INDEX OF SHEET - CONST.
SEE SHEET IA

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

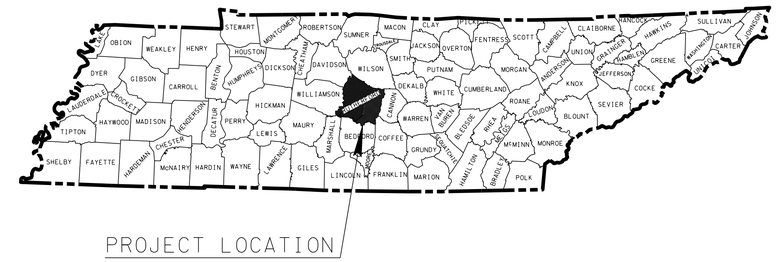
TENN.	YEAR	SHEET NO.
	2015	1
FED. AID PROJ. NO.	HSIP-I-24-1(106)	
STATE PROJ. NO.	75100-3102-94	

RUTHERFORD COUNTY

I-24
INTERCHANGE AT SR-10 (EXIT 81A, CHURCH ST.)
EASTBOUND OFF-RAMP (RSAR)

CONSTRUCTION

STATE HIGHWAY NO. 10 F.A.H.S. NO. I-24



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75100-3102-94
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75100-3102-94
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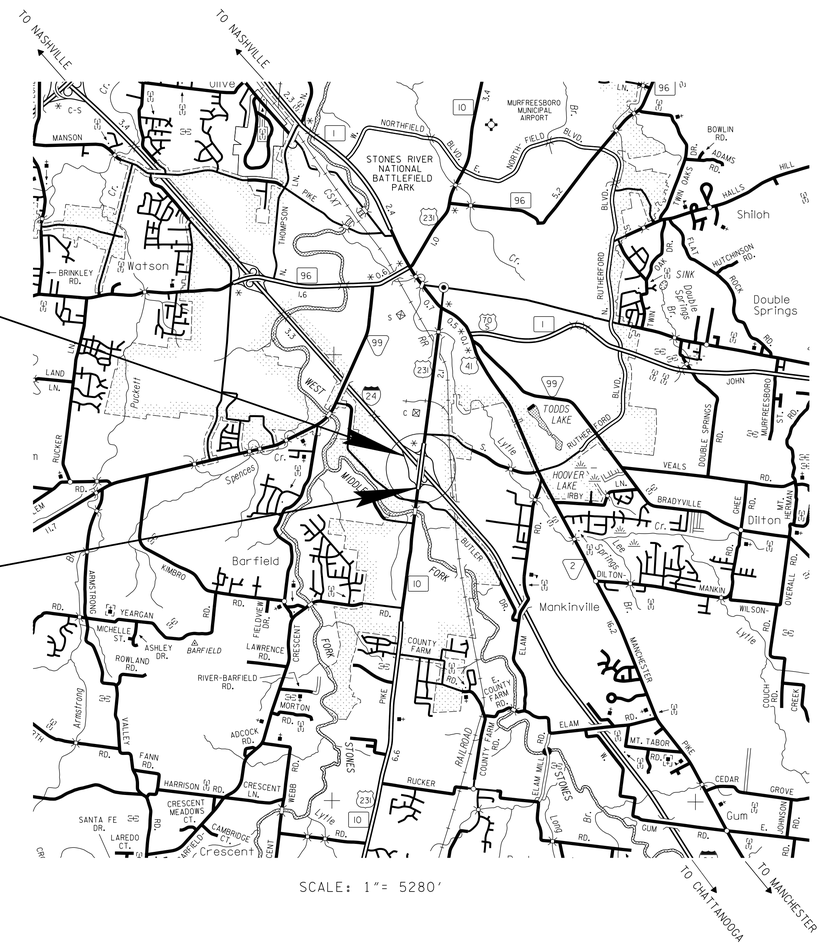
STA. 31+21.77
N 537684.2440
E 1850877.8400



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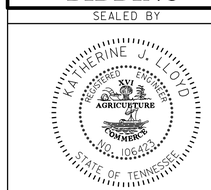

NO EXCLUSIONS
NO EQUATIONS

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 PROJ. SP. SV. 2 ROBERT BRAUN, P.E.

DESIGNER KAMIRAN DOSKI CHECKED BY DONNIE SIRICHANTO, P.E.

P.E. NO. 75100-1102-94 (DESIGN)

PIN NO. 118564.00

ROADWAY LENGTH (RAMP)	0.241 MILES
BRIDGE LENGTH (RAMP)	0.000 MILES
BOX BRIDGE LENGTH (RAMP)	0.000 MILES
PROJECT LENGTH (RAMP)	0.241 MILES

I-24 EASTBOUND EXIT RAMP

TRAFFIC DATA	
ADT (2014)	40860
ADT (2034)	49030
DHV (2034)	6495
D	55 - 45
T (ADT)	6 %
T (DHV)	4 %
V	30 MPH

SURVEY RECEIVED 02/04/2014

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR DATE

4-JAN-2015 10:06
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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	HSIP-I-24-1(106)	1A

INDEX

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NO PROJECT COMMITMENT SHEET INCLUDED IN THIS SET OF PLANS

STANDARD BRIDGE DRAWINGS

DWG. NO	REV.	DESCRIPTION

ROADWAY DESIGN STANDARDS

DWG. NO	REV.	DESCRIPTION
RD-A-1	12-18-99	STANDARD ABBREVIATIONS
RD-L-1	10-26-94	STANDARD LEGEND
RD-L-2	09-05-01	STANDARD LEGEND FOR UTILITY INSTALLATIONS
RD-L-5	05-01-08	STANDARD LEGEND FOR EROSION PREVENTION AND SEDIMENT CONTROL
RD-L-6	03-30-10	STANDARD LEGEND FOR EROSION PREVENTION AND SEDIMENT CONTROL
RD-L-7	05-24-12	STANDARD LEGEND FOR EROSION PREVENTION AND SEDIMENT CONTROL
RD01-TS-4	07-23-13	DESIGN STANDARDS 1 AND 2 LANE RAMPS
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

STANDARD ROADWAY DRAWINGS

DWG. NO	REV.	DESCRIPTION
RD01-SD-2		INTERSECTION SIGHT DISTANCE LANDSCAPE AND OBSTRUCTION
RD01-SE-3	10-15-02	RURAL SUPERELEVATION DETAILS
RD01-TS-7	10-15-02	DESIGN STANDARDS 2-LANE HIGHWAY WITH CONTINUOUS 2-WAY LEFT-TURN LANE

ROADWAY AND PAVEMENT APPURTENANCES

RP-J-1	10-26-00	PORTLAND CEMENT CONCRETE PAVEMENT JOINT TYPES AND SPACING
RP-J-3	10-26-00	PORTLAND CEMENT CONCRETE PAVEMENT JOINT TYPES AND SPACING
RP-J-5	07-01-01	TYPICAL ACCELERATION AND DECELERATION LANE JOINT TYPES AND SPACING FOR CONCRETE RAMPS
RP-J-7	07-14-14	CONCRETE RAMP JOINT TYPES AND SPACING
RP-J-9	02-02-12	CONTRACTION AND CONSTRUCTION JOINTS FOR CONCRETE PAVEMENT
RP-J-11	07-29-96	3/4" AND 1-3/4" EXPANSION AND EDGE PAVEMENT JOINTS
RP-J-13	03-20-91	3/4" AND 1-3/4" ELASTOMERIC COMPRESSION JOINT SEALS
RP-J-15	01-19-02	LONGITUDINAL CONTRACTION AND CONSTRUCTION JOINTS
RP-J-17	02-02-12	DOWEL ASSEMBLY DEVICES
RP-J-18	02-02-12	DOWEL ASSEMBLY DEVICES
RP-J-19	02-02-12	DOWEL ASSEMBLY DEVICES
RP-J-23	07-25-12	CONCRETE PAVEMENT REPAIR DETAILS
RP-J-24	05-27-01	CONCRETE PAVEMENT SPALL AND RANDOM CRACK REPAIR DETAILS
RP-J-25	05-27-01	CONCRETE PAVEMENT JOINT REPAIR DETAILS

SAFETY APPURTENANCES AND FENCE

S-F-1	05-24-12	HIGH VISIBILTY FENCE
S-GR31-1		W-BEAM GUARDRAIL
S-GRT-2	11-03-14	TYPE 38 GUARDRAIL TERMINALS
S-GRT-2R		EARTH PAD FOR TYPE 38 TERMINAL (RETROFIT)
S-GRA-3		GUARDRAIL ANCHOR FOR TYPE 12, 13 AND IN-LINE TERMINALS
S-GRT-4	11-06-14	TYPE 13 GUARDRAIL TERMINAL (TRAILING END)
S-CZ-1		CLEAR ZONE CRITERIA

TRAFFIC CONTROL APPURTENANCES

T-M-1	07-24-14	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS AND MARKING ABBREVIATIONS
T-M-3	07-24-14	MARKING STANDARDS FOR TRAFFIC ISLANDS, MEDIANS & PAVED SHOULDERS ON CONVENTIONAL ROADS
T-M-4	07-24-14	STANDARD INTERSECTION PAVEMENT MARKINGS
T-M-9	11-01-11	MARKING DETAILS FOR RAMP INTERSECTIONS
T-PBR-1	06-30-09	INTERCONNECTED PORTABLE BARRIER RAIL

DWG. NO	REV.	DESCRIPTION
T-S-6	02-12-91	STANDARD MOUNTING DETAILS - BOLTED EXTRUDED PANELS
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-9	06-10-14	STANDARD LAYOUT GROUND MOUNTED SIGNS
T-S-10	04-04-12	STANDARD MOUNTING DETAILS FLAT SHEET SIGNS ALUMINUM-STEEL DESIGN
T-S-11	06-06-11	DELINEATOR AND MILEPOST DETAILS
T-S-15	12-07-90	STANDARD CONDUIT & GROUND DETAILS FOR OVERHEAD & CANTILEVER SIGN STRUCTURES
T-S-17	07-19-13	STANDARD GROUND MOUNTED SIGN USING PERFORATED/KNOCKOUT SQUARE TUBE
T-S-19	07-19-13	STANDARD STEEL SIGN SUPPORTS
T-S-23A	07-19-13	MULTI-DIRECTIONAL SLIP BASE BREAKAWAY SQUARE TUBE SIGN SUPPORT
T-SG-2	07-29-04	LOOP LEAD-INS, CONDUIT AND PULL BOXES
T-SG-3	11-11-04	STANDARD NOTES AND DETAILS OF INDUCTIVE LOOPS
T-SG-3A		ALTERNATE DETECTION DETAILS
T-SG-5	12-04-13	CONTROLLER CABINET DETAILS
T-SG-7	11-01-11	SIGNAL HEAD ASSEMBLIES AND PEDESTRIAN PUSH BUTTON SIGNS
T-SG-9	12-04-13	DETAILS OF CANTILEVER SIGNAL SUPPORT
T-SG-9A	05-01-14	MISCELLANEOUS SIGNAL DETAILS
T-SG-10	06-11-14	MAST ARM POLE AND STRAIN POLES FOUNDATION DETAILS
T-SG-12	11-01-11	TYPICAL WIRING FOR SIGNAL HEADS AND DETECTION
T-FO-1		FIBER OPTIC AERIAL ENTRANCE DETAILS
T-FO-2		FIBER OPTIC UNDERGROUND ENTRANCE DETAILS
T-FO-3		FIBER OPTIC AERIAL CONNECTION DETAILS
T-FO-4		FIBER OPTIC PULL BOX, CABINET & POLE DETAILS

EROSION PREVENTION AND SEDIMENT CONTROL

EC-STR-3B	08-01-12	SILT FENCE
EC-STR-6	08-01-12	ROCK CHECK DAM
EC-STR-25	08-01-12	TEMPORARY CULVERT CROSSING, CONSTRUCTION EXIT, CONSTRUCTION FORD
EC-STR-34	08-01-12	EROSION CONTROL BLANKET FOR SLOPE INSTALLATION
EC-STR-37	06-10-14	SEDIMENT TUBE

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INDEX AND STANDARD DRAWINGS

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	HSIP-I-24-1(106)	2

ESTIMATED ROADWAY QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
	105-01	CONSTRUCTION STAKES, LINES AND GRADES	LS	1
	201-01	CLEARING AND GRUBBING	LS	1
(12)(1)	203-01	ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED)	C.Y.	1238
	203-06	WATER	M.G.	19
(11)(10)	209-05	SEDIMENT REMOVAL	C.Y.	42
(11)(10)	209-08.03	TEMPORARY SILT FENCE (WITHOUT BACKING)	L.F.	1207
(11)(10)	209-08.07	ROCK CHECK DAM	EACH	6
(2)	303-01	MINERAL AGGREGATE, TYPE A BASE, GRADING D	TON	2252
(3)	313-03	TREATED PERMEABLE BASE	S.Y.	3477
(4)	501-01.03	PORTLAND CEMENT CONCRETE PAVEMENT (PLAIN) 10"	S.Y.	4877
(14)	502-03.13	CONCRETE PAVEMENT REMOVAL	S.Y.	1100
(14)	502-04.01	SAWING CONCRETE PAVEMENT (FULL DEPTH)	L.F.	2700
(14)	502-04.02	LOAD TRANSFER DOWELS	EACH	825
(14)	502-04.03	TRANSVERSE TIE-BARS	EACH	450
(14)	502-07	SPALL REPAIR	S.Y.	3
	705-02.02	SINGLE GUARDRAIL (TYPE 2)	L.F.	125
	705-04.03	GUARDRAIL TERMINAL (TYPE 13)	EACH	2
	705-04.07	TAN ENERGY ABSORBING TERM (NCHRP 350, TL3)	EACH	2
	705-04.09	EARTH PAD FOR TYPE 38 GR END TREATMENT	EACH	2
(9)	705-08.51	PORTABLE IMPACT ATTENUATOR NCHRP350 TL-3	EACH	2
(11)(5)	707-08.11	HIGH-VISIBILITY CONSTRUCTION FENCE	L.F.	600
(11)(10)(6)	709-05.05	MACHINED RIP-RAP (CLASS A-3)	TON	78
	712-01	TRAFFIC CONTROL	LS	1
	712-02.02	INTERCONNECTED PORTABLE BARRIER RAIL	L.F.	1476
	712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	EACH	65
	712-04.50	PORTABLE BARRIER RAIL DELINEATOR	EACH	64
	712-06	SIGNS (CONSTRUCTION)	S.F.	248
(11)	712-08.03	ARROW BOARD (TYPE C)	EACH	2
	713-02.14	FLEXIBLE DELINEATOR (WHITE)	EACH	14
	713-02.15	FLEXIBLE DELINEATOR (YELLOW)	EACH	14
	713-09.01	STEEL OVERHEAD SIGN STRUCTURE (SPAN 68.00' + -)	EACH	1
	713-11.02	PERFORATED/KNOCKOUT SQUARE TUBE POST	LB.	258
	713-11.21	P POST SLIP BASE	EACH	2
	713-13.02	FLAT SHEET ALUMINUM SIGNS (0.080" THICK)	S.F.	18
	713-13.03	FLAT SHEET ALUMINUM SIGNS (0.100" THICK)	S.F.	54
	713-14	EXTRUDED ALUMINUM PANEL SIGNS	S.F.	456
	713-15	REMOVAL OF SIGNS, POSTS AND FOOTINGS	LS	1
(11)	713-16.01	CHANGEABLE MESSAGE SIGN UNIT	EACH	2
(13)	716-01.21	Snwplwble Pvmt Mrkrs (Bi-Dir)(1 Color)	EACH	43
(13)	716-01.23	Snwplwble Pvmt Mrkrs (Bi-Dir)(2 Color)	EACH	92
	716-02.04	PLASTIC PAVEMENT MARKING(CHANNELIZATION STRIPING)	S.Y.	202
	716-02.05	PLASTIC PAVEMENT MARKING (STOP LINE)	L.F.	100
	716-02.06	PLASTIC PAVEMENT MARKING (TURN LANE ARROW)	EACH	9
	716-02.08	PLASTIC PAVEMENT MARKING (8" DOTTED LINE)	L.F.	735
	716-03.01	PLASTIC WORD PAVEMENT MARKING (ONLY)	EACH	3
	716-04.01	PLASTIC PAVEMENT MARKING (STRAIGHT-TURN ARROW)	EACH	3
	716-04.05	PLASTIC PAVEMENT MARKING (STRAIGHT ARROW)	EACH	8
	716-08.01	REMOVAL OF PAVEMENT MARKING (LINE)	L.F.	2727
(7)	716-12.01	ENHANCED FLATLINE THERMO PVMT MRKNG (4IN LINE)	L.M.	0.85
(8)	716-12.02	ENHANCED FLATLINE THERMO PVMT MRKNG (6IN LINE)	L.M.	0.23
	716-12.04	ENHANCED FLATLINE THERMO PVMT MRKNG (4IN DOTTED LINE)	L.F.	404
	717-01	MOBILIZATION	LS	1
(11)(10)	740-10.03	GEOTEXTILE (TYPE III)(EROSION CONTROL)	S.Y.	134
(11)(10)	740-11.03	TEMPORARY SEDIMENT TUBE 18IN (EROSION CONTROL)	L.F.	150
(11)(10)	801-01	SEEDING (WITH MULCH)	UNIT	3
	801-03	WATER (SEEDING & SODDING)	M.G.	26
(11)(10)	803-01	SODDING (NEW SOD)	S.Y.	500

FOOTNOTES

(1) 14 CY FOR TEMPORARY CONSTRUCTION EXIT.

(2) 102 TON FOR TRAFFIC LOOP LOCATION.

(3) 300 SY FOR TRAFFIC LOOP LOCATION.

(4) 600 SY FOR TRAFFIC LOOP LOCATION, 1100 SY FOR FIXING CONCRETE REPAIR.

(5) LOCATION TO BE DETERMINED BY PROJECT ENGINEER.

(6) FOR TEMPORARY CONSTRUCTION EXIT.

(7) FOR S.R. 10

(8) FOR RAMP

(9) 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.

(10) SEE SUBSECTION 209.07 OF THE STANDARDS SPECIFICATION FOR MAINTENANCE REPLACEMENT.

(11) TO BE USED AS DIRECTED BY THE PROJECT ENGINEER.

(12) REFER TO GRADING SPECIAL NOTES ON SHEET 2E.

(13) LOCATED ON S.R. 10.

(14) FOR FIXING CONCRETE REPAIR.

