. 0+14 LT TO STA. 1+14 LT (2+50 EVERETT # 2)
STA. 0+24 RT TO STA. 1+23 RT (2+50 EVERETT # 2)
STA. 0+18 LT TO STA. 1+20 LT (3+87.18 BELL AIR)
STA. 0+18 RT TO STA. 1+00 RT (3+87.18 BELL AIR)

CONCRETE BAFFLE DETAILS



ENERGY DISSIPATOR FOR END OF CONCRETE DITCH AT LOCATIONS SHOWN ABOVE.





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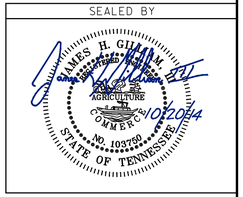

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SPECIAL DITCH DETAIL

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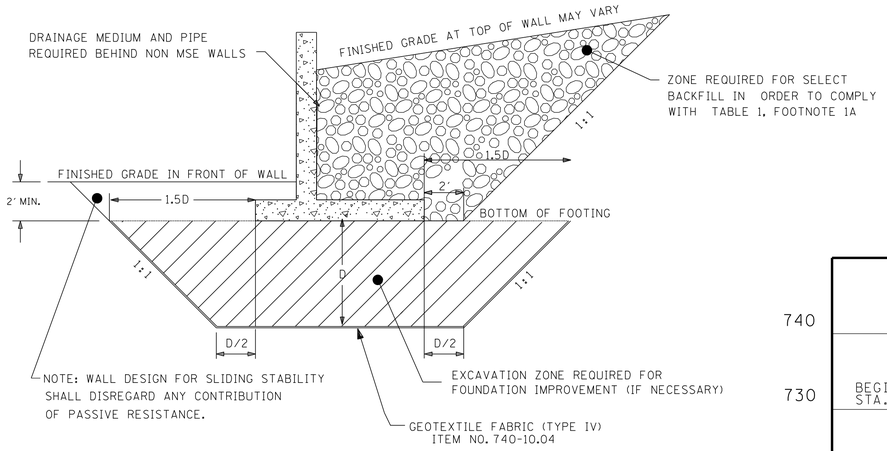
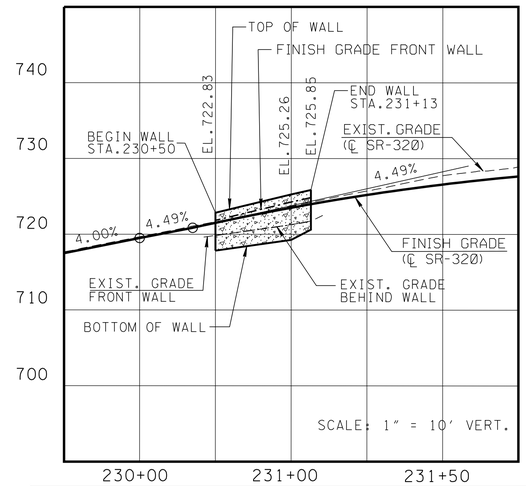
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

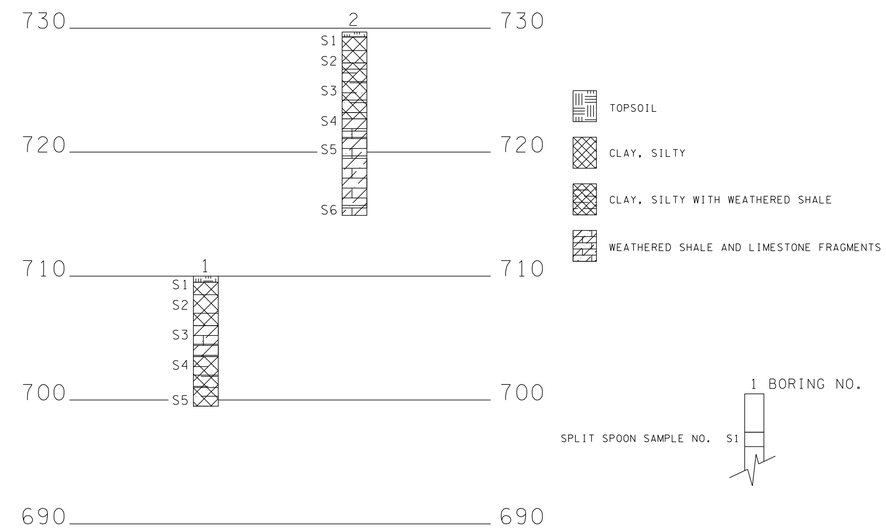
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	2W

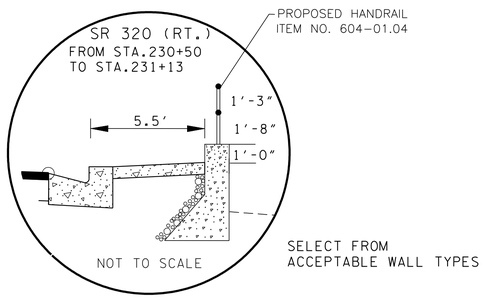


GROUND AND ROCK ELEVATIONS

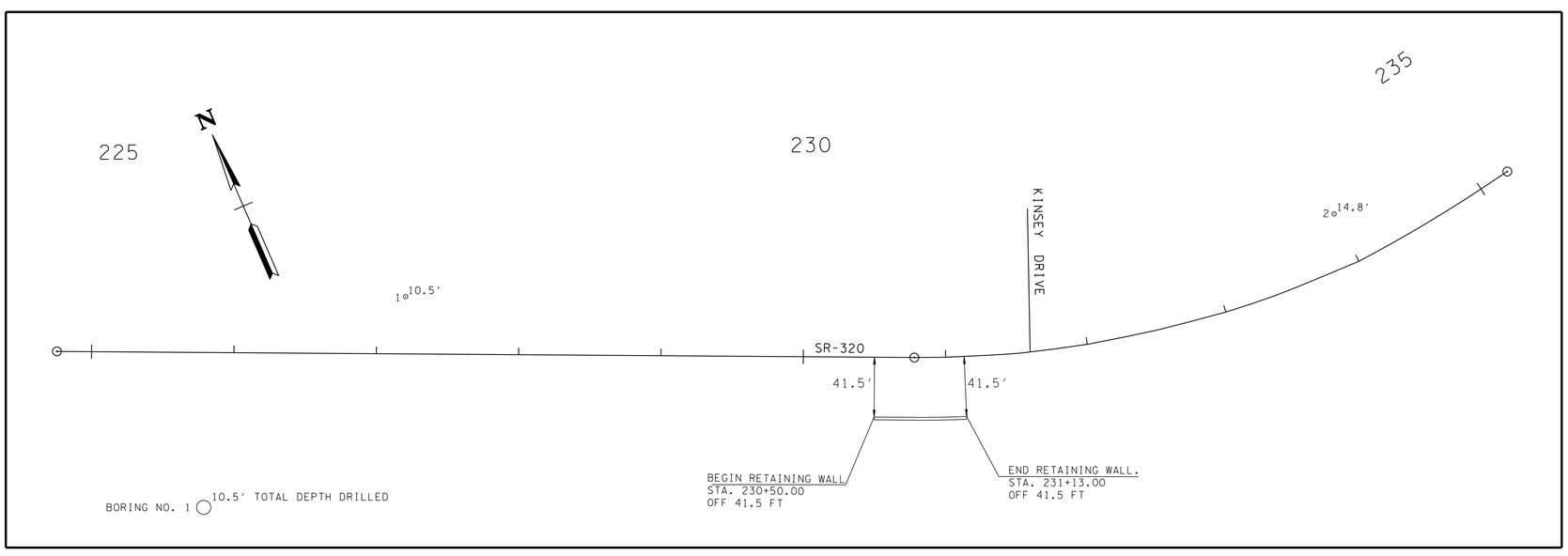
BORING NO.	STATION	CENTERLINE REF.	DEPTH	GROUND ELEVATION	ROCK ELEVATION
1	227+20	40.0' LT.	10.5'	710.0	-----
2	234+00	37.5' LT.	14.8'	729.7	-----







348 SF=TOTAL WALL AREA
63 LF=HANDRAIL LENGTH



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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RETAINING WALL NO. 1
CONCEPTUAL DRAWING

STATE ROUTE 320
STATION 230+50 TO 231+13
HAMILTON COUNTY

SCALE: 1"= 50' HORIZ.

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RETAINING WALL DESIGN NOTES

UNLESS SPECIFICALLY STATED OTHERWISE IN THE CONTRACT PLANS, THE BIDDING FOR, THE DESIGN OF AND THE CONSTRUCTION OF RETAINING WALLS SHOWN IN THE PLANS SHALL BE GOVERNED BY THE TENNESSEE DEPARTMENT OF TRANSPORTATION SPECIAL PROVISION 624 REGARDING RETAINING WALLS. THIS SPECIAL PROVISION SHALL BE CONSIDERED AS ONE OF THOSE DOCUMENTS WHICH THE BIDDER/CONTRACTOR HAS EXAMINED AND MADE HIMSELF FAMILIAR WITH AS DESCRIBED IN SECTION 102.04 – EXAMINATION OF THE SITE, THE WORK, THE PLANS, AND THE SPECIFICATIONS IN THE TDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

EXCAVATION FOR THE WALL AND/OR ITS FOOTING SHALL NOT BE ACCOMPLISHED UNTIL THE CONTRACTOR HAS SUBMITTED WALL DESIGNS AND CALCULATIONS AND HAS BEEN ISSUED AN APPROVED SET OF WALL PLANS AND HAS LABOR AND MATERIAL RESOURCES AVAILABLE TO BEGIN AND CONTINUE WALL CONSTRUCTION IMMEDIATELY AFTER EXCAVATION.

THIS WALL SHALL BE DESIGNED IN ACCORDANCE WITH LRFD DESIGN PROCEDURES AND REQUIREMENTS AS DESCRIBED IN 1) AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 2012 AND INTERIMS AND 2) PUBLICATION FHWA-NHI-10-024/FHWA GEC 011, DESIGN AND CONSTRUCTION OF MECHANICALLY STABILIZED EARTH WALLS AND REINFORCED SOIL SLOPES, NOVEMBER 2009 FOR MSE WALLS.

FOR PROPRIETARY WALL SYSTEMS THAT HAVE BEEN APPROVED AS SHOWN IN SPECIAL PROVISION 624, THE WALL DESIGNER SHALL BE RESPONSIBLE FOR PROVIDING WALL DESIGNS INCORPORATING MATERIALS AND COMPONENTS (I.E. REINFORCEMENT CONNECTION DEVICES, SPECIFIC MANUFACTURER AND PROPERTIES OF GEOGRID) AS WAS ORIGINALLY SUBMITTED AND APPROVED BY TDOT. IF A MATERIAL AND/OR COMPONENT OF THE WALL SYSTEM HAVE BEEN MODIFIED FROM THE ORIGINALLY APPROVED SYSTEM, A WALL DESIGN AND SET OF PLANS AND CALCULATIONS FOR THIS WALL SYSTEM CANNOT BE SUBMITTED FOR REVIEW AND APPROVAL UNTIL THE WALL SYSTEM DESIGNER WHO ORIGINALLY SUBMITTED THE WALL SYSTEM FOR APPROVAL BY TDOT SUBMITS A REQUEST FOR RE-APPROVAL UTILIZING THE MODIFIED ELEMENTS OF THE WALL. THIS SUBMITTAL DOES NOT GUARANTEE APPROVAL OF THE MODIFIED SYSTEM. IF THIS RE-APPROVAL PROCESS DOES NOT MEET THE CONTRACTOR'S SCHEDULE OR IF THE MODIFIED SYSTEM IS NOT APPROVED, THE CONTRACTOR/WALL DESIGNER SHALL PROVIDE A WALL DESIGN FOR ONE OF THE APPROVED SYSTEMS AT NO CHANGE IN CONTRACT PRICE FOR THE RETAINING WALL AND NO CHANGE IN PROJECT SCHEDULE REQUIREMENTS WILL BE ALLOWED.

THE WALL DESIGNER SHALL PROVIDE RETAINING WALL PLANS, DETAILS AND CALCULATIONS AS REQUIRED BY SPECIAL PROVISION 624 AND AS REQUIRED HEREIN.

- THE WALL DESIGNER SHALL UTILIZE THE GEOTECHNICAL PARAMETERS AND RESISTANCE FACTORS AS PROVIDED FOR EACH PROJECT RETAINING WALL ON THE WALL CONCEPT SHEET AND RELATED RETAINING WALL SHEETS TO PREPARE AND SUBMIT DESIGN CALCULATIONS. LOAD FACTORS AND OTHER PERTINENT DESIGN REQUIREMENTS PROVIDED IN AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 2012 AND INTERIMS SHALL BE USED FOR NON-MSE WALLS AND PUBLICATION FHWA-NHI-10-024/FHWA GEC 011, DESIGN AND CONSTRUCTION OF MECHANICALLY STABILIZED EARTH WALLS AND REINFORCED SOIL SLOPES, NOVEMBER 2009 FOR MSE WALLS.

- CALCULATIONS FOR BOTH INTERNAL AND EXTERNAL STABILITY (SLIDING, ECCENTRICITY, AND BEARING CAPACITY-GLOBAL STABILITY AND SETTLEMENT BEING THE EXCEPTIONS) SHALL BE PROVIDED FOR EACH CRITICAL WALL SECTION WHICH DEMONSTRATES THE REQUIRED CAPACITY TO DEMAND RATIO OF 1.0 IS MET UTILIZING THE DESIGN PARAMETERS PROVIDED. FOR MSE WALLS, THE WALL DESIGNER MUST ADJUST THE REINFORCEMENT LENGTHS BEYOND THOSE MINIMUM REQUIRED LENGTHS, IF REQUIRED, TO MEET BOTH INTERNAL AND EXTERNAL REQUIREMENTS. THE WALL DESIGNER/CONTRACTOR PLANS MUST INCLUDE ANY FOUNDATION IMPROVEMENTS AS REQUIRED HEREIN ON THE WALL DESIGNER/CONTRACTOR'S WALL ELEVATION VIEWS AND ANY CROSS-SECTIONAL DETAIL DRAWINGS.

- UNLESS OTHERWISE STATED, THE WALL DESIGNER CAN ASSUME THAT MINIMUM GLOBAL STABILITY AND SETTLEMENT CRITERIA IS ACHIEVED WITH A WALL DESIGN MEETING OTHER MINIMUM EXTERNAL STABILITY REQUIREMENTS AND ASSUMING WALL FOUNDATION CONDITIONS ARE MET. WHILE THE WALL DESIGNER'S DESIGN MUST DEMONSTRATE COMPLIANCE WITH EXTERNAL STABILITY REQUIREMENTS AS DISCUSSED ABOVE, THE WALL DESIGNER MAY PROVIDE CERTIFICATION (BY SIGNING AND STAMPING BY PROFESSIONAL ENGINEER REGISTERED IN STATE OF TENNESSEE) OF THE WALLS PLANS AND CALCULATIONS "FOR INTERNAL STABILITY ONLY".

- LOAD COMBINATIONS STRENGTH I, EXTREME EVENT I, AND EXTREME EVENT II AS GIVEN IN TABLE 4-1 OF PUBLICATION FHWA-NHI-10-024/FHWA GEC 011, DESIGN AND CONSTRUCTION OF MECHANICALLY STABILIZED EARTH WALLS AND REINFORCED SOIL SLOPES, NOVEMBER 2009 FOR MSE WALLS SHALL BE EVALUATED FOR MSE WALLS. LOAD COMBINATIONS FOR OTHER WALL TYPES SHALL BE AS GIVEN IN AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 2012 AND INTERIMS

NOTE REGARDING CONSTRUCTION SLOPES

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING THE EXCAVATION IN ACCORDANCE WITH OSHA AND OTHER APPLICABLE STATE AND LOCAL REGULATIONS REGARDING CONSTRUCTION SLOPES AND TRENCHES. IN ADDITION TO FOLLOWING APPLICABLE REGULATORY REQUIREMENTS, AS A MINIMUM REQUIREMENT, ALL TEMPORARY CONSTRUCTION SLOPES SHALL BE PLACED AT A MAXIMUM OF A 1:1 SLOPE IN SOIL AND SHALL NOT BE LEFT OPEN WITHOUT SHORING FOR ANY LONGER THAN ABSOLUTELY NECESSARY. THE CONTRACTOR BUILDING THE WALL SHALL ENSURE THAT THESE TEMPORARY BACK SLOPES ARE NOT AND DO NOT BECOME UNSTABLE. IF SLOPE IS UNSTABLE, BECOMES UNSTABLE, IS CUT STEEPER THAN A 1:1 SLOPE OR IS UNACCEPTABLE FOR ANOTHER REASON, THEN TEMPORARY SHORING SHALL BE USED. ANY UNUSUAL SOIL CONDITIONS OTHER THAN THOSE ASSUMED SHOULD BE REPORTED TO THE PROJECT ENGINEER.

ACCEPTABLE WALL TYPES

PRE-CAST GRAVITY WALL
CAST-IN-PLACE CONCRETE GRAVITY WALL
CAST-IN-PLACE CONCRETE CANTILEVER WALL

PROPRIETARY WALL SYSTEM SUPPLIERS/INSTALLERS SHALL BE THOSE LISTED AS PRE-APPROVED IN SPECIAL PROVISION 624.

WALL SHALL BE DESIGNED AND CONSTRUCTED WITH MATERIALS APPROPRIATE TO ACHIEVE SPECIFIED DESIGN LIFE.

THE COST OF THE FOLLOWING ITEMS TO BE INCLUDED IN THE UNIT PRICE BID FOR THIS WALL (604-07.0-):
1) ASHLAR STONE FINISH
2) APPLIED TEXTURE FINISH (MOUNTAIN GRAY, FED. SPEC. 36440) APPLIED TO ALL EXPOSED SURFACES
3) RETAINING WALL DRAINAGE, SEE STANDARD DRAWING STD-10-1
4) TEMPORARY SHORING AND CONSTRUCTION SLOPES

TABLE 1-DESIGN REQUIREMENTS AND PARAMETERS

DESCRIPTION		VALUE-OTHER WALLS	NOTE *
DESIGN LIFE		75 YEARS	
SEISMIC ACCELERATION COEFFICIENT (As)		0.175	
EFFECTIVE (DRAINED) FRICTION ANGLE			
RETAINED BACKFILL-UNCLASSIFIED SITE OR BORROW SOIL		28°	
RETAINED BACKFILL-SELECT BACKFILL		34° TO MAX 40°	1
REINFORCED BACKFILL		NOT APPLICABLE	1
UNIT WEIGHT			
UNCLASSIFIED SITE OR BORROW SOIL		120 POUNDS PER CUBIC FOOT	
SELECT BACKFILL MATERIAL		VARIES	1A
MINIMUM LENGTH OF SOIL REINFORCEMENT, B		NOT APPLICABLE	2,2A
LIMITING ECCENTRICITY		B/4 (SOIL), 3/8B (ROCK)	
COEFFICIENT OF SLIDING FRICTION		SEE TABLE 2 OR 3	3
NOMINAL BEARING CAPACITY		SEE TABLE 2 OR 3	3
RESISTANCE FACTORS			
SLIDING-STATIC		1.0	4
SLIDING-COMBINED STATIC+EARTHQUAKE		0.9	4
BEARING-STATIC		0.55	5
BEARING-COMBINED STATIC+EARTHQUAKE		0.8	
PULLOUT RESISTANCE			
STATIC		NOT APPLICABLE	6
COMBINED STATIC/EARTHQUAKE		NOT APPLICABLE	6
TENSILE RESISTANCE OF METALLIC REINFORCEMENTS AND CONNECTORS		NOT APPLICABLE	
STATIC -STRIP REINFORCEMENT -GRID REINFORCEMENT		NOT APPLICABLE	 7 7,8
COMBINED STATIC/EARTHQUAKE -STRIP REINFORCEMENT -GRID REINFORCEMENT		NOT APPLICABLE	 7 7,8
TENSILE RESISTANCE OF GEOSYNTHETIC REINFORCEMENTS AND CONNECTORS		NOT APPLICABLE	
STATIC		NOT APPLICABLE	
COMBINED STATIC/EARTHQUAKE		NOT APPLICABLE	
*REFER TO TABLE 1.1 FOR NOTES.			

TABLE 1.1
NOTES FOR TABLE 1

NO.	NOTE
1	A MINIMUM FRICTION ANGLE OF 34 DEGREES CAN BE ASSUMED FOR MATERIAL MEETING SPECIFICATIONS IN SECTION F, PART1, AND ITEM E OF TENNESSEE DEPARTMENT OF TRANSPORTATION SPECIAL PROVISION 624 REGARDING RETAINING WALLS. A HIGHER FRICTION ANGLE CAN BE UTILIZED IF THE CONTRACTOR SUBMITS INDEPENDENT TESTING AND IT IS VERIFIED BY TDOT. HOWEVER, IN NO CASE SHALL THE FRICTION ANGLE FOR ANALYSIS EXCEED 40-DEGREES.
1A	SELECT BACKFILL UNIT WEIGHT TO BE DETERMINED BY CONTRACTOR/DESIGNER DEPENDING ON ACTUAL BACKFILL MATERIAL USED. SELECT BACKFILL IS DEFINED AS MATERIAL MEETING SPECIFICATIONS IN SECTION F, PART 1, AND ITEM E OF TENNESSEE DEPARTMENT OF TRANSPORTATION SPECIAL PROVISION 624 REGARDING RETAINING WALLS. IN ORDER TO UTILIZE EFFECTIVE FRICTION ANGLE PHI FOR SELECT BACKFILL DESIGN, SELECT BACKFILL MUST BE PLACED FOR A MINIMUM ZONE FORMED BY A 1:1 SLOPE FROM 2 FEET BEHIND THE BOTTOM OF BACK OF THE WALL FOOTING UP TO FINISHED GRADE AT THE TOP OF THE WALL.
2	H IS DESIGN HEIGHT OF THE WALL AND IS DEFINED AS THE DIFFERENCE IN ELEVATION BETWEEN THE FINISHED GRADE AT THE TOP OF THE WALL AND THE TOP OF LEVELING PAD OR BOTTOM OF FOOTING FOR NON-MSE WALLS. THE TOP OF THE LEVELING PAD SHALL ALWAYS BE BELOW THE MINIMUM EMBEDMENT REFERENCE LINE AS INDICATED ON THE PLANS FOR THAT LOCATION. THE LENGTH OF THE SOIL REINFORCEMENT, B, IS MEASURED FROM THE BACKFACE OF THE WALL FACING UNIT. IN CASE OF GRID TYPE REINFORCEMENTS THE LENGTH OF THE SOIL REINFORCEMENT IS MEASURED FROM THE BACKFACE OF THE WALL FACING UNIT TO THE LAST FULL TRANSVERSE MEMBER. FOR MODULAR BLOCKFACING UNITS, THE TOTAL LENGTH OF THE REINFORCEMENT, Br AS MEASURED FROM THE FRONT FACE OF THE WALLIS THE LENGTH B AS DEFINED ABOVE PLUS THE WIDTH OF THE MODULAR BLOCK UNIT (THE HORIZONTAL DIMENSION OF THE BLOCK UNIT MEASURED PERPENDICULAR TO THE WALL FACE).
2A	WALL DESIGNER MUST ADJUST THE REINFORCEMENT LENGTHS BEYOND THOSE MINIMUM REQUIRED LENGTHS, IF REQUIRED, TO MEET BOTH INTERNAL AND EXTERNAL STABILITY REQUIREMENTS. MINIMUM REINFORCEMENT LENGTHS MAY BE REQUIRED FOR GLOBAL STABILITY. THIS REQUIREMENT WILL BE SHOWN IN THE PLANS.
3	THESE VALUES WILL BE PROVIDED IN TABLES 2 AND/OR 3
4	PASSIVE RESISTANCE SHALL NOT BE CONSIDERED IN EVALUATION OF SLIDING RESISTANCE.
5	FOR ALL LIMIT STATES, THE DESIGN LOADING FOR THE MSE RETAINING WALL SYSTEM SHALL NOT EXCEED THE FACTORED GENERAL AND LOCAL BEARING RESISTANCE SPECIFIED IN TABLES 2 OR 3.
6	LIVE LOAD DUE TO VEHICULAR TRAFFIC SHALL BE INCLUDED IN THE COMPUTATUONS TO DETERMINE THE MAXIMUM TENSILE FORCES IN REINFORCEMENT LAYERS, BUT SHALL BE NEGLECTED IN THE COMPUTATIONS FOR PULLOUT RESISTANCE.
7	APPLY TO GROSS CROSS-SECTION LESS SACRIFICIAL AREA. FOR SECTIONS WITH HOLES, REDUCE GROSS AREA IN ACCORDANCE WITH ARTICLE 6.8.3 OF AASHTO (2007) AND APPLY TO NET SECTION LESS SACRIFICIAL AREA.
8	APPLIES TO GRID REINFORCEMENTS CONNECTED TO A RIGID FACING ELEMENT, E.G., A CONCRETE PANEL OR BLOCK. FOR GRID REINFORCEMENTS CONNECTED TO A FLEXIBLE FACING MAT OR WHICH ARE CONTINUOUS WITH THE FACING MAT, USE THE RESISTANCE FACTOR FOR STRIP REINFORCEMENTS.

P.E. NO. _____

PROJECT NO.	YEAR	SHEET NO.
STP-320(4)	2014	2W1

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

TABLE 3-FOUNDATION PARAMETERS AND REQUIREMENTS FOR OTHER GRAVITY OR SEMI-GRAVITY WALLS

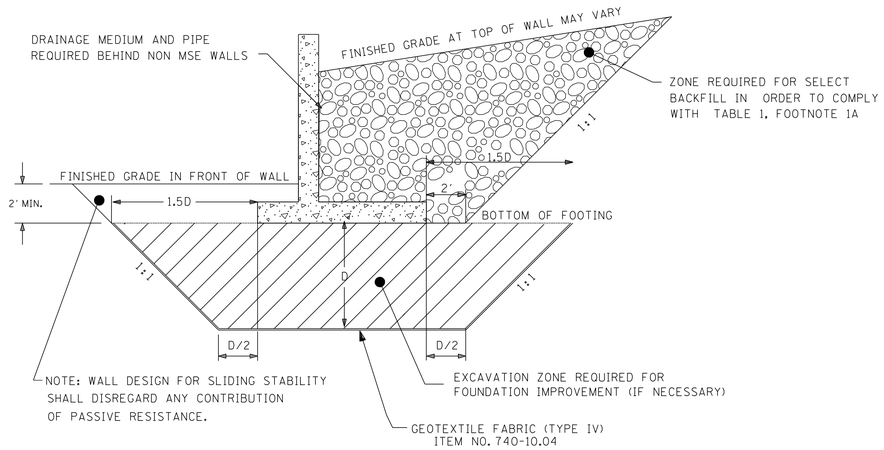
STATION LIMITS	FOUNDATION BEARING CONDITION REQUIREMENT	NOMINAL BEARING PRESSURE (psf)	COEFFICIENT OF SLIDING FRICTION
230+50 BEGIN TO 231+13 END	ON SOIL AT MINIMUM EMBEDMENT DEPTH	4400	0.35

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GEOTECHNICAL DESIGN NOTES
AND REQUIREMENTS
RETAINING WALL NO. 1
STATE ROUTE 320
STATION 230+50 TO 231+13
HAMILTON COUNTY
2014

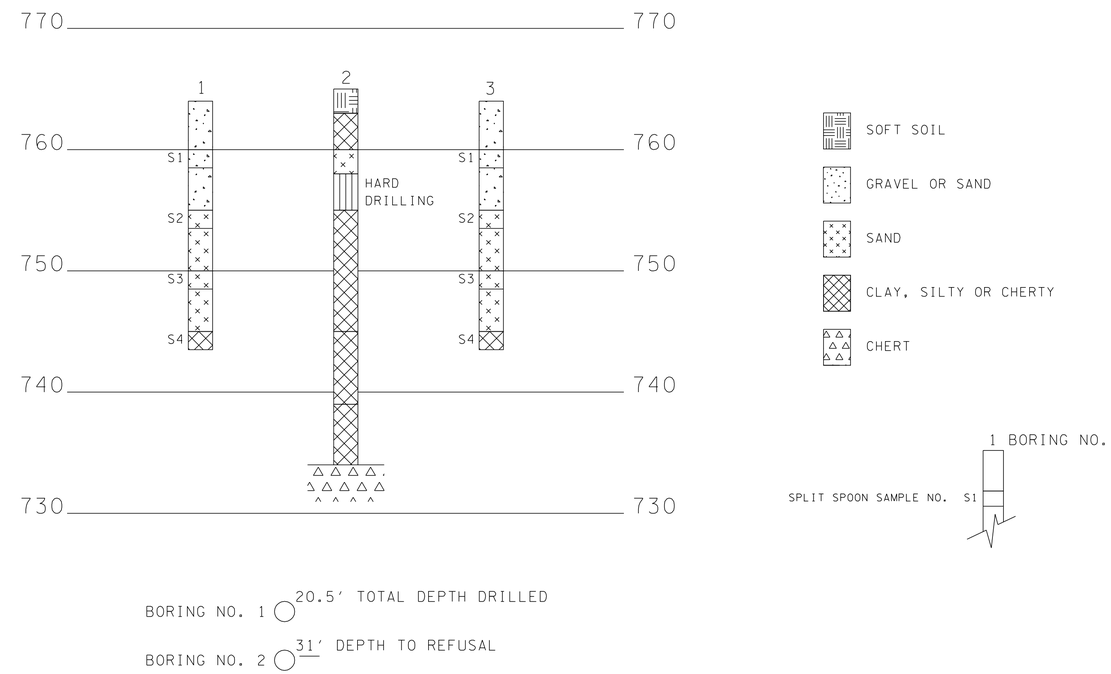
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

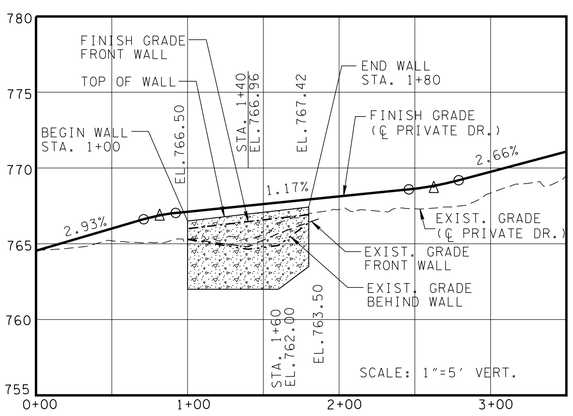
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	2W2



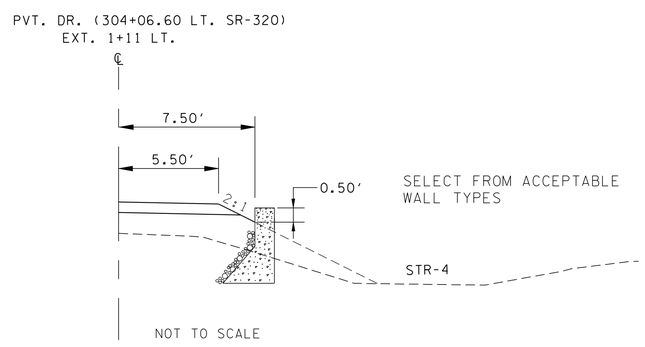
BORING LOCATION

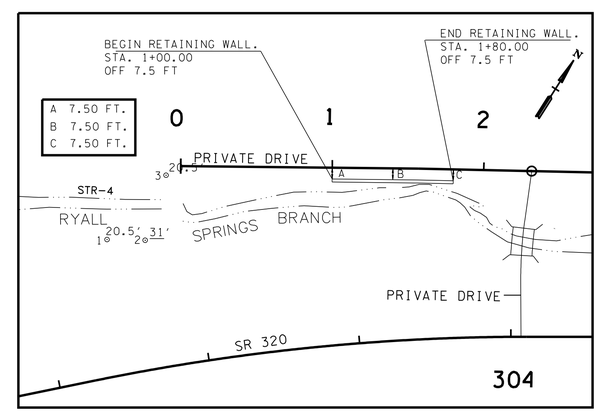
BORING NO.	STATION	OFF SET	DEPTH	GROUND ELEVATION	ROCK ELEVATION
1	301+50	85' LT	20.5'	764.0	-----
2	301+70	80' LT	31.0'	765.0	734.0
3	301+90	120' LT	20.5'	764.0	-----





382 SF TOTAL WALL AREA





SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RETAINING WALL NO. 2 CONCEPTUAL DRAWING

STATE ROUTE 320, DRIVEWAY
STATION 1+00 TO 1+80
HAMILTON COUNTY

SCALE: 1"= 50' HORIZ.

2/25/2014 9:45:0 AM
G:\2000025-00\CONSTRUCTION\RETAINING WALL DWG\From TDOT 02-06-2014\2W2-3 - SR 320 Driveway.dgn

RETAINING WALL DESIGN NOTES

UNLESS SPECIFICALLY STATED OTHERWISE IN THE CONTRACT PLANS, THE BIDDING FOR, THE DESIGN OF AND THE CONSTRUCTION OF RETAINING WALLS SHOWN IN THE PLANS SHALL BE GOVERNED BY THE TENNESSEE DEPARTMENT OF TRANSPORTATION SPECIAL PROVISION 624 REGARDING RETAINING WALLS. THIS SPECIAL PROVISION SHALL BE CONSIDERED AS ONE OF THOSE DOCUMENTS WHICH THE BIDDER/CONTRACTOR HAS EXAMINED AND MADE HIMSELF FAMILIAR WITH AS DESCRIBED IN SECTION 102.04 - EXAMINATION OF THE SITE, THE WORK, THE PLANS, AND THE SPECIFICATIONS IN THE TDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

EXCAVATION FOR THE WALL AND/OR ITS FOOTING SHALL NOT BE ACCOMPLISHED UNTIL THE CONTRACTOR HAS SUBMITTED WALL DESIGNS AND CALCULATIONS AND HAS BEEN ISSUED AN APPROVED SET OF WALL PLANS AND HAS LABOR AND MATERIAL RESOURCES AVAILABLE TO BEGIN AND CONTINUE WALL CONSTRUCTION IMMEDIATELY AFTER EXCAVATION.

THIS WALL SHALL BE DESIGNED IN ACCORDANCE WITH LRFD DESIGN PROCEDURES AND REQUIREMENTS AS DESCRIBED IN 1) AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 2012 AND INTERIMS AND 2) PUBLICATION FHWA-NHI-10-024/FHWA GEC 011, DESIGN AND CONSTRUCTION OF MECHANICALLY STABILIZED EARTH WALLS AND REINFORCED SOIL SLOPES, NOVEMBER 2009 FOR MSE WALLS.

FOR PROPRIETARY WALL SYSTEMS THAT HAVE BEEN APPROVED AS SHOWN IN SPECIAL PROVISION 624, THE WALL DESIGNER SHALL BE RESPONSIBLE FOR PROVIDING WALL DESIGNS INCORPORATING MATERIALS AND COMPONENTS (I.E. REINFORCEMENT CONNECTION DEVICES, SPECIFIC MANUFACTURER AND PROPERTIES OF GEOGRID) AS WAS ORIGINALLY SUBMITTED AND APPROVED BY TDOT. IF A MATERIAL AND/OR COMPONENT OF THE WALL SYSTEM HAVE BEEN MODIFIED FROM THE ORIGINALLY APPROVED SYSTEM, A WALL DESIGN AND SET OF PLANS AND CALCULATIONS FOR THIS WALL SYSTEM CANNOT BE SUBMITTED FOR REVIEW AND APPROVAL UNTIL THE WALL SYSTEM DESIGNER WHO ORIGINALLY SUBMITTED THE WALL SYSTEM FOR APPROVAL BY TDOT SUBMITS A REQUEST FOR RE-APPROVAL UTILIZING THE MODIFIED ELEMENTS OF THE WALL. THIS SUBMITTAL DOES NOT GUARANTEE APPROVAL OF THE MODIFIED SYSTEM. IF THIS RE-APPROVAL PROCESS DOES NOT MEET THE CONTRACTOR'S SCHEDULE OR IF THE MODIFIED SYSTEM IS NOT APPROVED, THE CONTRACTOR/WALL DESIGNER SHALL PROVIDE A WALL DESIGN FOR ONE OF THE APPROVED SYSTEMS AT NO CHANGE IN CONTRACT PRICE FOR THE RETAINING WALL AND NO CHANGE IN PROJECT SCHEDULE REQUIREMENTS WILL BE ALLOWED.

THE WALL DESIGNER SHALL PROVIDE RETAINING WALL PLANS, DETAILS AND CALCULATIONS AS REQUIRED BY SPECIAL PROVISION 624 AND AS REQUIRED HEREIN.

- THE WALL DESIGNER SHALL UTILIZE THE GEOTECHNICAL PARAMETERS AND RESISTANCE FACTORS AS PROVIDED FOR EACH PROJECT RETAINING WALL ON THE WALL CONCEPT SHEET AND RELATED RETAINING WALL SHEETS TO PREPARE AND SUBMIT DESIGN CALCULATIONS. LOAD FACTORS AND OTHER PERTINENT DESIGN REQUIREMENTS PROVIDED IN AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 2012 AND INTERIMS SHALL BE USED FOR NON-MSE WALLS AND PUBLICATION FHWA-NHI-10-024/FHWA GEC 011, DESIGN AND CONSTRUCTION OF MECHANICALLY STABILIZED EARTH WALLS AND REINFORCED SOIL SLOPES, NOVEMBER 2009 FOR MSE WALLS.

- CALCULATIONS FOR BOTH INTERNAL AND EXTERNAL STABILITY (SLIDING, ECCENTRICITY, AND BEARING CAPACITY-GLOBAL STABILITY AND SETTLEMENT BEING THE EXCEPTIONS) SHALL BE PROVIDED FOR EACH CRITICAL WALL SECTION WHICH DEMONSTRATES THE REQUIRED CAPACITY TO DEMAND RATIO OF 1.0 IS MET UTILIZING THE DESIGN PARAMETERS PROVIDED. FOR MSE WALLS, THE WALL DESIGNER MUST ADJUST THE REINFORCEMENT LENGTHS BEYOND THOSE MINIMUM REQUIRED LENGTHS, IF REQUIRED, TO MEET BOTH INTERNAL AND EXTERNAL REQUIREMENTS. THE WALL DESIGNER/CONTRACTOR PLANS MUST INCLUDE ANY FOUNDATION IMPROVEMENTS AS REQUIRED HEREIN ON THE WALL DESIGNER/CONTRACTOR'S WALL ELEVATION VIEWS AND ANY CROSS-SECTIONAL DETAIL DRAWINGS.

- UNLESS OTHERWISE STATED, THE WALL DESIGNER CAN ASSUME THAT MINIMUM GLOBAL STABILITY AND SETTLEMENT CRITERIA IS ACHIEVED WITH A WALL DESIGN MEETING OTHER MINIMUM EXTERNAL STABILITY REQUIREMENTS AND ASSUMING WALL FOUNDATION CONDITIONS ARE MET. WHILE THE WALL DESIGNER'S DESIGN MUST DEMONSTRATE COMPLIANCE WITH EXTERNAL STABILITY REQUIREMENTS AS DISCUSSED ABOVE, THE WALL DESIGNER MAY PROVIDE CERTIFICATION (BY SIGNING AND STAMPING BY PROFESSIONAL ENGINEER REGISTERED IN STATE OF TENNESSEE) OF THE WALLS PLANS AND CALCULATIONS "FOR INTERNAL STABILITY ONLY".

- LOAD COMBINATIONS STRENGTH I, EXTREME EVENT I, AND EXTREME EVENT II AS GIVEN IN TABLE 4-1 OF PUBLICATION FHWA-NHI-10-024/FHWA GEC 011, DESIGN AND CONSTRUCTION OF MECHANICALLY STABILIZED EARTH WALLS AND REINFORCED SOIL SLOPES, NOVEMBER 2009 FOR MSE WALLS SHALL BE EVALUATED FOR MSE WALLS. LOAD COMBINATIONS FOR OTHER WALL TYPES SHALL BE AS GIVEN IN AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 2012 AND INTERIMS

NOTE REGARDING CONSTRUCTION SLOPES

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING THE EXCAVATION IN ACCORDANCE WITH OSHA AND OTHER APPLICABLE STATE AND LOCAL REGULATIONS REGARDING CONSTRUCTION SLOPES AND TRENCHES. IN ADDITION TO FOLLOWING APPLICABLE REGULATORY REQUIREMENTS, AS A MINIMUM REQUIREMENT, ALL TEMPORARY CONSTRUCTION SLOPES SHALL BE PLACED AT A MAXIMUM OF A 1:1 SLOPE IN SOIL AND SHALL NOT BE LEFT OPEN WITHOUT SHORING FOR ANY LONGER THAN ABSOLUTELY NECESSARY. THE CONTRACTOR BUILDING THE WALL SHALL ENSURE THAT THESE TEMPORARY BACK SLOPES ARE NOT AND DO NOT BECOME UNSTABLE. IF SLOPE IS UNSTABLE, BECOMES UNSTABLE, IS CUT STEEPER THAN A 1:1 SLOPE OR IS UNACCEPTABLE FOR ANOTHER REASON, THEN TEMPORARY SHORING SHALL BE USED. ANY UNUSUAL SOIL CONDITIONS OTHER THAN THOSE ASSUMED SHOULD BE REPORTED TO THE PROJECT ENGINEER.

ACCEPTABLE WALL TYPES

PRE-CAST GRAVITY WALL
CAST-IN-PLACE CONCRETE GRAVITY WALL
CAST-IN-PLACE CONCRETE CANTILEVER WALL

PROPRIETARY WALL SYSTEM SUPPLIERS/INSTALLERS SHALL BE THOSE LISTED AS PRE-APPROVED IN SPECIAL PROVISION 624.

WALL SHALL BE DESIGNED AND CONSTRUCTED WITH MATERIALS APPROPRIATE TO ACHIEVE SPECIFIED DESIGN LIFE.

THE COST OF THE FOLLOWING ITEMS TO BE INCLUDED IN THE UNIT PRICE BID FOR THIS WALL (604-07.0-):
1) ASHLAR STONE FINISH
2) APPLIED TEXTURE FINISH (MOUNTAIN GRAY, FED. SPEC. 36440) APPLIED TO ALL EXPOSED SURFACES
3) RETAINING WALL DRAINAGE, SEE STANDARD DRAWING STD-10-1
4) TEMPORARY SHORING AND CONSTRUCTION SLOPES

TABLE 1-DESIGN REQUIREMENTS AND PARAMETERS

DESCRIPTION		VALUE-OTHER WALLS	NOTE •
DESIGN LIFE		75 YEARS	
SEISMIC ACCELERATION COEFFICIENT (As)		0.175	
EFFECTIVE (DRAINED) FRICTION ANGLE			
RETAINED BACKFILL-UNCLASSIFIED SITE OR BORROW SOIL		28 °	
RETAINED BACKFILL-SELECT BACKFILL		34 ° TO MAX 40 °	1
REINFORCED BACKFILL		NOT APPLICABLE	1
UNIT WEIGHT			
UNCLASSIFIED SITE OR BORROW SOIL		120 POUNDS PER CUBIC FOOT	
SELECT BACKFILL MATERIAL		VARIES	1A
MINIMUM LENGTH OF SOIL REINFORCEMENT, B		NOT APPLICABLE	2,2A
LIMITING ECCENTRICITY		B/4 (SOIL), 3/8B (ROCK)	
COEFFICIENT OF SLIDING FRICTION		SEE TABLE 2 OR 3	3
NOMINAL BEARING CAPACITY		SEE TABLE 2 OR 3	3
RESISTANCE FACTORS			
SLIDING-STATIC		1.0	4
SLIDING-COMBINED STATIC+EARTHQUAKE		0.9	4
BEARING-STATIC		0.55	5
BEARING-COMBINED STATIC+EARTHQUAKE		0.8	
PULLOUT RESISTANCE			
STATIC		NOT APPLICABLE	6
COMBINED STATIC/EARTHQUAKE		NOT APPLICABLE	6
TENSILE RESISTANCE OF METALLIC REINFORCEMENTS AND CONNECTORS		NOT APPLICABLE	
STATIC -STRIP REINFORCEMENT -GRID REINFORCEMENT		NOT APPLICABLE	 7 7,8
COMBINED STATIC/EARTHQUAKE -STRIP REINFORCEMENT -GRID REINFORCEMENT		 NOT APPLICABLE	 7 7,8
TENSILE RESISTANCE OF GEOSYNTHETIC REINFORCEMENTS AND CONNECTORS		NOT APPLICABLE	
STATIC		NOT APPLICABLE	
COMBINED STATIC/EARTHQUAKE		NOT APPLICABLE	
•REFER TO TABLE 1.1 FOR NOTES.			

TABLE 1.1
NOTES FOR TABLE 1

NO.	NOTE
1	A MINIMUM FRICTION ANGLE OF 34 DEGREES CAN BE ASSUMED FOR MATERIAL MEETING SPECIFICATIONS IN SECTION F, PART1, AND ITEM E OF TENNESSEE DEPARTMENT OF TRANSPORTATION SPECIAL PROVISION 624 REGARDING RETAINING WALLS. A HIGHER FRICTION ANGLE CAN BE UTILIZED IF THE CONTRACTOR SUBMITS INDEPENDENT TESTING AND IT IS VERIFIED BY TDOT. HOWEVER, IN NO CASE SHALL THE FRICTION ANGLE FOR ANALYSIS EXCEED 40-DEGREES.
1A	SELECT BACKFILL UNIT WEIGHT TO BE DETERMINED BY CONTRACTOR/DESIGNER DEPENDING ON ACTUAL BACKFILL MATERIAL USED. SELECT BACKFILL IS DEFINED AS MATERIAL MEETING SPECIFICATIONS IN SECTION F, PART 1, AND ITEM E OF TENNESSEE DEPARTMENT OF TRANSPORTATION SPECIAL PROVISION 624 REGARDING RETAINING WALLS. IN ORDER TO UTILIZE EFFECTIVE FRICTION ANGLE PHI FOR SELECT BACKFILL DESIGN, SELECT BACKFILL MUST BE PLACED FOR A MINIMUM ZONE FORMED BY A 1:1 SLOPE FROM 2 FEET BEHIND THE BOTTOM OF BACK OF THE WALL FOOTING UP TO FINISHED GRADE AT THE TOP OF THE WALL.
2	H IS DESIGN HEIGHT OF THE WALL AND IS DEFINED AS THE DIFFERENCE IN ELEVATION BETWEEN THE FINISHED GRADE AT THE TOP OF THE WALL AND THE TOP OF LEVELING PAD OR BOTTOM OF FOOTING FOR NON-MSE WALLS. THE TOP OF THE LEVELING PAD SHALL ALWAYS BE BELOW THE MINIMUM EMBEDMENT REFERENCE LINE AS INDICATED ON THE PLANS FOR THAT LOCATION. THE LENGTH OF THE SOIL REINFORCEMENT, B, IS MEASURED FROM THE BACKFACE OF THE WALL FACING UNIT. IN CASE OF GRID TYPE REINFORCEMENTS THE LENGTH OF THE SOIL REINFORCEMENT IS MEASURED FROM THE BACKFACE OF THE WALL FACING UNIT TO THE LAST FULL TRANSVERSE MEMBER. FOR MODULAR BLOCKFACING UNITS, THE TOTAL LENGTH OF THE REINFORCEMENT, Br AS MEASURED FROM THE FRONT FACE OF THE WALLIS THE LENGTH B AS DEFINED ABOVE PLUS THE WIDTH OF THE MODULAR BLOCK UNIT (THE HORIZONTAL DIMENSION OF THE BLOCK UNIT MEASURED PERPENDICULAR TO THE WALL FACE).
2A	WALL DESIGNER MUST ADJUST THE REINFORCEMENT LENGTHS BEYOND THOSE MINIMUM REQUIRED LENGTHS, IF REQUIRED, TO MEET BOTH INTERNAL AND EXTERNAL STABILITY REQUIREMENTS. MINIMUM REINFORCEMENT LENGTHS MAY BE REQUIRED FOR GLOBAL STABILITY. THIS REQUIREMENT WILL BE SHOWN IN THE PLANS.
3	THESE VALUES WILL BE PROVIDED IN TABLES 2 AND/OR 3
4	PASSIVE RESISTANCE SHALL NOT BE CONSIDERED IN EVALUATION OF SLIDING RESISTANCE.
5	FOR ALL LIMIT STATES, THE DESIGN LOADING FOR THE MSE RETAINING WALL SYSTEM SHALL NOT EXCEED THE FACTORED GENERAL AND LOCAL BEARING RESISTANCE SPECIFIED IN TABLES 2 OR 3.
6	LIVE LOAD DUE TO VEHICULAR TRAFFIC SHALL BE INCLUDED IN THE COMPUTATUONS TO DETERMINE THE MAXIMUM TENSILE FORCES IN REINFORCEMENT LAYERS, BUT SHALL BE NEGLECTED IN THE COMPUTATIONS FOR PULLOUT RESISTANCE.
7	APPLY TO GROSS CROSS-SECTION LESS SACRIFICIAL AREA. FOR SECTIONS WITH HOLES, REDUCE GROSS AREA IN ACCORDANCE WITH ARTICLE 6.8.3 OF AASHTO (2007) AND APPLY TO NET SECTION LESS SACRIFICIAL AREA.
8	APPLIES TO GRID REINFORCEMENTS CONNECTED TO A RIGID FACING ELEMENT, E.G., A CONCRETE PANEL OR BLOCK. FOR GRID REINFORCEMENTS CONNECTED TO A FLEXIBLE FACING MAT OR WHICH ARE CONTINUOUS WITH THE FACING MAT, USE THE RESISTANCE FACTOR FOR STRIP REINFORCEMENTS.

P.E. NO. _____

PROJECT NO.	YEAR	SHEET NO.
STP-320(4)	2014	2W3

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

TABLE 3-FOUNDATION PARAMETERS AND REQUIREMENTS FOR OTHER GRAVITY OR SEMI-GRAVITY WALLS

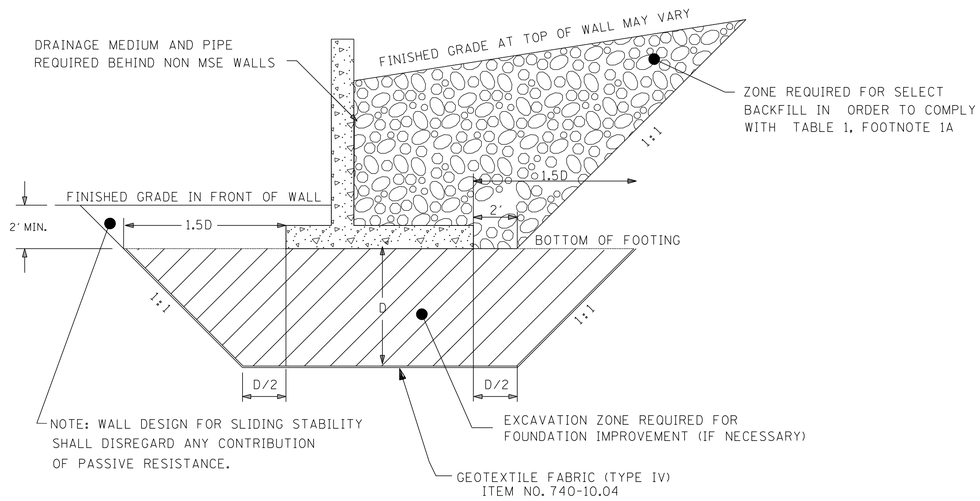
STATION LIMITS	FOUNDATION BEARING CONDITION REQUIREMENT	NOMINAL BEARING PRESSURE (psf)	COEFFICIENT OF SLIDING FRICTION
1+00 BEGIN TO 1+80 END	UNDERCUT 2 FEET BELOW PROPOSED FOOTING ELEVATION AND REPLACE WITH RIP-RAP (CLASS A-3)	6000	0.50

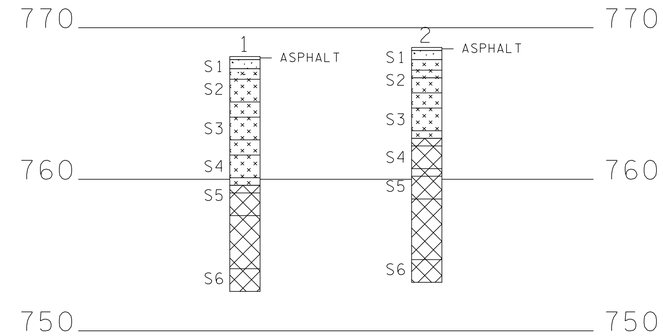
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

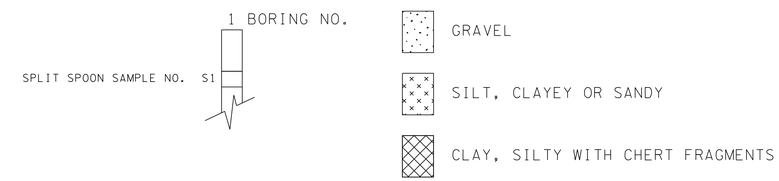
GEOTECHNICAL DESIGN NOTES
AND REQUIREMENTS
RETAINING WALL NO. 2
STATE ROUTE 320, DRIVEWAY
STATION 1+00 TO 1+80
HAMILTON COUNTY
2014

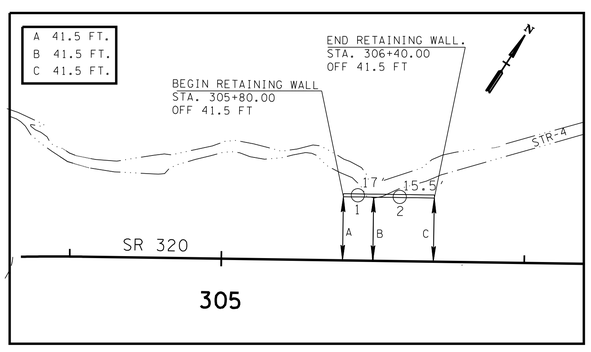
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	2W4

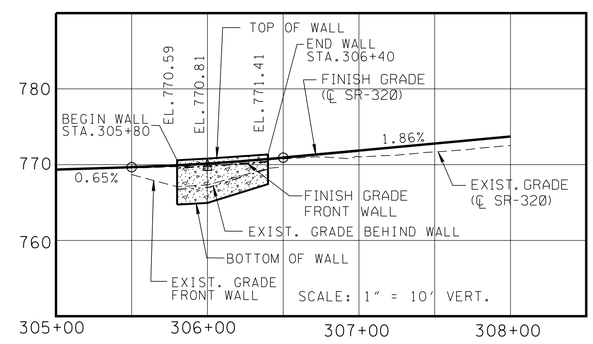




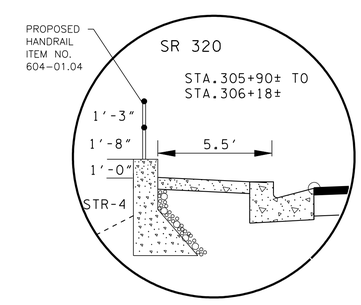




BORING ○



314 SF TOTAL WALL AREA
60 LF HANDRAIL LENGTH



RETAINING WALL
TYPE TO BE
SELECTED FROM
ACCEPTABLE WALL TYPES

BORING LOCATION

BORING NO.	STATION	OFF SET	HOLE DEPTH	GROUND ELEVATION	ROCK ELEVATION
1	305+90	42' LT	17.0'	768.1	-----
2	306+18	42' LT	15.5'	768.7	-----

SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RETAINING WALL NO. 3
CONCEPTUAL DRAWING

STATE ROUTE 320, DRIVEWAY
STATION 305+80 TO 306+40
HAMILTON COUNTY

SCALE: 1"= 50' HORIZ.

2/25/2014 9:20:41 AM
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THIS WALL SHALL BE DESIGNED IN ACCORDANCE WITH LRFD DESIGN PROCEDURES AND REQUIREMENTS AS DESCRIBED IN 1) AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 2012 AND INTERIMS AND 2) PUBLICATION FHWA-NHI-10-024/FHWA GEC 011, DESIGN AND CONSTRUCTION OF MECHANICALLY STABILIZED EARTH WALLS AND REINFORCED SOIL SLOPES, NOVEMBER 2009 FOR MSE WALLS.

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ACCEPTABLE WALL TYPES

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CAST-IN-PLACE CONCRETE GRAVITY WALL
CAST-IN-PLACE CONCRETE CANTILEVER WALL

PROPRIETARY WALL SYSTEM SUPPLIERS/INSTALLERS SHALL BE THOSE LISTED AS PRE-APPROVED IN SPECIAL PROVISION 624.

WALL SHALL BE DESIGNED AND CONSTRUCTED WITH MATERIALS APPROPRIATE TO ACHIEVE SPECIFIED DESIGN LIFE.

THE COST OF THE FOLLOWING ITEMS TO BE INCLUDED IN THE UNIT PRICE BID FOR THIS WALL (604-07.0-):
1) ASHLAR STONE FINISH
2) APPLIED TEXTURE FINISH (MOUNTAIN GRAY, FED. SPEC. 36440) APPLIED TO ALL EXPOSED SURFACES
3) RETAINING WALL DRAINAGE, SEE STANDARD DRAWING STD-10-1
4) TEMPORARY SHORING AND CONSTRUCTION SLOPES

TABLE 1-DESIGN REQUIREMENTS AND PARAMETERS

DESCRIPTION		VALUE-OTHER WALLS	NOTE •
DESIGN LIFE		75 YEARS	
SEISMIC ACCELERATION COEFFICIENT (As)		0.175	
EFFECTIVE (DRAINED) FRICTION ANGLE			
RETAINED BACKFILL-UNCLASSIFIED SITE OR BORROW SOIL		28 °	
RETAINED BACKFILL-SELECT BACKFILL		34 ° TO MAX 40 °	1
REINFORCED BACKFILL		NOT APPLICABLE	1
UNIT WEIGHT			
UNCLASSIFIED SITE OR BORROW SOIL		120 POUNDS PER CUBIC FOOT	
SELECT BACKFILL MATERIAL		VARIES	1A
MINIMUM LENGTH OF SOIL REINFORCEMENT, B		NOT APPLICABLE	2,2A
LIMITING ECCENTRICITY		B/4 (SOIL), 3/8B (ROCK)	
COEFFICIENT OF SLIDING FRICTION		SEE TABLE 2 OR 3	3
NOMINAL BEARING CAPACITY		SEE TABLE 2 OR 3	3
RESISTANCE FACTORS			
SLIDING-STATIC		1.0	4
SLIDING-COMBINED STATIC+EARTHQUAKE		0.9	4
BEARING-STATIC		0.55	5
BEARING-COMBINED STATIC+EARTHQUAKE		0.8	
PULLOUT RESISTANCE			
STATIC		NOT APPLICABLE	6
COMBINED STATIC/EARTHQUAKE		NOT APPLICABLE	6
TENSILE RESISTANCE OF METALLIC REINFORCEMENTS AND CONNECTORS		NOT APPLICABLE	
STATIC -STRIP REINFORCEMENT -GRID REINFORCEMENT		NOT APPLICABLE	 7 7,8
COMBINED STATIC/EARTHQUAKE -STRIP REINFORCEMENT -GRID REINFORCEMENT		 NOT APPLICABLE	 7 7,8
TENSILE RESISTANCE OF GEOSYNTHETIC REINFORCEMENTS AND CONNECTORS		NOT APPLICABLE	
STATIC		NOT APPLICABLE	
COMBINED STATIC/EARTHQUAKE		NOT APPLICABLE	
•REFER TO TABLE 1.1 FOR NOTES.			

TABLE 1.1
NOTES FOR TABLE 1

NO.	NOTE
1	A MINIMUM FRICTION ANGLE OF 34 DEGREES CAN BE ASSUMED FOR MATERIAL MEETING SPECIFICATIONS IN SECTION F, PART1, AND ITEM E OF TENNESSEE DEPARTMENT OF TRANSPORTATION SPECIAL PROVISION 624 REGARDING RETAINING WALLS. A HIGHER FRICTION ANGLE CAN BE UTILIZED IF THE CONTRACTOR SUBMITS INDEPENDENT TESTING AND IT IS VERIFIED BY TDOT. HOWEVER, IN NO CASE SHALL THE FRICTION ANGLE FOR ANALYSIS EXCEED 40-DEGREES.
1A	SELECT BACKFILL UNIT WEIGHT TO BE DETERMINED BY CONTRACTOR/DESIGNER DEPENDING ON ACTUAL BACKFILL MATERIAL USED. SELECT BACKFILL IS DEFINED AS MATERIAL MEETING SPECIFICATIONS IN SECTION F, PART 1, AND ITEM E OF TENNESSEE DEPARTMENT OF TRANSPORTATION SPECIAL PROVISION 624 REGARDING RETAINING WALLS. IN ORDER TO UTILIZE EFFECTIVE FRICTION ANGLE PHI FOR SELECT BACKFILL DESIGN, SELECT BACKFILL MUST BE PLACED FOR A MINIMUM ZONE FORMED BY A 1:1 SLOPE FROM 2 FEET BEHIND THE BOTTOM OF BACK OF THE WALL FOOTING UP TO FINISHED GRADE AT THE TOP OF THE WALL.
2	H IS DESIGN HEIGHT OF THE WALL AND IS DEFINED AS THE DIFFERENCE IN ELEVATION BETWEEN THE FINISHED GRADE AT THE TOP OF THE WALL AND THE TOP OF LEVELING PAD OR BOTTOM OF FOOTING FOR NON-MSE WALLS. THE TOP OF THE LEVELING PAD SHALL ALWAYS BE BELOW THE MINIMUM EMBEDMENT REFERENCE LINE AS INDICATED ON THE PLANS FOR THAT LOCATION. THE LENGTH OF THE SOIL REINFORCEMENT, B, IS MEASURED FROM THE BACKFACE OF THE WALL FACING UNIT. IN CASE OF GRID TYPE REINFORCEMENTS THE LENGTH OF THE SOIL REINFORCEMENT IS MEASURED FROM THE BACKFACE OF THE WALL FACING UNIT TO THE LAST FULL TRANSVERSE MEMBER. FOR MODULAR BLOCKFACING UNITS, THE TOTAL LENGTH OF THE REINFORCEMENT, Br AS MEASURED FROM THE FRONT FACE OF THE WALLIS THE LENGTH B AS DEFINED ABOVE PLUS THE WIDTH OF THE MODULAR BLOCK UNIT (THE HORIZONTAL DIMENSION OF THE BLOCK UNIT MEASURED PERPENDICULAR TO THE WALL FACE).
2A	WALL DESIGNER MUST ADJUST THE REINFORCEMENT LENGTHS BEYOND THOSE MINIMUM REQUIRED LENGTHS, IF REQUIRED, TO MEET BOTH INTERNAL AND EXTERNAL STABILITY REQUIREMENTS. MINIMUM REINFORCEMENT LENGTHS MAY BE REQUIRED FOR GLOBAL STABILITY. THIS REQUIREMENT WILL BE SHOWN IN THE PLANS.
3	THESE VALUES WILL BE PROVIDED IN TABLES 2 AND/OR 3
4	PASSIVE RESISTANCE SHALL NOT BE CONSIDERED IN EVALUATION OF SLIDING RESISTANCE.
5	FOR ALL LIMIT STATES, THE DESIGN LOADING FOR THE MSE RETAINING WALL SYSTEM SHALL NOT EXCEED THE FACTORED GENERAL AND LOCAL BEARING RESISTANCE SPECIFIED IN TABLES 2 OR 3.
6	LIVE LOAD DUE TO VEHICULAR TRAFFIC SHALL BE INCLUDED IN THE COMPUTATUONS TO DETERMINE THE MAXIMUM TENSILE FORCES IN REINFORCEMENT LAYERS, BUT SHALL BE NEGLECTED IN THE COMPUTATIONS FOR PULLOUT RESISTANCE.
7	APPLY TO GROSS CROSS-SECTION LESS SACRIFICIAL AREA. FOR SECTIONS WITH HOLES, REDUCE GROSS AREA IN ACCORDANCE WITH ARTICLE 6.8.3 OF AASHTO (2007) AND APPLY TO NET SECTION LESS SACRIFICIAL AREA.
8	APPLIES TO GRID REINFORCEMENTS CONNECTED TO A RIGID FACING ELEMENT, E.G., A CONCRETE PANEL OR BLOCK. FOR GRID REINFORCEMENTS CONNECTED TO A FLEXIBLE FACING MAT OR WHICH ARE CONTINUOUS WITH THE FACING MAT, USE THE RESISTANCE FACTOR FOR STRIP REINFORCEMENTS.

P.E. NO. _____

PROJECT NO.	YEAR	SHEET NO.
STP-320(4)	2014	2W5

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

TABLE 3-FOUNDATION PARAMETERS AND REQUIREMENTS FOR OTHER GRAVITY OR SEMI-GRAVITY WALLS

STATION LIMITS	FOUNDATION BEARING CONDITION REQUIREMENT	NOMINAL BEARING PRESSURE (psf)	COEFFICIENT OF SLIDING FRICTION
305+80 BEGIN TO 306+40 END	UNDERCUT 2 FEET BELOW PROPOSED FOOTING ELEVATION AND REPLACE WITH RIP-RAP (CLASS A-3)	6000	0.50

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GEOTECHNICAL DESIGN NOTES
AND REQUIREMENTS
RETAINING WALL NO. 3
STATE ROUTE 320, DRIVEWAY
STATION 305+80 TO 306+40
HAMILTON COUNTY
2014

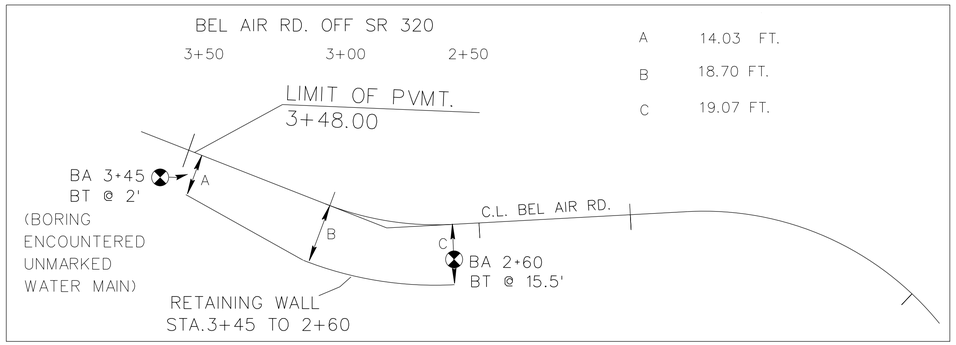
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

P.E. NO.

PROJECT NO.	YEAR	SHEET NO.
STP-320(4)	2014	2W6

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

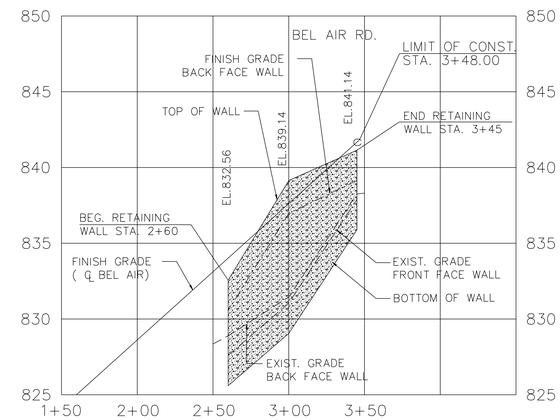


LEGEND

- BORING MARKER

BA 3+45 - BORING LABEL AND
BT @ 2' TERMINATION DEPTH

PROFILE OF BEL AIR ROAD RETAINING WALL STA. 323+83.71 SR 320

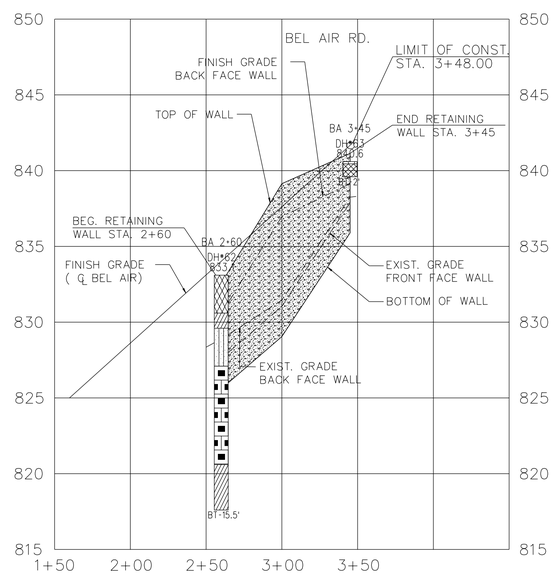


686 SF=TOTAL WALL AREA

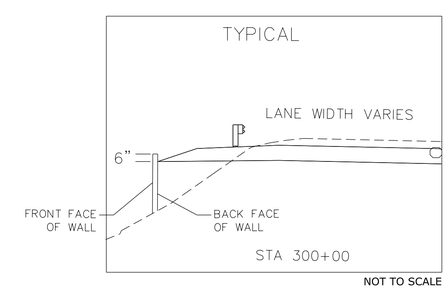
HORZ. SCALE: 1"=50'
VERT. SCALE: 1"=10'

LEGEND

- TOPSOIL
- FILL
- SANDY SILT (ML)
- SILTY CLAY (CL)
- CHERT



HORZ. SCALE: 1"=50'
VERT. SCALE: 1"=10'



NOT TO SCALE

BORING NO.	STATION	OFFSET	GROUND ELEV.	ROCK ELEV.
DH#62	BA 2+60	15'LT	833	---
DH#63	BA 3+45	10'LT	841	---

HORZ. SCALE: AS SHOWN
VERT. SCALE: AS SHOWN

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RETAINING WALL NO. 4
CONCEPTUAL DRAWING

STATE ROUTE 320
BEL AIR ROAD
STATION 2+60 TO 3+45
HAMILTON COUNTY

P.E. NO. _____

PROJECT NO.	YEAR	SHEET NO.
STP-320(4)	2014	2W7

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

RETAINING WALL DESIGN NOTES

UNLESS SPECIFICALLY STATED OTHERWISE IN THE CONTRACT PLANS, THE BIDDING FOR, THE DESIGN OF AND THE CONSTRUCTION OF RETAINING WALLS SHOWN IN THE PLANS SHALL BE GOVERNED BY THE TENNESSEE DEPARTMENT OF TRANSPORTATION SPECIAL PROVISION 624 REGARDING RETAINING WALLS. THIS SPECIAL PROVISION SHALL BE CONSIDERED AS ONE OF THOSE DOCUMENTS WHICH THE BIDDER/CONTRACTOR HAS EXAMINED AND MADE HIMSELF FAMILIAR WITH AS DESCRIBED IN SECTION 102.04 - EXAMINATION OF THE SITE, THE WORK, THE PLANS, AND THE SPECIFICATIONS IN THE TDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

EXCAVATION FOR THE WALL AND/OR ITS FOOTING SHALL NOT BE ACCOMPLISHED UNTIL THE CONTRACTOR HAS SUBMITTED WALL DESIGNS AND CALCULATIONS AND HAS BEEN ISSUED AN APPROVED SET OF WALL PLANS AND HAS LABOR AND MATERIAL RESOURCES AVAILABLE TO BEGIN AND CONTINUE WALL CONSTRUCTION IMMEDIATELY AFTER EXCAVATION.

THIS WALL SHALL BE DESIGNED IN ACCORDANCE WITH LRFD DESIGN PROCEDURES AND REQUIREMENTS AS DESCRIBED IN 1) AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 2012 AND INTERIMS AND 2) PUBLICATION FHWA-NHI-10-024/FHWA GEC 011, DESIGN AND CONSTRUCTION OF MECHANICALLY STABILIZED EARTH WALLS AND REINFORCED SOIL SLOPES, NOVEMBER 2009 FOR MSE WALLS.

FOR PROPRIETARY WALL SYSTEMS THAT HAVE BEEN APPROVED AS SHOWN IN SPECIAL PROVISION 624, THE WALL DESIGNER SHALL BE RESPONSIBLE FOR PROVIDING WALL DESIGNS INCORPORATING MATERIALS AND COMPONENTS (I.E. REINFORCEMENT CONNECTION DEVICES, SPECIFIC MANUFACTURER AND PROPERTIES OF GEOGRID) AS WAS ORIGINALLY SUBMITTED AND APPROVED BY TDOT, IF A MATERIAL AND/OR COMPONENT OF THE WALL SYSTEM HAVE BEEN MODIFIED FROM THE ORIGINALLY APPROVED SYSTEM, A WALL DESIGN AND SET OF PLANS AND CALCULATIONS FOR THIS WALL SYSTEM CANNOT BE SUBMITTED FOR REVIEW AND APPROVAL UNTIL THE WALL SYSTEM DESIGNER WHO ORIGINALLY SUBMITTED THE WALL SYSTEM FOR APPROVAL BY TDOT SUBMITS A REQUEST FOR RE-APPROVAL UTILIZING THE MODIFIED ELEMENTS OF THE WALL. THIS SUBMITTAL DOES NOT GUARANTEE APPROVAL OF THE MODIFIED SYSTEM. IF THIS RE-APPROVAL PROCESS DOES NOT MEET THE CONTRACTOR'S SCHEDULE OR IF THE MODIFIED SYSTEM IS NOT APPROVED, THE CONTRACTOR/WALL DESIGNER SHALL PROVIDE A WALL DESIGN FOR ONE OF THE APPROVED SYSTEMS AT NO CHANGE IN CONTRACT PRICE FOR THE RETAINING WALL AND NO CHANGE IN PROJECT SCHEDULE REQUIREMENTS WILL BE ALLOWED.

THE WALL DESIGNER SHALL PROVIDE RETAINING WALL PLANS, DETAILS AND CALCULATIONS AS REQUIRED BY SPECIAL PROVISION 624 AND AS REQUIRED HEREIN.

- THE WALL DESIGNER SHALL UTILIZE THE GEOTECHNICAL PARAMETERS AND RESISTANCE FACTORS AS PROVIDED FOR EACH PROJECT RETAINING WALL ON THE WALL CONCEPT SHEET AND RELATED RETAINING WALL SHEETS TO PREPARE AND SUBMIT DESIGN CALCULATIONS. LOAD FACTORS AND OTHER PERTINENT DESIGN REQUIREMENTS PROVIDED IN AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 2012 AND INTERIMS SHALL BE USED FOR NON-MSE WALLS AND PUBLICATION FHWA-NHI-10-024/FHWA GEC 011, DESIGN AND CONSTRUCTION OF MECHANICALLY STABILIZED EARTH WALLS AND REINFORCED SOIL SLOPES, NOVEMBER 2009 FOR MSE WALLS.
- CALCULATIONS FOR BOTH INTERNAL AND EXTERNAL STABILITY (SLIDING, ECCENTRICITY, AND BEARING CAPACITY-GLOBAL STABILITY AND SETTLEMENT BEING THE EXCEPTIONS) SHALL BE PROVIDED FOR EACH CRITICAL WALL SECTION WHICH DEMONSTRATES THE REQUIRED CAPACITY TO DEMAND RATIO OF 1.0 IS MET UTILIZING THE DESIGN PARAMETERS PROVIDED. FOR MSE WALLS, THE WALL DESIGNER MUST ADJUST THE REINFORCEMENT LENGTHS BEYOND THOSE MINIMUM REQUIRED LENGTHS, IF REQUIRED, TO MEET BOTH INTERNAL AND EXTERNAL REQUIREMENTS. THE WALL DESIGNER/CONTRACTOR PLANS MUST INCLUDE ANY FOUNDATION IMPROVEMENTS AS REQUIRED HEREIN ON THE WALL DESIGNER/CONTRACTOR'S WALL ELEVATION VIEWS AND ANY CROSS-SECTIONAL DETAIL DRAWINGS.
- LOAD COMBINATIONS STRENGTH I, EXTREME EVENT I, AND EXTREME EVENT II AS GIVEN IN TABLE 4-1 OF PUBLICATION FHWA-NHI-10-024/FHWA GEC 011, DESIGN AND CONSTRUCTION OF MECHANICALLY STABILIZED EARTH WALLS AND REINFORCED SOIL SLOPES, NOVEMBER 2009 FOR MSE WALLS SHALL BE EVALUATED FOR MSE WALLS. LOAD COMBINATIONS FOR OTHER WALL TYPES SHALL BE AS GIVEN IN AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 2012 AND INTERIMS.

NOTE REGARDING CONSTRUCTION SLOPES

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING THE EXCAVATION IN ACCORDANCE WITH OSHA AND OTHER APPLICABLE STATE AND LOCAL REGULATIONS REGARDING CONSTRUCTION SLOPES AND TRENCHES. IN ADDITION TO FOLLOWING APPLICABLE REGULATORY REQUIREMENTS, AS A MINIMUM REQUIREMENT, ALL TEMPORARY CONSTRUCTION SLOPES SHALL BE PLACED AT A MAXIMUM OF A 1:1 SLOPE IN SOIL AND SHALL NOT BE LEFT OPEN WITHOUT SHORING FOR ANY LONGER THAN ABSOLUTELY NECESSARY. THE CONTRACTOR BUILDING THE WALL SHALL ENSURE THAT THESE TEMPORARY BACK SLOPES ARE NOT AND DO NOT BECOME UNSTABLE. IF SLOPE IS UNSTABLE, BECOMES UNSTABLE, IS CUT STEEPER THAN A 1:1 SLOPE OR IS UNACCEPTABLE FOR ANOTHER REASON, THEN TEMPORARY SHORING SHALL BE USED. ANY UNUSUAL SOIL CONDITIONS OTHER THAN THOSE ASSUMED SHOULD BE REPORTED TO THE PROJECT ENGINEER.

ACCEPTABLE WALL TYPES

PRECAST GRAVITY WALL
CAST-IN-PLACE CONCRETE GRAVITY WALL
CAST-IN-PLACE CONCRETE CANTILEVER WALL
MECHANICALLY STABILIZED EARTH (MSE) WALL - SEGMENTAL PRECAST
MECHANICALLY STABILIZED EARTH (MSE) WALL - MODULAR BLOCK
SOLDIER PILE/LAGGING WALL
PROPRIETARY WALL SYSTEM SUPPLIERS/INSTALLERS SHALL BE THOSE LISTED AS PRE-APPROVED IN SPECIAL PROVISION 624.

WALL SHALL BE DESIGNED AND CONSTRUCTED WITH MATERIALS APPROPRIATE TO ACHIEVE SPECIFIED DESIGN LIFE.

THE COST OF THE FOLLOWING ITEMS TO BE INCLUDED IN THE UNIT PRICE BID FOR THIS WALL (604-07.04):
1) ASHLAR STONE FINISH
2) APPLIED TEXTURE FINISH (MOUNTAIN GRAY, FED. SPEC. 36440) APPLIED TO ALL EXPOSED SURFACES
3) RETAINING WALL DRAINAGE, SEE STANDARD DRAWING STD-10-1
4) TEMPORARY SHORING AND CONSTRUCTION SLOPES

OTHER DESIGN REQUIREMENTS

SOLDIER PILE/LAGGING WALLS SHALL HAVE PERMANENT PRECAST PANELS FOR LAGGING OR CAST-IN-PLACE STRUCTURAL CONCRETE WALL FACING. BOTH SYSTEMS SHALL BE CAPABLE OF TRANSMITTING AND RESISTING ALL DESIGN LOADS EXERTED ON WALL COMPONENTS.

TIMBER LAGGING SHALL ONLY BE USED TO TEMPORARILY SUPPORT MATERIAL TO ALLOW FOR TOP DOWN CONSTRUCTION. TIMBER LAGGING IS NEITHER AN ACCEPTABLE PERMANENT WALL FACING NOR AN ACCEPTABLE PERMANENT STRUCTURAL WALL ELEMENT.

THE WALL SHALL HAVE A DRAINAGE GUTTER AT THE TOP DESIGNED TO CARRY SURFACE RUNOFF TO EITHER OR BOTH ENDS OF WALL. DETAILS OF THIS DRAINAGE FEATURE SHALL BE PROVIDED IN WALL DESIGNER/CONTRACTOR'S WALL DESIGN PLANS.

THE WALL DESIGNER SHALL VERIFY THAT THE WALL HAS ADEQUATE EMBEDMENT AND/OR ANCHORAGE TO COMPENSATE FOR THE WALL BEING CONSTRUCTED ON A SLOPE.

THE CONTRACTOR/WALL DESIGNER SHALL INSTALL WALL SYSTEM, INCLUDING ANCHORS, REINFORCING ELEMENTS, AND TEMPORARY EXCAVATION SLOPES ONLY WITHIN TDOT RIGHT OF WAY OR TDOT CONSTRUCTION EASEMENT.

THE CONTRACTOR SHALL COORDINATE AND PERFORM ALL UTILITY RELOCATION SO THAT IT DOES NOT INTERFERE WITH THE RETAINING WALL INSTALLATION.

CONSTRUCTION NOTES

THE BORINGS DRILLED FOR THIS WALL WERE LOCATED ON THE SHOULDER OF THE ROADWAY, AND BOTH BORINGS INITIALLY ENCOUNTERED FILL SOILS. THE BORING DRILLED NEAR STATION 2+60 ENCOUNTERED ABOUT 2½ FEET OF FILL, AND THE BORING DRILLED NEAR STATION 3+45 ENCOUNTERED FILL TO A DEPTH OF ABOUT 2 FEET, WHERE AN UNMARKED WATER LINE WAS ENCOUNTERED. BASED ON THE PROVIDED PROJECT INFORMATION AND THE TEST BORING RESULTS, SOME FILL MAY BE PRESENT NEAR THE ENDS OF THE PROPOSED WALL WHERE IT LIES CLOSE TO THE EXISTING ROADWAY. FOR DESIGN AND ESTIMATION, THE RECOMMENDED WALL TYPES EXCEPT FOR THE SOLDIER PILE AND LAGGING WALL MAY BE SUPPORTED ON A SPREAD FOOTING BEARING IN STIFF OR BETTER RESIDUAL SOILS. DUE TO THE LACK OF INFORMATION RELATIVE TO ITS COMPOSITION AND COMPACTIVE STATE, IF FILL IS PRESENT IN THE WALL FOUNDATION EXCAVATION, THE FILL SHALL BE UNDERCUT AND REPLACED WITH COMPACTED SELECT BACKFILL.

IF PRESENT IN THE PROPOSED WALL CONSTRUCTION AREA, ABANDONED UTILITY LINES AND THEIR ASSOCIATED BACKFILL SHALL BE EXCAVATED AND REMOVED, AND THE EXCAVATION BACKFILLED WITH SELECT BACKFILL COMPACTED TO A MINIMUM OF 95 PERCENT OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY. IT IS RECOMMENDED THAT THE FOUNDATION EXCAVATION NOT BE BACKFILLED WITH WASHED GRANULAR MATERIAL, AS THIS MAY CREATE A SUMP THAT COULD COLLECT AND HOLD WATER BELOW THE WALL FOUNDATION. PRIOR TO FILL PLACEMENT, THE FOUNDATION SUBGRADE SHALL BE EVALUATED BY PERFORMING HAND AUGER BORINGS WITH DYNAMIC CONE PENETROMETER TESTING, AND SHALL BE RELATIVELY LEVEL OR SUITABLY BENCHED AND FREE OF LOOSE SOIL AND ROCK AT THE TIME OF EVALUATION.

TABLE 1-DESIGN REQUIREMENTS AND PARAMETERS

DESCRIPTION	VALUE-MSE WALLS	VALUE-GRAVITY AND SEMI GRAVITY WALLS	VALUE-SOLDIER PILE/LAGGING WALL	NOTE *
DESIGN LIFE	75 YEARS	75 YEARS	75 YEARS	
SEISMIC ACCELERATION COEFFICIENT (As)	0.175	0.175	0.175	
EFFECTIVE (DRAINED) FRICTION ANGLE				
RETAINED BACKFILL-UNCLASSIFIED SITE OR BORROW SOIL	28.5°	28.5°	28.5°	
RETAINED BACKFILL-SELECT BACKFILL	34° TO MAX 40°	34° TO MAX 40°	34° TO MAX 40°	1
REINFORCED BACKFILL	34° TO MAX 40°	NOT APPLICABLE	NOT APPLICABLE	1
UNIT WEIGHT				
UNCLASSIFIED SITE	124 pcf	124 pcf	124 pcf	
SELECT BACKFILL MATERIAL	VARIES	VARIES	VARIES	1A
MINIMUM LENGTH OF SOIL REINFORCEMENT, B	GREATER OF 0.7H OR 8 FT, OR AS SPECIFIED ON THE PLANS	NOT APPLICABLE	NOT APPLICABLE	2,2A
LIMITING ECCENTRICITY	B/4 (SOIL) 3/8B (ROCK)	B/4 (SOIL) 3/8B (ROCK)	NOT APPLICABLE NOT APPLICABLE	
COEFFICIENT OF SLIDING FRICTION	SEE TABLE 2 OR 3	SEE TABLE 2 OR 3	NOT APPLICABLE	3
NOMINAL BEARING CAPACITY	SEE TABLE 2 OR 3	SEE TABLE 2 OR 3	NOT APPLICABLE	3
RESISTANCE FACTORS				
SLIDING-STATIC	1.0	1.0	NOT APPLICABLE	4
SLIDING-COMBINED STATIC+EARTHQUAKE	0.9	0.9	NOT APPLICABLE	4
BEARING-STATIC	0.65	0.55	NOT APPLICABLE	5
BEARING-COMBINED STATIC+EARTHQUAKE	0.9	0.8	NOT APPLICABLE	
PULLOUT RESISTANCE				
STATIC	0.90	NOT APPLICABLE	NOT APPLICABLE	6
COMBINED STATIC/EARTHQUAKE	1.20	NOT APPLICABLE	NOT APPLICABLE	6
TENSILE RESISTANCE OF METALLIC REINFORCEMENTS AND CONNECTORS				
STATIC				
-STRIP REINFORCEMENT	0.75	NOT APPLICABLE	NOT APPLICABLE	7
-GRID REINFORCEMENT	0.65	NOT APPLICABLE	NOT APPLICABLE	7,8
COMBINED STATIC/EARTHQUAKE				
-STRIP REINFORCEMENT	1.00	NOT APPLICABLE	NOT APPLICABLE	7
-GRID REINFORCEMENT	0.85	NOT APPLICABLE	NOT APPLICABLE	7,8
TENSILE RESISTANCE OF GEOSYNTHETIC REINFORCEMENTS AND CONNECTORS				
STATIC	0.90	NOT APPLICABLE	NOT APPLICABLE	
COMBINED STATIC/EARTHQUAKE	1.20	NOT APPLICABLE	NOT APPLICABLE	
FLEXURAL CAPACITY OF VERTICAL ELEMENTS	NOT APPLICABLE	NOT APPLICABLE	0.90	
RESISTANCE FACTORS OF A SINGLE DRIVEN PILE STATIC ANALYSIS METHODS				
SIDE RESISTANCE AND END BEARING: CLAY AND MIXED SOILS				
α-METHOD (TOMLINSON, 1987; SKEMPTON, 1951)	NOT APPLICABLE	NOT APPLICABLE	0.35	
β-METHOD (ESRIG & KIRBY, 1997; SKEMPTON, 1951)	NOT APPLICABLE	NOT APPLICABLE	0.25	
λ-METHOD (VIJAYVERGIYA & FOCHT, 1972; SKEMPTON, 1951)	NOT APPLICABLE	NOT APPLICABLE	0.40	
SIDE RESISTANCE AND END BEARING: SAND				
NORDLUND/THURMAN METHOD (HANNIGAN ET AL, 2005)	NOT APPLICABLE	NOT APPLICABLE	0.45	
SPT-METHOD (MEYERHOF)	NOT APPLICABLE	NOT APPLICABLE	0.30	
CPT-METHOD (SCHMERTMANN)	NOT APPLICABLE	NOT APPLICABLE	0.50	
END BEARING IN ROCK (CANADIAN GEOTECH SOCIETY, 1985)	NOT APPLICABLE	NOT APPLICABLE	0.45	
LATERAL GEOTECHNICAL RESISTANCE OF A SINGLE PILE				
ALL SOILS AND ROCK	NOT APPLICABLE	NOT APPLICABLE	1.0	
RESISTANCE FACTORS OF A SINGLE DRILLED PILE/SHAFT				
SIDE RESISTANCE IN CLAY				
α-METHOD (O'NEILL AND REESE, 1999)	NOT APPLICABLE	NOT APPLICABLE	0.45	
TIP RESISTANCE IN CLAY				
TOTAL STRESS (O'NEILL AND REESE, 1999)	NOT APPLICABLE	NOT APPLICABLE	0.40	
SIDE RESISTANCE IN SAND				
β-METHOD (O'NEILL AND REESE, 1999)	NOT APPLICABLE	NOT APPLICABLE	0.55	
TIP RESISTANCE IN SAND				
O'NEILL AND REESE, 1999	NOT APPLICABLE	NOT APPLICABLE	0.50	
SIDE RESISTANCE IN INTERMEDIATE GEOMATERIALS (IGMs)				
O'NEILL AND REESE, 1999	NOT APPLICABLE	NOT APPLICABLE	0.60	
TIP RESISTANCE IN INTERMEDIATE GEOMATERIALS (IGMs)				
O'NEILL AND REESE, 1999	NOT APPLICABLE	NOT APPLICABLE	0.55	
SIDE RESISTANCE IN ROCK				
HORVATH AND KENNEY (1979), O'NEILL AND REESE (1999)	NOT APPLICABLE	NOT APPLICABLE	0.55	
CARTER AND KULHAWY (1988)	NOT APPLICABLE	NOT APPLICABLE	0.50	
TIP RESISTANCE IN ROCK				
CANADIAN GEOTECH. SOCIETY (1985), O'NEILL AND REESE (1999)	NOT APPLICABLE	NOT APPLICABLE	0.50	
LATERAL GEOTECHNICAL RESISTANCE OF A SINGLE PILE/SHAFT				
ALL MATERIALS	NOT APPLICABLE	NOT APPLICABLE	1.0	

*REFER TO TABLE 1.1 FOR NOTES.

TABLE 1.1
NOTES FOR TABLE 1

NO.	NOTE
1	A MINIMUM FRICTION ANGLE OF 34 DEGREES CAN BE ASSUMED FOR MATERIAL MEETING SPECIFICATIONS IN SECTION F, PART 1, AND ITEM E OF TENNESSEE DEPARTMENT OF TRANSPORTATION SPECIAL PROVISION 624 REGARDING RETAINING WALLS. A HIGHER FRICTION ANGLE CAN BE UTILIZED IF THE CONTRACTOR SUBMITS INDEPENDENT TESTING AND IT IS VERIFIED BY TDOT. HOWEVER, IN NO CASE SHALL THE FRICTION ANGLE FOR ANALYSIS EXCEED 40 DEGREES.
1A	SELECT BACKFILL UNIT WEIGHT TO BE DETERMINED BY CONTRACTOR/DESIGNER DEPENDING ON ACTUAL BACKFILL MATERIAL USED. SELECT BACKFILL IS DEFINED AS MATERIAL MEETING SPECIFICATIONS IN SECTION F, PART 1, AND ITEM E OF TENNESSEE DEPARTMENT OF TRANSPORTATION SPECIAL PROVISION 624 REGARDING RETAINING WALLS. IN ORDER TO UTILIZE EFFECTIVE FRICTION ANGLE PHI FOR SELECT BACKFILL DESIGN, SELECT BACKFILL MUST BE PLACED FOR A MINIMUM ZONE FORMED BY A 1:1 SLOPE FROM 2 FEET BEHIND THE BOTTOM OF BACK OF THE WALL FOOTING OR REINFORCED SOIL ZONE FOR MSE WALLS UP TO FINISHED GRADE AT THE TOP OF THE WALL.
2	H IS DESIGN HEIGHT OF THE WALL AND IS DEFINED AS THE DIFFERENCE IN ELEVATION BETWEEN THE FINISHED GRADE AT THE TOP OF THE WALL AND THE TOP OF LEVELING PAD OR BOTTOM OF FOOTING FOR NON-MSE WALLS. THE TOP OF THE LEVELING PAD SHALL ALWAYS BE BELOW THE MINIMUM EMBEDMENT REFERENCE LINE AS INDICATED ON THE PLANS FOR THAT LOCATION. THE LENGTH OF THE SOIL REINFORCEMENT, B, IS MEASURED FROM THE BACKFACE OF THE WALL FACING UNIT. IN CASE OF GRID TYPE REINFORCEMENTS, THE LENGTH OF THE SOIL REINFORCEMENT IS MEASURED FROM THE BACKFACE OF THE WALL FACING UNIT TO THE LAST FULL TRANSVERSE MEMBER. FOR MODULAR BLOCK FACING UNITS, THE TOTAL LENGTH OF THE REINFORCEMENT, Br, AS MEASURED FROM THE FRONT FACE OF THE WALL IS THE LENGTH B AS DEFINED ABOVE PLUS THE WIDTH OF THE MODULAR BLOCK UNIT (THE HORIZONTAL DIMENSION OF THE BLOCK UNIT MEASURED PERPENDICULAR TO THE WALL FACE).
2A	WALL DESIGNER MUST ADJUST THE REINFORCEMENT LENGTHS BEYOND THOSE MINIMUM REQUIRED LENGTHS, IF REQUIRED, TO MEET BOTH INTERNAL AND EXTERNAL STABILITY REQUIREMENTS. MINIMUM REINFORCEMENT LENGTHS MAY BE REQUIRED FOR GLOBAL STABILITY. THIS REQUIREMENT WILL BE SHOWN IN THE PLANS.
3	THESE VALUES WILL BE PROVIDED IN TABLES 2 AND/OR 3
4	PASSIVE RESISTANCE SHALL NOT BE CONSIDERED IN EVALUATION OF SLIDING RESISTANCE.
5	FOR ALL LIMIT STATES, THE DESIGN LOADING FOR THE MSE RETAINING WALL SYSTEM SHALL NOT EXCEED THE FACTORED GENERAL AND LOCAL BEARING RESISTANCE SPECIFIED IN TABLES 2 OR 3.
6	LIVE LOAD DUE TO VEHICULAR TRAFFIC SHALL BE INCLUDED IN THE COMPUTATIONS TO DETERMINE THE MAXIMUM TENSILE FORCES IN REINFORCEMENT LAYERS, BUT SHALL BE NEGLECTED IN THE COMPUTATIONS FOR PULLOUT RESISTANCE.
7	APPLY TO GROSS CROSS-SECTION LESS SACRIFICIAL AREA. FOR SECTIONS WITH HOLES, REDUCE GROSS AREA IN ACCORDANCE WITH ARTICLE 6.8.3 OF AASHTO (2012) AND APPLY TO NET SECTION LESS SACRIFICIAL AREA.
8	APPLIES TO GRID REINFORCEMENTS CONNECTED TO A RIGID FACING ELEMENT, E.G., A CONCRETE PANEL OR BLOCK. FOR GRID REINFORCEMENTS CONNECTED TO A FLEXIBLE FACING MAT OR WHICH ARE CONTINUOUS WITH THE FACING MAT, USE THE RESISTANCE FACTOR FOR STRIP REINFORCEMENTS.

TABLE 2-FOUNDATION PARAMETERS AND REQUIREMENTS FOR MSE WALLS

STATION LIMITS	FOUNDATION (REINFORCED ZONE) BEARING CONDITION REQUIREMENT	NOMINAL BEARING PRESSURE (psf)	COEFFICIENT OF SLIDING FRICTION
2+60 TO 3+45	RESIDUAL SOIL W/CHERT	4,000	0.4

TABLE 3-FOUNDATION PARAMETERS AND REQUIREMENTS FOR OTHER GRAVITY OR SEMI-GRAVITY WALLS

STATION LIMITS	FOUNDATION BEARING CONDITION REQUIREMENT	NOMINAL BEARING PRESSURE (psf)	COEFFICIENT OF SLIDING FRICTION
2+60 TO 3+45	RESIDUAL SOIL W/CHERT	4,000	0.4

TABLE 4-LPILE PARAMETERS FOR IN-SITU SOIL FOR LATERAL LOAD ANALYSIS OF SOLDIER PILE AND LAGGING WALL

DEPTH BELOW EXISTING GROUND SURFACE (feet)	gamma (pcf)	phi (degrees)	C (ksf)	C_a(ksf)	E_{50}
1.5-15	124	28.5	-	0.150	0.007

JONATHAN MICHAEL SMOLEN
REGISTERED ENGINEER
AGRICULTURE
9/17/14
NO. 00110146
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GEOTECHNICAL DESIGN NOTES
AND REQUIREMENTS
RETAINING WALL NO. 4

STATE ROUTE 320
BEL AIR ROAD
STATION 2+60 TO 3+45
HAMILTON COUNTY

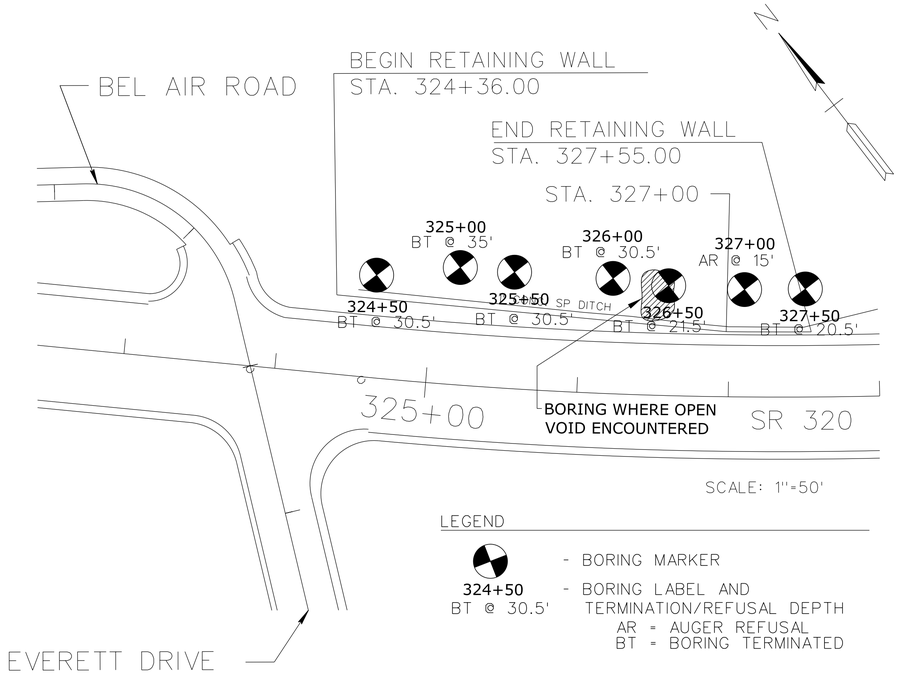
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

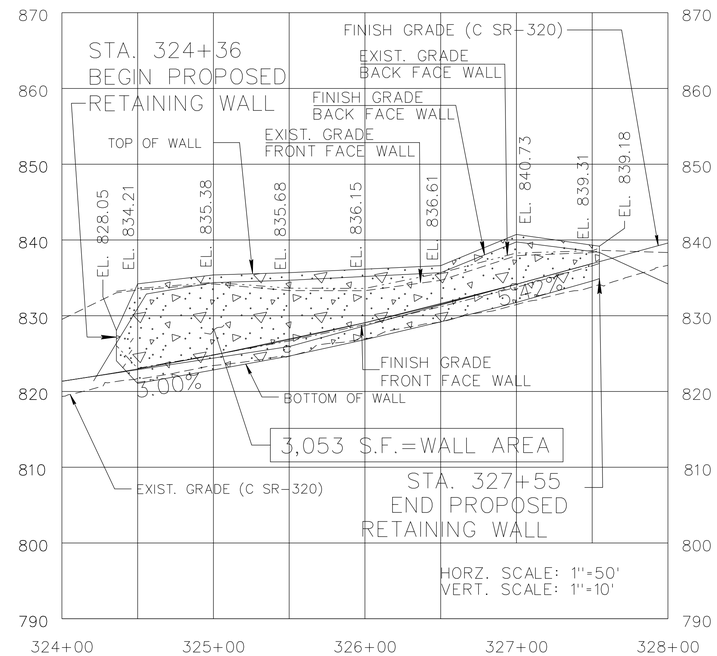
P.E. NO.

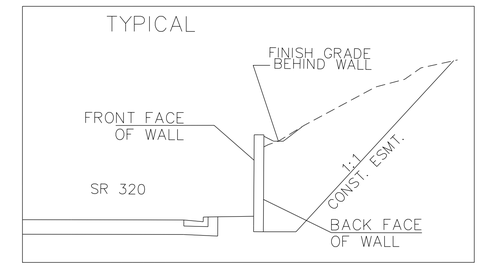
PROJECT NO.	YEAR	SHEET NO.
STP-320(4)	2014	2W8

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

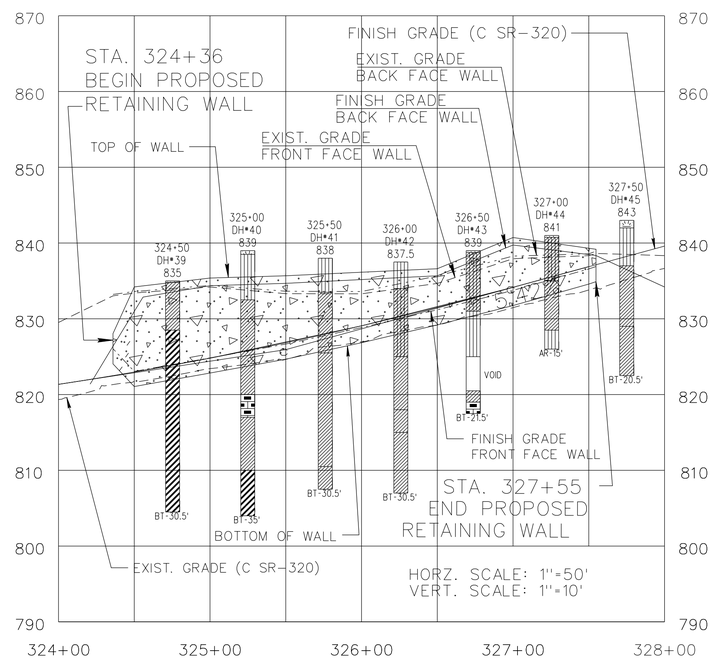






NOT TO SCALE

LEGEND
- TOPSOIL
- FILL
- SANDY SILT (ML)
- SILTY CLAY (CL)
- CHERT



BORING NO.	STATION	OFFSET	GROUND ELEV.	ROCK ELEV.
DH#39	324+50	52.31'LT	835	---
DH#40	325+00	51.14'LT	839	---
DH#41	325+50	50.13'LT	838	---
DH#42	326+00	48.29'LT	838	---
DH#43	326+50	45.52'LT	839	---
DH#44	327+00	43.13'LT	841	826*
DH#45	327+50	43.00'LT	843	---

*The boring drilled near Station 327+00 encountered auger refusal at an elevation of about 826 feet. Auger refusal may have been encountered on a chert boulder.

An open void was encountered in the boring drilled near Station 326+50, and also in the test pit excavated at the boring location. Due to the steep slope along State Route 320, the boring was offset about 12 feet northeast of the planned wall boring staked in the field by the TDOT survey crew. Based on our observation of the open void encountered in the test pit, the void appeared to extend northeast, northwest, and southwest of the northwest end of the test pit excavation. Because the boring and test pit were drilled/excavated about 12 feet away from the planned wall location, it is not known if the void is present below the wall location. Therefore we recommend that the treatment method shown on the "Sinkhole Treatment" drawing should be followed.

SCALE: AS SHOWN

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RETAINING WALL NO. 5
CONCEPTUAL DRAWING

STATE ROUTE 320
STATION 324+36 TO 327+55
HAMILTON COUNTY

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

P.E. NO.

PROJECT NO.	YEAR	SHEET NO.
STP-320(4)	2014	2W8A

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

NOTE: AFTER EXCAVATION IS COMPLETE AND ROCK OPENING IS EXPOSED, THE SITE AND TREATMENT METHOD SHALL BE APPROVED BY A REPRESENTATIVE OF TDOT'S GEOTECHNICAL ENGINEERING SECTION OF THE DIVISION OF MATERIALS AND TESTS. THE TOP 1-3 FEET OF MATERIAL SHALL BE APPROVED BY A REPRESENTATIVE OF TDOT'S GEOTECHNICAL ENGINEERING SECTION OF THE DIVISION OF MATERIALS AND TESTS

SEQUENCE OF CONSTRUCTION:

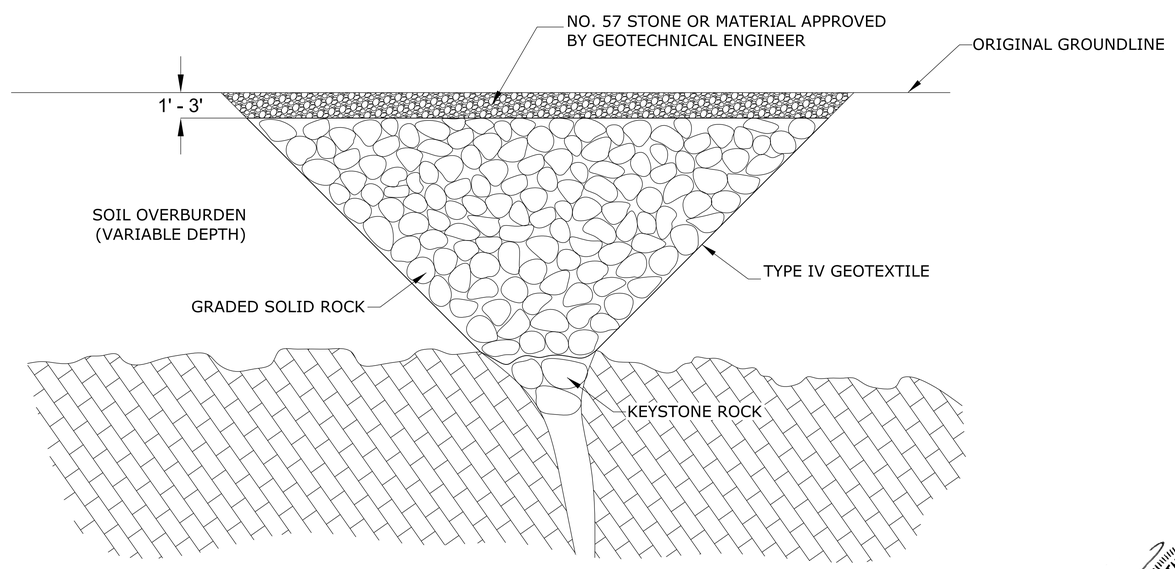
1. EXCAVATE SINKHOLE TO DEFINED OPENING IN BEDROCK, MAKING SURE TO REMOVE ALL SOIL AND DEBRIS.
2. FIT THE OPENING WITH KEYSTONE ROCK, WHICH SHALL BE OF SUFFICIENT SIZE TO LOCK IN PLACE WITHOUT CREATING AN AIRBLOCK TO SUBSURFACE DRAINAGE.
3. PLACE TYPE IV GEOTEXTILE FABRIC (SECTION 740) ON EXCAVATED SLOPES AND BASE OF SINKHOLE.
4. BACKFILL TO A MAXIMUM OF 2 FT. OF THE SPECIFIED GRADE WITH GRADED SOLID ROCK (CLASSIFICATION 203.02, BORROW EXCAVATION).
5. BACKFILL TO A MAXIMUM OF 1 FT. OF THE SPECIFIED GRADE WITH NO. 57 STONE ON TOP OF THE GRADED SOLID ROCK.
6. WRAP TYPE IV GEOTEXTILE OVER NO. 57 STONE.
7. BACKFILL TO GRADE WITH CLAY SOIL FILL COMPACTED TO A MINIMUM OF 95 PERCENT OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT WITHIN 3 PERCENT OF THE OPTIMUM MOISTURE CONTENT.

GRADED SOLID ROCK

BORROW EXCAVATION (GRADED SOLID ROCK) SHALL CONSIST OF THE REMOVAL AND SATISFACTORY PLACEMENT OF SOUND, NON-DEGRADABLE ROCK WITH A MAXIMUM SIZE OF 3 FEET (1 METER). AT LEAST 50 PERCENT OF THE ROCK SHALL BE UNIFORMLY DISTRIBUTED BETWEEN 1 FOOT (30 CENTIMETERS) AND 3 FEET (1 METER) IN DIAMETER AND NO GREATER THAN 10 PERCENT SHALL BE LESS THAT 2 INCHES (50 MILLIMETERS) IN DIAMETER. THE MATERIAL SHALL BE ROUGHLY EQUI-DIMENSIONAL IN SHAPE. THIN, SLABBY MATERIAL WILL NOT BE ACCEPTED. THE CONTRACTOR SHALL BE REQUIRED TO PROCESS THE MATERIAL WITH AN ACCEPTABLE MECHANICAL SCREENING PROCESS THAT PRODUCES THE REQUIRED GRADATION. WHEN THE MATERIAL IS SUBJECTED TO FIVE ALTERATIONS OF THE SODIUM SULFATE SOUNDNESS TEST (AASHTO T-104), THE WEIGHTED PERCENTAGE OF LOSS SHALL NOT BE MORE THAN 12. THE MATERIAL SHALL BE APPROVED BY THE ENGINEER BEFORE USE.

ESTIMATED QUANTITIES

QUANTITY	ITEM NO.	DESCRIPTION
200 CY	203-01	RD & DRAINAGE EXCAVATION (UNCLASSIFIED)
400 TONS	203-02.01	BORROW EXCAVATION (GRADED SOLID ROCK)
120 TONS	303-10.01	MINERAL AGGREGATE (#57)
300 SY	740-10.04	GEOTEXTILE (TYPE IV)



SCALE: NTS

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SINKHOLE TREATMENT

STATE ROUTE 320
STATION 324+36 TO 327+55
HAMILTON COUNTY

P.E. NO. _____

PROJECT NO.	YEAR	SHEET NO.
STP-320(4)	2014	2W9

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

RETAINING WALL DESIGN NOTES

UNLESS SPECIFICALLY STATED OTHERWISE IN THE CONTRACT PLANS, THE BIDDING FOR, THE DESIGN OF AND THE CONSTRUCTION OF RETAINING WALLS SHOWN IN THE PLANS SHALL BE GOVERNED BY THE TENNESSEE DEPARTMENT OF TRANSPORTATION SPECIAL PROVISION 624 REGARDING RETAINING WALLS. THIS SPECIAL PROVISION SHALL BE CONSIDERED AS ONE OF THOSE DOCUMENTS WHICH THE BIDDER/CONTRACTOR HAS EXAMINED AND MADE HIMSELF FAMILIAR WITH AS DESCRIBED IN SECTION 102.04 - EXAMINATION OF THE SITE, THE WORK, THE PLANS, AND THE SPECIFICATIONS IN THE TDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

EXCAVATION FOR THE WALL AND/OR ITS FOOTING SHALL NOT BE ACCOMPLISHED UNTIL THE CONTRACTOR HAS SUBMITTED WALL DESIGNS AND CALCULATIONS AND HAS BEEN ISSUED AN APPROVED SET OF WALL PLANS AND HAS LABOR AND MATERIAL RESOURCES AVAILABLE TO BEGIN AND CONTINUE WALL CONSTRUCTION IMMEDIATELY AFTER EXCAVATION.

THIS WALL SHALL BE DESIGNED IN ACCORDANCE WITH LRFD DESIGN PROCEDURES AND REQUIREMENTS AS DESCRIBED IN AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 2012 AND INTERIMS.

THE WALL DESIGNER SHALL PROVIDE RETAINING WALL PLANS, DETAILS AND CALCULATIONS AS REQUIRED BY SPECIAL PROVISION 624 AND AS REQUIRED HEREIN.

- THE WALL DESIGNER SHALL UTILIZE THE GEOTECHNICAL PARAMETERS AND RESISTANCE FACTORS AS PROVIDED FOR EACH PROJECT RETAINING WALL ON THE WALL CONCEPT SHEET AND RELATED RETAINING WALL SHEETS TO PREPARE AND SUBMIT DESIGN CALCULATIONS. LOAD FACTORS AND OTHER PERTINENT DESIGN REQUIREMENTS PROVIDED IN AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 2012 AND INTERIMS SHALL BE USED.
- CALCULATIONS FOR BOTH INTERNAL (BEARING CAPACITY, SLIDING, SETTLEMENT) AND EXTERNAL (GLOBAL) STABILITY SHALL BE PROVIDED FOR EACH CRITICAL WALL SECTION WHICH DEMONSTRATES THE REQUIRED CAPACITY TO DEMAND RATIO OF 1.0 IS MET UTILIZING THE DESIGN PARAMETERS PROVIDED. THE WALL DESIGNER/CONTRACTOR PLANS MUST INCLUDE ANY FOUNDATION IMPROVEMENTS AS REQUIRED HEREIN ON THE WALL DESIGNER/CONTRACTOR'S WALL ELEVATION VIEWS AND ANY CROSS-SECTIONAL DETAIL DRAWINGS.
- LOAD COMBINATIONS STRENGTH I, EXTREME EVENT I, AND EXTREME EVENT II AS GIVEN IN TABLE 4-1 OF PUBLICATION FHWA-NHI-10-024/FHWA GEC 011, DESIGN AND CONSTRUCTION OF MECHANICALLY STABILIZED EARTH WALLS AND REINFORCED SOIL SLOPES, NOVEMBER 2009 FOR MSE WALLS SHALL BE EVALUATED FOR MSE WALLS. LOAD COMBNATIONS FOR OTHER WALL TYPES SHALL BE AS GIVEN IN AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 2012 AND INTERIMS.

NOTE REGARDING CONSTRUCTION SLOPES

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING THE EXCAVATION IN ACCORDANCE WITH OSHA AND OTHER APPLICABLE STATE AND LOCAL REGULATIONS REGARDING CONSTRUCTION SLOPES AND TRENCHES. IN ADDITION TO FOLLOWING APPLICABLE REGULATORY REQUIREMENTS, AS A MINIMUM REQUIREMENT, ALL TEMPORARY CONSTRUCTION SLOPES SHALL BE PLACED AT A MAXIMUM OF A 1:1 SLOPE IN SOIL AND SHALL NOT BE LEFT OPEN WITHOUT SHORING FOR ANY LONGER THAN ABSOLUTELY NECESSARY. THE CONTRACTOR BUILDING THE WALL SHALL ENSURE THAT THESE TEMPORARY BACK SLOPES ARE NOT AND DO NOT BECOME UNSTABLE. IF SLOPE IS UNSTABLE, BECOMES UNSTABLE, IS CUT STEEPER THAN A 1:1 SLOPE OR IS UNACCEPTABLE FOR ANOTHER REASON, THEN TEMPORARY SHORING SHALL BE USED. ANY UNUSUAL SOIL CONDITIONS OTHER THAN THOSE ASSUMED SHOULD BE REPORTED TO THE PROJECT ENGINEER.

ACCEPTABLE WALL TYPES

CAST-IN-PLACE CONCRETE CANTILEVER WALL
SOLDIER PILE/LAGGING WALL

PROPRIETARY WALL SYSTEM SUPPLIERS/INSTALLERS SHALL BE THOSE LISTED AS PRE-APPROVED IN SPECIAL PROVISION 624.

WALL SHALL BE DESIGNED AND CONSTRUCTED WITH MATERIALS APPROPRIATE TO ACHIEVE SPECIFIED DESIGN LIFE.

THE COST OF THE FOLLOWING ITEMS TO BE INCLUDED IN THE UNIT PRICE BID FOR THIS WALL (604-07.05):
1) ASHLAR STONE FINISH
2) APPLIED TEXTURE FINISH (MOUNTAIN GRAY, FED. SPEC. 36440) APPLIED TO ALL EXPOSED SURFACES
3) RETAINING WALL DRAINAGE, SEE STANDARD DRAWING STD-10-1
4) TEMPORARY SHORING AND CONSTRUCTION SLOPES

TEMPORARY SHORING SHALL BE REQUIRED FOR CONSTRUCTION OF CIP WALL.

TABLE 1-DESIGN REQUIREMENTS AND PARAMETERS

DESCRIPTION	VALUE-GRAVITY AND SEMI GRAVITY WALLS	VALUE-SOLDIER PILE/LAGGING WALL	NOTE *
DESIGN LIFE	75 YEARS	75 YEARS	
SEISMIC ACCELERATION COEFFICIENT (As)	0.175	0.175	
EFFECTIVE (DRAINED) FRICTION ANGLE			
RETAINED BACKFILL-UNCLASSIFIED SITE OR BORROW SOIL	28.5°	28.5°	
RETAINED BACKFILL-SELECT BACKFILL	34° TO MAX 40°	34° TO MAX 40°	1
REINFORCED BACKFILL	NOT APPLICABLE	NOT APPLICABLE	1
UNIT WEIGHT			
UNCLASSIFIED SITE	124 pcf	124 pcf	
SELECT BACKFILL MATERIAL	VARIES	VARIES	1A
LIMITING ECCENTRICITY	B/4 (SOIL) 3/8B (ROCK)	NOT APPLICABLE NOT APPLICABLE	
COEFFICIENT OF SLIDING FRICTION	SEE TABLE 2	NOT APPLICABLE	2
NOMINAL BEARING CAPACITY	SEE TABLE 2	NOT APPLICABLE	2
RESISTANCE FACTORS			
SLIDING-STATIC	1.0	NOT APPLICABLE	3
SLIDING-COMBINED STATIC+EARTHQUAKE	0.9	NOT APPLICABLE	3
BEARING-STATIC	0.55	NOT APPLICABLE	
BEARING-COMBINED STATIC+EARTHQUAKE	0.8	NOT APPLICABLE	
FLEXURAL CAPACITY OF VERTICAL ELEMENTS	NOT APPLICABLE	0.90	
RESISTANCE FACTORS OF A SINGLE DRIVEN PILE STATIC ANALYSIS METHODS			
SIDE RESISTANCE AND END BEARING: CLAY AND MIXED SOILS			
α-METHOD (TOMLINSON, 1987; SKEMPTON, 1951)	NOT APPLICABLE	0.35	
β-METHOD (ESRIG & KIRBY, 1997; SKEMPTON, 1951)	NOT APPLICABLE	0.25	
λ-METHOD (VIJAYVERGIYA & FOCHT, 1972; SKEMPTON, 1951)	NOT APPLICABLE	0.40	
SIDE RESISTANCE AND END BEARING: SAND			
NORDLUND/THURMAN METHOD (HANNIGAN ET AL, 2005)	NOT APPLICABLE	0.45	
SPT-METHOD (MEYERHOF)	NOT APPLICABLE	0.30	
CPT-METHOD (SCHMERTMANN)	NOT APPLICABLE	0.50	
END BEARING IN ROCK (CANADIAN GEOTECH SOCIETY, 1985)	NOT APPLICABLE	0.45	
LATERAL GEOTECHNICAL RESISTANCE OF A SINGLE PILE			
ALL SOILS AND ROCK	NOT APPLICABLE	1.0	
RESISTANCE FACTORS OF A SINGLE DRILLED PILE/SHAFT			
SIDE RESISTANCE IN CLAY			
α-METHOD (O'NEILL AND REESE, 1999)	NOT APPLICABLE	0.45	
TIP RESISTANCE IN CLAY			
TOTAL STRESS (O'NEILL AND REESE, 1999)	NOT APPLICABLE	0.40	
SIDE RESISTANCE IN SAND			
β-METHOD (O'NEILL AND REESE, 1999)	NOT APPLICABLE	0.55	
TIP RESISTANCE IN SAND			
O'NEILL AND REESE, 1999	NOT APPLICABLE	0.50	
SIDE RESISTANCE IN INTERMEDIATE GEOMATERIALS (IGMs)			
O'NEILL AND REESE, 1999	NOT APPLICABLE	0.60	
TIP RESISTANCE IN INTERMEDIATE GEOMATERIALS (IGMs)			
O'NEILL AND REESE, 1999	NOT APPLICABLE	0.55	
SIDE RESISTANCE IN ROCK			
HORVATH AND KENNEY (1979), O'NEILL AND REESE (1999)	NOT APPLICABLE	0.55	
CARTER AND KULHAWY (1988)	NOT APPLICABLE	0.50	
TIP RESISTANCE IN ROCK			
CANADIAN GEOTECH. SOCIETY (1985), O'NEILL AND REESE (1999)	NOT APPLICABLE	0.50	
LATERAL GEOTECHNICAL RESISTANCE OF A SINGLE PILE/SHAFT			
ALL MATERIALS	NOT APPLICABLE	1.0	

*REFER TO TABLE 1.1 FOR NOTES.

TABLE 1.1
NOTES FOR TABLE 1

NO.	NOTE
1	A MINIMUM FRICTION ANGLE OF 34 DEGREES CAN BE ASSUMED FOR MATERIAL MEETING SPECIFICATIONS IN SECTION F, PART 1, AND ITEM E OF TENNESSEE DEPARTMENT OF TRANSPORTATION SPECIAL PROVISION 624 REGARDING RETAINING WALLS. A HIGHER FRICTION ANGLE CAN BE UTILIZED IF THE CONTRACTOR SUBMITS INDEPENDENT TESTING AND IT IS VERIFIED BY TDOT. HOWEVER, IN NO CASE SHALL THE FRICTION ANGLE FOR ANALYSIS EXCEED 40 DEGREES.
1A	SELECT BACKFILL UNIT WEIGHT TO BE DETERMINED BY CONTRACTOR/DESIGNER DEPENDING ON ACTUAL BACKFILL MATERIAL USED. SELECT BACKFILL IS DEFINED AS MATERIAL MEETING SPECIFICATIONS IN SECTION F, PART 1, AND ITEM E OF TENNESSEE DEPARTMENT OF TRANSPORTATION SPECIAL PROVISION 624 REGARDING RETAINING WALLS. IN ORDER TO UTILIZE EFFECTIVE FRICTION ANGLE PHI FOR SELECT BACKFILL DESIGN, SELECT BACKFILL MUST BE PLACED FOR A MINIMUM ZONE FORMED BY A 1:1 SLOPE FROM 2 FEET BEHIND THE BOTTOM OF BACK OF THE WALL FOOTING UP TO FINISHED GRADE AT THE TOP OF THE WALL.
2	THESE VALUES ARE PROVIDED IN TABLE 2
3	PASSIVE RESISTANCE SHALL NOT BE CONSIDERED IN EVALUATION OF SLIDING RESISTANCE.

TABLE 2-FOUNDATION PARAMETERS AND REQUIREMENTS FOR GRAVITY OR SEMI-GRAVITY WALLS

STATION LIMITS	FOUNDATION BEARING CONDITION REQUIREMENT	NOMINAL BEARING PRESSURE (psf)	COEFFICIENT OF SLIDING FRICTION (CONCRETE ON SOIL)	MINIMUM EMBEDMENT (feet)
324+36 TO 327+55	RESIDUAL SOIL W/CHERT	8,000	0.4	2

TABLE 3-LPILE PARAMETERS FOR IN-SITU SOIL FOR LATERAL LOAD ANALYSIS OF SOLDIER PILE AND LAGGING WALL

DEPTH BELOW EXISTING GROUND SURFACE (feet)	gamma (pcf)	phi (degrees)	C (ksf)	C_a(ksf)	E_{50}
1.5-35.5	124	28.5	-	0.150	0.007
35.5-50.5	120	28.5	-	0.150	0.010

OTHER DESIGN REQUIREMENTS

SOLDIER PILE/LAGGING WALLS SHALL HAVE PERMANENT PRECAST PANELS FOR LAGGING OR CAST-IN-PLACE STRUCTURAL CONCRETE WALL FACING. BOTH SYSTEMS SHALL BE CAPABLE OF TRANSMITTING AND RESISTING ALL DESIGN LOADS EXERTED ON WALL COMPONENTS.

TIMBER LAGGING SHALL ONLY BE USED TO TEMPORARILY SUPPORT MATERIAL TO ALLOW FOR TOP DOWN CONSTRUCTION. TIMBER LAGGING IS NEITHER AN ACCEPTABLE PERMANENT WALL FACING NOR AN ACCEPTABLE PERMANENT STRUCTURAL WALL ELEMENT.

THE WALL DESIGNER SHALL VERIFY THAT THE WALL HAS ADEQUATE EMBEDMENT AND/OR ANCHORAGE TO COMPENSATE FOR THE WALL BEING CONSTRUCTED ON A SLOPE.

THE WALL SHALL HAVE AN EMBEDMENT DEPTH OF AT LEAST 2 FEET REGARDLESS OF THE TYPE OF WALL CONSTRUCTED.

THE WALL SHALL HAVE A DRAINAGE GUTTER AT THE TOP DESIGNED TO CARRY SURFACE RUNOFF TO EITHER OR BOTH ENDS OF WALL. DETAILS OF THIS DRAINAGE FEATURE SHALL BE PROVIDED IN WALL DESIGNER/CONTRACTOR'S WALL DESIGN PLANS.

THE CONTRACTOR/WALL DESIGNER SHALL INSTALL WALL SYSTEM, INCLUDING ANCHORS, REINFORCING ELEMENTS, AND TEMPORARY EXCAVATION SLOPES ONLY WITHIN TDOT RIGHT OF WAY OR TDOT CONSTRUCTION EASEMENT.

THE CONTRACTOR SHALL COORDINATE AND PERFORM ALL UTILITY RELOCATION SO THAT IT DOES NOT INTERFERE WITH THE RETAINING WALL INSTALLATION.

IF A STEEPER THAN 1:1 BACKSLOPE IS REQUIRED BEHIND RETAINING WALL OR TEMPORARY SHORING, THE phi ANGLE FOR SELECT BACKFILL WILL NOT BE AVAILABLE FOR DESIGN AND THE phi ANGLE FOR UNCLASSIFIED SITE OR BORROW SITE WILL NEED TO BE USED FOR DESIGN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GEOTECHNICAL NOTES
AND REQUIREMENTS
RETAINING WALL NO. 5

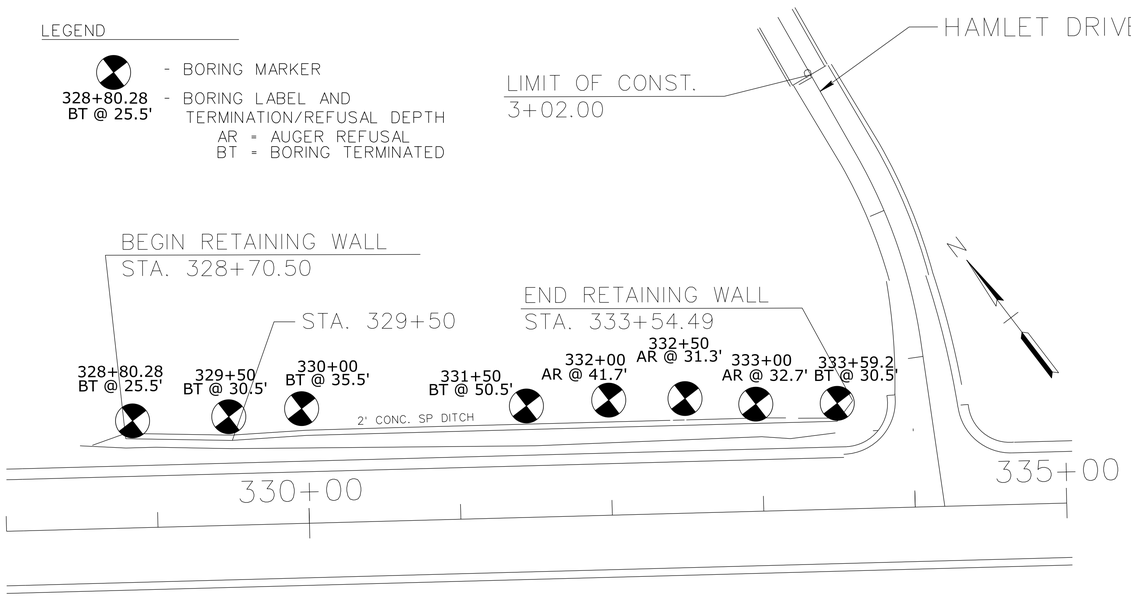
STATE ROUTE 320
STATION 324+36 TO 327+55
HAMILTON COUNTY

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

LEGEND

- BORING MARKER

328+80.28
BT @ 25.5' - BORING LABEL AND TERMINATION/REFUSAL DEPTH
AR = AUGER REFUSAL
BT = BORING TERMINATED



BORING NO.	STATION	OFFSET	GROUND ELEV.	ROCK ELEV.
DH#46	328+80.28	59.00'LT	847	---
DH#47	329+50	57.55'LT	859	---
DH#48	330+00	55.55'LT	868	---
DH#51	331+50	57.55'LT	884	---
DH#52	332+00	57.55'LT	885	843.3*
DH#53	332+50	57.55'LT	886	854.7*
DH#54	333+00	58.34'LT	886	853.3*
DH#55	333+59.2	59.00'LT	875	---

* These borings encountered auger refusal at the approximate elevations shown. Auger refusal may have been encountered on a chert boulder.

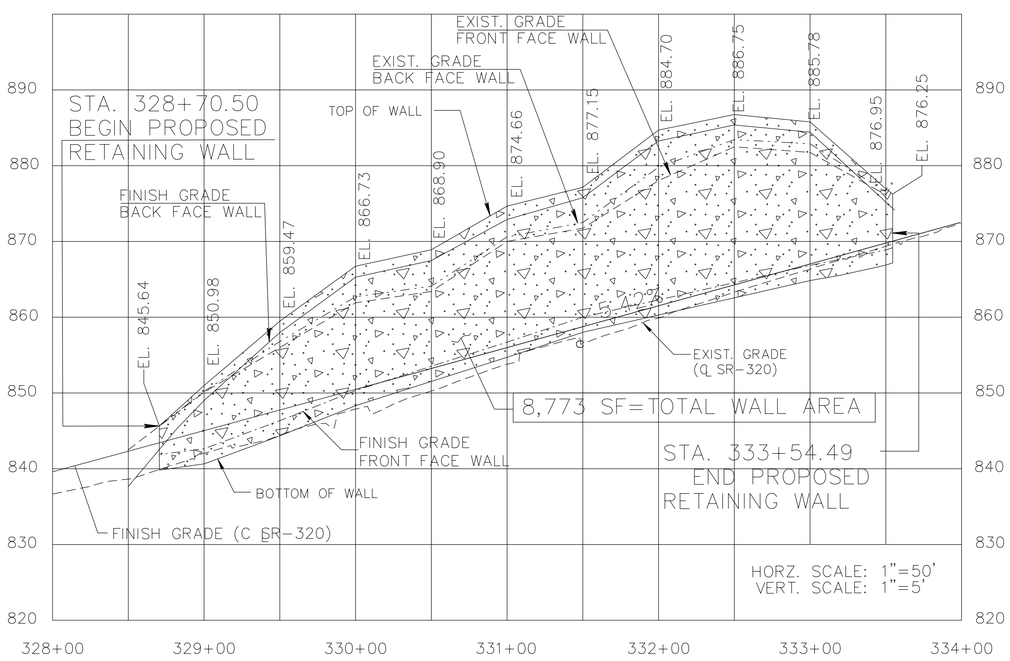
P.E. NO.

PROJECT NO.	YEAR	SHEET NO.
STP-320(4)	2014	2W10

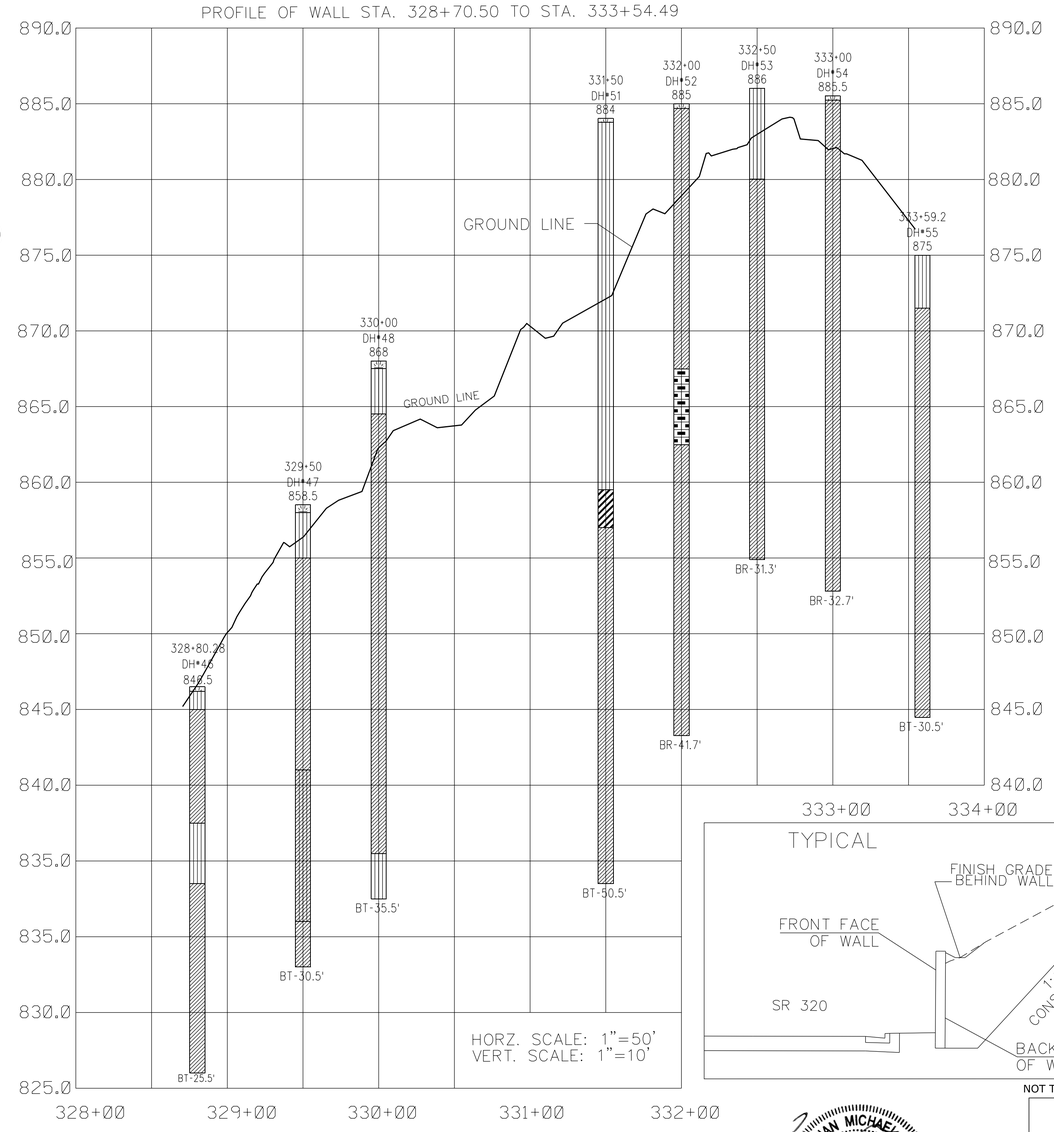
REVISIONS

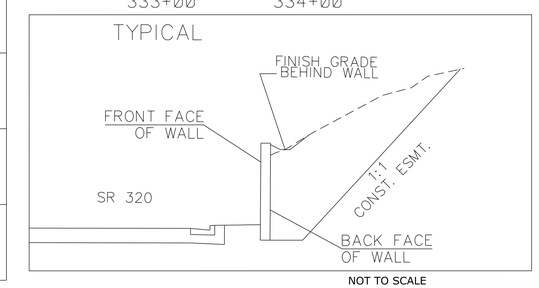
NO.	DATE	BY	BRIEF DESCRIPTION

PROFILE OF RETAINING WALL STA. 328+80.28 TO STA. 333+59.20



PROFILE OF WALL STA. 328+70.50 TO STA. 333+54.49





NOT TO SCALE

HORZ. SCALE: AS SHOWN
VERT. SCALE: AS SHOWN

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RETAINING WALL NO. 6
CONCEPTUAL DRAWING

STATE ROUTE 320
STATION 328+70.50 TO 333+54.49
HAMILTON COUNTY

P.E. NO. _____

PROJECT NO.	YEAR	SHEET NO.
STP-320(4)	2014	2W11

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

RETAINING WALL DESIGN NOTES

UNLESS SPECIFICALLY STATED OTHERWISE IN THE CONTRACT PLANS, THE BIDDING FOR, THE DESIGN OF AND THE CONSTRUCTION OF RETAINING WALLS SHOWN IN THE PLANS SHALL BE GOVERNED BY THE TENNESSEE DEPARTMENT OF TRANSPORTATION SPECIAL PROVISION 624 REGARDING RETAINING WALLS. THIS SPECIAL PROVISION SHALL BE CONSIDERED AS ONE OF THOSE DOCUMENTS WHICH THE BIDDER/CONTRACTOR HAS EXAMINED AND MADE HIMSELF FAMILIAR WITH AS DESCRIBED IN SECTION 102.04 - EXAMINATION OF THE SITE, THE WORK, THE PLANS, AND THE SPECIFICATIONS IN THE TDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

EXCAVATION FOR THE WALL AND/OR ITS FOOTING SHALL NOT BE ACCOMPLISHED UNTIL THE CONTRACTOR HAS SUBMITTED WALL DESIGNS AND CALCULATIONS AND HAS BEEN ISSUED AN APPROVED SET OF WALL PLANS AND HAS LABOR AND MATERIAL RESOURCES AVAILABLE TO BEGIN AND CONTINUE WALL CONSTRUCTION IMMEDIATELY AFTER EXCAVATION.

THIS WALL SHALL BE DESIGNED IN ACCORDANCE WITH LRFD DESIGN PROCEDURES AND REQUIREMENTS AS DESCRIBED IN AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 2012 AND INTERIMS.

THE WALL DESIGNER SHALL PROVIDE RETAINING WALL PLANS, DETAILS AND CALCULATIONS AS REQUIRED BY SPECIAL PROVISION 624 AND AS REQUIRED HEREIN.

- THE WALL DESIGNER SHALL UTILIZE THE GEOTECHNICAL PARAMETERS AND RESISTANCE FACTORS AS PROVIDED FOR EACH PROJECT RETAINING WALL ON THE WALL CONCEPT SHEET AND RELATED RETAINING WALL SHEETS TO PREPARE AND SUBMIT DESIGN CALCULATIONS. LOAD FACTORS AND OTHER PERTINENT DESIGN REQUIREMENTS PROVIDED IN AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 2012 AND INTERIMS SHALL BE USED.

- CALCULATIONS FOR BOTH INTERNAL (BEARING CAPACITY, SLIDING, SETTLEMENT) AND EXTERNAL (GLOBAL) STABILITY SHALL BE PROVIDED FOR EACH CRITICAL WALL SECTION WHICH DEMONSTRATES THE REQUIRED CAPACITY TO DEMAND RATIO OF 1.0 IS MET UTILIZING THE DESIGN PARAMETERS PROVIDED. THE WALL DESIGNER/CONTRACTOR PLANS MUST INCLUDE ANY FOUNDATION IMPROVEMENTS AS REQUIRED HEREIN ON THE WALL DESIGNER/CONTRACTOR'S WALL ELEVATION VIEWS AND ANY CROSS-SECTIONAL DETAIL DRAWINGS.

- LOAD COMBINATIONS AS GIVEN IN AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 2012 AND INTERIMS, SHALL BE EVALUATED FOR EACH WALL.

NOTE REGARDING CONSTRUCTION SLOPES

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING THE EXCAVATION IN ACCORDANCE WITH OSHA AND OTHER APPLICABLE STATE AND LOCAL REGULATIONS REGARDING CONSTRUCTION SLOPES AND TRENCHES. IN ADDITION TO FOLLOWING APPLICABLE REGULATORY REQUIREMENTS, AS A MINIMUM REQUIREMENT, ALL TEMPORARY CONSTRUCTION SLOPES SHALL BE PLACED AT A MAXIMUM OF A 1:1 SLOPE IN SOIL AND SHALL NOT BE LEFT OPEN WITHOUT SHORING FOR ANY LONGER THAN ABSOLUTELY NECESSARY. THE CONTRACTOR BUILDING THE WALL SHALL ENSURE THAT THESE TEMPORARY BACK SLOPES ARE NOT AND DO NOT BECOME UNSTABLE. IF SLOPE IS UNSTABLE, BECOMES UNSTABLE, IS CUT STEEPER THAN A 1:1 SLOPE OR IS UNACCEPTABLE FOR ANOTHER REASON, THEN TEMPORARY SHORING SHALL BE USED. ANY UNUSUAL SOIL CONDITIONS OTHER THAN THOSE ASSUMED SHOULD BE REPORTED TO THE PROJECT ENGINEER.

ACCEPTABLE WALL TYPES

CAST-IN-PLACE CONCRETE CANTILEVER WALL
SOLDIER PILE/LAGGING WALL

PROPRIETARY WALL SYSTEM SUPPLIERS/INSTALLERS SHALL BE THOSE LISTED AS PRE-APPROVED IN THE SPECIAL PROVISION 624.

WALL SHALL BE DESIGNED AND CONSTRUCTED WITH MATERIALS APPROPRIATE TO ACHIEVE SPECIFIED DESIGN LIFE.

THE COST OF THE FOLLOWING ITEMS TO BE INCLUDED IN THE UNIT PRICE BID FOR THIS WALL (604-07.06):
1) ASHLAR STONE FINISH
2) APPLIED TEXTURE FINISH (MOUNTAIN GRAY, FED. SPEC. 36440) APPLIED TO ALL EXPOSED SURFACES
3) RETAINING WALL DRAINAGE, SEE STANDARD DRAWING STD-10-1
4) TEMPORARY SHORING AND CONSTRUCTION SLOPES

TEMPORARY SHORING SHALL BE REQUIRED FOR CONSTRUCTION OF CIP WALLS.

TABLE 1-DESIGN REQUIREMENTS AND PARAMETERS

DESCRIPTION	VALUE-GRAVITY AND SEMI GRAVITY WALLS	VALUE-SOLDIER PILE/LAGGING WALL	NOTE •
DESIGN LIFE	75 YEARS	75 YEARS	
SEISMIC ACCELERATION COEFFICIENT (As)	0.175	0.175	
EFFECTIVE (DRAINED) FRICTION ANGLE			
RETAINED BACKFILL-UNCLASSIFIED SITE OR BORROW SOIL	28.5°	28.5°	
RETAINED BACKFILL-SELECT BACKFILL	34° TO MAX 40°	34° TO MAX 40°	1
REINFORCED BACKFILL	NOT APPLICABLE	NOT APPLICABLE	1
UNIT WEIGHT			
UNCLASSIFIED SITE	124 pcf	124 pcf	
SELECT BACKFILL MATERIAL	VARIES	VARIES	1A
LIMITING ECCENTRICITY	B/4 (SOIL) 3/8B (ROCK)	NOT APPLICABLE NOT APPLICABLE	
COEFFICIENT OF SLIDING FRICTION	SEE TABLE 2	NOT APPLICABLE	2
NOMINAL BEARING CAPACITY	SEE TABLE 2	NOT APPLICABLE	2
RESISTANCE FACTORS			
SLIDING-STATIC	1.0	NOT APPLICABLE	3
SLIDING-COMBINED STATIC+EARTHQUAKE	0.9	NOT APPLICABLE	3
BEARING-STATIC	0.55	NOT APPLICABLE	
BEARING-COMBINED STATIC+EARTHQUAKE	0.8	NOT APPLICABLE	
FLEXURAL CAPACITY OF VERTICAL ELEMENTS	NOT APPLICABLE	0.90	
RESISTANCE FACTORS OF A SINGLE DRIVEN PILE STATIC ANALYSIS METHODS			
SIDE RESISTANCE AND END BEARING: CLAY AND MIXED SOILS			
α-METHOD (TOMLINSON, 1987; SKEMPTON, 1951)	NOT APPLICABLE	0.35	
β-METHOD (ESRIG & KIRBY, 1997; SKEMPTON, 1951)	NOT APPLICABLE	0.25	
λ-METHOD (VIJAYVERGIYA & FOCHT, 1972; SKEMPTON, 1951)	NOT APPLICABLE	0.40	
SIDE RESISTANCE AND END BEARING: SAND			
NORDLUND/THURMAN METHOD (HANNIGAN ET AL, 2005)	NOT APPLICABLE	0.45	
SPT-METHOD (MEYERHOF)	NOT APPLICABLE	0.30	
CPT-METHOD (SCHMERTMANN)	NOT APPLICABLE	0.50	
END BEARING IN ROCK (CANADIAN GEOTECH SOCIETY, 1985)	NOT APPLICABLE	0.45	
LATERAL GEOTECHNICAL RESISTANCE OF A SINGLE PILE			
ALL SOILS AND ROCK	NOT APPLICABLE	1.0	
RESISTANCE FACTORS OF A SINGLE DRILLED PILE/SHAFT			
SIDE RESISTANCE IN CLAY			
α-METHOD (O'NEILL AND REESE, 1999)	NOT APPLICABLE	0.45	
TIP RESISTANCE IN CLAY			
TOTAL STRESS (O'NEILL AND REESE, 1999)	NOT APPLICABLE	0.40	
SIDE RESISTANCE IN SAND			
β-METHOD (O'NEILL AND REESE, 1999)	NOT APPLICABLE	0.55	
TIP RESISTANCE IN SAND			
O'NEILL AND REESE, 1999	NOT APPLICABLE	0.50	
SIDE RESISTANCE IN INTERMEDIATE GEOMATERIALS (IGMs)			
O'NEILL AND REESE, 1999	NOT APPLICABLE	0.60	
TIP RESISTANCE IN INTERMEDIATE GEOMATERIALS (IGMs)			
O'NEILL AND REESE, 1999	NOT APPLICABLE	0.55	
SIDE RESISTANCE IN ROCK			
HORVATH AND KENNEY (1979), O'NEILL AND REESE (1999)	NOT APPLICABLE	0.55	
CARTER AND KULHAWY (1988)	NOT APPLICABLE	0.50	
TIP RESISTANCE IN ROCK			
CANADIAN GEOTECH. SOCIETY (1985), O'NEILL AND REESE (1999)	NOT APPLICABLE	0.50	
LATERAL GEOTECHNICAL RESISTANCE OF A SINGLE PILE/SHAFT			
ALL MATERIALS	NOT APPLICABLE	1.0	

•REFER TO TABLE 1.1 FOR NOTES.

TABLE 1.1
NOTES FOR TABLE 1

NO.	NOTE
1	A MINIMUM FRICTION ANGLE OF 34 DEGREES CAN BE ASSUMED FOR MATERIAL MEETING SPECIFICATIONS IN SECTION F, PART 1, AND ITEM E OF TENNESSEE DEPARTMENT OF TRANSPORTATION SPECIAL PROVISION 624 REGARDING RETAINING WALLS. A HIGHER FRICTION ANGLE CAN BE UTILIZED IF THE CONTRACTOR SUBMITS INDEPENDENT TESTING AND IT IS VERIFIED BY TDOT. HOWEVER, IN NO CASE SHALL THE FRICTION ANGLE FOR ANALYSIS EXCEED 40 DEGREES.
1A	SELECT BACKFILL UNIT WEIGHT TO BE DETERMINED BY CONTRACTOR/DESIGNER DEPENDING ON ACTUAL BACKFILL MATERIAL USED. SELECT BACKFILL IS DEFINED AS MATERIAL MEETING SPECIFICATIONS IN SECTION F, PART 1, AND ITEM E OF TENNESSEE DEPARTMENT OF TRANSPORTATION SPECIAL PROVISION 624 REGARDING RETAINING WALLS. IN ORDER TO UTILIZE EFFECTIVE FRICTION ANGLE PHI FOR SELECT BACKFILL DESIGN, SELECT BACKFILL MUST BE PLACED FOR A MINIMUM ZONE FORMED BY A 1:1 SLOPE FROM 2 FEET BEHIND THE BOTTOM OF BACK OF THE WALL FOOTING UP TO FINISHED GRADE AT THE TOP OF THE WALL.
2	THESE VALUES ARE PROVIDED IN TABLE 2
3	PASSIVE RESISTANCE SHALL NOT BE CONSIDERED IN EVALUATION OF SLIDING RESISTANCE.

TABLE 2-FOUNDATION PARAMETERS AND REQUIREMENTS FOR GRAVITY OR SEMI-GRAVITY WALLS

STATION LIMITS	FOUNDATION BEARING CONDITION REQUIREMENT	NOMINAL BEARING PRESSURE (psf)	COEFFICIENT OF SLIDING FRICTION (CONCRETE ON SOIL)	MINIMUM EMBEDMENT (feet)
328+70.50 TO 333+54.49	RESIDUAL SOIL W/CHERT	8,000	0.4	5

TABLE 3-LPILE PARAMETERS FOR IN-SITU SOIL FOR LATERAL LOAD ANALYSIS OF SOLDIER PILE AND LAGGING WALL

DEPTH BELOW EXISTING GROUND SURFACE (feet)	gamma (pcf)	phi (degrees)	C (ksf)	C_a(ksf)	E_{50}
1.5-35.5	124	28.5	-	0.150	0.007
35.5-50.5	120	28.5	-	0.150	0.010

OTHER DESIGN REQUIREMENTS

SOLDIER PILE/LAGGING WALLS SHALL HAVE PERMANENT PRECAST PANELS FOR LAGGING OR CAST-IN-PLACE STRUCTURAL CONCRETE WALL FACING. BOTH SYSTEMS SHALL BE CAPABLE OF TRANSMITTING AND RESISTING ALL DESIGN LOADS EXERTED ON WALL COMPONENTS.

TIMBER LAGGING SHALL ONLY BE USED TO TEMPORARILY SUPPORT MATERIAL TO ALLOW FOR TOP DOWN CONSTRUCTION. TIMBER LAGGING IS NEITHER AN ACCEPTABLE PERMANENT WALL FACING NOR AN ACCEPTABLE PERMANENT STRUCTURAL WALL ELEMENT.

THE WALL DESIGNER SHALL VERIFY THAT THE WALL HAS ADEQUATE EMBEDMENT AND/OR ANCHORAGE TO COMPENSATE FOR THE WALL BEING CONSTRUCTED ON A SLOPE.

THE WALL SHALL HAVE AN EMBEDMENT DEPTH OF AT LEAST 5 FEET, REGARDLESS OF THE TYPE OF WALL CONSTRUCTED.

THE WALL SHALL HAVE A DRAINAGE GUTTER AT THE TOP DESIGNED TO CARRY SURFACE RUNOFF TO EITHER OR BOTH ENDS OF WALL. DETAILS OF THIS DRAINAGE FEATURE SHALL BE PROVIDED IN WALL DESIGNER/CONTRACTOR'S WALL DESIGN PLANS.

THE CONTRACTOR/WALL DESIGNER SHALL INSTALL WALL SYSTEM, INCLUDING ANCHORS, REINFORCING ELEMENTS, AND TEMPORARY EXCAVATION SLOPES ONLY WITHIN TDOT RIGHT OF WAY OR TDOT CONSTRUCTION EASEMENT.

THE CONTRACTOR SHALL COORDINATE AND PERFORM ALL UTILITY RELOCATION SO THAT IT DOES NOT INTERFERE WITH THE RETAINING WALL INSTALLATION.

IF A STEEPER THAN 1:1 BACKSLOPE IS REQUIRED BEHIND RETAINING WALL OR TEMPORARY SHORING, THE phi ANGLE FOR SELECT BACKFILL WILL NOT BE AVAILABLE FOR DESIGN AND THE phi ANGLE FOR UNCLASSIFIED SITE OR BORROW SITE WILL NEED TO BE USED FOR DESIGN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GEOTECHNICAL DESIGN NOTES
AND REQUIREMENTS
RETAINING WALL NO. 6

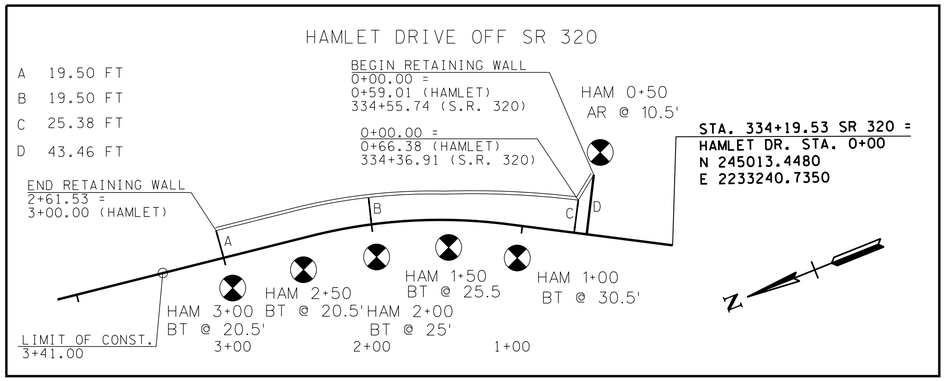
STATE ROUTE 320
STATION 328+70.50 TO 333+54.49
HAMILTON COUNTY

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	2W12

RETAINING WALL #7

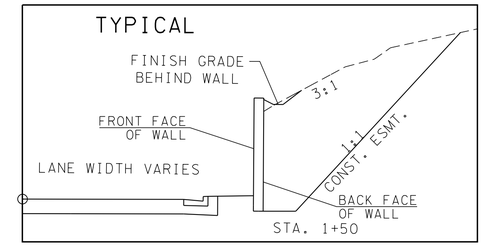
STA. 0+59 TO STA. 3+05 HAMLET DRIVE



LEGEND

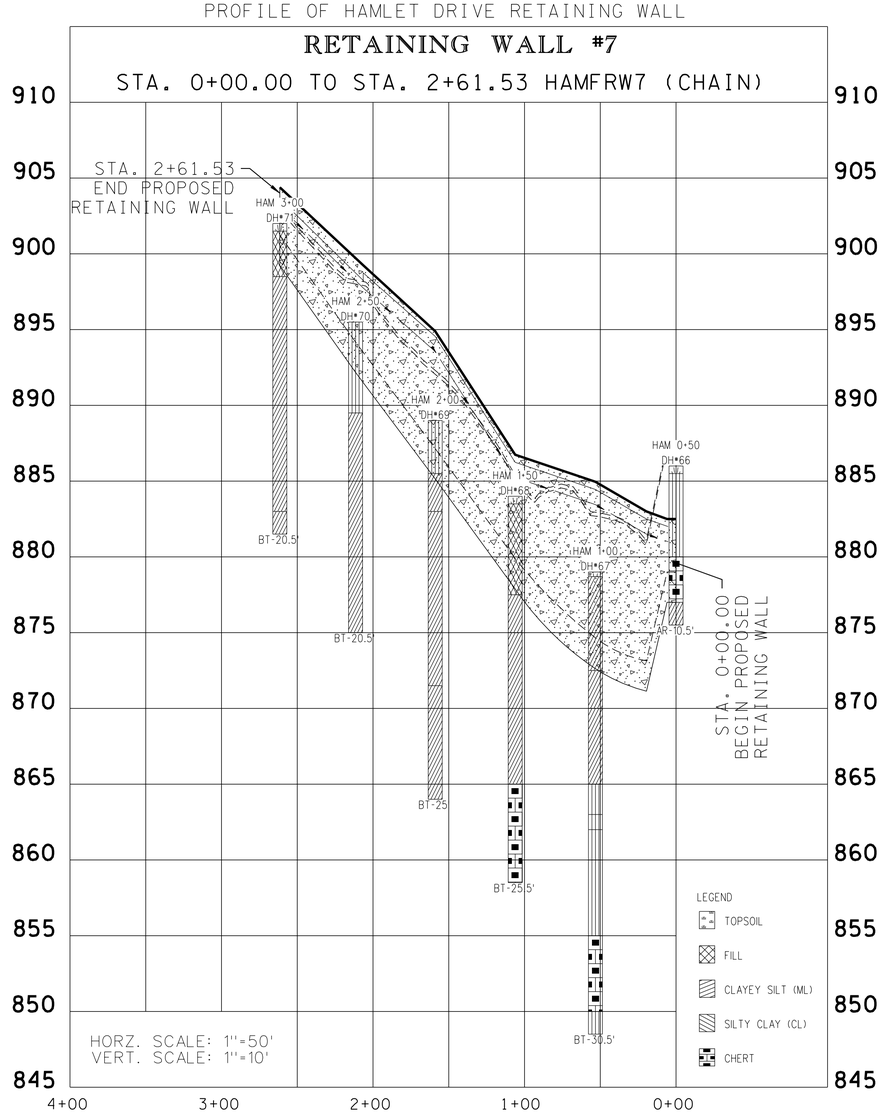
- BORING MARKER

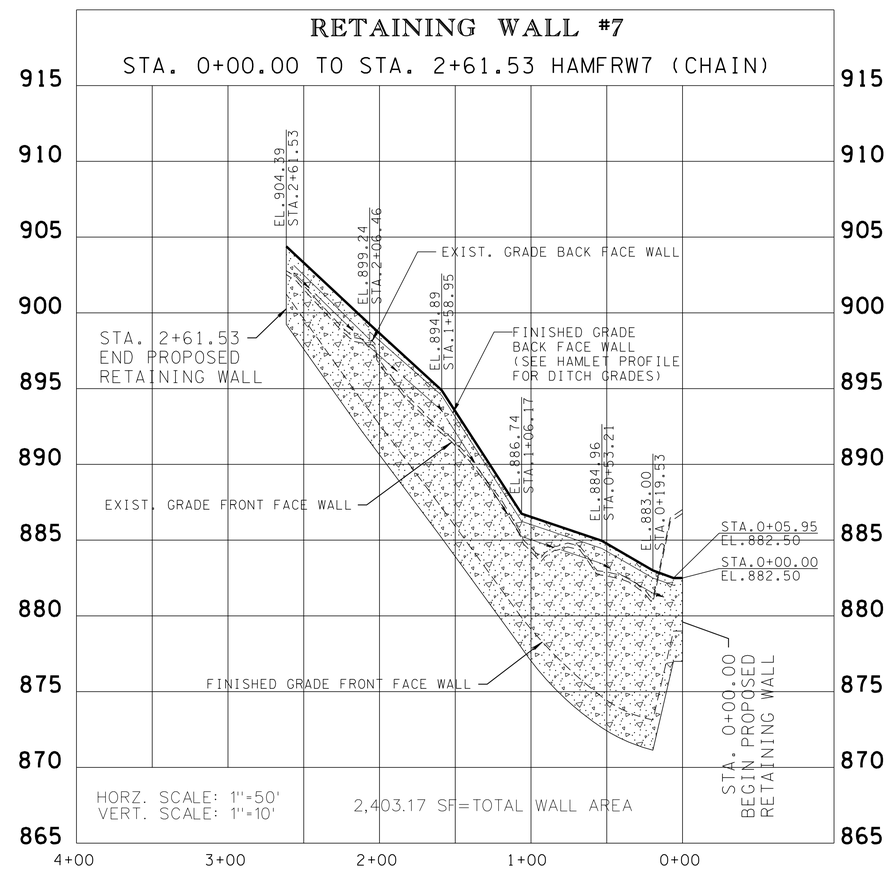
HAM 0+50 AR @ 10.5' - BORING LABEL AND TERMINATION/REFUSAL DEPTH
AR = AUGER REFUSAL
BT = BORING TERMINATED



BORING NO.	STATION	OFFSET	GROUND ELEV.	ROCK ELEV.
DH#66	Ham 0+50	54.5'RT	886	---
DH#67	Ham 1+00	21.3'LT	879	---
DH#68	Ham 1+50	17.4'LT	884	---
DH#69	Ham 2+00	14.9'LT	889	---
DH#70	Ham 2+50	16.0'LT	895.5	---
DH#71	Ham 3+00	16.9'LT	902	---

PROFILE OF HAMLET DRIVE RETAINING WALL





PT 1		FACE OF WALL #7		
DISTANCE N/A		FROM	N/A	
	N	E	STATION	OFFSET
	245,043.7811	2,233,307.4534	0+00.00	N/A
PT 2		FACE OF WALL #7		
DISTANCE 19.53'		FROM	PT 1	
	N	E	STATION	OFFSET
	245,059.0343	2,233,295.2584	0+19.53	N/A
CUR 1		FACE OF WALL #7		
RADIUS 207.5'		LENGTH 21.53'		
	N	E	STATION	OFFSET
PC	245,073.1888	2,233,302.5374	0+35.45	N/A
PI	245,082.7695	2,233,307.4659	0+46.22	N/A
PT	245,092.8090	2,233,311.3756	0+56.98	N/A
CUR 2		FACE OF WALL #7		
RADIUS 369.5'		LENGTH 101.59'		
	N	E	STATION	OFFSET
PC	245,138.6457	2,233,329.2219	1+06.16	N/A
PI	245,186.1944	2,233,347.9864	1+57.28	N/A
PT	245,237.0516	2,233,353.1372	2+07.75	N/A
PT 4		FACE OF WALL #7		
DISTANCE 53.78'		FROM	CUR 2	
	N	E	STATION	OFFSET
	245,290.5534	2,233,358.5558	2+61.53	N/A

THE COGO ALIGNMENT IS AVAILABLE FOR THE FRONT FACE OF RETAINING WALL #7.

CHAIN NAME: HAMFRW7

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RETAINING WALL NO. 7
CONCEPTUAL DRAWING

STATE ROUTE 320
STATION 0+59 TO 3+05
HAMILTON COUNTY

9/19/2014 11:26:24 AM
G:\2000025-00\CONSTRUCTION\RETAINING WALL DWG\SME_2014-09-17\2W12-13 - Hamlet Drive (9-17-14).dgn

P.E. NO. _____

PROJECT NO.	YEAR	SHEET NO.
STP-320(4)	2014	2W13

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

RETAINING WALL DESIGN NOTES

UNLESS SPECIFICALLY STATED OTHERWISE IN THE CONTRACT PLANS, THE BIDDING FOR, THE DESIGN OF AND THE CONSTRUCTION OF RETAINING WALLS SHOWN IN THE PLANS SHALL BE GOVERNED BY THE TENNESSEE DEPARTMENT OF TRANSPORTATION SPECIAL PROVISION 624 REGARDING RETAINING WALLS. THIS SPECIAL PROVISION SHALL BE CONSIDERED AS ONE OF THOSE DOCUMENTS WHICH THE BIDDER/CONTRACTOR HAS EXAMINED AND MADE HIMSELF FAMILIAR WITH AS DESCRIBED IN SECTION 102.04 - EXAMINATION OF THE SITE, THE WORK, THE PLANS, AND THE SPECIFICATIONS IN THE TDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

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ACCEPTABLE WALL TYPES

CAST-IN-PLACE GRAVITY WALL
CAST-IN-PLACE CONCRETE CANTILEVER WALL
SOLDIER PILE/LAGGING WALL

PROPRIETARY WALL SYSTEM SUPPLIERS/INSTALLERS SHALL BE THOSE LISTED AS PRE-APPROVED IN SPECIAL PROVISION 624.

WALL SHALL BE DESIGNED AND CONSTRUCTED WITH MATERIALS APPROPRIATE TO ACHIEVE SPECIFIED DESIGN LIFE.

THE COST OF THE FOLLOWING ITEMS TO BE INCLUDED IN THE UNIT PRICE BID FOR THIS WALL (604-07.07):
1) ASHLAR STONE FINISH
2) APPLIED TEXTURE FINISH (MOUNTAIN GRAY, FED. SPEC. 36440) APPLIED TO ALL EXPOSED SURFACES
3) RETAINING WALL DRAINAGE, SEE STANDARD DRAWING STD-10-1
4) TEMPORARY SHORING AND CONSTRUCTION SLOPES

TEMPORARY SHORING SHALL BE REQUIRED FOR CONSTRUCTION OF CIP WALL BEYOND STA. 2+00.

TABLE 1-DESIGN REQUIREMENTS AND PARAMETERS

DESCRIPTION	VALUE-GRAVITY AND SEMI GRAVITY WALLS	VALUE-SOLDIER PILE/LAGGING WALL	NOTE *
DESIGN LIFE	75 YEARS	75 YEARS	
SEISMIC ACCELERATION COEFFICIENT (As)	0.175	0.175	
EFFECTIVE (DRAINED) FRICTION ANGLE			
RETAINED BACKFILL-UNCLASSIFIED SITE OR BORROW SOIL	28.5°	28.5°	
RETAINED BACKFILL-SELECT BACKFILL	34° TO MAX 40°	34° TO MAX 40°	1
REINFORCED BACKFILL	NOT APPLICABLE	NOT APPLICABLE	1
UNIT WEIGHT			
UNCLASSIFIED SITE	124 pcf	124 pcf	
SELECT BACKFILL MATERIAL	VARIES	VARIES	1A
LIMITING ECCENTRICITY	B/4 (SOIL) 3/8B (ROCK)	NOT APPLICABLE NOT APPLICABLE	
COEFFICIENT OF SLIDING FRICTION	SEE TABLE 2	NOT APPLICABLE	2
NOMINAL BEARING CAPACITY	SEE TABLE 2	NOT APPLICABLE	2
RESISTANCE FACTORS			
SLIDING-STATIC	1.0	NOT APPLICABLE	3
SLIDING-COMBINED STATIC+EARTHQUAKE	0.9	NOT APPLICABLE	3
BEARING-STATIC	0.55	NOT APPLICABLE	
BEARING-COMBINED STATIC+EARTHQUAKE	0.8	NOT APPLICABLE	
FLEXURAL CAPACITY OF VERTICAL ELEMENTS	NOT APPLICABLE	0.90	
RESISTANCE FACTORS OF A SINGLE DRIVEN PILE STATIC ANALYSIS METHODS			
SIDE RESISTANCE AND END BEARING: CLAY AND MIXED SOILS			
α-METHOD (TOMLINSON, 1987: SKEMPTON, 1951)	NOT APPLICABLE	0.35	
β-METHOD (ESRIG & KIRBY, 1997: SKEMPTON, 1951)	NOT APPLICABLE	0.25	
λ-METHOD (VIJAYVERGIYA & FOCHT, 1972: SKEMPTON, 1951)	NOT APPLICABLE	0.40	
SIDE RESISTANCE AND END BEARING: SAND			
NORDLUND/THURMAN METHOD (HANNIGAN ET AL, 2005)	NOT APPLICABLE	0.45	
SPT-METHOD (MEYERHOF)	NOT APPLICABLE	0.30	
CPT-METHOD (SCHMERTMANN)	NOT APPLICABLE	0.50	
END BEARING IN ROCK (CANADIAN GEOTECH SOCIETY, 1985)	NOT APPLICABLE	0.45	
LATERAL GEOTECHNICAL RESISTANCE OF A SINGLE PILE			
ALL SOILS AND ROCK	NOT APPLICABLE	1.0	
RESISTANCE FACTORS OF A SINGLE DRILLED PILE/SHAFT			
SIDE RESISTANCE IN CLAY			
α-METHOD (O'NEILL AND REESE, 1999)	NOT APPLICABLE	0.45	
TIP RESISTANCE IN CLAY			
TOTAL STRESS (O'NEILL AND REESE, 1999)	NOT APPLICABLE	0.40	
SIDE RESISTANCE IN SAND			
β-METHOD (O'NEILL AND REESE, 1999)	NOT APPLICABLE	0.55	
TIP RESISTANCE IN SAND			
O'NEILL AND REESE, 1999	NOT APPLICABLE	0.50	
SIDE RESISTANCE IN INTERMEDIATE GEOMATERIALS (IGMs)			
O'NEILL AND REESE, 1999	NOT APPLICABLE	0.60	
TIP RESISTANCE IN INTERMEDIATE GEOMATERIALS (IGMs)			
O'NEILL AND REESE, 1999	NOT APPLICABLE	0.55	
SIDE RESISTANCE IN ROCK			
HORVATH AND KENNEY (1979), O'NEILL AND REESE (1999)	NOT APPLICABLE	0.55	
CARTER AND KULHAWY (1988)	NOT APPLICABLE	0.50	
TIP RESISTANCE IN ROCK			
CANADIAN GEOTECH. SOCIETY (1985), O'NEILL AND REESE (1999)	NOT APPLICABLE	0.50	
LATERAL GEOTECHNICAL RESISTANCE OF A SINGLE PILE/SHAFT			
ALL MATERIALS	NOT APPLICABLE	1.0	

*REFER TO TABLE 1.1 FOR NOTES.

TABLE 1.1
NOTES FOR TABLE 1

NO.	NOTE
1	A MINIMUM FRICTION ANGLE OF 34 DEGREES CAN BE ASSUMED FOR MATERIAL MEETING SPECIFICATIONS IN SECTION F, PART 1, AND ITEM E OF TENNESSEE DEPARTMENT OF TRANSPORTATION SPECIAL PROVISION 624 REGARDING RETAINING WALLS. A HIGHER FRICTION ANGLE CAN BE UTILIZED IF THE CONTRACTOR SUBMITS INDEPENDENT TESTING AND IT IS VERIFIED BY TDOT. HOWEVER, IN NO CASE SHALL THE FRICTION ANGLE FOR ANALYSIS EXCEED 40 DEGREES.
1A	SELECT BACKFILL UNIT WEIGHT TO BE DETERMINED BY CONTRACTOR/DESIGNER DEPENDING ON ACTUAL BACKFILL MATERIAL USED. SELECT BACKFILL IS DEFINED AS MATERIAL MEETING SPECIFICATIONS IN SECTION F, PART 1, AND ITEM E OF TENNESSEE DEPARTMENT OF TRANSPORTATION SPECIAL PROVISION 624 REGARDING RETAINING WALLS. IN ORDER TO UTILIZE EFFECTIVE FRICTION ANGLE PHI FOR SELECT BACKFILL DESIGN, SELECT BACKFILL MUST BE PLACED FOR A MINIMUM ZONE FORMED BY A 1:1 SLOPE FROM 2 FEET BEHIND THE BOTTOM OF BACK OF THE WALL FOOTING UP TO FINISHED GRADE AT THE TOP OF THE WALL.
2	THESE VALUES ARE PROVIDED IN TABLE 2
3	PASSIVE RESISTANCE SHALL NOT BE CONSIDERED IN EVALUATION OF SLIDING RESISTANCE.

TABLE 2-FOUNDATION PARAMETERS AND REQUIREMENTS FOR GRAVITY OR SEMI-GRAVITY WALLS

STATION LIMITS	FOUNDATION BEARING CONDITION REQUIREMENT	NOMINAL BEARING PRESSURE (psf)	COEFFICIENT OF SLIDING FRICTION	MINIMUM EMBEDMENT (feet)
0+59 TO 3+05	RESIDUAL SOIL W/CHERT	6,000	0.4	2
	MIN. 2 FT. SELECT BACKFILL	6,000	0.5	2

TABLE 3-LPILE PARAMETERS FOR IN-SITU SOIL FOR LATERAL LOAD ANALYSIS OF SOLDIER PILE AND LAGGING WALL

DEPTH BELOW EXISTING GROUND SURFACE (feet)	gamma (pcf)	phi (degrees)	C (ksf)	C_a(ksf)	E_{50}
1.5-30	124	28.5	-	0.150	0.007

OTHER DESIGN REQUIREMENTS

SOLDIER PILE/LAGGING WALLS SHALL HAVE PERMANENT PRECAST PANELS FOR LAGGING OR CAST-IN-PLACE STRUCTURAL CONCRETE WALL FACING. BOTH SYSTEMS SHALL BE CAPABLE OF TRANSMITTING AND RESISTING ALL DESIGN LOADS EXERTED ON WALL COMPONENTS.

TIMBER LAGGING SHALL ONLY BE USED TO TEMPORARILY SUPPORT MATERIAL TO ALLOW FOR TOP DOWN CONSTRUCTION. TIMBER LAGGING IS NEITHER AN ACCEPTABLE PERMANENT WALL FACING NOR AN ACCEPTABLE PERMANENT STRUCTURAL WALL ELEMENT.

THE WALL DESIGNER SHALL VERIFY THAT THE WALL HAS ADEQUATE EMBEDMENT AND/OR ANCHORAGE TO COMPENSATE FOR THE WALL BEING CONSTRUCTED ON A SLOPE.

THE WALL SHALL HAVE AN EMBEDMENT DEPTH OF AT LEAST 2 FEET, REGARDLESS OF THE TYPE OF WALL CONSTRUCTED.

THE CONTRACTOR/WALL DESIGNER SHALL INSTALL WALL SYSTEM, INCLUDING ANCHORS, REINFORCING ELEMENTS, AND TEMPORARY EXCAVATION SLOPES ONLY WITHIN TDOT RIGHT OF WAY OR TDOT CONSTRUCTION EASEMENT.

THE CONTRACTOR SHALL COORDINATE AND PERFORM ALL UTILITY RELOCATION SO THAT IT DOES NOT INTERFERE WITH THE RETAINING WALL INSTALLATION.

IF A STEEPER THAN 1:1 BACKSLOPE IS REQUIRED BEHIND RETAINING WALL OR TEMPORARY SHORING, THE phi ANGLE FOR SELECT BACKFILL WILL NOT BE AVAILABLE FOR DESIGN AND THE phi ANGLE FOR UNCLASSIFIED SITE OR BORROW SITE WILL NEED TO BE USED FOR DESIGN.

THE WALL SHALL HAVE A DRAINAGE GUTTER AT THE TOP DESIGNED TO CARRY SURFACE RUNOFF TO EITHER OR BOTH ENDS OF WALL. DETAILS OF THIS DRAINAGE FEATURE SHALL BE PROVIDED IN WALL DESIGNER/CONTRACTOR'S WALL DESIGN PLANS.

IF CONTRACTOR/DESIGNER DETERMINES THAT COEFFICIENT OF SLIDING FRICTION FOR CONCRETE ON SOIL IS INSUFFICIENT, THE FOOTING MAY BE DESIGNED WITH AN UNDERCUT OF 2 FEET AND BACKFILL OF SELECT FILL AS DEFINED IN NOTE 1A. CONTRACTOR WILL CONSIDER THIS AS PART OF THE ORIGINAL DESIGN/CONSTRUCTION COST OF THE WALL.

CONSTRUCTION NOTES

EXISTING UNDERGROUND UTILITIES WILL NEED TO BE RELOCATED TO CONSTRUCT THE WALL. ABANDONED UTILITY LINES AND THEIR ASSOCIATED BACKFILL SHALL BE EXCAVATED AND REMOVED FROM THE WALL CONSTRUCTION AREA, AND THE EXCAVATION BACKFILLED WITH COMPACTED SELECT FILL. IT IS RECOMMENDED THAT THE FOUNDATION EXCAVATION NOT BE BACKFILLED WITH WASHED GRANULAR MATERIAL, AS THIS MAY CREATE A SUMP THAT COULD COLLECT AND HOLD WATER BELOW THE WALL FOUNDATION.

PRIOR TO FILL PLACEMENT, THE FOUNDATION SUBGRADE SHALL BE EVALUATED BY PERFORMING HAND AUGER BORINGS WITH DYNAMIC CONE PENETROMETER TESTING, AND SHALL BE RELATIVELY LEVEL OR SUITABLY BENCHED AND FREE OF LOOSE SOIL AND ROCK AT THE TIME OF EVALUATION.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GEOTECHNICAL DESIGN NOTES
AND REQUIREMENTS
RETAINING WALL NO. 7

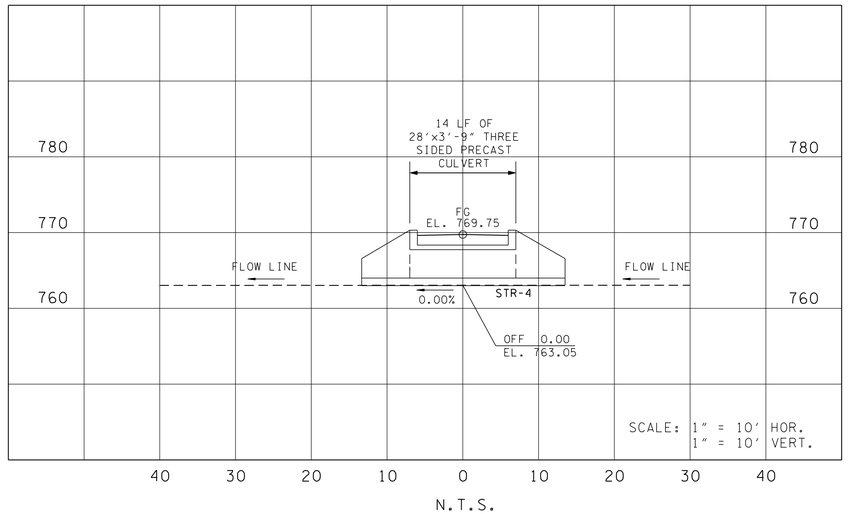
STATE ROUTE 320
HAMLET DRIVE
STATION 0+59 TO 3+05
HAMILTON COUNTY

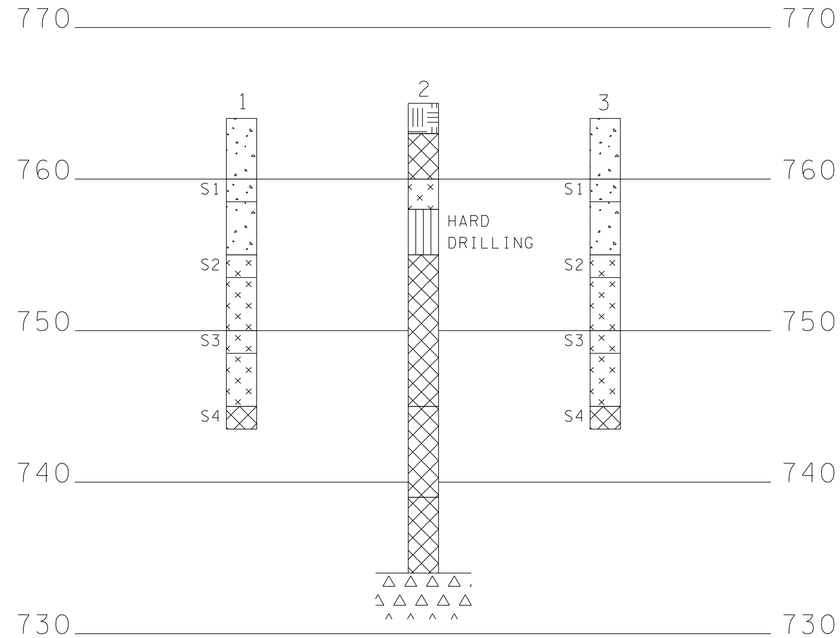
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	2W14

THREE SIDED PRECAST CULVERT STRUCTURE

STA. 0+62.75

PVT. DR. 304+06.60 LT. SR-320





SOFT SOIL

GRAVEL OR SAND

SAND

CLAY, SILTY OR CHERTY

CHERT

BORING LOCATION

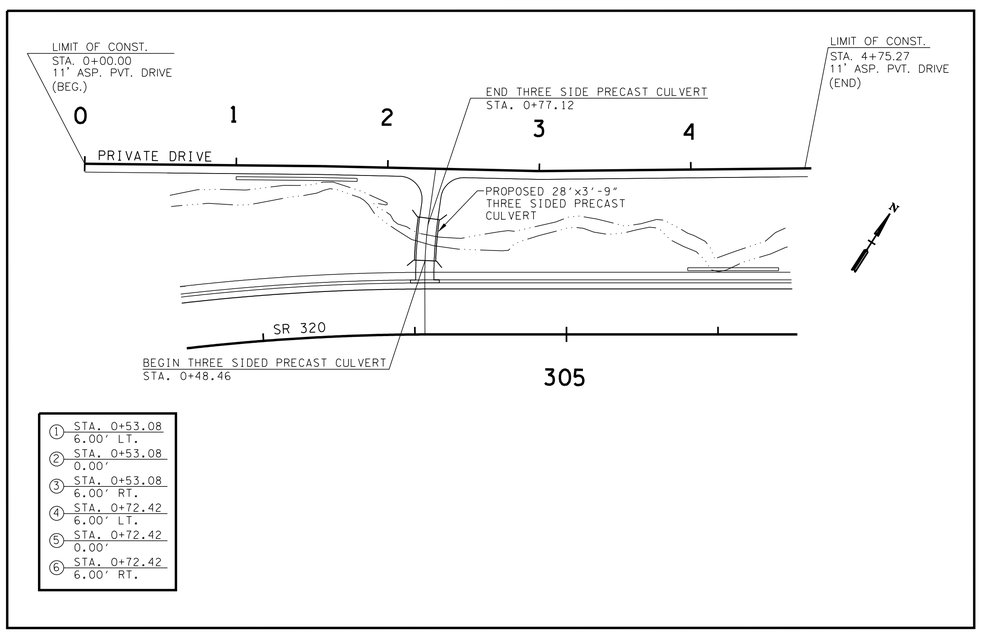
BORING NO.	STATION	OFF SET	DEPTH	GROUND ELEVATION	ROCK ELEVATION
1	301+50	85' LT	20.5'	764.0	-----
2	301+70	80' LT	31.0'	765.0	734.0
3	301+90	120' LT	20.5'	764.0	-----

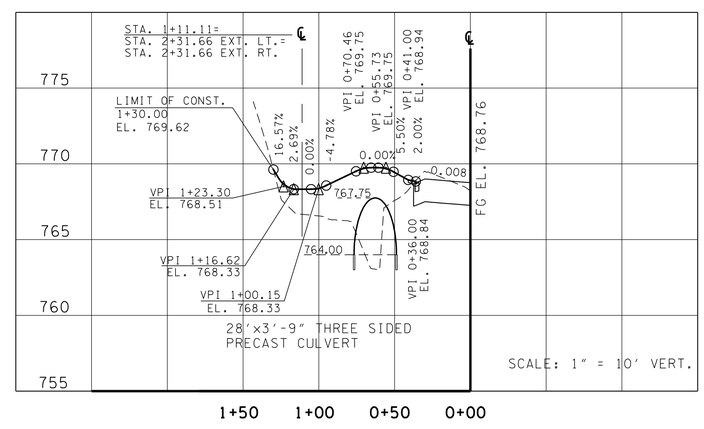
BORING NO. 1 ○ 20.5' TOTAL DEPTH DRILLED

BORING NO. 2 ○ 31' DEPTH TO REFUSAL

1 BORING NO.

SPLIT SPOON SAMPLE NO. S1





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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SLAB
BRIDGE

STATE ROUTE 320 DRIVEWAY

HAMILTON COUNTY

SCALE: 1"= 50' HORIZ.

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	STP-320(4)	2X

COORDINATE VALUES ARE NAD/83 (1995), AND ARE DATUM ADJUSTED BY THE FACTOR OF 0.99998, AND ARE TIED TO THE TENNESSEE GEODETIC REFERENCE NETWORK. ALL ELEVATIONS ARE REFERENCED TO NAVD 1988.

CONTROL POINTS

POINT	NORTH	EAST	ELEV.	STATION	OFFSET	DESCRIPTION
S3	245,097.7345	2,223,546.1221	706.62	226+14.90	-35.14	33-320-03
S4	244,785.8759	2,224,164.1412	729.95	232+99.26	34.73	33-320-04
S5	244,964.5278	2,224,986.7938	716.64	241+33.89	-19.19	33-320-05
S6	244,994.6960	2,225,323.7878	731.53	244+64.14	-33.99	33-320-06
S7	244,713.5181	2,225,791.5901	755.46	250+03.78	18.35	33-320-07
S8	244,415.7467	2,226,341.1106	765.87	256+25.04	22.98	33-320-08
S9	244,374.9794	2,226,981.4223	766.75	262+62.90	-18.05	33-320-09
S10	244,291.7522	2,227,366.9156	766.80	266+55.86	14.93	33-320-10
S11	244,180.4979	2,228,221.5872	749.06	275+16.54	-35.16	33-320-11
S12	244,080.9797	2,228,654.2592	752.42	279+59.07	17.23	33-320-12
S13	244,572.3914	2,229,618.7779	758.26	290+40.26	-34.61	33-320-13
S14	244,725.9994	2,229,967.2297	763.31	294+20.92	6.40	33-320-14
S15	245,267.3982	2,230,556.8233	766.40	302+21.46	1.89	33-320-15
S16	246,024.4253	2,231,598.5952	785.62	314+83.95	-88.77	33-320-16
S17	246,043.5784	2,231,995.6771	799.35	318+37.46	-107.51	33-320-17
S18	245,325.8906	2,232,804.5780	840.23	328+83.01	3.03	33-320-18
S19	244,868.8190	2,233,502.7712	890.37	337+16.57	-36.70	33-320-19

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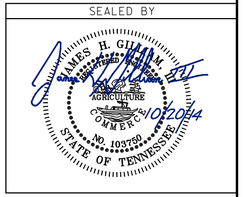

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CONTROL POINTS

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

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 BK.	DEED DOCUMENT PAGE	LEFT	RIGHT	TOTAL	LEFT	RIGHT	TOTAL	LEFT	RIGHT	PERM DRAINAGE	SLOPE	CONST.
~~1~~	~~H & K PROPERTIES~~	~~171-A~~	~~1~~	~~4835~~	~~0067~~		~~3.604~~	~~3.604~~		~~1951 S.F.~~	~~1951 S.F.~~		~~3.559~~			~~250~~
~~2~~	~~RIGOBERTO & BERTHA AYALA~~	~~159-O~~	~~55~~	~~6671~~	~~475~~	~~0.482~~		~~0.482~~	~~509 S.F.~~		~~509 S.F.~~	~~0.470~~				~~195~~
~~3~~	~~EDGAR M. & MARGARET D. LEWIS~~	~~159-O~~	~~54~~	~~3171~~	~~0128~~	~~1.777~~		~~1.777~~	~~632 S.F.~~		~~632 S.F.~~	~~1.762~~		~~9~~		
~~4~~	~~B.C. & M.H. McCARY, ET AL~~	~~159-O~~	~~53~~	~~2029~~	~~0410~~	~~0.909~~		~~0.909~~	~~762 S.F.~~		~~762 S.F.~~	~~0.892~~		~~442~~		
~~5~~	~~H & K PROPERTIES~~	~~171-A~~	~~2~~	~~5807~~	~~0408~~		~~0.755~~	~~0.755~~		~~1362 S.F.~~	~~1362 S.F.~~		~~0.724~~			~~441~~
~~6~~	~~CARL HERBERT & PATRICIA SUE HARVEY~~	~~159-O~~	~~52~~	~~1459~~	~~0587~~	~~0.376~~		~~0.376~~				~~0.376~~				
7	ED O. POMEROY JR. & IMOGENE	159-O	51.01	4952	0411	0.386		0.386	830 S.F.		830 S.F.	0.367				160
8	SUBHASH P. VICANI ET UX	171-A	3	6325	0460		0.755	0.755		832 S.F.	832 S.F.		0.736			828
9	DEBRAH DISTEFANO	159-O	50	7693	549	3.900		3.900	830 S.F.		830 S.F.	3.881				600
10	KENNETH McKAY & JAMES L. HOLLINGSWORTH	171-A	4	1948	0693		1.441	1.441		1643 S.F.	1643 S.F.		1.403			1611
11	AMERICAN NAT'L BANK & TRUST CO/SUNTRUST	159-O	48	2697	0541	1.019		1.019	4340 S.F.		4340 S.F.	0.919			456	1256
12	WILLIAM J. SUGGS, ET AL	171-A	5	3477	0735		0.862	0.862		1021 S.F.	1021 S.F.		0.839			1117
13	DEWEY P. & KAY S. BILLINGSLEY	171-A	6	5183	0799		0.344	0.344		555 S.F.	555 S.F.		0.331			1077
14	SARA E. & SHARON G. MORRIS	159-O	35	2563	0295	1.446		1.446	4299 S.F.		4299 S.F.	1.347		429	496	1310
15	BRENDA B. HOOPER	171-A	7	6130	0175		0.735	0.735		2784 S.F.	2784 S.F.		0.671			974
17	JAMES D. LEE, INC.	159-O	34	3463	0947	3.891		3.891	0.143		0.143	3.748				893
18	SIA TENNESSEE FUNERAL SERVICES INC.	171-B	1	7530	335		0.910	0.910		1527 S.F.	1527 S.F.		0.875			1217
19	SIA TENNESSEE FUNERAL SERVICES INC.	171-B	2	7530	335		1.177	1.177		2889 S.F.	2889 S.F.		1.111			909
20	JAMES D. LEE, INC.	159-O	26	3053	0520	5.300		5.300	0.131		0.131	5.169				902
20-S	JAMES D. LEE, INC.	159-O	26	3053	0520	0.198		0.198	1148 S.F.		1148 S.F.	0.171		3062		294
21	JAMES D. LEE, INC.	171-B	3	3461	0188		1.882	1.882		4195 S.F.	4195 S.F.		1.786			617
	JAMES D. LEE, INC.	171-B	4.01	3755	0538		1.091	1.091		0.101	0.101		0.990	582		1230
22	PAUL C. & CATHERINE HANEY	159-O	33	2285	0053	0.936		0.936	3256 S.F.		3256 S.F.	0.861		0.168 AC		1294
23	EAST BRAINERD CHURCH OF GOD	171-B	5	2091	0943		8.864	8.864		0.423	0.423		8.441		360	0.112 AC
24	ROBERT T & REBEKAH M HALL	159-O	21	3565	0611	0.303		0.303	0.103		0.103	0.200			574	1917
25	EDNA E. SHELLABARGER & DE SHELLABARGER	159-O	20	0939	0342	1.422		1.422	738 S.F.		738 S.F.	1.405			113	709
26	THERESA H. GAY	159-O	18	3680	0180	0.391		0.391	0.100		0.100	0.291			160	2042
27	DONALD O BRADLEY	159-O	17	1331	0076	0.344		0.344	3223 S.F.		3223 S.F.	0.270			130	810
~~28~~	~~GEORGE SR. & DOROTHY J. ADDISON~~	~~159-O~~	~~16~~	~~5226~~	~~0976~~	~~0.344~~		~~0.344~~				~~0.344~~				
~~29~~	~~SHERRY RENE KING~~	~~159-O~~	~~15~~	~~4572~~	~~0715~~	~~0.344~~		~~0.344~~				~~0.344~~				
30	GINA B PALMER, MARCUS S PALMER	159-O	16	6798	888	0.333		0.333	3265 S.F.		3265 S.F.	0.258			92	1145
~~31~~	~~RONALD C. HICKS~~	~~159-O~~	~~15~~	~~3721~~	~~0735~~	~~0.517~~		~~0.517~~				~~0.517~~				
32	DANIEL D. BOECEMA ET UX	159-O	17	6310	0241	0.191		0.191	1059 S.F.		1059 S.F.	0.167			137	4213
33	W.W. & MARY DOVE W. WRIGHT	159-O	18	970	468	0.418		0.418	1478 S.F.		1478 S.F.	0.384			914	610
33A	W.W. & MARY DOVE W. WRIGHT	159-O	19	2989	0193	1.200		1.200	635 S.F.		635 S.F.	1.185			495	241
~~35~~	~~CHARLES E. HAMES~~	~~171-B~~	~~5~~	~~6057~~	~~0148~~		~~0.469~~	~~0.469~~					~~0.469~~			
36	THOMAS C RUMPH JR	171-B	6	7695	699		0.426	0.426		3738 S.F.	3738 S.F.		0.340			1405
37	COVENANT PRESBYTERIAN CHURCH OF	159-O	20.04	3509	0537	8.134		8.134	0.149		0.149	7.985			3793	0.118 AC
38	RYAN K ANDERSON	171-B	7	GI 8158	0996		0.397	0.397		2115 S.F.	2115 S.F.		0.348			580
39	B.C. & DOROTHY K. HOOD	171-B	8	0910	0556		0.911	0.911		2119 S.F.	2119 S.F.		0.862			858
40	EMERSON E. & ANGELA RUSSELL	171-B	9	5612	0051		0.259	0.259		539 S.F.	539 S.F.		0.247			187
41	EMERSON E RUSSELL	171-B	9.02	GI 6842	914		0.154	0.154		1601 S.F.	1601 S.F.		0.117			426
42	PAUL & RUTH GI-TZE HUA VIN	171-B	10	3542	0508		0.560	0.560		2143 S.F.	2143 S.F.		0.511			541
43	JAMES GRAVILLE BOYDSTON JR., C/O GRACE	171-B	12	2501	0860		0.566	0.566		2122 S.F.	2122 S.F.		0.517			589
44	STEPHEN ALLEN ALE C/O CLARA N. McNABB	171-B	13	3687	0853		0.794	0.794		2127 S.F.	2127 S.F.		0.745			692
45	JAMES F. & GLORIA C. BALLARD	159-O	22.01	1979	0314	0.459		0.459	2110 S.F.		2110 S.F.	0.411			624	970
~~46~~	~~COVENANT PRESBYTERIAN CHURCH OF~~	~~159-O~~	~~20~~	~~4178~~	~~0798~~	~~15.000~~		~~15.000~~				~~15.000~~				
47	JAMIE FINLEY CUNNINGHAM	171-B	14	3541	0811		0.671	0.671		1980 S.F.	1980 S.F.		0.626			659
48	JAMES F. & GLORIA C. BALLARD	159-O	22	1827	0323	0.459		0.459	4189 S.F.		4189 S.F.	0.363			912	2222
49	STEPHEN A. & GLENDA M. ALE	171-B	15	3182	0258		0.857	0.857		2089 S.F.	2089 S.F.		0.809			829

FOOTNOTE:

CONSTRUCTION EASEMENT IF NEEDED FOR SPECIAL WORK.

REVISION 01-24-2011
--TRACT 11, REVISED ROW TAKE.

REVISION 07-06-2011
--TRACT 11 REVISED ROW, SLOPE & CONST. ESMT.

REVISION 10-31-2011
--TRACT 16, REVISED PROPERTY OWNER.

REVISION 1-23-12
--TRACT 16,DELETED TRACT 16.

REVISION 5-20-2014
--TRACT 12,REMOVED SLOPE ESMNT., ADJUSTED CONSTRUCTION ESMNT. AROUND FRONT EXTERIOR WALL.

REVISION 8-22-2014
--ADDED TRACT 20-S.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	3
CONST.	2014	STP-320(4)	3

REVISION 9-20-2006
--LINED THROUGH TRACT 28

REVISION 3-26-2007
UPDATED TRACTS 2,3,4,6,7,9,11,16, 17,18,20,21,22,23,37,40,41,43

REVISION 6-12-2007 CORRECTED TRACT 8

REVISION 9-7-2007
--CHANGED R.O.W. ON TRACTS 8,10,13, 15.
--UPDATED PROPERTY OWNERS TRACTS 2, 9,18,19,24,27,30,36.
--LINED OUT TRACTS 1 THROUGH 5.

REVISION 1-22-08
--TRACT 37 REVISED R.O.W.
--TRACT 33 REVISED PROPERTY OWNER

REVISION 4-22-08
--TRACT 48 REVISED R.O.W. AQUIRED

REVISION 5-20-08
--TRACT 20 REVISED R.O.W. & CONST. ESMT.
--TRACT 22 REVISED R.O.W. & CONST. ESMT.
--CHANGED TRACT 34 TO TRACT 33A & REVISED PROPERTY OWNER.

REVISION 7-30-08
--TRACT 20 REVISED TOTAL AREA.
--TRACT 30A REVISED TOTAL AREA.
--TRACT 22 REVISED TOTAL AREA

REVISION 10-29-08
--TRACT 9 REVISED TOTAL AREA.

REVISION 6-26-09
--TRACT 38, UPDATED PROPERTY OWNER.

REVISION 8-10-09
--TRACT 6 REVISED CONST. ESMT.

REVISION 9-08-09
--REVISED AREAS TO BE ACQUIRED, CONSTRUCTION EASEMENTS, AND REMAINING AREAS FOR TRACT NOS. 18 AND 19.

REVISION 11-03-09
--TRACT 41,CHANGE PROPERTY OWNER, BOOK AND PAGE.

REVISION 07-25-10
--TRACT 41,CHANGE PROPERTY OWNER, BOOK AND PAGE.

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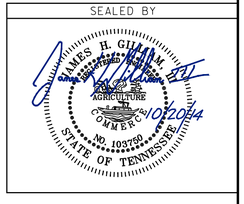

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RIGHT-OF-WAY ACQUISITION TABLE

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

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 BK.	DEED DOCUMENT PAGE	LEFT	RIGHT	TOTAL	LEFT	RIGHT	TOTAL	LEFT	RIGHT	PERM DRAINAGE	SLOPE	CONST.
50	KENNETH M. & MARYORIE ANN REED	159-O	25	2236	0847	0.603		0.603	3366 S.F.		3366 S.F.	0.526			85	1573
~~51~~	~~TENNESSEE AMERICAN WATER CO.~~	~~159-O~~	~~25.01~~	~~2202~~	~~0463~~	~~1307 S.F.~~		~~1307 S.F.~~				~~1307 S.F.~~				
~~52~~	~~BOBBY K. & JOANN L. BALES~~	~~159-O~~	~~24.05~~	~~4789~~	~~0339~~	~~0.110~~		~~0.110~~				~~0.110~~				
~~53~~	~~BOBBY K. & JOANN L. BALES & BOBBY K. BALES, JR.~~	~~159-O~~	~~24.03~~	~~5873~~	~~0885~~	~~0.105~~		~~0.105~~				~~0.105~~				
~~54~~	~~JOHN D. SHOEMAKER ET UX~~	~~159-O~~	~~24.02~~	~~6214~~	~~0378~~	~~0.289~~		~~0.289~~				~~0.289~~				
55	GARY L MEADOWS, GREGERY A MEADOWS & GLEN E MEADOWS	171-B	16	7848	394		0.895	0.895		2089 S.F.	2089 S.F.		0.847			0.121 AC
56	JEANNIE WILSON SCHUBERT	159-O	26	7718	763	0.524		0.524	1109 S.F.		1109 S.F.	0.499				166
57	BARRY N. LIGON, TR.	171-B	18	5675	0032		2.015	2.015					2.015			2041
58	JOSEPH L. BOWERS	159-O	27	5606	0255	0.524		0.524	1109 S.F.		1109 S.F.	0.499				448
~~59~~	~~WALTER W. NORMAN & THETA~~	~~171-B~~	~~20~~	~~1054~~	~~0397~~		~~0.555~~	~~0.555~~					~~0.555~~			
60	JIMMIE RAY COCHRAN	171-B	19	7569	893		0.425	0.425		0.103	0.103		0.322		591	1358
61	WALKER PROPERTIES OF TENNESSEE LLC	159-O	28	5403	0348	0.584		0.584	912 S.F.		912 S.F.	0.563				184
~~62~~	~~THOMAS Q. WADE & AUDREY I.~~	~~171-B~~	~~4.01~~	~~3329~~	~~0731~~		~~0.393~~	~~0.393~~					~~0.393~~			
~~63~~	~~CHARLES WATKINS ET UX~~	~~171-B~~	~~4~~	~~6388~~	~~0001~~		~~0.393~~	~~0.393~~					~~0.393~~			
64	ELEANOR JOY EMMETT DUGGAN	171-B	5	4714	0067		0.411	0.411		4235 S.F.	4235 S.F.		0.314		855	1855
65	DAVID J. ERWIN, ET AL	171-C	5	3544	0519	2.181		2.181	863 S.F.		863 S.F.	2.161				154
66	DAVID J. ERWIN, ET AL	171-C	5.01	3544	0519	0.453		0.453	3719 S.F.		3719 S.F.	0.368				981
67	MIKE NEAL	171-B	6	4347	0302		0.205	0.205		1203 S.F.	1203 S.F.		0.177			346
68	JESSE D. HUMBERD, JR.	171-B	7	3717	0153		3.539	3.539		4343 S.F.	4343 S.F.		3.439			1119
69	WILLIAM F. & LINDA C. HULLANDER	171-C	4	3418	0046	1.205		1.205	2503 S.F.		2503 S.F.	1.148			487	1111
70	CHRIST UNITED METHODIST CHURCH	171-C	1	3033	0921	32.190		32.190	0.412		0.412	31.778		1184	3918	0.143 AC
71	BILLY & SHIRLEY B. LAND	171-B	8	1735	0430		1.367	1.367		2109 S.F.	2109 S.F.		1.319		201	0.127 AC
72	BILLY & SHIRLEY B. LAND	171-B	9	4861	0817		0.416	0.416		4006 S.F.	4006 S.F.		0.324		422	0.183 AC
73	MARY B. ROE	171-B	11	1511	0611		5.389	5.389		0.287	0.287		5.102	200		2905
74	JESSE D. JR. & PATRICIA L. HUMBERD	171-B	10	4948	0827		0.588	0.588		0.120	0.120		0.468			0.231 AC
75	OPTIONS ST INC.	171-C	3	7114	96	0.459		0.459	1648 S.F.		1648 S.F.	0.421				302
76	JACK & CHARLENE BORN	171-C	1.01	3741	0324	0.712		0.712	2469 S.F.		2469 S.F.	0.655			103	1410
78	SOUTHEAST US RETAIL FUND LP C/O FIRST MANAGEMENT	171-B	14	4983	0993		2.271	2.271		0.262	0.262		2.009	1618	487	0.120 AC
79	HURRICAN CREEK ESTATES HOMEOWNERS ASSOC.	171-C	1	4432	0652		0.130	0.130		2623 S.F.	2623 S.F.		3040 S.F.		296	1191
80	RI TN 1, LLC	171-C	9.03	6922	301	0.460		0.460	4301 S.F.		4301 S.F.	0.361		180		1016
81	HURRICAN CREEK ESTATES HOMEOWNERS ASSOC.	171-C	2	4432	0652		0.136	0.136		3079 S.F.	3079 S.F.		2845 S.F.		1078	1313
82	WG CHATTANOOGA TN, LLC	171-C	3	6154	0154		0.936	0.936		0.144	0.144		0.792		1605	3788
		171-C	4	6154	0154											
83	JOHN FESTA	171-C	10	7329	169	2.600		2.600				2.600			20	227
84	PMS EQUIPMENT L.P. TENNESSEE LIMITED PARTNERSHIP	171-C	9.02	GI 9538	450	0.575		0.575	2358 S.F.		2358 S.F.	0.521				1060
~~85~~	~~WG CHATTANOOGA TN, LLC~~	~~171-C~~	~~4~~	~~6154~~	~~0154~~		~~0.624~~	~~0.624~~		~~3178 S.F.~~	~~3178 S.F.~~		~~0.551~~		~~39~~	~~819~~
86	CHATTANOOGA SPINE CENTER, PLLC	171-C	9	GI 9538	931	0.521		0.521	1453 S.F.		1453 S.F.	0.488				931
88	OMSIA CORPORATION	171-C	5.01	6894	942		0.890	0.890		0.131	0.131		0.759	1671	954	2079
89	JAMES A. & DORIS H. ASH	171-C	9.01	4686	0600	0.462		0.462	1253 S.F.		1253 S.F.	0.433		9		1263
90	TERRY B. & MADGE J. CLOUSE	171-C	6	4293	0016		0.551	0.551		1321 S.F.	1321 S.F.		0.521		405	1123
90-S	TERRY B. & MADGE J. CLOUSE	171-C	6	4293	0016		0.521	0.521					0.521	1153		
91	ELGIA LEE & BILLIE JEAN McCULLOUGH	171-C	7	1632	0321		0.331	0.331		298 S.F.	298 S.F.		0.324		272	644
91-S	ELGIA LEE & BILLIE JEAN McCULLOUGH	171-C	7	1632	0321		0.324	0.324					0.324	354		
92	VIRGINIA W. MILLION	171-C	1	5652	0978		0.501	0.501		0.182	0.182		0.319		719	1184
92-S	VIRGINIA W. MILLION	171-C	1	5652	0978		0.319	0.319		2721 S.F.	2721 S.F.		0.257	1797		488
93	VIRGINIA W. MILLION	171-C	3		0007		2.024	2.024		0.782	0.782		1.242		3698	2502
93-S	VIRGINIA W. MILLION	171-C	3		0007		1.242	1.242					1.242	4089		1276
94	VIRGINIA W. MILLION	171-C	8	5652	0998	1.651		1.651	3257 S.F.		3257 S.F.	1.576		1074		1399
95	VIRGINIA W. MILLION	171-C	7	5652	0998	2.800		2.800	1677 S.F.		1677 S.F.	2.762				1520
~~96~~	~~VIRGINIA W. MILLION~~	~~171-C~~	~~6~~	~~5652~~	~~0998~~	~~0.930~~		~~0.930~~	~~815 S.F.~~		~~815 S.F.~~	~~0.911~~			~~301~~	~~1382~~
97	VIRGINIA W. MILLION	171-C	5	5652	0980		0.613	0.613		0.155	0.155		0.458		785	460
98	VIRGINA W. MILILON	171-C	5	G15653	0003	0.505		0.505	1525 S.F.		1525 S.F.	0.470		4155	360	1333
98S	VIRGINA W. MILILON	171-C	5	G15653	0003	0.470		0.470				0.470		1872		
99	FRANCELIA K. ALLISON & JONNIE G. ALLEN	171-C	7	3316	0506		1.249	1.249		0.327	0.327		0.922		0.104 AC	1255

REVISION 07-25-2010
--TRACT 73, REVISED ROW TAKE.

REVISION 01-24-2011
--TRACT 92, REVISED ROW TAKE, ADDED CONST. EASMT.
--TRACT 93, ADDED CONST. EASMT.

REVISION 07-06-2011
--TRACT 80, REVISED ROW TAKE, CONST. ESMT,DRAINAGE ESMT.
--TRACT 93, MOVED CONST ESMT. FROM 93 TO 93S.

REVISION 09-21-2011
--TRACT 83, ADDED SLOPE ESMT.
--TRACT 93, MOVED CONST. ESMT FROM TRACT 93S TO TRACT 93.

REVISION 1-23-2012
--TRACT 87, DELETED TRACT.
--TRACT 92-S, ADDED ROW.
--TRACTS 84,86, REVISED PROPERTY OWNERS.

REVISION 09-05-2012
--COMBINED TRACT 82 AND 85.
--ELIMINATED TRACT NO. 85.

REVISION 5-23-2013
--CORRECTED PERMANENT DRAINAGE EASEMENTS FOR TRACTS 88, 89, 90, 90S, 91, 91S,92, 92S, 93, 93S, 94, 97, 98, 98S.
--CORRECTED CONSTRUCTION EASEMENT FOR TRACTS. 92S AND 93S.
--REVISED CONSTRUCTION AND PERMANENT DRAINAGE EASEMENT AREA FOR TRACT 80.

REVISION 05-20-2014
--CHANGED TRACT 80 PROPERTY OWNER, DEED BOOK AND PAGE.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	3A
CONST.	2014	STP-320(4)	3A

REVISION 4-10-2007
--UPDATED TRACTS 50,57,60,70,80, 84,86,89,92,93,94,95,97,98,99

REVISION 9-7-2007
--ADDED ADDITIONAL CONST. EASEMENT ON TRACTS 55,71,72,74
--CHANGED OWNER TRACTS 55,60,56, 75,83,86,88
--ADDED DRAINAGE EASEMENT TRACT 98

REVISION 1-22-2008
--TRACT 92 REVISED & DELETED DRAINAGE EASEMENT

REVISION 4-22-2008
--TRACT 88 ADDED ADDITIONAL DRAINAGE EASEMENT
--TRACT 97 CORRECTED R.O.W. ACQUIRED
--TRACT 60 DELETED CONST. ESMT.

REVISION 7-30-2008
--TRACT 98 CORRECTED PROPERTY OWNER.

REVISION 10-29-2008
--TRACT 61,CORRECTED TOTAL AREA,
--TRACT 60, ADDED BACK CONST. ESMT
--TRACT 81, REVISED AREA TAKE & ADDED AREA REMAINING.
--TRACT 57, REMOVED PROP. ROW.
--TRACT 89, REVISED ACQUISITION AREAS
--TRACT 96, REMOVED TRACT.

REVISION 10-07-2009
--TRACT 90,91, REMOVED DRAINAGE EASMT.

REVISION 05-19-2010
--TRACT 88, REVISED DRAIN. ESMT., SLOPE ESMT. & CONST. ESMT.
--TRACT 90, ADDED TRACT 90-S & ADDED DRAIN. ESMT.
--TRACT,91 ADDED TRACT 91-S & ADDED DRAIN, ESMT.
--TRACT 92, ADDED TRACT 92-S & ADDED DRAIN ESMT.
--TRACT 93, ADDED TRACT 93-S & ADDED DRAIN. ESMT.
--TRACT 98, ADDED TRACT 98-S & DRAIN ESMT.

REVISION 07-20-2010
--TRACT 70, COMBINE TRACTS 70 & 77
--DELETED TRACT 77.

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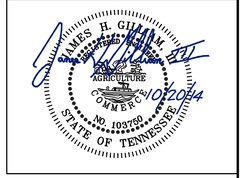

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RIGHT-OF-WAY ACQUISITION TABLE

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

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 BK.	DEED DOCUMENT PAGE	LEFT	RIGHT	TOTAL	LEFT	RIGHT	TOTAL	LEFT	RIGHT	PERM DRAINAGE	SLOPE	CONST.
100	JOHN B & SHELLIA W. HARVEY	171-C	4	6329	0726	0.445		0.445	825 S.F.		825 S.F.	0.426			25	699
101	FLOYD DARWIN & MARTHA P. RATLIFF	171-C	3	5746	0284	0.483		0.483	712 S.F.		712 S.F.	0.467				123
102	LESLIE E. ELDRIDGE	171-C	3.02	GI 7501	772	2.720		2.720	505 S.F.		505 S.F.	2.708				221
102A	LESLIE E ELDRIDGE	171-C	3.02	GI 7501	772	0.628		0.628	2051 S.F.		2051 S.F.	0.581				265
103	JACK DUGGAN	171-C	8	3380	0015		1.185	1.185		0.321	0.321		0.864		0.134 AC	1598
	JACK DUGGAN	171-C	9	3380	0015		1.299	1.299		0.361	0.361		0.938		2452	2937
	JACK DUGGAN	171-C	1	4504	0877		0.304	0.304		3997 S.F.	3997 S.F.		0.212		330	0.213 AC
104	MELVIN SANDIDGE	171-C	3.01	GI 8782	725	0.400		0.400	754 S.F.		754 S.F.	0.383				213
105	SANDIDGE CONSTRUCTION, INC.	171-C	2.02	GI 8863	466	2.000		2.000	3051 S.F.		3051 S.F.	1.930		3250		0.273 AC
105A	KALLEIGH ELDRIDGE	171-C	2	GI 8782	466	5.010		5.010	0.247		0.247	4.763				1524
106	DANIEL & KAMILLA BOEREMA	171-C	63	4954	0774		0.454	0.454		3102 S.F.	3102 S.F.		0.383		4011	899
~~107~~	~~WAYNE W. & THERESA BUTTS~~	~~171-C~~	~~47~~	~~4695~~	~~0320~~		~~0.123~~	~~0.123~~					~~0.123~~			
~~108~~	~~JASON L. & LAURA J. BOEHM~~	~~171-C~~	~~46~~	~~5217~~	~~0196~~		~~0.172~~	~~0.172~~					~~0.172~~			
109	BETTE L. HUNT	171-C	11	3839	0332		0.980	0.980	0.980		0.980		0.000			
~~110~~	~~CHAREL M. & MARY E. MOORE~~	~~171-C~~	~~45~~	~~5704~~	~~0557~~		~~0.188~~	~~0.188~~					~~0.188~~			
111	MICHAEL GUY BERRYMAN	171C-D	12	5797	0158		2.000	2.000		0.233	0.233		1.767	0.116 AC	0.300 AC	0.318 AC
112	LESLIE SANDIAGE	171-C	2.01	GI 8782	730	1.430		1.430	1101 S.F.		1101 S.F.	1.405				
113	JANICE P. LEWALLEN	171-C	1	4224	0023	5.540		5.540	0.433		0.433	5.107		0.299 AC		2204
114	MARTI J. COX HOOD	171-C	13	4976	0087		0.805	0.805		0.186	0.186		0.619	3511	0.159 AC	1271
	MARTI J. COX HOOD	171-C	14.01	4976	0089		1.448	1.448		4282 S.F.	4282 S.F.		1.350	1234	3134	1535
115	ANDREW MADRON, C/O HELEN W. MADRON	171-C	1	3146	0456		0.278	0.278	0.286		0.286		0.278			
~~117~~	~~H. LEE BRITTON & PEGGY JO GRIGSBY~~	~~159-N~~	~~15~~	~~3383~~	~~0314~~		~~0.567~~	~~0.567~~					~~0.567~~			
118	SYLVIA RYALL	159-N	3	1755	0299	0.827		0.827	0.221		0.221	0.606			1081	0.138 AC
119	RICHARD L. & RITA R. CHATFIELD	171-C	2	3340	0868		0.574	0.574		3782 S.F.	3782 S.F.		0.487	1758		855
120	DB HOLDINGS	171-C	3	6221	369		0.574	0.574		4246 S.F.	4246 S.F.		0.477	1430		1057
121	BONE'S EAST BRAINERD PROPERTIES LLC	171-C	4	5280	0881		0.574	0.574		4188 S.F.	4188 S.F.		0.478	1333		1110
121-A	BONE'S EAST BRAINERD PROPERTIES LLC	171-C	5	5280	0881		1.283	1.283		0.120	0.120		1.163	1330		1282
122	JAMES B. DAVIS ET UX	171-C	6	6179	0722		1.519	1.519		0.144	0.144		1.375	1346		1458
123	DANNY GIBSON	171-C	7	6343	0092		0.849	0.849		4191 S.F.	4191 S.F.		0.753	167		989
124	LEE ROY McCRAW	171-C	8	3001	0600		1.026	1.026		0.194	0.194		0.832			1345
125	ARTHUR A. DAVENPORT & DARRELL D.	171-C	2.01	2697	0270	0.322		0.322	844 S.F.		844 S.F.	0.303				387
126	FRED L. EDGMON & C. LARRY ARMOUR	159-M	1	5536	0931	3528 S.F.		3528 S.F.				3528 S.F.				
127	THOMAS L. & SANDRA RYALL	159-M	1	1906	0175		1.125	1.125		0.182	0.182		0.943		1492	1223
127-S	THOMAS L. & SANDRA RYALL	159-M	1	1906	0175		0.943	0.943					0.943	1388		
128	CHARLES LAMAR HAUN, TR.	159-M	2	2569	0949	0.718		0.718	1600 S.F.		1600 S.F.	0.681				1521
129	THOMAS L. & SANDRA RYALL	159-M	2	1167	0171		1.481	1.481	119 S.F.	0.260	0.263		1.221		0.132 AC	0.220 AC
~~130~~	~~SHYAM CORP~~	~~159-M~~	~~1.03~~	~~6569~~	~~0488~~	~~0.390~~		~~0.390~~				~~0.390~~				
131	BONNIE C. & JESSE RIGGS	159-M	3	4088	0569	1176 S.F.	0.738	0.765	1176 S.F.	0.192	0.219	S.F.	0.546		1812	2881
~~132~~	~~FRED L. EDGMON & C. LARRY ARMOUR~~	~~159-M~~	~~102~~	~~5536~~	~~0931~~		~~0.351~~	~~0.351~~		~~0.555~~	~~0.555~~					
133	PRISCILLA R JOHNSON	159-M	4	7424	431	3833 S.F.	0.555	0.643	3833 S.F.	0.555	0.643					
134	SANDRA GAIL TALLENT	159-M	5	4274	0409	0.207	0.944	1.151	0.207	0.944	1.151					
135	FRED L. EDGMON & C. LARRY ARMOUR	159-M	1.01,11	5536,5633	0914,0349	3.640		3.640	2397 S.F.		2397 S.F.	3.585		996	610	1642
137	THOMAS & SANDRA ELAINE RYALL	159-M	9	1705	0650	5.081		5.081		510 S.F.	510 S.F.	5.081			150	469
138	PHILLIP R. HOLMES	159-M	6	3749	0841	0.165	0.884	1.049	0.165	0.884	1.049	S.F.				
139	LAWRENCE L. & CAROLYN LEONIA DENTON	159-M	15	1557	0426	0.527		0.527	1745 S.F.		1745 S.F.	0.487		835	179	1364
~~140~~	~~GORDON D. HULGAN, III & JACQUELINE M.~~	~~159-M~~	~~14~~	~~5311~~	~~0028~~	~~0.612~~		~~0.612~~				~~0.612~~				
141	WILLIAM S. & BETTY FERM CAMPBELL	159-M	7	2257	0889	0.118	0.848	0.966	0.118	0.848	0.966					
142	THOMAS L. & SANDRA RYALL	159-M	8	1929	0144	517 S.F.	0.394	0.406	517 S.F.	0.394	0.406					
143	THOMAS L. & SANDRA RYALL	159-M	8.01	1929	0144		0.776	0.776		0.256	0.256		0.520		546	741

REVISION 11-12-2010
--TRACT 143, REVISED SLOPE EASMT., CONST. EASMT & R.O.W.

REVISION 07-06-2011
--TRACT 112, CHANGED TOTAL AREA

REVISION 07-25-2011
--TRACT 139, REVISED SLOPE, CONST, & DRAINAGE EASMT.

REVISION 08-24-2011
--TRACT 135, REVISED SLOPE ESMT.

REVISION 10-31-2011
--TRACT 116, NOT USED
--TRACT 143,ADDED SLOPE AND CONST. ESMT.

REVISION 1-23-2012
--TRACT 116, DELETED TRACT.
--TRACT 143, REVISED SLOPE, CONST. ESMT.

REVISION 05-20-2014
--TRACT 130, LINED THRU, REMOVED INCIDENTAL DAMAGE FOOTNOTE.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	3B
CONST.	2014	STP-320(4)	3B

REVISION 5-20-2008
--TRACT 143 REVISED CONST. SLOPE. ESMT. & R.O.W. ACQUIRED.

REVISION 7-30-2008
--TRACTS 100,101 CORRECTED PROPERTY OWNERS.
--TRACT 101 CORRECTED TOTAL AREA.
--TRACT 105 MOVED AND ADJUSTED DRAINAGE EASEMENT.

REVISION 10-29-2008
--TRACT 106, ACQUISITION AREAS.
--TRACT 109, UPDATED PROPERTY TOTAL AREA.
--TRACT 118, UPDATED PROPERTY OWNER & INFO
--TRACT 125, REMOVED LINE OVER TRACT.

REVISION 02-27-2009
--TRACT 105, ADDED CONST. ESMT.

REVISION 09-08-2009
--COMBINED TRACT NO. 114A WITH TRACT NO. 114.

REVISION 02-04-2010
-- ADDED TRACT NO. 105A.
-- TRACT 112, REVISED ROW & NAME.
-- TRACT 116,REPLACED DRAIN. ESMT WITH R.O.W.
-- TRACT 118 ADDED R.O.W.

REVISION 05-19-2010
--TRACT 127, ADDED TRACT 127-S & DRAIN ESMT.
--TRACT 102A, ADDED TRACT.
--TRACT 113, ADDED TRACT 113-S, ROW & CONST. ESMT.
--TRACT 118, ADDED TRACT 118-S & CONST. ESMT.

REVISION 07-25-2010
--TRACT 129, CHANGED PROPERTY OWNER.

REVISION 09-27-2010
--TRACT 113,113S, COMBINE TRACTS.
--TRACT 143, REVISED SLOPE, CONST. ESMT.
--TRACT 104, CORRECTED ROW TAKE.

REVISION 11-02-2010
--TRACT 118, DELETED TRACT 118S.
--TRACT 118, ADDED CONST. ESMT. FROM TRACT 118S TO 118.

