STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
ENVIRONMENTAL DIVISION
SUITE 900, JAMES K. POLK BUILDING
505 DEADERICK STREET
NASHVILLE, TENNESSEE 37243-1402
(615) 741-3655

JOHN C. SCHROER
COMMISSIONER

BILL HASLAM
GOVERNOR

May 22, 2015

Mr. Jim McAdoo, Permit Section
TN Department of Environment and Conservation
Division of Water Pollution Control
11th Floor William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue
Nashville, Tennessee 37243

RE: NOI and SWPPP Submittals for TDOT Construction Activities

Dear Mr. McAdoo:

We request coverage under the General NPDES Permit for Discharges of Storm Water Associated with Construction Activities for the subject project. Enclosed is the Notice of Intent (NOI) for Construction Activity – Storm Water Discharges and one hard copy and one electronic copy on CD of the site-specific Storm Water Pollution Prevention Plan (SWPPP).

Project # 18038-1230-04 PIN 100268.01 & 100268.03
SR-101, Peavine Road & 161KV Electric Transmission Line Relocation
Cumberland County

By copy of this letter, we are sending three hard copies of the permits and documentation binder and one CD of this SWPPP to the Region Construction Office (one copy for the contractor).

Please forward our office the Notice of Coverage (NOC) for this project as soon as it becomes available. Please contact me at (615) 253-2545 if I can be of any assistance.

Sincerely,

Andrew Wisniewski
Environmental Permits Section

Enclosures

JLH: KMA:

Enclosures for:
cc:

Mr. Ken Flynn, Region 2 Construction (CD)
Reading File, NPDES File

N

N 35.9930°
W 84.9403°

Begin Project STA No. 58+86.00

Legend

- # Outfalls
- Right of Way

STORMWATER POLLUTION PREVENTION PLAN

SITE LOCATION MAP

SR- 101;
From Fire Tower Road
to Near Lakeview Drive

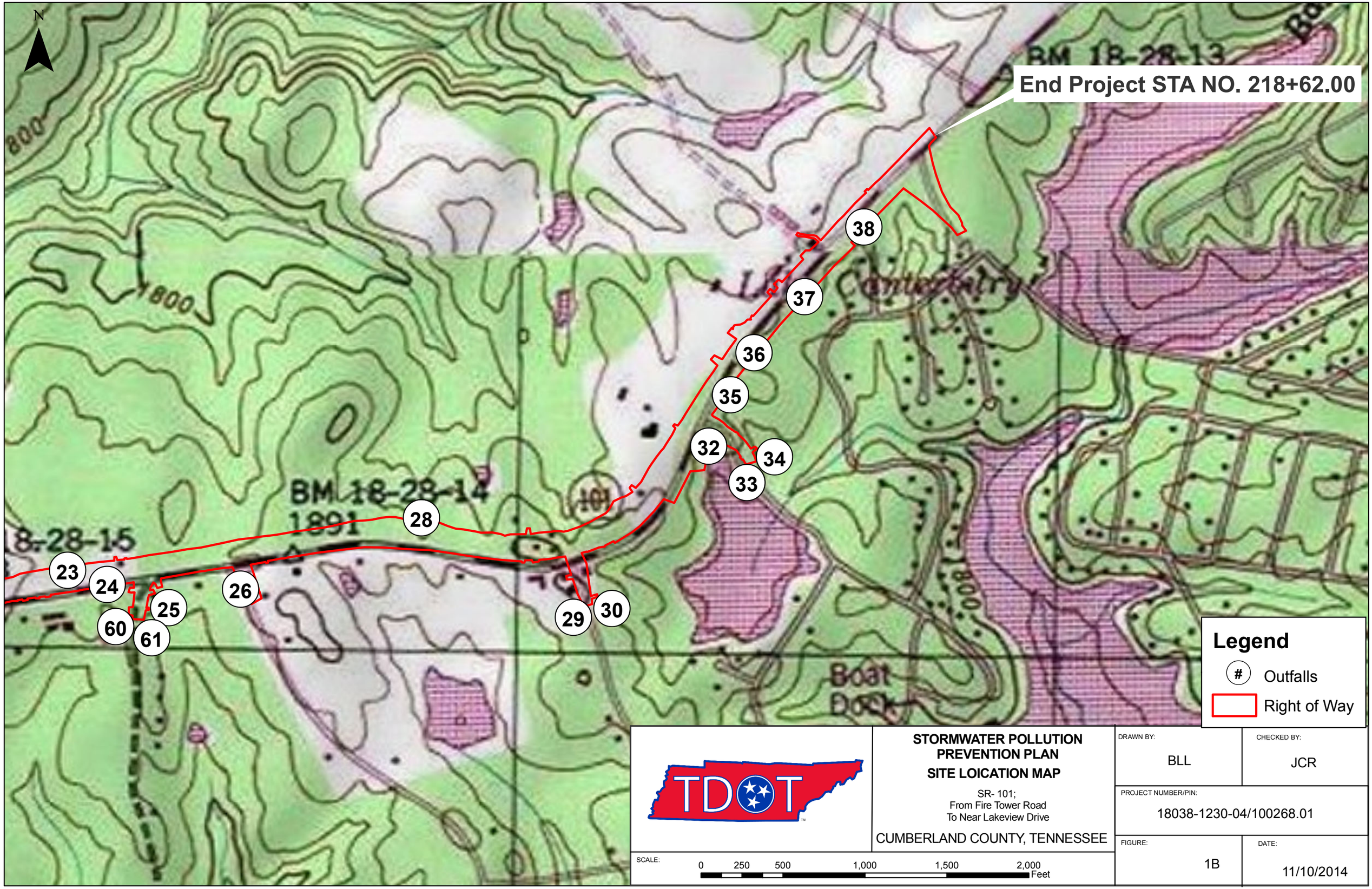
CUMBERLAND COUNTY, TENNESSEE

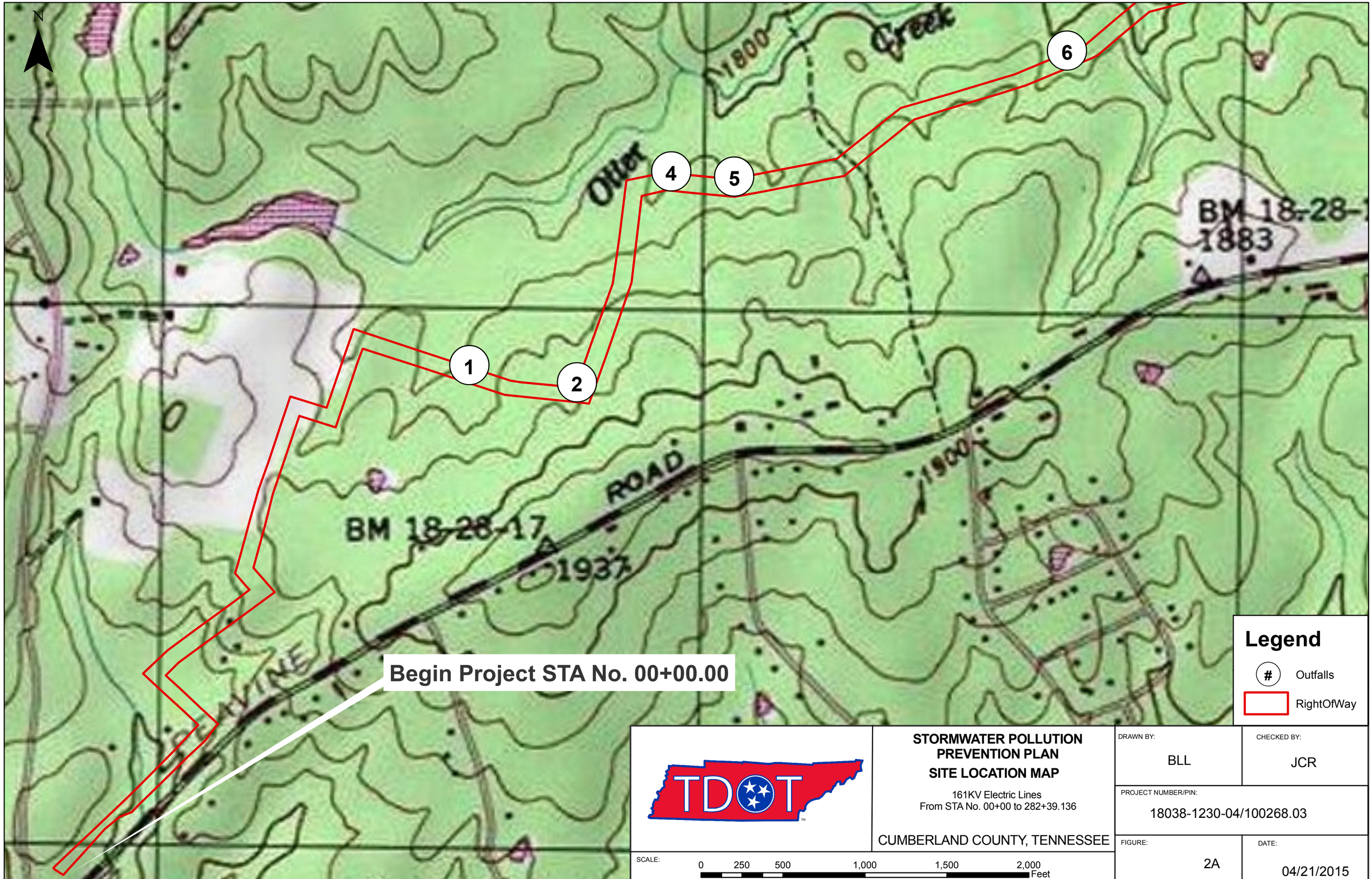
SCALE: 0 250 500 1,000 1,500 2,000 Feet

DRAWN BY:	CHECKED BY:
BLL	JCR

PROJECT NUMBER/PIN: 18038-1230-04/100268.01

FIGURE:	DATE:
1A	11/10/2014


N
End Project STA NO. 218+62.00
BM 18-28-13
BM 18-28-14
1891
8-28-15
101
Boat Dock
23
24
25
26
28
29
30
32
33
34
35
36
37
38
60
61
Legend
Outfalls
Right of Way
TDOT
STORMWATER POLLUTION PREVENTION PLAN
SITE LOICATION MAP
SR- 101;
From Fire Tower Road
To Near Lakeview Drive
CUMBERLAND COUNTY, TENNESSEE
DRAWN BY: BLL
CHECKED BY: JCR
PROJECT NUMBER/PIN: 18038-1230-04/100268.01
FIGURE: 1B
DATE: 11/10/2014
SCALE: 0 250 500 1,000 1,500 2,000 Feet


N
Creek
1800
Otter
1
2
4
5
6
BM 18-28-1
1883
ROAD
1900
BM 18-28-17
1937
Begin Project STA No. 00+00.00
Legend
#
Outfalls
RightOfWay
TDOT
STORMWATER POLLUTION PREVENTION PLAN
SITE LOCATION MAP
161KV Electric Lines
From STA No. 00+00 to 282+39.136
CUMBERLAND COUNTY, TENNESSEE
DRAWN BY:
BLL
CHECKED BY:
JCR
PROJECT NUMBER/PIN:
18038-1230-04/100268.03
FIGURE:
2A
DATE:
04/21/2015
SCALE:
0
250
500
1,000
1,500
2,000
Feet

N

2021

1800

Otter

1900

9

8

7

N 36.0008°
W 84.9309°

BM 18-21

Legend

Outfalls

RightOfWay

TDOT

STORMWATER POLLUTION PREVENTION PLAN

SITE LOCATION MAP

161KV Electric Lines
From STA No. 00+00 to 282+39.136

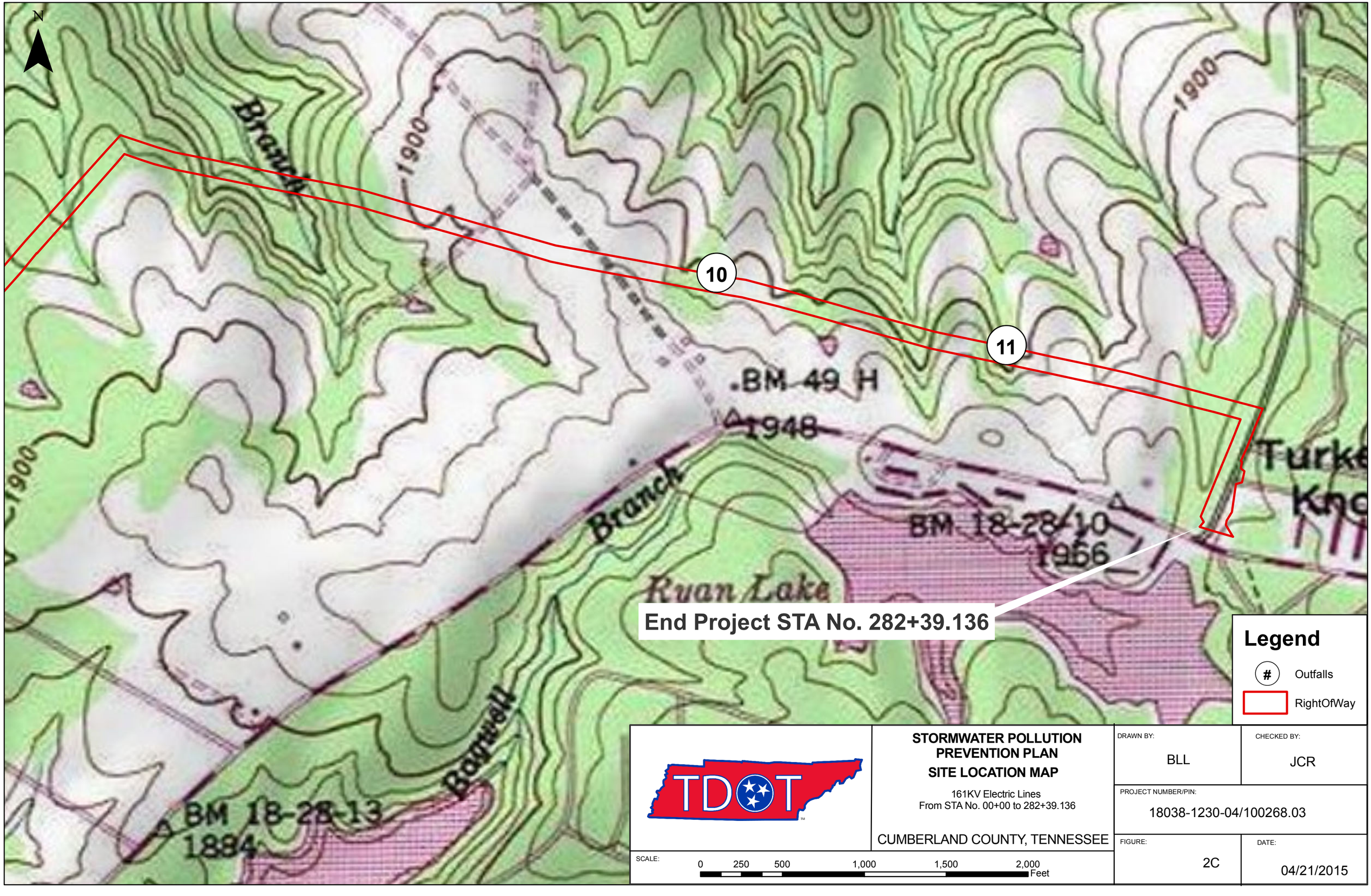
CUMBERLAND COUNTY, TENNESSEE

SCALE: 0 250 500 1,000 1,500 2,000 Feet

DRAWN BY:	CHECKED BY:
BLL	JCR

PROJECT PIN: 18038-1230-04/100268.03

FIGURE:	DATE:
2B	04/21/2015



TDOT

STORMWATER POLLUTION PREVENTION PLAN

SITE LOCATION MAP

161KV Electric Lines
From STA No. 00+00 to 282+39.136

CUMBERLAND COUNTY, TENNESSEE

SCALE: 0 250 500 1,000 1,500 2,000 Feet

DRAWN BY:	CHECKED BY:
BLL	JCR

PROJECT NUMBER/PIN: 18038-1230-04/100268.03

FIGURE:	DATE:
2C	04/21/2015

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	APD-52(48)	S1

SWPPP INDEX OF SHEETS

DESCRIPTION	SHT.
1. SWPPP REQUIREMENTS	S-1
2. SITE DESCRIPTION	S-1
3. ORDER OF CONSTRUCTION ACTIVITIES	S-2
4. STREAM, OUTFALL, WETLAND, TMDL AND ECOLOGY INFORMATION	S-2
5. EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) MEASURES	S-3
6. CONSTRUCTION SUPPORT ACTIVITIES – BORROW AND WASTE AREAS	S-3
7. MAINTENANCE AND INSPECTION	S-3
8. SITE ASSESSMENTS	S-4
9. STORMWATER MANAGEMENT	S-4
10. NON-STORMWATER DISCHARGES	S-4
11. SPILL PREVENTION, MANAGEMENT AND NOTIFICATION	S-4
12. RECORD-KEEPING	S-5
13. SITE WIDE/PRIMARY PERMITTEE CERTIFICATION	S-6
14. SECONDARY PERMITTEE (OPERATOR) CERTIFICATION	S-6
15. ENVIRONMENTAL PERMITS	S-6
16. OUTFALL TABLE	S-7

NOTE: CITATIONS IN PARENTHESIS INDICATE SECTIONS OF THE CURRENT CGP.

1. SWPPP REQUIREMENTS (3.0)

1.1. HAS THE SWPPP TEMPLATE BEEN PREPARED BY AN INDIVIDUAL THAT HAS THE FOLLOWING CERTIFICATIONS (3.1.1)?
YES ☒ NO ☐ (CHECK ALL THAT APPLY BELOW)
1.1.1. ☒ CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC); OR
1.1.2. ☒ TDEC LEVEL II

1.2. DOES THE EPSC PLANS INVOLVE STRUCTURAL DESIGN, HYDRAULIC, HYDROLOGIC OR OTHER ENGINEERING CALCULATIONS FOR EPSC STRUCTURAL MEASURES (SEDIMENT BASINS, ETC.)?(3.1.1)? YES ☐ NO ☒
IF YES, HAVE THE EPSC PLANS BEEN PREPARED, STAMPED AND CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER OR LANDSCAPE ARCHITECT?
☐YES ☐ NO

1.3. DOES THE PROJECT STORMWATER OUTFALLS DIRECTLY DISCHARGE INTO THE FOLLOWING (5.4.1)? YES ☐ NO ☒ (CHECK ALL THAT APPLY BELOW)
1.3.1. ☐ IMPAIRED WATERS (303d FOR SILTATION OR HABITAT ALTERATION)
1.3.2. ☐ KNOWN EXCEPTIONAL TENNESSEE WATERS
IF YES TO SECTION 1.3, HAVE THE EPSC PLANS BEEN PREPARED BY AN INDIVIDUAL WHO HAS COMPLETED TDEC LEVEL II? (5.4.1.b)
☐YES ☐ NO ☐ N/A (MAY 23, 2013 CGP EXEMPTION); AND
IF YES TO SECTION 1.3, HAS THE SWPPP TEMPLATE BEEN PREPARED BY AN INDIVIDUAL WHO HAS COMPLETED TDEC LEVEL II? (5.4.1.b)
☐YES ☐ NO ☐ N/A (MAY 23, 2013 CGP EXEMPTION)

2. SITE DESCRIPTION (3.5.1)

2.1. PROJECT LIMITS (3.5.1.g): REFER TO TITLE SHEET

2.2. PROJECT DESCRIPTION (3.5.1.a):
TITLE: SR-101 (FROM FIRE TOWER ROAD TO NEAR LAKEVIEW DRIVE) INCLUDING 161KV ELECTRIC LINE RELOCATION
COUNTY: CUMBERLAND
PIN: 100268.01 AND 100268.03

2.3. SITE MAP(S) (3.5.1.g): REFER TO TITLE SHEET

2.4. DESCRIPTION OF EXISTING SITE TOPOGRAPHY (3.5.1.d): REFER TO EXISTING CONTOURS SHEET(S) CONST. 32(A1) - CONST. 32(N1), DRAINAGE MAP SHEET(S) CONST. 30 - CONST. 30A, USGS QUAD MAP (SITE LOCATION MAP), AND THE OUTFALL TABLE IN SECTION 4.2.3 BELOW.

2.5. MAJOR SOIL DISTURBING ACTIVITIES (3.5.1.b) (CHECK ALL THAT APPLY):
2.5.1. ☒ CLEARING AND GRUBBING
2.5.2. ☒ EXCAVATION
2.5.3. ☒ CUTTING AND FILLING
2.5.4. ☒ FINAL GRADING AND SHAPING
2.5.5. ☒ UTILITIES
2.5.6. ☐ OTHER (DESCRIBE): ____

2.6. TOTAL PROJECT AREA (3.5.1.c): 67.60 ACRES (ROADWAY) / 63.79 ACRES (ELECTRIC LINE ROW)

2.7. TOTAL AREA TO BE DISTURBED (3.5.1.c): 67.60 ACRES (ROADWAY) / 51.2 ACRES (ELECTRIC LINE ROW)
IF GREATER THAN 50 ACRES, HAS CONSTRUCTION PROJECT PHASING BEEN SPECIFIED IN SECTION 3 BELOW AND IN THE PLANS (3.5.3.1.k)?
YES ☒ NO ☐ N/A ☐

2.8. ARE THERE ANY SEASONAL LIMITATIONS ON WORK? YES ☒ NO ☐
IF YES, DESCRIBE AND LIST THE CORRESPONDING PLAN SHEET NO. 59 ELECTRIC LINE PLANS

2.9. WAS ROW FINALIZED PRIOR TO FEBRUARY 1, 2010 (4.1.2.2)?
YES ☐ _____ (DATE) NO ☒

IF ROW WAS FINALIZED PRIOR TO FEBRUARY 1, 2010, THIS PROJECT IS CONSIDERED A PRE-APPROVED SITE (4.1.2.2)

2.10. ARE UTILITIES INCLUDED IN THE CONTRACT? YES ☒ NO ☐

2.11. SOIL PROPERTIES (3.5.1.e)(4.1.1).
SOIL PROPERTIES FOR THE PRIMARY SOILS ARE LISTED IN THE TABLE BELOW.

SOIL PROPERTIES - ROADWAY

PRIMARY SOIL NAME	HSG	% OF SITE	ERODIBILITY (k value)
GILPIN LOAN, 5-12% SLOPES (GpC)	C	4.0%	0.32
GILPIN LOAN, 12-20% SLOPES (GpD)	C	3.9%	0.32
JEFFERSON-SHELOCTA COMPLEX, 20-45% SLOPES (JsF)	A	0.5%	0.28 / 0.32
LILY LOAM, 2-6% SLOPES (LIB)	B	20.6%	0.24
LILY LOAM, 6-12% SLOPES (LIC)	B	20.0%	0.24
LONEWOOD LOAM, 2-5% SLOPES (LwB)	B	34.8%	0.28
RAMSEY-ROCK OUTCROP COMPLEX, 5-12% SLOPES (RrC)	D	11.6%	0.37 / ---
RAMSEY-ROCK OUTCROP COMPLEX, 12-20% SLOPES (RrD)	D	4.5%	0.37 / ---
WATER (W)	---	0.1%	---

SOIL PROPERTIES – ELECTRIC LINE

PRIMARY SOIL NAME	HSG	% OF SITE	ERODIBILITY (k value)
GILPIN LOAN, 5-12% SLOPES (GpC)	C	2.11	0.32
GILPIN LOAN, 12-20% SLOPES (GpD)	C	4.54	0.32
HENDON SILT LOAM (HeB)	C	2.36	0.37
JEFFERSON-SHELOCTA COMPLEX, 20-45% SLOPES (JsF)	B	0.58	0.28 / 0.32
LILY LOAM, 2-6% SLOPES (LIB)	C	0.19	0.24
LILY LOAM, 6-12% SLOPES (LIC)	B	43.91	0.24
LONEWOOD LOAM, 6-12% SLOPES (LwC)	B	5.19	0.28
RAMSEY LOAM 6-12% SLOPES (RaC)	D	2.02	0.37
RAMSEY LOAM 12-20% SLOPES (RaD)	D	6.53	0.37
RAMSEY-ROCK OUTCROP COMPLEX 6-12% SLOPES (RrC)	D	15.83	0.37 / ---
RAMSEY-ROCK OUTCROP COMPLEX 12-20% SLOPES (RrD)	D	10.38	0.37 / ---
RAMSEY-ROCK OUTCROP COMPLEX 20-45% SLOPES (RrF)	D	3.57	0.37 / ---
WATER (W)	---	2.79	---

2.12. IS ACID PRODUCING ROCK (APR) (i.e. PYRITE) LOCATED WITHIN THE PROJECT LIMITS? YES ☐ NO ☒
2.12.1. IF YES TO SECTION 2.12, HAVE APR LOCATIONS BEEN IDENTIFIED WITHIN THE CONSTRUCTION PLANS AND/OR THE GEOTECHNICAL REPORT? ☐ YES ☐ NO; AND
2.12.2. IF YES TO SECTION 2.12.1, HAS A SPECIAL HANDLING PLAN AND/OR ADAPTIVE MANAGEMENT PLAN (AMP) BEEN PREPARED FOR THE PROJECT? ☐YES ☐ NO ☐ N/A (TDOT SP107L WILL BE APPLIED.)

2.13. PROJECT RUNOFF COEFFICIENTS AND AREA PERCENTAGES (3.5.1.f).

RUNOFF COEFFICIENTS FOR EXISTING CONDITIONS - ROADWAY

AREA TYPE	AREA(AC)	PERCENTAGE OF TOTAL AREA (%)	RUNOFF CN	C FACTOR
IMPERVIOUS	16.17	23.92%	98	
SEMI-PERVIOUS (GRAVEL HSG A)	0.01	0.01%	76	
SEMI-PERVIOUS (GRAVEL HSG B)	1.09	1.61%	85	
SEMI-PERVIOUS (GRAVEL HSG C)	0.50	0.74%	89	
SEMI-PERVIOUS (GRAVEL HSG D)	0.70	1.04%	91	
PERVIOUS (FOREST HSG A)	0.20	0.30%	30	
PERVIOUS (FOREST HSG B)	23.27	34.42%	55	
PERVIOUS (FOREST HSG C)	2.14	3.17%	70	
PERVIOUS (FOREST HSG D)	3.88	5.74%	77	
PERVIOUS (MEADOW HSG B)	13.02	19.26%	58	
PERVIOUS (MEADOW HSG C)	1.90	2.81%	71	
PERVIOUS (MEADOW HSG D)	4.68	6.92%	78	
W	0.04	0.06%	0	
WEIGHTED CURVE NUMBER OR C-FACTOR =			78.8	

RUNOFF COEFFICIENTS FOR EXISTING CONDITIONS – ELECTRIC LINE

AREA TYPE	AREA(AC)	PERCENTAGE OF TOTAL AREA (%)	RUNOFF CN	C FACTOR
IMPERVIOUS	0.76	1.19	98	
SEMI-PERVIOUS (GRAVEL HSG B)	0.02	0.03	85	
SEMI-PERVIOUS (GRAVEL HSG C)	0.23	0.36	89	
PERVIOUS (MEADOW HSG B)	5.86	9.18	61	
PERVIOUS (MEADOW HSG C)	1.78	2.79	71	
PERVIOUS (MEADOW HSG D)	2.43	3.81	78	

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STORM WATER POLLUTION PREVENTION PLAN

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	APD-52(48)	S2

WATER	1.78	2.79	---	
PERVIOUS (WOODS HSG B)	25.13	39.42	60	
PERVIOUS (WOODS HSG C)	3.76	5.89	73	
PERVIOUS (WOODS HSG D)	22.04	34.53	79	
WEIGHTED CURVE NUMBER OR C-FACTOR =			67.3	

RUNOFF COEFFICIENTS FOR PROPOSED CONDITIONS - ROADWAY				
AREA TYPE	**AREA(AC)**	**PERCENTAGE OF TOTAL AREA (%)**	**RUNOFF CN**	**C FACTOR**
IMPERVIOUS	31.58	46.72%	98	
PERVIOUS (GRASS A)	0.16	0.24%	39	
PERVIOUS (GRASS B)	28.03	41.46%	61	
PERVIOUS (GRASS C)	2.62	3.88%	74	
PERVIOUS (GRASS D)	5.21	7.71%	80	
WEIGHTED CURVE NUMBER OR C-FACTOR =			89.4	
RUNOFF COEFFICIENTS FOR PROPOSED CONDITIONS – ELECTRIC LINE				
AREA TYPE	**AREA(AC)**	**PERCENTAGE OF TOTAL AREA (%)**	**RUNOFF CN**	**C FACTOR**
IMPERVIOUS	0.72	1.13	98	
SEMI-PERVIOUS (GRAVEL HSG B)	0.02	0.03	85	
SEMI-PERVIOUS (GRAVEL HSG C)	0.05	0.08	89	
PERVIOUS (GRASS HSG B)	31.01	48.61	61	
PERVIOUS (GRASS HSG C)	5.74	9.0	74	
PERVIOUS (GRASS HSG D)	24.47	38.36	80	
WATER	1.78	2.79	---	
WEIGHTED CURVE NUMBER OR C-FACTOR =			68.2	

3. ORDER OF CONSTRUCTION ACTIVITIES (3.5.1.b, 3.5.2.a):

3.1. SPECIAL SEQUENCING REQUIREMENTS (SEE SHEETS 32B1 – 32Z)
3.2. INSTALL STABILIZED CONSTRUCTION EXITS.
3.3. INSTALL PERIMETER PROTECTION WHERE RUNOFF SHEETS FROM THE SITE.
3.4. INSTALL INITIAL EPSC (EROSION PREVENTION AND SEDIMENT CONTROL) MEASURES.
3.5. PERFORM CLEARING AND GRUBBING (NOT MORE THAN 15 DAYS PRIOR TO GRADING OR EARTH-MOVING. REFER TO THE STABILIZATION PRACTICES BELOW.).
3.6. REMOVE AND STORE TOPSOIL.
3.7. STABILIZE DISTURBED AREAS WITHIN 14 DAYS OF COMPLETING ANY PHASE OF ACTIVITY.
3.8. INSTALL UTILITIES, STORM SEWERS, CULVERTS AND BRIDGE STRUCTURES.
3.9. INSTALL INLET AND CULVERT PROTECTION ONCE STRUCTURES ARE IN PLACE AND CAPABLE OF INTERCEPTING FLOW.
3.10. PERFORM FINAL GRADING AND INSTALL BASE STONE.
3.11. COMPLETE FINAL PAVING AND SEALING OF CONCRETE.
3.12. INSTALL TRAFFIC CONTROL AND PROTECTION DEVICES.
3.13. COMPLETE FINAL STABILIZATION (TOPSOIL, SEEDING, MULCH, EROSION CONTROL BLANKET, SOD, ETC.)
3.14. REMOVE TEMPORARY EROSION CONTROLS AND ACCUMULATED SEDIMENT FROM AREAS THAT HAVE ESTABLISHED AT LEAST 70 PERCENT PERMANENT VEGETATIVE COVER.
3.15. RE-STABILIZE AREAS DISTURBED BY REMOVAL ACTIVITIES.

4. STREAM, OUTFALL, WETLAND, TMDL AND ECOLOGY INFORMATION

4.1. STREAM INFORMATION
4.1.1. WILL CONSTRUCTION AND/OR EROSION PREVENTION AND SEDIMENT CONTROLS IMPACT ANY STREAMS WITHIN THE PROJECT LIMITS? YES ☒ NO ☐
4.1.2. IF NO TO SECTION 4.1.1, WILL THIS PROJECT DISCHARGE INTO STATE WATERS THAT ARE LESS THAN OR EQUAL TO 1 FLOW MILE DOWN GRADIENT OF THE PROJECT LIMITS? YES ☐ NO ☐
4.1.3. IF YES TO SECTION 4.1.2, HAVE ANY OF THE RECEIVING WATERS DOWN GRADIENT BEEN CLASSIFIED BY TDEC AS FOLLOWS (CHECK ALL THAT APPLY):
4.1.3.1. ☐ 303d IMPAIRED FOR SILTATION
4.1.3.2. ☐ 303d IMPAIRED FOR HABITAT ALTERATION
4.1.3.3. ☐ HIGH QUALITY WATERS OR KNOWN EXCEPTIONAL TENNESSEE WATERS (KETW)
4.1.4. RECEIVING STREAMS (3.5.1.j).

RECEIVING STREAM INFORMATION - ROADWAY					
NATURAL RESOURCE LABEL	**NAME OF RECEIVING NATURAL RESOURCE**	**303d IMPAIRED FOR SILTATION OR HABITAT ALTERATION (YES OR NO)**	**HIGH QUALITY OR KETW (YES OR NO)**	**LOCATED WITHIN PROJECT LIMITS (YES OR NO)**	**LOCATED WITHIN ≤ 1 FLOW MILE DOWN GRADIENT OF PROJECT LIMITS (YES OR NO)**
STR-1A	UNNAMED TRIBUTARY TO NORTH CREEK	NO	NO	YES	YES
STR-1	UNNAMED TRIBUTARY TO NORTH CREEK	NO	NO	YES	YES
RECEIVING STREAM INFORMATION – ELECTRIC LINE					
NATURAL RESOURCE LABEL	**NAME OF RECEIVING NATURAL RESOURCE**	**303d IMPAIRED FOR SILTATION OR HABITAT ALTERATION (YES OR NO)**	**HIGH QUALITY OR KETW (YES OR NO)**	**LOCATED WITHIN PROJECT LIMITS (YES OR NO)**	**LOCATED WITHIN ≤ 1 FLOW MILE DOWN GRADIENT OF PROJECT LIMITS (YES OR NO)**
STR-1	UNNAMED TRIBUTARY TO NORTH CREEK	NO	NO	YES	YES
STR-2	UNNAMED TRIBUTARY TO NORTH CREEK	NO	NO	YES	YES
STR-3	UNNAMED TRIBUTARY TO OTTER CREEK	NO	NO	YES	YES
STR-4	UNNAMED TRIBUTARY TO OTTER CREEK	NO	NO	YES	YES
STR-5	UNNAMED TRIBUTARY TO OTTER CREEK	NO	NO	YES	YES
STR-6	UNNAMED TRIBUTARY TO OTTER CREEK	NO	NO	YES	YES
STR-7	UNNAMED TRIBUTARY TO OTTER CREEK	NO	NO	YES	YES
STR-8	UNNAMED TRIBUTARY TO OTTER CREEK	NO	NO	YES	YES
STR-9	UNNAMED TRIBUTARY TO OTTER CREEK	NO	NO	YES	YES
STR-10	UNNAMED TRIBUTARY TO LAK-1	NO	NO	YES	YES
STR-11	UNNAMED TRIBUTARY TO LAK-1	NO	NO	YES	YES
STR-12	UNNAMED TRIBUTARY TO OTTER CREEK	NO	NO	YES	YES
STR-13	UNNAMED TRIBUTARY TO OTTER CREEK	NO	NO	YES	YES
STR-14	UNNAMED TRIBUTARY TO OTTER CREEK	NO	NO	YES	YES
STR-15	UNNAMED TRIBUTARY TO OTTER CREEK	NO	NO	YES	YES
STR-16	UNNAMED TRIBUTARY TO BEE BRANCH	NO	NO	YES	YES
STR-17	UNNAMED TRIBUTARY TO BEE BRANCH	NO	NO	YES	YES
STR-18	UNNAMED TRIBUTARY TO BEE BRANCH	NO	NO	YES	YES
STR-19	UNNAMED TRIBUTARY TO BEE BRANCH	NO	NO	YES	YES
STR-20	UNNAMED TRIBUTARY TO ROUGH MOUNTAIN BRANCH	NO	NO	YES	YES
STR-21	UNNAMED TRIBUTARY TO ROUGH MOUNTAIN BRANCH	NO	NO	YES	YES
STR-22	UNNAMED TRIBUTARY TO ROUGH MOUNTAIN BRANCH	NO	NO	YES	YES
STR-23	UNNAMED TRIBUTARY TO ROUGH MOUNTAIN BRANCH	NO	NO	YES	YES
STR-24	UNNAMED TRIBUTARY TO ROUGH MOUNTAIN BRANCH	NO	NO	YES	YES
STR-25	UNNAMED TRIBUTARY TO ROUGH MOUNTAIN BRANCH	NO	NO	YES	YES
STR-26	UNNAMED TRIBUTARY TO BAGWELL CREEK	NO	NO	YES	YES

4.1.5. ARE BUFFER ZONES REQUIRED (4.1.2, 5.4.2)? YES ☐ NO ☒
IF YES, THEY HAVE BEEN INCLUDED ON PLAN SHEET(S) _____

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STORM WATER POLLUTION PREVENTION PLAN

IF YES, CHECK THE APPROPRIATE BOX BELOW FOR SIZE OF BUFFER.
☐ 60-FEET FOR IMPAIRED AND KNOWN EXCEPTIONAL TENNESSEE WATERS (AVERAGE WIDTH PER SIDE WITH A MINIMUM OF 30-FEET)
☐ 30-FEET FOR ALL OTHER STREAMS (AVERAGE WIDTH PER SIDE WITH A MINIMUM OF 15-FEET)
IF NO, CHECK THE APPROPRIATE BOX BELOW.
☐ BUFFERS NOT REQUIRED (I.E. NO STREAM, WETLAND, ETC. IMPACTS)
☒ TDEC ARAP APPLIED FOR

BUFFER ZONE REQUIREMENTS ARE NOT REQUIRED FOR PRE-APPROVED SITES (4.1.2.2.)

4.1.6. ARE THERE BUFFER ZONE EXEMPTIONS (4.1.2.1)? YES ☐ NO ☒
IF YES, EXISTING CONDITIONS DESCRIPTION:_____

4.2. OUTFALL INFORMATION:
A SEDIMENT BASIN OR EQUIVALENT MEASURE(S) WILL BE PROVIDED FOR ANY OUTFALL IN A DRAINAGE AREA:

4.2.1. OF TEN ACRES OR MORE FOR AN OUTFALL(S) THAT DOES NOT DISCHARGE TO AN IMPAIRED STREAM OR KNOWN EXCEPTIONAL TENNESSEE WATERS (3.5.3.3) OR

4.2.2. OF FIVE ACRES OR MORE FOR AN OUTFALL(S) THAT DISCHARGES TO AN IMPAIRED STREAM OR KNOWN EXCEPTIONAL TENNESSEE WATERS (5.4.1.f).

4.2.3. OUTFALL TABLE (3.5.1.d, 5.4.1.f).

SEE SWPPP SHEET S-7 FOR OUTFALL INFORMATION.

4.2.4. WHERE POSSIBLE, HAS NON-PROJECT RUN-ON BEEN DIVERTED THROUGH THE PROJECT SO THAT THE OFF-SITE RUN-ON WILL NOT FLOW OVER DISTURBED AREAS WITHIN THE ROW, THUS SEPARATING NON-PROJECT RUN-OFF FROM PROJECT RUN-OFF THEREBY REDUCING THE DRAINAGE AREA TO ANY ONE OUTFALL?
YES ☒ NO ☐ N/A ☐

4.2.5. ARE EQUIVALENT MEASURES BEING SUBSTITUTED FOR A SEDIMENT BASIN(S)? YES ☐ NO ☐ N/A ☒

4.2.6. HAVE ALL OUTFALLS BEEN LABELED ON THE EPSC PLAN SHEETS (3.5.1.g, 5.4.1.f)? YES ☒ NO ☐

4.2.7. HAVE ALL OUTFALLS BEEN LABELED ON A USGS TOPOGRAPHIC MAP INCLUDED IN THE "DOCUMENTATION AND PERMITS" BINDER (2.6.2)?
YES ☒ NO ☐

4.3. WETLAND INFORMATION
WILL CONSTRUCTION AND/OR EROSION AND SEDIMENT CONTROLS IMPACT ANY WETLANDS? YES ☒ NO ☐
IF YES, THE STRUCTURAL EPSC MEASURES HAVE BEEN INCLUDED IN THE TOTAL PROJECT WETLAND IMPACTS AND HAVE BEEN INCLUDED IN THE ARAP PERMIT, 401 OR 404 PERMITS.

WETLAND INFORMATION - ROADWAY				
WETLAND LABEL	**FROM STATION LT OR RT**	**TO STATION LT OR RT**	**TEMPORARY IMPACTS (AC)**	**PERMANENT IMPACTS (AC)**
WTL-2	75+25 LT	79+00 LT	0.138	0.224
WTL-2B	115+25 RT	115+75 RT	0.00	0.044
WTL-3	133+50 LT	135+10 LT	0.031	0.230
WETLAND INFORMATION – ELECTRIC LINE				
WETLAND LABEL	**FROM STATION LT OR RT**	**TO STATION LT OR RT**	**TEMPORARY IMPACTS (AC)**	**PERMANENT IMPACTS (AC)**
WTL-1A	9+10 RT	11+80 LT	0.057	0.00
WTL-1B	12+00	12+50	0.079	0.00
WTL-2	19+90 LT	20+90 LT	0.00	0.00
WTL-3	20+60	21+00 RT	0.029	0.00
WTL-3.1	44+30 LT	41+40 RT	0.23	0.00
WTL-4	53+80 LT	51+10 LT	0.00	0.00
WTL-5	118+10 LT	118+40 LT	0.003	0.00
WTL-6	129+30 LT	130+90 RT	0.145	0.00
WTL-7	424+80 LT	243+20 LT	0.00	0.00
WTL-8	269+90 LT	270+30	0.041	0.00

4.4. TOTAL MAXIMUM DAILY LOADS (TMDL) INFORMATION (3.5.10)

4.4.1. IS THIS PROJECT LOCATED IN A WATERSHED THAT MAINTAINS AN EPA APPROVED TMDL FOR SILTATION? YES ☒ NO ☐

4.4.2. IF YES, IS THIS PROJECT LOCATED WITHIN A SUBWATERSHED WITH A WASTE LOAD ALLOCATION (WLA)? YES ☒ NO ☐

4.4.3. IF YES, DOES THE PROJECT HAVE A DIRECT DISCHARGE TO A 303(d) LISTED STREAM FOR SILTATION OR HABITAT ALTERATION?
YES ☐ NO ☒

4.4.4. IF YES, HAS A SUMMARY OF THE CONSULTATION (LETTER) BEEN INCLUDED WITH THE SWPPP DOCUMENTATION? YES ☐ NO ☐ N/A ☒

4.5. ECOLOGY INFORMATION (3.5.5.e)
IF SPECIAL NOTES ARE PRESENT IN THE TDOT ECOLOGY REPORT, HAVE THEY BEEN ADDED TO THE APPROPRIATE PLAN SHEETS?
YES ☒ NO ☐ NO NOTES REQUIRED ☐
IF YES, LIST ALL PLAN SHEETS WHERE SPECIAL NOTES HAVE BEEN ADDED.
SHEET NO. 59 ELECTRIC LINE PLANS

5. EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) MEASURES (3.5.3)

5.1. EPSC MEASURES MUST BE DESIGNED, INSTALLED AND MAINTAINED TO CONTROL STORMWATER VOLUME AND VELOCITY WITHIN THE SITE TO MINIMIZE EROSION (4.1.1).

5.2. EPSC MEASURES MUST CONTROL STORMWATER DISCHARGES, INCLUDING BOTH PEAK FLOWS AND TOTAL STORMWATER VOLUME, TO MINIMIZE EROSION AT OUTLETS, STREAM CHANNELS AND STREAM BANKS. (4.1.1)

5.3. HAVE THE CONTROL MEASURES BEEN DESIGNED ACCORDING TO THE SIZE AND SLOPE OF THE DISTURBED DRAINAGE AREA (3.5.3.3)? YES ☒ NO ☐

5.4. THE CONTROL MEASURES HAVE, AT A MINIMUM, BEEN DESIGNED FOR THE 2-YEAR, 24 HOUR STORM EVENT (3.5.3.3, 5.4.1.a).

5.5. ARE THE LIMITS OF DISTURBANCE CLEARLY MARKED ON THE EPSC PLANS (3.5.1.n)? YES ☒ NO ☐

5.6. HAVE PHASED EPSC PLANS BEEN PREPARED FOR THE PROJECT (3.5.2)?
YES ☒ NO ☐ (IF YES, CHECK ONE BELOW)
5.6.1.1. ☐ PROJECT DISTURBED AREA IS THAN LESS THAN 5 ACRES (MINIMUM OF TWO PHASES OF EPSC PLANS)
5.6.1.2. ☒ PROJECT DISTURBED AREA IS GREATER THAN 5 ACRES (MINIMUM OF THREE PHASES OF EPSC PLANS)

5.7. IS ADDITIONAL PHYSICAL OR CHEMICAL TREATMENT OF STORMWATER RUNOFF NECESSARY (5.4.1.a)? YES ☐ NO ☒

5.8. HAVE STEEP SLOPES (GREATER THAN 35%) BEEN MINIMALLY DISTURBED AND/OR PROTECTED BY CONVEYING RUNOFF NON-EROSIVELY AROUND OR OVER THE SLOPE (3.5.3.2) (10. "STEEP SLOPE")?
YES ☒ NO ☐ N/A ☐

5.9. ALL PHYSICAL AND/OR CHEMICAL TREATMENT WILL BE RESEARCHED, APPLIED IN ACCORDANCE WITH MANUFACTURE'S GUIDELINES AMD FULLY DESCRIBED ON THE EPSC PLANS (3.5.3.1.b).

5.10. ALL EPSC CONTROL MEASURES WILL BE INSTALLED ACCORDING TO TDOT STANDARDS (E.G. STANDARD DRAWINGS).

5.11. EPSC MEASURES WILL NOT BE INSTALLED IN A STREAM WITHOUT FIRST OBTAINING US COE SECTION 404, TDEC ARAP, AND TVA PERMITS.

5.12. DISCHARGES FROM DEWATERING ACTIVITIES ARE PROHIBITED UNLESS MANAGED BY CONTROLS PROVIDING EQUIVALENT LEVEL OF TREATMENT (FILTRATION) (4.14).

5.13. DISCHARGES FROM SEDIMENT BASINS AND IMPOUNDMENTS MUST USE OUTLET STRUCTURES THAT ONLY WITHDRAW WATER FROM NEAR THE SURFACE OF THE BASIN OR IMPOUNDMENT, UNLESS INFEASIBLE (4.1.7).

5.14. THE CONTROL MEASURES LISTED IN THE QUANTITIES TABLE ON SHEET NOS. 2, 2A, & 321A ROADWAY PLANS; SHEET NOS. 2 & 59 ELECTRIC LINE PLANS HAVE BEEN SELECTED IN ACCORDANCE WITH TDOT STANDARD DRAWINGS AND GOOD ENGINEERING PRACTICES (3.5.3.1.b).

5.15. THE QUANTITIES REQUIRED FOR STABILIZED CONSTRUCTION EXITS PER TDOT STANDARDS HAVE BEEN SPECIFIED ON SHEET NOS. 2, 2A, & 321A ROADWAY PLANS; SHEET NOS. 2 ELECTRIC LINE PLANS (3.5.3.1.n).

5.16. STABILIZATION PRACTICES: PRE-CONSTRUCTION VEGETATIVE COVER WILL NOT BE DESTROYED, REMOVED OR DISTURBED MORE THAN 15 DAYS PRIOR TO GRADING OR EARTH MOVING UNLESS THE AREA WILL BE SEEDED AND/OR MULCHED OR OTHER TEMPORARY COVER IS INSTALLED (3.5.3.1.h).

5.17. STABILIZATION MEASURES WILL BE INITIATED AS SOON AS POSSIBLE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED. TEMPORARY OR PERMANENT STABILIZATION WILL BE COMPLETED WITHIN 14 DAYS AFTER ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED IN THAT AREA. PERMANENT STABILIZATION WILL REPLACE TEMPORARY MEASURES AS SOON AS PRACTICABLE (3.5.3.2).

5.18. STEEP SLOPES (3.5.3.2): STEEP SLOPES ARE DEFINED AS A NATURAL OR CREATED SLOPE OF 35% GRADE OR STEEPER REGARDLESS OF HEIGHT. STEEP SLOPES SHALL BE TEMPORARILY STABILIZED NOT LATER THAN 7 DAYS AFTER CONSTRUCTION ACTIVITY ON THE SLOPE HAS TEMPORARILY OR PERMANENTLY CEASED.

