SEE SHEET NO. IA FOR INDEX

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

TENN.	YEAR	SHEET NO.
	2015	1
FED. AID PROJ. NO.		
STATE PROJ. NO.	71952-3544-04	

PUTNAM COUNTY

BENNETT RD.

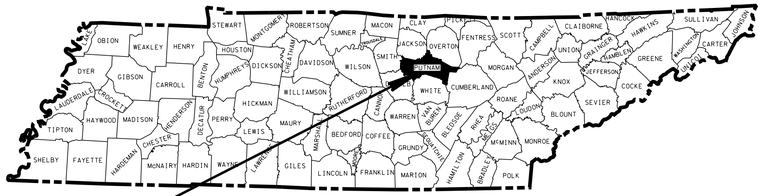
INDUSTRIAL ACCESS ROAD (BENNETT RD.)
SERVING PROJECT VICTOR

THE CONTRACTOR SHALL COORDINATE CONTRUCTION OPERATIONS WITH THE INTERCHANGE PROJECT (NH-I-40-6(130)) AND THE MINE LICK CREEK RD. SIA PROJECT (71952-3543-04). NO LANE CLOSURES WILL BE ALLOWED ON THE INTERCHANGE OR MINE LICK CREEK RD. PROJECTS UNTIL 2 LANES OF THE PROPOSED BENNETT RD. SIA PROJECT (71952-3544-04) ARE FULLY OPERATIONAL BETWEEN THE ACADEMY SPORTS TRUCK ENTRANCE AND HIGHLAND PARK BLVD.

CONSTRUCTION

GRADE, DRAIN, PAVE & SIGN

STATE HWY. NO.:NONE F.A.H.S. NO.:NONE



PROJECT LOCATION
71952-3544-04

BEG. ADJACENT PROJ. (CONST.)
NH-I-40-6(130);71100-3118-44

END PROJ. CONST.
71952-3544-04
STA. 64+25.00
N = 656672.2546
E = 2092837.1128

SCALE: 1"= 2640'

0 0.5 1 1.5 MILES

NO EXCLUSIONS
NO EQUATIONS

SEALED BY

UNOFFICIAL SET
NOT FOR BIDDING

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

DATE:

APPROVED:
JOHN SCHROER, COMMISSIONER

SPECIAL NOTES

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

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

TDOT TRANSPORTATION SPECIALIST SUPERVISOR II JIM BIVENS

DESIGNER WESLEY MATTINGLY, P.E. DESIGNED BY HMB PROFESSIONAL ENGINEERS, INC.

P.E. NO. 71952-1544-04

PIN NO. 120463.00

ROADWAY LENGTH	0.488 MILES (BENNETT RD.)
BRIDGE LENGTH	0.000 MILES
BOX BRIDGE LENGTH	0.000 MILES
PROJECT LENGTH	0.488 MILES

TRAFFIC DATA

ADT (2015)(BENNETT ROAD)	1790
ADT (2035)(BENNETT ROAD)	1940
DHV (2035)(BENNETT ROAD)	220
D	50 - 50
T (ADT)	11 %
T (DHV)	7 %
V (BENNETT ROAD)	45 MPH

TRAFFIC UPDATE	7/2014
ORIG. SURVEY DATE	7/2014
SURVEY UPDATE	10/2014

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR DATE

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	71952-3544-04	1A

INDEX

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SHEETS NOT INCLUDED: 2, 2B, 2C, 2I, 2M, 2O, 16-49

NO PROJECT COMMITMENTS SHEET INCLUDED IN THIS SET OF PLANS.

STANDARD ROADWAY DRAWINGS

DWG. NO	REV.	DESCRIPTION
ROADWAY DESIGN STANDARDS		
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-5	05-01-08	STANDARD LEGEND FOR EROSION PREVENTION AND SEDIMENT CONTROL
RD-L-6	03-30-10	STANDARD LEGEND FOR EROSION PREVENTION AND SEDIMENT CONTROL
RD-L-7	05-24-12	STANDARD LEGEND FOR EROSION PREVENTION AND SEDIMENT CONTROL
RD-UD-3	09-05-96	UNDERDRAIN DETAILS
RD-UD-4	05-27-01	UNDERDRAIN LATERAL DETAILS
RD-UD-7	12-18-94	LATERAL UNDERDRAIN ENDWALL DETAIL FOR 3:1 & 4:1 SLOPES
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-SE-3	10-15-02	RURAL SUPERELEVATION DETAILS
RD01-TS-1	10-15-02	DESIGN STANDARDS FOR LOCAL ROADS AND STREETS
RD01-TS-1A		DESIGN STANDARDS FOR LOW-VOLUME LOCAL ROADS (ADT<=400)
RD01-TS-3C	10-15-02	DESIGN STANDARDS 4 AND 6 LANE ARTERIAL HIGHWAYS WITH FLUSH MEDIANS
DRAINAGE - CULVERTS AND ENDWALL		
D-PB-1	01-02-13	STANDARD DETAILS CLASS "B" BEDDING AND CULVERT EXCAVATION
D-PB-2	01-29-14	STANDARD DETAILS FOR PLASTIC PIPE INSTALLATION
D-PB-3		INDUCED TRENCH SOIL EMBANKMENT FOR PIPE CULVERT INSTALLATION
D-PE-5	05-27-01	STANDARD WINGWALLS HORIZONTAL OVAL CONCRETE PIPES
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-PG-3	04-15-97	FERROUS AND ALUMINUM CORRUGATED METAL PIPE
D-PO-1	05-27-01	STANDARD OVAL & FLAT BASE CONCRETE CULVERT PIPE
D-PS-1	03-15-76	STRUTTING DETAILS FOR CORR. METAL & STRUCTURAL PLATE ROUND PIPE
ROADWAY AND PAVEMENT APPURTENANCES		
RP-R-1	05-27-01	STANDARD RAMPS TO SIDE ROADS
SAFETY APPURTENANCES AND FENCE		
S-F-1	05-24-12	HIGH VISIBILITY FENCE
S-CZ-1		CLEAR ZONE CRITERIA
S-PL-1		SAFETY PLAN AT ROADSIDE HAZARDS
S-PL-2		SAFETY PLAN AT SIDE ROADS OR PRIVATE DRIVES
S-PL-6	12-1-14	SAFETY PLAN SAFETY HARDWARE PLACEMENT
S-CC-1		CRASH CUSHION
S-GR31-1	12-1-14	W-BEAM GUARDRAIL
S-GRT-2	11-03-14	TYPE 38 GUARDRAIL TERMINAL
S-GRT-2P		EARTH PAD FOR TYPE 38 TERMINAL
S-GRT-3		TYPE 21 GUARDRAIL TERMINAL
S-GRT-3D		TYPE 21 GUARDRAIL TERMINAL (DETAILS)
S-GRT-3P		EARTH PAD FOR TYPE 21 TERMINAL
S-GRA-3		GUARDRAIL ANCHOR FOR TYPE 12, 13 AND IN-LINE TERMINALS
TRAFFIC CONTROL APPURTENANCES		
T-FAB-1	05-27-97	FLASHING YELLOW ARROW BOARD
T-M-1	07-24-14	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS AND MARKING ABBREVIATIONS
T-M-4	07-24-14	STANDARD INTERSECTION PAVEMENT MARKINGS
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-7	02-12-91	HIGHWAY SHIELDS USED ON INTERSTATE AND U.S. NUMBERED ROUTES
T-S-8	07-15-91	HIGHWAY SHIELDS USED ON STATE NUMBERED ROUTES AND ARROWS
T-S-10	04-04-12	STANDARD MOUNTING DETAILS FLAT SHEET SIGNS ALUMINUM-STEEL DESIGN
T-S-17	07-19-13	STANDARD GROUND MOUNTED SIGN USING PERFORATED/KNOCKOUT SQUARE TUBE
T-S-18	02-14-14	END OF ROADWAY AND DEAD END SIGNS, METAL BARRICADES (TYPE III) & WORK ZONE SPEED SIGNS
T-S-19	07-19-13	STANDARD STEEL SIGN SUPPORTS
T-S-20	11-01-11	SIGN DETAILS
T-WZ-30	09-01-05	TRAFFIC CONTROL 2-LANE, 2-WAY DIVERSION (40 MPH OR LESS)
T-WZ-32	10-29-13	TRAFFIC CONTROL PLAN SIGNAL LAYOUT FOR TRAFFIC SIGNAL AT TWO LANE BRIDGE RECONSTRUCTION SITE
T-WZ-34	09-01-05	TRAFFIC CONTROL PLAN GENERAL NOTES FOR TRAFFIC SIGNAL AT TWO LANE BRIDGE RECONSTRUCTION SITE
T-WZ-35	04-02-12	TRAFFIC CONTROL PLAN PAY ITEM AND SIGN DETAILS FOR TRAFFIC SIGNAL AT TWO LANE BRIDGE RECONSTRUCTION SITE

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

INDEX AND STANDARD DRAWINGS

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	71952-3544-04	1B

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-30A		INSTREAM DIVERSION (WITH TRAFFIC)
EC-STR-31A	04-01-08	TEMPORARY DIVERSION CHANNEL DESIGN
EC-STR-31	08-01-12	TEMPORARY DIVERSION CHANNEL
EC-STR-31A	04-01-08	TEMPORARY DIVERSION CHANNEL DESIGN
EC-STR-33	08-01-12	SUSPENDED PIPE DIVERSON (DOWNSTREAM)
EC-STR-33A	08-01-12	SUSPENDED PIPE DIVERSON (UPSTREAM)
EC-STR-34	08-01-12	EROSION CONTROL BLANKET FOR SLOPE INSTALLATION
EC-STR-37	06-10-14	SEDIMENT TUBE

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

INDEX AND STANDARD DRAWINGS

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	71952-3544-04	2A

ESTIMATED ROADWAY QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
	105-01	CONSTRUCTION STAKES, LINES AND GRADES	LS	1
(1)	201-01	CLEARING AND GRUBBING	LS	1
(2)	202-01	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	1
(3)	203-01	ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED)	C.Y.	61435
(4)	203-02.01	BORROW EXCAVATION (GRADED SOLID ROCK)	TON	9283
	203-04	PLACING AND SPREADING TOPSOIL	C.Y.	4055
(5)	203-05	UNDERCUTTING	C.Y.	4927
(6)	203-06	WATER	M.G.	475
(7)	204-06.01	FLOWABLE FILL (GENERAL)	C.Y.	24
	204-08	FOUNDATION FILL MATERIAL	C.Y.	34
(8)	209-02.03	8" TEMPORARY SLOPE DRAIN	L.F.	31
(8)	209-05	SEDIMENT REMOVAL	C.Y.	362
(8)	209-08.02	TEMPORARY SILT FENCE (WITH BACKING)	L.F.	9194
(8)	209-08.03	TEMPORARY SILT FENCE (WITHOUT BACKING)	L.F.	3345
(8)	209-08.07	ROCK CHECK DAM PER	EACH	152
(8)	209-08.08	ENHANCED ROCK CHECK DAM	EACH	42
(8)(9)	209-09.01	SANDBAGS	BAG	2400
(8)	209-09.03	SEDIMENT FILTER BAG (15' X 15')	EACH	1
(10)	209-09.22	POLYACRYLAMIDE POWDER	LB.	432
(8)	209-10.20	TEMPORARY SEDIMENT TRAP	C.Y.	676
(8)(9)	209-20.03	POLYETHYLENE SHEETING (6 MIL. MINIMUM)	S.Y.	133
(8)	209-65.03	TEMPORARY DIVERSION CHANNEL	L.F.	106
(11)	303-01	MINERAL AGGREGATE, TYPE A BASE, GRADING D	TON	12926
(8)(12)	303-10.01	MINERAL AGGREGATE (SIZE 57)	TON	267
	307-01.01	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING A	TON	1467
	307-01.02	ASPHALT CEMENT (PG64-22) (BPMB-HM) GRADING A-S	TON	37
	307-01.03	AGGREGATE (BPMB-HM) GRADING A-S MIX	TON	1067
	307-01.08	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING B-M2	TON	1522
(33)	307-01.15	ASC MIX (PG64-22) (BPMLC-HM) GRADING CS	TON	211
	402-01	BITUMINOUS MATERIAL FOR PRIME COAT (PC)	TON	20
	402-02	AGGREGATE FOR COVER MATERIAL (PC)	TON	79
	403-01	BITUMINOUS MATERIAL FOR TACK COAT (TC)	TON	9
	411-01.07	ACS MIX (PG64-22) GRADING E SHOULDER	TON	62
	411-01.10	ACS MIX(PG64-22) GRADING D	TON	265
	415-01.02	COLD PLANING BITUMINOUS PAVEMENT	S.Y.	700
	604-01.01	CLASS A CONCRETE (ROADWAY)	C.Y.	118
	604-01.02	STEEL BAR REINFORCEMENT (ROADWAY)	LB.	27131
	607-03.30	18" PIPE CULVERT	L.F.	83
	607-05.30	24" PIPE CULVERT	L.F.	127
	607-16.10	68"X 43" HORIZONTAL OVAL CONCRETE PIPE CULVERT	L.F.	47
	607-39.02	18" PIPE CULVERT (SIDE DRAIN)	L.F.	180
	611-07.01	CLASS A CONCRETE (PIPE ENDWALLS)	C.Y.	8
	611-07.02	STEEL BAR REINFORCEMENT (PIPE ENDWALLS)	LB.	470
	611-07.54	18IN ENDWALL (CROSS DRAIN) 3:1	EACH	4
	611-07.58	24IN ENDWALL (CROSS DRAIN) 4:1	EACH	2
	621-03.02	18" TEMPORARY DRAINAGE PIPE	L.F.	150
	621-03.05	36" TEMPORARY DRAINAGE PIPE	L.F.	50
	705-02.02	SINGLE GUARDRAIL (TYPE 2)	L.F.	1106
	705-04.04	GUARDRAIL TERMINAL (TYPE 21)	EACH	1
	705-04.05	GUARDRAIL TERMINAL (TYPE-IN-LINE)	EACH	2
	705-04.07	TAN ENERGY ABSORBING TERM (NCHRP 350, TL3)	EACH	2
(13)(34)(35)	705-08.51	PORTABLE IMPACT ATTENUATOR NCHRP350 TL-3	EACH	2
(8)(15)	707-08.11	HIGH-VISIBILITY CONSTRUCTION FENCE	L.F.	2545

ESTIMATED ROADWAY QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
(8)(16)	709-05.05	MACHINED RIP-RAP (CLASS A-3)	TON	400
(8)(17)	709-05.06	MACHINED RIP-RAP (CLASS A-1)	TON	4548
(8)(18)	709-05.08	MACHINED RIP-RAP (CLASS B)	TON	679
(8)(19)	709-05.09	MACHINED RIP-RAP (CLASS C)	TON	95
	710-02	AGGREGATE UNDERDRAINS (WITH PIPE)	L.F.	1800
	710-05	LATERAL UNDERDRAIN	L.F.	132
	710-06.12	LATERAL UNDERDRAIN ENDWALL (3:1)	EACH	1
	710-06.13	LATERAL UNDERDRAIN ENDWALL (4:1)	EACH	8
	710-06.15	LATERAL UNDERDRAIN ENDWALL (6:1)	EACH	1
	712-01	TRAFFIC CONTROL	LS	1
(14)(34)(35)	712-02.02	INTERCONNECTED PORTABLE BARRIER RAIL	L.F.	1160
(14)(34)	712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	EACH	100
(14)(34)	712-04.50	PORTABLE BARRIER RAIL DELINEATOR	EACH	58
(14)	712-05.01	WARNING LIGHTS (TYPE A)	EACH	8
(14)(34)	712-06	SIGNS (CONSTRUCTION)	S.F.	534
(14)	712-06.01	VERTICAL PANELS	S.F.	80
(14)	712-07.03	TEMPORARY BARRICADES (TYPE III)	L.F.	48
(14)	712-08.03	ARROW BOARD (TYPE C)	EACH	2
	712-09.01	REMOVABLE PAVEMENT MARKING LINE	L.F.	4600
	712-09.04	REMOVABLE PAVEMENT MARKING (STOP LINE)	L.F.	48
	713-11.01	"U" SECTION STEEL POSTS	LB.	293
	713-11.02	PERFORATED/KNOCKOUT SQUARE TUBE POST	LB.	353
	713-13.02	FLAT SHEET ALUMINUM SIGNS (0.080" THICK)	S.F.	93
	713-13.03	FLAT SHEET ALUMINUM SIGNS (0.100" THICK)	S.F.	72
(20)	713-15	REMOVAL OF SIGNS, POSTS AND FOOTINGS	LS	1
	713-15.04	INSTALLATION OF LETTERS & ARROWS	LS	1
(21)	713-15.35	METAL BARRICADE (TYPE III)	EACH	4
(14)(34)	713-16.01	CHANGEABLE MESSAGE SIGN UNIT	EACH	4
(21)	713-16.07	END OF ROADWAY SIGN AND SUPPORT	EACH	4
(22)	716-02.06	PLASTIC PAVEMENT MARKING (TURN LANE ARROW)	EACH	2
(23)	716-05.01	PAINTED PAVEMENT MARKING (4" LINE)	L.M.	4.92
	716-05.02	PAINTED PAVEMENT MARKING (8" BARRIER LINE)	L.F.	2190
(24)	716-05.05	PAINTED PAVEMENT MARKING (STOP LINE)	L.F.	167
	716-13.01	SPRAY THERMO PVMT MARKNG (60 mil) (4IN LINE)	L.M.	1.98
	717-01	MOBILIZATION	LS	1
(25)	730-40.02	TEMPORARY TRAFFIC SIGNAL SYSTEM	LS	1
(8)(26)	740-10.03	GEOTEXTILE (TYPE III)(EROSION CONTROL)	S.Y.	7339
(8)(27)	740-10.04	GEOTEXTILE (TYPE IV)(STABILIZATION)	S.Y.	865
(8)	740-11.03	TEMPORARY SEDIMENT TUBE (18IN)	L.F.	12914
(10)(28)	801-01	SEEDING (WITH MULCH)	UNIT	113
(8)(10)	801-01.07	TEMPORARY SEEDING (WITH MULCH)	UNIT	351
(29)	801-02	SEEDING (WITHOUT MULCH)	UNIT	146
(16)	801-03	WATER (SEEDING & SODDING)	M.G.	118
(10)	801-07	SEED (SUPPLEMENTAL APPLICATION)	LB.	58
(10)	801-08	FERTILIZER (SUPPLEMENTAL APPLICATION)	TON	1
	802-11.12	CORNUS FLORIDA (FLOWERING DOGWOOD 2-5FT CNTNR GRWN)	EACH	6
	802-11.14	DIOSPYROS VIRGINIANA (PERSIMMON 2-5FT CNTNR GRWN)	EACH	6
	802-11.26	PLATANUS OCCIDENTALIS (SYCAMORE 2-5FT CNTNR GRWN)	EACH	5
	802-13.14	CALLICARPA AMERICANA (AMRCN BEAUTYBERRY) 2-5FT C.G.	EACH	20
(30)	803-01	SODDING (NEW SOD)	S.Y.	6000
(31)	805-12.02	EROSION CONTROL BLANKET (TYPE II)	S.Y.	15985
(32)	806-02.03	PROJECT MOWING	CYCL	4

FOOTNOTES

(1) CLEARING AND GRUBBING AREA IS APPROX. 10.6 ACRES.
(2) INCLUDES REMOVAL OF 36' OF 12" CMP, 36' OF 30" CMP, 120' OF 18" RCP, ONE NO. 42 AREA DRAIN, AND EXISTING SIDE DRAINS AS INDICATED ON THE PLANS.
(3) 229 C.Y. FOR CONSTRUCTION EXITS, & 498 C.Y. FOR EARTH BERMS. SEE SPECIAL NOTES SHEET 2K.
(4) INCLUDES 297 TONS FOR FILLING STR-A & 8986 TONS FOR UNDERCUTTING ALONG BENNETT RD.
(5) SEE CROSS SECTIONS FOR LOCATIONS OF UNDERCUTTING AS DIRECTED BY THE ENGINEER.
(6) INCLUDES 19 M.G. FOR EMBANKMENT AND 456 M.G. FOR AGGREGATE BASE MATERIAL.
(7) FOR FILLING THE EXISTING 36" CMP ON BENNETT RD. AT STA. 49+78.53 AFTER CONSTRUCTION OF THE BOX CULVERT AT STA. 50+00.49 IS COMPLETE.
(8) SEE SUBSECTION 209.07 OF THE STANDARD SPECIFICATIONS FOR MAINTENANCE REPLACEMENT.
(9) FOR USE WITH TEMPORARY DIVERSION CHANNEL & SANDBAG BERMS.
(10) TO BE USED AS DIRECTED BY PROJECT ENGINEER.
(11) INCLUDES 500 TONS FOR TRAFFIC CONTROL AS DIRECTED BY THE ENGINEER.
(12) INCLUDES 67 TONS FOR EPSC AND 200 TONS TO BE USED AS DIRECTED BY THE ENGINEER.
(13) THIS ITEM SHALL BE A PORTABLE ENERGY ABSORBING TERMINAL MEETING THE REQUIREMENTS OF NCHRP 350 FOR TEST LEVEL 3. EXAMPLES WOULD BE A QUAD-GUARD, A REACT 350 OR A TRACC. THE PAY ITEM WILL INCLUDE FURNISHING AND INSTALLING ALL COMPONENTS AS SHOWN ON THE MANUFACTURER'S DRAWING. PAID ONLY ONCE, RELOCATION INCLUDED.
(14) FOR TRAFFIC CONTROL; USE AS DIRECTED.
(15) INCLUDES 2295 L.F. FOR BUFFER PROTECTION AND 250 FT TO BE USED AS DIRECTED BY PROJECT ENGINEER.
(16) TO BE USED FOR EROSION PREVENTION AND SEDIMENT CONTROL.
(17) INCLUDES 4109 TONS FOR DITCHES, 356 TONS FOR EPSC, 6 TONS FOR SIDE DRAINS, 2 TONS FOR CROSS DRAINS, AND 75 TONS FOR CULVERTS.
(18) INCLUDES 429 TONS FOR DITCHES, 26 TONS FOR CROSS DRAINS, AND 224 TONS FOR RELOCATED STR-A.
(19) FOR THE CROSS DRAIN ON BENNETT RD. AT STA. 46+67.
(20) INCLUDES REMOVAL OF ANY CONFLICTING SIGN WITHIN THE PROJECT LIMITS AS DIRECTED BY THE ENGINEER.
(21) TO BE USED AT THE INTERSECTION OF LEE SEMINARY DIVERSION & EXIST. LEE SEMINARY RD.
(22) THE CONTRACTOR MAY ELECT TO SUBSTITUTE PREFORMED PLASTIC FOR THERMOPLASTIC. PREFORMED PLASTIC SHALL BE PAID FOR AT THE SAME UNIT PRICE AS BID FOR THERMOPLASTIC.
(23) 0.63 L.M. FOR SIDE ROADS, AND 4.29 L.M. FOR TEMPORARY TRAFFIC CONTROL MARKINGS.
(24) INCLUDES 48 L.F. FOR USE ON INTERMEDIATE PAVEMENT LAYERS.
(25) TO BE USED ALONG BENNETT ROAD AS DETAILED IN THE TRAFFIC CONTROL PLANS. INCLUDES PORTABLE STRUCTURE, OR WOOD POLES, GUYING DEVICES, LOOP WIRE OR OTHER VEHICLE DETECTION, SPAN WIRE, 3 SIGNAL HEADS WITH BACKPLATES, CONDUIT RISERS, CONTROLLERS AND CONTROLLER CABINET AND ANY OTHER SIGNAL EQUIPMENT REQUIRED TO HAVE A FULLY OPERATIONAL TRAFFIC SIGNAL SYSTEM. BID PRICE TO INCLUDE ELECTRICAL SERVICE CONNECTION IF NEEDED, OPERATION AND MAINTENANCE THROUGH ALL CONSTRUCTION PHASES, MOVING SIGNALS AS NEEDED, AND THE REMOVAL OF ALL TEMPORARY TRAFFIC SIGNAL SYSTEM AS DIRECTED BY THE ENGINEER.
(26) INCLUDES 1379 S.Y. FOR EPSC, 5741 S.Y. FOR RIP-RAP DITCHES, 6 S.Y. FOR RIP-RAP AT SIDE DRAIN OUTLET, 108 S.Y. FOR CROSS DRAINS, AND 105 S.Y. FOR BOX CULVERT.
(27) INCLUDES 320 S.Y. FOR FILLING EXISTING STR-A ON OLD STEWART RD., 289 S.Y. FOR FILLING EXISTING STR-A ON BENNETT RD., AND 256 S.Y. FOR RELOCATED STR-A.
(28) INCLUDES 13 UNITS FOR SCARIFIED AREAS.
(29) TO BE USED WITH EROSION CONTROL BLANKET TYPE II.
(30) 5666 SY TO BE USED ON PERMANENT SLOPES FROM STA. 38+50 TO 52+00 AND 334 SY AS DIRECTED BY THE ENGINEER.
(31) 12958 S.Y. OF ECB II FOR EPSC, AND 3027 S.Y. FOR DITCHES.
(32) SHALL INCLUDE LITTER AND DEBRIS PICK UP.
(33) TO PROTECT THE BINDER SHOULD IT BE EXPOSED FOR A LONG PERIOD OF TIME OR OVER THE WINTER MONTHS. TO BE USED AS DIRECTED BY PROJECT ENGINEER.
(34) TOTAL QUANTITY FOR ITEM INCLUDES ONLY THE MAXIMUM REQUIRED FOR ANY ONE PHASE. INCLUDES RELOCATION.
(35) 1160 LF OF PORTABLE BARRIER RAIL AND 2 ATTENUATORS SHALL BE LEFT IN PLACE AS SHOWN ON SHEET 5A. THIS PORTABLE BARRIER RAIL AND ATTENUATORS WILL BECOME THE PROPERTY OF THE CONTRACTOR AWARDED THE I-40 INTERCHANGE PROJECT @ MINE LICK CREEK RD.

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ESTIMATED ROADWAY QUANTITIES

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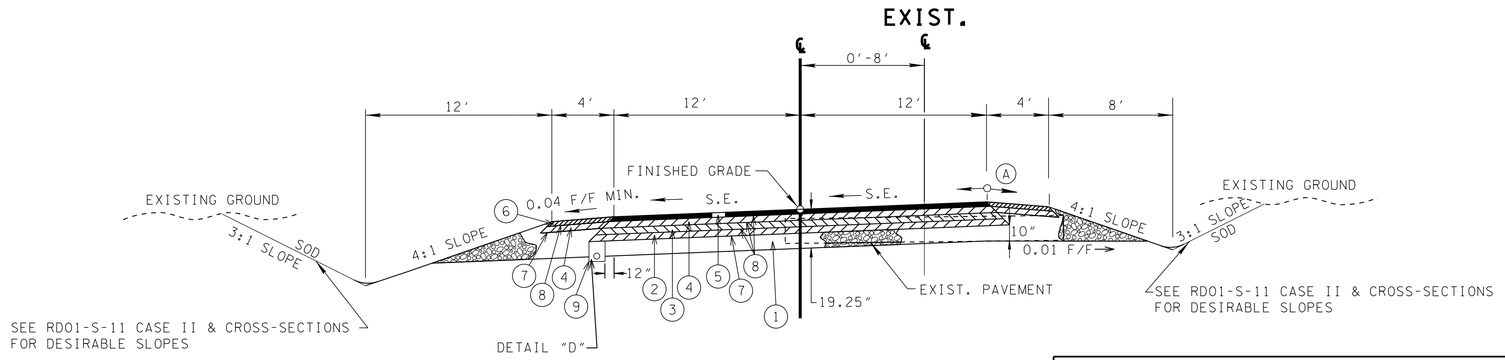
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	2D
CONST.	2015	71952-3544-04	2D

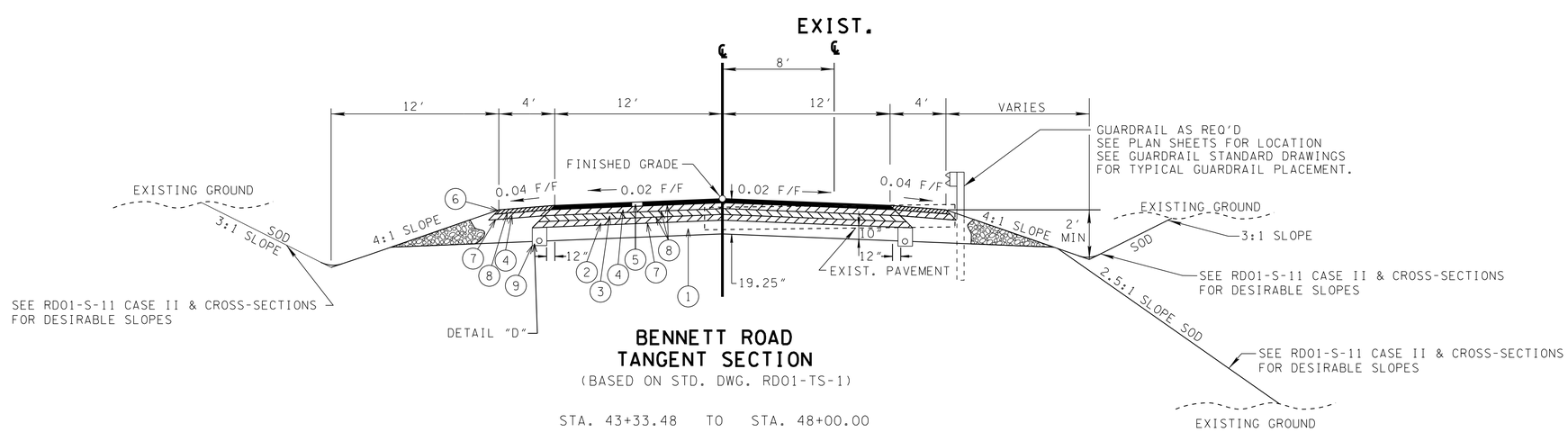


BENNETT ROAD
SUPERELEVATED SECTION

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

STA. 38+50.00 TO STA. 43+33.48

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



BENNETT ROAD
TANGENT SECTION

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

STA. 43+33.48 TO STA. 48+00.00

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TYPICAL SECTIONS

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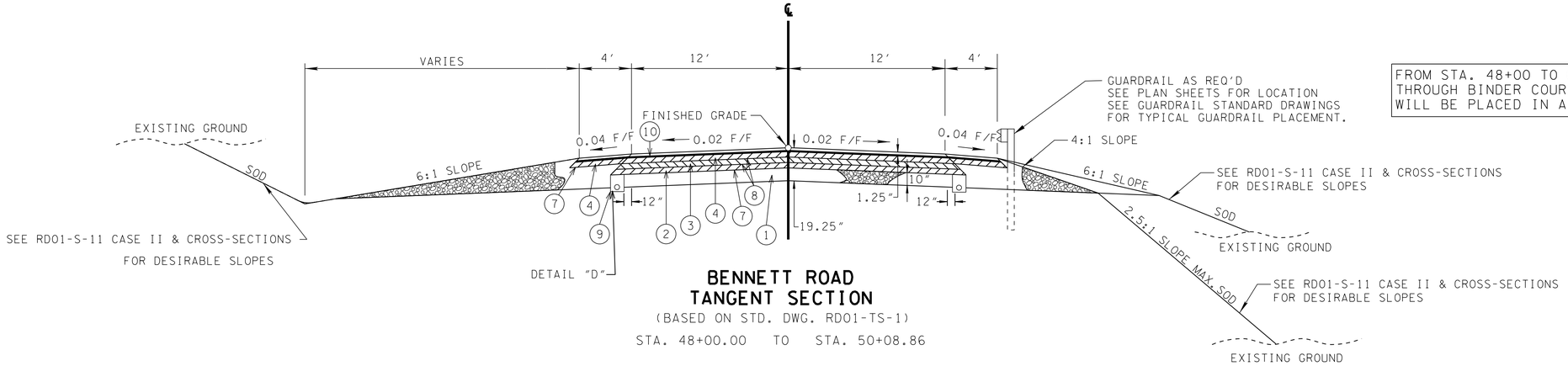
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	2E
CONST.	2015	71952-3544-04	2E

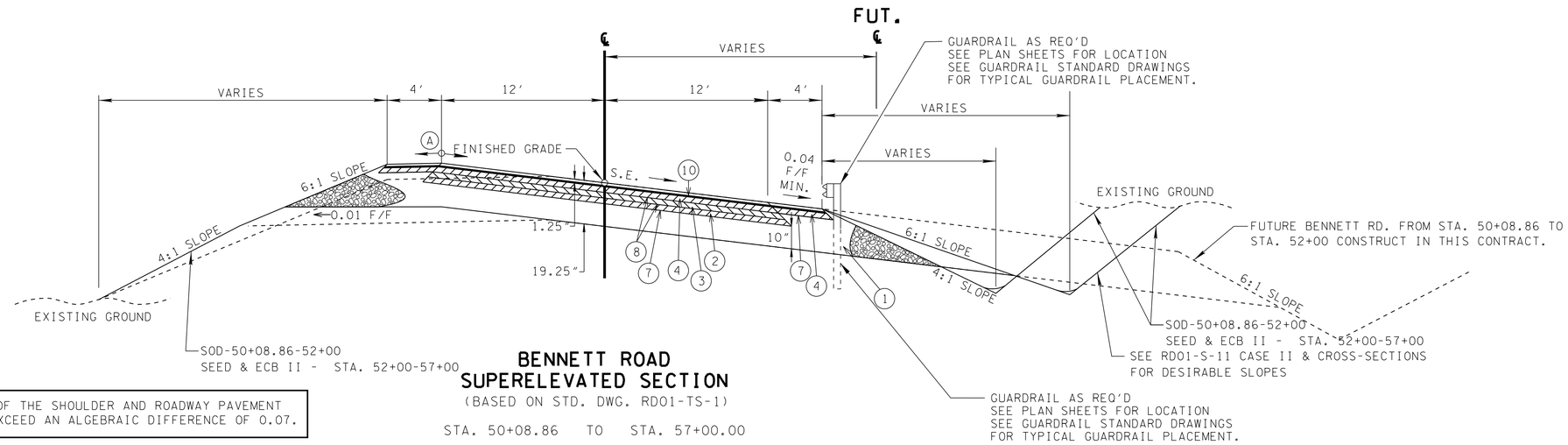
FROM STA. 48+00 TO 64+25 CONSTRUCT THROUGH BINDER COURSE. SURFACE COURSE WILL BE PLACED IN A SEPARATE CONTRACT.



BENNETT ROAD
TANGENT SECTION

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

STA. 48+00.00 TO STA. 50+08.86



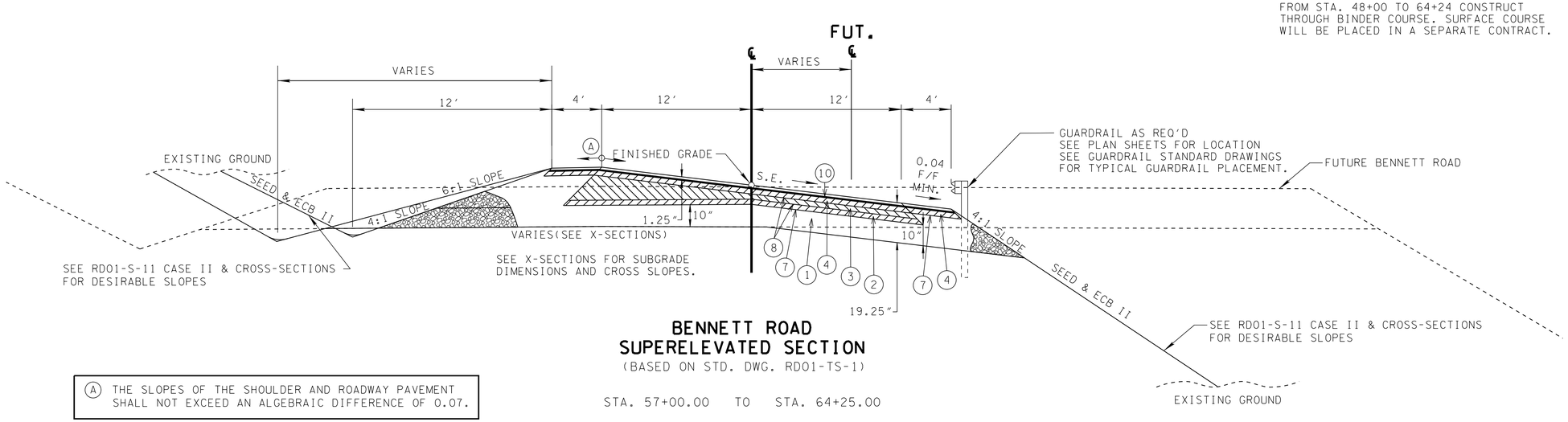
BENNETT ROAD
SUPERELEVATED SECTION

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

STA. 50+08.86 TO STA. 57+00.00

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

FROM STA. 48+00 TO 64+24 CONSTRUCT THROUGH BINDER COURSE. SURFACE COURSE WILL BE PLACED IN A SEPARATE CONTRACT.