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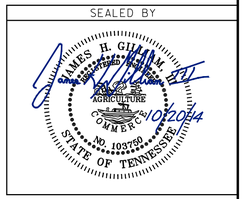

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RIGHT-OF-WAY ACQUISITION TABLE

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

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 BK.	DEED DOCUMENT PAGE	LEFT	RIGHT	TOTAL	LEFT	RIGHT	TOTAL	LEFT	RIGHT	PERM DRAINAGE	SLOPE	CONST.
~~144~~	~~KENNETH G. & CLEO R. JANOW~~	~~159-M~~	~~12~~	~~2403~~	~~0519~~	~~1.327~~		~~1.327~~				~~1.327~~				
145	KENNETH G. & CLEO R. JANOW	159-M	3	1322	0074	0.376		0.376	0.113		0.113	0.263				
146	KENNETH G. & CLEO R. JANOW	159-M	2	1673	0283	0.340		0.340	0.141		0.141	0.199				
147	THOMAS L. & SANDRA RYALL	159-M	8.02	1929	0144		0.316	0.316		0.316	0.316					
148	THOMAS L. & SANDRA RYALL	159-M	8.03	1929	0144		0.316	0.316		2599 S.F.	2599 S.F.		0.256			
~~149~~	~~WANDA RUTH BROWN~~	~~159-M~~	~~8~~	~~1557~~	~~0379~~	~~0.218~~		~~0.218~~				~~0.218~~				
150	JULIE LYNN COX	159-M	1	4843	0085	0.375		0.375	0.375		0.375					
151	THOMAS L. & SANDRA RYALL	159-M	8.04	1929	0144		0.414	0.414		0.148	0.148		0.266	2463	186	1656
151-S	THOMAS L. & SANDRA RYALL	159-M	8.04	1929	0144		0.308	0.308		2463 S.F.	2463 S.F.		0.251			
~~152~~	~~LONNIE MILLER~~	~~159-M~~	~~10~~	~~4366~~	~~0688~~		~~0.344~~	~~0.344~~					~~0.344~~			
~~153~~	~~STEVEN P. & REBECCA D. CRAIG~~	~~159-M~~	~~11~~	~~5007~~	~~0065~~		~~0.574~~	~~0.574~~					~~0.574~~			
154	OLA K. & MARGARET W. RADER	159-M	41	2090	0120	0.758		0.758	0.342		0.342	0.416				
~~155~~	~~TRINA A. & HITLER D. GALANTO~~	~~159-M~~	~~18~~	~~5640~~	~~0570~~		~~0.689~~	~~0.689~~					~~0.689~~			
156	ORVEL L. & MARY V. CRUMLEY	159-M	19	1414	0650		1.577	1.577		0.267	0.267		1.310	0.144 AC	826	2023
157	REBECCA A ALLEN & JOHN PAUL ALLEN	159-M	40	2244	0407	9.310		9.310	629 S.F.		629 S.F.	9.296		1518		1098
157-S	REBECCA A ALLEN & JOHN PAUL ALLEN	159-M	41	2245	0408	9.296		9.296	2035 S.F.		2035 S.F.	9.249				1691
158	BEARJ KAREKIN BARSOUMIAN	159-M	20	6214	109		0.660	0.660		4068 S.F.	4068 S.F.		0.567	0.100 AC		3254
159	IRONWOOD BUILDERS LLC	159-M	39	5890	0380	7.430		7.430	851 S.F.		851 S.F.	7.410		1566		2263
159-S	IRONWOOD BUILDERS LLC	159-M	39	5890	0380	7.410		7.410	1711 S.F.		1711 S.F.	7.371				
159A	STEVEN WADE WILSON &CYNTHA G WILSON	159-M	39.01	7760	985	1.100		1.100	850 S.F.		850 S.F.	1.080		1659		
159A-S	STEVEN WADE WILSON &CYNTHA G WILSON	159-M	39.01	7760	985	1.080		1.080	3402 S.F.		3402 S.F.	1.002				
160	JAMES F. CANNON, JR.	171	3	5551	0801		1.215	1.215		0.160	0.160		1.055	0.175 AC		677
161	MARY DIANN HARRISON	171	3.01	4646	0601		7.760	7.760		1157 S.F.	1157 S.F.		7.733	1385		147
162	SUE MOORE	171	4	4206	0016		1.033	1.033		0.132	0.132		0.901	0.170 AC		0.121 AC
163	DEE, JR. & LORINE MARIE CODY	159-M	38	5621	0208	5.194		5.194	1310 S.F.		1310 S.F.	5.164		0.109 AC		2626
163-S	DEE, JR. & LORINE MARIE CODY	159-M	38	5621	0208	5.164		5.164	0.114		0.114	5.050				0.229 AC
164	THELMA HARRIS MORRIS & SHARON G.	171-D	4	2618	0540		25 S.F.	25 S.F.		0.361	0.361			0.336 AC	3691	4242
165	JP LLC	156-M				0.410		0.410	1696 S.F.		1696 S.F.	0.371				
165-S	JP LLC	156-M				0.406		0.406	0.406		0.406					
* 8165	STATE OF TENNESSEE					0.371		0.371								
166	ROBERT D STONE & LUCI S								590 S.F.		590 S.F.				1962	0.189 AC
167	GLADISH A. WOLFE					0.460		0.460	769 S.F.		769 S.F.	0.442			1313	699
168	SHELBY D MORRIS	171D	36	26	42		0.340	0.340		0.132	0.132		0.208		760	1503
169	MICHEAL J. WALL & CINDY WALL	171D	35	26	42		0.597	0.597		3196 S.F.	3196 S.F.		0.524		302	827
170	CHRISTOPHER TODD LONG	171-D	34	26	42	0.412		0.412	919 S.F.		919 S.F.	0.391			52	318
171	MARRY BROWN & DAVID L. BROWN	171-D	50	27	252	0.389		0.389	636 S.F.		636 S.F.	0.374			778	847

FOOTNOTE:

CONSTRUCTION EASEMENT IF NEEDED FOR SPECIAL WORK.
* DUE TO PURCHASE OF ENTIRE TRACT

REVISION 07-06-2011
--TRACT 154, REVISED ROW.
--TRACT 157, REVISED ROW, DRAIN & CONST. ESMT.
--TRACT 159, REVISED ROW, DRAIN & CONST. ESMT.
--TRACT 159A, REVISED ROW, DRAIN & CONST. ESMT.
--TRACT 163, REVISED ROW,& CONST. ESMT.
--TRACT 165, REVISED ROW & DRAIN. ESMT.

REVISION 09-21-2011
--TRACT 159 ADDED TRACT 159S.
--TRACT 159A ADDED TRACT 159AS.
--TRACT 163, ADDED TRACT 163S.

REVISION 01-23-2012
--TRACT 151S REVISED ROW TAKE.

REVISION 05-23-2013
--TRACT 157:
CORRECTED AREA TO BE ACQUIRED.
CORRECTED PERMANENT DRAINAGE ESMT.
ADDED TRACT 157S TO ACQUISITION TABLE.
--TRACT 159S:
CORRECTED TOTAL AREA.
CORRECTED CONSTRUCTION ESMT.
--TRACT 159A:
CORRECTED PERMANENT DRAINAGE ESMT.
CORRECTED CONSTRUCTION ESMT.
--TRACT 159AS:
CORRECTED TOTAL AREA.
CORRECTED ARE TO BE ACQUIRED.
CORRECTED CONSTRUCTION ESMT.
--TRACT 163:
CORRECTED CONSTRUCTION ESMT.
CORRECTED PERMANENT DRAINAGE ESMT.
--TRACT 163S:
CORRECTED TOTAL AREA.
CORRECTED AREA TO BE ACQUIRED.
CORRECTED CONSTRUCTION ESMT.
--TRACT 165:
CORRECTED AREA TO BE ACQUIRED.
CORRECTED CONSTRUCTION ESMT.
CORRECTED SLOPED ESMT.
ADDED TRACT 165S TO ACQUISITION TABLE.

REVISION 05-20-2014
--TRACT 159A: ADJUSTED ROW AREA ACQUIRED.
--TRACT 159A-S: DELETED CONSTRUCTION ESMT.
--TRACT 159-S: DELETED CONSTRUCTION ESMT.
--TRACT 165: ADJUSTED TOTAL AREA AND REMAINING AREA.
--TRACT 8165: ADDED TRACT.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	3C
CONST.	2014	STP-320(4)	3C

REVISION 9-20-2006
--ADDED ADDITIONAL TEMP. CONST. ESMT. FOR REMOVAL OF STRUCTURE TRACT 158.
--ADDED ADDITIONAL TEMP. CONST. ESMT. FOR REMOVAL OF STRUCTURE TRACT 166.
--ADDED SLOPE ESMT. & CONST. ESMT. TRACT 167.

REVISION 4-10-2007
--UPDATED TRACTS 151,157,159,163, 165,166,167,170,171,168,169.

REVISION 9-7-2007
--ADDED ADITIONAL CONST. EASEMENT ON TRACTS 162,167.
--ADDED TRACT 159A.
--REVISED TRACT 159.
--UPDATED OWNER TRACT 158.

REVISION 1-22-2008
--TRACT 165 ADDED CONST. ESMT. FOR REMOVAL OF HOUSE.
--TRACT 145 ADDED CONST. ESMT.

REVISION 3-15-2008
--TRACT 157 CHANGED PROPERTY OWNER, DEED BOOK & PAGE.
--TRACT 154 REVISED R.O.W. ACQUIRED & OWNERS NAME.
--TRACT 145 DELETED CONST. ESMT.

REVISION 7-30-2008
--TRACT 154 REVISED R.O.W. ACQUIRED.
--TRACT 157 REVISED PROPERTY OWNER.

REVISION 12-03-2008
--TRACT 159 REVISED PROPERTY OWNER, & AREAS.
--TRACT 164 REVISED DRAIN ESMT.

REVISION 5-06-2009
--TRACT 159 REVISED AREAS & EASEMENTS.
--TRACT 159A REVISED AREAS & EASEMENTS.

REVISION 8-10-2009
--TRACT 157 DELETED SLOPE ESMT.

REVISION 05-19-2010
--TRACT 151 REPLACED PERMANENT DRAIN. EASMT. WITH ROW, ADDED TRACT 151S.

REVISION 01-24-2011
--TRACT 145, DELETED CONST. ESMT.
--TRACT 146, REVISED ROW TAKE.
--TRACT 157, ADDED SLOPE ESMT.
--TRACT 159, REVISED ROW TAKE.
--TRACT 159A,REVISED ROW TAKE.

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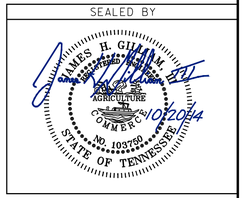

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RIGHT-OF-WAY ACQUISITION TABLE

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	3D
CONST.	2014	STP-320(4)	3D

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, ROADWAY DESIGN DIVISION AND THE CIVIL ENGINEERING MANAGER 1, REGIONAL ROADWAY 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 PROJECTS WITH CURB AND GUTTER THAT ARE ON STATE ROUTES, IT WILL BE THE RESPONSIBILITY OF THE OWNER TO SECURE A PERMIT. AFTER THE PERMIT HAS BEEN GRANTED, THE DEPARTMENT WILL CONSTRUCT THE DRIVEWAY OR FIELD ENTRANCE THROUGH THE CURB AND SIDEWALK, PROVIDED THE CURB AND SIDEWALK HAVE NOT BEEN CONSTRUCTED. IT WILL BE THE RESPONSIBILITY OF THE PROPERTY OWNER TO CONSTRUCT THE DRIVEWAY OR FIELD ENTRANCE FROM BACK OF SIDEWALK TO TOUCHDOWN POINT FOR ANY ADDITIONAL DRIVEWAYS OR FIELD ENTRANCES OTHER THAN THOSE PROVIDED IN THE PLANS.

(9) 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 OWNERS

UTILITY	OWNER	PHONE NO.	CONTACT	E MAIL ADDRESS	ADDRESS	CITY	STATE	ZIP CODE
CABLE TV	COMCAST (XFINITY)	423-296-2189	RAY STEWART	ray stewart@cable.comcast.com	2030 EAST POLYMER DRIVE	CHATTANOOGA	TN	37421
				Fax no. 423-855-9731	P.O. BOX 182249	CHATTANOOGA	TN	37421
ELECTRIC	ELECTRIC POWER BOARD OF CHATTANOOGA	423-648-3257 Cell 423-802-7562	DAVID HENDERSON	hendersondc@epb.net	P.O. BOX 182255	CHATTANOOGA	TN	37422
				Fax no. 423-648-3261	110 N GREENWOOD AVE.	CHATTANOOGA	TN	37404
GAS	ATLANTA GAS LIGHT COMPANY	404-584-3238	BENJAMIN MASSENGILL	bmasseng@aglresources.com	P.O. BOX 4569	ATLANTA	GA	30302-4569
				Fax no. 404-584-4187	10 PEACHTREE PLACE, 11TH FLOOR	ATLANTA	GA	30309
SEWER (CITY)	CITY OF CHATTANOOGA	423-643-6191	GORDAN PHILLIPS	phillips G@chattanooga.gov	1250 MARKET ST., SUITE 2100	CHATTANOOGA	TN	37402-2713
				Fax no. 423-757-0586	100 EAST 11TH STREET	CHATTANOOGA	TN	37402
SEWER (COUNTY)	HAMILTON CO. WATER & WASTEWATER TREATMENT	423-209-7842	MARK HARRISON	markh@hamiltontn.gov	1250 MARKET ST., SUITE 3050	CHATTANOOGA	TN	37402
				Fax no. 423-209-7811	P.O. BOX 8856	CHATTANOOGA	TN	37414
TELEPHONE	BELLSOUTH dba AT&T	423-752-9144 423-752-4339	TIM MANLEY	tm4644@att.com	300 E. MARTIN LUTHER KING BLVD	CHATTANOOGA	TN	37403
				Fax no. 423-267-0120		CHATTANOOGA	TN	37403
WATER	EASTSIDE UTILITY DISTRICT	423-892-2890	DONALD STRAFFORD	eud@vol.com	P.O. BOX 22037	CHATTANOOGA	TN	37422
				Fax no. 423-892-0656	3018 HICKORY VALLEY ROAD	CHATTANOOGA	TN	37422
WATER	TENNESSEE AMERICAN WATER COMPANY	423-755-7622	KEVIN ROGERS	kevin.n.rogers@amwater.com	P.O. BOX 6338	CHATTANOOGA	TN	37401
				Fax no. 423-755-7636	1101 BROAD STREET	CHATTANOOGA	TN	37401

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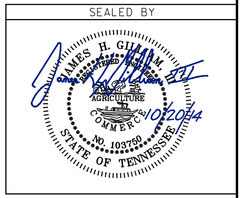

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

R.O.W NOTES
AND
UTILITY
OWNERS

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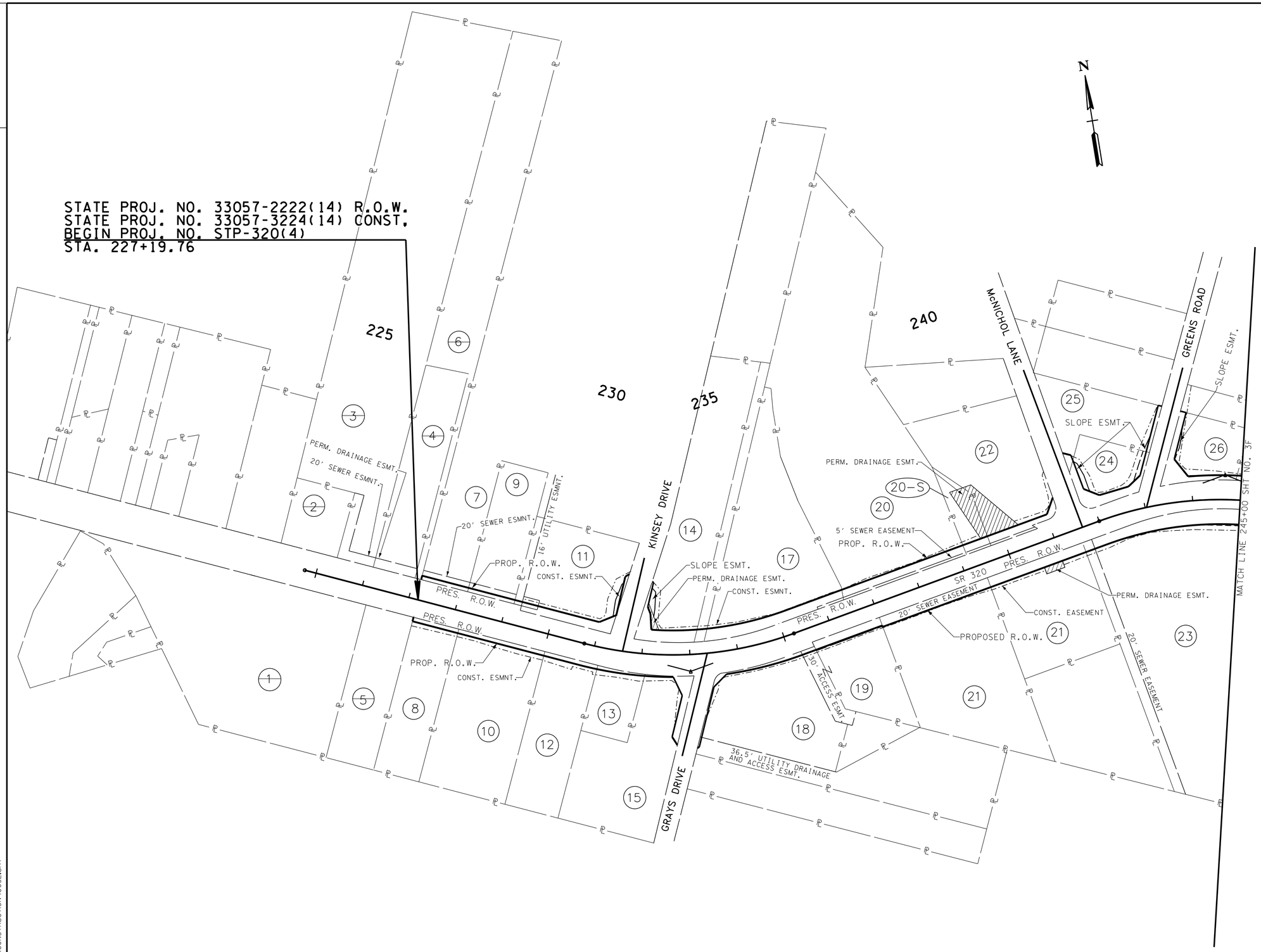
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

STATE PROJ. NO. 33057-2222(14) R.O.W.
STATE PROJ. NO. 33057-3224(14) CONST.
BEGIN PROJ. NO. STP-320(4)
STA. 227+19.76



TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2006	STP-320(4)	3E
CONST.	2014	STP=320(4)	3E

REVISION 4-10-2007
ADDED SEWER EASEMENTS TO TRACT 2, 4,7,9,11,17,18,20,19,20,21,22,23

REVISION 9-07-2007
--LINED OUT TRACTS 1 THROUGH 5.
--CHANGED BEGIN ROW PROJECT STATION.
--MOVED ROW IN 5 FT ON TRACTS 8,10, 12, 13,15

REVISION 3-15-2008
--TRACT 11 MOVED PRESENT ROW 10'

REVISION 5-20-2008
--TRACT 22 REVISED PROPERTY LINE. BETWEEN TRACT 20 & 22.

REVISION: 09-08-2009
--MOVED PROPOSED R.O.W. 3' IN FROM STA. 233+70 RT. TO 237+00 RT. ALONG TRACTS 18 AND 19.

REVISION: 01-23-2012
--TRACT 16, DELETED

REVISION: 8-22-2014
--ADDED TRACT 20-S

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JAMES H. GUM
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 103760
STATE OF TENNESSEE
10/2/2014

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPERTY MAP

BEG. TO STA. 245+00
SCALE: 1"=100'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	3F
CONST.	2014	STP-320(4)	3F

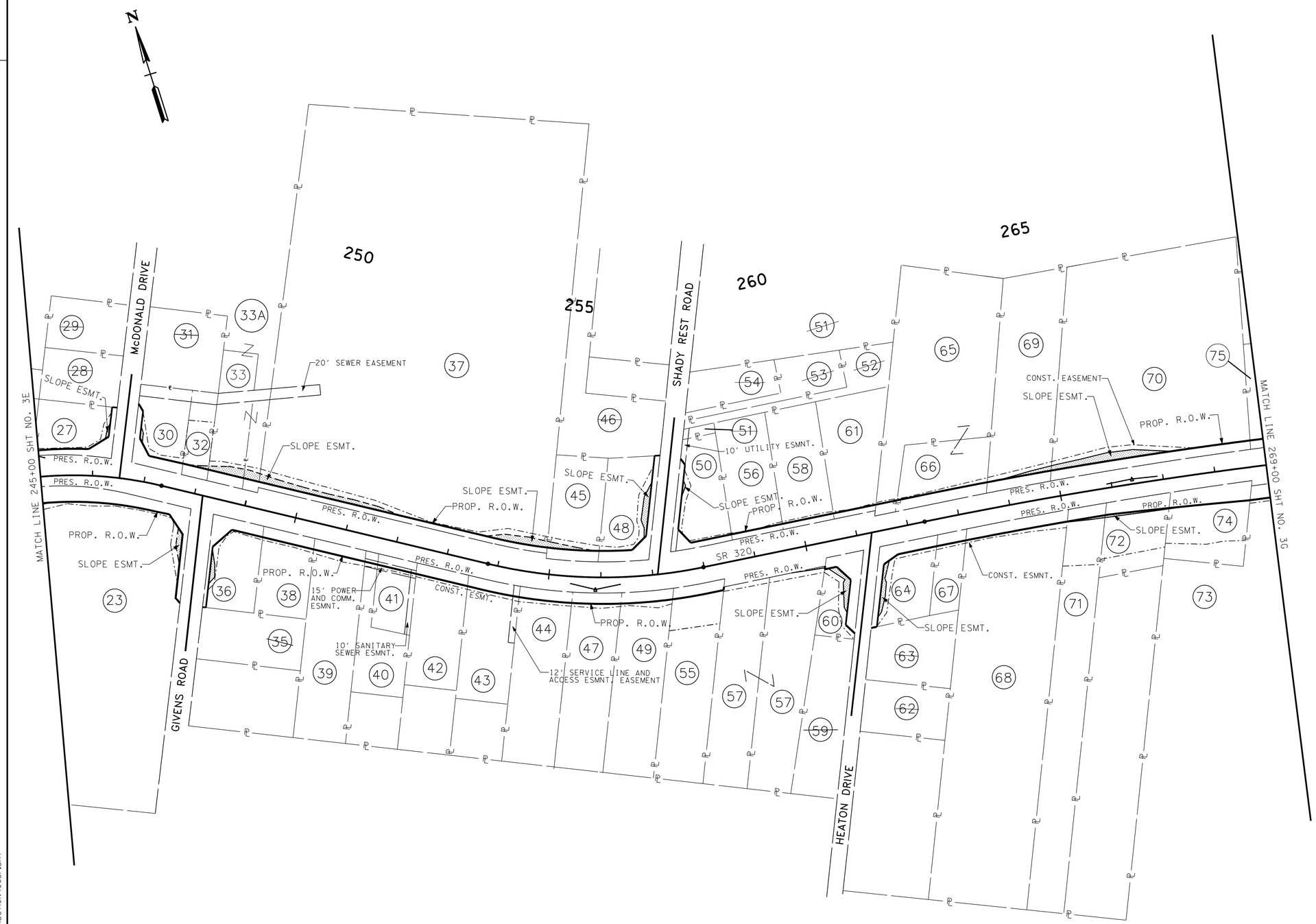
REVISION: 9-20-06
-- LINE THROUGH TRACTS 28,63

REVISION: 4-10-07
-- ADDED SEWER EASMENTS TO TRACTS 30.32.33.37.41.43.50.57.

REVISION: 9-07-2007
-- ADDED CONST. EASMT. TRACTS 71, 72,74

REVISION: 1-22-2008
-- TRACT 32 ADDED CONST. ESMT. FOR REMOVAL OF HOUSE.
-- TRACT 37 REVISED EASEMENT WIDTH TO 20 FT.
-- TRACT 49 REDUCED CONST. ESMT.

REVISION: 1-20-2008
-- CHANGED TRACT 34 TO 33A, ADDED Z BAR.
-- ADDED PROPERTY LINE TRACT 33.



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JAMES H. GILLIAM, JR.
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 103750
STATE OF TENNESSEE
10/20/14

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPERTY MAP

STA. 245+00 TO STA. 269+00

SCALE: 1"=100'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	3G
CONST.	2014	STP-320(4)	3G

REVISION 4-10-07
--ADDED UTILITY EASMENTS TO TRACTS 70,80,84,86,89,99,103.
--CHANGED PROPERTY LINES TRACTS 83,92,94,97,98,100,103,104,105.
--CHANGED ROW ON TRACTS 93,97,99, 103,104,105.

REVISION 9-07-07
--ADDED CONST. ESMT. TRACT 103.

REVISION 7-30-08
--TRACT 105 MOVED DRAINAGE ESMT.

REVISION 02-27-09
--TRACT 105 ADDED CONST. ESMT.

REVISION 02-04-2010
--TRACT 105 REVISED TO TRACT 105A.

REVISION 05-19-2010
--TRACT 88, REVISED DRAIN, ESMT.
--TRACT 90, ADDED TRACT 90-S & DRAIN ESMT.
--TRACT 91, ADDED TRACT 91-S & DRAIN ESMT.
--TRACT 92, ADDED TRACT 92-S & R.O.W.& DRAIN. ESMT.
--TRACT 98, ADDED TRACT 98S & DRAIN. ESMT..

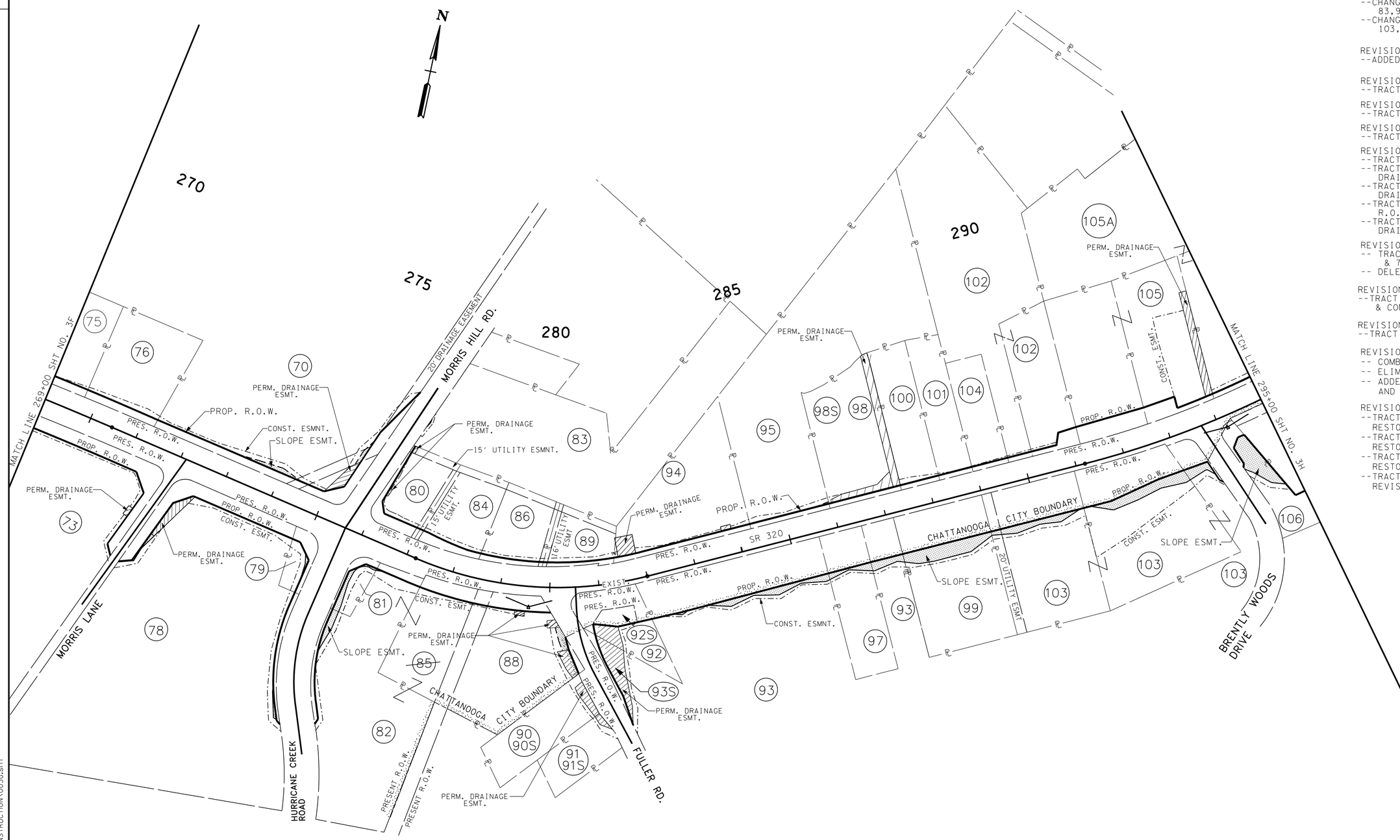
REVISION 07-20-2010
-- TRACT 70, COMBINE TRACTS 70 & 77,
-- DELETED TRACT 77.

REVISION 07-06-2011
--TRACT 80 REVISED R.O.W, DRAINAGE & CONST. ESMT.

REVISION 1-23-2012
--TRACT 87, DELETED TRACT.

REVISION 09-05-2012
-- COMBINED TRACTS 82 AND 85
-- ELIMINATED TRACT NO. 85.
-- ADDED Z BAR BETWEEN TRACTS 82 AND PREVIOUSLY 85.

REVISION 05-23-2013
--TRACT 92:
RESTORED PRESENT ROW.
--TRACT 92S:
RESTORED PRESENT ROW.
--TRACT 93:
RESTORED PRESENT ROW.
--TRACT 80:
REVISED CONSTRUCTION EASEMENT.



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JAMES H. GILLIAM
REGISTERED ENGINEER
DEPARTMENT OF AGRICULTURE
COMMERCE
NO. 103760
STATE OF TENNESSEE
10/20/14

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPERTY MAP

STA. 269+00 TO STA. 295+00

SCALE: 1"=100'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	3H
CONST.	2014	STP-320(4)	3H

REVISION: 4-10-2007
--CHANGED PROPERTY LINES TRACTS 109,114,114A,115,119,122,123,125, 128.
--CHANGED ROW OFFSET RT. STA. 280+12 TO STA. 315+47.
--CHANGED ROW OFFSET LT. STA. 281+02 TO STA. 317+09.
--CHANGED ROW ON TRACT 116,113,105, 127,129,131.

REVISION: 9-07-2007
--ADDED CONST. ESMT TRACTS 111, 129, 131

REVISION: 1-22-2008
--TRACTS 116,118 REDUCED ROW .
--TRACTS 135,136 COMBINE TRACTS
--TRACT 145 ADDED CONST. ESMT .

REVISION: 9-08-2009
--ADDED 'Z' BARS BETWEEN TRACT 114 AND PREVIOUS 114A. DELETED LABEL TRACT 114A.

REVISION: 02-04-2010
--TRACT 105, CHANGED TO TRACT 105A, AND ADDED PROPERTY LINES.
--TRACT 112, REVISED PROPERTY LINES.
--TRACT 116, REPLACED DRIAN. ESMT. WITH R.O.W.
--TRACT 118 ADDED R.O.W.

REVISION: 05-19-2010
--TRACT 113, ADDED TRACT 113S, & ADDED ROW AROUND POND.
--TRACT 127, ADDED TRACT 127S & DRAIN. EASEMENT.

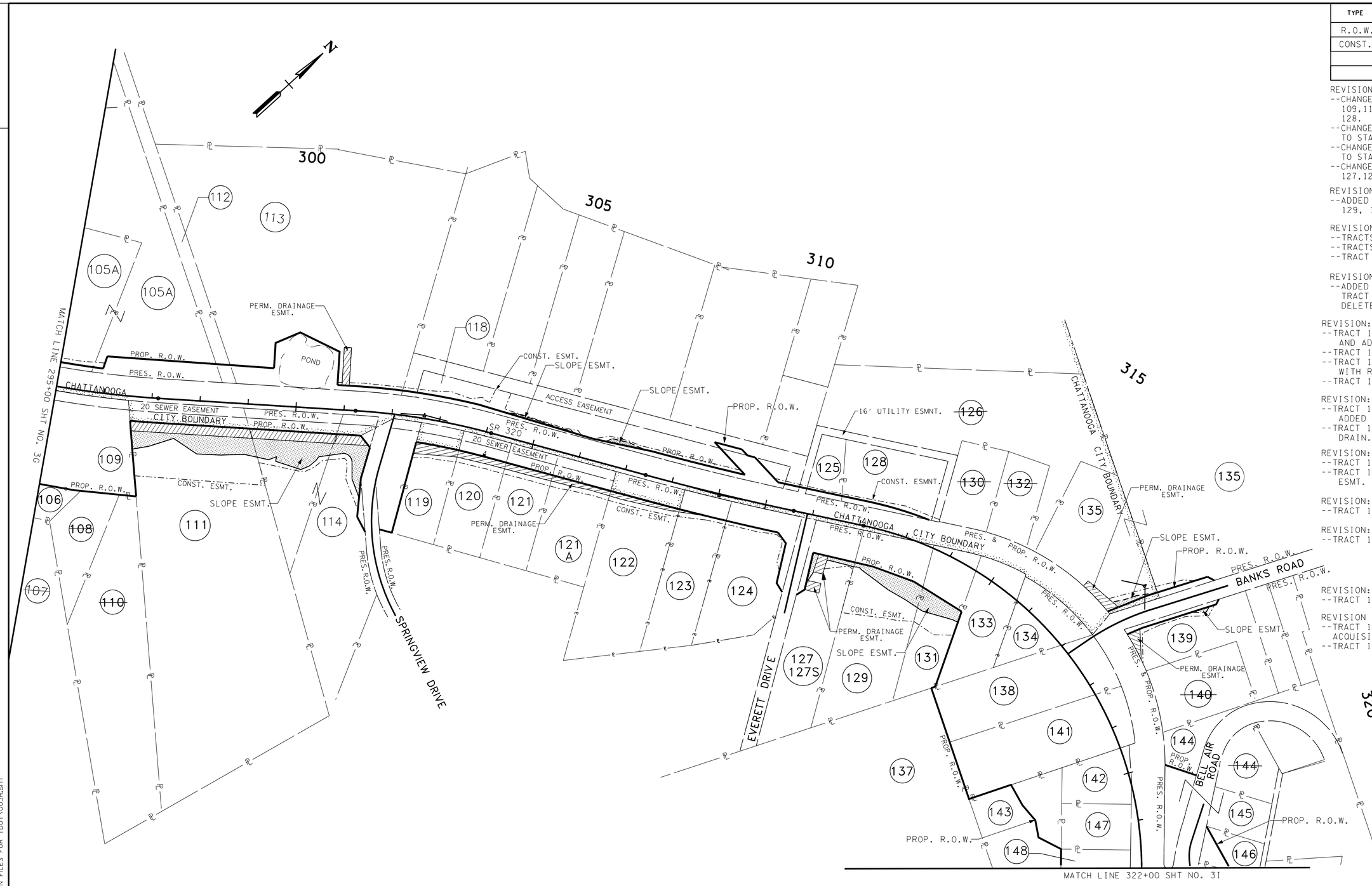
REVISION: 09-27-2010
--TRACT 113,113S COMBINE TRACTS
--TRACT 143, REVISED, SLOPE,CONST. ESMT.

REVISION: 11-02-2010
--TRACT 118, DELETED TRACT 118S

REVISION: 07-06-2011
--TRACT 118 REVISED CONST. ESMT.

REVISION: 10-31-2011
--TRACT 116, DELETED TRACT 116

REVISION 04-03-2013
--TRACT 112, REVISED PROPOSED ROW. ACQUISITION AMOUNTS UNAFFECTED.
--TRACT 130, LINED THRU.



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JAMES H. GILLIAM
REGISTERED ENGINEER
AGRICULTURE COMMERCE
NO. 103759
STATE OF TENNESSEE
5/10/2014

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPERTY MAP

STA. 295+00 TO STA. 322+00

SCALE: 1"=100'

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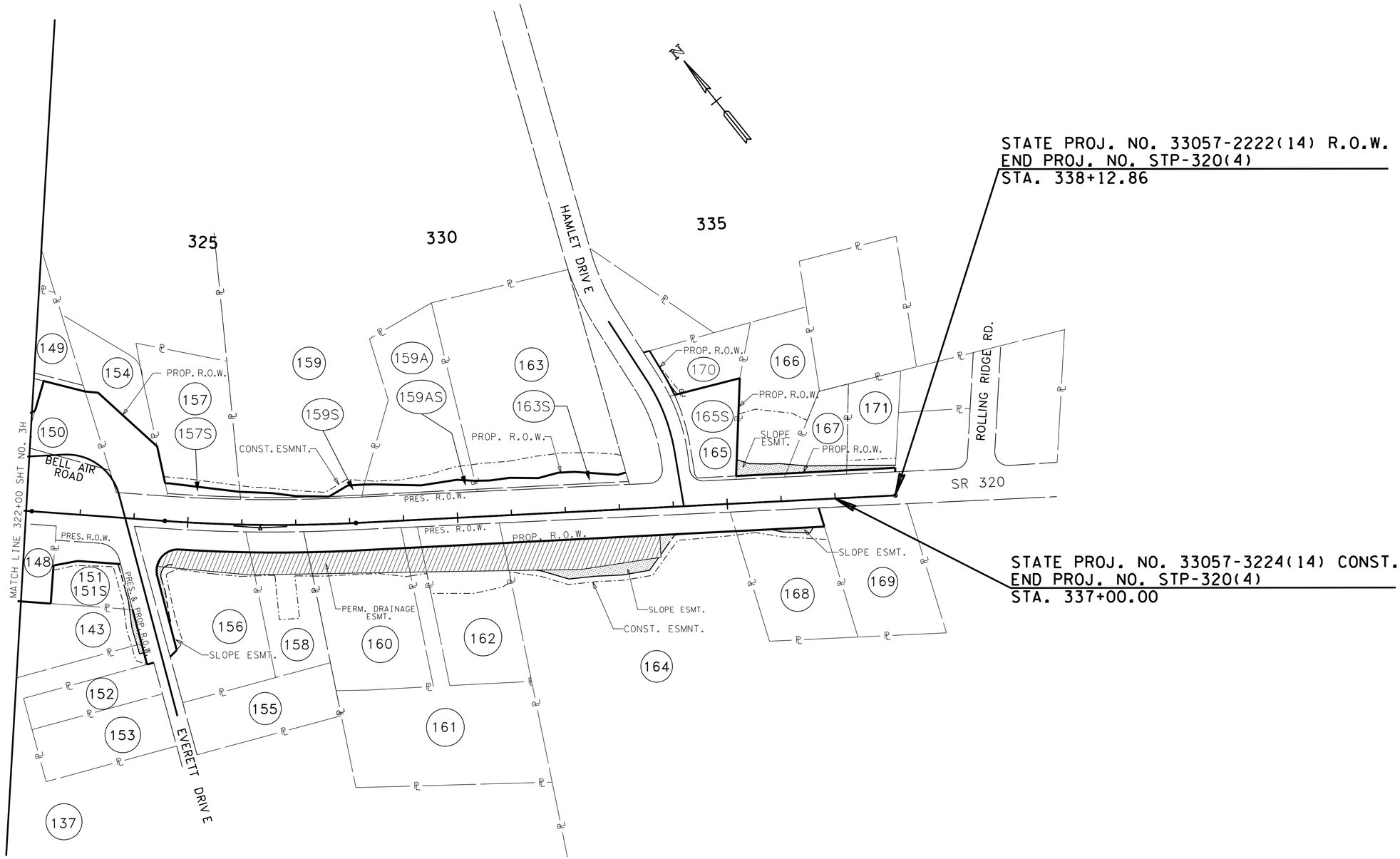
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.



TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	3I
CONST.	2014	STP-320(4)	3I

REVISION 9-20-2006
--ADDED TEMP. CONST. ESMT. FOR REMOVAL OF STRUCTURE TRACT 166.
--ADDED SLOPE & CONST. ESMT TO TRACT 167.

REVISION 4-10-2007
--ADDED & CORRECTED PROPERTY LINES TRACTS 164,165,166,167,168,169, 170,171.
--CHANGED ESMT. TRACTS 157,159, 163.
--CHANGED END OF PROJECT R.O.W. STATION.

REVISION 9-7-2007
--ADDED CONST. ESMT. TRACT 162,167.

REVISION 1-22-2008
--TRACT 165 ADDED CONST. ESMT. FOR REMOVAL OF HOUSE.

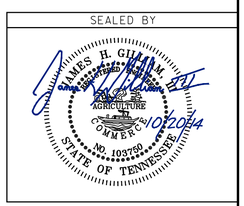
REVISION 7-30-2008
--TRACT 154 REVISED R.O.W. ACQUIRED.
--TRACT 157 REVISED PROPERTY LINES.

REVISION 05-19-2010
--TRACT 151, ADDED TRACT 151-S, REPLACED PERM. DRAIN ESMT. WITH ROW.

REVISION 07-06-2011
--TRACT 145, REVISED ROW
--TRACT 157, 159 163 REVISED ROW & CONST. ESMT.
--TRACT 165, REVISED ROW, DELETED DRAIN. ESMT.
--TRACT 151S, REVISED ROW.
REVISION 09-21-2011
--TRACT 159, ADDED TRACT 159S.
--TRACT 159A, ADDED TRACT 159A-S.
--TRACT 163, ADDED TRACT 163S.

REVISION 05-23-2013
--TRACT 157:
ADDED TRACT 157S.
--TRACT 157S:
ADDED PRESENT ROW.
--TRACT 159S:
RESTORED PRESENT ROW.
--TRACT 159AS:
RESTORED PRESENT ROW.
--TRACT 163S:
RESTORED PRESENT ROW.
--TRACT 165:
ADDED TRACT 165S
CHANGED PROPOSED ROW INTO PRESENT ROW.
--TRACT 165S:
ADDED PROPOSED ROW.
REMOVED CONSTRUCTION EASEMENT.
REMOVED PERMANENT DRAINAGE EASEMENT.

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPERTY MAP

STA. 322+00 TO END

SCALE: 1"=100'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2006	STP-320(4)	4
CONST.	2014	STP-320(4)	4

REVISION: 4-10-2007
--ADDED SEWER EASEMENTS TO TRACTS 2, 4, 7, 9, 11.

REVISION: 9-07-2007
--MOVED R.O.W. IN 5 FT ON TRACTS 8, 10, 12, 13, 15,
--UPDATED PROPERTY OWNERS TRACTS 2, 9, 18.
--COMBINE TRACTS 18,19 AND ADDED BUILDING.
--CHANGED BEGIN ROW PROJECT STATION.
--LINED OUT TRACTS 1 THROUGH 5.

REVISION: 3-15-2008
--TRACT 11, MOVED R.O.W. 10'.

REVISION: 09-08-2009
--MOVED PROPOSED R.O.W. 3' IN FROM STA. 233+70 RT. TO 237+00 RT. ALONG TRACTS 18 AND 19.
--ADDED NOTE.

REVISION: 05-19-2010
--ADDED WWC-1 & WWC-2.

REVISION: 11-12-2010
--TRACTS 10&12, MOVED PROPERTY LINE.
--TRACT 6, LINED OUT TRACT.

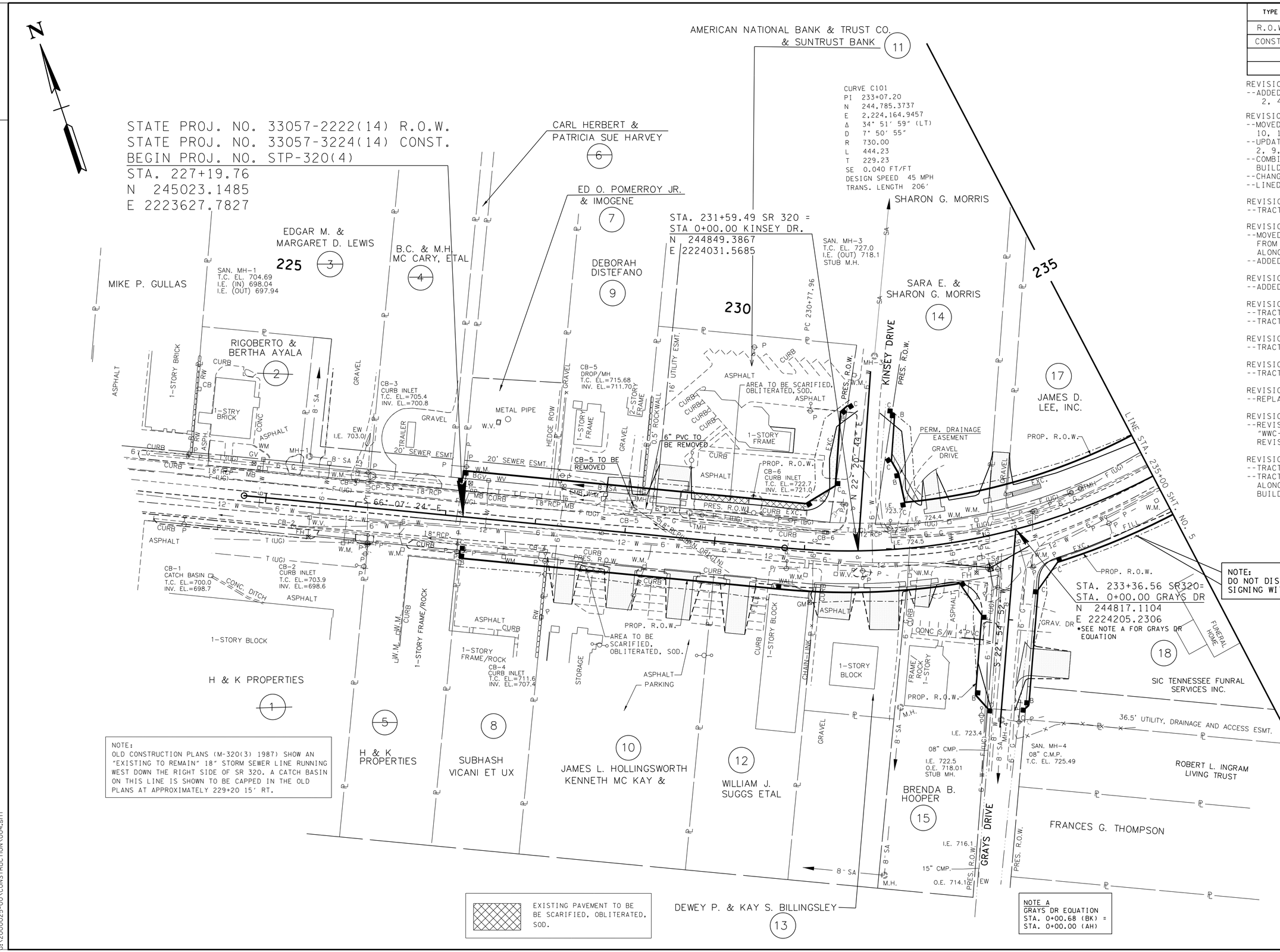
REVISION: 10-31-2011
--TRACT 16, CHANGED PROPERTY OWNER.

REVISION: 1-23-2011
--TRACT 16, DELETED TRACT.

REVISION: 09-05-2012
--REPLACED REVISION NOTE 11-12-2010.

REVISION: 11-20-2013
--REVISED THE STREAM CALL OUTS "WWC-1" AND "WWC-2", BASED ON REVISED EB REPORT.

REVISION: 05-20-2014
--TRACT 17, ADDED CURB CUT.
--TRACT 12, ADJUSTED CONST. ESMT. ALONG FRONT EXTERIOR WALL OF BUILDING.



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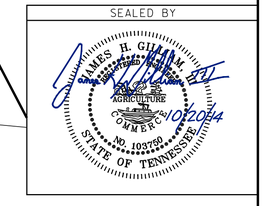

COORDINATE VALUES ARE NAD/83 (1995) AND ARE DATUM ADJUSTED BY THE FACTOR 0.99998 AND TIED TO THE TGRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

BEG. TO STA. 235+00

SCALE: 1"= 50'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2006	STP-320(4)	4A
CONST.	2014	STP-320(4)	4A

REVISION: 4-10-2007
--ADDED SEWER EASEMENTS TO TRACTS 2,4,7,9,11.

REVISION: 9-07-2007
--MOVED R.O.W. IN 5 FT ON TRACTS 8, 10, 12, 13 AND,15.
--UPDATED PROPERTY OWNERS TRACTS 2,9,18.
--COMBINE TRACTS 18,19 AND ADDED BUILDING.
--CHANGED BEGIN ROW PROJECT STATION.
--LINED OUT TRACTS 1 THROUGH 5

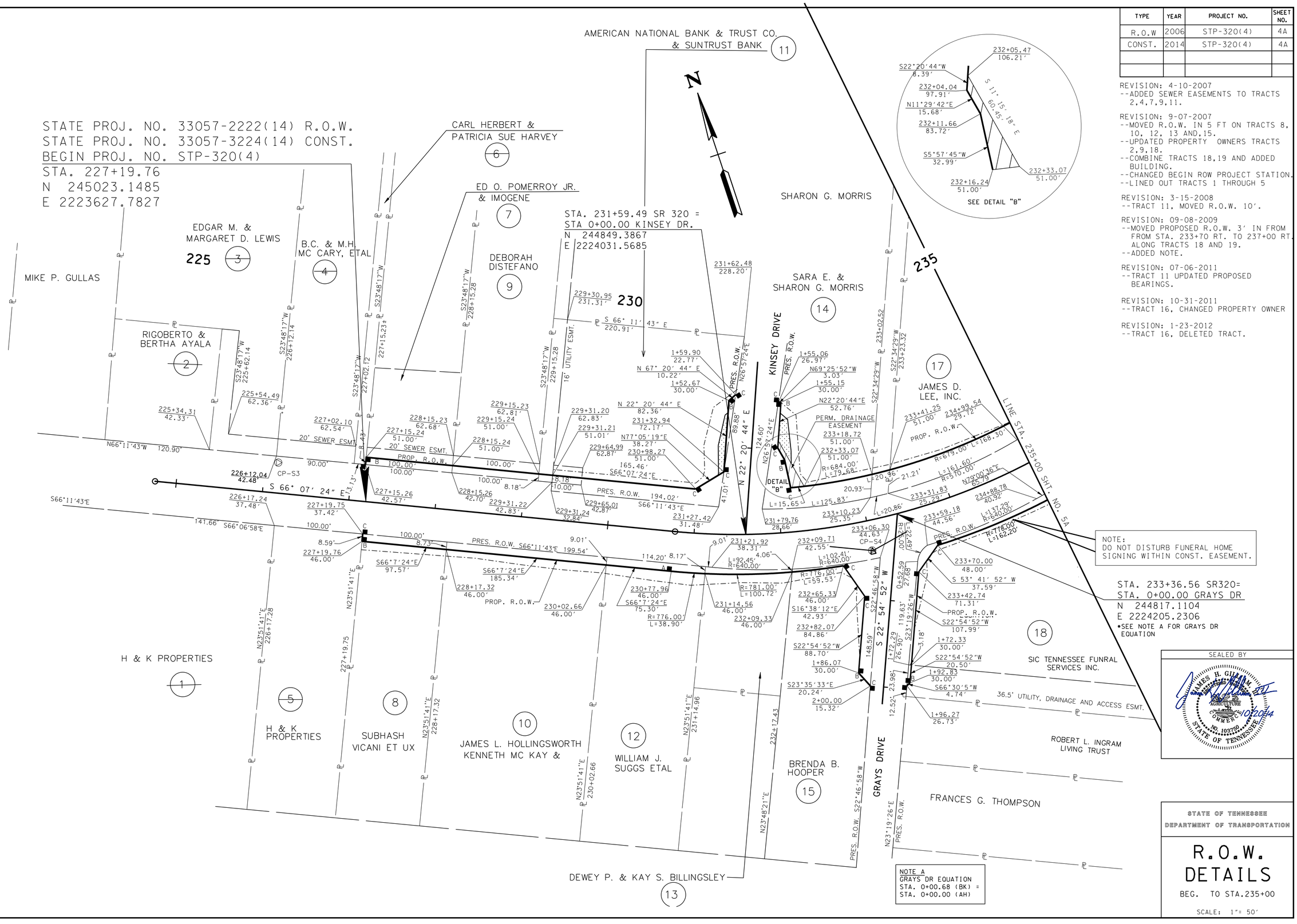
REVISION: 3-15-2008
--TRACT 11, MOVED R.O.W. 10'.

REVISION: 09-08-2009
--MOVED PROPOSED R.O.W. 3' IN FROM FROM STA. 233+70 RT. TO 237+00 RT. ALONG TRACTS 18 AND 19.
--ADDED NOTE.

REVISION: 07-06-2011
--TRACT 11 UPDATED PROPOSED BEARINGS.

REVISION: 10-31-2011
--TRACT 16, CHANGED PROPERTY OWNER

REVISION: 1-23-2012
--TRACT 16, DELETED TRACT.



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JAMES H. GHAM, III
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 103790
STATE OF TENNESSEE
10/2014

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

R.O.W. DETAILS

BEG. TO STA.235+00

SCALE: 1"= 50'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	4B
CONST.	2014	STP-320(4)	4B

REVISION: 9-07-2007
--CHANGED BEGIN ROW PROJECT STATION.

REVISION: 05-19-2010
--REMOVED PORTION OF WWC-1 AND WWC-2 UNDER PROPOSED ROADWAY.

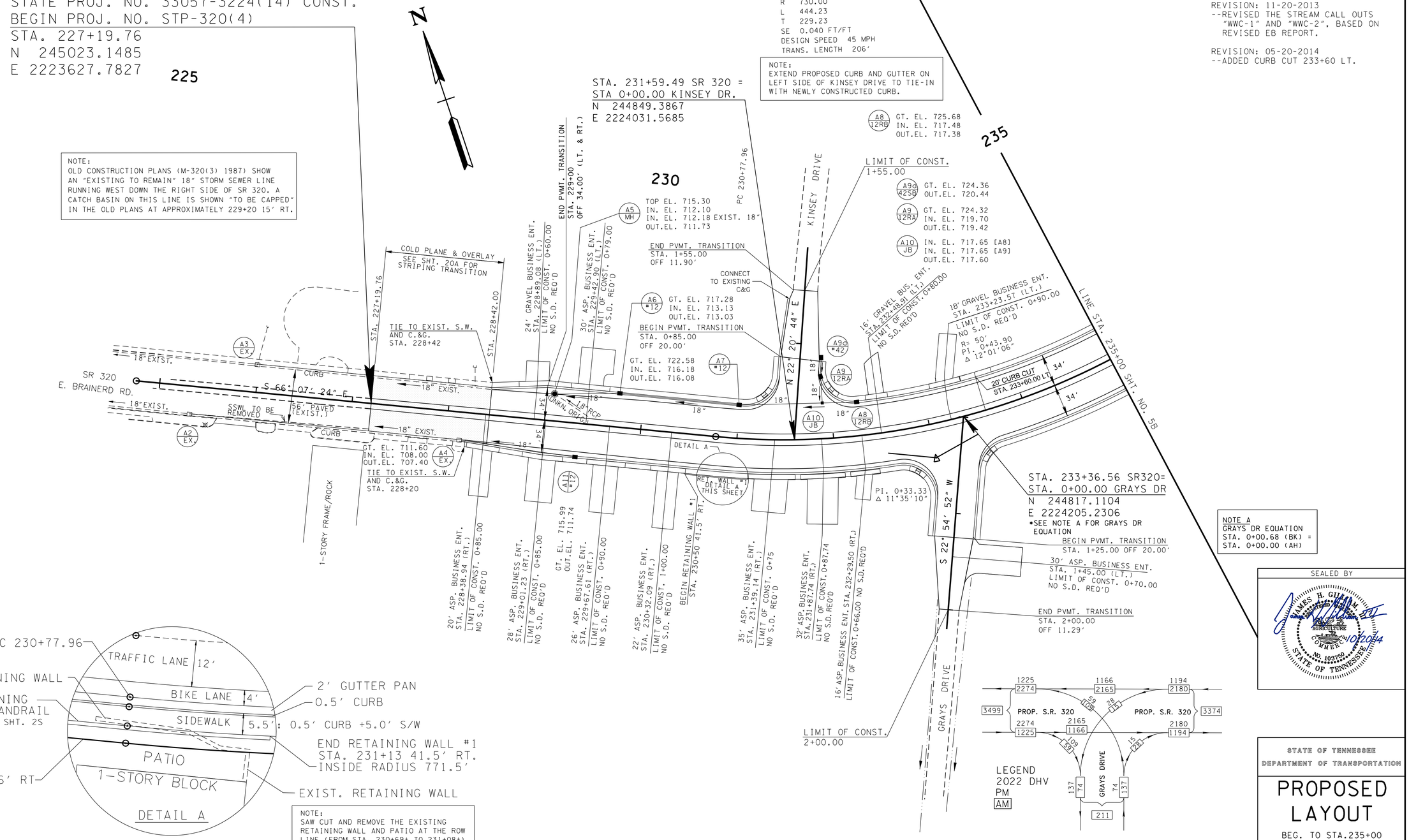
REVISION: 11-20-2013
--REVISED THE STREAM CALL OUTS "WWC-1" AND "WWC-2", BASED ON REVISED EB REPORT.

REVISION: 05-20-2014
--ADDED CURB CUT 233+60 LT.

NOTE:
-ALL SIDEROADS HAVE RADIUS OF 35'UNLESS OTHERWISE NOTED.
-ALL DRIVEWAYS OUTSIDE CURB & GUTTER RADIUS SHOULD BE 15' UNLESS OTHERWISE NOTED.

STATE PROJ. NO. 33057-2222(14) R.O.W.
STATE PROJ. NO. 33057-3224(14) CONST.
BEGIN PROJ. NO. STP-320(4)
STA. 227+19.76
N 245023.1485
E 2223627.7827

NOTE:
OLD CONSTRUCTION PLANS (M-320(3) 1987) SHOW AN "EXISTING TO REMAIN" 18" STORM SEWER LINE RUNNING WEST DOWN THE RIGHT SIDE OF SR 320. A CATCH BASIN ON THIS LINE IS SHOWN "TO BE CAPPED" IN THE OLD PLANS AT APPROXIMATELY 229+20 15' RT.



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JAMES H. GHAM, JR.
AGRICULTURE
COMMERCE
NO. 103790
STATE OF TENNESSEE
9/10/2014

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

BEG. TO STA.235+00
SCALE: 1"= 50'

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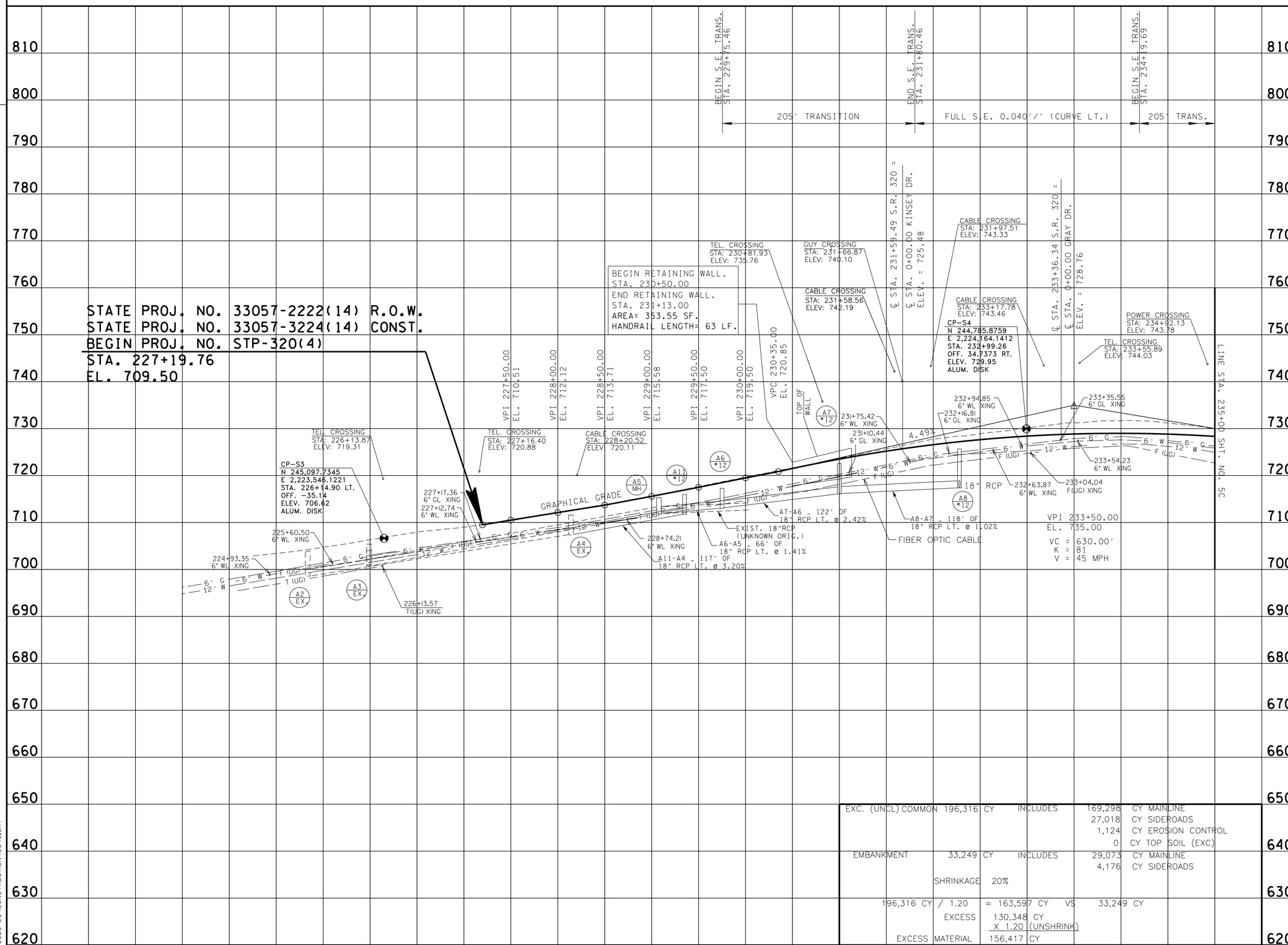
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2006	STP-320(4)	4C
CONST.	2014	STP-320(4)	4C

REVISION 9-07-07
--CHANGED BEGIN OF PROJECT ROW STATION.



EXC. (UNCL) COMMON	196,316 CY	INCLUDES	169,298	CY MAINLINE	
			27,018	CY SIDEROADS	
			1,124	CY EROSION CONTROL	
			0	CY TOP SOIL (EXC)	
EMBANKMENT	33,249 CY	INCLUDES	29,073	CY MAINLINE	
			4,176	CY SIDEROADS	
	SHRINKAGE 20%				
196,316 CY / 1.20	= 163,597 CY	VS	33,249 CY		
	EXCESS 130,348 CY				
	X 1.20 (UNSHRINK)				
	EXCESS MATERIAL 156,417 CY				

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DEPARTMENT OF AGRICULTURE
DEPARTMENT OF COMMERCE
NO. 103750
STATE OF TENNESSEE
10/20/14

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE

BEG. TO STA.235 +00
SCALE: 1"= 50' HORIZ.
1"= 10' VERT.

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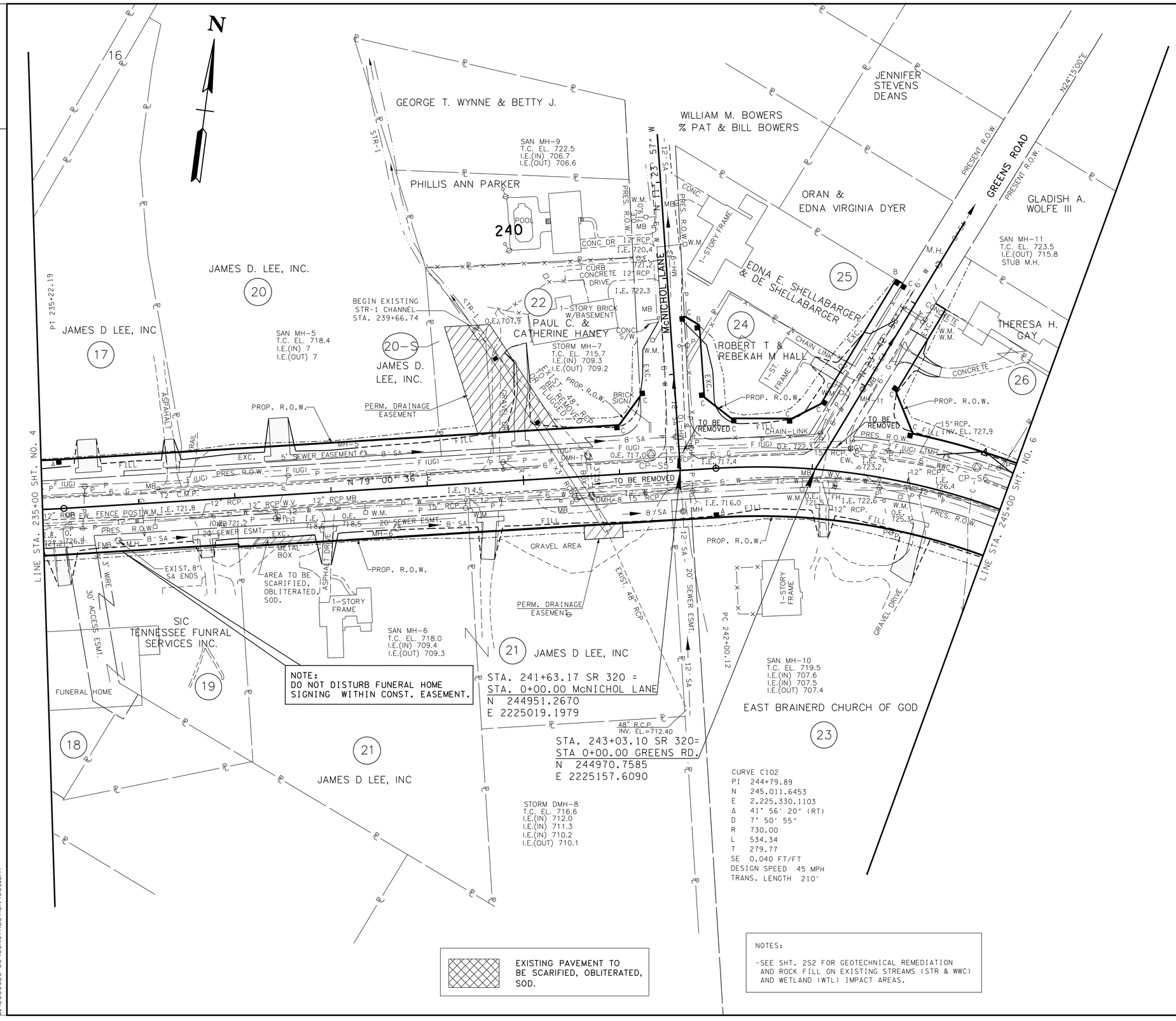
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.



CURVE C102
PI 244+79.89
N 245,011.6453
E 2,225,330.1103
Δ 41° 56′ 20″ (RT)
D 7° 50′ 55″
R 730.00
L 534.34
T 279.77
SE 0.040 FT/FT
DESIGN SPEED 45 MPH
TRANS. LENGTH 210′

NOTES:

-SEE SHT. 2S2 FOR GEOTECHNICAL REMEDIATION AND ROCK FILL ON EXISTING STREAMS (STR & WWC) AND WETLAND (WTL) IMPACT AREAS.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2006	STP-320(4)	5
CONST.	2014	STP-320(4)	5

REVISION: 4-10-2007
--ADDED ACCESS EASEMENTS BEWTEEN TRACT 18,19.
--ADDED SEWER EASEMENTS BETWEEN TRACTS 19,21 & 21,23.
--ADDED SEWER EASMENT TRACTS 17, 20,22.

REVISION: 9-07-2007
-- ADDED PVT. DRIVE TRACT 22.
-- CHANGED PROPERTY OWNER TRACT 18, 9,24.

REVISION: 4-22-2008
--TRACT 26, REVISED & ADDED PRIVATE DRIVE.

REVISION: 5-20-2008
--TRACT 22, REVISED PROPERTY LINE BETWEEN TRACTS 20 & 22.

REVISION: 09-08-2009
--MOVED PROPOSED R.O.W. 3′ IN FROM STA. 233+70 RT. TO 237+00 RT. ALONG TRACTS 18 AND 19.
--ADDED NOTE.

REVISION: 02-04-2010
--REMOVED WWC-1 AND WWC-2.
--CORRECTED STREAM CALLOUT FROM WWC-4 TO WWC-3.
--REMOVED PROPOSED 8′ FLAT BOTTOM SODDED DITCH DETAIL.
--ADDED ARROWS FOR FLOW DIRECTION TO STREAM STR-1.
--CORRECTED STREAM CROSS-SECTION FROM CROSS-SECTION A TO PROFILE "A"-"A".
--ADDED FIELD ENT. STA. 235+50 & BUS. DRIVE STA. 237+50

REVISION: 07-25-2011
--TRACT 26, DELETED AND REVISED PVT. DRIVES.

REVISION: 11-20-2013
--REVISED THE STREAM CALL OUTS "WWC-3" AND "WWC-7", BASED ON REVISED EB REPORT.

REVISION: 8-22-2014
--CORRECTED TR. 20/22 PROPERTY LINE BY MOVING LINE EAST AND CREATING TR. 20-S

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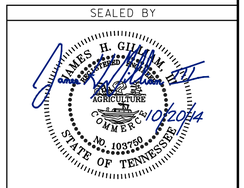

COORDINATE VALUES ARE NAD/83 (1995) AND ARE DATUM ADJUSTED BY THE FACTOR 0.99998 AND TIED TO THE TGRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 235+00 TO STA. 245+00

SCALE: 1"= 50′

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	5A
CONST.	2014	STP-320(4)	5A

REVISION: 4-10-2007
--ADDED ACCESS EASEMENTS BEWTEEN TRACT 18,19.
--ADDED SEWER EASEMENTS BETWEEN TRACTS 19,21 & 21,23.
--ADDED SEWER EASMENT TRACTS 17, 20,22.

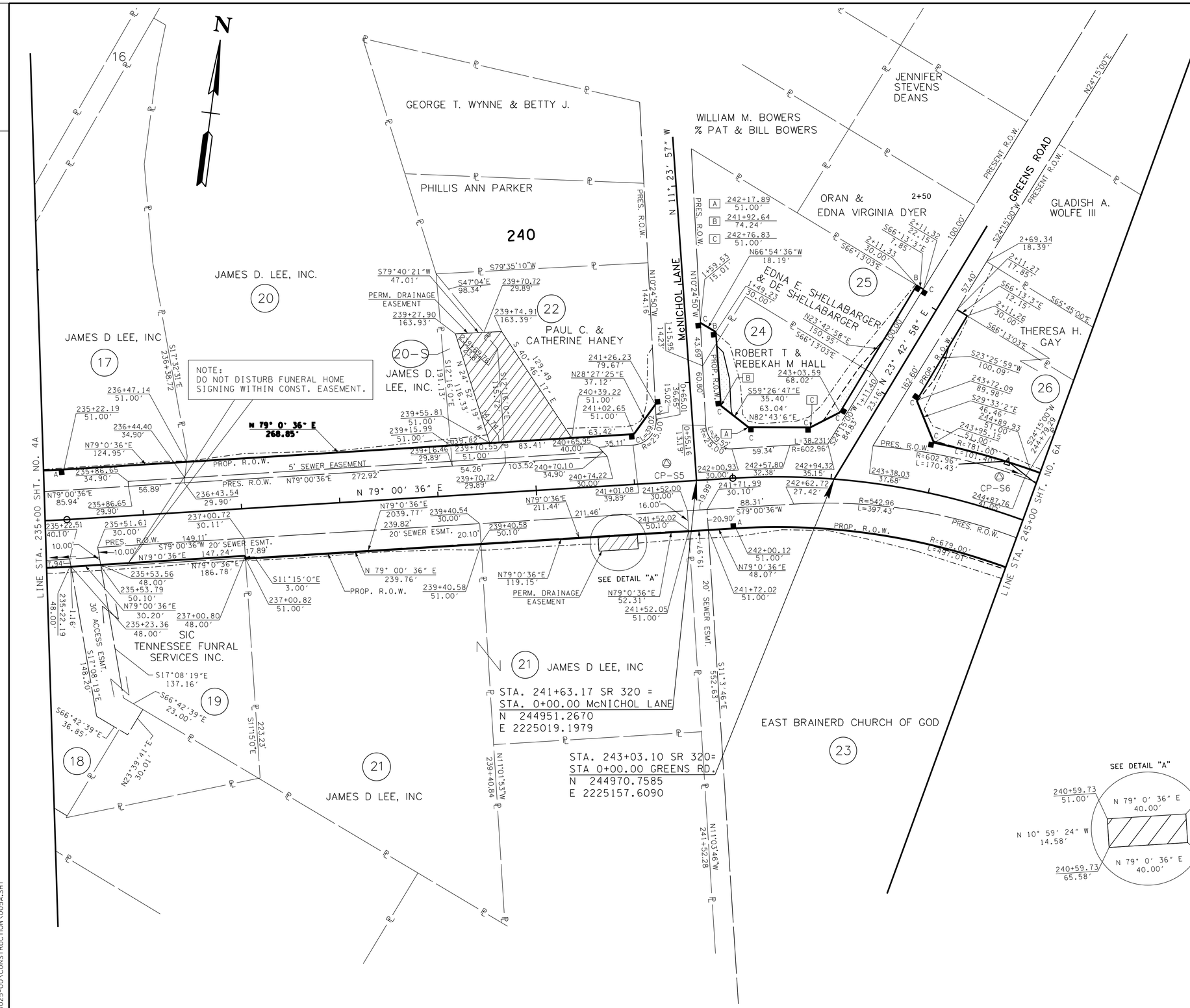
REVISION: 9-07-2007
-- ADDED PVT DRIVE TRACT 22.
--CHANGED PROPERTY OWNER TRACT 18, 19,24.

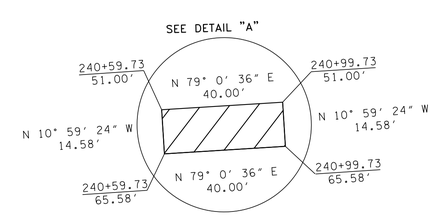
REVISION: 5-20-2008
--TRACT 22, REVISED PROPERTY LINE BETWEEB TRACTS 20 & 22.

REVISION: 09-08-2009
--MOVED PROPOSED R.O.W. 3′ IN FROM STA. 233+70 RT. TO 237+00 RT. ALONG TRACTS 18 AND 19.
--REVISED DISTANCES AND BEARING FOR PROPERTY LINES TRACTS 18 AND 19.
--ADDED NOTE.

REVISION: 07-06-2011
--TRACT 26 UPDATED PROPOSED BEARINGS.

REVISION: 8-22-2014
--CORRECTED TR. 20/22 PROPERTY LINE BY MOVING LINE EAST AND CREATING TR. 20-S





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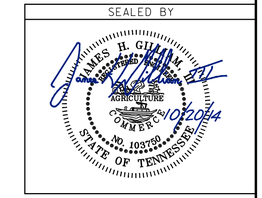

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

R.O.W. DETAILS

STA. 235+00 TO STA. 245+00

SCALE: 1″= 50′

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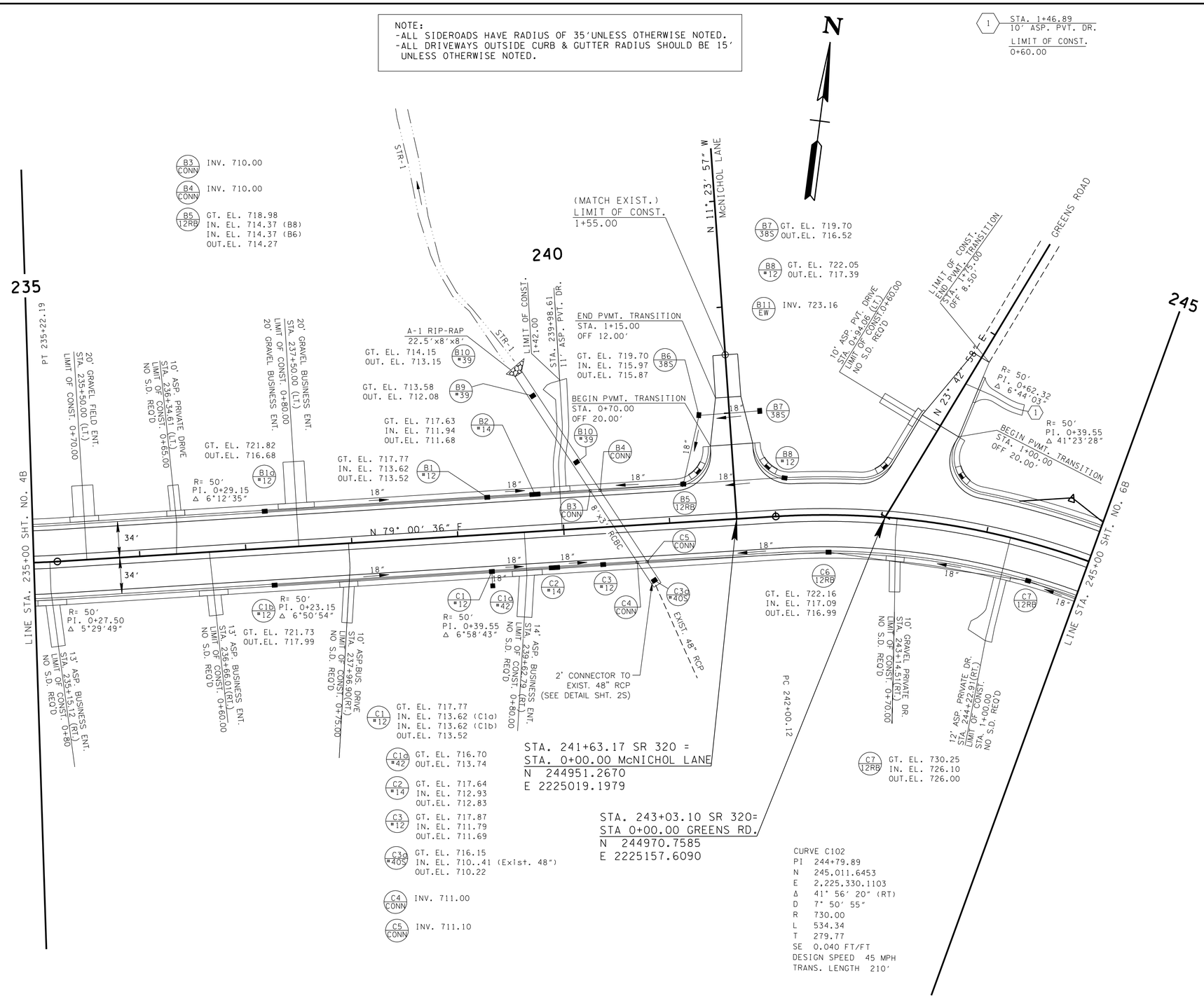
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

NOTE:
-ALL SIDEROADS HAVE RADIUS OF 35'UNLESS OTHERWISE NOTED.
-ALL DRIVEWAYS OUTSIDE CURB & GUTTER RADIUS SHOULD BE 15' UNLESS OTHERWISE NOTED.



NOTES:

-SEE SHT. 2S2 FOR GEOTECHNICAL REMEDIATION AND ROCK FILL ON EXISTING STREAMS (STR & WWC) AND WETLAND (WTL) IMPACT AREAS.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	5B
CONST.	2014	STP-320(4)	5B

REVISION: 9-07-2007
--ADDED PVT. DRIVE STA. 240+05.

REVISION: 4-22-2008
--TRACT 26, REVISED & ADDED PVT. DRIVE.

REVISION: 02-04-2010
--REMOVED WWC-1 AND WWC-2.
--REMOVED WWC-3 AND WWC-7 FROM PROPOSED ROADWAY.
--REMOVED LOW FLOW CHANNEL DETAIL.
--ADDED FIELD ENT. STA. 235+50 & BUS. DRIVE STA. 237+50.

REVISION: 07-25-2011
--DELETED PVT DRIVE STA. 1+46.89.

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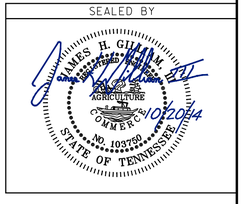

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 235+00 TO STA. 245+00
SCALE: 1"= 50'

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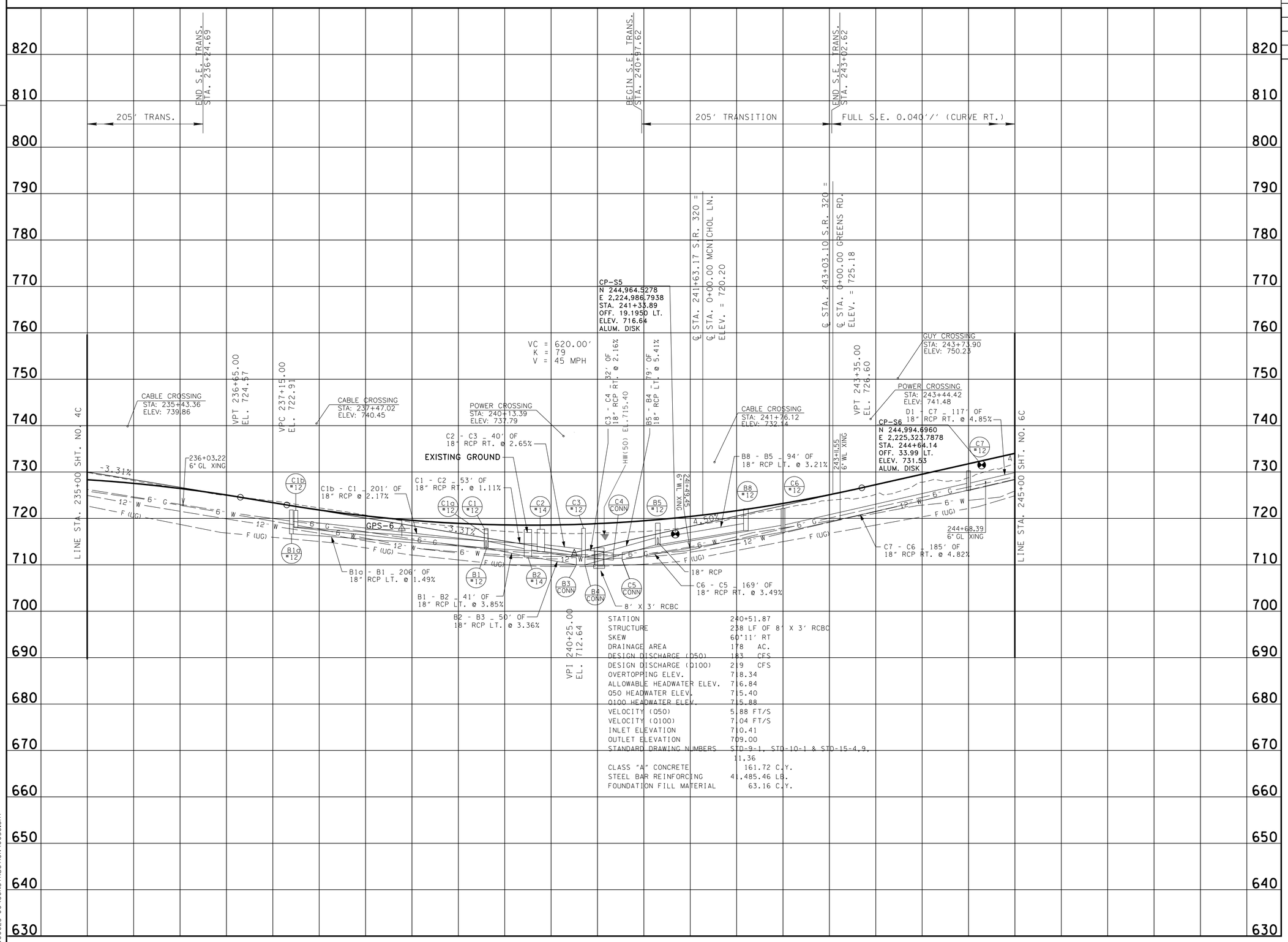
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2006	STP-320(4)	5C
CONST.	2014	STP-320(4)	5C



STATION	240+51.87
STRUCTURE	238 LF OF 8' X 3' RCBC
SKEW	60°11' RT
DRAINAGE AREA	178 AC.
DESIGN DISCHARGE (Q50)	183 CFS
DESIGN DISCHARGE (Q100)	219 CFS
OVERTOPPING ELEV.	718.34
ALLOWABLE HEADWATER ELEV.	716.84
Q50 HEADWATER ELEV.	715.40
Q100 HEADWATER ELEV.	715.88
VELOCITY (Q50)	5.88 FT/S
VELOCITY (Q100)	7.04 FT/S
INLET ELEVATION	710.41
OUTLET ELEVATION	709.00
STANDARD DRAWING NUMBERS	STD-9-1, STD-10-1 & STD-15-4.9, 11.36
CLASS "A" CONCRETE	161.72 C.Y.
STEEL BAR REINFORCING	41,485.46 LB.
FOUNDATION FILL MATERIAL	63.16 C.Y.

SEALED BY

JAMES H. GILLIAM III
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AGRICULTURE
COMMERCE
NO. 103759
STATE OF TENNESSEE
2/10/2014

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE

STA. 235+00 TO STA. 245+00

SCALE: 1"= 50' HORIZ.
1"=10' VERT.

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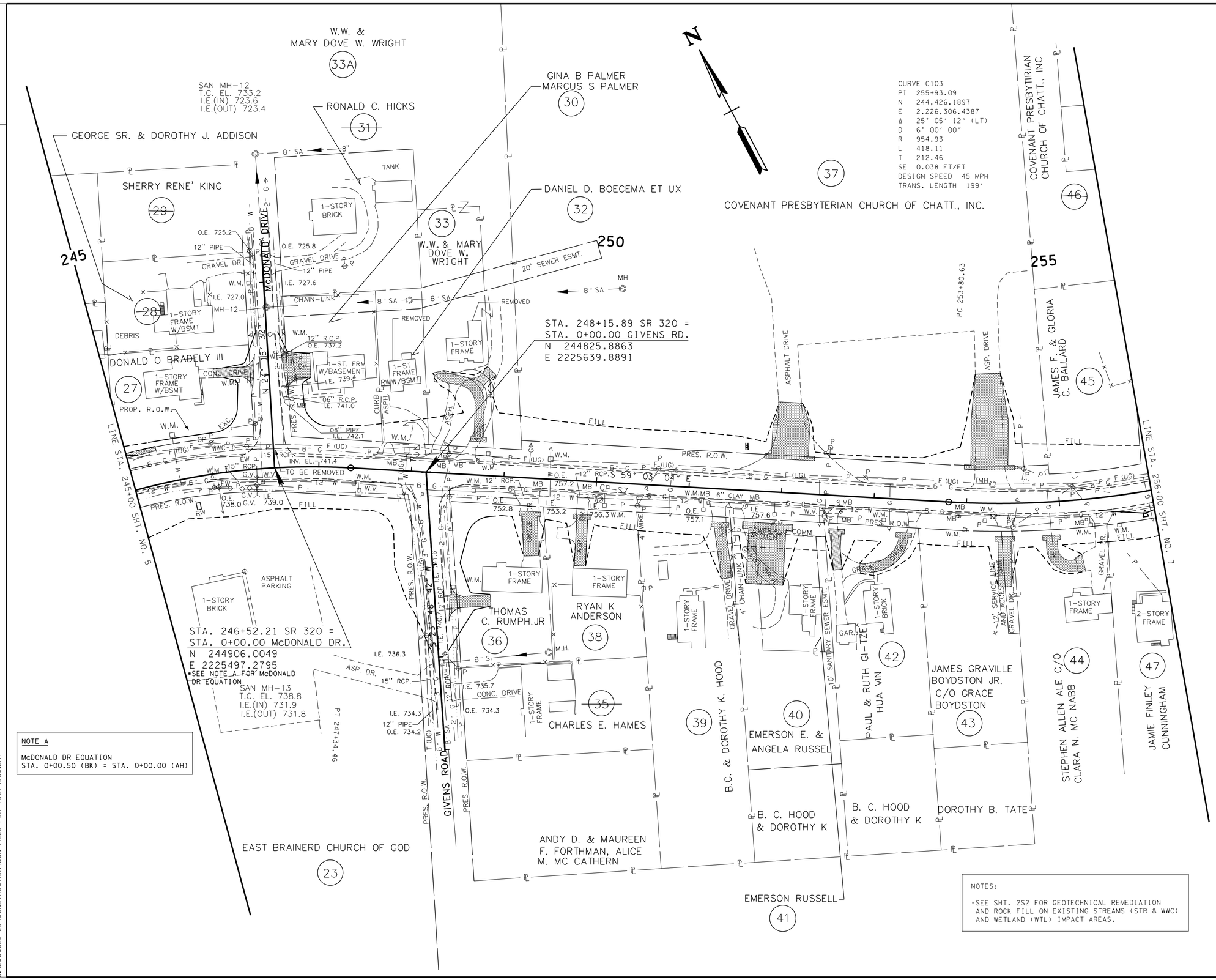
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.



NOTE A

McDONALD DR EQUATION
STA. 0+00.50 (BK) = STA. 0+00.00 (AH)

NOTES:

-SEE SHT. 2S2 FOR GEOTECHNICAL REMEDIATION AND ROCK FILL ON EXISTING STREAMS (STR & WWC) AND WETLAND (WTL) IMPACT AREAS.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2006	STP-320(4)	6
CONST.	2014	STP-320(4)	6

REVISION: 4-10-2007
--ADDED EASEMENTS TO TRACTS 30,32, 33,37,41,43.

REVISION: 9-07-2007
--UPDATED PROPERTY OWNERS ON TRACTS 27,30,36.

REVISION: 1-22-2008
--TRACT 32 ADDED CONST. ESMT FOR REMOVAL OF HOUSE.
--TRACT 33 CHANGED PROPERTY OWNER . AND PROPERTY LINE.
--TRACT 37 REVISED UTILITY EASMENT WIDTH .

REVISION: 4-22-2008
--TRACT 34 ADDED PROPERTY LINE PREVIOUSLY DELETED.

REVISION: 5-20-2008
--CHANGED TRACT 34 TO TRACT 33A, ADDED Z BAR. ADDED PROPERTY LINE PREVIOUSLY DELETED TRACT 33.

REVISION: 10-29-2008
--TRACT 27,ADDED CURB CUT

REVISION: 6-26-2009
--TRACT 38,UPDATED PROPERTY OWNER.

REVISION: 11-3-2009
--TRACT 41,UPDATED PROPERTY OWNER.

REVISION: 05-19-2010
--PVT. DR. STA. 248+71.77, ADDED SECOND DRIVE TO PVT. DRIVE.

REVISION: 07-25-2010
--TRACT 37, REVISED & ADDED BUS. DRIVE.
--TRACT 40,41, DELETED & ADDED PVT. DRIVE.
--TRACT 41, REVISED PROPERTY OWNER.

REVISION: 04-03-2013
--MOVED BUSINESS ENTRANCE LEFT FOR TRACT NO. 37 FROM STA.254+50 TO STA. 254+24.13.

REVISION: 11-20-2013
--REVISED THE STREAM CALL OUTS "WWC-3", "WWC-4", "WWC-5" AND "WWC-6", BASED ON REVISED EB REPORT.

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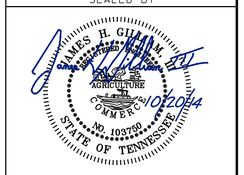

COORDINATE VALUES ARE NAD/83 (1995) AND ARE DATUM ADJUSTED BY THE FACTOR 0.99998 AND TIED TO THE TGRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 245+00 TO STA. 256+00

SCALE: 1"= 50'

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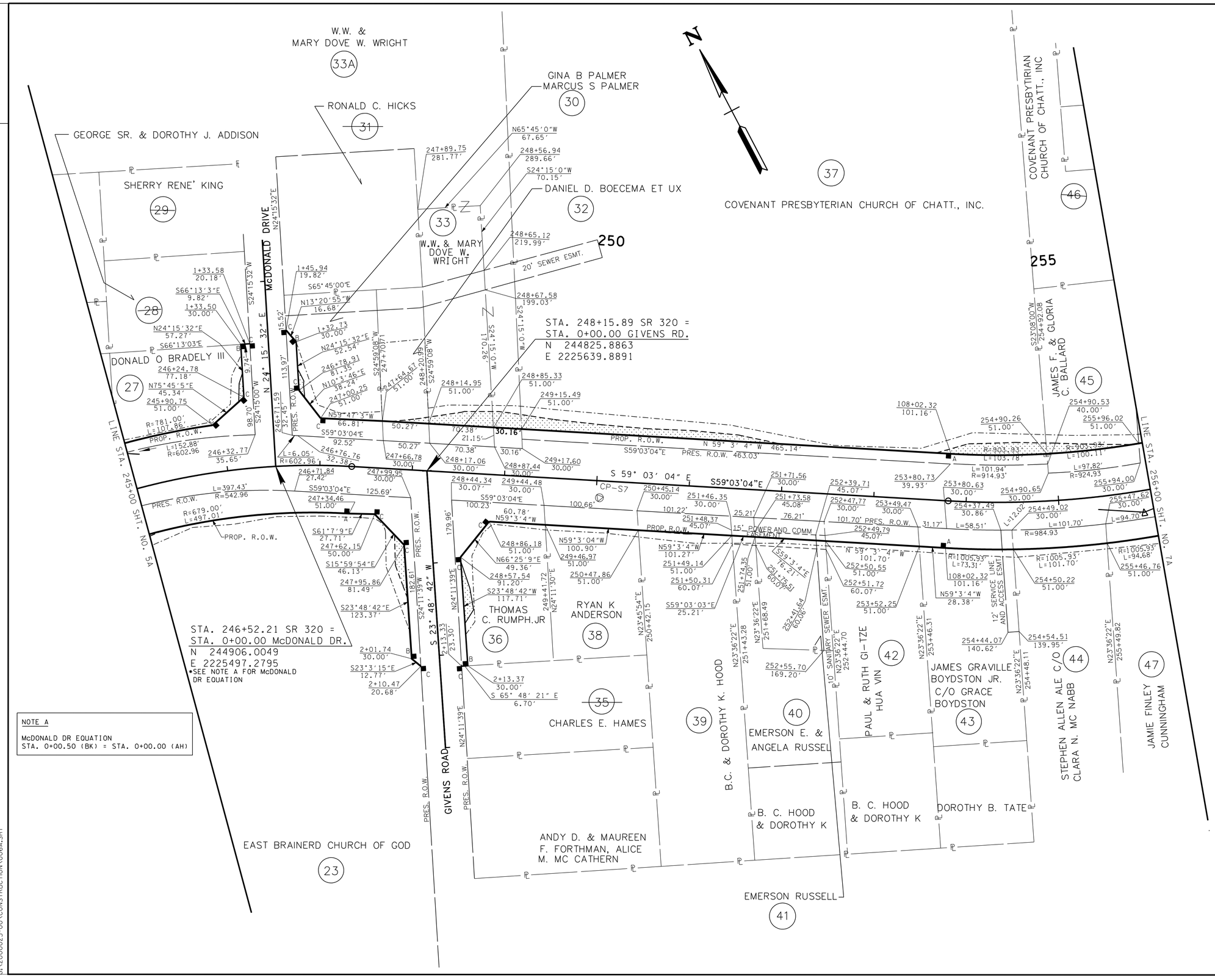
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.



NOTE A

McDONALD DR EQUATION
STA. 0+00.50 (BK) = STA. 0+00.00 (AH)

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	6A
CONST.	2014	STP-320(4)	6A

REVISION: 4-10-2007
--ADDED UTILITY EASEMENTS TO TRACT 30, 21, 33, 37, 41, 43.

REVISION: 9-07-2007
--UPDATED PROPERTY OWNERS, TRACTS 27, 30, 36.

REVISION: 1-22-2008
--TRACT 32 ADDED CONST. ESMT FOR REMOVAL OF HOUSE.
--TRACT 33 CHANGED PROPERTY OWNER. AND PROPERTY LINE.
--TRACT 37 REVISED UTILITY EASEMENT WIDTH.

REVISION: 4-22-2008
--TRACT 34 ADDED PROPERTY LINE PREVIOUSLY DELETED.

REVISION: 5-20-2008
--CHANGED TRACT 34 TO TRACT 33A, ADDED Z BAR. ADDED PROPERTY LINE PREVIOUSLY DELETED TRACT 33.

REVISION: 10-29-2008
--TRACT 27, CORRECTED PROPOSED ROW BEARINGS.

REVISION: 6-26-2009
--TRACT 38, UPDATED PROPERTY OWNER.

REVISION: 11-3-2009
--TRACT 41, UPDATED PROPERTY OWNER.

REVISION: 07-06-2011
--TRACT 23 UPDATED PROPOSED BEARINGS.

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JAMES H. GILLIAM
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 103790
STATE OF TENNESSEE
10/2/2014

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

R.O.W. DETAILS

STA.245+00 TO STA.256 +00

SCALE: 1"= 50'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

NOTE:
-ALL SIDEROADS HAVE RADIUS OF 35'UNLESS OTHERWISE NOTED.
-ALL DRIVEWAYS OUTSIDE CURB & GUTTER RADIUS SHOULD BE 15' UNLESS OTHERWISE NOTED.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	6B
CONST.	2014	STP-320(4)	6B

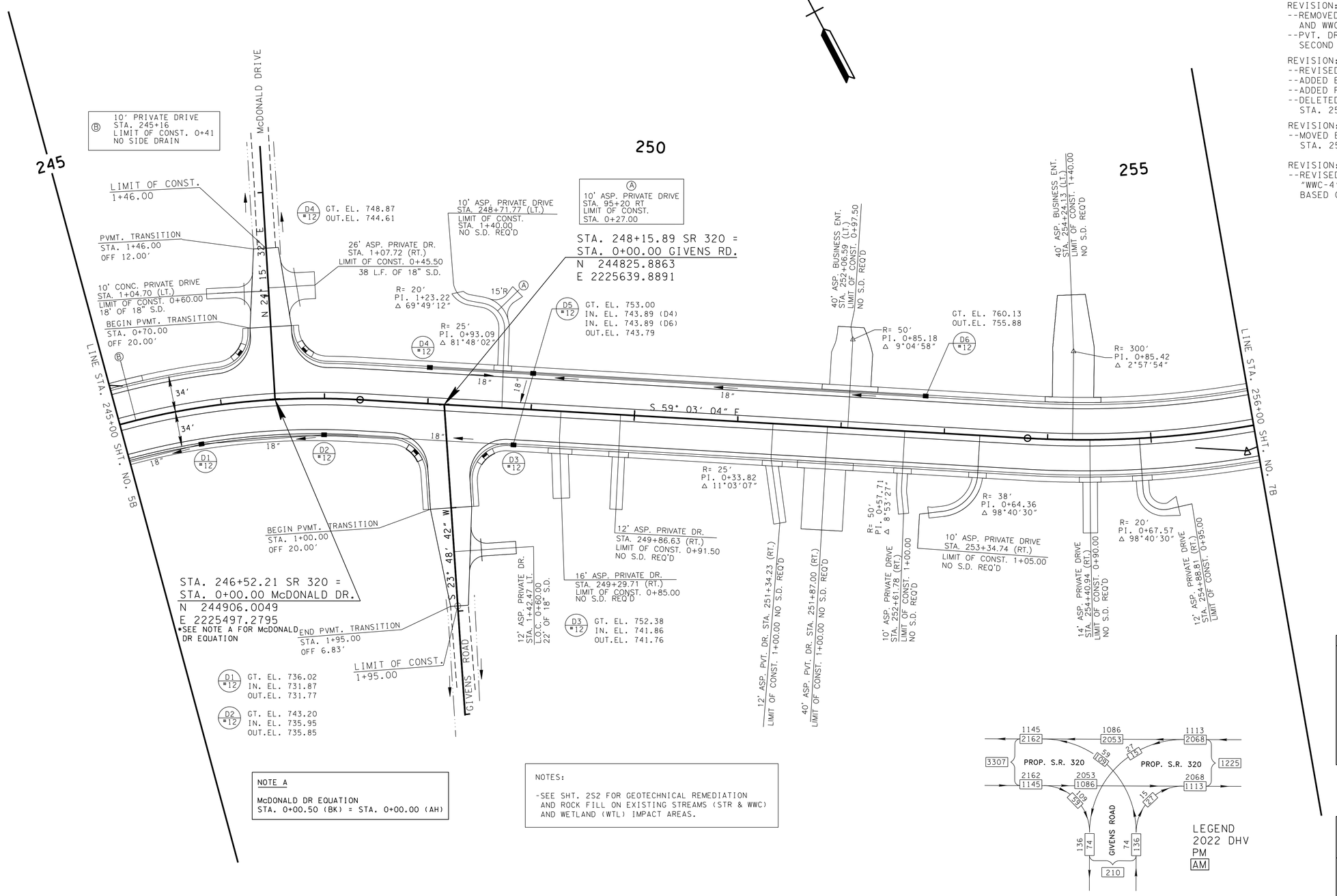
REVISION: 10-29-2008
--DISPLAYED PRIVATE DRIVE STA. 248+72.90
--ADDED CURB CUT STA. 245+16

REVISION: 05-19-2010
--REMOVED WWC-3, WWC-4, WWC-5, AND WWC-7 FROM PROPOSED ROADWAY.
--PVT. DR. STA. 248+71.77, ADDED SECOND DRIVE TO PVT. DRIVE.

REVISION: 07-25-2010
--REVISED PVT. DRIVE STA.252+06.59.
--ADDED BUS. DRIVE STA.254+50.00.
--ADDED PVT. DRIVE STA.251+87.00.
--DELETED PVT DR. STA. 251+59.34 & STA. 252+04.25.

REVISION: 04-03-2013
--MOVED BUSINESS ENTRANCE LEFT FROM STA. 254+50 TO STA. 254+24.13.

REVISION: 11-20-2013
--REVISED THE STREAM CALL OUTS "WWC-4", "WWC-5" AND "WWC-6", BASED ON REVISED EB REPORT.



NOTE A

McDONALD DR EQUATION
STA. 0+00.50 (BK) = STA. 0+00.00 (AH)

NOTES:

-SEE SHT. 2S2 FOR GEOTECHNICAL REMEDIATION AND ROCK FILL ON EXISTING STREAMS (STR & WWC) AND WETLAND (WTL) IMPACT AREAS.

LEGEND
2022 DHV
PM
AM

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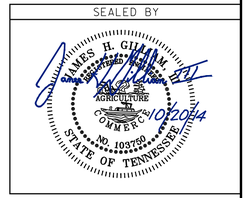

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 245+00 TO STA. 256+00
SCALE: 1"= 50'

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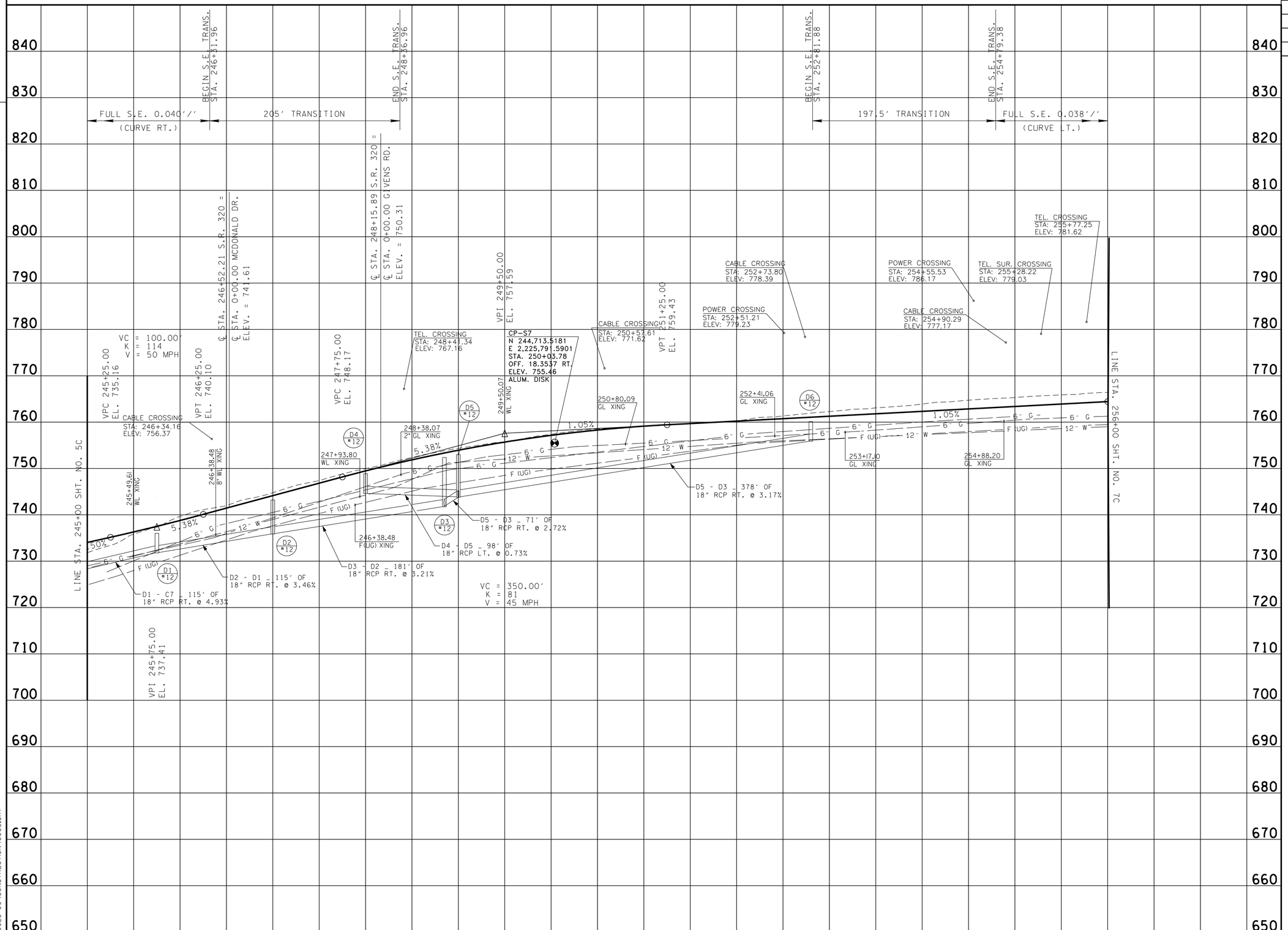
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2006	STP-320(4)	6C
CONST.	2014	STP-320(4)	6C



SEALED BY

JAMES H. GILLIAM III
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 103759
STATE OF TENNESSEE
9/10/2014

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE

STA. 245+00 TO STA. 256+00

SCALE: 1"= 50' HORIZ.
1"=10' VERT.

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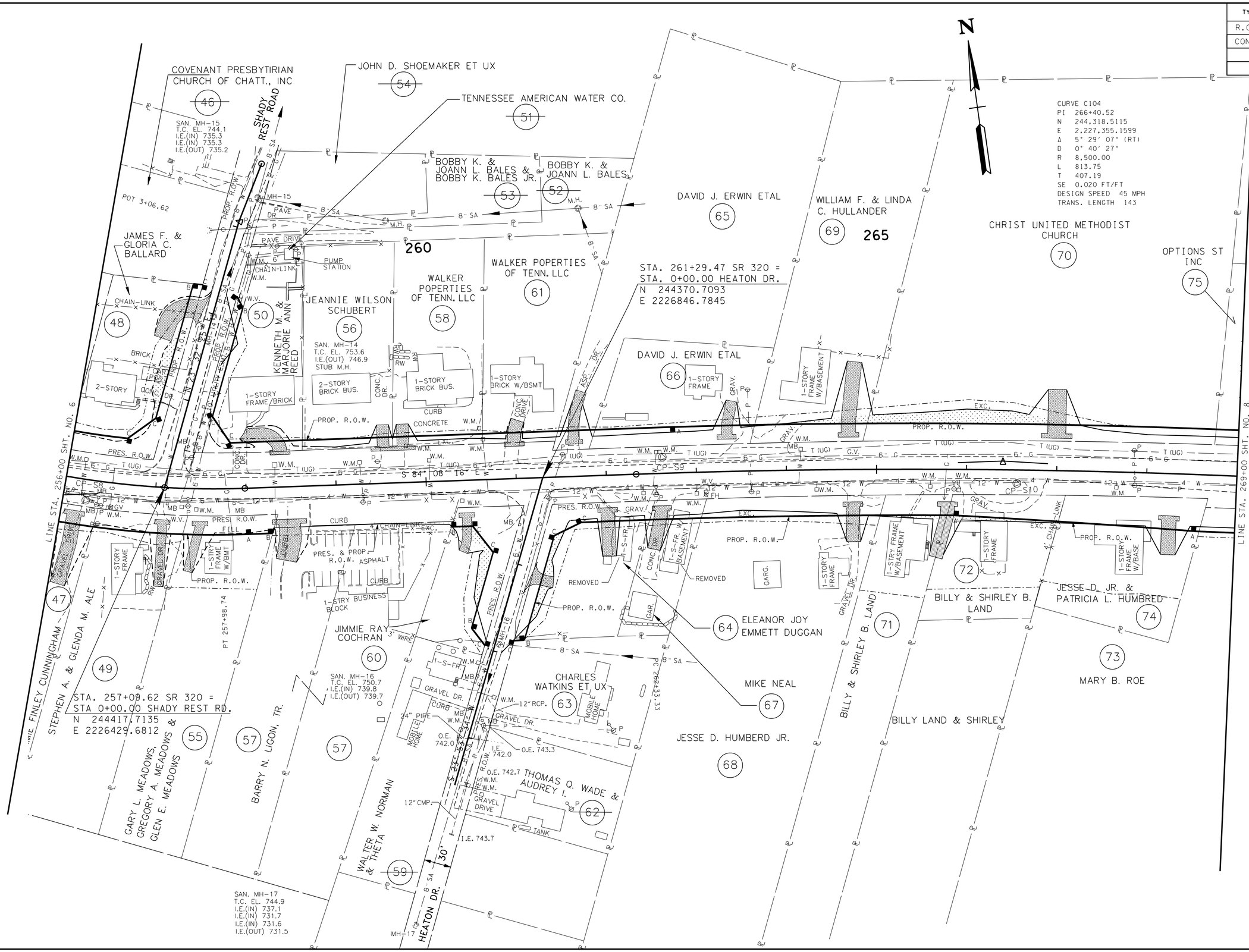
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	7
CONST.	2014	STP-320(4)	7



CURVE C104
PI 266+40.52
N 244,318.5115
E 2,227,355.1599
Δ 5° 29' 07" (RT)
D 0° 40' 27"
R 8,500.00
L 813.75
T 407.19
SE 0.020 FT/FT
DESIGN SPEED 45 MPH
TRANS. LENGTH 143

REVISION 4-10-2007
--ADDED UTILITY EASEMENTS TO TRACT 50 ,57.

REVISION 9-7-2007
--MOVED PVT. DRIVE TRACT 49, UPDATED PROPERTY OWNER TRACTS 55,56,60. ADDED CONST. ESMT. FOR REMOVAL OF STRUCTURES TRACTS 55, 56,71,72,74.

REVISION 1-22-2008
--REMOVED CONST. ESMT. TRACT 49 AROUND HOUSE.

REVISION 4-22-2008
--TRACT 57 MOVED BUS. DRIVE.

REVISION 7-30-2008
--ADDED CURB CUT TRACT 64.

REVISION: 10-29-2008
--TRACT 57, REVISED EXISTING ROW & REMOVED PROP. ROW.

REVISION 06-26-2009
--TRACT 64, REPLACED CURB CUT WITH PVT. DRIVE.

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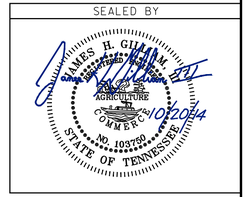

COORDINATE VALUES ARE NAD/83 (1995) AND ARE DATUM ADJUSTED BY THE FACTOR 0.99998 AND TIED TO THE TGRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 256+00 TO STA. 269+00

SCALE: 1"= 50'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	7A
CONST.	2014	STP-320(4)	7A

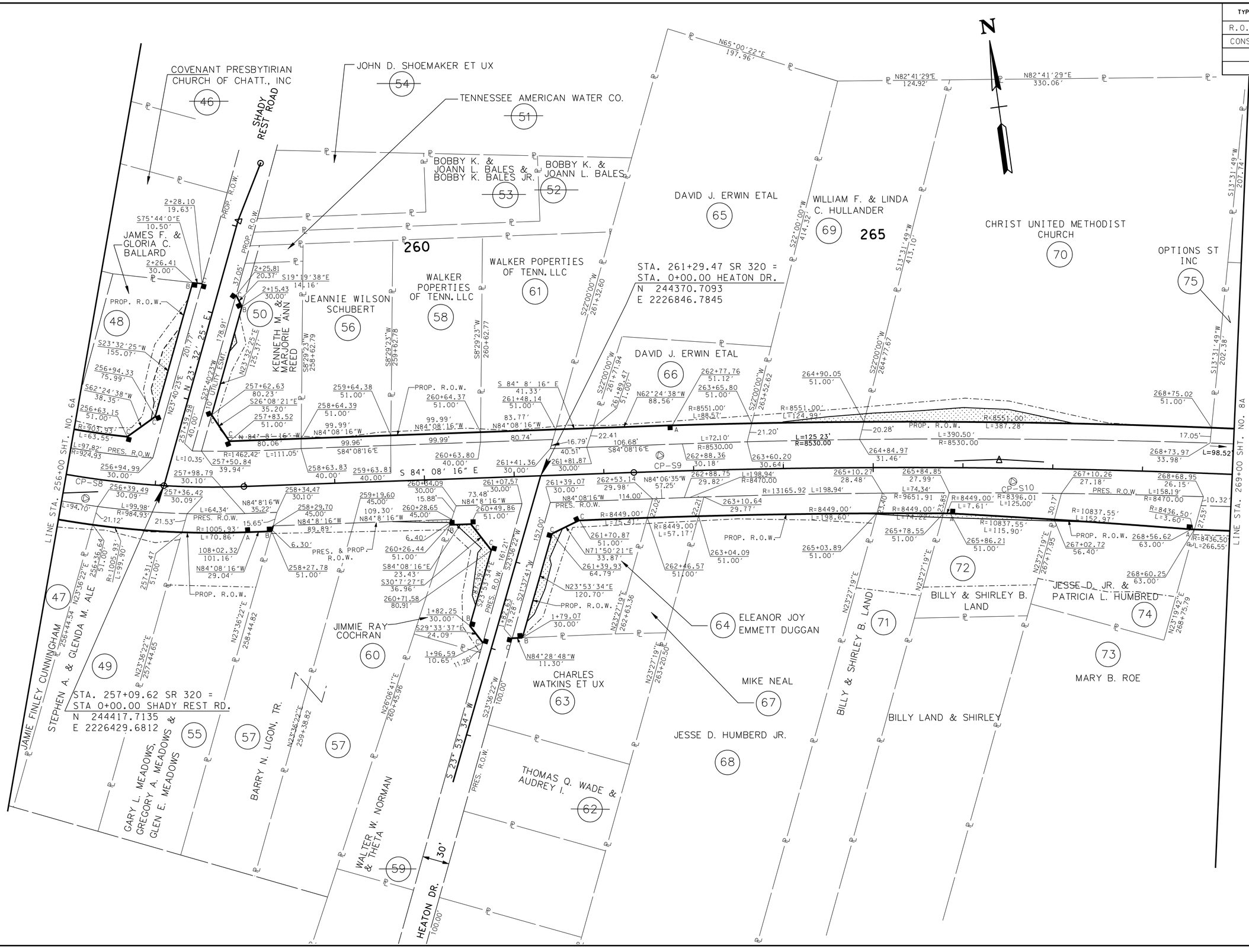
REVISION: 4-10-2007
--ADDED UTILITY EASEMENTS TO TRACT 50 ,57.

REVISION: 9-07-2007
--UPDATED PROPERTY OWNER TRACTS 55,56,60,ADDED CONST. ESMT. FOR REMOVAL OF STRUCTURES TRACTS 55,56,71, 72,74.

REVISION: 1-22-2008
--REMOVED CONST. ESMT. TRACT 49 AROUND HOUSE.

REVISION: 10-29-2008
--TRACT 57, REVISED EXISTING R.O.W. & REMOVED PROP. ROW.

REVISION: 07-06-2011
--TRACTS 48,50 UPDATED PROPOSED BEARINGS.



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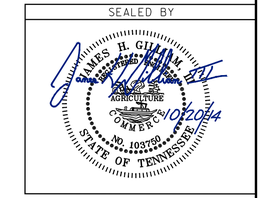

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

R.O.W. DETAILS

STA.256+00 TO STA.269+00

SCALE: 1"= 50'

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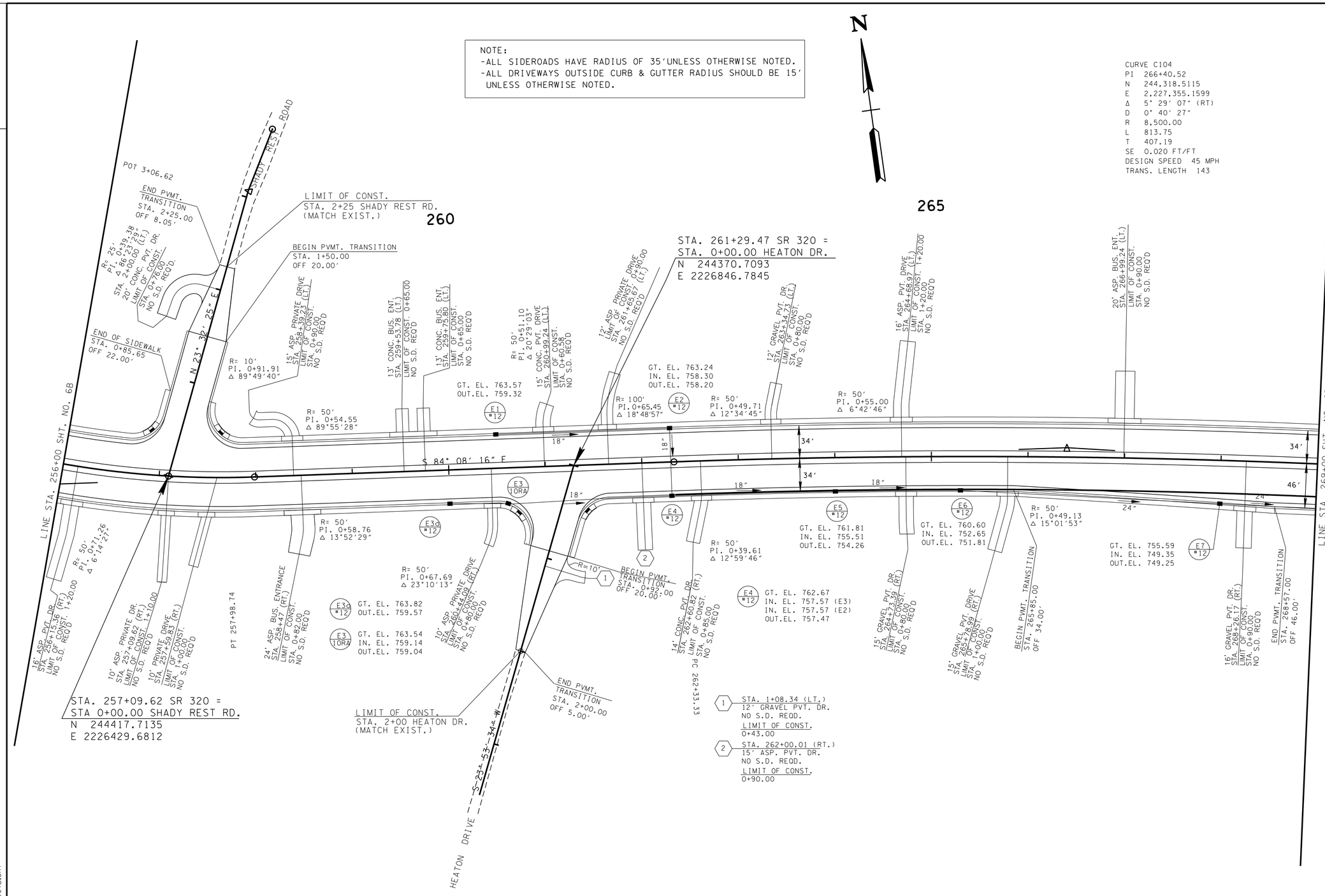
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	7B
CONST.	2014	STP-320(4)	7B

NOTE:
-ALL SIDEROADS HAVE RADIUS OF 35'UNLESS OTHERWISE NOTED.
-ALL DRIVEWAYS OUTSIDE CURB & GUTTER RADIUS SHOULD BE 15' UNLESS OTHERWISE NOTED.

CURVE C104
PI 266+40.52
N 244,318.5115
E 2,227,355.1599
Δ 5° 29' 07" (RT)
D 0° 40' 27"
R 8,500.00
L 813.75
T 407.19
SE 0.020 FT/FT
DESIGN SPEED 45 MPH
TRANS. LENGTH 143

REVISION 9-07-2007
--MOVED PVT. DRIVE STA. 257+10.34.
REVISION 4-22-2008
--TRACT 57 MOVED BUS. DRIVE.
REVISION 7-30-2008
--ADDED CURB CUT STA. 262+00.
REVISION 6-26-2009
--REPLACED CURB CUT WITH PRVT. DRIVE STA. 262+00 (RT).
REVISION 05-19-2010
--CORRECTED SIDEROAD NAME.



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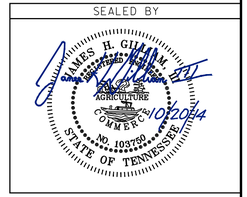

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 256+00 TO STA. 269+00
SCALE: 1"= 50'

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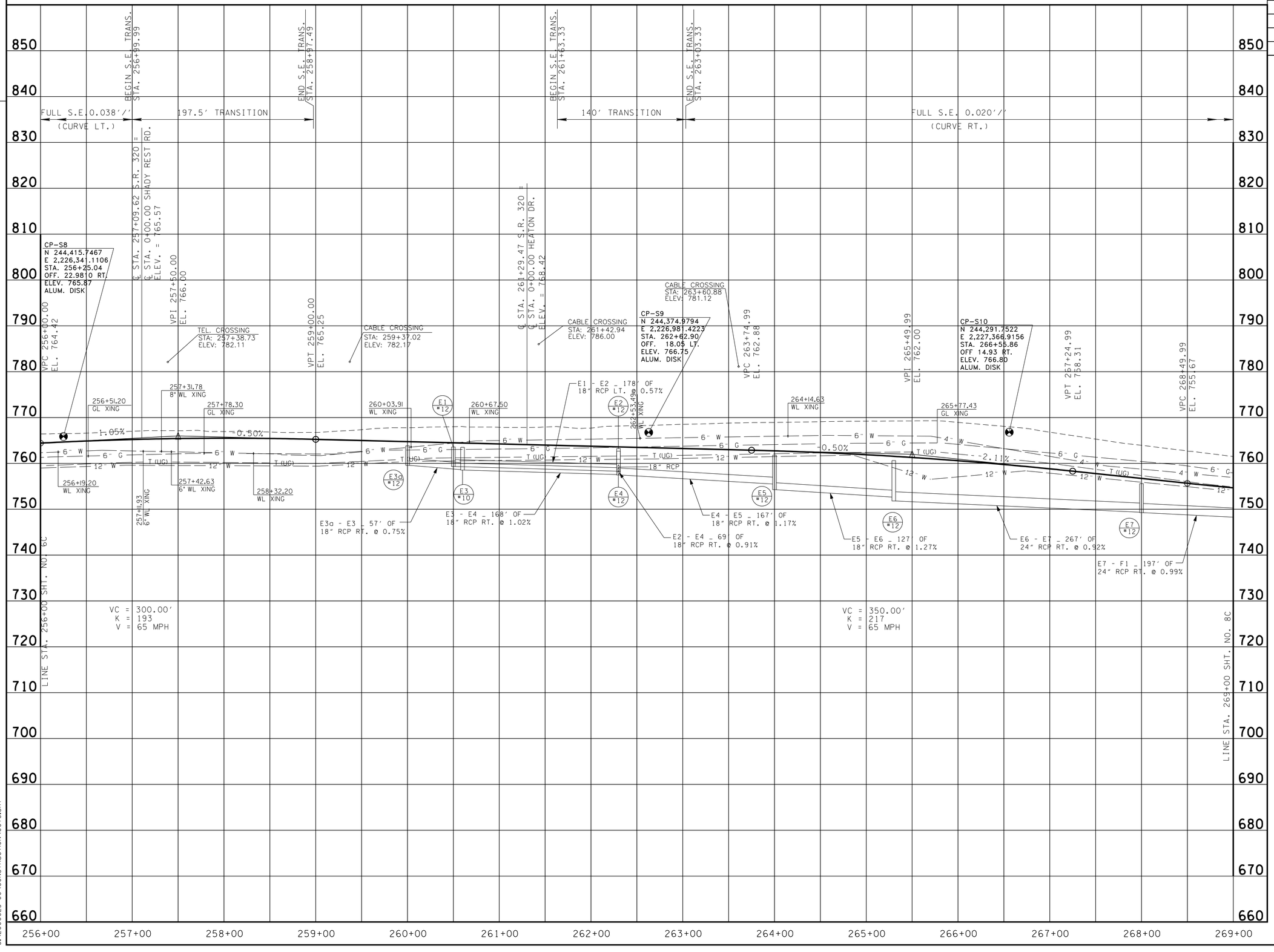
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	7C
CONST.	2014	STP-320(4)	7C



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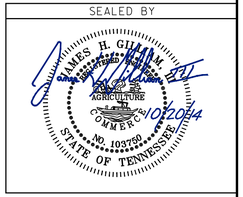

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE

STA. 256+00 TO STA. 269+00
SCALE: 1"= 50' HORIZ.
1"=10' VERT.

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

REVISION: 01-20-2014
-REMOVED EXISTING SPRING FROM STA. 281+67.38 RT. S.R. 320.
-ADDED ROCK FILL AT FULLER ROAD.

REVISION: 05-23-2013
-ADDED END EXISTING STR-2A.
-ADDED BEGIN PROPOSED STR-2A
-RESTORED PRESENT ROW FOR TRACT NOS. 92, 92S AND 93.
-REVISED SLOPE LINES AND CONSTRUCTION EASEMENT FOR TRACT 80.
-CHANGED CULVERT SIZE AT STA. 281+72.24

REVISION: 07-25-2010
TRACT 73,
-REVISED PRESENT R.O.W. LINES.

REVISION: 09-27-2010
-TRACT 78, ADDED BUS. DRIVE.

REVISION: 01-24-2011
-TRACT 76, ADDED PVT. DRIVE.
-TRACT 90, 91, 92, 93, REVISED PRESENT R.O.W.

REVISION: 07-06-2011
-TRACT 80 REVISED R.O.W.& DRAINAGE. ESMT.
-TRACT 80 ADDED BUS. DRIVE

REVISION: 1-23-2012
-TRACT 87, DELETED TRACT.
-TRACTS 84,86 UPDATED PROPERTY OWNERS.

REVISION: 09-05-2012
-REPLACED REVISION NOTES; 09-07-2007, 09-08-2009, 11-03-2009.
-ELIMINATED TRACT 85.
-REPLACED "Z BAR" BETWEEN TRACTS 82 AND PREVIOUSLY 85.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	8
CONST.	2014	STP-320(4)	8

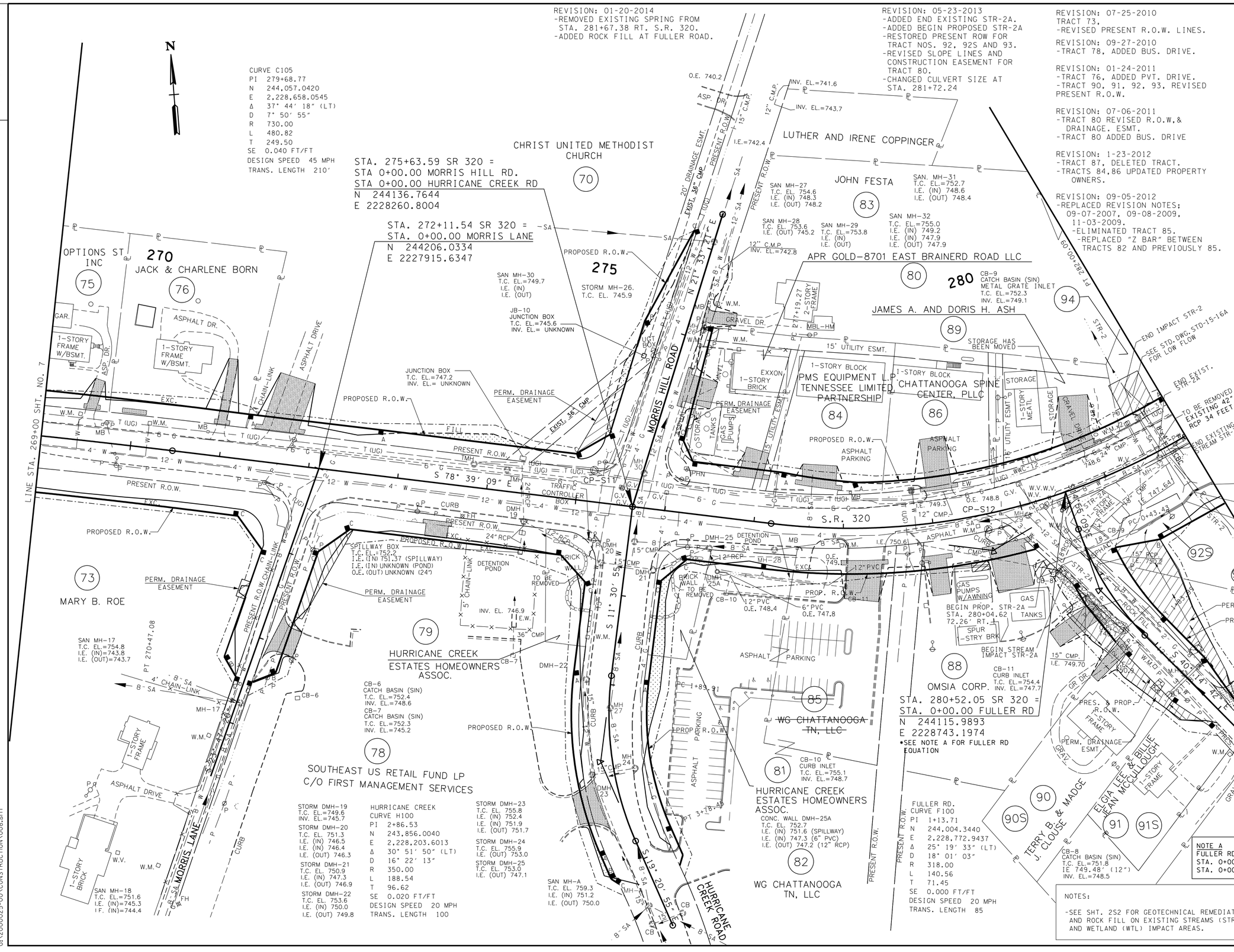
REVISION: 9-07-2007
-UPDATED PROPERTY OWNER TRACTS 75, 83,86,88. COMBINE TRACTS 82 & 85.
-MOVED BUS. DRIVE TRACT 88

REVISION: 09-08-2009
-REVISED 10' PRIVATE DRIVE TO 40' PRIVATE DRIVE AT STA. 3+10.00 LT. FULLER ROAD ON TRACT NO. 93.

REVISION: 11-03-2009
-TRACT 90,MOVED PRIVATE DRIVE .

REVISION: 05-19-2010
TRACT 88,
-REVISED DRAIN. ESMT.,
-SLOPE ESMT. & CONST ESMT.
TRACT 90,
-ADDED DRAIN. ESMT.,
-ADDED TRACT 90S
-REVISED CONST. ESMT.
-DELETED SLOPE ESMT.
TRACT,91
-ADDED DRAIN, ESMT.,
-ADDED TRACT 91S
-REVISED CONST. ESMT.
-DELETED SLOPE ESMT.
TRACT 92,
-ADDED R.O.W., DRAIN ESMT.
-ADDED TRACT 92S
-REVISED CONST. ESMT.
-DELETED SLOPE ESMT.
TRACT 93,
-ADDED DRAIN. ESMT.,
-ADDED TRACT 93S
-REVISED CONST. ESMT.&
-DELETED SLOPE ESMT.
-PVT. DR. STA. 271+59.01, CHANGED WIDTH OF PVT. DRIVE.

REVISION: 07-20-2010
TRACT 70,
-COMBINE TRACTS 70 & 77, DELETED TRACT 77.



NOTES:
-SEE SHT. 2S2 FOR GEOTECHNICAL REMEDIATION AND ROCK FILL ON EXISTING STREAMS (STR & WWC) AND WETLAND (WTL) IMPACT AREAS.

NOTE A
FULLER RD EQUATION
STA. 0+00.66 (BK) =
STA. 0+00.00 (AH)

SEALED BY
JAMES H. GILLIAM
NO. 109750
STATE OF TENNESSEE
1/10/2014

COORDINATE VALUES ARE NAD/83 (1995) AND ARE DATUM ADJUSTED BY THE FACTOR 0.99998 AND TIED TO THE TGRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 269+00 TO STA. 282+00

SCALE: 1"= 50'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2006	STP-320(4)	8A
CONST.	2014	STP-320(4)	8A

REVISION: 4-10-2007
--ADDED UTILITY EASEMENTS TO TRACTS 70,80,84,86,89.
--CHANGED PROPERTY LINES ON TRACT 92.

REVISION: 9-07-2007
--UPDATED PROPERTY OWNER TRACTS 75, 83,86,88. COMBINE TRACTS 82 & 85.
--MOVED BUS. DRIVE TRACT 88

REVISION: 4-22-2008
--TRACT 80, ADDED PRESENT R.O.W. LINE PREVIOUSLY DELETED
-- TRACT 88 ADDED DRAINAGE EASMT.
-- TRACT 89, REVISED PROPERTY LINES.

REVISION: 10-29-2008
--TRACT 89, MOVED PROPERTY LINE.

REVISION 05-19-2010
--TRACT 88,
-REVISED DRAIN. ESMT.
-SLOPE ESMT. & CONST ESMT.
--TRACT 90,
-ADDED DRAIN. ESMT.,
-ADDED TRACT 90S.
-REVISED CONST. ESMT.
-DELETED SLOPE ESMT.
--TRACT,91
-ADDED DRAIN, ESMT.
-ADDED TRACT 91S.
-REVISED CONST. ESMT.
-DELETED SLOPE ESMT.
--TRACT 92,
-ADDED R.O.W., DRAIN ESMT.
-ADDED TRACT 92S.
-REVISED CONST. ESMT.
-DELETED SLOPE ESMT.
--TRACT 93,
-ADDED DRAIN. ESMT.
-ADDED TRACT 93S.
-REVISED CONST. ESMT.
-DELETED SLOPE ESMT.

REVISION: 07-25-2010
--TRACT 73, REVISED PRESENT ROW LINES.

REVISION: 01-24-2011
--TRACT 90,91,92,93, REVISED PRESENT ROW.

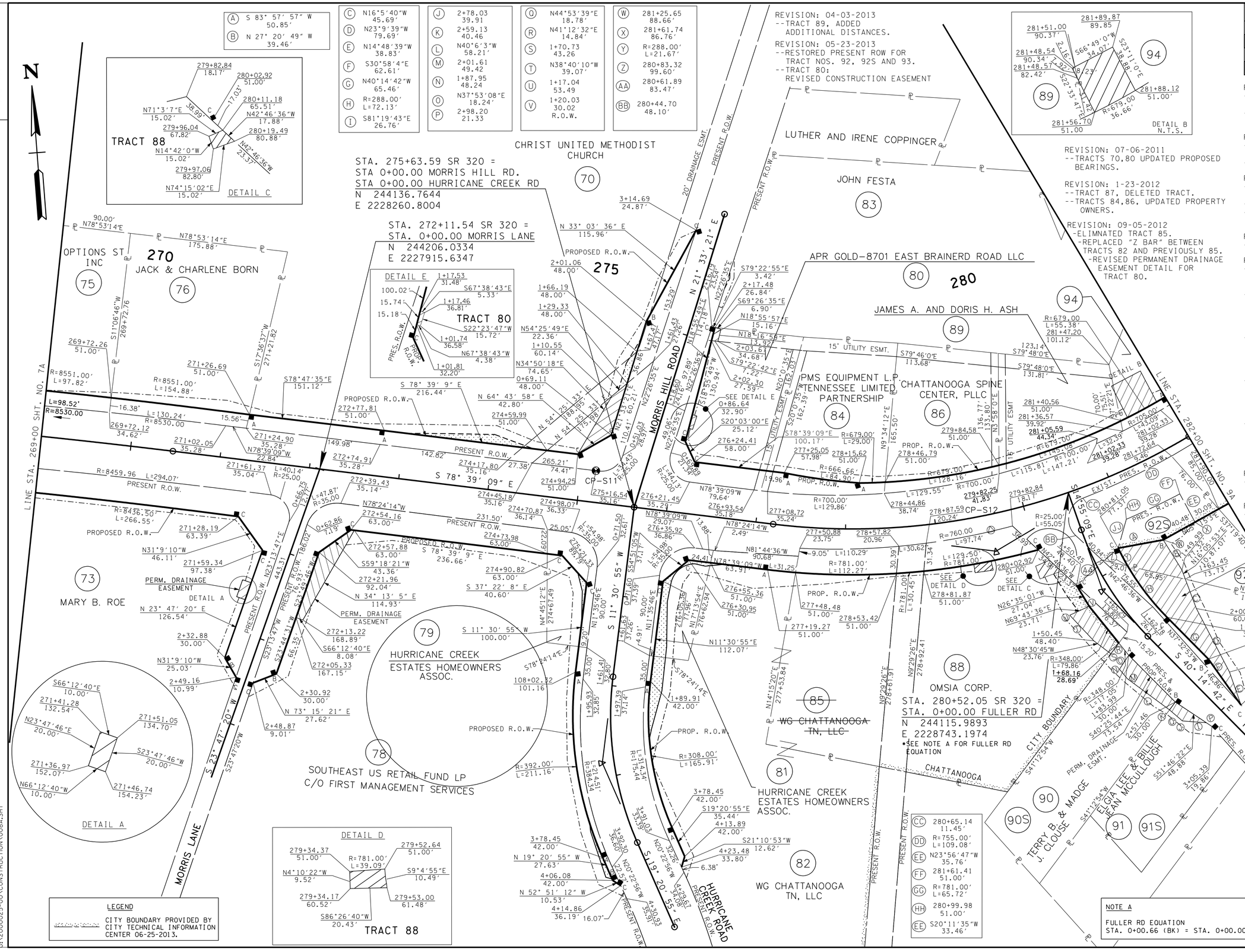
REVISION: 04-03-2013
--TRACT 89, ADDED ADDITIONAL DISTANCES.

REVISION: 05-23-2013
--RESTORED PRESENT ROW FOR TRACT NOS. 92, 92S AND 93.
--TRACT 80:
REVISED CONSTRUCTION EASEMENT

REVISION: 07-06-2011
--TRACTS 70,80 UPDATED PROPOSED BEARINGS.

REVISION: 1-23-2012
--TRACT 87, DELETED TRACT.
--TRACTS 84,86, UPDATED PROPERTY OWNERS.

REVISION: 09-05-2012
-ELIMNATED TRACT 85.
-REPLACED "Z BAR" BETWEEN TRACTS 82 AND PREVIOUSLY 85.
-REVISED PERMANENT DRAINAGE EASEMENT DETAIL FOR TRACT 80.



SEALED BY

JAMES H. GILLIAM III
REGISTERED ENGINEER
AGRICULTURE COMMERCE
NO. 103730
STATE OF TENNESSEE
10/20/14

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

R.O.W. DETAILS

STA. 269+00 TO STA. 282+00

SCALE: 1"= 50'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	8B
CONST.	2014	STP-320(4)	8B

REVISION: 05-23-2013
--ADDED BEGIN PROPOSED STR-2A.
--CHANGED CULVERT SIZE AT STA. 281+72

REVISION: 01-20-2014
--REMOVED DRAINAGE STRUCTURE CODE NOS. K1A AND K1B.
--ADDED DRAINAGE STRUCTURE CODE NO. H2A.
--ADDED ROCK FILL AT FULLER ROAD.

REVISION: 9-07-2007
--MOVED BUS. DRIVE STA. 279+00.00.

REVISION: 10-29-2008
--TRACT 93, ADDED PVT. DRIVE, STA. 3+10.00.

REVISION: 9-08-2009
--REVISED 10' PRIVATE DRIVE TO 40' PRIVATE DRIVE AT STA. 3+10.00 LT. FULLER ROAD.

REVISION: 11-03-2009
--MOVED PVT. DRIVE TO STA. 1+76.44.

REVISION: 05-19-2010
--UPDATED PRIVATE DRIVES LT. OF MORRIS LANE, AND RT. OF FULLER RD.
--REMOVED LOW FLOW DETAIL AND ROCK FILL.
--ADDED CALLOUT FOR BEGIN 2' CHANNEL CHANGE.
--ADDED SPEC. DITCHES ALONG FULLER RD.
--ADDED CHANNEL CHANGE ALONG SR 320.
--PVT. DR. STA. 271+59.01, CHANGED WIDTH OF PVT. DRIVE.

REVISION: 9-27-2010
--ADDED BUS. DRIVE STA. 273+50.00.

REVISION: 1-24-2011
--ADDED PVT. DRIVE STA. 270+50.00.

REVISION: 07-06-2011
--ADDED 20' CURB CUT AT STA. 270+00.00 LT.
--DELETED PVT DRIVE STA. 270+50 LT.
--ADDED CATCH BASIN & MANHOLE ON SR 320 & MORRIS HILL RD.
--MODIFIED STORMWATER DRAINAGE ON SR 320 & MORRIS HILL RD.
--ADDED 20' BUS. DRIVE STA. 1+23.00 RT. FULLER ROAD.

NOTE:
-ALL SIDEROADS HAVE RADIUS OF 35'UNLESS OTHERWISED NOTED.
-ALL DRIVEWAYS OUTSIDE CURB & GUTTER RADIUS SHOULD BE 15' UNLESS OTHERWISE NOTED.

CURVE C105
PI 279+68.77
N 244,057.0420
E 2,228,658.0545
Δ 37° 44' 18" (LT)
D 7° 50' 55"
R 730.00
L 480.82
T 249.50
SE 0.040 FT/FT
DESIGN SPEED 45 MPH
TRANS. LENGTH 210'

ENVIRONMENTAL NOTE:
INSTALLATION AND REMOVAL OF CULVERT AT STATION 281+74.63 SHOULD BE CONDUCTED IN THE DRY
DO NOT PUT TEMPORARY RIP-RAP IN THE STREAM CHANNEL AT STATION 281+74.63.

STA. 275+63.59 SR 320 =
STA 0+00.00 MORRIS HILL RD.
STA 0+00.00 HURRICANE CREEK RD
N 244136.7644
E 2228260.8004

STA. 272+11.54 SR 320 =
STA. 0+00.00 MORRIS LANE
N 244206.0334
E 2227915.6347

(MATCH EXIST.)
LIMIT OF CONST.
STA. 3+00 MORRIS HILL RD.

END PVMT. TRANSITION
STA. 3+00.00
OFF 12.61'

BEGIN PVMT. TRANSITION
STA. 1+86.61
OFF 36.00'

END OF SIDEWALK
STA. 1+79.94
OFF 38.00'

PROP. SIGNAL POLE #2
STA. 275+21.10
OFF 52.60' LT.

MAY REMAIN IF NOT IN WAY

24" RCP TO BE REMOVED OR CAPPED (TO BE DETERMINE BY THE ENGINEER)

12" RCP TO BE REMOVED

15"CMP TO BE REMOVED

12" RCP TO BE REMOVED

CB TO BE REMOVED

8 LF OF 24" RCP CONNECTED TO EXIST. 24" PIPE

DETENTION POND

EXIST. 24" PIPE

PROP. SIGNAL POLE #1
STA. 275+16.20- RT 63.20'

ENGINEER TO DETERMINE IF DETENTION POND FENCE TO REMAIN ALONG EAST BRAINERD RD.

BEGIN PVMT. TRANSITION
STA. 1+50.00
OFF 20.00'

30' ASP. BUSINESS ENT.
STA. 1+91.86 (LT)
LIMIT OF CONST. 0+50.50
38 LF OF 23"x14" S.D. REQ'D

END PVMT. TRANSITION
STA. 2+50.00
OFF 6.36'

LIMIT OF CONST.
STA. 2+50 MORRIS LN
(MATCH EXIST.)

TIE EXIST. STORM SEWER PIPE TO PROP. C.B.

END OF SIDE WALK
STA. 3+08.00
OFF 40.00'

40' BUSINESS ENTRANCE
STA. 3+26.90 (RT.)
LIMIT OF CONST. 0+50.00
NO S.D. REQ'D
MAINTAIN SWALE

LIMIT OF CONST.
STA. 4+00 HURRICANE CREEK RD.
(MATCH EXIST.)

SEE SHT. 8D FOR GEOMETRIC LAYOUT AND LANE TRANSITIONS OF HURRICANE CREEK ROAD.

NOTE "B"
EXISTING DRAINAGE SYSTEM TO BE REMOVED OR ADJUSTED WHEN DETENTION POND IS MODIFIED.

25' ASP. BUSINESS ENT.
STA. 273+50 (RT.)
LIMIT OF CONST. 0+60.00
NO SIDE DRIAD REQ'D

HURRICANE CREEK
CURVE H100
PI 2+86.53
N 243,856.0040
E 2,228,203.6013
Δ 30° 51' 50" (LT)
D 16° 22' 13"
R 350.00
L 188.54
T 96.62
SE 0.020 FT/FT
DESIGN SPEED 20 MPH
TRANS. LENGTH 100

LEGEND
2022 DHV
PM
AM

1 14' GRAVEL PRIVATE DR.
STA. 2+27.88 (RT.)
LIMIT OF CONST. 0+50.00
NO S.D. REQ'D

2 32' ASP. BUSINESS ENT.
STA. 1+44.72 (RT.)
LIMIT OF CONST. 0+50.00
NO S.D. REQ'D

3 26' ASP. BUSINESS ENTRANCE
STA. 276+87.95 (LT.)
LIMIT OF CONST. 0+79.85
NO S.D. REQ'D

4 38' ASP. BUSINESS ENT
STA. 277+69.90 (LT.)
LIMIT OF CONST. 0+70.00
NO S.D. REQ'D

7 40' ASP. BUS. ENT.
STA. 279+74.17 (RT.)
LIMIT OF CONST.
STA. 0+90.00
NO S.D. REQ'D

6 20' ASP. BUS. ENT.
STA. 1+23.00 (RT.)
LIMIT OF CONST.
STA. 0+80.00
32 LF OF 18" S.D.

STA. 280+52.05 SR 320 =
STA. 0+00.00 FULLER RD
N 244115.9893
E 2228743.1974
•SEE NOTE A FOR FULLER RD EQUATION

FULLER RD.
CURVE F100
PI 1+13.71
N 244,004.3440
E 2,228,772.9437
Δ 25° 19' 33" (LT)
D 18° 01' 03"
R 318.00
L 140.56
T 71.45
SE 0.000 FT/FT
DESIGN SPEED 20 MPH
TRANS. LENGTH 85

NOTE A
FULLER RD EQUATION
STA. 0+00.66 (BK) = STA. 0+00.00 (AH)

NOTES:
-SEE SHT. 2S2 FOR GEOTECHNICAL REMEDIATION AND ROCK FILL ON EXISTING STREAMS (STR & WWC) AND WETLAND (WTL) IMPACT AREAS.
-SEE SHT'S 2T AND 2U FOR CHANNEL CHANGE NOTES, DETAILS, MITIGATION AND QUANTITIES.
-SEE SHT. 2V FOR DITCH DETAILS.

SEALED BY
JAMES H. GUM JR.
10/20/14
TENNESSEE DEPARTMENT OF AGRICULTURE COMMERCE
NO. 103790
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 269+00 TO STA. 282+00
SCALE: 1"= 50'

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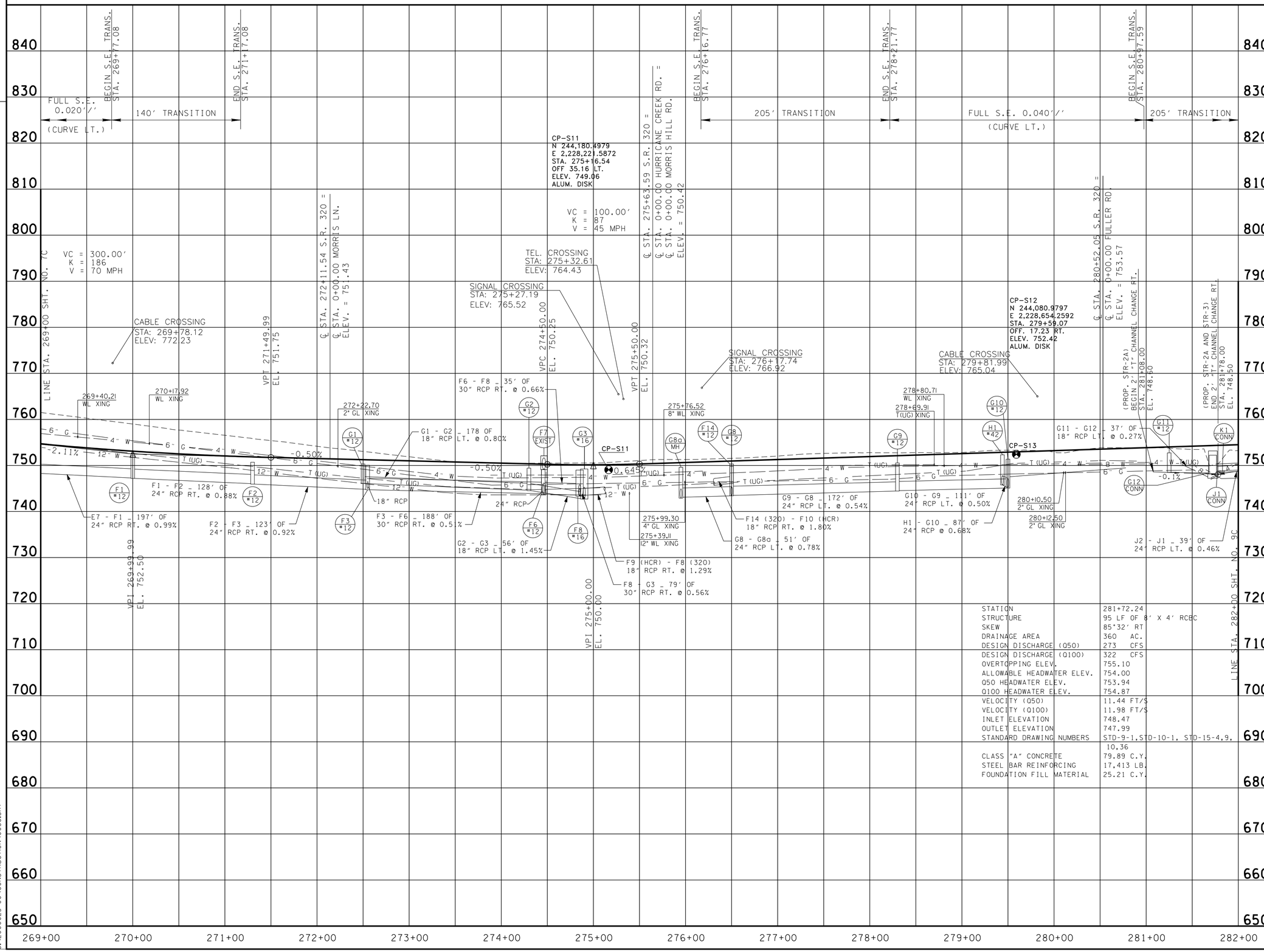
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.



TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2006	STP-320(4)	8C
CONST.	2014	STP-320(4)	8C

REVISION: 05-19-2010
--UPDATED HYDRAULIC DATA TEXT SIZE.
--ADDED CALLOUT TO BEGIN 2' CHANNEL CHANGE, STATION AND OFFSET.

REVISION: 07-06-2011
--ADDED CATCH BASIN & MANHOLE ON SR320 & MORRIS HILL RD.
--MODIFIED STORMWATER DRAINAGE ON SR 320 & MORRIS HILL RD.

REVISION: 05-23-2013
--CHANGED DRAINAGE CALC'S AND SIZE OF CULVERT AT STA. 281+72.24

REVISION: 01-20-2014
--REMOVED DRAINAGE STRUCTURE CODE NOS. K1A AND K1B.

SEALED BY

JAMES H. GIAMMA JR. LICENSED PROFESSIONAL ENGINEER NO. 109750 STATE OF TENNESSEE
1/10/2014

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE

STA. 269+00 TO STA. 282+00
SCALE: 1"= 50' HORIZ.
1"=10' VERT.

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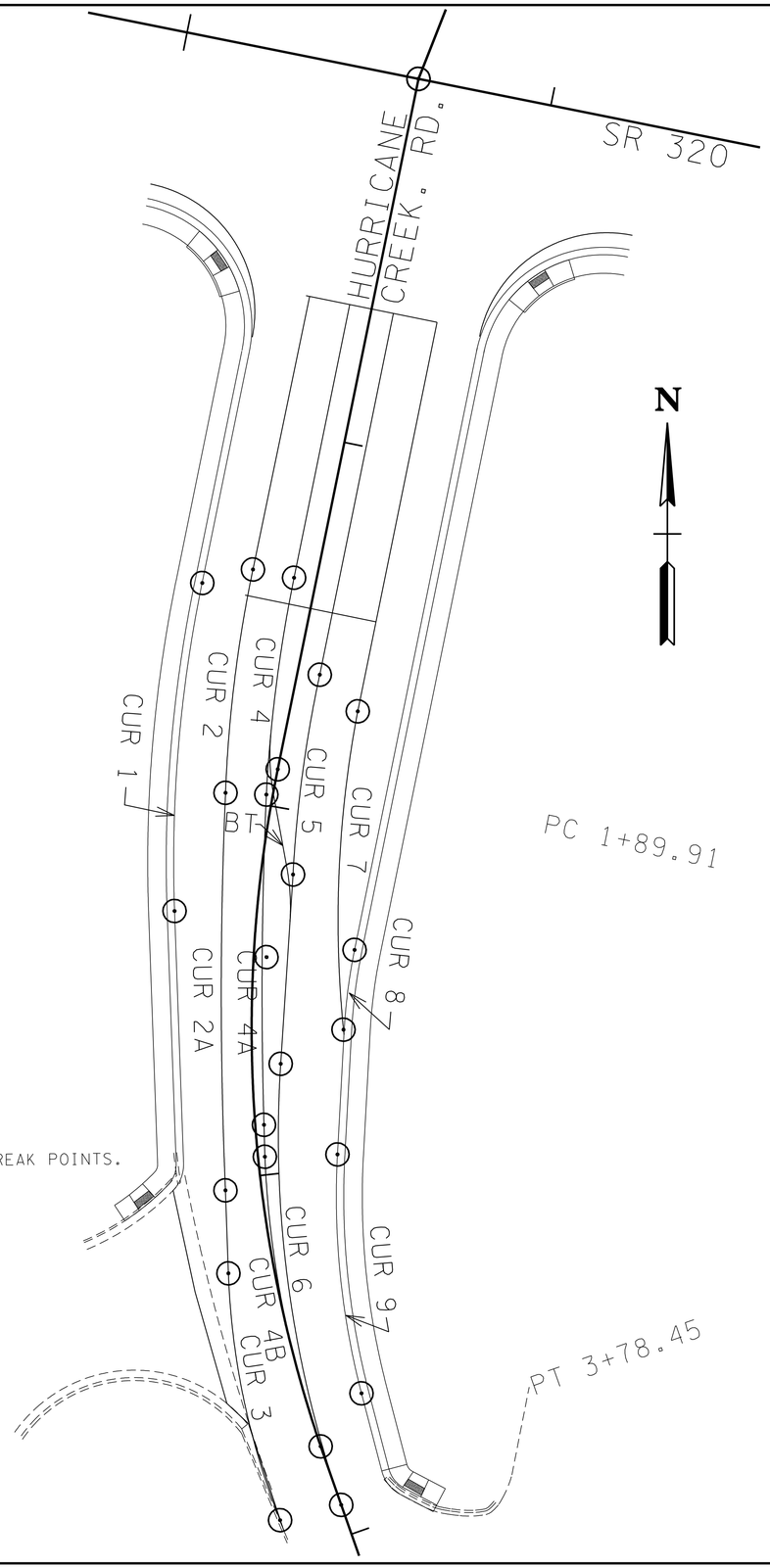
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	8D



HURRICANE CREEK
CURVE H100
PI 2+86.53
N 243,856.0040
E 2,228,203.6013
Δ 30° 51′ 50″ (LT)
D 16° 22′ 13″
R 350.00
L 188.54
T 96.62
SE 0.020 FT/FT
DESIGN SPEED 20 MPH
TRANS. LENGTH 100
SEE CROSS SECTIONS FOR SE BREAK POINTS.

CUR 1		RT. SIDE- FACE OF GUTTER		
RADIUS 372'		LENGTH 88.02'		
	N	E	STATION	OFFSET
PC	243,999.9910	2,228,202.3194	1+45.69	30.00
PI	243,956.6639	2,228,193.4924	1+89.91	30.00
PT	243,912.4748	2,228,195.0679	2+30.43	22.13
CUR 2		RT. LANE STRIPE		
RADIUS 384.77'		LENGTH 60.72'		
	N	E	STATION	OFFSET
PC	244,004.5268	2,228,216.1968	1+38.48	17.31
PI	243,974.7157	2,228,210.1234	1+68.90	17.31
PT	243,944.3206	2,228,208.8104	1+98.63	12.64
CUR 2A		RT. LANE STRIPE		
RADIUS 1,247.76'		LENGTH 107.18'		
	N	E	STATION	OFFSET
PC	243,944.3205	2,228,208.8140	1+98.63	12.63
PI	243,890.7475	2,228,206.4998	2+50.57	9.48
PT	243,837.1735	2,228,208.7904	3+02.81	9.71
CUR 3		RT. LANE STRIPE		
RADIUS 200'		LENGTH 68.30'		
	N	E	STATION	OFFSET
PC	243,814.8065	2,228,209.5878	3+24.37	12.32
PI	243,780.3439	2,228,210.8165	3+56.77	18.97
PT	243,748.2827	2,228,223.5154	3+90.07	16.90
CUR 4		RT. LANE DIVIDER		
RADIUS 400.18'		LENGTH 59'		
	N	E	STATION	OFFSET
PC	244,002.3044	2,228,227.2848	1+38.44	6.00
PI	243,973.3512	2,228,221.3851	1+67.99	6.00
PT	243,943.8401	2,228,219.8034	1+97.18	1.74
CUR 4A		RT. LANE DIVIDER		
RADIUS 1,236.76'		LENGTH 89.03'		
	N	E	STATION	OFFSET
PC	243,943.8457	2,228,219.8037	1+97.18	1.74
PI	243,899.3530	2,228,217.8819	2+41.62	-1.54
PT	243,854.8372	2,228,219.1651	2+86.42	-2.35
CUR 4B		RT. LANE DIVIDER		
RADIUS 270.50'		LENGTH 79.79'		
	N	E	STATION	OFFSET
PC	243,846.2361	2,228,219.4130	2+95.06	-1.85
PI	243,806.0867	2,228,221.1295	3+34.96	2.72
PT	243,768.1703	2,228,234.4438	3+74.92	0.02
CUR 5		LEFT TURN LANE STRIPE		
RADIUS 400'		LENGTH 54.37'		
	N	E	STATION	OFFSET
PC	243,976.1572	2,228,234.2033	1+62.68	-6.00
PI	243,949.4773	2,228,228.7678	1+89.91	-6.00
PT	243,922.3068	2,228,226.9979	2+17.60	-8.62
CUR 6		CENTERLINE STRIPE		
RADIUS 300'		LENGTH 120.82'		
	N	E	STATION	OFFSET
PC	243,871.2881	2,228,223.6745	2+69.99	-7.70
PI	243,810.1759	2,228,219.6936	3+30.70	3.28
PT	243,752.3931	2,228,239.9839	3+91.65	0.00

CUR 7		LT. LANE STRIPE (OPENING)		
RADIUS 276'		LENGTH 86.24'		
	N	E	STATION	OFFSET
PC	243,966.2913	2,228,244.4398	1+70.31	-18.00
PI	243,923.6898	2,228,235.7606	2+15.04	-17.14
PT	243,880.4832	2,228,240.5983	2+60.60	-24.75
CUR 8		LT. SIDE FACE OF GUTTER		
RADIUS 150'		LENGTH 21.99'		
	N	E	STATION	OFFSET
PC	243,901.9969	2,228,243.5876	2+37.27	-27.05
PI	243,891.2060	2,228,241.3892	2+49.04	-25.38
PT	243,880.2097	2,228,240.7903	2+60.90	-24.95
CUR 9		LT. SIDE FACE OF GUTTER		
RADIUS 210'		LENGTH 64.98'		
	N	E	STATION	OFFSET
PC	243,846.8637	2,228,238.9743	2+96.47	-21.37
PI	243,814.1616	2,228,237.1933	3+30.28	-14.66
PT	243,782.4701	2,228,245.4548	3+64.48	-14.86

BT1		BAY TAPER(BT)		
RADIUS 60'		LENGTH 16.56'		
	N	E	STATION	OFFSET
PC	243960.3334	2228221.0301	1+80.82	3.75
PI	243952.0370	2228220.2408	1+89.11	2.87
PT	243943.8394	2228221.7426	1+96.84	-0.17
BT2		BAY TAPER(BT)		
RADIUS 60'		LENGTH 14.77'		
	N	E	STATION	OFFSET
PC	243,924.3326	2,228,225.3162	2+15.76	-6.70
PI	243,917.0295	2,228,226.6541	2+23.02	-8.88
PT	243,909.6206	2,228,226.1715	2+30.63	-9.11

THESE ALIGNMENTS ARE FOR LAYOUT PURPOSES ONLY. SEE TRAFFIC CONTROL AND SIGNS & STRIPING SHEETS ALONG WITH CROSS SECTIONS FOR ADDITIONAL INFO.

COGO ALIGNMENTS ARE AVAILABLE FOR HURRICANE CREEK ROAD EDGE OF PAVEMENT/FACE OF GUTTER AND STRIPING LAYOUTS.

CHAIN NAME- DESCRIPTION
HURRLT- LEFT EOP/FACE OF GUTTER
HURRRT- RIGHT EOP/FACE OF GUTTER
HURRLT1,HURRLT2- NORTH BOUND STRIPING
HURRRT1,HURRRT2- SOUTH BOUND STRIPING
HURRBT- BAY TAPER

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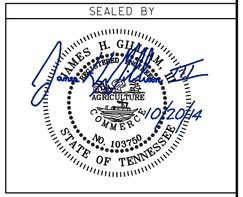

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

HURRICANE CREEK ROAD GEOMETRIC LAYOUT

SCALE: 1"=20'

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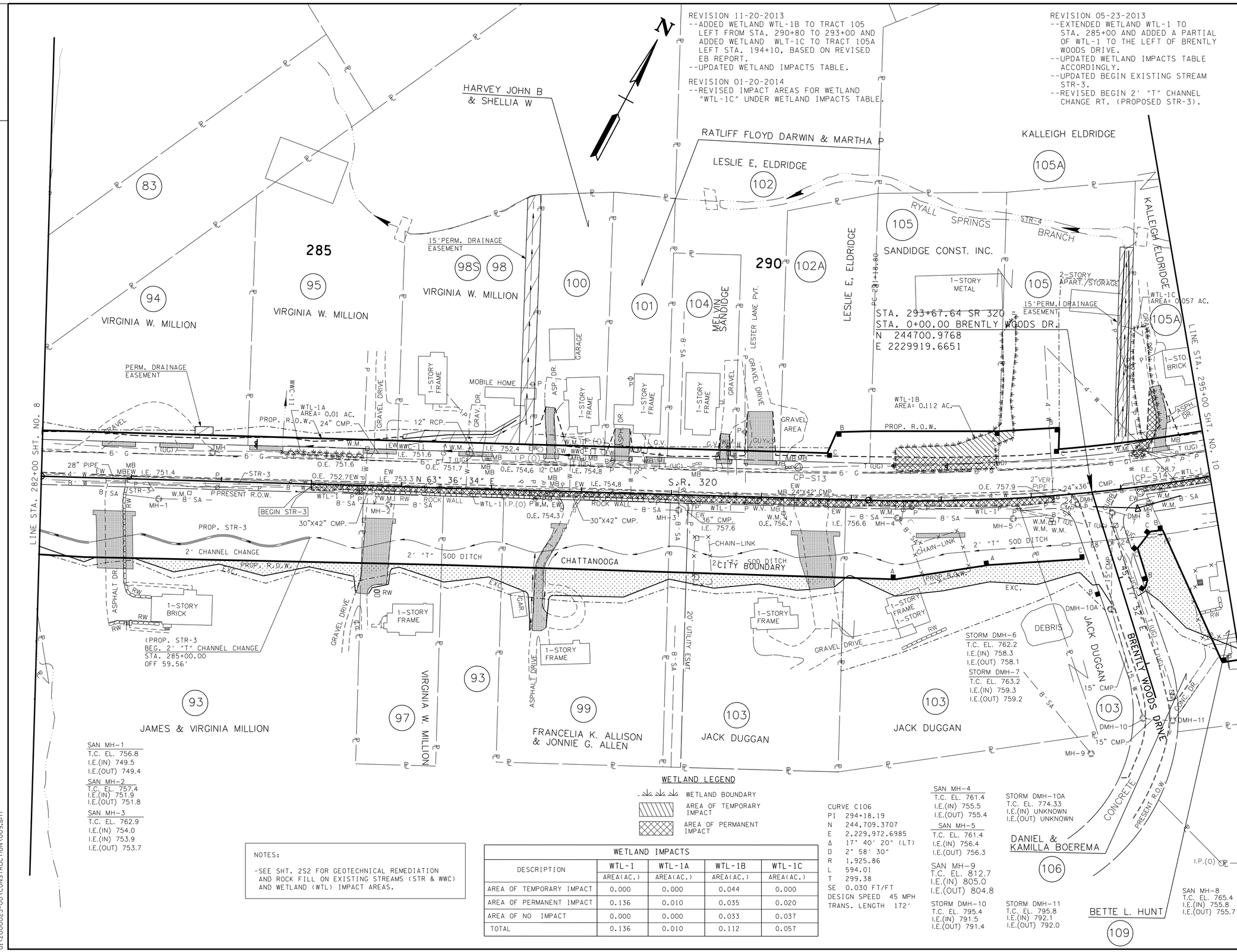
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

REVISION 11-20-2013
--ADDED WETLAND WTL-1B TO TRACT 105 LEFT FROM STA. 290+80 TO 293+00 AND ADDED WETLAND WLT-1C TO TRACT 105A LEFT STA. 194+10, BASED ON REVISED EB REPORT.
--UPDATED WETLAND IMPACTS TABLE.

REVISION 01-20-2014
--REVISED IMPACT AREAS FOR WETLAND "WTL-1C" UNDER WETLAND IMPACTS TABLE.

REVISION 05-23-2013
--EXTENDED WETLAND WTL-1 TO STA. 285+00 AND ADDED A PARTIAL OF WTL-1 TO THE LEFT OF BRENTLY WOODS DRIVE.
--UPDATED WETLAND IMPACTS TABLE ACCORDINGLY.
--UPDATED BEGIN EXISTING STREAM STR-3.
--REVISED BEGIN 2' "T" CHANNEL CHANGE RT. (PROPOSED STR-3).



TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	9
CONST.	2014	STP-320(4)	9

REVISION 4-10-2007
--UPDATED ALL THE TRACTS ON SHEET 9.

REVISION 9-7-2007
--MOVED DRAINAGE ESMT. FROM TRACT 100 TO TRACT 98.
--ADDED GARAGE TO TRACT 100.
--ADDED ADDITIONAL CONST. ESMT ON TRACT 103.
--ADDED BUILDING TO TRACT 105.

REVISION 7-30-2008
--TRACT 105, MOVED DRAINAGE ESMT.

REVISION 10-29-2008
--TRACT 106,109, REVISED PROPERTY LINES.
--TRACT 93, 97, REVISED PRIVATE DRIVE WIDTH.

REVISION 02-27-2009
--TRACT 105, ADDED CONST. ESMT. & REVISED APARTMENT STORAGE.

REVISION 06-26-2009
--TRACT 103, REVISED WIDTH OF PRVT. DRIVE. ADDED 40' CURB CUT.

REVISION 09-08-2009
--REVISED 18' PRIVATE DRIVE TO 40' PRIVATE DRIVE RT. STA. 282+81.03 ON TRACT NO. 93.
--ELIMINATED PRIVATE DRIVES LT. STA. 283+50.00 ON TRACT 94, STA. 284+50 AND 285+75.54 ON TRACT 95, STA. 286+82.35 ON TRACT 98, AND REPLACED ALL WITH 30' CURB CUTS.

REVISION 02-04-2010
--CORRECTTED SIDEROAD NAME.
--REVISED PERMANENT WETLAND IMPACT AREA AND ADDED HATCHING.
--ADDED WETLAND LEGEND AND WETLAND IMPACTS TABLE.
--REVISED BEGIN EXISTING STR-3.
--CHANGED TRACT 105 TO TRACT 105A, AND CHANGED PROPERTY OWNER.

REVISION 05-19-2010
--TRACT 102, CREATED TRACT 102A FROM TRACT 102.
--TRACT 105,DELETED PROPERTY LINE.
--TRACT 98,
-ADDED TRACT 98S.
-ADDED DRAIN ESMT.

REVISION 09-27-2010
--TRACT 101,ADDED CURB CUT

REVISION 09-5-2012
--ADDED WETLAND WTL-1A TO THE WETLAND IMPACTS TABLE.
--REVISED BEGIN STR-3 LOCATION.

WETLAND LEGEND

- WETLAND BOUNDARY
- AREA OF TEMPORARY IMPACT
- AREA OF PERMANENT IMPACT

CURVE C106
PI 294+18.19
N 244,709.3707
E 2,229,972.6985
Δ 17° 40' 20" (LT)
D 2° 58' 30"
R 1,925.86
L 594.01
T 299.38
SE 0.030 FT/FT
DESIGN SPEED 45 MPH
TRANS. LENGTH 172'

NOTES:

-SEE SHT. 2S2 FOR GEOTECHNICAL REMEDIATION AND ROCK FILL ON EXISTING STREAMS (STR & WWC) AND WETLAND (WTL) IMPACT AREAS.

WETLAND IMPACTS

DESCRIPTION	WTL-1	WTL-1A	WTL-1B	WTL-1C
	AREA(AC.)	AREA(AC.)	AREA(AC.)	AREA(AC.)
AREA OF TEMPORARY IMPACT	0.000	0.000	0.044	0.000
AREA OF PERMANENT IMPACT	0.136	0.010	0.035	0.020
AREA OF NO IMPACT	0.000	0.000	0.033	0.037
TOTAL	0.136	0.010	0.112	0.057

SEALED BY

JAMES H. GILLIAM III
REGISTERED ENGINEER
AGRICULTURE COMMERCE
NO. 103750
STATE OF TENNESSEE
10/2/2014

COORDINATE VALUES ARE NAD/83 (1995) AND ARE DATUM ADJUSTED BY THE FACTOR 0.99998 AND TIED TO THE TGRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 282+00 TO STA. 295+00

SCALE: 1"= 50'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	9A
CONST.	2014	STP-320(4)	9A

REVISION 4-10-2007
--UPDATED ALL THE TRACTS ON SHT. 9A.

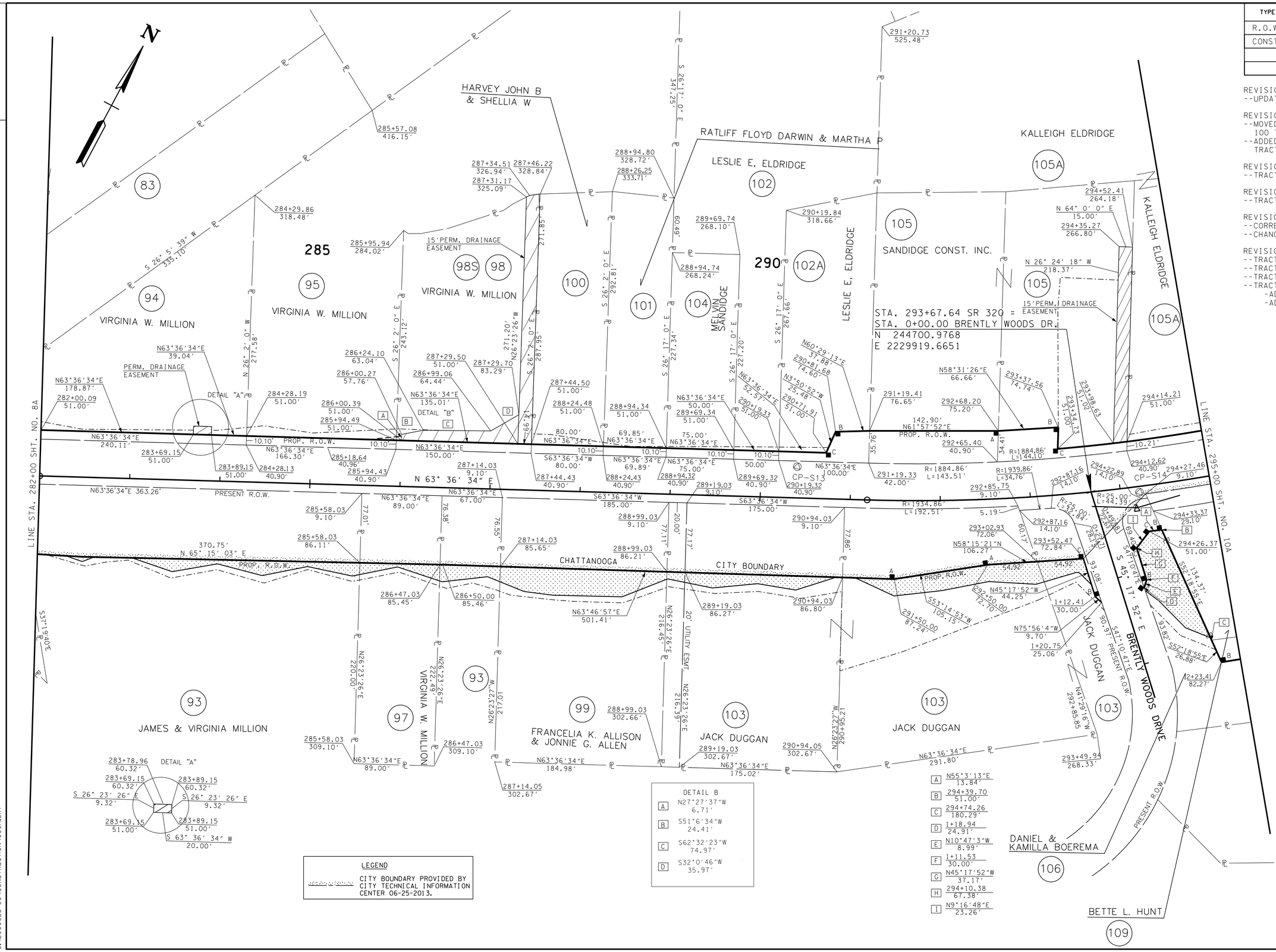
REVISION 9-07-2007
--MOVED DRAINAGE ESMT. FROM TRACT 100 TO TRACT 98.
--ADDED ADITIONAL CONST. ESMT. ON TRACT 103.

REVISION 7-30-2008
--TRACT 105 MOVED DRAINAGE ESMT.

REVISION 02-27-2009
--TRACT 105, ADDED CONST. ESMT.

REVISION 02-04-2010
--CORRECTTED SIDEROAD NAME.
--CHANGED TRACT 105 TO TRACT 105A.

REVISION 05-19-2010
--TRACT 102, CHANGED TO TRACT 102A.
--TRACT 105,DELETED PROPERTY LINE.
--TRACT 102,102A DELETED Z BAR.
--TRACT 98,
-ADDED TRACT 98S.
-ADDED DRAIN ESMT.



DETAIL B

A	N27°27'37"W 6.71'
B	S51°6'34"W 24.41'
C	S62°32'23"W 74.97'
D	S32°0'46"W 35.97'

A	N55°3'13"E 13.84'
B	294+39.70 51.00'
C	294+74.26 180.29'
D	1+18.94 24.91'
E	N10°47'3"W 8.99'
F	1+11.53 30.00'
G	N45°17'52"W 37.17'
H	294+10.38 67.38'
I	N9°16'48"E 23.26'

LEGEND

CITY BOUNDARY PROVIDED BY CITY TECHNICAL INFORMATION CENTER 06-25-2013.

SEALED BY

JAMES H. GILLIAM III
STATE OF TENNESSEE
AGRICULTURE
COMMERCE
NO. 103700
10/20/2014

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

R.O.W. DETAILS

STA.282+00 TO STA.295+00

SCALE: 1"= 50'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

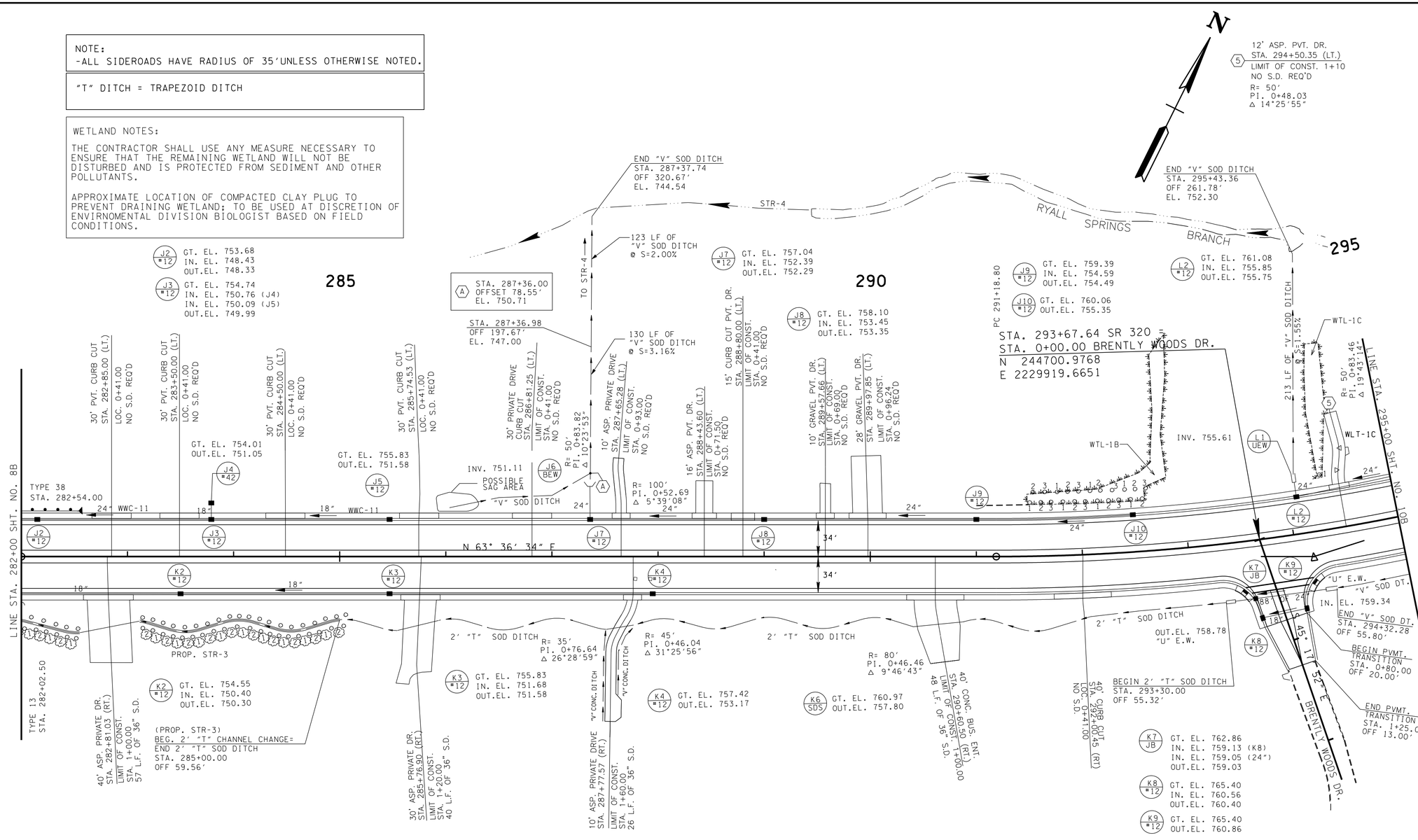
NOTE:
-ALL SIDEROADS HAVE RADIUS OF 35'UNLESS OTHERWISE NOTED.

"T" DITCH = TRAPEZOID DITCH

WETLAND NOTES:

THE CONTRACTOR SHALL USE ANY MEASURE NECESSARY TO ENSURE THAT THE REMAINING WETLAND WILL NOT BE DISTURBED AND IS PROTECTED FROM SEDIMENT AND OTHER POLLUTANTS.

APPROXIMATE LOCATION OF COMPACTED CLAY PLUG TO PREVENT DRAINING WETLAND; TO BE USED AT DISCRETION OF ENVIRNOMENTAL DIVISION BIOLOGIST BASED ON FIELD CONDITIONS.



NOTE:

-CONTRACTOR SHALL PROTECT THE WETLAND AREAS LOCATED BEYOND THE LIMITS OF THE FILL AND PROPOSED R.O.W.

NOTES:

-SEE SHT. 2S2 FOR GEOTECHNICAL REMEDIATION AND ROCK FILL ON EXISTING STREAMS (STR & WWC) AND WETLAND (WTL) IMPACT AREAS.

-SEE SHT'S 2T AND 2U FOR CHANNEL CHANGE NOTES, DETAILS, MITIGATION AND QUANTITIES.

-SEE SHT. 2V FOR DITCH DETAILS.

CURVE C106
PI 294+18.19
N 244,709.3707
E 2,229,972.6985
Δ 17° 40' 20" (LT)
D 2° 58' 30"
R 1,925.86
L 594.01
T 299.38
SE 0.030 FT/FT
DESIGN SPEED 45 MPH
TRANS. LENGTH 172'

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	9B
CONST.	2014	STP-320(4)	9B

REVISION: 4-10-2007
--MITIGATED WETLAND AND STREAM WITH TREES & SHRUBS.
--MEANDERED STREAM RT. OF ROADWAY.

REVISION: 10-29-2008
--TRACT 93,97 REVISED PRVT. DRIVES

REVISION: 06-26-2009
-- REVISED WIDTH OF PRVT.DRIVE STA. 290+62.46. ADDED CURB CUT STA. 292+00.

REVISION 09-08-2009
--REVISED 18' PRIVATE DRIVE TO 40' PVT. DRIVE RT. STA. 282+81.03.
--ELIMINATE PRIVATE DRIVES LT. STA. 283+50.00, STA. 284+50.00, STA. 285+75.54 AND STA. 286+82.35. AND RELACED ALL WITH 30' CURB CUTS.

REVISION 05-19-2010
--REMOVED ENVIRONMENTAL NOTES, TREE PLACEMENT AND CHANNEL DETAILS.
--REMOVED EXISTING STREAMS STR-3, WWC-9 AND WWC-11 FROM PROPOSED ROADWAY.
--UPDATED ESTIMATED TREE QUANTITIES.

REVISION 09-27-2010
-- ADDED CURB CUT STA. 288+80.00

REVISION 05-23-2013
--REVISED BEGIN 2' "T" CHANNEL CHANGE RT. (PROPOSED STR-3).
--CHANGED 2' "T" CHANNEL CHANGE RT. FROM STA. 285+00 TO 293+30 INTO "T" SOD DITCH.
--UPDATED "V" SOD DITCH LT. FROM STA. 286+00 TO 287+36.

REVISION: 11-20-2013
--ADDED WETLAND WTL-1B LEFT FROM STA. 290+80 TO 293+00 AND ADDED WETLAND WTL-1C LEFT STA. 294+10, BASED ON REVISED EB REPORT.

REVISION 01-20-2014
--REMOVED DRAINAGE STRUCTURE CODE NOS. K5 AND K6.

SEALED BY

JAMES H. GILLIAM III
REGISTERED ENGINEER
AGRICULTURE COMMERCE
NO. 103759
STATE OF TENNESSEE
1/10/2014

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 282+00 TO STA. 295+00

SCALE: 1"= 50'

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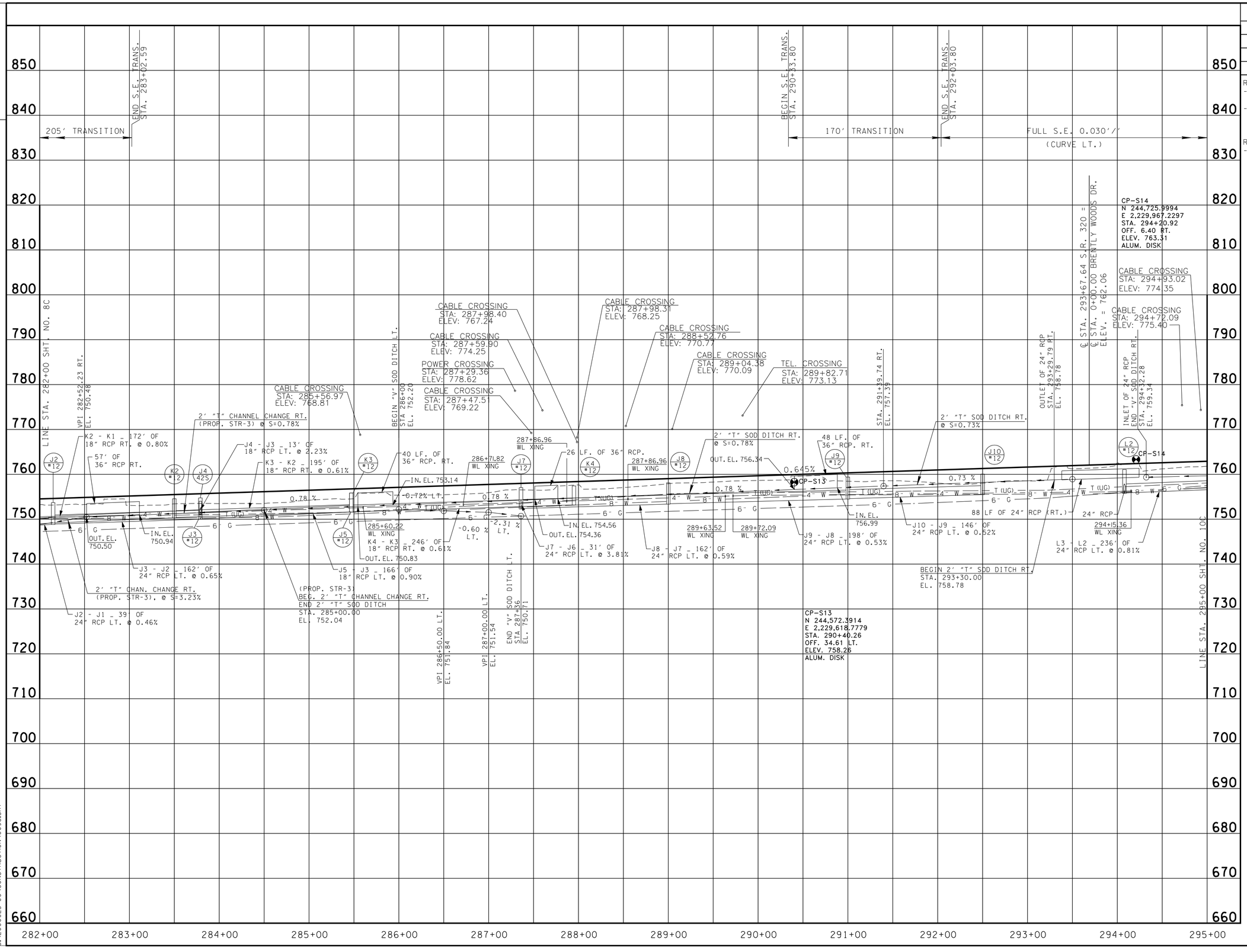
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.



TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	9C
CONST.	2014	STP-320(4)	9C

REVISION: 05-23-2013
--REVISED BEGIN 2' "T" CHANNEL CHANGE RT. (PROPOSED STR-3).
--CHANGED CHANNEL CHANGE RT. FROM STA. 285+00 TO 293+30 INTO 2' "T" SOD DITCH.

REVISION: 01-20-2014
--REMOVED DRAINAGE STRUCTURE CODE NOS. K5 AND K6.

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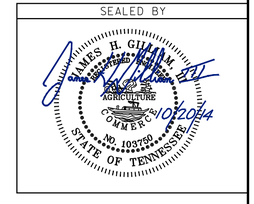

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE

STA. 282+00 TO STA. 295+00
SCALE: 1"= 50' HORIZ.
1"=10' VERT.

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

WETLAND IMPACTS			
DESCRIPTION	WTL-4	WTL-3	WTL-2
	AREA(AC.)	AREA(AC.)	AREA(AC.)
AREA OF TEMPORARY IMPACT	0.000	0.044	0.051
AREA OF PERMANENT IMPACT	0.006	0.033	0.028
AREA HAVE NO IMPACT	0.000	0.077	0.047
TOTAL	0.006	0.154	0.126

WETLAND LEGEND

- WETLAND BOUNDARY
- AREA OF TEMPORARY IMPACT
- AREA OF PERMANENT IMPACT

NOTE:
THE CONTRACTOR WILL NEED TO PROTECT WETLANDS BEYOND THE LIMIT OF THE FILL SLOPE AND PROPOSED RIGHT-OF-WAY.

STA. 302+05.62 SR 320=
STA. 0+00.00 SPRINGVIEW DR.
N 245258.5764
E 2230543.5474

REVISION 11-20-2013
--REVISED STREAMS WWC-9 AND WWC-10, BASED ON REVISED EB REPORT.

REVISION 08-22-2014
--REPLACED DITCH WITH SIDE DRAINS ON TRACTS 121 & 121A.

REVISION 04-03-2013
--TRACT 112.
-REVISED PROPOSED ROW. ACQUISITION AMOUNTS UNAFFECTED.
-REVISED WETLAND IMPACT AREA FOR WTL-2
--UPDATED WETLAND IMPACTS TABLE ACCORDINGLY.

REVISION 07-06-2011
--TRACT 118, REVISED PVT. DRIVE.

REVISION 10-31-2011
--TRACT 116, REMOVED TRACT 116.

REVISION 09-05-2012
--ADDED 12' CURB CUT TO TRACT NO. 112 AT STA. 298+50 LT.
--ADDED WETLAND WLT-4 TO THE WETLAND IMPACTS TABLE.

NOTE: DO NOT DISTURB THE SPRING (SPG-4A) DURING CONSTRUCTION.

PVT. DRIVE GOES TO UNOCCUPIED HOUSE

SAN MH-35
T.C. EL. 767.85
I.E.(IN) 759.47
I.E.(OUT) 759.37

SAN MH-36
T.C. EL. 767.45
I.E.(IN) 760.37
I.E.(OUT) 760.27

SAN MH-37
T.C. EL. 769.85
I.E.(IN) 761.31
I.E.(OUT) 761.21

SAN MH-33
T.C. EL. 765.8
I.E.(IN) 756.67
I.E.(OUT) 756.57

SAN MH-34
T.C. EL. 764.3
I.E.(IN) 757.71
I.E.(OUT) 757.61

SAN MH
T.C. EL. 792.34
I.E.(IN) UNKNOWN
I.E.(OUT) UNKNOWN

SAN MH.
T.C. EL. 792.44
I.E.(IN) UNKNOWN
I.E.(OUT) UNKNOWN

SAN MH.
T.C. EL. 812.28
I.E.(IN) UNKNOWN
I.E.(OUT) UNKNOWN

CURVE C107
PI 302+67.60
N 245,303.4019
E 2,230,586.4843
Δ 11° 34' 38" (RT)
D 4° 02' 43"
R 1,416.39
L 286.19
T 143.59
SE 0.034 FT/FT
DESIGN SPEED 45 MPH
TRANS. LENGTH 189'

SPRINGVIEW DRIVE
CURVE SP100
PI 2+89.26
N 245,011.5983
E 2,230,694.1177
Δ 46° 40' 31" (LT)
D 14° 00' 31"
R 409.00
L 333.19
T 176.46
SE 0.038 FT/FT
DESIGN SPEED 30 MPH
TRANS. LENGTH 105

NOTES:
-SEE SHT. 2S2 FOR GEOTECHNICAL REMEDIATION AND ROCK FILL ON EXISTING STREAMS (STR & WWC) AND WETLAND (WTL) IMPACT AREAS.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	10
CONST.	2014	STP-320(4)	10

REVISION: 9-20-2006
--CHANGED P.D.E. TO PROP. R.O.W. FOR MITIGATION TRACT 118.
--DELETED Z BAR BETWEEN TR. 121, 121A

REVISION: 4-10-2007
--CHANGED P.D.E. TO PROP. R.O.W. FOR MITIGATION TRACT 118.
--DELETED Z BAR BETWEEN TR. 121, 121A
--CHANGED PROPERTY LINES TRACTS 105,112,109,114,114A,115,119,122.
--CHANGED ROW TAKE ON TRACT 113, 112,105 AND 116.

REVISION: 9-07-2007
--ADDED CONST. ESMT TO TRACT 111.
--CHANGED PROPERTY OWNER TRACTS 120.

REVISION: 1-22-2008
--TRACT 116,118 REDUCED ROW

REVISION: 5-20-2008
--REVISED PVT DRIVE TRACT 111.

REVISION: 10-29-2008
--TRACT 119, 122, REVISED PVT. DRIVE.
--TRACT 118, UPDATED PROPERTY OWNER.
--TRACT 109, REVISED PROPERTY LINES.

REVISION: 9-08-2009
--DELETED LABEL TRACT 114A. COMBINED WITH TRACT 114.

REVISION: 02-04-2010
--ADDED WETLAND IMPACTS TABLE, WETLAND LEGEND, HATCHING TO DESIGNATE THE AREA.
--ADDED WETLAND PROTECTION NOTE.
--ADDED SPRING PROTECTION NOTE.
--TRACT 105,
CHANGED TO TRACT 105A.
CHANGED NAME.
ADDED PROPERTY LINES.
--TRACT 112,
CHANGED NAME.
REVISED PROPERTY LINES.

REVISION 05-19-2010:
--TRACT 113,
-ADDED TRACT 113S
-PLACED ROW AROUND POND
-PLACED CONST. ESMT AROUND PVT DR.STRUCTURES.
--TRACT 118, ADDED TRACT 118S & CONST. ESMT.
--ADDED BOX CULVERTS TO PVT. DRIVES.

REVISION 09-27-2010
--TRACT 113.
--DELETED TRACT 113S.
--COMBINE TRACTS 113, 113S.

REVISION 11-02-2010
--TRACT 118. DELETED TRACT 118S.

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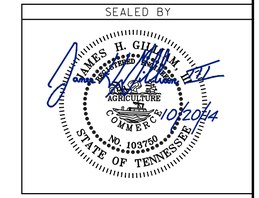

COORDINATE VALUES ARE NAD/83 (1995) AND ARE DATUM ADJUSTED BY THE FACTOR 0.99998 AND TIED TO THE TGRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 295+00 TO STA. 308+00

SCALE: 1"= 50'

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TENNESSEE D.O.T.
DESIGN DIVISION
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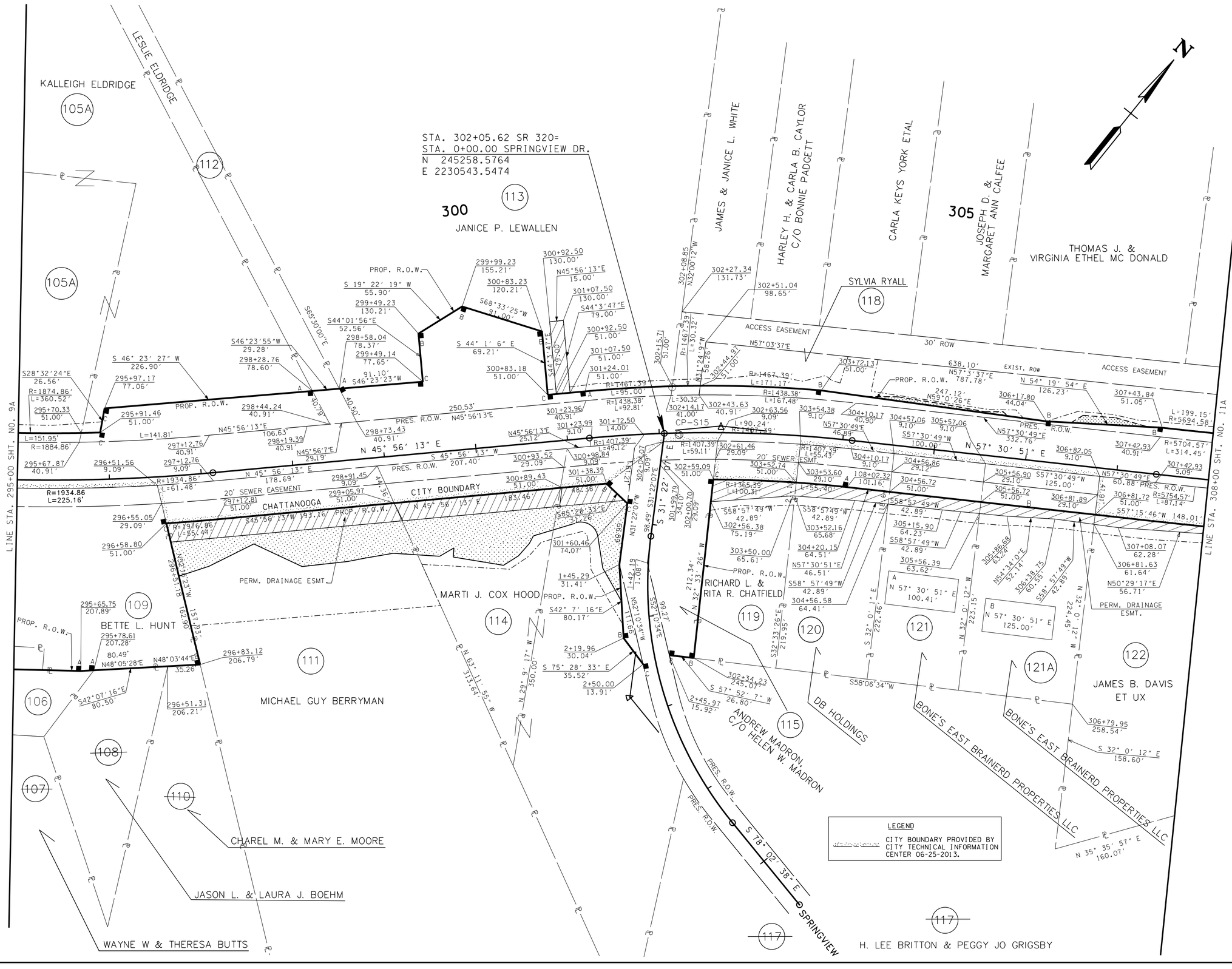

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	10A
CONST.	2014	STP-320(4)	10A

REVISION: 9-20-2006
--CHANGED P.D.E. TO PROP. R.O.W. FOR MITIGATION TRACT 118.
--DELETED Z BAR BETWEEN TR. 121,121A

REVISION: 4-10-2007
--CHANGED P.D.E. TO PROP. R.O.W. FOR MITIGATION TRACT 118.
-- DELETED Z BAR BETWEEN TR. 121, & 121A.
--CHANGED PROPERTY LINES TRACTS 105, 112,109,114,114A,115,119,122.
--CHANGED ROW TAKE ON TRACT 113.112 105 & 116.

REVISION: 9-07-2007
--ADDED CONST. ESMT TO TRACT 111.
--CHANGED PROPERTY OWNER TRACT 120.

REVISION: 1-22-2008
--TRACT 116,118 REDUCED ROW

REVISION: 10-29-2008
--TRACT 118, UPDATED PROPERTY OWNER.
--TRACT 106,109 REVISED PROPERTY LINES.

REVISION: 9-08-2009
--DELETED LABEL TRACT 114A. COMBINED WITH TRACT 114.

REVISION: 02-04-2010
--TRACT 105,
CHANGED TO TRACT 105A.
CHANGED PROPERTY OWNER.
ADDED PROPERTY LINES.
--TRACT 112,
CHANGED PROPERTY OWNER.
REVISED PROPERTY LINES.

REVISION 05-19-2010:
--TRACT 113,
-ADDED TRACT 113S
-PLACED ROW AROUND POND
-PLACED CONST. ESMT AROUND PVT DR.STRUCTURES.
--TRACT 118, ADDED TRACT 118S & CONST. ESMT.

REVISION 09-27-2010
--TRACT 113.
--DELETED TRACT 113S.
--COMBINE TRACTS 113 , 113S.

REVISION 11-02-2010
--TRACT 118, DELETED TRACT 118S.

REVISION 07-06-2011
--TRACT 113 UPDATED PROPOSED BEARINGS.

REVISION 10-31-2011
--TRACT 116, REMOVED TRACT 116.

REVISION 04-03-2013
--TRACT 112, REVISED PROPOSED ROW. ACQUISITION AMOUNTS UNAFFECTED.

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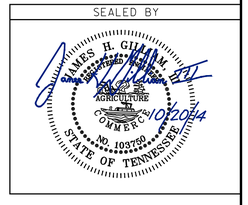

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

R.O.W. DETAILS

STA.295+00 TO STA.308+00

SCALE: 1"= 50'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

NOTE:
-ALL SIDEROADS HAVE RADIUS OF 35′UNLESS OTHERWISE NOTED.
-ALL DRIVEWAYS OUTSIDE CURB & GUTTER RADIUS SHOULD BE 15′ UNLESS OTHERWISE NOTED.

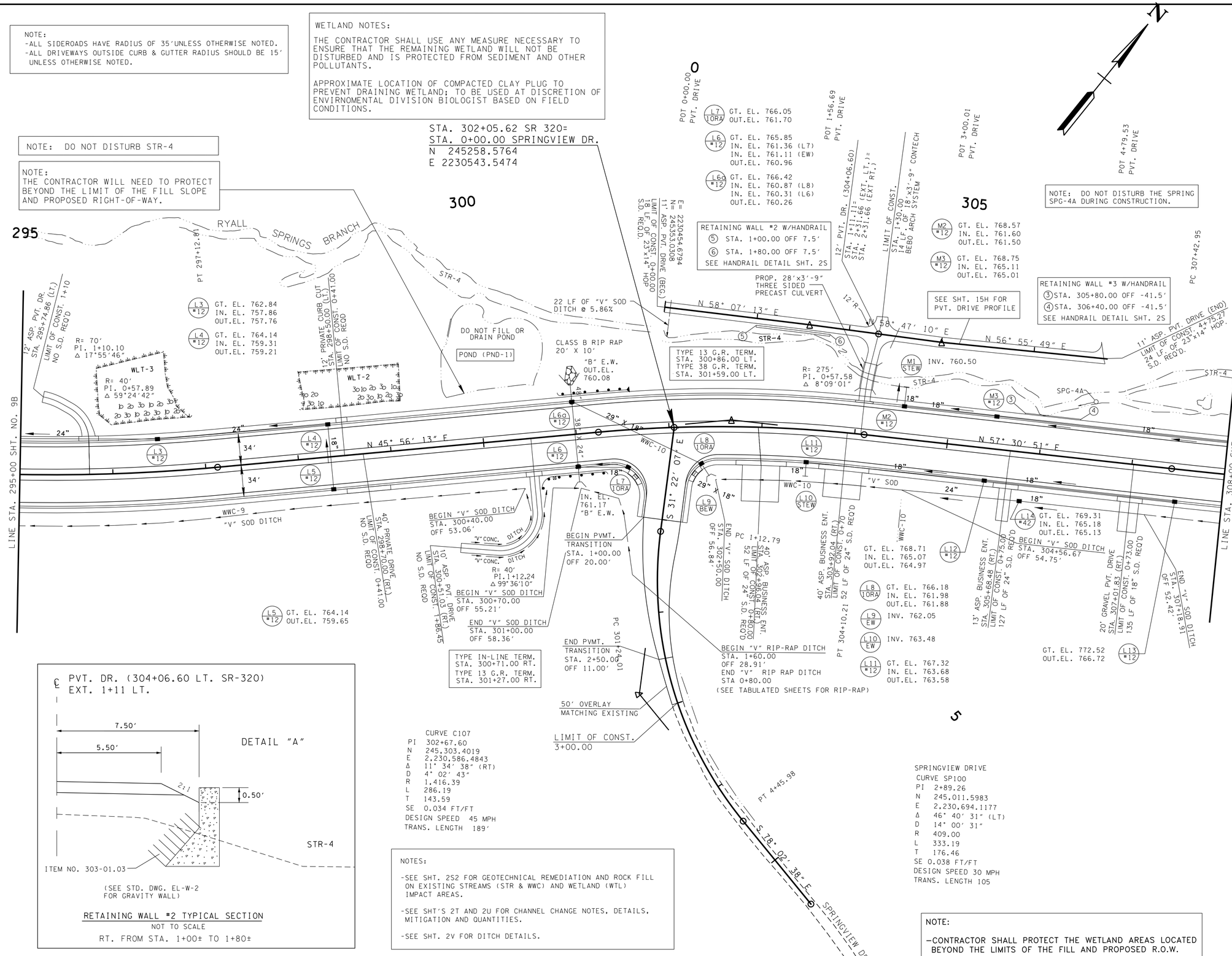
WETLAND NOTES:

THE CONTRACTOR SHALL USE ANY MEASURE NECESSARY TO ENSURE THAT THE REMAINING WETLAND WILL NOT BE DISTURBED AND IS PROTECTED FROM SEDIMENT AND OTHER POLLUTANTS.

APPROXIMATE LOCATION OF COMPACTED CLAY PLUG TO PREVENT DRAINING WETLAND; TO BE USED AT DISCRETION OF ENVIRONMENTAL DIVISION BIOLOGIST BASED ON FIELD CONDITIONS.

NOTE: DO NOT DISTURB STR-4

NOTE:
THE CONTRACTOR WILL NEED TO PROTECT BEYOND THE LIMIT OF THE FILL SLOPE AND PROPOSED RIGHT-OF-WAY.



CURVE C107
PI 302+67.60
N 245,303.4019
E 2,230,586.4843
Δ 11° 34′ 38″ (RT)
D 4° 02′ 43″
R 1,416.39
L 286.19
T 143.59
SE 0.034 FT/FT
DESIGN SPEED 45 MPH
TRANS. LENGTH 189′

SPRINGVIEW DRIVE
CURVE SP100
PI 2+89.26
N 245,011.5983
E 2,230,694.1177
Δ 46° 40′ 31″ (LT)
D 14° 00′ 31″
R 409.00
L 333.19
T 176.46
SE 0.038 FT/FT
DESIGN SPEED 30 MPH
TRANS. LENGTH 105

NOTES:

-SEE SHT. 2S2 FOR GEOTECHNICAL REMEDIATION AND ROCK FILL ON EXISTING STREAMS (STR & WWC) AND WETLAND (WTL) IMPACT AREAS.

-SEE SHT'S 2T AND 2U FOR CHANNEL CHANGE NOTES, DETAILS, MITIGATION AND QUANTITIES.

-SEE SHT. 2V FOR DITCH DETAILS.

NOTE:

-CONTRACTOR SHALL PROTECT THE WETLAND AREAS LOCATED BEYOND THE LIMITS OF THE FILL AND PROPOSED R.O.W.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	10B
CONST.	2014	STP-320(4)	10B

REVISION: 4-10-2007
--MITIGATED WETLAND WITH TREES.

REVISION: 1-22-2008
--REMOVED SPECIAL DITCH & ADDED RETAINING WALL.

REVISION: 5-20-2008
--REVISED AND MOVED PVT. DRIVE STA. 298+85 TO STA. 298+70.

REVISION: 10-29-2008
--REVISED PVT.DRIVE STA.303+93.13
--REVISED PVT.DRIVE STA.307+02.91

REVISION: 05-19-2010
--ADDED WETLAND PROTECTION NOTE.
--REMOVED WETLAND NOTES,& TREE PLACEMENT AND DETAILS.
--REMOVED STREAMS WWC-9 AND WWC-10 FROM PROPOSED ROADWAY.
--REVISED ESTIMATED TREE QUANTITIES FOR TEMPORARY WETLAND AREA.

REVISION: 09-27-2010
--ADDED 8′X 5′ RCBC TO PVT. DRIVES STA.
--301+80.81
--304+06.60
--306+74.26

REVISION: 07-06-2011
--REVISED PVT.DRIVES ACROSS RYALL SPRINGS.

REVISION 09-05-2012
--ADDED 12′ CURB CUT TO STA. 298+50 LT.

REVISION 05-23-2013
--REMOVED BERM, SPECIAL "V" SOD DITCH LEFT FROM STA. 299+50 TO 300+50 AND NOTE ACCORDINGLY.

REVISION: 11-20-2013
--REVISED THE STREAM CALL OUT "WWC-9" AND REVISED STREAM "WWC-10", BASED ON REVISED EB REPORT.

REVISION 01-20-2014
--ADDED RETAINING WALL DETAIL "A"

REVISION 08-22-2014
--REPLACED DITCH WITH SIDE DRAINS ON TRACTS 121 & 121A.
--CHANGED SIDE DRAINS ON TRACT 121A FROM 18" TO 24".
--CATCHBASIN L14 ADDED.

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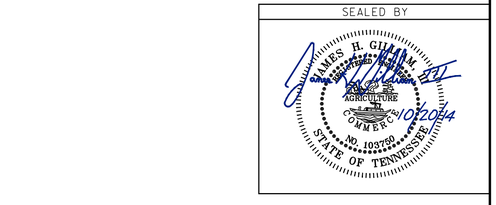

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 295+00 TO STA. 308+00
SCALE: 1"= 50′

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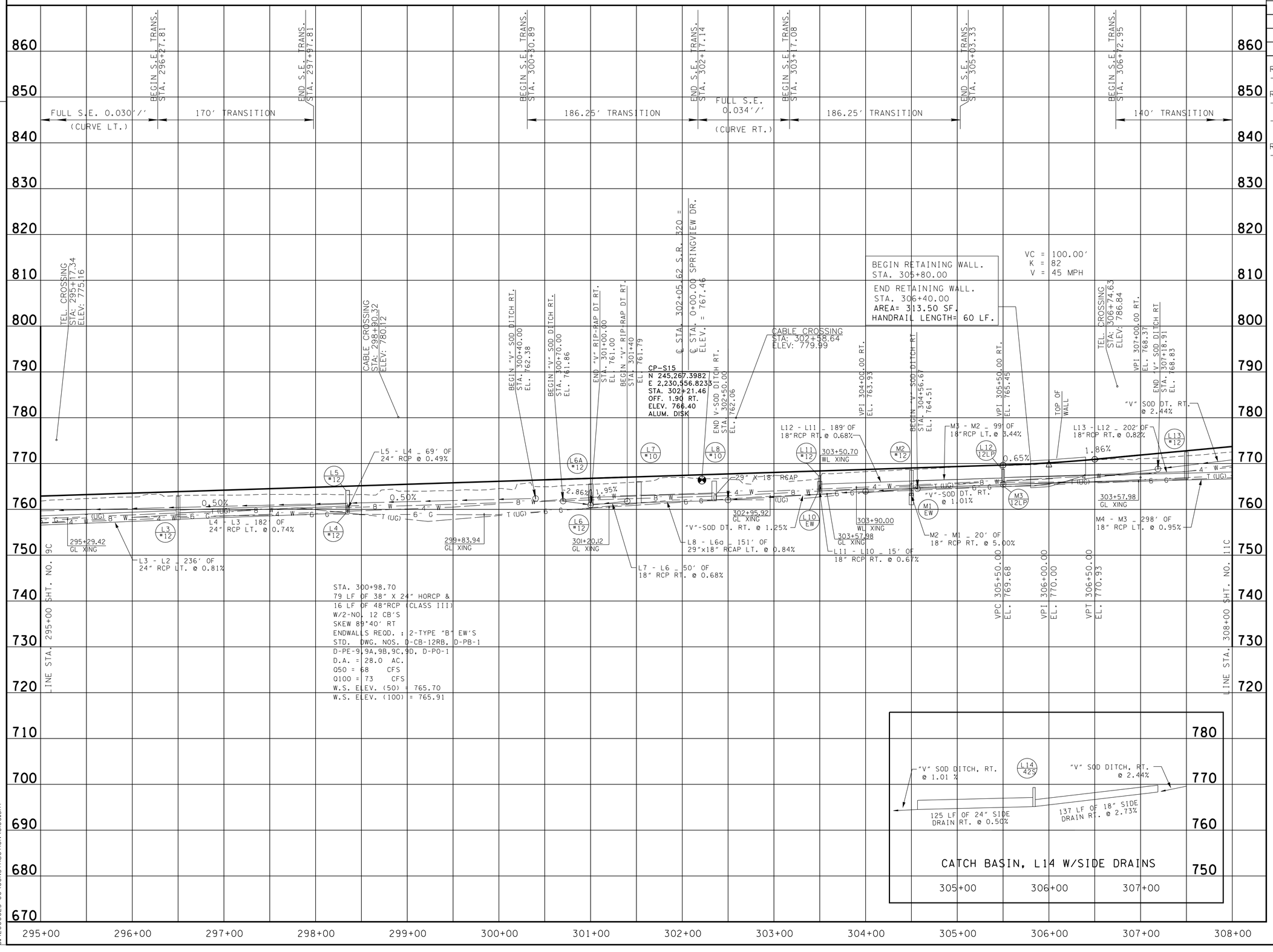
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	10C
CONST.	2014	STP-320(4)	10C

REVISION 1-22-2008:
--ADDED RETAINING WALL

REVISION 05-19-2010:
--LABELED BEGIN AND END OF "V" AND 2' "T" DITCHES STA. 295+00.
--CORRECTED CULVERT SIZE IN CULVERT INFORMATION.

REVISION 08-22-2014:
--ADDED CATCH BASIN / SIDE DRAIN DETAIL.



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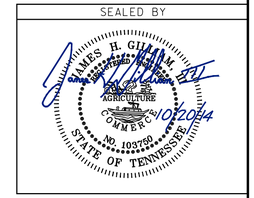

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE

STA. 295+00 TO STA. 308+00
SCALE: 1"= 50' HORIZ.
1"=10' VERT.

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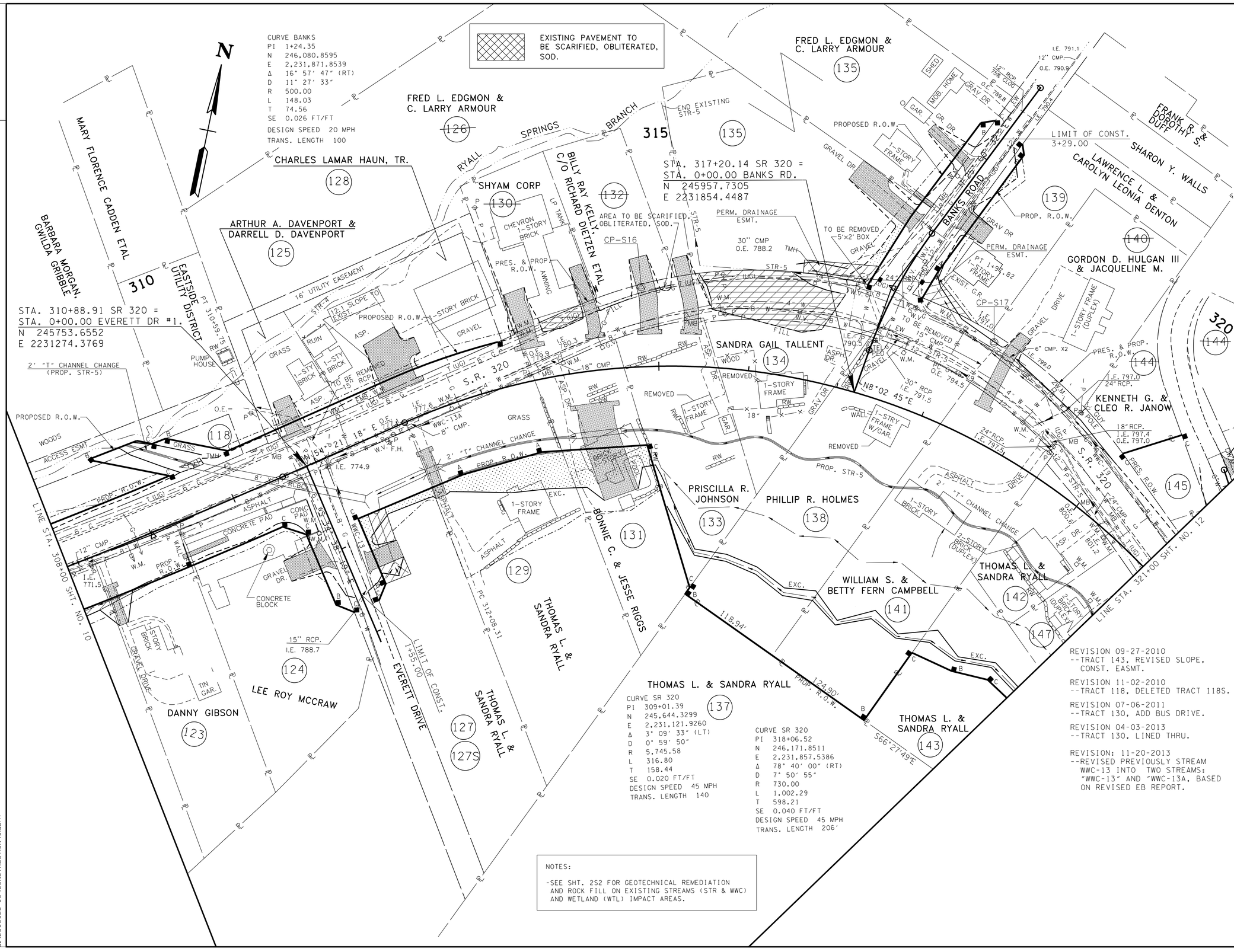
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	11
CONST.	2014	STP-320(4)	11



CURVE SR 320
PI 309+01.39
N 245,644.3299
E 2,231,121.9260
Δ 3° 09' 33" (LT)
D 0° 59' 50"
R 5,745.58
L 316.80
T 158.44
SE 0.020 FT/FT
DESIGN SPEED 45 MPH
TRANS. LENGTH 140

CURVE SR 320
PI 318+06.52
N 246,171.8511
E 2,231,857.5386
Δ 78° 40' 00" (RT)
D 7° 50' 55"
R 730.00
L 1,002.29
T 598.21
SE 0.040 FT/FT
DESIGN SPEED 45 MPH
TRANS. LENGTH 206'

NOTES:

-SEE SHT. 2S2 FOR GEOTECHNICAL REMEDIATION AND ROCK FILL ON EXISTING STREAMS (STR & WWC) AND WETLAND (WTL) IMPACT AREAS.

REVISION 4-10-07 :
--ADDED MEANDERING TO SPECIAL DITCH.
--UPDATED PROPERTY LINES TRACTS 123, 125,128.
--CHANGED DRAINAGE EASMENT TRACT 139.
--CHANGED ROW OFFSET RT. STA. 280+23 TO STA. 315+47.
--CHANGED ROW OFFSET LT STA. 281+02 TO STA. 317+09.

REVISION 9-07-07 :
--ADDED CONST. ESMT TRACT 129, 131.
--CHANGED PROPERTY OWNER TRACT 133.
--MOVED PVT DRIVE TRACTS 135 & 139.

REVISION 1-22-2008 :
--TRACT 125 ADDED PRIVATE DRIVE .
--TRACT 145 ADDED CONST. ESMT.
--TRACTS 135,136 COMBINE TRACTS.

REVISION 11-03-09 :
--TRACT 127, ADDED PVT. DRIVE.

REVISION 11-03-09 :
--TRACT 127, ADDED PVT. DRIVE.