5.19. THE STRUCTURAL EPSC MEASURES HAVE BEEN INCLUDED IN THE TOTAL PROJECT IMPACTS AND HAVE BEEN INCLUDED IN THE AQUATIC RESOURCE ALTERATION (ARAP) PERMIT OR SECTION 401 CERTIFICATION (3.5.1.i). REFER TO THE LIST OF APPLICABLE ENVIRONMENTAL PERMITS LOCATED ON SWPPP SHEET S-6 . ALL PERMITS WILL BE MAINTAINED ON SITE IN THE "DOCUMENTATION AND PERMITS" BINDER.

6. CONSTRUCTION SUPPORT ACTIVITIES – BORROW AND WASTE AREAS (1.2.2)(3.5.3.1.g)

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* AS INDICATED IN THE *STATEWIDE STORMWATER MANAGEMENT PLAN (SSWMP).*

7. MAINTENANCE AND INSPECTION

7.1. INSPECTION PRACTICES (3.5.8)

7.1.1. INSPECTORS MUST HAVE SUCCESSFULLY COMPLETED THE TDEC FUNDAMENTALS OF EROSION AND SEDIMENT CONTROL COURSE (TDEC LEVEL I) AND MAINTAIN THE CERTIFICATION. A COPY OF THE INSPECTOR'S CERTIFICATION SHOULD BE KEPT ON SITE (3.5.8.1).

7.1.2. INSPECTIONS WILL BE CONDUCTED AT LEAST TWICE EVERY CALENDAR WEEK AND AT LEAST 72 HOURS A PART (3.5.8.2.a).

7.1.3. THE FREQUENCY OF EPSC INSPECTIONS MAY BE REDUCED TO ONCE A MONTH (I.E. EXTREME DROUGHT CONDITIONS, FROZEN GROUND, ETC.) WITH WRITTEN NOTIFICATION TO TDEC NASHVILLE CENTRAL OFFICE AND SUBSEQUENT TDEC APPROVAL. WRITTEN NOTIFICATION MUST INCLUDE THE INTENT TO CHANGE FREQUENCY AND JUSTIFICATION (3.5.8.2.a).

7.1.4. ALL DISTURBED AREAS OF THE SITE THAT HAVE NOT BEEN FINALLY STABILIZED, AREAS USED FOR MATERIAL STORAGE THAT ARE EXPOSED TO PRECIPITATION, STRUCTURAL CONTROL MEASURES, AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE, AND EACH OUTFALL WILL BE INSPECTED (3.5.8.2.b).

7.1.5. THE INSPECTOR WILL OVERSEE THE REQUIREMENTS OF OTHER CONSTRUCTION-RELATED WATER QUALITY PERMITS (I.E. TDEC ARAP, US COE AND TVA SECTION 26a PERMITS) FOR CONSTRUCTION ACTIVITIES AROUND WATERS OF THE STATE (10 "INSPECTOR").

7.1.6. THE SWPPP WILL BE REVISED AS NECESSARY BASED ON THE RESULTS OF THE INSPECTION. REVISION(S) WILL BE RECORDED WITHIN 7 DAYS OF THE INSPECTION. REVISION(S) WILL BE IMPLEMENTED WITHIN 14 DAYS OF THE INSPECTION (3.8.5.2.e AND 3.8.5.2.f).

7.1.7. THE INSPECTOR SHALL CONDUCT PRE-CONSTRUCTION INSPECTIONS TO VERIFY AREAS THAT ARE NOT TO BE DISTURBED HAVE BEEN MARKED IN THE SWPPP AND IN THE FIELD BEFORE LAND DISTURBANCE ACTIVITIES BEGIN AND INITIAL MEASURES HAVE BEEN INSTALLED (10 "INSPECTOR") (3.5.1.n).

7.1.8. INSPECTIONS WILL BE DOCUMENTED ON THE TDOT EPSC INSPECTION REPORT (TDEC PRE-APPROVED) AND INCLUDE THE SCOPE OF THE INSPECTION, NAME(S), TITLE AND TN EPSC CERTIFICATION NUMBER OF

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PERSONNEL MAKING THE INSPECTION, THE DATE(S) OF THE INSPECTION, CURRENT APPROXIMATE DISTURBED ACREAGE AT TIME OF INSPECTION, CHECKLIST (NOC, SWPPP, RAIN GAUGE, SITE CONTACT INFORMATION, ETC.) AND MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE SWPPP (3.5.8.2.g).

7.1.9. DOCUMENTATION OF INSPECTIONS WILL BE MAINTAINED ON SITE IN THE "DOCUMENTATION AND PERMITS" BINDER. REPORTS WILL BE SUBMITTED TO THE TDOT PROJECT SUPERVISOR PER THE CONTRACT.

7.1.10. THESE INSPECTION REQUIREMENTS DO NOT APPLY TO DEFINABLE AREAS OF THE SITE THAT HAVE MET FINAL STABILIZATION REQUIREMENTS AND HAVE BEEN NOTED IN THE SWPPP.

7.1.11. TRAINED CERTIFIED INSPECTORS SHALL COMPLETE INSPECTION DOCUMENTATION TO THE BEST OF THEIR ABILITY. FALSIFYING INSPECTION RECORDS OR OTHER DOCUMENTATION OR FAILURE TO COMPLETE INSPECTION DOCUMENTATION SHALL RESULT IN A VIOLATION OF THIS PERMIT AND ANY OTHER APPLICABLE ACTS OR RULES (3.8.5.2.h).

7.2. DULY AUTHORIZED REPRESENTATIVE (7.7.3)

THE PROJECT SUPERVISOR MAY DELEGATE AN INDIVIDUAL AND/OR CONSULTANT TO SIGN EPSC INSPECTIONS REPORTS. FOR SATISFYING SIGNATORY REQUIREMENTS FOR EPSC INSPECTION REPORTS, THE PROJECT SUPERVISOR AND NEWLY AUTHORIZED INDIVIDUAL ACCEPTING RESPONSIBILITY MUST PERFORM THE FOLLOWING:

7.2.1. COMPLETE AND SIGN THE TDOT CONSTRUCTION DIVISION EPSC DELEGATION OF AUTHORITY.

7.2.2. SUBMIT THE EPSC DELEGATION OF AUTHORITY TO THE LOCAL TDEC EFO.

7.3. MAINTENANCE PRACTICES (3.5.3.1 AND 3.5.7)

7.3.1. ALL CONTROLS WILL BE MAINTAINED IN GOOD AND EFFECTIVE OPERATING ORDER. NECESSARY REPAIRS OR MAINTENANCE WILL BE ACCOMPLISHED BEFORE THE NEXT STORM EVENT AND IN NO CASE MORE THAN 24 HOURS AFTER THE NEED IS IDENTIFIED. IN A CASE WHERE THE ACTIVITY IS DEEMED IMPRACTICABLE, ANY SUCH CONDITIONS WILL BE DOCUMENTED (3.5.8.2.e).

7.3.2. ALL CONTROLS WILL BE MAINTAINED IN ACCORDANCE WITH TDOT STANDARD DRAWINGS AND GOOD ENGINEERING PRACTICES. (3.5.3.1.b)

7.3.3. SEDIMENT WILL BE REMOVED FROM SEDIMENT TRAPS, SILT FENCE, SEDIMENT BASINS, AND OTHER CONTROLS WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY 50% (3.5.3.1.e).

7.3.4. CHECK DAMS WILL BE INSPECTED FOR STABILITY. SEDIMENT WILL BE REMOVED WHEN DEPTH REACHES ONE-HALF (½) THE HEIGHT OF THE DAM.

7.3.5. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER WILL BE PICKED UP AND REMOVED FROM STORMWATER EXPOSURE PRIOR TO ANTICIPATED STORM EVENTS OR BEFORE BEING CARRIED OFF OF THE SITE BY WIND, OR OTHERWISE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORMWATER DISCHARGES. AFTER USE, MATERIALS USED FOR EROSION CONTROL WILL BE REMOVED (3.5.3.1.f).

7.3.6. ALL SEEDED AREAS WILL BE CHECKED FOR BARE SPOTS, EROSION WASHOUTS, AND VIGOROUS GROWTH FREE OF SIGNIFICANT WEED INFESTATIONS.

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

8. <u>SITE ASSESSMENTS</u> (3.1.2)

QUALITY ASSURANCE SITE ASSESSMENTS OF EROSION PREVENTION AND SEDIMENT CONTROLS SHALL BE PERFORMED BY THE TDOT ENVIRONMENTAL DIVISION COMPREHENSIVE INSPECTIONS OFFICE GUIDELINES.

9. <u>STORMWATER MANAGEMENT</u> (3.5.4)

9.1. STORMWATER MANAGEMENT WILL BE HANDLED BY TEMPORARY CONTROLS OUTLINED IN THIS SWPPP AND ANY PERMANENT CONTROLS NEEDED TO MEET PERMANENT STORMWATER MANAGEMENT NEEDS IN THE POST CONSTRUCTION PERIOD. PERMANENT CONTROLS WILL BE SHOWN ON THE PLANS AND NOTED AS PERMANENT.

9.2. DESCRIBE ANY SPECIFIC POST-CONSTRUCTION MEASURES THAT WILL CONTROL VELOCITY, POLLUTANTS, AND/OR EROSION (3.5.1.F, 3.5.4): <u>SOD WILL BE USED AS PREMANENT STABILIZATION THROUGHOUT MUCH THE PROJECT TO CONTROL OVERALL EROSION. DITCHES AS SHOWN ON THE PLANS WILL BE LINED WITH SOD, RIPRAP, OR CONCRETE TO CONTROL STORMWATER VELOCITY.</u>

9.3. OTHER ITEMS NEEDING CONTROL (3.5.5)

9.3.1. CONSTRUCTION MATERIALS: THE FOLLOWING MATERIALS OR SUBSTANCES ARE EXPECTED TO BE PRESENT ON THE SITE DURING THE CONSTRUCTION PERIOD. (CHECK ALL THAT APPLY).

9.3.1.1. ☒ LUMBER, GUARDRAIL, TRAFFIC CONTROL DEVICES
9.3.1.2. ☒ CONCRETE WASHOUT
9.3.1.3. ☒ CONCRETE AND CORRUGATED METAL PIPES
9.3.1.4. ☒ MINERAL AGGREGATES, ASPHALT
9.3.1.5. ☒ EARTH
9.3.1.6. ☒ LIQUID TRAFFIC STRIPING MATERIALS, PAINT
9.3.1.7. ☒ ROCK
9.3.1.8. ☐ CURING COMPOUND
9.3.1.9. ☐ EXPLOSIVES
9.3.1.10. ☐ OTHER

THESE MATERIALS WILL BE HANDLED AS NOTED IN THIS SWPPP.

9.3.2. WASTE MATERIALS (3.5.5.b)

WASTE MATERIAL (EARTH, ROCK, ASPHALT, CONCRETE, ETC.) NOT REQUIRED FOR THE CONSTRUCTION OF THE PROJECT WILL BE DISPOSED OF BY THE CONTRACTOR. 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.

9.3.3. HAZARDOUS WASTE (3.5.5.c) (7.9)

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

9.3.4. SANITARY WASTE (3.5.5.b)

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

9.3.5. OTHER MATERIALS

THE FOLLOWING MATERIALS OR SUBSTANCES ARE EXPECTED TO BE PRESENT ON THE SITE DURING THE CONSTRUCTION PERIOD. (CHECK ALL THAT APPLY).

9.3.5.1. ☒ FERTILIZERS AND LIME
9.3.5.2. ☐ PESTICIDES AND/OR HERBICIDES
9.3.5.3. ☒ DIESEL AND GASOLINE
9.3.5.4. ☒ MACHINERY LUBRICANTS (OIL AND GREASE)

THESE MATERIALS WILL BE HANDLED AS NOTED THIS SWPPP.

10. <u>NON-STORMWATER DISCHARGES</u> (3.5.9)

10.1. THE FOLLOWING NON-STORMWATER DISCHARGES ARE ANTICIPATED DURING THE COURSE OF THIS PROJECT (CHECK ALL THAT APPLY):

10.1.1. ☒ DEWATERING OF WORK AREAS OF COLLECTED STORMWATER AND GROUND WATER

10.1.2. ☒ WATERS USED TO WASH VEHICLES (OF DUST AND SOIL) WHERE DETERGENTS ARE NOT USED AND DETENTION AND/OR FILTERING IS PROVIDED BEFORE THE WATER LEAVES SITE

10.1.3. ☒ WATER USED TO CONTROL DUST (3.5.3.1.n)

10.1.4. ☒ POTABLE WATER SOURCES INCLUDING WATERLINE FLUSHINGS FROM WHICH CHLORINE HAS BEEN REMOVED TO THE MAXIMUM EXTENT PRACTICABLE

10.1.5. ☒ UNCONTAMINATED GROUNDWATER OR SPRING WATER

10.1.6. ☒ FOUNDATION OR FOOTING DRAINS WHERE FLOWS ARE NOT CONTAMINATED WITH POLLUTANTS

10.1.7. ☐ OTHER:

10.2. ALL ALLOWABLE NON-STORMWATER DISCHARGES WILL BE DIRECTED TO STABLE DISCHARGE STRUCTURES PRIOR TO LEAVING THE SITE. FILTERING OR CHEMICAL TREATMENT MAY BE NECESSARY PRIOR TO DISCHARGE.

10.3. THE DESIGN OF ALL IMPACTED EPSC MEASURES RECEIVING FLOW FROM ALLOWABLE NON-STORMWATER DISCHARGES MUST BE DESIGNED TO HANDLE THE VOLUME OF THE NON-STORMWATER COMPONENT.

10.4. 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.

10.5. ARE ANY DISCHARGES ASSOCIATED WITH INDUSTRIAL (NON-CONSTRUCTION STORMWATER) ACTIVITY EXPECTED (3.5.1.h)?

YES ☐ NO ☒ IF YES, SPECIFY THE LOCATION OF THE ACTIVITY AND ITS PERMIT NUMBER.

11. <u>SPILL PREVENTION, MANAGEMENT AND NOTIFICATION (3.5.5.c, 5.1)</u>

11.1. SPILL PREVENTION (3.5.5.c)

11.1.1. MATERIAL MANAGEMENT

11.1.1.1. HOUSEKEEPING

ONLY NEEDED PRODUCTS WILL BE STORED ON-SITE BY THE CONTRACTOR. EXCEPT FOR BULK MATERIALS THE CONTRACTOR WILL STORE ALL MATERIALS UNDER COVER AND IN APPROPRIATE CONTAINERS. PRODUCTS MUST BE STORED IN ORIGINAL CONTAINERS AND LABELED. MATERIAL MIXING WILL BE CONDUCTED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. WHEN POSSIBLE, ALL PRODUCTS WILL BE USED COMPLETELY BEFORE PROPERLY DISPOSING OF THE CONTAINER OFF SITE. THE MANUFACTURER'S DIRECTIONS FOR DISPOSAL OF MATERIALS AND CONTAINERS WILL BE FOLLOWED. THE CONTRACTOR'S SITE SUPERINTENDENT WILL INSPECT MATERIALS STORAGE AREAS REGULARLY TO ENSURE PROPER USE AND DISPOSAL. DUST GENERATED WILL BE CONTROLLED IN AN ENVIRONMENTALLY SAFE MANNER. VEGETATION AREAS NOT ESSENTIAL TO THE CONSTRUCTION PROJECT WILL BE PRESERVED AND MAINTAINED AS NOTED ON THE PLANS.

11.1.1.2. HAZARDOUS MATERIALS

PRODUCTS WILL BE KEPT IN ORIGINAL CONTAINERS UNLESS THE CONTAINER IS NOT RESEALABLE. ORIGINAL LABELS AND MATERIAL SAFETY DATA SHEETS WILL BE RETAINED IN A SAFE PLACE TO RELAY IMPORTANT PRODUCT INFORMATION. IF SURPLUS PRODUCT MUST BE DISPOSED OF, MANUFACTURER'S LABEL DIRECTIONS FOR DISPOSAL WILL BE FOLLOWED. MAINTENANCE AND REPAIR OF ALL EQUIPMENT AND VEHICLES INVOLVING OIL CHANGES, HYDRAULIC SYSTEM DRAIN DOWN, DE-GREASING OPERATIONS, FUEL TANK DRAIN DOWN AND REMOVAL, AND OTHER ACTIVITIES WHICH MAY RESULT IN THE ACCIDENTAL RELEASE OF CONTAMINANTS WILL BE CONDUCTED ON AN IMPERVIOUS SURFACE AND UNDER COVER DURING WET WEATHER TO PREVENT THE RELEASE OF CONTAMINANTS ONTO THE GROUND. WHEEL WASH WATER WILL BE COLLECTED AND ALLOWED TO SETTLE OUT SUSPENDED SOLIDS PRIOR TO DISCHARGE. WHEEL WASH WATER WILL NOT BE DISCHARGED DIRECTLY INTO ANY STORMWATER SYSTEM OR STORMWATER TREATMENT SYSTEM. POTENTIAL PH-MODIFYING MATERIALS SUCH AS: BULK CEMENT, CEMENT KILN DUST, FLY ASH, NEW CONCRETE WASHINGS AND CURING WATERS, CONCRETE PUMPING, AND MIXER WASHOUT WATERS WILL BE COLLECTED ON SITE AND MANAGED TO PREVENT CONTAMINATION OF STORMWATER RUNOFF.

11.1.1.3. PRODUCT SPECIFIC PRACTICES

11.1.1.3.1. PETROLEUM PRODUCTS: ALL ON-SITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED.

11.1.1.3.2. FERTILIZERS: FERTILIZERS WILL BE APPLIED ONLY IN THE AMOUNTS SPECIFIED BY TDOT.

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ONCE APPLIED, FERTILIZERS WILL BE WORKED INTO THE SOIL TO LIMIT THE EXPOSURE TO STORMWATER. FERTILIZERS WILL BE STORED IN AN ENCLOSED AREA UNDER COVER. THE CONTENTS OF PARTIALLY USED FERTILIZER BAGS WILL BE TRANSFERRED TO SEALABLE CONTAINERS TO AVOID SPILLS.

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

11.1.1.3.4. CONCRETE TRUCKS: CONTRACTORS WILL PROVIDE DESIGNATED TRUCK WASHOUT AREAS ON THE SITE. THESE AREAS MUST BE SELF CONTAINED AND NOT CONNECTED TO ANY STORMWATER OUTLET OF THE SITE. UPON COMPLETION OF CONSTRUCTION WASHOUT AREAS WILL BE PROPERLY STABILIZED.

11.2. SPILL MANAGEMENT

11.2.1. IN ADDITION TO THE PREVIOUS HOUSEKEEPING AND MANAGEMENT PRACTICES, THE FOLLOWING PRACTICES WILL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP IF NECESSARY.

11.2.2. 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.

11.2.3. APPROPRIATE CLEANUP MATERIALS AND EQUIPMENT WILL BE MAINTAINED BY THE CONTRACTOR IN THE MATERIALS STORAGE AREA ON-SITE AND UNDER COVER. AS APPROPRIATE, EQUIPMENT AND MATERIALS MAY INCLUDE ITEMS SUCH AS BOOMS, DUST PANS, MOPS, RAGS, GLOVES, GOGGLES, KITTY LITTER, SAND, SAWDUST, AND PLASTIC AND METAL TRASH CONTAINERS SPECIFICALLY FOR CLEAN UP PURPOSES.

11.2.4. 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.

11.2.5. 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.

11.2.6. IF SPILLS REPRESENT AN IMMINENT THREAT OF ESCAPING THE SITE AND ENTERING RECEIVING WATERS, PERSONNEL WILL RESPOND IMMEDIATELY TO CONTAIN THE RELEASE AND NOTIFY THE SUPERINTENDENT AFTER THE SITUATION HAS BEEN STABILIZED.

11.2.7. 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.

11.2.8. IF A SPILL OCCURS THE SUPERINTENDENT OR THE SUPERINTENDENT'S DESIGNEE WILL BE RESPONSIBLE FOR COMPLETING THE SPILL REPORTING FORM AND FOR REPORTING THE SPILL TO THE TDOT PROJECT SUPERVISOR.

11.2.9. SPILL RESPONSE EQUIPMENT WILL BE INSPECTED AND MAINTAINED BY THE CONTRACTOR AS NECESSARY TO REPLACE ANY MATERIALS USED IN SPILL RESPONSE ACTIVITIES.

11.3. SPILL NOTIFICATION (5.1)

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:

11.3.1. THE TDOT PROJECT SUPERVISOR IS RESPONSIBLE FOR NOTIFYING THE REGIONAL ENVIRONMENTAL COORDINATOR OR ASSISTANT REGIONAL ENVIRONMENTAL COORDINATOR AS SOON AS HE OR SHE HAS KNOWLEDGE OF THE DISCHARGE.

11.3.2. THE TDOT REGIONAL ENVIRONMENTAL COORDINATOR WILL NOTIFY THE LOCAL TDEC ENVIRONMENTAL FIELD OFFICE AND ANY OTHER APPLICABLE REGULATORY AGENCIES WITHIN 24 HOURS OF THE SPILL.

11.3.3. A WRITTEN DESCRIPTION OF THE RELEASE, DATE OF RELEASE AND CIRCUMSTANCES LEADING TO THE RELEASE, WHAT ACTIONS WERE TAKEN TO MITIGATE EFFECTS OF THE RELEASE, AND STEPS TAKEN TO MINIMIZE THE CHANCE OF FUTURE OCCURRENCES WILL BE SUBMITTED TO THE APPROPRIATE TDEC ENVIRONMENTAL FIELD OFFICE WITHIN 14 DAYS OF KNOWLEDGE OF THE RELEASE.

11.3.4. THE SWPPP MUST BE MODIFIED WITHIN 14 DAYS OF KNOWLEDGE OF THE RELEASE PROVIDING A DESCRIPTION OF THE RELEASE, CIRCUMSTANCES LEADING TO THE RELEASE, AND THE DATE OF RELEASE. THE SWPPP WILL BE REVIEWED AND MODIFIED AS NECESSARY TO IDENTIFY MEASURES TO PREVENT THE REOCCURRENCE OF SUCH RELEASES AND TO RESPOND TO SUCH RELEASES.

12. RECORD-KEEPING

12.1. REQUIRED RECORDS

TDOT OR THEIR DESIGNEE WILL MAINTAIN AT THE SITE THE FOLLOWING RECORDS OF CONSTRUCTION ACTIVITIES (3.5.3.1.m) (6.2.1):

12.1.1. THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR

12.1.2. THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE

12.1.3. THE DATES WHEN STABILIZATION MEASURES ARE INITIATED

12.1.4. RECORDS OF TWICE WEEKLY EPSC INSPECTION REPORTS AND CORRECTIVE MEASURES

12.1.5. RECORDS OF QUALITY ASSURANCE SITE ASSESSMENTS

12.1.6. COPY OF SITE EPSC INSPECTOR'S TDEC LEVEL 1 CERTIFICATION

12.1.7. RAINFALL MONITORING PLAN (3.5.3.1.o):

12.1.7.1. EQUIPMENT

AT A MINIMUM, THE CONTRACTOR WILL INSTALL A FENCE POST TYPE RAIN GAUGE TO MEASURE RAINFALL. THE STANDARD FENCE POST RAIN GAUGE WILL BE A WEDGE-SHAPED GAUGE THAT MEASURES UP TO 6 INCHES OF RAINFALL. AN ENGLISH SCALE WILL BE PROVIDED ON ONE FACE, WITH A METRIC SCALE ON THE OTHER FACE. GRADUATION WILL BE PERMANENTLY MOLDED IN DURABLE WEATHER-RESISTANT PLASTIC. THE MINIMUM GRADUATION WILL BE 0.01 INCH (OR 0.1MM). AN ALUMINUM BRACKET WITH SCREWS MAY BE USED TO MOUNT THE GAUGE ON A WOODEN SUPPORT.

12.1.7.2. LOCATION

THE RAIN GAUGE WILL BE LOCATED AT OR ALONG THE PROJECT SITE, AS DEFINED IN THE NOI OF THE NPDES PERMIT, IN AN OPEN AREA SUCH THAT THE MEASUREMENT WILL NOT BE INFLUENCED BY OUTSIDE FACTORS (I.E. OVERHANGS, GUTTER, TREES, ETC). AT LEAST ONE RAIN GAUGE PER LINEAR MILE IS REQUIRED ALONG (AS MEASURED ALONG THE CENTERLINE OF THE PRIMARY ALIGNMENT) THE PROJECT WHERE CLEARING, GRUBBING, EXCAVATION, GRADING, CUTTING OR FILLING IS ACTIVELY PERFORMED, OR EXPOSED SOIL HAS NOT YET BEEN PERMANENTLY STABILIZED.

12.1.7.3. METHODS

12.1.7.3.1. RAINFALL MONITORING WILL BE INITIATED PRIOR TO CLEARING, GRUBBING, EXCAVATION, GRADING, CUTTING, OR FILLING, EXCEPT AS SUCH MINIMAL CLEARING MAY BE NECESSARY TO INSTALL A RAIN GAUGE IN AN OPEN AREA. THE RAIN GAUGE WILL BE CHECKED FOR OPERATIONAL SOUNDNESS DAILY (DURING NORMAL BUSINESS HOURS) IN WET TIMES AND WEEKLY IN DRY TIMES. GAUGES WILL BE REPAIRED OR REPLACED ON THE SAME DAY IF FOUND TO BE NON-OPERATIONAL OR MISSING.

12.1.7.3.2. EACH RAIN GAUGE WILL BE READ (FOR DETAILED RECORDS OF RAINFALL) AND EMPTIED AFTER EVERY RAINFALL EVENT OCCURRING ON THE PROJECT SITE AT APPROXIMATELY THE SAME TIME OF THE DAY (DURING NORMAL BUSINESS HOURS). DURING PERIODS OF DRY CONDITIONS, IT WILL NOT BE NECESSARY TO READ THE RAIN GAUGE EVERY DAY. IN LIEU OF THIS REQUIREMENT ON WEEKENDS AND ON STATE HOLIDAYS, THE RAIN GAUGES CAN BE EMPTIED THE NEXT BUSINESS DAY AND A REFERENCE SITE USED FOR A RECORD OF DAILY AMOUNT OF PRECIPITATION FOR THOSE DAYS. A REFERENCE SITE IS THE DOCUMENTATION FROM THE CLOSEST GAUGE WITHIN PROXIMITY OF THE PROJECT FROM A RECOGNIZED SOURCE SUCH AS THE NOAA NATIONAL WEATHER SERVICE.

12.1.7.3.3. DETAILED RECORDS WILL BE RECORDED OF RAINFALL EVENTS INCLUDE DATES, AMOUNTS OF RAINFALL, AND THE APPROXIMATE DURATION (OR THE STARTING AND ENDING TIMES). THE RAINFALL RECORDS SHALL BE RECORDED ON THE TDOT RAINFALL RECORD SHEET AND SHALL BE MAINTAINED IN THE "DOCUMENTATION AND PERMITS" BINDER.

12.1.7.3.4. IF, IN THE EVENT THAT THE RAINFALL EVENT IS STILL IN PROGRESS AT THE DAILY RECORDING TIME, THE GAUGE WILL BE EMPTIED AND THE RECORD WILL INDICATE THAT THE STORM EVENT WAS STILL IN PROGRESS.

12.1.7.3.5. RAIN GAUGE INFORMATION (DETAILED RECORDS), INCLUDING THE LOCATION OF THE NEAREST OUTFALL, WILL BE RECORDED ON THE EPSC INSPECTION REPORT FORMS AT THE TIME OF MEASUREMENT.

12.2. KEEPING PLANS CURRENT (3.4)

TDOT OR THEIR DESIGNEE WILL MODIFY AND UPDATE THE SWPPP WHEN ANY OF THE FOLLOWING CONDITIONS APPLY:

12.2.1. WHENEVER THERE IS A CHANGE IN THE SCOPE OF THE PROJECT THAT WOULD BE EXPECTED TO HAVE A SIGNIFICANT EFFECT ON THE DISCHARGE OF POLLUTANTS TO THE WATERS OF THE STATE AND WHICH HAS NOT OTHERWISE BEEN ADDRESSED IN THE SWPPP;

12.2.2. WHENEVER INSPECTIONS OR INVESTIGATIONS BY SITE OPERATORS, LOCAL, STATE, OR FEDERAL OFFICIALS INDICATE THE SWPPP IS PROVING INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANTS FROM CONSTRUCTION ACTIVITY SOURCES, OR IS OTHERWISE NOT ACHIEVING THE GENERAL OBJECTIVES OF CONTROLLING POLLUTANTS IN STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY; WHERE LOCAL, STATE, OR FEDERAL OFFICIALS DETERMINE THAT THE SWPPP IS INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANT SOURCES, A COPY OF ANY CORRESPONDENCE TO THAT EFFECT MUST BE RETAINED IN THE SWPPP;

12.2.3. WHEN ANY NEW OPERATOR AND/OR SUB-OPERATOR IS ASSIGNED OR RELIEVED OF THEIR RESPONSIBILITY TO IMPLEMENT A PORTION OF THE SWPPP;

12.2.4. TO PREVENT A NEGATIVE IMPACT TO LEGALLY PROTECTED STATE OR FEDERALLY LISTED OR PROPOSED THREATENED OR ENDANGERED AQUATIC FAUNA;

12.2.5. WHEN THERE IS A CHANGE IN CHEMICAL TREATMENT METHODS INCLUDING: USE OF DIFFERENT TREATMENT CHEMICALS, DIFFERENT DOSAGE OR APPLICATION RATES OR A DIFFERENT AREA OF APPLICATION NOT SPECIFIED ON THE EPSC PLANS; OR

12.2.6. WHEN A TMDL IS DEVELOPED FOR THE RECEIVING WATERS FOR A POLLUTANT OF CONCERN (SILTATION AND/OR HABITAT ALTERATION)

12.3. MAKING PLANS ACCESSIBLE

12.3.1. TDOT WILL RETAIN A COPY OF THIS SWPPP (INCLUDING A COPY OF THE "DOCUMENTATION AND PERMITS" BINDER AT THE CONSTRUCTION SITE (OR OTHER LOCATION ACCESSIBLE TO TDEC AND THE PUBLIC) FROM THE DATE CONSTRUCTION COMMENCES TO THE DATE OF FINAL STABILIZATION. TDOT WILL HAVE A COPY OF THE SWPPP AVAILABLE AT THE LOCATION WHERE WORK IS OCCURRING ON-SITE FOR THE USE OF OPERATORS AND THOSE IDENTIFIED AS HAVING RESPONSIBILITIES UNDER THE SWPPP WHENEVER THEY ARE ON THE CONSTRUCTION SITE (6.2).

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12.3.2. PRIOR TO THE INITIATION OF LAND DISTURBING ACTIVITIES AND UNTIL THE SITE HAS MET THE FINAL STABILIZATION CRITERIA, TDOT OR THEIR DESIGNEE WILL POST A NOTICE NEAR THE MAIN ENTRANCE OF THE CONSTRUCTION SITE WITH THE FOLLOWING INFORMATION (3.3.3) (6.2.1):

12.3.2.1. A COPY OF THE NOTICE OF COVERAGE (NOC) WITH THE NPDES PERMIT NUMBER FOR THE PROJECT;

12.3.2.2. THE INDIVIDUAL NAME, COMPANY NAME, E-MAIL ADDRESS (IF APPLICABLE) AND TELEPHONE NUMBER OF THE LOCAL PROJECT SITE OWNER AND OPERATOR CONTACT;

12.3.2.3. A BRIEF DESCRIPTION OF THE PROJECT; AND

12.3.2.4. THE LOCATION OF THE SWPPP.

12.3.3. ALL INFORMATION DESCRIBED IN SECTION 10.3.2 MUST BE MAINTAINED IN LEGIBLE CONDITION. IF POSTING THIS INFORMATION NEAR A MAIN ENTRANCE IS INFEASIBLE DUE TO SAFETY CONCERNS, THE NOTICE SHALL BE POSTED IN A LOCAL BUILDING. THE NOTICE MUST BE PLACED IN A PUBLICLY ACCESSIBLE LOCATION WHERE CONSTRUCTION IS ACTIVELY UNDERWAY AND MOVED AS NECESSARY.

12.4. NOTICE OF TERMINATION (8.0)

12.4.1. WHEN ALL STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES THAT ARE AUTHORIZED BY THE PERMIT ARE ELIMINATED BY FINAL STABILIZATION, TDOT WILL SUBMIT A NOTICE OF TERMINATION (NOT) THAT IS SIGNED IN ACCORDANCE WITH THE PERMIT TO THE TDEC CENTRAL OFFICE IN NASHVILLE, TN.

12.4.2. FOR THE PURPOSES OF THE CERTIFICATION REQUIRED BY THE NOT, THE ELIMINATION OF STORMWATER DISCHARGES ASSOCIATED WITH THE CONSTRUCTION ACTIVITY MEANS THE FOLLOWING:

12.4.2.1. ALL EARTH-DISTURBING ACTIVITIES ON THE SITE ARE COMPLETED AND ALL DISTURBED SOILS AT THE PORTION OF THE CONSTRUCTION SITE WHERE THE OPERATOR HAD CONTROL HAVE BEEN FINALLY STABILIZED; AND

12.4.2.2. ALL CONSTRUCTION MATERIALS, WASTE AND WASTE HANDLING DEVICES, AND ALL EQUIPMENT, AND VEHICLES THAT WERE USED DURING CONSTRUCTION HAVE BEEN REMOVED AND PROPERLY DISPOSED; AND

12.4.2.3. ALL STORMWATER CONTROLS THAT WERE INSTALLED AND MAINTAINED DURING CONSTRUCTION, EXCEPT THOSE THAT ARE INTENDED FOR LONG-TERM USE FOLLOWING TERMINATION OF PERMIT COVERAGE, HAVE BEEN REMOVED; AND

12.4.2.4. ALL POTENTIAL POLLUTANTS AND POLLUTANT GENERATING ACTIVITIES ASSOCIATED WITH CONSTRUCTION HAVE BEEN REMOVED; AND

12.4.2.5. THE PERMITTEE HAS IDENTIFIED WHO IS RESPONSIBLE FOR ONGOING MAINTENANCE OF ANY STORMWATER CONTROLS LEFT ON THE SITE FOR LONG-TERM USE FOLLOWING TERMINATION OF PERMIT COVERAGE; AND

12.4.2.6. TEMPORARY EPSC MEASURES HAVE BEEN OR WILL BE REMOVED AT AN APPROPRIATE TIME TO ENSURE FINAL STABILIZATION IS MAINTAINED; AND

12.4.2.7. ALL STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES FROM THE IDENTIFIED SITE THAT ARE AUTHORIZED BY A NPDES GENERAL PERMIT HAVE OTHERWISE BEEN ELIMINATED FROM THE PORTION OF THE CONSTRUCTION SITE WHERE THE OPERATOR HAD CONTROL.

12.5. RETENTION OF RECORDS (6.2)

TDOT WILL RETAIN COPIES OF THE SWPPP, ALL REPORTS REQUIRED BY THE PERMIT, AND RECORDS OF ALL DATA USED TO COMPLETE THE NOTICE OF INTENT FOR THE PROJECT FOR A PERIOD OF AT LEAST THREE (3) YEARS FROM THE DATE THE NOT WAS FILED.

13. SITE WIDE/PRIMARY PERMITTEE CERTIFICATION (7.7.5)

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

AUTHORIZED TDOT PERSONNEL SIGNATURE (3.3.1)

JIM OZMENT
PRINTED NAME

ENVIRONMENTAL DIVISION DIRECTOR
TITLE

05-22-2015
DATE

14. SECONDARY PERMITTEE (OPERATOR) CERTIFICATION (7.7.6)

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE REVIEWED THIS DOCUMENT, ANY ATTACHMENTS, AND THE SWPPP REFERENCED ABOVE. BASED ON MY INQUIRY OF THE CONSTRUCTION SITE OWNER/DEVELOPER IDENTIFIED ABOVE AND/OR MY INQUIRY OF THE PERSON DIRECTLY RESPONSIBLE FOR ASSEMBLING THIS NOI AND SWPPP, I BELIEVE THE INFORMATION SUBMITTED IS ACCURATE. I AM AWARE THAT THIS NOI, IF APPROVED, MAKES THE ABOVE-DESCRIBED CONSTRUCTION ACTIVITY SUBJECT TO NPDES PERMIT NUMBER TNR100000, AND THAT CERTAIN OF MY ACTIVITIES ON-SITE ARE THEREBY REGULATED. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS, AND FOR FAILURE TO COMPLY WITH THESE PERMIT REQUIREMENTS.

AUTHORIZED OPERATOR (CONTRACTOR) SIGNATURE (3.3.1)

PRINTED NAME

TITLE

DATE

15. ENVIRONMENTAL PERMITS (9.0)

LIST ALL ENVIRONMENTAL PERMITS AND EXPIRATION DATES FOR PROJECT **(TO BE COMPLETED AT THE ENVIRONMENTAL PRECONSTRUCTION MEETING BY TDOT CONSTRUCTION OR THEIR DESIGNEE)**:

ENVIRONMENTAL PERMITS			
PERMIT	**YES OR NO**	**PERMIT OR TRACKING NO.**	**EXPIRATION DATE***
TDEC ARAP			
CORPS OF ENGINEERS (COE)			
TVA 26A			
TDEC CGP			
OTHER:			

*THE TDOT ENVIRONMENTAL DIVISION MUST BE NOTIFIED SIX MONTHS PRIOR TO PERMIT EXPIRATION DATE.

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4.2.3 OUTFALL TABLE - ROADWAY (3.5.1.d, 5.4.1.f)

EPSC PHASE	OUTFALL LABEL	STATION CL, LT OR RT	SLOPE WITHIN ROW (%)	PHASE 1 (P1) DRAINAGE AREA (AC)	PHASE 2 (P2) DRAINAGE AREA (AC)	PHASE 3 (P3) DRAINAGE AREA (AC)	PHASE 4 (P4) DRAINAGE AREA (AC)	SEDIMENT BASIN OR EQUIVALENT MEASURE(S) (YES, NO OR N/A)	RECEIVING NATURAL RESOURCE NAME OR LABEL	COMMENTS
-	OUT-1	66+50RT	10.00	0.09	0.09	-	0.09	N/A	STR-1A	-
-	OUT-2	75+15RT	5.71	-	3.11	3.11	SLOPE CHANGE	N/A	STR-1	-
-	OUT-2	75+15RT	2.00	-	-	-	3.00	N/A	STR-1	-
-	OUT-3	67+00 LT	0.50	-	-	0.47	-	-	-	-
-	OUT-4	75+15LT	5.00	4.40	4.40	4.40	4.40	N/A	STR-1	-
-	OUT-5	75+25RT	2.00	3.00	-	-	3.00	N/A	STR-1	-
-	OUT-6	78+00LT	4.00	0.03	-	-	-	N/A	STR-1	-
-	OUT-7	83+33LT	10.00	0.23	-	-	-	N/A	-	-
-	OUT-8	84+67LT	10.00	0.06	-	-	-	N/A	-	-
-	OUT-9	86+25LT	10.00	0.90	-	-	0.90	N/A	-	-
-	OUT-10	89+25LT	10.00	-	-	0.80	-	N/A	-	-
-	OUT-11	27+00LT STONE LOOP	5.00	0.03	0.03	0.03	0.03	N/A	-	-
-	OUT-12	27+00RT STONE LOOP	2.85	0.08	0.08	0.08	0.08	N/A	-	-
-	OUT-13	102+25RT	4.00	-	-	0.35	-	N/A	-	-
-	OUT-14	115+75RT	5.00	0.11	-	3.59	3.59	N/A	-	-
-	OUT-15	27+00LT STONE LOOP	6.00	0.32	0.32	1.06	1.06	N/A	-	-
-	OUT-16	27+00RT STONE LOOP	6.00	0.05	0.05	0.06	0.06	N/A	-	-
-	OUT-17	125+25RT	2.00	-	0.96	0.96	SLOPE CHANGE	N/A	-	-
-	OUT-17	125+25RT	1.50	-	-	-	0.96	N/A	-	-
-	OUT-18	-	-	-	-	-	-	-	-	NOT USED
-	OUT-19	-	-	-	-	-	-	-	-	NOT USED
-	OUT-20	-	-	-	-	-	-	-	-	NOT USED
-	OUT-21	-	-	-	-	-	-	-	-	NOT USED
-	OUT-22	7+00RT FENCE LANE	4.00	0.07	-	-	0.07	N/A	-	-
-	OUT-23	158+15LT	1.00	3.66	-	2.11	SLOPE CHANGE	N/A	-	-
-	OUT-23	163+33LT	1.50	-	-	-	2.11	N/A	-	-
-	OUT-24	-	-	-	-	-	-	-	-	NOT USED
-	OUT-25	27+50RT SHORTY BARNS RD.	1.00	0.02	SLOPE CHANGE	-	-	N/A	-	-
-	OUT-25	27+50RT SHORTY BARNS RD.	4.00	-	7.63	7.63	7.63	N/A	-	-
-	OUT-26	27+50LT FAIRVIEW DR.	2.00	-	-	3.02	3.02	N/A	-	-
-	OUT-27	-	-	-	-	-	-	-	-	NOT USED
-	OUT-28	80+33LT	1.50	-	0.95	0.95	0.95	N/A	-	-
-	OUT-29	26+00LT FAIRVIEW ROAD	1.00	0.06	-	0.06	0.06	N/A	-	-
-	OUT-30	26+00RT FAIRVIEW ROAD	1.00	0.06	-	0.06	-	N/A	-	-
-	OUT-31	-	-	-	-	-	-	-	-	NOT USED
-	OUT-32	8+50RT SPRING LAKE DR.	8.00	0.84	0.84	0.84	1.20	N/A	-	-
-	OUT-33	25+75LT ST. GEORGE RD.	4.00	0.06	0.06	0.06	0.06	N/A	-	-
-	OUT-34	25+75RT ST. GEORGE RD.	3.33	0.05	0.05	0.05	0.05	N/A	-	-
-	OUT-35	205+95RT	2.00	1.58	-	0.21	1.35	N/A	-	-
-	OUT-35	201+75RT	2.00	-	1.35	-	-	N/A	-	-
-	OUT-36	205+95RT	2.00	-	1.58	SLOPE CHANGE	-	N/A	-	-
-	OUT-36	205+95RT	1.50	-	-	1.58	4.32	N/A	-	-
-	OUT-37	210+50RT	4.00	0.40	0.40	SLOPE CHANGE	-	N/A	-	-
-	OUT-37	210+50RT	1.50	-	-	0.40	2.95	N/A	-	-
-	OUT-38	215+67RT	4.00	-	0.54	-	-	N/A	-	-
-	OUT-50	27+50LT CHERRY BR. RD.	0.50	0.16	-	-	-	N/A	-	-
-	OUT-51	27+00RT CHERRY BR. RD.	0.50	0.75	-	-	-	N/A	-	-
-	OUT-52	7+00RT FENCE LANE	0.50	1.14	-	-	-	N/A	-	-
-	OUT-53	130+85RT	1.50	-	0.65	-	-	N/A	-	-
-	OUT-54	27+00LT CHERRY BR. RD.	1.75	-	0.75	0.75	-	N/A	-	-
-	OUT-55	27+00RT CHERRY BR. RD.	1.75	-	-	0.50	-	N/A	-	-
-	OUT-60	27+33LT	1.0	-	-	0.02	-	N/A	-	-
-	OUT-61	27+33LT	1.0	-	-	0.02	-	N/A	-	-

* SEE COMMENTS COLUMN FOR ADDITIONAL INFORMATION REGARDING DRAINAGE AREA.

ALL UNUSED FIELDS WITHIN THE OUTFALL TABLE ARE TO BE SHADED OR HATCHED TO INDICATE THEIR NON-USAGE.

4.2.4 OUTFALL TABLE - ELECTRIC LINE (3.5.1.d, 5.4.1.f)

EPSC PHASE	OUTFALL LABEL	STATION CL, LT OR RT	SLOPE WITHIN ROW (%)	PHASE 1 (P1) DRAINAGE AREA (AC)	PHASE 2 (P2) DRAINAGE AREA (AC)	PHASE 3 (P3) DRAINAGE AREA (AC)	SEDIMENT BASIN OR EQUIVALENT MEASURE(S) (YES, NO OR N/A)	RECEIVING NATURAL RESOURCE NAME OR LABEL	COMMENTS
-	OUT-1	57+15LT	5.34	11.5	11.5	11.5	NO	STR-5	*SEE NOTE BELOW
-	OUT-2	64+67LT	8.00	4.1	4.1	4.1	N/A	STR-6	-
-	OUT-3	79+25LT	3.33	16.97	16.97	16.97	NO	STR-6	*SEE NOTE BELOW
-	OUT-4	79+50LT	9.17	3.34	3.34	3.34	N/A	STR-6	-
-	OUT-5	83+25LT	8.33	4.12	4.12	4.12	N/A	STR-6	-

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EPSC PHASE	OUTFALL LABEL	STATION CL, LT OR RT	SLOPE WITHIN ROW (%)	PHASE 1 (P1) DRAINAGE AREA (AC)	PHASE 2 (P2) DRAINAGE AREA (AC)	PHASE 3 (P3) DRAINAGE AREA (AC)	SEDIMENT BASIN OR EQUIVALENT MEASURE(S) (YES, NO OR N/A)	RECEIVING NATURAL RESOURCE NAME OR LABEL	COMMENTS
-	OUT-6	105+25LT	8.21	9.51	9.51	9.51	N/A	STR-8	-
-	OUT-7	126+50LT	14.7	11.79	11.79	11.79	NO	STR-11	*SEE NOTE BELOW
-	OUT-8	177+50LT	8.42	3.48	3.48	3.48	N/A	STR-15	-
-	OUT-9	180+33LT	6.92	6	6	6	N/A	STR-15	-
-	OUT-10	239+10LT	13.00	6.45	6.45	6.45	N/A	STR-20	-
-	OUT-11	257+50LT	17.00	4.38	4.38	4.38	N/A	STR-24	-

* RUN-ON STORMWATER WILL BE ALLOWED TO PASS THROUGH THE PROJECT AREA AND WILL BE SEPARATED FROM CONSTRUCTION RUNOFF BY FILTER SOCKS. CONSTRUCTION SITE RUNOFF WILL SHEET FLOW THROUGH THE FILTER SOCKS ON EITHER SIDE OF THE DRAINAGE WAY.

ALL UNUSED FIELDS WITHIN THE OUTFALL TABLE ARE TO BE SHADED OR HATCHED TO INDICATE THEIR NON-USAGE.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STORM WATER POLLUTION PREVENTION PLAN

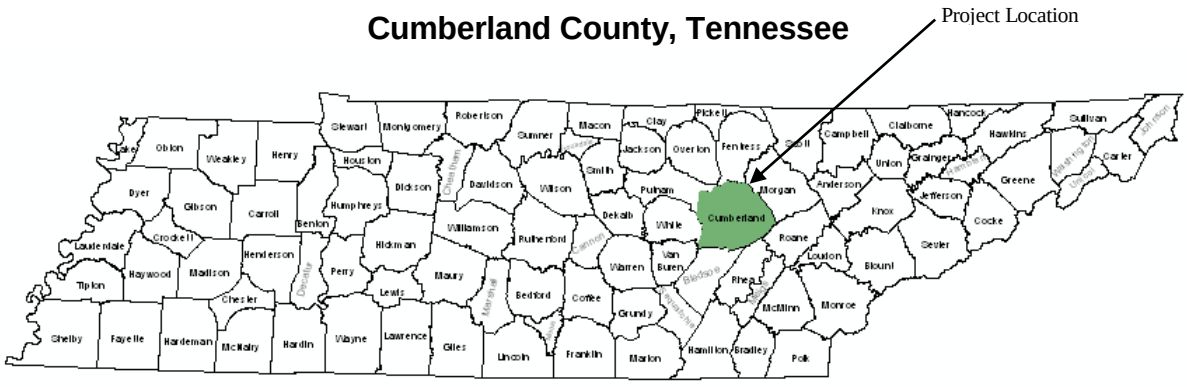
Documentation
and
Permits Binder

SR-101 (FROM FIRE TOWER ROAD TO NEAR LAKEVIEW DRIVE)
INCLUDING 161KV ELECTRIC LINE RELOCATION

Project No.: 18038-1230-04

PIN: 100268.01 & 100268.03

Cumberland County, Tennessee



Prepared for:
Tennessee Department of Transportation – TDOT

Prepared by:
Civil & Environmental Consultants, Inc.

