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

Index Of Sheets

SEE SHEET 1A

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

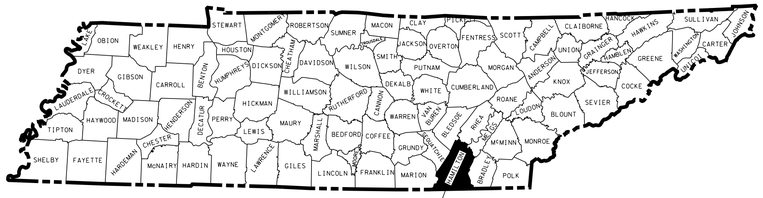
HAMILTON COUNTY

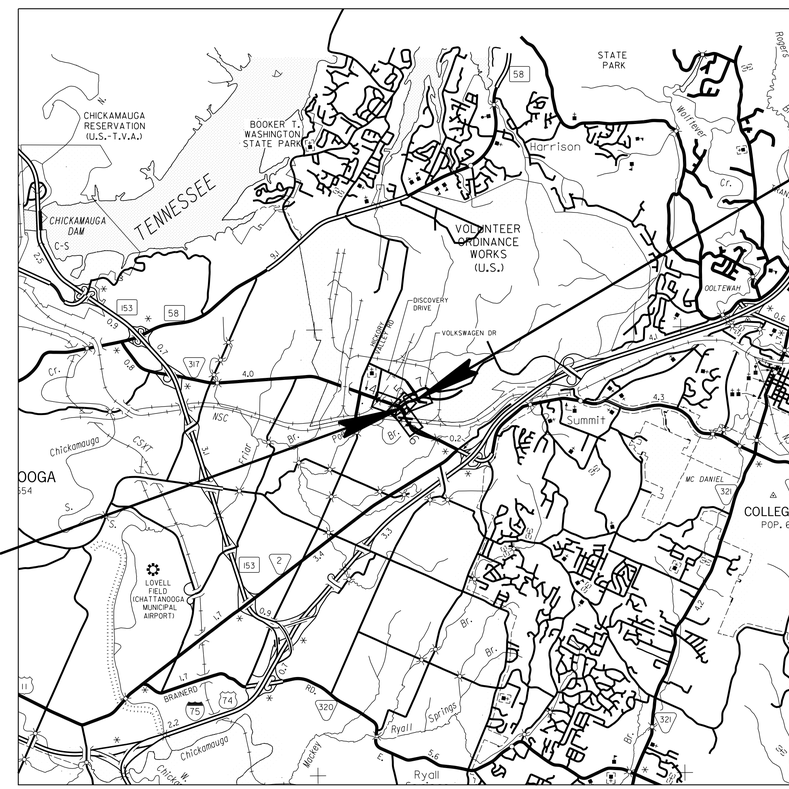
TENN.	YEAR	SHEET NO.
	2014	1
FED. AID PROJ. NO.		
STATE PROJ. NO.	33960-3509-04	

SIA SERVING VOLKSWAGEN GROUP OF AMERICA (EXPANSION)
IN CHATTANOOGA

CONSTRUCTION

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





SCALE: 1"= 5280'

END PROJ. NO. 33960-3509-04 CONST.
STA. 166+00.00
N 2225046.7489
E 269499.5359

BEGIN PROJ. NO. 33960-3509-04 CONST.
STA. 150+07.64
N 2223673.6269
E 268746.2725

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NO EXCLUSIONS

NO EQUATIONS

SEALED BY

S.R. 317 (BONNY OAKS DR.) TRAFFIC DATA	
ADT (2014)	17040
ADT (2034)	23600
DHV (2034)	2937
D	55 - 45
T (ADT)	6 %
T (DHV)	4 %
V	45 MPH

VOLKSWAGEN DR. TRAFFIC DATA	
ADT (2014)	5970
ADT (2034)	13650
DHV (2034)	2471
D	65 - 35
T (ADT)	7 %
T (DHV)	5 %
V	40 MPH

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

DATE:

APPROVED:
JOHN SCHROER, COMMISSIONER

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR DATE

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 MARCH 1, 2006 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS AND IN THE PROPOSAL CONTRACT.

TDOT DESIGN MANAGER 1 ROBERT RODGERS, P.E.
DESIGNED BY VOLKERT, INC.
DESIGNER JEREMY SIMS, P.E. CHECKED BY DAVID A. YATES, P.E.

P.E. NO. 33960-1509-04 (DESIGN)

PIN NO. 117560.00

ROADWAY LENGTH = 0.301 MILE
BRIDGE LENGTH = 0.000 MILE
BOX BRIDGE LENGTH = 0.000 MILES
PROJECT LENGTH = 0.301 MILES

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	1A

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THE LETTERS "I", "O" AND "Q" OMITTED FOR CLARITY.

CITY OF CHATTANOOGA DRAWINGS

TO BE PRINTED WITH PLANS

DWG. NO.	REV.	DESCRIPTION
SD-608.01	8-24-01	CATCH BASIN (STANDARD), FRAME AND GRATE
SD-610.01	3-27-06	CURB INLET – LEFT (PRECAST CONCRETE)
SD-610.02	3-27-06	CURB INLET – RIGHT (PRECAST CONCRETE)
SD-610.03	3-27-06	CURB INLET – CENTER (PRECAST CONCRETE)

STANDARD BRIDGE DRAWINGS

BRIDGE APPURTENANCES ENGLISH (LRFD BOX CULVERTS)

DWG. NO.	REV.	DESCRIPTION
STD-17-1		INDEX OF DRAWINGS
STD-17-2		TERMINOLOGY
STD-17-3		GENERAL NOTES
STD-17-4		DESIGN SECTION LIMITS
STD-17-5		TYPICAL SECTION AND DETAILS
STD-17-6		TYPICAL ELEVATIONS
STD-17-7		CURB, RAIL & EDGE BEAM DETAILS - SKEW NOT LESS THAN 45 DEG
STD-17-10		TYPICAL WINGWALL DETAILS AND NOTES
STD-17-17		BACKFILL AND DRAINAGE DETAILS
STD-17-18		BACKFILL DETAILS
STD-17-26		EXTENSION DETAILS
STD-17-75		BOX BRIDGE, 2 BARRELS AT 10', CLEAR HTS. 7' - 10', 0 - 60' FILL

STANDARD ROADWAY DRAWINGS

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
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-SE-3	10-15-02	RURAL SUPERELEVATION DETAILS
RD01-TS-2B	10-15-02	DESIGN STANDARDS 4 AND 6 LANE COLLECTOR HIGHWAYS WITH FLUSH MEDIANS
RD01-TS-6A	07-31-13	TYPICAL CURB AND GUTTER SECTIONS WITHOUT SHOULDER
RD01-TS-10	06-15-12	DESIGN STANDARDS FOR MULTI-LANE URBAN AND RURAL ROUNDABOUTS

DRAINAGE - CULVERTS AND ENDWALL

DWG. NO	REV.	DESCRIPTION
D-PB-1	01-02-13	STANDARD DETAILS CLASS "B" BEDDING AND CULVERT EXCAVATION
D-PE-1	02-12-76	TYPE "A" CONCRETE ENDWALL 2:1 SLOPE, 36" TO 78"
D-PE-18A	06-14-13	18" CONCRRETE ENDWALL CROSS DRAIN
D-PE-18B		18" CONCRRETE ENDWALL CROSS DRAIN
D-PE-24A	06-14-13	24" CONCRRETE ENDWALL CROSS DRAIN
D-PE-24B		24" CONCRRETE ENDWALL CROSS DRAIN
D-PE-30A	06-14-13	30" CONCRRETE ENDWALL CROSS DRAIN WITH STEEL PIPE GRATE
D-PE-30B		30" CONCRRETE ENDWALL CROSS DRAIN WITH STEEL PIPE GRATE
D-PE-36A	06-14-13	36" CONCRRETE ENDWALL CROSS DRAIN WITH STEEL PIPE GRATE
D-PE-36B		36" CONCRRETE ENDWALL CROSS DRAIN WITH STEEL PIPE GRATE
D-SEW-1A	01-10-13	SIDE DRAIN CONCRETE ENDWALL WITH STEEL PIPE GRATE

DRAINAGE-CATCH BASINS AND MANHOLES

DWG. NO	REV.	DESCRIPTION
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-JBS-4	08-01-12	STANDARD 7' X 7' SQUARE CONCRETE NO. 4 JUNCTION BOX

ROADWAY AND PAVEMENT APPURTENANCES

DWG. NO	REV.	DESCRIPTION
RP-H-3	06-14-13	CURB RAMP AND TRUNCATED DOME SURFACE DETAIL
RP-H-4	06-14-13	PERPENDICULAR CURB RAMP
RP-H-5	06-04-013	PARALLEL CURB RAMP
RP-H-6	06-04-13	MEDIAN CROSSING
RP-H-7	06-14-13	PERPENDICULAR CURB RAMP TYPE 1
RP-I-5	12-18-96	EXAMPLES OF STREET AND ALLEY INTERSECTIONS
RP-J-1	10-26-00	PORTLAND CEMENT CONCRETE PAVEMENT JOINT TYPES AND SPACING
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-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

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DEPARTMENT OF TRANSPORTATION

INDEX AND STANDARD DRAWINGS

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	1B

STANDARD ROADWAY DRAWINGS

DWG. NO	REV.	DESCRIPTION
ROADWAY AND PAVEMENT APPURTENANCES (CONT.)		
RP-NMC-10	07-29-03	STANDARD VERTICAL (NONMOUNTABLE) CONCRETE CURBS AND CONCRETE CURBS AND GUTTERS
RP-NMC-11	02-28-02	STANDARD VERTICAL (NONMOUNTABLE) CONCRETE CURBS AND CONCRETE CURBS AND GUTTERS
RP-R-1	05-27-01	STANDARD RAMPS TO SIDE ROADS
RP-R-2		STANDARD CONSTRUCTION DETAILS FOR ROUNDABOUTS
RP-S-7	06-04-13	DETAILS FOR STANDARD CONCRETE SIDEWALKS
SAFETY APPURTENANCES AND FENCE		
S-BPR-1		BIKE/PEDESTRIAN SAFETY RAIL
S-CZ-1		CLEAR ZONE CRITERIA
S-F-1	05-24-12	HIGH VISIBILITY FENCE
S-GR31-1		W-BEAM GUARDRAIL
S-GRT-2		TYPE 38 GUARDRAIL TERMINAL
S-GRT-2P		EARTH PAD FOR TYPE 38 TERMINAL
S-PL-1		SAFETY PLAN AT ROADSIDE HAZARDS
S-PL-2		SAFETY PLAN AT SIDE ROADS OR PRIVATE DRIVES
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-16	11-01-11	ASPHALT SHOULDER RUMBLE STRIPE INSTALLATION DETAILS FOR NON-ACCESS CONTROLLED ROUTES
T-M-17		PAVEMENT MARKING DETAILS FOR ROUNDABOUTS
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-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-11	06-06-11	DELINEATOR AND MILEPOST DETAILS
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	07-19-13	STANDARD GROUND MOUNTED SIGN USING PERFORATED/KNOCKOUT SQUARE TUBE
T-S-19	07-19-13	STANDARD STEEL SIGN SUPPORTS
T-S-20	11-01-11	SIGN DETAILS
T-SG-3A		ALTERNATE DETECTION DETAILS
T-SG-4		SPAN WIRE AND MESSENGER CABLE DETAILS

DWG. NO.	REV.	DESCRIPTION
T-SG-5	07-29-04	CONTROLLER CABINET DETAILS
T-SG-7	11-01-11	SIGNAL HEAD ASSEMBLIES AND PEDESTRIAN PUSH BUTTON SIGNS
T-SG-7A	11-01-11	TYPICAL SIGNAL HEAD PLACEMENT
T-SG-8	11-01-11	STRAIN POLE DETAILS FOR SPAN MOUNTED SIGNALS
T-SG-9A		MISCELLANEOUS SIGNAL DETAILS
T-SG-10	05-06-13	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 ROAD WORK SIGNING ON HIGHWAYS AND FREEWAYS
T-WZ-40	04-02-12	RIGHT LANE CLOSURES AT NEAR SIDE OF INTERSECTIONS
T-WZ-41	04-02-12	LEFT LANE CLOSURES AT NEAR SIDE OF INTERSECTIONS
T-WZ-42	04-02-12	CENTER LANE CLOSURES AT NEAR SIDE OF INTERSECTIONS
TT-WZ-55		SIDEWALK TRAFFIC CONTROL
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-7	08-01-12	SEDIMENT TRAP WITH CHECK DAM
EC-STR-11	08-01-12	CULVERT PROCTECTION TYPE 1
EC-STR-11A	08-01-12	CULVERT PROCTECTION TYPE 2
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-32	08-01-12	TEMPORARY DIVERSION CULVERTS
EC-STR-33	08-01-12	SUSPENDED PIPE DIVERSON (DOWNSTREAM)
EC-STR-36	08-01-12	TURF REINFORCEMENT MAT FOR CHANNEL INSTALLATION
EC-STR-37	08-01-12	SEDIMENT TUBE
EC-STR-39	08-01-12	CURB INLET PROTECTION TYPE 1 & 2
EC-STR-40		CATCH BASIN FILTER ASSEMBLY FOR CIRCULAR STRUCTURES
EL-W-2	05-27-01	STANDARD GRAVITY-TYPE RETAINING WALLS

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INDEX AND STANDARD DRAWINGS

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	1C

PROJECT COMMITMENTS

COMMITMENT ID	SOURCE DIVISION	DESCRIPTION	STA./LOCATION
1	TENNESSEE DEPARTMENT OF ENVIRONMENT & CONSERVATION (TDEC)	PRIOR TO CONSTRUCTION A SWEEP FOR THE CHICKAMAUGA CRAYFISH (Cambarus (puncticambarus) extraneus) SHALL BE CONDUCTED. THE SWEEP SHALL OCCUR IN THE SAME LOCATIONS AND WITH THE SAME METHODOLOGY AS CONDUCTED ON NOVEMBER 16, 2012. IF ANY SPECIMENS OF CRAYFISH ARE CAPTURED WITHIN THE IMPACT AREA (ESPECIALLY CHICKAMAUGA CRAYFISH). THEN THESE SPECIMENS WILL BE RELOCATED WITHIN POE BRANCH SOUTH (DOWNSTREAM) OF THE PROJECT LIMITS.	STA. 45+27 RT.

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PROJECT COMMITMENTS

3/17/2014
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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	2

ESTIMATED ROADWAY QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
	105-01	CONSTRUCTION STAKES, LINES AND GRADES	LS	1
	201-01	CLEARING AND GRUBBING	LS	1
	202-02.01	REMOVAL OF PIPE (36" ST, 49+00 RT. S.R. 317)	L.F.	78
	202-02.02	REMOVAL OF PIPE (36" ST, 49+50 RT. S.R. 317)	L.F.	28
	202-02.03	REMOVAL OF PIPE (18" RCP, 51+00 RT. S.R. 317)	L.F.	40
	202-03	REMOVAL OF RIGID PAVEMENT, SIDEWALK, ETC.	S.Y.	1835
	202-08.15	REMOVAL OF CURB AND GUTTER (VOLKSWAGEN DRIVE)	L.F.	2805
(1)	203-01	ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED)	C.Y.	6187
(2)	203-02	BORROW EXCAVATION (SOLID ROCK)	C.Y.	122
	203-02.01	BORROW EXCAVATION (GRADED SOLID ROCK)	TON	1514
	203-03	BORROW EXCAVATION (UNCLASSIFIED)	C.Y.	5387
	203-03.10	SELECT GRANULAR MATERIAL	TON	1479
(3)	203-05	UNDERCUTTING	C.Y.	1850
	203-06	WATER	M.G.	56
(2)	203-15.03	COMPACTED CLAY	C.Y.	27
	204-08	FOUNDATION FILL MATERIAL	C.Y.	29
(4)(5)	209-02.05	12" TEMPORARY SLOPE DRAIN	L.F.	25
	209-05	SEDIMENT REMOVAL	C.Y.	228
(4)(5)	209-08.02	TEMPORARY SILT FENCE (WITH BACKING)	L.F.	2380
(4)(5)	209-08.03	TEMPORARY SILT FENCE (WITHOUT BACKING)	L.F.	1200
(4)(5)	209-08.07	ROCK CHECK DAM PER	EACH	47
(4)(5)	209-08.08	ENHANCED ROCK CHECK DAM	EACH	12
(4)(5)	209-09.01	SANDBAGS	BAG	88
(4)(5)	209-09.41	CURB INLET PROTECTION (TYPE 2)	EACH	23
(4)(5)	209-10.20	TEMPORARY SEDIMENT TRAP	C.Y.	54
(4)(5)	209-20.03	POLYETHYLENE SHEETING (6 MIL. MINIMUM)	S.Y.	60
	209-65.01	TEMPORARY STREAM DIVERSION (INLET 10' X 9' BOX CULV.)	LS	1
	303-01	MINERAL AGGREGATE, TYPE A BASE, GRADING D	TON	4767
	303-01.01	GRANULAR BACKFILL (ROADWAY)	TON	429
(6)	303-10.01	MINERAL AGGREGATE (SIZE 57)	TON	50
	306-04.01	PORTLAND CEMENT CONCRETE BASE (PLAIN) 9"	S.Y.	1262
	307-01.01	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING A	TON	174
	307-01.08	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING B-M2	TON	1887
	402-01	BITUMINOUS MATERIAL FOR PRIME COAT (PC)	TON	7
	402-02	AGGREGATE FOR COVER MATERIAL (PC)	TON	28
	403-01	BITUMINOUS MATERIAL FOR TACK COAT (TC)	TON	14
	411-01.10	ACS MIX (PG64-22) GRADING D	TON	1487
	411-12.03	SCORING FOR RUMBLE STRIPE (NON-CONTINUOUS) (8IN WIDTH)	L.M.	1.1
	415-01.02	COLD PLANING BITUMINOUS PAVEMENT	S.Y.	13234
	501-04.01	ROLLER COMPACTED CONCRETE PAVEMENT (10" DEPTH)	C.Y.	1042
	502-04.01	SAWING CONCRETE PAVEMENT (FULL DEPTH)	L.F.	430
	502-08.02	RESEALING JOINTS (SILICONE SEALANT)	L.F.	930
(7)	502-25	SAWING CONCRETE JOINTS	L.F.	500
	604-01.01	CLASS A CONCRETE (ROADWAY)	C.Y.	75
	604-01.02	STEEL BAR REINFORCEMENT (ROADWAY)	LB.	15870
(8)	604-01.04	1-1/2" STEEL PIPE HANDRAIL	L.F.	450
(9)(10)	604-07.01	RETAINING WALL (S.R. 317)	S.F.	2170
(11)	604-12.01	CONCRETE IMPRINTING	S.F.	700
(12)	604-12.03	CONCRETE PIGMENT	LB.	195

ESTIMATED ROADWAY QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
	607-02.02	15" CONCRETE PIPE CULVERT (CLASS III)	L.F.	30
	607-03.30	18" PIPE CULVERT	L.F.	6
	607-05.30	24" PIPE CULVERT	L.F.	14
	607-06.30	30" PIPE CULVERT	L.F.	12
	607-07.30	36" PIPE CULVERT	L.F.	102
	607-11.30	60" PIPE CULVERT	L.F.	22
	607-37.02	18" CORRUGATED METAL PIPE CULVERT	L.F.	492
	611-01.21	REWORK MANHOLE	EACH	1
	611-02.10	JUNCTION BOX, TYPE 1	EACH	1
	611-02.11	JUNCTION BOX, TYPE 2	EACH	1
	611-02.13	JUNCTION BOX, TYPE 4	EACH	2
	611-07.01	CLASS A CONCRETE (PIPE ENDWALLS)	C.Y.	12
	611-07.02	STEEL BAR REINFORCEMENT (PIPE ENDWALLS)	LB.	152
	611-07.31	18 IN ENDWALL (SIDE DRAIN)	EACH	2
	611-07.57	24 IN ENDWALL (CROSS DRAIN) 3:1	EACH	1
	611-07.60	30 IN ENDWALL (CROSS DRAIN) 3:1	EACH	1
	611-07.63	36 IN ENDWALL (CROSS DRAIN) 3:1	EACH	2
	611-09.03	CAPPING EXISTING CATCHBASIN	EACH	9
	621-03.05	36" TEMPORARY DRAINAGE PIPE	L.F.	60
	701-01.01	CONCRETE SIDEWALK (4")	S.F.	6912
	701-01.05	CONCRETE SIDEWALK - 6" (CONC. ISLANDS)	S.F.	1595
	701-02.03	CONCRETE HANDICAP RAMP	S.F.	860
	702-01	CONCRETE CURB	C.Y.	14
	702-03	CONCRETE COMBINED CURB & GUTTER	C.Y.	227
	705-02.02	SINGLE GUARDRAIL (TYPE 2)	L.F.	923
	705-04.05	GUARDRAIL TERMINAL (TYPE-IN-LINE)	EACH	3
	705-04.07	TAN ENERGY ABSORBING TERM (NCHRP 350, TL3)	EACH	5
	705-04.09	EARTH PAD FOR TYPE 38 GR END TREATMENT	EACH	5
	705-08.51	PORTABLE IMPACT ATTENUATOR NCHRP350 TL-3	EACH	4
	707-08.11	HIGH-VISIBILITY CONSTRUCTION FENCE	L.F.	1700
	708-02.01	MARKERS (CONCRETE R.O.W. POSTS)	EACH	1
(13)	709-01.01	RUBBLE STONE RIP-RAP	C.Y.	33
	709-05.05	MACHINED RIP-RAP (CLASS A-3)	TON	300
(14)	709-05.06	MACHINED RIP-RAP (CLASS A-1)	TON	451
	712-01	TRAFFIC CONTROL	LS	1
	712-02.02	INTERCONNECTED PORTABLE BARRIER RAIL	L.F.	2927
	712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	EACH	30
	712-04.50	PORTABLE BARRIER RAIL DELINEATOR	EACH	33
	712-05.01	WARNING LIGHTS (TYPE A)	EACH	8
	712-06	SIGNS (CONSTRUCTION)	S.F.	279
	712-07.03	TEMPORARY BARRICADES (TYPE III)	L.F.	90
	712-08.03	ARROW BOARD (TYPE C)	EACH	1
	713-02.04	DELINEATOR (MILE MARKER) & STEEL POST	EACH	1
	713-02.14	FLEXIBLE DELINEATOR (WHITE)	EACH	8
	713-11.01	"U" SECTION STEEL POSTS	LB.	615
	713-11.02	PERFORATED/KNOCKOUT SQUARE TUBE POST	LB.	537
(15)	713-15	REMOVAL OF SIGNS, POSTS AND FOOTINGS	LS	1
	713-13.02	FLAT SHEET ALUMINUM SIGNS (0.064" THICK)	S.F.	157
	713-13.03	FLAT SHEET ALUMINUM SIGNS (0.100" THICK)	S.F.	106
	713-16.01	CHANGEABLE MESSAGE SIGN UNIT	EACH	4
	713-16.20	SIGNS (R10-10)	EACH	1
	713-16.50	REMOVE AND REPLACE SIGN (NO TRUCKS)	EACH	1
	713-16.51	REMOVE AND REPLACE SIGN (BONNY VALE LANE)	EACH	1
	713-16.52	REMOVE AND REPLACE SIGN (SR 153, HWY 58, I-75 DIRECT.)	EACH	1

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ESTIMATED ROADWAY QUANTITIES

7/3/2014
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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	2A

ESTIMATED ROADWAY QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
(16)	714-01.38	LIGHT POLE RELOCATION	EACH	19
(17)	714-05.05	PULL BOXES (MATCH EXISTING)	EACH	19
	716-01.21	SNWPLWBLE PVMT MRKRS (BI-DIR) (1 COLOR)	EACH	82
	716-01.22	SNWPLWBLE PVMT MRKRS (MONO-DIR) (1 COLOR)	EACH	83
	716-02.03	PLASTIC PAVEMENT MARKING (CROSS-WALK)	L.F.	112
	716-02.04	PLASTIC PAVEMENT MARKING (CHANNELIZATION STRIPING)	S.Y.	4
	716-02.05	PLASTIC PAVEMENT MARKING (STOP LINE)	L.F.	134
(18)	716-02.06	PLASTIC PAVEMENT MARKING (TURN LANE ARROW)	EACH	25
	716-02.08	PLASTIC PAVEMENT MARKING (8" DOTTED LINE)	L.F.	545
	716-03.01	PLASTIC WORD PAVEMENT MARKING (ONLY)	EACH	4
(19)	716-04.01	PLASTIC PAVEMENT MARKING (STRAIGHT-TURN ARROW)	EACH	5
	716-04.02	PLASTIC PAVEMENT MARKING (DOUBLE TURNING ARROW)	EACH	1
	716-04.12	PLASTIC PAVEMENT MARKING (YIELD LINE)	S.F.	44
	716-04.14	PLASTIC PAVEMENT MARKING (LANE REDUCTION ARROW)	EACH	2
(20)	716-05.01	PAINTED PAVEMENT MARKING (4" LINE)	L.M.	2
(20)	716-05.02	PAINTED PAVEMENT MARKING (8" BARRIER LINE)	L.F.	5088
(21)(22)	716-08.01	REMOVAL OF PAVEMENT MARKING (LINE)	L.F.	273
(21)(22)	716-08.03	REMOVAL OF PAVEMENT MARKING (CROSS-WALK)	L.F.	20
(21)(22)	716-08.04	REMOVAL OF PAVEMENT MARKING (CHANNELIZATION)	S.Y.	23
(21)(22)	716-08.07	REMOVAL OF PAVEMENT MARKING (STRAIGHT-TURN ARROW)	EACH	1
(23)	716-13.02	SPRAY THERMO PVMT MRKNG (60 mil) (6 IN LINE)	L.M.	4
	716-13.03	SPRAY THERMO PVMT MRKNG (60 mil) (8 IN BARRIER LINE)	L.F.	250
	716-13.05	SPRAY THERMO PVMT MRKNG (60 mil) (6 IN DOTTED LINE)	L.F.	1845
	717-01	MOBILIZATION	LS	1
(24)	725-03.08	ETHERNET SWITCH (TYPE A)	EACH	1
	730-01.02	REMOVAL OF SIGNAL EQUIPMENT	EACH	1
	730-02.09	SIGNAL HEAD ASSEMBLY (130 WITH BACKPLATE)	EACH	7
	730-02.10	SIGNAL HEAD ASSEMBLY (130 A2)	EACH	3
	730-02.13	SIGNAL HEAD ASSEMBLY (140 A1)	EACH	2
	730-02.17	SIGNAL HEAD ASSEMBLY (150 A2H WITH BACKPLATE)	EACH	1
	730-08.02	SIGNAL CABLE - 5 CONDUCTOR	L.F.	210
	730-08.04	SIGNAL CABLE - 9 CONDUCTOR	L.F.	631
	730-09.01	SPAN WIRE ASSEMBLY (23,397 LBS. MIN. BRK STRENGTH)	L.F.	429
	730-10.01	TETHER WIRE ASSEMBLY - 1/4" DIAMETER	L.F.	429
	730-12.02	CONDUIT 2" DIAMETER (PVC)	L.F.	36
	730-12.08	CONDUIT 2" DIAMETER (RGS)	L.F.	20
(25)	730-13.08	VEHICLE DETECTOR ("FISHEYE" VIDEO DETECTION)	EACH	1
(26)	730-16.02	EIGHT PHASE ACTUATED CONTROLLER	EACH	1
(27)	730-23.01	STEEL STRAIN POLE (SIGNAL SUPPORT)	EACH	4
(28)	730-35.01	RF DATA SYSTEM (UBIQUITI BULLET M2-HP)	EACH	1
(29)	730-35.10	ANTENNA (EXTERNAL WiFi)	EACH	1
(30)	740-06.01	GEOMEMBRANE	S.Y.	636
	740-10.03	GEOTEXTILE (TYPE III) (EROSION CONTROL)	S.Y.	1120
(30)	740-10.04	GEOTEXTILE (TYPE IV) (STABILIZATION)	S.Y.	4323
	740-11.03	TEMPORARY SEDIMENT TUBE 18 IN (EROSION CONTROL)	L.F.	4270
	801-01.07	TEMPORARY SEEDING (WITH MULCH)	UNIT	89
(31)	801-03	WATER (SEEDING & SODDING)	M.G.	107
(32)	803-01	SODDING (NEW SOD)	S.Y.	9794
	920-10.04	CITY OF CHATTANOOGA CURB INLET LEFT	EACH	4
	920-11.04	CITY OF CHATTANOOGA CURB INLET RIGHT	EACH	1
	920-12.04	CITY OF CHATTANOOGA CURB INLET CENTER	EACH	2
	920-13.04	CITY OF CHATTANOOGA CATCH BASIN STANDARD	EACH	2

FOOTNOTES

(1) INCLUDES 36 C.Y. FOR EROSION AND SEDIMENT CONTROL.

(2) TO BE USED FOR SINKHOLE TREATMENT IF REQUIRED AND AS DIRECTED BY THE ENGINEER.

(3) 150 C.Y. TO BE USED FOR SINKHOLE TREATMENT IF REQUIRED AND AS DIRECTED BY THE ENGINEER.

(4) SEE SUBSECTION 209.07 OF THE STANDARD SPECIFICATIONS FOR MAINTENANCE REPLACEMENT.

(5) ALL QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER.

(6) 20 TONS TO BE USED FOR SINKHOLE TREATMENT IF REQUIRED AND AS DIRECTED BY THE ENGINEER.

(7) TO BE USED FOR JOINTS IN THE ROUNDABOUT.

(8) TO BE USED ON TOP OF THE RETAINING WALL.

(9) COST OF FOUNDATION SUPPORT SYSTEM, AS NOTED ON SHEETS 21, 21A, 21B & 21C, INCLUDING ADDITIONAL BORINGS, IF REQUIRED, WILL BE INCLUDED IN THE COST OF THE PROPOSED RETAINING WALL.

(10) PAYMENT FOR THE PROPOSED RETAINING WALL WILL BE BASED ON ACTUAL CONSTRUCTED WALL FACE.

(11) STAMPED THIN LONDON COBBLESTONE.

(12) COLOR GRAY.

(13) TO BE USED FOR SPECIAL V DITCH AT STA. 566+88.00 AMAZON DRIVEWAY EXIT.

(14) INCLUDES 192 TONS FOR CULVERT PROTECTION.

(15) REMOVE SIGN FACE, SUPPORTS AND FOOTINGS ON APPROXIMATELY 24 SIGNS WITHIN THE PROJECT LIMITS OR AS DIRECTED BY THE ENGINEER.

(16) INCLUDES 14 DECORATIVE LIGHTS AND 5 STREET LIGHTS. CONTRACTOR WILL REMOVE, STORE AND RELOCATE LIGHT POLES. COST TO INCLUDE FOUNDATION OF RELOCATED POLE.

(17) PULL BOXES TO BE QUAZITE OR APPROVED EQUAL.

(18) INCLUDES 2 FISH HOOK LEFT TURN ARROWS.

(19) INCLUDES 2 FISH HOOK STRAIGHT-RIGHT TURN ARROWS.

(20) FOR TRAFFIC CONTROL.

(21) THE CONTRACTOR MAY REMOVE EXISTING PAVEMENT MARKINGS BY THE METHOD OF HIS CHOICE PROVIDED NO DAMAGE IS DONE TO THE ROADWAY SURFACE.

(22) FOR REMOVAL OF PAVEMENT MARKINGS IN THE ROUNDABOUT AT VOLKSWAGEN DRIVE AND AMAZON ENTRANCE.

(23) INCLUDES 2.2 MILES OF YELLOW AND 1.8 MILES OF WHITE.

(24) KYLAND SICOM3170 7 + 3G PORT GIGABIT MANAGED INDUSTRIAL ETHERNET SWITCH OR APPROVED EQUAL.

(25) PRICE BID FOR VIDEO DETECTION SYSTEM SHALL INCLUDE CAMERAS, EXTENSION ARMS, CABINET EQUIPMENT HARDWARE OR SOFTWARE, CAMERA MOUNTING ASSEMBLIES, CABLING, LABOR AND INCIDENTALS NECESSARY TO PROVIDE A COMPLETE AND OPERABLE SYSTEM. PRICE BID INCLUDES 1 FISH-EYE CAMERA FOR PRESENCE DETECTION, 2 TRADITIONAL CAMERAS FOR ADVANCE DETECTION AND APPROXIMATELY 25O FT. OF CAT5e CABLE. PRICE BID INCLUDES MOUNTING HARDWARE, MOUNTING ANY CABINET HARDWARE OR SOFTWARE NECESSARY TO RENDER A COMPLETE AND OPERABLE SYSTEM.

(26) PRICE BID INCLUDES SIEMENS M52 OR APPROVED EQUAL CONTROLLER WITH 8-PHASE, 16 LOAD SWITCH, BASE MOUNT CABINET.

(27) FOUNDATION DEPTH/MAXIMUM MOMENT- POLE C: 23 FT., POLE D: 19 FT.

(28) UBIQUITI BULLET M2-HP RADIO, US VERSION, WITH UBIQUITI POE-24, 24V POE ADAPTER W/ US POWER CORD OR APPROVED EQUAL.

(29) ANTENNA PLUS APWIFI OR APPROVED EQUAL.

(30) 80 S.Y. TO BE USED FOR SINKHOLE TREATMENT IF REQUIRED AND AS DIRECTED BY THE ENGINEER.

(31) INCLUDES 9 M.G. FOR EROSION AND SEDIMENT CONTROL.

(32) INCLUDES 850 S.Y. FOR SPECIAL DITCHES.

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ESTIMATED ROADWAY QUANTITIES

5/5/2014
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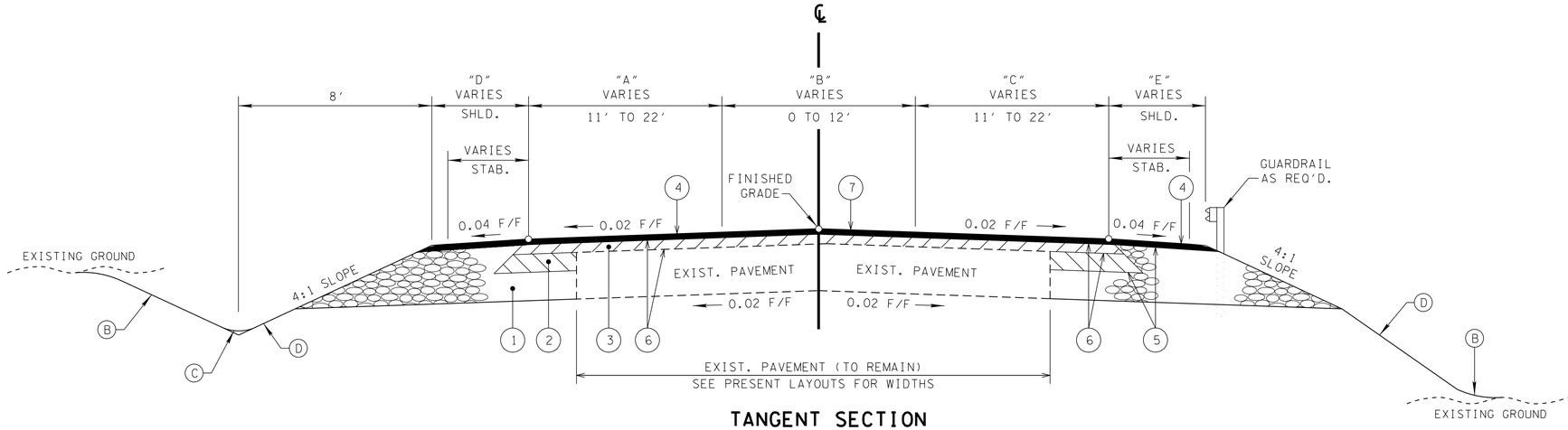
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	2
CONST.	2014	33960-3509-04	2B



TANGENT SECTION

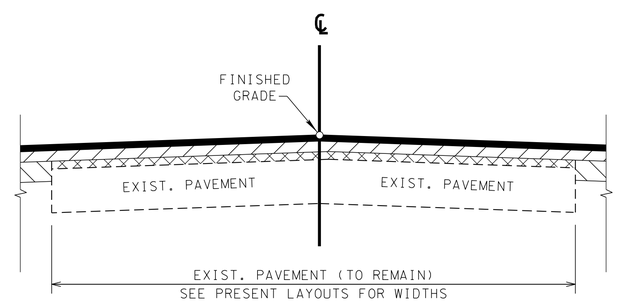
(BASED ON STD. DWG. RD01-TS-2B)

S.R. 317 (BONNY OAKS DR.)

STA. 33+00.00 TO STA. 43+33.50
STA. 53+87.89 TO STA. 57+58.49

TABLE OF DIMENSIONS S.R. 317 (BONNY OAKS DR.)					
DIMENSION	WIDTH (FT)	STATION	WIDTH (FT)	STATION	REMARKS
"A"	11.00	33+00.00	22.00	36+25.00	TRANSITION
"A"	22.00	36+25.00	22.00	43+33.50	
"A"	11.00	53+87.89	11.00	57+78.49	
"B"	0	33+00.00	0	38+40.00	
"B"	0	38+40.00	10.96	43+33.50	TRANSITION
"B"	11.38	53+87.89	0	56+54.00	TRANSITION
"B"	0	56+54.00	0	57+58.49	
"C"	11.00	33+00.00	11.00	38+40.00	
"C"	11.00	38+40.00	22.00	41+00.00	TRANSITION
"C"	22.00	41+00.00	22.00	43+33.50	
"C"	22.00	53+87.89	22.00	57+58.49	
"D"	✱8.00	33+00.00	✱8.00	43+33.50	
"D"	✱5.17	53+87.89	2.00	56+54.00	SHLD. TRANSITION
"D"	2.00	56+54.00	2.00	57+50.00	
"D"	2.00	57+50.00	2.20	57+58.49	SHLD. TRANSITION
"E"	✱8.00	33+00.00	✱8.00	43+33.50	
"E"	✱5.17	53+87.89	2.00	56+54.00	SHLD. TRANSITION
"E"	2.00	56+54.00	2.00	57+58.49	

✱ STABILIZED SHLD. IS 2′ LESS FOR WIDTHS GREATER THAN 4′

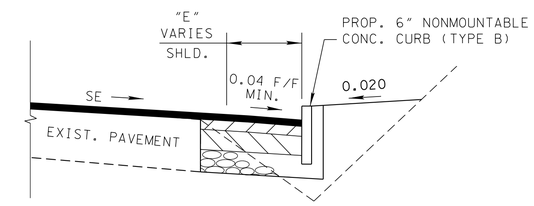


1 TYPICAL SECTION (WITH COLD PLANING)

S.R. 317 (BONNY OAKS DR.)

STA. 33+00.00 (LT & RT) TO STA. 35+50.00 (LT & RT)
STA. 38+50.00 (LT & RT) TO STA. 42+50.00 (LT & RT)
STA. 42+50.00 (LT) TO STA. 45+50.00 (LT)
STA. 48+00.00 (LT) TO STA. 49+50.00 (LT)
STA. 51+00.00 (LT) TO STA. 55+00.00 (LT)
STA. 55+00.00 (LT & RT) TO STA. 61+80.00 (LT & RT)

1 SEE SHEET 2C FOR ADDITIONAL DETAILS.



TYPICAL SECTION (WITH CURB)

S.R. 317 (BONNY OAKS DR.)

STA. 52+00.00 (RT) TO STA. 56+00.00 (RT)

UNOFFICIAL SET
NOT FOR BIDDING

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✱✱ THICKNESS MAY BE ADJUSTED TO ACHIEVE PROPOSED GRADE OVER EXISTING PAVEMENT.

PROPOSED PAVING SCHEDULE

1. MINERAL AGGREGATE BASE (10") ROADWAY & FULL DEPTH UNDER SHOULDERS
   303-01 MINERAL AGGREGATE, TYPE A BASE, GRADING D (TON)
2. BITUMINOUS PLANT MIX BASE (HOT MIX) (3") (APPROX. 345 LB/SY)
   307-01.01 ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING A (TON)
3. ✱✱ BITUMINOUS PLANT MIX BASE (HOT MIX) (2" MIN.) (APPROX. 226 LB/SY)
   307-01.08 ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING B-M2 (TON)
4. ASPHALTIC CONCRETE SURFACE (HOT MIX) (1.25") (APPROX. 132.50 LB/SY)
   411-01.10 ASPHALT CEMENT (PG64-22) (ACS) GRADING D (TON)
5. PRIME COAT
   402-01 BITUMINOUS MATERIAL FOR PRIME COAT (PC) (RATE 0.35 GAL/SY) (TON)
   402-02 AGGREGATE FOR COVER MATERIAL (PC) (RATE 12 LB/SY) (TON)
6. TACK COAT (RATE 0.07 GAL/SY GENERAL USE, 0.10 GAL/SY FOR COLD PLANING)
   403-01 BITUMINOUS MATERIAL FOR TACK COAT (TC) (TON)
7. COLD PLANING BITUMINOUS PAVEMENT (APPROX. 2")
   415-01.02 COLD PLANING BITUMINOUS PAVEMENT (SY)

ROADWAY SLOPE STABILIZATION NOTES
ITEM NO. 803-01, (NEW SOD) SHALL BE USED ON ALL SLOPES.

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

(B) SEE STANDARD DRAWING RD-S-11 FOR FILL AND CUT SLOPE TABLES, ROUNDING ON TOP OF CUT SLOPES AND TOE OF FILL SLOPES AND SPECIAL ROCK CUT.

(C) SEE STANDARD DRAWING RD-S-11A FOR ROUNDING OF ROADSIDE DITCH SLOPES.

(D) SEE STANDARD DRAWING RD-S-11 (CASE II) FOR DESIRABLE SLOPES & NOTE REGARDING GEOLOGICAL RECOMMENDATIONS.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

3/17/2014
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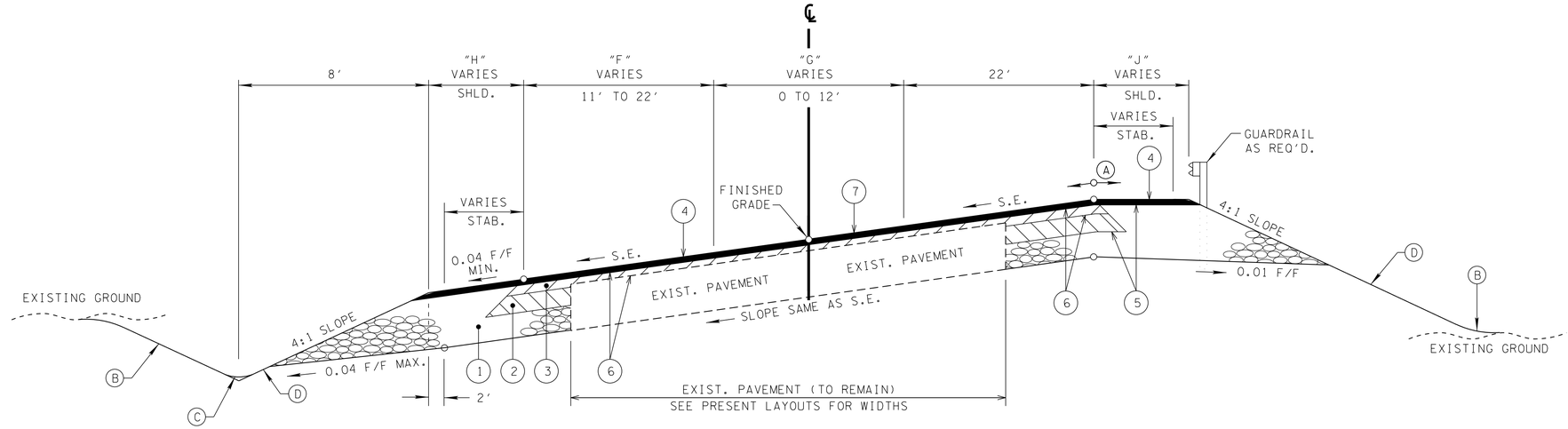
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	2A
CONST.	2014	33960-3509-04	2C



SUPERELEVATED SECTION

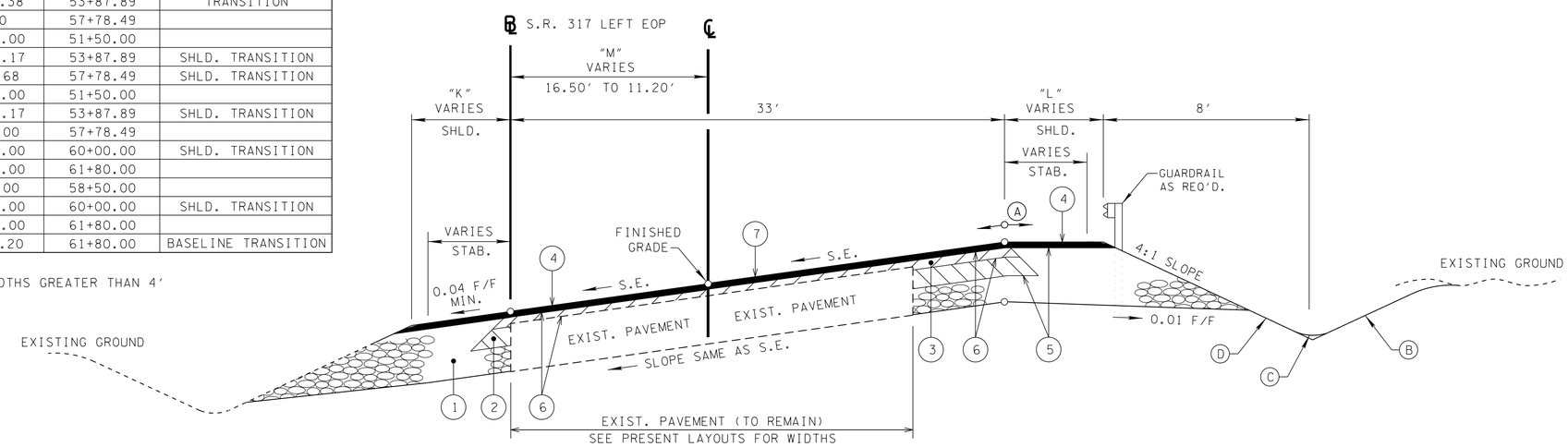
(BASED ON STD. DWG. RD01-TS-2B)

S.R. 317 (BONNY OAKS DR.)

STA. 43+33.50 TO STA. 53+87.89
STA. 57+58.49 TO STA. 57+78.49

TABLE OF DIMENSIONS S.R. 317 (BONNY OAKS DR.)					
DIMENSION	WIDTH (FT)	STATION	WIDTH (FT)	STATION	REMARKS
"F"	22.00	43+33.50	22.00	51+50.00	
"F"	22.00	51+50.00	11.00	53+60.00	TRANSITION
"F"	11.00	53+60.00	11.00	53+87.89	
"F"	11.00	57+58.49	11.00	57+78.49	
"G"	10.96	43+33.50	12.00	43+80.78	TRANSITION
"G"	12.00	43+80.78	12.00	53+60.00	
"G"	12.00	53+60.00	11.38	53+87.89	TRANSITION
"G"	0	57+58.49	0	57+78.49	
"H"	✳8.00	43+33.50	✳8.00	51+50.00	
"H"	✳8.00	51+50.00	✳5.17	53+87.89	SHLD. TRANSITION
"H"	2.20	57+58.49	2.68	57+78.49	SHLD. TRANSITION
"J"	✳8.00	43+33.50	✳8.00	51+50.00	
"J"	✳8.00	51+50.00	✳5.17	53+87.89	SHLD. TRANSITION
"J"	2.00	57+58.49	2.00	57+78.49	
"K"	2.68	57+78.49	✳8.00	60+00.00	SHLD. TRANSITION
"K"	✳8.00	60+00.00	✳8.00	61+80.00	
"L"	2.00	57+78.49	2.00	58+50.00	
"L"	2.00	58+50.00	✳8.00	60+00.00	SHLD. TRANSITION
"L"	✳8.00	60+00.00	✳8.00	61+80.00	
"M"	16.50	57+78.49	11.20	61+80.00	BASELINE TRANSITION

✳ STABILIZED SHLD. IS 2′ LESS FOR WIDTHS GREATER THAN 4′



SUPERELEVATED SECTION

(BASED ON STD. DWG. RD01-TS-2B)

S.R. 317 (BONNY OAKS DR.)

STA. 57+78.49 TO STA. 61+80.00

UNOFFICIAL SET

NOT FOR BIDDING

SEALED BY

ROADWAY SLOPE STABILIZATION NOTES
ITEM NO. 803-01, (NEW SOD) SHALL BE USED ON ALL SLOPES.

✳✳ THICKNESS MAY BE ADJUSTED TO ACHIEVE PROPOSED GRADE OVER EXISTING PAVEMENT.

PROPOSED PAVING SCHEDULE

(1) MINERAL AGGREGATE BASE (10") ROADWAY & FULL DEPTH UNDER SHOULDERS 303-01 MINERAL AGGREGATE, TYPE A BASE, GRADING D (TON)	(5) PRIME COAT 402-01 BITUMINOUS MATERIAL FOR PRIME COAT (PC) (RATE 0.35 GAL/SY) (TON) 402-02 AGGREGATE FOR COVER MATERIAL (PC) (RATE 12 LB/SY) (TON)
(2) BITUMINOUS PLANT MIX BASE (HOT MIX) (3") (APPROX. 345 LB/SY) 307-01.01 ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING A (TON)	(6) TACK COAT (RATE 0.07 GAL/SY GENERAL USE, 0.10 GAL/SY FOR COLD PLANING) 403-01 BITUMINOUS MATERIAL FOR TACK COAT (TC) (TON)
✳✳(3) BITUMINOUS PLANT MIX BASE (HOT MIX) (2" MIN.) (APPROX. 226 LB/SY) 307-01.08 ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING B-M2 (TON)	(7) COLD PLANING BITUMINOUS PAVEMENT (APPROX. 2") 415-01.02 COLD PLANING BITUMINOUS PAVEMENT (SY)
(4) ASPHALTIC CONCRETE SURFACE (HOT MIX) (1.25") (APPROX. 132.50 LB/SY) 411-01.10 ASPHALT CEMENT (PG64-22) (ACS) GRADING D (TON)	

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

(B) SEE STANDARD DRAWING RD-S-11 FOR FILL AND CUT SLOPE TABLES, ROUNDING ON TOP OF CUT SLOPES AND TOE OF FILL SLOPES AND SPECIAL ROCK CUT.

(C) SEE STANDARD DRAWING RD-S-11A FOR ROUNDING OF ROADSIDE DITCH SLOPES.

(D) SEE STANDARD DRAWING RD-S-11 (CASE II) FOR DESIRABLE SLOPES & NOTE REGARDING GEOLOGICAL RECOMMENDATIONS.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

3/17/2014
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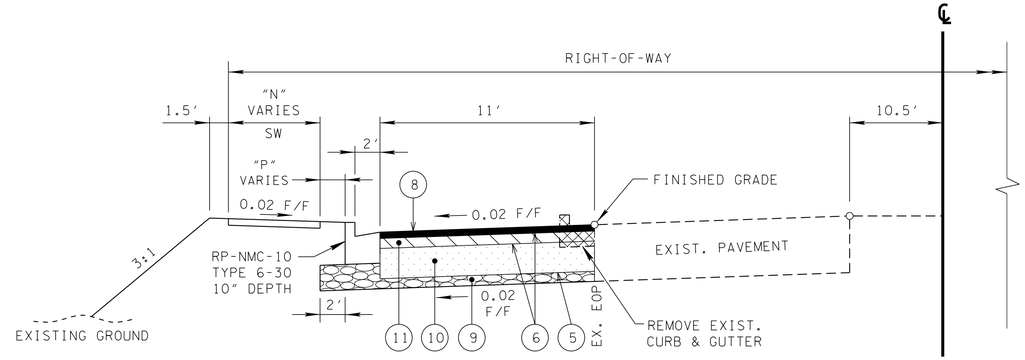
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	2B
CONST.	2014	33960-3509-04	2D



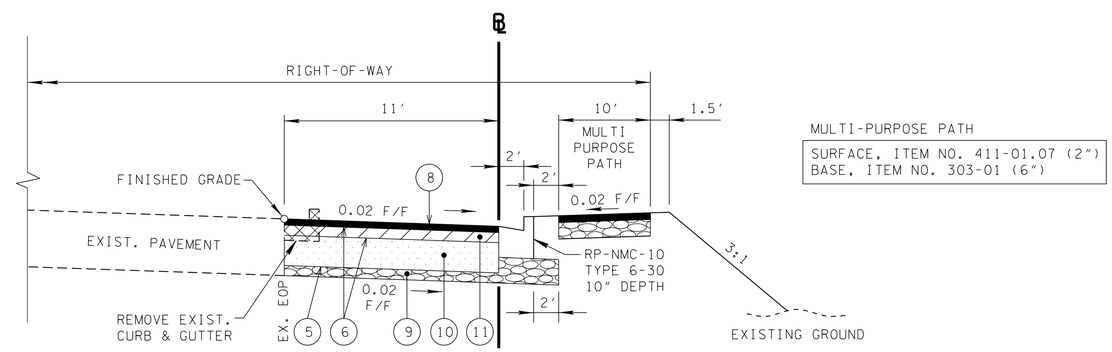
TANGENT SECTION

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

VOLKSWAGEN DRIVE

STA. 150+39.42 TO STA. 158+20.00

TABLE OF DIMENSIONS VOLKSWAGEN DRIVE					
DIMENSION	WIDTH (FT)	STATION	WIDTH (FT)	STATION	REMARKS
"N"	10.00	150+39.42	10.00	153+47.21	
"N"	5.00	153+47.21	5.00	158+20.00	
"P"	10.50	150+39.42	10.50	153+47.21	
"P"	3.50	153+47.21	3.50	158+20.00	



TANGENT SECTION

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

AMAZON DRIVEWAY ENTRANCE (VOLKSWAGEN DRIVE)

STA. 459+02.65 TO STA. 462+05.00

UNOFFICIAL SET

NOT FOR BIDDING

SEALED BY

PROPOSED PAVING SCHEDULE

(5) PRIME COAT 402-01 BITUMINOUS MATERIAL FOR PRIME COAT (PC) (RATE 0.35 GAL/SY) (TON) 402-02 AGGREGATE FOR COVER MATERIAL (PC) (RATE 12 LB/SY) (TON)	(9) MINERAL AGGREGATE BASE (3") ROADWAY & FULL DEPTH UNDER SHOULDERS 303-01 MINERAL AGGREGATE, TYPE A BASE, GRADING D (TON)
(6) TACK COAT (RATE 0.07 GAL/SY GENERAL USE, 0.10 GAL/SY FOR COLD PLANING) 403-01 BITUMINOUS MATERIAL FOR TACK COAT (TC) (TON)	(10) PORTLAND CEMENT BASE (9") 306-04.01 PORTLAND CEMENT CONCRETE BASE (PLAIN) (SY)
(8) ASPHALTIC CONCRETE SURFACE (HOT MIX) (1.5") (APPROX. 159.00 LB/SY) 411-01.10 ASPHALT CEMENT (PG64-22) (ACS) GRADING D (TON)	(11) ASPHALT CONCRETE MIX (3") (APPROX. 339 LB/SY) 307-01.08 ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING B-52 (TON)

ROADWAY SLOPE STABILIZATION NOTES
ITEM NO. 803-01, (NEW SOD) SHALL BE USED ON ALL SLOPES.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

3/17/2014
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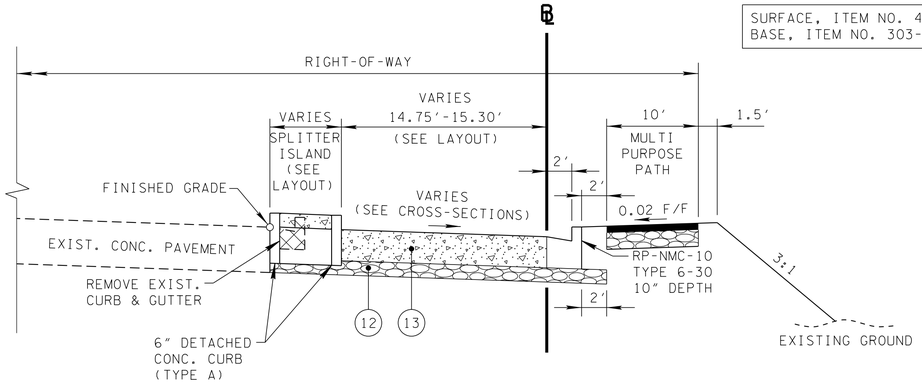
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

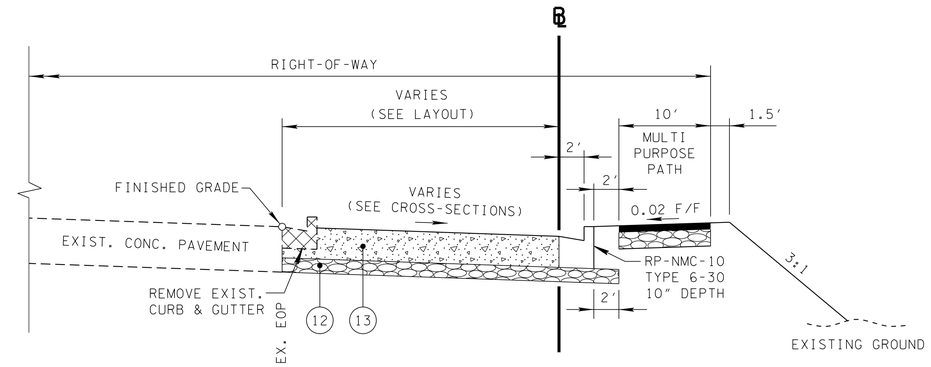
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	2C
CONST.	2014	33960-3509-04	2E

MULTI-PURPOSE PATH
SURFACE, ITEM NO. 411-01.10 (2")
BASE, ITEM NO. 303-01 (6")



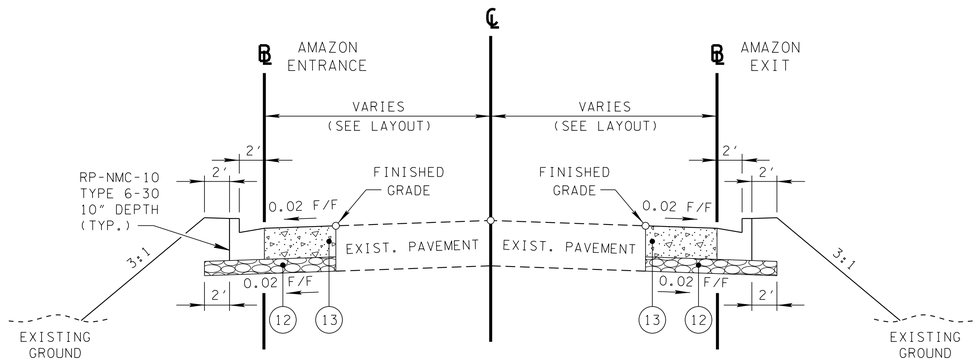
ROUNDABOUT SECTION

(BASED ON STD. DWG. RD01-TS-6A)
AMAZON DRIVEWAY ENTRANCE (VOLKSWAGEN DRIVE)
STA. 462+51.00 TO STA. 464+04.54



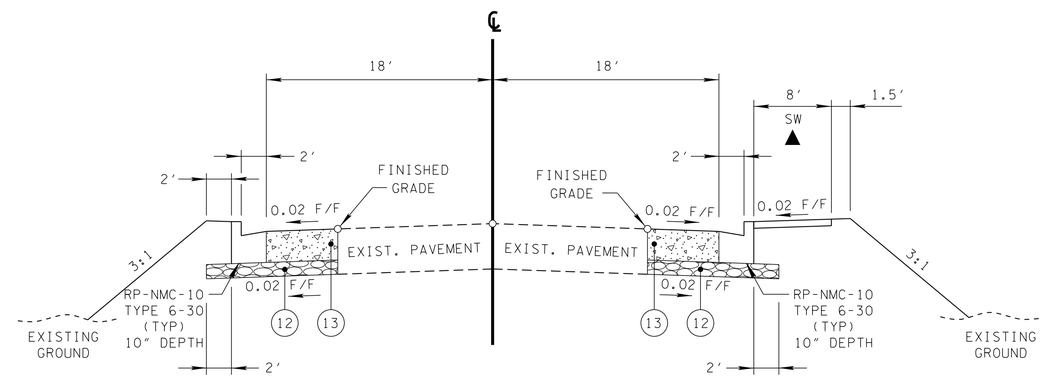
ROUNDABOUT SECTION

(BASED ON STD. DWG. RD01-TS-6A)
AMAZON DRIVEWAY ENTRANCE (VOLKSWAGEN DRIVE)
STA. 462+05.00 TO STA. 462+51.00
STA. 464+04.54 TO STA. 464+28.28
AMAZON DRIVEWAY EXIT (VOLKSWAGEN DRIVE)
STA. 568+68.78 TO STA. 570+47.10



TANGENT SECTION

(BASED ON STD. DWG. RD01-TS-6A)
AMAZON ENTRANCE STA. 464+28.28 TO STA. 466+74.88
AMAZON EXIT STA. 566+74.88 TO STA. 568+68.78



▲ (SIDEWALK STA. 769+27.79 TO STA. 770+76.44)

TANGENT SECTION

(BASED ON STD. DWG. RD01-TS-6A)
AMAZON DRIVEWAY
STA. 766+74.88 TO STA. 771+03.76

PROPOSED PAVING SCHEDULE

12	MINERAL AGGREGATE BASE (4.5") 303-01 MINERAL AGGREGATE, TYPE A BASE, GRADING D (TON)
13	CONCRETE PAVEMENT (10") 501-04.01 ROLLER COMPACTED CONCRETE PAVEMENT (CY)

ROADWAY SLOPE STABILIZATION NOTES
ITEM NO. 803-01, (NEW SOD) SHALL BE USED ON ALL SLOPES.

UNOFFICIAL SET
NOT FOR BIDDING

SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

3/17/2014
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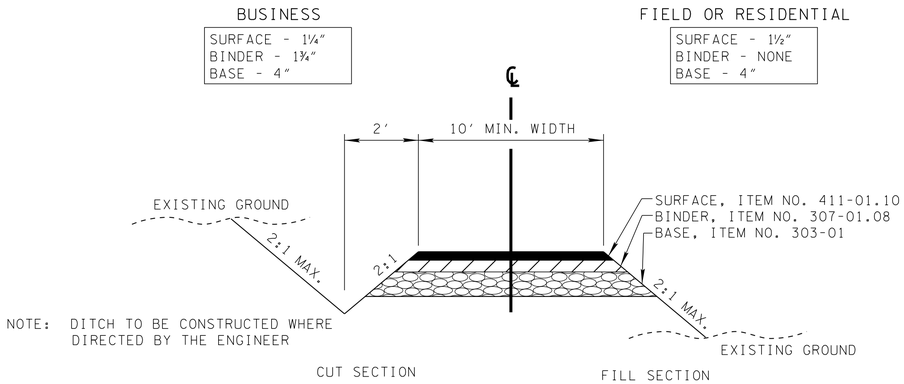
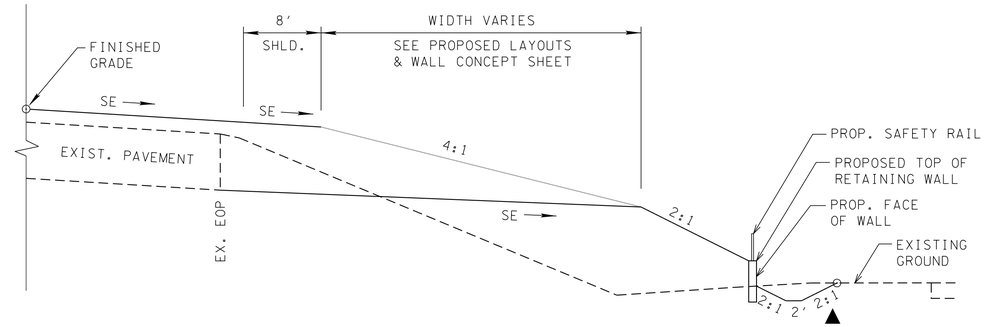
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	2D
CONST.	2014	33960-3509-04	2F



TYPICAL SECTION

PRIVATE DRIVE TO BUSINESS, FIELD, OR RESIDENTIAL PROPERTY

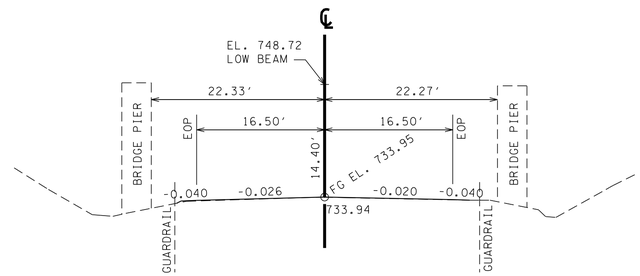


▲ (DITCH STA. 45+35.00 TO STA. 48+50.00)

GRAVITY RETAINING WALL TYPICAL SECTION

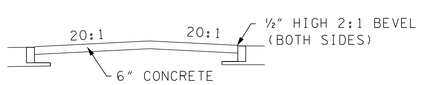
S.R. 317 (BONNY OAKS DR.)
STA. 43+25.00 TO STA. 47+75.00

FOR REFERENCE ONLY
SEE OTHER TYPICALS FOR PAVEMENT SCHEDULE

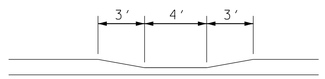


CROSS SECTION OF S.R. 311 (BONNY OAKS DR.) AT NORFOLK SOUTHERN RAILROAD

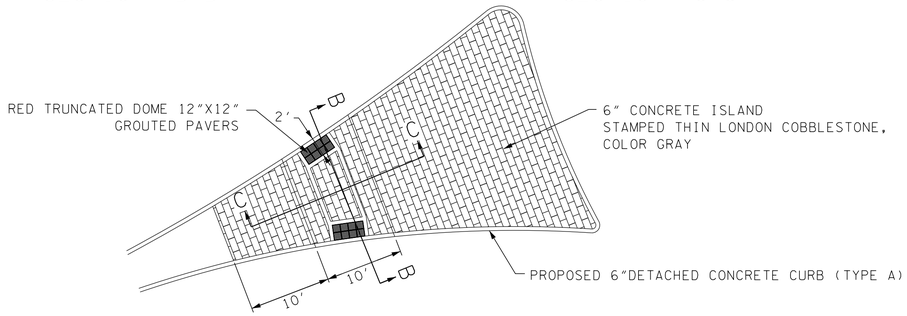
STA. 56+90.52



SECTION "B-B"

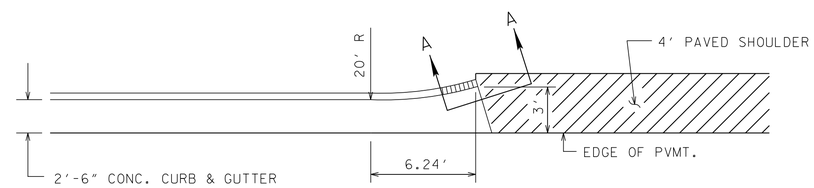


SECTION "C-C"



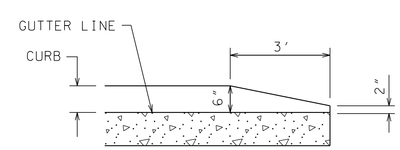
STAMPED CONCRETE ISLAND DETAIL

NTS



DETAIL OF CONC. CURB & GUTTER END FLARE AND TRANSITION

CURB & GUTTER END FLARE AND TRANSITION WILL BE PAID FOR AT THE PRICE BID FOR CONCRETE COMBINED CURB & GUTTER (ITEM NO. 702-03)
NTS



SECTION A-A

NTS

ROADWAY SLOPE STABILIZATION NOTES
ITEM NO. 803-01, (NEW SOD) SHALL BE USED ON ALL SLOPES.

UNOFFICIAL SET

NOT FOR BIDDING

SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS & DETAILS

3/17/2014
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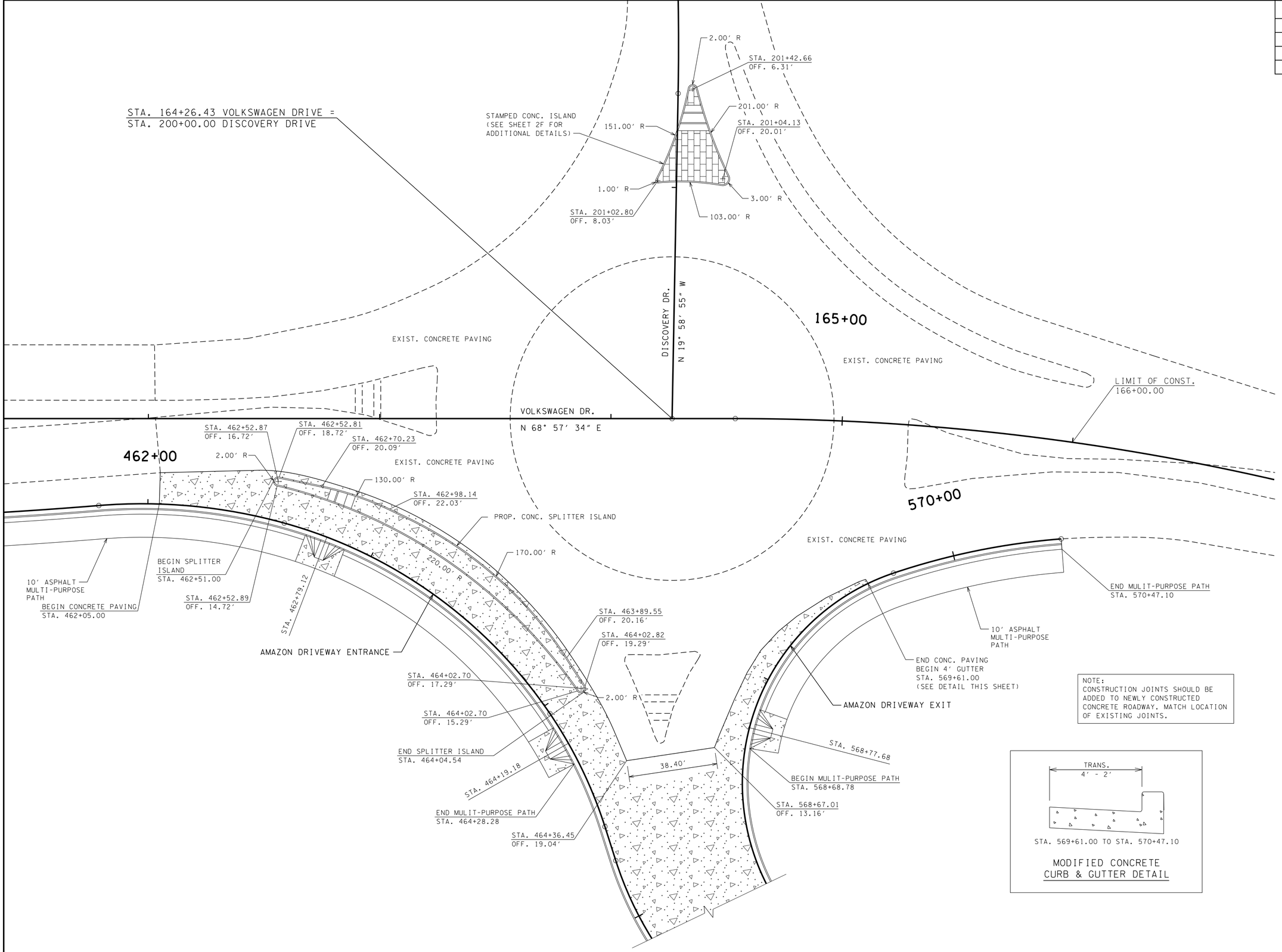
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	2G



NOTE:
CONSTRUCTION JOINTS SHOULD BE ADDED TO NEWLY CONSTRUCTED CONCRETE ROADWAY. MATCH LOCATION OF EXISTING JOINTS.

STA. 569+61.00 TO STA. 570+47.10

MODIFIED CONCRETE
CURB & GUTTER DETAIL

UNOFFICIAL SET

NOT FOR BIDDING

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CONCRETE PAVING & ISLAND LAYOUT

3/17/2014
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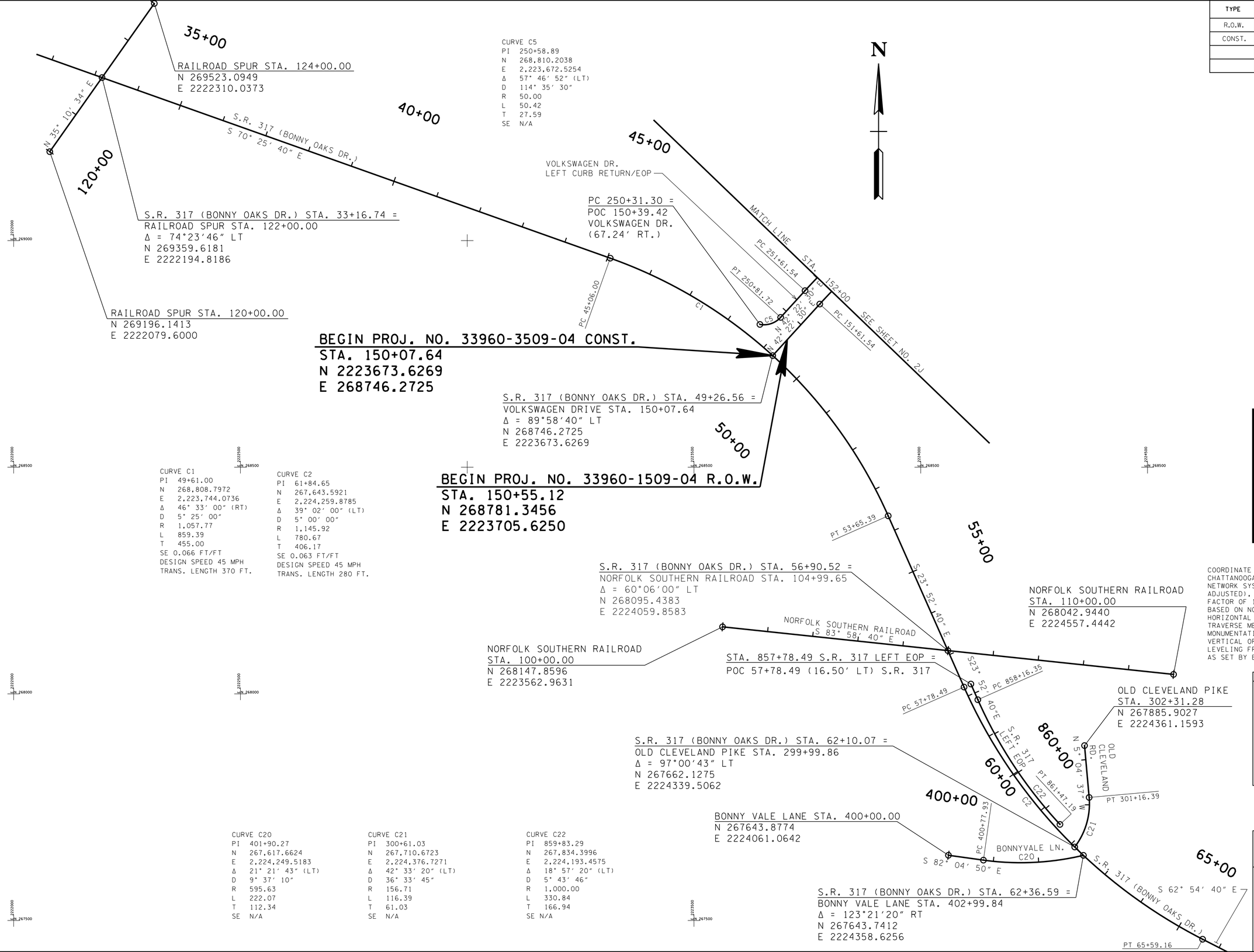
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	2F
CONST.	2014	33960-3509-04	2H



COORDINATE VALUES ARE BASED ON CHATTANOOGA/HAMILTON COUNTY MONUMENT NETWORK SYSTEM (CHAM) NAD/83(UN-ADJUSTED), HAVING A PROJECT COMBINED FACTOR OF 1.00000679. ALL ELEVATIONS ARE BASED ON NGVD 29 AS PER CHAM DATA SHEETS. HORIZONTAL ORDER DERIVED BY CONVENTIONAL TRAVERSE METHODOLOGY FROM PRIMARY MONUMENTATION, AS SET BY BWSC, AND VERTICAL ORDER DERIVED BY DIFFERENTIAL LEVELING FROM PRIMARY MONUMENTATION, AS SET BY BWSC.

UNOFFICIAL SET

NOT FOR BIDDING

SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ALIGNMENT CURVE DATA

SCALE: 1"=100'

3/17/2014
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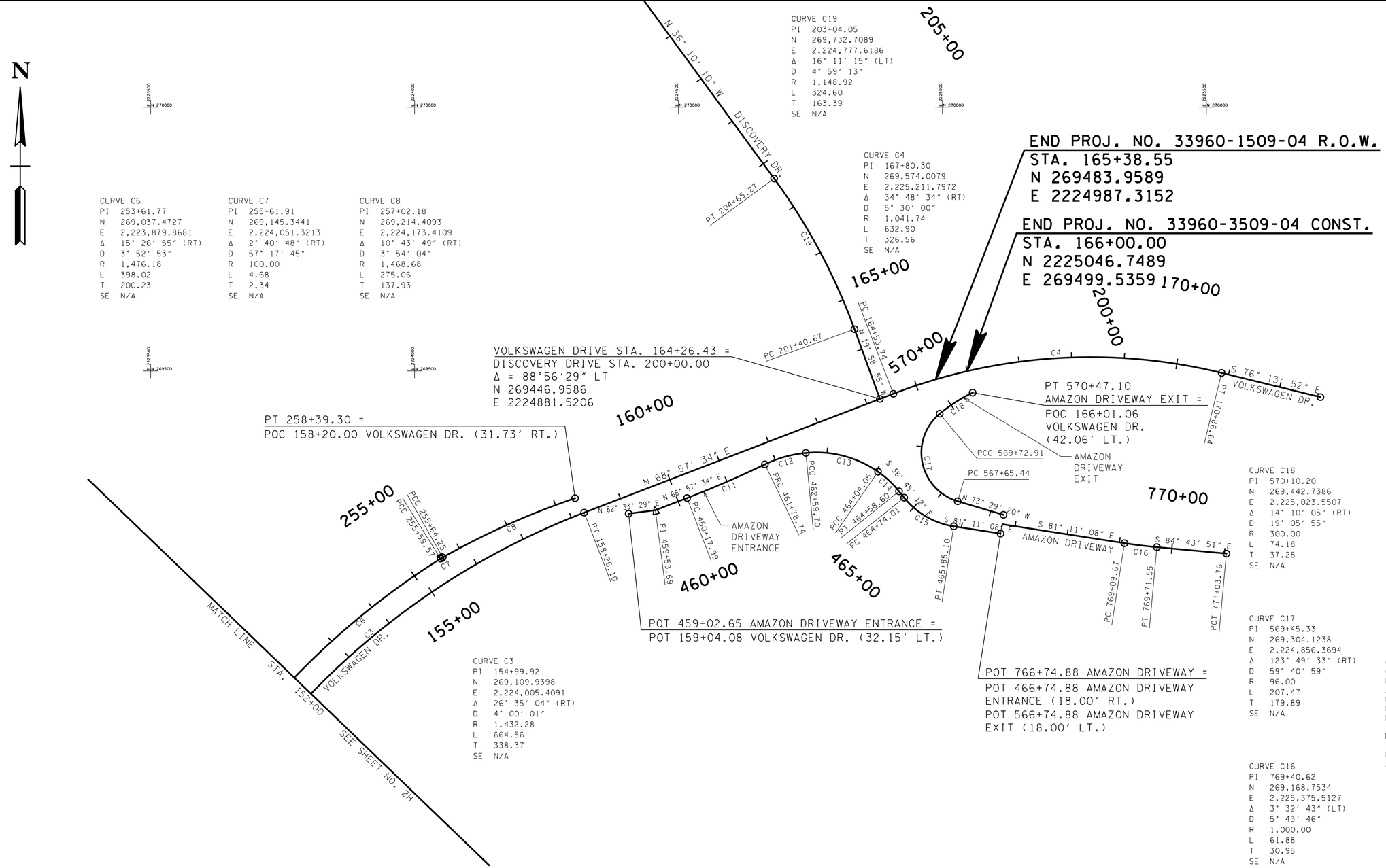
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	2G
CONST.	2014	33960-3509-04	2J



CURVE C19
PI 203+04.05
N 269,732.7089
E 2,224,777.6186
Δ 16° 11′ 15″ (LT)
D 4° 59′ 13″
R 1,148.92
L 324.60
T 163.39
SE N/A

CURVE C4
PI 167+80.30
N 269,574.0079
E 2,225,211.7972
Δ 34° 48′ 34″ (RT)
D 5° 30′ 00″
R 1,041.74
L 632.90
T 326.56
SE N/A

CURVE C6
PI 253+61.77
N 269,037.4727
E 2,223,879.8681
Δ 15° 26′ 55″ (RT)
D 3° 52′ 53″
R 1,476.18
L 398.02
T 200.23
SE N/A

CURVE C7
PI 255+61.91
N 269,145.3441
E 2,224,051.3213
Δ 2° 40′ 48″ (RT)
D 57° 17′ 45″
R 100.00
L 4.68
T 2.34
SE N/A

CURVE C8
PI 257+02.18
N 269,214.4093
E 2,224,173.4109
Δ 10° 43′ 49″ (RT)
D 3° 54′ 04″
R 1,468.68
L 275.06
T 137.93
SE N/A

CURVE C18
PI 570+10.20
N 269,442.7386
E 2,225,023.5507
Δ 14° 10′ 05″ (RT)
D 19° 05′ 55″
R 300.00
L 74.18
T 37.28
SE N/A

CURVE C17
PI 569+45.33
N 269,304.1238
E 2,224,856.3694
Δ 123° 49′ 33″ (RT)
D 59° 40′ 59″
R 96.00
L 207.47
T 179.89
SE N/A

CURVE C16
PI 769+40.62
N 269,168.7534
E 2,225,375.5127
Δ 3° 32′ 43″ (LT)
D 5° 43′ 46″
R 1,000.00
L 61.88
T 30.95
SE N/A

CURVE C3
PI 154+99.92
N 269,109.9398
E 2,224,005.4091
Δ 26° 35′ 04″ (RT)
D 4° 00′ 01″
R 1,432.28
L 664.56
T 338.37
SE N/A

CURVE C11
PI 460+98.41
N 269,287.9796
E 2,224,591.2206
Δ 4° 40′ 32″ (LT)
D 2° 54′ 30″
R 1,970.00
L 160.76
T 80.42
SE N/A

CURVE C12
PI 462+19.65
N 269,340.6245
E 2,224,700.5305
Δ 20° 10′ 06″ (RT)
D 24° 54′ 40″
R 230.00
L 80.96
T 40.90
SE N/A

CURVE C13
PI 463+35.02
N 269,351.8598
E 2,224,816.2022
Δ 40° 20′ 40″ (RT)
D 27° 56′ 57″
R 205.00
L 144.35
T 75.31
SE N/A

CURVE C14
PI 464+31.52
N 269,293.2086
E 2,224,900.6004
Δ 16° 27′ 00″ (RT)
D 30° 09′ 20″
R 190.00
L 54.55
T 27.46
SE N/A

CURVE C15
PI 465+32.24
N 269,214.3677
E 2,224,963.8846
Δ 42° 25′ 56″ (LT)
D 38° 11′ 50″
R 150.00
L 111.09
T 58.23
SE N/A

UNOFFICIAL SET

NOT FOR BIDDING

COORDINATE VALUES ARE BASED ON CHATTANOOGA/HAMILTON COUNTY MONUMENT NETWORK SYSTEM (CHAM) NAD/83(UN-ADJUSTED), HAVING A PROJECT COMBINED FACTOR OF 1.00000679. ALL ELEVATIONS ARE BASED ON NGVD 29 AS PER CHAM DATA SHEETS. HORIZONTAL ORDER DERIVED BY CONVENTIONAL TRAVERSE METHODOLOGY FROM PRIMARY MONUMENTATION, AS SET BY BWSC, AND VERTICAL ORDER DERIVED BY DIFFERENTIAL LEVELING FROM PRIMARY MONUMENTATION, AS SET BY BWSC.

SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ALIGNMENT CURVE DATA

SCALE: 1"=100′

3/17/2014
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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	2K

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) TEMPORARY 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 TEMPORARY 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 THE INSTALLATION OF PIPE CULVERTS, STORM SEWERS, CONDUITS, ALL OTHER CULVERTS AND MINOR STRUCTURES OF ANY TYPE AND DESCRIPTION WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT WILL BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF PIPE.

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

(2) 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

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. 716-05.01, PAINTED PAVEMENT MARKING (4" LINE), L.M.

(2) WIDE (8 INCH) TEMPORARY PAVEMENT MARKING LINE WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-05.02 PAINTED PAVEMENT MARKING (8" BARRIER LINE), LIN. FT.

FINAL PAVEMENT MARKING IF 6" SPRAY THERMOPLASTIC (60 mil) IS USED

(1) PERMANENT PAVEMENT LINE MARKINGS SHALL BE 6" SPRAY THERMOPLASTIC (60 mil) 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. 716-13.02, SPRAY THERMO PVMT MRKNG (60 mil) (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 DIRECTLY, BUT THE COSTS ARE TO BE INCLUDED IN THE PRICE BID FOR THE PERMANENT MARKINGS.

DETOURS, LANE SHIFTS AND MEDIAN CROSS-OVERS

(1) THE PAVEMENT MARKING ON THE LANE SHIFTS FOR CENTERLINE, EDGELINE AND LANE LINE 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. 716-05.01 PAINTED PAVEMENT MARKING (4 IN. LINE), LIN. MI.

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

PAVEMENT

PAVING

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

RESURFACING

(1) WHERE DIRECTED BY THE TDOT ENGINEER, THE CONTRACTOR SHALL BE REQUIRED TO SHAPE PUBLIC SIDE ROADS, BUSINESS ENTRANCES, AND PRIVATE DRIVES, AS WELL AS CLEANING OF EXISTING DRAINS BEFORE PLACING MATERIALS. ALL COSTS ARE TO BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF CONSTRUCTION.

(2) ALL PUBLIC SIDE ROADS SHALL BE PAVED ONE PAVER WIDTH THROUGH THE INTERSECTION AS A MINIMUM. A SATISFACTORY TRANSITION FROM THE NEW PAVEMENT TO THE EXISTING GRADE OF THE INTERSECTING PUBLIC ROAD OR BUSINESS ENTRANCE SHALL BE PROVIDED. SHOULD THE PAVEMENT OF THE INTERSECTING PUBLIC ROAD BE DISTRESSED, THE RESURFACING WIDTH MAY BE INCREASED TO THE NORMAL RIGHT OF WAY LINE.

(3) PRIVATE DRIVEWAYS, FIELD ENTRANCES, AND BUSINESS ENTRANCES WILL BE RESURFACED A PAVER WIDTH (LANE WIDTH) AS A MINIMUM. A PAVEMENT TAPER TO TRANSITION THE NEW PAVEMENT SHALL BE REQUIRED, IT SHALL BE BASED ON AN ADDITIONAL ONE FOOT OF WIDTH PER ONE INCH DEPTH OF PAVEMENT. IF THE SHOULDER IS NARROW ENOUGH THAT THE SUM OF THE SHOULDER AND THE TRANSITION ARE LESS THAN A PAVER WIDTH, THE TRANSITION SHALL OCCUR WITHIN THE PAVER WIDTH. IF THE SUM OF THE SHOULDER AND THE TRANSITION IS GREATER THAN A PAVER WIDTH (LANE WIDTH), THE TRANSITION SHALL OCCUR OUTSIDE OF THE PAVER WIDTH.

(4) ON CURB AND GUTTER SECTIONS, PUBLIC ROAD INTERSECTIONS SHALL BE RESURFACED TO THE END OF RADIUS. A SATISFACTORY TRANSITION FROM THE NEW PAVEMENT TO THE EXISTING GRADE OF THE INTERSECTING PUBLIC ROAD SHALL BE PROVIDED.

(5) ON URBAN TYPICAL SECTIONS, (CURB AND GUTTER), RESIDENTIAL DRIVEWAYS AND BUSINESS ENTRANCES SHALL HAVE A MINIMUM WIDTH OF MATERIAL NOT LESS THAN ONE FOOT USED IN THE TRANSITION TO FEATHER THE PAVEMENT EDGE.

(6) IN ALL CASES, THE LENGTH OF THE PAVEMENT TRANSITION, THE THICKNESS AND WIDTH OF THE RESURFACING AND ANY ADDITIONAL PAVEMENT MATERIALS SHALL BE AS DIRECTED BY THE TDOT ENGINEER.

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SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

3/17/2014
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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	2L

GENERAL NOTES (CONT.)

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

(3) 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.

(4) 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.

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

(6) 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.

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 AN OPEN TRAFFIC LANE AT ANY TIME UNLESS PROTECTED AS DESCRIBED ABOVE FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL BE INCREASED TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADT'S OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE.. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS REQUIRED SETBACK, THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.

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

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

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

(2) 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.

(3) 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.

(4) 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.

(5) 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.

(6) 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.

(7) 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.

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

STREAM/WETLAND

(1) 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.

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

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

(4) 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.

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

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GENERAL NOTES

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	2M

GENERAL NOTES (CONT.)

EROSION PREVENTION AND SEDIMENT CONTROL (CONT.)

STREAM/WETLAND (CONT.)

(1) 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.

(2) 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.

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

SPECIES

(1) 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

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

(2) 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.

(3) 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.

(4) 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.

(5) 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.

(6) 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.

(7) 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.

(8) 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

(1) 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

(1) 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.

(2) 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.

(3) 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.

(4) 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.

(5) 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.

(6) 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 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.

(7) 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.

(8) 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.

(9) 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

(1) 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.

(2) 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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GENERAL NOTES

3/17/2014
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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	2N

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.

PAVEMENT

RESURFACING

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

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

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

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

D. THE MILLED SURFACE SHALL BE PAVED WITHIN 48 HOURS.

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

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

G. IF RAVELING OR DETERIORATION OF THE MILLED SURFACE IS OCCURRING WHILE TRAFFIC IS DRIVING ON THE MILLED SURFACE, THEN THIS PRACTICE WILL NOT BE ALLOWED AND PAVING SHALL BE COMPLETED IMMEDIATELY AFTER MILLING.

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

SIGNALIZATION

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

EROSION PREVENTION AND SEDIMENT CONTROL

NPDES

(1) REFER TO THE EROSION PREVENTION AND SEDIMENT CONTROL PLAN, SHEET 12, FOR NOTES REGARDING SEASONAL WORK LIMITATION OR LIMITATION ON THE TOTAL AREA OF EXPOSED SOIL.

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.

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. SODDING, IN ACCORDANCE WITH SECTION 803 OF THE STANDARD SPECIFICATIONS, WILL BE MEASURED AND PAID FOR UNDER ITEM 803-01.

(2) SOD SHALL BE PLACED AT ALL LOCATIONS ON THE PROJECT.

MISCELLANEOUS

(1) THE CONTRACTOR SHALL NOT BE ALLOWED TO INTERRUPT TRAFFIC FLOW AND SHALL MAINTAIN ALL TRAFFIC LANES IN EACH DIRECTION ON THE FOLLOWING DAYS:

A. OFFICIAL STATE HOLIDAYS.

B. FRIDAY AT 6:00 A.M. UNTIL TUESDAY AT 7:00 P.M., IF A STATE HOLIDAY OCCURS OR IS OBSERVED ON MONDAY.

C. THURSDAY AT 6:00 A.M. UNTIL MONDAY AT 7:00 P.M., IF A STATE HOLIDAY OCCURS OR IS OBSERVED ON FRIDAY.

(2) THE CONTRACTOR SHALL BE REQUIRED TO SCHEDULE CONSTRUCTION ACTIVITIES TO ENSURE THAT THERE WILL BE NO LANE OR ENTRANCE CLOSURES RESULTING IN REDUCED TRAFFIC CAPACITY ON VOLKSWAGEN DRIVE OR AT THE AMAZON ENTRANCE FROM OCT. 1 THROUGH JAN. 15.

(3) THE COST OF RELOCATION OF DECORATIVE LIGHTING ALONG VOLKSWAGEN DRIVE WILL INCLUDE THE COMPLETE REMOVAL, STORAGE AND REPLACEMENT OF THE LIGHTS. ANY DAMAGE TO THE LIGHTS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR. COST OF RELOCATION TO BE PAID FOR UNDER ITEM 714-01.38.

(4) THE IRRIGATION SYSTEM ALONG VOLKSWAGEN DRIVE WILL BE RELOCATED BY THE CONTRACTOR. THE CONTRACTOR SHOULD COORDINATE WITH HAMILTON COUNTY PARKS DEPARTMENT FOR ANY SPECIAL CONSIDERATIONS. COST OF RELOCATION WILL NOT BE MEASURED AND PAID FOR DIRECTLY BUT WILL BE INCLUDED IN THE COST OF OTHER ITEMS.

(5) EXISTING SPEED HUMPS ON AMAZON DRIVEWAY WILL BE REMOVED BY AMAZON PRIOR TO THE BEGINNING OF CONSTRUCTION.

NORFOLK SOUTHERN RAILROAD

(1) THE CONTRACTOR SHALL NOT, FOR ANY REASON, STORE CONSTRUCTION EQUIPMENT UPON NOR STORE OR DUMP WASTE CONSTRUCTION MATERIALS UPON THE RAILROAD'S RIGHT-OF-WAY.

(2) THE CONTRACTOR IS PROHIBITED FROM INSTALLING ANY CONSTRUCTION SIGNS, MESSAGE BOARDS, ARROW BOARDS, AND/OR OTHER TEMPORARY TRAFFIC CONTROL SIGNS OR DEVICES WITHIN THE RAILROAD'S RIGHT-OF-WAY.

(3) THE CONTRACTOR SHALL CONDUCT HIS WORK SO AS TO PROTECT THE RAILROAD'S TRACK FACILITIES AND PROPERTY FROM DAMAGE.

(4) SEE SPECIAL PROVISION 105C TO SET UP FLAGGING SERVICES AND SUBMIT FOR INSURANCE REQUIRED FOR THE WORK AT OR NEAR THE RAILROAD'S RIGHT-OF-WAY AND UNDERPASS STRUCTURE OVER S.R. 317 (BONNY OAKS DRIVE).

(5) THE CONTRACTOR SHALL COORDINATE HIS WORK AT THE RAILROAD CROSSING WITH THE FOLLOWING REPRESENTATIVES OF THE RAILROAD.

MR. BRENT A. EMERSON – DIVISION ENGINEER
NORFOLK SOUTHERN CORPORATION
GEORGIA DIVISION OFFICE
1200 PEACHTREE STREET, NE
ATLANTA, GA 30309
PHONE: (404) 529-1387
E-MAIL: BRENT.EMERSON @NSCORP.COM

AND

MR. DANIEL PARKER, ENGINEER – PUBLIC IMPROVEMENTS
NORFOLK SOUTHERN CORPORATION
1200 PEACHTREE STREET, NE
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PHONE: (404) 529-1256
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SPECIAL NOTES

4/10/2014
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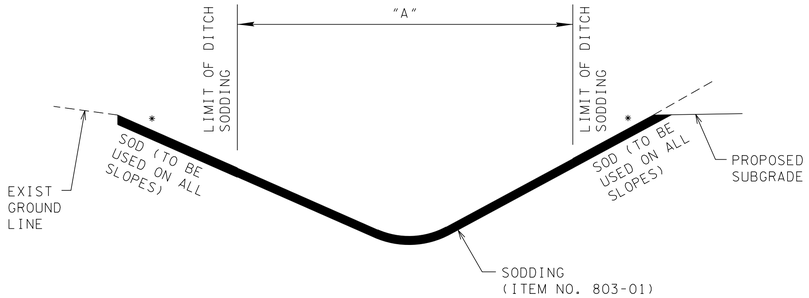
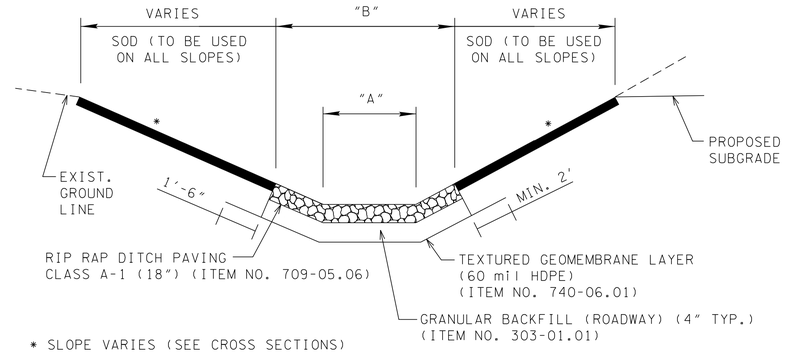
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	2P



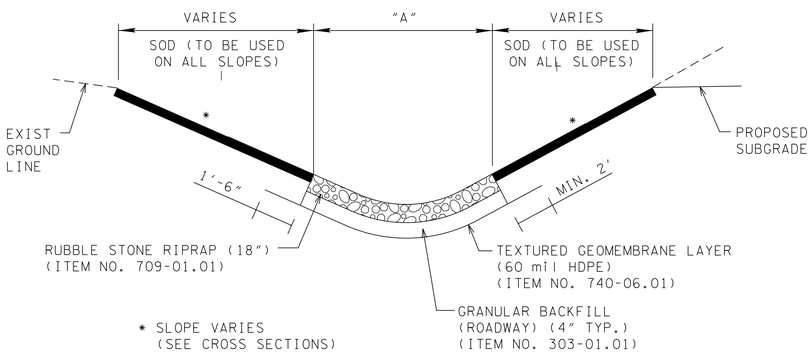
* SLOPE VARIES (SEE CROSS SECTIONS)

DETAIL OF V SOD DITCH



* SLOPE VARIES (SEE CROSS SECTIONS)

DETAIL OF V AND T RIP RAP DITCH



* SLOPE VARIES (SEE CROSS SECTIONS)

DETAIL OF V ROCK DITCH

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

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TABULATED QUANTITIES

SPECIAL DITCHES

ROAD	STATION		SIDE		LENGTH (FT)	DIMENSION "A" (FT.)	DIMENSION "B" (FT.)	TYPE	SOD (S.Y.) 803-01 (1)	RUBBLE STONE RIP RAP (C.Y.) 709-01.01	RIP-RAP CLASS A-1 (TON) 709-05.06	GRANULAR BACKFILL (TON) 303-01.01	GEOMEMBRANE LAYER (60 MIL) (S.Y.) 740-06.01
	FROM	TO	LT	RT									
S.R. 317	33+71	37+50	X		379	7.5	0	SOD	316				
S.R. 317	45+35	48+50		X	315	6	2	RIP RAP (CLASS A-1)			184	41	333
S.R. 317	49+72	51+00		X	128	6	0	RIP RAP (CLASS A-1)			75	17	136
S.R. 317	58+50	61+50		X	300	12	0	SOD	400				
AMAZON DRIVEWAY ENTRANCE	463+00	464+00		X	100	12	0	SOD	133				
AMAZON DRIVEWAY EXIT	566+88	567+33		X	58	10	0	RUBBLE STONE RIP RAP		33		15	87
TOTALS									**850**	**33**	**259**	**72**	**556**

(1) SOD QUANTITY INCLUDES ONLY THE SOD PLACED WITHIN THE LIMITS OF THE DITCH.

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	2R

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

CATCH BASINS AND JUNCTION BOXES

LOCATION	STATION	OFFSET (FT.) (AT FOC)	DRAINAGE CODE	GRATE/TOP ELEV. (AT TOC)	OUTLET ELEV	STRUCTURE TYPE	DEPTH (FT.)	STANDARD DRAWING	CATCH BASINS				JUNCTION BOXES			CAPPING EXIST CI & CB 611-09.03	REWORK MH 611-01.21	CATCH BASIN FILTER ASSEMBLY TYPE
									CUB INLET LEFT 920-10.04	CUB INLET RIGHT 920-11.04	CURB INLET CENTER 920-12.04	CATCH BASIN 920-13.04	TYPE 1 611-02.10	TYPE 2 611-02.11	TYPE 4 611-02.13			
VOLKSWAGEN DR.	153+23.02	35.81 LT	B1	-	-	XCI	-	N/A								1		
VOLKSWAGEN DR.	153+23.67	45.90 LT	B2	721.96	713.39	CI	8.57	* SD-610.01	1									2
VOLKSWAGEN DR.	154+48.72	36.05 LT	C1	-	-	XCI	-	N/A								1		
VOLKSWAGEN DR.	154+48.78	45.90 LT	C2	719.10	710.52	CI	8.58	* SD-610.01	1									2
VOLKSWAGEN DR.	154+48.86	62.79 LT	C3			JB		D-JBS-2						1				
AMAZON DRIVEWAY ENTRANCE	461+99.16	2.00 RT	D1	721.96	717.20	CI	4.76	* SD-610.02	1									2
AMAZON DRIVEWAY ENTRANCE	461+99.63	0.25 LT	D2	-	-	XMH		N/A									1	
AMAZON DRIVEWAY ENTRANCE	461+98.03	8.33 LT	D3	-	-	XCI	-	N/A								1		
VOLKSWAGEN DR.	156+98.77	37.19 LT	D4	718.20	714.09	CI	4.11	* SD-610.02		1								2
VOLKSWAGEN DR.	156+98.79	34.96 LT	D5	-	-	XCI	-	N/A								1		
VOLKSWAGEN DR.	156+00.74	36.04 LT	D6	-	-	XCI	-	N/A								1		
VOLKSWAGEN DR.	156+00.57	43.62 LT	D7	717.82	708.07	CI	9.75	* SD-610.03			1							2
VOLKSWAGEN DR.	156+00.00	63.06 LT	D8	-	-	JB	-	D-JBS-1					1					
AMAZON DRIVEWAY ENTRANCE	463+86.80	6.05 LT	E2	-	-	JB		D-JBS-4							1			
AMAZON DRIVEWAY ENTRANCE	464+51.76	2.00 RT	F1	724.31	721.61	CI	2.70	* SD-610.01	1									2
AMAZON DRIVEWAY ENTRANCE	464+40.82	17.33 LT	F2	-	-	XCI	-	N/A								1		
AMAZON DRIVEWAY ENTRANCE	568+61.91	13.06 LT	F3	-	-	XCI	-	N/A								1		
AMAZON DRIVEWAY ENTRANCE	568+61.44	2.00 RT	F4	724.38	720.93	CI	3.45	* SD-610.01			1							2
AMAZON DRIVEWAY	768+20.77	20.00 LT	G1	740.74	734.77	CB	5.97	* SD-608.01				1						2
AMAZON DRIVEWAY	768+21.35	11.62 LT	G2	-	-	XCB	-	N/A								1		
AMAZON DRIVEWAY EXIT	567+17.89	24.25 LT	G3	-	-	XCB	-	N/A								1		
AMAZON DRIVEWAY EXIT	567+27.61	1.47 RT	G4	730.26	717.50	CB	12.76	* SD-608.01				1						2
S.R. 317	49+41.79	55.66 RT	H2	716.11	708.11	JB	8.00	D-JBS-4							1			
TOTALS									**4**	**1**	**2**	**2**	**1**	**1**	**2**	**9**	**1**	

* CITY OF CHATTANOOGA STANDARDS

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.)	18 IN. ENDWALL 6:1 611-07.31 (EA.)	24 IN. ENDWALL 3:1 611-07.57 (EA.)	30 IN. ENDWALL 3:1 611-07.60 (EA.)	36 IN. ENDWALL 3:1 611-07.63 (EA.)
5B	VOLKSWAGEN DR.	154+49.00	76.78	C4	U	D-PE-30A					1	
5B	VOLKSWAGEN DR.	156+00.00	77.05	D9	U	D-PE-24A				1		
5B	S.R. 317	49+70.41	58.61	H1	U	D-PE-36A						1
5B	S.R. 317	48+56.41	68.25	H3	U	D-PE-36A						1
5B	S.R. 317	51+02.05	52.46	J2	SEW	D-PE-18A, D-SEW-1A			1			
6B	S.R. 317	56+00.00	28.34	J1	SEW	D-PE-18A, D-SEW-1A			1			
7B	AMAZON DRIVEWAY ENTRANCE	464+05.50	25.53	E1	A	D-PE-1	12.00	152				
TOTALS							**12.00**	**152**	**2**	**1**	**1**	**2**

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TABULATED QUANTITIES

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	2S

STORM DRAINAGE PIPES

LOCATION	STATION	FROM		TO		% GRADE	PIPE CULVERT SIZE & LENGTH (L.F.)						
		CODE	OUTLET ELEV.	CODE	INLET ELEV.		15" RCP	18"	18" CMP	24"	30"	36"	60"
VOLKSWAGEN DR.	154+49	C3	710.11	C4	710.05	0.50					12		
AMAZON DRIVEWAY ENTRANCE	462+00	D1	717.20	D2	716.96	12.00	2						
VOLKSWAGEN DR.	157+00	D4	714.09	D5	714.05	0.67	6						
VOLKSWAGEN DR.	156+00	D8	707.73	D9	707.66	0.50				14			
AMAZON DRIVEWAY ENTRANCE	463+82	E1	715.55	E2	715.42	0.59							22
AMAZON DRIVEWAY ENTRANCE	464+50	F1	721.61	F2	721.50	0.50	22						
AMAZON DRIVEWAY	768+22	G1	735.01	G2	734.95	1.00		6					
S.R. 317	-	J1	730.19	J2	717.10	* VARIES			492				
S.R. 317	-	H1	711.50	H2	710.66	3.50						24	
S.R. 317	-	H2	708.11	H3	707.30	1.04						78	
TOTALS							**30**	**6**	**492**	**14**	**12**	**102**	**22**

* SEE PROFILE OF S.R. 317

BOX CULVERT TABULATION

STATION	LOCATION	SPAN (FT.)	HEIGHT (FT.)	LENGTH (FT.)	SKEW	DRAINAGE AREA (ACRES)	BOX CLASS "A" CONC. (C.Y) 604-01.01	BOX REINF. STEEL (LBS.) 604-01.02	DRAWING NO.	BACKFILLING (TONS) 303-01.01	FOUNDATION FILL MATERIAL (C.Y.) 204-08
45+27	S.R. 317	10	9	60	90^00'00"	2260	74.1	15870	STD-17-75	357	28.9
TOTALS							**74.1**	**15870**		**357**	**28.9**

PROPOSED GUARDRAIL

LOCATION	STATION		GUARDRAIL	TERMINAL ANCHORS		REMARKS
	FROM (+-)	TO (+-)	SINGLE TYPE 2 705-02.02 (L.F.)	TYPE IN-LINE 705-04.05 (EACH)	TYPE 38 705-04.07 (EACH)	
S.R. 317 (RT)	32+05	33+80	76.7	-	2	
S.R. 317 (LT)	32+51	33+97	46.5	-	2	
S.R. 317 (RT)	42+50	49+03	606.6	1	1	
S.R. 317 (RT)	49+38	51+11	192.8	2	-	
			922.6	**3**	**5**	

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TABULATED QUANTITIES

3/17/2014
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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	2T

PAVEMENT QUANTITIES

LOCATION	303-01 (TON)	306-04.01 (SY)	307-01.01 (TON)	307-01.08 (TON)	402-01 (TON)	402-02 (TON)	403-01 (TON)	411-01.10 (TON)	501-04.01 (10" DEPTH) (CY)
VOLKSWAGEN DRIVE	213.4	1261.6		213.9	1.9	7.6	0.7	100.3	
VOLKSWAGEN DRIVE (ROUNDABOUT)	217.5								238.1
S.R. 317 (BONNY OAKS DRIVE)	3205.2		173.4	1602.5	5.0	19.9	12.9	1264.6	
AMAZON DRIVEWAY	734.1								803.6
MULTI-USE PATH	236.8							74.2	
DRIVEWAYS	159.9			70.1				47.0	
TOTALS	**4766.9**	**1261.6**	**173.4**	**1886.5**	**6.9**	**27.5**	**13.6**	**1486.1**	**1041.7**

REMOVAL OF PIPE

SHEET NO.	STATION	SIDE	LOCATION	DESCRIPTION	LENGTH (L.F.)	REMARKS
5	49+00	RT	S.R. 317	36" ST	78	
5	49+50	RT	S.R. 317	36" ST	28	
5	51+00	RT	S.R. 317	18" RCP	40	

R.O.W. MARKERS

SHEET NO.	QUANTITIES			
	"A"	"B"	"C"	TOTALS
5A	0	0	1	1
TOTALS	**0**	**0**	**1**	**1**

ESTIMATED GRADING QUANTITIES

LOCATION	ROAD & DRAINAGE EXC. (UNCL.) C.Y.	BORROW EXCAVATION UNCL. - C.Y.	EMB. C.Y.
S.R. 317 (BONNY OAKS DRIVE)	3923	5387	5507
SIDE ROADS	2201		2835
TOTALS	**6124**	**5387**	**8342**

EROSION PREVENTION AND SEDIMENT CONTROL QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	QUANTITY TOTAL
203-01	ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED)	C.Y.	63
209-02.05	12" TEMPORARY SLOPE DRAIN	L.F.	25
209-08.02	TEMPORARY SILT FENCE (WITH BACKING)	L.F.	2380
209-08.03	TEMPORARY SILT FENCE (WITHOUT BACKING)	L.F.	1200
209-08.07	ROCK CHECK DAM	EACH	47
209-08.08	ENHANCED ROCK CHECK DAM	EACH	12
209-09.01	SANDBAGS	BAG	88
209-09.03	SEDIMENT FILTER BAG (15' X 15')	EACH	2
209-10.20	TEMPORARY SEDIMENT TRAP	C.Y.	54
209-20.03	POLYETHYLENE SHEETING (6 MIL. MINIMUM)	S.Y.	60
209-09.41	CURB INLET PROTECTION (TYPE 2)	EACH	23
303-10.01	MINERAL AGGREGATE (SIZE 57)	TON	53
621-03.05	36" TEMPORARY DRAINAGE PIPE	L.F.	60
707-08.11	HIGH VISIBILITY FENCE	L.F.	1700
709-05.05	MACHINED RIPRAP (CLASS A-3)	TON	300
709-05.06	MACHINED RIPRAP (CLASS A-1)	TON	192
740-10.03	GEOTEXTILE (TYPE III) (EROSION CONTROL)	S.Y.	1120
740-11.03	TEMPORARY SEDIMENT TUBE 18 IN (EROSION CONTROL)	L.F.	4270
801-01.07	TEMPORARY SEEDING (WITH MULCH)	UNIT	89
801-03	WATER (SEEDING AND SODDING)	MG	9

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DEPARTMENT OF TRANSPORTATION

TABULATED QUANTITIES

3/19/2014
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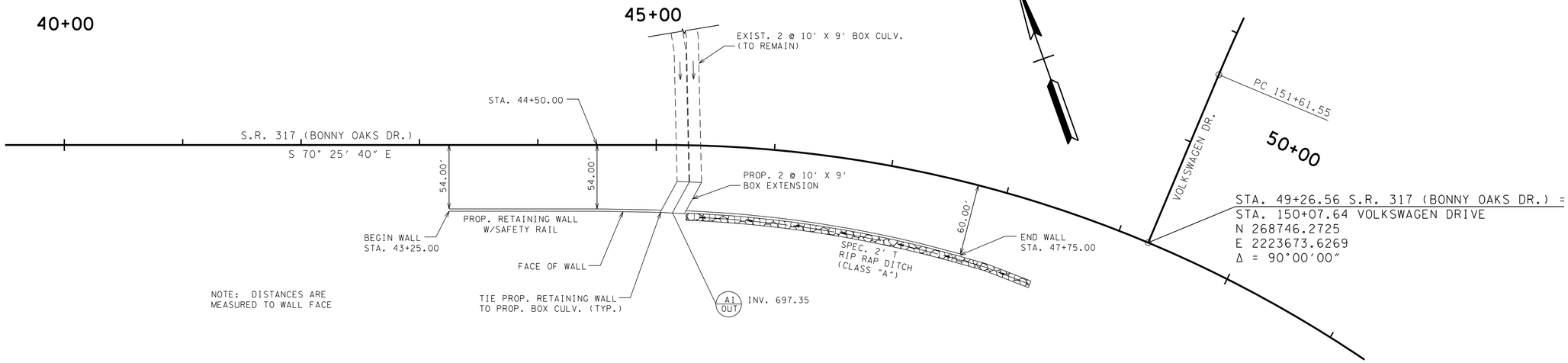
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	2U

RETAINING WALL PLAN VIEW

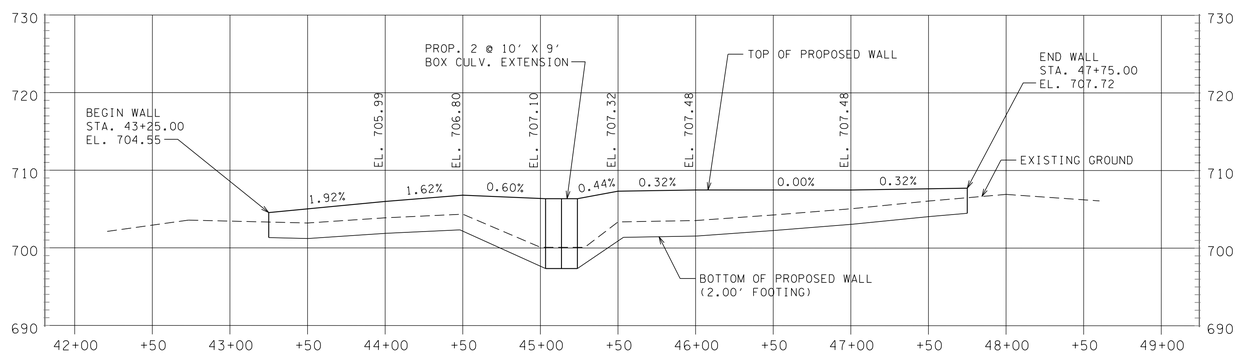
SCALE: 1" = 50'



NOTE: DISTANCES ARE MEASURED TO WALL FACE

RETAINING WALL ELEVATION VIEW

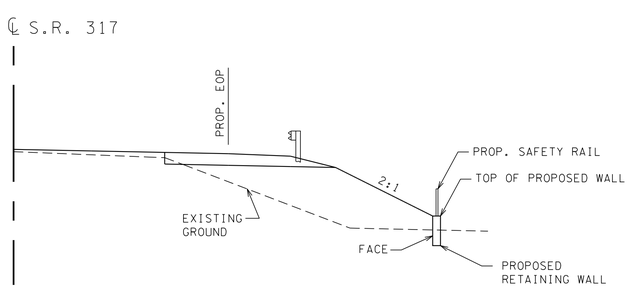
SCALE: 1" = 50' HORIZ.
1" = 10' VERT.



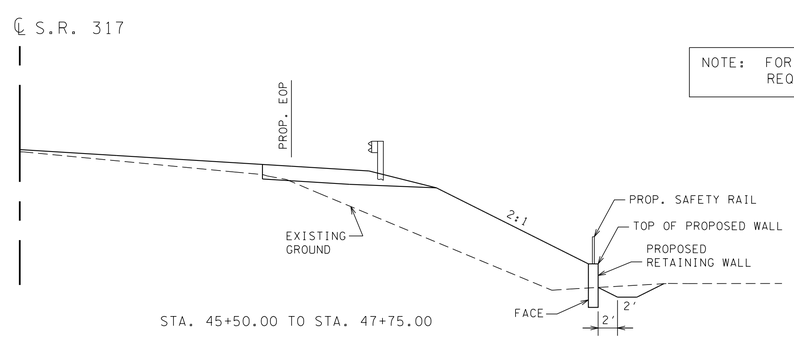
NOTE: ACTUAL PROFILE OF TOP OF PROPOSED WALL WILL VARY DEPENDING ON TYPE OF WALL SYSTEM CONSTRUCTED.

RETAINING WALL TYPICAL SECTIONS

NTS



STA. 43+25.00 TO STA. 45+50.00



STA. 45+50.00 TO STA. 47+75.00

NOTE: FOR GEOTECHNICAL DESIGN REQUIREMENTS SHEET NO. 21.

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RETAINING WALL CONCEPTUAL DRAWING

S.R. 317

3/19/2014
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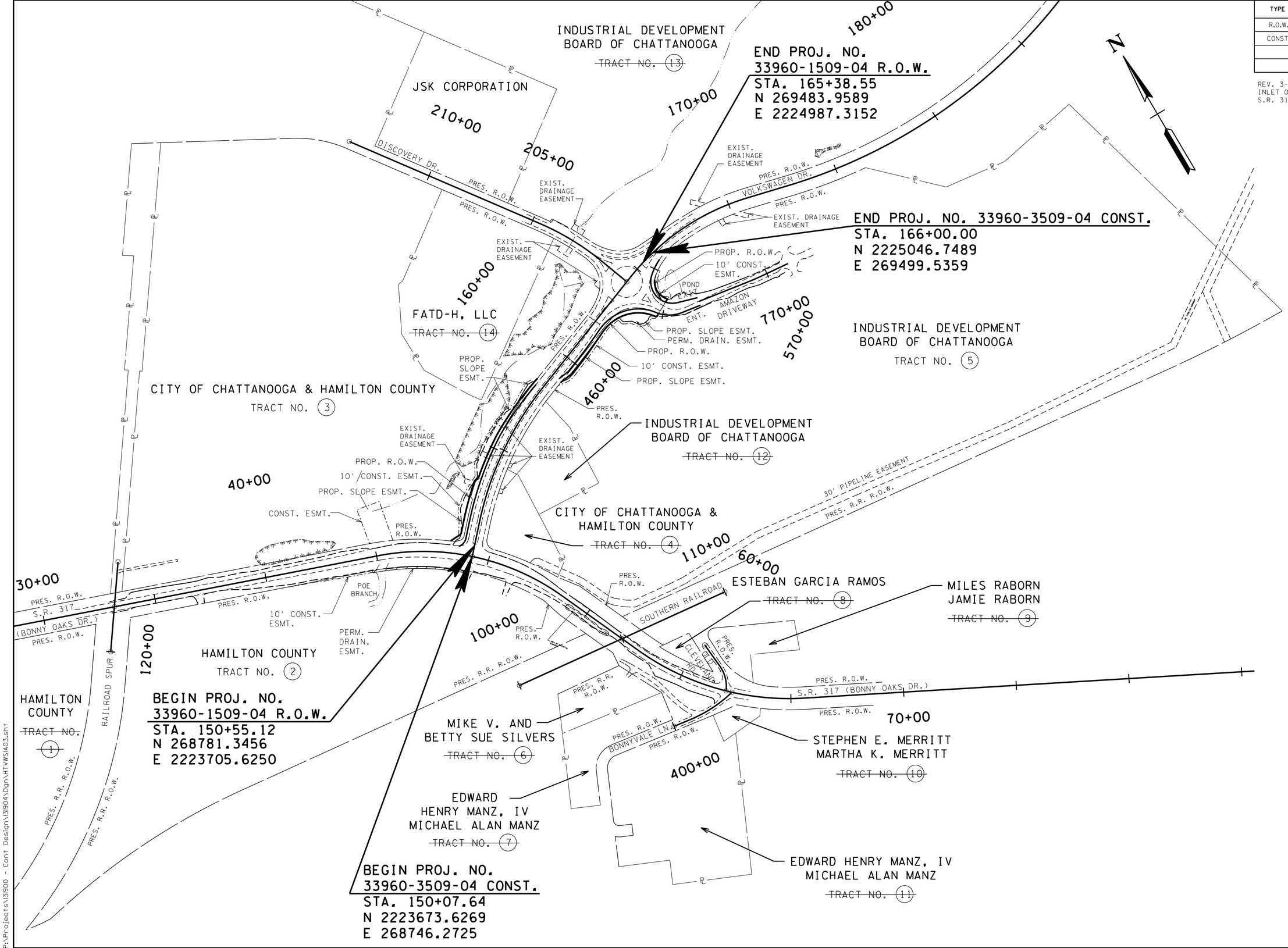
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	3
CONST.	2014	33960-3509-04	3

REV. 3-28-14: ADDED CONST. ESMT. AT INLET OF BOX CULVERT AT STA. 45+27, S.R. 317.



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PROPERTY MAP

SCALE: 1"=200'

5/6/2014
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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	3A
CONST.	2014	33960-3509-04	3A

REV. 3-28-14: INCREASED REQUIRED CONST. ESMT. FOR TRACT NO. 3.

R.O.W. ACQUISITION TABLE

TRACT NO.	PROPERTY OWNERS	COUNTY RECORDS				TOTAL AREA ACRES			AREA TO BE ACQUIRED ACRES			AREA REMAINING ACRES		EASEMENT (SQUARE FEET)		
		TAX MAP NO.	PARCEL NO.	DEED DOCUMENT REFERENCE BK.	DEED DOCUMENT REFERENCE PAGE	LEFT	RIGHT	TOTAL	LEFT	RIGHT	TOTAL	LEFT	RIGHT	PERM. DRAINAGE	SLOPE	CONST.
1	HAMILTON COUNTY	139	1.01	2570	988		23.352	23.352					23.352			
2	HAMILTON COUNTY	139	1.01	2570	988		33.469	33.469					33.469	4040		2389
3	CITY OF CHATTANOOGA & HAMILTON COUNTY	130	1	7476	1	60.017		60.017	0.205		0.205	59.812			0.256 AC	0.577 AC
4	CITY OF CHATTANOOGA & HAMILTON COUNTY	130	1.07	6785	296	1.881		1.881				1.881				
5	INDUSTRIAL DEVELOPMENT BOARD OF CHATTANOOGA	139	74	8842	829	86.099		86.099	0.207		0.207	85.892		4102	1308	0.162 AC
6	MIKE V. AND BETTY SUE SILVERS	139A	D 1	1747	133		1.565	1.565					1.565			
7	EDWARD HENRY MANZ, IV AND MICHAEL ALAN MANZ	139A	D 9	9843	749		2.156	2.156					2.156			
8	ESTEBAN GARCIA RAMOS	139G	A 20	9353	706	0.363		0.363				0.363				
9	MILES AND JAMIE RABORN	139G	A 18	9104	824	1.358		1.358				1.358				
10	STEPHEN E. AND MARTHA K. MERRITT	139A	D 20	6653	128		0.426	0.426					0.426			
11	EDWARD HENRY MANZ, IV AND MICHAEL ALAN MANZ	139A	D 12	9843	749		8.024	8.024					8.024			
12	INDUSTRIAL DEVELOPMENT BOARD OF CHATTANOOGA	139	74.04	8842	829	2.471		2.471				2.471				
13	INDUSTRIAL DEVELOPMENT BOARD OF CHATTANOOGA	130	1.18	9518	313	1183.101		1183.101				1183.101				
14	FATD-H, LLC	130	1.31	9697	366	8.901		8.901				8.901				

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 IS 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) TRACT REMAINDERS NOT HAVING AN EXISTING DRIVEWAY WILL BE PROVIDED ONE 50-FOOT OPENING IN THE ACCESS CONTROL FENCE AND A DRIVEWAY WILL BE CONSTRUCTED UNLESS ACCESS IS PROVIDED FROM AN INTERSECTING ROAD OR BASED ON PHYSICAL CONDITIONS AND/OR CONFLICTS WITH OTHER DESIGN CONSIDERATIONS WHICH PREVENT AN ACCESS OPENING. PAVING OF THESE NEW DRIVEWAYS WILL BE IN ACCORDANCE TO THE 7 PERCENT CRITERIA PREVIOUSLY MENTIONED FOR EXISTING DRIVEWAYS.

(8) 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.

(9) ON PROJECTS WITHOUT CURB AND GUTTER THAT ARE ON STATE ROUTES, IT WILL BE THE RESPONSIBILITY OF THE OWNER TO SECURE A PERMIT AND TO CONSTRUCT ADDITIONAL DRIVEWAYS AND FIELD ENTRANCES OTHER THAN THOSE PROVIDED IN THE PLANS.

(10) 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.

(11) 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.

(12) EASEMENT REQUIRED FOR THE RAILROAD CROSSING IS TO BE OBTAINED BY THE UTILITIES ENGINEER BY PROVISIONS CONTAINED IN THE CROSSING AGREEMENT NEGOTIATED WITH THE RAILROAD.

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.

UTILITY OWNERS

TELEPHONE:

BELLSOUTH
300 EAST MARTIN LUTHER KING BLVD
CHATTANOOGA, TN 37403
ATTN: TIM MANLEY
PHONE: 423-752-9018

AT&T
360 GEES MILL BUSINESS PARKWAY
CONYERS, GA 30013
ATTN: GENE GEREN
PHONE: 770-602-2121

CABLE TV:

COMCAST CABLE COMMUNICATIONS, INC.
2030 EAST POLYMER DRIVE
CHATTANOOGA, TN 37421
ATTN: GEOFF SHOOK
PHONE: 423-855-3900

ELECTRIC:

CHATTANOOGA ELECTRIC POWER BOARD
P.O. BOX 182255
CHATTANOOGA, TN 37422
ATTN: DAVID HENDERSON
PHONE: 423-648-3257

WATER:

TENNESSEE-AMERICAN WATER COMPANY
P.O. BOX 6338
CHATTANOOGA, TN 37401
ATTN: JOHN WATSON
PHONE: 423-755-7617

EASTSIDE UTILITY DISTRICT
P.O. BOX 22037
CHATTANOOGA, TN 37422
ATTN: DON STAFFORD
PHONE: 423-892-2890

SEWER:

CITY OF CHATTANOOGA
1250 MARKET STREET
SUITE 1000 D.R.C.
CHATTANOOGA, TN 37402
ATTN.: GORDON PHILLIPS
PHONE: 423-757-4869

GAS:

ATLANTA GAS LIGHT COMPANY
P.O. BOX 4569
ATLANTA, GA 30302
MR. JONATHAN TODD
PHONE: 404-584-3363

COLONIAL PIPLINE COMPANY
391 SCRUGGS ROAD
RINGGOLD, GA 30736
ATTN: KEVIN RALEY
PHONE: 706-891-6641

PLANTATION PIPELINE COMPANY
4720 BONNY OAKS DRIVE
CHATTANOOGA, TN 37416
ATTN: ROBIN TAYLOR
PHONE: 423-899-4684

RAILROAD:

NORFOLK SOUTHERN RAILWAY CO.
1200 PEACHTREE ST., NW
ATLANTA, GA 30309
ATTN: DANIEL PARKER
PHONE: 404-529-1256

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ACQUISITION TABLE, R.O.W. NOTES, & UTILITY OWNERS

5/6/2014
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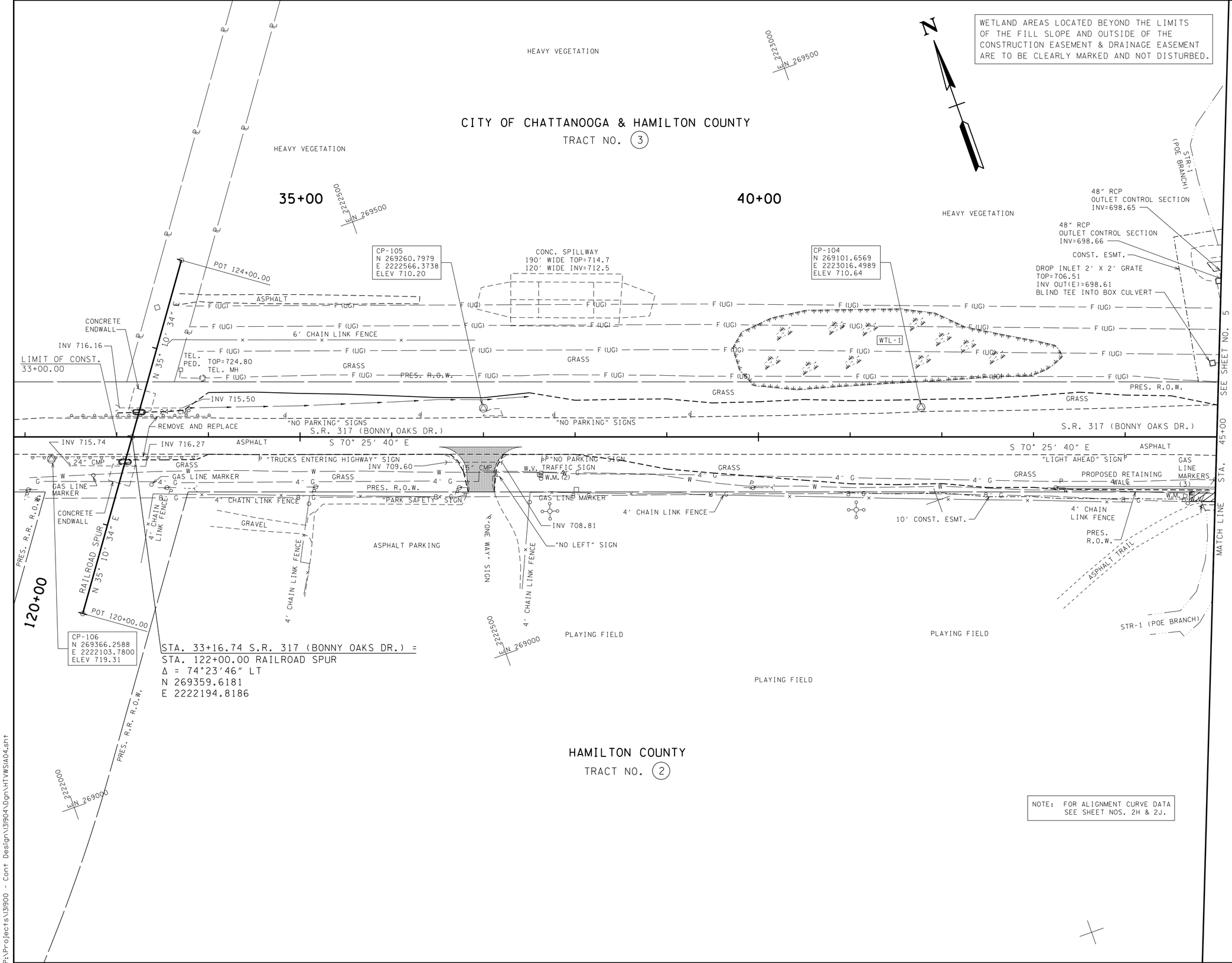
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	4
CONST.	2014	33960-3509-04	4

REV. 3-28-14: ADDED CONST. ESMT. AT INLET OF BOX CULVERT AT STA. 45+27, S.R. 317.

WETLAND AREAS LOCATED BEYOND THE LIMITS OF THE FILL SLOPE AND OUTSIDE OF THE CONSTRUCTION EASEMENT & DRAINAGE EASEMENT ARE TO BE CLEARLY MARKED AND NOT DISTURBED.



NOTE: FOR ALIGNMENT CURVE DATA SEE SHEET NOS. 2H & 2J.

UNOFFICIAL SET

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COORDINATE VALUES ARE BASED ON CHATTANOOGA/HAMILTON COUNTY MONUMENT NETWORK SYSTEM (CHAM) NAD/83(UN-ADJUSTED), HAVING A PROJECT COMBINED FACTOR OF 1.00000679. ALL ELEVATIONS ARE BASED ON NGVD 29 AS PER CHAM DATA SHEETS. HORIZONTAL ORDER DERIVED BY CONVENTIONAL TRAVERSE METHODOLOGY FROM PRIMARY MONUMENTATION, AS SET BY BWSC, AND VERTICAL ORDER DERIVED BY DIFFERENTIAL LEVELING FROM PRIMARY MONUMENTATION, AS SET BY BWSC.

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PRESENT LAYOUT

BEGIN TO STA. 45+00

SCALE: 1"= 50'

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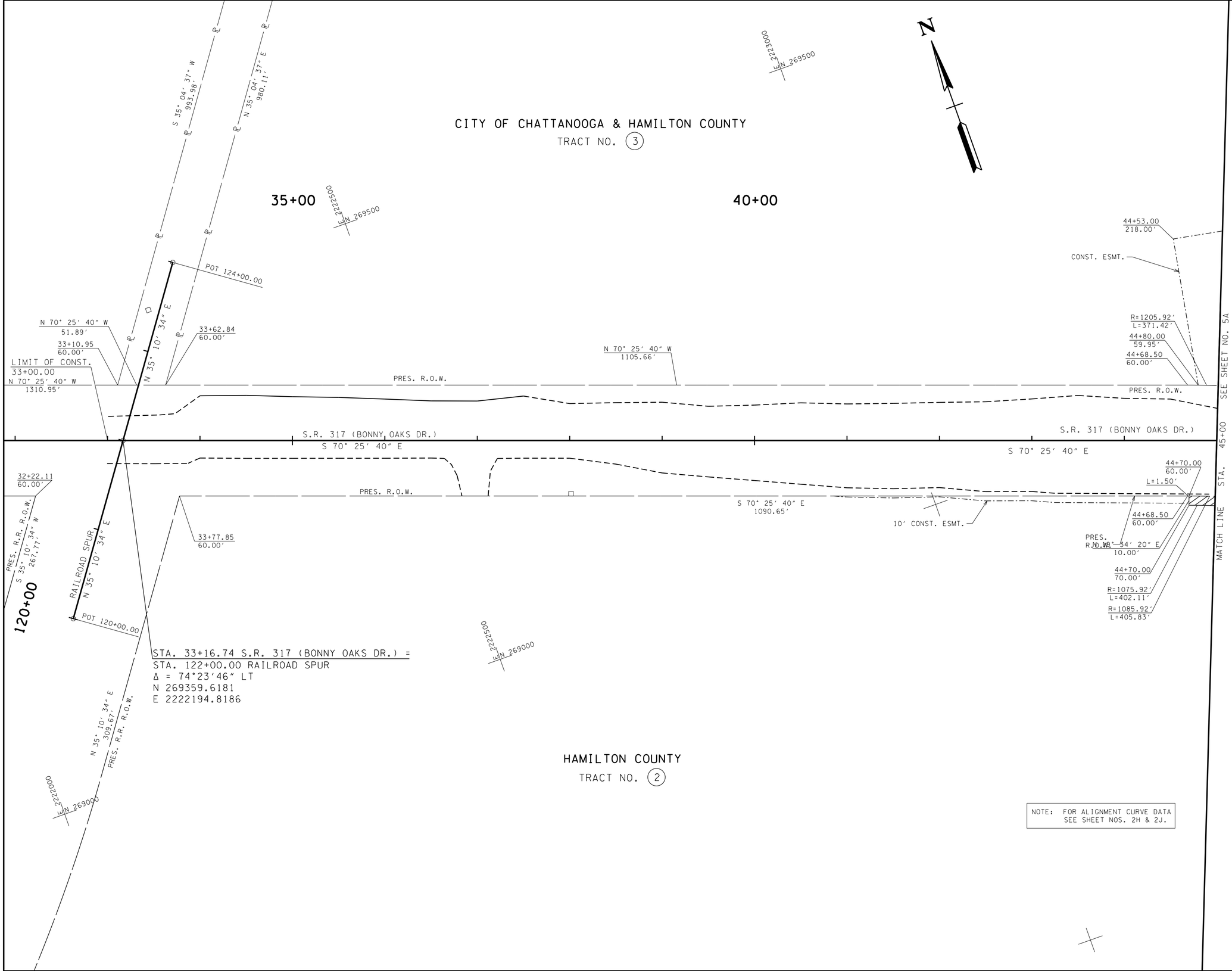
5/6/2014

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	4A
CONST.	2014	33960-3509-04	4A

REV. 3-28-14: ADDED CONST. ESMT. AT INLET OF BOX CULVERT AT STA. 45+27, S.R. 317.



NOTE: FOR ALIGNMENT CURVE DATA SEE SHEET NOS. 2H & 2J.

UNOFFICIAL SET

NOT FOR BIDDING

COORDINATE VALUES ARE BASED ON CHATTANOOGA/HAMILTON COUNTY MONUMENT NETWORK SYSTEM (CHAM) NAD/83(UN-ADJUSTED), HAVING A PROJECT COMBINED FACTOR OF 1.00000679. ALL ELEVATIONS ARE BASED ON NGVD 29 AS PER CHAM DATA SHEETS. HORIZONTAL ORDER DERIVED BY CONVENTIONAL TRAVERSE METHODOLOGY FROM PRIMARY MONUMENTATION, AS SET BY BWSC, AND VERTICAL ORDER DERIVED BY DIFFERENTIAL LEVELING FROM PRIMARY MONUMENTATION, AS SET BY BWSC.

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R.O.W. DETAILS

BEGIN TO STA. 45+00

SCALE: 1"= 50'

5/6/2014
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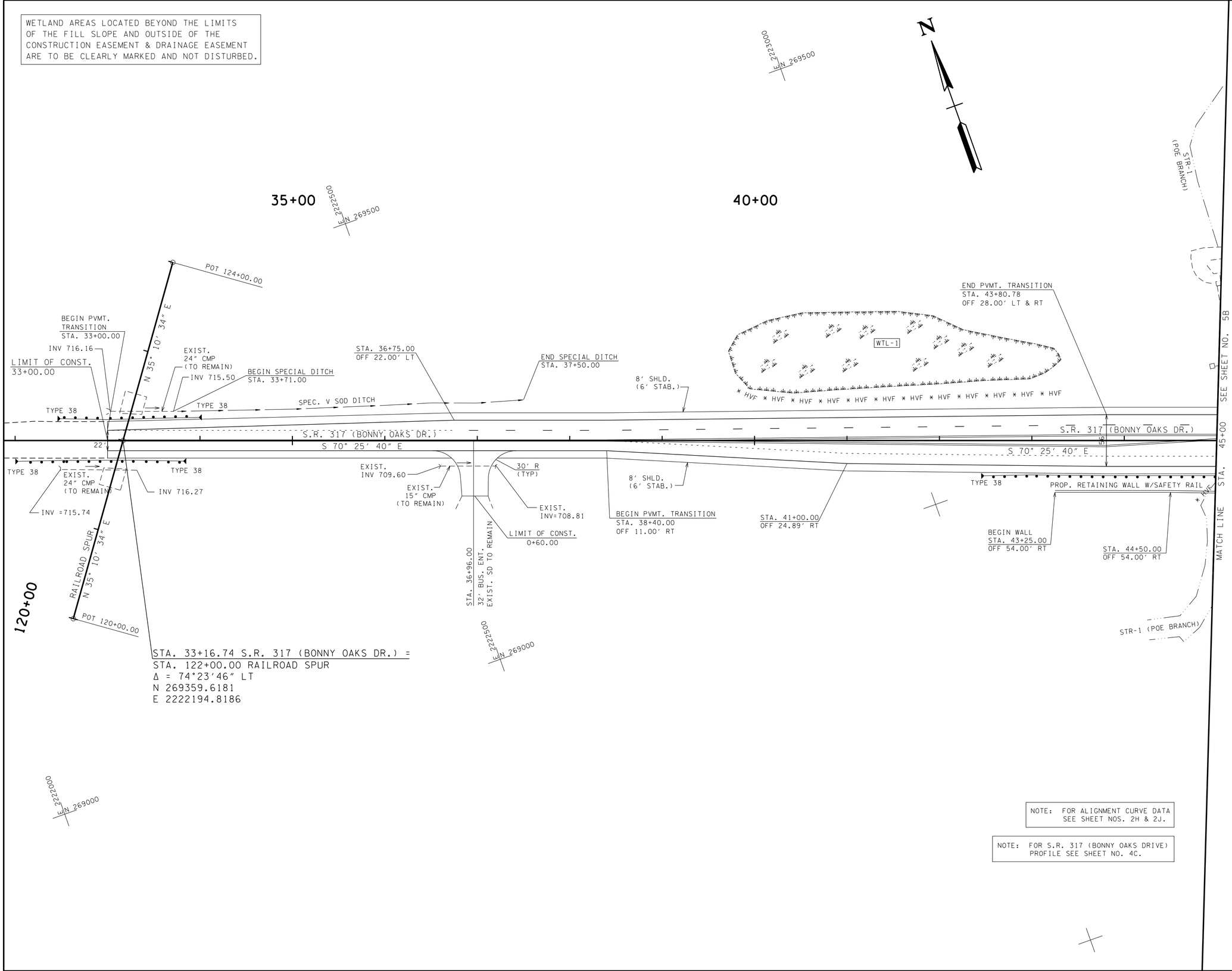
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	4B
CONST.	2014	33960-3509-04	4B

WETLAND AREAS LOCATED BEYOND THE LIMITS OF THE FILL SLOPE AND OUTSIDE OF THE CONSTRUCTION EASEMENT & DRAINAGE EASEMENT ARE TO BE CLEARLY MARKED AND NOT DISTURBED.



STA. 33+16.74 S.R. 317 (BONNY OAKS DR.) =
STA. 122+00.00 RAILROAD SPUR
Δ = 74°23'46" LT
N 269359.6181
E 2222194.8186

NOTE: FOR ALIGNMENT CURVE DATA SEE SHEET NOS. 2H & 2J.

NOTE: FOR S.R. 317 (BONNY OAKS DRIVE) PROFILE SEE SHEET NO. 4C.

UNOFFICIAL SET

NOT FOR BIDDING

COORDINATE VALUES ARE BASED ON CHATTANOOGA/HAMILTON COUNTY MONUMENT NETWORK SYSTEM (CHAM) NAD/83(UN-ADJUSTED), HAVING A PROJECT COMBINED FACTOR OF 1.00000679. ALL ELEVATIONS ARE BASED ON NGVD 29 AS PER CHAM DATA SHEETS. HORIZONTAL ORDER DERIVED BY CONVENTIONAL TRAVERSE METHODOLOGY FROM PRIMARY MONUMENTATION, AS SET BY BWSC, AND VERTICAL ORDER DERIVED BY DIFFERENTIAL LEVELING FROM PRIMARY MONUMENTATION, AS SET BY BWSC.

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PROPOSED LAYOUT

BEGIN TO STA. 45+00

SCALE: 1"= 50'

3/18/2014
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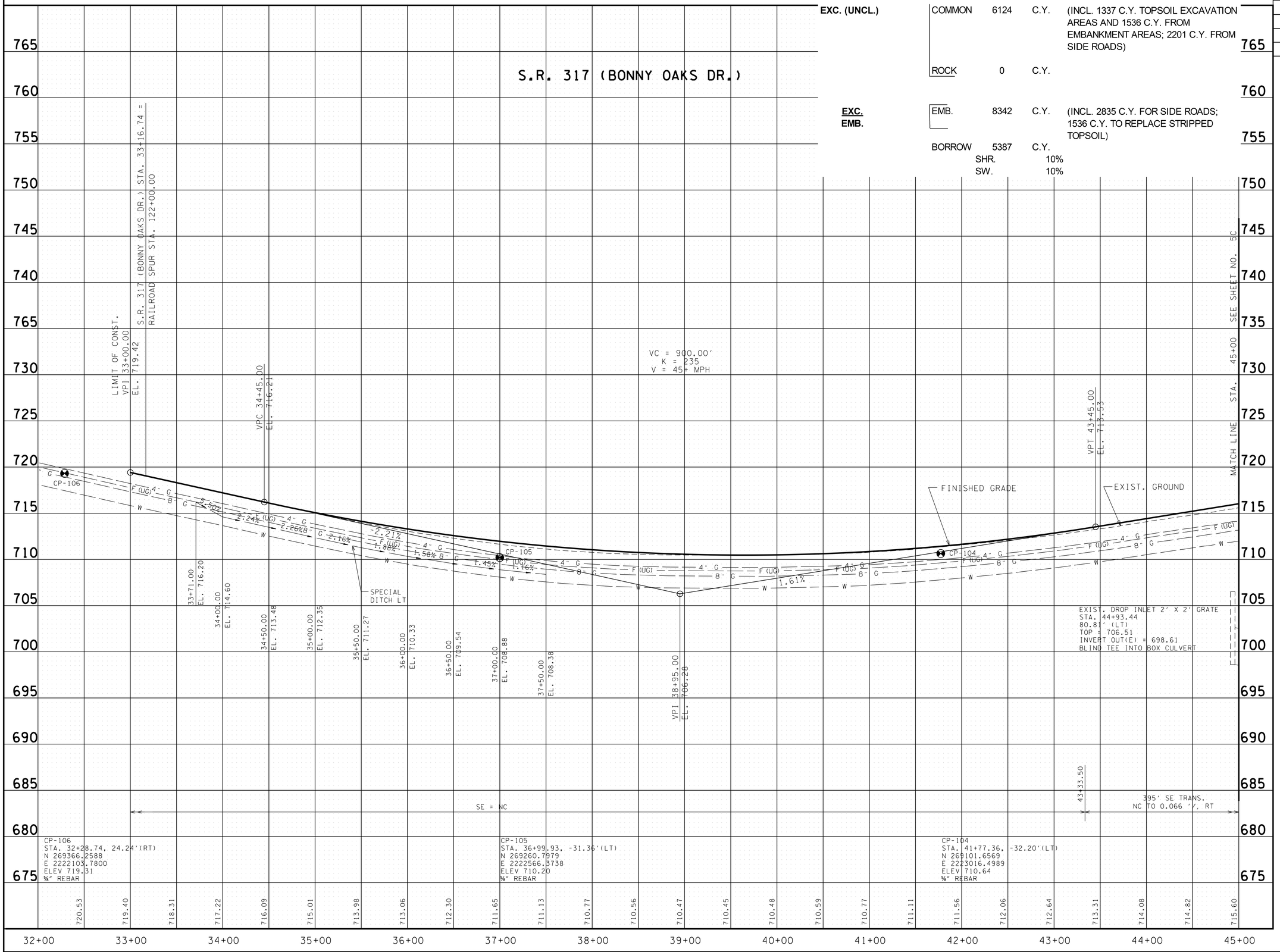
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	4C
CONST.	2014	33960-3509-04	4C

EXC. (UNCL.)	COMMON	6124	C.Y.	(INCL. 1337 C.Y. TOPSOIL EXCAVATION AREAS AND 1536 C.Y. FROM EMBANKMENT AREAS; 2201 C.Y. FROM SIDE ROADS)
	ROCK	0	C.Y.	
EXC. EMB.	EMB.	8342	C.Y.	(INCL. 2835 C.Y. FOR SIDE ROADS; 1536 C.Y. TO REPLACE STRIPPED TOPSOIL)
	BORROW	5387	C.Y.	
	SHR.		10%	
	SW.		10%	



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PROFILE

S.R. 317 (BONNY OAKS DR.)
BEGIN TO STA. 45+00
SCALE: 1"= 50' HORIZ.
1"= 5' VERT.

3/17/2014
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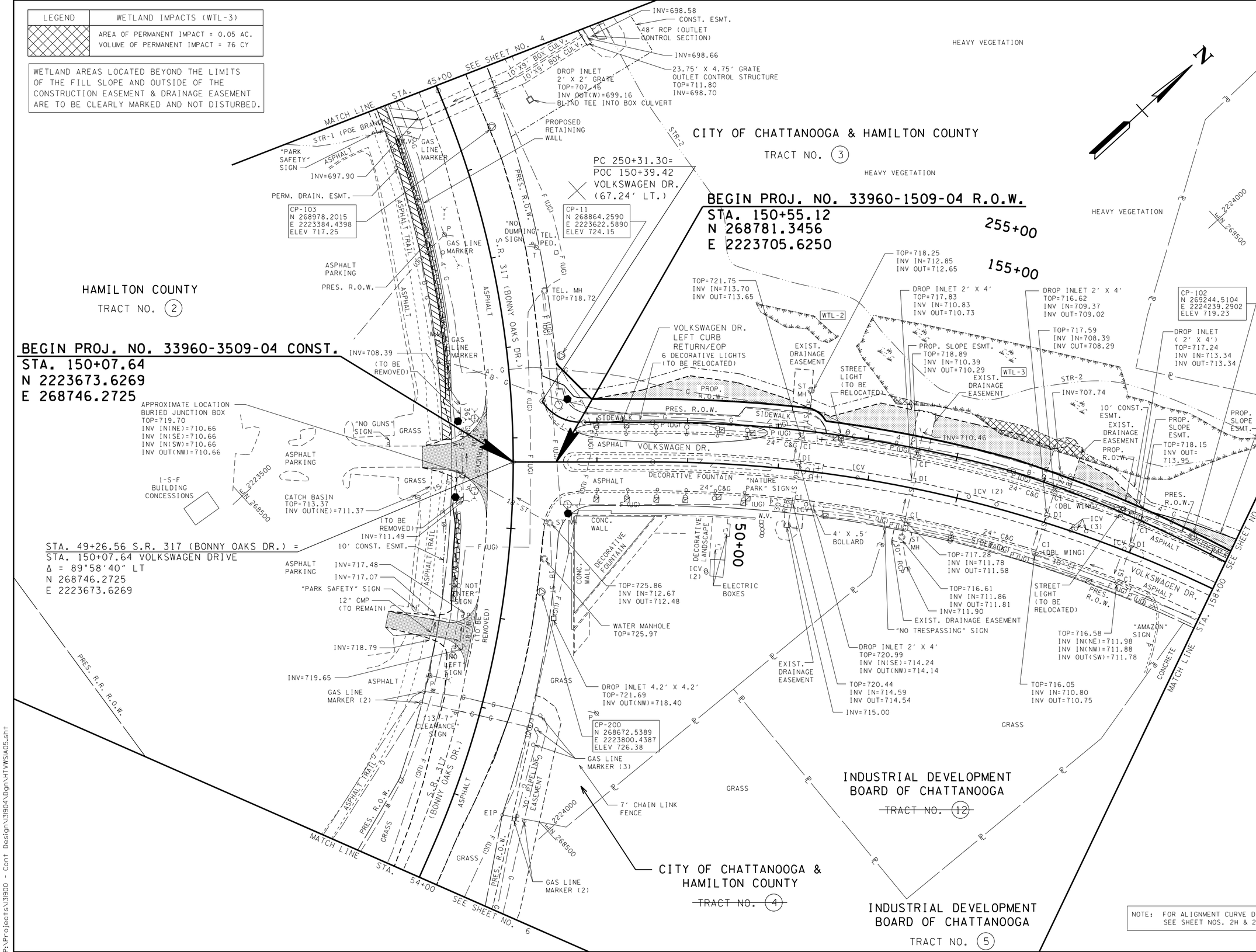
LEGEND	WETLAND IMPACTS (WTL-3)
	AREA OF PERMANENT IMPACT = 0.05 AC. VOLUME OF PERMANENT IMPACT = 76 CY

WETLAND AREAS LOCATED BEYOND THE LIMITS OF THE FILL SLOPE AND OUTSIDE OF THE CONSTRUCTION EASEMENT & DRAINAGE EASEMENT ARE TO BE CLEARLY MARKED AND NOT DISTURBED.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	5
CONST.	2014	33960-3509-04	5

REV. 3-28-14: ADDED CONST. ESMT. AT INLET OF BOX CULVERT AT STA. 45+27, S.R. 317.



UNOFFICIAL SET

NOT FOR BIDDING

COORDINATE VALUES ARE BASED ON CHATTANOOGA/HAMILTON COUNTY MONUMENT NETWORK SYSTEM (CHAM) NAD/83(UN-ADJUSTED), HAVING A PROJECT COMBINED FACTOR OF 1.00000679. ALL ELEVATIONS ARE BASED ON NGVD 29 AS PER CHAM DATA SHEETS. HORIZONTAL ORDER DERIVED BY CONVENTIONAL TRAVERSE METHODOLOGY FROM PRIMARY MONUMENTATION, AS SET BY BWSC, AND VERTICAL ORDER DERIVED BY DIFFERENTIAL LEVELING FROM PRIMARY MONUMENTATION, AS SET BY BWSC.

SEALED BY

NOTE: FOR ALIGNMENT CURVE DATA SEE SHEET NOS. 2H & 2J.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 45+00 TO STA. 54+00

SCALE: 1"= 50'

5/6/2014
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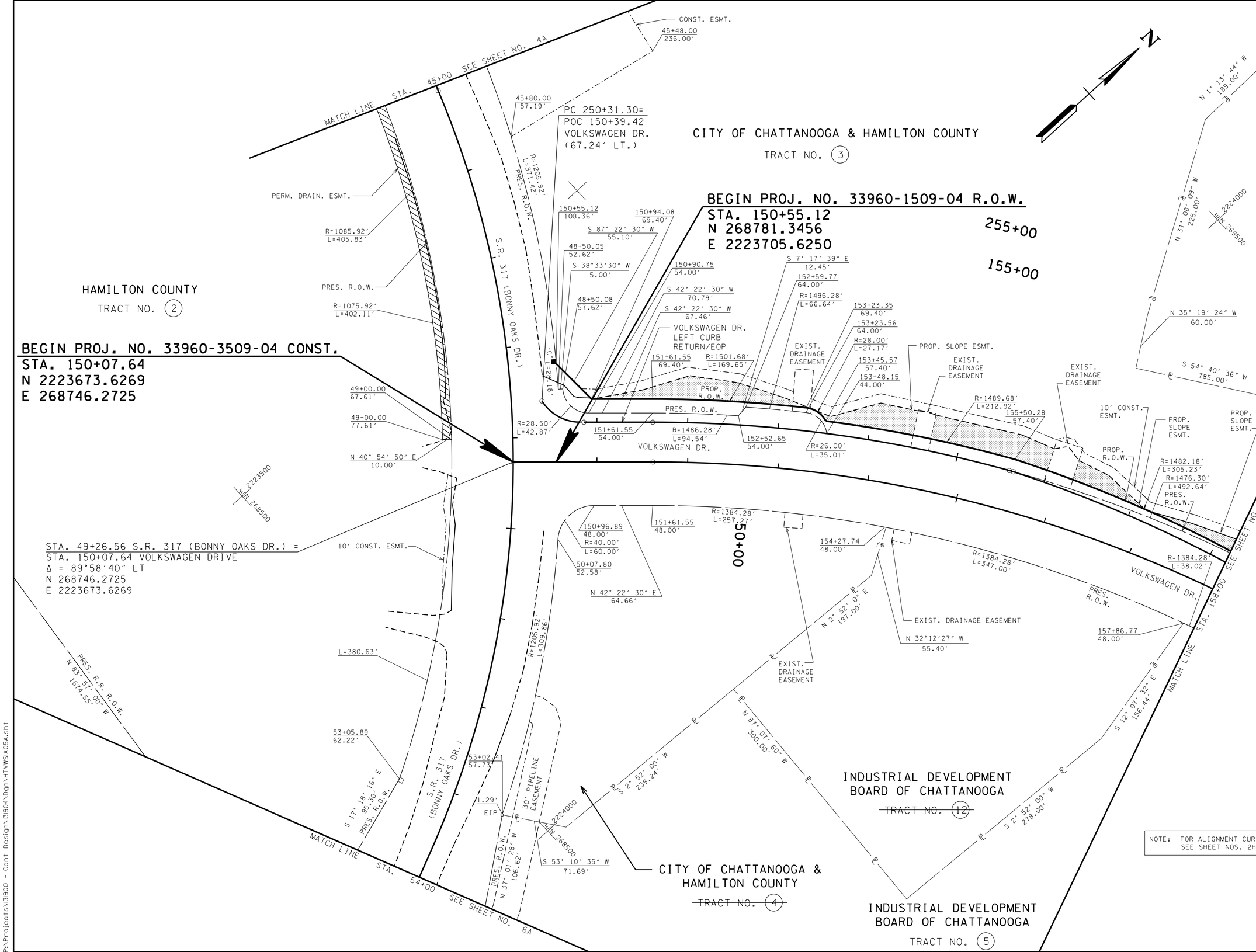
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	5A
CONST.	2014	33960-3509-04	5A

REV. 3-28-14: ADDED CONST. ESMT. AT INLET OF BOX CULVERT AT STA. 45+27, S.R. 317.



UNOFFICIAL SET

NOT FOR BIDDING

COORDINATE VALUES ARE BASED ON CHATTANOOGA/HAMILTON COUNTY MONUMENT NETWORK SYSTEM (CHAM) NAD/83(UN-ADJUSTED), HAVING A PROJECT COMBINED FACTOR OF 1.00000679. ALL ELEVATIONS ARE BASED ON NGVD 29 AS PER CHAM DATA SHEETS. HORIZONTAL ORDER DERIVED BY CONVENTIONAL TRAVERSE METHODOLOGY FROM PRIMARY MONUMENTATION, AS SET BY BWSC, AND VERTICAL ORDER DERIVED BY DIFFERENTIAL LEVELING FROM PRIMARY MONUMENTATION, AS SET BY BWSC.

SEALED BY

NOTE: FOR ALIGNMENT CURVE DATA SEE SHEET NOS. 2H & 2J.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

R.O.W. DETAILS

STA. 45+00 TO STA. 54+00

SCALE: 1"= 50'

5/6/2014
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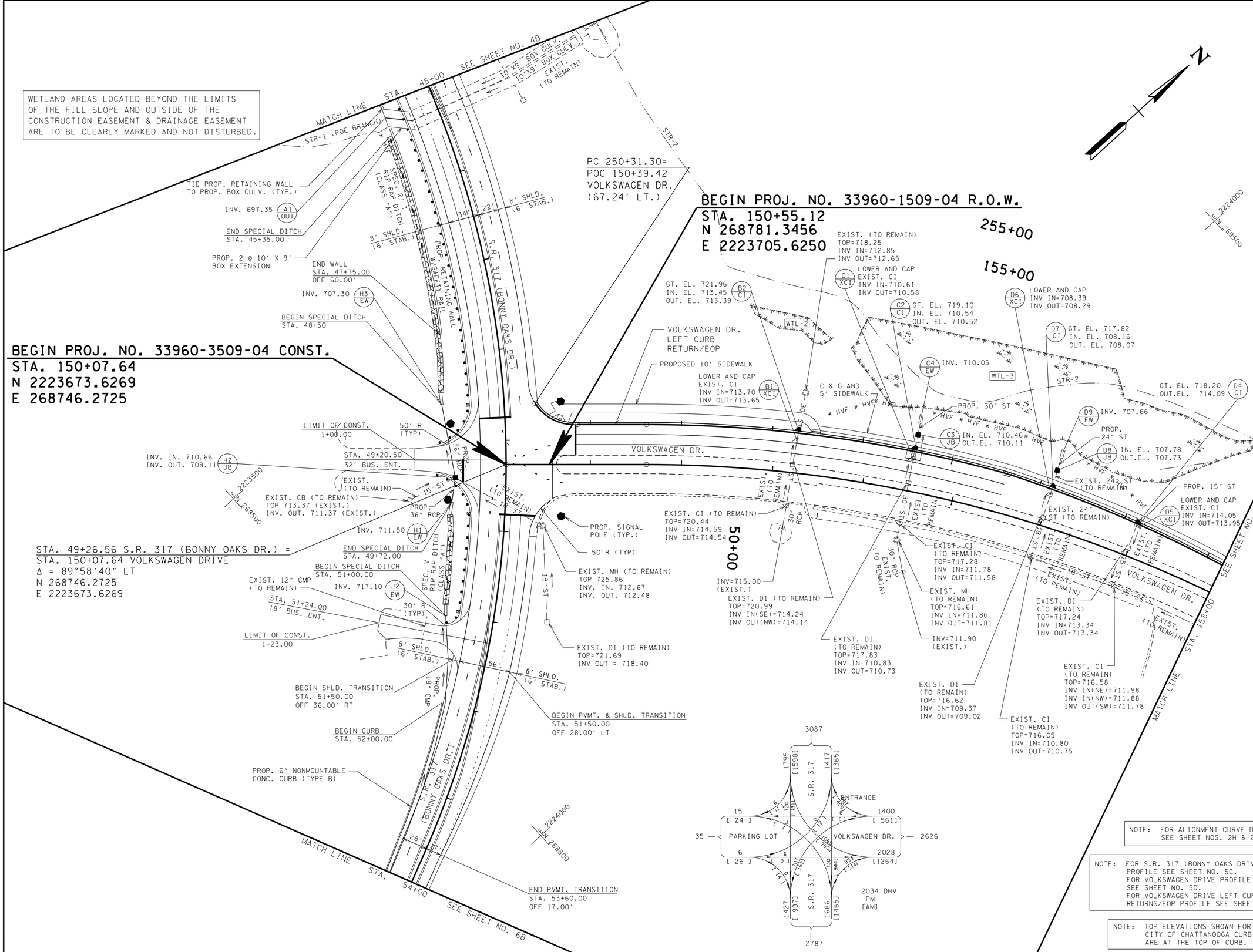
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	5B
CONST.	2014	33960-3509-04	5B



UNOFFICIAL SET

NOT FOR BIDDING

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SEALED BY

NOTE: FOR ALIGNMENT CURVE DATA SEE SHEET NOS. 2H & 2J.

NOTE: FOR S.R. 317 (BONNY OAKS DRIVE) PROFILE SEE SHEET NO. 5C. FOR VOLKSWAGEN DRIVE PROFILE SEE SHEET NO. 5D. FOR VOLKSWAGEN DRIVE LEFT CURB RETURNS/EOP PROFILE SEE SHEET NO. 5E.

NOTE: TOP ELEVATIONS SHOWN FOR CITY OF CHATTANOOGA CURB INLETS ARE AT THE TOP OF CURB.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 45+00 TO STA. 54+00

SCALE: 1"= 50'

5/6/2014
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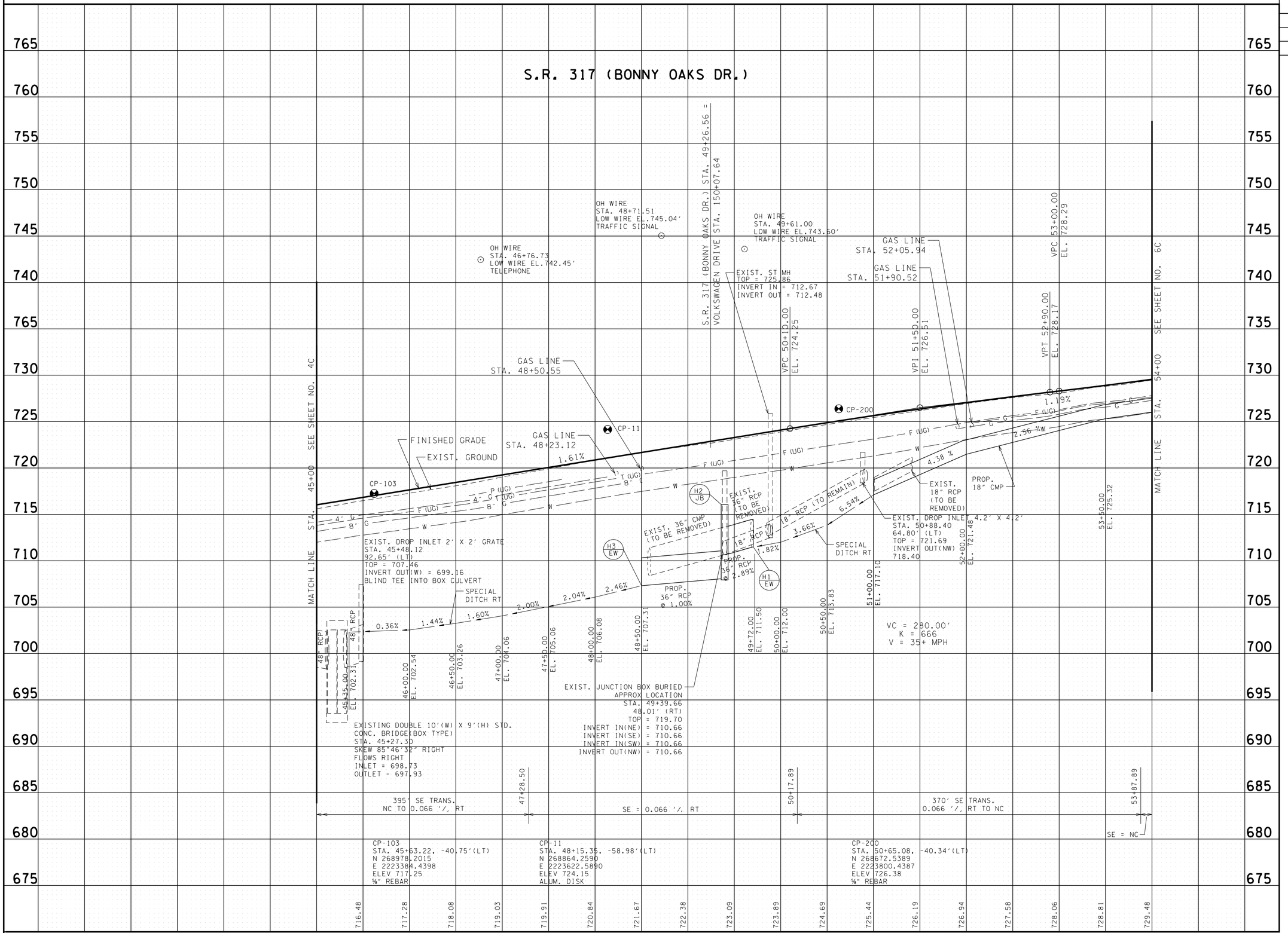
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	5C
CONST.	2014	33960-3509-04	5C



UNOFFICIAL SET

NOT FOR BIDDING

SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE

S.R. 317 (BONNY OAKS DR.)
STA. 45+00 TO STA. 54+00
SCALE: 1"= 50' HORIZ.
1"= 5' VERT.