REVISION 02-04-2010 :
--ADDED CURB CUT STA. 309+50
--UPDATED EXISTING CULVERTS ON EXISTING STR-5.
--CORRECTED PREVIOUSLY LABELED WWC-15 TO WWC-19.
--EXTENDED CHANNEL CHANGE FOR PROPOSED STR-5.
--TRACT 116, REPLACED DRAIN. ESMT.WITH R.O.W.
--TRACT 118 ADDED R.O.W.

REVISION 05-19-2010
--TRACT 127,ADDED TRACT 127S & DRAIN. EASMT.
--TRACT 118, ADDED TRACT 118S.

REVISION 07-25-2010
--TRACT 129, CHANGED PROPERTY OWNER.

REVISION 09-27-2010
--TRACT 143, REVISED SLOPE, CONST. EASMT.

REVISION 11-02-2010
--TRACT 118, DELETED TRACT 118S.

REVISION 07-06-2011
--TRACT 130, ADD BUS DRIVE.

REVISION 04-03-2013
--TRACT 130, LINED THRU.

REVISION: 11-20-2013
--REVISED PREVIOUSLY STREAM WWC-13 INTO TWO STREAMS: "WWC-13" AND "WWC-13A, BASED ON REVISED EB REPORT.

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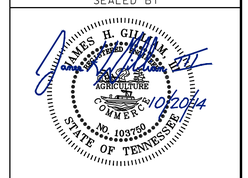

COORDINATE VALUES ARE NAD/83 (1995) AND ARE DATUM ADJUSTED BY THE FACTOR 0.99998 AND TIED TO THE TGRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 308+00 TO STA. 321+00

SCALE: 1"= 50'

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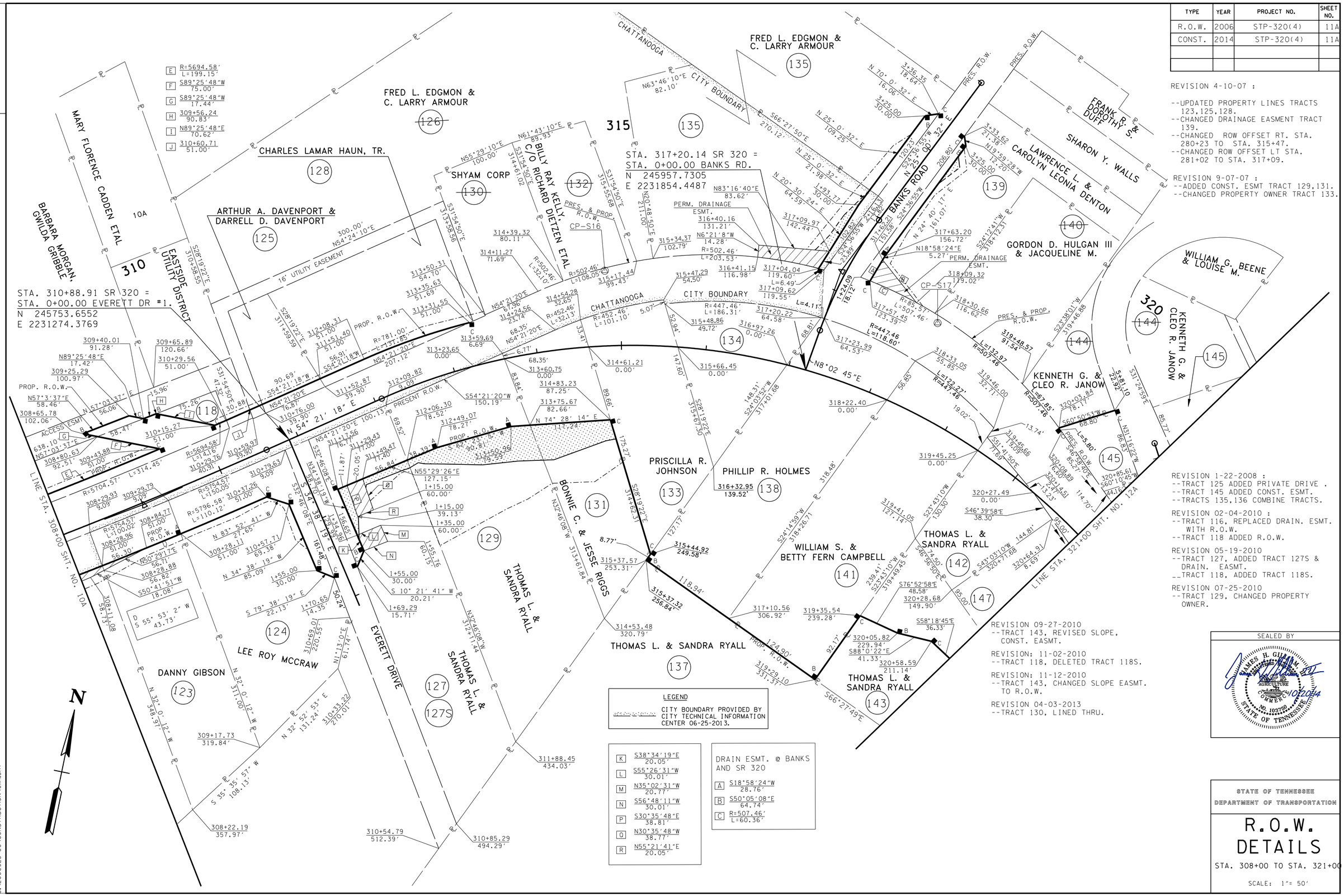
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	11A
CONST.	2014	STP-320(4)	11A



REVISION 4-10-07 :

--UPDATED PROPERTY LINES TRACTS 123,125,128.
--CHANGED DRAINAGE EASMENT TRACT 139.
--CHANGED ROW OFFSET RT. STA. 280+23 TO STA. 315+47.
--CHANGED ROW OFFSET LT STA. 281+02 TO STA. 317+09.

REVISION 9-07-07 :
--ADDED CONST. ESMT TRACT 129,131.
--CHANGED PROPERTY OWNER TRACT 133.

REVISION 1-22-2008 :
--TRACT 125 ADDED PRIVATE DRIVE .
--TRACT 145 ADDED CONST. ESMT.
--TRACTS 135,136 COMBINE TRACTS.

REVISION 02-04-2010 :
--TRACT 116, REPLACED DRAIN. ESMT. WITH R.O.W.
--TRACT 118 ADDED R.O.W.

REVISION 05-19-2010
--TRACT 127, ADDED TRACT 127S & DRAIN. EASMT.
--TRACT 118, ADDED TRACT 118S.

REVISION 07-25-2010
--TRACT 129, CHANGED PROPERTY OWNER.

REVISION 09-27-2010
--TRACT 143, REVISED SLOPE, CONST. EASMT.

REVISION: 11-02-2010
--TRACT 118, DELETED TRACT 118S.

REVISION: 11-12-2010
--TRACT 143, CHANGED SLOPE EASMT. TO R.O.W.

REVISION 04-03-2013
--TRACT 130, LINED THRU.

LEGEND

CITY BOUNDARY PROVIDED BY CITY TECHNICAL INFORMATION CENTER 06-25-2013.

K	S38°34'19"E 20.05'
L	S55°26'31"W 30.01'
M	N35°02'31"W 20.77'
N	S56°48'11"W 30.01'
P	S30°35'48"E 38.81'
O	N30°35'48"W 38.77'
R	N55°21'41"E 20.05'

DRAIN ESMT. @ BANKS AND SR 320

A	S18°58'24"W 28.76'
B	S50°05'08"E 64.74'
C	R=507.46' L=60.36'

SEALED BY

JAMES H. GHAM
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 103750
STATE OF TENNESSEE
10/20/2014

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

R.O.W. DETAILS

STA. 308+00 TO STA. 321+00

SCALE: 1"= 50'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	11B
CONST.	2014	STP-320(4)	11B

REVISION 4-10-07 :
ADDED MEANDERING TO SPEC. DITCH WITH TREES & SHRUBS.

REVISION 9-07-07 :
--MOVED PVT DRIVE STA. 1+91.79 & STA. 2+28.12 (BANKS ROAD)

REVISION 3-15-08 :
--ADDED PVT DRIVE BELL AIR ROAD

REVISION 11-03-09 :
--ADDED PVT DRIVE STA. 1+25 EVERETT ROAD.

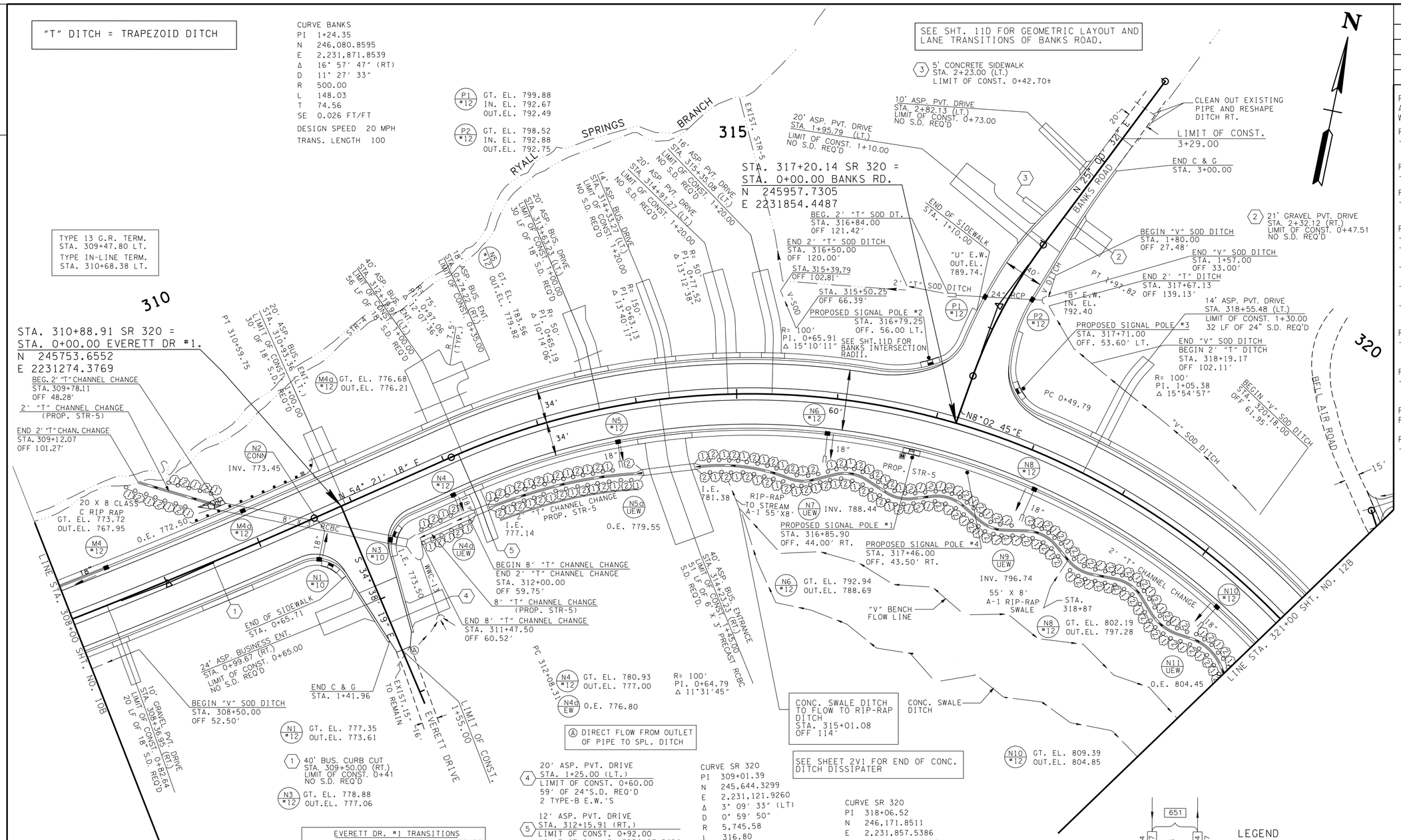
REVISION 2-04-10 :
--ADDED CURB CUT STA. 309+50
--REMOVED PORTION OF STR-5, WWC-13, AND WWC-19 FROM PROPOSED ROADWAY.
--REMOVED ENVIRONMENTAL NOTES, TREE PLACEMENT DETAILS.
--REVISED ESTIMATED TREE QUANTITIES FOR STREAM MITIGATION.
--EXTENDED 8' "T" CHANNEL CHANGE FOR PROPOSED STR-5.

REVISION 05-19-2010 :
--ADDED SIDE DRAIN TO PVT. DRIVE STA. 1+25.00.

REVISION 09-27-2010 :
--ADDED BENCHES AND SPEC. DITCH TO SLOPE.

REV. 01-14-11: ADDED TURF REINFORCEMENT MAT TO 2' T-SOD DITCH.

REVSION 07-06-2011:
--ADDED BUS. DRIVE STA. 314+33.27.



NOTES:

-CONCRETE DRAINAGE SWALE TO BE CONSTRUCTED MAXIMUM 10 FT. FROM TOP OF SLOPE.

-SEE SHT. 2S2 FOR GEOTECHNICAL REMEDIATION AND ROCK FILL ON EXISTING STREAMS (STR & WWC) AND WETLAND (WTL) IMPACT AREAS.

-SEE SHT'S 2T AND 2U FOR CHANNEL CHANGE NOTES, DETAILS, MITIGATION AND QUANTITIES.

-SEE SHT. 2V FOR DITCH DETAILS.

NOTE:
-TRANSITION FROM STREAM WIDTH TO BOX WIDTH= 6'
-TRANSITION FROM BOX WIDTH TO STREAM WIDTH= 6'

NOTE:
-ALL SIDEROADS HAVE RADIUS OF 35'UNLESS OTHERWISE NOTED.
-ALL DRIVEWAYS OUTSIDE CURB & GUTTER RADIUS SHOULD BE 15' UNLESS OTHERWISE NOTED.

SEALED BY

JAMES H. GILLIAM JR.
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 103799
STATE OF TENNESSEE
10/20/14

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 308+00 TO STA. 321+00
SCALE: 1"=50'

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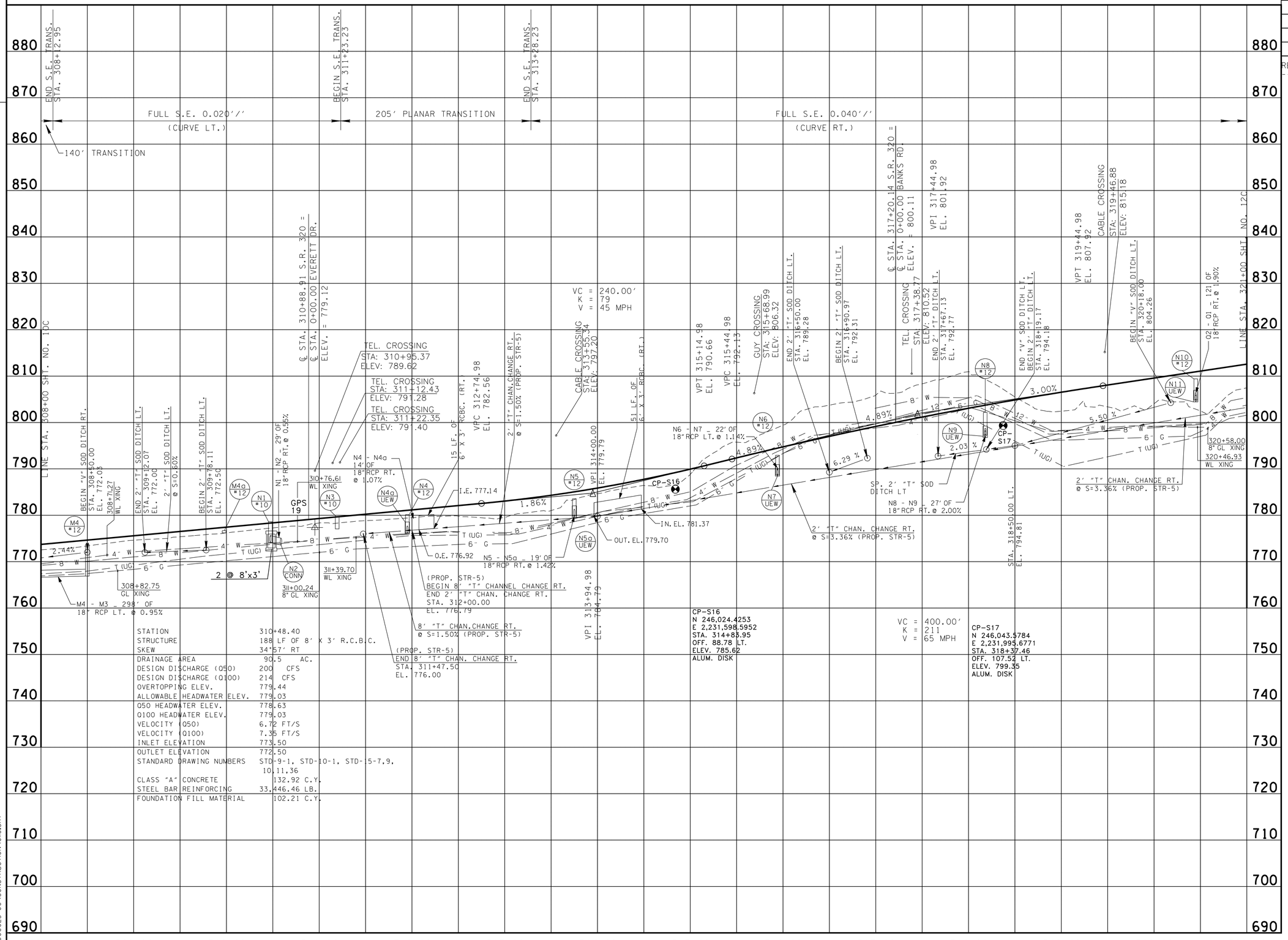
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	11C
CONST.	2014	STP-320(4)	11C

REVISION 05-19-2010:
--EXTENDED 3' "T" CHANNEL CHANGE FOR PROPOSED STR-5.



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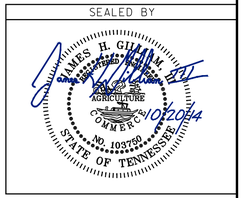

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE

STA. 308+00 TO STA. 321+00
SCALE: 1"= 50' HORIZ.
1"=10' VERT.

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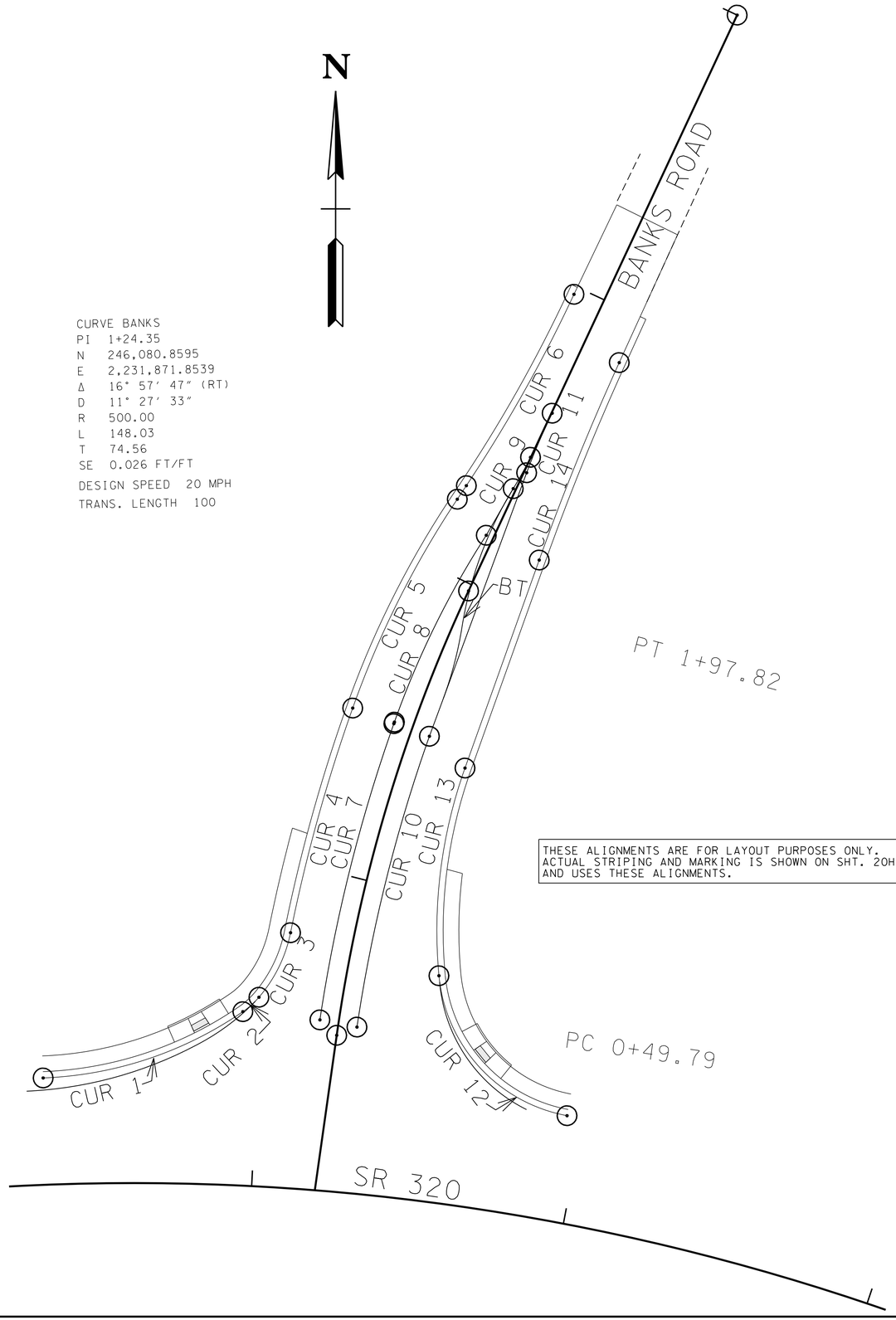
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.



THESE ALIGNMENTS ARE FOR LAYOUT PURPOSES ONLY. ACTUAL STRIPING AND MARKING IS SHOWN ON SHT. 2OH AND USES THESE ALIGNMENTS.

COGO ALIGNMENTS ARE AVAILABLE FOR BANKS ROAD EDGE OF PAVEMENT/FACE OF GUTTER AND STRIPING LAYOUTS.

CHAIN NAME- DESCRIPTION
BANKLT- LEFT EOP/FACE OF GUTTER
BANKRT- RIGHT EOP/FACE OF GUTTER
BANKLTST- LEFT LANE STRIPE
BANKRTST- RIGHT LANE DIVIDER STRIPE
BANKABT- BAY TAPER

BT1	BAY TAPER(BT)			
RADIUS 120'	LENGTH 23.52'			
	N	E	STATION	OFFSET
PC	246,114.2112	2,231,895.3528	1+62.98	6.00
PI	246,125.2808	2,231,899.4382	1+74.91	5.70
PT	246,136.9341	2,231,901.2893	1+86.46	2.84
BT2	BAY TAPER(BT)			
RADIUS 120'	LENGTH 47.28'			
	N	E	STATION	OFFSET
PC	246,136.9086	2,231,901.2853	1+86.43	2.85
PI	246,160.5627	2,231,905.0376	2+09.52	-3.62
PT	246,180.9642	2,231,917.5826	2+33.31	-0.88

CUR 1	LEFT SIDE FACE OF GUTTER			
RADIUS 120'	LENGTH 67.86'			
	N	E	STATION	OFFSET
PC	245,993.4644	2,231,767.9971	0+23.28	-90.60
PI	245,994.7799	2,231,802.8385	0+29.46	-56.29
PT	246,014.5610	2,231,831.5502	0+52.88	-30.64
CUR 2	LEFT SIDE FACE OF GUTTER			
RADIUS 27'	LENGTH 6.89'			
	N	E	STATION	OFFSET
PC	246,014.5610	2,231,831.5502	0+52.88	-30.64
PI	246,016.5258	2,231,834.4021	0+55.11	-28.11
PT	246,019.1467	2,231,836.6657	0+57.90	-26.27
CUR 3	LEFT SIDE FACE OF GUTTER			
RADIUS 45'	LENGTH 23.12'			
	N	E	STATION	OFFSET
PC	246,019.1467	2,231,836.6657	0+57.90	-26.27
PI	246,028.0919	2,231,844.3916	0+67.55	-20.13
PT	246,039.6792	2,231,846.7244	0+78.91	-20.00
CUR 4	LEFT SIDE FACE OF GUTTER			
RADIUS 520'	LENGTH 73.93'			
	N	E	STATION	OFFSET
PC	246,039.6792	2,231,846.7244	0+78.91	-20.00
PI	246,075.9784	2,231,854.0322	1+14.46	-21.32
PT	246,110.8759	2,231,866.4098	1+50.00	-20.00
CUR 5	LEFT SIDE FACE OF GUTTER			
RADIUS 300'	LENGTH 74.29'			
	N	E	STATION	OFFSET
PC	246,111.3683	2,231,866.5844	1+50.50	-20.00
PI	246,146.5566	2,231,879.0651	1+86.34	-21.38
PT	246,177.6124	2,231,899.7902	2+22.75	-15.59
CUR 6	LEFT SIDE FACE OF GUTTER			
RADIUS 460'	LENGTH 69.92'			
	N	E	STATION	OFFSET
PC	246,181.9261	2,231,902.6689	2+27.88	-14.80
PI	246,211.0593	2,231,922.1113	2+62.50	-9.50
PT	246,242.8004	2,231,936.9186	2+97.53	-9.50
CUR 7	LT. LANE STRIPE			
RADIUS 506'	LENGTH 93.43'			
	N	E	STATION	OFFSET
PC	246,015.7635	2,231,856.6560	0+57.68	-6.00
PI	246,062.0421	2,231,863.9438	1+03.84	-8.16
PT	246,106.1959	2,231,879.6044	1+50.00	-6.00
CUR 8	LT. LANE STRIPE			
RADIUS 286'	LENGTH 66.40'			
	N	E	STATION	OFFSET
PC	246,106.6884	2,231,879.7791	1+50.52	-6.00
PI	246,138.1219	2,231,890.9280	1+83.42	-7.13
PT	246,166.1466	2,231,909.0107	2+16.26	-2.38
CUR 9	LT. LANE STRIPE			
RADIUS 120'	LENGTH 11.38'			
	N	E	STATION	OFFSET
PC	246,180.9860	2,231,917.5959	2+33.34	-0.88
PI	246,185.8372	2,231,920.5804	2+39.00	-0.22
PT	246,190.9493	2,231,923.0920	2+44.69	-0.11
CUR 10	RT. LANE DIVIDER			
RADIUS 494'	LENGTH 91.22'			
	N	E	STATION	OFFSET
PC	246,013.8968	2,231,868.5099	0+57.68	6.00
PI	246,059.0779	2,231,875.6249	1+03.84	3.89
PT	246,102.1846	2,231,890.9141	1+50.00	6.00
CUR 11	RT. LANE DIVIDER			
RADIUS 200'	LENGTH 20.62'			
	N	E	STATION	OFFSET
PC	246,186.0336	2,231,921.8602	2+39.72	0.85
PI	246,195.7146	2,231,925.4332	2+50.00	0.00
PT	246,204.9765	2,231,929.9835	2+60.32	0.21
CUR 12	RT. SIDE FACE OF GUTTER			
RADIUS 50'	LENGTH 64.81'			
	N	E	STATION	OFFSET
PC	245,981.4625	2,231,934.7104	0+34.73	76.15
PI	245,988.2954	2,231,897.4726	0+36.29	38.32
PT	246,025.9909	2,231,893.9511	0+74.56	28.98
CUR 13	RT. SIDE FACE OF GUTTER			
RADIUS 154'	LENGTH 67.13'			
	N	E	STATION	OFFSET
PC	246,025.9909	2,231,893.9511	0+74.56	28.98
PI	246,059.9491	2,231,890.7788	1+08.58	18.34
PT	246,092.0714	2,231,902.2413	1+44.02	20.02
CUR 14	RT. SIDE FACE OF GUTTER			
RADIUS 800'	LENGTH 67.81'			
	N	E	STATION	OFFSET
PC	246,158.2552	2,231,925.8582	2+16.23	16.22
PI	246,190.2087	2,231,937.2607	2+50.01	13.05
PT	246,221.0821	2,231,951.3275	2+83.94	12.74

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	11D

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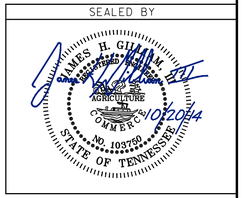

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BANKS ROAD GEOMETRIC LAYOUT

SCALE: 1"=20'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

SR 320
CURVE C110
PI 326+34.63
N 245,474.4008
E 2,232,604.8925
Δ 7° 04′ 54″ (LT)
D 2° 00′ 00″
R 2,864.79
L 354.08
T 177.27
SE 0.025 FT/FT
DESIGN SPEED 45 MPH
TRANS. LENGTH 155′

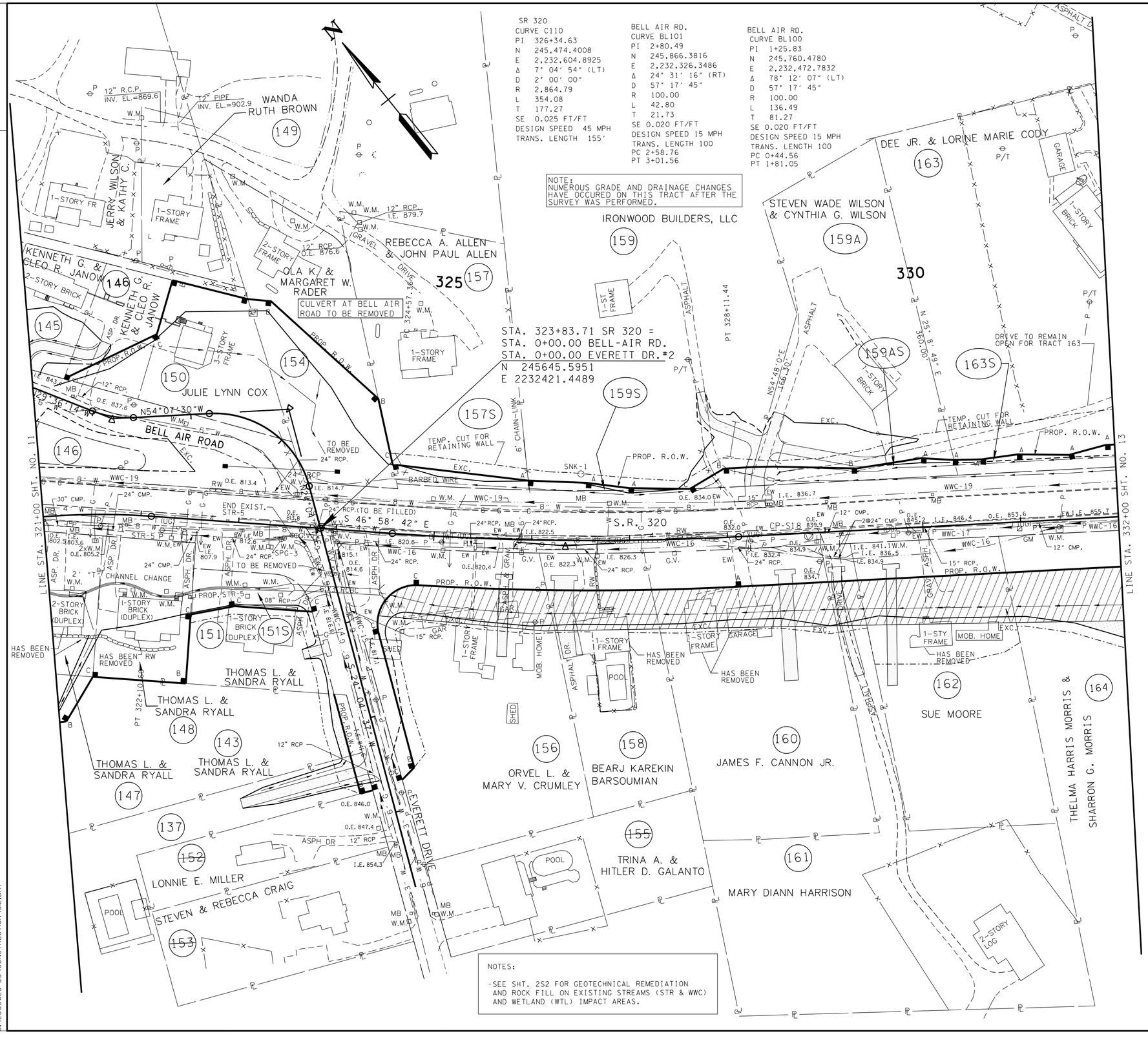
BELL AIR RD.
CURVE BL101
PI 2+80.49
N 245,866.3816
E 2,232,326.3486
Δ 24° 31′ 16″ (RT)
D 57° 17′ 45″
R 100.00
L 42.80
T 21.73
SE 0.020 FT/FT
DESIGN SPEED 15 MPH
TRANS. LENGTH 100
PC 2+58.76
PT 3+01.56

BELL AIR RD.
CURVE BL100
PI 1+25.83
N 245,760.4780
E 2,232,472.7832
Δ 78° 12′ 07″ (LT)
D 57° 17′ 45″
R 100.00
L 136.49
T 81.27
SE 0.020 FT/FT
DESIGN SPEED 15 MPH
TRANS. LENGTH 100
PC 0+44.56
PT 1+81.05

NOTE:
NUMEROUS GRADE AND DRAINAGE CHANGES HAVE OCCURED ON THIS TRACT AFTER THE SURVEY WAS PERFORMED.

CULVERT AT BELL AIR ROAD TO BE REMOVED

STA. 323+83.71 SR 320 =
STA. 0+00.00 BELL-AIR RD.
STA. 0+00.00 EVERETT DR.#2
N 245645.5951
E 2232421.4489



NOTES:

-SEE SHT. 2S2 FOR GEOTECHNICAL REMEDIATION AND ROCK FILL ON EXISTING STREAMS (STR & WWC) AND WETLAND (WTL) IMPACT AREAS.

REVISION 05-23-2013
--TRACT 157:
ADDED TRACT 157S AND PRESENT ROW.
--TRACT 159S:
ADDED PRESENT ROW.
--TRACT 159AS:
ADDED PRESENT ROW.
--TRACT 163S:
ADDED PRESENT ROW.

REVISION 05-20-2014
--TRACT 157S, 159S, 159AS, 163S:
REMOVED OLD PRESENT ROW LINE.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	12
CONST.	2014	STP-320(4)	12

REVISION 9-20-2006
--ADDED TEMP. CONST. ESMT. FOR REMOVAL OF STRUCTURE TRACT 158.

REVISION 4-10-2007
--CHANGED EASMENTS ON TRACTS 157, 159,160.
--CORRECTED PROPERTY LINES TRACT 163.
--CHANGED R.O.W. IN TRACT 158.

REVISION 9-7-2007
--ADDED CONST. ESMT. TRACT 162.
--ADDED TRACT 159A & ADJUSTED TRACT 159.
--CHANGED PROPERTY OWNER TRACT 158

REVISION 1-22-2008
--TRACT 145 ADDED PVT. DRIVE & CONST. EASEMENT.

REVISION 3-15-2008
--TRACT 154 CHANGED PROPERTY OWNER.
--TRACT 145 ADDED PVT.DRIVE.

REVISION 4-22-2008
--TRACT 137 ADDED PROPERTY LINE BETWEEN TRACTS 137 & 143.

REVISION 6-13-2008
--TRACT 154 REVISED R.O.W. TAKE.

REVISION 7-30-2008
--TRACT 154 REVISED R.O.W TAKE.
--TRACT 157 REVISED PROPERTY OWNER & PROPERTY LINES.

REVISION 12-03-2008
--TRACT 159 UPDATED PROPERTY OWNER

REVISION 02-04-2010
--ADDED PVT. DRIVE STA. 2+50.00.

REVISION 05-19-2010
--CHANGE DRAINAGE STRUCTURE UNDER EVERETT DR..
--TRACT 151 REPLACED PERMANENT DRAIN. EASMT. WITH R.O.W., ADDED TRACT 151S.

REVISION 09-27-2010
--TRACT 143, REVISED SLOPE, CONST. EASMT.

REVISION 01-24-2011
--TRACT 151S, REVISED PRES. ROW

REVISION 07-06-2011
--TRACT 154, 157, 159, 159A, 163 ADDED ROW, CONST. ESMT. DELETED DRAIN.ESMT.

REVISION 09-21-2011
--TRACT 159, ADDED TRACT 159S.
--TRACT 159A, ADDED TRACT 159A-S.
--TRACT 163, ADDED TRACT 163S.

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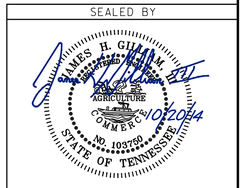

COORDINATE VALUES ARE NAD/83 (1995) AND ARE DATUM ADJUSTED BY THE FACTOR 0.99998 AND TIED TO THE TGRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 321+00 TO STA. 332+00

SCALE: 1"= 50′

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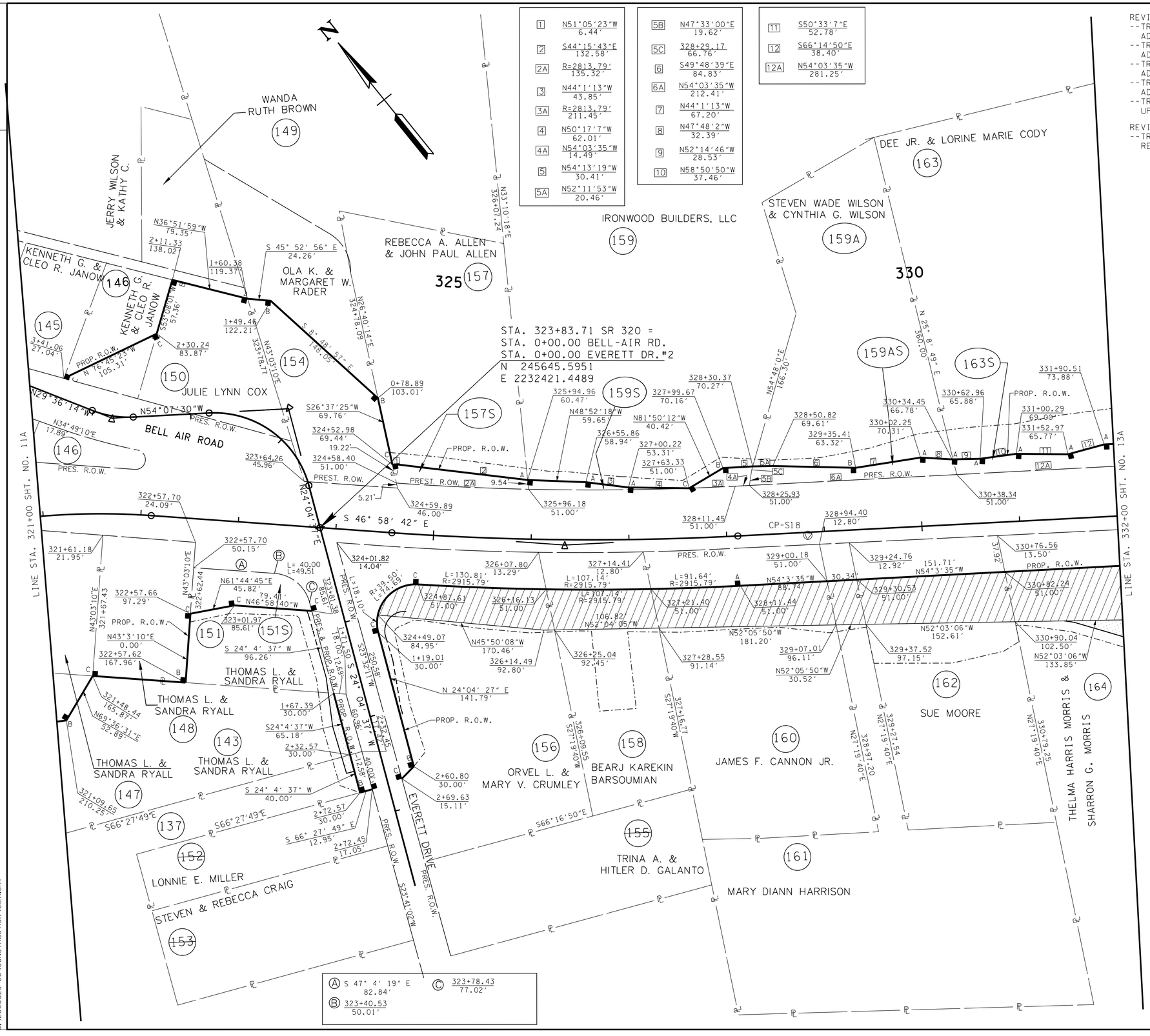
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.



1	N51°05'23"W 6.44'
2	S44°15'43"E 132.58'
2A	R=2813.79' 135.32'
3	N44°1'13"W 43.85'
3A	R=2813.79' 211.45'
4	N50°17'7"W 62.01'
4A	N54°03'35"W 14.49'
5	N54°13'19"W 30.41'
5A	N52°11'53"W 20.46'

5B	N47°33'00"E 19.62'
5C	328+29.17 66.76'
6	S49°48'39"E 84.83'
6A	N54°03'35"W 212.41'
7	N44°1'13"W 67.20'
8	N47°48'2"W 32.39'
9	N52°14'46"W 28.53'
10	N58°50'50"W 37.46'

11	S50°33'7"E 52.78'
12	S66°14'50"E 38.40'
12A	N54°03'35"W 281.25'

Ⓐ S 47° 4' 19" E 82.84'
Ⓑ 323+40.53 50.01'
Ⓒ 323+78.43 77.02'

REVISION 05-23-2013
--TRACT 157:
ADDED TRACT 157S AND PRESENT ROW.
--TRACT 159S:
ADDED PRESENT ROW.
--TRACT 159AS:
ADDED PRESENT ROW.
--TRACT 163S:
ADDED PRESENT ROW.
--TRACT 156:
UPDATED SLOPE EASEMENT

REVISION 05-20-2014
--TRACT 157S, 159S, 159AS, 163S:
REMOVED OLD PRESENT ROW LINE.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	12A
CONST.	2014	STP-320(4)	12A

REVISION 9-20-2006
--ADDED TEMP. CONST. ESMT. FOR REMOVAL OF STRUCTURE TRACT 158.

REVISION 4-10-2007
--CHANGED EASMENTS ON TRACTS 157, 159,160.
--CORRECTED PROPERTY LINES TRACT 163.
--CHANGED R.O.W. IN TRACT 158.

REVISION 9-7-2007
--ADDED CONST.ESMT.TRACT 162.
--ADDED TRACT 159A & ADJUSTED TRACT 159.
--CHANGED PROPERTY OWNER TRACT 158.

REVISION 1-22-2008
--TRACT 145 ADDED PVT. DRIVE & CONST. EASEMENT.

REVISION 3-15-2008
--TRACT 154 CHANGED PROPERTY OWNER.

REVISION 4-22-2008
--TRACT 137 ADDED PROPERTY LINE BETWEEN TRACTS 137 & 143.

REVISION 6-13-2008
--TRACT 154 REVISED R.O.W. TAKE.

REVISION 7-30-2008
--TRACT 154 REVISED R.O.W TAKE.
--TRACT 157 REVISED PROPERTY OWNER & PROPERTY LINES.

REVISION 12-03-2008
--TRACT 159 UPDATED PROPERTY OWNER AND LABELING.

REVISION 05-19-2010
--TRACT 151 REPLACED PERMANENT DRAIN. EASMT. WITH R.O.W., ADDED TRACT 151S.

REVISION 09-27-2010
--TRACT 143, REVISED SLOPE, CONST. EASMT.

REVISION 01-24-2011
--TRACT 151S, REVISED PRES. ROW

REVISION: 07-06-2011
--TRACT 154,157,159,159A,163 ADDED ROW, CONST. ESMT.DELETED DRAIN ESMT.
--TRACT 146,151,156 UPDATED PROPOSED BEARINGS.

REVISION 09-21-2011
--TRACT 159, ADDED TRACT 159S.
--TRACT 159A, ADDED TRACT 159A-S.
--TRACT 163, ADDED TRACT 163S.

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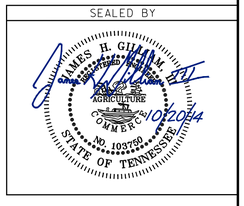

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

R.O.W. DETAILS

STA.321+00 TO STA.332+00

SCALE: 1"= 50'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	12B
CONST.	2014	STP-320(4)	12B

REVISION 4-10-2007
--ADDED RETAINING WALL BEG. STA. 328+80.28.
--ADDED SPRING DRAIN BOXES STA. 320+56.
--ADDED MEANDERING TO SPEC. DITCH.
--REVISED PVT. DRIVE 328+30.02.

REVISION 3-15-2008
--BELL AIR RD, ADDED PRIVATE DRIVE.

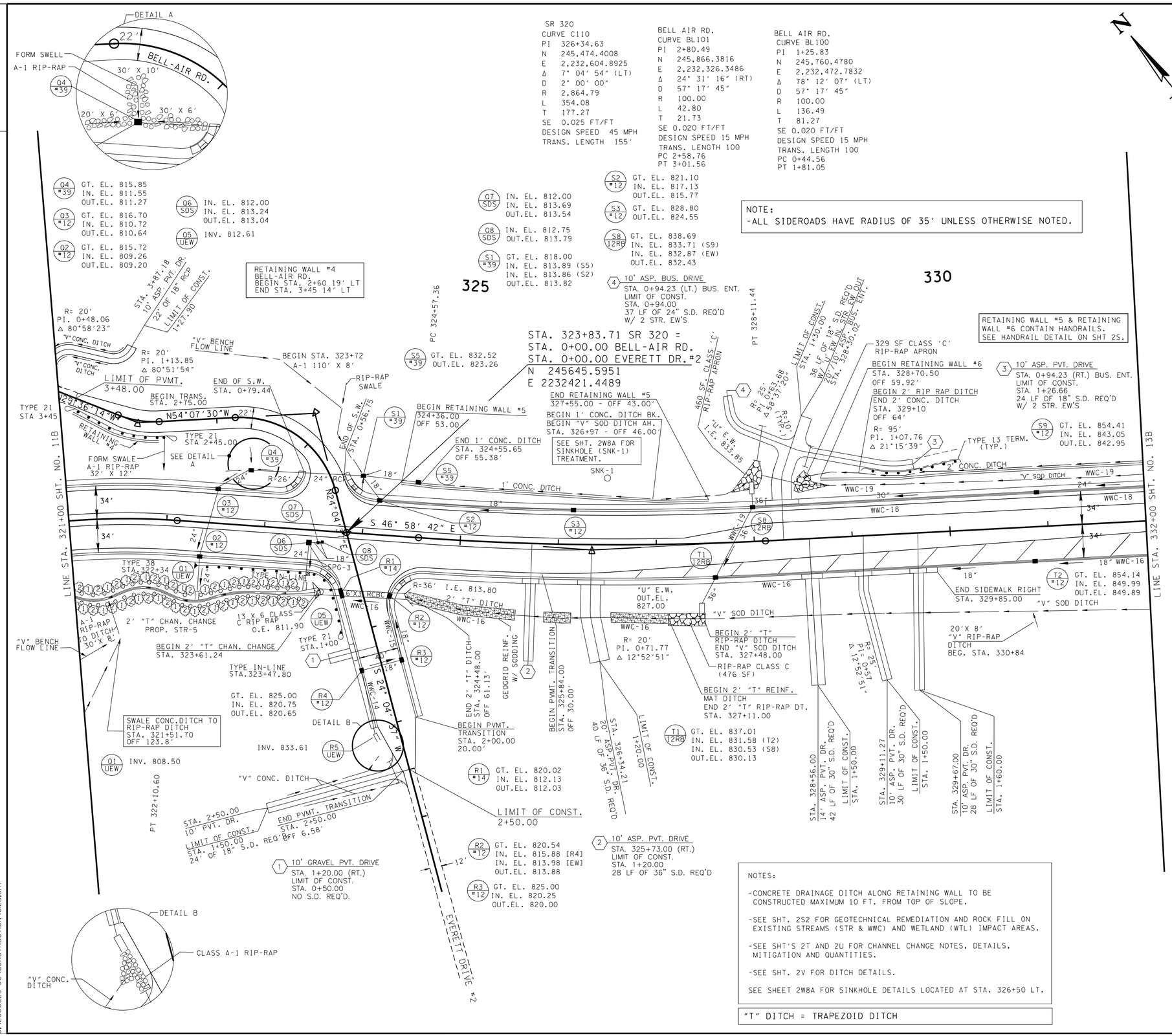
REVISION 7-30-2008
--REVISED PVT. DRIVE STA. 326+34.43.

REVISION 02-04-2010
--ADDED PVT DRIVE STA. 2+50.00.
--CORRECTED A MISSPELLING "EVERETT"
--REVISED CHANNEL CHANGE CROSS-SECTION AND END STATION FOR PROPOSED STR-5.
--REVISED ESTIMATED TREE QUANTITIES FOR STREAM MITIGATION.

REVISION 05-19-2010
--EXTENDED CHANNEL CHANGE.
--CHANGE DRAINAGE STRUCTURE UNDER EVERETT DR..

REVISION 09-27-2010 :
--ADDED BENCHES AND SPEC. DITCH TO SLOPE.

REVISION 07-06-2011 :
--REVISED RETAINING WALLS LENGTH.



NOTES:

-CONCRETE DRAINAGE DITCH ALONG RETAINING WALL TO BE CONSTRUCTED MAXIMUM 10 FT. FROM TOP OF SLOPE.

-SEE SHT. 2S2 FOR GEOTECHNICAL REMEDIATION AND ROCK FILL ON EXISTING STREAMS (STR & WWC) AND WETLAND (WTL) IMPACT AREAS.

-SEE SHT'S 2T AND 2U FOR CHANNEL CHANGE NOTES, DETAILS, MITIGATION AND QUANTITIES.

-SEE SHT. 2V FOR DITCH DETAILS.

SEE SHEET 2W8A FOR SINKHOLE DETAILS LOCATED AT STA. 326+50 LT.

"T" DITCH = TRAPEZOID DITCH

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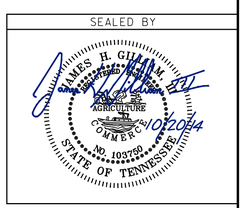

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 321+00 TO STA. 332+00
SCALE: 1"= 50′

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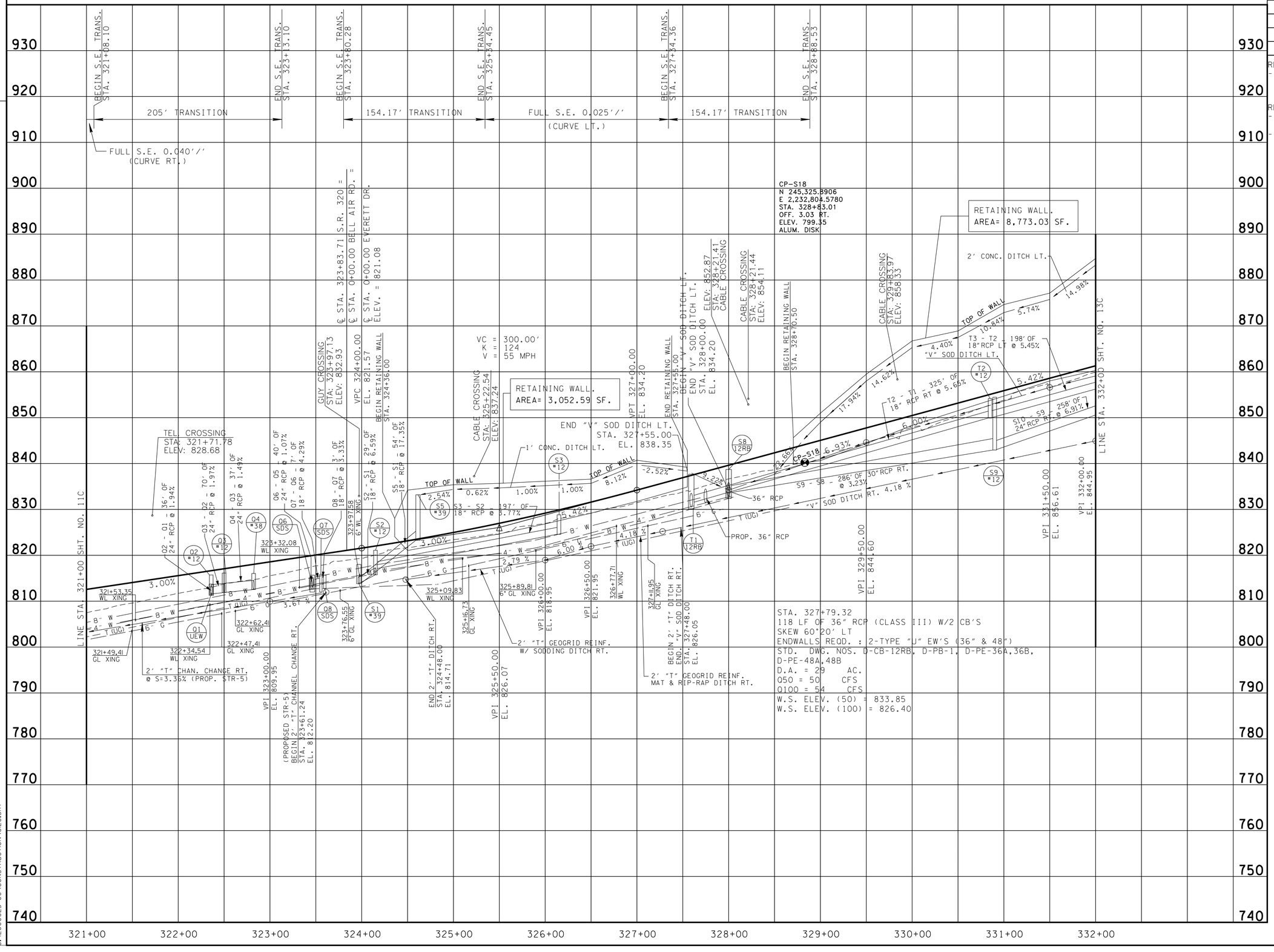
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	12C
CONST.	2014	STP-320(4)	12C

REVISION 05-19-2010:
--CORRECTED STATION END FOR 3' "T" CHANNEL CHANGE RT. AND BEGIN V-SOD DITCH RT.

REVISION 07-06-2011:
--EXTENDED RETAINING WALL TO STA. 324+26.
--EXTENDED RETAINING WALL TO STA.328+80.28.



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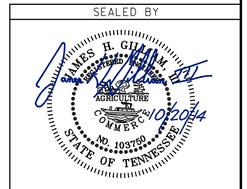

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE

STA. 321+00 TO STA. 332+00
SCALE: 1"= 50' HORIZ.
1"=10' VERT.

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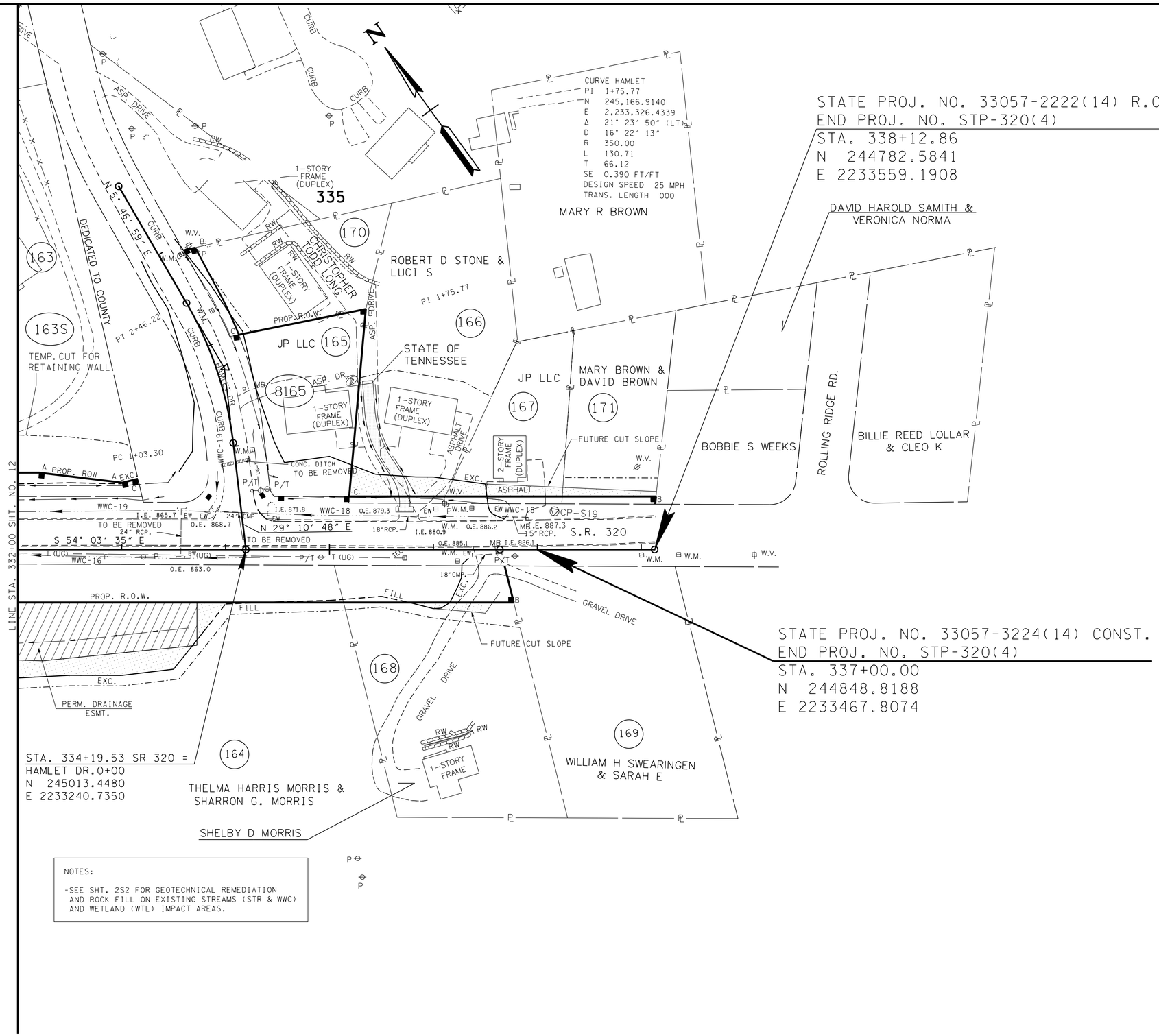
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.



NOTES:

-SEE SHT. 2S2 FOR GEOTECHNICAL REMEDIATION AND ROCK FILL ON EXISTING STREAMS (STR & WWC) AND WETLAND (WTL) IMPACT AREAS.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	13
CONST.	2014	STP-320(4)	13

REVISION: 9-20-2006
--ADDED TEMP. CONST. ESMT. FOR REMOVAL OF STRUCTURE TRACT 166.
--ADDED SLOPE & CONST. ESMT TO TRACT 167

REVISION: 04-10-2007
--ADDED AND CORRECTED ALL PROPERTY LINES SHT. 13.
--EXTENDED RETAINING WALL TO STA. 335+59.20.
--CHANGED END OF PROJECT R.O.W. STATION.

REVISION: 09-07-2007
--ADD CONST. ESMT. TO ENTIRE TRACT NO. 167

REVISION: 1-22-2008
--TRACT 165 ADDED CONST. ESMT. FOR REMOVAL OF HOUSE.

REVISION: 04-22-2008
--TRACT 169, ADDED END OF PAVEMENT TIE TO PRIVATE DRIVE.

REVISION: 05-19-2010
--ADDED LABELS TO WWC-16, WWC-18, WWC-19.

REVISION: 07-06-2011
--TRACT 163, ADDED ROW, CONST ESMT. DELETED DRAIN ESMT.
--TRACT 165 ADDED ROW DELETED DRAIN ESMT.

REVISION: 05-23-2013
--TRACT 163S:
ADDED PRESENT ROW.
--TRACT 165:
ADDED TRACT 165S.
CHANGED PROPOSED ROW INTO PRESENT ROW.
--TRACT 165S:
ADDED PROPOSED ROW.
REMOVED CONSTRUCTION EASEMENT.
REMOVED PERMANENT DRAIN. EASEMENT.

REVISION: 05-20-2014
--TRACT 8165/165S:
CHANGED TRACT NO. AND OWNER NAME.
REMOVED OLD PRES. ROW LINE.
--TRACT 163S:
REMOVED OLD PRES. ROW LINE.

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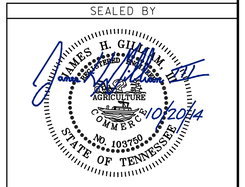

COORDINATE VALUES ARE NAD/83 (1995) AND ARE DATUM ADJUSTED BY THE FACTOR 0.99998 AND TIED TO THE TGRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 332+00 TO END

SCALE: 1"= 50'

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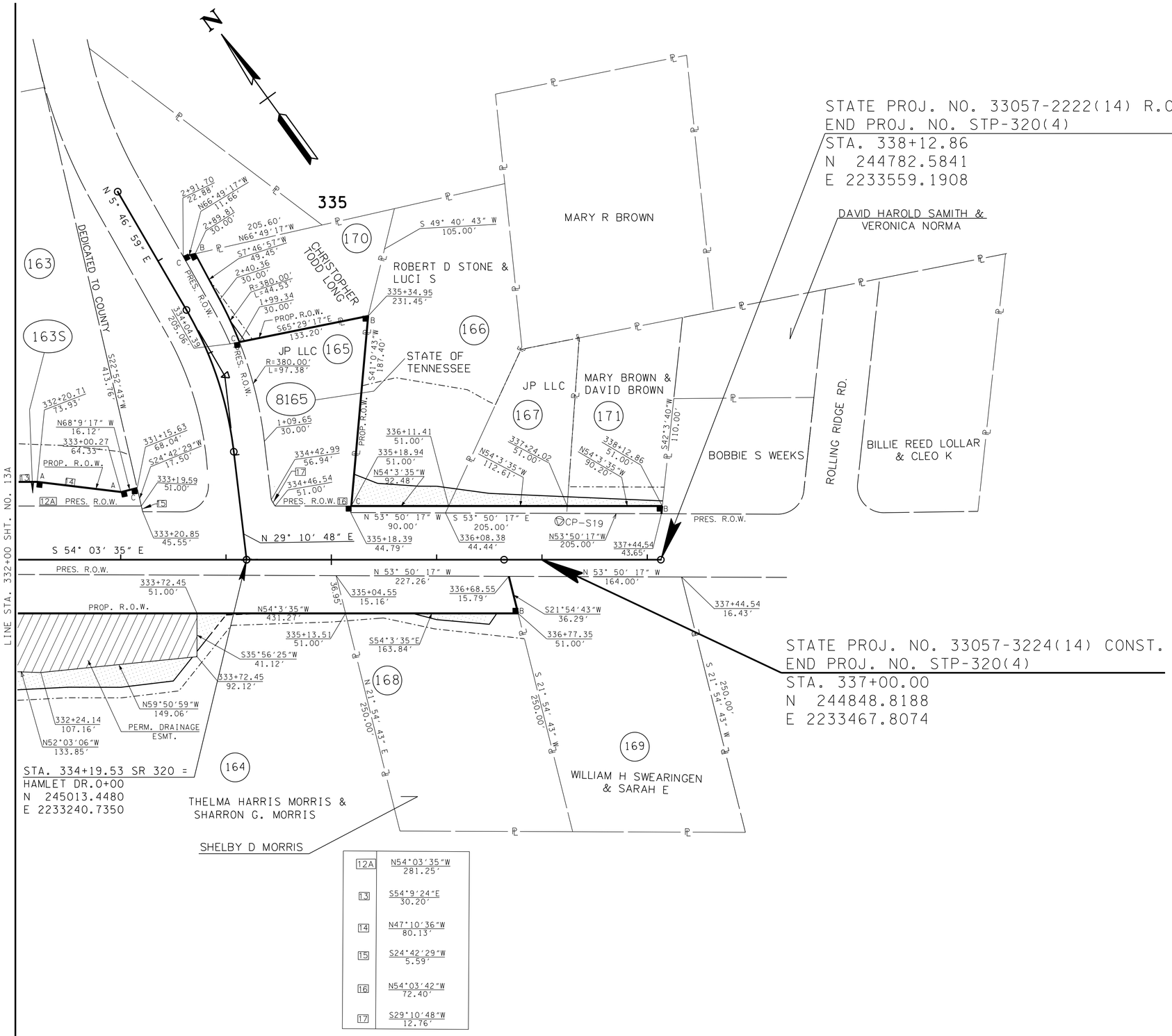
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.



STATE PROJ. NO. 33057-2222(14) R.O.W.
END PROJ. NO. STP-320(4)
STA. 338+12.86
N 244782.5841
E 2233559.1908

DAVID HAROLD SAMITH & VERONICA NORMA

STATE PROJ. NO. 33057-3224(14) CONST.
END PROJ. NO. STP-320(4)
STA. 337+00.00
N 244848.8188
E 2233467.8074

STA. 334+19.53 SR 320 =
HAMLET DR.0+00
N 245013.4480
E 2233240.7350

12A	N54°03'35"W 281.25'
13	S54°9'24"E 30.20'
14	N47°10'36"W 80.13'
15	S24°42'29"W 5.59'
16	N54°03'42"W 72.40'
17	S29°10'48"W 12.76'

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	13A
CONST.	2014	STP-320(4)	13A

REVISION: 9-20-2006
--ADDED TEMP. CONST. ESMT. FOR REMOVAL OF STRUCTURE TRACT 166.
--ADDED SLOPE & CONST. ESMT TO TRACT 167

REVISION: 4-10-2007
--ADDED AND CORRECTED PROPERTY LINES.
--CHANGED END OF PROJECT R.O.W. STATION.

REVISION: 9-07-2007
--ADD CONST. ESMT. TO ENTIRE TRACT 167.

REVISION: 1-22-2008
--TRACT 165 ADDED CONST. ESMT. FOR REMOVAL OF HOUSE .

REVISION: 5-19-2010
--ADDED STATIONS TO PROP. ROW.

REVISION: 07-06-2011
--TRACT 164, 166, 168 UPDATED BEARINGS
--TRACT 163, ADDED ROW, CONST. ESMT., DELETED DRAINAGE ESMT.
--TRACT 165, ADDED ROW, DELETED DRAINAGE ESMT

REVISION: 05-23-2013
--TRACT 163S: ADDED PRESENT ROW.
--TRACT 165: ADDED TRACT 165S. CHANGED PROPOSED ROW INTO PRESENT ROW.
--TRACT 165S: ADDED PROPOSED ROW. REMOVED CONSTRUCTION EASEMENT. REMOVED PERMANENT DRAINAGE EASEMENT.

REVISION: 05-20-2014
--TRACT 8165/165S: CHANGED TRACT NO. AND OWNER NAME. REMOVED OLD PRES. ROW LINE.
--TRACT 163S: REMOVED OLD PRES. ROW LINE.

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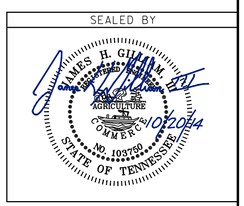

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

R.O.W. DETAILS

STA. 332+00 TO END

SCALE: 1"= 50'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	13B
CONST.	2014	STP-320(4)	13B

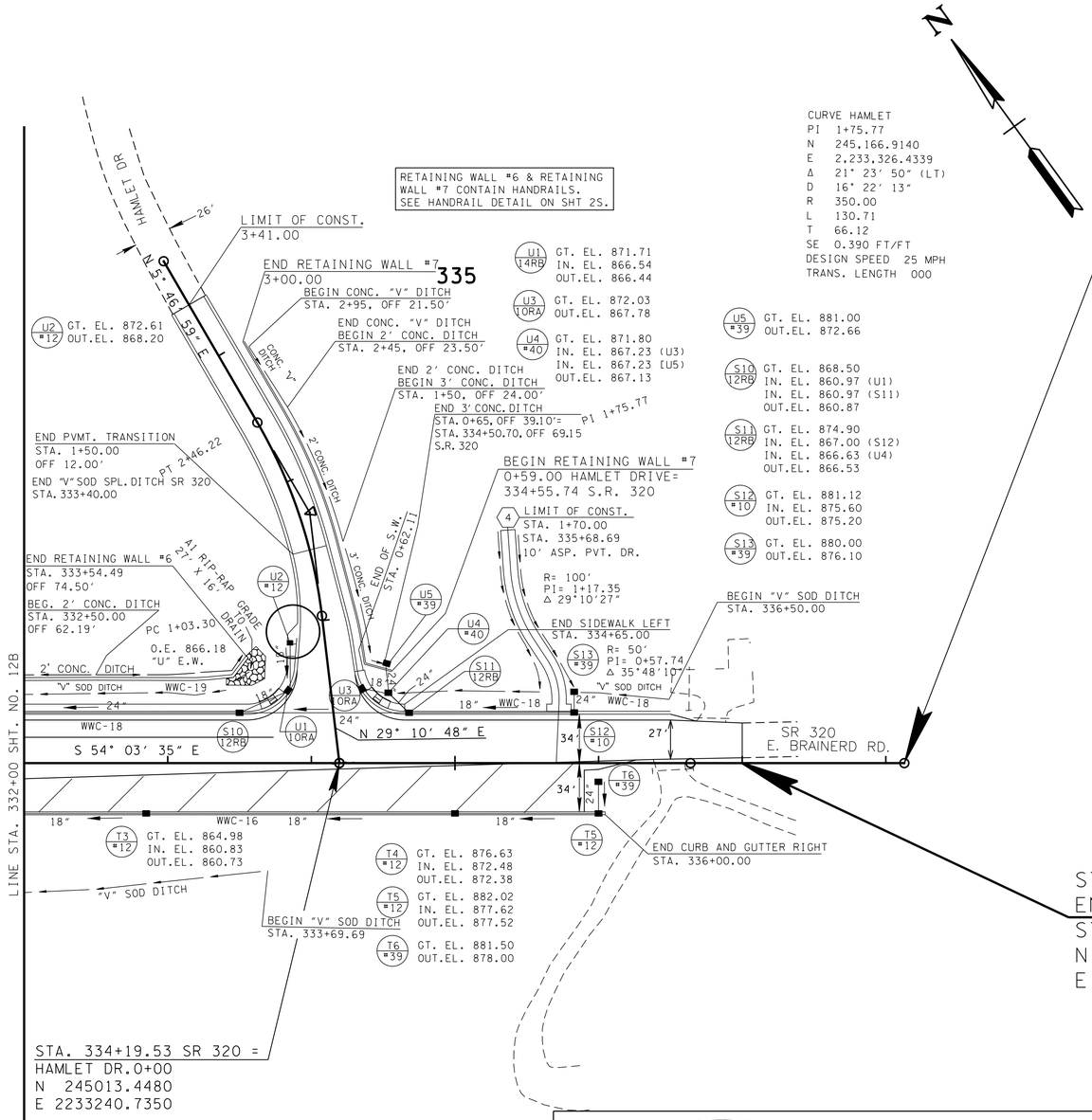
TRANSITIONAL PAVEMENT AND FUTURE PROJECT
SEE PROFILE AND CROSS SECTIONS FOR TRANSITIONAL PAVEMENT TO BE CONSTRUCTED FOR THIS PROJECT FROM STA 335+00 TO STA 337+00. ANY FUTURE PROJECT TO EXTEND SR 320 TO THE EAST SHOULD MATCH THE FUTURE PROJECT PROFILE SHOWN ON SHEET 13C.

REVISION 4-10-07 :
--EXTEDNDED RETAINING WALL TO STA. 335+59.20.
--CHANGED END OF PROJECT R.O.W. STATION
--ADDED DRAINAGE STRUCTURES TO HAMLET RD.

REVISION: 4-22-2008
--TRACT 169 ADDED END OF PAVEMENT TIE TO PRIVATE DRIVE.

REVISION: 05-19-2010
--ADDED SHEET NUMBER TO MATCH LINE
--REMOVE WWC-16, WWC-18 AND WWC-19 FROM PROPOSED ROADWAY.

REVISION: 07-06-2011
--EXTENDED RETAINING WALL TO STA. 0+59.00



CURVE HAMLET
PI 1+75.77
N 245.166.9140
E 2,233,326.4339
Δ 21° 23' 50" (LT)
D 16° 22' 13"
R 350.00
L 130.71
T 66.12
SE 0.390 FT/FT
DESIGN SPEED 25 MPH
TRANS. LENGTH 000

STATE PROJ. NO. 33057-2222(14) R.O.W.
END PROJ. NO. STP-320(4)
STA. 338+12.86
N 244782.5841
E 2233559.1908

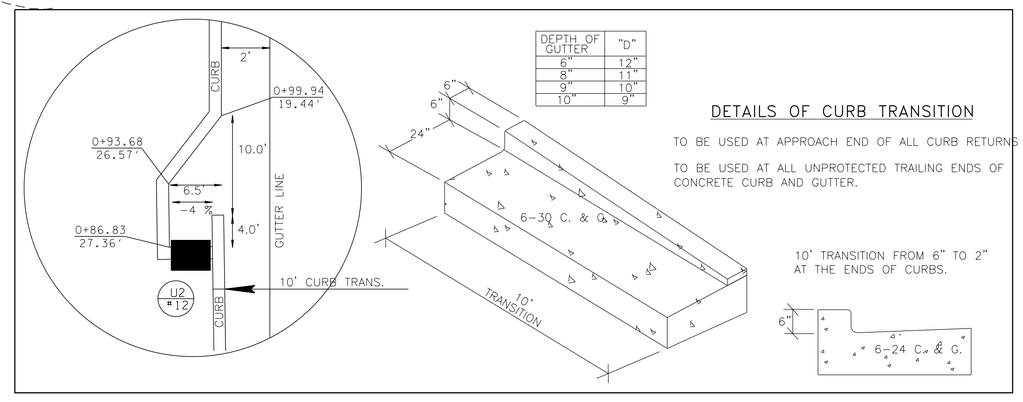
STATE PROJ. NO. 33057-3224(14) CONST.
END PROJ. NO. STP-320(4)
STA. 337+00.00
N 244848.8188
E 2233467.8074

STA. 334+19.53 SR 320 =
HAMLET DR.0+00
N 245013.4480
E 2233240.7350

NOTES:
-SEE SHT. 2S2 FOR GEOTECHNICAL REMEDIATION AND ROCK FILL ON EXISTING STREAMS (STR & WWC) AND WETLAND (WTL) IMPACT AREAS.

NOTE:
-SEE SHT. 2V FOR DITCH DETAILS.

NOTE:
-ALL SIDEROADS HAVE RADIUS OF 35'UNLESS OTHERWISE NOTED.



DEPTH OF GUTTER	"D"
6"	12"
8"	11"
9"	10"
10"	9"

DETAILS OF CURB TRANSITION

TO BE USED AT APPROACH END OF ALL CURB RETURNS

TO BE USED AT ALL UNPROTECTED TRAILING ENDS OF CONCRETE CURB AND GUTTER.

10' TRANSITION FROM 6" TO 2" AT THE ENDS OF CURBS.

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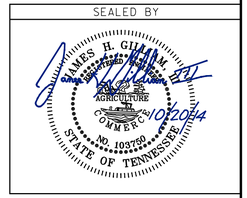

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 332+00 TO END
SCALE: 1"= 50'

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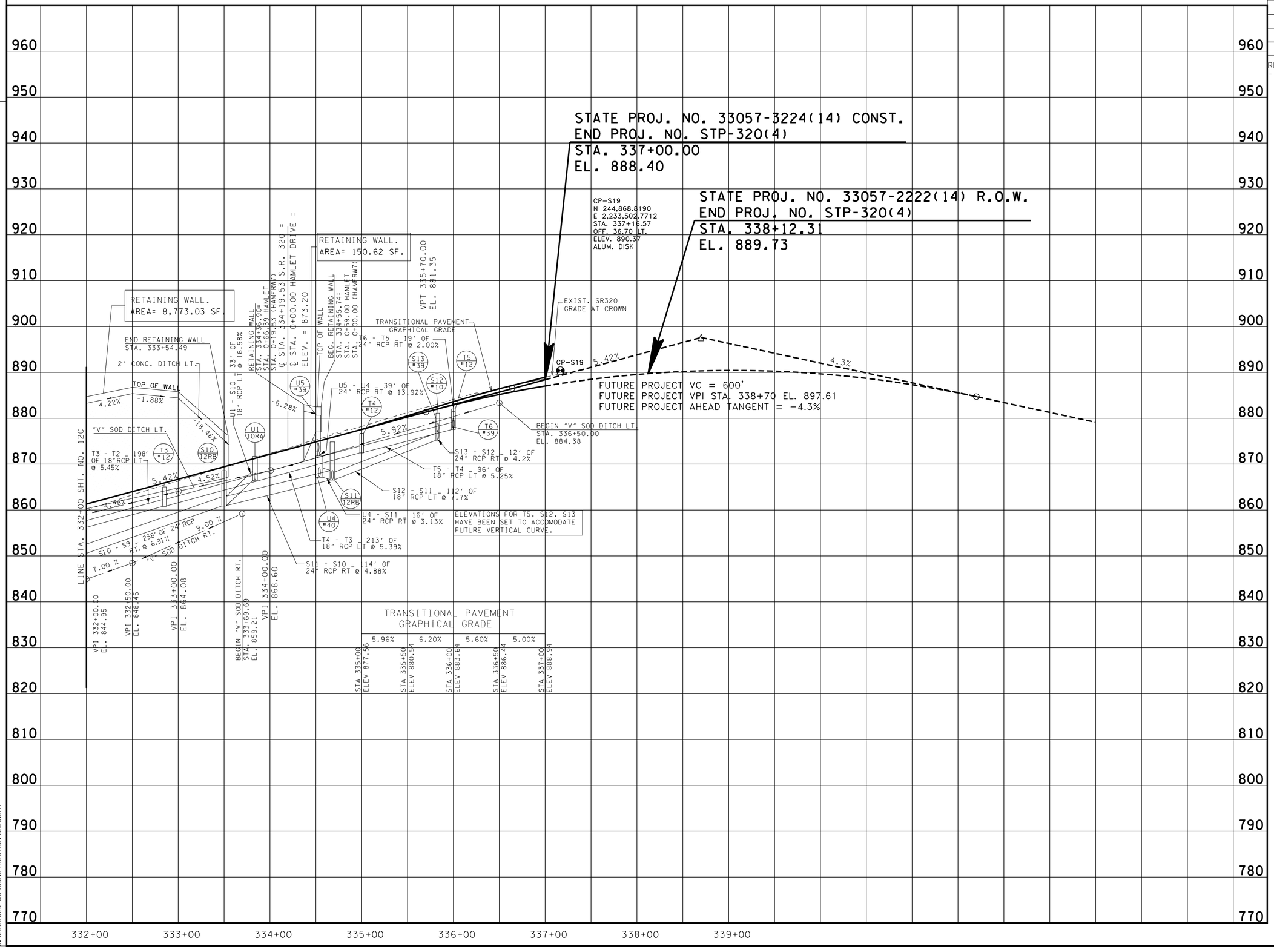
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	13C
CONST.	2014	STP-320(4)	13C

REVISION 05-19-2010:
--CORRECTED STATION FOR END PROJECT R.O.W.



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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE

STA. 332+00 TO END
SCALE: 1"= 50' HORIZ.
1"=10' VERT.

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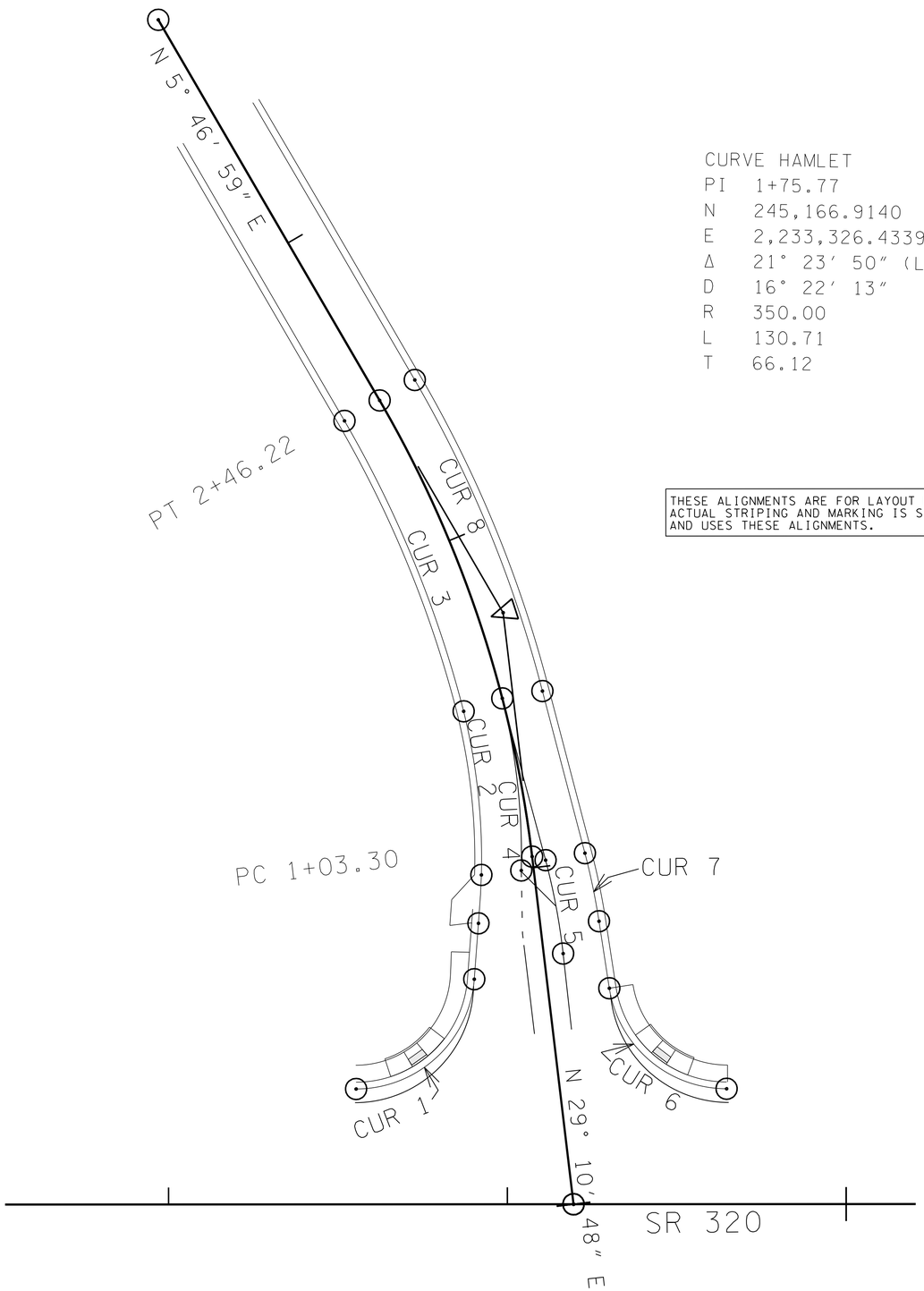
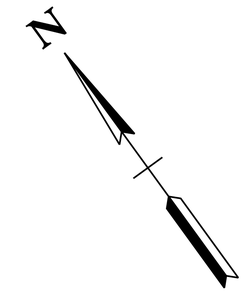
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	13D
CONST.	2014	STP-320(4)	13D



CURVE HAMLET
PI 1+75.77
N 245,166.9140
E 2,233,326.4339
Δ 21° 23′ 50″ (LT)
D 16° 22′ 13″
R 350.00
L 130.71
T 66.12



THESE ALIGNMENTS ARE FOR LAYOUT PURPOSES ONLY. ACTUAL STRIPING AND MARKING IS SHOWN ON SHT. 20J AND USES THESE ALIGNMENTS.

COGO ALIGNMENTS ARE AVAILABLE FOR HAMLET ROAD EDGE OF PAVEMENT/FACE OF GUTTER AND STRIPING LAYOUTS.
CHAIN NAME- DESCRIPTION
HAMLT- LEFT EOP/FACE OF GUTTER
HAMRT- RIGHT EOP/FACE OF GUTTER
HAMLTST- LEFT LANE STRIPE
HAMRTST- RIGHT LANE DIVIDER STRIPE
HAMBT- BAY TAPER

	Radius	Length	PC Northing	PC Easting	PI Northing	PI Easting	PT Northing	PT Easting
cur1	35.00	52.35	245078.67	2233208.77	245059.62	2233235.06	245084.40	2233256.03
			PC Station	PC Offset	PI Station	PI Offset	PT Station	PT Offset
			0+41.36	-59.71	0+37.54	-27.47	0+69.40	-21.24
cur2	Radius	Length	PC Northing	PC Easting	PI Northing	PI Easting	PT Northing	PT Easting
	180.00	57.25	245101.42	2233270.44	245123.46	2233289.09	245150.22	2233299.91
			PC Station	PC Offset	PI Station	PI Offset	PT Station	PT Offset
			0+91.29	-16.96	1+20.16	-11.03	1+50.00	-12.01
cur3	Radius	Length	PC Northing	PC Easting	PI Northing	PI Easting	PT Northing	PT Easting
	338.00	92.92	245150.22	2233299.92	245193.71	2233317.09	245240.23	2233321.80
			PC Station	PC Offset	PI Station	PI Offset	PT Station	PT Offset
			1+50.00	-12.00	1+98.11	-8.78	2+46.22	-12.00
cur4	Radius	Length	PC Northing	PC Easting	PI Northing	PI Easting	PT Northing	PT Easting
	191.75	51.24	245102.22	2233286.10	245122.71	2233301.74	245146.61	2233311.40
			PC Station	PC Offset	PI Station	PI Offset	PT Station	PT Offset
			0+99.62	-3.67	1+25.11	0.67	1+50.86	0.00
cur5	Radius	Length	PC Northing	PC Easting	PI Northing	PI Easting	PT Northing	PT Easting
	185.50	28.07	245075.12	2233281.70	245087.34	2233288.66	245100.46	2233293.70
			PC Station	PC Offset	PI Station	PI Offset	PT Station	PT Offset
			0+73.82	5.70	0+87.88	5.82	1+01.79	3.81
cur6	Radius	Length	PC Northing	PC Easting	PI Northing	PI Easting	PT Northing	PT Easting
	35.00	49.64	245014.49	2233297.32	245032.11	2233273.01	245058.82	2233286.73
			PC Station	PC Offset	PI Station	PI Offset	PT Station	PT Offset
			0+28.50	48.89	0+32.03	19.07	0+62.04	18.03
cur7	Radius	Length	PC Northing	PC Easting	PI Northing	PI Easting	PT Northing	PT Easting
	200.00	20.75	245076.62	2233295.87	245085.85	2233300.62	245095.53	2233304.39
			PC Station	PC Offset	PI Station	PI Offset	PT Station	PT Offset
			0+82.04	17.34	0+92.41	16.98	1+02.70	15.55
cur8	Radius	Length	PC Northing	PC Easting	PI Northing	PI Easting	PT Northing	PT Easting
	362.00	99.53	245141.40	2233322.25	245187.98	2233340.63	245237.81	2233345.68
			PC Station	PC Offset	PI Station	PI Offset	PT Station	PT Offset
			1+50.00	12.00	1+98.11	15.45	2+46.22	12.00

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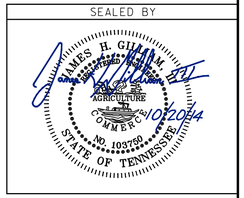

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

HAMLET ROAD GEOMETRIC LAYOUT

SCALE: 1"=20'

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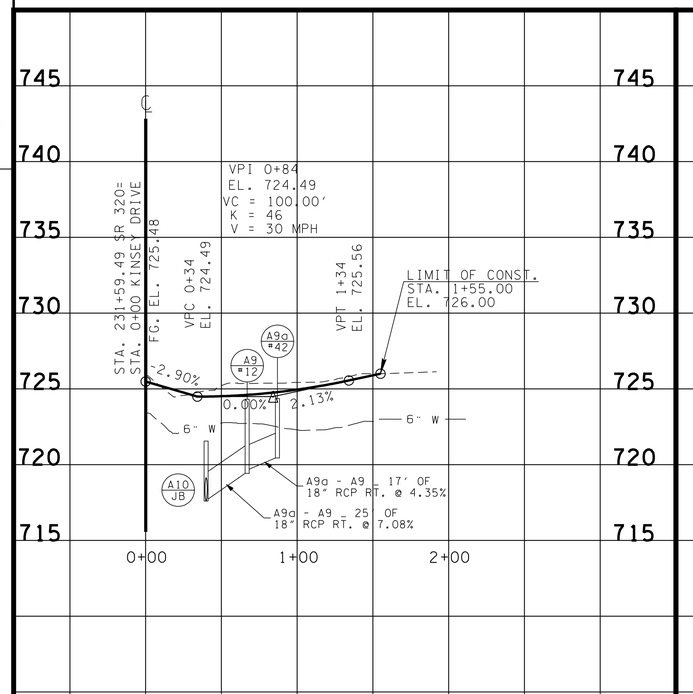
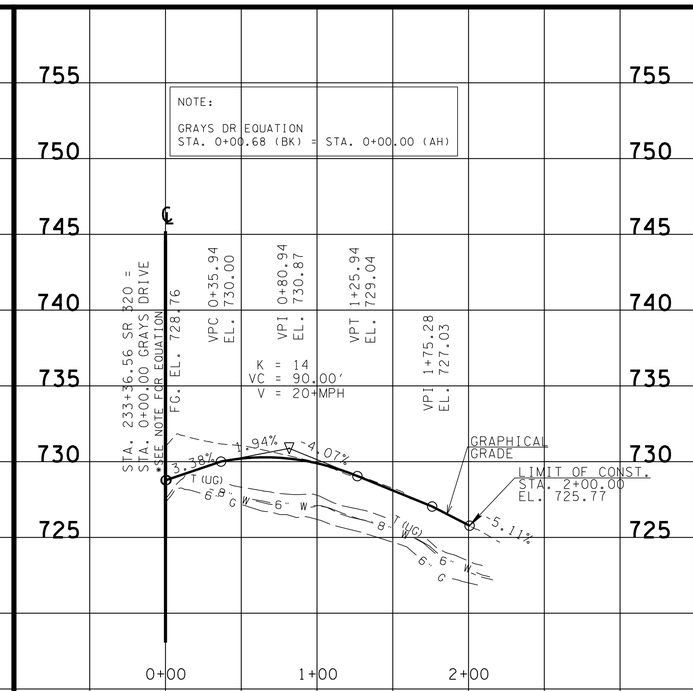
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	14
CONST.	2014	STP-320(4)	14

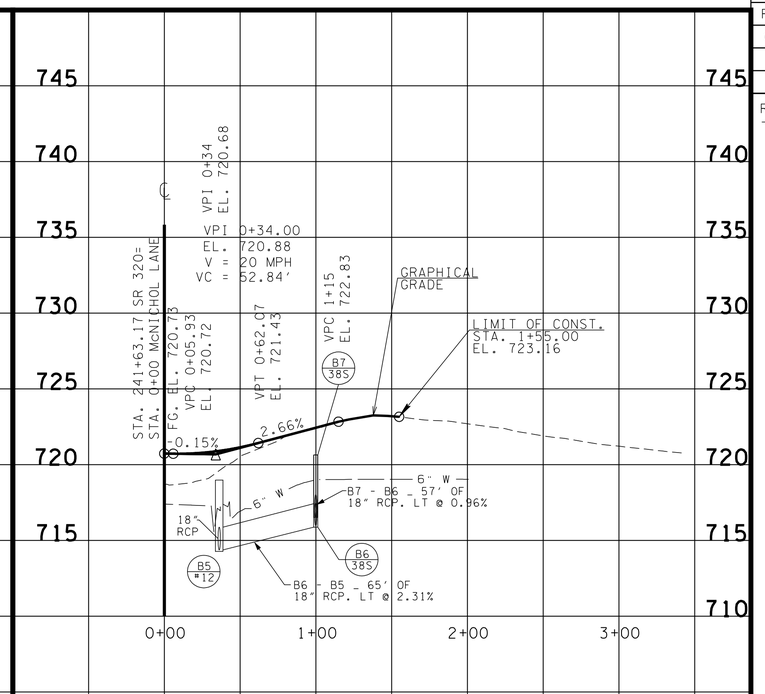
REVISION 05-19-2010 :
--ADDED CALLOUTS AND STATIONS.



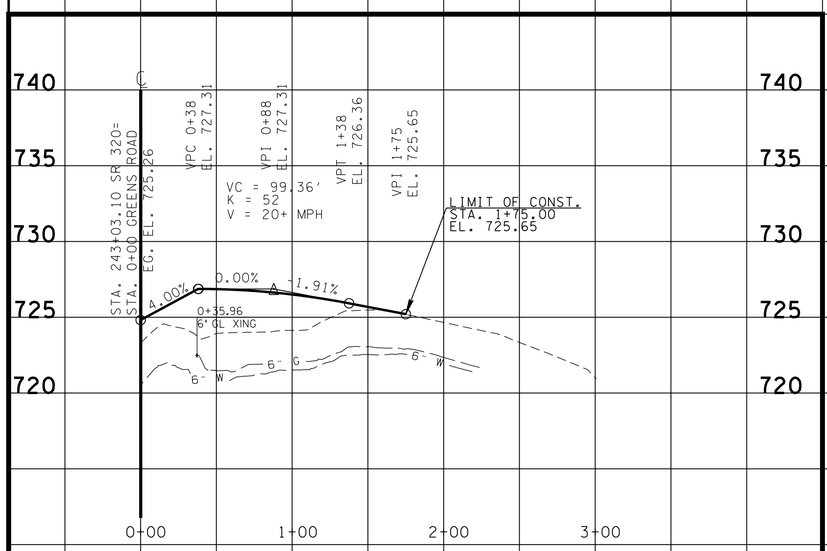
KINSEY DRIVE
STA. 231+59.49 SR 320 (LT)



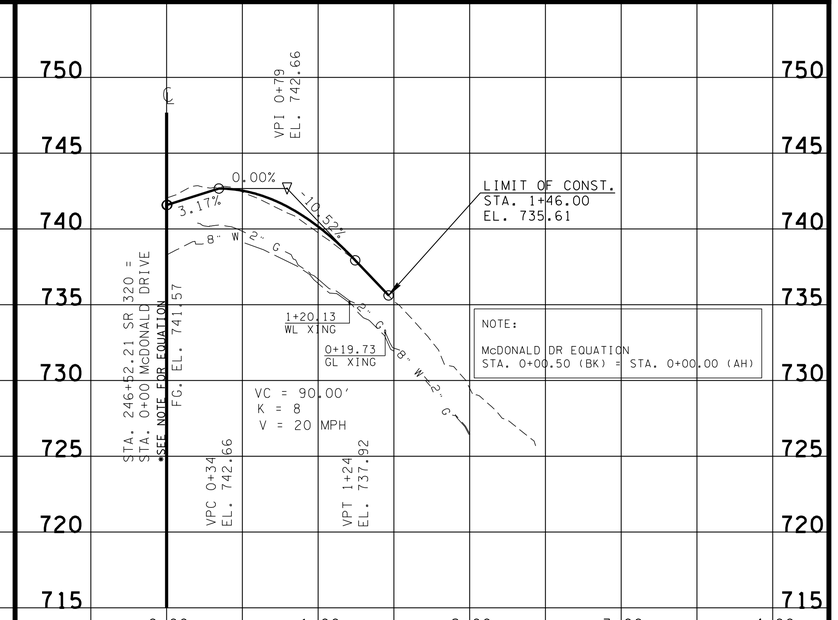
GRAYS DRIVE
STA. 233+36.56 SR 320 (RT)



McNICHOL LANE
STA. 241+63.17 SR 320 (LT)



GREENS ROAD
STA. 243+03.10 SR 320 (LT)



McDONALD DRIVE
STA. 246+52.21 SR 320 (LT)

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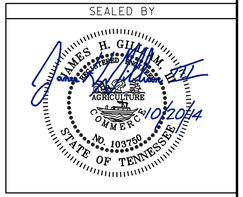

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE OF SIDE ROADS AND STREETS

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

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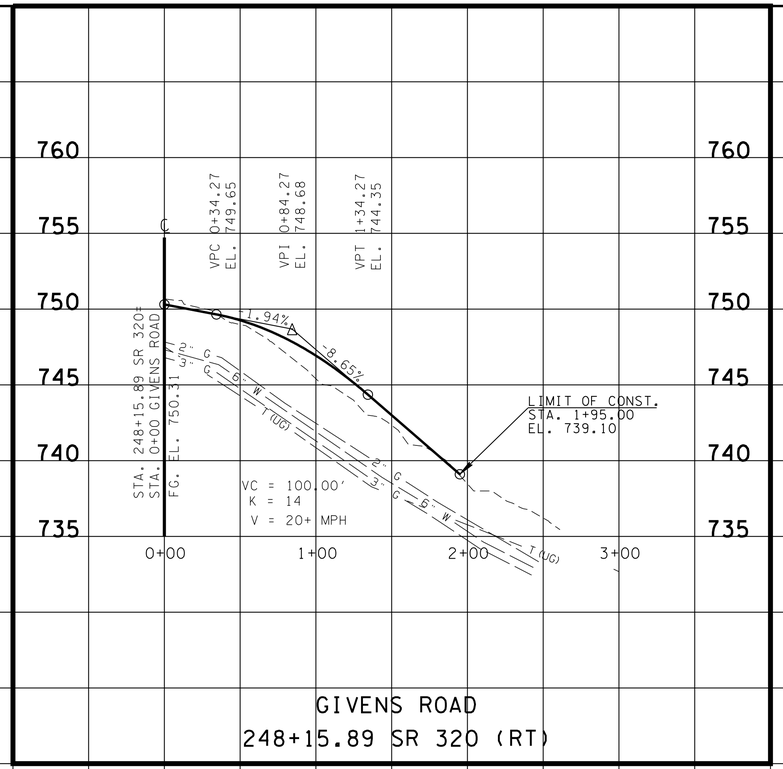
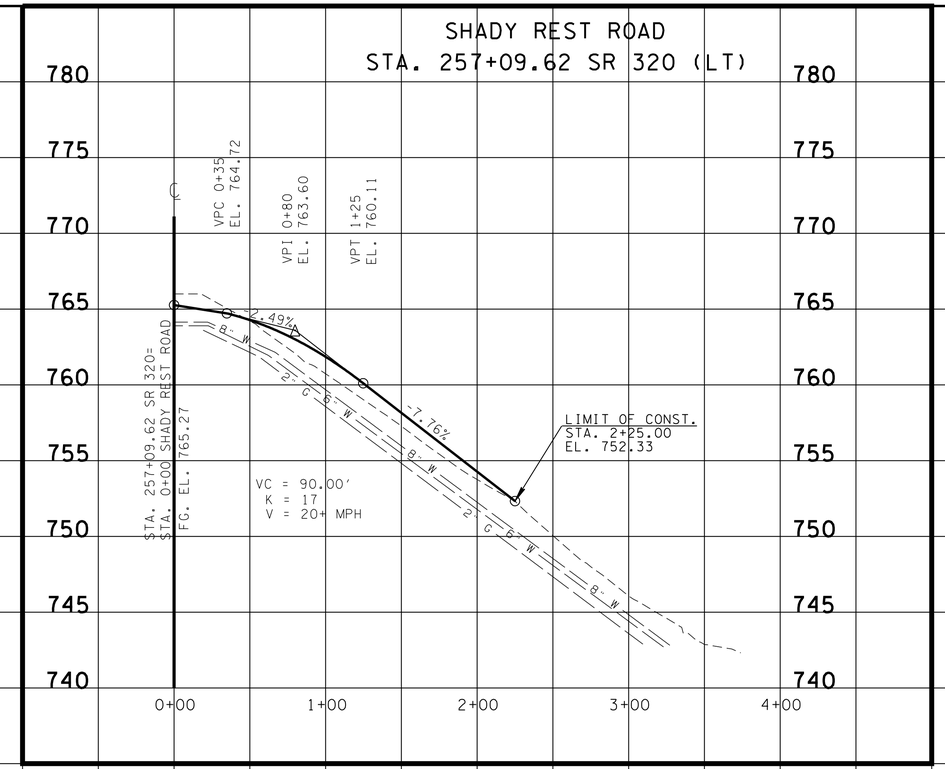
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

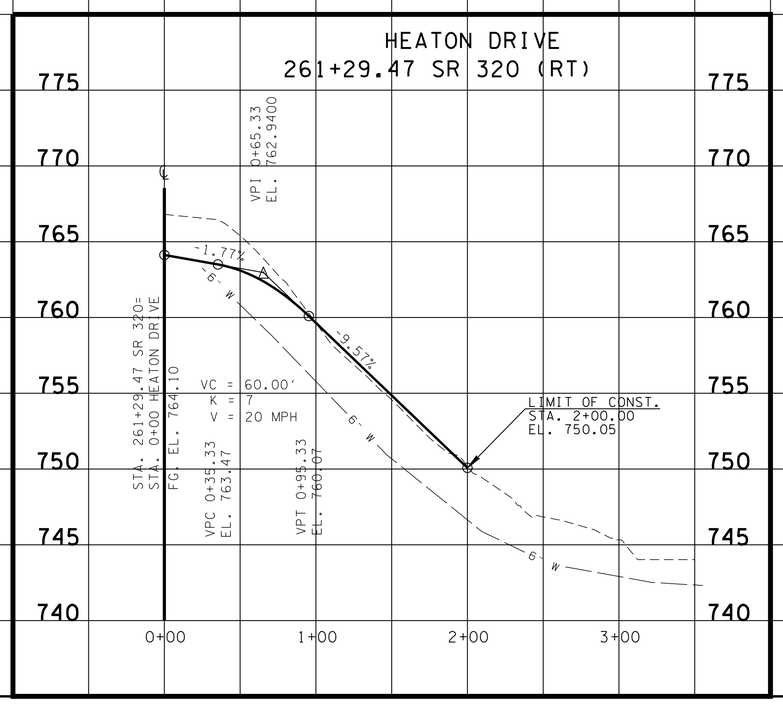
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	14A
CONST.	2014	STP-320(4)	14A

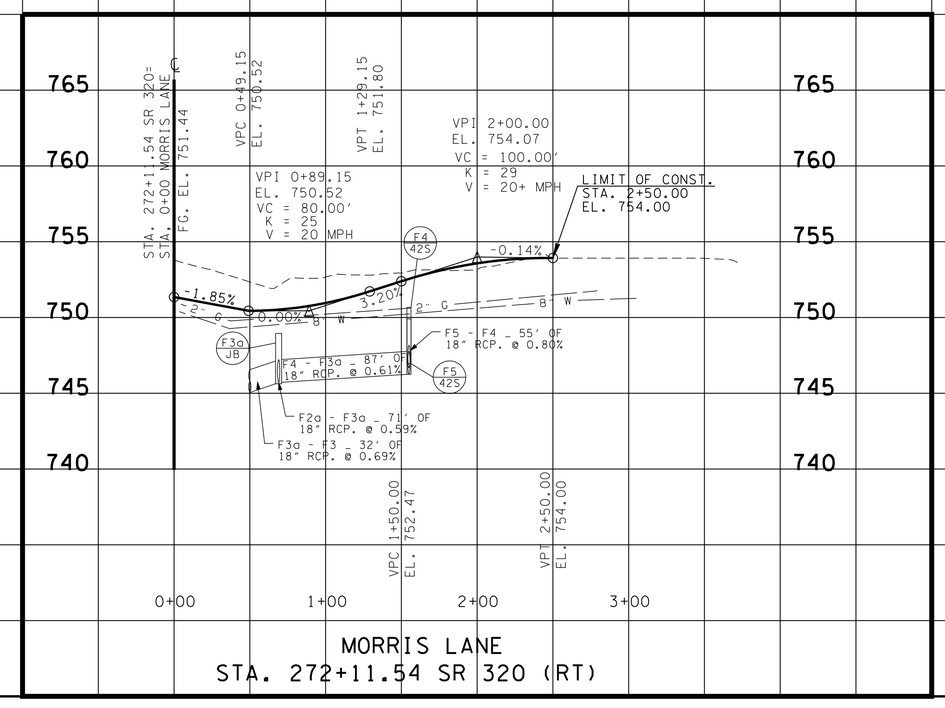
REVISION 05-19-2010 :
--ADDED CALLOUTS & STATIONS.



GIVENS ROAD
248+15.89 SR 320 (RT)

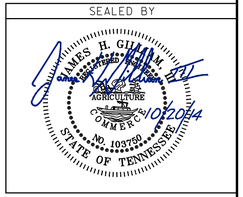






MORRIS LANE
STA. 272+11.54 SR 320 (RT)

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE OF SIDE ROADS AND STREETS

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

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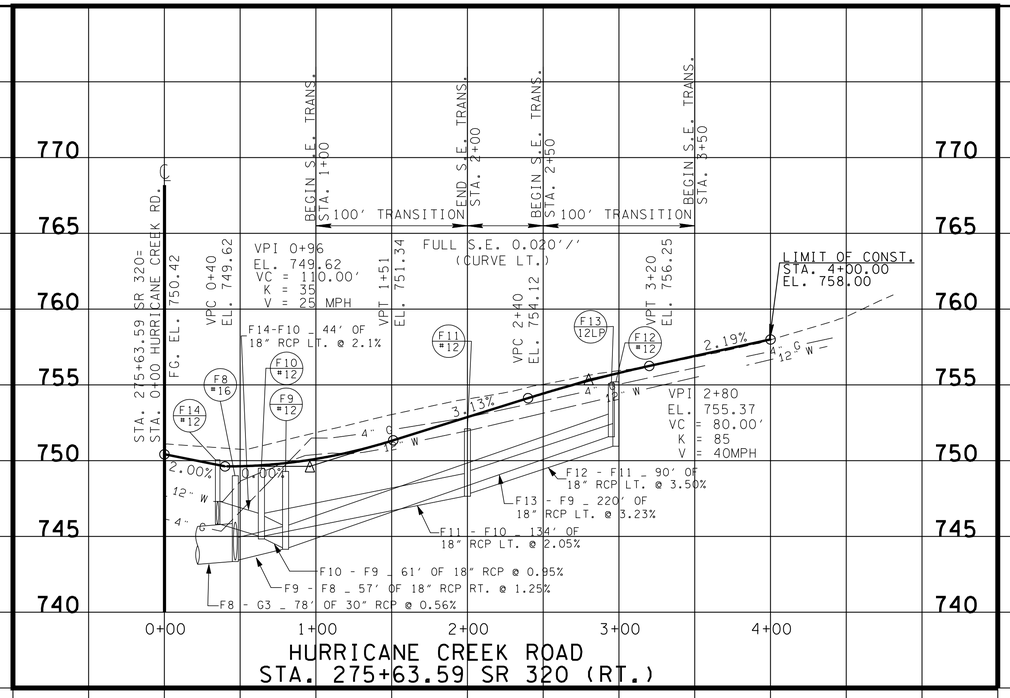
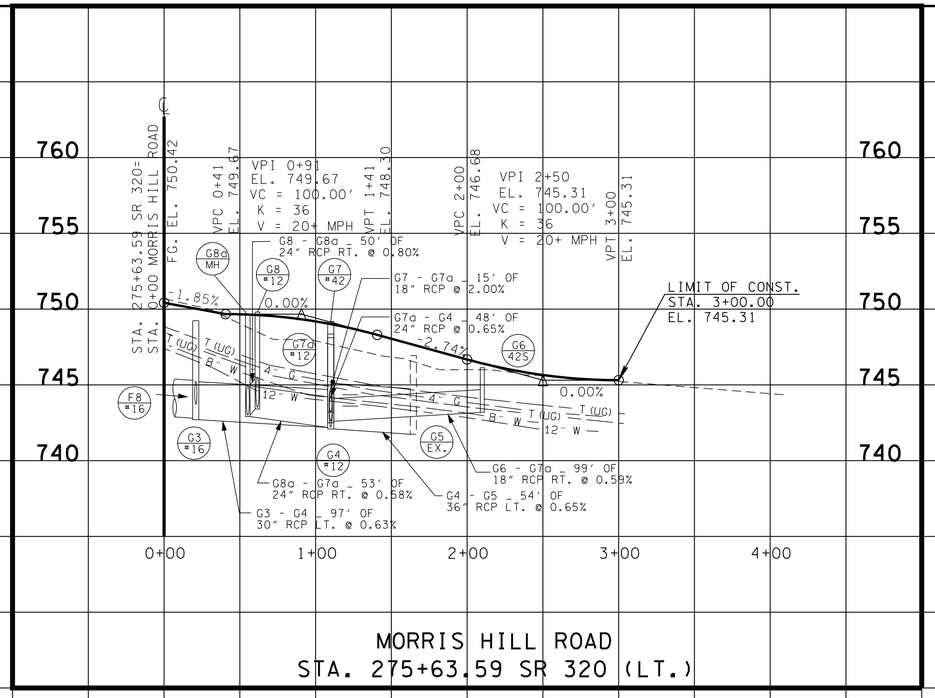
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

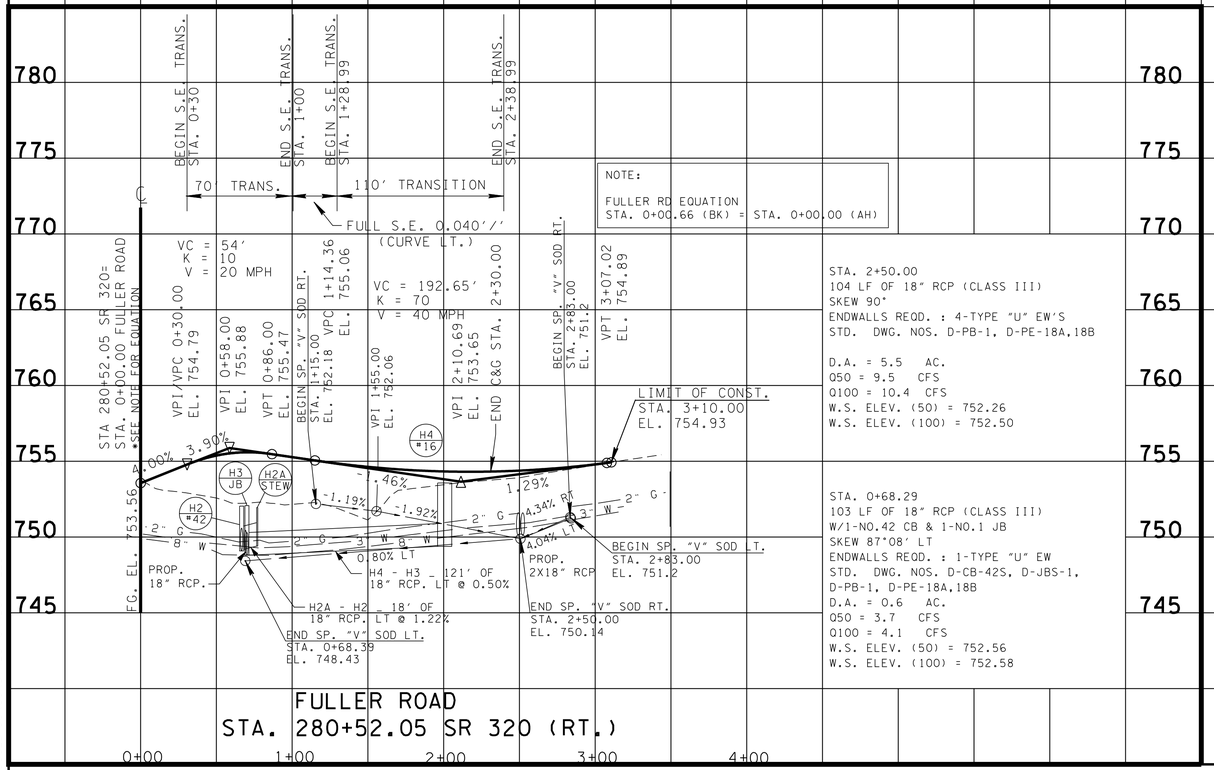
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	14B
CONST.	2014	STP-320(4)	14B

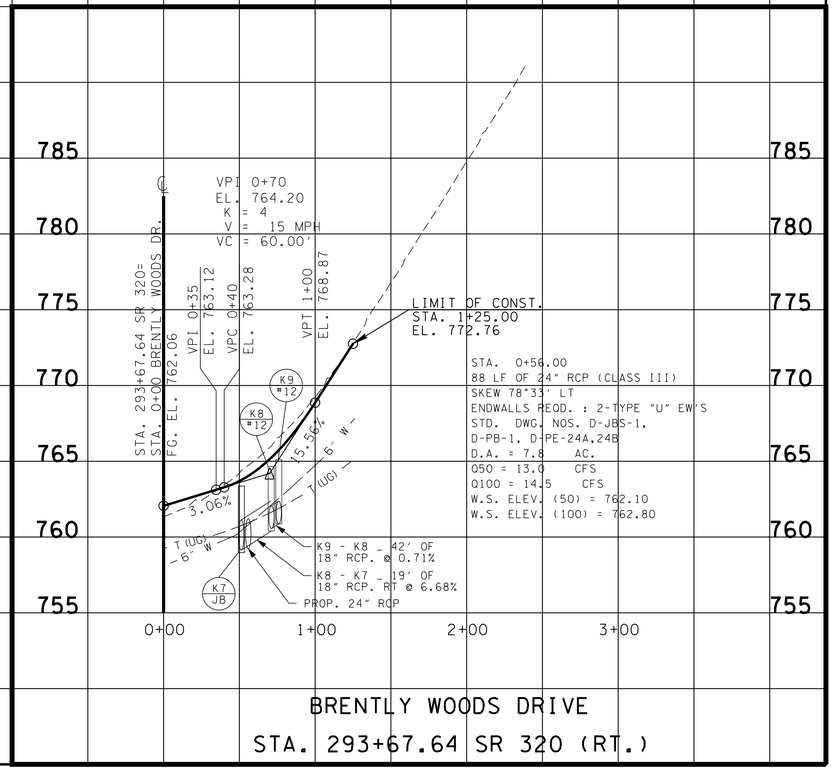
REVISION 05-19-2010 :
--ADDED CALLOUTS AND STATIONS.

REVISION 01-20-2014 :
--ADDED DRAINAGE STRUCTURE CODE NO. H2A TO FULLER ROAD PROFILE.









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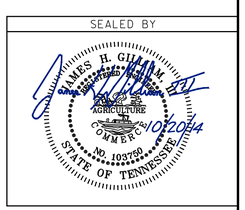

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE OF SIDE ROADS AND STREETS

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

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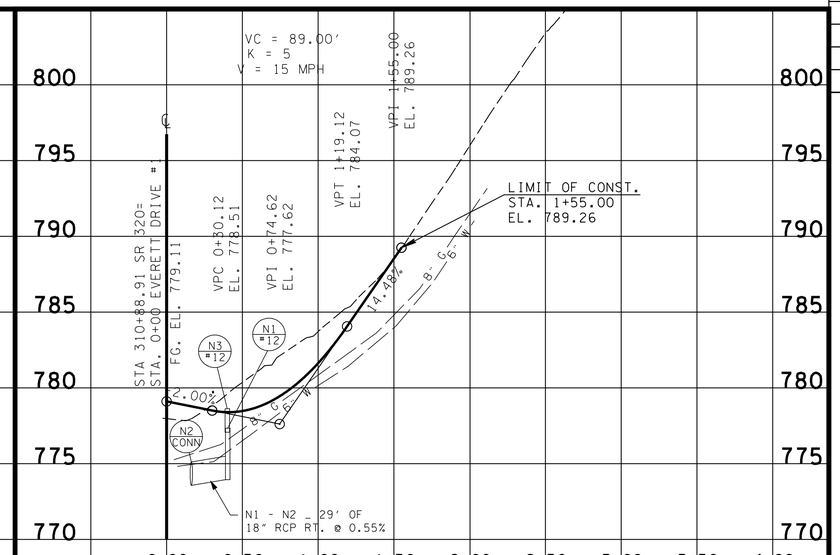
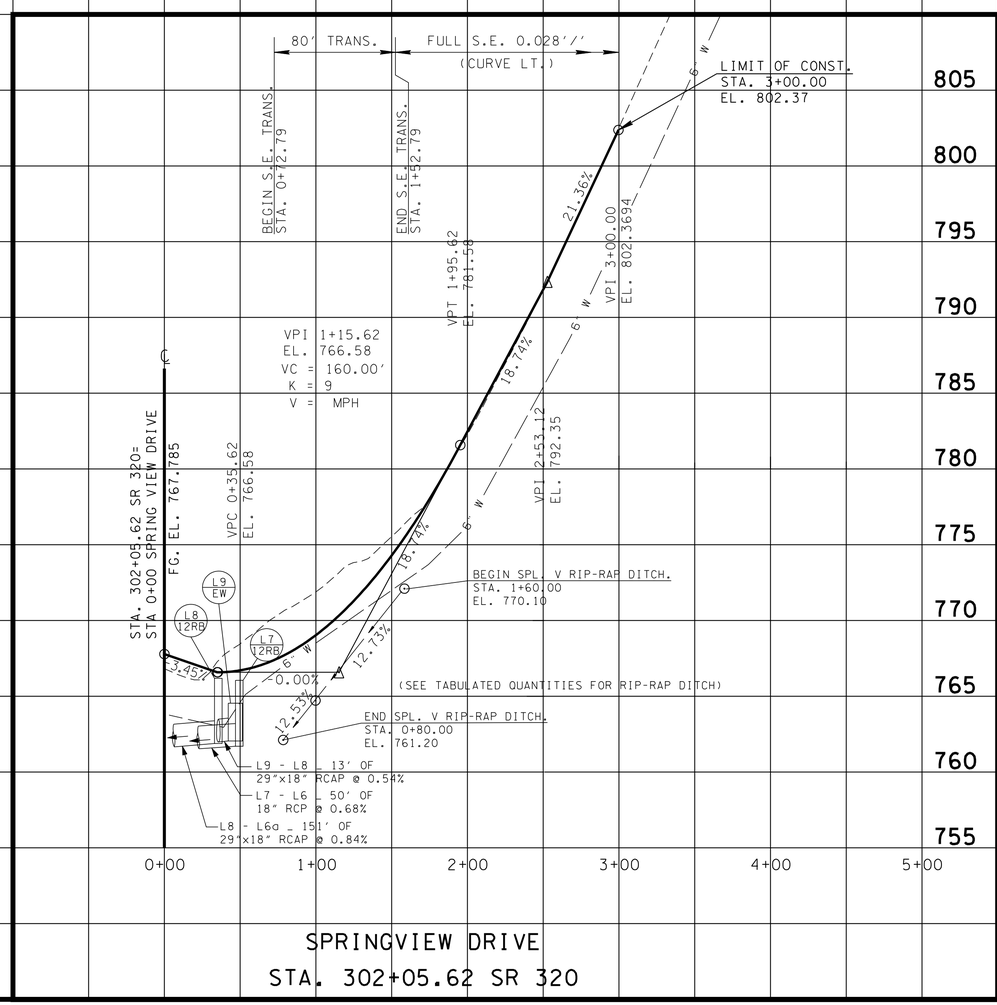
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

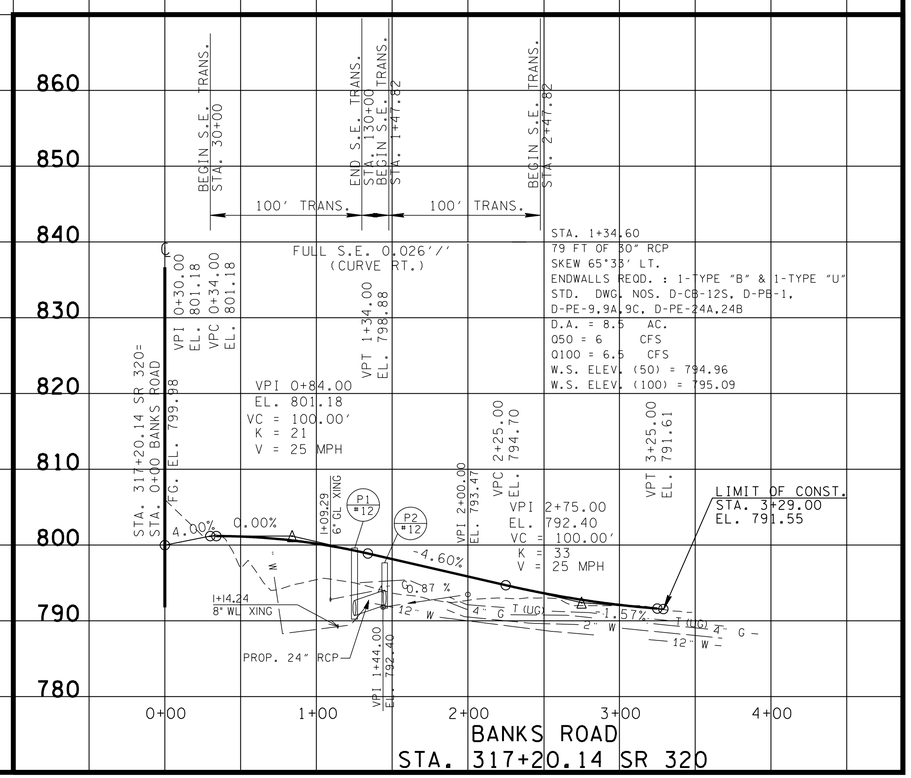
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	14C
CONST.	2014	STP-320(4)	14C

REVISION 4-10-07 :
--ADDED DRAINAGE STRUCTURES AND CHANGED CULVERT SIZE ON BANKS ROAD.

REVISION 05-19-2010 :
--ADDED CALLOUT & STATIONS.







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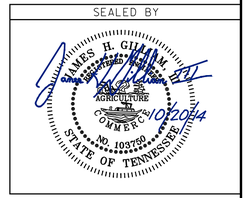

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE OF SIDE ROADS AND STREETS

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

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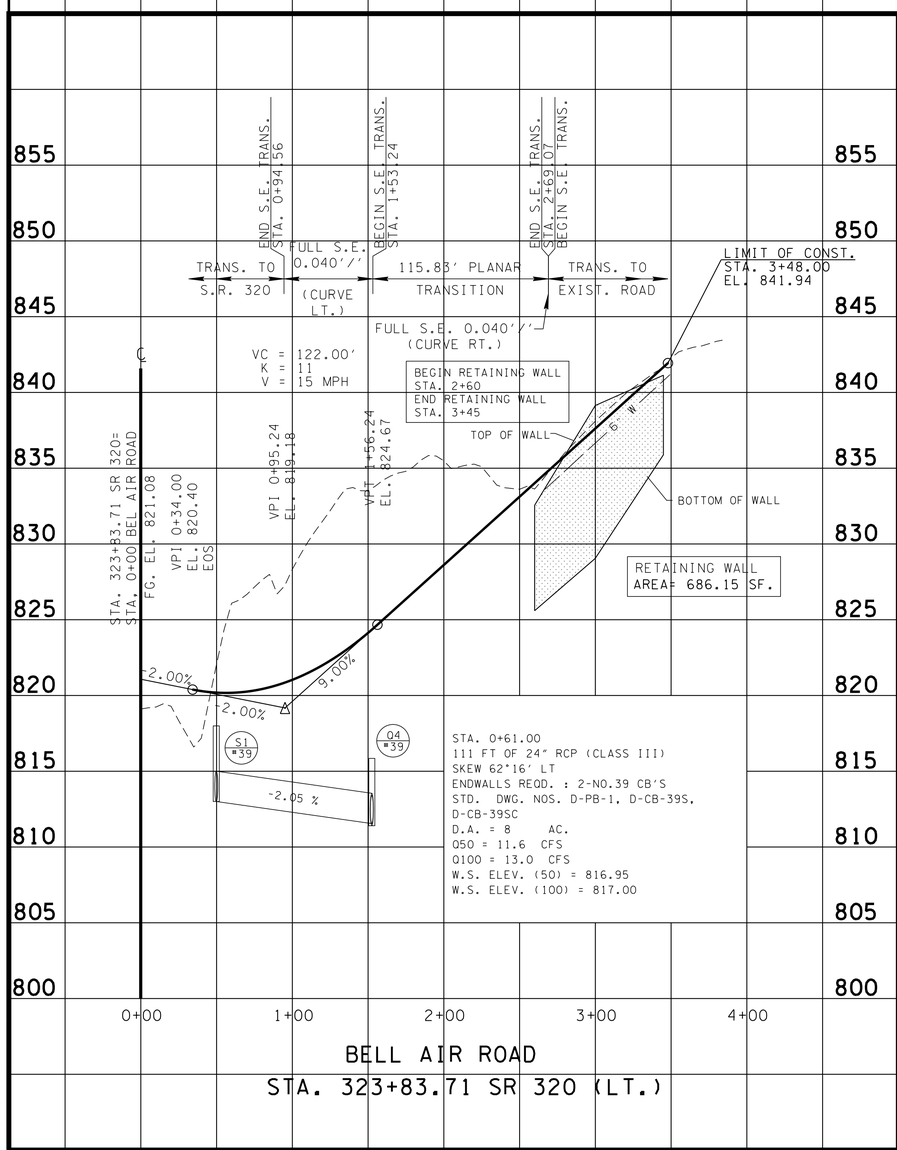
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

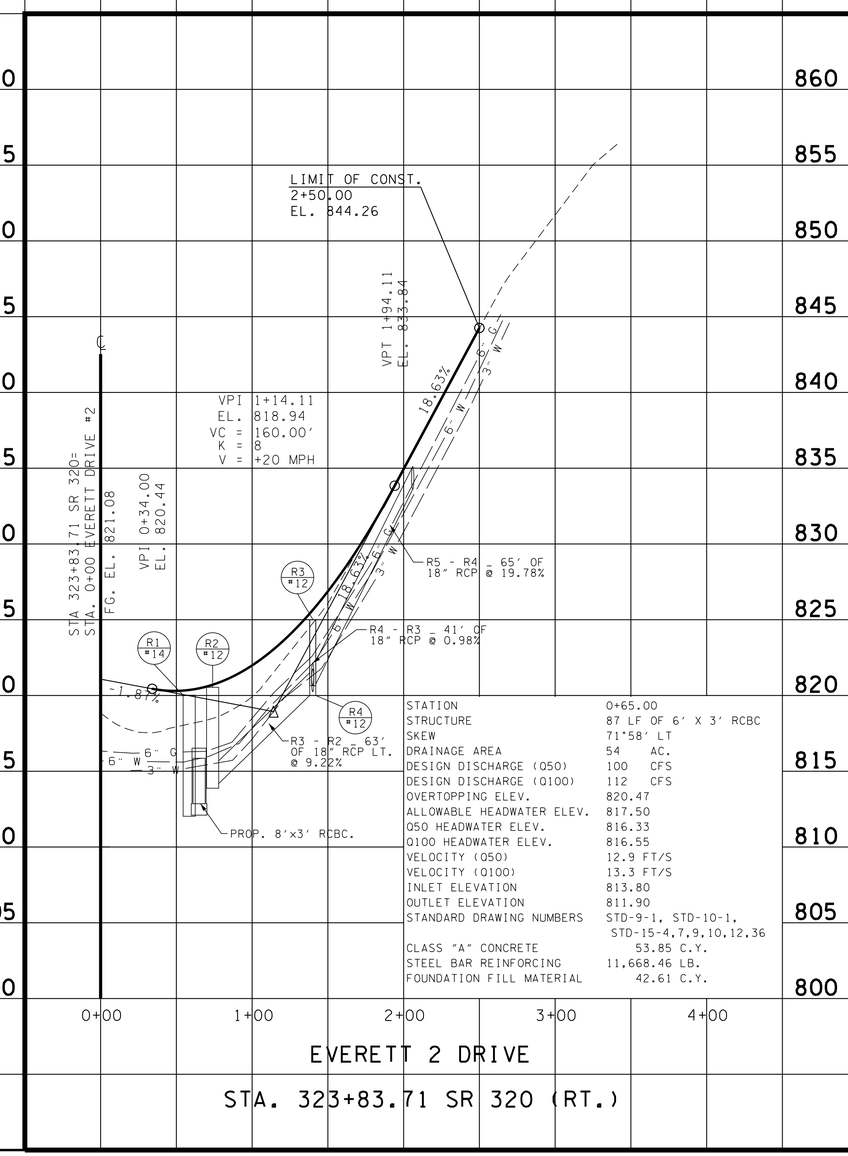
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	14D
CONST.	2014	STP-320(4)	14D

REV. 05-19-2010 :
--ADDED CALLOUTS AND STATIONS.



BELL AIR ROAD

STA. 323+83.71 SR 320 (LT.)



STATION	0+65.00
STRUCTURE	87 LF OF 6' X 3' RCBC
SKEW	71°58' LT
DRAINAGE AREA	54 AC.
DESIGN DISCHARGE (Q50)	100 CFS
DESIGN DISCHARGE (Q100)	112 CFS
OVERTOPPING ELEV.	820.47
ALLOWABLE HEADWATER ELEV.	817.50
Q50 HEADWATER ELEV.	816.33
Q100 HEADWATER ELEV.	816.55
VELOCITY (Q50)	12.9 FT/S
VELOCITY (Q100)	13.3 FT/S
INLET ELEVATION	813.80
OUTLET ELEVATION	811.90
STANDARD DRAWING NUMBERS	STD-9-1, STD-10-1, STD-15-4,7,9,10,12,36
CLASS "A" CONCRETE	53.85 C.Y.
STEEL BAR REINFORCING	11,668.46 LB.
FOUNDATION FILL MATERIAL	42.61 C.Y.

EVERETT 2 DRIVE

STA. 323+83.71 SR 320 (RT.)

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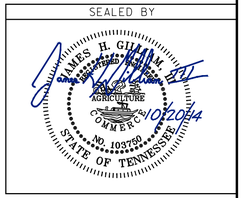

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE OF SIDE ROADS AND STREETS

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

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

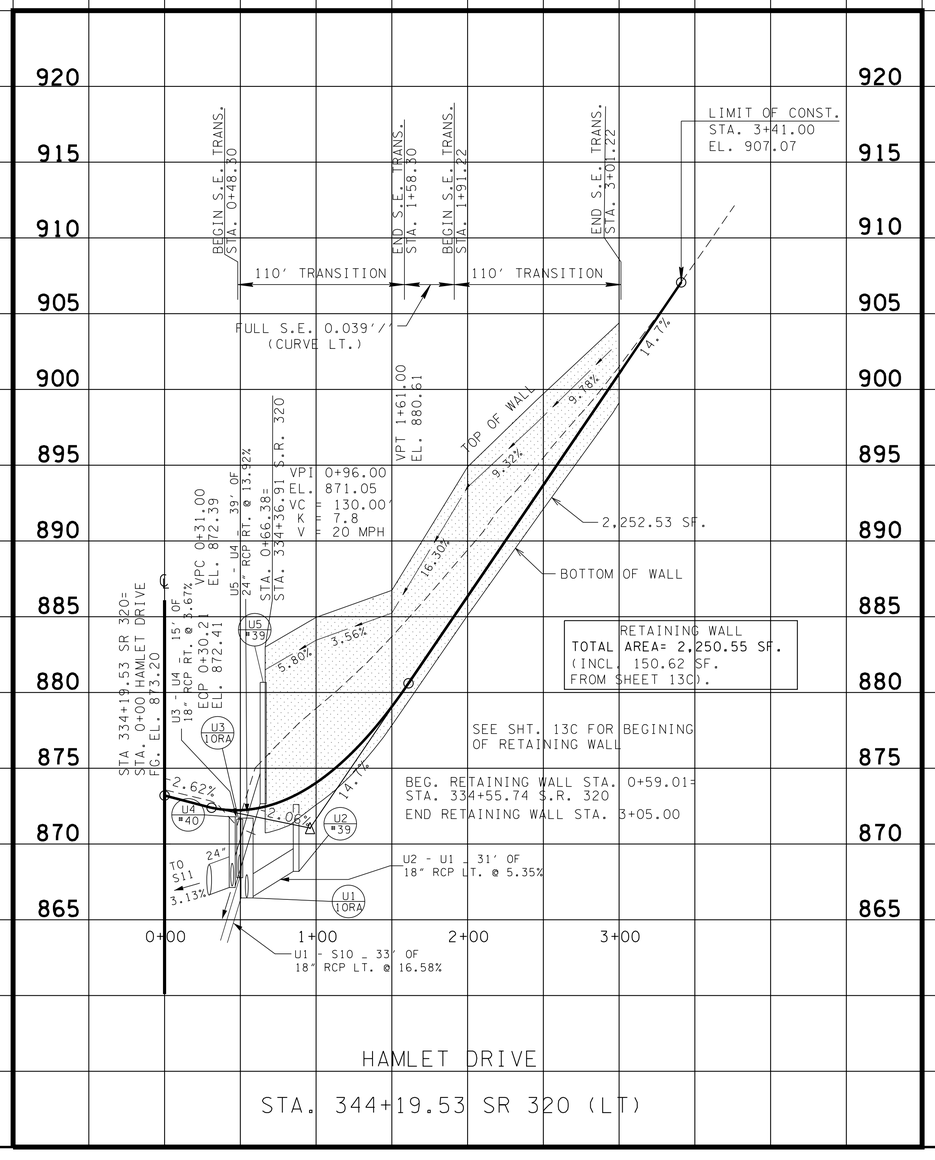
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	14E
CONST.	2014	STP-320(4)	14E

REVISION 4-10-07 :
--ADDED DRAINAGE STRUCTURES AND CHANGED CULVERT SIZE.

REVISION 10-7-08 :
--ADDED PVT DRIVE STA. 3+10

REVISION 05-19-2010 :
--REMOVED PVT. DRIVE PROFILE STA. 3+10.00

REVISION 07-06-2011 :
--EXTENDED RETAINING WALL



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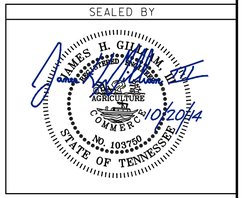

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE OF SIDE ROADS AND STREETS

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

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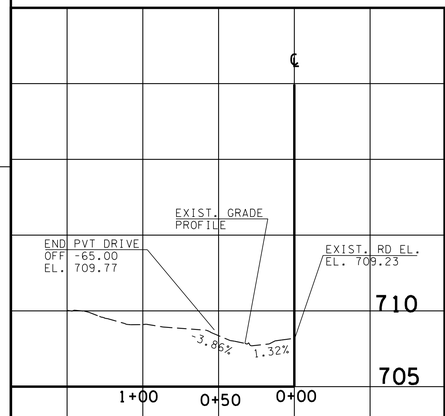
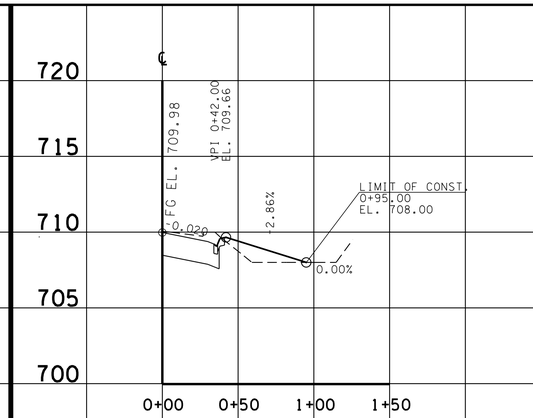
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2006	STP-320(4)	15
CONST.	2014	STP-320(4)	15

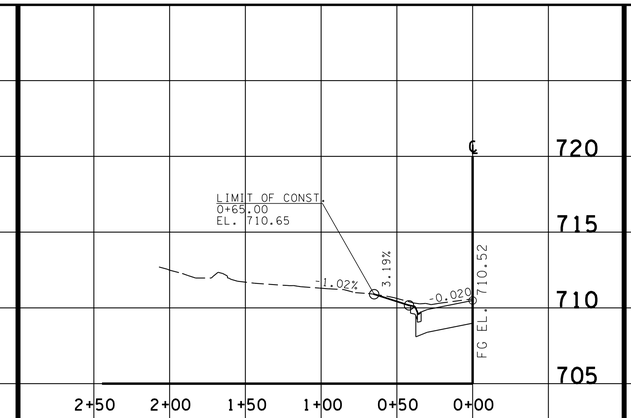
REV: 9-07-07
ADDED PVT DRIVE TRACT 22
REV: 05-19-2010
ADDED/REMOVED/MOVED PROFILES.



PVT. DR. LT. 227+08.63
TRACT NO.6



BUS. DR. RT. 227+43.68
TRACT NO.8



PVT. DR. LT. 227+60.24
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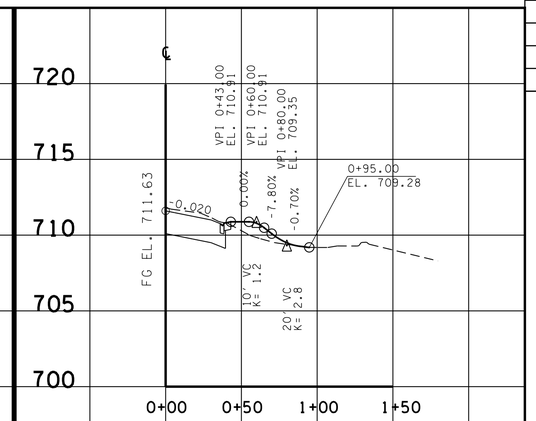
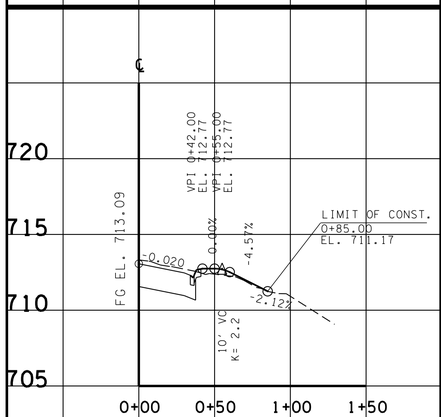
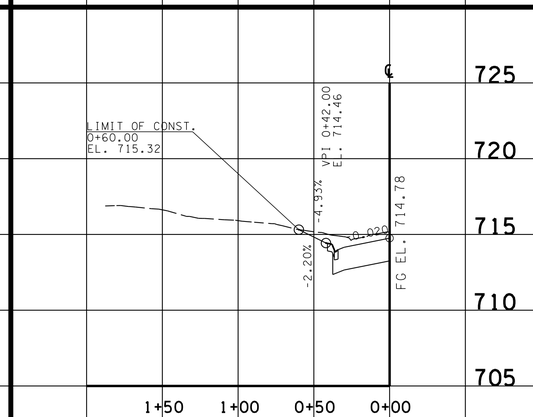


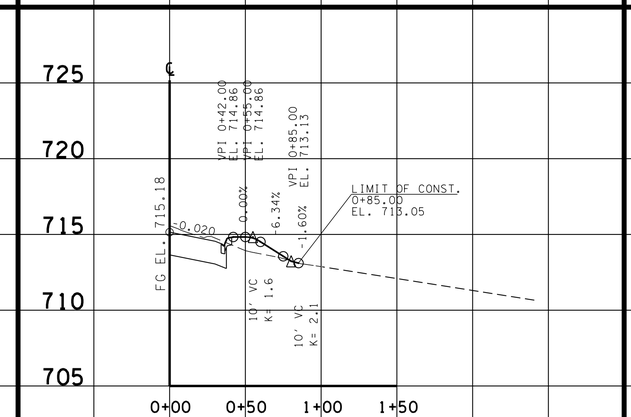
BUS. DR. RT. 227+94.22
TRACT NO.8



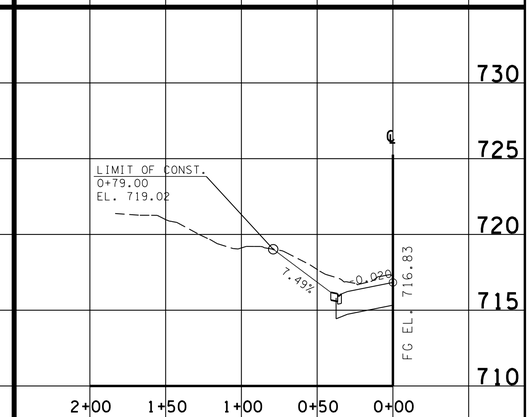
BUS. DR. RT. 228+38.94
TRACT NO.10



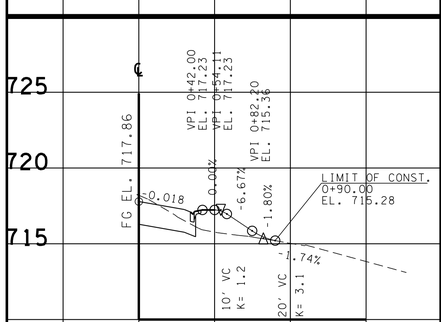
BUS. DR. LT. 228+89.08
TRACT NO.9



BUS. DR. RT. 229+01.23
TRACT NO.10



BUS. DR. LT. 229+42.90
TRACT NO.11



BUS. DR. RT. 229+67.61
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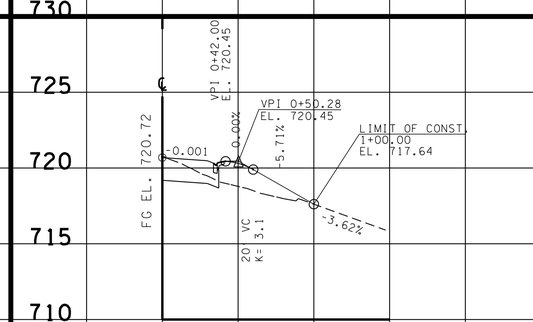

BUS. DR. RT. 230+32.09
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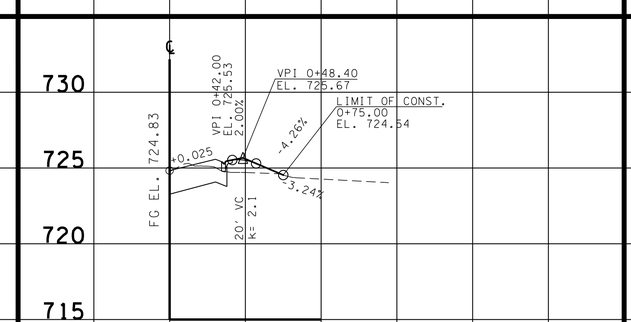

BUS. DR. RT. 231+39.14
TRACT NO.13

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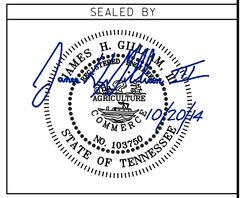

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE OF PRIVATE DRIVES

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

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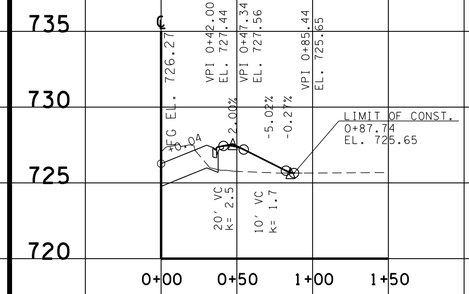
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

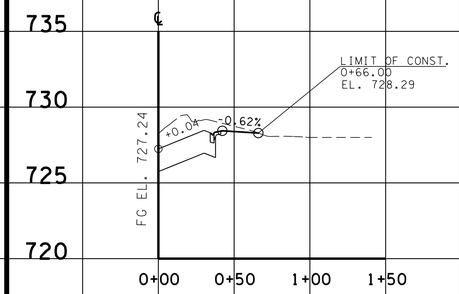
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2006	STP-320(4)	15A
CONST.	2014	STP-320(4)	15A

REV: 05-19-2010
ADDED/REMOVED/MOVED PROFILES.

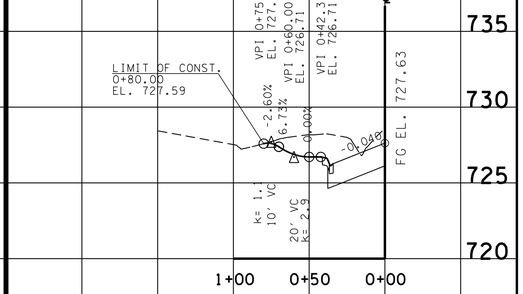
REV: 07-25-2010
--RENUMBERED SHEET.



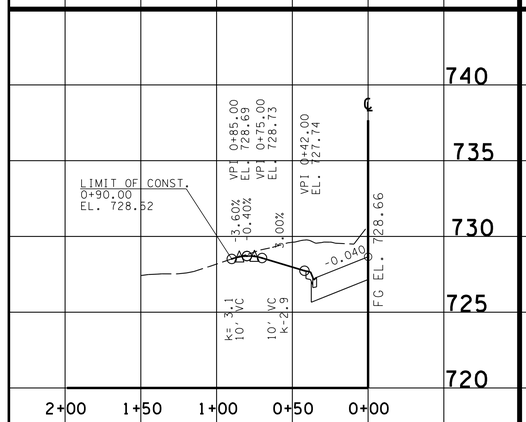
BUS. ENT. RT. 231+87.74
TRACT NO.13



BUS. DR. RT. 232+29.50
TRACT NO.15



BUS. ENT. LT. 232+48.91
TRACT NO.14



BUS. ENT. LT. 233+23.57
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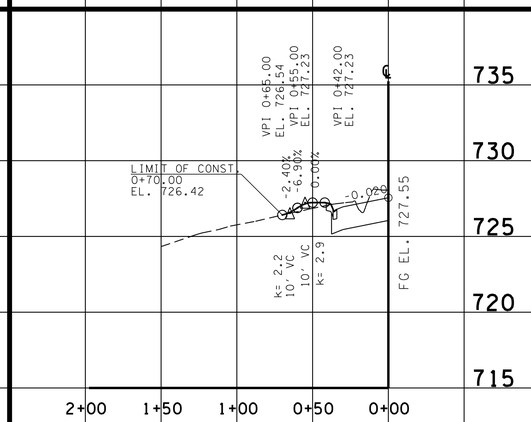
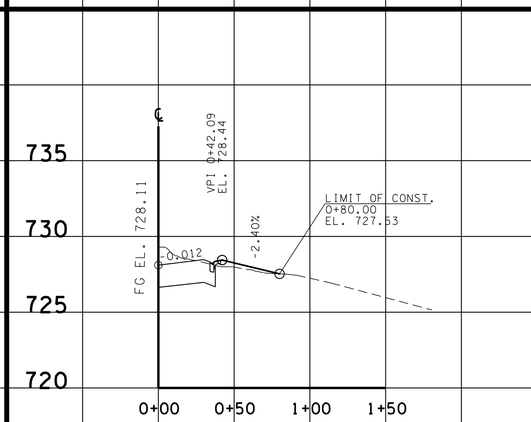


FIELD ENT. LT. 235+50.00
TRACT NO.17



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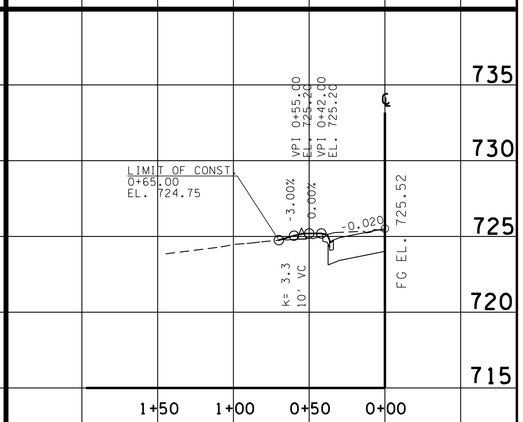
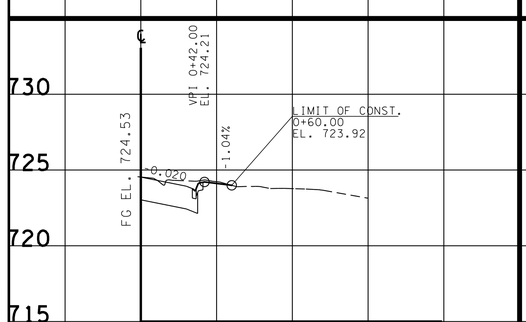
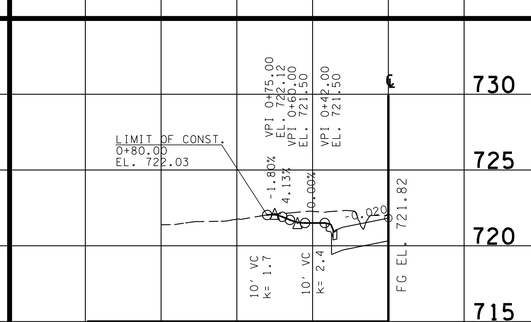


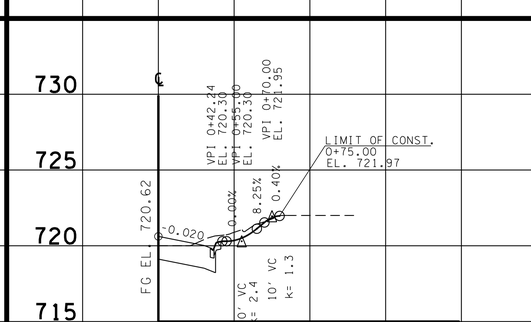
PVT. DR. LT. 236+34.61
TRACT NO.17



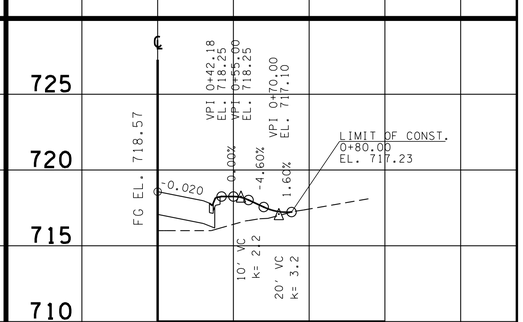
PVT. DR. RT. 236+66.01
TRACT NO.19



BUS. ENT. LT. 237+50.00
TRACT NO.20



PVT. DR. RT. 237+96.90
TRACT NO.21



PVT. DR. RT. 239+62.79
TRACT NO.21

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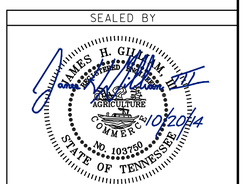

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE OF PRIVATE DRIVES

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

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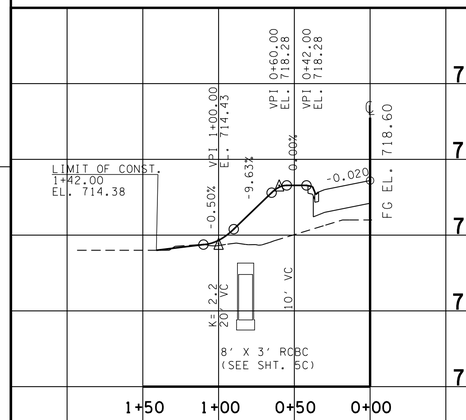
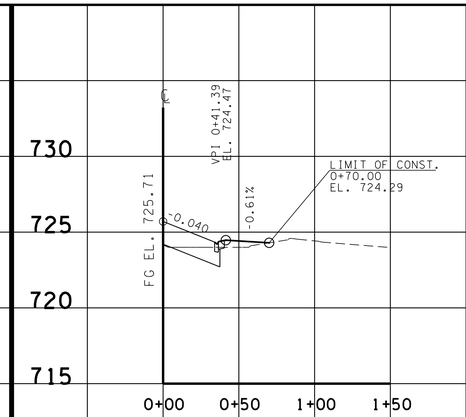
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.



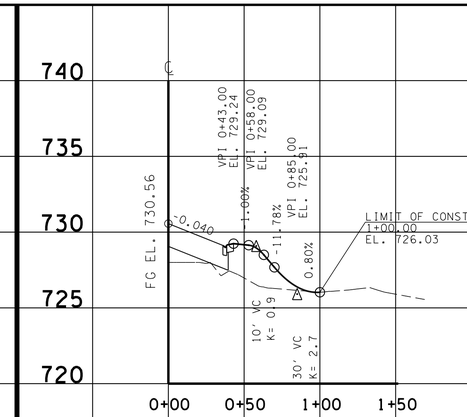
PVT. DR. LT. 239+98.61

TRACT NO.22



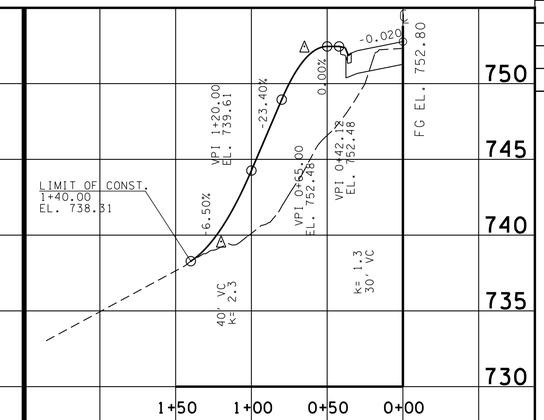
PVT. DR. RT. 243+14.51

TRACT NO.23



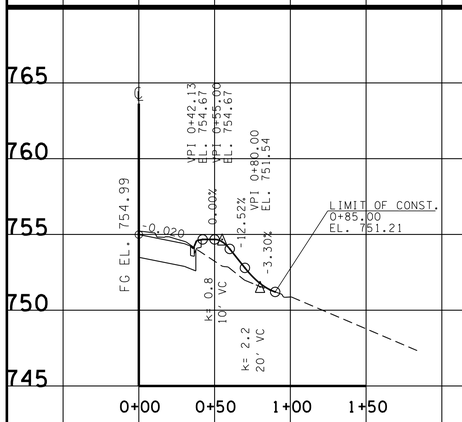
PVT. DR. RT. 244+22.91

TRACT NO.23



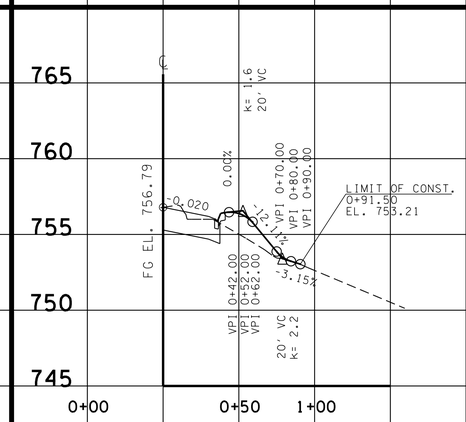
PVT. DR. LT. 248+71.77

TRACT NO.33



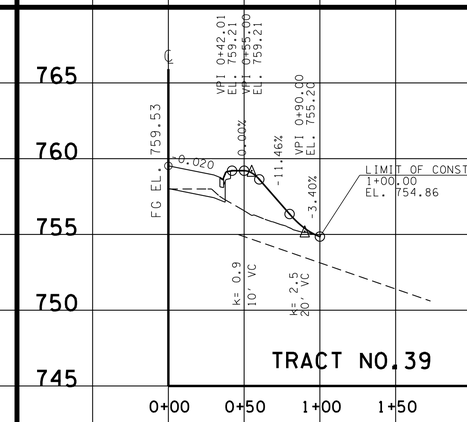
PVT. DR. RT. 249+29.71

TRACT NO.36



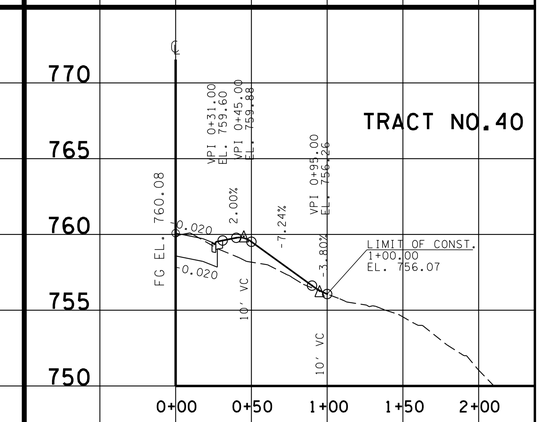
PVT. DR. RT. 249+86.63

TRACT NO.38

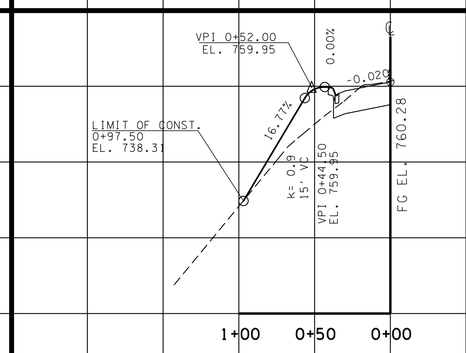


PVT. DR. RT. 251+34.23

TRACT NO.39

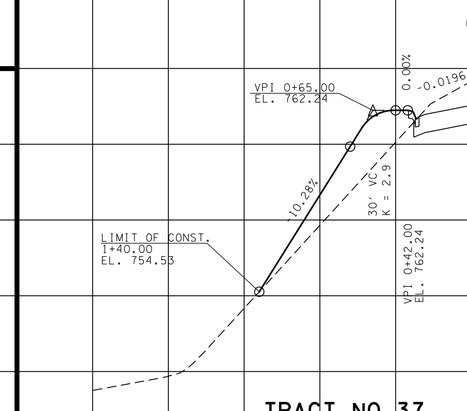


PVT. DR. RT. 251+87.00



BUS. ENT. LT. 252+06.59

TRACT NO.37



TRACT NO.37

BUS. ENT. LT. 254+24.13

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2006	STP-320(4)	15B
CONST.	2014	STP-320(4)	15B

REV: 2-22-08:
--TRACT 26, ADDED PVT.DRIVE.

REV: 05-19-2010
--ADDED/REMOVED/MOVED PROFILES.

REV: 07-25-2010
--ADDED BUS.DRIVE STA. 251+87.00.
--ADDED PVT.DRIVE STA. 254+50.00
--DELETED PVT. DRIVE STA. 251+59.34, 252+04.23
--RENUMBERED SHEET

REVISION: 04-03-2013
--MOVED BUSINESS ENTRANCE LEFT FOR TRACT NO. 37 FROM STA.254+50 TO STA. 254+24.13.

SEALED BY

JAMES H. GHAM
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 103750
STATE OF TENNESSEE
8/10/2014

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE OF PRIVATE DRIVES

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

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TENNESSEE D.O.T.
DESIGN DIVISION

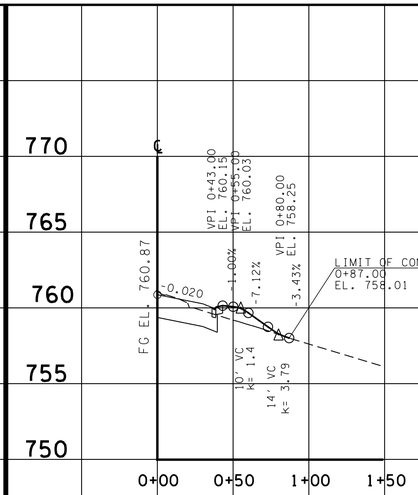
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2006	STP-320(4)	15C
CONST.	2014	STP-320(4)	15C

REV: 9-07-07
MOVED PVT DRIVE TRACT 49.

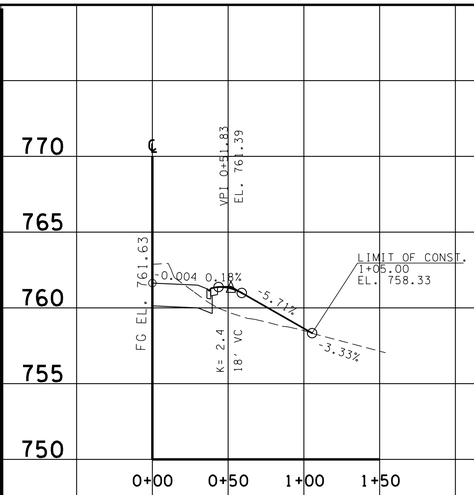
REV: 4-22-08
TRACT 57 MOVED PVT DRIVE.

REV: 05-19-2010
ADDED/REMOVED/MOVED PROFILES.



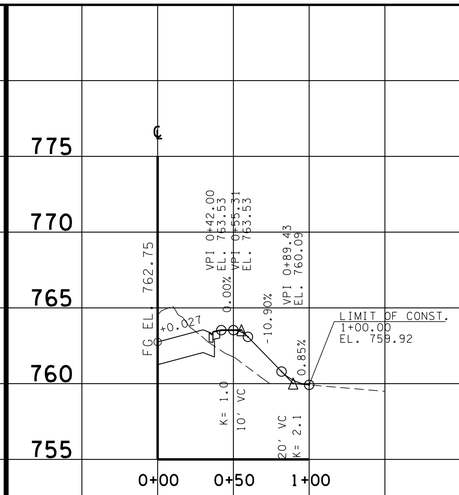
PVT. DR. RT. 252+61.78

TRACT NO.42



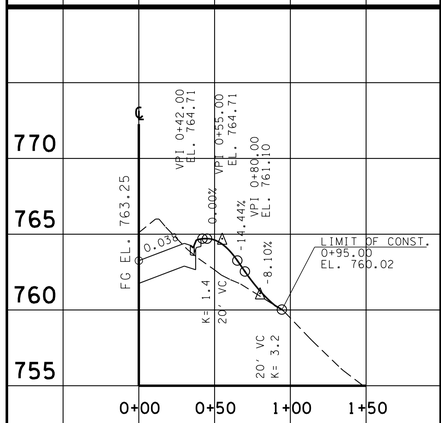
PVT. DR. RT. 253+34.74

TRACT NO.42



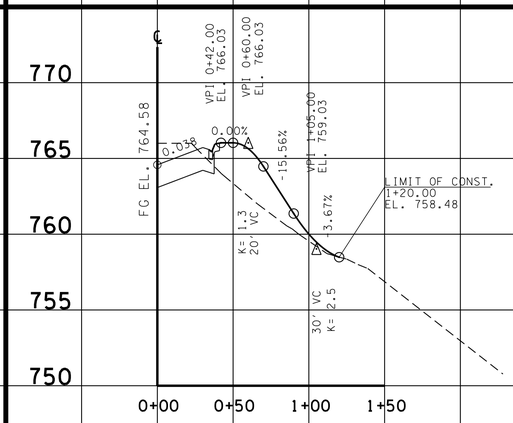
PVT. DR. RT. 254+40.94

TRACT NO.43



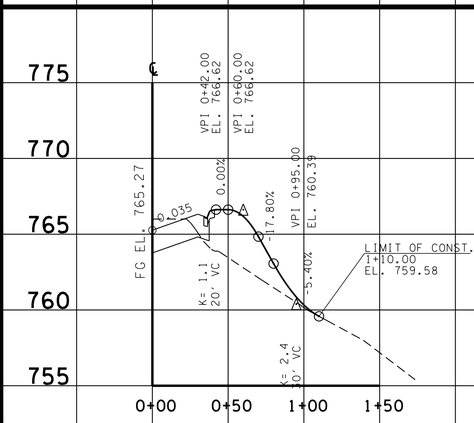
PVT. DR. RT. 254+88.81

TRACT NO.44



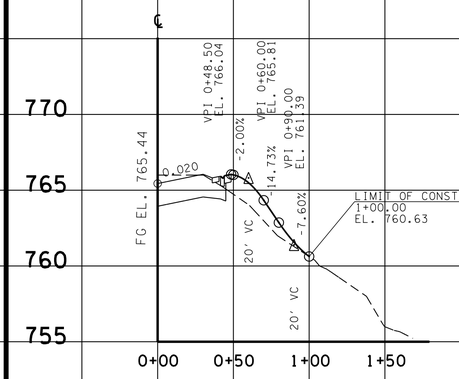
PVT. DR. RT. 256+15.36

TRACT NO.47



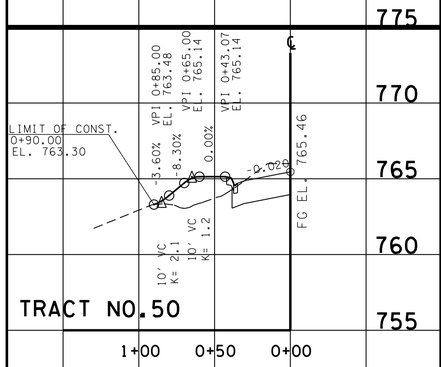
PVT. DR. RT. 257+09.62

TRACT NO.49



PVT. DR. RT. 257+59.83

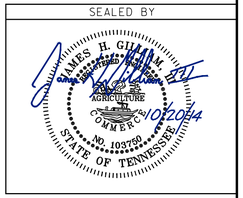
TRACT NO.55



TRACT NO.50

PVT. DR. LT. 258+39.23

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE OF PRIVATE DRIVES

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

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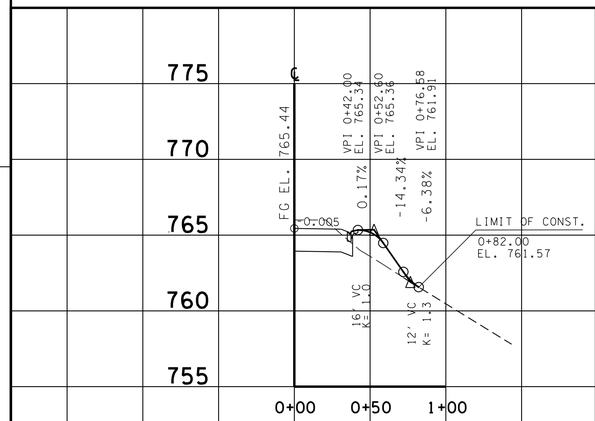
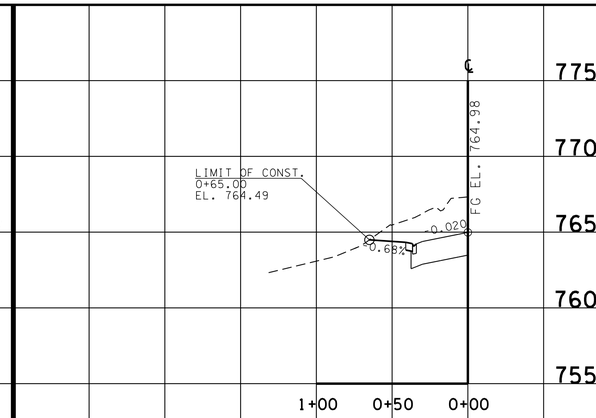
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2006	STP-320(4)	15D
CONST.	2014	STP-320(4)	15D

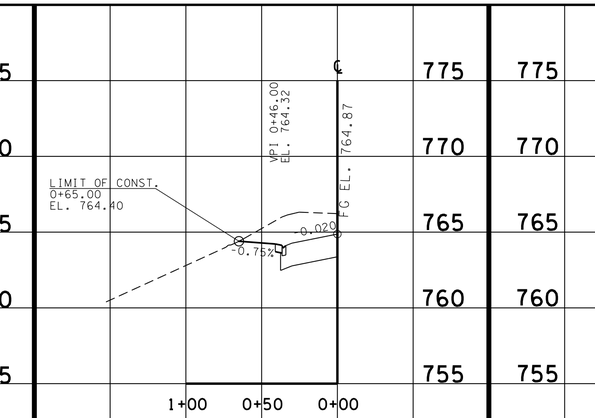
REV: 05-19-2010
ADDED/REMOVED/MOVED PROFILES.



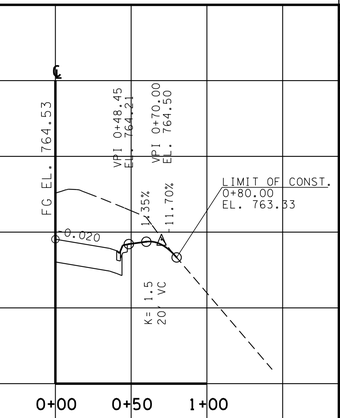
BUS. ENT. RT. 258+47.00
TRACT NO.57



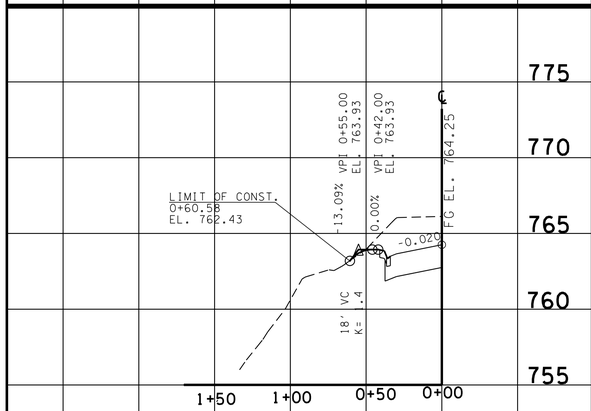
BUS. ENT. LT. 259+53.78
TRACT NO.56



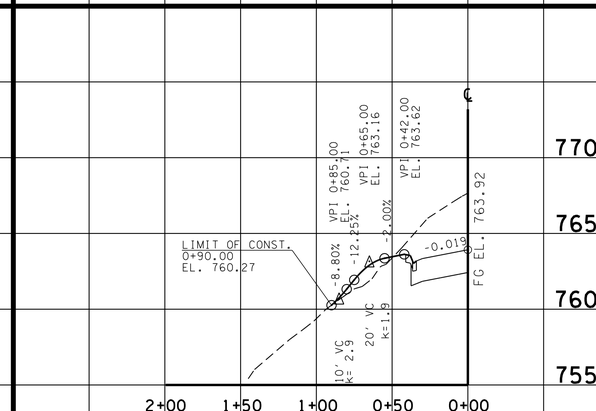
BUS. ENT. LT. 259+75.80
TRACT NO.58



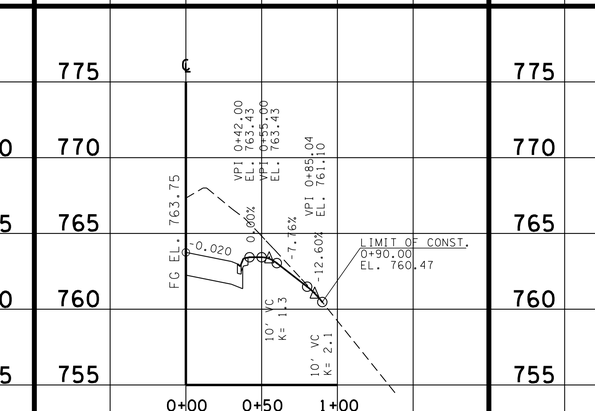
PVT. DR. RT. 260+44.09
TRACT NO.60



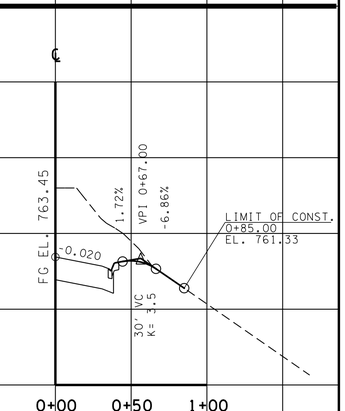
PVT. DR. LT. 260+99.24
TRACT NO.61



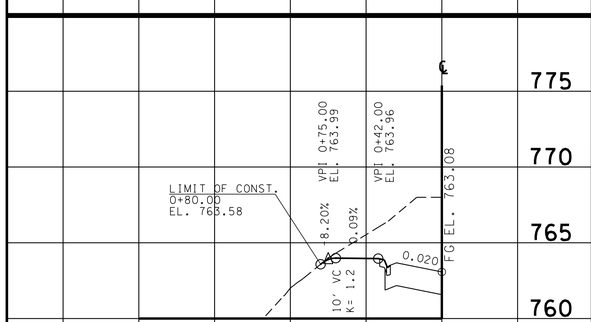
PVT. DR. LT. 261+65.67
TRACT NO.



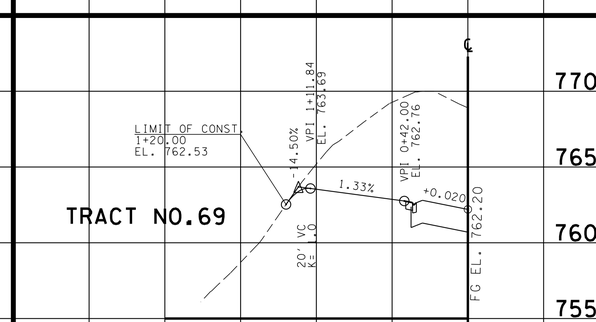
PVT. DR. RT. 262+00.01
TRACT NO.64



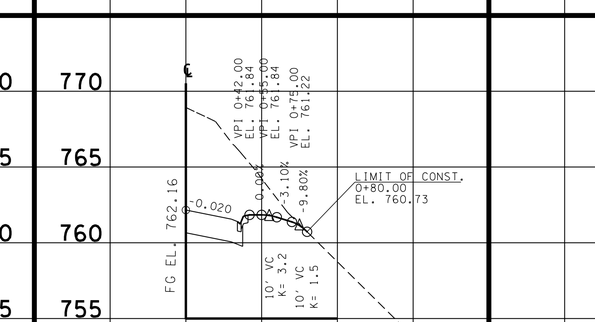
PVT. DR. RT. 262+60.82
TRACT NO.67



PVT. DR. LT. 263+34.73
TRACT NO.66

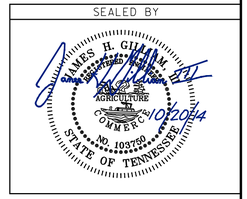


TRACT NO.69
PVT. DR. LT. 264+68.97
TRACT NO.69



PVT. DR. RT. 264+73.39
TRACT NO.68

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE OF PRIVATE DRIVES

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

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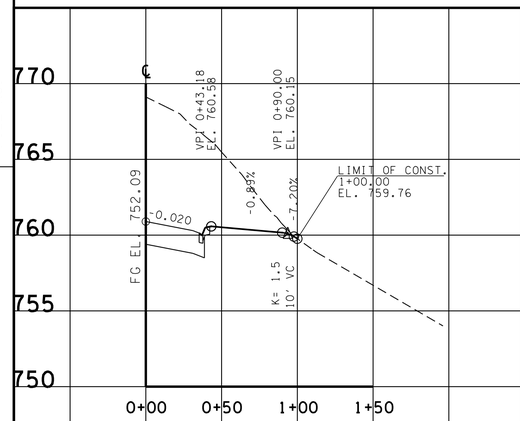
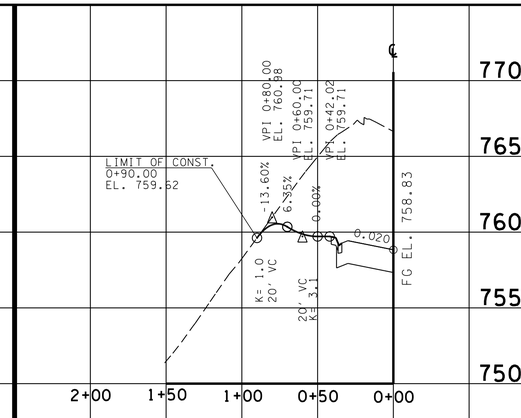
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.



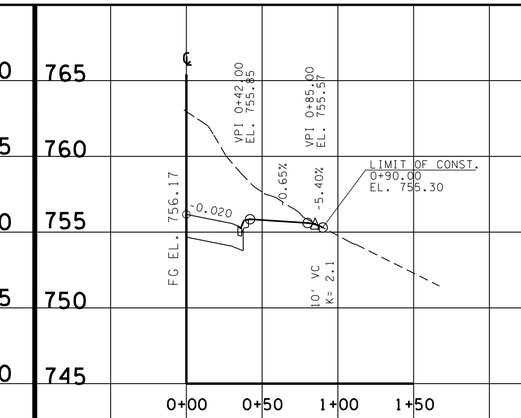
PVT. DR. RT. 265+78.99

TRACT NO.71,72



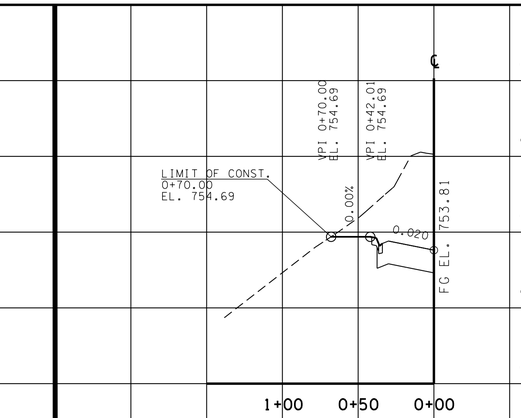
PVT. DR. LT. 266+99.24

TRACT NO.70



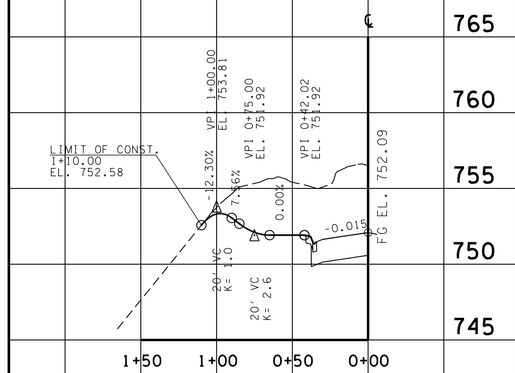
PVT. DR. RT. 268+26.17

TRACT NO.74



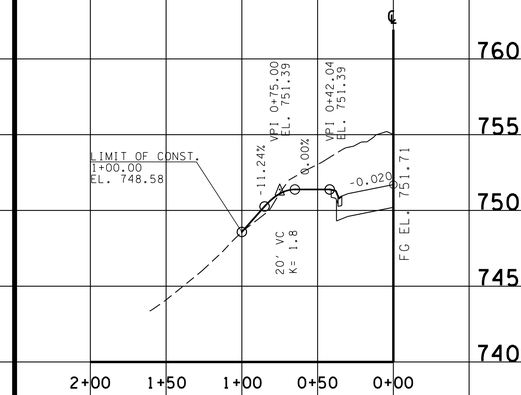
PVT. DR. LT. 269+50.88

TRACT NO.75



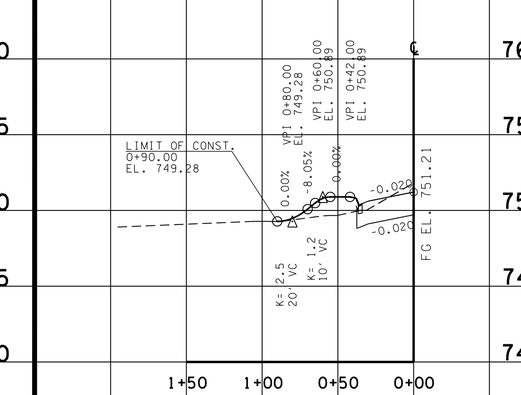
PVT. DR. LT. 270+97.62

TRACT NO.76



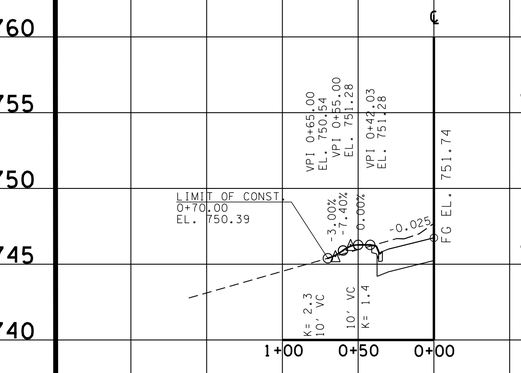
BUS. ENT. LT. 271+59.01

TRACT NO.77



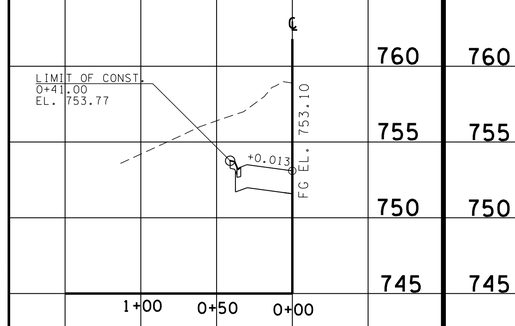
BUS. ENT. LT. 276+87.95

TRACT NO.80



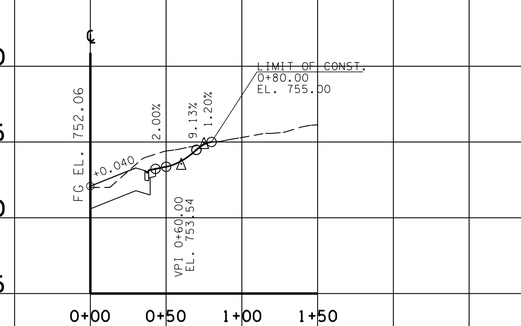
BUS. ENT. LT. 277+69.90

TRACT NO. 84



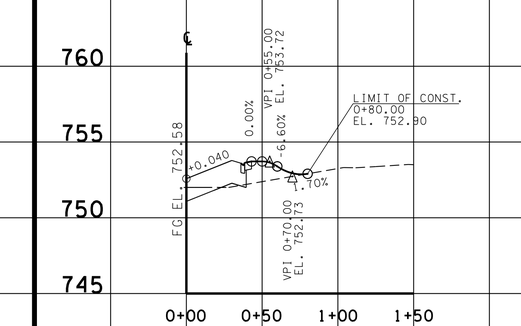
PVT. DR. LT. 270+00.00

TRACT NO.76



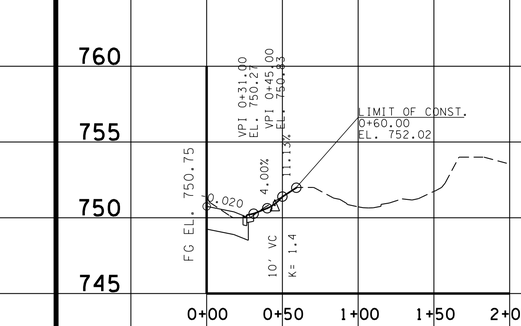
BUS. ENT. RT. 278+23.78

TRACT NO. 85



BUS. ENT. RT. 279+00.00

TRACT NO.88



PVT. DR. RT. 273+50.00

TRACT NO.78

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2006	STP-320(4)	15E
CONST.	2014	STP-320(4)	15E

REV. 09-07-07:
--MOVED PVT. DRIVE STA. 279+00.

REV. 10-29-08:
--MOVED PVT. DRIVE STA. 282+81.03.

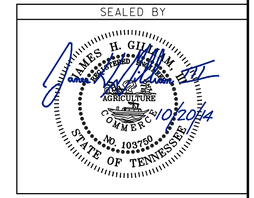
REV. 09-08-09:
--REVISED 18' PVT. DRIVE TO 40' PVT. DRIVE STA. 182+81.03 RT. TRACT NO. 93.
--ELIMINATED 25' PRIVATE DRIVE LT. STA. 283+50 TRACT 94 AND 26' PRIVATE DRIVE LT. STA. 284+50.00 TRACT 95.

REV. 05-19-2010:
--ADDED PVT. DRIVE STA. 273+50.

REV. 01-24-2011:
--ADDED PVT. DRIVE STA. 270+50.

REV. 07-06-2011:
--ADDED 20' CURB CUT STA. 270+00 TRACT 76.
--DELETED PVT. DRIVE STA. 270+50 TRACT 76.

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE OF PRIVATE DRIVES

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

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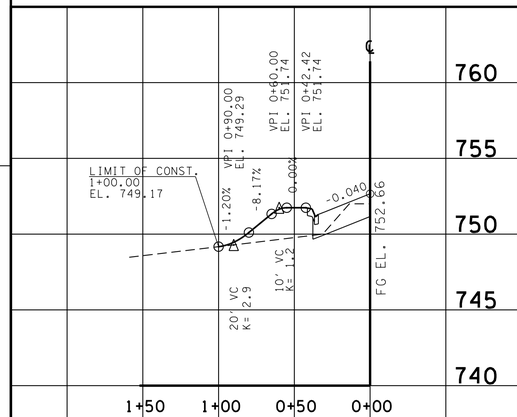
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2006	STP-320(4)	15F
CONST.	2014	STP-320(4)	15F

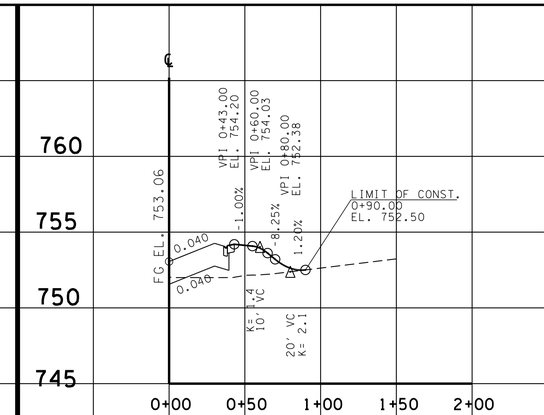
REVISION 4-22-08: TRACT 26, ADDED PRIVATE DRIVE.

REVISION 09-08-09: ELIMINATED 14' PRIVATE DRIVE LT. STA. 285+75.54 TRACT 95 AND 12' PRIVATE DRIVE \LT. STA. 286+82.35 TRACT 98.

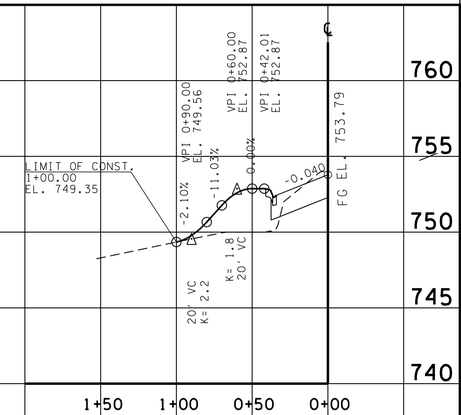
REV: 05-19-2010
ADDED/REMOVED/MOVED PROFILES.



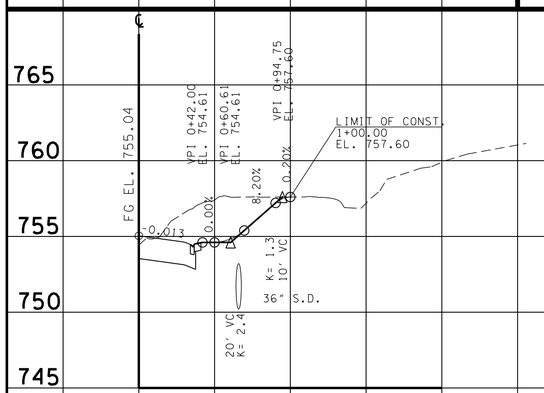
BUS. ENT. LT. 279+12.38
TRACT NO.86



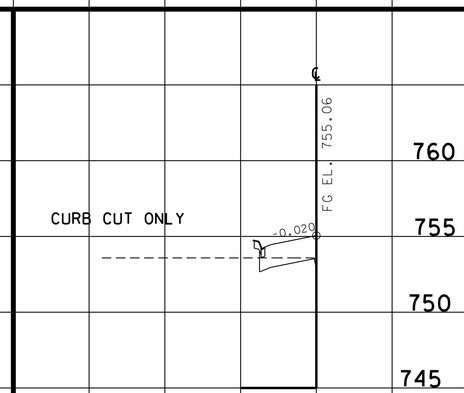
BUS. ENT. RT. 279+74.17
TRACT NO.88



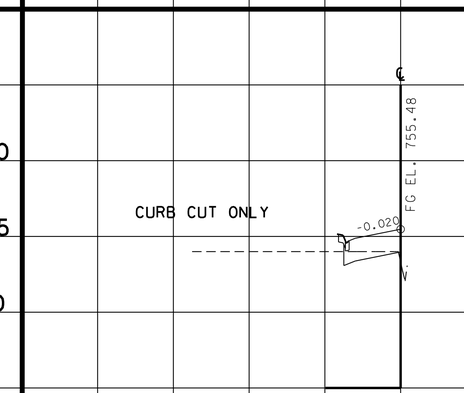
BUS. ENT. LT. 280+87.00
TRACT NO.89



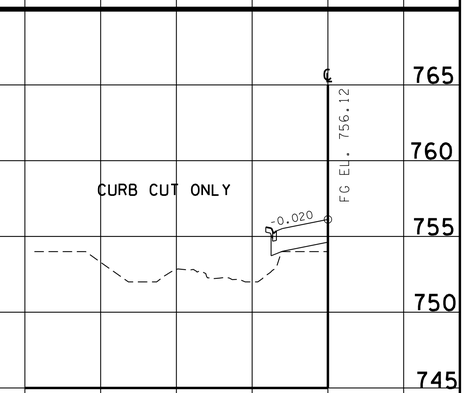
PVT. DR. RT. 282+81.03
TRACT NO.93



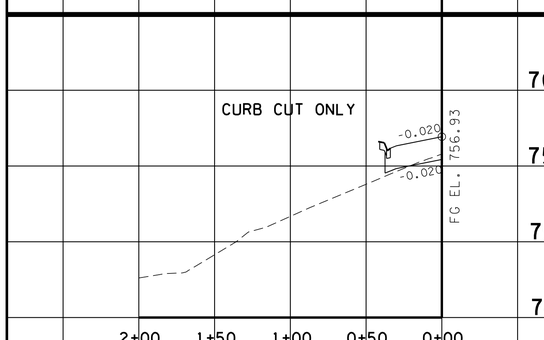
PVT. DR. LT. 282+85.00
TRACT NO.94



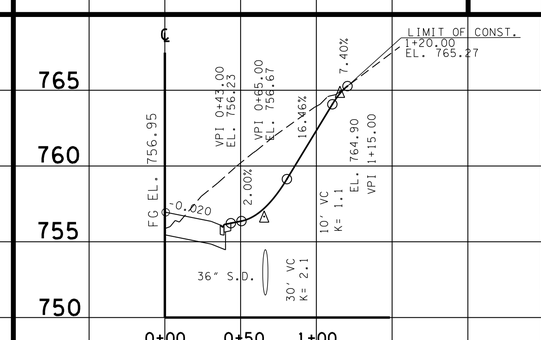
PVT. DR. LT. 283+50.00
TRACT NO.94



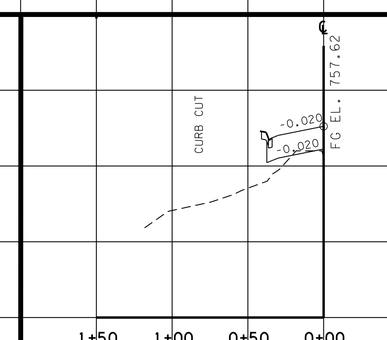
PVT. DR. LT. 284+50.00
TRACT NO.95



PVT. DR. LT. 285+74.53
TRACT NO.95

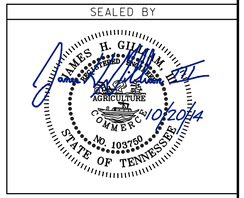


PVT. DR. RT. 285+76.90
TRACT NO.97



PVT. DR. LT. 286+81.25
TRACT NO.98

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE OF PRIVATE DRIVES

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

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2006	STP-320(4)	15G
CONST.	2014	STP-320(4)	15G

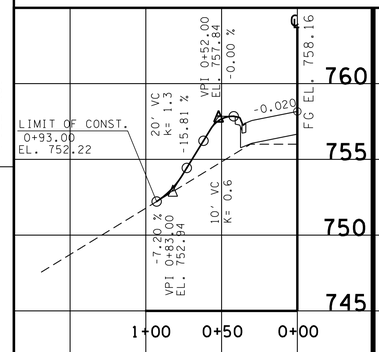
REVISION 10-29-08 REVISED PVT DRIVE RT. STA. 307+02.91

REVISION 05-19-2010
--ADDED/REMOVED/MOVED PROFILES.

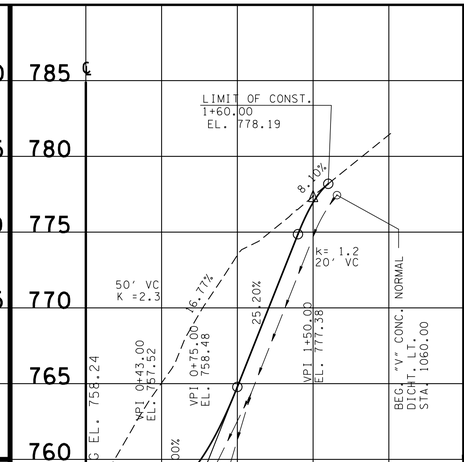
REVISION 09-27-2010
--ADDED CURB CUT STA. 288+80.00

REVISION 07-06-2011
--ADDED/REMOVED/MOVED PROFILES.

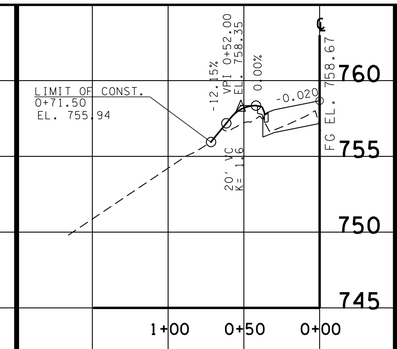
REVISION 09-05-12
--ADDED CURB CUT FOR TRACT NO. 112 STA. 298+50 LT.



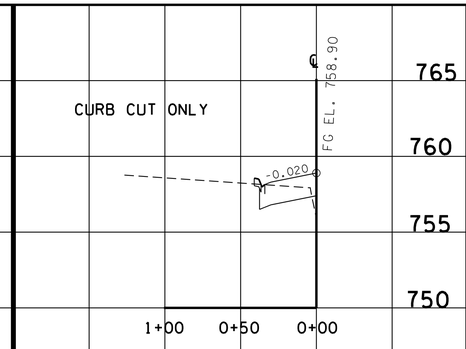
PVT. DR. LT. 287+65.28
TRACT NO. 100



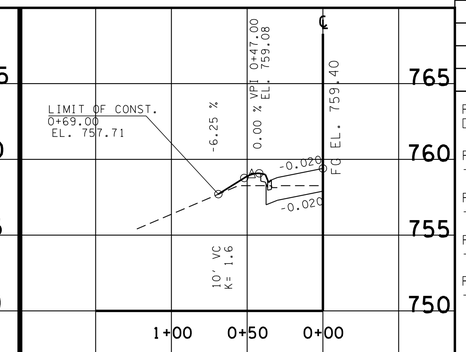
PVT. DR. RT. 287+77.57
TRACT NO.99



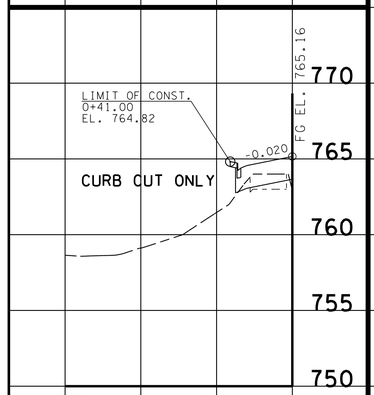
PVT. DR. LT. 288+43.60
TRACT NO.101



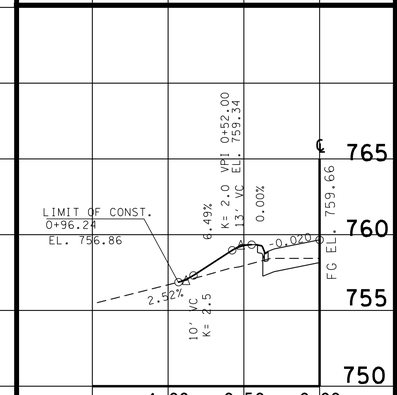
PVT. DR. RT. 288+80.00
TRACT NO.101



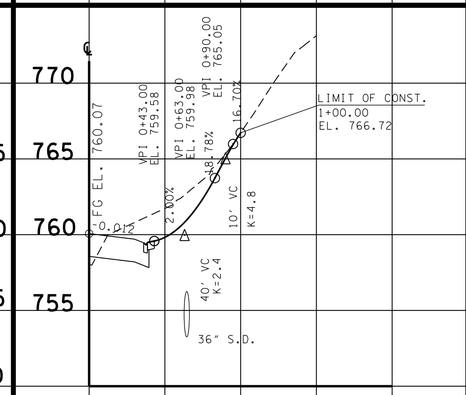
PVT. DR. LT. 289+57.66
TRACT NO.104



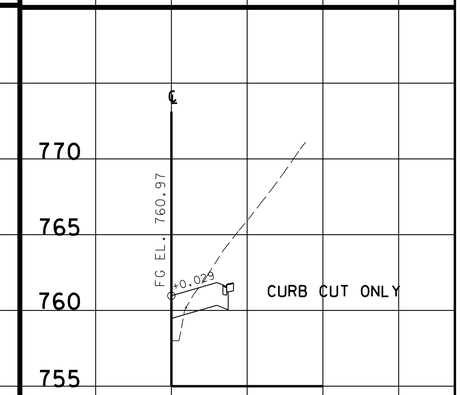
PVT. DR. RT. 298+50.00
TRACT NO. 112



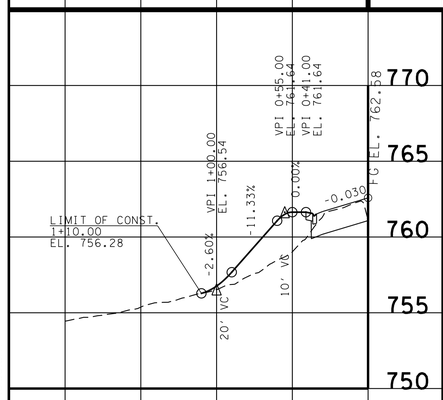
PVT. DR. LT. 289+97.85
TRACT NO.102



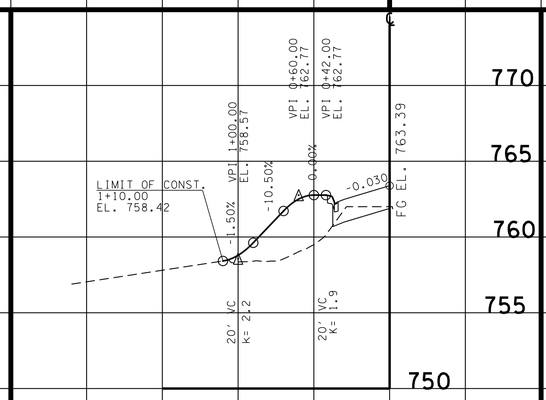
BUS. ENT. RT. 290+60.50
TRACT NO. 103



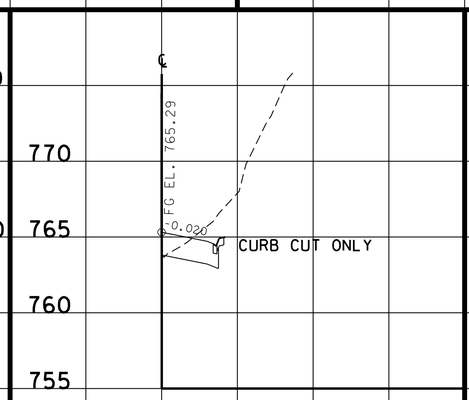
PVT. DR. RT. 292+00.45
TRACT NO. 103



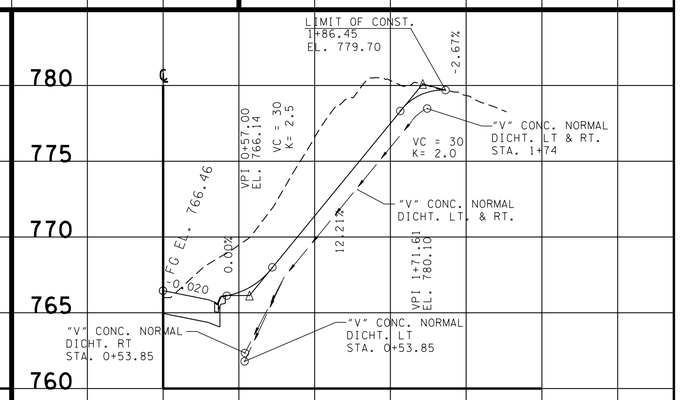
PVT. DR. LT. 294+50.35
TRACT NO.105



PVT. DR. LT. 295+74.86
TRACT NO. 105



PVT. DR. RT. 298+70.00
TRACT NO. 114



PVT. DR. RT. 300+51.03
TRACT NO. 114

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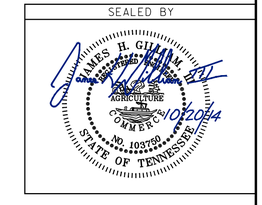

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE OF PRIVATE DRIVES

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

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	15H
CONST.	2014	STP-320(4)	15H

REVISION 4-10-07:
CHANGED SIDE DRAIN STA 318+59.44

REVISION 9-07-07:
MOVED PVT. DRIVE TRACT 135.

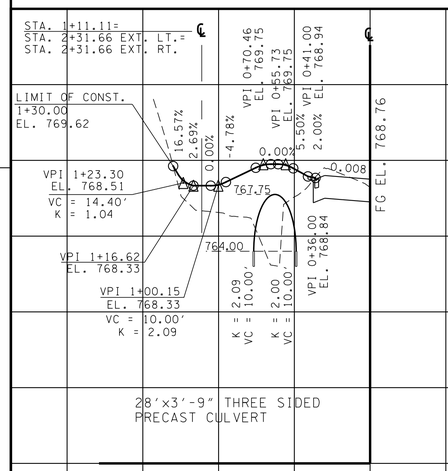
REVISION 1-22-08:
ADDED PVT. DRIVE TRACT 125.

REV. 05-19-10:
ADDED/REMOVED/MOVED PROFILES.

REV. 07-06-11:
ADDED/REMOVED/MOVED PROFILES.

REV. 09-05-12
CHANGED FROM TRACT NO. 116 TO ACCESS EASEMENT. REVISED PRIVATE DRIVE PROFILES:
STA. 304+06.60 LT., STA. 1+11.11 LT. AND RT.

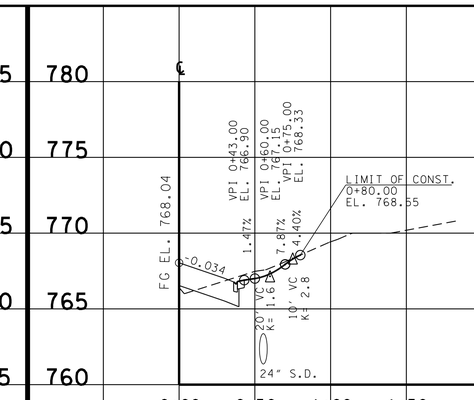
REV. 08-22-14
UPDATED TRACTS 121A, 122, 123 AND 124.



PVT. DR. LT. 304+06.60

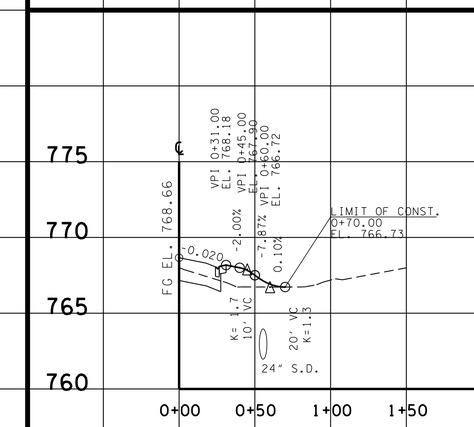
ACCESS EASEMENT

STATION	0+62.75 PVT DR. LT. (304+06.60 SR-320)
STRUCTURE	14 LF OF 28'x3'-9" THREE SIDED PRECAST CULVERT
SKEW	90°00'
DRAINAGE AREA	1.32 SQ. MI
DESIGN DISCHARGE (5 YR)	323.20 CFS
5 YR BACKWATER	0.11 FT. AT EL. 767.62
5 YR VELOCITY	4.03 FT/S
100 YR DISCHARGE	620.90 CFS AT EL. 769.30
INLET ELEVATION	764.00
OUTLET ELEVATION	764.00
APPROACH OVERTOPPING ELE.	766.60
STANDARD DRAWING NUMBERS	SEE MANUFACTURER SPECS
CLASS "A" CONCRETE	N/A C.Y.
STEEL BAR REINFORCING	N/A LB.



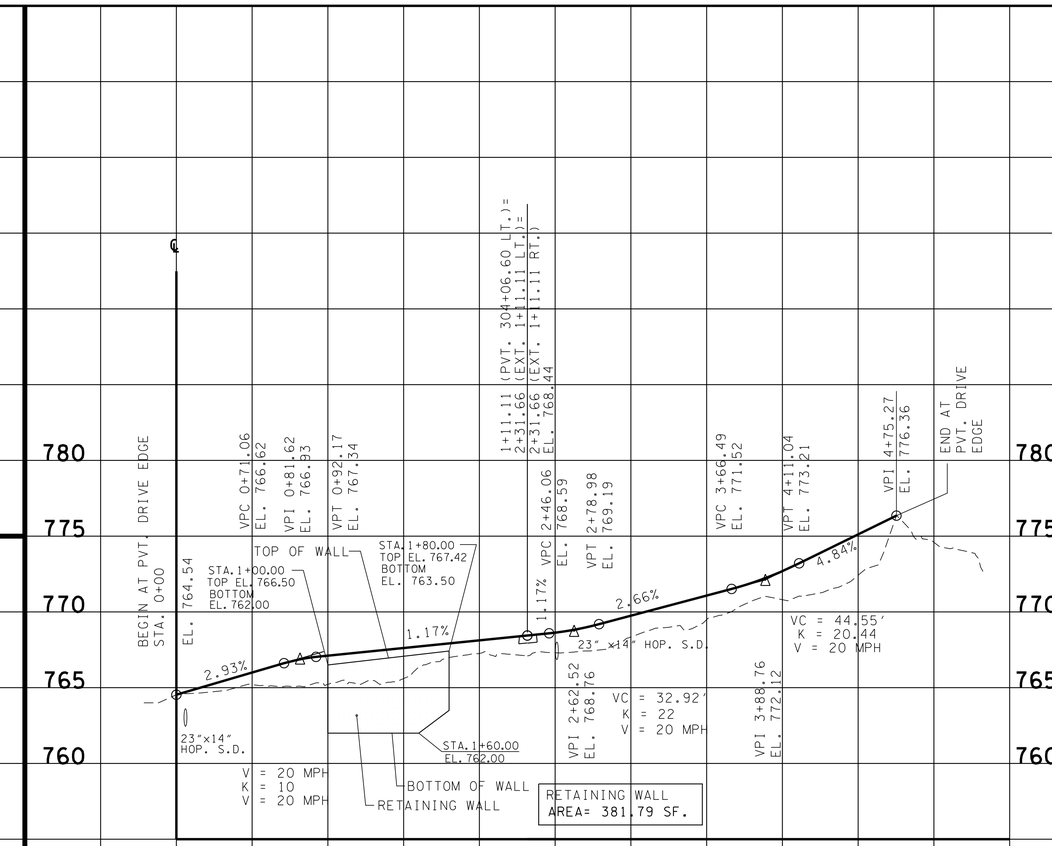
BUS. ENT. RT. 302+96.04

TRACT NO.119

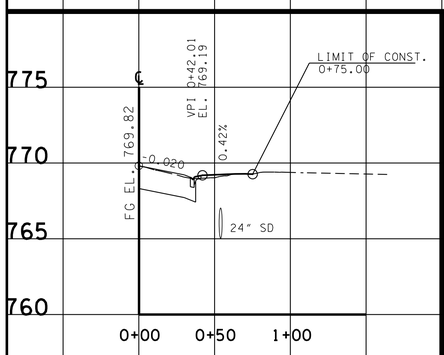


BUS. ENT. RT. 303+92.04

TRACT NO.120

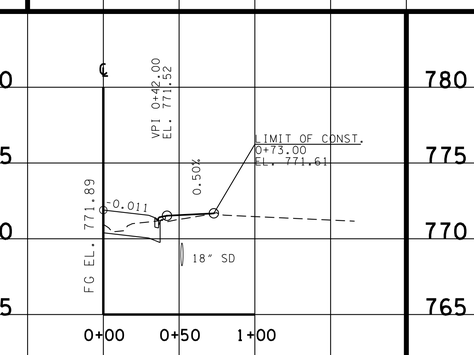


PVT. DR. EXT. LT. & RT. 1+11.11
(304+06.60 LT)
ACCESS EASEMENT



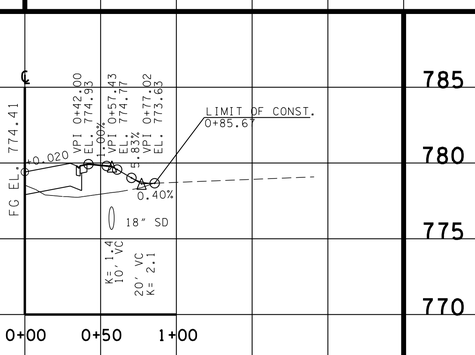
BUS. ENT. RT. 305+68.48

TRACT NO.121A



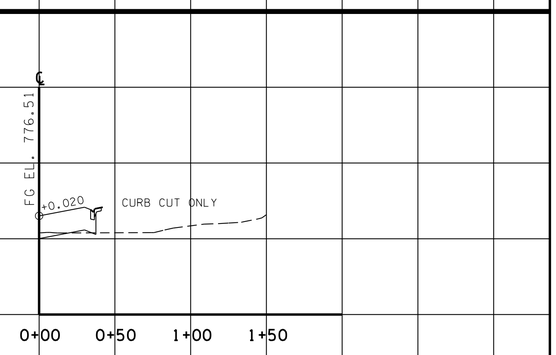
PVT. DR. RT. 307+01.83

TRACT NO.122



PVT. DR. RT. 308+36.95

TRACT NO.123



PVT. DR. RT. 309+50.00

TRACT NO.124

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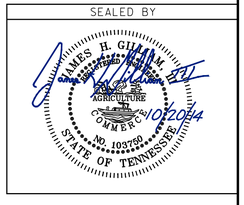

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE OF PRIVATE DRIVES

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

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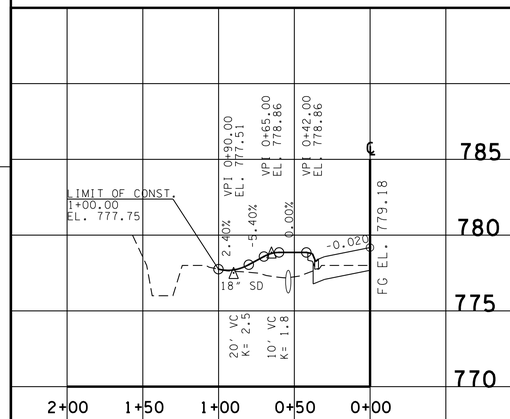
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	15I
CONST.	2014	STP-320(4)	15I

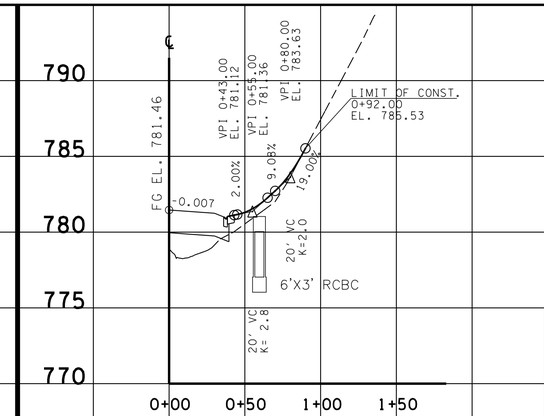
REVISION 7-30-2008
--REVISED PVT. DRIVE TRACT 158.

REV: 05-19-2010
ADDED/REMOVED/MOVED PROFILES.

REV: 07-06-2011
ADDED/REMOVED/MOVED PROFILES.

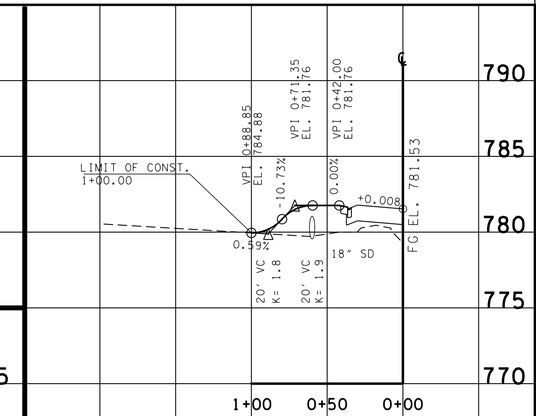


BUS. ENT. LT. 310+93.36
TRACT NO.125

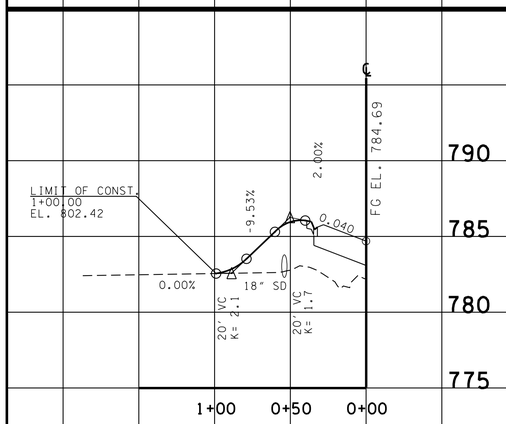


PVT. DR. RT. 312+15.91
TRACT NO.129

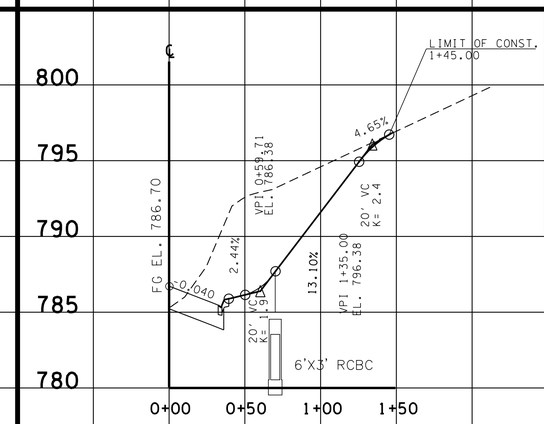
STATION	0+60.55 (PVT. DR. STA. 312+15.91 RT.)
STRUCTURE	16' OF 6' X 3' RCBC
SKEW	87°31' RT
DRAINAGE AREA	66 AC.
DESIGN DISCHARGE (Q50)	125 CFS
DESIGN DISCHARGE (Q100)	138 CFS
OVERTOPPING ELEV.	781.83
ALLOWABLE HEADWATER ELEV.	781.40
Q50 HEADWATER ELEV.	781.04
Q100 HEADWATER ELEV.	781.40
VELOCITY (Q50)	10.6 FT/S
VELOCITY (Q100)	19.9 FT/S
INLET ELEVATION	777.15
OUTLET ELEVATION	776.91
STANDARD DRAWING NUMBERS	STD-9-1, STD-10-1, STD-15-4,9,10,12,35
CLASS "A" CONCRETE	13.12 C.Y.
STEEL BAR REINFORCING	3,340.46 LB.
FOUNDATION FILL MATERIAL	9.75 C.Y.



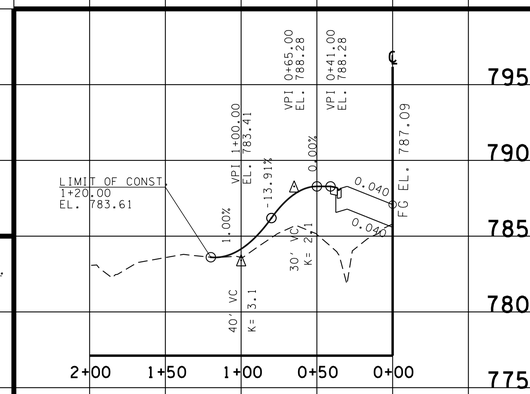
BUS. ENT. LT. 312+19.91
TRACT NO.128



BUS. ENT. LT. 313+63.23
TRACT NO.130

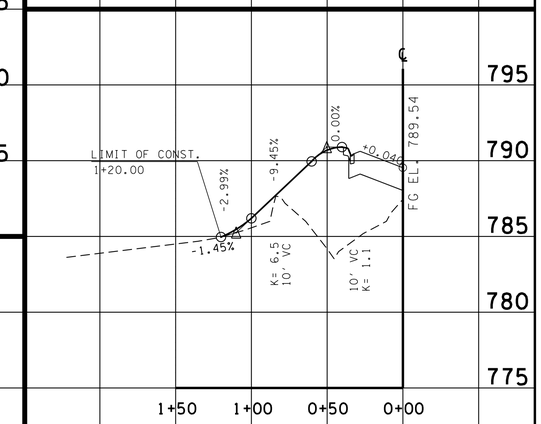


BUS. ENT. RT. 314+23.23
TRACT NO.131



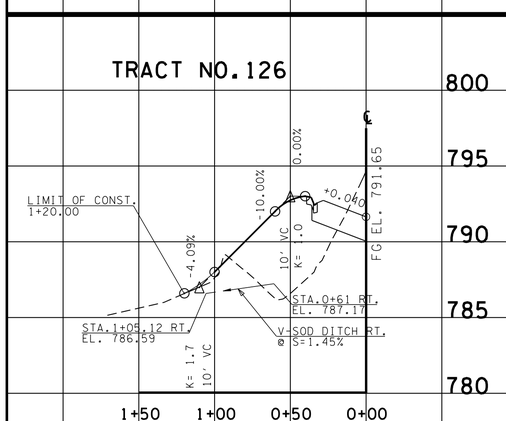
PVT. DR. LT. 314+33.27
TRACT NO. 130

STATION	0+70.15 (BUS. ENT. STA. 314+23.23 RT.)
STRUCTURE	51' OF 6' X 3' RCBC
SKEW	78°40' LT.
DRAINAGE AREA	66 AC.
DESIGN DISCHARGE (Q50)	125 CFS
DESIGN DISCHARGE (Q100)	138 CFS
OVERTOPPING ELEV.	787.68
ALLOWABLE HEADWATER ELEV.	787.10
Q50 HEADWATER ELEV.	785.24
Q100 HEADWATER ELEV.	785.61
VELOCITY (Q50)	4.6 FT/S
VELOCITY (Q100)	4.9 FT/S
INLET ELEVATION	781.37
OUTLET ELEVATION	779.70
STANDARD DRAWING NUMBERS	STD-9-1, STD-10-1, STD-15-4,9,10,12,35
CLASS "A" CONCRETE	32.27 C.Y.
STEEL BAR REINFORCING	8,151.46 LB.
FOUNDATION FILL MATERIAL	26.17 C.Y.