Consultant Reference No.: 143-680

N

N 35.9930°
W 84.9403°

Begin Project STA No. 58+86.00

Legend

- # Outfalls
- Right of Way

STORMWATER POLLUTION PREVENTION PLAN

SITE LOCATION MAP

SR- 101;
From Fire Tower Road
to Near Lakeview Drive

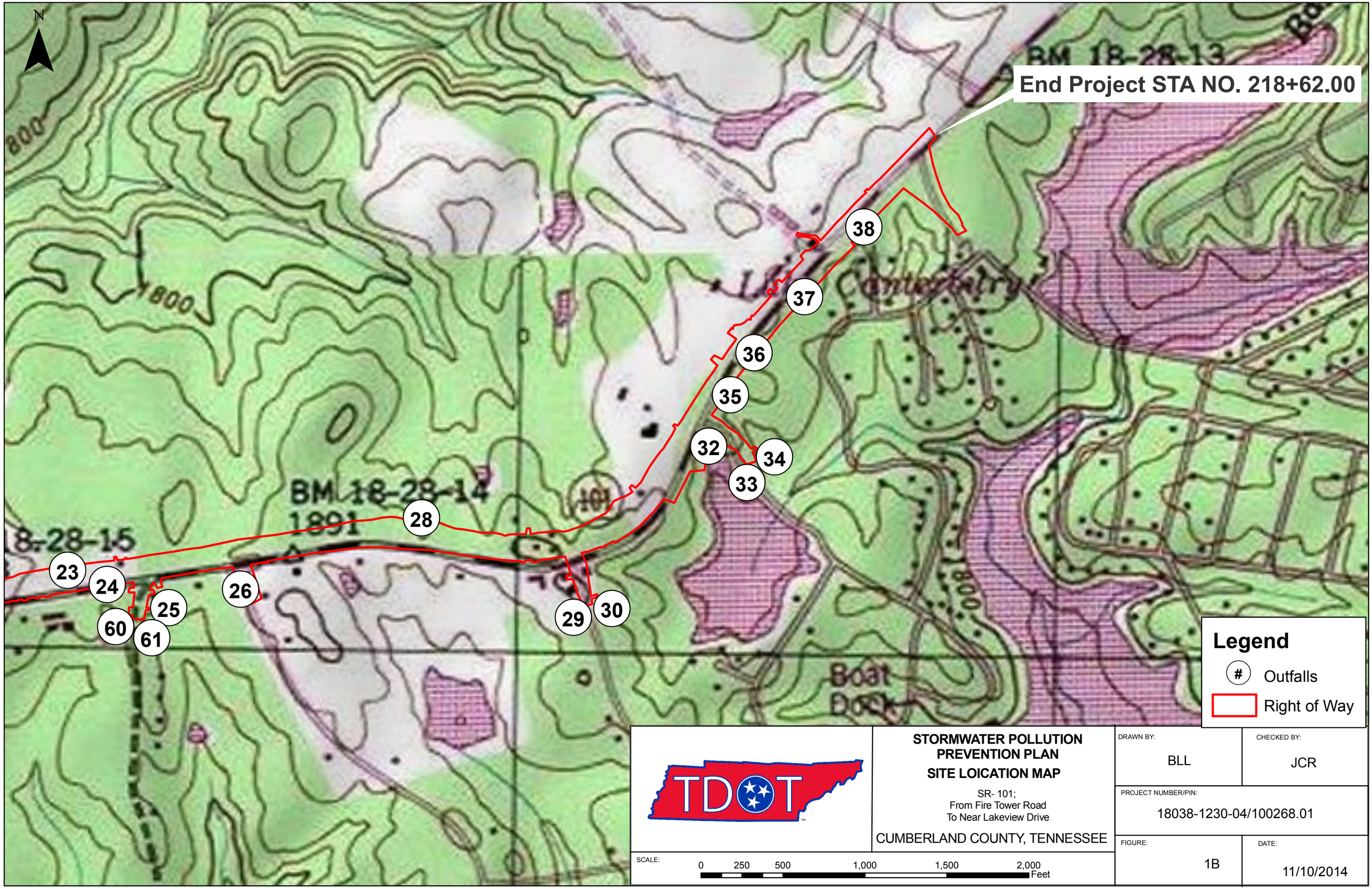
CUMBERLAND COUNTY, TENNESSEE

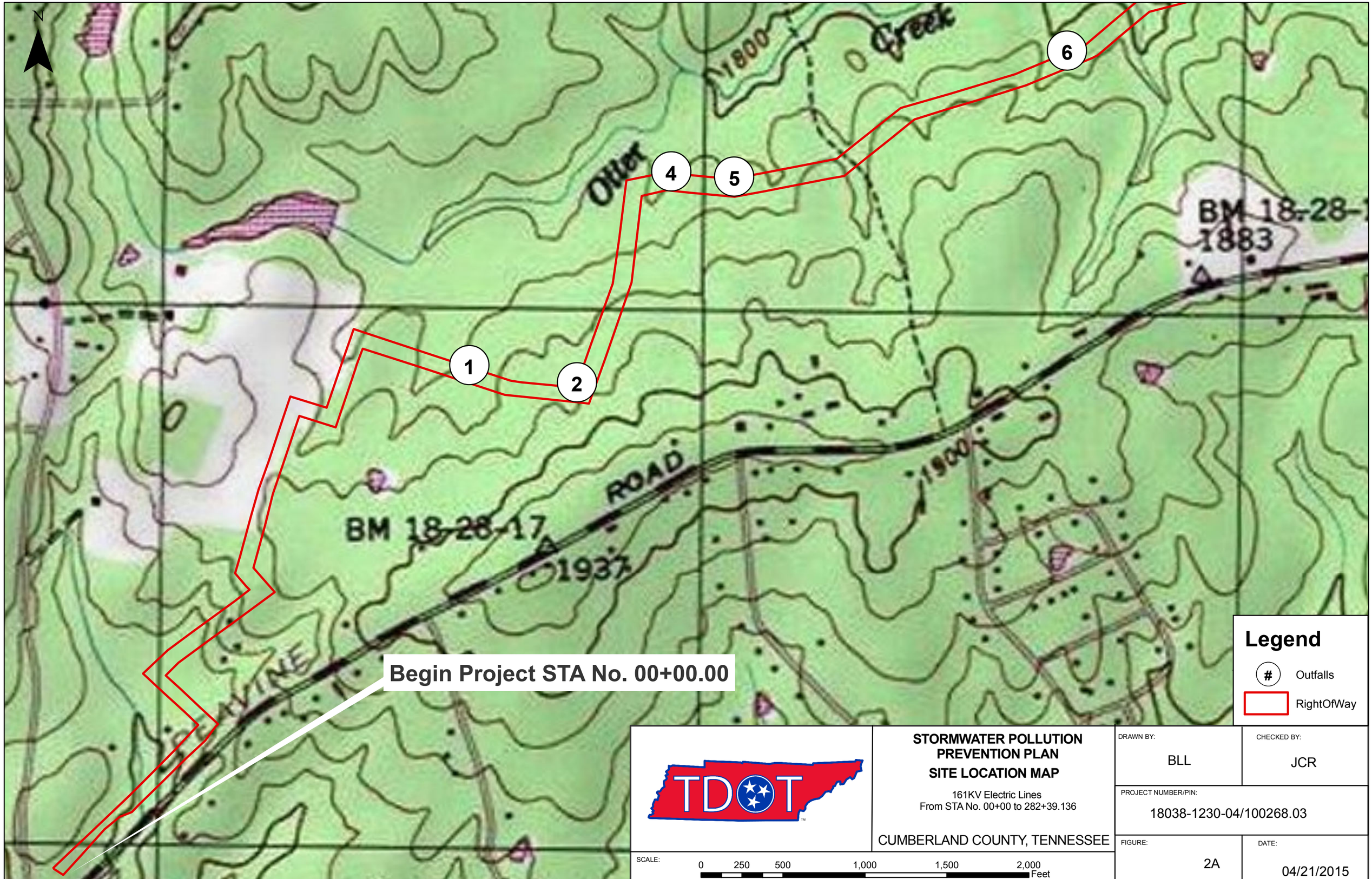
SCALE: 0 250 500 1,000 1,500 2,000 Feet

DRAWN BY:	CHECKED BY:
BLL	JCR

PROJECT NUMBER/PIN: 18038-1230-04/100268.01

FIGURE:	DATE:
1A	11/10/2014


N
End Project STA NO. 218+62.00
BM 18-28-13
BM 18-28-14
1891
8-28-15
101
Boat Dock
23
24
25
26
28
29
30
32
33
34
35
36
37
38
60
61
Legend
Outfalls
Right of Way
TDOT
STORMWATER POLLUTION PREVENTION PLAN
SITE LOICATION MAP
SR- 101;
From Fire Tower Road
To Near Lakeview Drive
CUMBERLAND COUNTY, TENNESSEE
DRAWN BY: BLL
CHECKED BY: JCR
PROJECT NUMBER/PIN: 18038-1230-04/100268.01
FIGURE: 1B
DATE: 11/10/2014
SCALE: 0 250 500 1,000 1,500 2,000 Feet


N
Creek
1800
Otter
1
2
4
5
6
BM 18-28-1
1883
ROAD
1900
BM 18-28-17
1937
Begin Project STA No. 00+00.00
Legend
#
Outfalls
RightOfWay
TDOT
STORMWATER POLLUTION PREVENTION PLAN
SITE LOCATION MAP
161KV Electric Lines
From STA No. 00+00 to 282+39.136
CUMBERLAND COUNTY, TENNESSEE
DRAWN BY:
BLL
CHECKED BY:
JCR
PROJECT NUMBER/PIN:
18038-1230-04/100268.03
FIGURE:
2A
DATE:
04/21/2015
SCALE:
0
250
500
1,000
1,500
2,000
Feet

N

2021

1800

Otter

1900

9

8

7

N 36.0008°
W 84.9309°

BM 18-21

Legend

Outfalls

RightOfWay

TDOT

STORMWATER POLLUTION PREVENTION PLAN

SITE LOCATION MAP

161KV Electric Lines
From STA No. 00+00 to 282+39.136

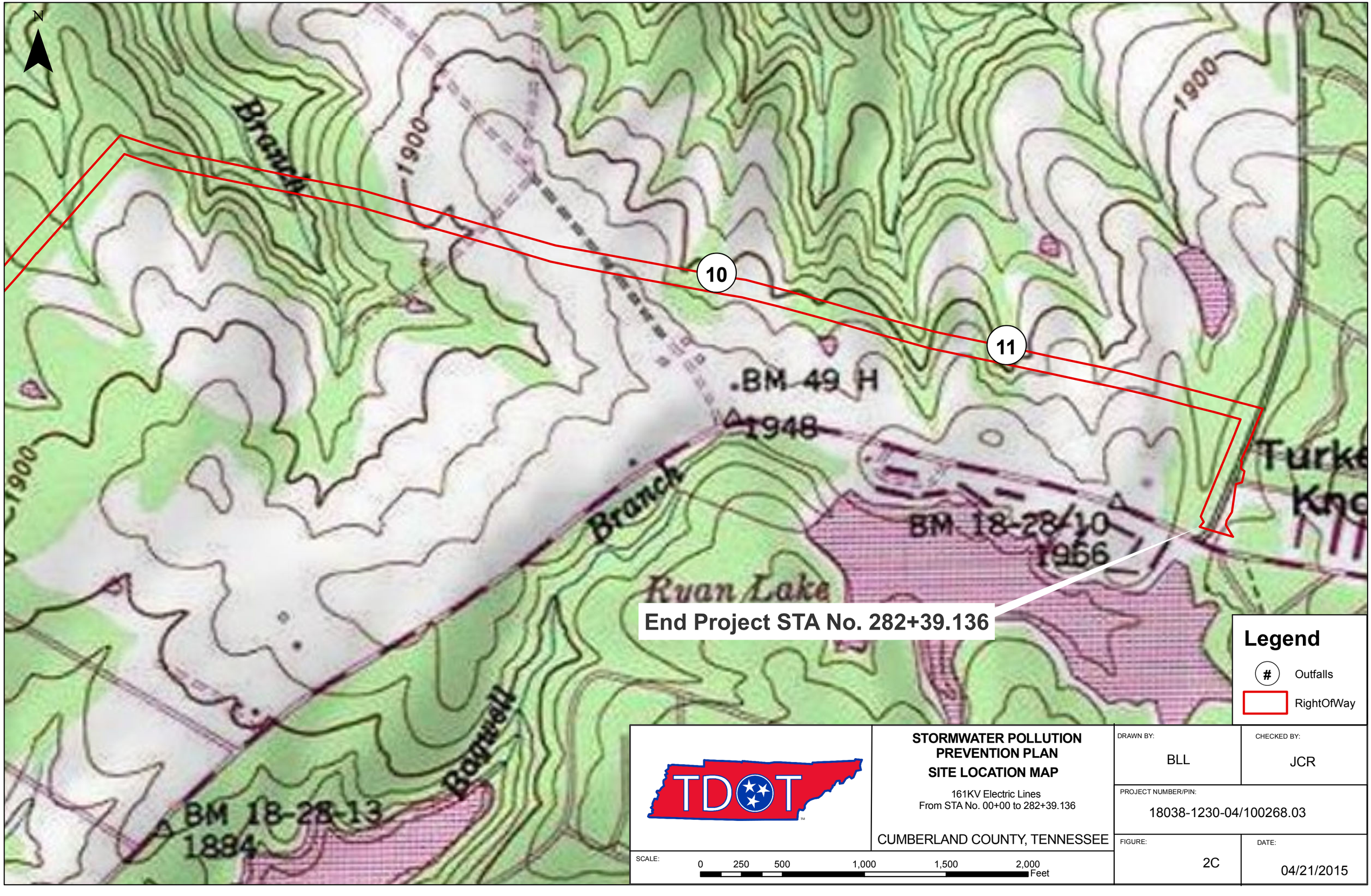
CUMBERLAND COUNTY, TENNESSEE

SCALE: 0 250 500 1,000 1,500 2,000 Feet

DRAWN BY:	CHECKED BY:
BLL	JCR

PROJECT PIN: 18038-1230-04/100268.03

FIGURE:	DATE:
2B	04/21/2015



TDOT

STORMWATER POLLUTION PREVENTION PLAN

SITE LOCATION MAP

161KV Electric Lines
From STA No. 00+00 to 282+39.136

CUMBERLAND COUNTY, TENNESSEE

SCALE: 0 250 500 1,000 1,500 2,000 Feet

DRAWN BY:	CHECKED BY:
BLL	JCR

PROJECT NUMBER/PIN: 18038-1230-04/100268.03

FIGURE:	DATE:
2C	04/21/2015

DOCUMENTS AND PERMITS BINDER

CHECKLIST

PROJECT NAME: SR-101 (FROM FIRE TOWER ROAD TO NEAR LAKEVIEW DRIVE)
INCLUDING 161KV ELECTRIC LINE RELOCATION
PIN: 100268.01 & 100268.03
PROJECT NO.: 18038-1230-04
COUNTY: CUMBERLAND

1. ☒ INDEX OF REVISIONS

2. ☒ RAINFALL RECORD SHEETS

3. ☒ EPSC INSPECTION REPORTS

4. ☒ NOI AND ☐ NOC

5. ☒ BLANK NOT

6. ☒ CONSTRUCTION GENERAL PERMIT (CGP)

7. ENVIRONMENTAL PERMITS
   7.1 ☒ PERMIT APPLICATION LETTER
   7.2 PERMITS
   a. ☐ TDEC ARAP
   b. ☐ CORPS OF ENGINEERS (COE)
   c. ☐ TVA 26A
   d. ☐ OTHER

8. ☒ ECOLOGY REPORT

9. TRAINING CERTIFICATIONS

   TDEC LEVEL I
   a. ☐ EPSC INSPECTOR
   b. ☐ TDOT PROJECT SUPERVISOR
   c. ☐ TDOT PROJECT SUPERVISOR MANAGER
   d. ☐ CONTRACTOR PROJECT SUPERVISOR

   TDEC LEVEL II
   e. ☐ TDOT PROJECT SUPERVISOR MANAGER

10. TMDL INFORMATION REQUIRED

   a. ☐ Yes

   b. ☒ No

Index of SWPPP Revisions					
Revision #	Date	Revision Description	Revision on EC Sheet #	Signature of Contractor	Signature of TDOT Project Supervisor

State Route (SR) / US Route or Road Name:_____TDOT Construction No.:_____ TDOT Contract No.: _____

TDOT EPSC Inspection Monthly Rainfall Data Log

Month _____ **Year**_____

Date	Day of Week[1]	Predicted Precipitation (%)[2]	Rainfall Gage 1 (in)	Rainfall Gage 2 (in)	Rainfall Gage 3 (in)	Rainfall Gage 4 (in)	Rainfall Gage 5 (in)	Duration (hr)
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								

[1] Day of Week= Su,M,Tu,W,Th,F,Sa

[2] Predicted Precipitation Source: _____

NOAA Atlas 14, Volume 2, Version 3
Location name: Crossville, Tennessee, US*
Latitude: 36.0027°, Longitude: -84.9268°
Elevation: 1816 ft*
* source: Google Maps

POINT PRECIPITATION FREQUENCY ESTIMATES

G.M. Bonnin, D. Martin, B. Lin, T. Parzybok, M.Yekta, and D. Riley

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.367 (0.338–0.402)	0.435 (0.400–0.476)	0.513 (0.472–0.560)	0.580 (0.531–0.632)	0.670 (0.609–0.729)	0.744 (0.671–0.807)	0.822 (0.736–0.891)	0.902 (0.800–0.979)	1.02 (0.887–1.10)	1.11 (0.958–1.20)
10-min	0.587 (0.540–0.642)	0.695 (0.640–0.761)	0.822 (0.756–0.897)	0.927 (0.848–1.01)	1.07 (0.970–1.16)	1.19 (1.07–1.29)	1.31 (1.17–1.42)	1.43 (1.27–1.55)	1.61 (1.40–1.74)	1.75 (1.51–1.90)
15-min	0.734 (0.675–0.803)	0.874 (0.805–0.956)	1.04 (0.956–1.13)	1.17 (1.07–1.28)	1.35 (1.23–1.47)	1.50 (1.35–1.63)	1.65 (1.48–1.79)	1.81 (1.60–1.96)	2.02 (1.77–2.19)	2.19 (1.89–2.38)
30-min	1.01 (0.925–1.10)	1.21 (1.11–1.32)	1.48 (1.36–1.61)	1.70 (1.56–1.85)	2.01 (1.82–2.18)	2.26 (2.04–2.45)	2.53 (2.26–2.74)	2.81 (2.49–3.05)	3.22 (2.81–3.49)	3.55 (3.07–3.85)
60-min	1.25 (1.15–1.37)	1.52 (1.40–1.66)	1.89 (1.74–2.07)	2.21 (2.03–2.41)	2.67 (2.43–2.90)	3.06 (2.76–3.32)	3.48 (3.12–3.77)	3.94 (3.50–4.28)	4.61 (4.03–5.01)	5.18 (4.48–5.63)
2-hr	1.48 (1.36–1.62)	1.78 (1.63–1.95)	2.22 (2.03–2.42)	2.58 (2.36–2.82)	3.12 (2.83–3.40)	3.58 (3.22–3.90)	4.08 (3.64–4.43)	4.62 (4.08–5.01)	5.42 (4.71–5.88)	6.09 (5.23–6.62)
3-hr	1.60 (1.48–1.74)	1.93 (1.78–2.10)	2.39 (2.20–2.60)	2.78 (2.55–3.02)	3.34 (3.04–3.62)	3.82 (3.45–4.13)	4.33 (3.88–4.68)	4.88 (4.33–5.28)	5.69 (4.98–6.16)	6.37 (5.50–6.91)
6-hr	1.99 (1.85–2.17)	2.38 (2.21–2.60)	2.92 (2.69–3.18)	3.37 (3.10–3.66)	4.01 (3.67–4.36)	4.56 (4.15–4.95)	5.14 (4.64–5.58)	5.77 (5.16–6.26)	6.67 (5.87–7.24)	7.41 (6.45–8.06)
12-hr	2.48 (2.31–2.68)	2.97 (2.76–3.22)	3.61 (3.35–3.92)	4.15 (3.84–4.50)	4.92 (4.53–5.32)	5.56 (5.09–6.01)	6.23 (5.66–6.73)	6.95 (6.26–7.51)	7.97 (7.09–8.63)	8.82 (7.75–9.57)
24-hr	3.03 (2.85–3.24)	3.62 (3.41–3.88)	4.42 (4.15–4.72)	5.04 (4.72–5.38)	5.89 (5.51–6.28)	6.57 (6.12–6.99)	7.26 (6.74–7.72)	7.96 (7.37–8.47)	8.92 (8.22–9.49)	9.67 (8.87–10.3)
2-day	3.72 (3.49–3.96)	4.44 (4.18–4.75)	5.41 (5.08–5.78)	6.17 (5.79–6.59)	7.21 (6.75–7.68)	8.03 (7.49–8.55)	8.86 (8.24–9.44)	9.71 (9.00–10.3)	10.9 (10.0–11.6)	11.8 (10.8–12.6)
3-day	3.96 (3.72–4.23)	4.74 (4.45–5.06)	5.76 (5.40–6.14)	6.54 (6.13–6.97)	7.58 (7.09–8.07)	8.40 (7.84–8.94)	9.22 (8.58–9.81)	10.0 (9.32–10.7)	11.1 (10.3–11.9)	12.0 (11.0–12.8)
4-day	4.21 (3.96–4.49)	5.04 (4.73–5.37)	6.10 (5.72–6.50)	6.91 (6.47–7.35)	7.96 (7.44–8.47)	8.77 (8.19–9.32)	9.58 (8.92–10.2)	10.4 (9.65–11.0)	11.4 (10.6–12.2)	12.2 (11.3–13.0)
7-day	5.11 (4.81–5.43)	6.10 (5.74–6.47)	7.31 (6.87–7.76)	8.21 (7.72–8.71)	9.38 (8.81–9.95)	10.3 (9.63–10.9)	11.1 (10.4–11.8)	12.0 (11.2–12.7)	13.0 (12.1–13.8)	13.8 (12.8–14.7)
10-day	5.80 (5.49–6.13)	6.89 (6.52–7.29)	8.18 (7.74–8.66)	9.17 (8.66–9.70)	10.5 (9.87–11.1)	11.4 (10.8–12.1)	12.4 (11.6–13.1)	13.3 (12.5–14.1)	14.6 (13.6–15.4)	15.5 (14.4–16.4)
20-day	8.00 (7.58–8.43)	9.45 (8.96–9.95)	11.0 (10.4–11.6)	12.1 (11.4–12.7)	13.4 (12.7–14.2)	14.4 (13.6–15.2)	15.3 (14.5–16.2)	16.2 (15.3–17.1)	17.2 (16.2–18.2)	18.0 (16.9–19.0)
30-day	9.87 (9.40–10.3)	11.6 (11.0–12.2)	13.3 (12.6–13.9)	14.5 (13.8–15.2)	15.9 (15.1–16.7)	16.9 (16.1–17.7)	17.9 (17.0–18.7)	18.7 (17.8–19.6)	19.8 (18.7–20.7)	20.4 (19.3–21.5)
45-day	12.5 (11.9–13.1)	14.6 (13.9–15.3)	16.5 (15.8–17.3)	17.9 (17.1–18.8)	19.6 (18.7–20.5)	20.8 (19.9–21.8)	21.9 (20.9–22.9)	22.9 (21.8–24.0)	24.0 (22.9–25.2)	24.8 (23.6–26.1)
60-day	15.0 (14.3–15.7)	17.5 (16.8–18.3)	19.8 (18.9–20.7)	21.4 (20.5–22.4)	23.4 (22.3–24.4)	24.7 (23.6–25.9)	25.9 (24.7–27.1)	27.0 (25.8–28.3)	28.3 (26.9–29.6)	29.1 (27.7–30.6)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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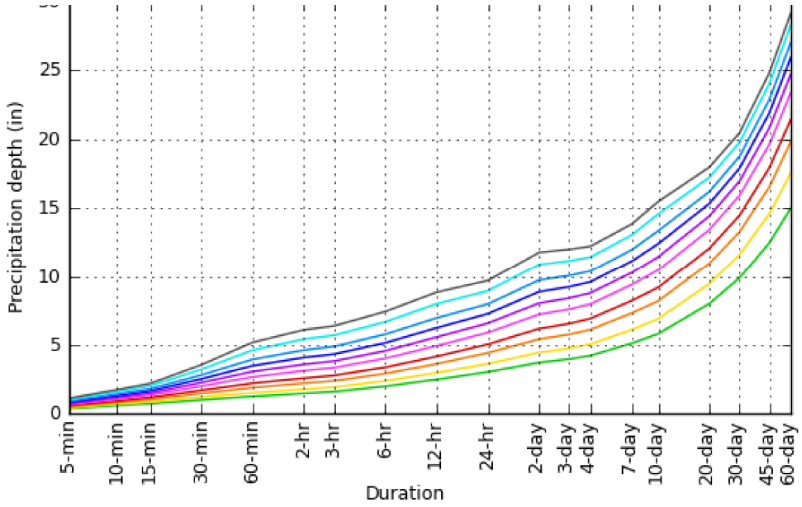
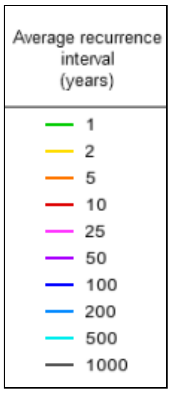
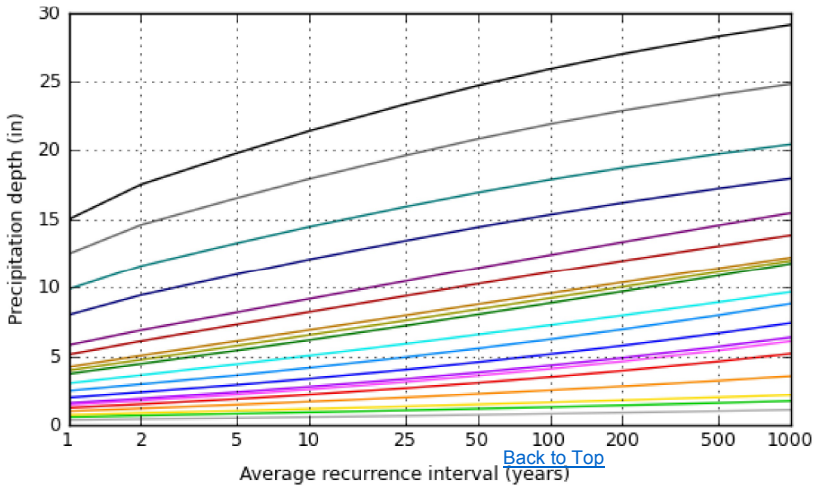
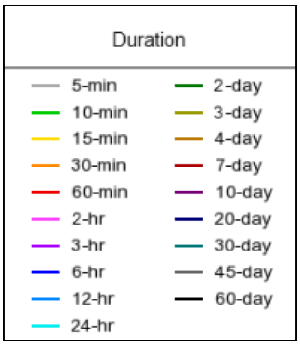
PF graphical









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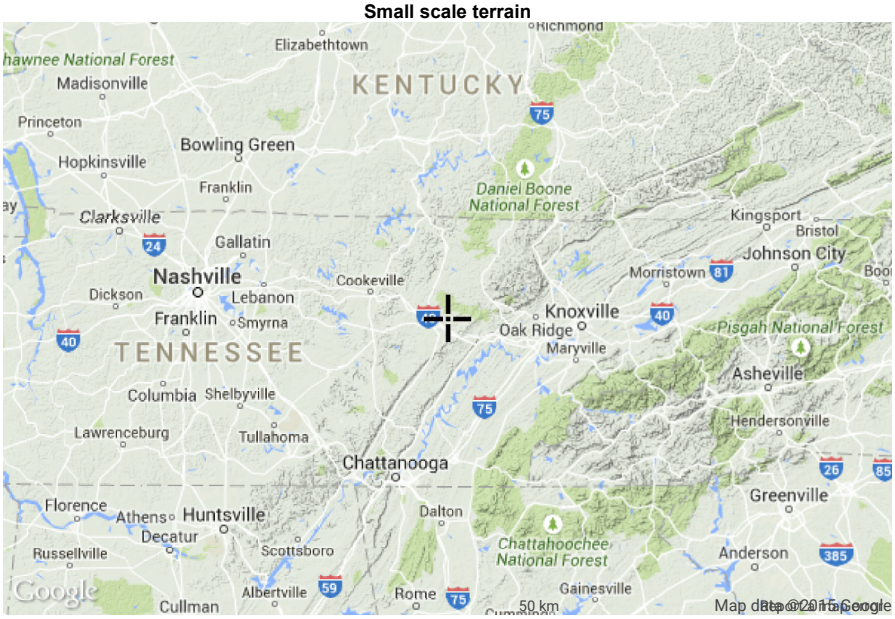
Maps & aerials

NOAA Atlas 14, Volume 2, Version 3

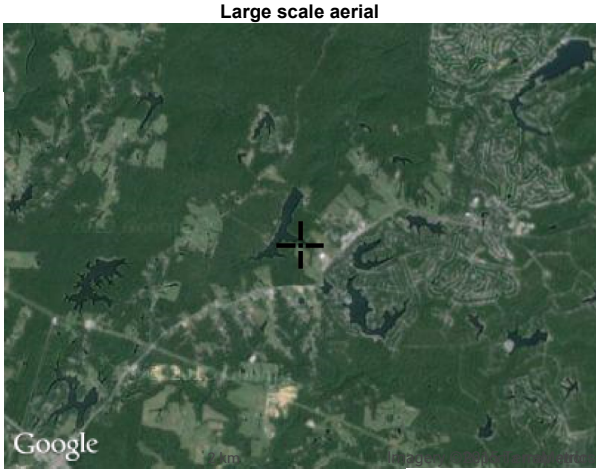
Created (GMT): Tue May 12 15:20:24 2015

Small scale terrain



Large scale terrain

Large scale aerial



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US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
Office of Hydrologic Development
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

Disclaimer

CONSTRUCTION DIVISION
EPSC DELEGATION OF AUTHORITY

In accordance with Section 7.7.3 (Duly Authorized Representative) of the *Tennessee General NPDES Permit for Discharges of Stormwater Associated with Construction Activities*, I _____ (print name of TDOT project supervisor), delegate the reporting responsibility of coordination with the erosion prevention and sediment control (EPSC) inspection services consultant for TDOT contract # _____ to:

Name: _____ (print name of TDOT delegate)

Title: _____

Address: _____

_____

_____

Phone No.: _____

Email Address: _____

I am providing delegation of authority as stated above and confirm that the TDOT delegate stated above has direct knowledge of the subject project and the ability to discuss the reports and recommendations from the EPSC inspection services consultant on the subject project directly to the contractor.

_____ (signature of TDOT Project Supervisor)

_____ (signature of TDOT delegate)

_____ (date)

The EPSC Delegation of Authority shall be submitted to the local TDEC WPC Environmental Field Office (EFO) address (see table below) for record keeping. A copy shall be placed within the on-site SWPPP Documentation and Permits Binder.

EFO	Street Address	Zip Code	EFO	Street Address	Zip Code
Memphis	8383 Wolf Lake Drive, Bartlett	38133	Cookeville	1221 South Willow Ave.	38506
Jackson	1625 Hollywood Drive	38305	Chattanooga	540 McCallie Avenue STE 550	37402
Nashville	711 R S Gass Boulevard	37243	Knoxville	3711 Middlebrook Pike	37921
Columbia	1421 Hampshire Pike	38401	Johnson City	2305 Silverdale Road	37601

TENNESSEE DEPARTMENT OF TRANSPORTATION
EROSION PREVENTION & SEDIMENT CONTROL (EPSC) INSPECTION REPORT

EPSC Inspection Schedule (circle one): 1st Weekly or 2nd Weekly Date of Inspection:_____

Site or Project Name (State Route (SR) / US Route or Road Name and Description):			Are corrective actions required by this inspection report (Yes /No):			Current approximate disturbed acreage:
County(ies):	TDOT PIN:	NPDES Tracking Number: TNR	Number of New Corrective Actions/Deficiencies:	Number of Recurring Corrective Actions/Deficiencies:	Number of New Sediment Releases:	Number of Un-Corrected Sediment Releases:
TDOT Project No.:	TDOT Contract No.:	Contractor:				

Please check the box if the following items are on-site:

☐ Notice of Coverage (NOC) ☐ Stormwater Pollution Prevention Plan (SWPPP) ☐ Twice Weekly Inspection Documentation ☐ Site Contact Information ☐ Rain Gauge(s)

☐ Off-site Reference Rain Gauge Location:_____ Has daily rainfall been checked/documented on the TDOT Monthly Rainfall Log? ☐Yes ☐No

Best Management Practices (BMPs) **Are the Erosion Prevention and Sediment Controls (EPSCs) functioning correctly:** If "No," see attached page(s) for description.				TDOT/Contractor Agrees with EPSC Inspection Report: NO or YES. If No, Explain and initial comment:
1.	Are all applicable (EPSCs) installed and maintained per the SWPPP?	☐Yes	☐No	
2.	Are EPSC's functioning correctly at all disturbed areas/material storage areas per section 4.1.5 of the CGP?	☐Yes	☐No	
3.	Are EPSC's functioning correctly at outfall/discharge points such that there is no objectionable color contrast in the receiving stream, and no other water quality impacts per section 5.3.2 of the CGP?	☐Yes	☐No	
4.	Are EPSC's functioning correctly at ingress/egress points such that there is no evidence of track out?	☐Yes	☐No	
5.	If construction activity at any location on-site has temporarily/permanently ceased, was the area stabilized within 14 days per section 3.5.3.2 of the CGP? If, "No," refer to the attached page(s) for each location and measures taken to stabilize the area(s).	☐Yes	☐No	
6.	Have pollution prevention measures been installed, implemented, and maintained to minimize the discharge of pollutants from equipment and vehicle washing, wheel and wash water and other wash waters per section 4.1.5 of the CGP? If "No," refer to the attached page(s) for measures to be implemented to address deficiencies.	☐Yes	☐No	
7.	If applicable, have discharges from dewatering activities been managed by appropriate controls per Section 4.1.4 of the CGP? If "No," refer to the attached page(s) for measures to be implemented to address deficiencies.	☐N/A ☐Yes	☐No	
8.	If a concrete washout facility is located on site, is it clearly identified on the project and maintained? If "No," refer to the attached page(s) for measures to be implemented to address deficiencies.	☐N/A ☐Yes	☐No	(Additional pages may be attached, if needed)

Certification and Signature (must be signed by the certified inspector and the permittees per Sections 3.5.8.2 (g) and 7.7.2 of the CGP)

This document was prepared in accordance with a system designed to assure that qualified personnel properly gathered and evaluated information presented. Based on my inquiry of the person(s) who manage the system, or those persons directly responsible for gathering the information, I certify that inspections of storm water discharge points (outfalls) and of erosion and sediment controls have been performed and recorded. I certify that erosion and sediment controls in the drainage area of the identified outfall were installed as planned and designed in working order as recorded in the table above. I certify, under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision. The submitted information is to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment. As specified in Tennessee Code annotated section 39-16-702(a) (4), this declaration is made under penalty of perjury.	EPSC Inspector Name, Title and Company (print or type): TN EPSC Certification No.:	Signature:	Date:
	Contractor (Secondary Permittee) Name and Title (print or type):	Signature:	Date:
	TDOT Project Supervisor or Designee (Primary Permittee) Name and Title (print or type):	Signature:	Date:

State/US Route or Road Name: _____ TDOT Project No.: _____ TDOT Contract No.: _____ Date of Inspection: _____

Outfall Name or Station No.	Rain Gauge No.	Approx. Station No. From/To	LT, RT, or CL	Date Last Disturbed	Date of Stabilization and Code T=Temporary P=Permanent	Existing EPSC Control Measures Codes *	Current Condition Codes *	Objectionable Color Contrast Discharge to Receiving Stream or Other Water Quality Impacts? Y, N, N/A	Corrective Action(s) or Comment(s)

EROSION PREVENTION AND SEDIMENT CONTROL MEASURE CODES

1. Temporary Silt Fence
2. Temporary Diversion Berm or Ditch
3. Temporary Slope Drain
4. Rock Check Dams
5. Brush Barrier
6. Sediment Removal
7. Rock Filter Ring / Rock Ring
8. Sand Bags
9. Sediment Trap / Basin
10. Temporary Sediment Filter Bag / Dewatering
11. Polyethylene Sheeting
12. Machined Rip Rap
13. Geotextile
14. Permanent Seeding with Mulch or Sod
15. Temporary Seeding with Mulch
16. Temporary Mulching
17. Erosion Control Blanket
18. Flexible Channel Liner
19. Catch Basin / Storm Inlet Protection
20. Riprap Outlet Structure
21. Riprap Energy / Velocity Dissipater
22. Curb, Gutter, or Storm Sewer Protection
23. Temporary Construction Exit / Entrance
24. Temporary Stream Crossing
25. Turbidity Barrier / Silt Boom
26. Temporary Stream Diversion
27. Preserve Natural Resource / Buffer Zone
28. Mineral Aggregate Base on Subgrade
29. Excess Dirt Removed from Rdwy. Daily
30. Haul Roads Dampened for Dust Control
31. Ditch Liner
32. Rock Silt Screen
33. Temporary Silt Fence with Backing
34. Enhanced Silt Fence
35. Sediment Tube
36. Sediment Dam
37. Concrete Washout, other pollution issues
38. Berm (soil, riprap, rock)
39. Gabion
40. Sheet Piling
41.
42.

CONDITION CODES

A Active (Under Construction)
C Cleaning Needed-Maintenance
FM Future Maintenance
FS Final Stabilized
I Increase Measures
R Repair and/or Replace-Maintenance
RO Repeat Occurrence
SR Sediment Release
S Stable (No Action Needed)
U Upgrade Needed (Failure Noted)
W Too Wet to Work Conditions
Other (#1): _____
Other (#2): _____
Other (#3): _____

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
Division of Water Resources
William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 11th Floor, Nashville, Tennessee 37243
1-888-891-8332 (TDEC)

Notice of Intent (NOI) for General NPDES Permit for Stormwater Discharges from Construction Activities (TNR100000)

Site or Project Name: PIN 100268.01 & 100268.03, Project No. 18038-1230-04	**Existing NPDES Tracking Number: TNR**
Street Address or Location: SR-101 (From Fire Tower Road to near Lakeview Drive)	Start date: June 2015
	Estimated end date: June 2020
Site Activity Description: SR-101 From 325 feet east of Graysville Road To 900 feet east of Bell-Air Road including relocated 161KV Electric Line	Latitude (dd.dddd): Roadway: 35.9930 Electric Line: 36.0008
	Longitude (dd.dddd): Roadway: -84.9403 Electric Line: -84.9309
County(ies): Cumberland / MS4 Jurisdiction: TDOT	Acres Disturbed: Roadway: 67.6 Electric Line: 51.2
	Total Acres: Roadway: 67.6 Electric Line: 63.79

Does a topographic map show dotted or solid blue lines ■ and/or wetlands ■ on or adjacent to the construction site?
If wetlands are located on-site and may be impacted, attach wetlands delineation report.
If an Aquatic Resource Alteration Permit has been obtained for this site, what is the permit number? ARAP permit No.: Pending

Receiving waters: Unnamed Tributaries to North Creek, Cherry Branch, Brown Creek, and Otter Creek

Attach the SWPPP with the NOI ■ SWPPP Attached | Attach a site location map ■ Map Attached

Site Owner/Developer Entity (*Primary Permittee* - person, company, or legal entity that has operational or design control over construction plans and specifications): Tennessee Department of Tranportation

Site Owner/Developer Signatory (V.P. level/higher - individual responsible for site - signs certification below): Jim Ozment		Signatory's Title or Position (V.P. level/higher - signs certification below): Director - Environmental Division	
Mailing Address: 900 James K. Polk Bldg., 505 Deaderick Street		City: Nashville	State: TN Zip: 37243-0334
Phone: 615-741-5373	Fax: 615-741-1098	E-mail: Environmental.NPDES.TDOT@tn.gov	

Optional Contact: Khalid Ahmed		Title or Position: Senior Transportation Specialist	
Mailing Address: 900 James K. Polk Bldg., 505 Deaderick Street		City: Nashville	State: TN Zip: 37243-0334
Phone: 615-253-0021	Fax: 615-741-1098	E-mail: Khalid.Ahmed@tn.gov	

Owner or Developer Certification (must be signed by president, vice-president or equivalent, or ranking elected official) (Primary Permittee)

I certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision. The submitted information is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

Owner or Developer Name: (print or type) Jim Ozment	Signature:	Date:

Contractor(s) Certification (must be signed by president, vice-president or equivalent, or ranking elected official) (Secondary Permittee)

I certify under penalty of law that I have reviewed this document, any attachments, and the SWPPP referenced above. Based on my inquiry of the construction site owner/developer identified above and/or my inquiry of the person directly responsible for assembling this NOI and SWPPP, I believe the information submitted is accurate. I am aware that this NOI, if approved, makes the above-described construction activity subject to NPDES permit number TNR100000, and that certain of my activities on-site are thereby regulated.

Contractor company name (print or type):			
Contractor signatory (print/type): (V.P. level or higher)		Signature:	Date:
Mailing Address:		City: State:	Zip:
Phone:	Fax:	E-mail:	

Other Contractor company name (print or type):			
Other Contractor signatory (print/type): (V.P. level or higher)		Signature:	Date:
Mailing Address:		City: State:	Zip:
Phone:	Fax:	E-mail:	

OFFICIAL STATE USE ONLY

Received Date:	Reviewer:	Field Office:	Permit Number **TNR**	Exceptional TN Water:
Fee(s):	T & E Aquatic Flora and Fauna:		Impaired Receiving Stream:	Notice of Coverage Date:

Notice of Intent (NOI) for General NPDES Permit for Stormwater Discharges from Construction Activities (TNR100000)

Purpose of this form: A completed notice of intent (NOI) must be submitted to obtain coverage under the Tennessee General NPDES Permit for Discharges of Stormwater Associated with Construction Activity (permit). **Requesting coverage under this permit means that an applicant has obtained and examined a copy of this permit, and thereby acknowledges applicant's claim of ability to be in compliance with permit terms and conditions.** This permit is required for stormwater discharge(s) from construction activities including clearing, grading, filling and excavating (including borrow pits) of one or more acres of land. This form should be submitted at least 30 days prior to the commencement of land disturbing activities, or no later than 48 hours prior to when a new operator assumes operational control over site specifications or commences work at the site.

Permit application fee: (see table below) must accompany the NOI and is based on total acreage to be disturbed by an entire project, including any associated construction support activities (e.g. equipment staging yards, material storage areas, excavated material disposal areas, borrow or waste sites).

Acres Disturbed	= or > 150 acres	= or > 50 < 150 acres	= or > 20 < 50 acres	= or > 5 < 20 acres	= or > 1 < 5 acres	Subsequent coverage*
Fee	$10,000	$6,000	$3,000	$1,000	$250	$100

*Subsequent Primary Operators seeking coverage under an actively covered larger common plan of development or sale

Who must submit the NOI form: Per Section 2 of the permit, all site operators must submit an NOI form. "Operator" for the purpose of this permit and in the context of stormwater associated with construction activity means any person associated with a construction project who meets either or both of the following two criteria: (1) The person has operational or design control over construction plans and specifications, including the ability to make modifications to those plans and specifications. This person is typically the owner or developer of the project or a portion of the project (e.g. subsequent builder), or the person that is the current land owner of the construction site. This person is considered the primary permittee; or (2) The person has day-to-day operational control of those activities at a project which are necessary to ensure compliance with a SWPPP for the site or other permit conditions. This person is typically a contractor or a commercial builder who is hired by the primary permittee, and is considered a secondary permittee.

Owners, developers and all contractors that meet the definition of the operator in subsection 2.2 of the permit shall apply for permit coverage on the same NOI, insofar as possible. After permit coverage has been granted to the primary permittee, any subsequent NOI submittals must include the site's previously assigned permit tracking number and the project name. The comprehensive site-specific SWPPP shall be prepared in accordance with the requirements of part 3 of the permit and must be submitted with the NOI unless the NOI being submitted is to only add a contractor (secondary permittee) to an existing coverage.

Notice of Coverage: The division will review the NOI for completeness and accuracy and prepare a notice of coverage (NOC). Stormwater discharge from the construction site is authorized as of the effective date of the NOC.

Complete the form: Type or print clearly, using ink and not markers or pencil. Answer each item or enter "NA," for not applicable, if a particular item does not fit the circumstances or characteristics of your construction site or activity. If you need additional space, attach a separate piece of paper to the NOI form. **The NOI will be considered incomplete without a permit fee, a map, and the SWPPP.**

Describe and locate the project: Use the legal or official name of the construction site. If a construction site lacks street name or route number, give the most accurate geographic information available to describe the location (reference to adjacent highways, roads and structures; e.g. intersection of state highways 70 and 100). Latitude and longitude (expressed in decimal degrees) of the center of the site can be located on USGS quadrangle maps. The quadrangle maps can be obtained at the USGS World Wide Web site: http://www.usgs.gov/; latitude and longitude information can be found at numerous other web sites. Attach a copy of a portion of a 7.5 minute quad map, showing location of site, with boundaries at least one mile outside the site boundaries. Provide estimated starting date of clearing activities and completion date of the project, and an estimate of the number of acres of the site on which soil will be disturbed, including borrow areas, fill areas, stockpiles and the total acres. For linear projects, give location at each end of the construction area.

MS4 Jurisdiction: If this construction site is located within a Municipal Separate Storm Sewer System (MS4), please list name of MS4. A current list of MS4s in Tennessee may be found at http://www.state.tn.us/environment/water/water-quality_storm-water.shtml

Give name of the receiving waters: Trace the route of stormwater runoff from the construction site and determine the name of the river(s), stream(s), creek(s), wetland(s), lake(s) or any other water course(s) into which the stormwater runoff drains. Note that the receiving water course may or may not be located on the construction site. If the first water body receiving construction site runoff is unnamed ("unnamed tributary"), determine the name of the water body that the unnamed tributary enters.

ARAP permit may be required: **If your work will disturb or cause alterations of a stream or wetland, you must obtain an appropriate Aquatic Resource Alteration Permit (ARAP).** If you have a question about the ARAP program or permits, contact your local Environmental Field Office (EFO).

Submitting the form and obtaining more information: Note that this form must be signed by the company President, Vice-President, or a ranking elected official in the case of a municipality, for details see subpart 2.5. For more information, contact your local EFO at the toll-free number 1-888-891-8332 (TDEC). Submit the completed NOI form (keep a copy for your records) to the appropriate EFO for the county(ies) where the construction activity is located, addressed to **Attention: Stormwater NOI Processing**.