BENNETT ROAD
SUPERELEVATED SECTION

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

STA. 57+00.00 TO STA. 64+25.00

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

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TYPICAL SECTIONS

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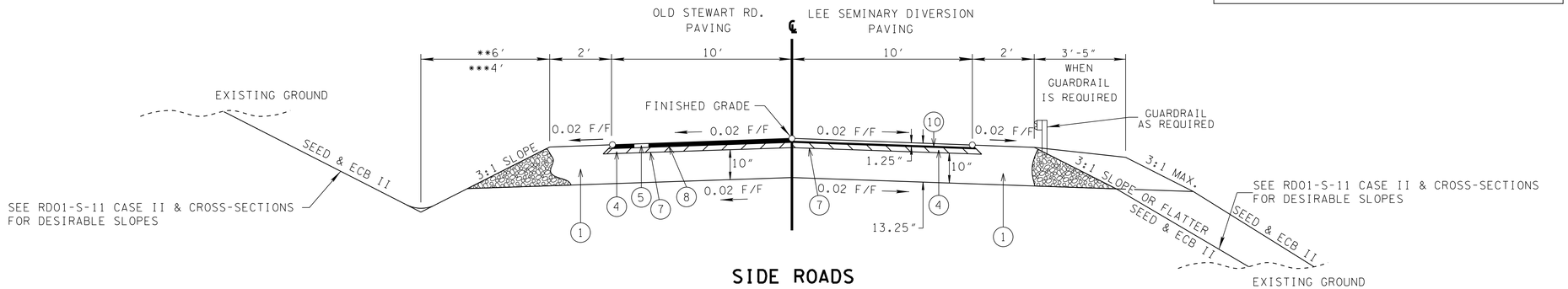
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	2F
CONST.	2015	71952-3544-04	2F

CONSTRUCT LEE SEMINARY DIVERSION THROUGH BINDER COURSE. SURFACE COURSE WILL BE PLACED IN A SEPARATE CONTRACT.



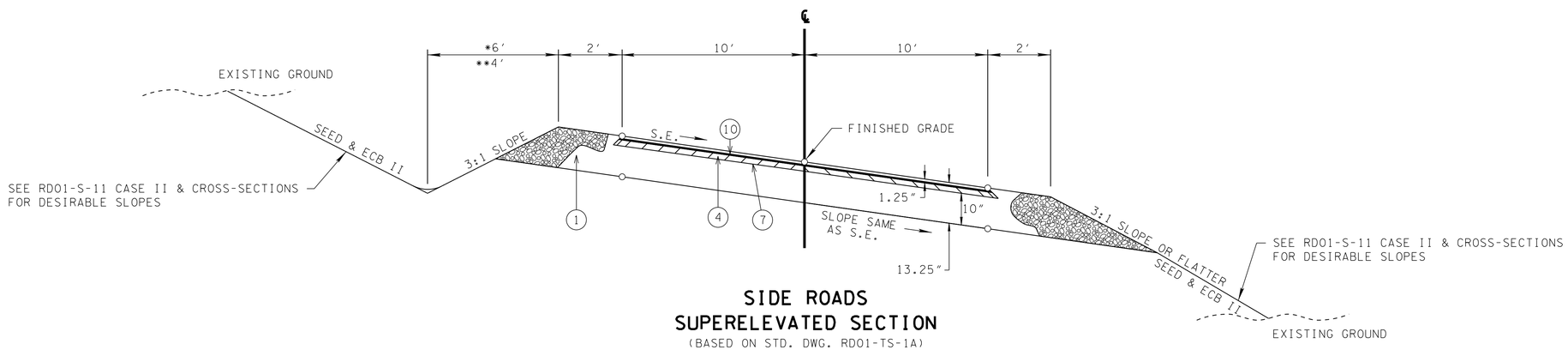
SIDE ROADS
TANGENT SECTION

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

**6' FOR OLD STEWART ROAD
***4' FOR LEE SEMINARY DIVERSION

OLD STEWART ROAD
STA. 18+90.00 TO STA. 19+87.79

LEE SEMINARY DIVERSION
STA. 20+12.00 TO STA. 20+88.00



SIDE ROADS
SUPERELEVATED SECTION

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

LEE SEMINARY DIVERSION
STA. 20+88.00 TO STA. 24+85.00

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TYPICAL SECTIONS

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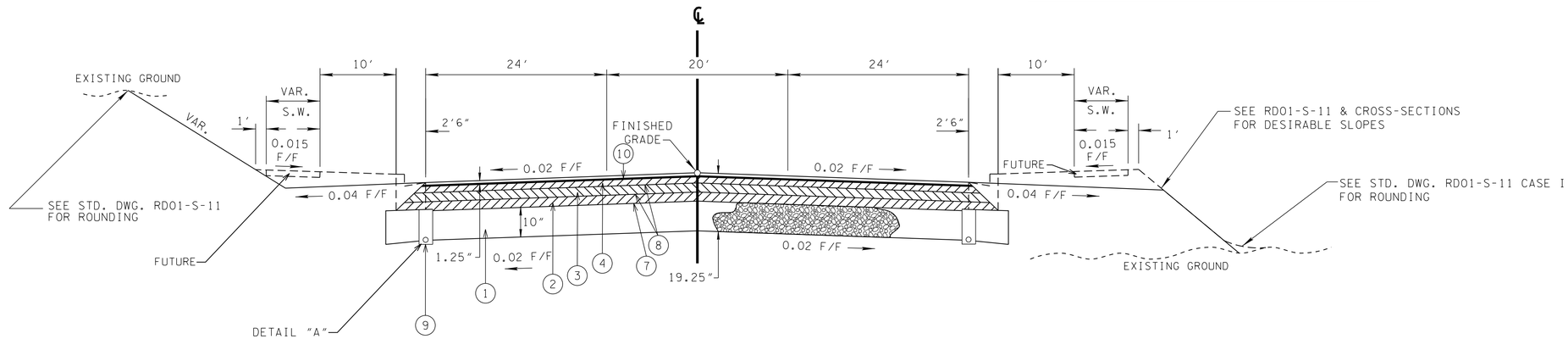
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	2G
CONST.	2015	71952-3544-04	2G

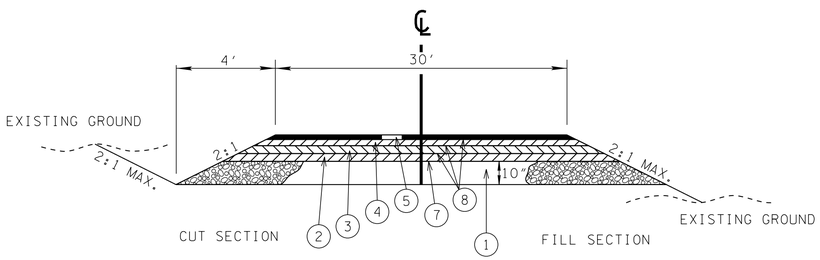
CONSTRUCT HIGHLAND PARK THROUGH BINDER COURSE. SURFACE COURSE WILL BE PLACED IN A SEPARATE CONTRACT.



HIGHLAND PARK BLVD.
TANGENT SECTION

(BASED ON STD. DWG. RD01-TS-3C)

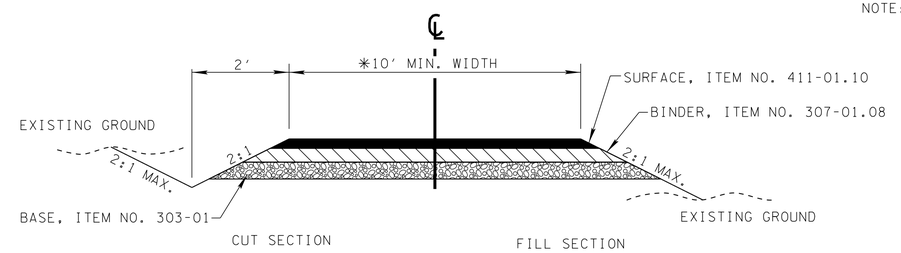
STA. 20+00.00 TO STA. 20+65.98



TYPICAL SECTION

BUSINESS ENTRANCE

STA. 42+68.82



TYPICAL SECTION

PRIVATE DRIVE TO
FIELD OR RESIDENTIAL PROPERTY

NOTE:
1. DITCH TO BE CONSTRUCTED WHERE DIRECTED BY THE ENGINEER.
2. ALL RADII TO BE 15' UNLESS NOTED OTHERWISE.
3. SEE SHEET 3 FOR DRIVEWAY NOTES.

SURFACE - 1¼"
BINDER - 2"
BASE - 4"

10' MIN. PRIVATE DRIVE OR RESIDENTIAL
* 16' FIELD ENTRANCE

PROPOSED PAVEMENT SCHEDULE

(1) **MINERAL AGGREGATE BASE - (VARIES) 2.03 TONS/C.Y.** ITEM 303-01 MINERAL AGGREGATE, TYPE "A" BASE, GRADING "D" (SEE TYPICAL SECTIONS FOR DEPTHS)	(6) **ASPHALTIC CONCRETE SURFACE (HOT MIX)(1.25") APPROX. 128.75 LB/S.Y.** ITEM 411-01.07 ASPHALT CONCRETE SURFACE (PG 64-22), ACS MIX, GRADING "E" (SHOULDER)
(2) **BITUMINOUS PLANT MIX BASE (HOT MIX)(3") APPROX. 270 LB/S.Y.** ITEM 307-01.02 ASPHALT CONCRETE MIX (PG 64-22)(BPMB-HM) GRADING "A-S" ITEM 307-01.03 AGGREGATE (PG 64-22)(BPMB-HM) GRADING "A-S" MIX	(7) **PRIME COAT** ITEM 402-01 BITUMINOUS MATERIAL FOR PRIME COAT (P.C.) 0.30-0.35 GAL/SY ITEM 402-02 AGGREGATE FOR COVER MATERIAL (P.C.) 8-12 LBS/SY
(3) **BITUMINOUS PLANT MIX BASE (HOT MIX)(3") APPROX. 345 LB/S.Y.** ITEM 307-01.01 ASPHALT CONCRETE MIX (PG 64-22)(BPMB-HM) GRADING "A"	(8) **TACK COAT** ITEM 403-01 BITUMINOUS MATERIAL FOR TACK COAT (T.C.) 0.07 GAL/SY
(4) **BITUMINOUS PLANT MIX BASE (HOT MIX)(2")APPROX. 226 LB/S.Y.** ITEM 307-01.08 ASPHALT CONCRETE MIX (PG 64-22)(BPMB-HM) GRADING "B-M2"	(9) **UNDERDRAINS** ITEM 710-02 AGGREGATE UNDERDRAINS (WITH PIPE)
(5) **ASPHALTIC CONCRETE SURFACE (HOT MIX)(1.25") APPROX. 132.5 LB/S.Y.** ITEM 411-01.10 ACS MIX (PG 64-22) GRADING "D"	(10) **BITUMINOUS PLANT MIX BASE (HOT MIX)(0.35") APPROX. 40 LB/S.Y.** ITEM 307-01.15 ASPHALT CONCRETE MIX (PG 64-22) GRADING "CS" (TO BE USED AS DIRECTED BY THE ENGINEER)

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TYPICAL SECTIONS

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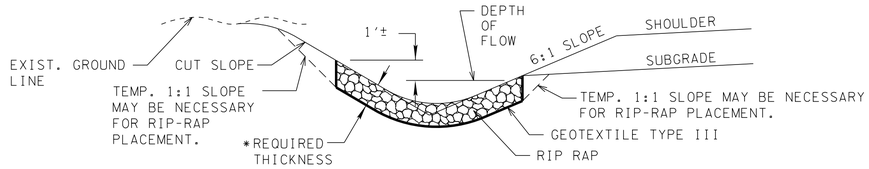
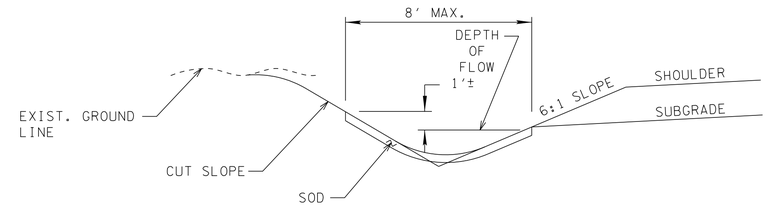
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	2H
CONST.	2015	71952-3544-04	2H

NOTE: EXC. ASSOCIATED WITH THE TEMP. SLOPE WILL BE CONSIDERED INCIDENTAL TO RIP-RAP IN PLACE.



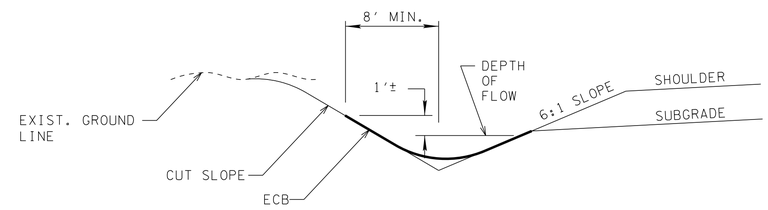
TYPICAL CUT DITCH W/ RIP-RAP LINING

* 1.5' FOR CLASS "A-1" RIP-RAP
2.5' FOR CLASS "B" RIP-RAP
3.5' FOR CLASS "C" RIP-RAP



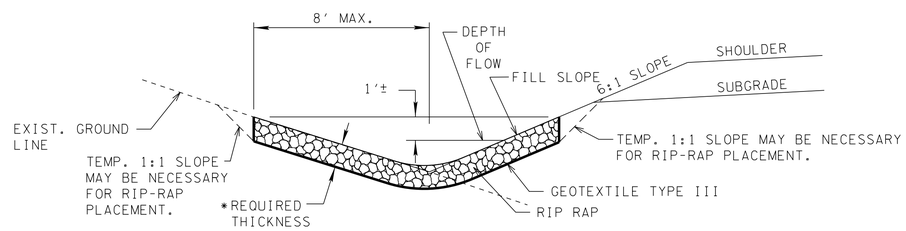
TYPICAL CUT DITCH W/ SOD

1. IN CUT DITCHES (NOT ROCK) ALL TREATMENTS ARE TO COME TO SUBGRADE.
2. TOPSOIL IS TO BE PLACED ON ALL SLOPES (NOT ROCK) ACCORDING TO SPECIFICATIONS.
3. SOD DITCHES ARE NOT SPECIFIED IN THE PLANS, BUT MAY BE USED FOR SPOT TREATMENTS AS DIRECTED BY THE PROJECT ENGINEER.



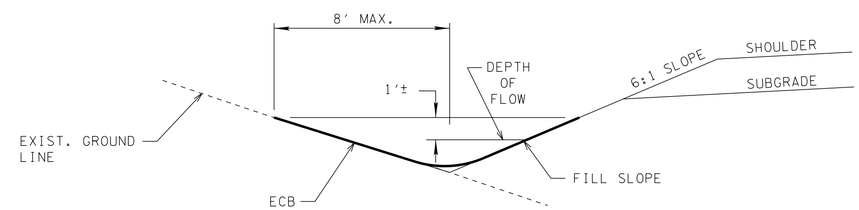
TYPICAL CUT DITCH W/ ECB LINING

NOTE: EXC. ASSOCIATED WITH THE TEMP. SLOPE WILL BE CONSIDERED INCIDENTAL TO RIP-RAP IN PLACE.



TYPICAL TOE OF FILL DITCH W/ RIP-RAP LINING

* 1.5' FOR CLASS "A-1" RIP-RAP
2.5' FOR CLASS "B" RIP-RAP
3.5' FOR CLASS "C" RIP-RAP



TYPICAL TOE OF FILL DITCH W/ ECB LINING

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DITCH DETAILS

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	71952-3544-04	2J

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.

SEEDING AND SODDING

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

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

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

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

GUARDRAIL

(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.

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

DRAINAGE

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

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

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

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

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

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

UTILITIES

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

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

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

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

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

FENCING

(1) LOCATION OF THE FENCE SHALL BE ONE FOOT INSIDE THE RIGHT-OF-WAY EXCEPT WHERE SHOWN ON THE PLANS.

(2) FENCES SHALL BE TURNED IN AT DRAINAGE STRUCTURES, STOCK PASSES AND BRIDGES WHERE DIRECTED BY THE ENGINEER SO AS TO ABUT WINGWALLS AND/OR ABUTMENTS.

(3) THE CONTRACTOR SHALL GIVE THE AFFECTED PROPERTY OWNERS TWO WEEKS NOTICE PRIOR TO CUTTING FENCES.

(4) THE CONTRACTOR SHALL BE REQUIRED TO INSTALL ACCESS CONTROL FENCES PRIOR TO CUTTING EXISTING STOCK FENCES IN AREAS UTILIZED BY DOMESTIC LIVESTOCK OR OTHER AREAS AS DIRECTED BY THE ENGINEER.

MISCELLANEOUS

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

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

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

PAVEMENT MARKINGS

TEMPORARY PAVEMENT MARKING ON INTERMEDIATE LAYERS

(4) 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.

(5) 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. 716-05.02, PAINTED PAVEMENT MARKING (8" BARRIER LINE), L.F.

(6) 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 4" SPRAY THERMOPLASTIC (60 mil) IS USED

(7) PERMANENT PAVEMENT LINE MARKINGS SHALL BE 4" 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. 716-13.01, SPRAY THERMO PVMT MRKNG (60 mil) (4IN LINE), L.M. THE CONTRACTOR SHALL HAVE THE OPTION OF USING REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK AND THEN INSTALLING THE PERMANENT MARKINGS AFTER THE PAVING OPERATION IS COMPLETED. THE TEMPORARY MARKINGS FOR THE FINAL SURFACE WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COSTS ARE TO BE INCLUDED IN THE PRICE BID FOR THE PERMANENT MARKINGS.

FINAL PAVEMENT MARKING IF REFLECTORIZED PAINT IS USED

(8) PERMANENT PAVEMENT LINE MARKINGS SHALL BE REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S 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 (4IN LINE), L.M.

DETOURS, LANE SHIFTS AND MEDIAN CROSS-OVERS

(9) THE PAVEMENT MARKING ON THE LANE SHIFTS FOR CENTERLINES AND EDGE LINES WILL BE INSTALLED AND MAINTAINED TO THE SAME STANDARDS AS FOR PERMANENT MARKINGS ON THE MAIN ROADWAY. THESE MARKINGS SHALL BE IN PLACE PRIOR TO ALLOWING TRAFFIC ONTO THE PAVEMENT. THESE PAVEMENT MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-05.01, PAINTED PAVEMENT MARKING (4" LINE), LIN. MI.

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

PAVEMENT

PAVING

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

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

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CONST.	2015	71952-3544-04	2K

GENERAL NOTES CON'T.

PAVEMENT

PAVING

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

GRADED SOLID ROCK

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

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

SIGNING

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

(2) 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.

(3) 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.

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

(5) 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.

CONSTRUCTION WORK ZONE & TRAFFIC CONTROL

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

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

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

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

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

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

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

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

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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.

EROSION PREVENTION AND SEDIMENT CONTROL

NPDES

(1) REFER TO THE EROSION PREVENTION AND SEDIMENT CONTROL PLAN, SHEET 10, FOR NOTES REGARDING SEASONAL WORK LIMITATION OR LIMITATION ON THE TOTAL AREA OF EXPOSED SOIL.

ENVIRONMENTAL

(1) STAFF FROM THE TDOT ENVIRONMENTAL DIVISION COMPREHENSIVE INSPECTION OFFICE SHALL BE INVITED TO ALL PRE-CONSTRUCTION MEETINGS.

ECOLOGY

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

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

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

STREAM RELOCATION

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

STANDARD STREAM MITIGATION

(1) IF THE RELOCATED CHANNEL FLOWS INTO A PROPOSED CULVERT, THE NEW CHANNEL SHALL BE RELOCATED PRIOR TO INSTALLATION OF THE CULVERT TO ENSURE CORRECT ELEVATION LEVELS ARE SET FOR THE INLET. THE NEW CHANNEL SHALL BE EXCAVATED AND STABILIZED DURING A LOW WATER PERIOD. RIP-RAP (ONLY AS SHOWN ON PLANS), SEEDING AND/OR SOD SHALL BE INSTALLED IMMEDIATELY FOLLOWING CHANNEL COMPLETION. TREES SHALL BE INSTALLED IN THE FIRST PLANTING SEASON FOLLOWING CHANNEL EXCAVATION. PLANTING SEASON IS CONSIDERED TO BE BETWEEN NOVEMBER 1 AND MARCH 31. WATER SHALL BE DIVERTED INTO THE NEW CHANNEL ONLY AFTER IT IS COMPLETELY STABILIZED, AND ONLY DURING A LOW WATER PERIOD. STABILIZED MEANS THAT ALL SPECIFIED ROCK, EROSION CONTROL BLANKETS, SEEDING, SOD, OR MATERIALS ARE IN PLACE AND ESTABLISHED. NOTIFY THE REGIONAL BIOLOGIST WHEN WATER IS DIVERTED INTO EACH NEW CHANNEL.

CHANNEL RELOCATION SEQUENCE

(1) FLAG EDGE OF THE NEW CHANNEL TOP OF BANK PRIOR TO CLEARING. DO NOT CLEAR LARGE TREES IN POSITION TO SHADE THE NEW CHANNEL. LEAVE AS MANY TREES AND SHRUBS AS POSSIBLE BETWEEN TOE OF THE NEW HIGHWAY SLOPE AND THE STREAM.

(2) EXCAVATE THE NEW CHANNEL "IN THE DRY" BY LEAVING AREAS OF UNDISTURBED EARTH (DIVERSION BERMS) IN PLACE AT BOTH ENDS.

(3) SHAPE CHANNEL TO SPECIFICATIONS SHOWN. REMOVE LOOSE SOILS AND DEBRIS.

(4) PLACE TOPSOIL, EROSION CONTROL BLANKET, SEED, SOD, OR OTHER MATERIAL AS SPECIFIED.

(5) REMOVE DIVERSION BERMS, BEGINNING WITH THE MOST DOWNSTREAM; BANKS AND BOTTOM ELEVATION OF THE OLD CHANNEL SHOULD TRANSITION SMOOTHLY INTO THE NEW CHANNEL. THE ELEVATIONS OF THE NEW CHANNEL BOTTOM AT EACH END OF THE RELOCATION SEQUENCE SHOULD MATCH THE ELEVATIONS OF THE EXISTING CHANNEL, AND A STEADY PERCENT SLOPE SHOULD BE MAINTAINED THROUGHOUT THE RELOCATED CHANNEL CENTERLINE OR AS SPECIFIED.

(6) INSTALL TREES ACCORDING TO STANDARD SPECIFICATIONS SECTION 802. PLANT TWO ALTERNATING ROWS OF TREE OR SHRUB SPECIES ON BOTH SIDES OF THE NEW CHANNELS; THE FIRST ROW SHALL BE SHRUBS THAT ARE PLANTED ON THE CHANNEL SLOPE 10' APART, CENTERED ON THE MIDPOINT OF THE SLOPE, BUT NOT WITHIN ONE FOOT FROM THE PROPOSED RIP-RAP. ALONG TOP OF BANK, TWO- TO FIVE-FOOT (2-5 FT) CONTAINER GROWN TREES ARE TO BE PLANTED WITHIN ONE FOOT OF THE TOP OF BANK, ALTERNATING THE IDENTIFIED SPECIES AND 10' APART. PLEASE REFER TO THE PROVIDED SKETCHES.

(7) ONLY RIP-RAP SHOWN ON PLANS SHOULD BE USED IN THE RELOCATED CHANNEL REACH. ANY OTHER PROPOSED RIP-RAP SHOULD BE COORDINATED WITH THE ENVIRONMENTAL DIVISION THROUGH THE TDOT CONSTRUCTION OFFICE.

(8) REQUESTS BY ANY AGENCY THAT WOULD REQUIRE THE MODIFICATION OF CHANNELS, ELEVATIONS, RIP-RAP OR ANY OTHER STREAM MITIGATION ITEMS ASSOCIATED WITH THE CHANNEL RELOCATIONS SHALL BE REFERRED TO THE TDOT ENVIRONMENTAL DIVISION VIA THE HEADQUARTERS CONSTRUCTION OFFICE FOR THE COORDINATION WITH ALL AGENCIES AND TDOT DIVISIONS. THE TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION MAY MAKE RECOMMENDATIONS CONCERNING EROSION CONTROL VIA THE ENGINEER WITHOUT SUCH REFERRAL.

TREES

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

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

(3) TREES SHALL BE WATERED AS REQUIRED THROUGH THE PERIOD OF ESTABLISHMENT TO INSURE SURVIVAL.

SEEDING AND SODDING

(1) ITEM NO. 801-02.01 SHALL BE USED ON SLOPES 2.5:1 OR STEEPER AND OTHER AREAS AS INDICATED IN THE PLANS THAT ARE INACCESSIBLE FOR MOWING.

(2) ITEM NO. 803-01, SODDING (NEW SOD) SHALL BE PLACED AT LOCATIONS SHOWN ON THE PLANS AS WELL AS LOCATIONS DIRECTED BY THE ENGINEER.

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	71952-3544-04	2N

PAVEMENT QUANTITIES

LOCATION	PAY ITEMS										
	303-01 (TON)	307-01.01 (TON)	307-01.02 (TON)	307-01.03 (TON)	307-01.08 (TON)	307-01.15 (TON) (1)	402-01 (TON)	402-02 (TON)	403-01 (TON)	411-01.07 (TON)	411-01.10 (TON)
BENNETT RD.	9992	1467	37	1067	1188	174	17	66	8	62	193
SIDE ROADS	1764				247	37	3	13	1		21
DRIVEWAYS	170				87						51
TRAFFIC CONTROL	500										
TOTALS	**12426**	**1467**	**37**	**1067**	**1522**	**211**	**20**	**79**	**9**	**62**	**265**

(1) TO PROTECT THE BINDER SHOULD IT BE EXPOSED FOR A LONG PERIOD OF TIME OR OVER THE WINTER MONTHS. TO BE USED AS DIRECTED BY PROJECT ENGINEER.

TRAFFIC CONTROL QUANTITIES

	ITEM NO.	DESCRIPTION	M.U.T.C.D. NO.	UNIT	SIGNS S.F. / EACH	SIZE	PHASE 1	PHASE 2	TOTAL
		END ROAD WORK	G20-2		8	48"X24"	5	3	40.0
		ROAD WORK 1/2 MILE	W20-1		16	48"X48"	5	3	80.0
		ROAD WORK 1500 FT	W20-1		16	48"X48"	2	2	32.0
		ROAD WORK 1000 FT	W20-1		16	48"X48"	5	3	80.0
		ROAD WORK 500 FT	W20-1		16	48"X48"	5	3	80.0
		ONE LANE ROAD 1500 FT	W20-4		16	48"X48"	2		32.0
		FLAGGER	W20-7		16	48"X48"	2		32.0
		SUPPLEMENTAL SPEED	W13-1P		4	24"X24"		4	16.0
		BE PREPARED TO STOP	W3-4		9	36"X36"		2	18.0
		SUPPLEMENTAL PLATE 1000 FT	W16-2P		3	24"X18"		2	6.0
		SIGNAL AHEAD (SYMBOL)	W3-3		9	36"X36"		3	27.0
		STOP HERE ON RED	R10-6		6	24"X36"		2	12.0
		STAY IN LANE TO EXT. GREEN	R10-6 (MOD.)		8.75	30"X42"		2	17.5
		LANE SHIFT (SYMBOL)	W1-4aR		6.25	30"X30"		2	12.5
		MAXIMUM X MINUTE RED			14	42"X48"		2	28.0
		MAINTAIN XX MPH SPEED			10.5	42"X36"		2	21.0
(1)(5)	712-06	**TOTALS FOR SIGNS**		S.F.					534
(1)(7)	705-08.51	PORTABLE IMPACT ATTENUATOR NCHRP350 - TL3		EACH			2	2	2
(2)	712-02.02	INTERCONNECTED PORTABLE BARRIER RAIL		L.F.			1030	1160	1160
(1)	712-04.01	FLEXIBLE DRUMS (CHANNELIZING)		EACH			38	100	100
(1)	712-04.50	PORTABLE BARRIER RAIL DELINEATOR		EACH			52	58	58
(4)	712-05.01	WARNING LIGHTS (TYPE A)		EACH				8	8
(3)	712-06.01	VERTICAL PANELS		S.F.				80	80
(4)	712-07.03	TEMPORARY BARRICADES (TYPE III)		L.F.				48	48
	712-09.01	REMOVABLE PAVEMENT MARKING LINE		L.F.				4600	4600
	712-09.04	REMOVABLE PAVEMENT MARKING (STOP LINE)		L.F.				48	48
(1)(2)	713-16.01	CHANGEABLE MESSAGE SIGN UNIT		EACH				4	4
	716-05.01	PAINTED PAVEMENT MARKING (4" LINE)		L.M.			1.83	2.46	4.29
	716-05.05	PAINTED PAVEMENT MARKING (STOP LINE)		L.F.				119	119
(6)	730-40.02	TEMPORARY TRAFFIC SIGNAL SYSTEM		LS				1	1

(1) TOTAL QUANTITY FOR ITEM INCLUDES ONLY THE MAXIMUM REQUIRED FOR ANY ONE PHASE. INCLUDES RELOCATION.
(2) TO BE USED AS DIRECTED BY PROJECT ENGINEER.
(3) TO BE USED ALONG LEE SEMINARY DIVERSION.
(4) FOR USE WITH THE TEMPORARY TRAFFIC SIGNAL SETUP AS DIRECTED BY THE ENGINEER
(5) BID AMOUNT FOR FLAGGER SIGNS SHALL INCLUDE RESETTING THE SIGNS FOR ALL ADDITIONAL PHASES.
(6) TEMPORARY TRAFFIC SIGNAL SYSTEM SHALL INCLUDE 3 SIGNAL HEADS.
(7) 1160 LF OF PORTABLE BARRIER RAIL SHALL BE LEFT IN PLACE AS SHOWN ON SHEET 5A. THIS PORTABLE BARRIER RAIL WILL BECOME THE PROPERTY OF THE CONTRACTOR AWARDED THE I-40 INTERCHANGE PROJECT @ MINE LICK CREEK RD.

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TABULATED QUANTITIES

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	71952-3544-04	2P

DITCHES

ROAD	STATION		SIDE			SLOPE			TYPE	WIDTH OF TREATMENT	CLASS A-1 RIP-RAP	CLASS B RIP-RAP	ECB TYPE II	GEOTEXTILE TYPE III	REMARKS
	FROM	TO	LT	TYPE	RT	FORE (H/V)	BACK (H/V)	DEPTH OF FLOW (FT.)		(L.F.)	709-05.06 (TONS)	709-05.08 (TONS)	805-12.02 (S.Y.)	740-10.03 (S.Y.)	
BENNETT RD. TO OLD STEWART RD.	40+00	45+50	X			3	4	0.7	SP. V	12	516			685	
OLD STEWART RD.	18+90	19+50			X	3	3	0.5	SP. V	16			107		
OLD STEWART RD. TO BENNETT RD.	18+90	46+67	X			4	3	1.9	SP. V	21		429		321	
BENNETT RD.	38+50	39+50			X	4	3	0.7	SP. V	16			178		
BENNETT RD.	39+50	46+67			X	4	3	0.7	SP. V	13	881			1166	
BENNETT RD.	46+67	49+00	X			3	4	1.4	SP. V	20			518		
BENNETT RD.	49+00	50+30	X			4	6	0.8	SP. V	18	243			307	
BENNETT RD.	50+30	53+80	X			4	6	0.7	V	20			778		
BENNETT RD.	53+83	57+00	X			4	6	0.8	SP. V	20			736		
BENNETT RD.	57+00	62+50	X			2	4	0.8	SP. V	11	600			808	
BENNETT RD.	62+50	64+25	X			4	4	0.9	SP. V	16	266			343	
BENNETT RD.	49+55	51+13			X	6	4	0.7	SP. V	18	215			273	
BENNETT RD.	51+70	52+50			X	6	2	0.5	SP. V	12	103			136	
BENNETT RD.	52+50	56+00			X	4	2	1.3	SP. V	16			711		
BENNETT RD.	56+00	60+00			X	4	2	0.6	SP. V	10	347			474	
BENNETT RD.	60+00	60+80			X	4	2	0.6	SP. V	10	79			107	
BENNETT RD.	62+01	64+25			X	6	3	1.2	SP. V	21	453			568	
LEE SEMINARY DIVERSION	20+50	24+50			X	3	4	0.4	SP. V	10	406			553	
TOTALS											**4109**	**429**	**3027**	**5741**	

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DEPARTMENT OF TRANSPORTATION

TABULATED QUANTITIES

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	71952-3544-04	20

PROPOSED GUARDRAIL

SHEET NO.	LOCATION	SIDE		STATION		GUARDRAIL	TERMINAL ANCHORS			REMARKS
		LT	RT	FROM	TO	SINGLE TYPE 2 705-02.02 (L.F.)	TYPE 21 705-04.04 (EACH)	TYPE IN-LINE 705-04.05 (EACH)	TYPE 38 705-04.07 (EACH)	
4A	BENNETT RD		X	44+53.25	50+22.17	550.00		1	1	ROUNDED END ELEMENT
4A/5A	BENNETT RD	X		45+90.79	51+71.07	556.25	1	1	1	
TOTALS						**1106**	**1**	**2**	**2**	

ESTIMATED GRADING QUANTITIES

LOCATION	ROAD & DRAINAGE EXC. (UNCL.) 203-01	EMBANKMENT	TOPSOIL	PLACING & SPREADIN TOPSOIL	UNDERCUT	PREBENCHING	REMARKS
	COMMON (C.Y.)	COMMON (C.Y.)	FROM EXC. 203-01 (C.Y.)	203-04 **(C.Y.)	203-05 ***(C.Y.)	203-01 (C.Y.)	
BENNETT ROAD	54270	1101	3504	3504	4860	189	
OLD STEWART RD.	165	33	91	91	67		
HIGHLAND PARK BLVD.	237		102	102			
LEE SEMINARY DIVERSION	1473	93	358	358			
DRIVEWAYS	319	53					
*EROSION CONTROL	727						
TOTALS	**57191**	**1280**	**4055**	**4055**	**4927**	**189**	

*229 C.Y. FOR TEPORARY CONSTRUCTION EXISTS.
**2710 C.Y. FROM EXC., AND 637 C.Y. FROM EMB.
***UNDERCUT AREAS TO BE REPLACED WITH GRADED SOLID ROCK
277 C.Y. FOR STR-A ADDED TO BENNETT 203-01.