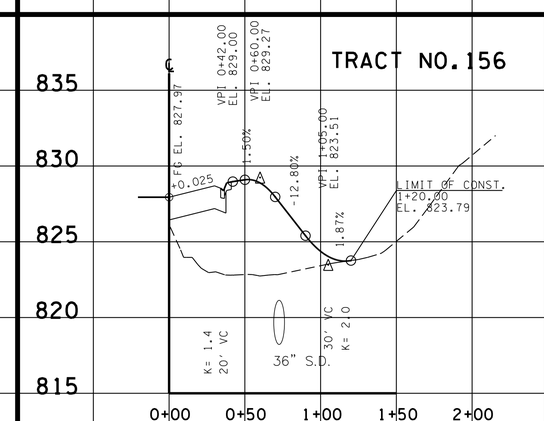
PVT. DR. LT. 314+91.27
TRACT NO.32

TRACT NO.126



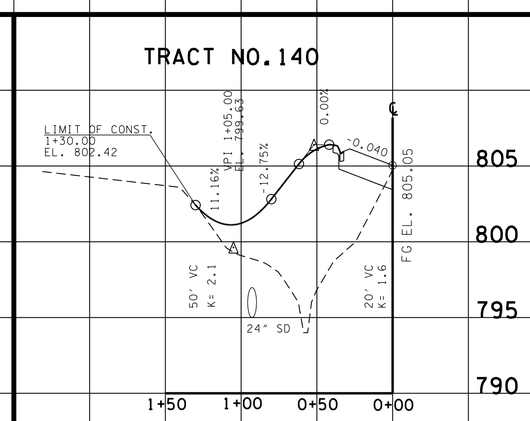
PVT. DR. LT. 315+35.08

TRACT NO.156

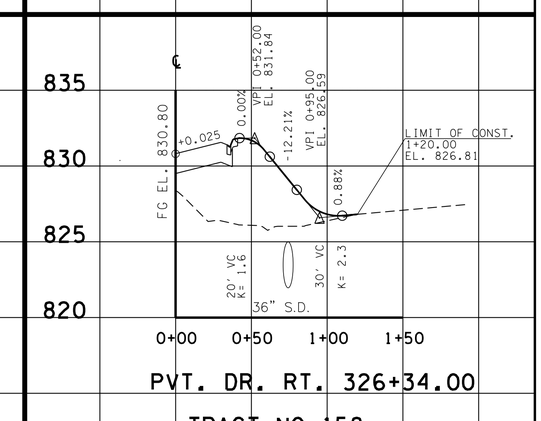


PVT. DR. RT. 325+73.00

TRACT NO.140

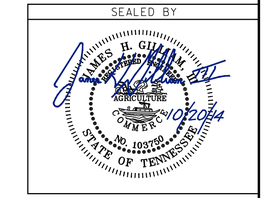


PVT. DR. LT. 318+55.48



PVT. DR. RT. 326+34.00
TRACT NO.158

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE OF PRIVATE DRIVES

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

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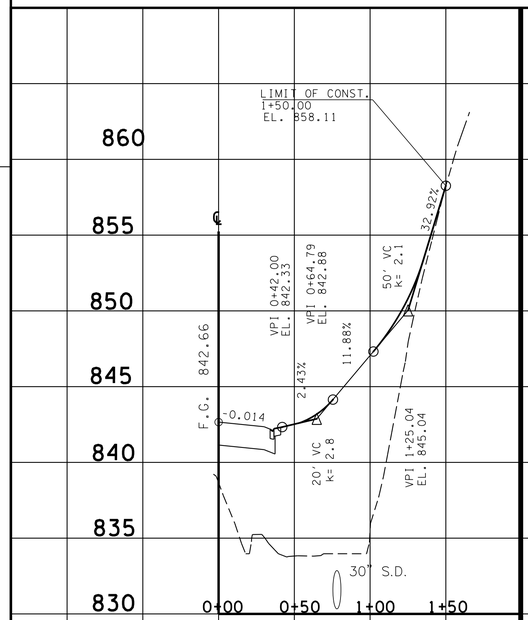
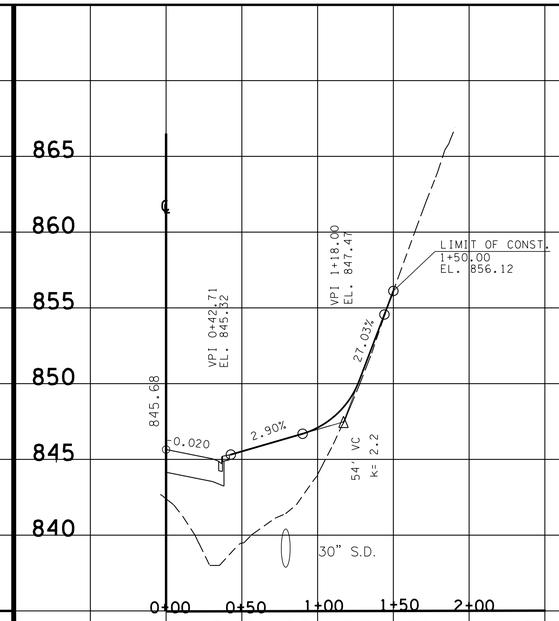
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	15J
CONST.	2014	STP-320(4)	15J

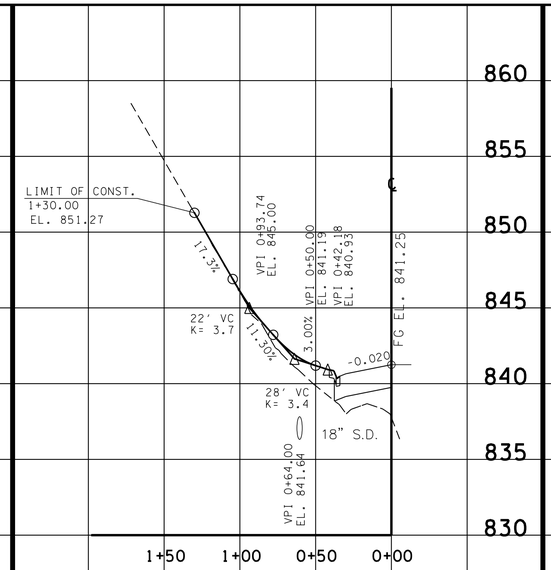
REV: 05-19-2010
ADDED/REMOVED/MOVED PROFILES.



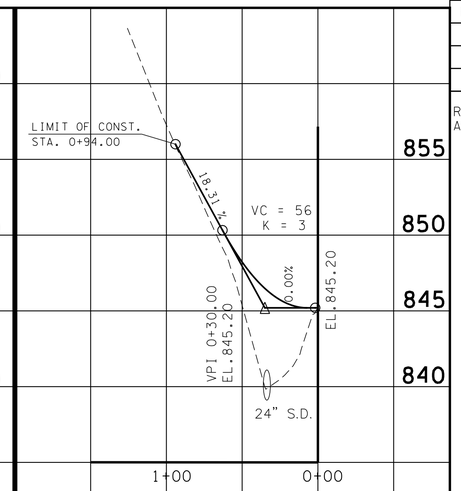
PVT. DR. RT. 328+56.00
TRACT NO. 160



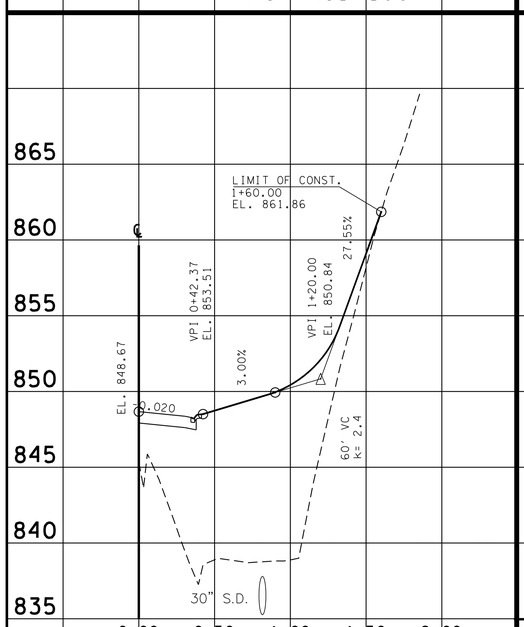
PVT. DR. RT. 329+11.27
TRACT NO. 161



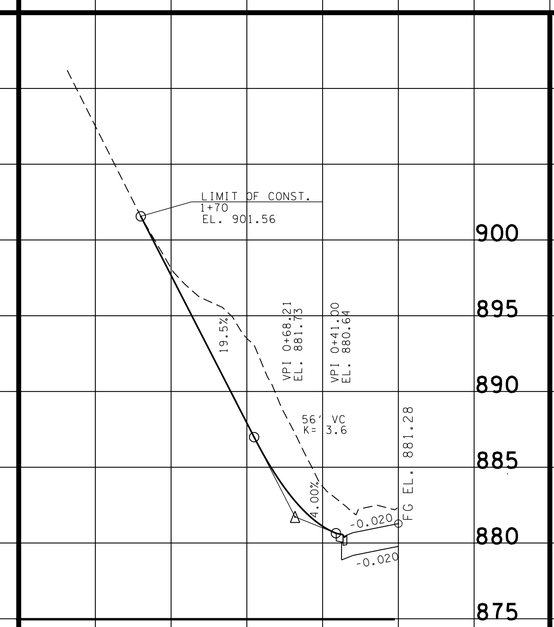
BUS. ENT. LT. 328+30.02
TRACT NO.159A



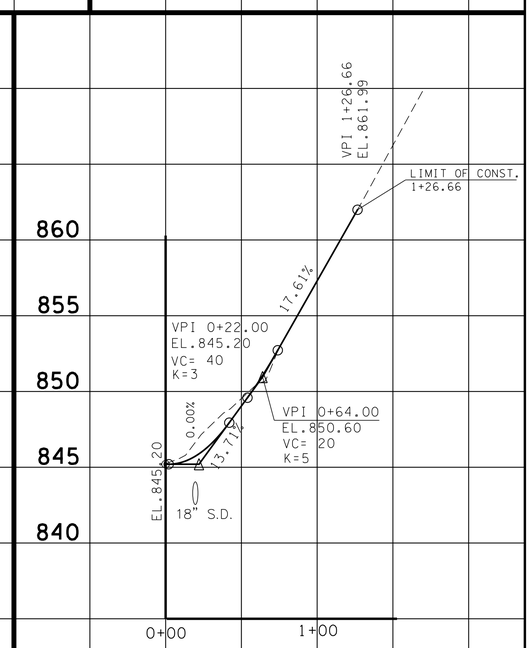
PVT. 0+94.23 LT
(BUS. ENT. LT. 328+30.02)
TRACT NO.159



PVT. DR. RT. 329+67.00
TRACT NO. 162



PVT. DR. LT. 335+68.69
TRACT NO. 166



PVT. 0+94.23 RT
(BUS. ENT. LT. 328+30.02)
TRACT NO.163

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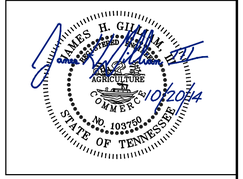

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE OF PRIVATE DRIVES

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

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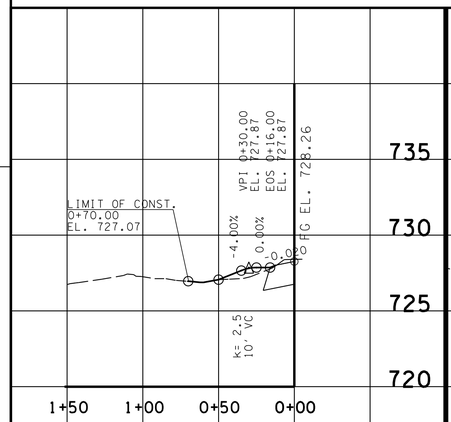
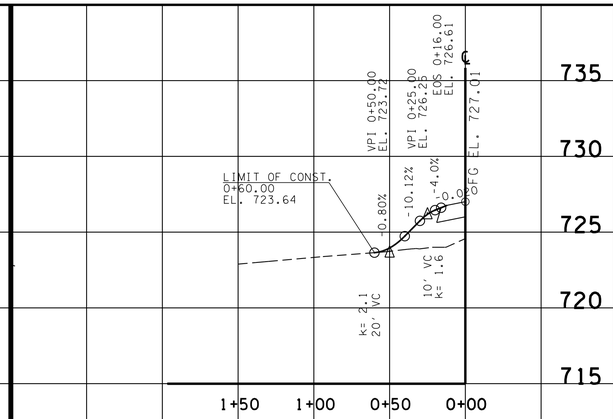
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	15K
CONST.	2014	STP-320(4)	15K

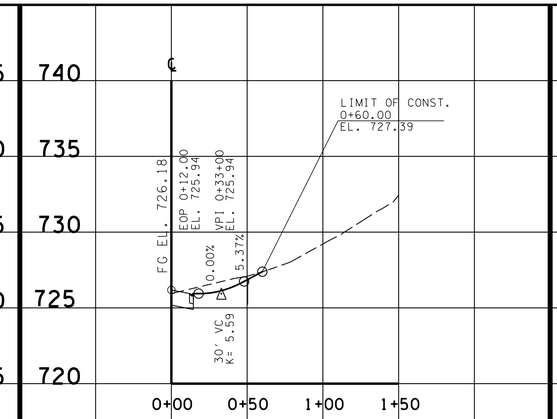
REV 05-19-2010: ADDED SHEET.
REV 07-25-2010: DELETED ONE OF TWO PVT. DRIVE GREENS RD.



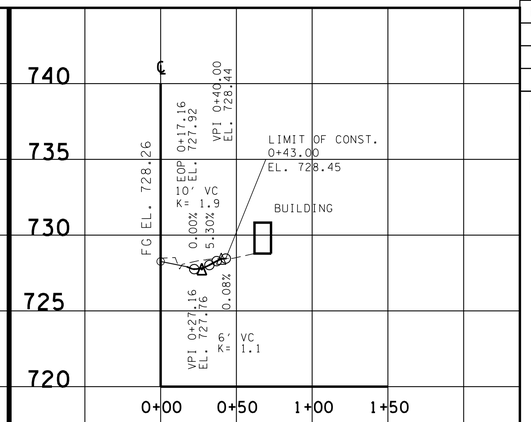
BUS. ENT. LT. 1+45.00
GRAYS DRIVE TRACT 18



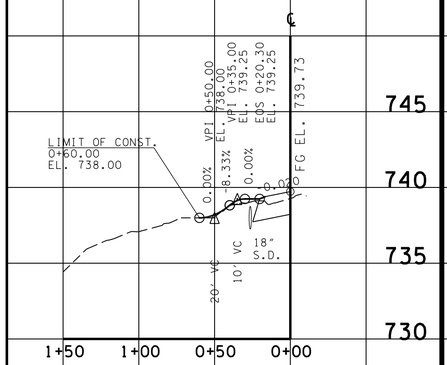
PVT. DR. LT. 0+94.06
GREENS ROAD TRACT 24



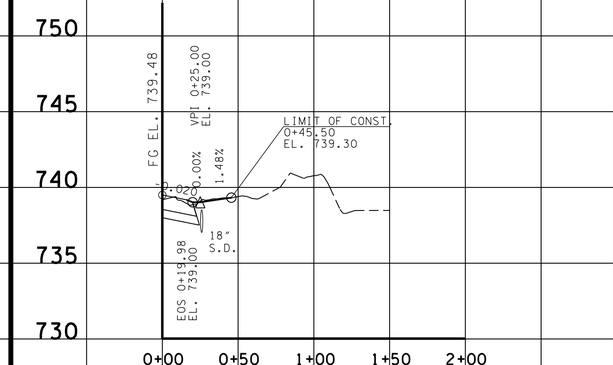
PVT. DR. RT. 1+46.89
GREENS ROAD TRACT NO.26



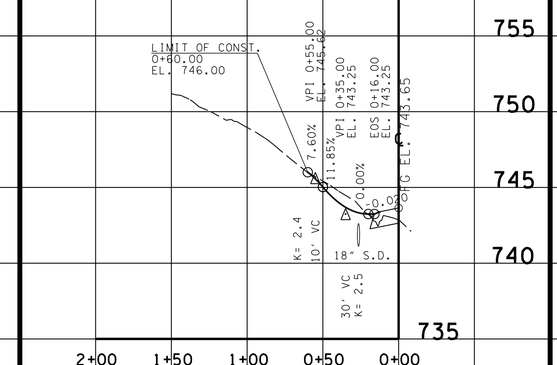
BUS. ENT. RT. 1+45.00
GRAYS DRIVE TRACT 15



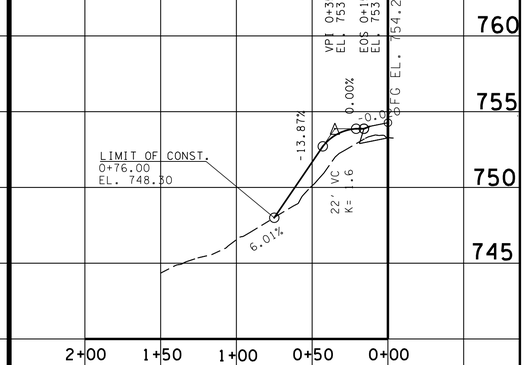
PVT. DR. LT. 1+04.70
McDONALD DRIVE TRACT 27



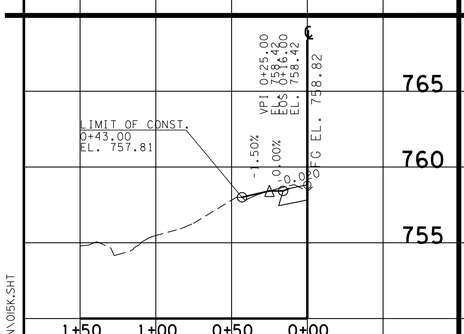
PVT. DR. RT. 1+07.72
McDONALD DRIVE TRACT 31



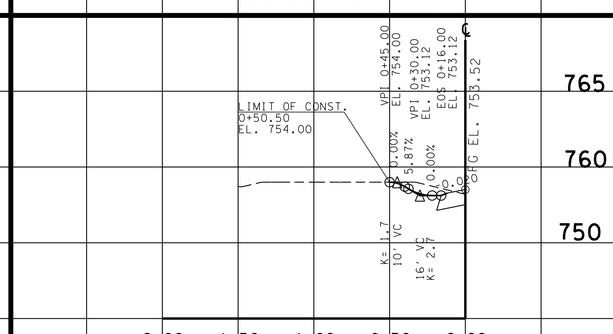
PVT. DR. LT. 1+42.47
GIVENS ROAD TRACT 36



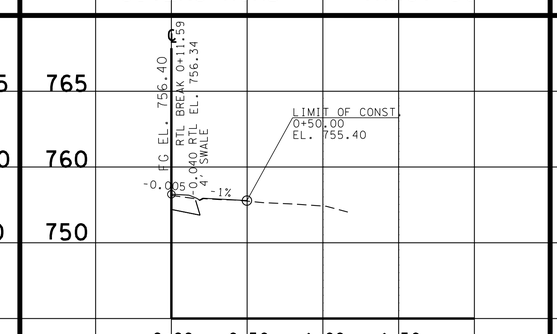
PVT. DR. LT. 2+00.00
SHADY REST ROAD TRACT 36



PVT. DR. LT. 1+08.34
HEATON DRIVE TRACT 64

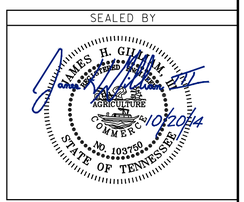


BUS. DR. RT. 1+91.86
MORRIS LANE TRACT 78



PVT. DR. RT. 3+26.90
HURRICANE CREEK RD. TRACT 79

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE OF PRIVATE DRIVES

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

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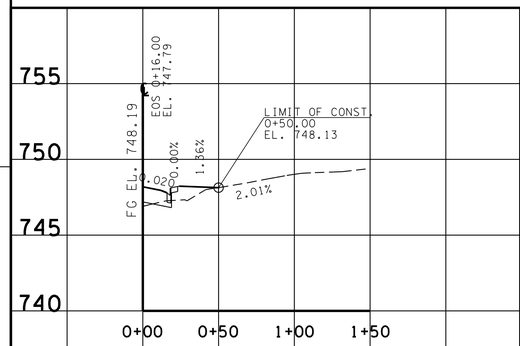
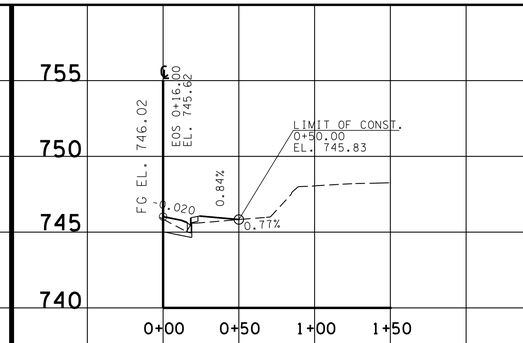
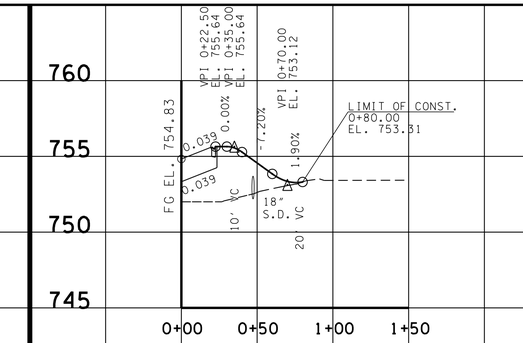
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.



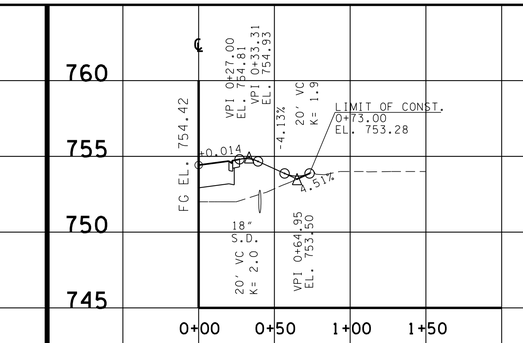
BUS. ENT. RT. 1+44.72
MORRIS HILL RD.
TRACT NO. 80



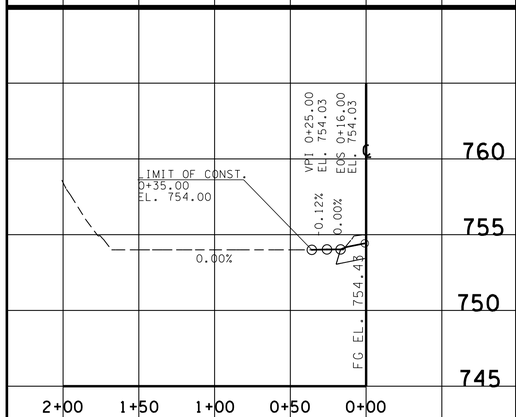
PVT. DR. RT. 2+27.88
MORRIS HILL RD. TRACT 83



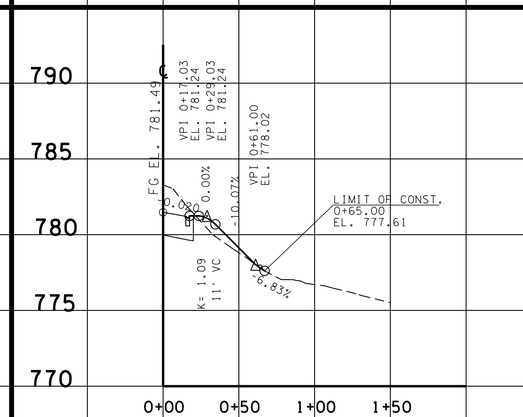
BUS. ENT. RT. 1+23.00
FULLER RD.
TRACT NO. 88



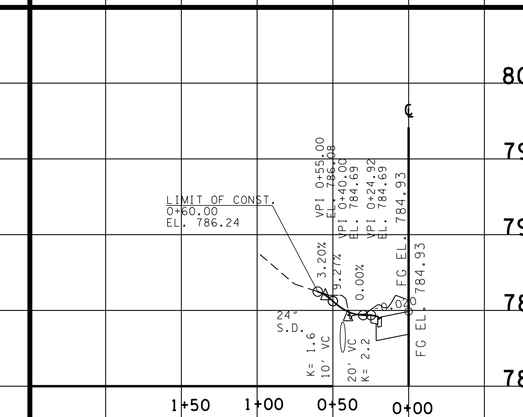
PVT. DR. RT. 1+76.44
FULLER RD.
TRACT NO. 90



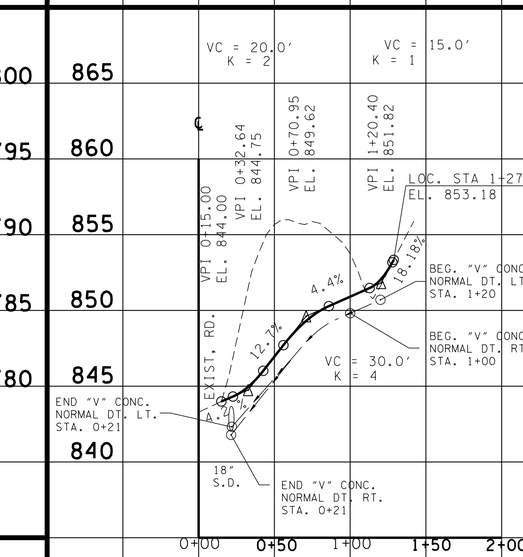
PVT. DR. RT. 3+10.00
FULLER RD.
TRACT NO. 93



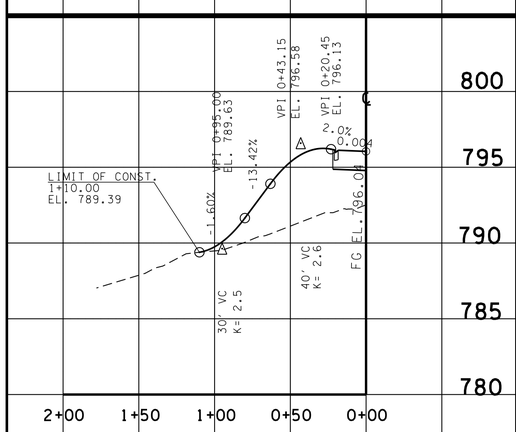
BUS. ENT. RT. 0+99.67
EVERETT DRIVE TRACT 124



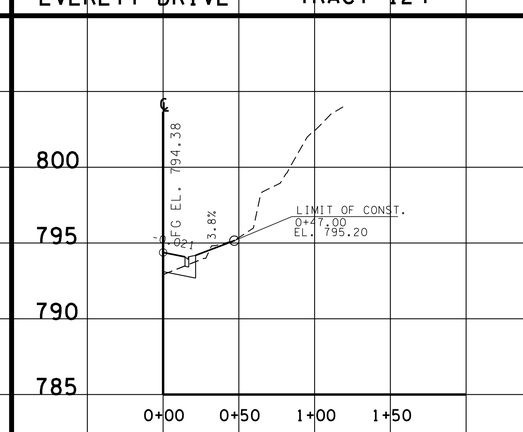
PVT. DR. LT. 1+25.00
EVERETT DRIVE TRACT 127



PVT. DR. RT. 3+87.18
BELL AIR RD.
TRACT NO. 146



PVT. DR. LT. 1+95.79
BANKS ROAD TRACT 135



PVT. DR. RT. 2+32.12
BANKS ROAD TRACT 139

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	15L
CONST.	2014	STP-320(4)	15L

REV. 05-19-2010: ADDED SHEET.

REV. 07-06-2011: ADDED BUS. DRIVE STA. 1+23.00, FULLER ROAD.

SEALED BY

JAMES H. GILLIAM
REGISTERED ENGINEER
DEPARTMENT OF AGRICULTURE
DEPARTMENT OF COMMERCE
NO. 103750
STATE OF TENNESSEE
8/21/2014

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE OF PRIVATE DRIVES

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

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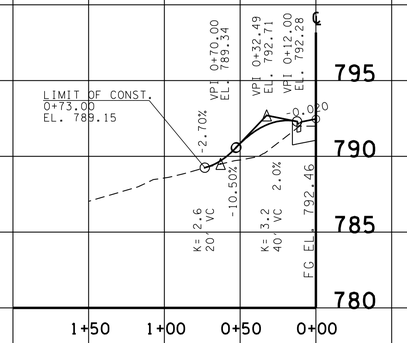
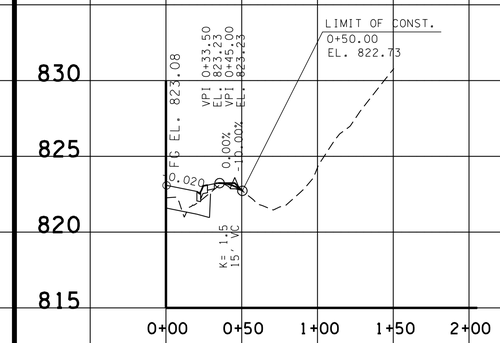
TENNESSEE D.O.T.
DESIGN DIVISION

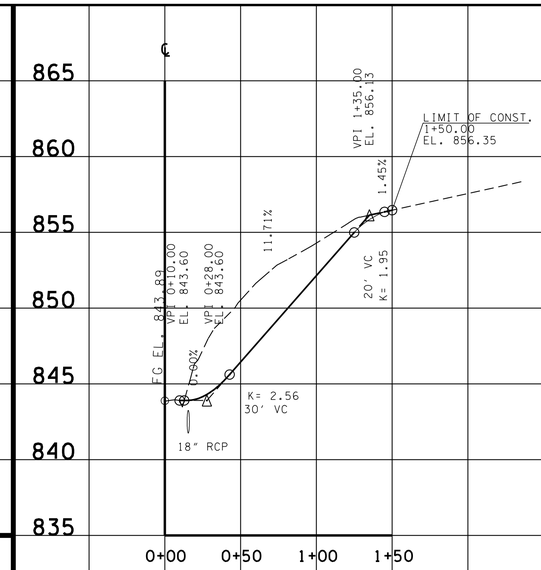
FILE NO.



PVT. DR. LT. 2+82.13
BANKS ROAD TRACT 135



PVT. DR. RT. 1+20.00
EVERETT 2 DRIVE TRACT 151

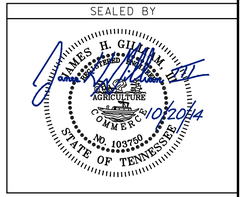


PVT. DR. RT. 2+50.00
EVERETT 2 DRIVE TRACT 137

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	15M
CONST.	2014	STP-320(4)	15M

REV 05-19-2010 :ADDED SHEET.

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE OF PRIVATE DRIVES

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

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

PROPOSED DRAINAGE STRUCTURE					
CODES	LOCATION	PROPOSED STRUCTURE	AREA	FLOW	COMMENTS
1	STA. 240+51.87 SR 320	8′ x 3′ RCBC	178 AC	RT TO LT	
2	STA. 281+72.24 SR 320	8′ x 4′ RCBC	360 AC	RT TO LT	INCL. AREAS 2,2A,2B,2C,2D
2C	FULLER ROAD STA. 0+68.29	18″ RCP	0.6 AC	RT TO LT	
2B	FULLER ROAD STA. 2+50.00	2 - 18″ RCP	5.5 AC	RT TO LT	
2D	BRENTLY WOODS STA.0+55.85	24″ RCP	7.8 AC	RT TO LT	
4	STA. 300+98.70 SR 320	38″ x 24″ HORCP	28.5 AC	RT TO LT	
4A	SPRINGVIEW DR. STA.0+23.59	29″ x 18″ RCP	10.6 AC	RT TO LT	
5	STA. 310+48.40 SR 320	8′ x 3′ RCBC	90.5 AC	RT TO LT	INCL. AREAS 6,7,9,11,12
7	EVERETT DR. #2 STA.0+65.00	6′ x 3′ RCBC	54.0 AC	RT TO LT	INCL. AREAS 9,11,12,12A
8	BELL-AIR RD. STA. 0+61.00	24″ RCP	8.0 AC	RT TO LT	
10	BANKS ROAD STA. 1+34.60	24″ RCP	8.5 AC	RT TO LT	INCLUDES AREA 8
11	STA. 327+79.32 SR 320	36″ RCP	29 AC	RT TO LT	INCLUDES AREA 9,12,12A

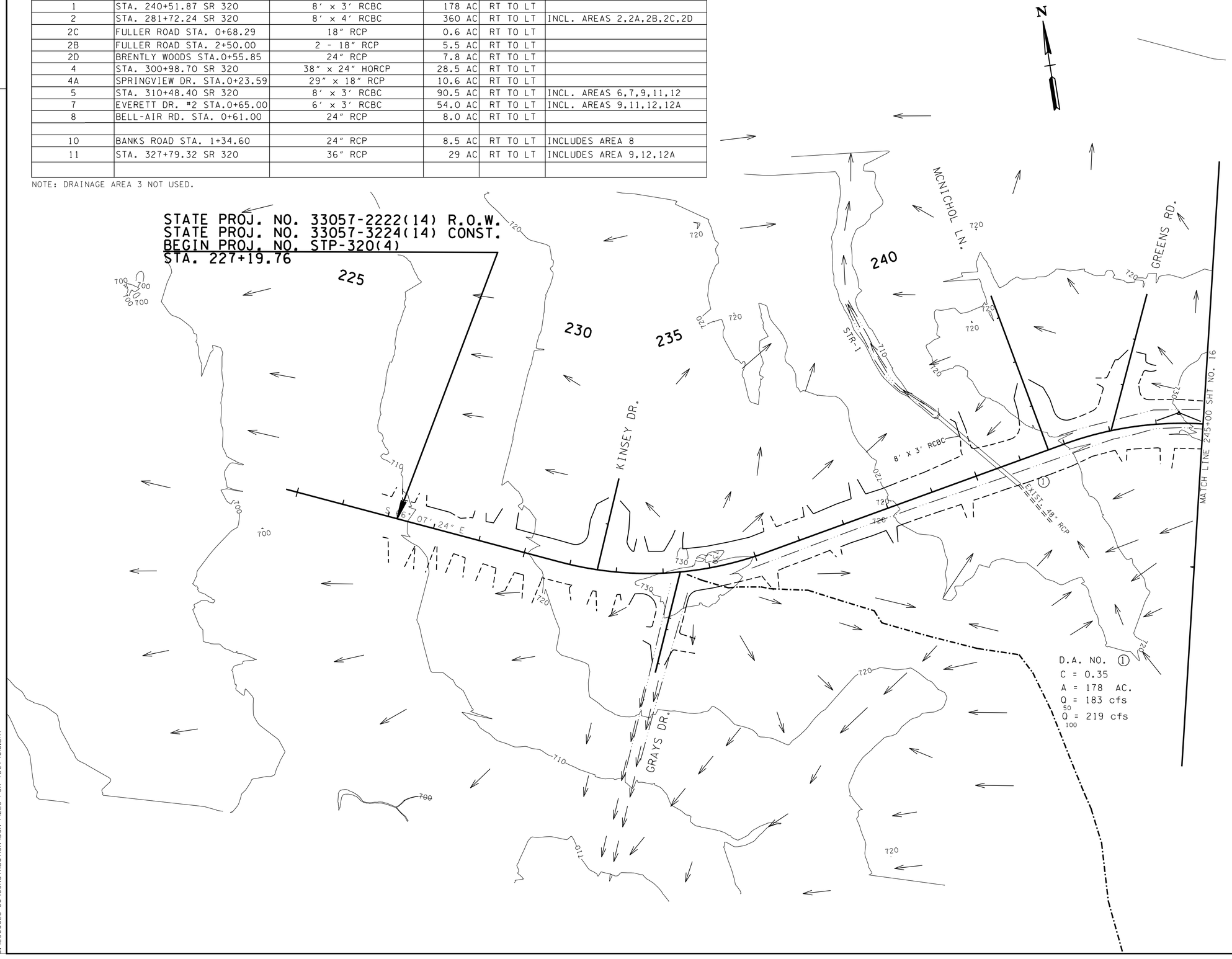
NOTE: DRAINAGE AREA 3 NOT USED.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	16
CONST.	2014	STP-320(4)	16

REVISION: 09-07-2007
--CHANGED BEGIN ROW PROJECT STATION.

REVISION: 05-19-2010
--REVISED DRAINAGE TABLE.

REVISION: 05-23-2013
--CHANGED DRAINAGE AREA FROM 3 TO 2D.
--ADDED NOTE "DRAINAGE AREA 3 NOT USED".
--REVISED DRAINAGE AREA AND PROPOSED STRUCTURE FOR DRAINAGE AREA 2.



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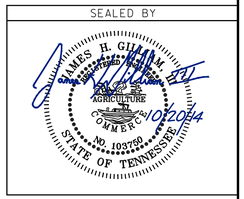

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DRAINAGE MAP

BEG. TO STA. 245+00

SCALE: 1″=100′

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	16A
CONST.	2014	STP-320(4)	16A

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

SEALED BY

JAMES H. GRAHAM
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 103750
STATE OF TENNESSEE
9/10/2014

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DRAINAGE MAP

STA. 245+00 TO STA. 269+00

SCALE: 1"=100'

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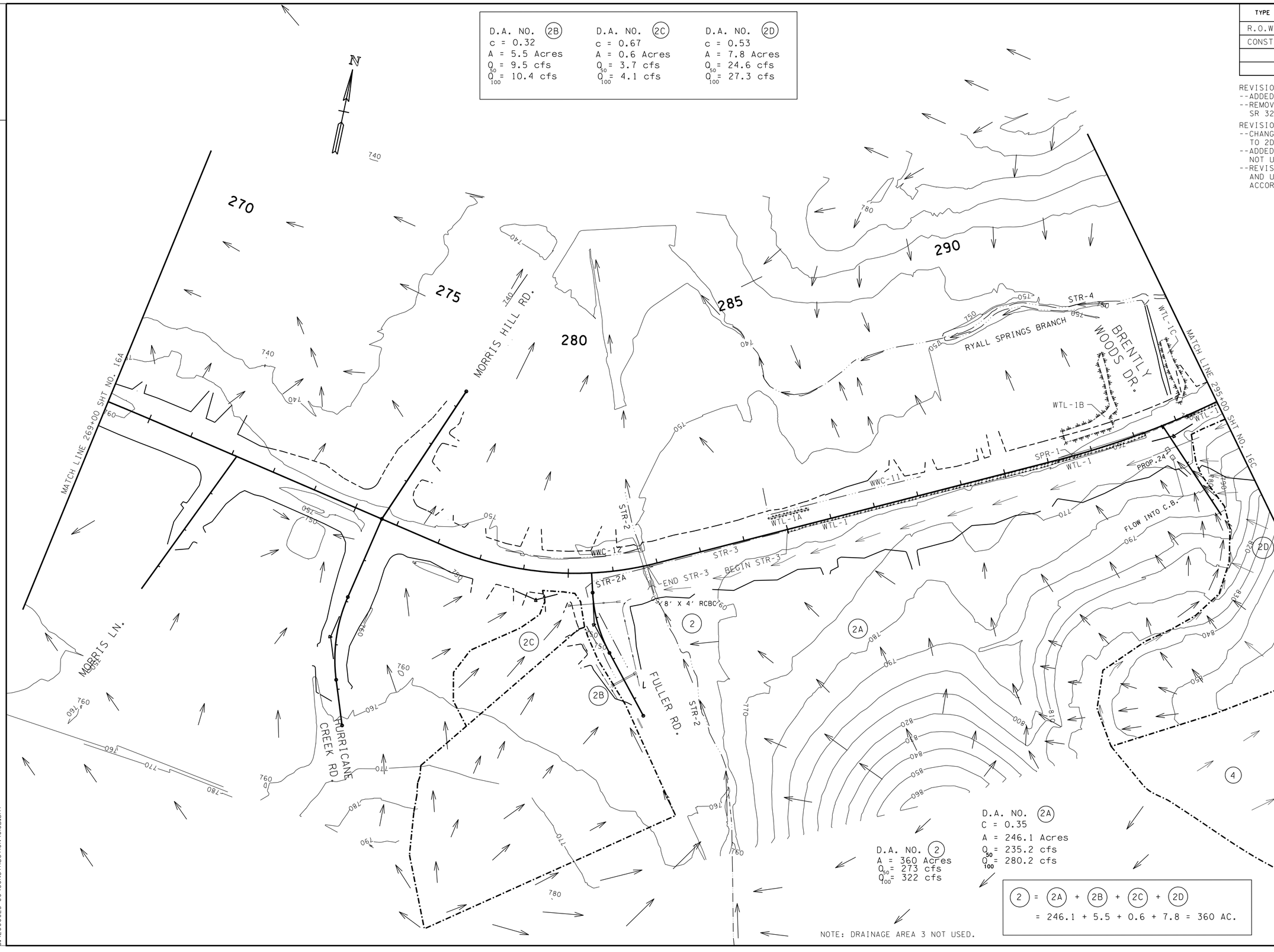
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	16B
CONST.	2014	STP-320(4)	16B

REVISION: 05-19-2010
--ADDED CROSS DRAIN FULLER RD.
--REMOVED CROSS DRAIN STA 294+26 SR 320.

REVISION: 05-23-2013
--CHANGED DRAINAGE AREA FROM 3 TO 2D.
--ADDED NOTE "DRAINAGE AREA 3 NOT USED".
--REVISED DRAINAGE AREA 2A AND UPDATED DRAINAGE AREA 2 ACCORDINGLY.



SEALED BY

JAMES H. GILLIAM, III
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 103790
STATE OF TENNESSEE
11/12/2014

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DRAINAGE MAP

STA. 269+10 TO STA. 295+00

SCALE: 1"=100'

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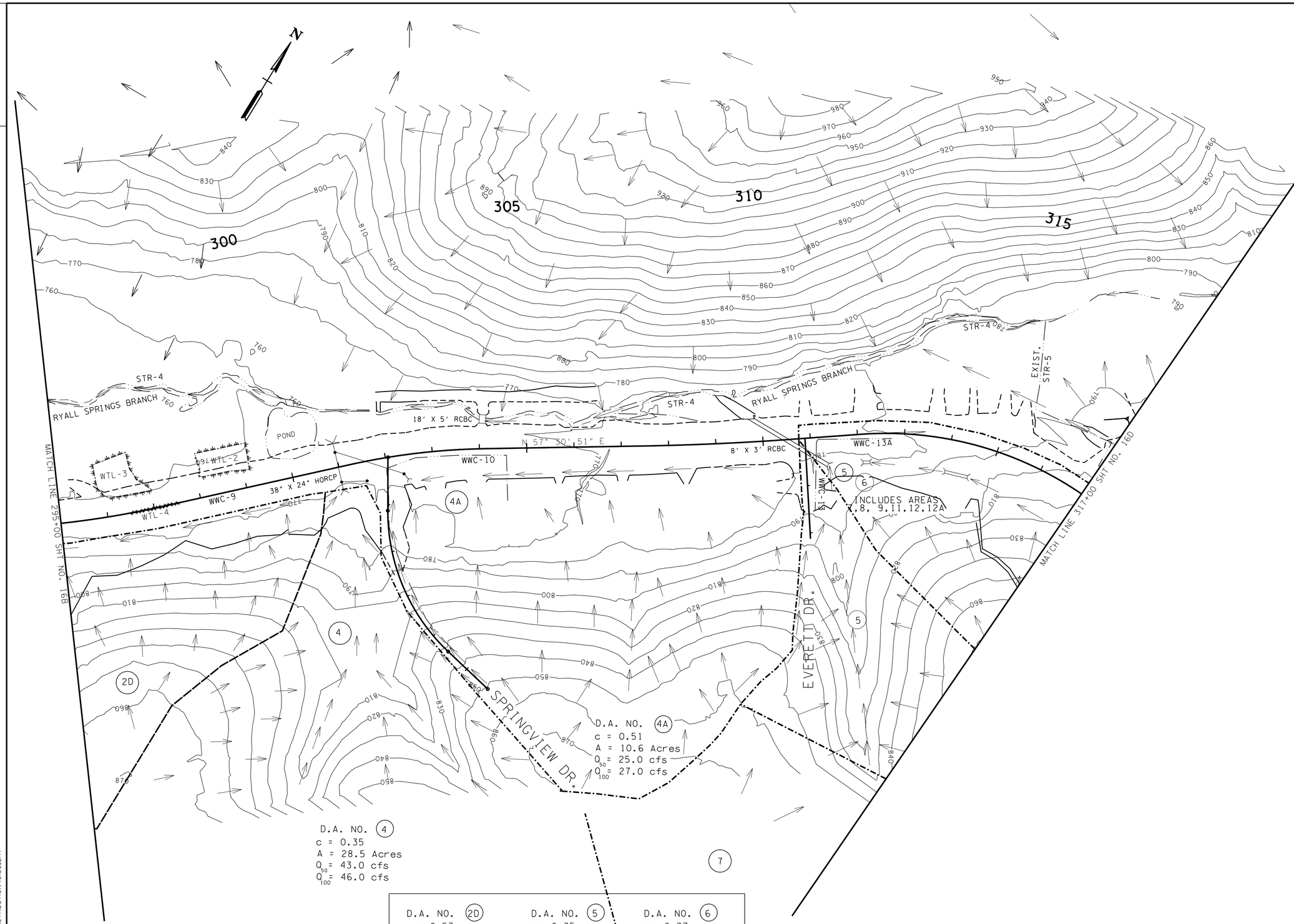
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	16C
CONST.	2014	STP-320(4)	16C

REVISION: 05-19-2010
--ADDED DRAINAGE AREAS.
--REVISED DRAINAGE AT SPRINGVIEW DRIVE.

REVISION: 09-27-2010
--ADDED BOX CULVERTS TO PVT DRIVES.

REVISION: 05-23-2013
--CHANGED DRAINAGE AREA FROM 3 TO 2D.
--ADDED NOTE "DRAINAGE AREA 3 NOT USED".
--DRAINAGE AREA 3 NOT USED.



D.A. NO. 2D	D.A. NO. 5	D.A. NO. 6
c = 0.53	c = 0.35	c = 0.37
A = 7.8 Acres	A = 23.0 Acres	A = 13.5 Acres
Q_{50} = 24.6 cfs	Q_{50} = 75.0 cfs	Q_{50} = 28.5 cfs
Q_{100} = 27.3 cfs	Q_{100} = 82.0 cfs	Q_{100} = 31.0 cfs

NOTE: DRAINAGE AREA 3 NOT USED.

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AGRICULTURE
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NO. 103790
STATE OF TENNESSEE
10/2014

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DRAINAGE MAP

STA. 295+00 TO STA. 317+00

SCALE: 1"=100'

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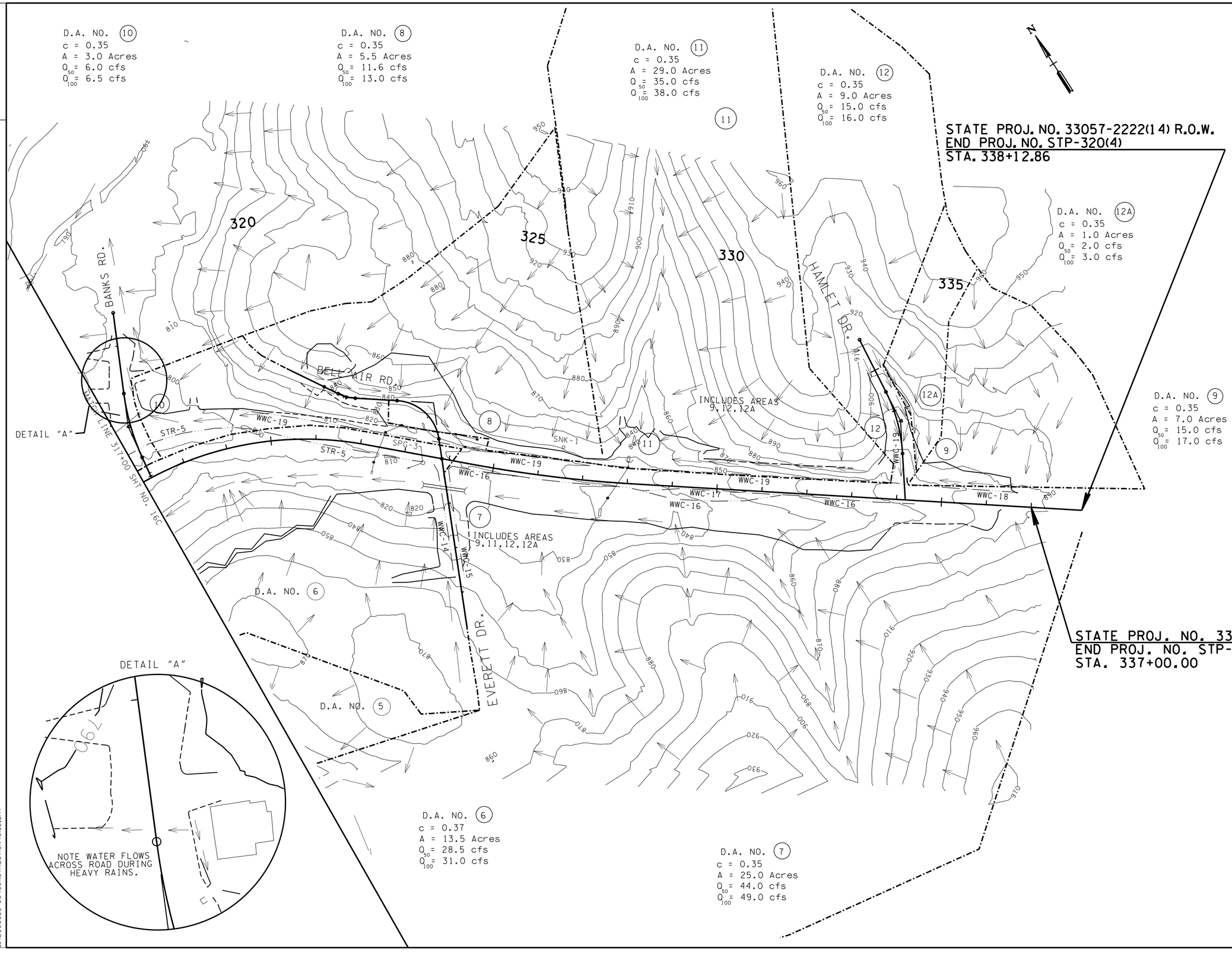
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	16D
CONST.	2014	STP-320(4)	16D

REVISION 04-10-2004:
--CHANGED END OF PROJECT R.O.W. STATION

REVISION 05-19-2010:
--ADDED LABLES.
--REVISED CROSS DRAINS AT CROSS ROADS.



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NO. 103750
STATE OF TENNESSEE
10/20/14

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DRAINAGE MAP

STA. 317+00 TO STA. END

SCALE: 1"=100'

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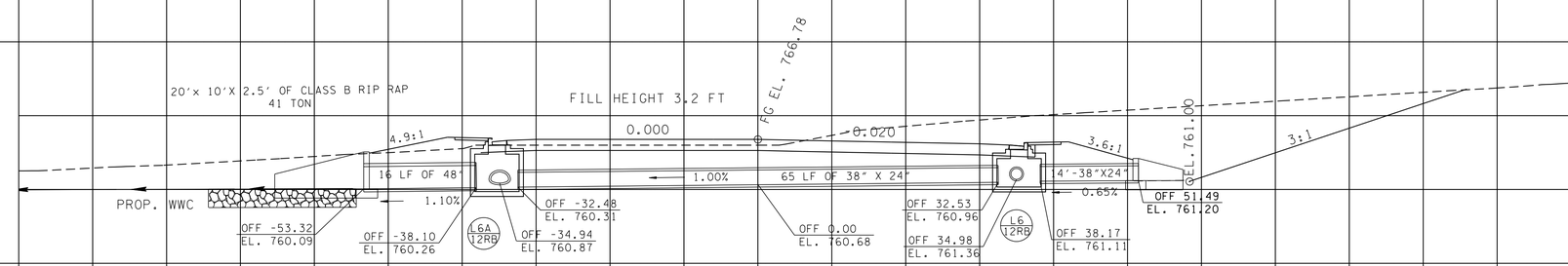
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	17
CONST.	2014	STP-320(4)	17

REV. 05-19-10:
--UPDATED DRAWING.
REV. 05-23-13:
--CHANGED CALC'S AND SIZE OF CULVERT AT STA. 281+72.24.

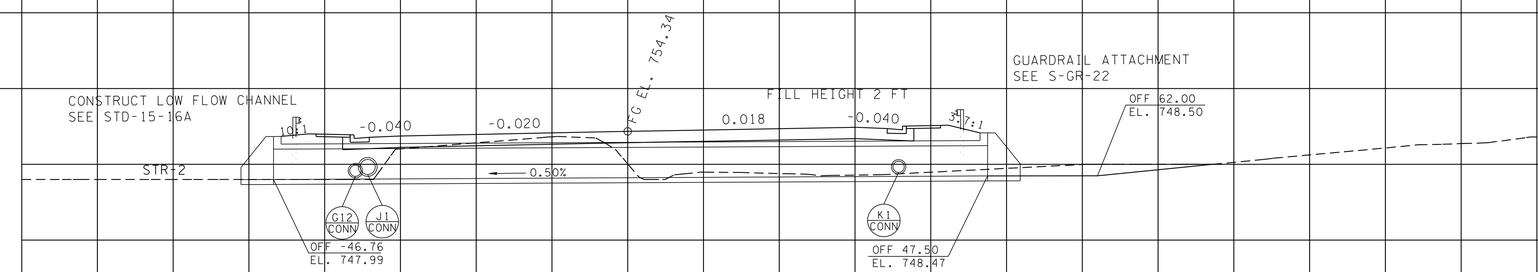
STA. 300+98.70
79 LF OF 38" X 24" HORCP &
16 LF OF 48" RCP (CLASS III)
W/2-NO. 12 CB'S
SKEW 89°40' RT
ENDWALLS REQD. : 2-TYPE "B" EW'S
STD. DWG. NOS. D-CB-12RB, D-PB-1
D-PE-9,9A,9C, D-PO-1
D.A. = 28 AC.
Q50 = 68 CFS
Q100 = 73 CFS
W.S. ELEV. (50) = 765.70
W.S. ELEV. (100) = 765.91



RIP-RAP SHALL BE EMBEDDED INTO THE SOIL SUCH THAT THE TOP OF THE RIP-RAP IS FLUSH WITH THE BOTTOM.

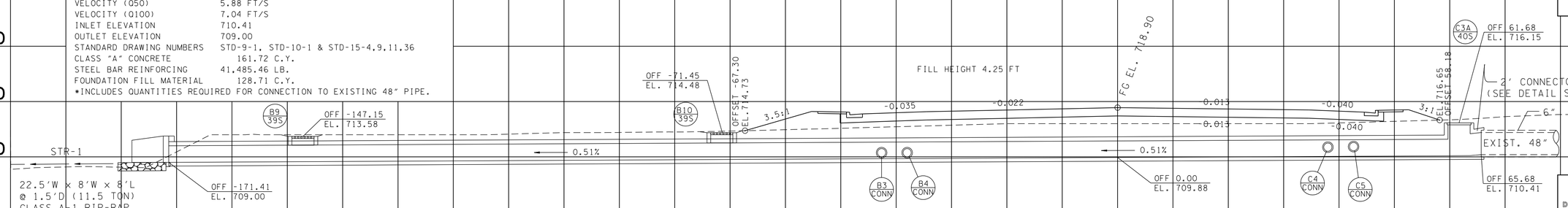
SR320
300+98.70

STATION 281+72.24
STRUCTURE 95 LF OF 8' X 4' RCBC
SKEW 85°32' RT
DRAINAGE AREA 360 AC.
DESIGN DISCHARGE (Q50) 273 CFS
DESIGN DISCHARGE (Q100) 322 CFS
OVERTOPPING ELEV. 755.10
ALLOWABLE HEADWATER ELEV. 754.00
Q50 HEADWATER ELEV. 753.94
Q100 HEADWATER ELEV. 754.87
VELOCITY (Q50) 11.44 FT/S
VELOCITY (Q100) 11.98 FT/S
INLET ELEVATION 748.47
OUTLET ELEVATION 747.99
STANDARD DRAWING NUMBERS STD-9-1,STD-10-1,STD-15-4,9,10,36
CLASS "A" CONCRETE 79.89 C.Y.
STEEL BAR REINFORCING 17,413.46 LB.
FOUNDATION FILL MATERIAL 55.20 C.Y.



SR320
281+72.24

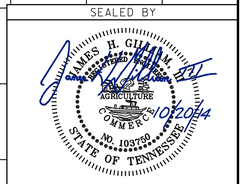
STATION 240+51.87
STRUCTURE 238 LF OF 8' X 3' RCBC
SKEW 60°11' RT
DRAINAGE AREA 178 AC.
DESIGN DISCHARGE (Q50) 183 CFS
DESIGN DISCHARGE (Q100) 219 CFS
OVERTOPPING ELEV. 718.34
ALLOWABLE HEADWATER ELEV. 716.84
Q50 HEADWATER ELEV. 715.40
Q100 HEADWATER ELEV. 715.88
VELOCITY (Q50) 5.88 FT/S
VELOCITY (Q100) 7.04 FT/S
INLET ELEVATION 710.41
OUTLET ELEVATION 709.00
STANDARD DRAWING NUMBERS STD-9-1, STD-10-1 & STD-15-4,9,11,36
CLASS "A" CONCRETE 161.72 C.Y.
STEEL BAR REINFORCING 41,485.46 LB.
FOUNDATION FILL MATERIAL 128.71 C.Y.
*INCLUDES QUANTITIES REQUIRED FOR CONNECTION TO EXISTING 48" PIPE.



RIP-RAP SHALL BE EMBEDDED INTO THE SOIL SUCH THAT THE TOP OF THE RIP-RAP IS FLUSH WITH THE BOTTOM.

SR320
240+51.87

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CULVERT CROSS-SECTIONS

SCALE: 1"=10' HORIZ.
1"=10' VERT.

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

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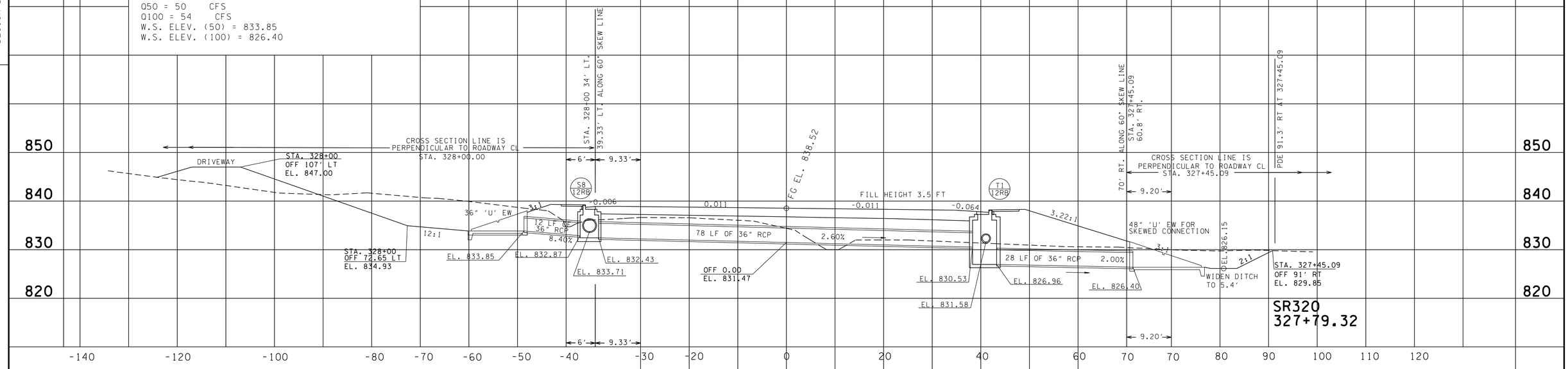
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	17A
CONST.	2014	STP-320(4)	17A

REVISION: 05-19-2010
--UPDATED DRAWING

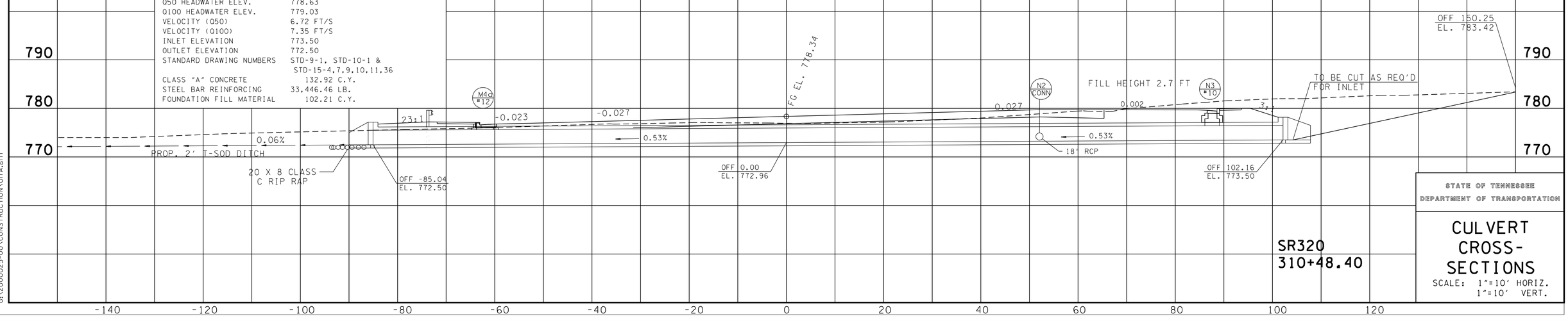
FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION

STA. 327+79.32
118 LF OF 36" RCP (CLASS III) W/2 CB'S
SKEW 60°20' LT
ENDWALLS REQD. : 2-TYPE "U" EW'S (36" & 48")
STD. DWG. NOS. D-CB-12RB, D-PB-1, D-PE-36A,36B,
D-PE-48A,48B
D.A. = 29 AC.
Q50 = 50 CFS
Q100 = 54 CFS
W.S. ELEV. (50) = 833.85
W.S. ELEV. (100) = 826.40



STATION	310+48.40
STRUCTURE	188 LF OF 8' X 3' RCBC
SKEW	34°57' RT
DRAINAGE AREA	90.5 AC.
DESIGN DISCHARGE (Q50)	200 CFS
DESIGN DISCHARGE (Q100)	214 CFS
OVERTOPPING ELEV.	779.44
ALLOWABLE HEADWATER ELEV.	779.03
Q50 HEADWATER ELEV.	778.63
Q100 HEADWATER ELEV.	779.03
VELOCITY (Q50)	6.72 FT/S
VELOCITY (Q100)	7.35 FT/S
INLET ELEVATION	773.50
OUTLET ELEVATION	772.50
STANDARD DRAWING NUMBERS	STD-9-1, STD-10-1 & STD-15-4,7,9,10,11,36
CLASS "A" CONCRETE	132.92 C.Y.
STEEL BAR REINFORCING	33,446.46 LB.
FOUNDATION FILL MATERIAL	102.21 C.Y.



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STATE OF TENNESSEE
10/20/14

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CULVERT CROSS-SECTIONS

SCALE: 1"=10' HORIZ.
1"=10' VERT.

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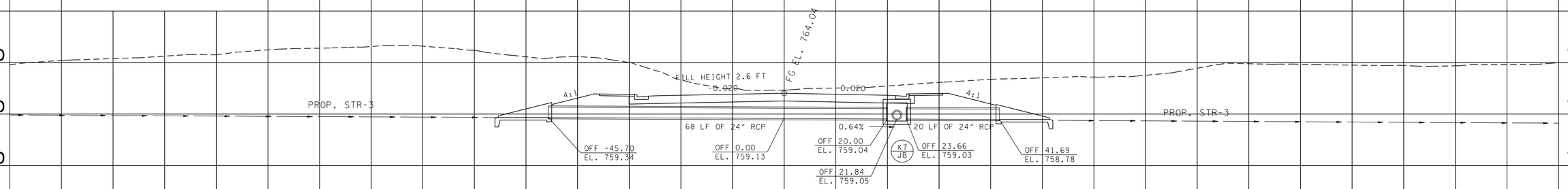
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	17B
CONST.	2014	STP-320(4)	17B

REVISION: 05-19-2010
--REVISED SHEET.

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION

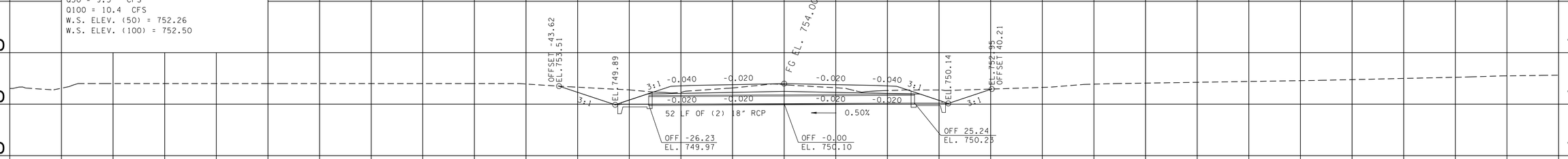
STA. 0+56.00
88 LF OF 24" RCP (CLASS III)
SKEW 78°33' LT
ENDWALLS REQD. : 2-TYPE "U" EW'S
STD. DWG. NOS. D-JBS-1, D-PB-1,
D-PE-24A,24B
D.A. = 7.8 AC.
Q50 = 13.0 CFS
Q100 = 14.5 CFS
W.S. ELEV. (50) = 762.10
W.S. ELEV. (100) = 762.80



BRENTLY WOODS
0+56.00

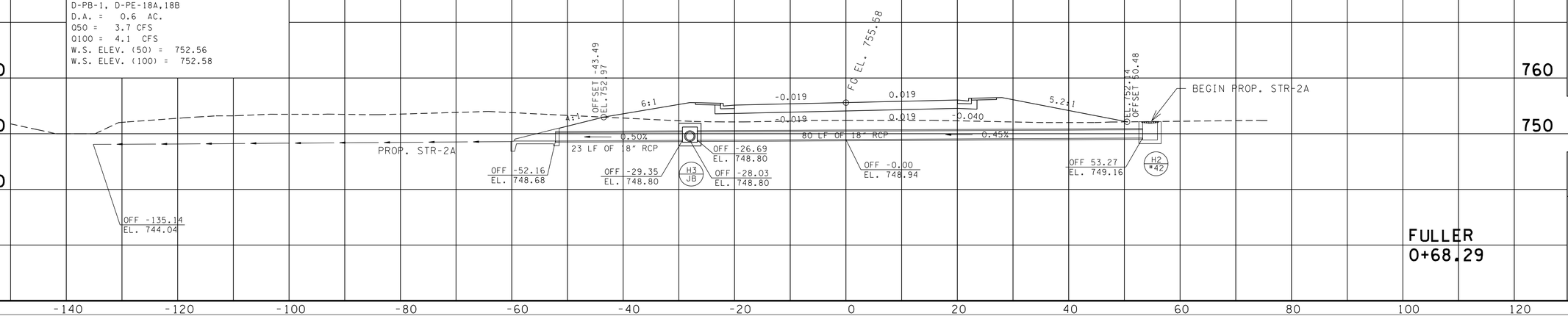
STA. 2+50.00
104 LF OF 18" RCP (CLASS III)
SKEW 90°
ENDWALLS REQD. : 4-TYPE "U" EW
STD. DWG. NOS. D-PB-1, D-PE-18A,18B

D.A. = 5.5 AC.
Q50 = 9.5 CFS
Q100 = 10.4 CFS
W.S. ELEV. (50) = 752.26
W.S. ELEV. (100) = 752.50



FULLER RD.
2+50.00

STA. 0+68.29
103 LF OF 18" RCP (CLASS III)
W/1-NO.42 CB & 1-NO.1 JB
SKEW 87°08' LT
ENDWALLS REQD. : 1-TYPE "U" EW
STD. DWG. NOS. D-CB-42S, D-JBS-1,
D-PB-1, D-PE-18A,18B
D.A. = 0.6 AC.
Q50 = 3.7 CFS
Q100 = 4.1 CFS
W.S. ELEV. (50) = 752.56
W.S. ELEV. (100) = 752.58



FULLER
0+68.29

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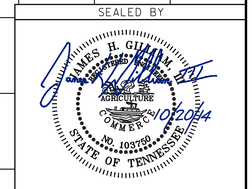

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CULVERT CROSS-SECTIONS

SCALE: 1"=10' HORIZ.
1"=10' VERT.

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-140 -120 -100 -80 -60 -40 -20 0 20 40 60 80 100 120

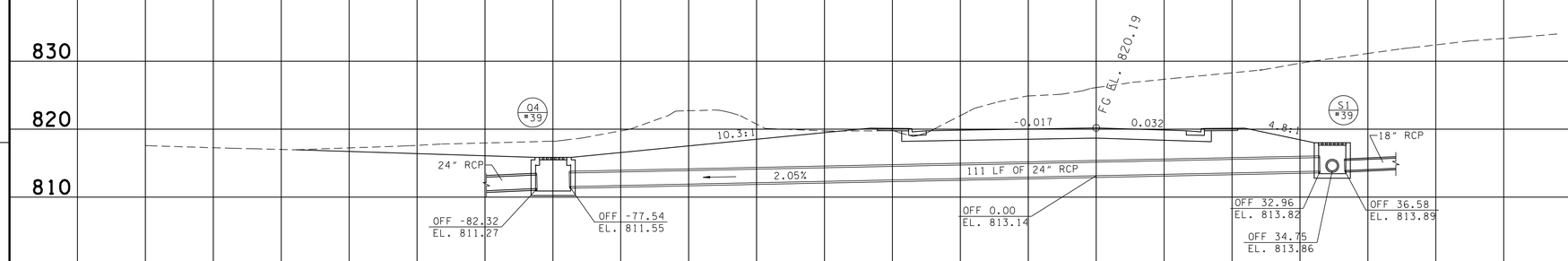
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	17C
CONST.	2014	STP-320(4)	17C

REV. 05-19-2010:
--REVISED SHEET.

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION

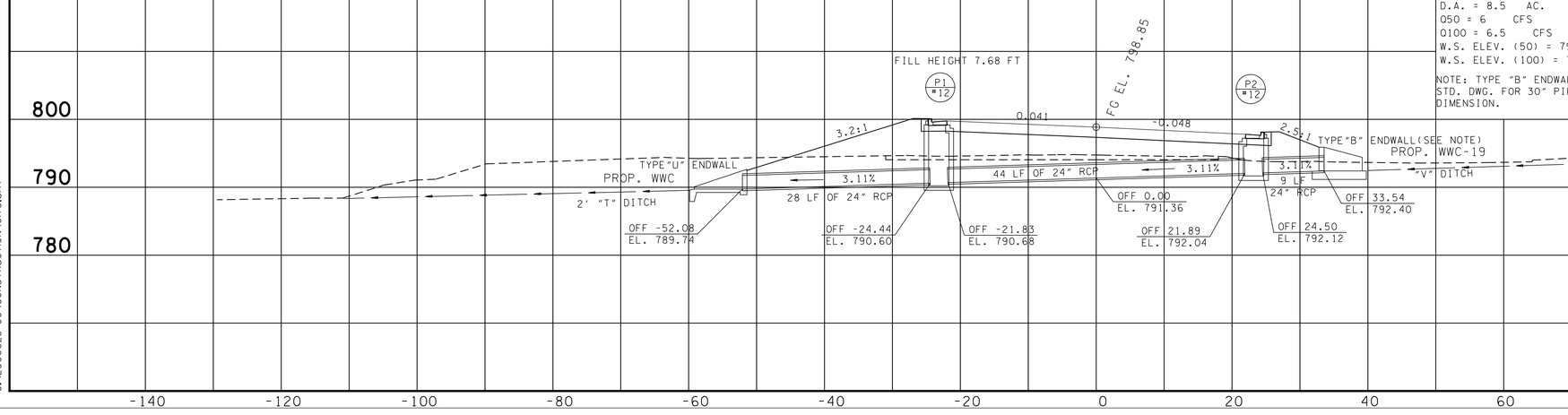
BELL AIR ROAD
0+61.00



STA. 0+61.00
111 LF OF 24" RCP (CLASS III)
SKEW 62°16' LT
ENDWALLS REQD. : 2-NO.39 CB'S
STD. DWG. NOS. D-PB-1.
D-CB-39S, D-CB-39SC
D.A. = 8 AC.
Q50 = 11.6 CFS
Q100 = 13.0 CFS
W.S. ELEV. (50) = 816.95
W.S. ELEV. (100) = 817.00

STA. 1+34.60
81 LF OF 24" RCP (CLASS III) W/2-NO. 12 CB'S
SKEW 65°48' RT
ENDWALLS REQD. : 1-TYPE "B" & 1-TYPE "U"
STD. DWG. NOS. D-CB-12S, D-PB-1,
D-PE-9,9A,9C, D-PE-24A,24B
D.A. = 8.5 AC.
Q50 = 6 CFS
Q100 = 6.5 CFS
W.S. ELEV. (50) = 794.96
W.S. ELEV. (100) = 795.09

NOTE: TYPE "B" ENDWALL DIMENSIONS TO MATCH SIZES IN STD. DWG. FOR 30" PIPE BUT USE 24" PIPE AND OPENING DIMENSION.



BANKS RD.
1+34.60

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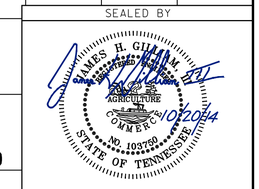

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CULVERT CROSS-SECTIONS

SCALE: 1"=10' HORIZ.
1"=10' VERT.

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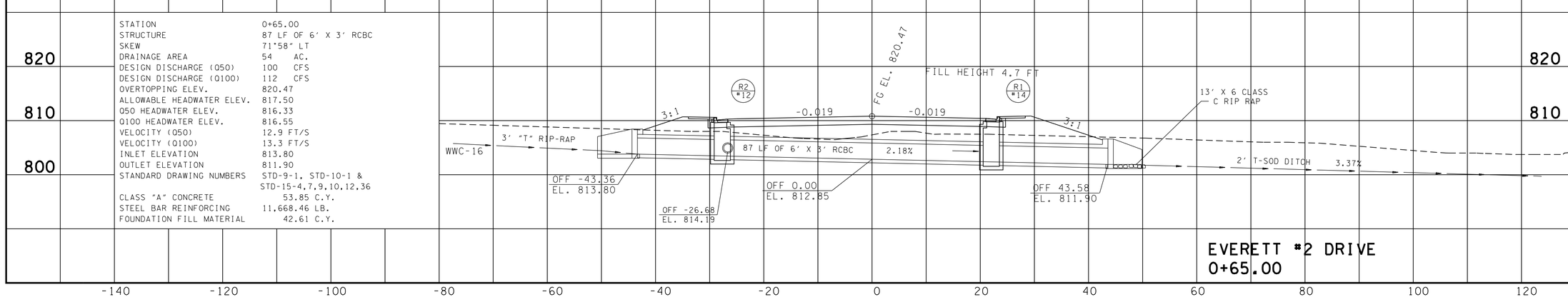
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	17D
CONST.	2014	STP-320(4)	17D

REV: 05-19-2010:
--REVISED SHEET.

STATION	0+65.00
STRUCTURE	87 LF OF 6' X 3' RCBC
SKEW	71°58" LT
DRAINAGE AREA	54 AC.
DESIGN DISCHARGE (Q50)	100 CFS
DESIGN DISCHARGE (Q100)	112 CFS
OVERTOPPING ELEV.	820.47
ALLOWABLE HEADWATER ELEV.	817.50
Q50 HEADWATER ELEV.	816.33
Q100 HEADWATER ELEV.	816.55
VELOCITY (Q50)	12.9 FT/S
VELOCITY (Q100)	13.3 FT/S
INLET ELEVATION	813.80
OUTLET ELEVATION	811.90
STANDARD DRAWING NUMBERS	STD-9-1, STD-10-1 & STD-15-4,7,9,10,12,36
CLASS "A" CONCRETE	53.85 C.Y.
STEEL BAR REINFORCING	11,668.46 LB.
FOUNDATION FILL MATERIAL	42.61 C.Y.



EVERETT #2 DRIVE
0+65.00

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STATE OF TENNESSEE
5/10/2014

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CULVERT CROSS-SECTIONS

SCALE: 1"=10' HORIZ.
1"=10' VERT.

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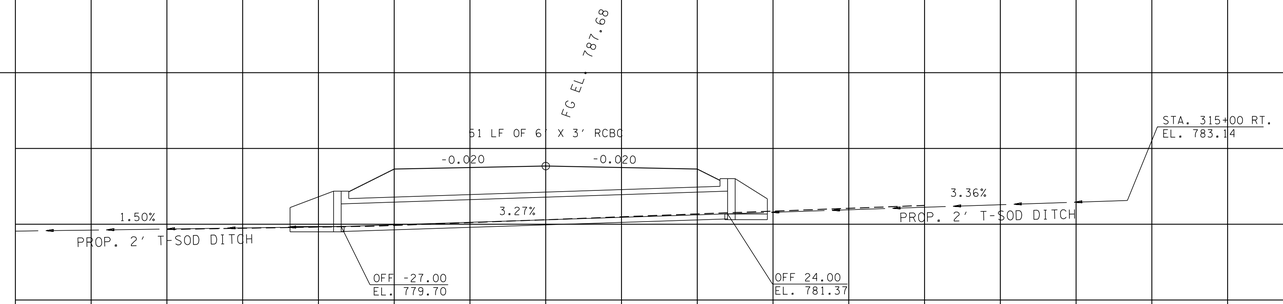
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	17E
CONST.	2014	STP-320(4)	17E

FILE NO.

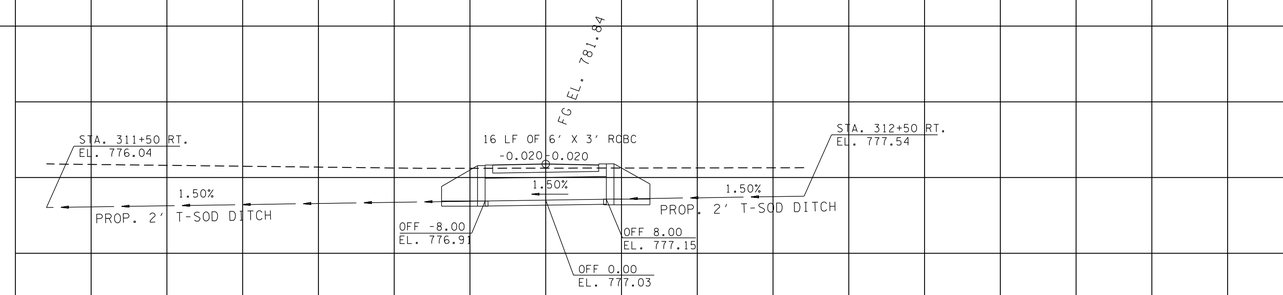
TENNESSEE D.O.T.
DESIGN DIVISION

STATION 0+70.15 (BUS. ENT. STA. 314+23.23 RT.)
STRUCTURE 51 LF OF 6' X 3' RCBC
SKEW 78°40' LT
DRAINAGE AREA 66 AC.
DESIGN DISCHARGE (Q50) 125 CFS
DESIGN DISCHARGE (Q100) 138 CFS
OVERTOPPING ELEV. 787.68
ALLOWABLE HEADWATER ELEV. 787.10
Q50 HEADWATER ELEV. 785.24
Q100 HEADWATER ELEV. 785.61
VELOCITY (Q50) 14.6 FT/S
VELOCITY (Q100) 14.9 FT/S
INLET ELEVATION 781.37
OUTLET ELEVATION 779.70
STANDARD DRAWING NUMBERS STD-9-1, STD-10-1 & STD-15-4,9,10,12,35
CLASS "A" CONCRETE 32.27 C.Y.
STEEL BAR REINFORCING 8,151.46 LB.
FOUNDATION FILL MATERIAL 26.17 C.Y.



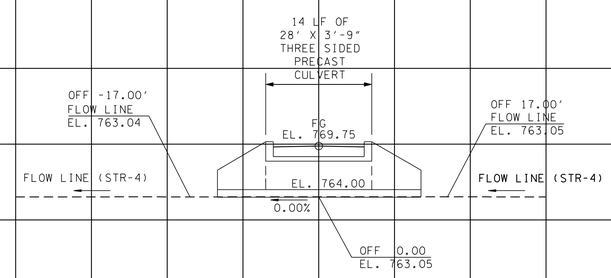
PRIVATE DRIVE STA. 314+23.23 RT.
0+70.15

STATION 0+60.55 (PVT. DR. STA. 312+15.91 RT.)
STRUCTURE 16 LF OF 6' X 3' RCBC
SKEW 87°31' RT
DRAINAGE AREA 66 AC.
DESIGN DISCHARGE (Q50) 125 CFS
DESIGN DISCHARGE (Q100) 138 CFS
OVERTOPPING ELEV. 781.83
ALLOWABLE HEADWATER ELEV. 781.40
Q50 HEADWATER ELEV. 781.04
Q100 HEADWATER ELEV. 781.40
VELOCITY (Q50) 10.6 FT/S
VELOCITY (Q100) 19.9 FT/S
INLET ELEVATION 777.15
OUTLET ELEVATION 776.91
STANDARD DRAWING NUMBERS STD-9-1, STD-10-1 & STD-15-4,9,10,12,35
CLASS "A" CONCRETE 13.12 C.Y.
STEEL BAR REINFORCING 3,340.46 LB.
FOUNDATION FILL MATERIAL 9.75 C.Y.



PRIVATE DRIVE STA. 312+15.91 RT.
0+60.55

STATION 0+62.75 (PVT. DR. STA. 304+06.60 LT. SR-320)
STRUCTURE 14 LF OF 28'x3'-9" THREE SIDED PRECAST CULVERT
SKEW 90°00"
DRAINAGE AREA 1.32 SQ. MI
DESIGN DISCHARGE (5 YR) 323.20 CFS
5 YR BACKWATER 0.11 FT. AT EL. 767.62
5 YR VELOCITY 4.03 FT/S
100 YR DISCHARGE 620.90 CFS AT EL. 769.30
INLET ELEVATION 764.00
OUTLET ELEVATION 764.00
APPROACH OVERTOPPING ELE. 766.60
STANDARD DRAWING NUMBERS SEE MANUFACTURER SPECS
CLASS "A" CONCRETE N/A C.Y.
STEEL BAR REINFORCING N/A LB.



NOTE:
DESIGN PROVIDED BY TDOT.

PRIVATE DRIVE STA. 304+06.60 LT.
0+62.75

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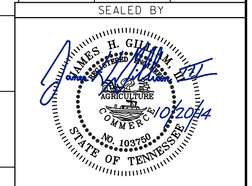

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CULVERT CROSS-SECTIONS

SCALE: 1"=10' HORIZ.
1"=10' VERT.

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2006	STP-320(4)	18
CONST.	2014	STP-320(4)	18

REVISION: 05-19-2010
--REVISED SHEET

EROSION PREVENTION AND SEDIMENT CONTROL NOTES

STREAM/WETLAND

(1) 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.

(2) A 30 FOOT NATURAL RIPARIAN BUFFER ZONE ADJACENT TO AND ON BOTH SIDES OF THE RECEIVING STREAM SHALL BE PRESERVED, TO THE MAXIMUM EXTENT PRACTICABLE, DURING CONSTRUCTION ACTIVITIES AT THE SITE. BUFFER ZONES ARE NOT SEDIMENT CONTROL MEASURES AND SHOULD NOT BE RELIED UPON AS PRIMARY SEDIMENT CONTROL MEASURES. THE RIPARIAN BUFFER ZONE SHALL BE ESTABLISHED BETWEEN THE TOP OF THE STREAM BANK AND THE DISTURBED CONSTRUCTION AREA. 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. EVERY ATTEMPT SHALL BE MADE FOR CONSTRUCTION ACTIVITIES NOT TO TAKE PLACE WITHIN THE BUFFER ZONES. BEST MANAGEMENT PRACTICES (BMPS) PROVIDING EQUIVALENT PROTECTION AS THE NATURAL RIPARIAN ZONE MAY BE USED. A JUSTIFICATION FOR USE AND DESIGN EQUIVALENCY SHALL BE DOCUMENTED WITHIN THE SWPPP. THE ENVIRONMENTAL AND DESIGN DIVISIONS SHALL REVIEW AND APPROVE THIS REVISION OF THE SWPPP BEFORE DISTURBANCE OF THE SITE PROCEEDS, UNLESS PREVIOUSLY EXEMPT IN THE NPDES CONSTRUCTION GENERAL PERMIT. WHERE ISSUED, ARAP/401 REQUIREMENTS WILL PREVAIL IF IN CONFLICT WITH THESE BUFFER ZONE REQUIREMENTS.

KNOWN EXCEPTIONAL TENNESSEE WATERS

(3) FOR PROJECTS THAT DISCHARGE INTO KNOWN EXCEPTIONAL TENNESSEE WATERS OR WATERS IMPAIRED BY SILTATION, AN OUTFALL IN A DRAINAGE AREA OF 5 ACRES OR MORE, 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. 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, UNLESS PREVIOUSLY EXEMPT IN THE NPDES CONSTRUCTION GENERAL PERMIT.

(4) FOR PROJECTS THAT DISCHARGE INTO KNOWN EXCEPTIONAL TENNESSEE WATERS OR WATERS IMPAIRED BY SILTATION, A 60 FOOT NATURAL RIPARIAN BUFFER ZONE ADJACENT TO AND ON BOTH SIDES OF THE RECEIVING STREAM WITH THIS DESIGNATION SHALL BE PRESERVED, TO THE MAXIMUM EXTENT PRACTICABLE, DURING CONSTRUCTION ACTIVITIES AT THE SITE. BUFFER ZONES ARE NOT SEDIMENT CONTROL MEASURES AND SHOULD NOT BE RELIED UPON AS PRIMARY SEDIMENT CONTROL MEASURES. THE RIPARIAN BUFFER ZONE SHALL BE ESTABLISHED BETWEEN THE TOP OF THE STREAM BANK AND THE DISTURBED CONSTRUCTION AREA. 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. EVERY ATTEMPT SHALL BE MADE FOR CONSTRUCTION ACTIVITIES NOT TO TAKE PLACE WITHIN THE BUFFER ZONES. BEST MANAGEMENT PRACTICES (BMPS) PROVIDING EQUIVALENT PROTECTION AS THE NATURAL RIPARIAN ZONE MAY 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 CONSTRUCTION GENERAL PERMIT. WHERE ISSUED, ARAP/401 REQUIREMENTS WILL PREVAIL IF IN CONFLICT WITH THESE BUFFER ZONE REQUIREMENTS.

NPDES

(5) 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 BASIC EPSC DEVICES ON THE EPSC PLAN CONTAINED IN THE APPROVED SWPPP.

(6) THE EPSC MEASURES AND/OR PLAN SHALL BE MODIFIED AS NECESSARY SO THAT THEY ARE EFFECTIVE AT ALL TIMES THROUGHOUT THE COURSE OF THE PROJECT.

(7) THE ACCEPTED EPSC PLAN SHALL REQUIRE THAT EPSC MEASURES BE IN PLACE BEFORE CLEARING, GRUBBING, EXCAVATION, GRADING, CUTTING OR FILLING OCCURS, EXCEPT AS SUCH WORK MAY BE NECESSARY TO INSTALL EPSC MEASURES, INCLUDING WITHOUT LIMITATION AS FOLLOWS:

A. INITIAL CLEARING AND GRUBBING SHALL BE LIMITED TO THAT NECESSARY FOR THE INSTALLATION OF APPLICABLE EPSC MEASURES IN ACCORDANCE WITH THE ACCEPTED EPSC PLAN INCORPORATED INTO THE SWPPP.

B. NO OTHER CLEARING AND GRUBBING OPERATIONS SHALL BE STARTED BEFORE APPLICABLE EPSC MEASURES ARE IN PLACE IN ACCORDANCE WITH THE ACCEPTED EPSC PLAN INCORPORATED INTO THE SWPPP.

C. NO CULVERT OR BRIDGE CONSTRUCTION SHALL BE STARTED BEFORE APPLICABLE EPSC MEASURES ARE IN PLACE IN ACCORDANCE WITH THE ACCEPTED EPSC PLAN INCORPORATED INTO THE SWPPP.

D. NO GRADING, EXCAVATION, CUTTING, FILLING, OR OTHER EARTHWORK SHALL BE STARTED BEFORE EPSC MEASURES ARE IN PLACE IN ACCORDANCE WITH THE ACCEPTED EPSC PLAN INCORPORATED INTO THE SWPPP.

(8) PERMANENT EPSC MEASURES SHALL BE INITIATED WITHIN 14 CALENDAR DAYS AFTER FINAL GRADING OF ANY SEQUENCE OR PHASE. TEMPORARY OR PERMANENT STABILIZATION SHALL BE INITIATED WITHIN 14 CALENDAR DAYS AFTER FINAL GRADING OR WHEN CONSTRUCTION ACTIVITIES ON A PORTION OF THE SITE ARE TEMPORARILY CEASED AND EARTH DISTURBING ACTIVITIES WILL NOT RESUME UNTIL AFTER 14 CALENDAR DAYS. PERMANENT STABILIZATION WITH PERENNIAL VEGETATION OR OTHER PERMANENTLY STABLE NON-ERODING SURFACE SHALL REPLACE ANY TEMPORARY MEASURES AS SOON AS PRACTICABLE. UNPACKED GRAVEL CONTAINING FINES (SILT AND CLAY SIZED PARTICLES) OR CRUSHER-RUN WILL NOT BE CONSIDERED A NON-ERODIBLE SURFACE.

(9) STEEP SLOPES (A NATURAL OR CREATED SLOPE OF 35% GRADE (2.8H:1V) OR GREATER REGARDLESS OF HEIGHT) SHALL BE TEMPORARILY STABILIZED NO LATER THAN 7 CALENDAR DAYS AFTER CONSTRUCTION ACTIVITY ON THE SLOPE HAS TEMPORARILY OR PERMANENTLY CEASED.

(10) FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION SUPPORT ACTIVITIES; TDOT PROJECTS ARE COVERED UNDER THE "WASTE AND BORROW" MANUAL PER THE SSWMP.

(11) 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.

UTILITY RELOCATION

(12) RAIN WATER WHICH COLLECTS IN THE UTILITY TRENCH SHALL BE PUMPED INTO A DEWATERING STRUCTURE OR SEDIMENT FILTER BAG AND MAINTAINED.

(13) SILT FENCE SHALL BE INSTALLED ON THE DOWNSTREAM SIDE OF STOCKPILED SOIL. TRENCHING ACROSS WET WEATHER CONVEYANCES SHALL BE DONE DURING NO FLOW CONDITIONS AND STABILIZED BY THE END OF THE WORK DAY

(14) UTILITY CROSSINGS FOR PERENNIAL STREAMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH TDOT STANDARDS AND NO WORK SHALL BE CONDUCTED IN FLOWING WATERS. TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC) REGULATIONS APPLY TO UTILITIES IN THIS PROJECT IN REGARD TO EROSION PREVENTION AND SEDIMENT CONTROL (EPSC). THE STATE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE STORM WATER POLLUTION PREVENTION PLANS (SWPPP).

(15) IT IS THE RESPONSIBILITY OF THE STATE UTILITY CONTRACTOR INSTALLER TO PROTECT FROM EROSION EXPOSED EARTH RESULTING FROM THEIR OPERATIONS AND TO PROVIDE FOR CONTAINMENT OF SEDIMENT THAT MAY RESULT FROM THEIR WORK. PRIOR TO BEGINNING WORK, ADEQUATE 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 EROSION. AT NO TIME SHALL EXPOSED EARTH RESULTING FROM THEIR OPERATIONS HAVE UNPROTECTED ACCESS TO FLOWING OFF-SITE AND ENTERING WATERS OF THE STATE/U.S.

(16) FOR THE INSTALLATION OF BURIED UTILITIES (PIPES AND CABLES), TRENCHES SHALL BE BACKFILLED DAILY AS CONSTRUCTION PROCEEDS. BACKFILLED TRENCHES SHALL BE SEEDED AND MULCHED OR SODDED DAILY IF POSSIBLE, BUT NO LATER THAN SEVEN DAYS AFTER BEING BACKFILLED. ANY TEMPORARY SPOIL OF EXCAVATED EARTH SHALL BE LOCATED WITHIN TDOT EROSION PREVENTION AND SEDIMENT CONTROL (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 SUCH TIME AS THE TRENCH IS BACKFILLED.

(17) IN REGARD TO EROSION PREVENTION AND SEDIMENT CONTROL (EPSC), TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC) REGULATIONS APPLY TO THE STATE UTILITY CONTRACTORS IN THIS PROJECT, THEREFORE, THE STATE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE STORM WATER POLLUTIONS PREVENTION PLANS (SWPPP). THE STATE CONTRACTOR IS RESPONSIBLE FOR EPSC MEASURES RELATED TO UTILITY CONSTRUCTION INCLUDED IN THE STATE CONTRACT WORK.

(18) TRENCHES FORMED FOR THE INSTALLATION OF BURIED UTILITIES MAY CAUSE STORM WATER RUNOFF TO CONCENTRATE AT THE TRENCH LINE. ADDITIONAL EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) MEASURES MAY BE REQUIRED TO BE INSTALLED AS APPROVED BY THE TDOT PROJECT ENGINEER.

(19) FOR THE INSTALLATION OF UNDERGROUND UTILITIES OUTSIDE OF THE TDOT RIGHT-OF-WAY, EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) 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.

(20) THE UTILITY CONTRACTOR SHALL RESTORE ALL AFFECTED WET WEATHER CONVEYANCES TO THE EXISTING TOPOGRAPHIC CONDITIONS (AS APPROVED BY THE TDOT PROJECT ENGINEER).

(21) THE UTILITY CONTRACTOR WILL PROVIDE APPROPRIATE EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) MEASURES TO REPLACE IN-PLACE EPSC MEASURES REMOVED TO FACILITATE THE INSTALLATION OF UTILITIES. REPLACEMENT OF EPSC MEASURES WILL BE COORDINATED WITH THE TDOT PROJECT ENGINEER BEFORE COMMENCING WORK.

POLYACRYLAMIDE

(23) ENSURE POLYACRYLAMIDE (PAM) EMULSIONS AND POWDERS ARE OF THE ANIONIC TYPE AND MEET THE FOLLOWING REQUIREMENTS:

(24) MEETS THE EPA AND FDA ACRYLAMIDE MONOMER LIMITS OF EQUAL TO OR GREATER THAN 0.005% ACRYLAMIDE MONOMER.

(25) HAS A DENSITY OF 10% TO 55% BY WEIGHT AND A MOLECULAR WEIGHT OF 16 TO 24 MG/MOLE.

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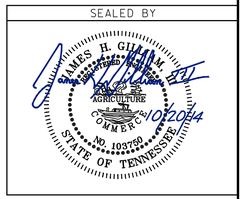

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL NOTES

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2006	STP-320(4)	18
CONST.	2014	STP-320(4)	18A

REVISION: 05-19-2010
--REVISED SHEET

EROSION PREVENTION AND SEDIMENT CONTROL NOTES

POLYACRYLAMIDE (CONTINUED)

(26) MIXTURE IS NON-COMBUSTIBLE.

(27) CONTAINS ONLY MANUFACTURED RECOMMENDED ADDITIVES.

(28) PAM SHALL BE MIXED AND APPLIED IN ACCORDANCE WITH ALL OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) MATERIAL SAFETY DATA SHEET (MSDS) REQUIREMENTS AND THE MANUFACTURE'S RECOMMENDATIONS FOR THE SPECIFIED USED CONFORMING TO ALL FEDERAL, STATE, AND LOCAL LAWS, RULES, AND REGULATIONS.

(29) ALL VENDORS AND SUPPLIERS OF PAM, PAM MIX, OR PAM BLENDS SHALL PRESENT OR SUPPLY A WRITTEN TOXICITY REPORT WHICH VERIFIES THAT THE PAM, PAM MIX, PAM BLEND 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 TOXIT POTENTIALS HAVE BEEN REDUCED. CATIONIC FORMS OF PAM ARE NOT ALLOWED FOR UNDER THIS GUIDELINE DUE TO THEIR HIGH LEVELS OF TOXICITY TO AQUATIC ORGANISMS. PAM EMULSIONS SHALL NEVER BE APPLIED DIRECTLY TO STORMWATER RUNOFF OR RIPARIAN WATERS DUER TO SURFACTANT TOXICITY. CONTRACTOR MUST SEEK THE APPROVAL OF THE EPSC DEISGN ENGINEER AND TDOT IF CHITOSAN IS PROPOSED FOR USE ON THIS PROJECT.

(30) ALL VENDORS AND SUPPLIERS OF PAM, PAM MIX, OR PAM BLENDS SHALL SUPPLY WRITTEN "SITE SPECIFIC" TESTING RESULTS DEMONSTRATING THAT A PERFORMANCE OF 95% OR GREATER REDUCTION OF NTU OR TSS FROM STORMWATER DISCHARGES.

(31) EMULSION BATCHES SHALL BE MIXED FOLLOWING RECOMMENDATIONS OF A TESTING LABORATORY THAT DETERMINES THE PROPER PRODUCT AND RATE TO MEET SITE REQUIREMENTS. APPLICATION METHOD SHALL INSURE UNIFORM COVERAGE TO THE TARGET AREA. EMULSIONS SHALL NEVER BE APPLIED DIRECTLY TO STORMWATER FUNOFF OR RIPARIAN WATERS.

(32) PAM POWDER MAY BE APPLIED BY A HAND SPREADER OR A MECHANICAL SPREADER. MIXING PAM POWDER WITH DRY SILICA SAND WILL AID IN SPREADING.

(33) PREMIXING OF PAM POWDER INTO FERTILIZER, SEED, OR OTHER SOIL AMENDMENTS IS ALLOWED WHEN SPECIFIED IN THE DESIGN PLAN. APPLICATION METHDON SHALL ENSURE UNIFORM COVERAGE TO THE TARGET AREA.

(34) PAM LOGS OR BLOCKS SHALL BE APPLLED FOLLOWING SITE TESTING RESULTS TO ENSURE PROPER PLACEMENT AND PERFORMANCE AND SHALL MEET OR EXCEED STATE AND FEDERAL WATER QUALITY REQUIREMENTS.

SPECIAL NOTES

ENVIRONMENTAL

PROJECT SPECIFIC

(1) TOPSOIL IS TO BE REMOVED FROM ALL AREAS OF TEMPORARY WETLAND IMPACTS AND STOCKPILED PRIOR TO CONSTRUCTION

(2) UPON COMPLETION OF CONSTRUCTION ACTIVITIES, TEMPORARY HAUL ROADS ARE TO BE REMOVED. EXCAVATED MATERIAL FROM THE HAUL ROADS IS TO BE DISPOSED OF AS DIRECTED BY THE ENGINEER.

(3) UPON COMPLETION OF CONSTRUCTION ACTIVITIES, ALL TEMPORARY WETLAND IMPACT AREAS ARE TO BE RESTORED TO PRE-CONSTRUCTION CONTOURS AND THE STOCKPILED WETLAND TOPSOIL SPREAD TO RESTORE THESE AREAS TO PRE-CONSTRUCTION ELEVATION

(4) ALL APPLICABLE NOTES FOR INSTRUCTIONAL BULLETIN NO. 06-14 FOR EROSION PREVENTION AND SEDIMENT CONTROL SHALL BE FOLLOWED.

(5) AN EROSION AND SEDIMENT CONTROL PLAN WILL BE PREPARED IN ACCORDANCE WITH THE NPDES PERMITTING PROGRAM AND INCORPORATED INTO THE CONSTRUCTION PLANS.

(6) INSTALLATION OF CULVERTS MUST BE CONDUCTED IN THE DRY.

(7) ALL SWEEPING FOR THE CHICKAMAUGA CRAYFISH WILL OCCUR TWO WEEKS PRIOR TO ANY CULVERT REMOVAL AND STREAM RELOCATION.

(8) SWEEPING WILL BE CONDUCTED BY TWRA OR A CONSULTANT.

(9) THE TDOT PROJECT SUPERVISOR WILL NOTIFY THE TDOT ENVIRONMENTAL DIVISION BIOLOGIST (ROB HOWARD), TWO WEEKS PRIOR TO ANY WORK NEAR OR IN THE TRIBUTARIES TO RYALL SPRINGS BRANCH. THIS BIOLOGIST OR A DESIGNEE WILL INSPECT THE SITE DURING CONSTRUCTION ACTIVITIES INVOLVING THE TRIBUTARIES TO RYALL SPRINGS BRANCH.

(10) THE TDOT PROJECT SUPERVISOR WILL NOTIFY THE TDOT ENVIRONMENTAL DIVISION MANAGER (DEE DEE KATHMAN), SIX WEEKS PRIOR TO ANY WORK NEAR OR IN THE TRIBUTARIES TO RYALL SPRINGS BRANCH

(11) BEFORE INSTALLATION OF SPRING BOXES/ FRENCH DRAINS, THE SPRING HEAD SHOULD BE FIELD VERIFIED. IF THE SPRING MOVES FROM UNDERNEATH THE PROPOSED ROADWAY, FLOW FROM THE SPRING AREA SHOULD BE CONVEYED/DIRECTED INTO THE PROPOSED PIPE.

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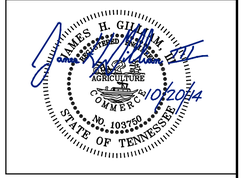

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL NOTES

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2006	STP-320(4)	18A
CONST.	2014	STP-320(4)	18AA

REVISION: 05-19-2010
- REVISED SHEET.

REVISION: 06-30-2011
- REVISED SHEET.

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
SFB SFB SFB SFB	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 (V-DITCH)	EC-STR-6A
	ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6
	ENHANCED ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6A
	ROCK SEDIMENT DAM	EC-STR-12
TCE	TEMPORARY CONSTRUCTION EXIT	EC-STR-25
	TEMPORARY BERM	EC-STR-27
	TEMPORARY SLOPE DRAIN WITH TEMPORARY BERM	EC-STR-27
	SAND BAG BERM	EC-STR-33
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37
4	CURB INLET PROTECTION (TYPE 4)	EC-STR-39A
1	CATCH BASIN FILTER ASSEMBLY (TYPE 1)	EC-STR-41
2	CATCH BASIN FILTER ASSEMBLY (TYPE 2)	EC-STR-42
3	CATCH BASIN FILTER ASSEMBLY (TYPE 3)	EC-STR-43
4	CATCH BASIN FILTER ASSEMBLY (TYPE 4)	EC-STR-44
6	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EC-STR-46
7	CATCH BASIN FILTER ASSEMBLY (TYPE 7)	EC-STR-47
8	CATCH BASIN FILTER ASSEMBLY (TYPE 8)	EC-STR-48
	RIPRAP	
→	TRAFFIC FLOW	
* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1

TEMPORARY CONSTRUCTION EXIT (EC-STR-25) MAY BE PLACED WHERE NEEDED, AS DIRECTED BY THE ENGINEER OR EPSC INSPECTOR.

SEE STD. DWG. EC-STR-32 FOR TEMPORARY CULVERT DIVERSION

ESTIMATED EPSC QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
1	203-01	ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED)	C.Y.	1,189
	209-02.05	12" TEMPORARY SLOPE DRAIN	L.F.	50
	209-02.06	15" TEMPORARY SLOPE DRAIN	L.F.	384
	209-02.07	18" TEMPORARY SLOPE DRAIN	L.F.	569
	209-05	SEDIMENT REMOVAL	C.Y.	745
	209-06.13	20IN DIA COIR LOG (IN STREAM)	L.F.	100
3	209-08.02	TEMPORARY SILT FENCE (WITH BACKING)	L.F.	10,187
	209-08.03	TEMPORARY SILT FENCE (WITHOUT BACKING)	L.F.	12,655
	209-08.07	ROCK CHECK DAM PER	EACH	39
	209-08.08	ENHANCED ROCK CHECK DAM	EACH	18
12	209-09.01	SANDBAGS	BAG	2,015
16	209-09.04	SEDIMENT FILTER BAG(15' X 10')	EACH	5
	209-09.21	POLYACHLAMIDE GEL LOGS	EACH	19
15	209-09.22	POLYACHLAMIDE POWDER	LB.	202
17	209-09.24	JUTE MESH FABRIC	S.Y.	2,875
	209-09.43	CURB INLET PROTECTION (TYPE 4)	EACH	61
13	209-20.03	POLYETHYLENE SHEETING (6 MIL. MINIMUM)	S.Y.	54
	209-40.41	CATCH BASIN FILTER ASSEMBLY(TYPE 1)	EACH	16
	209-40.42	CATCH BASIN FILTER ASSEMBLY(TYPE 2)	EACH	26
	209-40.43	CATCH BASIN FILTER ASSEMBLY(TYPE 3)	EACH	6
	209-40.44	CATCH BASIN FILTER ASSEMBLY(TYPE 4)	EACH	2
	209-40.46	CATCH BASIN FILTER ASSEMBLY(TYPE 6)	EACH	115
	209-40.47	CATCH BASIN FILTER ASSEMBLY(TYPE 7)	EACH	6
	209-40.48	CATCH BASIN FILTER ASSEMBLY(TYPE 8)	EACH	6
2	303-10.01	MINERAL AGGREGATE (SIZE 57)	TON	43
14	621-03.03	24" TEMPORARY DRAINAGE PIPE	L.F.	40
11	621-03.05	36" TEMPORARY DRAINAGE PIPE	L.F.	120
9	707-08.11	HIGH-VISIBILITY CONSTRUCTION FENCE	L.F.	6,402
8	709-05.05	MACHINED RIP-RAP (CLASS A-3)	TON	169
4	709-05.06	MACHINED RIP-RAP (CLASS A-1)	TON	161
7	709-05.08	MACHINED RIP-RAP (CLASS B)	TON	268
5	740-10.03	GEOTEXTILE (TYPE III)(EROSION CONTROL)	S.Y.	896
10	740-10.04	GEOTEXTILE (TYPE IV)(STABILIZATION)	S.Y.	550
18	740-11.01	TEMPORARY SEDIMENT TUBE 8IN (DIAMETER)	L.F.	74
18	740-11.02	TEMPORARY SEDIMENT TUBE 12IN (DIAMETER)	L.F.	3,496
18	740-11.03	TEMPORARY SEDIMENT TUBE 18IN (DIAMETER)	L.F.	5,797
18	740-11.04	TEMPORARY SEDIMENT TUBE 20IN (DIAMETER)	L.F.	229
	801-01.07	TEMPORARY SEEDING (WITH MULCH)	UNIT	357
6	801-01.65	TEMPORARY MULCH	UNIT	20
	801-02.08	TEMPORARY SEEDING (WITHOUT MULCH)	UNIT	180
	801-03	WATER (SEEDING & SODDING)	M.G.	54
	805-12.03	EROSION CONTROL BLANKET (TYPE III)	S.Y.	10,000

FOOTNOTE

1. INCLUDES
   137 C.Y. ROCK SEDIMENT DAM (EC-STR-12)
   106 C.Y. TEMPORARY CONSTRUCTION EXIT
   926 C.Y. TEMPORARY SLOPE DRAIN AND BERM (EC-STR-27)
   20 C.Y. TEMPORARY DIVERSION CULVERTS (RIP-RAP)

2. INCLUDES
   26.0 TON SEDIMENT FILTER BAG (15' X 10') (EC-STR-2)
   17.0 TON ROCK SEDIMENT DAM (EC-STR-12)

3. INCLUDES
   349 L.F. SEDIMENT FILTER BAG (15' X 10') (EC-STR-2)
   250 L.F. STOCKPILING EMBANKMENT MATERIAL
   300 L.F. TOPSOIL

4. INCLUDES
   126 TON TEMPORARY SLOPE DRAIN AND BERM (EC-STR-27)
   35 TON TEMPORARY DIVERSION CULVERTS (EC-STR-32)

5. INCLUDES
   298 S.Y. SEDIMENT FILTER BAG (15' X 10') (EC-STR-2)
   306 S.Y. TEMPORARY CONSTRUCTION EXIT
   234 S.Y. ROCK SEDIMENT DAM (EC-STR-12)
   58 S.Y. TEMPORARY DIVERSION CULVERT (EC-STR-32)

6. ADDITIONAL GROUND COVER FOR AREAS THAT APPEAR SPOTTY OR AREAS THAT DEVELOP RILLS.

7. INCLUDES
   220 TON ROCK SEDIMENT DAM (EC-STR-12)

8. INCLUDES
   230 TON TEMPORARY CONSTRUCTION EXIT (EC-STR-25)
   MAY INCREASE OR DECREASE AS DETERMINED BY THE PROJECT ENGINEER.

9. FOR CONSTRUCTION PARKING, ENTRANCES, EXITS, WETLANDS, SPRINGS & ABOVE RETAINING WALL (HAMLET RD.).

10. INCLUDES
    550 S.Y. ROCK SEDIMENT DAM (EC-STR-12)

11. FOR CONSTRUCTION OF BOX CULVERT STA. 281+72.

12. INCLUDES
    1,215 BAGS FOR CONSTRUCTION OF BOX CULVERTS AT STA. 240+51.87 AND STA. 281+72.
    440 BAGS FOR PRIVATE DRIVES STRUCTURES
    360 BAGS FOR RETAINING WALL STA. 305+90.
    (MAY SUBSTITUTE GRAVEL FOR SAND IF APPROVED BY ENGINEER)

13. FOR TEMPORARY DIVERSION CULVERTS (EC-STR-32).

14. FOR CONSTRUCTION OF BOX CULVERT STA. 240+51.87.

15. TO BE USED WHEN TEMPORARY SEEDING (W/MULCH) AND/OR TEMPORARY MULCH IS APPLIED.
    STA. 281+25 RT. TO STA. 334+00 RT.
    STA. 321+00 LT. TO STA. 336+64 LT.

16. INCLUDES REPLACEMENT BAG FOR STR-3.

17. SEE SEDIMENT TUBE DETAIL SHT. 18AA.

18. TO BE INCLUDED THE COST OF WOOD AND METAL STAKES.

ALL QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER

SEALED BY

JAMES H. GILLIAM
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 103760
STATE OF TENNESSEE
10/2/2014

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

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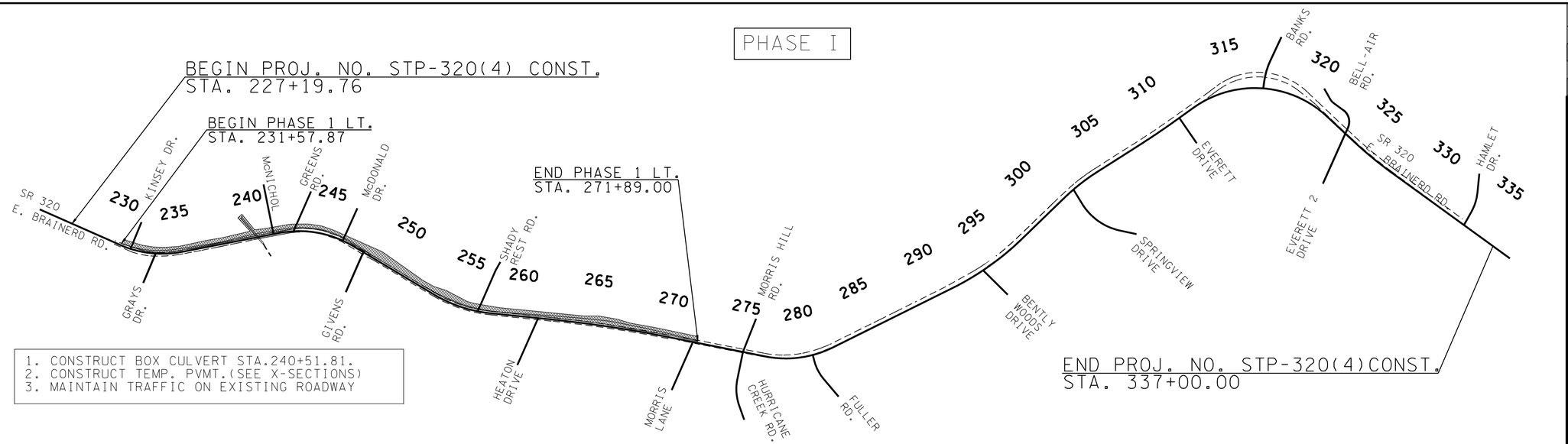
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	18A1
CONST.	2014	STP-320(4)	18B

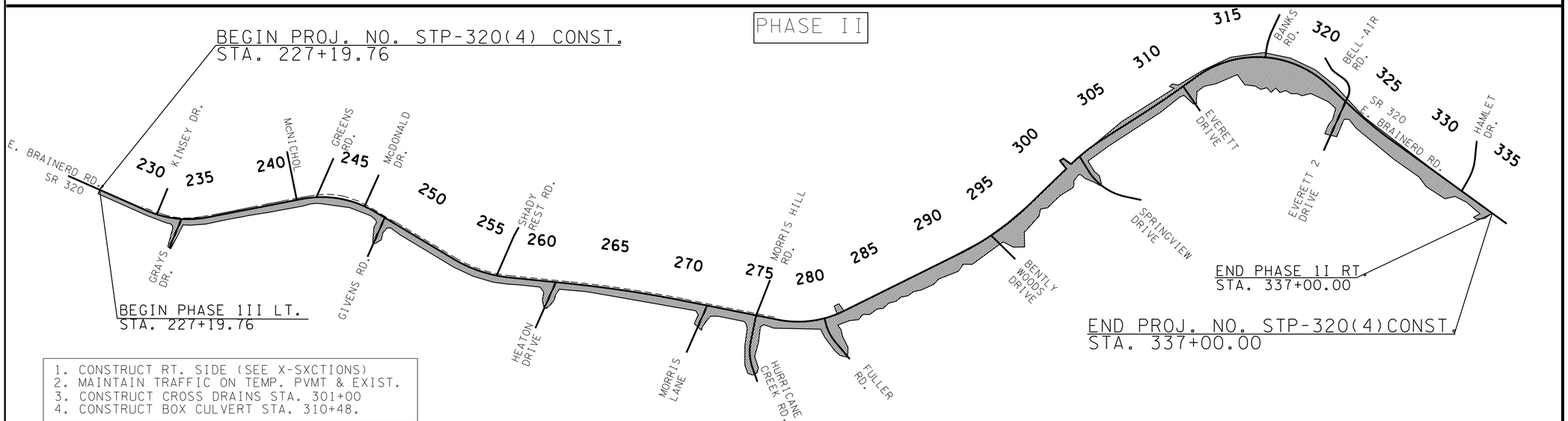
REVISION: 05-19-2010
--REVISED SHEET

PHASE I



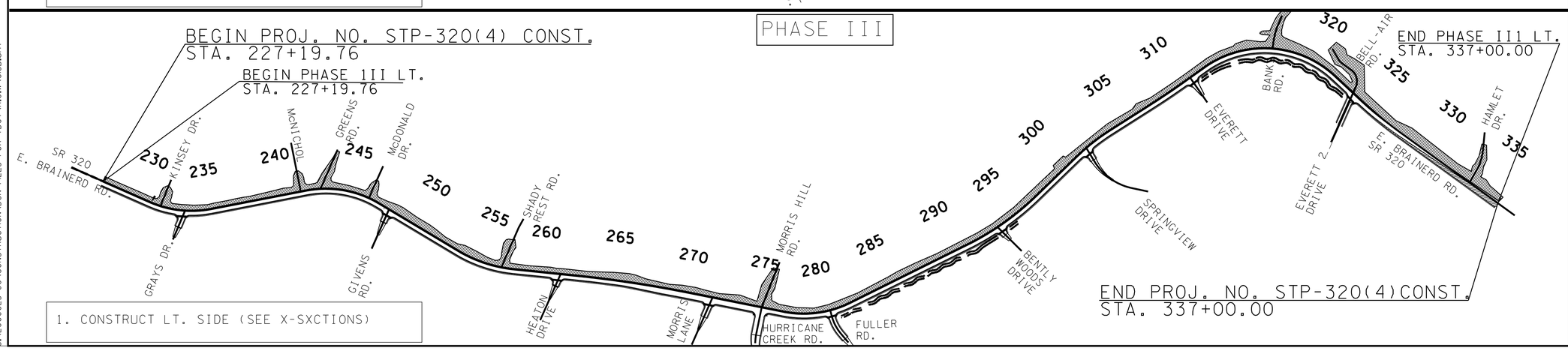
1. CONSTRUCT BOX CULVERT STA.240+51.81.
2. CONSTRUCT TEMP. PVMT.(SEE X-SECTIONS)
3. MAINTAIN TRAFFIC ON EXISTING ROADWAY

PHASE II



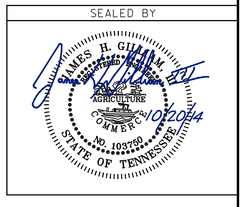
1. CONSTRUCT RT. SIDE (SEE X-SXCTIONS)
2. MAINTAIN TRAFFIC ON TEMP. PVMT & EXIST.
3. CONSTRUCT CROSS DRAINS STA. 301+00
4. CONSTRUCT BOX CULVERT STA. 310+48.

PHASE III



1. CONSTRUCT LT. SIDE (SEE X-SXCTIONS)

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN

SCALE: 1"=400'

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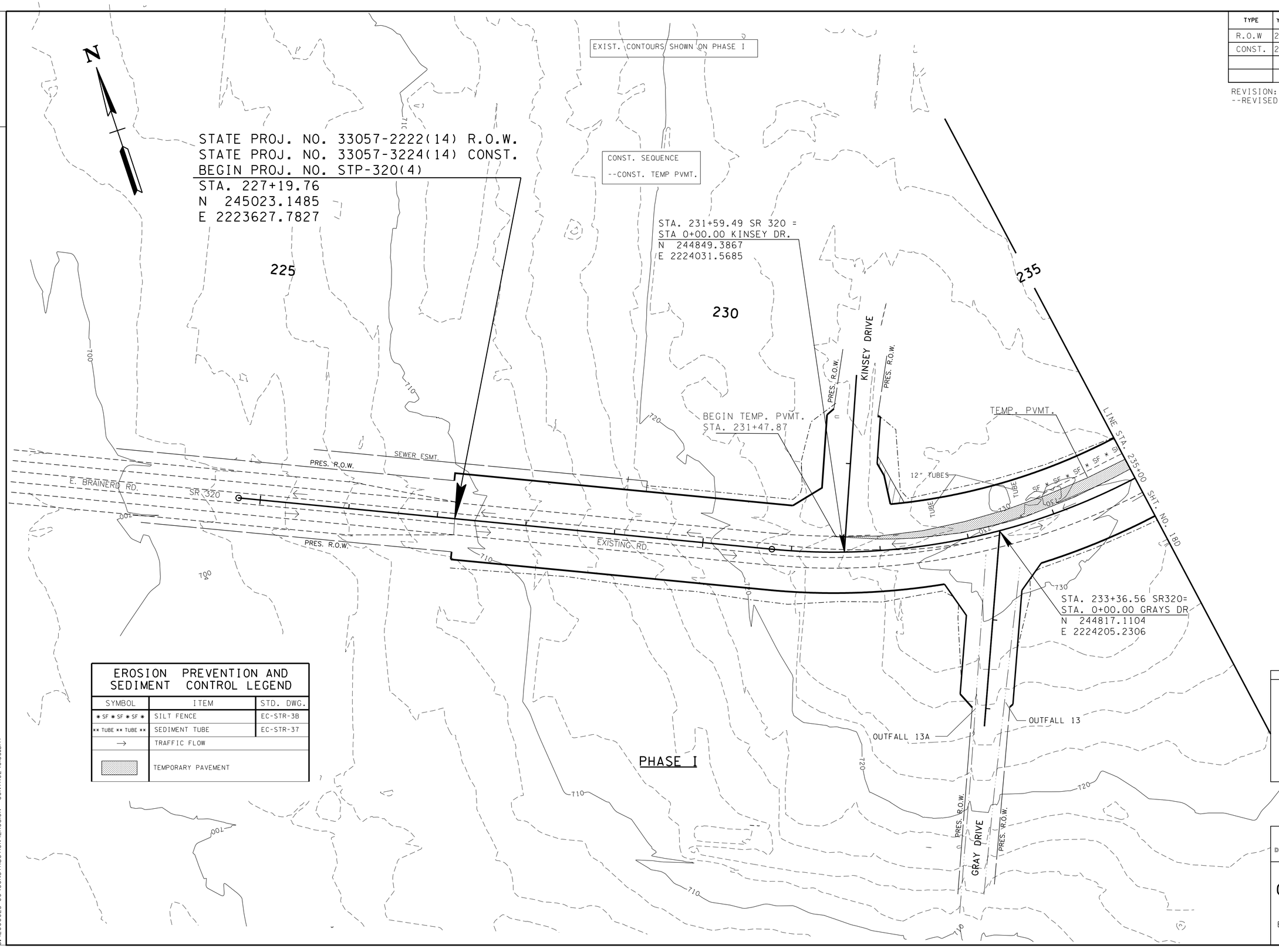
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2006	STP-320(4)	18B
CONST.	2014	STP-320(4)	18C

REVISION: 05-19-2010
--REVISED SHEET



EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SF * SF * SF *	SILT FENCE	EC-STR-3B
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37
→	TRAFFIC FLOW	
	TEMPORARY PAVEMENT	

SEALED BY

JAMES H. GHAM
REGISTERED ENGINEER
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COMMERCE
NO. 103750
STATE OF TENNESSEE
5/10/2014

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN PHASE I

BEG. PROJ. TO STA.235+00

SCALE: 1"= 50'

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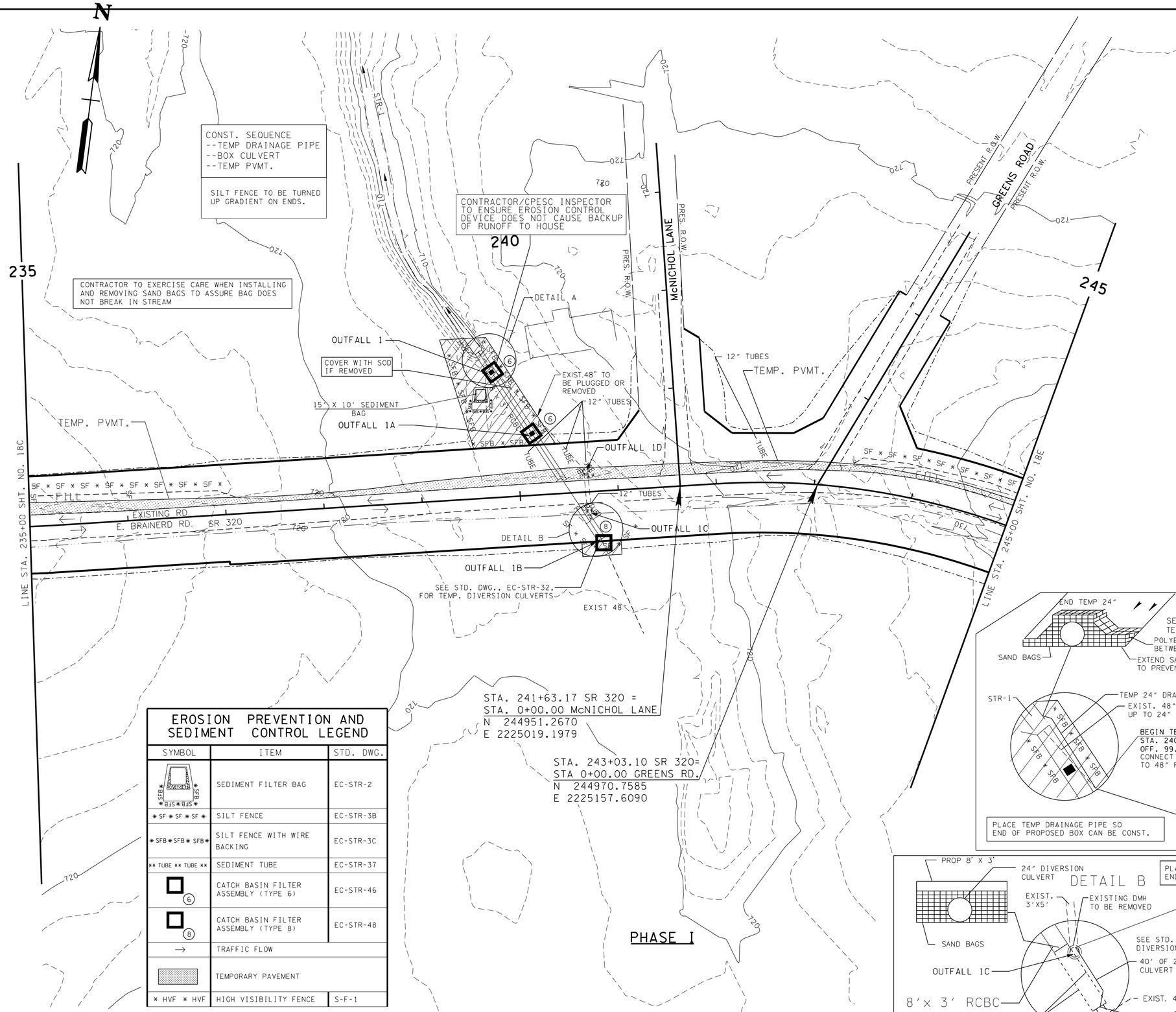
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

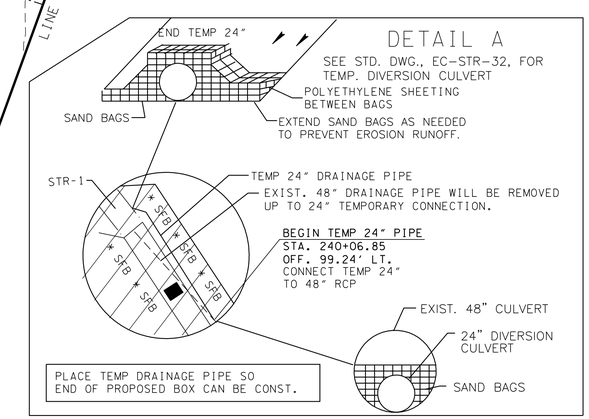
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2006	STP-320(4)	18C
CONST.	2014	STP-320(4)	18D

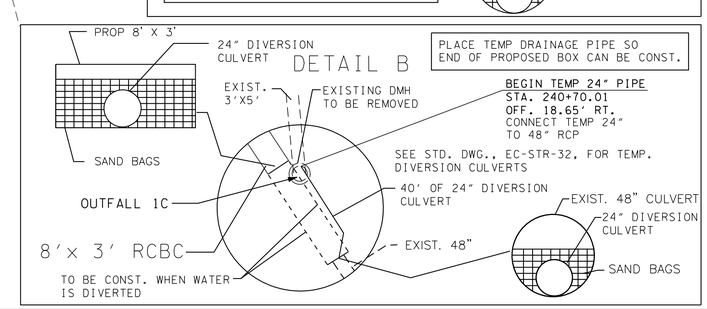
REVISION: 05-19-2010
--REVISED SHEET



EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
SFB	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
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37
6	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EC-STR-46
8	CATCH BASIN FILTER ASSEMBLY (TYPE 8)	EC-STR-48
→	TRAFFIC FLOW	
	TEMPORARY PAVEMENT	
* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1





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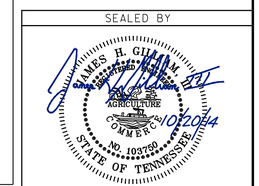

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN PHASE I

STA. 235+00 TO STA. 245+00

SCALE: 1"= 50'

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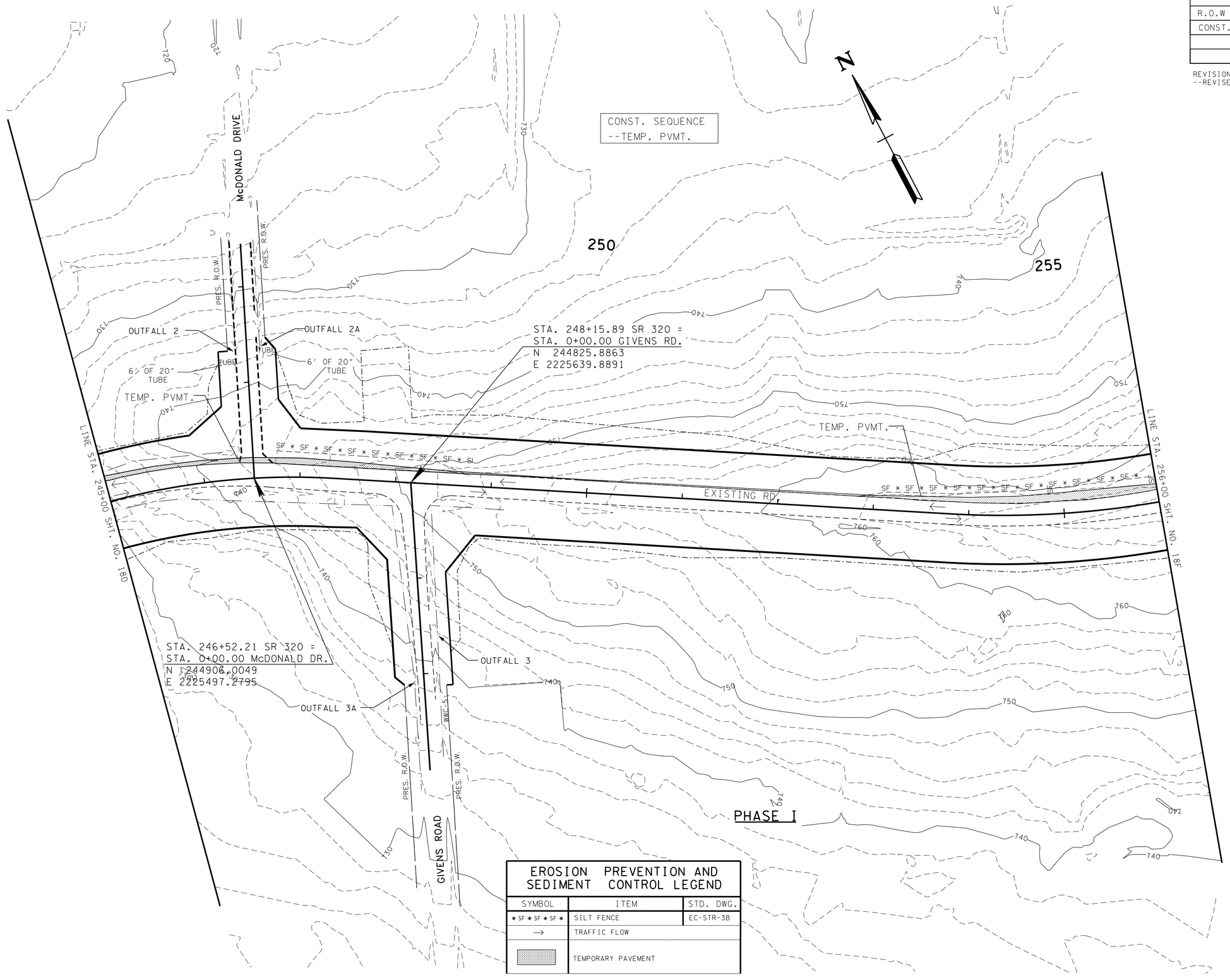
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

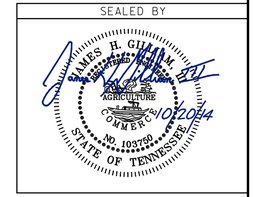
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2006	STP-320(4)	18D
CONST.	2014	STP-320(4)	18E

REVISION: 05-19-2010
--REVISED SHEET



EROSION PREVENTION AND SEDIMENT CONTROL LEGEND		
SYMBOL	ITEM	STD. DWG.
* SF * SF * SF *	SILT FENCE	EC-STR-3B
→	TRAFFIC FLOW	
	TEMPORARY PAVEMENT	

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN PHASE I

STA. 245+00 TO STA. 256+00

SCALE: 1"= 50'

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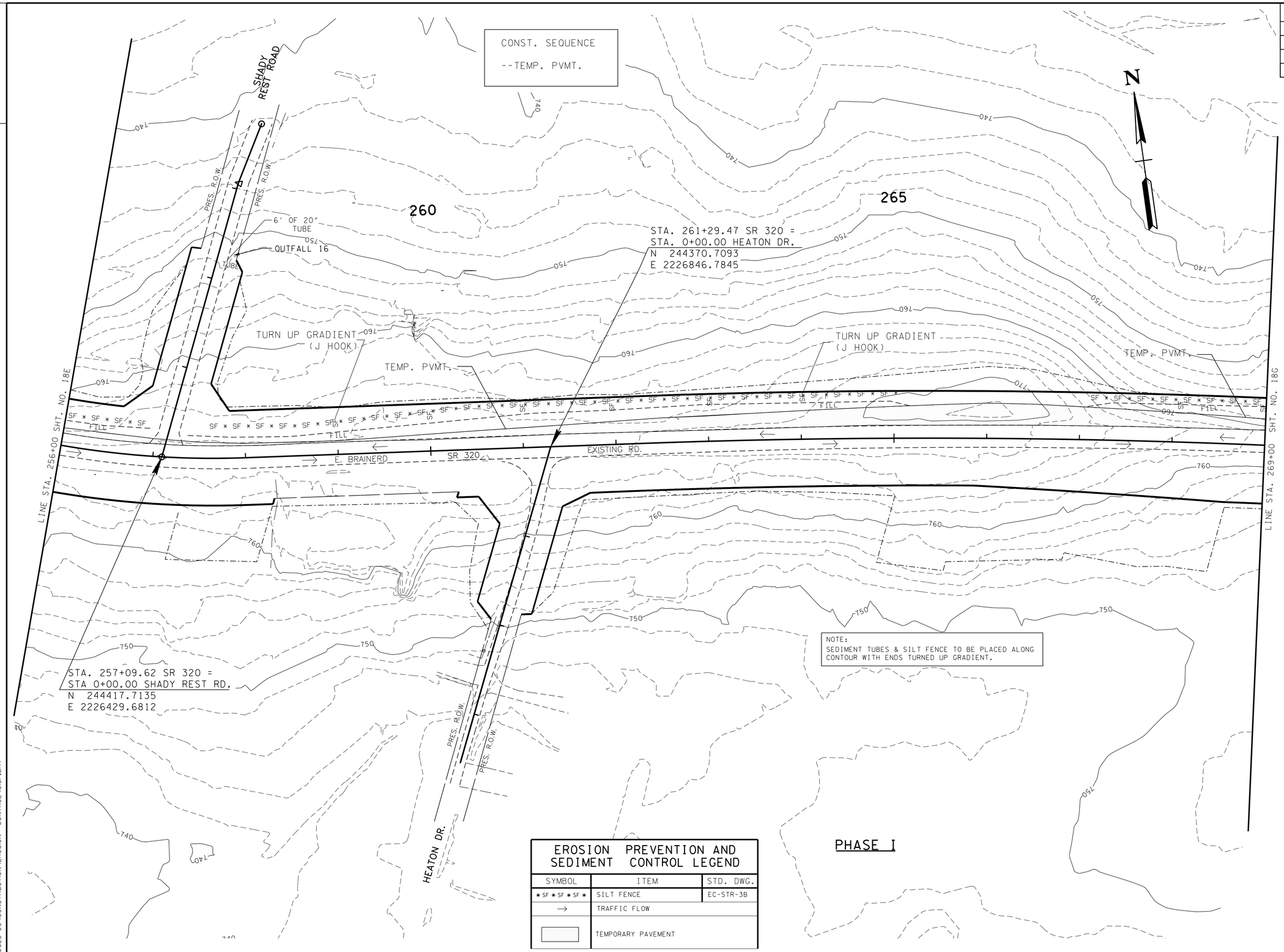
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

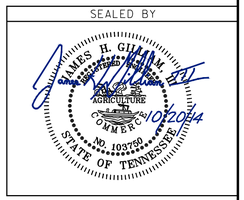
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2006	STP-320(4)	18E
CONST.	2014	STP-320(4)	18F

REVISION: 05-19-2010
--REVISED SHEET



EROSION PREVENTION AND SEDIMENT CONTROL LEGEND		
SYMBOL	ITEM	STD. DWG.
* SF * SF * SF *	SILT FENCE	EC-STR-3B
→	TRAFFIC FLOW	
	TEMPORARY PAVEMENT	

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN PHASE I

STA. 256+00 TO STA. 269+00

SCALE: 1"= 50'

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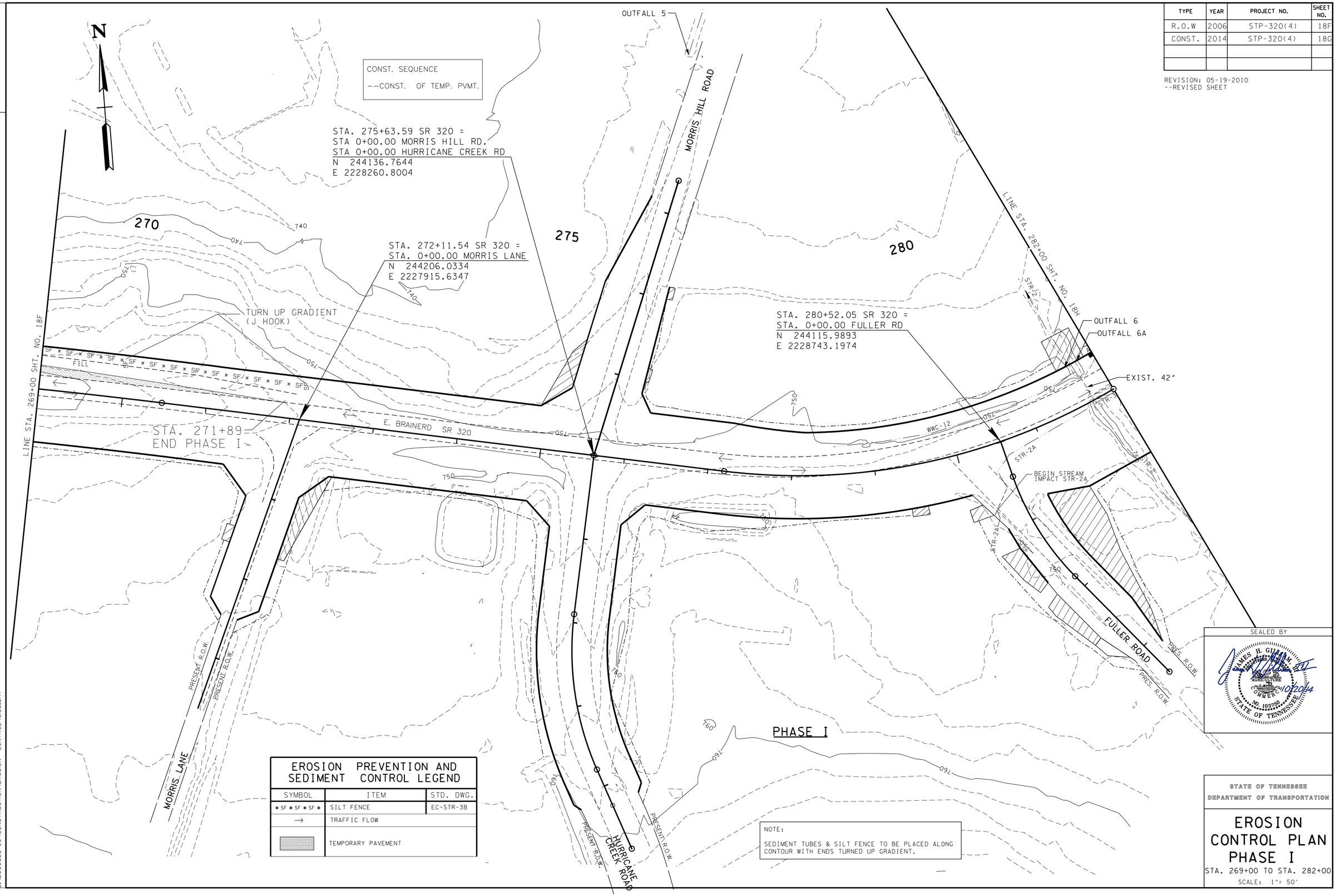
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2006	STP-320(4)	18F
CONST.	2014	STP-320(4)	18G

REVISION: 05-19-2010
--REVISED SHEET



EROSION PREVENTION AND SEDIMENT CONTROL LEGEND		
SYMBOL	ITEM	STD. DWG.
* SF * SF * SF *	SILT FENCE	EC-STR-3B
→	TRAFFIC FLOW	
	TEMPORARY PAVEMENT	

NOTE:

SEDIMENT TUBES & SILT FENCE TO BE PLACED ALONG CONTOUR WITH ENDS TURNED UP GRADIENT.

SEALED BY

JAMES H. GILLIAM
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 103750
STATE OF TENNESSEE
5/01/2014

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN PHASE I

STA. 269+00 TO STA. 282+00

SCALE: 1"= 50'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2006	STP-320(4)	18G
CONST.	2014	STP-320(4)	18H

REVISION: 05-19-2010
--REVISED SHEET

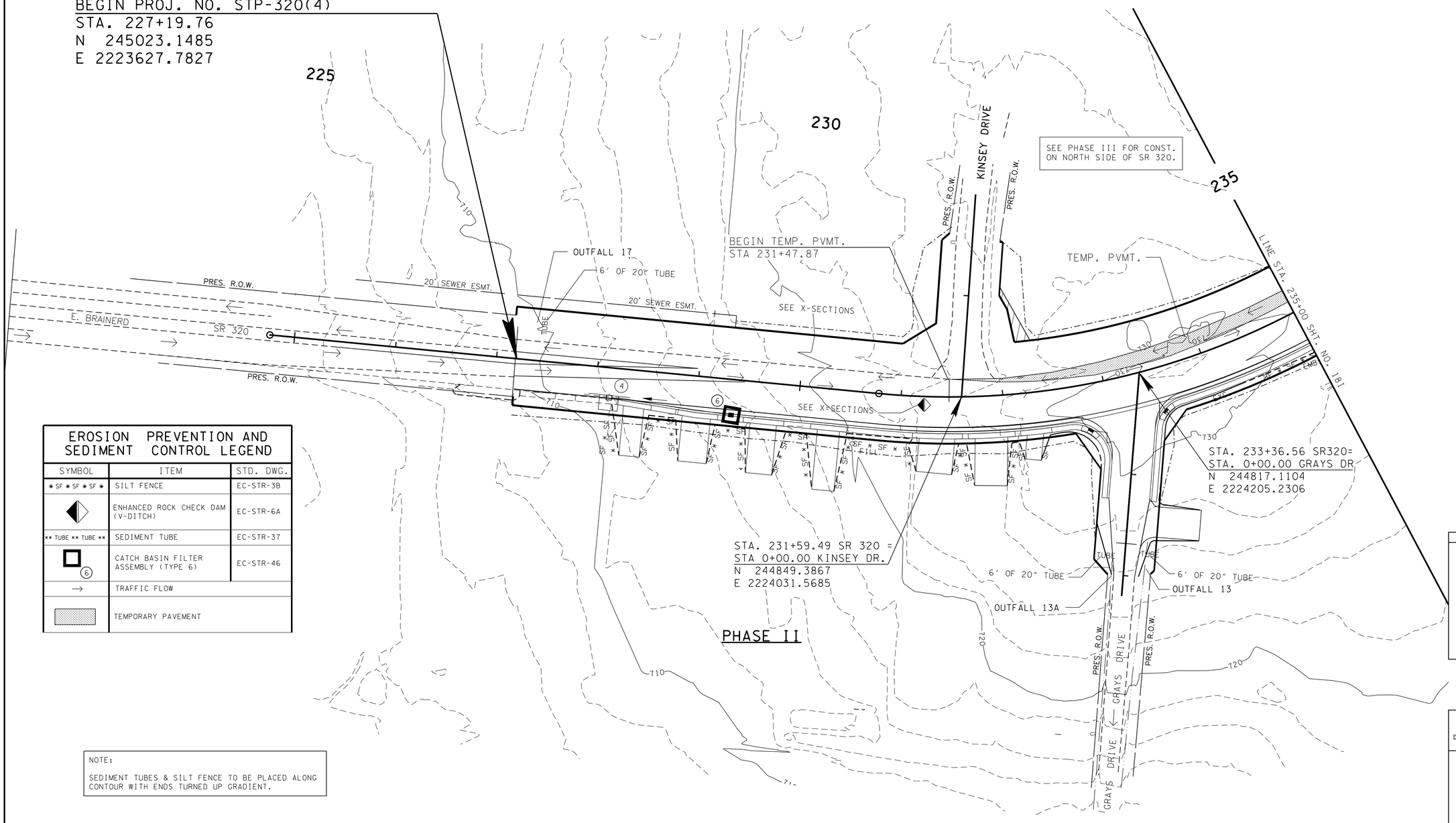
EXIST. CONTOURS SHOWN ON PHASE II

CONST. RT. SIDE OF SR 320 & GRAYS DRIVE

CONST. SEQUENCE

--CULVERTS
--SIDE ROAD
--SR 320 RT.

STATE PROJ. NO. 33057-2222(14) R.O.W.
STATE PROJ. NO. 33057-3224(14) CONST.
BEGIN PROJ. NO. STP-320(4)
STA. 227+19.76
N 245023.1485
E 2223627.7827



EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SF * SF * SF *	SILT FENCE	EC-STR-3B
	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37
6	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EC-STR-46
→	TRAFFIC FLOW	
	TEMPORARY PAVEMENT	

NOTE:

SEDIMENT TUBES & SILT FENCE TO BE PLACED ALONG CONTOUR WITH ENDS TURNED UP GRADIENT.

SEALED BY

JAMES H. GILLIAM JR.
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 109750
STATE OF TENNESSEE
10/20/14

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN PHASE II

BEG. TO STA.235+00

SCALE: 1"= 50'

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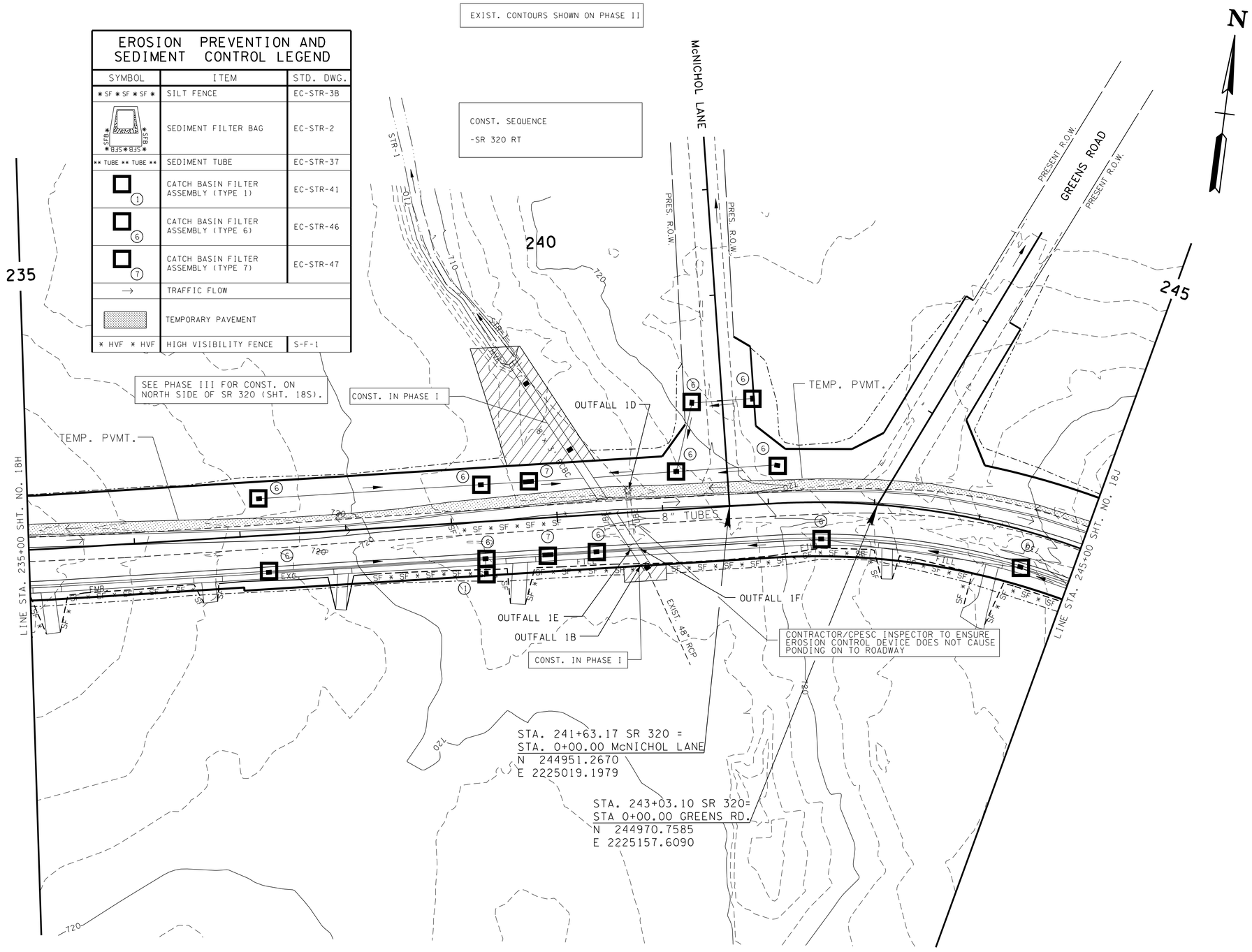
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2006	STP-320(4)	18H
CONST.	2014	STP-320(4)	18I

REVISION: 05-19-2010
--REVISED SHEET

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SF * SF * SF *	SILT FENCE	EC-STR-3B
SFB * * SFB SFB * * SFB	SEDIMENT FILTER BAG	EC-STR-2
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37
1	CATCH BASIN FILTER ASSEMBLY (TYPE 1)	EC-STR-41
6	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EC-STR-46
7	CATCH BASIN FILTER ASSEMBLY (TYPE 7)	EC-STR-47
→	TRAFFIC FLOW	
	TEMPORARY PAVEMENT	
* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1

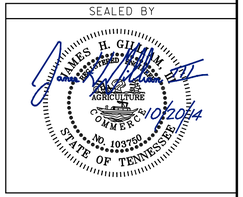


PHASE II

NOTE:

SEDIMENT TUBES & SILT FENCE TO BE PLACED ALONG CONTOUR WITH ENDS TURNED UP GRADIENT.

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN PHASE II

STA. 235+00 TO STA. 245+00

SCALE: 1"= 50'

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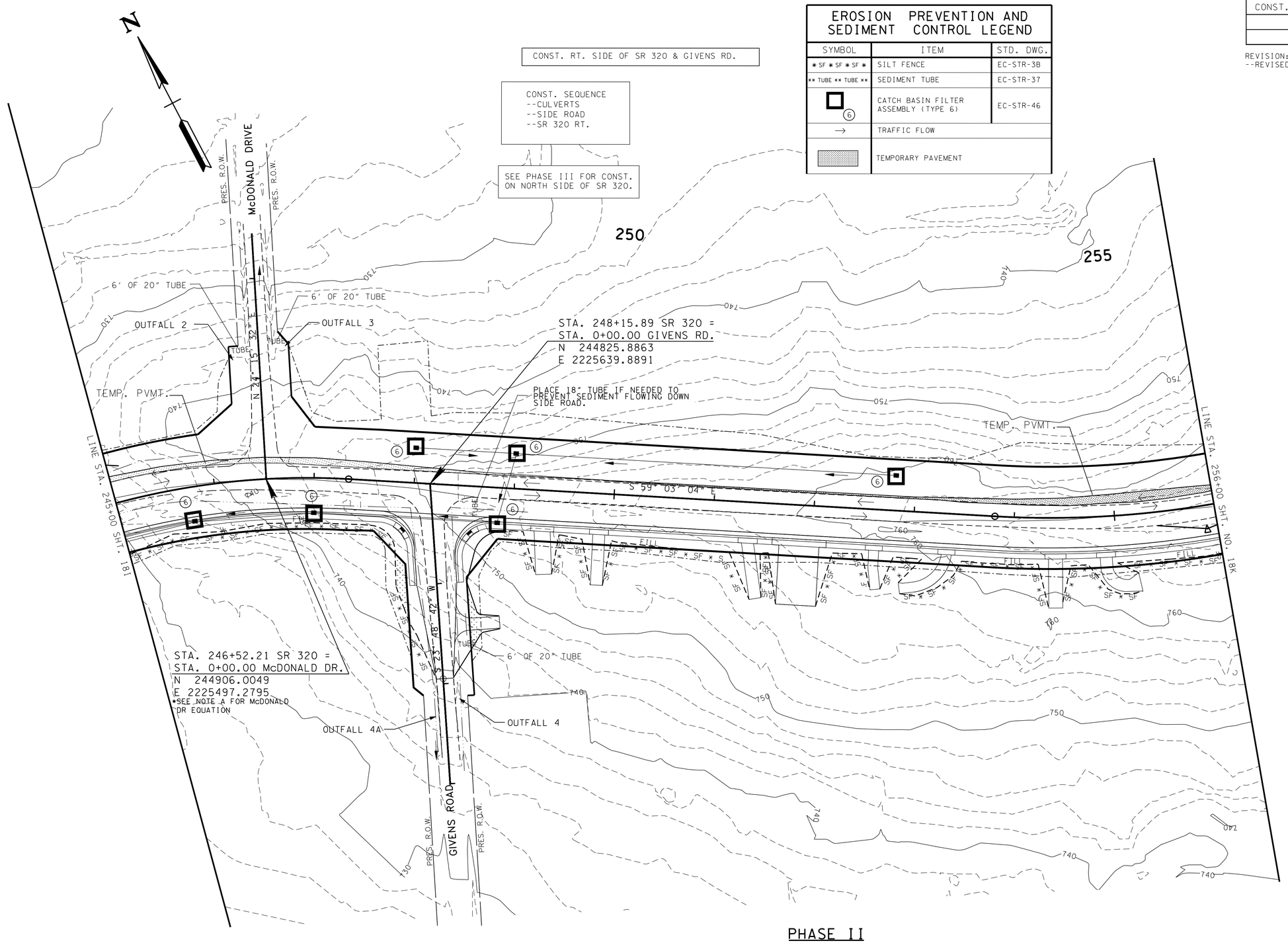
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2006	STP-320(4)	18I
CONST.	2014	STP-320(4)	18J

REVISION: 05-19-2010
--REVISED SHEET

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SF * SF * SF *	SILT FENCE	EC-STR-3B
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37
(6)	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EC-STR-46
→	TRAFFIC FLOW	
	TEMPORARY PAVEMENT	



PHASE II

NOTE:

SEDIMENT TUBES & SILT FENCE TO BE PLACED ALONG CONTOUR WITH ENDS TURNED UP GRADIENT.

SEALED BY

JAMES H. GILLIAM
REGISTERED ENGINEER
NO. 19 OF
AGRICULTURE
AND
COMMERCE
NO. 109750
STATE OF TENNESSEE
2/10/2014

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN PHASE II

STA. 245+00 TO STA. 256+00

SCALE: 1"= 50'

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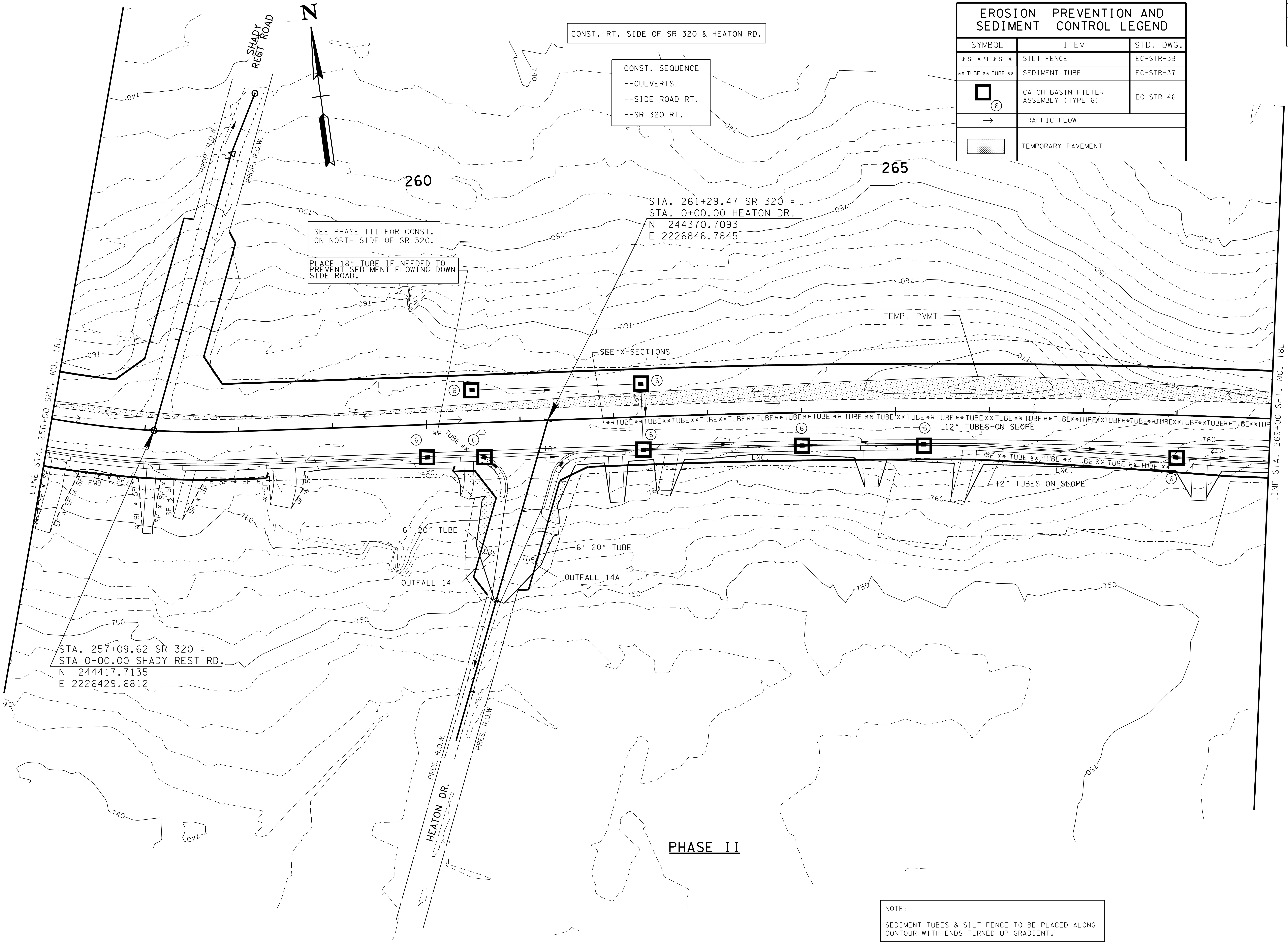
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2006	STP-320(4)	18J
CONST.	2014	STP-320(4)	18K

REVISION: 05-19-2010
--REVISED SHEET

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.



EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SF * SF * SF *	SILT FENCE	EC-STR-3B
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37
☐ (6)	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EC-STR-46
→	TRAFFIC FLOW	
(shaded)	TEMPORARY PAVEMENT	

NOTE:

SEDIMENT TUBES & SILT FENCE TO BE PLACED ALONG CONTOUR WITH ENDS TURNED UP GRADIENT.

SEALED BY

JAMES H. GILLIAM, III
REGISTERED ENGINEER
AGRICULTURE COMMERCE
NO. 103750
STATE OF TENNESSEE
10/20/14

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN PHASE II

STA. 256+00 TO STA. 269+00

SCALE: 1"= 50'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2006	STP-320(4)	18K
CONST.	2014	STP-320(4)	18L

REVISION: 05-19-2010
--REVISED SHEET

BOX CONST. SEQUENCE.

-- PLACE TEMP.36" CULVERT ACROSS ROADWAY.
-- CONST. PHASE I 8' X 4' BOX CULVERTS.
-- SHIFT TRAFFIC.
-- CONST. REMAINING 8' X 4' BOX CULVERTS.
-- REMOVE EXIST. 42" CULVERT.
-- MOVE WATER TO 8' X 4' BOX CULVERTS.
-- REMOVE TEMP. 36" CULVERT OR PLUG
SEE STD. DWG. EC-STR-32

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

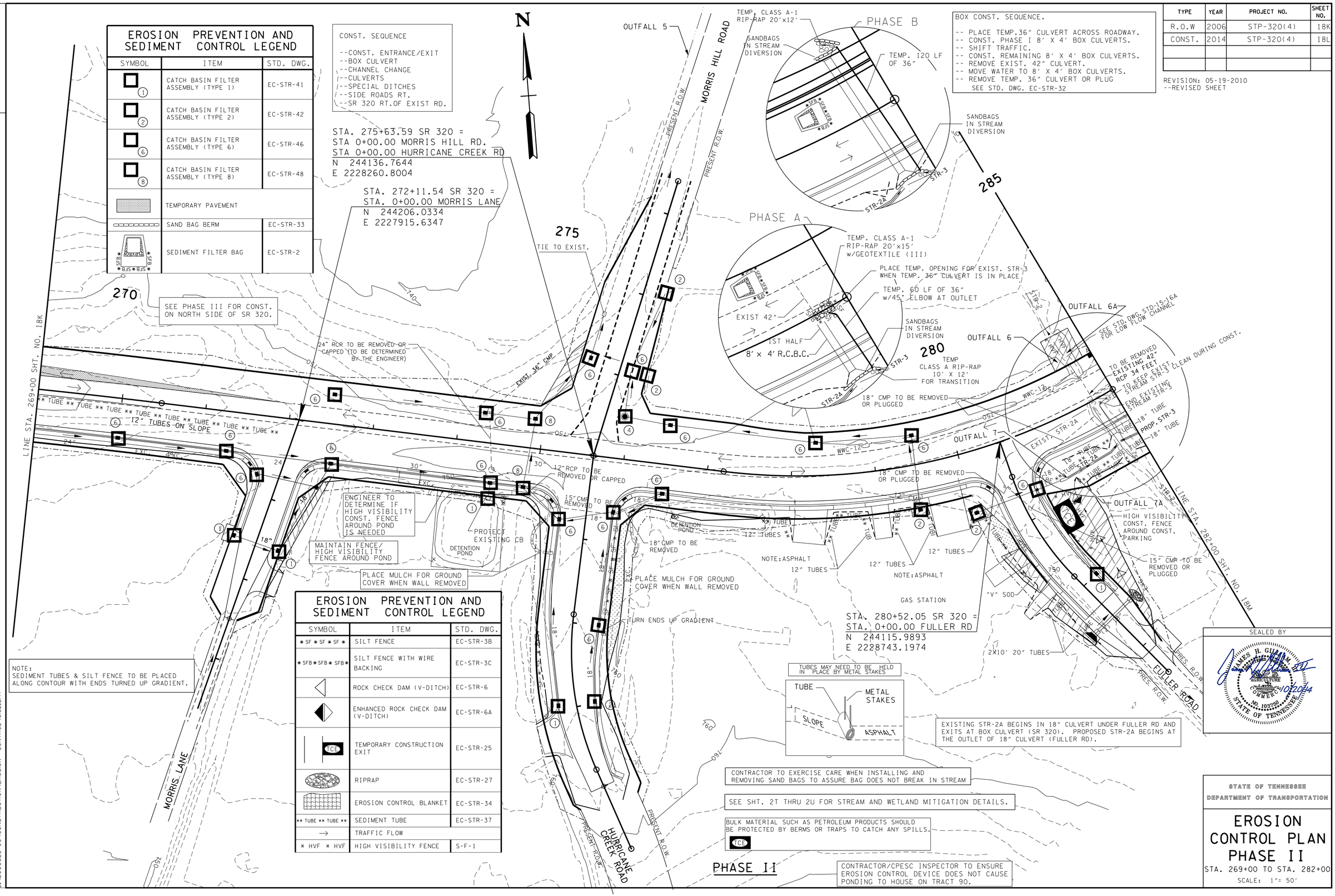
SYMBOL	ITEM	STD. DWG.
①	CATCH BASIN FILTER ASSEMBLY (TYPE 1)	EC-STR-41
②	CATCH BASIN FILTER ASSEMBLY (TYPE 2)	EC-STR-42
⑥	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EC-STR-46
⑧	CATCH BASIN FILTER ASSEMBLY (TYPE 8)	EC-STR-48
	TEMPORARY PAVEMENT	
	SAND BAG BERM	EC-STR-33
SFB	SEDIMENT FILTER BAG	EC-STR-2

CONST. SEQUENCE

--CONST. ENTRANCE/EXIT
--BOX CULVERT
--CHANNEL CHANGE
--CULVERTS
--SPECIAL DITCHES
--SIDE ROADS RT.
--SR 320 RT.OF EXIST RD.

STA. 275+63.59 SR 320 =
STA 0+00.00 MORRIS HILL RD.
STA 0+00.00 HURRICANE CREEK RD
N 244136.7644
E 2228260.8004

STA. 272+11.54 SR 320 =
STA. 0+00.00 MORRIS LANE
N 244206.0334
E 2227915.6347



NOTE:
SEDIMENT TUBES & SILT FENCE TO BE PLACED ALONG CONTOUR WITH ENDS TURNED UP GRADIENT.

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* 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 (V-DITCH)	EC-STR-6A
TCE	TEMPORARY CONSTRUCTION EXIT	EC-STR-25
	RIPRAP	EC-STR-27
	EROSION CONTROL BLANKET	EC-STR-34
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37
→	TRAFFIC FLOW	
* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1

CONTRACTOR TO EXERCISE CARE WHEN INSTALLING AND REMOVING SAND BAGS TO ASSURE BAG DOES NOT BREAK IN STREAM

SEE SHT. 2T THRU 2U FOR STREAM AND WETLAND MITIGATION DETAILS.

BULK MATERIAL SUCH AS PETROLEUM PRODUCTS SHOULD BE PROTECTED BY BERMS OR TRAPS TO CATCH ANY SPILLS.
TCE

PHASE II

CONTRACTOR/CPESC INSPECTOR TO ENSURE EROSION CONTROL DEVICE DOES NOT CAUSE PONDING TO HOUSE ON TRACT 90.

SEALED BY
JAMES H. GILLIAM JR.
LICENSED PROFESSIONAL ENGINEER
NO. 109750
STATE OF TENNESSEE
10/20/14

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN PHASE II

STA. 269+00 TO STA. 282+00

SCALE: 1"= 50'

2/19/2013 9:44:39 AM
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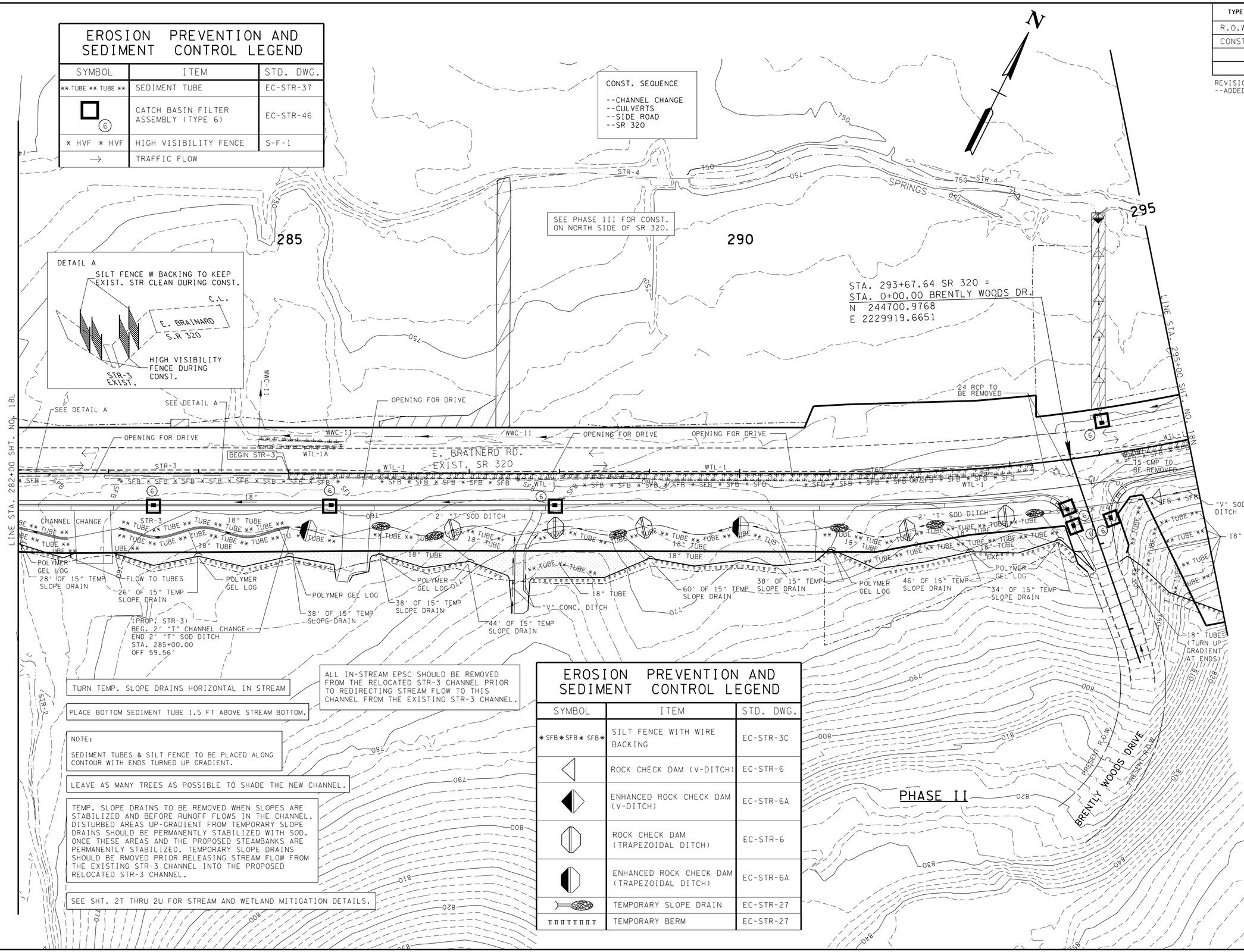
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2006	STP-320(4)	18L
CONST.	2014	STP-320(4)	18M

REVISION: 05-19-2010
--ADDED SHEET.

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37
6	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EC-STR-46
* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1
→	TRAFFIC FLOW	



TURN TEMP. SLOPE DRAINS HORIZONTAL IN STREAM

PLACE BOTTOM SEDIMENT TUBE 1.5 FT ABOVE STREAM BOTTOM.

NOTE:

SEDIMENT TUBES & SILT FENCE TO BE PLACED ALONG CONTOUR WITH ENDS TURNED UP GRADIENT.

LEAVE AS MANY TREES AS POSSIBLE TO SHADE THE NEW CHANNEL.

TEMP. SLOPE DRAINS TO BE REMOVED WHEN SLOPES ARE STABILIZED AND BEFORE RUNOFF FLOWS IN THE CHANNEL. DISTURBED AREAS UP-GRADIENT FROM TEMPORARY SLOPE DRAINS SHOULD BE PERMANENTLY STABILIZED WITH SOD. ONCE THESE AREAS AND THE PROPOSED STEAMBANKS ARE PERMANENTLY STABILIZED, TEMPORARY SLOPE DRAINS SHOULD BE RMOVED PRIOR RELEASING STREAM FLOW FROM THE EXISTING STR-3 CHANNEL INTO THE PROPOSED RELOCATED STR-3 CHANNEL.

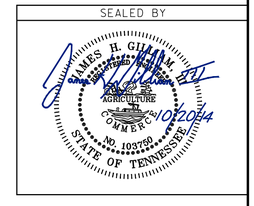
SEE SHT. 2T THRU 2U FOR STREAM AND WETLAND MITIGATION DETAILS.

ALL IN-STREAM EPSC SHOULD BE REMOVED FROM THE RELOCATED STR-3 CHANNEL PRIOR TO REDIRECTING STREAM FLOW TO THIS CHANNEL FROM THE EXISTING STR-3 CHANNEL.

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SFB * SFB * SFB *	SILT FENCE WITH WIRE BACKING	EC-STR-3C
	ROCK CHECK DAM (V-DITCH)	EC-STR-6
	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
	ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6
	ENHANCED ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6A
	TEMPORARY SLOPE DRAIN	EC-STR-27
	TEMPORARY BERM	EC-STR-27

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN PHASE II

STA. 282+00 TO STA. 295+00

SCALE: 1"= 50'

10/16/2014 1:10:49 PM
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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2006	STP-320(4)	18M
CONST.	2014	STP-320(4)	18N

REVISION: 05-19-2010
--ADDED SHEET.

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
	ROCK CHECK DAM (V-DITCH)	EC-STR-6
	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
	ENHANCED ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6A
	SAND BAG BERM	EC-STR-33
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37
1	CATCH BASIN FILTER ASSEMBLY (TYPE 1)	EC-STR-41
3	CATCH BASIN FILTER ASSEMBLY (TYPE 3)	EC-STR-43
6	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EC-STR-46
→	TRAFFIC FLOW	

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SF * SF * SF *	SILT FENCE	EC-STR-3B
	TEMPORARY BERM	EC-STR-27
* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1
	TEMPORARY SLOPE DRAIN	EC-STR-27

CONST. SEQUENCE

--CROSS DRAIN
--SPL. DITCHES
--SIDE ROAD
--SR 320

SEE PHASE III FOR CONST. ON NORTH SIDE OF SR 320

STA. 302+05.62 SR 320=
STA. 0+00.00 SPRINGVIEW DR.
N 245258.5764
E 2230543.5474

300

305

RYALL SPRINGS BRANCH

HIGH VISIBILITY CONST. FENCE

OUTFALL 10

DO NOT FILL POND BEYOND PROPOSED BERM.

DO NOT DRAIN POND.

CONST. ON PHASE III

POND PND-1

DO NOT DISTURB STR-4 OUTSIDE OF PROPOSED WORKING AREA

DO NOT DISTURB SPG-4A

EXIST. STRUCTURE 8"X 5'

SPG-4A

PHASE III CONST.

WETLAND WLT-3

WETLAND WLT-2

WTL-4

E. BRAINERD RD.
EXIST. SR 320

WWC-9

WWC-10

18" TUBES
TURN ENDS UP GRADIENT

18" TUBES

SPECIAL "V" SOD DITCH

WWC

24"

18"

OUTFALL 18

** TUBE ** TUBE ** TUBE ** TUBE ** TUBE ** TUBE **

** TUBE ** TUBE ** TUBE ** TUBE ** TUBE

** TUBE **

18" TUBES

POLYMER GEL COG

70' OF 18" TEMP. SLOPE DRAIN

45' OF 18" TEMP. SLOPE DRAIN

"V" CONC. DITCH

40' OF 18" TEMP. SLOPE DRAIN

PLACE 18" TUBE IF NEEDED TO PREVENT SEDIMENT FLOWING DOWN TO E. BRAINERD

12" TUBE (TURN UP GRADIENT AT END)

TURN TEMP. SLOPE DRAINS HORIZONTAL IN STREAM

CONST. 3' HIGH AROUND FRONT OF CULVERT.

NOTE:

SEDIMENT TUBES & SILT FENCE TO BE PLACED ALONG CONTOUR WITH ENDS TURNED UP GRADIENT.

SEE SHT. 2T THRU 2U FOR STREAM AND WETLAND MITIGATION DETAILS.

PHASE II

PRES. R.O.W.

SPRINGVIEW DRIVE

LINE STA. 295+00 SHT. NO. 18M

LINE STA. 308+00 SHT. NO. 18O

SEALED BY

JAMES H. GILLIAM III
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 103759
STATE OF TENNESSEE
5/10/2014

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN PHASE II

STA. 295+00 TO STA. 308+00

SCALE: 1"= 50'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2006	STP-320(4)	18N
CONST.	2014	STP-320(4)	18O

REVISION: 05-19-2010
--ADDED SHEET.

REVISION: 09-27-2010
--ADDED BENCHES AND SPL. DITCH.

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
SFB	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
	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
	ENHANCED ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6A
TCE	TEMPORARY CONSTRUCTION EXIT	EC-STR-25

USE POWERED PAM ON RE-DISTURBED AREAS

CONST.SEQUENCE
-- CONST. ENTRANCE/EXIT.
-- SEDIMENT TUBE ALONG EXIST. STR-5(SEE DETAIL)
-- BOX CULVERTS
-- CHANNEL CHANGE
-- SIDE ROAD
-- SR 320

ALSO SEE PHASE III FOR CONST. ON NORTH SIDE OF SR 320.

SEDIMENT TUBES TO BE TURNED UP GRADIENT AT ENDS.

STA. 317+20.14 SR 320 =
STA. 0+00.00 BANKS RD.
N 245957.7305
E 2231854.4487

STA. 310+88.91 SR 320 =
STA. 0+00.00 EVERETT DR #1.
N 245753.6552
E 2231274.3769

SEDIMENT BAG WILL BE NECESSARY TO REMOVE RUNOFF IN STR-5 UNTIL OPEN.

SEDIMENT BAG 15' X 10' (REPLACEMENT BAG MAY BE NEEDED)

REMOVE LAST 6' OF CHANNEL DURING LOW WATER PERIOD

USE EXISTING PIPES UNTIL 2' "T" SOD DITCH IS CONST.

END EXISTING STR-5

30" CMP TO BE REMOVED

EXIST. 5' X 2' BOX TO BE REMOVED

OUTFALL 12

HIGH VISIBILITY CONST. FENCE FOR PARKING

OUTFALL 19

BANKS ROAD

SILT FENCE W BACKING TO KEEP STR CLEAN DURING CONST.

E. BRAINARD S.R 320

HIGH VISIBILITY FENCE

STR-5

OUTFALL 11

TEMP PUMP

E. BRAINERD RD. EXIST. SR 320

POLYMER GEL LOG

SEE DETAIL A

49 L.F. OF 6 X 3 RCBC

15 L.F. OF 6 X 3 RCBC

4' OF 8" TUBES (TURN UP GRADIENT)

45' OF 18" TEMP. SLOPE DRAIN OUTFALL 15A

31' OF 18" TEMP. SLOPE DRAIN

A-1 RIP-RAP TO STREAM 55' X 8'

CONC.SWALE DITCH TO FLOW TO RIP-RAP DITCH
STA. 315+01.08
OFF 114'

BENCH FLOW LINE

PLACE ADDITIONAL 18" TUBES IN SWALE

PHASE III CONST.

BELL AIR ROAD

PLACE BEHIND CONC. DITCH (SEE X-SEC.)

CONC. DITCH

END V-SOD DITCH
STA. 308+50.00
OFF 52.50'

6' OF 8" TUBES (TURN UP GRADIENT)

LINE STA. 308+00 SHT. NO. 18N

LINE STA. 321+00 SHT. NO. 18P

EVERETT DRIVE

PHASE II

HIGH VISIBILITY FENCE SHALL BE PLACED AROUND ALL NON-IMPACTED SECTIONS OF WATER QUALITY FEATURES.

DETAIL A

8' OF 18" SEDIMENT TUBE

18"

STR-5

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
	TEMPORARY SLOPE DRAIN WITH TEMPORARY BERM	EC-STR-27
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37
6	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EC-STR-46
* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1
→	TRAFFIC FLOW	

TURN TEMP. SLOPE DRAINS HORIZONTAL IN STREAMS

PLACE BOTTOM SEDIMENT TUBE 1.5 FT ABOVE STREAM.

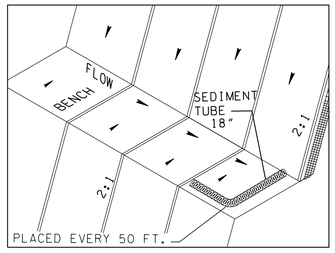
MAINTAIN EXISTING STR-5 UNTIL NEW CHANNEL IS STABLE

6"+ SOD HEIGHT RECOMMENDED BEFORE OPENING CHANNEL CHANGE

SEE SHT. 2T THRU 2U FOR STREAM AND WETLAND MITIGATION DETAILS.

LEAVE AS MANY TREES AS POSSIBLE TO SHADE THE NEW CHANNEL

EROSION CONTROL ON BENCH



NOTE:

SEDIMENT TUBES & SILT FENCE TO BE PLACED ALONG CONTOUR WITH ENDS TURNED UP GRADIENT.

SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN PHASE II

STA. 308+00 TO STA. 321+00

SCALE: 1"= 50'

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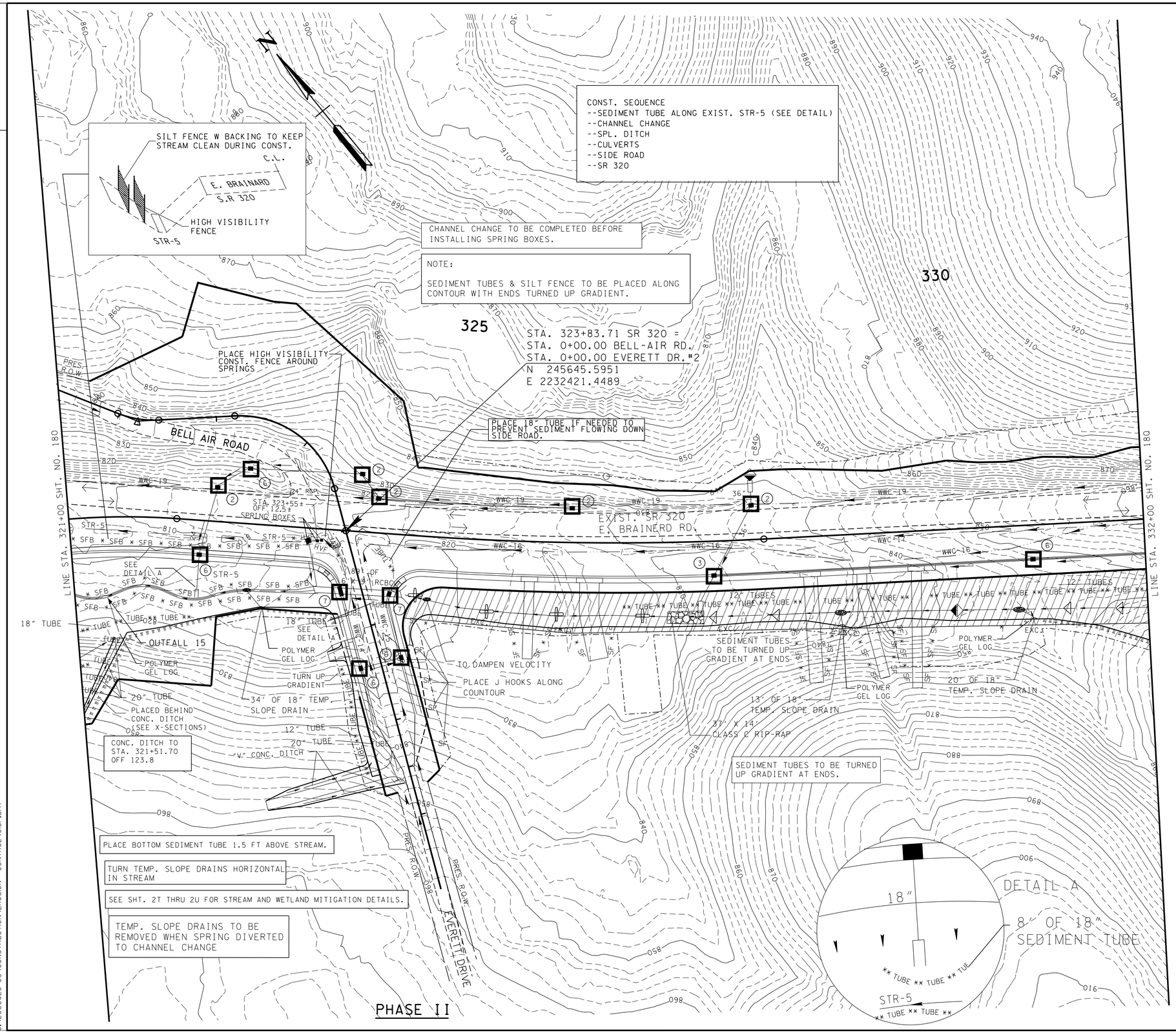
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2006	STP-320(4)	18O
CONST.	2014	STP-320(4)	18P

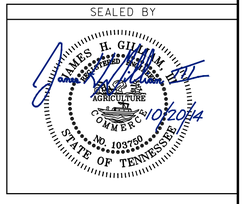
REVISION: 05-19-2010
--ADDED SHEET.
REVISION: 09-27-2010
--ADDED BENCHES AND SPL. DITCH.



EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* 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 (V-DITCH)	EC-STR-6A
	ROCK SEDIMENT DAM	EC-STR-12
	TEMPORARY SLOPE DRAIN WITH TEMPORARY BERM	EC-STR-27
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37
3	CATCH BASIN FILTER ASSEMBLY (TYPE 3)	EC-STR-43
6	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EC-STR-46
7	CATCH BASIN FILTER ASSEMBLY (TYPE 7)	EC-STR-47
→	TRAFFIC FLOW	
* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN PHASE II

STA. 321+00 TO STA. 332+00

SCALE: 1"= 50'

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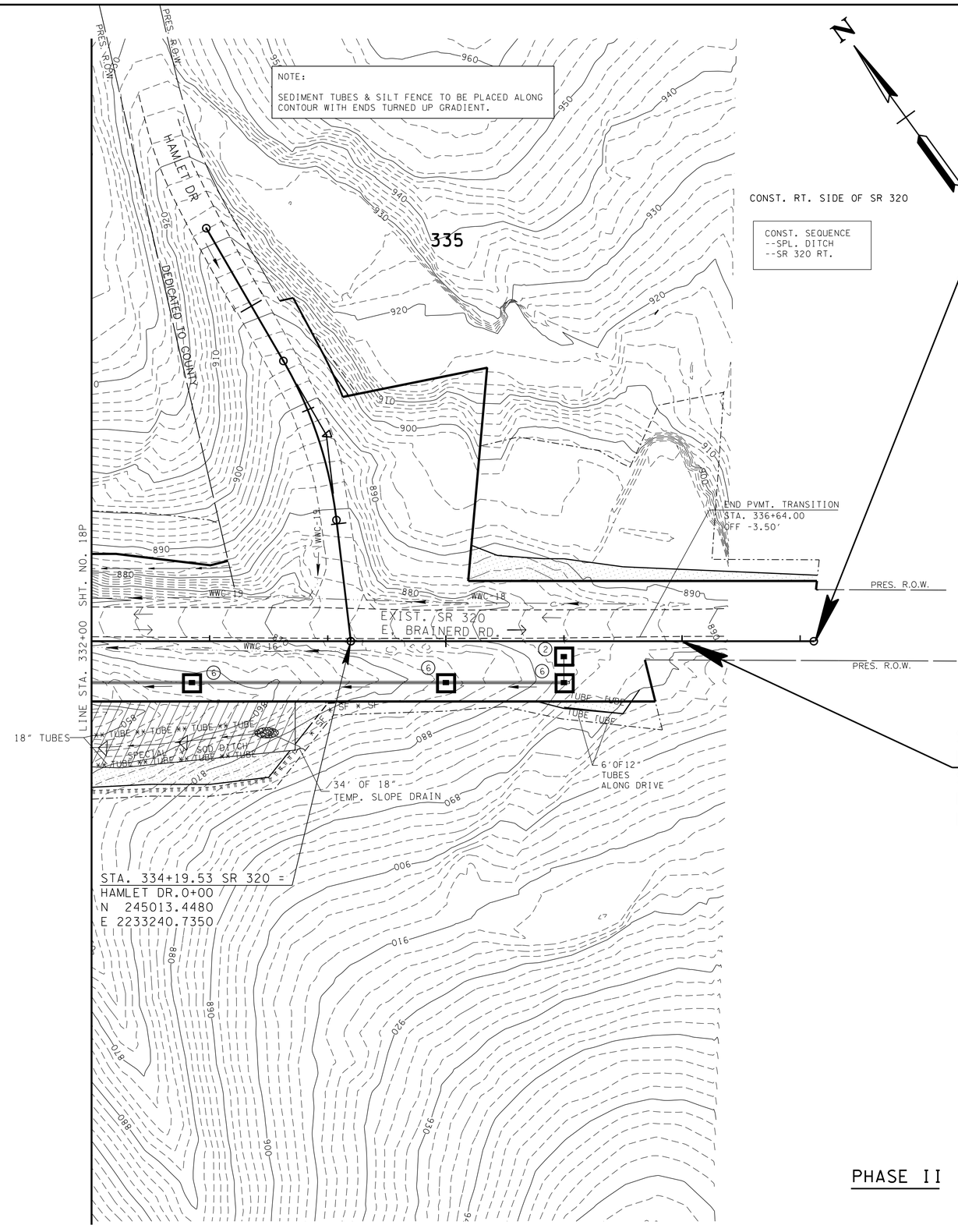
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2006	STP-320(4)	18P
CONST.	2014	STP-320(4)	18Q

REVISION: 05-19-2010
--ADDED SHEET.



STATE PROJ. NO. 33057-2222(14) R.O.W.
END PROJ. NO. STP-320(4)
STA. 338+12.86
N 244782.5841
E 2233559.1908

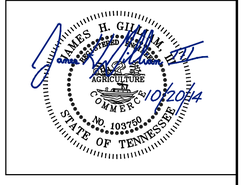
STATE PROJ. NO. 33057-3224(14) CONST.
END PROJ. NO. STP-320(4)
STA. 337+00.00
N 244848.8188
E 2233467.8074

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SF * SF * SF *	SILT FENCE	EC-STR-3B
	ROCK CHECK DAM (V-DITCH)	EC-STR-6
π π π π π π π π	TEMPORARY BERM	EC-STR-27
	TEMPORARY SLOPE DRAIN	EC-STR-27
×× TUBE ×× TUBE ××	SEDIMENT TUBE	EC-STR-37
2	CATCH BASIN FILTER ASSEMBLY (TYPE 2)	EC-STR-42
6	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EC-STR-46
→	TRAFFIC FLOW	

PHASE II

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN PHASE II

STA. 332+00 TO END PROJECT

SCALE: 1"= 50'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2006	STP-320(4)	18O
CONST.	2014	STP-320(4)	18R

REVISION: 05-19-2010
--ADDED SHEET.

CONST. SEQUENCE

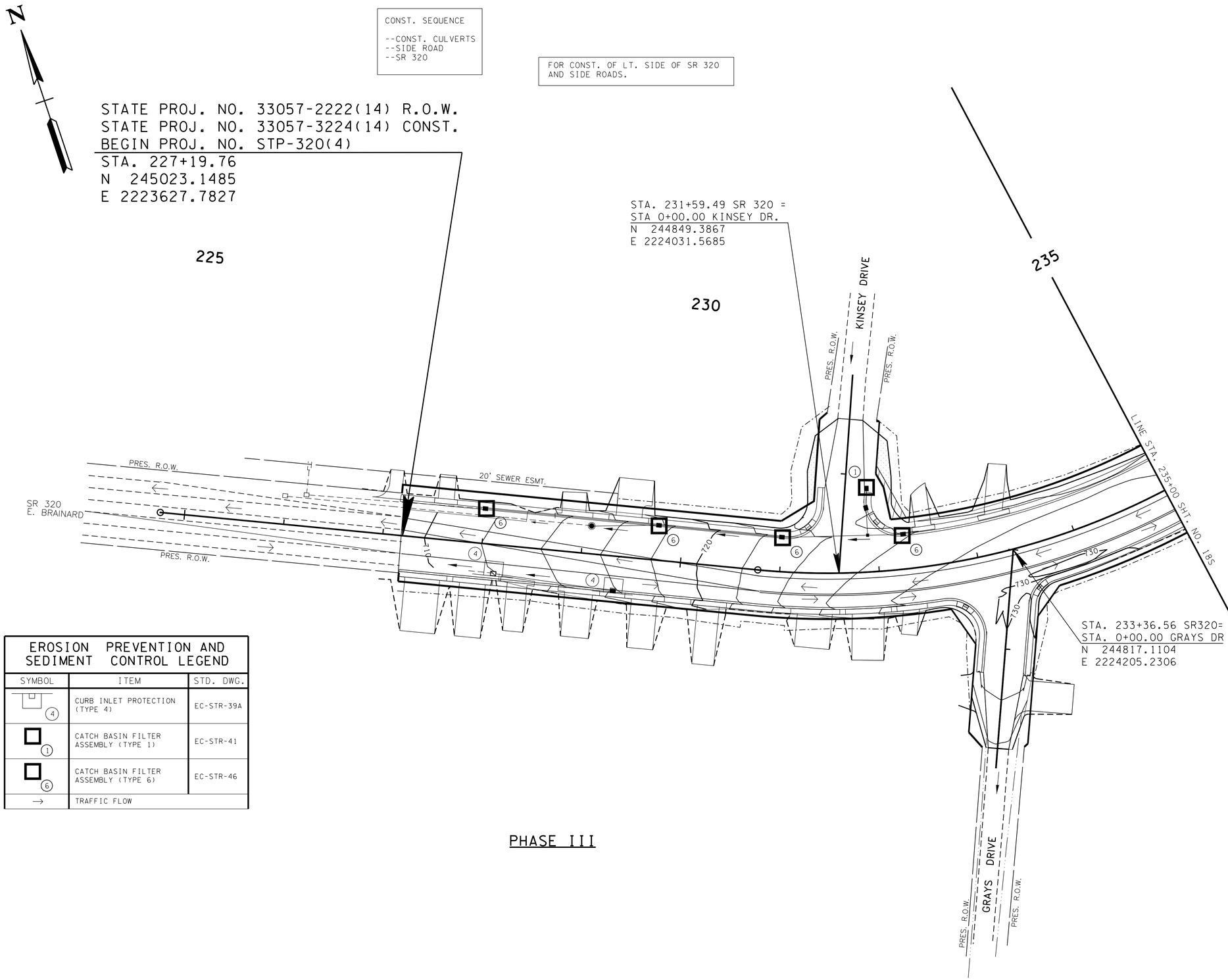
--CONST. CULVERTS
--SIDE ROAD
--SR 320

FOR CONST. OF LT. SIDE OF SR 320 AND SIDE ROADS.

STATE PROJ. NO. 33057-2222(14) R.O.W.
STATE PROJ. NO. 33057-3224(14) CONST.
BEGIN PROJ. NO. STP-320(4)
STA. 227+19.76
N 245023.1485
E 2223627.7827

STA. 231+59.49 SR 320 =
STA 0+00.00 KINSEY DR.
N 244849.3867
E 2224031.5685

STA. 233+36.56 SR320=
STA. 0+00.00 GRAYS DR
N 244817.1104
E 2224205.2306



EROSION PREVENTION AND SEDIMENT CONTROL LEGEND		
SYMBOL	ITEM	STD. DWG.
4	CURB INLET PROTECTION (TYPE 4)	EC-STR-39A
1	CATCH BASIN FILTER ASSEMBLY (TYPE 1)	EC-STR-41
6	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EC-STR-46
→	TRAFFIC FLOW	

PHASE III

SEALED BY

JAMES H. GILLIAM, JR.
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 103750
STATE OF TENNESSEE
10/2/2014

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN PHASE III

BEG. PROJ. TO STA. 235+00

SCALE: 1"= 50'

9/2/2014 9:47:55 AM
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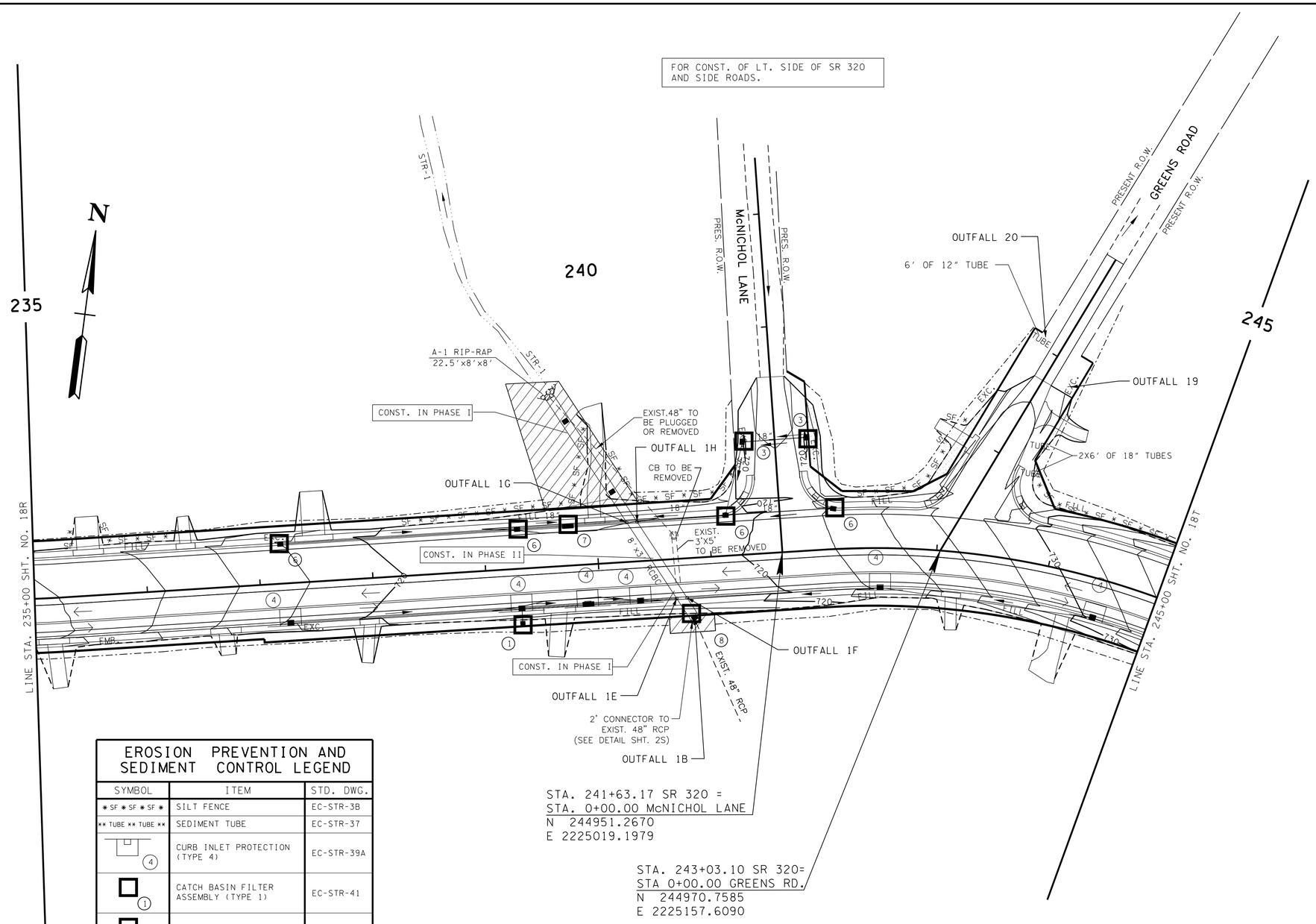
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2006	STP-320(4)	18R
CONST.	2014	STP-320(4)	18S

REVISION: 05-19-2010
--ADDED SHEET.

FOR CONST. OF LT. SIDE OF SR 320
AND SIDE ROADS.



STA. 241+63.17 SR 320 =
STA. 0+00.00 McNICHOL LANE
N 244951.2670
E 2225019.1979

STA. 243+03.10 SR 320=
STA 0+00.00 GREENS RD.
N 244970.7585
E 2225157.6090

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SF * SF * SF *	SILT FENCE	EC-STR-3B
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37
(4)	CURB INLET PROTECTION (TYPE 4)	EC-STR-39A
(1)	CATCH BASIN FILTER ASSEMBLY (TYPE 1)	EC-STR-41
(3)	CATCH BASIN FILTER ASSEMBLY (TYPE 3)	EC-STR-43
(6)	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EC-STR-46
(7)	CATCH BASIN FILTER ASSEMBLY (TYPE 7)	EC-STR-47
(8)	CATCH BASIN FILTER ASSEMBLY (TYPE 8)	EC-STR-48
→	TRAFFIC FLOW	

PHASE III

NOTE:

SEDIMENT TUBES & SILT FENCE TO BE PLACED ALONG CONTOUR WITH ENDS TURNED UP GRADIENT.

SEALED BY

JAMES H. GILLIAM
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 103750
STATE OF TENNESSEE
10/7/2014

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN PHASE III

STA. 235+00 TO STA. 245+00

SCALE: 1"= 50'

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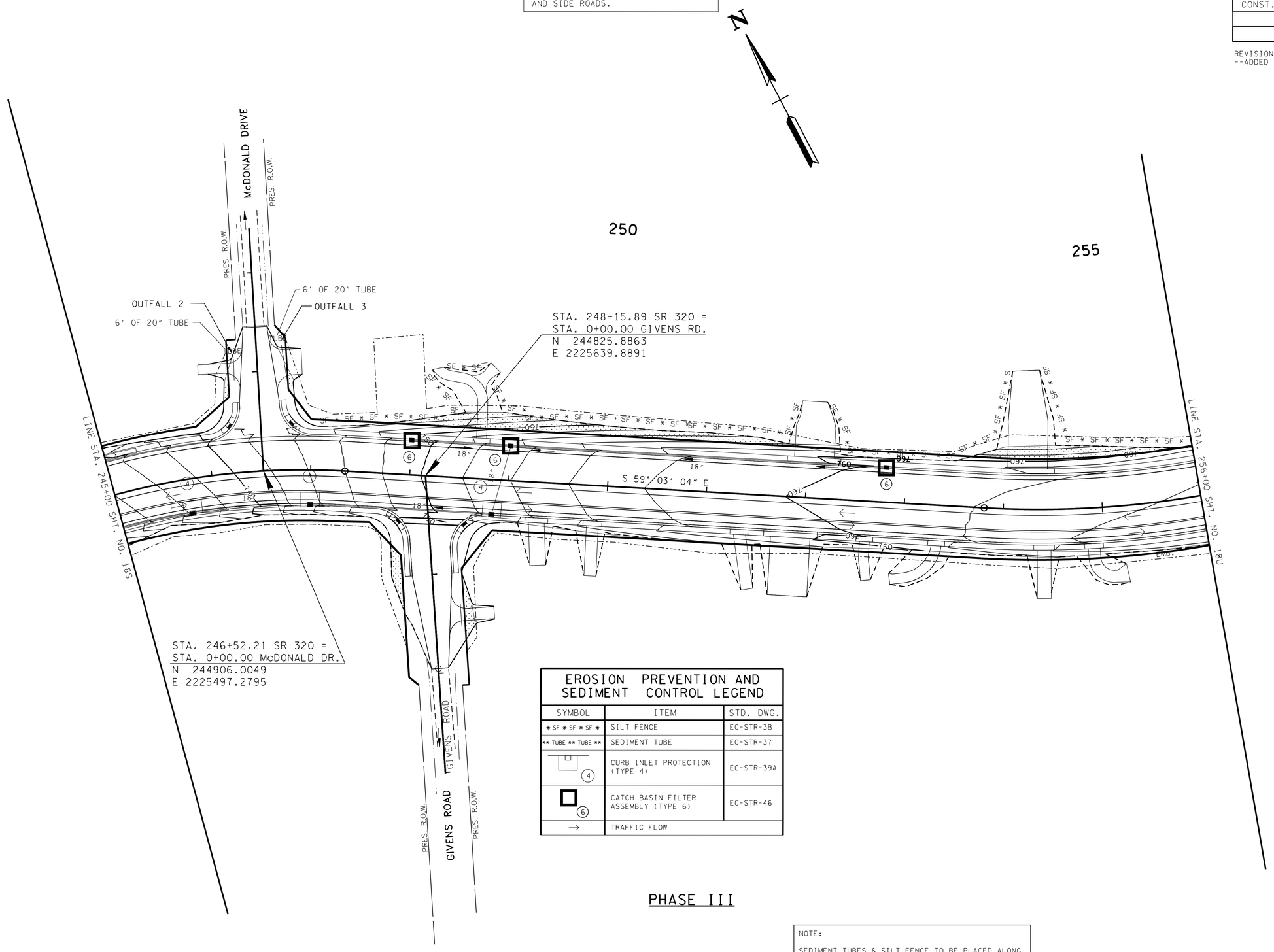
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2006	STP-320(4)	18S
CONST.	2014	STP-320(4)	18T

REVISION: 05-19-2010
--ADDED SHEET.

FOR CONST. OF LT. SIDE OF SR 320
AND SIDE ROADS.



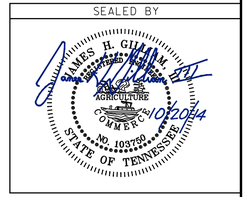
EROSION PREVENTION AND SEDIMENT CONTROL LEGEND		
SYMBOL	ITEM	STD. DWG.
SF SF SF SF	SILT FENCE	EC-STR-3B
TUBE TUBE	SEDIMENT TUBE	EC-STR-37
4	CURB INLET PROTECTION (TYPE 4)	EC-STR-39A
6	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EC-STR-46
→	TRAFFIC FLOW	

PHASE III

NOTE:

SEDIMENT TUBES & SILT FENCE TO BE PLACED ALONG CONTOUR WITH ENDS TURNED UP GRADIENT.

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN PHASE III

STA. 245+00 TO STA. 256+00

SCALE: 1"= 50'

2/19/2013 9:51:31 AM
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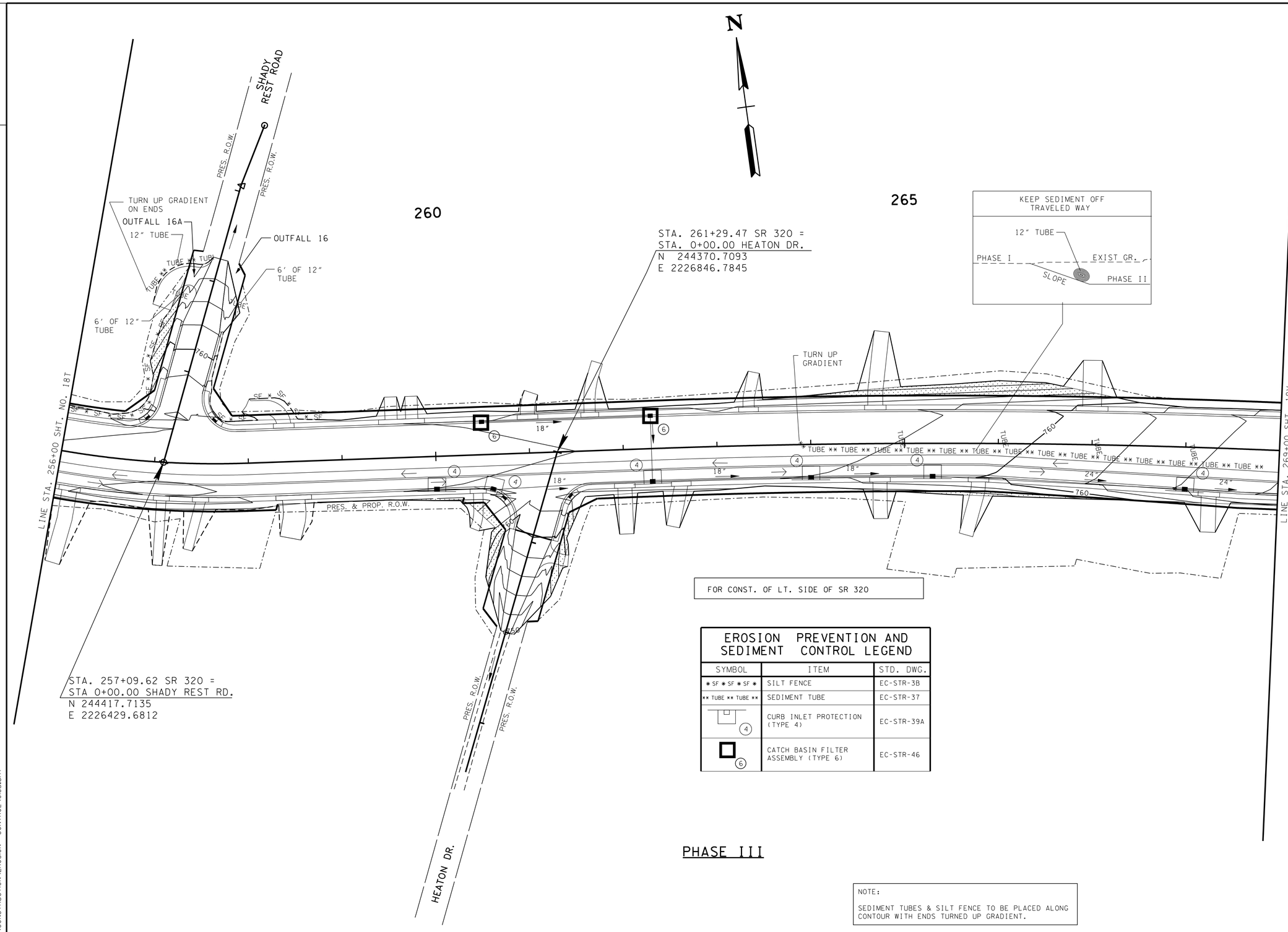
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2006	STP-320(4)	18T
CONST.	2014	STP-320(4)	18U

REVISION: 05-19-2010
--ADDED SHEET.



FOR CONST. OF LT. SIDE OF SR 320

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND		
SYMBOL	ITEM	STD. DWG.
* SF * SF * SF *	SILT FENCE	EC-STR-3B
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37
(4)	CURB INLET PROTECTION (TYPE 4)	EC-STR-39A
(6)	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EC-STR-46

PHASE III

NOTE:

SEDIMENT TUBES & SILT FENCE TO BE PLACED ALONG CONTOUR WITH ENDS TURNED UP GRADIENT.

SEALED BY

JAMES H. GILLIAM, JR.
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 103760
STATE OF TENNESSEE
10/20/14

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN PHASE III

STA. 256+00 TO STA. 269+00

SCALE: 1"= 50'

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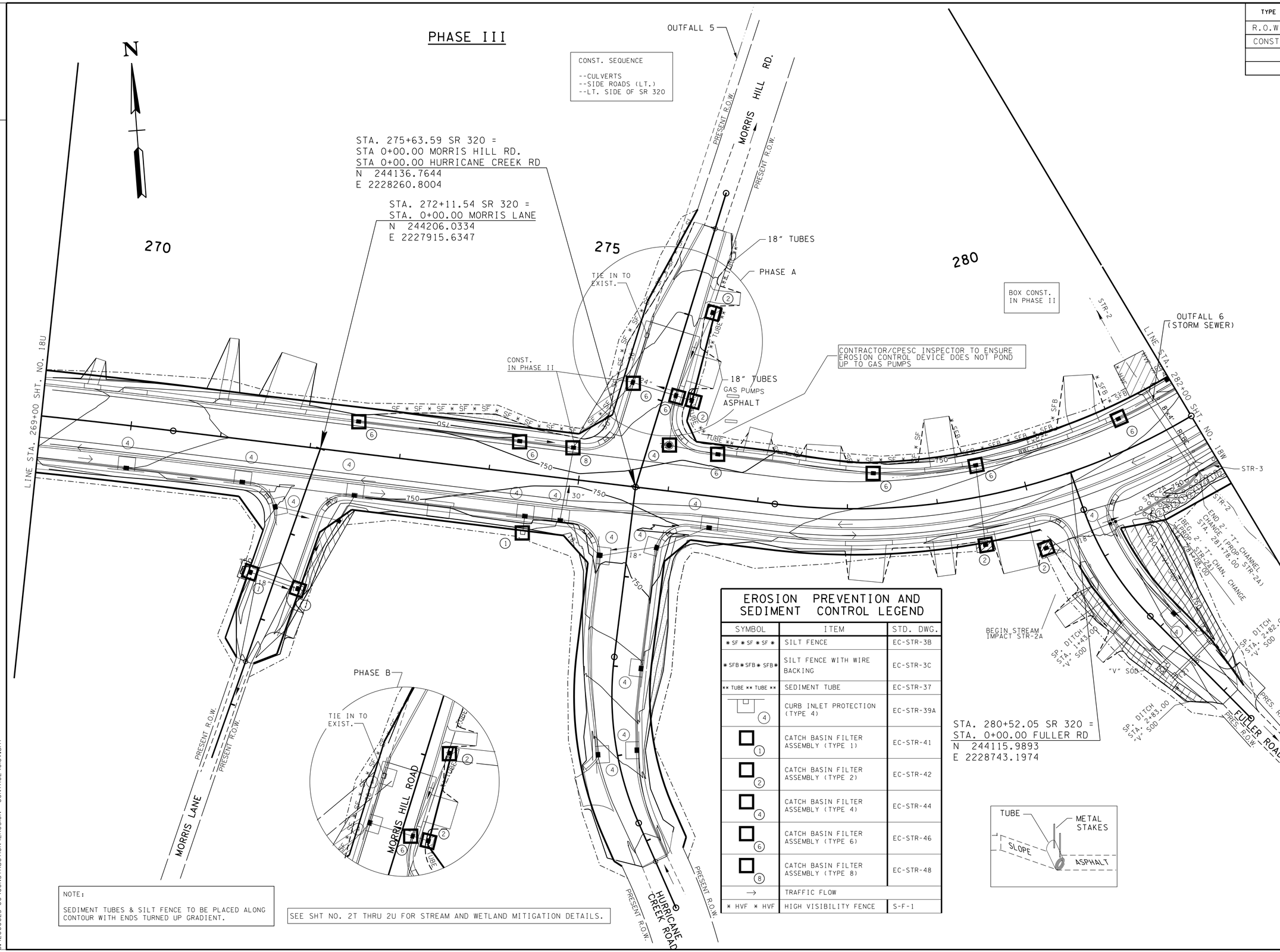
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2006	STP-320(4)	18U
CONST.	2014	STP-320(4)	18V



EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SF * SF * SF *	SILT FENCE	EC-STR-3B
* SFB * SFB * SFB *	SILT FENCE WITH WIRE BACKING	EC-STR-3C
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37
(4)	CURB INLET PROTECTION (TYPE 4)	EC-STR-39A
(1)	CATCH BASIN FILTER ASSEMBLY (TYPE 1)	EC-STR-41
(2)	CATCH BASIN FILTER ASSEMBLY (TYPE 2)	EC-STR-42
(4)	CATCH BASIN FILTER ASSEMBLY (TYPE 4)	EC-STR-44
(6)	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EC-STR-46
(8)	CATCH BASIN FILTER ASSEMBLY (TYPE 8)	EC-STR-48
→	TRAFFIC FLOW	
* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1

NOTE:

SEDIMENT TUBES & SILT FENCE TO BE PLACED ALONG CONTOUR WITH ENDS TURNED UP GRADIENT.

SEE SHT NO. 2T THRU 2U FOR STREAM AND WETLAND MITIGATION DETAILS.

SEALED BY

JAMES H. GILLIAM, JR.
REGISTERED ENGINEER
DEPARTMENT OF AGRICULTURE
COMMERCE
NO. 103750
STATE OF TENNESSEE
10/2/2014

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN PHASE III

STA. 269+00 TO STA. 282+00

SCALE: 1"= 50'

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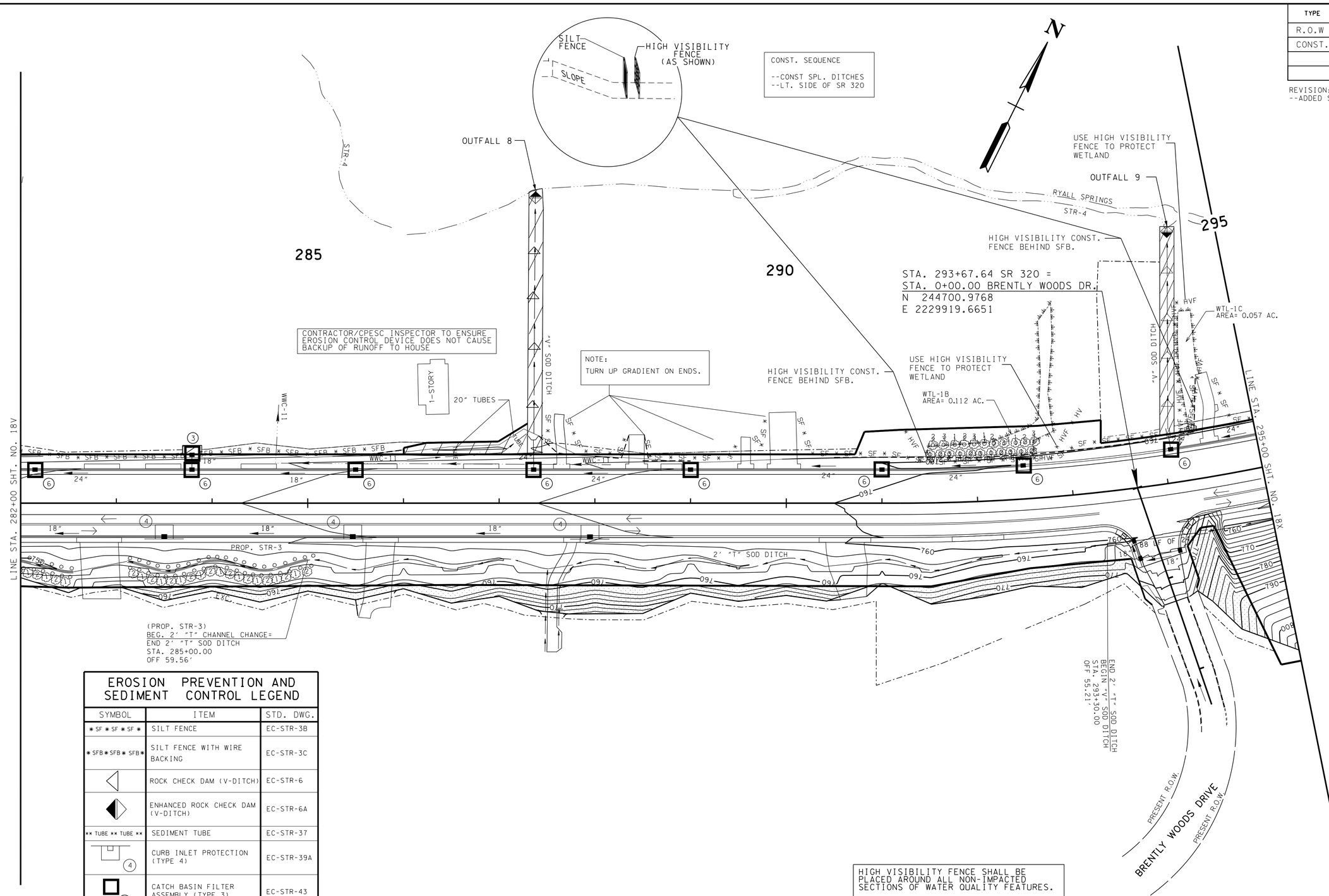
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2006	STP-320(4)	18V
CONST.	2014	STP-320(4)	18W

REVISION: 05-19-2010
--ADDED SHEET.



EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* 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 (V-DITCH)	EC-STR-6A
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37
4	CURB INLET PROTECTION (TYPE 4)	EC-STR-39A
3	CATCH BASIN FILTER ASSEMBLY (TYPE 3)	EC-STR-43
6	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EC-STR-46
→	TRAFFIC FLOW	
* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1

HIGH VISIBILITY FENCE SHALL BE PLACED AROUND ALL NON-IMPACTED SECTIONS OF WATER QUALITY FEATURES.

SEE SHT NO. 2T THRU 2U FOR STREAM AND WETLAND MITIGATION DETAILS.

PHASE III

NOTE:

SEDIMENT TUBES & SILT FENCE TO BE PLACED ALONG CONTOUR WITH ENDS TURNED UP GRADIENT.

SEALED BY

JAMES H. GILLIAM, III
REGISTERED ENGINEER
AGRICULTURE COMMERCE
NO. 103750
STATE OF TENNESSEE
10/2/2014

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN PHASE III

STA. 282+00 TO STA. 295+00

SCALE: 1"= 50'

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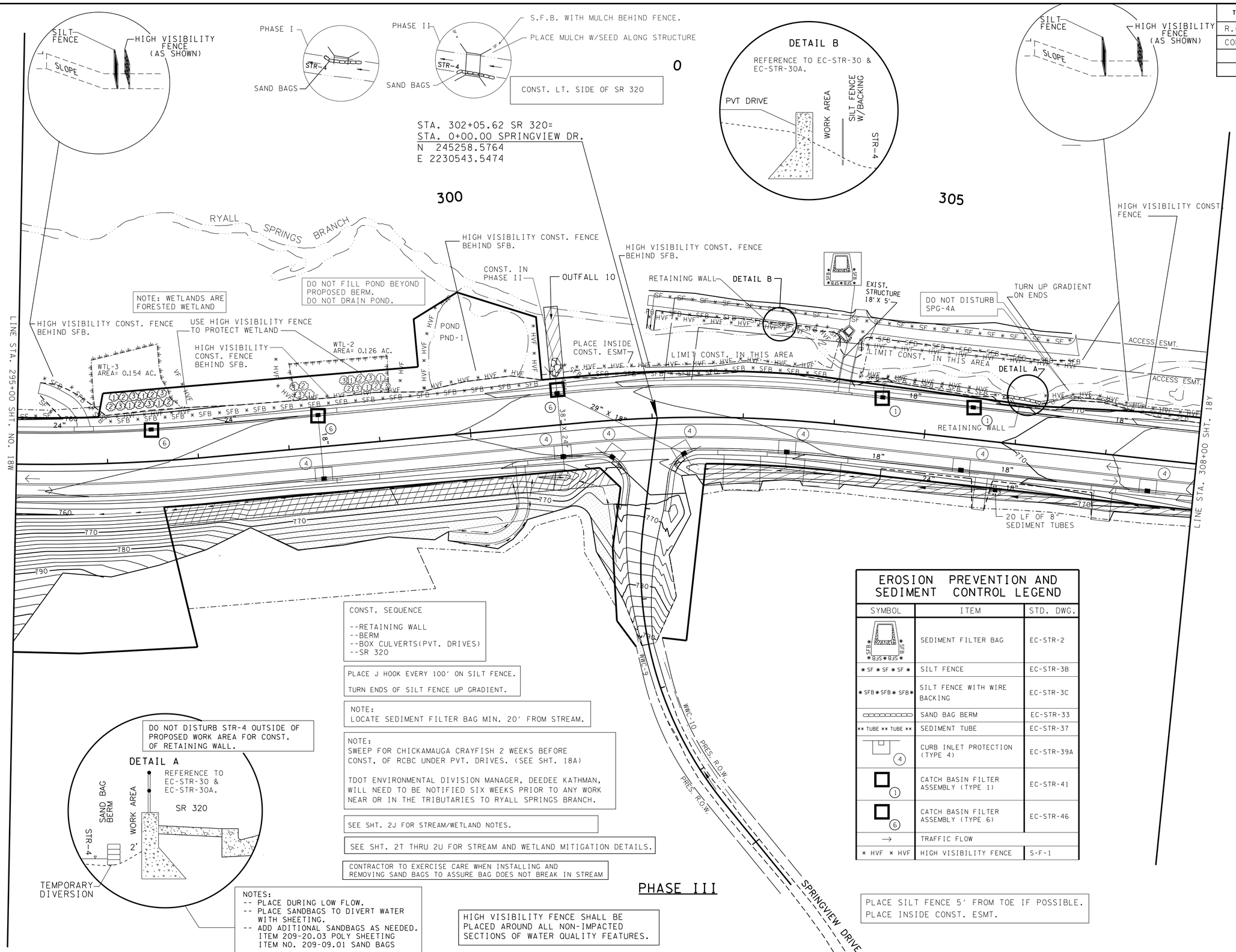
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2006	STP-320(4)	18W
CONST.	2014	STP-320(4)	18X

REVISION: 05-19-2010
--ADDED SHEET.