EFO	**Street Address**	**Zip Code**	**EFO**	**Street Address**	**Zip Code**
Memphis	8383 Wolf Lake Drive, Bartlett	38133-4119	Cookeville	1221 South Willow Ave.	38506
Jackson	1625 Hollywood Drive	38305-4316	Chattanooga	540 McCallie Avenue STE 550	37402-2013
Nashville	711 R S Gass Boulevard	37243	Knoxville	3711 Middlebrook Pike	37921
Columbia	1421 Hampshire Pike	38401	Johnson City	2305 Silverdale Road	37601

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

INDEX OF SHEETS

SEE SHEET NO. 1A FOR INDEX

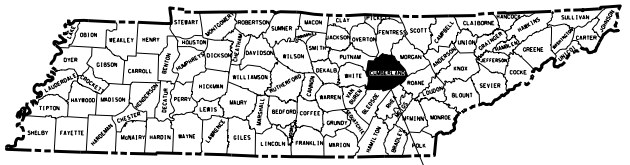
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

TENN.	YEAR	SHEET NO.
	2015	1
FED. AID PROJ. NO.	STP-101(16)	
STATE PROJ. NO.	18038-3240-14	

CUMBERLAND COUNTY

SR-101 (PEAVINE ROAD)

CONST. PHASE 1 -- FROM FIRE TOWER ROAD TO NEAR LAKEVIEW DRIVE



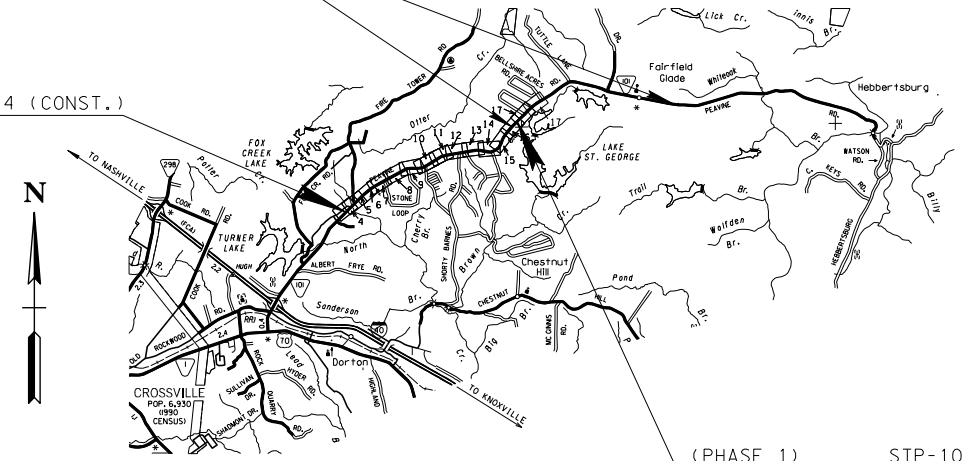
RESURFACING, GRADE, DRAIN, BASE, PAVE, GUARDRAIL, PAVEMENT MARKINGS, AND STRUCTURES

CONSTRUCTION: PHASE 1

STATE HIGHWAY NO. 101 F.A.H.S. NO. 101

(PHASE 2)(R.O.W.)
PROJECT NO. STP.101-(17)
STA. 213+00.00 TO STA. 355+10.00

(PHASE 1) STP-101(16)
BEGIN PROJECT NO. 18038-3240-14 (CONST.)
STA. 58+86.00



(PHASE 1) STP-101(16)
END PROJECT NO. 18038-3240-14 (CONST.)
STA 218+62.00

0 5000' 10000' 15000'

SCALE: 1"= 5000'

PHASE 1-	ROADWAY LENGTH	3.025 MILES
	BRIDGE LENGTH	0.000 MILES
	BOX BRIDGE LENGTH	0.000 MILES
	PROJECT LENGTH	3.025 MILES

TRAFFIC DATA	
ADT (2013)	14,640
ADT (2033)	18,640
DHV (2033)	1,864
D	55 - 45
T (ADT)	2 %
T (DHV)	1 %
V	50 MPH

NO EXCLUSIONS
NO EQUATIONS

SEALED BY
UNOFFICIAL SET
NOT FOR BIDDING

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

DATE:

APPROVED:
JOHN SCHROER, COMMISSIONER

SPECIAL NOTES

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

THIS PROJECT TO BE CONSTRUCTED UNDER THE STANDARD SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION DATED MARCH 1, 2006 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS AND IN THE PROPOSAL CONTRACT.

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

DESIGNER JASON INGRAM, P.E. DESIGNER CARL PERRY/GREG TAYLOR P.E.

P.E. NO. 18038-1230-04

PIN NO. 100268.01

SURVEY:

07-23-09
05-27-10
05-29-11
12-07-11
02-13-12
03-27-12
07-20-12
05-08-13

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR DATE

20-OCT-2014 14:09
K:\J02WFO\tdot\state.tn.us\025shared\Design County Folders\Cumberland\SR101fairfield glade (de\SR101sheet files\Phase 1Sheets\CUM1.00_PHASE1-CONST.sht

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

INDEX OF SHEETS

SEE SHEET NO. 1 FOR INDEX

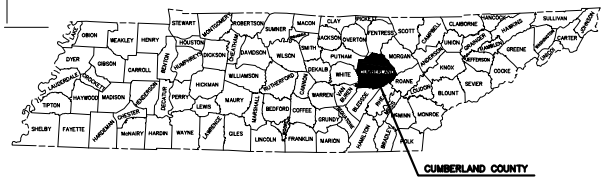
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

TENN.	YEAR	SHEET NO.
	2015	0
FED. AID PROJ. NO.	STP-101(21)	
STATE PROJ. NO.	18038-3241-14	

CUMBERLAND COUNTY

SR-101 (PEAVINE ROAD)

FROM FIRE TOWER ROAD TO EAST OF
WESTCHESTER DRIVE/ CATOOSA BOULEVARD
IN FAIRFIELD GLADE

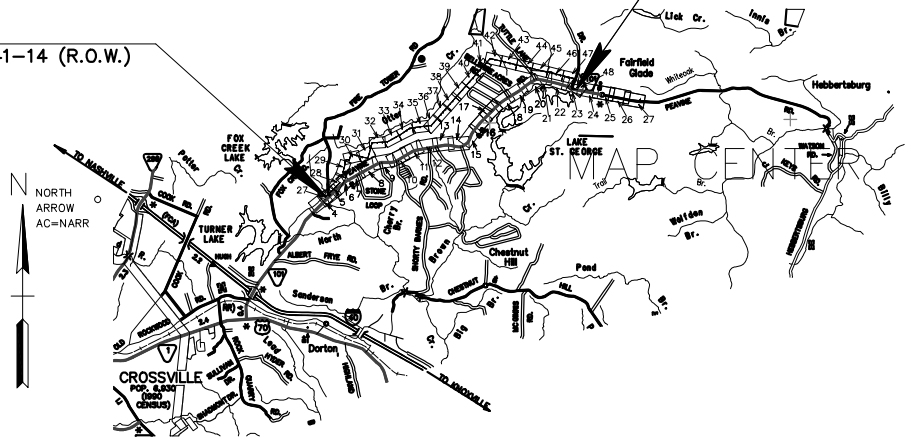


CONSTRUCTION

STATE HIGHWAY NO. 101 F.A.H.S. NO. 101

STA. 282+39.136
END PROJECT NO. 18038-3241-14 (R.O.W.)
STA. 307+68.39 S.R. 101

STA. 00+00.00
BEGIN PROJECT NO. 18038-3241-14 (R.O.W.)
STA. 67+99.1098 S.R. 101



SCALE: 1"= 5000

NO EXCLUSIONS
NO EQUATIONS

APPROVED:
CHIEF ENGINEER
DATE:
APPROVED:
COMMISSIONER

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED:
DIVISION ADMINISTRATOR DATE

SPECIAL NOTES

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

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

TDOT ROAD SP. SV. 2 ROBERT RODGERS

DESIGNER BRIAN KING / JOHN PANKEY

P.E. NO. 18038-1230-04

PIN NO. 100268.01 & 100268.02

EASEMENT LENGTH 5.418 MILES

N

N 35.9930°
W 84.9403°

Begin Project STA No. 58+86.00

Legend

- # Outfalls
- Right of Way

STORMWATER POLLUTION PREVENTION PLAN

SITE LOCATION MAP

SR- 101;
From Fire Tower Road
to Near Lakeview Drive

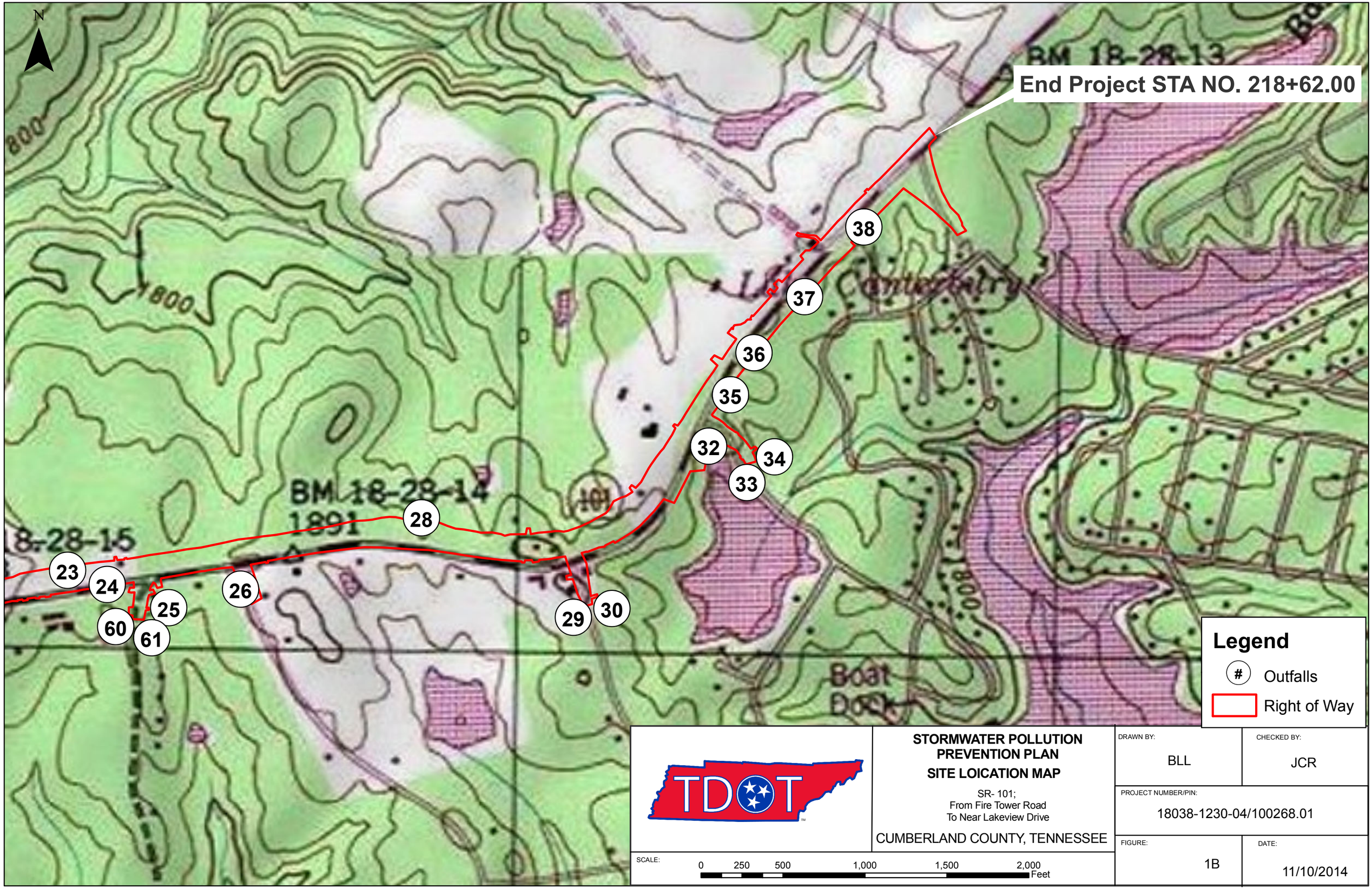
CUMBERLAND COUNTY, TENNESSEE

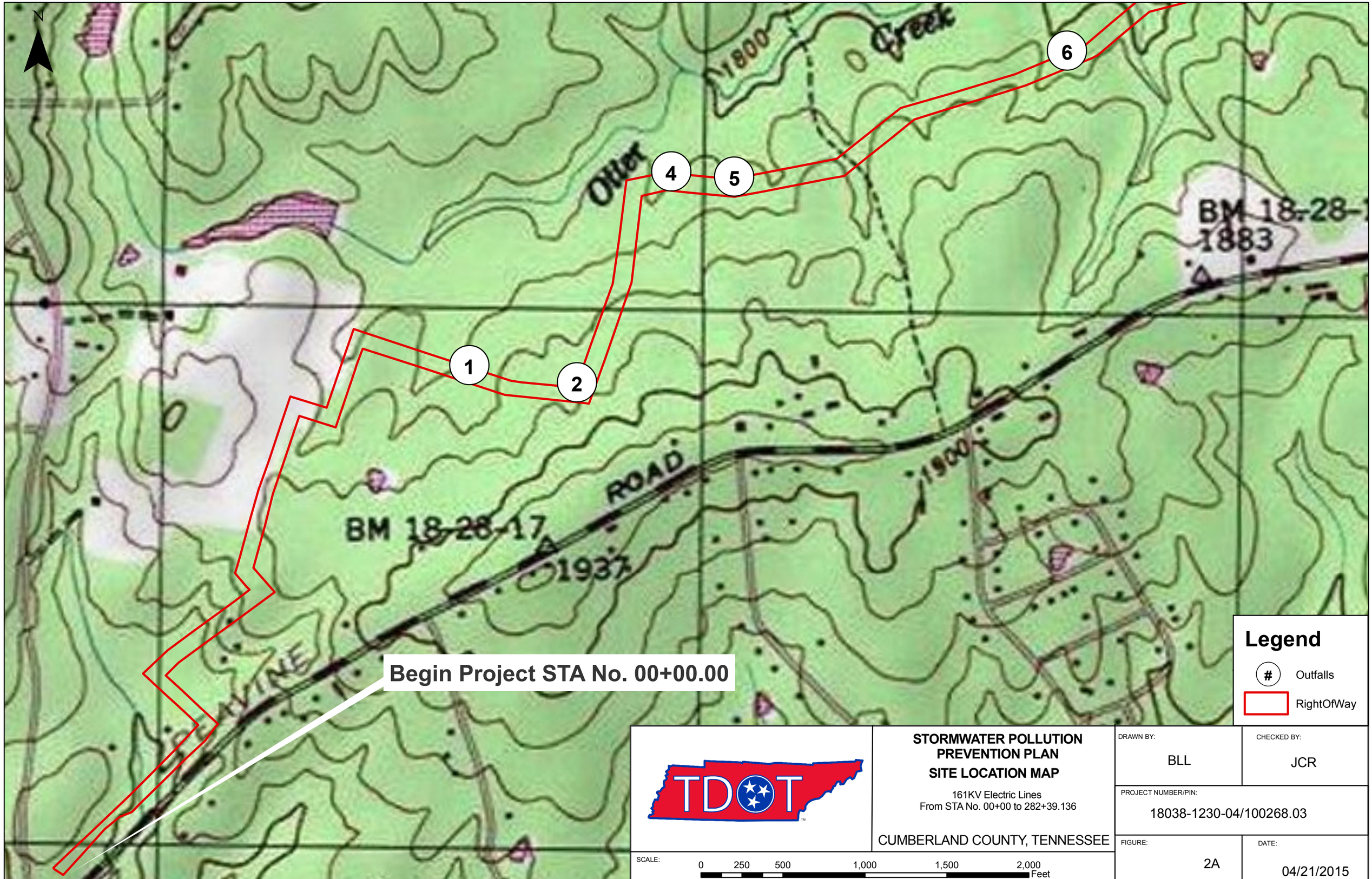
SCALE: 0 250 500 1,000 1,500 2,000 Feet

DRAWN BY:	CHECKED BY:
BLL	JCR

PROJECT NUMBER/PIN: 18038-1230-04/100268.01

FIGURE:	DATE:
1A	11/10/2014


N
End Project STA NO. 218+62.00
BM 18-28-13
BM 18-28-14
1891
8-28-15
101
Boat Dock
23
24
25
26
28
29
30
32
33
34
35
36
37
38
60
61
Legend
Outfalls
Right of Way
TDOT
STORMWATER POLLUTION PREVENTION PLAN
SITE LOICATION MAP
SR- 101;
From Fire Tower Road
To Near Lakeview Drive
CUMBERLAND COUNTY, TENNESSEE
SCALE:
0 250 500 1,000 1,500 2,000 Feet
DRAWN BY: BLL
CHECKED BY: JCR
PROJECT NUMBER/PIN: 18038-1230-04/100268.01
FIGURE: 1B
DATE: 11/10/2014


N
Creek
1800
Otter
1
2
4
5
6
BM 18-28-1
1883
ROAD
1900
BM 18-28-17
1937
Begin Project STA No. 00+00.00
Legend
Outfalls
RightOfWay
TDOT
STORMWATER POLLUTION PREVENTION PLAN
SITE LOCATION MAP
161KV Electric Lines
From STA No. 00+00 to 282+39.136
CUMBERLAND COUNTY, TENNESSEE
DRAWN BY:
BLL
CHECKED BY:
JCR
PROJECT NUMBER/PIN:
18038-1230-04/100268.03
FIGURE:
2A
DATE:
04/21/2015
SCALE:
0
250
500
1,000
1,500
2,000
Feet

N

2021

1800

Otter

1900

9

8

7

N 36.0008°
W 84.9309°

BM 18-21

Legend

Outfalls

RightOfWay

TDOT

STORMWATER POLLUTION PREVENTION PLAN

SITE LOCATION MAP

161KV Electric Lines
From STA No. 00+00 to 282+39.136

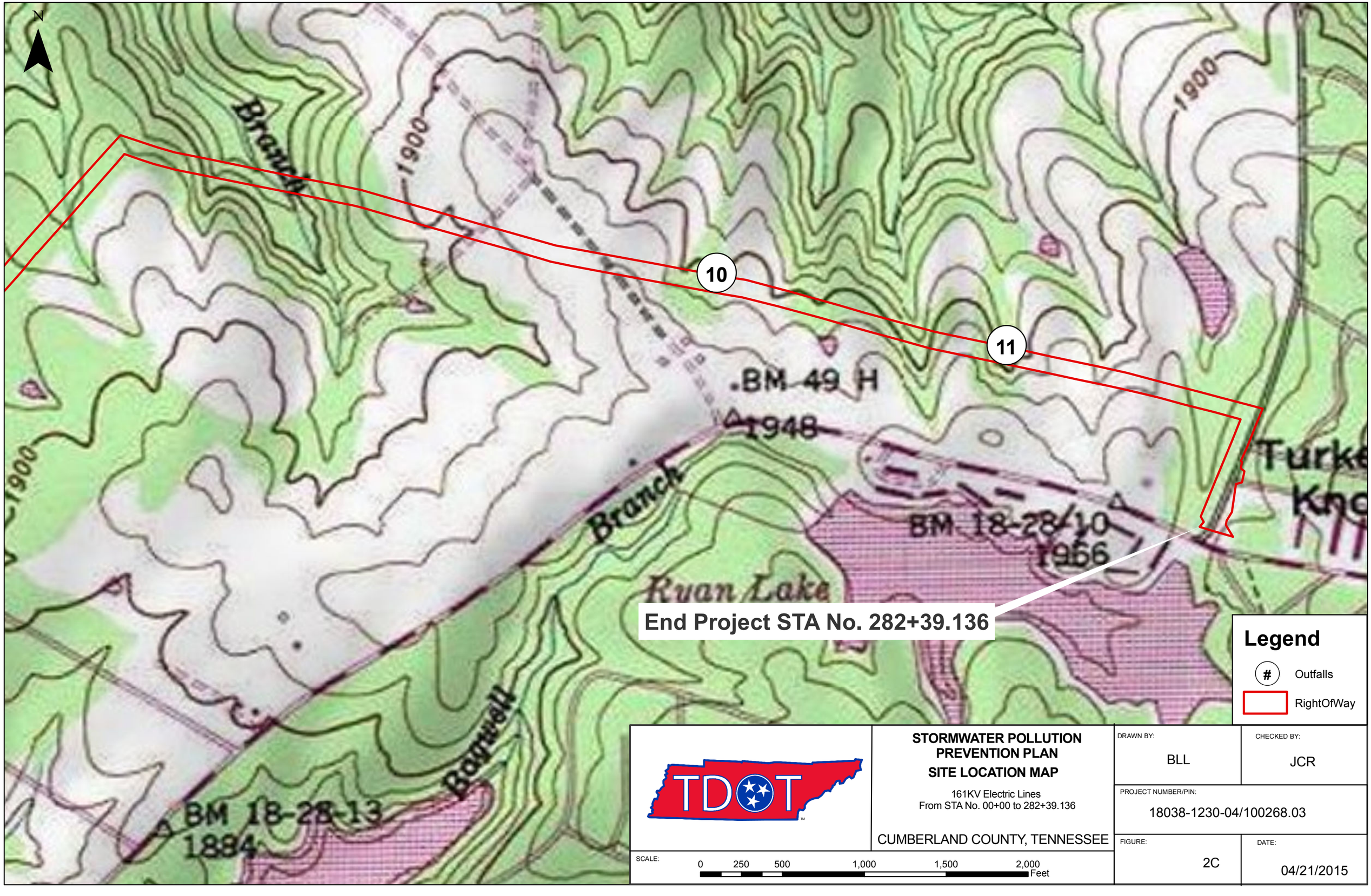
CUMBERLAND COUNTY, TENNESSEE

SCALE: 0 250 500 1,000 1,500 2,000 Feet

DRAWN BY:	CHECKED BY:
BLL	JCR

PROJECT PIN: 18038-1230-04/100268.03

FIGURE:	DATE:
2B	04/21/2015



TDOT

STORMWATER POLLUTION PREVENTION PLAN

SITE LOCATION MAP

161KV Electric Lines
From STA No. 00+00 to 282+39.136

CUMBERLAND COUNTY, TENNESSEE

SCALE: 0 250 500 1,000 1,500 2,000 Feet

DRAWN BY:	CHECKED BY:
BLL	JCR

PROJECT NUMBER/PIN: 18038-1230-04/100268.03

FIGURE:	DATE:
2C	04/21/2015

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC)
Division of Water Resources
William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Ave., 11th Floor, Nashville, TN 37243
1-888-891-TDEC (8332)

Notice of Termination (NOT) for General NPDES Permit for Stormwater Discharges from Construction Activities (CGP)

This form is required to be submitted when requesting termination of coverage from the CGP. The purpose of this form is to notify the TDEC that either all stormwater discharges associated with construction activity from the portion of the identified facility where you, as an operator, have ceased or have been eliminated; or you are no longer an operator at the construction site. Submission of this form shall in no way relieve the permittee of permit obligations required prior to submission of this form. Please submit this form to the TDEC Nashville, TN address depicted below. For more information, contact your local EFO at the toll-free number 1-888-891-8332 (TDEC).

Type or print clearly, using ink.

Site or Project Name:	**NPDES Tracking Number: TNR**
Street Address or Location:	County(ies):

Name of Permittee Requesting Termination of Coverage: Tennessee Department of Transportation			
Permittee Contact Name:	Title or Position:		
Mailing Address:	City:	State:	Zip:
Phone: ( )	E-mail:		

Check the reason(s) for termination of permit coverage:

☐	Stormwater discharge associated with construction activity is no longer occurring and the permitted area has a uniform 70% permanent vegetative cover OR has equivalent measures such as rip rap or geotextiles, in areas not covered with impervious surfaces.
☐	You are no longer the operator at the construction site (i.e., termination of site-wide, primary or secondary permittee coverage).

Certification and Signature: (must be signed by president, vice-president or equivalent ranking elected official)

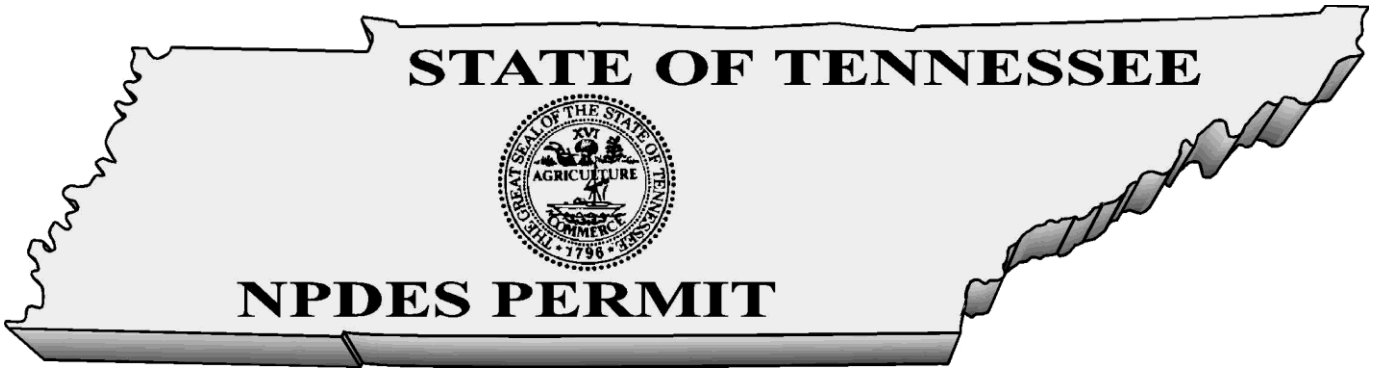
I certify under penalty of law that either: (a) all stormwater discharges associated with construction activity from the portion of the identified facility where I was an operator have ceased or have been eliminated or (b) I am no longer an operator at the construction site. I understand that by submitting this notice of termination, I am no longer authorized to discharge stormwater associated with construction activity under this general permit, and that discharging pollutants in stormwater associated with construction activity to waters of the United States is unlawful under the Clean Water Act where the discharge is not authorized by a NPDES permit. I also understand that the submittal of this notice of termination does not release an operator from liability for any violations of this permit or the Clean Water Act.

For the purposes of this certification, elimination of stormwater discharges associated with construction activity means that all stormwater discharges associated with construction activities from the identified site that are authorized by a NPDES general permit have been eliminated from the portion of the construction site where the operator had control. Specifically, this means that all disturbed soils at the portion of the construction site where the operator had control have been finally stabilized, the temporary erosion and sediment control measures have been removed, and/or subsequent operators have obtained permit coverage for the site or portions of the site where the operator had control.

I certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision. The submitted information is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

Permittee name (print or type):	Signature:	Date:

Tennessee Department of Environment and Conservation
Division of Water Resources
Attn: Storm Water NOI Processing
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, TN 37243



GENERAL NPDES PERMIT
FOR DISCHARGES OF STORMWATER
ASSOCIATED WITH CONSTRUCTION ACTIVITIES

PERMIT NO. TNR100000

Under authority of the Tennessee Water Quality Control Act of 1977 (T.C.A. 69-3-101 et seq.) and the authorization by the United States Environmental Protection Agency under the Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977 (33 U.S.C. 1251, et seq.) and the Water Quality Act of 1987, P.L. 100-4, including special requirements as provided in part 5.4 (Discharges into Impaired or Exceptional Tennessee Waters) of this general permit, operators of point source discharges of stormwater associated with construction activities into waters of the State of Tennessee, are authorized to discharge stormwater associated with construction activities in accordance with the following permit monitoring and reporting requirements, effluent limitations, and other provisions as set forth in parts 1 through 10 herein, from the subject outfalls to waters of the State of Tennessee.

This permit is issued on: **May 23, 2011**

This permit is effective on: **May 24, 2011**

This permit expires on: **May 23, 2016**

for Paul E. Davis, P.E., Director
Division of Water Pollution Control

CN-0759 RDAs 2352 and 2366

Tennessee General Permit No. TNR100000
Stormwater Discharges Associated with Construction Activities

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APPENDIX A – Notice of Intent (NOI) Form
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1. COVERAGE UNDER THIS GENERAL PERMIT

1.1. Permit Area

This construction general permit (CGP) covers all areas of the State of Tennessee.

1.2. Discharges Covered by this Permit

1.2.1. Stormwater discharges associated with construction activities

This permit authorizes point source discharges of stormwater from construction activities including clearing, grading, filling and excavating (including borrow pits and stockpile/material storage areas containing erodible material), or other similar construction activities that result in the disturbance of one acre or more of total land area. Projects or developments of less than one acre of land disturbance are required to obtain authorization under this permit if the construction activities at the site are part of a larger common plan of development or sale that comprise at least one acre of land disturbance. One or more site operators must maintain coverage under this permit for all portions of a site that have not been finally stabilized.

Projects or developments of less than one acre of total land disturbance may also be required to obtain authorization under this permit if:

a) the director has determined that the stormwater discharge from a site is causing, contributing to, or is likely to contribute to a violation of a state water quality standard;
b) the director has determined that the stormwater discharge is, or is likely to be a significant contributor of pollutants to waters of the state, or
c) changes in state or federal rules require sites of less than one acre that are not part of a larger common plan of development or sale to obtain a stormwater permit.

Note: Any discharge of stormwater or other fluid to an improved sinkhole or other injection well, as defined, must be authorized by permit or rule as a Class V underground injection well under the provisions of TDEC Rules, Chapter 1200-4-6.

1.2.2. Stormwater discharges associated with construction support activities

This permit also authorizes stormwater discharges from support activities associated with a permitted construction site (e.g., concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, borrow areas) provided all of the following are met:

a) the support activity is primarily related to a construction site that is covered under this general permit;
b) the operator of the support activity is the same as the operator of the construction site;
c) the support activity is not a commercial operation serving multiple unrelated construction projects by different operators;
d) the support activity does not operate beyond the completion of the construction activity of the last construction project it supports; and

e) support activities are identified in the Notice of Intent (NOI) and the Stormwater Pollution Prevention Plan (SWPPP). The appropriate erosion prevention and sediment controls and measures applicable to the support activity shall be described in a comprehensive SWPPP covering the discharges from the support activity areas.

TDOT projects shall be addressed in the Waste and Borrow Manual per the Statewide Stormwater Management Plan (SSWMP). Stormwater discharges associated with support activities that have been issued a separate individual permit or an alternative general permit are not authorized by this general permit. This permit does not authorize any process wastewater discharges from support activities. Process wastewater discharges from support activities must be authorized by an individual permit or other appropriate general permit.

1.2.3. Non-stormwater discharges authorized by this permit

The following non-stormwater discharges from active construction sites are authorized by this permit provided the non-stormwater component of the discharge is in compliance with section 3.5.9 below (*Pollution prevention measures for non-stormwater discharges*):

a) dewatering of work areas of collected stormwater and ground water (filtering or chemical treatment may be necessary prior to discharge);
b) waters used to wash vehicles (of dust and soil, not process materials such as oils, asphalt or concrete) where detergents are not used and detention and/or filtering is provided before the water leaves site;
c) water used to control dust in accordance with section 3.5.5 below;
d) potable water sources including waterline flushings from which chlorine has been removed to the maximum extent practicable;
e) routine external building washdown that does not use detergents or other chemicals;
f) uncontaminated groundwater or spring water; and
g) foundation or footing drains where flows are not contaminated with pollutants (process materials such as solvents, heavy metals, etc.).

All non-stormwater discharges authorized by this permit must be free of sediment or other solids and must not cause erosion of soil or the stream bank, or result in sediment impacts to the receiving stream.

1.2.4. Other NPDES-permitted discharges

Discharges of stormwater or wastewater authorized by and in compliance with a different NPDES permit (other than this permit) may be mixed with discharges authorized by this permit.

1.3. Limitations on Coverage

Except for discharges from support activities, as described in section 1.2.2 above and certain non-stormwater discharges listed in section 1.2.3 above, all discharges covered by this permit shall be composed entirely of stormwater. This permit does not authorize the following discharges:

a) Post-Construction Discharges (Permanent Stormwater Management) - Stormwater discharges associated with construction activity that originate from the construction site

after construction activities have been completed, the site has undergone final stabilization, and the coverage under this permit has been terminated.

b) Discharges Mixed with Non-Stormwater - Discharges that are mixed with sources of non-stormwater, other than discharges which are identified in section 1.2.4 above (*Other NPDES-permitted discharges*) and in compliance with section 3.5.9 below (*Pollution prevention measures for non-stormwater discharges*) of this permit.

c) Discharges Covered by Another Permit - Stormwater discharges associated with construction activity that have been issued an individual permit in accordance with subpart 7.12 below (*Requiring an Individual Permit*).

d) Discharges Threatening Water Quality - Stormwater discharges from construction sites, that the director determines will cause, have the reasonable potential to cause, or contribute to violations of water quality standards. Where such determination has been made, the discharger will be notified by the director in writing that an individual permit application is necessary as described in subpart 7.12 below (*Requiring an Individual Permit*). However, the division may authorize coverage under this permit after appropriate controls and implementation procedures have been included in the SWPPP that are designed to bring the discharge into compliance with water quality standards.

e) Discharges into Impaired Streams – This permit does not authorize discharges that would add loadings of a pollutant that is identified as causing or contributing to the impairment of a water body on the list of impaired waters. Impaired waters means any segment of surface waters that has been identified by the division as failing to support its designated classified uses. Compliance with the additional requirements set forth in sub-part 5.4 is not considered as contributing to loadings to impaired waters or degradation unless the division determines upon review of the SWPPP that there is a reason to limit coverage as set forth in paragraph d) above and the SWPPP cannot be modified to bring the site into compliance.

f) Discharges into Outstanding National Resource Waters - The director shall not grant coverage under this permit for discharges into waters that are designated by the Water Quality Control Board as Outstanding National Resource Waters (ONRWs). Designation of ONRWs are made according to TDEC Rules, Chapter 1200-4-3-.06.

g) Discharges into Exceptional Quality Waters - The director shall not grant coverage under this permit for potential discharges of pollutants which would cause degradation to waters designated by TDEC as exceptional quality waters (see sub-part 5.4 (Discharges into Impaired or Exceptional Tennessee Waters for additional permit requirements). Compliance with the additional requirements set forth in sub-part 5.4 is not considered as contributing to loadings to exceptional quality waters or degradation unless the division determines upon review of the SWPPP that there is a reason to limit coverage as set forth in paragraph d) above and the SWPPP cannot be modified to bring the site into compliance. Identification of exceptional quality waters is made according to TDEC Rules, Chapter 1200-4-3-.06.

h) Discharges Not Protective of Federal or State listed Threatened and Endangered Species, Species Deemed in Need of Management or Special Concern Species - Stormwater discharges and stormwater discharge-related activities that are not protective of legally protected listed or proposed threatened or endangered aquatic fauna or flora (or species proposed for such protection) in the receiving stream(s); or discharges or activities that would result in a "take" of a state or federal listed endangered or threatened aquatic or wildlife species deemed in need of management or special concern species, or such species' habitat. If the division finds that stormwater discharges or stormwater related activities are likely to result in any of the above effects, the director will deny the

coverage under this general permit unless and until project plans are changed to adequately protect the species.

i) Discharges from a New or Proposed Mining Operation - This permit does not cover discharges from a new or proposed mining operation.

j) Discharges Negatively Affecting a Property on the National Historic Register - Stormwater discharges that would negatively affect a property that is listed or is eligible for listing in the National Historic Register maintained by the Secretary of Interior.

k) Discharging into Receiving Waters With an Approved Total Maximum Daily Load Analysis - Discharges of pollutants of concern to waters for which there is an EPA-approved total maximum daily load (TMDL) for the same pollutant are not covered by this permit unless measures or controls that are consistent with the assumptions and requirements of such TMDL are incorporated into the SWPPP. If a specific wasteload allocation has been established that would apply to the discharge, that allocation must be incorporated into the SWPPP and steps necessary to meet that allocation must be implemented. In a situation where an EPA-approved or established TMDL has specified a general wasteload allocation applicable to construction stormwater discharges, but no specific requirements for construction sites have been identified, the permittee should consult with the division to confirm that adherence to a SWPPP that meets the requirements of this permit will be consistent with the approved TMDL. Where an EPA-approved or established TMDL has not specified a wasteload allocation applicable to construction stormwater discharges, but has not specifically excluded these discharges, adherence to a SWPPP that meets the requirements of the CGP will generally be assumed to be consistent with the approved TMDL. If the EPA-approved or established TMDL specifically precludes construction stormwater discharges, the operator is not eligible for coverage under the CGP.

1.4. Obtaining Permit Coverage

Submitting a complete NOI, a SWPPP and an appropriate permitting application fee are required to obtain coverage under this general permit. Requesting coverage under this permit means that an applicant has obtained and examined a copy of this permit, and thereby acknowledges applicant's claim of ability to comply with permit terms and conditions. Upon completing NOI review, the division will:

a) issue a notice of coverage (NOC) to the operator identified as a primary permittee on the NOI form (see subpart 1.5 below - *Effective Date of Coverage*); or
b) notify the applicant of needed changes to their NOI submittal (see section 2.6.3 below - *Application completeness*); or
c) deny coverage under this general permit (see subpart 7.12 below - *Requiring an Individual Permit*).

1.4.1. Notice of Intent (NOI)

Operators wishing to obtain coverage under this permit must submit a completed NOI in accordance with requirements of part 2 below, using the NOI form provided in Appendix A of this permit (or a copy thereof). The division will review NOIs for completeness and accuracy and, when deemed necessary, investigate the proposed project for potential impacts to the waters of the state.

1.4.2. Stormwater Pollution Prevention Plan (SWPPP)

Operators wishing to obtain coverage under this permit must develop and submit a site-specific SWPPP with the NOI. The initial, comprehensive SWPPP, developed and submitted by the site-wide permittee (typically owner/developer who applied for coverage at project commencement[1]), should address all construction-related activities from the date construction commences to the date of termination of permit coverage, to the maximum extent practicable. The SWPPP must be developed, implemented and updated according to the requirements in part 3 below (*SWPPP Requirements*) and subpart 2.3 below (*Responsibilities of Operators*). The SWPPP must be implemented prior to commencement of construction activities.

If the initial, comprehensive SWPPP does not address all activities until final stabilization of the site, an updated SWPPP or addendums to the plan addressing all aspects of current site disturbance must be prepared. An active, updated SWPPP must be in place for all disturbed portions of a site until each portion has been completed and finally stabilized.

Preparation and implementation of the comprehensive SWPPP may be a cooperative effort with all operators at a site. New operators with design and operational control of their portion of the construction site are expected to adopt, modify, update and implement a comprehensive SWPPP. Primary permittees at the site may develop a SWPPP addressing only their portion of the project, as long as the proposed Best Management Practices (BMPs) are compatible with the comprehensive SWPPP and complying with conditions of this general permit.

1.4.3. Permit application fees

The permit application fee should accompany the site-wide permittee's NOI form. The fee is based on the total acreage planned to be disturbed by an entire construction project for which the site-wide permittee is requesting coverage, including any associated construction support activities (see section 1.2.2 above). *The disturbed area* means the total area presented as part of the development (and/or of a larger common plan of development) subject to being cleared, graded, or excavated during the life of the development. The area cannot be limited to only the portion of the total area that the site-wide owner/developer initially disturbs through the process of various land clearing activities and/or in the construction of roadways, sewers and water utilities, stormwater drainage structures, etc., to make the property marketable. The site-wide owner/developer may present documentation of common areas in the project that will not be subject to disturbance at anytime during the life of the project and have these areas excluded from the fee calculation.

The application fees shall be as specified in the TDEC Rules, Chapter 1200-4-11. The application will be deemed incomplete until the appropriate application fee is paid in full. Checks for the appropriate fee should be made payable to "Treasurer, State of Tennessee." There is no additional fee for subsequent owner/operator to obtain permit coverage (see section 2.4.3 below - *New operator*), as long as the site-wide primary permittee has active permit coverage at the time of receipt of the subsequent operator's application, because the site-wide primary permittee paid the appropriate fee for the entire area of site disturbance. If a project was previously permitted, but permit coverage was terminated (see section 8.1.1 below - Termination process for primary permittees), and subsequent site disturbance or re-development occurs, the new operator must obtain coverage and pay the appropriate fee for the disturbed acreage.

[1] See sub-part 2.1 on page 7 for a definition of an site-wide permittee.

1.4.4. Submittal of a copy of the NOC and NOT to the local MS4

Permittees who discharge stormwater through an NPDES-permitted municipal separate storm sewer system (MS4) who are not exempted in section 1.4.5 below (*Permit Coverage through Qualifying Local Program*) must submit a courtesy copy of the notice of coverage (NOC), and at project completion, a copy of the signed notice of termination (NOT) to the MS4 upon their request. Permitting status of all permittees covered (or previously covered) under this general permit as well as the most current list of all MS4 permits is available at the division's DataViewer web site[2].

1.4.5. Permit Coverage through Qualifying Local Program

Coverage equivalent to coverage under this general permit may be obtained from a qualifying local erosion prevention and sediment control Municipal Separate Storm Sewer System (MS4) program. A qualifying local program (QLP) is a municipal stormwater program for stormwater discharges associated with construction activity that has been formally approved by the division. More information about Tennessee's QLP program and MS4 participants can be found at: http://www.tn.gov/environment/water/water-quality_storm-water-qualifying-local-programs.shtml.

If a construction site is within the jurisdiction of and has obtained a notice of coverage from a QLP, the operator of the construction activity is authorized to discharge stormwater associated with construction activity under this general permit without the submittal of an NOI to the division. The permittee is also not required to submit a SWPPP, a notice of termination or a permit fee to the division. At the time of issuance of this permit, there were no qualifying local erosion prevention and sediment control MS4 programs in Tennessee. Permitting of stormwater runoff from construction sites from federal or state agencies (including, but not limited to the Tennessee Department of Transportation (TDOT) and Tennessee Valley Authority (TVA)) and the local MS4 program itself will remain solely under the authority of TDEC.

The division may require any owner/developer or operator located within the jurisdiction of a QLP to obtain permit coverage directly from the division. The operator shall be notified in writing by the division that coverage by the QLP is no longer applicable, and how to obtain coverage under this permit.

1.5. Effective Date of Coverage

1.5.1. Notice of Coverage (NOC)

The NOC is a notice from the division to the primary permittee, which informs the primary permittee that the NOI, the SWPPP and the appropriate fee were received and accepted, and stormwater discharges from a specified area of a construction activity have been approved under this general permit. The permittee is authorized to discharge stormwater associated with construction activity as of the effective date listed on the NOC.

Assigning a permit tracking number by the division to a proposed discharge from a construction site does not confirm or imply an authorization to discharge under this permit. Correspondence

[2] http://tnmap.tn.gov/wpc/

with the permittee is maintained through the Site Owner or Developer listed in the NOI, not the optional contact or the secondary permittee.

If any Aquatic Resource Alteration Permits (ARAP) are required for a site in areas proposed for active construction, the NOC will not be issued until ARAP application(s) are submitted and deemed by TDEC to be complete. The treatment and disposal of wastewater (including, but not limited to sanitary wastewater) generated during and after the construction must be also addressed. The issuance of the NOC may be delayed until adequate wastewater treatment and accompanying permits are issued.

1.5.2. Permit tracking numbers

Construction sites covered under this permit will be assigned permit tracking numbers in the sequence TNR100001, TNR100002, etc. An operator presently permitted under a previous construction general permit shall be granted coverage under this new general permit. Permit tracking numbers assigned under a previous construction general permit will be retained (see section 2.4.1 below). An operator receiving new permit coverage will be assigned a new permit tracking number (see section 2.4.2 below).

2. NOTICE OF INTENT (NOI) REQUIREMENTS

2.1. Who Must Submit an NOI?

All site operators must submit an NOI form. "Operator" for the purpose of this permit and in the context of stormwater associated with construction activity means any person associated with a construction project who meets either or both of the following two criteria:

a) The person has operational or design control over construction plans and specifications, including the ability to make modifications to those plans and specifications. This person is typically the owner or developer of the project or a portion of the project (e.g. subsequent builder), or the person that is the current land owner of the construction site. This person is considered the primary permittee; or
b) The person has day-to-day operational control of those activities at a project which are necessary to ensure compliance with a SWPPP for the site or other permit conditions. This person is typically a contractor or a commercial builder who is hired by the primary permittee, and is considered a secondary permittee.

The site-wide permittee is the first primary permittee to apply for coverage at the site. There may be other primary permittees for a project, but there is only one site-wide permittee. Where there are multiple operators associated with the same project, all operators are required to obtain permit coverage. Once covered by a permit, all such operators are to be considered as co-permittees if their involvement in the construction activities affects the same project site, and are held jointly and severally responsible for complying with the permit.

2.2. Typical Construction Site Operators

2.2.1. Owner/Developer

An owner or developer(s) of a project is a primary permittee. This person has operational or design control over construction plans and specifications, including the ability to make modifications to those plans and specifications. This person may include, but is not limited to a developer, landowner, realtor, commercial builder, homebuilder, etc. An owner or developer's responsibility to comply with requirements of this permit extends until permit coverage is terminated in accordance with requirements of part 8 below.

2.2.2. Commercial builders

A commercial builder can be a primary or secondary permittee at a construction site.

A commercial builder who purchases one or more lots from an owner/developer (site-wide permittee) for the purpose of constructing and selling a structure (e.g., residential house, non-residential structure, commercial building, industrial facility, etc.) and has design or operational control over construction plans and specifications is a primary permittee for that portion of the site. A commercial builder may also be hired by the end user (e.g., a lot owner who may not be a permittee). In either case the commercial builder is considered a new operator and must submit a new NOI following requirements in section 2.4.3 below.

The commercial builder may also be hired by the primary permittee or a lot owner to build a structure. In this case, the commercial builder signs the primary permittee's NOI and SWPPP as a contractor (see section 2.2.3 below) and is considered a secondary permittee.

2.2.3. Contractors

A contractor is considered a secondary permittee. This person has day-to-day operational control of those activities at a project which are necessary to ensure compliance with a SWPPP for the site or other permit conditions (e.g., contractor is authorized to direct workers at a site to carry out activities required by the SWPPP or comply with other permit conditions).

A contractor may be, but is not limited to a general contractor, grading contractor, erosion control contractor, sub-contractor responsible for any land disturbing activities and/or erosion prevention and sediment control (EPSC) implementation/maintenance, commercial builder hired by the owner/developer, etc. The contractor may need to include in their contract with the party that hired them specific details for the contractor's responsibilities concerning EPSC measures. This includes the ability of the contractor to make EPSC modifications. The contractor should sign the NOI and SWPPP associated with the construction project at which they will be an operator.

2.3. Responsibilities of Operators

A permittee may meet one or more of the operational control components in the definition of "operator" found in subpart 2.1 above. Either section 2.3.1 or 2.3.2 below, or both, will apply depending on the type of operational control exerted by an individual permittee.

2.3.1. Permittee(s) with design control (owner/developer)

Permittee(s) with design control (i.e., operational control over construction plans and specifications) at the construction site, including the ability to make modifications to those plans and specifications (e.g., owner/developer) must:

a) Ensure the project specifications they develop meet the minimum requirements of part 3 below (stormwater pollution prevention plan - SWPPP) and all other applicable conditions;
b) Ensure that the SWPPP indicates the areas of the project where they have design control (including the ability to make modifications in specifications), and ensure all other permittees implementing and maintaining portions of the SWPPP impacted by any changes they make to the plan are notified of such modifications in a timely manner;
c) Ensure that all common facilities (i.e., sediment treatment basin and drainage structures) that are necessary for the prevention of erosion or control of sediment are maintained and effective until all construction is complete and all disturbed areas in the entire project are stabilized, unless permit coverage has been obtained and responsibility has been taken over by a new (replacement) owner/operator.
d) If parties with day-to-day operational control of the construction site have not been identified at the time the comprehensive SWPPP is initially developed, the permittee with design control shall be considered to be the responsible person until such time the supplemental NOI is submitted, identifying the new operator(s) (see section 2.4.3 below). These new operators (e.g., general contractor, utilities contractors, sub-contractors, erosion control contractors, hired commercial builders) are considered secondary permittees. The SWPPP must be updated to reflect the addition of new operators as needed to reflect operational or design control.
e) Ensure that all operators on the site have permit coverage, if required, and are complying with the SWPPP.

2.3.2. Permittee(s) with day-to-day operational control (contractor – secondary permittee)

Permittee(s) with day-to-day operational control of those activities at a project which are necessary to ensure compliance with the SWPPP for the site or other permit conditions (e.g., general contractor, utilities contractors, sub-contractors, erosion control contractors, hired commercial builders) must:

a) Ensure that the SWPPP for portions of the project where they are operators meets the minimum requirements of part 3 below (*SWPPP Requirements*) and identifies the parties responsible for implementation of control measures identified in the plan;
b) Ensure that the SWPPP indicates areas of the project where they have operational control over day-to-day activities;
c) Ensure that measures in the SWPPP are adequate to prevent erosion and control any sediment that may result from their earth disturbing activity;
d) Permittees with operational control over only a portion of a larger construction project are responsible for compliance with all applicable terms and conditions of this permit as it relates to their activities on their portion of the construction site. This includes, but is not limited to, implementation of Best Management Practices (BMPs) and other controls required by the SWPPP. Permittees shall ensure either directly or through coordination with other permittees, that their activities do not render another person's pollution control ineffective. All permittees must implement their portions of a comprehensive SWPPP.