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TABULATED QUANTITIES

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	71952-3544-04	2R

SIDE DRAIN TABULATION

ROAD	STATION	LOCATION LT	LOCATION RT	DESCRIPTION	SURFACE WIDTH (L.F.)	RCP CLASS III OR CMP 16 GA. OR HDPE OR PVC (L.F.) FILL HEIGHT < OR = 10 FT. 18" 607-39.02	CLASS A-1 RIP-RAP 709-05.06 (TON)	GEO-TEXTILE (TYPE III) 740-10.03 (S.Y.)	REMARKS
BENNETT RD.	42+68.82	X		ASPHALT - BUS. ENT.	30	90	2	2	
BENNETT RD.	50+33.25		X	ASPHALT - FLD. ENT.	16	40	2	2	
LEE SEMINARY DIVERSION	20+80.00		X	ASPHALT - PVT. DR.	10	50	2	2	
TOTALS						**180**	**6**	**6**	

CROSS DRAIN TABULATION (LOCAL ROADS)

STATION	LOCATION	RCP CLASS III OR CMP 14 GA. OR HDPE OR PVC (L.F.) FILL HEIGHT < OR = 16 FT. 18" 607-03.30	24" 607-05.30	SKEW	CLASS A-1 RIP-RAP 709-05.06 (TON)	CLASS B RIP-RAP 709-05.08 (TON)	GEO-TEXTILE (TYPE III) 740-10.03 (S.Y.)	END TREATMENT INLET TYPE	INLET DRAWING NO.	OUTLET TYPE	OUTLET DRAWING NO.	18" TYPE U ENDWALL 611-07.54 (EACH)	24" TYPE U ENDWALL 611-07.58 (EACH)	REMARKS
19+63.58	OLD STEWART RD.	48		80° RT.		4	3	U	D-PE-18(A),(B)	U	D-PE-18(A),(B)	2		
20+44.64	HIGHLAND PARK BLVD.		127	12° RT.		6	4	U	D-PE-24(A),(B)	U	D-PE-24(A),(B)		2	
20+52.79	LEE SEMINARY DIVERSION	35		14° RT.	2		2	U	D-PE-18(A),(B)	U	D-PE-18(A),(B)	2		
TOTALS		**83**	**127**		**2**	**10**	**8**					**4**	**2**	

CROSS DRAIN TABULATION (ARTERIALS)

STATION	LOCATION	RCP CLASS III FILL HT. < OR = 10 FT. 68"X43" 607-16.10	SKEW	CLASS B RIP-RAP 709-05.08 (TON)	CLASS C RIP-RAP 709-05.09 (TON)	GEO-TEXTILE (TYPE III) 740-10.03 (S.Y.)	END TREATMENT INLET TYPE	INLET DRAWING NO.	OUTLET TYPE	OUTLET DRAWING NO.	CLASS A CONC. 611-07.01 (C.Y.)	REINF. STEEL 611-07.02 (LB.)	REMARKS
46+67.00	BENNETT RD.	47	90°	16	95	100	OVAL	D-PE-5	OVAL	D-PE-5	8	470	
TOTALS		**47**		**16**	**95**	**100**					**8**	**470**	

BOX CULVERT TABULATION

STATION	LOCATION	SPAN	HEIGHT	LENGTH	SKEW	DRAINAGE AREA (ACRES)	BOX CULVERT BOX CLASS "A" CONC. 604-01.01 (C.Y.)	BOX CULVERT BOX REINF. STEEL 604-01.02 (LB.)	DRAWING NO.	CLASS A-1 RIP-RAP 709-05.06 (TONS)	GEO-TEXTILE (TYPE III) 740-10.03 (S.Y.)	FOUNDATION FILL MATERIAL 204-08 (C.Y.)	REMARKS
50+00.49	BENNETT RD.	6	3	102	46° RT.	74.87	118	27131	STD-17-71	75	105	34	
TOTALS							**118**	**27131**		**75**	**105**	**34**	

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TABULATED QUANTITIES

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	3
CONST.	2015	71952-3544-04	3

RIGHT – OF – WAY

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

UTILITY OWNERS

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UPPER CUMBERLAND ELECTRIC
MEMBERSHIP COOPERATIVE
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WATER:

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COOKEVILLE BOAT DOCK ROAD UTILITY DISTRICT
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R.O.W. & UTILITY NOTES

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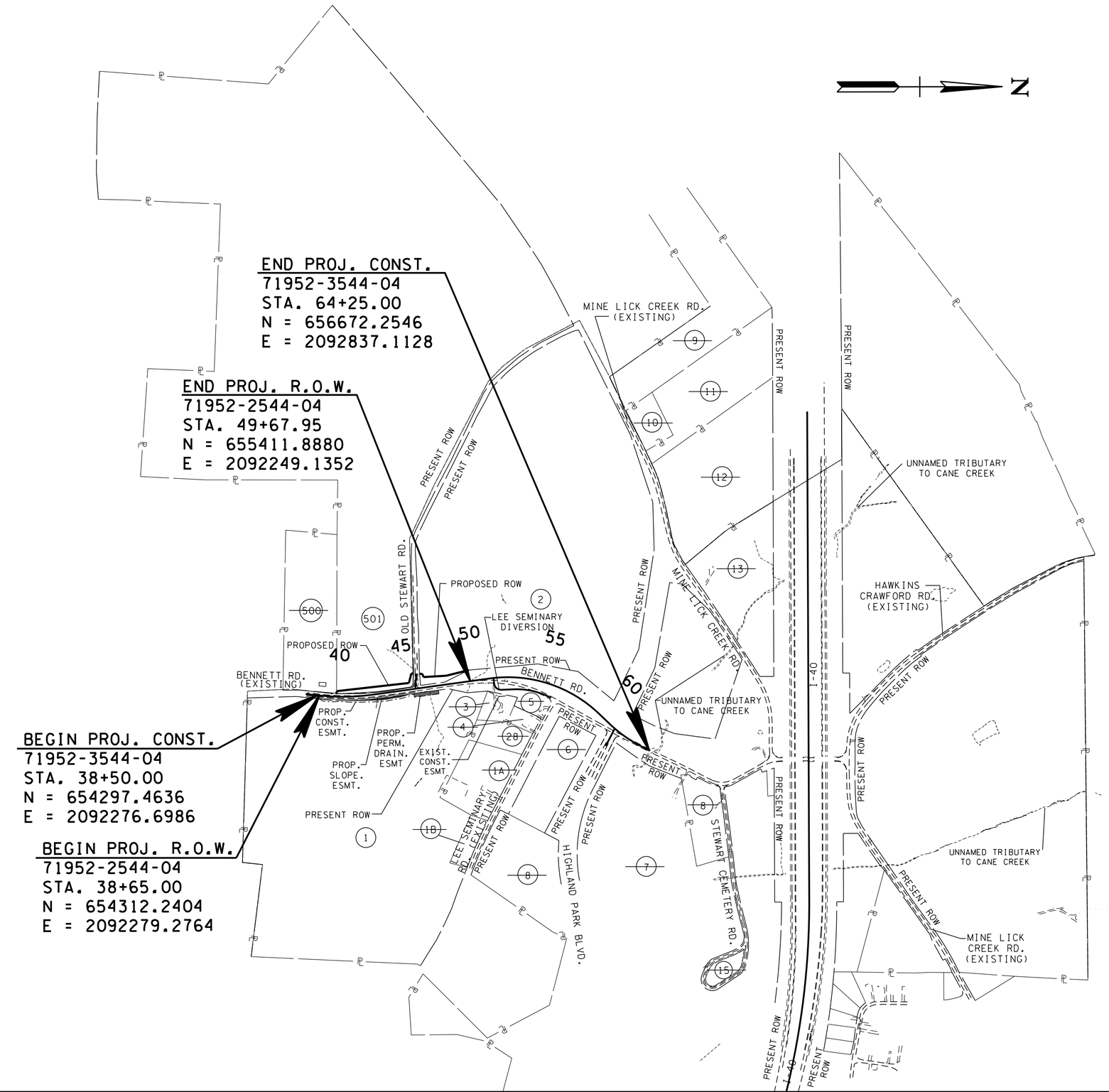
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	3A
CONST.	2015	71952-3544-04	3A



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DEPARTMENT OF TRANSPORTATION

PROPERTY MAP

STA.38+50 TO STA.64+25

SCALE: 1"=400'

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	3B
CONST.	2015	71952-3544-04	3B

R.O.W. ACQUISITION TABLE

TRACT NO.	PROPERTY OWNERS	COUNTY RECORDS				TOTAL AREA ACRES			AREA TO BE ACQUIRED ACRES			AREA REMAINING ACRES		EASEMENT ACRES		
		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	VERNON WILSON	64	71.02	382	553		69.000	69.000					69.000	0.112	0.100	0.152
2	BILLY L. WILLIAMS AND WIFE EVELYN P.	64	32	179	65	102.899	2.795	105.694	0.315		0.315	102.584	2.795			
3	WALTER E. PRESLEY AND WIFE BRENDA I.	64	69.01	370	611		1.230	1.230					1.230			
4	SAMANTHA R. SHERRELL	64	69.03	RB822	574		1.600	1.600					1.600			
5	GEORGE D. STEPHENS AND WIFE LINDA	64	69.02	RB184	740		0.710	0.710					0.710			
6	PUTNAM COUNTY AND COOKEVILLE CITY	64	31	RB366	576		77.000	77.000					77.000			
6B	PUTNAM COUNTY AND COOKEVILLE CITY	64	28	RB366	576		12.000	12.000					12.000			
7	PUTNAM COUNTY AND COOKEVILLE CITY	64	30	RB342	158		164.610	164.610					164.610			
8	PUTNAM COUNTY AND COOKEVILLE CITY	64	112	RB349	201		164.610	164.610					164.610			
9	CHARLES CRAWFORD AND WIFE LINDA	64	34	303	387	15.600		15.600				15.600				
10	UNION GRAVE BAPTIST CHURCH	64	33	RB254	197	1.000		1.000				1.000				
11	CHARLES CRAWFORD AND WIFE LINDA	64	34.06	308	235	10.430		10.430				10.430				
12	TOMMIE KYLE HANNA AND WIFE KIMBERLY JOYCE	64	34.07	303	429	15.800		15.800				15.800				
13	JOHN MEDLEY	64	34.1	319	249	10.120		10.120				10.120				
14	BRICIE RICE %PAUL SWALLOWS,CPA	64	31.01	105	427		0.250	0.250					0.250			
15	STEWART CEMETERY	64	29				1.300	1.300					1.300			
16	TIFFANY K. MACKIE	65H	A38.00	RB557	348		1.000	1.000					1.000			
17	FRED H. BROWN	65H	A37.00	RB501	628		1.000	1.000					1.000			
18	ANGELA D. CROW	65H	A36.00	RB333	231		1.000	1.000					1.000			
19	TIM CLARK AND GARY JETT	65H	A35.00	RB592	210		1.000	1.000					1.000			
20	FRED H. BROWN	65H	A34.00	RB596	69		1.000	1.000					1.000			
21	CLAUDE LAVERN CRAWFORD	64	18.01	WILL	382	69.000		69.000				69.000				
22	CLAUDE LAVERN CRAWFORD	64	18	304	413	25.000		25.000				25.000				
23	SHERIDAN FAMILY PARTNERS L P	64	27	402	63	76.971	11.029	88.000				76.971	11.029			
24	MATTEHW TRAVIS MANLEY AND WIFE AMANDA M.	65H	A45.00	RB520	98		1.000	1.000					1.000			
25	MARK CRABTREE	65	88.01	344	211		0.770	0.770					0.770			
501	THE INDUSTRIAL DEVELOPMENT BOARD OF THE CITY OF COOKEVILLE, TENNESSEE	064	066.00	832	191	186.020		186.020	0.448		0.448	185.572				
500	DANIEL N. & MARTHA HALL	064	072.00	393	5	1.000		1.000				1.000				
ACQUISITION TOTALS (ACRES)									0.763	0.000	0.763			0.112	0.100	0.152

DISTURBED AREA

IN BETWEEN SLOPE LINES	6.580 (AC)
FOR STOCKPILE	2.289 (AC)
15 FOOT WIDE STRIP (OUTSIDE SLOPE LINES)	1.773 (AC)
TOTAL DISTURBED AREA	10.642 (AC)

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DEPARTMENT OF TRANSPORTATION

RIGHT-OF-WAY ACQUISITION TABLE

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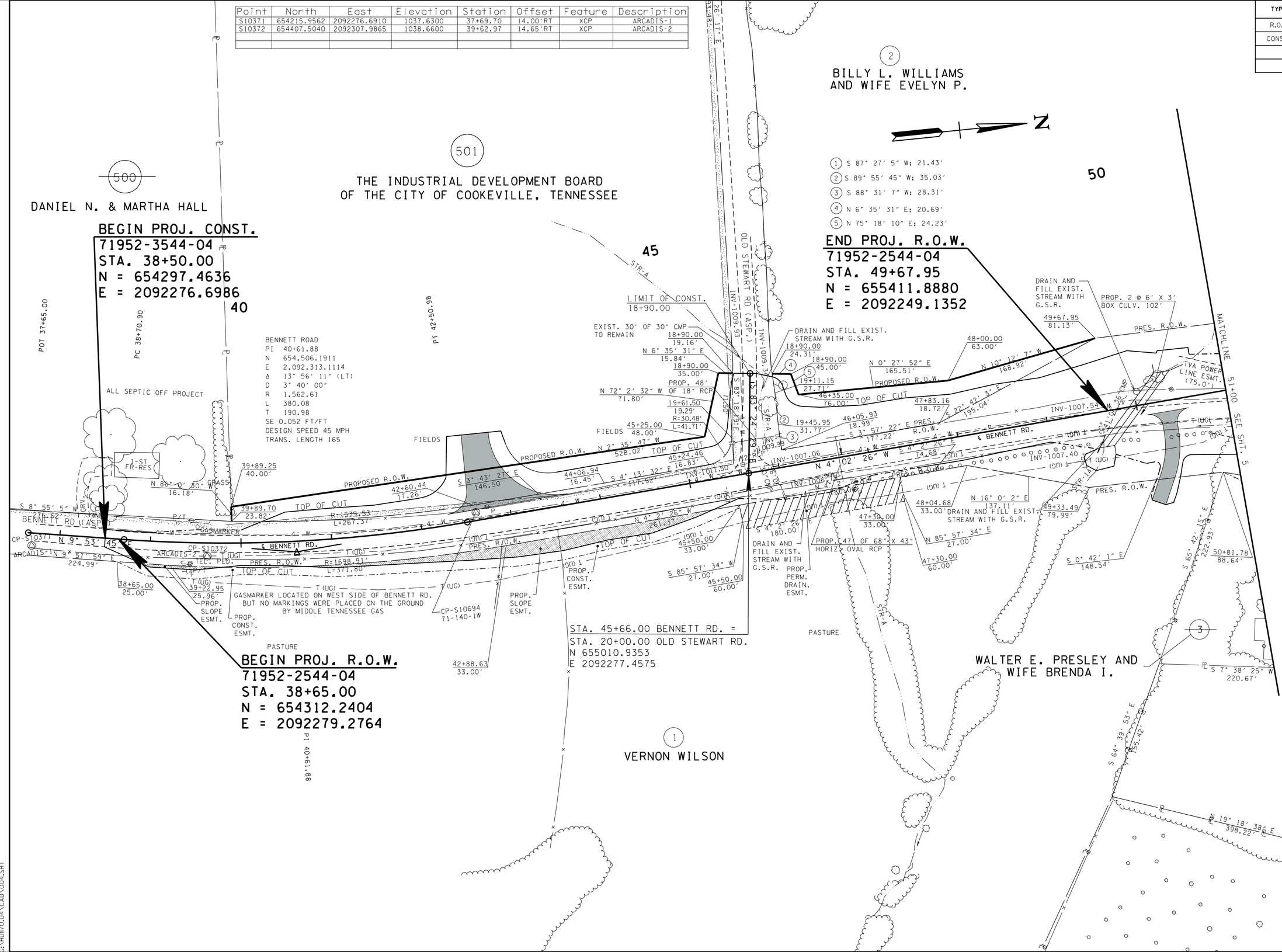
Point	North	East	Elevation	Station	Offset	Feature	Description
S10371	654215.9562	2092276.6910	1037.6300	37+69.70	14.00'RT	XCP	ARCADIS-1
S10372	654407.5040	2092307.9865	1038.6600	39+62.97	14.65'RT	XCP	ARCADIS-2

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	4
CONST.	2015	71952-3544-04	4



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COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.0000749 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA.38+50 TO STA.51+00

SCALE: 1"=50'

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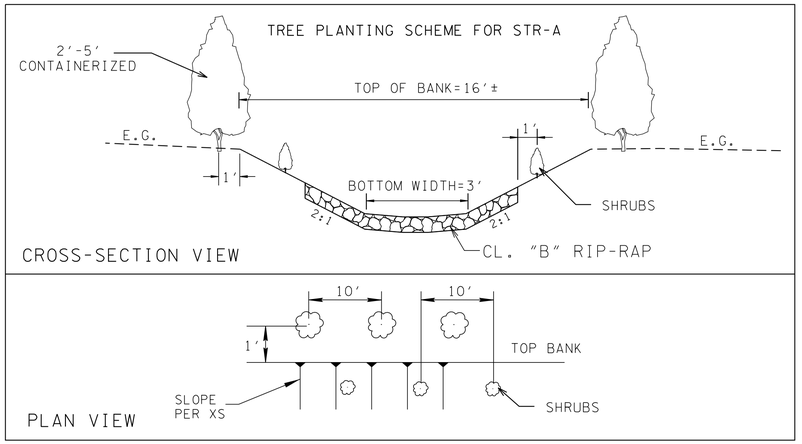
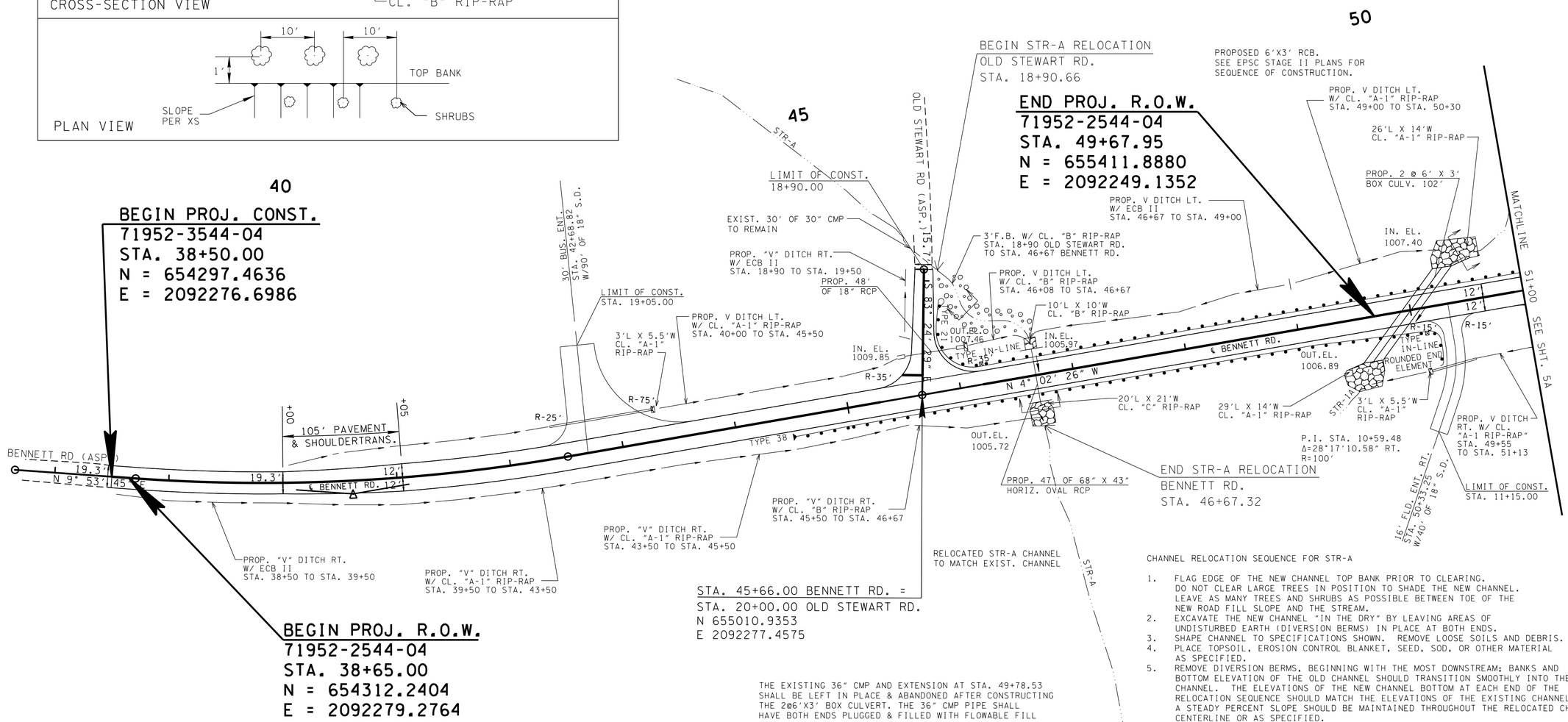
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	4A
CONST.	2015	71952-3544-04	4A



TREE AND SHRUB SPECIES FOR STR-A:

ITEM #	DECSRIPTION	UNIT	QTY
802-11.12	CORNUS FLORIDA (FLOWERING DOGWOOD) 2-5' IN HEIGHT, CONTAINERIZED	EACH	6
802-11.14	DIOSPYROS VIRGINIANA (PERSIMMON) 2-5' IN HEIGHT, CONTAINERIZED	EACH	6
802-11.26	PLATANUS OCCIDENTALIS (SYCAMORE) 2-5' IN HEIGHT, CONTAINERIZED	EACH	5
802-13.14	CALLICARPA AMERICANA (AMERICAN BEAUTY BERRY) 2-5' IN HEIGHT, CONTAINERIZED	EACH	20

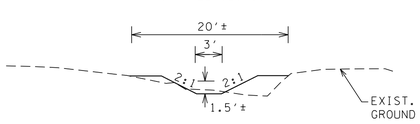


THE EXISTING 36" CMP AND EXTENSION AT STA. 49+78.53 SHALL BE LEFT IN PLACE & ABANDONED AFTER CONSTRUCTING THE 2@6'X3' BOX CULVERT. THE 36" CMP PIPE SHALL HAVE BOTH ENDS PLUGGED & FILLED WITH FLOWABLE FILL AS DIRECTED BY THE ENGINEER.

CHANNEL RELOCATION SEQUENCE FOR STR-A

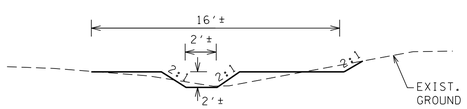
1. FLAG EDGE OF THE NEW CHANNEL TOP BANK PRIOR TO CLEARING. DO NOT CLEAR LARGE TREES IN POSITION TO SHADE THE NEW CHANNEL. LEAVE AS MANY TREES AND SHRUBS AS POSSIBLE BETWEEN TOE OF THE NEW ROAD FILL SLOPE AND THE STREAM.
2. EXCAVATE THE NEW CHANNEL "IN THE DRY" BY LEAVING AREAS OF UNDISTURBED EARTH (DIVERSION BERMS) IN PLACE AT BOTH ENDS.
3. SHAPE CHANNEL TO SPECIFICATIONS SHOWN. REMOVE LOOSE SOILS AND DEBRIS.
4. PLACE TOPSOIL, EROSION CONTROL BLANKET, SEED, SOD, OR OTHER MATERIAL AS SPECIFIED.
5. REMOVE DIVERSION BERMS, BEGINNING WITH THE MOST DOWNSTREAM; BANKS AND BOTTOM ELEVATION OF THE OLD CHANNEL SHOULD TRANSITION SMOOTHLY INTO THE NEW CHANNEL. THE ELEVATIONS OF THE NEW CHANNEL BOTTOM AT EACH END OF THE RELOCATION SEQUENCE SHOULD MATCH THE ELEVATIONS OF THE EXISTING CHANNEL, AND A STEADY PERCENT SLOPE SHOULD BE MAINTAINED THROUGHOUT THE RELOCATED CHANNEL CENTERLINE OR AS SPECIFIED.
6. PLANT TREES AND SHRUBS ACCORDING TO STANDARD SPECIFICATIONS SECTION 802. PLANT TWO ALTERNATING ROWS OF TREE OR SHRUB SPECIES ON BOTH SIDES OF THE NEW CHANNELS; THE FIRST ROW SHALL BE SHRUBS THAT ARE PLANTED ON THE CHANNEL SLOPE 10' APART, CENTERED ON THE MIDPOINT OF THE SLOPE. ALONG TOP OF BANK, TWO- TO FIVE-FOOT (2-5 FT) CONTAINER GROWN TREES ARE TO BE PLANTED WITHIN ONE FOOT OF THE TOP OF BANK, ALTERNATING THE IDENTIFIED SPECIES AND 10' APART. PLEASE REFER TO THE PROVIDED SKETCHES.

STR-A
CHANNEL SECTION



FOR 68" X 43" HORIZ. OVAL RCP INLET AND OUTLET DESIGN LOW FLOW IN RIP-RAP AREA.

STR-1A
CHANNEL SECTION



FOR THE PROP. DBL. 6' X 3' BOX CULVERT INLET AND OUTLET DESIGN, SEE ALTERNATE SECTION "A"-"A" IN STANDARD DRAWING STD-17-20 (LOW FLOW CHANNEL CONSTRUCTION DETAILS FOR CULVERT INLET AND OUTLET).

THE EXISTING STEAMBED OF STR-A SHALL BE UNDERCUT AND BACKFILLED WITH GRADED SOLID ROCK TO CONFORM TO THE ORIGINAL GROUND LINE ALONG OLD STEWART RD. GEOTEXTILE FABRIC TYPE IV SHALL BE PLACED ABOVE AND BELOW THE GRADED SOLID ROCK WITH THE REMAINDER OF THE FILL CONSISTING OF COMMOM ROADWAY EMBANKMENT.

STR-A AND STR-1A
RIP-RAP SHALL BE PLACED AS TO MIMIC THE EXISTING CONTOURS OF THE STREAM CHANNEL. THE TOP OF THE PROPOSED RIP-RAP SHALL BE AT GRADE WITH THE BOTTOM OF THE EXISTING STREAM CHANNEL. VOIDS WITHIN THE RIP-RAP SHALL BE FILLED WITH CREEK GRAVEL TO PREVENT LOSS OF STREAM WITHIN RIP-RAP AREAS. CREEK GRAVEL CAN BE REMOVED FROM CULVERT EXCAVATION AREA.

NOTE: ALL DRIVEWAY RADII ARE 15' UNLESS OTHERWISE NOTED.

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COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.0000749 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA.38+50 TO STA.51+00

SCALE: 1"=50'

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	4B
CONST.	2015	71952-3544-04	4B

EARTHWORK SUMMARY (ASSUME 10% SHRINKAGE)

EXC. (UNCL.) = 61435 C.Y.

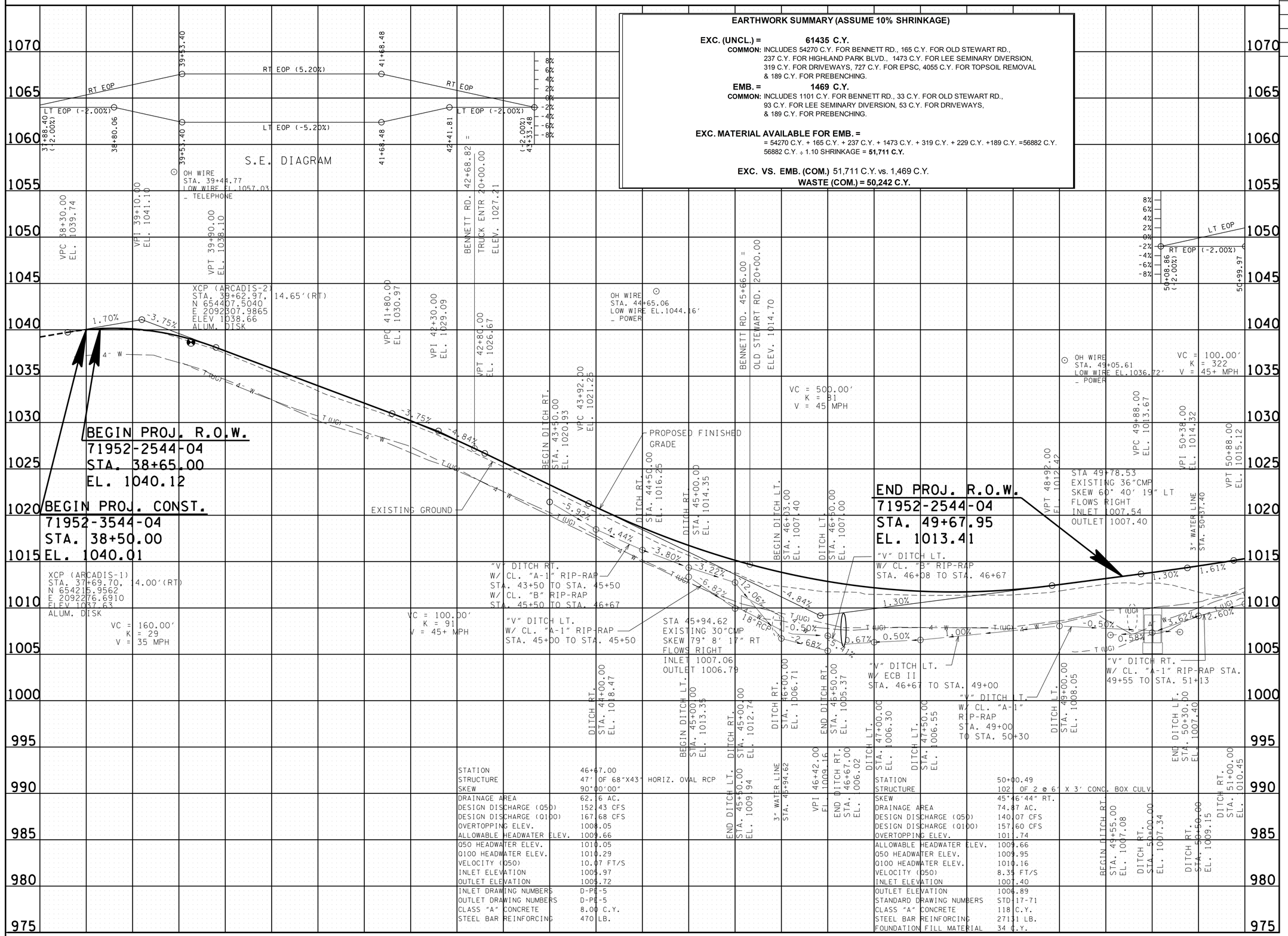
COMMON: INCLUDES 54270 C.Y. FOR BENNETT RD., 165 C.Y. FOR OLD STEWART RD., 237 C.Y. FOR HIGHLAND PARK BLVD., 1473 C.Y. FOR LEE SEMINARY DIVERSION, 319 C.Y. FOR DRIVEWAYS, 727 C.Y. FOR EPSC, 4055 C.Y. FOR TOPSOIL REMOVAL & 189 C.Y. FOR PREBENCHING.

EMB. = 1469 C.Y.

COMMON: INCLUDES 1101 C.Y. FOR BENNETT RD., 33 C.Y. FOR OLD STEWART RD., 93 C.Y. FOR LEE SEMINARY DIVERSION, 53 C.Y. FOR DRIVEWAYS, & 189 C.Y. FOR PREBENCHING.

EXC. MATERIAL AVAILABLE FOR EMB. =
= 54270 C.Y. + 165 C.Y. + 237 C.Y. + 1473 C.Y. + 319 C.Y. + 229 C.Y. +189 C.Y. =56882 C.Y.
56882 C.Y. ÷ 1.10 SHRINKAGE = **51,711 C.Y.**

EXC. VS. EMB. (COM.) 51,711 C.Y. vs. 1,469 C.Y.
WASTE (COM.) = 50,242 C.Y.



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DEPARTMENT OF TRANSPORTATION

PROFILE

STA. 38+50 TO STA. 51+00
SCALE: 1"= 50' HORIZ.
1"= 5' VERT.

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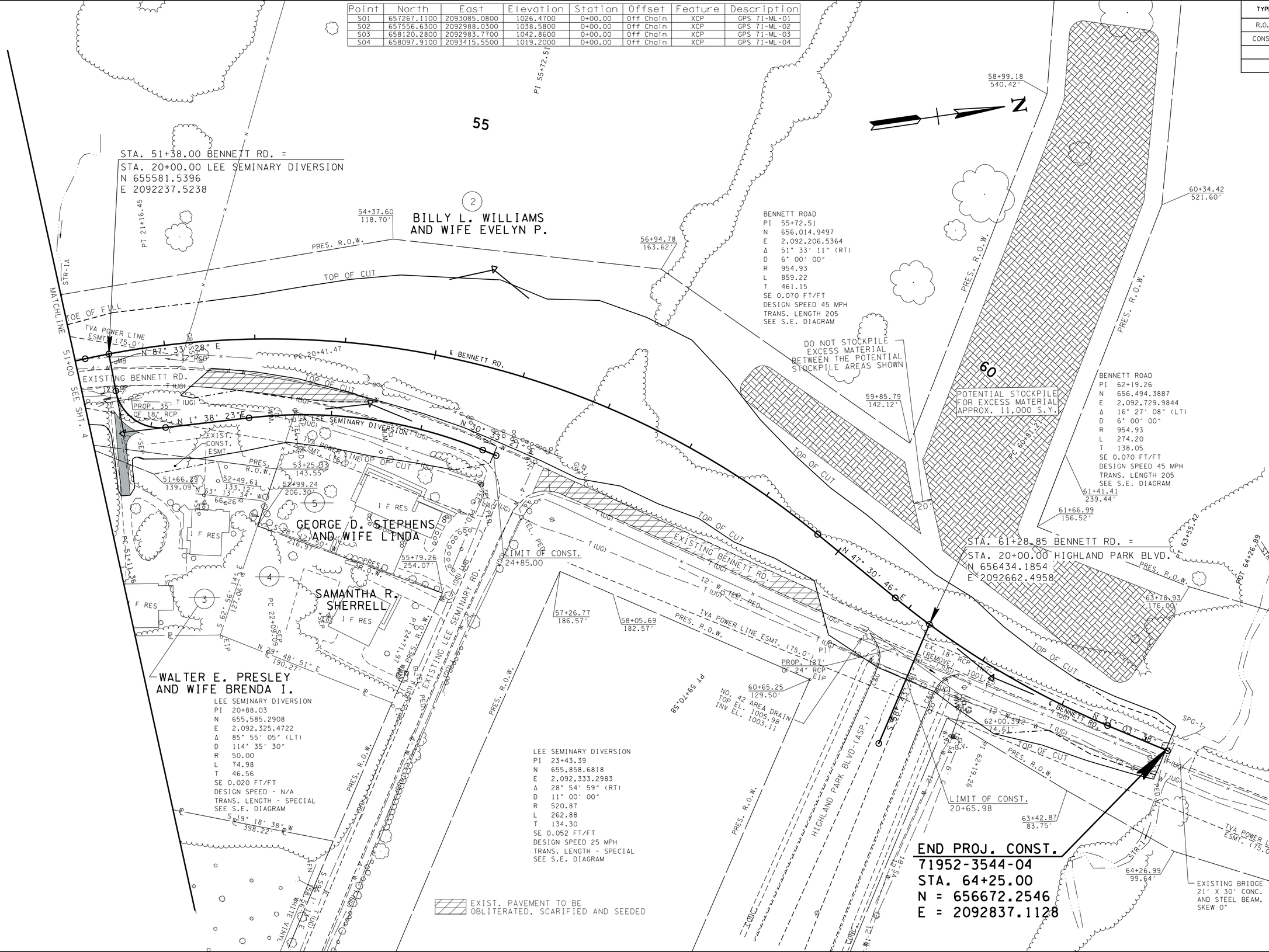
Point	North	East	Elevation	Station	Offset	Feature	Description
S01	657267.1100	2093085.0800	1026.4700	0+00.00	Off Chain	XCP	GPS 71-ML-01
S02	657556.6300	2092988.0300	1038.5800	0+00.00	Off Chain	XCP	GPS 71-ML-02
S03	658120.2800	2092983.7700	1042.8600	0+00.00	Off Chain	XCP	GPS 71-ML-03
S04	658097.9100	2093415.5500	1019.2000	0+00.00	Off Chain	XCP	GPS 71-ML-04

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	5
CONST.	2015	71952-3544-04	5



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COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.0000749 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
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PRESENT LAYOUT

STA.51+00 TO STA.64+25

SCALE: 1"=50'

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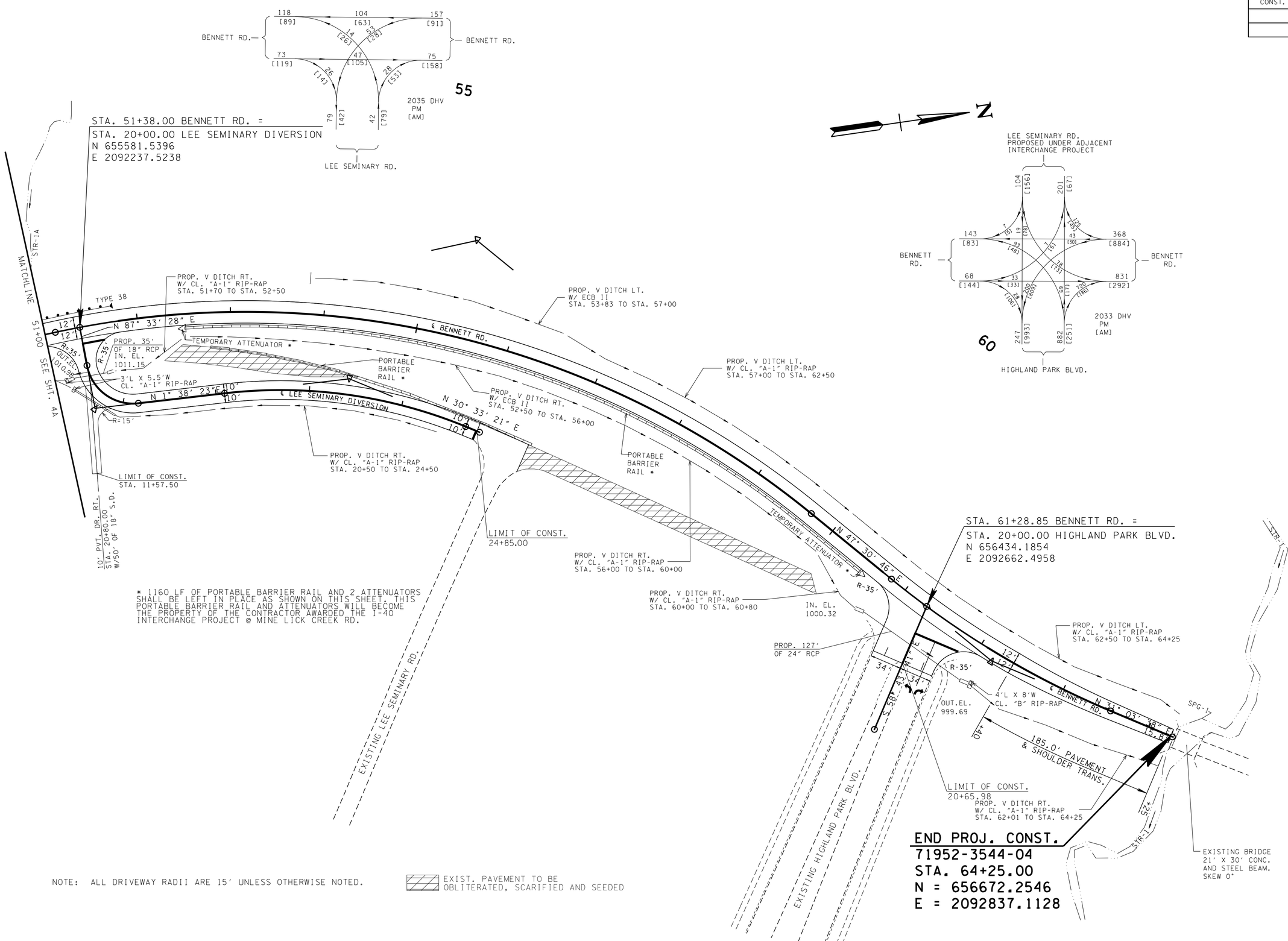
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	5A
CONST.	2015	71952-3544-04	5A