CONST. SEQUENCE

--RETAINING WALL
--BERM
--BOX CULVERTS(PVT. DRIVES)
--SR 320

PLACE J HOOK EVERY 100' ON SILT FENCE.

TURN ENDS OF SILT FENCE UP GRADIENT.

NOTE:
LOCATE SEDIMENT FILTER BAG MIN. 20' FROM STREAM.

NOTE:
SWEEP FOR CHICKAMAUGA CRAYFISH 2 WEEKS BEFORE CONST, OF RCBC UNDER PVT. DRIVES. (SEE SHT. 18A)

TDOT ENVIRONMENTAL DIVISION MANAGER, DEEDEE KATHMAN, WILL NEED TO BE NOTIFIED SIX WEEKS PRIOR TO ANY WORK NEAR OR IN THE TRIBUTARIES TO RYALL SPRINGS BRANCH.

SEE SHT. 2J FOR STREAM/WETLAND NOTES.

SEE SHT. 2T THRU 2U FOR STREAM AND WETLAND MITIGATION DETAILS.

CONTRACTOR TO EXERCISE CARE WHEN INSTALLING AND REMOVING SAND BAGS TO ASSURE BAG DOES NOT BREAK IN STREAM

PHASE III

HIGH VISIBILITY FENCE SHALL BE PLACED AROUND ALL NON-IMPACTED SECTIONS OF WATER QUALITY FEATURES.

DO NOT DISTURB STR-4 OUTSIDE OF PROPOSED WORK AREA FOR CONST. OF RETAINING WALL.

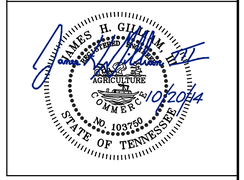
NOTES:
-- PLACE DURING LOW FLOW.
-- PLACE SANDBAGS TO DIVERT WATER WITH SHEETING.
-- ADD ADITIONAL SANDBAGS AS NEEDED. ITEM 209-20.03 POLY SHEETING ITEM NO. 209-09.01 SAND BAGS

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SFB * SFB * SFB *	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
	SAND BAG BERM	EC-STR-33
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37
4	CURB INLET PROTECTION (TYPE 4)	EC-STR-39A
1	CATCH BASIN FILTER ASSEMBLY (TYPE 1)	EC-STR-41
6	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EC-STR-46
→	TRAFFIC FLOW	
* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1

PLACE SILT FENCE 5' FROM TOE IF POSSIBLE.
PLACE INSIDE CONST. ESMT.

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN PHASE III

STA. 295+00 TO STA. 308+00

SCALE: 1"= 50'

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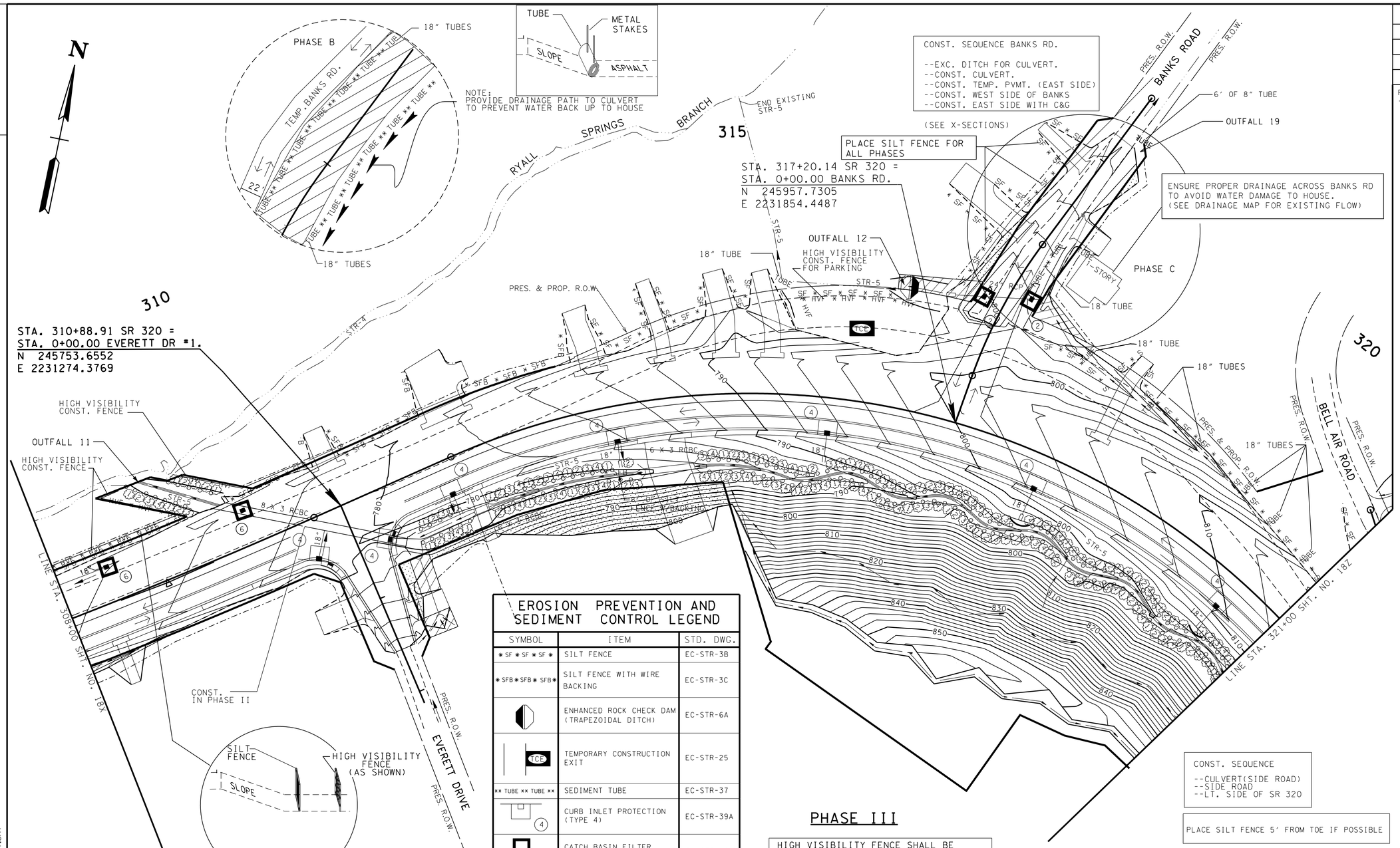
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.



EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SF * SF * SF *	SILT FENCE	EC-STR-3B
* SFB * SFB * SFB *	SILT FENCE WITH WIRE BACKING	EC-STR-3C
	ENHANCED ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6A
TCE	TEMPORARY CONSTRUCTION EXIT	EC-STR-25
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37
4	CURB INLET PROTECTION (TYPE 4)	EC-STR-39A
2	CATCH BASIN FILTER ASSEMBLY (TYPE 2)	EC-STR-42
6	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EC-STR-46
→	TRAFFIC FLOW	
* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1

PHASE III

HIGH VISIBILITY FENCE SHALL BE PLACED AROUND ALL NON-IMPACTED SECTIONS OF WATER QUALITY FEATURES.

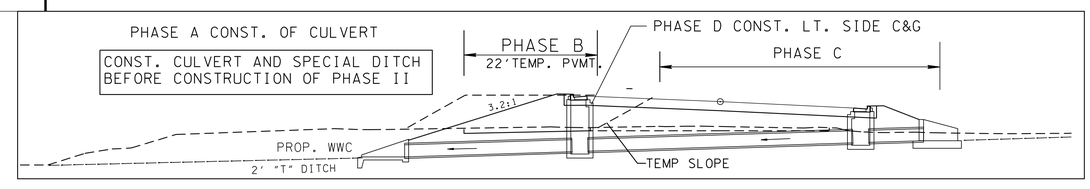
SEE SHT. 2T THRU 2U FOR STREAM AND WETLAND MITIGATION DETAILS.

CONST. SEQUENCE
--CULVERT(SIDE ROAD)
--SIDE ROAD
--LT. SIDE OF SR 320

PLACE SILT FENCE 5' FROM TOE IF POSSIBLE

CONST. LT. SIDE OF SR 320 AND BANKS RD.

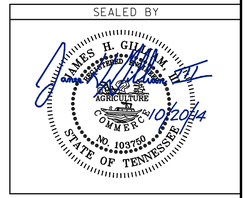
NOTE:
SEDIMENT TUBES & SILT FENCE TO BE PLACED ALONG CONTOUR WITH ENDS TURNED UP GRADIENT.



TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2006	STP-320(4)	18X
CONST.	2014	STP-320(4)	18Y

REVISION: 05-19-2010
--ADDED SHEET.

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN PHASE III

STA. 308+00 TO STA. 321+00

SCALE: 1"= 50'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2006	STP-320(4)	18Y
CONST.	2014	STP-320(4)	18Z

REVISION: 05-19-2010
--ADDED SHEET.

CONST. LT. SIDE OF SR 320 AND BELL AIR RD.

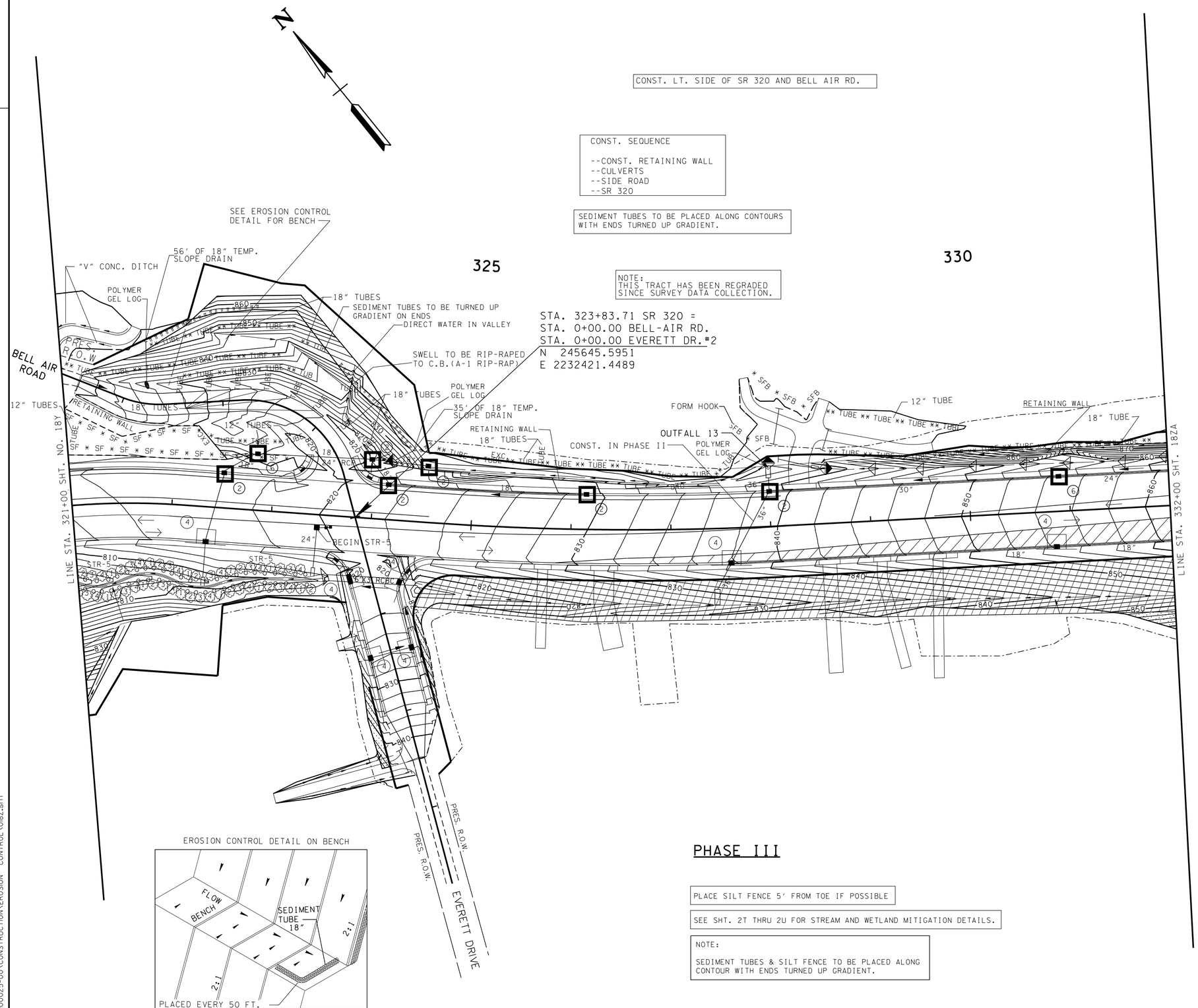
CONST. SEQUENCE

--CONST. RETAINING WALL
--CULVERTS
--SIDE ROAD
--SR 320

SEDIMENT TUBES TO BE PLACED ALONG CONTOURS WITH ENDS TURNED UP GRADIENT.

NOTE:
THIS TRACT HAS BEEN REGRADED SINCE SURVEY DATA COLLECTION.

STA. 323+83.71 SR 320 =
STA. 0+00.00 BELL-AIR RD.
STA. 0+00.00 EVERETT DR.#2
N 245645.5951
E 2232421.4489



EROSION CONTROL DETAIL ON BENCH

PHASE III

PLACE SILT FENCE 5' FROM TOE IF POSSIBLE

SEE SHT. 2T THRU 2U FOR STREAM AND WETLAND MITIGATION DETAILS.

NOTE:

SEDIMENT TUBES & SILT FENCE TO BE PLACED ALONG CONTOUR WITH ENDS TURNED UP GRADIENT.

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* 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 (V-DITCH)	EC-STR-6A
	TEMPORARY SLOPE DRAIN WITH TEMPORARY BERM	EC-STR-27
	TEMPORARY SLOPE DRAIN	EC-STR-27
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37
4	CURB INLET PROTECTION (TYPE 4)	EC-STR-39A
2	CATCH BASIN FILTER ASSEMBLY (TYPE 2)	EC-STR-42
6	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EC-STR-46
→	TRAFFIC FLOW	

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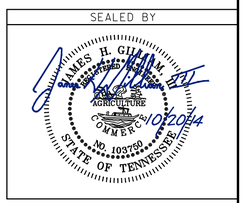

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN PHASE III

STA. 321+00 TO STA. 332+00

SCALE: 1"= 50'

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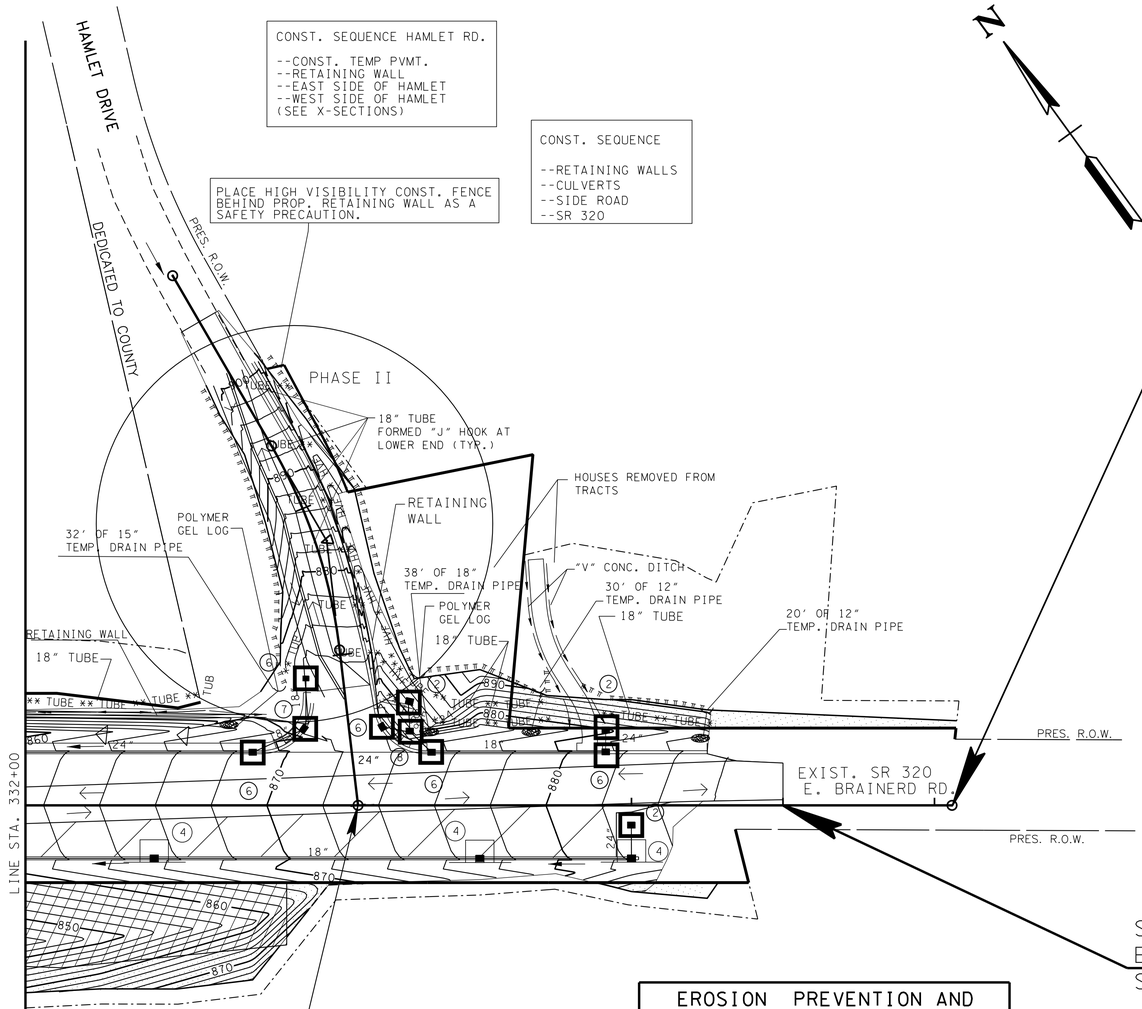
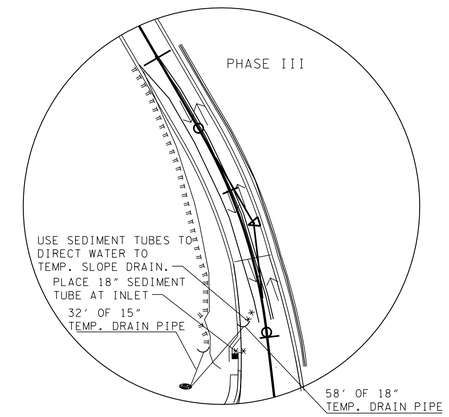
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2006	STP-320(4)	18Z
CONST.	2014	STP-320(4)	18ZA

REVISION: 05-19-2010
--ADDED SHEET.



STATE PROJ. NO. 33057-2222-(14) R.O.W.
END PROJ. NO. STP-320(4)
STA. 338+12.86



STATE PROJ. NO. 33057-3224(14) CONST.
END PROJ. NO. STP-320(4)
STA. 337+00.00

STA. 334+19.53 SR 320 =
HAMLET DR.0+00
N 245013.4480
E 2233240.7350

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
	ROCK CHECK DAM (V-DITCH)	EC-STR-6
	TEMPORARY SLOPE DRAIN WITH TEMPORARY BERM	EC-STR-27
	TEMPORARY BERM	EC-STR-27
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37
4	CURB INLET PROTECTION (TYPE 4)	EC-STR-39A
2	CATCH BASIN FILTER ASSEMBLY (TYPE 2)	EC-STR-42
6	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EC-STR-46
7	CATCH BASIN FILTER ASSEMBLY (TYPE 7)	EC-STR-47
8	CATCH BASIN FILTER ASSEMBLY (TYPE 8)	EC-STR-48
→	TRAFFIC FLOW	
* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1

NOTE:

SEDIMENT TUBES & SILT FENCE TO BE PLACED ALONG CONTOUR WITH ENDS TURNED UP GRADIENT.

PHASE III

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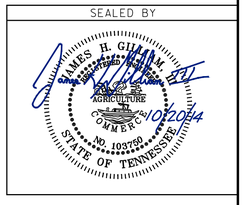

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN PHASE III

STA. 332+00 TO END PROJECT

SCALE: 1"= 50'

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	19

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

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 PAVEMENT (W8-11) AND/OR SHOULDER DROP-OFF (W8-9A), 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 PAVEMENT AND/OR LOW SHOULDER) 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 PAVEMENT AND/OR LOW SHOULDER) 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 (W8-9A). 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 ONE 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 PAVEMENT AND/OR LOW SHOULDER) 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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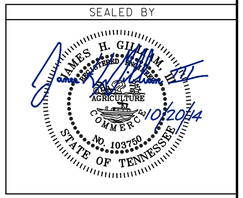

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PAVEMENT EDGE DROP-OFF TRAFFIC CONTROL NOTES

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	19A

SIGNAL HEAD ADJUSTMENTS

1. SR 320 - PHASE II, PHASE III (EASTBOUND, WESTBOUND)
2. HURRICANE CREEK RD. - PHASE A & B
3. MORRIS HILL RD. - PHASE A & B

THESE WILL BE INCLUDED UNDER ITEM NO. 712-01

TRAFFIC CONTROL NOTES
THE CONSTRUCTION PLANS ARE TO SERVE AS A GUIDE ONLY. OTHER SIGNS MAY BE REQUIRED DURING VARIES PHASES OF CONSTRUCTION.

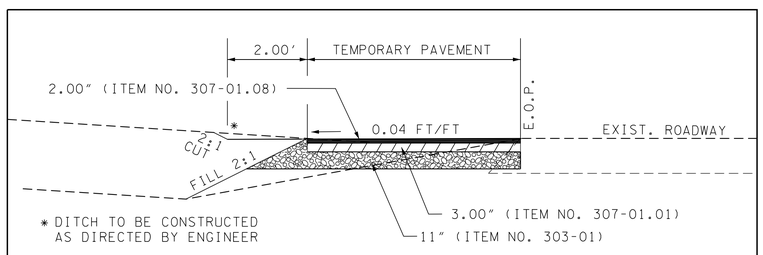
THIS TRAFFIC CONTROL PLAN DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF INSTALLING TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

THE CONTRACTOR IS TO HAVE TWO FLAGGERS ON THE PROJECT ANY TIME TRAFFIC NEEDS TO BE RESTRICTED TO ONE LANE. COST OF THE FLAGGERS IS TO BE INCLUDED IN THE COST OF ITEM NO. 712-01 TRAFFIC CONTROL (LUMP SUM).

FLAGGER AHEAD, SHOULDER DROP-OFF AND ROAD NARROWS SIGNS TO BE USED WHEN CONSTRUCTION OPERATIONS WARRANT. TO BE LOCATED AS DIRECTED BY THE T.D.O.T. SUPERVISOR. COST TO BE INCLUDED IN THE COST OF ITEM NO. 712-01.

TRAFFIC CONTROL LEGEND

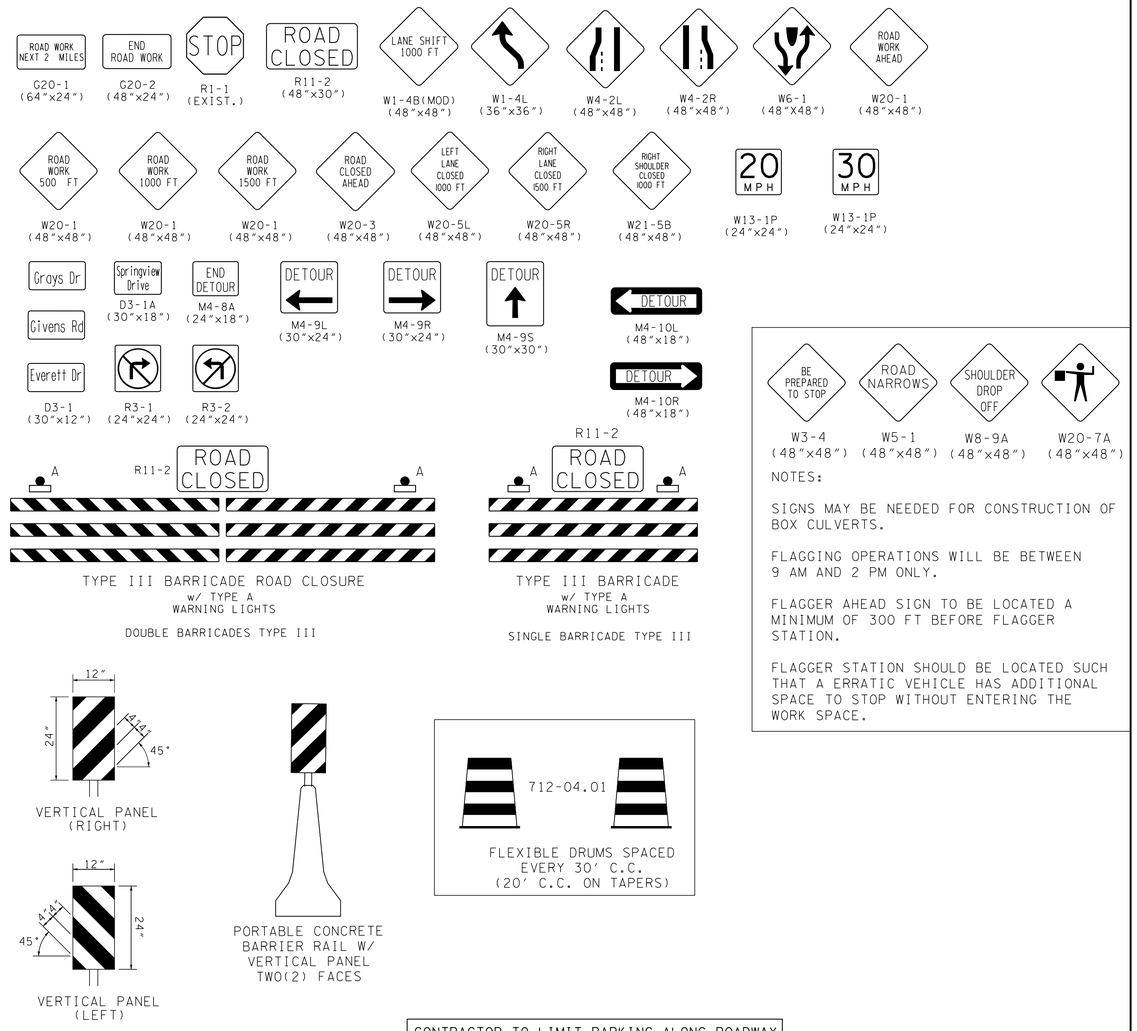
SYMBOL	ITEM
	WORK ZONE
	CONSTRUCTION UNDER TRAFFIC
	SIGN (CONSTRUCTION)
→	TRAFFIC FLOW
C	WARNING LIGHT (TYPE C) (STEADY)
	TEMPORARY BARRICADE (TYPE III)
	FLEXIBLE DRUMS (CHANNELIZING)
	TEMPORARY PAVEMENT
	ARROW BOARD TYPE C (CAUTION)
	ARROW BOARD TYPE C
	PORTABLE BARRIER RAIL
	VERTICAL PANELS (2 FACES)
	TEMPORARY ATTENUATOR
	CHANGEABLE MESSAGE SIGN
4" TDSYL	4" TEMPORARY DOUBLE SOLID YELLOW LINE
6" TSSWL	6" TEMPORARY SINGLE SOLID WHITE LINE
8" TSSWL	8" TEMPORARY SINGLE SOLID WHITE LINE



TEMPORARY PAVEMENT
TYPICAL SECTIONS

STA. 231+47.87 TO 271+89.00 SR-320
STA. 1+00 TO 3+50 BANKS ROAD
STA. 1+00 TO 3+02 HAMLET DRIVE

TRAFFIC CONTROL SIGNS



CONTRACTOR TO LIMIT PARKING ALONG ROADWAY TO ENSURE PROPER SIGHT DISTANCE

NOTES:

SIGNS MAY BE NEEDED FOR CONSTRUCTION OF BOX CULVERTS.

FLAGGING OPERATIONS WILL BE BETWEEN 9 AM AND 2 PM ONLY.

FLAGGER AHEAD SIGN TO BE LOCATED A MINIMUM OF 300 FT BEFORE FLAGGER STATION.

FLAGGER STATION SHOULD BE LOCATED SUCH THAT A ERRATIC VEHICLE HAS ADDITIONAL SPACE TO STOP WITHOUT ENTERING THE WORK SPACE.

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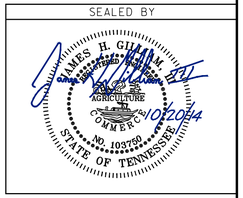

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	19A1

TRAFFIC CONTROL QUANTITIES

	DESCRIPTION	UNIT	QUANTITY	ITEM NO. 712-06 (S.F.)	SIZE	M.U.T.C.D. NO.	REMARKS
	GRAYS DR	SF	5	12.5	30" X 12"	D3-1	
	GIVENS RD	SF	5	12.5	30" X 12"	D3-1	
	EVERETT DR	SF	6	15	30" X 12"	D3-1	
	SPRINGVIEW DRIVE	SF	4	15	30" X 18"	D3-1	
	ROAD WORK NEXT 2 MILES	SF	2	21.33	64" X 24"	G20-1	SR 320
	END ROAD WORK	SF	22	176	48" X 24"	G20-2	
	END DETOUR	SF	5	15	24" X 18"	M4-8A	
	DETOUR WITH ARROW (LEFT)	SF	7	35	30" X 24"	M4-9L	
	DETOUR WITH ARROW (RIGHT)	SF	8	40	30" X 24"	M4-9R	
	DETOUR WITH ARROW (STR.)	SF	5	31.25	30" X 30"	M4-9S	
	DETOUR ARROW - LEFT	SF	3	18	48" X 18"	M4-10L	
	DETOUR ARROW - RIGHT	SF	2	12	48" X 18"	M4-10R	
	NO TURN	SF	5	20	24" X 24"	R3-1	
	NO TURN	SF	5	20	24" X 24"	R3-2	
	ROAD CLOSED	SF	23	230	48" X 30"	R11-2	
	LANE SHIFT 1000 FT	SF	1	16	48" X 48"	W1-4B(MOD)	SR 320
	CURVE SYMBOL LEFT	SF	3	27	36" X 36"	W1-4L	
	LANE REDUCTION SYMBOL	SF	1	16	48" X 48"	W4-2L	SR 320
	LANE REDUCTION SYMBOL	SF	1	16	48" X 48"	W4-2R	SR 320
	DIVIDED HIGHWAY SYMBOL	SF	1	16	48" X 48"	W6-1	SR 320
	ADVISORY SPEED SIGN 20	SF	16	64	24" X 24"	W13-1	
	ADVISORY SPEED SIGN 30	SF	3	12	24" X 24"	W13-1	SR 320
	ROAD WORK AHEAD	SF	23	368	48" X 48"	W20-1	BANKS ROAD
	ROAD WORK 500 FT	SF	3	48	48" X 48"	W20-1	
	ROAD WORK 1000 FT	SF	3	48	48" X 48"	W20-1	
	ROAD WORK 1500 FT	SF	3	48	48" X 48"	W20-1	SR 320
	ROAD CLOSED AHEAD	SF	5	80	48" X 48"	W20-3	
	LEFT LANE CLOSED 1000 FT	SF	1	16	48" X 48"	W20-5L	SR 320
	RIGHT LANE CLOSED 1000 FT	SF	1	16	48" X 48"	W20-5R	SR 320
	RIGHT SHLDR CLOSED AHEAD	SF	1	16	48" X 48"	W21-5B	SR 320
	RIGHT SHLDR CLOSED 1000 FT	SF	1	16	48" X 48"	W21-5B	SR 320
	TEMPORARY SIGNS						
1	BE PREPARED TO STOP	SF	2	32	48" X 48"	W3-4	
1	NARROW ROAD	SF	2	32	48" X 48"	W5-1	
1	SHOULDER DROP OFF	SF	2	32	48" X 48"	W8-9A	
1	FLAGGER AHEAD	SF	6	96	48" X 48"	W20-7A	
	TOTAL			**1688.58**			**ITEM NO. 712-06**

1. MAY BE NEEDED FOR CONST. OF BOX\ PIPES CULVERTS

ESTIMATED ROADWAY QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
1	303-01	MINERAL AGGREGATE, TYPE A BASE, GRADING D	TON	4,542
1	307-01.01	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING A	TON	858
1	307-01.08	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING B-M2	TON	562
	705-08.51	PORTABLE IMPACT ATTENUATOR NCHRP350 TL-3	EACH	16
	712-01	TRAFFIC CONTROL	LS	1
3	712-02.02	INTERCONNECTED PORTABLE BARRIER RAIL	L.F.	3,399
	712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	EACH	624
	712-05.01	WARNING LIGHTS (TYPE A)	EACH	63
	712-05.03	WARNING LIGHTS (TYPE C)	EACH	196
5	712-06	SIGNS (CONSTRUCTION)	S.F.	1,689
	712-06.01	VERTICAL PANELS	S.F.	1,056
	712-07.03	TEMPORARY BARRICADES (TYPE III)	L.F.	360
	712-08.03	ARROW BOARD (TYPE C)	EACH	2
3	713-15.02	REMOVAL & RELOCATION OF SIGN & SUPPORT	EACH	12
	713-16.01	CHANGEABLE MESSAGE SIGN UNIT	EACH	4
	716-01.07	TEMPORARY RAISED PAVEMENT MARKER,YELLOW	EACH	525
2	716-05.01	PAINTED PAVEMENT MARKING (4" LINE)	L.M.	6.6
2	716-05.05	PAINTED PAVEMENT MARKING (STOP LINE)	L.F.	144
2	716-05.06	PAINTED PAVEMENT MARKING (TURN LANE ARROW)	EACH	18
2	716-05.20	PAINTED PAVEMENT MARKING (6" LINE)	L.M.	3.8
2	716-05.49	PAINTED PAVEMENT MARKINGS(8" LINE)	L.M.	1.6
4	716-08.01	REMOVAL OF PAVEMENT MARKING (LINE)	L.F.	7,300

1. FOR TEMPORARY SR-320, SIDE ROADS AND PVT. DRIVE TIE END.
2. QUANTITIES INCLUDE MARKING PROJECT TWO TIMES.
3. USE EXIST. STOP SIGNS DURING TRAFFIC CONTROL PHASES
4. REMOVAL OF EXISTING PAVEMENT LINES FOR PHASE I & II
5. INCLUDES ADDITIONAL 180 SF OF CONSTRUCTION SIGNS TO BE USED AS DIRECTED BY ENGINEER.

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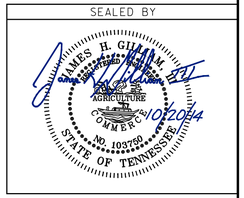

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL

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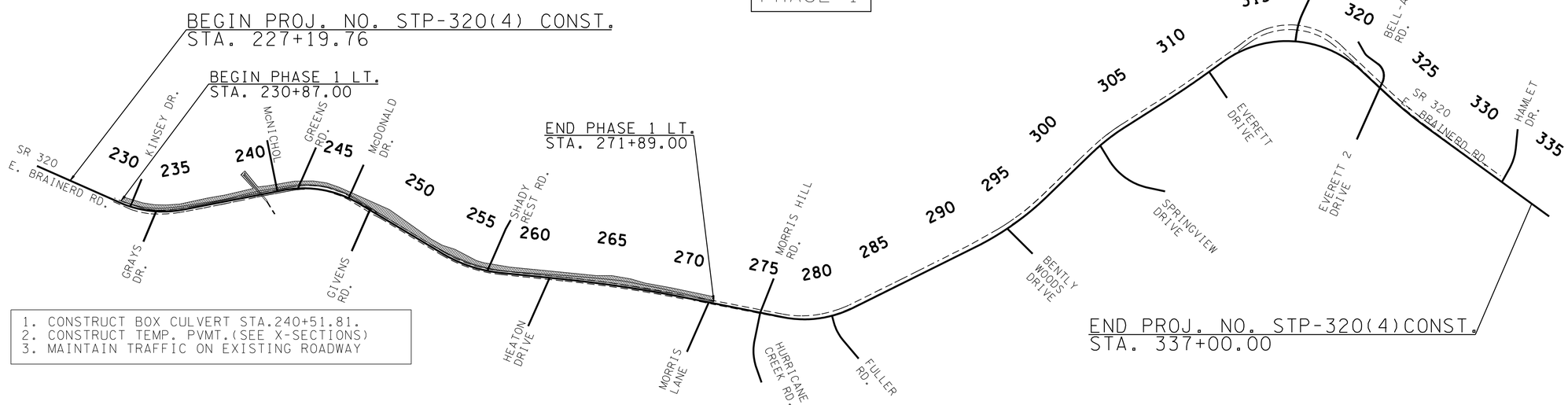
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

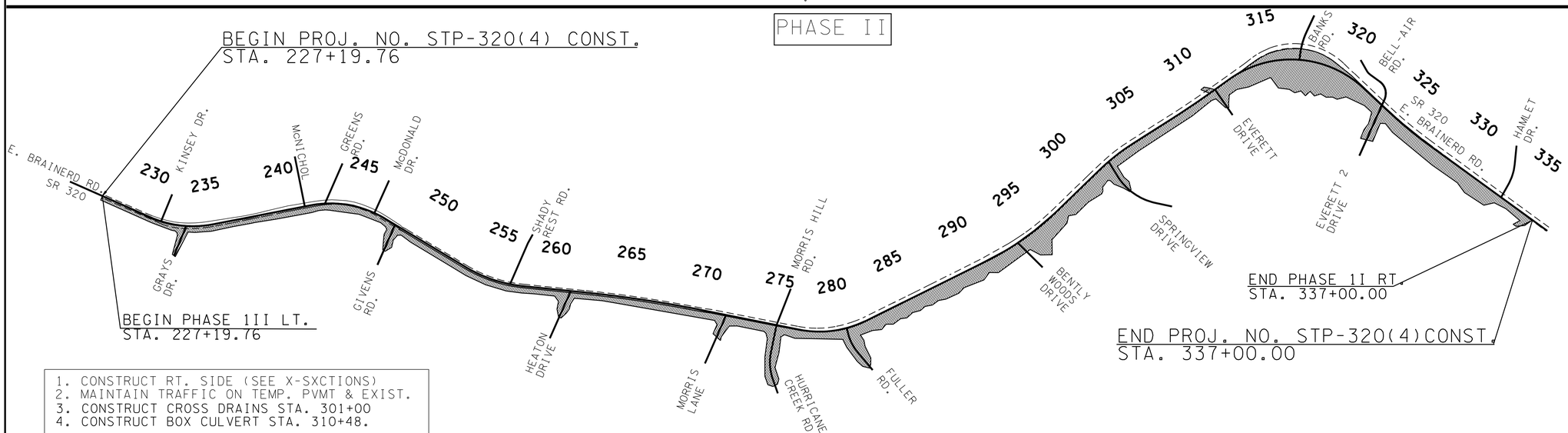
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	19B

PHASE I



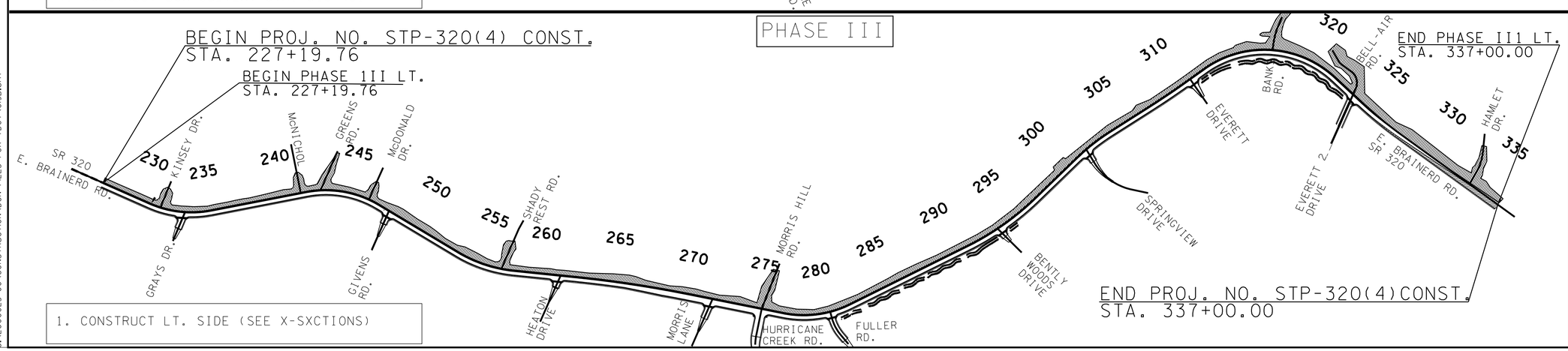
1. CONSTRUCT BOX CULVERT STA.240+51.81.
2. CONSTRUCT TEMP. PVMT.(SEE X-SECTIONS)
3. MAINTAIN TRAFFIC ON EXISTING ROADWAY

PHASE II



1. CONSTRUCT RT. SIDE (SEE X-SXCTIONS)
2. MAINTAIN TRAFFIC ON TEMP. PVMT & EXIST.
3. CONSTRUCT CROSS DRAINS STA. 301+00
4. CONSTRUCT BOX CULVERT STA. 310+48.

PHASE III



1. CONSTRUCT LT. SIDE (SEE X-SXCTIONS)

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN

SCALE: 1"=400'

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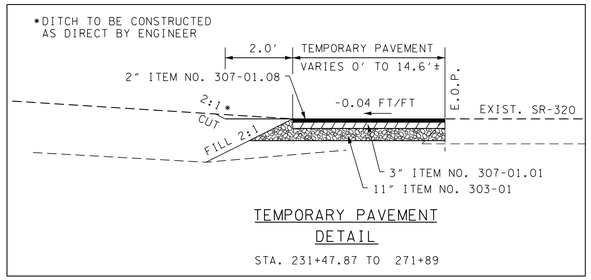
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	19C



TEMPORARY PAVEMENT DETAIL

STA. 231+47.87 TO 271+89

TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	WORK ZONE
	FLEXIBLE DRUMS (CHANNELIZING)
→	TRAFFIC FLOW
	TEMPORARY PAVEMENT
	SIGN (CONSTRUCTION)

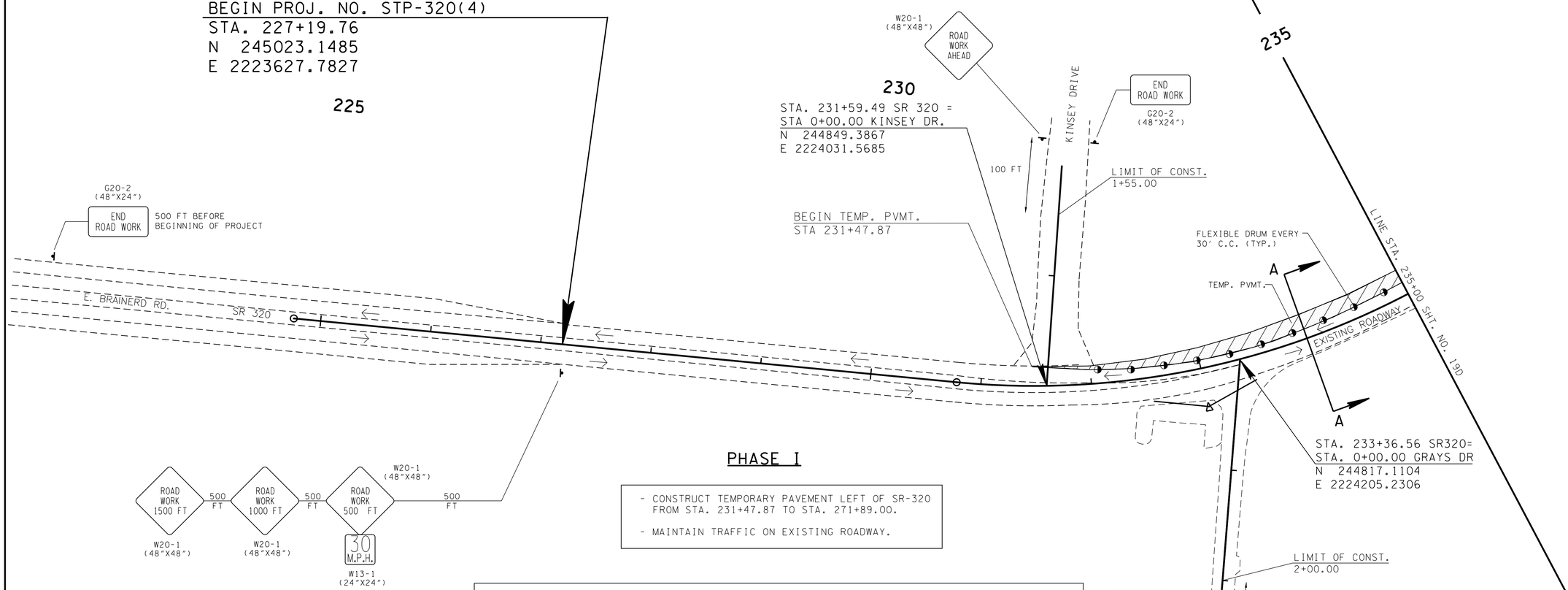
STATE PROJ. NO. 33057-3224(14) CONST.
BEGIN PROJ. NO. STP-320(4)
STA. 227+19.76
N 245023.1485
E 2223627.7827

225

230

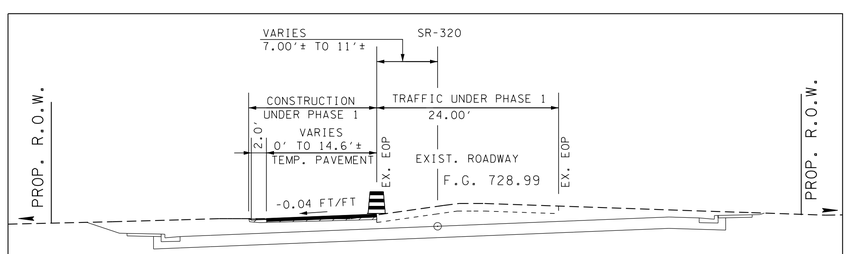
STA. 231+59.49 SR 320 =
STA 0+00.00 KINSEY DR.
N 244849.3867
E 2224031.5685

235



PHASE I

- CONSTRUCT TEMPORARY PAVEMENT LEFT OF SR-320 FROM STA. 231+47.87 TO STA. 271+89.00.
- MAINTAIN TRAFFIC ON EXISTING ROADWAY.



NOT TO SCALE

SEE TEMPORARY PAVEMENT DETAIL

SECTION "A-A" SR-320
234+00.00

STA. 231+47.87 TO STA. 235+00

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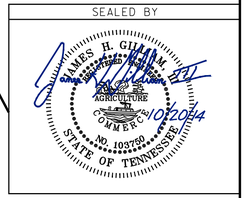

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN PHASE I

BEG. PROJ. TO STA. 235+00

SCALE: 1"= 50'

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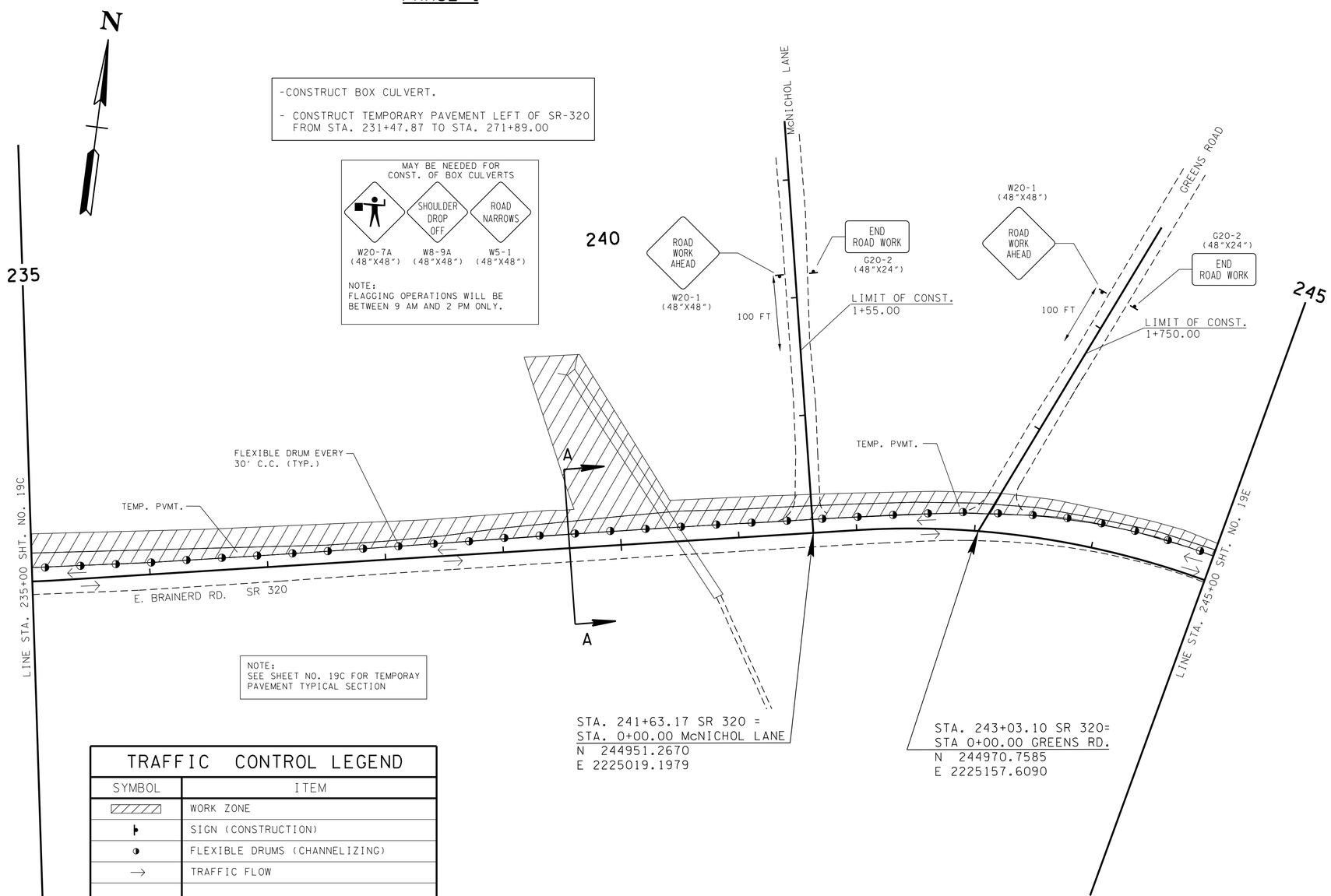
TENNESSEE D.O.T.	DESIGN DIVISION	FILE NO.

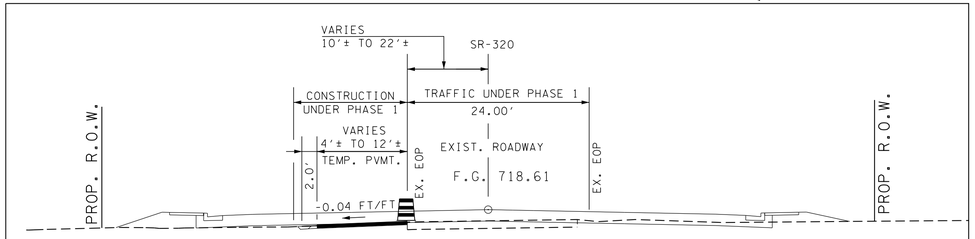
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	19D

PHASE I



TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	WORK ZONE
	SIGN (CONSTRUCTION)
	FLEXIBLE DRUMS (CHANNELIZING)
→	TRAFFIC FLOW
	TEMPORARY PAVEMENT



NOT TO SCALE

SEE SHEET NO. 19C FOR TEMPORARY PAVEMENT DETAIL

SECTION "A-A" SR-320 239+50.00

STA. 235+00 TO STA. 245+00

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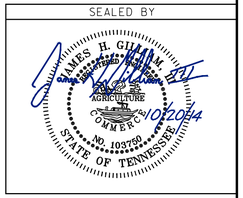

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN PHASE I

STA. 235+00 TO STA. 245+00

SCALE: 1"= 50'

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	19E

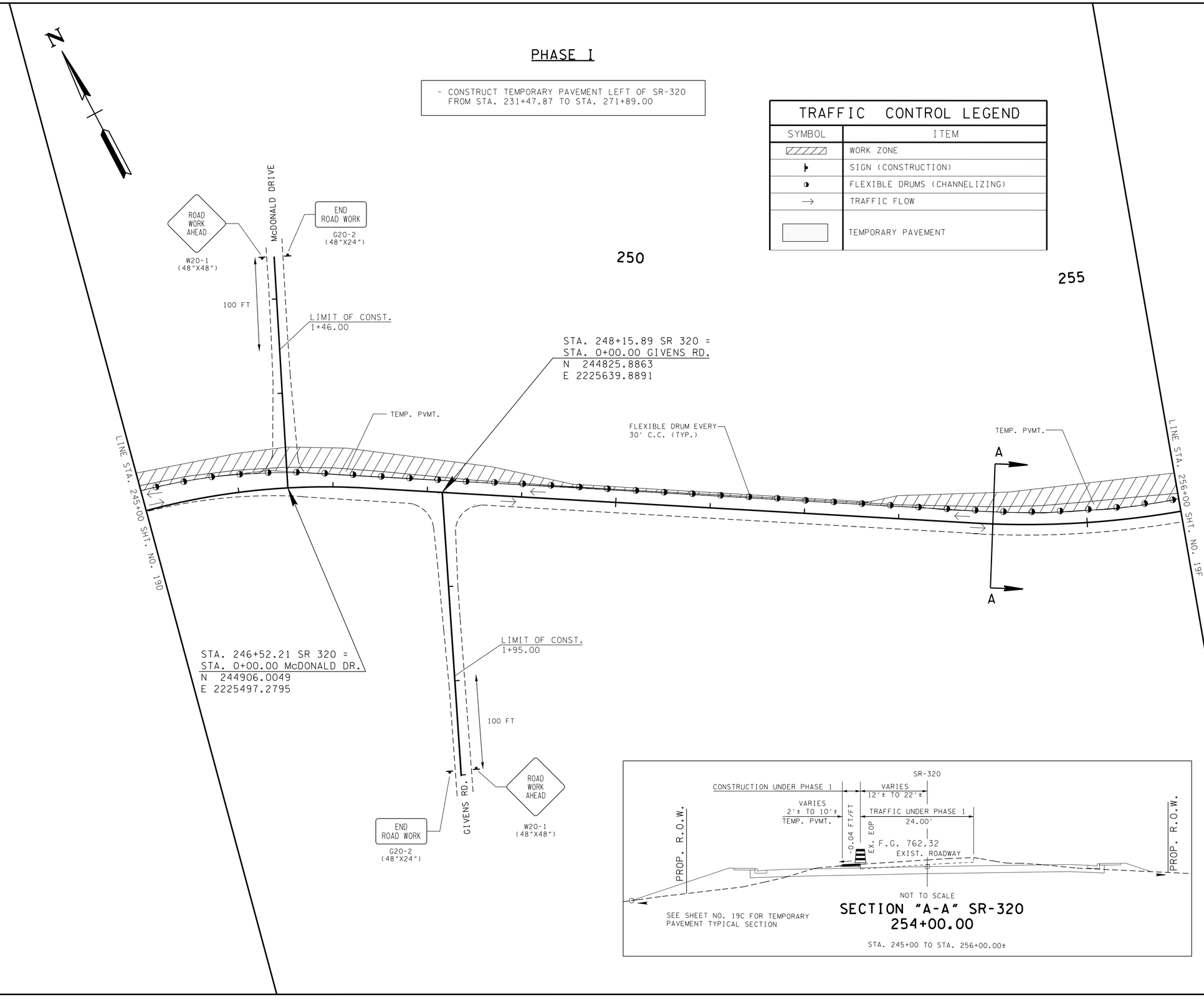
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

PHASE I

- CONSTRUCT TEMPORARY PAVEMENT LEFT OF SR-320 FROM STA. 231+47.87 TO STA. 271+89.00

TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	WORK ZONE
	SIGN (CONSTRUCTION)
	FLEXIBLE DRUMS (CHANNELIZING)
→	TRAFFIC FLOW
	TEMPORARY PAVEMENT



SEE SHEET NO. 19C FOR TEMPORARY PAVEMENT TYPICAL SECTION

SECTION "A-A" SR-320 254+00.00

STA. 245+00 TO STA. 256+00.00±

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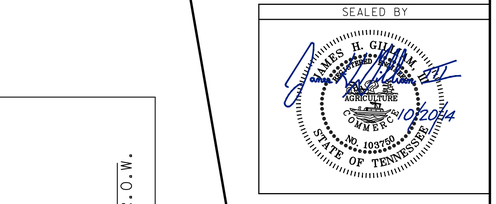

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN PHASE I

STA. 245+00 TO STA. 256+00

SCALE: 1"= 50'

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TENNESSEE D.O.T.	DESIGN DIVISION	FILE NO.

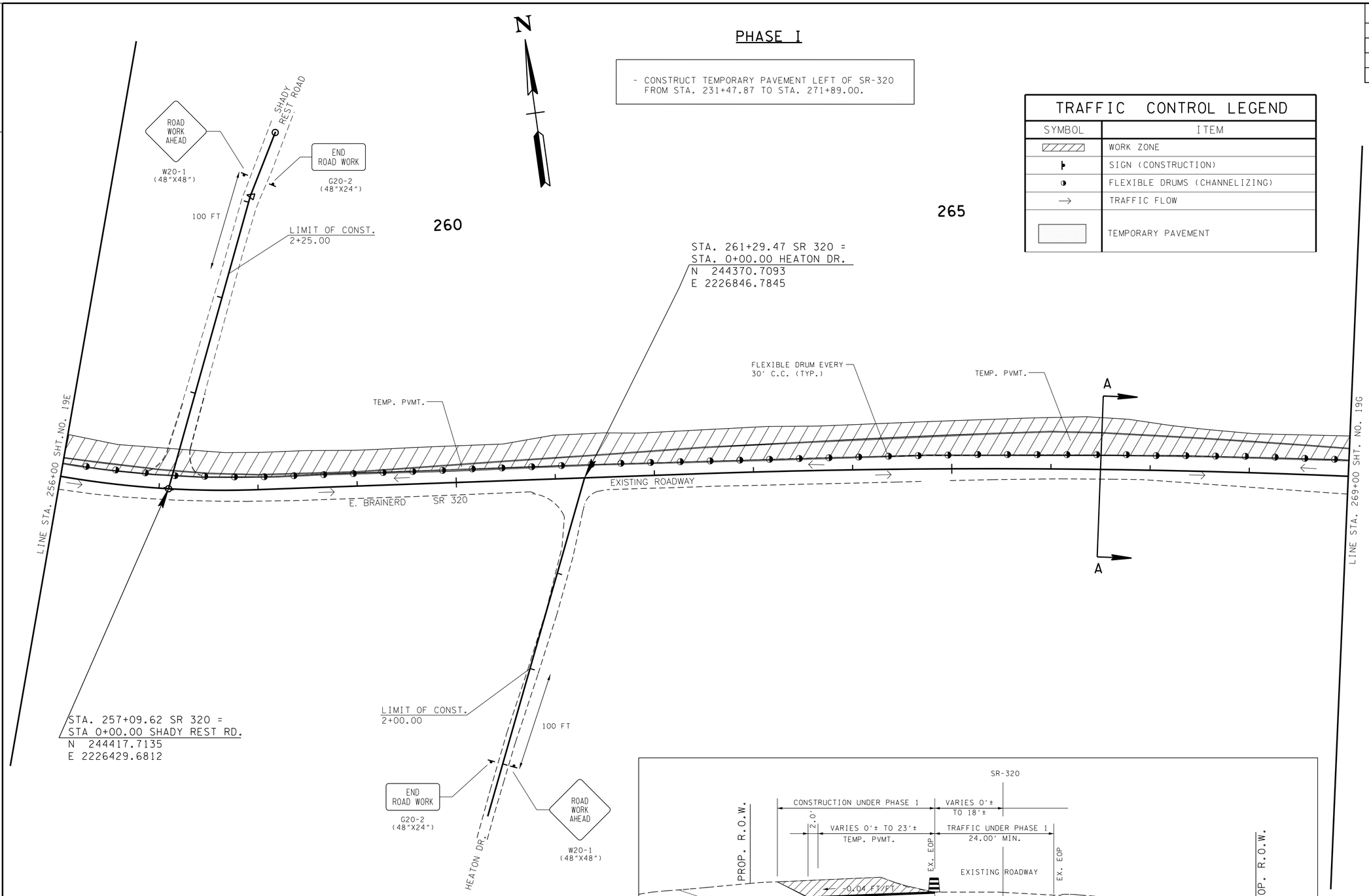
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	19F

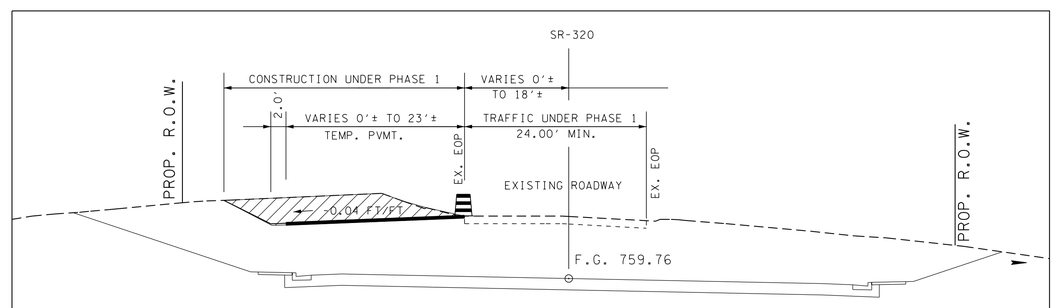
PHASE I

- CONSTRUCT TEMPORARY PAVEMENT LEFT OF SR-320 FROM STA. 231+47.87 TO STA. 271+89.00.

TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	WORK ZONE
	SIGN (CONSTRUCTION)
	FLEXIBLE DRUMS (CHANNELIZING)
→	TRAFFIC FLOW
	TEMPORARY PAVEMENT





NOT TO SCALE

SEE SHEET NO. 19C FOR TEMPORARY PAVEMENT TYPICAL SECTION

SECTION "A-A" SR-320
266+50.00

STA. 256+00.00 TO STA. 271+89.00

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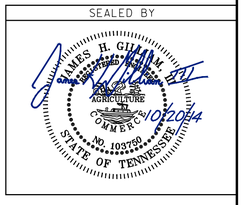

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN PHASE I

STA. 256+00 TO STA. 269+00

SCALE: 1"= 50'

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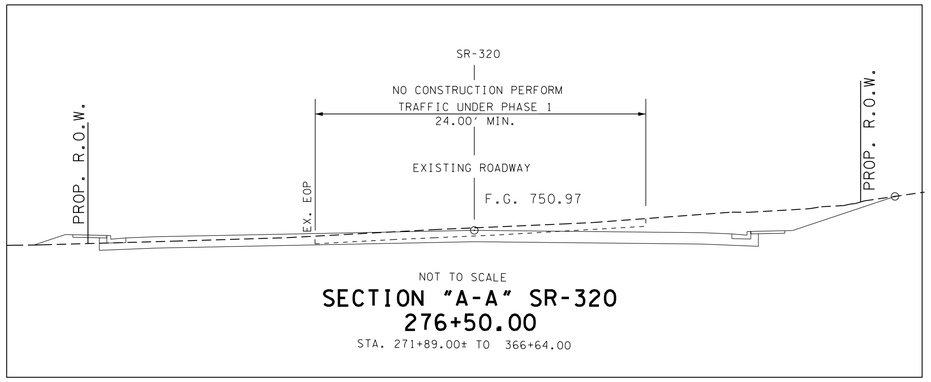
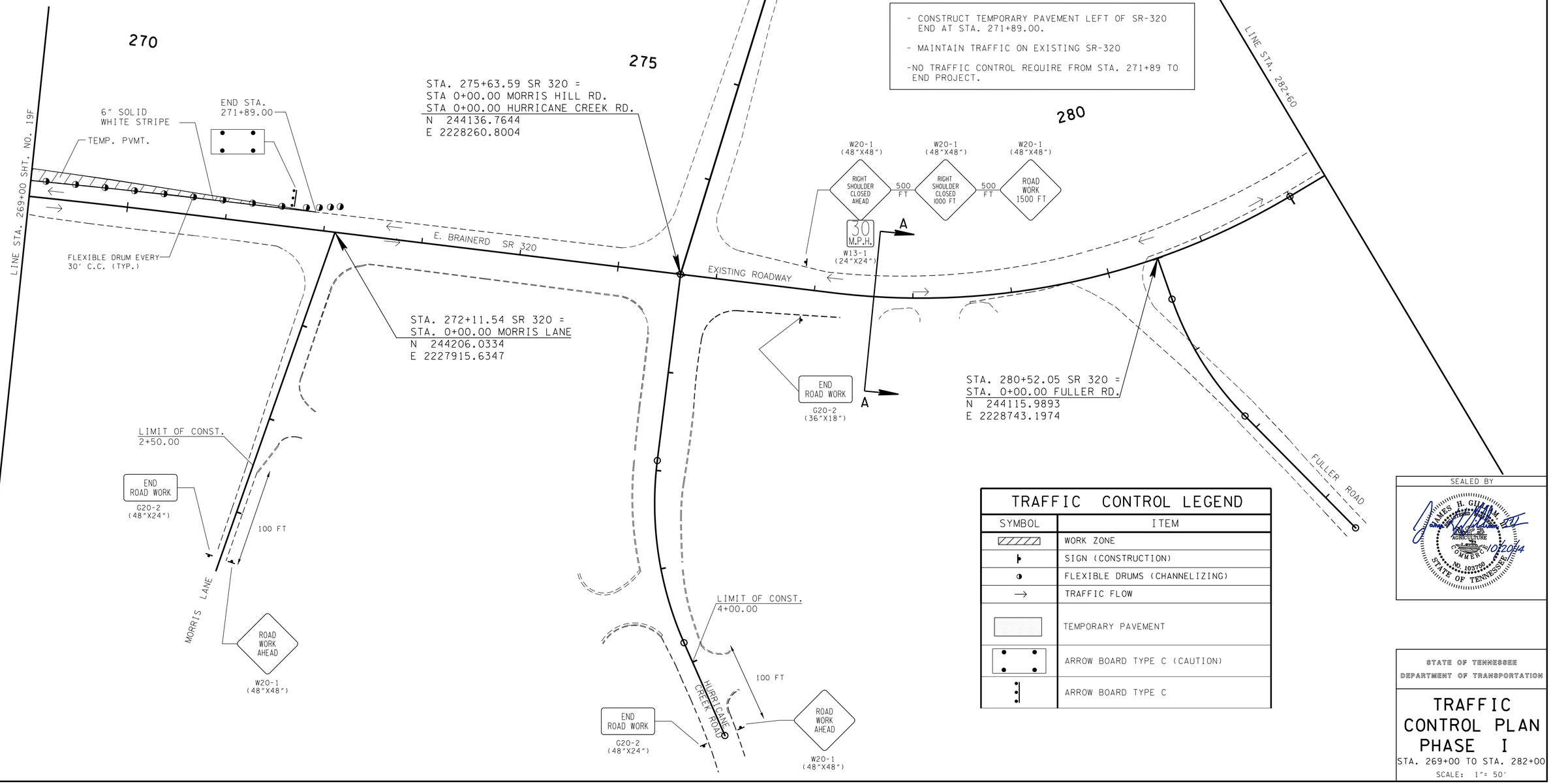
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	19G

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.





TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	WORK ZONE
	SIGN (CONSTRUCTION)
	FLEXIBLE DRUMS (CHANNELIZING)
→	TRAFFIC FLOW
	TEMPORARY PAVEMENT
	ARROW BOARD TYPE C (CAUTION)
	ARROW BOARD TYPE C

SEALED BY

JAMES H. GILLIAM JR.
REGISTERED ENGINEER
AGRICULTURE COMMERCE
NO. 103790
STATE OF TENNESSEE
10/2/2014

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN PHASE I

STA. 269+00 TO STA. 282+00

SCALE: 1"= 50'

9/25/2014 9:51:25 AM
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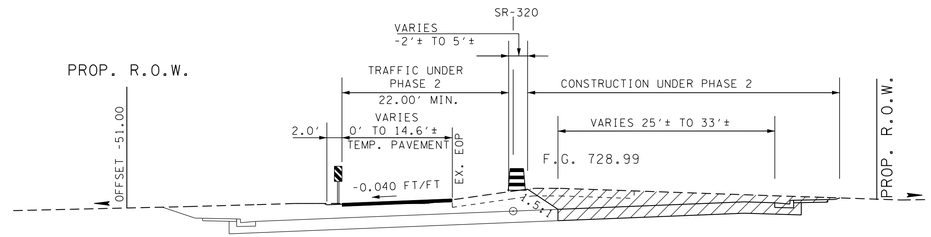
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	19H



NOT TO SCALE

SEE SHEET NO. 19C FOR TEMPORARY PAVEMENT TYPICAL SECTION

SECTION "A-A" SR-320
234+00.00

STA. 231+47.87 TO 235+00

PHASE II

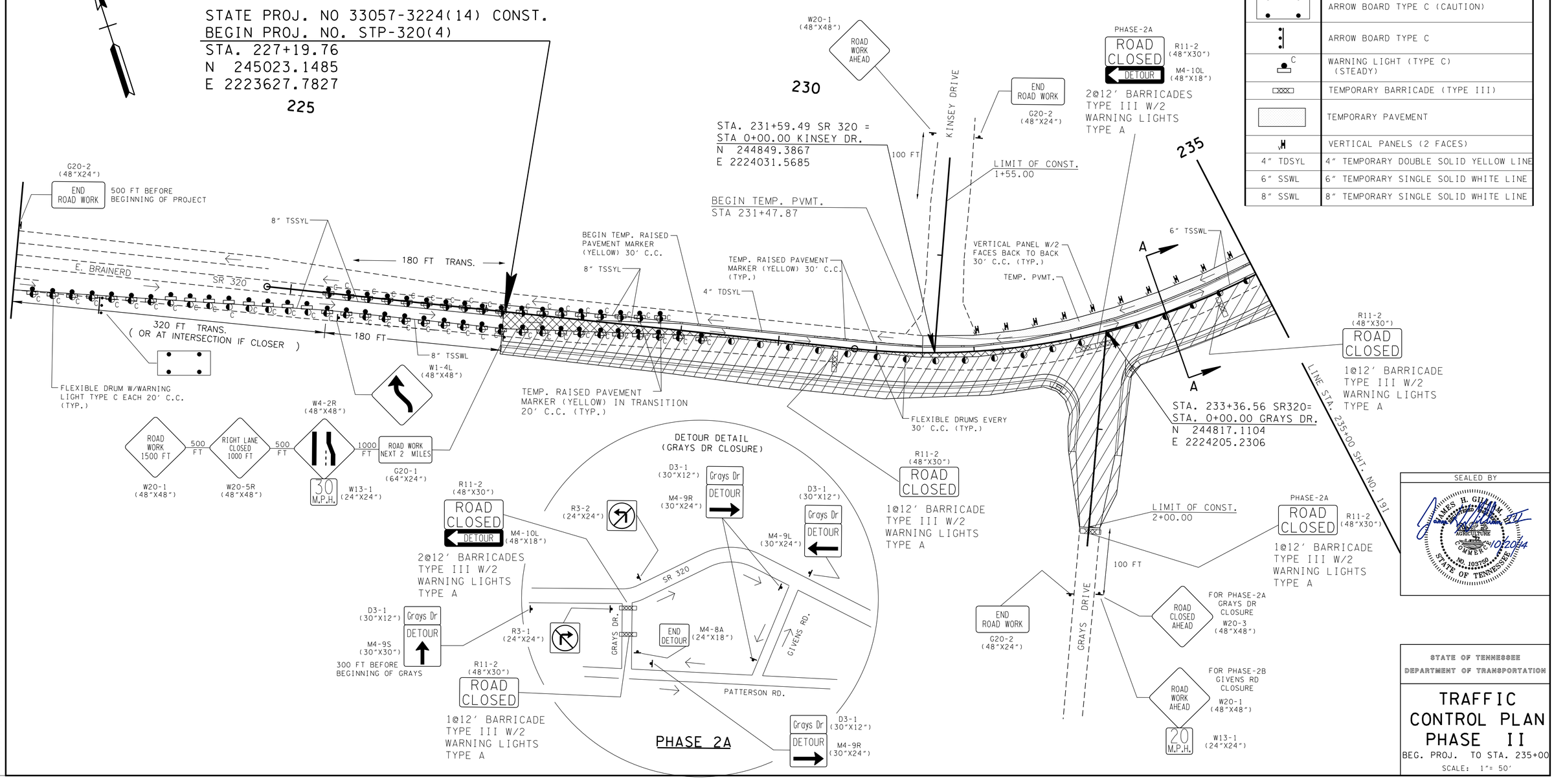
-GIVENS ROAD AND GRAYS DRIVE PHASING:

1) PHASE 2A: CLOSE AND CONSTRUCT GRAYS DRIVE. KEEP GIVENS ROAD OPEN TO THE TRAFFIC AND USE AS DETOUR FOR GRAYS DRIVE.

2) PHASE 2B: CLOSED AND CONSTRUCT GIVENS ROAD. OPEN NEWLY CONSTRUCTED GRAYS DRIVE TO THE TRAFFIC AND USE AS DETOUR FOR GIVENS ROAD.

TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	WORK ZONE
	CONSTRUCTION UNDER TRAFFIC
	SIGN (CONSTRUCTION)
	FLEXIBLE DRUMS (CHANNELIZING)
→	TRAFFIC FLOW
	ARROW BOARD TYPE C (CAUTION)
	ARROW BOARD TYPE C
C	WARNING LIGHT (TYPE C) (STEADY)
	TEMPORARY BARRICADE (TYPE III)
	TEMPORARY PAVEMENT
H	VERTICAL PANELS (2 FACES)
4" TDSYL	4" TEMPORARY DOUBLE SOLID YELLOW LINE
6" SSWL	6" TEMPORARY SINGLE SOLID WHITE LINE
8" SSWL	8" TEMPORARY SINGLE SOLID WHITE LINE



SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN PHASE II

BEG. PROJ. TO STA. 235+00

SCALE: 1"= 50'

10/16/2014 1:22:52 PM
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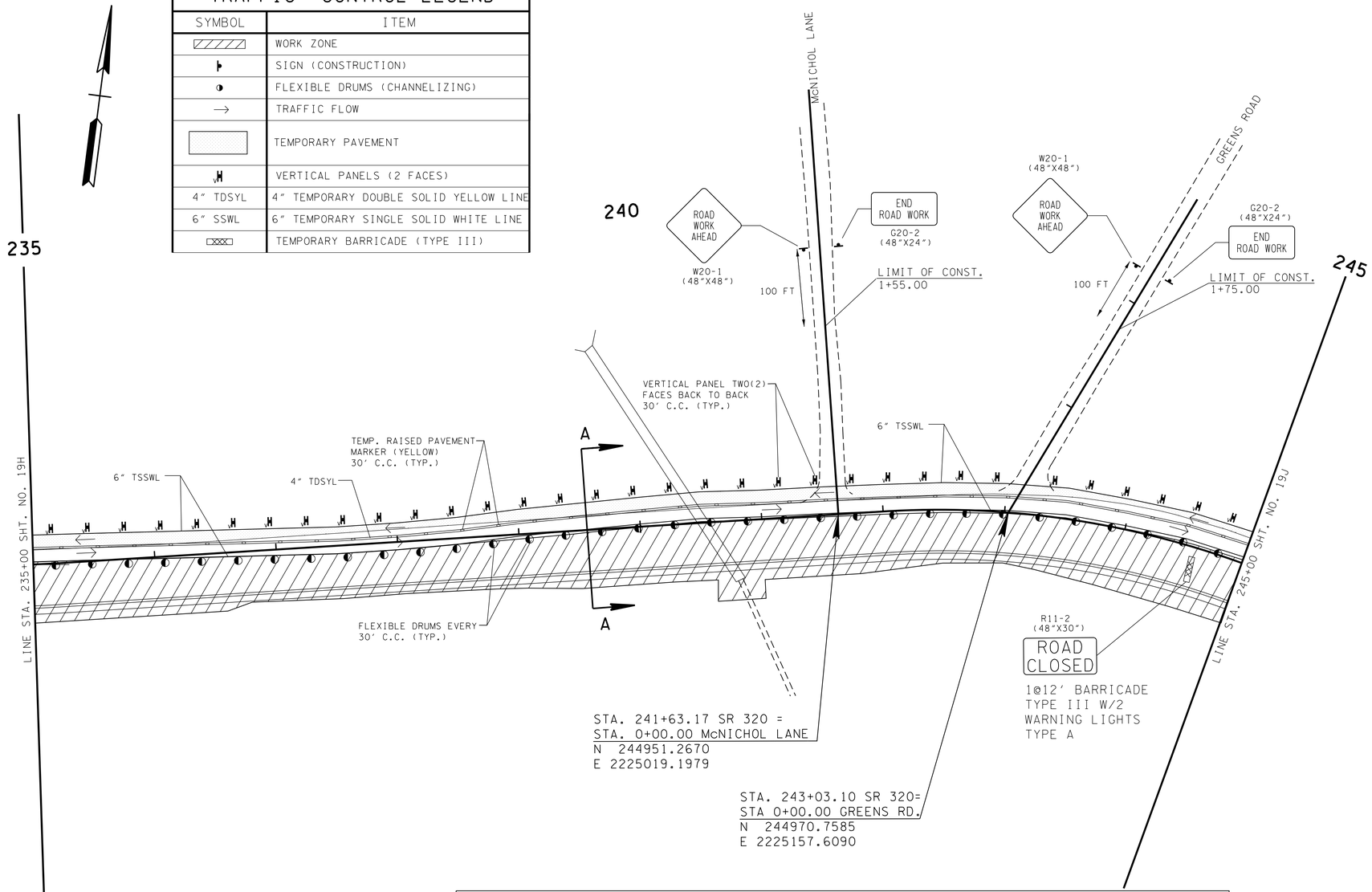
TENNESSEE D.O.T.	
DESIGN DIVISION	
FILE NO.	

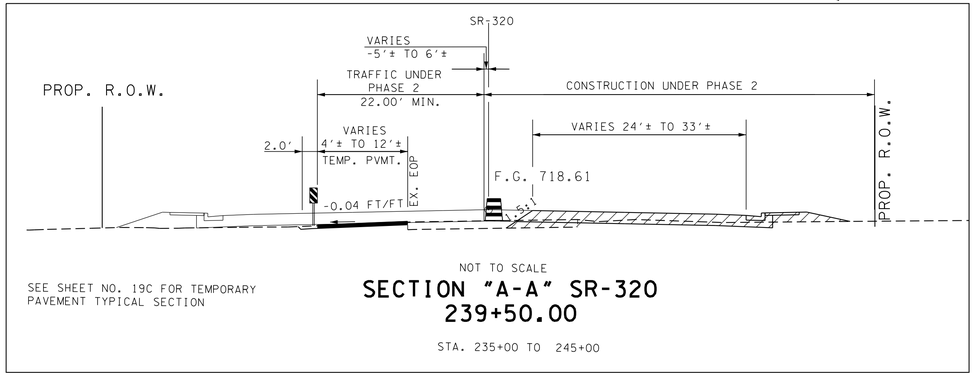
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	19I

PHASE II

N

TRAFFIC CONTROL LEGEND	
SYMBOL	ITEM
	WORK ZONE
	SIGN (CONSTRUCTION)
	FLEXIBLE DRUMS (CHANNELIZING)
→	TRAFFIC FLOW
	TEMPORARY PAVEMENT
	VERTICAL PANELS (2 FACES)
4" TDSYL	4" TEMPORARY DOUBLE SOLID YELLOW LINE
6" SSWL	6" TEMPORARY SINGLE SOLID WHITE LINE
	TEMPORARY BARRICADE (TYPE III)





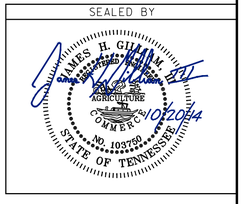
NOT TO SCALE

SEE SHEET NO. 19C FOR TEMPORARY PAVEMENT TYPICAL SECTION

SECTION "A-A" SR-320
239+50.00

STA. 235+00 TO 245+00

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN PHASE II

STA. 235+00 TO STA. 245+00

SCALE: 1"= 50'

9/25/2014 10:50:33 AM
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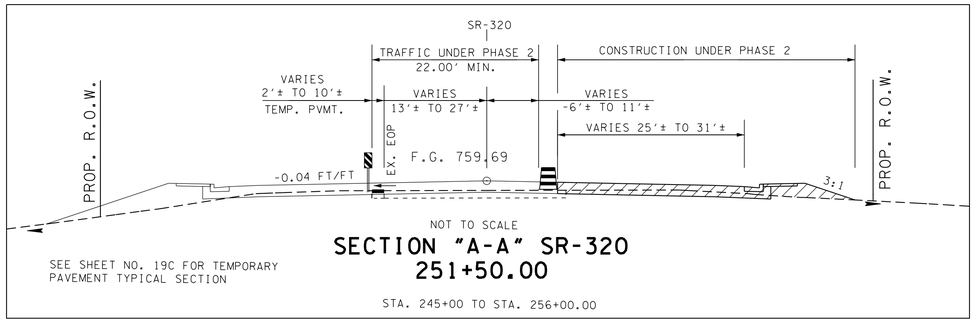
TENNESSEE D.O.T.	DESIGN DIVISION	FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	19J

PHASE II

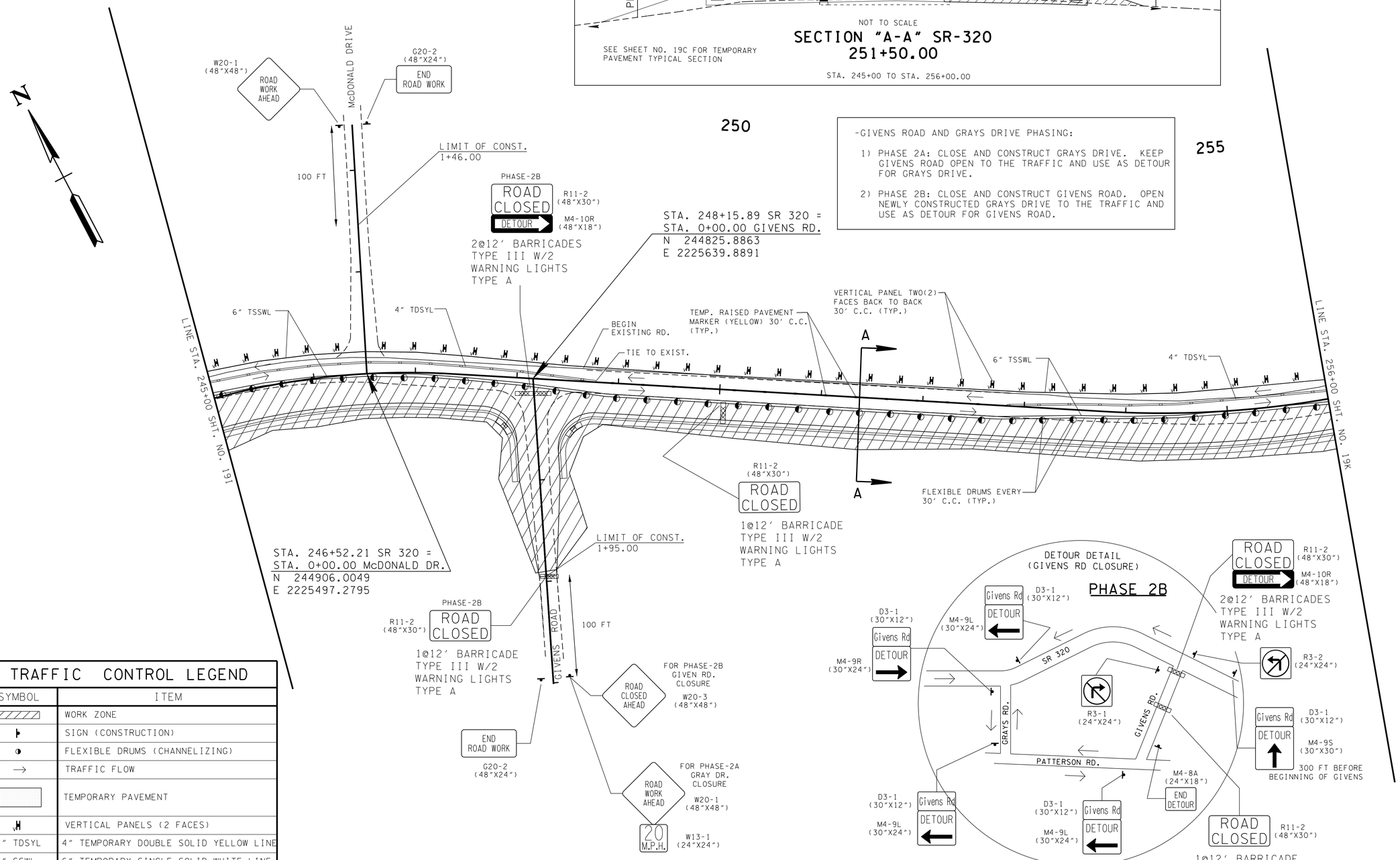


SEE SHEET NO. 19C FOR TEMPORARY PAVEMENT TYPICAL SECTION

-GIVENS ROAD AND GRAYS DRIVE PHASING:

1) PHASE 2A: CLOSE AND CONSTRUCT GRAYS DRIVE. KEEP GIVENS ROAD OPEN TO THE TRAFFIC AND USE AS DETOUR FOR GRAYS DRIVE.

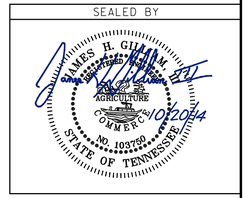
2) PHASE 2B: CLOSE AND CONSTRUCT GIVENS ROAD. OPEN NEWLY CONSTRUCTED GRAYS DRIVE TO THE TRAFFIC AND USE AS DETOUR FOR GIVENS ROAD.



TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	WORK ZONE
	SIGN (CONSTRUCTION)
	FLEXIBLE DRUMS (CHANNELIZING)
→	TRAFFIC FLOW
	TEMPORARY PAVEMENT
	VERTICAL PANELS (2 FACES)
4" TDSYL	4" TEMPORARY DOUBLE SOLID YELLOW LINE
6" SSWL	6" TEMPORARY SINGLE SOLID WHITE LINE
	TEMPORARY BARRICADE (TYPE III)

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN PHASE II

STA. 245+00 TO STA. 256+00

SCALE: 1"= 50'

9/29/2014 8:21:41 AM
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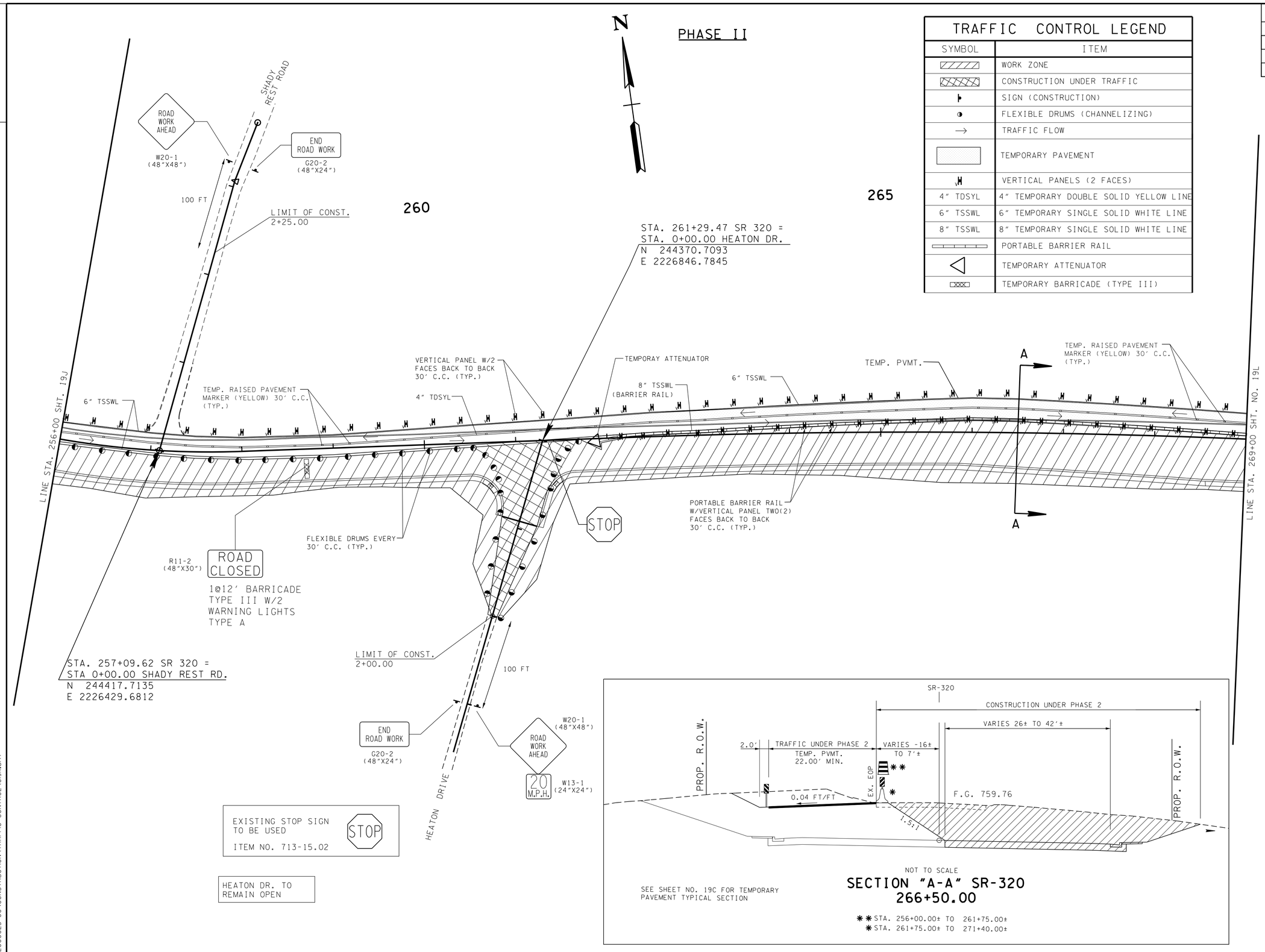
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	19K

TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	WORK ZONE
	CONSTRUCTION UNDER TRAFFIC
	SIGN (CONSTRUCTION)
	FLEXIBLE DRUMS (CHANNELIZING)
→	TRAFFIC FLOW
	TEMPORARY PAVEMENT
	VERTICAL PANELS (2 FACES)
4" TDSYL	4" TEMPORARY DOUBLE SOLID YELLOW LINE
6" TSSWL	6" TEMPORARY SINGLE SOLID WHITE LINE
8" TSSWL	8" TEMPORARY SINGLE SOLID WHITE LINE
	PORTABLE BARRIER RAIL
	TEMPORARY ATTENUATOR
	TEMPORARY BARRICADE (TYPE III)



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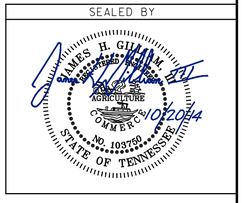

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN PHASE II

STA. 256+00 TO STA. 269+00

SCALE: 1"= 50'

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TENNESSEE D.O.T.	DESIGN DIVISION	FILE NO.

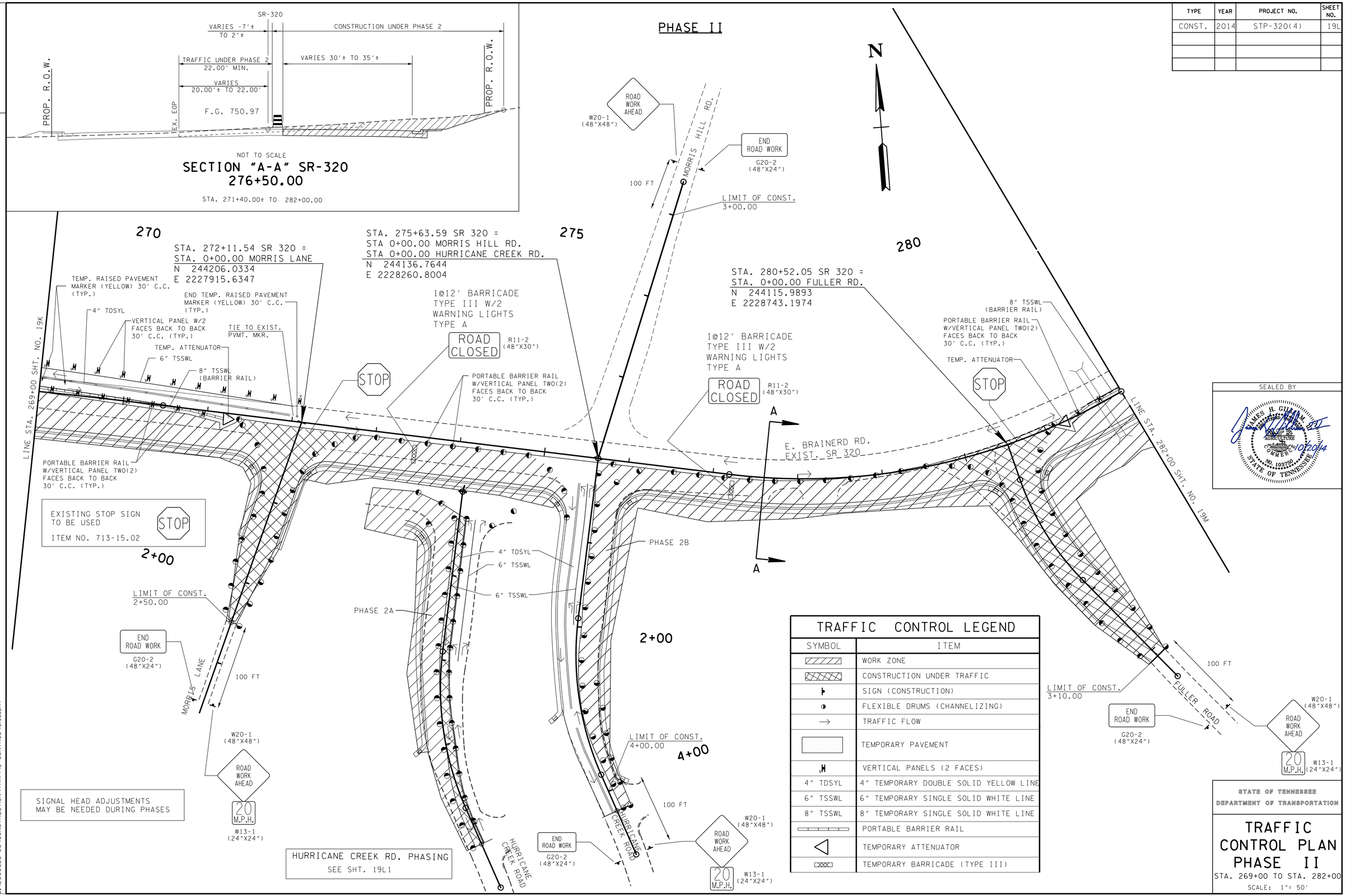
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	19L

NOT TO SCALE

SECTION "A-A" SR-320
276+50.00

STA. 271+40.00± TO 282+00.00

PHASE II



TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	WORK ZONE
	CONSTRUCTION UNDER TRAFFIC
	SIGN (CONSTRUCTION)
	FLEXIBLE DRUMS (CHANNELIZING)
→	TRAFFIC FLOW
	TEMPORARY PAVEMENT
	VERTICAL PANELS (2 FACES)
4" TDSYL	4" TEMPORARY DOUBLE SOLID YELLOW LINE
6" TSSWL	6" TEMPORARY SINGLE SOLID WHITE LINE
8" TSSWL	8" TEMPORARY SINGLE SOLID WHITE LINE
	PORTABLE BARRIER RAIL
	TEMPORARY ATTENUATOR
	TEMPORARY BARRICADE (TYPE III)

SEALED BY

JAMES H. GILLIAM III
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 103750
STATE OF TENNESSEE
10/2/2014

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN PHASE II

STA. 269+00 TO STA. 282+00

SCALE: 1"= 50'

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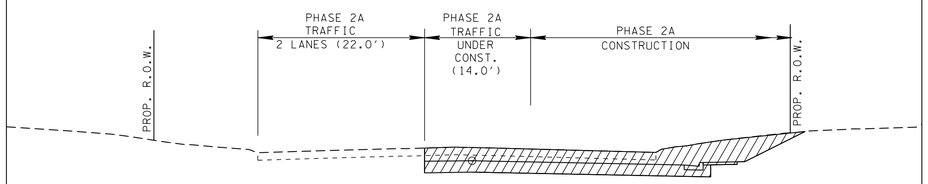
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	19L1

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

PHASE 2A

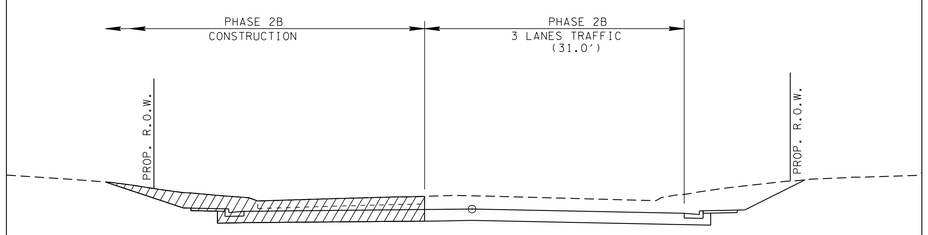


NOT TO SCALE

HURRICANE CREEK ROAD
1+00.00

STA. 0+00± TO STA. 4+00±

PHASE 2B

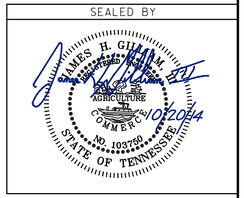


NOT TO SCALE

HURRICANE CREEK ROAD
1+00.00

STA. 0+00± TO STA. 4+00±

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN PHASE II

(HURRICANE CREEK ROAD)

N.T.S.

10/16/2014 1:24:33 PM
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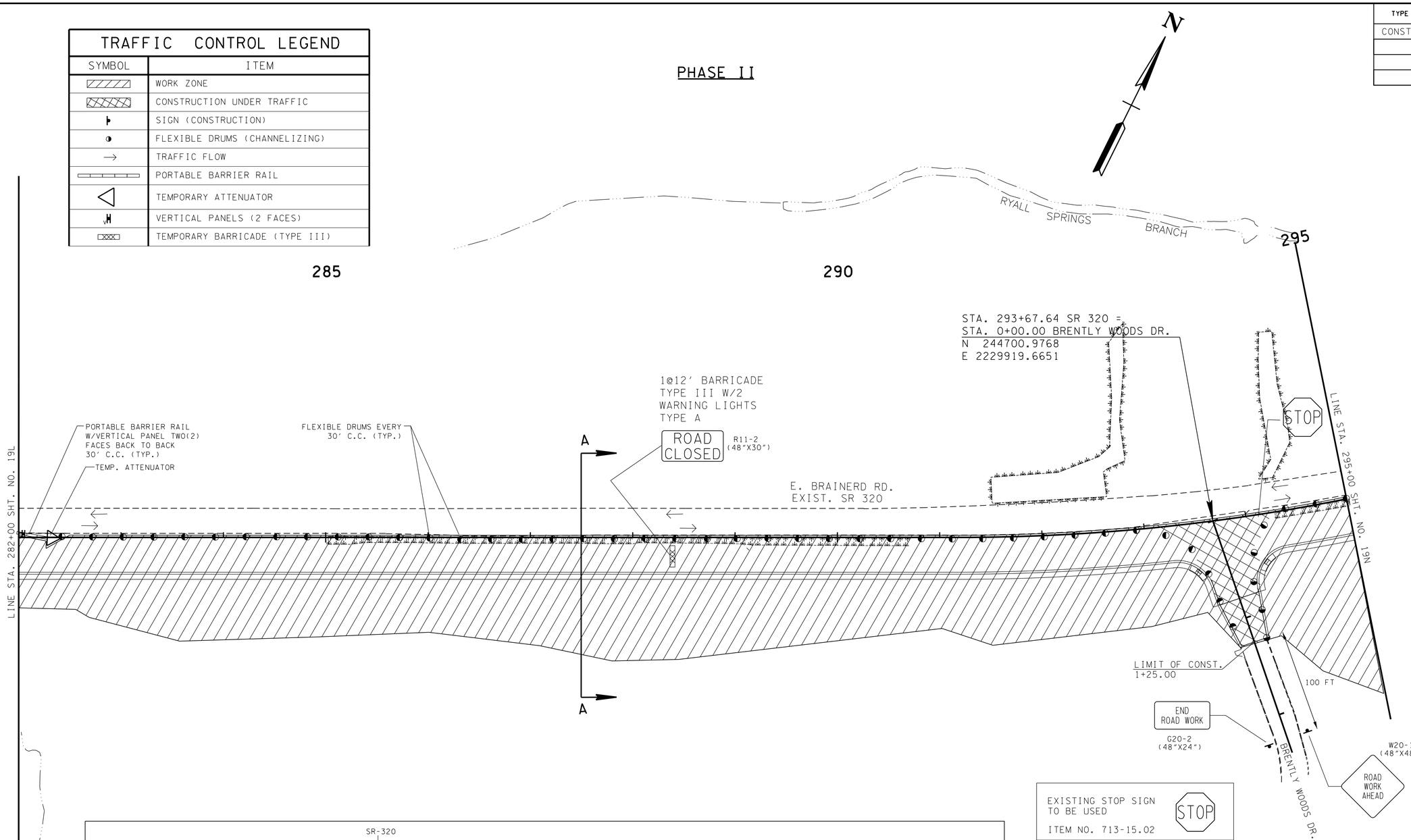
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	19M

TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	WORK ZONE
	CONSTRUCTION UNDER TRAFFIC
	SIGN (CONSTRUCTION)
	FLEXIBLE DRUMS (CHANNELIZING)
→	TRAFFIC FLOW
	PORTABLE BARRIER RAIL
	TEMPORARY ATTENUATOR
	VERTICAL PANELS (2 FACES)
	TEMPORARY BARRICADE (TYPE III)

PHASE II

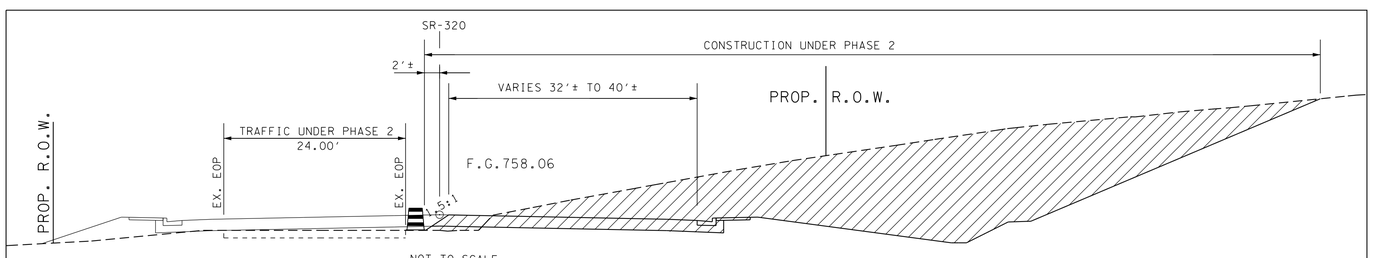


EXISTING STOP SIGN
TO BE USED

ITEM NO. 713-15.02

STOP

BRENTLY WOODS DRIVE TO
REMAIN OPEN



NOT TO SCALE

SECTION "A-A" SR-320
287+50.00

STA. 282+00.00± TO 295+00.00

SEALED BY

JAMES H. GILLIAM, III
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 103790
STATE OF TENNESSEE
10/2/2014

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN PHASE II

STA. 282+00 TO STA. 295+00

SCALE: 1"= 50'

9/25/2014 11:55:18 AM
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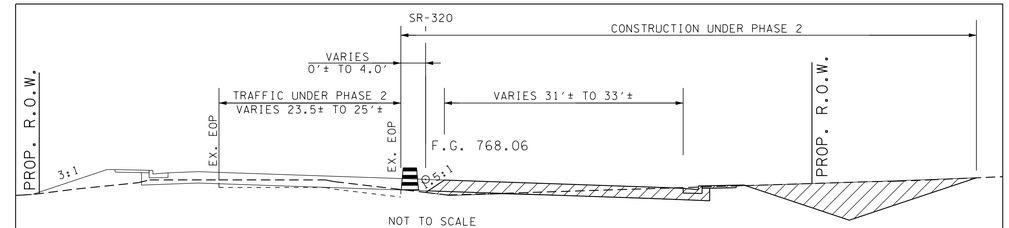
TENNESSEE D.O.T.	DESIGN DIVISION	FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	19N

TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	WORK ZONE
	CONSTRUCTION UNDER TRAFFIC
	SIGN (CONSTRUCTION)
	FLEXIBLE DRUMS (CHANNELIZING)
→	TRAFFIC FLOW
	TEMPORARY BARRICADE (TYPE III)

PHASE II

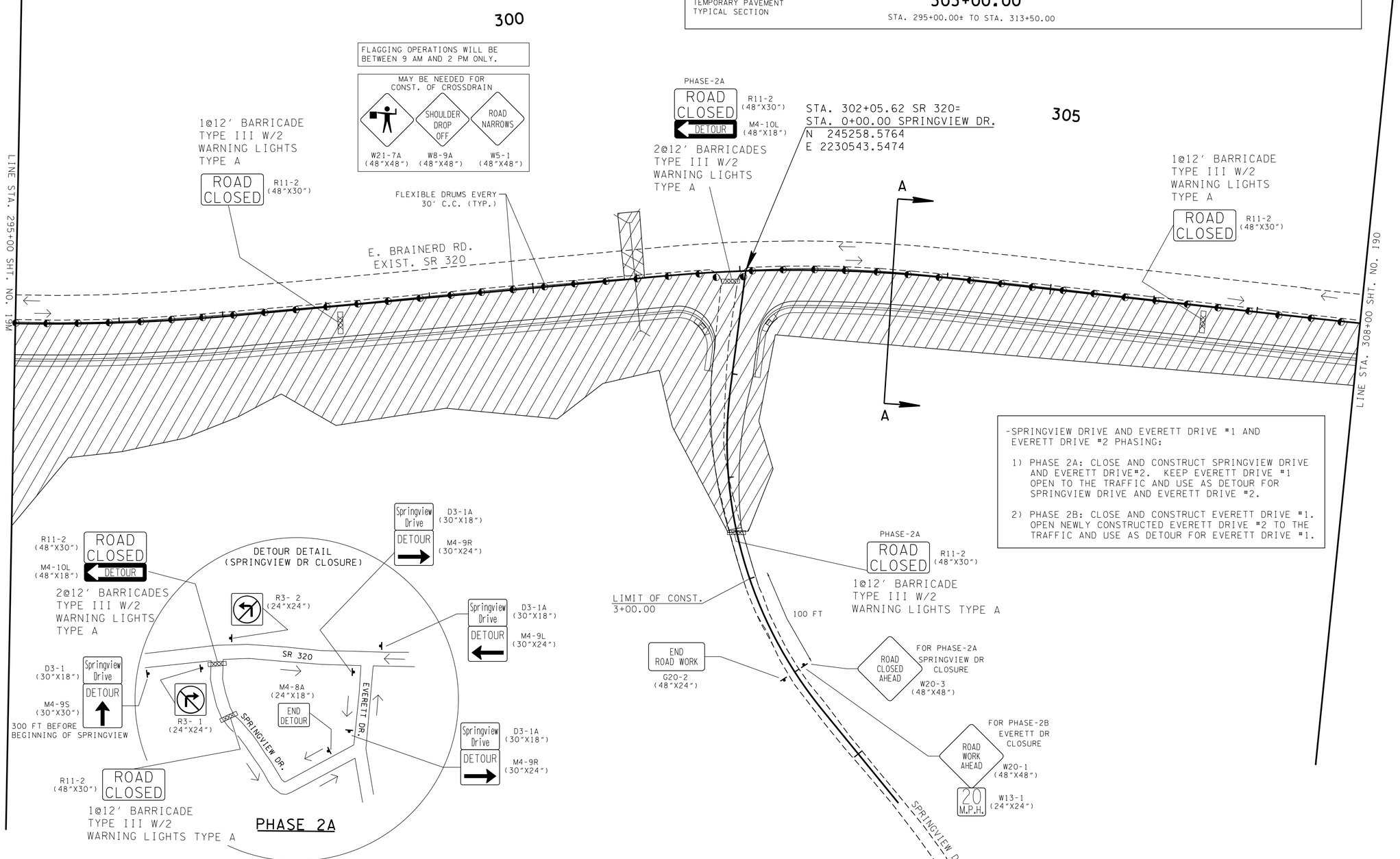


NOT TO SCALE

SEE SHEET NO. 19C FOR TEMPORARY PAVEMENT TYPICAL SECTION

SECTION "A-A" SR-320
303+00.00

STA. 295+00.00± TO STA. 313+50.00



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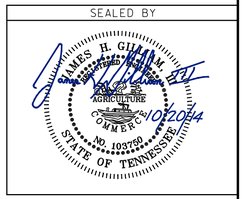

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN PHASE II

STA. 295+00 TO STA. 308+00

SCALE: 1"= 50'

9/29/2014 8:38:45 AM
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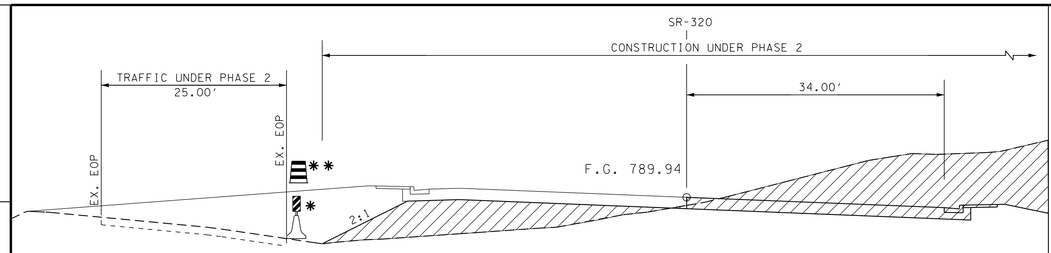
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	190



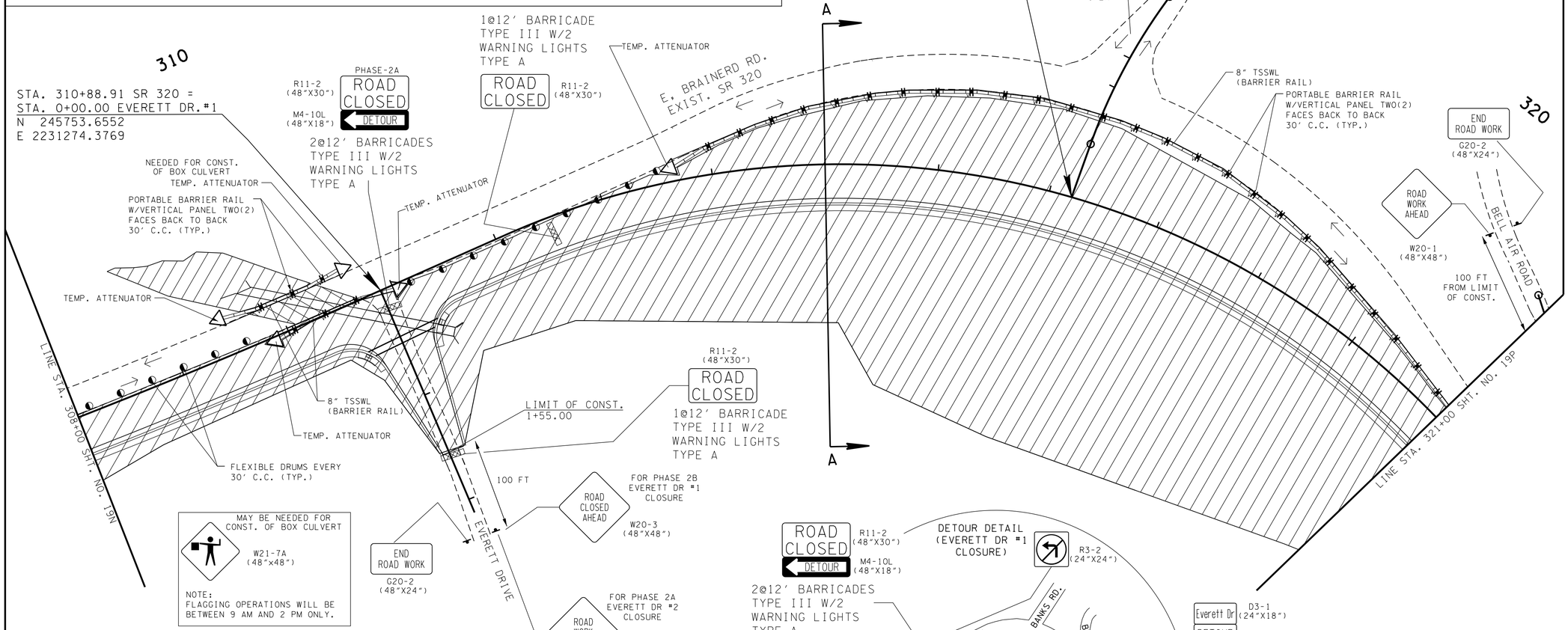
NOT TO SCALE

SECTION "A-A" SR-320
315+00.00

✱ STA. 313+50.00± TO 321+00.00±
✱✱ STA. 308+00.00 TO 313+50.00±

SEE SHEET NO. 19C FOR TEMPORARY PAVEMENT TYPICAL SECTION

PHASE II



TRAFFIC CONTROL LEGEND

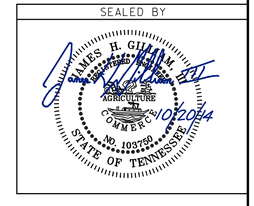
SYMBOL	ITEM
	WORK ZONE
	CONSTRUCTION UNDER TRAFFIC
	SIGN (CONSTRUCTION)
	FLEXIBLE DRUMS (CHANNELIZING)
→	TRAFFIC FLOW
	TEMPORARY BARRICADE (TYPE III)
	PORTABLE BARRIER RAIL
	TEMPORARY ATTENUATOR
	VERTICAL PANELS (2 FACES)
8" TSSWL	8" TEMPORARY SINGLE SOLID WHITE LINE

-SPRINGVIEW DRIVE AND EVERETT DRIVE #1 AND EVERETT DRIVE #2 PHASING:

1) PHASE 2A: CLOSE AND CONSTRUCT SPRINGVIEW DRIVE AND EVERETT DRIVE#2. KEEP EVERETT DRIVE #1 OPEN TO THE TRAFFIC AND USE AS DETOUR FOR SPRINGVIEW DRIVE AND EVERETT DRIVE #2.

2) PHASE 2B: CLOSED AND CONSTRUCT EVERETT DRIVE #1. OPEN NEWLY CONSTRUCTED EVERETT DRIVE #2 TO THE TRAFFIC AND USE AS DETOUR FOR EVERETT DRIVE #1.

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN PHASE II

STA. 308+00 TO STA. 321+00

SCALE: 1"= 50'

9/29/2014 9:49:11 AM
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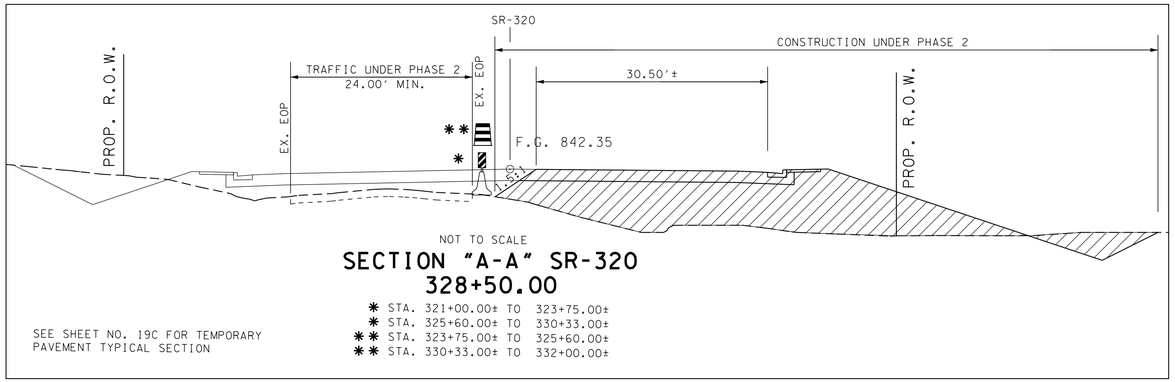
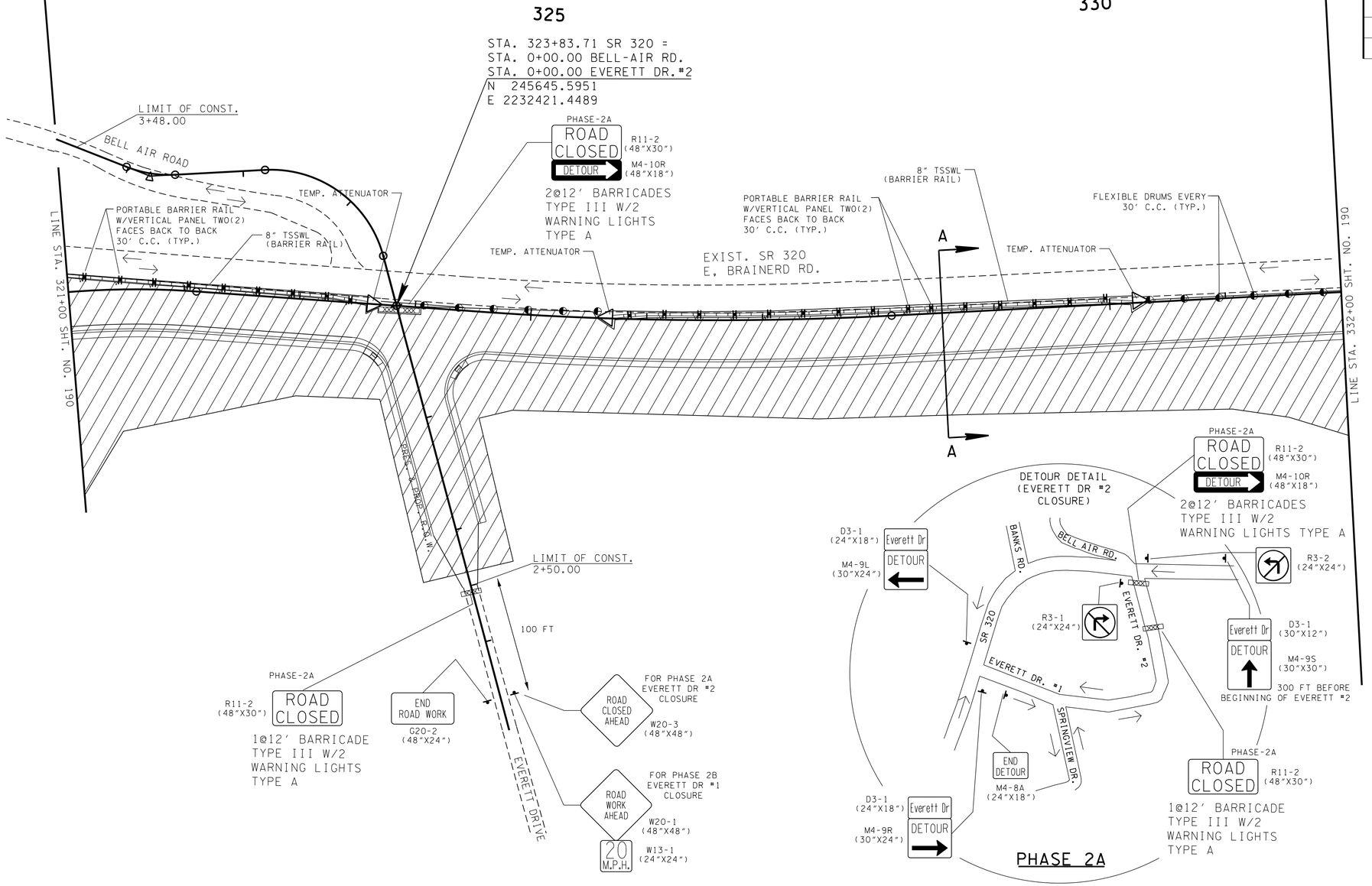
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	19P



TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	WORK ZONE
	SIGN (CONSTRUCTION)
	FLEXIBLE DRUMS (CHANNELIZING)
→	TRAFFIC FLOW
	TEMPORARY BARRICADE (TYPE III)
	PORTABLE BARRIER RAIL
	TEMPORARY ATTENUATOR
	VERTICAL PANELS (2 FACES)
8" TSSWL	8" TEMPORARY SINGLE SOLID WHITE LINE

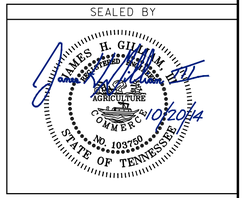


-SPRINGVIEW DRIVE AND EVERETT DRIVE #1 AND EVERETT DRIVE #2 PHASING:

1) PHASE 2A: CLOSE AND CONSTRUCT SPRINGVIEW DRIVE AND EVERETT DRIVE#2. KEEP EVERETT DRIVE #1 OPEN TO THE TRAFFIC AND USE AS DETOUR FOR SPRINGVIEW DRIVE AND EVERETT DRIVE #2.

2) PHASE 2B: CLOSE AND CONSTRUCT EVERETT DRIVE #1. OPEN NEWLY CONSTRUCTED EVERETT DRIVE #2 TO THE TRAFFIC AND USE AS DETOUR FOR EVERETT DRIVE #1.

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN PHASE II

STA. 321+00 TO STA. 332+00

SCALE: 1"= 50'

9/29/2014 8:47:03 AM
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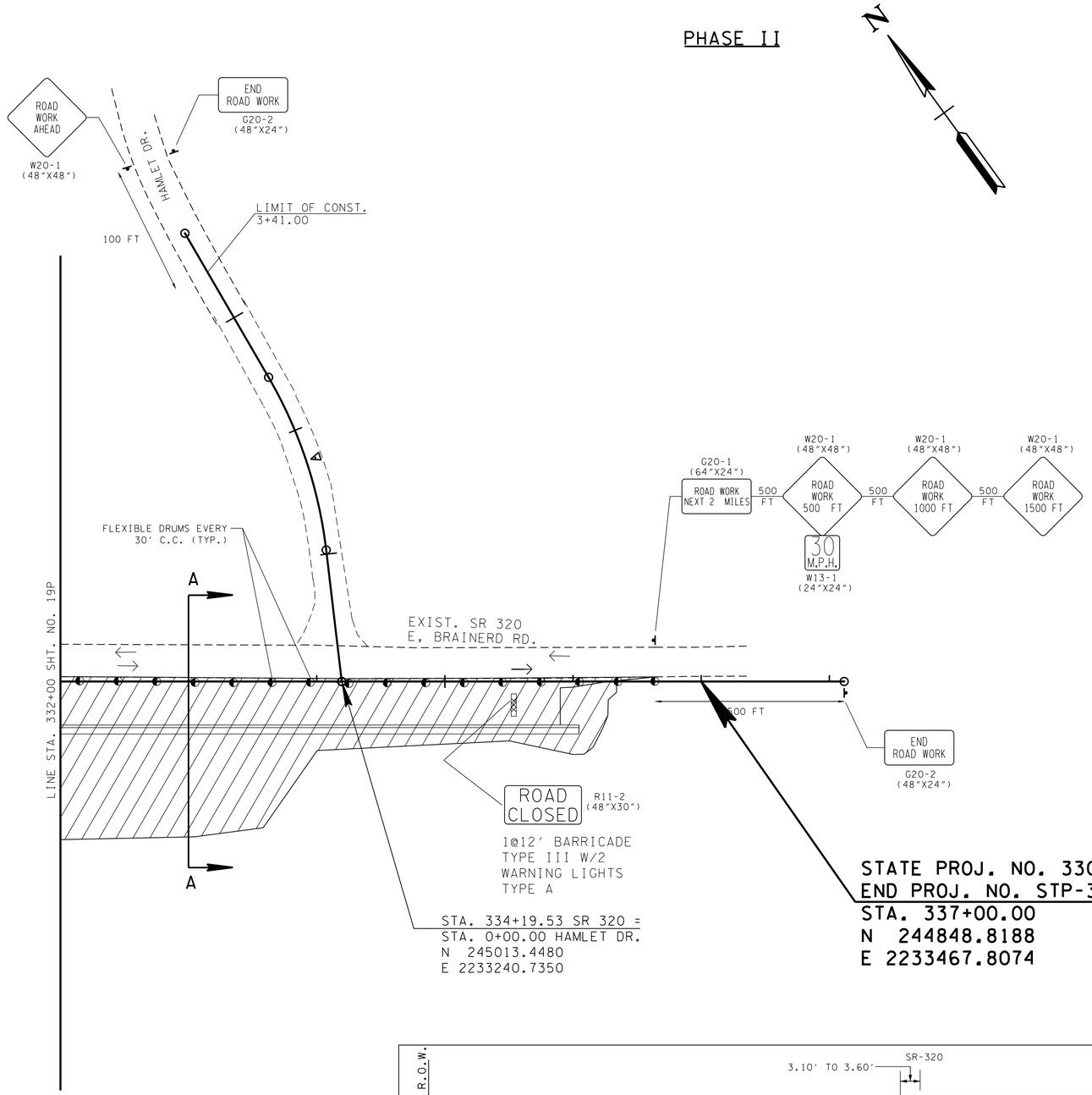
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	190

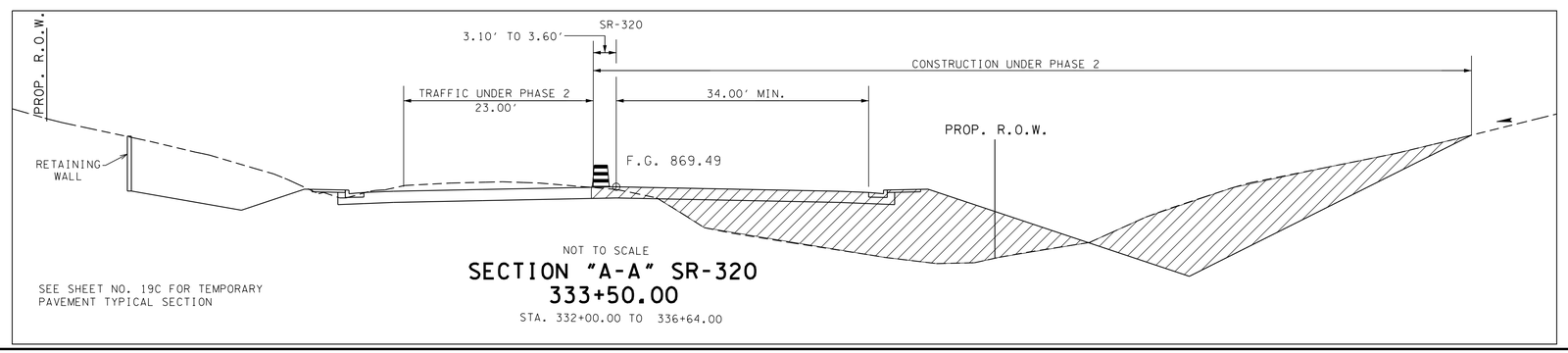
PHASE II



STATE PROJ. NO. 33057-3224(14) CONST.
END PROJ. NO. STP-320(4)
STA. 337+00.00
N 244848.8188
E 2233467.8074

TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	WORK ZONE
	SIGN (CONSTRUCTION)
	FLEXIBLE DRUMS (CHANNELIZING)
→	TRAFFIC FLOW
	TEMPORARY BARRICADE (TYPE III)

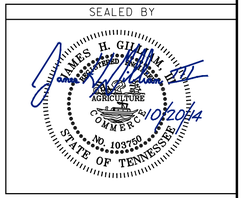


NOT TO SCALE

SECTION "A-A" SR-320
333+50.00
STA. 332+00.00 TO 336+64.00

SEE SHEET NO. 19C FOR TEMPORARY PAVEMENT TYPICAL SECTION

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN PHASE II

STA. 332+00 TO END PROJ.

SCALE: 1"= 50'

9/25/2014 1:22:21 PM
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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	19R

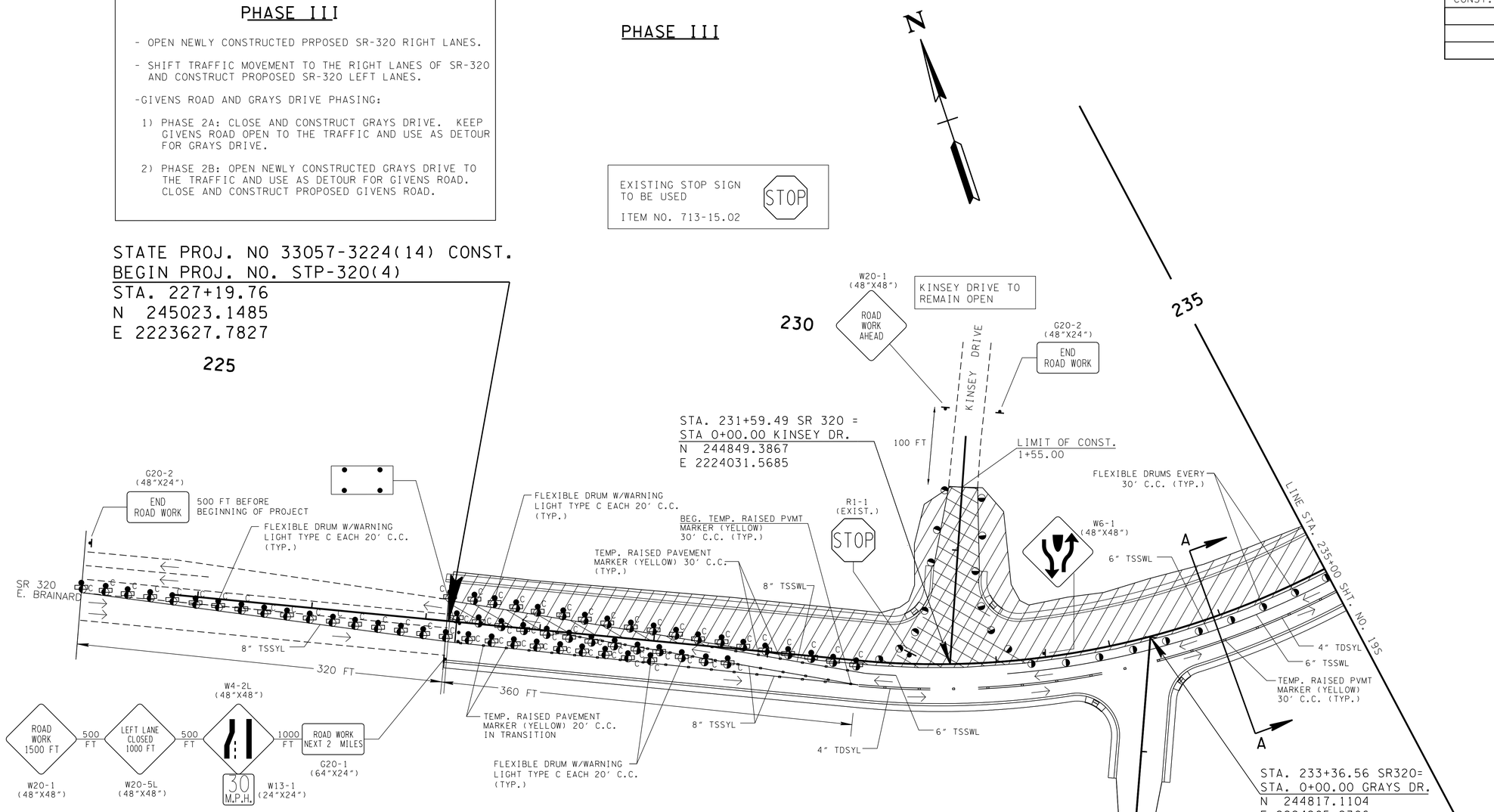
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

PHASE III

- OPEN NEWLY CONSTRUCTED PRPOSED SR-320 RIGHT LANES.
- SHIFT TRAFFIC MOVEMENT TO THE RIGHT LANES OF SR-320 AND CONSTRUCT PROPOSED SR-320 LEFT LANES.
- GIVENS ROAD AND GRAYS DRIVE PHASING:
  1) PHASE 2A: CLOSE AND CONSTRUCT GRAYS DRIVE. KEEP GIVENS ROAD OPEN TO THE TRAFFIC AND USE AS DETOUR FOR GRAYS DRIVE.
  2) PHASE 2B: OPEN NEWLY CONSTRUCTED GRAYS DRIVE TO THE TRAFFIC AND USE AS DETOUR FOR GIVENS ROAD. CLOSE AND CONSTRUCT PROPOSED GIVENS ROAD.

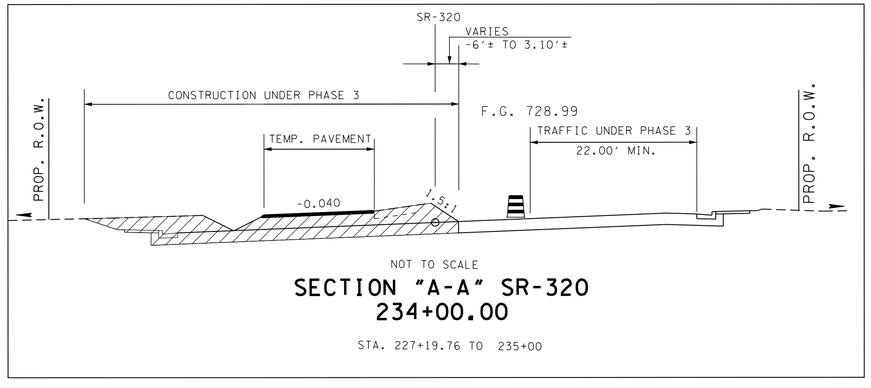
PHASE III

EXISTING STOP SIGN TO BE USED
ITEM NO. 713-15.02



TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	WORK ZONE
	CONSTRUCTION UNDER TRAFFIC
	SIGN (CONSTRUCTION)
	FLEXIBLE DRUMS (CHANNELIZING)
→	TRAFFIC FLOW
	ARROW BOARD TYPE C (CAUTION)
	ARROW BOARD TYPE C
C	WARNING LIGHT (TYPE C) (STEADY)
4" TDSYL	4" TEMPORARY DOUBLE SOLID YELLOW LINE
6" TSSWL	6" TEMPORARY SINGLE SOLID WHITE LINE
8" TSSWL	8" TEMPORARY SINGLE SOLID WHITE LINE
8" TSSYL	8" TEMPORARY SINGLE SOLID YELLOW LINE

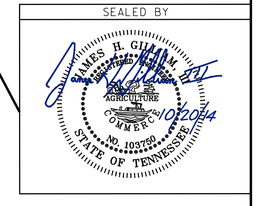


NOT TO SCALE

SECTION "A-A" SR-320 234+00.00

STA. 227+19.76 TO 235+00

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN PHASE III

BEG. PROJ. TO STA. 235+00

SCALE: 1"= 50'

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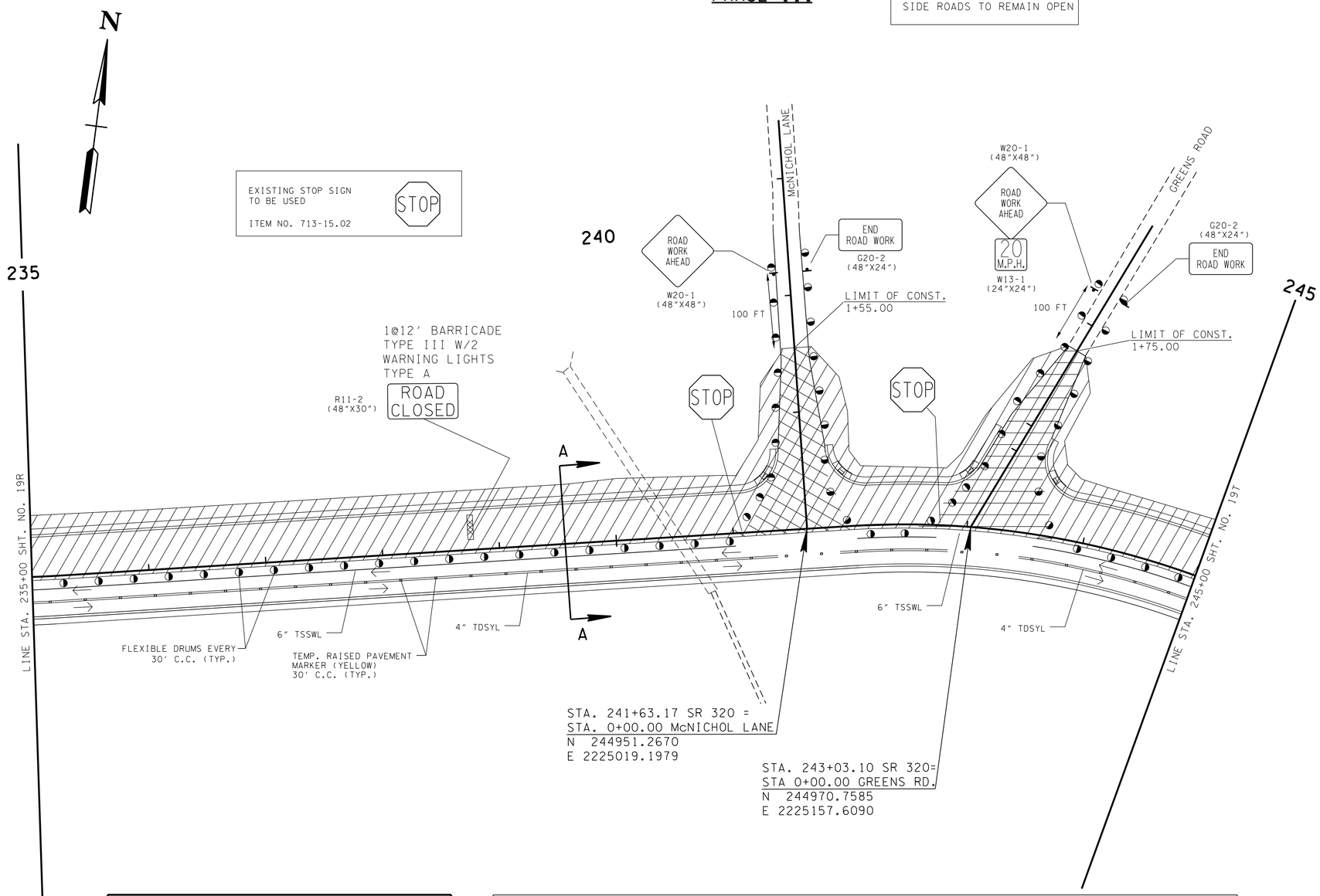
TENNESSEE D.O.T.	DESIGN DIVISION	FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	19S

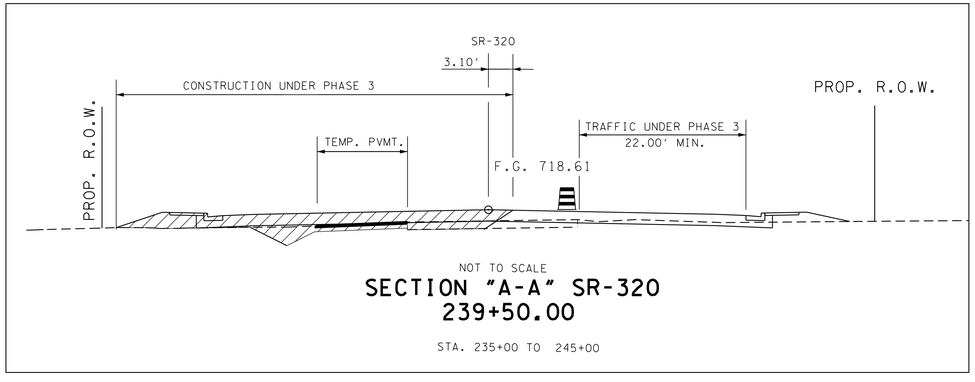
PHASE III

SIDE ROADS TO REMAIN OPEN



TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	WORK ZONE
	CONSTRUCTION UNDER TRAFFIC
	SIGN (CONSTRUCTION)
	FLEXIBLE DRUMS (CHANNELIZING)
→	TRAFFIC FLOW
6" TSSWL	6" TEMPORARY SINGLE SOLID WHITE LINE
4" TDSYL	4" TEMPORARY DOUBLE SOLID YELLOW LINE
	TEMPORARY BARRICADE (TYPE III)

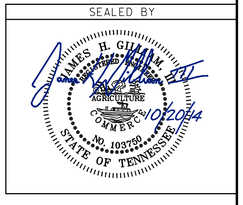


NOT TO SCALE

SECTION "A-A" SR-320
239+50.00

STA. 235+00 TO 245+00

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN PHASE III

STA. 235+00 TO STA. 245+00

SCALE: 1"= 50'

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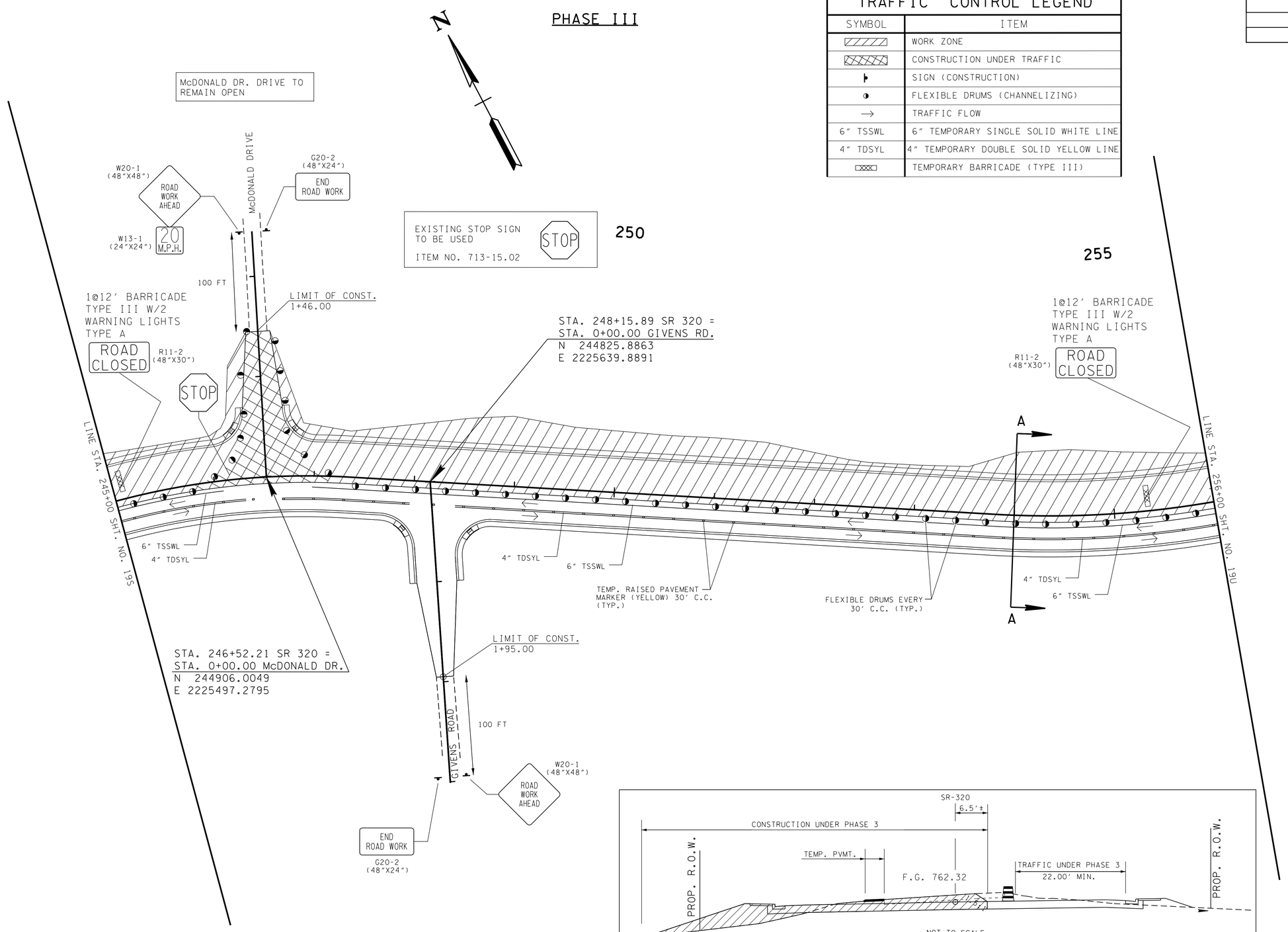
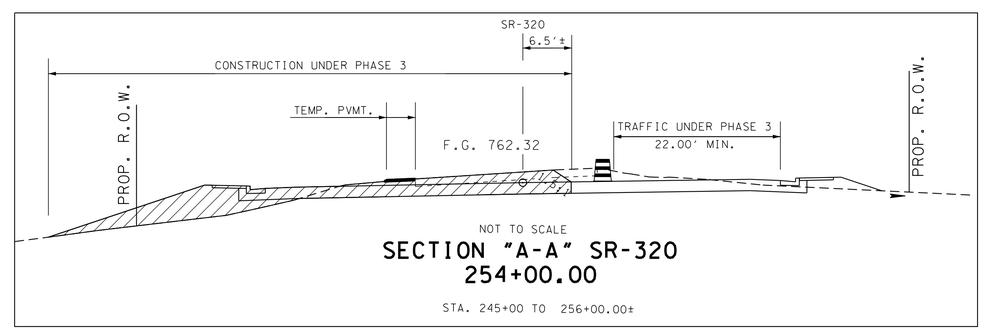
TENNESSEE D.O.T.	DESIGN DIVISION	FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	19T

PHASE III

TRAFFIC CONTROL LEGEND	
SYMBOL	ITEM
	WORK ZONE
	CONSTRUCTION UNDER TRAFFIC
	SIGN (CONSTRUCTION)
	FLEXIBLE DRUMS (CHANNELIZING)
→	TRAFFIC FLOW
6" TSSWL	6" TEMPORARY SINGLE SOLID WHITE LINE
4" TDSYL	4" TEMPORARY DOUBLE SOLID YELLOW LINE
	TEMPORARY BARRICADE (TYPE III)



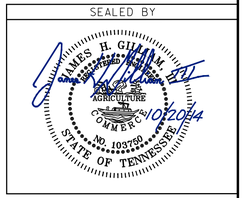


NOT TO SCALE

SECTION "A-A" SR-320
254+00.00

STA. 245+00 TO 256+00.00±

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN PHASE III

STA. 245+00 TO STA. 256+00

SCALE: 1"= 50'

9/25/2014 2:17:38 PM
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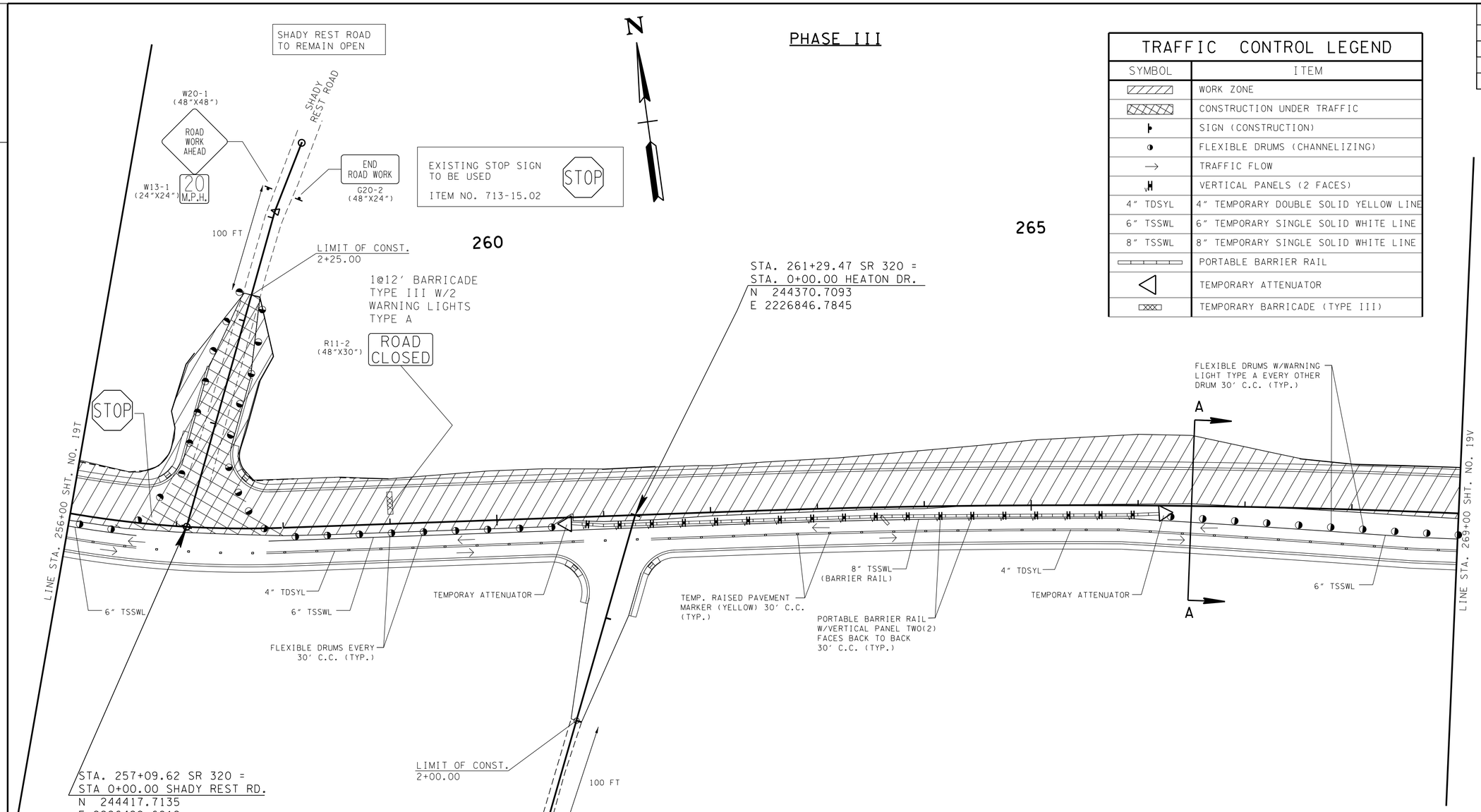
TENNESSEE D.O.T.	DESIGN DIVISION	FILE NO.

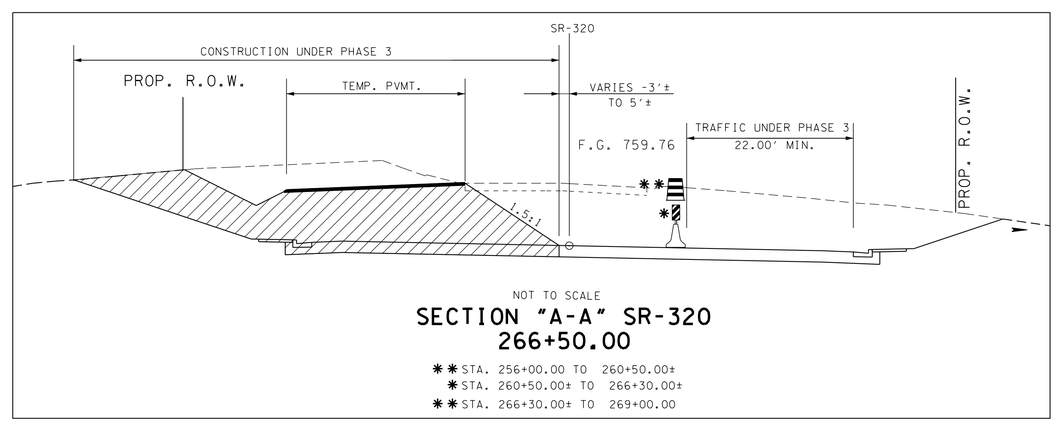
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	19U

PHASE III

TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	WORK ZONE
	CONSTRUCTION UNDER TRAFFIC
	SIGN (CONSTRUCTION)
	FLEXIBLE DRUMS (CHANNELIZING)
→	TRAFFIC FLOW
	VERTICAL PANELS (2 FACES)
4" TDSYL	4" TEMPORARY DOUBLE SOLID YELLOW LINE
6" TSSWL	6" TEMPORARY SINGLE SOLID WHITE LINE
8" TSSWL	8" TEMPORARY SINGLE SOLID WHITE LINE
	PORTABLE BARRIER RAIL
	TEMPORARY ATTENUATOR
	TEMPORARY BARRICADE (TYPE III)





NOT TO SCALE

SECTION "A-A" SR-320
266+50.00

✱✱ STA. 256+00.00 TO 260+50.00±
✱ STA. 260+50.00± TO 266+30.00±
✱✱ STA. 266+30.00± TO 269+00.00

SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN PHASE III

STA. 256+00 TO STA. 269+00

SCALE: 1"= 50'

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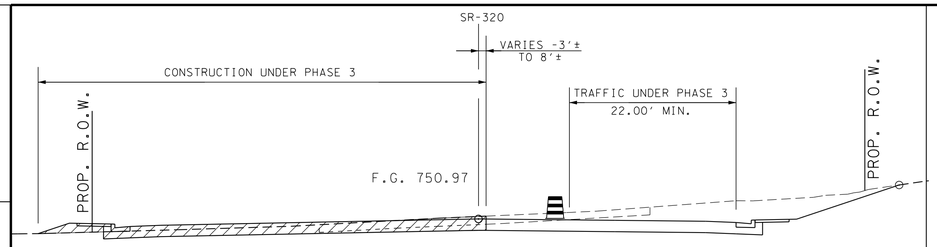
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	19V



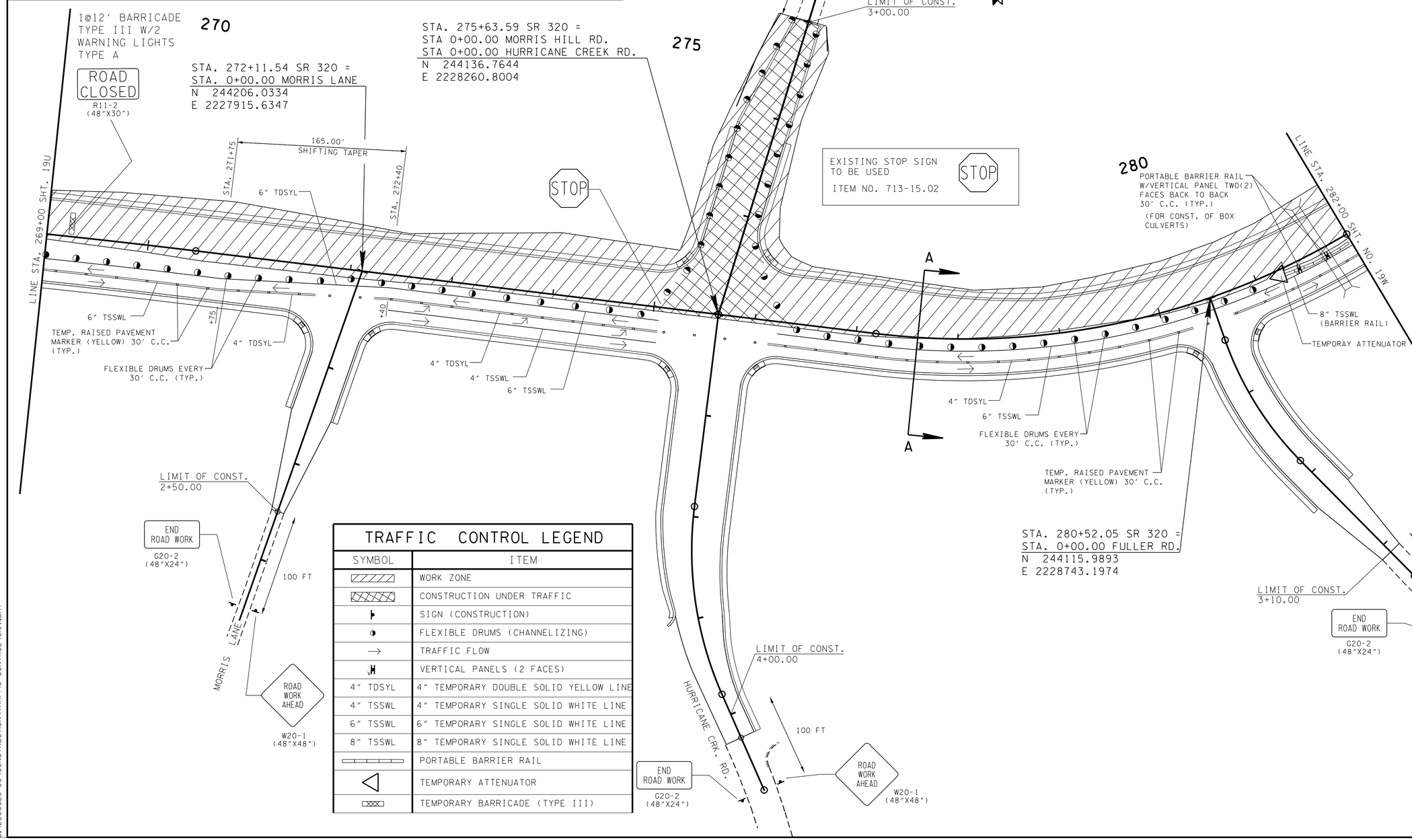
NOT TO SCALE

SECTION "A-A" SR-320
276+50.00

STA. 269+00.00± TO 282+00.00

PHASE III

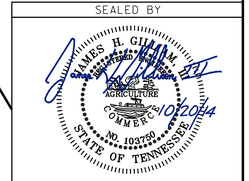
MORRIS HILL ROAD TO REMAIN OPEN



TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	WORK ZONE
	CONSTRUCTION UNDER TRAFFIC
	SIGN (CONSTRUCTION)
	FLEXIBLE DRUMS (CHANNELIZING)
→	TRAFFIC FLOW
	VERTICAL PANELS (2 FACES)
4" TDSYL	4" TEMPORARY DOUBLE SOLID YELLOW LINE
4" TSSWL	4" TEMPORARY SINGLE SOLID WHITE LINE
6" TSSWL	6" TEMPORARY SINGLE SOLID WHITE LINE
8" TSSWL	8" TEMPORARY SINGLE SOLID WHITE LINE
	PORTABLE BARRIER RAIL
	TEMPORARY ATTENUATOR
	TEMPORARY BARRICADE (TYPE III)

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN PHASE III

STA. 269+00 TO STA. 282+00

SCALE: 1"= 50'

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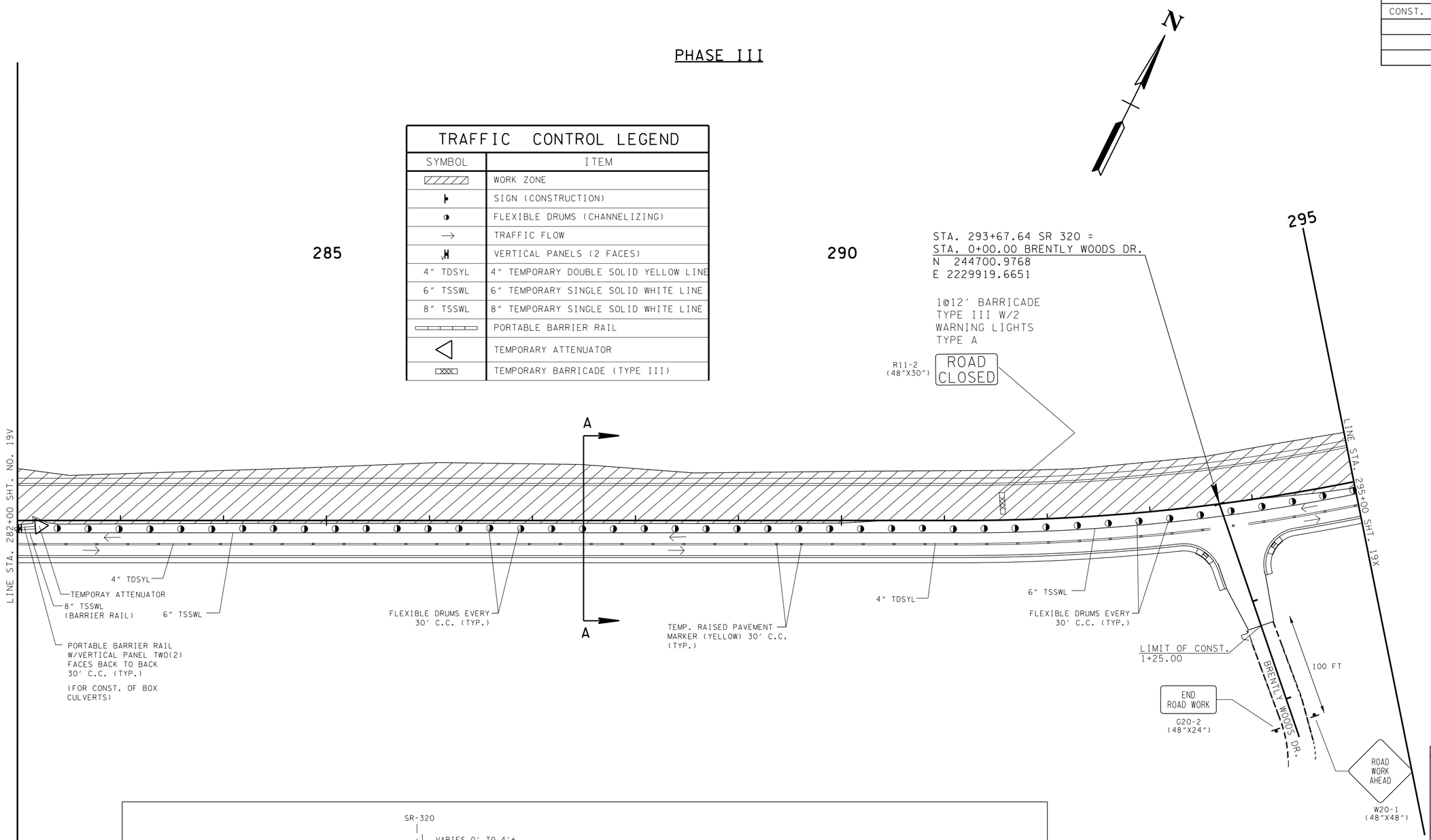
TENNESSEE D.O.T.	DESIGN DIVISION	FILE NO.

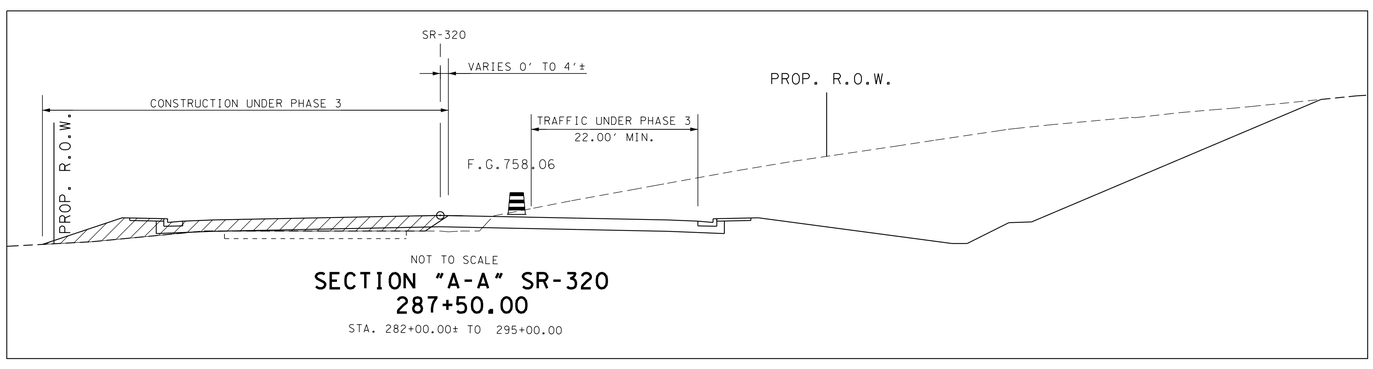
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	19W

PHASE III

TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	WORK ZONE
	SIGN (CONSTRUCTION)
	FLEXIBLE DRUMS (CHANNELIZING)
→	TRAFFIC FLOW
	VERTICAL PANELS (2 FACES)
4" TDSYL	4" TEMPORARY DOUBLE SOLID YELLOW LINE
6" TSSWL	6" TEMPORARY SINGLE SOLID WHITE LINE
8" TSSWL	8" TEMPORARY SINGLE SOLID WHITE LINE
	PORTABLE BARRIER RAIL
	TEMPORARY ATTENUATOR
	TEMPORARY BARRICADE (TYPE III)



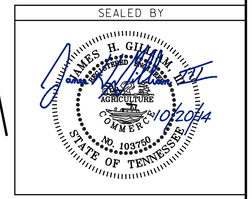


NOT TO SCALE

SECTION "A-A" SR-320
287+50.00

STA. 282+00.00± TO 295+00.00

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN PHASE III

STA. 282+00 TO STA. 295+00

SCALE: 1"= 50'

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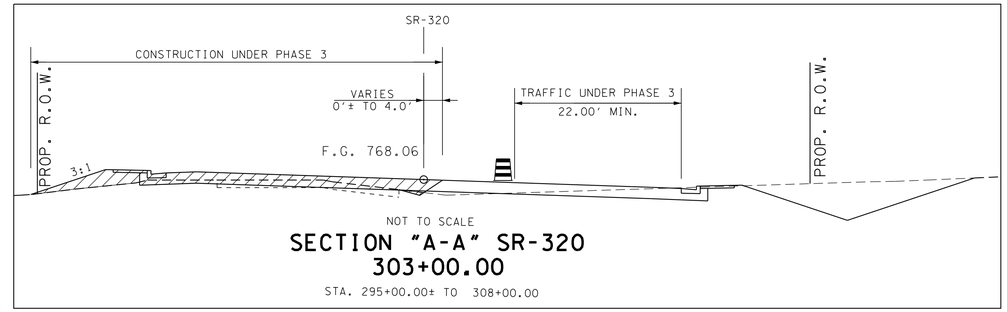
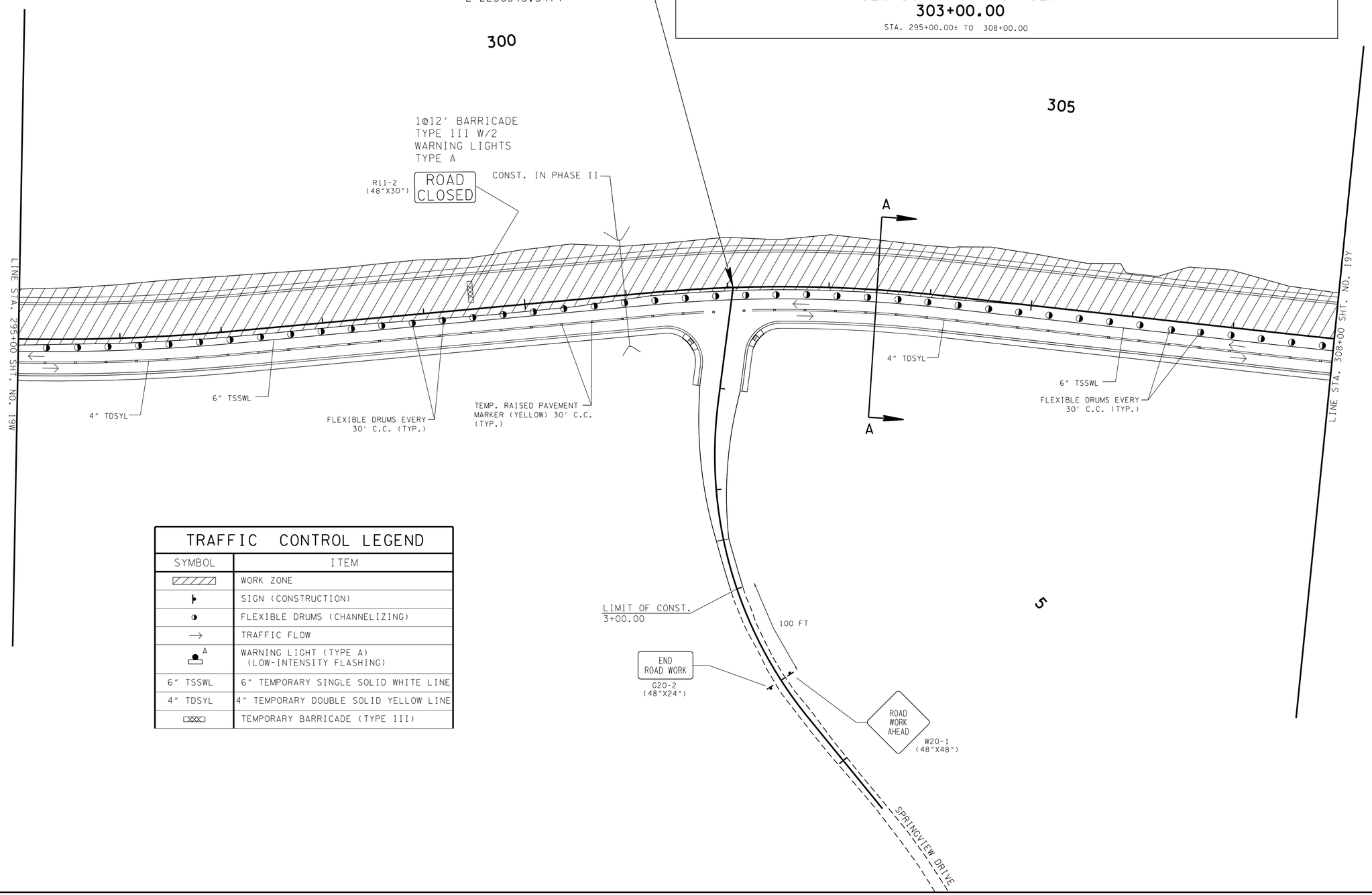
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	19X

PHASE III

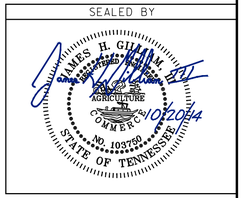




TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	WORK ZONE
	SIGN (CONSTRUCTION)
	FLEXIBLE DRUMS (CHANNELIZING)
→	TRAFFIC FLOW
A	WARNING LIGHT (TYPE A) (LOW-INTENSITY FLASHING)
6" TSSWL	6" TEMPORARY SINGLE SOLID WHITE LINE
4" TDSYL	4" TEMPORARY DOUBLE SOLID YELLOW LINE
	TEMPORARY BARRICADE (TYPE III)

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN PHASE III

STA. 295+00 TO STA. 308+00

SCALE: 1"= 50'

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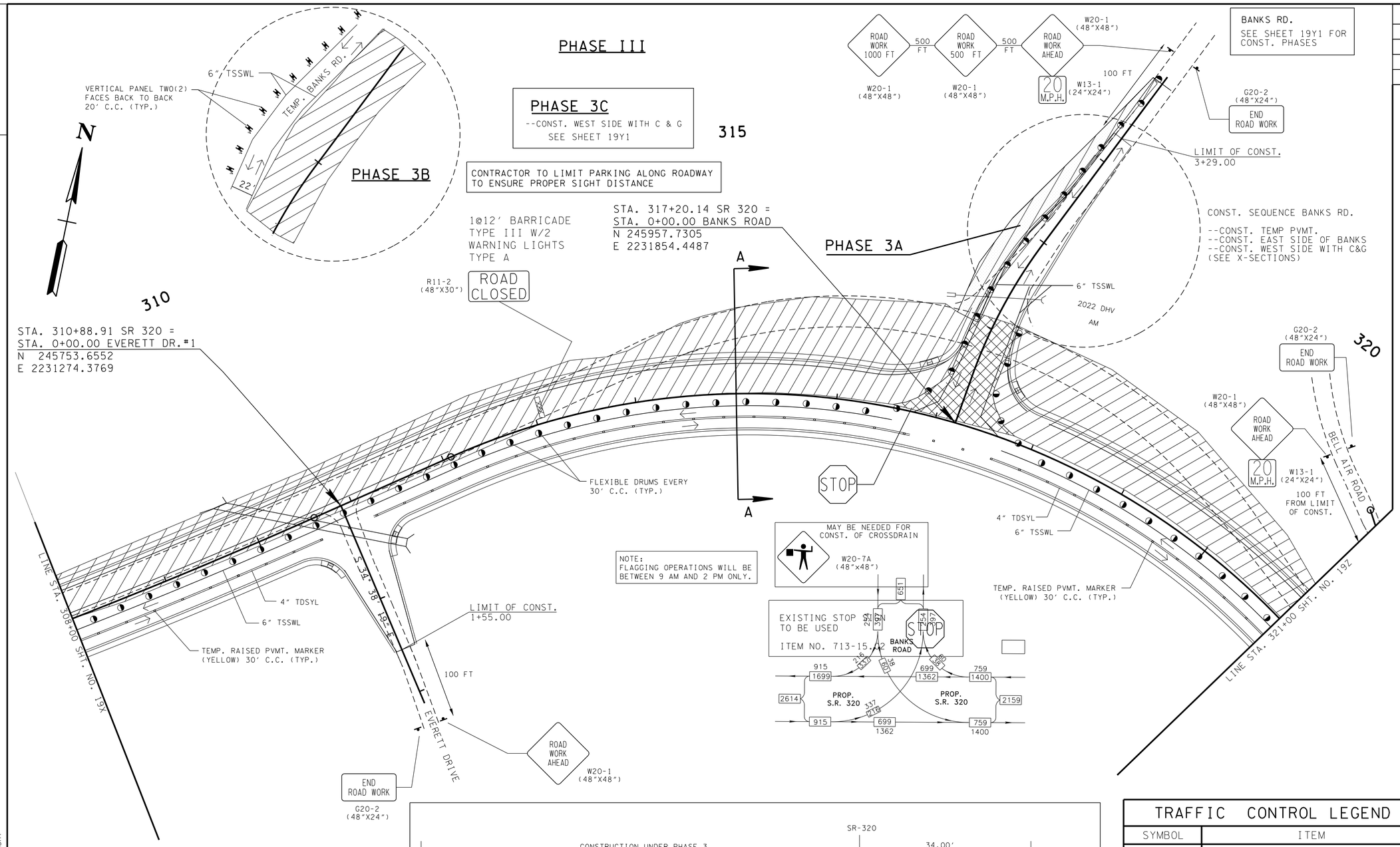
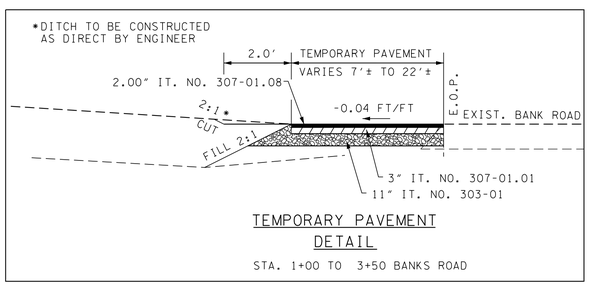
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

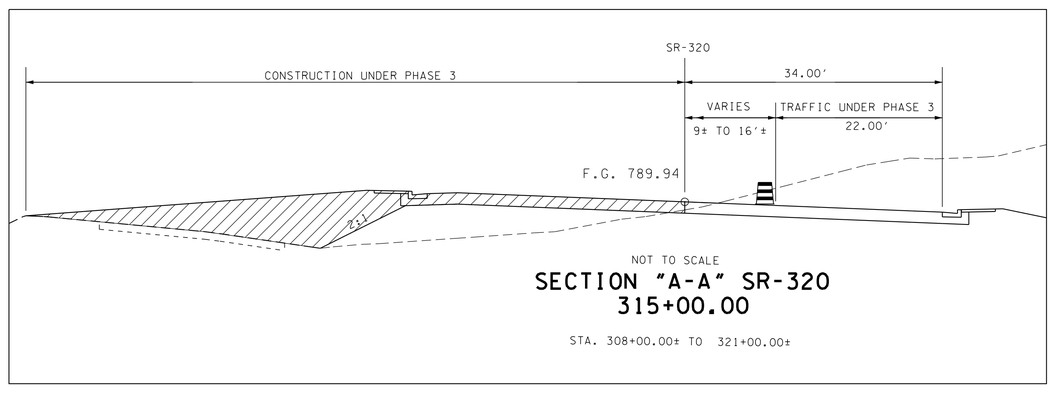
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	19Y





TEMPORARY PAVEMENT DETAIL

STA. 1+00 TO 3+50 BANKS ROAD



NOT TO SCALE

SECTION "A-A" SR-320
315+00.00

STA. 308+00.00± TO 321+00.00±

TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	WORK ZONE
	CONSTRUCTION UNDER TRAFFIC
	SIGN (CONSTRUCTION)
	FLEXIBLE DRUMS (CHANNELIZING)
→	TRAFFIC FLOW
	VERTICAL PANELS (2 FACES)
6" TSSWL	6" TEMPORARY SINGLE SOLID WHITE LINE
4" TDSYL	4" TEMPORARY DOUBLE SOLID YELLOW LINE
	TEMPORARY BARRICADE (TYPE III)
	TEMPORARY PAVEMENT

SEALED BY

JAMES H. GIAMMARINO
NO. 109750
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
STATE OF TENNESSEE
10/20/14

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN PHASE III

STA. 308+00 TO STA. 321+00

SCALE: 1"= 50'

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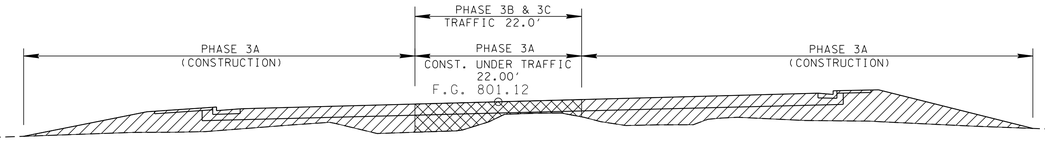
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	19Y1

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

PHASE 3A

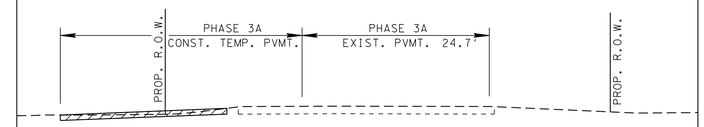


NOT TO SCALE

BANKS ROAD
0+50.00

STA. 0+50± TO STA. 1+10±

PHASE 3A

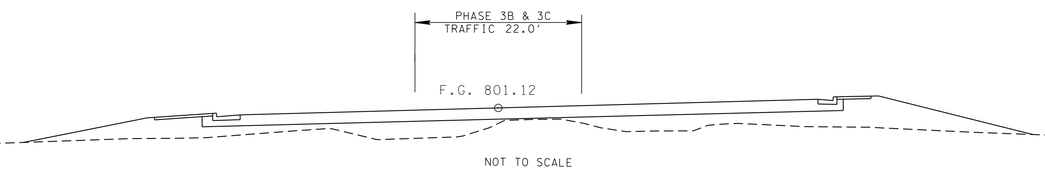


NOT TO SCALE

BANKS ROAD
1+50.00

STA. 1+10± TO STA. 3+29±

PHASE 3B/3C

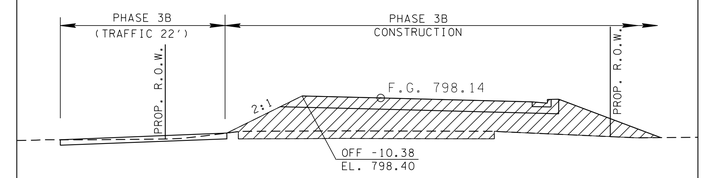


NOT TO SCALE

BANKS ROAD
0+50.00

STA. 0+50± TO STA. 1+10±

PHASE 3B

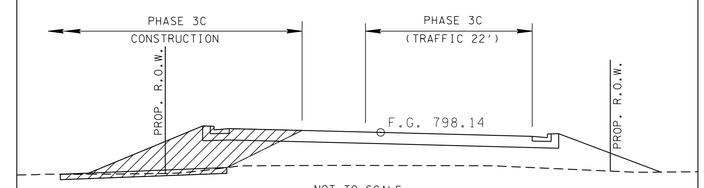


NOT TO SCALE

BANKS ROAD
1+50.00

STA. 1+10± TO STA. 3+29±

PHASE 3C

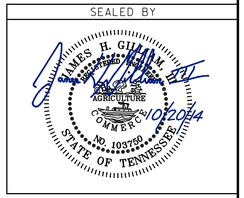


NOT TO SCALE

BANKS ROAD
1+50.00

STA. 1+10± TO STA. 3+29±

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN PHASE III

(BANKS ROAD)

N.T.S.

10/16/2014 1:26:21 PM
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TENNESSEE D.O.T.	DESIGN DIVISION	FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	19Z

PHASE III

TRAFFIC CONTROL LEGEND	
SYMBOL	ITEM
	WORK ZONE
	CONSTRUCTION UNDER TRAFFIC
	SIGN (CONSTRUCTION)
	FLEXIBLE DRUMS (CHANNELIZING)
→	TRAFFIC FLOW
4" TDSYL	4" TEMPORARY DOUBLE SOLID YELLOW LINE
6" TSSWL	6" TEMPORARY SINGLE SOLID WHITE LINE
8" TSSWL	8" TEMPORARY SINGLE SOLID WHITE LINE
	TEMPORARY BARRICADE (TYPE III)

CONTRACTOR TO LIMIT PARKING ALONG ROADWAY TO ENSURE PROPER SIGHT DISTANCE

BELL-AIR RD. TO REMAIN OPEN

EXISTING STOP SIGN TO BE USED

ITEM NO. 713-15.02

STOP

MAY BE NEEDED FOR CONST. OF CROSSDRAINS

W20-7A (48"x48")

NOTE:
FLAGGING OPERATIONS WILL BE BETWEEN 9 AM AND 2 PM ONLY.

325

330

1@12' BARRICADE
TYPE III W/2
WARNING LIGHTS
TYPE A

R11-2 (48"X30") ROAD CLOSED

STA. 323+83.71 SR 320 =
STA. 0+00.00 BELL-AIR RD.
STA. 0+00.00 EVERETT DR.#2
N 245645.5951
E 2232421.4489

FLEXIBLE DRUMS EVERY 30' C.C. (TYP.)

6" TSSWL

A

FLEXIBLE DRUM IN TRANSITION W/WARNING LIGHT TYPE C EACH 20' C.C. (TYP.)

LINE STA. 321+00 SHT. NO. 19Y

LINE STA. 332+00 SHT. NO. 19ZA

6" TSSWL

4" TDSYL

ROAD CLOSED R11-2 (48"X30")

1@12' BARRICADE
TYPE III W/2
WARNING LIGHTS
TYPE A

STOP

4" TDSYL

8" TSSWL

TEMP. RAISED PAVEMENT MARKER (YELLOW) 20' C.C. IN TRANSITION (TYP.)

TEMP. RAISED PAVEMENT MARKER (YELLOW) 30' C.C. (TYP.)

STA. 328+50.00

A

FLEXIBLE DRUM IN TRANSITION W/WARNING LIGHT TYPE C EACH 20' C.C. (TYP.)

814.00'
TRANSITION

W1-4L (36"X36")

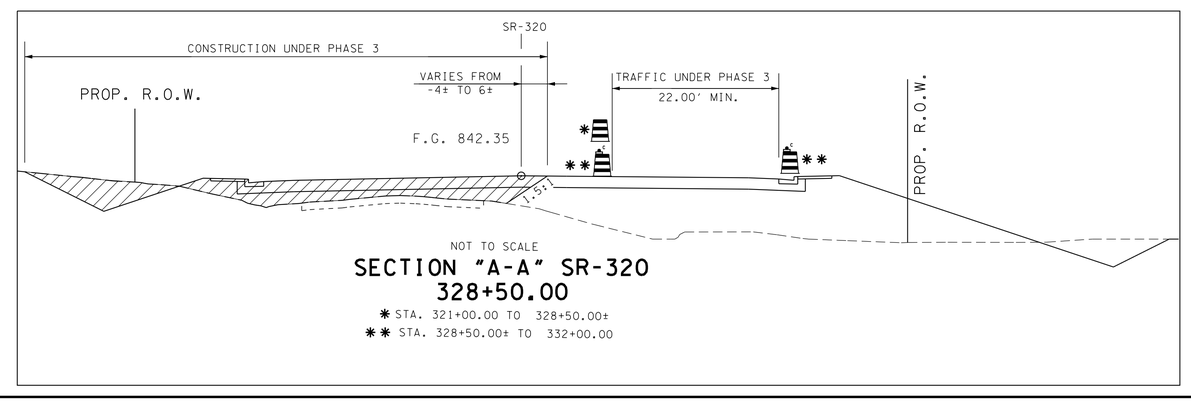
LIMIT OF CONST.
2+50.00

100 FT

END ROAD WORK
G20-2 (48"X24")

EVERETT DRIVE

ROAD WORK AHEAD
W20-1 (48"X48")



NOT TO SCALE

SECTION "A-A" SR-320
328+50.00

✱ STA. 321+00.00 TO 328+50.00±

✱✱ STA. 328+50.00± TO 332+00.00

SEALED BY

JAMES H. GIAMMARINO
NO. 109750
STATE OF TENNESSEE
10/20/2014

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN PHASE III

STA. 321+00 TO STA. 332+00

SCALE: 1"= 50'

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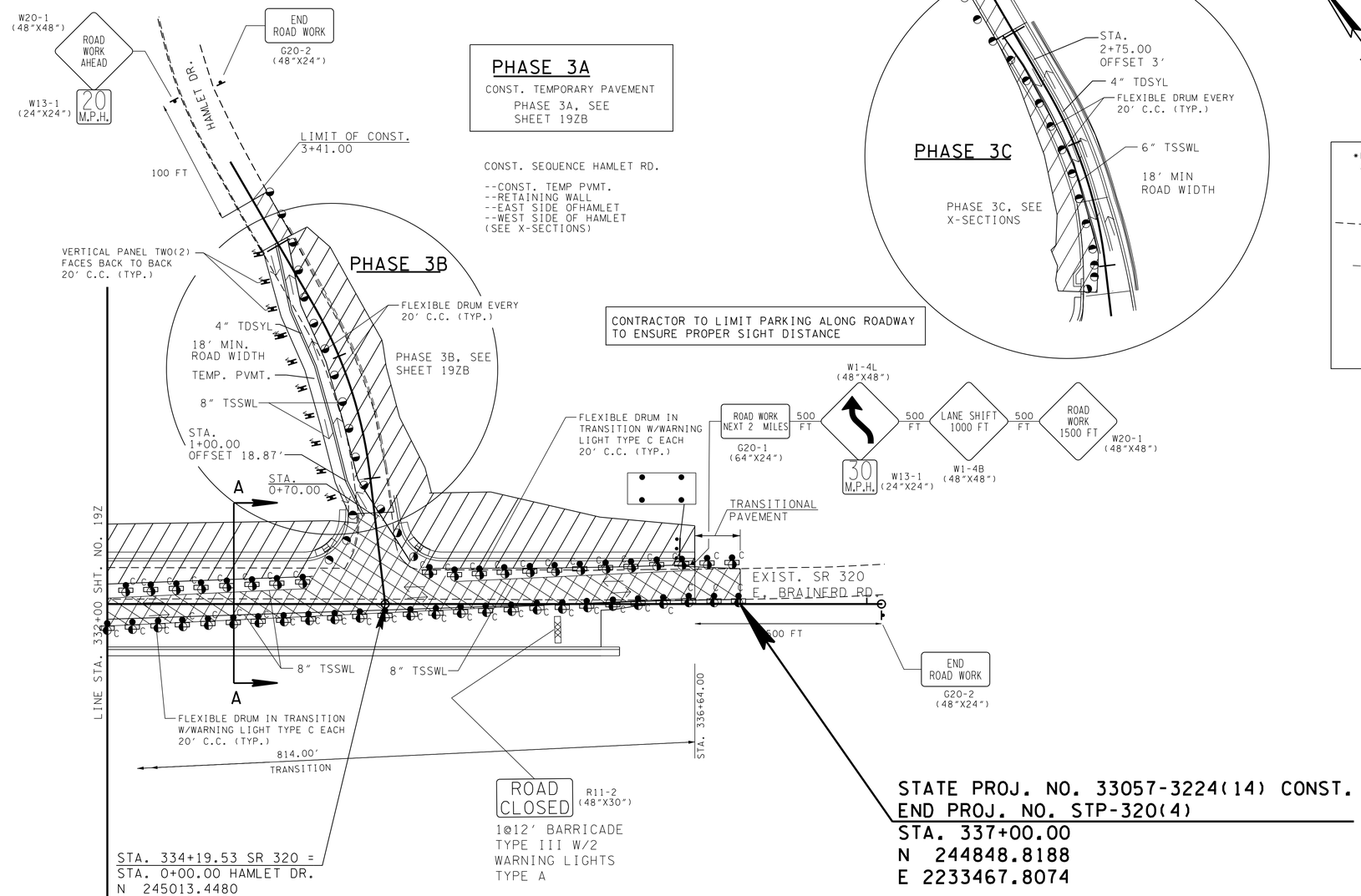
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	19ZA

PHASE III



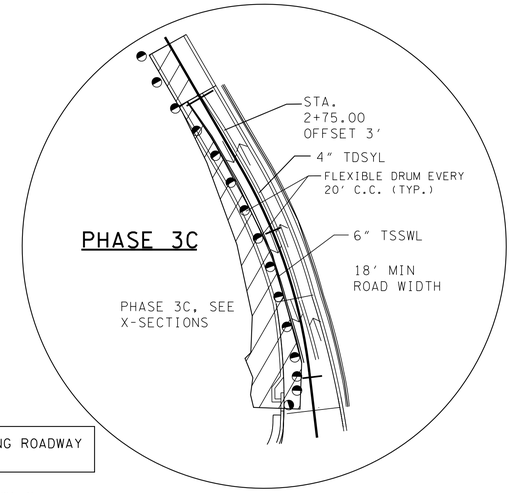
PHASE 3A

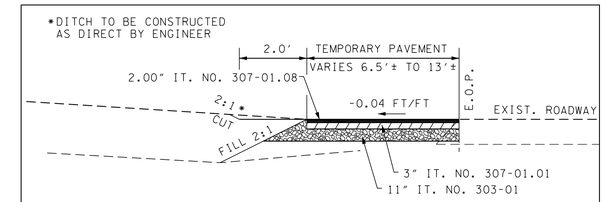
CONST. TEMPORARY PAVEMENT
PHASE 3A, SEE SHEET 19ZB

CONST. SEQUENCE HAMLET RD.

--CONST. TEMP PVMT.
--RETAINING WALL
--EAST SIDE OFHAMLET
--WEST SIDE OF HAMLET
(SEE X-SECTIONS)

CONTRACTOR TO LIMIT PARKING ALONG ROADWAY TO ENSURE PROPER SIGHT DISTANCE





TEMPORARY PAVEMENT DETAIL

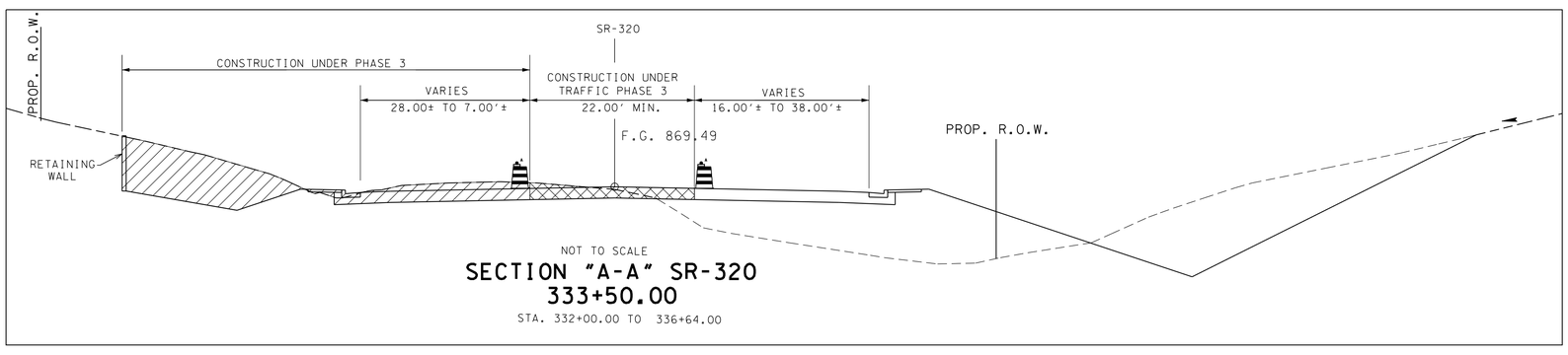
STA. 1+00 TO 3+02 HAMLET DRIVE

TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	WORK ZONE
	CONSTRUCTION UNDER TRAFFIC
	SIGN (CONSTRUCTION)
	FLEXIBLE DRUMS (CHANNELIZING)
→	TRAFFIC FLOW
	ARROW BOARD TYPE C (CAUTION)
	ARROW BOARD TYPE C
C	WARNING LIGHT (TYPE C) (STEADY)
	VERTICAL PANELS (2 FACES)
4" TDSYL	4" TEMPORARY DOUBLE SOLID YELLOW LINE
6" TSSWL	6" TEMPORARY SINGLE SOLID WHITE LINE
8" TSSWL	8" TEMPORARY SINGLE SOLID WHITE LINE
	TEMPORARY BARRICADE (TYPE III)

STA. 334+19.53 SR 320 =
STA. 0+00.00 HAMLET DR.
N 245013.4480
E 2233240.7350

STATE PROJ. NO. 33057-3224(14) CONST.
END PROJ. NO. STP-320(4)
STA. 337+00.00
N 244848.8188
E 2233467.8074

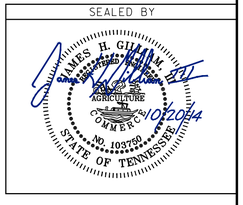


NOT TO SCALE

SECTION "A-A" SR-320
333+50.00

STA. 332+00.00 TO 336+64.00

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN PHASE III

STA. 332+00 TO END PROJ.

SCALE: 1"= 50'

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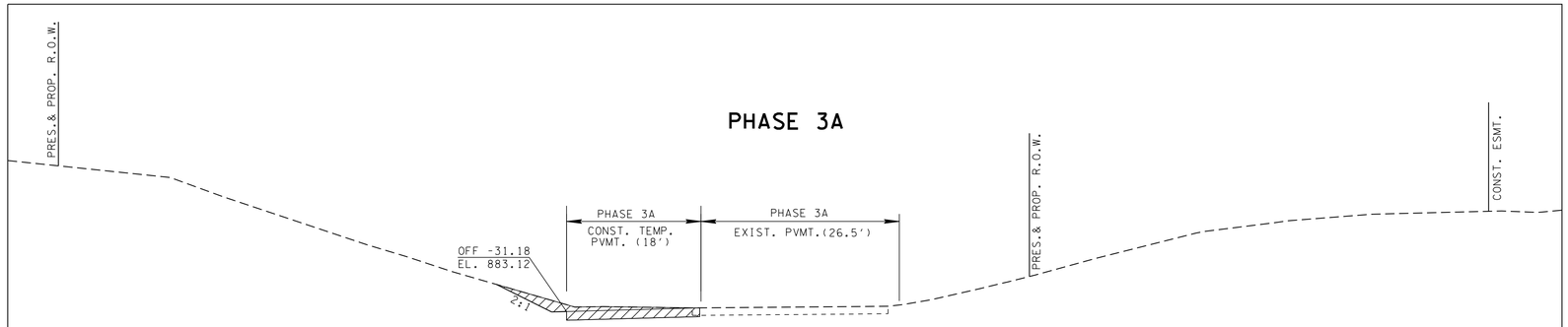
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	19ZB

PHASE 3A



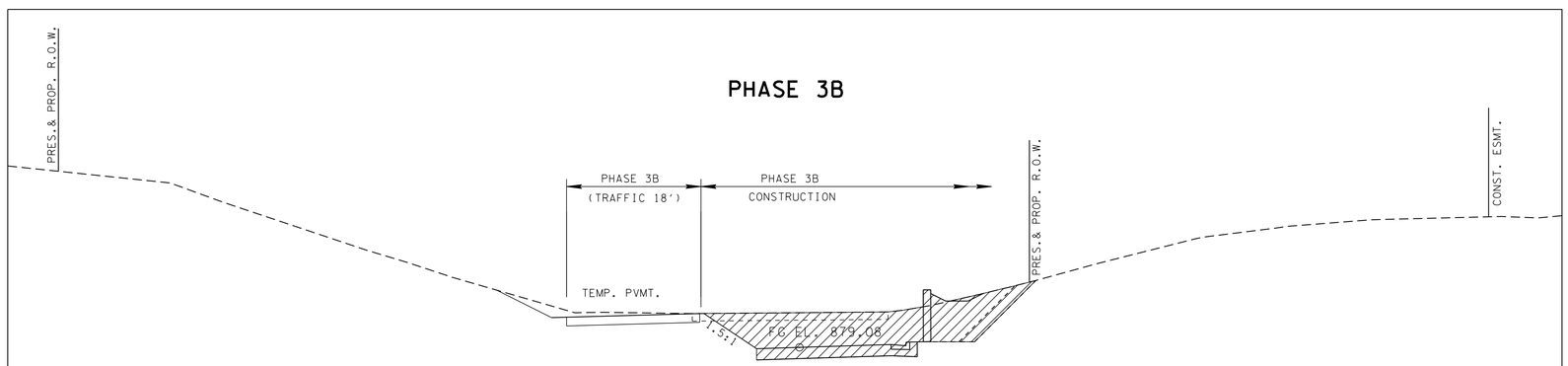
NOT TO SCALE

HAMLET DRIVE

1+50.00

STA. 0+50± TO STA. 3+41±

PHASE 3B



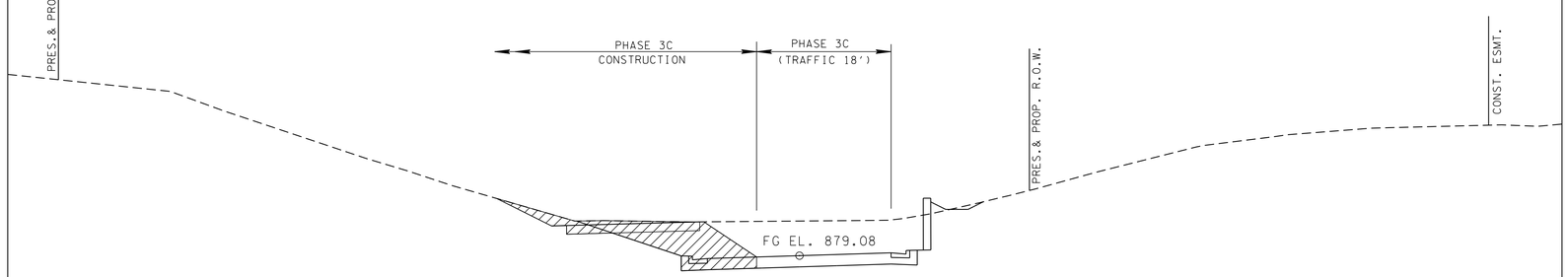
NOT TO SCALE

HAMLET DRIVE

1+50.00

STA. 0+50± TO STA. 3+41±

PHASE 3C



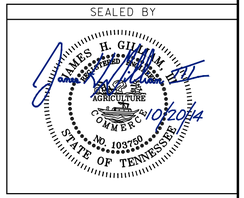
NOT TO SCALE

HAMLET DRIVE

1+50.00

STA. 0+50± TO STA. 3+41±

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN PHASE III

(HAMLET DRIVE)

N.T.S.

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	20

PAVEMENT MARKING QUANTITIES

LOCATION	"U" SECTION STEEL POSTS 713-11.01 (LB.)	STEEL HOLLOW SQUARE POST SUPPORT 713-11.02 (LB.)	FLAT SHEET ALUMINUM SIGNS (0.080" THICK) 713-13.02 (S.F.)	FLAT SHEET ALUMINUM SIGNS (0.100" THICK) 713-13.03 (S.F.)	Snwplwble Pvmt Mrkrs (Bi-Dir)(1 Color) 716-01.21 (EACH)	Snw Plwble Pvmt Mrkrs (Bi-Dir)(2 Color) 716-01.23 (EACH)	PLASTIC PAVEMENT MARKING (CROSS-WALK) 716-02.03 (L.F.)	PLASTIC PAVEMENT MARKING (CHANNELIZATION) 716-02.04 (S.Y.)	PLASTIC PAVEMENT MARKING (STOP LINE) 716-02.05 (L.F.)	PLASTIC PAVEMENT MARKING (TURN ARROW) 716-02.06 (EACH)	PLASTIC PAVEMENT MARKING (8"DOTTED LINE) 716-02.08 (L.F.)	PLASTIC PAVEMENT MARKING (LONG. CROSS-WALK) 716-02.09 (L.F.)
SR 320 (E. BRAINARD)	1,693.50	229.38	385.00	69.00	380	405	258	1,000	110	52		
SIDE ROADS												
KINSEY DRIVE	40.50		9.00		8	1		37	29	2		61
GRAYS DRIVE	40.50		9.00		13	2		63	28	2		69
McNICHOL LANE	40.50		9.00		12	2		24	31	2		59
GREENS ROAD	40.50		9.00		9	1		39	29	2		67
McDONALD DRIVE	40.50		9.00		6	1		24	29	2		56
GIVENS ROAD	40.50		9.00		12	2		51	32	2		61
SHADY REST ROAD	40.50		9.00		12	5		27	28	2		65
HEATON DRIVE	40.50		9.00		10	2		41	28	2		64
MORRIS LANE	40.50		9.00		13	5		71	29	2		61
MORRIS HILL ROAD	194.21	29.21	36.75	9.00	15	12		69	40	4		62
HURRICANE CREEK RD.	234.71	29.21	43.00	9.00	21	20		28	39	4		66
FULLER ROAD	81.00		15.25		20	8		47	30	4		56
BENTLEY WOODS DR.	79.50		15.25		4	1		13	34	2		60
SPRINGVIEW DRIVE	79.50		15.25		10	1		29	28	2		56
EVERETT DRIVE	40.50		9.00		4	1		40	36	2		61
BANKS ROAD		29.21		9.00	16	5		24	38	2		70
BELL AIR ROAD	40.50		9.00		4			0	31	0		61
EVERETT DRIVE (2)	79.50		15.25		14	7		34	40	1	105	70
HAMLET DRIVE	79.50		15.25		18	2		31	35	2		65
TOTALS	**2,967**	**318**	**640**	**96**	**601**	**483**	**258**	**1,692**	**724**	**93**	**105**	**1,190**

PAVEMENT MARKING QUANTITIES

LOCATION	PLASTIC WORD PVMT MARKING (ONLY) 716-03.01 (EACH)	PLASTIC PAVEMENT MARKING (STOP AHEAD) 716-03.03 (EACH)	PLASTIC PAVEMENT MARKING (STRAIGHT TURN ARROWS) 716-04.01 (EACH)	PLASTIC PAVEMENT MARKING (TRANS. SHLDR) 716-04.04 (L.F.)	PLASTIC PAVEMENT MARKING ARROWS STRAIGHT 716-04.05 (EACH)	PLASTIC PAVEMENT MARKING (YIELD LINE) 716-04.12 (S.F.)	PLASTIC PAVEMENT MARKING (LANE REDUCTION ARROW) 716-04.14 (EACH)	PLASTIC PAVEMENT MARKING -BIKE SYMBOL/ARROW 716-04.15 (EACH)	ENHANCED THERMO PVMT MRKNG (4" LINE) 716-12.01 (L.M.)	ENHANCED THERMO PVMT MARKING (6" LINE) 716-12.02 (L.M.)	ENHANCED THERMO PVMT MARKING (4" DOTTED LINE) 716-12.04 (L.F.)	ENHANCED THERMO PVMT MARKING (6" DOTTED LINE) 716-12.05 (L.F.)
SR 320 (E. BRAINARD)	2		4	554.02	4	34	2	32	5.33	3.87	2,352	2,001
SIDE ROADS												
KINSEY DRIVE									0.11		25	
GRAYS DRIVE									0.14		28	
McNICHOL LANE									0.14		22	
GREENS ROAD									0.10		31	
McDONALD DRIVE									0.10		22	
GIVENS ROAD									0.17		20	
SHADY REST ROAD									0.14		20	
HEATON DRIVE									0.15		22	
MORRIS LANE									0.17		39	
MORRIS HILL ROAD					2				0.18		96	
HURRICANE CREEK RD.	1				6				0.29		23	
FULLER ROAD		1							0.17		22	
BENTLEY WOODS DR.									0.05		20	
SPRINGVIEW DRIVE									0.20		20	
EVERETT DRIVE									0.08		20	
BANKS ROAD									0.17		67	
BELL AIR ROAD									0.23		0	
EVERETT DRIVE (2)			1						0.13		51	
HAMLET DRIVE									0.14		20	
TOTALS	**3**	**1**	**5**	**554**	**12**	**34**	**2**	**32**	**8.2**	**3.9**	**2,920**	**2,001**

SEALED BY

JAMES H. GHAM
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 103750
STATE OF TENNESSEE
10/2014

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGN & PAVEMENT MARKINGS QUANTITIES

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	20A

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

SSWL	SINGLE SOLID WHITE LINE
SBWL	SINGLE BROKEN WHITE LINE
SBYL	SINGLE BROKEN YELLOW LINE
DSYL	DOUBLE SOLID YELLOW LINE
SSYL	SINGLE SOLID YELLOW LINE
DWL	DOTTED WHITE LINE

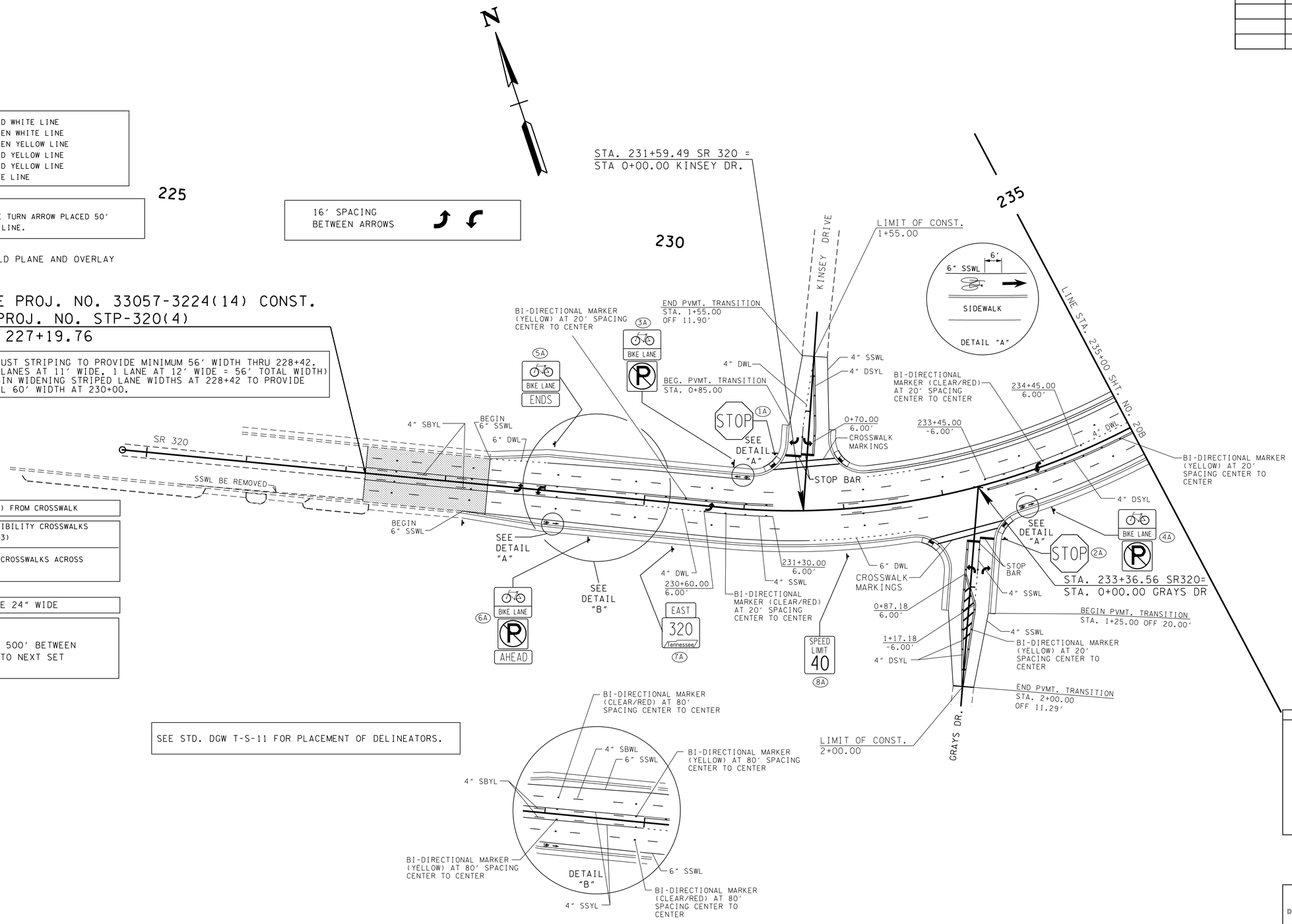
SR 320
TURN LANES TO HAVE TURN ARROW PLACED 50' FROM NEAREST STOP LINE.

COLD PLANE AND OVERLAY

16' SPACING BETWEEN ARROWS

STATE PROJ. NO. 33057-3224(14) CONST.
END PROJ. NO. STP-320(4)
STA. 227+19.76

ADJUST STRIPING TO PROVIDE MINIMUM 56' WIDTH THRU 228+42. (4 LANES AT 11' WIDE, 1 LANE AT 12' WIDE = 56' TOTAL WIDTH) BEGIN WIDENING STRIPED LANE WIDTHS AT 228+42 TO PROVIDE FULL 60' WIDTH AT 230+00.



PLACE STOP BAR 4' (MIN.) FROM CROSSWALK

PLACE 10' WIDE HIGH VISIBILITY CROSSWALKS ACROSS SR 320 (716-02.03)

PLACE 6' WIDE STANDARD CROSSWALKS ACROSS SIDE ROADS (716-02.09)

STOP LINES SHOULD BE 24" WIDE

MIDDLE TURN LANE
MAXIMUM SPACING OF 500' BETWEEN ONE SET OF ARROWS TO NEXT SET OF ARROWS

SEE STD. DGW T-S-11 FOR PLACEMENT OF DELINEATORS.

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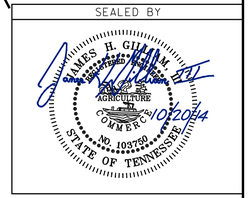

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGN & PAVEMENT MARKINGS

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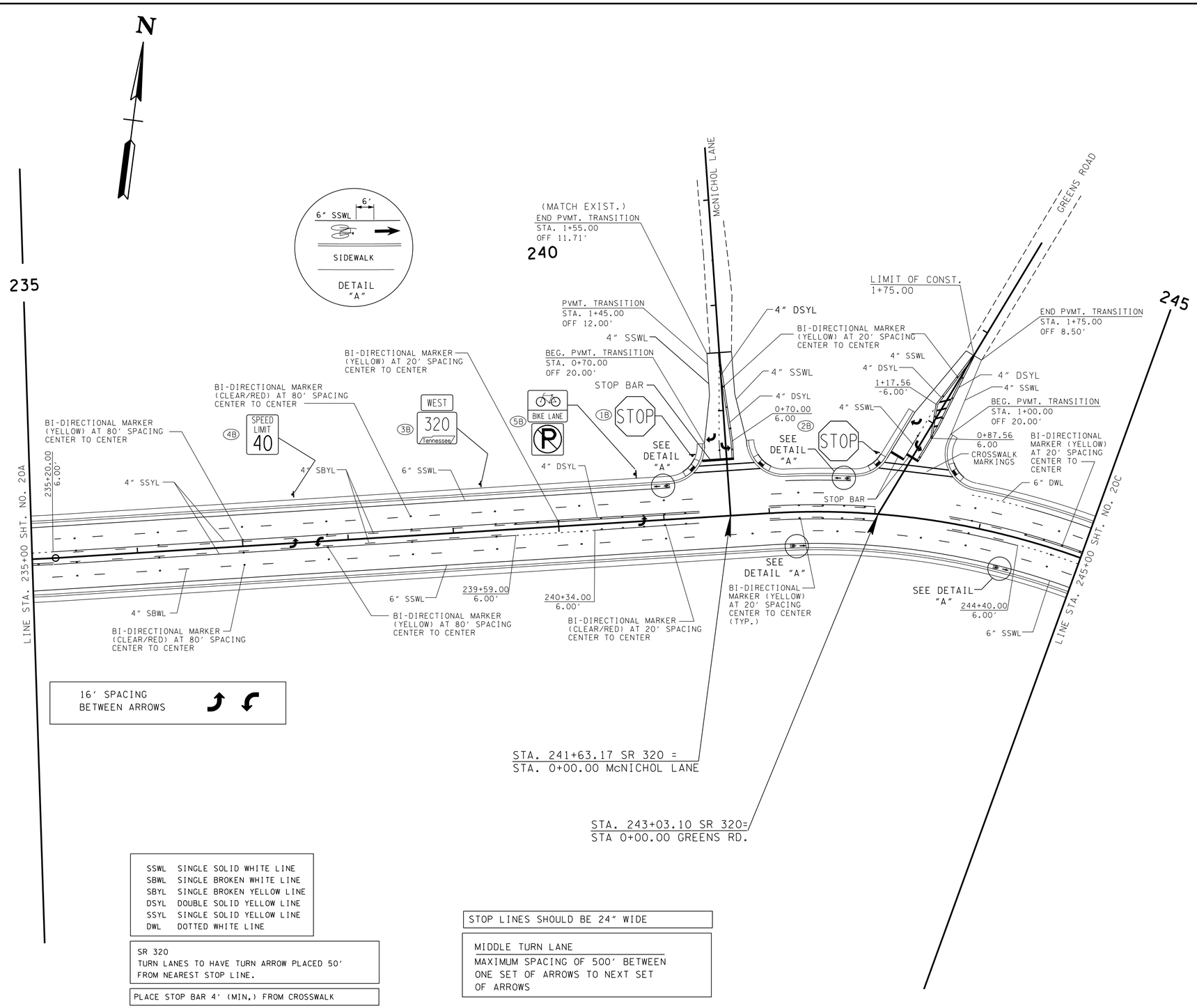
TENNESSEE D.O.T.	DESIGN DIVISION	FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	20B



SSWL	SINGLE SOLID WHITE LINE
SBWL	SINGLE BROKEN WHITE LINE
SBYL	SINGLE BROKEN YELLOW LINE
DSYL	DOUBLE SOLID YELLOW LINE
SSYL	SINGLE SOLID YELLOW LINE
DWL	DOTTED WHITE LINE

SR 320
TURN LANES TO HAVE TURN ARROW PLACED 50' FROM NEAREST STOP LINE.

PLACE STOP BAR 4' (MIN,) FROM CROSSWALK

PLACE 10' WIDE HIGH VISIBILITY CROSSWALKS ACROSS SR 320 (716-02.03)

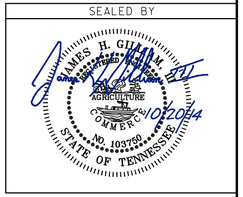
PLACE 6' WIDE STANDARD CROSSWALKS ACROSS SIDE ROADS (716-02.09)

SEE STD. DGW T-S-11 FOR PLACEMENT OF DELINEATORS.

STOP LINES SHOULD BE 24" WIDE

MIDDLE TURN LANE
MAXIMUM SPACING OF 500' BETWEEN ONE SET OF ARROWS TO NEXT SET OF ARROWS

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGN & PAVEMENT MARKINGS

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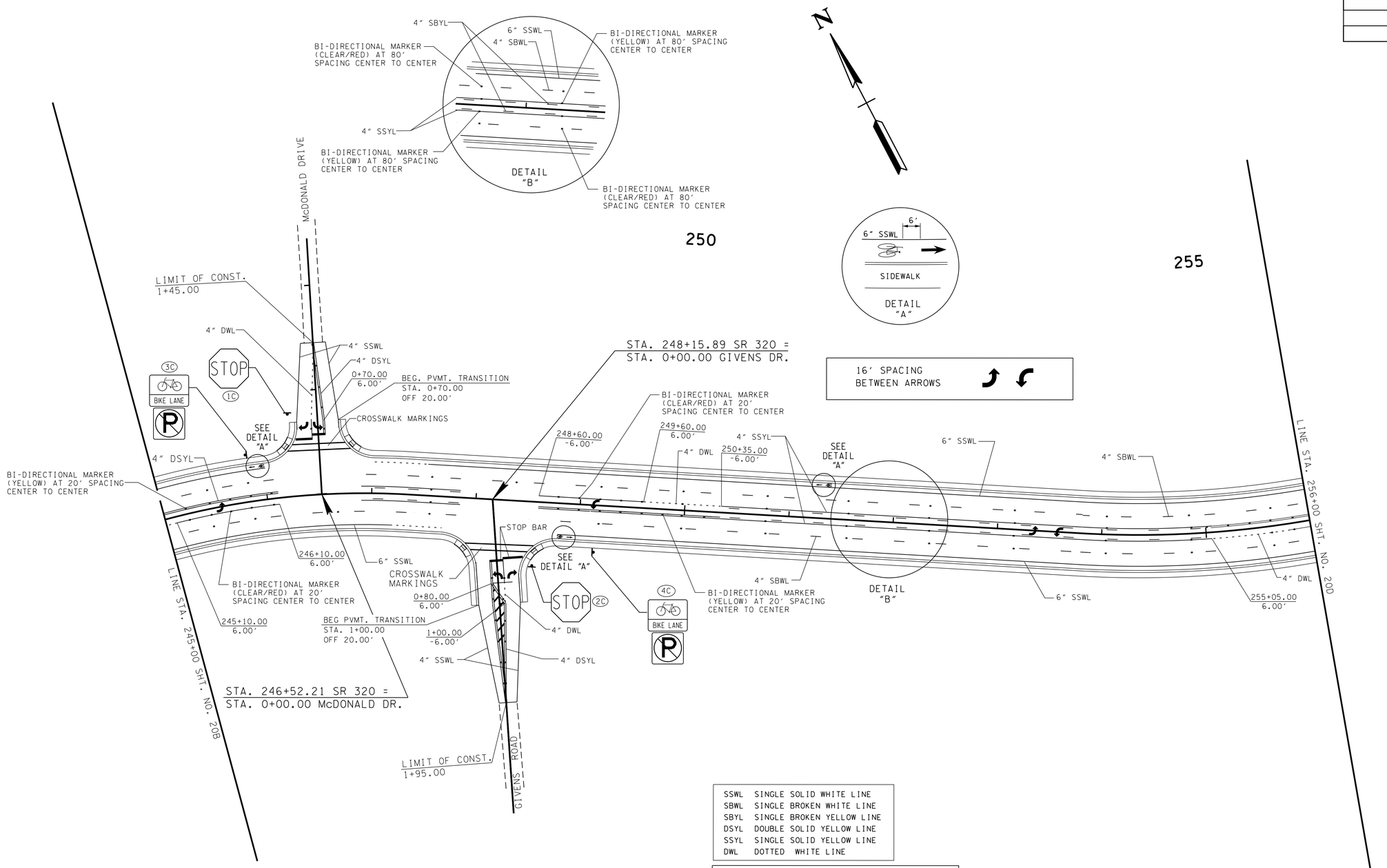
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	20C

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.