3/17/2014
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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	5D
CONST.	2014	33960-3509-04	5D

VOLKSWAGEN DRIVE

BEGIN PROJ. NO. 33960-3509-04 CONST.
STA. 150+07.64
N 2223673.6269
E 268746.2725

BEGIN PROJ. NO. 33960-1509-04 R.O.W.
STA. 150+55.12
N 268781.3456
E 2223705.6250

765 760 755 750 745 740 735 730 725 720 715 710 705 700 695 690 685 680 675 670

149+00 150+00 151+00 152+00 153+00 154+00 155+00 156+00 157+00 158+00

MATCH LINE STA. 158+00 SEE SHEET NO. 7C

UNDERGROUND TELEPHONE STA. 150+28.22

18" RCP

UNDERGROUND TELEPHONE STA. 150+93.34

UNDERGROUND FIBER OPTIC STA. 150+55.83

EXIST. DROP INLET 4.2' X 4.2'
STA. 150+52.45
172.52' (RT)
TOP = 721.69
INVERT OUT(NW) = 718.40

EXIST. STORM DRAIN MANHOLE
STA. 150+48.09
67.22' (RT)
TOP = 725.86
INVERT IN(SE) = 712.67
INVERT OUT(SW) = 712.48

30" RCP
STA. 153+17.85
58.79' (RT)
INVERT = 715.00

EXIST. CATCH BASIN
STA. 153+19.45
36.51' (RT)
TOP = 720.44
INVERT IN(SE) = 714.59
INVERT OUT(NW) = 714.54

EXIST. DROP INLET 2' X 4'
STA. 153+21.34
8.91' (LT)
TOP = 720.99
INVERT IN(SE) = 714.24
INVERT OUT(NW) = 714.14

EXIST. CATCH BASIN
STA. 153+23.02
35.81' (LT)
TOP = 721.75
INVERT IN(SE) = 713.70
INVERT OUT(NW) = 713.65

EXIST. STORM DRAIN MANHOLE
STA. 153+26.39
89.04' (LT)
TOP = 718.25
INVERT IN(SE) = 712.85
INVERT OUT(NW) = 712.65

30" RCP

30" RCP
STA. 154+62.22
86.59' (RT)
INVERT = 711.90

30" RCP
STA. 154+48.87
-62.79' (LT)
INVERT = 710.46

EXIST. STORM DRAIN MANHOLE
STA. 154+49.02
55.12' (RT)
TOP = 716.61
INVERT IN(SE) = 711.86
INVERT OUT(NW) = 711.81

EXIST. CATCH BASIN
STA. 154+49.02
36.55' (RT)
TOP = 717.28
INVERT IN(SE) = 711.78
INVERT OUT(NW) = 711.58

EXIST. DROP INLET 2' X 4'
STA. 154+49.24
8.58' (LT)
TOP = 717.83
INVERT IN(SE) = 710.83
INVERT OUT(NW) = 710.73

EXIST. CATCH BASIN
STA. 154+48.73
36.05' (LT)
TOP = 718.89
INVERT IN(SE) = 710.39
INVERT OUT(NW) = 710.29

SE = EXIST.

CP-102

18" RCP

18" RCP

24" RCP

15" RCP

STA. 156+00.08
-63.06' (LT)
INVERT = 707.74

EXIST. CATCH BASIN
STA. 156+01.17
36.52' (RT)
TOP = 716.05
INVERT IN(NE) = 710.80
INVERT OUT(NW) = 710.75

EXIST. DROP INLET 2' X 4'
STA. 156+00.52
8.68' (LT)
TOP = 716.62
INVERT IN(SE) = 709.37
INVERT OUT(NW) = 709.02

EXIST. CATCH BASIN
STA. 156+00.75
36.04' (LT)
TOP = 717.59
INVERT IN(SE) = 708.39
INVERT OUT(NW) = 708.29

EXIST. CATCH BASIN
STA. 156+98.79
36.08' (LT)
TOP = 718.15
INVERT OUT(SE) = 713.95

EXIST. DROP INLET 2' X 4'
STA. 156+99.06
8.83' (LT)
TOP = 717.24
INVERT IN(NW) = 713.34
INVERT OUT(SE) = 713.34

EXIST. CATCH BASIN
STA. 156+99.44
36.51' (RT)
TOP = 716.58
INVERT IN(NE) = 711.98
INVERT IN(NW) = 711.88
INVERT OUT(SW) = 711.78

CP-102
STA. 157+56.42, -43.37' (LT)
N 269244.5104
E 2224239.2902
ELEV 719.23
¾" REBAR

UNOFFICIAL SET

NOT FOR BIDDING

SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE

VOLKSWAGEN DRIVE
STA. 150+00 TO STA. 158+00
SCALE: 1"= 50' HORIZ.
1"= 5' VERT.

3/17/2014
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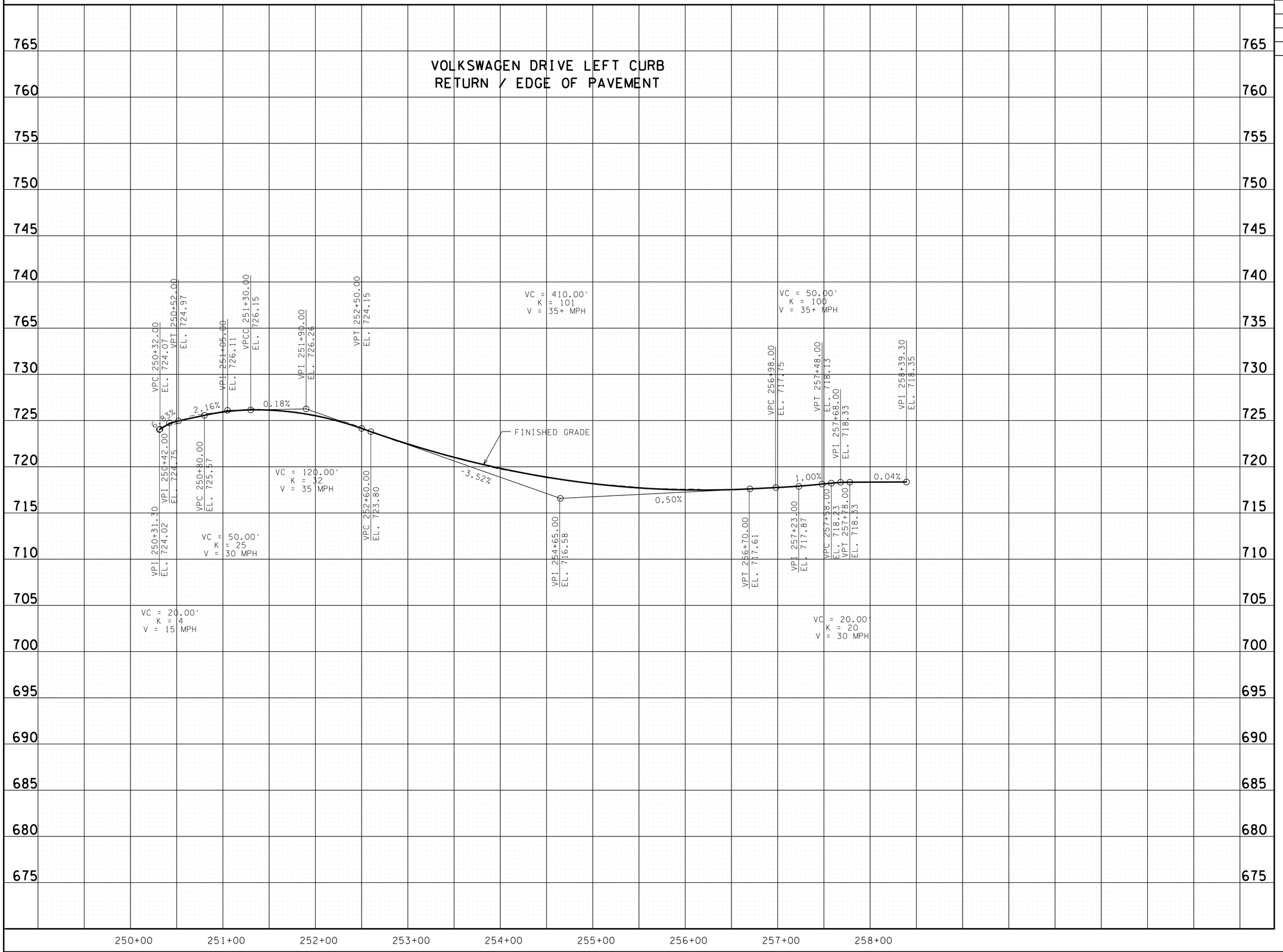
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	5E
CONST.	2014	33960-3509-04	5E



UNOFFICIAL SET

NOT FOR BIDDING

SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE

VOLKSWAGEN DRIVE
LEFT CURB RETURNS/EOP

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

3/17/2014
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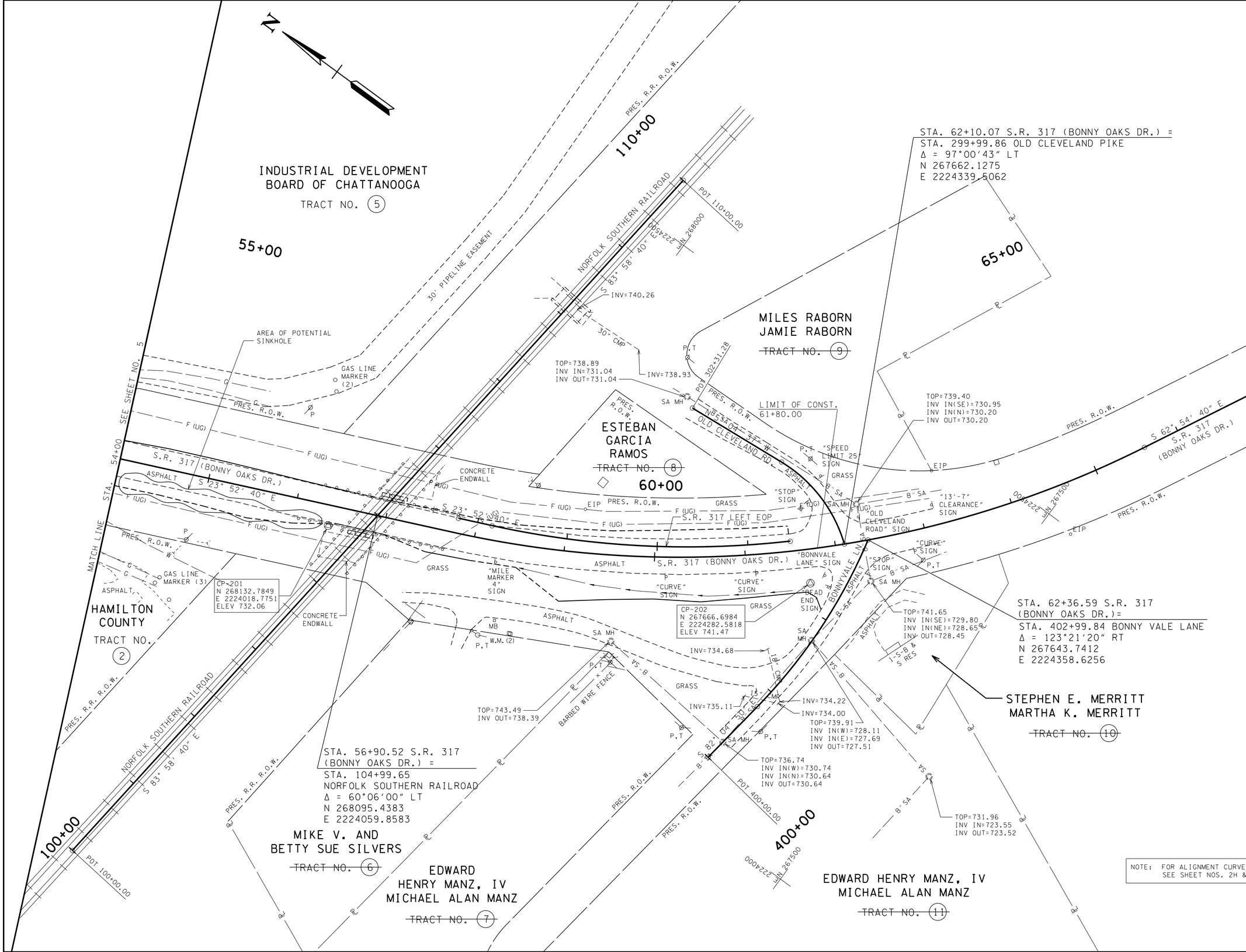
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	6
CONST.	2014	33960-3509-04	6



UNOFFICIAL SET

NOT FOR BIDDING

COORDINATE VALUES ARE BASED ON CHATTANOOGA/HAMILTON COUNTY MONUMENT NETWORK SYSTEM (CHAM) NAD/83(UN-ADJUSTED), HAVING A PROJECT COMBINED FACTOR OF 1.00000679. ALL ELEVATIONS ARE BASED ON NGVD 29 AS PER CHAM DATA SHEETS. HORIZONTAL ORDER DERIVED BY CONVENTIONAL TRAVERSE METHODOLOGY FROM PRIMARY MONUMENTATION, AS SET BY BWSC, AND VERTICAL ORDER DERIVED BY DIFFERENTIAL LEVELING FROM PRIMARY MONUMENTATION, AS SET BY BWSC.

SEALED BY

NOTE: FOR ALIGNMENT CURVE DATA SEE SHEET NOS. 2H & 2J.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 54+00 TO END

SCALE: 1"= 50'

3/17/2014
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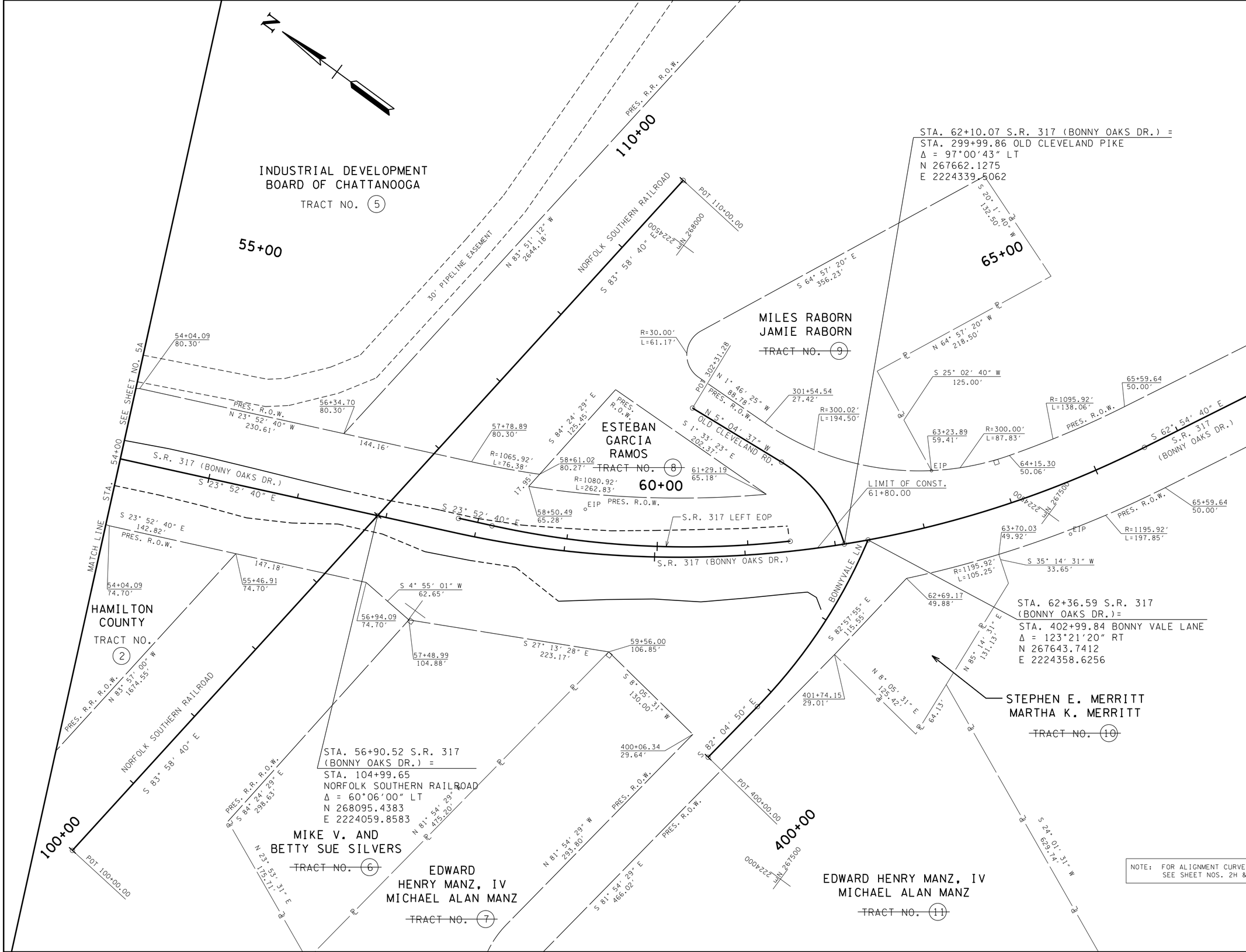
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	6A
CONST.	2014	33960-3509-04	6A



UNOFFICIAL SET

NOT FOR BIDDING

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SEALED BY

NOTE: FOR ALIGNMENT CURVE DATA SEE SHEET NOS. 2H & 2J.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

R.O.W. DETAILS

STA. 54+00 TO END

SCALE: 1"= 50'

3/17/2014
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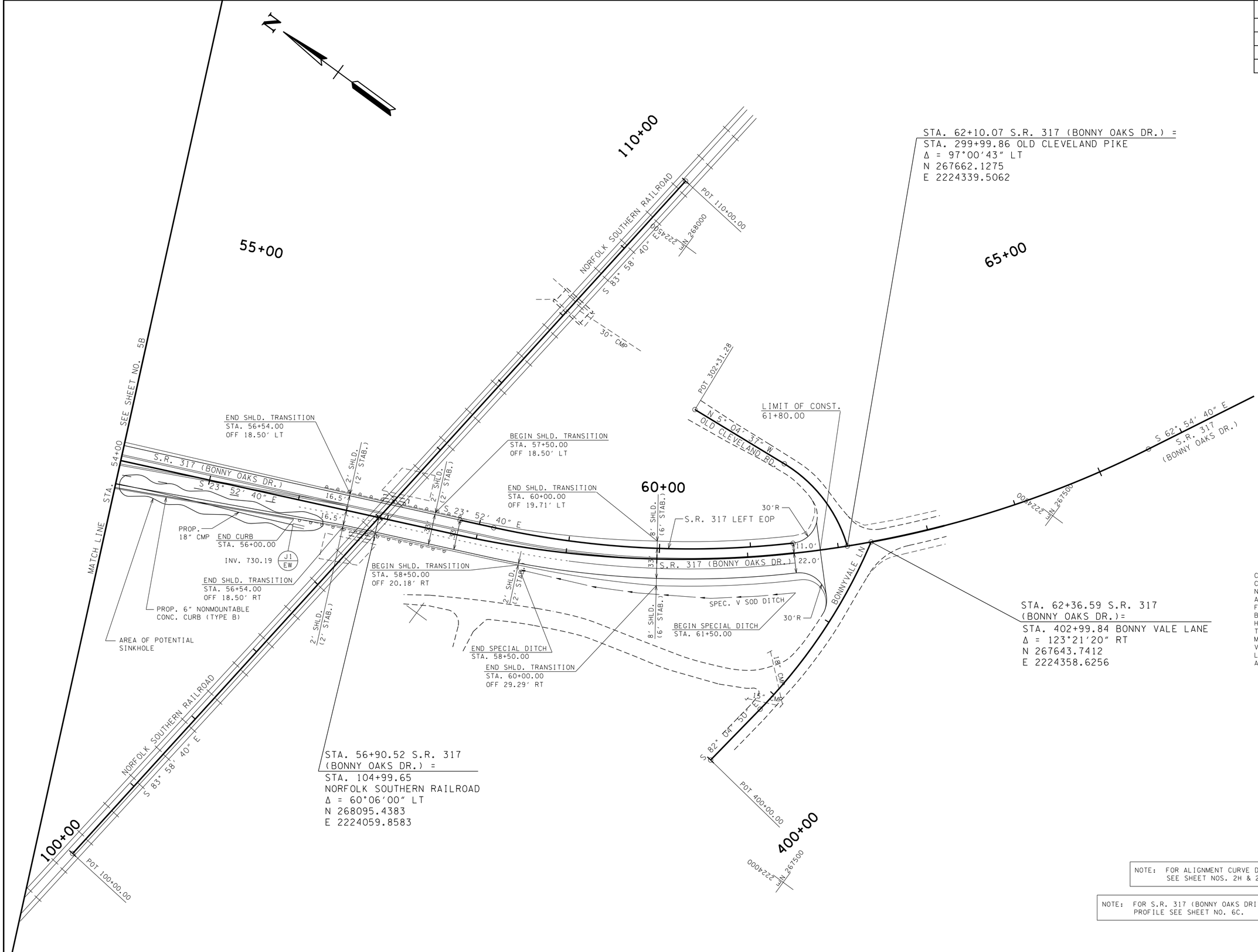
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	6B
CONST.	2014	33960-3509-04	6B



UNOFFICIAL SET

NOT FOR BIDDING

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SEALED BY

NOTE: FOR ALIGNMENT CURVE DATA SEE SHEET NOS. 2H & 2J.

NOTE: FOR S.R. 317 (BONNY OAKS DRIVE) PROFILE SEE SHEET NO. 6C.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 54+00 TO END

SCALE: 1"= 50'

3/17/2014
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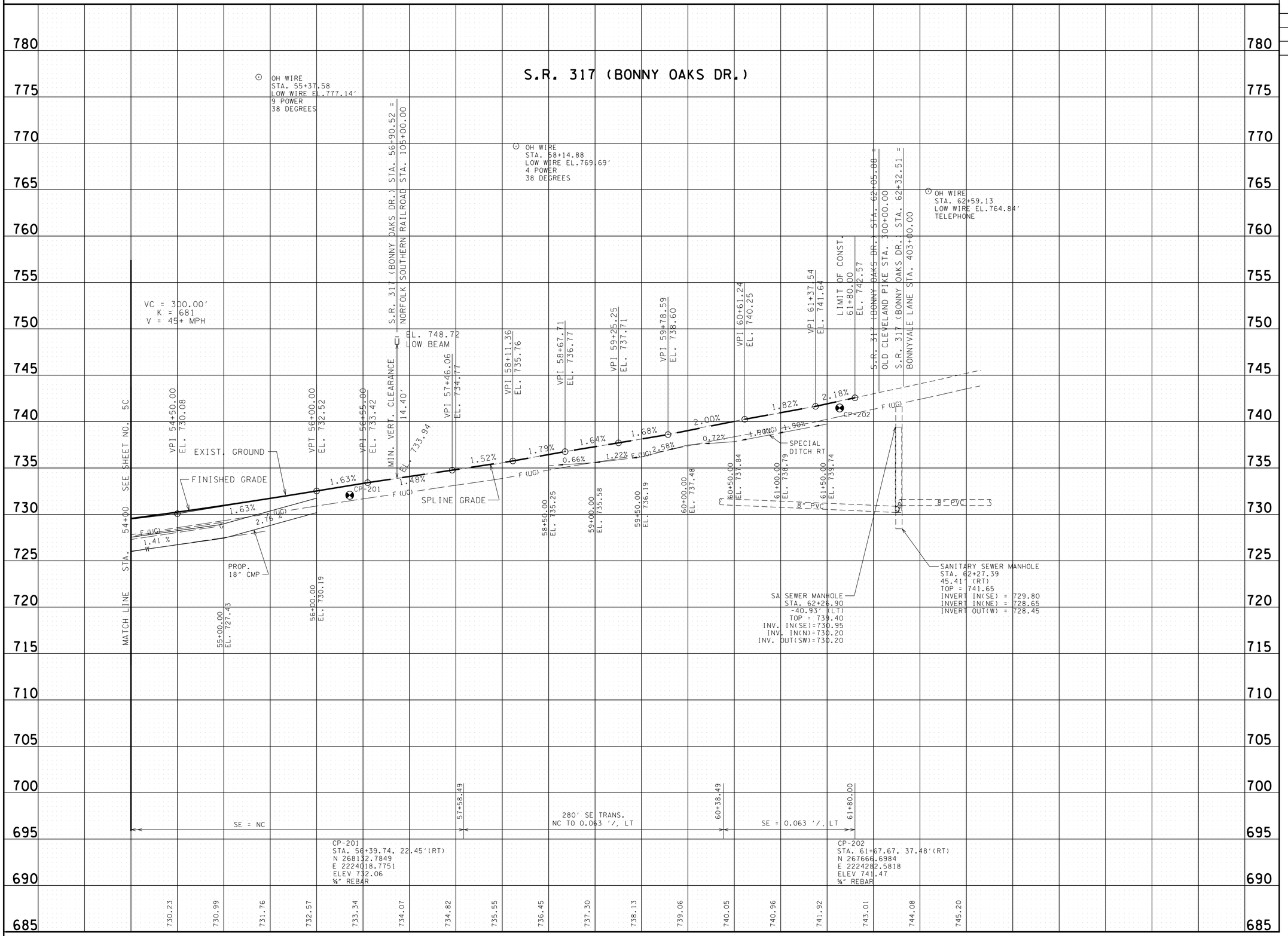
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	6C
CONST.	2014	33960-3509-04	6C



UNOFFICIAL SET

NOT FOR BIDDING

SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE

S.R. 317 (BONNY OAKS DR.)

STA. 54+00 TO END

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

3/17/2014
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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	7
CONST.	2014	33960-3509-04	7

WETLAND AREAS LOCATED BEYOND THE LIMITS OF THE FILL SLOPE AND OUTSIDE OF THE CONSTRUCTION EASEMENT & DRAINAGE EASEMENT ARE TO BE CLEARLY MARKED AND NOT DISTURBED.

FATD-H, LLC
~~TRACT NO. 14~~

CITY OF CHATTANOOGA & HAMILTON COUNTY
TRACT NO. 3

INDUSTRIAL DEVELOPMENT BOARD OF CHATTANOOGA
~~TRACT NO. 13~~

INDUSTRIAL DEVELOPMENT BOARD OF CHATTANOOGA
TRACT NO. 5

INDUSTRIAL DEVELOPMENT BOARD OF CHATTANOOGA
TRACT NO. 5

STA. 164+26.43 VOLKSWAGEN DRIVE =
STA. 200+00.00 DISCOVERY DRIVE
Δ = 88°56'29" LT
N 269446.9586
E 2224881.5206

PT 258+39.30 =
POC 158+20.00 VOLKSWAGEN DR. (31.73' RT.)

POT 459+02.65
AMAZON DRIVEWAY ENTRANCE =
POT 159+04.08
VOLKSWAGEN DR. (32.15' LT.)

POT 766+74.88 AMAZON DRIVEWAY =
POT 466+74.88 AMAZON DRIVEWAY ENTRANCE (18.00' RT.)
POT 566+74.88 AMAZON DRIVEWAY EXIT (18.00' LT.)

END PROJ. NO. 33960-1509-04 R.O.W.
STA. 165+38.55
N 269483.9589
E 2224987.3152

END PROJ.
NO. 33960-3509-04 CONST.
STA. 166+00.00
N 2225046.7489
E 269499.5359

PT 570+47.10
AMAZON DRIVEWAY EXIT =
POC 166+01.06
VOLKSWAGEN DR.
(42.06' LT.)

CP-100
N 269491.5027
E 2224901.3720
ELEV 726.68

CP-8
N 269395.4640
E 2224880.2510
ELEV 724.02

CP-9
N 269564.0090
E 2225394.3210
ELEV 731.80

WTL-4

160+00
165+00
460+00
465+00
570+00
770+00

SEE SHEET NO. 5
MATCH LINE STA. 158+00

COORDINATE VALUES ARE BASED ON CHATTANOOGA/HAMILTON COUNTY MONUMENT NETWORK SYSTEM (CHAM) NAD/83(UN-ADJUSTED), HAVING A PROJECT COMBINED FACTOR OF 1.00000679. ALL ELEVATIONS ARE BASED ON NGVD 29 AS PER CHAM DATA SHEETS. HORIZONTAL ORDER DERIVED BY CONVENTIONAL TRAVERSE METHODOLOGY FROM PRIMARY MONUMENTATION, AS SET BY BWSC, AND VERTICAL ORDER DERIVED BY DIFFERENTIAL LEVELING FROM PRIMARY MONUMENTATION, AS SET BY BWSC.

NOTE: FOR ALIGNMENT CURVE DATA SEE SHEET NOS. 2H & 2J.

UNOFFICIAL SET
NOT FOR BIDDING

SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 158+00 TO END

SCALE: 1"= 50'

3/19/2014
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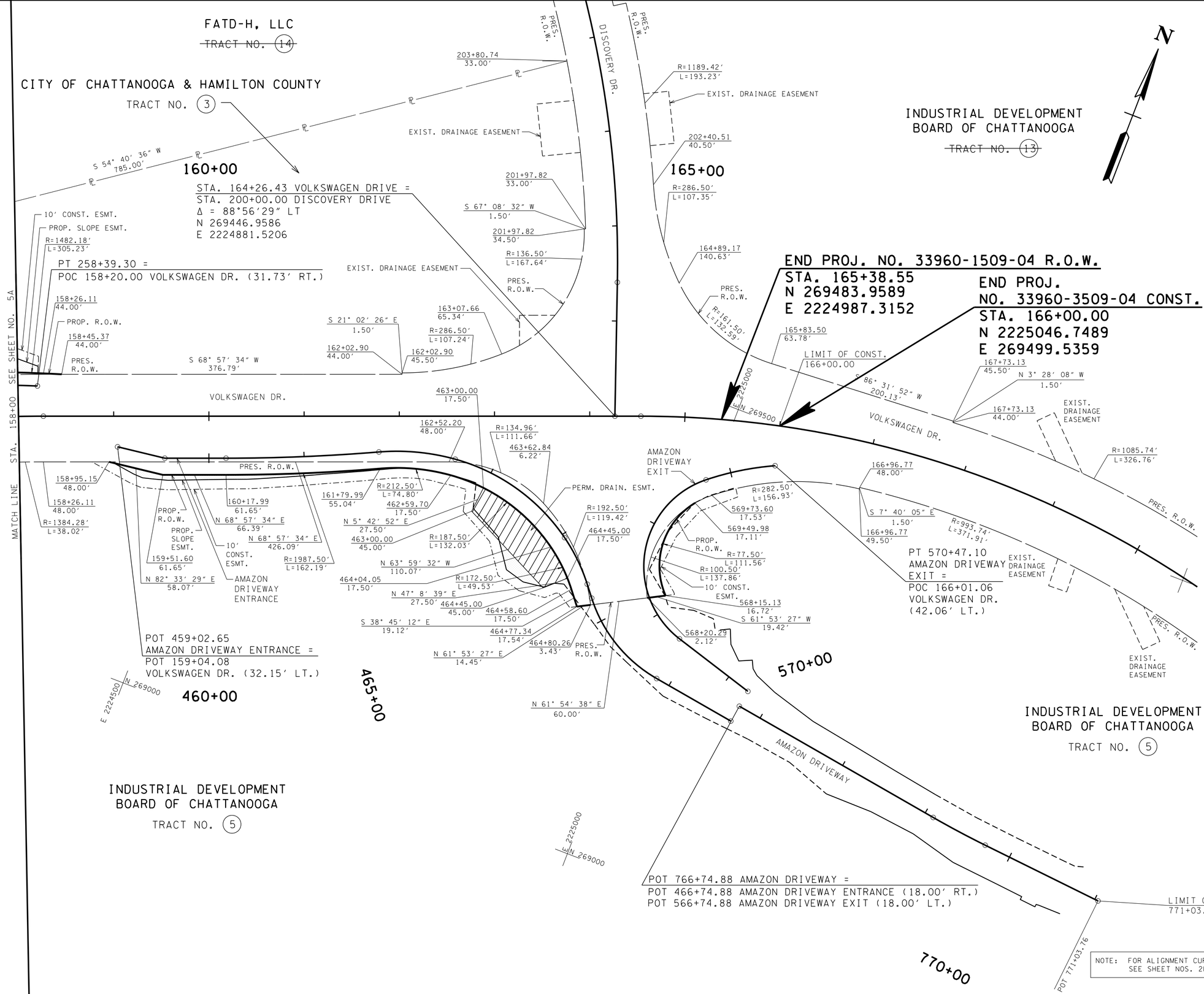
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	7A
CONST.	2014	33960-3509-04	7A



UNOFFICIAL SET

NOT FOR BIDDING

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SEALED BY

NOTE: FOR ALIGNMENT CURVE DATA SEE SHEET NOS. 2H & 2J.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

R.O.W. DETAILS

STA. 158+00 TO END

SCALE: 1"= 50'

3/17/2014
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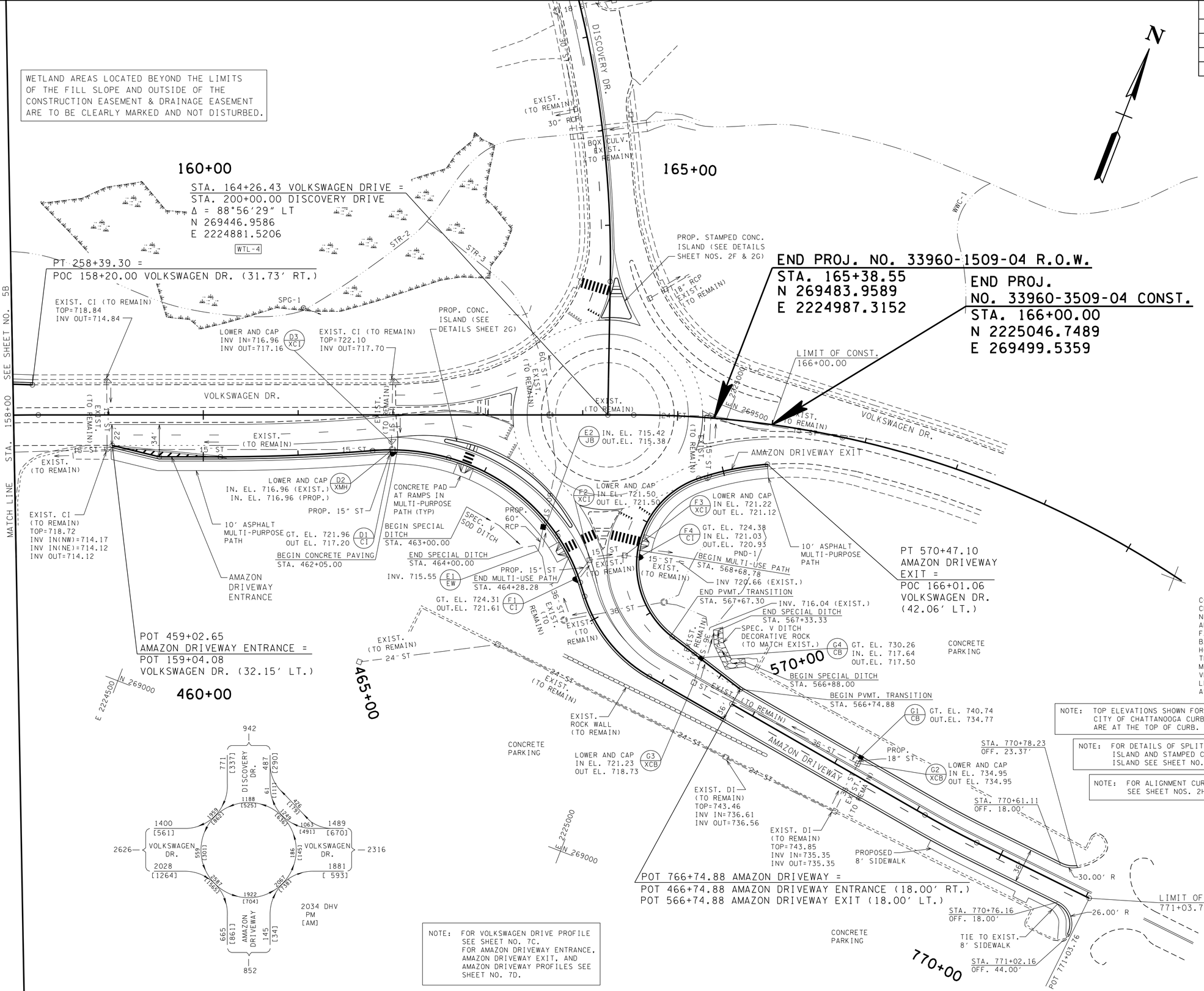
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	7B
CONST.	2014	33960-3509-04	7B

WETLAND AREAS LOCATED BEYOND THE LIMITS OF THE FILL SLOPE AND OUTSIDE OF THE CONSTRUCTION EASEMENT & DRAINAGE EASEMENT ARE TO BE CLEARLY MARKED AND NOT DISTURBED.



NOTE: FOR VOLKSWAGEN DRIVE PROFILE SEE SHEET NO. 7C. FOR AMAZON DRIVEWAY ENTRANCE, AMAZON DRIVEWAY EXIT, AND AMAZON DRIVEWAY PROFILES SEE SHEET NO. 7D.

COORDINATE VALUES ARE BASED ON CHATTANOOGA/HAMILTON COUNTY MONUMENT NETWORK SYSTEM (CHAM) NAD/83(UN-ADJUSTED), HAVING A PROJECT COMBINED FACTOR OF 1.00000679. ALL ELEVATIONS ARE BASED ON NGVD 29 AS PER CHAM DATA SHEETS. HORIZONTAL ORDER DERIVED BY CONVENTIONAL TRAVERSE METHODOLOGY FROM PRIMARY MONUMENTATION, AS SET BY BWSC, AND VERTICAL ORDER DERIVED BY DIFFERENTIAL LEVELING FROM PRIMARY MONUMENTATION, AS SET BY BWSC.

NOTE: TOP ELEVATIONS SHOWN FOR CITY OF CHATTANOOGA CURB INLETS ARE AT THE TOP OF CURB.

NOTE: FOR DETAILS OF SPLITTER ISLAND AND STAMPED CONCRETE ISLAND SEE SHEET NO. 2G.

NOTE: FOR ALIGNMENT CURVE DATA SEE SHEET NOS. 2H & 2J.

SEALED BY

UNOFFICIAL SET

NOT FOR BIDDING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 158+00 TO END

SCALE: 1″= 50′

3/17/2014
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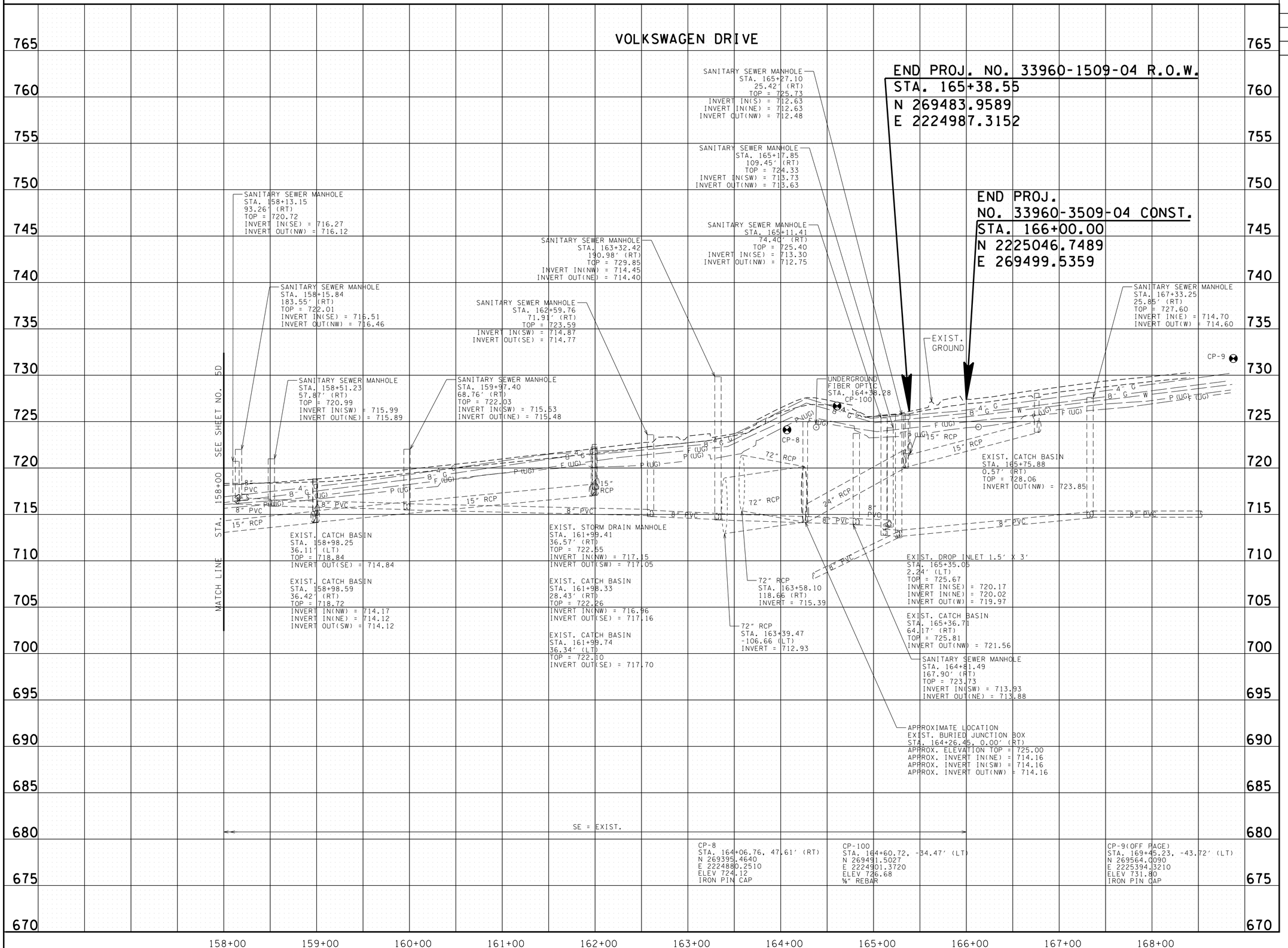
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	7C
CONST.	2014	33960-3509-04	7C



UNOFFICIAL SET

NOT FOR BIDDING

SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROFILE

VOLKSWAGEN DRIVE

STA. 158+00 TO END

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

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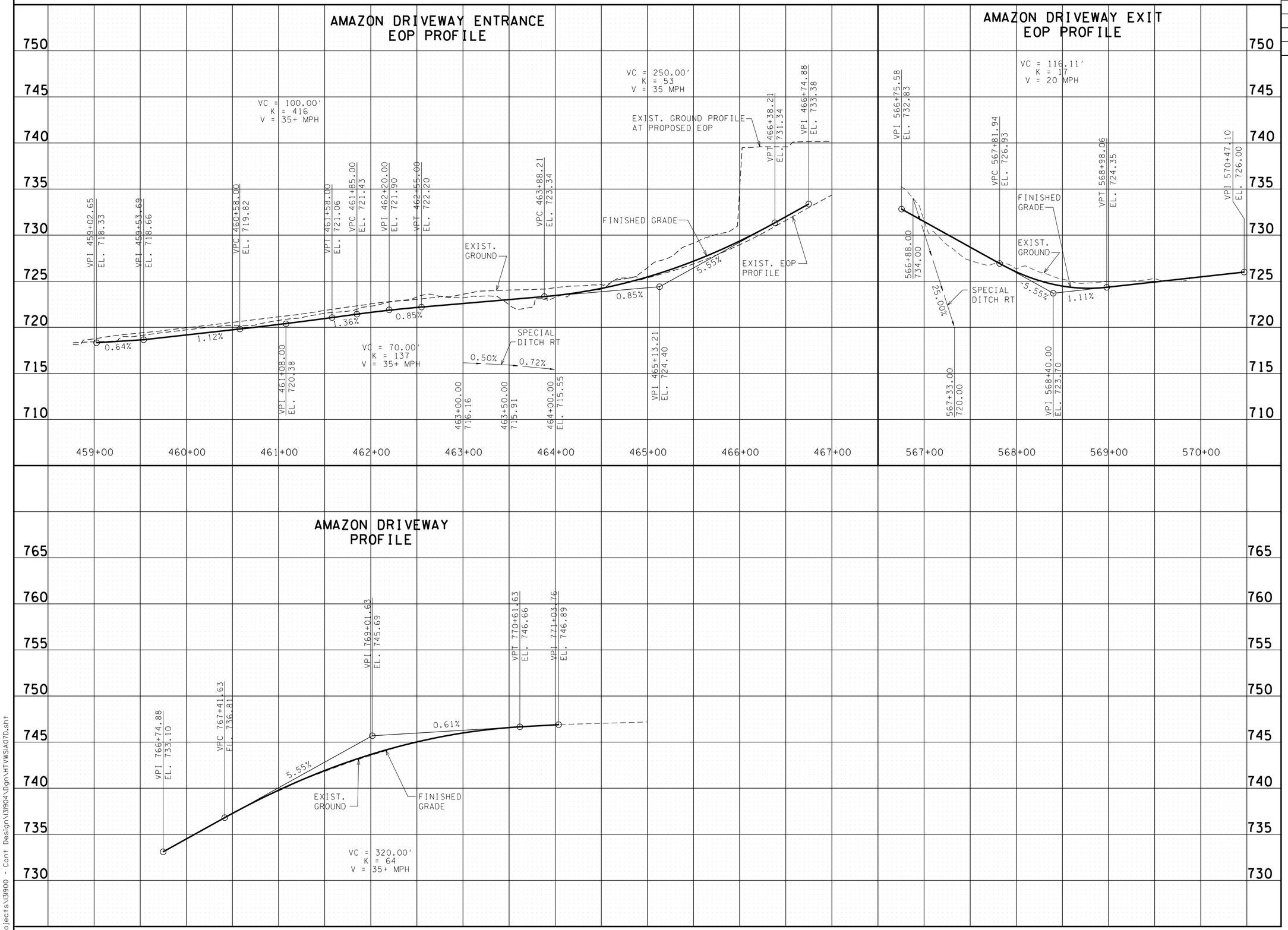
3/17/2014

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	7D
CONST.	2014	33960-3509-04	7D



UNOFFICIAL SET

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DEPARTMENT OF TRANSPORTATION

PROFILE

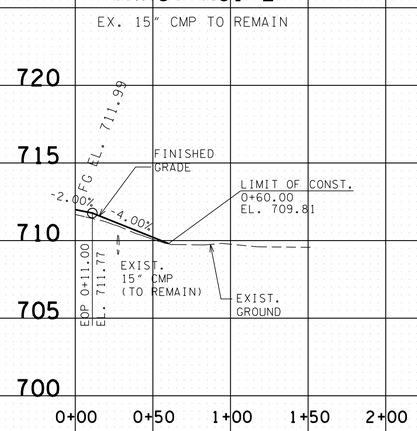
AMAZON DRIVEWAY
ENTRANCE & EXIT

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

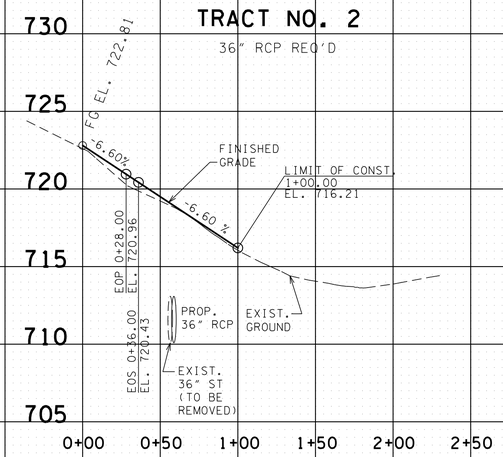
3/17/2014
P:\Projects\13900 - Cont Design\13904\Dgn\HTVWSIA07D.sht

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	8
CONST.	2014	33960-3509-04	8

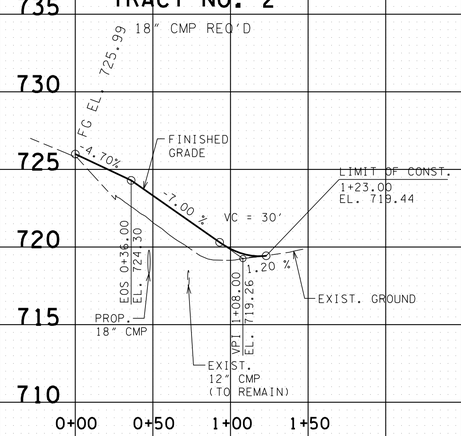
BUS. ENT. RT. 36+96.00
TRACT NO. 2



BUS. ENT. RT. 49+20.50
TRACT NO. 2



BUS. ENT. RT. 51+24.00
TRACT NO. 2



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PROFILE OF PRIVATE DRIVES

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

3/17/2014
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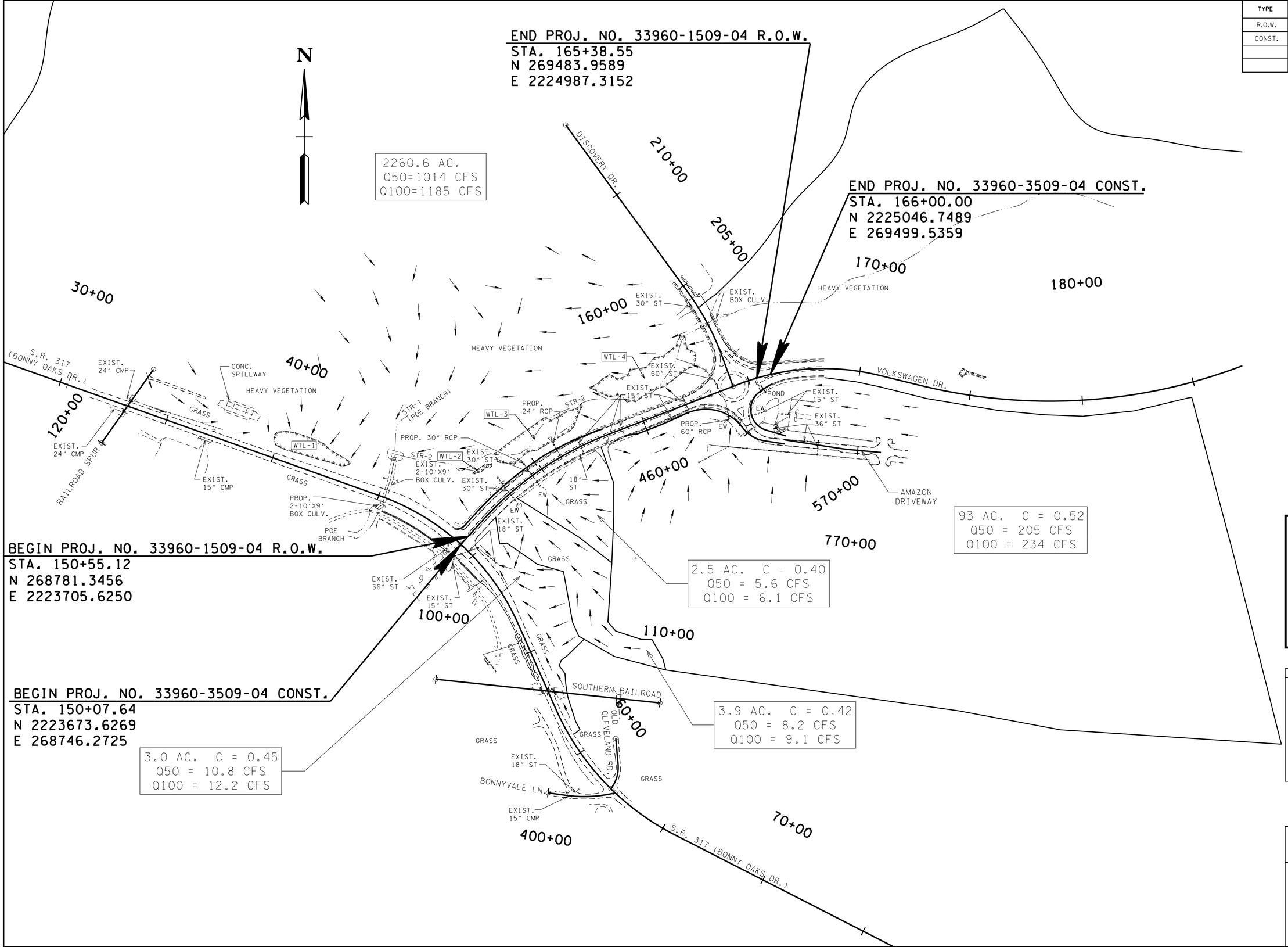
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	9
CONST.	2014	33960-3509-04	9



UNOFFICIAL SET

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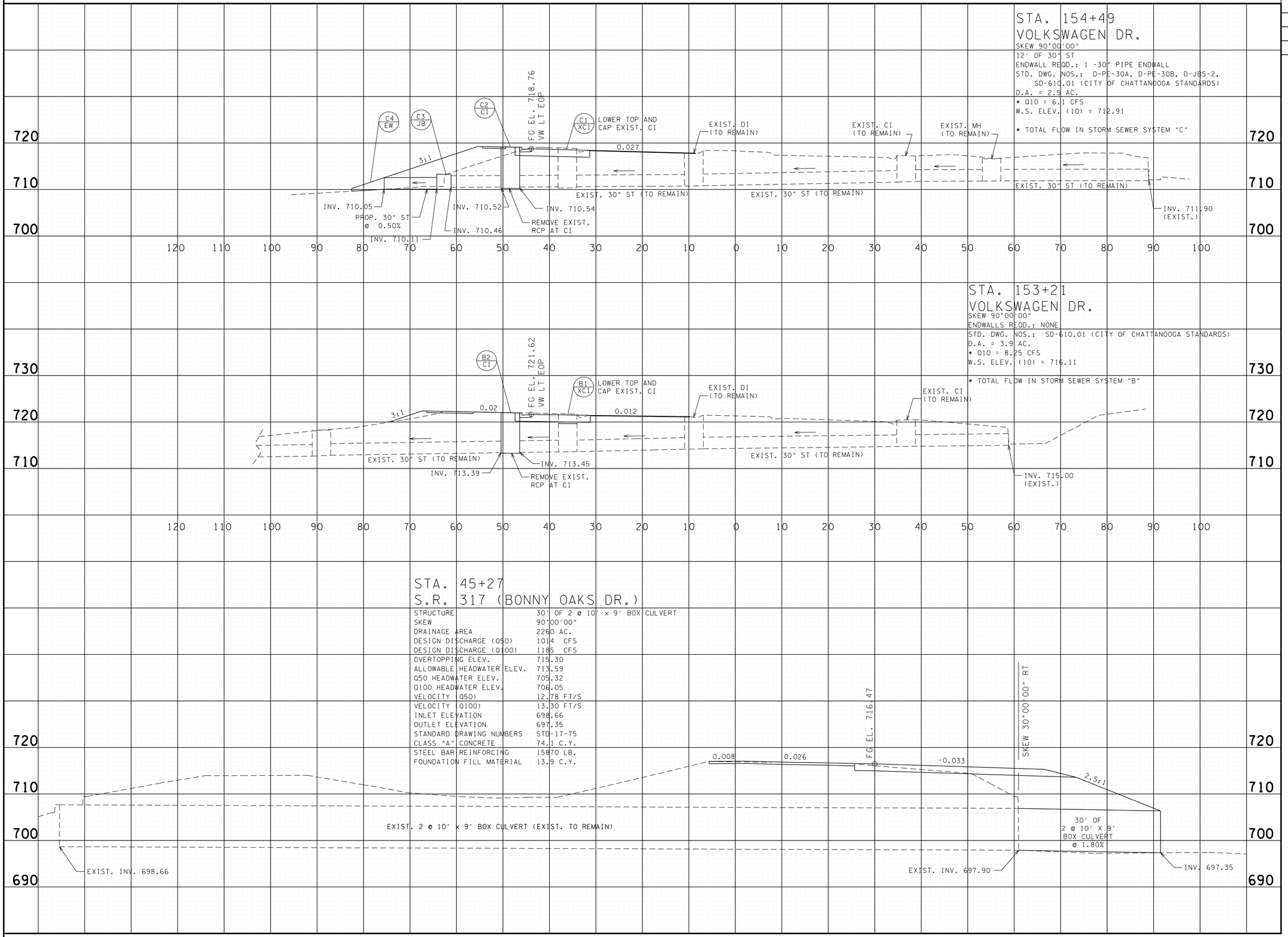
DRAINAGE MAP

SCALE: 1"=200'

3/17/2014
P:\Projects\31900 - Cont Design\31904\Dgn\HTVWSIA09.sht

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	10
CONST.	2014	33960-3509-04	10



UNOFFICIAL SET

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CULVERT CROSS-SECTIONS

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

3/17/2014
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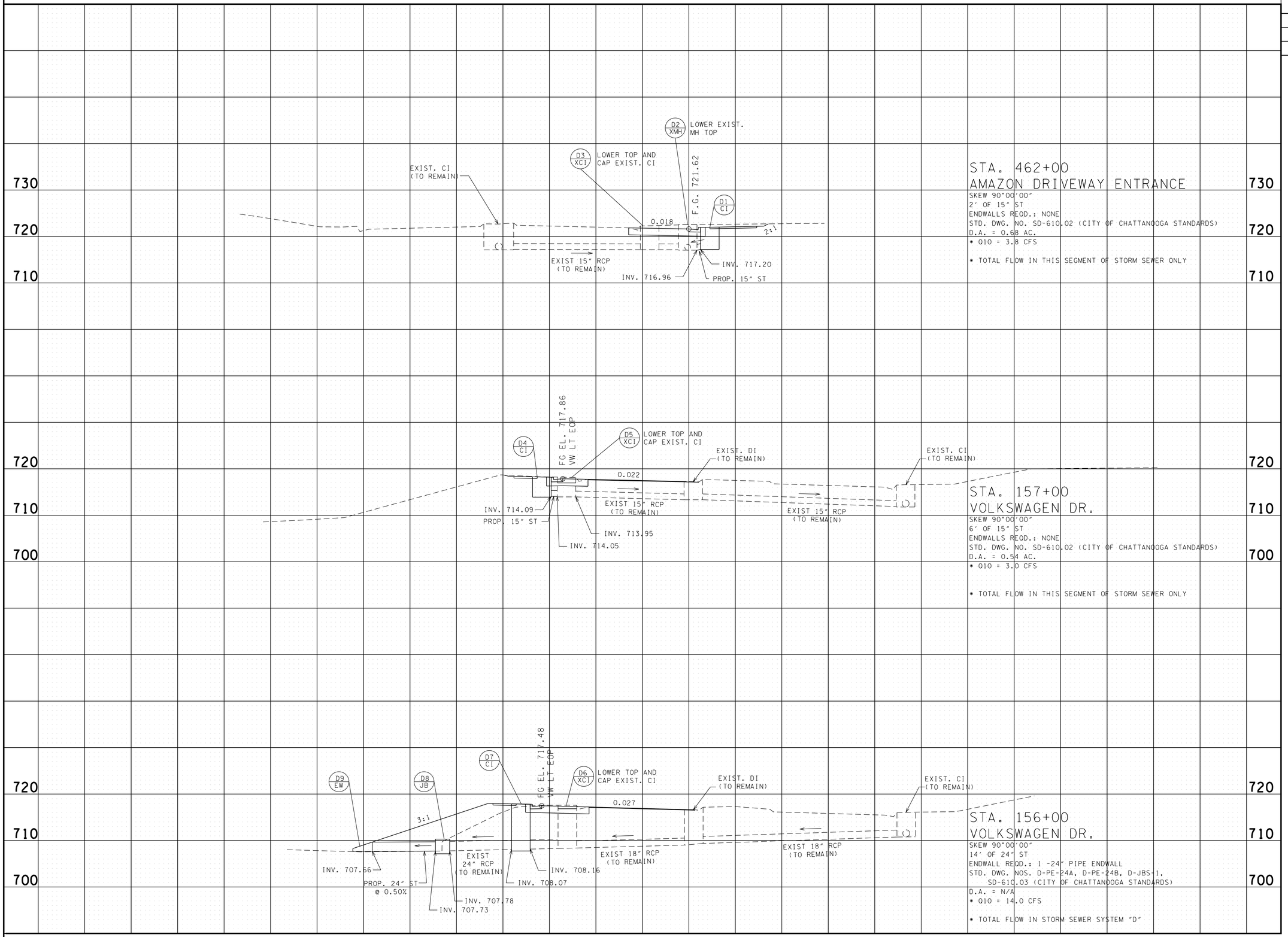
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	10A
CONST.	2014	33960-3509-04	10A



UNOFFICIAL SET

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CULVERT CROSS-SECTIONS

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

3/17/2014
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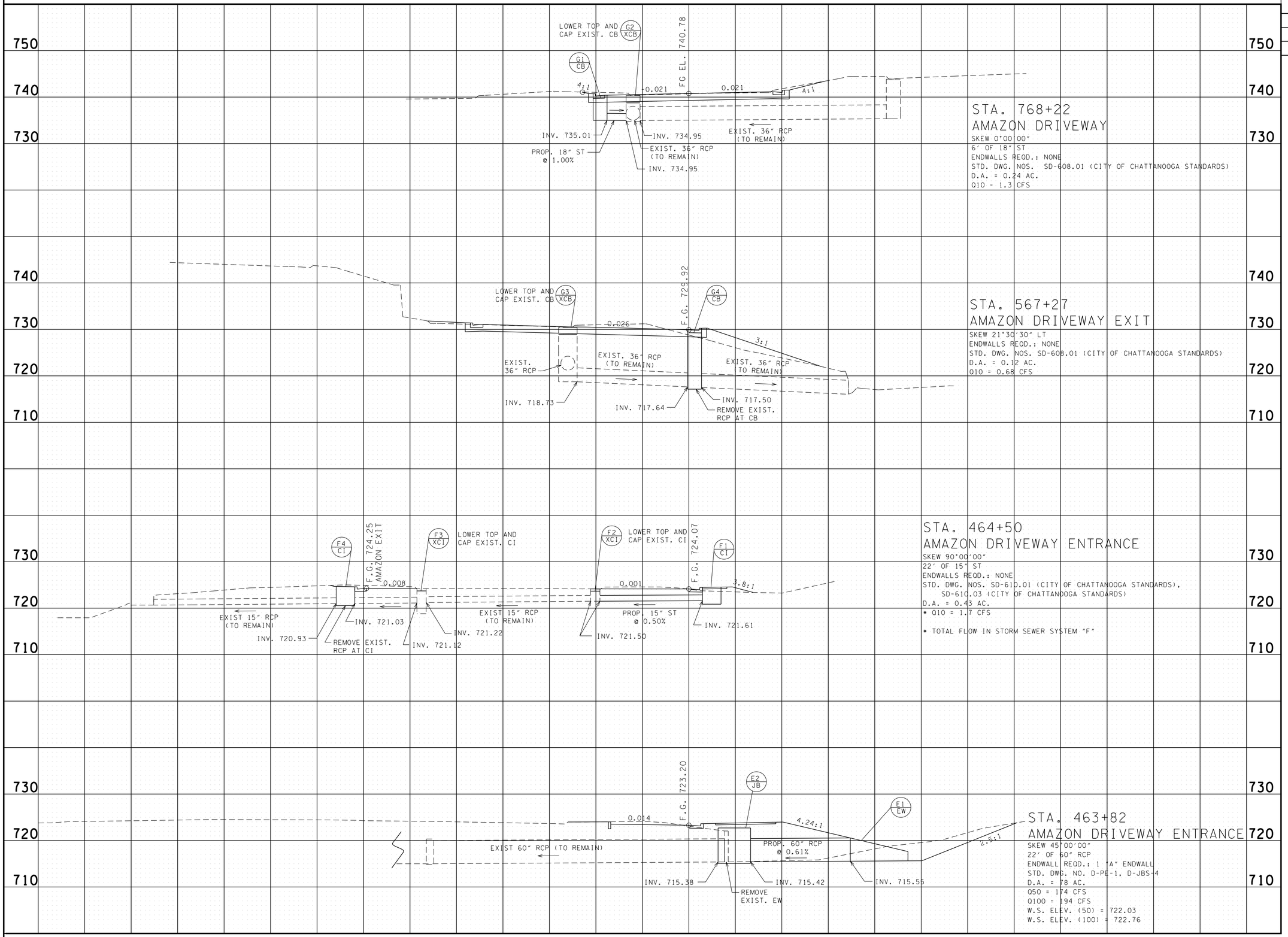
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	10B
CONST.	2014	33960-3509-04	10B



UNOFFICIAL SET

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CULVERT CROSS-SECTIONS

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

3/17/2014
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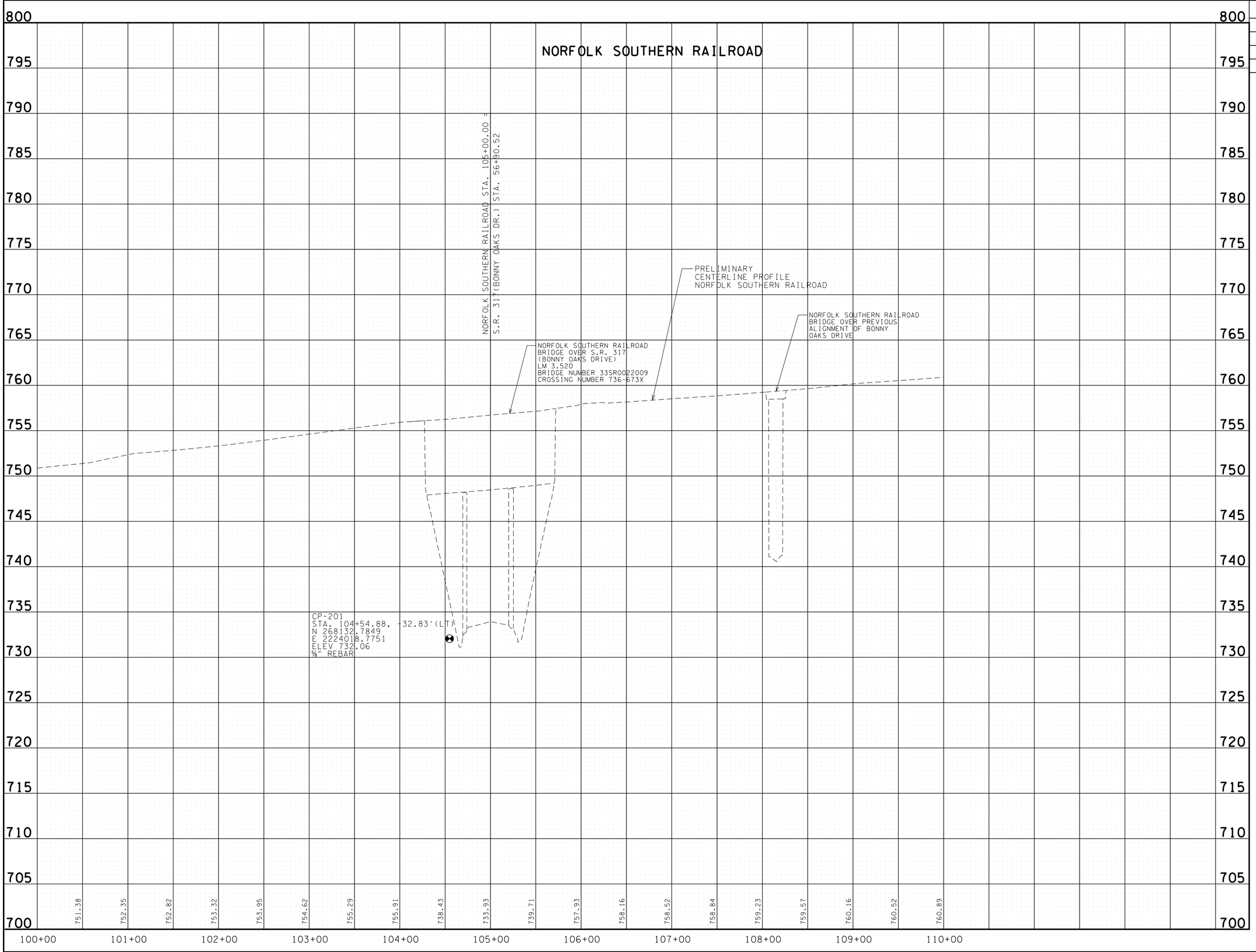
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	11
CONST.	2014	33960-3509-04	11



UNOFFICIAL SET

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PROFILE

NORFOLK SOUTHERN RAILROAD

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

3/18/2014
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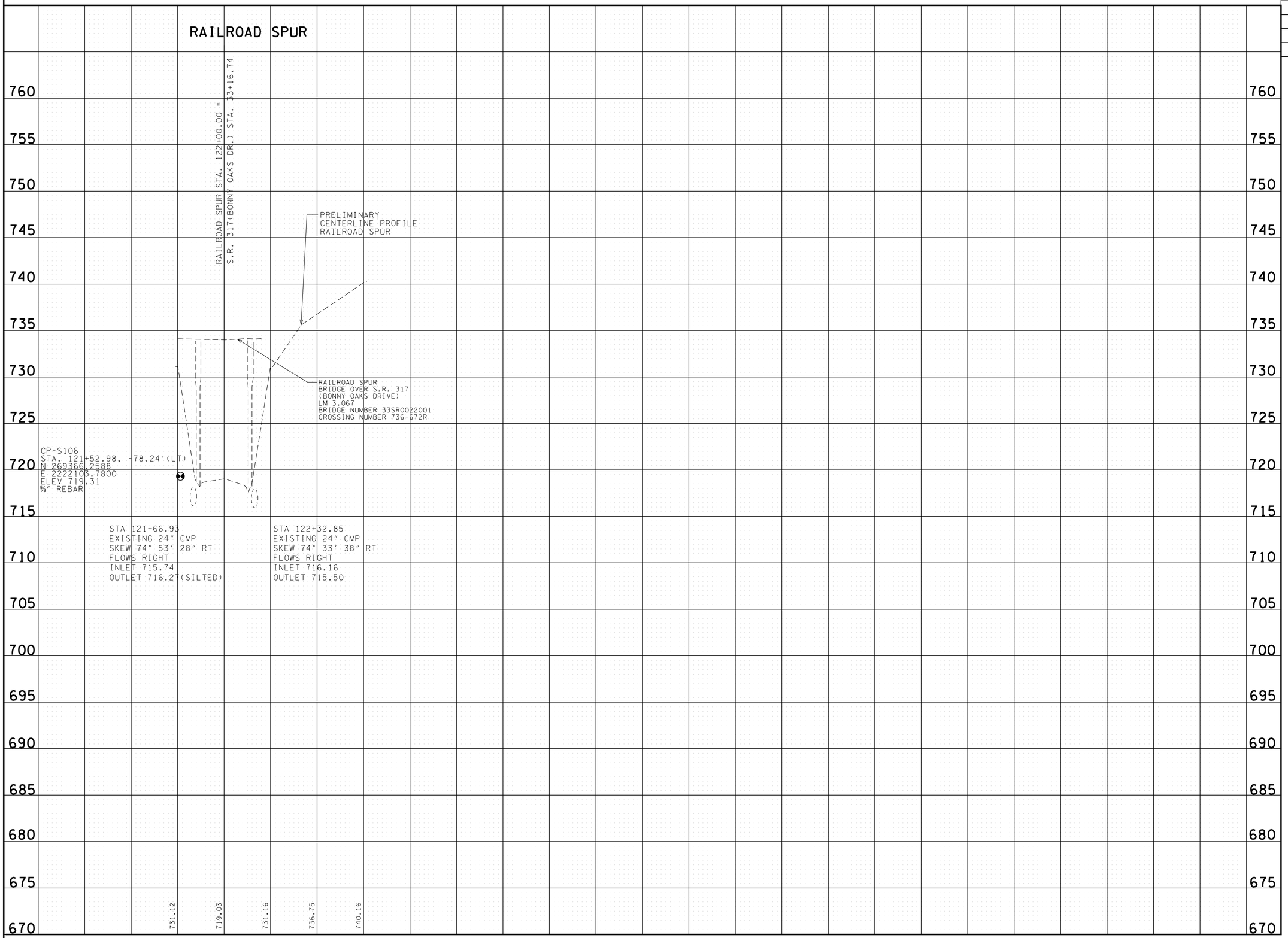
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	11A
CONST.	2014	33960-3509-04	11A



UNOFFICIAL SET

NOT FOR BIDDING

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PROFILE

RAILROAD SPUR

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

3/18/2014
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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	12

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 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.

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.

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EROSION PREVENTION AND SEDIMENT CONTROL NOTES

3/18/2014
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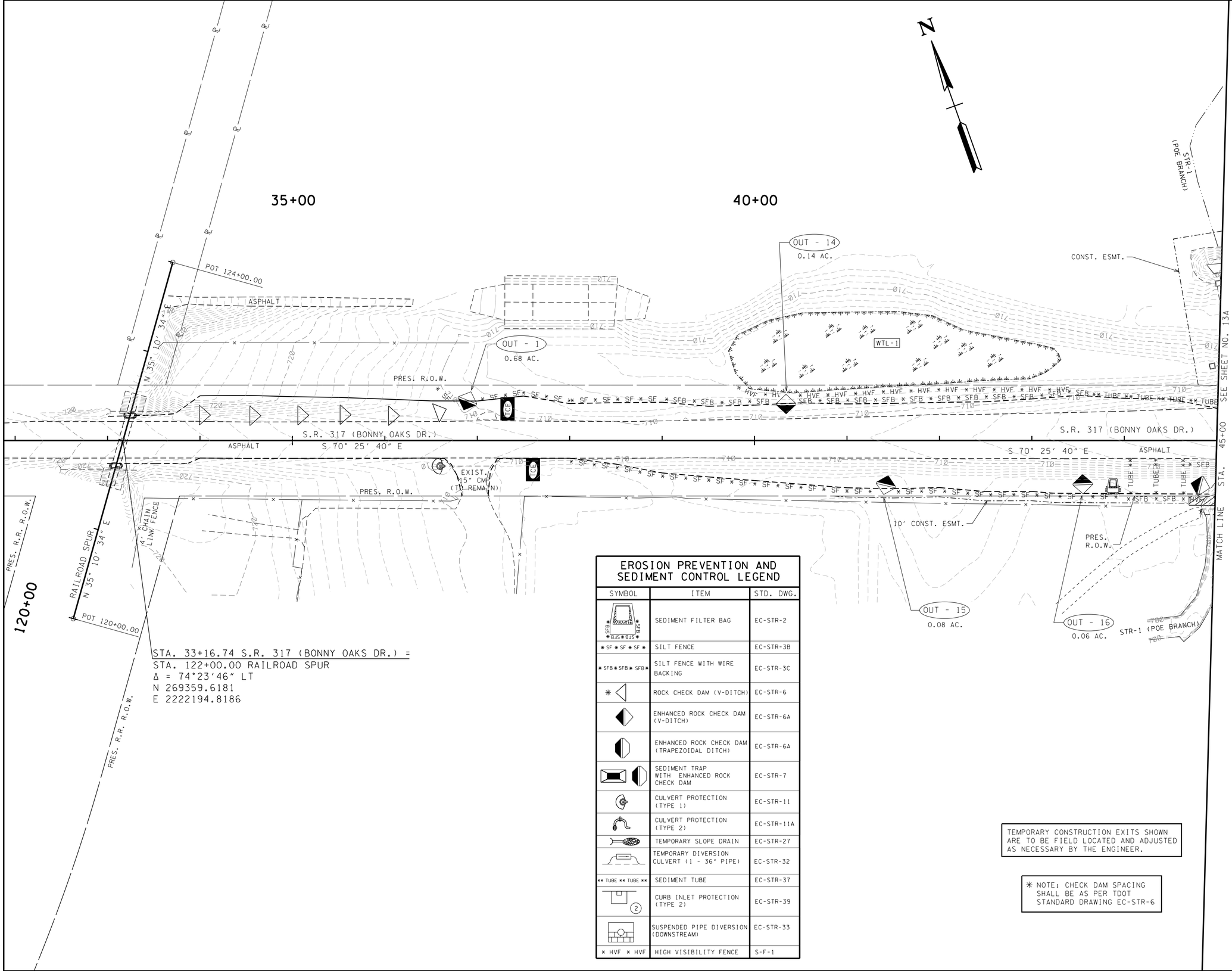
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	12
CONST.	2014	33960-3509-04	13



STA. 33+16.74 S.R. 317 (BONNY OAKS DR.) =
STA. 122+00.00 RAILROAD SPUR
Δ = 74°23'46" LT
N 269359.6181
E 2222194.8186

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
SFB	SEDIMENT FILTER BAG	EC-STR-2
SF	SILT FENCE	EC-STR-3B
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
	ENHANCED ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6A
	SEDIMENT TRAP WITH ENHANCED ROCK CHECK DAM	EC-STR-7
	CULVERT PROTECTION (TYPE 1)	EC-STR-11
	CULVERT PROTECTION (TYPE 2)	EC-STR-11A
	TEMPORARY SLOPE DRAIN	EC-STR-27
	TEMPORARY DIVERSION CULVERT (1 - 36" PIPE)	EC-STR-32
TUBE	SEDIMENT TUBE	EC-STR-37
2	CURB INLET PROTECTION (TYPE 2)	EC-STR-39
	SUSPENDED PIPE DIVERSION (DOWNSTREAM)	EC-STR-33
HVF	HIGH VISIBILITY FENCE	S-F-1

TEMPORARY CONSTRUCTION EXITS SHOWN ARE TO BE FIELD LOCATED AND ADJUSTED AS NECESSARY BY THE ENGINEER.