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ESTIMATED ROADWAY QUANTITIES

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	HSIP-I-24-1(106)	2A

ESTIMATED SIGNAL QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
(1)	713-15.07	SUSPENDED FLAT SHEET ALUMINUM SIGN (0.080" THICK)	EACH	4
(2)	730-02.09	SIGNAL HEAD ASSEMBLY (130 WITH BACKPLATE)	EACH	4
(2),(3)	730-02.30	SIGNAL HEAD ASSEMBLY (130A3 WITH BACKPLATE)	EACH	4
	730-03.20	INSTALL PULL BOX (TYPE A)	EACH	5
	730-03.21	INSTALL PULL BOX (TYPE B)	EACH	7
	730-03.24	INSTALL PULL BOX (FIBER OPTIC-TYPE B)	EACH	1
(4)	730-05.01	ELECTRICAL SERVICE CONNECTION	EACH	1
	730-08.02	SIGNAL CABLE - 5 CONDUCTOR	L.F.	205
	730-08.03	SIGNAL CABLE - 7 CONDUCTOR	L.F.	362
	730-08.40	INTERCONNECT CABLE - FIBER OPTIC (6SM/6MM DROP CABLE)	L.F.	165
	730-11.10	RISER ASSEMBLY (2" RGS)	EACH	1
	730-12.01	CONDUIT 1" DIAMETER (PVC)		17
	730-12.02	CONDUIT 2" DIAMETER (PVC)	L.F.	774
	730-12.03	CONDUIT 3" DIAMETER (PVC)	L.F.	72
	730-12.08	CONDUIT 2" DIAMETER (RGS)	L.F.	152
	730-12.09	CONDUIT 3" DIAMETER (RGS)	L.F.	155
	730-12.14	CONDUIT 3" DIAMETER (JACK AND BORE)	L.F.	217
	730-13.03	VEHICLE DETECTOR (4 - CHANNEL, RACK MOUNT)	EACH	3
	730-14.01	SHIELDED DETECTOR CABLE	L.F.	2607
	730-14.02	SAW SLOT	L.F.	1241
	730-14.03	LOOP WIRE	L.F.	3157
(5)	730-14.11	PREFORMED DETECTION LOOP(6 FT X 45 FT)	EACH	6
(6),(7)	730-15.32	CABINET (EIGHT PHASE BASE MOUNTED)	EACH	1
(6)	730-16.02	EIGHT PHASE ACTUATED CONTROLLER	EACH	1
(8),(9)	730-23.36	CANTILEVER SIGNAL SUPPORT (2 @ 58' & 90')	EACH	1
(10)	730-23.80	CANTILEVER SIGNAL SUPPORT (1 ARM @ 40')	EACH	1

FOOTNOTES

(1) FOR THREE (3) R10-11a SIGNS AND ONE (1) R10-5 SIGN.

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

(3) TO INCLUDE LOUVERS FOR THREE (3) SIGNAL HEADS ON POLE #1 FOR THE I-24 EB OFF RAMP. SEE PROPOSED SIGNAL HEAD FOOTNOTE ON SHEET 10 FOR DETAILS.

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

(5) FOR LOOPS ON THE I-24 EB OFF RAMP.

(6) CABINET AND CONTROLLER SHALL BE EAGLE M52 SERIES IN ORDER TO BE COMPATIBLE WITH THE EXISTING CLOSED LOOP SYSTEM.

(7) INCLUDES THE INSTALLATION OF A METER BASE POWER PEDESTAL WITH DISCONNECT.

(8) FOR MAST ARM POLE #1, USE A DRILLED SHAFT FOUNDATION 4'-0" IN DIAMETER WITH A 21'-0" DEEP SOIL SOCKET. IF SOUND BEDROCK IS ENCOUNTERED PRIOR TO ATTAINING THE REQUIRED 21'-0" DEPTH, SOCKET INTO THE ROCK TO A DEPTH OF 8'-0".

(9) FOR MAST ARM POLE #1, POLE FABRICATOR MUST USE THRU-BOLTED SPLIT BRACKETS RATHER THAN RING-STIFFENED BOXES FOR ATTACHMENT OF THE DUAL ARM MAST ARMS TO ALLOW FOR MINOR FIELD ADJUSTMENTS TO THE MAST ARM RADIAL INDICES. MAST ARM ATTACHMENT HEIGHTS MUST BE STAGGERED BY AT LEAST 2'-6".

FOOTNOTES CONT'D.

(10) FOR MAST ARM POLE #2, USE A DRILLED SHAFT FOUNDATION 4'-0" IN DIAMETER WITH A 15'-0" DEEP SOIL SOCKET. IF SOUND BEDROCK IS ENCOUNTERED PRIOR TO ATTAINING THE REQUIRED 15'-0" DEPTH, SOCKET INTO THE ROCK TO A DEPTH OF 8'-0".

SPECIAL NOTES REGARDING SIGNAL HEADS

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

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

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

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

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

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DEPARTMENT OF TRANSPORTATION

ESTIMATED SIGNAL QUANTITIES AND SPECIAL NOTES

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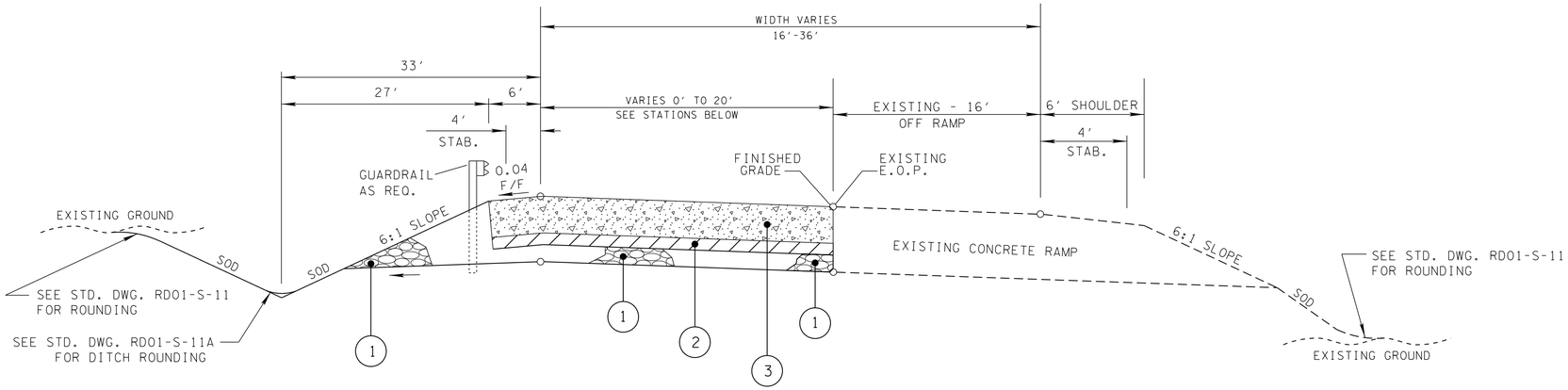
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	HSIP-I-24-1(106)	2
CONST.	2015	HSIP-I-24-1(106)	2B



TYPICAL SECTION

(BASED ON STD. DWG. RD01-TS-4)

I-24 EAST BOUND OFF RAMP

MATCH EXISTING CROSS SLOPE - SEE CROSS SECTIONS

STA. 18+45.23 - STA. 20+59.72 (VARIES FROM 0' - 8')

STA. 20+59.72 - STA. 23+84.91 (VARIES FROM 8' - 20')

STA. 23+84.91 - STA. 31+21.77 (20')

NOTE: REMOVE EXISTING 6' INSIDE SHOULDER CONSTRUCT PROPOSED PAVEMENT FROM EDGE OF EXISTING CONCRETE. TRANSITION TO 36' (3 LANES @ 12' EACH) OFF RAMP AS SHOWN ON PROPOSED LAYOUT SHEET 4A AND 5A WITH 6' SHOULDER.

PROPOSED PAVEMENT SCHEDULE

(1) MINERAL AGGREGATE @ 6" THICK (RAMPS) AND SHOULDERS 303-01 MINERAL AGGREGATE, TYPE "A" BASE, GRADING "D"	(3) PORTLAND CEMENT CONCRETE PAVEMENT @ 10" THICK AND SHOULDERS 501-01.03 PORTLAND CEMENT CONCRETE (PLAIN)
(2) TREATED PERMEABLE BASE @ 4" THICK AND SHOULDERS 313-03 TREATED PERMEABLE BASE	

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

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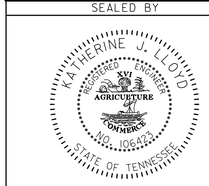

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS AND PAVEMENT SCHEDULE

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	HSIP-I-24-1(106)	2C

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.

SEEDING AND SODDING

(1) 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.

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

GUARDRAIL

(1) 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.

UTILITIES (SEE SHEET NO.3)

MISCELLANEOUS

(1) 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

FINAL PAVEMENT MARKING IF 4" ENHANCED FLATLINE THERMOPLASTIC IS USED

(1) PERMANENT PAVEMENT LINE MARKINGS SHALL BE 4" ENHANCED FLATLINE THERMOPLASTIC INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK. SHORT UNMARKED SECTIONS SHALL NOT BE ALLOWED. PAVEMENT MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-12.01, ENHANCED FLATLINE THERMO PVMT MRKNG (4IN LINE), L.M. THE CONTRACTOR SHALL HAVE THE OPTION OF USING REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK AND THEN INSTALLING THE PERMANENT MARKINGS AFTER THE PAVING OPERATION IS COMPLETED. THE TEMPORARY MARKINGS FOR THE FINAL SURFACE WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COSTS ARE TO BE INCLUDED IN THE PRICE BID FOR THE PERMANENT MARKINGS.

FINAL PAVEMENT MARKING IF 6" ENHANCED FLATLINE THERMOPLASTIC IS USED

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

PAVEMENT

PAVING

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

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.

SIGNING

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

(2) THE LENGTHS OF ALL SIGN SUPPORTS SHOWN ON THE SIGN SCHEDULE ARE APPROXIMATE AND ARE FOR ESTIMATING PURPOSES ONLY. THE LENGTHS WERE COMPUTED FROM THE CROSS-SECTIONS CONTAINED IN THE CONSTRUCTION PLANS. IN THE EVENT THE SUPPORT LENGTHS ARE 2 FEET SHORTER OR LONGER THAN SHOWN ON THE PLANS, THE ENGINEER SHALL VERIFY THE SUPPORT TYPE WITH THE ROOADWAY DESIGN DIVISION, SIGNING AND MARKING SECTION, TELEPHONE NO. (615)-741-0982. THE CONTRACTOR SHALL VERIFY ALL SUPPORT LENGTHS AT THE SITE PRIOR TO ORDERING MATERIAL.

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

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

(5) THE CONTRACTOR SHALL BE REQUIRED TO FURNISH LAYOUT DRAWINGS (3 SETS) OF ALL EXTRUDED PANEL SIGNS WITH SPACING OF ALL LETTERS, NUMERALS, SHIELDS, AND ARROWS. THE LAYOUT DRAWINGS SHALL BE SENT TO THE ROOADWAY DESIGN DIVISION, SIGNING AND MARKING SECTION, SUITE 1300, J. K. POLK BUILDING, NASHVILLE, TN 37243-1402.

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

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

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

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

SIGNALIZATION

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

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

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

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

(5) LOOPS SHALL BE INSTALLED IN THE LEVELING COURSE IF A LEVELING COURSE IS PROVIDED.

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GENERAL NOTES

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GENERAL NOTES

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	HSIP-I-24-1(106)	2D

EROSION PREVENTION AND SEDIMENT CONTROL

DISTURBED AREA

(1) AREAS TO BE UNDISTURBED SHALL BE CLEARLY MARKED IN THE FIELD BEFORE CONSTRUCTION ACTIVITIES BEGIN. THE TOTAL AREA TO BE DISTURBED NOT INCLUDING EXCLUSIVE BORROW/WASTE AREAS AND STAGING AREAS IS 0.907 ACRES. IF THE TOTAL DISTURBED AREA FOR THE PROJECT SITE (INCLUDING STAGING AND EXCLUSIVE WASTE/BORROW AREAS) INCREASES TO MORE THAN 1 ACRE, THEN THE NATURAL RESOURCES OFFICE OF THE ENVIRONMENTAL DIVISION MUST BE NOTIFIED SO THAT A SWPPP CAN BE PREPARED.

(2) PRE-CONSTRUCTION VEGETATIVE GROUND COVER SHALL NOT BE DESTROYED, REMOVED OR DISTURBED (I.E. CLEARING AND GRUBBING INITIATED) MORE THAN 15 CALENDAR DAYS (10 CALENDAR DAYS FOR SITES WITH AN ACTIVE ARAP) PRIOR TO GRADING OR EARTH MOVING ACTIVITIES UNLESS THE AREA IS MULCHED, SEEDED WITH MULCH, OR OTHER TEMPORARY COVER IS INSTALLED.

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

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

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

(6) IF OFFSITE BORROW AND WASTE AREAS BECOME NECESSARY DURING THE LIFE OF THE PROJECT, THIS SUPPORT ACTIVITY SHALL BE ADDRESSED PER THE TDOT *WASTE AND BORROW MANUAL*

SEDIMENT CONTROL

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

(8) THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT THE OFF-SITE MIGRATION OR DEPOSIT OF SEDIMENT ON ROADWAYS USED BY THE GENERAL PUBLIC. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFF-SITE ACCUMULATIONS OF SEDIMENT THAT HAVE NOT REACHED A STREAM MUST BE REMOVED AT A FREQUENCY SUFFICIENT TO MINIMIZE OFF-SITE IMPACTS (E.G., FUGITIVE SEDIMENT THAT HAS ESCAPED THE CONSTRUCTION SITE AND HAS COLLECTED IN A STREET MUST BE REMOVED SO THAT IT IS NOT SUBSEQUENTLY WASHED INTO STORM SEWERS AND STREAMS BY THE NEXT RAIN AND/OR SO THAT IT DOES NOT POSE A SAFETY HAZARD TO USERS OF PUBLIC STREETS). ARRANGEMENTS CONCERNING REMOVAL OF SEDIMENT ON ADJOINING PROPERTY MUST BE SETTLED WITH THE ADJOINING PROPERTY OWNER BEFORE REMOVAL OF SEDIMENT.

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

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

(11) DELAYING PLANTING OF PERMANENT COVER VEGETATION UNTIL WINTER MONTHS OR DRY MONTHS SHOULD BE AVOIDED, IF POSSIBLE.

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

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

(14) ALL PHYSICAL AND/OR CHEMICAL TREATMENT WILL BE APPLIED IN ACCORDANCE WITH MANUFACTURER'S GUIDELINES AND DESCRIBED ON THE EPSC PLANS FOR ALL PROJECTS REQUIRING ADDITIONAL PHYSICAL OR CHEMICAL TREATMENT OF STORMWATER RUNOFF.

STREAM/WETLAND

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

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

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

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

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

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

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

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

SPECIES

(23) NO ACTIVITY MAY SUBSTANTIALLY DISRUPT THE MOVEMENT OF THOSE SPECIES OF AQUATIC LIFE INDIGENOUS TO THE WATER BODY, INCLUDING THOSE SPECIES THAT NORMALLY MIGRATE THROUGH THE AREA. EPSC MEASURES SHALL BE ADDED TO PREVENT NEGATIVE IMPACTS TO LEGALLY PROTECTED STATE OR FEDERAL FAUNA OR FLORA OR AS INDICATED IN THE ECOLOGICAL STUDIES OR ON THE PERMIT(S).

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INSPECTION, MAINTENANCE, REPAIR

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

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

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

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

(28) THE TDOT PROJECT SUPERVISOR (OR THEIR DESIGNEE) AND THE CONTRACTOR'S SITE SUPERINTENDENT ARE RESPONSIBLE FOR INSPECTIONS. MAINTENANCE AND REPAIR ACTIVITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR.

(29) EPSC MEASURES FOUND TO BE INEFFECTIVE SHALL BE REPAIRED, REPLACED, OR MODIFIED BEFORE THE NEXT RAIN EVENT, IF POSSIBLE.

MATERIALS AND STAGING

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

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

PERMITS, PLANS, RECORDS

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

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

(34) ALL PROJECT RELATED ENVIRONMENTAL PERMITS SHALL BE MAINTAINED AT OR NEAR THE PROJECT SITE.

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

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GENERAL NOTES

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(36) THE EPSC PLAN SHALL BE UPDATED WHENEVER EPSC INSPECTIONS INDICATE, OR WHERE STATE OR FEDERAL OFFICIALS DETERMINE EPSC MEASURES ARE PROVING INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANT SOURCES OR ARE OTHERWISE NOT ACHIEVING THE GENERAL OBJECTIVES OF CONTROLLING POLLUTANTS IN STORM WATER DISCHARGES ASSOCIATED WITH THE CONSTRUCTION ACTIVITY.

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

(38) THE EPSC PLAN IS TO SERVE AS AN INITIAL GUIDE FOR SITE PERSONNEL AS THE CONSTRUCTION PROCESS DEVELOPS. IT MUST BE AMENDED, MODIFIED, AND UPDATED WHENEVER A CHANGE IN THE DESIGN OR CONSTRUCTION OF THE PROJECT OCCURS. THE PHASES DEPICTED IN THE EPSC PLANS MAY NOT COINCIDE WITH THE ACTUAL PHASES OF CONSTRUCTION ESTABLISHED BY THE CONTRACTOR DURING CONSTRUCTION, THUS MODIFICATIONS WILL BE REQUIRED TO ENSURE THE EPSC PLAN IS MAINTAINED TO DEPICT CURRENT SITE CONDITIONS. IT SHOULD BE MAINTAINED SUCH THAT IT WILL ALWAYS REFLECT THE MEASURES THAT ARE INSTALLED DURING THE VARIOUS STAGES OF CONSTRUCTION. IT IS IMPRACTICAL TO DETERMINE ALL THE INTERMEDIATE PHASES OF CONSTRUCTION THAT WILL OCCUR, THUS THESE DOCUMENTS WILL HAVE TO BE UPDATED THROUGHOUT THE LIFE OF THE CONSTRUCTION PROJECT.

LITTER, DEBRIS, WASTE, PETROLEUM

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

(40) THE CONTRACTOR SHALL TAKE APPROPRIATE STEPS TO ENSURE THAT PETROLEUM PRODUCTS OR OTHER CHEMICAL POLLUTANTS ARE PREVENTED FROM ENTERING WATERS OF THE STATE/U.S. ALL EQUIPMENT REFUELING, SERVICING, AND STAGING AREAS SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL LAWS, RULES, REGULATIONS, AND ORDINANCES, INCLUDING THOSE OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA). APPROPRIATE CONTAINMENT MEASURES FOR THESE AREAS SHALL BE USED. ALL SPILLS MUST BE REPORTED TO THE APPROPRIATE AGENCY, AND MEASURES SHALL BE TAKEN IMMEDIATELY TO PREVENT THE POLLUTION OF WATERS OF THE STATE/U.S., INCLUDING GROUNDWATER, SHOULD A SPILL OCCUR.