SSWL	SINGLE SOLID WHITE LINE
SBWL	SINGLE BROKEN WHITE LINE
SBYL	SINGLE BROKEN YELLOW LINE
DSYL	DOUBLE SOLID YELLOW LINE
SSYL	SINGLE SOLID YELLOW LINE
DWL	DOTTED WHITE LINE

SR 320
TURN LANES TO HAVE TURN ARROW PLACED 50' FROM NEAREST STOP LINE.

STOP LINES SHOULD BE 24" WIDE

MIDDLE TURN LANE
MAXIMUM SPACING OF 500' BETWEEN ONE SET OF ARROWS TO NEXT SET OF ARROWS

PLACE STOP BAR 4' (MIN.) FROM CROSSWALK

PLACE 6' WIDE STANDARD CROSSWALKS ACROSS SIDE ROADS (716-02.09)

SEE STD. DGW T-S-11 FOR PLACEMENT OF DELINEATORS.

SEALED BY

JAMES H. GILLIAM, III
REGISTERED ENGINEER
AGRICULTURE COMMERCE
NO. 103760
STATE OF TENNESSEE
10/20/14

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGN & PAVEMENT MARKINGS

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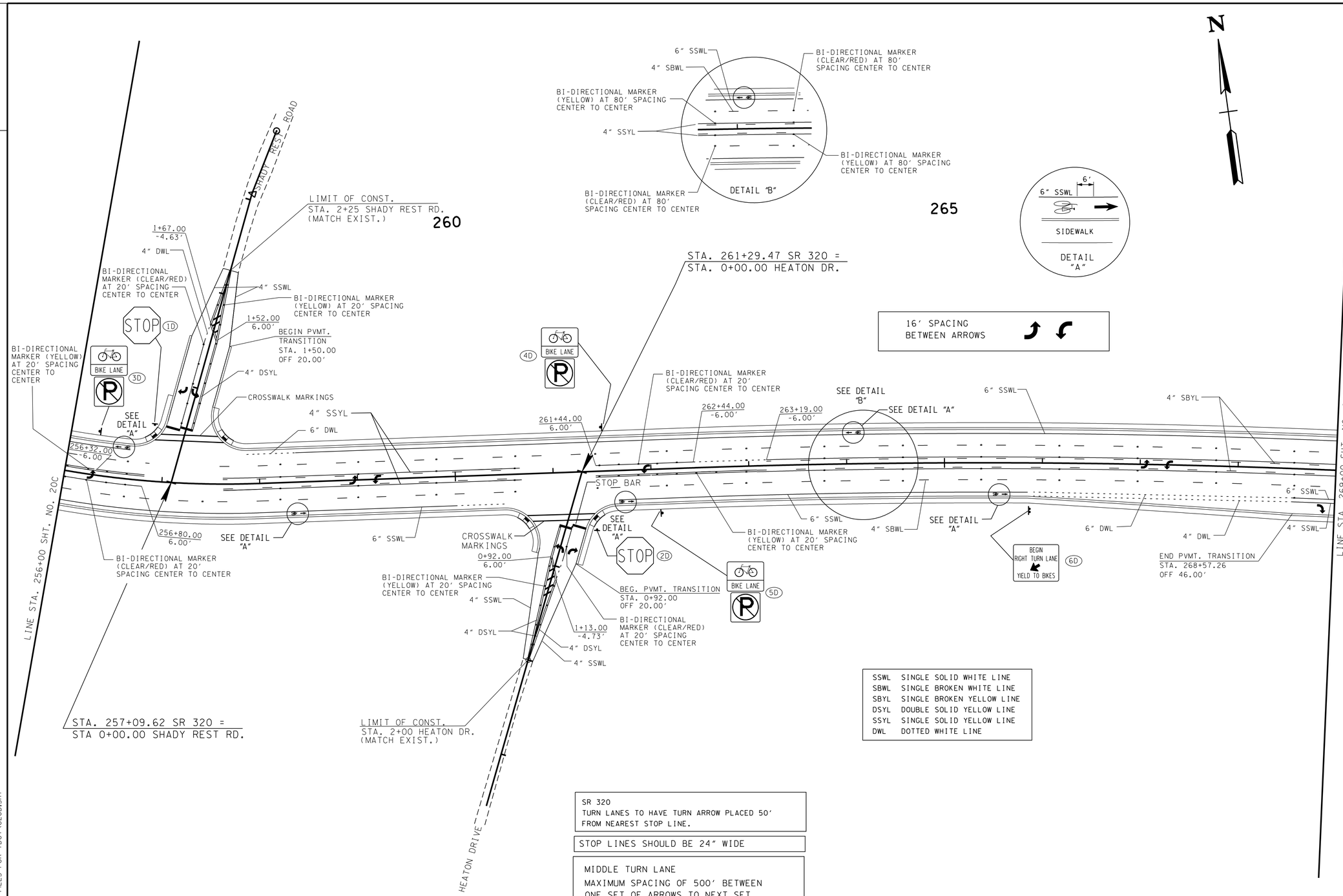
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	20D



SSWL	SINGLE SOLID WHITE LINE
SBWL	SINGLE BROKEN WHITE LINE
SBYL	SINGLE BROKEN YELLOW LINE
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SSYL	SINGLE SOLID YELLOW LINE
DWL	DOTTED WHITE LINE

SR 320
TURN LANES TO HAVE TURN ARROW PLACED 50' FROM NEAREST STOP LINE.

STOP LINES SHOULD BE 24" WIDE

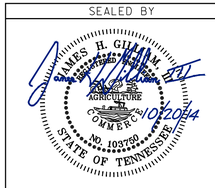
MIDDLE TURN LANE
MAXIMUM SPACING OF 500' BETWEEN ONE SET OF ARROWS TO NEXT SET OF ARROWS

PLACE STOP BAR 4' (MIN.) FROM CROSSWALK

PLACE 10' WIDE HIGH VISIBILITY CROSSWALKS ACROSS SR 320 (716-02.03)

PLACE 6' WIDE STANDARD CROSSWALKS ACROSS SIDE ROADS (716-02.09)

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGN & PAVEMENT MARKINGS

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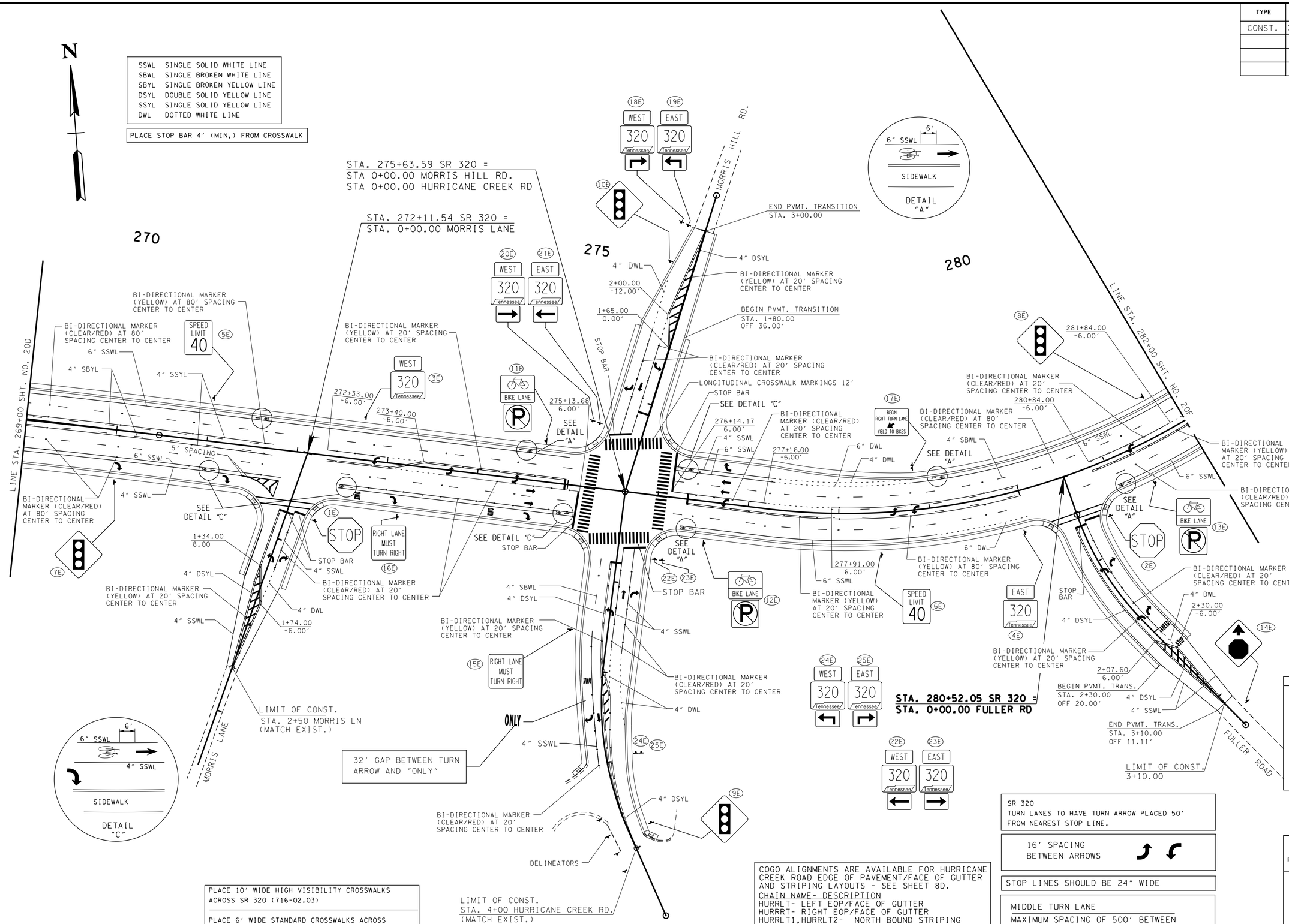
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	20E

SSWL	SINGLE SOLID WHITE LINE
SBWL	SINGLE BROKEN WHITE LINE
SBYL	SINGLE BROKEN YELLOW LINE
DSYL	DOUBLE SOLID YELLOW LINE
SSYL	SINGLE SOLID YELLOW LINE
DWL	DOTTED WHITE LINE

PLACE STOP BAR 4' (MIN.) FROM CROSSWALK



PLACE 10' WIDE HIGH VISIBILITY CROSSWALKS ACROSS SR 320 (716-02.03)

PLACE 6' WIDE STANDARD CROSSWALKS ACROSS SIDE ROADS (716-02.09)

COGO ALIGNMENTS ARE AVAILABLE FOR HURRICANE CREEK ROAD EDGE OF PAVEMENT/FACE OF GUTTER AND STRIPING LAYOUTS - SEE SHEET 8D.

CHAIN NAME- DESCRIPTION
HURRLT- LEFT EOP/FACE OF GUTTER
HURRRT- RIGHT EOP/FACE OF GUTTER
HURRLT1,HURRLT2- NORTH BOUND STRIPING
HURRRT1,HURRRT2- SOUTH BOUND STRIPING
HURRBT- BAY TAPER

SR 320
TURN LANES TO HAVE TURN ARROW PLACED 50' FROM NEAREST STOP LINE.

16' SPACING BETWEEN ARROWS

STOP LINES SHOULD BE 24" WIDE

MIDDLE TURN LANE
MAXIMUM SPACING OF 500' BETWEEN ONE SET OF ARROWS TO NEXT SET OF ARROWS

SEALED BY

JAMES H. GILLIAM, JR.
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 103790
STATE OF TENNESSEE
10/2014

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGN & PAVEMENT MARKINGS

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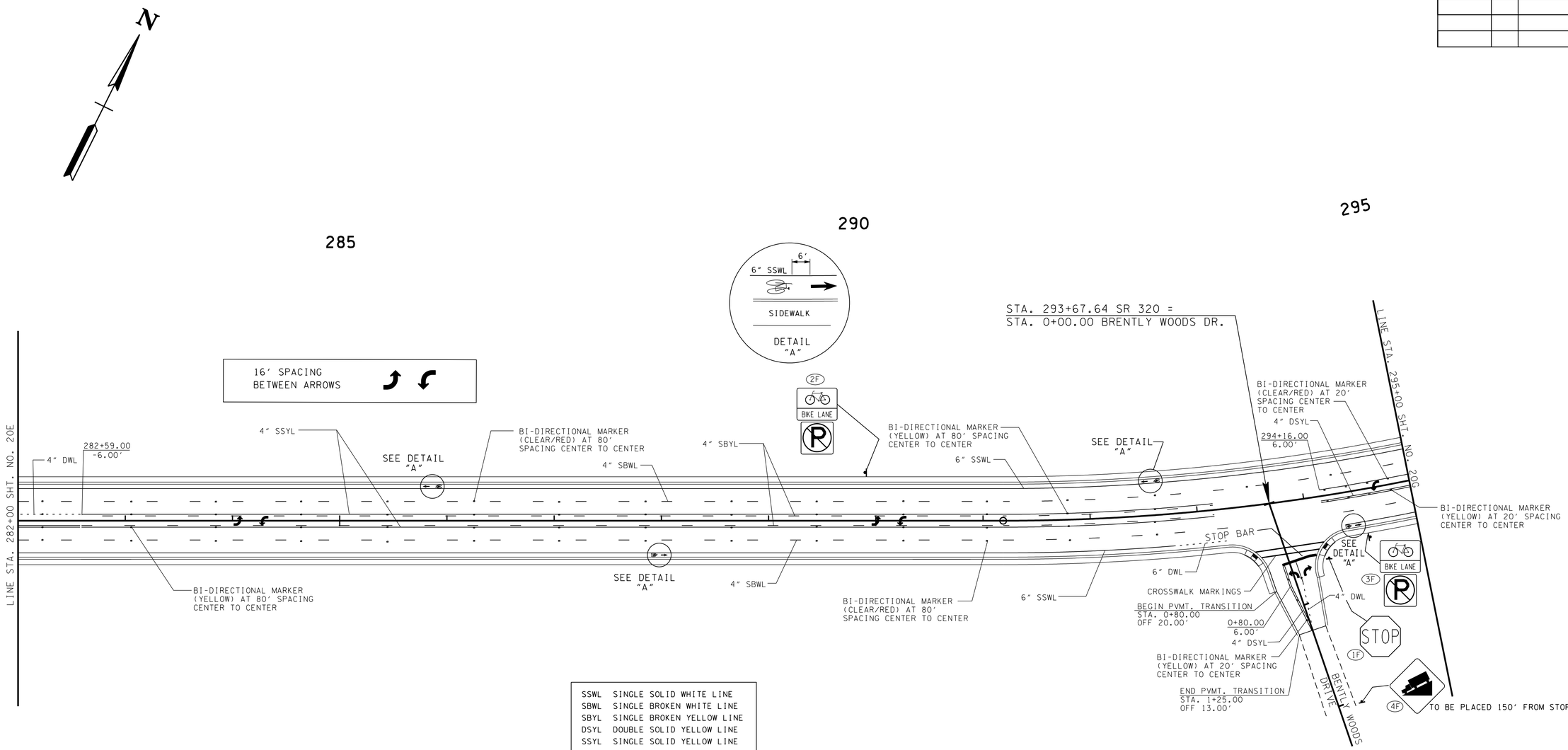
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	20F

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.



SSWL	SINGLE SOLID WHITE LINE
SBWL	SINGLE BROKEN WHITE LINE
SBYL	SINGLE BROKEN YELLOW LINE
DSYL	DOUBLE SOLID YELLOW LINE
SSYL	SINGLE SOLID YELLOW LINE
DWL	DOTTED WHITE LINE

SR 320
TURN LANES TO HAVE TURN ARROW PLACED 50' FROM NEAREST STOP LINE.

PLACE STOP BAR 4' (MIN.) FROM CROSSWALK

PLACE 10' WIDE HIGH VISIBILITY CROSSWALKS ACROSS SR 320 (716-02.03)

PLACE 6' WIDE STANDARD CROSSWALKS ACROSS SIDE ROADS (716-02.09)

STOP LINES SHOULD BE 24" WIDE

MIDDLE TURN LANE

MAXIMUM SPACING OF 500' BETWEEN ONE SET OF ARROWS TO NEXT SET OF ARROWS

SEALED BY

JAMES H. GILLIAM JR.
REGISTERED ENGINEER
No. 103720
AGRICULTURE COMMERCE
STATE OF TENNESSEE
10/20/14

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGN & PAVEMENT MARKINGS

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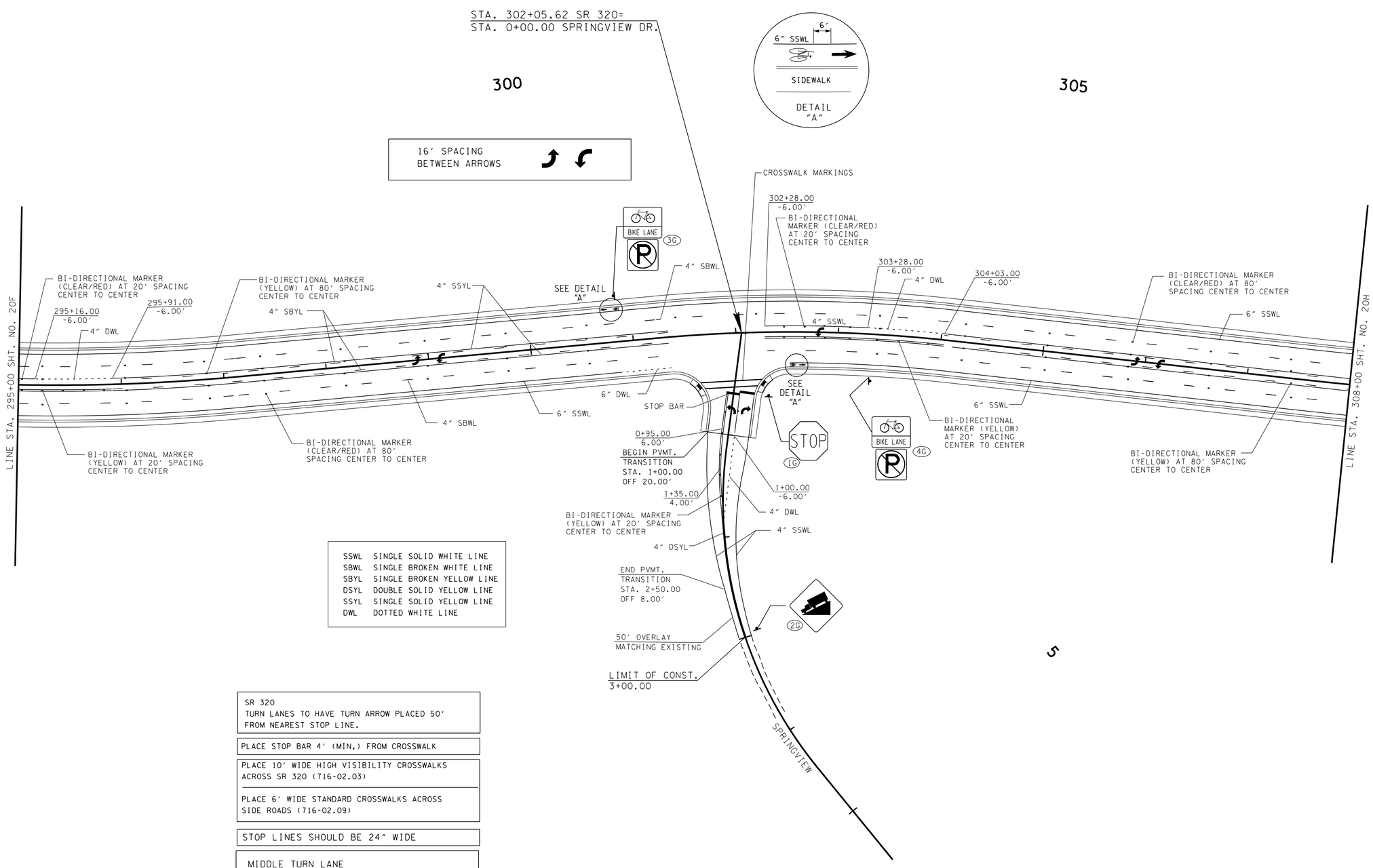
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	20G

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.



SSWL	SINGLE SOLID WHITE LINE
SBWL	SINGLE BROKEN WHITE LINE
SBYL	SINGLE BROKEN YELLOW LINE
DSYL	DOUBLE SOLID YELLOW LINE
SSYL	SINGLE SOLID YELLOW LINE
DWL	DOTTED WHITE LINE

SR 320
TURN LANES TO HAVE TURN ARROW PLACED 50' FROM NEAREST STOP LINE.

PLACE STOP BAR 4' (MIN.) FROM CROSSWALK

PLACE 10' WIDE HIGH VISIBILITY CROSSWALKS ACROSS SR 320 (716-02.03)

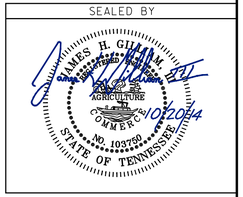
PLACE 6' WIDE STANDARD CROSSWALKS ACROSS SIDE ROADS (716-02.09)

STOP LINES SHOULD BE 24" WIDE

MIDDLE TURN LANE
MAXIMUM SPACING OF 500' BETWEEN ONE SET OF ARROWS TO NEXT SET OF ARROWS

5

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGN & PAVEMENT MARKINGS

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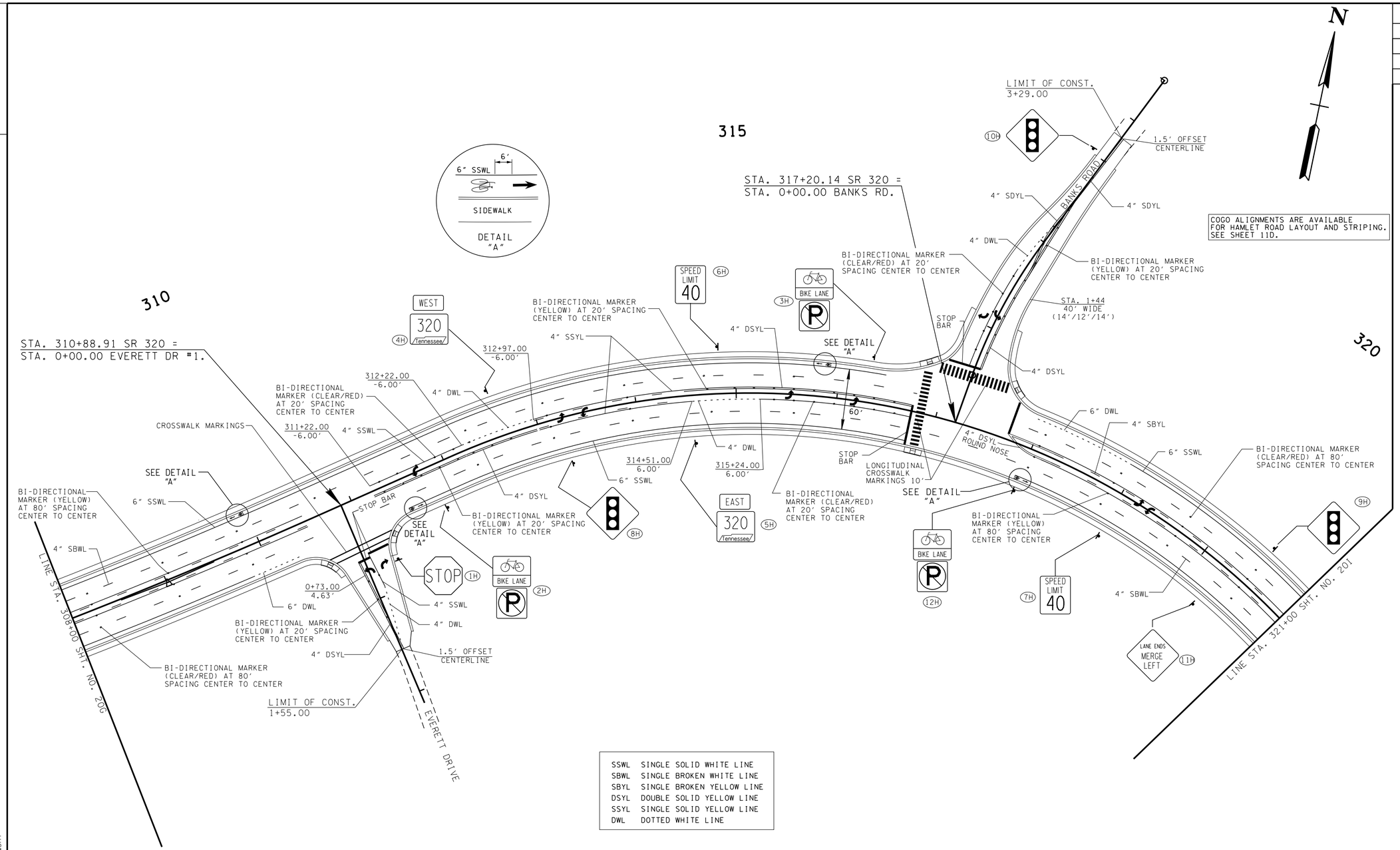
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	20H



COGO ALIGNMENTS ARE AVAILABLE FOR HAMLET ROAD LAYOUT AND STRIPING. SEE SHEET 11D.

SSWL	SINGLE SOLID WHITE LINE
SBWL	SINGLE BROKEN WHITE LINE
SBYL	SINGLE BROKEN YELLOW LINE
DSYL	DOUBLE SOLID YELLOW LINE
SSYL	SINGLE SOLID YELLOW LINE
DWL	DOTTED WHITE LINE

16' SPACING BETWEEN ARROWS

PLACE STOP BAR 4' (MIN.) FROM CROSSWALK

PLACE 10' WIDE HIGH VISIBILITY CROSSWALKS ACROSS SR 320 (716-02.03)

PLACE 6' WIDE STANDARD CROSSWALKS ACROSS SIDE ROADS (716-02.09)

STOP LINES SHOULD BE 24" WIDE

SR 320
TURN LANES TO HAVE TURN ARROW PLACED 50' FROM NEAREST STOP LINE.

MIDDLE TURN LANE
MAXIMUM SPACING OF 500' BETWEEN ONE SET OF ARROWS TO NEXT SET OF ARROWS

SEALED BY

JAMES H. GILLIAM III
AGRICULTURE COMMERCE
NO. 103705
STATE OF TENNESSEE
10/20/14

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGN & PAVEMENT MARKINGS

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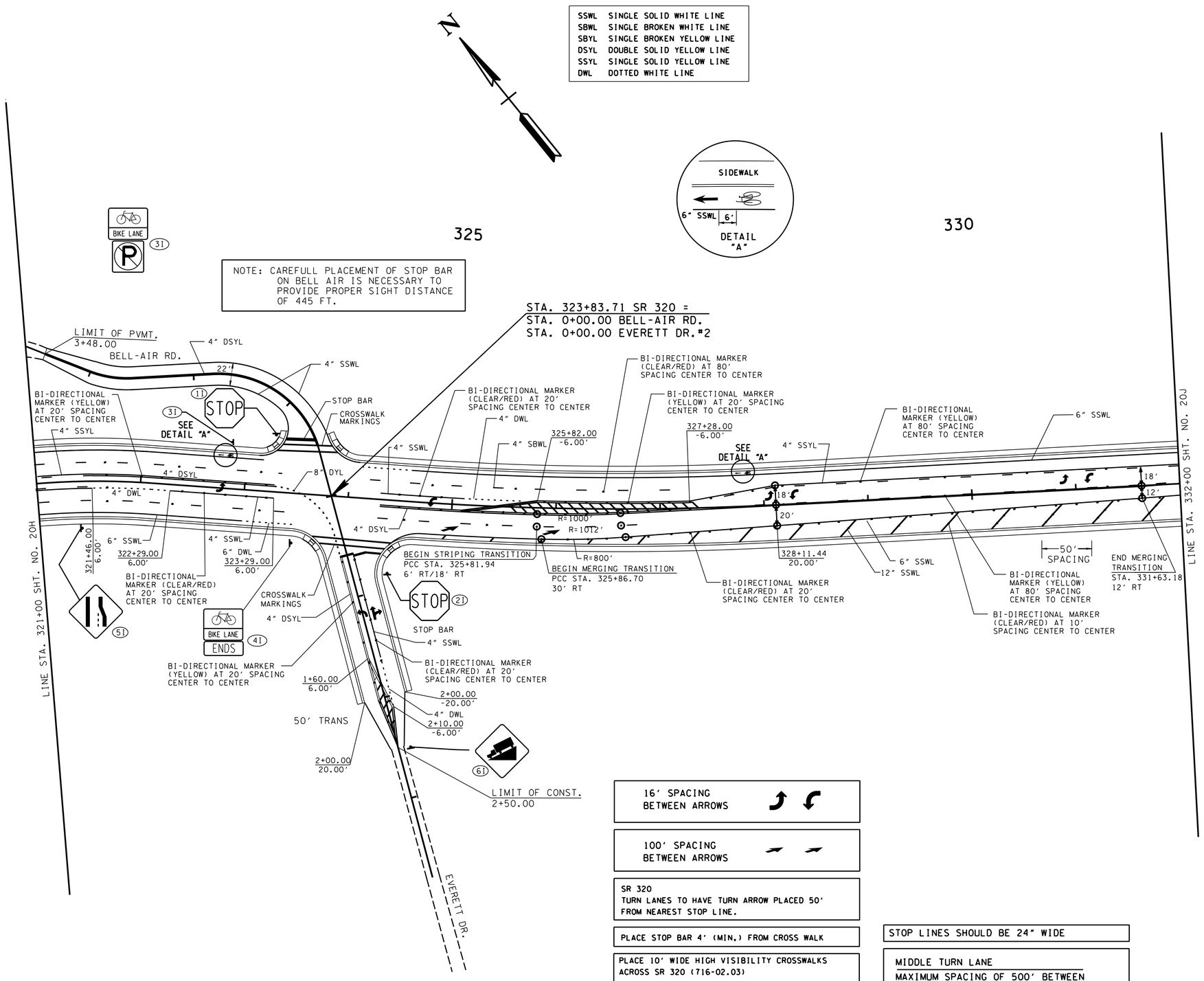
TENNESSEE D.O.T.	DESIGN DIVISION	FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	20I

SSWL	SINGLE SOLID WHITE LINE
SBWL	SINGLE BROKEN WHITE LINE
SBYL	SINGLE BROKEN YELLOW LINE
DSYL	DOUBLE SOLID YELLOW LINE
SSYL	SINGLE SOLID YELLOW LINE
DWL	DOTTED WHITE LINE



16' SPACING BETWEEN ARROWS	
100' SPACING BETWEEN ARROWS	

SR 320
TURN LANES TO HAVE TURN ARROW PLACED 50' FROM NEAREST STOP LINE.

PLACE STOP BAR 4' (MIN.) FROM CROSS WALK

PLACE 10' WIDE HIGH VISIBILITY CROSSWALKS ACROSS SR 320 (716-02.03)

PLACE 6' WIDE STANDARD CROSSWALKS ACROSS SIDE ROADS (716-02.09)

STOP LINES SHOULD BE 24" WIDE

MIDDLE TURN LANE
MAXIMUM SPACING OF 500' BETWEEN ONE SET OF ARROWS TO NEXT SET OF ARROWS

SEALED BY

JAMES H. GILLIAM, III
REGISTERED ENGINEER
AGRICULTURE COMMERCE
NO. 103790
STATE OF TENNESSEE
10/20/2014

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGN & PAVEMENT MARKINGS

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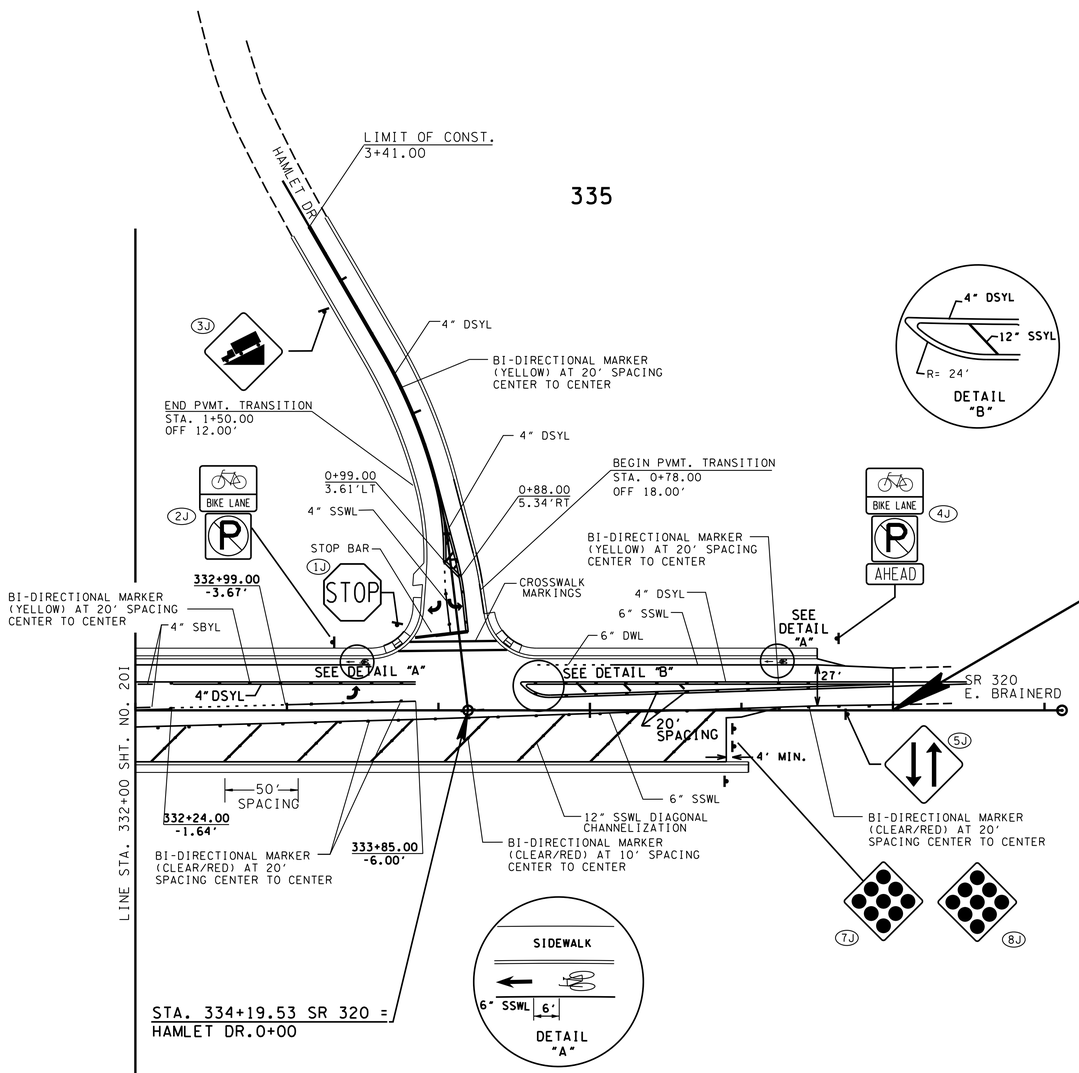
TENNESSEE D.O.T.	DESIGN DIVISION	FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	20J



STATE PROJ. NO. 33057-3224(14) CONST.
END PROJ. NO. STP-320(4)
STA. 337+00.00

SSWL	SINGLE SOLID WHITE LINE
SBWL	SINGLE BROKEN WHITE LINE
SBYL	SINGLE BROKEN YELLOW LINE
DSYL	DOUBLE SOLID YELLOW LINE
SSYL	SINGLE SOLID YELLOW LINE
DWL	DOTTED WHITE LINE

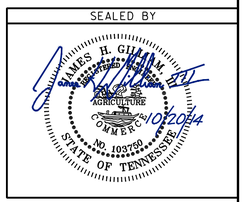
STOP LINES SHOULD BE 24" WIDE

PLACE STOP BAR 4' (MIN.) FROM CROSSWALK

PLACE 6' WIDE STANDARD CROSSWALKS ACROSS SIDE ROADS (716-02.09)

SR 320
TURN LANES TO HAVE TURN ARROW PLACED 50' FROM NEAREST STOP LINE.

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGN & PAVEMENT MARKINGS

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

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 LENGTH	SIZE HEIGHT	SIZE RADIUS	SIZE BORDER WIDTH	COPY CAPITAL	COPY LOWER CASE	COPY NUMERAL	COPY SERIES	SHIELD	ARROW	SIGN FACE COPY	SIGN FACE BACKGROUND	SIGN FACE MATERIAL	STEEL DESIGN (BREAK-AWAY) SUPPORT TYPE	SUPPORT LENGTH	FOOTING	CONC. CU. YD.	REIN STEEL LBS.	MINIMUM VERTICAL CLEARANCE	REMARKS
7J, 8J	OM4-1	20J	18"	18"									RED (REF.)	RED (REF.)	0.080" SHEET ALUMINUM	U3 2.50 LBS/FT	10'-6"				5'-0"	MINIMUM OFFSET OF 4' REQUIRED FROM EDGE OF PAVEMENT
1A, 2A	STOP R1-1	20A	36"	36"									WHITE (REF.)	RED (REF.)	0.080" SHEET ALUMINUM	U6 3.00 LBS/FT	13'-6"				7'-0"	
1B, 2B		20B																				
1C, 2C		20C																				
1D, 2D		20D																				
1E, 2E		20E																				
1F		20F																				
1G		20G																				
1H		20H																				
1I, 2I		20I																				
1J		20J																				
8A, 4B	SPEED LIMIT 40 R2-1	20A, 20B	24"	30"									BLACK	WHITE (REF.)	0.080" SHEET ALUMINUM	U6 3.00 LBS/FT	13'-6"				7'-0"	
5E, 6E		20E																				
6H, 7H		20H																				
15E, 16E	RIGHT LANE MUST TURN RIGHT R3-7R	20E	30"	30"									BLACK	WHITE (REF.)	0.080" SHEET ALUMINUM	U6 3.00 LBS/FT	13'-6"				7'-0"	
3A, 4A	BIKE LANE R3-17 R8-3	20A	30"	24"									BLACK	WHITE (REF.)	0.080" SHEET ALUMINUM	U6 3.00 LBS/FT	15'-0"				7'-0"	
5B, 3C		20B																				
4C		20C	24"	30"									BLACK RED									
3D, 4D		20D																				

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	20K

• NOTE

1. 2½" DIA. SUPPORT (ITEM NO. 713-11.03) TO BE AS SPECIFIED ON THE "QUALIFIED PRODUCT LISTS", LIST 33. "PDZ-LOC SLIPBASE SYSTEM", NORTHWEST PIPE CO., TRAFFIC SYSTEMS OR EQUIVALENT. ITEM TO INCLUDE CONCRETE FOOTING AND ALL HARDWARE TO ATTACH SIGNS TO POST.

2. R5-1 SIGNS TO BE MOUNTED AT AN ANGLE AS DESCRIBED IN THE M.U.T.C.D. SECTION 2E-50 "WRONG WAY CONTROL AT INTERCHANGE RAMPS" OR AS DIRECTED BY THE ENGINEER.

U-POST SUBSTITUTION TABLE

BID ITEM 713-11.01	SUBSTITUTION ALLOWED
2#/FT. U1	2#/FT. MU1 OR 2#/FT. R1
2.5#/FT. U3	2.5#/FT. MU3 OR 3#/FT. R2*
3#/FT. U6	
4#/FT. U7	NO SUBSTITUTES

* PAID AT A RATE OF 2.5#/FT.

SEALED BY

JAMES H. GILLIAM III
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 103750
STATE OF TENNESSEE
10/2014

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGN SCHEDULE

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

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 LENGTH	SIZE HEIGHT	SIZE RADIUS	SIZE BORDER WIDTH	COPY CAPITAL	COPY LOWER CASE	COPY NUMERAL	COPY SERIES	SHIELD	ARROW	SIGN FACE COPY	SIGN FACE BACKGROUND	SIGN FACE MATERIAL	STEEL DESIGN (BREAK-AWAY) SUPPORT TYPE	SUPPORT LENGTH	FOOTING	CONC. CU. YD.	REIN STEEL LBS.	MINIMUM VERTICAL CLEARANCE	REMARKS
5D	BIKE LANE R3-17 R8-3	20D	30" 24"	24" 30"									BLACK BLACK RED	WHITE (REF.)	0.080" SHEET ALUMINUM	U6 3.00 LBS/FT	15'-0"				7'-0"	
11E		20E																				
12E																						
13E																						
2F		20F																				
3F																						
3G		20G																				
4G																						
2H		20H																				
3H																						
12H																						
3I		20I																				
2J		20J																				
6A	BIKE LANE R3-17	20A	30"	24"									BLACK	WHITE (REF.)	0.080" SHEET ALUMINUM	U6 3.00 LBS/FT	15'-0"				6'-0"	
4J	R8-3 AHEAD R3-17A	20J	24" 30"	30" 12"									BLACK RED BLACK									
5A	BIKE LANE R3-17	20A	30"	24"									BLACK	WHITE (REF.)	0.080" SHEET ALUMINUM	U6 3.00 LBS/FT	12'-6"				6'-0"	
4I	ENDS R3-17B	20I	30"	12"																		
6D	BEGIN RIGHT TURN LANE YIELD TO BIKES R4-4	20D	36"	30"									BLACK	WHITE (REF.)	0.100" SHEET ALUMINUM	P8 2.164 LBS/FT	12'-6"				7'-0"	
17E		20E																				
18E	WEST 320 Tennessee M3-4 TN-6D MS-1R	20E	24" 30" 21"	12" 24" 15"									BLACK	WHITE (REF.)	0.080" SHEET ALUMINUM	U6 3.00 LBS/FT	13'-9"				6'-0"	
19E	EAST 320 Tennessee M3-2 TN-6D MS-1L	20E	24" 30" 21"	12" 24" 15"									BLACK	WHITE (REF.)	0.080" SHEET ALUMINUM	U6 3.00 LBS/FT	13'-9"				6'-0"	
20E	WEST 320 Tennessee M3-4 TN-6D M6-1R	20E	24" 30" 21"	12" 24" 15"									BLACK	WHITE (REF.)	0.080" SHEET ALUMINUM	U6 3.00 LBS/FT	13'-9"				6'-0"	

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	20L

• NOTE

1 2½" DIA. SUPPORT (ITEM NO. 713-11.03) TO BE AS SPECIFIED ON THE "QUALIFIED PRODUCT LISTS", LIST 33. "PDZ-LOC SLIPBASE SYSTEM", NORTHWEST PIPE CO., TRAFFIC SYSTEMS OR EQUIVALENT. ITEM TO INCLUDE CONCRETE FOOTING AND ALL HARDWARE TO ATTACH SIGNS TO POST.

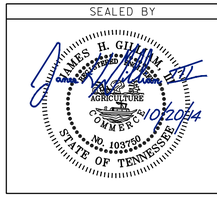
2 R5-1 SIGNS TO BE MOUNTED AT AN ANGLE AS DESCRIBED IN THE M.U.T.C.D. SECTION 2E-50 "WRONG WAY CONTROL AT INTERCHANGE RAMPS" OR AS DIRECTED BY THE ENGINEER.

U-POST SUBSTITUTION TABLE

BID ITEM 713-11.01	SUBSTITUTION ALLOWED
2#/FT. U1	2#/FT. MU1 OR 2#/FT. R1
2.5#/FT. U3	2.5#/FT. MU3 OR 3#/FT. R2•
3#/FT. U6	
4#/FT. U7	NO SUBSTITUTES

• PAID AT A RATE OF 2.5#/FT.

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGN SCHEDULE

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	20M

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.		
21E	EAST 320 Tennessee ← M3-2 TN-6D M6-1L	20E	24" 30" 21"	12" 24" 15"									BLACK	WHITE (REF.)	0.080" SHEET ALUMINUM	U6 3.00 LBS/FT	13'-9"				6'-0"	
22E	WEST 320 Tennessee ← M3-4 TN-6D M6-1L	20E	24" 30" 21"	12" 24" 15"									BLACK	WHITE (REF.)	0.080" SHEET ALUMINUM	U6 3.00 LBS/FT	13'-9"				6'-0"	
23E	EAST 320 Tennessee → M3-2 TN-6D M6-1R	20E	24" 30" 21"	12" 24" 15"									BLACK	WHITE (REF.)	0.080" SHEET ALUMINUM	U6 3.00 LBS/FT	13'-9"				6'-0"	
24E	WEST 320 Tennessee ↰ M3-4 TN-6D MS-1L	20E	24" 30" 21"	12" 24" 15"									BLACK	WHITE (REF.)	0.080" SHEET ALUMINUM	U6 3.00 LBS/FT	13'-9"				6'-0"	
25E	EAST 320 Tennessee ↱ M3-2 TN-6D MS-1R	20E	24" 30" 21"	12" 24" 15"									BLACK	WHITE (REF.)	0.080" SHEET ALUMINUM	U6 3.00 LBS/FT	13'-9"				6'-0"	
7A 4E 5H	EAST 320 Tennessee M3-2 TN-6D	20A 20E 20H	24" 30"	12" 24"									BLACK	WHITE (REF.)	0.080" SHEET ALUMINUM	U6 3.00 LBS/FT	13'-6"				7'-0"	
3B 3E 4H	WEST 320 Tennessee M3-4 TN-6D	20B 20E 20H	24" 30"	12" 24"									BLACK	WHITE (REF.)	0.080" SHEET ALUMINUM	U6 3.00 LBS/FT	13'-6"				7'-0"	
14E	↑ W3-1	20E	30"	30"									BLACK RED (REF.)	YELLOW (REF.)	0.080" SHEET ALUMINUM	U6 3.00 LBS/FT	13'-6"				7'-0"	

• NOTE

1 2½" DIA. SUPPORT (ITEM NO. 713-11.03) TO BE AS SPECIFIED ON THE "QUALIFIED PRODUCT LISTS", LIST 33. "PDZ-LOC SLIPBASE SYSTEM", NORTHWEST PIPE CO., TRAFFIC SYSTEMS OR EQUIVALENT. ITEM TO INCLUDE CONCRETE FOOTING AND ALL HARDWARE TO ATTACH SIGNS TO POST.

2 R5-1 SIGNS TO BE MOUNTED AT AN ANGLE AS DESCRIBED IN THE M.U.T.C.D. SECTION 2E-50 "WRONG WAY CONTROL AT INTERCHANGE RAMPS" OR AS DIRECTED BY THE ENGINEER.

U-POST SUBSTITUTION TABLE

BID ITEM 713-11.01	SUBSTITUTION ALLOWED
2#/FT. U1	2#/FT. MU1 OR 2#/FT. R1
2.5#/FT. U3	2.5#/FT. MU3 OR 3#/FT. R2•
3#/FT. U6	
4#/FT. U7	NO SUBSTITUTES

• PAID AT A RATE OF 2.5#/FT.

SEALED BY

JAMES H. GILLIAM, III
AGRICULTURE COMMERCE
NO. 103790
STATE OF TENNESSEE
10/2014

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGN SCHEDULE

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

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 LENGTH	SIZE HEIGHT	SIZE RADIUS	SIZE BORDER WIDTH	COPY CAPITAL	COPY LOWER CASE	COPY NUMERAL	COPY SERIES	SHIELD	ARROW	SIGN FACE COPY	SIGN FACE BACKGROUND	SIGN FACE MATERIAL	STEEL DESIGN (BREAK-AWAY) SUPPORT TYPE	SUPPORT LENGTH	FOOTING	CONC. CU. YD.	REIN STEEL LBS.	MINIMUM VERTICAL CLEARANCE	REMARKS
7E, 8E, 9E, 10E, 8H, 9H, 10OH	W3-3	20E, 20H	36″	36″									BLACK RED YELLOW GREEN (REF.)	YELLOW (REF.)	0.100″ SHEET ALUMINUM	P8 2.164 LBS/FT	13′-6″				7′-0″	FOR MAJOR INTERSECTION
5I	W4-2R	20I	36″	36″									BLACK	YELLOW (REF.)	0.100″ SHEET ALUMINUM	P8 2.164 LBS/FT	13′-6″				7′-0″	
5J	W6-3	20J	36″	36″									BLACK	YELLOW (REF.)	0.100″ SHEET ALUMINUM	P8 2.164 LBS/FT	13′-6″				7′-0″	TO BE PLACED AT END OF PROJECT
4F, 2G, 6I, 3J	W7-1	20F, 20G, 20I, 20J	30″	30″									BLACK	YELLOW (REF.)	0.080″ SHEET ALUMINUM	U6 3.00 LBS/FT	13′-0″				7′-0″	TO BE PLACED ON SIDE ROADS WITH STEEP DOWN GRADES
11H	LANE ENDS MERGE LEFT W9-2L	20H	30″	30″									BLACK	YELLOW (REF.)	0.080″ SHEET ALUMINUM	U6 3.00 LBS/FT	13′-0″				7′-0″	
1S, 2S	Banks Rd D3-1	21B	42″	18″			8″ 8″	6″ 6″		"D"			WHITE (REF.)	GREEN (REF.)	0.100″ SHEET ALUMINUM							ALL MATERIAL & WORK TO BE PAID UNDER ITEM 713-15.40 NOTE: ALL LETTER SPACING TO BE 20%. SEE SIGNAL SHEETS FOR LOCATION.
3S, 4S	E Brainerd Rd D3-1	21, 21B	60″	18″			8″ 8″	6″ 6″		"D"			WHITE (REF.)	GREEN (REF.)	0.100″ SHEET ALUMINUM							
2S, 1SA	Hurricane Cr Rd → ← Hurricane Cr Rd D3-1 (MOD.)	21	84″	18″			8″ 8″	6″ 6″		"D"		TYPE "A"	WHITE (REF.)	GREEN (REF.)	0.100″ SHEET ALUMINUM							
1S, 2SA	Morris Hill Rd → ← Morris Hill Rd D3-1 (MOD.)	21	66″	18″			8″ 8″	6″ 6″		"D"		TYPE "A"	WHITE (REF.)	GREEN (REF.)	0.100″ SHEET ALUMINUM							

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	20N

• NOTE

① 2½″ DIA. SUPPORT (ITEM NO. 713-11.03) TO BE AS SPECIFIED ON THE "QUALIFIED PRODUCT LISTS", LIST 33. "PDZ-LOC SLIPBASE SYSTEM", NORTHWEST PIPE CO., TRAFFIC SYSTEMS OR EQUIVALENT. ITEM TO INCLUDE CONCRETE FOOTING AND ALL HARDWARE TO ATTACH SIGNS TO POST.

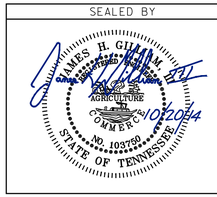
② R5-1 SIGNS TO BE MOUNTED AT AN ANGLE AS DESCRIBED IN THE M.U.T.C.D. SECTION 2E-50 "WRONG WAY CONTROL AT INTERCHANGE RAMPS" OR AS DIRECTED BY THE ENGINEER.

U-POST SUBSTITUTION TABLE

BID ITEM 713-11.01	SUBSTITUTION ALLOWED
2#/FT. U1	2#/FT. MU1 OR 2#/FT. R1
2.5#/FT. U3	2.5#/FT. MU3 OR 3#/FT. R2•
3#/FT. U6	
4#/FT. U7	NO SUBSTITUTES

• PAID AT A RATE OF 2.5#/FT.

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGN SCHEDULE

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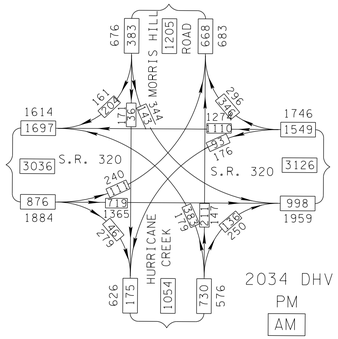
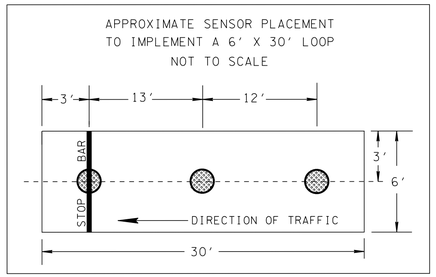
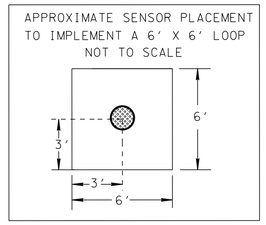
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	21

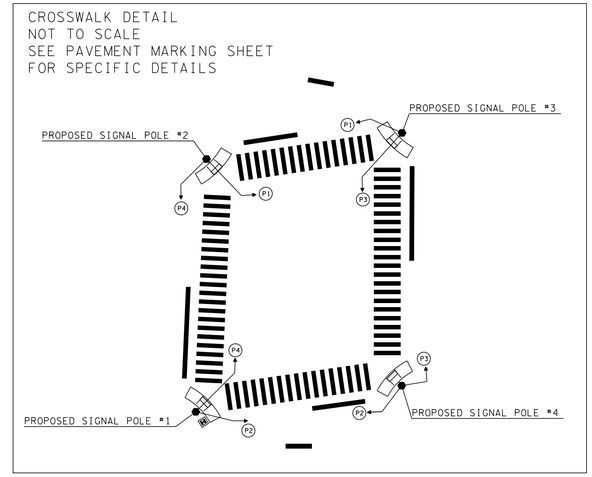


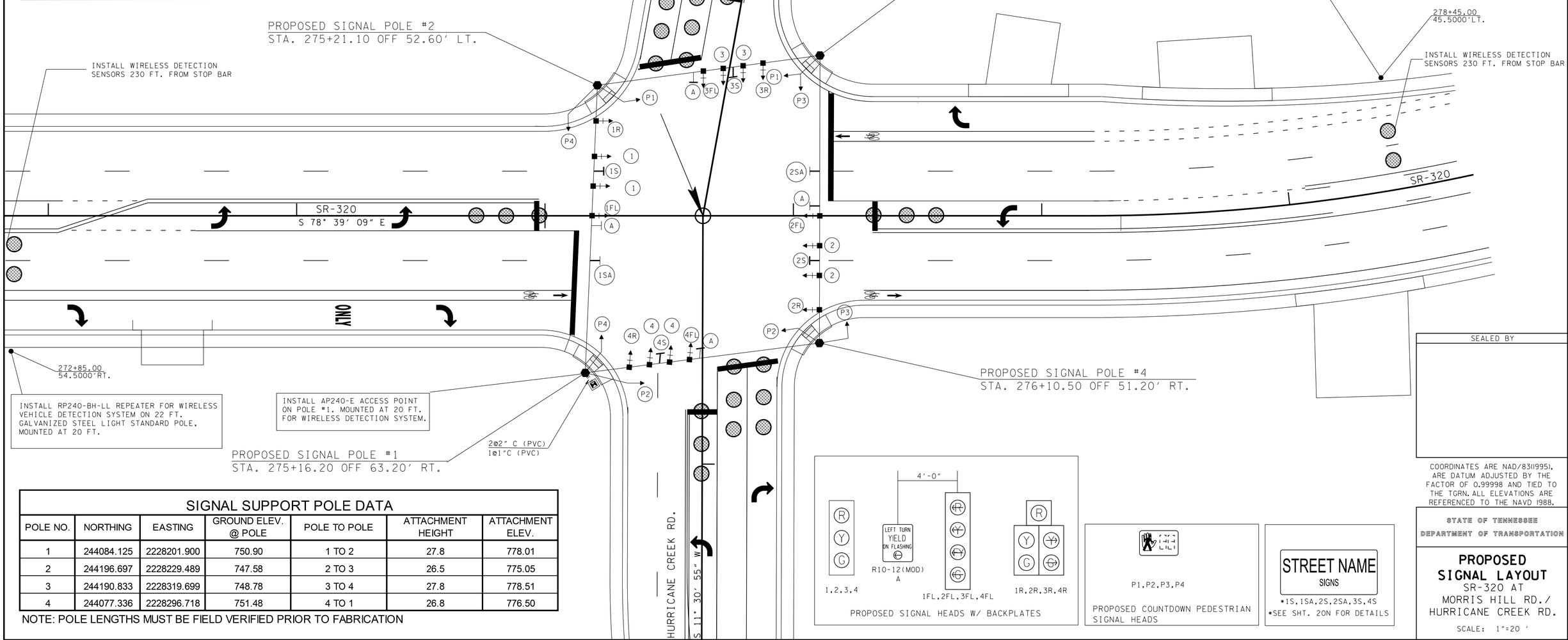
STA. 275+63.59 SR 320 =
STA 0+00.00 MORRIS HILL RD.
STA 0+00.00 HURRICANE CREEK RD

N 244136.7644
E 2228260.8004









SIGNAL SUPPORT POLE DATA

POLE NO.	NORTHING	EASTING	GROUND ELEV. @ POLE	POLE TO POLE	ATTACHMENT HEIGHT	ATTACHMENT ELEV.
1	244084.125	2228201.900	750.90	1 TO 2	27.8	778.01
2	244196.697	2228229.489	747.58	2 TO 3	26.5	775.05
3	244190.833	2228319.699	748.78	3 TO 4	27.8	778.51
4	244077.336	2228296.718	751.48	4 TO 1	26.8	776.50

NOTE: POLE LENGTHS MUST BE FIELD VERIFIED PRIOR TO FABRICATION

SEALED BY

COORDINATES ARE NAD/B3(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 0.99998 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

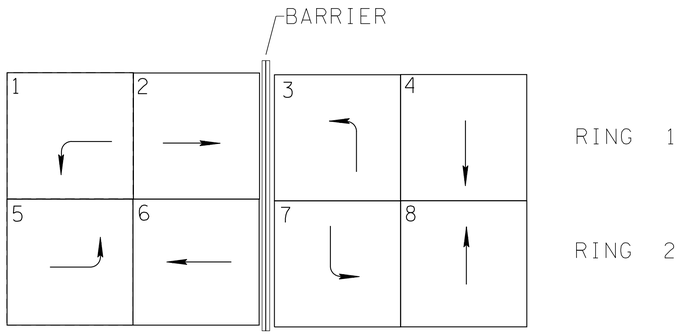
PROPOSED SIGNAL LAYOUT
SR-320 AT
MORRIS HILL RD./
HURRICANE CREEK RD.

SCALE: 1"=20 '

10/16/2014 10:01:13 AM
C:\PROJECTS\HAMILTON\SR320\HurricaneCr_Signal20_Wireless.dgn

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	21A

THE CONTRACTOR SHALL CONTACT THOMAS TROTTER, THE CITY OF CHATTANOOGA, AT (423) 643-5950 A MINIMUM OF THIRTY (30) DAYS PRIOR TO ACTIVATION OF THE SIGNAL TO OBTAIN THE INITIAL SIGNAL TIMINGS.



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

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

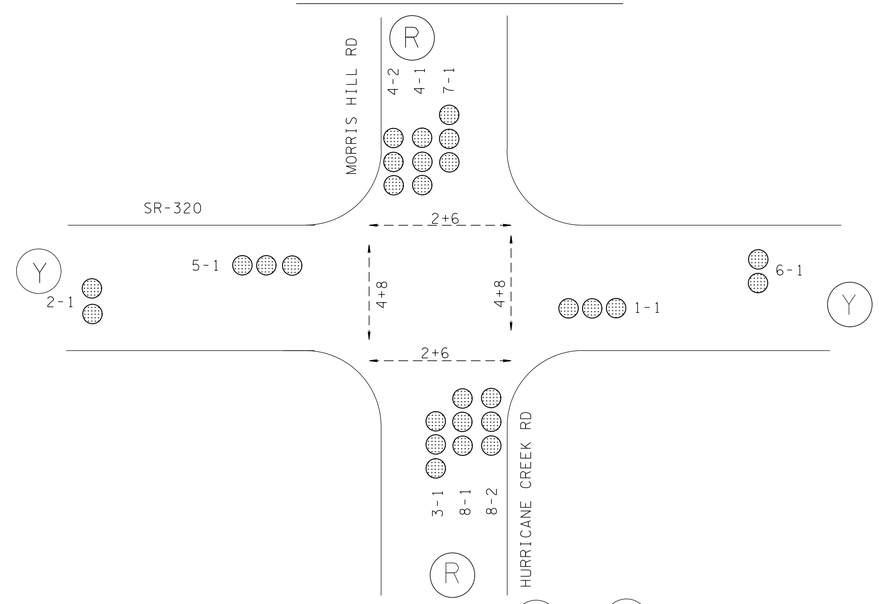
(2) PERM = PERMITTED
PROT = PROTECTED
P + P = PROT/PERM

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.

DETECTION LOOP DIAGRAM



WIRELESS VEHICLE DETECTOR

FLASHING OPERATION (Y) OR (R)

DETECTION LOOP NUMBERING

PEDESTRIAN MOVEMENTS [◄---------►] AND ASSOCIATED PHASE

INTERSECTION OF SR-320 AND HURRICANE CREEK RD.

SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PHASING, TIMING, DETECTOR ASSIGNMENT

EIGHT PHASE

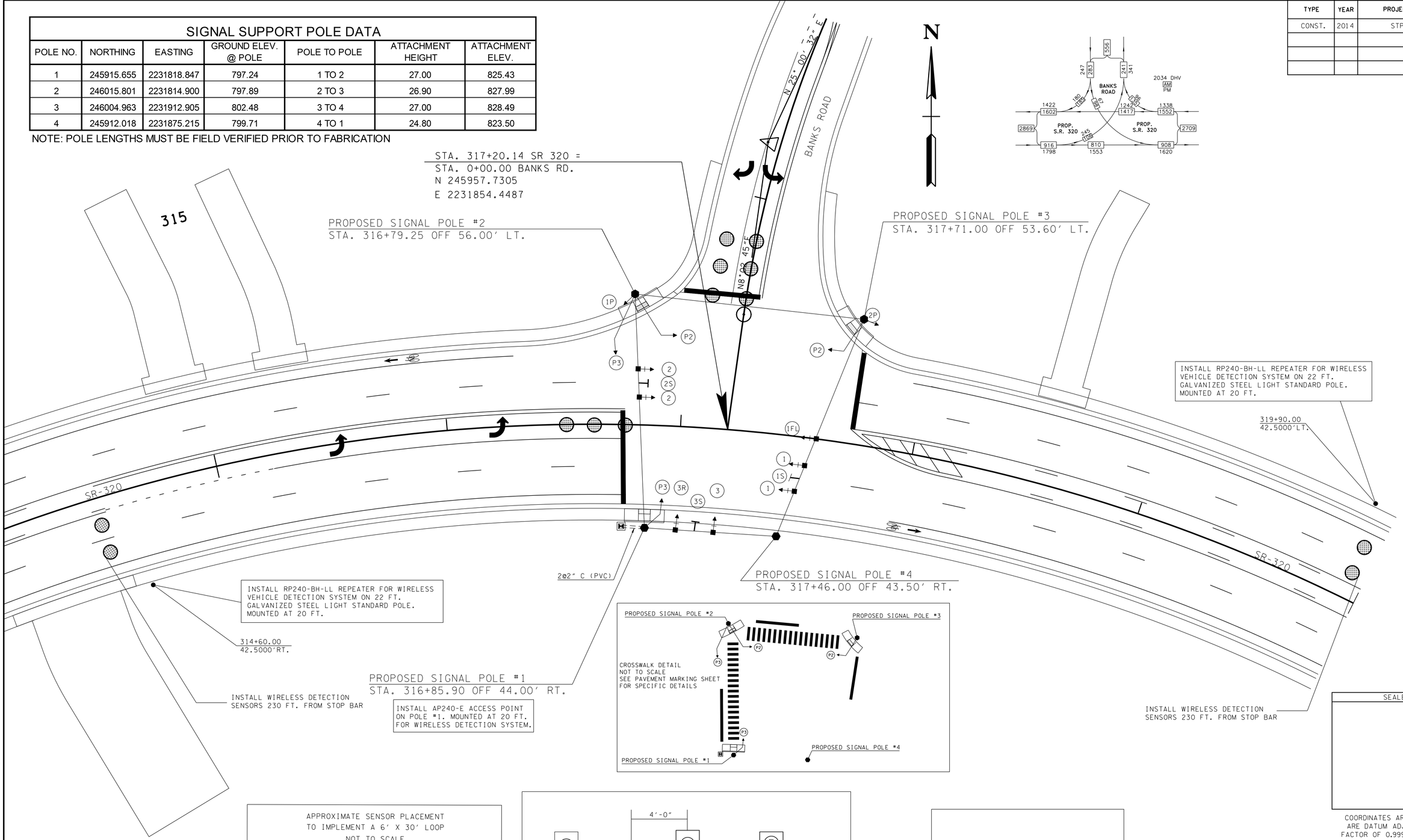
10/15/2014 4:9:23 PM
C:\PROJECTS\HAMILTON\SR320\PHASE_HurricaneCr.dgn

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	21B

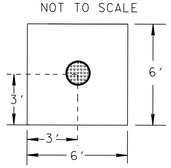
SIGNAL SUPPORT POLE DATA

POLE NO.	NORTHING	EASTING	GROUND ELEV. @ POLE	POLE TO POLE	ATTACHMENT HEIGHT	ATTACHMENT ELEV.
1	245915.655	2231818.847	797.24	1 TO 2	27.00	825.43
2	246015.801	2231814.900	797.89	2 TO 3	26.90	827.99
3	246004.963	2231912.905	802.48	3 TO 4	27.00	828.49
4	245912.018	2231875.215	799.71	4 TO 1	24.80	823.50

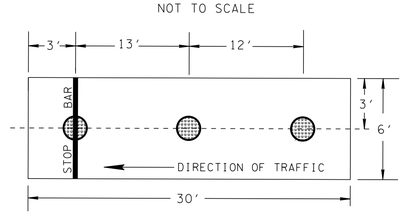
NOTE: POLE LENGTHS MUST BE FIELD VERIFIED PRIOR TO FABRICATION

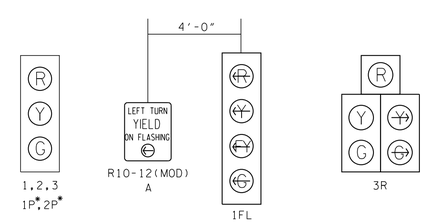


APPROXIMATE SENSOR PLACEMENT TO IMPLEMENT A 6' X 6' LOOP NOT TO SCALE



APPROXIMATE SENSOR PLACEMENT TO IMPLEMENT A 6' X 30' LOOP NOT TO SCALE





PROPOSED SIGNAL HEADS W/BACKPLATES

* POLE MOUNTED SIGNALS

P2,P3

PROPOSED COUNTDOWN PEDESTRIAN SIGNAL HEADS

STREET NAME
SIGN

*1S,2S,3S

*SEE SHT. 20N FOR DETAILS

SEALED BY

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 0.99998 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

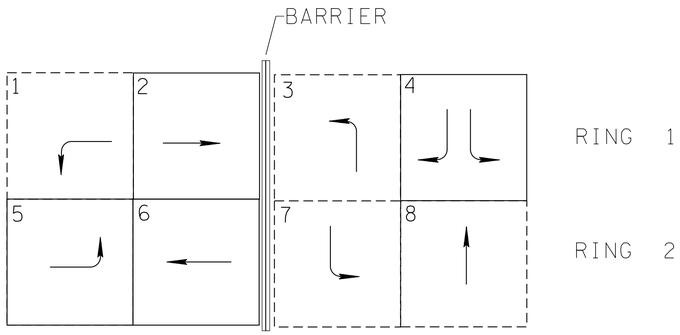
PROPOSED SIGNAL LAYOUT
SR-320
AT
BANKS ROAD

SCALE: 1"=20 '

10/16/2014 10:10:26 AM
C:\PROJECTS\HAMILTON\SR320\Banks_Signal20_Wireless.dgn

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	21C

THE CONTRACTOR SHALL CONTACT THOMAS TROTTER, THE CITY OF CHATTANOOGA, AT (423) 643-5950 A MINIMUM OF THIRTY (30) DAYS PRIOR TO ACTIVATION OF THE SIGNAL TO OBTAIN THE INITIAL SIGNAL TIMINGS.



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

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

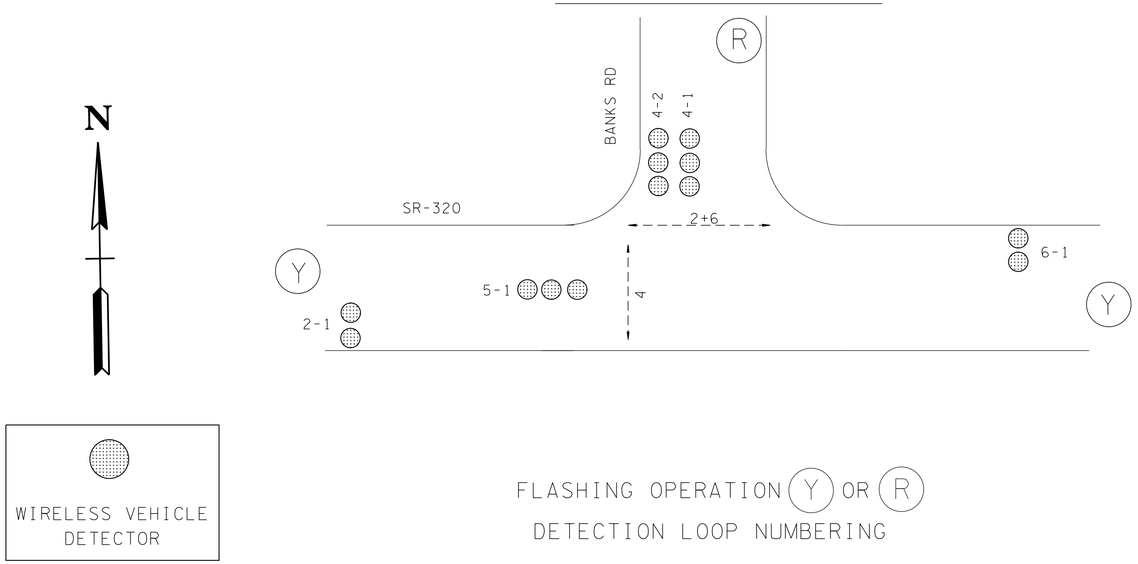
(2) PERM = PERMITTED
PROT = PROTECTED
P + P = PROT/PERM

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.

DETECTION LOOP DIAGRAM



FLASHING OPERATION (Y) OR (R)

DETECTION LOOP NUMBERING

PEDESTRIAN MOVEMENTS [◄--------►] AND ASSOCIATED PHASE

INTERSECTION OF SR-320 AND BANKS RD.

SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PHASING, TIMING, DETECTOR ASSIGNMENT

EIGHT PHASE

10/15/2014 1:16:35 PM
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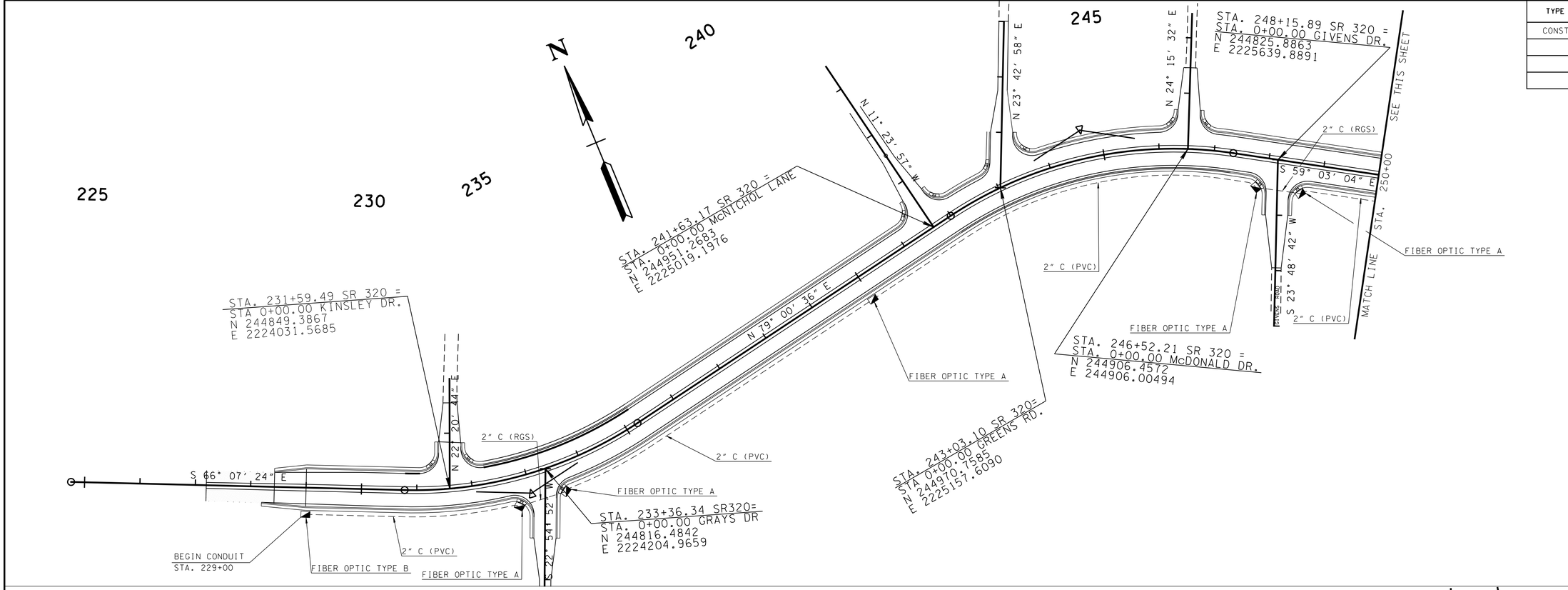
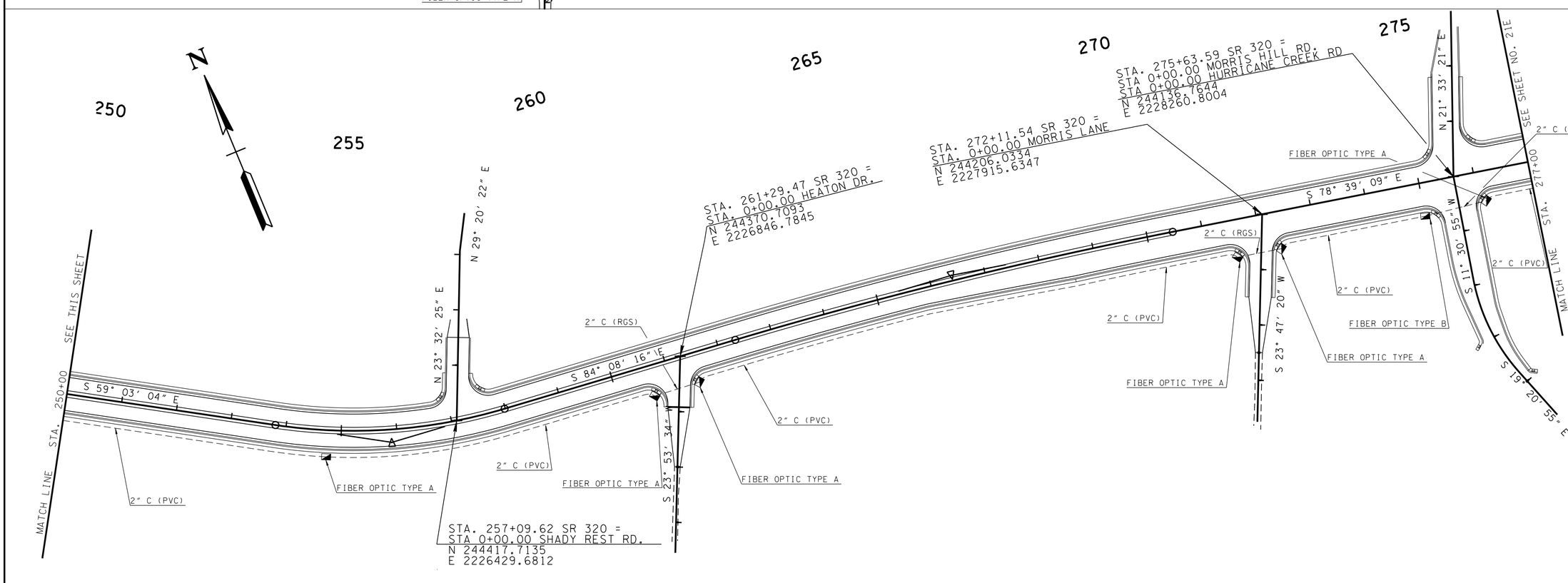
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	21D





SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CONDUIT LAYOUT FOR FUTURE FIBER OPTICS

STA. 229+00 TO STA. 277+00

SCALE: 1"=100'

9/22/2014 8:03:24 AM
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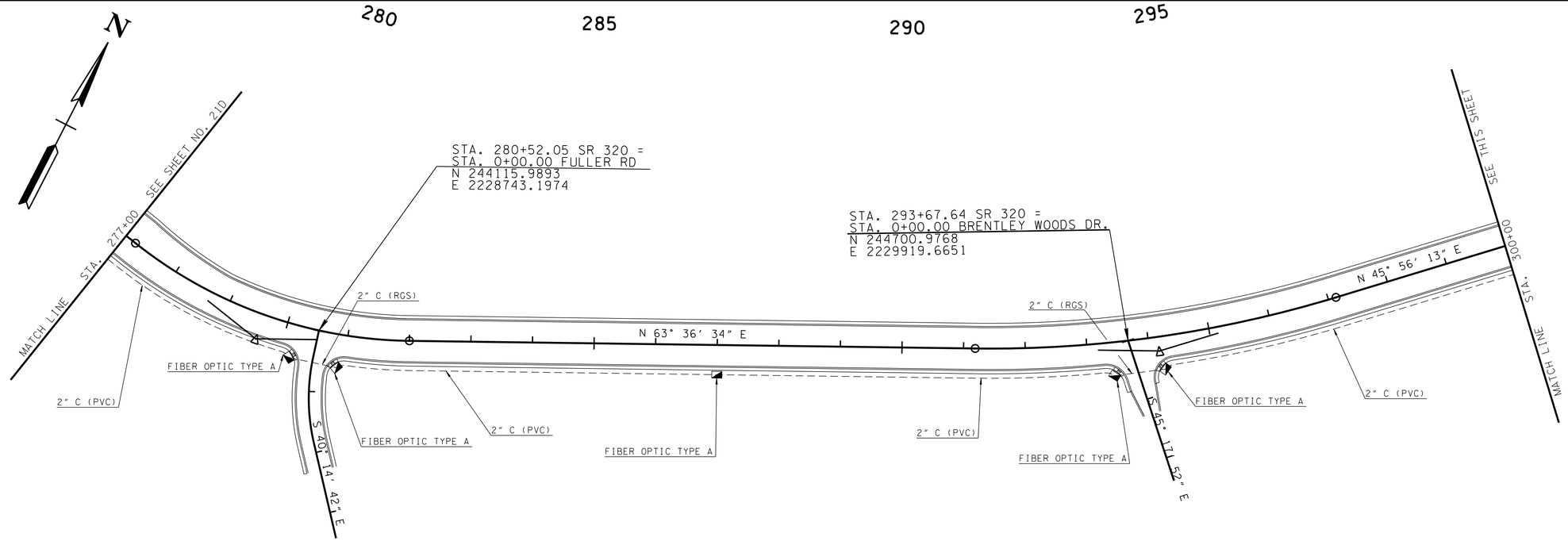
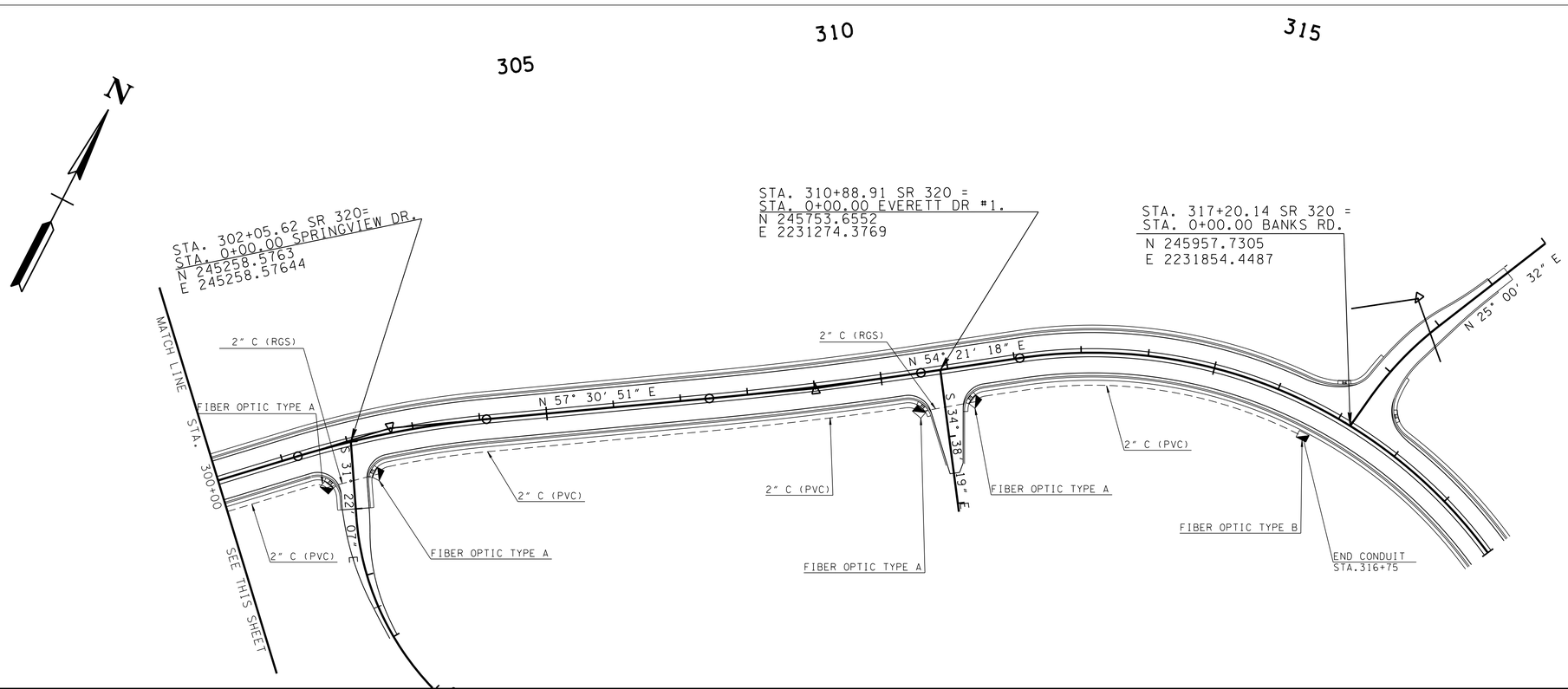
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	21E





SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CONDUIT LAYOUT FOR FUTURE FIBER OPTICS

STA. 277+00 TO STA. 320+00

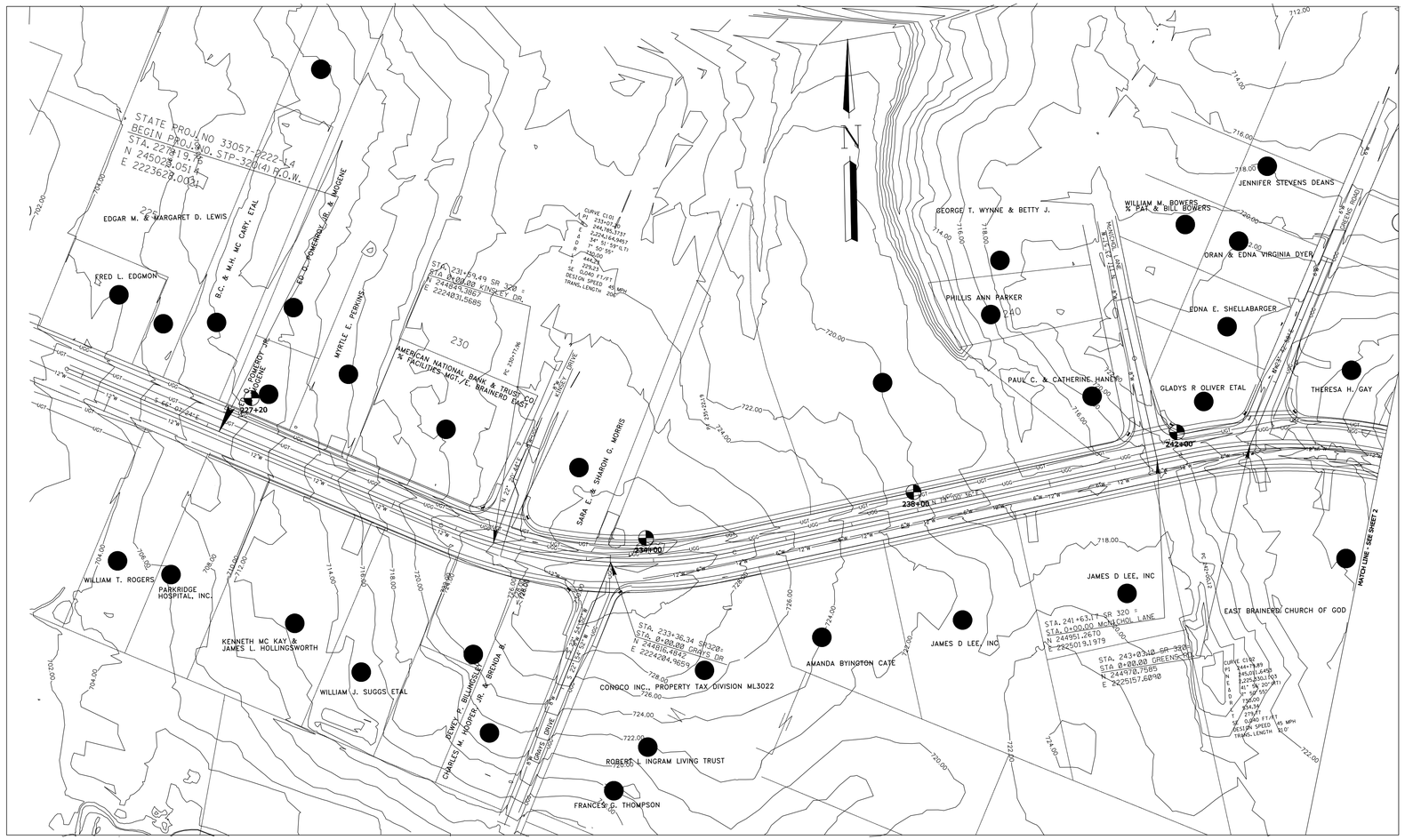
SCALE: 1″=100′

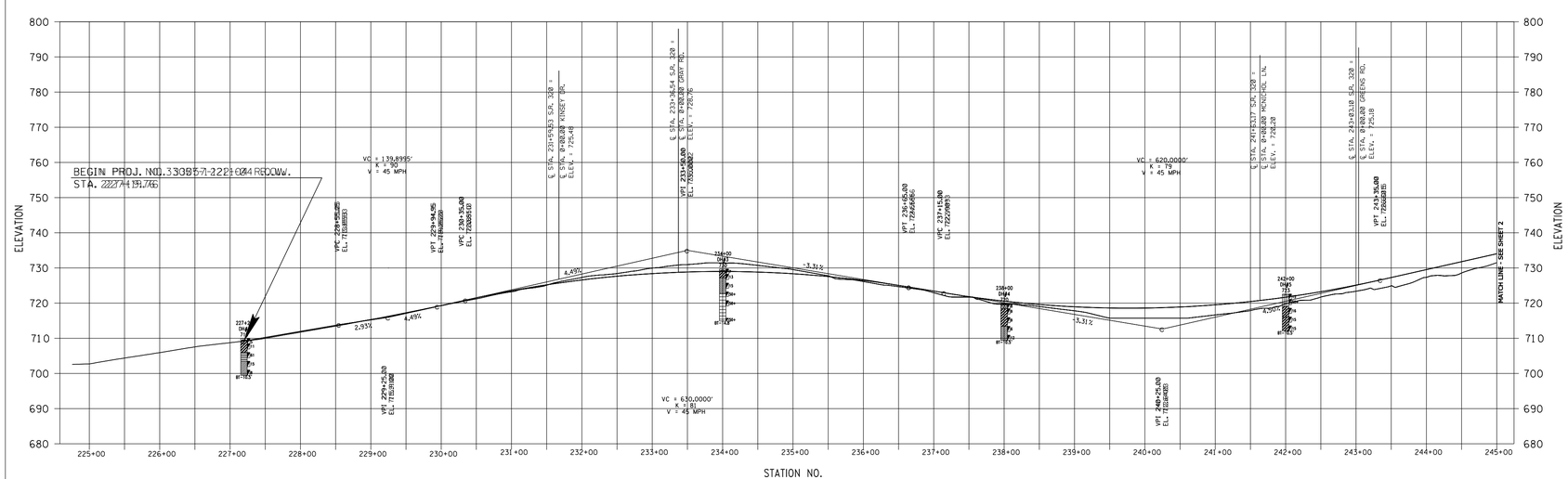
9/22/2014 8:05:02 AM
C:\PROJECTS\HAMILTON\SR320\ConduitLayout2.dgn

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

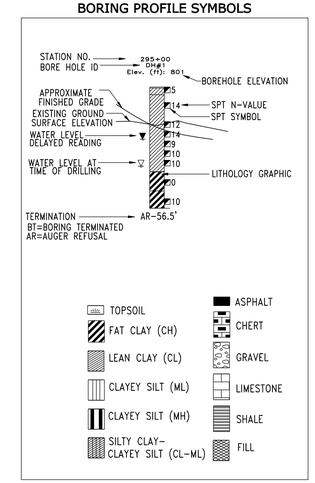
TYPE	YEAR	PROJECT NO.	SHEET NO.
Preliminary Design	2010	BR-STP-320(4)	1
CONST.	2014	BR-STP-320(4)	22

S&ME PROJECT #: 1811-10-055A	BASE INFO BY: HART FREELAND ROBERTS, INC.	DRAWN BY: DR
REVISION NO.: INITIAL	DATE: 11/29/2010	CHECKED BY: JMH
REVISION NO.:	DATE:	CHECKED BY:
REVISION NO.:	DATE:	CHECKED BY:





BORING PROFILE SYMBOLS



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

BORING LOCATION PLAN AND SOIL PROFILE SR 320 IMPROVEMENTS

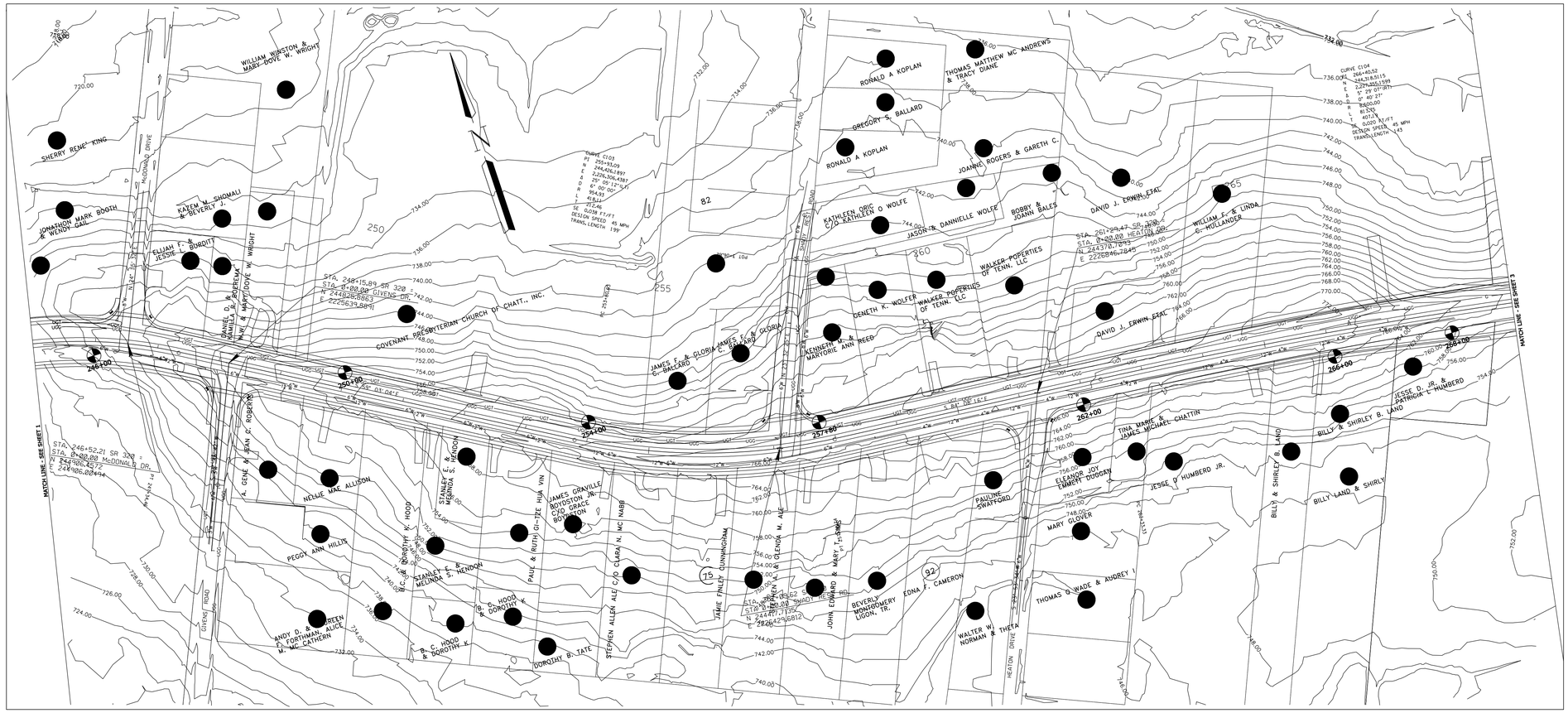
SR 320 STA. 227+19.76 TO 245+00

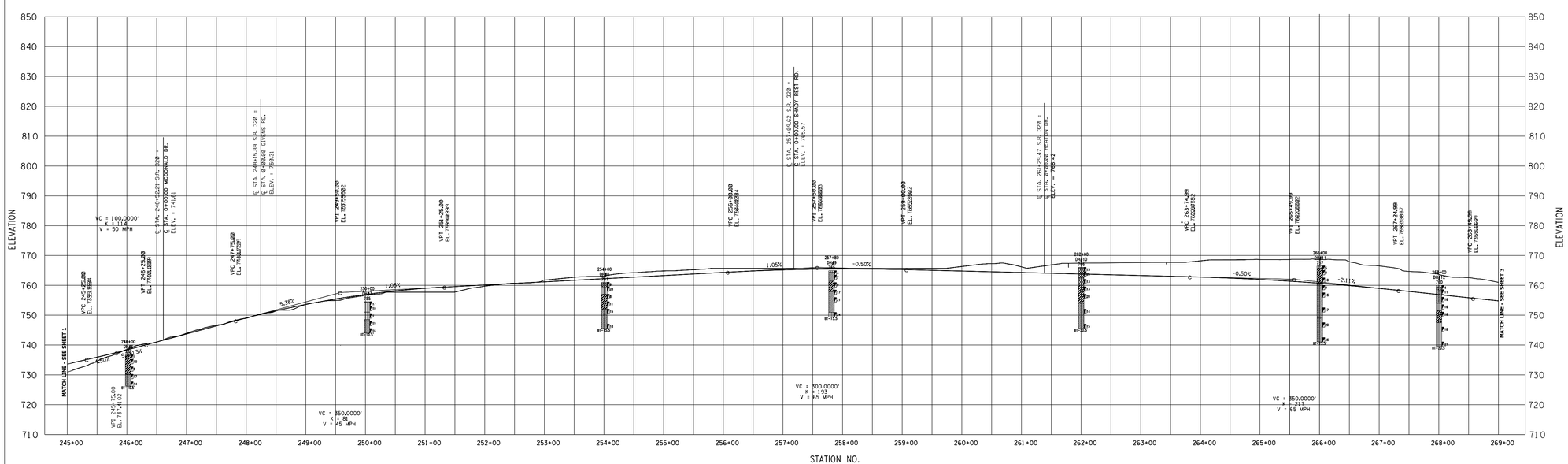
VERT SCALE: 1"=20'
HORIZ. SCALE: 1"=100'

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

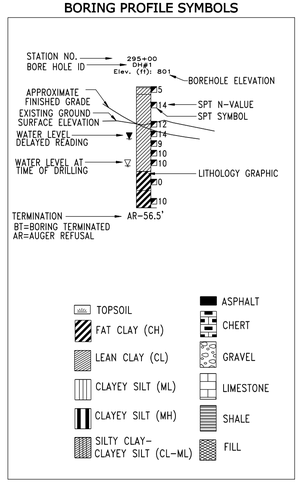
TYPE	YEAR	PROJECT NO.	SHEET NO.
Preliminary Design	2010	BR-STP-320(4)	2
CONST.	2014	BR-STP-320(4)	22A

S&ME PROJECT #: 1811-10-055A	BASE INFO BY: HART FREELAND ROBERTS, INC.	DRAWN BY: DR
REVISION NO.: INITIAL	DATE: 11/29/2010	CHECKED BY: JMH
REVISION NO.:	DATE:	CHECKED BY:
REVISION NO.:	DATE:	CHECKED BY:





BORING PROFILE SYMBOLS



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

BORING LOCATION PLAN AND SOIL PROFILE SR 320 IMPROVEMENTS

SR 320 STA. 245+00 TO 269+00

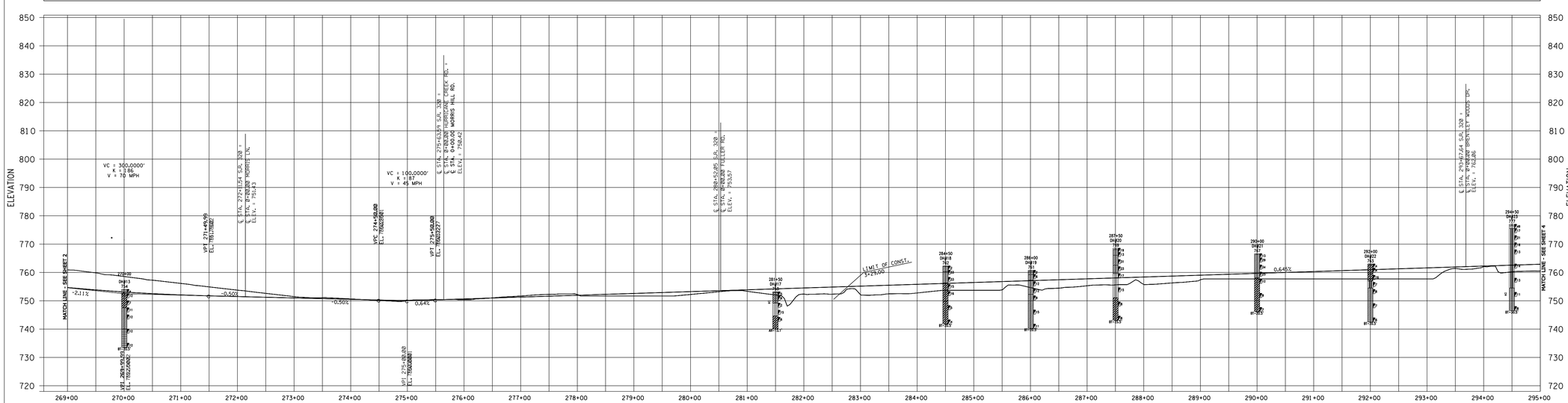
VERT SCALE: 1"=20'
HORIZ. SCALE: 1"=100'

JAMIE M. HUDSON
PROFESSIONAL ENGINEER
No. 00109240
STATE OF TENNESSEE
12/13/2011

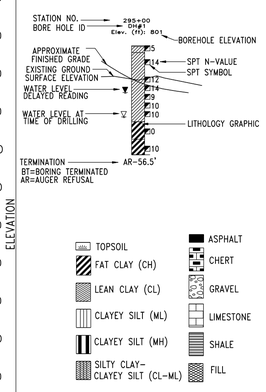
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
Preliminary Design	2010	BR-STP-320(4)	3
CONST.	2014	BR-STP-320(4)	22B

S&ME PROJECT #: 1811-10-055A	BASE INFO BY: HART FREELAND ROBERTS, INC.	DRAWN BY: DR
REVISION NO.: INITIAL	DATE: 11/29/2010	CHECKED BY: JMH
REVISION NO.:	DATE:	CHECKED BY:
REVISION NO.:	DATE:	CHECKED BY:



BORING PROFILE SYMBOLS



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

BORING LOCATION PLAN AND SOIL PROFILE SR 320 IMPROVEMENTS

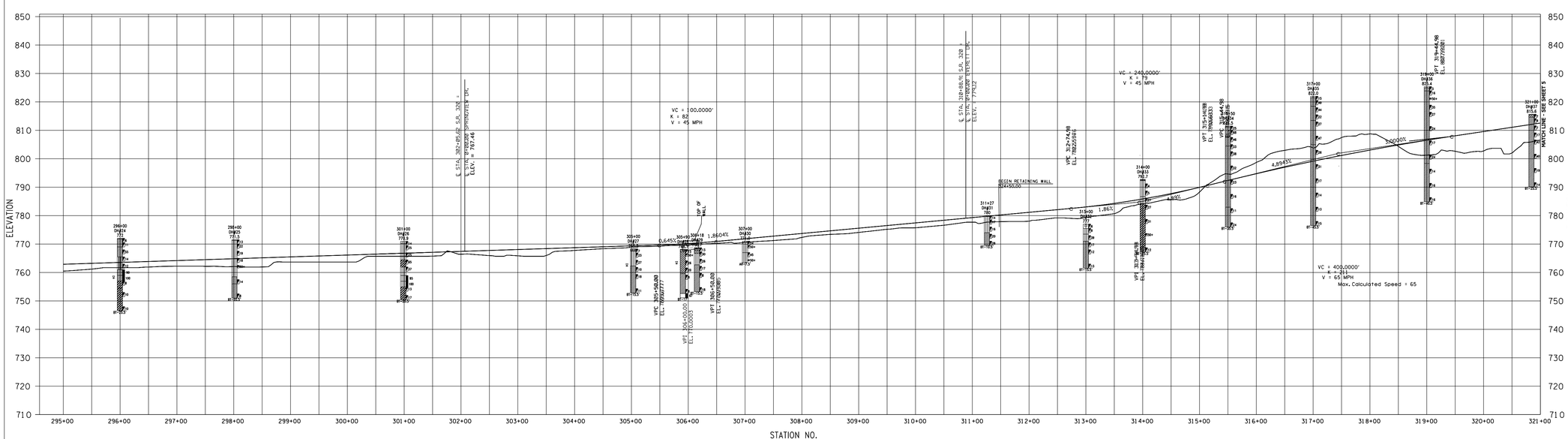
SR 320 STA. 269+00 TO 295+00

VERT SCALE: 1"=20'
HORIZ. SCALE: 1"=100'

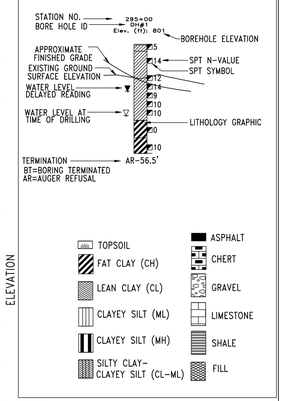
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
Preliminary Design	2010	BR-STP-320(4)	4
CONST.	2014	BR-STP-320(4)	22C

S&ME PROJECT #: 1811-10-055A	BASE INFO BY: HART FREELAND ROBERTS, INC.	DRAWN BY: DR
REVISION NO.: INITIAL	DATE: 11/29/2010	CHECKED BY: JMH
REVISION NO.:	DATE:	CHECKED BY:
REVISION NO.:	DATE:	CHECKED BY:



BORING PROFILE SYMBOLS



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

BORING LOCATION PLAN AND SOIL PROFILE SR 320 IMPROVEMENTS

SR 320 STA. 295+00 TO 321+00

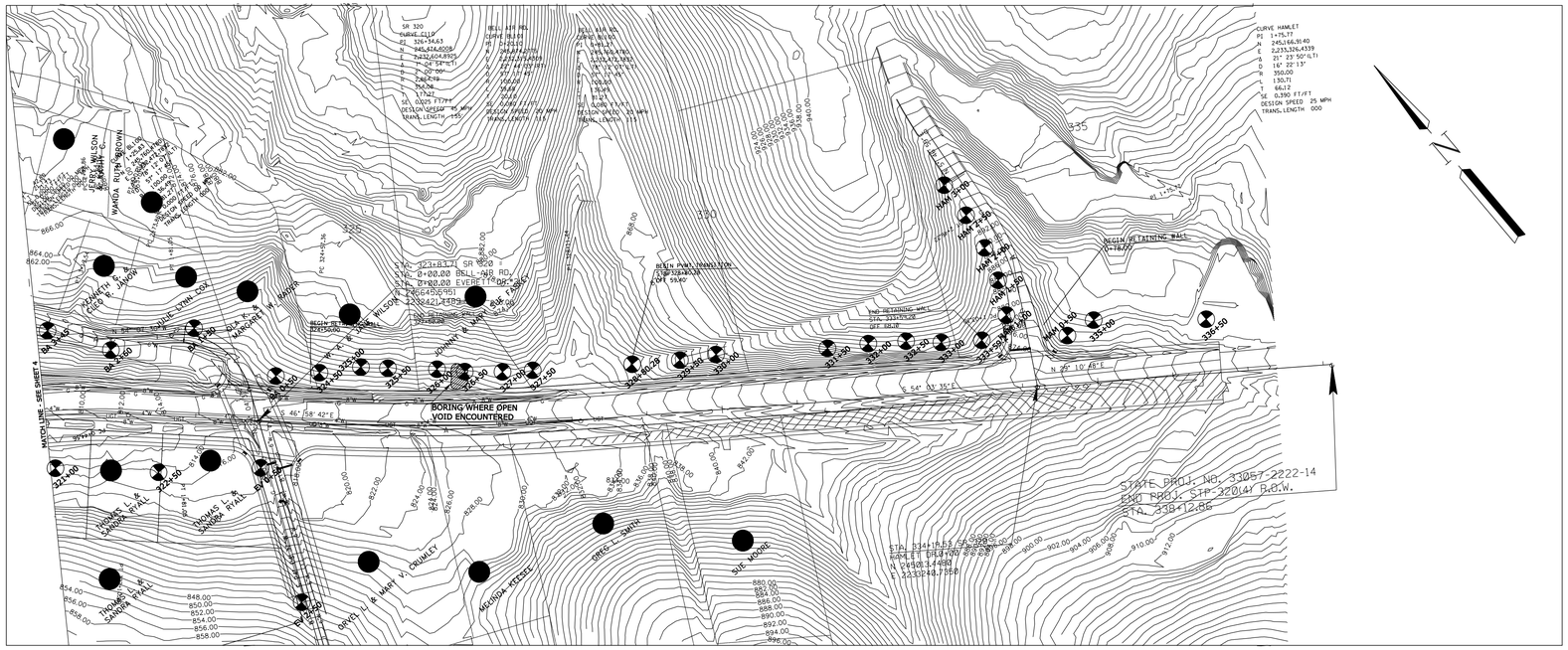
VERT SCALE: 1"=20'
HORIZ. SCALE: 1"=100'

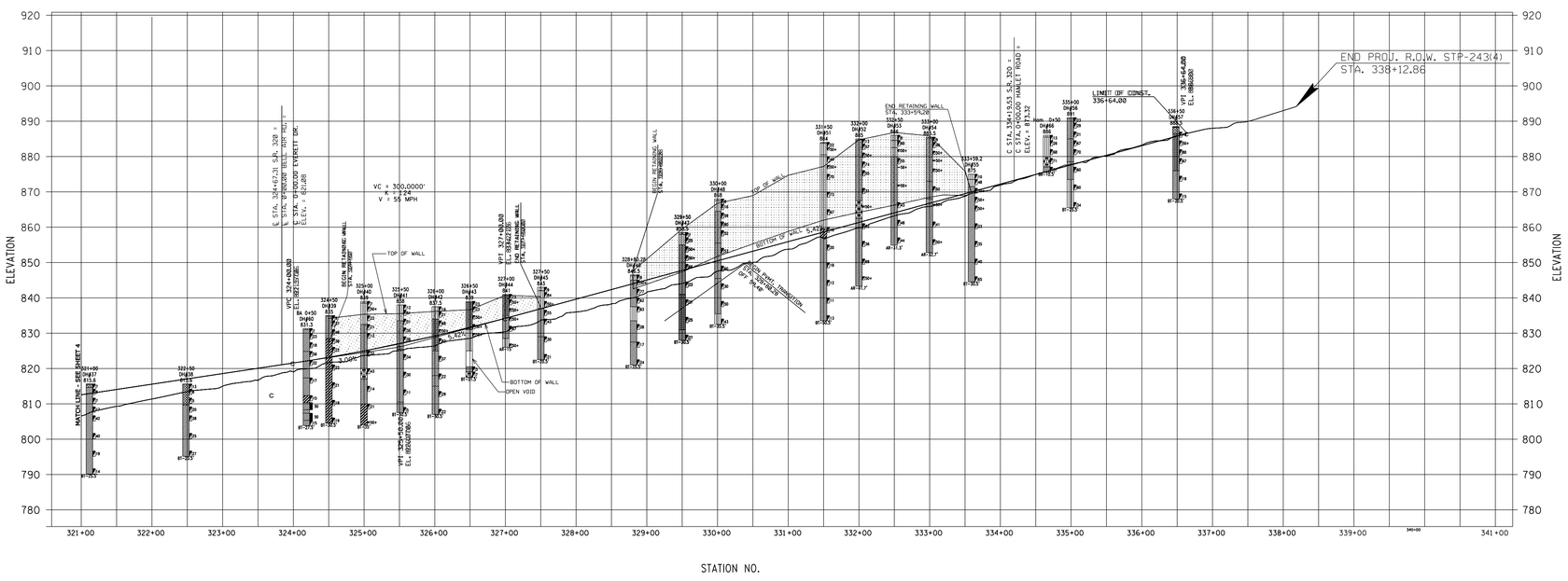
JAMIE M. HUDSON
PROFESSIONAL ENGINEER
No. 20010945
STATE OF TENNESSEE

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

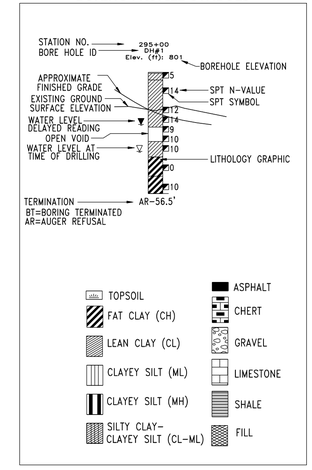
TYPE	YEAR	PROJECT NO.	SHEET NO.
Preliminary Dsgn	2010	BR-STP-320(4)	5
CONST.	2014	BR-STP-320(4)	22D

S&ME PROJECT #: 1811-10-055A	BASE INFO BY: HART FREELAND ROBERTS, INC.	DRAWN BY: DR
REVISION NO.: INITIAL	DATE: 11/29/2010	CHECKED BY: JMH
REVISION NO.:	DATE:	CHECKED BY:
REVISION NO.:	DATE:	CHECKED BY:





BORING PROFILE SYMBOLS



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

BORING LOCATION PLAN AND SOIL PROFILE SR 320 IMPROVEMENTS

SR 320 STA. 321+00 TO 338+12.86

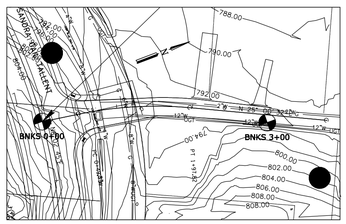
VERT SCALE: 1"=20'
HORIZ. SCALE: 1"=100'

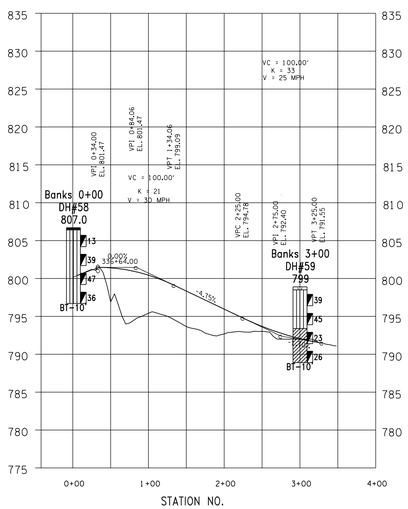
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
Preliminary Design	2010	BR-STP-320(4)	6
CONST.	2014	BR-STP-320(4)	22E

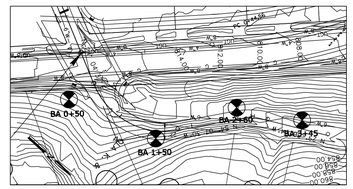
S&ME PROJECT #: 1811-10-055A	BASE INFO BY: HART FREELAND ROBERTS, INC.	DRAWN BY: DR
REVISION NO.: INITIAL	DATE: 11/29/2010	CHECKED BY: JMH
REVISION NO.:	DATE:	CHECKED BY:
REVISION NO.:	DATE:	CHECKED BY:

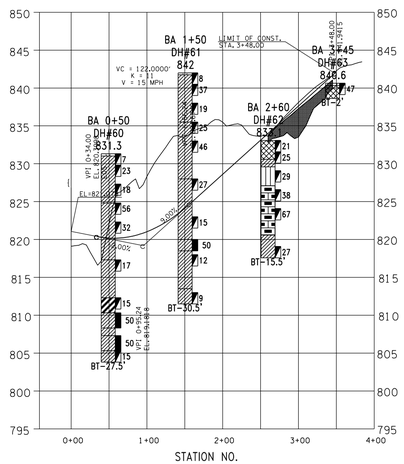
BANKS ROAD



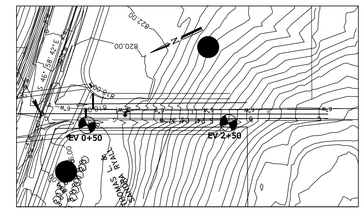


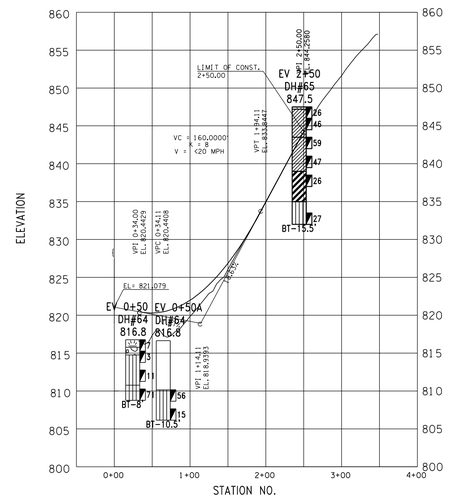
BEL AIR ROAD



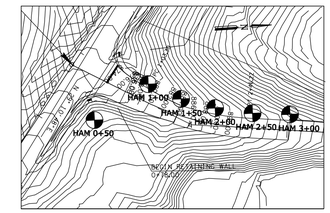


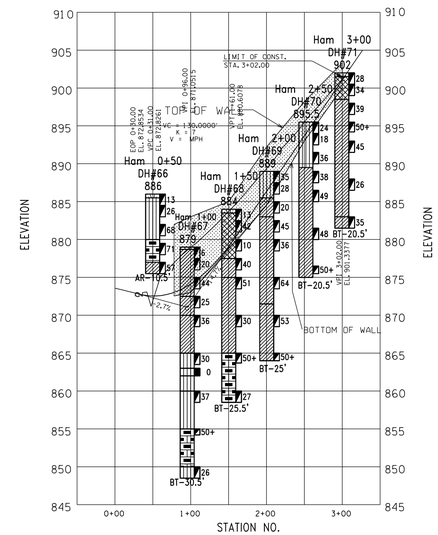
EVERETT DRIVE (#2)



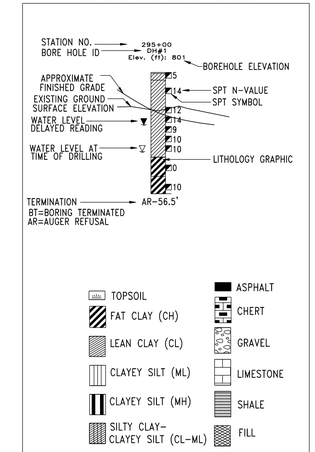


HAMLET DRIVE





BORING PROFILE SYMBOLS



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

BORING LOCATION PLAN AND SOIL PROFILE SR 320 IMPROVEMENTS

SIDE STREETS
BANKS, EVERET,
BEL AIR AND HAMLET

VERT SCALE: 1"=10'
HORIZ. SCALE: 1"=100'

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
Preliminary Dsgn	2010	BR-STP-320(4)	7
CONST.	2014	BR-STP-320(4)	22F

S&ME PROJECT #: 1811-10-055A	BASE INFO BY: HART FREELAND ROBERTS, INC.	DRAWN BY: DR
REVISION NO.: INITIAL	DATE: 11/29/2010	CHECKED BY: JMH
REVISION NO.:	DATE:	CHECKED BY:
REVISION NO.:	DATE:	CHECKED BY:

Soil Descriptions for Sheet 1

Spoons/Tubes Data

Sample No.	Station No.	Depth (feet)	Description	In-Situ Moisture (%)	LL	PI	AASHTO Class	USCS Class
1	227+20	0 - 1.5	Topsoil, yellow brown silty clay	17.6				
2		1.5 - 3		31	69	42	A-7-6	CH
3		4 - 5.5	Light gray weathered shale and limestone fragments	2.8				
4		6.5 - 8	Green-brown and yellow-brown silty clay and weathered shale	19.1	31	10	A-4	CL
5		9 - 10.5		18.1				
1	234+00	0-1.5	Red-brown and tan-brown silty clay	30.6				
2		1.5 - 3		25.1	74	43	A-7-5	CH
3		4 - 5.5	Tan-brown, red-brown and yellow-brown silty clay with weathered shale	23.2	49	27	A-7-6	CL
4		6.5 - 8		3.9				
5		9 - 10.5	Light gray and green-gray limestone fragments and weathered shale	5.3				
6		14-15.5		5.2				
1	238+00	0 - 1.5	Topsoil, tan-brown and brown clayey silt	17.6				
2		1.5 - 3	Green-brown, red-brown and yellow-brown silty clay with chert	28.9	70	44	A-7-6	CH
3		4 - 5.5		18.7				
4		6.5 - 8	Gray-brown, brown and tan-brown silty clay with silty sand and weathered shale	27.9				
5		9 - 10.5		22.1	41	21	A-7-6	CL
1	242+00	0 - 1.5	Topsoil, tan-brown, brown and red-brown clayey silt with chert fragments	9.9				
2		1.5 - 3		11.8				
3		4 - 5.5	Tan-brown, red-brown and gray silty clay	25.6	58	29	A-7-6	CH
4		6.5 - 8	Tan-brown, red-brown and gray silty clay with weathered shale	24.5				
5		9 - 10.5		28.3	59	30	A-7-6	CH

Soil Descriptions for Sheet 2

Spoons/Tubes Data

Sample No.	Station No.	Depth (feet)	Description	In-Situ Moisture (%)	LL	PI	AASHTO Class	USCS Class
1	246+00	0 - 1.5	Topsoil, yellow-brown, gray and red-brown silty clay	19.6				
2		1.5 - 3		36.7				
3		4 - 5.5		31.8	71	39	A-7-5	CH
4		6.5 - 8	Yellow-brown, red-brown and gray silty clay with weathered shale	27.5				
5		9 - 10.5		28.5	46	21	A-7-6	CL
1	250+00	0 - 1.5	Topsoil, tan-brown, red-brown and gray clayey silt with chert fragments	8.1				
2		1.5 - 3		7.3				
3		4 - 5.5	Tan-brown, gray and red-brown silty clay with weathered shale	15.5				
4		6.5 - 8	Yellow-brown, red-brown and gray silty clay with weathered shale	22.6	49	23	A-7-6	CL
5		9 - 10.5		24.5	43	18	A-7-6	CL
1	254+00	0 - 1.5	Topsoil, brown and red-brown silty clay with roots	19.2				
2		1.5 - 3	Red-brown and tan-brown clayey silt with chert fragments and chert sand	9.7				
3		4 - 5.5	Tan-brown and gray silty clay with chert fragments	13.6				
4		6.5 - 8		30.0	79	48	A-7-5	CH
5		9 - 10.5	Yellow-brown and gray silty clay with weathered shale	28.5				
6		14 - 15.5		27.4	49	22	A-7-6	CL
1	257+80	0 - 1.5	Topsoil, brown silty clay with chert fragments	14.2				
2		1.5 - 3		21.3				
3		4 - 5.5	Tan-brown, brown and red-brown silty clay with some chert fragments	38.4	89	54	A-7-5	CH
4		6.5 - 8	Green-brown silty clay	22.6				
5		9 - 10.5		17.4	33	12	A-6	CL
6		14 - 15.5	Tan-brown clayey silt with weathered shale and some chert fragments	20.2				
1	262+00	0 - 1.5	Topsoil, yellow-brown, brown and gray silty clay with rock fragments	10.3				
2		1.5 - 3		12.0				
3		4 - 5.5	Brown limestone fragments and silty clay	4.2				
4		6.5 - 8	Yellow-brown, red-brown and gray silty clay	26.2	67	38	A-7-6	CH
5		9 - 10.5		23.7				
6		14 - 15.5	Yellow-brown, red-brown and gray silty clay	26.4				
7		19 - 20.5		20.9	33	12	A-6	CL
1	266+00	0 - 1.5	Topsoil, red-brown and gray silty clay	16.6				
2		1.5 - 3		33.1*				
3		4 - 5.5		29.9*	59	31	A-7-6	CH
4		6.5 - 8	Red-brown, brown, yellow-brown and gray silty clay	30.5*				
5		9 - 10.5		25.9	46	20	A-7-6	CL
6		14 - 15.5		23.6				
7		19 - 20.5	Green-brown , red-brown and brown silty clay with weathered shale	22.7				
8		24-25.5		16.1	31	10	A-4	CL
1	268+00	0 - 1.5	Topsoil, brown silty clay	14.8				
2		1.5 - 3	Red-brown, brown and yellow-brown silty clay	20.0	32	15	A-6	CL
3		4 - 5.5		20.4				
4		6.5 - 8	Red-brown and yellow-brown clayey silt	29.9				
5		9 - 10.5	Yellow-brown, red-brown and gray silty clay	30.0	58	30	A-7-6	CH
6		14 - 15.5	Brown clayey silt	27.3				
7		19 - 20.5		20.8				

Bulk Sample Data

Sample No.	Description	In Situ Moisture (%)	Maximum Dry Density (pcf)	Optimum Moisture Content (%)	Moisture Range (%)	PL	LL	AASHTO Class	USCS Class
266+00, 0-10 feet	Red-brown, brown and yellow-brown silty clay	29.1	96	26	16.6 - 33.1	30	69	A-7-5	CH

Soil Descriptions for Sheet 3

Spoons/Tubes Data

Sample No.	Station No.	Depth (feet)	Description	In-Situ Moisture (%)	LL	PI	AASHTO Class	USCS Class
1	270+00	0 - 1.5	Topsoil, tan-brown and red-brown clayey silt with fine roots	23.5				
2		1.5 - 3	Red-brown, yellow-brown and gray silty clay with fine roots	36.6	82	51	A-7-5	CH
3		4 - 5.5		30.8				
4		6.5 - 8	Yellow-brown, red-brown and gray silty clay with weathered shale	28.2				
5		9 - 10.5		22.2				
6		14 - 15.5	Tan-brown, brown, red-brown and gray weathered shale and silty clay	27.3	47	24	A-7-6	CL
7		19 - 20.5		35.7				
1	281+50	0 - 1.5	Gravel, dark brown and brown silty clay with chert fragments	11.9				
2		1.5 - 3		11.7	33	14	A-2-6	CL
3		4 - 5.5	Dark brown clayey silt with rounded pebbles	13.3				
4		6.5 - 8		20.8				
5		9 - 10.5	Red-brown, brown and gray silty clay	33.8	50	26	A-7-6	CH
1	284+50	0 - 1.5	Topsoil, brown silty clay with roots	17.8				
2		1.5 - 3	Red-brown and yellow-brown silty clay with chert fragments and chert sand	13.0	36	15	A-6	CL
3		4 - 5.5		11.6				
4		6.5 - 8		32.2				
5		9 - 10.5		21.7				
6		14 - 15.5	Yellow-brown silty clay	41.5	69	37	A-7-5	CH
7		19 - 20.5		47.6				
Tube		6 - 8	Red-brown and yellow-brown silty clay with chert fragments and chert sand	33.8				
Tube		14 - 16	Yellow-brown silty clay	37.2				
1	286+00	0 - 1.5	Topsoil, brown silty clay with roots	17.1				
2		1.5 - 3	Yellow-brown silty clay	37.0				
3		4 - 5.5	Brown and red-brown silty clay with chert fragments	19.1				
4		6.5 - 8		18.3	35	16	A-6	CL
5		9 - 10.5	Red-brown, brown and tan silty clay with chert fragments	23.9				
6		14 - 15.5		19.7	31	10	A-4	CL
7		19 - 20.5		18.5				
1	287+50	0 - 1.5	Topsoil, dark brown silty clay with chert fragments	9.1				
2		1.5 - 3		16.8	37	16		CL
3		4 - 5.5	Red-brown and brown silty clay	17.0			A-6	
4		6.5 - 8	Red-brown and yellow-brown silty clay with chert fragments and chert sand	13.6	33	13	A-6	CL
5		9 - 10.5	Red-brown and yellow-brown clayey silt	34.1				
6		14 - 15.5		35.7				
7		19 - 20.5	Yellow-brown silty clay	35.9				
8		24 - 25.5		33.6	56	29	A-7-6	CH
1	290+00	0 - 1.5	Topsoil, red-brown, brown and tan-brown silty clay with chert fragments	22.2*				
2		1.5 - 3		15.3				
3		4 - 5.5		18.5				
4		6.5 - 8		18.3	45	22	A-7-6	CL
5		9 - 10.5	Yellow-brown, red-brown and tan silty clay with occasional chert fragments	33.5*				
6		14 - 15.5		34.0*	55	27	A-7-6	CH
7		19 - 20.5		31.9*				
1	292+00	0 - 1.5	Gravel, topsoil, red-brown and brown silty clay with occasional chert fragments	14.8				
2		1.5 - 3		14.5				
3		4 - 5.5	Red-brown, yellow-brown and gray silty clay with chert fragments	15.3				
4		6.5 - 8	Red-brown, yellow-brown and gray clayey silt with occasional chert fragments	44.1*	70	35	A-7-5	MH
5		9 - 10.5	Red-brown, yellow-brown and gray silty clay with occasional chert fragments	30.9*				
6		14 - 15.5		34.6*	46	19	A-7-6	CL
7		19 - 20.5		61.8*				
Tube		7 - 9	Red-brown, yellow-brown and gray clayey silt with occasional chert fragments	21.3*				
1	294+50	0 - 1.5	Topsoil, red-brown and tan-brown sandy silt and chert fragments	11.5				
2		1.5 - 3	Red-brown, yellow-brown and brown clayey silt with chert fragments	29.2	57	21	A-7-5	MH
3		4 - 5.5		29.9				
4		6.5 - 8		28.0				
5		9 - 10.5		28.7	50	20	A-7-5	MH
6		14 - 15.5		30.0				
7		19 - 20.5		26.6				
8		24 - 25.5	Red-brown, yellow-brown and brown silty clay with occasional chert fragments	34.1	48	25	A-7-6	CL
9		29 - 30.5		29.4				

Bulk Sample Data

Sample No.	Description	In Situ Moisture (%)	Maximum Dry Density (pcf)	Optimum Moisture Content (%)	Moisture Range (%)	PL	LL	AASHTO Class	USCS Class
290+00, 0 - 9 feet	Red-brown, brown and tan-brown silty clay with chert fragments	14.2	114.7	15.6	15.3 - 22.2	18	40	A-6	CL
292+00, 0 - 9 feet	Red-brown, brown and yellow-brown silty clay with chert fragments	25.3*	109.8	17.5	14.5 - 44.1	23	53	A-7-5	CH

CBR Data

CBR No.	Description	In Situ Moisture (%)	Maximum Dry Density (pcf)	Optimum Moisture Content (%)	Moisture Range (%)	PL	LL	AASHTO Class	USCS Class	CBR at 0.1 Inch Penetration
290+00, 0 - 9 feet	Red-brown, brown and tan-brown silty clay with chert fragments	14.2	114.7	15.6	15.3 - 22.2	18	40	A-6	CL	3.3

Soil Descriptions for Sheet 4

Spoons/Tubes Data

Sample No.	Station No.	Depth (feet)	Description	In-Situ Moisture (%)	LL	PI	AASHTO Class	USCS Class
1	296+00	0 - 1.5	Gravel and topsoil, brown silty clay with roots and chert fragments	16.7				
2		1.5 - 3		14.6				
3		4 - 5.5	Tan-brown and brown silty clay, chert and chert sand	10.0				
4		6.5 - 8	Yellow-brown, red-brown and brown clayey silt	34.7*	58	24	A-7-5	MH
5		9 - 10.5		37.9*				
6		15-16.5	Gray-brown, red-brown and brown silty clay	35.8*	53	31	A-7-6	CH
7		19 - 20.5	Brown and red-brown silty clay	28.7*	54	31	A-7-6	CH
8		24 - 25.5		32.0*				
Tube		11 - 13	Yellow-brown, red-brown and brown clayey silt	32.2*				
Tube		13 - 15		31.9*				
1	298+00	0 - 1.5	Topsoil, tan-brown, brown and red-brown clayey silt with chert fragment sand some chert sand	13.0				
2		1.5 - 3		10.1				
3		4 - 5.5		10.2				
4		6.5 - 8		10.0				
5		9 - 10.5		11.2				
6		14 - 15.5	Yellow-brown, red-brown and gray silty clay with chert fragments	11.7	37	15	A-6	CL
7		19 - 20.5	Brown and red-brown silty clay	31.7	44	23	A-7-6	CL
1	301+00	0 - 1.5	Topsoil, red-brown and tan-brown clayey sandy silt with chert fragments	13.2				
2		1.5 - 3		6.4				
3		4 - 5.5		6.5				
4		6.5 - 8	Brown and tan-brown chert and chert sand with silt	3.8	19	4	A-2-4	CL-ML
5		9 - 10.5	Brown and tan-brown clayey silt with chert and che	9.2				
6		16 - 17.5	Yellow-brown and red-brown silty clay	35.6*	56	30	A-7-6	CH
7		19 - 20.5		34.2*				
Tube		12 - 14	Brown and tan-brown clayey silt with chert and che	41.3*				
Tube		14 - 16		37.3*				
1	305+00	0.5 - 2	Dark brown clayey silt with rock fragments	14.6				
2		2 - 3.5	Tan-brown sandy silt with chert fragments	6.0				
3		4 - 5.5		11.3				
4		6.5 - 8	Red-brown and brown silty clay with chert fragments and chert sand	24.7	34	17	A-6	CL
5		9 - 10.5		19.5				
6		14 - 15.5		25.5				
5	305+90	9-10.5	Tan-brown, yellow-brown and red-brown silty clay with chert fragments	19.6	33	14	A-6	CL
Tube		15.5 - 17		28.0				
1	311+27	0 - 1.5	Topsoil, brown and tan-brown clayey silt with chert fragments	16.3				
2		1.5 - 3		3.4				
3		4 - 5.5		9.0				
4		6.5 - 8	Red-brown, brown and yellow-brown silty clay with chert fragments	5.6	41	20	A-2-7	CL
5		9 - 10.5		10.2				
1	313+00	0 - 1.5	Topsoil	20.3				
2		1.5 - 3	Tan-brown clayey silt with chert fragments	8.5				
3		4 - 5.5	Tan-brown and red-brown sandy silt with chert frag	10.5				
4		6.5 - 8	Red-brown, brown and gray silty clay with chert fragments	20.7				
5		9 - 10.5		18.4	45	26	A-7-6	CL
6		14 - 15.5		21.0				
1	314+00	1.5 - 3	Brown and tan-brown clayey silt with chert fragments	17.4				
2		4 - 5.5		18.4				
3		6.5 - 8	Brown and tan-brown silty clay with chert fragments	10.3				
4		9 - 10.5		15.7				
5		14 - 15.5		16.4	54	32	A-7-6	CH
6		19 - 20.5		17.0				
7		24 - 25.5	Tan-brown and red-brown silty clay with chert fragments	16.8				
Tube	317+00A	32 - 34	Red-brown and brown silty clay with chert fragments	20.3				
Tube	319+00A	28 - 30	Brown and red-brown silty clay	22.7				
8	321+00	24 - 25.5	Red-brown, yellow-brown and brown silty clay with chert fragments	17.2	44	22	A-7-6	CL

* Some soils on site were significantly wet of optimum. Additional handling and drying can be expected for these soils and will likely be required, particularly during wet portions of the year.

Bulk Sample Data

Sample No.	Description	In Situ Moisture (%)	Maximum Dry Density (pcf)	Optimum Moisture Content (%)	Moisture Range (%)	PL	LL	AASHTO Class	USCS Class
296+00, 0 - 11 feet	Brown, tan-brown and red-brown silty clay with chert fragments and chert sand	21.9	105.5	19.6	14.6 - 37.9	20	46	A-7-6	CL
301+00, 0 - 10 feet	Red-brown, tan-brown and brown silty clay - clayey silt with chert fragments and chert sand	4.2	130.7	10.1	3.8 - 13.2	18	22	A-2-4	CL-ML
315+50, 0 - 12 feet	Tan-brown and red-brown silty clay with chert fragments	12.5				18	29	A-2-6	CL
315+50, 12 - 24 feet	Tan-brown and orange-brown silty clay with chert fragments	18.4	111.2	17.9		20	45	A-7-6	CL
317+00, 0 - 10 feet	Red-brown and tan-brown silty clay with chert fragments	11.7	113.9	14.9		17	31	A-6	CL
317+00, 10 - 20 feet	Red-brown and brown silty clay with chert fragments	14				17	31		CL
317+00, 20 - 30 feet	Red-brown and tan-brown sandy clay with chert fragments	16.2				19	33		CL

Table continued on next sheet

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

SOIL DESCRIPTIONS

SR 320 IMPROVEMENTS

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

Soil Descriptions for Sheet 4 (*continued*)

Bulk Sample Data (*continued from previous sheet*)

Sample No.	Description	In Situ Moisture (%)	Maximum Dry Density (pcf)	Optimum Moisture Content (%)	Moisture Range (%)	PL	LL	AASHTO Class	USCS Class
319+00, 0 - 10 feet	Brown and red-brown silty clay with chert fragments	19.1	107.1	19		24	45	A-7-6	CL
319+00, 10 - 20 feet		19				22	49		CL
319+00, 20 - 28 feet		20.8				25	48		CL

CBR Data

CBR No.	Description	In Situ Moisture (%)	Maximum Dry Density (pcf)	Optimum Moisture Content (%)	Moisture Range (%)	PL	LL	AASHTO Class	USCS Class	CBR at 0.1 Inch Penetration
301+00, 0 - 10 feet	Red-brown, tan-brown and brown silty clay - clayey silt with chert fragments and chert sand	4.2	130.7	10.1	3.8 - 13.2	18	22	A-2-4	CL-ML	7.2
317+00, 0 - 10 feet	Red-brown and tan-brown silty clay with chert fragments	11.7	113.9	14.9		17	31	A-6	CL	43.4
319+00, 0 - 10 feet	Brown and red-brown silty clay with chert fragments	19.1	107.1	19		24	45	A-7-6	CL	3.1
319+00, 10 - 20 feet		19				22	49		CL	
319+00, 20 - 28 feet		20.8				25	48		CL	

Soil Descriptions for Sheet 5

Spoons/Tubes Data

Sample No.	Station No.	Depth (feet)	Description	In-Situ Moisture (%)	LL	PI	AASHTO Class	USCS Class
8	321+00	24 - 25.5	Red-brown, yellow-brown and brown silty clay with chert fragments	17.2	44	22	A-7-6	CL
1	322+50	0 - 1.5	Brown, red-brown and dark gray clayey silt with chert fragments and some chert sand	14.2				
2		1.5 - 3		16.2				
3		4 - 5.5		15.3				
4		6.5 - 8	Tan-brown, orange-brown and gray silty clay with chert fragments	19.9				
5		9 - 10.5		15.7	32	14	A-6	CL
6		14 - 15.5		21.3				
7		19 - 20.5		21.9				
1	324+50	0 - 1.5	Topsoil, tan-brown and brown sandy clay with chert fragments	12.3				
2		1.5 - 3		6.6				
3		4 - 5.5		9.1				
4		6.5 - 8	Orange-brown and tan-brown silty clay with chert fragments	19.7*				
5		9 - 10.5		24.1*				
6		14 - 15.5		20.1*	64	39	A-7-6	CH
7		19 - 20.5		19.6*				
8		24 - 25.5		19.5*				
9		29 - 30.5		24.3*	53	29	A-7-6	CH
6	325+00	14 - 15.5	Orange-brown and brown silty clay with chert fragments	12.6	43	22	A-2-7	CL
9		29 - 30.5	Orange-brown, brown and gray silty clay with chert fragments	21.4	54	29	A-7-6	CH
1	325+50	0 - 1.5	Brown silty clay with chert fragments	9.9				
2		1.5 - 3		11.1				
3		4 - 5.5	Red--brown, brown and tan-brown silty clay with chert fragments	14.1	37	14	A-6	CL
4		6.5 - 8		12.2				
5		9 - 10.5		14.7				
6		14 - 15.5	Red-brown, brown and tan-brown silty clay with chert fragments and some chert sand	10.3	29	12	A-6	CL
7		19 - 20.5		12.4				
8		24 - 25.5		8.7				
9		29 - 30.5	Yellow-brown, red-brown and gray silty clay	18.4	34	13	A-6	CL
1	326+00	0 - 1.5	Brown and tan-brown clayey silt with chert fragments	8.0				
2		1.5 - 3		10.2				
3		4 - 5.5	Tan-brown, red-brown and brown silty clay-clayey silt with chert fragments	11.0	23	4	A-4	CL-ML
4		6.5 - 8		11.5				
5		9 - 10.5		8.6				
6		14 - 15.5	Red-brown, tan-brown and brown silty clay with chert fragments	16.1	34	14	A-6	CL
7		19 - 20.5	Red-brown, yellow-brown and brown silty clay with chert fragments	14.8				
8		24 - 25.5	Dark brown and red-brown silty sandy clay with chert fragments	22.1	48	23	A-2-7	CL
9		29 - 30.5		10.5				
4	326+50	6.5 - 8	Tan-brown silty clay-sandy silt with chert fragments	12.3	24	7	A-4	CL-ML
7		18.5 - 20	orange-brown silty clay	13.8	36	15	A-6	CL
1	327+00	0 - 1.5	Topsoil, tan-brown and brown silty clay-clayey silt with chert fragments and ad chert sand	13.1				
2		1.5 - 3		8.1	20	5	A-4	CL-ML
3		4 - 5.5		9.3				
4		6.5 - 8	Red-brown, yellow-brown and tan-brown silty clay with chert fragments	9.5				
5		9 - 10.5		16.9	40	16	A-6	CL
6		14 - 15.5	Yellow-brown, red-brown and brown clayey silt with chert fragments	11.8				

Spoons/Tubes Data (*continued from below*)

Sample No.	Station No.	Depth (feet)	Description	In-Situ Moisture (%)	LL	PI	AASHTO Class	USCS Class
1	327+50	0 - 1.5	Topsoil, tan-brown, brown and orange-brown clayey silt with chert fragments	8.8				
2		1.5 - 3		9.3				
3		4 - 5.5		10.5				
4		6.5 - 8	Brown, tan-brown and orange-brown silty clay with chert fragments and chert sand	8.7	29	12	A-2-6	CL
5		9 - 10.5		10.6				
6		14 - 15.5	Tan-brown and brown silty clay with chert fragments	11.6				
7		19 - 20.5		13.4	30	11	A-6	CL
1	328+80.28	0 - 1.5	Topsoil, brown and red-brown clayey silt with chert fragments	15.6				
2		1.5 - 3	Red-brown and yellow-brown silty clay with chert fragments and chert sand	11.5				
3		4 - 5.5		10.1				
4		6.5 - 8		11.8	46	21	A-2-7	CL
5		9 - 10.5	Red-brown and yellow-brown sandy silt with chert fragments	10.8				
6		14 - 15.5	orange-brown silty clay with chert fragments	17.2	43	17	A-7-6	CL
7		19 - 20.5	Yellow-brown and tan-brown silty clay with chert fragments	17.2				
8		24 - 25.5		17.0	35	12	A-6	CL
1	329+50	0 - 1.5	Topsoil, brown and tan-brown silty clay with chert fragments	11.4				
2		1.5 - 3		6.5				
3		4 - 5.5	Red-brown, yellow-brown and tan-brown silty clay with chert fragments and chert sand	9.3				
4		6.5 - 8		8.5	26	10	A-4	CL
5		9 - 10.5		11.3				
6		14 - 15.5		18.3				
7		19 - 20.5	Yellow-brown, brown and red-brown silty clay-clayey silt with chert fragments and chert sand	12.0	25	7	A-4	CL-ML
8		24 - 25.5		14.3				
9		29 - 30.5	Yellow-brown, brown and red-brown silty clay with chert fragments and chert sand	13.9	39	15	A-6	CL
1	330+00	0 - 1.5	Topsoil, tan-brown and brown clayey silt with chert fragments and chert sand	10.3				
2		1.5 - 3		6.0				
3		4 - 5.5	Red-brown, yellow-brown and tan-brown silty clay with chert fragments	16.6				
4		6.5 - 8		13.1				
5		9 - 10.5		14.6	38	15	A-6	CL
6		14 - 15.5	Red-brown, brown and tan-brown silty clay with chert fragments and chert sand	6.3	24	8	A-2-4	CL
7		19 - 20.5		5.4				
8		24 - 25.5	Yellow-brown and brown silty clay	21.0	42	17	A-7-6	CL
9		29 - 30.5		21.8				
10		34 - 35.5	Yellow-brown, red-brown and brown clayey silt with chert fragments	17.1				
1	331+50	0 - 1.5	Topsoil, tan-brown sandy silt with chert fragments	14.0				
2		1.5 - 3		7.6				
3		4 - 5.5	Red-brown and tan-brown sandy silt with chert fragments	13.4				
4		6.5 - 8		6.1				
5		9 - 10.5		7.9				
6		14 - 15.5		9.4				
7		19 - 20.5		10.0				
8		24 - 25.5	Red-brown, gray and maroon silty clay	25.4	55	28	A-7-6	CH
9		29 - 30.5	Red-brown and tan-brown silty clay with chert fragments	14.6				
10		34 - 35.5		13.7				
11		39 - 40.5		19.4				
12		44 - 45.5		21.6				
13		49 - 50.5		16.1				
5	332+00	9 - 10.5	Tan-brown and orange-brown silty clay with chert fragments	8.6	29	10	A-4	CL
9		29 - 30.5	Orange-brown, maroon and gray silty clay with chert fragments	19.9	44	18	A-7-6	CL
7	332+50	19 - 20.5	Orange-brown, red-brown and gray silty clay with chert fragments	19.6	43	19	A-7-6	CL
9		29 - 30.5		6.5	27	8	A-2-4	CL
1	333+00	0 - 1.5	Topsoil, tan-brown and red-brown sandy clay with chert fragments	16.5				
2		1.5 - 3		4.1	22	8	A-2-4	CL
3		4 - 5.5		5.5				
4		6.5 - 8		5.6				
5		9 - 10.5		6.3				
6		14 - 15.5	Red-brown, maroon and tan-brown silty clay with chert fragments	10.6	36	15	A-6	CL
7		19 - 20.5	Red-brown and tan-brown sandy clay with chert fragments	6.4				
8		24 - 25.5		11.3				
9		29 - 30.5		9.7	29	10	A-4	CL
6	333+59.2	14 - 15.5	Tan-brown, red-brown and gray silty clay with chert fragments	14.4	37	16	A-6	CL
1	335+00	0 - 1.5	Topsoil, tan-brown, red-brown and brown silty clay with chert fragments	8.5				
2		1.5 - 3		7.1				
3		4 - 5.5		7.3				
4		6.5 - 8	Tan-brown and orange-brown silty clay with chert fragments	8.2				
5		9 - 10.5		5.9				
6		14 - 15.5	Orange-brown and tan-brown sandy clay with chert fragments	8.4	23	9	A-2-4	CL
7		19 - 20.5	Orange-brown, tan-brown and brown clayey silt with chert fragments	17.7				
8		24 - 25.5		11.8				
1	336+50	1.5 - 3	Yellow-brown, red-brown and tan-brown sandy clay-sandy silt with chert fragments	15.8				
2		4 - 5.5		7.4	23	4	A-2-4	CL-ML
3		6.5 - 8		2.9				
4		9 - 10.5		10.1				
5		14 - 15.5	Red-brown and yellow-brown silty clay with chert fragments and chert sand	18.3				
6		19 - 20.5		16.5	42	19	A-7-6	CL

Bulk Sample Data

Sample No.	Description	In Situ Moisture (%)	Maximum Dry Density (pcf)	Optimum Moisture Content (%)	Moisture Range (%)	PL	LL	AASHTO Class	USCS Class
324+50, 0 - 10 feet	Tan-brown and brown sandy clay with chert fragments		117.8	12.8	6.6 - 24.1	18	31	A-6	CL
330+00, 0 - 12 feet	Red-brown, yellow-brown and tan-brown silty clay with chert fragments	10.2			6.0 - 16.6	18	31	A-6	CL
332+50, 0 - 18 feet	Orange-brown, red-brown and gray silty clay with chert fragments		123.5	11.6		15	23	A-2-4	CL
335+00, 0 - 10 feet	Tan-brown, red-brown and gray silty clay with chert fragments	6.5			5.9 - 8.5	16	25	A-2-4	CL

TYPE	YEAR	PROJECT NO.	SHEET NO.
Preliminary Dsgn	2010	BR-STP-320(4)	8
CONST.	2014	BR-STP-320(4)	22G

S&ME PROJECT #: 1811-10-055A	BASE INFO BY: HART FREELAND ROBERTS, INC.	DRAWN BY: DR
REVISION NO.: INITIAL	DATE: 11/29/2010	CHECKED BY: JMH
REVISION NO.:	DATE:	CHECKED BY:
REVISION NO.:	DATE:	CHECKED BY:

* Some soils on site were significantly wet of optimum. Additional handling and drying can be expected for these soils and will likely be required, particularly during wet portions of the year.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

SOIL DESCRIPTIONS

SR 320 IMPROVEMENTS

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
Preliminary Dsgn	2010	BR-STP-320(4)	9
CONST.	2014	BR-STP-320(4)	22H

S&ME PROJECT #: 1811-10-055A	BASE INFO BY: HART FREELAND ROBERTS, INC.	DRAWN BY: DR
REVISION NO.: INITIAL	DATE: 11/29/2010	CHECKED BY: JMH
REVISION NO.:	DATE:	CHECKED BY:
REVISION NO.:	DATE:	CHECKED BY:

Soil Descriptions for Sheet 6

Spoons/Tubes Data

Sample No.	Station No.	Depth (feet)	Description	In-Situ Moisture (%)	LL	PI	AASHTO Class	USCS Class
1	Banks, 3+00	1 - 2.5	Red-brown and brown clayey silt with chert fragments	12.6				
2		3.5 - 5		15.4				
3		6 - 7.5	Red-brown, yellow-brown and brown silty clay with chert fragments	19.3	38	17	A-6	CL
4		8.5 - 10		16.8				
1	Bel Air, 0+50	0 - 1.5	Topsoil, tan-brown silty clay with chert fragments	12.7				
2		1.5 - 3		7.7				
3		4 - 5.5		5.6				
4		6.5 - 8	Orange-brown, tan-brown and brown silty clay with chert fragments and some chert sand	6.1	25	8	A-2-4	CL
5		9 - 10.5		11.7				
6		14 - 15.5	Orange-brown and brown silty clay with chert fragments	10.9	44	19	A-7-6	CL
7		19 - 20.5	Orange-brown and tan-brown silty clay with ah few chert fragments	29.7	58	31	A-7-6	CH
8		26 - 27.5	Orange-brown and brown silty clay with chert fragments	28.4				
Tube		24 - 26	Orange-brown and tan-brown silty clay with a few chert fragments	28.9				
1	Bel Air, 1+50	0 - 1.5	Topsoil, tan-brown silty clay with chert fragments and some chert sand	11.4				
2		1.5 - 3		8.1				
3		4 - 5.5		8.6				
4		6.5 - 8	Orange-brown and tan-brown silty clay with chert fragments and some chert sand		27	9	A-2-4	CL
5		9 - 10.5		11.3				
6		14 - 15.5		2.7	45	21	A-7-6	CL
7		19 - 20.5		13.8				
8		24 - 25.5	Orange-brown and tan-brown silty clay with chert fragments	19.2*				
9		29 - 30.5		16.0*	44	21	A-7-6	CL
Tube		16 - 17	Orange-brown, red-brown and tan-brown silty clay with chert fragments	16.7*				
1	Bel Air, 2+60	0 - 1.5	Brown and tan-brown chert sand, chert gravel, and limestone gravel	10.0				
2		1.5 - 3	Brown silty clay	28.9				
3		4 - 5.5	Yellow-brown chert fragments, silty sand, and silty clay	5.3				
4		6.5 - 8						
5		9 - 10.5		7.0	29	11	A-6	CL
6		14 - 15.5	Yellow-brown and red-brown silty clay with chert fragments and chert sand	7.8	31	11	A-6	CL
1	Bel Air, 3+45	0 - 1.5	Brown and gray silty sand and rock fragments	1.2				
1	Everett, 0+50	0 - 1.5	Topsoil and gravel	23.3				
2		1.5 - 3	Red-brown and yellow-brown clayey silt with chert fragments	6.1				
3		4 - 5.5		15.8				
4		6.5 - 8	Yellow-brown, brown and red-brown sandy silt with chert fragments	10.9				
1	Everett, 0+50A	6.5 - 8	Yellow-brown, brown and red-brown sandy silt with chert fragments	11.3				
2		9 - 10.5		11.9				
1	Everett, 2+50	0 - 1.5	Topsoil, tan-brown and brown silty clay with chert fragments	13.1				
2		1.5 - 3		10.4				
3		4 - 5.5	Red-brown and brown silty clay with chert fragments	12.4				
4		6.5 - 8		14.5				
5		9 - 10.5	Red-brown, yellow-brown and brown silty clay with chert fragments	23.4	61	36	A-7-6	CH
6		14 - 15.5	Red-brown, yellow-brown and gray clayey silt with chert fragments	26.5				
1	Hamlet, 0+50	0 - 1.5	Topsoil, tan-brown and red-brown clayey silty with chert fragments	9.9				
2		1.5 - 3		9.8				
3		4 - 5.5		12.0				
4		6.5 - 8	Gray and tan-brown chert with clayey silt	8.1				
5		9 - 10.5	Tan-brown and orange-brown silty clay and chert fragments	12.0	42	22	A-2-7	CL
1	Hamlet, 1+00	0 - 1.5	Topsoil, brown, red-brown and yellow-0brown silty clay with chert fragments	9.7				
2		1.5 - 3		10.8				
3		4 - 5.5		8.6				
4		6.5 - 8	Yellow-brown, dark gray and red-brown silty clay with chert fragments	11.1				
5		9 - 10.5	Red-brown, yellow-brown and tan-brown silty clay with chert fragments and chert sand	8.5	38	17	A-6	CL
6		14 - 15.5	Yellow-brown, brown and red-brown clayey sandy silt with chert fragments	10.2				
7		19 - 20.5	Yellow-brown and gray clayey silt with chert fragments	11.6	40	13	A-6	ML
8		24 - 25.5	Yellow-brown and red-brown chert and sandy clay	13.8				
9		29 - 30.5	Yellow-brown, ran-brown and tan clayey silt	15.1	45	17	A-7-6	ML
1	Hamlet, 1+50	0 - 1.5	Topsoil and gravel, dark brown and brown clayey silt with rock fragments	7.2				
2		1.5 - 3		8.8				
3		4 - 5.5		10.7				
4		6.5 - 8	Tan-brown, yellow-brown and red-brown sandy silty clay		27	9	A-2-4	CL
5		9 - 10.5	Yellow-brown, red-brown and brown silty clay with chert fragments	6.1				
6		14 - 15.5		8.0	34	14	A-6	CL
7		19 - 20.5	Red-brown and brown chert fragments and chert sand	14.5				
8		24 - 25.5		9.1				
1	Hamlet, 2+00	0 - 1.5	Brown sandy silty with chert fragments	6.2				
2		1.5 - 3		6.1				
3		4 - 5.5	Brown and red-brown silty clay with chert fragments and chert sand	0.7	24	9	A-2-4	CL
4		6.5 - 8	Yellow-brown and red-brown silty clay with chert fragments and chert sand	7.5	25	8	A-4	CL
5		9 - 10.5		16.4				
6		14 - 15.5		12.4				
7		19 - 20.5	Red-brown and yellow-brown silty sandy clay with chert fragments	3.4	25	10	A-2-4	CL
8		24 - 25.5		4.4				

Spoons/Tubes Data (*continued from below*)

Sample No.	Station No.	Depth (feet)	Description	In-Situ Moisture (%)	LL	PI	AASHTO Class	USCS Class
1	Hamlet, 2+50	0 - 1.5	Brown and tan-brown clayey silt with chert fragments and chert sand	6.2				
2		1.5 - 3		6.7				
3		4 - 5.5		11.2				
4		6.5 - 8	Yellow-brown, gray and purple-brown silty clay with chert fragments	26.2				
5		9 - 10.5		29.1	38	14	A-6	CL
6		14 - 15.5		18.9	38	14	A-6	CL
7		19 - 20.5		25.2				
1	Hamlet, 3+00	0 - 1.5	Topsoil and asphalt fragments, dark brown, brown and gray clayey silt with chert fragments	13.5				
2		1.5 - 3		10.3				
3		4 - 5.5	Red-brown and yellow-brown silty clay with chert fragments	12.8	35	15	A-6	CL
4		6.5 - 8		14.5				
5		9 - 10.5		17.8				
6		14 - 15.5		24.1				
7		19 - 20.5	Tan-brown, yellow-brown and brown silty clay and chert fragments with chert sand	7.1	35	14	A-6	CL

Bulk Sample Data

Sample No.	Description	In Situ Moisture (%)	Maximum Dry Density (pcf)	Optimum Moisture Content (%)	Moisture Range (%)	PL	LL	AASHTO Class	USCS Class
Bel Air, 0+50, 0 - 14 feet	Tan-brown, orange-brown and brown silty clay with chert fragments and some chert sand	9.5			5.6 - 12.7	17	30	A-6	CL
Bel Air, 1+50, 0 - 10 feet	Tan-brown and orange-brown silty clay with chert fragments and some chert sand	18.2*	119.2	12	8.1 - 11.4	24	43	A-7-6	CL
Bel Air, 1+50, 10 - 19 feet	Orange-brown, red-brown and tan-brown silty clay with chert fragments	8.8			2.7 - 11.3	16	26	A-2-4	CL
Everett, 2+50, 0 - 10 feet	Tan-brown, brown and red-brown silty clay with chert fragments	11.6			10.4 - 23.4	20	34		CL
Hamlet, 1+00, 0 - 10 feet	Brown, red-brown and yellow-brown silty clay with chert fragments and chert sand	5.9	122.3	12.4	8.5 - 11.1	17	26	A-4	CL
Hamlet, 2+00, 0 - 10 feet	Brown, red-brown and yellow-brown silty clay - clayey silt with chert fragments and chert sand	4.6			0.7 - 16.4	18	25	A-2-4	CL-ML

* Some soils on site were significantly wet of optimum. Additional handling and drying can be expected for these soils and will likely be required, particularly during wet portions of the year.

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

SOIL DESCRIPTIONS

SR 320 IMPROVEMENTS

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
Preliminary Dsgn	2010	BR-STP-320(4)	10
CONST.	2014	BR-STP-320(4)	22-I

S&ME PROJECT #: 1811-10-055A	BASE INFO BY: HART FREELAND ROBERTS, INC.	DRAWN BY: DR
REVISION NO.: INITIAL	DATE: 11/29/2010	CHECKED BY: JMH
REVISION NO.:	DATE:	CHECKED BY:
REVISION NO.:	DATE:	CHECKED BY:

Site Preparation

1. Demolition or removal of existing structures in proposed roadway areas will be required. If present in proposed paved roadway areas, grade slabs and shallow foundations shall be removed. If present outside roadway areas, it may be possible to leave grade slabs and shallow foundations in place, depending on proposed grades.

2. If present, existing basements, inground pools and septic tanks shall be excavated with 4H:1V side slopes where they will occur under future roadway areas. These areas shall be backfilled with properly compacted fill.

3. Abandoned utility lines shall be removed and replaced with compacted fill.

4. After demolition, trees, stumps, brush, topsoil and other undesirable materials shall be stripped from construction areas and disposed of off-site. The topsoil may be stockpiled for re-use in grass covered areas.

5. Trees, stumps, and root balls should be completely grubbed. Clearing and grubbing shall extend at least 10 feet beyond the construction limits.

6. In areas where drainage ditches and creeks are present, and in low-lying areas that currently accept surface runoff from the surrounding area, undercutting of several feet of soil may be required to reach stable soils suitable for fill placement or roadway construction. Alternatively, it may be possible to stabilize these areas with rip rap size stone. The need to undercut or stabilize these areas shall be based on field observations and proofrolling after the completion of stripping and prior to fill placement. Proofrolling is described below.

7. After completion of stripping in areas to receive fill, and once grade is achieved in cut areas, proofrolling the exposed surface of the subgrade soils shall be performed using a fully loaded dump truck or other heavy equipment approved by the geotechnical engineer. The proofrolling operation shall traffic the construction area with parallel passes of the vehicle starting at one side of the area and continuing to the other. Each pass shall overlap the preceding pass to ensure complete coverage. The geotechnical engineer shall be present to observe the proofrolling operations and to provide recommendations should unstable soils be encountered.

8. In cut areas, the top one foot of subgrade soils shall be scarified and re-compacted in accordance with the recommendations provided in Note 2 of the Compacted Fill section.

Compacted Fill

1. Fill soils shall consist of low to moderately plastic clay or silt with a plasticity index of less than thirty (PI<30) and a standard Proctor maximum dry density greater than 95 pounds per cubic foot. The fill shall contain no rock fragments larger than 4 inches in any dimension, and no organic matter.

2. Fill shall be placed in thin lifts with a maximum loose thickness of 8 inches, then compacted to 95 percent of the standard Proctor maximum dry density, with a moisture content within 3 percent of the optimum moisture content, depending on the shape of the Proctor curve. Wetting or drying of these soils may be required, depending on the time of year site grading is performed. The top one foot beneath pavements shall be compacted to 100 percent standard Proctor compaction. The edge of the compacted fill shall extend at least 10 feet beyond the outside edge of pavements before sloping. Testing the density and moisture content of each lift shall be performed before placing additional lifts.

3. Due to their plasticity, cut soils in the vicinity of Stations 266+00 and 292+00 shall be blended with lower plasticity soils prior to using them as compacted fill. Alternatively, they may be placed near the base of deep fills where no significant variations in moisture content are expected to occur. High plasticity soils may be present in additional cut areas.

Groundwater

1. Based on the test boring results, groundwater is not expected to present significant site development problems. However, perched groundwater conditions may occur at this site, particularly during periods of heavy rain. If groundwater is encountered, the contractor shall provide adequate dewatering to maintain the groundwater level below the bottom of excavations, except when the excavation is in rock. Pumping from sumps constructed outside the excavation should be effective in dewatering the soils encountered in our exploration. Water from the pumps shall be discharged beyond the construction boundaries to limit its affect on construction activities.

Slopes

1. Cut and compacted fill slopes shall have a maximum slope inclination of 2 horizontal to 1 vertical (2H:IV).

2. A 10 foot wide bench shall be constructed at the mid point of the slope for each slope 40 feet in height or greater. The benches shall be sloped down toward the up-hill slope face at a slope of 12H:1V, and shall be cambered to allow gravity drainage.

3. A concrete-lined drainage swale shall be constructed at the top of each slope, a maximum of 10 feet away from the slope crest. A concrete lined drainage swale shall also be constructed at the base of the up-hill slope face on the benches.

4. Vegetation shall be established as quickly as possible on slopes to prevent erosion. Erosion control measures shall be constructed in accordance with TDOT Guidelines.

5. Should shallow slides or slumps occur, they shall be repaired promptly to prevent further slope erosion. Repair can typically be accomplished by removing the slide material, excavating a bench within the failure zone, and backfilling the failure zone with crushed rock.

6. A qualified geotechnical engineer or engineering geologist shall observe each cut slope at the time of construction to check for seepage, slickensided zones, down-slope dipping, or other unfavorable geologic conditions. If such conditions exist, the slope must be flattened or other corrective measures undertaken.

California Bearing Ratio

7. A CBR value of 3 shall be used for flexible pavement design of the proposed roadways.

JAMIE M. HUDSON
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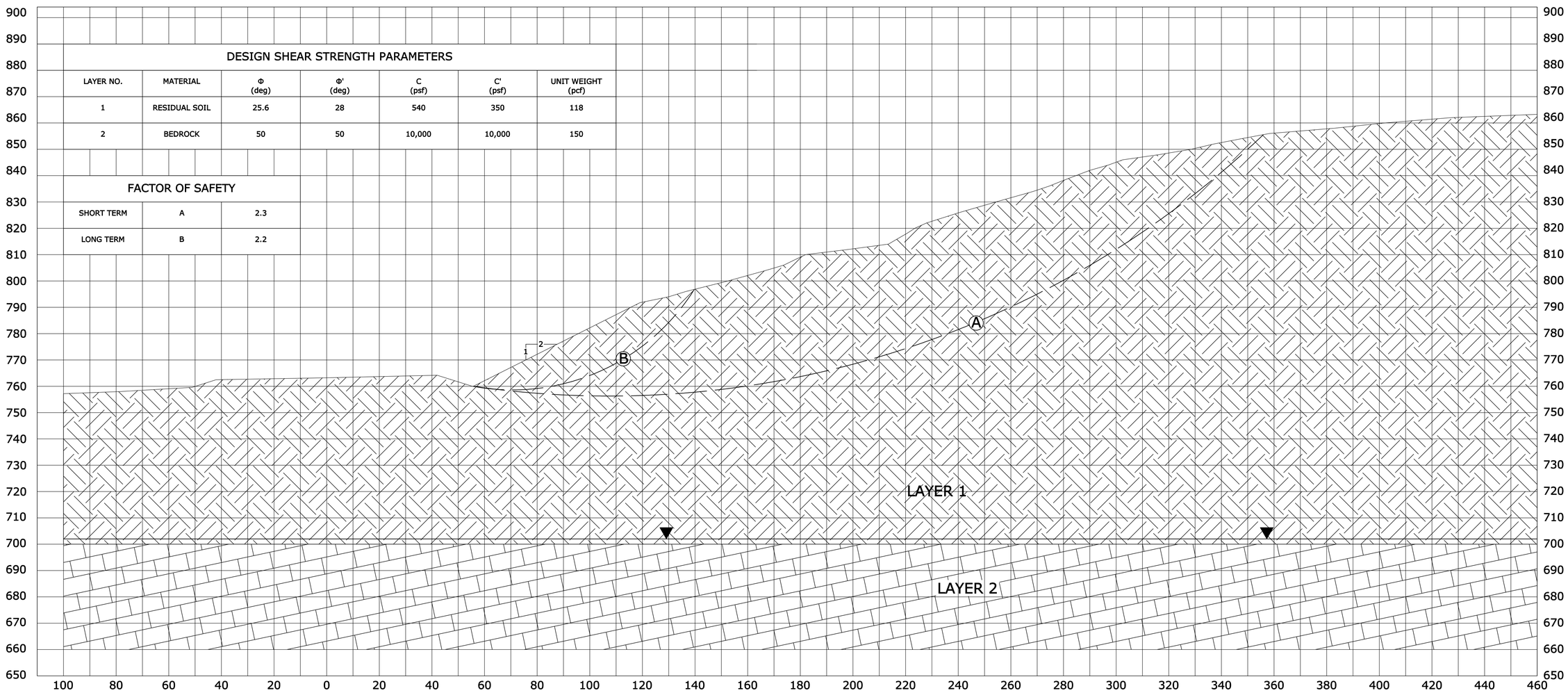
SPECIAL NOTES AND SPECIFICATIONS

SR 320 IMPROVEMENTS

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
Preliminary Dsgn	2010	BR-STP-320(4)	11
CONST.	2014	BR-STP-320(4)	22J

S&ME PROJECT #: 1811-10-055A	BASE INFO BY: HART FREELAND ROBERTS, INC.	DRAWN BY: DR
REVISION NO.: INITIAL	DATE: 11/29/2010	CHECKED BY: JMH
REVISION NO.:	DATE:	CHECKED BY:
REVISION NO.:	DATE:	CHECKED BY:



DESIGN SHEAR STRENGTH PARAMETERS

LAYER NO.	MATERIAL	Φ (deg)	Φ' (deg)	C (psf)	C' (psf)	UNIT WEIGHT (pcf)
1	RESIDUAL SOIL	25.6	28	540	350	118
2	BEDROCK	50	50	10,000	10,000	150

FACTOR OF SAFETY

SHORT TERM	A	2.3
LONG TERM	B	2.2

LEGEND

- RESIDUAL SOIL
- BEDROCK
- GROUNDWATER LEVEL

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

STATION 295+50
SLOPE STABILITY CROSS SECTION

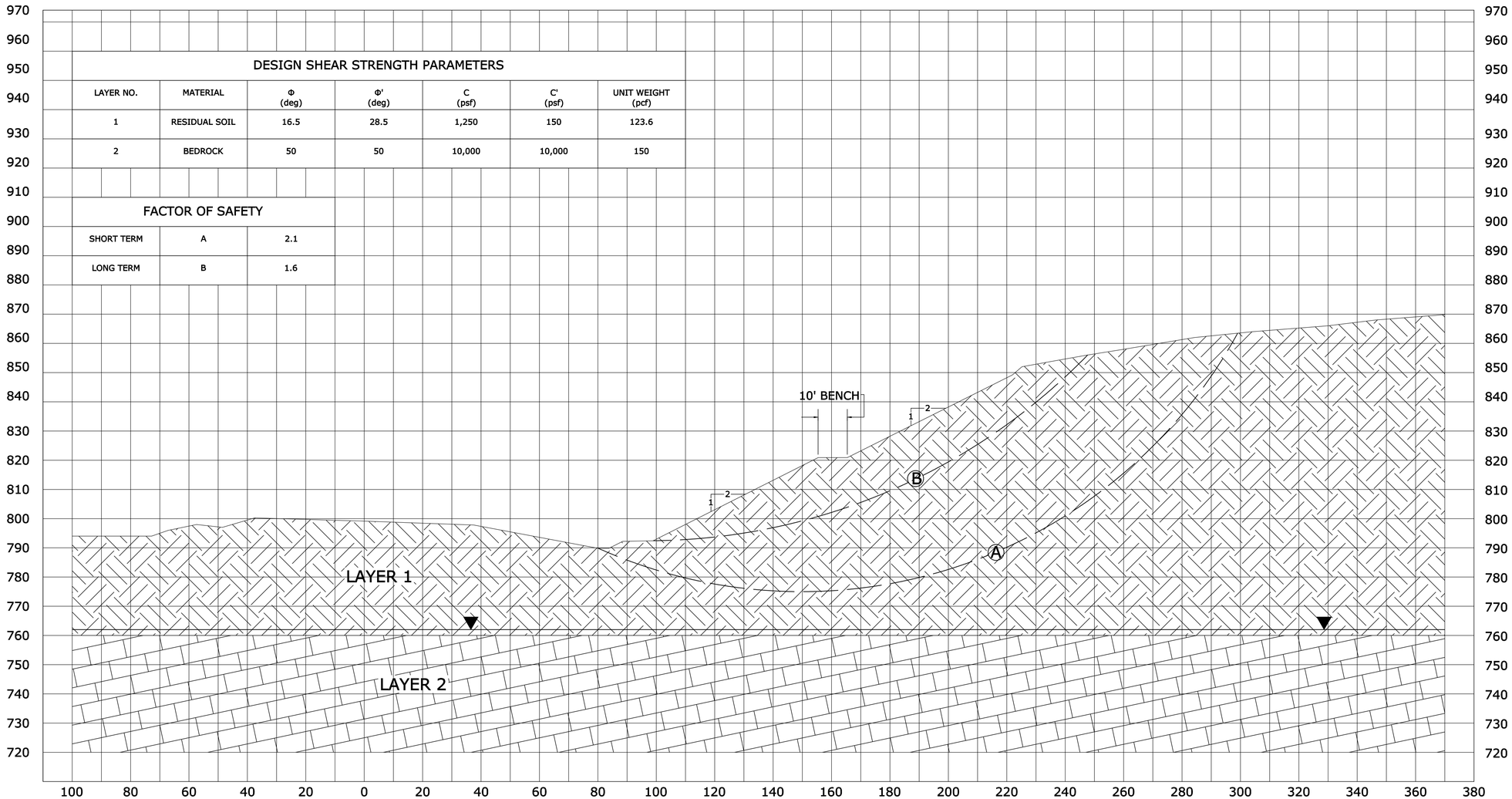
STATE ROUTE 320

VERT SCALE: AS SHOWN
HORIZ. SCALE: 1"=20'
VERT. SCALE: 1"=20'

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
Preliminary Dsgn	2010	BR-STP-320(4)	12
CONST.	2014	BR-STP-320(4)	22K

S&ME PROJECT #: 1811-10-055A	BASE INFO BY: HART FREELAND ROBERTS, INC.	DRAWN BY: DR
REVISION NO.: INITIAL	DATE: 11/29/2010	CHECKED BY: JMH
REVISION NO.:	DATE:	CHECKED BY:
REVISION NO.:	DATE:	CHECKED BY:



DESIGN SHEAR STRENGTH PARAMETERS

LAYER NO.	MATERIAL	Φ (deg)	Φ' (deg)	C (psf)	C' (psf)	UNIT WEIGHT (pcf)
1	RESIDUAL SOIL	16.5	28.5	1,250	150	123.6
2	BEDROCK	50	50	10,000	10,000	150

FACTOR OF SAFETY

SHORT TERM	A	2.1
LONG TERM	B	1.6

LEGEND

- RESIDUAL SOIL
- BEDROCK
- GROUNDWATER LEVEL

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DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

STA 317+00
SLOPE STABILITY CROSS SECTION

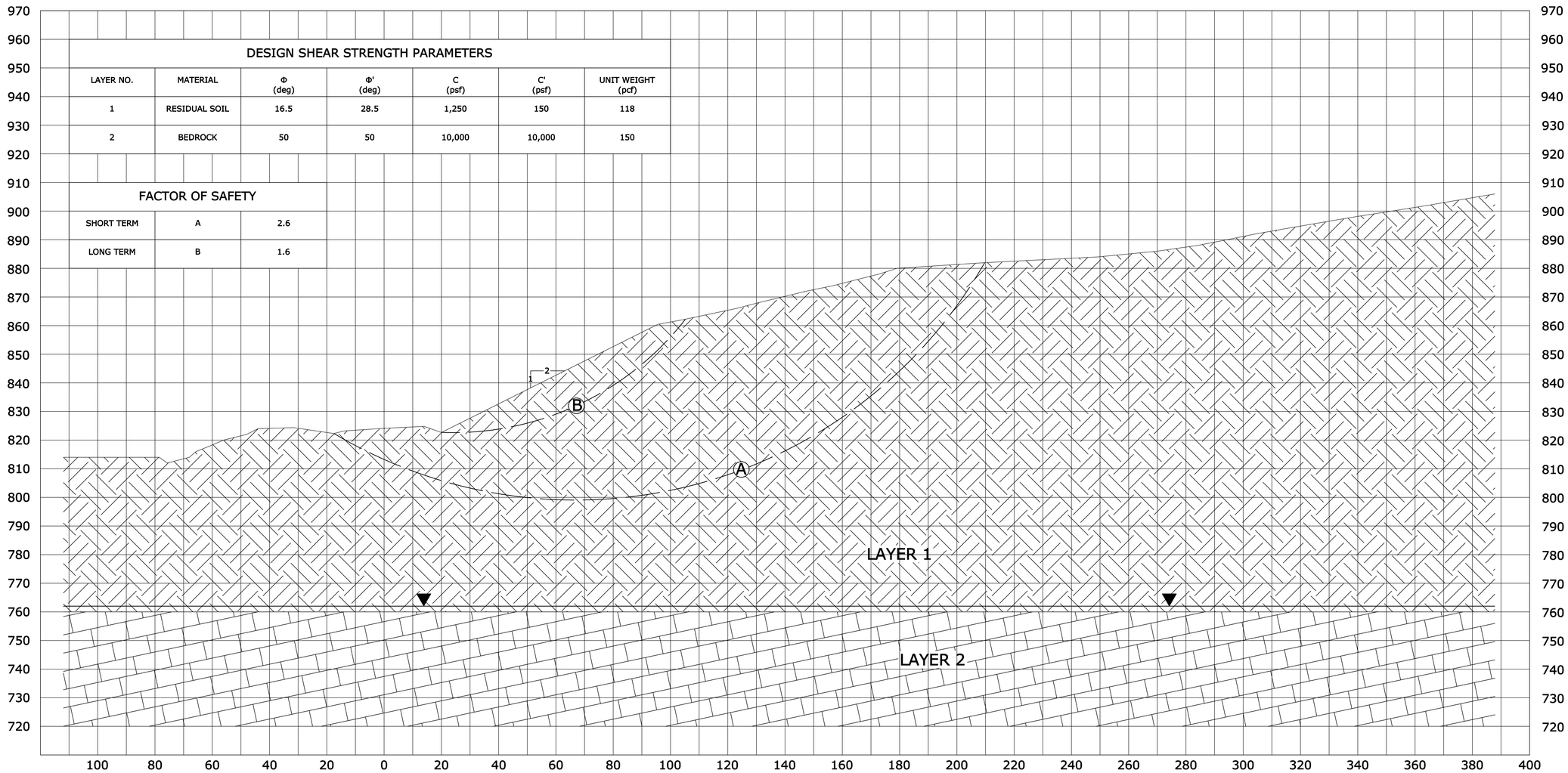
STATE ROUTE 320

VERT SCALE: AS SHOWN
HORIZ. SCALE: 1"=20'
VERT. SCALE: 1"=20'

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
Preliminary Dsgn	2010	BR-STP-320(4)	13
CONST.	2014	BR-STP-320(4)	22L

S&ME PROJECT #: 1811-10-055A	BASE INFO BY: HART FREELAND ROBERTS, INC.	DRAWN BY: DR
REVISION NO.: INITIAL	DATE: 11/29/2010	CHECKED BY: JMH
REVISION NO.:	DATE:	CHECKED BY:
REVISION NO.:	DATE:	CHECKED BY:



DESIGN SHEAR STRENGTH PARAMETERS

LAYER NO.	MATERIAL	Φ (deg)	Φ' (deg)	C (psf)	C' (psf)	UNIT WEIGHT (pcf)
1	RESIDUAL SOIL	16.5	28.5	1,250	150	118
2	BEDROCK	50	50	10,000	10,000	150

FACTOR OF SAFETY

SHORT TERM	A	2.6
LONG TERM	B	1.6

LEGEND

- RESIDUAL SOIL
- BEDROCK
- GROUNDWATER LEVEL

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

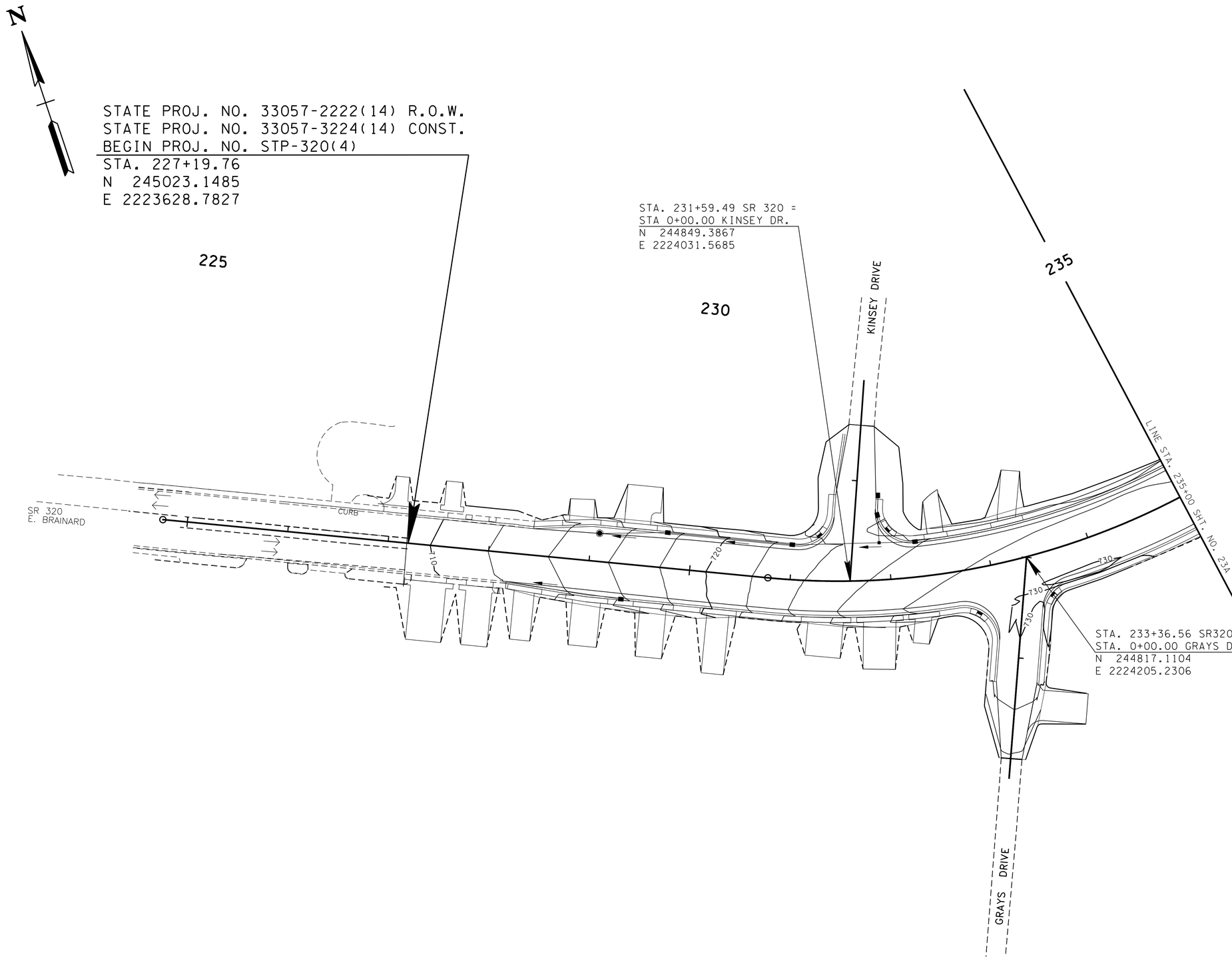
BEL AIR ROAD STATION 1+50
SLOPE STABILITY CROSS SECTION

STATE ROUTE 320

VERT SCALE: AS SHOWN
HORIZ. SCALE: 1"=20'
VERT. SCALE: 1"=20'

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	23



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10/2/2014

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED CONTOURS

BEG. PROJ. TO STA. 235+00

SCALE: 1"= 50'

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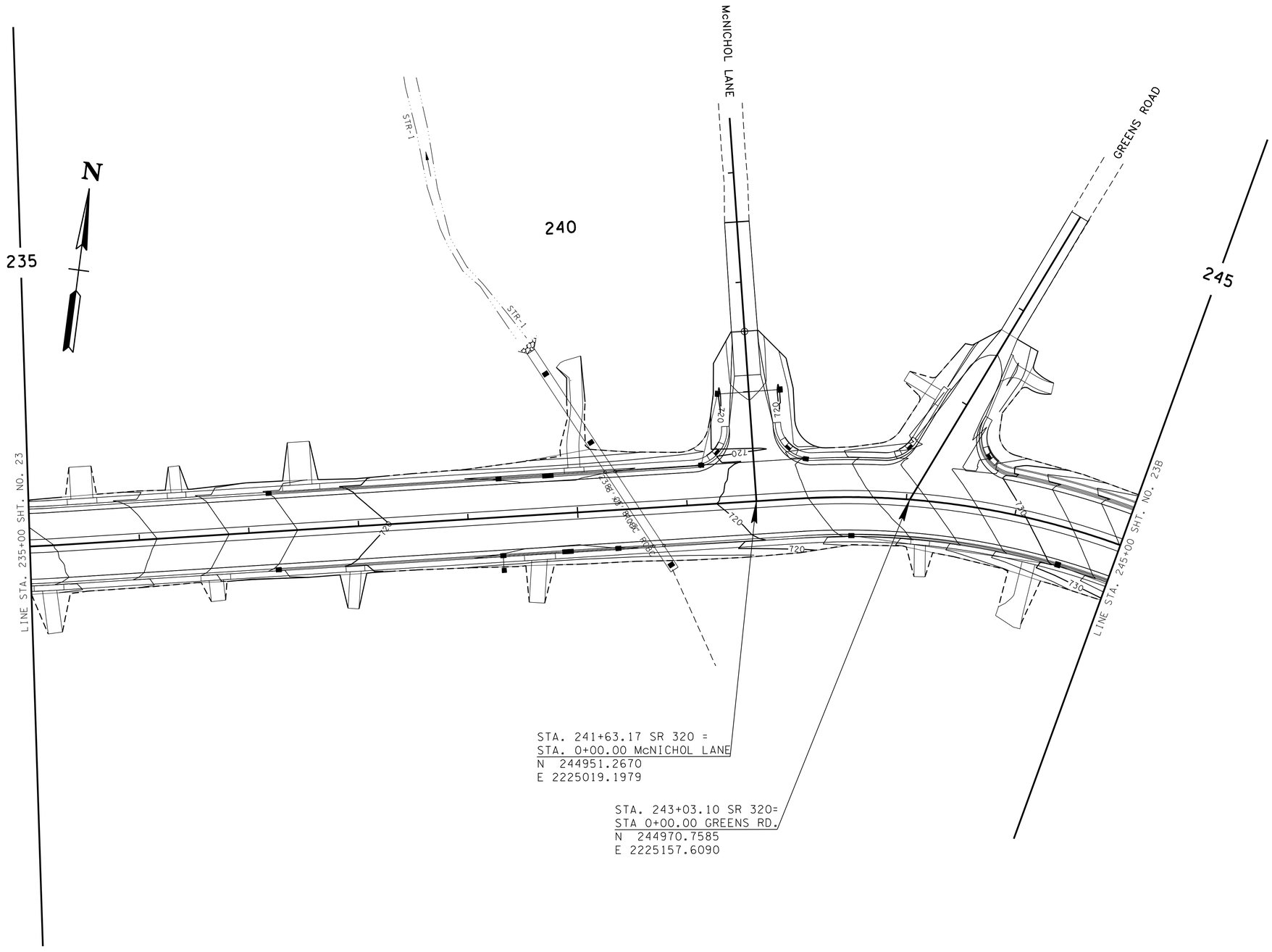
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	23A



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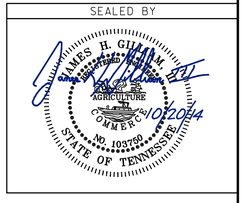

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED CONTOURS

STA. 235+00 TO STA. 245+00

SCALE: 1"= 50'

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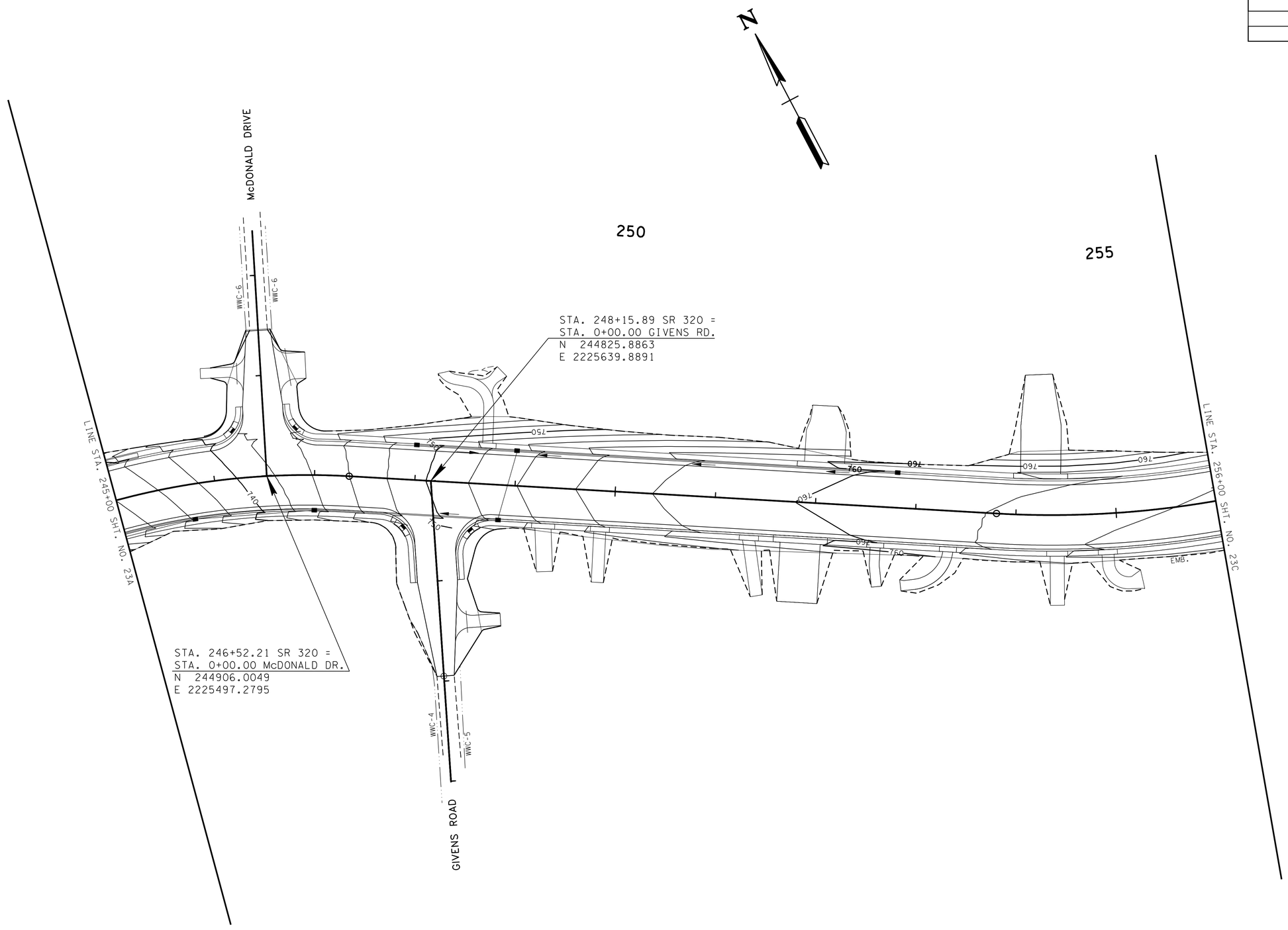
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	23B

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.



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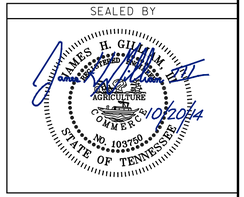

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED CONTOURS

STA. 245+00 TO STA. 256+00

SCALE: 1"= 50'

8/22/2013 2:44:34 PM
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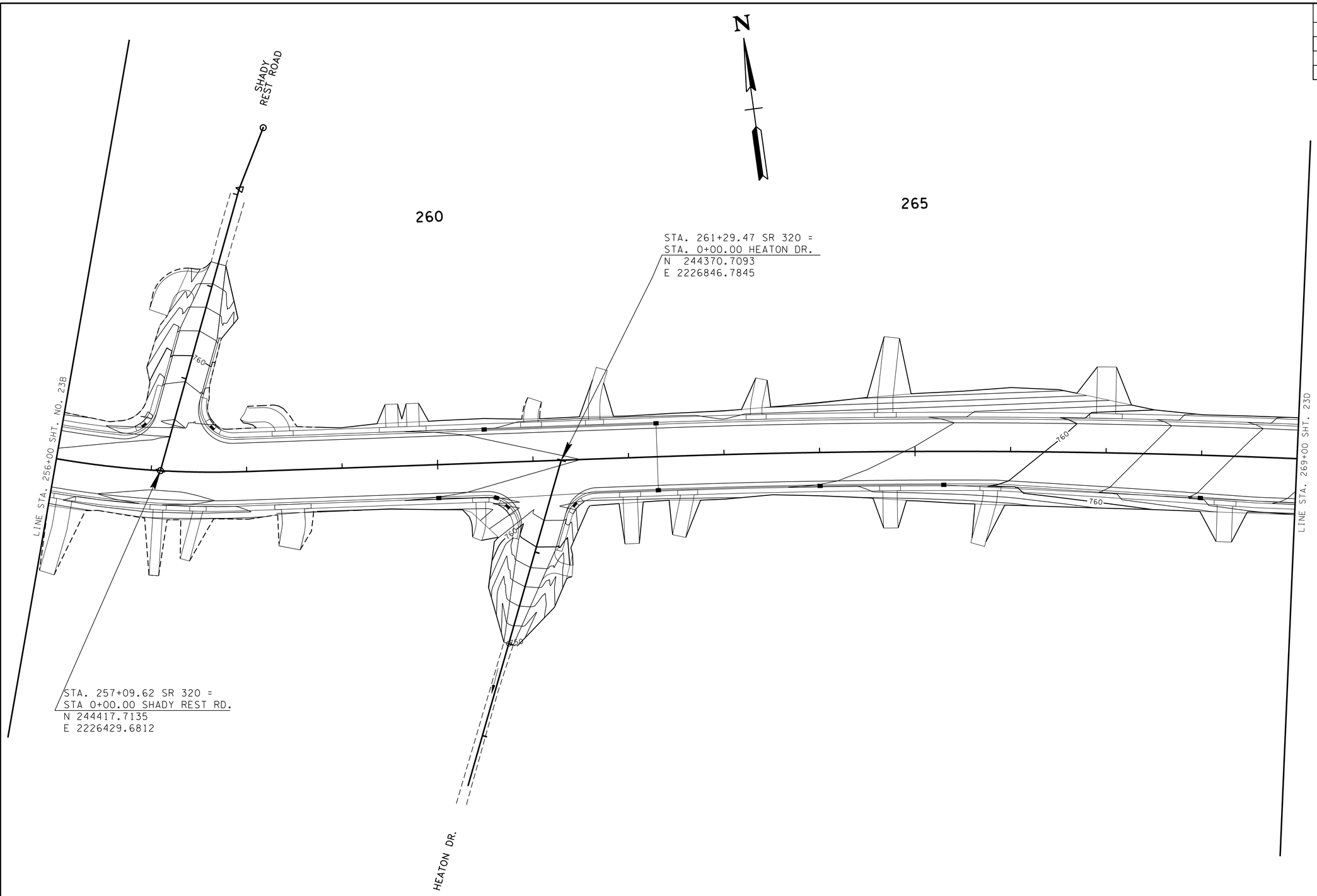
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	23C



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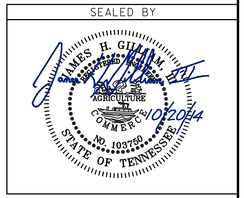

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED CONTOURS

STA. 256+00 TO STA. 269+00

SCALE: 1"= 50'

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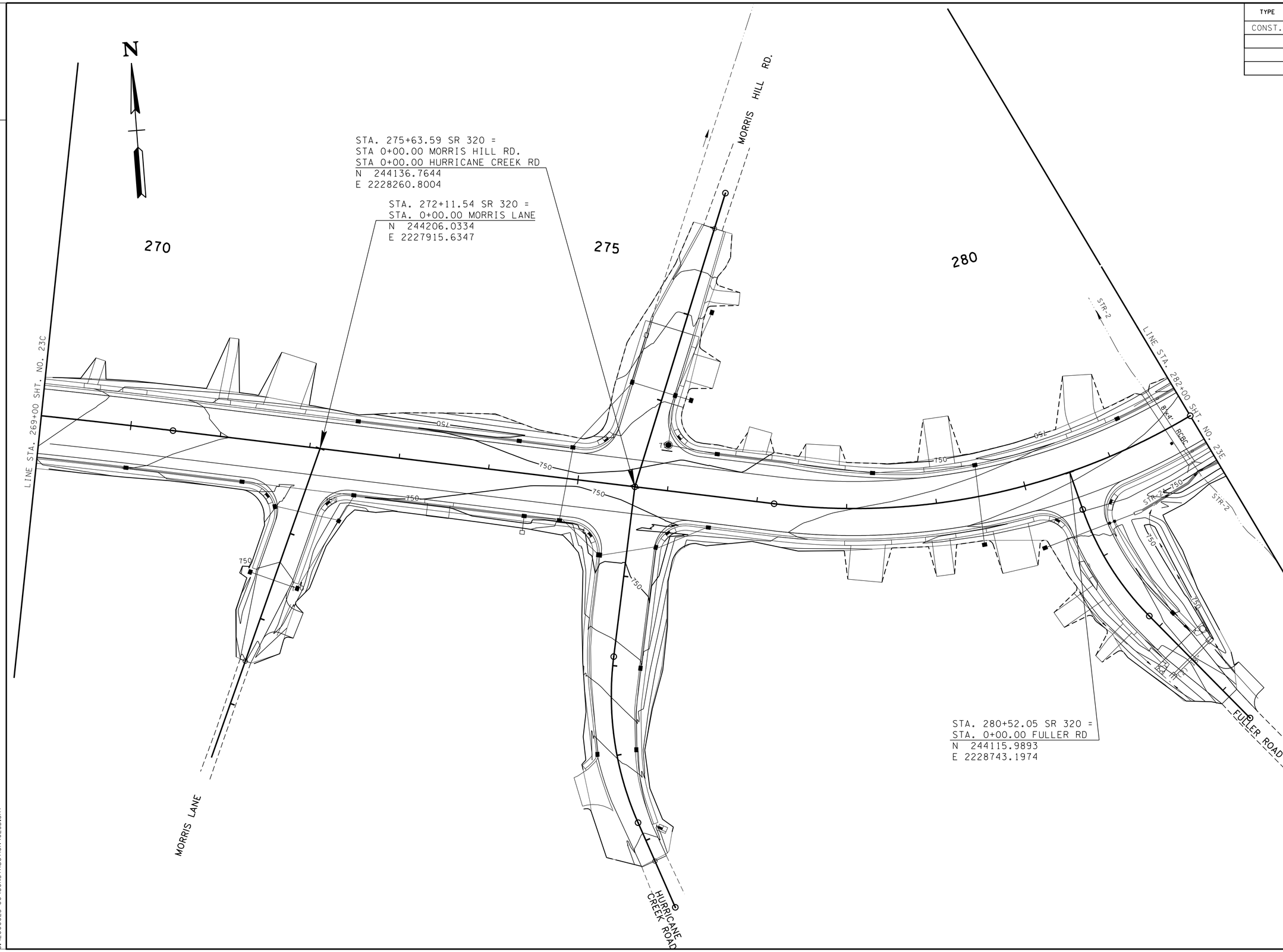
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	23D

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.



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8/10/2014

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED CONTOURS

STA. 269+00 TO STA. 282+00

SCALE: 1"= 50'

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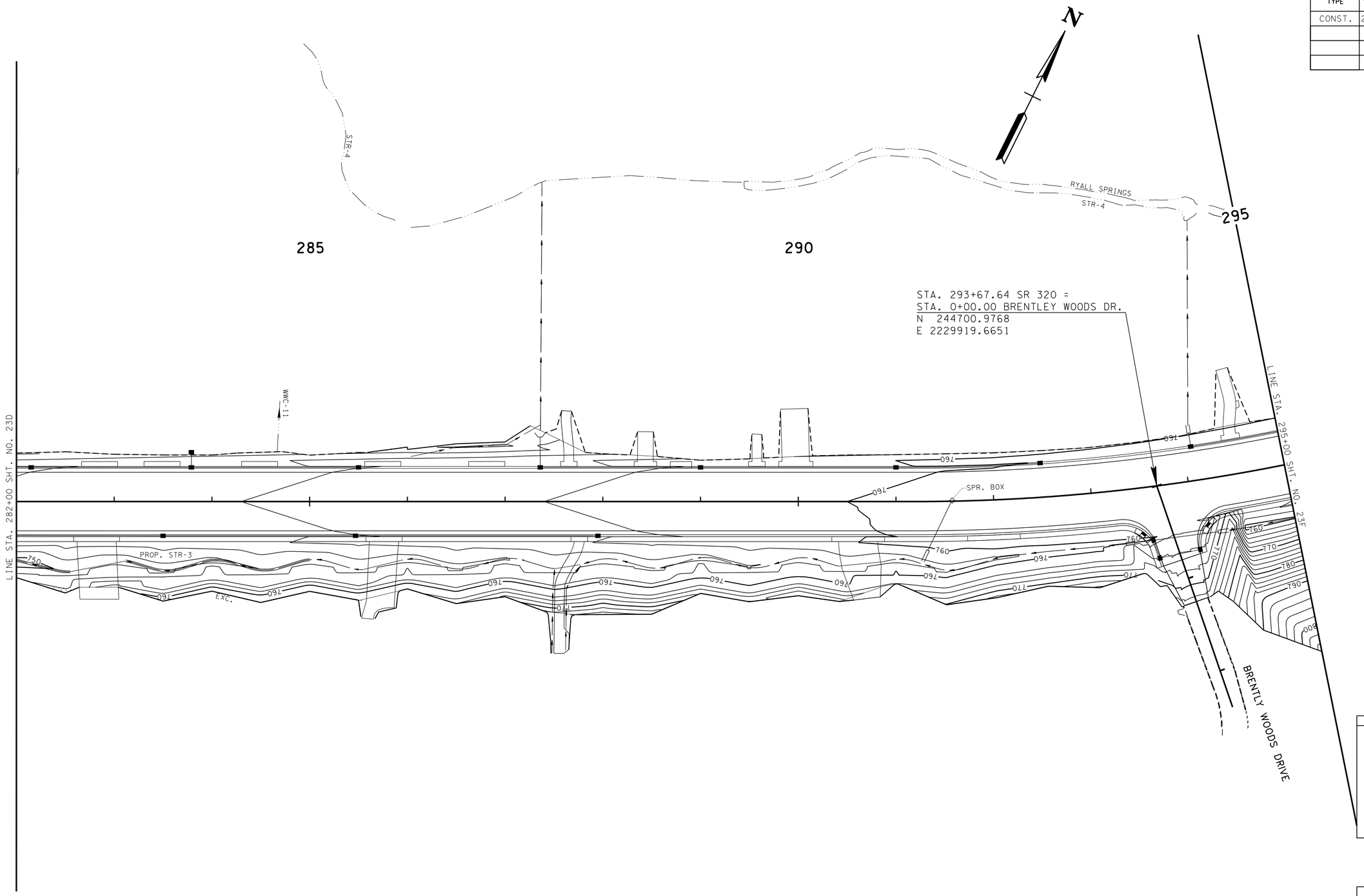
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	23E

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.



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STATE OF TENNESSEE
10/2/2014

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED CONTOURS

STA. 282+00 TO STA. 295+00

SCALE: 1"= 50'

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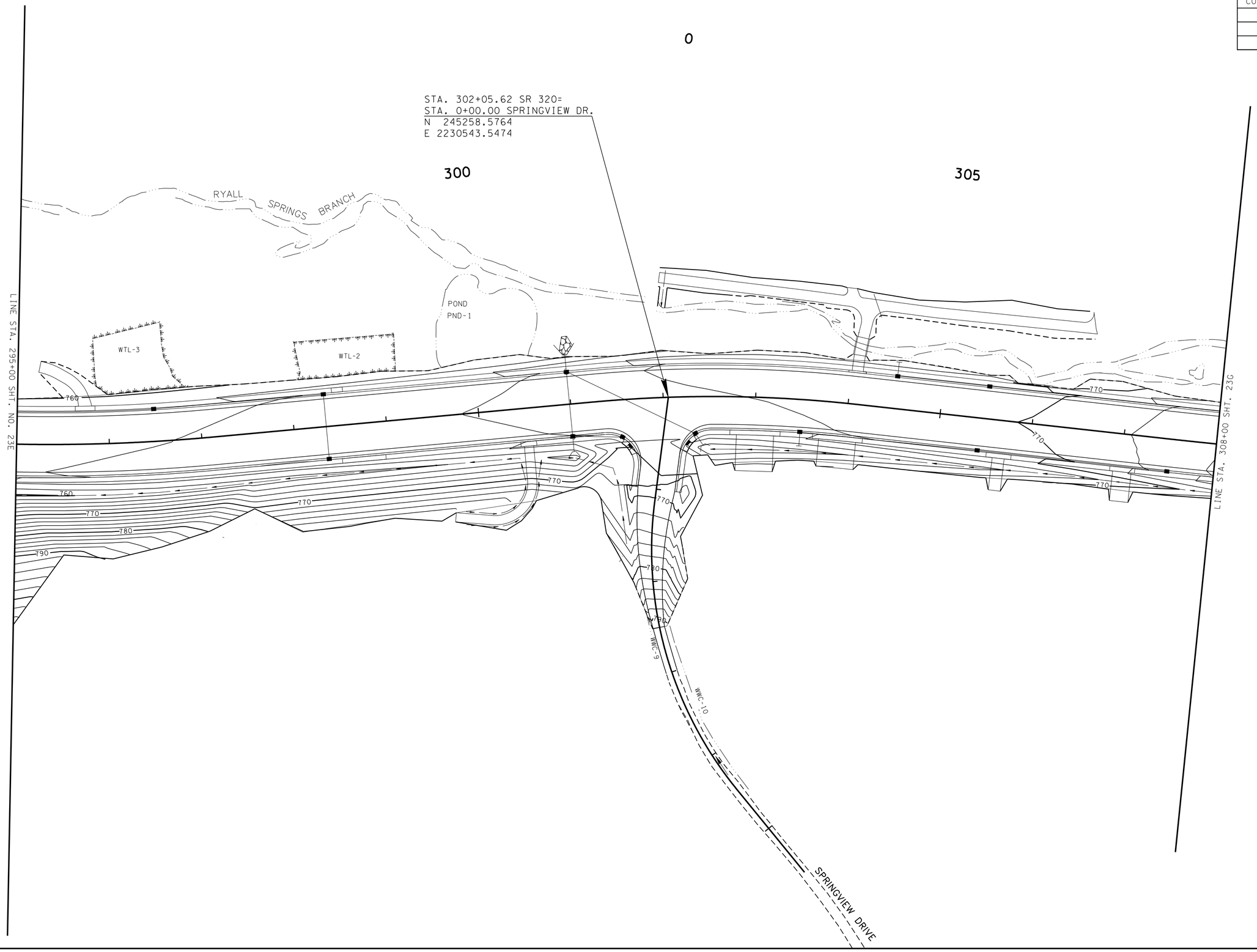
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	23F



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COMMERCE
NO. 103795
STATE OF TENNESSEE
10/20/14

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED CONTOURS

STA. 295+00 TO STA. 308+00

SCALE: 1"= 50'

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	23G

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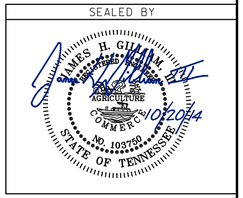

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED CONTOURS

STA. 308+00 TO STA. 321+00

SCALE: 1"= 50'

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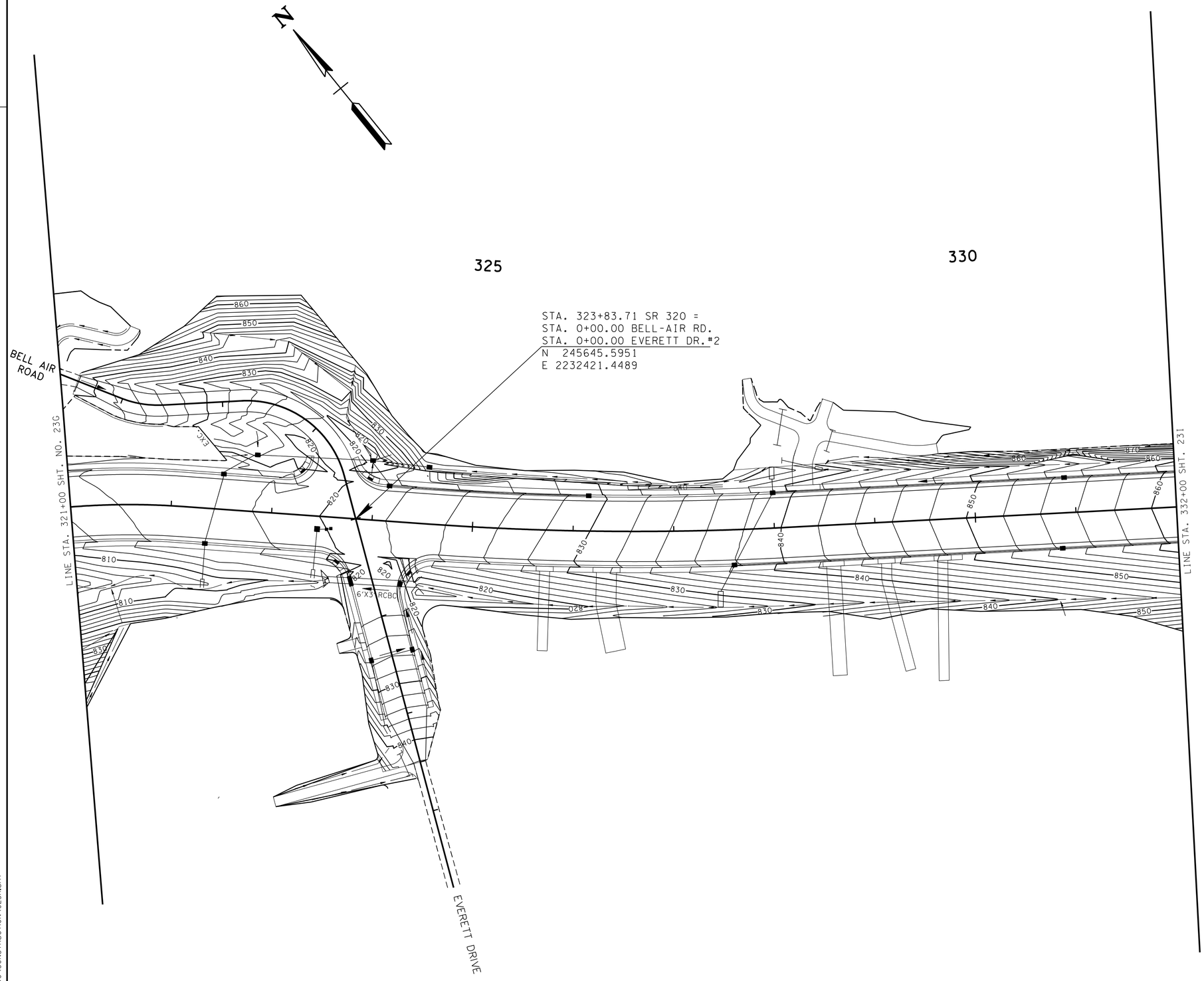
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	23H



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COMMERCE
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STATE OF TENNESSEE
10/2014

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED CONTOURS

STA. 321+00 TO STA. 332+00

SCALE: 1"= 50'

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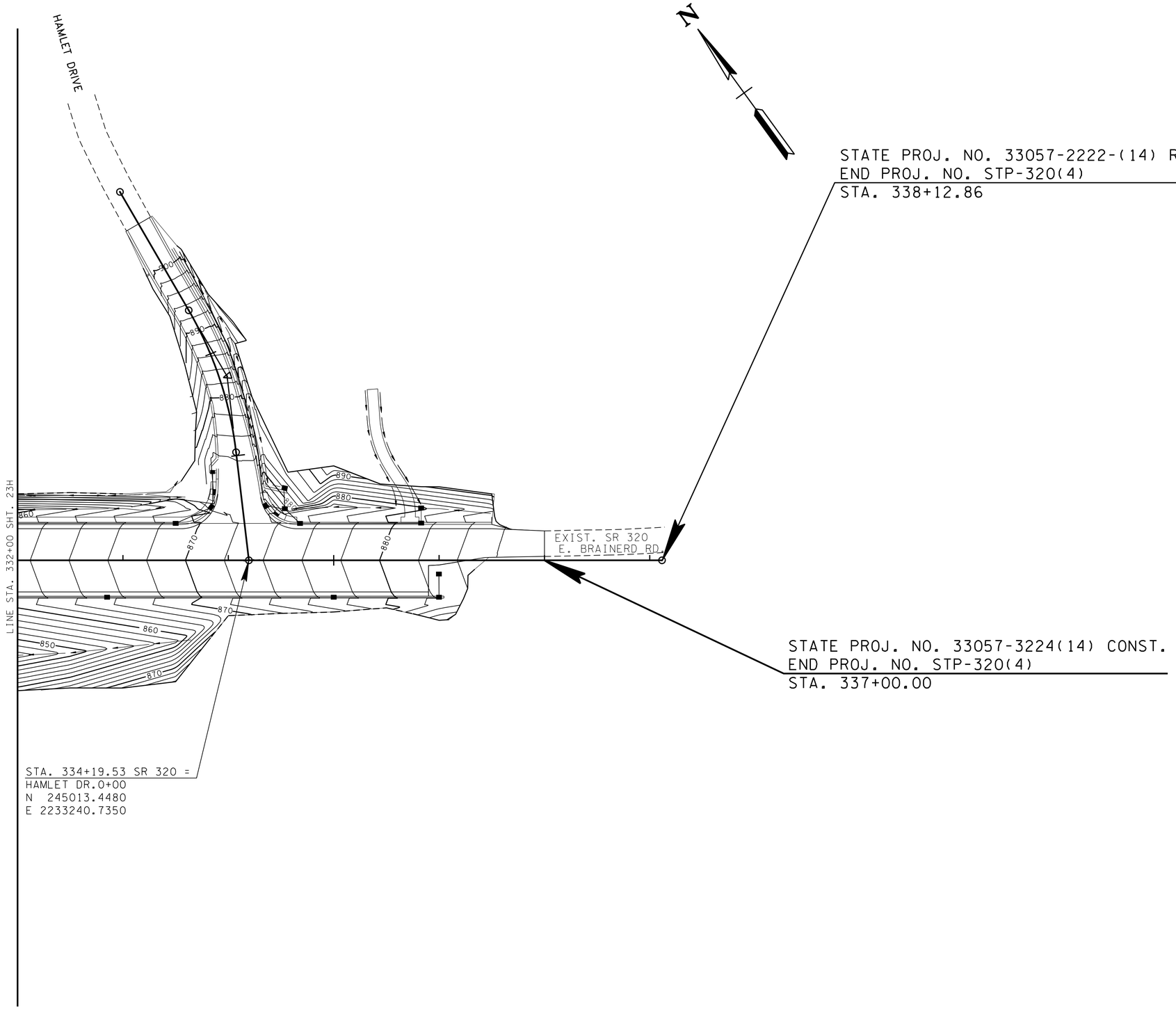
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	STP-320(4)	23I

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.