2.4. NOI Submittal

2.4.1. Existing site

An operator presently permitted under the 2005 construction general permit shall be granted coverage under this new general permit. There will be no additional fees associated with an extension of coverage for existing sites under the new permit. The division may, at its discretion, require permittees to confirm their intent to be covered under this new general permit following its effective date through submission of an updated NOI. Should the confirmation be required and is not received, coverage under the new general permit will be terminated. Should a site with terminated coverage be unstable or construction continues, a new NOI, SWPPP and an appropriate fee must be submitted.

2.4.2. Application for new permit coverage

Except as provided in section 2.4.3 below, operators must submit a complete NOI, SWPPP and an appropriate fee in accordance with the requirements described in subpart 1.4 above. The complete application should be submitted at least 30 days prior to commencement of construction activities. The permittee is authorized to discharge stormwater associated with construction activity as of the effective date listed on the NOC. The land disturbing activities shall not start until a NOC is prepared and written approval by the division staff is obtained according to subpart 1.5 above.

2.4.3. New operator

For stormwater discharges from construction sites or portions of the sites where the operator changes (new owner), or projects where an operator is added (new contractor) after the initial NOI and comprehensive SWPPP have been submitted, the supplemental (submitted by a new contractor) or additional (submitted by a new owner) NOI should be submitted as soon as practicable, and always before the new operator commences work at the site. The supplemental NOI must reference the project name and tracking number assigned to the primary permittee's NOI.

If the site under the control of the new owner is inactive and all areas disturbed are completely stabilized, the NOI may not need to be submitted immediately upon assuming operational control. However, the division should be notified if a new operator obtains operational control at a site, but commencement of construction under the direction of the operator at the site is going to be delayed.

If upon the sale or transfer of the site's ownership does not change the signatory requirements for the NOI (see section 7.7.1 below), but the site's owner or developer's company name has changed, a new, updated NOI should be submitted to the division within 30 days of the name change. If the new operator agrees to comply with an existing comprehensive SWPPP already implemented at the site, a copy of the supplemental or modified SWPPP does not have to be submitted with the NOI. There will be no additional fees associated with the sale or transfer of ownership for existing permitted sites.

If the transfer of ownership is due to foreclosure or a permittee filing for bankruptcy proceedings, the new owner (including but not limited to a lending institution) must obtain permit coverage if the property is inactive, but is not stabilized sufficiently. If the property is sufficiently stabilized permit coverage may not be necessary, unless and until construction activity at the site resumes.

2.4.4. Late NOIs

Dischargers are not prohibited from submitting late NOIs. When a late NOI is submitted, and if the division authorizes coverage under this permit, such authorization is only for future discharges; any prior, unpermitted, discharges or permit noncompliances are subject to penalties as described in section 7.1.2 below.

2.5. Who Must Sign the NOI?

All construction site operators as defined in subsection 2.2 above (*Typical Construction Site Operators*) must sign the NOI form. Signatory requirements for a NOI are described in section 7.7.1 below. All signatures must be original. An NOI that does not bear an original signature will be deemed incomplete. The division recommends that signatures be in blue ink.

2.6. NOI Form

2.6.1. Contents of the NOI form

NOI for construction projects shall be submitted on the form provided in Appendix A of this permit, or on a copy thereof. This form and its instructions set forth the required content of the NOI. The NOI form must be filled in completely. If sections of the NOI are left blank, a narrative explaining the omission must be provided as an attachment.

Owners, developers and all contractors that meet the definition of the operator in subsection 2.2 above (*Typical Construction Site Operators*) shall apply for permit coverage on the same NOI, insofar as possible. The NOI is designed for more than one contractor (secondary permittee). The division may accept separate NOI forms from different operators for the same construction site when warranted.

After permit coverage has been granted to the primary permittee, any subsequent NOI submittals must include the site's previously assigned permit tracking number and the project name. The comprehensive site-specific SWPPP shall be prepared in accordance with the requirements of part 3 below, and must be submitted with the NOI unless the NOI being submitted is to only add a contractor (secondary permittee) to an existing coverage.

2.6.2. Construction site map

An excerpt (8 ½" by 11" or 11" by 17") from the appropriate 7.5 minute United States Geological Survey (USGS) topographic map, with the proposed construction site centered, must be included with the NOI. The entire proposed construction area must be clearly identified (outlined) on this map. The total area to be disturbed (in acres) should be included on the map. The map should outline the boundaries of projects, developments and the construction site in relation to major roads, streams or other landmarks. All outfalls where runoff will leave the property should be identified. Stream(s) receiving the discharge, and storm sewer system(s)

conveying the discharge from all site outfalls should be clearly identified and marked on the map. The map should also list and indicate the location of EPSCs that will be used at the construction site. NOIs for linear projects must specify the location of each end of the construction area and all areas to be disturbed. Commercial builders that develop separate SWPPPs that cover only their portion of the project shall also submit a site or plat map that clearly indicates the lots which they purchased and for which they are applying for permit coverage and the location of EPSCs that will be used at each lot.

2.6.3. Application completeness

Based on a review of the NOI or other available information, the division shall:

1. prepare a notice of coverage (NOC) for the construction site (see subpart 1.5 above); or
2. prepare a deficiency letter stating additional information must be provided before the NOC can be issued; or
3. deny coverage under this general permit and require the discharger to obtain coverage under an individual NPDES permit (see subpart 7.12 below).

2.7. Where to Submit the NOI, SWPPP and Permitting Fee?

The applicant shall submit the NOI, SWPPP and permitting fee to the appropriate TDEC Environmental Field Office (EFO) for the county(ies) where the construction activity is located and where stormwater discharges enters waters of the state. If a site straddles a county line of counties that are in areas of different EFOs, the operators shall send NOIs to each EFO. The permitting fee should be submitted to the EFO that provides coverage for the majority of the proposed construction activity.

A list of counties and the corresponding EFOs is provided in subpart 2.8 below. The division's Nashville Central Office will serve as a processing office for NOIs submitted by federal or state agencies (including, but not limited to the Tennessee Department of Transportation (TDOT), Tennessee Valley Authority (TVA) and the local MS4 programs).

2.8. List of the TDEC Environmental Field Offices (EFOs) and Corresponding Counties

EFO Name	List of Counties
Chattanooga	Bledsoe, Bradley, Grundy, Hamilton, Marion, McMinn, Meigs, Polk, Rhea, Sequatchie
Columbia	Bedford, Coffee, Franklin, Giles, Hickman, Lawrence, Lewis, Lincoln, Marshall, Maury, Moore, Perry, Wayne
Cookeville	Cannon, Clay, Cumberland, De Kalb, Fentress, Jackson, Macon, Overton, Pickett, Putnam, Smith, Van Buren, Warren, White
Jackson	Benton, Carroll, Chester, Crockett, Decatur, Dyer, Gibson, Hardeman, Hardin, Haywood, Henderson, Henry, Lake, Lauderdale, Madison, McNairy, Obion, Weakley
Johnson City	Carter, Greene, Hancock, Hawkins, Johnson, Sullivan, Unicoi, Washington
Knoxville	Anderson, Blount, Campbell, Claiborne, Cocke, Grainger, Hamblen, Jefferson, Knox, Loudon, Monroe, Morgan, Roane, Scott, Sevier, Union
Memphis	Fayette, Shelby, Tipton
Nashville	Cheatham, Davidson, Dickson, Houston, Humphreys, Montgomery, Robertson, Rutherford, Stewart, Sumner, Trousdale, Williamson, Wilson

TDEC may be reached by telephone at the toll-free number 1-888-891-8332 (TDEC). Local EFOs may be reached directly when calling this number from the construction site, using a land line.

3. STORMWATER POLLUTION PREVENTION PLAN (SWPPP) REQUIREMENTS

3.1. The General Purpose of the SWPPP

A comprehensive SWPPP must be prepared and submitted along with the NOI as required in section 1.4.2 above. The primary permittee must implement the SWPPP as written from commencement of construction activity until final stabilization is complete, or until the permittee does not have design or operational control of any portion of the construction site. Requirements for termination of site coverage are provided in part 8 below.

A site-specific SWPPP must be developed for each construction project or site covered by this permit. The design, inspection and maintenance of Best Management Practices (BMPs) described in SWPPP must be prepared in accordance with good engineering practices. At a minimum, BMPs shall be consistent with the requirements and recommendations contained in the current edition of the Tennessee Erosion and Sediment Control Handbook (the handbook). The handbook is designed to provide information to planners, developers, engineers, and contractors on the proper selection, installation, and maintenance of BMPs. This permit allows the use of innovative or alternative BMPs, whose performance has been documented to be equivalent or superior to conventional BMPs as certified by the SWPPP designer.

Once a definable area has been finally stabilized, the permittee may identify this area on the site-specific SWPPP. No further SWPPP or inspection requirements apply to that portion of the site (e.g., earth-disturbing activities around one of three buildings in a complex are done and the area is finally stabilized, one mile of a roadway or pipeline project is done and finally stabilized, etc).

For more effective coordination of BMPs a cooperative effort by the different operators at a site to prepare and participate in a comprehensive SWPPP is expected. Primary permittees at a site may develop separate SWPPPs that cover only their portion of the project. In instances where there is more than one SWPPP for a site, the permittees must ensure the stormwater discharge controls and other measures are compatible with one another and do not prevent another operator from complying with permit conditions. The comprehensive SWPPP developed and submitted by the primary permittee must assign responsibilities to subsequent (secondary) permittees and coordinate all BMPs at the construction site. Assignment and coordination can be done by name or by job title.

3.1.1. Registered engineer or landscape architect requirement

The narrative portion of the SWPPP may be prepared by an individual that has a working knowledge of erosion prevention and sediment controls, such as a Certified Professional in Erosion and Sediment Control (CPESC) or a person that successfully completed the "Level II Design Principles for Erosion Prevention and Sediment Control for Construction Sites" course. Plans and specifications for any building or structure, including the design of sediment basins or other sediment controls involving structural, hydraulic, hydrologic or other engineering calculations shall be prepared by a licensed professional engineer or landscape architect and

stamped and certified in accordance with the Tennessee Code Annotated, Title 62, Chapter 2 (see part 10 below) and the rules of the Tennessee Board of Architectural and Engineering Examiners. Engineering design of sediment basins and other sediment controls must be included in SWPPPs for construction sites involving drainage to an outfall totaling 10 or more acres (see subsection 3.5.3.3 below) or 5 or more acres if draining to an impaired or exceptional quality waters (see subsection 5.4.1 below).

3.1.2. Site Assessment

Quality assurance of erosion prevention and sediment controls shall be done by performing site assessment at a construction site. The site assessment shall be conducted at each outfall involving drainage totaling 10 or more acres (see subsection 3.5.3.3 below) or 5 or more acres if draining to an impaired or exceptional quality waters (see subsection 5.4.1 below), within a month of construction commencing at each portion of the site that drains the qualifying acreage of such portion of the site. The site assessment shall be performed by individuals with following qualifications:

- a licensed professional engineer or landscape architect;
- a Certified Professional in Erosion and Sediment Control (CPESC) or
- a person that successfully completed the "Level II Design Principles for Erosion Prevention and Sediment Control for Construction Sites" course.

As a minimum, site assessment should be performed to verify the installation, functionality and performance of the EPSC measures described in the SWPPP. The site assessment should be performed with the inspector (as defined in part 10 below – Definitions), and should include a review and update (if applicable) of the SWPPP. Modifications of plans and specifications for any building or structure, including the design of sediment basins or other sediment controls involving structural, hydraulic, hydrologic or other engineering calculations shall be prepared by a licensed professional engineer or landscape architect and stamped and certified in accordance with the Tennessee Code Annotated, Title 62, Chapter 2 (see part 10 below) and the rules of the Tennessee Board of Architectural and Engineering Examiners.

The site assessment findings shall be documented and the documentation kept with the SWPPP at the site. At a minimum, the documentation shall include information included in the inspection form provided in Appendix C of this permit. The documentation must contain the printed name and signature of the individual performing the site assessment and the following certification:

> *"I certify under penalty of law that this report and all attachments are, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."*

The site assessment can take the place of one of the twice weekly inspections requirement from subsection 3.5.8.2 below.

The division may require additional site assessment(s) to be performed if site inspection by division's personnel reveals site conditions that have potential of causing pollution to the waters of the state.

3.2. SWPPP Preparation and Compliance

3.2.1. Existing site

Operator(s) of an existing site presently permitted under the division's previous construction general permit shall maintain full compliance with the current SWPPP. The current SWPPP should be modified, if necessary, to meet requirements of this new general permit, and the SWPPP changes implemented no later than 12 months following the new permit effective date (May 24, 2011), excluding the buffer zone requirements as stated in section 4.1.2 below. The permittee shall make the updated SWPPP available for the division's review upon request.

3.2.2. New site

For construction stormwater discharges not authorized under an NPDES permit as of the effective date of this permit, a SWPPP that meets the requirements of subpart 3.5 below of this permit shall be prepared and submitted along with the NOI and an appropriate fee for coverage under this permit.

3.3. Signature Requirements, Plan Review and Making Plans Available

3.3.1. Signature Requirements for a SWPPP

The SWPPP shall be signed by the operator(s) in accordance with subpart 7.7 below, and if applicable, certified according to requirements in section 3.1.1 above. All signatures must be original. A SWPPP that does not bear an original signature will be deemed incomplete. The division recommends that signatures be in blue ink.

3.3.2. SWPPP Review

The permittee shall make updated plans and inspection reports available upon request to the director, local agency approving erosion prevention and sediment control plan, grading plans, land disturbance plans, or stormwater management plans, or the operator of an MS4.

3.3.3. Making plans available

A copy of the SWPPP shall be retained on-site at the location which generates the stormwater discharge in accordance with part 6 below of this permit. If the site is inactive or does not have an onsite location adequate to store the SWPPP, the location of the SWPPP, along with a contact phone number, shall be posted on-site. If the SWPPP is located offsite, reasonable local access to the plan, during normal working hours, must be provided.

3.4. Keeping Plans Current

3.4.1. SWPPP modifications

The permittee must modify and update the SWPPP if any of the following are met:

a) whenever there is a change in the scope of the project, which would be expected to have a significant effect on the discharge of pollutants to the waters of the state and which has

not otherwise been addressed in the SWPPP. If applicable, the SWPPP must be modified or updated whenever there is a change in chemical treatment methods, including the use of different treatment chemical, different dosage or application rate, or different area of application;

b) whenever inspections or investigations by site operators, local, state or federal officials indicate the SWPPP is proving ineffective in eliminating or significantly minimizing pollutants from sources identified under section 3.5.2 below of this permit, or is otherwise not achieving the general objectives of controlling pollutants in stormwater discharges associated with construction activity. Where local, state or federal officials determine that the SWPPP is ineffective in eliminating or significantly minimizing pollutant sources, a copy of any correspondence to that effect must be retained in the SWPPP;
c) to identify any new operator (typically contractor and/or subcontractor) as needed to reflect operational or design control that will implement a measure of the SWPPP (see subparts 2.1 and 2.2 above for further description of which operators must be identified); and
d) to include measures necessary to prevent a negative impact to legally protected state or federally listed fauna or flora (or species proposed for such protection – see subpart 1.3 above). Amendments to the SWPPP may be reviewed by the division, a local MS4, the EPA or an authorized regulatory agency; and
e) a TMDL is developed for the receiving waters for a pollutant of concern (siltation and/or habitat alteration).

3.5. Components of the SWPPP

The SWPPP shall include the following items, as described in sections 3.5.1 to 3.5.10 below: site description, description of stormwater runoff controls, erosion prevention and sediment controls, stormwater management, description of other items needing control, approved local government sediment and erosion control requirements, maintenance, inspections, pollution prevention measures for non-stormwater discharges, and documentation of permit eligibility related to Total Maximum Daily Loads (TMDL). The SWPPP must:

a) identify all potential sources of pollution which are likely to affect the quality of stormwater discharges from the construction site;
b) describe practices to be used to reduce pollutants in stormwater discharges from the construction site; and
c) assure compliance with the terms and conditions of this permit.

3.5.1. Site description

Each plan shall provide a description of pollutant sources and other information as indicated below:

a) a description of all construction activities at the site (not just grading and street construction);
b) the intended sequence of major activities which disturb soils for major portions of the site (e.g., grubbing, excavation, grading, utilities and infrastructure installation, etc.);
c) estimates of the total area of the site and the total area that is expected to be disturbed by excavation, grading, filling, or other construction activities;

d) a description of the topography of the site including an estimation of the percent slope and the variation in percent slope found on the site; such estimation should be on a basis of a drainage area serving each outfall, rather than an entire project;
e) any data describing the soil (data may be referenced or summarized) and how the soil type will dictate the needed control measures and how the soil may affect the expected quality of runoff from the site;
f) an estimate of the runoff coefficient of the site after construction activities are completed and how the runoff will be handled to prevent erosion at the permanent outfall and receiving stream, as well as the estimate of the percentage of impervious area before and after construction;
g) an erosion prevention and sediment control plan of the site with the proposed construction area clearly outlined. The plan should indicate the boundaries of the permitted area, drainage patterns and approximate slopes anticipated after major grading activities, areas of soil disturbance, an outline of areas which are not to be disturbed, the location of major structural and nonstructural controls identified in the SWPPP, the location of areas where stabilization practices are expected to occur, surface waters including wetlands, sinkholes, and careful identification on the site plan of outfall points intended for coverage under the general permit for stormwater discharges from the site. The erosion control plan must meet requirements stated in section 3.5.2 below;
h) a description of any discharge associated with industrial activity other than construction stormwater that originates on site and the location of that activity and its permit number;
i) identification of any stream or wetland on or adjacent to the project, a description of any anticipated alteration of these waters and the permit number or the tracking number of the Aquatic Resources Alteration Permit (ARAP) or Section 401 Certification issued for the alteration;
j) the name of the receiving water(s), and approximate size and location of affected wetland acreage at the site;
k) if applicable, clearly identify and outline the buffer zones established to protect waters of the state located within the boundaries of the project;
l) some construction projects, such as residential or commercial subdivisions and/or developments or industrial parks are subdivided. Subdivided lots are sometimes sold to new owners prior to completion of construction. The site-wide developer/owner must describe EPSC measures implemented at those lots. Once the property is sold, the new operator must obtain coverage under this permit;
m) for projects of more than 50 acres, the construction phases must be described (see subsection 3.5.3.1 below); and
n) if only a portion of the total acreage of the construction site is to be disturbed, then the protections employed to limit the disturbance must be discussed, i.e., caution fence, stream side buffer zones, etc. Limits of disturbance shall be clearly marked in the SWPPP and areas to be undisturbed clearly marked in the field before construction activities begin.

3.5.2. Description of stormwater runoff controls

The SWPPP shall include a description of appropriate erosion prevention and sediment controls and other Best Management Practices (BMPs) that will be implemented at the construction site. The SWPPP must clearly describe each major activity which disturbs soils for major portions of the site (e.g., grubbing, excavation, grading, utilities and infrastructure installation, etc.):

a) appropriate control measures and the general timing for the measures to be implemented during construction activities; and
b) which permittee is responsible for implementation of which controls.

The SWPPP must include erosion prevention and sediment control (EPSC) plans showing the approximate location of each control measure along with a description of the timing during the construction process for implementing each measure (e.g., prior to the start of earth disturbance, as the slopes are altered and after major grading is finished). The different stages of construction (initial/major grading, installation of infrastructure, final contours, etc.) and the erosion preventions and sediment control measures that will be utilized during each stage should be depicted on multiple plan sheets (see paragraphs below). Half sheets are acceptable. One sheet showing all EPSCs that will be used during the life of the multi-phase project implementing different EPSC controls at each stage will not be considered complete.

For site disturbances less than 5 acres, at least two separate EPSC plan sheets shall be developed. At least two stages shall be identified, with associated EPSC measures addressed. The plan stages shall be addressed separately in plan sheets, with each stage reflecting the conditions and EPSC measures necessary to manage stormwater runoff, erosion and sediment during the initial land disturbance (initial grading) and the conditions and EPSC measures necessary to manage stormwater, erosion and sediment at final grading.

For site disturbances more than 5 acres, at least 3 separate EPSC plan sheets shall be developed. Three stages shall be identified. The first plan sheet should reflect the conditions and EPSC measures necessary to manage stormwater runoff, during the initial land disturbance (initial grading). The second plan sheet shall reflect the conditions and the EPSC measures necessary to manage stormwater runoff from interim land disturbance activities. The third plan sheet shall reflect the conditions and EPSC measures necessary to manage stormwater runoff, erosion and sediment at final grading.

The description and implementation of controls shall address the following minimum components, as described in sections 3.5.3, 3.5.4 and 3.5.5 below. Additional controls may be necessary to comply with section 5.3.2 below.

3.5.3. Erosion prevention and sediment controls

3.5.3.1. General criteria and requirements

a) The construction-phase erosion prevention controls shall be designed to eliminate (or minimize if complete elimination is not possible) the dislodging and suspension of soil in water. Sediment controls shall be designed to retain mobilized sediment on site to the maximum extent practicable.
b) The design, inspection and maintenance of Best Management Practices (BMPs) described in SWPPP must be prepared in accordance with good engineering practices and, at a minimum, shall be consistent with the requirements and recommendations contained in the current edition of the Tennessee Erosion and Sediment Control Handbook. In addition, all control measures must be properly selected, installed, and maintained in accordance with the manufacturer's specifications (where applicable). All control measures selected must be able to slow runoff so that rill and gully formation is prevented. When steep slopes and/or fine particle soils are present at the site, additional physical or chemical treatment of stormwater runoff may be required. Proposed physical

and/or chemical treatment must be researched and applied according to the manufacturer's guidelines and fully described in the SWPPP. If periodic inspections or other information indicates a control has been used inappropriately, or incorrectly, the permittee must replace or modify the control for relevant site situations.

c) If permanent or temporary vegetation is to be used as a control measure, then the timing of the planting of the vegetation cover must be discussed in the SWPPP. Planning for planting cover vegetation during winter months or dry months should be avoided.

d) If sediment escapes the permitted area, off-site accumulations of sediment that have not reached a stream must be removed at a frequency sufficient to minimize offsite 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). Permittees shall not initiate remediation/restoration of a stream without consulting the division first. This permit does not authorize access to private property. Arrangements concerning removal of sediment on adjoining property must be settled by the permittee with the adjoining landowner.

e) Sediment should be removed from sediment traps, silt fences, sedimentation ponds, and other sediment controls as recommended in the Tennessee Erosion and Sediment Control Handbook, and must be removed when design capacity has been reduced by 50%.

f) Litter, construction debris, and construction chemicals exposed to stormwater shall be picked up prior to anticipated storm events or before being carried off of the site by wind (e.g., forecasted by local weather reports), or otherwise prevented from becoming a pollutant source for stormwater discharges (e.g., screening outfalls, daily pick-up, etc.). After use, materials used for erosion prevention and sediment control (such as silt fence) should be removed or otherwise prevented from becoming a pollutant source for stormwater discharges.

g) Erodible material storage areas (including but not limited to overburden and stockpiles of soil etc.) and borrow pits used primarily for the permitted project and which are contiguous to the site are considered a part of the site and shall be identified on the NOI, addressed in the SWPPP and included in the fee calculation. TDOT projects shall be addressed in the Waste and Borrow Manual per the Statewide Stormwater Management Plan (SSWMP).

h) Pre-construction vegetative ground cover shall not be destroyed, removed or disturbed more than 15 days prior to grading or earth moving unless the area is seeded and/or mulched or other temporary cover is installed.

i) Clearing and grubbing must be held to the minimum necessary for grading and equipment operation. Existing vegetation at the site should be preserved to the maximum extent practicable.

j) Construction must be sequenced to minimize the exposure time of graded or denuded areas.

k) Construction phasing is required on all projects regardless of size as a major practice for minimizing erosion and limiting sedimentation. Construction must be phased to keep the total disturbed area less than 50 acres at any one time. Areas of the completed phase must be stabilized within 14 days (see subsection 3.5.3.2 below). No more than 50 acres of active soil disturbance is allowed at any time during the construction project. This includes off-site borrow or disposal areas that meet the conditions of section 1.2.2 above of this general permit.

The 50 acre limitation does not apply to linear construction projects (such as roadway, pipeline, and other infrastructure construction activities) if the following conditions are met:

- Where no one area of active soil disturbance is greater than 50 acres and the various areas of disturbance have distinct receiving waters; or
- Where contiguous disturbances amount to greater than 50 acres, but no one distinct water is receiving run off from more than 50 disturbed acres; or
- With the department's written concurrence, where more than 50 acres of disturbance is to occur and where one receiving water will receive run-off from more than 50 acres; or
- Where no one area of active soil disturbance is greater than 50 acres and the various areas of disturbance are more than 5 miles apart.

In order for a linear project to take advantage of the 50 acre rule exemption outlined in this paragraph, the contractor shall conduct monthly site assessments as described in section 3.1.2 above until the site is permanently stabilized.

l) Erosion prevention and sediment control measures must be in place and functional before earth moving operations begin, and must be constructed and maintained throughout the construction period. Temporary measures may be removed at the beginning of the workday, but must be replaced at the end of the workday.
m) The following records shall be maintained on or near site: the dates when major grading activities occur; the dates when construction activities temporarily or permanently cease on a portion of the site; the dates when stabilization measures are initiated; inspection records and rainfall records.
n) Off-site vehicle tracking of sediments and the generation of dust shall be minimized. A stabilized construction access (a point of entrance/exit to a construction site) shall be described and implemented, as needed, to reduce the tracking of mud and dirt onto public roads by construction vehicles.
o) Permittees shall maintain a rain gauge and daily rainfall records at the site, or use a reference site for a record of daily amount of precipitation.

3.5.3.2. Stabilization practices

The SWPPP shall include a description of interim and permanent stabilization practices, including site-specific scheduling of the implementation of the practices. Site plans should ensure that existing vegetation is preserved where attainable and that disturbed portions of the site are stabilized. Site plans should comply with buffer zone requirements (see sections 4.1.2 and 5.4.2 below), if applicable, in which construction activities, borrow and/or fill are prohibited. Stabilization practices may include: temporary seeding, permanent seeding, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, preservation of mature vegetation, and other appropriate measures. Use of impervious surfaces for final stabilization in lieu of a permanent vegetative cover should be avoided where practicable. No stabilization, erosion prevention and sediment control measures are to be installed in a stream without obtaining a Section 404 permit and an Aquatic Resources Alteration Permit (ARAP), if such permits are required and appropriate.

Stabilization measures shall be initiated as soon as possible in portions of the site where construction activities have temporarily or permanently ceased. Temporary or permanent soil stabilization at the construction site (or a phase of the project) must be completed no later than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased. In the following situations, temporary stabilization measures are not required:

a) where the initiation of stabilization measures is precluded by snow cover or frozen ground conditions or adverse soggy ground conditions, stabilization measures shall be initiated as soon as practicable; or
b) where construction activity on a portion of the site is temporarily ceased, and earth disturbing activities will be resumed within 14 days.

Steep slopes shall be temporarily stabilized not later than 7 days after construction activity on the slope has temporarily or permanently ceased.

Permanent stabilization with perennial vegetation (using native herbaceous and woody plants where practicable) 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 runs will not be considered a non-eroding surface.

3.5.3.3. Structural practices

The SWPPP shall include a description of structural practices to divert flows from exposed soils, store flows or otherwise limit runoff and discharge of pollutants from exposed areas of the site. Such practices may include silt fences, earth dikes, drainage swales, sediment traps, check dams, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins. Structural controls shall not be placed in streams or wetlands except as authorized by a section 404 permit and/or Aquatic Resources Alteration Permit (ARAP).

Erosion prevention and sediment control measures must be prepared in accordance with good engineering practices and the latest edition of the Tennessee Erosion and Sediment Control Handbook. In addition, erosion prevention and sediment controls shall be designed to minimize erosion and maximize sediment removal resulting from a 2-year, 24-hour storm (the design storm – see part 10 below: "2-year and 5-year design storm depths and intensities"), as a minimum, either from total rainfall in the designated period or the equivalent intensity as specified on the following website http://hdsc.nws.noaa.gov/hdsc/pfds/orb/tn_pfds.html. When clay and other fine particle soils are present at the construction site, chemical treatment may be used to minimize amount of sediment being discharged.

For an on-site outfall which receives drainage from 10 or more acres, a minimum sediment basin volume that will provide treatment for a calculated volume of runoff from a 2 year, 24 hour storm and runoff from each acre drained, or equivalent control measures as specified in the Tennessee Erosion and Sediment Control Handbook, shall be provided until final stabilization of the site. A drainage area of 10 or more acres includes both disturbed and undisturbed portions of the site or areas adjacent to the site, all draining through the common outfall. Where an equivalent control measure is substituted for a sediment retention basin, the equivalency must be justified to the division. Runoff from any undisturbed acreage should be diverted around the disturbed area and the sediment basin. Diverted runoff can be omitted from the volume calculation. Sediment storage expected from the disturbed areas must be included.

All calculations of drainage areas, runoff coefficients and basin volumes must be provided in the SWPPP. The discharge structure from a sediment basin must be designed to retain sediment during the lower flows. Muddy water to be pumped from excavation and work areas must be held in settling basins or filtered or chemically treated prior to its discharge into surface waters. Water must be discharged through a pipe, well-grassed or lined channel or other equivalent means so that the discharge does not cause erosion and sedimentation. Discharged water must not cause an objectionable color contrast with the receiving stream.

3.5.4. Stormwater management

The SWPPP shall include a description of any measures that will be installed during the construction process to control pollutants in stormwater discharges that will occur after construction operations have been completed.

For projects discharging to waters considered impaired by sediment or habitat alteration due to in-channel erosion, the SWPPP shall include a description of measures that will be installed during the construction process to control pollutants and any increase in the volume of stormwater discharges that will occur after construction operations have been completed. For steep slope sites, the SWPPP shall also include a description of measures that will be installed to dissipate the volume and energy of the stormwater runoff to pre-development levels.

This permit only addresses the installation of stormwater management measures, and not the ultimate operation and maintenance of such structures after the construction activities have been completed, the site has undergone final stabilization, and the permit coverage has been terminated. Permittees are only responsible for the installation and maintenance of stormwater management measures prior to final stabilization of the site, and are not responsible for maintenance after stormwater discharges associated with construction activity have been eliminated from the site. All permittees are encouraged to limit the amount of post construction runoff, if not required by local building regulations or local MS4 program requirements, in order to minimize in-stream channel erosion in the receiving stream.

Construction stormwater runoff management practices may include: stormwater detention structures (including ponds with a permanent pool); stormwater retention structures; flow attenuation by use of open vegetated swales and natural depressions; infiltration of runoff onsite; and sequential systems (which combine several practices).

Velocity dissipation devices shall be placed at discharge locations and along the length of any outfall channel to provide a non-erosive velocity flow from the structure to the receiving stream so that the natural physical and biological characteristics and functions of the stream are maintained and protected (e.g., there should be no significant changes in the hydrological regime of the receiving water). The SWPPP shall include an explanation of the technical basis used to select the velocity dissipation devices to control pollution where flows exceed pre-development levels. The Tennessee Erosion and Sediment Control Handbook provides measures that can be incorporated into the design or implemented on site to decrease erosive velocities. An Aquatic Resources Alteration Permit (ARAP) may be required if such velocity dissipation devices installed would alter the receiving stream and/or its banks.

3.5.5. Other items needing control

a) No solid materials, including building materials, shall be placed in waters of the state, except as authorized by a section 404 permit and/or Aquatic Resources Alteration Permit (ARAP)(see part 9 below).
b) For installation of any waste disposal systems on site, or sanitary sewer or septic system, the SWPPP shall identify these systems and provide for the necessary EPSC controls. Permittees must also comply with applicable state and/or local waste disposal, sanitary sewer or septic system regulations for such systems to the extent these are located within the permitted area.
c) The SWPPP shall include a description of construction and waste materials expected to be stored on-site. The SWPPP shall also include a description of controls used to reduce pollutants from materials stored on site, including storage practices to minimize exposure of the materials to stormwater, and spill prevention and response.
d) A description of stormwater sources from areas other than construction and a description of controls and measures that will be implemented at those sites.
e) A description of measures necessary to prevent "taking" of legally protected state or federal listed threatened or endangered aquatic fauna and/or critical habitat (if applicable). The permittee must describe and implement such measures to maintain eligibility for coverage under this permit.

3.5.6. Approved local government sediment and erosion control requirements

Permittees must comply with any additional erosion prevention, sediment controls and stormwater management measures required by a local municipality or permitted MS4 program.

3.5.7. Maintenance

The SWPPP shall describe procedures to ensure that vegetation, erosion and sediment control measures, buffer zones, and other protective measures identified in the site plan are kept in good and effective operating condition. Maintenance needs identified in inspections or by other means shall be accomplished before the next storm event, but in no case more than 7 days after the need is identified.

3.5.8. Inspections

3.5.8.1. Inspector training and certification

Inspectors performing the required twice weekly inspections must have an active certification by completing the "Fundamentals of Erosion Prevention and Sediment Control Level I" course. A copy of the certification or training record for inspector certification should be kept on site.

3.5.8.2. Schedule of inspections

a) Inspections described in paragraphs b, c and d below, shall be performed at least twice every calendar week. Inspections shall be performed at least 72 hours apart. Where sites or portion(s) of construction sites have been temporarily stabilized, or runoff is unlikely due to winter conditions (e.g., site covered with snow or ice) or due to extreme drought, such inspection only has to be conducted once per month until thawing or precipitation results in runoff or construction activity resumes. Inspection requirements do not apply

to definable areas that have been finally stabilized, as described in subpart 3.1 above. Written notification of the intent to change the inspection frequency and the justification for such request must be submitted to the local Environmental Field Office, or the division's Nashville Central Office for projects of the Tennessee Department of Transportation (TDOT) and the Tennessee Valley Authority (TVA). Should the division discover that monthly inspections of the site are not appropriate due to insufficient stabilization measures or otherwise, twice weekly inspections shall resume. The division may inspect the site to confirm or deny the notification to conduct monthly inspections.

b) Qualified personnel, as defined in section 3.5.8.1 above (provided by the permittee or cooperatively by multiple permittees) shall inspect disturbed areas of the construction site that have not been finally stabilized, areas used for storage of materials that are exposed to precipitation, structural control measures, locations where vehicles enter or exit the site, and each outfall.

c) Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the site's drainage system. Erosion prevention and sediment control measures shall be observed to ensure that they are operating correctly.

d) Outfall points (where discharges leave the site and/or enter waters of the state) shall be inspected to determine whether erosion prevention and sediment control measures are effective in preventing significant impacts to receiving waters. Where discharge locations are inaccessible, nearby downstream locations shall be inspected. Locations where vehicles enter or exit the site shall be inspected for evidence of offsite sediment tracking.

e) Based on the results of the inspection, any inadequate control measures or control measures in disrepair shall be replaced or modified, or repaired as necessary, before the next rain event, but in no case more than 7 days after the need is identified.

f) Based on the results of the inspection, the site description identified in the SWPPP in accordance with section 3.5.1 above and pollution prevention measures identified in the SWPPP in accordance with section 3.5.2 above shall be revised as appropriate, but in no case later than 7 days following the inspection. Such modifications shall provide for timely implementation of any changes to the SWPPP, but in no case later than 14 days following the inspection.

g) All inspections shall be documented on the Construction Stormwater Inspection Certification form provided in Appendix C of this permit for all construction sites. An alternative inspection form may be used as long as the form contents and the inspection certification language are, at a minimum, equivalent to the division's form (Appendix C) and the permittee has obtained a written approval from the division to use the alternative form. Inspection documentation will be maintained on site and made available to the division upon request. Inspection reports must be submitted to the division within 10 days of the request. If the division requests the Construction Stormwater Inspection Certification form to be submitted, the submitted form must contain the printed name and signature of the trained certified inspector and the person who meets the signatory requirements of section 7.7.2 below of this permit.

h) Trained certified inspectors shall complete inspection documentation to the best of their ability. Falsifying inspection records or other documentation or failure to complete inspection documentation shall result in a violation of this permit and any other applicable acts or rules.

i) Subsequent operator(s) (primary permittees) who have obtained coverage under this permit should conduct twice weekly inspections, unless their portion(s) of the site has been temporarily stabilized, or runoff is unlikely due to winter conditions or due to

extreme drought as stated in paragraph a) above. The primary permittee (such as a developer) is no longer required to conduct inspections of portions of the site that are covered by a subsequent primary permittee (such as a home builder).

3.5.9. Pollution prevention measures for non-stormwater discharges

Sources of non-stormwater listed in section 1.2.3 above of this permit that are combined with stormwater discharges associated with construction activity must be identified in the SWPPP. The plan shall identify and ensure the implementation of appropriate pollution prevention measures for the non-stormwater component(s) of the discharge. Any non-stormwater must be discharged through stable discharge structures. Estimated volume of the non-stormwater component(s) of the discharge must be included in the design of all impacted control measures.

3.5.10. Documentation of permit eligibility related to Total Maximum Daily Loads (TMDL)

The SWPPP must include documentation supporting a determination of permit eligibility with regard to waters that have an approved TMDL for a pollutant of concern, including:

a) identification of whether the discharge is identified, either specifically or generally, in an approved TMDL and any associated wasteload allocations, site-specific requirements, and assumptions identified for the construction stormwater discharge;
b) summaries of consultation with the division on consistency of SWPPP conditions with the approved TMDL, and
c) measures taken to ensure that the discharge of TMDL identified pollutants from the site is consistent with the assumptions and requirements of the approved TMDL, including any specific wasteload allocation that has been established that would apply to the construction stormwater discharge.

4. CONSTRUCTION AND DEVELOPMENT EFFLUENT GUIDELINES

4.1. Non-Numeric Effluent Limitations

Any point source authorized by this general permit must achieve, at a minimum, the effluent limitations representing the degree of effluent reduction attainable by application of best practicable control technology (BPT) currently available and is described in sections 4.1.1 through 4.1.7 below.

4.1.1. Erosion Prevention and Sediment Controls

Design, install and maintain effective erosion prevention and sediment controls to minimize the discharge of pollutants. At a minimum, such controls must be designed, installed and maintained to:

(1) Control stormwater volume and velocity within the site to minimize soil erosion;
(2) Control stormwater discharges, including both peak flow rates and total stormwater volume, to minimize erosion at outlets and to minimize downstream channel and streambank erosion;
(3) Minimize the amount of soil exposed during construction activity;
(4) Minimize the disturbance of steep slopes;

(5) Eliminate (or minimize if complete elimination is not possible) sediment discharges from the site. The design, installation and maintenance of erosion prevention and sediment controls must address factors such as the design storm (see sub-section 3.5.3.3 above) and soil characteristics, including the range of soil particle sizes expected to be present on the site;
(6) Provide and maintain natural buffers around surface waters, direct stormwater to vegetated areas to increase sediment removal and maximize stormwater infiltration, unless infeasible (see section 4.1.2 below); and
(7) Minimize soil compaction and, unless infeasible, preserve topsoil.

4.1.2. Buffer zone requirements

Buffer zone requirements in this section apply to all streams adjacent to construction sites, with an exception for streams designated as impaired or Exceptional Tennessee waters (see section 5.4.2 below). A 30-foot natural riparian buffer zone adjacent to all streams at the construction site shall be preserved, to the maximum extent practicable, during construction activities at the site. The water quality buffer zone is required to protect waters of the state (e.g., perennial and intermittent streams, rivers, lakes, wetlands) located within or immediately adjacent to the boundaries of the project, as identified using methodology from Standard Operating Procedures for Hydrologic Determinations (see rules to implement a certification program for Qualified Hydrologic Professionals, TN Rules Chapter 0400-40-17). Buffer zones are not primary sediment control measures and should not be relied on as such. Rehabilitation and enhancement of a natural buffer zone is allowed, if necessary, for improvement of its effectiveness of protection of the waters of the state. The buffer zone requirement only applies to new construction sites, as described in section 2.4.2 above.

The riparian buffer zone should be preserved between the top of stream bank and the disturbed construction area. The 30-feet criterion for the width of the buffer zone can be established on an average width basis at a project, as long as the minimum width of the buffer zone is more than 15 feet at any measured location.

Every attempt should be made for construction activities not to take place within the buffer zone. BMPs providing equivalent protection to a receiving stream as a natural riparian zone may be used at a construction site. Such equivalent BMPs shall be designed to be as effective in protecting the receiving stream from effects of stormwater runoff as a natural riparian zone. A justification for use and a design of equivalent BMPs shall be included in the SWPPP. Such equivalent BMPs are expected to be routinely used at construction projects typically located adjacent to surface waters. These projects include, but are not limited to: sewer line construction, roadway construction, utility line or equipment installation, greenway construction, construction of a permanent outfall or a velocity dissipating structure, etc.

This requirement does not apply to any valid Aquatic Resources Alteration Permit (ARAP), or equivalent permits issued by federal authorities. Additional buffer zone requirements may be established by the local MS4 program.

4.1.2.1. Buffer zone exemption based on existing uses

Buffer zones as described in section 4.1.2 above shall not be required to portions of the buffer where certain land uses exist and are to remain in place according to the following:

1. A use shall be considered existing if it was present within the buffer zone as of the date of the Notice of Intent for coverage under the CGP. Existing uses shall include, but not be limited to, buildings, parking lots, roadways, utility lines and on-site sanitary sewage systems. Only the portion of the buffer zone that contains the footprint of the existing land use is exempt from buffer zones. Activities necessary to maintain uses are allowed provided that no additional vegetation is removed from the buffer zone.

2. If an area with an existing land use is proposed to be converted to another use or the impervious surfaces located within the buffer area are being removed buffer zone requirements shall apply.

4.1.2.2. Pre-Approved Sites

Construction activity at sites that have been pre-approved before February 1, 2010, are exempt from the buffer requirements of section 4.1.2 above. Evidence of pre-approval for highway projects shall be a final right-of-way plan and for other construction projects, the final design drawings with attached dated, written approval by the local, state or federal agency with authority to approve such design drawings for construction.

4.1.3. Soil stabilization

Stabilization of disturbed areas must, at a minimum, be initiated immediately whenever any clearing, grading, excavating or other earth disturbing activities have temporarily or permanently ceased on any portion of the site, and will not resume for a period exceeding 14 calendar days. Soil stabilization (temporary or permanent) of those of disturbed areas must be completed as soon as possible, but not later than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased. In arid, semiarid, and drought-stricken areas where initiating vegetative stabilization measures immediately is infeasible, alternative stabilization measures (such as, but not limited to: properly anchored mulch, soil binders, matting) must be employed.

4.1.4. Dewatering

Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, are prohibited unless managed by appropriate controls. Appropriate controls include, but are not limited to: weir tank, dewatering tank, gravity bag filter, sand media particulate filter, pressurized bag filter, cartridge filter or other control units providing the level of treatment necessary to comply with permit requirements.

4.1.5. Pollution prevention measures

The permittee must design, install, implement, and maintain effective pollution prevention measures to minimize the discharge of pollutants. At a minimum, such measures must be designed, installed, implemented and maintained to:

(1) Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge;
(2) Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials present on the site to precipitation and to stormwater; and
(3) Minimize the discharge of pollutants from spills and leaks and implement chemical spill and leak prevention and response procedures.

4.1.6. Prohibited discharges

The following discharges are prohibited:

(1) Wastewater from washout of concrete, unless managed by an appropriate control;
(2) Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;
(3) Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance; and
(4) Soaps or solvents used in vehicle and equipment washing.

4.1.7. Surface outlets

When discharging from basins and impoundments, utilize outlet structures that only withdraw water from near the surface of the basin or impoundment, unless infeasible.

5. SPECIAL CONDITIONS, MANAGEMENT PRACTICES, AND OTHER NON-NUMERIC LIMITATIONS

5.1. Releases in Excess of Reportable Quantities

The discharge of hazardous substances or oil in the stormwater discharge(s) from a facility shall be prevented or minimized in accordance with the applicable stormwater pollution prevention plan for the facility. This permit does not relieve the permittee of the reporting requirements of 40 CFR 117 and 40 CFR 302. 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:

a) the permittee is required to notify the National Response Center (NRC) (800-424-8802) and the Tennessee Emergency Management Agency (emergencies: 800-262-3300; non-emergencies: 800-262-3400) in accordance with the requirements of 40 CFR 117 or 40 CFR 302 as soon as he or she has knowledge of the discharge;
b) the permittee shall submit, within 14 days of knowledge of the release, a written description of: the release (including the type and estimate of the amount of material

released), the date that such release occurred, the circumstances leading to the release, what actions were taken to mitigate effects of the release, and steps to be taken to minimize the chance of future occurrences, to the appropriate Environmental Field Office (see subpart 2.8 above); and

c) the SWPPP required under part 3 above of this permit must be updated within 14 days of knowledge of the release: to provide a description of the release, the circumstances leading to the release, and the date of the release. This can be accomplished by including a copy of a written description of the release as described in the paragraph b) above. In addition, the SWPPP must be reviewed to identify measures to prevent the reoccurrence of such releases and to respond to such releases, and the plan must be modified where appropriate.

5.2. Spills

This permit does not authorize the discharge of hazardous substances or oil resulting from an on-site spill.

5.3. Discharge Compliance with State Water Quality Standards

5.3.1. Violation of Water Quality Standards

This permit does not authorize stormwater or other discharges that would result in a violation of a state water quality standard (the TDEC Rules, Chapters 1200-4-3, 1200-4-4). Such discharges constitute a violation of this permit.

Where a discharge is already authorized under this permit and the division determines the discharge to cause or contribute to the violation of applicable state water quality standards, the division will notify the operator of such violation(s). The permittee shall take all necessary actions to ensure future discharges do not cause or contribute to the violation of a water quality standard and shall document these actions in the SWPPP.

5.3.2. Discharge quality

a) The construction activity shall be carried out in such a manner that will prevent violations of water quality criteria as stated in the TDEC Rules, Chapter 1200-4-3-.03. This includes but is not limited to the prevention of any discharge that causes a condition in which visible solids, bottom deposits, or turbidity impairs the usefulness of waters of the state for any of the uses designated for that water body by TDEC Rules, Chapter 1200-4-4. Construction activity carried out in the manner required by this permit shall be considered compliance with the TDEC Rules, Chapter 1200-4-3-.03.
b) There shall be no distinctly visible floating scum, oil or other matter contained in the stormwater discharge.
c) The stormwater discharge must not cause an objectionable color contrast in the receiving stream.
d) The stormwater discharge must result in no materials in concentrations sufficient to be hazardous or otherwise detrimental to humans, livestock, wildlife, plant life, or fish and aquatic life in the receiving stream. This provision includes species covered under subpart 1.3 above.