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

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

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

SPILL PREVENTION, MANAGEMENT AND NOTIFICATION

(44) ONLY PRODUCTS NEEDED WILL BE STORED ON-SITE BY THE CONTRACTOR. THE CONTRACTOR WILL STORE ALL MATERIALS UNDER COVER AND IN APPROPRIATE CONTAINERS. PRODUCTS MUST BE STORED IN ORIGINAL CONTAINERS AND LABELED. MATERIAL MIXING WILL BE CONDUCTED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE CONTRACTOR'S SITE SUPERINTENDENT WILL INSPECT MATERIALS STORAGE AREAS REGULARLY TO ENSURE PROPER USE AND DISPOSAL.

(45) WHEN POSSIBLE, ALL PRODUCTS WILL BE USED COMPLETELY BEFORE PROPERLY DISPOSING OF THE CONTAINER OFF SITE. THE MANUFACTURER'S DIRECTIONS FOR DISPOSAL OF MATERIALS AND CONTAINERS WILL BE FOLLOWED.

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

(47) ALL ON-SITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE.

(48) FERTILIZERS WILL BE APPLIED ONLY IN THE AMOUNTS SPECIFIED BY TDOT. ONCE APPLIED, FERTILIZERS WILL BE WORKED INTO THE SOIL TO LIMIT THE EXPOSURE TO STORMWATER.

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

(50) CONTRACTORS WILL PROVIDE DESIGNATED TRUCK WASHOUT AREAS ON THE SITE. THESE AREAS MUST BE SELF CONTAINED AND NOT CONNECTED TO ANY STORMWATER OUTLET OF THE SITE. UPON COMPLETION OF CONSTRUCTION WASHOUT AREAS WILL BE PROPERLY STABILIZED. WASH DOWN OR WASTE DISCHARGE OF CONCRETE TRUCKS WILL NOT BE PERMITTED ON-SITE UNLESS PROPER SETTLEMENT AREAS HAVE BEEN PROVIDED IN ACCORDANCE WITH BOTH STATE AND FEDERAL REGULATIONS.

(51) FOR ALL HAZARDOUS MATERIALS STORED ON SITE, THE MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEAN UP WILL BE CLEARLY POSTED. SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATIONS OF THE INFORMATION AND CLEANUP SUPPLIES.

(52) APPROPRIATE CLEANUP MATERIALS AND EQUIPMENT WILL BE MAINTAINED BY THE CONTRACTOR IN THE MATERIALS STORAGE AREA ON-SITE AND UNDER COVER. SPILL RESPONSE EQUIPMENT WILL BE INSPECTED AND MAINTAINED BY THE CONTRACTOR AS NECESSARY TO REPLACE ANY MATERIALS USED IN SPILL RESPONSE ACTIVITIES.

(53) ALL SPILLS WILL BE CLEANED IMMEDIATELY AFTER DISCOVERY AND THE MATERIALS DISPOSED OF PROPERLY. THE SPILL AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.

(54) THE CONTRACTOR'S SITE SUPERINTENDENT WILL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THE SITE SUPERINTENDENT HAS HAD APPROPRIATE TRAINING FOR HAZARDOUS MATERIALS HANDLING, SPILL MANAGEMENT, AND CLEANUP.

(55) IF OIL SHEEN IS OBSERVED ON SURFACE WATER (E.G. SETTLING PONDS, DETENTION PONDS, SWALES), ACTION WILL BE TAKEN IMMEDIATELY TO REMOVE THE MATERIAL CAUSING THE SHEEN. THE CONTRACTOR WILL USE APPROPRIATE MATERIALS TO CONTAIN AND ABSORB THE SPILL. THE SOURCE OF THE OIL SHEEN WILL ALSO BE IDENTIFIED AND REMOVED OR REPAIRED AS NECESSARY TO PREVENT FURTHER RELEASES.

(56) WHERE A RELEASE CONTAINING A HAZARDOUS SUBSTANCE IN AN AMOUNT EQUAL TO OR IN EXCESS OF A REPORTABLE QUANTITY ESTABLISHED UNDER EITHER 40 CFR 117 OR 40 CFR 302 OCCURS DURING A 24 HOUR PERIOD, SEE THE LATEST TENNESSEE GENERAL PERMIT NO. TNR100000 STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES SECTION 5.1 FOR REPORTING REQUIREMENTS.

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.

SIGNALIZATION

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

ENVIRONMENTAL

(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.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	HSIP-I-24-1(106)	2E

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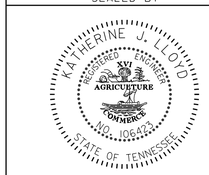

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES AND SPECIAL NOTES

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	HSIP-I-24-1(106)	2F

ESTIMATED GRADING QUANTITIES

STATION TO STATION	ROAD & DRAINAGE EXC. (UNCL.)		BORROW EXCAVATION		CHANNEL EXC. C.Y.	EXCESS EXC. WASTE C.Y.	EMB. C.Y.
	COMMON - C.Y.	S. ROCK - C.Y.	UNCL. - C.Y.	S. ROCK - C.Y.			
18+45.23 to 31+21.77	1224					715	424
TOTALS	**1224**	**0**	**0**	**0**	**0**	**715**	**424**

PROPOSED GUARDRAIL

SHEET NO.	LOCATION	SIDE		STATION		SINGLE TYPE 2 705-02.02 (L.F.)	GUARDRAIL		REMARKS
							TYPE 13 705-04.04 (EACH)	TYPE 38 705-04.07 (EACH)	
		LT	RT	FROM	TO				
4A	EXIT RAMP		X	24+00.00	23+37.5	62.5	1	1	
4A	EXIT RAMP	X		24+00.00	23+37.5	62.5	1	1	
TOTALS						**125**	**2**	**2**	

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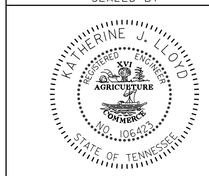

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TABULATED QUANTITIES

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	HSIP-I-24-1(106)	3
CONST.	2015	HSIP-I-24-1(106)	3

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.

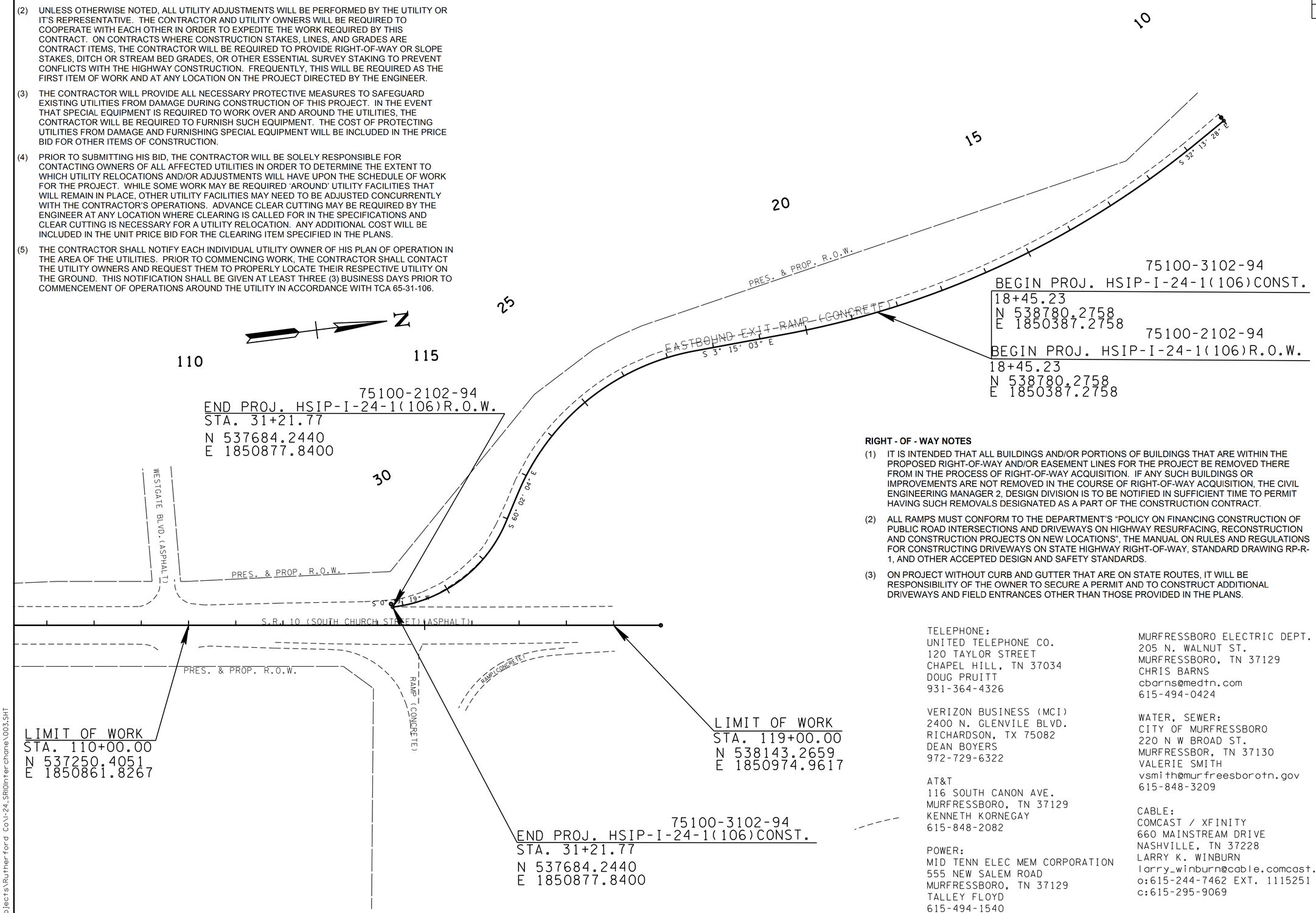
(2) UNLESS OTHERWISE NOTED, ALL UTILITY ADJUSTMENTS WILL BE PERFORMED BY THE UTILITY OR IT'S REPRESENTATIVE. THE CONTRACTOR AND UTILITY OWNERS WILL BE REQUIRED TO COOPERATE WITH EACH OTHER IN ORDER TO EXPEDITE THE WORK REQUIRED BY THIS CONTRACT. ON CONTRACTS WHERE CONSTRUCTION STAKES, LINES, AND GRADES 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.

NO ROW TO BE AQUIRED - PRESENT ROW IS STATE OF TN



RIGHT - OF - WAY NOTES

(1) IT IS INTENDED THAT ALL BUILDINGS AND/OR PORTIONS OF BUILDINGS THAT ARE WITHIN THE PROPOSED RIGHT-OF-WAY AND/OR EASEMENT LINES FOR THE PROJECT BE REMOVED THERE FROM IN THE PROCESS OF RIGHT-OF-WAY ACQUISITION. IF ANY SUCH BUILDINGS OR IMPROVEMENTS ARE NOT REMOVED IN THE COURSE OF RIGHT-OF-WAY ACQUISITION, THE CIVIL ENGINEERING MANAGER 2, DESIGN DIVISION 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) ON PROJECT WITHOUT CURB AND GUTTER THAT ARE ON STATE ROUTES, IT WILL BE RESPONSIBILITY OF THE OWNER TO SECURE A PERMIT AND TO CONSTRUCT ADDITIONAL DRIVEWAYS AND FIELD ENTRANCES OTHER THAN THOSE PROVIDED IN THE PLANS.

TELEPHONE:
UNITED TELEPHONE CO.
120 TAYLOR STREET
CHAPEL HILL, TN 37034
DOUG PRUITT
931-364-4326

VERIZON BUSINESS (MCI)
2400 N. GLENVILE BLVD.
RICHARDSON, TX 75082
DEAN BOYERS
972-729-6322

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

POWER:
MID TENN ELEC MEM CORPORATION
555 NEW SALEM ROAD
MURFRESSBORO, TN 37129
TALLEY FLOYD
615-494-1540

MURFRESSBORO ELECTRIC DEPT.
205 N. WALNUT ST.
MURFRESSBORO, TN 37129
CHRIS BARNS
cbarns@medtn.com
615-494-0424

WATER, SEWER:
CITY OF MURFRESSBORO
220 N W BROAD ST.
MURFRESSBOR, TN 37130
VALERIE SMITH
vsmith@murfreesborotn.gov
615-848-3209

CABLE:
COMCAST / XFINITY
660 MAINSTREAM DRIVE
NASHVILLE, TN 37228
LARRY K. WINBURN
larry_winburn@cable.comcast.com
o:615-244-7462 EXT. 1115251
c:615-295-9069

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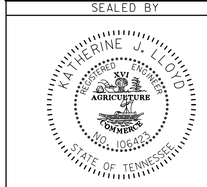

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00008 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPERTY MAP

SCALE: 1"=100'

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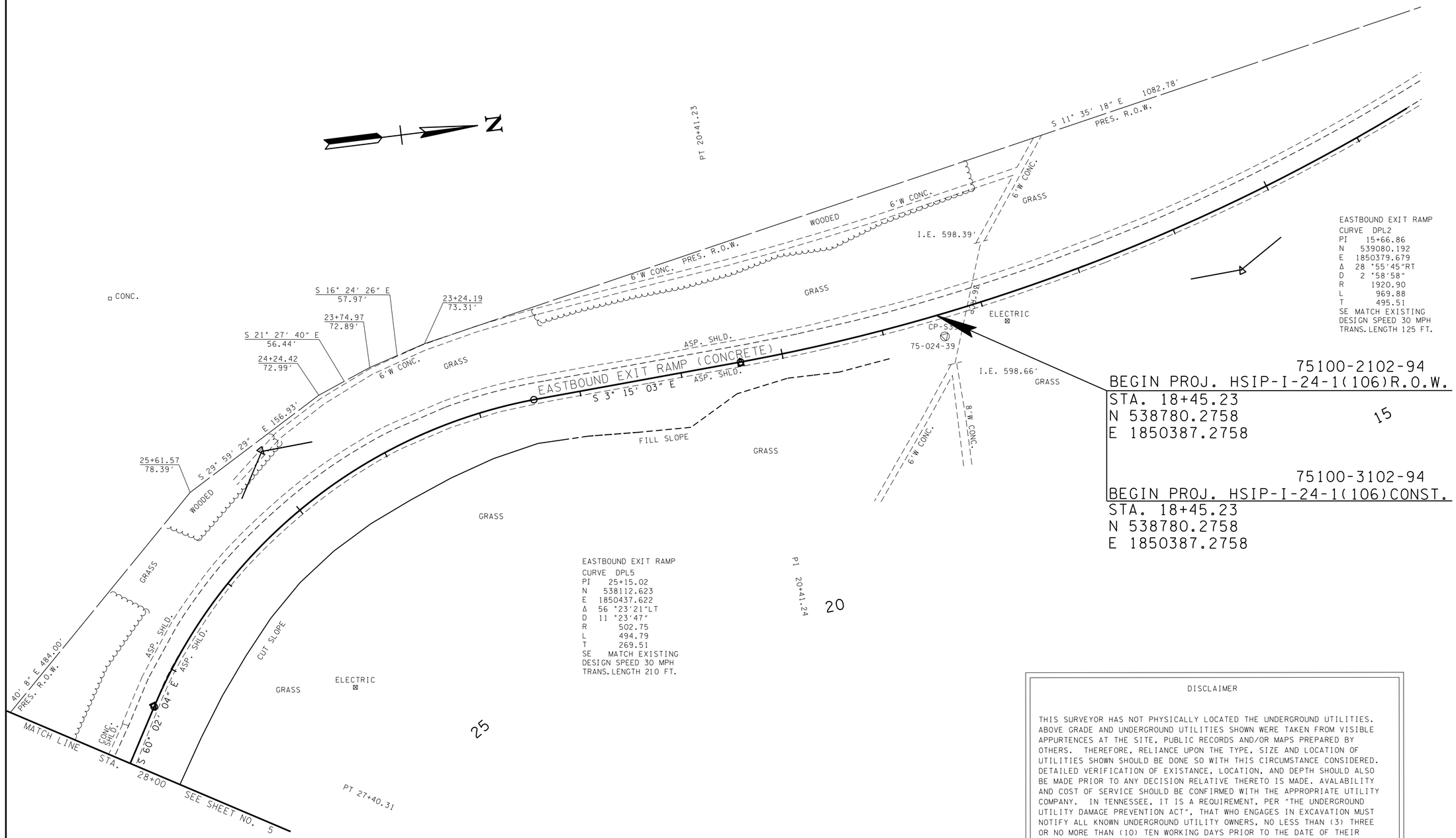
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	HSIP-I-24-1(106)	4
CONST.	2015	HSIP-I-24-1(106)	4

CONTROL POINTS					
POINT	NORTH	EAST	ELEV.	STATION	OFFSET
S38	539435.9790	1850166.1440	604.41	11+51.17	19.62′ (LT)
S39	538785.9100	1850408.5530	606.60	18+39.76	29.76′ (LT)
S40	538440.7830	1850951.2570	625.75	22+12.23	541.51′ (LT)
S41	537875.6720	1850883.5690	617.11	29+52.51	68.22′ (LT)

NOTE: CONSTRUCTION SHALL NOT DISTURB EXISTING CONCRETE DITCHES



EASTBOUND EXIT RAMP
CURVE DPL2
PI 15+66.86
N 539080.192
E 1850379.679
Δ 28 °55′45″RT
D 2 °58′58″
R 1920.90
L 969.88
T 495.51
SE MATCH EXISTING
DESIGN SPEED 30 MPH
TRANS. LENGTH 125 FT.

EASTBOUND EXIT RAMP
CURVE DPL5
PI 25+15.02
N 538112.623
E 1850437.622
Δ 56 °23′21″LT
D 11 °23′47″
R 502.75
L 494.79
T 269.51
SE MATCH EXISTING
DESIGN SPEED 30 MPH
TRANS. LENGTH 210 FT.

75100-2102-94
BEGIN PROJ. HSIP-I-24-1(106)R.O.W.
STA. 18+45.23
N 538780.2758
E 1850387.2758

75100-3102-94
BEGIN PROJ. HSIP-I-24-1(106)CONST.
STA. 18+45.23
N 538780.2758
E 1850387.2758

DISCLAIMER

THIS SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. ABOVE GRADE AND UNDERGROUND UTILITIES SHOWN WERE TAKEN FROM VISIBLE APPURTENCES AT THE SITE, PUBLIC RECORDS AND/OR MAPS PREPARED BY OTHERS. THEREFORE, RELIANCE UPON THE TYPE, SIZE AND LOCATION OF UTILITIES SHOWN SHOULD BE DONE SO WITH THIS CIRCUMSTANCE CONSIDERED. DETAILED VERIFICATION OF EXISTANCE, LOCATION, AND DEPTH SHOULD ALSO BE MADE PRIOR TO ANY DECISION RELATIVE THERETO IS MADE. AVALABILITY AND COST OF SERVICE SHOULD BE CONFIRMED WITH THE APPROPRIATE UTILITY COMPANY. IN TENNESSEE, IT IS A REQUIREMENT, PER "THE UNDERGROUND UTILITY DAMAGE PREVENTION ACT", THAT WHO ENGAGES IN EXCAVATION MUST NOTIFY ALL KNOWN UNDERGROUND UTILITY OWNERS, NO LESS THAN (3) THREE OR NO MORE THAN (10) TEN WORKING DAYS PRIOR TO THE DATE OF THEIR INTENT TO EXCAVATE AND ALSO TO AVOID ANY POSSIBLE HAZARD OR CONFLICT. TENNESSEE ONE CALL 1-800-351-1111.