✳ NOTE: CHECK DAM SPACING SHALL BE AS PER TDOT STANDARD DRAWING EC-STR-6

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EROSION AND SEDIMENT CONTROL PLAN PHASE I

BEGIN TO STA. 45+00

SCALE: 1"= 50'

5/6/2014
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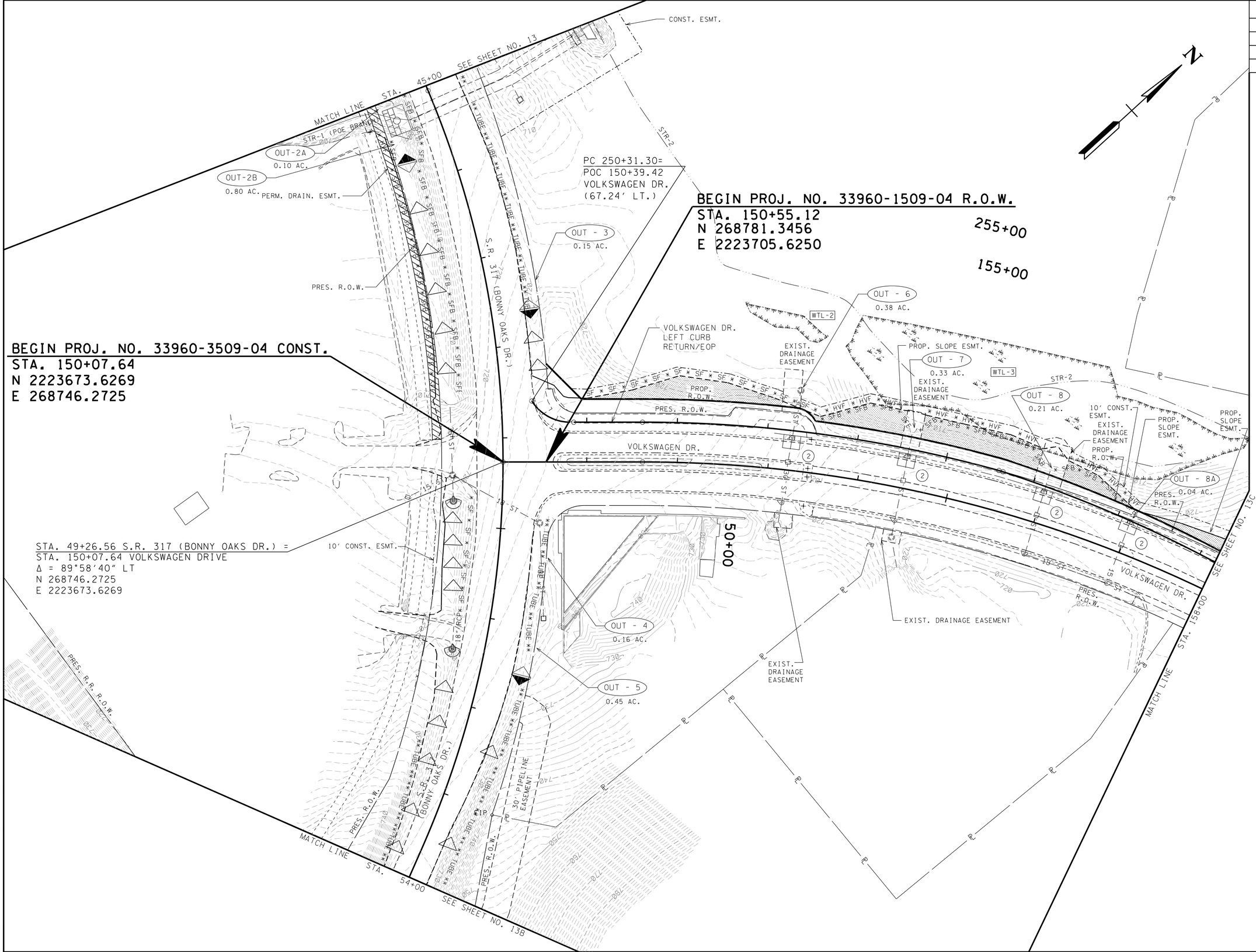
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	12A
CONST.	2014	33960-3509-04	13A



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DEPARTMENT OF TRANSPORTATION

EROSION AND SEDIMENT CONTROL PLAN PHASE I

STA. 45+00 TO STA. 54+00

SCALE: 1"= 50'

5/6/2014
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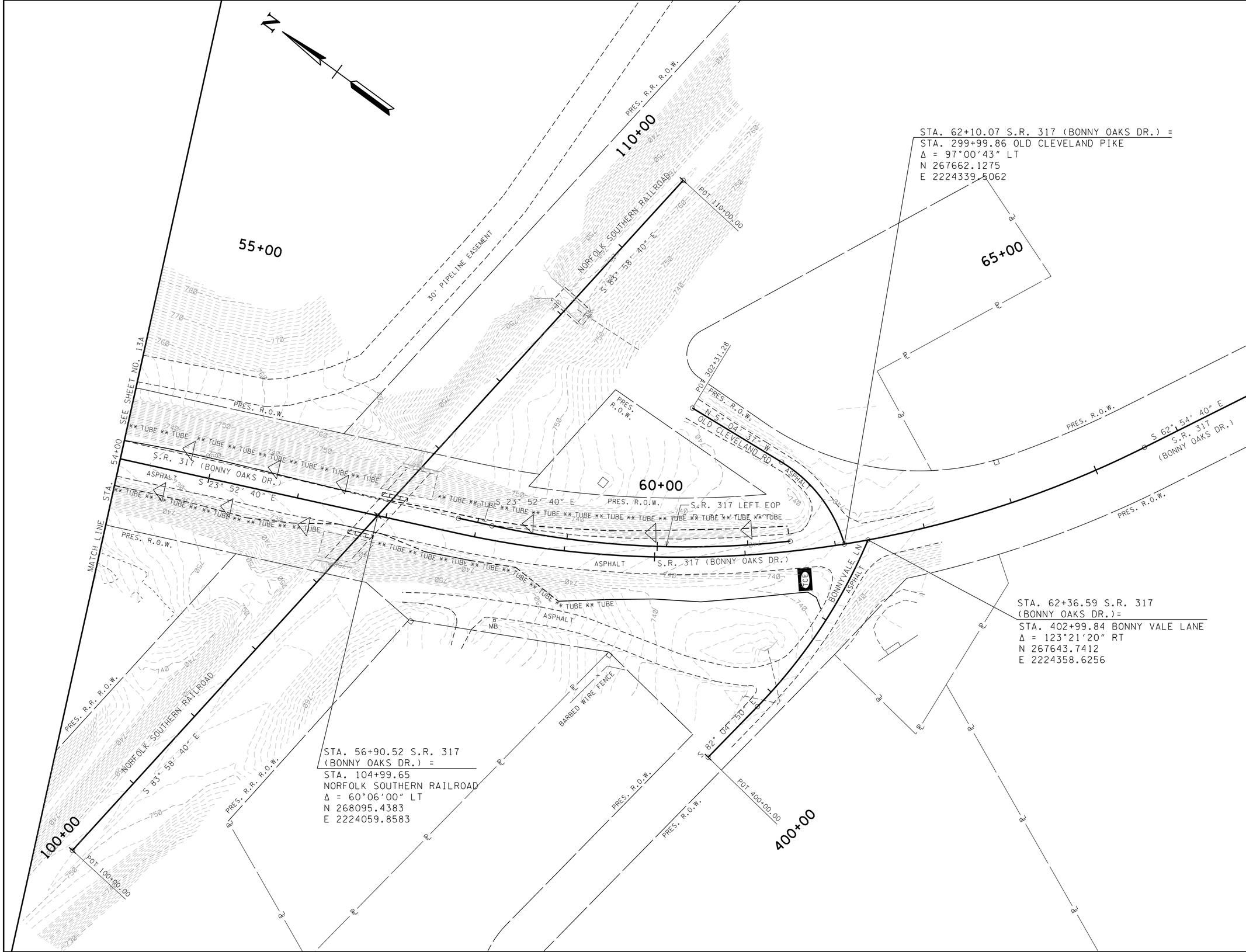
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	12B
CONST.	2014	33960-3509-04	13B



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EROSION AND SEDIMENT CONTROL PLAN PHASE I

STA. 54+00 TO END

SCALE: 1"= 50'

3/18/2014
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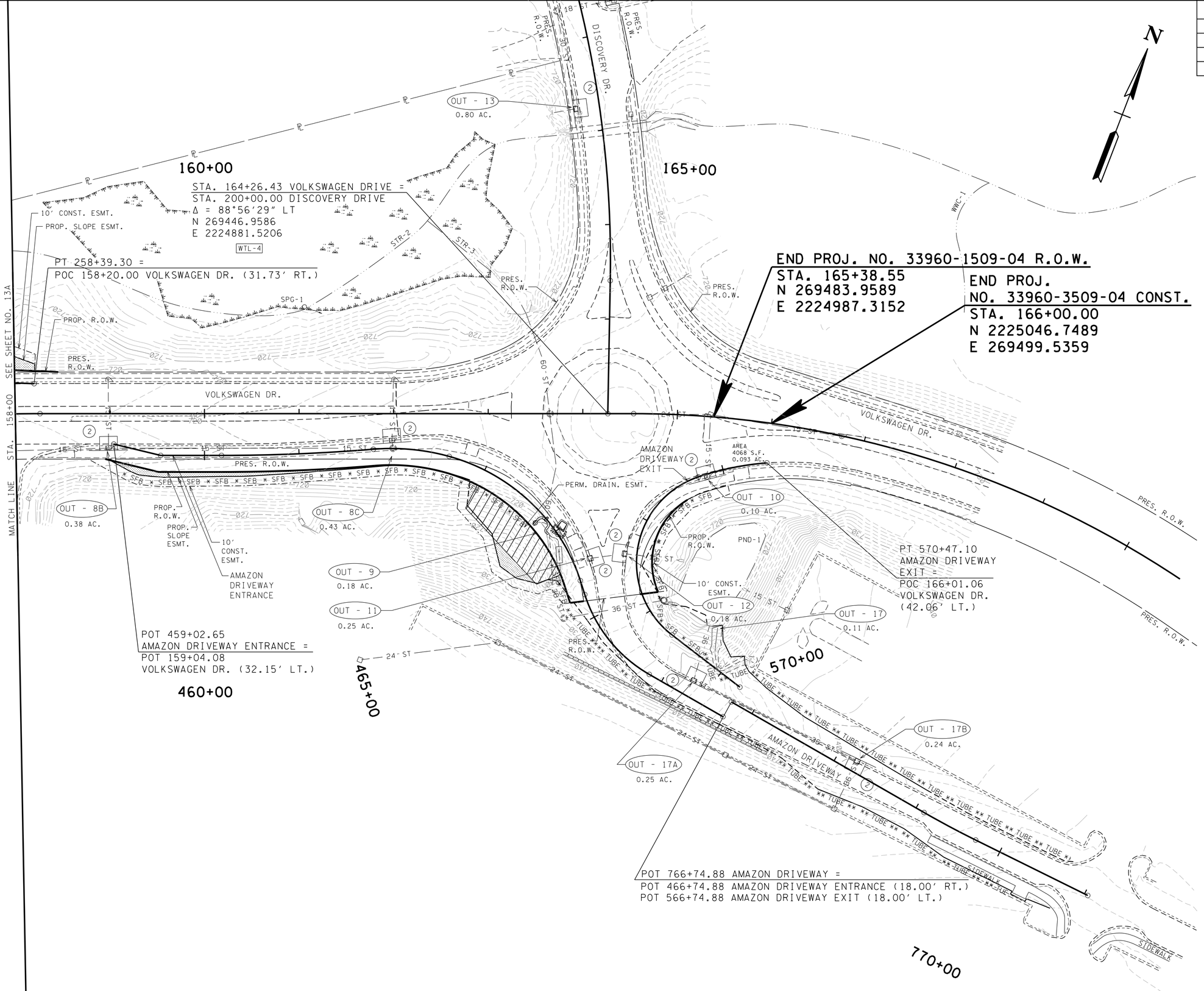
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	12C
CONST.	2014	33960-3509-04	13C



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EROSION AND SEDIMENT CONTROL PLAN PHASE I

STA. 158+00 TO END

SCALE: 1"= 50'

3/18/2014
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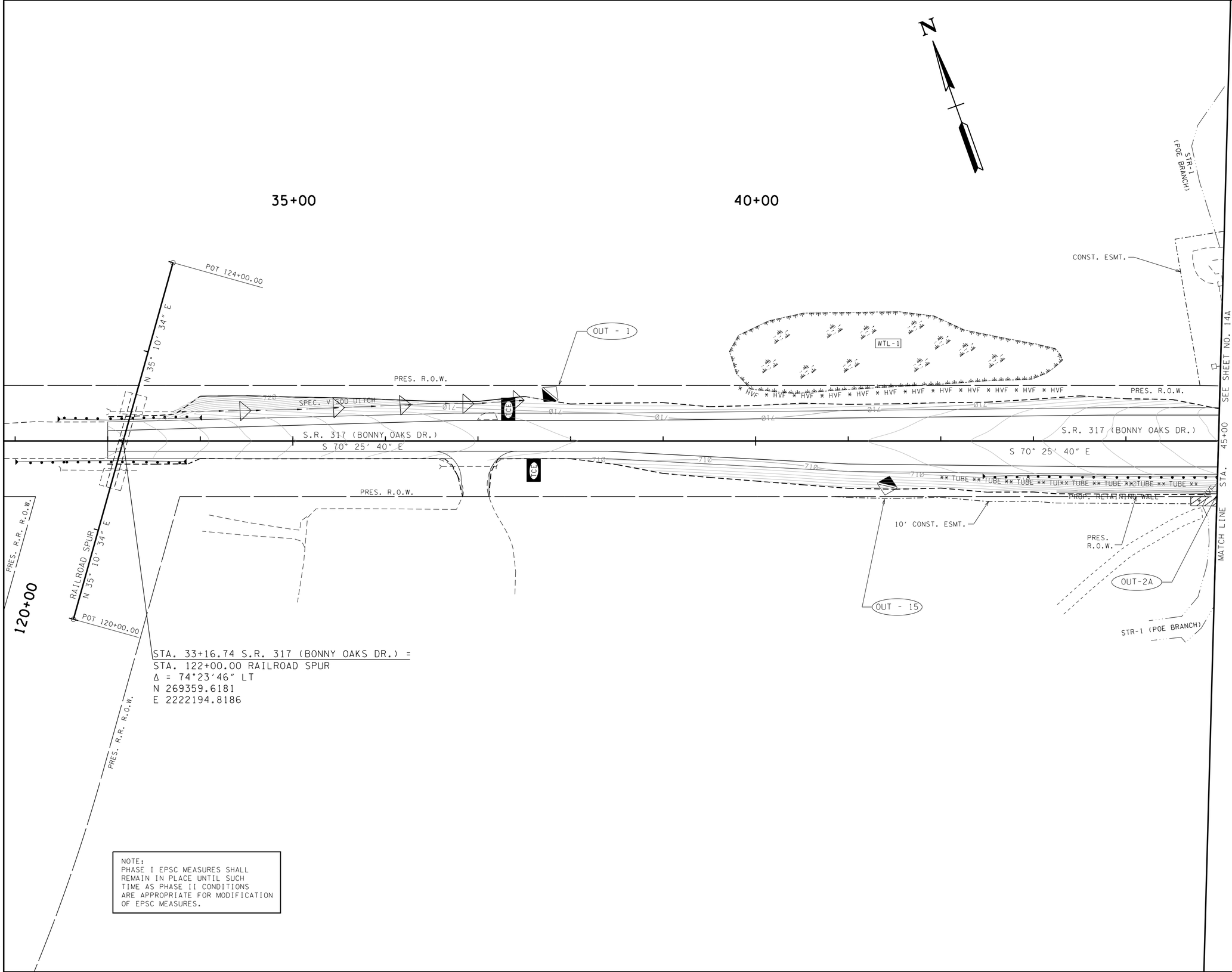
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	13
CONST.	2014	33960-3509-04	14



STA. 33+16.74 S.R. 317 (BONNY OAKS DR.) =
STA. 122+00.00 RAILROAD SPUR
Δ = 74°23'46" LT
N 269359.6181
E 2222194.8186

NOTE:
PHASE I EPSC MEASURES SHALL REMAIN IN PLACE UNTIL SUCH TIME AS PHASE II CONDITIONS ARE APPROPRIATE FOR MODIFICATION OF EPSC MEASURES.

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EROSION AND SEDIMENT CONTROL PLAN PHASE II

BEGIN TO STA. 45+00

SCALE: 1"= 50'

5/6/2014
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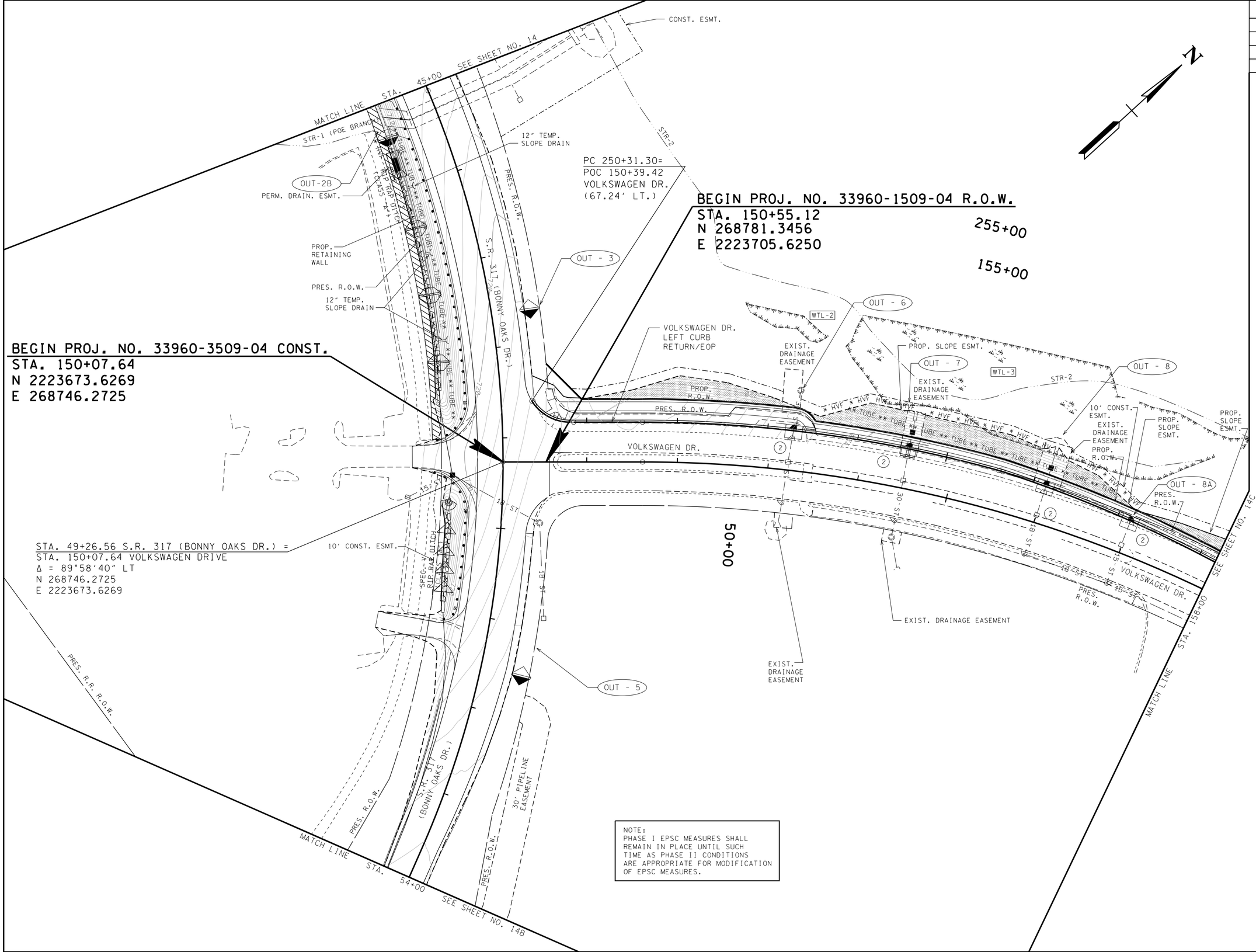
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	13A
CONST.	2014	33960-3509-04	14A



NOTE:
PHASE I EPSC MEASURES SHALL REMAIN IN PLACE UNTIL SUCH TIME AS PHASE II CONDITIONS ARE APPROPRIATE FOR MODIFICATION OF EPSC MEASURES.

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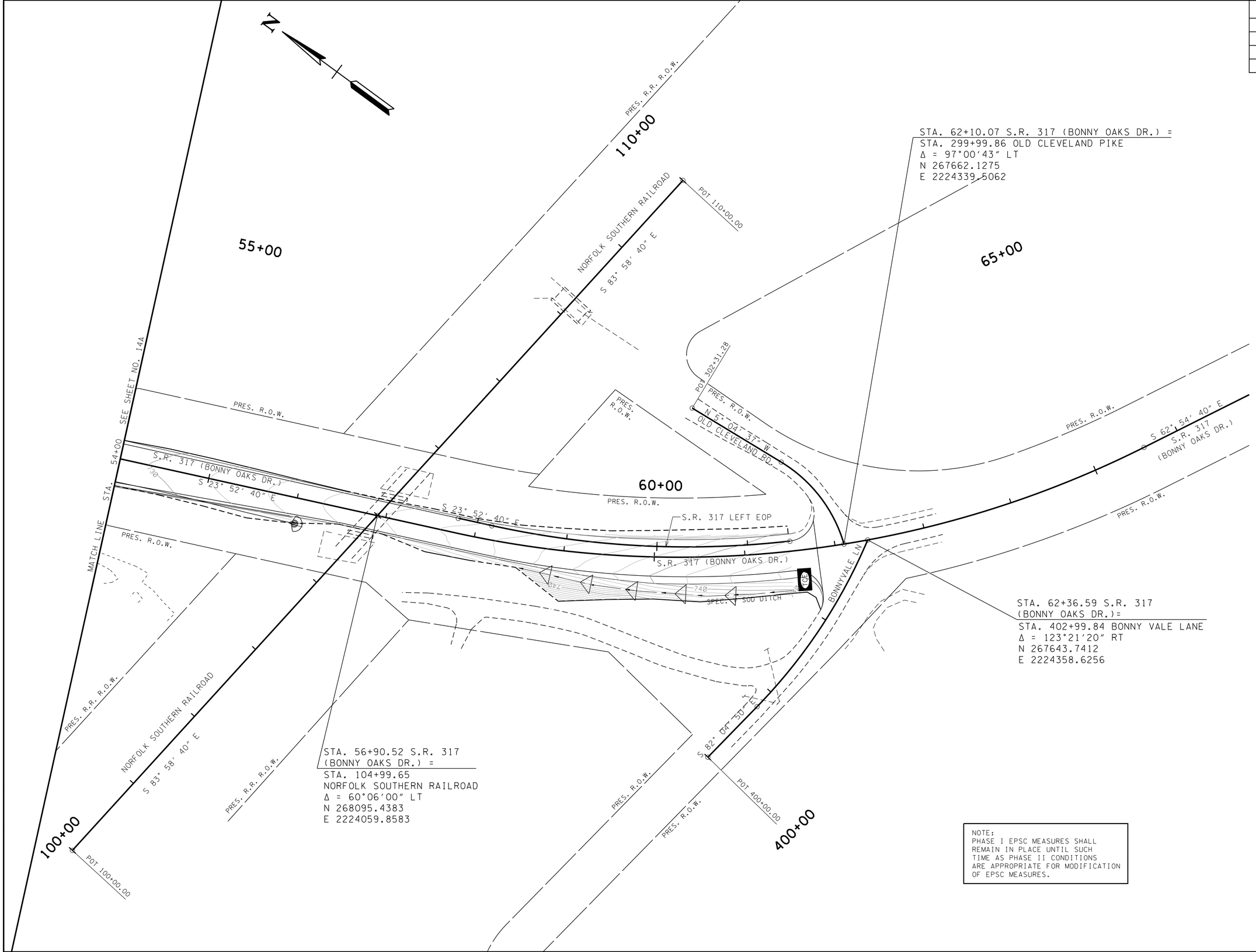
EROSION AND SEDIMENT CONTROL PLAN PHASE II

STA. 45+00 TO STA. 54+00

SCALE: 1"= 50'

5/6/2014
P:\Projects\13900 - Cont Design\13904\Dgn\HTVWS1A14A.sht

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	13B
CONST.	2014	33960-3509-04	14B



NOTE:
PHASE I EPSC MEASURES SHALL REMAIN IN PLACE UNTIL SUCH TIME AS PHASE II CONDITIONS ARE APPROPRIATE FOR MODIFICATION OF EPSC MEASURES.

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EROSION AND SEDIMENT CONTROL PLAN PHASE II

STA. 54+00 TO END

SCALE: 1"= 50'

3/18/2014
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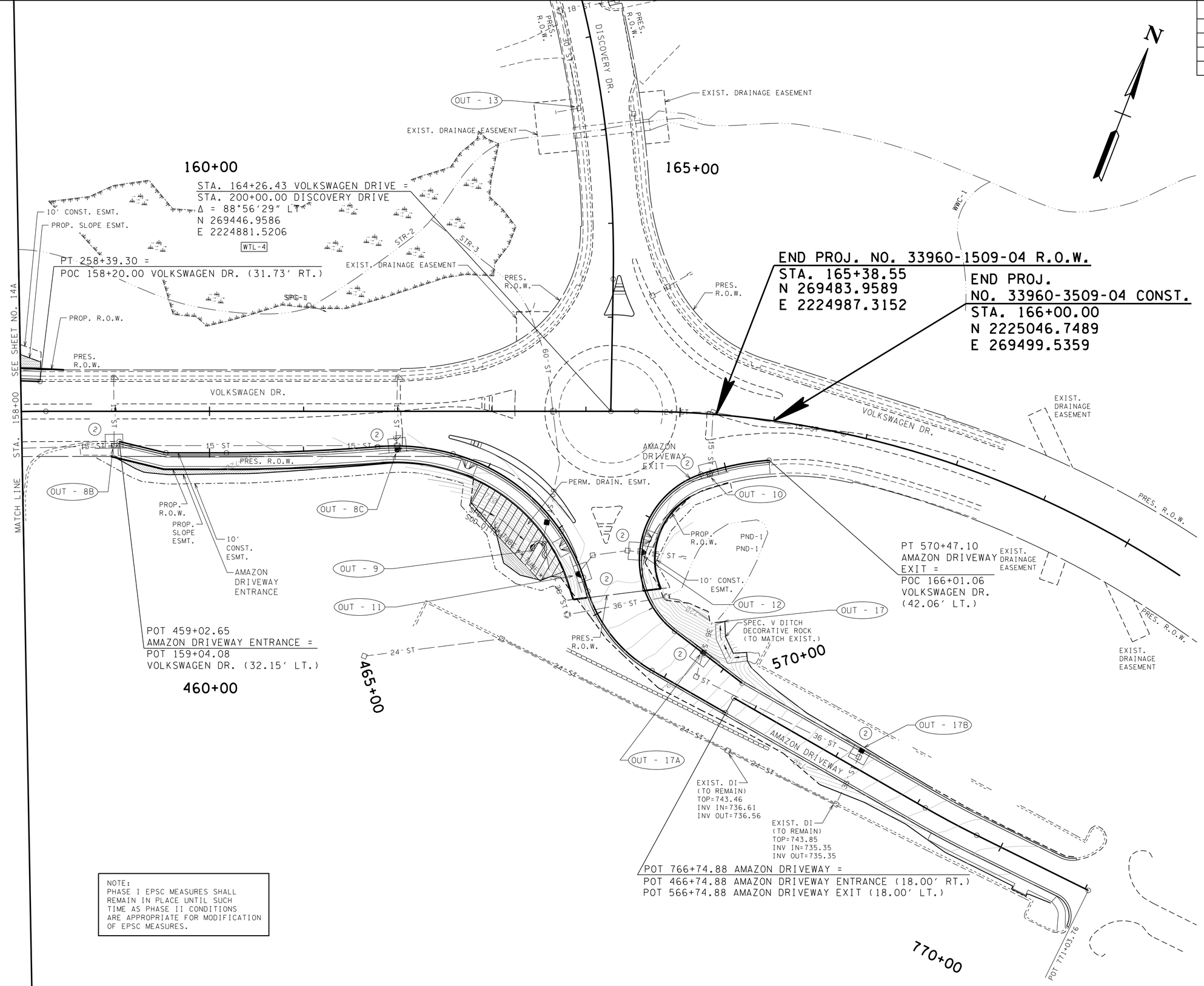
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	13C
CONST.	2014	33960-3509-04	14C



NOTE:
PHASE I EPSC MEASURES SHALL REMAIN IN PLACE UNTIL SUCH TIME AS PHASE II CONDITIONS ARE APPROPRIATE FOR MODIFICATION OF EPSC MEASURES.

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EROSION AND SEDIMENT CONTROL PLAN PHASE II

STA. 158+00 TO END

SCALE: 1"= 50'

3/18/2014
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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	15

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

CONSTRUCTION SEQUENCE – PHASE I

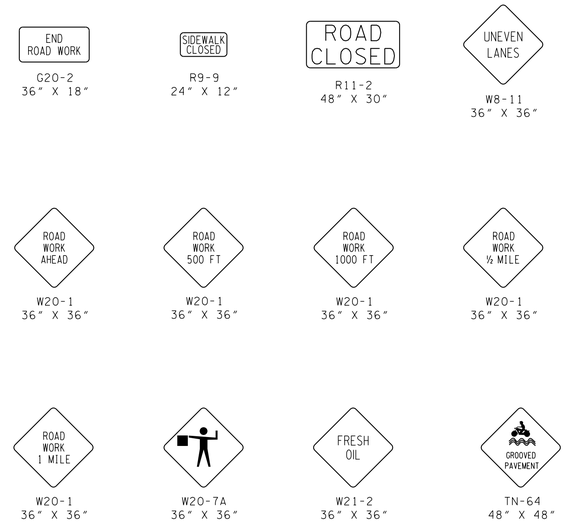
1. TRAFFIC ON S.R. 317 AND VOLKSWAGEN DRIVE IS TO BE MAINTAINED ON EXISTING TRAVEL LANES AT ALL TIMES.
2. INSTALL NECESSARY TRAFFIC CONTROL DEVICES AS SHOWN ON TRAFFIC CONTROL PLANS.
3. CLOSE AMAZON DRIVEWAY.
4. CLOSE THE RIGHT SHOULDER OF S.R. 317 FROM STA. 38+00.00 TO STA. 61+80.00. CONSTRUCT WIDENING THROUGH BINDER LAYER ALONG WITH ALL REQUIRED GRADING AND DRAINAGE, INCLUDING RETAINING WALL AND DRIVEWAYS.
5. CONSTRUCT AMAZON DRIVEWAY ENTRANCE THROUGH FINAL LAYER ALONG WITH ALL REQUIRED GRADING AND DRAINAGE FROM STA. 459+02.65 TO STA. 466+74.88.
6. CONSTRUCT AMAZON DRIVEWAY THROUGH FINAL LAYER ALONG WITH ALL REQUIRED GRADING AND DRAINAGE FROM STA. 466+74.88 TO STA. 771+03.76..
7. CONSTRUCT AMAZON DRIVEWAY EXIT THROUGH FINAL LAYER ALONG WITH ALL REQUIRED GRADING AND DRAINAGE FROM STA. 566+74.88 TO STA. 570+47.10.

CONSTRUCTION SEQUENCE – PHASE II

1. TRAFFIC ON S.R. 317 AND VOLKSWAGEN DRIVE IS TO BE MAINTAINED ON EXISTING LANES AT ALL TIMES.
2. INSTALL NECESSARY TRAFFIC CONTROL DEVICES.
3. OPEN AMAZON DRIVEWAY TO TRAFFIC.
4. CLOSE THE LEFT SHOULDER OF S.R. 317 FROM STA. 38+00.00 TO STA. 61+80.00. CONSTRUCT WIDENING THROUGH BINDER LAYER ALONG WITH ALL REQUIRED GRADING AND DRAINAGE.
5. CONSTRUCT VOLKSWAGEN DRIVE WIDENING FROM STA. 150+39.42 TO STA. 158+20.00 THROUGH FINAL LAYER ALONG WITH ALL REQUIRED GRADING AND DRAINAGE.

CONSTRUCTION SEQUENCE – PHASE III

1. INSTALL NECESSARY TRAFFIC CONTROL DEVICES.
2. COMPLETE FINAL PAVING ON S.R. 317 FROM STA. 38+00.00 TO STA. 61+80.00, WHILE MAINTAINING AT LEAST ONE LANE OF TRAFFIC IN EACH DIRECTION AT ALL TIMES.



TRAFFIC CONTROL QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	PHASE I	PHASE II	PHASE III	QUANTITY	ITEM NO. 712-06 (S.F.)	SIZE	M.U.T.C.D. NO.	REMARKS
705-08.51	PORTABLE IMPACT ATTENUATOR NCHRP350 TL-3	EACH	4	3	0	4				
712-02.02	INTERCONNECTED PORTABLE BARRIER RAIL	L.F.	2927	2816	0	2927				
712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	EACH	30	0	0	30				
712-04.50	PORTABLE BARRIER RAIL DELINEATOR	EACH	33	32	0	33				
712-05.01	WARNING LIGHTS (TYPE A)	EACH	8	0	0	8				
712-07.03	TEMPORARY BARRICADES (TYPE III)	L.F.	90	0	0	90				
712-08.03	ARROW BOARD (TYPE C)	EACH	1	1	1	1				
713-16.01	CHANGEABLE MESSAGE SIGN UNIT	EACH	4	4	4	4				
712-06	SIGNS (CONSTRUCTION)	EACH	6	6	6	6	27	36" x 18"	G20-2	END ROAD WORK
		EACH	1	1	0	1	2	24" x 12"	R9-9	SIDEWALK CLOSED
		EACH	4	0	0	4	40	48" x 30"	R11-2	ROAD CLOSED
		EACH	0	0	2	2	18	36" x 36"	W8-11	UNEVEN LANES
		EACH	3	3	3	3	27	36" x 36"	W20-1	ROAD WORK AHEAD
		EACH	1	1	1	1	9	36" x 36"	W20-1	ROAD WORK 500 FT
		EACH	3	3	3	3	27	36" x 36"	W20-1	ROAD WORK 1000 FT
		EACH	3	3	3	3	27	36" x 36"	W20-1	ROAD WORK 1/2 MILE
		EACH	2	2	2	2	18	36" x 36"	W20-1	ROAD WORK 1 MILE
		EACH	2	2	2	2	18	36" x 36"	W20-7A	FLAGGER
		EACH	0	0	2	2	18	36" x 36"	W21-2	FRESH OIL
		EACH	3	3	3	3	48	48" x 48"	TN-64	GROOVED PAVEMENT
TOTAL							**279**			

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DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL NOTES, SIGNING & QUANTITIES

3/18/2014
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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	15A

PAVEMENT EDGE DROP-OFF TRAFFIC CONTROL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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PAVEMENT EDGE DROP-OFF TRAFFIC CONTROL NOTES

3/18/2014
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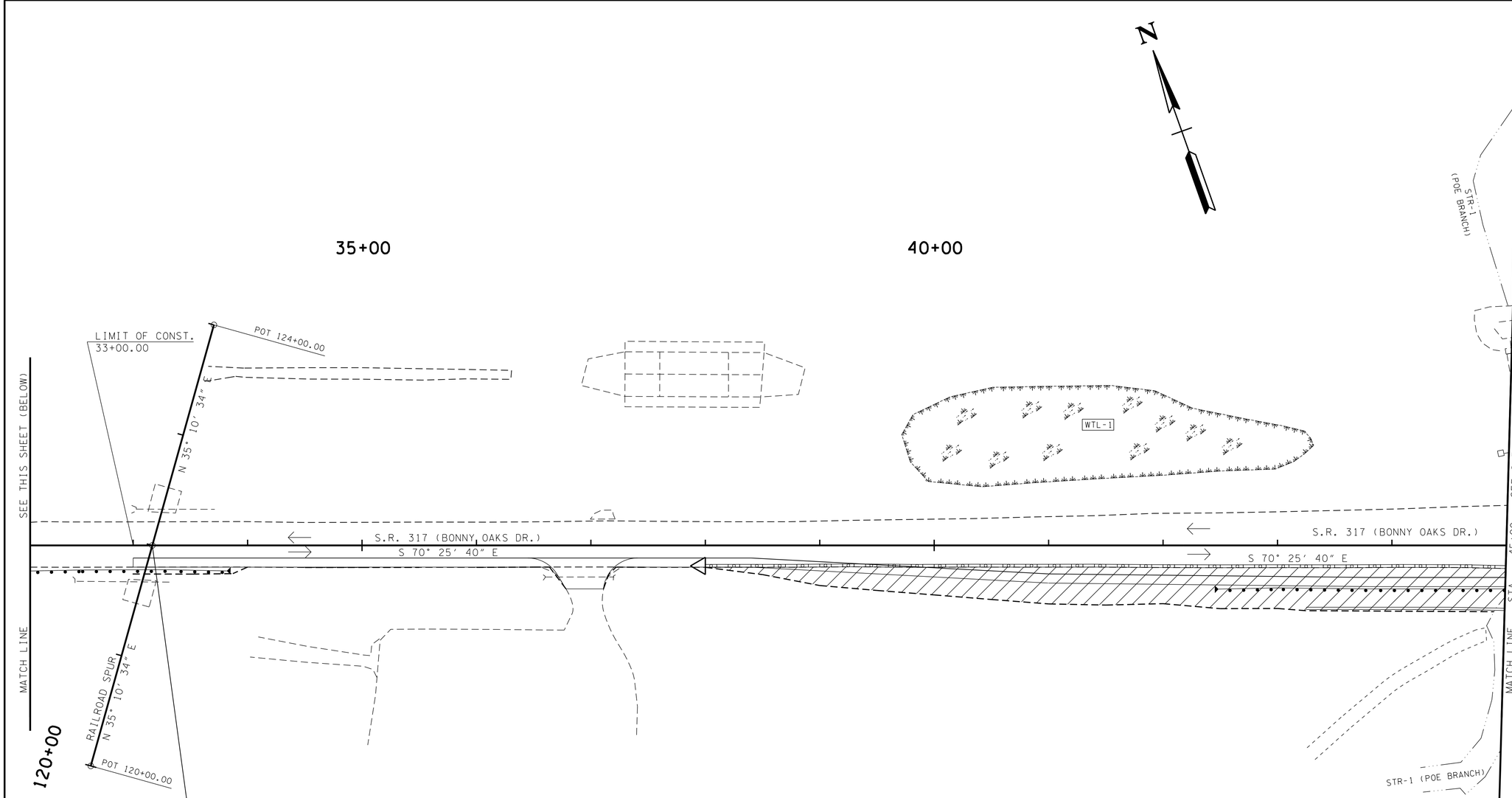
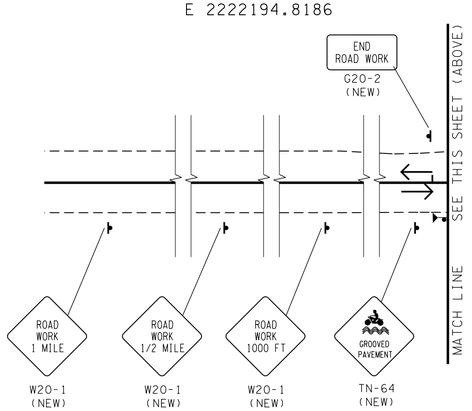
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	16



STA. 33+16.74 S.R. 317 (BONNY OAKS DR.) =
STA. 122+00.00 RAILROAD SPUR
Δ = 74°23'46" LT
N 269359.6181
E 2222194.8186



TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	WORK ZONE
	PAVEMENT TO BE REMOVED
→	TRAFFIC FLOW
	TEMPORARY BARRICADE (TYPE III)
	FLEXIBLE DRUMS (CHANNELIZING)
	SIGN (CONSTRUCTION)
	PORTABLE BARRIER RAIL (WITH BARRIER RAIL DELINEATORS)
	TEMPORARY ATTENUATOR
A	WARNING LIGHT (TYPE A) (LOW-INTENSITY FLASHING)
	CHANGEABLE MESSAGE SIGN
	CHANGEABLE MESSAGE SIGN
	ARROW BOARD TYPE C
	ARROW BOARD TYPE C (SINGLE ARROW)

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TRAFFIC CONTROL PLAN PHASE I

BEGIN TO STA. 45+00

SCALE: 1"= 50'

3/18/2014
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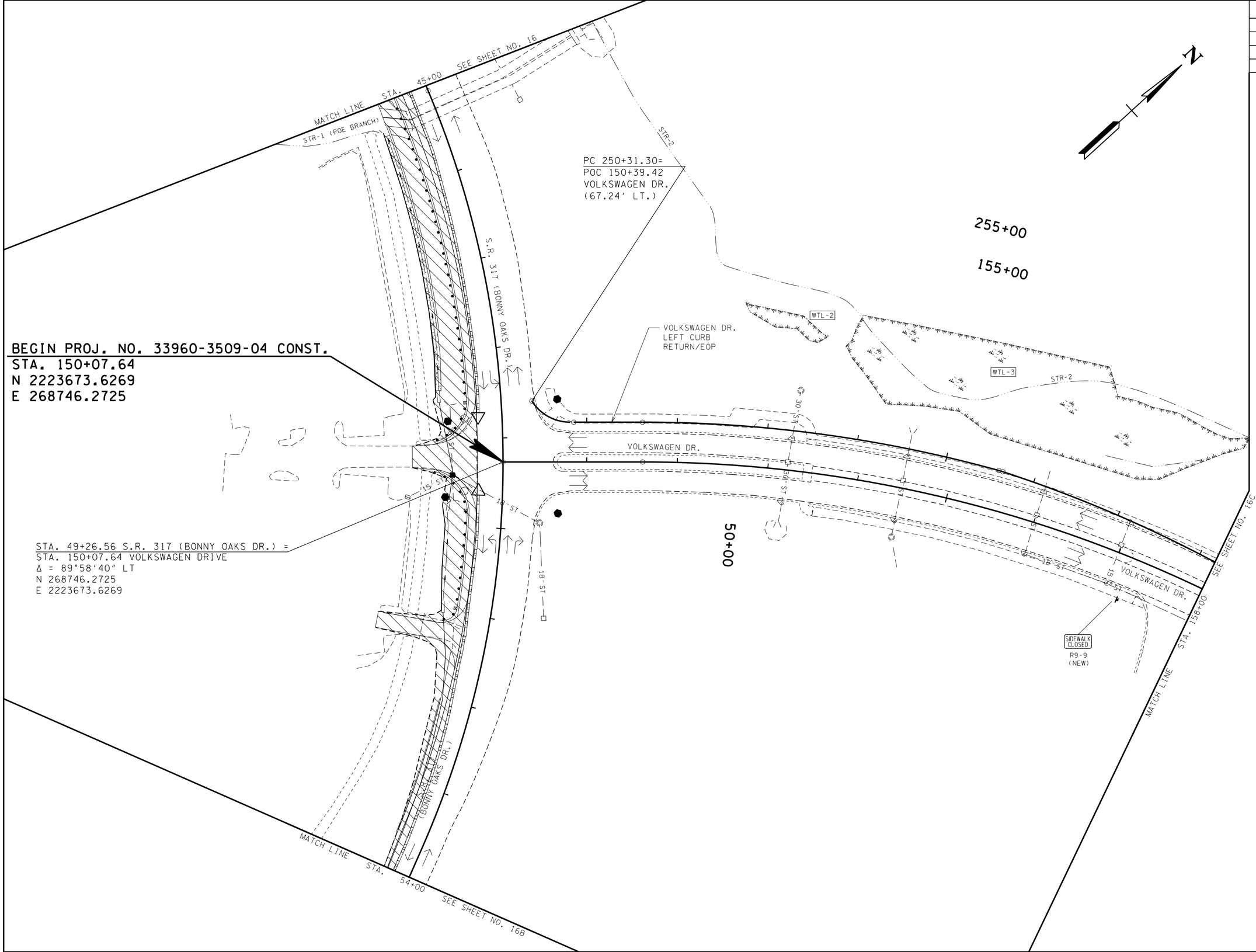
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	16A



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TRAFFIC CONTROL PLAN PHASE I

STA. 45+00 TO STA. 54+00

SCALE: 1"= 50'

3/18/2014
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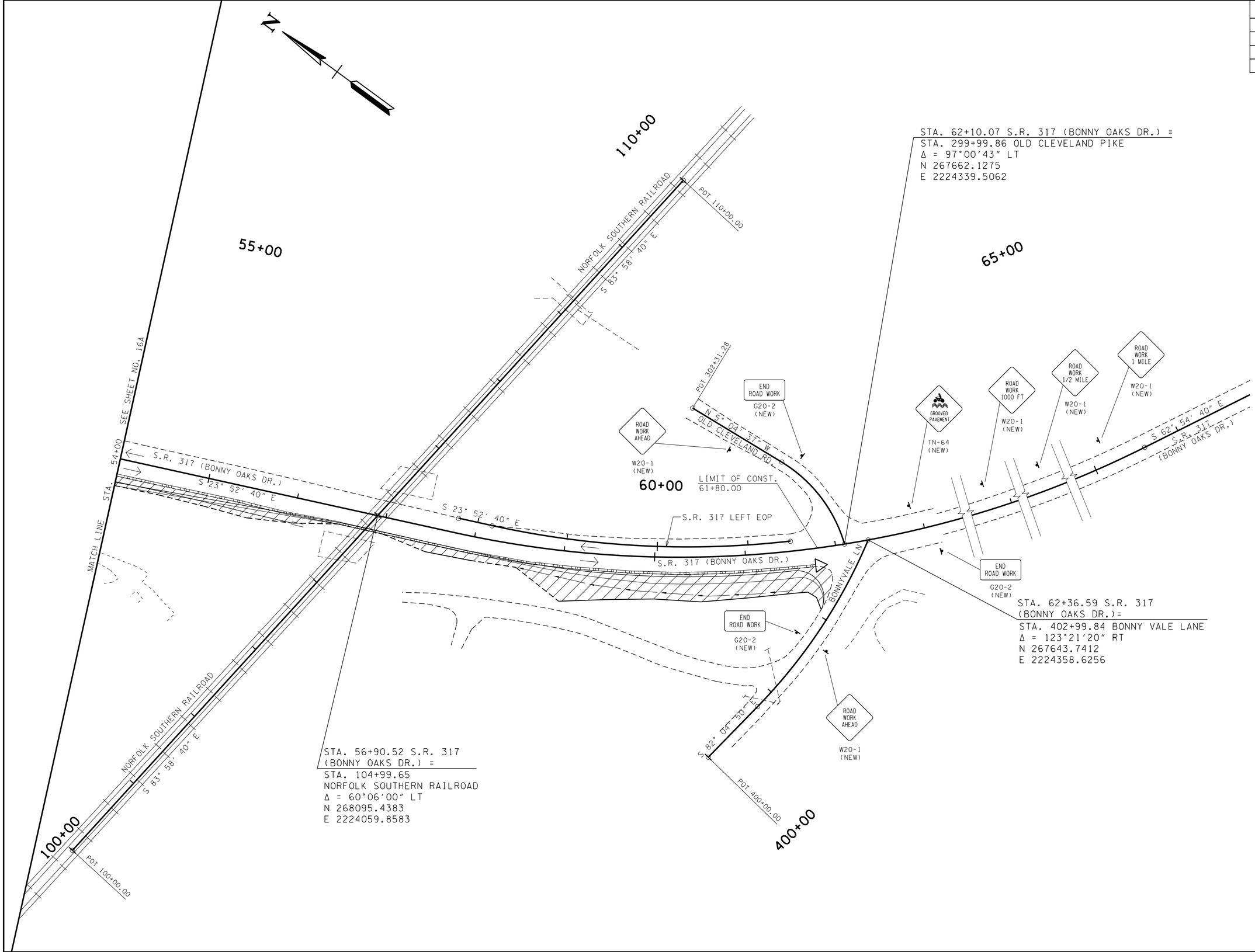
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	16B



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TRAFFIC CONTROL PLAN PHASE I

STA. 54+00 TO END

SCALE: 1"= 50'

3/18/2014
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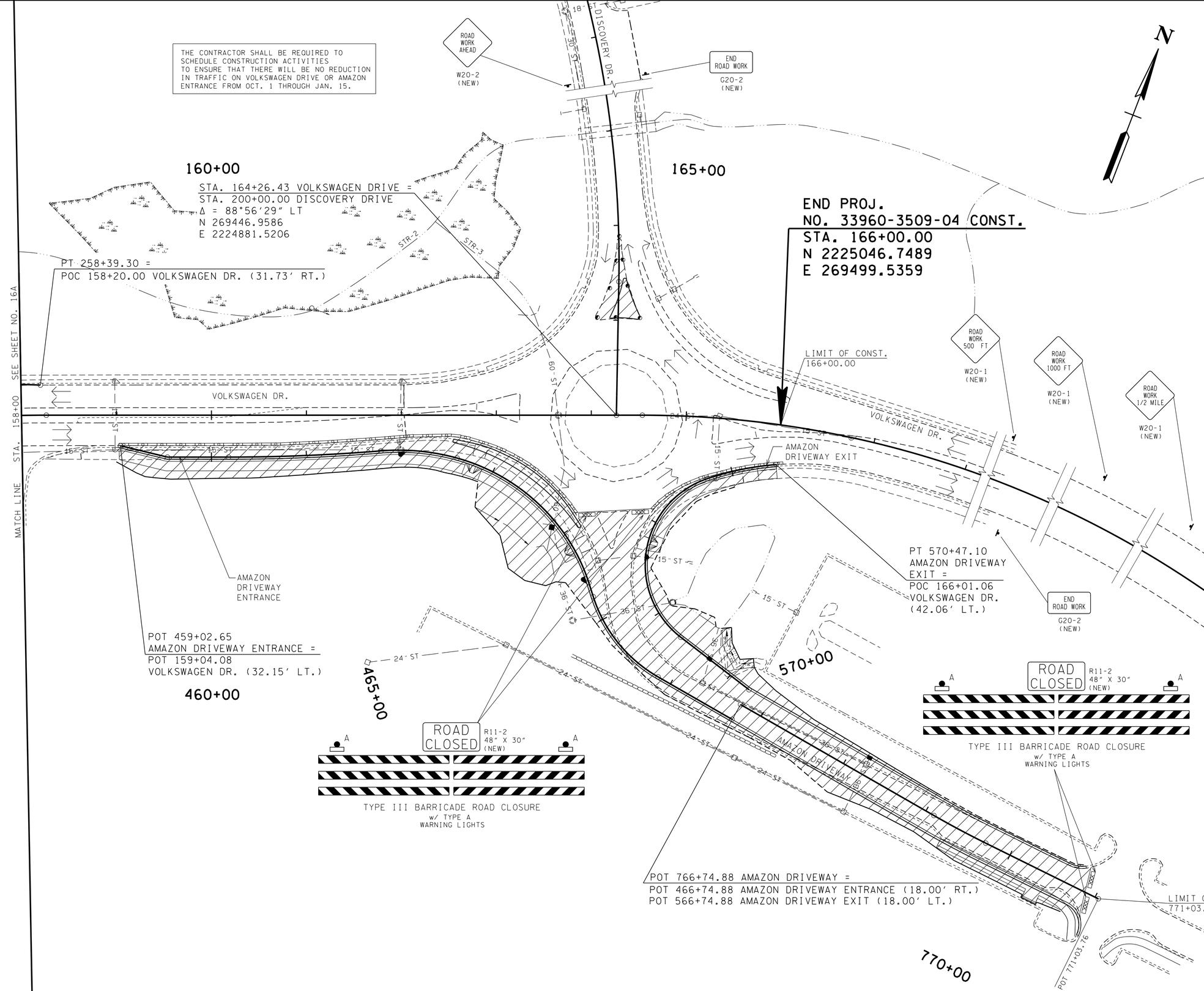
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	16C



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DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN PHASE I

STA. 158+00 TO END

SCALE: 1"= 50'

3/18/2014
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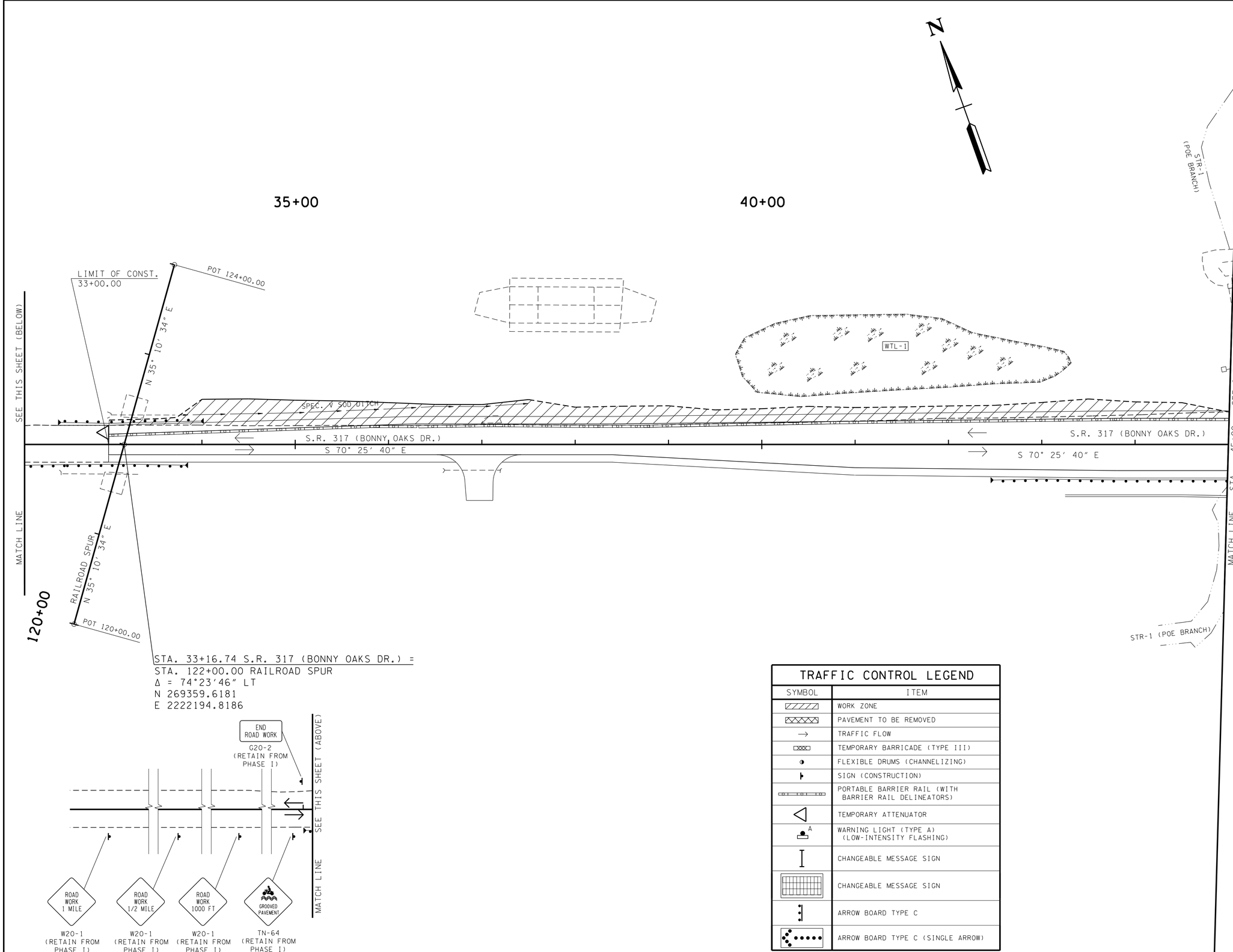
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	17



TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	WORK ZONE
	PAVEMENT TO BE REMOVED
→	TRAFFIC FLOW
	TEMPORARY BARRICADE (TYPE III)
	FLEXIBLE DRUMS (CHANNELIZING)
	SIGN (CONSTRUCTION)
	PORTABLE BARRIER RAIL (WITH BARRIER RAIL DELINEATORS)
	TEMPORARY ATTENUATOR
A	WARNING LIGHT (TYPE A) (LOW-INTENSITY FLASHING)
	CHANGEABLE MESSAGE SIGN
	CHANGEABLE MESSAGE SIGN
	ARROW BOARD TYPE C
	ARROW BOARD TYPE C (SINGLE ARROW)

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TRAFFIC CONTROL PLAN PHASE II

BEGIN TO STA. 45+00

SCALE: 1"= 50'

3/18/2014
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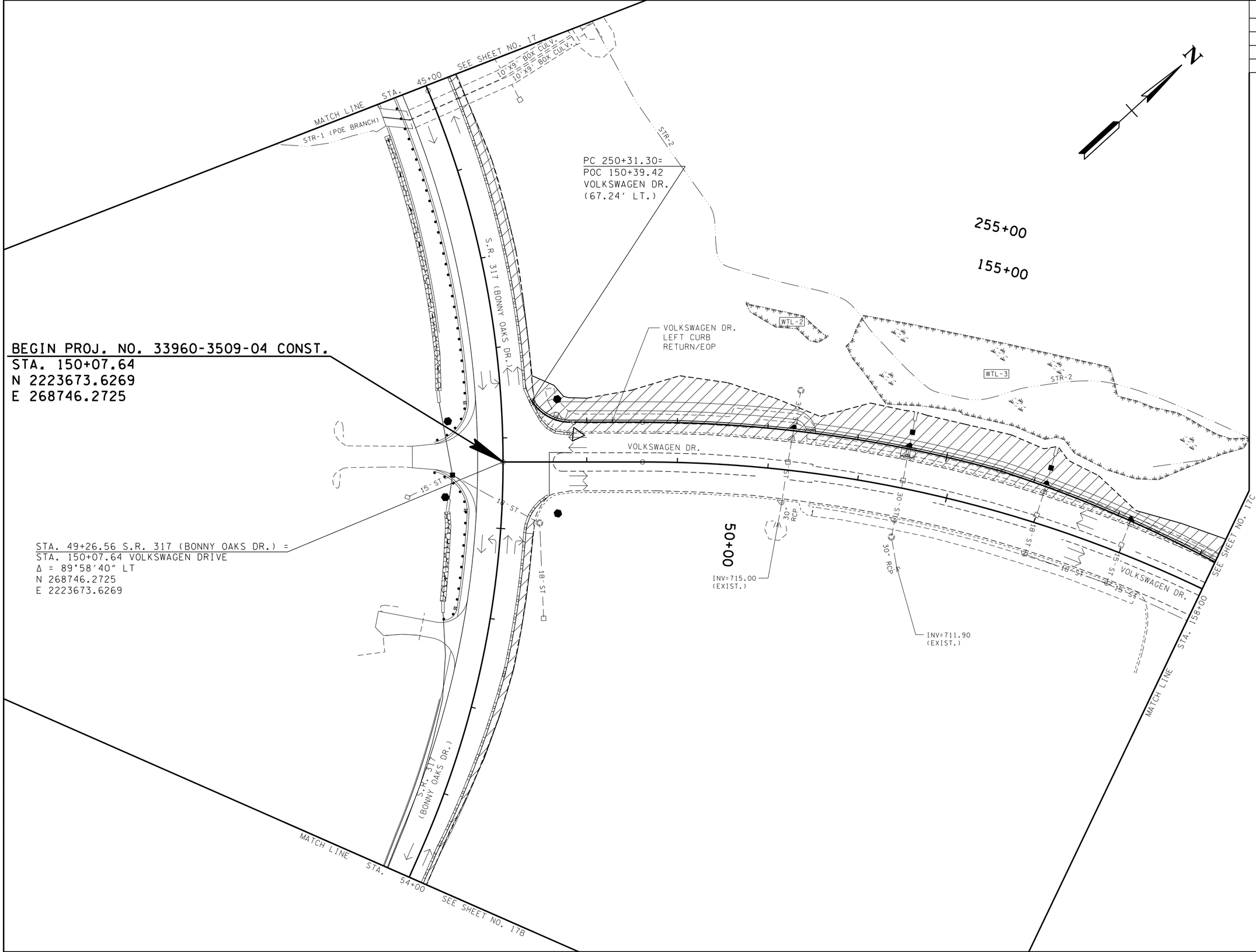
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	17A



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DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN PHASE II

STA. 45+00 TO STA. 54+00

SCALE: 1"= 50'

3/18/2014
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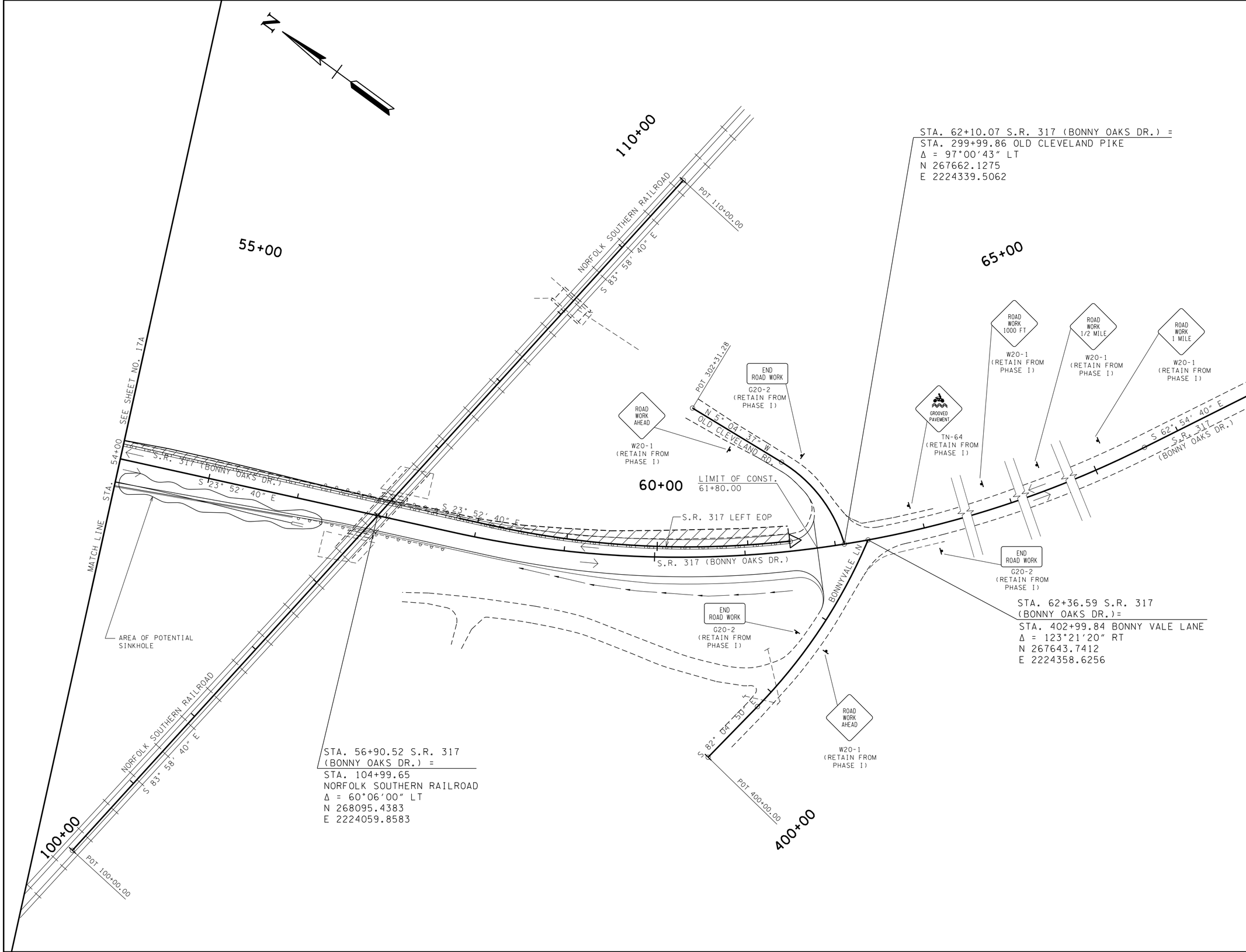
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	17B



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DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN PHASE II

STA. 54+00 TO END

SCALE: 1"= 50'

3/18/2014
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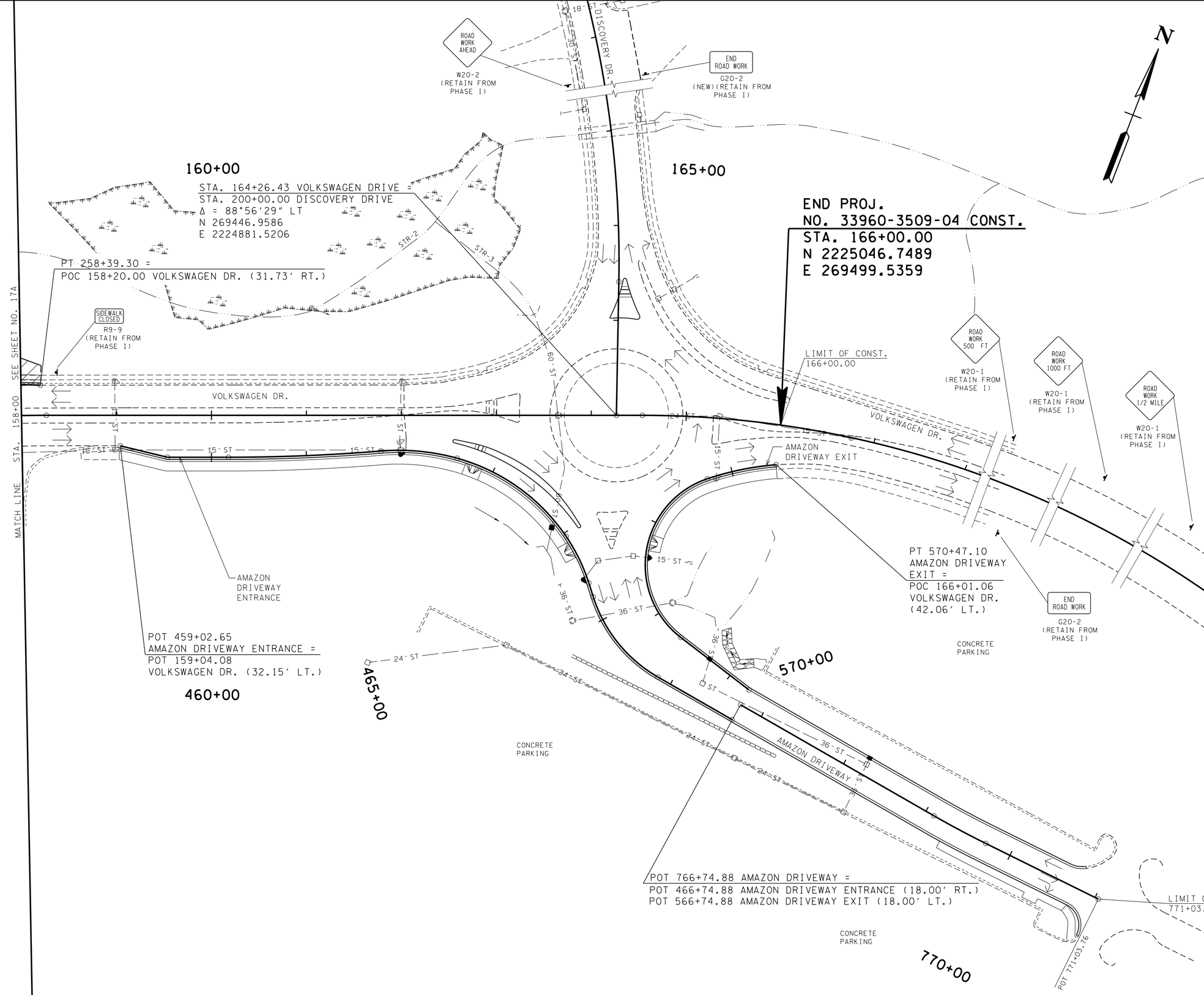
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	17C



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TRAFFIC CONTROL PLAN PHASE II

STA. 158+00 TO END

SCALE: 1"= 50'

3/18/2014
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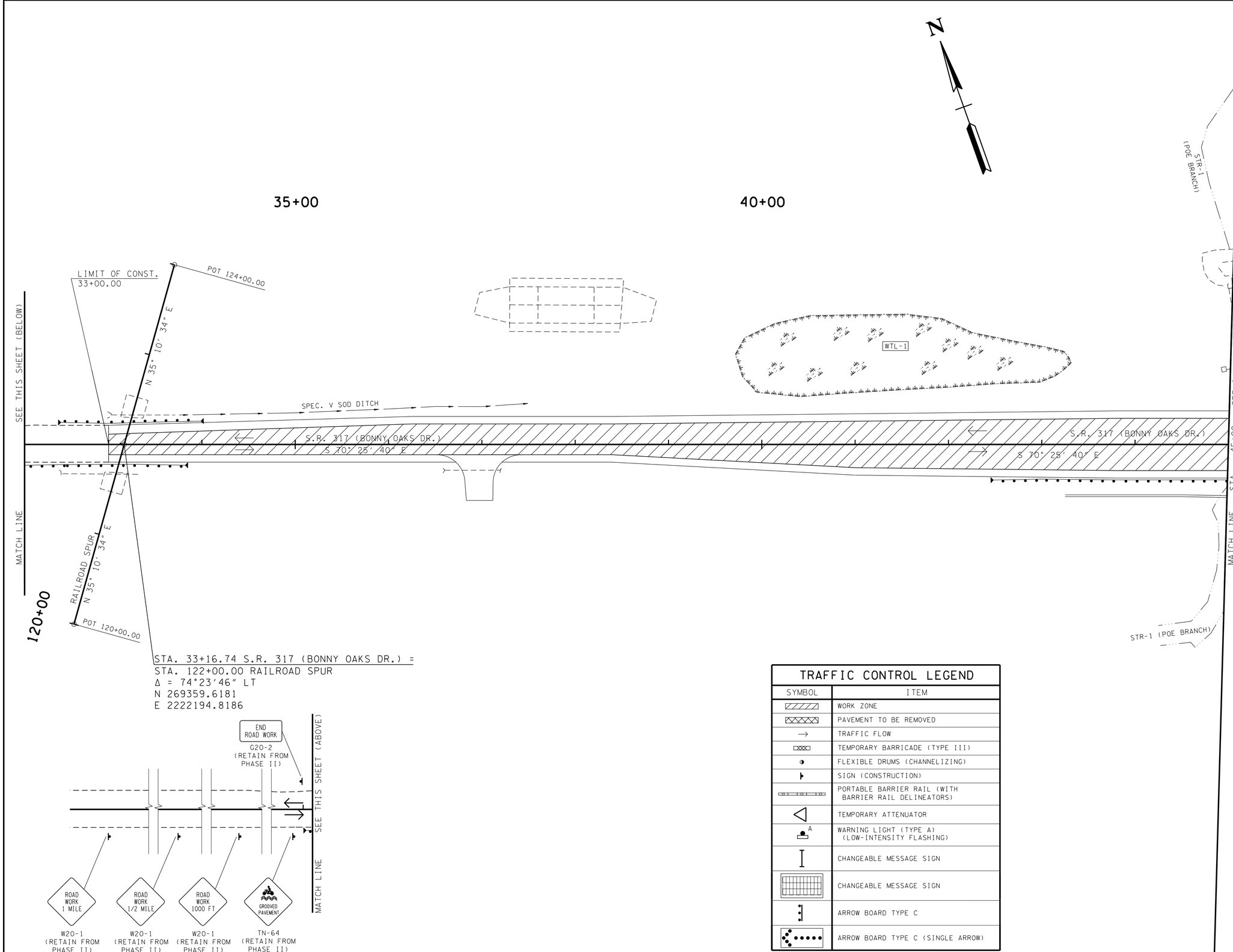
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	18



STA. 33+16.74 S.R. 317 (BONNY OAKS DR.) =
STA. 122+00.00 RAILROAD SPUR
Δ = 74°23'46" LT
N 269359.6181
E 2222194.8186

TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	WORK ZONE
	PAVEMENT TO BE REMOVED
→	TRAFFIC FLOW
	TEMPORARY BARRICADE (TYPE III)
	FLEXIBLE DRUMS (CHANNELIZING)
	SIGN (CONSTRUCTION)
	PORTABLE BARRIER RAIL (WITH BARRIER RAIL DELINEATORS)
	TEMPORARY ATTENUATOR
A	WARNING LIGHT (TYPE A) (LOW-INTENSITY FLASHING)
	CHANGEABLE MESSAGE SIGN
	CHANGEABLE MESSAGE SIGN
	ARROW BOARD TYPE C
	ARROW BOARD TYPE C (SINGLE ARROW)

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TRAFFIC CONTROL PLAN PHASE III

BEGIN TO STA. 45+00

SCALE: 1"= 50'

3/18/2014
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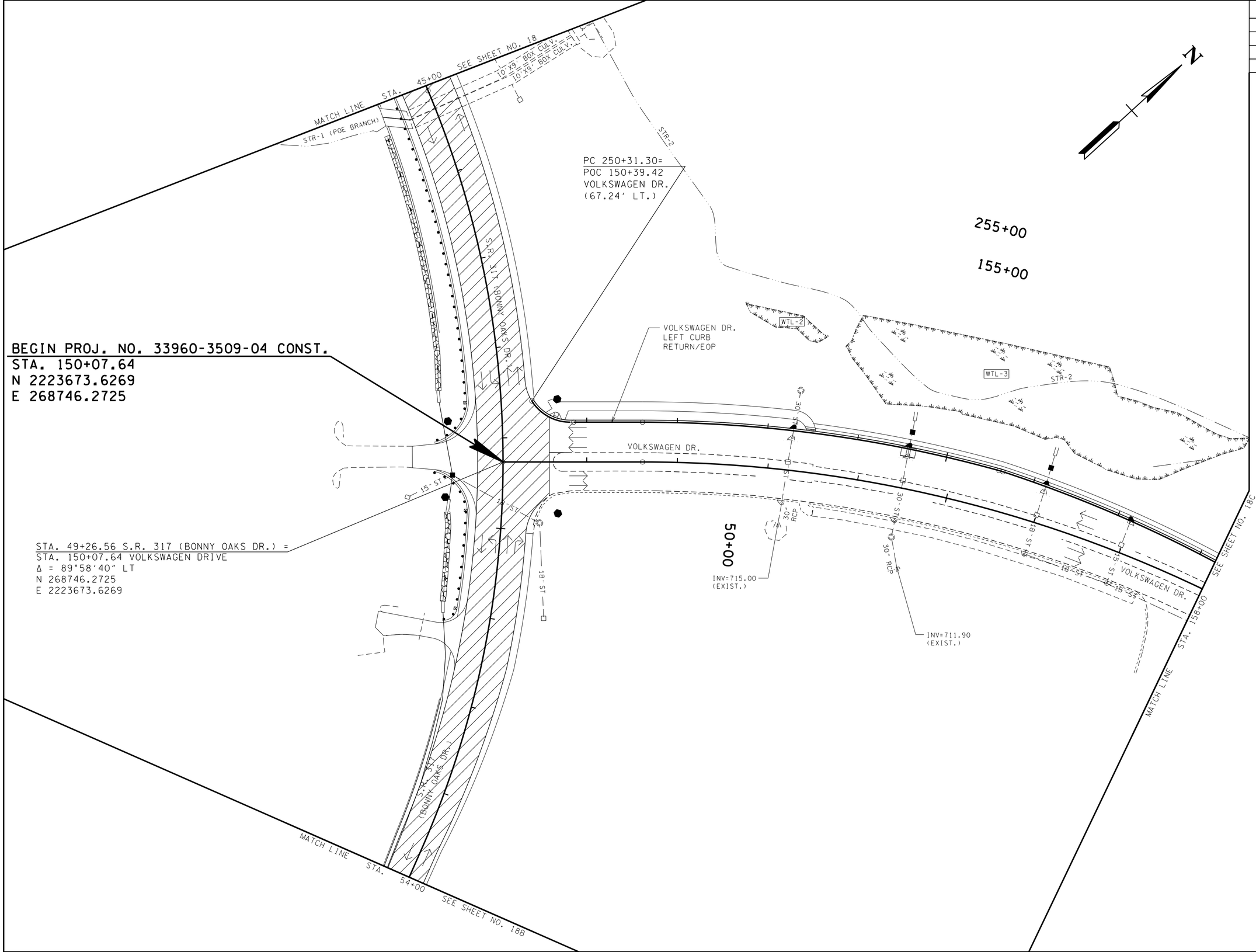
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	18A



UNOFFICIAL SET

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DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN PHASE III

STA. 45+00 TO STA. 54+00

SCALE: 1"= 50'

3/18/2014
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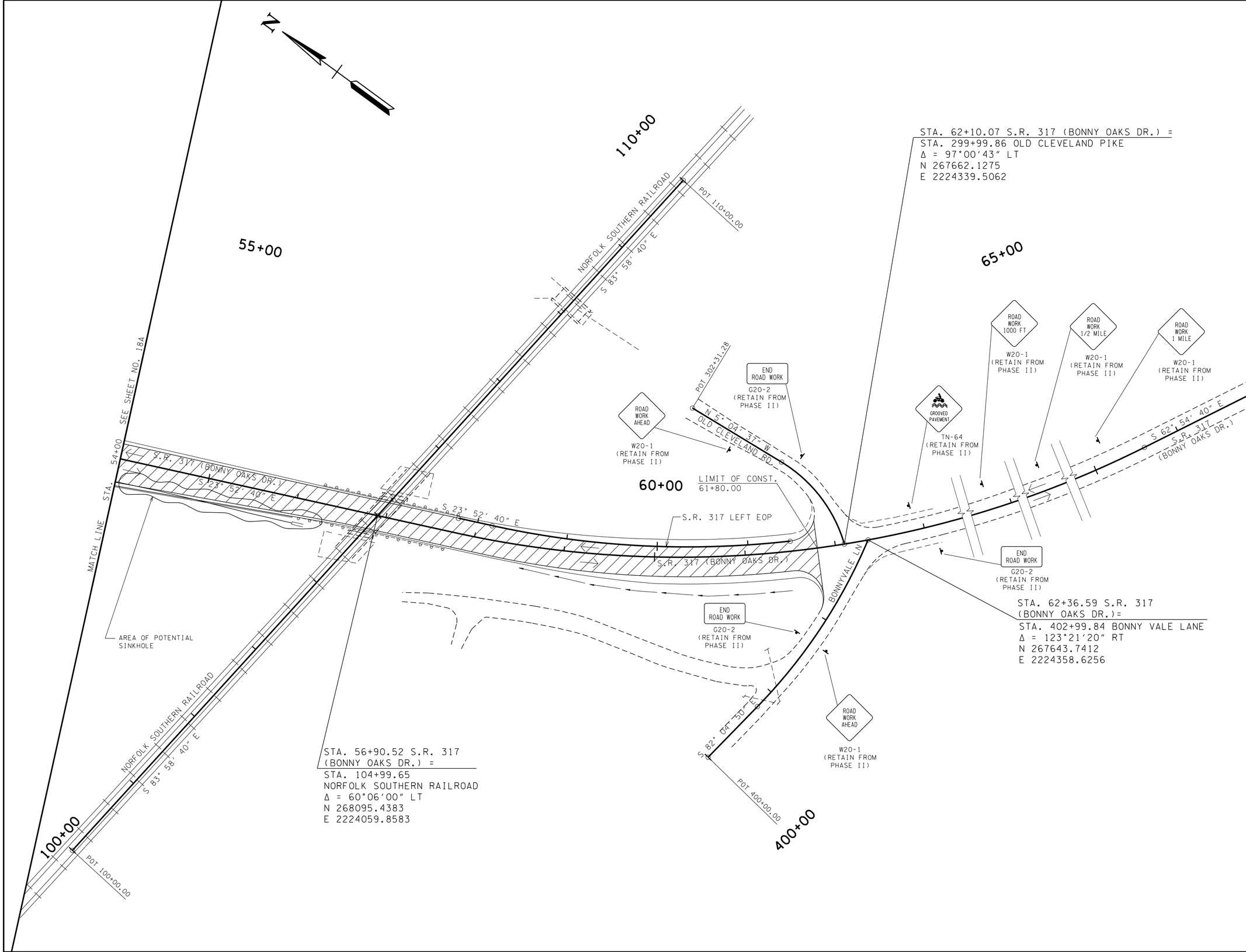
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	18B



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DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN PHASE III

STA. 54+00 TO END

SCALE: 1"= 50'

3/18/2014
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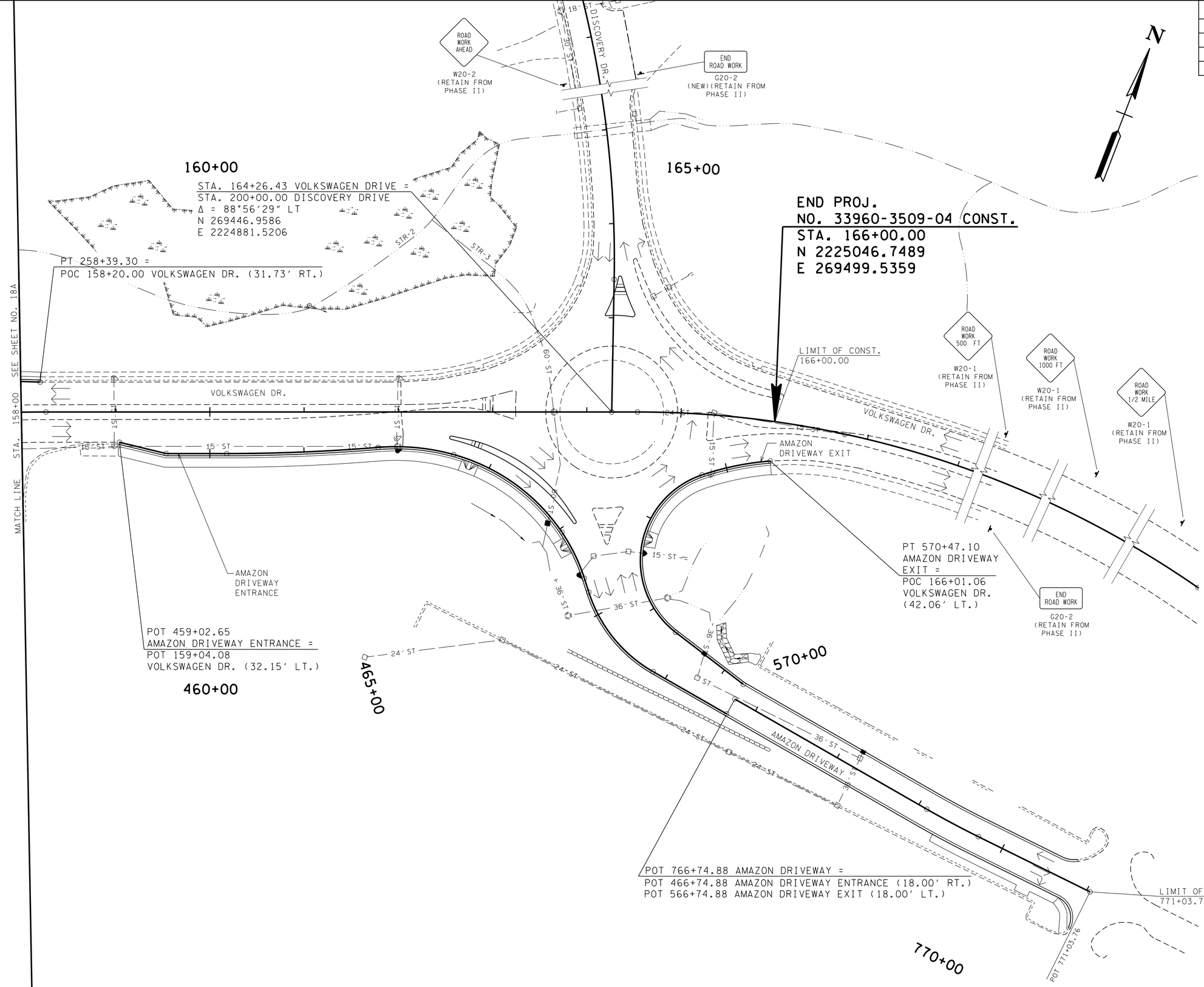
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	18C



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DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN PHASE III