5.4. Discharges into Impaired or Exceptional Tennessee Waters

5.4.1. Additional SWPPP/BMP Requirements for discharges into impaired or exceptional TN Waters

Discharges that would add loadings of a pollutant that is identified as causing or contributing to an impairment of a water body on the list of impaired waters, or which would cause degradation to waters designated by TDEC as Exceptional Tennessee waters are not authorized by this permit (see subpart 1.3 above). To be eligible to obtain and maintain coverage under this permit, the operator must satisfy, at a minimum, the following additional requirements for discharges into waters impaired by siltation (or discharges upstream of such waters and because of the proximity to the impaired segment and the nature of the discharge is likely to contribute pollutants of concern in amounts measurable in the impaired segment that may affect the impaired waters) and for discharges to waters identified by TDEC as Exceptional Tennessee waters (or discharges upstream of such waters and because of the proximity to the exceptional segment and the nature of the discharge is likely to contribute pollutants of concern in amounts measurable in the exceptional segment that may affect the Exceptional Tennessee waters):

a) The SWPPP must certify that erosion prevention and sediment controls used at the site are designed to control storm runoff generated by a 5-year, 24-hour storm event (the design storm - see part 10 below: "2-year and 5-year design storm depths and intensities"), as a minimum, either from total rainfall in the designated period or the equivalent intensity as specified on the following website http://hdsc.nws.noaa.gov/hdsc/pfds/orb/tn_pfds.html. When clay and other fine particle soils are found on sites, additional physical or chemical treatment of stormwater runoff may be used.
b) The SWPPP must be prepared by a person who, at a minimum, has completed the department's Level II Design Principles for Erosion Prevention and Sediment Control for Construction Sites course. This requirement goes in effect 24 months following the new permit effective date. A copy of the certification or training record for inspector certification should be included with the SWPPP.
c) The permittee shall perform inspections described in section 3.5.8 above at least twice every calendar week. Inspections shall be performed at least 72 hours apart.
d) The permittee must certify on the form provided in Appendix C of this permit whether or not all planned and designed erosion prevention and sediment controls are installed and in working order. The form must contain the printed name and signature of the inspector and the certification must be executed by a person who meets the signatory requirements of section 7.7.2 below of this permit. The record of inspections must be kept at the construction site with a copy of the SWPPP. For record retention requirements, see part 6 below.
e) In the event the division finds that a discharger is complying with the SWPPP, but contributing to the impairment of receiving stream, then the discharger will be notified by the director in writing that the discharge is no longer eligible for coverage under the general permit. The permittee may update the SWPPP and implement the necessary changes designed to eliminate further impairment of the receiving stream. If the permittee does not implement the SWPPP changes within 7 days of receipt of notification, the permittee will be notified in writing that continued discharges must be covered by an individual permit (see subpart 7.12 below). To obtain the individual permit, the operator must file an individual permit application (EPA Forms 1 and 2F). The project must be stabilized immediately until the SWPPP is updated and the

individual permit is issued. Only discharges from earth disturbing activities necessary for stabilization are authorized to continue until the individual permit is issued.

f) For an on-site outfall in a drainage area of a total of 5 or more acres, a minimum temporary (or permanent) sediment basin volume that will provide treatment for a calculated volume of runoff from a 5 year, 24 hour storm and runoff from each acre drained, or equivalent control measures as specified in the Tennessee Erosion and Sediment Control Handbook

g) , shall be provided until final stabilization of the site. A drainage area of 5 or more acres includes both disturbed and undisturbed portions of the site or areas adjacent to the site, all draining through the common outfall. Where an equivalent control measure is substituted for a sediment retention basin, the equivalency must be justified. Runoff from any undisturbed acreage should be diverted around the disturbed area and the sediment basin and, if so, can be omitted from the volume calculation. Sediment storage expected from the disturbed areas must be included and a marker installed signifying a cleanout need.

h) The director may require revisions to the SWPPP necessary to prevent a negative impact to legally protected state or federally listed aquatic fauna, their habitat, or the receiving waters.

5.4.2. Buffer zone requirements for discharges into impaired or exceptional TN waters

For sites that contain and/or are adjacent to a receiving stream designated as impaired or Exceptional Tennessee waters a 60-foot natural riparian buffer zone adjacent to the receiving stream shall be preserved, to the maximum extent practicable, during construction activities at the site. The water quality buffer zone is required to protect waters of the state (e.g., perennial and intermittent streams, rivers, lakes, wetlands) located within or immediately adjacent to the boundaries of the project, as identified using methodology from Standard Operating Procedures for Hydrologic Determinations (see rules to implement a certification program for Qualified Hydrologic Professionals , TN Rules Chapter 0400-40-17). Buffer zones are not primary sediment control measures and should not be relied on as such. Rehabilitation and enhancement of a natural buffer zone is allowed, if necessary, for improvement of its effectiveness of protection of the waters of the state. The buffer zone requirement only applies to new construction sites, as described in section 2.4.2 above.

The natural buffer zone should be established between the top of stream bank and the disturbed construction area. The 60-feet criterion for the width of the buffer zone can be established on an average width basis at a project, as long as the minimum width of the buffer zone is more than 30 feet at any measured location.

Every attempt should be made for construction activities not to take place within the buffer zone. BMPs providing equivalent protection to a receiving stream as a natural riparian zone may be used at a construction site. Such equivalent BMPs shall be designed to be as effective in protecting the receiving stream from effects of stormwater runoff as a natural buffer zone. A justification for use and a design of equivalent BMPs shall be included in the SWPPP. Such equivalent BMPs are expected to be routinely used at construction projects typically located adjacent to surface waters. These projects include, but are not limited to: sewer line construction, roadway construction, utility line or equipment installation, greenway construction, construction of a permanent outfall or a velocity dissipating structure, etc.

This requirement does not apply to an area that is being altered under the authorization of a valid Aquatic Resources Alteration Permit (ARAP), or equivalent permits issued by federal authorities. Additional natural buffer zone requirements may be established by the local MS4 program.

5.4.2.1. Buffer zone exemption based on existing uses

Buffer zones as described in section 5.4.2 above shall not be required to portions of the buffer where certain land uses exist and are to remain in place according to the following:

1. A use shall be considered existing if it was present within the buffer zone as of the date of the Notice of Intent for coverage under the CGP. Existing uses shall include, but not be limited to, buildings, parking lots, roadways, utility lines and on-site sanitary sewage systems. Only the portion of the buffer zone that contains the footprint of the existing land use is exempt from buffer zones. Activities necessary to maintain uses are allowed provided that no additional vegetation is removed from the buffer zone.

2. If an area with an existing land use is proposed to be converted to another use or the impervious surfaces located within the buffer area are being removed buffer zone requirements shall apply.

5.4.3. Pre-Approved sites

Construction activity at sites that have been pre-approved before June 16, 2005, are exempt from the design storm requirements of section 5.4.1 a) and e) above and the buffer requirements of section 5.4.2 above. Evidence of pre-approval for highway projects shall be a final right-of-way plan and for other construction projects, the final design drawings with attached dated, written approval by the local, state or federal agency with authority to approve such design drawings for construction.

6. RETENTION, ACCESSIBILITY AND SUBMISSION OF RECORDS

6.1. Documents

The permittee shall retain copies of stormwater pollution prevention plans and all reports required by this permit, and records of all data used to complete the NOI and the NOT to be covered by this permit, for a period of at least three years from the date the notice of termination is submitted. This period may be extended by written request of the director.

6.2. Accessibility and Retention of Records

The permittee shall retain a copy of the SWPPP required by this permit (including a copy of the permit) at the construction site (or other local location accessible to the director and the public) from the date construction commences to the date of termination of permit coverage. Permittees with day-to-day operational control over pollution prevention plan implementation shall have a copy of the SWPPP available at a central location onsite for the use of all operators and those identified as having responsibilities under the plan whenever they are on the construction site. Once coverage is terminated, the permittee shall maintain a copy of all records for a period of three years.

6.2.1. Posting information at the construction site

The permittee shall post a notice near the main entrance of the construction site accessible to the public with the following information:

a) a copy of the NOC with the NPDES permit tracking number for the construction project;
b) name, company name, E-mail address (if available), telephone number and address of the project site owner/operator or a local contact person;
c) a brief description of the project; and
d) the location of the SWPPP (see section 3.3.3 above).

The notice must be maintained in a legible condition. If posting this information near a main entrance is infeasible due to safety concerns, or not accessible to the public, the notice shall be posted in a local public building. If the construction project is a linear construction project (e.g., pipeline, highway, etc.), the notice must be placed in a publicly accessible location near where construction is actively underway and moved as necessary. This permit does not provide the public with any right to trespass on a construction site for any reason, including inspection of a site. This permit does not require that permittees allow members of the public access to a construction site.

The permittee shall also retain following items/information in an appropriate location on-site:

a) a rain gauge;
b) a copy of twice weekly inspection reports;
c) a documentation of quality assurance site assessments, if applicable (see section 3.1.2 above); and
d) a copy of the site inspector's Fundamentals of Erosion Prevention and Sediment Control Level 1 certification.

6.3. Electronic Submission of NOIs, NOTs and Reports

If the division notifies dischargers (directly by mail or E-mail, by public notice, or by making information available on the world wide web) of electronic forms or other report options that become available at a later date (e.g., electronic submission of forms), the operators may take advantage of those options to satisfy the NOI, NOT and other report notification requirements.

7. STANDARD PERMIT CONDITIONS

7.1. Duty to Comply

7.1.1. Permittee's duty to comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Tennessee Water Quality Control Act (TWQCA) and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

7.1.2. Penalties for violations of permit conditions

Pursuant to T.C.A. § 69-3-115 of The Tennessee Water Quality Control Act of 1977, as amended:

a) any person who violates an effluent standard or limitation or a water quality standard established under this part (T.C.A. § 69-3-101, et. seq.); violates the terms or conditions of this permit; fails to complete a filing requirement; fails to allow or perform an entry, inspection, monitoring or reporting requirement; violates a final determination or order of the board, panel or commissioner; or violates any other provision of this part or any rule or regulation promulgated by the board, is subject to a civil penalty of up to ten thousand dollars ($10,000) per day for each day during which the act or omission continues or occurs;
b) any person unlawfully polluting the waters of the state or violating or failing, neglecting, or refusing to comply with any of the provisions of this part (T.C.A. § 69-3-101, et. seq.) commits a Class C misdemeanor. Each day upon which such violation occurs constitutes a separate offense;
c) any person who willfully and knowingly falsifies any records, information, plans, specifications, or other data required by the board or the commissioner, or who willfully and knowingly pollutes the waters of the state, or willfully fails, neglects or refuses to comply with any of the provisions of this part (T.C.A. § 69-3-101, et. seq.) commits a Class E felony and shall be punished by a fine of not more than twenty-five thousand dollars ($25,000) or incarceration, or both.

7.1.3. Civil and criminal liability

Nothing in this permit shall be construed to relieve the discharger from civil or criminal penalties for noncompliance. Notwithstanding this permit, the discharger shall remain liable for any damages sustained by the State of Tennessee, including but not limited to fish kills and losses of aquatic life and/or wildlife, as a result of the discharge to any surface or subsurface waters. Additionally, notwithstanding this permit, it shall be the responsibility of the discharger to conduct stormwater discharge activities in a manner such that public or private nuisances or health hazards will not be created. Furthermore, nothing in this permit shall be construed to preclude the State of Tennessee from any legal action or relieve the discharger from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or the Federal Water Pollution Control Act.

7.1.4. Liability under state law

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable local, state or federal law.

7.2. Continuation of the Expired General Permit

Permittees shall maintain coverage under this general permit until a new general permit is issued. Permittees who choose not to maintain coverage under the expired general permit, or are required to obtain an individual permit, must submit an application (U.S. EPA NPDES Forms 1 and 2F and any other applicable forms) at least 180 days prior to expiration of this general permit. Permittees who are eligible and choose to be covered by the new general permit must submit an NOI by the date specified in that permit. Facilities that have not obtained coverage under this permit by the permit expiration date cannot become authorized to discharge under the continued permit.

Operator(s) of an existing site permitted under the division's 2005 construction general permit shall maintain full compliance with the existing SWPPP. The existing SWPPP should be modified, if necessary, to meet requirements of this new general permit, and the SWPPP changes implemented no later than 12 months following the new permit effective date. The permittee shall make the updated SWPPP available for the division's review upon request.

7.3. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

7.4. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

7.5. Duty to Provide Information

The permittee shall furnish to the division or an authorized representative of the division, within a time specified by the division, any information that the division may request to determine compliance with this permit or other information relevant to the protection of the waters of the state. The permittee shall also furnish to the division, upon request, copies of records required to be kept by this permit.

7.6. Other Information

When the permittee becomes aware that he or she failed to submit any relevant facts or submitted incorrect information in the Notice of Intent or in any other report to the director, he or she shall promptly submit such facts or information.

7.7. Signatory Requirements

All Notices of Intent (NOIs), stormwater pollution prevention plans (SWPPPs), requests for termination of permit coverage (NOTs), Construction Stormwater Inspection Certifications, Construction Stormwater Monitoring Report forms, reports, certifications or information either submitted to the director or the operator of a large or medium municipal separate storm sewer system and/or any other information either submitted to the division, or that this permit requires be maintained by the permittee, shall be signed as described in sections 7.7.1 and 7.7.2 below and dated.

7.7.1. Signatory requirements for a Notice of Intent (NOI)[3]

NOI shall be signed as follows:

a) For a corporation, by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

(i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or
(ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated site including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

NOTE: The division does not require specific assignments or delegations of authority to responsible corporate officers. The division will presume that these responsible corporate officers have the requisite authority to sign permit applications unless the corporation has notified the director to the contrary. Corporate procedures governing authority to sign permit applications may provide for assignment or delegation to applicable corporate positions rather than to specific individuals.

b) For a partnership or sole proprietorship, by a general partner or the proprietor, respectively.

c) For a municipality, state, federal, or other public agency, by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:

(i) the chief executive officer of the agency, or

[3] As specified in 40 CFR 122.22(a)(1)-(3) [48 FR 14153, Apr. 1, 1983, as amended at 48 FR 39619, Sept. 1, 1983; 49 FR 38047, Sept. 29, 1984; 50 FR 6941, Feb. 19, 1985; 55 FR 48063, Nov. 16, 1990; 65 FR 30907, May 15, 2000]

(ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).

7.7.2. Signatory requirements for reports and other items

SWPPPs, Construction Stormwater Inspection Certification forms, reports, certifications or other information submittals required by the permit and other information requested by the division, including but not limited to Notice of Violation responses, shall be signed by a person described in section 7.7.1 above, or by a duly authorized representative of that person.

7.7.3. Duly authorized representative

For a purpose of satisfying signatory requirements for reports (see section 7.7.2 above), a person is a duly authorized representative only if:

a) the authorization is made in writing by a person described in section 7.7.1 above;
b) the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated site or activity such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company; a duly authorized representative may thus be either a named individual or any individual occupying a named position and,
c) the written authorization is submitted to the director or an appropriate EFO (see section 2.8 above). The written authorization shall be a written document including the name of the newly authorized person and the contact information (title, mailing address, phone number, fax number and E-mail address) for the authorized person. The written authorization shall be signed by the newly authorized person accepting responsibility and by the person described in section 7.7.1 above delegating the authority.

7.7.4. Changes to authorization

If an authorization under sections 7.7.1 above or 7.7.3 above is no longer accurate because a different individual or position has responsibility as the primary or secondary permittee, but the company name (permittee name) remains the same, a new NOI and SWPPP certification shall be submitted to an appropriate EFO (see section 2.8 above) and signed by the new party who meets signatory authority satisfying the requirements of sections 7.7.1 above or 7.7.3 above . The NOI shall include the new individual's information (title, mailing address, phone number, fax number and E-mail address), the existing tracking number and the project name.

7.7.5. Signatory requirements for primary permittees

Primary permittees required to sign an NOI and SWPPP because they meet the definition of an operator (see subpart 2.2 above) shall sign the following certification statement on the NOI and SWPPP:

"*I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the*

information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

7.7.6. Signatory requirements for secondary permittees

Secondary permittees (typically construction contractors) required to sign an NOI and SWPPP because they meet the definition of an operator but who are not primarily responsible for preparing an NOI and SWPPP, shall sign the following certification statement on the NOI and SWPPP:

"I certify under penalty of law that I have reviewed this document, any attachments, and the SWPPP referenced above. Based on my inquiry of the construction site owner/developer identified above and/or my inquiry of the person directly responsible for assembling this NOI and SWPPP, I believe the information submitted is accurate. I am aware that this NOI, if approved, makes the above-described construction activity subject to NPDES permit number TNR100000, and that certain of my activities on-site are thereby regulated. I am aware that there are significant penalties, including the possibility of fine and imprisonment for knowing violations, and for failure to comply with these permit requirements."

7.8. Penalties for Falsification of Reports

Knowingly making any false statement on any report or form required by this permit may result in the imposition of criminal penalties as provided for in Section 309 of the Clean Water Act and in T.C.A. §69-3-115 of the Tennessee Water Quality Control Act.

7.9. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject to Section 311 of the Clean Water Act or Section 106 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA).

7.10. Property Rights

The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. The issuance of this permit does not authorize trespassing or discharges of stormwater or non-stormwater across private property.

7.11. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

7.12. Requiring an Individual Permit

7.12.1. Director can require a site to obtain an individual permit

The director may require any person authorized by this permit to apply for and/or obtain an individual NPDES permit in order to obtain adequate protection of designated uses of a receiving stream. Any interested person may petition the director in writing to take action under this paragraph, but must include in their petition the justification for such an action. Where the director requires a discharger authorized to discharge under this permit to apply for an individual NPDES permit, the director shall notify the discharger in writing that an individual permit application is required. This notification will include a brief statement of the reasons for this decision, an application form, a statement setting a deadline for the discharger to file the application, and a statement that coverage under this general permit shall terminate upon the effective date of an individual NPDES permit or denial of coverage under an individual permit. The notification may require stabilization of the site and suspend coverage under this general permit until the individual permit is issued. Individual permit applications shall be submitted to the appropriate Environmental Field Office of the division as indicated in subpart 2.8 above of this permit. The director may grant additional time to submit the application upon request of the applicant. If a discharger fails to submit in a timely manner an individual NPDES permit application as required by the director under this paragraph, then the applicability of this permit to the discharger will be terminated at the end of the day specified by the director for application submittal.

If the decision to require an individual NPDES permit precedes the issuance of coverage under this general permit, earth disturbing activities cannot begin until the individual permit is issued.

7.12.2. Permittee may request individual permit instead of coverage under this general permit

Any discharger authorized by this permit may request to be excluded from the coverage of this permit by applying for an individual permit. Any discharger that knowingly cannot abide by the terms and conditions of this permit must apply for an individual permit. In such cases, the permittee shall submit an individual application in accordance with the requirements of 40 CFR 122.26(c)(1)(ii), with reasons supporting the request, to the appropriate division's Environmental Field Office. The request may be granted by issuance of an individual permit, or alternative general permit, if the reasons cited by the permittee are adequate to support the request.

7.12.3. Individual permit terminates general permit

When an individual NPDES permit is issued to a discharger otherwise subject to this permit, or the discharger is authorized to discharge under an alternative NPDES general permit, the applicability of this permit to the discharger is terminated on the effective date of the individual permit or the date of authorization of coverage under the alternative general permit, whichever the case may be. When an individual NPDES permit is denied to an owner or operator otherwise

subject to this permit, or the owner or operator is denied for coverage under an alternative NPDES general permit, the applicability of this permit to the individual NPDES permittee is terminated on the date of such denial, unless otherwise specified by the director. Coverage under the Tennessee Multi-Sector General Permit for the Discharge of Stormwater from an Industrial Activity (TMSP) will not be considered as an alternative general permit under this section without being specified by the director.

7.13. Other, Non-Stormwater, Program Requirements

No condition of this permit shall release the permittee from any responsibility or requirements under other environmental statutes or regulations.

7.14. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related equipment) which are installed or used by the permittee to achieve compliance with the conditions of this permit and with the requirements of stormwater pollution prevention plans.

Proper operation and maintenance also includes adequate laboratory quality assurance and quality control procedures. Proper operation and maintenance requires the operation of backup or auxiliary facilities or similar systems, installed by a permittee, when determined by the permittee or the division to be necessary to achieve compliance with the conditions of the permit.

7.15. Inspection and Entry

The permittee shall allow authorized representatives of the Environmental Protection Agency, the director or an authorized representative of the commissioner of TDEC, or, in the case of a construction site which discharges through a municipal separate storm sewer, an authorized representative of the MS4 receiving the discharge, upon the presentation of credentials and other documents as may be required by law:

a) to enter upon the permittee's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;
b) to have access to and copy at reasonable times, any records that must be kept under the conditions of this permit; and
c) to inspect any facilities or equipment (including monitoring and control equipment).

7.16. Permit Actions

This permit may be issued, modified, revoked, reissued or terminated for cause in accordance with this permit and the applicable requirements of T.C.A. § 69-3-108. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

8.1.1. Termination of builder and contractor coverage

8. REQUIREMENTS FOR TERMINATION OF COVERAGE

8.1. Termination of Developer and Builder Coverage

8.1.1. Termination process for primary permittees

Primary permittees wishing to terminate coverage under this permit must submit a completed notice of termination (NOT) form, provided in Appendix B of this permit (or copy thereof). Primary permittees who abandon the site and fail to submit the NOT will be in violation of this permit. Signs notifying the public of the construction activity shall be in place until the NOT form has been submitted. Primary permittees may terminate permit coverage only if the conditions described in items 1, 2 or 3 below occur at the site:

1. All earth-disturbing activities at the site are completed and, if applicable, construction support activities permitted under section 1.2.2 above, and the following requirements are met:

   (a) For any areas that
   - were disturbed during construction,
   - are not covered over by permanent structures, and
   - over which the permittee had control during the construction activities

   the requirements for final vegetative or non-vegetative stabilization described in sub-section 3.5.3.2 above are met;

   (b) The permittee has removed and properly disposed of all construction materials, waste and waste handling devices, and have removed all equipment and vehicles that were used during construction, unless intended for long-term use following termination of permit coverage;

   (c) The permittee has removed all stormwater controls that were installed and maintained during construction, except those that are intended for long-term use following termination of permit coverage;

   (d) The permittee has removed all potential pollutants and pollutant-generating activities associated with construction, unless needed for long-term use following termination of permit coverage; and

   (e) The permittee must identify who is responsible for ongoing maintenance of any stormwater controls left on the site for long-term use following termination of permit coverage; or

2. The permittee has transferred control of all areas of the site for which he is responsible (including, but not limited to, infrastructure, common areas, stormwater drainage structures, sediment control basin, etc.) under this permit to another operator, and that operator has submitted an NOI and obtained coverage under this permit; or

3. The permittee obtains coverage under an individual or alternative general NPDES permit.

8.1.2. NOT review

The division will review NOTs for completeness and accuracy and, when necessary, investigate the proposed site for which the NOT was submitted. Upon completing the NOT review, the division will:

1) prepare and transmit a notification that a NOT form was received;
2) notify the applicant of needed changes to their NOT submittal; or
3) deny a request for termination of coverage under this general permit.

The division retains the right to deny termination of coverage under this general permit upon receipt of the NOT. If the local Environmental Field Office has information indicating that the permit coverage is not eligible for termination, written notification will be provided that permit coverage has not been terminated. The notification will include a summary of existing deficiencies. When the site meets the termination criteria, the NOT should be re-submitted.

If any permittee files for bankruptcy or the site is foreclosed on by the lender, the permittee should notify the division of the situation so that the division may assess the site to determine if permit coverage should be obtained by any other person or whether other action is needed.

8.2. Termination of Builder and Contractor Coverage

8.2.1. Termination process for secondary permittees

Secondary permittees (builders/contractors) must request termination of coverage under this permit by submitting an NOT when they are no longer an operator at the construction site. Secondary permittees receive coverage under this permit, but are not normally mailed a Notice of Coverage. Consequently, the division may, but is not required to, notify secondary permittees that their notice of termination has been received. If the division has reason to believe that the secondary permittee's NOT should not have been submitted, the division will deny the secondary permittee's NOT in writing, with specific reasons as to why the NOT should not have been submitted.

8.3. NOT certification

The NOT and the following certification must be signed in accordance with subpart 7.7 above (Signatory Requirements) of this permit:

> *"I certify under penalty of law that either: (a) all stormwater discharges associated with construction activity from the portion of the identified facility where I was an operator have ceased or have been eliminated or (b) I am no longer an operator at the construction site. I understand that by submitting this notice of termination, I am no longer authorized to discharge stormwater associated with construction activity under this general permit, and that discharging pollutants in stormwater associated with construction activity to waters of the United States is unlawful under the Clean Water Act where the discharge is not authorized by a NPDES permit. I also understand that the submittal of this notice of termination does not release an operator from liability for any violations of this permit or the Clean Water Act."*

8.4. Where to Submit a Notice of Termination (NOT)?

The NOT shall be submitted to the Environmental Field Office (EFO) which issued the NOC to the primary permittee. A list of counties and the corresponding EFOs is provided in subpart 2.8 above. The appropriate permit tracking number must be clearly printed on the form.

9. Aquatic Resource Alteration Permits (ARAP)

Alterations to channels or waterbodies (stream, wetland and/or other waters of the state) that are contained on, traverse through or are adjacent to the construction site, may require an Aquatic Resources Alteration Permit (ARAP). It is the responsibility of the developer to provide a determination of the water's status[4]. This determination must be conducted using methodology from Standard Operating Procedures for Hydrologic Determinations (see rules to implement a certification program for Qualified Hydrologic Professionals, TN Rules Chapter 0400-40-17). The permittee can make an assumption that streams/wetlands are present at the site in order to expedite the permit process. In some cases, issuance of coverage under the CGP may be delayed or withheld if the appropriate ARAP has not been obtained. At a minimum, any delay in obtaining an ARAP for water body alteration associated with the proposed project must be adequately addressed in the SWPPP prior to issuance of an NOC**.** Failure to obtain an ARAP prior to any actual alteration may result in enforcement action for the unauthorized alteration.

10. DEFINITIONS

"**2-year and 5-year design storm depths and intensities**" The estimated design rainfall amounts, for any return period interval (i.e., 2-yr, 5-yr, 25-yr, etc,) in terms of either 24-hour depths or intensities for any duration, can be found by accessing the following NOAA National Weather Service Atlas 14 data for Tennessee: http://hdsc.nws.noaa.gov/hdsc/pfds/orb/tn_pfds.html. Other data sources may be acceptable with prior written approval by TDEC Water Pollution Control.

"Best Management Practices" ("BMPs") means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants to waters of the state. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

"Borrow Pit" is an excavation from which erodible material (typically soil) is removed to be fill for another site. There is no processing or separation of erodible material conducted at the site. Given the nature of activity and pollutants present at such excavation, a borrow pit is considered a construction activity for the purpose of this permit.

"**Buffer Zone**" is a strip of dense undisturbed perennial native vegetation, either original or re-established, that borders streams and rivers, ponds and lakes, wetlands, and seeps. Buffer zones are established for the purposes of slowing water runoff, enhancing water infiltration, and

[4] The EPA considers inventorying a site's natural features is a technique called fingerprinting. More info can be found in EPA's document - EPA's Developing Your SWPPP – A Guide for Construction Sites (EPA-833-R-06-004 May 2007)

minimizing the risk of any potential nutrients or pollutants from leaving the upland area and reaching surface waters. Buffer zones are most effective when stormwater runoff is flowing into and through the buffer zone as shallow sheet flow, rather than in concentrated form such as in channels, gullies, or wet weather conveyances. Therefore, it is critical that the design of any development include management practices, to the maximum extent practical, that will result in stormwater runoff flowing into and through the buffer zone as shallow sheet flow. Buffer zones are established for the primary purpose of protecting water quality and maintaining a healthy aquatic ecosystem in receiving waters.

"Clearing" in the definition of discharges associated with construction activity, typically refers to removal of vegetation and disturbance of soil prior to grading or excavation in anticipation of construction activities. Clearing may also refer to wide area land disturbance in anticipation of non-construction activities; for instance, clearing forested land in order to convert forestland to pasture for wildlife management purposes. Clearing, grading and excavation do not refer to clearing of vegetation along existing or new roadways, highways, dams or power lines for sight distance or other maintenance and/or safety concerns, or cold planing, milling, and/or removal of concrete and/or bituminous asphalt roadway pavement surfaces. The clearing of land for agricultural purposes is exempt from federal stormwater NPDES permitting in accordance with Section 401(1)(1) of the 1987 Water Quality Act and state stormwater NPDES permitting in accordance with the Tennessee Water Quality Control Act of 1977 (T.C.A. 69-3-101 et seq.).

"Commencement of construction" The initial disturbance of soils associated with clearing, grading, or excavating activities or other construction activities.

"Common plan of development or sale" is broadly defined as any announcement or documentation (including a sign, public notice or hearing, sales pitch, advertisement, drawing, permit application, zoning request, computer design, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor markings, etc.) indicating construction activities may occur on a specific plot. A common plan of development or sale identifies a situation in which multiple areas of disturbance are occurring on contiguous areas. This applies because the activities may take place at different times, on different schedules, by different operators.

"Control measure" As used in this permit, refers to any Best Management Practice (BMP) or other method used to prevent or reduce the discharge of pollutants to waters of the state.

"CWA" means the Clean Water Act of 1977 or the Federal Water Pollution Control Act (33 U.S.C. 1251, et seq.)

"**Department**" means the Department of Environment and Conservation.

"Director" means the director, or authorized representative, of the Division of Water Pollution Control of the State of Tennessee, Department of Environment and Conservation.

"Discharge of stormwater associated with construction activity" As used in this permit, refers to stormwater point source discharges from areas where soil disturbing activities (e.g., clearing, grading, excavation, etc.), or construction materials or equipment storage or maintenance (e.g., earth fill piles, fueling, waste material etc.) are located.

"**Division**" means the Division of Water Pollution Control of the State of Tennessee, Department of Environment and Conservation.

"**Final Stabilization**" means that all soil disturbing activities at the site have been completed and one of the three following criteria is met:

a. A uniform (e.g., evenly distributed, without large bare areas) perennial vegetative cover with a uniform density of at least 70 percent of the (preferably) native vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures, and all slopes and channels have been permanently stabilized against erosion, or

b. Equivalent permanent stabilization measures (such as the use of riprap; permanent geotextiles, hardened surface materials including concrete, asphalt, gabion baskets, or Reno mattresses) have been employed, or

c. For construction projects on land used for agricultural or silvicultural purposes, final stabilization may be accomplished by returning the disturbed land to its preconstruction agricultural or silvicultural use.

"Exceptional Tennessee waters" are surface waters of the State of Tennessee that satisfy characteristics of exceptional Tennessee waters as listed Chapter 1200-4-3-.06 of the official compilation - Rules and Regulations of the State of Tennessee. Characteristics include waters designated by the Water Quality Control Board as Outstanding National Resource Waters (ONRW); waters that provide habitat for ecologically significant populations of certain aquatic or semi-aquatic plants or animals; waters that provide specialized recreational opportunities; waters that possess outstanding scenic or geologic values; or waters where existing conditions are better than water quality standards.

"**Impaired waters**" (unavailable conditions waters) means any segment of surface waters that has been identified by the division as failing to support one or more classified uses. For the purpose of this permit, pollutants of concern include, but are not limited to: siltation (silt/sediment) and habitat alterations. Based on the most recent assessment information available to staff, the division will notify applicants and permittees if their discharge is into, or is affecting, impaired waters. Resources to be used in making this determination include biennial compilations of impaired waters, databases of assessment information, updated GIS coverages (http://tnmap.tn.gov/wpc/), and the results of recent field surveys. GIS coverages of the streams and lakes not meeting water quality standards, plus the biennial list of impaired waters, can be found at http://www.tn.gov/environment/water/docs/wpc/2012_pf_303d_list.pdf.

"Improved sinkhole" is a natural surface depression that has been altered in order to direct fluids into the hole opening. Improved sinkhole is a type of injection well regulated under the Underground Injection Control (UIC) program. Underground injection constitutes an intentional disposal of waste waters in natural depressions, open fractures, and crevices (such as those commonly associated with weathering of limestone).

"Inspector" An inspector is a person that has successfully completed (has a valid certification from) the "Fundamentals of Erosion Prevention and Sediment Control Level I" course or equivalent course. An inspector performs and documents the required inspections, paying

particular attention to time-sensitive permit requirements such as stabilization and maintenance activities. An inspector may also have the following responsibilities:

a) oversee the requirements of other construction-related permits, such as Aquatic Resources Alteration Permit (ARAP) or Corps of Engineers permit for construction activities in or around waters of the state;
b) update field SWPPPs;
c) conduct pre-construction inspection to verify that undisturbed areas have been properly marked and initial measures have been installed; and
d) inform the permit holder of activities that may be necessary to gain or remain in compliance with the CGP and other environmental permits.

"Linear Project" – is a land disturbing activity as conducted by an underground/overhead utility or highway department, including but not limited to any cable line or wire for the transmission of electrical energy; any conveyance pipeline for transportation of gaseous or liquid substance; any cable line or wire for communications; or any other energy resource transmission ROW or utility infrastructure, e.g., roads and highways. Activities include the construction and installation of these utilities within a corridor. Linear project activities also include the construction of access roads, staging areas, and borrow/spoil sites associated with the linear project. Land disturbance specific to the development of a residential and/or commercial subdivision or high-rise structures is not considered a linear project.

"Monthly" refers to calendar months.

"**Municipal Separate Storm Sewer System**" or "**MS4**" is defined at 40 CFR §122.26(b)(8) to mean a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains):

1. Owned and operated by a state, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to state law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under state law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States;
2. Designed or used for collecting or conveying stormwater;
3. Which is not a combined sewer; and
4. Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR §122.2.

"NOI" means notice of intent to be covered by this permit (see part 2 above of this permit.)

"NOT" means notice of termination (see part 8 above of this permit).

"**Operator**" for the purpose of this permit and in the context of stormwater associated with construction activity, means any person associated with a construction project that meets either of the following two criteria:

a) This person has operational or design control over construction plans and specifications, including the ability to make modifications to those plans and specifications. This person

is typically the owner or developer of the project or a portion of the project, and is considered the primary permittee; or

b) This person has day-to-day operational control of those activities at a project which are necessary to ensure compliance with a SWPPP for the site or other permit conditions. This person is typically a contractor or a commercial builder who is hired by the primary permittee, and is considered a secondary permittee.

It is anticipated that at different phases of a construction project, different types of parties may satisfy the definition of "operator."

"Point source" means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include introduction of pollutants from non point-source agricultural and silvicultural activities, including stormwater runoff from orchards, cultivated crops, pastures, range lands, and forest lands or return flows from irrigated agriculture or agricultural stormwater runoff.

"**Qualifying State, Tribal, or local erosion and sediment control program**" is one that includes, as defined in 40 CFR 122.44(s):

(i) Requirements for construction site operators to implement appropriate erosion and sediment control best management practices;
(ii) Requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality;
(iii) Requirements for construction site operators to develop and implement a stormwater pollution prevention plan. (A stormwater pollution prevention plan includes site descriptions, descriptions of appropriate control measures, copies of approved State, Tribal or local requirements, maintenance procedures, inspection procedures, and identification of non-stormwater discharges); and
(iv) Requirements to submit a site plan for review that incorporates consideration of potential water quality impacts.

"**Quality Assurance Site Assessment**" means documented site inspection to verify the functionality and performance of the SWPPP and for determining if construction, operation and maintenance accurately comply with permit requirements, as presented in the narrative, engineering specifications; maps, plans and drawings; and details for erosion prevention, sediment control and stormwater management.

"**Registered Engineer**" and "**Registered Landscape Architect**" An engineer or landscape architect certified and registered by the State Board of Architectural and Engineer Examiners pursuant to Section 62-202, Tennessee Code Annotated, to practice in Tennessee.

"Runoff coefficient" means the fraction of total rainfall that will appear at the conveyance as runoff. Runoff coefficient is also defined as the ratio of the amount of water that is NOT absorbed by the surface to the total amount of water that falls during a rainstorm.

"**Sediment**" means solid material, both inorganic (mineral) and organic, that is in suspension, is being transported, or has been moved from the site of origin by wind, water, gravity, or ice as a product of erosion.

"Sediment basin" A temporary basin consisting of an embankment constructed across a wet weather conveyance, or an excavation that creates a basin or by a combination of both. A sediment basin typically consists of a forebay cell, dam, impoundment, permanent pool, primary spillway, secondary or emergency spillway, and surface dewatering device. The size and shape of the basin depends on the location, size of drainage area, incoming runoff volume and peak flow, soil type and particle size, land cover, and receiving stream classification (i.e., impaired, HQ, or unimpaired).

"**Sedimentation**" means the action or process of forming or depositing sediment.

"**Significant contributor of pollutants to waters of the state**" means any discharge containing pollutants that are reasonably expected to cause or contribute to an impairment of receiving stream water quality or designated uses.

"**Soil**" means the unconsolidated mineral and organic material on the immediate surface of the earth that serves as a natural medium for the growth of plants.

"**Steep Slope**" A natural or created slope of 35% grade or greater. Designers of sites with steep slopes must pay attention to stormwater management in the SWPPP to engineer runoff non-erosively around or over a steep slope. In addition, site managers should focus on erosion prevention on the slope(s) and stabilize the slope(s) as soon as practicable to prevent slope failure and/or sediment discharges from the project.

"Stormwater" means rainfall runoff, snow melt runoff, and surface runoff and drainage.

"Stormwater associated with industrial activity" is defined at 40 CFR 122.26(b)(14) and incorporated here by reference. Most relevant to this permit is 40 CFR 122.26(b)(14)(x), which relates to construction activity including clearing, grading, filling and excavation activities (including borrow pits containing erodible material). Disturbance of soil for the purpose of crop production is exempted from permit requirements, but stormwater discharges from agriculture-related activities which involve construction of structures (e.g., barn construction, road construction, pond construction, etc.) are considered associated with industrial activity. Maintenance performed to maintain the original line and grade, hydraulic capacity, or original purpose of the facility, e.g. re-clearing, minor excavation performed around an existing structure necessary for maintenance or repair, and repaving of an existing road, is not considered a construction activity for the purpose of this permit.

"Stormwater discharge-related activities" include: activities which cause, contribute to, or result in point source stormwater pollutant discharges, including but not limited to: excavation, site development, grading and other surface disturbance activities; and measures to control stormwater including the siting, construction and operation of best management practices (BMPs) to control, reduce or prevent stormwater pollution.

"**Stormwater Pollution Prevention Plan"**(SWPPP): A written plan required by this permit that includes site map(s), an identification of construction/contractor activities that could cause

pollutants in the stormwater, and a description of measures or practices to control these pollutants. It must be prepared and approved before construction begins. In order to effectively reduce erosion and sedimentation impacts, Best Management Practices (BMPs) must be designed, installed, and maintained during land disturbing activities. The SWPPP should be prepared in accordance with the Tennessee Erosion and Sediment Control Handbook. The handbook is designed to provide information to planners, developers, engineers, and contractors on the proper selection, installation, and maintenance of BMPs. The handbook is intended for use during the design and construction of projects that require erosion and sediment controls to protect waters of the state. It also aids in the development of SWPPPs and other reports, plans, or specifications required when participating in Tennessee's water quality regulations.

"Take" of an endangered species means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or attempt to engage in any such conduct.

"**Temporary stabilization**" is achieved when vegetation and/or a non-erodible surface have been established on the area of disturbance and construction activity has temporarily ceased. Under certain conditions, temporary stabilization is required when construction activities temporarily cease. However, if future construction activity is planned, permit coverage continues.

"**Total maximum daily load**" (TMDL) The sum of the individual wasteload allocations for point sources and load allocations for nonpoint sources and natural background (40 CFR 130.2(I)). TMDL is a study that: quantifies the amount of a pollutant in a stream, identifies the sources of the pollutant, and recommends regulatory or other actions that may need to be taken in order for the stream to cease being polluted. Some of the actions that might be taken are:

1.) Re-allocation of limits on the sources of pollutants documented as impacting streams. It might be necessary to lower the amount of pollutants being discharged under NPDES permits or to require the installation of other control measures, if necessary, to ensure that water quality standards will be met.
2.) For sources over which the division does not have regulatory authority, such as ordinary agricultural or forestry activities, provide information and technical assistance to other state and federal agencies that work directly with these groups to install appropriate Best Management Practices (BMPs).

Even for impacted streams, TMDL development is not considered appropriate for all bodies of water: if enforcement has already been taken and a compliance schedule has been developed; or if best management practices have already been installed for non-regulated activities, the TMDL is considered not applicable. In cases involving pollution sources in other states, the recommendation may be that another state or EPA perform the TMDL . TMDLs can also be described by the following equation:

TMDL = sum of non point sources (LA)+ sum of point sources (WLA)+ margin of safety

A list of completed TMDLs that have been approved by EPA cab found at our web site: http://www.tn.gov/environment/water/watersheds/

"Turbidity" is the cloudiness or haziness of a fluid caused by individual particles (suspended solids) that are generally invisible to the naked eye, similar to smoke in air.

"**Waters**" or "**waters of the state**" means any and all water, public or private, on or beneath the surface of the ground, which are contained within, flow through, or border upon Tennessee or any portion thereof except those bodies of water confined to and retained within the limits of private property in single ownership which do not combine or effect a junction with natural surface or underground waters.

"**Waste site**" is an area where material from a construction site is disposed of. When the material is erodible, such as soil, the site must be treated as a construction site.

"**Wet weather conveyances**" are man-made or natural watercourses, including natural watercourses that have been modified by channelization that flow only in direct response to precipitation runoff in their immediate locality; whose channels are at all times above the ground water table; that are not suitable for drinking water supplies; and in which hydrological and biological analyses indicate that, under normal weather conditions, due to naturally occurring ephemeral or low flow there is not sufficient water to support fish or multiple populations of obligate lotic aquatic organisms whose life cycle includes an aquatic phage of at least two months. (Rules and Regulations of the State of Tennessee, Chapter 1200-4-3-.04(3)).

11. LIST OF ACRONYMS

ARAP	Aquatic Resource Alteration Permit
BMP	Best Management Practice
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CGP	Construction General Permit
CWA	Clean Water Act
EFO	Environmental Field Office
EPA	(U.S.) Environmental Protection Agency
EPSC	Erosion Prevention and Sediment Control
MS4	Municipal Separate Storm Sewer System
NOC	Notice of Coverage
NOI	Notice of Intent
NOT	Notice of Termination
NPDES	National Pollutant Discharge Elimination System
ONRW	Outstanding National Resource Waters
POTW	Publicly Owned Treatment Works
SWPPP	Stormwater Pollution Prevention Plan
TDEC	Tennessee Department of Environment and Conservation
TDOT	Tennessee Department of Transportation
TMDL	Total Maximum Daily Load
TMSP	Tennessee Multi-Sector General Permit for the Discharge of Stormwater from an Industrial Activity
TVA	Tennessee Valley Authority
TWQCA	Tennessee Water Quality Control Act
UIC	Underground Injection Control
USGS	United States Geological Survey

(End of body of permit; appendices follow.)

APPENDIX A – Notice of Intent (NOI) Form

You may access a copy of the NOI at the division's Web page:

http://www.tn.gov/environment/water/water-quality_storm-water.shtml

If you do not have access to the Internet,
Please contact the division at 1-888-891-8332 (TDEC)
or
E-mail a request for the NOI at Storm.Water@tn.gov

APPENDIX B – Notice of Termination (NOT) Form

You may access a copy of the NOT at the division's Web page:

http://www.tn.gov/environment/water/water-quality_storm-water.shtml

If you do not have access to the Internet,
Please contact the division at 1-888-891-8332 (TDEC)
or
E-mail a request for the NOI at Storm.Water@tn.gov

APPENDIX C – Twice-Weekly Inspection Report Form

You may access a copy of the Twice Weekly Inspection Form at the division's Web page:

http://www.tn.gov/environment/water/water-quality_storm-water.shtml

If you do not have access to the Internet,
Please contact the division at 1-888-891-8332 (TDEC)
or
E-mail a request for the NOI at Storm.Water@tn.gov

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ENVIRONMENTAL PERMITS

TO BE INSERTED BY TDOT

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
ENVIRONMENTAL DIVISION
SUITE 900, JAMES K. POLK BUILDING
505 DEADERICK STREET
NASHVILLE, TENNESSEE 37243-1402
(615) 741-3655

JOHN C. SCHROER
COMMISSIONER

BILL HASLAM
GOVERNOR

March 19, 2015

Mr. Robert Wayne
Natural Resource Section
Tennessee Department of Environment and Conservation
11th Floor William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue
Nashville, Tennessee 37243

Subject: Project #18038-1230-04
PIN 100268.03
161 KV transmission line relocation along
State Route 101 (Peavine Road)
From: Firetower Road
To: Lakeview Drive
Cumberland County

Dear Mr. Wayne:

We previously obtained the following water quality permits for widening State Route (SR) 101 (Peavine Road) from Firetower Road to Lakeview Drive (TDOT PIN # 100268.01) in Cumberland County:

- TDEC Water Quality Permit Certification, NRS 13.03
- USACOE permit, LRN 2013-00510
- TVA Section 26a permit, 230876

With this letter, we are applying for water quality permits for the construction of a new 161 KV transmission line associated with the above mentioned project. The current utility transmission line is located within the right-of-way needed to construct SR-101 project. When determining the location of the high voltage (161KV) utility line, which needs a minimum of 100 feet cleared right-of-way, TDOT examined several routes. Commercial and residential developments along the existing SR 101, made the installation of utility transmission lines not feasible for the route. Routes to the south were eliminated because they were almost double the cost and would severely impact Tennessee Department of Environment and Conservation (TDEC) properties. The northern option was selected as the most feasible location because it avoids considerable

cost of commercial property acquisition, transmission voltage line impacts to existing residential areas and the practical decimation of the business district located in the vicinity of the existing power line and the proposed roadway improvements.

This high voltage utility transmission line will be relocated to new right-of-way north of the roadway. This new right-of-way will be 100 feet in width and will be approximately 6.5 miles in length. Also included within the project scope is the crossing/impact of 24 streams and 7 wetlands. In accordance with T.C.A. 69-3-108(b), this office is submitting form CN-1091 identifying where permits may be needed.

In addition, and in accordance with the notification requirements of the U.S. Army Corps of Engineers, we are submitting this pre-construction notification and requesting concurrence at the locations described within the enclosed feature impact tables, meet the criteria of the nationwide permit identified.

By copy of this letter, we are also applying for a Section 26a permit or a letter of no objection from the Tennessee Valley Authority. Appropriate information is enclosed. This project will not cause any loss of flood storage or power storage volumes.

Please refer to the enclosed feature impact and summary tables for detailed information regarding environmental feature locations, proposed environmental feature impacts, required environmental permits, FEMA floodplain designations, etc.

It is the opinion of our office that no impacts are proposed to the wetlands (WTL-2, WTL-4, WTL-7) and the streams (STR-14, STR-19, and STR-26).

This project includes 0.59 acre permanent vegetation removal of wetlands. We propose to mitigate the permanent wetland impacts by purchasing, at a 1:1 ratio, 0.59 acre from available wetland credits from Tennessee Mitigation Fund (TMF). The pre-approved credit availability is attached.

Efforts were made during the planning and design phases of this project to avoid impacts to waters of the U.S. and waters of the State to the extent practicable, and to minimize impacts that were not avoidable. Erosion Prevention and Sediment Control measures will be installed around the environmental features to avoid soil erosion and sediment release.

In a letter dated October 10, 2013, the TN-SHPO state that the area of potential effect for the subject project contains no cultural resources eligible for listing in the National Register of Historic Places. In a letter dated August 20, 2013, the TN-SHPO stated that the area of potential effect for the subject project contains no archaeological resources eligible for listing in the National Register of Historic Places.

In a coordination letter dated November 24, 2014, the United States Fish and Wildlife Service (USFWS) concurred with the TDOT determination that the project is "not likely to adversely affect" the federally endangered Indiana bat (Myotis sodalis) and "not likely to jeopardize" the proposed northern long-eared bat (NLEB)(Myotis septentrionalis). The letter is included with the attached ecology report.

A search of the TDEC Division of Natural Areas, endangered species database, was conducted on February 6, 2014 determined that there is one (1) protected species within a one (1) mile radius of the project limits and fifteen (15) protected species within the four (4) mile radius of the project limits. TWRA reports an occurrence of the Black Mountain Dusky Salamander,

Desmognathus welteri, within 1.2 miles of the project area. TWRA notes potential suitable habitat for this salamander within the riparian zone in some of the streams within the project boundaries. In their response to TDOT Ecology Section email on March 27, 2014, TWRA requests TDOT perform surveys in areas that will have physical disturbance of the steam and/or adjacent banks. If the Dusky Salamander is observed during surveys, TWRA may require additional coordination. Additionally, TWRA requests that standard TDOT BMPs are in place and erosion control measures are installed and maintained during construction. TDOT added special note in the plans to perform the survey of Dusky Salamander prior to the construction. Please refer to the Species Review Form included in the Environmental Boundaries Report for a complete list of protected species.

It is the opinion of this office that all other aspects of the project not specifically mentioned in this letter meet the criteria for the General Permit for Wet Weather Conveyances. Please refer to the enclosed Form G for more information.

This project is currently scheduled for the April 29, 2015 turn-in. We would greatly appreciate your initial review and request for additional information needed, or issuance of the public notice, within 15 days of receipt of our application; and issuance of the permits as soon as possible.

If you have any questions or we can be of further assistance please contact me at (615) 253-0021 or Andrew Wisniewski at (615) 253-2545.