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 18+45.23-STA. 28+00

SCALE: 1″= 50′

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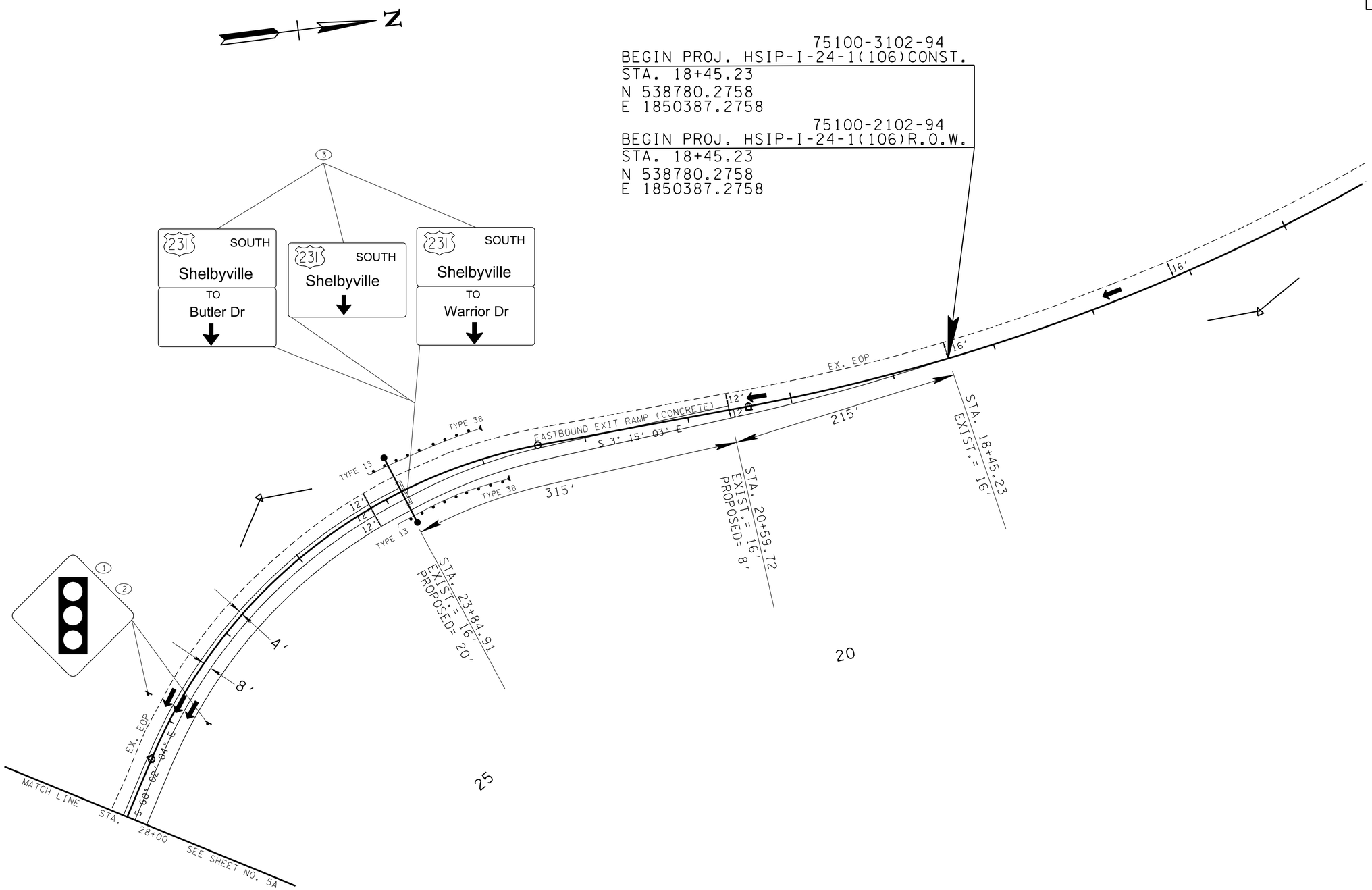
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	HSIP-I-24-1(106)	4A
CONST.	2015	HSIP-I-24-1(106)	4A



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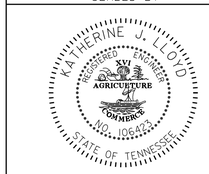

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 18+45.23-STA. 28+00

SCALE: 1"= 50'

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	HSIP-I-24-1(106)	4B
CONST.	2015	HSIP-I-24-1(106)	4B

EARTH QUANTITIES

EXCAVATION (COMMON) 1224 C.Y.

EMBANKMENT (COMMON) 424 C.Y.

EXCESS 715 C.Y.

SHR. 20%

SW. 20%

75100-3102-94

BEGIN PROJ. HSIP-I-24-1(106)CONST.

STA. 18+45.23

75100-2102-94

BEGIN PROJ. HSIP-I-24-1(106)R.O.W.

STA. 18+45.23

LOW WIRE
STA. 22+95.30
ELEV-639.20
1-POWER
1-CABLE
1-TELEPHONE

XCP
STA. 22+12.23, 541.51(LT)
N 538440.7830
E 1850951.2570
ELEV 625.75
ALLUM. DISK

XCP
STA. 18+39.76, 29.75(LT)
N 528785.9100
E 1850408.5530
ELEV 606.59
ALLUM. DISK

75100-3102-94

END PROJ. HSIP-I-24-1(106)CONST.

STA. 31+21.77 =

STA. 114+32.41 S.R. 10

75100-2102-94

END PROJ. HSIP-I-24-1(106)R.O.W.

STA. 31+21.77 =

STA. 114+32.41 S.R. 10

GRAPHICAL GRADE

GRAPHICAL GRADE

640 635 630 625 620 615 610 605 600 595 590 585 580 575 570 565

19+00 20+00 21+00 22+00 23+00 24+00 25+00 26+00 27+00 28+00 29+00 30+00 31+00

DISCLAIMER

THIS SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. ABOVE GRADE AND UNDERGROUND UTILITIES SHOWN WERE TAKEN FROM VISIBLE APPURTENCES AT THE SITE, PUBLIC RECORDS AND/OR MAPS PREPARED BY OTHERS. THEREFORE, RELIANCE UPON THE TYPE, SIZE AND LOCATION OF UTILITIES SHOWN SHOULD BE DONE SO WITH THIS CIRCUMSTANCE CONSIDERED. DETAILED VERIFICATION OF EXISTANCE, LOCATION, AND DEPTH SHOULD ALSO BE MADE PRIOR TO ANY DECISION RELATIVE THERETO IS MADE. AVALABILITY AND COST OF SERVICE SHOULD BE CONFIRMED WITH THE APPROPRIATE UTILITY COMPANY. IN TENNESSEE, IT IS A REQUIREMENT, PER "THE UNDERGROUND UTILITY DAMAGE PREVENTION ACT", THAT WHO ENGAGES IN EXCAVATION MUST NOTIFY ALL KNOWN UNDERGROUND UTILITY OWNERS, NO LESS THAN (3) THREE OR NO MORE THAN (10) TEN WORKING DAYS PRIOR TO THE DATE OF THEIR INTENT TO EXCAVATE AND ALSO TO AVOID ANY POSSIBLE HAZARD OR CONFLICT. TENNESSEE ONE CALL 1-800-351-1111.

DISCLAIMER

UTILITY DEPTHS ARE APPROXIMATE BASED ON AVERAGE DEPTHS SUPPLIED BY UTILITY PROVIDERS.

I-24 E.B. OFF RAMP AT S.R. 10
GRAPHICAL GRADE (MATCH EXISTING CROSS SLOPE)

UNOFFICIAL SET

NOT FOR BIDDING

SEALED BY

KATHERINE J. LLOYD
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 106423
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RAMP PROFILE

STA.18+45.23-STA.31+21.77

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

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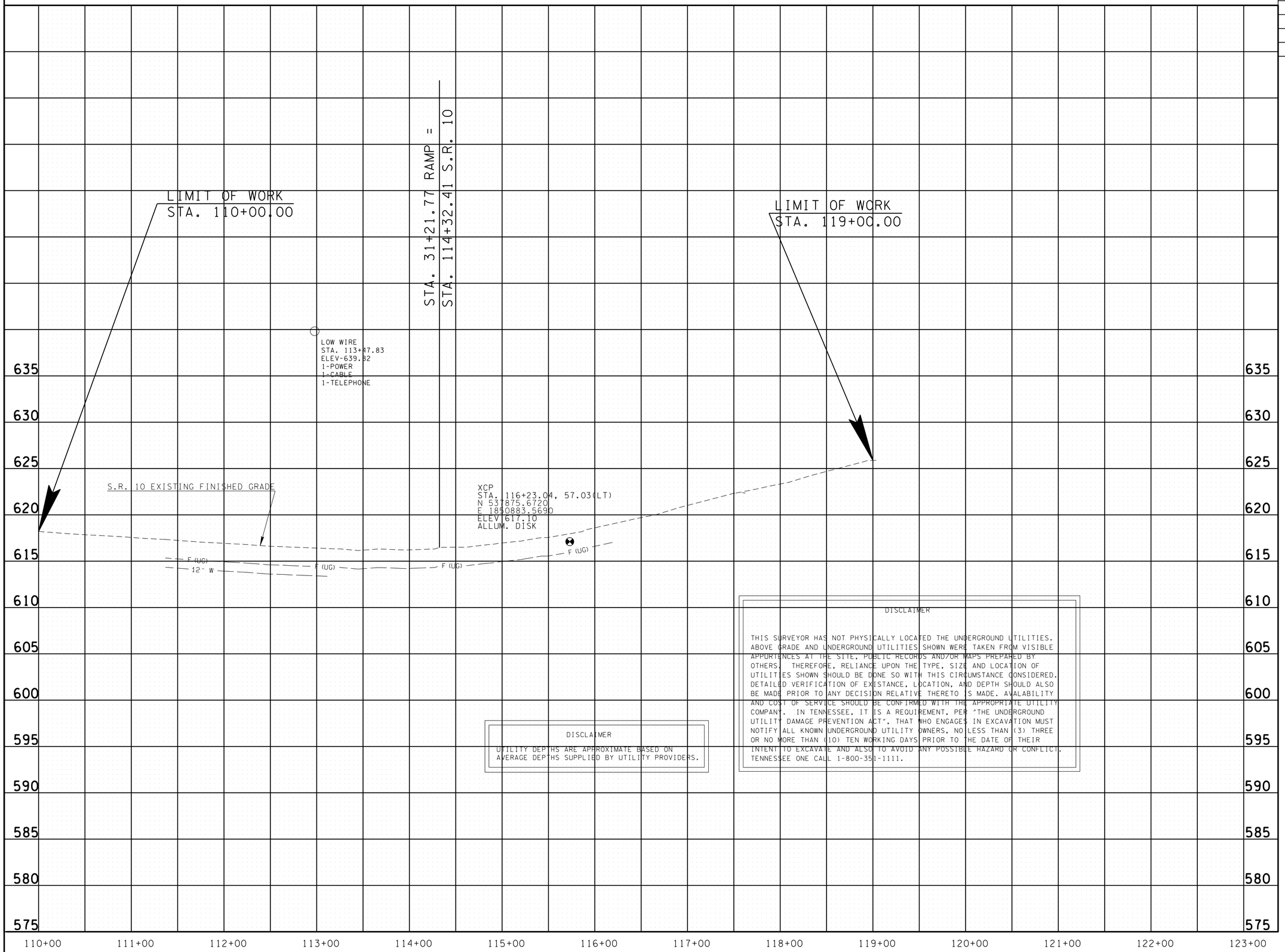
24-JAN-2015 10:11

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	HSIP-I-24-1(106)	4C
CONST.	2015	HSIP-I-24-1(106)	4C



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UNOFFICIAL SET

NOT FOR BIDDING

SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

S.R. 10 PROFILE

STA.110+00 - STA.119+00

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

4-JAN-2015 10:11
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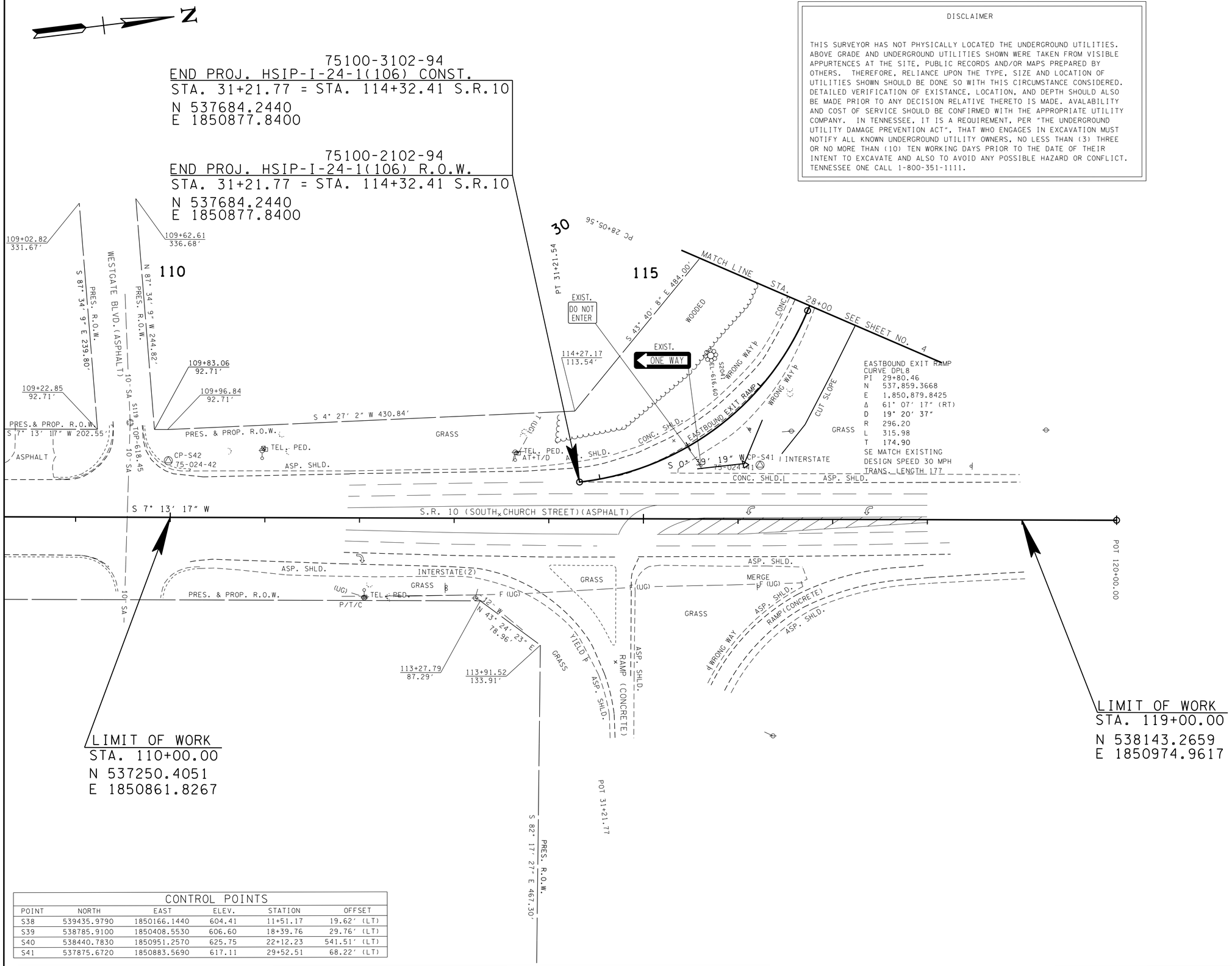
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	HSIP-I-24-1(106)	5
CONST.	2015	HSIP-I-24-1(106)	5

DISCLAIMER

THIS SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. ABOVE GRADE AND UNDERGROUND UTILITIES SHOWN WERE TAKEN FROM VISIBLE APPURTENCES AT THE SITE, PUBLIC RECORDS AND/OR MAPS PREPARED BY OTHERS. THEREFORE, RELIANCE UPON THE TYPE, SIZE AND LOCATION OF UTILITIES SHOWN SHOULD BE DONE SO WITH THIS CIRCUMSTANCE CONSIDERED. DETAILED VERIFICATION OF EXISTANCE, LOCATION, AND DEPTH SHOULD ALSO BE MADE PRIOR TO ANY DECISION RELATIVE THERETO IS MADE. AVALABILITY AND COST OF SERVICE SHOULD BE CONFIRMED WITH THE APPROPRIATE UTILITY COMPANY. IN TENNESSEE, IT IS A REQUIREMENT, PER "THE UNDERGROUND UTILITY DAMAGE PREVENTION ACT", THAT WHO ENGAGES IN EXCAVATION MUST NOTIFY ALL KNOWN UNDERGROUND UTILITY OWNERS, NO LESS THAN (3) THREE OR NO MORE THAN (10) TEN WORKING DAYS PRIOR TO THE DATE OF THEIR INTENT TO EXCAVATE AND ALSO TO AVOID ANY POSSIBLE HAZARD OR CONFLICT. TENNESSEE ONE CALL 1-800-351-1111.