STA. 158+00 TO END

SCALE: 1"= 50′

3/18/2014
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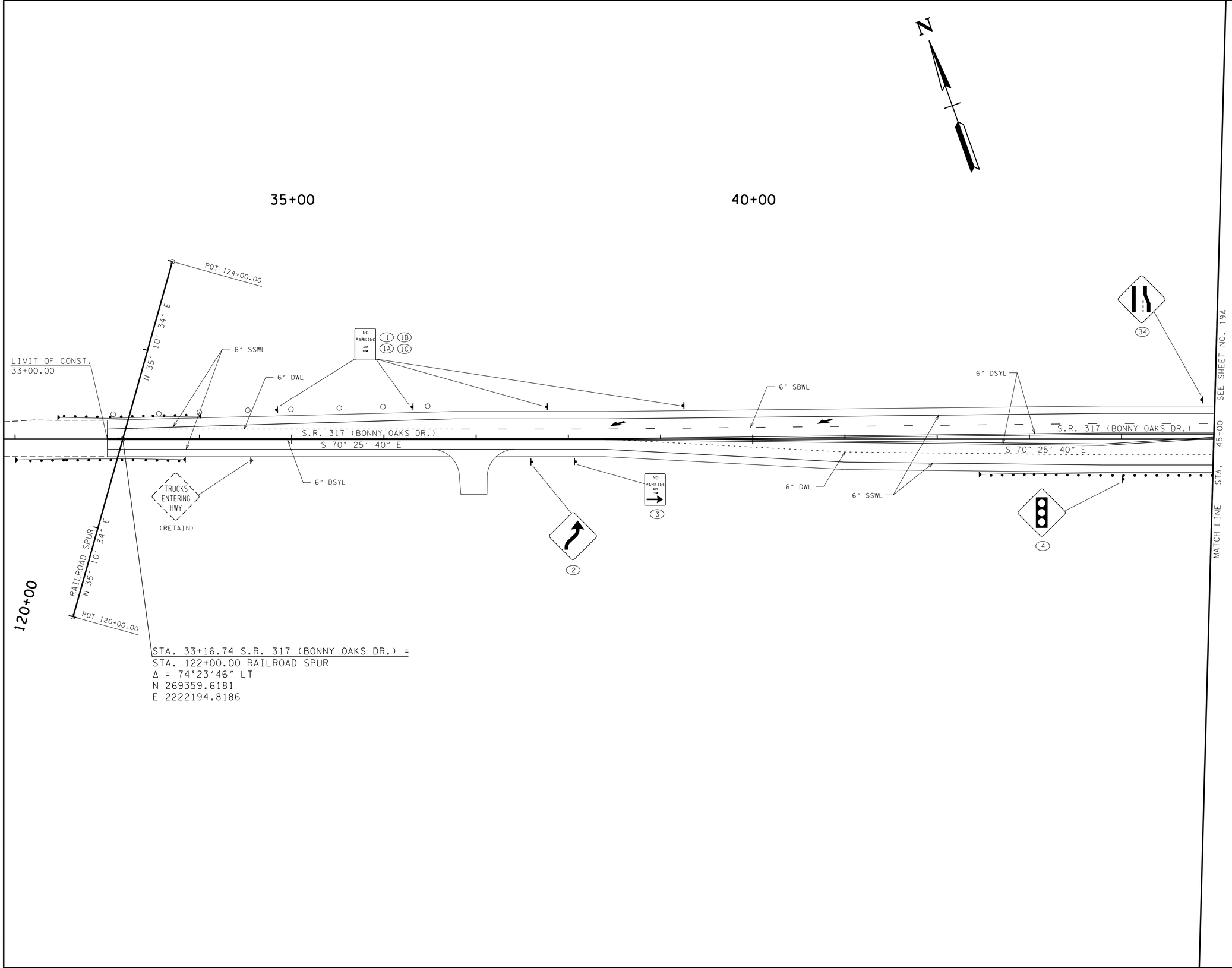
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	19



UNOFFICIAL SET

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DEPARTMENT OF TRANSPORTATION

SIGNING AND PAVEMENT MARKINGS

BEGIN TO STA. 45+00

SCALE: 1"= 50'

3/18/2014
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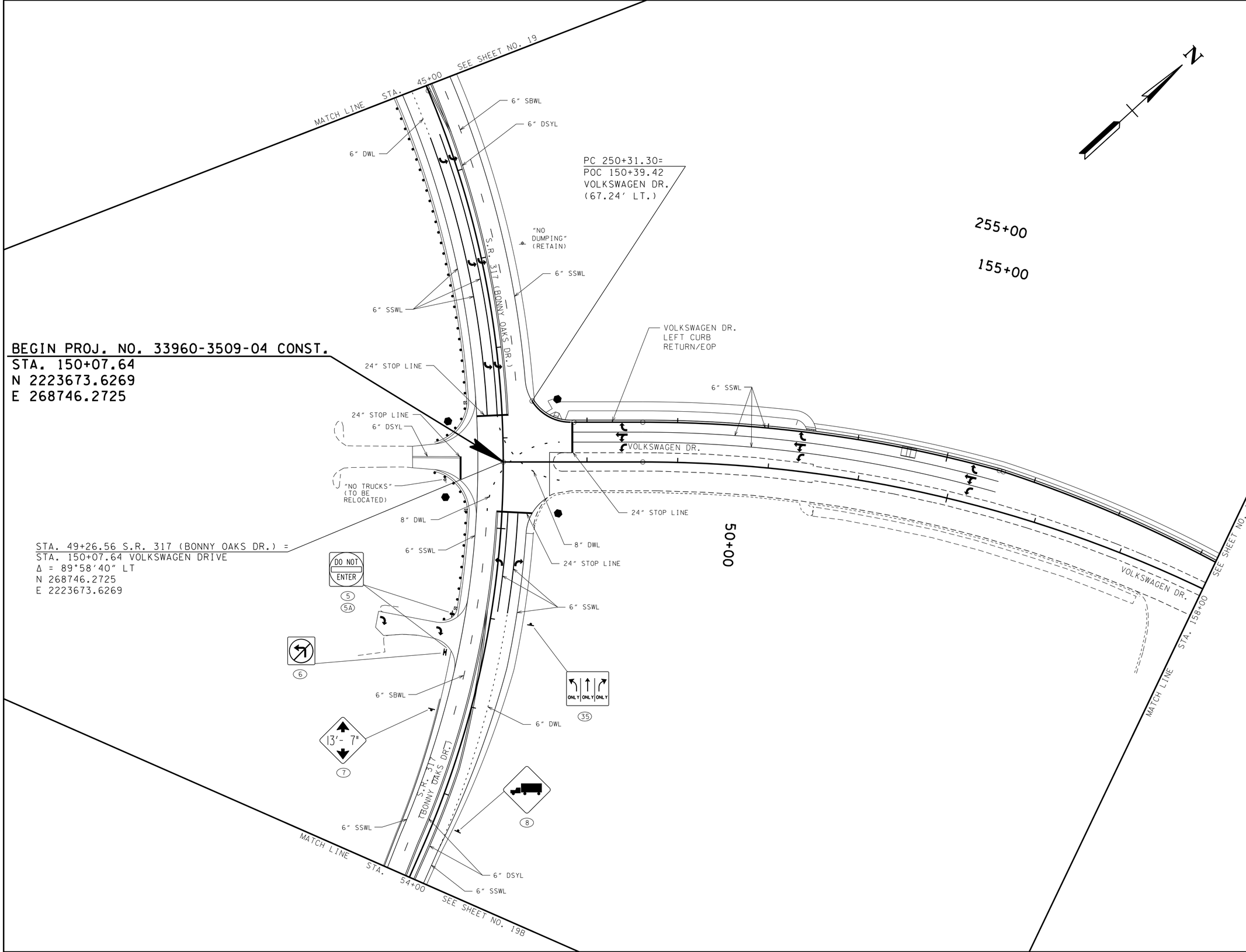
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	19A



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SIGNING AND PAVEMENT MARKINGS

STA. 45+00 TO STA. 54+00

SCALE: 1"= 50'

3/18/2014
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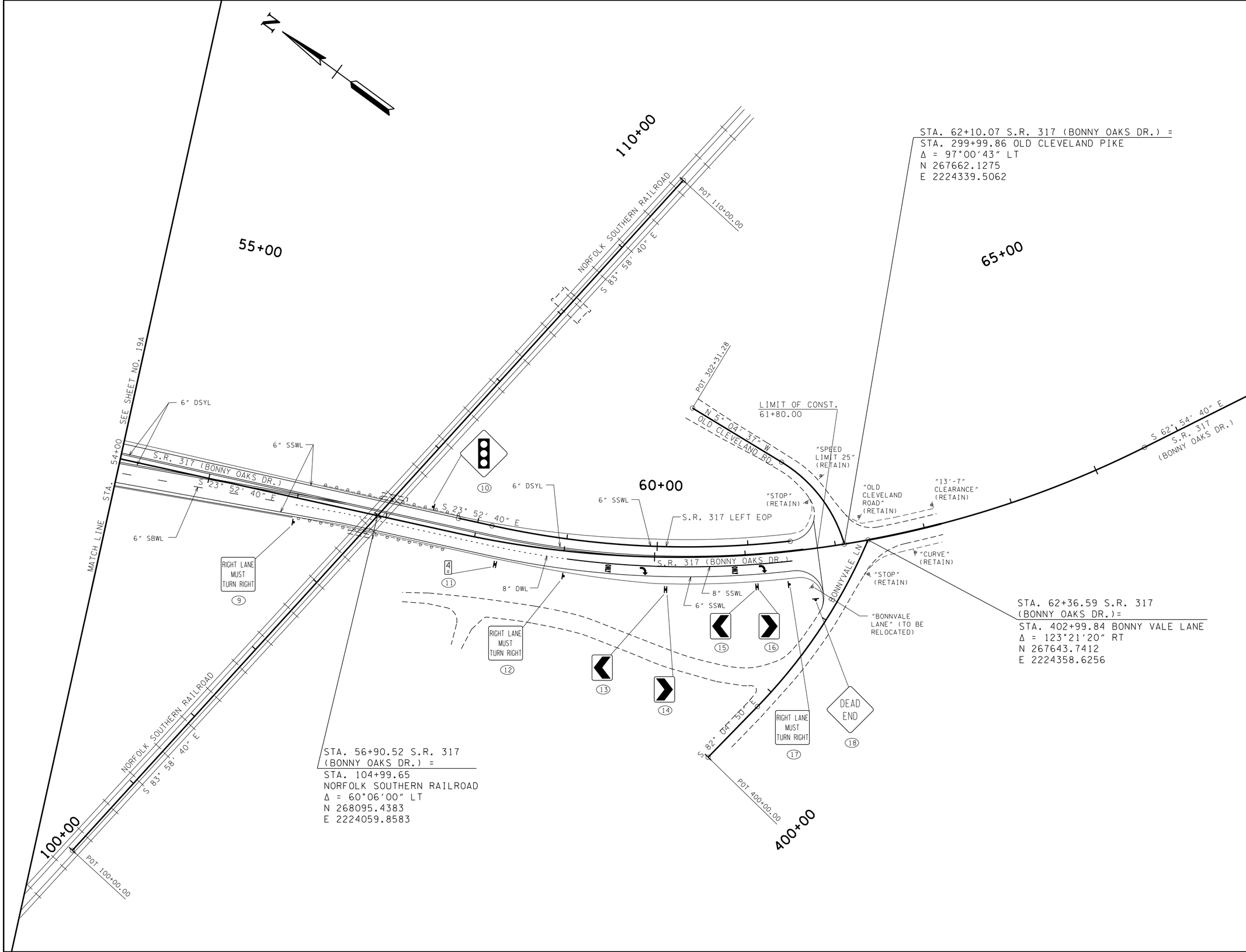
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	19B



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DEPARTMENT OF TRANSPORTATION

SIGNING AND PAVEMENT MARKINGS

STA. 54+00 TO END

SCALE: 1"= 50'

3/18/2014
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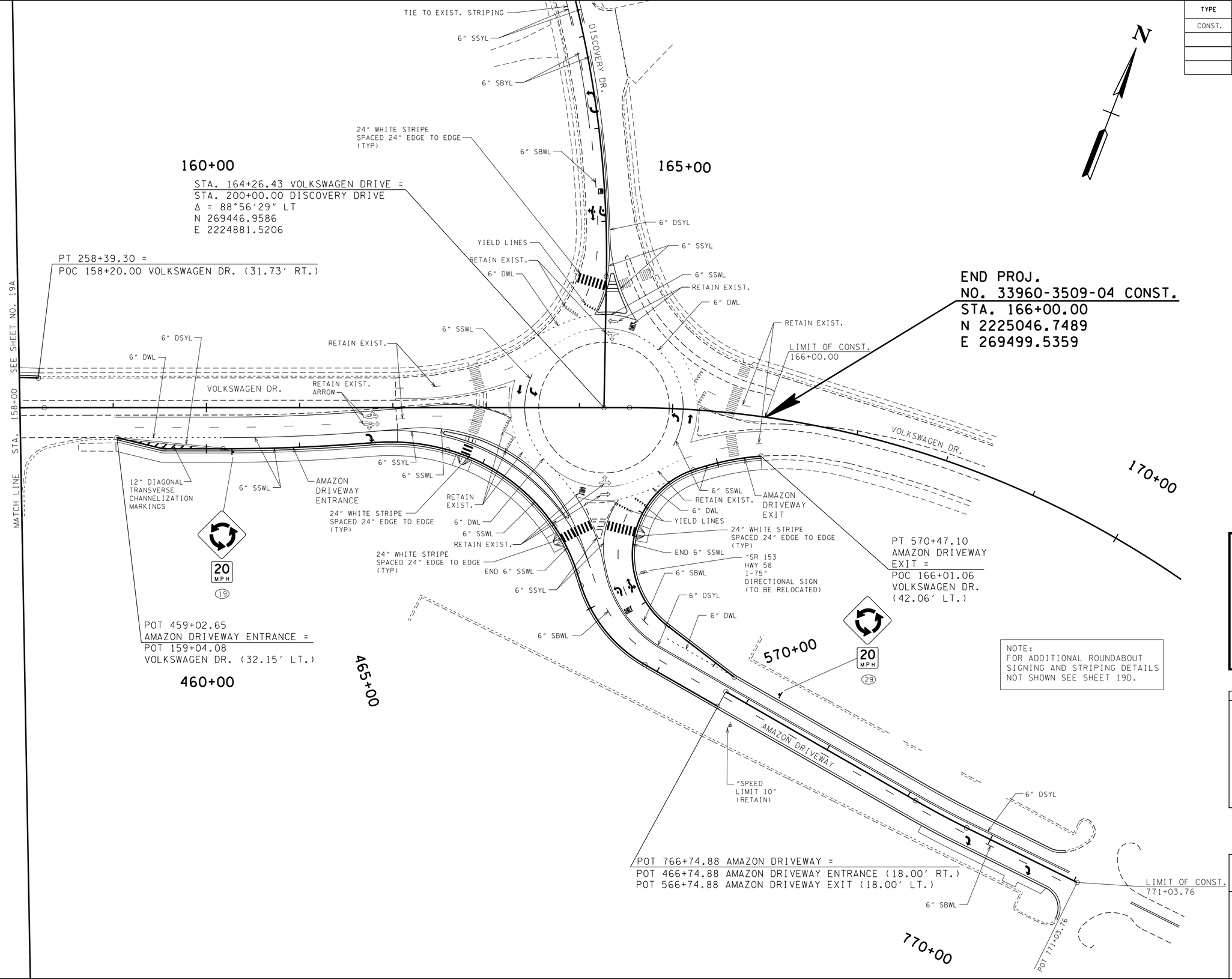
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	19C



NOTE:
FOR ADDITIONAL ROUNDABOUT SIGNING AND STRIPING DETAILS NOT SHOWN SEE SHEET 19D.

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SIGNING AND PAVEMENT MARKINGS

STA. 158+00 TO END

SCALE: 1"= 50'

3/18/2014
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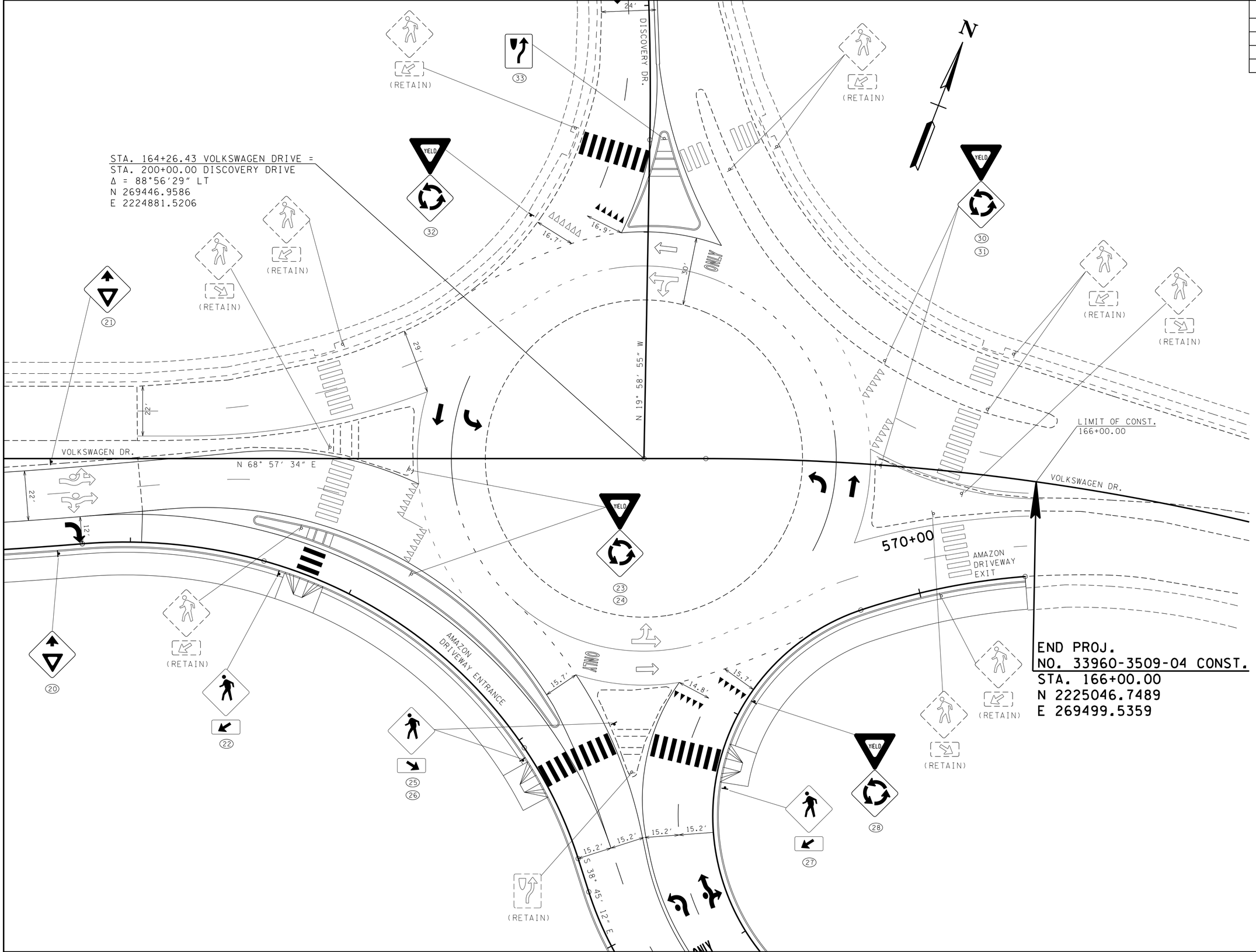
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	19D



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SIGNING AND PAVEMENT MARKINGS

ROUNDABOUT DETAIL

SCALE: 1"= 20'

3/18/2014
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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	19E

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

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

SIGN NO	LEGEND	SHEET NO	SIZE				COPY				SHIELD	ARROW	SIGN FACE			STEEL DESIGN (BREAK-AWAY)					MINIMUM VERTICAL CLEARANCE	REMARKS
			LENGTH	HEIGHT	RADIUS	BORDER WIDTH	CAPITAL	LOWER CASE	NUMERAL	SERIES			COPY	BACKGROUND	MATERIAL	SUPPORT TYPE	SUPPORT LENGTH	FOOTING	CONC. CU. YD.	REIN STEEL LBS.		
1	NO PARKING ANY TIME R7-1	19	12"	18"									RED (REF.)	WHITE (REF.)	0.080" SHEET ALUMINUM	U3	h=10'-11"				5'-0"	
1A		19														U3	h=10'-11"					
1B		19														U3	h=10'-11"					
1C		19														U3	h=10'-11"					
2	W1-4R	19	30"	30"									BLACK	YELLOW (REF.)	0.080" SHEET ALUMINUM	U6	h=13'-2"				5'-0"	
3	NO PARKING ANY TIME R7-1R	19	12"	18"									RED (REF.)	WHITE (REF.)	0.080" SHEET ALUMINUM	U3	h=10'-11"				5'-0"	
4	W3-3	19	30"	30"									BLACK RED (REF.) GREEN (REF.)	YELLOW (REF.)	0.080" SHEET ALUMINUM	U6	h=13'-2"				5'-0"	
10		19B														U6	h=13'-2"					
5	DO NOT ENTER R5-1	19A	30"	30"									WHITE (REF.)	WHITE (REF.) RED (REF.)	0.080" SHEET ALUMINUM	P8	h=11'-9"				5'-0"	
5A		19A														P8	h=11'-9"					
6	R3-2	19A	24"	24"									BLACK RED (REF.)	WHITE (REF.)	0.080" SHEET ALUMINUM							MOUNTED ON BACK OF SIGN NO. 5A
7	13'- 7" W12-2	19A	36"	36"									BLACK	YELLOW (REF.)	0.100" SHEET ALUMINUM	P8	h=11'-6"				5'-0"	
8	W8-6	19A	36"	36"									BLACK	YELLOW (REF.)	0.100" SHEET ALUMINUM	P8	h=11'-6"				5'-0"	
9	RIGHT LANE MUST TURN RIGHT R3-7R	19B	36"	36"									BLACK	WHITE (REF.)	0.100" SHEET ALUMINUM	P8	h=11'-4"				5'-0"	
12		19B														P8	h=11'-4"					
17		19B														P8	h=11'-4"					
11	4 TN-17A	19B		SEE STANDARD DRAWING T-S-11																		PAID FOR UNDER ITEM 713-02.04
13	W1-8L	19B	18"	24"									BLACK	YELLOW (REF.)	0.080" SHEET ALUMINUM	U3	h=11'-9"				5'-0"	
15		19B														U3	h=11'-9"					
14	W1-8R	19B	18"	24"									BLACK	YELLOW (REF.)	0.080" SHEET ALUMINUM	U3	h=11'-9"				5'-0"	
16		19B														U3	h=11'-9"					
18	DEAD END W14-1	19B	30"	30"									BLACK	YELLOW (REF.)	0.080" SHEET ALUMINUM	U6	h=13'-2"				5'-0"	

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SIGN SCHEDULE

3/18/2014
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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	19F

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
19	W2-6	19C	30"	30"									BLACK	YELLOW (REF.)	0.080" SHEET ALUMINUM	U6	h=14'-8"				7'-0"	
29	W13-1P (20 MPH)	19C	18"	18"												U6	h=14'-8"					
20	W3-2	19D	30"	30"									BLACK RED (REF.) WHITE (REF.)	YELLOW (REF.)	0.080" SHEET ALUMINUM	U6	h=13'-2"				7'-0"	
21		19D														U6	h=13'-2"					
22	W11-2	19D	36"	36"									BLACK	YELLOW (REF.)	0.100" SHEET ALUMINUM	P8	h=14'2"				7'-0"	
27	W16-7P	19D	24"	12"												P8	h=14'2"					
23	R1-2 (YIELD) / W2-6	19D	36" / 30"	36" / 30"									RED (REF.) BLACK	WHITE (REF.) BLACK YELLOW (REF.)	0.080" SHEET ALUMINUM	P8	h=14'-7"				7'-0"	
24		19D														P8	h=14'-7"					
28		19D														P8	h=14'-7"					
30		19D														P8	h=14'-7"					
31		19D														P8	h=14'-7"					
32		19D														P8	h=14'-7"					
25	W11-2	19D	36"	36"									BLACK	YELLOW (REF.)	0.100" SHEET ALUMINUM	P8	h=14'2"				7'-0"	
26	W16-7P	19D	24"	12"												P8	h=14'2"					
33	R4-7	19D	24"	30"									BLACK	WHITE (REF.)	0.080" SHEET ALUMINUM	U6	h=12'-6"				7'-0"	
34	R4-7	19	36"	36"									BLACK	YELLOW (REF.)	0.100" SHEET ALUMINUM	P8	h=11'-4"				5'-0"	
35	R4-7 (ONLY ONLY ONLY)	19A	36"	30"									BLACK	WHITE (REF.)	0.100" SHEET ALUMINUM	P8	h=12'-4"				5'-0"	

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SIGN SCHEDULE

3/18/2014
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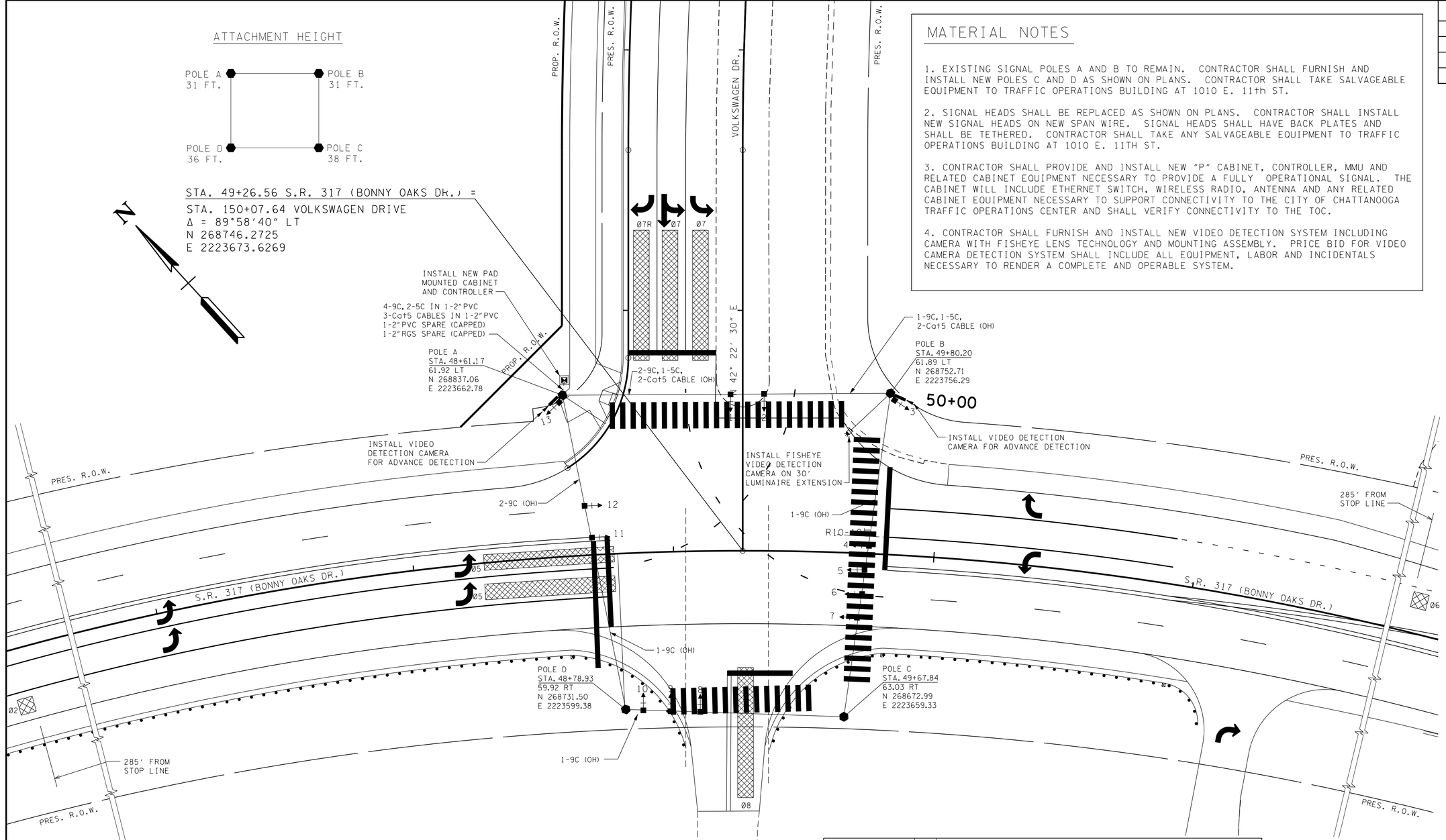
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	20

ATTACHMENT HEIGHT

POLE A 31 FT. — POLE B 31 FT.
POLE D 36 FT. — POLE C 38 FT.

STA. 49+26.56 S.R. 317 (BONNY OAKS DR.) =
STA. 150+07.64 VOLKSWAGEN DRIVE
Δ = 89°58′40″ LT
N 268746.2725
E 2223673.6269



MATERIAL NOTES

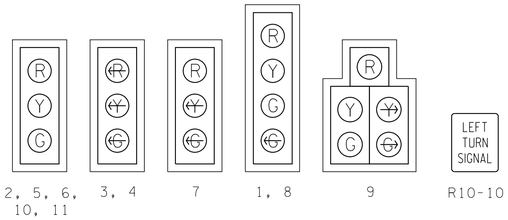
1. EXISTING SIGNAL POLES A AND B TO REMAIN. CONTRACTOR SHALL FURNISH AND INSTALL NEW POLES C AND D AS SHOWN ON PLANS. CONTRACTOR SHALL TAKE SALVAGEABLE EQUIPMENT TO TRAFFIC OPERATIONS BUILDING AT 1010 E. 11th ST.

2. SIGNAL HEADS SHALL BE REPLACED AS SHOWN ON PLANS. CONTRACTOR SHALL INSTALL NEW SIGNAL HEADS ON NEW SPAN WIRE. SIGNAL HEADS SHALL HAVE BACK PLATES AND SHALL BE TETHERED. CONTRACTOR SHALL TAKE ANY SALVAGEABLE EQUIPMENT TO TRAFFIC OPERATIONS BUILDING AT 1010 E. 11TH ST.

3. CONTRACTOR SHALL PROVIDE AND INSTALL NEW "P" CABINET, CONTROLLER, MMU AND RELATED CABINET EQUIPMENT NECESSARY TO PROVIDE A FULLY OPERATIONAL SIGNAL. THE CABINET WILL INCLUDE ETHERNET SWITCH, WIRELESS RADIO, ANTENNA AND ANY RELATED CABINET EQUIPMENT NECESSARY TO SUPPORT CONNECTIVITY TO THE CITY OF CHATTANOOGA TRAFFIC OPERATIONS CENTER AND SHALL VERIFY CONNECTIVITY TO THE TOC.

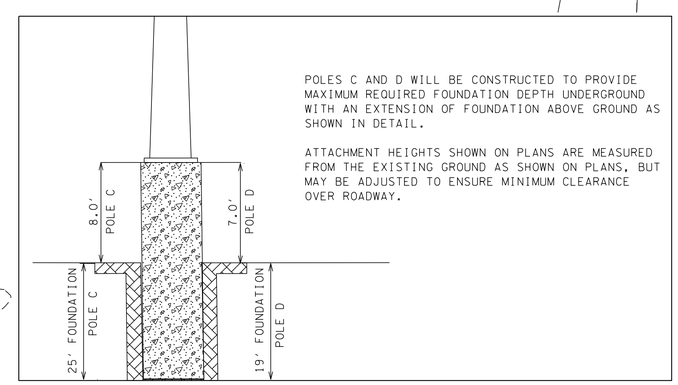
4. CONTRACTOR SHALL FURNISH AND INSTALL NEW VIDEO DETECTION SYSTEM INCLUDING CAMERA WITH FISHEYE LENS TECHNOLOGY AND MOUNTING ASSEMBLY. PRICE BID FOR VIDEO CAMERA DETECTION SYSTEM SHALL INCLUDE ALL EQUIPMENT, LABOR AND INCIDENTALS NECESSARY TO RENDER A COMPLETE AND OPERABLE SYSTEM.

PROPOSED 12″ SIGNAL HEADS & SIGNS



SIGNAL PHASING DIAGRAM

INACTIVE Ø1	Ø2	INACTIVE Ø3	INACTIVE Ø4
Ø5	Ø6	Ø7	Ø8



POLES C AND D WILL BE CONSTRUCTED TO PROVIDE MAXIMUM REQUIRED FOUNDATION DEPTH UNDERGROUND WITH AN EXTENSION OF FOUNDATION ABOVE GROUND AS SHOWN IN DETAIL.

ATTACHMENT HEIGHTS SHOWN ON PLANS ARE MEASURED FROM THE EXISTING GROUND AS SHOWN ON PLANS, BUT MAY BE ADJUSTED TO ENSURE MINIMUM CLEARANCE OVER ROADWAY.

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PROPOSED SIGNAL LAYOUT

S.R. 317 @
VOLKSWAGEN DRIVE

SCALE: 1″=20′

5/5/2014
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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	20A

VOLUME - DENSITY TIMINGS (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 DON'T WALK		
2	15.0	2.3	6.3	2.0	23.0	23.0	70.0	---	4.7	1.2	---	---	MIN.	L
6	15.0	2.3	6.3	2.0	16.3	16.3	50.0	---	4.7	1.5	---	---	MIN.	L

(1) NL = NONLOCK
L = LOCK

BASIC OR FULLY ACTUATED TIMINGS (SECS)

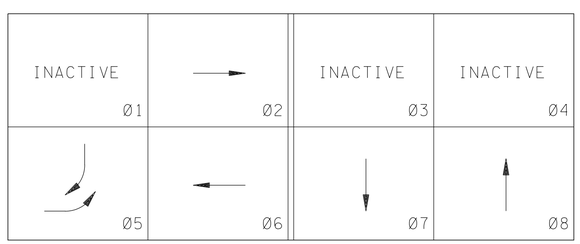
PHASE	INITIAL INTERVAL	VEHICLE INTERVAL	MAX I	MAX II	CLEARANCE		PEDESTRIAN		RECALL TO	MEMORY POSITION (1)
					YELLOW	ALL RED	WALK	FLASHING DON'T WALK		
5	6.0	2.0	20.0	---	4.0	1.9	---	---	---	NL
7	6.0	2.0	20.0	---	5.1	2.5	---	---	---	NL
8	6.0	2.0	20.0	---	4.0	1.9	---	---	---	NL

THESE TIMINGS ARE INITIAL AND SHOULD BE ADJUSTED BY THE CONTRACTOR AS DIRECTED BY THE CITY TO PROVIDE EFFICIENT OPERATION.

DETECTOR ASSIGNMENTS				
DETECTOR AREA NO.	TURNS	LENGTH	MODE	TIMING
Ø2	N/A	6 FT.	PULSE	
Ø5	N/A	50 FT.	PRES.	
Ø6	N/A	6 FT.	PULSE	
Ø7	N/A	50 FT.	PRES.	
Ø7R	N/A	50 FT.	PRES.	5.0 SEC DELAY
Ø8	N/A	50 FT.	PRES.	

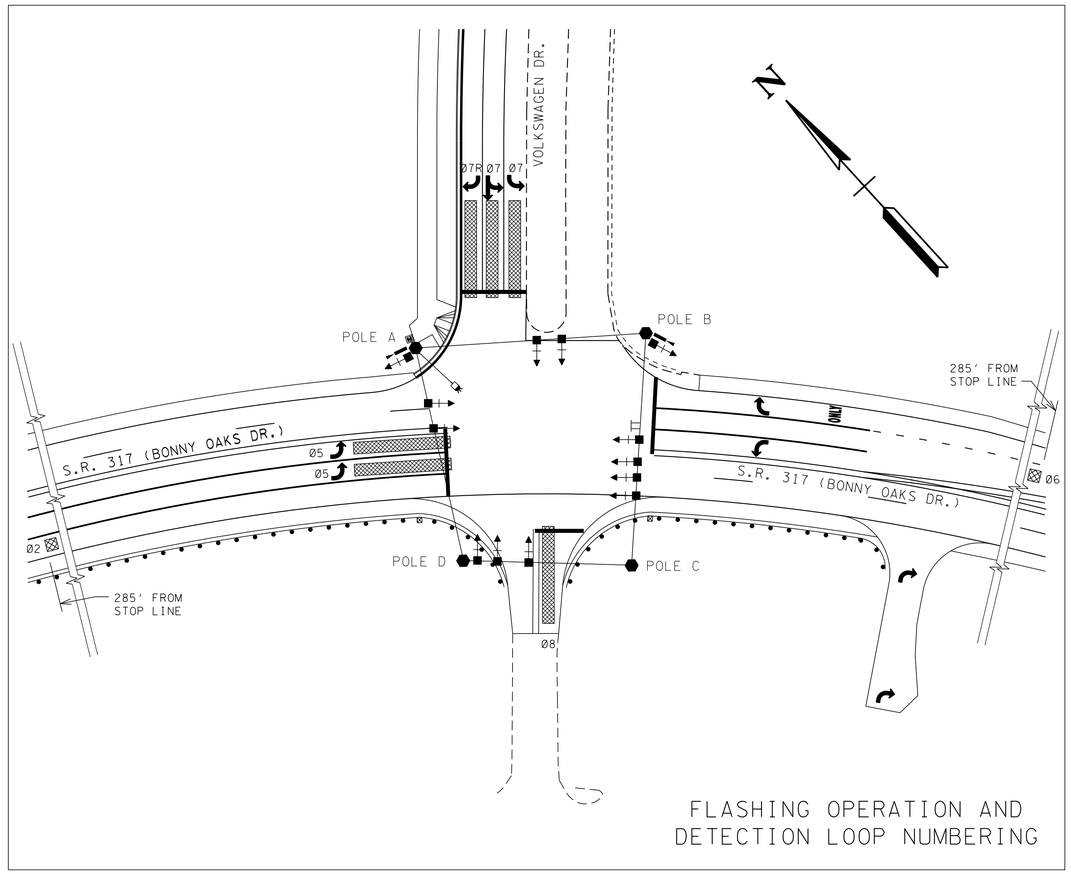
- ALL DETECTION ZONES ARE 6 FT. IN WIDTH, CENTERED IN TRAFFIC LANE.
- DETECTION ZONE NUMBERS CORRESPOND WITH INPUT PHASE NUMBERS.

SIGNAL PHASING DIAGRAM



EIGHT PHASE SEQUENCING

- MIN RECALL: Ø2, Ø6
- ALL SIGNAL DISPLAYS AND CLEARANCES SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- FULL SKIP CAPABILITY



FLASHING OPERATION AND DETECTION LOOP NUMBERING

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PHASING, TIMING, AND DETECTOR ASSIGNMENTS

S.R. 317 @
VOLKSWAGEN DRIVE

5/5/2014
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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	21

SITE PREPARATION

1. THE PROPOSED RIGHT-OF-WAY SHOULD BE CLEARED OF TREES, STUMPS, BRUSH, AND OTHER UNDESIRABLE MATERIALS. TREES, STUMPS, AND ROOTS SHOULD BE COMPLETELY GRUBBED, EXCEPT SOUND UNDISTURBED STUMPS WHICH WILL BE AT LEAST 5 FEET BELOW SUBGRADE. CLEARING AND GRUBBING SHOULD EXTEND TO THE LIMITS OF THE PROPOSED RIGHT-OF-WAY OR 10 FEET OUTSIDE THE CONSTRUCTION LIMITS, WHICHEVER IS LESS.
2. TOPSOIL SHOULD BE STRIPPED FROM THE CONSTRUCTION AREA. TOPSOIL MAY BE STOCKPILED TO DRESS SLOPE AREAS.
3. MATERIALS SHOULD NOT BE STOCKPILED WITHIN 10 FEET OF THE TOP OF CUT SLOPES OR EMBANKMENT SLOPES.
4. THE EXPOSED SUBGRADE IN BOTH ROADWAY AND EMBANKMENT AREAS SHOULD BE PROOFROLLED TO DELINEATE UNSTABLE AREAS. THE PROOFROLLING SHOULD BE DONE AFTER A SUITABLE PERIOD OF DRY WEATHER TO AVOID DEGRADING THE SUBGRADE. THE PROOFROLLING SHOULD BE OBSERVED AND DOCUMENTED BY TDOT'S QUALIFIED REPRESENTATIVE. PROOFROLLING SHOULD BE PERFORMED USING A FULLY LOADED TANDEM AXLE DUMP TRUCK (MINIMUM) OR OTHER PNEUMATIC TIRED EQUIPMENT APPROVED BY TDOT'S QUALIFIED REPRESENTATIVE. THE PROOFROLLING EQUIPMENT SHOULD MAKE SEVERAL PASSES OVER EACH SECTION OF THE SUBGRADE.
5. SOFT, ORGANIC, HIGHLY PLASTIC, AND UNSTABLE SOILS IDENTIFIED BY PROOFROLLING SHOULD BE UNDERCUT AS RECOMMENDED BY TDOT'S QUALIFIED REPRESENTATIVE. OTHER STABILIZATION METHODS, SUCH AS SCARIFYING AND RECOMPACTING, BRIDGING WITH DURABLE ROCK FILL, ADDITION OF LIME OR CEMENT, OR USE OF GEOGRIDS AND AGGREGATE, MAY BE APPROVED BY TDOT'S QUALIFIED REPRESENTATIVE DEPENDING UPON THE DEGREE OF INSTABILITY, VERTICAL CLEARANCE BETWEEN THE UNSTABLE SOILS AND FINISHED SUBGRADE, OR OTHER SPECIFIC FACTORS NOTED AT THE TIME OF CONSTRUCTION.
6. SOFT AND WET MATERIALS WILL BE ENCOUNTERED BETWEEN THE FOLLOWING STATIONS:

APPROXIMATE STATION LIMITS	ESTIMATED AVERAGE UNDERCUT DEPTH (FT.)
VOLKSWAGEN DR. – 153+65 TO 157+75 LT	1.5
S.R. 317 – 39+70 TO 43+30 LT	1.5
S.R. 317 – 45+00 TO 47+50 RT	3
S.R. 317 – 47+50 TO 49+00 RT	3
AMAZON DR. EXIT – 567+35 TO 568+50 RT	2

THESE MATERIALS SHOULD BE UNDERCUT TO MINIMUM DEPTHS RANGING FROM ONE TO THREE FEET, AS INDICATED ABOVE AND TO EXTEND TO A MINIMUM OF FIVE FEET BEYOND THE TOE OF THE PROPOSED SLOPE. A LAYER OF GEOTEXTILE FABRIC (TYPE IV, HIGH SURVIVABILITY) SHALL BE PLACED WITHIN THE ENTIRE UNDERCUT AREA.

7. BACKFILL IN UNDERCUT AREAS OF TWO FEET OR LESS SHOULD BE SELECT GRANULAR MATERIAL. BACKFILL IN UNDERCUT AREAS OF MORE THAN TWO FEET SHOULD BE GRADED SOLID ROCK MATERIAL.
8. WHEN EXTENDING EXISTING FILL EMBANKMENTS THAT ARE STEEPER THAN 4H:1V, THE NEW FILL SHOULD BE BENCHED INTO THE EXISTING FILL EMBANKMENT TO REMOVE SOFT OR LOOSE SURFICIAL MATERIALS AND AVOID CREATING A WEAK ZONE AT THE INTERFACE OF THE EXISTING FILL AND THE NEW FILL. BENCHING SHOULD BE PERFORMED IN ACCORDANCE WITH TDOT SECTION 205.03. BENCHING CAN TYPICALLY BE ACCOMPLISHED BY CUTTING INTO THE EXISTING EMBANKMENT AT LEAST ONE BLADE WIDTH OF A BULLDOZER.
9. SIDE HILL FILLS AND SLIVER FILLS SHOULD BE BENCHED INTO THE EXISTING FILL EMBANKMENT, REGARDLESS OF THE INCLINATION OF THE EXISTING FILL EMBANKMENT. BENCHING SHOULD BE PERFORMED IN ACCORDANCE WITH TDOT SECTION 205.03.
10. THE TOP 6 INCHES OF ROADWAY SUBGRADE IN CUT AREAS SHOULD BE SCARIFIED AND RECOMPACTED ACCORDING TO THE CRITERIA IN TDOT SECTION 207.04. THESE AREAS SHOULD BE REWORKED AFTER THE AREA IS EXCAVATED TO GRADE AND PROOFROLLED.

GENERAL GRADING NOTES

1. SOME SOILS MAY REQUIRE MOISTURE CONDITIONING (DRYING) PRIOR TO REUSE AS EMBANKMENT FILL.
2. SOME OF THE CLAYS ALONG THE ALIGNMENT ARE CLASSIFIED AS FAT CLAYS AND ELASTIC SILTS (AASHTO A-7-5). THESE SOILS HAVE A RELATIVELY WIDE RANGE OF MOISTURE CONTENT OVER WHICH THEY CAN ACHIEVE THE DESIRED COMPACTION BUT A RELATIVELY NARROW MOISTURE RANGE OVER WHICH THEY ARE STABLE. CAREFUL CONTROL OF MOISTURE CONTENT WILL BE REQUIRED WHEN USING THESE SOILS.
3. POSITIVE SURFACE DRAINAGE SHOULD BE MAINTAINED DURING GRADING OPERATIONS TO PREVENT WATER FROM PONDING ON THE SURFACE.
4. SURFACE WATER DRAINAGE FROM OFF-SITE AREAS SHOULD BE DIVERTED AROUND THE CONSTRUCTION AREA USING DITCHES OR BERMS.
5. THE SURFACE SHOULD BE ROLLED SMOOTH TO ENHANCE DRAINAGE IF PRECIPITATION IS EXPECTED.
6. TDOT'S QUALIFIED REPRESENTATIVE SHOULD PROVIDE RECOMMENDATIONS FOR TREATMENT IF THE SOILS BECOME EXCESSIVELY WET, EXCESSIVELY DRY, OR FROZEN.

SINKHOLE NOTES

1. SINKHOLES WERE NOT ENCOUNTERED ALONG THE ALIGNMENT DURING THE GEOTECHNICAL EXPLORATION. HOWEVER, SINKHOLES MAY BE DISCLOSED ALONG THE ALIGNMENT DURING CLEARING AND GRUBBING OR EARTHWORK OPERATIONS. SINKHOLES, IF IDENTIFIED WITHIN THE EXISTING RIGHT-OF-WAY AND INSIDE PROPOSED CONSTRUCTION LIMITS THAT WILL IMPACT, OR BE IMPACTED BY, THE PLANNED CONSTRUCTION, SHALL BE REPAIRED IN ACCORDANCE WITH THE APPROPRIATE TDOT STANDARD SINKHOLE TREATMENT DETAIL FOR REPAIR OF SINKHOLES. THE APPROPRIATE TREATMENT SHALL BE DETERMINED AT THE TIME OF CONSTRUCTION BASED ON THE CONDITIONS ENCOUNTERED.
2. IDENTIFIED FEATURES SHOULD BE PROTECTED USING PROPER EROSION CONTROL MEASURES IN ACCORDANCE WITH APPLICABLE STANDARDS OF THE STATE OF TENNESSEE.
3. SINKHOLE REPAIRS **MUST BE PERMITTED** BY THE GROUNDWATER PROTECTION DIVISION OF THE TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC).
4. TO MITIGATE FUTURE SINKHOLE ACTIVITY:
   - SURFACE WATER SHOULD BE DIRECTED AWAY FROM STRUCTURAL AREAS.
   - SUBGRADE AREAS SHOULD BE THOROUGHLY PROOFROLLED AFTER CLEARING AND GRUBBING IN FILL AREAS, OR AFTER THE REQUIRED CUTS ARE PERFORMED IN CUTS AREAS.
   - TDOT'S QUALIFIED REPRESENTATIVE SHOULD CAREFULLY CHECK THE SUBGRADE FOR INDICATIONS OF SOLUTION ACTIVITY AFTER CUT AREAS ARE EXCAVATED TO GRADE AND BEFORE EMBANKMENT FILL IS PLACED IN FILL AREAS.

COMPACTED FILL

1. MATERIALS GENERATED THROUGH PROJECT EXCAVATIONS WILL LIKELY CONSIST OF CLAY AND SILT SOILS. THESE MATERIALS MAY BE USED AS EMBANKMENT FILL ELSEWHERE ON THE PROJECT, PROVIDED THEY MEET THE CRITERIA PROVIDED IN THE TABLE "SUMMARY OF COMPACTED FILL CRITERIA".
2. EXPECT EMBANKMENT FILL IMPORTED FROM OFFSITE SOURCES WILL ALSO BE REQUIRED. IMPORTED FILL SHOULD CONSIST OF SUITABLE SOIL OR NON-DEGRADABLE CLEAN ROCK ONLY.
3. ALL EMBANKMENT FILL SHOULD BE FREE OF ORGANICS AND ROOTS.
4. THE TABLE BELOW INCLUDES A SUMMARY OF THE TDOT SOIL AND ROCK GUIDELINES AND ADDITIONAL CRITERIA. THE TDOT STANDARD SPECIFICATIONS SHOULD BE CONSULTED FOR OCCASIONAL PERMISSABLE EXCEPTIONS TO THE GUIDELINES PRESENTED HEREIN.

SUMMARY OF COMPACTED FILL CRITERIA

FILL MATERIAL TYPE	CHARACTERISTICS	COMPACTION PROCEDURES	COMPACTION CONTROL
NON-DEGRADABLE SHOT-ROCK	ORIGIN - OFF-SITE DEFINITION OF MATERIAL - PER TDOT 203.02(B) AND 205.04(A) MAXIMUM SHOT-ROCK SIZE - 24 INCHES; REFER TO TDOT 205.04(B) FOR PERMISSIBLE EXCEPTIONS GRADATION - PER TDOT 205.04(B)	SPREADING - PER TDOT 205.04(B) MAXIMUM LIFT THICKNESS - 36 INCHES COMPACTION REQUIREMENTS - PER TDOT 205.04(B)	ROCK FILL PLACEMENT AND COMPACTION TECHNIQUES SHOULD BE CLOSELY MONITORED BY TDOT'S QUALIFIED REPRESENTATIVE. THE REPRESENTATIVE SHOULD DOCUMENT FILL CONSTITUENTS, LIFT THICKNESSES, AND COMPACTION TECHNIQUES.
SOIL	ORIGIN: ON-SITE OR OFF-SITE DEFINITION OF MATERIAL – AASHTO M 145, CLASSIFICATION A-6 OR BETTER, OR NO WORSE THAN THE PREDOMINANT SOIL TYPE IN THE ROADWAY EXCAVATION BASED ON AASHTO CLASSIFICATION (PER TDOT 203.02(B))	MAXIMUM LOOSE LIFT THICKNESS - 10 INCHES COMPACTION REQUIREMENTS – PER TDOT 205.04 MOISTURE CONTENT AT TIME OF COMPACTION – PER TDOT 205.04	AT LEAST ONE COMPACTION TEST EVERY 100 LF ALONG CENTERLINE OR PER TDOT GUIDELINES, WHICHEVER RESULTS IN THE GREATEST NUMBER OF TESTS.

Boring No.	Sample Depth (feet)	Location	Description	Proctor Maximum Dry Density (pcf)	Optimum Moisture (%)	Moisture Range for Compaction (%)*	LL	PI	AASHTO Classification	USCS Classification	CBR Value
BO-8	1 - 7	S.R. 317, STA. 59+50, 65' RT	ELASTIC SILT, Red Brown	87.5	33.0	31 - 37	74	33	A-7-5	MH	5.0

*Minimum 95 percent ASTM D698 / AASHTO T99

TDOT EXCAVATION CLASSIFICATION (203.02)

A. SOIL MATERIAL

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

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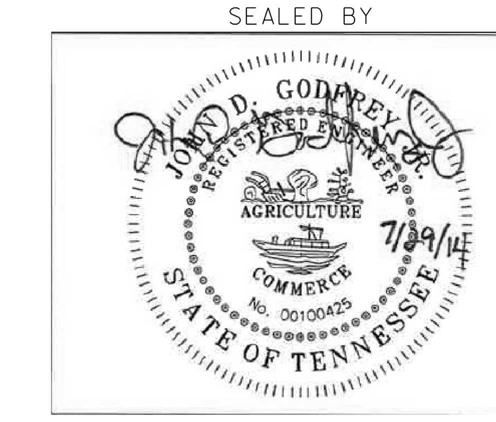


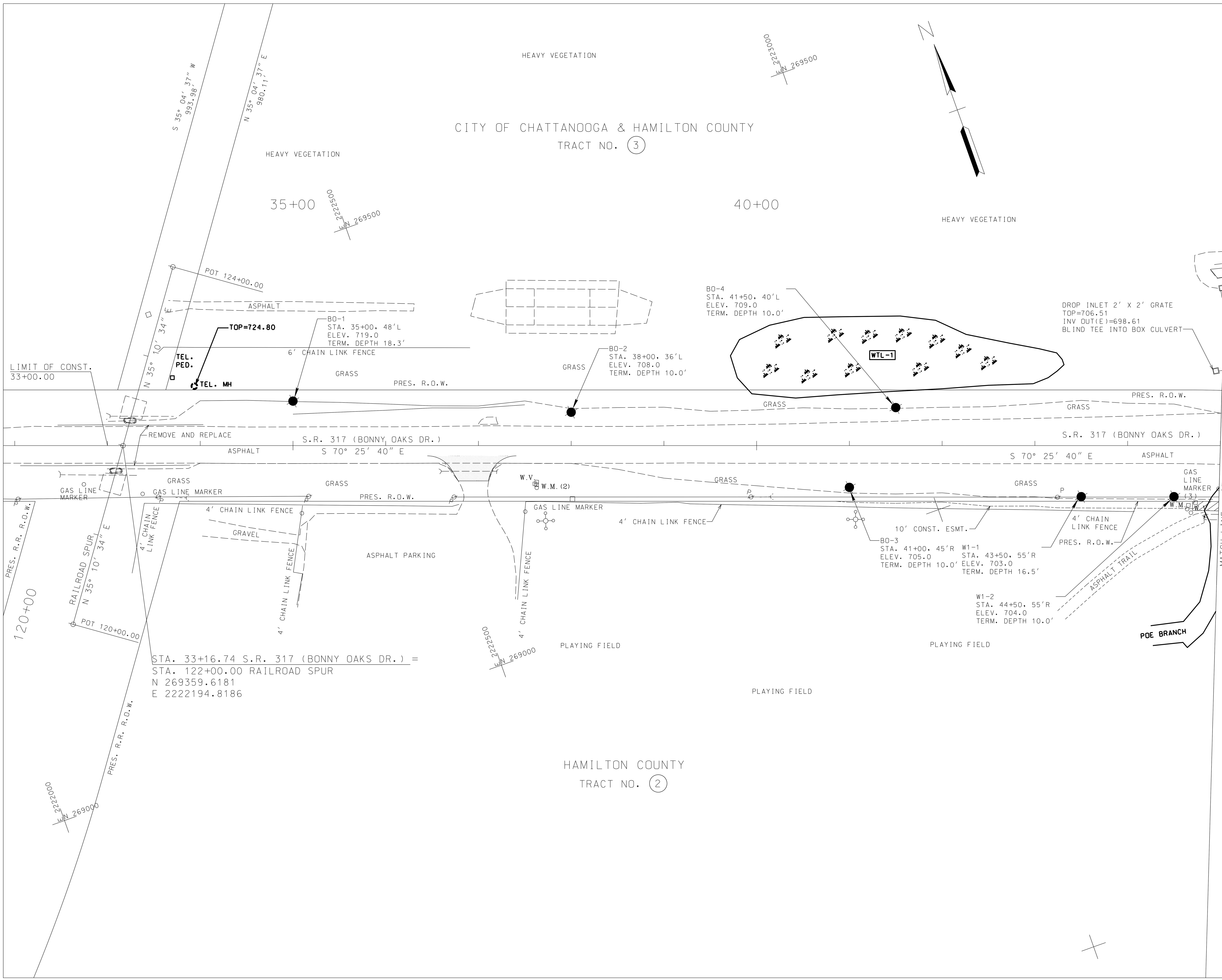
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GEOTECHNICAL NOTES AND DETAILS

SCALE: NTS

$$$$SYTIME$$$$$$$
$$$$DGNSPEC$$$

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	21A



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$$$DGNSPEC$$

UNOFFICIAL SET

NOT FOR BIDDING

COORDINATE VALUES ARE BASED ON CHATTANOOGA/HAMILTON COUNTY MONUMENT NETWORK SYSTEM (CHAM) NAD/83(UN-ADJUSTED), HAVING A PROJECT COMBINED FACTOR OF 1.00000679. ALL ELEVATIONS ARE BASED ON NGVD 29 AS PER CHAM DATA SHEETS. HORIZONTAL ORDER DERIVED BY CONVENTIONAL TRAVERSE METHODOLOGY FROM PRIMARY MONUMENTATION, AS SET BY BWSC, AND VERTICAL ORDER DERIVED BY DIFFERENTIAL LEVELING FROM PRIMARY MONUMENTATION, AS SET BY BWSC.

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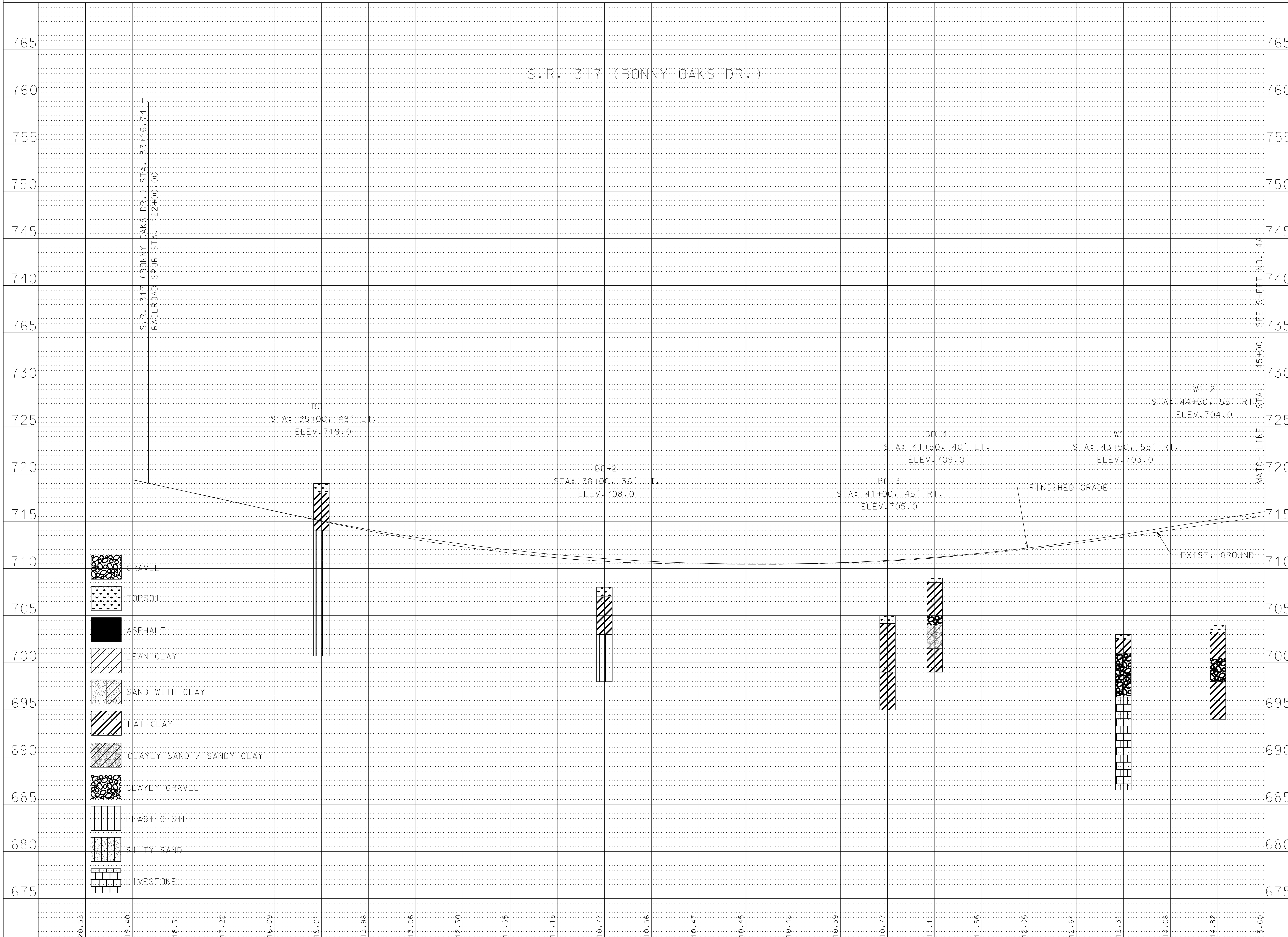
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SOIL BORINGS

BEGIN TO STA. 45+00

SCALE: 1″= 50′

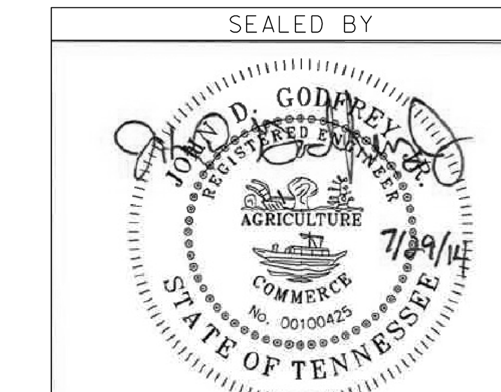
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	21B



UNOFFICIAL SET

NOT FOR BIDDING

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SOILS PROFILE

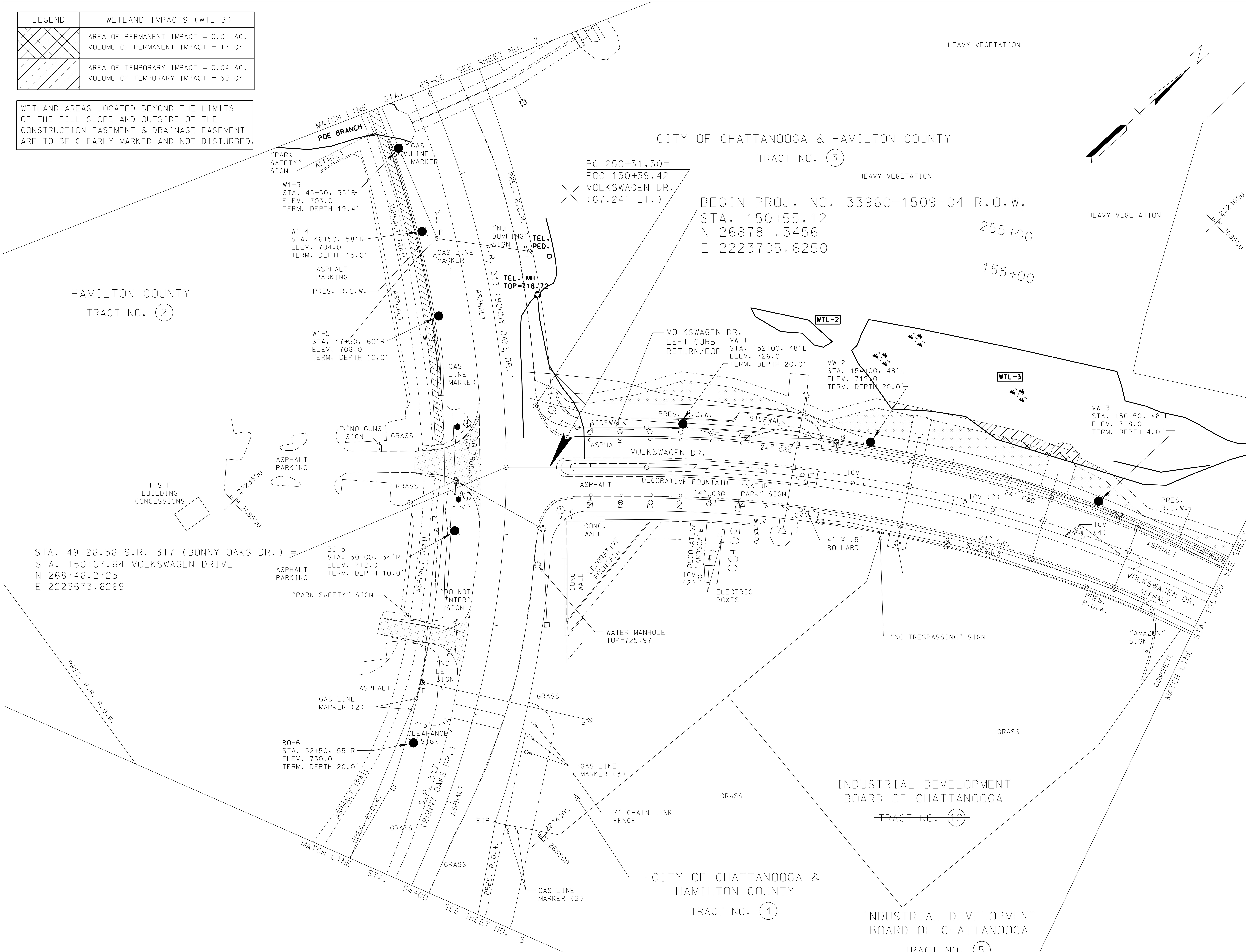
S.R. 317 (BONNY OAKS DR.)
BEGIN TO STA. 45+00
SCALE: 1"= 50' HORIZ.
1"= 5' VERT.

$$$$SYTIME$$$$$$
$$$$DGNSPEC$$

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	21C

LEGEND	WETLAND IMPACTS (WTL-3)
(cross-hatch)	AREA OF PERMANENT IMPACT = 0.01 AC. VOLUME OF PERMANENT IMPACT = 17 CY
(hatch)	AREA OF TEMPORARY IMPACT = 0.04 AC. VOLUME OF TEMPORARY IMPACT = 59 CY

WETLAND AREAS LOCATED BEYOND THE LIMITS OF THE FILL SLOPE AND OUTSIDE OF THE CONSTRUCTION EASEMENT & DRAINAGE EASEMENT ARE TO BE CLEARLY MARKED AND NOT DISTURBED.



UNOFFICIAL SET

NOT FOR BIDDING

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

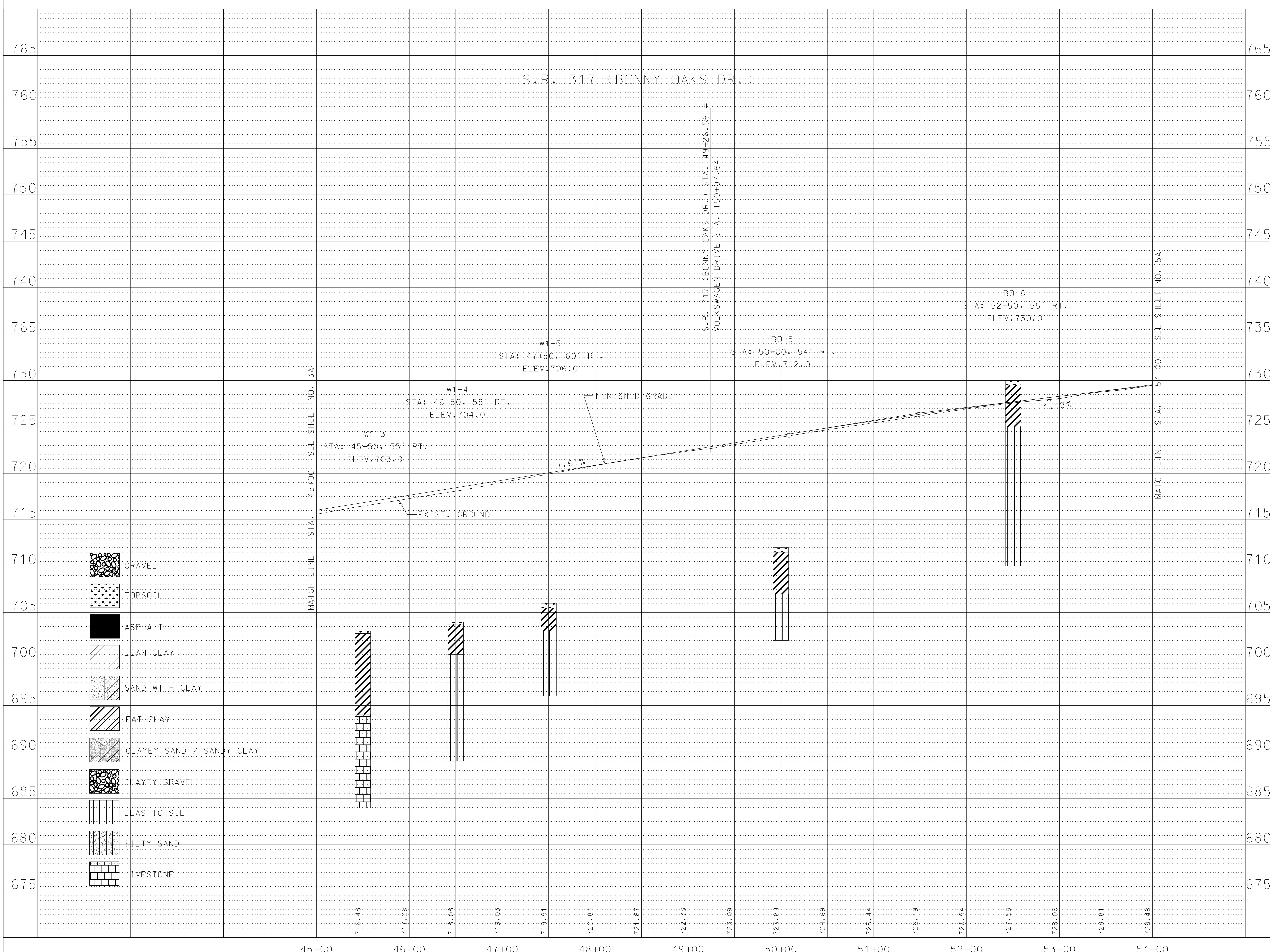
SOIL BORINGS

STA. 45+00 TO STA. 54+00

SCALE: 1"= 50'

$$$$SYTIME$$$$$$
$$$$DGNSPEC$$$

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	21D



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$$$$DGNSPEC$$

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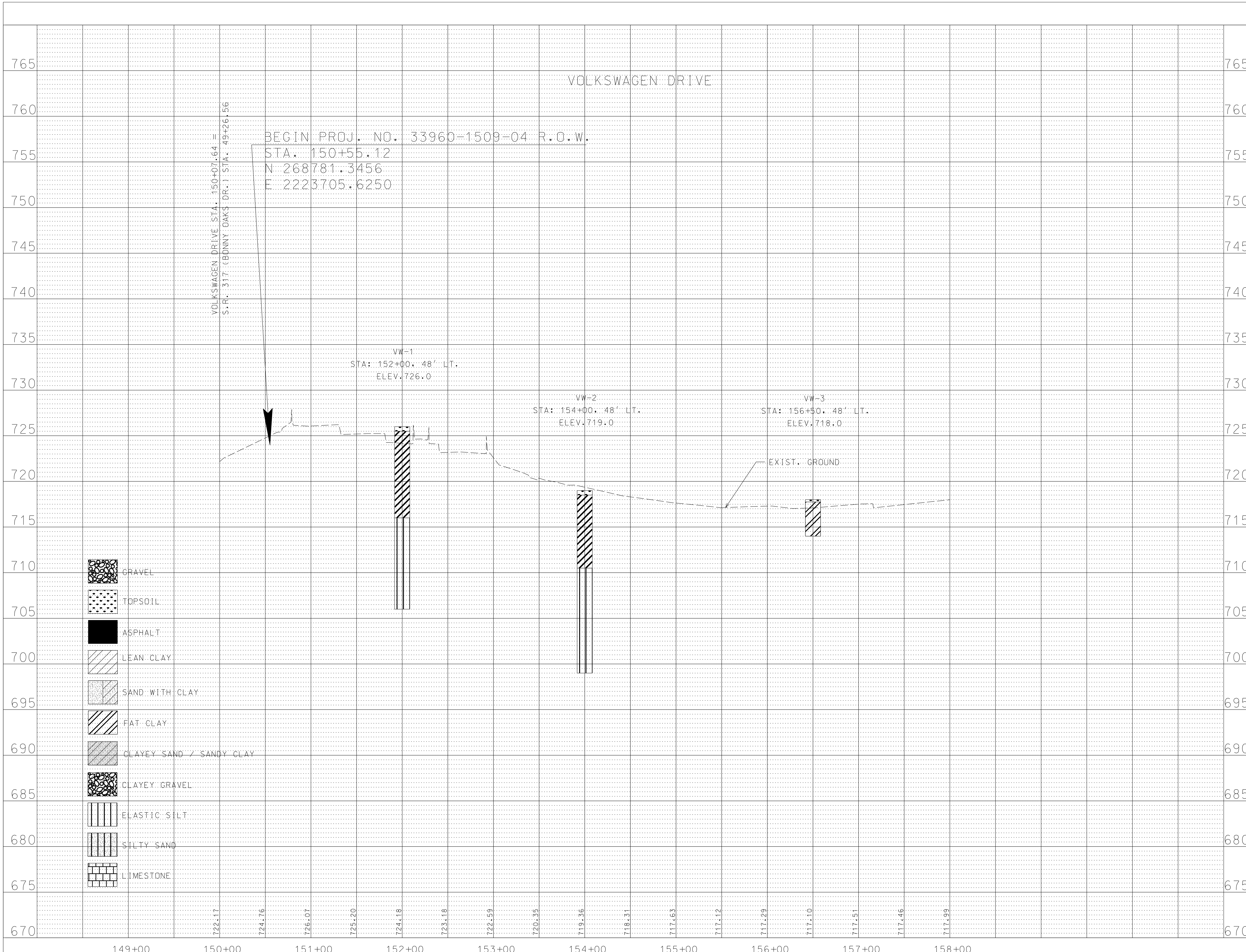
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SOILS PROFILE

S.R. 317 (BONNY OAKS DR.)
STA. 45+00 TO STA. 54+00

SCALE: 1″= 50′ HORIZ.
1″= 5′ VERT.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	21E



$$$$SYTIME$$$$$$
$$$$DGNSPEC$$

UNOFFICIAL SET

NOT FOR BIDDING

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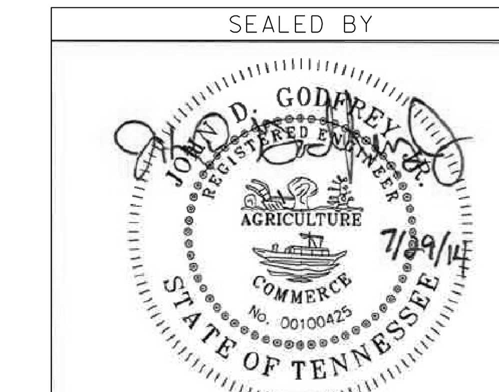
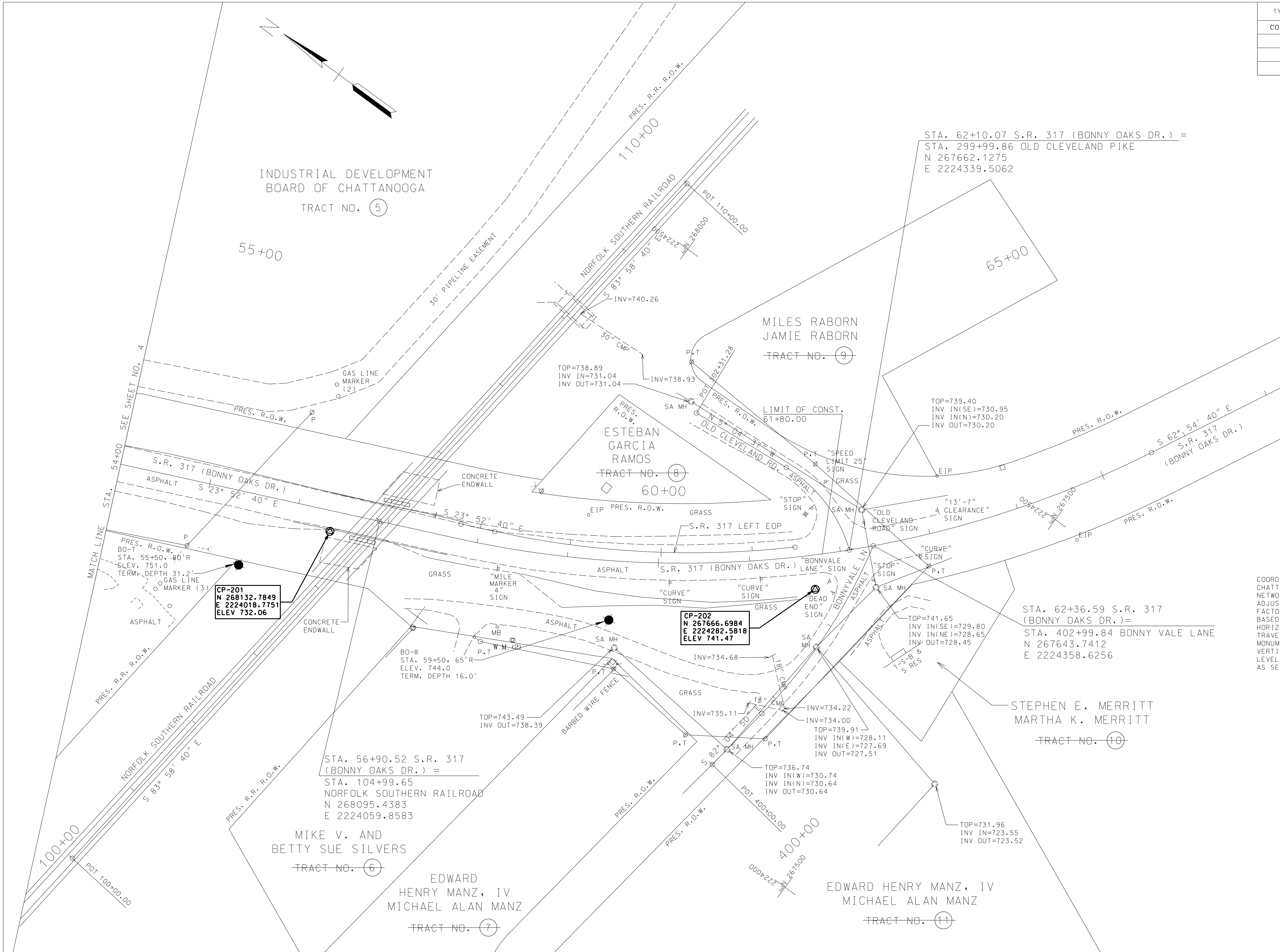


STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SOILS PROFILE

VOLKSWAGEN DRIVE
STA. 150+00 TO STA. 158+00
SCALE: 1"= 50' HORIZ.
1"= 5' VERT.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	21F



UNOFFICIAL SET

NOT FOR BIDDING

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

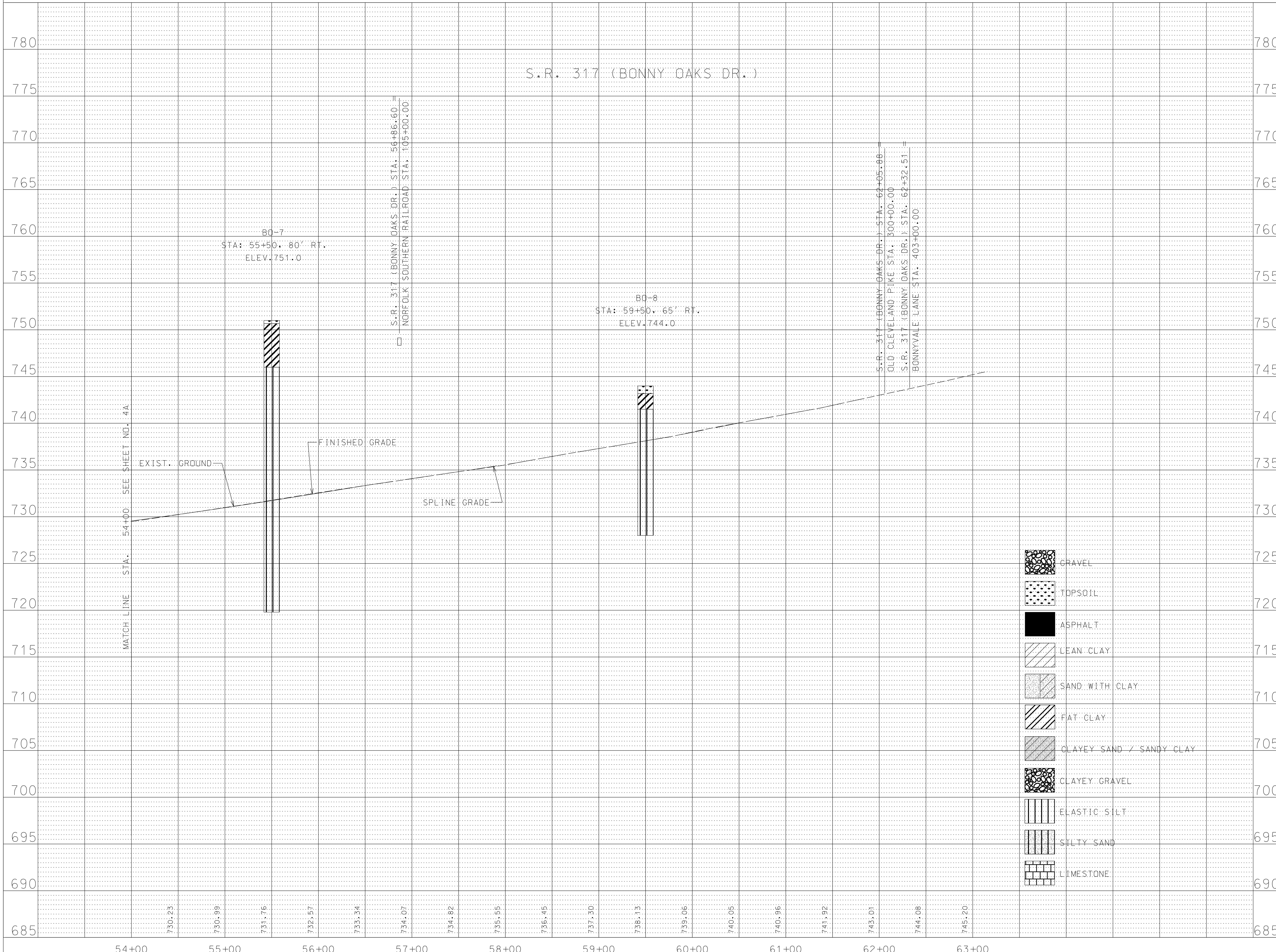
SOIL BORINGS

STA. 54+00 TO END

SCALE: 1"= 50'

$$$$SYTIME$$$$$$
$$$$DGNSPEC$$$

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	21G



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UNOFFICIAL SET

NOT FOR BIDDING

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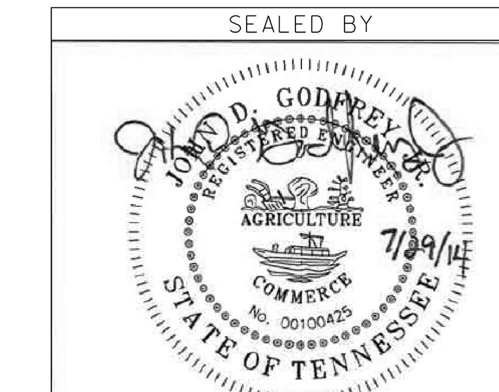
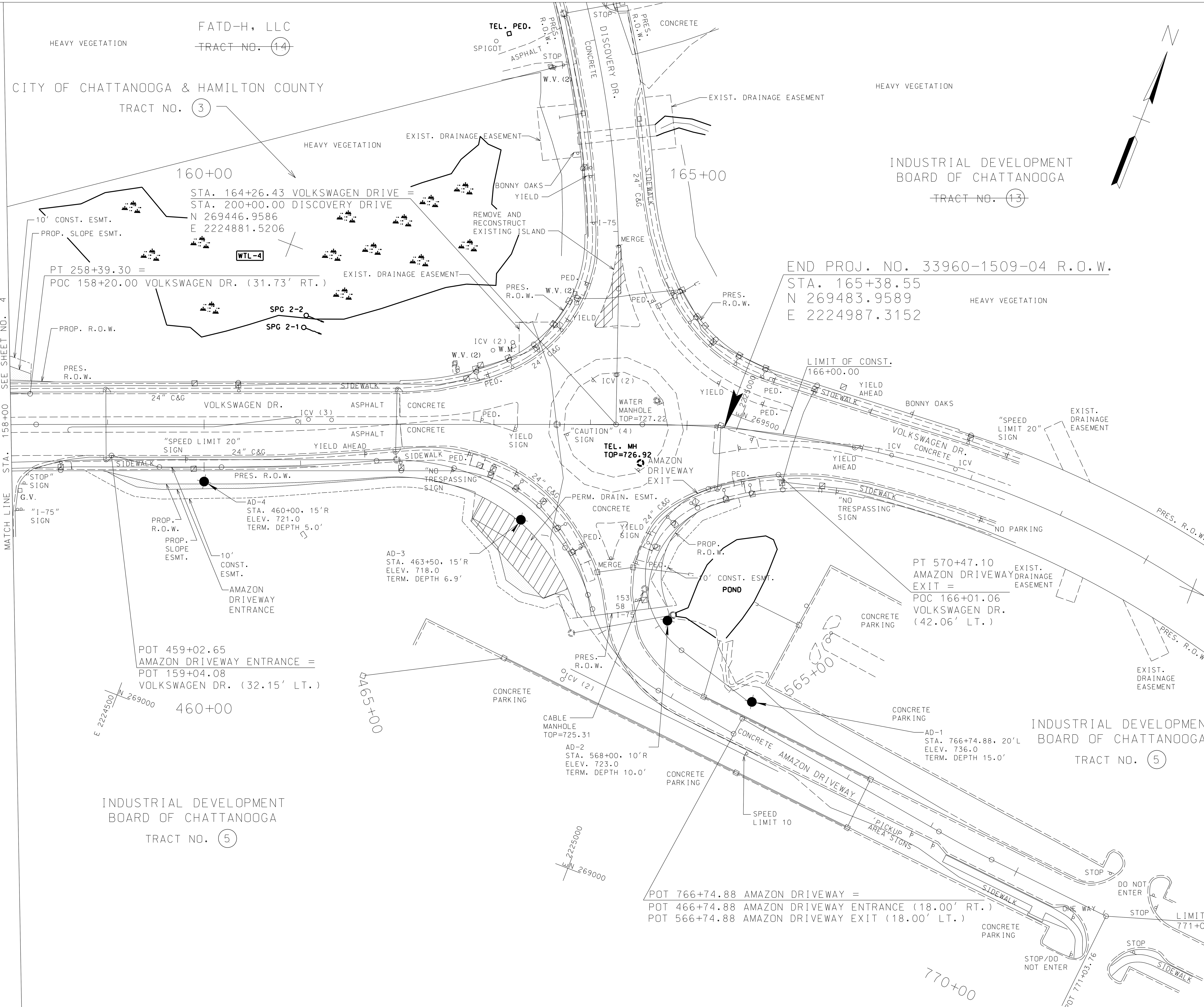


STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SOILS PROFILE

S.R. 317 (BONNY OAKS DR.)
STA. 54+00 TO END
SCALE: 1"= 50' HORIZ.
1"= 5' VERT.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	21H



UNOFFICIAL SET

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

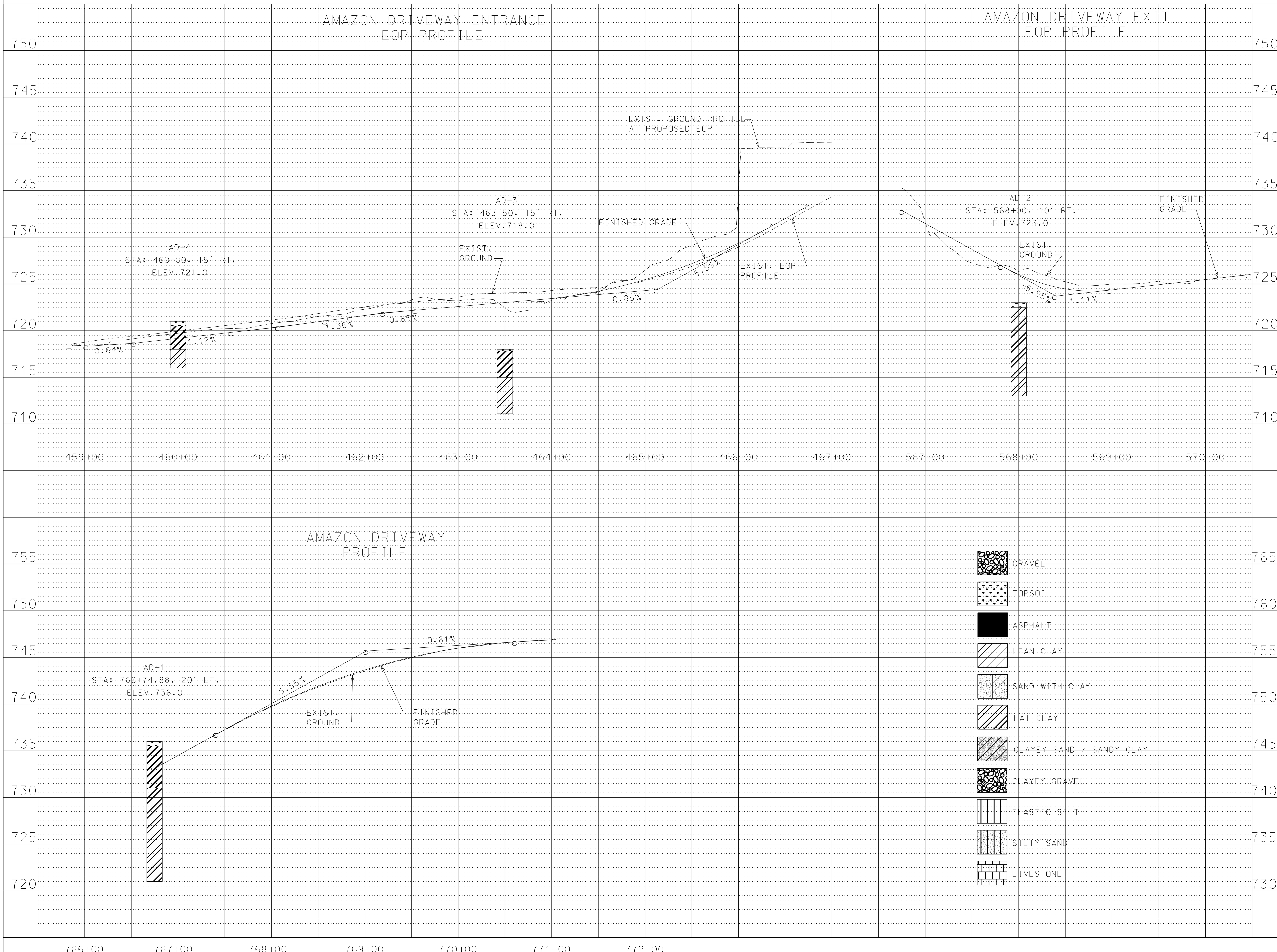
SOIL BORINGS

STA. 158+00 TO END

SCALE: 1″= 50′

$$$$SYTIME$$$$$$
$$$DGNSPEC$$

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	21J



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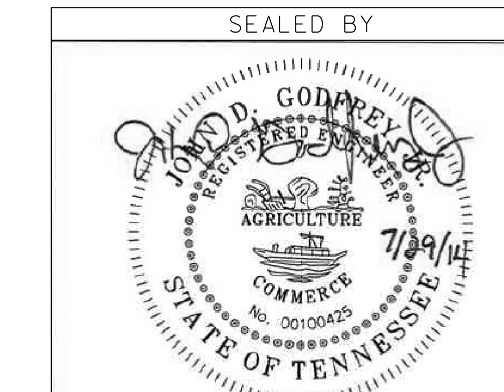


STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

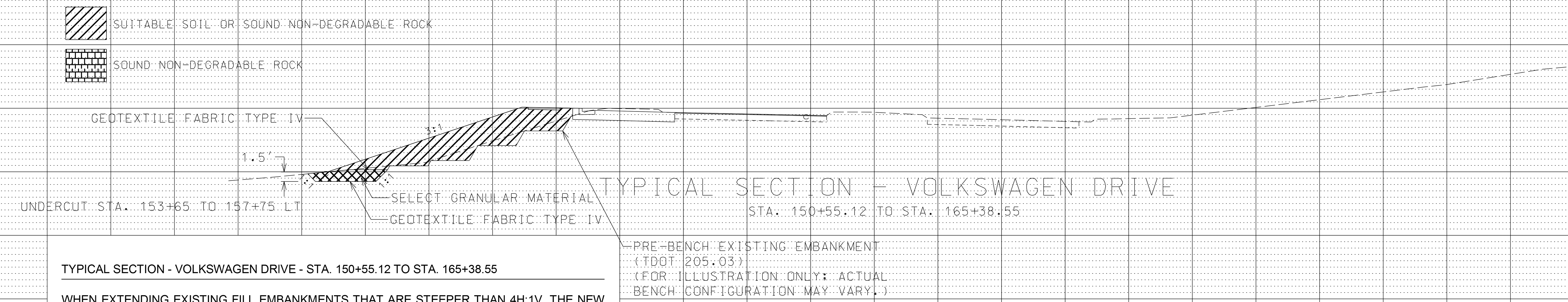
SOILS PROFILE

AMAZON DRIVEWAY
ENTRANCE & EXIT

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

$$$$SYTIME$$$$$$$
$$$$DGNSPEC$$

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	21K



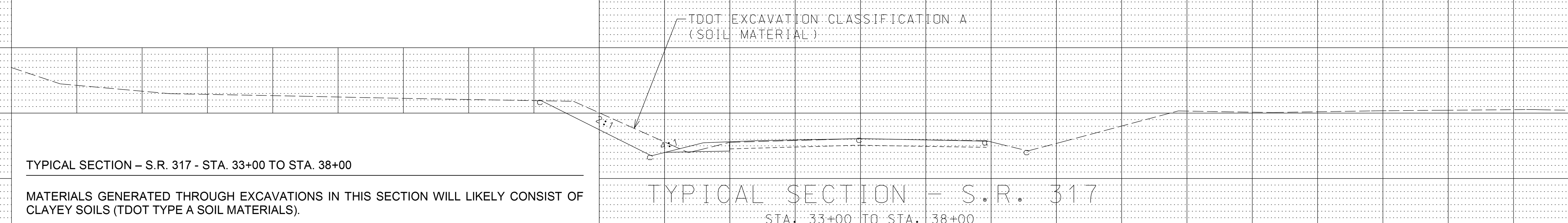
TYPICAL SECTION - VOLKSWAGEN DRIVE - STA. 150+55.12 TO STA. 165+38.55

WHEN EXTENDING EXISTING FILL EMBANKMENTS THAT ARE STEEPER THAN 4H:1V, THE NEW FILL SHOULD BE BENCHED INTO THE EXISTING FILL EMBANKMENT TO REMOVE SOFT OR LOOSE SURFICIAL MATERIALS AND AVOID CREATING A WEAK ZONE AT THE INTERFACE OF THE EXISTING FILL AND THE NEW FILL. BENCHING SHOULD BE PERFORMED IN ACCORDANCE WITH TDOT SECTION 205.03. BENCHING CAN TYPICALLY BE ACCOMPLISHED BY CUTTING INTO THE EXISTING EMBANKMENT AT LEAST ONE BLADE WIDTH OF A BULLDOZER.

SIDE HILL FILLS AND SLIVER FILLS SHOULD BE BENCHED INTO THE EXISTING FILL EMBANKMENT, REGARDLESS OF THE INCLINATION OF THE EXISTING FILL EMBANKMENT. BENCHING SHOULD BE PERFORMED IN ACCORDANCE WITH TDOT SECTION 205.03.

EMBANKMENTS IN THIS SECTION SHALL BE CONSTRUCTED USING SUITABLE SOIL OR SOUND NON-DEGRADABLE ROCK (SEE CRITERIA PROVIDED ON SHEET 2).

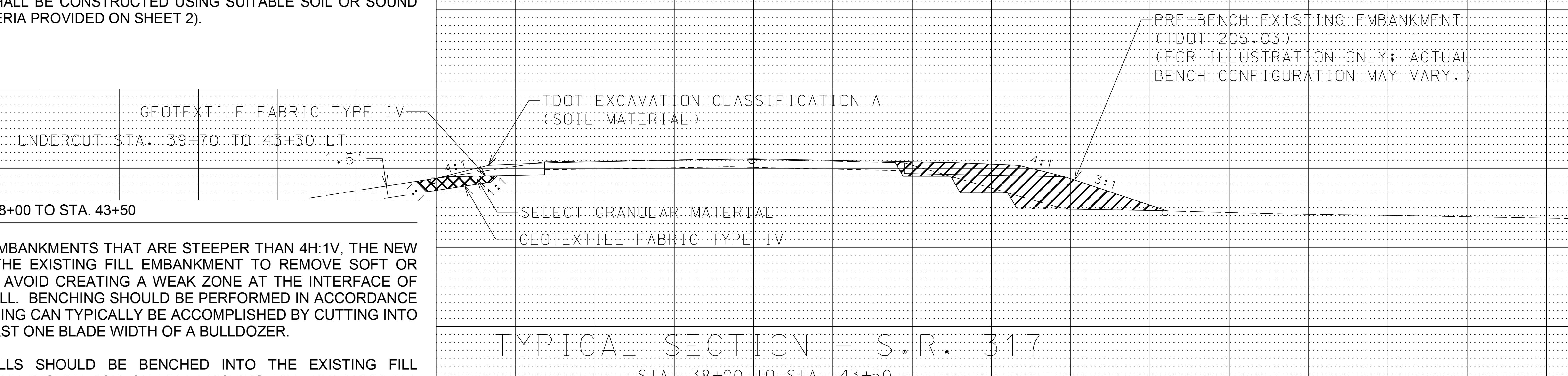
SOFT AND WET MATERIALS WILL BE ENCOUNTERED BETWEEN STATIONS 153+65 AND 157+75 LT. THESE MATERIALS SHOULD BE UNDERCUT TO MINIMUM DEPTHS RANGING FROM ONE TO TWO FEET AND TO EXTEND TO A MINIMUM OF FIVE FEET BEYOND THE TOE OF THE PROPOSED SLOPE. A LAYER OF GEOTEXTILE FABRIC (TYPE IV, HIGH SURVIVABILITY) SHALL BE PLACED WITHIN THE ENTIRE UNDERCUT AREA. BACKFILL IN THESE AREAS SHOULD BE SELECT GRANULAR MATERIAL.



TYPICAL SECTION – S.R. 317 - STA. 33+00 TO STA. 38+00

MATERIALS GENERATED THROUGH EXCAVATIONS IN THIS SECTION WILL LIKELY CONSIST OF CLAYEY SOILS (TDOT TYPE A SOIL MATERIALS).

EMBANKMENTS IN THIS SECTION SHALL BE CONSTRUCTED USING SUITABLE SOIL OR SOUND NON-DEGRADABLE ROCK (SEE CRITERIA PROVIDED ON SHEET 2).



TYPICAL SECTION – S.R. 317 - STA. 38+00 TO STA. 43+50

WHEN EXTENDING EXISTING FILL EMBANKMENTS THAT ARE STEEPER THAN 4H:1V, THE NEW FILL SHOULD BE BENCHED INTO THE EXISTING FILL EMBANKMENT TO REMOVE SOFT OR LOOSE SURFICIAL MATERIALS AND AVOID CREATING A WEAK ZONE AT THE INTERFACE OF THE EXISTING FILL AND THE NEW FILL. BENCHING SHOULD BE PERFORMED IN ACCORDANCE WITH TDOT SECTION 205.03. BENCHING CAN TYPICALLY BE ACCOMPLISHED BY CUTTING INTO THE EXISTING EMBANKMENT AT LEAST ONE BLADE WIDTH OF A BULLDOZER.

SIDE HILL FILLS AND SLIVER FILLS SHOULD BE BENCHED INTO THE EXISTING FILL EMBANKMENT, REGARDLESS OF THE INCLINATION OF THE EXISTING FILL EMBANKMENT. BENCHING SHOULD BE PERFORMED IN ACCORDANCE WITH TDOT SECTION 205.03.

SOFT AND WET MATERIALS WILL BE ENCOUNTERED BETWEEN STATIONS 39+70 AND 43+30 LT. THESE MATERIALS SHOULD BE UNDERCUT TO MINIMUM DEPTHS RANGING FROM ONE TO TWO FEET AND TO EXTEND TO A MINIMUM OF FIVE FEET BEYOND THE TOE OF THE PROPOSED SLOPE. A LAYER OF GEOTEXTILE FABRIC (TYPE IV, HIGH SURVIVABILITY) SHALL BE PLACED WITHIN THE ENTIRE UNDERCUT AREA. BACKFILL IN THESE AREAS SHOULD BE SELECT GRANULAR MATERIAL.

120 100 80 60 40 20 0 20 40 60 80 100 120

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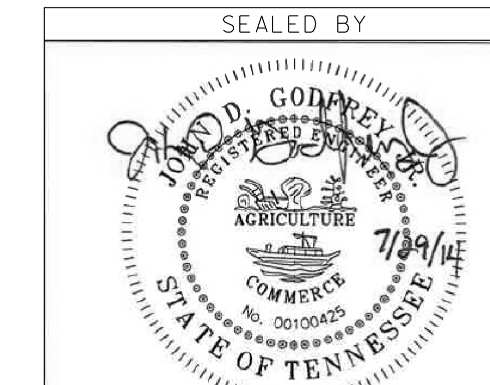


STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	21L

SUITABLE SOIL OR SOUND NON-DEGRADABLE ROCK

SOUND NON-DEGRADABLE ROCK

TYPICAL SECTION – S.R. 317 - STA. 43+50 TO STA. 47+50

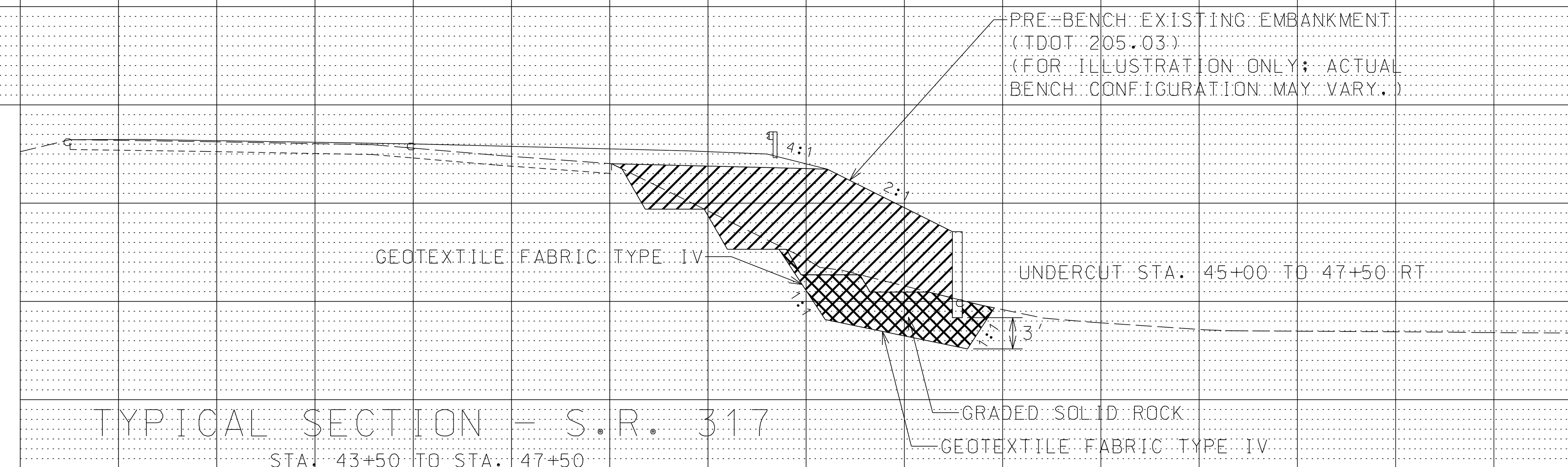
A RETAINING WALL IS PLANNED ALONG THE RIGHT EMBANKMENT SLOPE TOE THROUGH THIS SECTION. ADDITIONAL RETAINING WALL INFORMATION IS PRESENTED IN A SEPARATE REPORT.

WHEN EXTENDING EXISTING FILL EMBANKMENTS THAT ARE STEEPER THAN 4H:1V, THE NEW FILL SHOULD BE BENCHED INTO THE EXISTING FILL EMBANKMENT TO REMOVE SOFT OR LOOSE SURFICIAL MATERIALS AND AVOID CREATING A WEAK ZONE AT THE INTERFACE OF THE EXISTING FILL AND THE NEW FILL. BENCHING SHOULD BE PERFORMED IN ACCORDANCE WITH TDOT SECTION 205.03. BENCHING CAN TYPICALLY BE ACCOMPLISHED BY CUTTING INTO THE EXISTING EMBANKMENT AT LEAST ONE BLADE WIDTH OF A BULLDOZER.

EMBANKMENTS IN THIS SECTION SHALL BE CONSTRUCTED USING SUITABLE SOIL OR SOUND NON-DEGRADABLE ROCK (SEE CRITERIA PROVIDED ON SHEET 2).

COMPACTED FILL REQUIRED TO INFILL EXISTING DITCHES IN THIS SECTION SHALL CONSIST OF SUITABLE SOIL OR SOUND NON-DEGRADABLE ROCK (SEE CRITERIA PROVIDED ON SHEET 2).

SOFT AND WET MATERIALS WILL BE ENCOUNTERED BETWEEN STATIONS 45+00 AND 47+50 RT. THESE MATERIALS SHOULD BE UNDERCUT TO MAXIMUM DEPTHS OF UP TO THREE (3) FEET AND TO EXTEND TO A MINIMUM OF FIVE FEET BEYOND THE TOE OF THE PROPOSED SLOPE. A LAYER OF GEOTEXTILE FABRIC (TYPE IV, HIGH SURVIVABILITY) SHALL BE PLACED WITHIN THE ENTIRE UNDERCUT AREA. BACKFILL IN THESE AREAS SHOULD BE GRADED SOLID ROCK.



TYPICAL SECTION - S.R. 317
STA. 43+50 TO STA. 47+50

TYPICAL SECTION – S.R. 317 - STA. 47+50 TO STA. 55+50

WHEN EXTENDING EXISTING FILL EMBANKMENTS THAT ARE STEEPER THAN 4H:1V, THE NEW FILL SHOULD BE BENCHED INTO THE EXISTING FILL EMBANKMENT TO REMOVE SOFT OR LOOSE SURFICIAL MATERIALS AND AVOID CREATING A WEAK ZONE AT THE INTERFACE OF THE EXISTING FILL AND THE NEW FILL. BENCHING SHOULD BE PERFORMED IN ACCORDANCE WITH TDOT SECTION 205.03. BENCHING CAN TYPICALLY BE ACCOMPLISHED BY CUTTING INTO THE EXISTING EMBANKMENT AT LEAST ONE BLADE WIDTH OF A BULLDOZER.

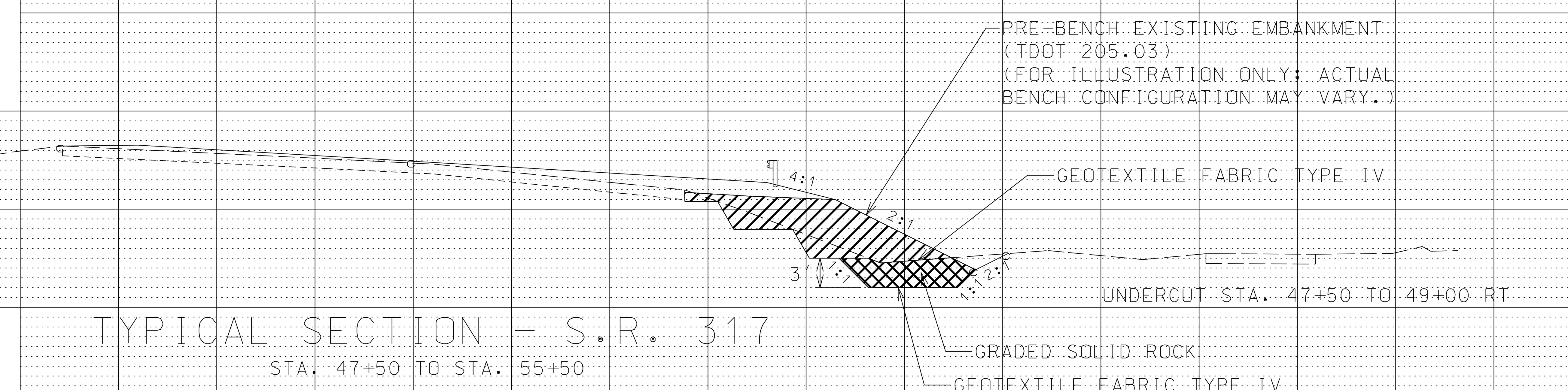
SIDE HILL FILLS AND SLIVER FILLS SHOULD BE BENCHED INTO THE EXISTING FILL EMBANKMENT, REGARDLESS OF THE INCLINATION OF THE EXISTING FILL EMBANKMENT. BENCHING SHOULD BE PERFORMED IN ACCORDANCE WITH TDOT SECTION 205.03.

EMBANKMENTS IN THIS SECTION SHALL BE CONSTRUCTED USING SUITABLE SOIL OR SOUND NON-DEGRADABLE ROCK (SEE CRITERIA PROVIDED ON SHEET 2).

COMPACTED FILL REQUIRED TO INFILL EXISTING DITCHES IN THIS SECTION SHALL CONSIST OF SUITABLE SOIL OR SOUND NON-DEGRADABLE ROCK (SEE CRITERIA PROVIDED ON SHEET 2).

MATERIALS GENERATED THROUGH EXCAVATIONS IN THIS SECTION WILL LIKELY CONSIST OF CLAYEY SOILS (TDOT TYPE A SOIL MATERIALS).

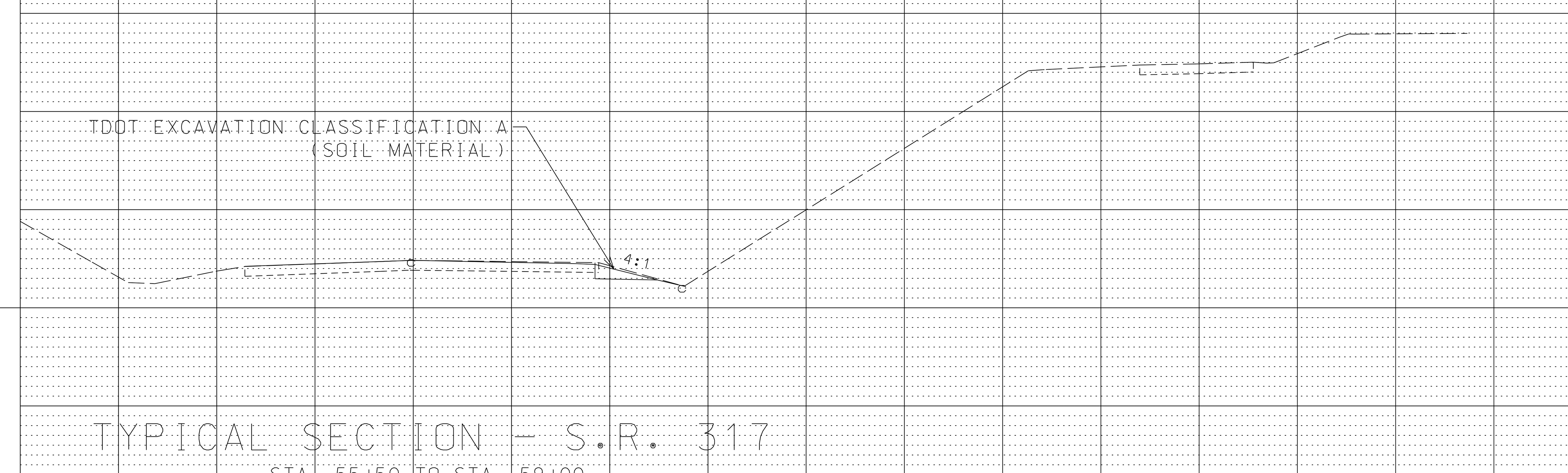
SOFT AND WET MATERIALS WILL BE ENCOUNTERED BETWEEN STATIONS 47+50 AND 49+00 RT. THESE MATERIALS SHOULD BE UNDERCUT TO MAXIMUM DEPTHS OF UP TO THREE (3) FEET AND TO EXTEND TO A MINIMUM OF FIVE FEET BEYOND THE TOE OF THE PROPOSED SLOPE. A LAYER OF GEOTEXTILE FABRIC (TYPE IV, HIGH SURVIVABILITY) SHALL BE PLACED WITHIN THE ENTIRE UNDERCUT AREA. BACKFILL IN THESE AREAS SHOULD BE GRADED SOLID ROCK.



TYPICAL SECTION - S.R. 317
STA. 47+50 TO STA. 55+50

TYPICAL SECTION – S.R. 317 - STA. 55+50 TO STA. 59+00

MATERIALS GENERATED THROUGH EXCAVATIONS IN THIS SECTION WILL LIKELY CONSIST OF CLAYEY SOILS (TDOT TYPE A SOIL MATERIALS).



TYPICAL SECTION - S.R. 317
STA. 55+50 TO STA. 59+00

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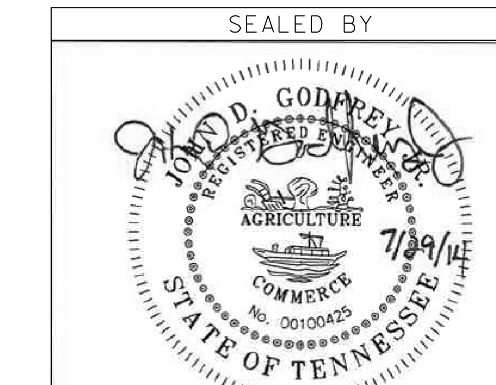

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

$$$$SYTIME$$$$$$
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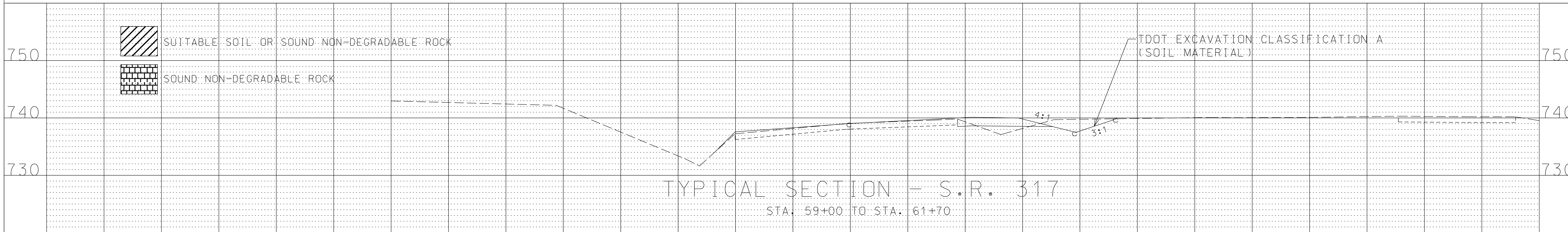
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	21M

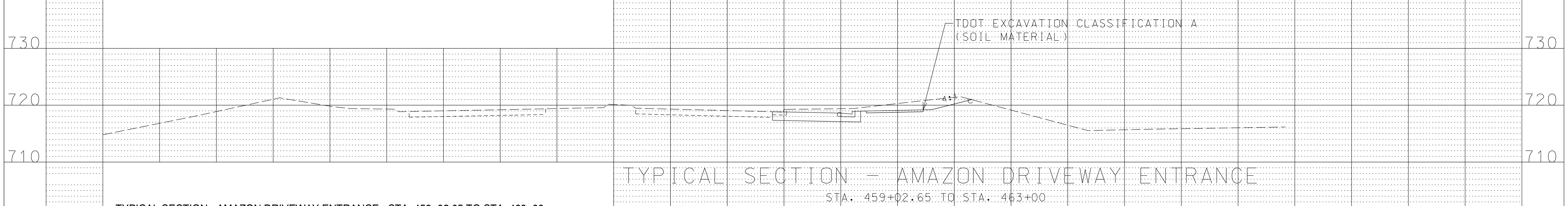


TYPICAL SECTION - S.R. 317 - STA. 59+00 TO STA. 61+70

EMBANKMENTS IN THIS SECTION SHALL BE CONSTRUCTED USING SUITABLE SOIL OR SOUND NON-DEGRADABLE ROCK (SEE CRITERIA PROVIDED ON SHEET 2).

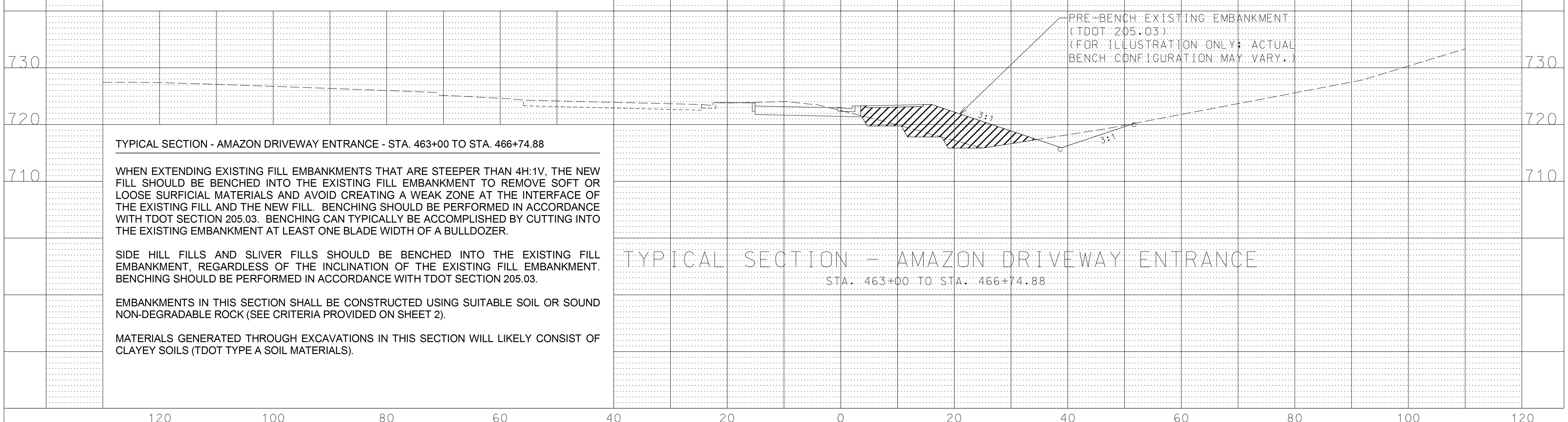
COMPACTED FILL REQUIRED TO INFILL EXISTING DITCHES IN THIS SECTION SHALL CONSIST OF SUITABLE SOIL OR SOUND NON-DEGRADABLE ROCK (SEE CRITERIA PROVIDED ON SHEET 2).

MATERIALS GENERATED THROUGH EXCAVATIONS IN THIS SECTION WILL LIKELY CONSIST OF CLAYEY SOILS (TDOT TYPE A SOIL MATERIALS).



TYPICAL SECTION - AMAZON DRIVEWAY ENTRANCE - STA. 459+02.65 TO STA. 463+00

MATERIALS GENERATED THROUGH EXCAVATIONS IN THIS SECTION WILL LIKELY CONSIST OF CLAYEY SOILS (TDOT TYPE A SOIL MATERIALS).



TYPICAL SECTION - AMAZON DRIVEWAY ENTRANCE - STA. 463+00 TO STA. 466+74.88

WHEN EXTENDING EXISTING FILL EMBANKMENTS THAT ARE STEEPER THAN 4H:1V, THE NEW FILL SHOULD BE BENCHED INTO THE EXISTING FILL EMBANKMENT TO REMOVE SOFT OR LOOSE SURFICIAL MATERIALS AND AVOID CREATING A WEAK ZONE AT THE INTERFACE OF THE EXISTING FILL AND THE NEW FILL. BENCHING SHOULD BE PERFORMED IN ACCORDANCE WITH TDOT SECTION 205.03. BENCHING CAN TYPICALLY BE ACCOMPLISHED BY CUTTING INTO THE EXISTING EMBANKMENT AT LEAST ONE BLADE WIDTH OF A BULLDOZER.

SIDE HILL FILLS AND SLIVER FILLS SHOULD BE BENCHED INTO THE EXISTING FILL EMBANKMENT, REGARDLESS OF THE INCLINATION OF THE EXISTING FILL EMBANKMENT. BENCHING SHOULD BE PERFORMED IN ACCORDANCE WITH TDOT SECTION 205.03.

EMBANKMENTS IN THIS SECTION SHALL BE CONSTRUCTED USING SUITABLE SOIL OR SOUND NON-DEGRADABLE ROCK (SEE CRITERIA PROVIDED ON SHEET 2).

MATERIALS GENERATED THROUGH EXCAVATIONS IN THIS SECTION WILL LIKELY CONSIST OF CLAYEY SOILS (TDOT TYPE A SOIL MATERIALS).

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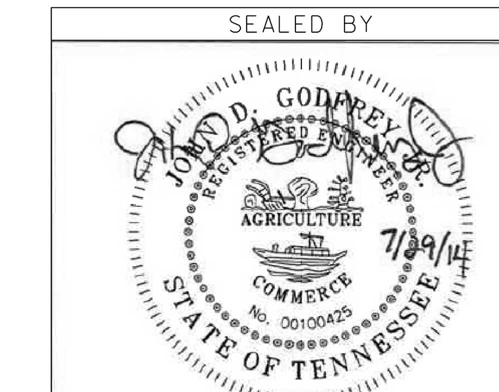


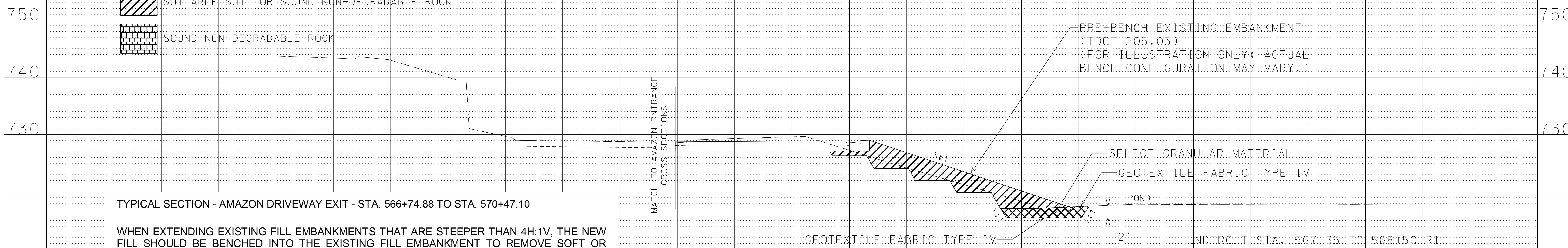
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	21N

SUITABLE SOIL OR SOUND NON-DEGRADABLE ROCK

SOUND NON-DEGRADABLE ROCK



TYPICAL SECTION - AMAZON DRIVEWAY EXIT
STA. 566+74.88 TO STA. 570+47.10

TYPICAL SECTION - AMAZON DRIVEWAY EXIT - STA. 566+74.88 TO STA. 570+47.10

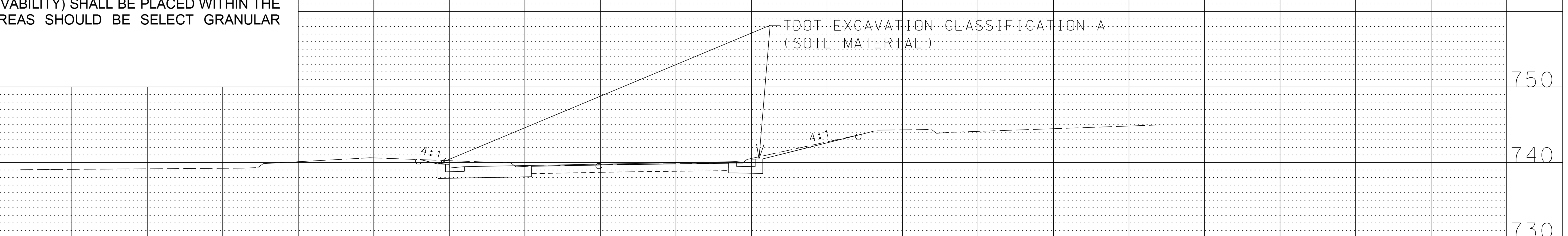
WHEN EXTENDING EXISTING FILL EMBANKMENTS THAT ARE STEEPER THAN 4H:1V, THE NEW FILL SHOULD BE BENCHED INTO THE EXISTING FILL EMBANKMENT TO REMOVE SOFT OR LOOSE SURFICIAL MATERIALS AND AVOID CREATING A WEAK ZONE AT THE INTERFACE OF THE EXISTING FILL AND THE NEW FILL. BENCHING SHOULD BE PERFORMED IN ACCORDANCE WITH TDOT SECTION 205.03. BENCHING CAN TYPICALLY BE ACCOMPLISHED BY CUTTING INTO THE EXISTING EMBANKMENT AT LEAST ONE BLADE WIDTH OF A BULLDOZER.

SIDE HILL FILLS AND SLIVER FILLS SHOULD BE BENCHED INTO THE EXISTING FILL EMBANKMENT, REGARDLESS OF THE INCLINATION OF THE EXISTING FILL EMBANKMENT. BENCHING SHOULD BE PERFORMED IN ACCORDANCE WITH TDOT SECTION 205.03.

EMBANKMENTS IN THIS SECTION SHALL BE CONSTRUCTED USING SUITABLE SOIL OR SOUND NON-DEGRADABLE ROCK (SEE CRITERIA PROVIDED ON SHEET 2).

MATERIALS GENERATED THROUGH EXCAVATIONS IN THIS SECTION WILL LIKELY CONSIST OF CLAYEY SOILS (TDOT TYPE A SOIL MATERIALS).

SOFT AND WET MATERIALS WILL BE ENCOUNTERED BETWEEN STATIONS 567+35 AND 568+50 RT. THESE MATERIALS SHOULD BE UNDERCUT TO MINIMUM DEPTHS OF UP TO TWO FEET AND TO EXTEND TO A MINIMUM OF FIVE FEET BEYOND THE TOE OF THE PROPOSED SLOPE. A LAYER OF GEOTEXTILE FABRIC (TYPE IV, HIGH SURVIVABILITY) SHALL BE PLACED WITHIN THE ENTIRE UNDERCUT AREA. BACKFILL IN THESE AREAS SHOULD BE SELECT GRANULAR MATERIAL.



TYPICAL SECTION - AMAZON DRIVEWAY
STA. 766+74.88 TO STA. 771+03.76

TYPICAL SECTION - AMAZON DRIVEWAY - STA. 766+74.88 TO STA. 771+03.76

SIDE HILL FILLS AND SLIVER FILLS SHOULD BE BENCHED INTO THE EXISTING FILL EMBANKMENT, REGARDLESS OF THE INCLINATION OF THE EXISTING FILL EMBANKMENT. BENCHING SHOULD BE PERFORMED IN ACCORDANCE WITH TDOT SECTION 205.03.

EMBANKMENTS IN THIS SECTION SHALL BE CONSTRUCTED USING SUITABLE SOIL OR SOUND NON-DEGRADABLE ROCK (SEE CRITERIA PROVIDED ON SHEET 2).

MATERIALS GENERATED THROUGH EXCAVATIONS IN THIS SECTION WILL LIKELY CONSIST OF CLAYEY SOILS (TDOT TYPE A SOIL MATERIALS).

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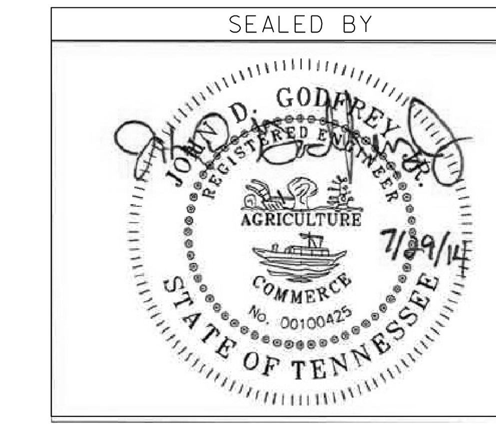

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	21P

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, 2007 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, 2007 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 ME 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, 2007 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 2:1 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 2:1 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

THE RETAINING WALL SHALL BE ONE OF THE WALL TYPES LISTED BELOW. FOR RETAINING WALL SYSTEMS LISTED AS BIN WALL, CRIB WALL, MSE (EITHER SEGMENTAL PANEL OR MODULAR BLOCK) AND GROUND ANCHOR WALL, THE SPECIFIC WALL SYSTEM SUPPLIER/INSTALLER SHALL BE ONE OF THOSE LISTED AS PRE–APPROVED IN THE SPECIAL PROVISION 624.

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

TABLE 1–DESIGN REQUIREMENTS AND PARAMETERS

DESCRIPTION	VALUE–MSE WALLS	VALUE–OTHER WALLS	NOTE *
DESIGN LIFE	75 YEARS	75 YEARS	
SEISMIC ACCELERATION COEFFICIENT (Amax)	0.312	0.312	
EFFECTIVE (DRAINED) FRICTION ANGLE			
RETAINED BACKFILL–UNCLASSIFIED SITE OR BORROW SOIL	27°	27°	
RETAINED BACKFILL–SELECT BACKFILL	34° TO MAX 40°	34° TO MAX 40°	1
REINFORCED BACKFILL	34° TO MAX 40°	NOT APPLICABLE	1
UNIT WEIGHT			
UNCLASSIFIED SITE OR BORROW SOIL	118 POUNDS PER CUBIC FOOT	118 POUNDS PER CUBIC FOOT	
SELECT BACKFILL MATERIAL	VARIES	VARIES	1A
MINIMUM LENGTH OF SOIL REINFORCEMENT, B	GREATER OF 0.7H MIN. OR 8–FT OR AS SPECIFIED ON THE PLANS	NOT APPLICABLE	2,2A
LIMITING ECCENTRICITY	B/4 (SOIL), 3/8B (ROCK)	B/4 (SOIL), 3/8B (ROCK)	
COEFFICIENT OF SLIDING FRICTION	SEE TABLE 2 OR 3	SEE TABLE 2 OR 3	3
NOMINAL BEARING CAPACITY	SEE TABLE 2 OR 3	SEE TABLE 2 OR 3	3
RESISTANCE FACTORS			
SLIDING–STATIC	1.0	0.85	4
SLIDING–COMBINED STATIC+EARTHQUAKE	1.0	1.0	4
BEARING–STATIC	0.65	0.45	5
BEARING–COMBINED STATIC+EARTHQUAKE	1.0	1.0	
PULLOUT RESISTANCE			
STATIC	0.90	NOT APPLICABLE	6
COMBINED STATIC/EARTHQUAKE	1.20	NOT APPLICABLE	6
TENSILE RESISTANCE OF METALLIC REINFORCEMENTS AND CONNECTORS		NOT APPLICABLE	
STATIC		NOT APPLICABLE	
–STRIP REINFORCEMENT	0.75		7
–GRID REINFORCEMENT	0.65		7,8
COMBINED STATIC/EARTHQUAKE			
–STRIP REINFORCEMENT	1.00		7
–GRID REINFORCEMENT	0.85	NOT APPLICABLE	7,8
TENSILE RESISTANCE OF GEOSYNTHETIC REINFORCEMENTS AND CONNECTORS		NOT APPLICABLE	
STATIC	0.90	NOT APPLICABLE	
COMBINED STATIC/EARTHQUAKE	1.20	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 UTILIZED ϕ 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 WALL FOOTING OR REINFORCED SOIL ZONE FOR MSE WALLS UP TO FINISHED GRADE.
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 LENGHTS 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.
	UNLESS OTHERWISE SPECIFIED, ALL RESISTANCE FACTORS SHALL BE TAKEN AS 1.0 WHEN INVESTIGATING AN EXTREME EVENT LIMIT STATE.

NOTE: TABLES 1 AND 1.1 ARE MODIFICATIONS OF TABLES 1 AND 1.1 OF PUBLICATION FHWA–NHI–10–024/FHWA GEC 011, DESIGN AND CONSTRUCTION OF MECHANICALLY STABILIZED EARTH WALLS AND REINFORCED SOIL SLOPES, NOVEMBER 2009.

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
43+25 TO 45+00	ON SOIL AT MINIMUM EMBEDMENT DEPTH	5000	0.45
45+00 TO 47+75	UNDERCUT 3 FEET BELOW PROPOSED FOOTING ELEVATION AND REPLACE WITH SELECT GRANULAR MATERIAL	5000	0.60

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
43+25 TO 45+00	ON SOIL AT MINIMUM EMBEDMENT DEPTH	5000	0.45
45+00 TO 47+75	UNDERCUT 3 FEET BELOW PROPOSED FOOTING ELEVATION AND REPLACE WITH SELECT GRANULAR MATERIAL	5000	0.60

OTHER DESIGN REQUIREMENTS

THE WALL SHALL HAVE A DRAINAGE GUTTER AT THE TOP DESIGNED TO CARRY SURFACE RUNOFF TO EITHER OR BOTH ENDS OF WALLS. DETAILS OF THIS DRAINAGE FEATURE SHALL BE PROVIDED IN WALL DESIGNER/CONTRACTOR'S WALL DESIGN PLANS. IF A CONCRETE CANTILEVER WALL IS USED, THE WALL DESIGNER MUST PROVIDE FOR A DRAINAGE LAYER BEHIND THE WALL STEM WITH ADEQUATE DRAINAGE PROVIDED VIA WEEP HOLES.

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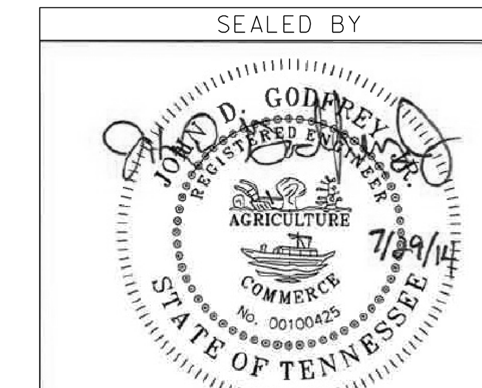


STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GEOTECHNICAL DESIGN NOTES AND DETAILS
RETAINING WALL NO. 1
S.R. 317
STA. 43+25 to 47+75

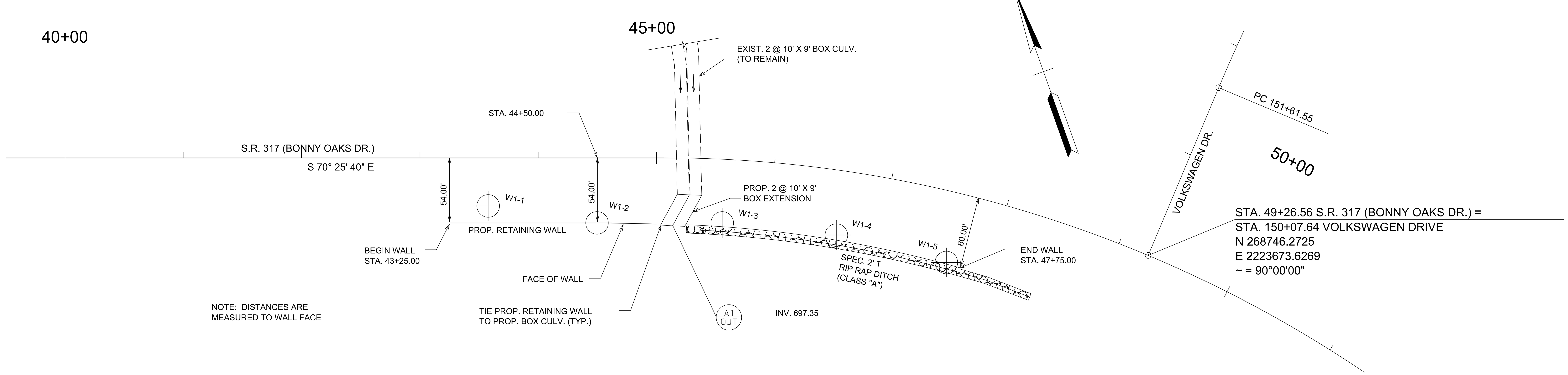
SCALE: NTS

$$$$SYTIME$$$$$$
$$$$DGNSPEC$$

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	21Q

RETAINING WALL PLAN VIEW

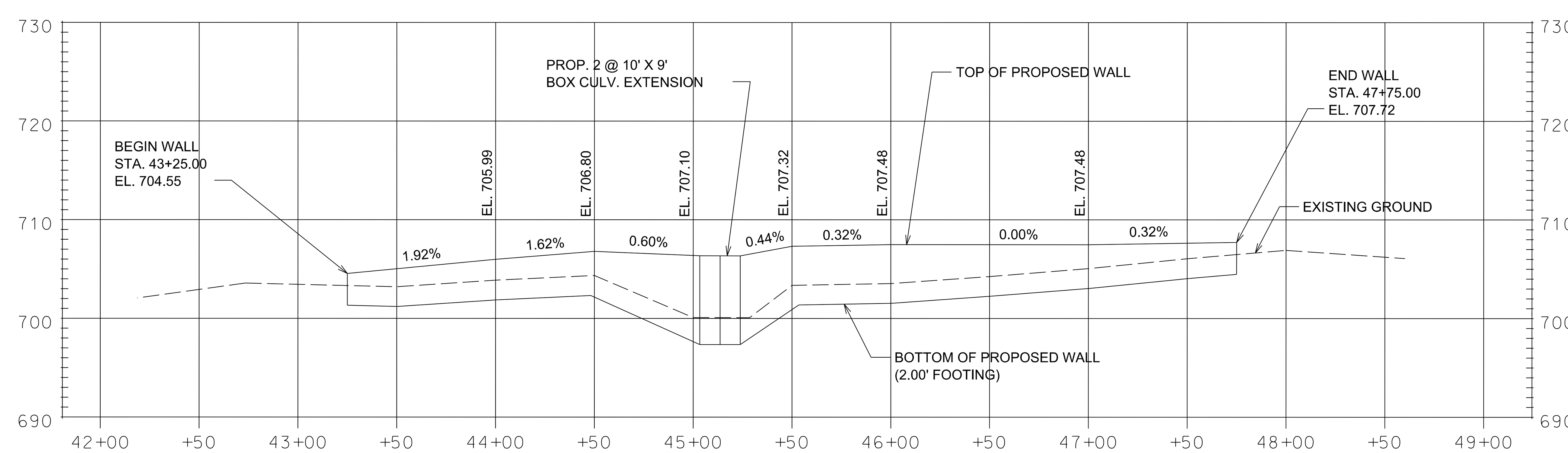
SCALE: 1" = 50'



NOTE: DISTANCES ARE MEASURED TO WALL FACE

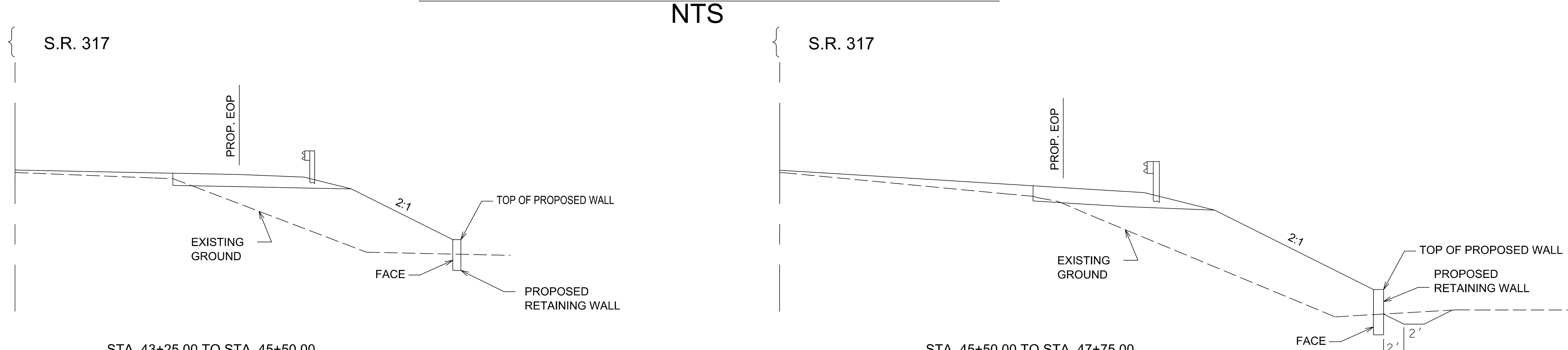
RETAINING WALL ELEVATION VIEW

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



NOTE: ACTUAL PROFILE OF TOP OF PROPOSED WALL WILL VARY DEPENDING ON TYPE OF WALL SYSTEM CONSTRUCTED.

RETAINING WALL TYPICAL SECTIONS
NTS



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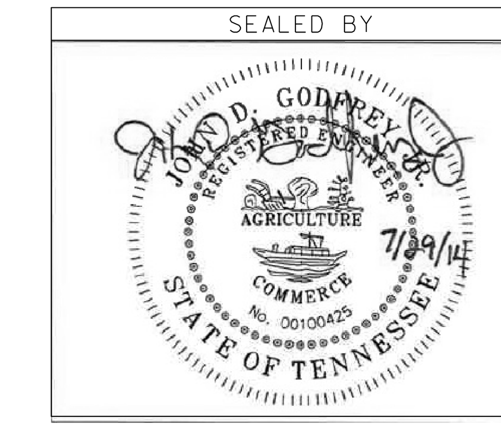


STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RETAINING WALL
CONCEPTUAL
DRAWING
S.R.317
STA. 43+25 to 47+75

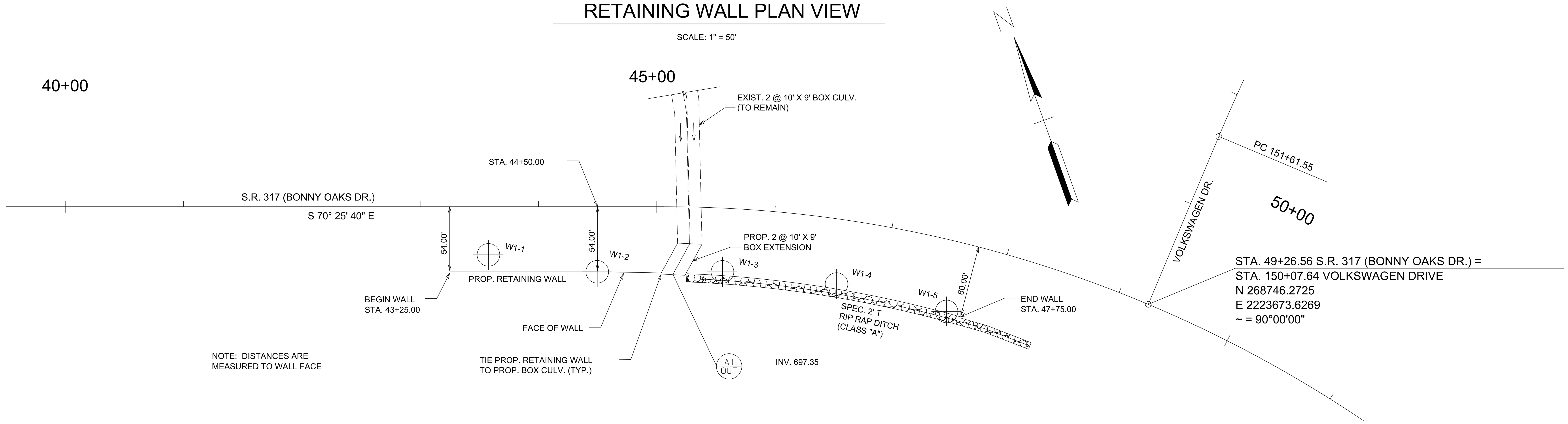
SCALE: NTS

$$$$SYTIME$$$$$$
$$$$DGNSPEC$$$

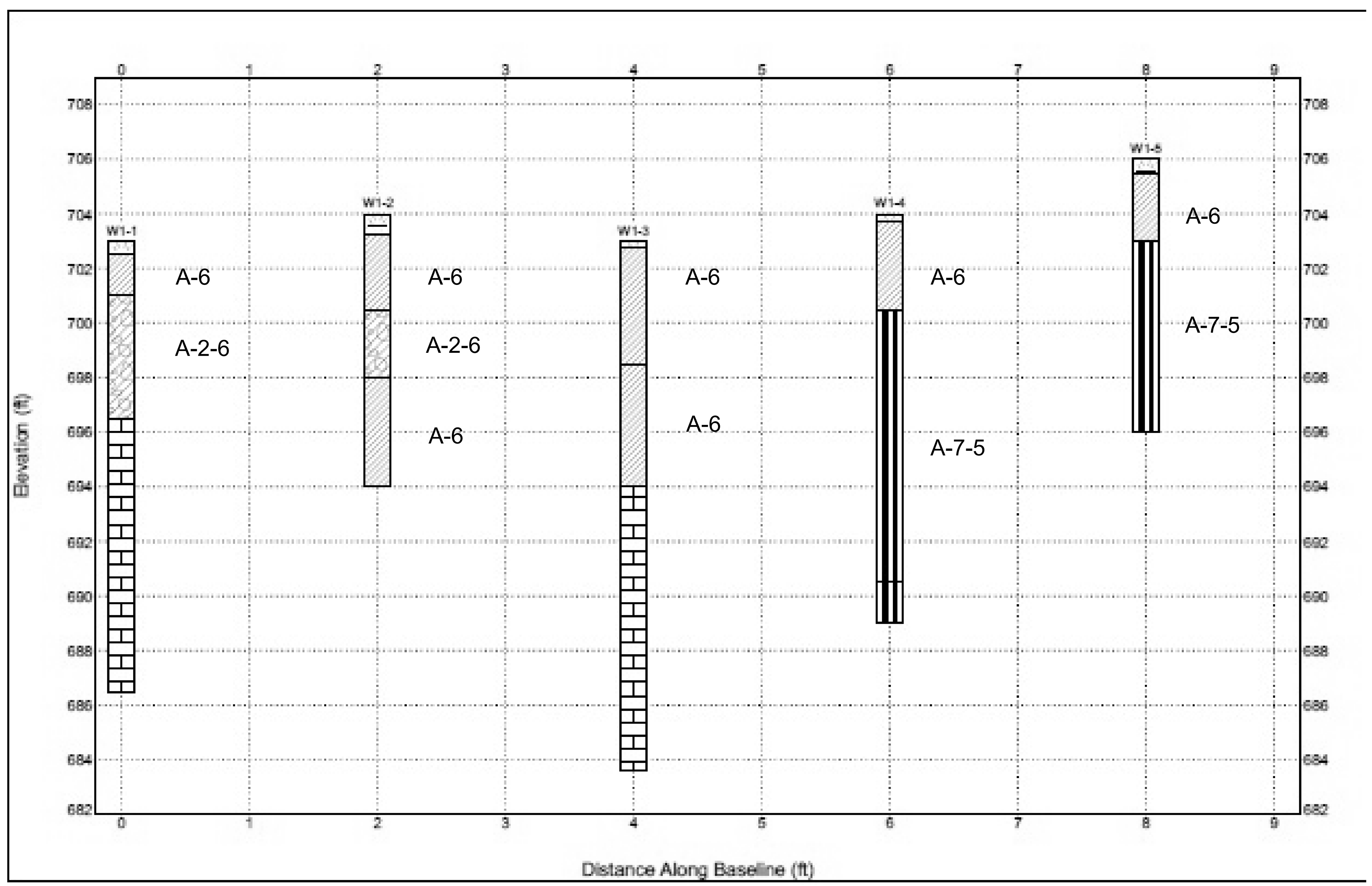
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	21R

RETAINING WALL PLAN VIEW

SCALE: 1" = 50'



NOTE: DISTANCES ARE
MEASURED TO WALL FACE



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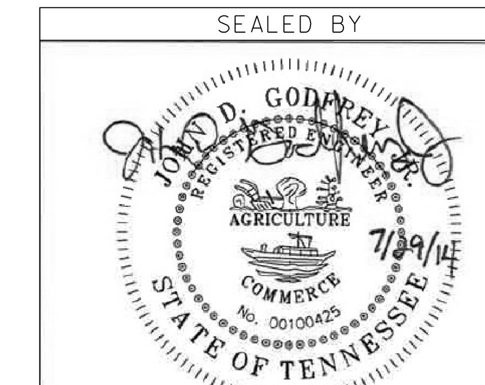


STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

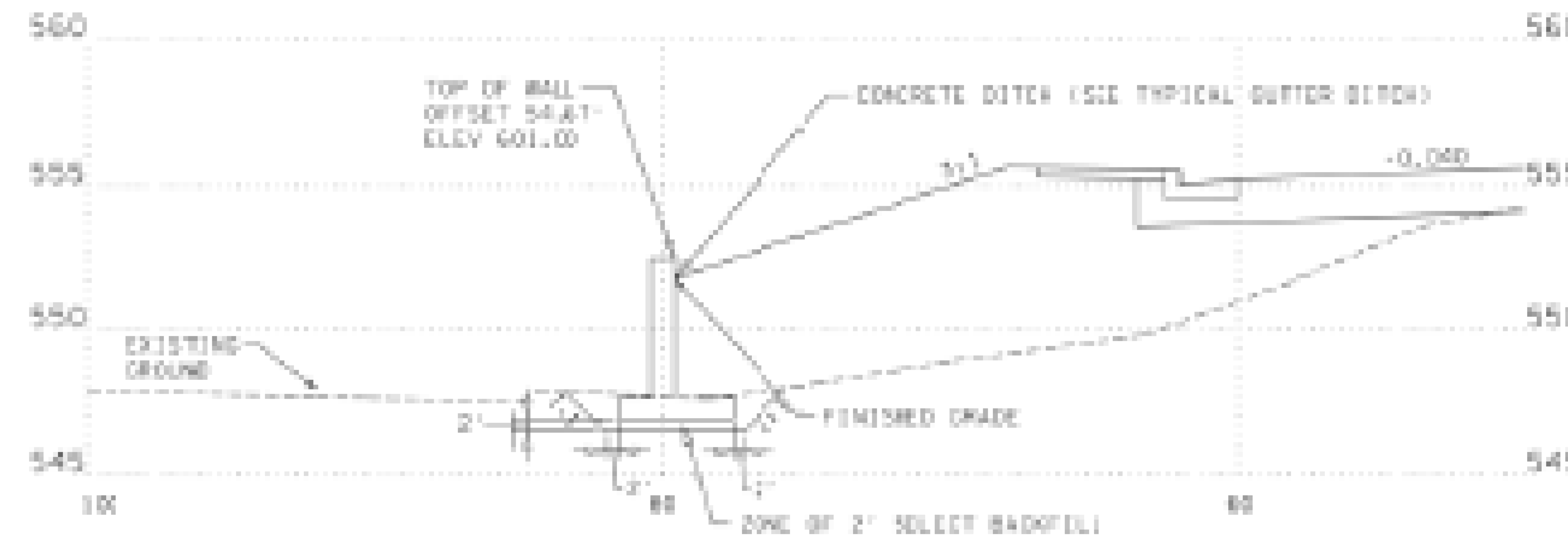
RETAINING WALL
CONCEPTUAL
DRAWING
S.R.317
STA. 43+25 to 47+75

SCALE: NTS

$$$$SYTIME$$$$$$
$$$$DGNSPEC$$

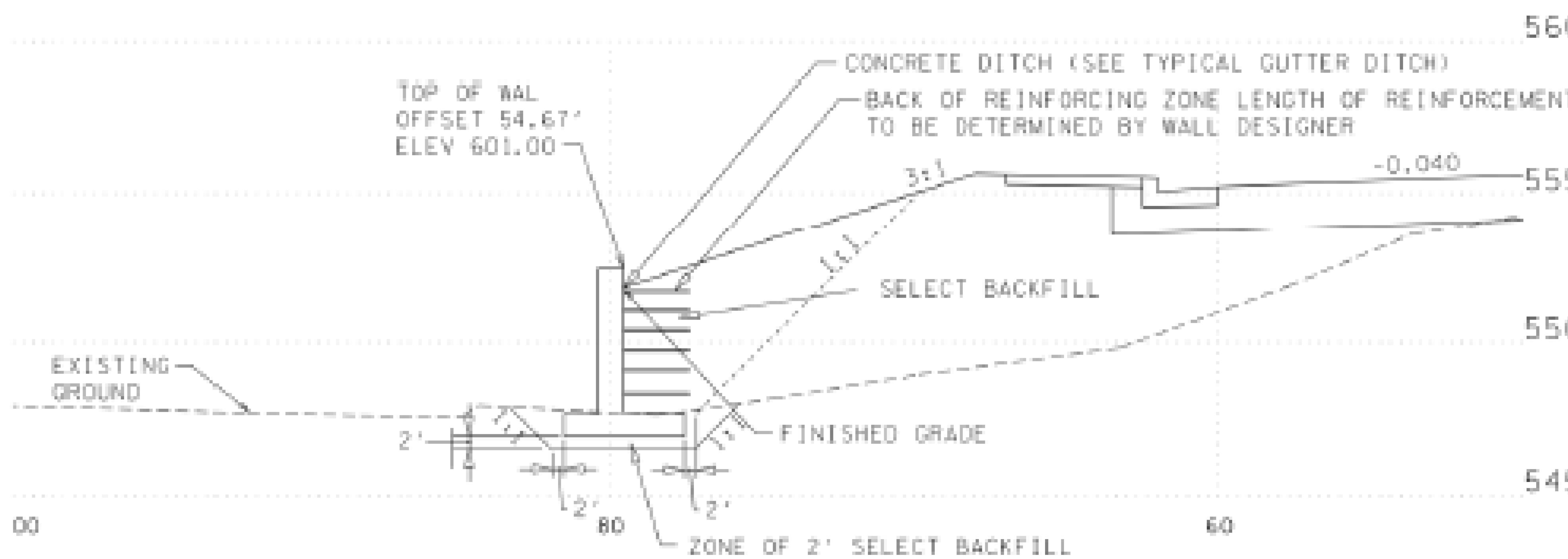
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	21S

CAST-IN-PLACE CONCRETE CANTILEVER WALL
SPREAD FOOTING - FOUNDATION ON 2' SELECT MATERIAL



TYPICAL SECTION STA.?TO+50.00

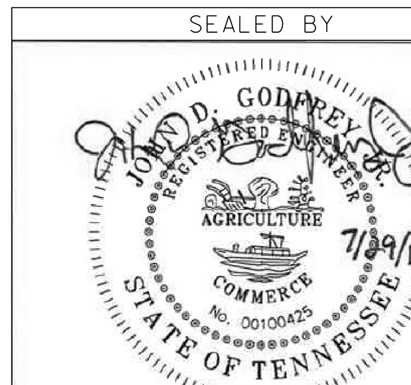
MSE WALL - SEGMENTAL PRE-CAST OR MODULAR BLOCK
SPREAD FOOTING - FOUNDATION ON 2' SELECT MATERIAL



UNOFFICIAL SET

NOT FOR BIDDING

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RETAINING WALL
CONCEPT DRAWING
S.R. 317
STA. 43+25
TO 47+75
SCALE: NTS

$$$$SYTIME$$$$$$
$$$DGNSPEC$$$

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

Index Of Sheets

SHEET NO.	DESCRIPTION
1	.... TITLE SHEET
2	.... GEOTECHNICAL NOTES AND DETAILS
3-6	.... SOIL LAYOUT
3A-6A	.... SOIL PROFILE
7-10	.... TYPICAL SECTIONS

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

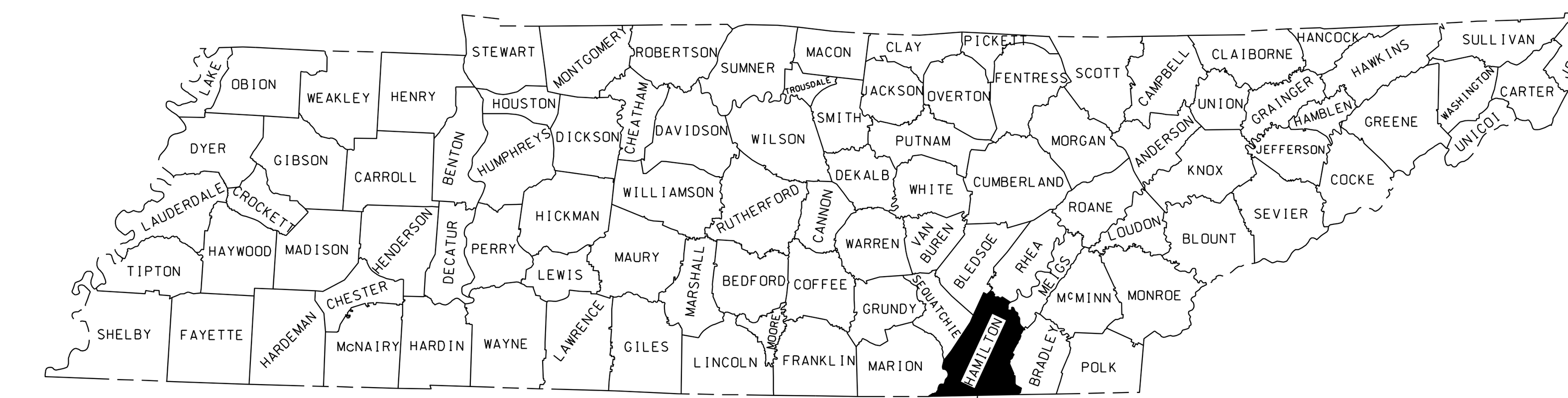
HAMILTON COUNTY

TENN.	YEAR	SHEET NO.
	2014	21T
TYPE	CONST.	
STATE PROJ. NO.	33960-3509-04	

SIA SERVING VOLKSWAGEN GROUP OF AMERICA (EXPANSION)
IN CHATTANOOGA

GEOTECHNICAL

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



PROJECT LOCATION

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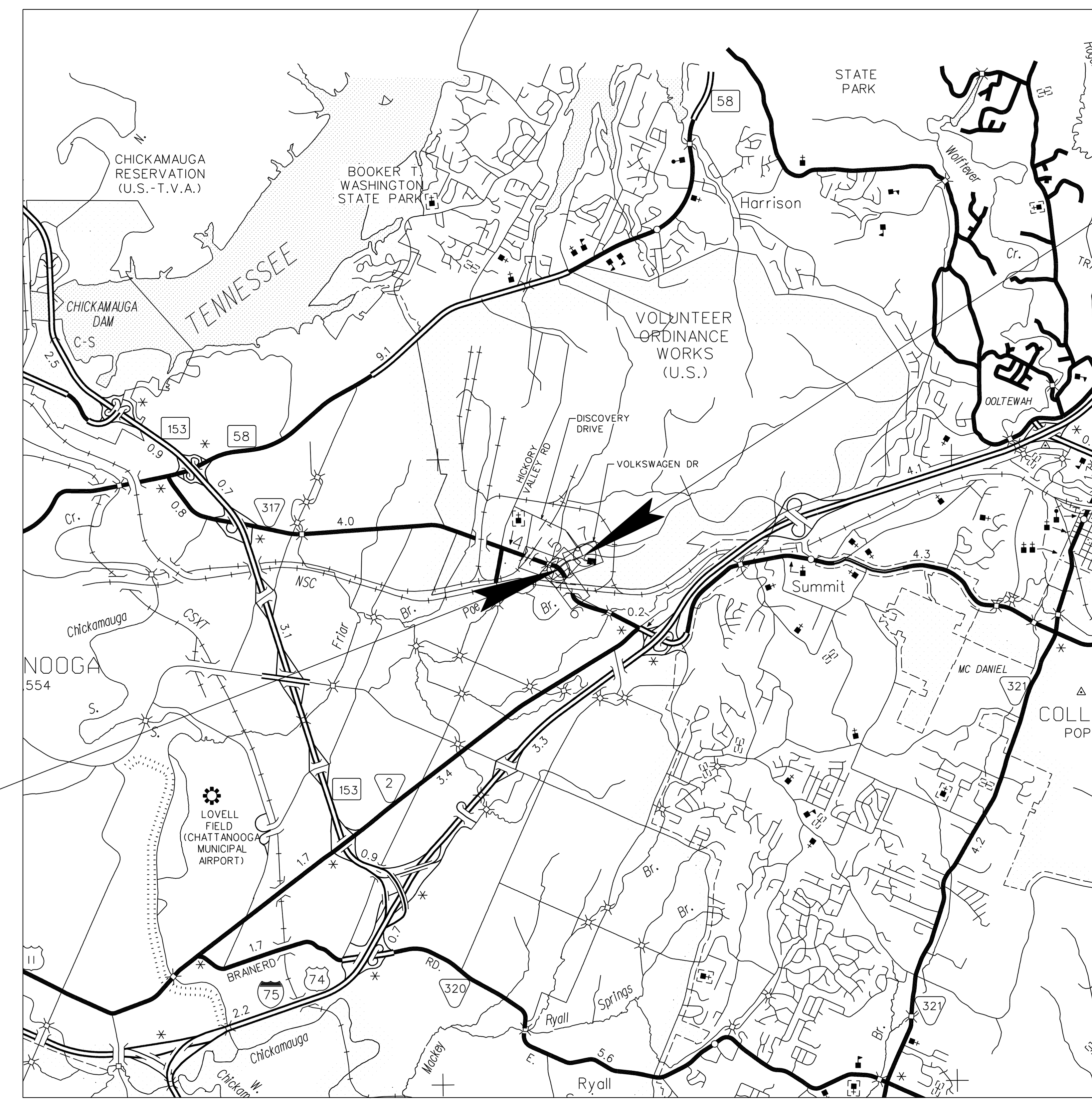


END PROJ. NO. 33960-1509-04
STA. 165+38.55
N 269483.9589
E 2224987.3152

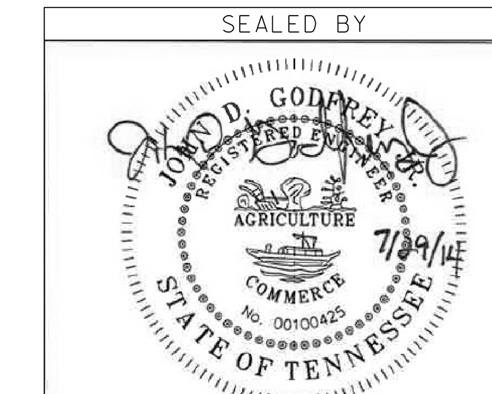
UNOFFICIAL SET

NOT FOR BIDDING

BEGIN PROJ. NO. 33960-1509-04
STA. 150+55.12
N 268781.3456
E 2223705.6250

SCALE: 1"= 5280'

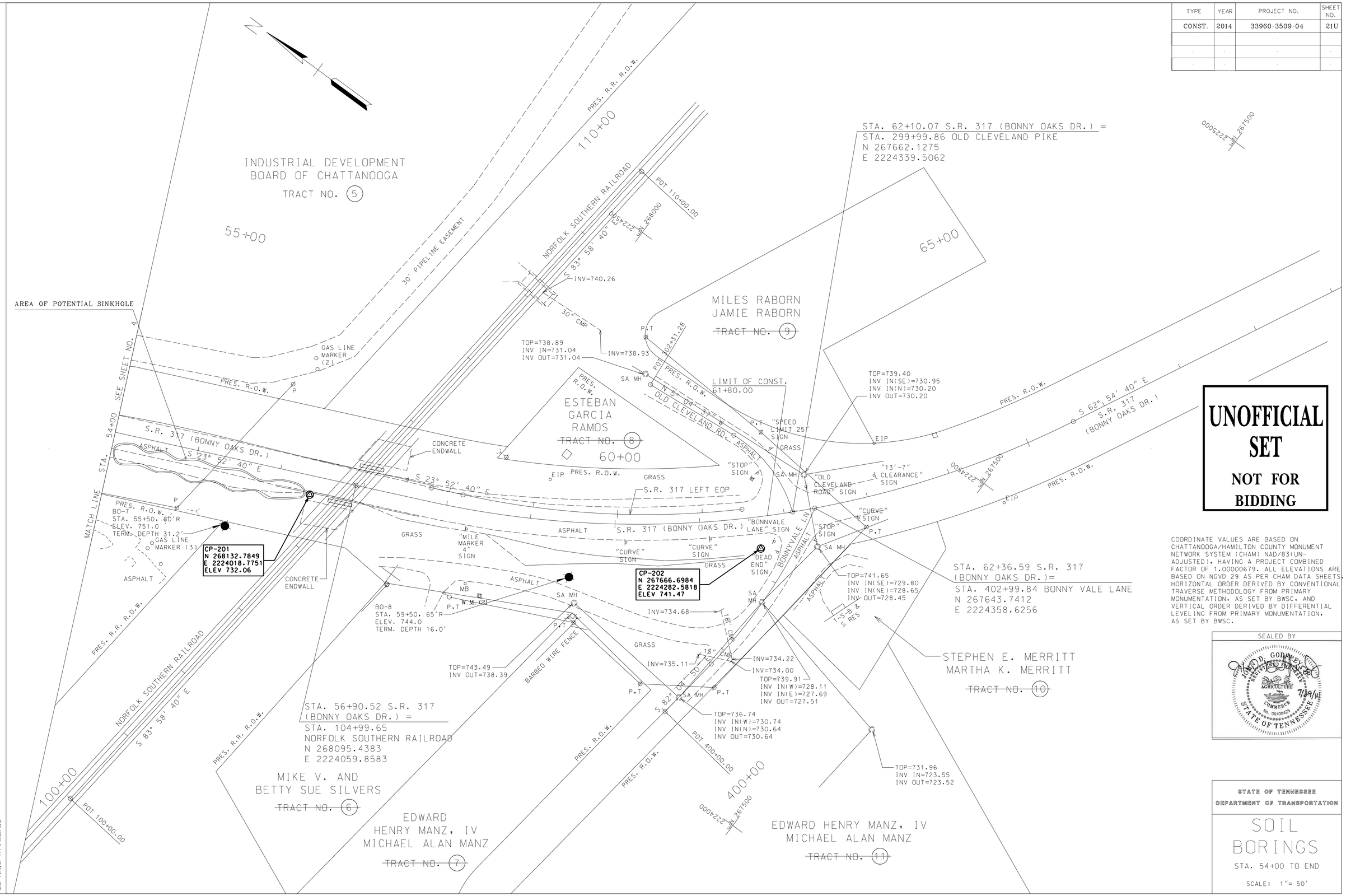
SEALED BY



R.O.W. PROJECT LENGTH = 0.280 MILE

GEOTECHNICAL OFFICE NO.
2615912
CONSULTANT:
K.S. WARE AND ASSOCIATES, L.L.C.
PREPARED BY:
John D. Godfrey, Jr., P.E.
DATE:
November 15, 2013

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	21U



UNOFFICIAL SET

NOT FOR BIDDING

COORDINATE VALUES ARE BASED ON CHATTANOOGA/HAMILTON COUNTY MONUMENT NETWORK SYSTEM (CHAM) NAD/83(UN-ADJUSTED). HAVING A PROJECT COMBINED FACTOR OF 1.00000679. ALL ELEVATIONS ARE BASED ON NGVD 29 AS PER CHAM DATA SHEETS. HORIZONTAL ORDER DERIVED BY CONVENTIONAL TRAVERSE METHODOLOGY FROM PRIMARY MONUMENTATION, AS SET BY BWSC, AND VERTICAL ORDER DERIVED BY DIFFERENTIAL LEVELING FROM PRIMARY MONUMENTATION, AS SET BY BWSC.