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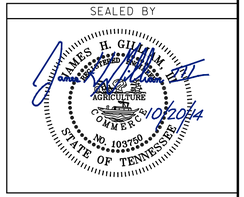

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED CONTOURS

STA. 332+00 TO END PROJECT

SCALE: 1"= 50'

2/9/2013 2:38:51 PM
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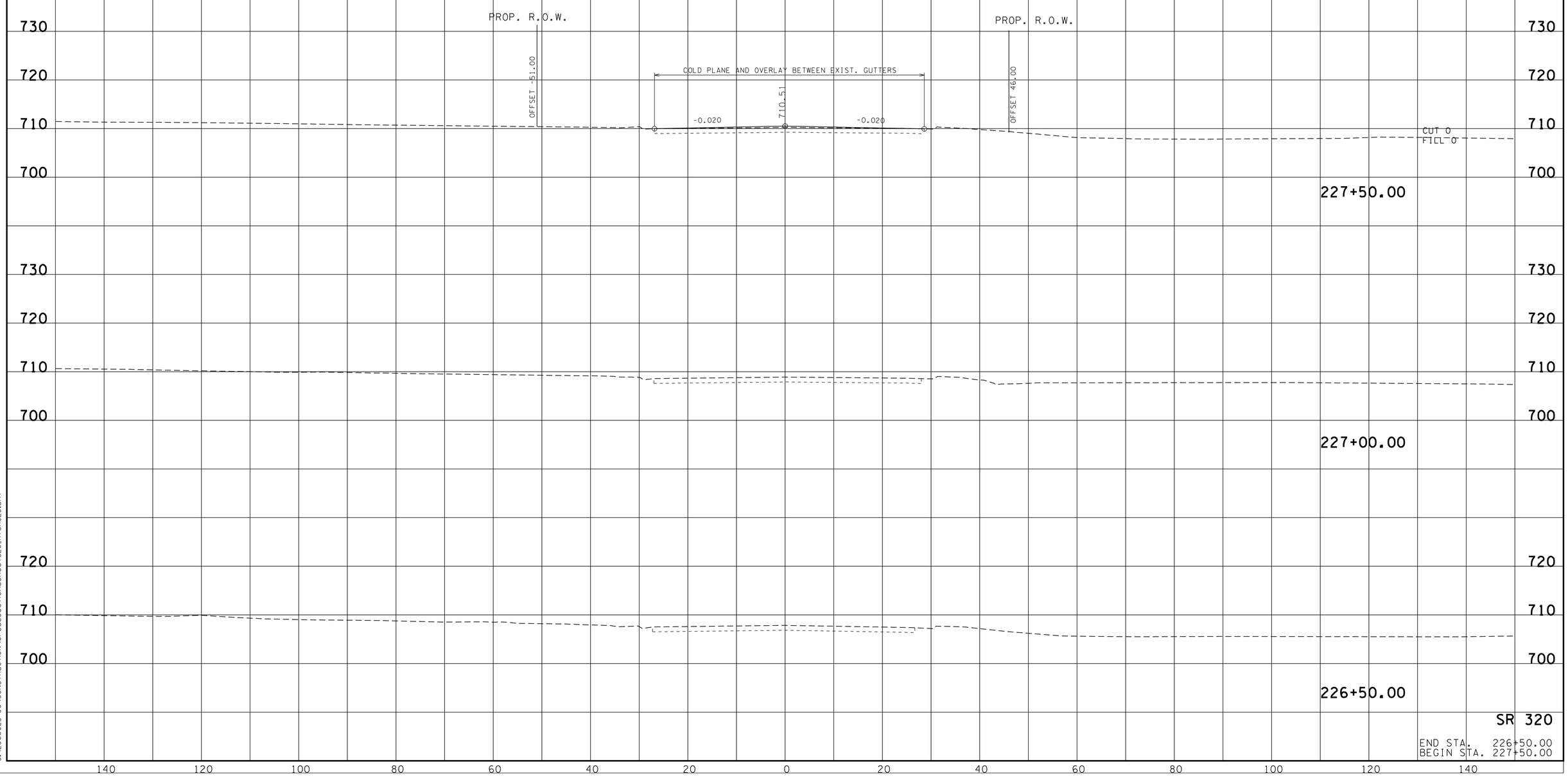
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	20
CONST.	2014	STP-320(4)	24

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



SR 320

END STA. 226+50.00
BEGIN STA. 227+50.00

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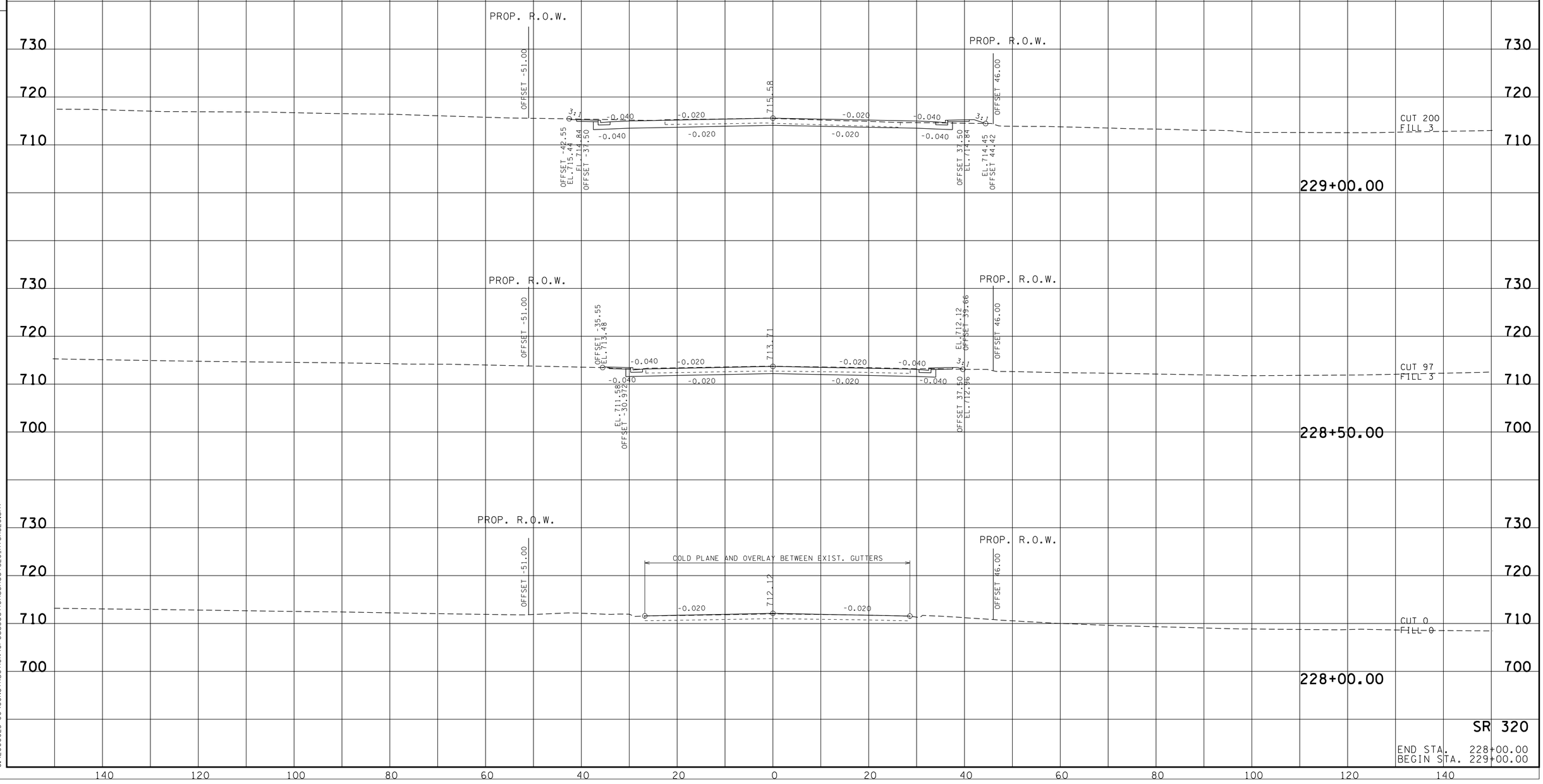
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	21
CONST.	2014	STP-320(4)	25

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



SR 320

END STA. 228+00.00
BEGIN STA. 229+00.00

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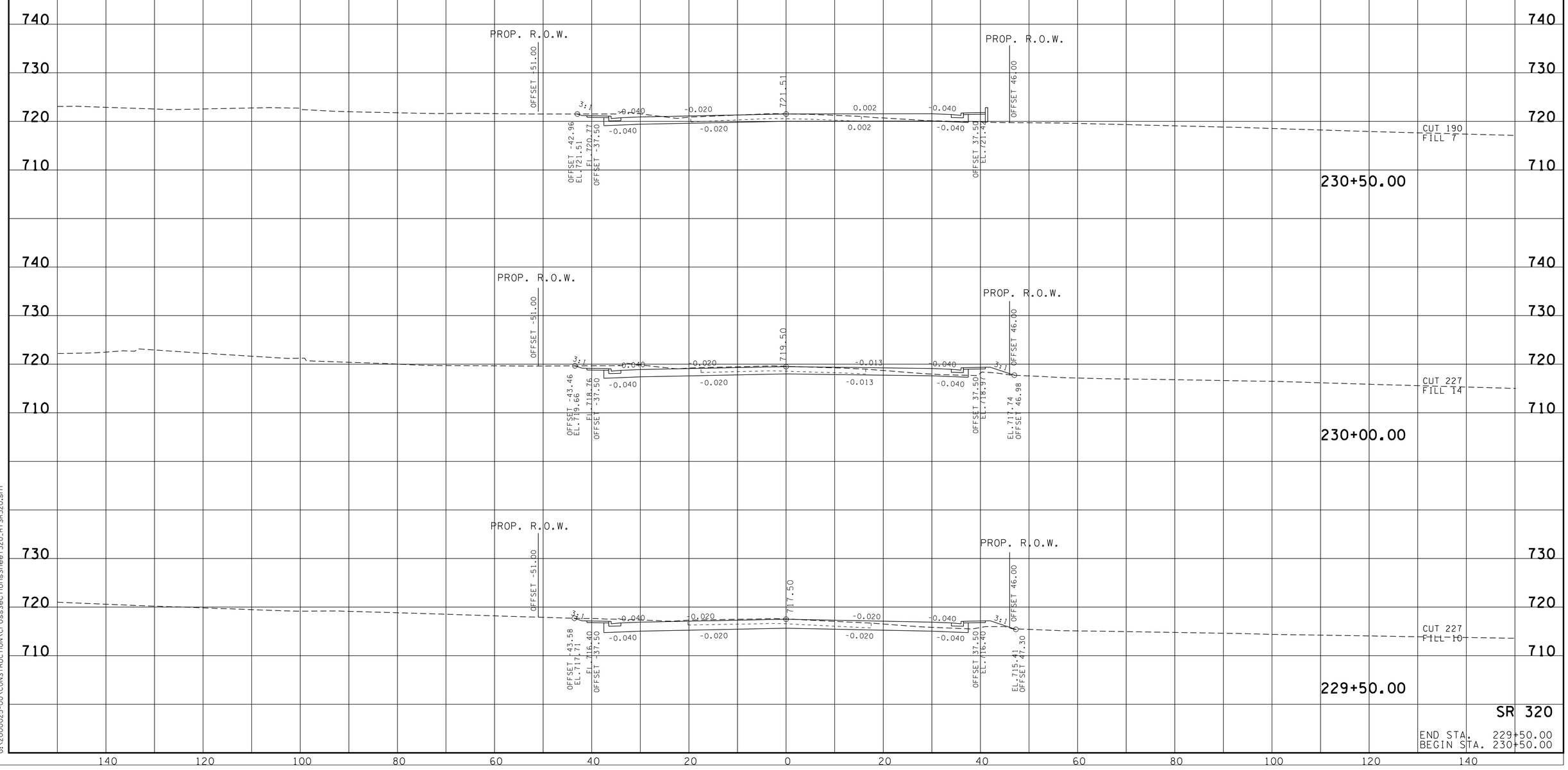
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	22
CONST.	2014	STP-320(4)	26

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



SR 320

END STA. 229+50.00
BEGIN STA. 230+50.00

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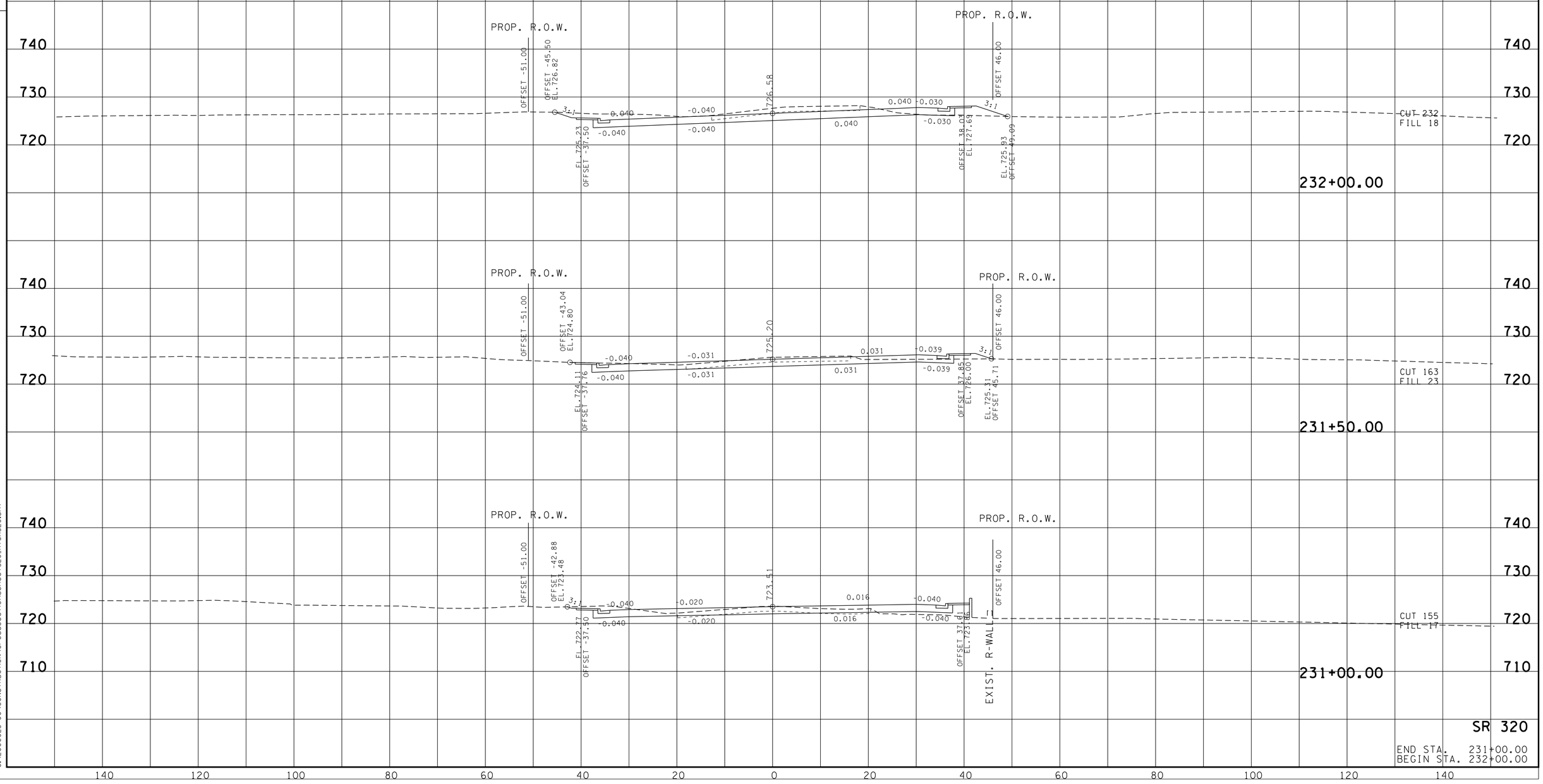
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	23
CONST.	2014	STP-320(4)	27

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



SR 320

END STA. 231+00.00
BEGIN STA. 232+00.00

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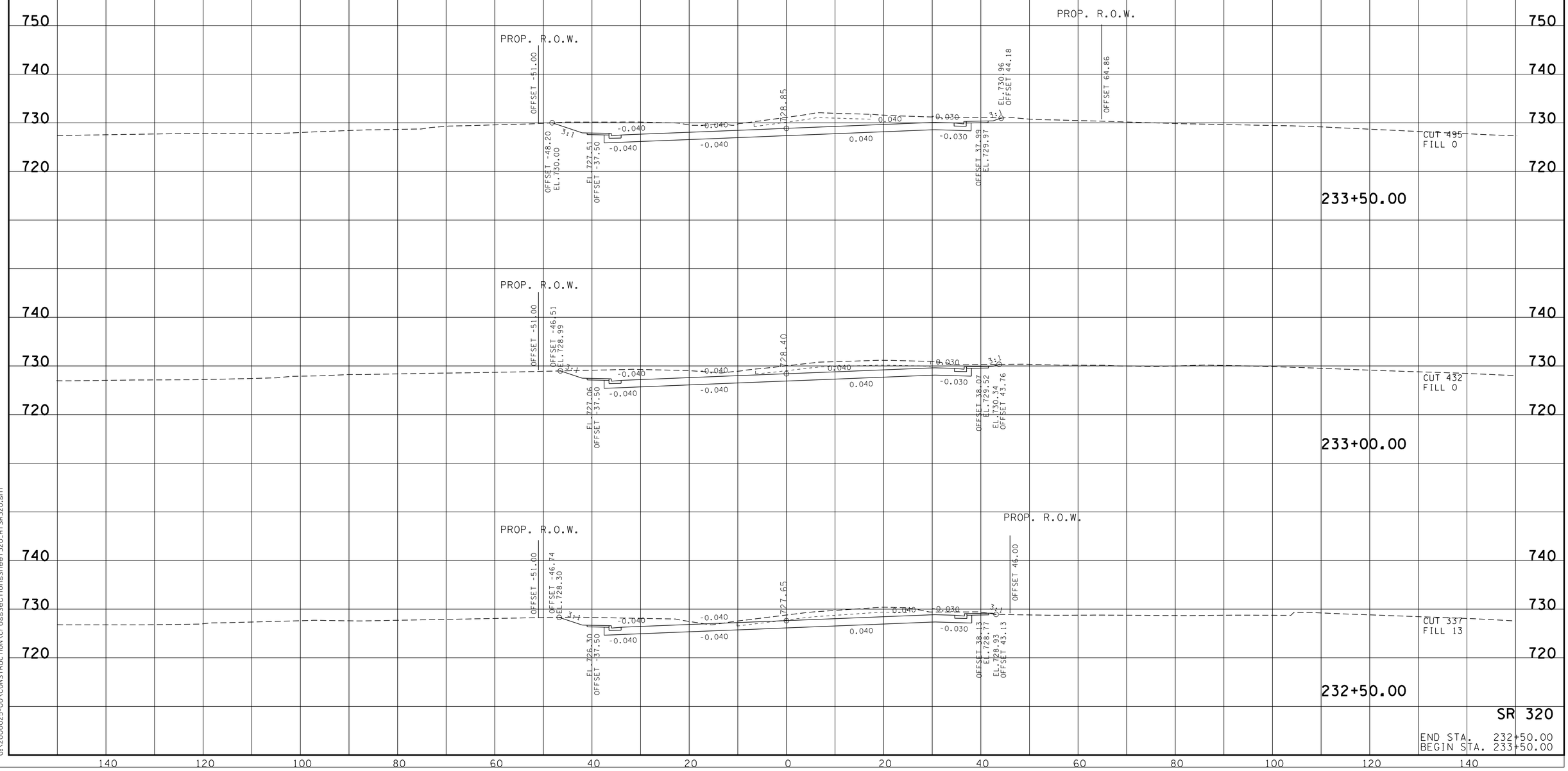
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	24
CONST.	2014	STP-320(4)	28

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



SR 320

END STA. 232+50.00
BEGIN STA. 233+50.00

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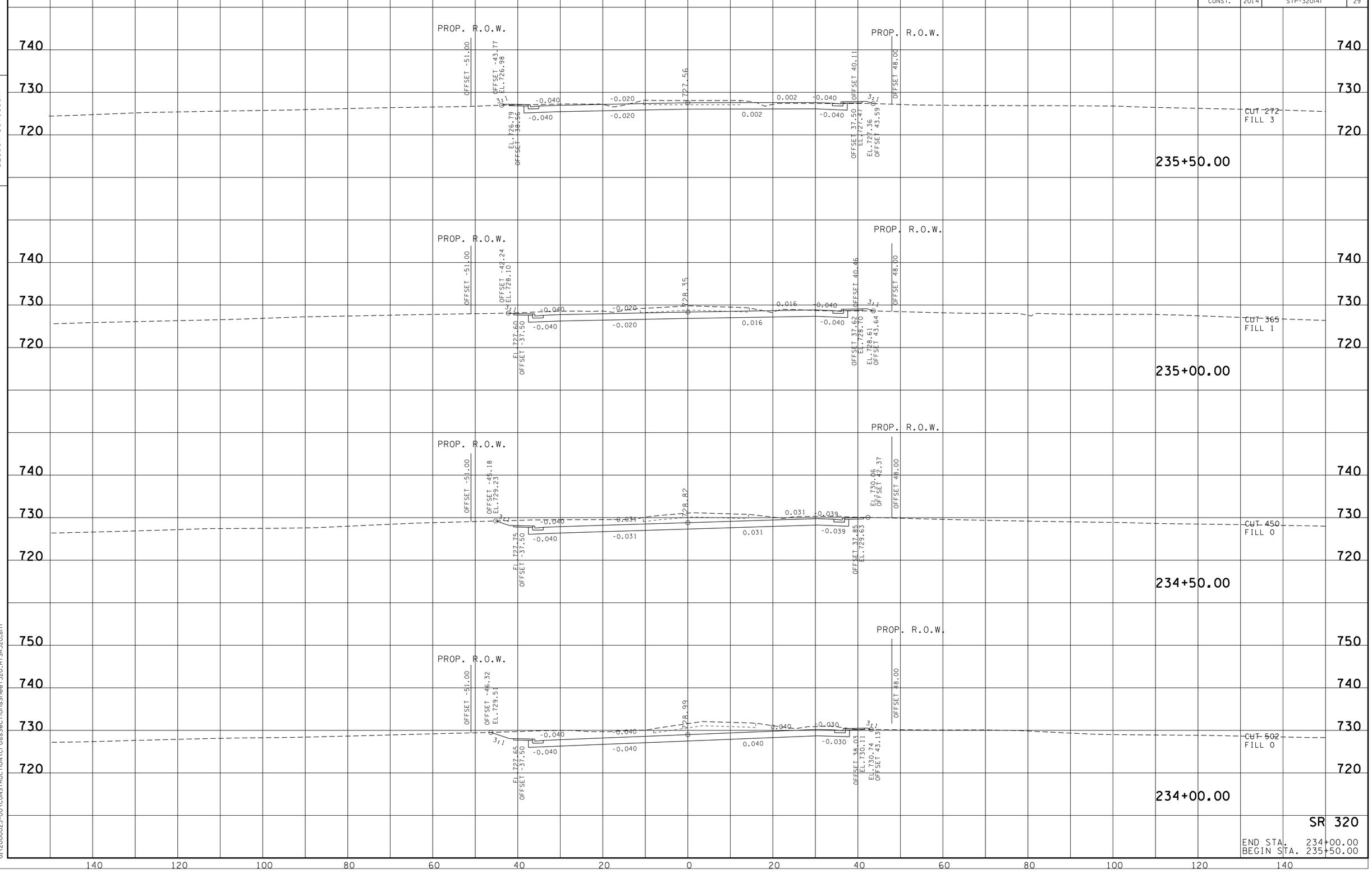
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	25
CONST.	2014	STP-320(4)	29

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.



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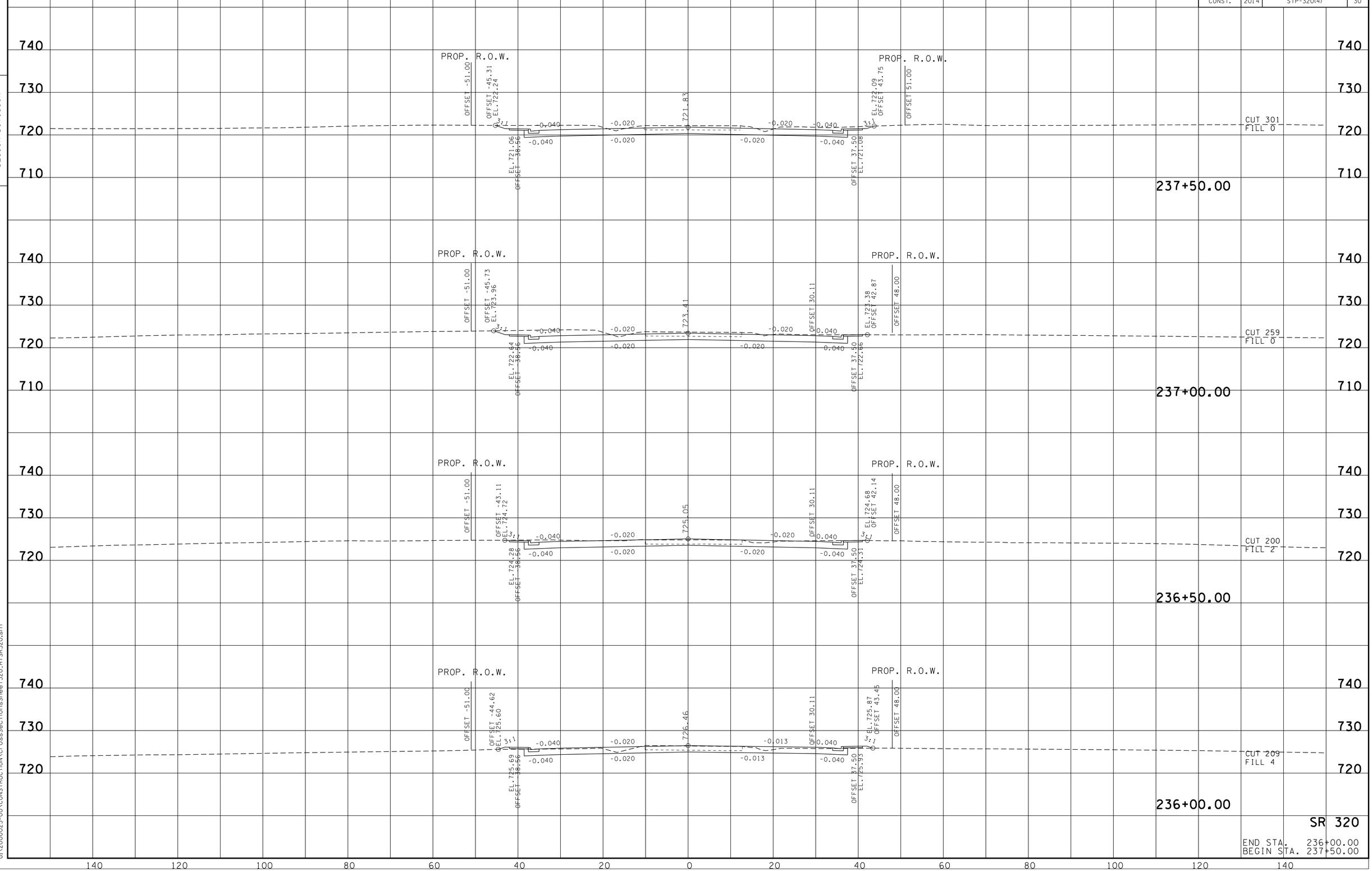
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	26
CONST.	2014	STP-320(4)	30

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



SR 320

END STA. 236+00.00
BEGIN STA. 237+50.00

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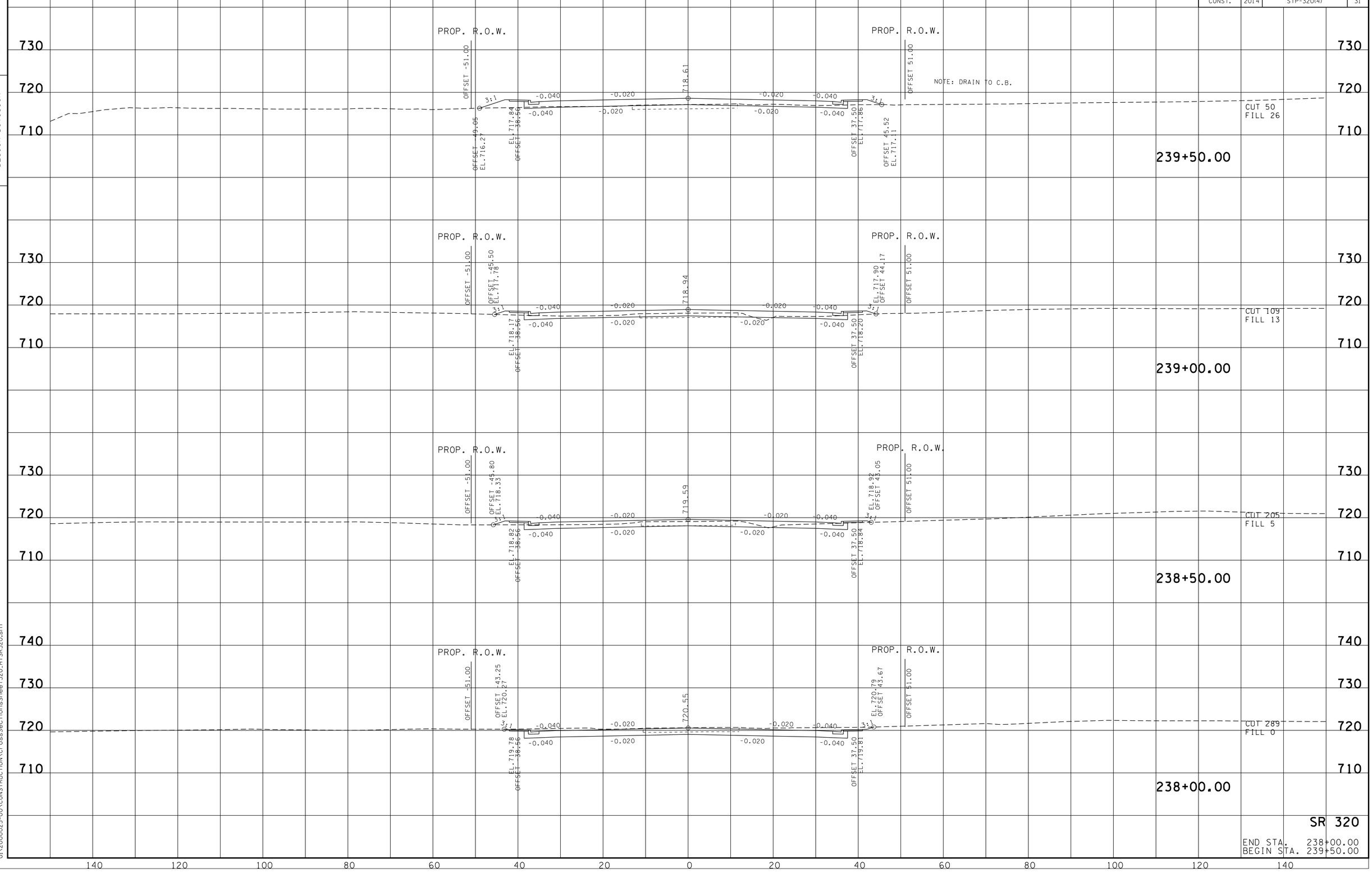
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	27
CONST.	2014	STP-320(4)	31

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



SR 320

END STA. 238+00.00
BEGIN STA. 239+50.00

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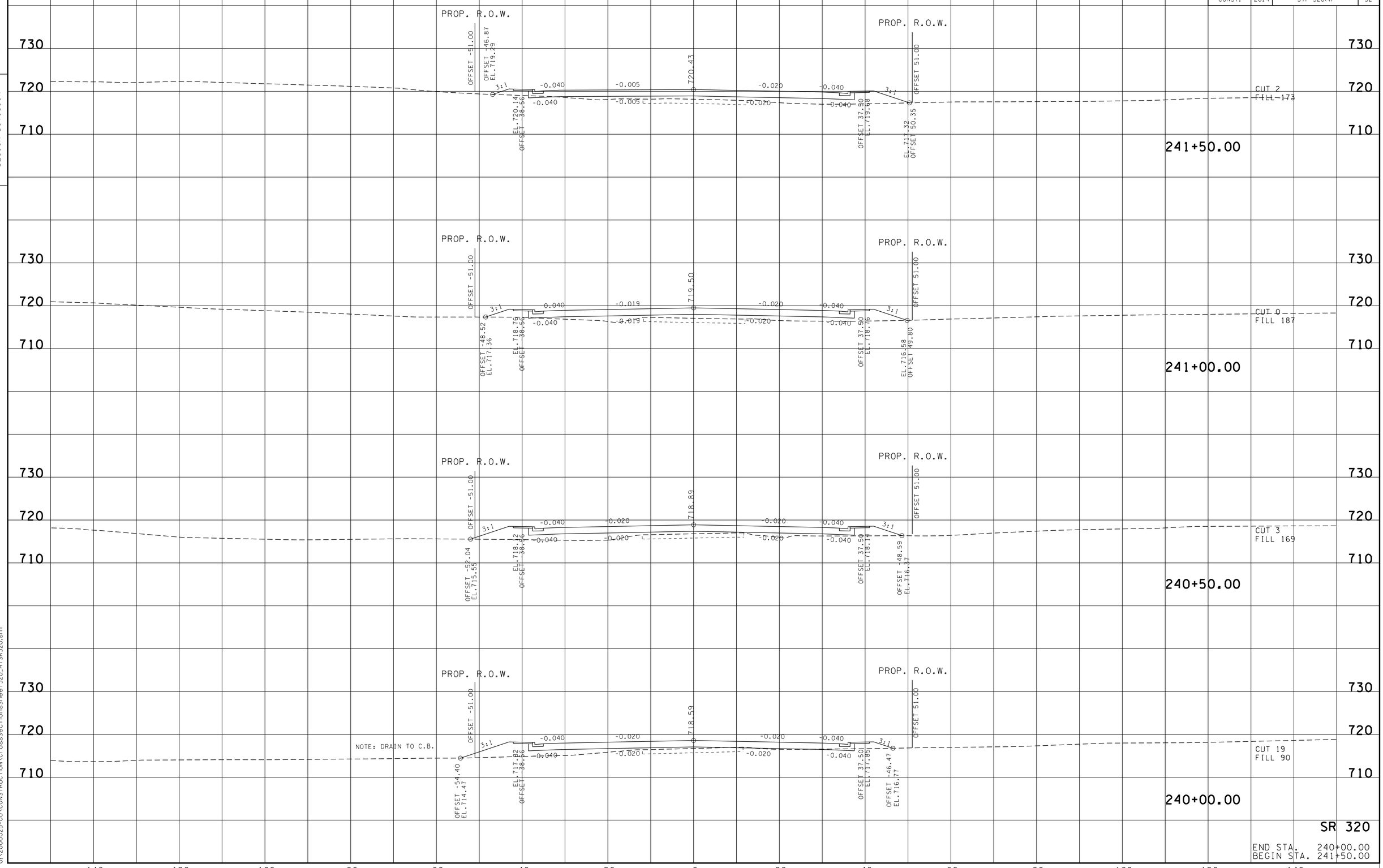
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	28
CONST.	2014	STP-320(4)	32

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.



SR 320

END STA. 240+00.00
BEGIN STA. 241+50.00

9/3/2013 3:48:42 PM
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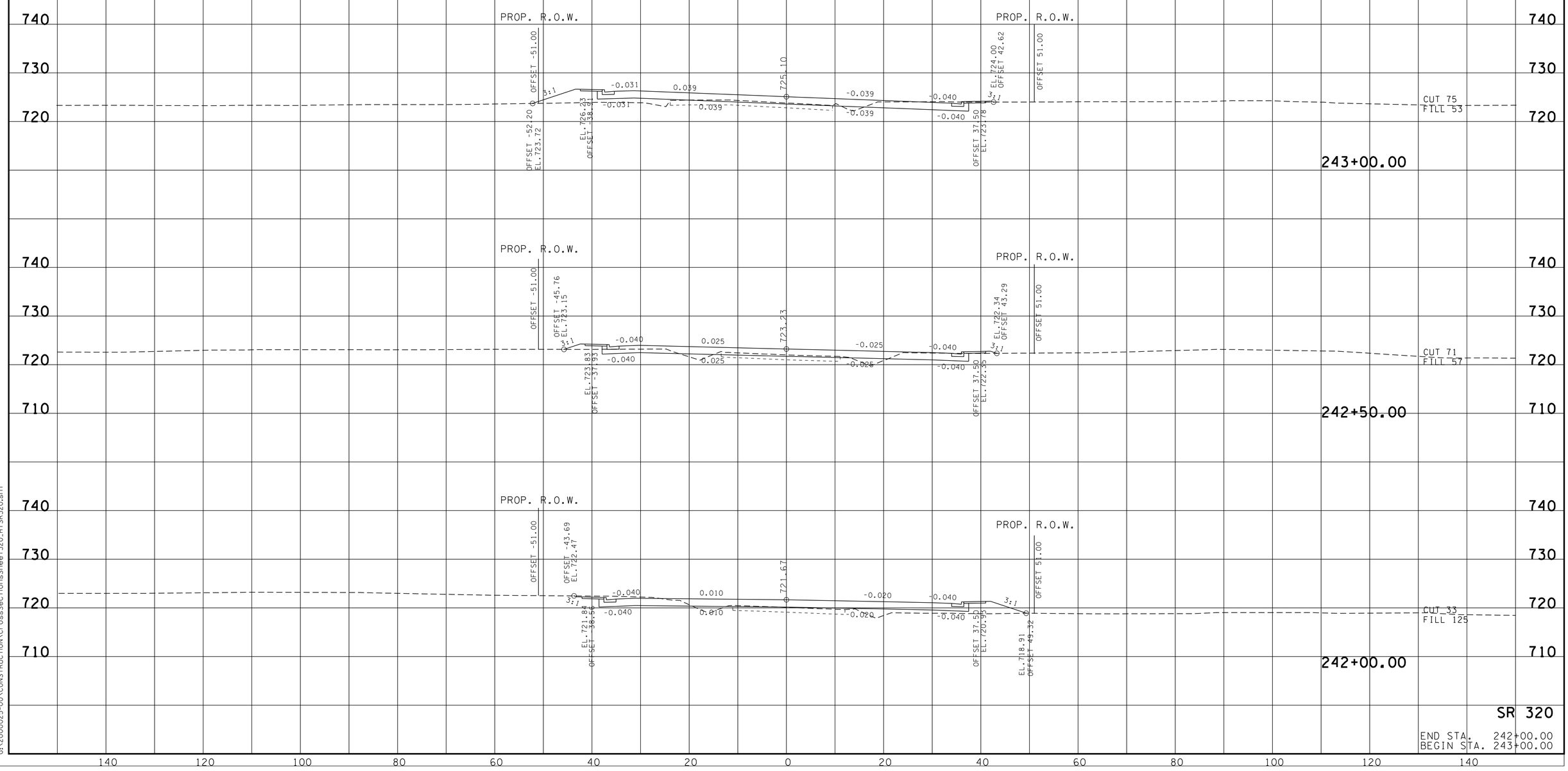
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	29
CONST.	2014	STP-320(4)	33

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



SR 320

END STA. 242+00.00
BEGIN STA. 243+00.00

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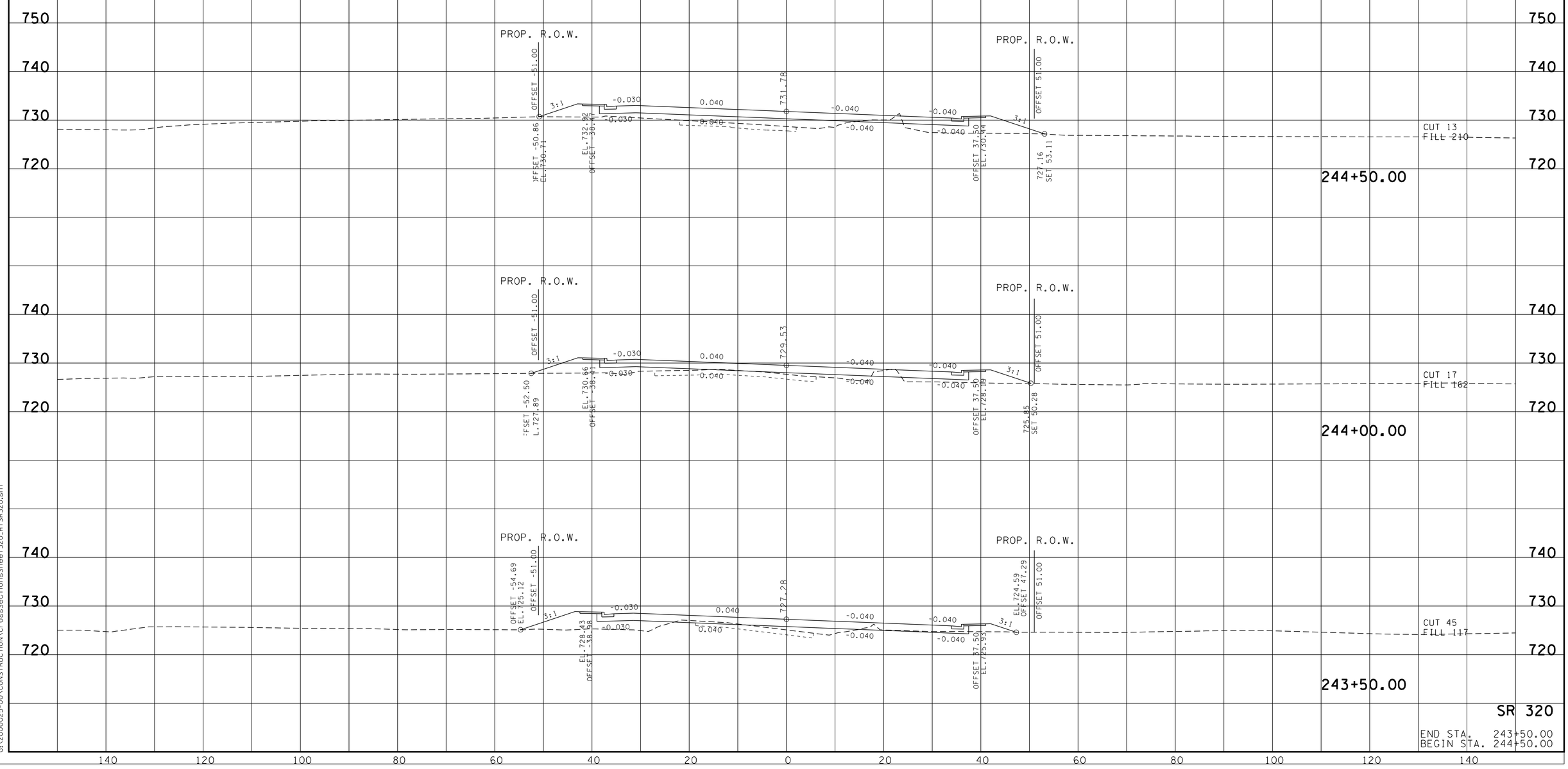
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	30
CONST.	2014	STP-320(4)	34

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



SR 320

END STA. 243+50.00
BEGIN STA. 244+50.00

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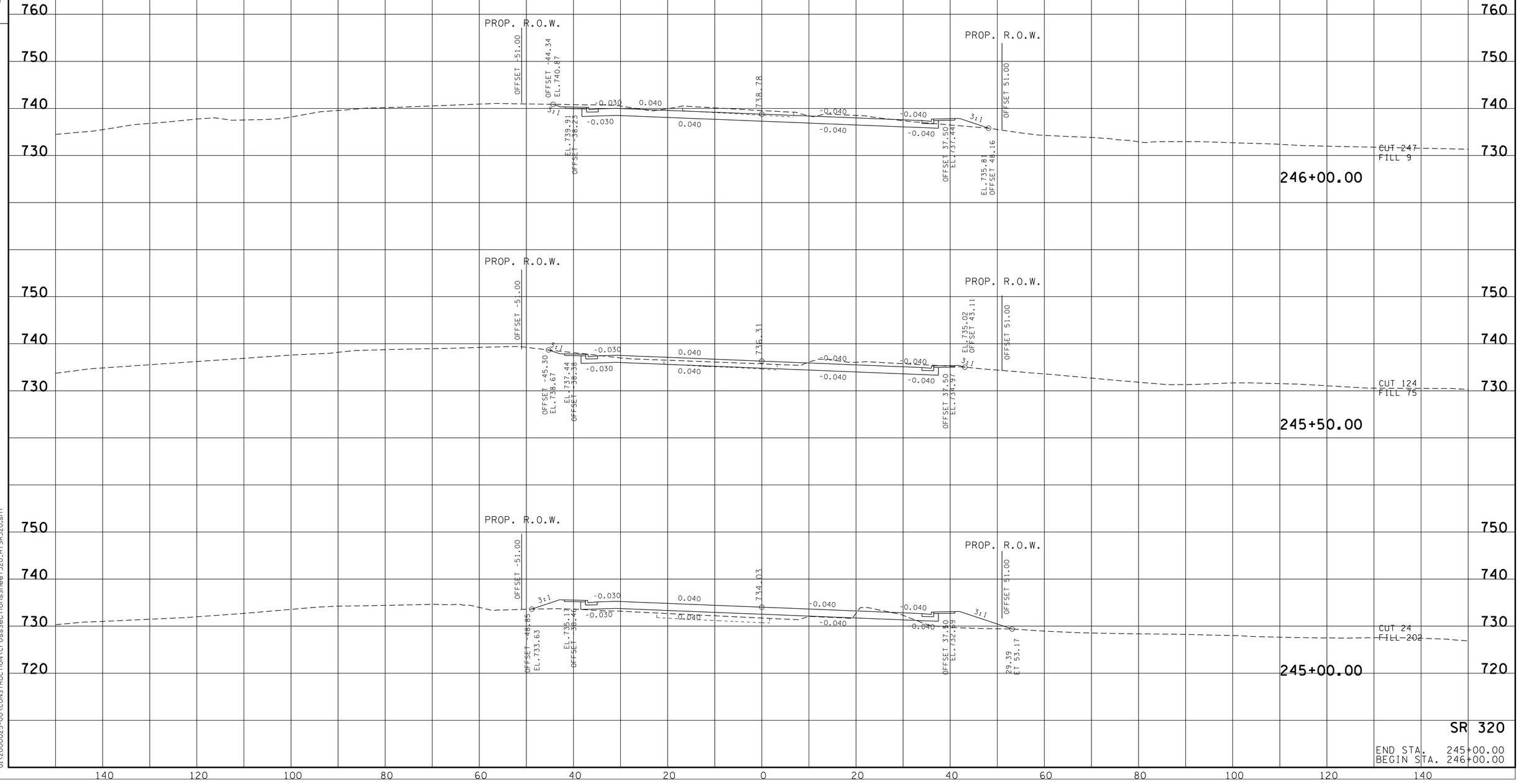
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	31
CONST.	2014	STP-320(4)	35

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



SR 320

END STA. 245+00.00
BEGIN STA. 246+00.00

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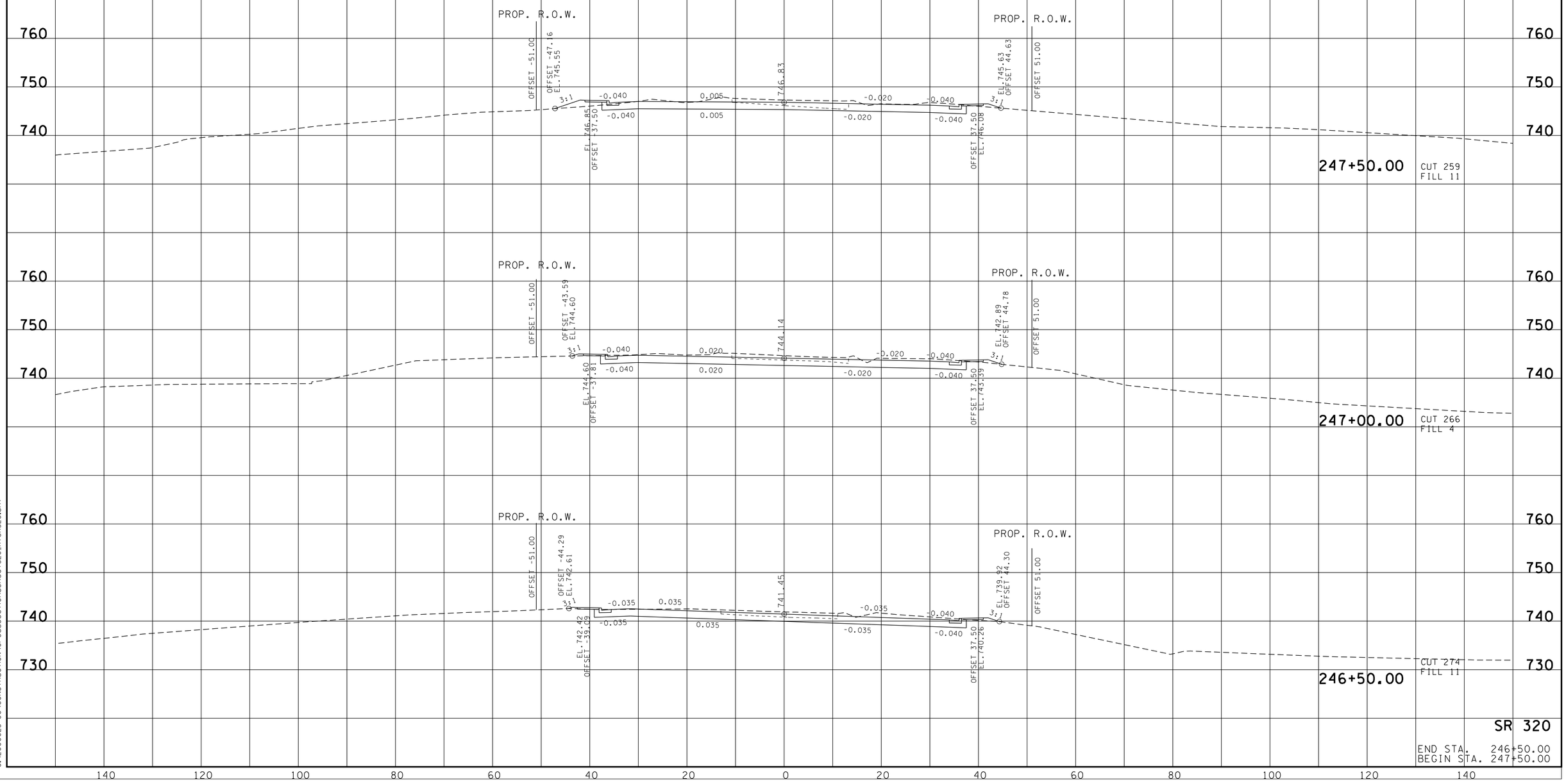
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	32
CONST.	2014	STP-320(4)	36

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



SR 320

END STA. 246+50.00
BEGIN STA. 247+50.00

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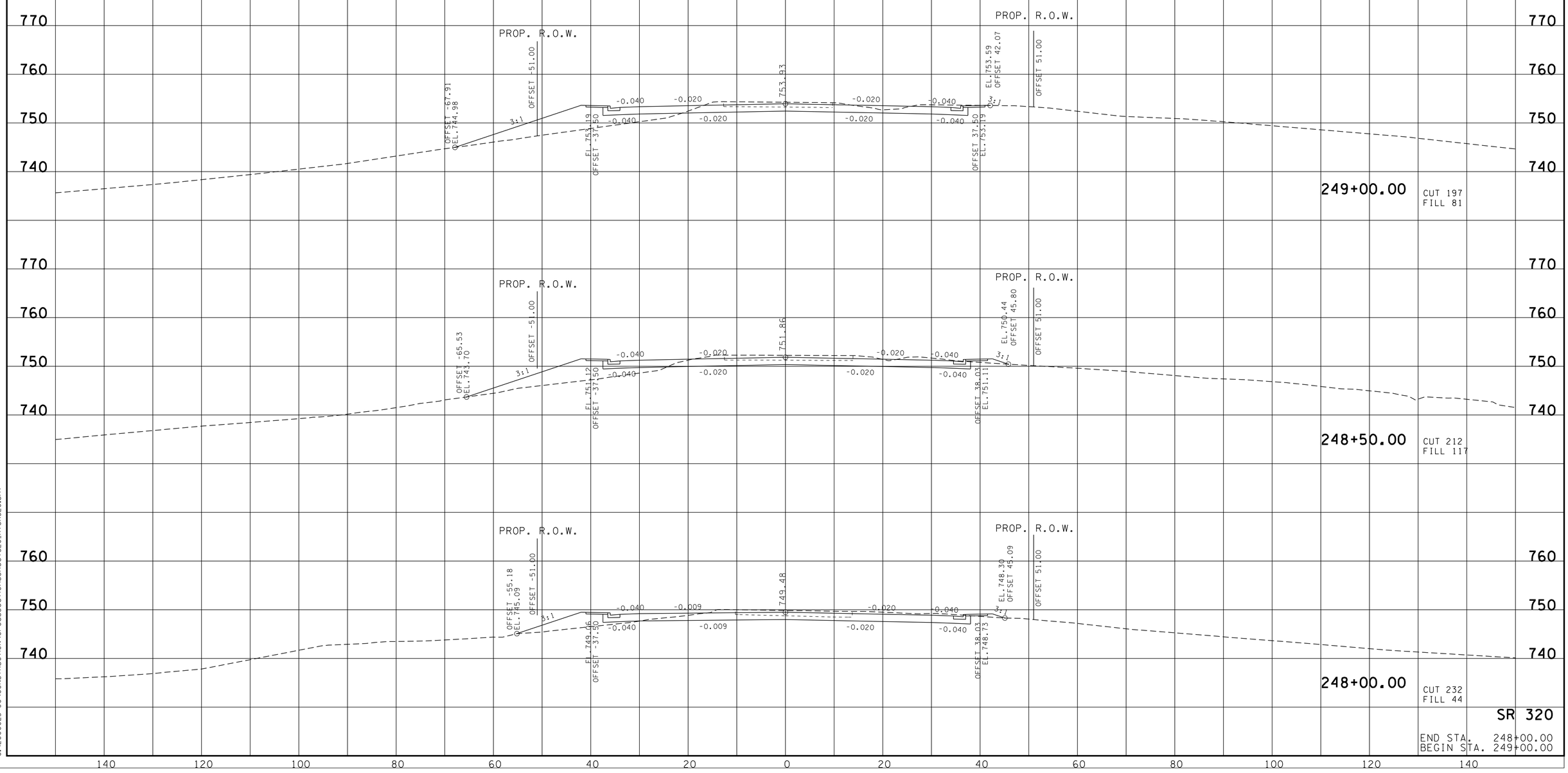
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	33
CONST.	2014	STP-320(4)	37

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



SR 320

END STA. 248+00.00
BEGIN STA. 249+00.00

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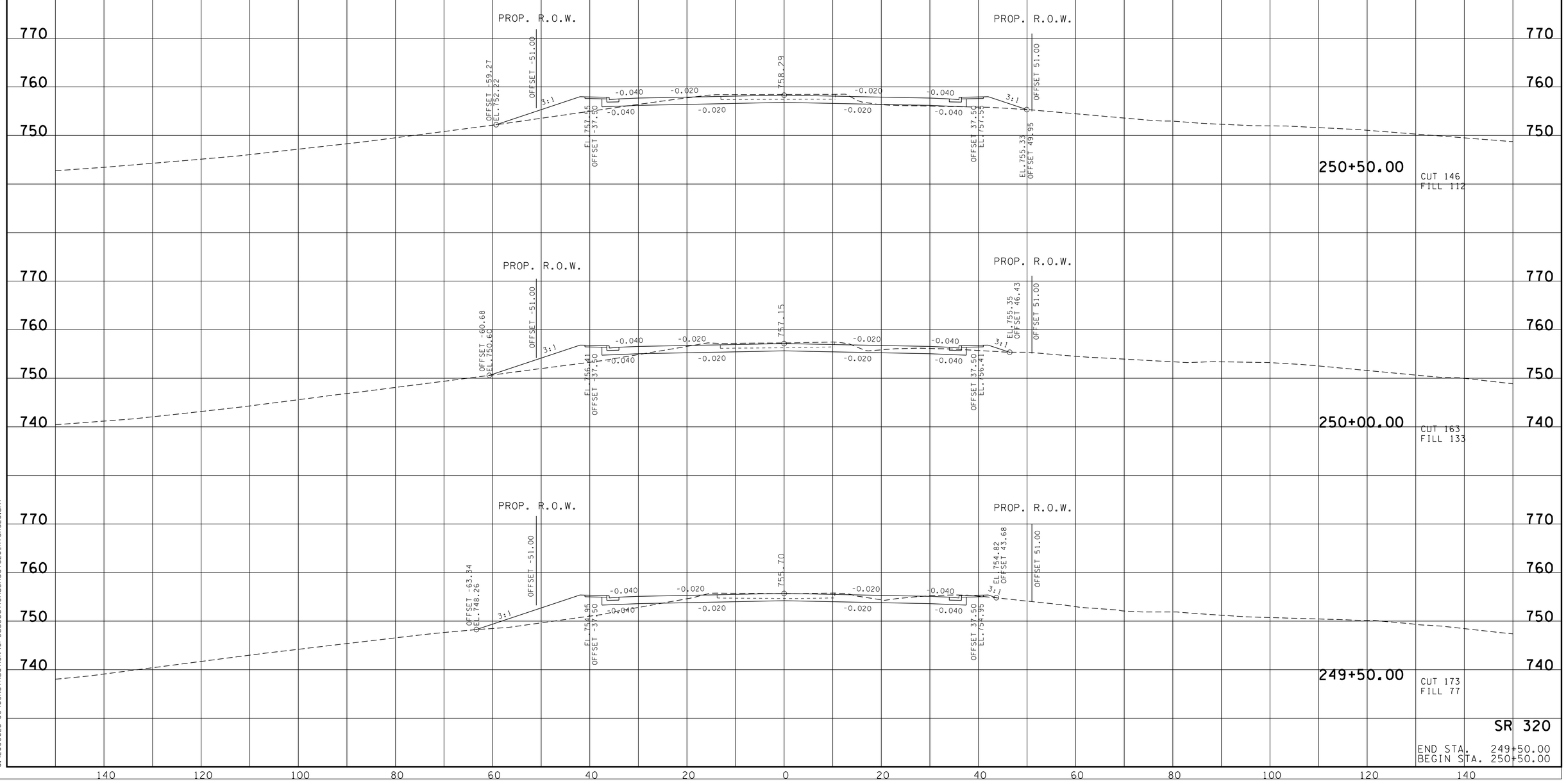
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	34
CONST.	2014	STP-320(4)	38

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



SR 320

END STA. 249+50.00
BEGIN STA. 250+50.00

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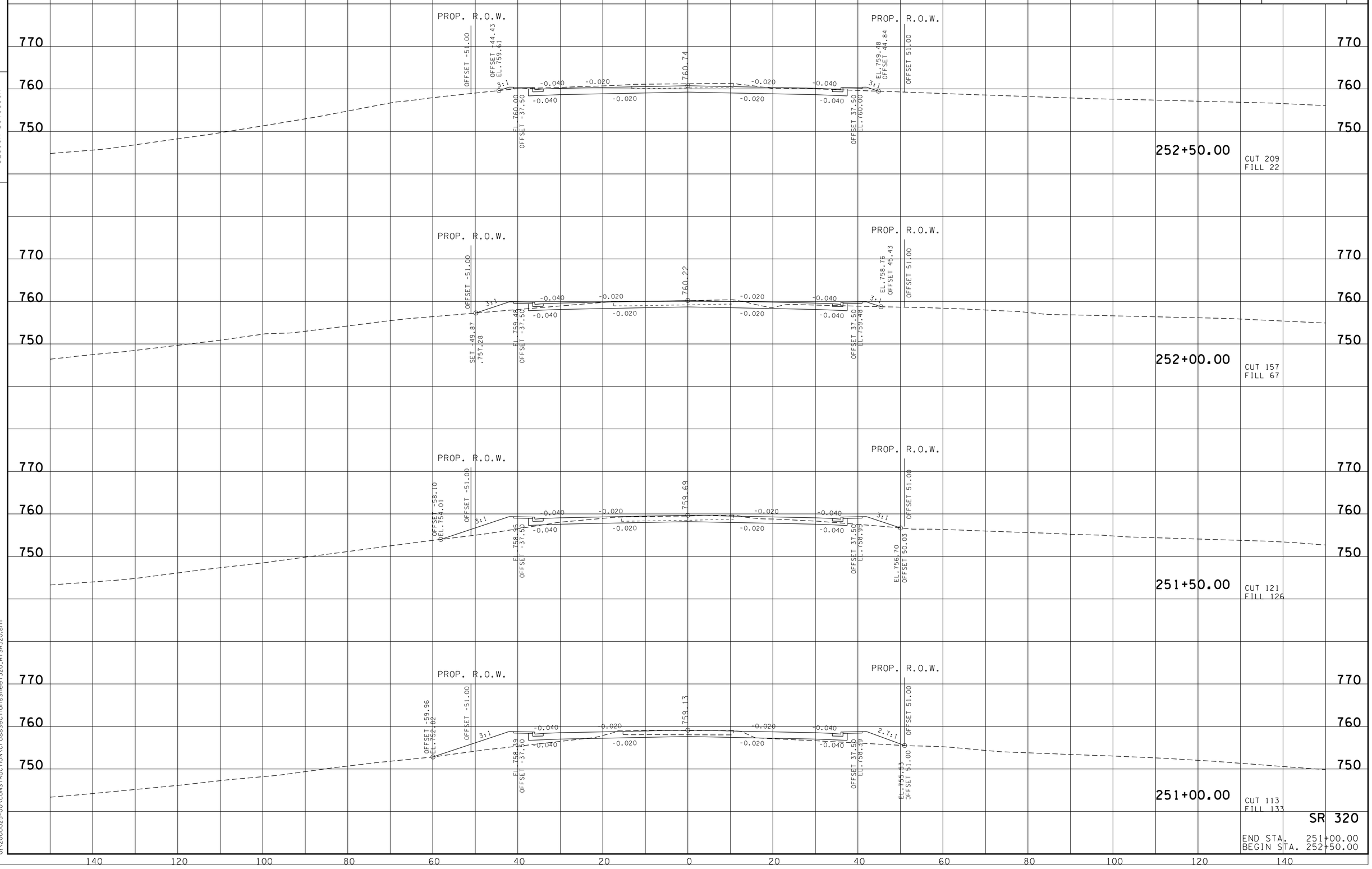
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	35
CONST.	2014	STP-320(4)	39

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



SR 320

END STA. 251+00.00
BEGIN STA. 252+50.00

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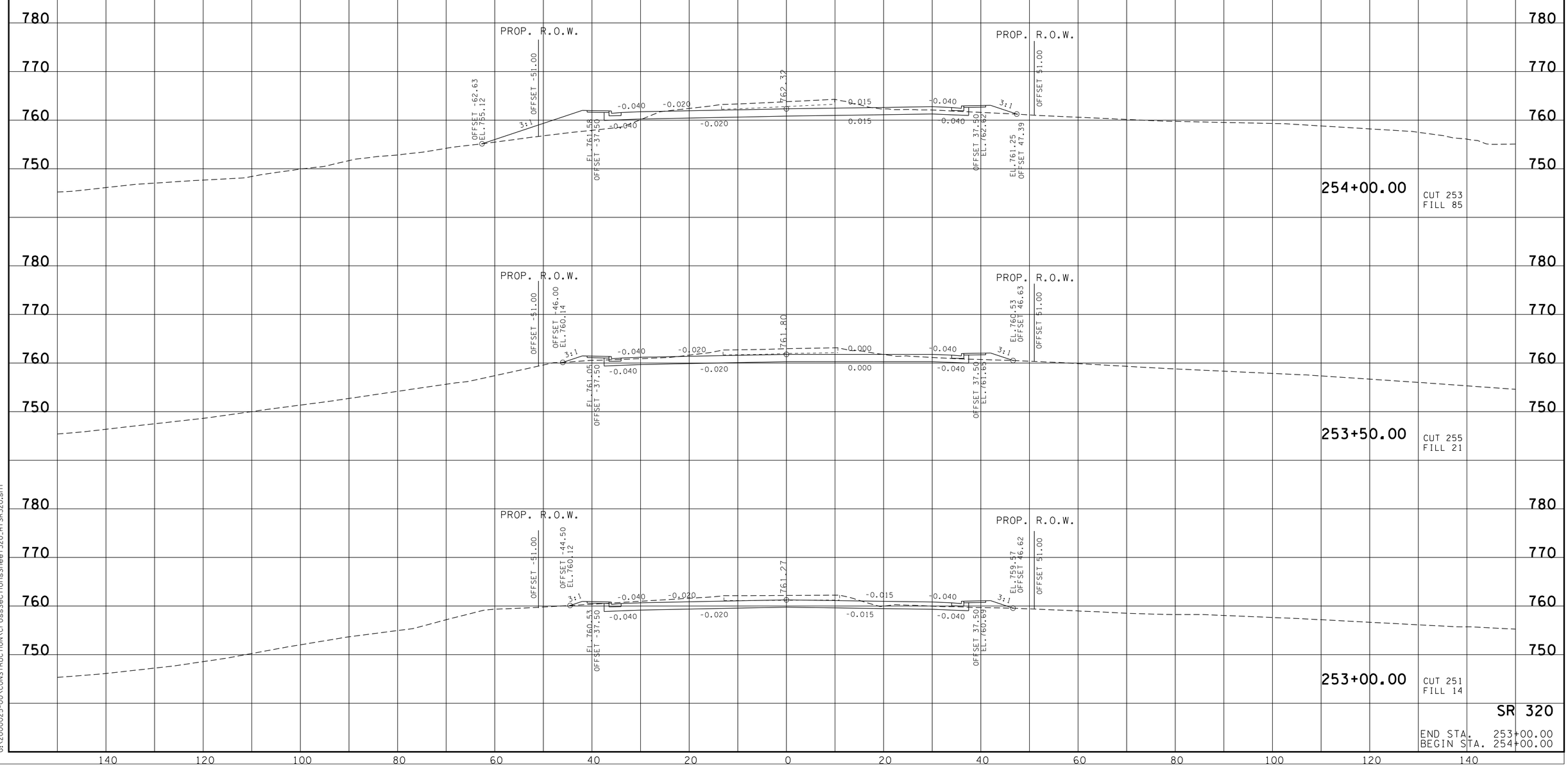
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	36
CONST.	2014	STP-320(4)	40

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



SR 320

END STA. 253+00.00
BEGIN STA. 254+00.00

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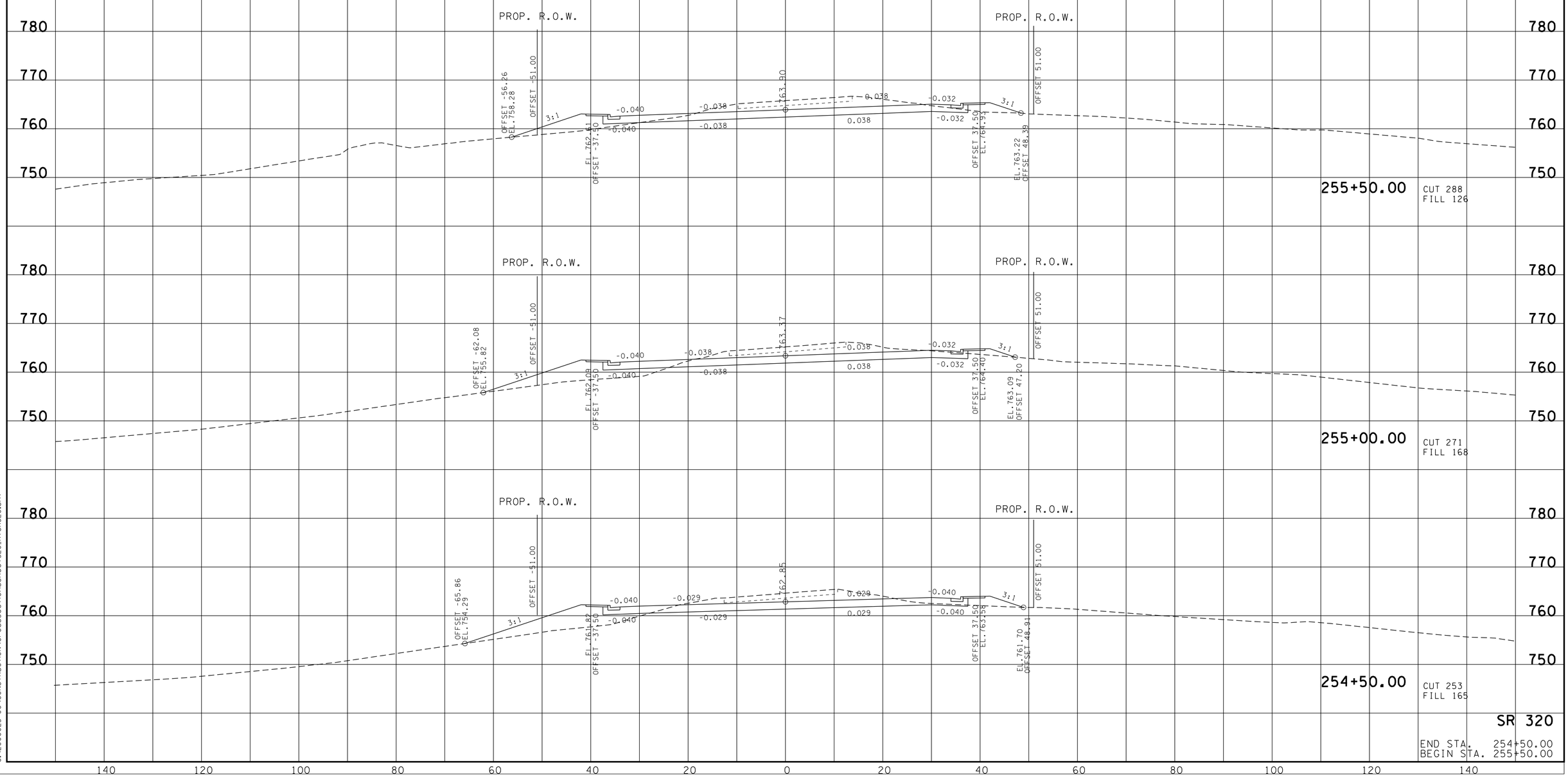
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	37
CONST.	2014	STP-320(4)	41

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



SR 320

END STA. 254+50.00
BEGIN STA. 255+50.00

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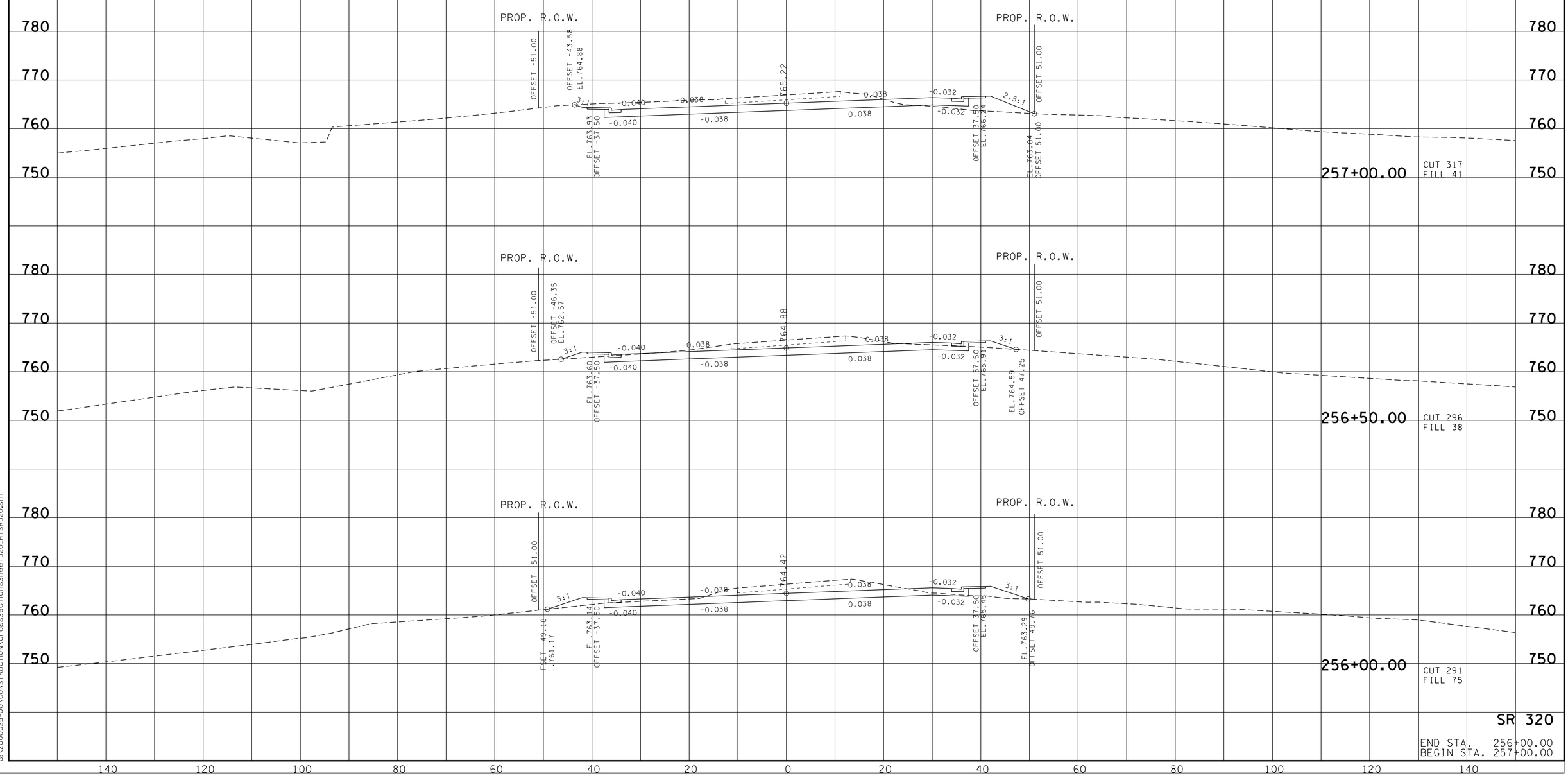
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	38
CONST.	2014	STP-320(4)	42

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.



SR 320

END STA. 256+00.00
BEGIN STA. 257+00.00

9/3/2013 3:48:47 PM
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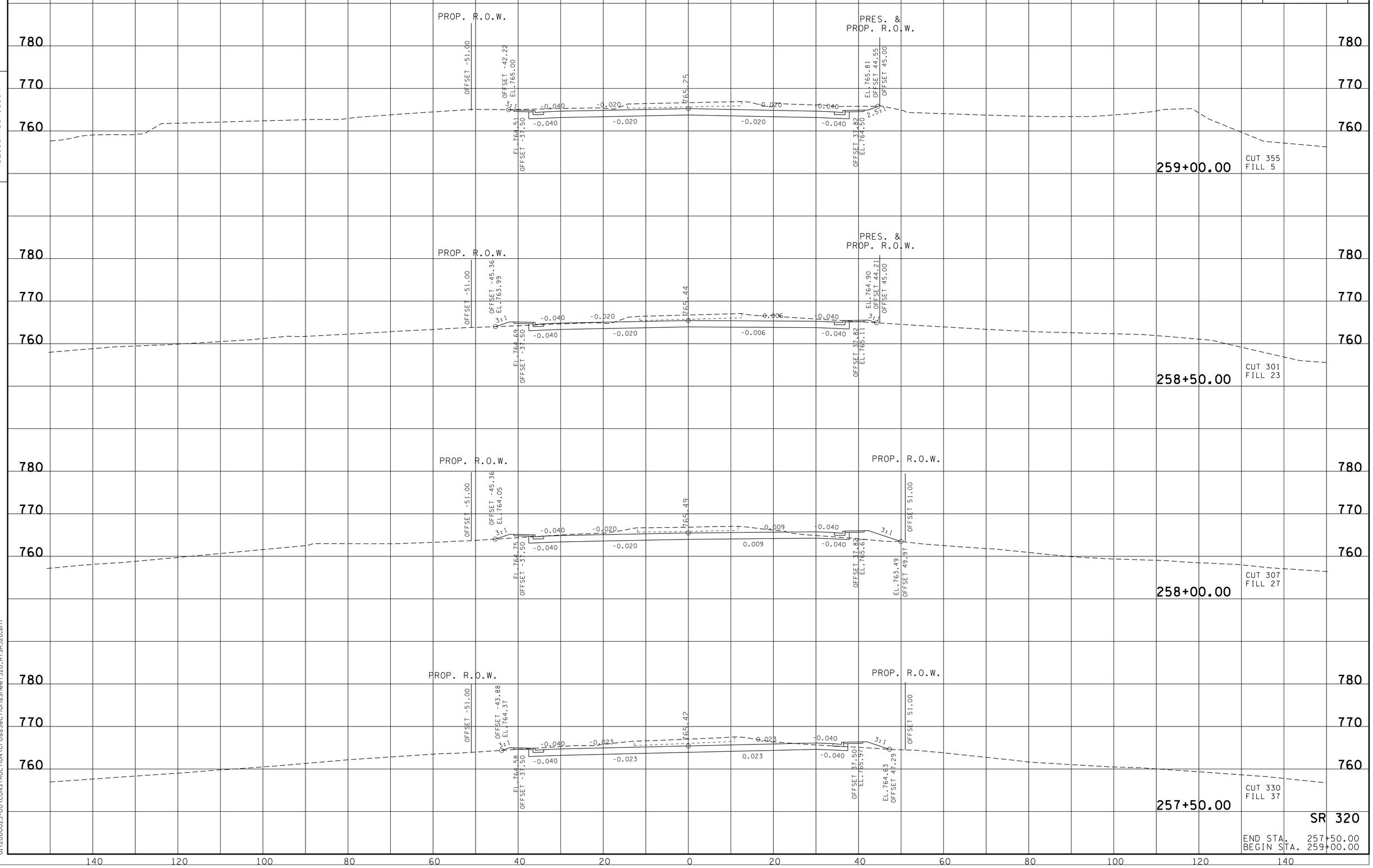
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	39
CONST.	2014	STP-320(4)	43

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.



SR 320

END STA. 257+50.00
BEGIN STA. 259+00.00

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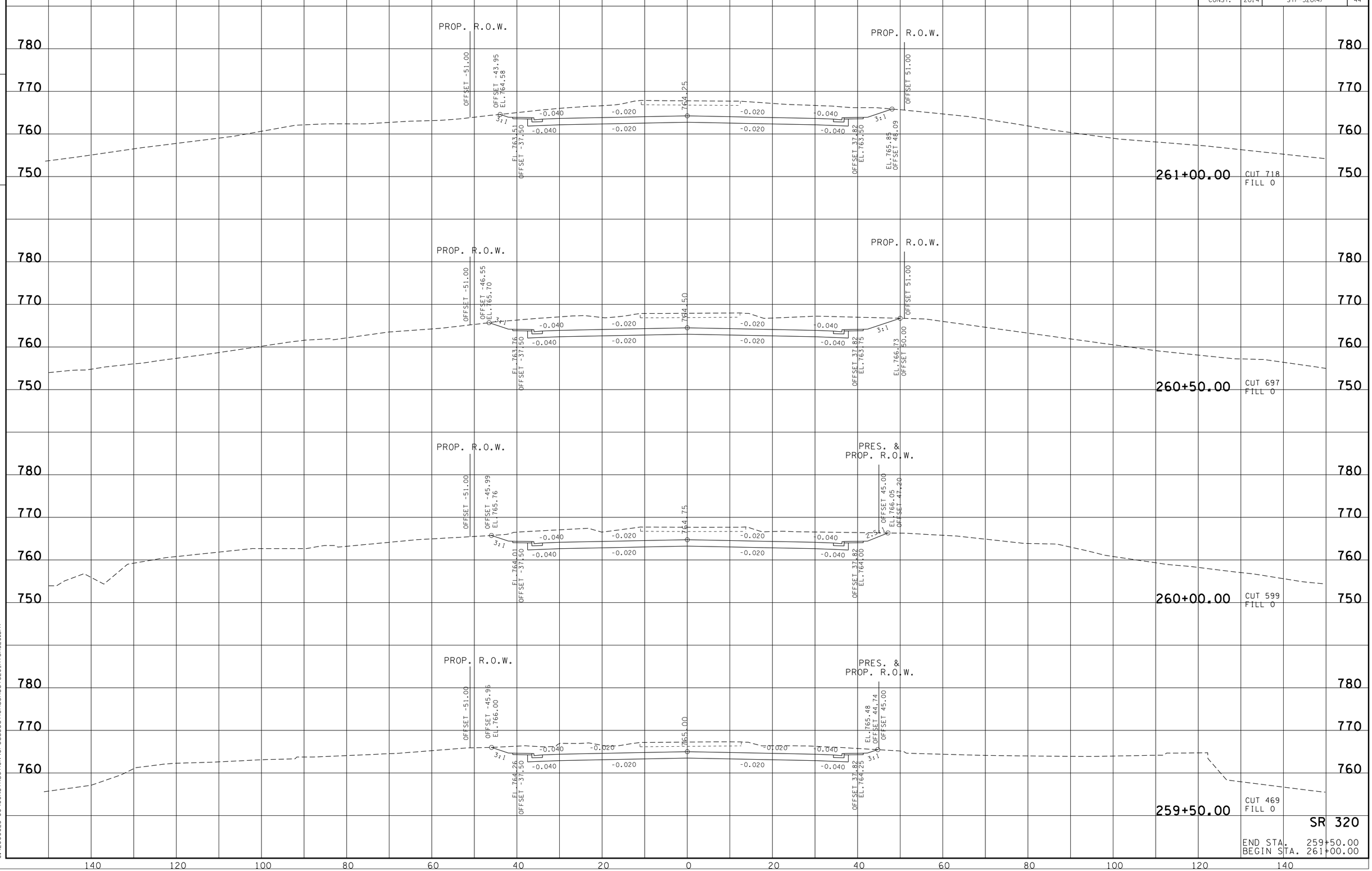
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	40
CONST.	2014	STP-320(4)	44

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



SR 320

END STA. 259+50.00
BEGIN STA. 261+00.00

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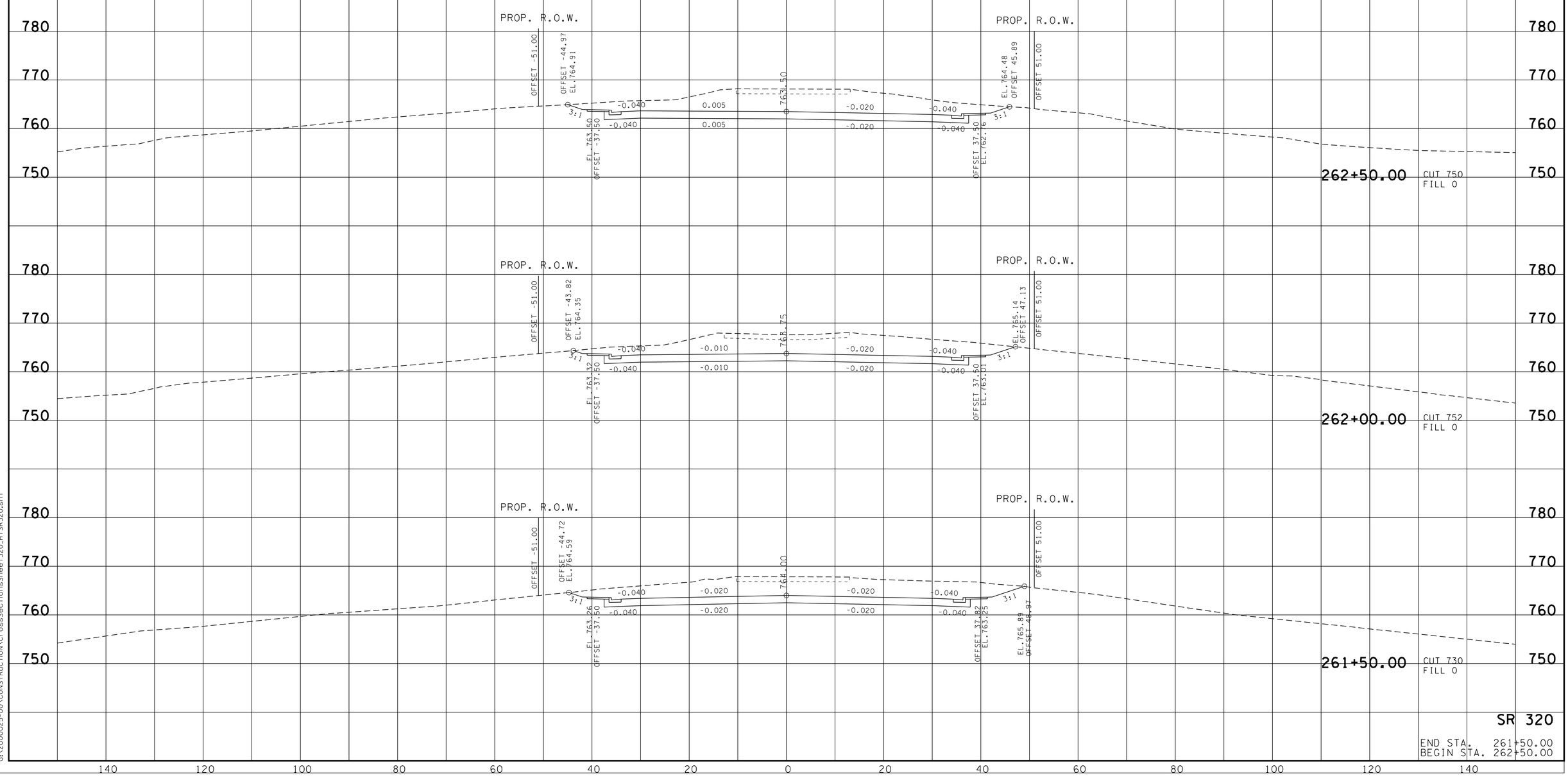
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	41
CONST.	2014	STP-320(4)	45

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



SR 320

END STA. 261+50.00
BEGIN STA. 262+50.00

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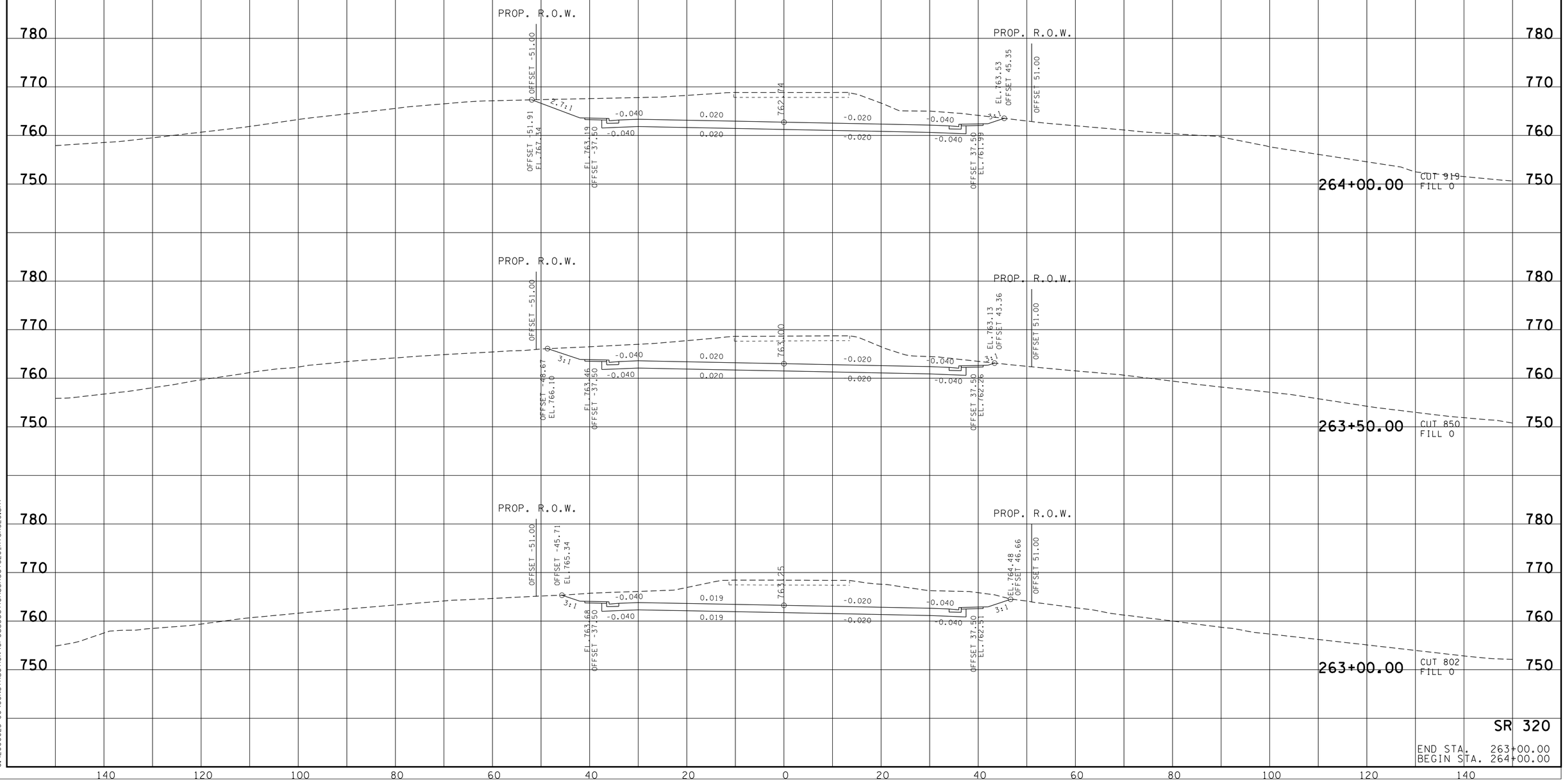
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	42
CONST.	2014	STP-320(4)	46

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



SR 320

END STA. 263+00.00
BEGIN STA. 264+00.00

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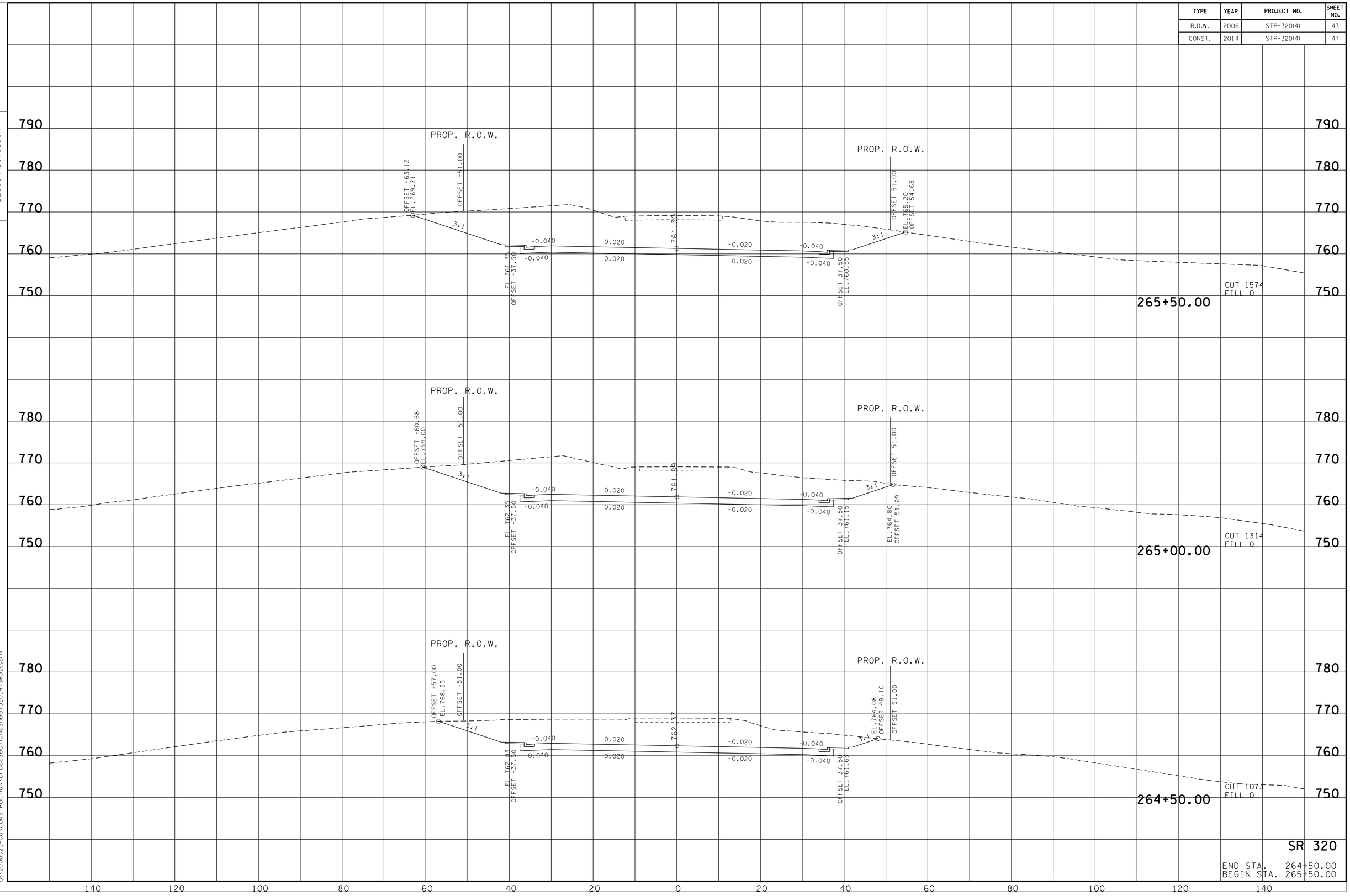
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	43
CONST.	2014	STP-320(4)	47

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



SR 320

END STA. 264+50.00
BEGIN STA. 265+50.00

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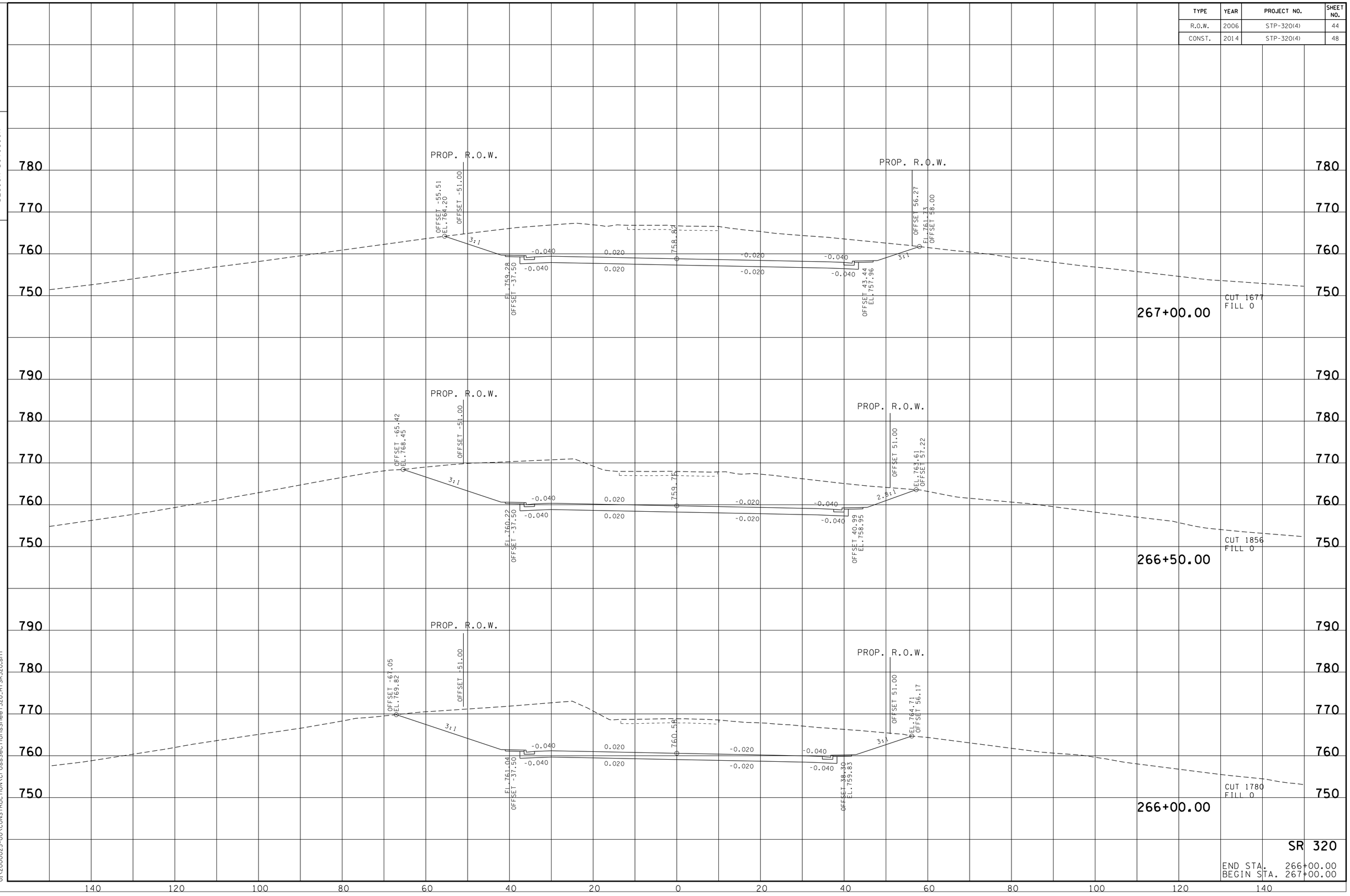
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	44
CONST.	2014	STP-320(4)	48

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



SR 320

END STA. 266+00.00
BEGIN STA. 267+00.00

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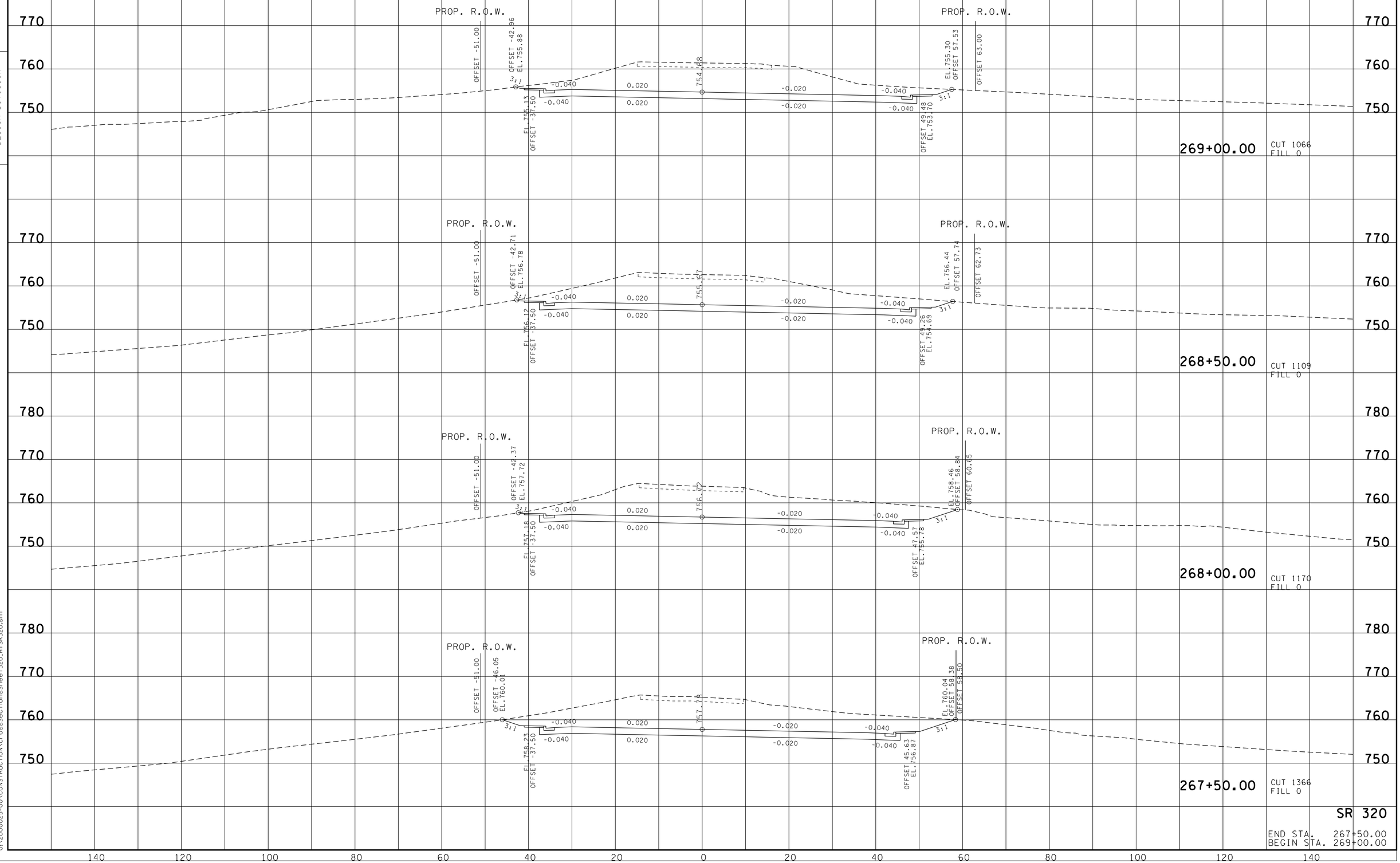
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	45
CONST.	2014	STP-320(4)	49

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.



SR 320

END STA. 267+50.00
BEGIN STA. 269+00.00

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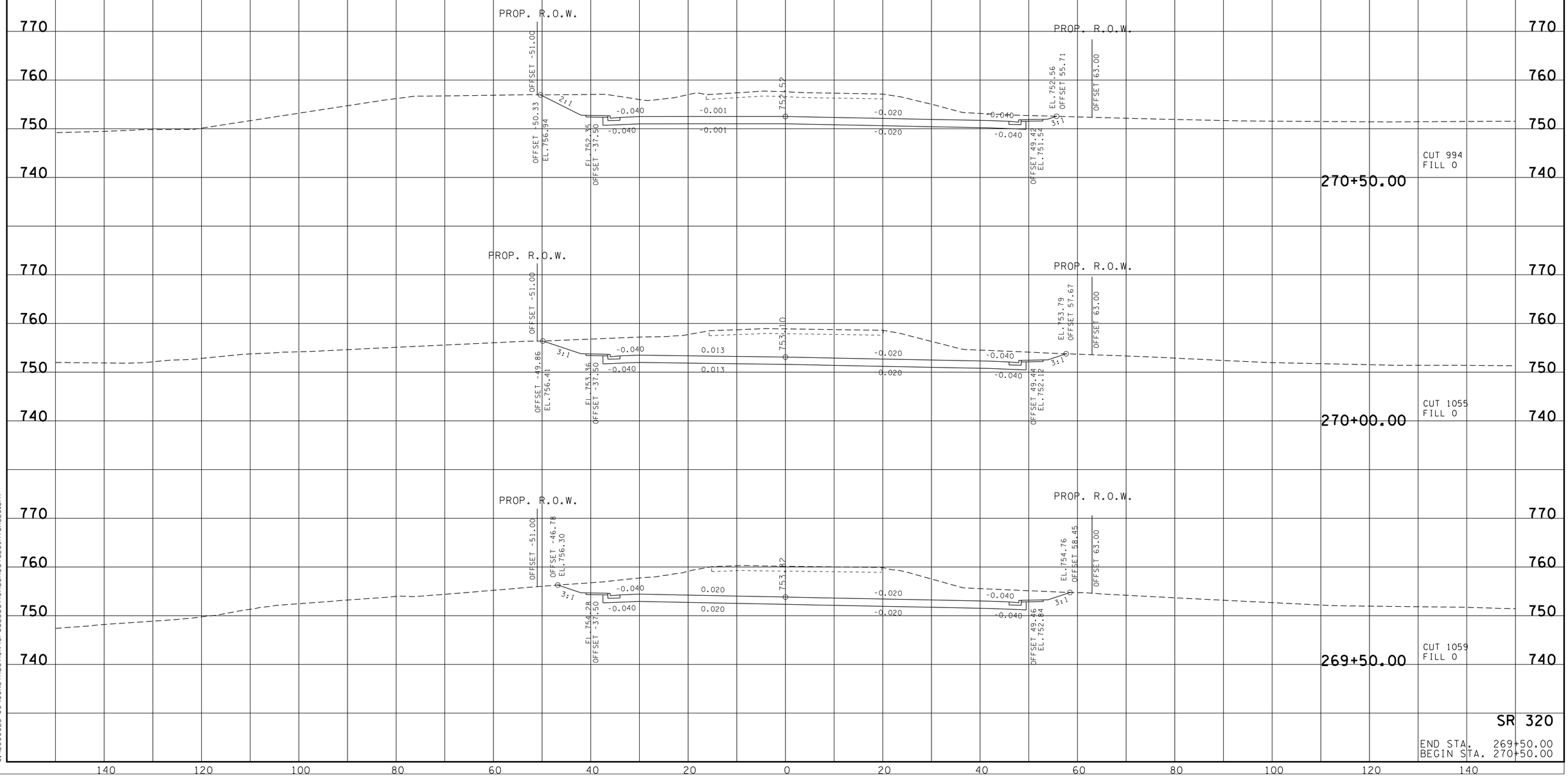
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	46
CONST.	2014	STP-320(4)	50

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



SR 320

END STA. 269+50.00
BEGIN STA. 270+50.00

9/3/2013 3:48:52 PM
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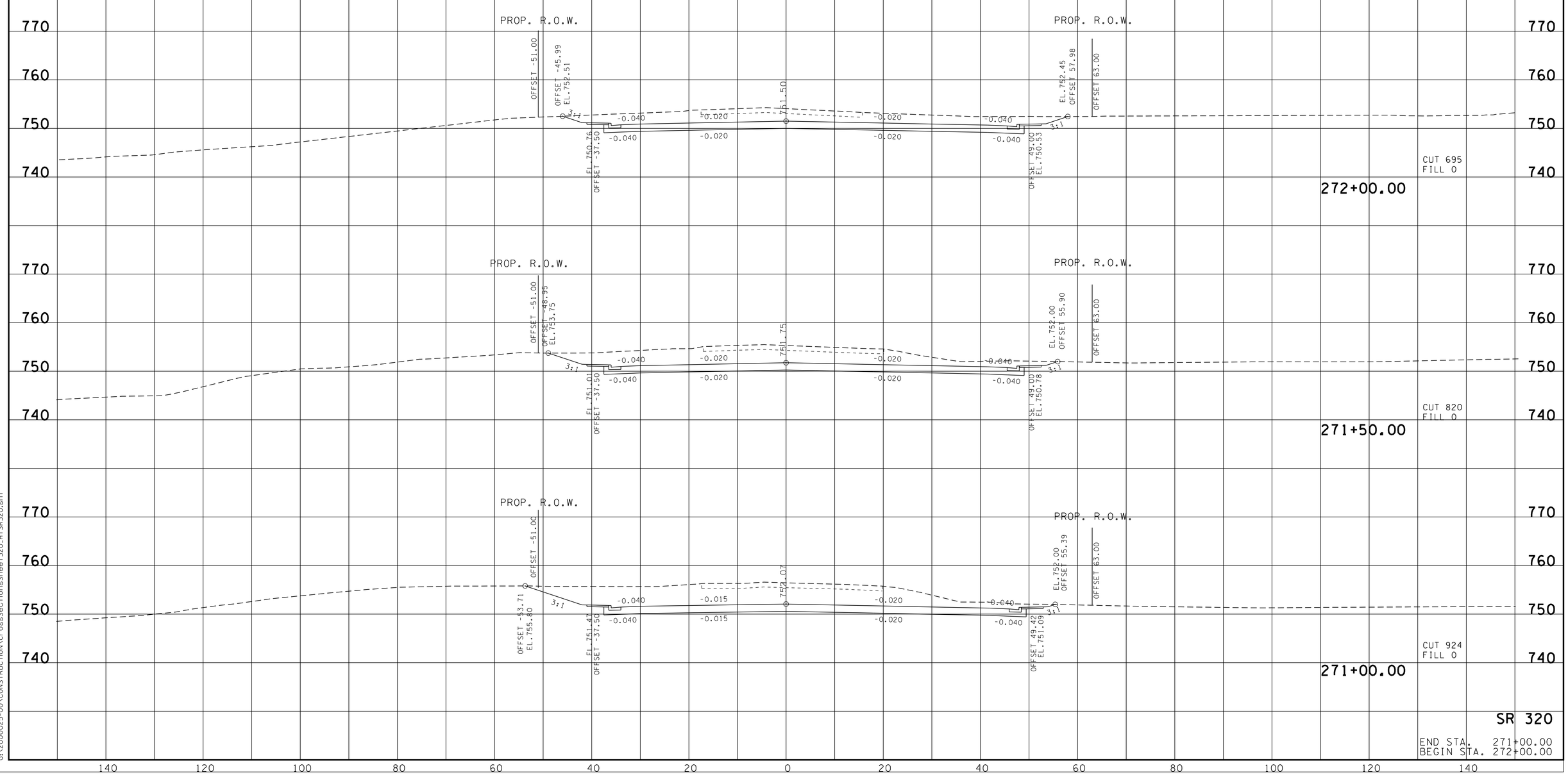
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	47
CONST.	2014	STP-320(4)	51

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



SR 320

END STA. 271+00.00
BEGIN STA. 272+00.00

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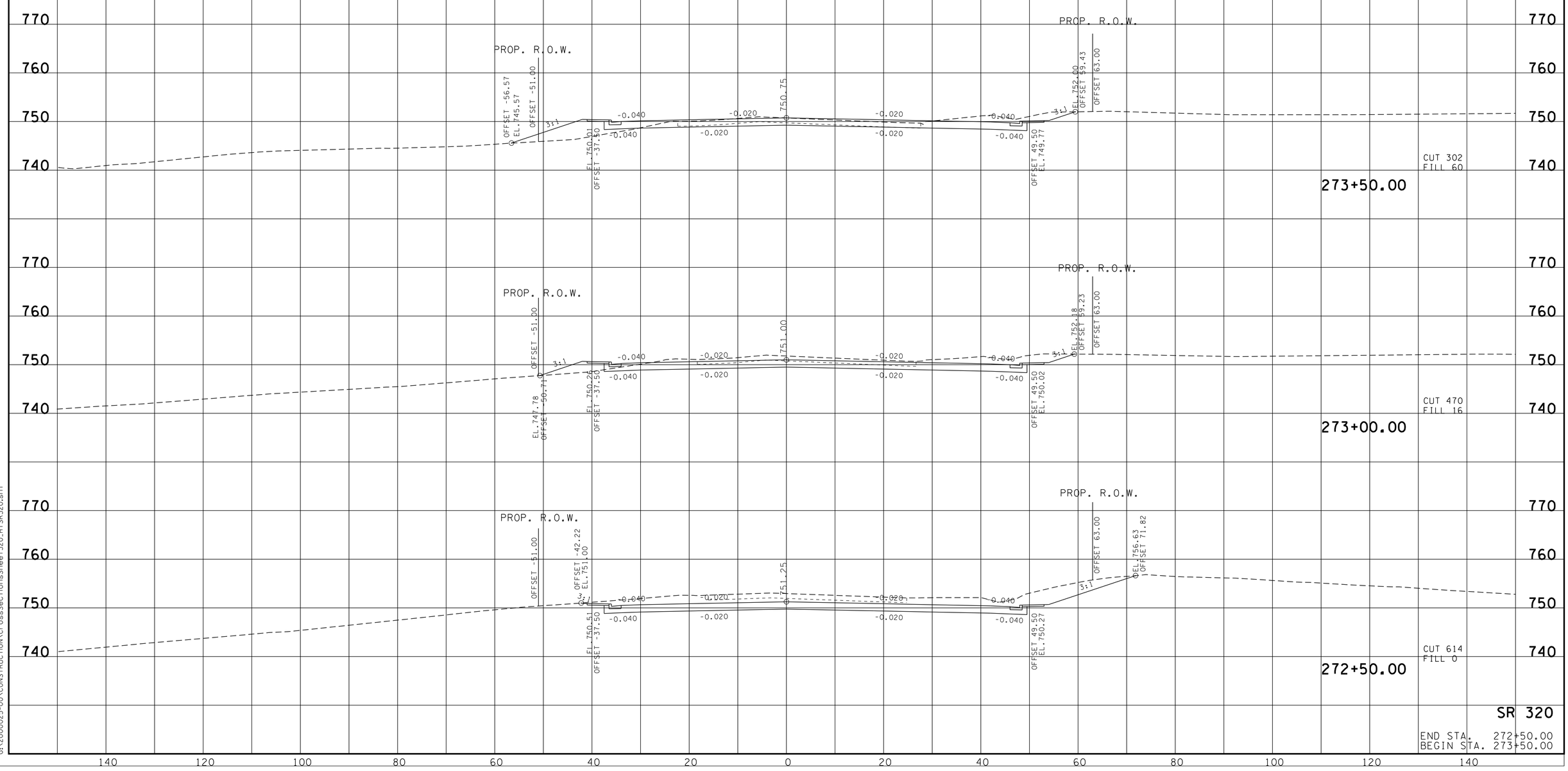
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	48
CONST.	2014	STP-320(4)	52

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



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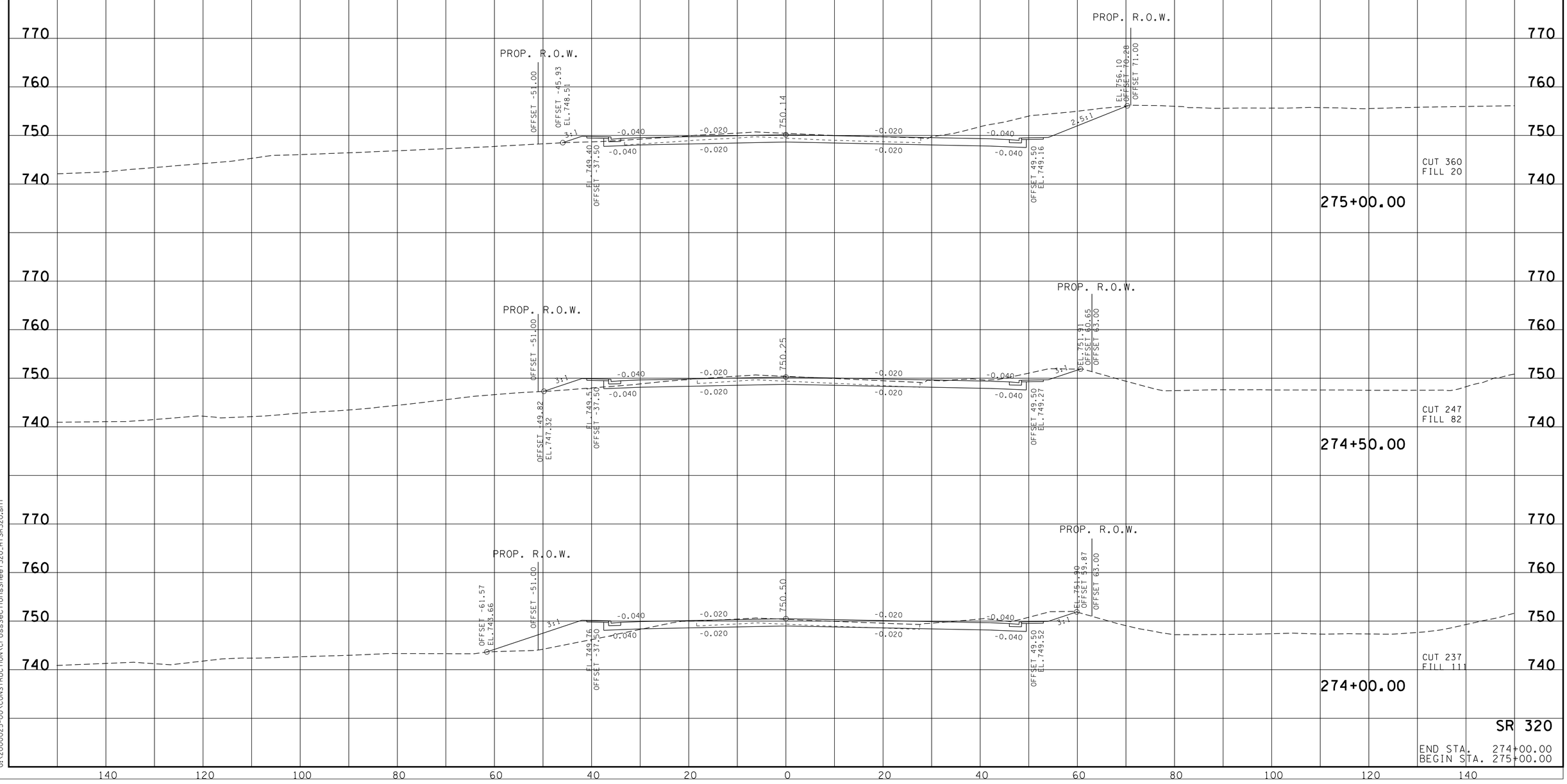
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	49
CONST.	2014	STP-320(4)	53

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.



SR 320

END STA. 274+00.00
BEGIN STA. 275+00.00

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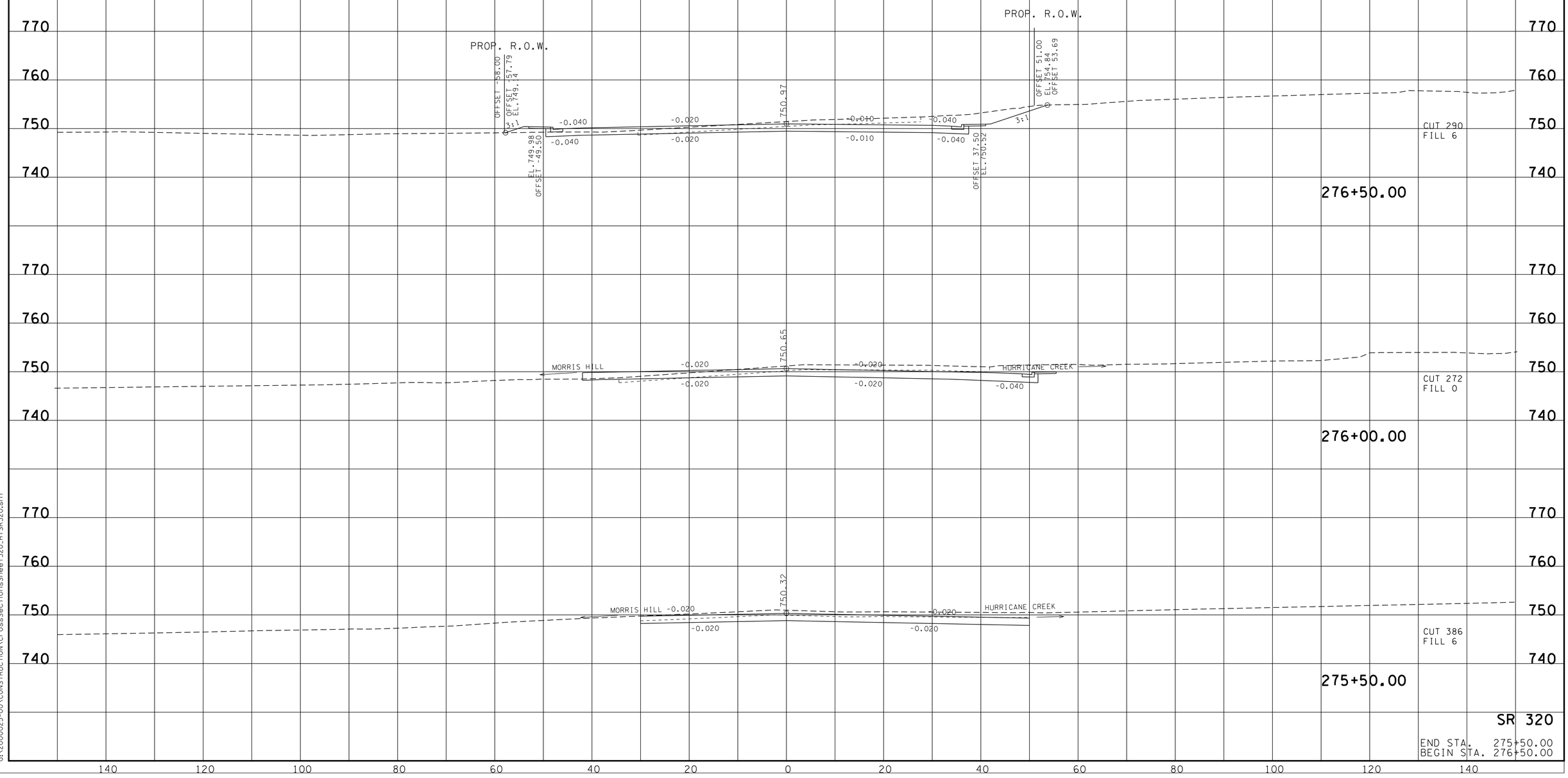
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	50
CONST.	2014	STP-320(4)	54

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



SR 320

END STA. 275+50.00
BEGIN STA. 276+50.00

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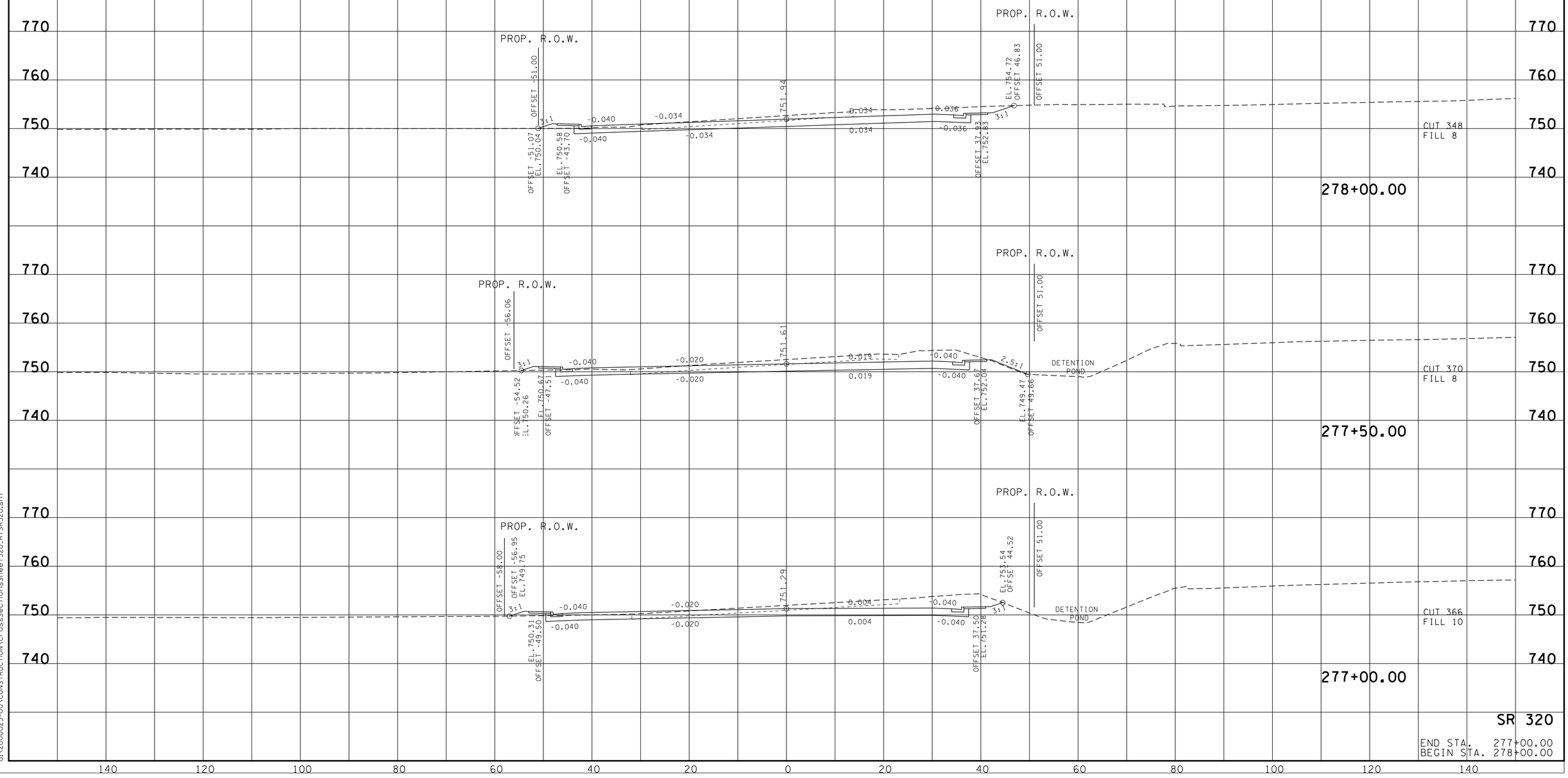
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	51
CONST.	2014	STP-320(4)	55

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



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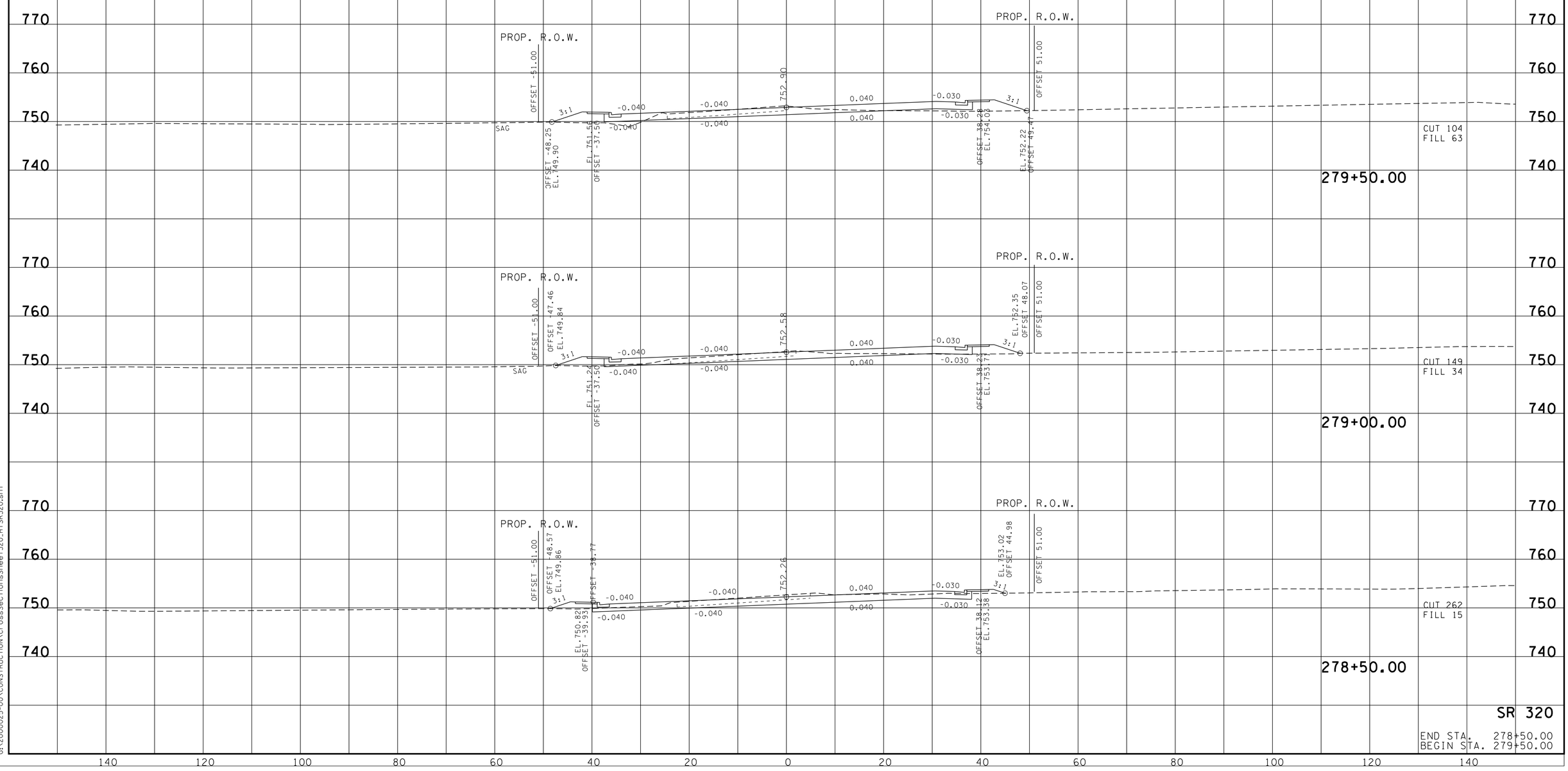
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	52
CONST.	2014	STP-320(4)	56

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



SR 320

END STA. 278+50.00
BEGIN STA. 279+50.00

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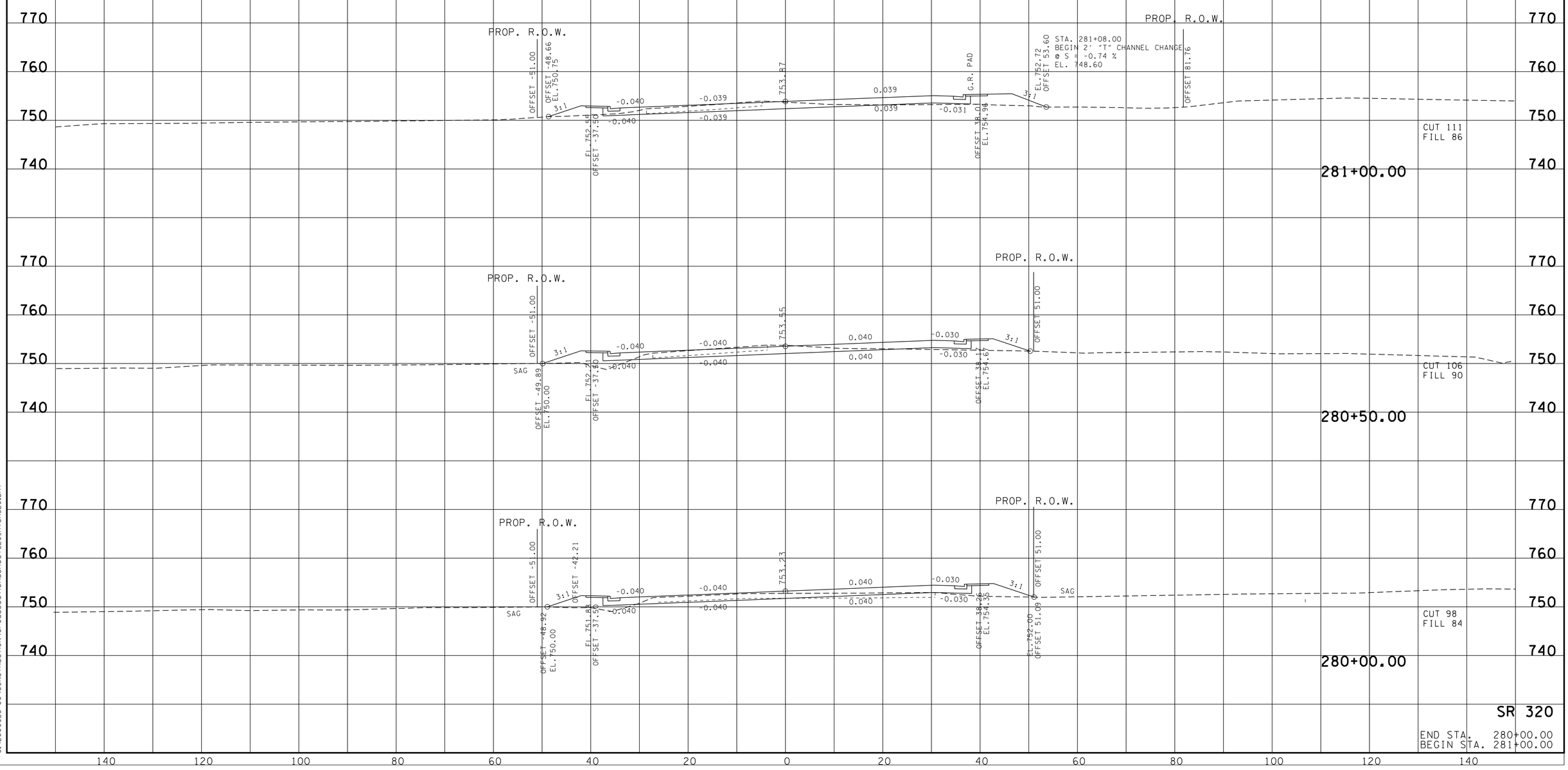
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	53
CONST.	2014	STP-320(4)	57

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



SR 320

END STA. 280+00.00
BEGIN STA. 281+00.00

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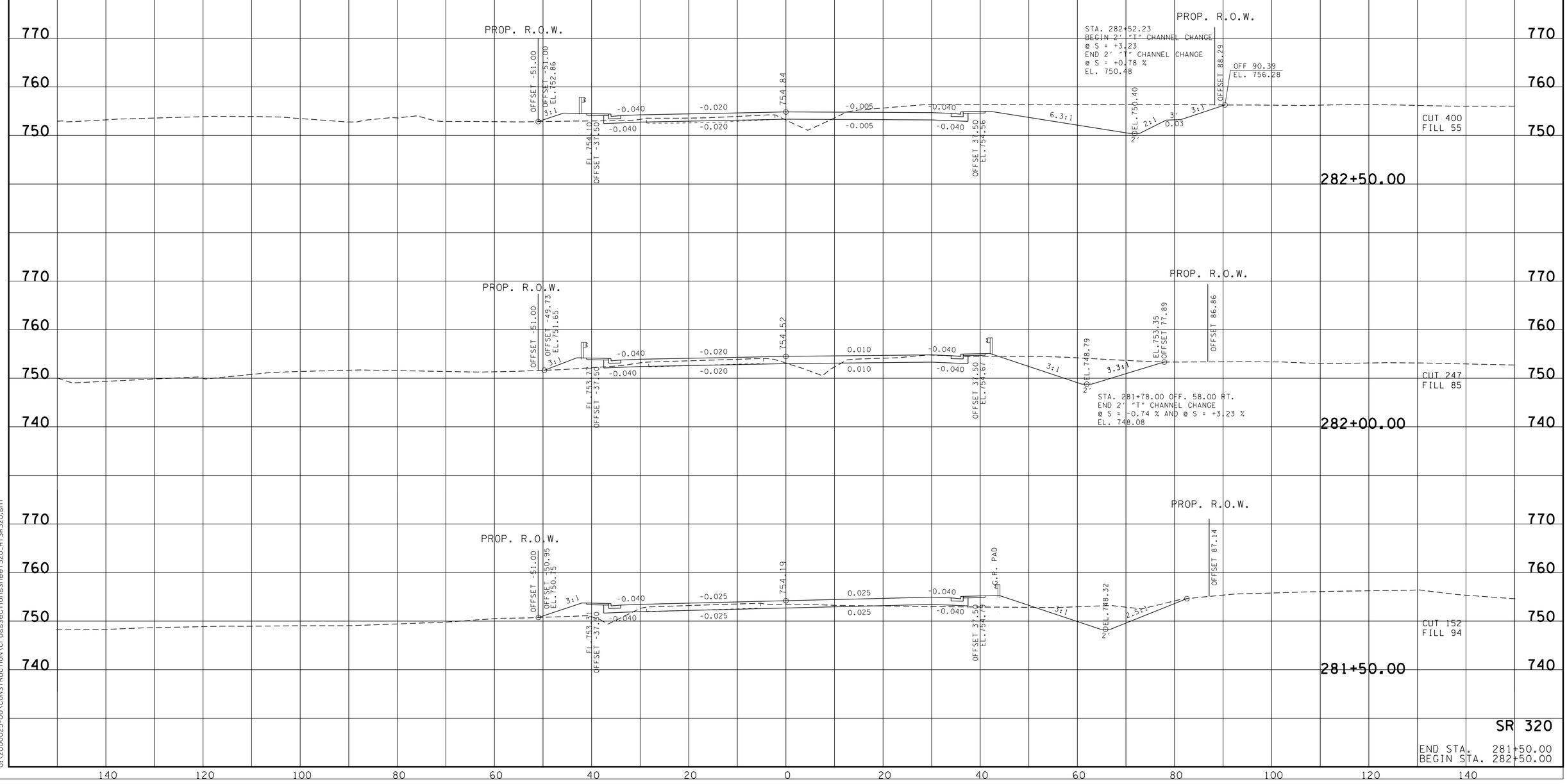
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	54
CONST.	2014	STP-320(4)	58

REVISION 4-10-07: CHANGED SPECIAL DITCH

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



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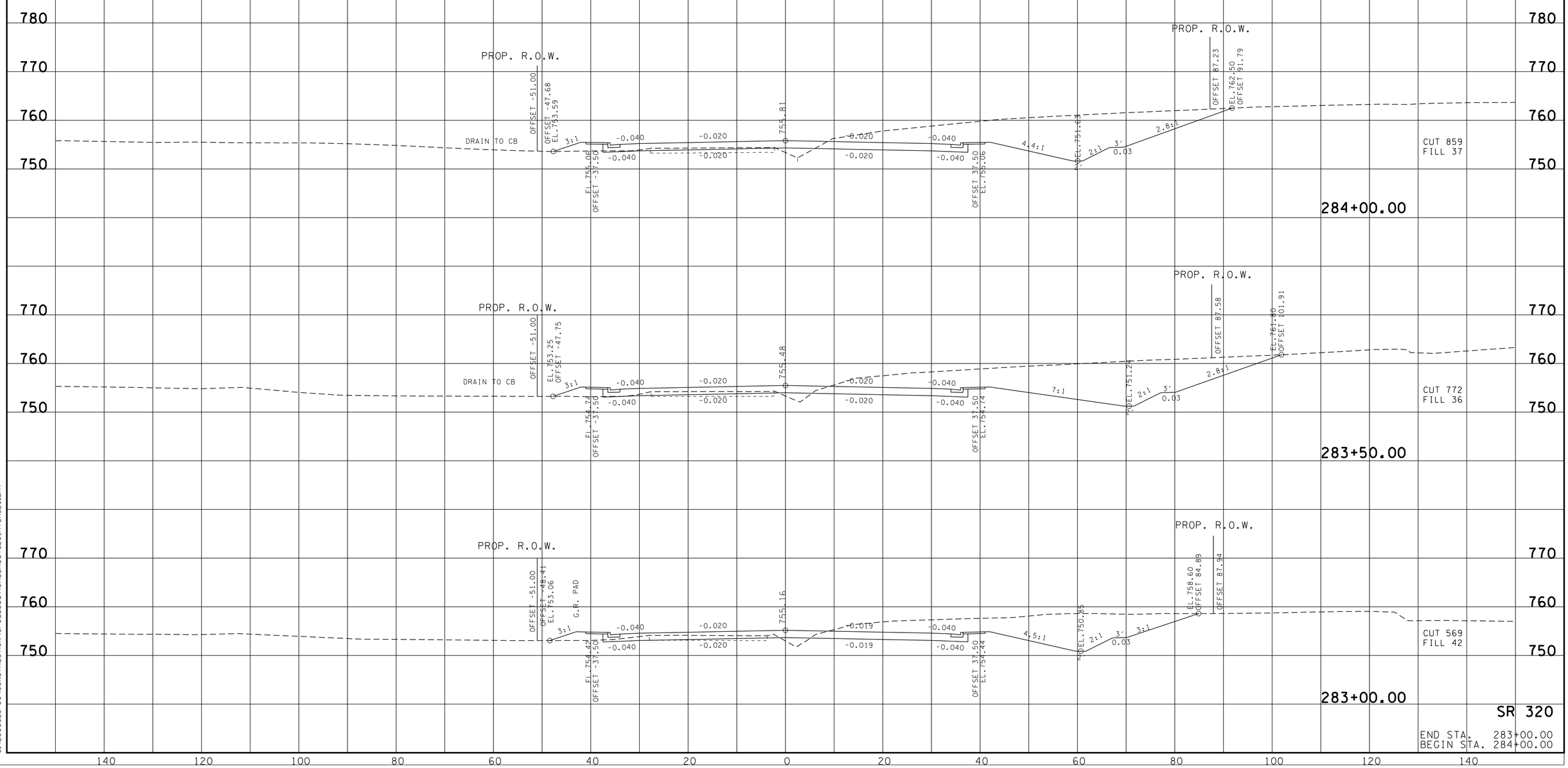
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	55
CONST.	2014	STP-320(4)	59

REVISION 4-10-07: CHANGED SPECIAL DITCH

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



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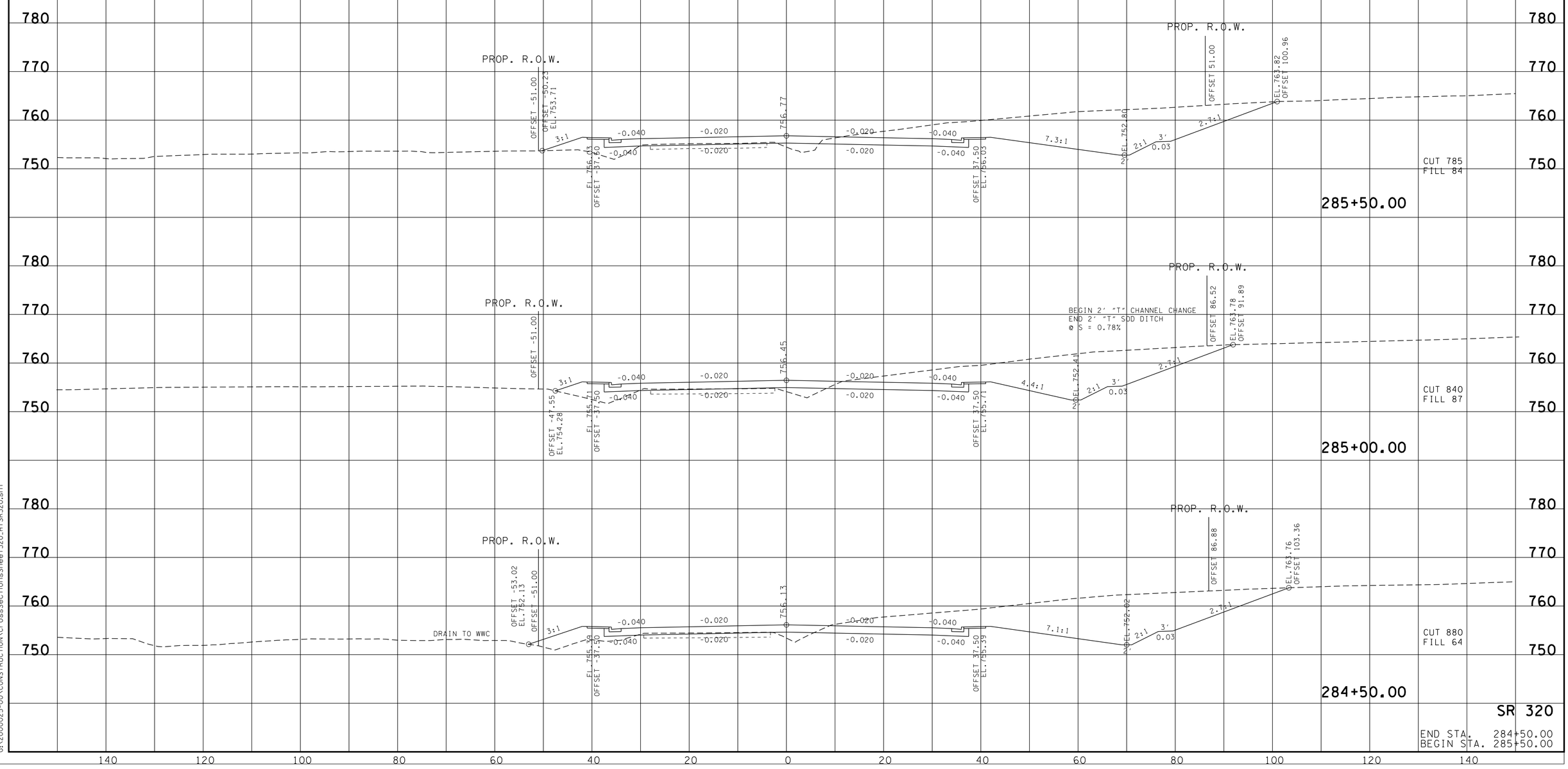
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	56
CONST.	2014	STP-320(4)	60

REVISION 4-10-07: CHANGED SPECIAL DITCH

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



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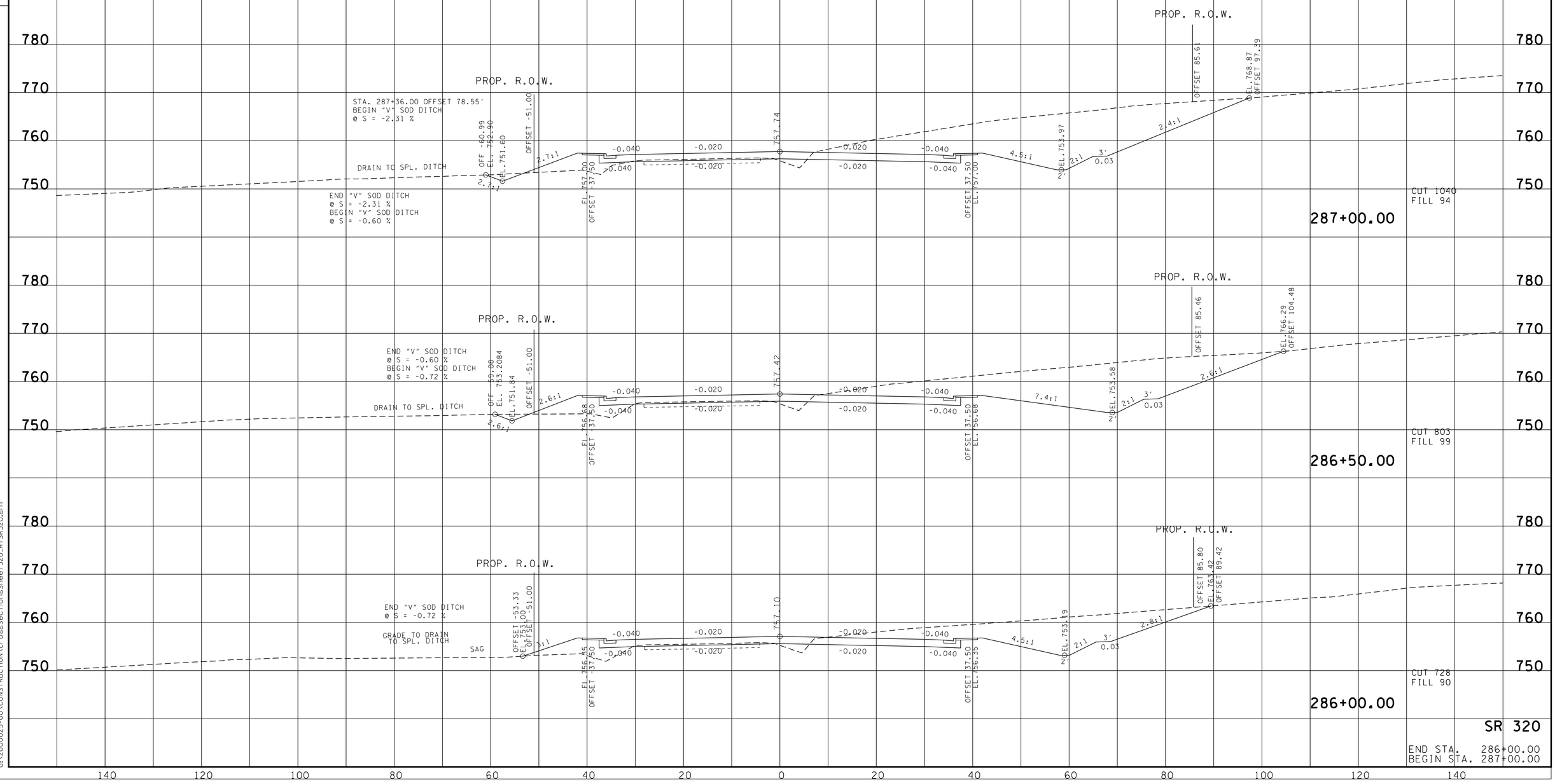
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	57
CONST.	2014	STP-320(4)	61

REVISION 4-10-07: CHANGED SPECIAL DITCH

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.



SR 320

END STA. 286+00.00
BEGIN STA. 287+00.00

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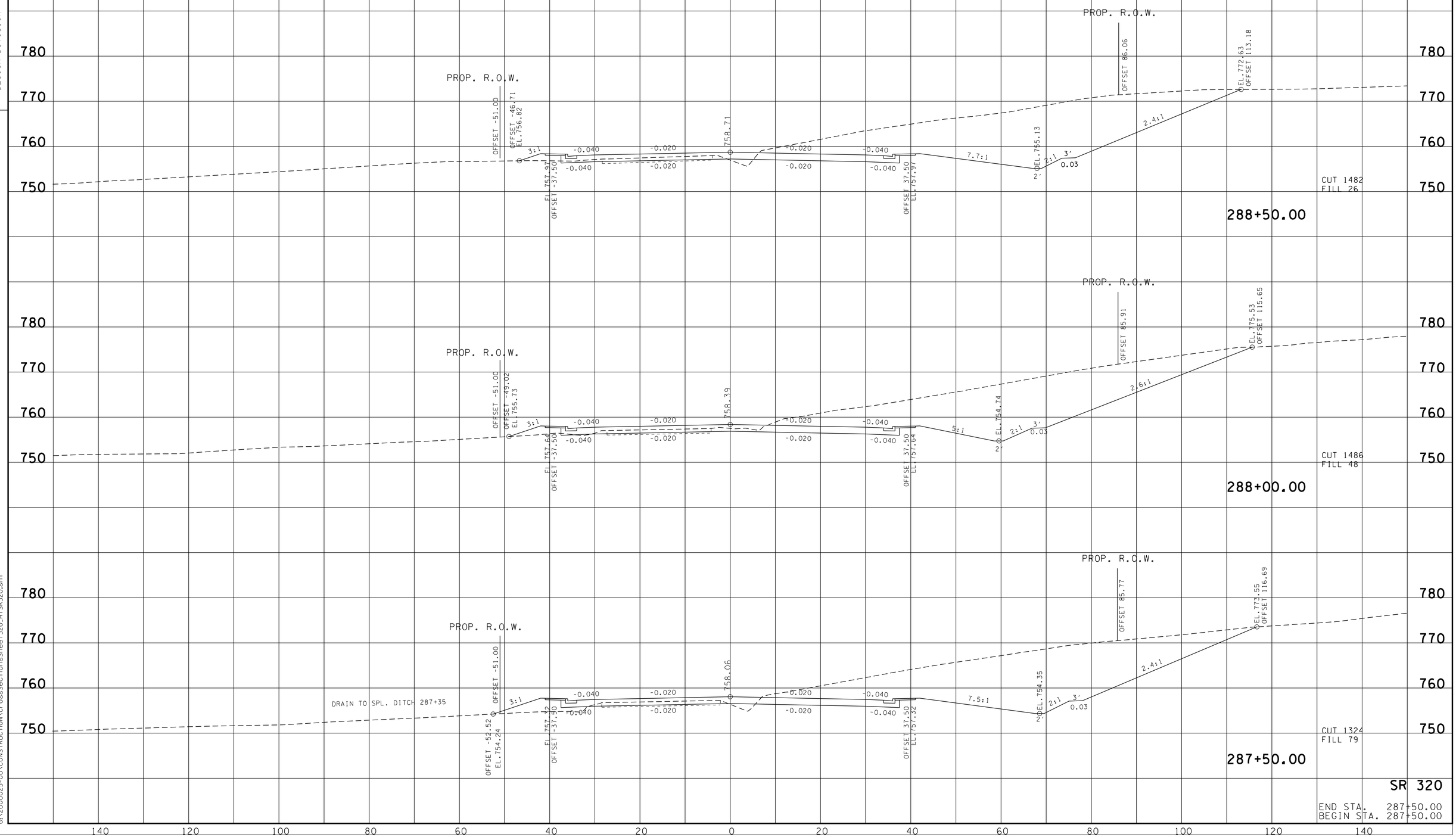
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	58
CONST.	2014	STP-320(4)	62

REVISION 4-10-07: CHANGED SPECIAL DITCH

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



SR 320

END STA. 287+50.00
BEGIN STA. 287+50.00

12/10/2013 9:21:07 AM
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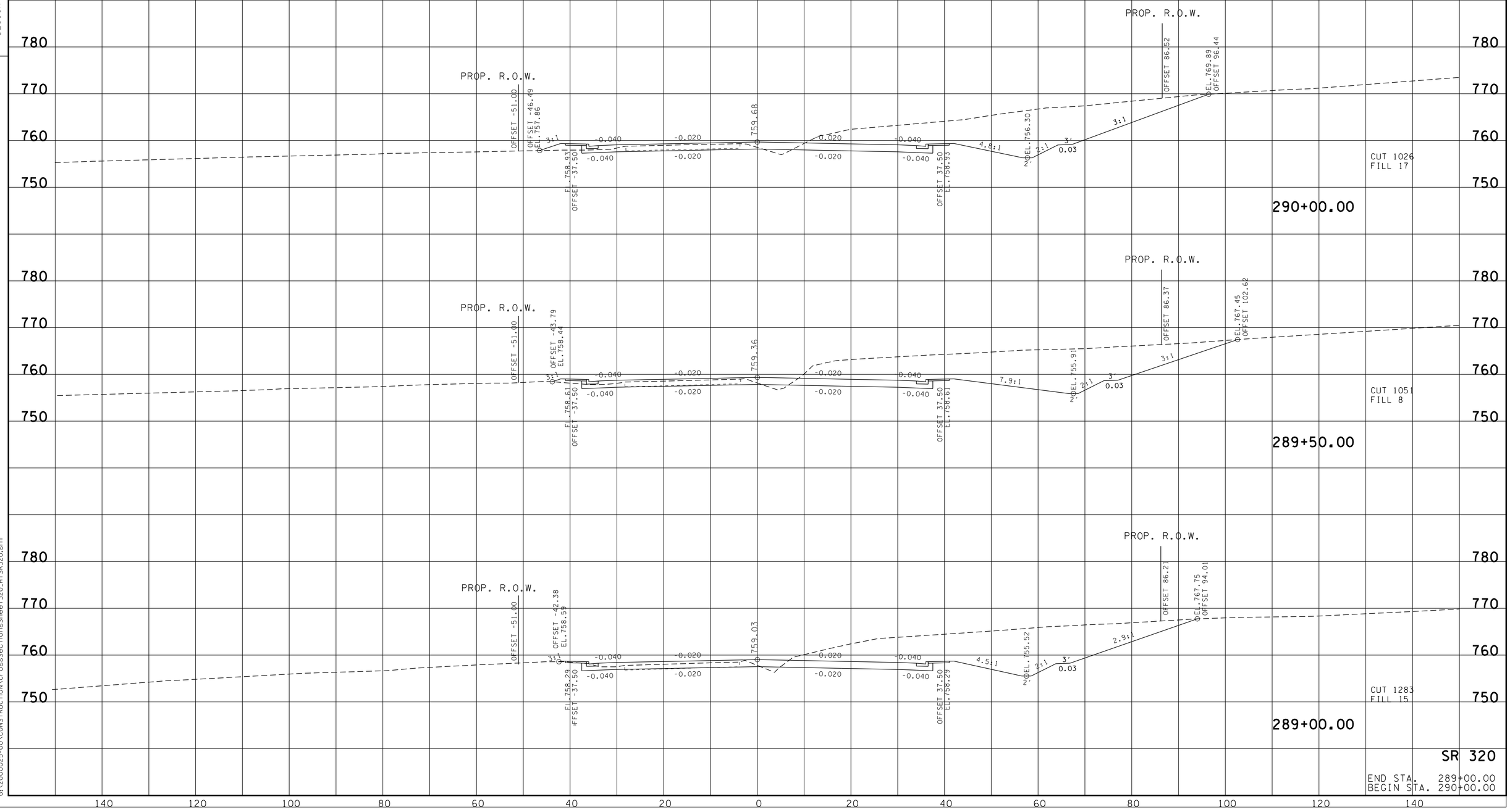
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	59
CONST.	2014	STP-320(4)	63

REVISION 4-10-07: CHANGED SPECIAL DITCH

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



SR 320

END STA. 289+00.00
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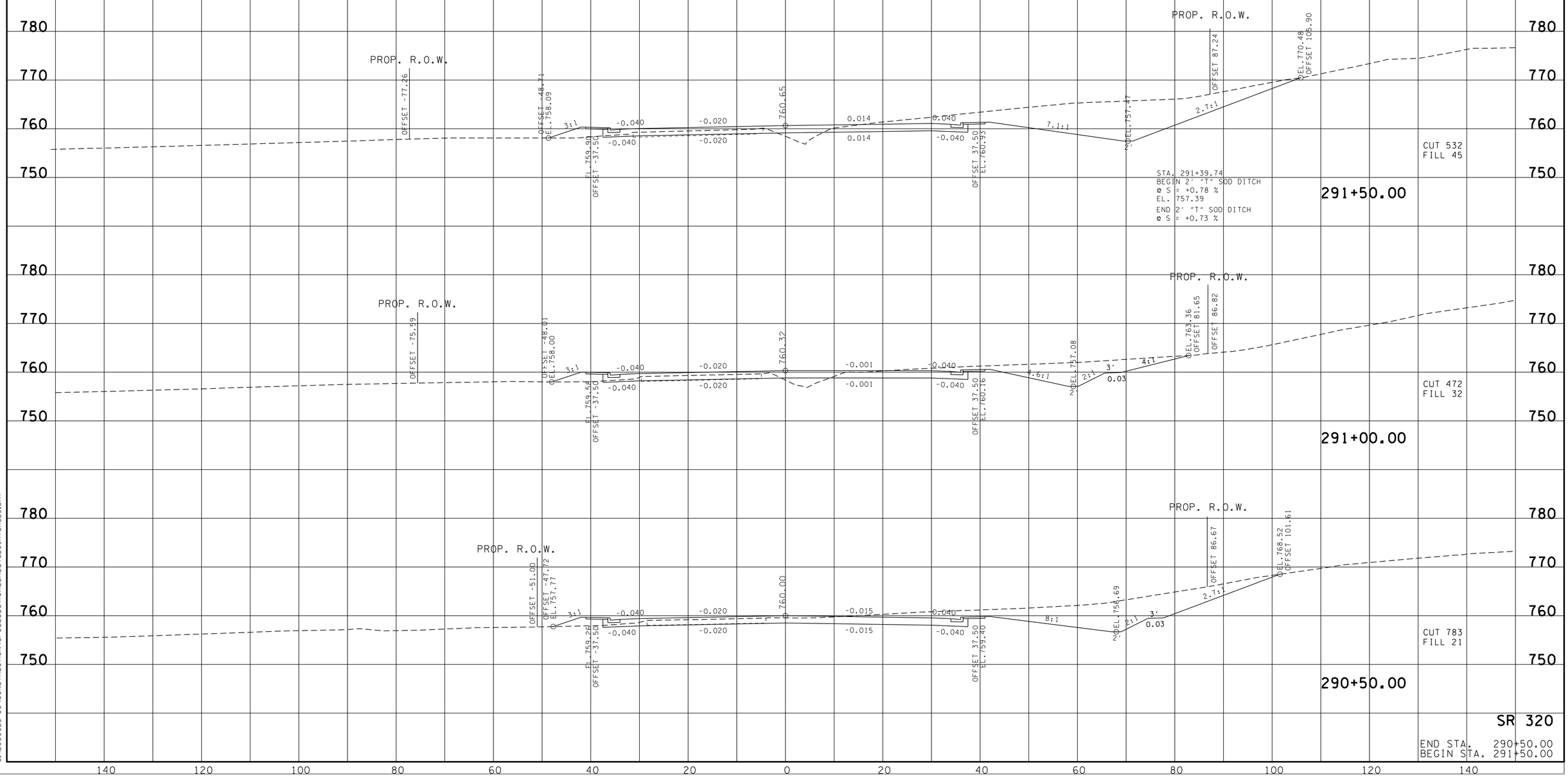
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	60
CONST.	2014	STP-320(4)	64

REVISION 4-10-07: CHANGED SPECIAL DITCH

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



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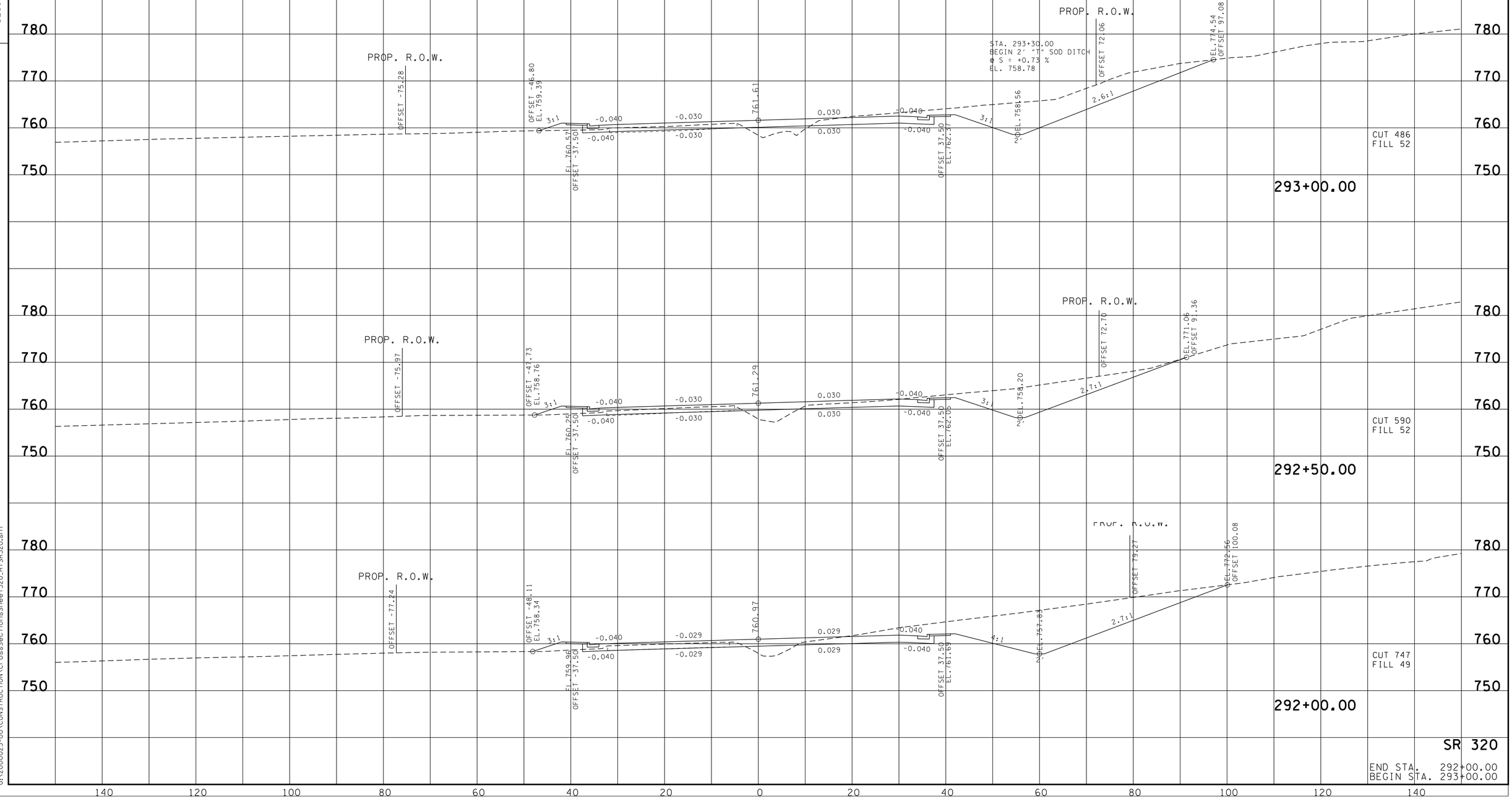
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	61
CONST.	2014	STP-320(4)	65

REVISION 4-10-07: CHANGED SPECIAL DITCH

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



SR 320

END STA. 292+00.00
BEGIN STA. 293+00.00

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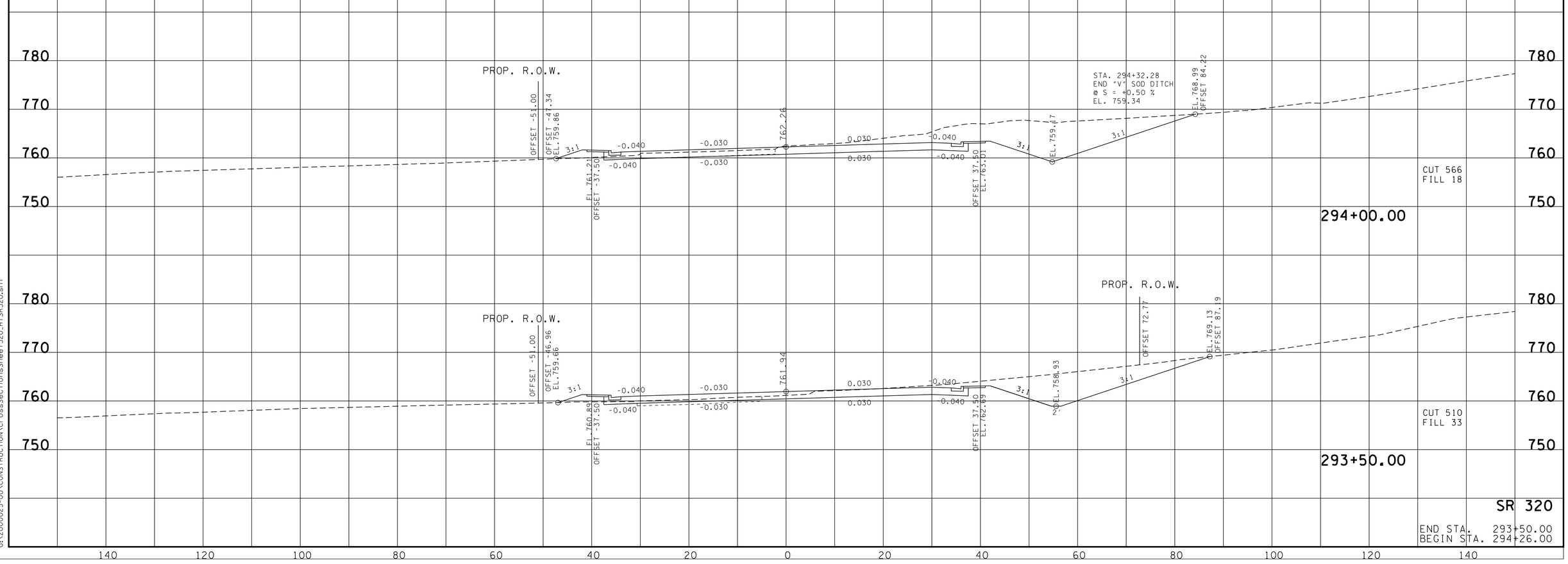
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	62
CONST.	2014	STP-320(4)	66

REVISION 4-10-07: CHANGED SPECIAL DITCH

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



SR 320

END STA. 293+50.00
BEGIN STA. 294+26.00

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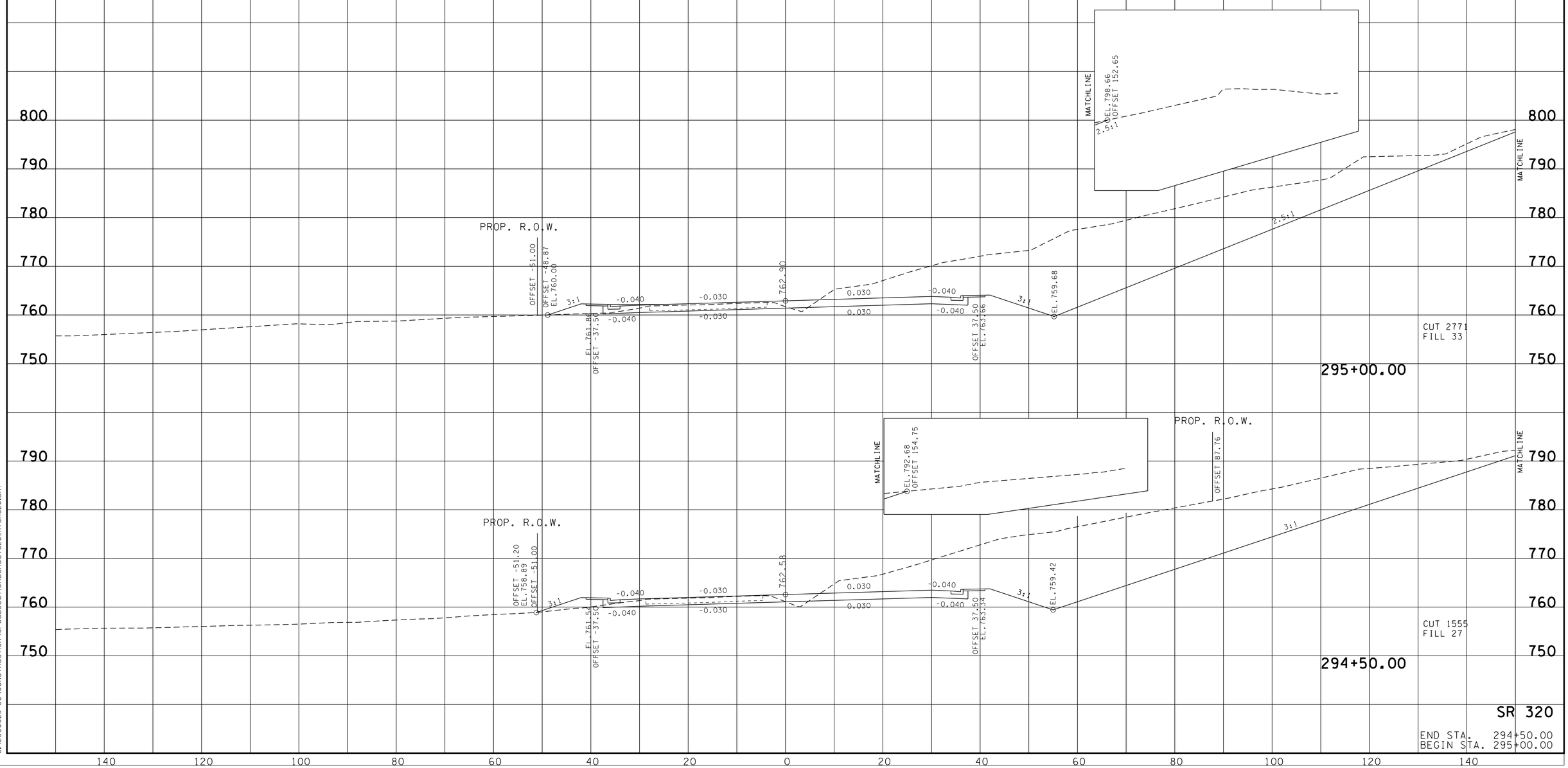
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	63
CONST.	2014	STP-320(4)	67

REVISION 4-10-07: CHANGED SPECIAL DITCH

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.



SR 320

END STA. 294+50.00
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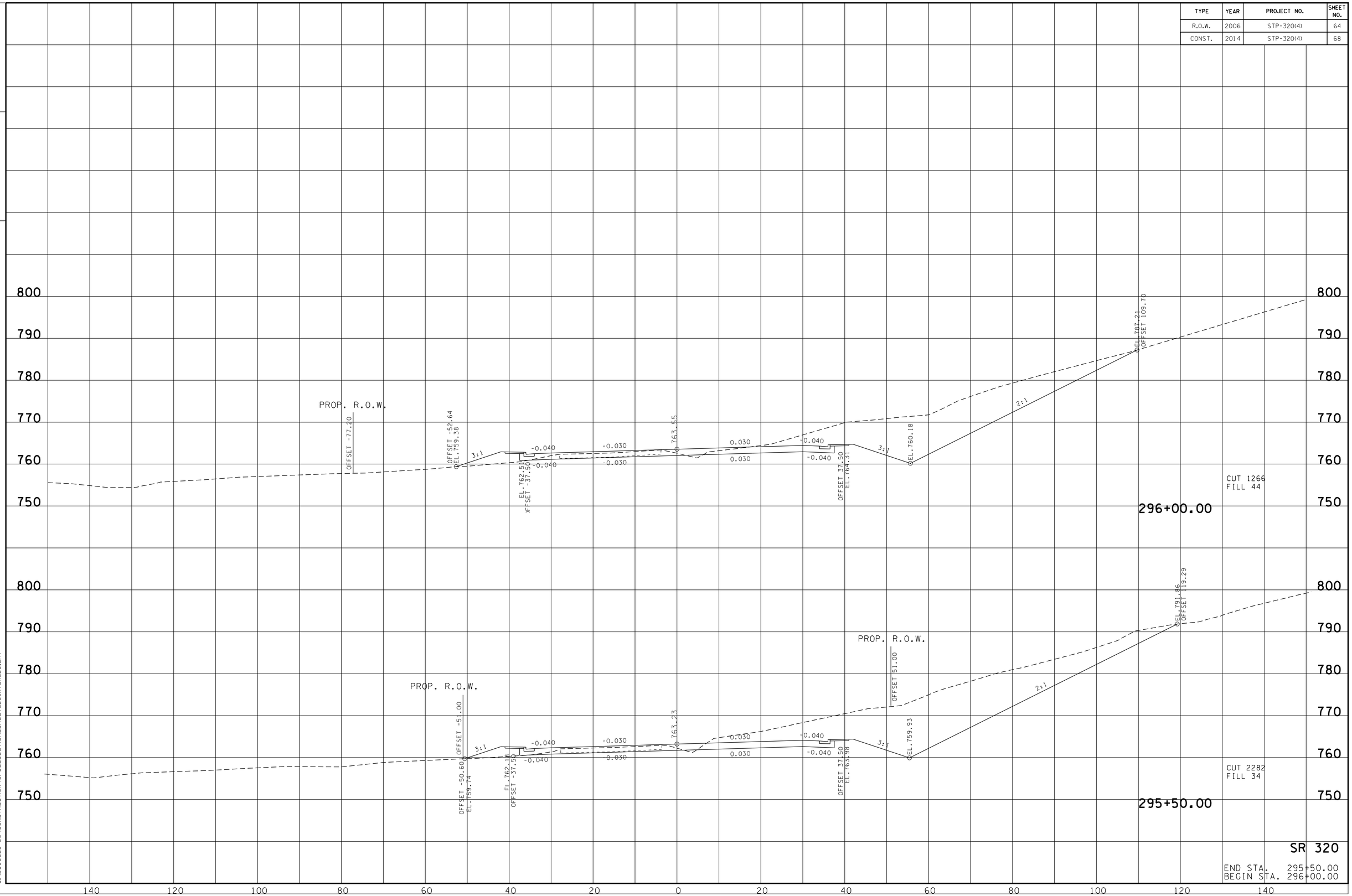
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	64
CONST.	2014	STP-320(4)	68



FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION

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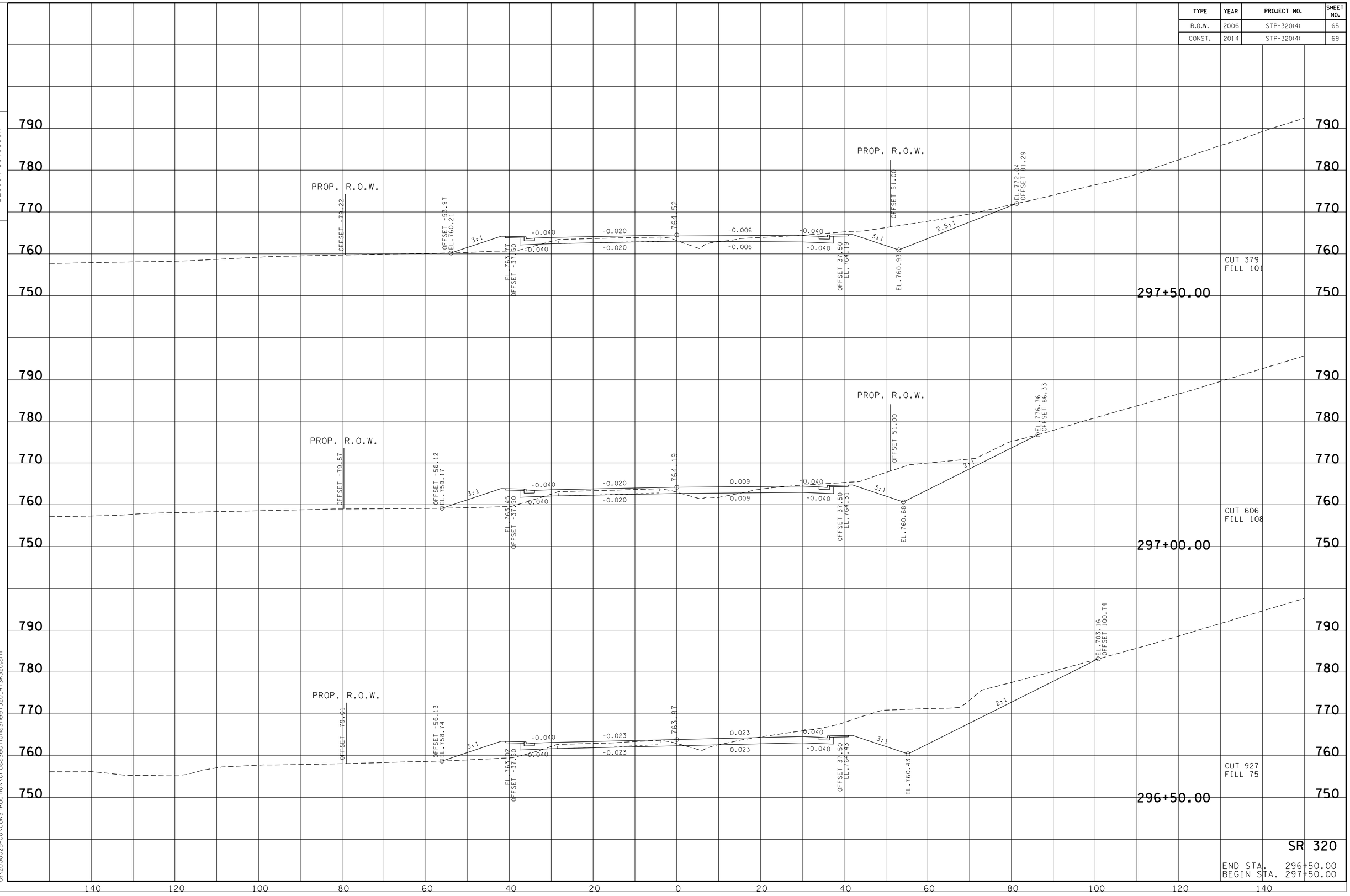
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	65
CONST.	2014	STP-320(4)	69

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



SR 320

END STA. 296+50.00
BEGIN STA. 297+50.00

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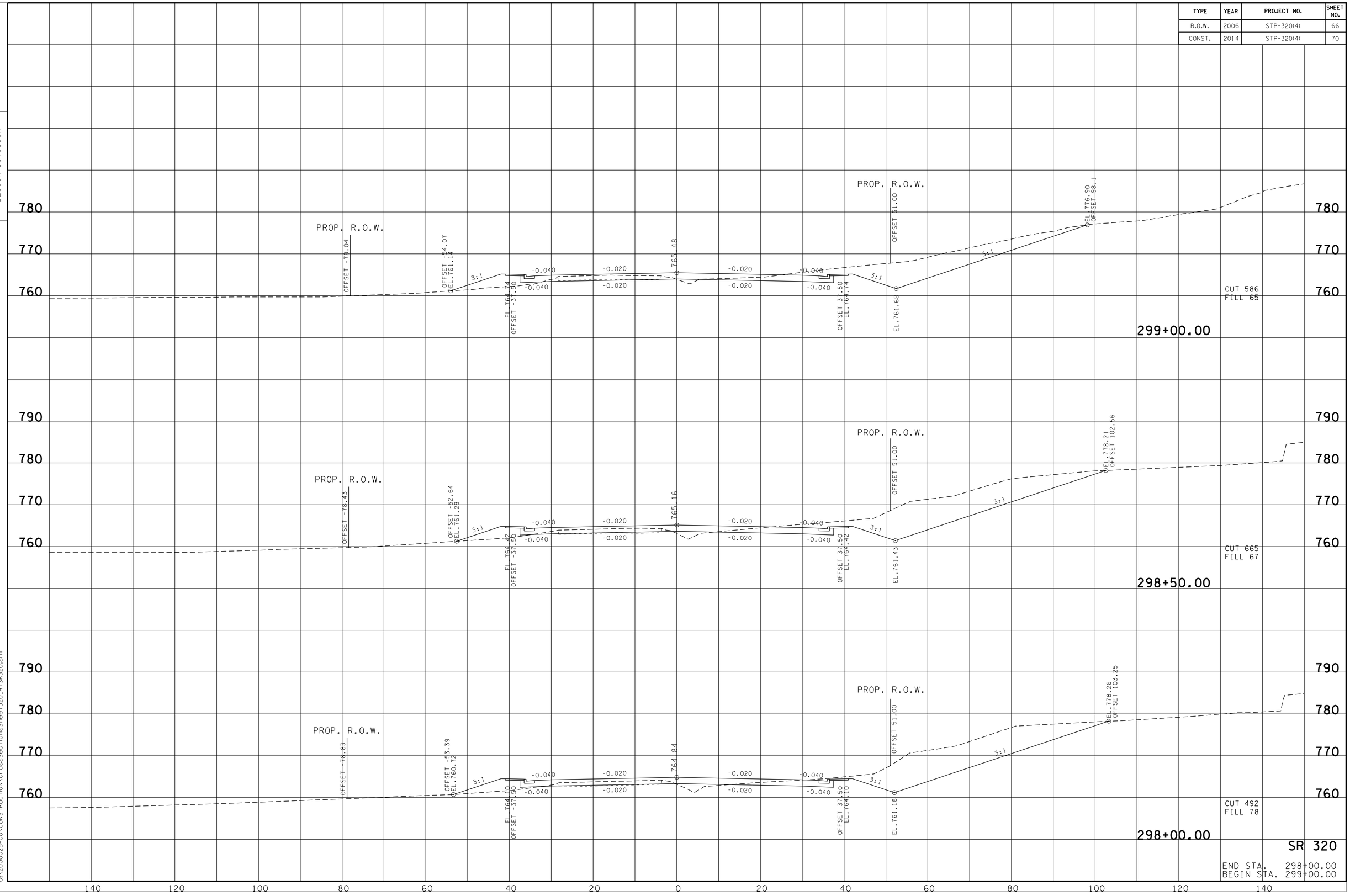
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	66
CONST.	2014	STP-320(4)	70

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



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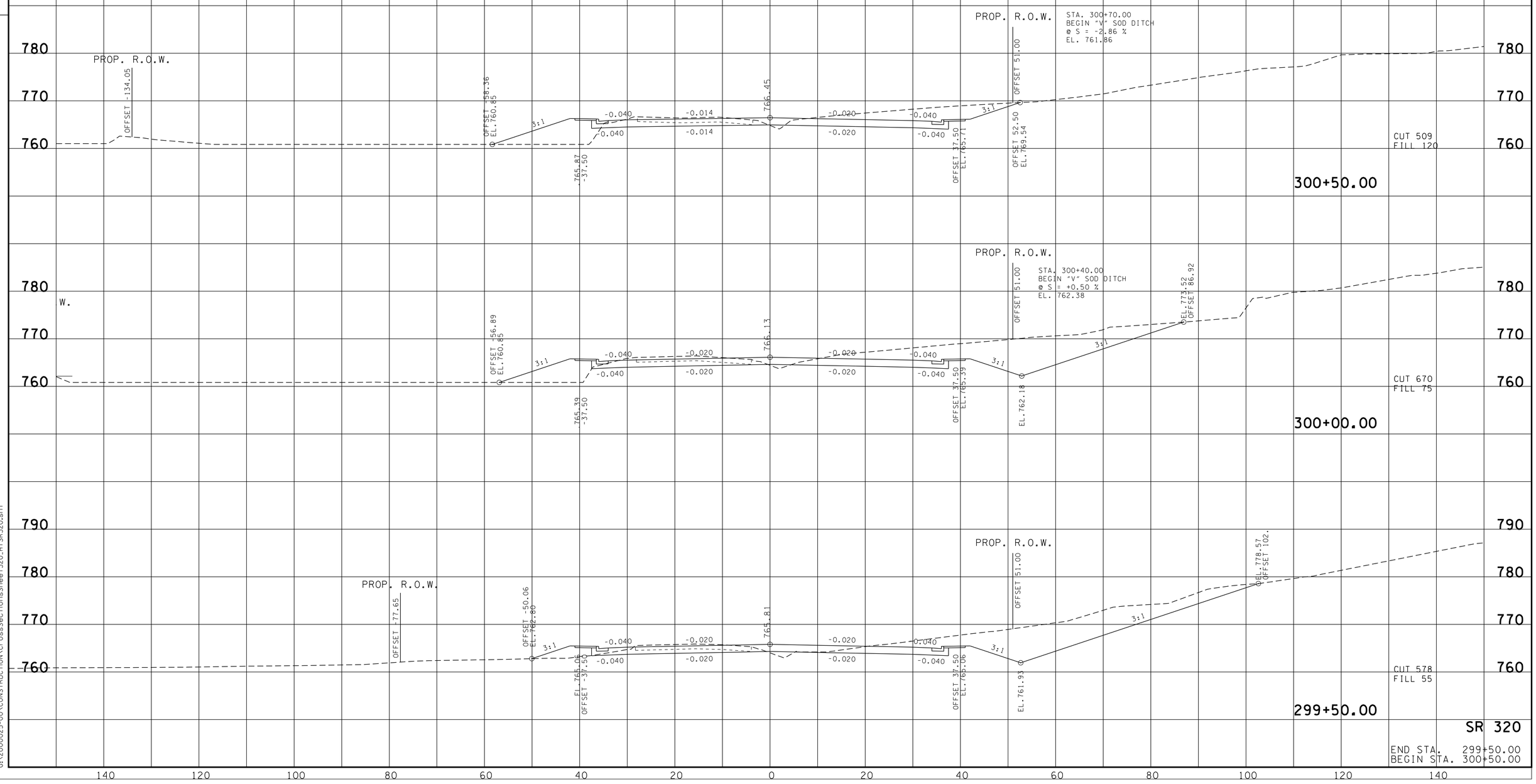
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	67
CONST.	2014	STP-320(4)	71

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



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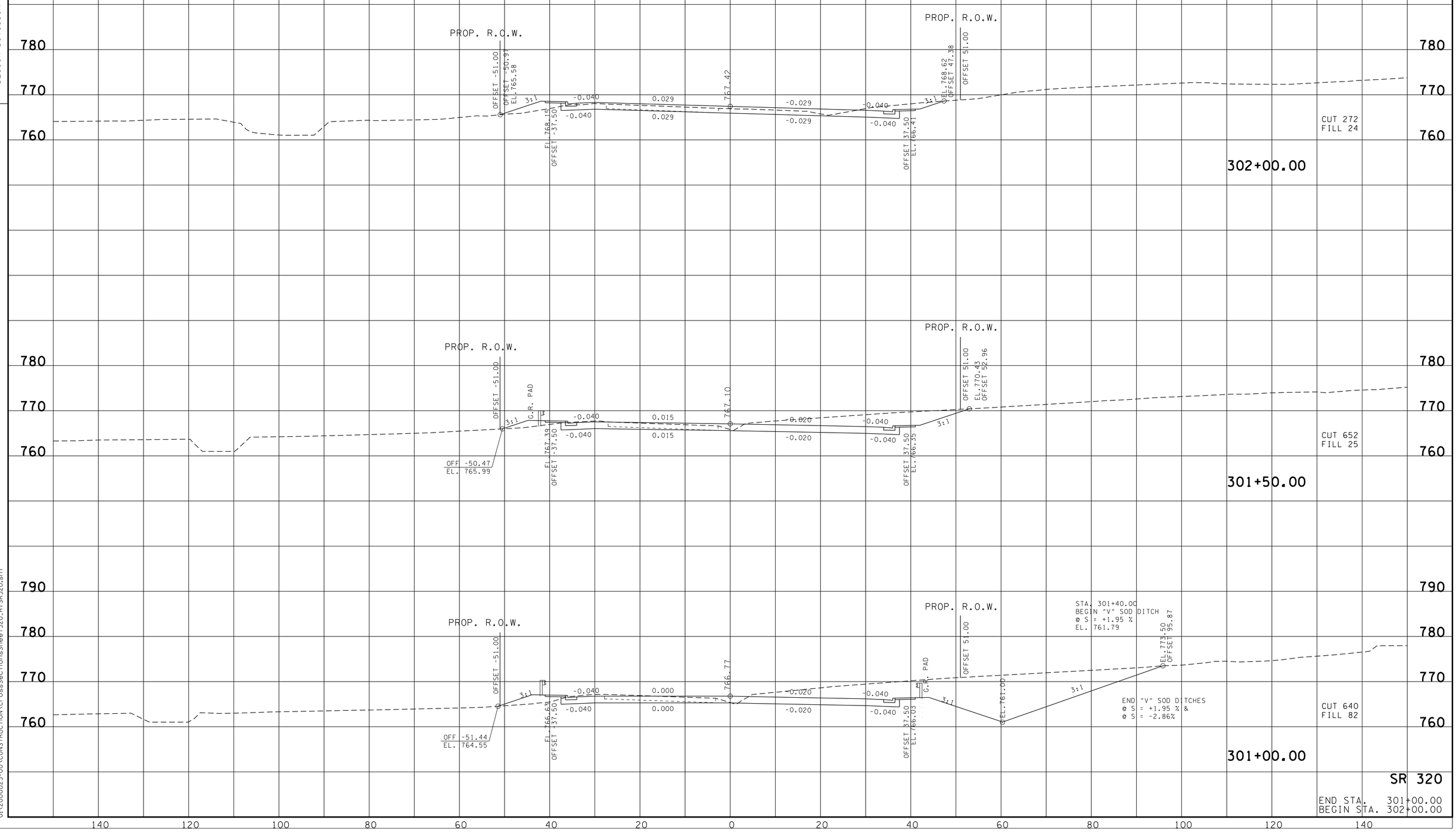
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	68
CONST.	2014	STP-320(4)	72

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.



SR 320

END STA. 301+00.00
BEGIN STA. 302+00.00

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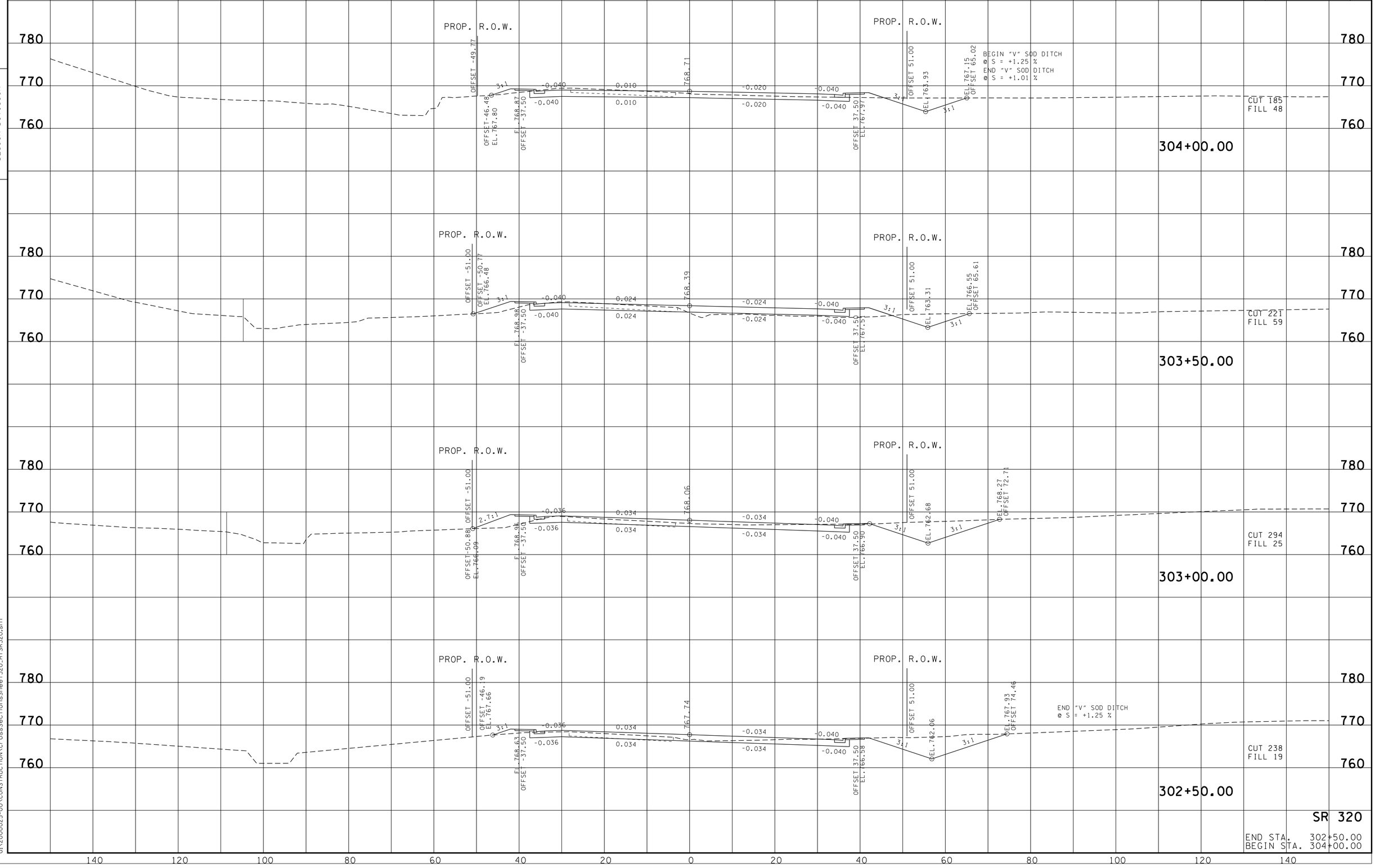
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	69
CONST.	2014	STP-320(4)	73

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



SR 320

END STA. 302+50.00
BEGIN STA. 304+00.00

9/3/2013 3:49:05 PM
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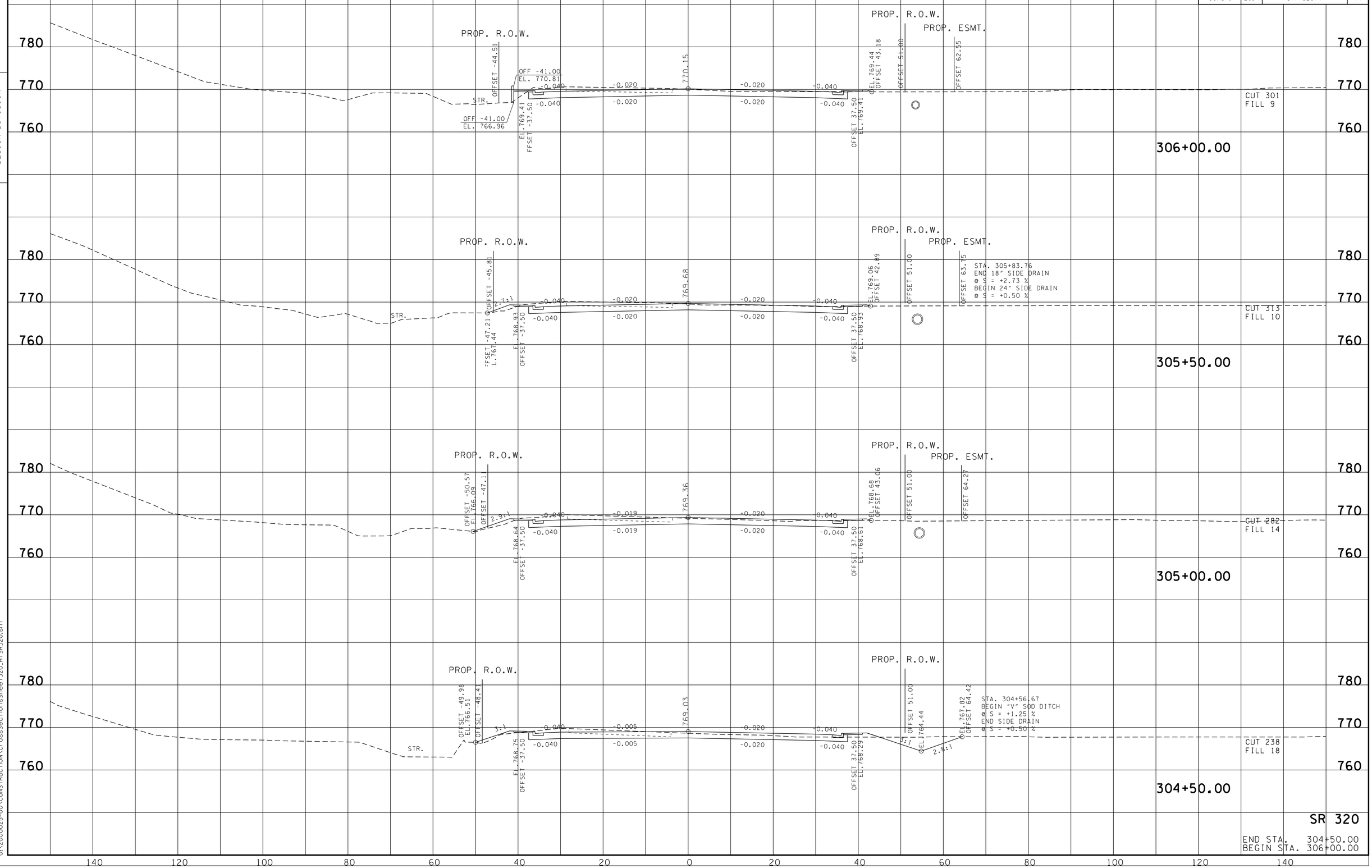
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	70
CONST.	2014	STP-320(4)	74

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.



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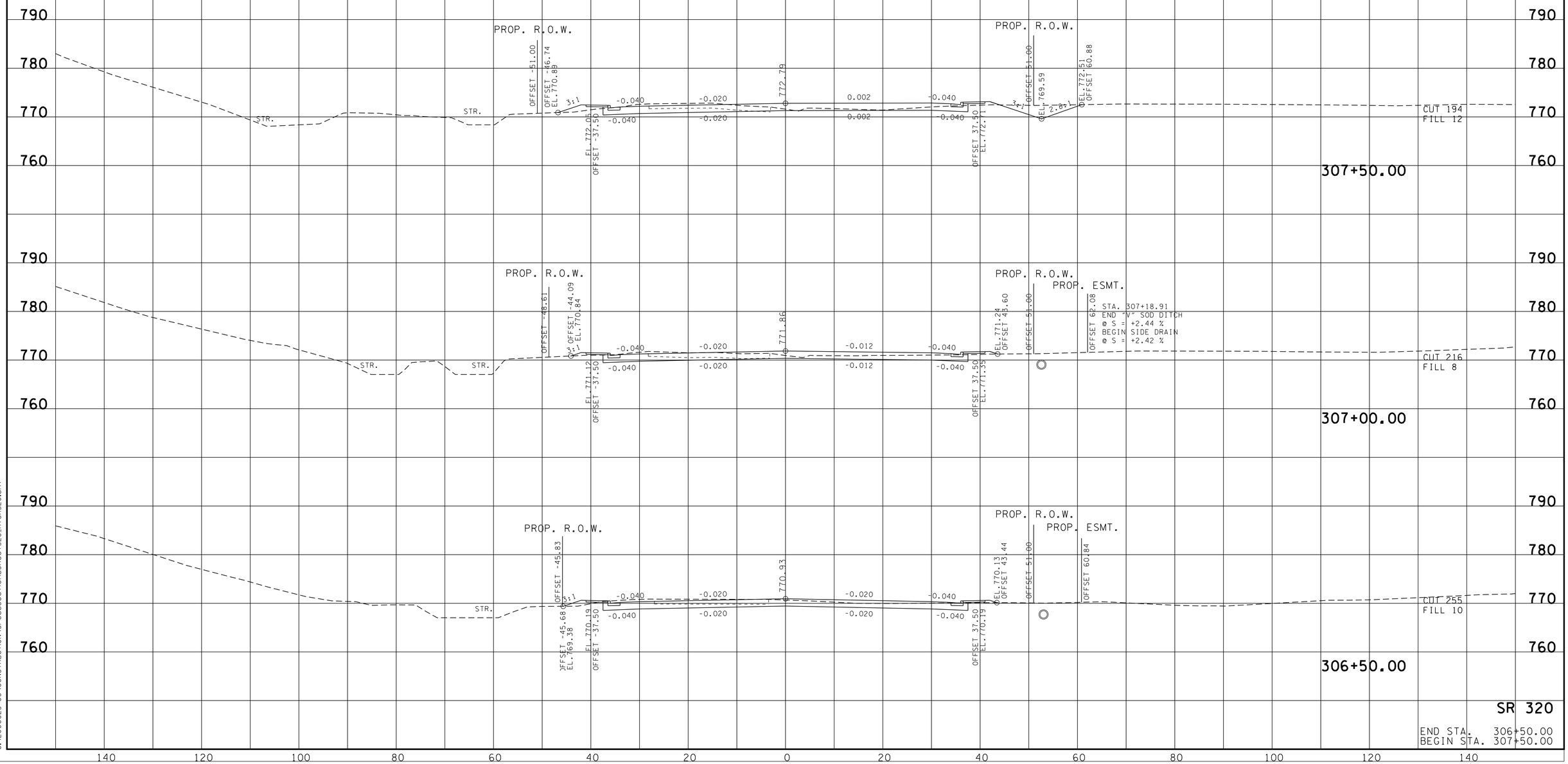
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	71
CONST.	2014	STP-320(4)	75

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.



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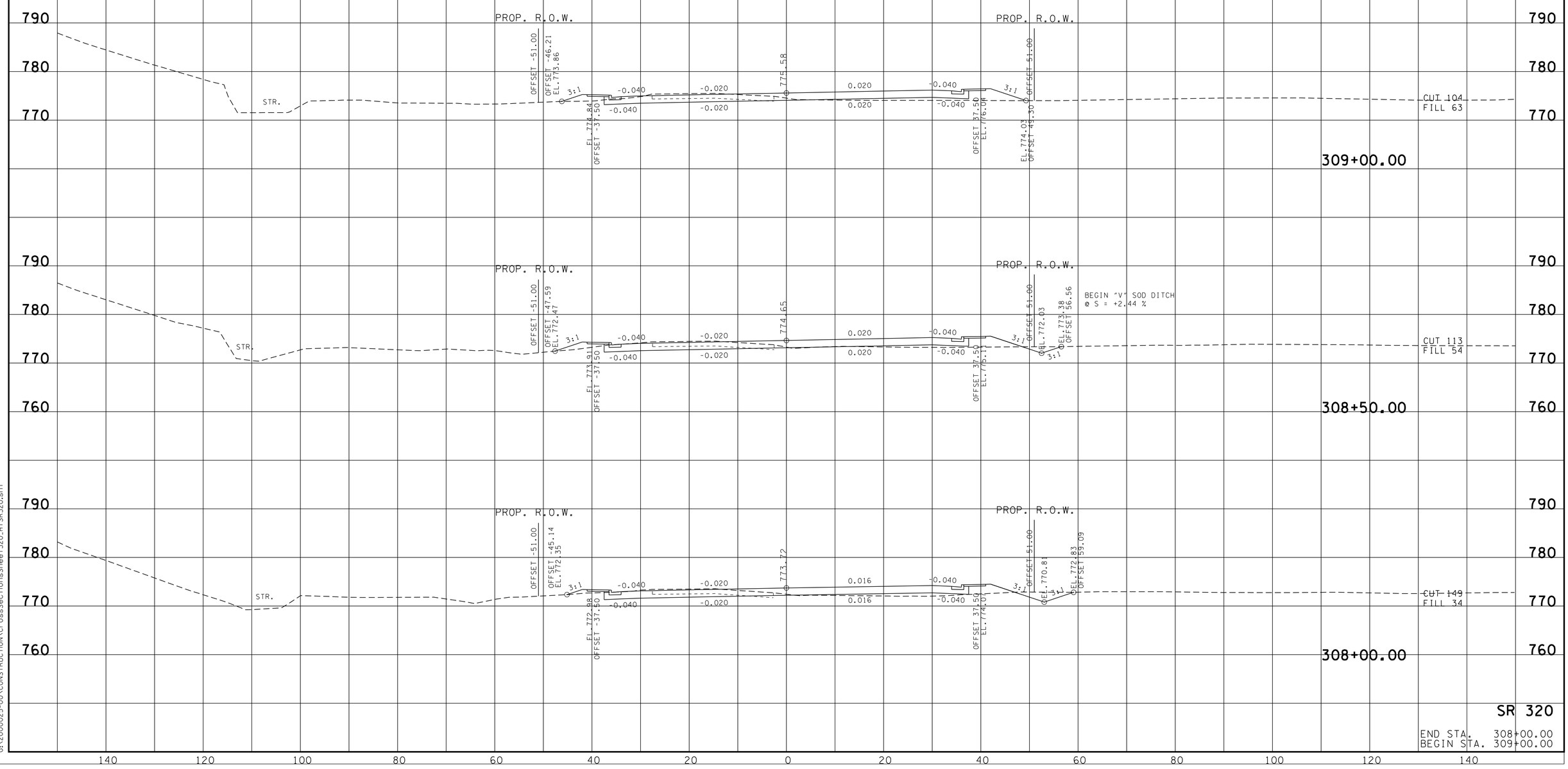
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	72
CONST.	2014	STP-320(4)	76

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.



SR 320

END STA. 308+00.00
BEGIN STA. 309+00.00

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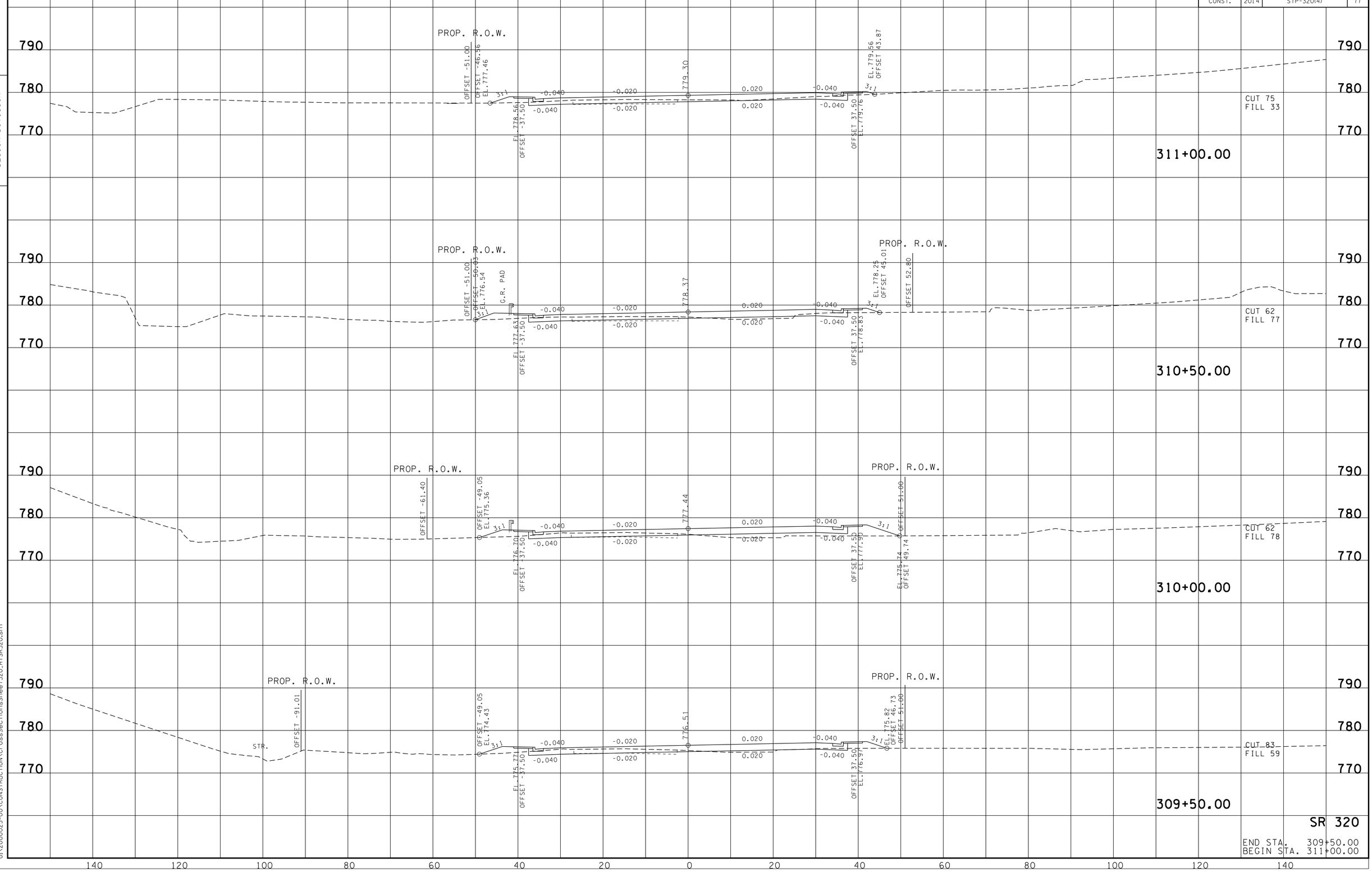
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	73
CONST.	2014	STP-320(4)	77

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



SR 320

END STA. 309+50.00
BEGIN STA. 311+00.00

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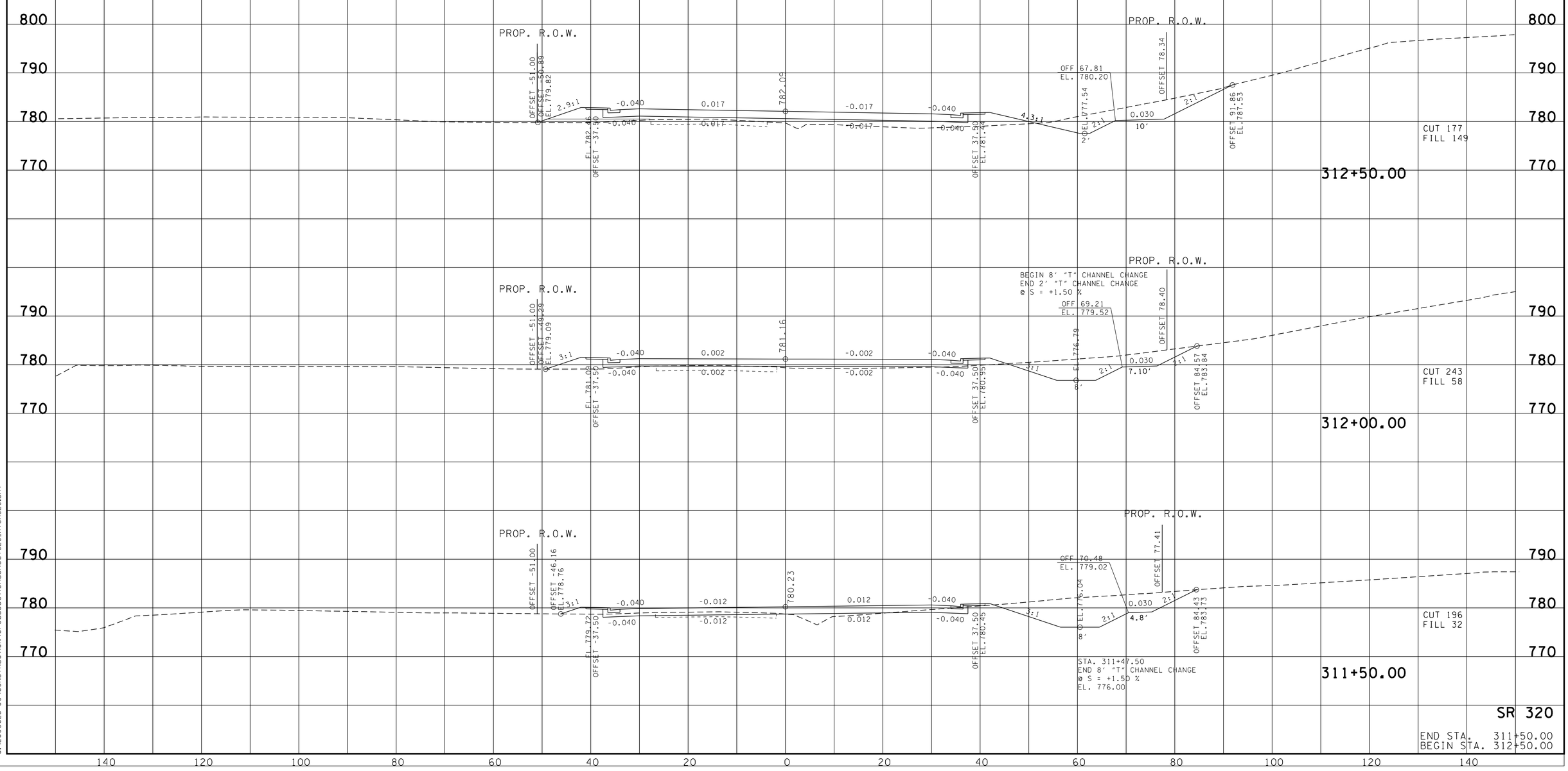
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	74
CONST.	2014	STP-320(4)	78

REVISION 4-10-07: CHANGED SPECIAL DITCH

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



SR 320

END STA. 311+50.00
BEGIN STA. 312+50.00

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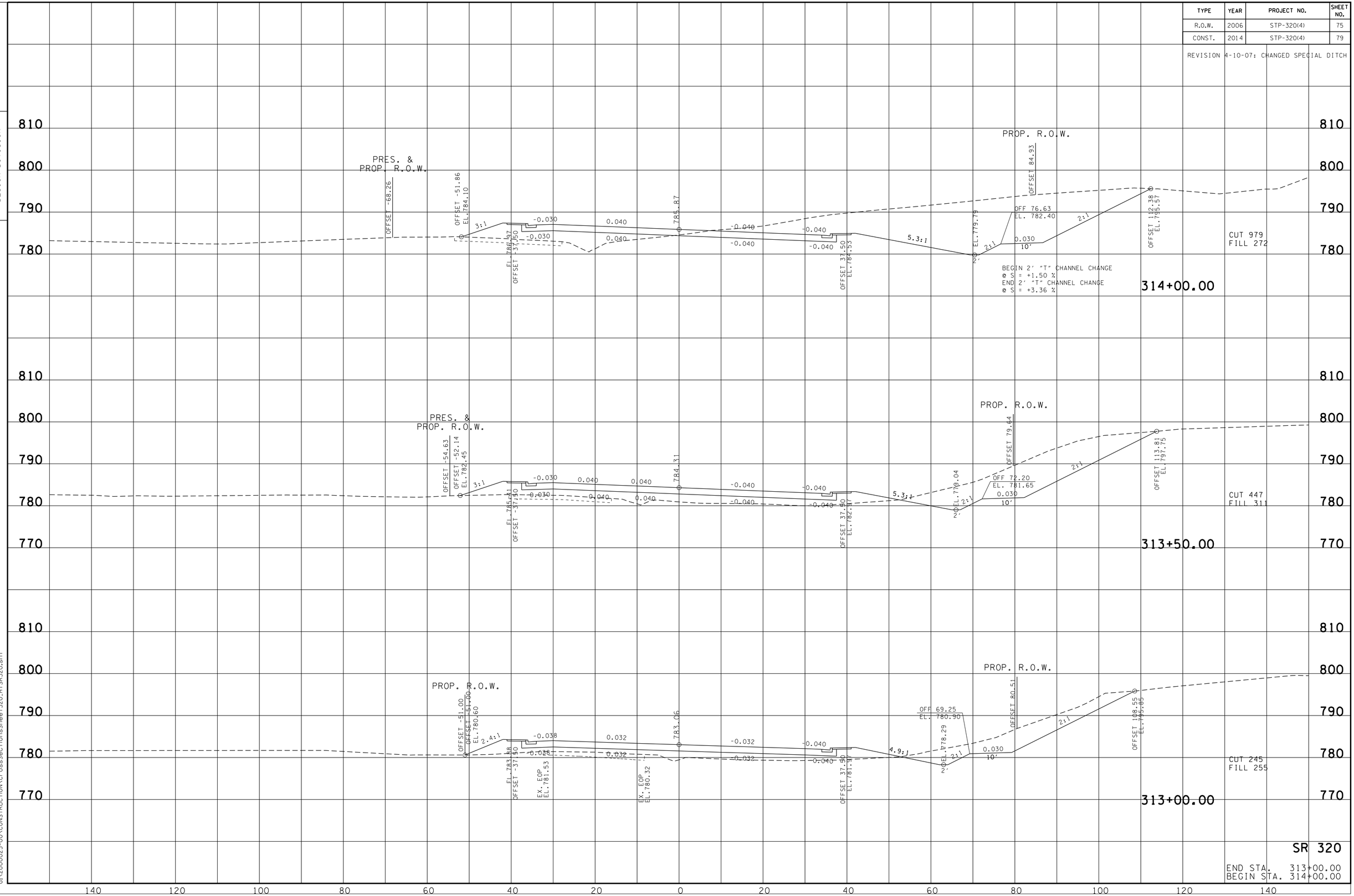
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	75
CONST.	2014	STP-320(4)	79

REVISION 4-10-07: CHANGED SPECIAL DITCH

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



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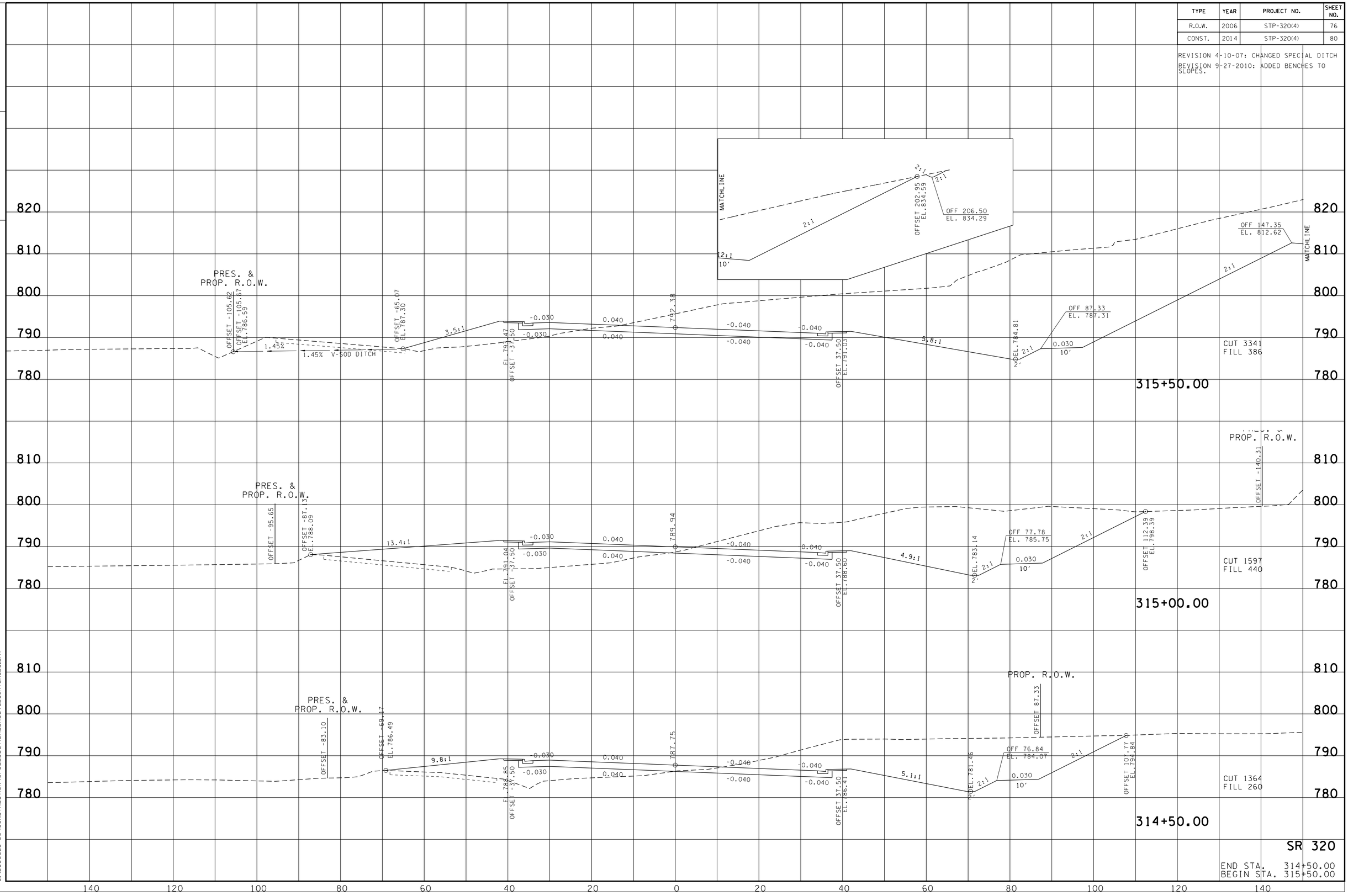
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	76
CONST.	2014	STP-320(4)	80

REVISION 4-10-07: CHANGED SPECIAL DITCH
REVISION 9-27-2010: ADDED BENCHES TO SLOPES.

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.



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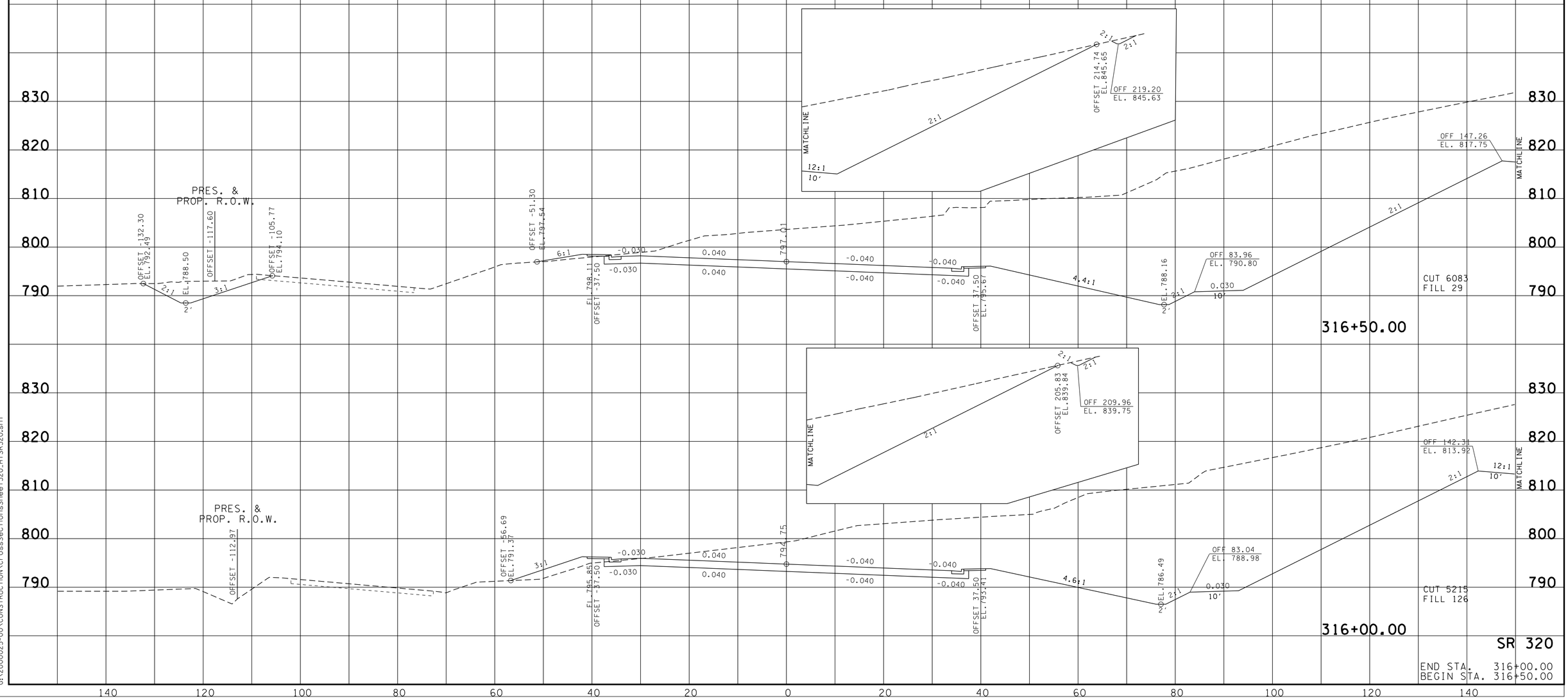
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	77
CONST.	2014	STP-320(4)	81

REVISION 4-10-07: CHANGED SPECIAL DITCH
REVISION 9-27-10: ADDED BENCHES TO SLOPES.