CONTROL POINTS

POINT	NORTH	EAST	ELEV.	STATION	OFFSET
S38	539435.9790	1850166.1440	604.41	11+51.17	19.62' (LT)
S39	538785.9100	1850408.5530	606.60	18+39.76	29.76' (LT)
S40	538440.7830	1850951.2570	625.75	22+12.23	541.51' (LT)
S41	537875.6720	1850883.5690	617.11	29+52.51	68.22' (LT)

UNOFFICIAL SET

NOT FOR BIDDING

SEALED BY

KATHERINE J. LLOYD
REGISTERED ENGINEER
XVI AGRICULTURE COMMERCE
NO. 106423
STATE OF TENNESSEE

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

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 28+00 - STA. 31+21.77

SCALE: 1"= 50'

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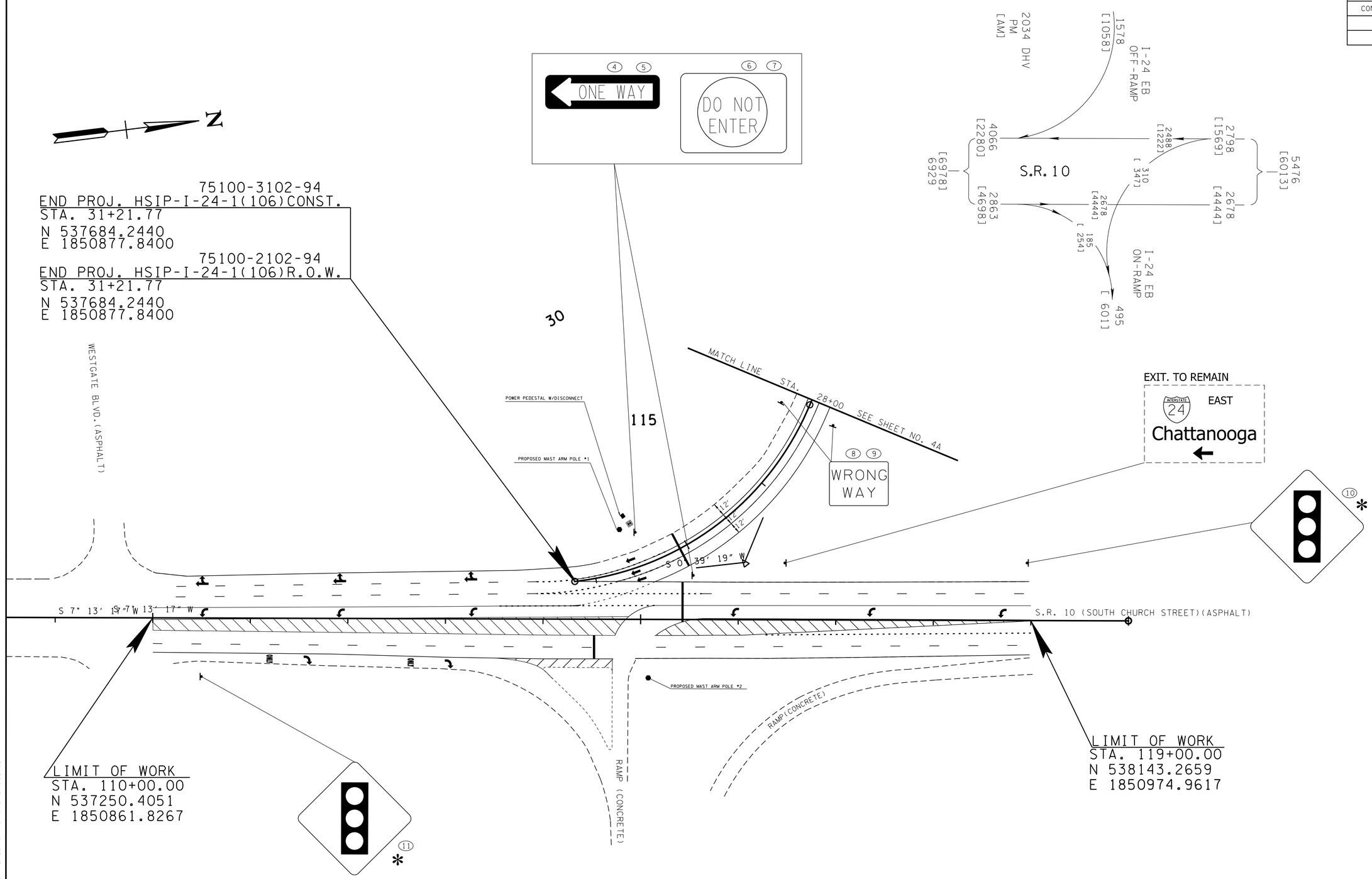
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	HSPI-I-24-1(106)	5A
CONST.	2015	HSIP-I-24-1(106)	5A



*TO BE LOCATED AS DIRECTED BY THE ENGINEER.

UNOFFICIAL SET

NOT FOR BIDDING

SEALED BY

KATHERINE J. LLOYD
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 106422
STATE OF TENNESSEE

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 28+00-STA. 31+21.77

SCALE: 1"= 50'

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EROSION PREVENTION AND SEDIMENT CONTROL NOTES

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	HSIP-I-24-1(106)	6
CONST.	2015	HSIP-I-24-1(106)	6

NPDES

(1) 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.

(2) 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.

(3) 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.

B. NO OTHER CLEARING AND GRUBBING OPERATIONS SHALL BE STARTED BEFORE APPLICABLE EPSC MEASURES ARE IN PLACE IN ACCORDANCE WITH THE ACCEPTED EPSC PLAN.

C. NO CULVERT OR BRIDGE CONSTRUCTION SHALL BE STARTED BEFORE APPLICABLE EPSC MEASURES ARE IN PLACE IN ACCORDANCE WITH THE ACCEPTED EPSC PLAN.

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.

(4) 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.

(5) 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.

(6) FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION SUPPORT ACTIVITIES; TDOT PROJECTS ARE COVERED UNDER THE "WASTE AND BORROW" MANUAL PER THE SSWMP.

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

UTILITY RELOCATION

(1) RAIN WATER WHICH COLLECTS IN THE UTILITY TRENCH SHALL BE PUMPED INTO A DEWATERING STRUCTURE OR SEDIMENT FILTER BAG AND MAINTAINED.

(2) SILT FENCE SHALL BE INSTALLED ON THE DOWNSTREAM SIDE OF STOCKPILED SOIL. TRENCHING ACROSS WET WEATHER CONVEYANCES SHALL BE DONE DURING NO FLOW CONDITIONS AND STABILIZED BY THE END OF THE WORK DAY

(3) UTILITY CROSSINGS FOR PERENNIAL STREAMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH TDOT STANDARDS AND NO WORK SHALL BE CONDUCTED IN FLOWING WATERS. TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC) REGULATIONS APPLY TO UTILITIES IN THIS PROJECT IN REGARD TO EROSION PREVENTION AND SEDIMENT CONTROL (EPSC). THE STATE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE STORM WATER POLLUTION PREVENTION PLANS (SWPPP).

(4) IT IS THE RESPONSIBILITY OF THE STATE UTILITY CONTRACTOR INSTALLER TO PROTECT FROM EROSION EXPOSED EARTH RESULTING FROM THEIR OPERATIONS AND TO PROVIDE FOR CONTAINMENT OF SEDIMENT THAT MAY RESULT FROM THEIR WORK. PRIOR TO BEGINNING WORK, ADEQUATE MEASURES MUST BE IN PLACE TO TRAP ANY SEDIMENT THAT MAY TRAVEL OFF-SITE IN THE EVENT OF RAIN. DURING THE PROGRESSION OF THEIR WORK, EXPOSED EARTH AREAS SHALL BE STABILIZED AS SOON AS POSSIBLE TO PREVENT EROSION. AT NO TIME SHALL EXPOSED EARTH RESULTING FROM THEIR OPERATIONS HAVE UNPROTECTED ACCESS TO FLOWING OFF-SITE AND ENTERING WATERS OF THE STATE/U.S.

(5) FOR THE INSTALLATION OF BURIED UTILITIES (PIPES AND CABLES), TRENCHES SHALL BE BACKFILLED DAILY AS CONSTRUCTION PROCEEDS. BACKFILLED TRENCHES SHALL BE SEEDED AND MULCHED OR SODDED DAILY IF POSSIBLE, BUT NO LATER THAN SEVEN DAYS AFTER BEING BACKFILLED. ANY TEMPORARY SPOIL OF EXCAVATED EARTH SHALL BE LOCATED WITHIN TDOT EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) MEASURES OR RECEIVE SEPARATE EPSC MEASURES. IF TRENCHES ARE NOT BACKFILLED OVERNIGHT, APPROPRIATE EPSC MEASURES WILL BE INSTALLED BY THE STATE UTILITY CONTRACTOR UNTIL SUCH TIME AS THE TRENCH IS BACKFILLED.

(6) IN REGARD TO EROSION PREVENTION AND SEDIMENT CONTROL (EPSC), TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC) REGULATIONS APPLY TO THE STATE UTILITY CONTRACTORS IN THIS PROJECT, THEREFORE, THE STATE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE STORM WATER POLLUTIONS PREVENTION PLANS (SWPPP). THE STATE CONTRACTOR IS RESPONSIBLE FOR EPSC MEASURES RELATED TO UTILITY CONSTRUCTION INCLUDED IN THE STATE CONTRACT WORK.

(7) TRENCHES FORMED FOR THE INSTALLATION OF BURIED UTILITIES MAY CAUSE STORM WATER RUNOFF TO CONCENTRATE AT THE TRENCH LINE. ADDITIONAL EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) MEASURES MAY BE REQUIRED TO BE INSTALLED AS APPROVED BY THE TDOT PROJECT ENGINEER.

(8) FOR THE INSTALLATION OF UNDERGROUND UTILITIES OUTSIDE OF THE TDOT RIGHT-OF-WAY, EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) SHALL BE INSTALLED PRIOR TO CLEARING (TRENCHING AND ASSOCIATED BLASTING) IN THOSE AREAS NECESSARY TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION AREA. THESE EPSC MEASURES SHALL REMAIN UNTIL THE BACKFILLED TRENCH IS STABILIZED WITH FINAL VEGETATIVE COVER.

(9) THE UTILITY CONTRACTOR SHALL RESTORE ALL AFFECTED WET WEATHER CONVEYANCES TO THE EXISTING TOPOGRAPHIC CONDITIONS (AS APPROVED BY THE TDOT PROJECT ENGINEER).

(10) THE UTILITY CONTRACTOR WILL PROVIDE APPROPRIATE EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) MEASURES TO REPLACE IN-PLACE EPSC MEASURES REMOVED TO FACILITATE THE INSTALLATION OF UTILITIES. REPLACEMENT OF EPSC MEASURES WILL BE COORDINATED WITH THE TDOT PROJECT ENGINEER BEFORE COMMENCING WORK.

EROSION PREVENTION AND SEDIMENT CONTROL QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
(4)	203-01	ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED)	C.Y.	14
(3)(2)	209-05	SEDIMENT REMOVAL	C.Y.	42
(3)(2)	209-08.03	TEMPORARY SILT FENCE (WITHOUT BACKING)	L.F.	1207
(3)(2)	209-08.07	ROCK CHECK DAM	EACH	6
(3)	707-08.11	HIGH-VISIBILITY CONSTRUCTION FENCE	L.F.	600
(3)(2)(1)	709-05.05	MACHINED RIP-RAP (CLASS A-3)	TON	78
(3)(2)(1)	740-10.03	GEOTEXTILE (TYPE III) (EROSION CONTROL)	S.Y.	134
(3)(2)	740-11.03	TEMPORARY SEDIMENT TUBE 18IN(EROSIN CONTROL)	L.F.	150
(3)(2)	801-01	SEEDING (WITH MULCH)	UNIT	3
	801-03	WATER (SEEDING & SODDING)	M.G.	26
(3)(2)	803-01	SODDING (NEW SOD)	S.Y.	500

(1) FOR TEMPORARY CONSTRUCTION EXIT.

(2) SEE SUBSECTION 209.07 OF THE STANDARDS SPECIFICATION FOR MAINTENANCE REPLACEMENT.

(3) TO BE USED AS DIRECTED BY THE PROJECT ENGINEER.

(4) FOR CONSTRUCTION EXIT.

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

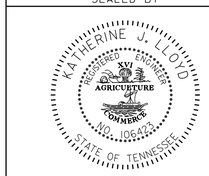
	SYMBOL	ITEM	STD. DWG.
	* SF * SF * SF *	SILT FENCE	EC-STR-3B
		ROCK CHECK DAM (V-DITCH)	EC-STR-6
*	TCE	TEMPORARY CONSTRUCTION EXIT	EC-STR-25
	** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37
*	* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1

*LOCATION TO BE DETERMINED BY PROJECT ENGINEER

UNOFFICIAL SET

NOT FOR BIDDING

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL NOTES

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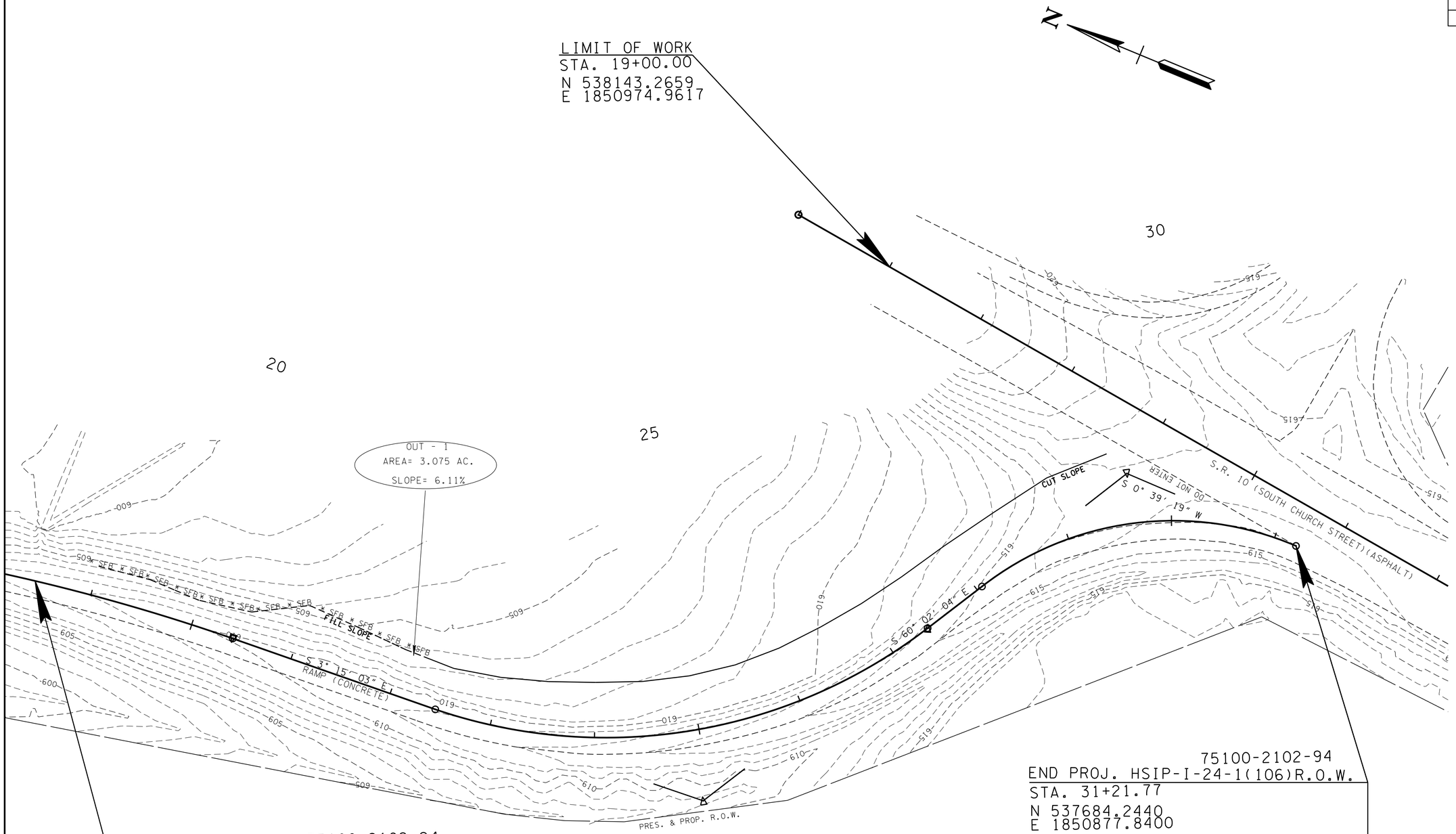
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	HSIP-I-24-1(106)	7
CONST.	2015	HSIP-I-24-1(106)	6A



75100-2102-94
BEGIN PROJ. HSIP-I-24-1(106)R.O.W.
18+45.23
N 538780.2758
E 1850387.2758

75100-3102-94
BEGIN PROJ. HSIP-I-24-1(106)CONST.
18+45.23
N 538780.2758
E 1850387.2758

75100-2102-94
END PROJ. HSIP-I-24-1(106)R.O.W.
STA. 31+21.77
N 537684.2440
E 1850877.8400

75100-3102-94
END PROJ. HSIP-I-24-1(106)CONST.
STA. 31+21.77
N 537684.2440
E 1850877.8400

NOTE: EXISTING CONTOURS SHOWN

UNOFFICIAL SET

NOT FOR BIDDING

SEALED BY

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

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN PHASE I

SCALE: 1"=50'

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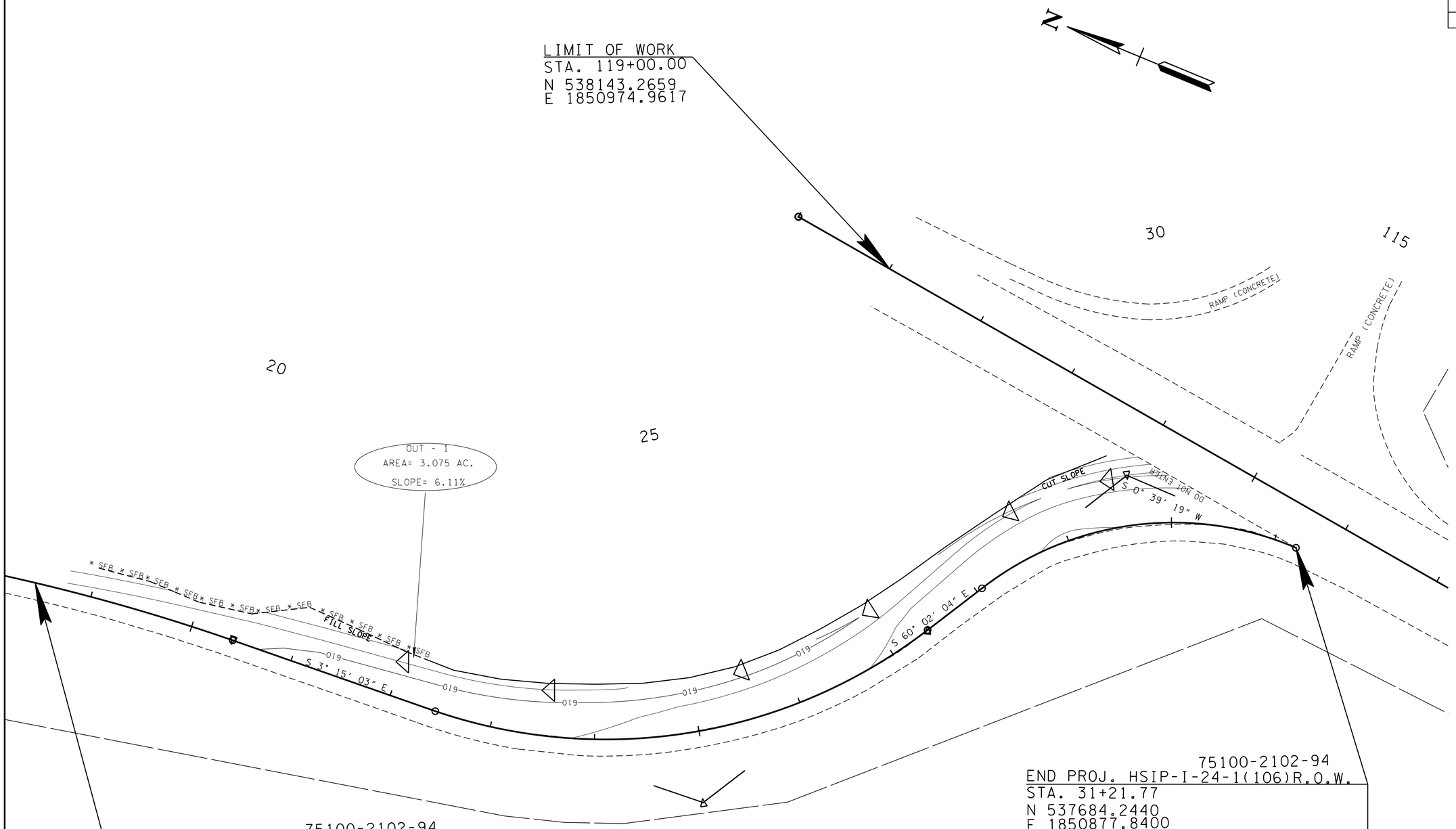
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	HSIP-I-24-1(106)	8
CONST.	2015	HSIP-I-24-1(106)	6B