SEALED BY

JOHN D. GODFREY JR. REGISTERED ENGINEER AGRICULTURE COMMERCE No. 00100429 STATE OF TENNESSEE 7/29/14

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

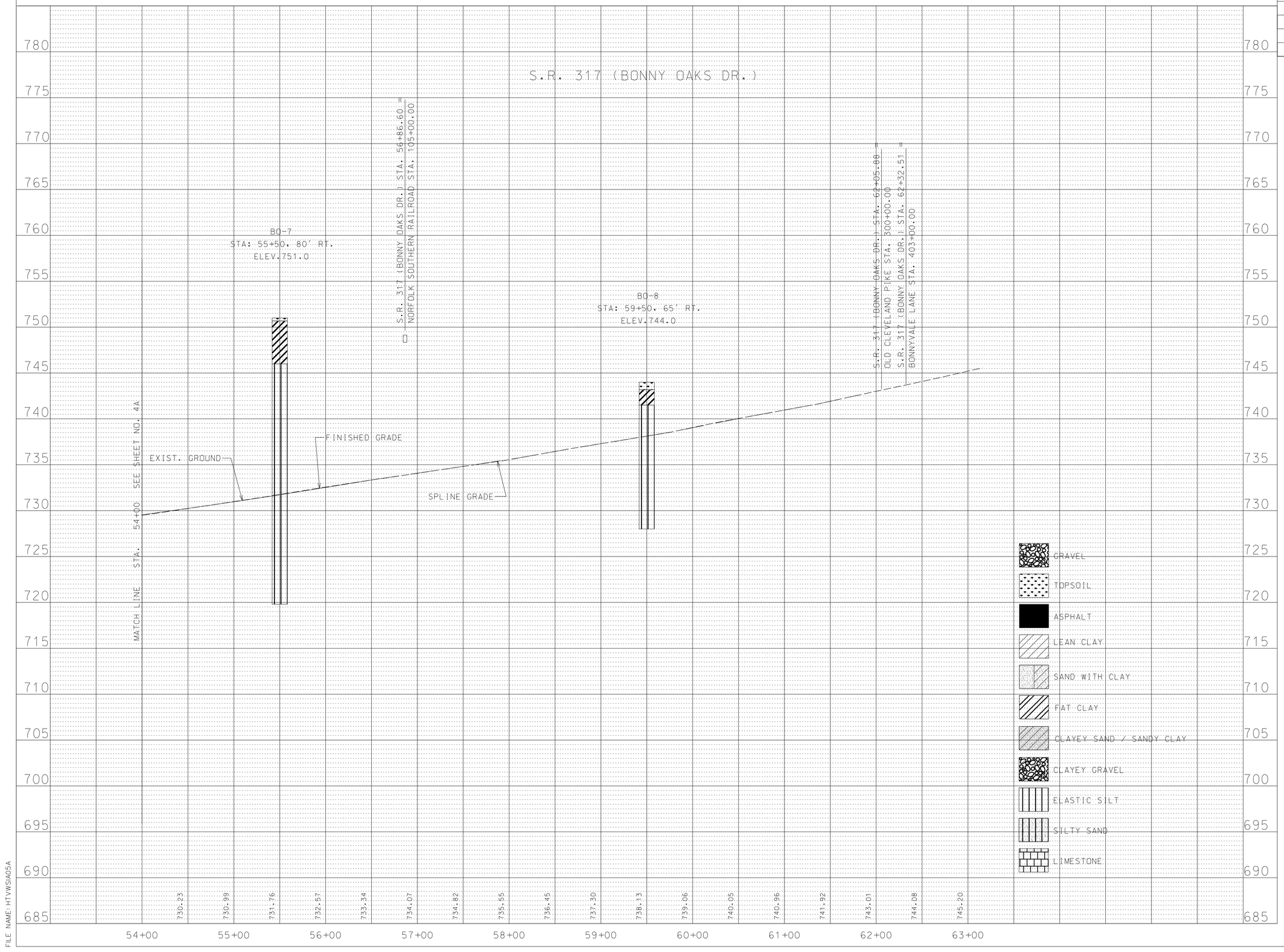
SOIL BORINGS

STA. 54+00 TO END

SCALE: 1"= 50'

FILE NAME: HTVWSIA05

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2014	33960-3509-04	21V



FILE NAME: HTVWSIA05A

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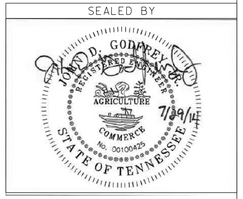
NOT FOR BIDDING

SEALED BY



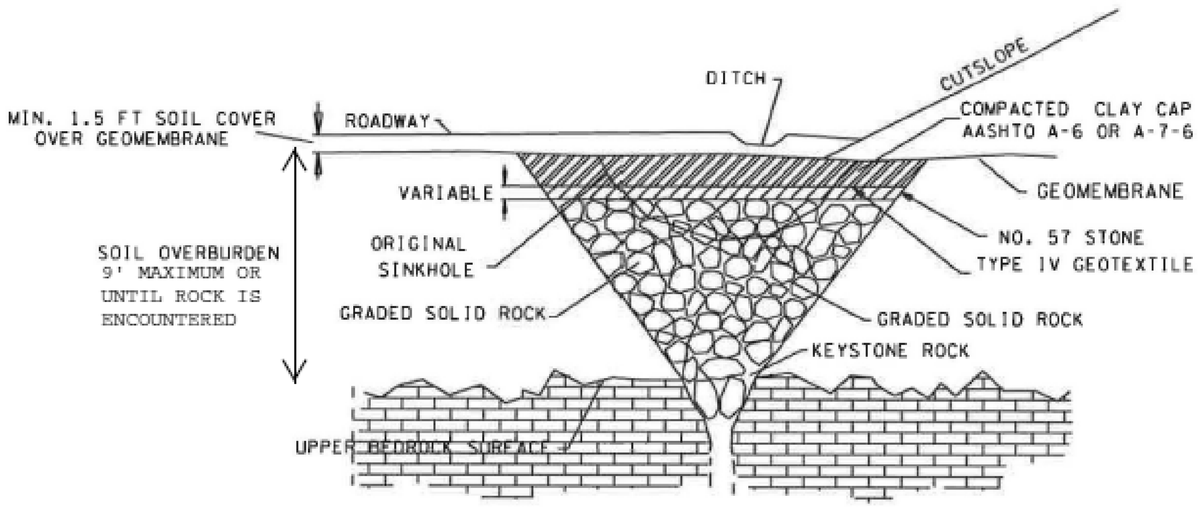
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SOILS PROFILE

S.R. 317 (BONNY OAKS DR.)
STA. 54+00 TO END

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2014	33960-3509-04	21W



SINKHOLE TREATMENT 2A

STATION 54+00 TO 56+50

SINKHOLE TREATMENT 2 AND 2A , INACTIVE

NOTE: AFTER EXCAVATION IS COMPLETE AND ROCK OPENING IS EXPOSED, THE SITE AND TREATMENT METHOD SHALL BE APPROVED BY A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEERING SECTION OF THE DIVISION OF MATERIALS AND TESTS. ANY CHANGE IN THE NO. 57 STONE FILL OR THE CLAY CAP SHALL BE APPROVED BY A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEERING SECTION OF THE DIVISION OF MATERIALS AND TESTS.

SEQUENCE OF CONSTRUCTION:

1. EXCAVATE SINKHOLE TO DEFINE OPENING IN BEDROCK MAKING SURE TO REMOVE ALL SOIL AND DEBRIS.

2. FILL THE OPENING WITH KEYSTONE ROCK, WHICH SHALL BE OF SUFFICENT SIZE TO LOCK IN PLACE WITHOUT CREATING AN AIRBLOCK TO SUBSURFACE DRAINAGE. PAYMENT OF KEYSTONE ROCK WILL ROCK WILL BE INCLUDED IN THE COST OF ITEM NO. 203-02.

3. BACKFILL WITH GRADED SOLID ROCK (CLASSIFICATION 203.02. BORROW EXCAVATION) UP TO SPECIFIED GRADE.

4. PLACE TYPE IV GEOTEXTILE ON TOP OF GRADED SOLID ROCK. PLACE NO. 57 STONE ON TOP OF GEOTEXTILE.

5. CONSTRUCT COMPACTED CLAY CAP. SOIL SHOULD BE OF TYPE AASHTO A-6 OR A-7-6.

6. PLACE GEOMEMBRANE ON TOP OF SOIL CAP BEFORE CONSTRUCTION OF ANY OVERLYING STRUCTURES OR EMBANKMENTS. THERE SHOULD BE A MINIMUM OF 1.5 FT. OR SOIL PLACED OVER THE MEMBRANE.

7. DITCH SHOULD BE PAVED OR LINED WITH A GEOMEMBRANE.

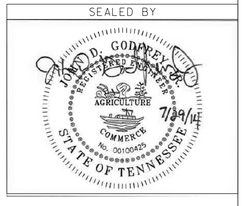
GRADED SOLID ROCK

BORROW EXCAVATION (GRADED SOLID ROCK) SHALL CONSIST OF THE REMOVAL AND SATISFACTORY PLACEMENT OF SOUND NON-DEGRADAB LE ROCK WITH MAXIMUM SIZE OF 3 FEET (1 METER). AT LEAST 50 PERCENT OF THE ROCK SHALL BE UNIFORMLY DISTRIBUTED BETWEEN 1 FOOT (30 CECENTIMETERS) AND 3 FEET (1 METER) IN DIAMETER AND NO GREATER THAN 10 PERCENT SHALL BE LESS THAN 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.

UNOFFICIAL SET

NOT FOR BIDDING

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTION

STATE ROUTE 317

HAMILTON COUNTY

FILE NAME: HTVWSIA07

TYPE	YEAR	PROJECT NO.	SHEET NO.
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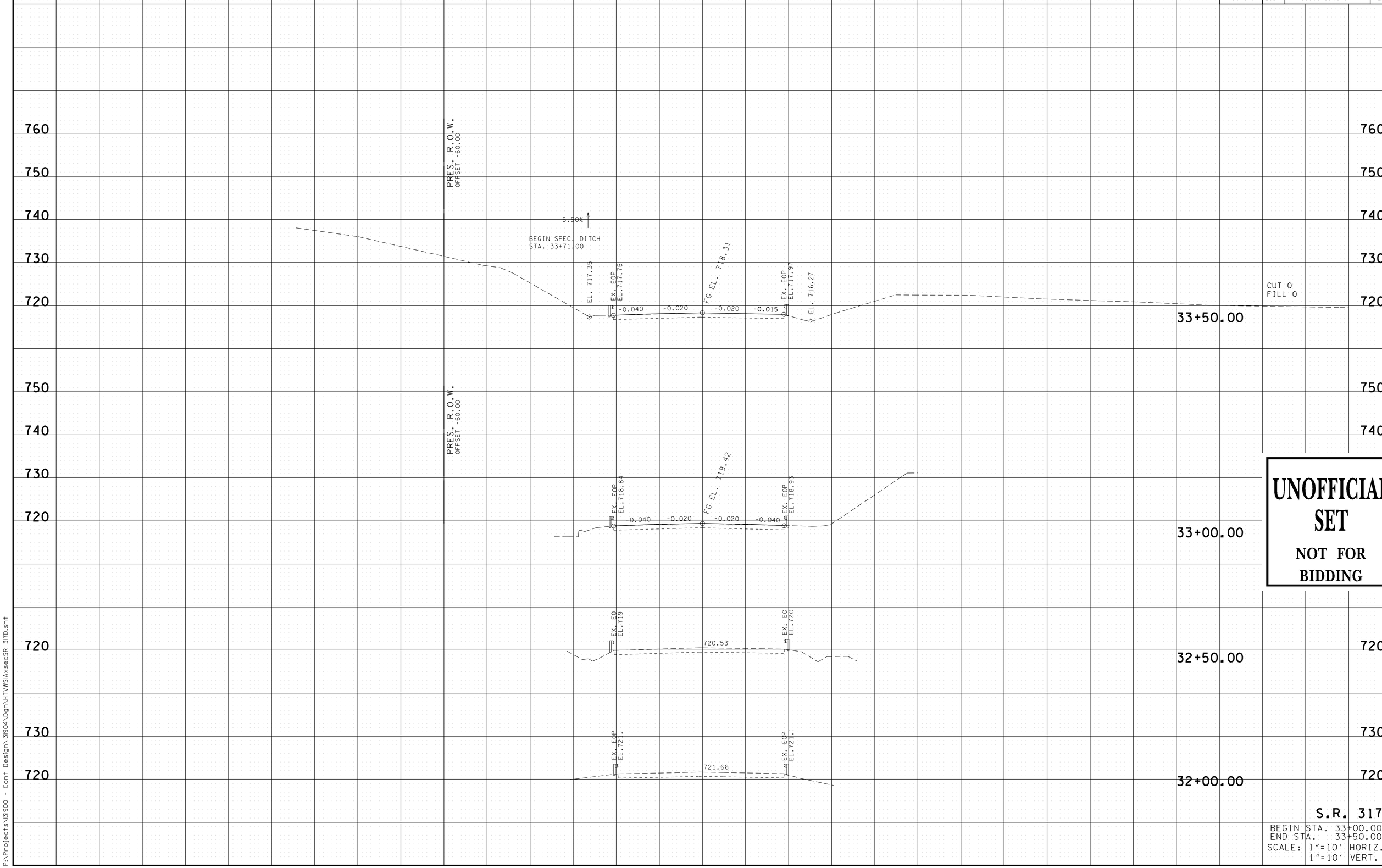
CONST.	2014	33960-3509-04	22



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NOT FOR BIDDING

S.R. 317

BEGIN STA. 33+00.00
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SCALE: 1"=10' HORIZ.
1"=10' VERT.

3/19/2014
P:\Projects\3I900 - Cont Design\3I904\Dgn\HTWMSIAxsecSR 317D.sht

TYPE	YEAR	PROJECT NO.	SHEET NO.
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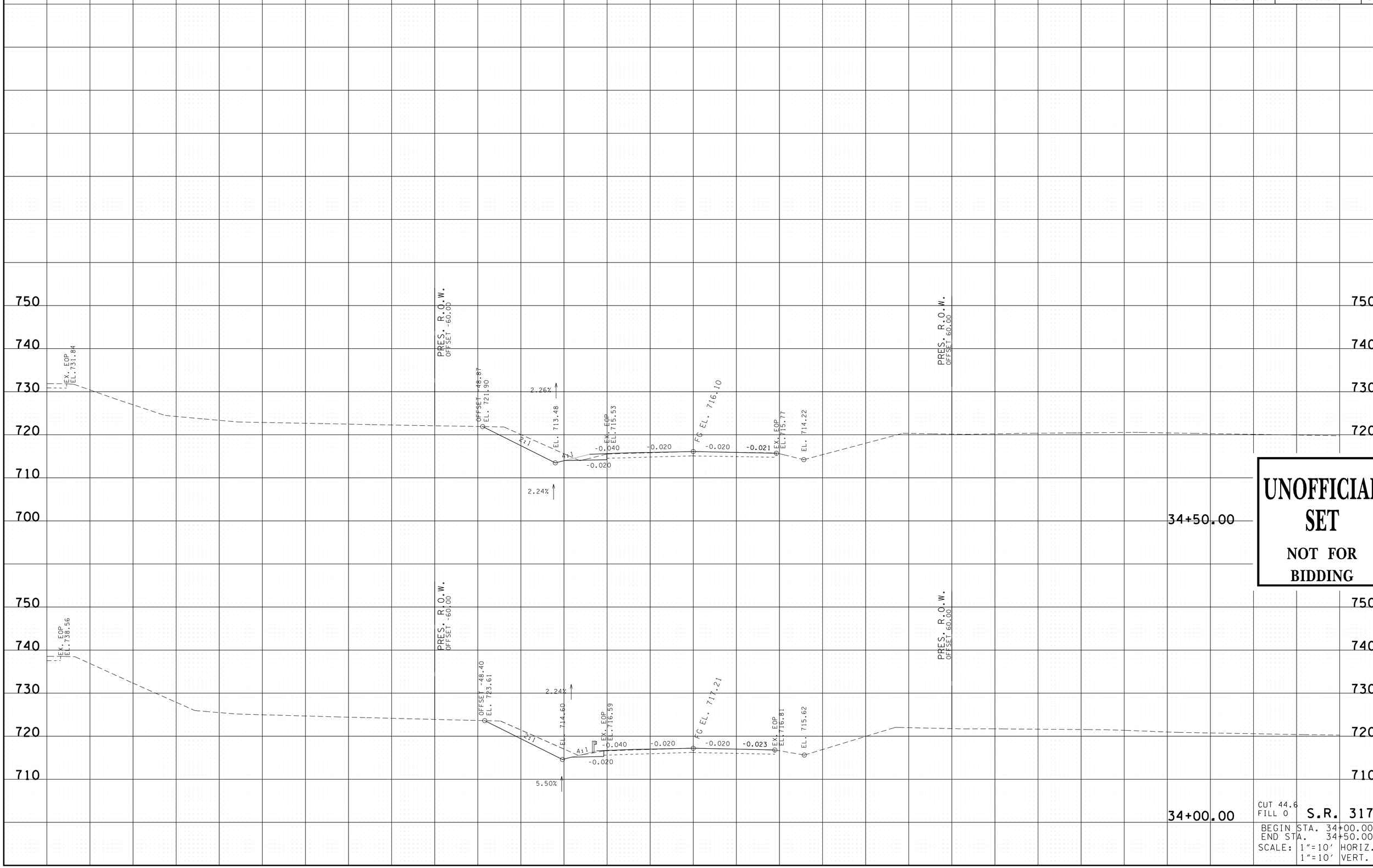
CONST.	2014	33960-3509-04	23



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NOT FOR BIDDING

CUT 44.6
FILL 0

S.R. 317

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

3/19/2014
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TYPE	YEAR	PROJECT NO.	SHEET NO.
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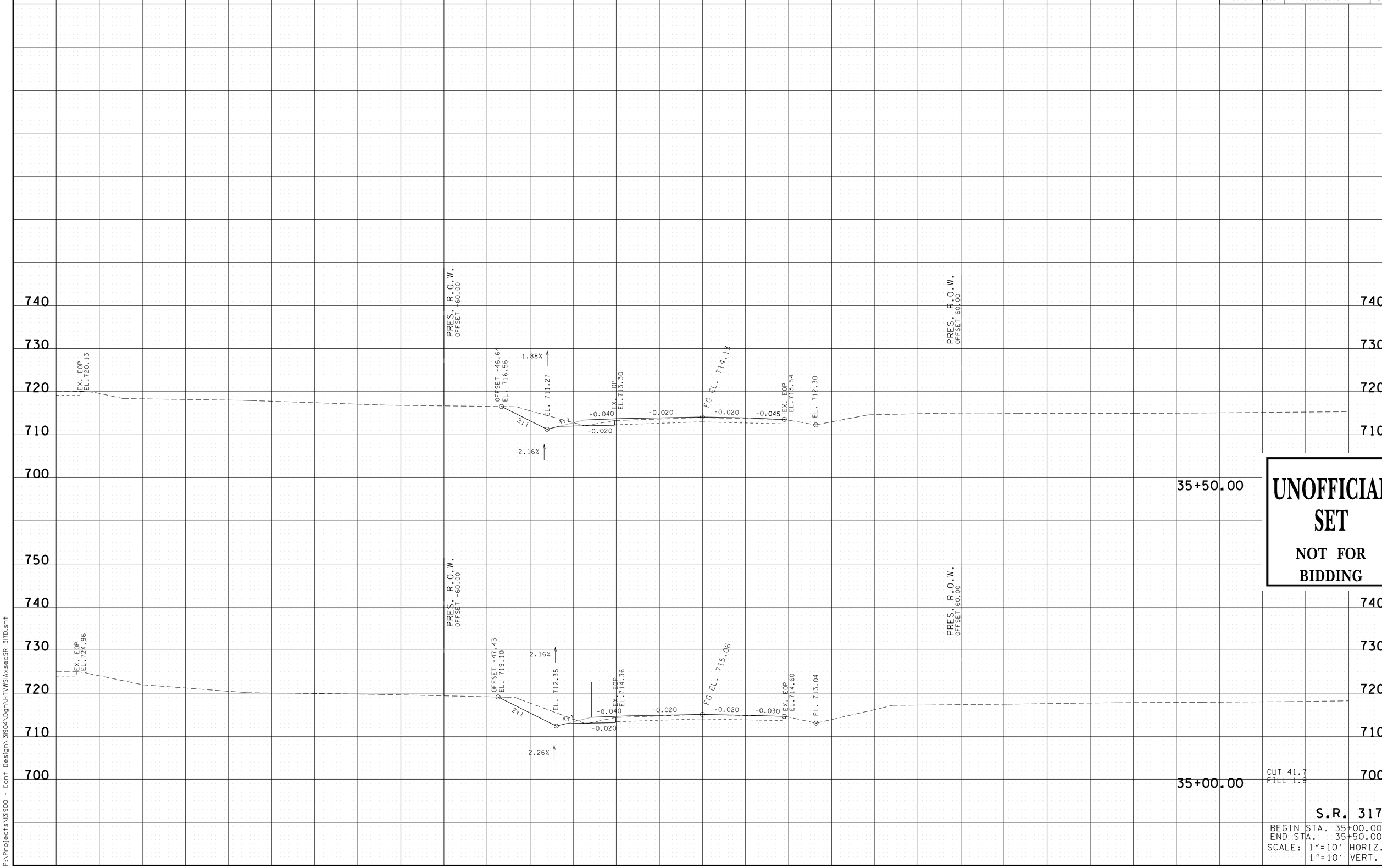
CONST.	2014	33960-3509-04	24



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3/19/2014
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TYPE	YEAR	PROJECT NO.	SHEET NO.
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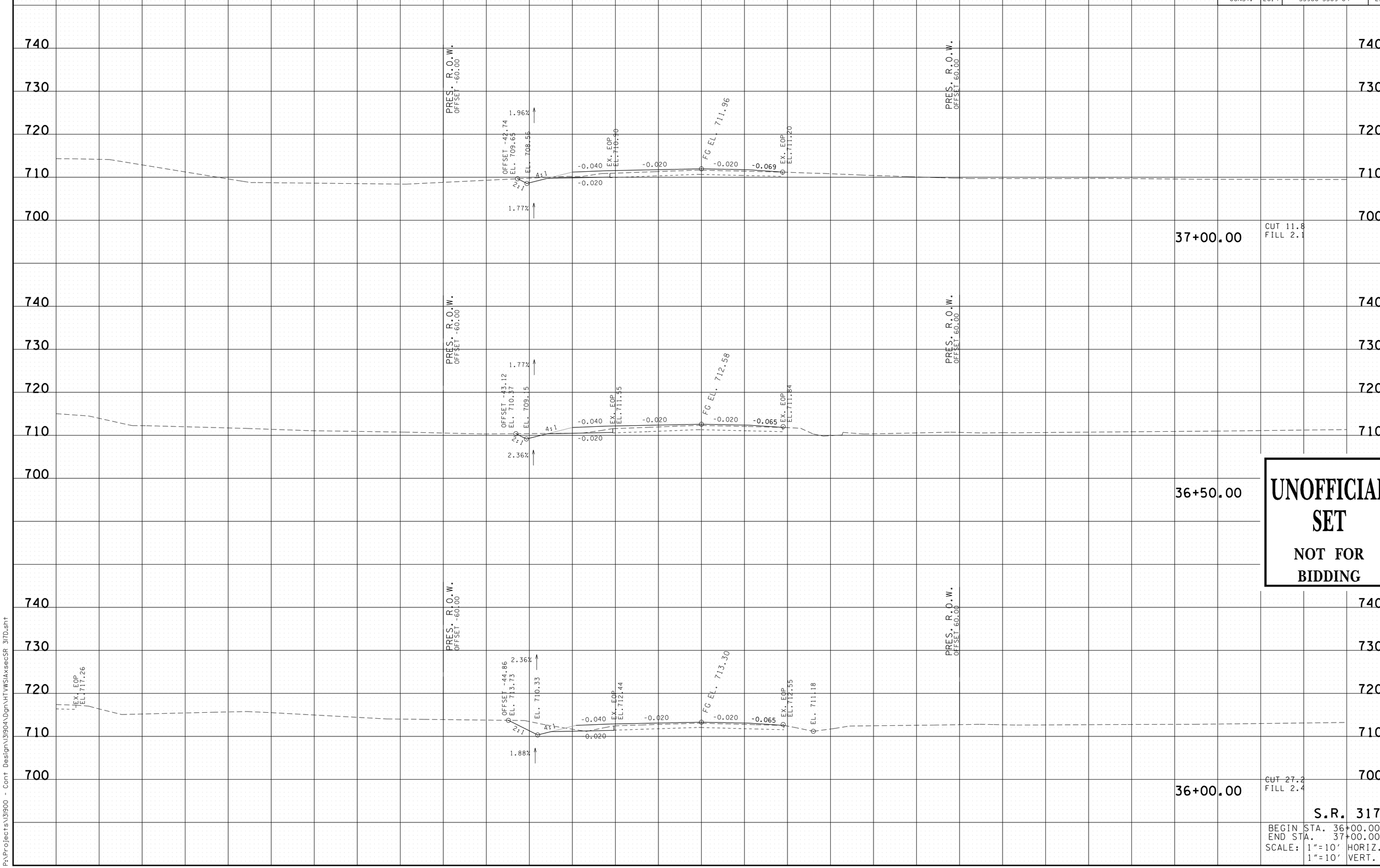
CONST.	2014	33960-3509-04	25



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3/9/2014
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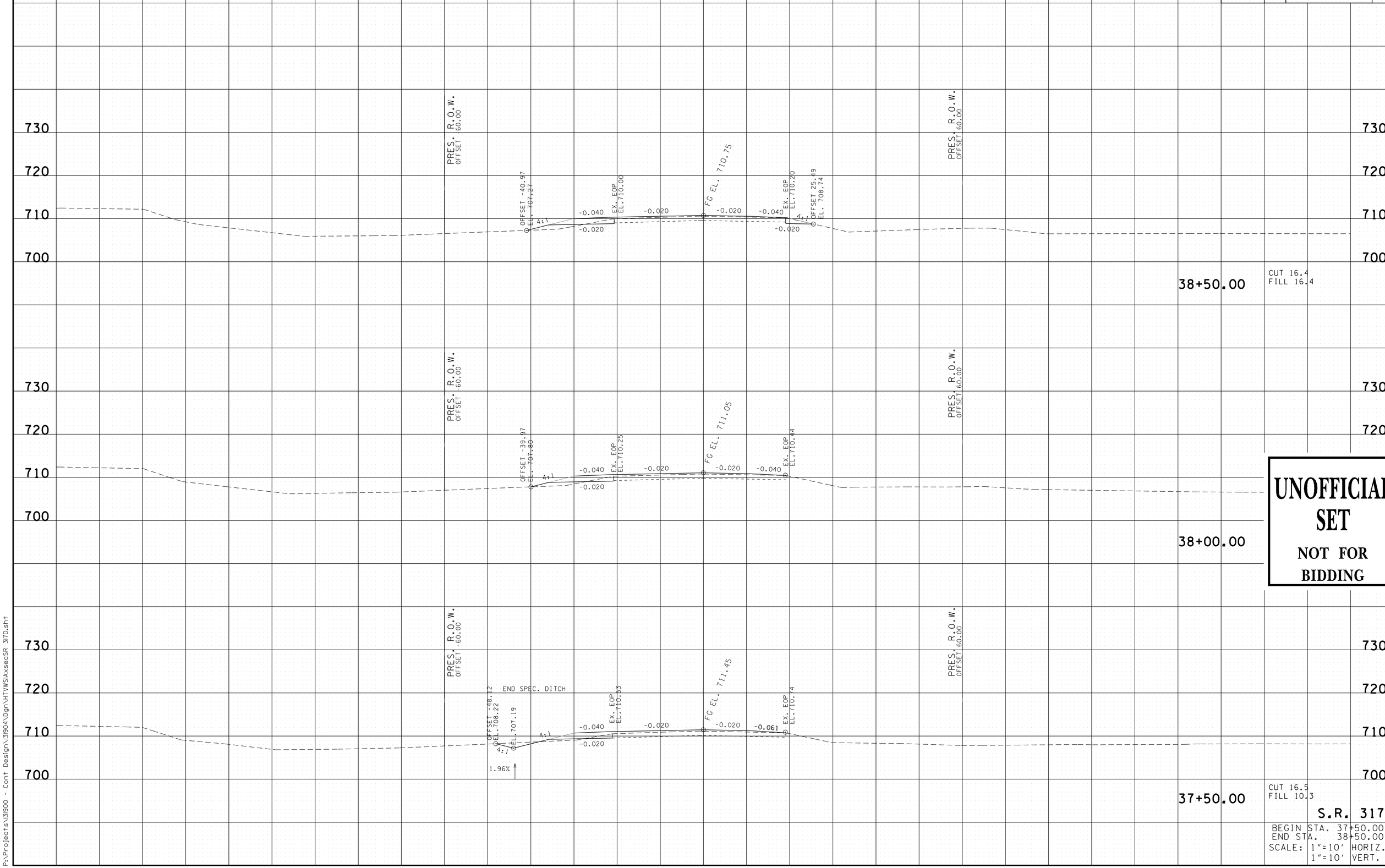

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S.R. 317

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1"=10' VERT.

3/19/2014
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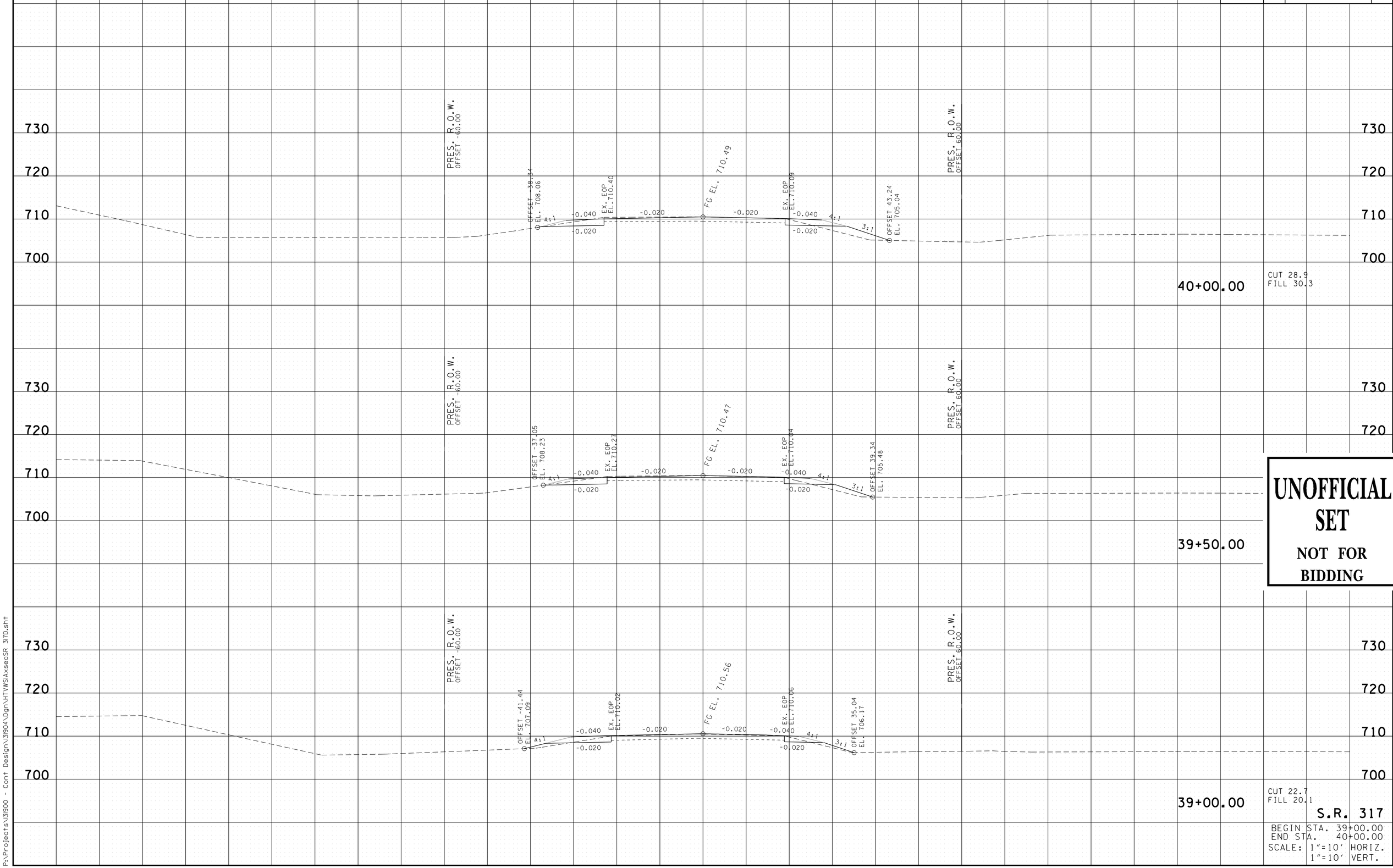
CONST.	2014	33960-3509-04	27



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NOT FOR BIDDING

S.R. 317

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1"=10' VERT.

3/19/2014
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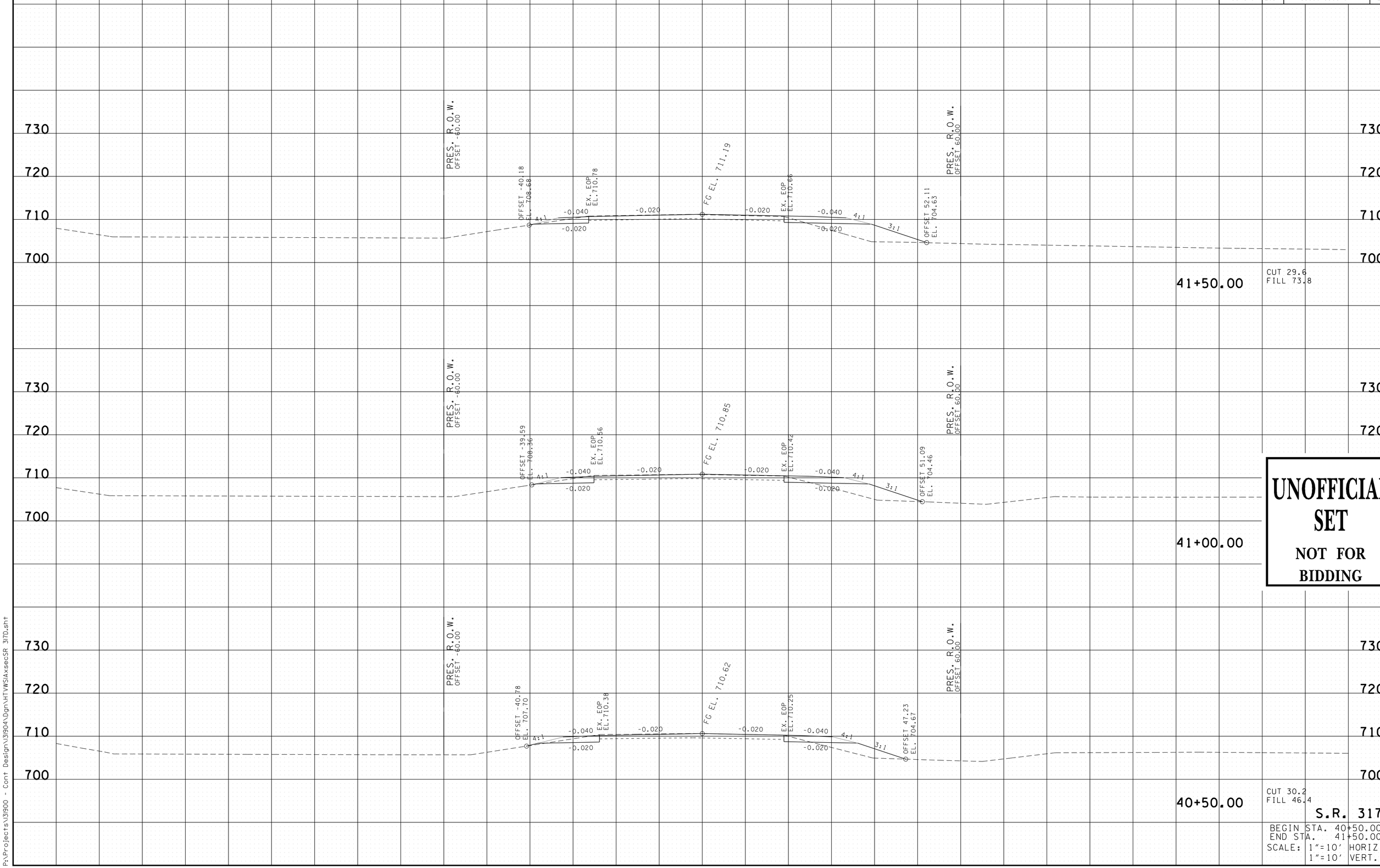
CONST.	2014	33960-3509-04	28



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NOT FOR BIDDING

S.R. 317

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3/19/2014
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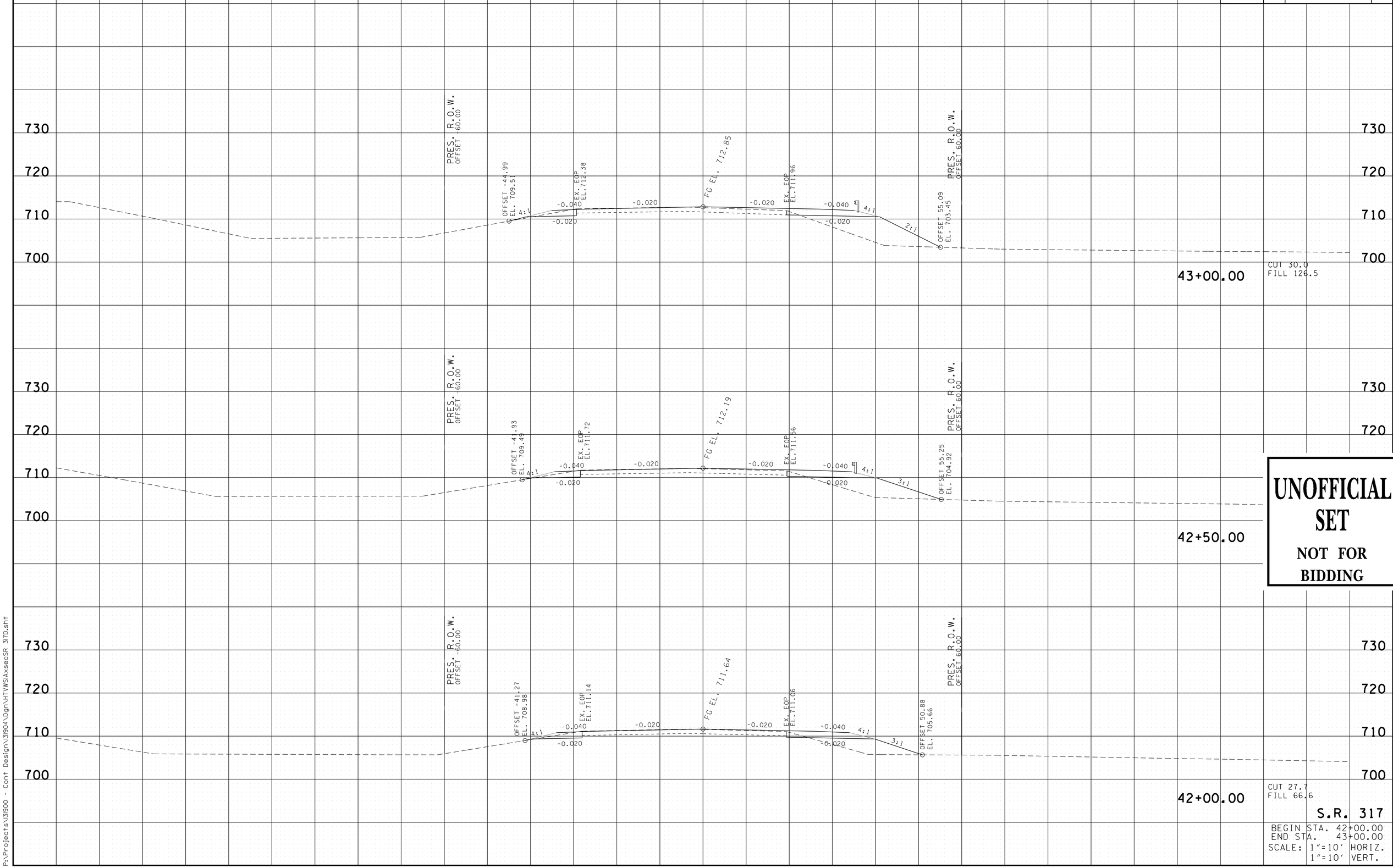
CONST.	2014	33960-3509-04	29



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NOT FOR BIDDING

S.R. 317

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3/19/2014
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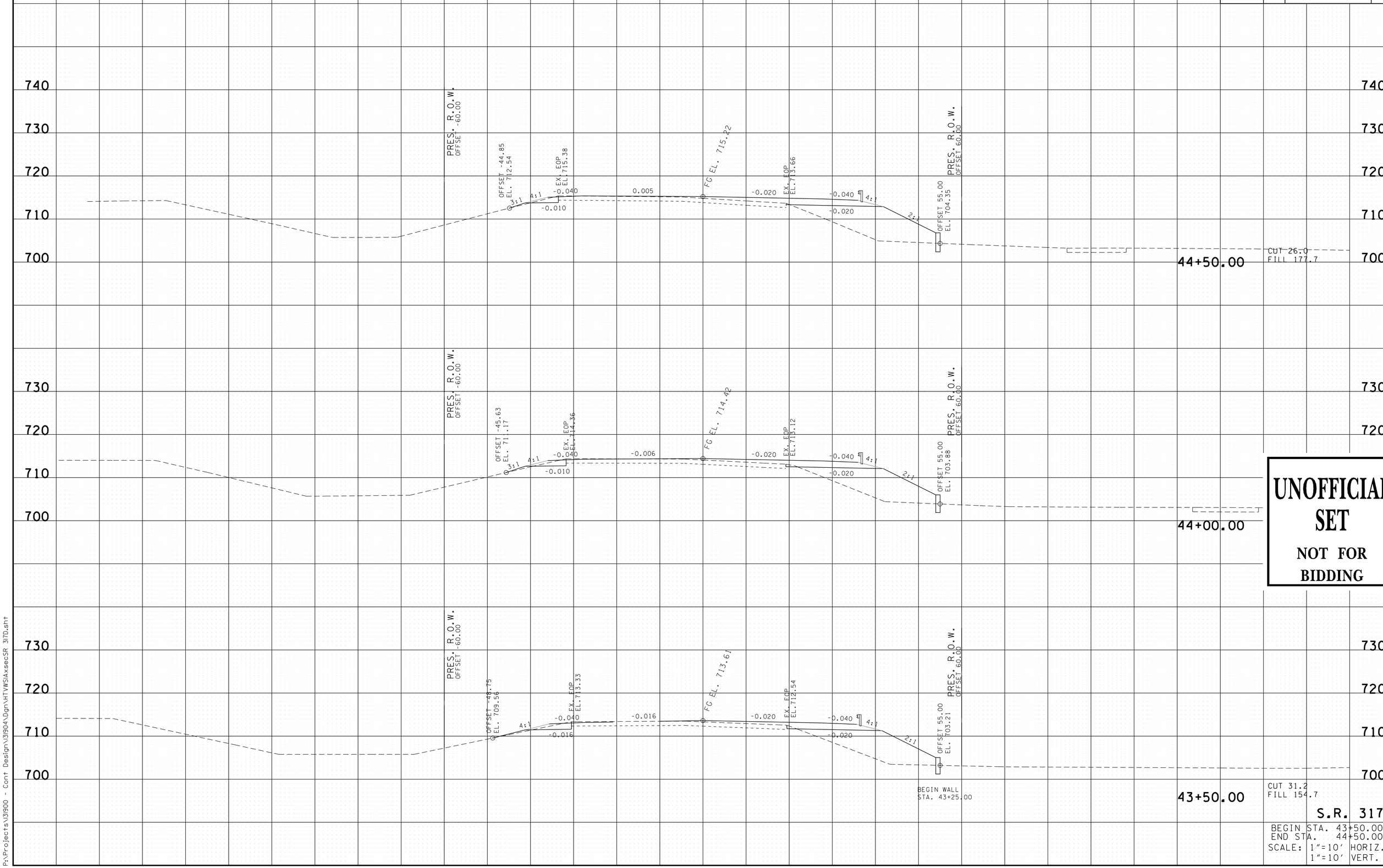

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NOT FOR BIDDING

S.R. 317

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1"=10' VERT.

3/19/2014
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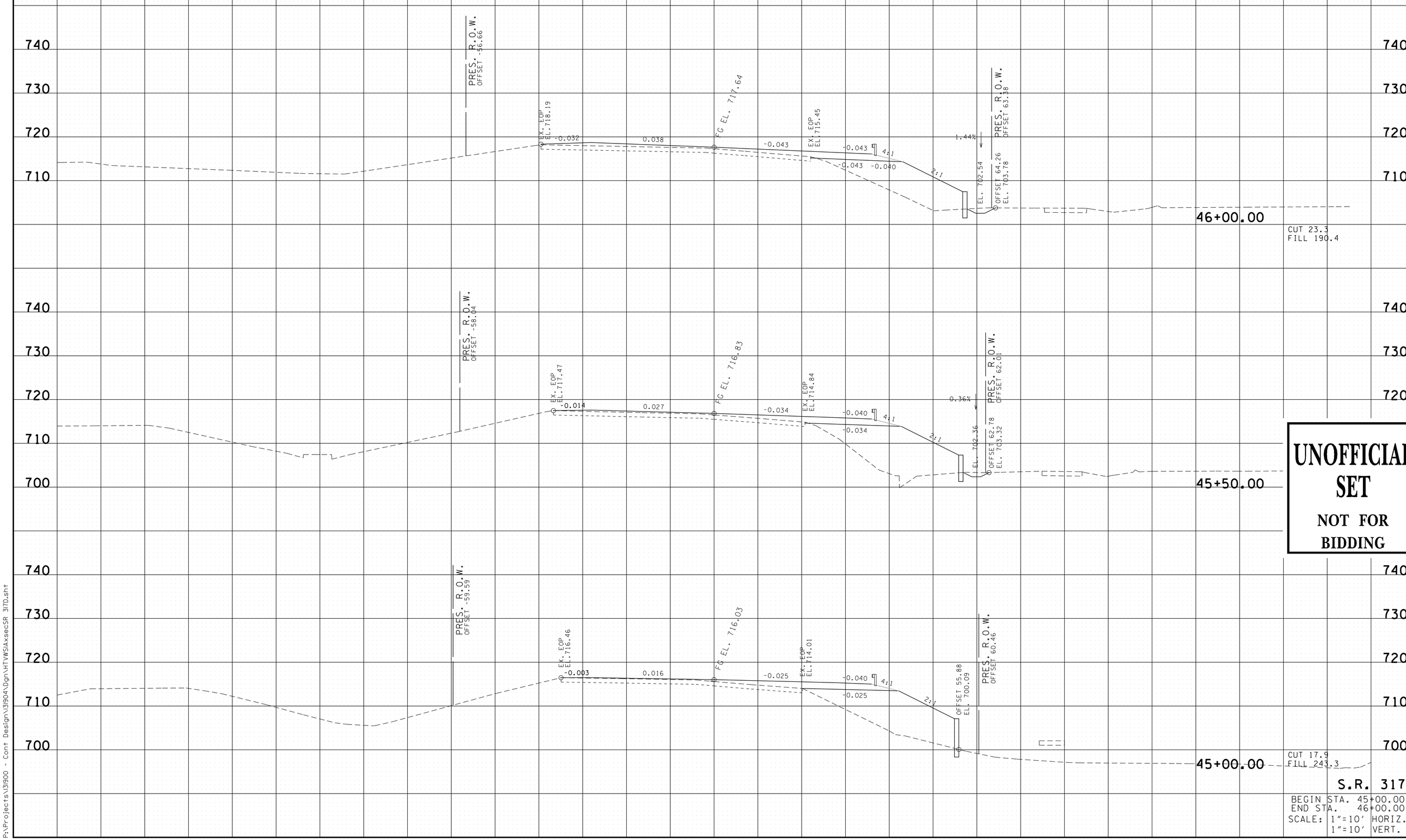

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NOT FOR BIDDING

S.R. 317

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3/19/2014
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TYPE	YEAR	PROJECT NO.	SHEET NO.
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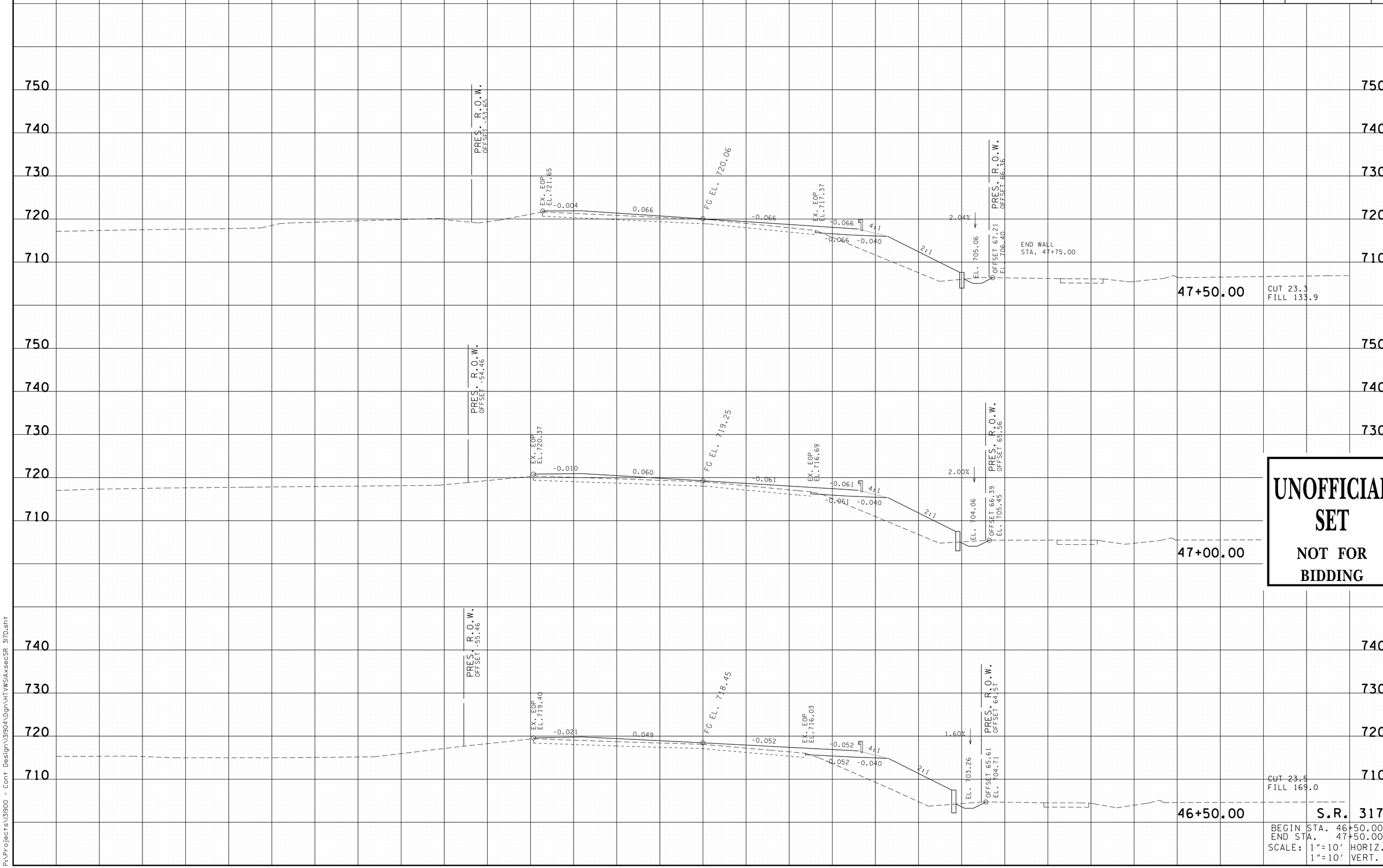
CONST.	2014	33960-3509-04	32



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3/19/2014
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TYPE	YEAR	PROJECT NO.	SHEET NO.
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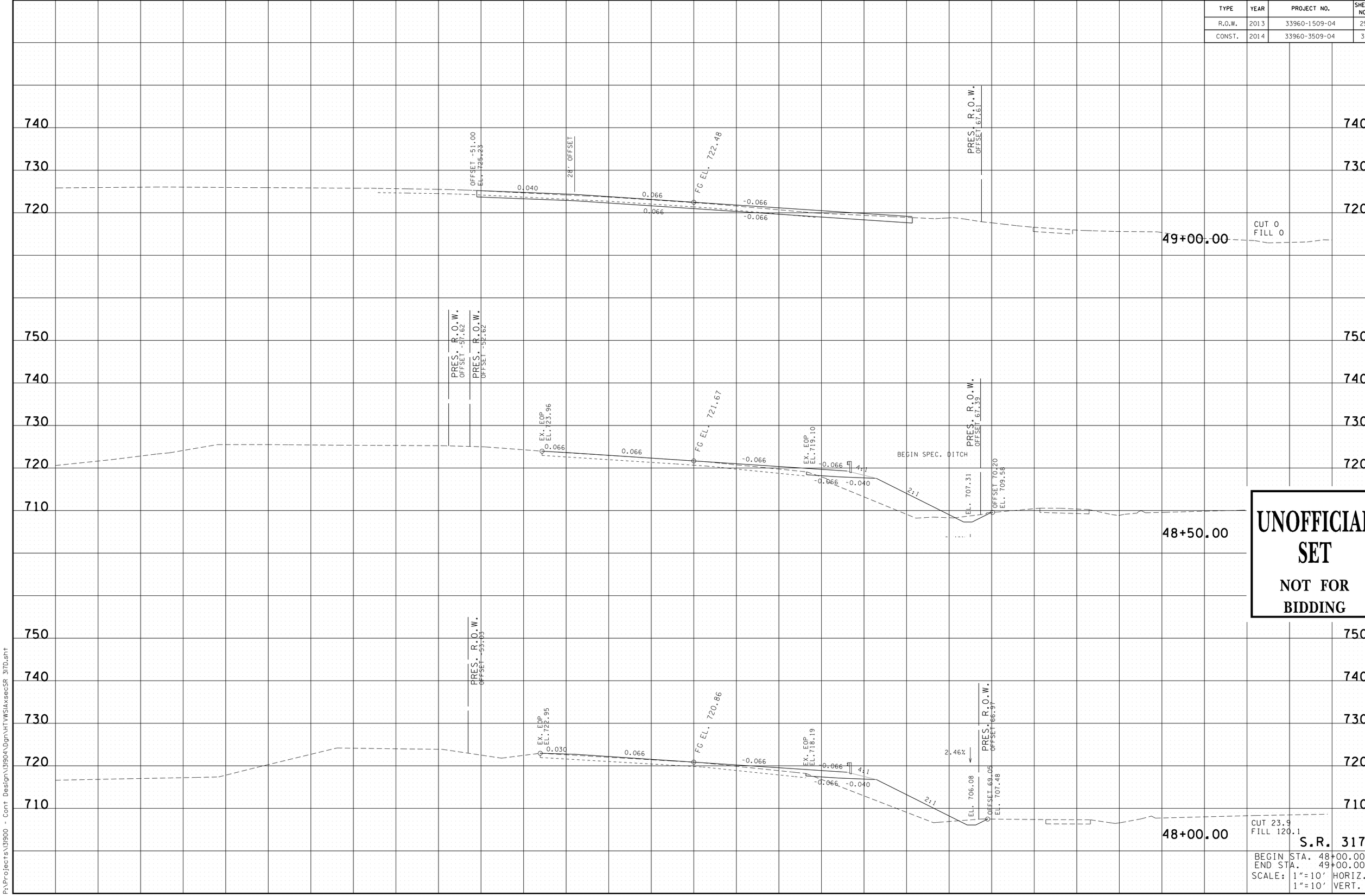
CONST.	2014	33960-3509-04	33



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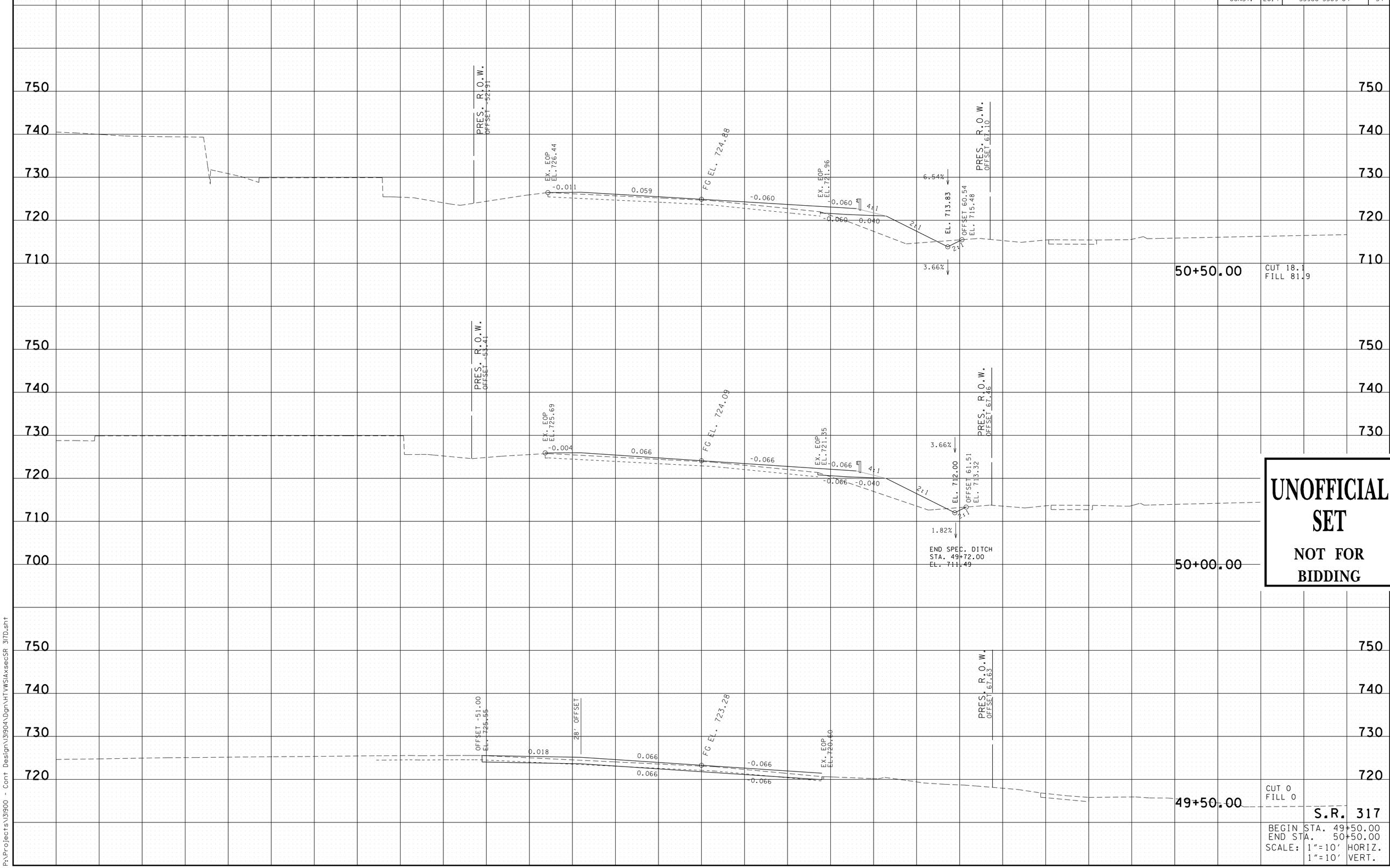

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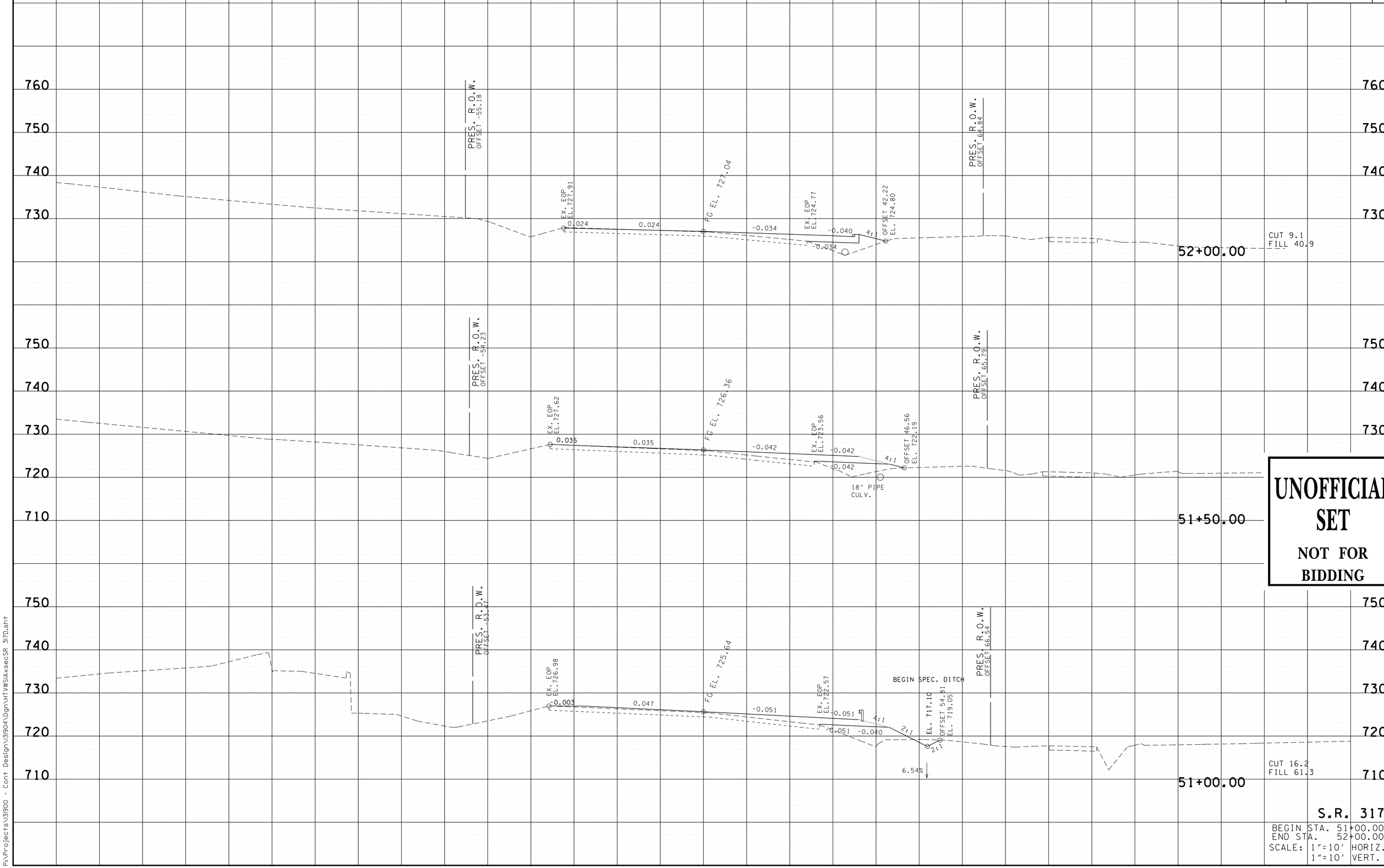
CONST.	2014	33960-3509-04	35



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NOT FOR BIDDING

S.R. 317

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

3/19/2014
P:\Projects\13900 - Cont Design\13904\Dgn\HTVWSIAxsecSR 317D.sht

TYPE	YEAR	PROJECT NO.	SHEET NO.
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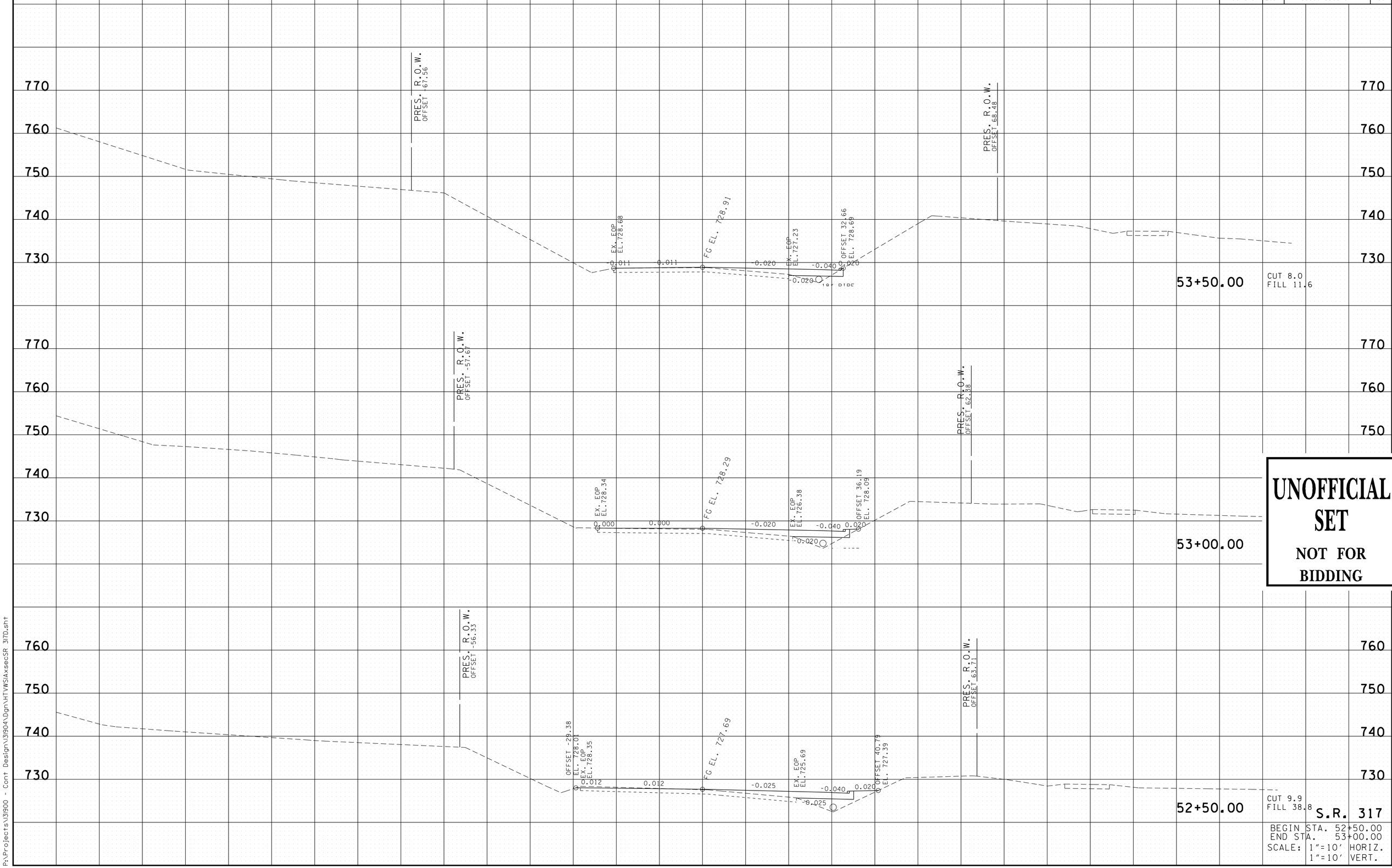
CONST.	2014	33960-3509-04	36



UNOFFICIAL SET

NOT FOR BIDDING

S.R. 317

BEGIN STA. 52+50.00
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SCALE: 1"=10' HORIZ.
1"=10' VERT.

3/19/2014
P:\Projects\3l900 - Cont Design\3l904\Dgn\HTVWSIAxsecSR 317D.sht

TYPE	YEAR	PROJECT NO.	SHEET NO.
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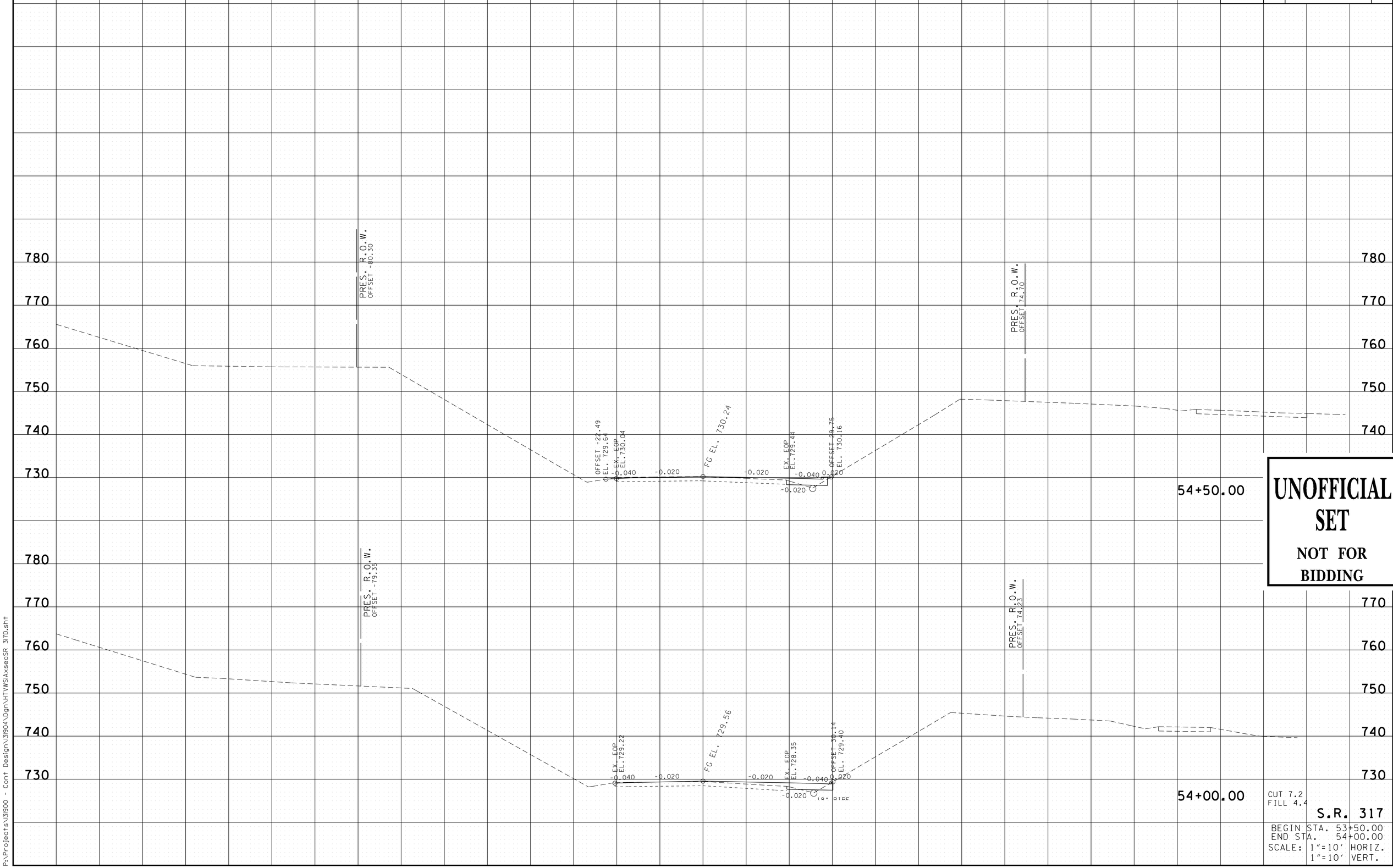
CONST.	2014	33960-3509-04	37



UNOFFICIAL SET

NOT FOR BIDDING

CUT 7.2
FILL 4.4

S.R. 317

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1"=10' VERT.

3/19/2014
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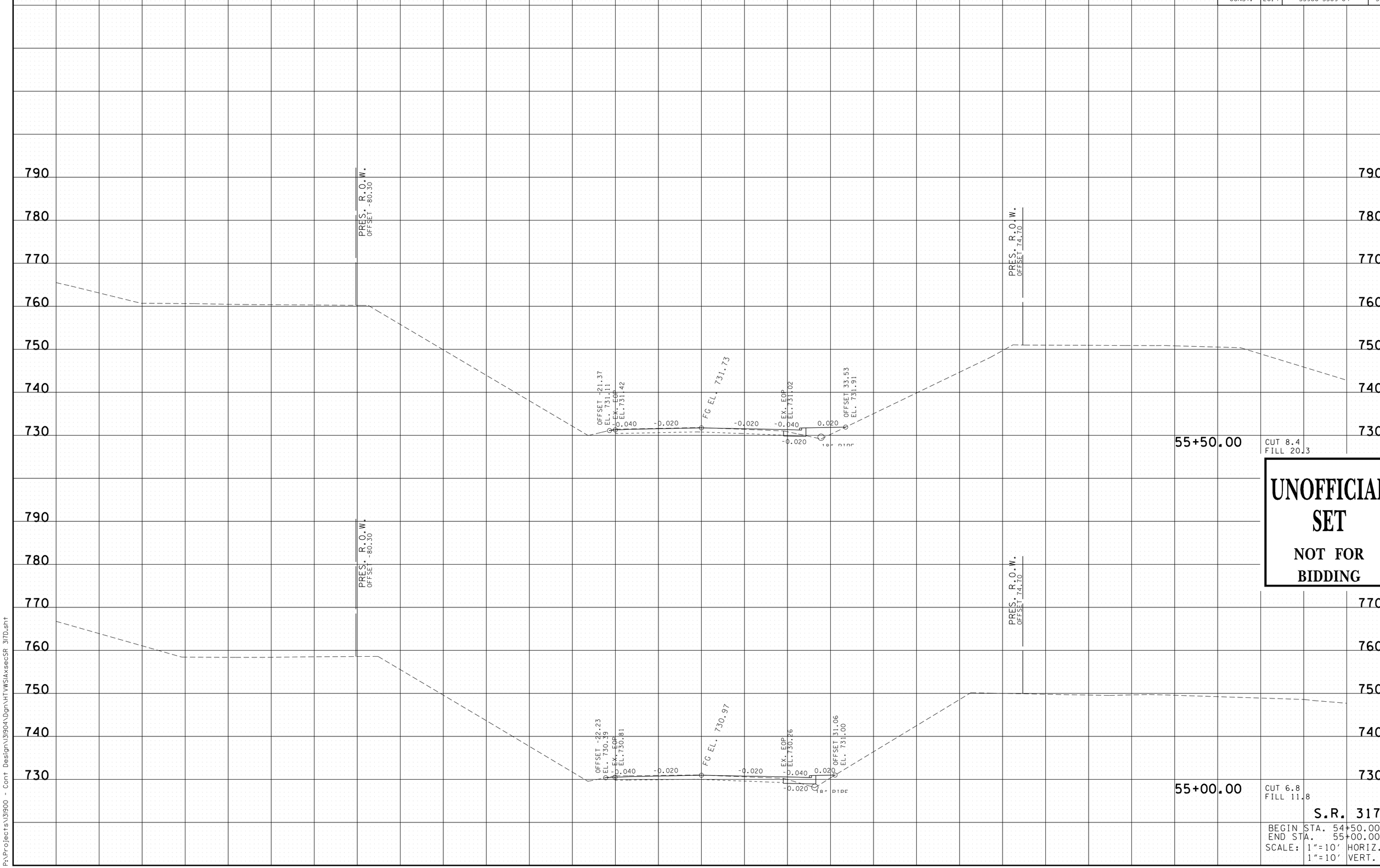

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S.R. 317

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1"=10' VERT.