Sincerely,

Khalid Ahmed

Khalid Ahmed
Senior Transportation Project Specialist,
Environmental Permits Section

Enclosures

JLH: KMA: APW

cc: Mr. Jimmy Smith, TDEC
Ms. Tammy Turley, USACE, Nashville District
Ms. Kelly Baxter, TVA

ec:

Ms. Jeanene Woodruff, TDEC
Mr. Gary King, Project Management Office
Mr. Steve Langford, Reg-2 Utility Office
Mr. Ken Flynn, Region 2 Construction Office
Mr. Wesley Hughen, Region 2 Project Development
Mr. Jamie Fitzpatrick, HQ Construction Division
Mr. Tommy Paul, Region 2 Environmental Coordinator
Mr. Rob Howard, Region 2 Ecology Section
Mr. Brandon Chance, Region 2 Ecology Section
Mr. Ben Brown, Ecology Section, Mitigation
Mr. Ronnie Porter, Program Operations Office

Mr. Hugh (Chip) Hannah, TDOT Compliance
Ms. Jennifer Stover, TDOT Compliance
Mr. John Hewitt, Natural Resources Office
Permit File

FEATURE SUMMARY TABLE:

Location Information						Permits Needed			Impacts			
Location #	Feature Name	Stream Designation	Latitude Longitude	Stationing	FEMA Map Designation	TDEC	CORP	TVA	Existing Feature Characteristics	Proposed Impact	Impact Acres to Waters of the US	Mitigation Needed
1	STR-1 Unnamed Tributary to North Creek	Perennial	35.9854° 84.9595°	12+00	Map not available	General Aquatic Resource Permit	NW12	Section 26A or Letter of No Objection	•152 ft. of open channel. •See enclosed Environmental Boundaries Report for more information	•152 ft. of vegetation removal	0.015	-
2	STR-2 Unnamed Tributary to North Creek	Intermittent	35.9874° 84.9588°	19+46	Map not available	General Aquatic Resource Permit	NW12	Section 26A or Letter of No Objection	•133 ft. of open channel. •See enclosed Environmental Boundaries Report for more information	•133 ft. of vegetation removal •12 ft. rock ford for equipment crossing	0.009	-
4	STR-3 Unnamed Tributary to Otter Creek	Intermittent	35.9933° 84.9549°	49+66	Map not available	General Aquatic Resource Permit	Non-Notification - Nationwide #12 (no-verification needed): • A section 10 permit is not required • Mechanized land clearing in forested wetlands for the ROW is not occurring • Discharge results in the loss of less than a tenth of an acre • Utility line does not exceed 500 linear feet in waters of the US excluding overhead lines AND does not run parallel to a stream bed within jurisdictional area All conditions of the Nationwide #12 General Permit will be followed during construction.	Section 26A or Letter of No Objection	•155 ft. of open channel. •See enclosed Environmental Boundaries Report for more information	•155 ft. of vegetation removal •12 ft. rock ford for equipment crossing	0.012	-
4	STR-4 Unnamed Tributary to Otter Creek	Perennial	35.9933° 84.9547°	49+94	Map not available	General Aquatic Resource Permit	Non-Notification - Nationwide #12 (no-verification needed): See Location 4 for conditions of the Non-Notification	Section 26A or Letter of No Objection	•127 ft. of open channel. •See enclosed Environmental Boundaries Report for more information	•127 ft. of vegetation removal •12 ft. rock ford for equipment crossing	0.011	-
5	STR-5 Unnamed Tributary to Otter Creek	Intermittent	35.9930° 84.9534°	54+10	Map not available	General Aquatic Resource Permit	NW12	Section 26A or Letter of No Objection	•114 ft. of open channel. •See enclosed Environmental Boundaries Report for more information	•114 ft. of vegetation removal •12 ft. rock ford for equipment crossing	0.008	-
6	STR-6 Unnamed Tributary to Otter Creek	Intermittent	35.9958° 84.9460°	86+13	Map not available	General Aquatic Resource Permit	Non-Notification - Nationwide #12 (no-verification needed): See Location 4 for conditions of the Non-Notification	Section 26A or Letter of No Objection	•121 ft. of open channel. •See enclosed Environmental Boundaries Report for more information	•121 ft. of vegetation removal •12 ft. rock ford for equipment crossing	0.009	-
7	STR-7 Unnamed Tributary to Otter Creek	Perennial	35.9961° 84.9444°	90+72	Map not available	General Aquatic Resource Permit	Non-Notification - Nationwide #12 (no-verification needed): See Location 4 for conditions of the Non-Notification	Section 26A or Letter of No Objection	•121 ft. of open channel. •See enclosed Environmental Boundaries Report for more information	•121 ft. of vegetation removal •12 ft. rock ford for equipment crossing	0.016	-
8	STR-8 Unnamed Tributary to Otter Creek	Perennial	35.9989° 84.9385°	111+10	Map not available	General Aquatic Resource Permit	Non-Notification - Nationwide #12 (no-verification needed): See Location 4 for conditions of the Non-Notification	Section 26A or Letter of No Objection	•114 ft. of open channel. •See enclosed Environmental Boundaries Report for more information	•114 ft. of vegetation removal •12 ft. rock ford for equipment crossing	0.018	-
9	STR-9 Unnamed Tributary to Otter Creek	Intermittent	35.9992° 84.9361°	118+44	Map not available	General Aquatic Resource Permit	NW12	Section 26A or Letter of No Objection	•114 ft. of open channel. •See enclosed Environmental Boundaries Report for more information	•114 ft. of vegetation removal •12 ft. rock ford for equipment crossing	0.009	-
10	STR-10 Unnamed Tributary	Intermittent	35.9997° 84.9322°	130+10	Zone x	General Aquatic Resource Permit	NW12	Section 26A or Letter of No Objection	•96 ft. of open channel. •See enclosed Environmental Boundaries Report for more information	•96 ft. of vegetation removal •12 ft. rock ford for equipment crossing	0.002	-
10	STR-11 Unnamed Tributary	Intermittent	35.9998° 84.9322°	130+51	Zone x	General Aquatic Resource Permit	NW12	Section 26A or Letter of No Objection	•66 ft. of open channel. •See enclosed Environmental Boundaries Report for more information	•66 ft. of vegetation removal •12 ft. rock ford for equipment crossing	0.001	-
11	LAK-1/STR-12		36.0005° 84.9297°	134+40-137+10.	Zone x	General Aquatic Resource Permit	Non-Notification - Nationwide #12 (no-verification needed): See Location 4 for conditions of the Non-Notification	Section 26A or Letter of No Objection	130 ft. of open stream	130 ft. of vegetation removal	-	-
12	LAK-2		36.0005° 84.9246°	147+50-152+50	Zone x	General Aquatic Resource Permit	Non-Notification - Nationwide #12 (no-verification needed): See Location 4 for conditions of the Non-Notification	Section 26A or Letter of No Objection	110 ft. of open stream	110 ft. of vegetation removal	-	-
13	STR-15 Unnamed Tributary to Otter Creek	Perennial	36.0113° 84.9194°	186+51	Zone x	General Aquatic Resource Permit	Non-Notification - Nationwide #12 (no-verification needed): See Location 4 for conditions of the Non-Notification	Section 26A or Letter of No Objection	•121 ft. of open channel. •See enclosed Environmental Boundaries Report for more information	•121 ft. of vegetation removal •12 ft. rock ford for equipment crossing	0.015	-
14	STR-16 Unnamed Tributary to Otter Creek	Intermittent	36.0133° 84.9172°	196+64	Zone x	General Aquatic Resource Permit	Non-Notification - Nationwide #12 (no-verification needed): See Location 4 for conditions of the Non-Notification	Section 26A or Letter of No Objection	•144 ft. of open channel. See enclosed Environmental Boundaries Report for more information	•144 ft. of vegetation removal •12 ft. rock ford for equipment crossing	0.010	-

FEATURE SUMMARY TABLE:												
Location Information						**Permits Needed**			**Impacts**			
Location #	Feature Name	Stream Designation	Latitude Longitude	Stationing	FEMA Map Designation	TDEC	CORP	TVA	Existing Feature Characteristics	Proposed Impact	Impact Acres to Waters of the US	Mitigation Needed
15	STR-17 Unnamed Tributary to Otter Creek	Intermittent	36.0141° 84.9141°	207+71	Zone x	General Aquatic Resource Permit	Non-Notification - Nationwide #12 (no-verification needed): See Location 4 for conditions of the Non-Notification	Section 26A or Letter of No Objection	•111 ft. of open channel. •See enclosed Environmental Boundaries Report for more information	•111 ft. of vegetation removal •12 ft. rock ford for equipment crossing	0.010	-
16	STR-18 Bee Branch	Perennial	36.0139° 84.9129°	211+36	Zone x	General Aquatic Resource Permit	Non-Notification - Nationwide #12 (no-verification needed): See Location 4 for conditions of the Non-Notification	Section 26A or Letter of No Objection	•111 ft. of open channel. •See enclosed Environmental Boundaries Report for more information	•111 ft. of vegetation removal •12 ft. rock ford for equipment crossing	0.046	-
17	STR-20 Unnamed Tributary to Rough Mountain Brach	Intermittent	36.0125° 84.9044°	236+42	Zone x	General Aquatic Resource Permit	Non-Notification - Nationwide #12 (no-verification needed): See Location 4 for conditions of the Non-Notification	Section 26A or Letter of No Objection	•108 ft. of open channel. •See enclosed Environmental Boundaries Report for more information	•108 ft. of vegetation removal •12 ft. rock ford for equipment crossing	0.005	
18	STR-21 Unnamed Tributary to Rough Mountain Brach	Intermittent	36.0118° 84.9025°	243+28	Zone x	General Aquatic Resource Permit	NW12	Section 26A or Letter of No Objection	•49 ft. of open channel. •See enclosed Environmental Boundaries Report for more information	•49 ft. of vegetation removal	0.004	
19	STR-22 Unnamed Tributary to Rough Mountain Brach	Intermittent	36.0159° 84.9016°	245+70	Zone x	General Aquatic Resource Permit	Non-Notification - Nationwide #12 (no-verification needed): See Location 4 for conditions of the Non-Notification	Section 26A or Letter of No Objection	•112 ft. of open channel. •See enclosed Environmental Boundaries Report for more information	•112 ft. of vegetation removal •12 ft. rock ford for equipment crossing	0.008	
20	STR-23 Unnamed Tributary to Rough Mountain Brach	Intermittent	36.0111° 84.8996°	252+00	Zone x	General Aquatic Resource Permit	Non-Notification - Nationwide #12 (no-verification needed): See Location 4 for conditions of the Non-Notification	Section 26A or Letter of No Objection	•104 ft. of open channel. •See enclosed Environmental Boundaries Report for more information	•104 ft. of vegetation removal •12 ft. rock ford for equipment crossing	0.008	
21	STR-24 Unnamed Tributary to Rough Mountain Brach	Intermittent	36.0104° 84.8968°	259+74	Map not available	General Aquatic Resource Permit	Non-Notification - Nationwide #12 (no-verification needed): See Location 4 for conditions of the Non-Notification	Section 26A or Letter of No Objection	•199 ft. of open channel. •See enclosed Environmental Boundaries Report for more information	•199 ft. of vegetation removal •12 ft. rock ford for equipment crossing	0.013	
22	STR-25 Unnamed Tributary to Rough Mountain Brach	Intermittent	36.0100° 84.8938°	269+74	Map not available	General Aquatic Resource Permit	NW12	Section 26A or Letter of No Objection	•119 ft. of open channel. •See enclosed Environmental Boundaries Report for more information	•119 ft. of vegetation removal •12 ft. rock ford for equipment crossing	0.010	
					Project Totals:			-				

WETLAND SUMMARY TABLE:										
Location Information								Mitigation Description		Comments
Location #	Feature Name	Latitude	Longitude	Station	Existing Wetland Area (ac.)	Type of Impact	Impact Acreage to Waters of the US (ac.)	Wetland Debit (ac.) **(@ 1:1 ratio)**	Wetland Mitigation	Location-Specific Miscellaneous Comments
1	WTL-1A	35.9855°	84.9593°	11+60	0.399	Vegetation Removal	0.057	0.06	Tennessee Mitigation Fund	-
1	WTL-1B	35.9857°	84.9592°	12+20	0.100	Vegetation Removal	0.079	0.08	Tennessee Mitigation Fund	-
2	WTL-3	35.9876°	84.9588°	28+80	0.029	Vegetation Removal	0.029	0.03	Tennessee Mitigation Fund	-
3	WTL-3-1	35.9716°	84.9801°	45+50	0.230	Vegetation Removal	0.230	0.23	Tennessee Mitigation Fund	-
9	WTL-5	35.9994°	84.9361°	118+35	0.012	Vegetation Removal	0.003	0.003	Tennessee Mitigation Fund	-
10	WTL-6	35.9997°	84.9320°	130+50	0.240	Vegetation Removal	0.145	0.15	Tennessee Mitigation Fund	
22	WTL-8	36.0100°	84.8936°	270+20	0.058	Vegetation Removal	0.041	0.04	Tennessee Mitigation Fund	-
Project Totals:						**0.000**	**0.584**	**0.59**	**-**	**-**

(SummaryTable WTLs ONLY)

WET WEATHER CONVEYANCE SUMMARY TABLE:								
Location Information				**Impact Description**				**Comments**
Feature Name	Latitude	Longitude	Station	Brief Impact Description	Total Existing Feature Length (ft.)	Total Proposed Feature Length (ft.)	Total Feature Impact Area (ac.)	Location-Specific Miscellaneous Comments
WWC-1/EPH-1	35.9868°	84.9582°	7+00	No Impact	-	-	0.0	-
WWC-2/EPH-2	35.9927°	84.9522°	57+50	Vegetation Removal	165	165	0.0	-
WWC-3/EPH-3	35.9923°	84.9501°	64+00	Vegetation Removal	160	160	0.0	-
WWC-4/EPH-4	35.9958°	84.9485°	78+80	Vegetation Removal	110	110	0.0	-
WWC-5/EPH-5	35.9958°	84.9481°	79+70	Vegetation Removal	130	130	0.0	-
WWC-6/EPH-6	35.9959°	84.9469°	83+40	Vegetation Removal	130	130	0.0	-
WWC-7/EPH-7	35.9978°	84.9403°	105+00	Vegetation Removal	200	200	0.0	-
WWC-7.5/EPH-7.5	35.9994°	84.9334°	126+50	Vegetation Removal	100	100	0.0	-
WWC-9/EPH-9	36.0094°	84.9216°	177+30	Vegetation Removal	110	110	0.0	-
WWC-10/EPH-10	36.0100°	84.9209°	180+40	Vegetation Removal	130	130	0.0	-
WWC-11/EPH-11	36.0121°	84.9038°	239+40	Vegetation Removal	60	60	0.0	-
WWC-12/EPH-12	36.0106°	84.8978°	257+60	Vegetation Removal	100	100	0.0	-
					1,395	**1,395**	**0.000**	**-**

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
Division of Water Resources
William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 11th Floor, Nashville, Tennessee 37243
1-888-891-8332 (TDEC)

Application for Aquatic Resource Alteration Permit (ARAP) & State §401 Water Quality Permit

OFFICIAL STATE USE ONLY	Site #:		Permit #:	

Section 1. Applicant Information *(individual responsible for site, signs certification below)*

Applicant Name: Khalid Ahmed			
Company: Tennessee Department of Transportation		Signatory's Title or Position: Sr. Transportation Project Specialist	
Mailing Address: 505 Deaderick Street Suite 900 J.K. Polk Bldg.		City: Nashville	State: TN Zip: 37243
Phone: (615) 253-0021	Fax: N/A	E-mail: Khalid.Ahmed@tn.gov	

Section 2. Alternate Contact/Consultant Information (*a consultant is not required*)

Alternate Contact Name: Andrew Wisniewski			
Company: Tennessee Department of Transportation		Title or Position: TDOT Graduate Transportation Associate	
Mailing Address: 505 Deaderick Street Suite 900 J.K. Polk Bldg.		City: Nashville	State: TN Zip: 37243
Phone: (615) 253-2545	Fax: N/A	E-mail: Andrew.Wisniewski@tn.gov	

Section 3. Fee *(check appropriate box and submit requisite fee with application)*

☒ No Fee Submitted ☐ Fee Submitted with Application Amount Submitted: $ ____

Current fee schedules for Aquatic Resource Alteration Permit processing may be found at the Division of Water Resources webpage at http://www.tn.gov/environment/permits/arap.shtml or by calling (615) 532-0625. Make checks payable to "Treasurer, State of Tennessee".

Section 4. Project Details *(fill in information and check appropriate boxes)*

Site or Project Name: PIN 100268.03		Nearest City, Town or Major Landmark:
Street Address or Location: 161 KV transmission line relocation, SR101 (Peavine Road), Firetower Road to Lakeview Drive		
County(ies): Cumberland	MS4 Jurisdiction: TDOT	Latitude (dd.dddd): See Feature Summary Tables Longitude (dd.dddd): See Feature Summary Tables

Resource Proposed for Alteration: ✓ Stream ✓ Wetland Reservoir

Name of Water Resource: UT

Brief Project Description (a more detailed description is required under Section 8):

Relocation of high voltage utility transmission line to a 100 ft. wide new right-of-way.

Does the proposed activity require approval from the U.S. Army Corps of Engineers, the Tennessee Valley Authority, or any other federal, state, or local government agency? ☒ Yes ☐ No

If Yes, provide the permit reference numbers: Pending

Is the proposed activity associated with a larger common plan of development? ☐ Yes ☒ No

If Yes, submit site plans and identify the location and overall scope of the common plan of development. Plans attached? ☐ Yes ☒ No

If applicable, indicate any other federal, state, or local permit authorizations that the overall project site (common plan of development) has obtained in the past (i.e. construction general permit coverage and/or other ARAPs):

N/A

Section 5. Project Schedule *(fill in information and check appropriate boxes)*

Start date: August 10, 2015	Estimated end date: August 10, 2020

Is any portion of the activity complete now? ☐ Yes ☒ No If yes, describe the extent of the completed portion:

N/A

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The required information in Sections 6-11 must be submitted on a separate sheet(s) and submitted in the same numbered format as presented below. If any question in not applicable, state the reason why it is not applicable. Please refer to the enclosed feature impact and summary tables.

Section 6. Project Description		**Attached** Yes	No
6.1	A narrative description of the scope of the project	☒	☐
6.2	USGS topographic map indicating the exact location of the project (*can be a photographic copy*)	☒	☐
6.3	Photographs of the resource(s) proposed for alteration with location description (*photo locations should be noted on map*)	☒	☐
6.4	A narrative description of the **existing** stream and/or wetland characteristics including, but not limited to, dimensions (e.g., depth, length, average width), substrate and riparian vegetation	☒	☐
6.5	A narrative description of the **proposed** stream and/or wetland characteristics including, but not limited to, dimensions (e.g., depth, length, average width), substrate and riparian vegetation	☒	☐
6.6	In the case of wetlands, include a wetland delineation with delineation forms and site map denoting location of data points	☒	☐
6.7	A copy of all hydrologic or jurisdictional determination documents issued for water resources on the project site	☒	☐

Section 7. Project Rationale	**Attached** Yes	No
Describe the need for the proposed activity, including, but not limited to, the purpose, alternatives considered, and what will be done to avoid or minimize impacts to streams or wetlands.	☒	☐

Section 8. Technical Information		**Attached** Yes	No
8.1	Detailed plans, specifications, blueprints, or legible sketches of present site conditions and the proposed activity. Plans must be 8.5.x 11 inches. Additional larger plans may also be submitted to aid in application review. The detailed plans should be superimposed on existing and new conditions *(e.g., stream cross sections where road crossings are proposed)*	☒	☐
8.2	For both the proposed activity and compensatory mitigation, provide a discussion regarding the sequencing of events and construction methods	☒	☐
8.3	Depiction and narrative on the location and type of erosion prevention and sediment control (EPSC) measures for the proposed alterations	☒	☐

Section 9. Water Resources Degradation (degree of proposed impact) *Note that in most cases, activities that exceed the scope of the General Permit limitations are considered greater than de minimis degradation to water quality.*

My activity, as proposed:

Please refer to the enclosed feature impact and summary tables.

a. ☐ Will not cause measurable degradation to water quality
b. ☒ Will only cause de minimis degradation to water quality
c. ☐ Will cause more than de minimis degradation to water quality (*Complete additional sections 9-11*)
d. ☐ Unsure/need more information

For information and guidance on the definition of de minimis and degradation, refer to the Antidegradation Statement in Chapter 0400-40-03-.06 of the Tennessee Water Quality Criteria Rule: https://www.tn.gov/sos/rules/0400/0400-40/0400-40-03.20131216.pdf. For more information on specifics on what General Permits can cover, refer to the Natural Resources Unit webpage at http://www.tn.gov/environment/permits/arap.shtml

If you checked "c." above in Section 9, complete the following 2 sections, 10-11. N/A

Section 10. Detailed Alternative Analysis		**Attached** Yes	No
10.1	Analyze all reasonable alternatives and describe the level of degradation caused by each of the feasible alternatives	☐	☒
10.2	Discuss the social and economic consequences of each alternative	☐	☒
10.3	Demonstrate that the degradation associated with the preferred alternative will not violate water quality criteria for uses designated in the receiving waters, and is necessary to accommodate important economic and social development in the area	☐	☒

Application for Aquatic Resource Alteration Permit (ARAP) & State §401 Water Quality Permit

Section 11. Compensatory Mitigation		Attached Yes	Attached No
11.1	A detailed discussion of the proposed compensatory mitigation	☐	☒
11.2	Describe how the compensatory mitigation would result in no net loss of resource value	☐	☒
11.3	Provide a detailed monitoring plan for the compensatory mitigation site	☐	☒
11.4	Describe the long-term protection measures for the compensatory mitigation site *(e.g., deed restrictions, conservation easement)*	☐	☒

Certification and Signature

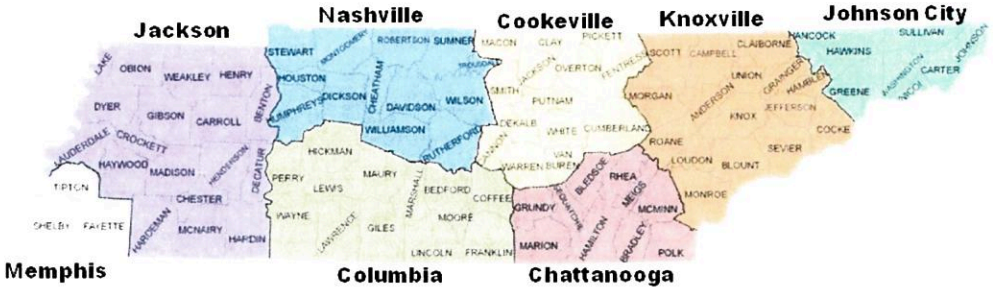
An application submitted by a corporation must be signed by a principal executive officer; from a partnership or proprietorship, by the partner or proprietor respectively; from a municipal, state, federal or other public agency or facility, the application must be signed by either a principal executive officer, ranking elected official, or other duly authorized employee.

"I certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision. The submitted information is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury".

Khalid Ahmed	Sr. Transportation Project Specialist	Khalid Ahmed	March 19, 2015
Printed Name	Official Title	Signature	Date

Submitting the form and obtaining more information Note that this form must be signed by the principal executive officer, partner or proprietor, or a ranking elected official in the case of a municipality; for details see **Certification and Signature** statement above. For more information, contact your local EFO at the toll-free number 1-888-891-8332 (TDEC). Submit the completed ARAP Application form (keep a copy for your records) to the appropriate EFO for the county(ies) where the ARAP activity is located, addressed to **Attention: ARAP Processing**. You may also electronically submit the complete application and all associated attachments (e.g., maps, wetland delineations and narrative portions) to water.permits@tn.gov.

EFO	Street Address	Zip Code	EFO	Street Address	Zip Code
Memphis	8383 Wolf Lake Drive, Bartlett	38133-4119	Cookeville	1221 South Willow Ave.	38506
Jackson	1625 Hollywood Drive	38305-4316	Chattanooga	540 McCallie Avenue STE 550	37402-2013
Nashville	711 R S Gass Boulevard	37243	Knoxville	3711 Middlebrook Pike	37921
Columbia	1421 Hampshire Pike	38401	Johnson City	2305 Silverdale Road	37601



OFFICIAL STATE USE ONLY

Received Date:	Permit Number:	Reviewer:	Field Office:
Fee amount paid:	T & E Aquatic Flora and Fauna:	Impaired Receiving Stream:	Application Review:
Date:			☐ Deficient Date:
Check #:	Exceptional TN Water:		☐ Complete Date:

OMB No. 3316-0060
Exp. Date 09/30/2013

JOINT APPLICATION FORM
Department of the Army/TVA

The Department of the Army (DA) permit program is authorized by **Section 10 of the Rivers and Harbors Act of 1899** and **Section 404 of the Clean Water Act (P.L. 95-217).** These laws require permits authorizing structures and work in or affecting navigable waters of the United States. **Section 26a of the Tennessee Valley Authority Act,** as amended, prohibits the construction, operation, or maintenance of any structure affecting navigation, flood control, or public lands or reservations across, along, or in the Tennessee River or any of its tributaries until plans for such construction, operation, and maintenance have been submitted to and approved by the Tennessee Valley Authority (TVA).

Name and Address of Applicant:	Name, Address, and Title of Authorized Agent:
Tennessee Department of Transportation 505 Deaderick Street, Suite 900 Nashville, TN 37243	
Telephone Number: Home _____ Office (615) 253-0021	Telephone Number: Home _____ Office _____

Location where activity exists or will occur *(include Stream Name and Mile, if known)*:

161 KV transmission line relocation, SR101 (Peavine Road), from Firetower Road to Lakeview Drive, Cumberland County

Application submitted to ☒ DA ☒ TVA

Date activity is proposed to commence: August 10, 2015 Date activity is proposed to be completed: August 10, 2020

Describe in detail the proposed activity, its purpose and intended use *(private, public, commercial, or other)*. Describe structures to be erected including those placed on fills, piles, or floating platforms. Also describe the type, composition, and quantity of materials to be discharged or placed in the water; the means of conveyance; and the source of discharge or fill material. Please attach additional sheets if needed.

PIN 100268.03

The applicant proposes to relocate high voltage utility transmission line to a new right-of-way north of the existing roadway. This new right-of-way will be 100 feet in width and will be approximately 6.5 miles in length.

This project will not cause any loss of flood storage or power storage volumes.

Application is hereby made for approval of the activities described herein. I certify that I am familiar with the information contained in this application, and that to the best of my knowledge and belief such information is true, complete, and accurate. I further certify that I possess the authority to undertake the proposed activities. **I agree that, if this application is approved by TVA, I will comply with the attached terms and conditions and any special conditions that may be imposed by TVA at the time of approval. Please note the U.S. Army Corps of Engineers may impose additional conditions or restrictions.**

March 19, 2015
Date

Khalil Ahmed
Signature of Applicant

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of The United States knowingly and willfully falsifies, conceals, or covers up by any trick, scheme, or device a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statement or entry, shall be fined not more than $10,000 or imprisoned not more than five years, or both. The appropriate DA fee will be assessed when a permit is issued.

Names, addresses, and telephone numbers of adjoining property owners, lessees, etc., whose properties also join the waterway:

See attached

List of previous DA/TVA permits/approvals ☐ DA _____ (Permit Number) ☐ TVA _____ (Date)

Is any portion of the activity for which authorization is sought now complete? ☐ Yes ☐ No *(If "Yes" attach explanation)*
Month and year the activity was completed: _____ . Indicate the existing work on the drawings.

List all approvals or certifications required by other federal, interstate, state, or local agencies for any structures, construction, discharges, deposits, or other activities described in this application.

Issuing Agency	Type Approval	Identification No.	Date of Application	Date of Approval
TDEC	GARAP			
TDEC	NPDES			

Has any agency denied approval for the activity described herein or for any activity directly related to the activity described herein?
☐ Yes ☒ No *(If "Yes" attach explanation)*

Project plans or drawings should accompany the application. These should be on paper suitable for reproduction no larger than 11 x 17 inches or contained on a 3-1/2 inch floppy computer disc in "dxf" format, and should be submitted to the appropriate TVA and U.S. Army Corps of Engineers offices. An application that is not complete will be returned for additional information.

U.S.A.C.E. Offices		TVA Office Location
U.S. Army Corps of Engineers Eastern Regulatory Field Office Spring Cress Business Park 501 Adessa Blvd., Suite 250 Lenoir City, Tennessee 37771 (865) 986-7296	U.S. Army Corps of Engineers Savannah District The Plaza, Suite 130 1590 Adamson Parkway Morrow, Georgia 30260-1763 (678) 422-2729	Tennessee Valley Authority
U.S. Army Corps of Engineers Regulatory Branch 3701 Bell Road Nashville, Tennessee 37214 (615) 369-7500	U.S. Army Corps of Engineers Western Regulatory Field Office 2042 Beltline Road, SW, Bldg C, Suite 415 Decatur, Alabama 35602 (256) 350-5620	
U.S. Army Corps of Engineers Norfolk District P.O. Box 338 Abingdon, Virginia 24212 (276) 623-5259	U.S. Army Corps of Engineers Asheville Regulatory Field Office 151 Patton Avenue, Room 208 Asheville, North Carolina 28801-5006 (828) 271-4856	

Privacy Act Statement

This information is being requested in accordance with Section 26a of the TVA Act as cited on the front page of this form. Disclosure of the information requested is voluntary; however, failure to provide any required information or documents may result in a delay in processing your application or in your being denied a Section 26a permit. An application that is not complete will be returned for additional information. TVA uses this information to assess the impact of the proposed project on TVA programs and the environment and to determine if the project can be approved. Information in the application is made a matter of public record through issuance of a public notice if warranted. Routine uses of this information include providing to federal, state, or local agencies, and to consultants, contractors, etc., for use in program evaluations, studies, or other matters involving support services to the program; to respond to a congressional inquiry concerning the application or Section 26a program; and for oversight or similar purposes, corrective action, litigation or law enforcement.

Burden Estimate Statement

Public reporting burden for this collection of information is estimated to average 1.5 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Agency Clearance Officer, Tennessee Valley Authority, 1101 Market Street, Chattanooga, Tennessee 37402; and to the Office of Management and Budget, Paperwork Reduction Project (3316-0060), Washington, D.C. 20503.

Section 26a Permit and Land Use Application
Applicant Disclosure Form

By signing the Joint Application Form (Department of Army/TVA) or TVA's Land Use Application and again below, you agree to disclose any business, political, or financial interest that may present an actual or potential conflict of interest with TVA. If a new significant business, political, or financial interest is obtained during the period of the time that the application is under review, you agree to file an additional disclosure.

Project #18038-1230-04
PIN 100268.03
161 KV transmission line relocation
State Route 101 (Peavine Road)
From: Firetower Road
To: Lakeview Drive

Disclose if any of the following apply to you (check all that apply ☑). I am:

- ☐ An elected government official
- ☐ A policy making level employee of an entity that regulates TVA or its activities
- ☐ A management level employee of a power customer of TVA
- ☐ A TVA Director
- ☐ A TVA employee
- ☐ An immediate family member of one of the above
- ☐ A representative of a corporation or entity submitting an application and one of the above applies to me. Print entity or corporation name, and identify which of the above applies to you.

_____

_____

- ☐ A representative of a corporation or entity submitting an application and the corporation or entity has partners, investors, or senior management that are one of the above. Print entity or corporation name, and identify the partner(s), investor(s), or senior manager(s) and which of the above applies.

_____

_____

_____

- ☑ None of the above

Do you have any other business or personal relationships not covered in your answers above that could appear to be a conflict of interest? (check one) **Yes** ☐ **No** ☑ If yes, provide more detail here.

_____

_____

_____

By signing this form, you consent to this Applicant Disclosure Form being made available to the public in response to an appropriate request, including, without limitation, a request made under the Freedom of Information Act.

Please sign and return this form with your application package. Your application cannot be processed without receipt of this signed form.

Name of applicant (Printed) Khalid Ahmed

Signature of Applicant Khalid Ahmed Date March 19, 2015

All applications and communications that occur as part of the application process may be made public to the extent permitted by applicable law, including the Freedom of Information Act and the Privacy Act, and could be reviewed formally by the Office of Inspector General (OIG). All written correspondence regarding your request may be forwarded to the TVA Chief Ethics and Compliance Officer (CECO) and the OIG, and all oral communication between TVA and the applicant regarding this request may be documented and maintained by TVA. Inquiries concerning your application from any person who falls into one of the categories described above will be disclosed to the CECO and OIG.

Privacy Act Statement

This information is being requested in accordance with Sections 4(k), 15d, 26a, and/or 31 of the TVA Act; 40 U.S.C. § 1314; 30 U.S.C. § 185; 16 U.S.C. § 667b; and/or 40 U.S.C. § 483. Disclosure of the information requested is voluntary; however, failure to provide any required information or documents may result in a delay in processing your application or in your application being denied. An application that is not complete will be returned for additional information. TVA uses this information to assess the impact of the proposed project on TVA programs and the environment and to determine if the project can be approved. Information in the application is made a matter of public record through issuance of a public notice if warranted. Routine uses of this information include providing to federal, state, or local agencies, and to consultants, contractors, etc., for use in program evaluations, studies, or other matters involving support services to the program; to respond to a congressional inquiry concerning the application or the applicable program; and for oversight or similar purposes, corrective action, litigation, or law enforcement.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
ENVIRONMENTAL DIVISION
SUITE 900 - JAMES K. POLK BUILDING
505 DEADERICK STREET
NASHVILLE, TENNESSEE 37243-0334

MEMORANDUM

To: Robert Rodgers
TDOT Design

From: Todd Askegaard
Ecology Section

Date: 4 March 2010

Subject: **CUMBERLAND COUNTY SR 101 (PEAVINE ROAD):**
PHASE 1- FROM FIRETOWER ROAD TO LAKEVIEW DRIVE,
P.E. NO. 18038-1230-04 PIN 100268.01

__X__ Streams: There are 3 streams located within project ROW. STR-1a is located the beginning of the project but outside of the construction limits. SR 101 will be repaved above STR-1a. SR 101 is being widened over STR-1 and the corresponding culvert lengthened. If possible the culvert should be angled to so inlet and outlet lie in the stream channel. The upper portion of STR-1 was originally designated as STR-2 which has been changed to STR-1 since it is all the same water course. STR-1b is approximately 600 feet long and parallels SR 101 on the right. Plans indicate that fill and cut lines will alter its course. This stream should be relocated to the toe of slope for either the fill or cut areas. If necessary, plant trees on one bank due to clearance regulations. Please see forms G and J for stream details and mitigation recommendations.

__X__ Wetlands: There are 3 wetlands located within or along the project ROW. WTL-1 has been changed to LAK-1. The previously designated wetland is actually the shoreline of Cannelles Lake. WTL-2 will have temporary and permanent impacts due to the fill slopes for the proposed south bound lanes of SR 101. WTL-2b is a small isolated wetland adjacent to the project ROW. A permanent drainage easement has been located in its vicinity. WTL-3 will be largely affected by fill slopes for the relocated center alignment of the project. Please see forms G and J for stream details and mitigation recommendations.

__X__ Lakes: There is one (1) lake affected by project construction.

__X__ Protected species: There are no listed species occurring within a 1 mile radius of the project alignment. There are 2 species reported to have been found within a 1 to 4 mile radius of the project. TWRA has been contacted and their response will be forwarded upon receipt. USFWS response letter indicates that there are no federally listed or proposed endangered or threatened species occur within the project impact area. Please see form N for a list and details of these species.

If you have any questions or comments please contact me at Todd.Askegaard@tn.gov or 615-532-5579. If I cannot be reached please contact Christina Richards at 615-253-8690 or Chirstina.Richards@tn.gov. Thank you very much.

Copy: Robert Rodgers, Design: memo, form G, topo, photos, form J, form N, topo, USFWS response, marked-up plans
Emily Marsh, Design: memo, form G, topo, photos, form J, form N, topo, USFWS response, marked-up plans
Khalid Ahmed, Permits: memo, form G, topo, photos, form J, form N, topo, USFWS response, marked-up plans
Gary Chapman, Survey: memo, form G, topo, photos, form J, form N, topo, USFWS response, marked-up plans
Christina Richards, Ecology: memo, form G, topo, photos, form J, form N, topo, USFWS response, marked-up plans
Project file: memo, form G, topo, photos, form J, form N, topo, USFWS response, marked-up plans
Reading file: memo

Ecology Field Data Sheet: **Water Resources** Form G

Project: Cumberland Co SR 101 (Peavine Rd) from Firetower Rd to Lakeview Drive
P.E. no. 18038-1230-04 PIN 100268.01
Date of survey: 01 March 2010 **Biologist:** T. Askegaard, T. Nehus **Affiliation:** TDOT Ed.

1-Station: from plans	~65+75
2-Map label and name	STR-1a
3-Latitude/Longitude	35 58 60 N 084 57 43 W
4-Potential impact	None
5-Feature description:	
what is it	perennial stream
blue-line on topo? (y/n)	yes
defined channel (y/n)	yes
straight or meandering	meandering
channel bottom width	3-4’
top of bank width	4-5’
bank height and slope ratio	12-18” steep/vert
avg. gradient of stream (%)	<3
substratum	boulder, cobble, gravel, pebble, sand, silt
riffle/run/pool	r/r/p
width of buffer zone	LB: narrow woods to mown area RB: ~100’ to Old Peavine road
water flow	yes
water depth	3” in riffle, 12” in pool
water width	3-4’
general water quality	fair
OHWM indicators	leaf packs
groundwater connection	
bank stability: LB, RB	some undercutting
dominant species: LB, RB	tulip poplar, red maple, blackberry briars, red oak, short leaf pine
overhead canopy (%)	80
benthos	Simuliidae (black fly, abundant), Perlidae (stonefly)
fish	not observed
algae or other aquatic life	algae
habitat assessment score	suboptimal (146)
photo number (s)	1, 2
rainfall information	0.27 inches 7d Crab Orchard
6- HUC code & name (12-digit)	060102080202 Daddys Creek, middle
7-**Confirmed by:**	
8-**Mitigation**: yes/no (If yes, include on Form J)	no
9-Notes Indicate if stream is ETW or ONRW or on 303(d) list Estimate size (acres) of lake or pond if applicable	Prevent run-off from beginning of project

Project: Cumberland Co SR 101 (Peavine Rd) from Firetower Rd to Lakeview Drive
P.E. no. 18038-1230-04 PIN 100268.01
Date of survey: 01 March 2010 **Biologist:** T. Askegaard, T. Nehus **Affiliation:** TDOT Ed.

1-Station: from plans	~70+00R to ~73+40R
2-Map label and name	LAK-1 (Cannelles Lake)
3-Latitude/Longitude	35 59 04 N 084 57 36 W
4-Potential impact	fill impact on northern shore
5-Feature description:	
what is it	small lake
blue-line on topo? (y/n)	
defined channel (y/n)	
straight or meandering	
channel bottom width	approx. 400' x 125'
top of bank width	
bank height and slope ratio	12" to 36"
avg. gradient of stream (%)	
substratum	
riffle/run/pool	
width of buffer zone	NW bank: ~100' to SR 101; E bank: >100' woods; SW bank: mown lawn; SE bank: dyke
water flow	
water depth	
water width	
general water quality	
OHWM indicators	
groundwater connection	no
bank stability: LB, RB	stable
dominant species: LB, RB	red oak, alder, red maple, privet, rubus, cat briar
overhead canopy (%)	
benthos	
fish	
algae or other aquatic life	
habitat assessment score	
photo number (s)	3
rainfall information	0.27 inches 7d Crab Orchard
6- HUC code & name (12-digit)	060102080202 Daddys Creek, middle
7-**Confirmed by:**	
8-**Mitigation**: yes/no (If yes, include on Form J)	no
9-Notes Indicate if stream is ETW or ONRW or on 303(d) list Estimate size (acres) of lake or pond if applicable	Fill line is proposed to affect the northeastern shore for about 100'. WTL-1 previously noted along this shore has been designated as shore line and no longer a wetland.

Project: Cumberland Co SR 101 (Peavine Rd) from Firetower Rd to Lakeview Drive
P.E. no. 18038-1230-04 PIN 100268.01
Date of survey: 01 March 2010 **Biologist:** T. Askegaard, T. Nehus **Affiliation:** TDOT Ed.

1-Station: from plans	~73+40R to ~80+50L
2-Map label and name	STR-1
3-Latitude/Longitude	35 59 06 N 084 57 35 W
4-Potential impact	Crossing, encapsulation; SR 101 and Bonanza Dr
5-Feature description:	
what is it	perennial stream
blue-line on topo? (y/n)	yes
defined channel (y/n)	yes
straight or meandering	meandering
channel bottom width	3-5’
top of bank width	4-8’
bank height and slope ratio	12-24”
avg. gradient of stream (%)	<3
substratum	boulder, cobble, gravel, pebble, sand, silt
riffle/run/pool	r/r/p
width of buffer zone	LB: <100’ of woods to SR 101 RB: woods
water flow	yes
water depth	6-10” in riffle, 24” in pool
water width	2-5’
general water quality	poor
OHWM indicators	some leaf packs
groundwater connection	
bank stability: LB, RB	stable
dominant species: LB, RB	“chinkapin” oaks, sm. alder, dogwood
overhead canopy (%)	80
benthos	not observed
fish	not observed
algae or other aquatic life	algae
habitat assessment score	suboptimal (144)
photo number (s)	4, 5
rainfall information	0.27 inches 7d Crab Orchard
6- HUC code & name (12-digit)	060102080202 Daddys Creek, middle
7-**Confirmed by:**	
8-**Mitigation**: yes/no (If yes, include on Form J)	yes
9-Notes Indicate if stream is ETW or ONRW or on 303(d) list Estimate size (acres) of lake or pond if applicable	Slight sewer odor, iron stain. Stream flows through WTL-2 and upper portion is part of STR-1 and STR-2 label removed.

Project: Cumberland Co SR 101 (Peavine Rd) from Firetower Rd to Lakeview Drive
P.E. no. 18038-1230-04 PIN 100268.01
Date of survey: 01 March 2010 **Biologist:** T. Askegaard, T. Nehus **Affiliation:** TDOT Ed.

1-Station: from plans	~75+40L to ~78+80L
2-Lat/Long	35 59 07 N 084 57 33 W
3-Map label	WTL-2
4-Potential impact	along cut and fill lines and on both sides of Bonanza Dr.
5-Feature name	(and nearest waterbody)
6-Feature description:	
7- Wetland type	Forested: ____ Scrub/Shrub: ____ Emergent: __X__ Bog/Fen: ____ Aquatic Bed: ____

Dominant Plant Species		Indicator	Stratum	Dominant Plant Species	Indicator	Stratum
Alnus serrulatus	alder	FACW+	T			
Juncus	soft rush	OBL	H			
Carex sp		OBL	H			

Hydrophytic Vegetation:	% of Dominants OBL, FACW, FAC = 100	Hydrophytic Vegetation Present: __X__ Yes _____No

Hydrology	**Primary Hydrology Indicators**	**Secondary Hydrology Indicators**
Depth of inundation __0__ in. Depth to water in pit__6__ in. Depth to Sat. Soil ___0__ in. Surface water connection: __X__Yes ____ No Ground water connection: __ Yes ___ No __X__ Unkn.	Inundated ___X___ Saturated (upper 12") ___X___ Water Marks ___X___ Drift Lines ___X___ Sediment Deposits _____ Drainage Patterns ___X___	Oxidized Root Channels __X___ Water-stained Leaves ___X__ Fac-Neutral Test _____ Other _____
	Isolated:_____ Abutting:___X__ Adjacent:_____	Wetland Hydrology Present: __X__Yes _____No

Soils	Map Unit Name: Gilpin Loam/Ramsey Rock-outcrop Drainage Class: well drained/somewhat excessively drained
Soil Profile Description	Subgroup: Confirmed Map Unit Type: _____YES _____NO

Depth (inches)	Horizon	Matrix Color	Mottle Color	Mottle Abundance	Texture, concretions	Hydric Soil Indicators	
12+		10YR 4/1			Mg	Sulfidic Odor	
						Gleyed or Low Chroma (=1) matrix	
						Chroma ≤2 w/ mottles	
						Concretions Mg	X
						Reducing Conditions	
						Hydric Soils List	

Hydric Soils Present: __X___YES _____NO
Rationale/Remarks:

approximate size (ac.) _____	portion affected (ac.) unknown (permanent)	portion affected (ac.) unknown (temporary)
width of buffer zone (ft)	>50' along 3 sides, SR 101	
photo number(s)	8	
8-Watershed HUC code	060102080202	
8-Watershed HUC name	Daddys Creek, middle	
9-Determination: TDOT/ consultant	Hydrophytic Vegetation Present? __X___Yes _____No Hydric Soils Present? __X___Yes _____No Wetland Hydrology Present? ___X__Yes _____No Is Sampling Point in a Wetland? __X__Yes ____No	
10-Determination: Confirmed? By?		
11-Mitigation: to be included in design	yes	
12-Notes	Iron sheen. Wetland is on both sides of Bonanza Dr. Will be affected by fill from SR 101 and Bonanza Dr.	

Project: Cumberland Co SR 101 (Peavine Rd) from Firetower Rd to Lakeview Drive
P.E. no. 18038-1230-04 PIN 100268.01
Date of survey: 01 March 2010 **Biologist:** T. Askegaard, T. Nehus **Affiliation:** TDOT Ed.

1-Station: from plans	~75+40R to ~81+00R
2-Map label and name	STR-1b
3-Latitude/Longitude	35 59 08 N 084 57 31 W
4-Potential impact	fill
5-Feature description:	
what is it	perennial stream
blue-line on topo? (y/n)	no
defined channel (y/n)	yes
straight or meandering	straight
channel bottom width	12-24”
top of bank width	12-24”
bank height and slope ratio	12”
avg. gradient of stream (%)	<3
substratum	leaves, sand, pebble, gravel, cobble
riffle/run/pool	run
width of buffer zone	LB: mown grass RB: SR 101 shoulder
water flow	yes
water depth	2-4”
water width	6-12”
general water quality	fair
OHWM indicators	driftlines
groundwater connection	
bank stability: LB, RB	slightly eroding to stable
dominant species: LB, RB	grass
overhead canopy (%)	10
benthos	Capniidae (stonefly)
fish	no
algae or other aquatic life	no
habitat assessment score	marginal (101)
photo number (s)	6, 7, 9, 10
rainfall information	0.27 inches 7d Crab Orchard
6- HUC code & name (12-digit)	060102080202 Daddys Creek, middle
7-**Confirmed by:**	
8-**Mitigation**: yes/no (If yes, include on Form J)	yes
9-Notes Indicate if stream is ETW or ONRW or on 303(d) list Estimate size (acres) of lake or pond if applicable	Channel is ~600’ long which will require relocation to toe of slope for fill and cut lines. Stream starts at approximately station 81+00R where sheet flow from surrounding terrain and interstitial flow from hillside collects. Use a french drain to collect and direct flow to new channel along toe of slope.

Project: Cumberland Co SR 101 (Peavine Rd) from Firetower Rd to Lakeview Drive
P.E. no. 18038-1230-04 PIN 100268.01
Date of survey: 01 March 2010 **Biologist:** T. Askegaard, T. Nehus **Affiliation:** TDOT Ed.

1-Station: from plans	~81+00R to ~95+00R
2-Map label and name	WWC-1
3-Latitude/Longitude	35 59 14 N 084 57 24 W
4-Potential impact	fill
5-Feature description:	
what is it	wet weather conveyance
blue-line on topo? (y/n)	no
defined channel (y/n)	yes
straight or meandering	straight
channel bottom width	12-24”
top of bank width	12-24”
bank height and slope ratio	12”
avg. gradient of stream (%)	<3
substratum	leaves, grass, bedrock
riffle/run/pool	--
width of buffer zone	LB: mown grass RB: SR 101
water flow	no
water depth	--
water width	--
general water quality	--
OHWM indicators	--
groundwater connection	--
bank stability: LB, RB	stable
dominant species: LB, RB	grass
overhead canopy (%)	0
benthos	none
fish	none
algae or other aquatic life	none
habitat assessment score	
photo number (s)	11, 12
rainfall information	0.27 inches 7d Crab Orchard
6- HUC code & name (12-digit)	060102080202 Daddys Creek, middle
7-**Confirmed by:**	
8-**Mitigation**: yes/no (If yes, include on Form J)	no
9-Notes Indicate if stream is ETW or ONRW or on 303(d) list Estimate size (acres) of lake or pond if applicable	

Project: Cumberland Co SR 101 (Peavine Rd) from Firetower Rd to Lakeview Drive
P.E. no. 18038-1230-04 PIN 100268.01
Date of survey: 01 March 2010 **Biologist:** T. Askegaard, T. Nehus **Affiliation:** TDOT Ed.