75100-2102-94
BEGIN PROJ. HSIP-I-24-1(106)R.O.W.
18+45.23
N 538780.2758
E 1850387.2758

75100-3102-94
BEGIN PROJ. HSIP-I-24-1(106)CONST.
18+45.23
N 538780.2758
E 1850387.2758

75100-2102-94
END PROJ. HSIP-I-24-1(106)R.O.W.
STA. 31+21.77
N 537684.2440
E 1850877.8400

75100-3102-94
END PROJ. HSIP-I-24-1(106)CONST.
STA. 31+21.77
N 537684.2440
E 1850877.8400

NOTE: PROPOSED CONTOURS SHOWN

UNOFFICIAL SET

NOT FOR BIDDING

SEALED BY

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN PHASE II

SCALE: 1"=50'

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	HSIP-I-24-1(106)	7

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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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PAVEMENT EDGE DROP-OFF TRAFFIC CONTROL NOTES

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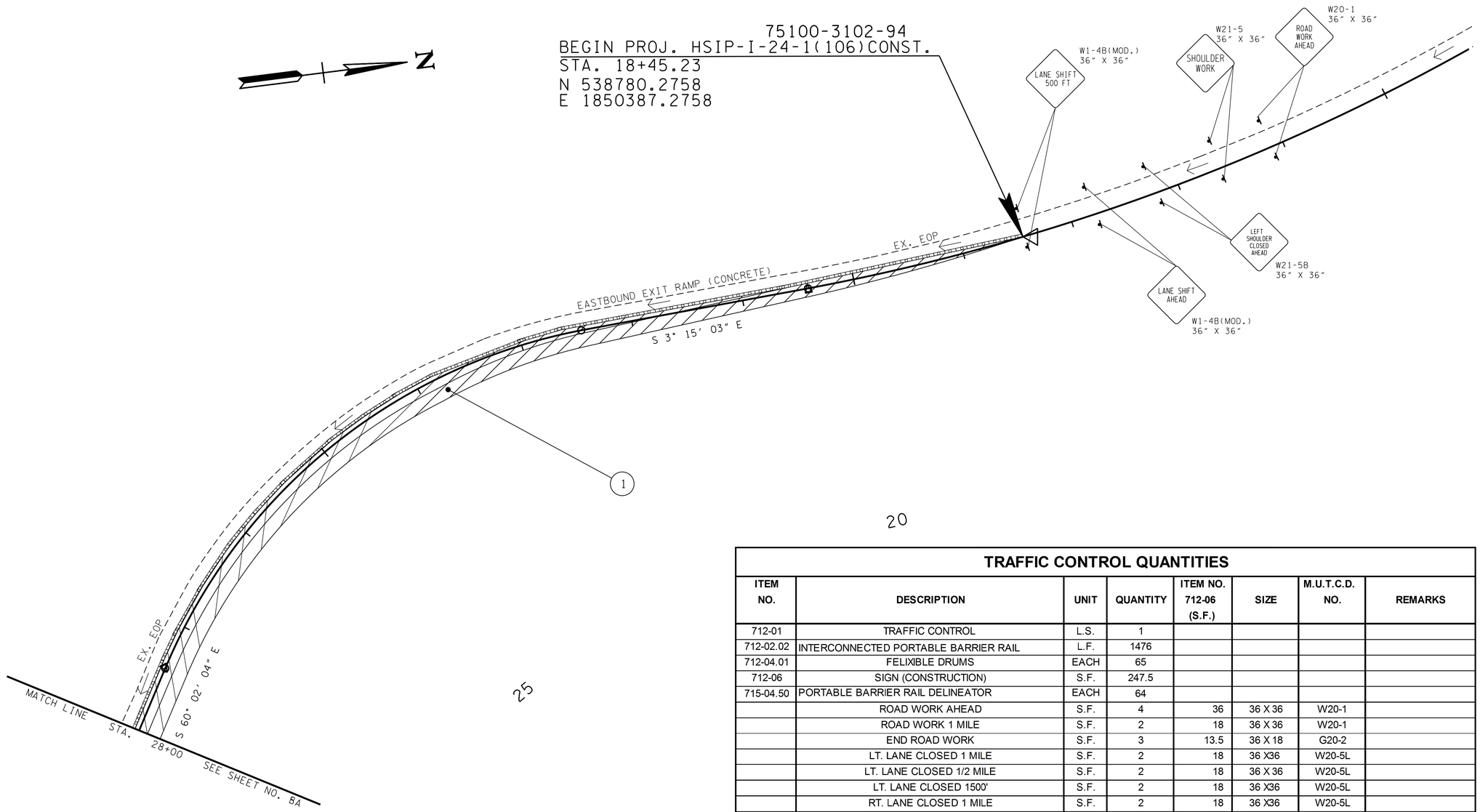
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	HSIP-I-24-1(106)	8

GUIDANCE

1. Widen ramp pavement (full depth) to accommodate three (3) 12′ lanes of traffic along the I-24 eastbound exit ramp extending approximately 1200′ from the US-231/SR-10 intersection. Keep existing west outside edge of pavement and widen to the east.

TRAFFIC CONTROL LEGEND	
SYMBOL	ITEM
	WORK ZONE
	PORTABLE BARRIER RAIL (WITH BARRIER RAIL DELINEATORS)
	SIGN (CONSTRUCTION)
	TEMPORARY ATTENUATOR
	FLEXIBLE DRUMS (CHANNELIZING)



TRAFFIC CONTROL QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	ITEM NO. 712-06 (S.F.)	SIZE	M.U.T.C.D. NO.	REMARKS
712-01	TRAFFIC CONTROL	L.S.	1				
712-02.02	INTERCONNECTED PORTABLE BARRIER RAIL	L.F.	1476				
712-04.01	FELIXIBLE DRUMS	EACH	65				
712-06	SIGN (CONSTRUCTION)	S.F.	247.5				
715-04.50	PORTABLE BARRIER RAIL DELINEATOR	EACH	64				
	ROAD WORK AHEAD	S.F.	4	36	36 X 36	W20-1	
	ROAD WORK 1 MILE	S.F.	2	18	36 X 36	W20-1	
	END ROAD WORK	S.F.	3	13.5	36 X 18	G20-2	
	LT. LANE CLOSED 1 MILE	S.F.	2	18	36 X36	W20-5L	
	LT. LANE CLOSED 1/2 MILE	S.F.	2	18	36 X 36	W20-5L	
	LT. LANE CLOSED 1500'	S.F.	2	18	36 X36	W20-5L	
	RT. LANE CLOSED 1 MILE	S.F.	2	18	36 X36	W20-5L	
	RT. LANE CLOSED 1/2 MILE	S.F.	2	18	36 X 36	W20-5L	
	RT. LANE CLOSED 1500'	S.F.	2	18	36 X36	W20-5L	
	SHOULDER WORK	S.F.	2	18	36 X 36	W21-5	
	LT. SHOULDER CLOSED AHEAD	S.F.	2	18	36 X 36	W21-5B	
	LANE SHIFT AHEAD	S.F.	2	18	36 X 36	W1-4B(MOD)	
	LANE SHIFT 500'	S.F.	2	18	36 X 36	W1-4B(MOD)	
TOTAL				247.5			

UNOFFICIAL SET

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SEALED BY

KATHERINE J. LLOYD
REGISTERED ENGINEER
XV
AGRICULTURE
XV
COMMERCE
NO. 106473
STATE OF TENNESSEE

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

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN PHASE I

STA. 18+45.23-STA. 28+00

SCALE: 1"= 50′

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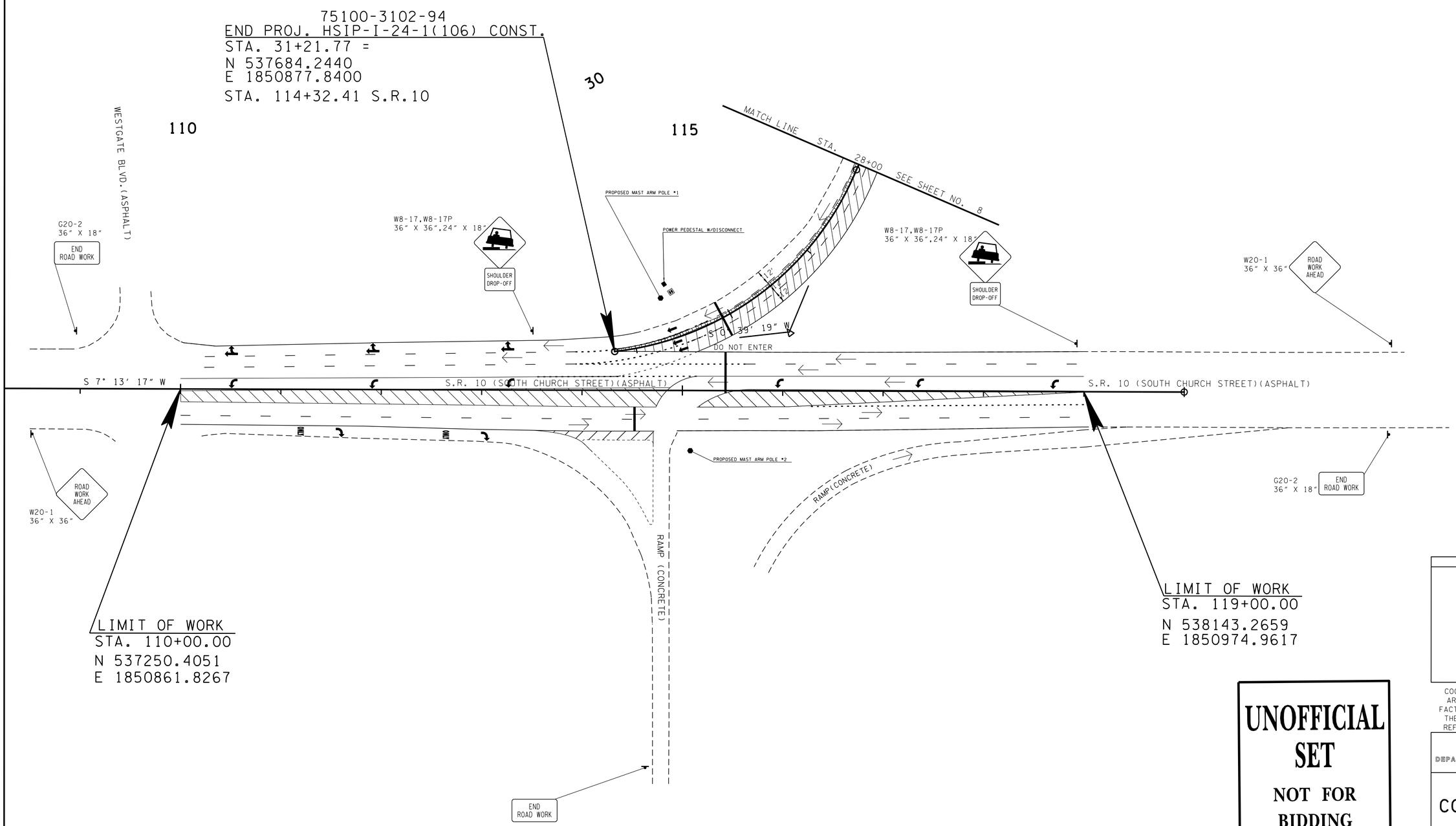
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	HSIP-I-24-1(106)	8A

TRAFFIC CONTROL LEGEND	
SYMBOL	ITEM
	WORK ZONE
	PORTABLE BARRIER RAIL (WITH BARRIER RAIL DELINEATORS)
	SIGN (CONSTRUCTION)
	TEMPORARY ATTENUATOR
	FLEXIBLE DRUMS (CHANNELIZING)



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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN PHASE I

STA. 28+00 - STA. 31+21.77

SCALE: 1"= 50'

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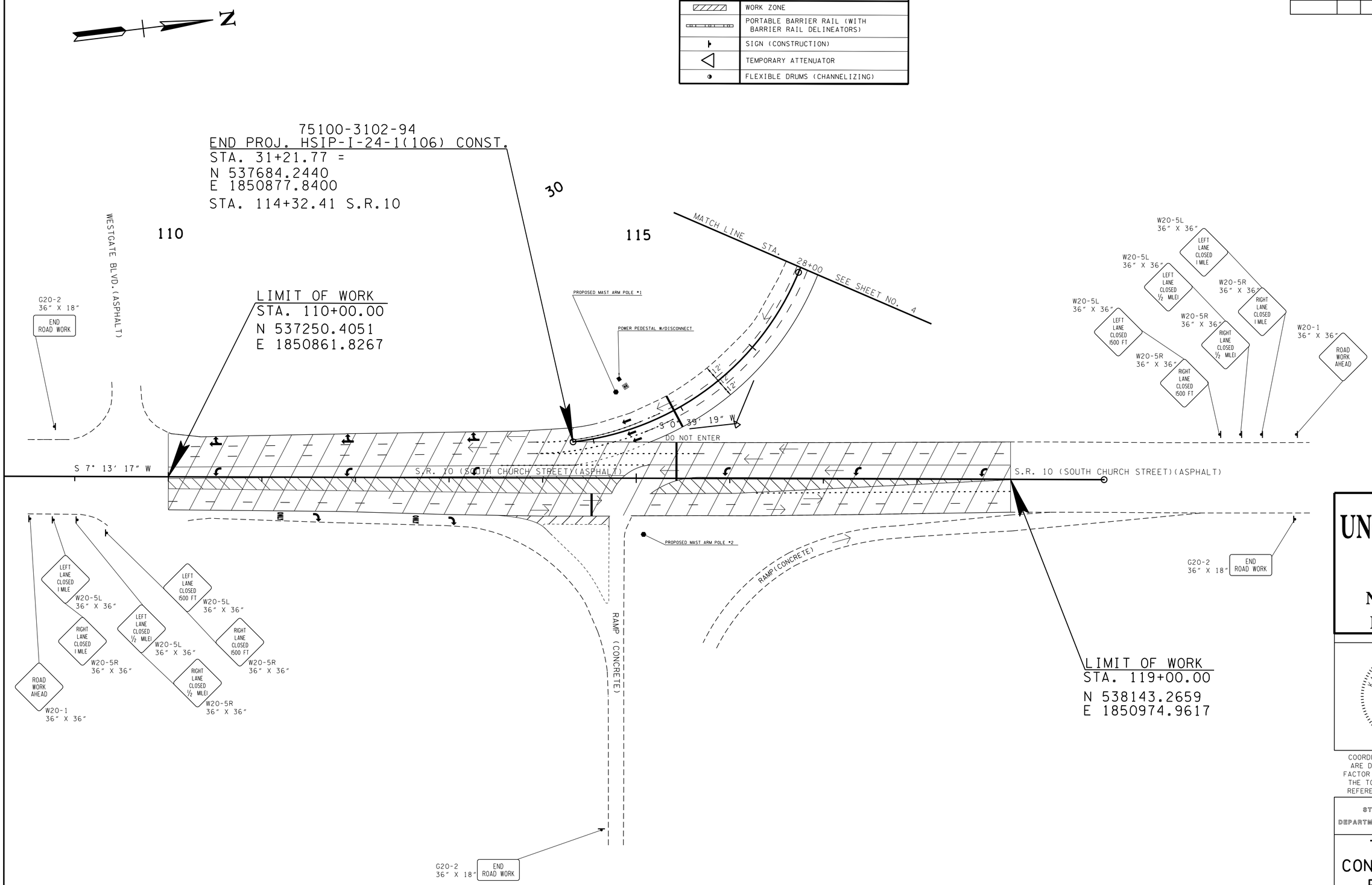
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	HSIP-I-24-1(106)	8B

TRAFFIC CONTROL LEGEND	
SYMBOL	ITEM
	WORK ZONE
	PORTABLE BARRIER RAIL (WITH BARRIER RAIL DELINEATORS)
	SIGN (CONSTRUCTION)
	TEMPORARY ATTENUATOR
	FLEXIBLE DRUMS (CHANNELIZING)



UNOFFICIAL SET

NOT FOR BIDDING

SEALED BY

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

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN PHASE II

STA. 28+00 - STA. 31+21.77

SCALE: 1"= 50'