3/19/2014
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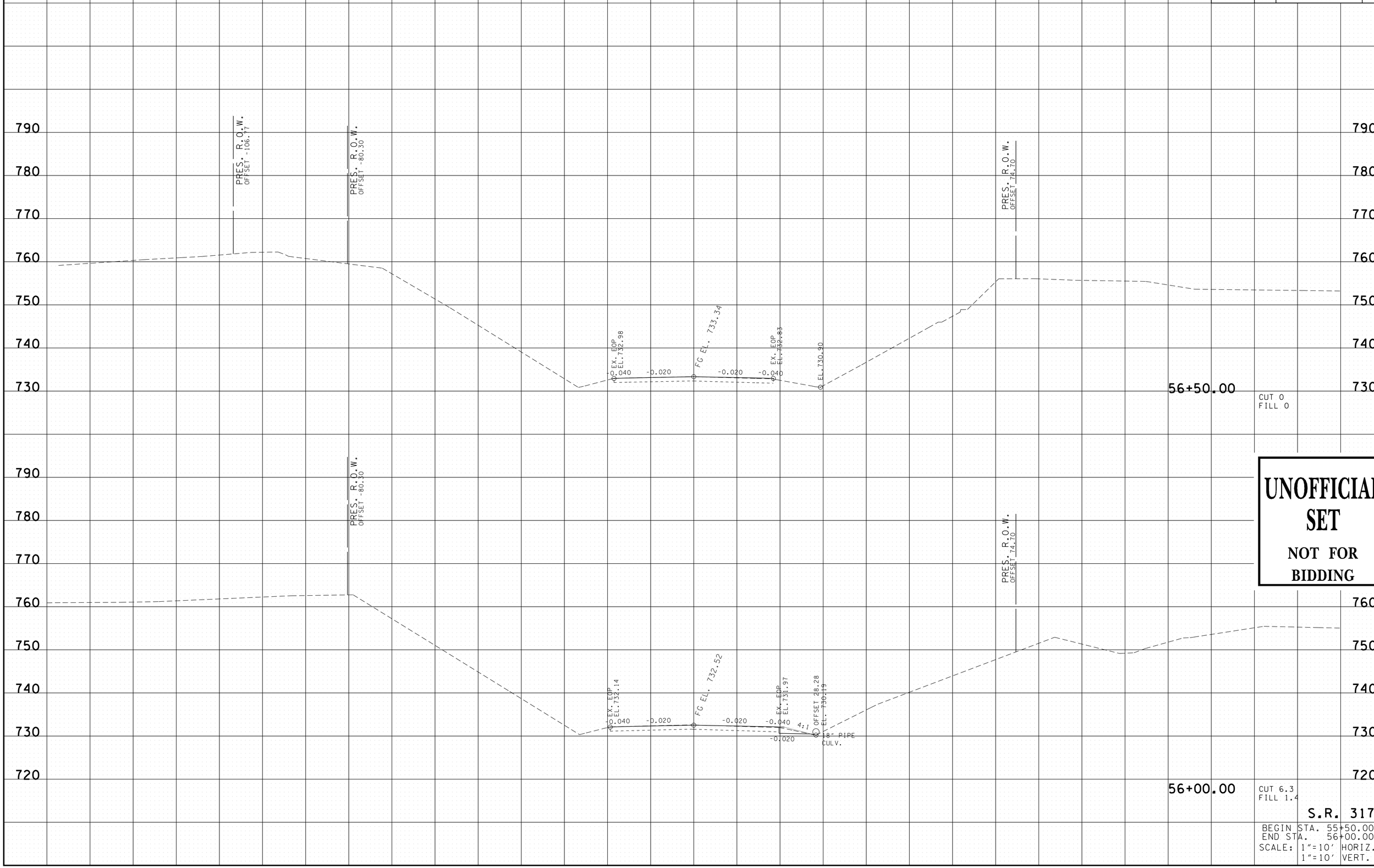
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	31
CONST.	2014	33960-3509-04	39



UNOFFICIAL SET

NOT FOR BIDDING

3/19/2014
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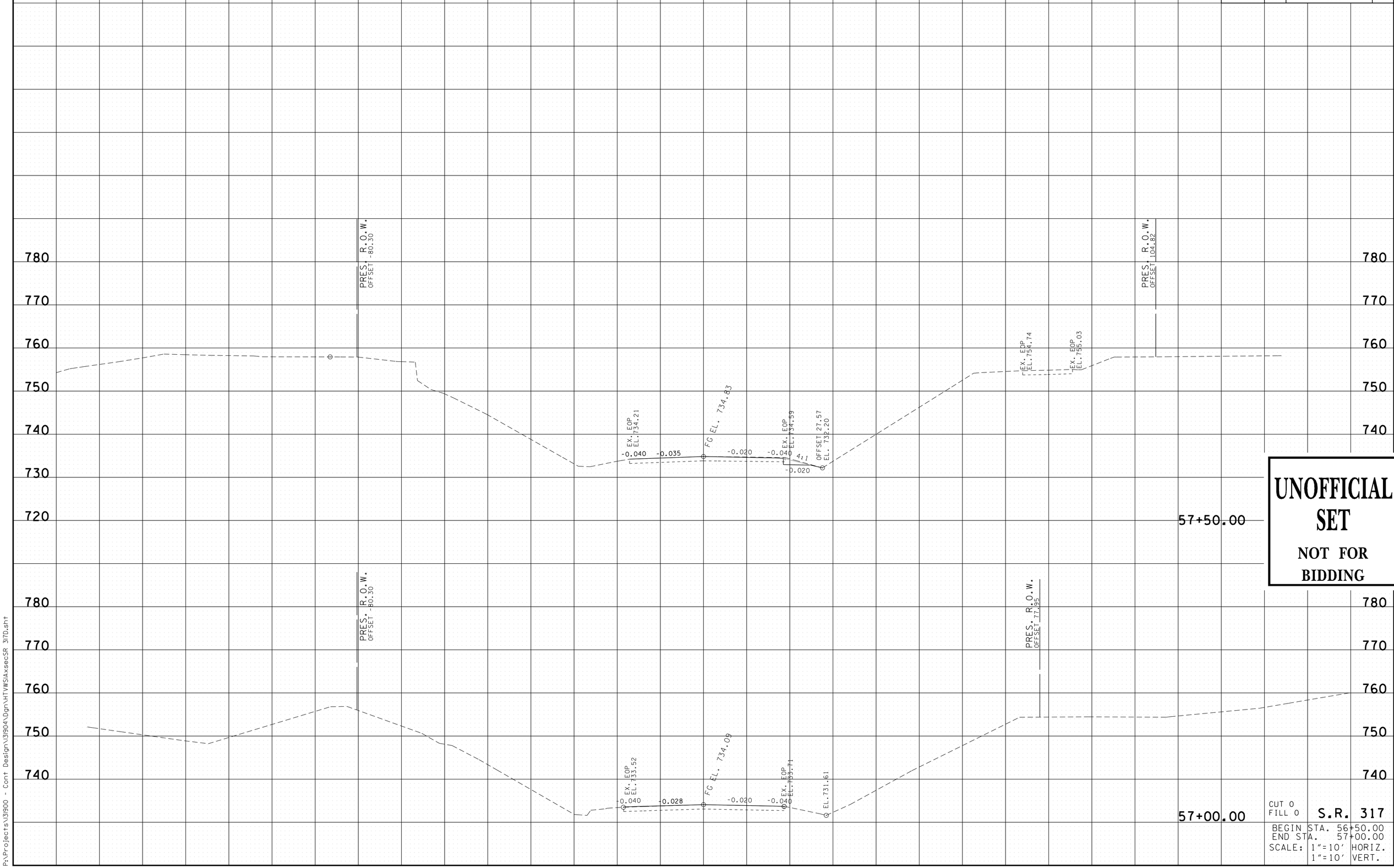
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	32
CONST.	2014	33960-3509-04	40



UNOFFICIAL SET

NOT FOR BIDDING

CUT 0
FILL 0

S.R. 317

BEGIN STA. 56+50.00
END STA. 57+00.00
SCALE: 1"=10' HORIZ.
1"=10' VERT.

3/19/2014
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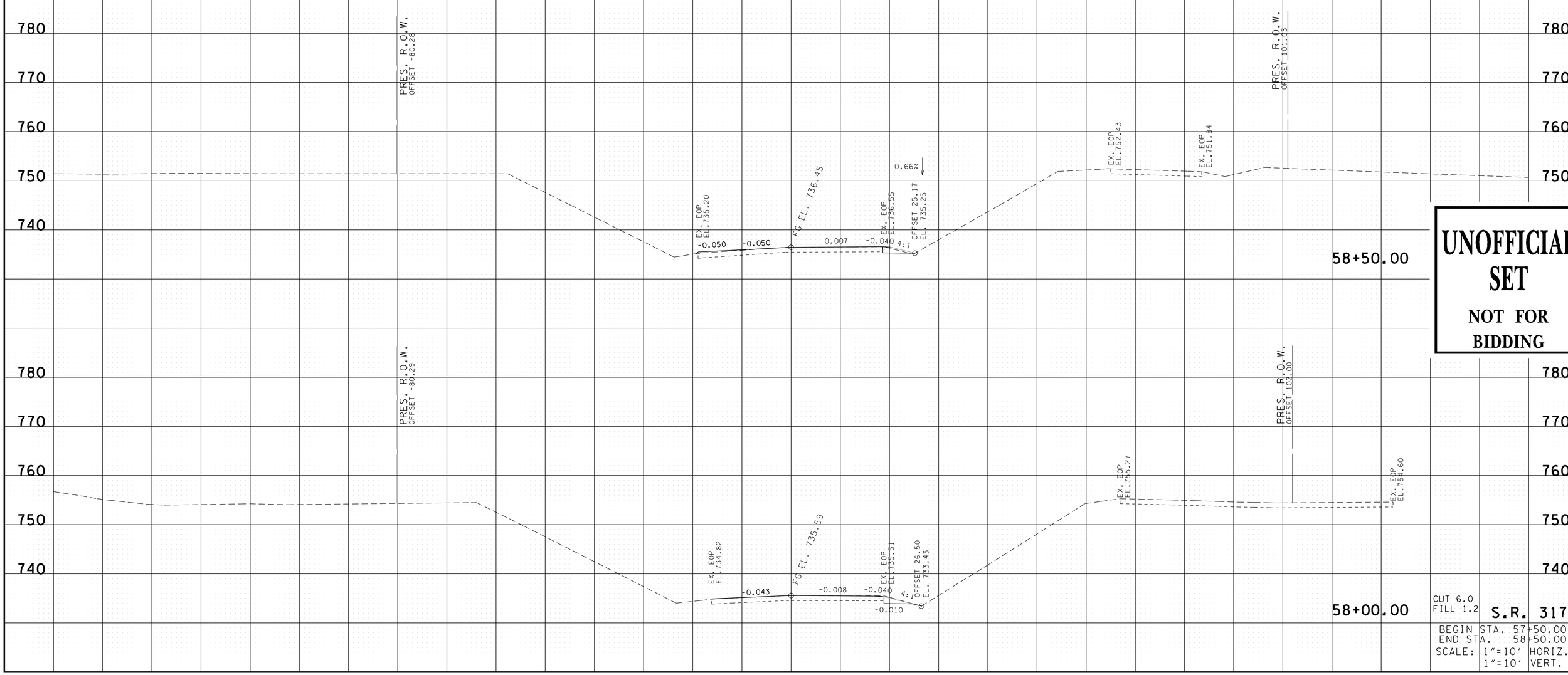
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	33
CONST.	2014	33960-3509-04	41



UNOFFICIAL SET

NOT FOR BIDDING

CUT 6.0
FILL 1.2

S.R. 317

BEGIN STA. 57+50.00
END STA. 58+50.00
SCALE: 1"=10' HORIZ.
1"=10' VERT.

3/19/2014
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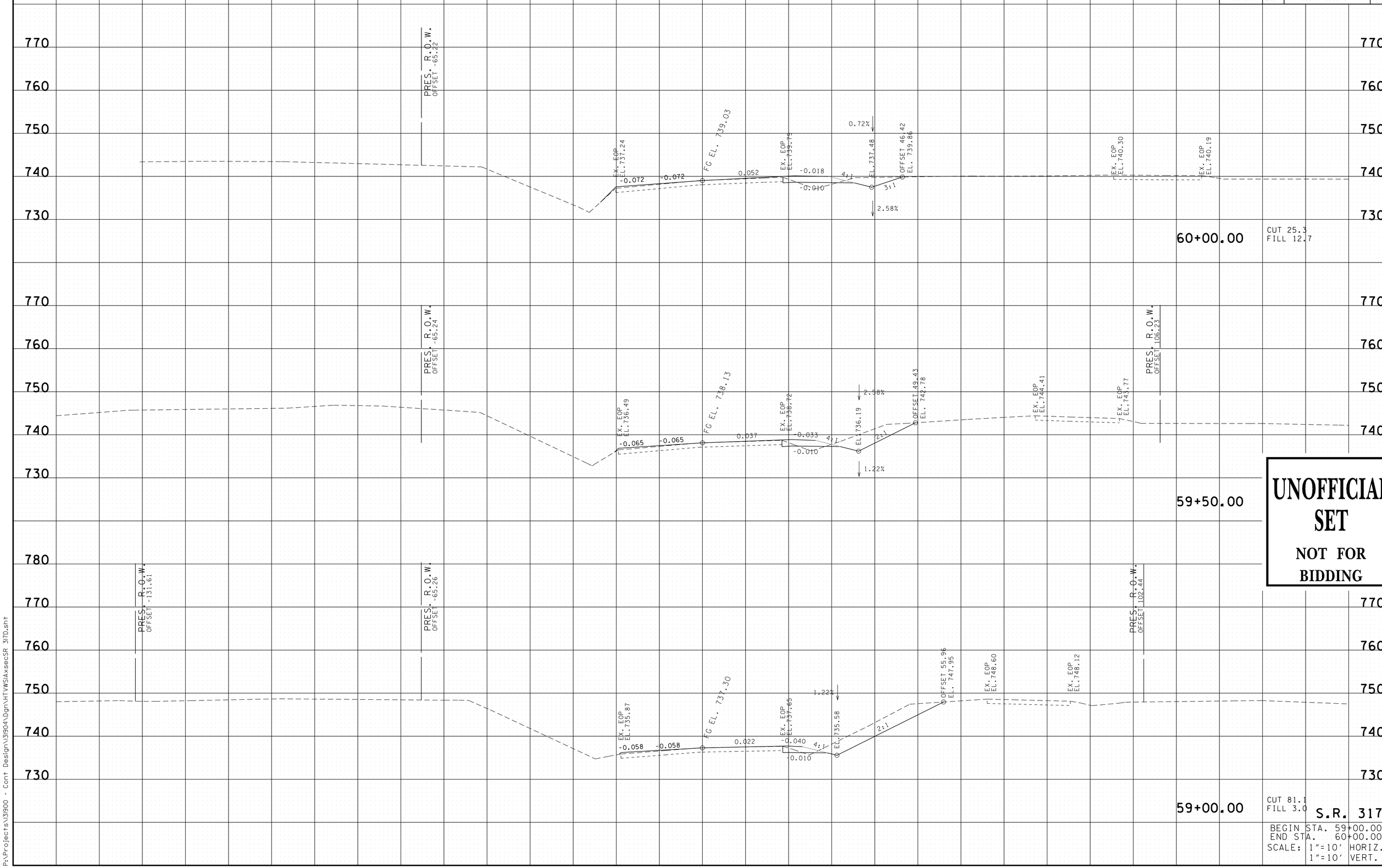
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	34
CONST.	2014	33960-3509-04	42



UNOFFICIAL SET

NOT FOR BIDDING

3/19/2014
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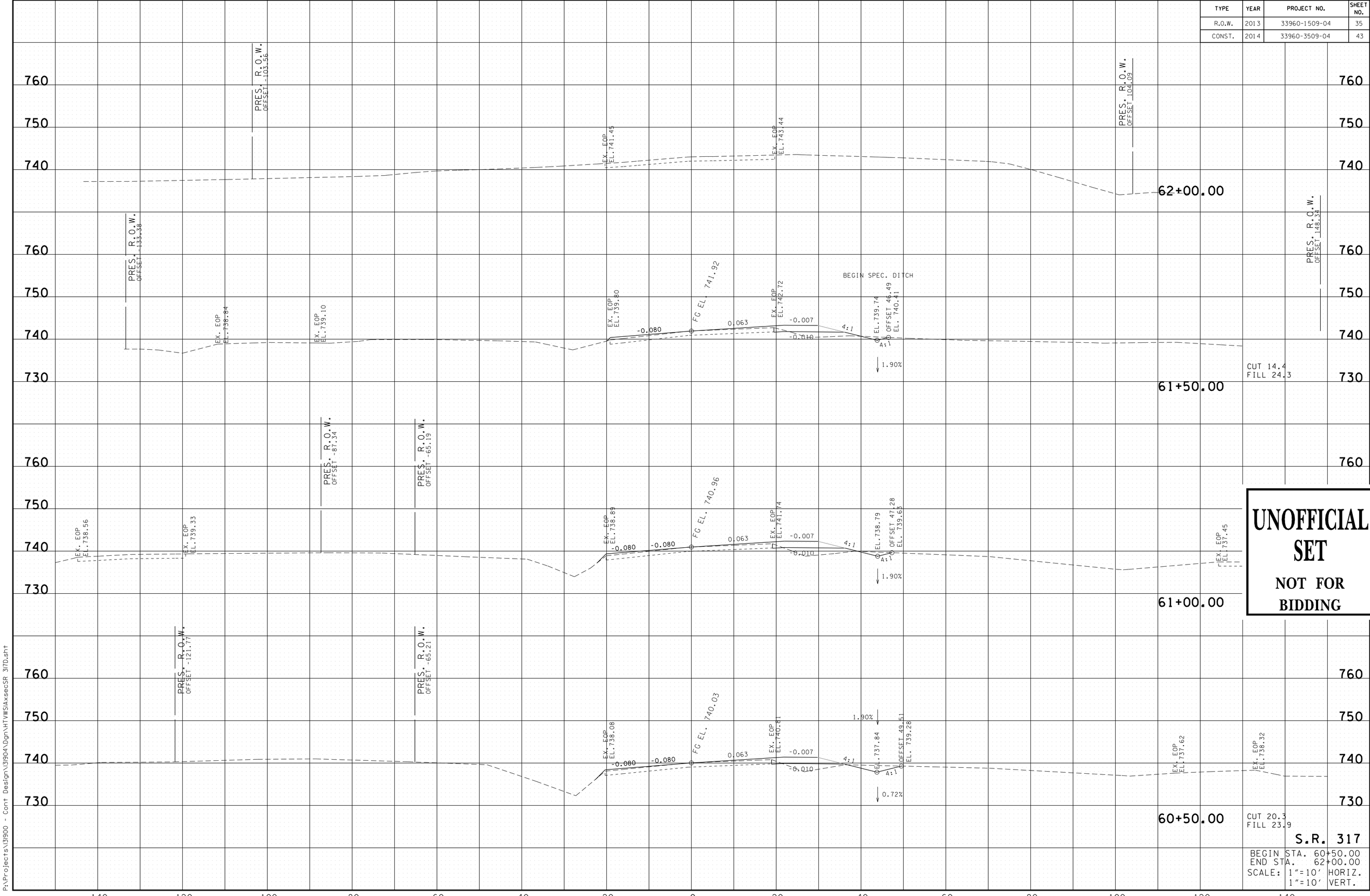
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	35
CONST.	2014	33960-3509-04	43



UNOFFICIAL SET

NOT FOR BIDDING

S.R. 317

BEGIN STA. 60+50.00
END STA. 62+00.00
SCALE: 1"=10' HORIZ.
1"=10' VERT.

3/19/2014
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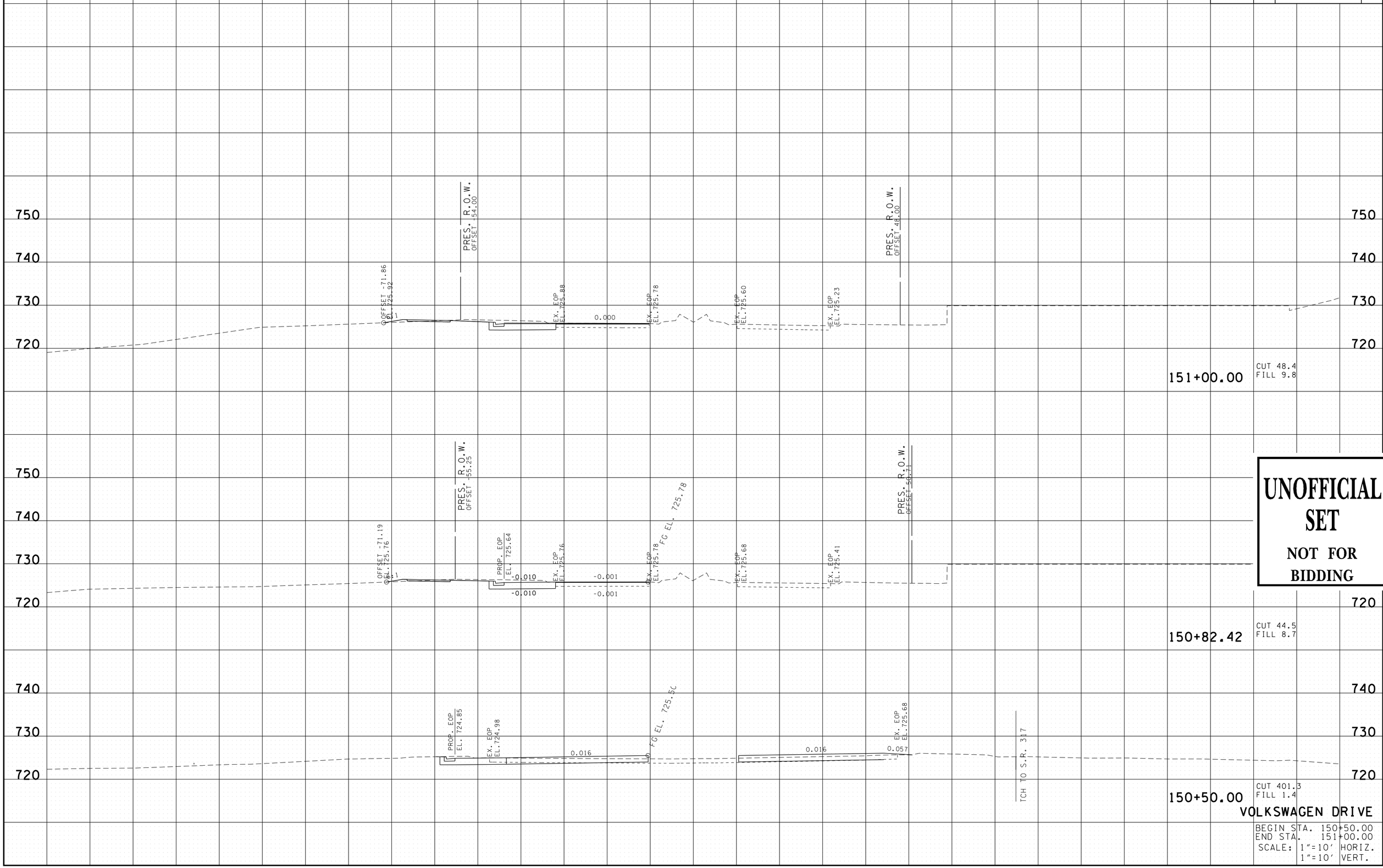
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	36
CONST.	2014	33960-3509-04	44



UNOFFICIAL SET

NOT FOR BIDDING

VOLKSWAGEN DRIVE

BEGIN STA. 150+50.00
END STA. 151+00.00
SCALE: 1"=10' HORIZ.
1"=10' VERT.

3/19/2014
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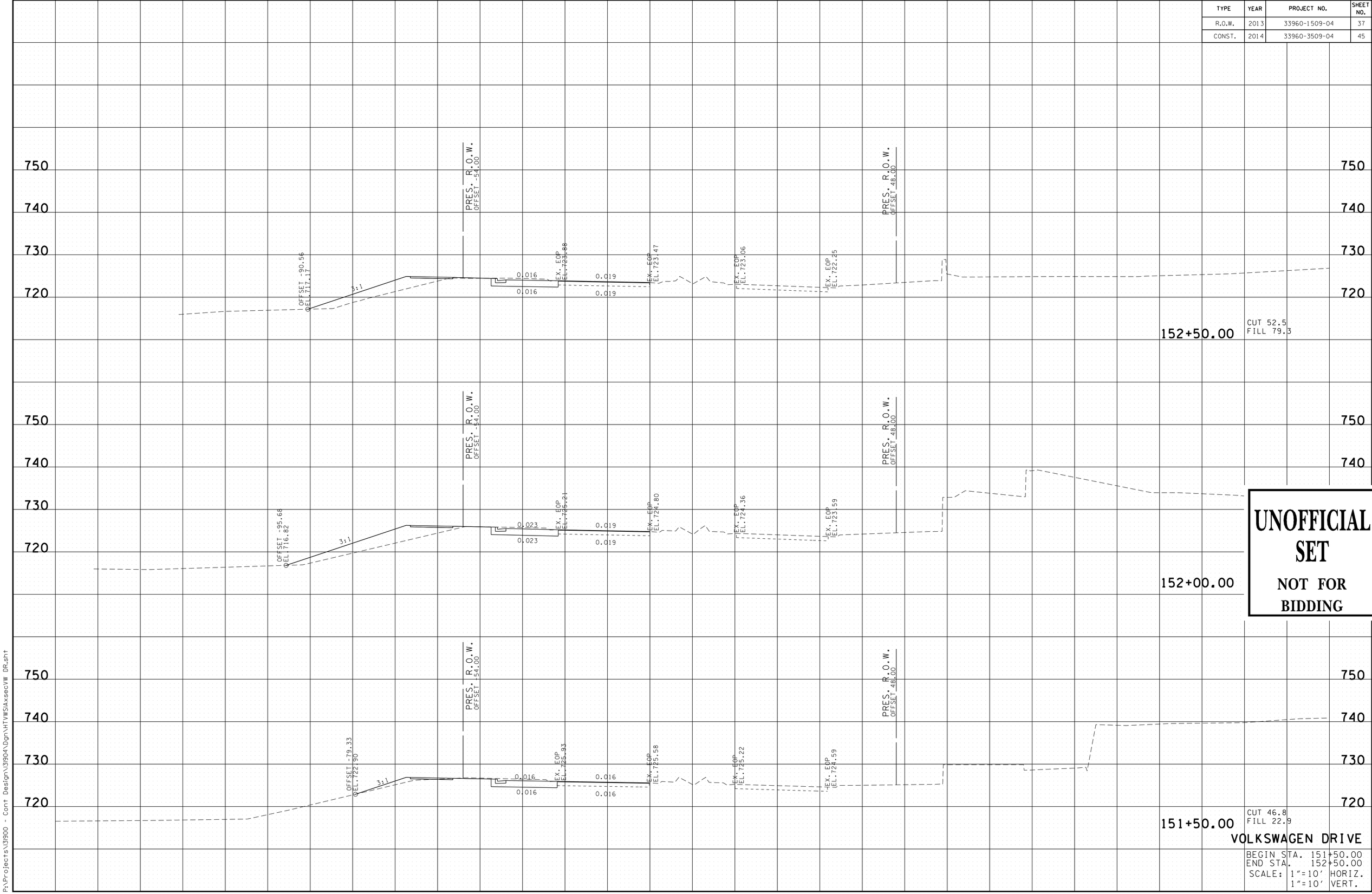
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	37
CONST.	2014	33960-3509-04	45



UNOFFICIAL SET

NOT FOR BIDDING

VOLKSWAGEN DRIVE

BEGIN STA. 151+50.00
END STA. 152+50.00
SCALE: 1"=10' HORIZ.
1"=10' VERT.

3/19/2014
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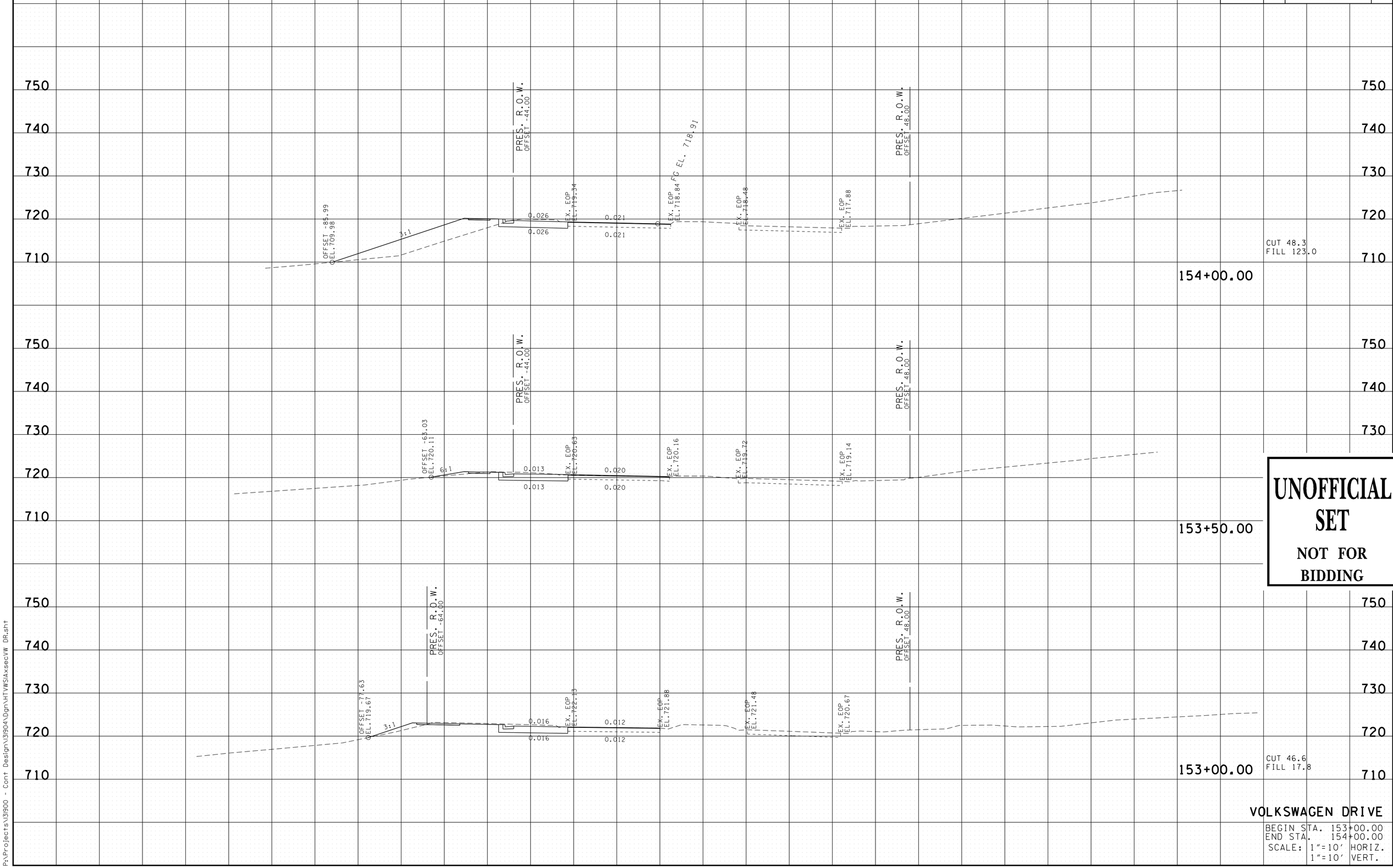
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	38
CONST.	2014	33960-3509-04	46



UNOFFICIAL SET

NOT FOR BIDDING

VOLKSWAGEN DRIVE

BEGIN STA. 153+00.00
END STA. 154+00.00
SCALE: 1"=10' HORIZ.
1"=10' VERT.

3/19/2014
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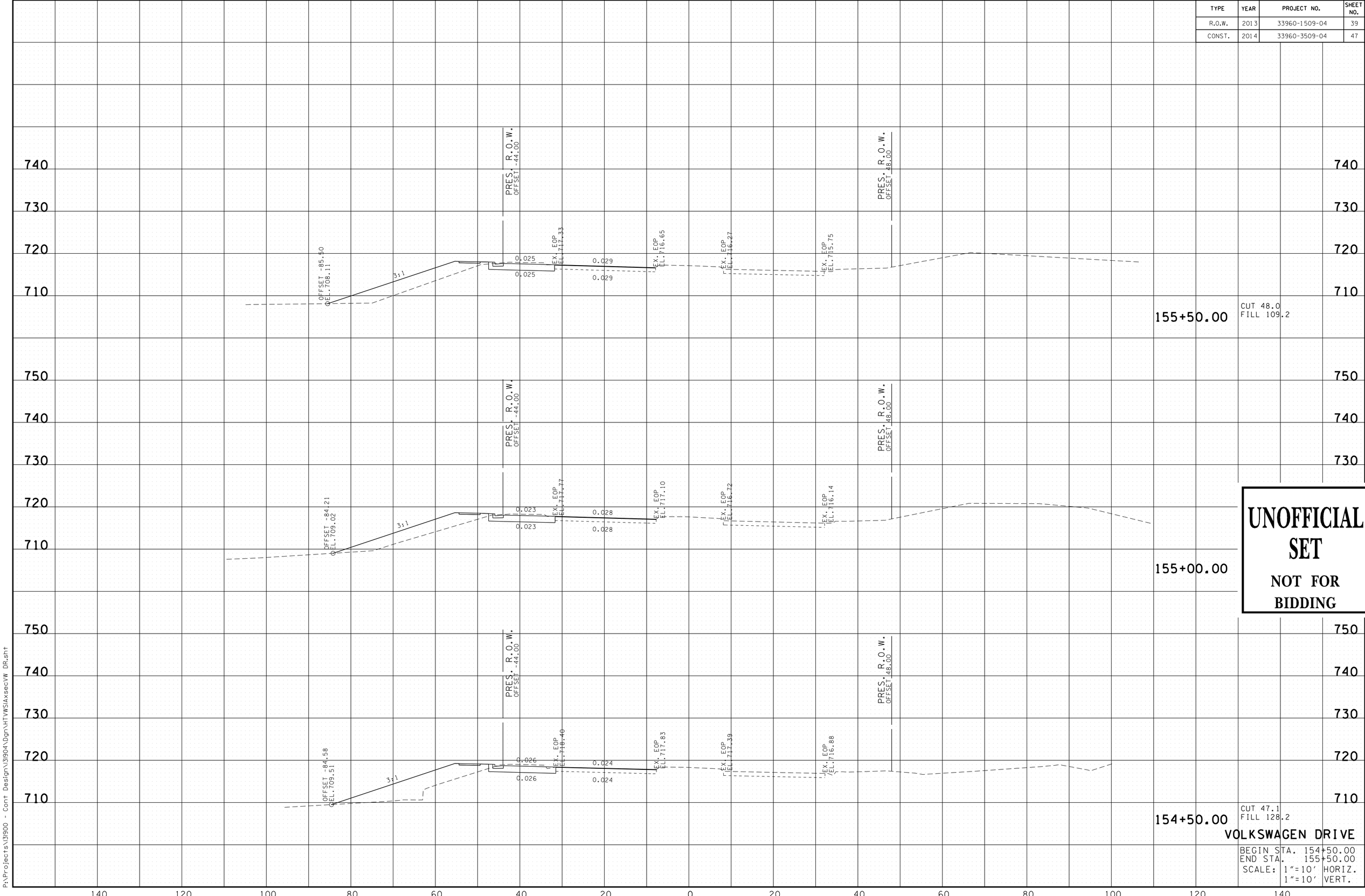
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	39
CONST.	2014	33960-3509-04	47



UNOFFICIAL SET

NOT FOR BIDDING

VOLKSWAGEN DRIVE

BEGIN STA. 154+50.00
END STA. 155+50.00
SCALE: 1"=10' HORIZ.
1"=10' VERT.

3/19/2014
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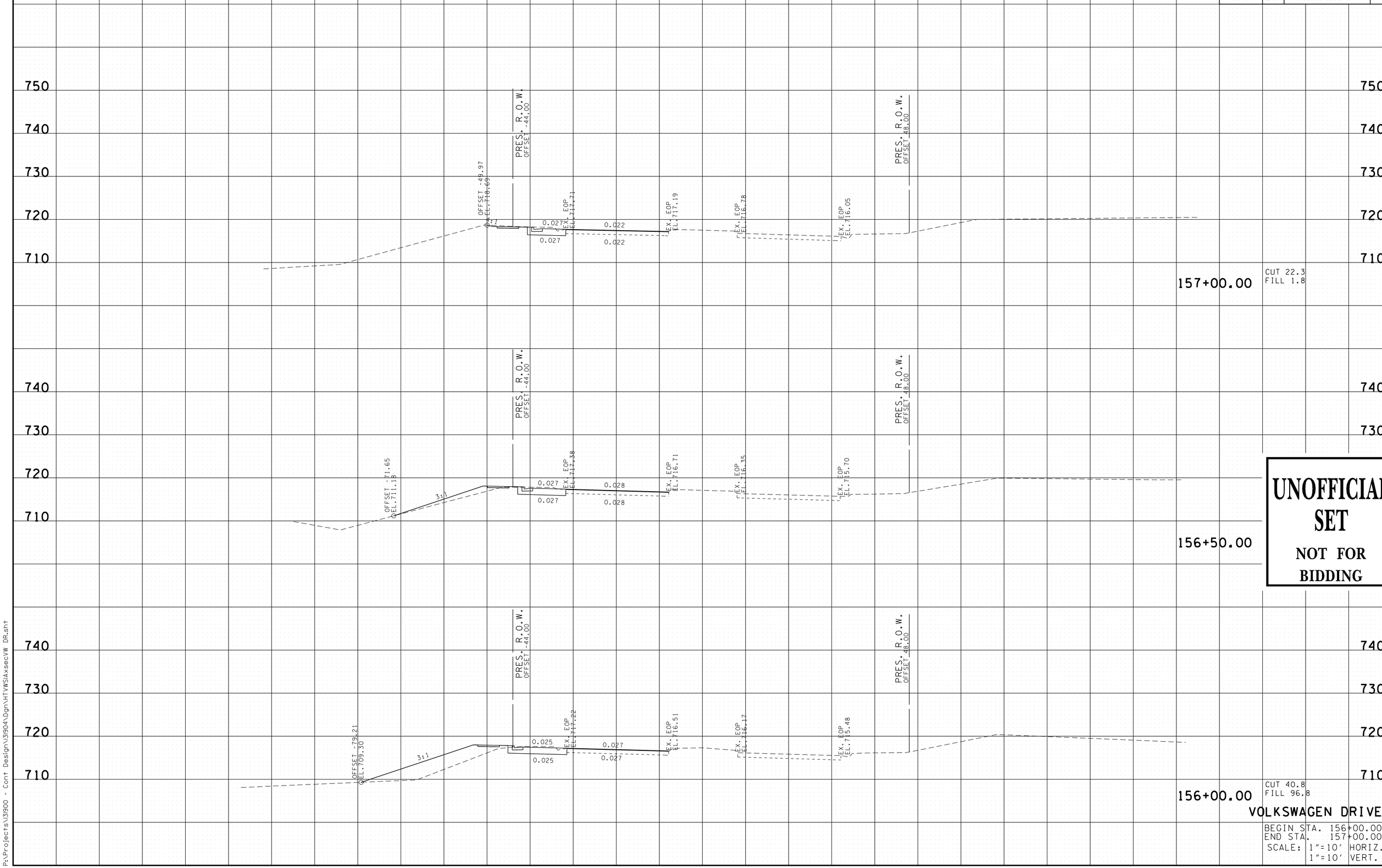
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	40
CONST.	2014	33960-3509-04	48



UNOFFICIAL SET

NOT FOR BIDDING

VOLKSWAGEN DRIVE

BEGIN STA. 156+00.00
END STA. 157+00.00
SCALE: 1"=10' HORIZ.
1"=10' VERT.

3/19/2014
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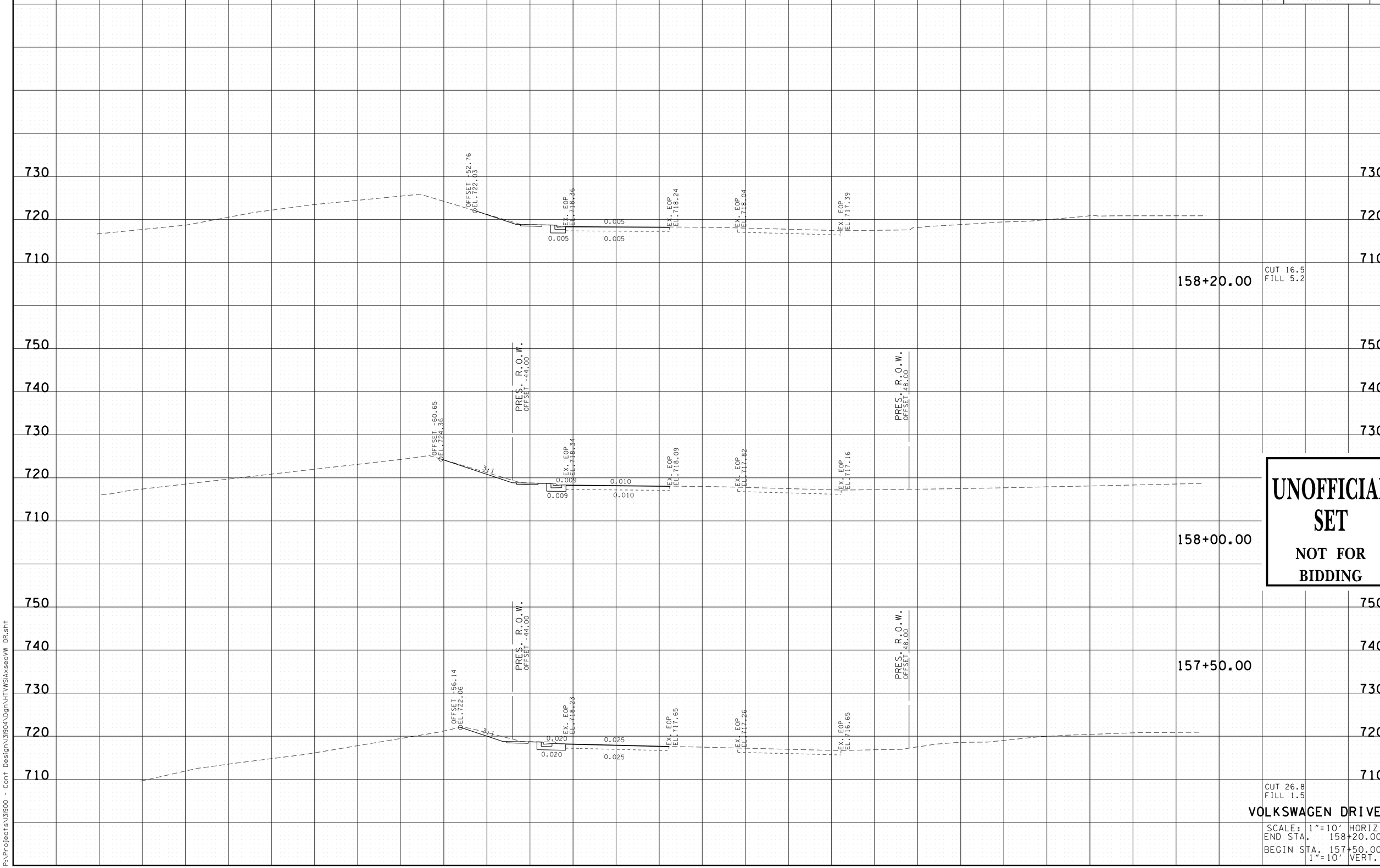
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	41
CONST.	2014	33960-3509-04	49



UNOFFICIAL SET

NOT FOR BIDDING

3/19/2014
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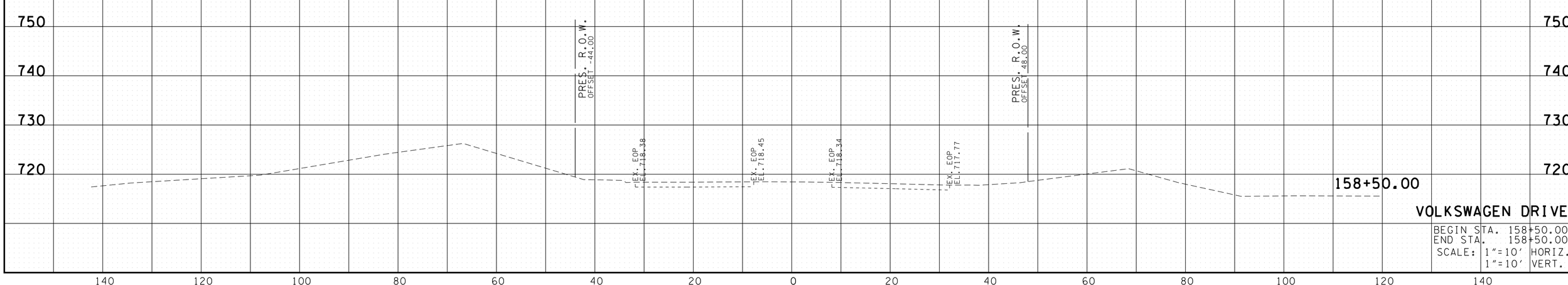
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	42
CONST.	2014	33960-3509-04	50

UNOFFICIAL SET

NOT FOR BIDDING



VOLKSWAGEN DRIVE

BEGIN STA. 158+50.00
END STA. 158+50.00
SCALE: 1"=10' HORIZ.
1"=10' VERT.

3/19/2014
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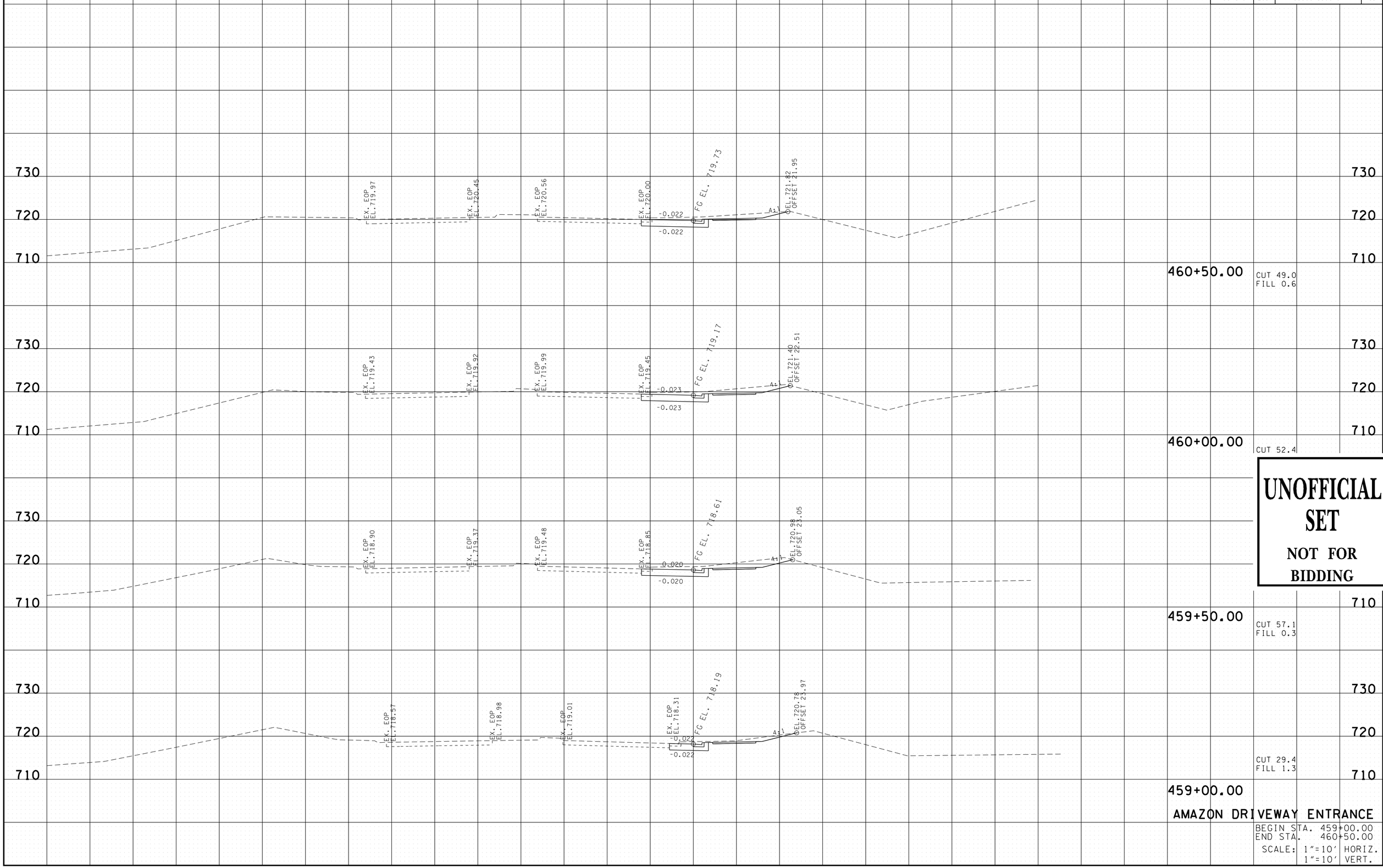
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	43
CONST.	2014	33960-3509-04	51



UNOFFICIAL SET

NOT FOR BIDDING

AMAZON DRIVEWAY ENTRANCE

BEGIN STA. 459+00.00
END STA. 460+50.00

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

3/19/2014
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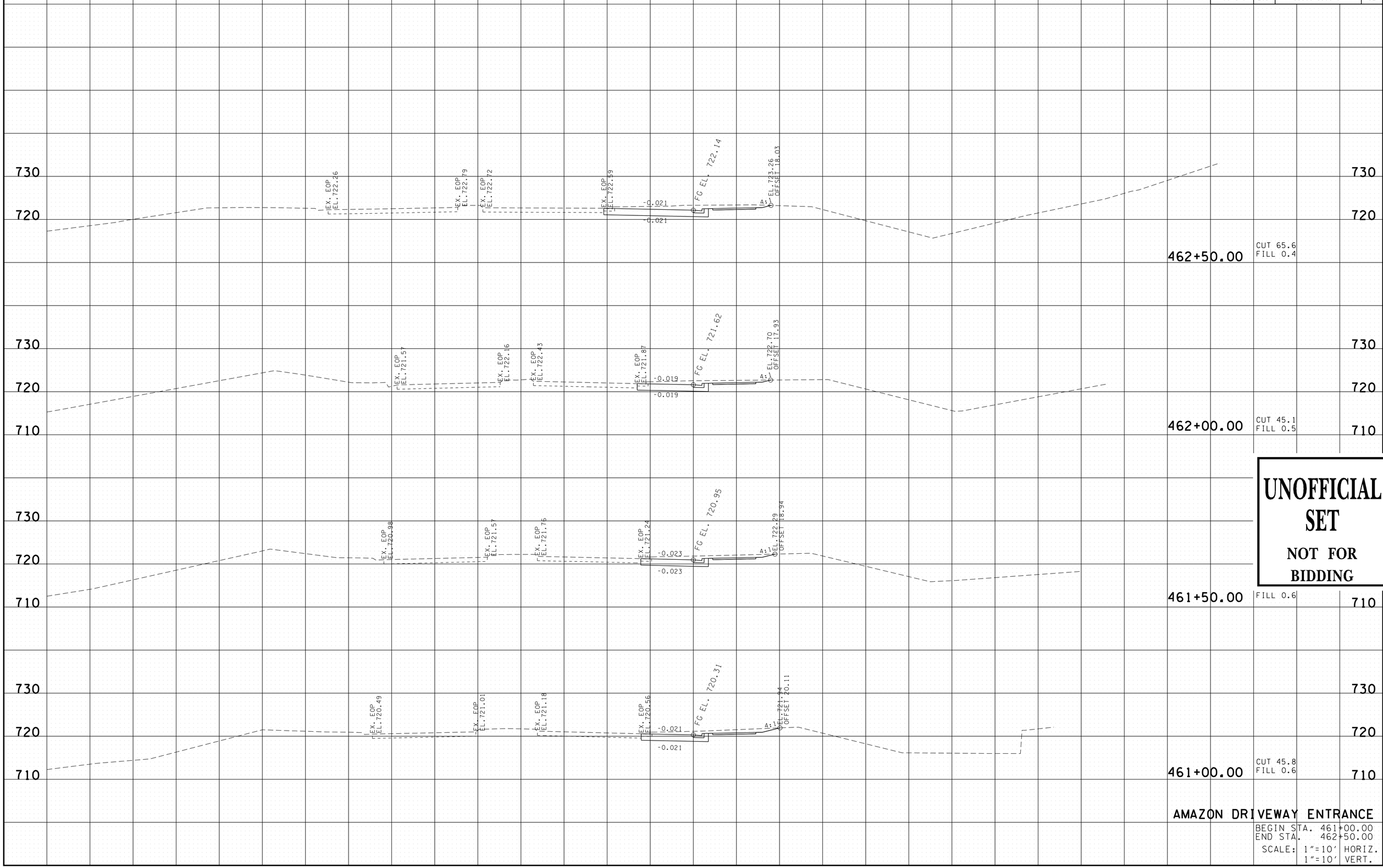
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	44
CONST.	2014	33960-3509-04	52



UNOFFICIAL SET

NOT FOR BIDDING

AMAZON DRIVEWAY ENTRANCE

BEGIN STA. 461+00.00
END STA. 462+50.00

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

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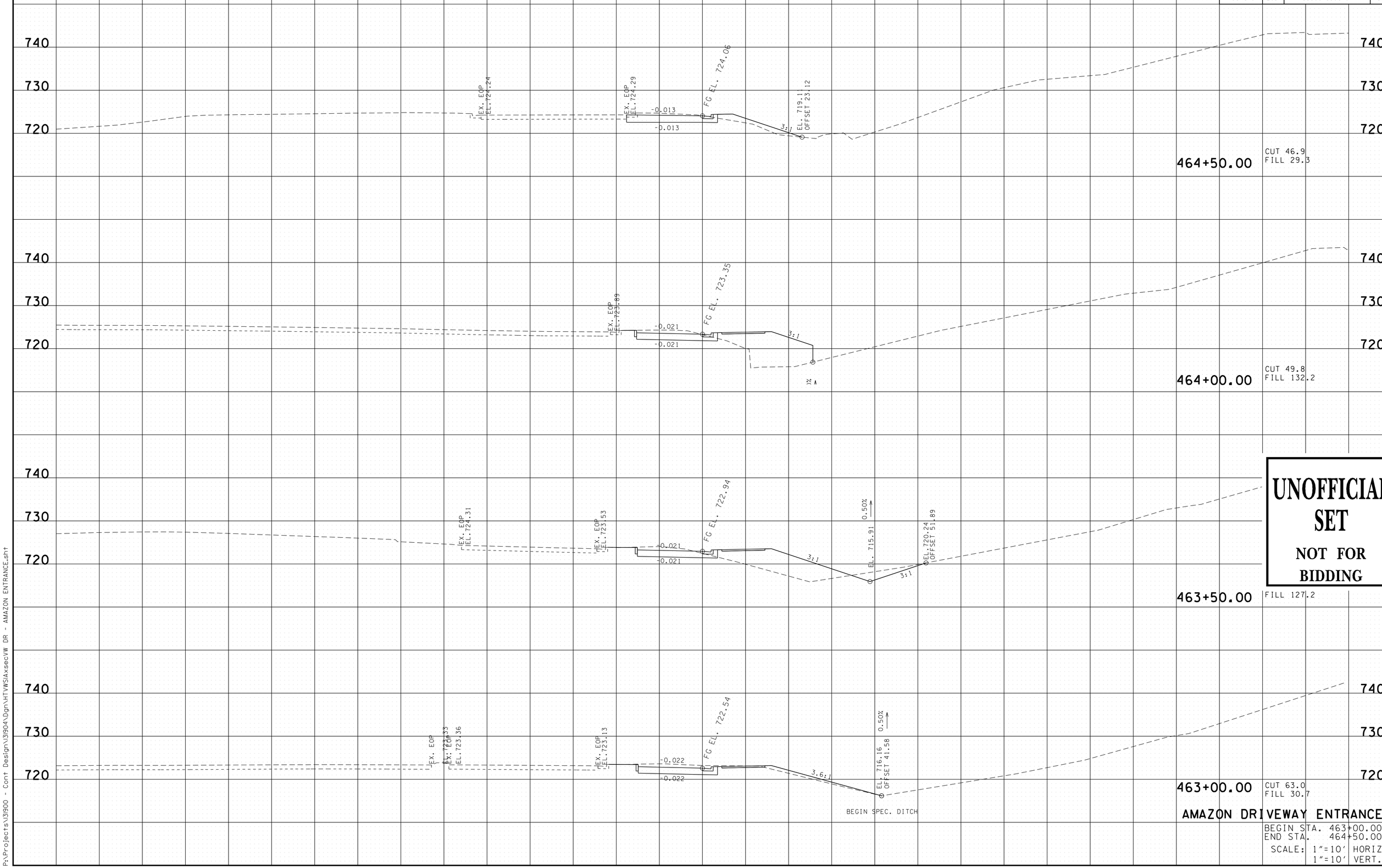
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	45
CONST.	2014	33960-3509-04	53



UNOFFICIAL SET

NOT FOR BIDDING

AMAZON DRIVEWAY ENTRANCE

BEGIN STA. 463+00.00
END STA. 464+50.00
SCALE: 1"=10' HORIZ.
1"=10' VERT.

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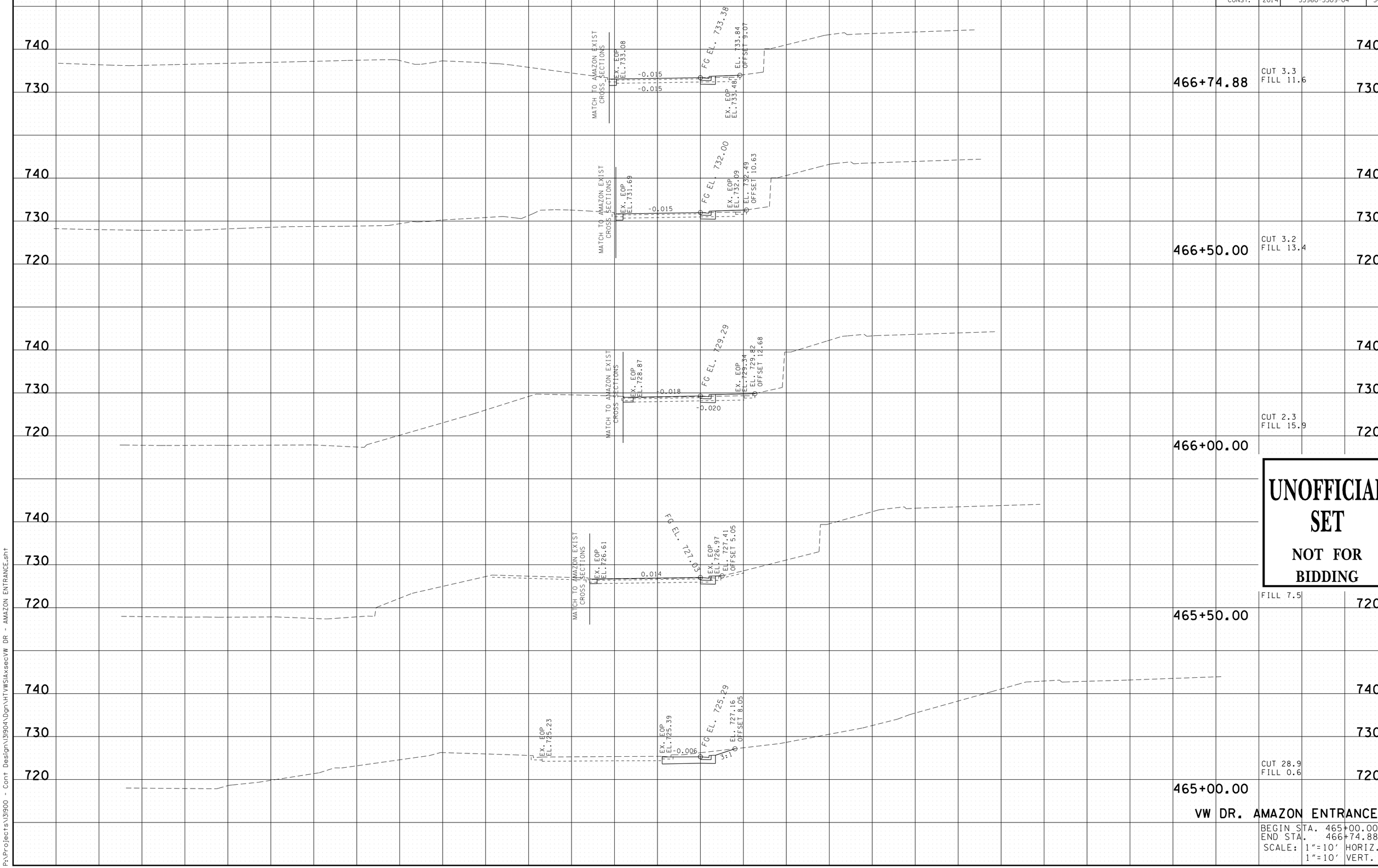
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	46
CONST.	2014	33960-3509-04	54



UNOFFICIAL SET

NOT FOR BIDDING

VW DR. AMAZON ENTRANCE

BEGIN STA. 465+00.00
END STA. 466+74.88
SCALE: 1"=10' HORIZ.
1"=10' VERT.

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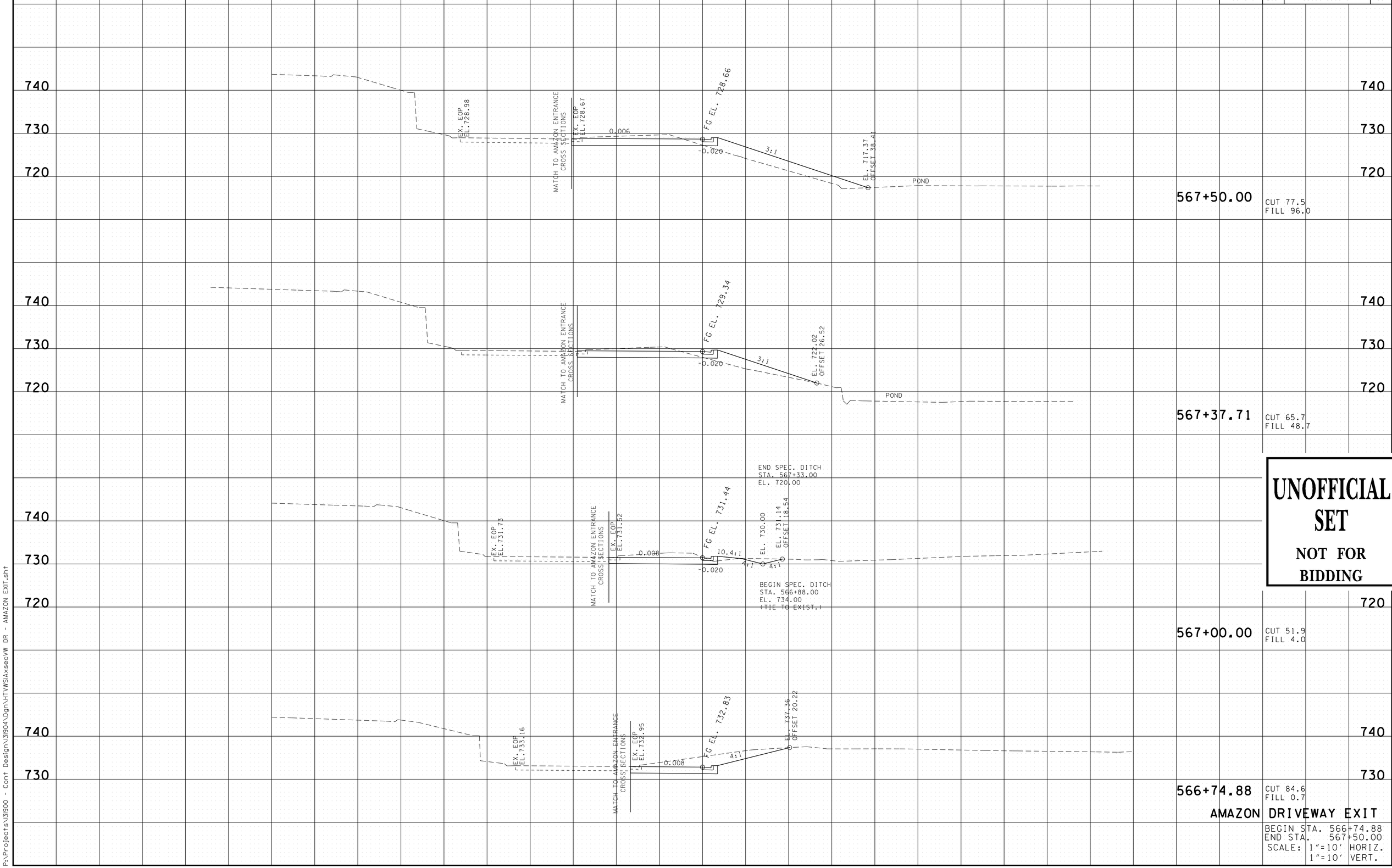
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	47
CONST.	2014	33960-3509-04	55



UNOFFICIAL SET

NOT FOR BIDDING

AMAZON DRIVEWAY EXIT

BEGIN STA. 566+74.88
END STA. 567+50.00
SCALE: 1"=10' HORIZ.
1"=10' VERT.

3/19/2014
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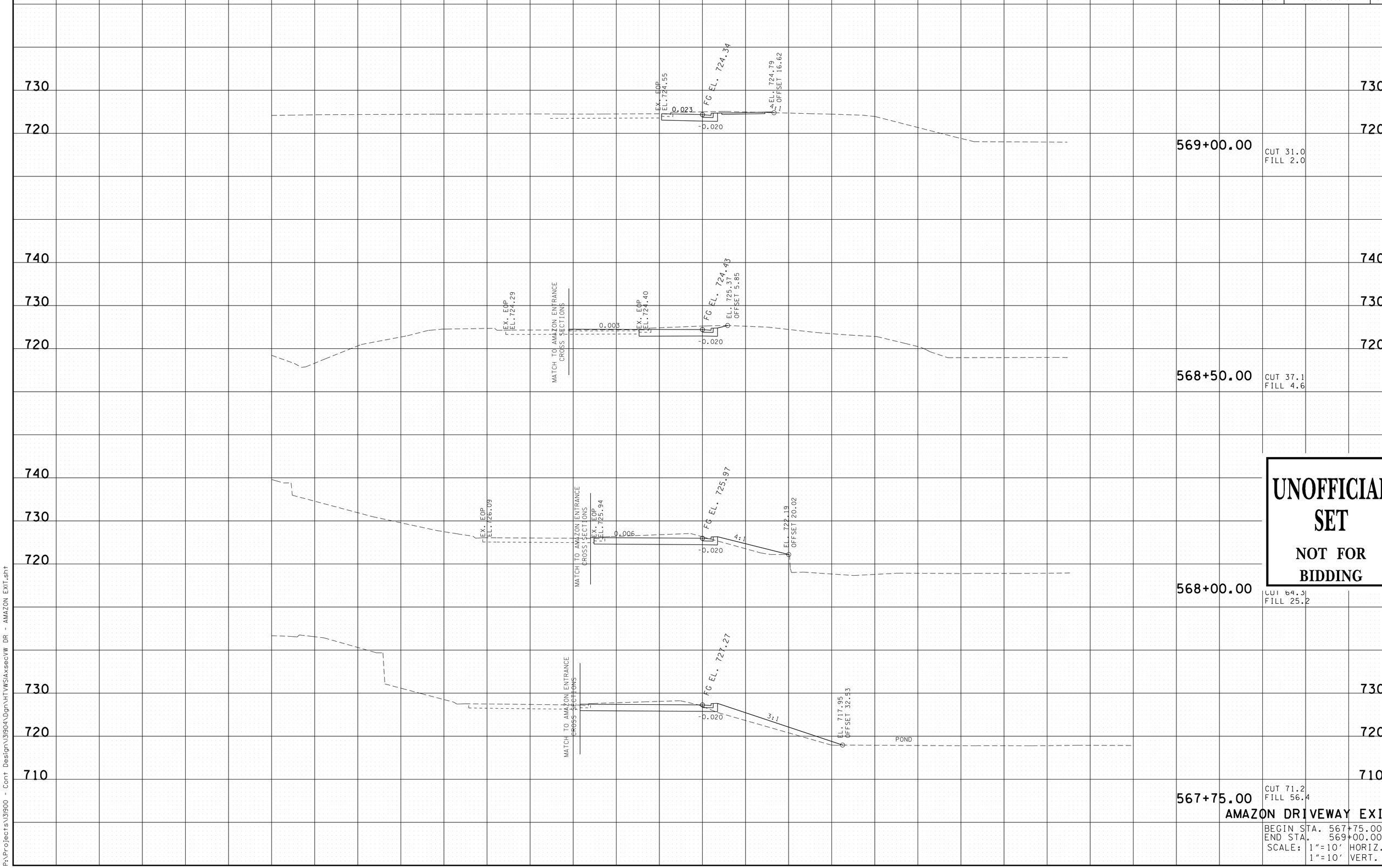
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	48
CONST.	2014	33960-3509-04	56



UNOFFICIAL SET

NOT FOR BIDDING

AMAZON DRIVEWAY EXIT

BEGIN STA. 567+75.00
END STA. 569+00.00
SCALE: 1"=10' HORIZ.
1"=10' VERT.

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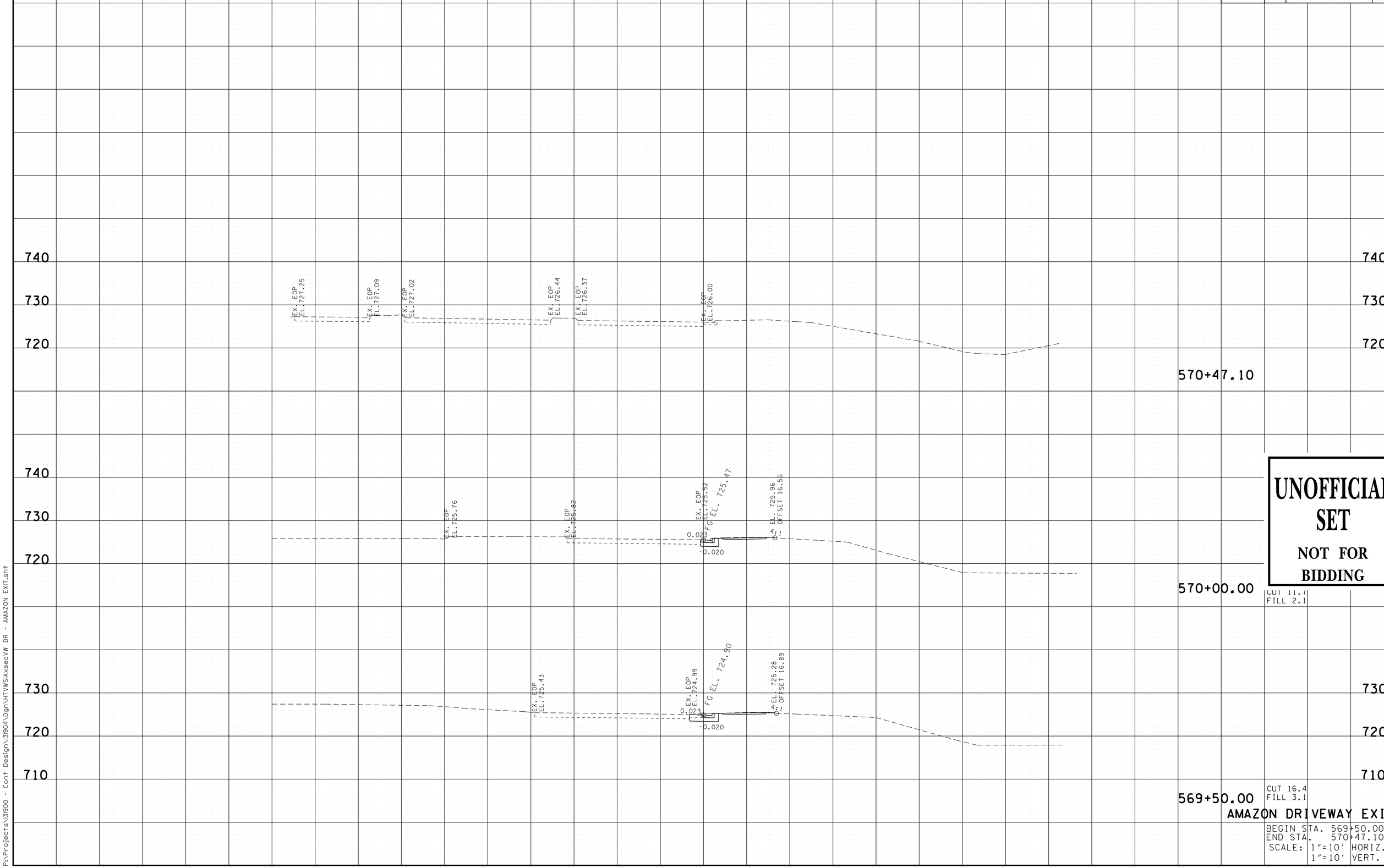
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	49
CONST.	2014	33960-3509-04	57



UNOFFICIAL SET

NOT FOR BIDDING

AMAZON DRIVEWAY EXIT

BEGIN STA. 569+50.00
END STA. 570+47.10
SCALE: 1"=10' HORIZ.
1"=10' VERT.

3/19/2014
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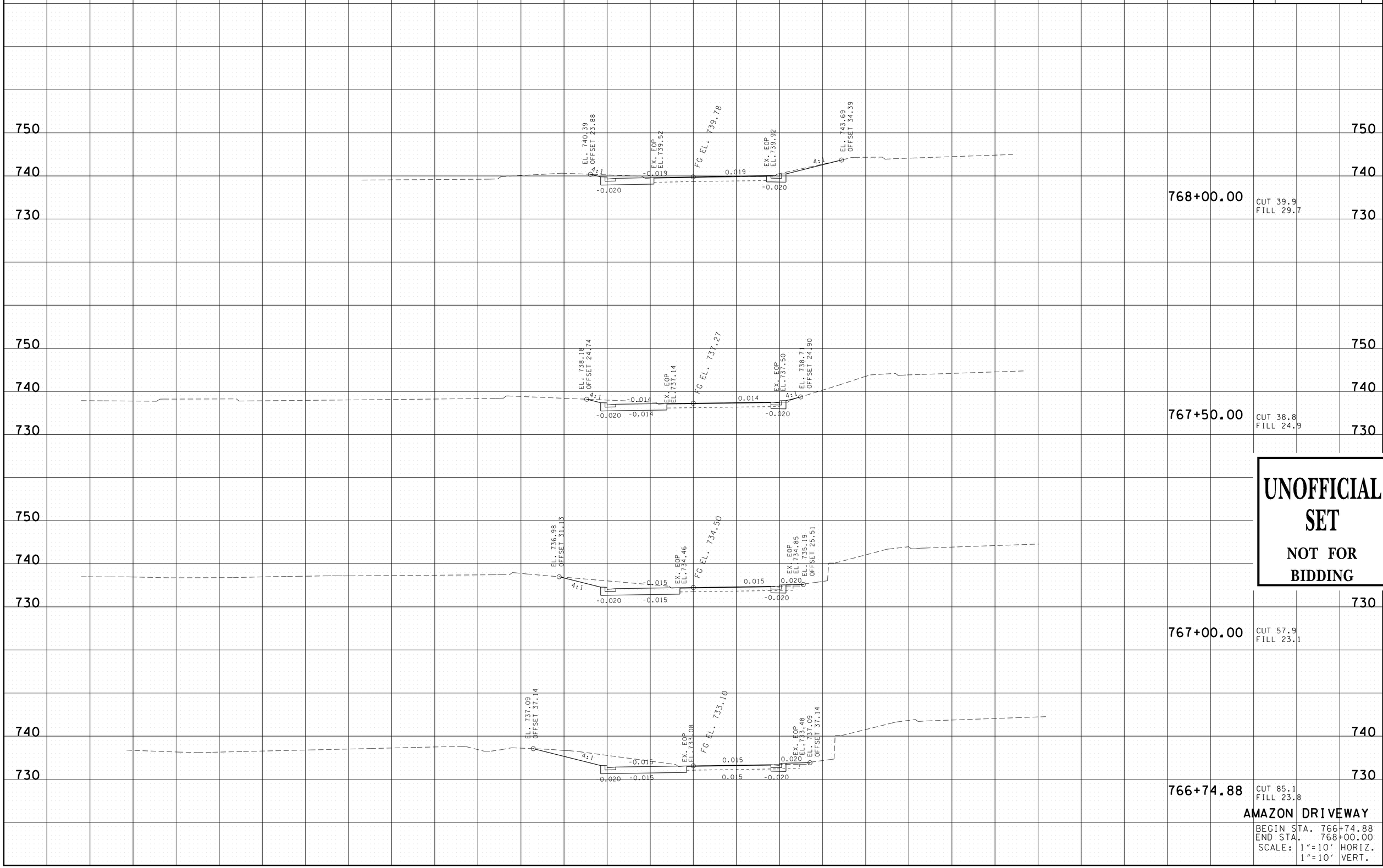
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	50
CONST.	2014	33960-3509-04	58



UNOFFICIAL SET

NOT FOR BIDDING

AMAZON DRIVEWAY

BEGIN STA. 766+74.88
END STA. 768+00.00
SCALE: 1"=10' HORIZ.
1"=10' VERT.

3/19/2014
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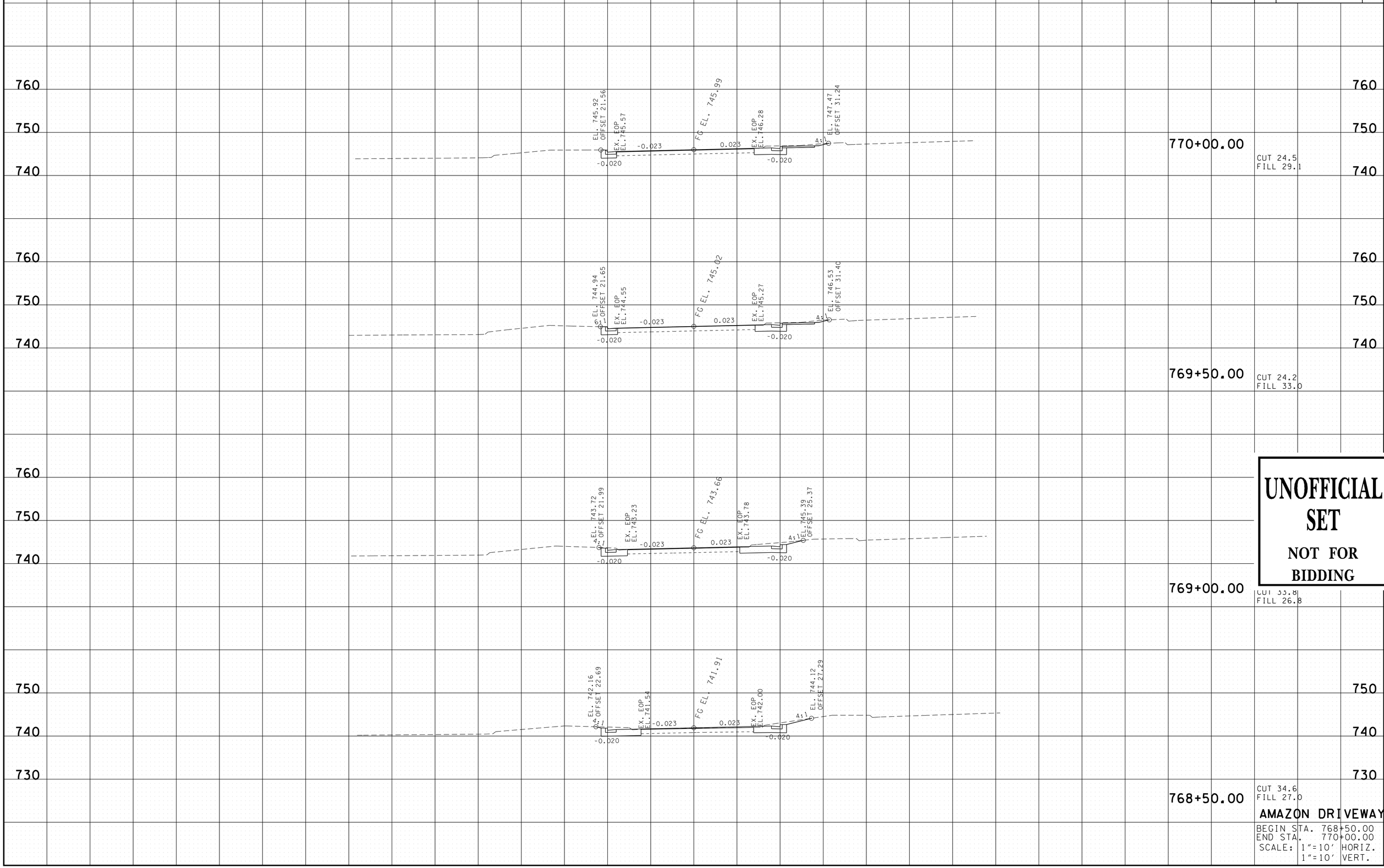
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	51
CONST.	2014	33960-3509-04	59



UNOFFICIAL SET

NOT FOR BIDDING

AMAZON DRIVEWAY

BEGIN STA. 768+50.00
END STA. 770+00.00
SCALE: 1"=10' HORIZ.
1"=10' VERT.

3/19/2014
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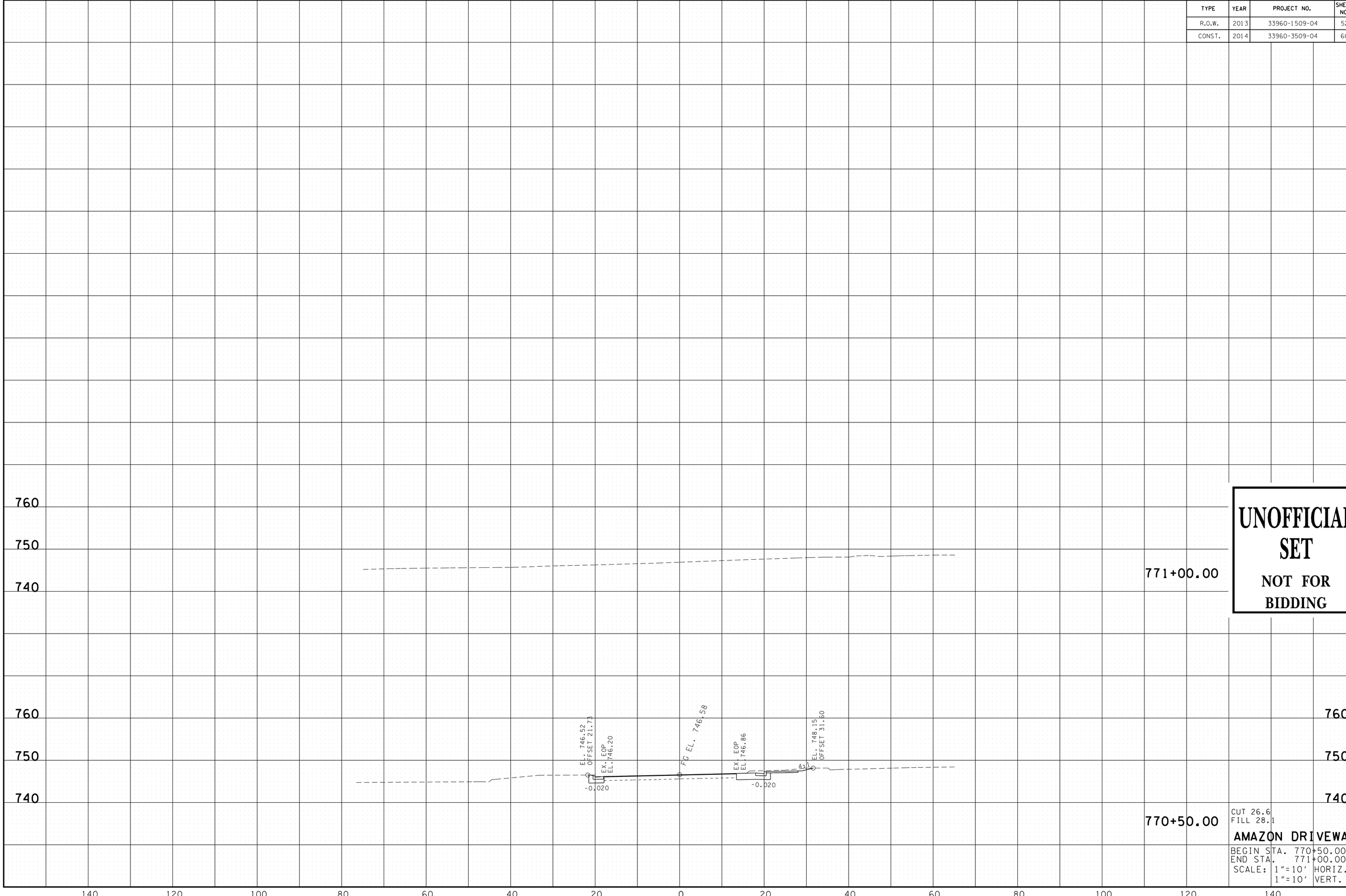
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2013	33960-1509-04	52
CONST.	2014	33960-3509-04	60



UNOFFICIAL SET

NOT FOR BIDDING

CUT 26.6
FILL 28.1

AMAZON DRIVEWAY

BEGIN STA. 770+50.00
END STA. 771+00.00
SCALE: 1"=10' HORIZ.
1"=10' VERT.

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