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COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.0000749 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA.51+00 TO STA.64+25

SCALE: 1"=50'

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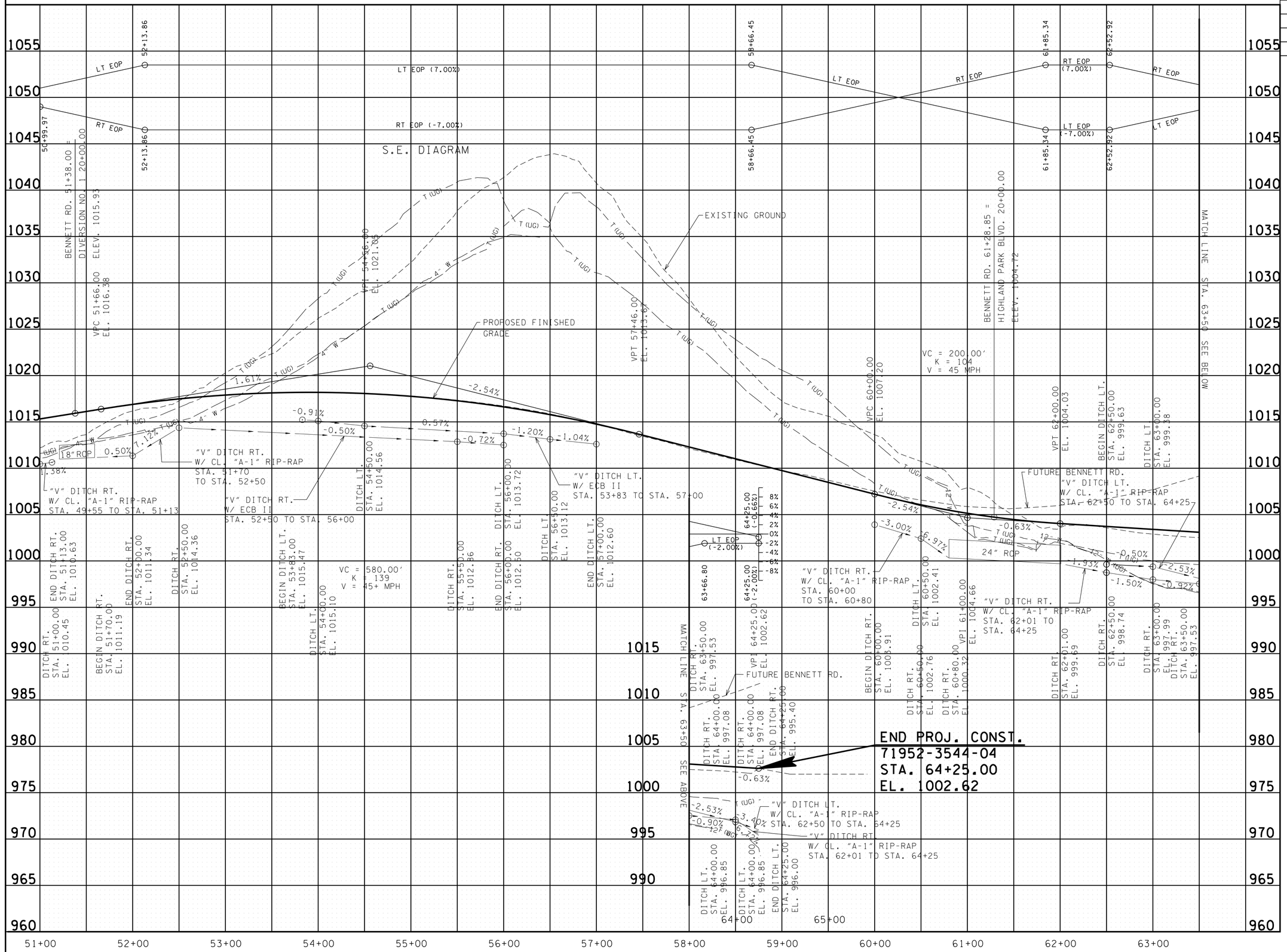
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	5B
CONST.	2015	71952-3544-04	5B



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PROFILE

STA. 51+00 TO STA. 64+25

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

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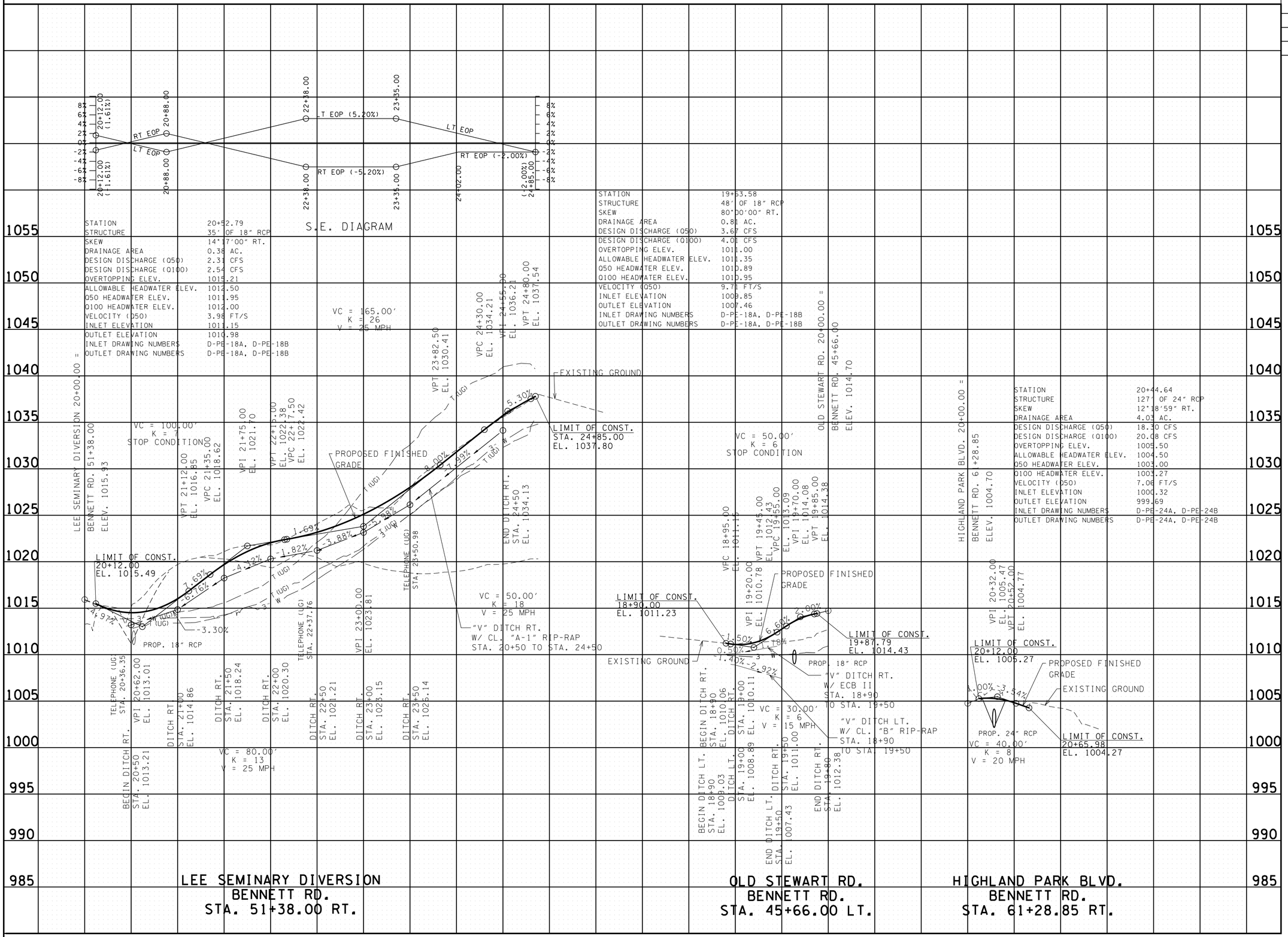
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	6
CONST.	2015	71952-3544-04	6



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PROFILE OF SIDE ROADS AND STREETS

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

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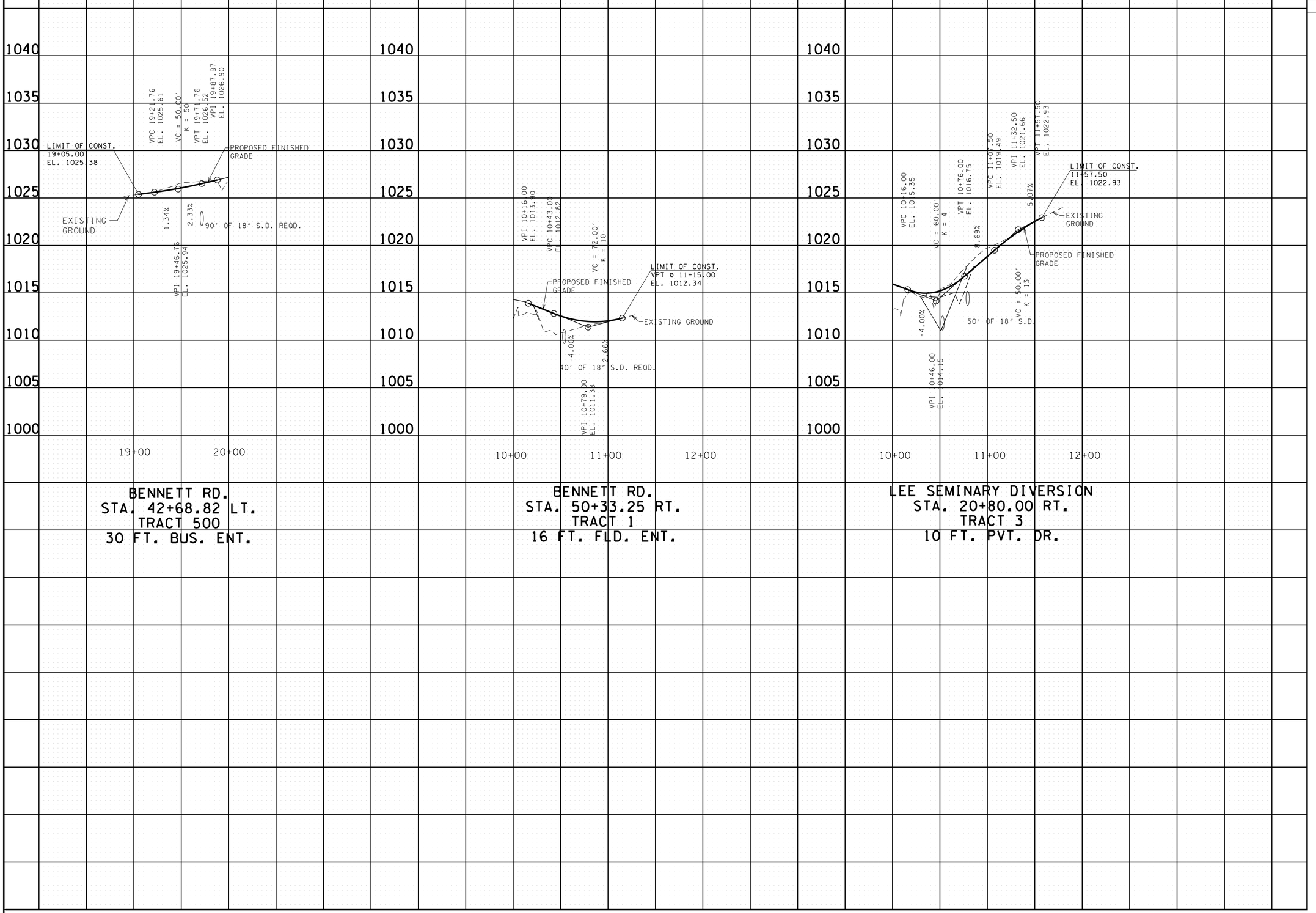
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	7
CONST.	2015	71952-3544-04	7



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PROFILE OF PRIVATE DRIVES

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

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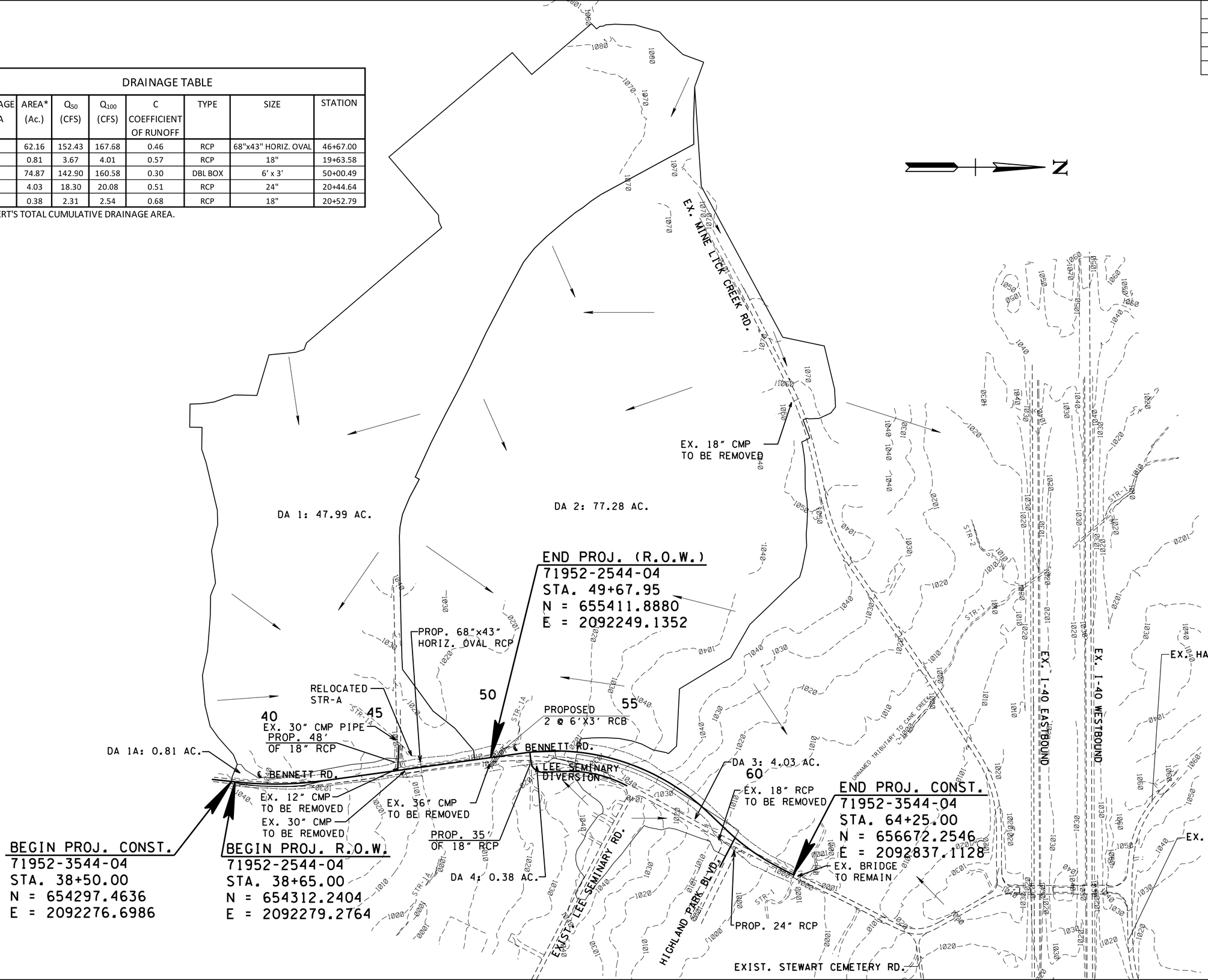
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	8
CONST.	2015	71952-3544-04	8

DRAINAGE TABLE

DRAINAGE AREA	AREA* (Ac.)	Q_{50} (CFS)	Q_{100} (CFS)	C COEFFICIENT OF RUNOFF	TYPE	SIZE	STATION
1	62.16	152.43	167.68	0.46	RCP	68"x43" HORIZ. OVAL	46+67.00
1A	0.81	3.67	4.01	0.57	RCP	18"	19+63.58
2	74.87	142.90	160.58	0.30	DBL BOX	6' x 3'	50+00.49
3	4.03	18.30	20.08	0.51	RCP	24"	20+44.64
4	0.38	2.31	2.54	0.68	RCP	18"	20+52.79

*CULVERT'S TOTAL CUMULATIVE DRAINAGE AREA.



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DEPARTMENT OF TRANSPORTATION

DRAINAGE MAP

STA.38+50 TO STA.64+25

SCALE: 1"=200'

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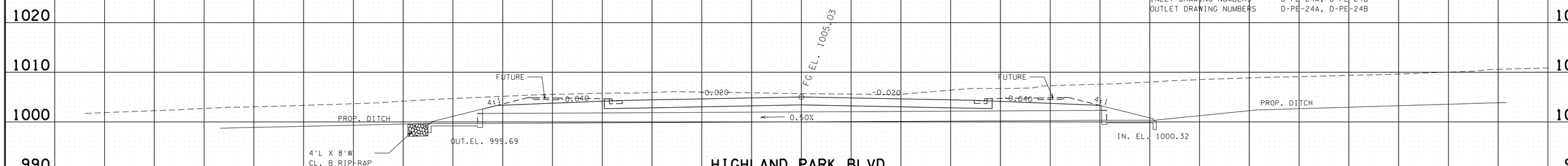
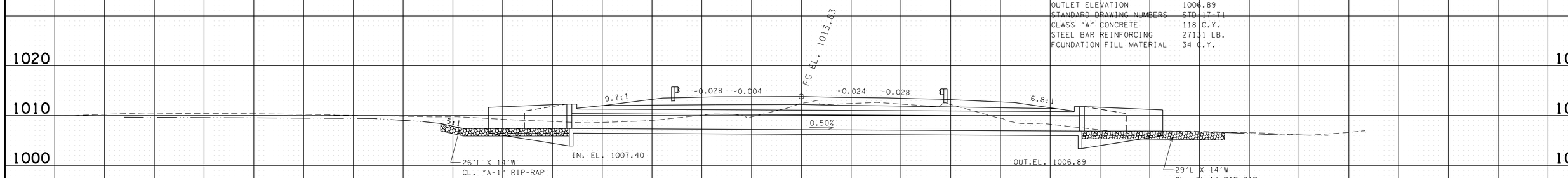
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	9
CONST.	2015	71952-3544-04	9

STATION	20+44.64
STRUCTURE	127' OF 24" RCP
SKEW	12°18'59" RT.
DRAINAGE AREA	4.03 AC.
DESIGN DISCHARGE (Q50)	18.30 CFS
DESIGN DISCHARGE (Q100)	20.08 CFS
OVERTOPPING ELEV.	1005.50
ALLOWABLE HEADWATER ELEV.	1004.50
Q50 HEADWATER ELEV.	1003.00
Q100 HEADWATER ELEV.	1003.27
VELOCITY (Q50)	7.06 FT/S
INLET ELEVATION	1000.32
OUTLET ELEVATION	999.69
INLET DRAWING NUMBERS	D-PE-24A, D-PE-24B
OUTLET DRAWING NUMBERS	D-PE-24A, D-PE-24B



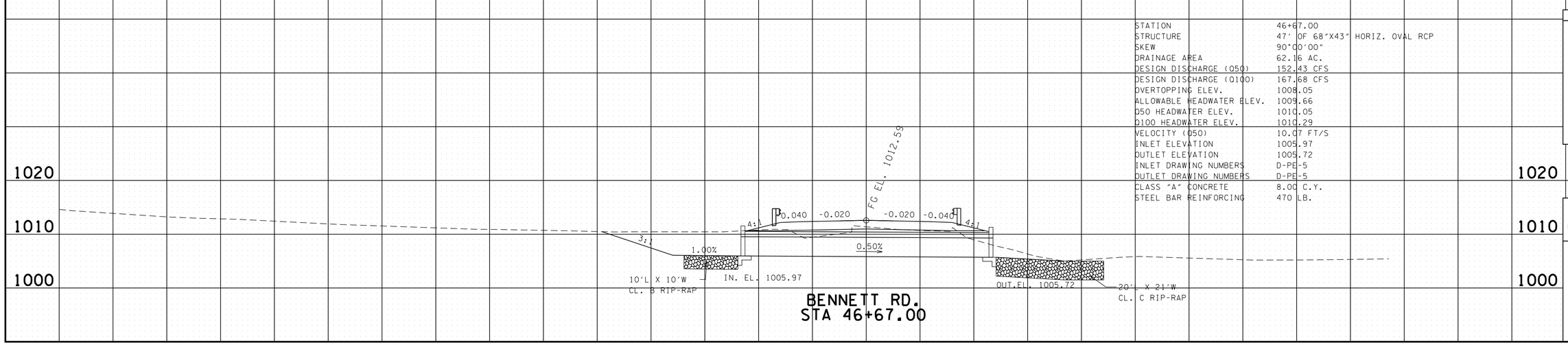
HIGHLAND PARK BLVD.
STA 20+44.64

STATION	50+00.49
STRUCTURE	102' OF 2 @ 6' X 3' CONC. BOX CULV.
SKEW	45°46'44" RT.
DRAINAGE AREA	74.87 AC.
DESIGN DISCHARGE (Q50)	140.07 CFS
DESIGN DISCHARGE (Q100)	157.60 CFS
OVERTOPPING ELEV.	1011.74
ALLOWABLE HEADWATER ELEV.	1009.66
Q50 HEADWATER ELEV.	1009.95
Q100 HEADWATER ELEV.	1010.16
VELOCITY (Q50)	8.35 FT/S
INLET ELEVATION	1007.40
OUTLET ELEVATION	1006.89
STANDARD DRAWING NUMBERS	STD-17-71
CLASS "A" CONCRETE	118 C.Y.
STEEL BAR REINFORCING	27131 LB.
FOUNDATION FILL MATERIAL	34 C.Y.



BENNETT RD.
STA 50+00.49

STATION	46+67.00
STRUCTURE	47' OF 68"X43" HORIZ. OVAL RCP
SKEW	90°00'00"
DRAINAGE AREA	62.16 AC.
DESIGN DISCHARGE (Q50)	152.43 CFS
DESIGN DISCHARGE (Q100)	167.68 CFS
OVERTOPPING ELEV.	1008.05
ALLOWABLE HEADWATER ELEV.	1009.66
Q50 HEADWATER ELEV.	1010.05
Q100 HEADWATER ELEV.	1010.29
VELOCITY (Q50)	10.07 FT/S
INLET ELEVATION	1005.97
OUTLET ELEVATION	1005.72
INLET DRAWING NUMBERS	D-PE-5
OUTLET DRAWING NUMBERS	D-PE-5
CLASS "A" CONCRETE	8.00 C.Y.
STEEL BAR REINFORCING	470 LB.



BENNETT RD.
STA 46+67.00

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CULVERT CROSS-SECTIONS

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

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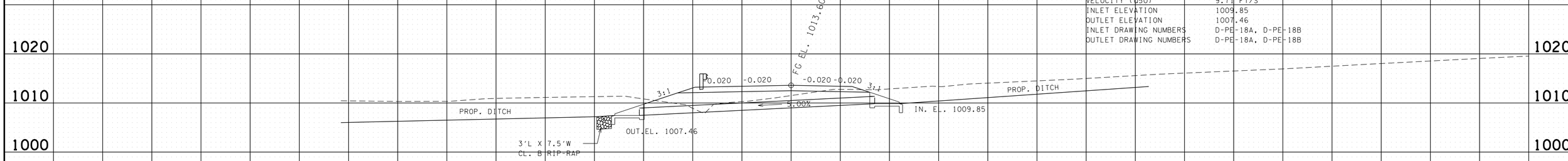
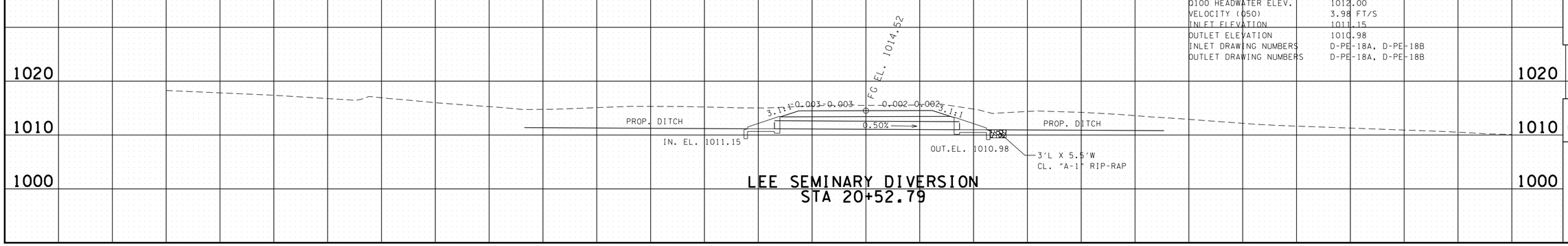
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	9A
CONST.	2015	71952-3544-04	9A

STATION	19+63.58
STRUCTURE	48' OF 18" RCP
SKEW	80°00'00" RT.
DRAINAGE AREA	0.81 AC.
DESIGN DISCHARGE (Q50)	3.67 CFS
DESIGN DISCHARGE (Q100)	4.01 CFS
OVERTOPPING ELEV.	1011.00
ALLOWABLE HEADWATER ELEV.	1011.35
Q50 HEADWATER ELEV.	1010.89
Q100 HEADWATER ELEV.	1010.95
VELOCITY (Q50)	9.71 FT/S
INLET ELEVATION	1009.85
OUTLET ELEVATION	1007.46
INLET DRAWING NUMBERS	D-PE-18A, D-PE-18B
OUTLET DRAWING NUMBERS	D-PE-18A, D-PE-18B



OLD STEWART RD.
STA 19+63.58

STATION	20+52.79
STRUCTURE	35' OF 18" RCP
SKEW	14°17'00" RT.
DRAINAGE AREA	0.38 AC.
DESIGN DISCHARGE (Q50)	2.31 CFS
DESIGN DISCHARGE (Q100)	2.54 CFS
OVERTOPPING ELEV.	1015.21
ALLOWABLE HEADWATER ELEV.	1012.50
Q50 HEADWATER ELEV.	1011.95
Q100 HEADWATER ELEV.	1012.00
VELOCITY (Q50)	3.98 FT/S
INLET ELEVATION	1011.15
OUTLET ELEVATION	1010.98
INLET DRAWING NUMBERS	D-PE-18A, D-PE-18B
OUTLET DRAWING NUMBERS	D-PE-18A, D-PE-18B



LEE SEMINARY DIVERSION
STA 20+52.79

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CULVERT CROSS-SECTIONS

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

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-140 -130 -120 -110 -100 -90 -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	10
CONST.	2015	71952-3544-04	10

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.

POLYACRYLAMIDE

(1) ENSURE POLYACRYLAMIDE (PAM) EMULSIONS AND POWDERS ARE OF THE ANIONIC TYPE AND MEET THE FOLLOWING REQUIREMENTS:

(2) MEETS THE EPA AND FDA ACRYLAMIDE MONOMER LIMITS OF EQUAL TO OR GREATER THAN 0.005% ACRYLAMIDE MONOMER.

(3) HAS A DENSITY OF 10% TO 55% BY WEIGHT AND A MOLECULAR WEIGHT OF 16 TO 24 MG/MOLE.

(4) MIXTURE IS NON-COMBUSTIBLE.

(5) CONTAINS ONLY MANUFACTURER'S RECOMMENDED ADDITIVES.

(6) PAM SHALL BE MIXED AND APPLIED IN ACCORDANCE WITH ALL OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) MATERIAL SAFETY DATA SHEET (MSDS) REQUIREMENTS AND THE MANUFACTURER'S RECOMMENDATIONS FOR THE SPECIFIED USES CONFORMING TO ALL FEDERAL, STATE, AND LOCAL LAWS, RULES, AND REGULATIONS.

(7) ALL VENDERS AND SUPPLIERS OF PAM, PAM MIX, OR PAM BLENDS SHALL PRESENT OR SUPPLY A WRITTEN TOXICITY REPORT WHICH VERIFIES THAT THE PAM, PAM MIX, PAM BLEND EXHIBITS ACCEPTABLE TOXICITY PARAMETERS WHICH MEET OR EXCEED THE EPA REQUIREMENTS FOR THE STATE AND FEDERAL WATER QUALITY STANDARDS. WHOLE EFFLUENT TESTING DOES NOT MEET THIS REQUIREMENT AS PRIMARY REACTIONS HAVE OCCURRED AND TOXIC POTENTIALS HAVE BEEN REDUCED. CATIONIC FORMS OF PAM ARE NOT ALLOWED FOR UNDER THIS GUIDELINE DUE TO THEIR HIGH LEVELS OF TOXICITY TO AQUATIC ORGANISMS. PAM EMULSIONS SHALL NEVER BE APPLIED DIRECTLY TO STORMWATER RUNOFF OR RIPARIAN WATERS DUR TO SURFACTANT TOXICITY. CONTRACTOR MUST SEEK THE APPROVAL OF THE EPSC DESIGN ENGINEER AND TDOT IF CHITOSAN IS PROPOSED FOR USE ON THIS PROJECT.

(8) ALL VENDORS AND SUPPLIERS OF PAM, PAM MIX, OR PAM BLENDS SHALL SUPPLY WRITTEN "SITE SPECIFIC" TESTING RESULTS DEMONSTRATING THAT A PERFORMANCE OF 95% OR GREATER REDUCTION OF NTU OR TSS FROM STORMWATER DISCHARGES.

(9) EMULSION BATCHES SHALL BE MIXED FOLLOWING RECOMMENDATIONS OF A TESTING LABORATORY THAT DETERMINES THE PROPER PRODUCT AND RATE TO MEET SITE REQUIREMENTS. APPLICATION METHOD SHALL ENSURE UNIFORM COVERAGE TO THE TARGET AREA. EMULSIONS SHALL NEVER BE APPLIED DIRECTLY TO STORMWATER RUNOFF OR RIPARIAN WATERS.

(10) PAM POWDER MAY BE APPLIED BY A HAND SPREADER OR A MECHANICAL SPREADER. MIXING PAM POWDER WITH DRY SILICA SAND WILL AID IN SPREADING.

(11) PREMIXING OF PAM POWDER INTO FERTILIZER, SEED, OR OTHER SOIL AMENDMENTS IS ALLOWED WHEN SPECIFIED IN THE DESIGN PLAN. APPLICATION METHOD SHALL ENSURE UNIFORM COVERAGE TO THE TARGET AREA.

(12) PAM LOGS OR BLOCKS SHALL BE APPLIED FOLLOWING SITE TESTING RESULTS TO ENSURE PROPER PLACEMENT AND PERFORMANCE AND SHALL MEET OR EXCEED STATE AND FEDERAL WATER QUALITY REQUIREMENTS.

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DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN NOTES

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	10A
CONST.	2015	71952-3544-04	10A

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
SFB SFB SFB SFB	SEDIMENT FILTER BAG	EC-STR-2
* SF * SF * SF *	SILT FENCE	EC-STR-3B
* SFB * SFB * SFB *	SILT FENCE WITH WIRE BACKING	EC-STR-3C
	ROCK CHECK DAM (V-DITCH)	EC-STR-6
	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
	SEDIMENT TRAP WITH ENHANCED ROCK CHECK DAM	EC-STR-7
	CULVERT PROTECTION (TYPE 1)	EC-STR-11
	CULVERT PROTECTION (TYPE 2)	EC-STR-11A
TCE	TEMPORARY CONSTRUCTION EXIT	EC-STR-25
	TEMPORARY BERM	EC-STR-27
	TEMPORARY SLOPE DRAIN	EC-STR-27
	TEMPORARY DIVERSION CHANNEL (3' F.B. - A-1 RIP RAP)	EC-STR-31
	SAND BAG BERM	EC-STR-31
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37
* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1
	SEDIMENT TUBE INLET PROTECTION	EC-STR-37

EROSION CONTROL QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	PHASE 1 QUANTITY	PHASE 2 QUANTITY	PHASE 3 QUANTITY	TOTAL
(1)	203-01	ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED)	C.Y.	658		69	727
	209-02.03	8" TEMPORARY SLOPE DRAIN	L.F.			31	31
	209-05	SEDIMENT REMOVAL	C.Y.			362	362
(2)	209-08.02	TEMPORARY SILT FENCE (W/ BACKING)	L.F.	7113	2081		9194
	209-08.03	TEMPORARY SILT FENCE (W/O BACKING)	L.F.	1554	428	1363	3345
	209-08.07	ROCK CHECK DAM PER	EACH	76		76	152
(15)	209-08.08	ENHANCED ROCK CHECK DAM	EACH	16		26	42
(3)	209-09.01	SANDBAGS	BAGS		2400		2400
	209-09.03	SEDIMENT FILTER BAGS (15' X 15')	EACH		1		1
(4)	209-09.22	POLYACRYLAMIDE POWDER	LB.			432	432
	209-10.20	TEMPORARY SEDIMENT TRAP	C.Y.			676	676
(3)	209-20.03	POLYETHYLENE SHEETING (6 MIL. MINIMUM)	S.Y.		133		133
	209-65.03	TEMPORARY DIVERSION CHANNEL	L.F.		106		106
(5)	303-10.01	MINERAL AGGREGATE (SIZE 57)	TON	13	22	32	67
(6)	621-03.02	18" TEMPORARY DRAINAGE PIPE	L.F.	150			150
	621-03.05	36" TEMPORARY DRAINAGE PIPE	L.F.		50		50
(7)	707-08.11	HIGH-VISIBILITY CONSTRUCTION FENCE	L.F.	2295			2545
(8)	709-05.05	MACHINED RIPRAP (CLASS A-3)	TON	400			400
(9)	709-05.06	MACHINED RIPRAP (CLASS A-1)	TON	23	214	119	356
(10)	740-10.03	GEOTEXTILE TYPE III (EROSION CONTROL)	S.Y.	687	368	324	1379
	740-11.03	SEDIMENT TUBE (18")	L.F.	640	0	12274	12914
(11)	801-01	SEEDING (WITH MULCH)	UNIT			113	113
(4)	801-01.07	TEMPORARY SEEDING (WITH MULCH)	UNIT	117	117	117	351
(12)	801-02	SEEDING (WITHOUT MULCH)	UNIT			146	146
	801-03	WATER (SEEDING & SODDING)	M.G.			118	118
(4)	801-07	SEED (SUPPLEMENTAL APPLICATION)	LB.			58	58
(4)	801-08	FERTILIZER (SUPPLEMENTAL APPLICATION)	TON			1	1
(16)	803-01	SODDING (NEW SOD)	S.Y.			6000	6000
(14)	805-12.02	EROSION CONTROL BLANKET (TYPE II)	S.Y.			12958	12958

(1) 229 C.Y. FOR CONSTRUCTION EXITS, AND 498 C.Y. FOR EARTH BERMS.
(2) 102 L.F. FOR SEDIMENT FILTER BAGS.
(3) FOR USE WITH TEMPORARY DIVERSION CHANNEL & SANDBAG BERMS.
(4) TO BE USED AS DIRECTED BY PROJECT ENGINEER.
(5) 45 TONS FOR CULVERT PROTECTION AND 22 TONS FOR SEDIMENT FILTER BAGS.
(6) 150 L.F. FOR CONSTRUCTION EXITS.
(7) INCLUDES 2295 L.F. FOR BUFFER PROTECTECTION AND 250 FT TO BE USED AS DIRECTED BY PROJECT ENGINEER.
(8) FOR TEMPORARY CONSTRUCTION EXITS.
(9) 136 TON FOR CULVERT PROTECTION, 214 TONS DIVERSION CHANNELS, AND 6 TONS TEMPORARY SLOPE DRAINS.
(10) INCLUDES 589 S.Y. FOR T.C.E., 111 S.Y. FOR SED. FILTER BAGS, 257 S.Y. FOR TEMP. DIV. CHANNELS, 422 S.Y. FOR CULVERT PROTECTION.
(11) FOR USE ON SCARIFIED AREAS.
(12) TO BE USED WITH EROSION CONTROL BLANKET TYPE II.
(13) TO BE USED ON ALL SLOPES 2.5:1 OR STEEPER.
(14) TO BE USED FOR FINAL STABILIZATION OF ALL SLOPES.
(15) INCLUDES 5 EACH TO BE USED FOR SEDIMENT TRAP WITH CHECK DAM.
(16) 5666 SY TO BE USED ON PERMANENT SLOPES FROM STA. 38+50 TO 52+00 AND 334 SY AS DIRECTED BY