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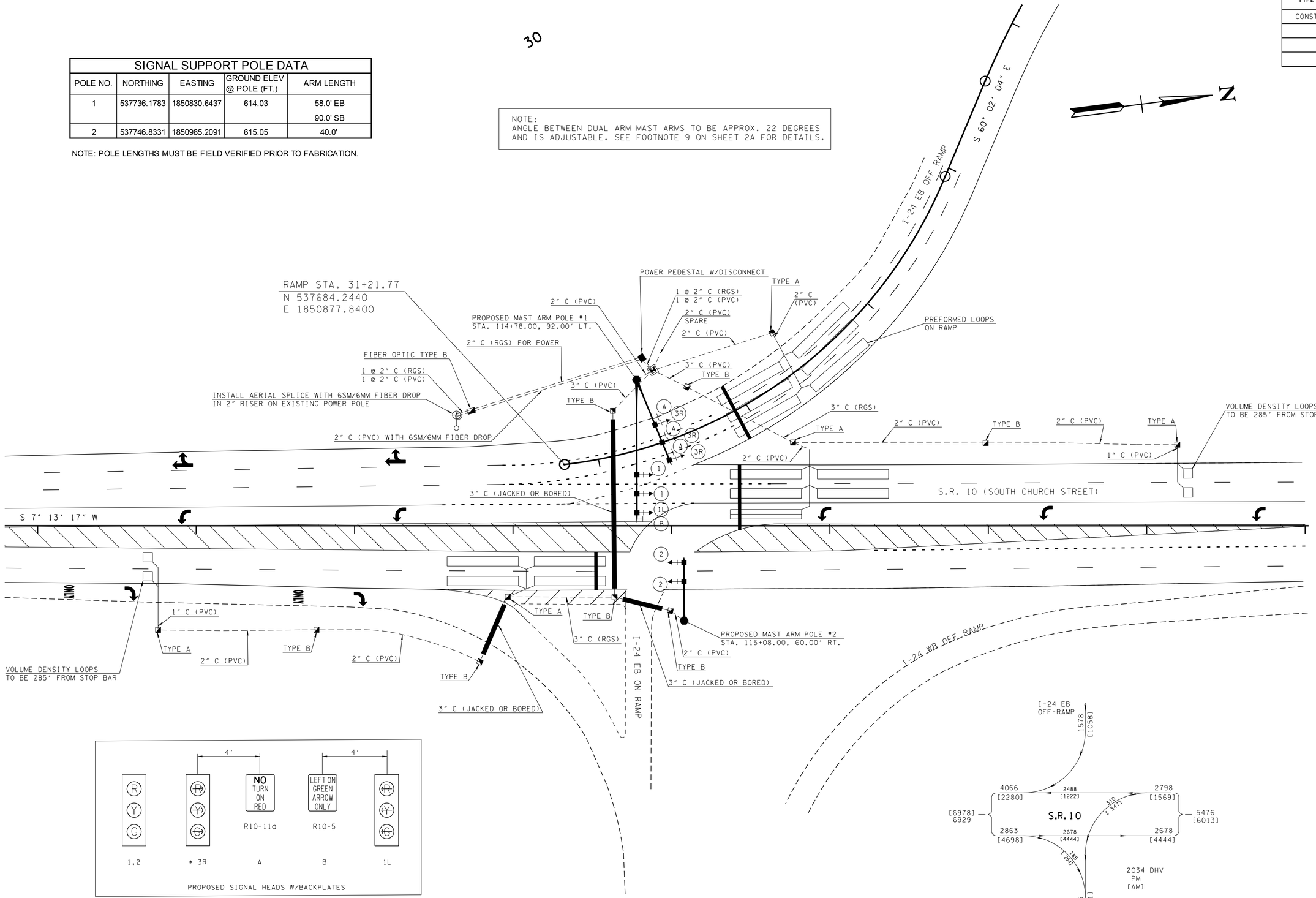
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	HSIP-I-24-1(106)	10

30

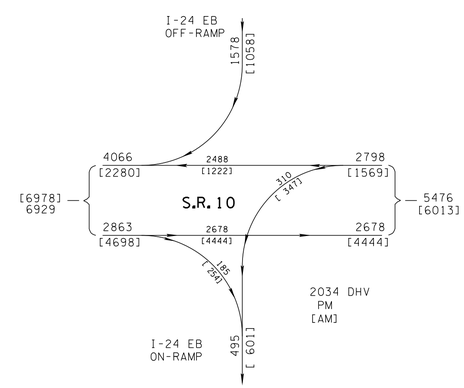
SIGNAL SUPPORT POLE DATA				
POLE NO.	NORTHING	EASTING	GROUND ELEV @ POLE (FT.)	ARM LENGTH
1	537736.1783	1850830.6437	614.03	58.0' EB 90.0' SB
2	537746.8331	1850985.2091	615.05	40.0'

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

NOTE:
ANGLE BETWEEN DUAL ARM MAST ARMS TO BE APPROX. 22 DEGREES AND IS ADJUSTABLE. SEE FOOTNOTE 9 ON SHEET 2A FOR DETAILS.



* VERTICAL LOUVERS TO BE INSTALLED ON ALL LENSES OF 3R SIGNAL HEADS, IF DETERMINED TO BE NEEDED BY THE ENGINEER, IN CONSULTATION WITH THE CITY OF MURFREESBORO. LOUVERS TO BE TILTED AT AN ANGLE SUCH THAT SB TRAFFIC ON SR-10 CAN NOT SEE ANY OF THE INDICATIONS.



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

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED SIGNAL LAYOUT

INTERSECTION OF
I-24 EB OFF RAMP
AT S.R. 10

SCALE: 1"=30 '

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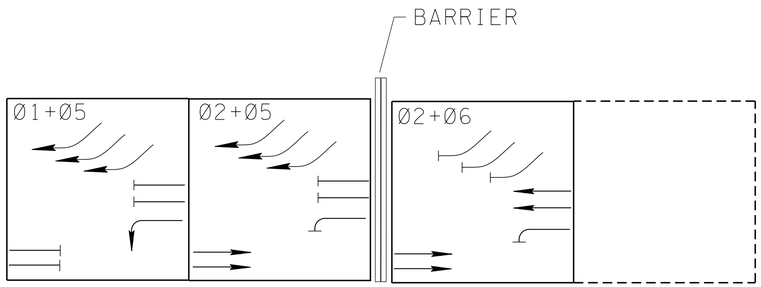
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	HSIP-I-24-1(106)	10A

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



EIGHT PHASE DESIGNATIONS

ACTIVE PHASE

INACTIVE PHASE (NOT USED)

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

  LEAD - LAG LEFT TURNS (LIST)

  SPLIT PHASING (LIST)

BASIC OR SEMI - ACTUATED TIMING (SECS)

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

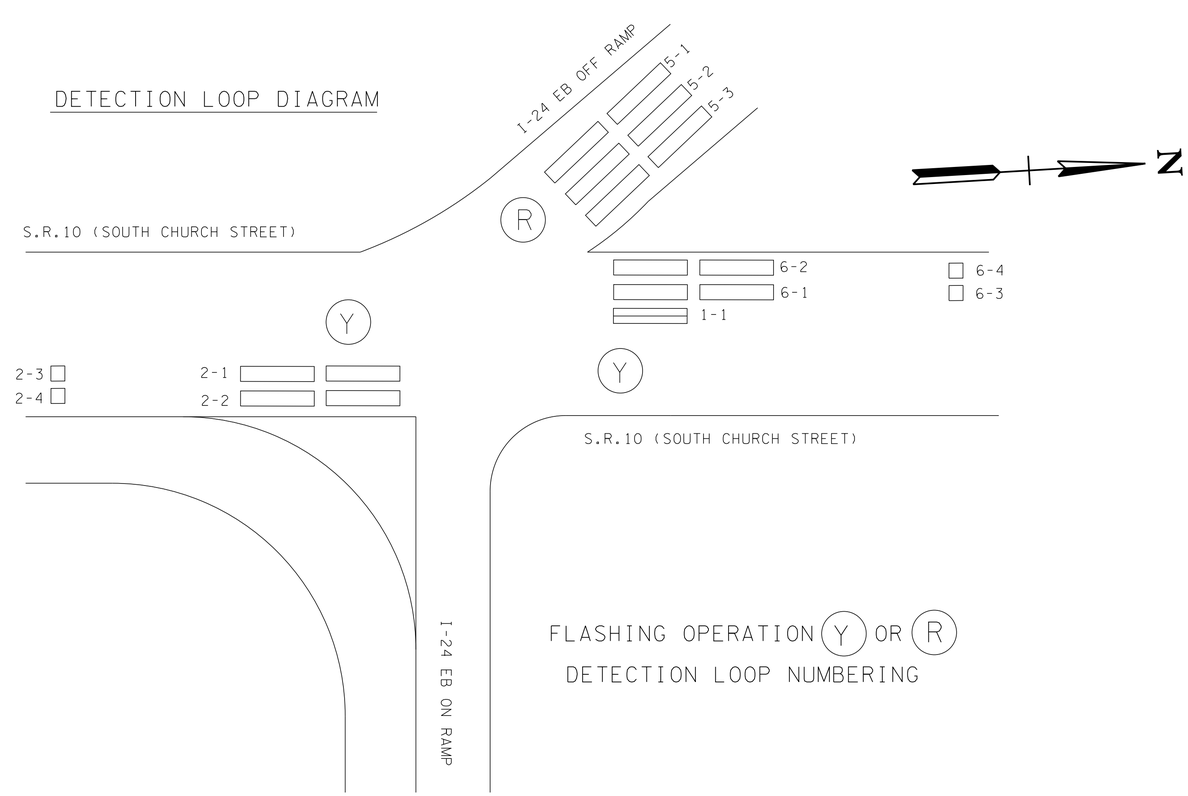
(1) NL = NONLOCK
L = LOCK

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

VOLUME - DENSITY TIMING (SECS)

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

DETECTION LOOP DIAGRAM



FLASHING OPERATION (Y) OR (R)

DETECTION LOOP NUMBERING

LOOP AND AMP ASSIGNMENTS

	LOOP #	VEHICLE DETECT #	LOOP LENGTH	AMP MODE	AMP. FEATURE TIMING(SEC)	ASSOC. Ø
	2-1	1	2@6x45	PRES		2
	2-2	1	2@6x45	PRES		2
	2-3	1	1@6x6	PULSE		2
	2-4	1	1@6x6	PULSE		2
	6-1	2	2@6x45	PRES		6
	6-2	2	2@6x45	PRES		6
	6-3	2	1@6x6	PULSE		6
	6-4	2	1@6x6	PULSE		6
	5-1	3	2@6x45	PRES		5
	5-2	3	2@6x45	PRES		5
	5-3	3	2@6x45	PRES		5
*	1-1	3	1@6x45	PRES		1

* QUADRUPOLE

- ALL LOOPS ARE 6' IN WIDTH, CENTERED IN TRAFFIC LANE . REFER TO STD. DWG. T-SG-3 FOR NUMBER OF TURNS FOR VARIOUS LOOP LENGTHS.

- LOOP WIRE CONNECTIONS SHALL BE WIRED TO PROVIDE THE APPROPRIATE INDUCTANCE AS REQUIRED BY STD. DWG. T-SG-3.

SEALED BY

INTERSECTION OF
I-24 EB OFF RAMP/
S.R. 10 (S.CHURCH ST.)

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PHASING, TIMING, DETECTOR ASSIGNMENT

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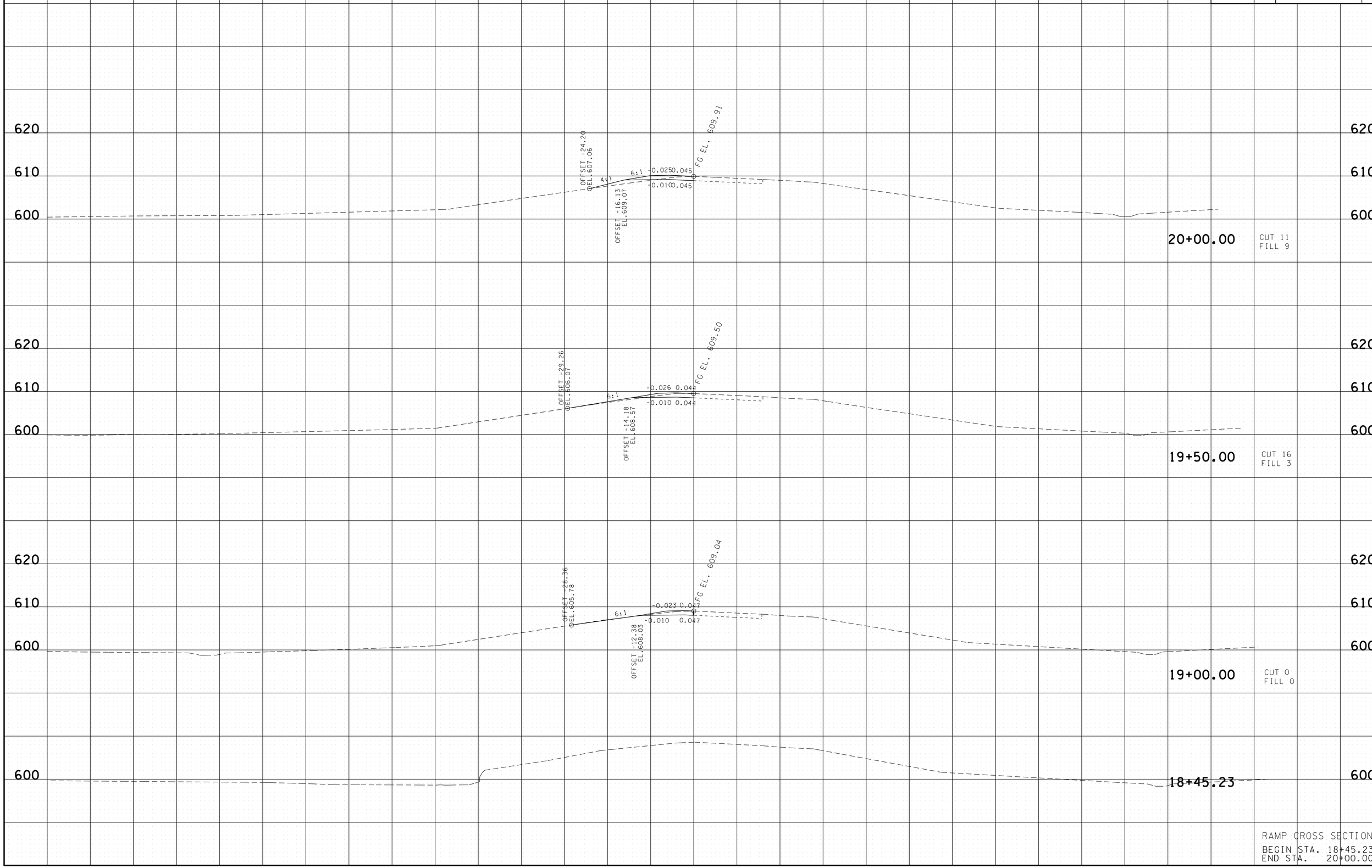
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	HSIP-I-24-1(106)	9
CONST.	2015	HSIP-I-24-1(106)	12



RAMP CROSS SECTIONS
BEGIN STA. 18+45.23
END STA. 20+00.00

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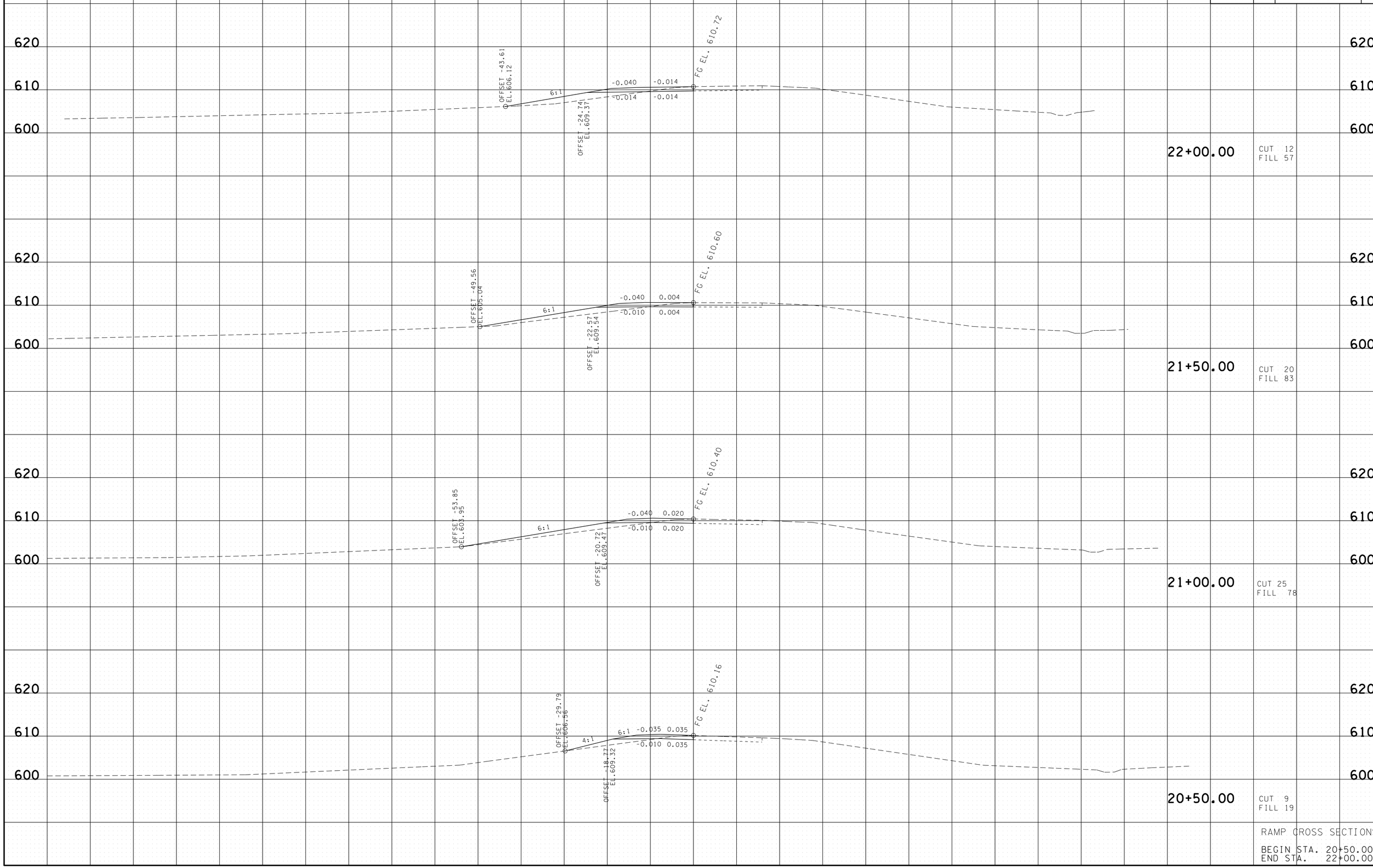
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	HSIP-I-24-1(106)	10
CONST.	2015	HSIP-I-24-1(106)	13