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



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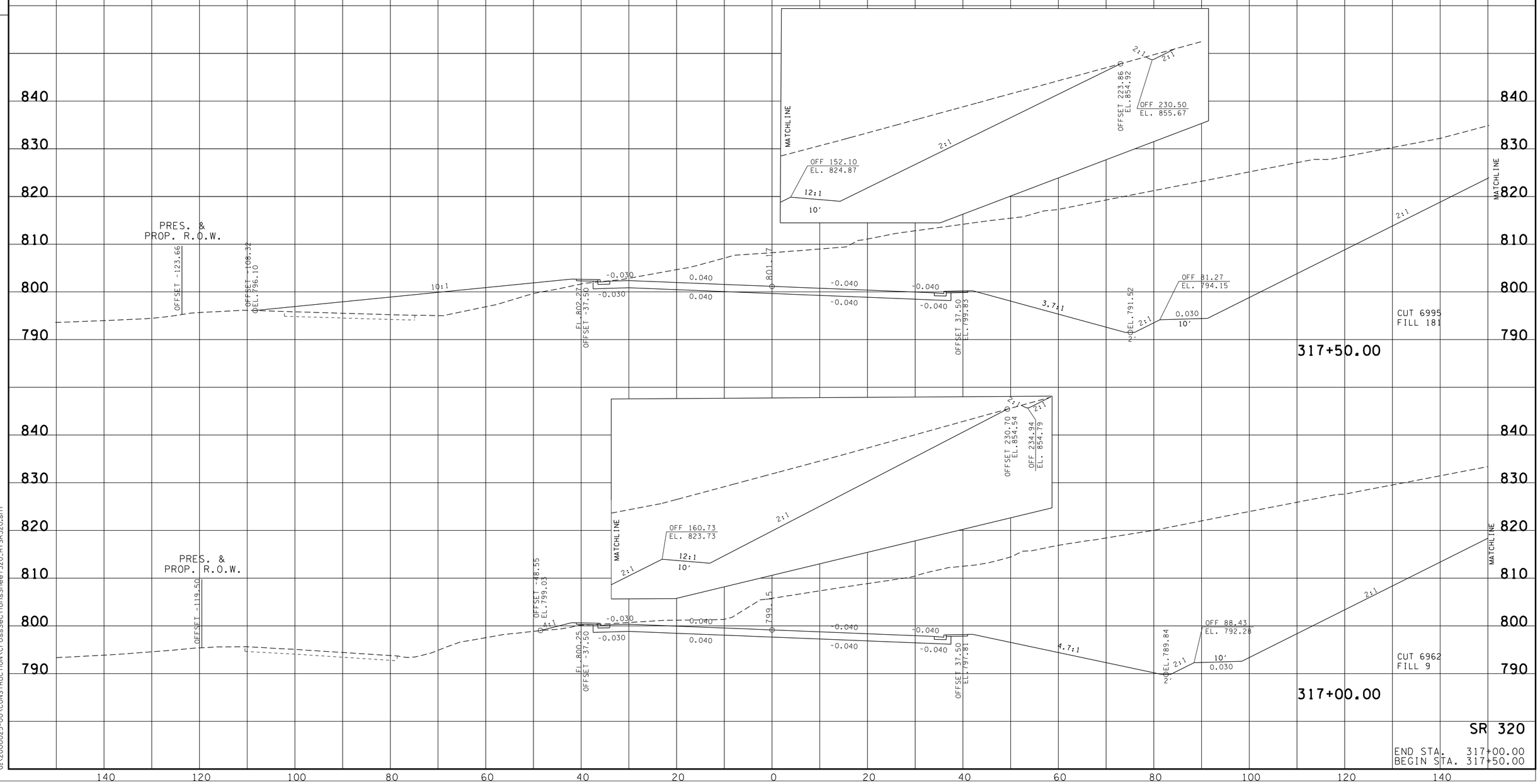
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	78
CONST.	2014	STP-320(4)	82

REVISION 4-10-07: CHANGED SPECIAL DITCH
REVISION 9-27-2010: ADDED BENCHES TO SLOPES.

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



SR 320

END STA. 317+00.00
BEGIN STA. 317+50.00

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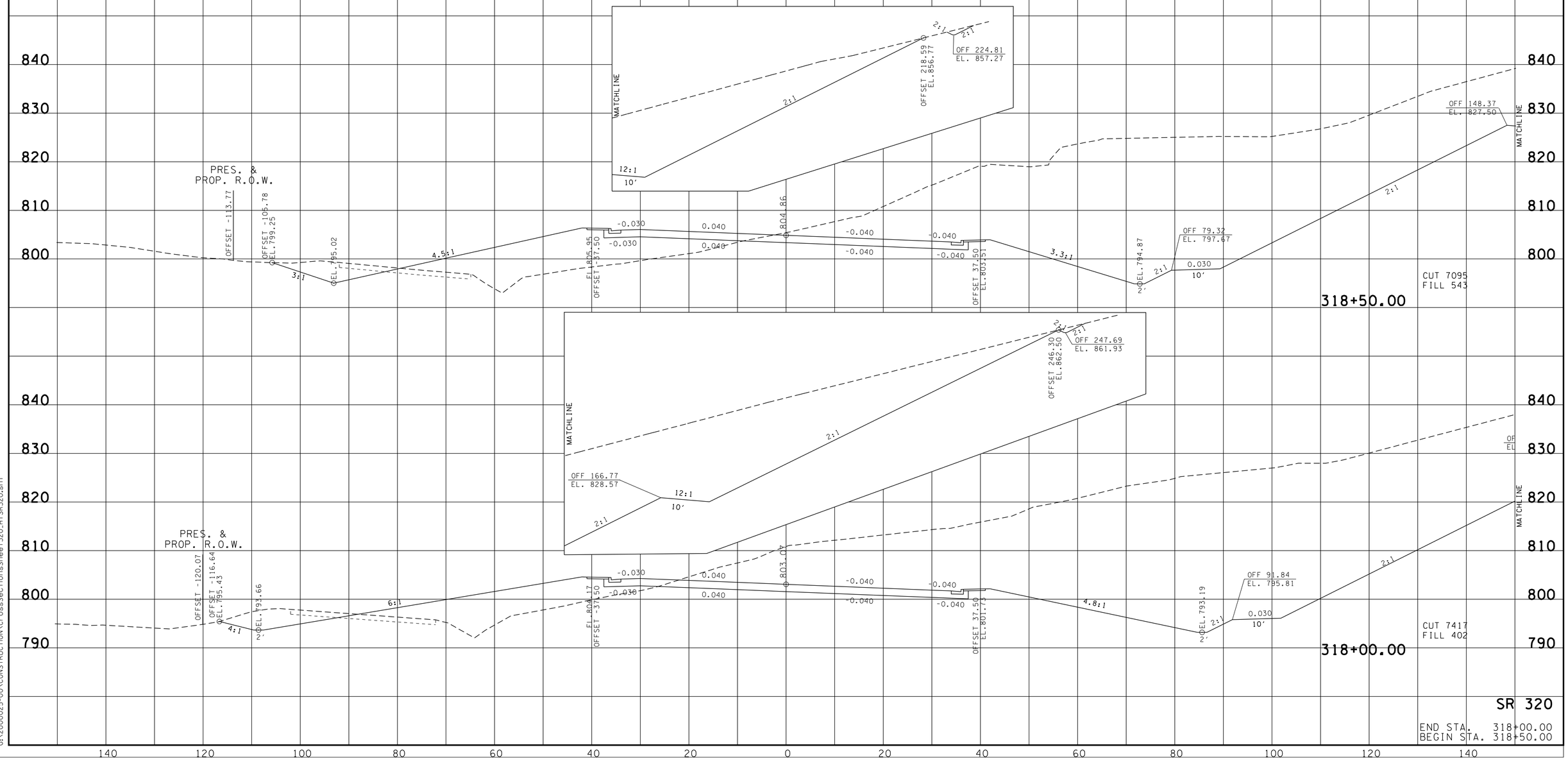
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	79
CONST.	2014	STP-320(4)	83

REVISION 4-10-07: CHANGED SPECIAL DITCH
REVISION 9-27-2010: ADDED BENCHES TO SLOPES.

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



SR 320

END STA. 318+00.00
BEGIN STA. 318+50.00

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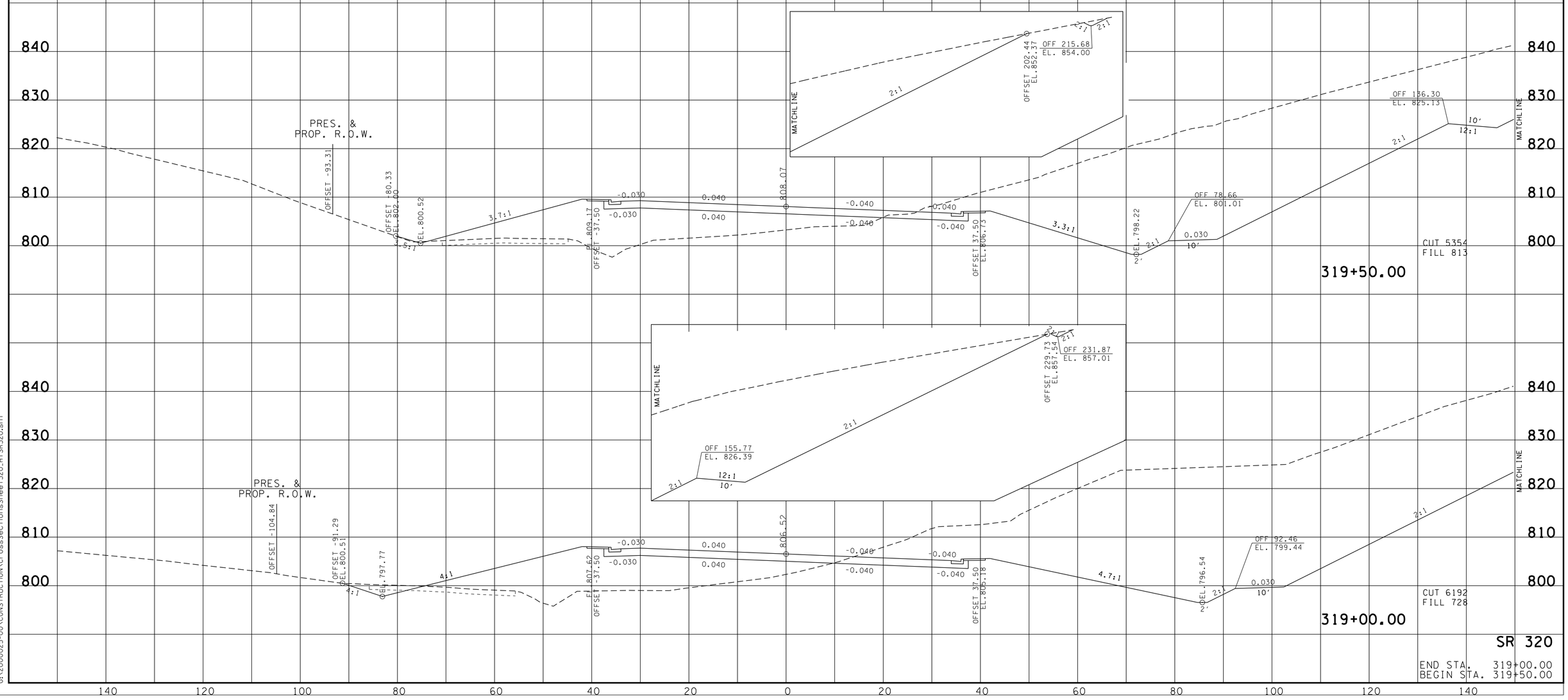
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	80
CONST.	2014	STP-320(4)	84

REVISION 4-10-07: CHANGED SPECIAL DITCH
REVISION 9-27-2010: ADDED BENCHES TO SLOPES.

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



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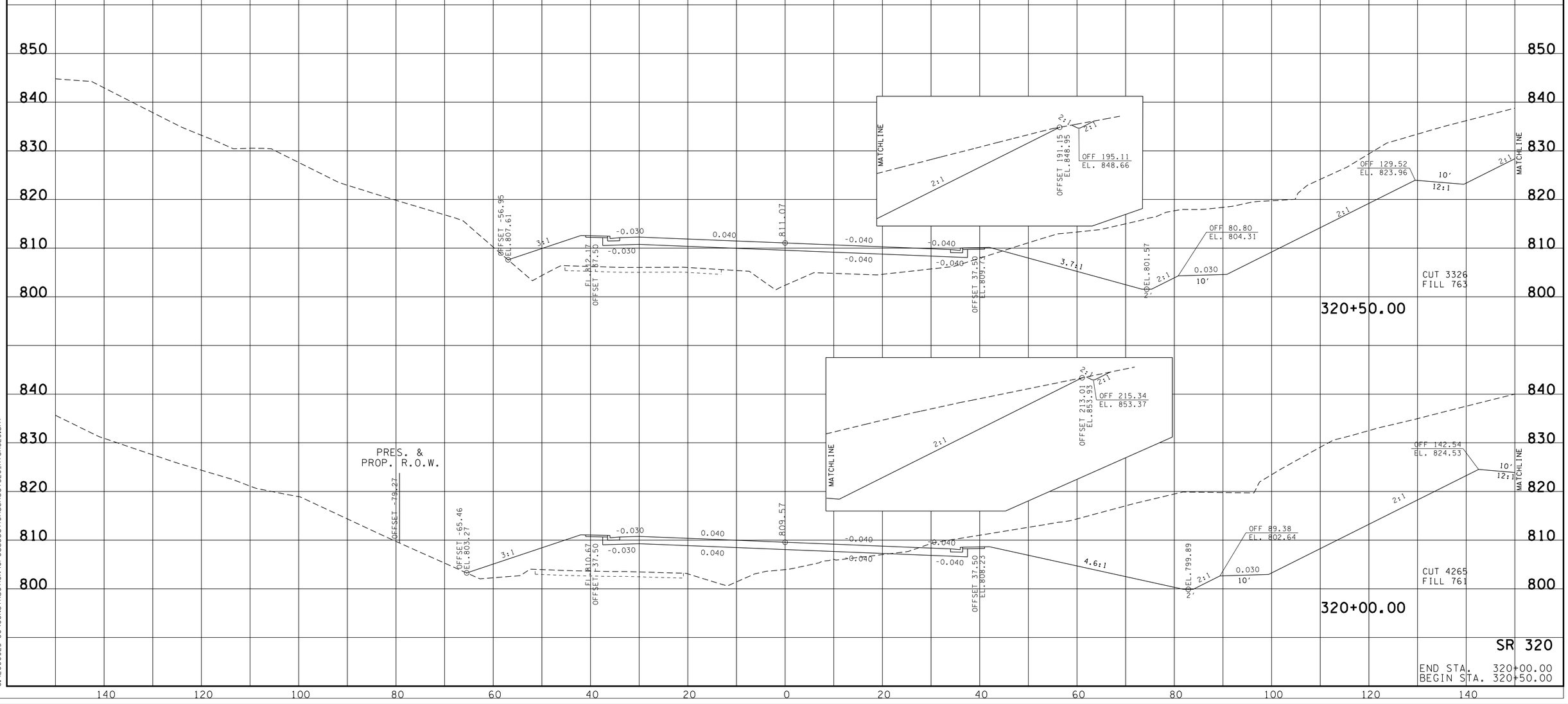
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	81
CONST.	2014	STP-320(4)	85

REVISION 4-10-07: CHANGED SPECIAL DITCH
REVISION 9-27-2010: ADDED BENCHES TO SLOPES.

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



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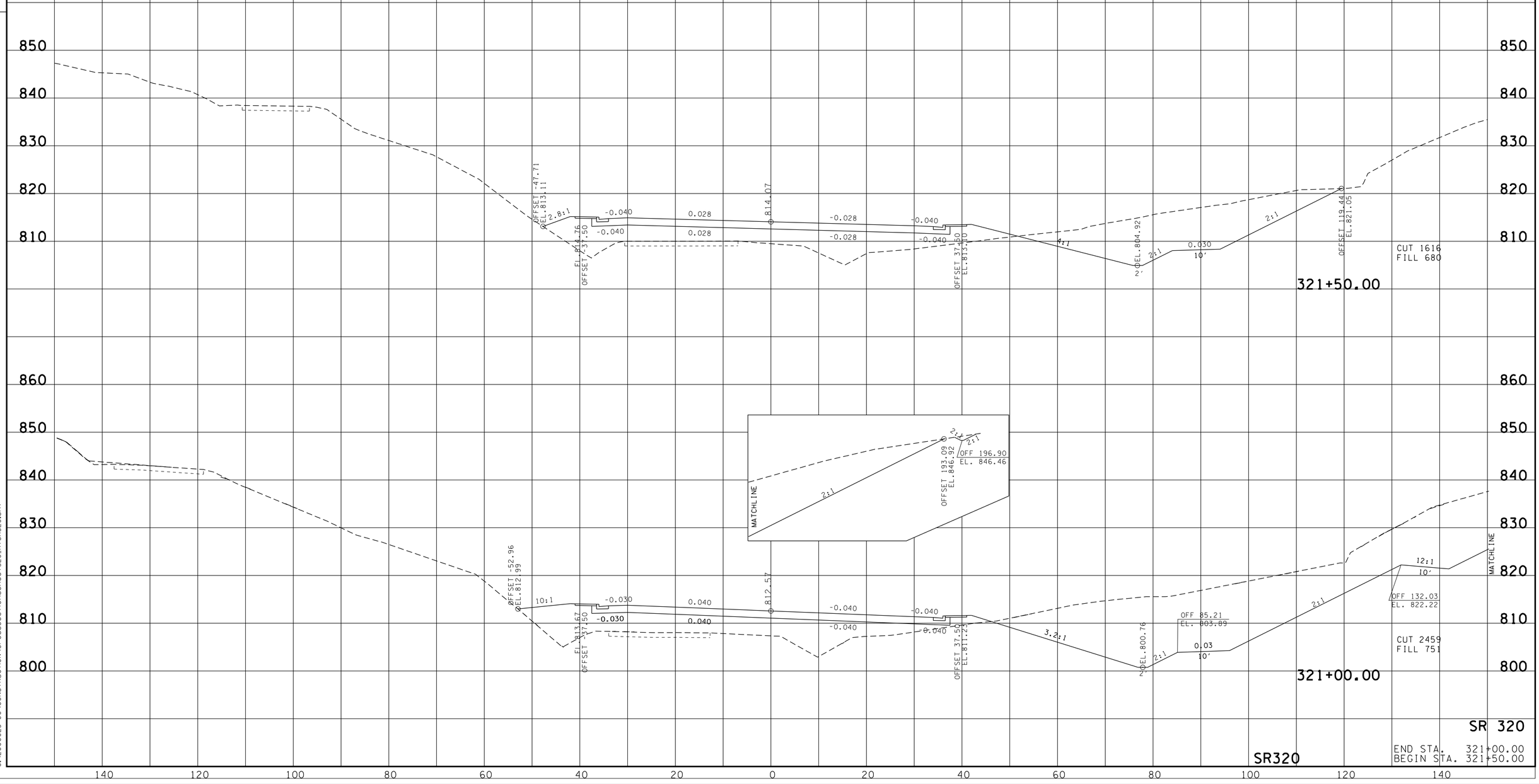
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	82
CONST.	2014	STP-320(4)	86

REVISION 4-10-07: CHANGED SPECIAL DITCH
REVISION 9-27-10: ADDED BENCHES TO SLOPES.

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



SR 320

END STA. 321+00.00
BEGIN STA. 321+50.00

SR320

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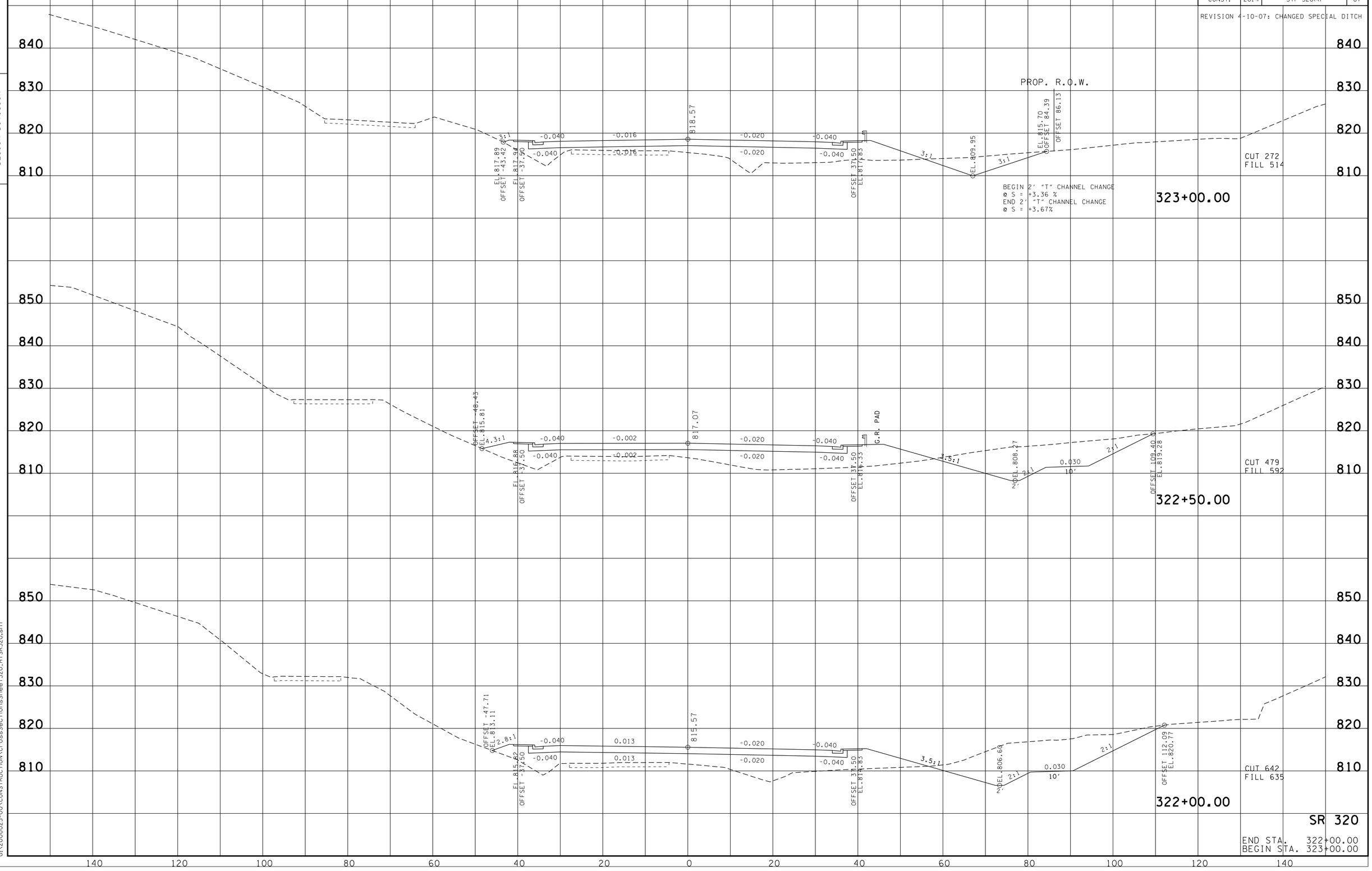
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	83
CONST.	2014	STP-320(4)	87

REVISION 4-10-07: CHANGED SPECIAL DITCH

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



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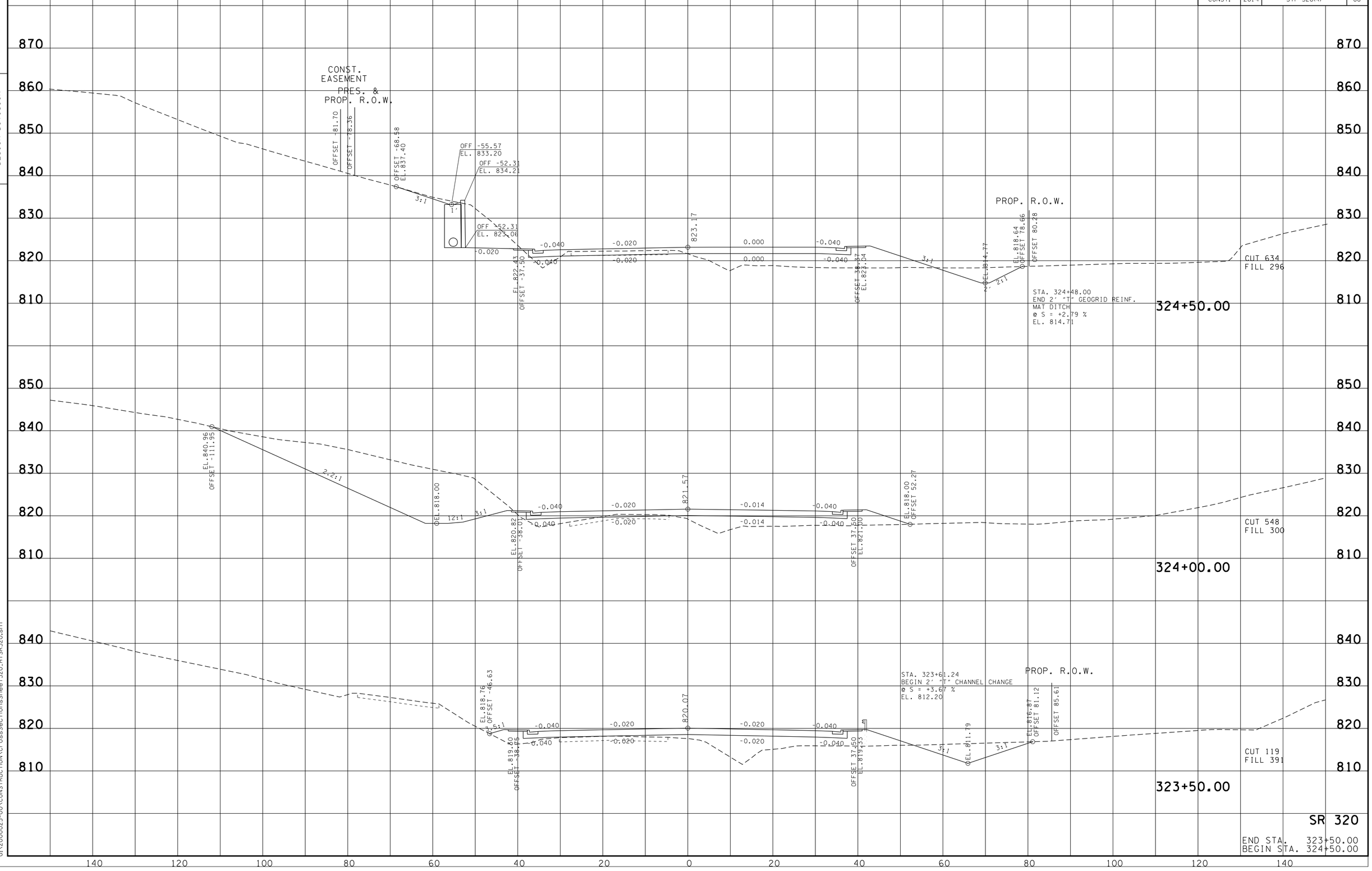
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	84
CONST.	2014	STP-320(4)	88



FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION

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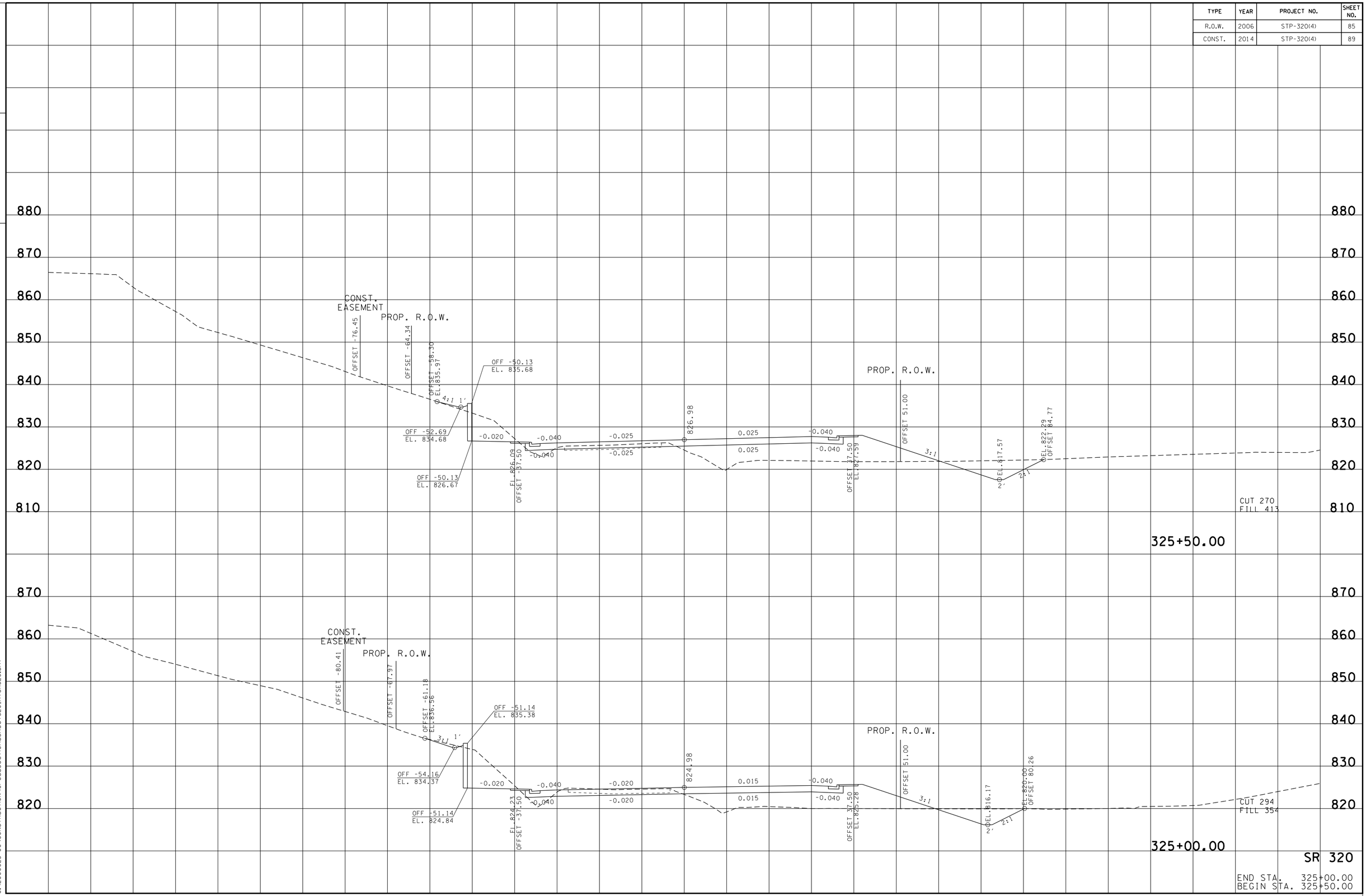
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	85
CONST.	2014	STP-320(4)	89

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



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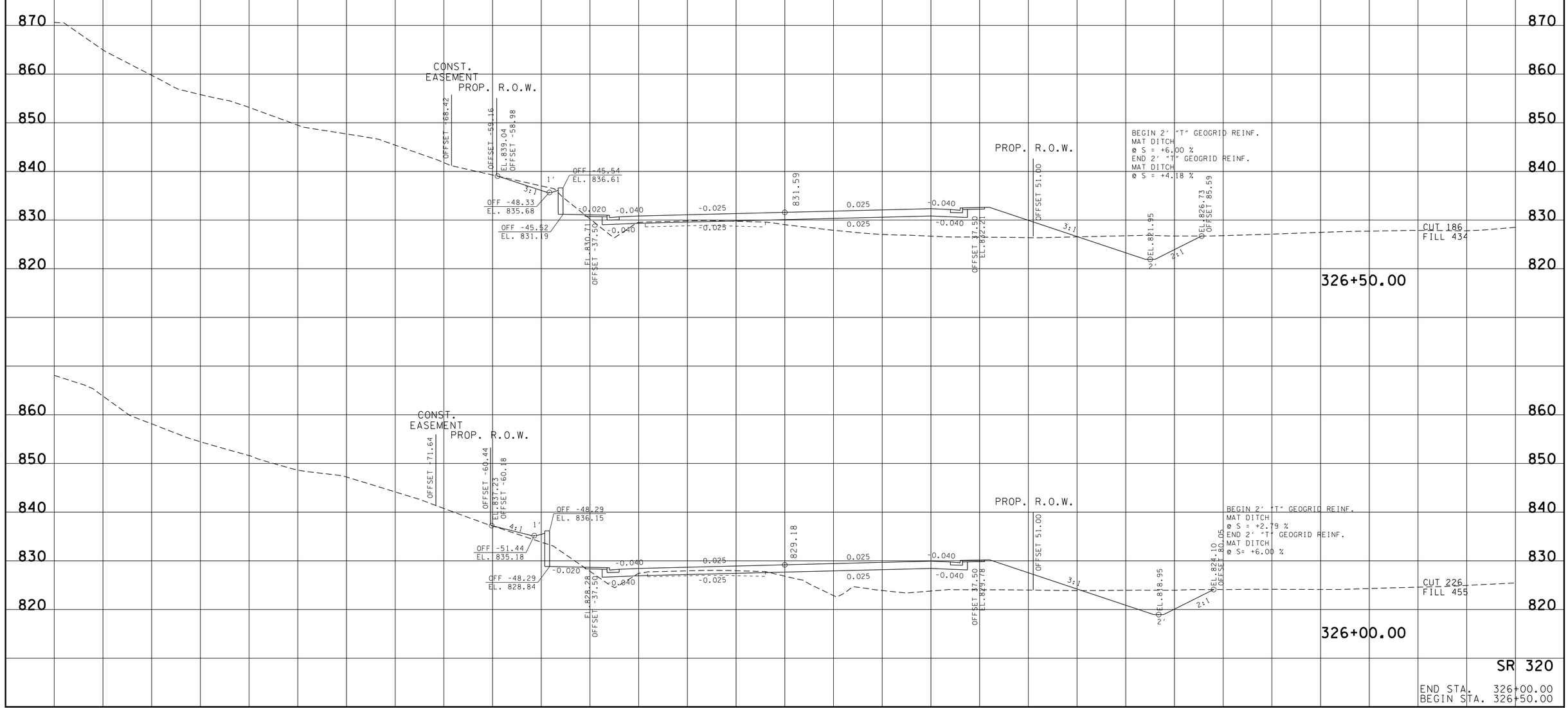
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	86
CONST.	2014	STP-320(4)	90

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



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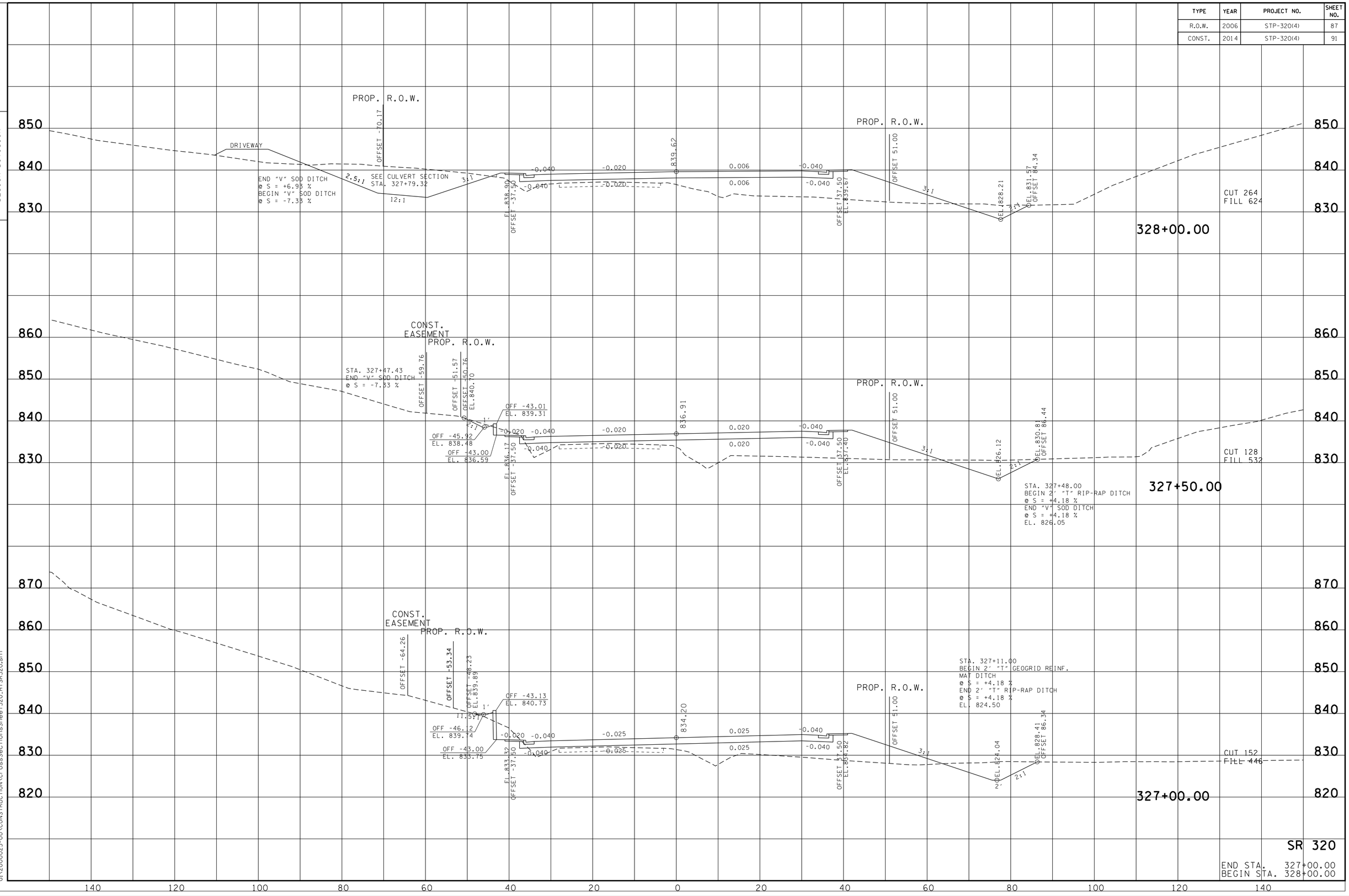
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	87
CONST.	2014	STP-320(4)	91

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



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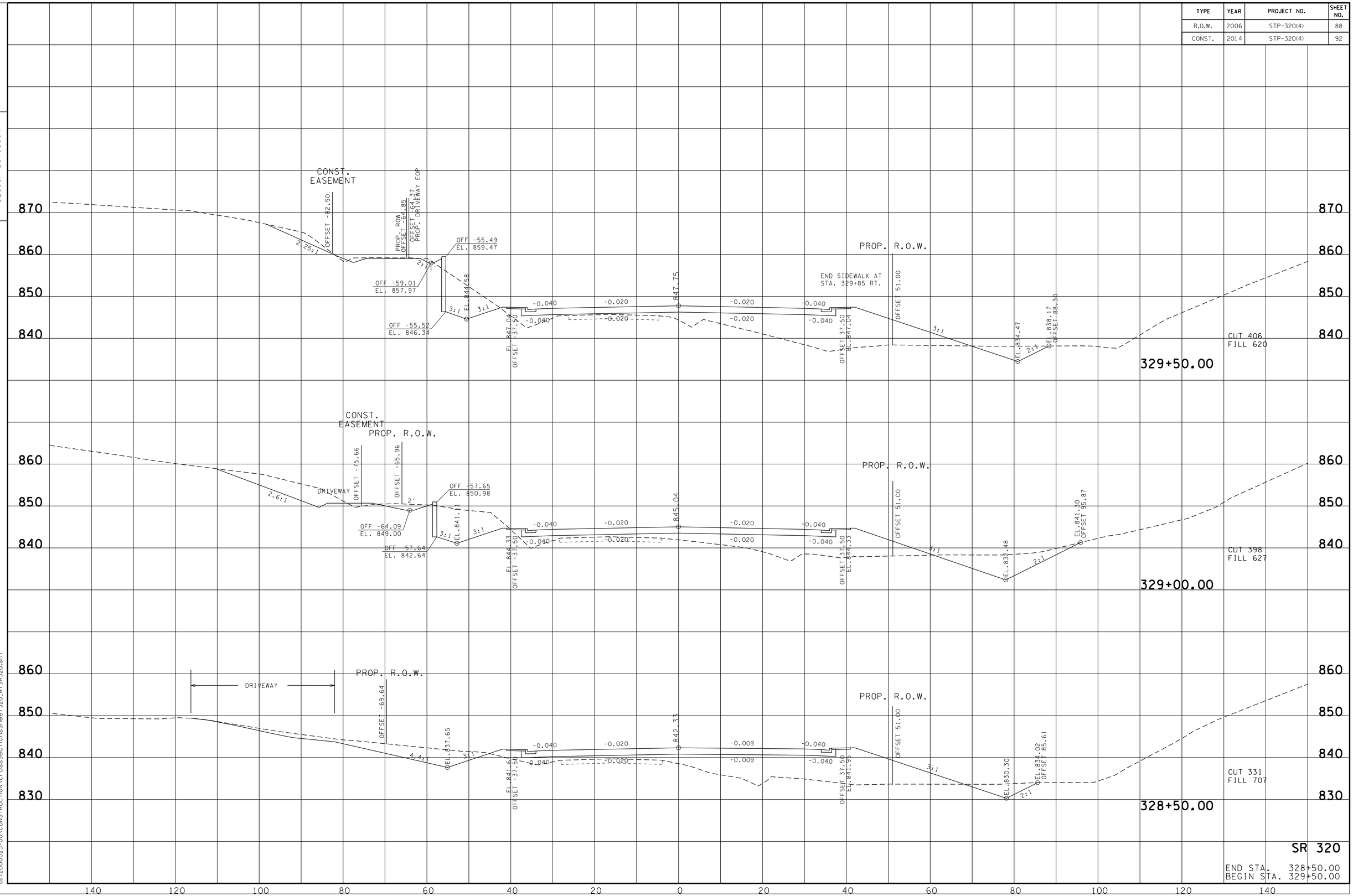
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	88
CONST.	2014	STP-320(4)	92

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



SR 320

END STA. 328+50.00
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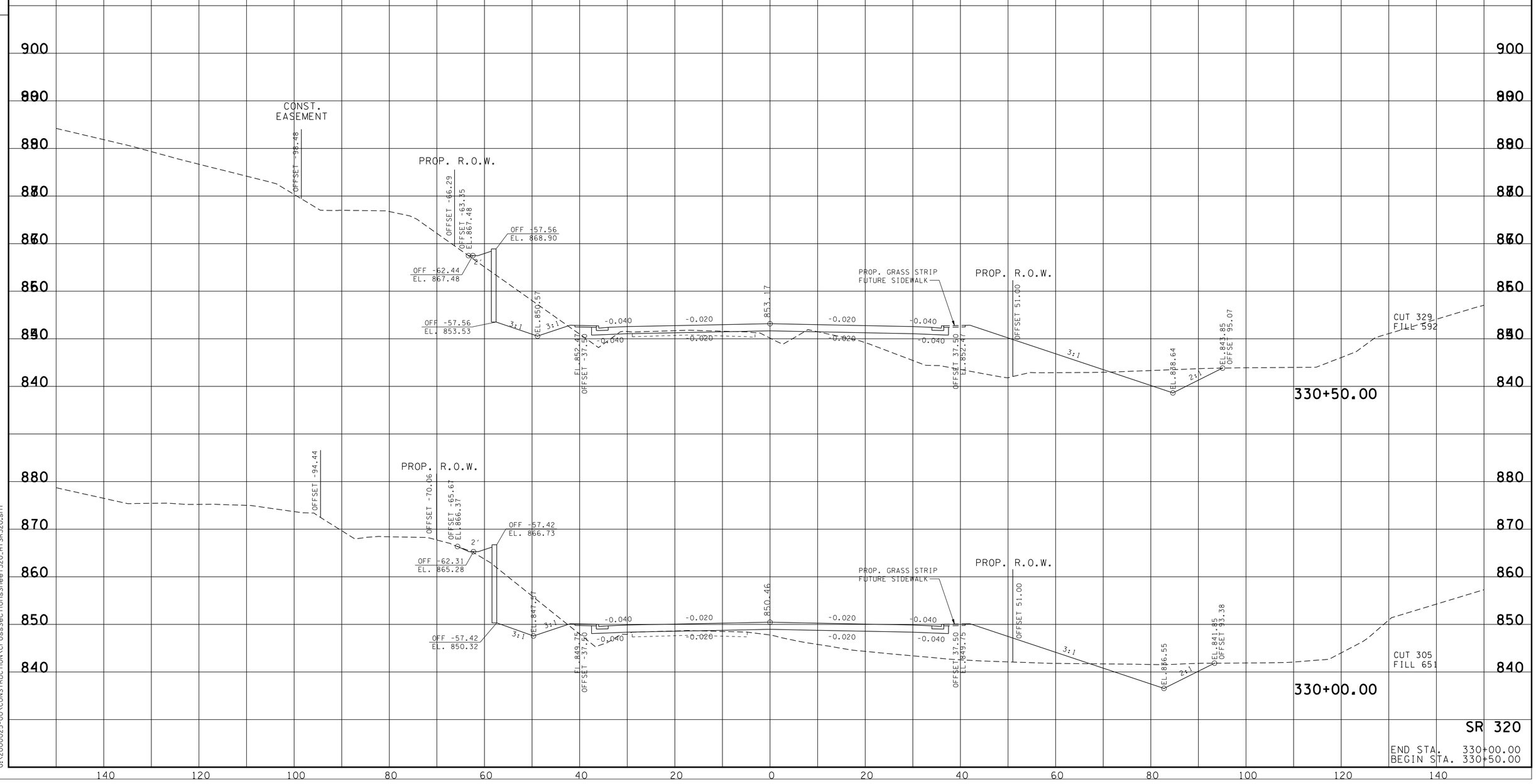
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	89
CONST.	2014	STP-320(4)	93

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



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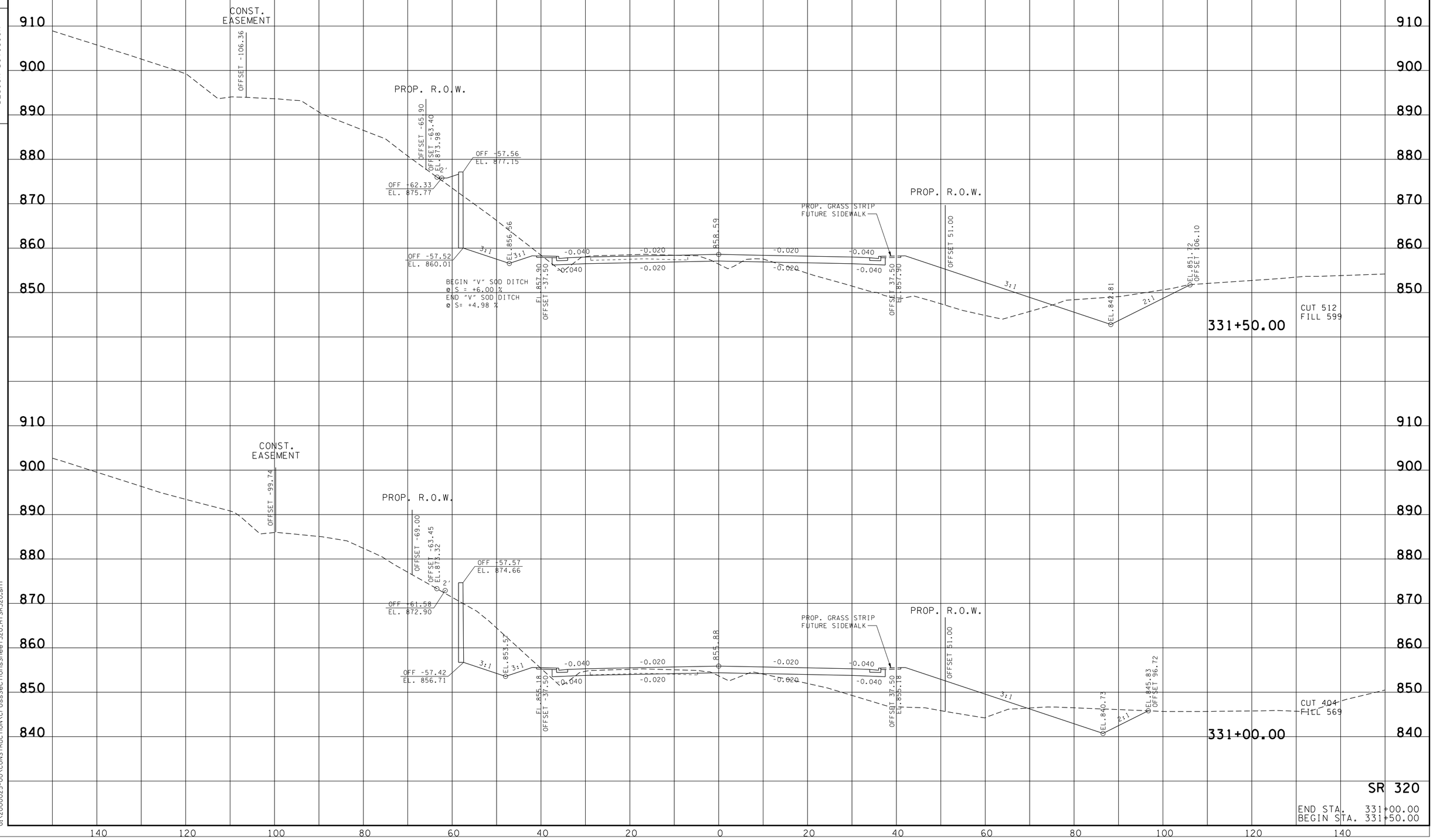
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	90
CONST.	2014	STP-320(4)	94

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



SR 320

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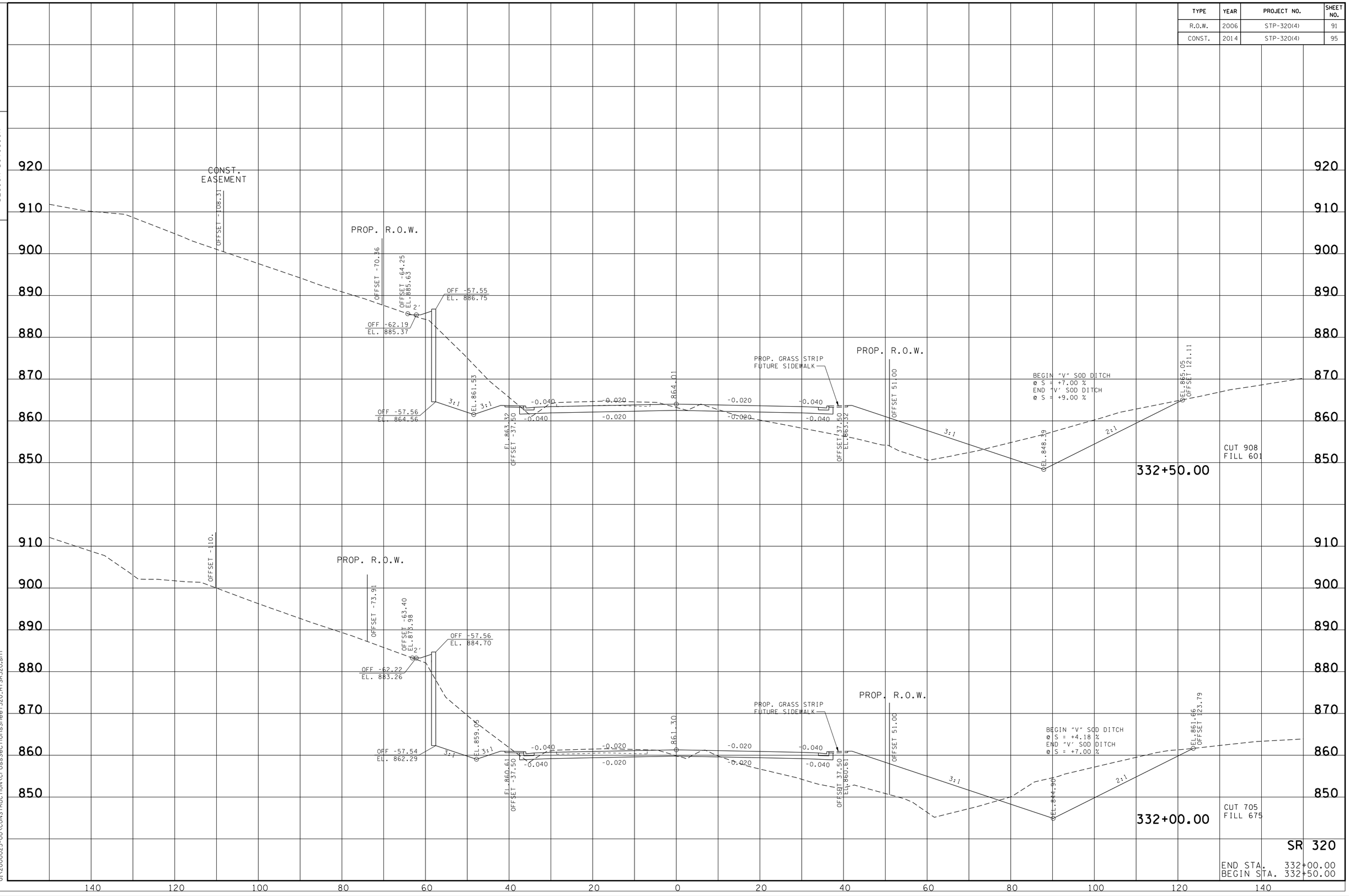
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	91
CONST.	2014	STP-320(4)	95

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



SR 320

END STA. 332+00.00
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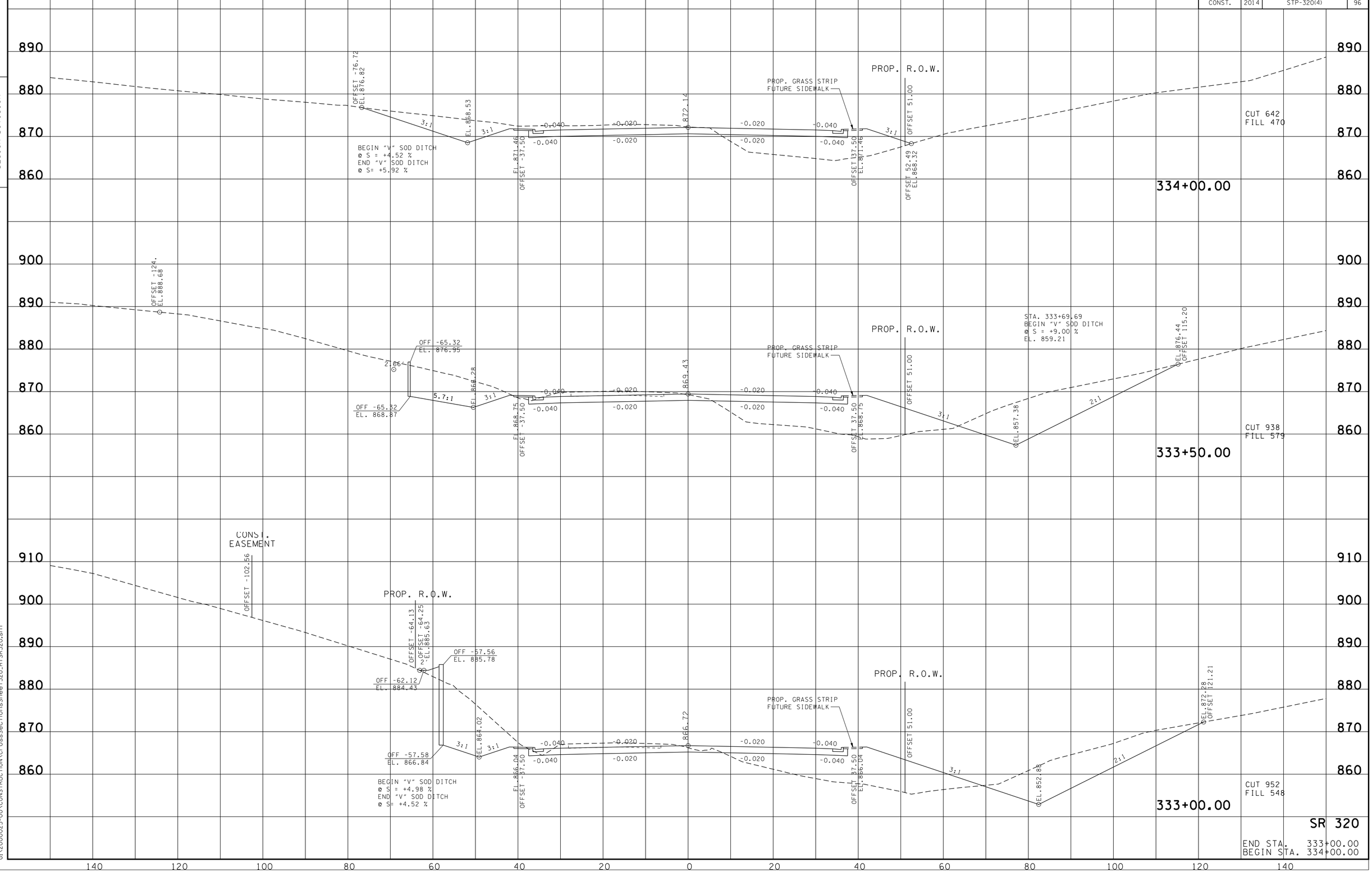
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	92
CONST.	2014	STP-320(4)	96

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



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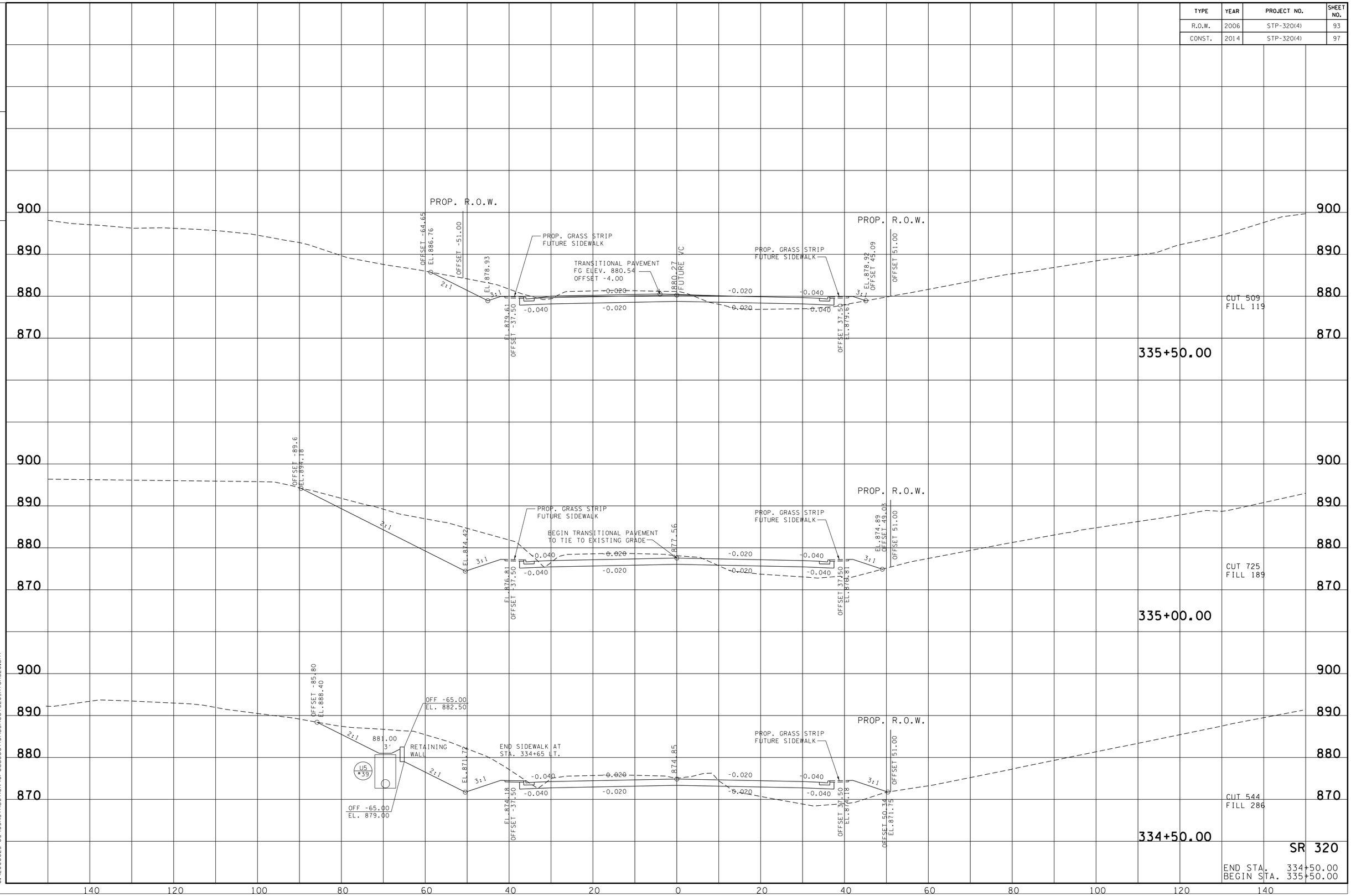
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	93
CONST.	2014	STP-320(4)	97

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



SR 320

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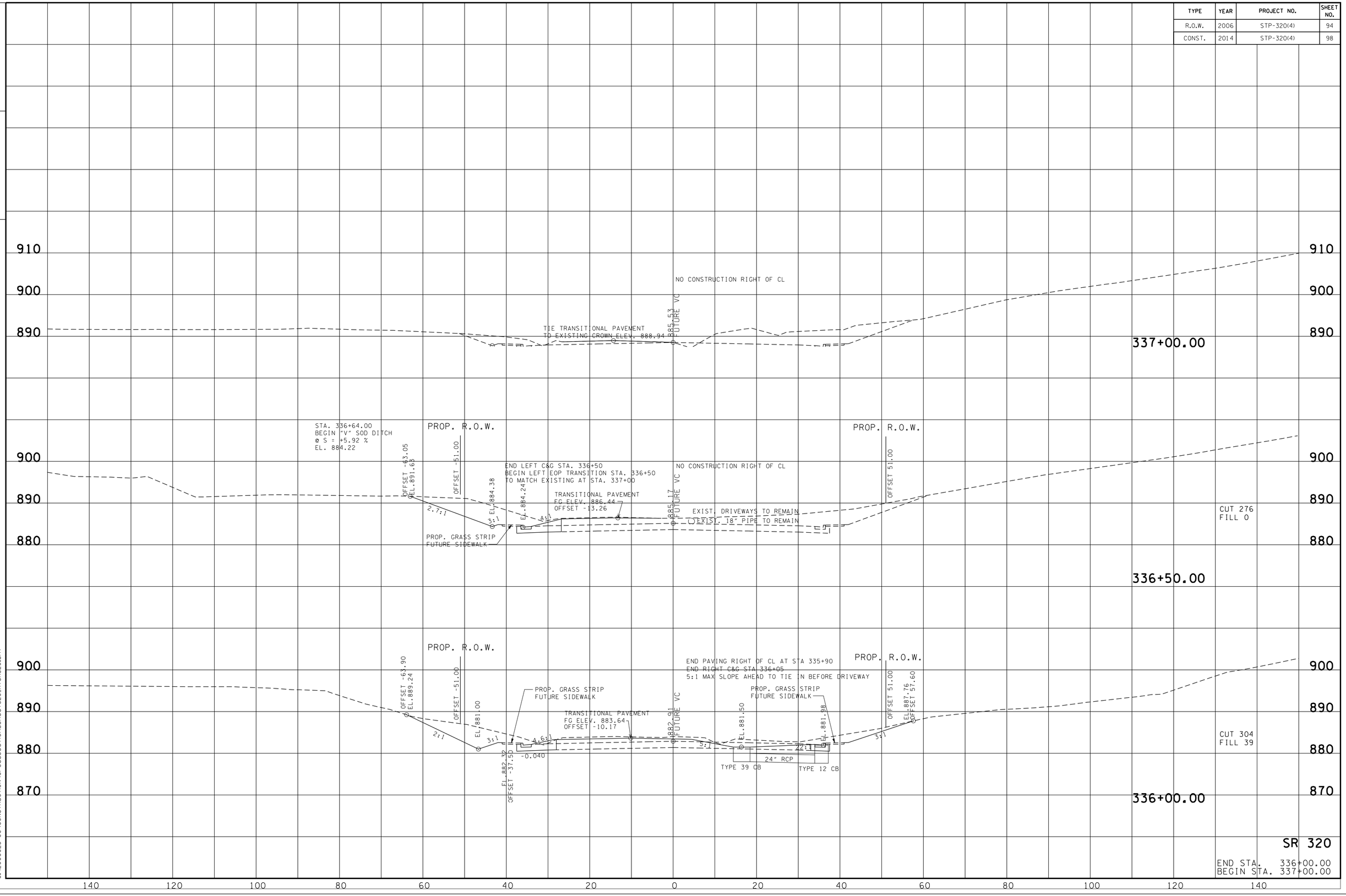
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	94
CONST.	2014	STP-320(4)	98

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.



SR 320

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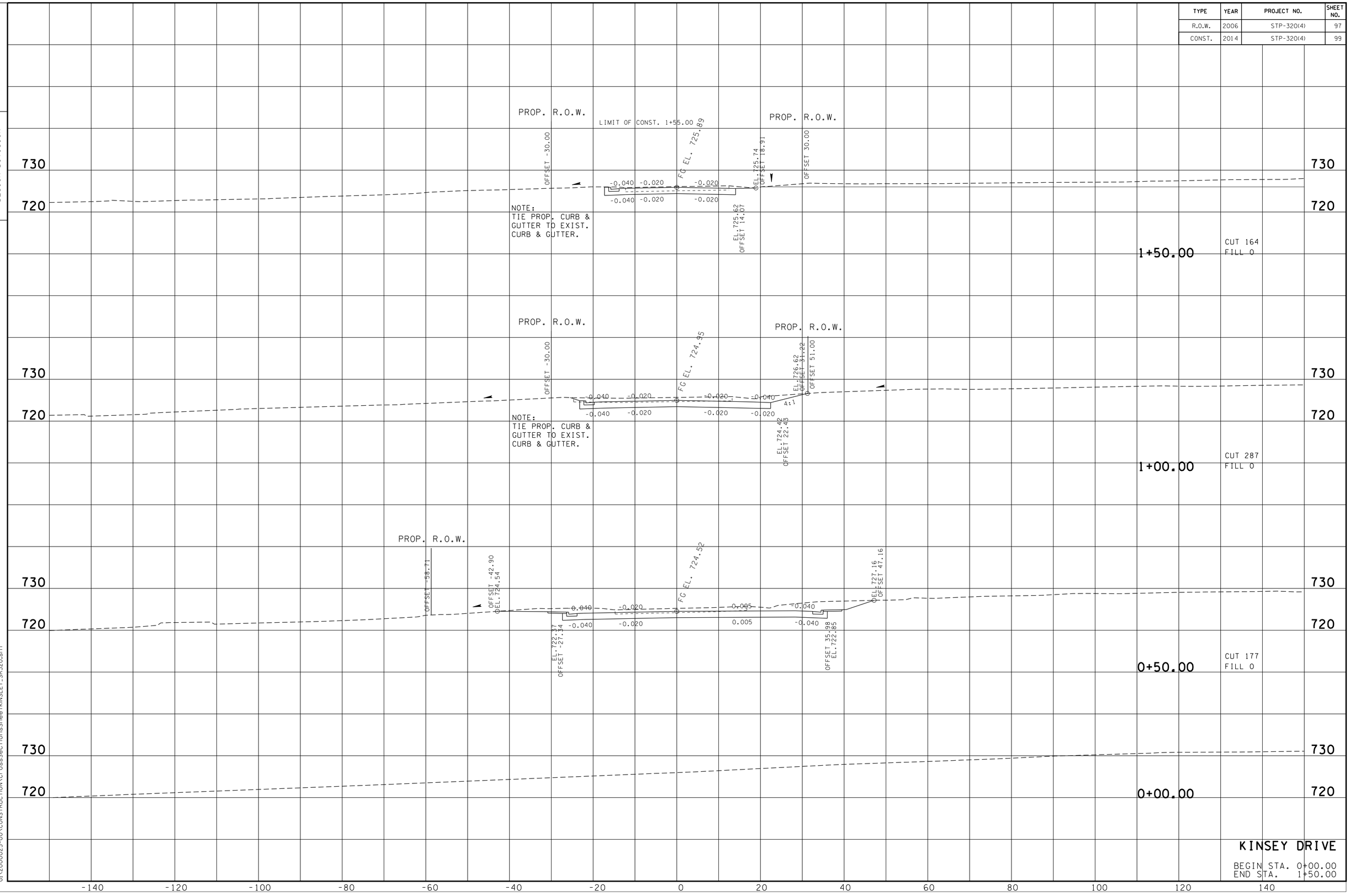
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	97
CONST.	2014	STP-320(4)	99

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



KINSEY DRIVE

BEGIN STA. 0+00.00
END STA. 1+50.00

9/3/2013 4:10:16 PM
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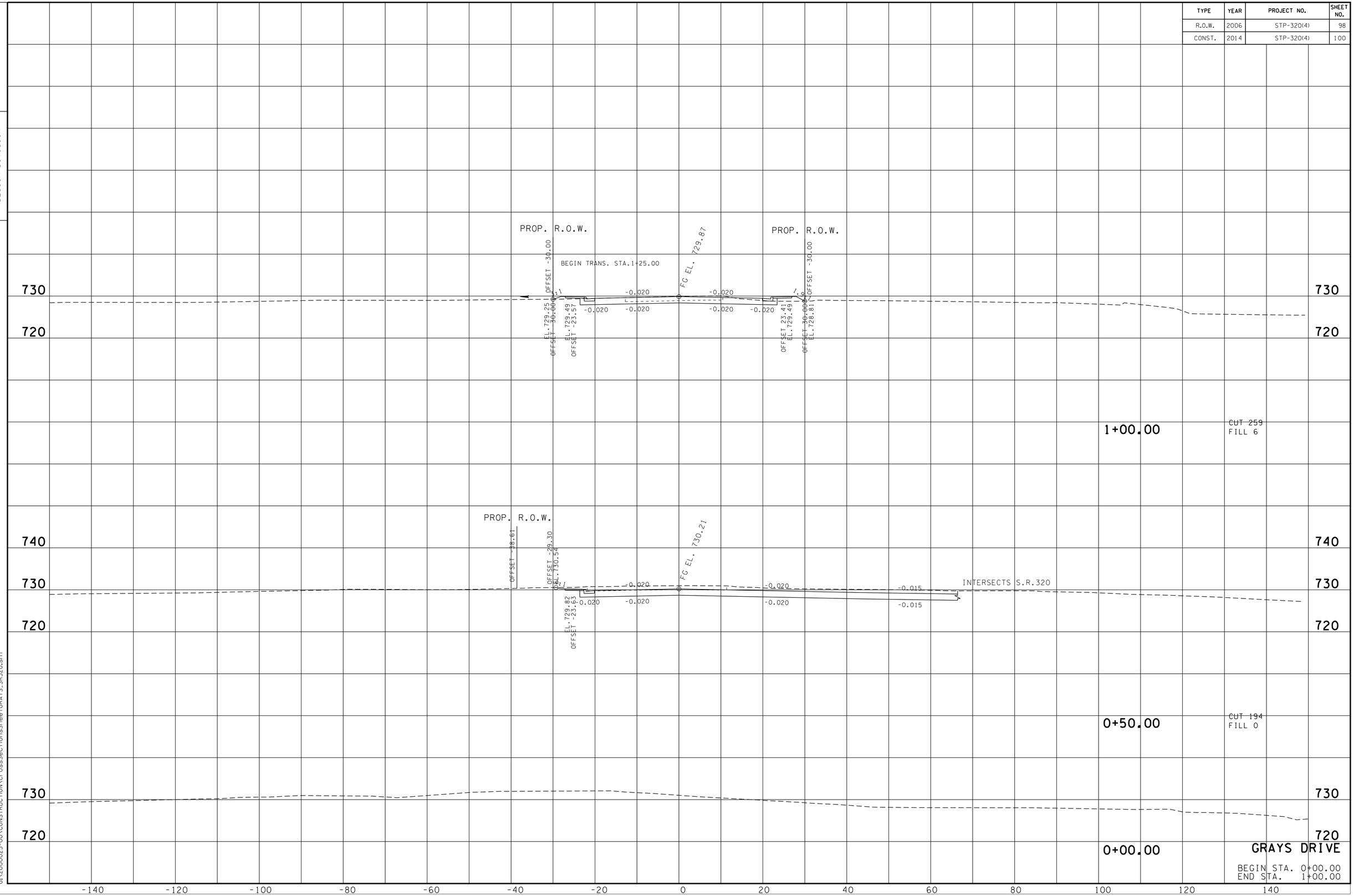
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	98
CONST.	2014	STP-320(4)	100

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.



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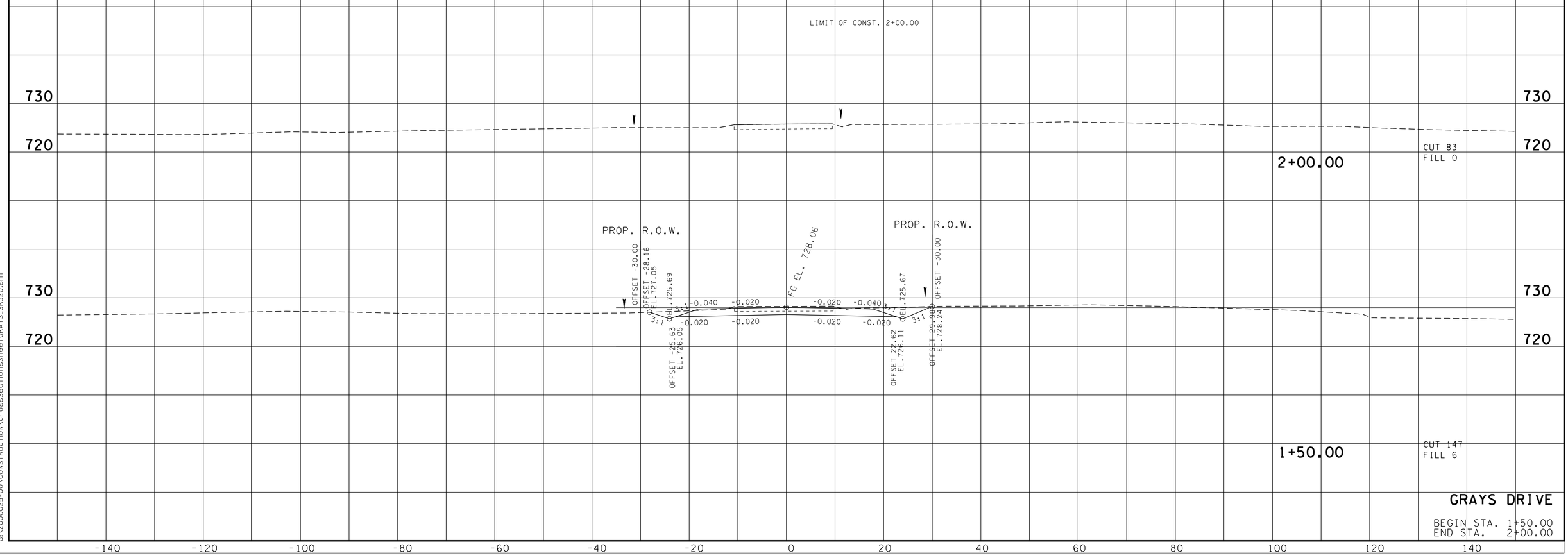
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	99
CONST.	2014	STP-320(4)	101



GRAYS DRIVE

BEGIN STA. 1+50.00
END STA. 2+00.00

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION

9/3/2013 4:01:07 PM
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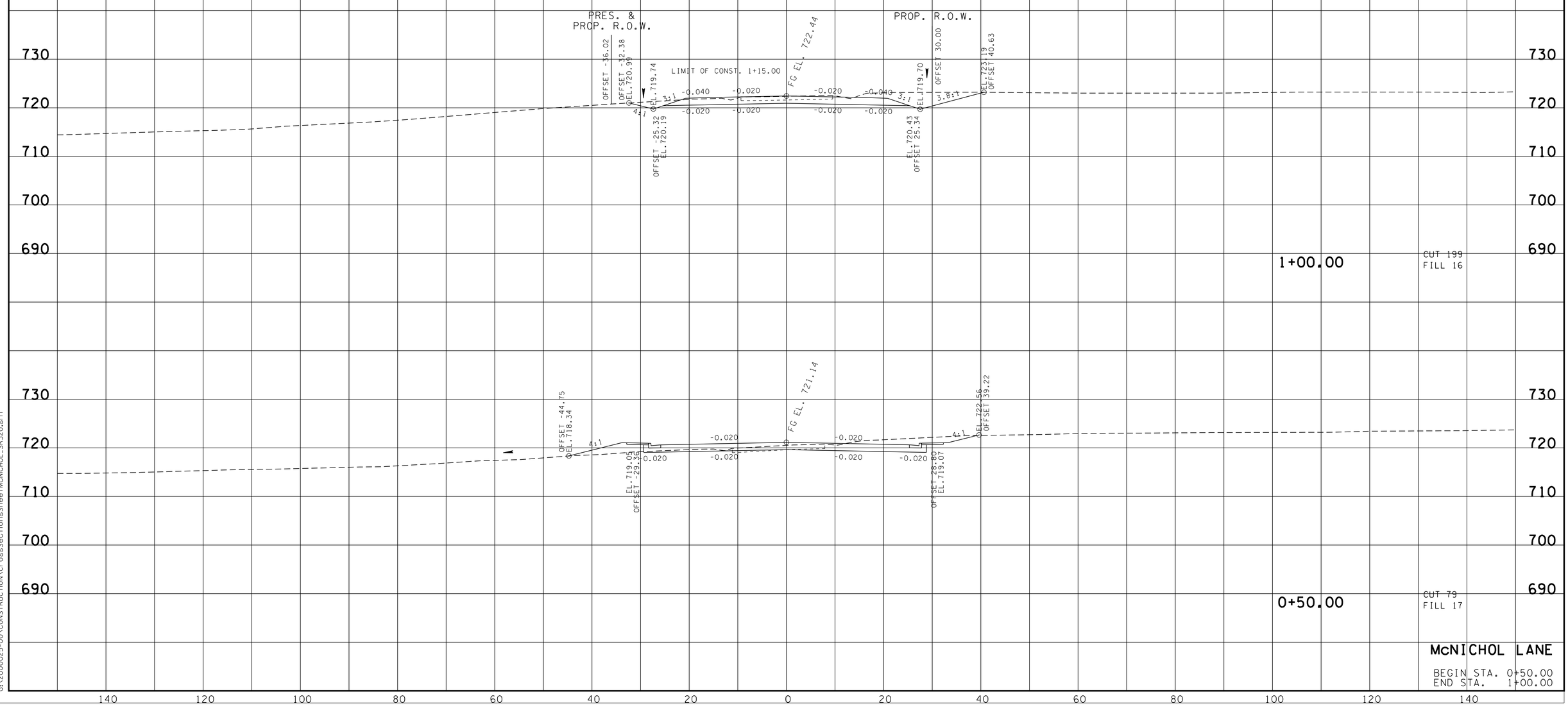
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	100
CONST.	2014	STP-320(4)	102

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



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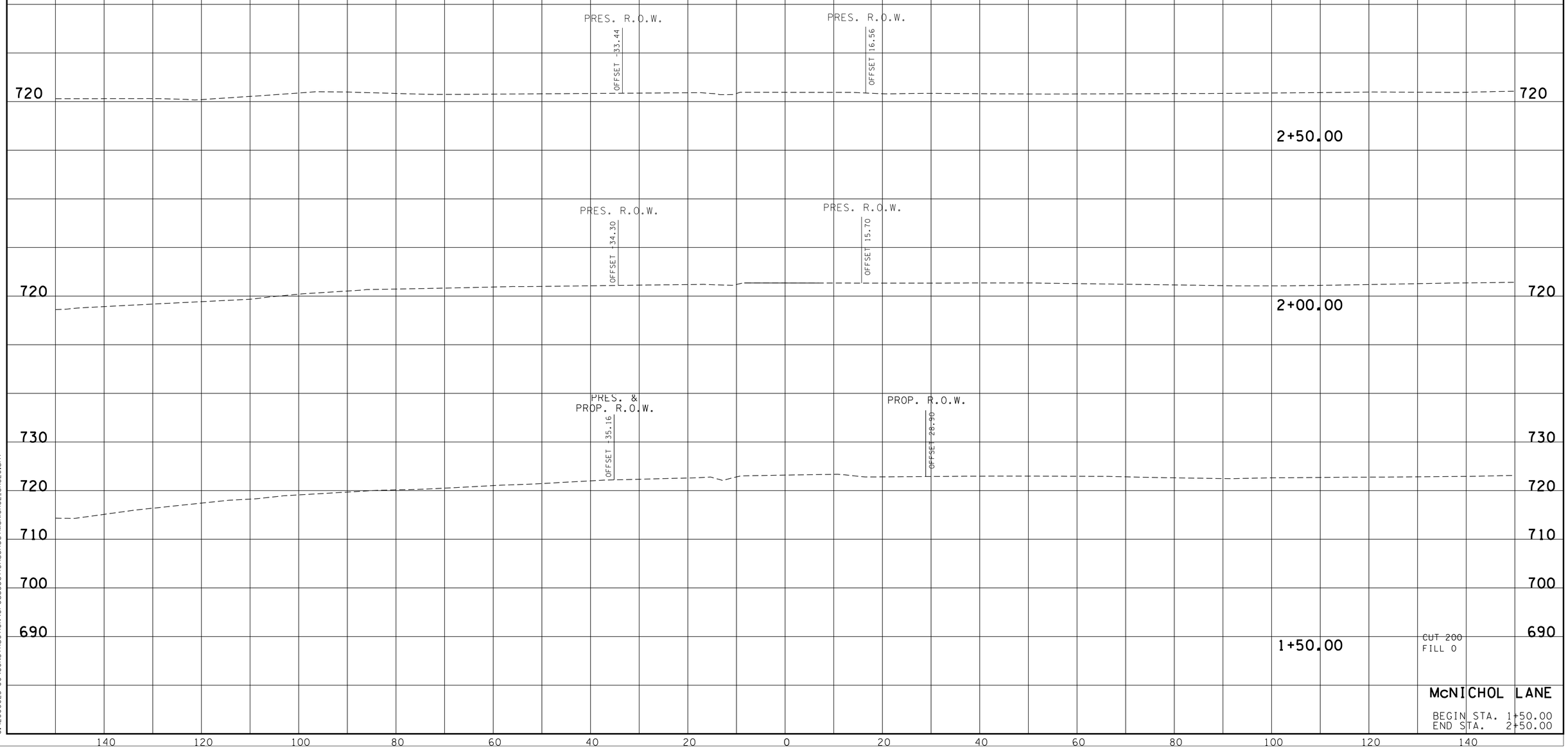
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	101
CONST.	2014	STP-320(4)	103

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



McNICHOL LANE

BEGIN STA. 1+50.00
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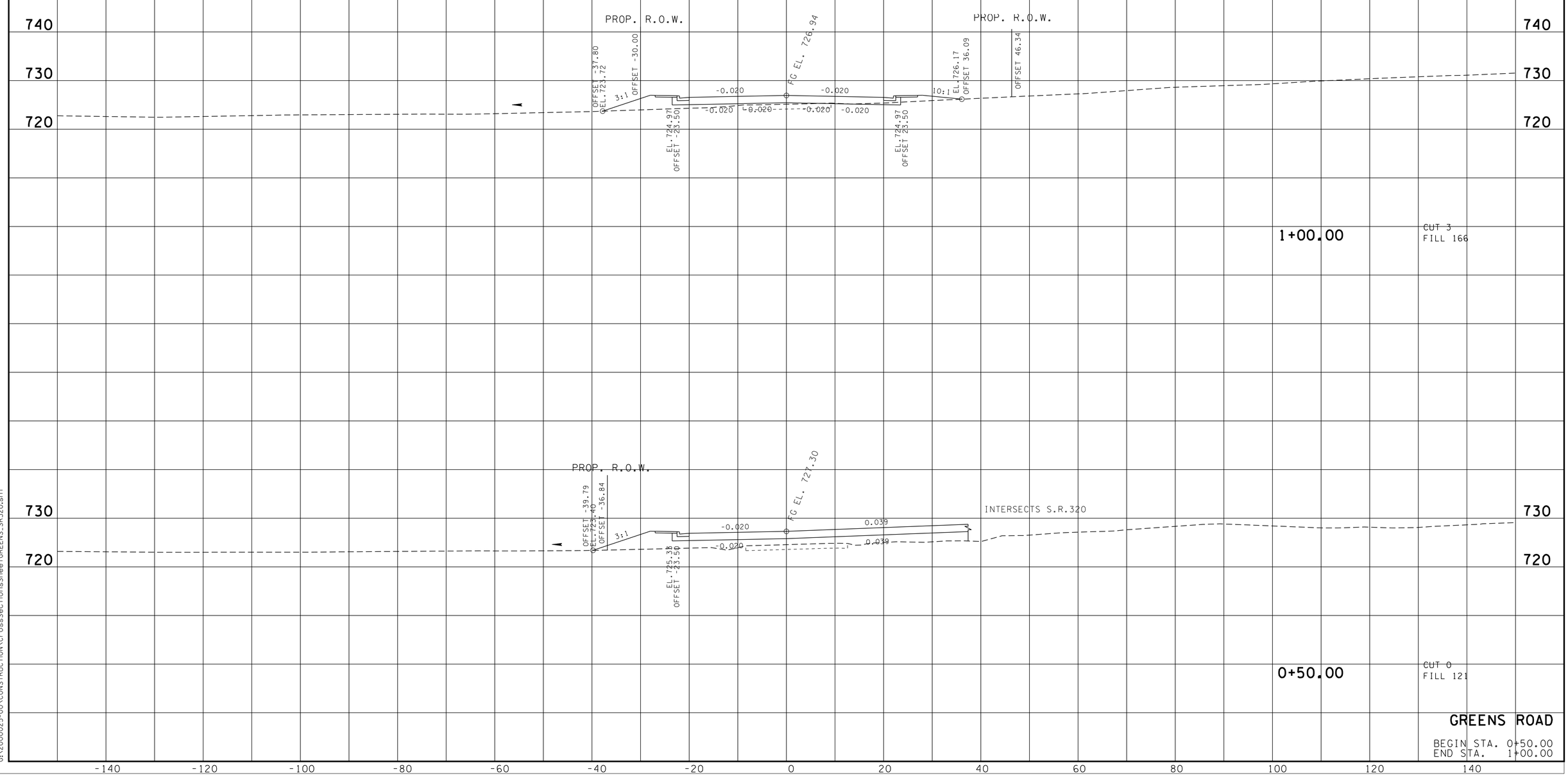
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	102
CONST.	2014	STP-320(4)	104

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



GREENS ROAD

BEGIN STA. 0+50.00
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9/3/2013 4:02:39 PM
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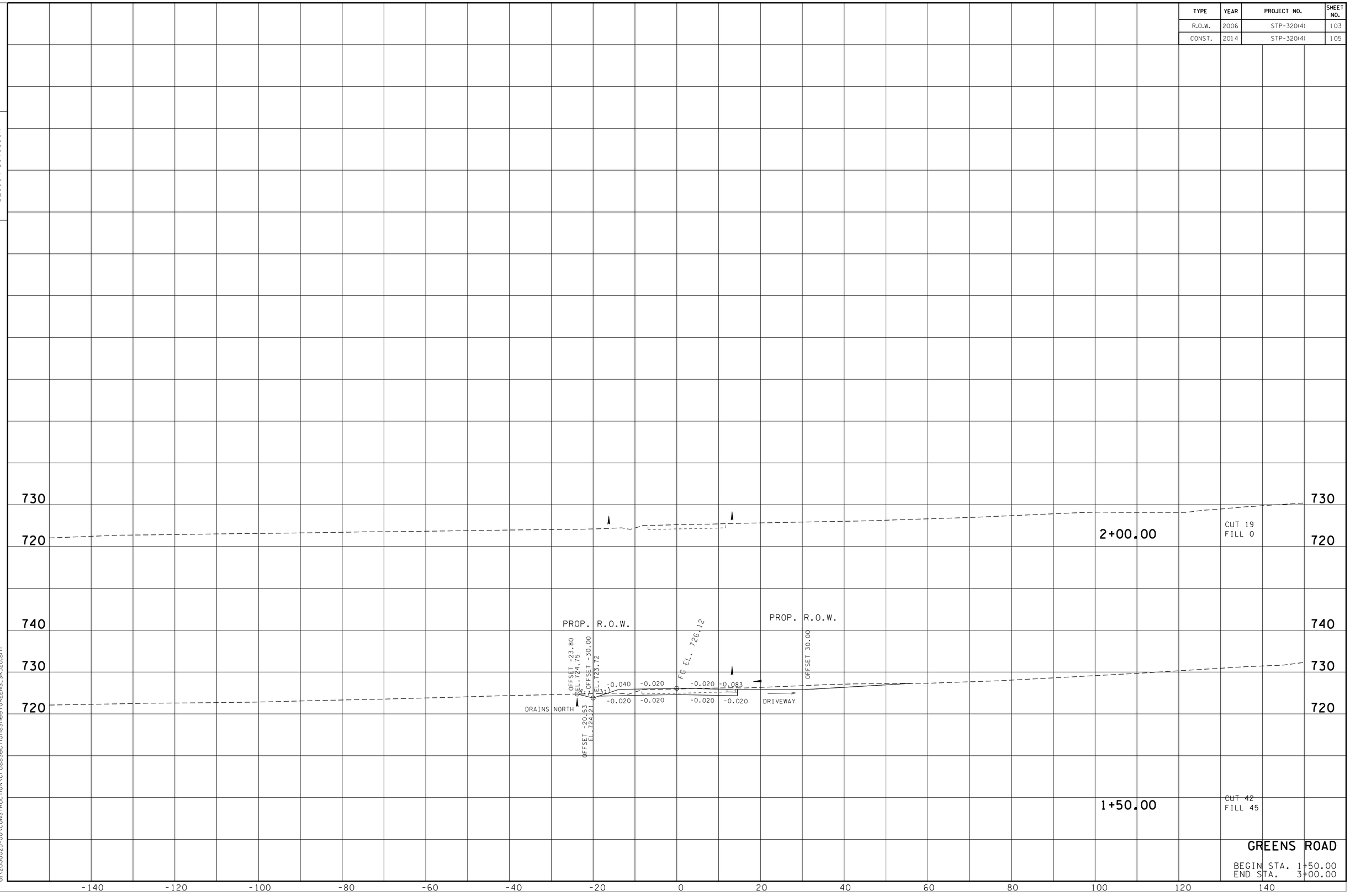
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	103
CONST.	2014	STP-320(4)	105



FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION

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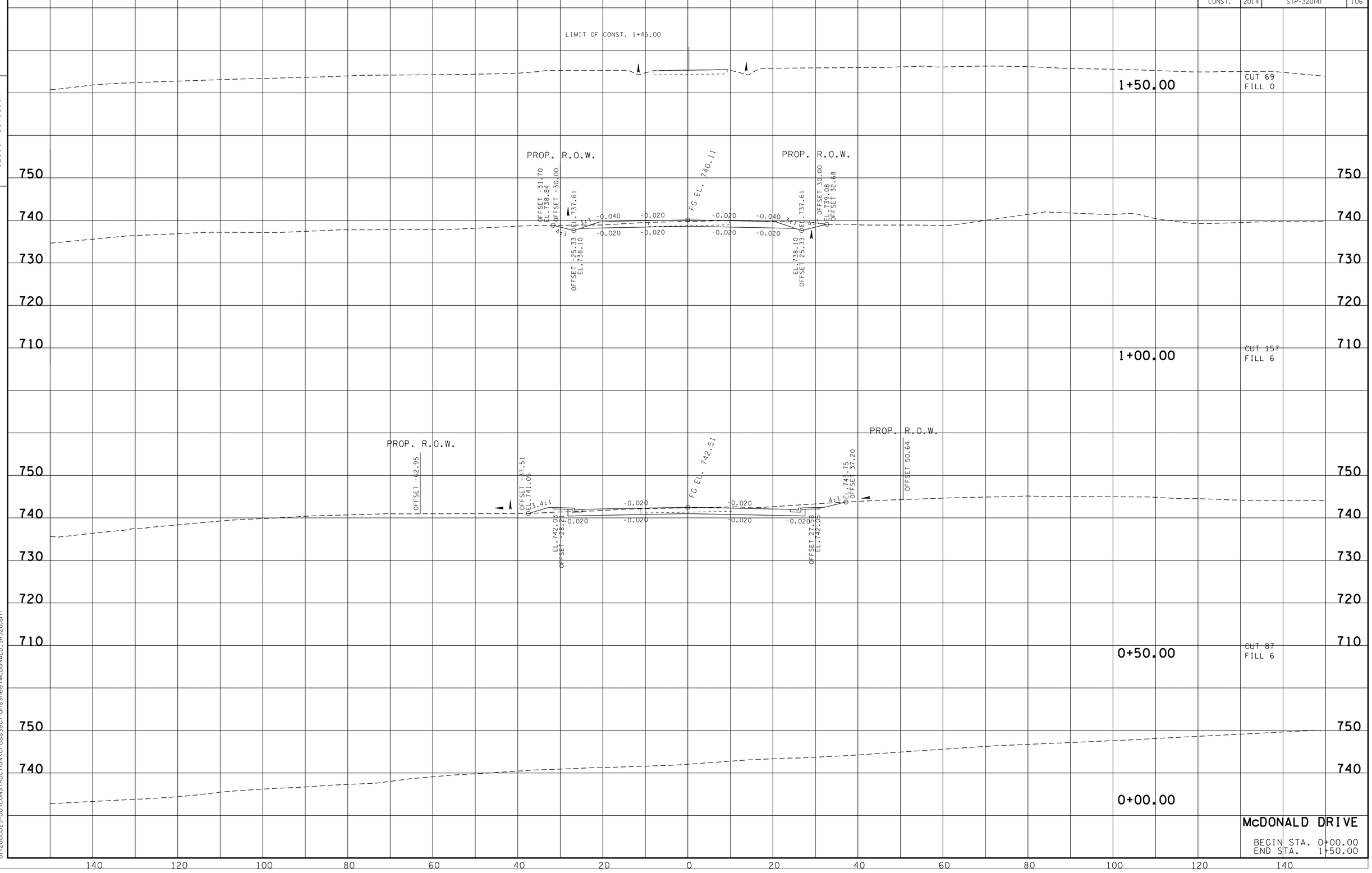
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	104
CONST.	2014	STP-320(4)	106

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



McDONALD DRIVE

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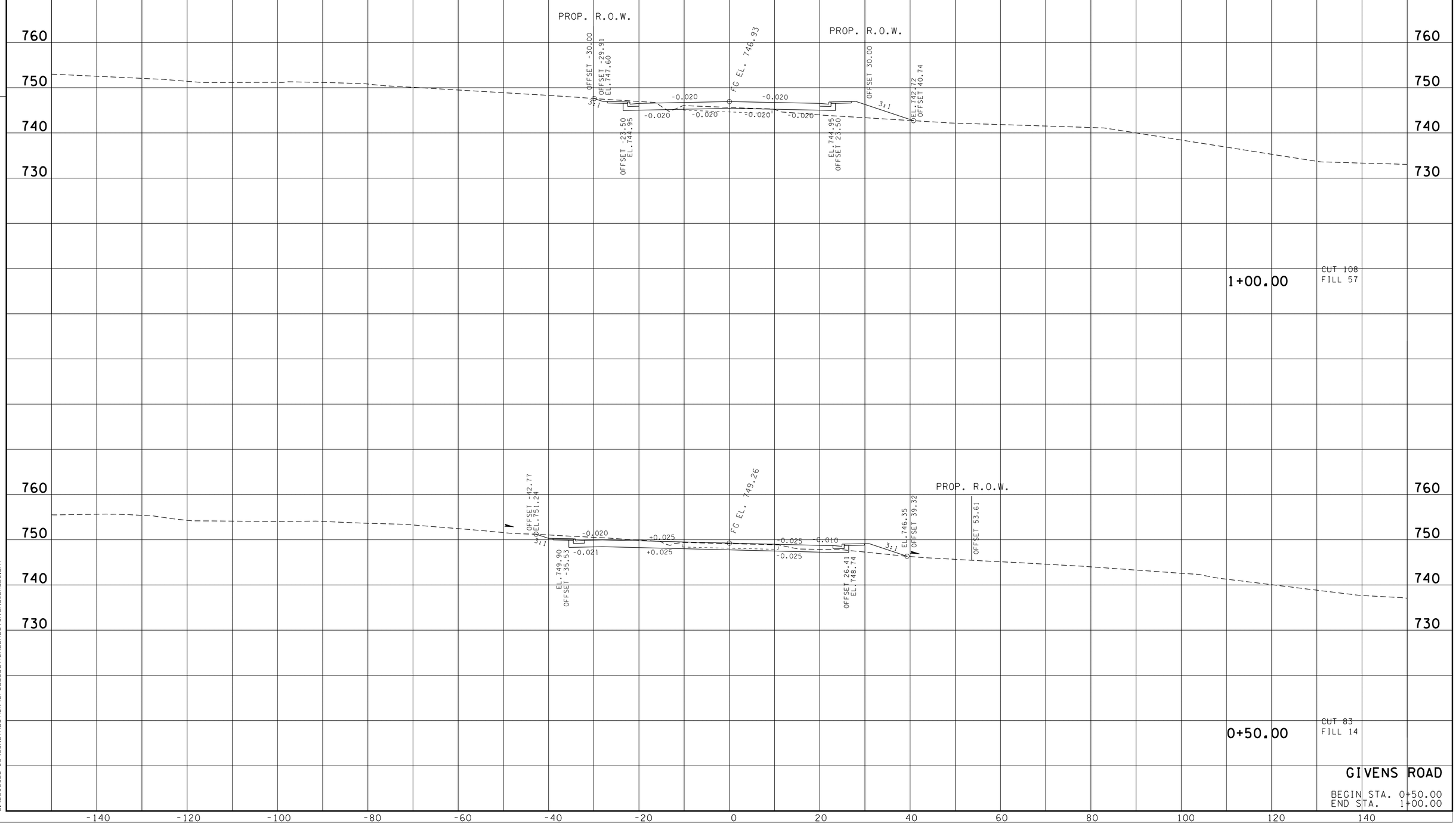
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	105
CONST.	2014	STP-320(4)	107

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



GIVENS ROAD

BEGIN STA. 0+50.00
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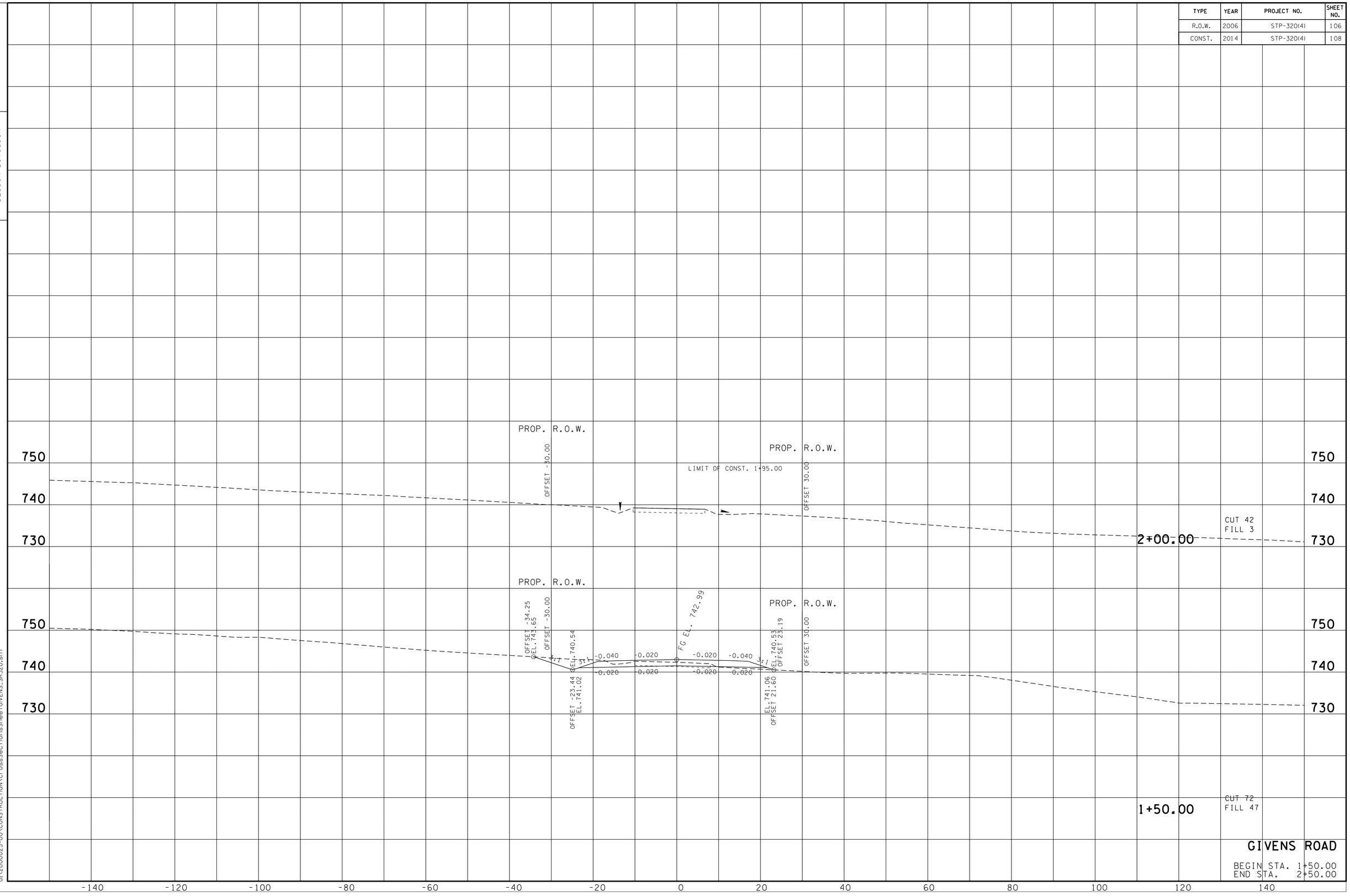
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	106
CONST.	2014	STP-320(4)	108



GIVENS ROAD

BEGIN STA. 1+50.00
END STA. 2+50.00

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION

9/3/2013 3:59:39 PM
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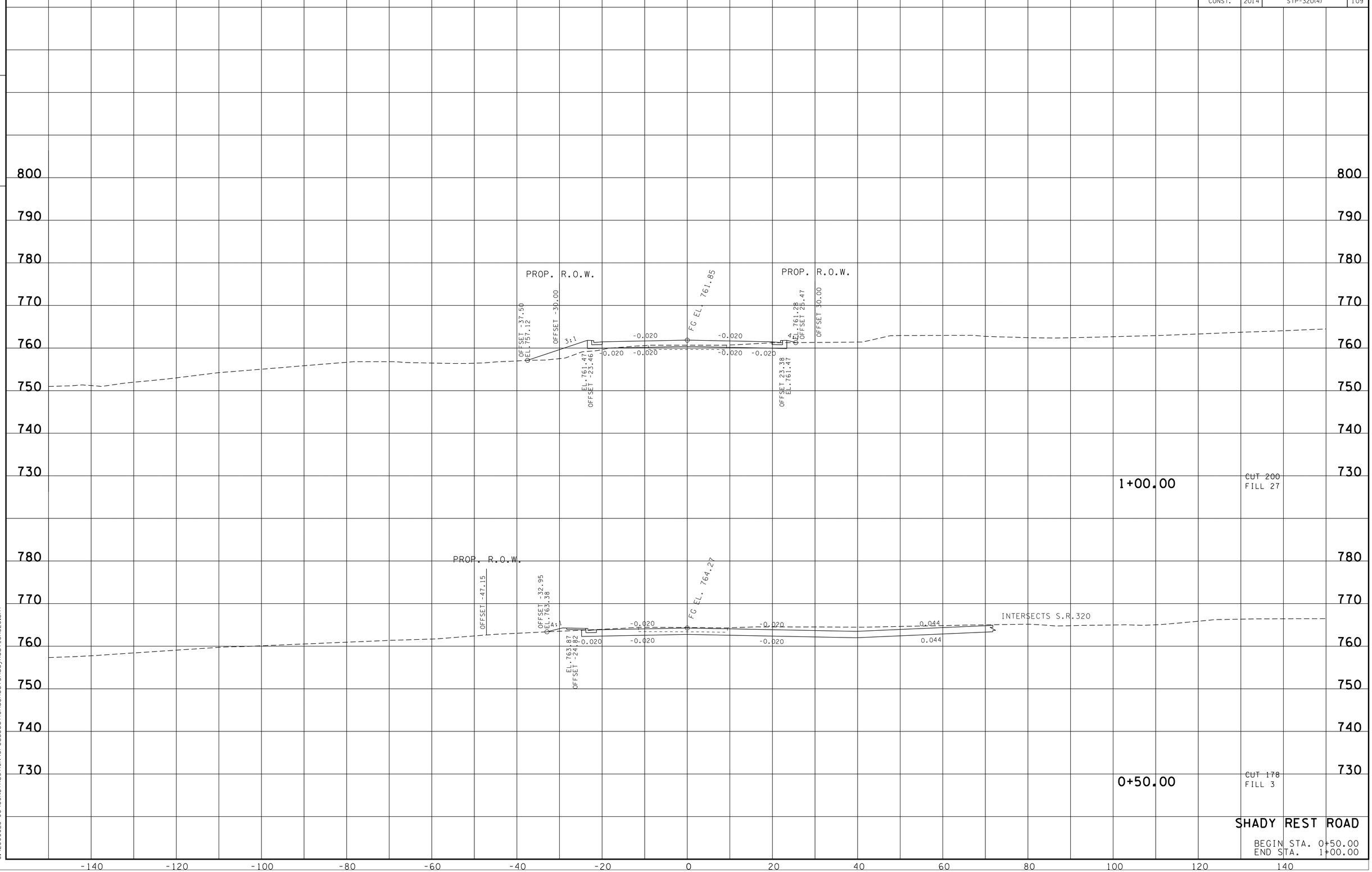
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	107
CONST.	2014	STP-320(4)	109

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



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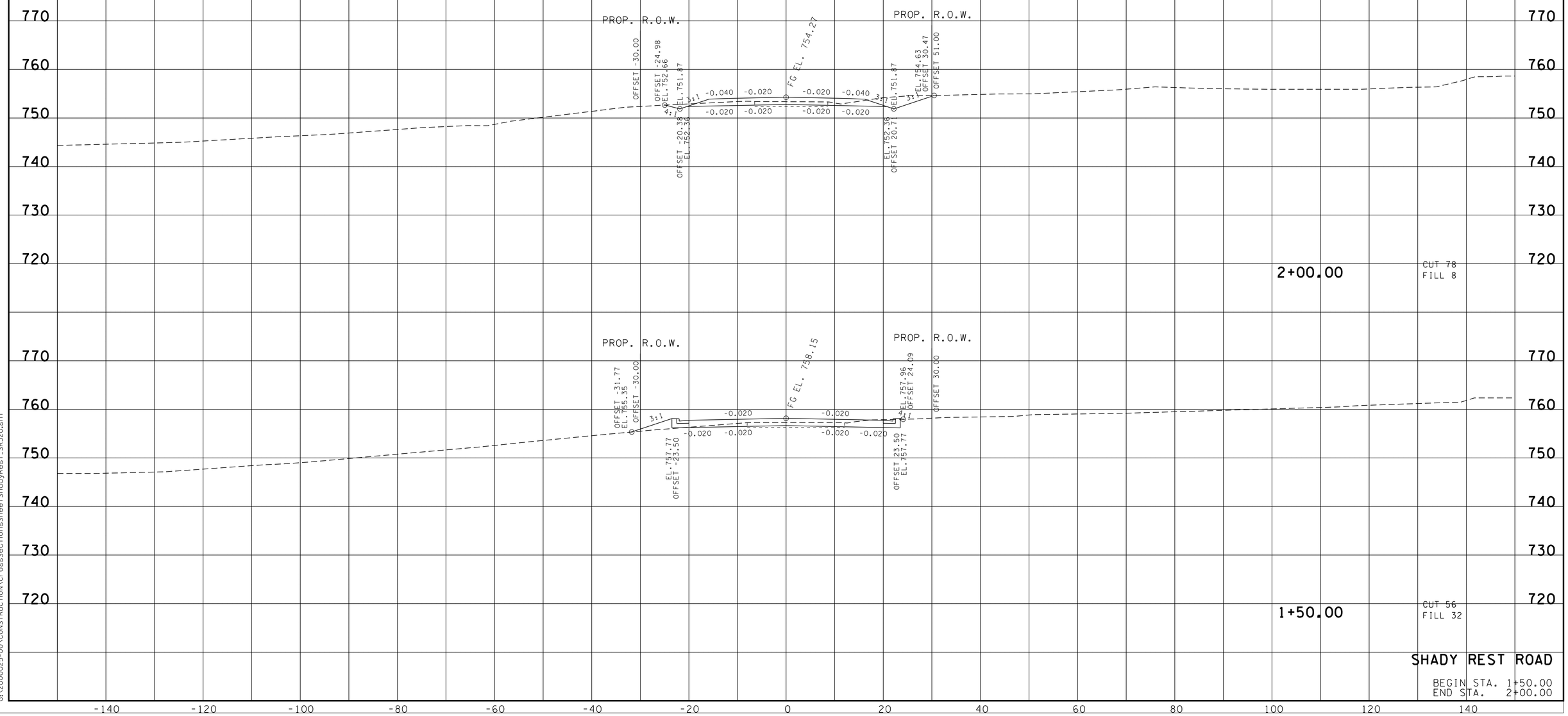
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	108
CONST.	2014	STP-320(4)	110

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



SHADY REST ROAD

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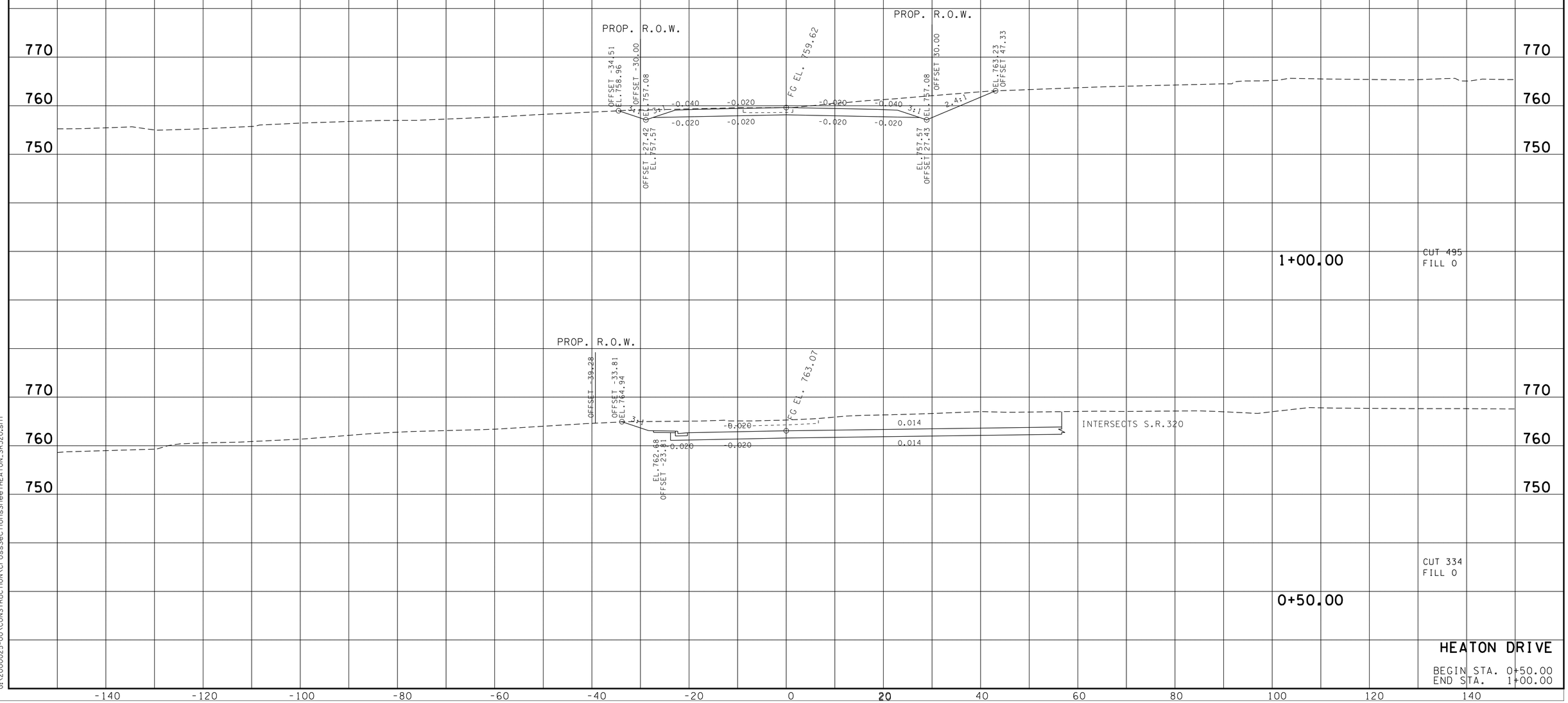
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	109
CONST.	2014	STP-320(4)	111

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.



HEATON DRIVE

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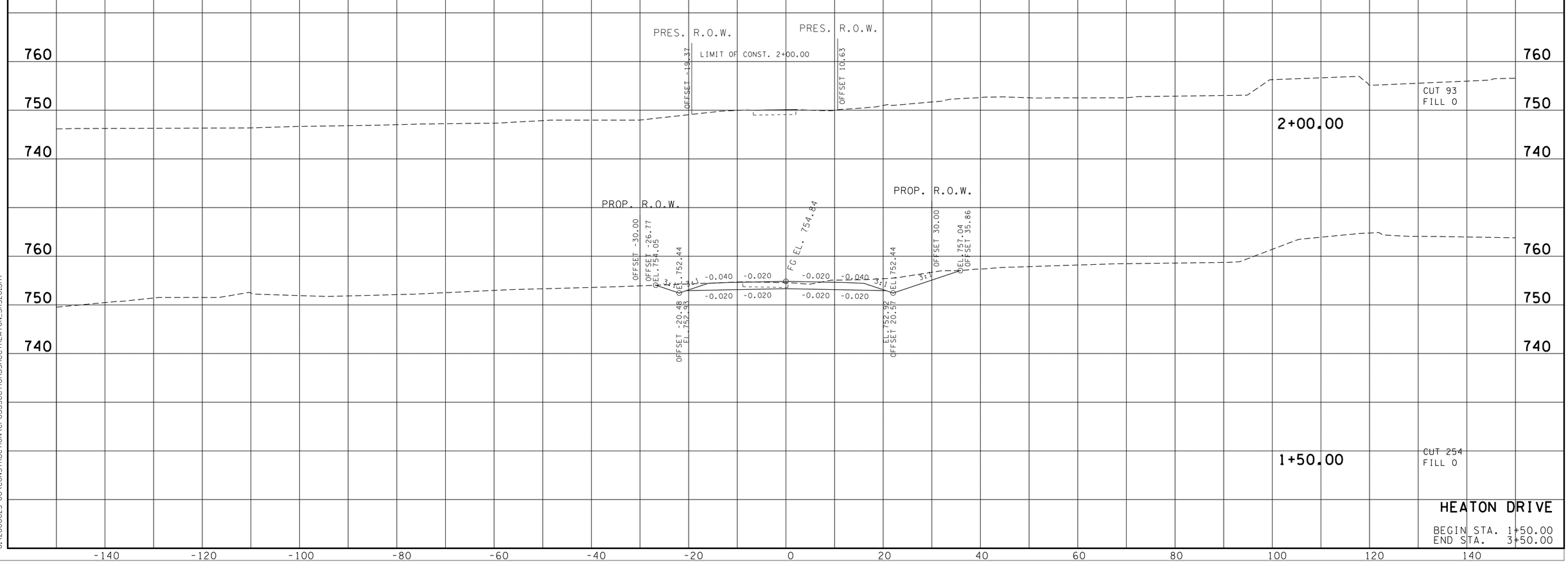
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	110
CONST.	2014	STP-320(4)	112



TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

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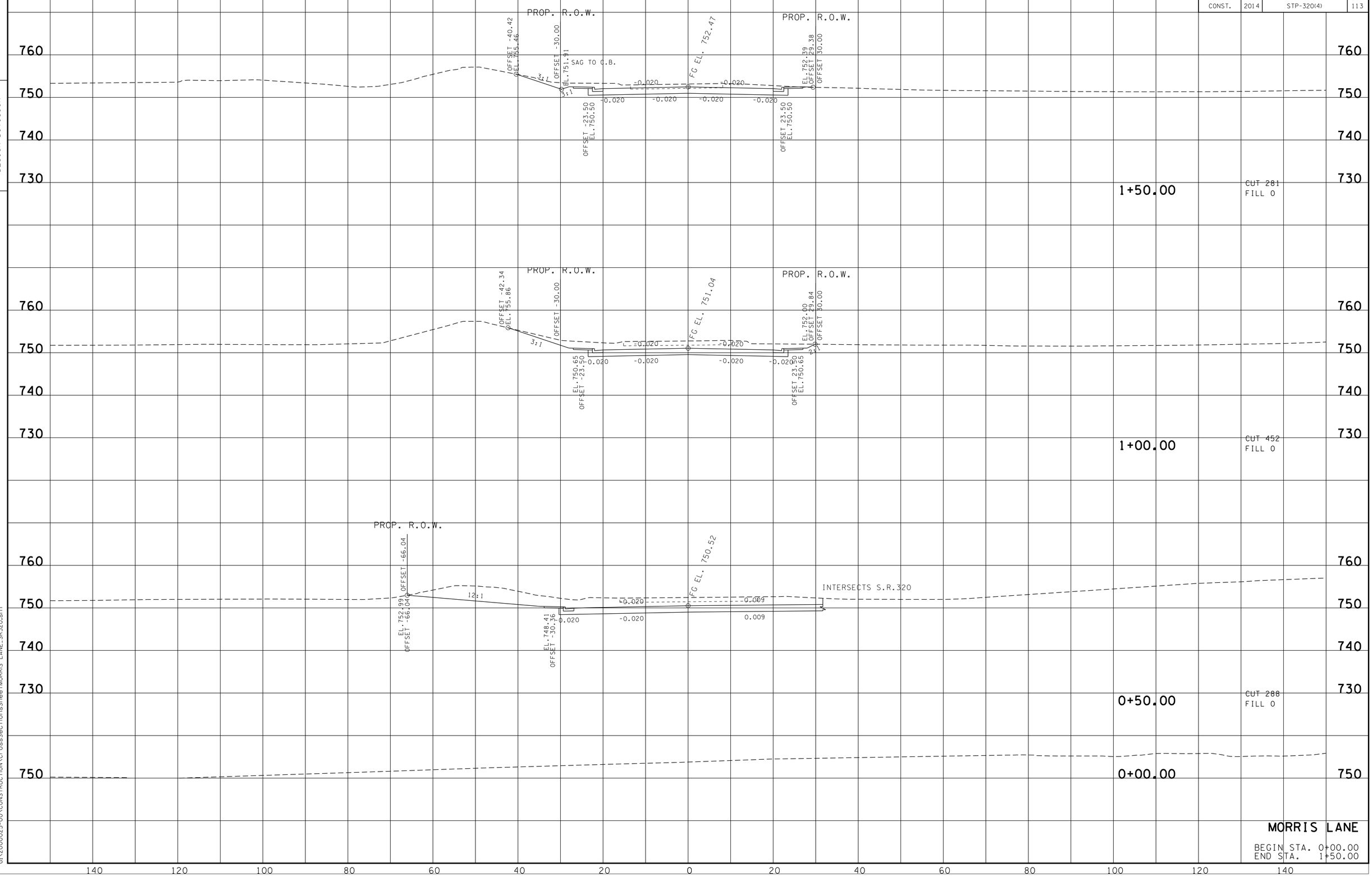
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	111
CONST.	2014	STP-320(4)	113



TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

MORRIS LANE

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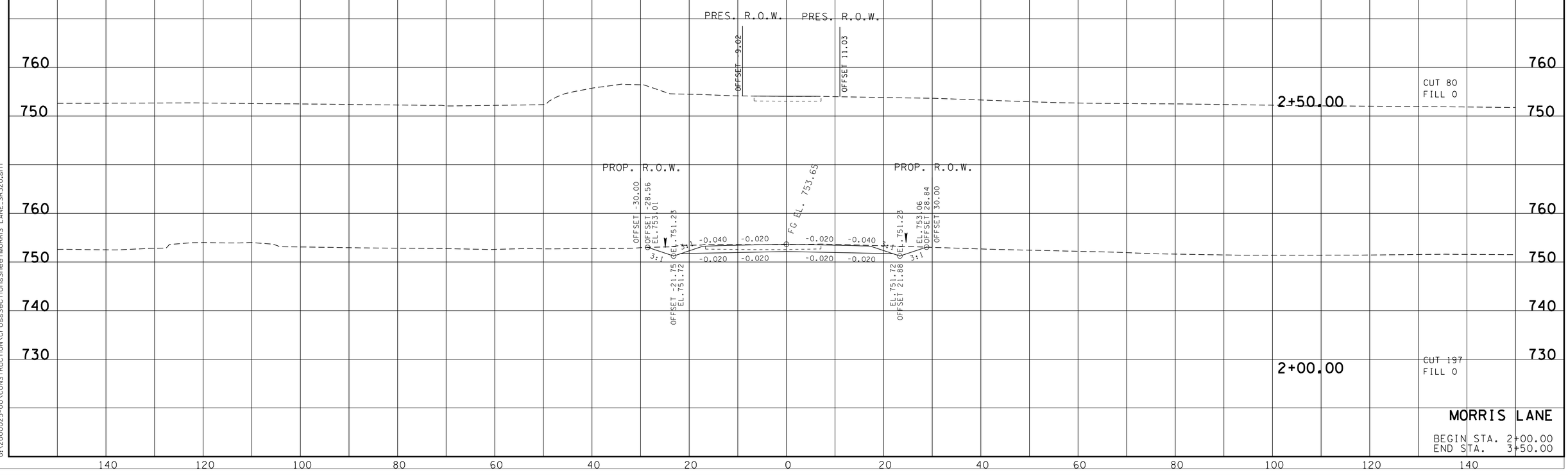
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	112
CONST.	2014	STP-320(4)	114

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.



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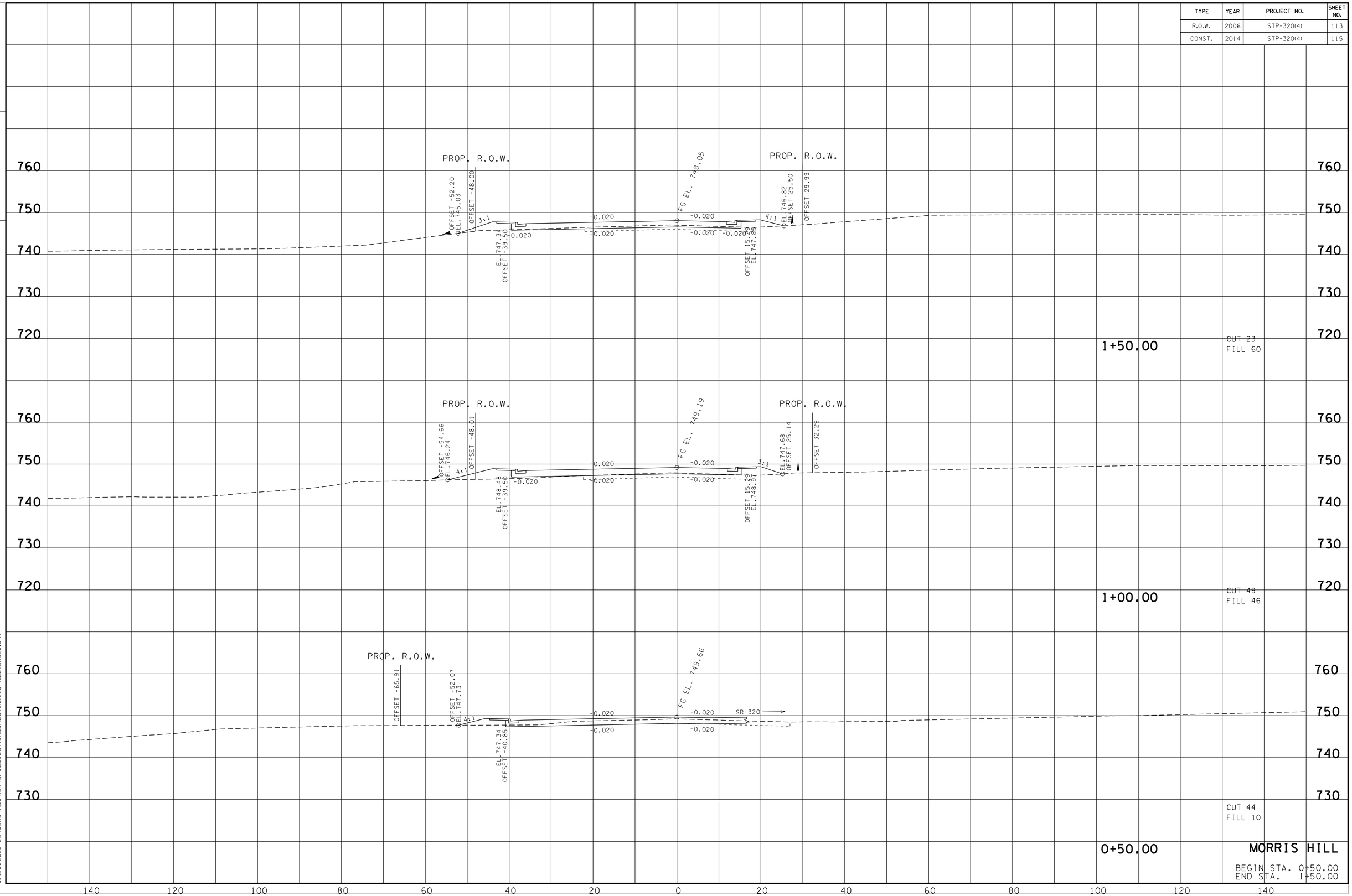
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	113
CONST.	2014	STP-320(4)	115



TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

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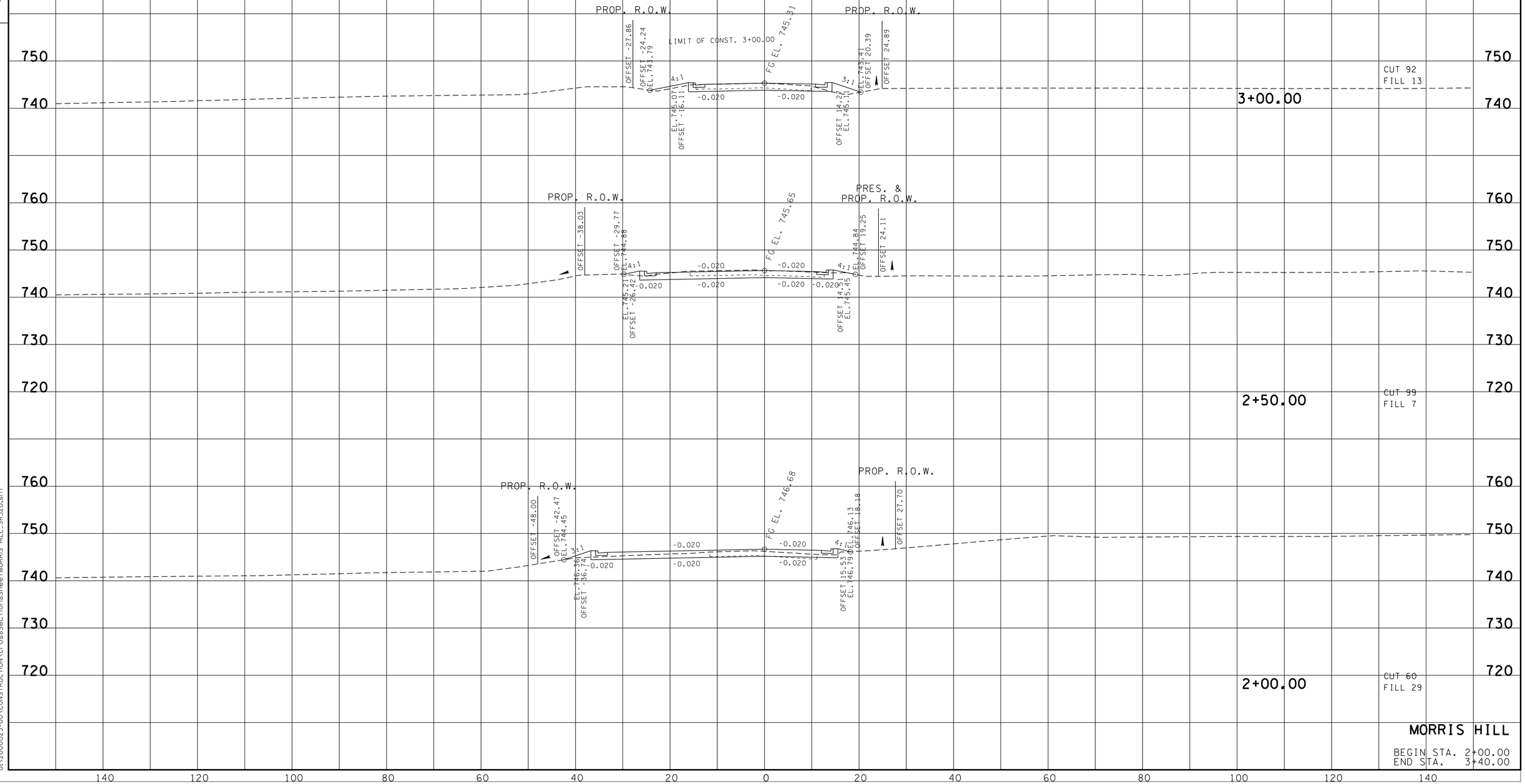
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	114
CONST.	2014	STP-320(4)	116

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



MORRIS HILL

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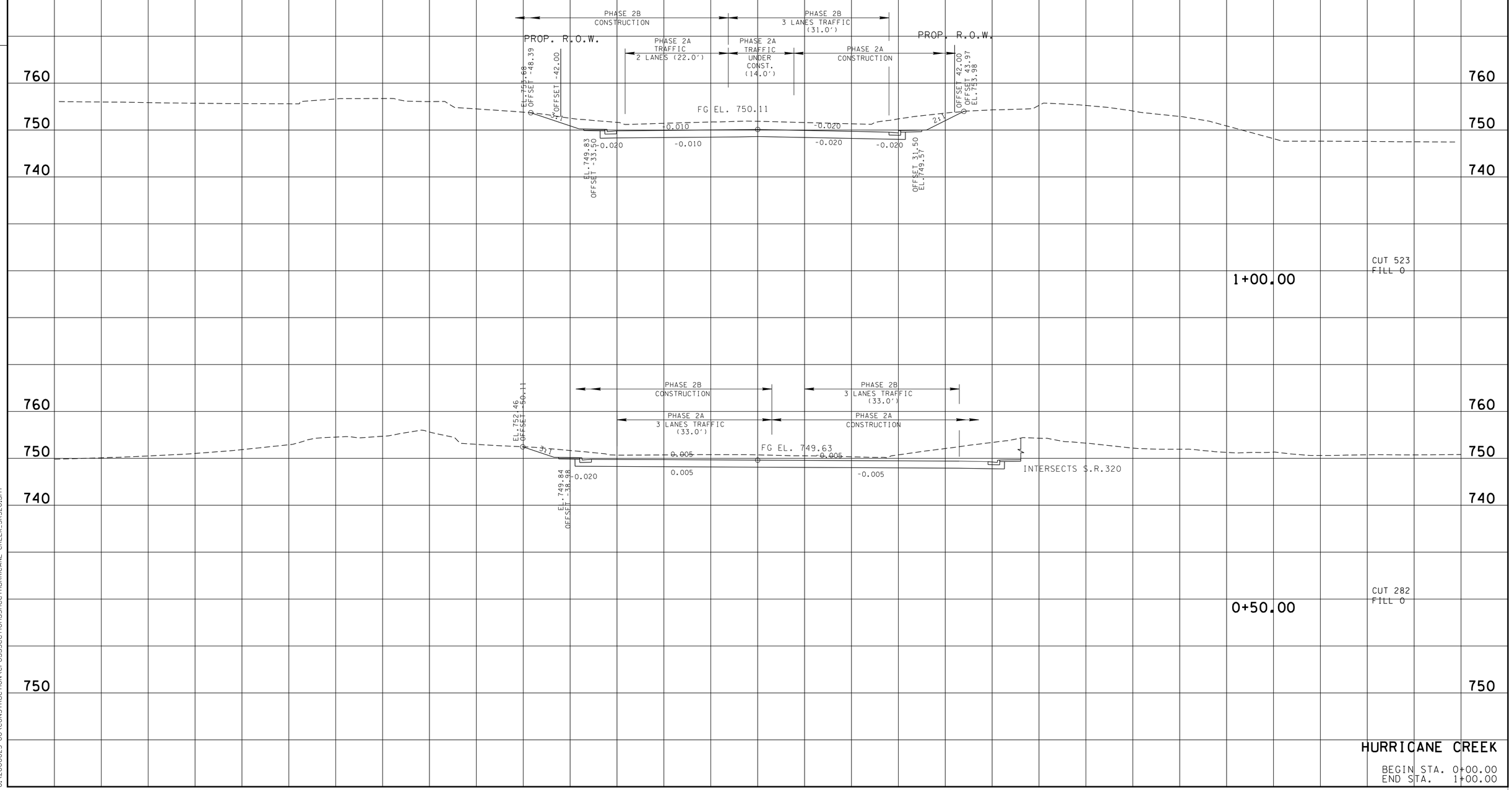
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	115
CONST.	2014	STP-320(4)	117

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



HURRICANE CREEK

BEGIN STA. 0+00.00
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9/3/2013 4:06:32 PM
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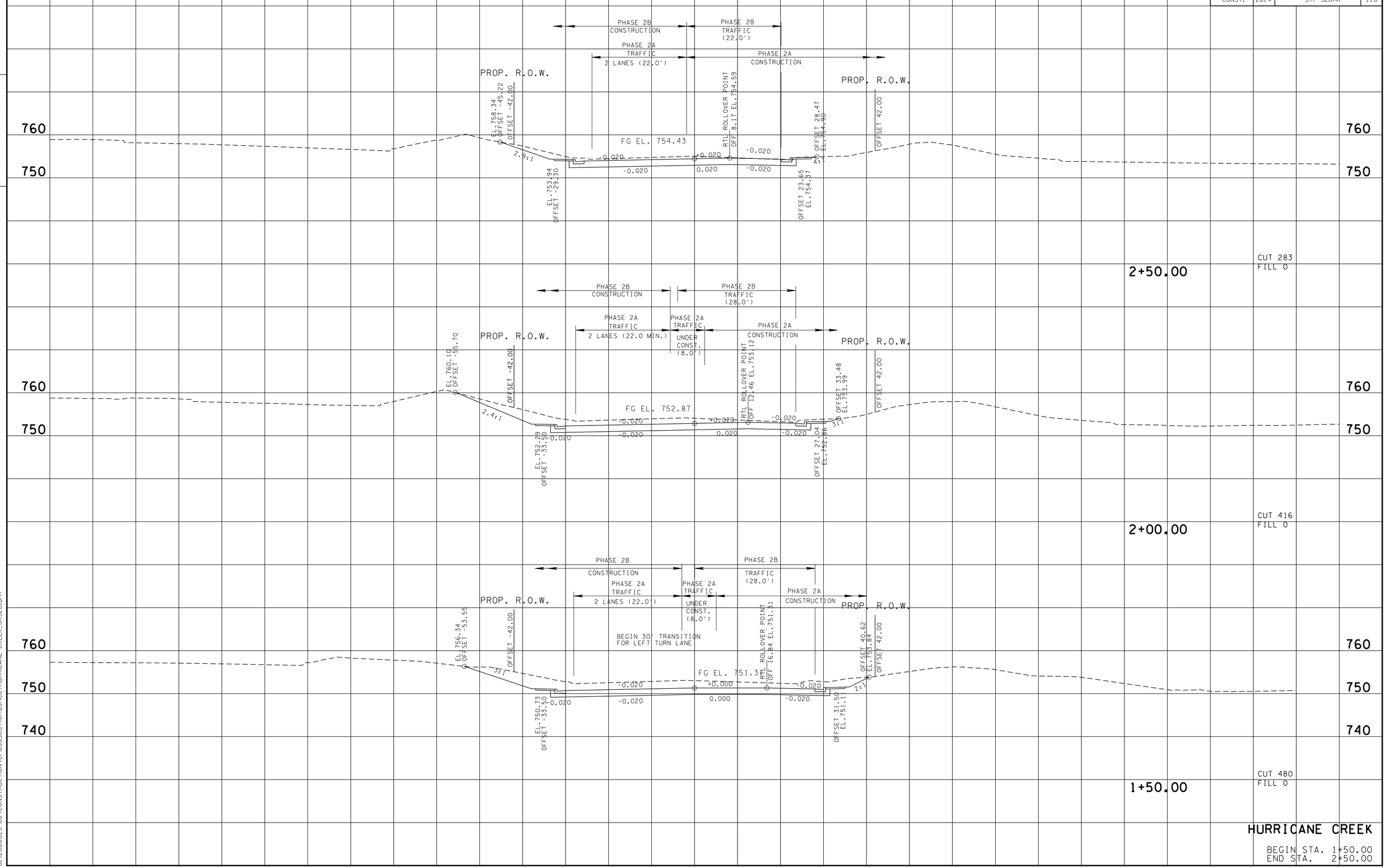
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	116
CONST.	2014	STP-320(4)	118

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



HURRICANE CREEK

BEGIN STA. 1+50.00
END STA. 2+50.00

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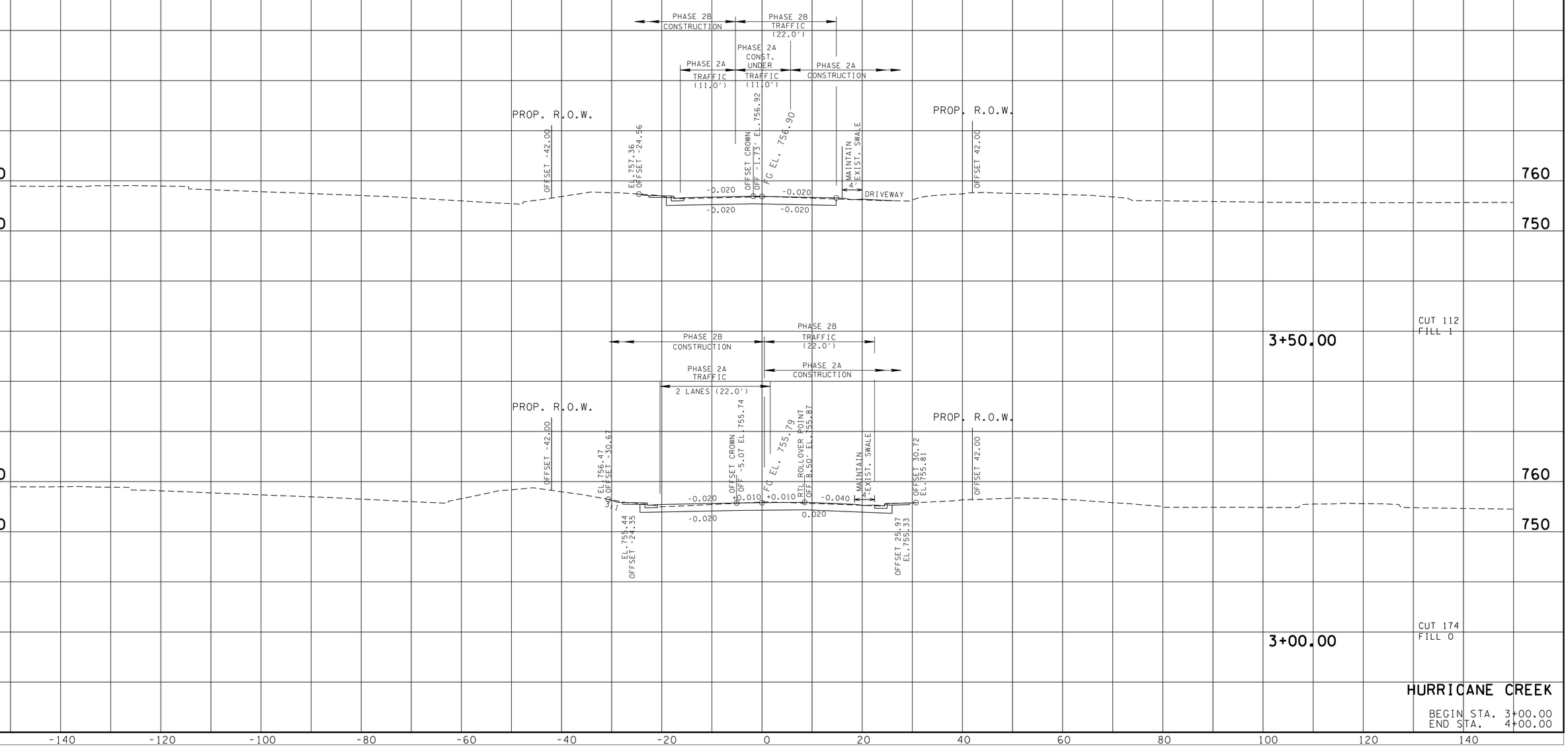
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	117
CONST.	2014	STP-320(4)	119

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



HURRICANE CREEK

BEGIN STA. 3+00.00
END STA. 4+00.00

9/3/2013 4:06:31PM
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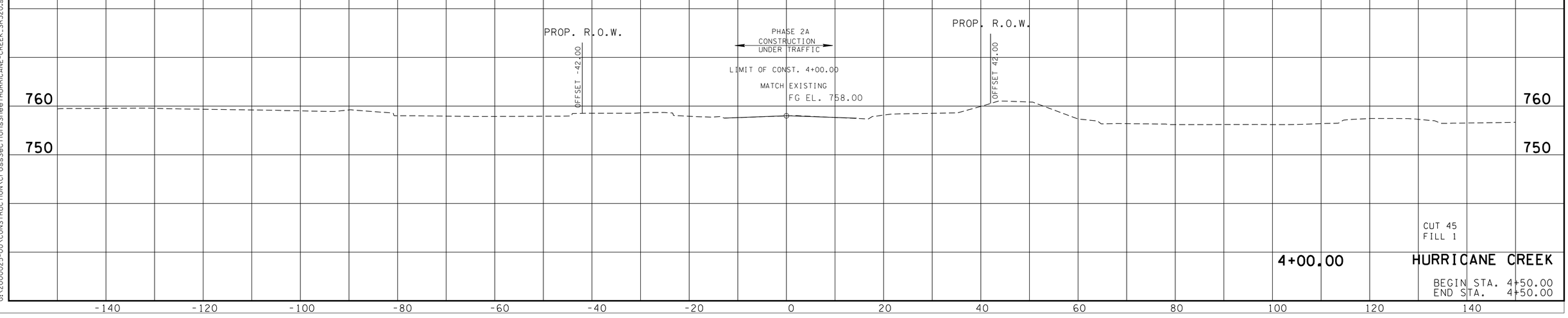
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	118
CONST.	2014	STP-320(4)	120



CUT 45
FILL 1

4+00.00

HURRICANE CREEK

BEGIN STA. 4+50.00
END STA. 4+50.00

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

9/3/2013 4:06:32 PM
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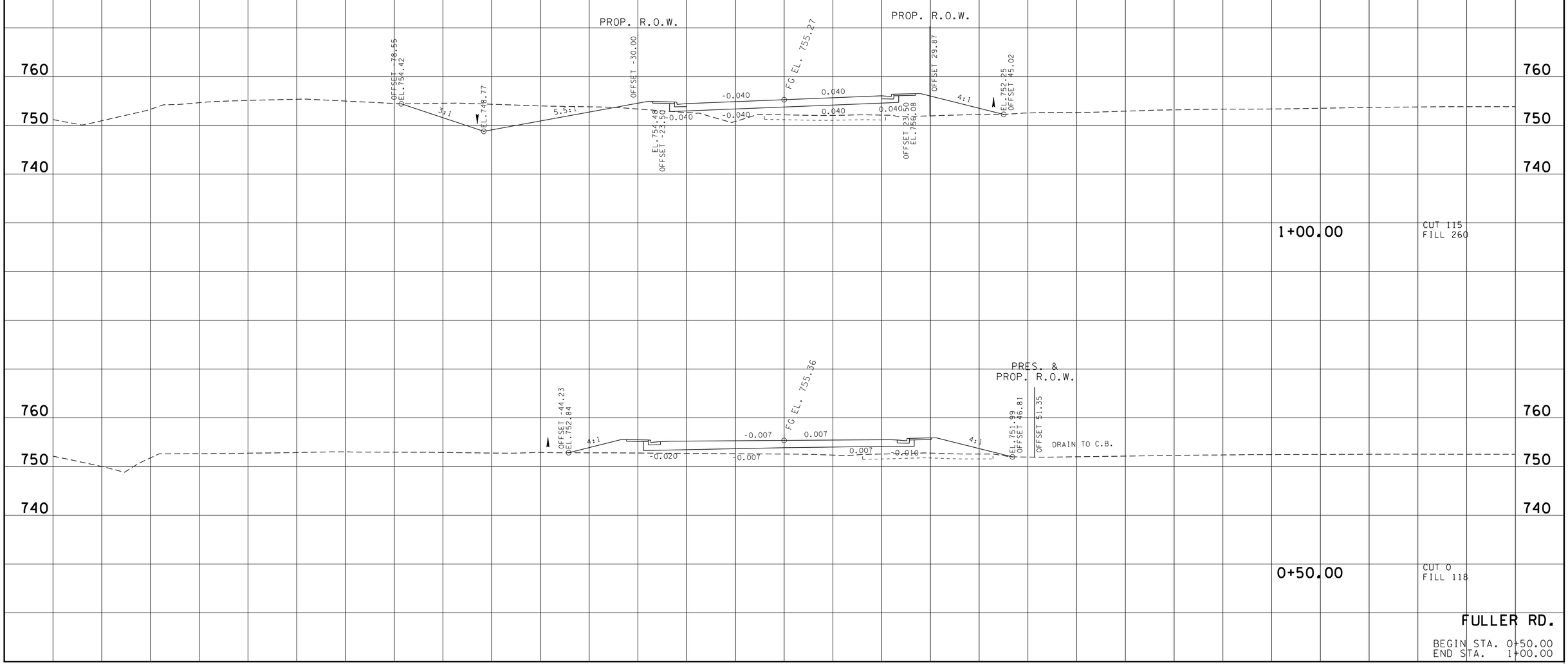
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	119
CONST.	2014	STP-320(4)	121

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



FULLER RD.

BEGIN STA. 0+50.00
END STA. 1+00.00

9/3/2013 3:57:16 PM
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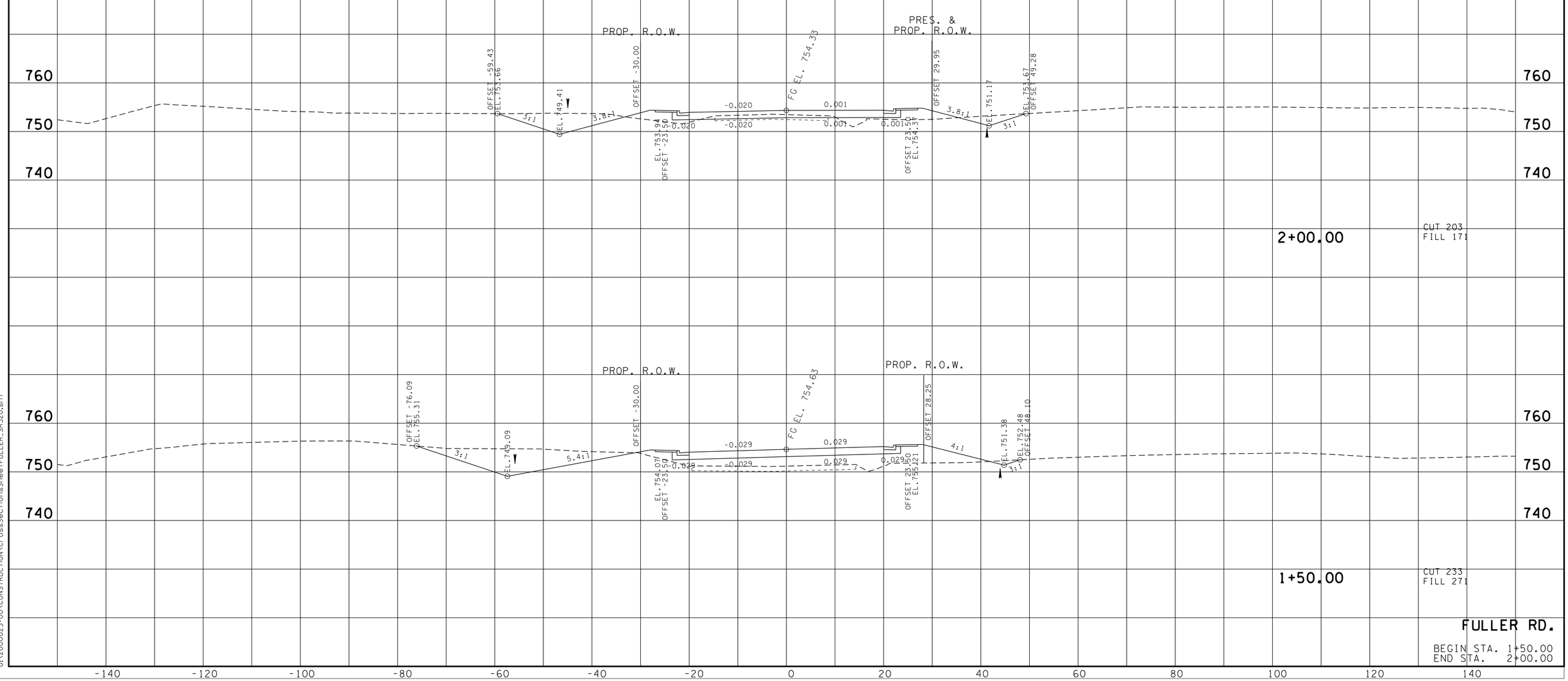
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	120
CONST.	2014	STP-320(4)	122

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.



FULLER RD.

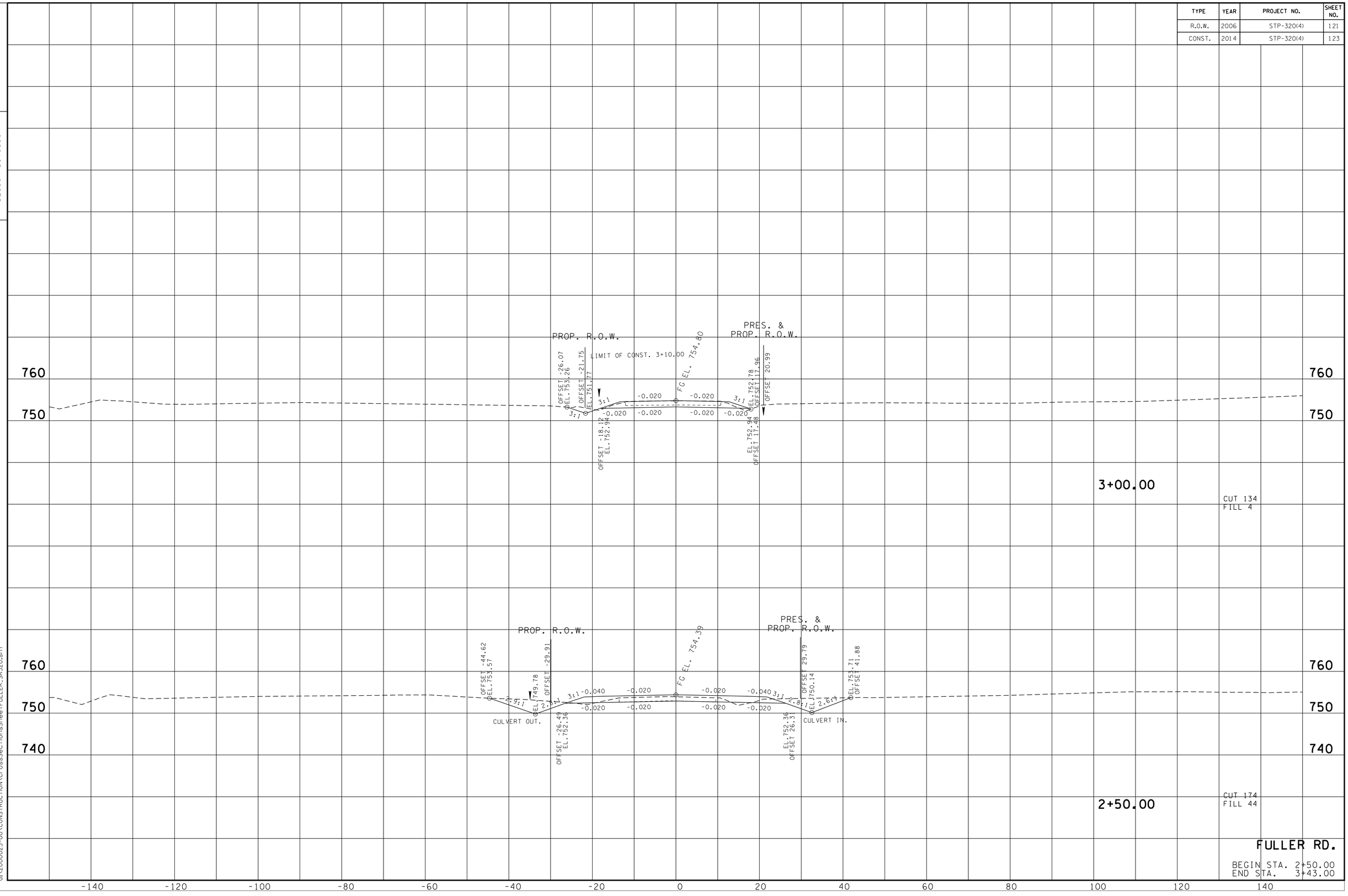
BEGIN STA. 1+50.00
END STA. 2+00.00

9/3/2013 3:57:16 PM
G:\2000025-00\CONSTRUCTION\CrossSectionsSheet\FULLER.SR320.sht

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	121
CONST.	2014	STP-320(4)	123

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.



FULLER RD.

BEGIN STA. 2+50.00
END STA. 3+43.00

9/3/2013 3:57:17 PM
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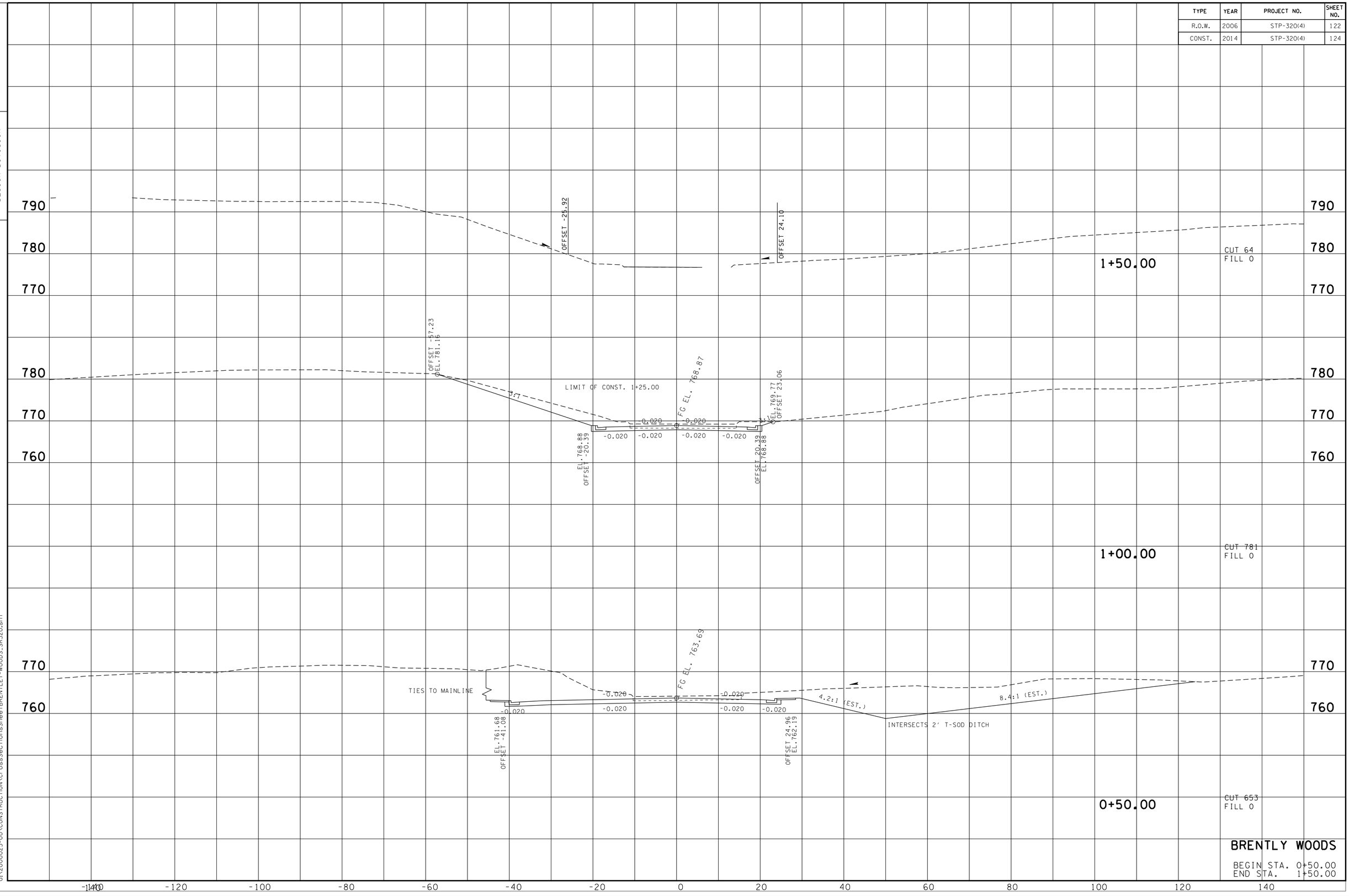
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	122
CONST.	2014	STP-320(4)	124

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



BRENTLY WOODS

BEGIN STA. 0+50.00
END STA. 1+50.00

1/28/2014 2:42:12 PM
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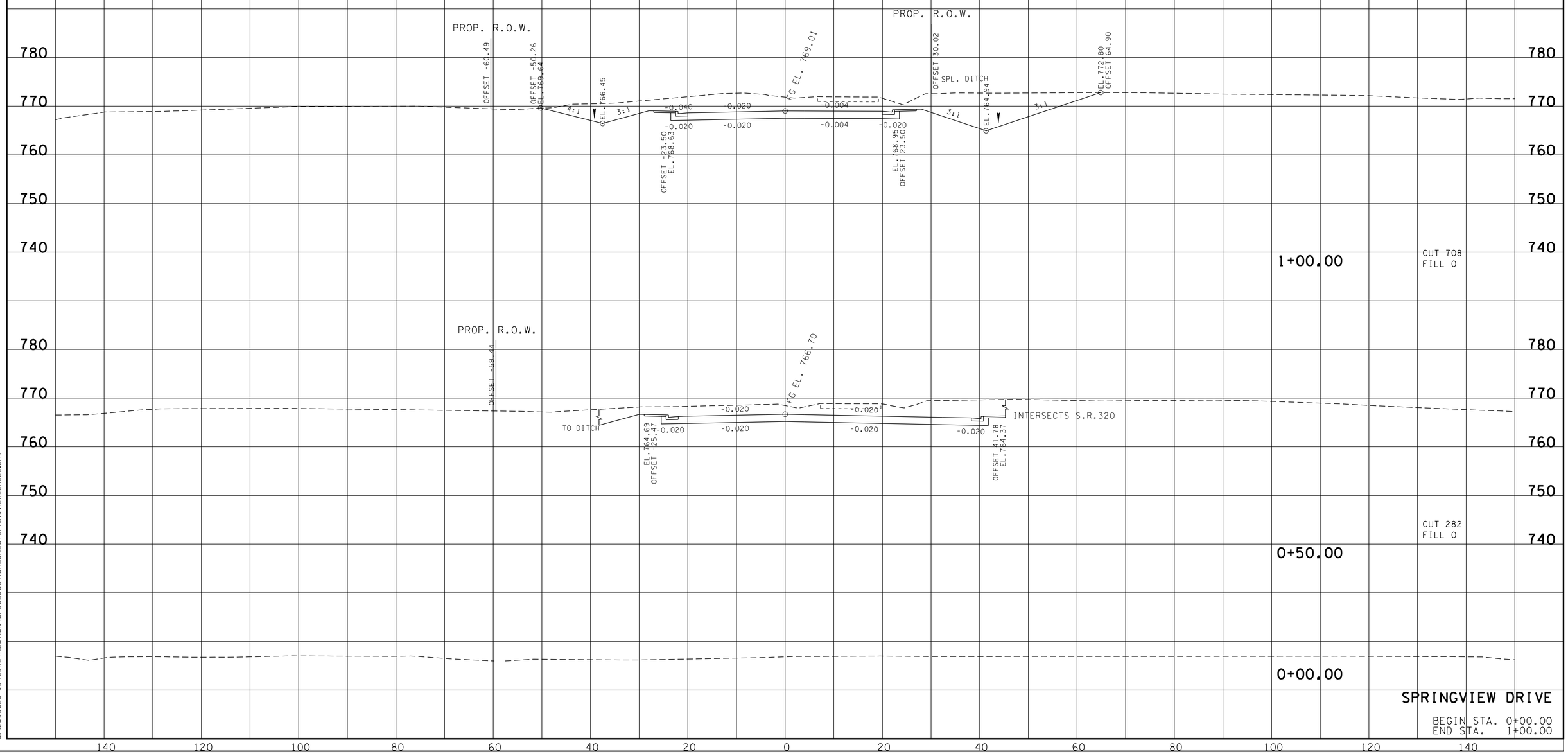
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	123
CONST.	2014	STP-320(4)	125

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



SPRINGVIEW DRIVE

BEGIN STA. 0+00.00
END STA. 1+00.00

9/3/2013 4:30:12 PM
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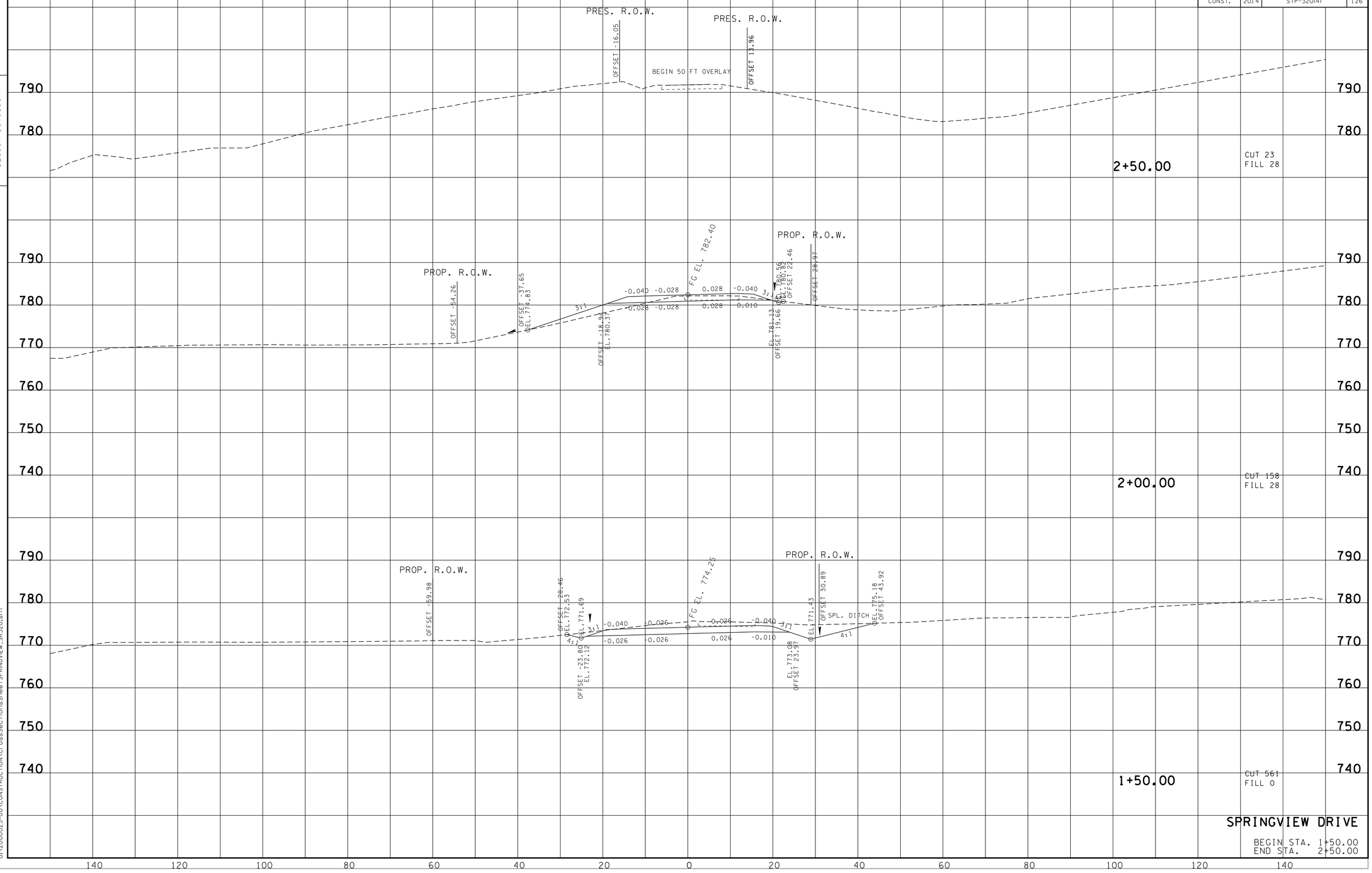
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	124
CONST.	2014	STP-320(4)	126



FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION

9/3/2013 4:30:13 PM
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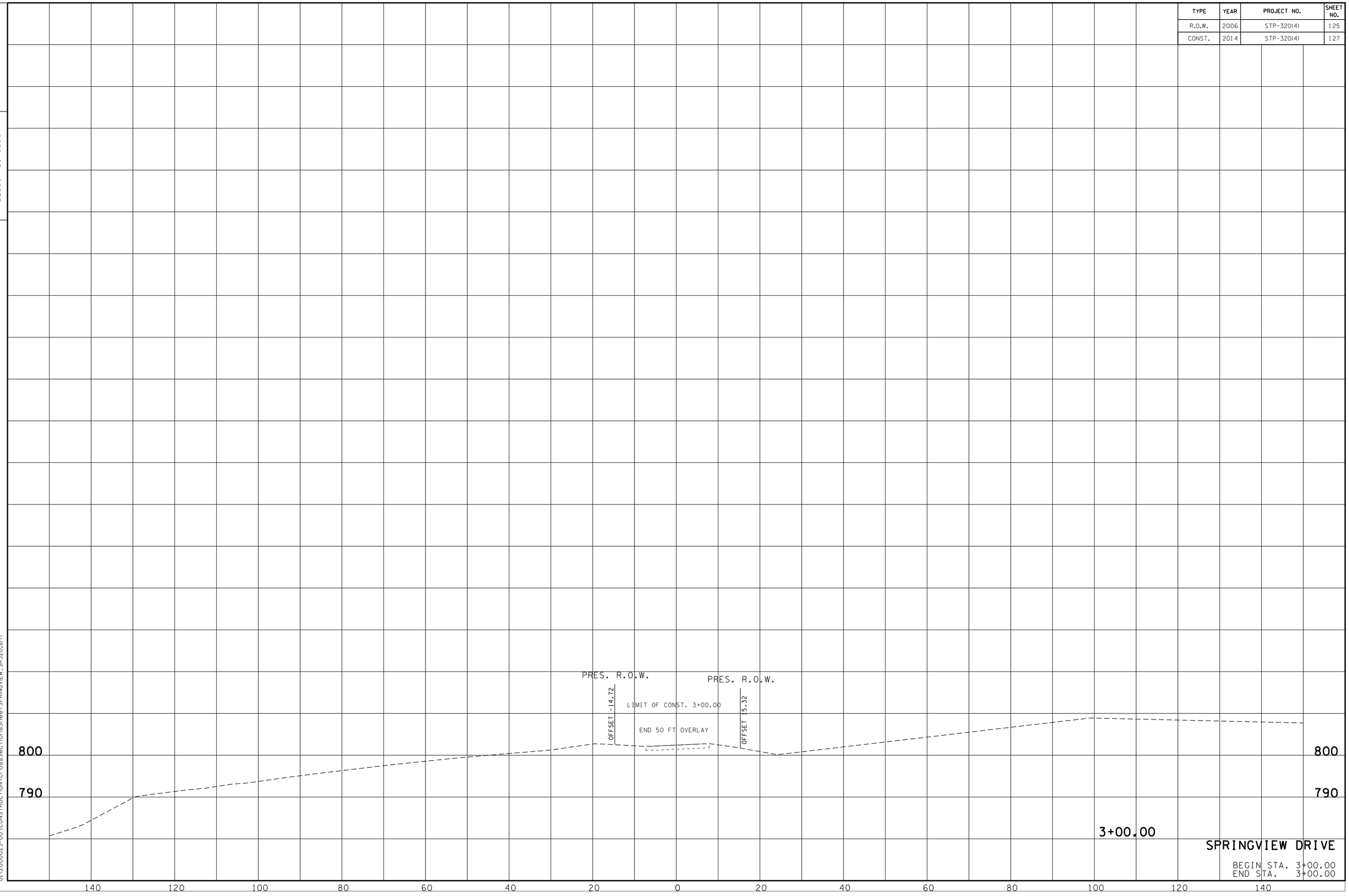
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	125
CONST.	2014	STP-320(4)	127



FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION

9/3/2013 4:30:13 PM
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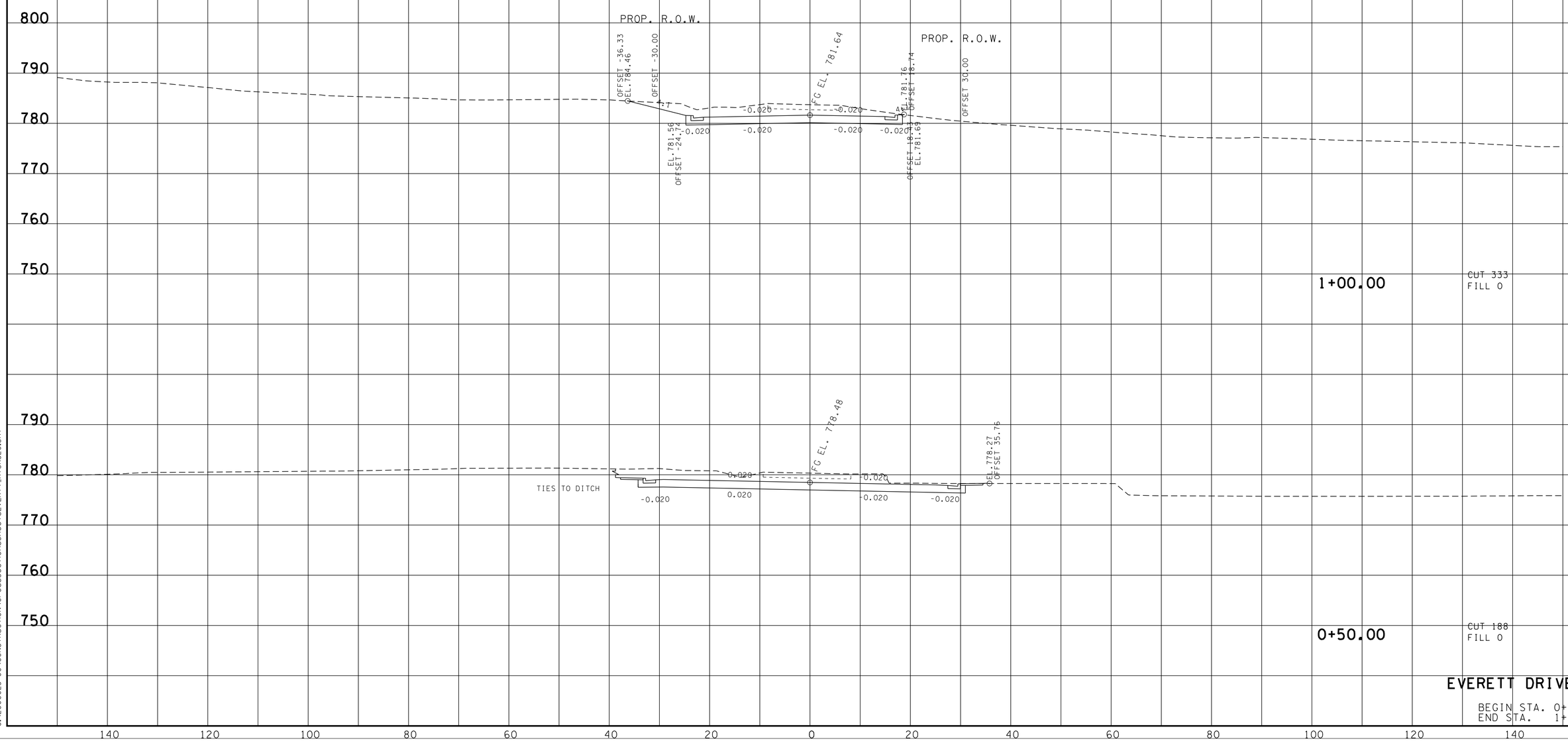
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	126
CONST.	2014	STP-320(4)	128

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION

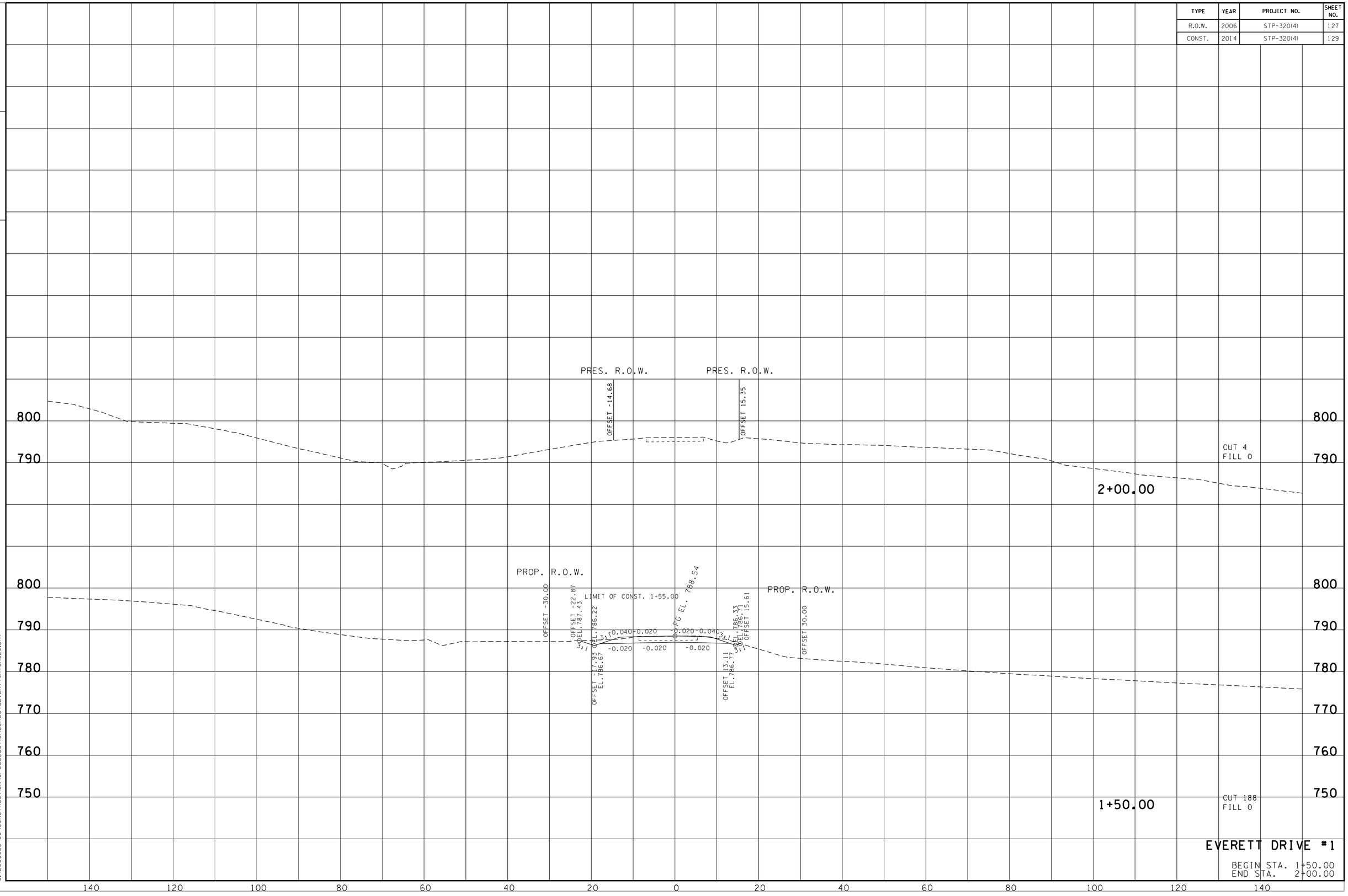


9/3/2013 4:23:58 PM
G:\2000025-00\CONSTRUCTION\CrossSectionSheets\EVERTT_HTSR320.Sht

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	127
CONST.	2014	STP-320(4)	129

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



EVERETT DRIVE #1

BEGIN STA. 1+50.00
END STA. 2+00.00

9/3/2013 4:23:59 PM
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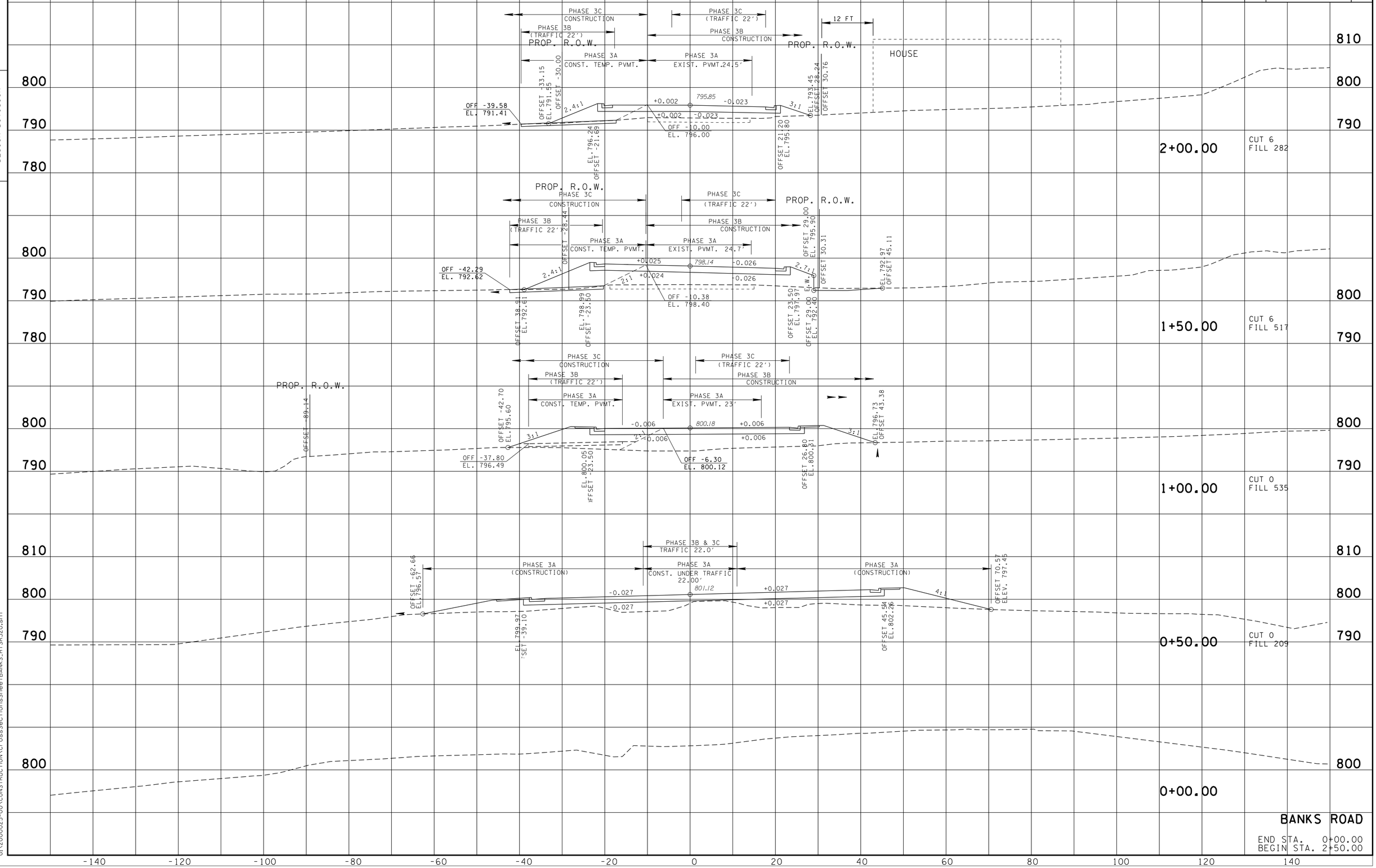
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	128
CONST.	2014	STP-320(4)	130

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



9/3/2013 3:52:58 PM
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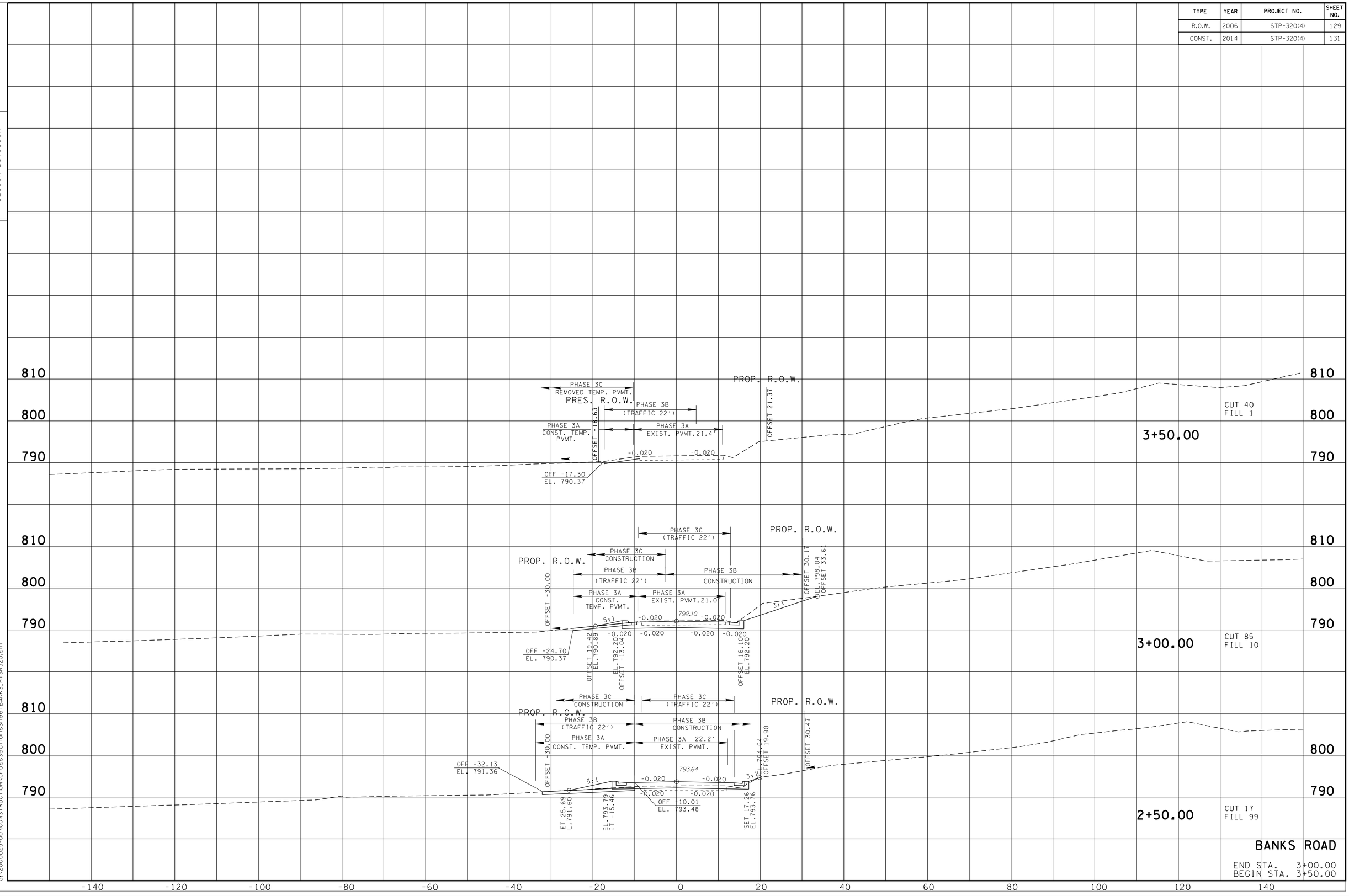
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	129
CONST.	2014	STP-320(4)	131

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



BANKS ROAD

END STA. 3+00.00
BEGIN STA. 3+50.00

9/3/2013 3:52:57 PM
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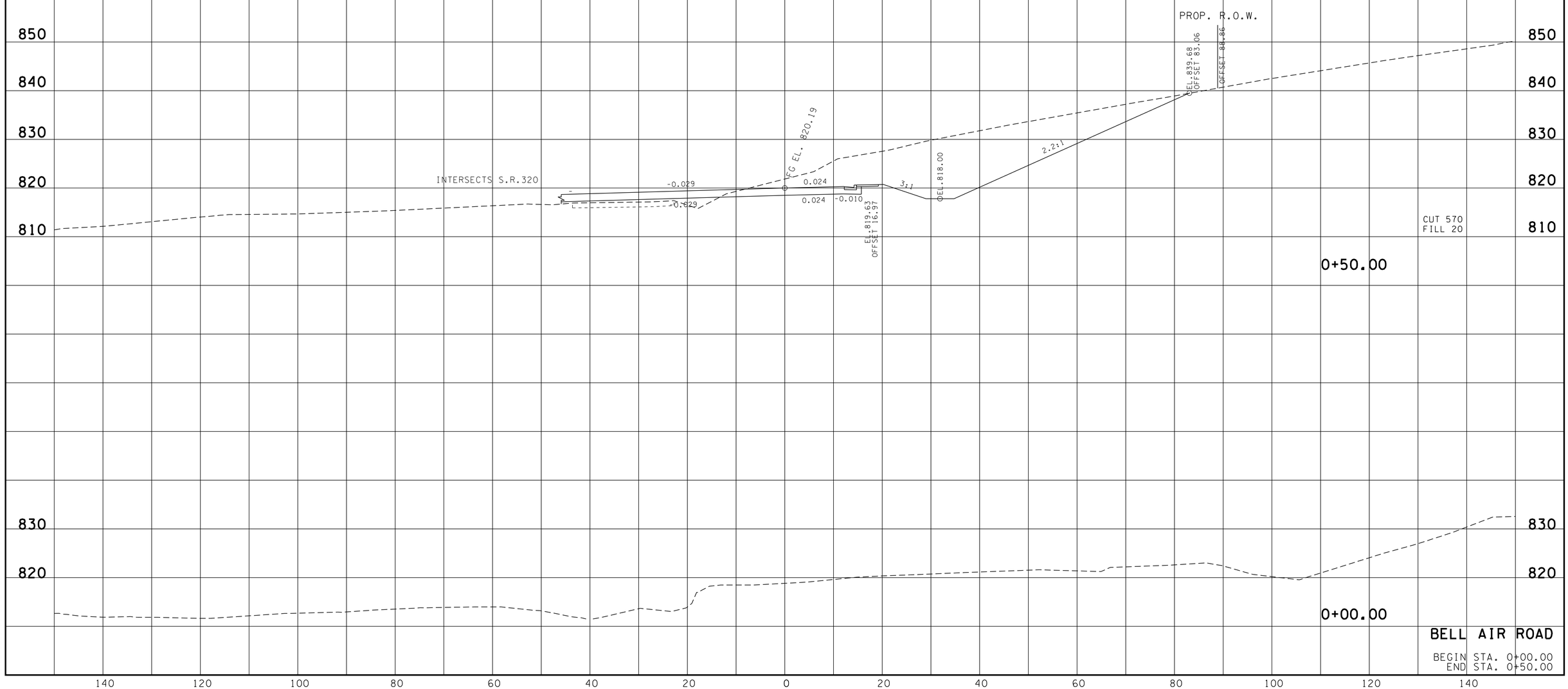
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	130
CONST.	2014	STP-320(4)	132

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.



BELL AIR ROAD

BEGIN STA. 0+00.00
END STA. 0+50.00

9/3/2013 4:20:06 PM
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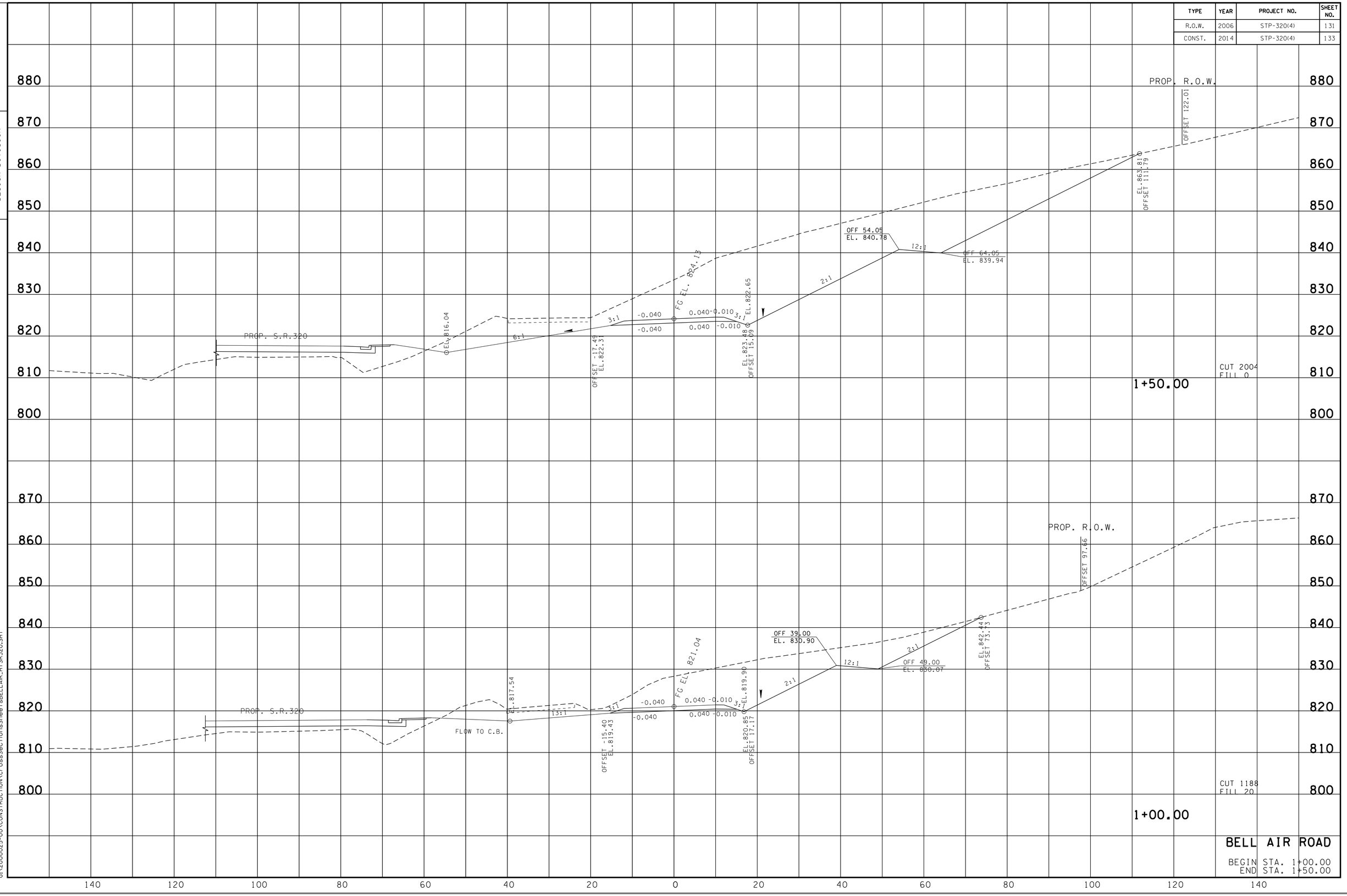
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	131
CONST.	2014	STP-320(4)	133

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



9/3/2013 4:20:07 PM
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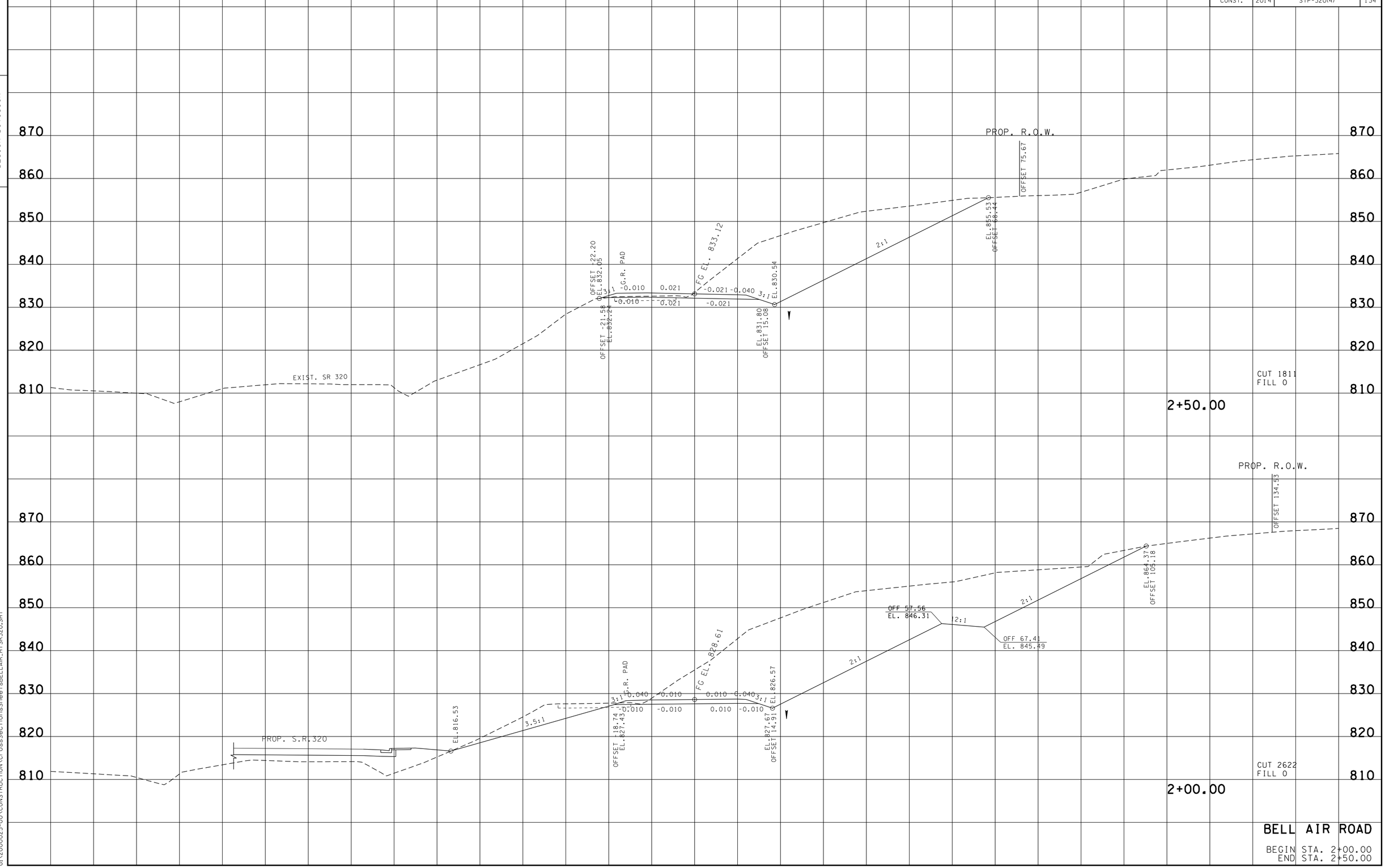
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	132
CONST.	2014	STP-320(4)	134

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.



BELL AIR ROAD

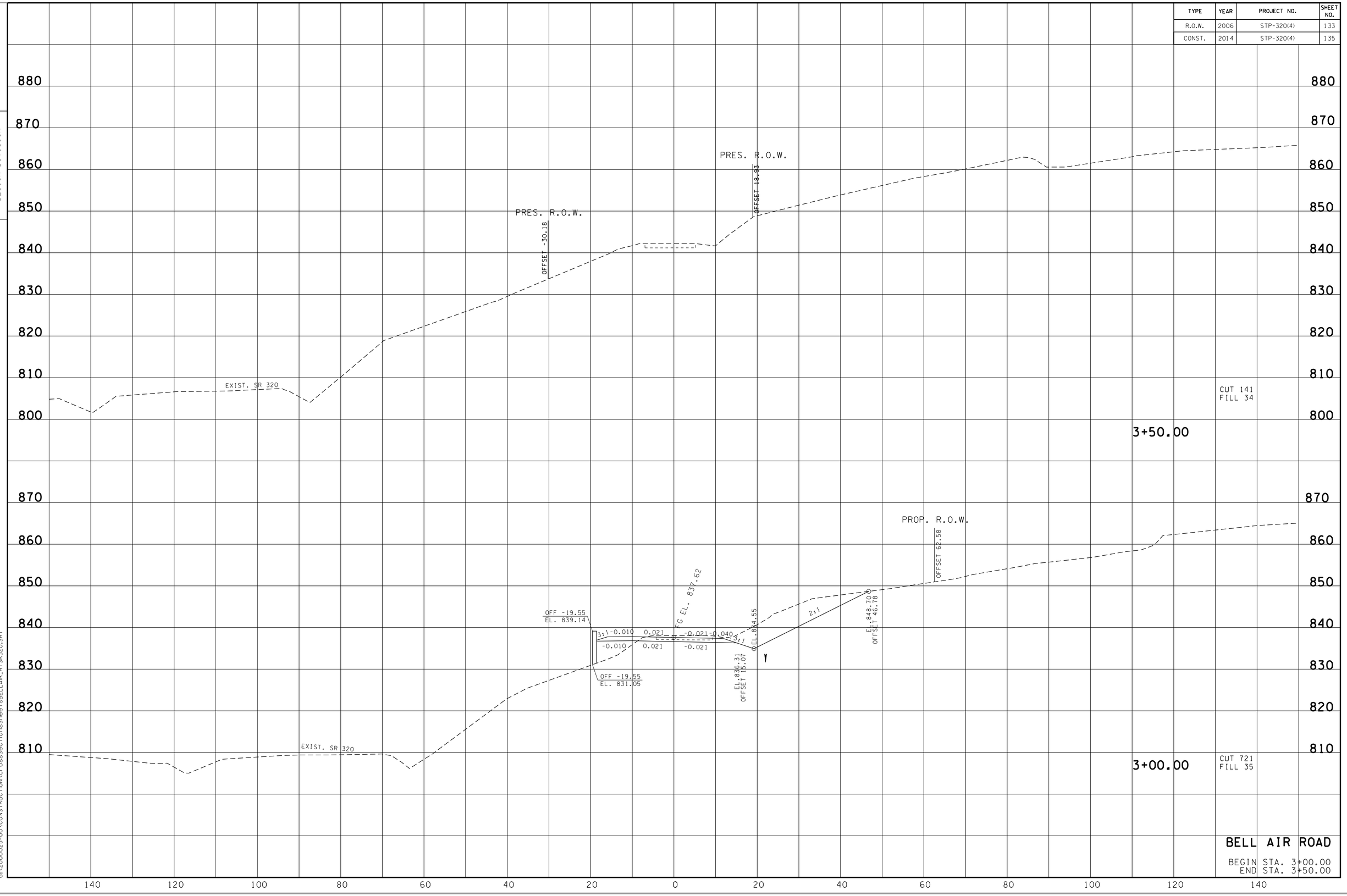
BEGIN STA. 2+00.00
END STA. 2+50.00

9/3/2013 4:20:07 PM
G:\2000025-00\CONSTRUCTION\CrossSectionsSheetsBELLAIR_HTSR320.SHT

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	133
CONST.	2014	STP-320(4)	135

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.



BELL AIR ROAD

BEGIN STA. 3+00.00
END STA. 3+50.00

12/18/2013 2:42:39 PM
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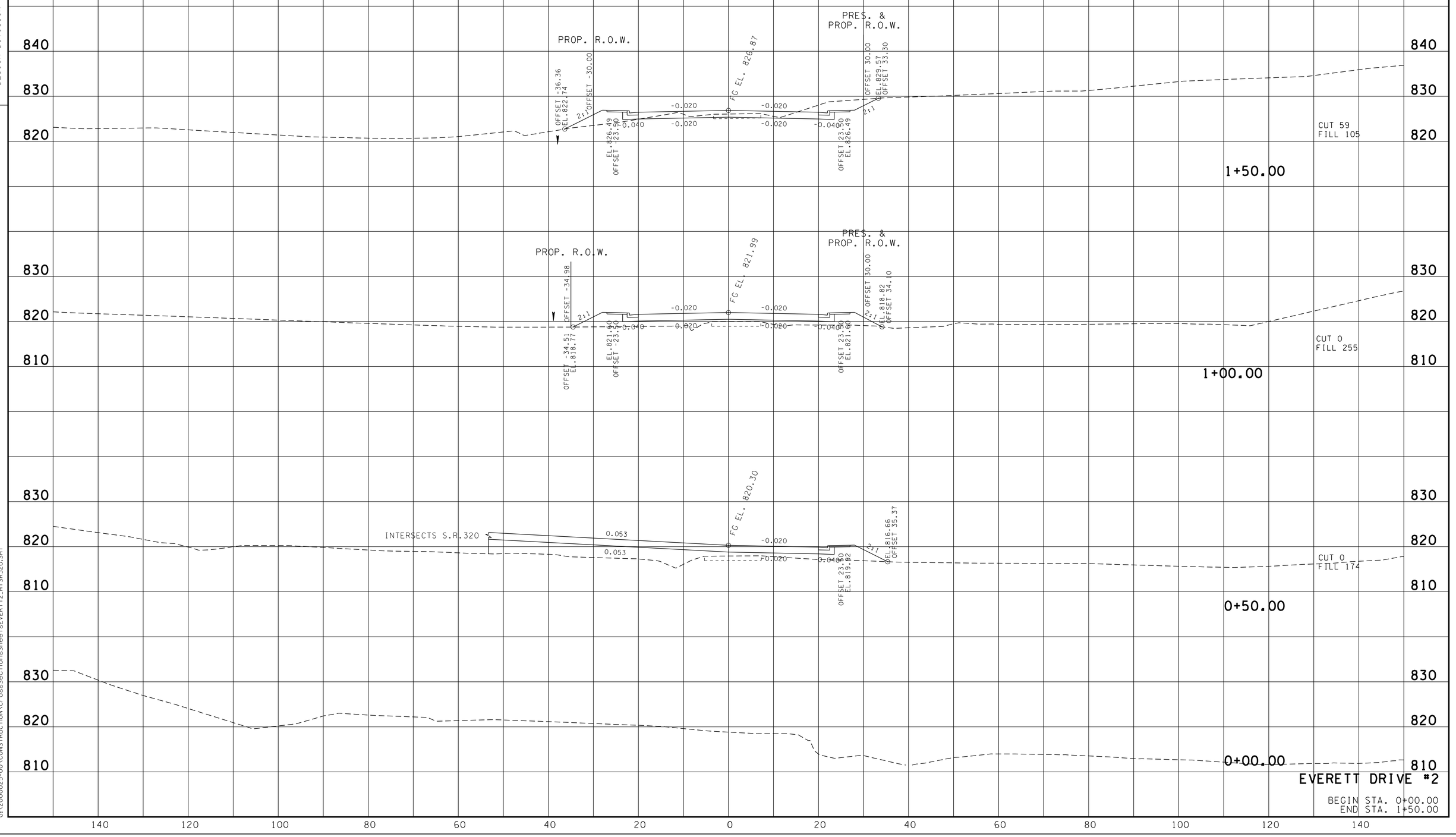
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	134
CONST.	2014	STP-320(4)	136

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.



EVERETT DRIVE #2

BEGIN STA. 0+00.00
END STA. 1+50.00

9/3/2013 4:22:20 PM
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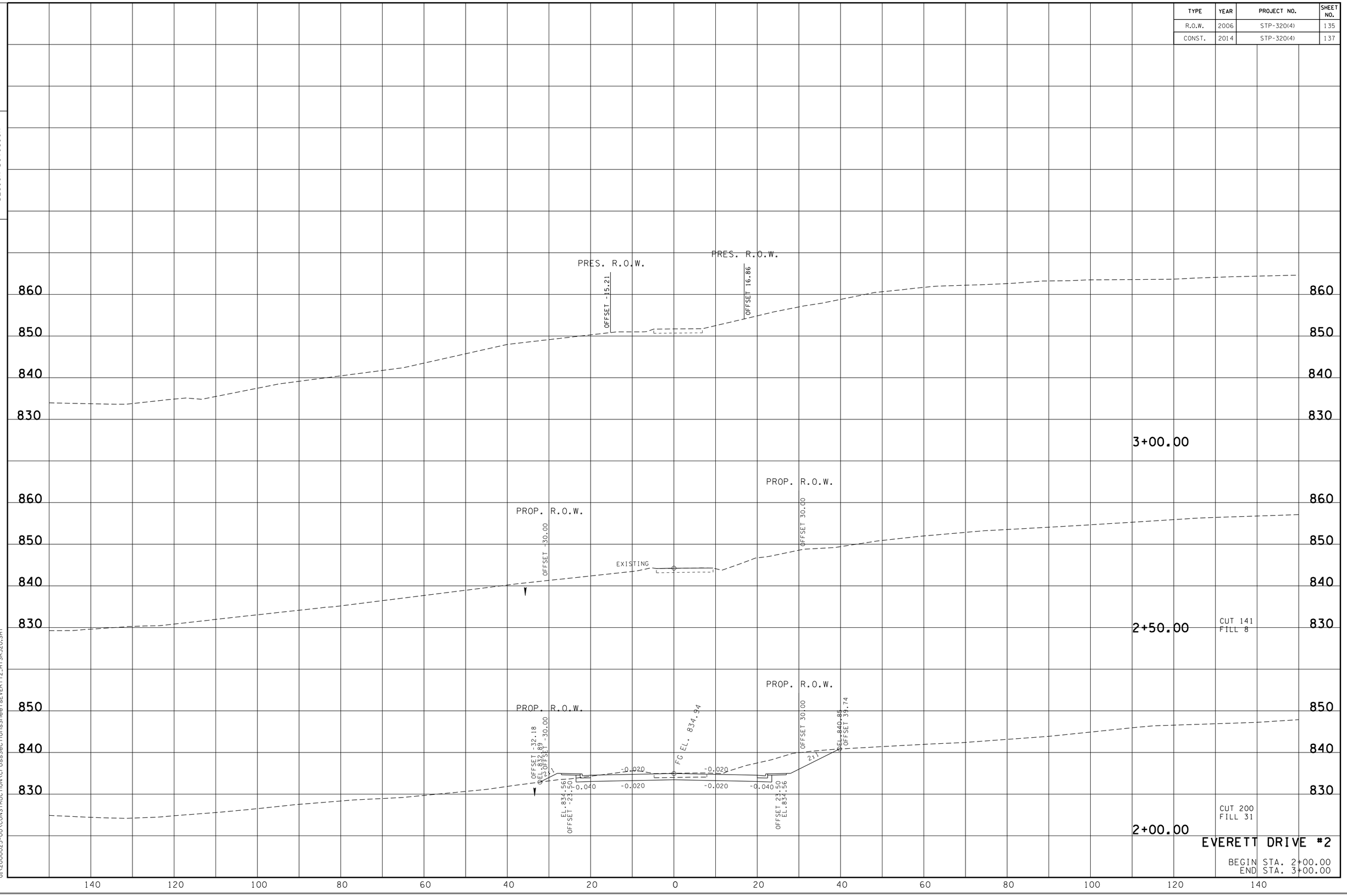
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	135
CONST.	2014	STP-320(4)	137

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.



EVERETT DRIVE #2

BEGIN STA. 2+00.00
END STA. 3+00.00

9/3/2013 4:22:21 PM
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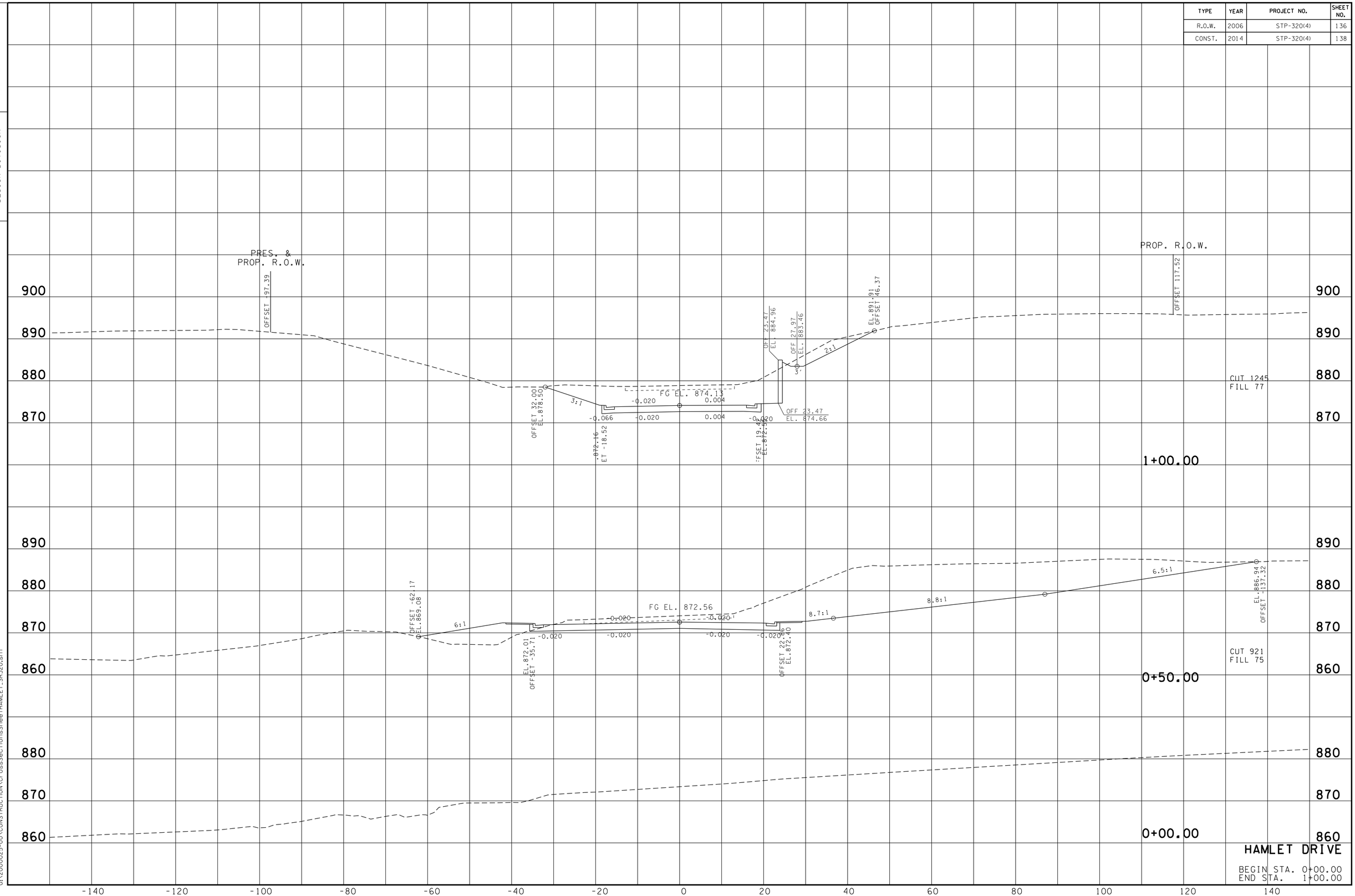
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	136
CONST.	2014	STP-320(4)	138

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.



HAMLET DRIVE

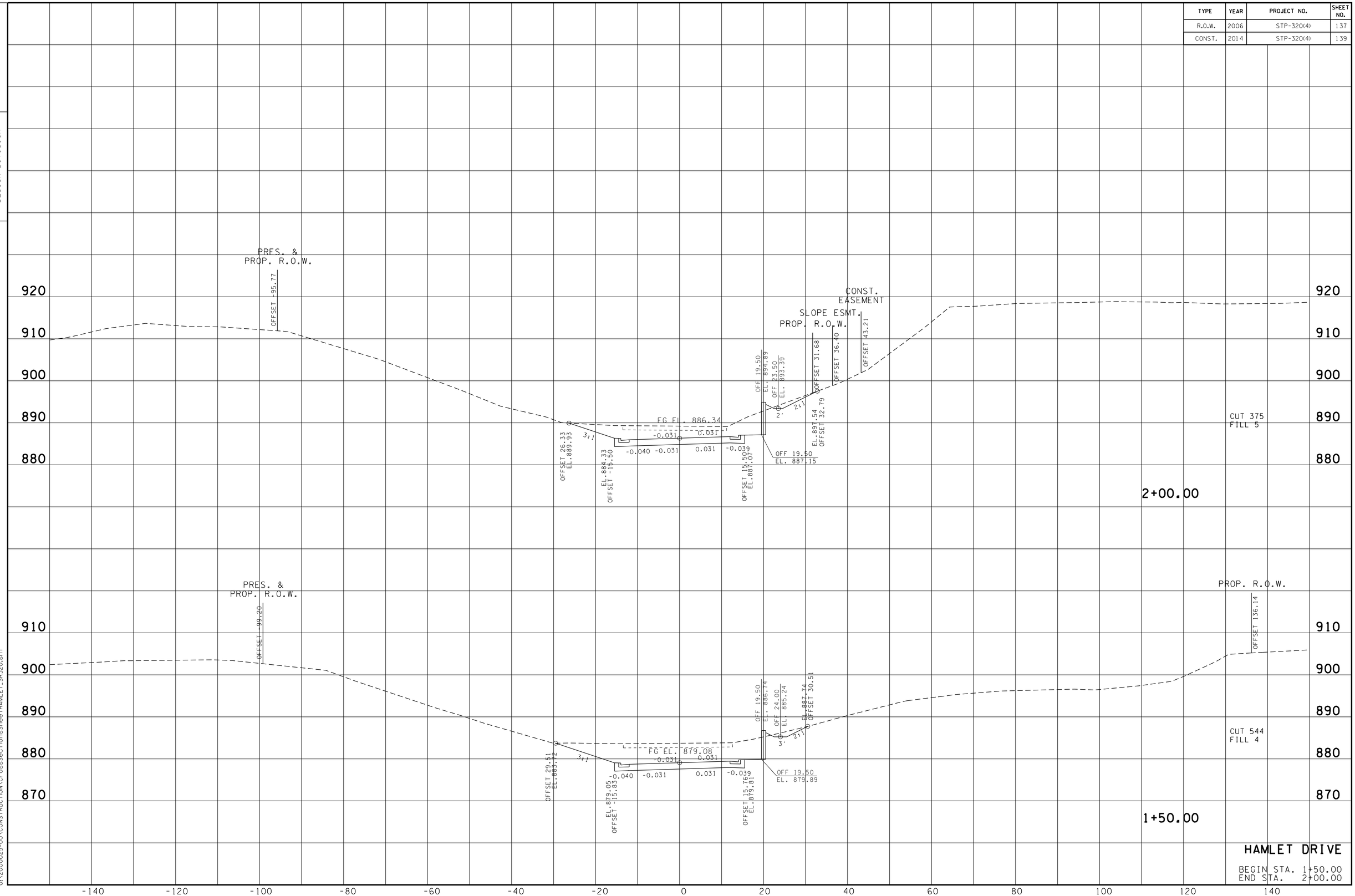
BEGIN STA. 0+00.00
END STA. 1+00.00

9/10/2014 4:09:30 PM
G:\2000025-00\CONSTRUCTION\CrossSectionsSheetHAMLET_SR320.sht

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	137
CONST.	2014	STP-320(4)	139

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.



HAMLET DRIVE

BEGIN STA. 1+50.00
END STA. 2+00.00

9/10/2014 4:09:58 PM
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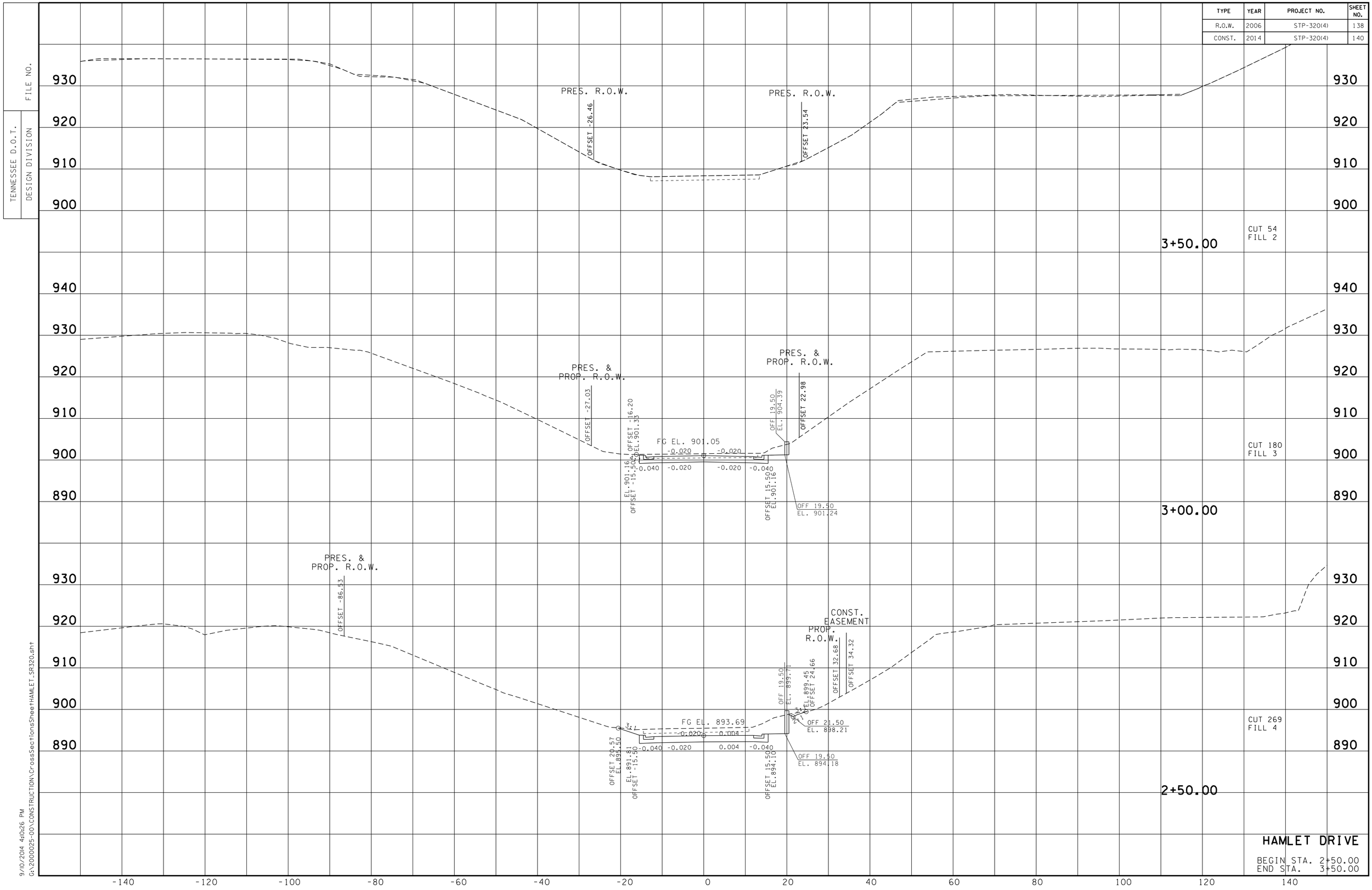
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2006	STP-320(4)	138
CONST.	2014	STP-320(4)	140