SEDIMENT TRAP WITH CHECK DAM

SHEET NO.	LOCATION	STATION	PHASE	LT/RT	DESCRIPTION	TEMPORARY SEDIMENT TRAP 209-10.20 (C.Y.)	MACHINED RIP-RAP (CLASS A-1) (1) (TON)	GEOTEXTILE (TYPE III) (EROSION CONTROL) (1) (S.Y.)	ENHANCED ROCK CHECK DAM (EACH) 209-08.08 (S.Y.) (2)
11B	BENNETT RD.	46+15	3	RT	34 X 17 X 4	125.9	68.4	106.3	1
11B	BENNETT RD.	49+85	3	RT	44 X 22 X 4	195.6	78.8	122.4	1
12B	BENNETT RD.	51+90	3	LT	15 X 7.5 X 2.5	17.4	14.2	41.8	1
12B	BENNETT RD.	63+50	3	RT	46 X 23 X 4	211.3	80.9	125.7	1
12B	BENNETT RD.	64+00	3	LT	34 X 17 X 4	125.9	68.4	106.3	1
TOTALS						**676**	**311**	**503**	**5**

(1) QUANTITY AND COST TO BE INCLUDED IN ITEM 209-10.20
(2) QUANTITY INCLUDED IN EROSION CONTROL QUANTITIES TAB, THIS SHEET

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EPSC QUANTITIES

DETAILS & LEGEND

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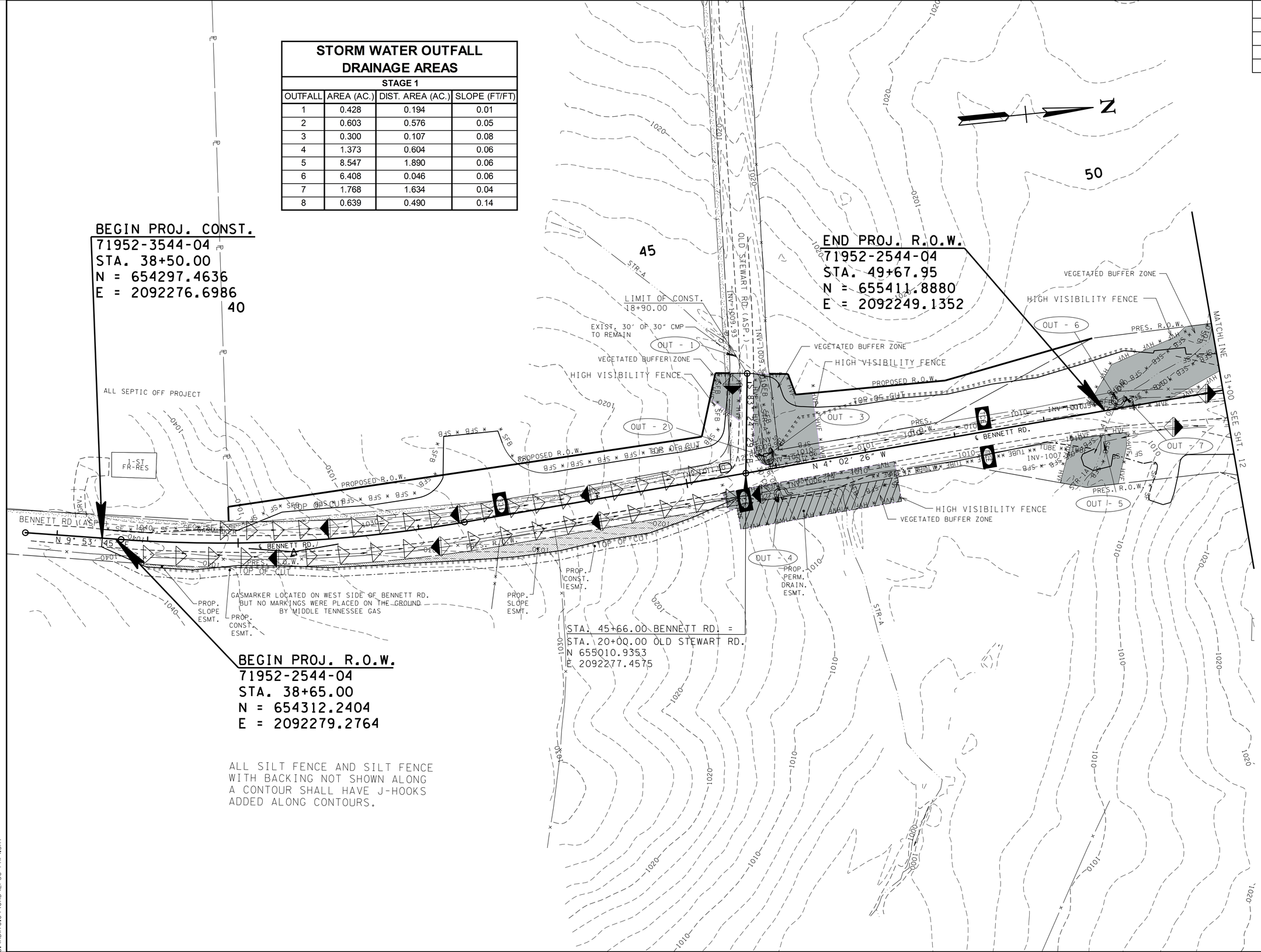
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	11
CONST.	2015	71952-3544-04	11

STORM WATER OUTFALL DRAINAGE AREAS

STAGE 1

OUTFALL	AREA (AC.)	DIST. AREA (AC.)	SLOPE (FT/FT)
1	0.428	0.194	0.01
2	0.603	0.576	0.05
3	0.300	0.107	0.08
4	1.373	0.604	0.06
5	8.547	1.890	0.06
6	6.408	0.046	0.06
7	1.768	1.634	0.04
8	0.639	0.490	0.14



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STAGE I
CLEARING & GRUBBING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA.38+50 TO STA.51+00

SCALE: 1"=50'

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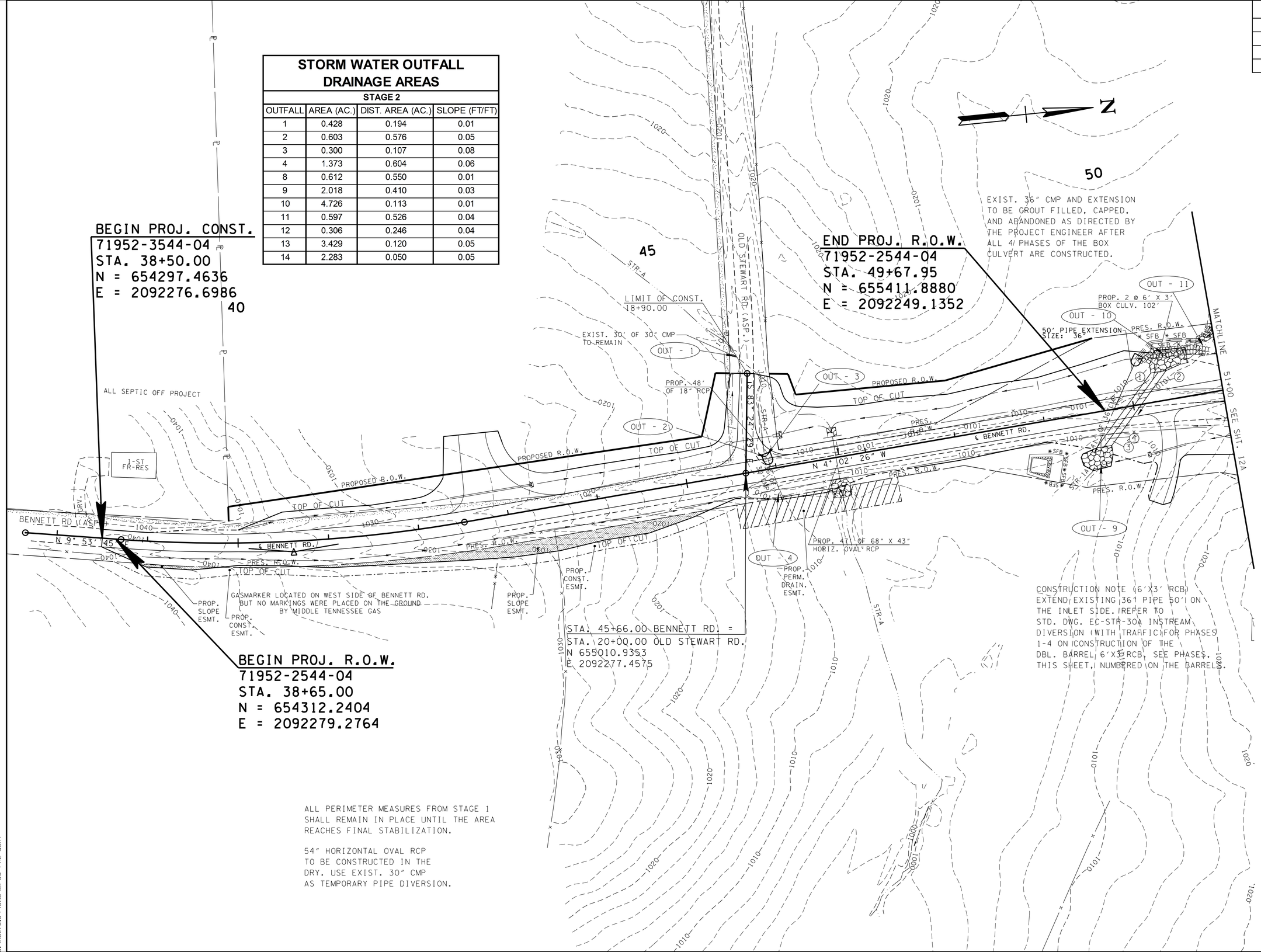
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	11A
CONST.	2015	71952-3544-04	11A

STORM WATER OUTFALL DRAINAGE AREAS

STAGE 2

OUTFALL	AREA (AC.)	DIST. AREA (AC.)	SLOPE (FT/FT)
1	0.428	0.194	0.01
2	0.603	0.576	0.05
3	0.300	0.107	0.08
4	1.373	0.604	0.06
8	0.612	0.550	0.01
9	2.018	0.410	0.03
10	4.726	0.113	0.01
11	0.597	0.526	0.04
12	0.306	0.246	0.04
13	3.429	0.120	0.05
14	2.283	0.050	0.05



ALL PERIMETER MEASURES FROM STAGE 1 SHALL REMAIN IN PLACE UNTIL THE AREA REACHES FINAL STABILIZATION.

54" HORIZONTAL OVAL RCP TO BE CONSTRUCTED IN THE DRY. USE EXIST. 30" CMP AS TEMPORARY PIPE DIVERSION.

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STAGE 2
INTERMEDIATE GRADING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA.38+50 TO STA.51+00

SCALE: 1"=50'

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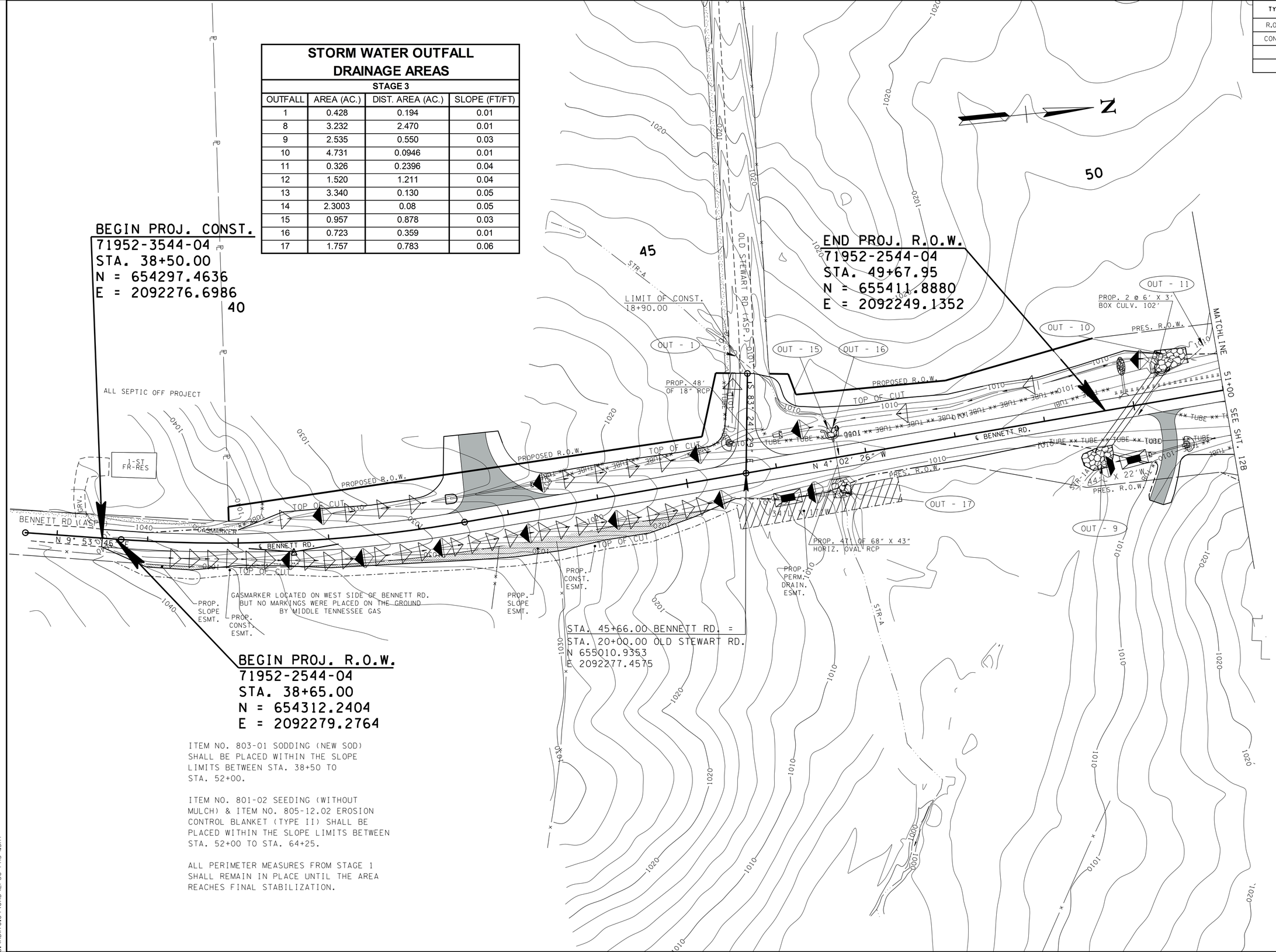
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	11B
CONST.	2015	71952-3544-04	11B

STORM WATER OUTFALL DRAINAGE AREAS

STAGE 3

OUTFALL	AREA (AC.)	DIST. AREA (AC.)	SLOPE (FT/FT)
1	0.428	0.194	0.01
8	3.232	2.470	0.01
9	2.535	0.550	0.03
10	4.731	0.0946	0.01
11	0.326	0.2396	0.04
12	1.520	1.211	0.04
13	3.340	0.130	0.05
14	2.3003	0.08	0.05
15	0.957	0.878	0.03
16	0.723	0.359	0.01
17	1.757	0.783	0.06



ITEM NO. 803-01 SODDING (NEW SOD) SHALL BE PLACED WITHIN THE SLOPE LIMITS BETWEEN STA. 38+50 TO STA. 52+00.

ITEM NO. 801-02 SEEDING (WITHOUT MULCH) & ITEM NO. 805-12.02 EROSION CONTROL BLANKET (TYPE II) SHALL BE PLACED WITHIN THE SLOPE LIMITS BETWEEN STA. 52+00 TO STA. 64+25.

ALL PERIMETER MEASURES FROM STAGE 1 SHALL REMAIN IN PLACE UNTIL THE AREA REACHES FINAL STABILIZATION.

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STAGE 3
FINAL STABILIZATION

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL
PROPOSED CONTOURS

STA.38+50 TO STA.51+00
SCALE: 1"= 50'

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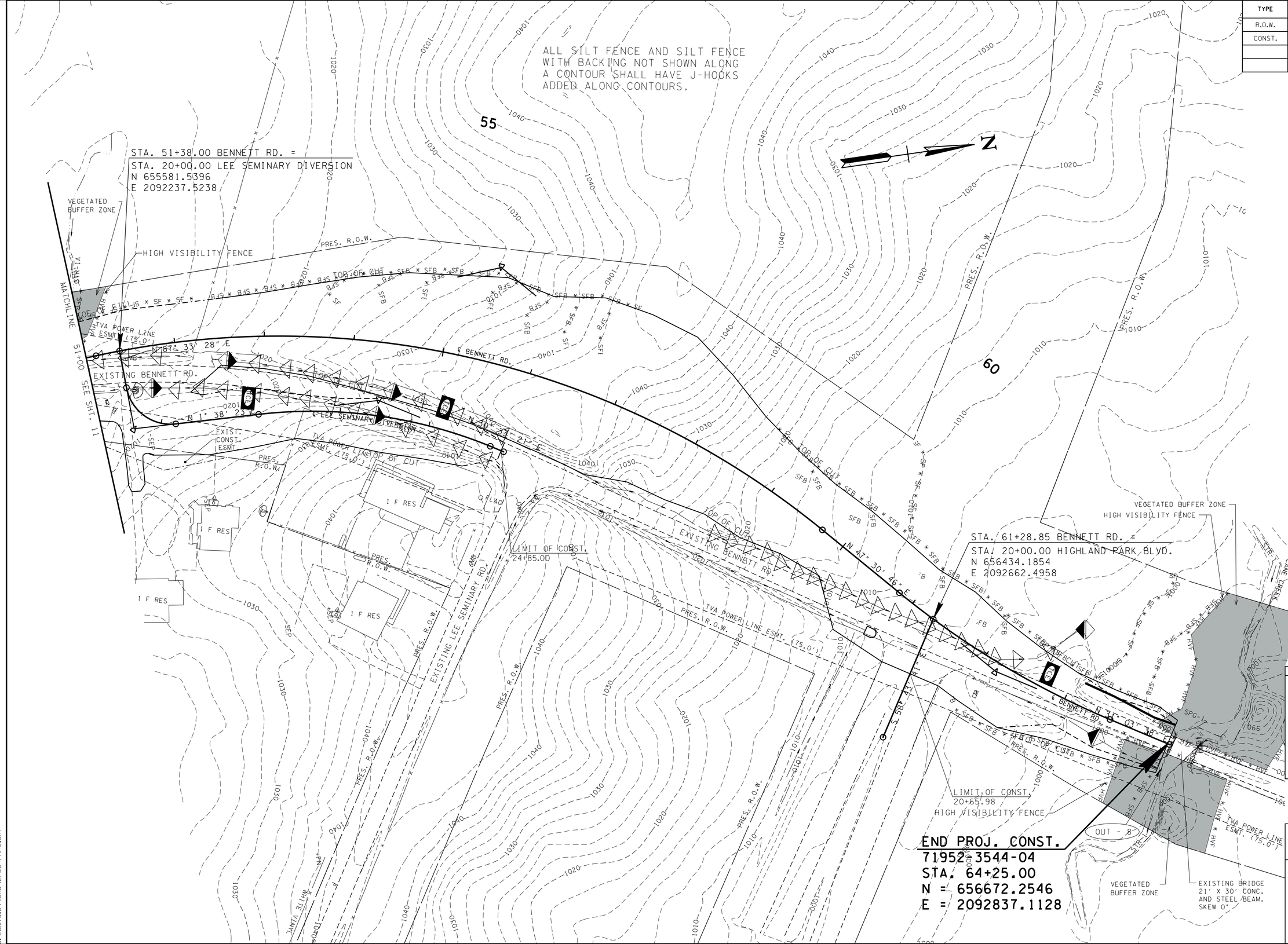
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	12
CONST.	2015	71952-3544-04	12



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STAGE I
CLEARING & GRUBBING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA.51+00 TO STA.64+25

SCALE: 1"=50'

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	12A
CONST.	2015	71952-3544-04	12A

ALL PERIMETER MEASURES FROM STAGE 1 SHALL REMAIN IN PLACE UNTIL THE AREA REACHES FINAL STABILIZATION.

STA. 51+38.00 BENNETT RD. =
STA. 20+00.00 LEE SEMINARY DIVERSION
N 655581.5396
E 2092237.5238

STA. 61+28.85 BENNETT RD. =
STA. 20+00.00 HIGHLAND PARK BLVD.
N 656434.1854
E 2092662.4958

END PROJ. CONST.
71952-3544-04
STA. 64+25.00
N = 656672.2546
E = 2092837.1128

DO NOT STOCKPILE EXCESS MATERIAL BETWEEN THE POTENTIAL STOCKPILE AREAS SHOWN

POTENTIAL STOCKPILE FOR EXCESS MATERIAL APPROX. 11,000 S.Y.

55

60

N

MATCHLINE 51+00 SEE SHT. 11A

EXISTING BENNETT RD.

℄ BENNETT RD.

℄ LEE SEMINARY DIVERSION

EXISTING LEE SEMINARY RD.

HIGHLAND PARK BLVD. (ASP.)

TRIBUTARY TO CANE CREEK

TVA POWER LINE ESMT. (75.0')

PROP. 351 OF 18" RCP

PROP. 127 OF 24" (RCP)

EXIST. CONST. ESMT.

LIMIT OF CONST. 24+85.00

LIMIT OF CONST. 20+65.98

TOP OF CUT

TOE OF FILL

PRES. R.O.W.

I F RES

OUT - 14

OUT - 13

OUT - 12

OUT - 8

EXISTING BRIDGE 21' X 30' CONC. AND STEEL BEAM. SKEW 0°

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STAGE 2
INTERMEDIATE GRADING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA.51+00 TO STA.64+25

SCALE: 1"=50'

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	12B
CONST.	2015	71952-3544-04	12B

ALL PERIMETER MEASURES FROM STAGE 1 SHALL REMAIN IN PLACE UNTIL THE AREA REACHES FINAL STABILIZATION.

STA. 51+38.00 BENNETT RD. =
STA. 20+00.00 LEE SEMINARY DIVERSION
N 655581.5396
E 2092237.5238

MATCHLINE 51+00 SEE SHT. 11B

TOE OF FILL 15'L X 7.5'W

N 87° 33' 28" E

PROP. 35' OF 18" RCP

℄ BENNETT RD.

N 1° 38' 23" E

℄ LEE SEMINARY DIVERSION

N 47° 30' 46" E

S 58° 43' 41" E

N 31° 03' 38" E

34'L X 17'W

46'L X 23'W

TOP OF CUT

PRES. R.O.W.

TVA POWER LINE ESMT. (75.0')

PROP. 127' OF 24" RCP

LIMIT OF CONST. 24+85.00

LIMIT OF CONST. 20+85.98

EXISTING LEE SEMINARY RD.

I F RES

DO NOT STOCKPILE EXCESS MATERIAL BETWEEN THE POTENTIAL STOCKPILE AREAS SHOWN

POTENTIAL STOCKPILE FOR EXCESS MATERIAL APPROX. 11,000 S.Y.

STA. 61+28.85 BENNETT RD. =
STA. 20+00.00 HIGHLAND PARK BLVD.
N 656434.1854
E 2092662.4958

ITEM NO. 803-01 SODDING (NEW SOD) SHALL BE PLACED WITHIN THE SLOPE LIMITS BETWEEN STA. 38+50 TO STA. 52+00.

ITEM NO. 801-02 SEEDING (WITHOUT MULCH) & ITEM NO. 805-12.02 EROSION CONTROL BLANKET (TYPE II) SHALL BE PLACED WITHIN THE SLOPE LIMITS BETWEEN STA. 52+00 TO STA. 64+25.

END PROJ. CONST.
71952-3544-04
STA. 64+25.00
N = 656672.2546
E = 2092837.1128

EXISTING BRIDGE 21' X 30' CONC. AND STEEL BEAM. SKEW 0°

TRIBUTARY TO CANE CREEK

OUT - 14
OUT - 13
OUT - 12
OUT - 8

55
60

SEALED BY

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NOT FOR BIDDING

STAGE 3
FINAL STABILIZATION

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL
PROPOSED CONTOURS

STA.51+00 TO STA.64+25
SCALE: 1"= 50'

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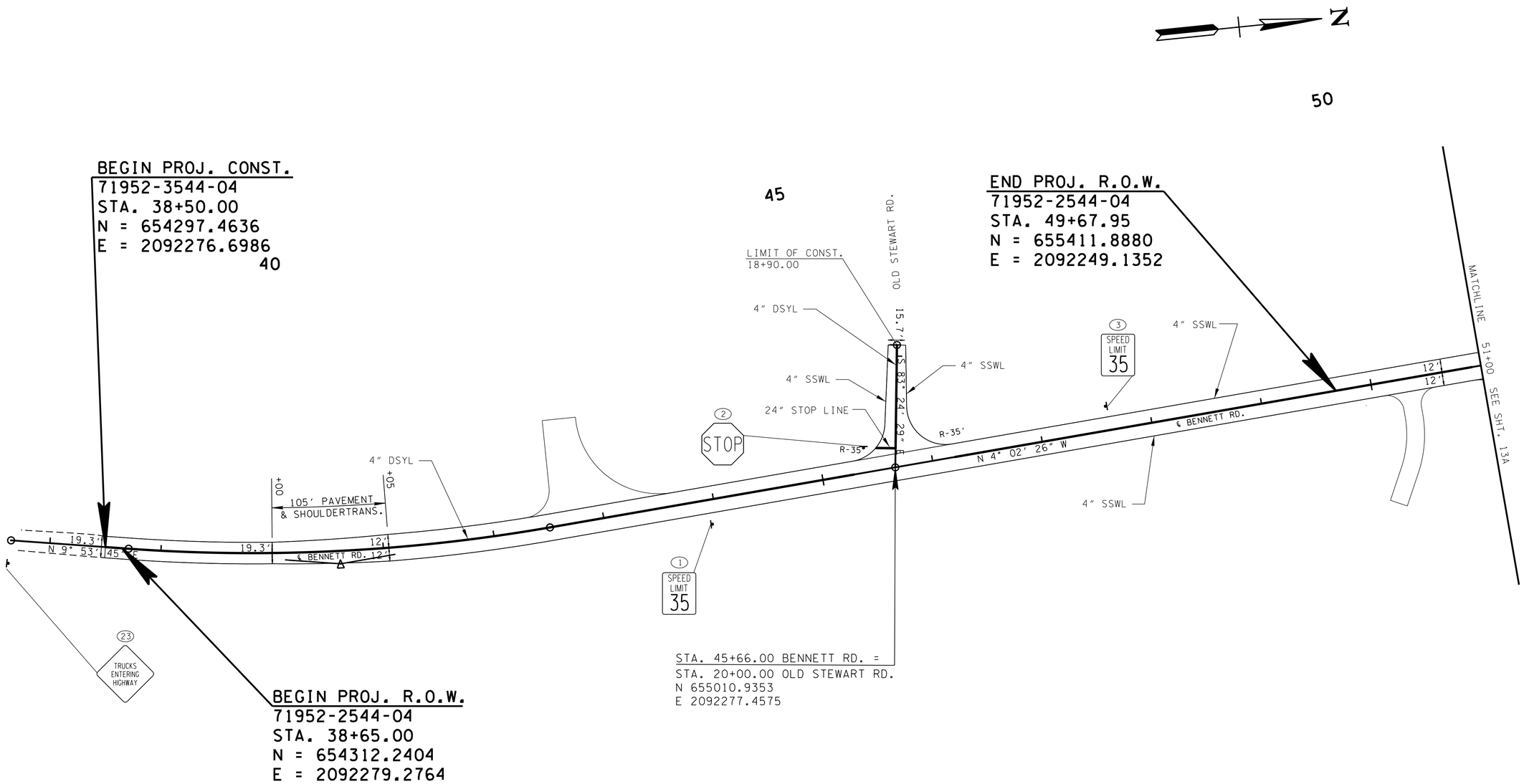
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	13
CONST.	2015	71952-3544-04	13



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DEPARTMENT OF TRANSPORTATION

SIGNING & PAVEMENT MARKING

STA.38+50 TO STA.51+00
SCALE: 1"=50'

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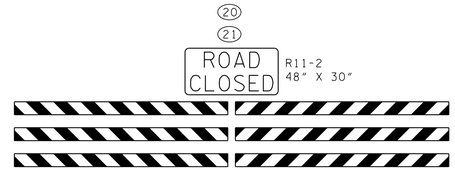
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	13A
CONST.	2015	71952-3544-04	13A



METAL BARRICADE (TYPE III) ROAD CLOSURE

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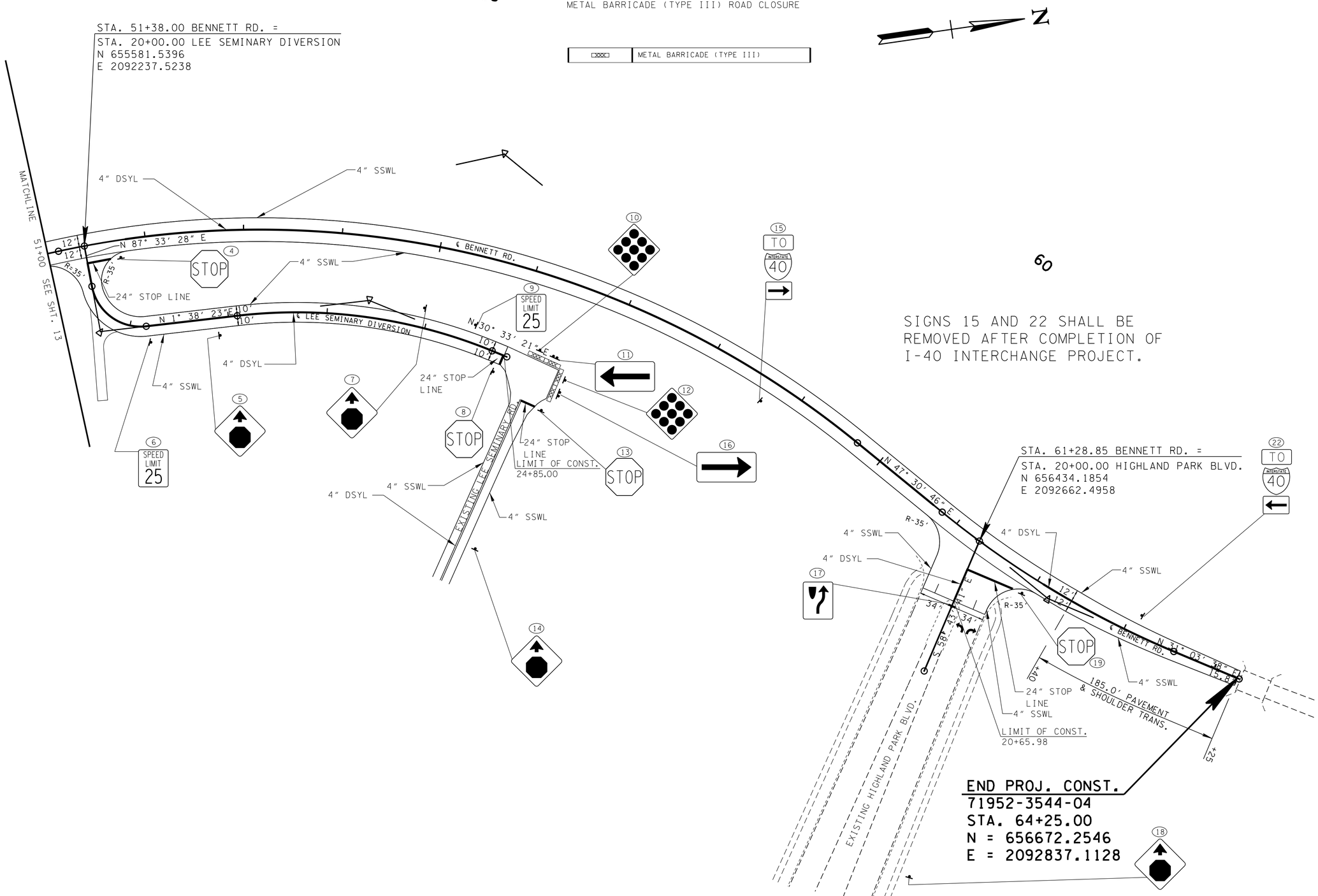
	METAL BARRICADE (TYPE III)



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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGNING & PAVEMENT MARKING

STA.51+00 TO STA.64+25
SCALE: 1"=50'

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

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

SIGN NO	LEGEND		SHEET NO	SIZE 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
2 4 8 13 19	STOP	R1-1	13 13A	36"	36"									WHITE (REF.)	RED (REF.)	0.080" SHEET ALUMINUM	P8	h=12'-6"				5'0"	
5 7 14 18		W3-1	13 13A	36"	36"									(ARROW) BLACK (STOP) RED (REF.)	YELLOW (REF.)	0.100" SHEET ALUMINUM	P8	h=13'-6"				5'0"	
17		R4-7	13A	24"	30"									BLACK	WHITE (REF.)	0.080" SHEET ALUMINUM	U3	h=12'-6"				5'0"	
11		W1-6	13A	48"	24"									(ARROW) BLACK	YELLOW (REF.)	0.100" SHEET ALUMINUM	U1	h_1=12'-0" h_2=12'-0"				5'0"	
16		W1-6	13A	48"	24"									(ARROW) BLACK	YELLOW (REF.)	0.100" SHEET ALUMINUM	U1	h_1=12'-0" h_2=12'-0"				5'0"	
6 9	SPEED LIMIT 25	R2-1	13A	24"	30"									BLACK	WHITE (REF.)	0.080" SHEET ALUMINUM	U3	h=12'-6"				5'0"	
1 3	SPEED LIMIT 35	R2-1	13	24"	30"									BLACK	WHITE (REF.)	0.080" SHEET ALUMINUM	U3	h=12'-6"				5'0"	
15	TO INTERSTATE 40 	M4-5 M1-1 M6-1	13A	24" 24" 21"	12" 24" 15"									WHITE WHITE WHITE	BLUE (REF.) (TOP) RED (BOTTOM) BLUE BLUE (REF.)	0.080" SHEET ALUMINUM	P8	h=14'-6"				5'0"	
10 12		OM4-1	13A					SEE STD. DWG. T-S-18															TO BE PAID FOR UNDER ITEM NO. 713-16.07
20 21	ROAD CLOSED	R11-2	13A	48"	30"									BLACK (REF.)	WHITE (REF.)	0.100" SHEET ALUMINUM		N/A				N/A	TO BE MOUNTED ON METAL BARRICADE (TYPE III)
22	TO INTERSTATE 40 	M4-5 M1-1 M6-1	13A	24" 24" 21"	12" 24" 15"									WHITE WHITE WHITE	BLUE (REF.) (TOP) RED (BOTTOM) BLUE BLUE (REF.)	0.080" SHEET ALUMINUM	P8	h=14'-6"				5'0"	
23	TRUCKS ENTERING HIGHWAY	W414	13	30"	30"									BLACK	YELLOW (REF.)	0.080" SHEET ALUMINUM	U6	h=13'-6"				5'0"	

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	71952-3544-04	14

U-POST SUBSTITUTION TABLE

BID ITEM 713-11.01	SUBSTITUTION ALLOWED
2#/FT. U1	2#/FT. MU1 OR 2#/FT. R1
2.5#/FT. U3	2.5#/FT. MU3 OR 3#/FT. R2*
3#/FT. U6	
4#/FT. U7	NO SUBSTITUTES

* PAID AT A RATE OF 2.5#/FT.

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DEPARTMENT OF TRANSPORTATION

SIGN SCHEDULE

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	71952-3544-04	15

PAVEMENT EDGE DROP-OFF TRAFFIC CONTROL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

SEPARATION WILL BE PROVIDED BY USE OF PORTABLE BARRIER RAIL.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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PAVEMENT EDGE DROP-OFF TRAFFIC CONTROL NOTES

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	71952-3544-04	15A

SPECIAL TRAFFIC CONTROL NOTES

CONSTRUCTION SEQUENCE

PHASE 1

1. MAINTAIN TRAFFIC ON EXISTING BENNETT RD. AND MAINTAIN ACCESS TO ALL PROPERTY OWNERS ADJACENT TO THE PROJECT AT ALL TIMES.
2. INSTALL PORTABLE BARRIER RAIL ALONG THE WEST SIDE OF EXISTING BENNETT RD., AS SHOWN.
3. CONSTRUCT PROPOSED BENNETT RD. FULL WIDTH FROM STA. 51+00 TO STA. 61+00, AS SHOWN IN PHASE I PLAN AND AS DETAILED IN THE PROPOSED CROSS SECTIONS.
4. CONSTRUCT PROPOSED LEE SEMINARY DIVERSION FULL WIDTH FROM STA. 20+40 TO STA. 22+50 AS SHOWN IN THE PHASE I PLAN.
5. INSTALL FLEXIBLE DRUMS ALONG THE WEST SIDE OF BENNETT RD. AND CONSTRUCT THE LEFT SIDE OF BENNETT RD. FROM STA. 42+50 TO STA. 51+00.
6. INSTALL FLEXIBLE DRUMS ALONG THE WEST SIDE OF BENNETT RD. AND CONSTRUCT BENNETT RD. FROM STA. 61+00 TO STA. 62+00, AS SHOWN.
7. PERFORM PAVING OPERATIONS UP THROUGH THE BINDER COURSE ON SECTIONS OF ROADWAY CONSTRUCTED IN PREVIOUS ITEMS.
8. CONSTRUCT THE LEFT SIDE OF BENNETT RD. FROM STA. 38+50 TO STA. 42+50 AND STA. 62+00 TO STA. 64+25 UNDER TRAFFIC USING FLAGGERS.
9. CONSTRUCT LEE SEMINARY DIVERSION FROM STA. 20+12 TO STA. 20+40 AND STA. 22+50 TO STA. 24+85 UNDER TRAFFIC USING FLAGGERS.
10. TEMPORARILY STRIPE THE PROPOSED PAVEMENT WITH 1-10' LANE AND 2' SHOULDERS MINIMUM ALONG BENNETT RD.
11. INSTALL TEMPORARY SIGNALS ALONG BENNETT RD. FOR THE WORK ZONE FROM STA. 38+50 TO STA. 51+00, UNTIL 2 LANES OF TRAFFIC ARE OPEN, AS PER STD. DWG. T-WZ-32.