RAMP CROSS SECTIONS

BEGIN STA. 20+50.00
END STA. 22+00.00

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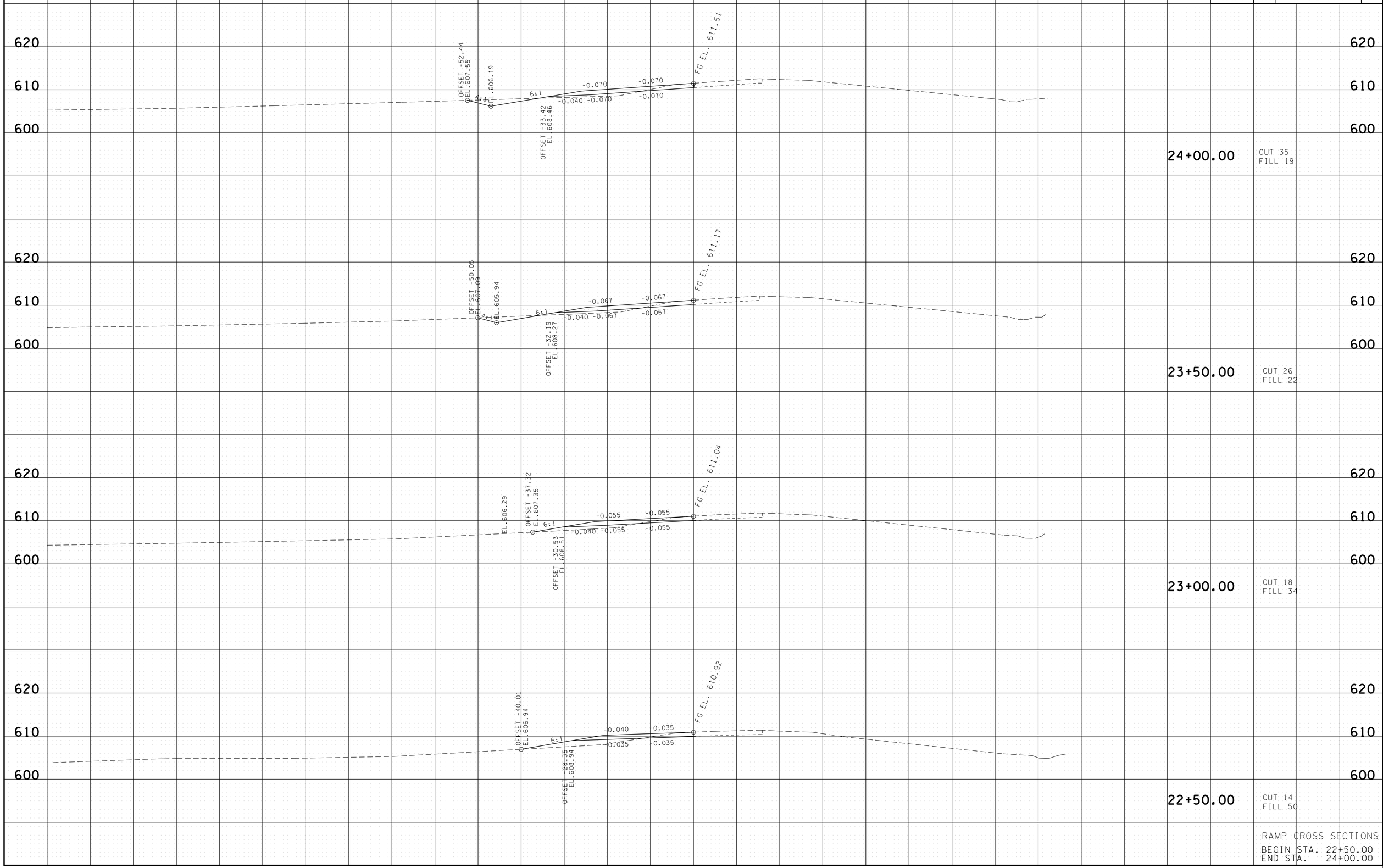
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	HSIP-I-24-1(106)	11
CONST.	2015	HSIP-I-24-1(106)	14



RAMP CROSS SECTIONS
BEGIN STA. 22+50.00
END STA. 24+00.00

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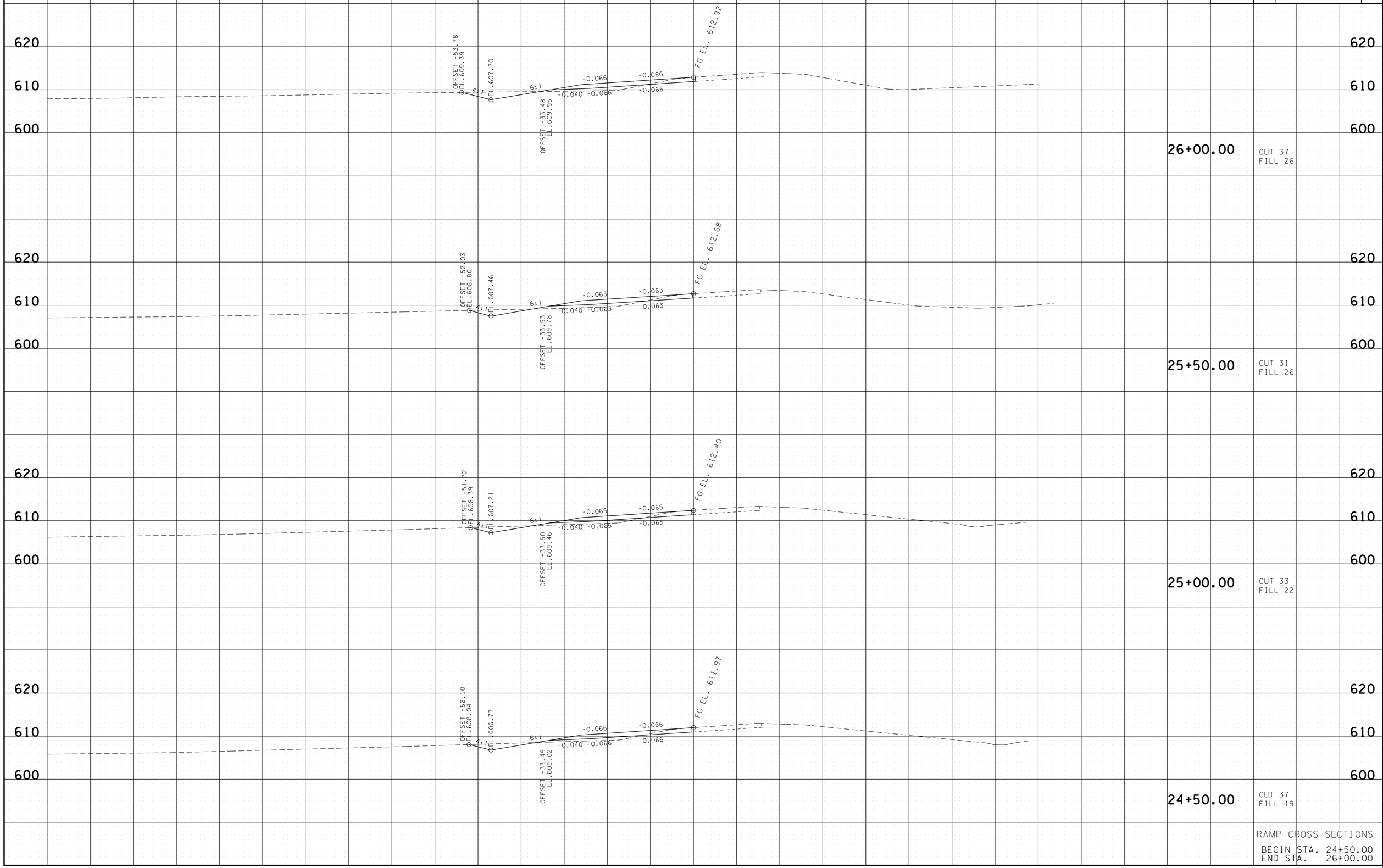
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	HSIP-I-24-1(106)	12
CONST.	2015	HSIP-I-24-1(106)	15



RAMP CROSS SECTIONS

BEGIN STA. 24+50.00
END STA. 26+00.00

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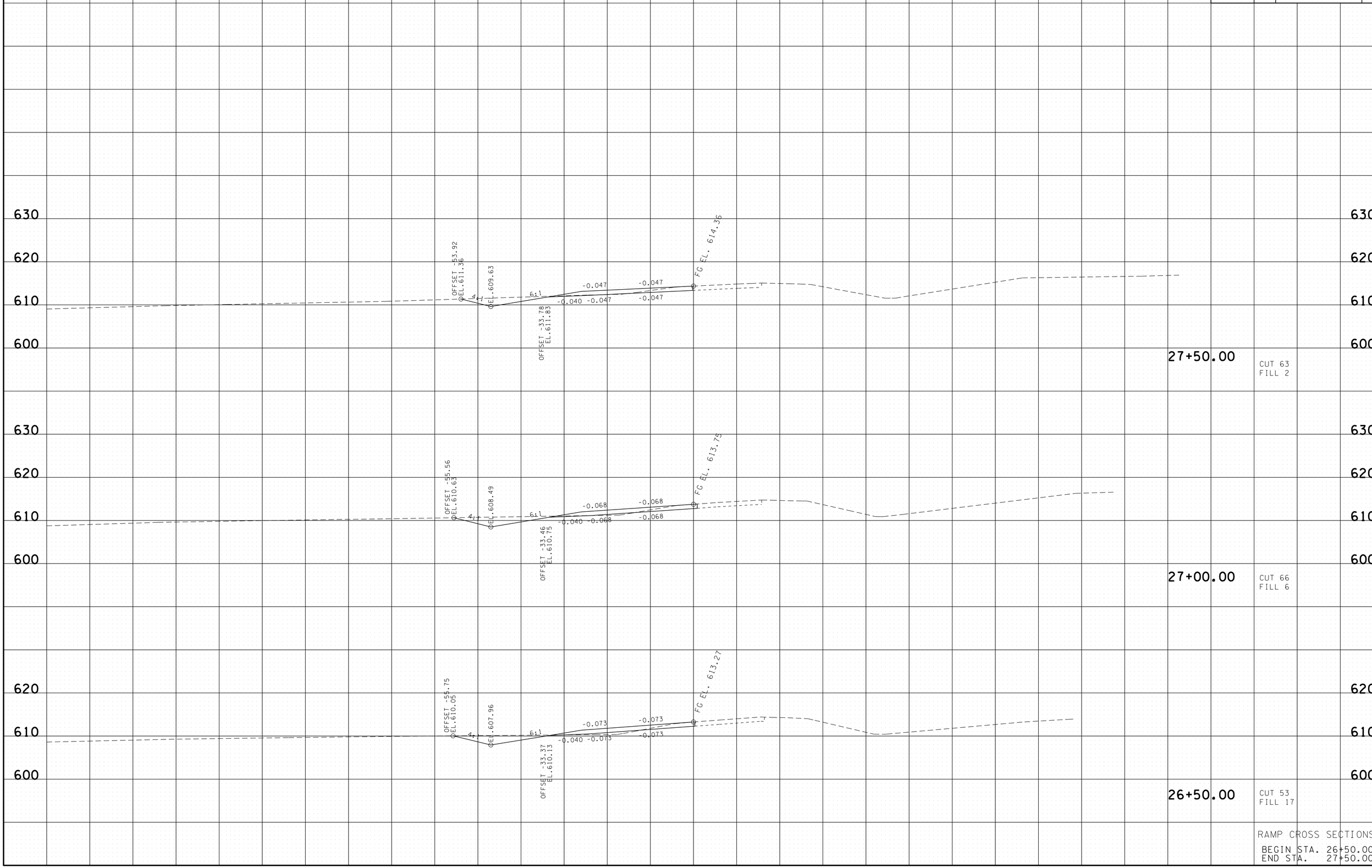
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	HSIP-I-24-1(106)	13
CONST.	2015	HSIP-I-24-1(106)	16

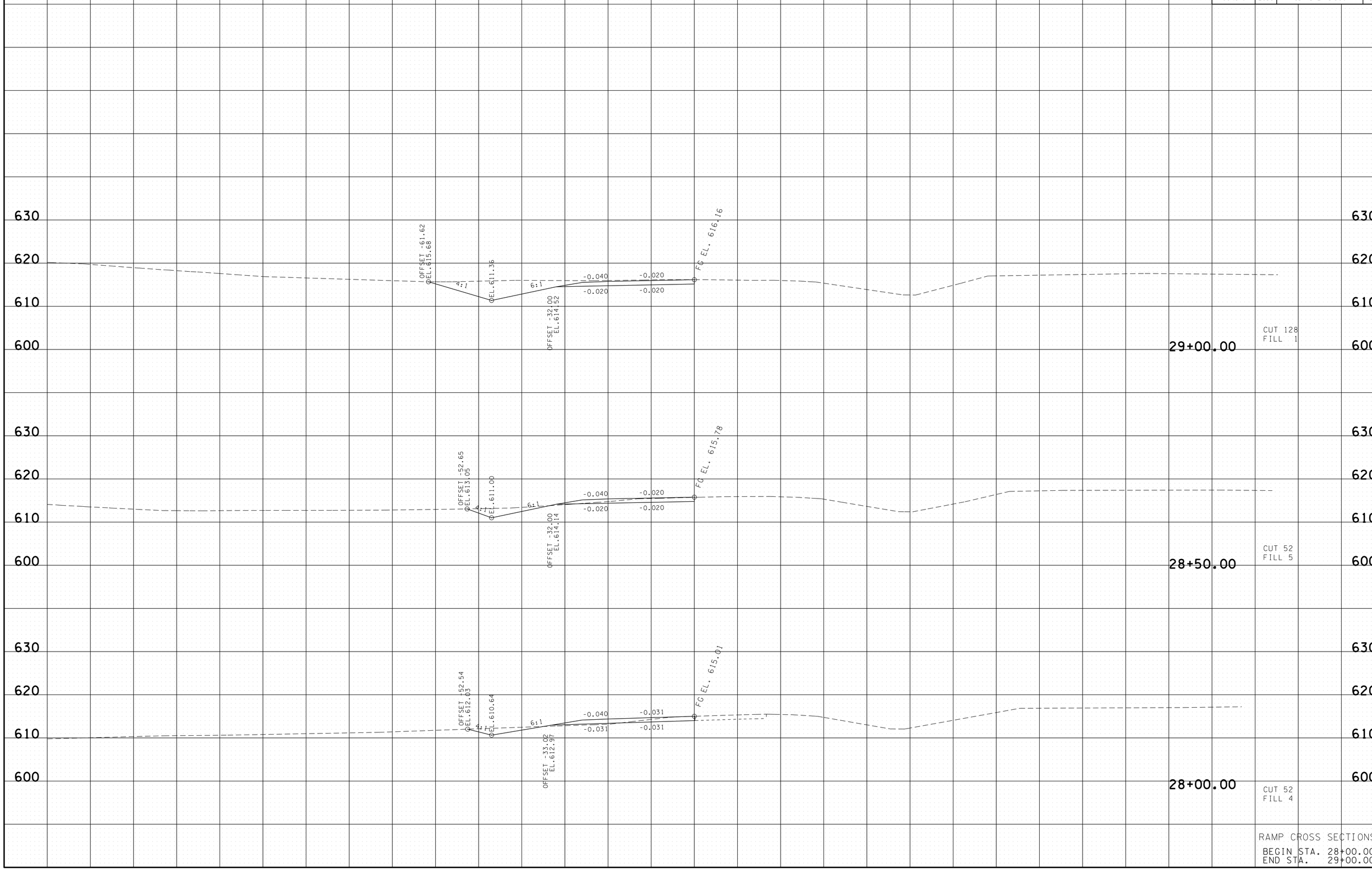


RAMP CROSS SECTIONS

BEGIN STA. 26+50.00
END STA. 27+50.00

14-JAN-2015 10:14
C:\projects\Rutherford Co\I-24_SR10Interchange\RAMPXSectionSheets.SHT

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	HSIP-I-24-1(106)	14
CONST.	2015	HSIP-I-24-1(106)	17



RAMP CROSS SECTIONS
BEGIN STA. 28+00.00
END STA. 29+00.00

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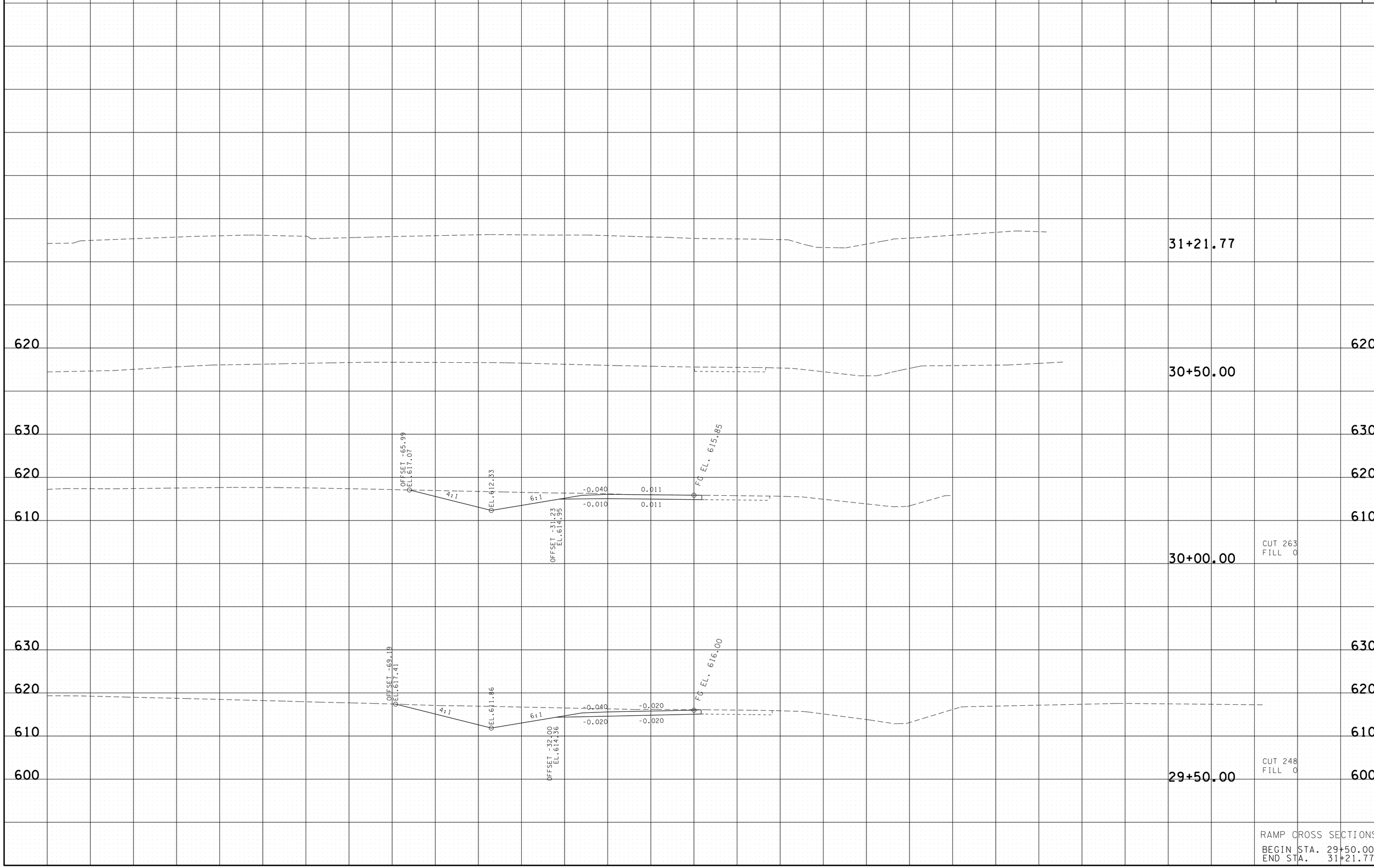
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	HSIP-I-24-1(106)	15
CONST.	2015	HSIP-I-24-1(106)	18



RAMP CROSS SECTIONS

BEGIN STA. 29+50.00
END STA. 31+21.77

14-JAN-2015 10:14
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