PHASE 2

1. INSTALL FLEXIBLE DRUMS ALONG THE CENTERLINE OF PROPOSED BENNETT RD. FROM STA. 38+50 TO STA. 51+00, AND THEN SHIFT TRAFFIC TO THE LEFT LANE OF BENNETT RD. AND THROUGH LEE SEMINARY DIVERSION AND MAINTAIN ACCESS TO ALL PROPERTY OWNERS ADJACENT TO THE PROJECT AT ALL TIMES.
2. INSTALL PORTABLE BARRIER RAIL ALONG THE EAST SIDE OF BENNETT RD. FROM STA. 52+50 TO STA. 60+50, AS SHOWN. LEAVE IN PLACE UNTIL BENNETT RD. OF THE INTERCHANGE PROJECT IS CONSTRCUTED.
3. CONSTRUCT THE RIGHT SIDE OF BENNETT RD. FROM STA. 38+50 TO STA. 51+00 AND FROM STA. 61+57 TO STA. 64+25 UNDER TRAFFIC USING FLAGGERS.
4. PERFORM PAVING OPERATIONS UP THROUGH THE BINDER COURSE ON SECTIONS OF ROADWAY CONSTRUCTED IN PREVIOUS ITEMS.
5. OPEN BENNETT RD. TO 2-WAY TRAFFIC.
6. FINISH GRADE ANY DITCHES THAT PASS THROUGH EXISTING BENNETT RD.

PHASE 3

1. PLACE ASPHALT SURFACE COURSE FULL WIDTH UNDER TRAFFIC.

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DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL NOTES

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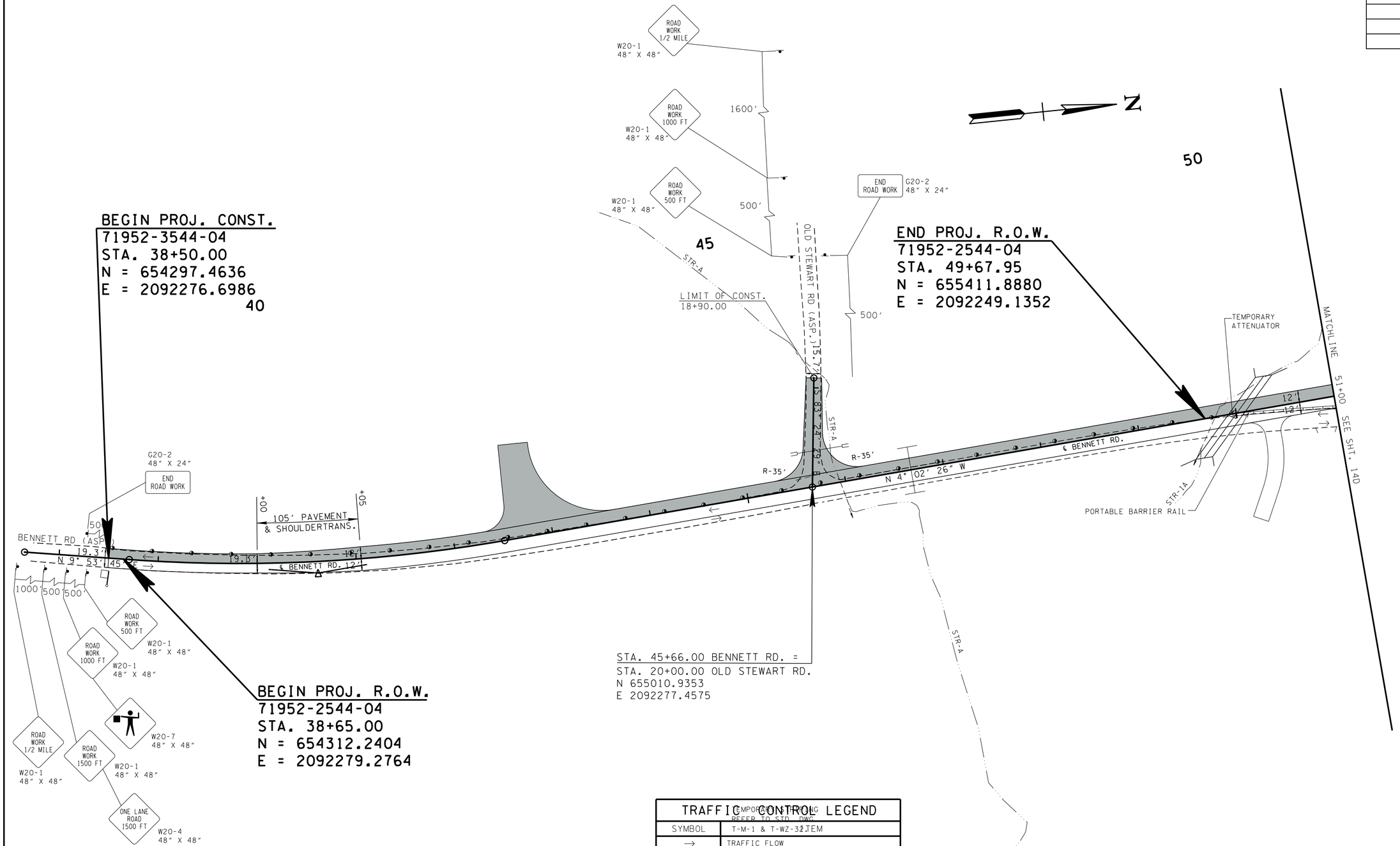
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	71952-3544-04	15B



ADVANCED WARNING
SIGNS DURING DAYTIME LANE CLOSURE.
REFER TO STD. DWG. T-WZ-32.

TRAFFIC CONTROL LEGEND

TEMPORARY TRAFFIC CONTROL
REFER TO STD. DWG.

SYMBOL	T-M-1 & T-WZ-32 ITEM
→	TRAFFIC FLOW
	SIGN (CONSTRUCTION)
	PHASE I WORK ZONE
	PORTABLE BARRIER RAIL
	FLAGGER
	FLEXIBLE DRUMS (CHANNELIZING)
	TEMPORARY ATTENUATOR

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COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.0000749 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
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TRAFFIC CONTROL PLAN PHASE I

STA.38+50 TO STA.51+00

SCALE: 1"=50'

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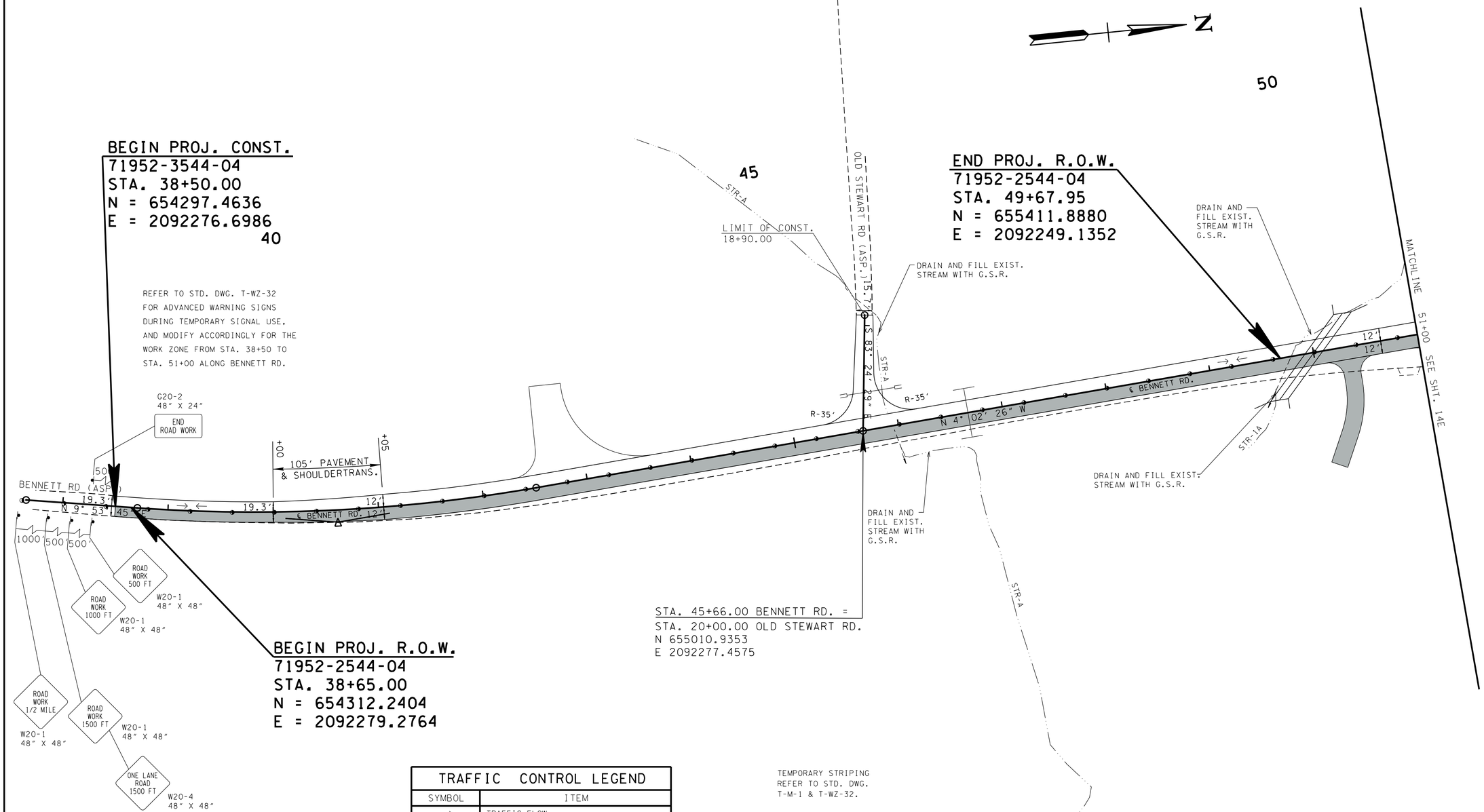
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	71952-3544-04	15C



TRAFFIC CONTROL LEGEND	
SYMBOL	ITEM
→	TRAFFIC FLOW
▶	SIGN (CONSTRUCTION)
▭	PHASE II WORK ZONE
◑	FLEXIBLE DRUMS (CHANNELIZING)

TEMPORARY STRIPING REFER TO STD. DWG. T-M-1 & T-WZ-32.

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STATE OF TENNESSEE
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TRAFFIC CONTROL PLAN PHASE II

STA.38+50 TO STA.51+00

SCALE: 1"=50'

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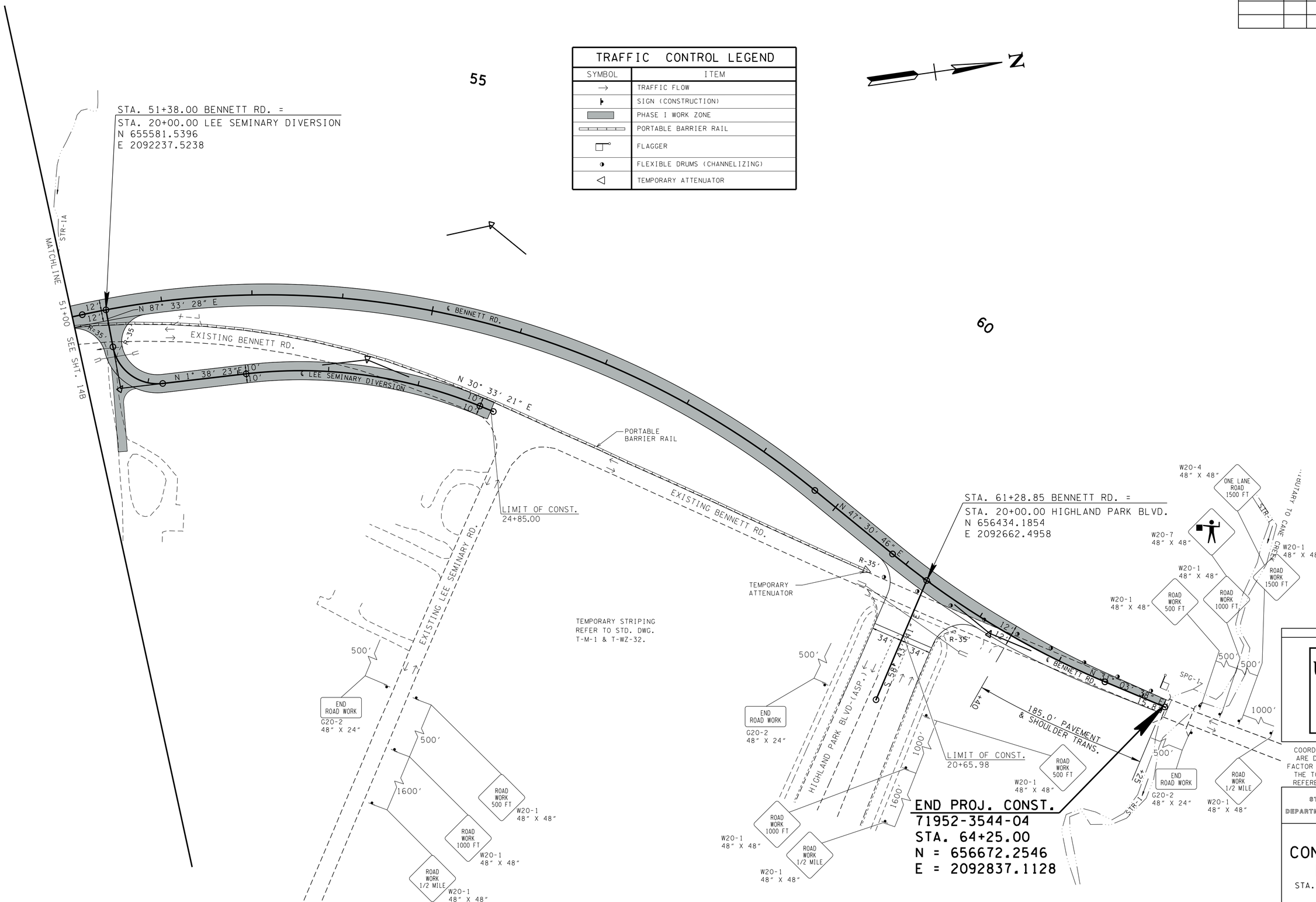
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	71952-3544-04	15D

TRAFFIC CONTROL LEGEND	
SYMBOL	ITEM
→	TRAFFIC FLOW
	SIGN (CONSTRUCTION)
	PHASE I WORK ZONE
	PORTABLE BARRIER RAIL
	FLAGGER
	FLEXIBLE DRUMS (CHANNELIZING)
◁	TEMPORARY ATTENUATOR



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COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.0000749 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

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TRAFFIC CONTROL PLAN PHASE I

STA.51+00 TO STA.64+25

SCALE: 1"=50'

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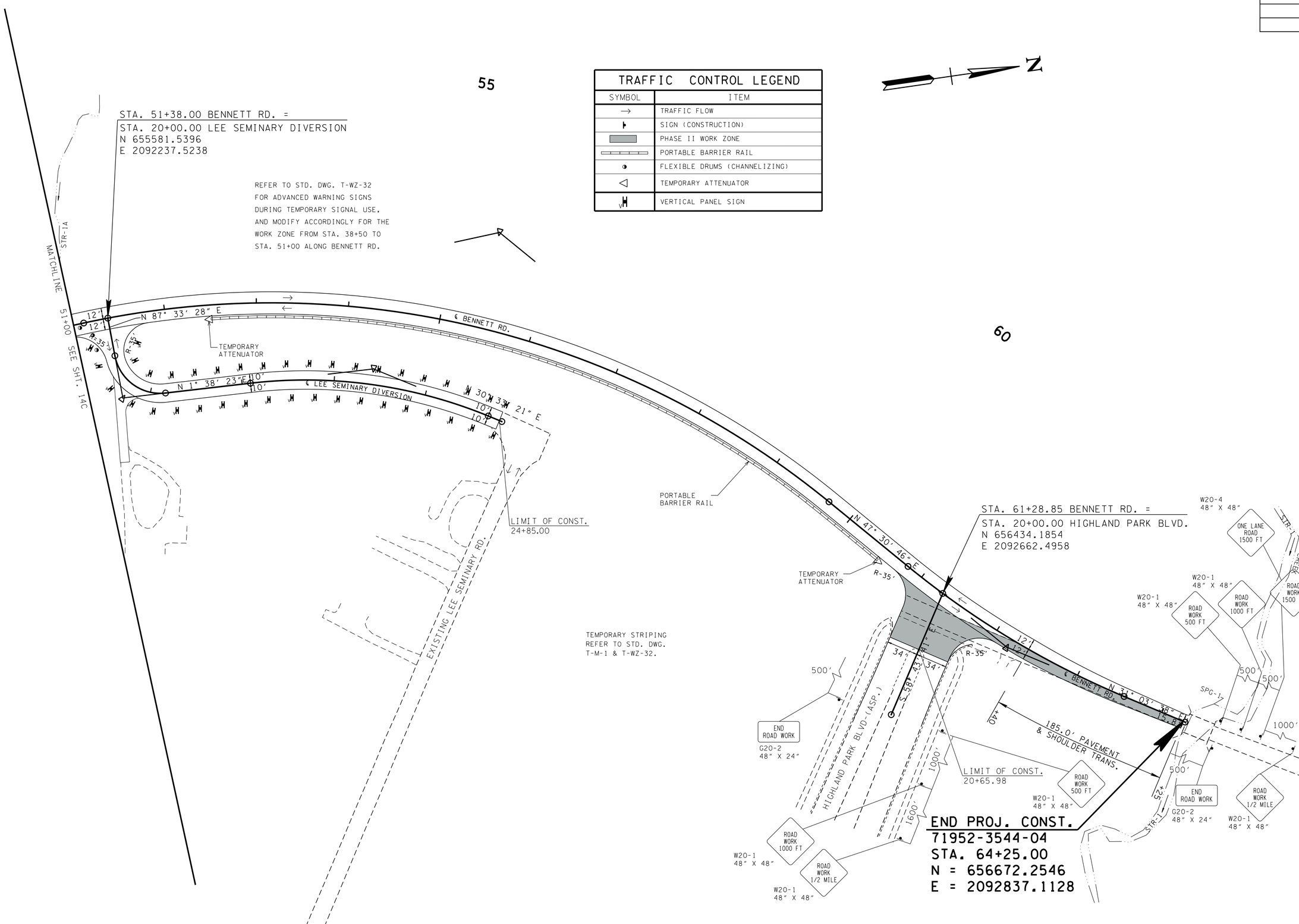
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	71952-3544-04	15E

TRAFFIC CONTROL LEGEND	
SYMBOL	ITEM
→	TRAFFIC FLOW
	SIGN (CONSTRUCTION)
	PHASE II WORK ZONE
	PORTABLE BARRIER RAIL
	FLEXIBLE DRUMS (CHANNELIZING)
	TEMPORARY ATTENUATOR
	VERTICAL PANEL SIGN



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COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.0000749 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

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TRAFFIC CONTROL PLAN PHASE II

STA.51+00 TO STA.64+25

SCALE: 1"=50'

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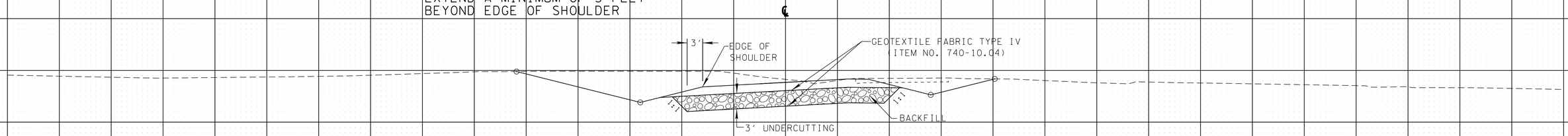
TYPE	YEAR	PROJECT NO.	SHEET NO.
SOILS	2015	71952-3544-04	16

SURFICIAL SOFT SOILS OR FAT CLAYS ARE PRESENT AT SPECIFIC LOCATIONS OF PLANNED FILL AREAS ALONG THE MAINLINE AND SIDE ROADS. THESE MATERIALS SHALL BE EXCAVATED TO A DEPTH OF THREE (3) FEET OR TO TOP OF ROCK, WHICHEVER IS SHALLOWER. THE ZONES SHOULD THEN BE BACKFILLED TO THE REQUIRED GRADE USING GRADED SOLID ROCK.

SOIL REPLACEMENT MUST EXTEND A MINIMUM OF 3 FEET BEYOND EDGE OF SHOULDER



ITEM NO. 203-02.01 BORROW EXCAVATION (GRADED SOLID ROCK):

BORROW EXCAVATION (GRADED SOLID ROCK) SHALL CONSIST OF THE REMOVAL AND SATISFACTORY PLACEMENT OF SOUND, NON-DEGRADABLE ROCK WITH A MAXIMUM SIZE OF 3 FT. (1 M). AT LEAST 50 PERCENT OF THE ROCK SHALL BE UNIFORMLY DISTRIBUTED BETWEEN 1 FT. (30 CM) AND 3 FT. (1 M) IN DIAMETER AND NO GREATER THAN 10 PERCENT SHALL BE LESS THAN 2 IN. (50 MM) 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 BE NOT MORE THAN 12. THE MATERIAL SHALL BE APPROVED BE THE ENGINEER BEFORE USE.

BENNETT ROAD
TYPICAL SECTION FOR STATIONS:

STA. 52+50.00 TO STA. 64+00.00

SCALE: 1"=10'

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UNOFFICIAL SET
NOT FOR BIDDING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SOILS TYPICAL SECTIONS

SCALE: 1"=10'

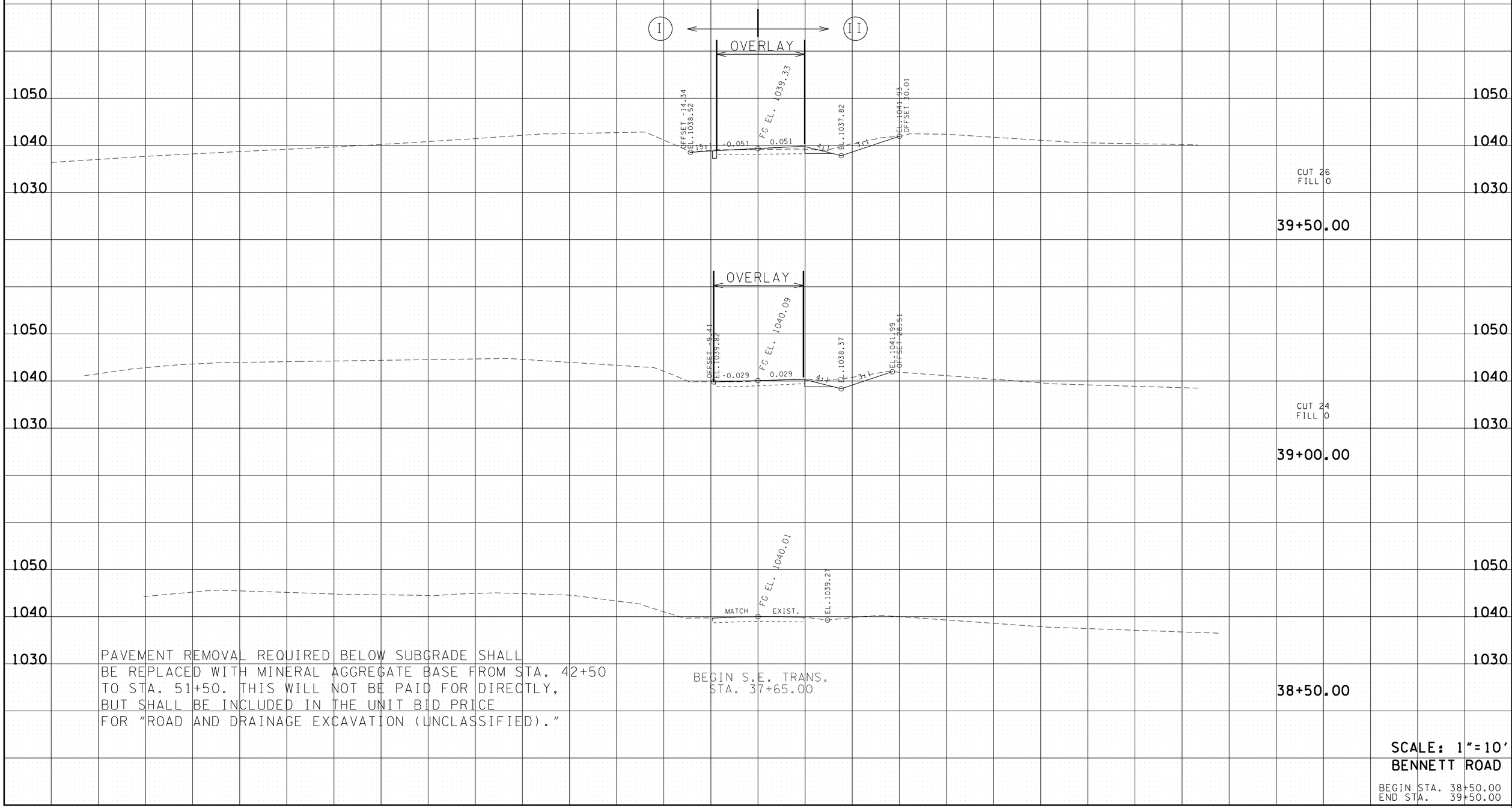
2/23/2015 11:00:49 AM
G:\HDII170.04\CAD\Soils Typical Sections.sht

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	50
CONST.	2015	71952-3544-04	50

LEGEND

(I) CONSTRUCTION PHASE 1

(II) CONSTRUCTION PHASE 2



PAVEMENT REMOVAL REQUIRED BELOW SUBGRADE SHALL BE REPLACED WITH MINERAL AGGREGATE BASE FROM STA. 42+50 TO STA. 51+50. THIS WILL NOT BE PAID FOR DIRECTLY, BUT SHALL BE INCLUDED IN THE UNIT BID PRICE FOR "ROAD AND DRAINAGE EXCAVATION (UNCLASSIFIED)."

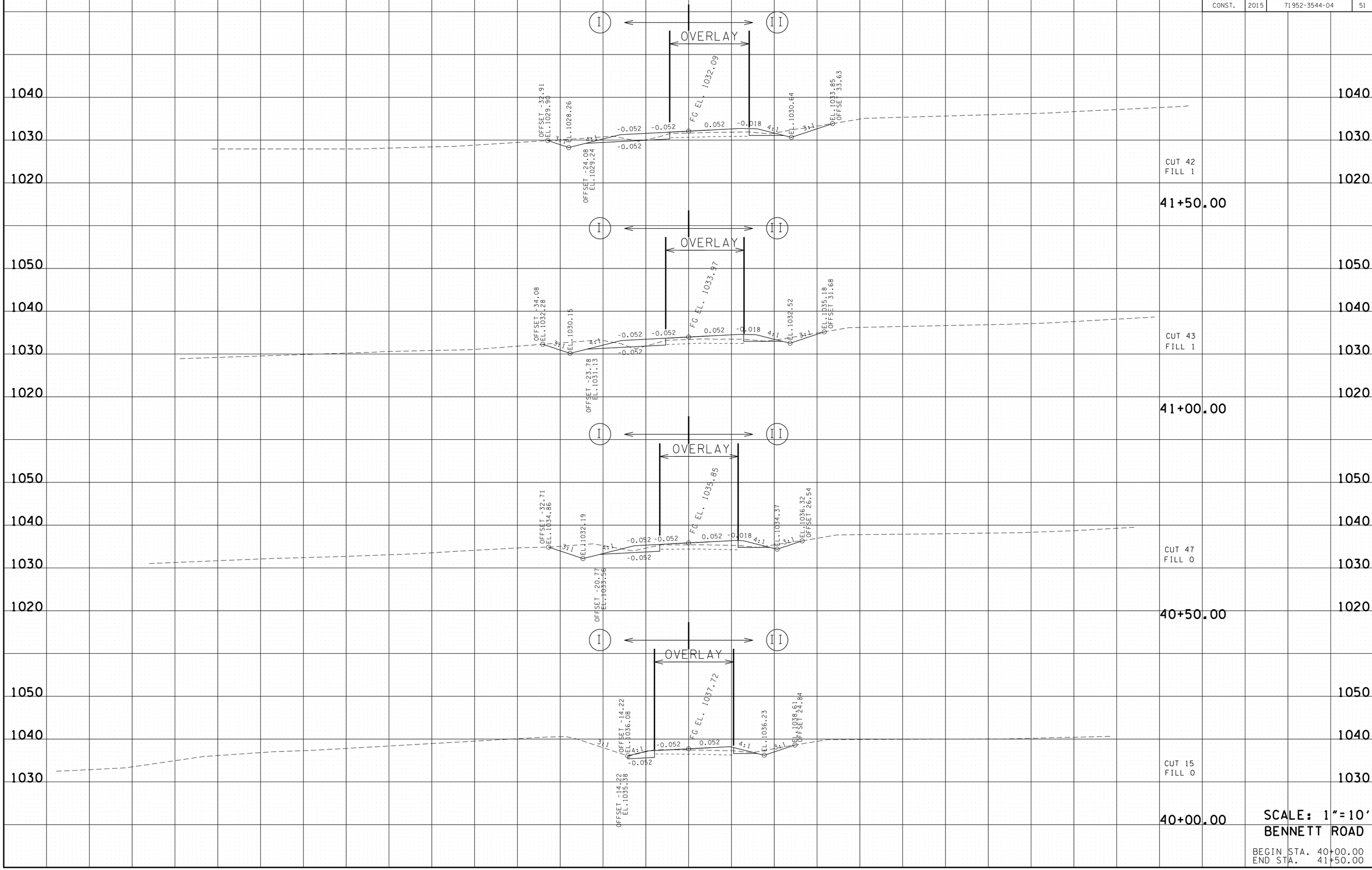
SCALE: 1"=10'

BENNETT ROAD

BEGIN STA. 38+50.00
END STA. 39+50.00

2/23/2015 9:17:32 AM
G:\HDII70.04\CAD\PU-BEN_BENNETT XSECS.sht

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	51
CONST.	2015	71952-3544-04	51



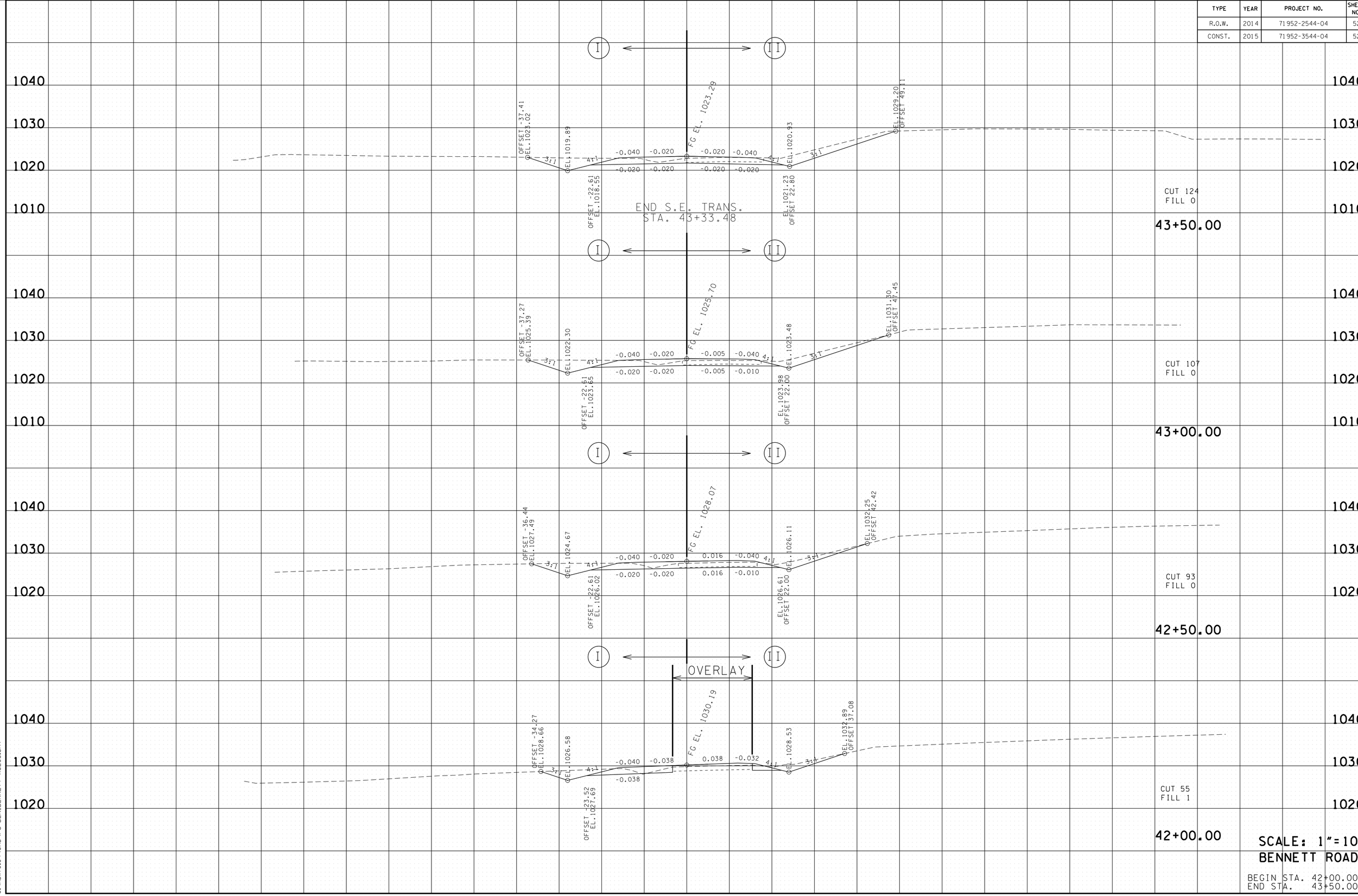
SCALE: 1"=10'

BENNETT ROAD

BEGIN STA. 40+00.00
END STA. 41+50.00

2/23/2015 9:17:34 AM
G:\HDI170.04\CAD\PU-BEN.BENNETT XSECS.sht

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	52
CONST.	2015	71952-3544-04	52



SCALE: 1"=10'

BENNETT ROAD

BEGIN STA. 42+00.00
END STA. 43+50.00

2/23/2015 9:17:35 AM
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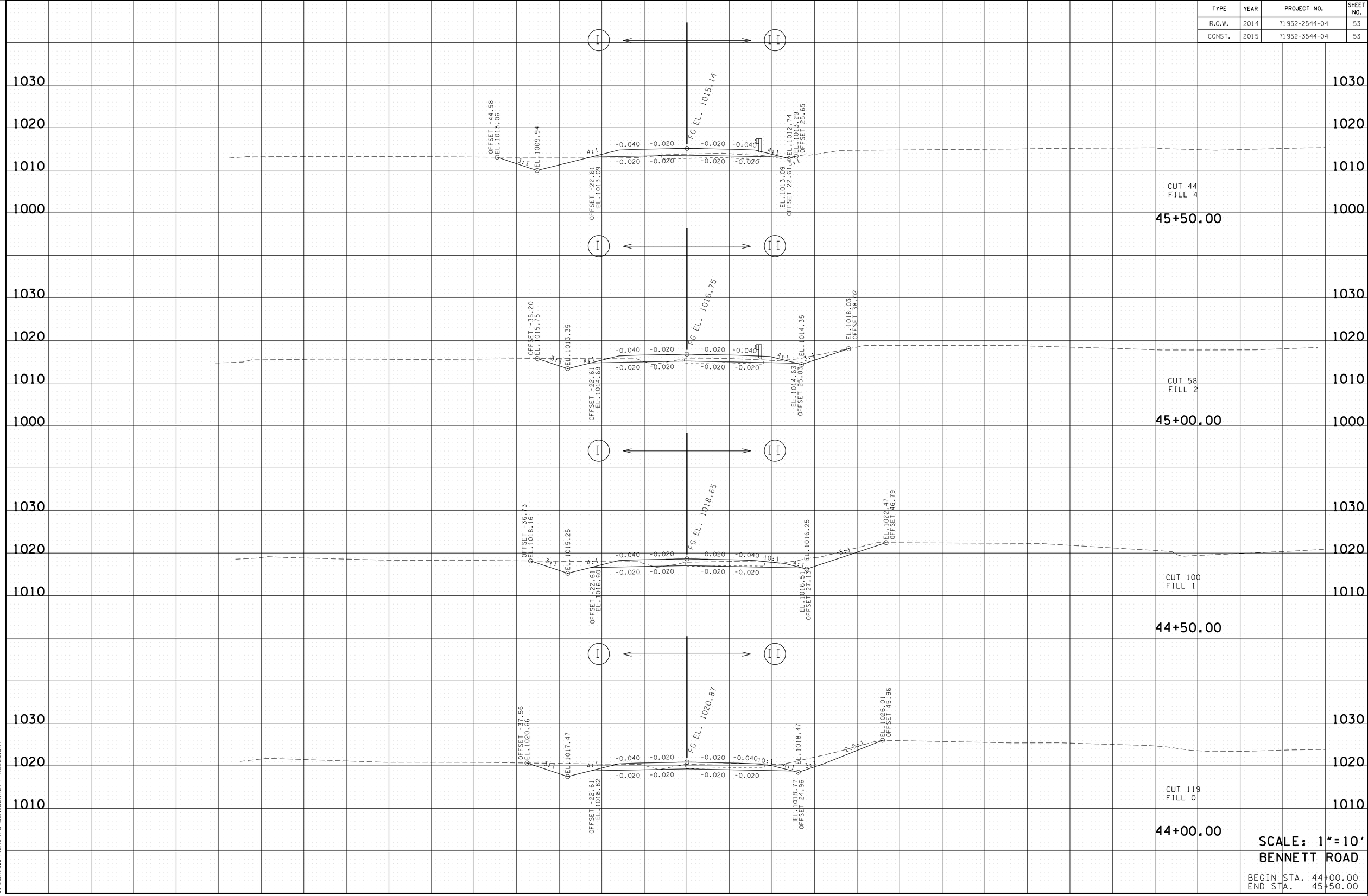
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	53
CONST.	2015	71952-3544-04	53



SCALE: 1"=10'

BENNETT ROAD

BEGIN STA. 44+00.00
END STA. 45+50.00

2/23/2015 9:17:37 AM
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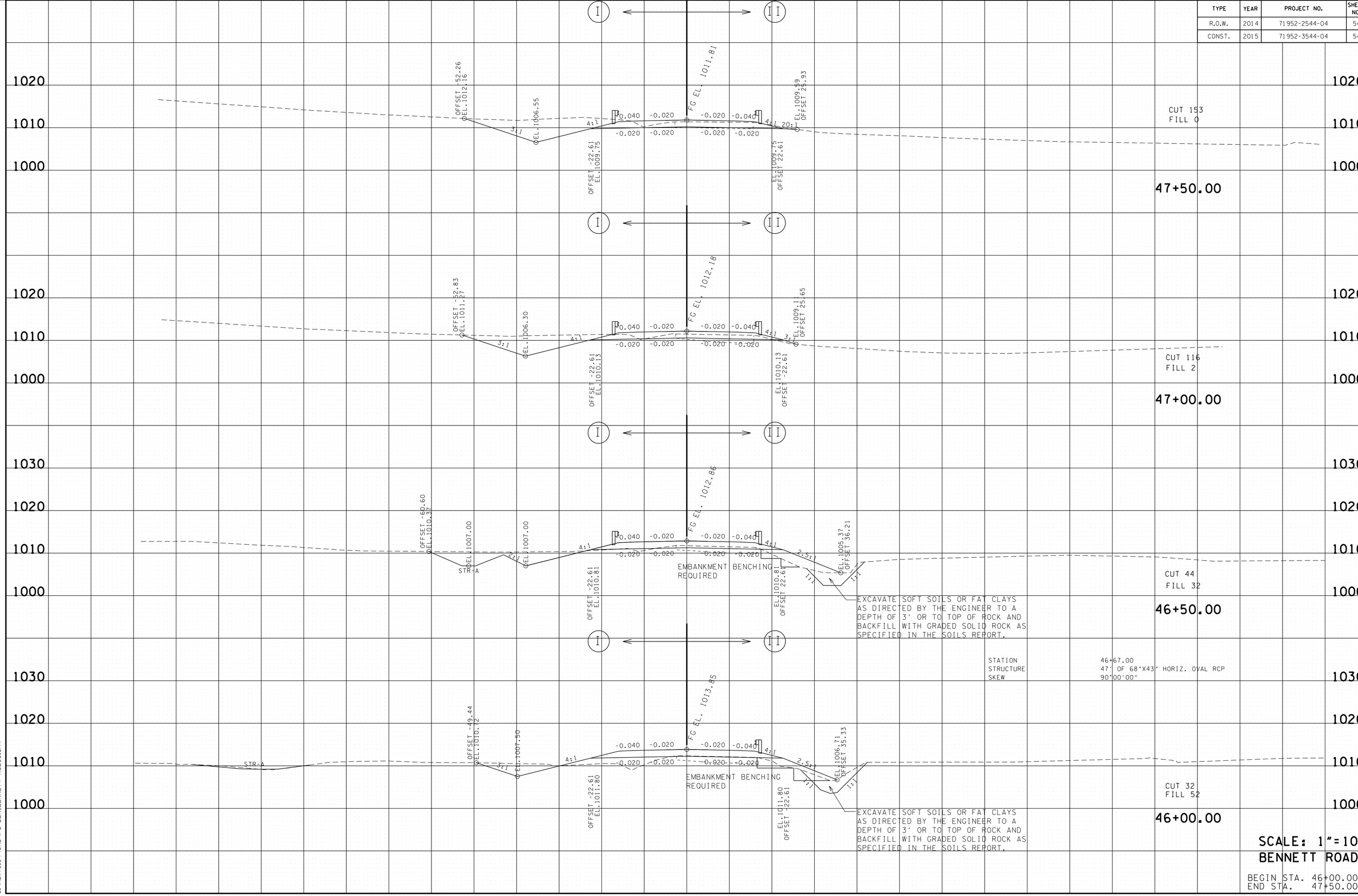
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	54
CONST.	2015	71952-3544-04	54



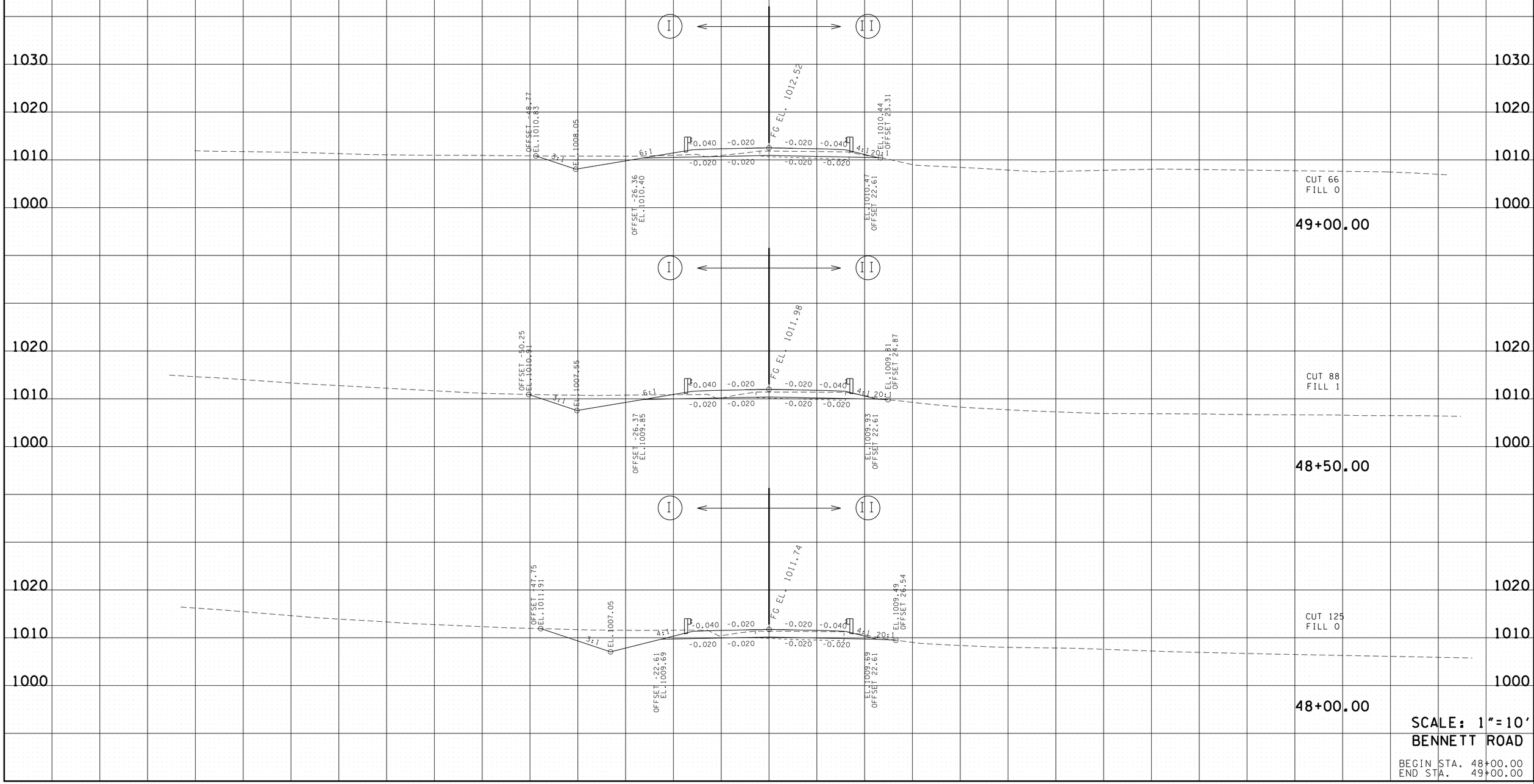
SCALE: 1"=10'

BENNETT ROAD

BEGIN STA. 46+00.00
END STA. 47+50.00

2/23/2015 9:17:38 AM
G:\HDI170.04\CAD\PU-BEN_BENNETT XSECS.sht

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	55
CONST.	2015	71952-3544-04	55



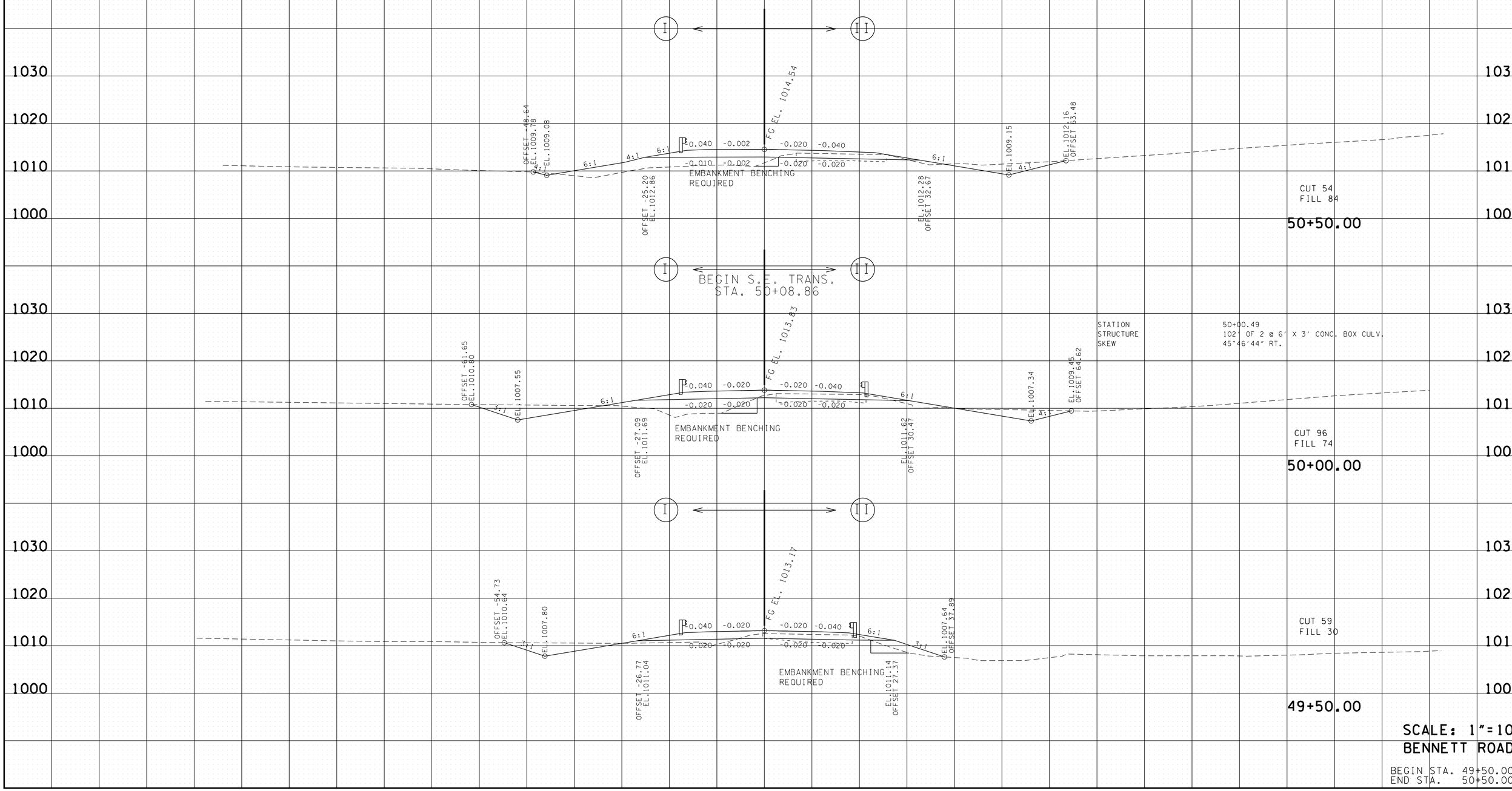
SCALE: 1"=10'

BENNETT ROAD

BEGIN STA. 48+00.00
END STA. 49+00.00

2/23/2015 9:17:40 AM
G:\HDI170.04\CAD\PU-BEN_BENNETT XSECS.sht

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	56
CONST.	2015	71952-3544-04	56



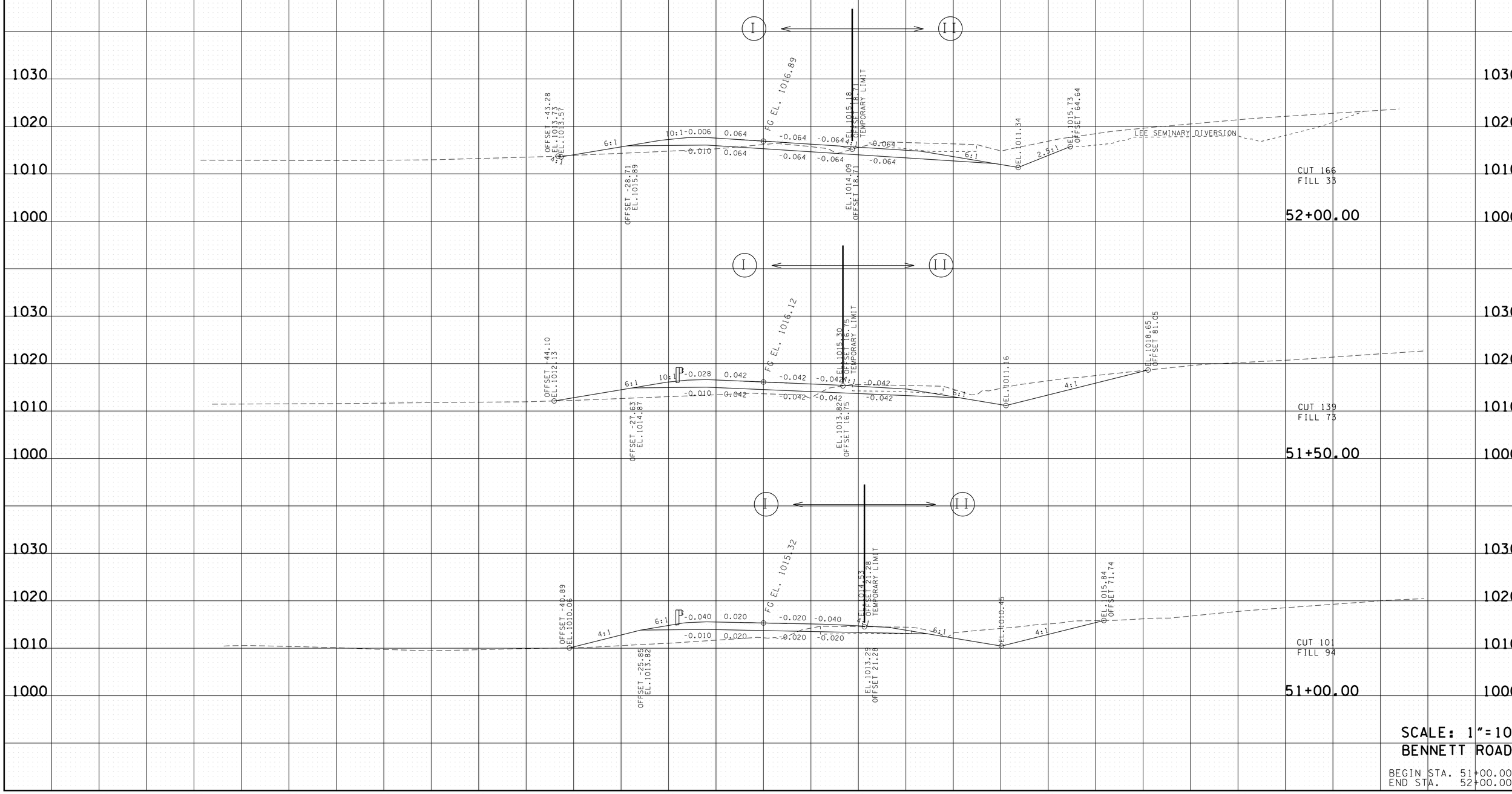
SCALE: 1"=10'

BENNETT ROAD

BEGIN STA. 49+50.00
END STA. 50+50.00

2/23/2015 9:17:42 AM
G:\HDI70.04\CAD\PU-BEN.BENNETT XSECS.sht

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	57
CONST.	2015	71952-3544-04	57



SCALE: 1"=10'

BENNETT ROAD

BEGIN STA. 51+00.00
END STA. 52+00.00

2/23/2015 9:17:43 AM
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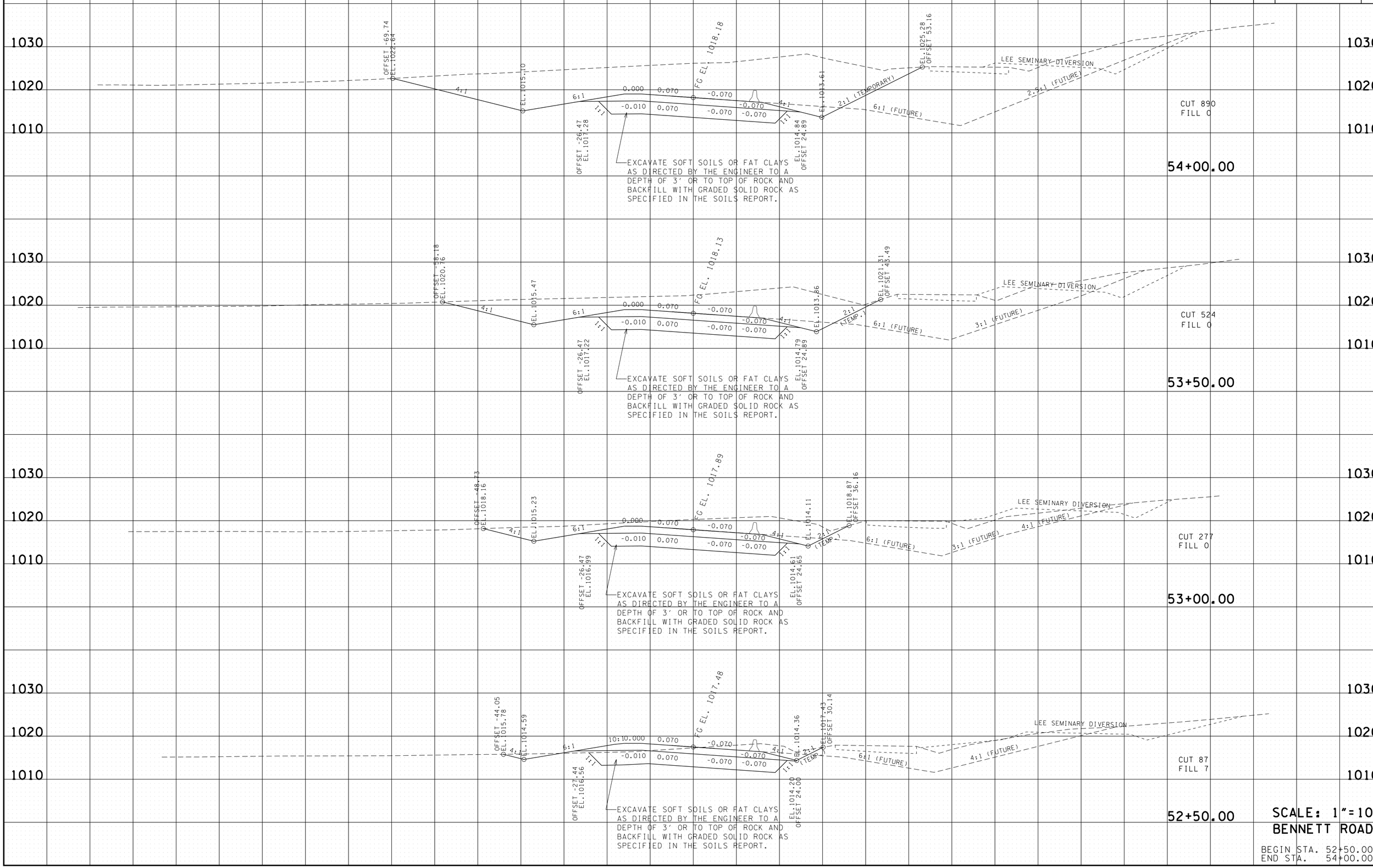
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	58
CONST.	2015	71952-3544-04	58



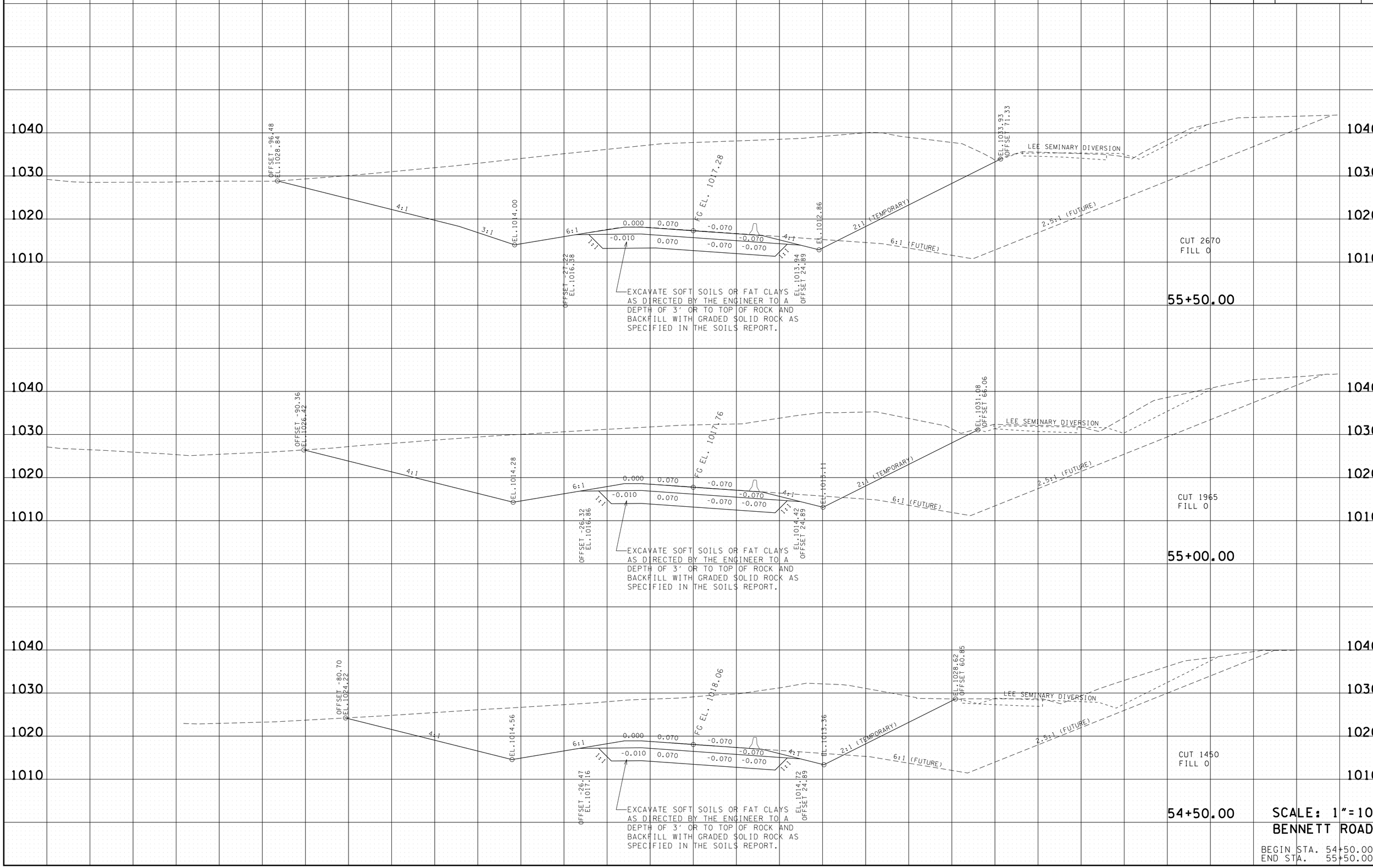
SCALE: 1"=10'

BENNETT ROAD

BEGIN STA. 52+50.00
END STA. 54+00.00

2/23/2015 9:17:45 AM
G:\HDI70.04\CAD\PU-BEN.BENNETT XSECS.sht

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	59
CONST.	2015	71952-3544-04	59



SCALE: 1"=10'

BENNETT ROAD

BEGIN STA. 54+50.00
END STA. 55+50.00

2/23/2015 9:17:46 AM
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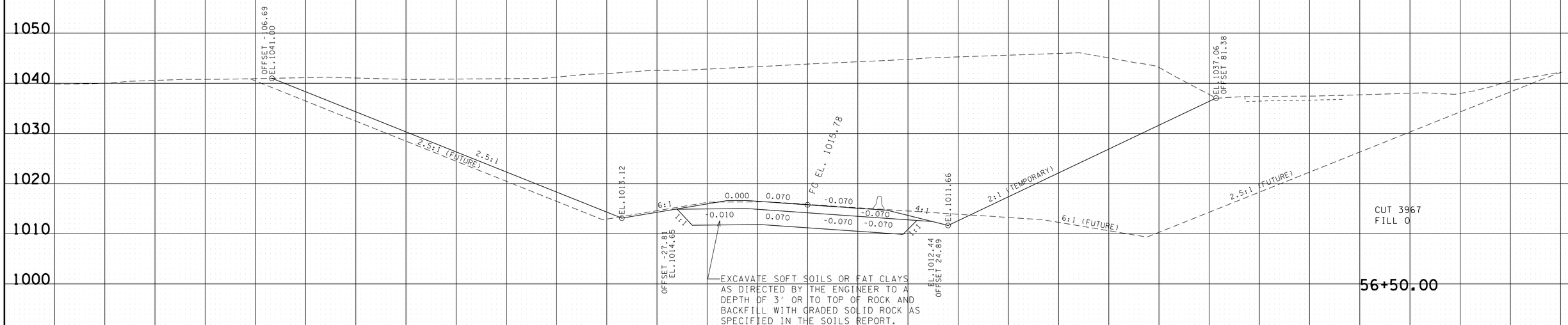
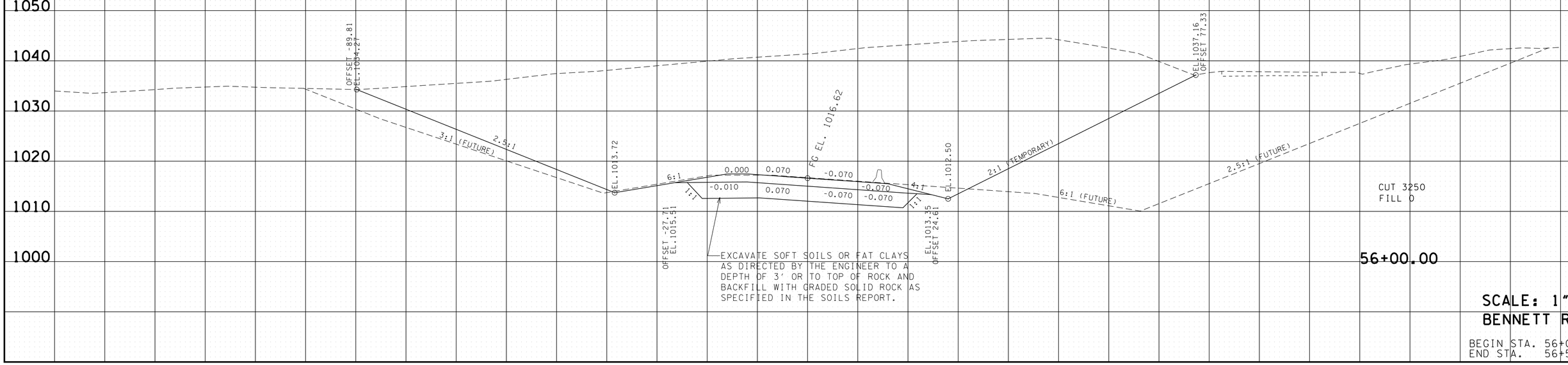
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	60
CONST.	2015	71952-3544-04	60





140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

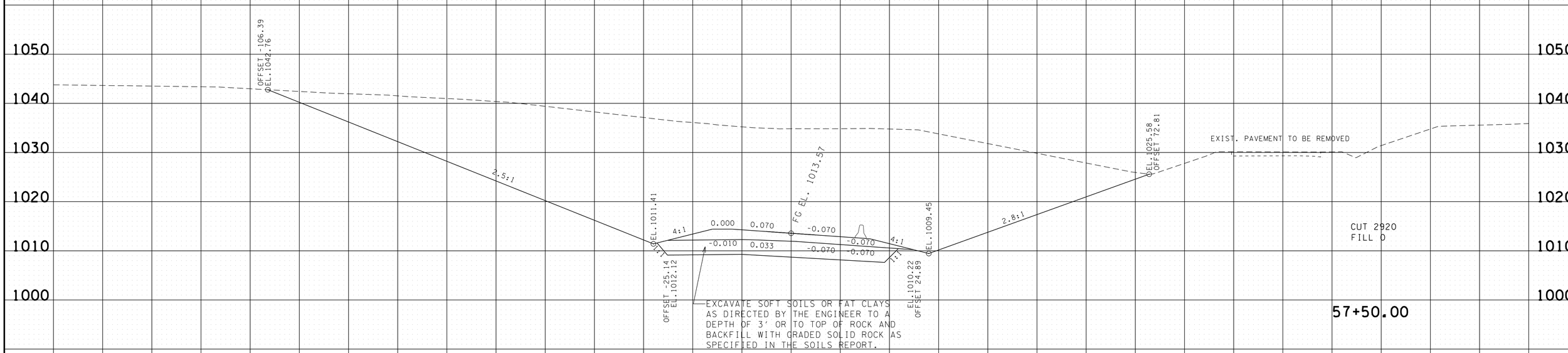
SCALE: 1"=10'

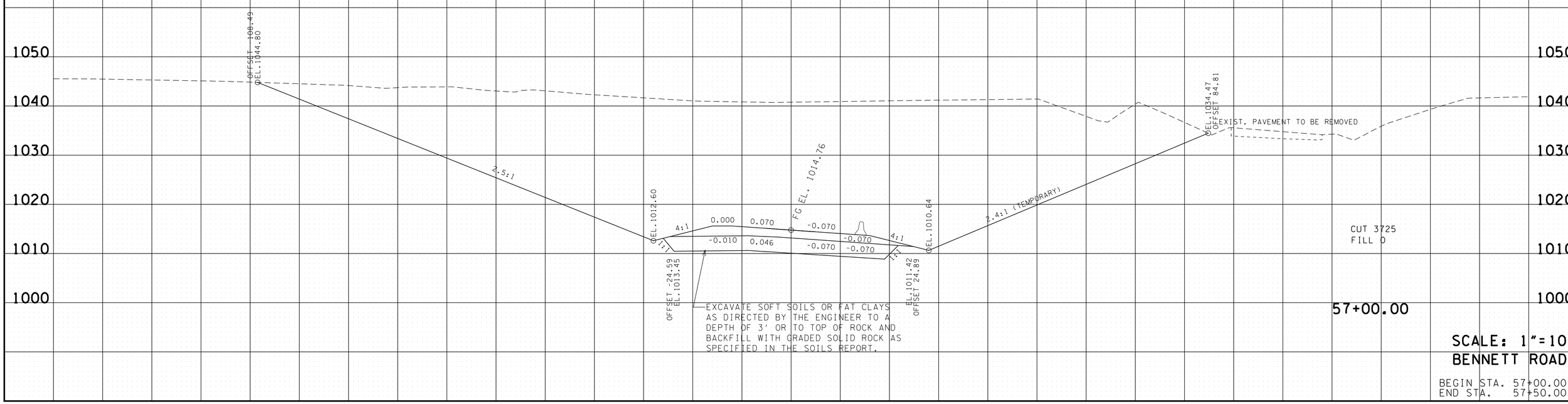
BENNETT ROAD

BEGIN STA. 56+00.00
END STA. 56+50.00

2/23/2015 9:17:48 AM
G:\HDI170.04\CAD\PLI-BEN.BENNETT XSECS.sht

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	61
CONST.	2015	71952-3544-04	61





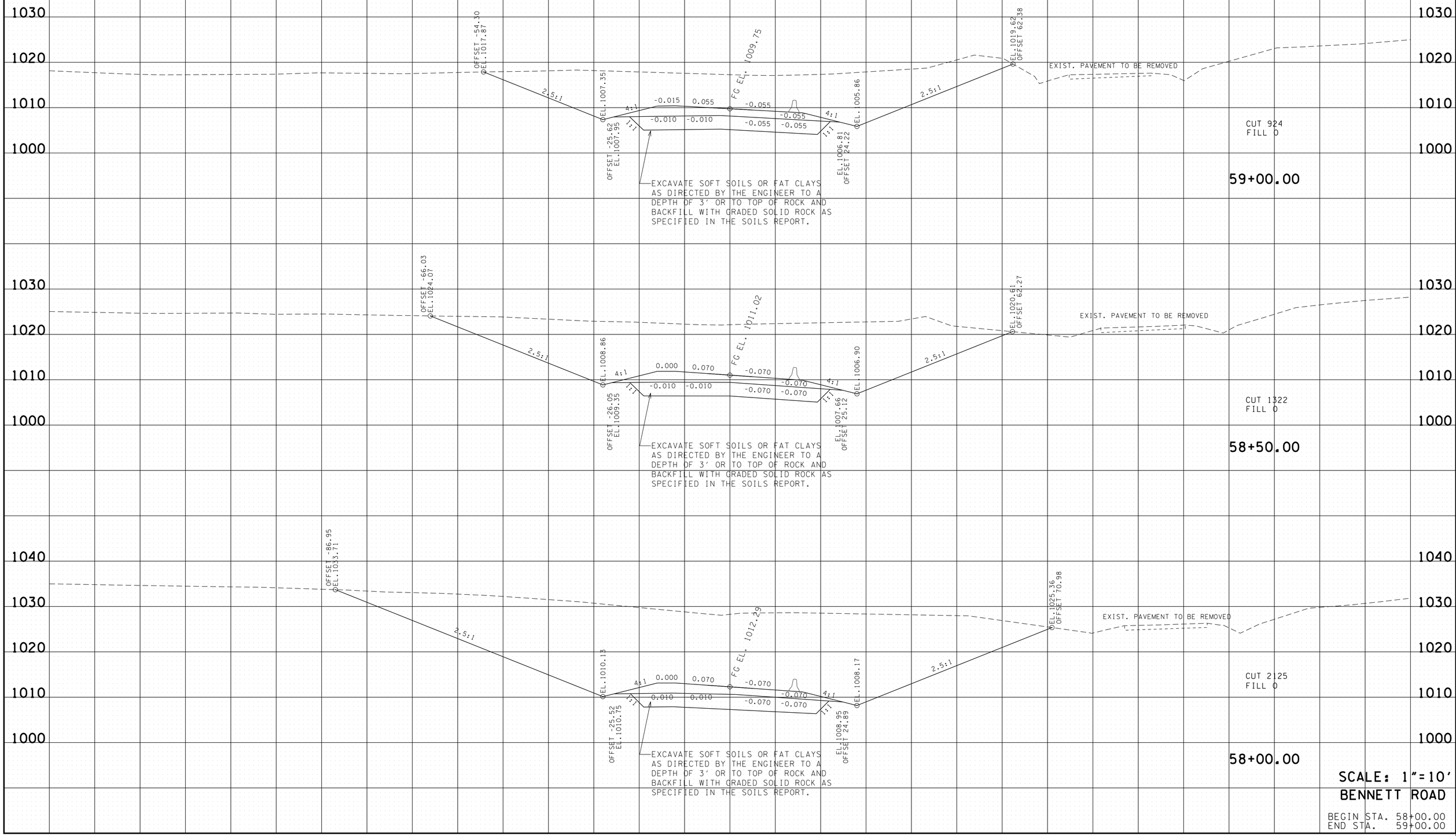
SCALE: 1"=10'

BENNETT ROAD

BEGIN STA. 57+00.00
END STA. 57+50.00

2/23/2015 9:17:49 AM
G:\HDI170.04\CAD\PU-BEN_BENNETT XSECS.sht

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	62
CONST.	2015	71952-3544-04	62



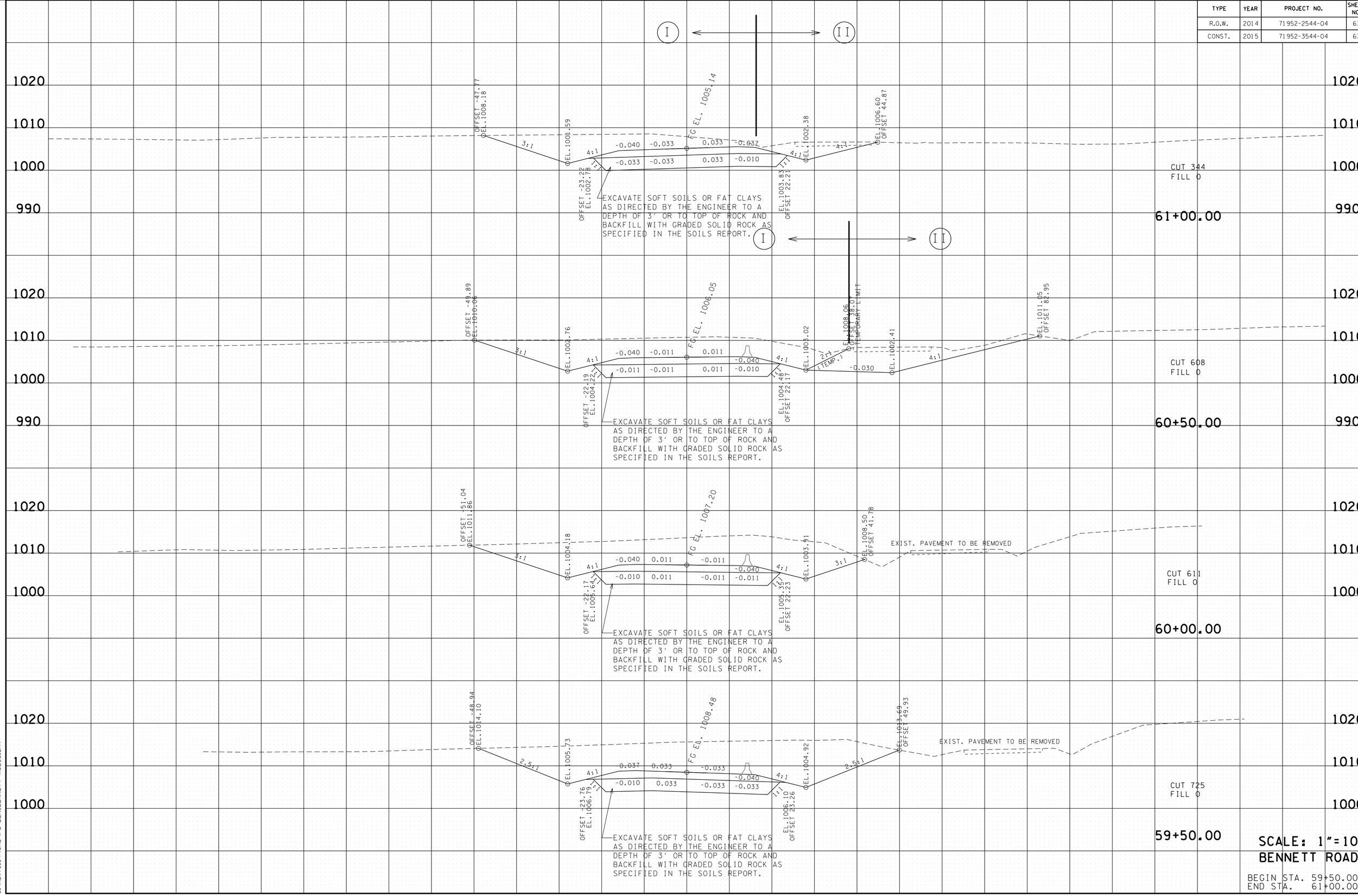
SCALE: 1"=10'

BENNETT ROAD

BEGIN STA. 58+00.00
END STA. 59+00.00

2/23/2015 9:17:51 AM
G:\H0170.04\CAD\PU-BEN_BENNETT XSECS.sht

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	63
CONST.	2015	71952-3544-04	63



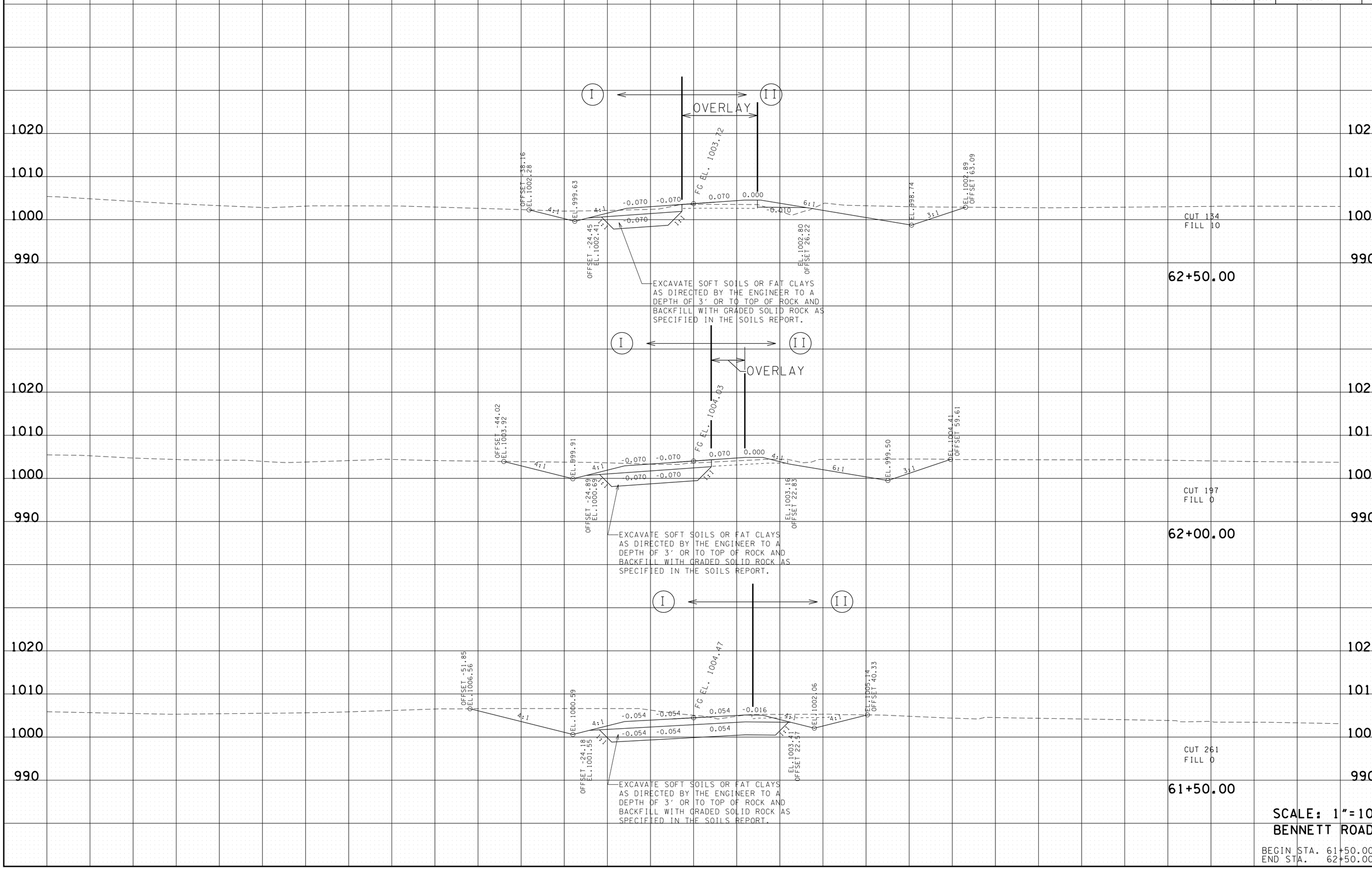
SCALE: 1"=10'

BENNETT ROAD

BEGIN STA. 59+50.00
END STA. 61+00.00

2/23/2015 9:17:52 AM
G:\HDI170.04\CAD\PU-BEN.BENNETT XSECS.sht

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	64
CONST.	2015	71952-3544-04	64



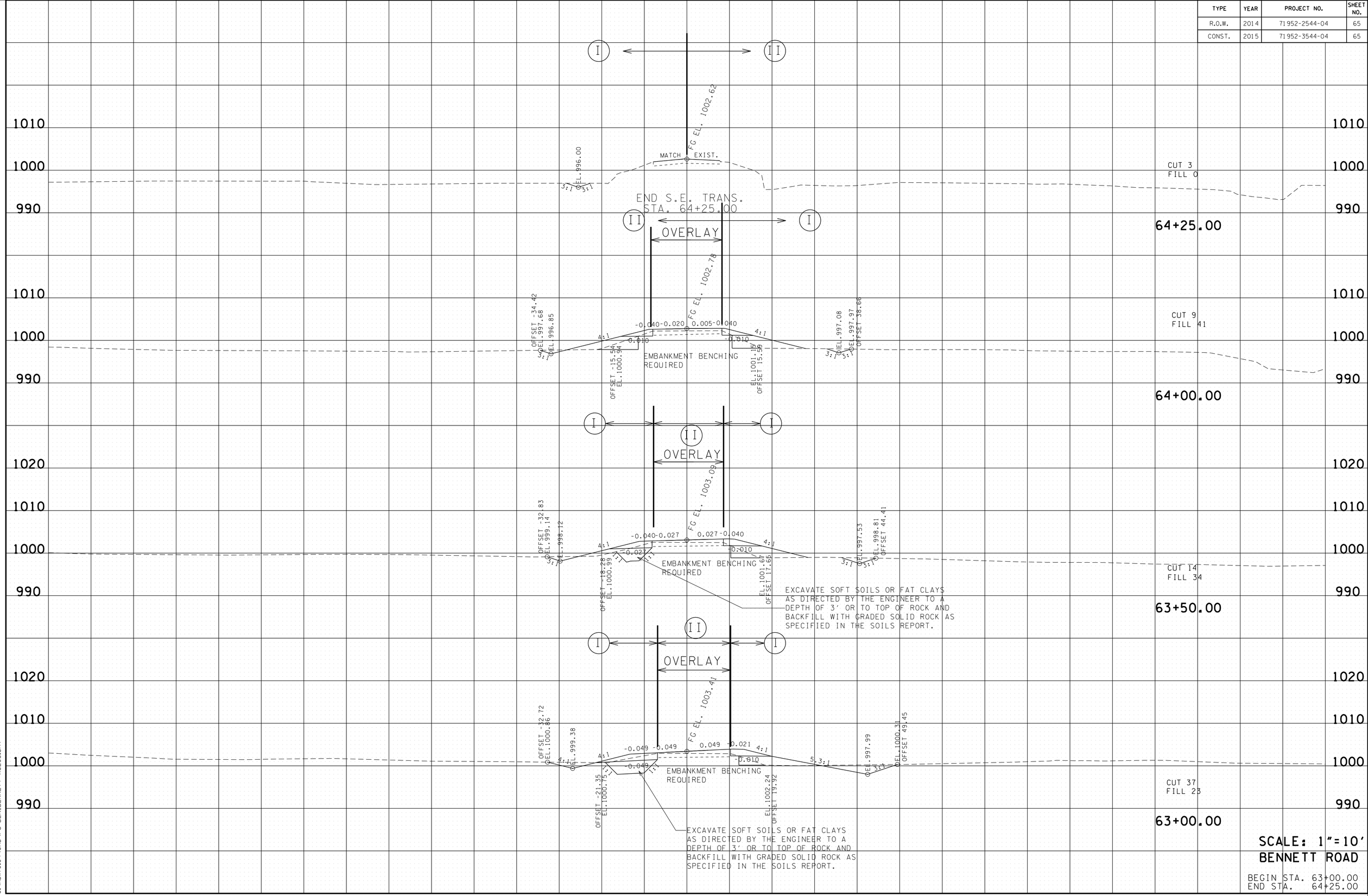
SCALE: 1"=10'

BENNETT ROAD

BEGIN STA. 61+50.00
END STA. 62+50.00

2/23/2015 9:17:54 AM
G:\HDI170.04\CAD\PU-BEN.BENNETT XSECS.sht

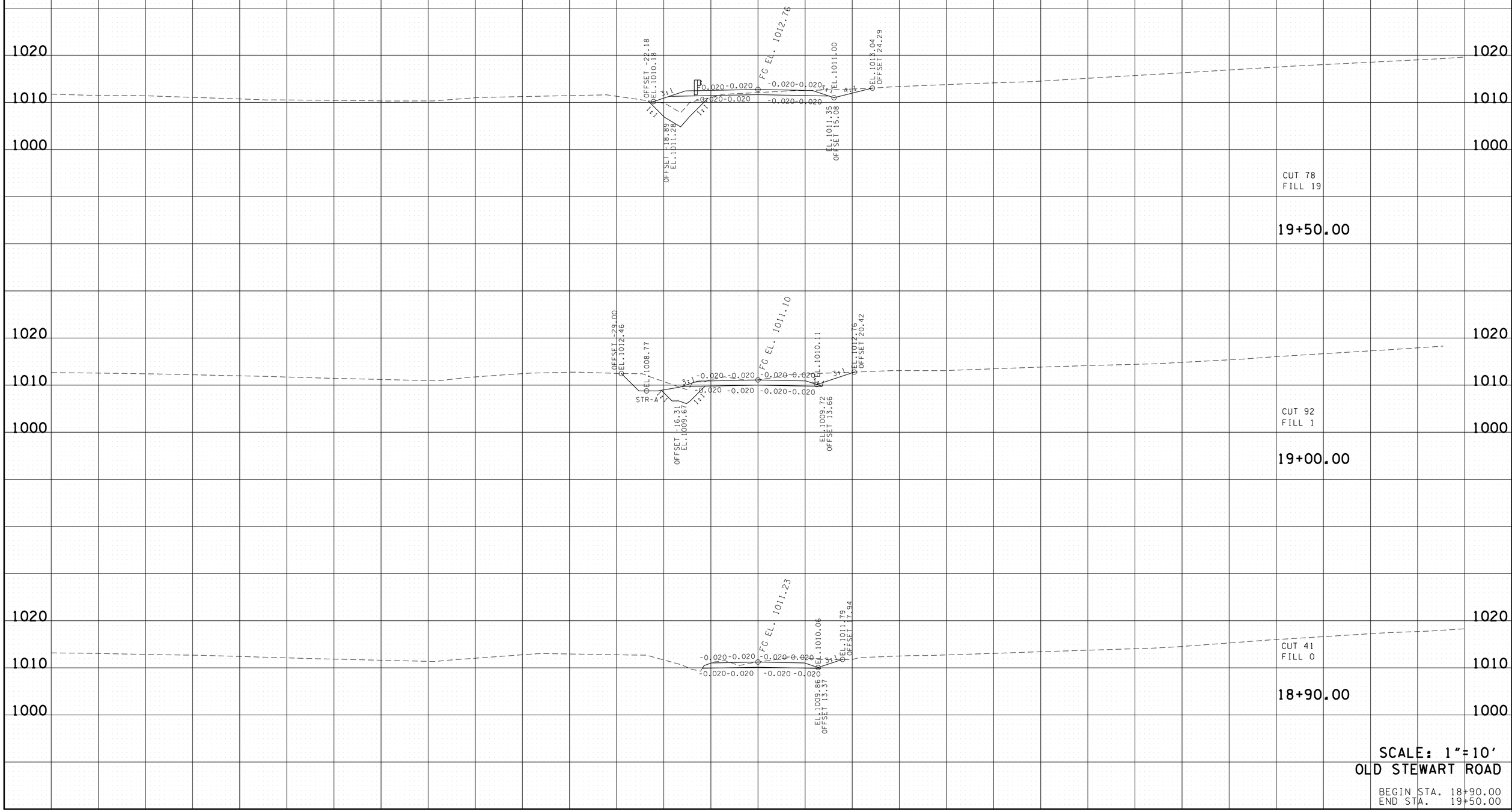
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	65
CONST.	2015	71952-3544-04	65



TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	66
CONST.	2015	71952-3544-04	66

STATION
STRUCTURE
SKEW

19+63.58
48' OF 18" RCP
80°00'00" RT.

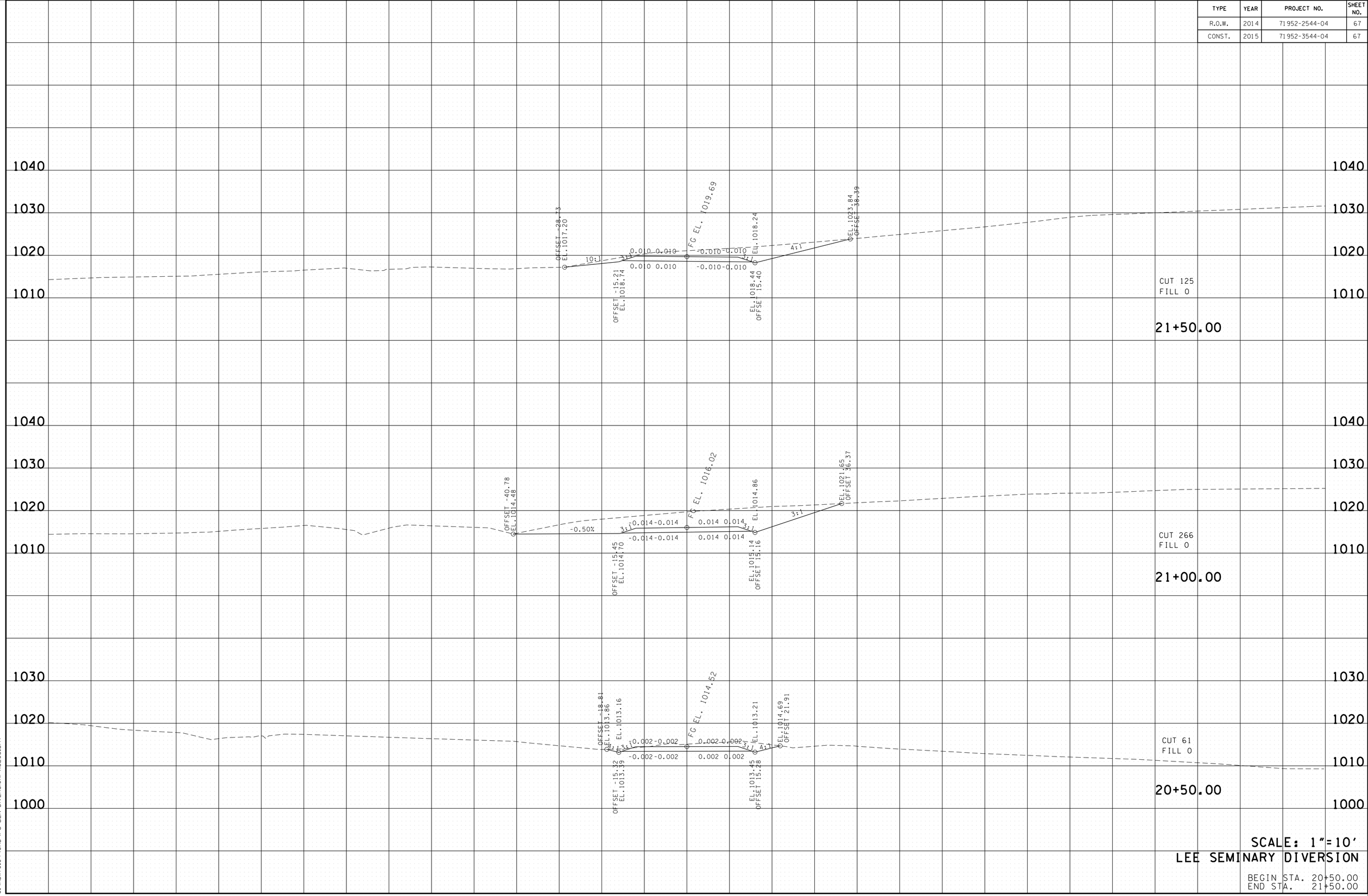


SCALE: 1"=10'
OLD STEWART ROAD

BEGIN STA. 18+90.00
END STA. 19+50.00

2/23/2015 9:17:57 AM
G:\HDI\70.04\CAD\PU-BEN-OLD STEWART XSECS.sht

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	67
CONST.	2015	71952-3544-04	67



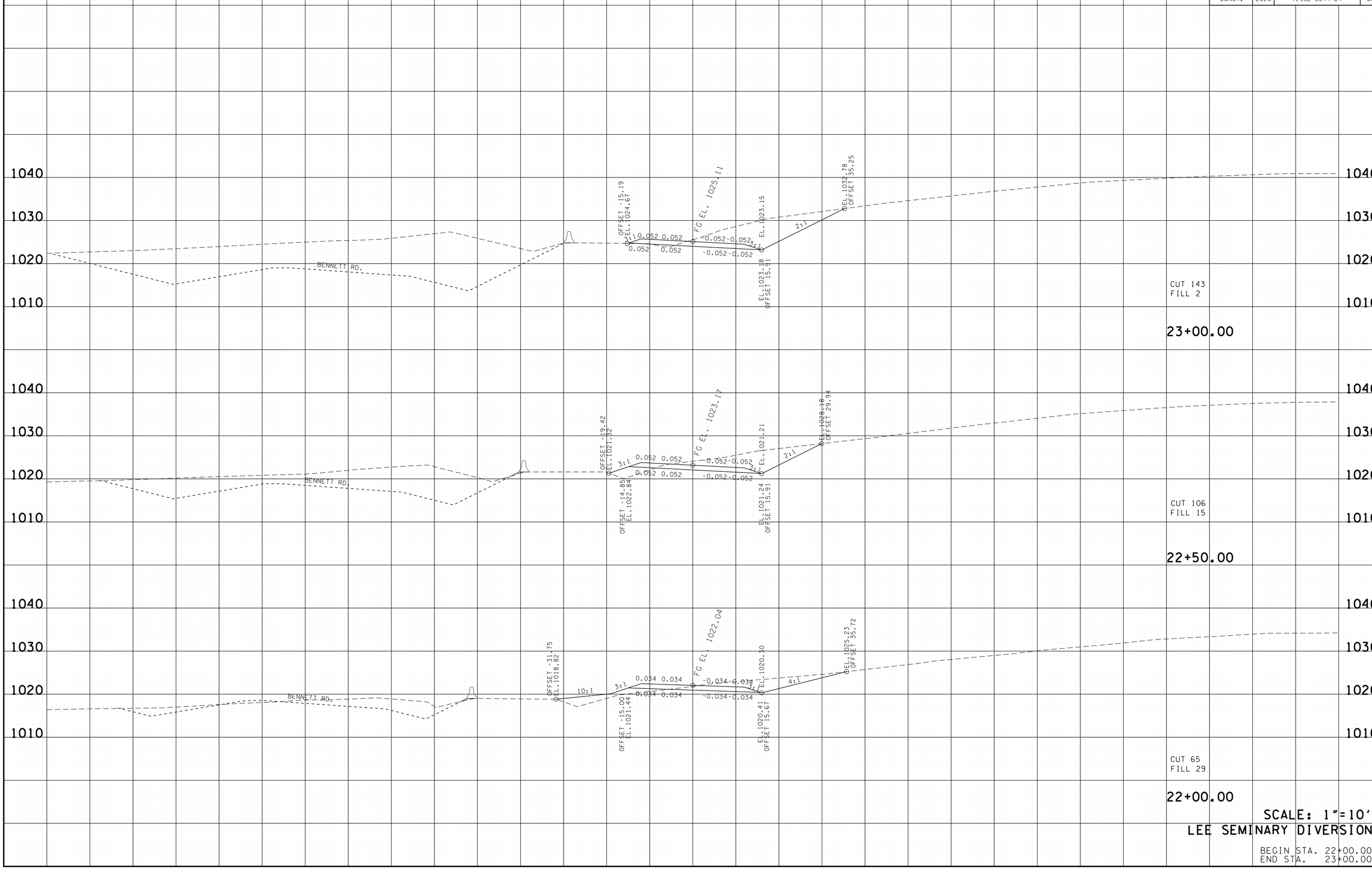
SCALE: 1"=10'

LEE SEMINARY DIVERSION

BEGIN STA. 20+50.00
END STA. 21+50.00

2/23/2015 9:17:58 AM
G:\HDI170.04\CAD\PLI-BEN-DIVERSION1-XSECS.sht

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	68
CONST.	2015	71952-3544-04	68



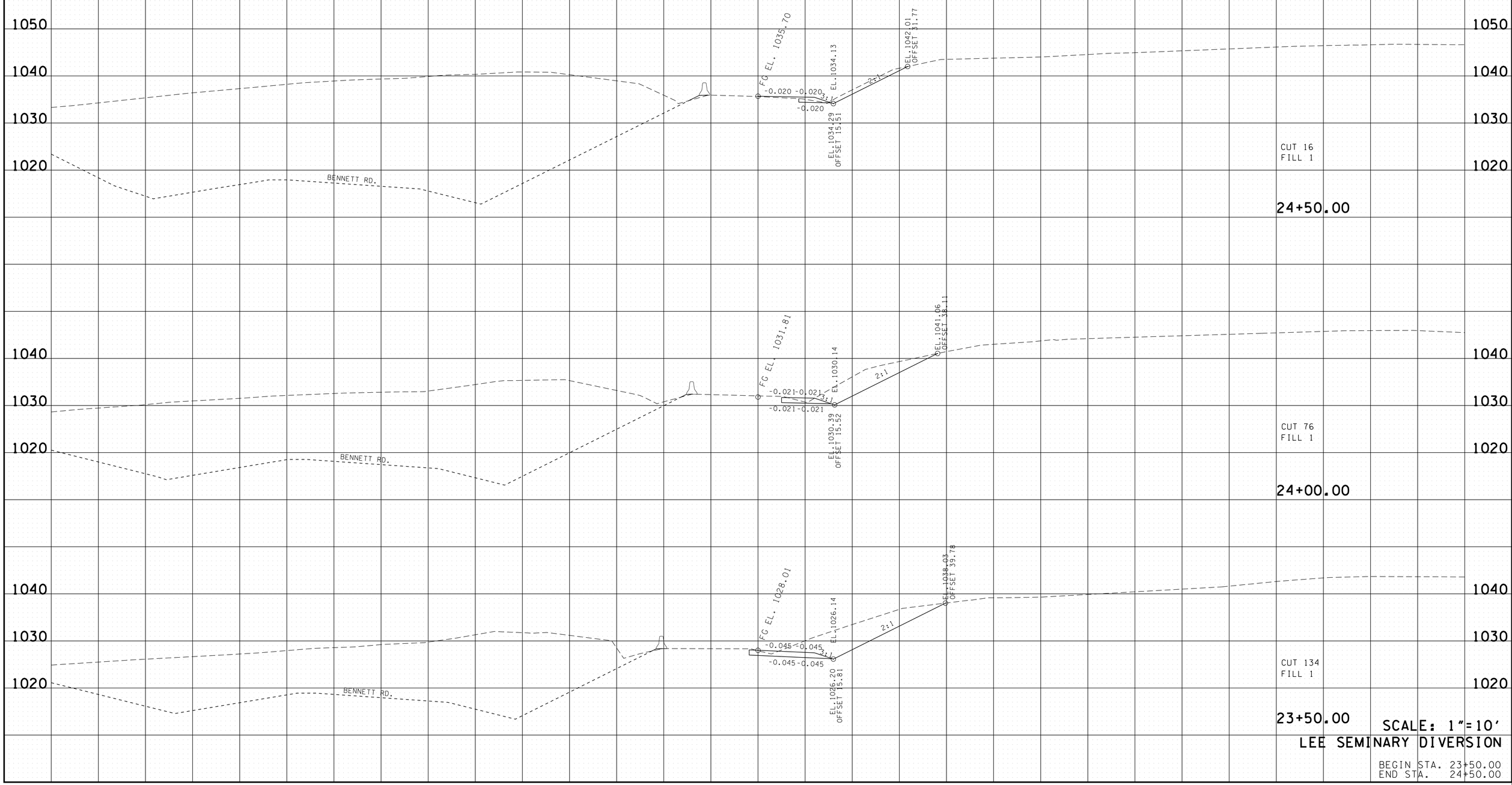
SCALE: 1"=10'

LEE SEMINARY DIVERSION

BEGIN STA. 22+00.00
END STA. 23+00.00

2/23/2015 9:17:59 AM
G:\HDI170.04\CAD\PU-BEN-DIVERSION1-XSECS.sht

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	69
CONST.	2015	71952-3544-04	69



SCALE: 1"=10'

LEE SEMINARY DIVERSION

BEGIN STA. 23+50.00
END STA. 24+50.00

2/23/2015 9:18:00 AM
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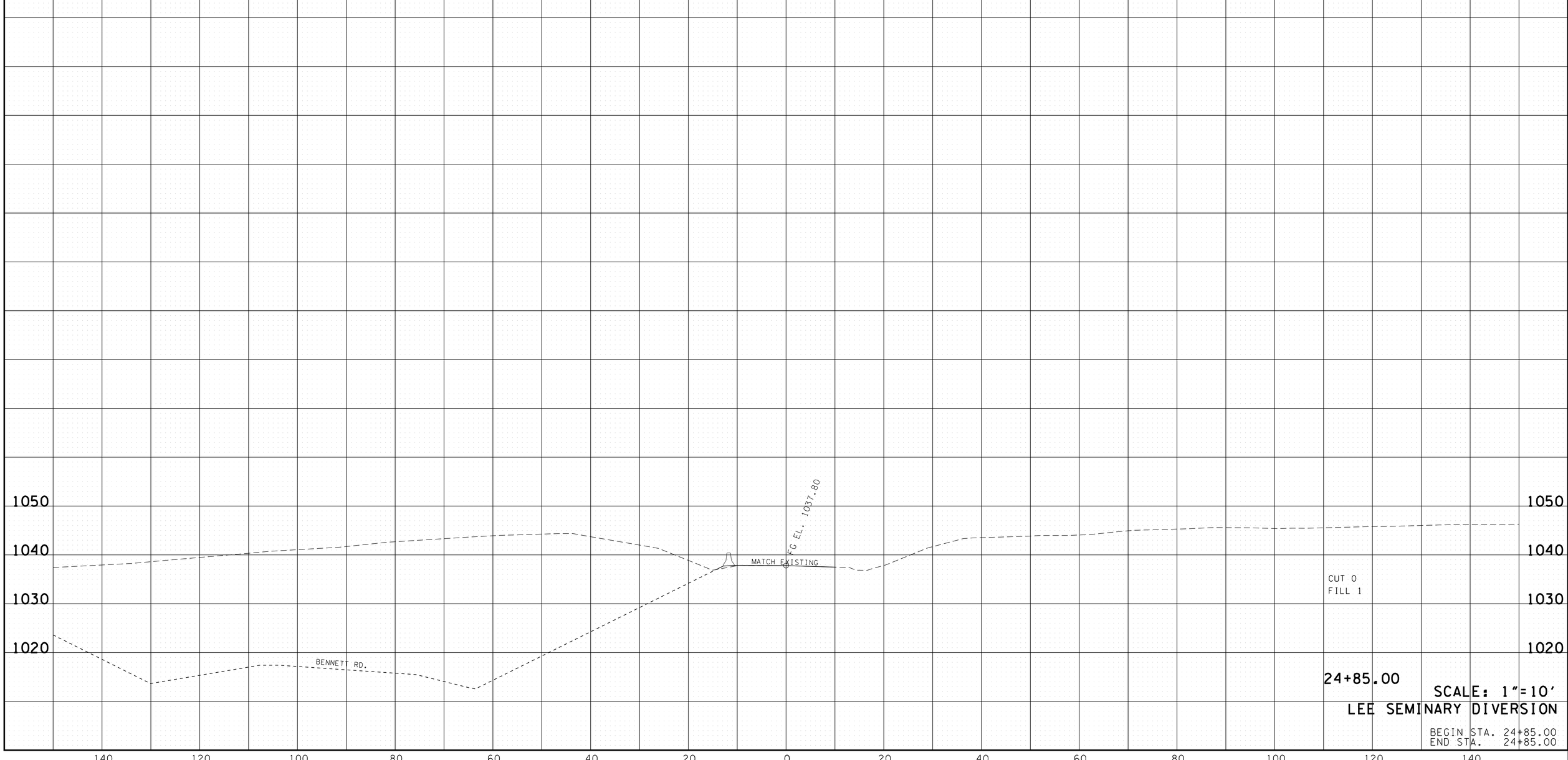
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	70
CONST.	2015	71952-3544-04	70



24+85.00

SCALE: 1"=10'

LEE SEMINARY DIVERSION

BEGIN STA. 24+85.00
END STA. 24+85.00

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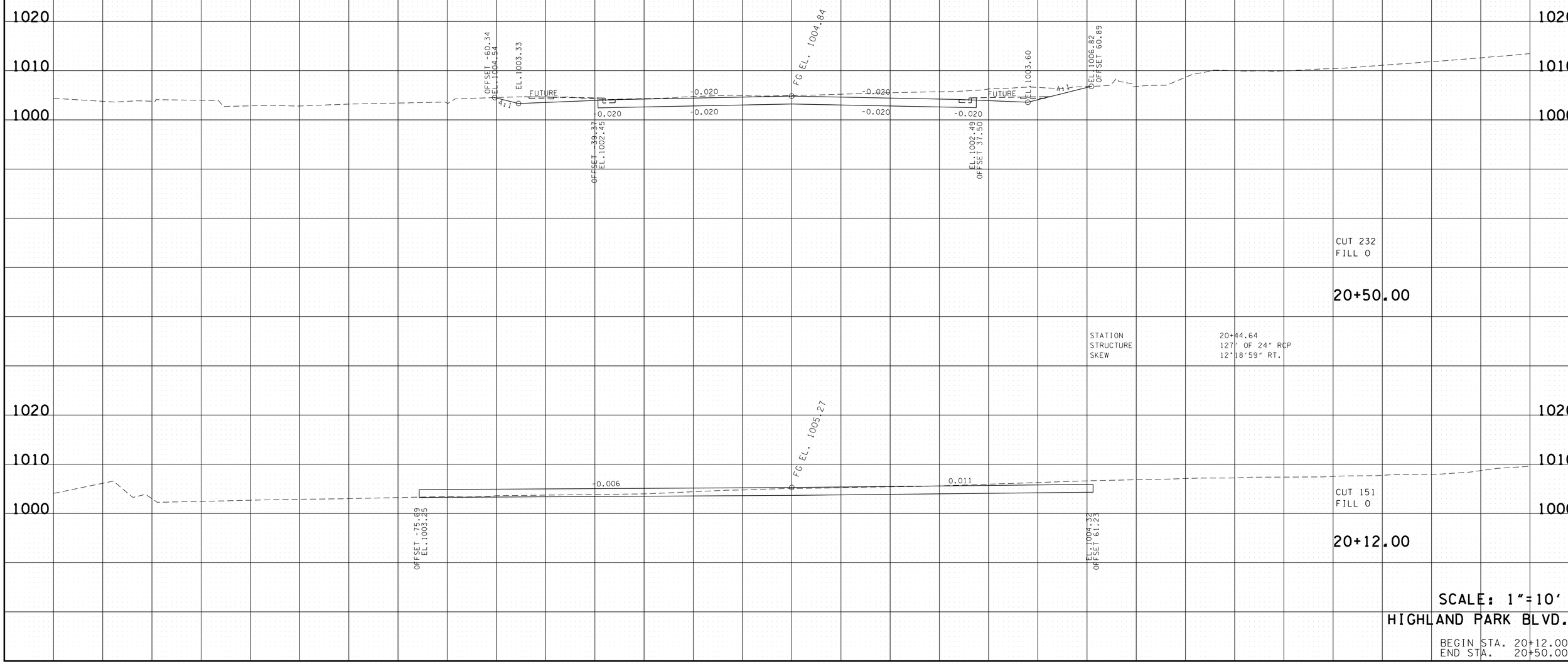
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	71952-2544-04	71
CONST.	2015	71952-3544-04	71



SCALE: 1"=10'

HIGHLAND PARK BLVD.

BEGIN STA. 20+12.00
END STA. 20+50.00

2/23/2015 9:18:02 AM
G:\HDI170.04\CAD\PU-BEN-HIGHLAND XSECS.SHT