1-Station: from plans	~113+80R to ~114+40R
2-Lat/Long	35 59 25 N 084 56 54 W
3-Map label	WTL-2B
4-Potential impact	may coincide wit permanent drainage easement
5-Feature name	(and nearest waterbody)
6-Feature description:	
7- Wetland type	Forested: ____ Scrub/Shrub: ____ Emergent: __X__ Bog/Fen: ____ Aquatic Bed: ____

Dominant Plant Species		Indicator	Stratum	Dominant Plant Species	Indicator	Stratum
Cyperus	false nut sedge	OBL	H			
Juncus	soft rush	OBL	H			
Typha	cattail	OBL	H			
Panicum	panic grass	FACW	H			
Ludwigia	seed box	OBL	H			

Hydrophytic Vegetation:	% of Dominants OBL, FACW, FAC = 100	Hydrophytic Vegetation Present: __X__ Yes _____No

Hydrology	**Primary Hydrology Indicators**	**Secondary Hydrology Indicators**
Depth of inundation __2__ in. Depth to water in pit__0__ in. Depth to Sat. Soil ___0__ in. Surface water connection: __X__Yes ____ No Ground water connection: __ Yes ___ No __X__ Unkn.	Inundated ___X___ Saturated (upper 12") ___X___ Water Marks ___X___ Drift Lines _____ Sediment Deposits _____ Drainage Patterns _____	Oxidized Root Channels __X___ 0-6" Water-stained Leaves _____ Fac-Neutral Test _____ Other _____
	Isolated:__X____ Abutting:_____ Adjacent:_____	Wetland Hydrology Present: __X__Yes _____No

Soils	Map Unit Name: Ramsey Rock-outcrop Drainage Class: somewhat excessively drained
Soil Profile Description	Subgroup: Confirmed Map Unit Type: _____YES _____NO

Depth (inches)	Horizon	Matrix Color	Mottle Color	Mottle Abundance	Texture, concretions	Hydric Soil Indicators	
0-6		10YR 3/2				Sulfidic Odor	
						Gleyed or Low Chroma (=1) matrix	
						Chroma ≤2 w/ mottles	
						Concretions	
						Reducing Conditions	
						Hydric Soils List	

Hydric Soils Present: __X___YES _____NO
Rationale/Remarks:

approximate size (ac.) _____	portion affected (ac.) (permanent)	portion affected (ac.) 50 percent (temporary)
width of buffer zone (ft)	in open field near SR 101	
photo number(s)	15	
8-Watershed HUC code	060102080202	
8-Watershed HUC name	Daddys Creek, middle	
9-Determination: TDOT/ consultant	Hydrophytic Vegetation Present? __X___Yes _____No Hydric Soils Present? __X___Yes _____No Wetland Hydrology Present? ___X__Yes _____No Is Sampling Point in a Wetland? __X__Yes ____No	
10-Determination: Confirmed? By?		
11-Mitigation: to be included in design	yes	
12-Notes	Flagged with pin flags for survey	

Project: Cumberland Co SR 101 (Peavine Rd) from Firetower Rd to Lakeview Drive
P.E. no. 18038-1230-04 PIN 100268.01
Date of survey: 01 March 2010 **Biologist:** T. Askegaard, T. Nehus **Affiliation:** TDOT Ed.

1-Station: from plans	~87+00L to ~94+60L
2-Map label and name	WWC-2
3-Latitude/Longitude	35 59 16 N 084 57 20 W
4-Potential impact	fill
5-Feature description:	
what is it	wet weather conveyance
blue-line on topo? (y/n)	no
defined channel (y/n)	yes
straight or meandering	straight
channel bottom width	~12”
top of bank width	18-24”
bank height and slope ratio	12”
avg. gradient of stream (%)	<3
substratum	grass, leaves, trash, gravel
riffle/run/pool	--
width of buffer zone	LB: SR 101 RB: lawn
water flow	no
water depth	--
water width	--
general water quality	--
OHWM indicators	--
groundwater connection	--
bank stability: LB, RB	some erosion
dominant species: LB, RB	grass
overhead canopy (%)	0
benthos	none
fish	none
algae or other aquatic life	none
habitat assessment score	
photo number (s)	13, 14
rainfall information	0.27 inches 7d Crab Orchard
6- HUC code & name (12-digit)	060102080202 Daddys Creek, middle
7-**Confirmed by:**	
8-**Mitigation**: yes/no (If yes, include on Form J)	no
9-Notes Indicate if stream is ETW or ONRW or on 303(d) list Estimate size (acres) of lake or pond if applicable	

Project: Cumberland Co SR 101 (Peavine Rd) from Firetower Rd to Lakeview Drive
P.E. no. 18038-1230-04 PIN 100268.01
Date of survey: 01 March 2010 **Biologist:** T. Askegaard, T. Nehus **Affiliation:** TDOT Ed.

1-Station: from plans	~123+00L to ~133+50L
2-Map label and name	WWC-3
3-Latitude/Longitude	35 59 29 N 084 56 38 W
4-Potential impact	fill
5-Feature description:	
what is it	wet weather conveyance
blue-line on topo? (y/n)	no
defined channel (y/n)	yes
straight or meandering	straight
channel bottom width	1-2’
top of bank width	3-4’
bank height and slope ratio	12-18”
avg. gradient of stream (%)	<3
substratum	leaves, grass, trash
riffle/run/pool	--
width of buffer zone	LB: lawn RB: SR 101
water flow	no
water depth	--
water width	--
general water quality	--
OHWM indicators	--
groundwater connection	--
bank stability: LB, RB	stable
dominant species: LB, RB	grass
overhead canopy (%)	0
benthos	none
fish	none
algae or other aquatic life	none
habitat assessment score	
photo number (s)	17,18
rainfall information	0.27 inches 7d Crab Orchard
6- HUC code & name (12-digit)	060102080104 Obed River
7-**Confirmed by:**	
8-**Mitigation**: yes/no (If yes, include on Form J)	no
9-Notes Indicate if stream is ETW or ONRW or on 303(d) list Estimate size (acres) of lake or pond if applicable	

Project: Cumberland Co SR 101 (Peavine Rd) from Firetower Rd to Lakeview Drive
P.E. no. 18038-1230-04 PIN 100268.01
Date of survey: 01 March 2010 **Biologist:** T. Askegaard, T. Nehus **Affiliation:** TDOT Ed.

1-Station: from plans	~133+50L to ~135+00L
2-Lat/Long	35 59 31 N 084 56 31 W
3-Map label	WTL-3
4-Potential impact	fill/drainage easement
5-Feature name	(and nearest waterbody)
6-Feature description:	
7- Wetland type	Forested: ____ Scrub/Shrub: __X__ Emergent: ____ Bog/Fen: ____ Aquatic Bed: ____

Dominant Plant Species		Indicator	Stratum	Dominant Plant Species		Indicator	Stratum
Salix nigra	black willow	FACW+	T	*Juncus*	soft rush	OBL	H
Ludwigia	seed box	OBL	H				
Typha	cattail	OBL	H				
Acer negundo	box elder	FAC	T				
Carex sp.		OBL	H				
Scirpus	wool grass	OBL	H				

Hydrophytic Vegetation:	% of Dominants OBL, FACW, FAC = 100	Hydrophytic Vegetation Present: __X__ Yes _____No

Hydrology	**Primary Hydrology Indicators**	**Secondary Hydrology Indicators**
Depth of inundation __0__ in. Depth to water in pit__>6__ in. Depth to Sat. Soil ___0__ in. Surface water connection: ____Yes __X__ No Ground water connection: __ Yes ___ No __X__ Unkn.	Inundated ___X___ Saturated (upper 12") ___X___ Water Marks ___X___ Drift Lines ___X___ Sediment Deposits _____ Drainage Patterns _____	Oxidized Root Channels _____ Water-stained Leaves ___X__ Fac-Neutral Test _____ Other _____
	Isolated:__X____ Abutting:_____ Adjacent:_____	Wetland Hydrology Present: __X__Yes _____No

Soils	Map Unit Name: Lily Loam	Drainage Class: well drained
Soil Profile Description	Subgroup:	Confirmed Map Unit Type: _____YES _____NO

Depth (inches)	Horizon	Matrix Color	Mottle Color	Mottle Abundance	Texture, concretions	Hydric Soil Indicators	
6-10		10YR 4/2	5 YR 5/8	Few	Mg	Sulfidic Odor	
						Gleyed or Low Chroma (=1) matrix	
						Chroma ≤2 w/ mottles	
						Concretions Mg	X
						Reducing Conditions	
						Hydric Soils List	

Hydric Soils Present: __X___YES _____NO
Rationale/Remarks:

approximate size (ac.) _____	portion affected (ac.) unknown (permanent)	portion affected (ac.) unknown (temporary)
width of buffer zone (ft)	woods (>50') and SR 101	
photo number(s)	16	
8-Watershed HUC code	060102080104	
8-Watershed HUC name	Obed River	
9-Determination: TDOT/ consultant	Hydrophytic Vegetation Present? __X___Yes _____No Hydric Soils Present? __X___Yes _____No Wetland Hydrology Present? ___X__Yes _____No Is Sampling Point in a Wetland? __X__Yes ____No	
10-Determination: Confirmed? By?		
11-Mitigation: to be included in design	Yes	
12-Notes		

Project: Cumberland Co SR 101 (Peavine Rd) from Firetower Rd to Lakeview Drive
P.E. no. 18038-1230-04 PIN 100268.01
Date of survey: 01 March 2010 **Biologist:** T. Askegaard, T. Nehus **Affiliation:** TDOT Ed.

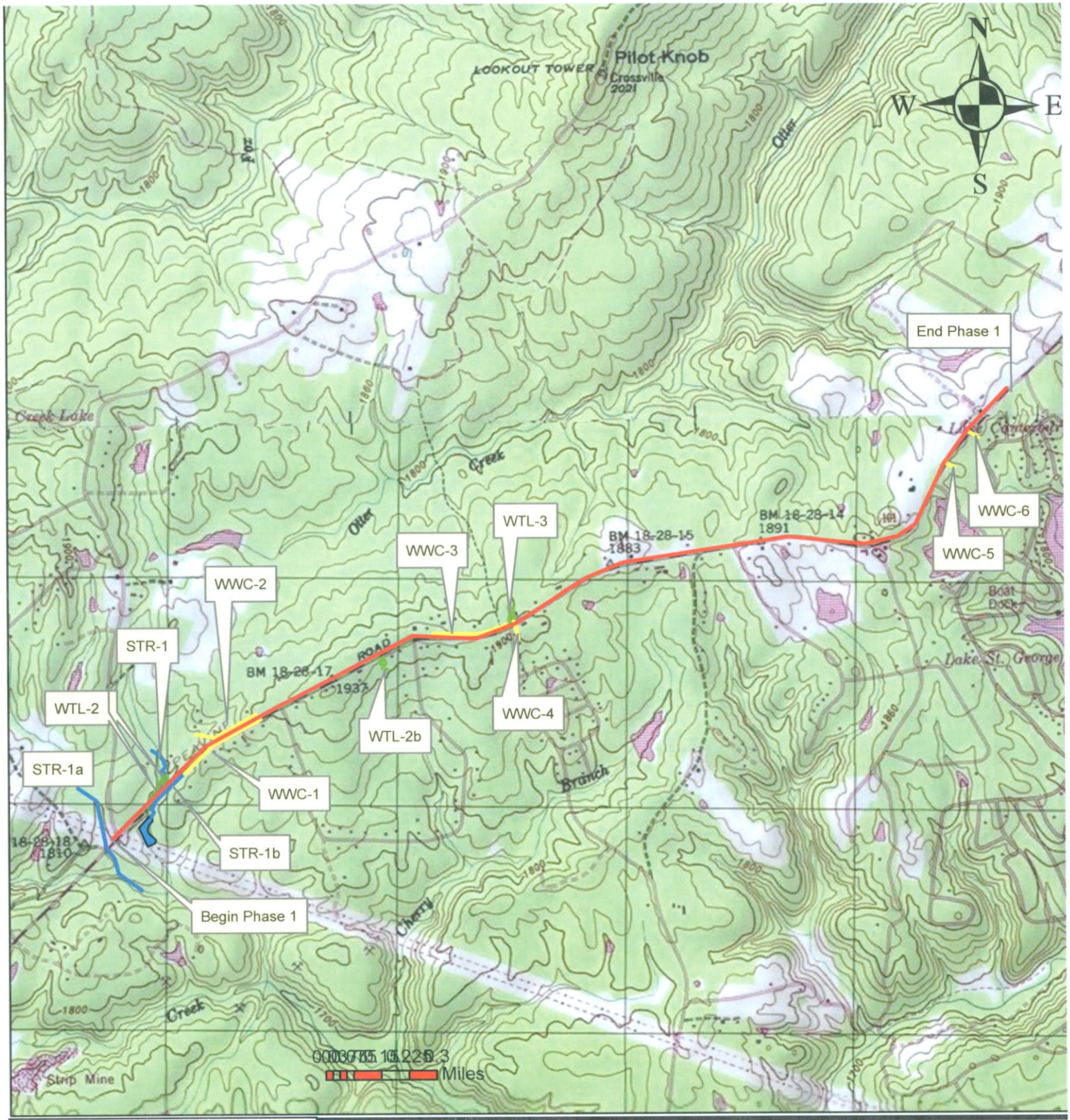
1-Station: from plans	~30+80R to ~ 33+20R (Cherry Branch Road)
2-Map label and name	WWC-4
3-Latitude/Longitude	35 59 30 N 084 56 31 W
4-Potential impact	fill
5-Feature description:	
what is it	wet weather conveyance
blue-line on topo? (y/n)	no
defined channel (y/n)	yes
straight or meandering	straight
channel bottom width	1-3’
top of bank width	4-6’
bank height and slope ratio	6-24”
avg. gradient of stream (%)	<3
substratum	gravel, grass
riffle/run/pool	--
width of buffer zone	LB: Cherry Branch Rd RB: lawn
water flow	none
water depth	--
water width	--
general water quality	--
OHWM indicators	--
groundwater connection	--
bank stability: LB, RB	stable
dominant species: LB, RB	grass
overhead canopy (%)	0
benthos	none
fish	none
algae or other aquatic life	none
habitat assessment score	
photo number (s)	19, 20
rainfall information	0.27 inches 7d Crab Orchard
6- HUC code & name (12-digit)	060102080202 Daddys Creek, middle
7-**Confirmed by:**	
8-**Mitigation**: yes/no (If yes, include on Form J)	no
9-Notes Indicate if stream is ETW or ONRW or on 303(d) list Estimate size (acres) of lake or pond if applicable	

Project: Cumberland Co SR 101 (Peavine Rd) from Firetower Rd to Lakeview Drive
P.E. no. 18038-1230-04 PIN 100268.01
Date of survey: 01 March 2010 **Biologist:** T. Askegaard, T. Nehus **Affiliation:** TDOT Ed.

1-Station: from plans	~205+00R to ~205+50R
2-Map label and name	WWC-5
3-Latitude/Longitude	35 59 52 N 084 55 15 W
4-Potential impact	fill
5-Feature description:	
what is it	wet weather conveyance
blue-line on topo? (y/n)	no
defined channel (y/n)	yes
straight or meandering	meandering
channel bottom width	12-18”
top of bank width	~3’
bank height and slope ratio	18-24”
avg. gradient of stream (%)	<3
substratum	sand silt leaves
riffle/run/pool	--
width of buffer zone	LB: >100’ woods RB: >100’ woods
water flow	none
water depth	--
water width	--
general water quality	--
OHWM indicators	--
groundwater connection	--
bank stability: LB, RB	stable
dominant species: LB, RB	southern red oak, loblolly pine (1)
overhead canopy (%)	95
benthos	none
fish	none
algae or other aquatic life	none
habitat assessment score	
photo number (s)	21, 22
rainfall information	0.27 inches 7d Crab Orchard
6- HUC code & name (12-digit)	060102080202 Daddys Creek, middle
7-**Confirmed by:**	
8-**Mitigation**: yes/no (If yes, include on Form J)	no
9-Notes Indicate if stream is ETW or ONRW or on 303(d) list Estimate size (acres) of lake or pond if applicable	Conveyance starts at outlet of culvert. Sheet flow from culvert outlet to channel.

Project: Cumberland Co SR 101 (Peavine Rd) from Firetower Rd to Lakeview Drive
P.E. no. 18038-1230-04 PIN 100268.01
Date of survey: 01 March 2010 **Biologist:** T. Askegaard, T. Nehus **Affiliation:** TDOT Ed.

1-Station: from plans	~210+50R
2-Map label and name	WWC-6
3-Latitude/Longitude	35 59 57 N 084 55 10 W
4-Potential impact	fill
5-Feature description:	
what is it	wet weather conveyance
blue-line on topo? (y/n)	no
defined channel (y/n)	yes
straight or meandering	meandering
channel bottom width	6-12”
top of bank width	12-18”
bank height and slope ratio	6”
avg. gradient of stream (%)	<3
substratum	leaf litter, dirt
riffle/run/pool	--
width of buffer zone	LB: woods RB: woods
water flow	none
water depth	----
water width	--
general water quality	--
OHWM indicators	--
groundwater connection	--
bank stability: LB, RB	some eroding
dominant species: LB, RB	privet, dogwood, several red oak sp., strawberry bush
overhead canopy (%)	95
benthos	--
fish	--
algae or other aquatic life	--
habitat assessment score	
photo number (s)	23,24
rainfall information	0.27 inches 7d Crab Orchard
6- HUC code & name (12-digit)	060102080202 Daddys Creek, middle
7-**Confirmed by:**	
8-**Mitigation**: yes/no (If yes, include on Form J)	no
9-Notes Indicate if stream is ETW or ONRW or on 303(d) list Estimate size (acres) of lake or pond if applicable	



Cumberland Co SR 101 (Peavine Rd)
Phase 1 - from Firetower Rd to Lakeview Dr

P.E. 18038-1230-04 **PIN 100268.01**

03 March 2010

Photo 1

Sta. ~65+75

STR-1A: Standing west of bridge looking upstream (west). Stream passes under SR 101 just south of beginning of project.

Photo 2

Sta. ~65+75

STR-1A: Standing west of bridge looking downstream (east). Stream passes under SR 101 just south of beginning of project.

Photo 3

Sta. ~70+00R to ~73+40R

Cannelles Lake: Standing on northeast shore looking southwest over lake toward dyke.

Photo 4

Sta. ~73+40R to ~80+50L

STR-1: Standing approximately 50’ upstream from confluence with lake looking downstream (south).

Photo 5

Sta. ~73+40R to ~80+50L

STR-1: Standing approximately 50’ upstream from confluence with lake looking upstream (north).

Photo 6

Sta. ~75+30R to ~81+00R

STR-1B: Standing ~200’ upstream of confluence with STR-1 looking downstream (southwest).

Photo 7

Sta. ~75+30R to ~81+00R

STR-1B: Standing ~200’ upstream of confluence with STR-1 looking upstream (northeast).

Photo 8

Sta. ~75+40L to ~78+80L

WTL-2: Standing on eastern edge of wetland looking west across wetland.

Photo 9

Sta. ~75+30R to ~81+00R

STR-1B: Standing across from BP station looking downstream (southwest).

Photo 10

Sta. ~75+30R to ~81+00R

STR-1B: Standing across from BP station looking upstream (northeast).

Photo 11

Sta. ~81+00R to ~95+00R

WWC-1: Standing at station 87+00R looking down gradient (southwest) at wet weather conveyance channel.

Photo 12

Sta. ~81+00R to ~95+00R

WWC-1: Standing at station 87+00R looking up gradient (northeast) at wet weather conveyance channel.

Photo 13

Sta. ~87+00L to ~94+60L

WWC-2: Standing at station 92+00L looking up gradient (northeast) at channel.

Photo 14

Sta. ~87+00L to ~94+60L

WWC-2: Standing at station 92+00L looking down gradient (southwest) at channel.

Photo 15

Sta. ~114+00R

WTL-2B: Standing at west edge of wetland looking east over wetland.

Photo 16

Sta. ~133+50L to ~135+00L

WTL-3: Standing on east side of wetland looking west over wetland.

Photo 17

Sta. ~123+00L to ~133+50L

WWC-3: Standing at station 128+00L looking down gradient (northeast).

Photo 18

Sta. ~123+00L to ~133+50L

WWC-3: Standing at station 128+00L looking up gradient (southwest).

Photo 19

Sta. ~30+80R to ~33+20R (Cherry Branch Road)

WWC-4: Standing at station 31+50 looking down gradient (south).

Photo 20

Sta. ~30+80R to ~33+20R (Cherry Branch Road)

WWC-4: Standing at station 31+50 looking up gradient (north) toward SR 101.

Photo 21

Sta. ~205+00R to ~205+50R

WWC-5: Standing approximately 50’ east of SR 101 looking down gradient (east).

Photo 22

Sta. ~205+00R to ~205+50R

WWC-5: Standing approximately 50’ east of SR 101 looking up gradient (west). Conveyance starts at outlet of culvert and sheet flows across grassy area (where TWA is crouching) to start of channel.

Photo 23

Sta. ~210+50R

WWC-6: Standing at tree line looking up gradient (west) toward SR 101.

Photo 24

Sta. ~210+50R

WWC-6: Standing at tree line looking down gradient (east).

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

Index Of Sheets

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2-2C	TYPICAL SECTIONS (4 SHEETS)
3	R.O.W. NOTES & UTILITY OWNERS
3A-3C	ACQUISITION TABLES (3 SHEETS)
3D-3F	PROPERTY MAPS (3 SHEETS)
4-27	PRESENT LAYOUTS (24 SHEETS)
5A-27A.....	RIGHT-OF-WAY DETAILS (23 SHEETS)
4B-27B.....	PROPOSED LAYOUTS SHEETS (24 SHEETS)
4C-27C.....	PROFILE SHEETS (24 SHEETS)
28-28E.....	REFERENCE CONTROL POINTS (6 SHEETS)
29-29E.....	PROFILE OF SIDE ROADS AND STREETS (6 SHEETS)
30-30J.....	PROFILE OF PRIVATE DRIVES (11 SHEETS)
31-31B.....	DRAINAGE MAP (3 SHEETS)
32-32	CULVERT SECTIONS (SHEETS)
33-33	EROSION PREVENTION AND SEDIMENT CONTROL (ESPC) PLANS
34-34	PROPOSED CONTOURS
35-35	WETLAND MITIGATION PLANS
36-	CROSS-SECTIONS (BOX CULVERT) (SHEETS)
-.....	CROSS-SECTIONS (MAINLINE) (SHEETS)
-.....	CROSS-SECTIONS (STREETS) (SHEETS)

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

TENN.	YEAR	SHEET NO.
	2010	1
FED. AID PROJ. NO.		
STATE PROJ. NO.		

CUMBERLAND COUNTY

SR-101 (PEAVINE ROAD)

PHASE 1 -- FROM FIRE TOWER ROAD TO LAKEVIEW DRIVE
PHASE 2 -- FROM LAKEVIEW DRIVE
TO EAST OF WESTCHESTER DRIVE/ CATOOSA BOULEVARD
IN FAIRFIELD GLADE

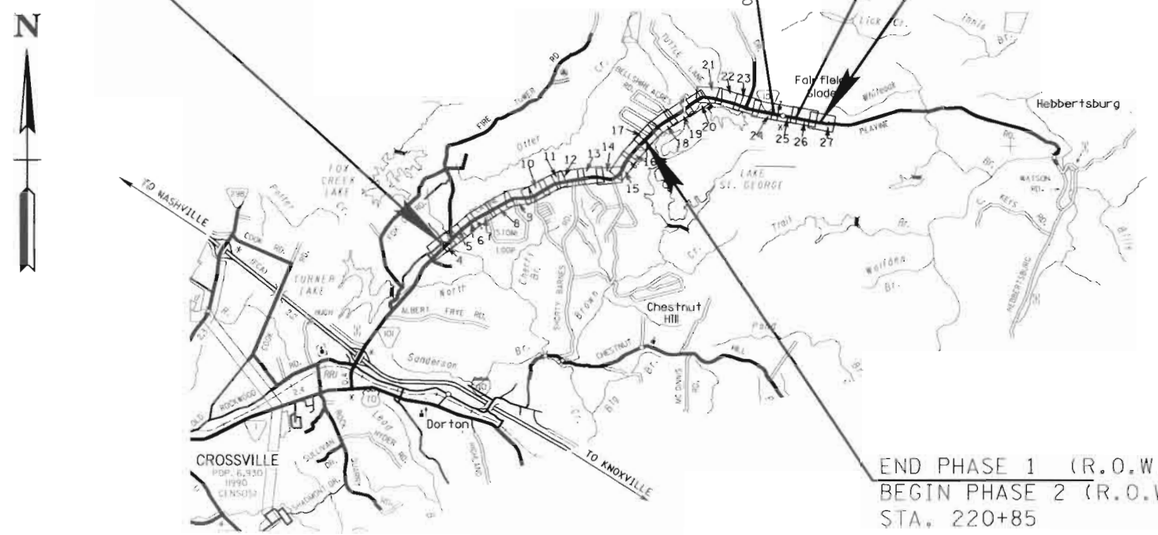
RIGHT OF WAY

STATE HIGHWAY NO. 101 F.A.H.S. NO. 101

(PHASE 1)
BEGIN PROJECT NO. (R.O.W.)
STA. 66+54.40

(PHASE 2)
END PROJECT NO. (R.O.W.)
STA. 355+10

EXCLUSION
1475'
STA. 321+70
STA. 336+45



END PHASE 1 (R.O.W.)
BEGIN PHASE 2 (R.O.W.)
STA. 220+85

EXCLUSIONS	
STATION TO STATION	LENGTH (FT.)
321+70-336+45	1475
-	
TOTAL EFFECT =	-1475

NO EQUATIONS

FOR INCIDENTALS ONLY

APPROVED: Paul D. Rogers
CHIEF ENGINEER

DATE:

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

TDOT ROAD SP. SV. 2 ROBERT RODGERS

DESIGNER EMILY MARSH

P.E. NO. 18038-1230-04

PIN NO. 100268.00

SCALE: 1"= 5000

RIGHT-OF-WAY LENGTH 5.185 MILES

TRAFFIC DATA	
ADT (2004)	8,600
ADT (2024)	17,200
DHV (2024)	1,720
D	60 - 40
T (ADT)	10 %
T (DHV)	10 %
V	** MPH

** 50 MPH FROM STA. 69+53.73 TO STA. 296+60
** 40 MPH FROM STA. 296+60 TO STA. 355+10

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR DATE

16-SEP-2009 06:55
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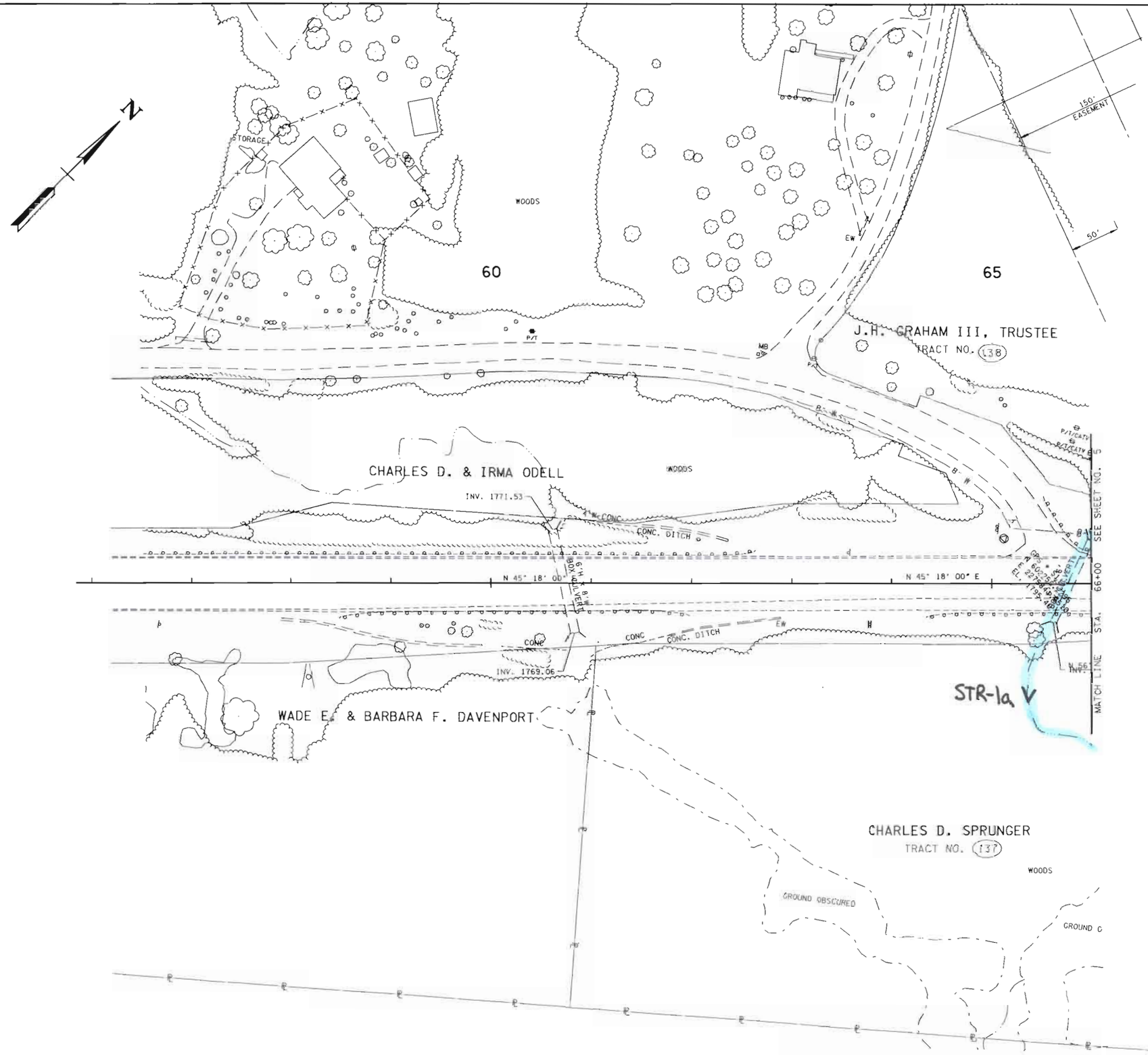
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010		4



FOR INCIDENTALS ONLY

COORDINATE VALUES ARE NAD/83(1995) AND ARE DATUM ADJUSTED BY THE FACTOR 1.00015 & TIED TO THE TCRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

PRESENT LAYOUT

STA. 56+00 TO STA. 66+00

SCALE: 1"= 50'

15-SEP-2009 13:42
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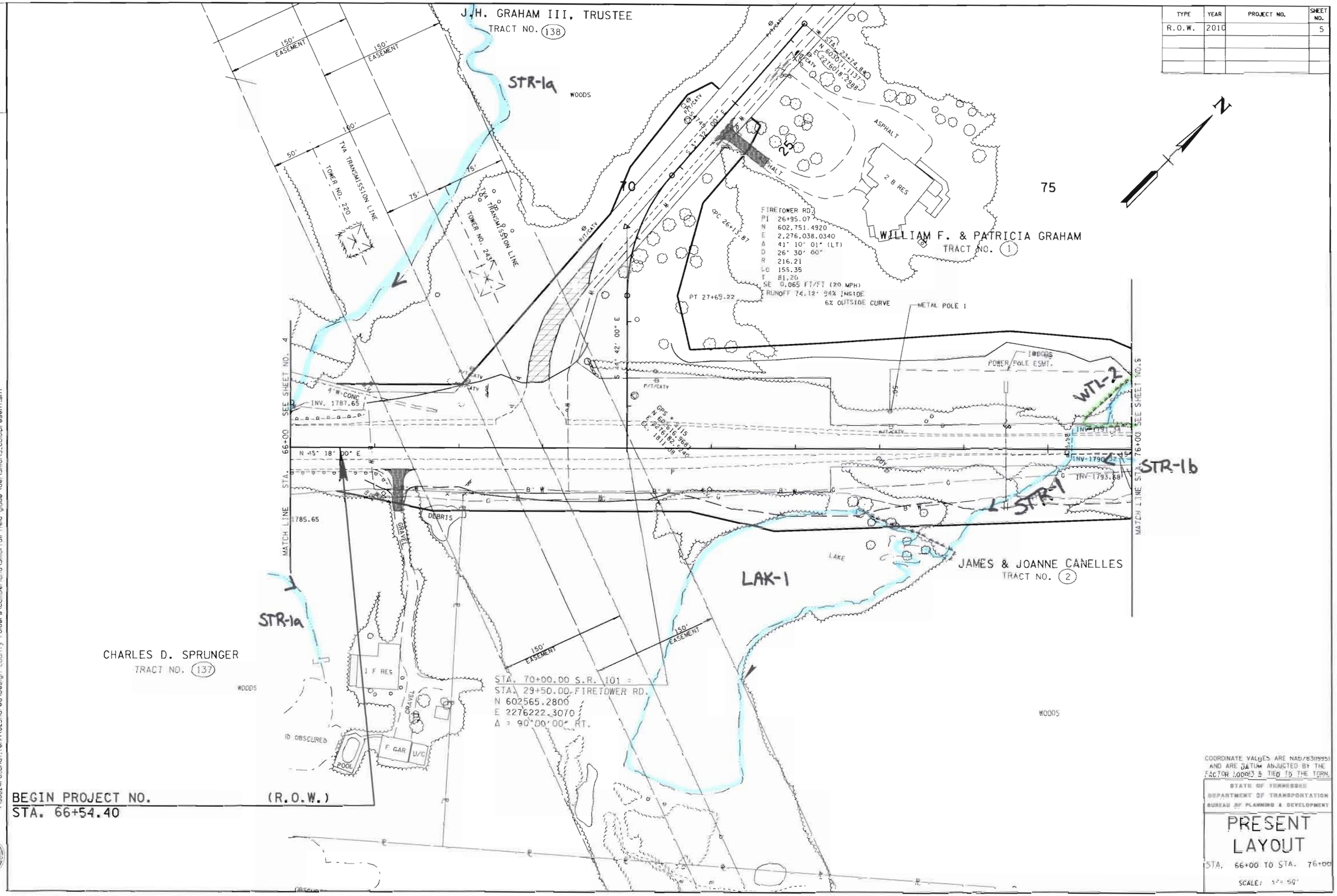
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010		5

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



BEGIN PROJECT NO. (R.O.W.)
STA. 66+54.40

COORDINATE VALUES ARE NAD/83(1995) AND ARE DATUM ADJUSTED BY THE FACTOR 1.00013 & TIED TO THE TGRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

PRESENT LAYOUT

STA. 66+00 TO STA. 76+00

SCALE: 1" = 50'

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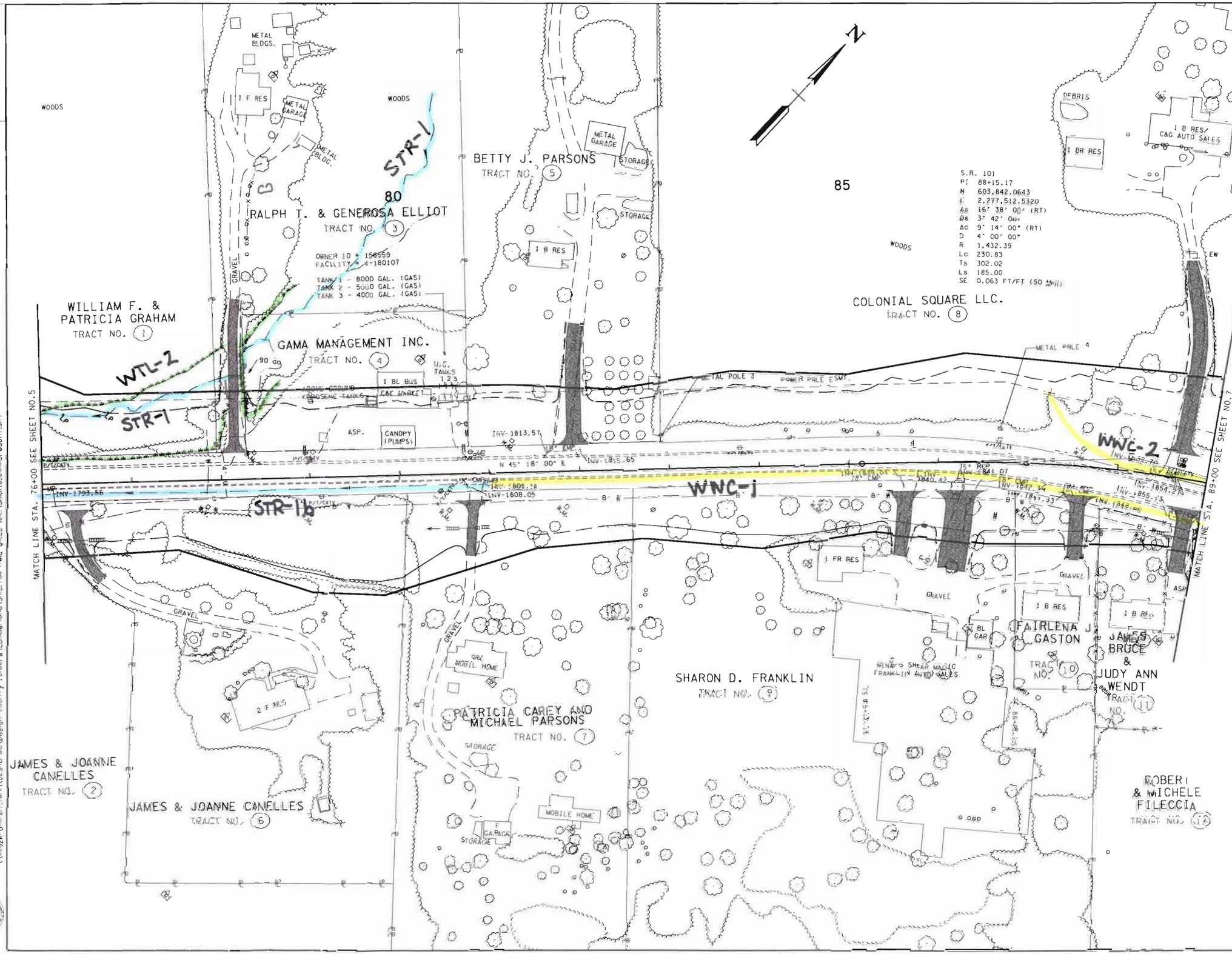
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010		6

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



FOR INCIDENTALS ONLY

COORDINATE VALUES ARE NAD/83 [illegible] AND ARE DATUM ADJUSTED BY THE FACTOR [illegible] TO THE TGRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

PRESENT LAYOUT

STA. 76+00 TO STA. 89+00

SCALE: 1" = 50'

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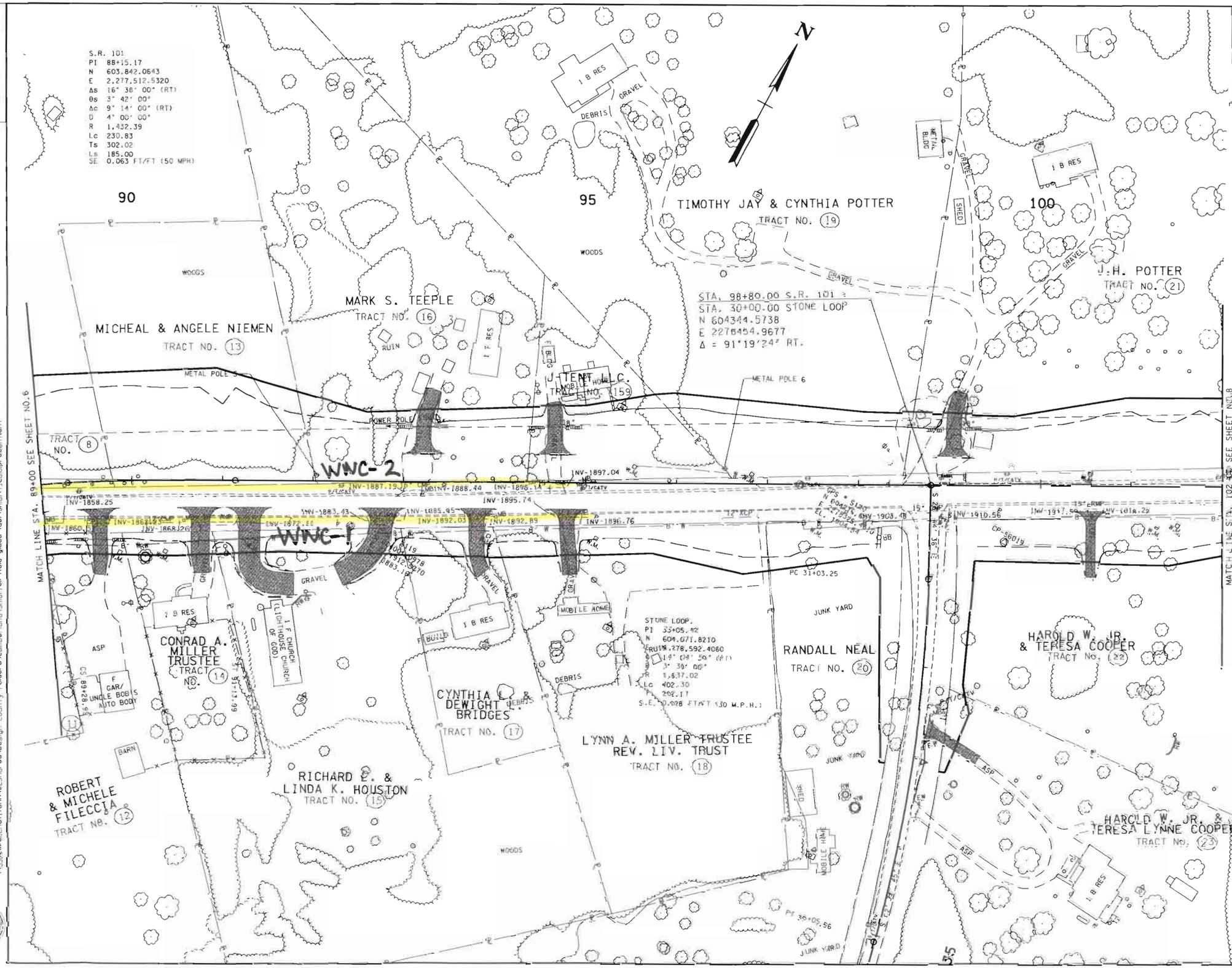
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010		7



FOR INCIDENTALS ONLY

COORDINATE VALUES ARE NAD/83(1995) AND ARE DATUM ADJUSTED BY THE FACTOR 1.00013 & TIED TO THE TGRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

PRESENT LAYOUT

STA. 89+00 TO STA. 102+00

SCALE: 1" = 50'

16-Sep-2009 13:43
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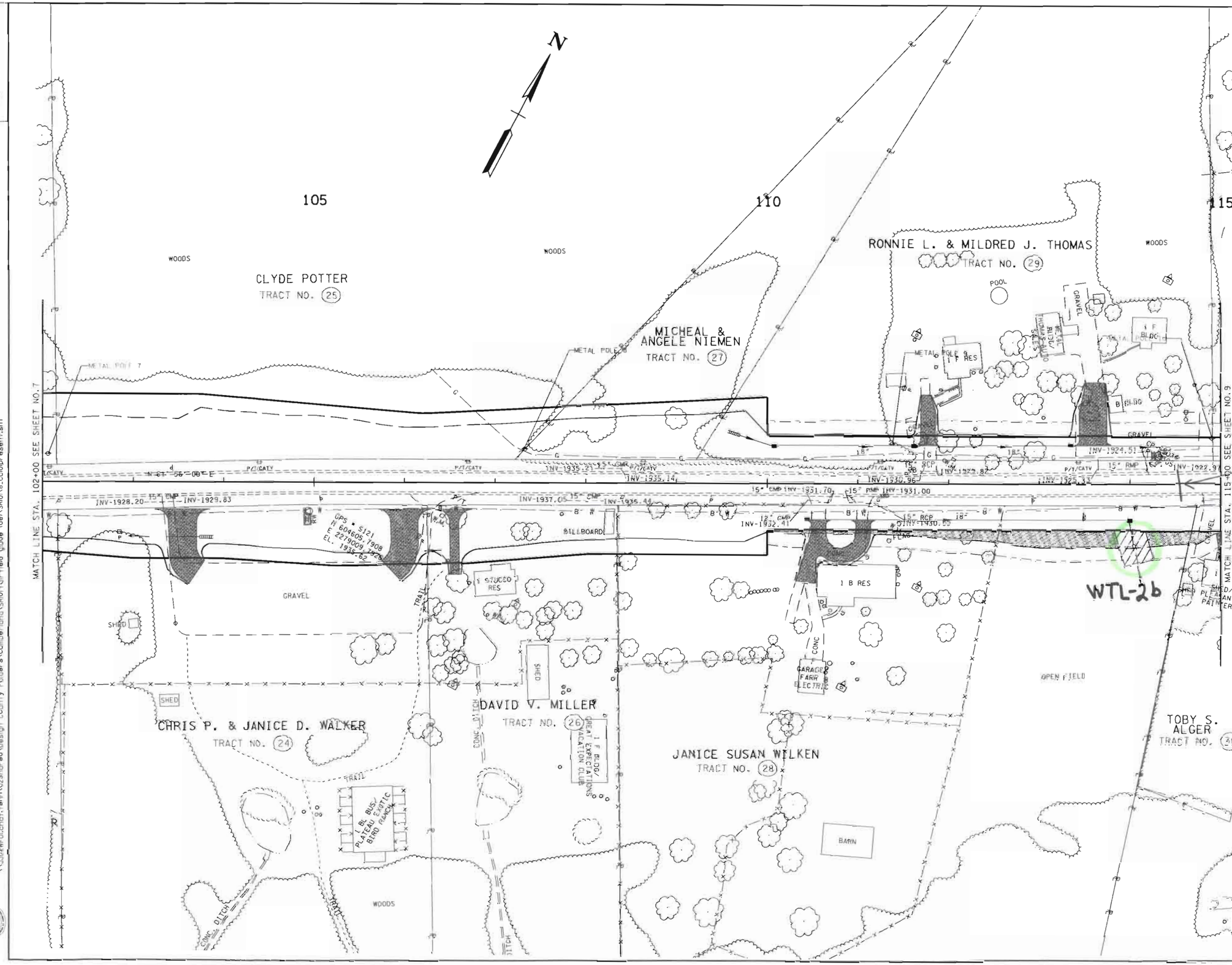
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010		8



FOR INCIDENTALS ONLY

COORDINATE VALUES ARE NAD/83(1995) AND ARE DATUM ADJUSTED BY THE FACTOR 1.00013 & TIED TO THE TCSN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

PRESENT LAYOUT

STA. 102+00 TO STA. 115+00

SCALE: 1" = 50'

15-SEP-2009 11:44
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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010		9

STA. 120+16.06 S.R. 101 =
STA. 50+00.00 STONE LOOP
N 605311.1552
E 22280356.3435
Δ = 96°13'47" RT.

STONE FAMILY LP OF CUMBERLAND CO.
TRACT NO. (34)

PEAVINE PLAZA INC.
TRACT NO. (31)

J. RANDALL CROWDER
TRACT NO. (33)

JAMES & CAROLYN SULLIVAN
TRACT NO. (35)

LANDSCAPE SOLUTIONS CO.
TRACT NO. (37)

IRIS L. LAWSON FARMS
TRACT NO. (39)

KENNETH A. BANEGAS
TRACT NO. (40)

JAMES N. & CYNTHIA A. PASQUINELLY
TRACT NO. (44)

AUSTIN & LARUE HAMBY
TRACT NO. (41)

LINVIL & VIRGINIA PARSONS BLAYLOCK
TRACT NO. (32)

DELOY & BETTY J. DAVENPORT
TRACT NO. (36)

VICKIE & DAVID D. WYATT
TRACT NO. (38)

S.R. 101
PI 120+16.72
N 605,349.8987
E 2,280,340.4132
Δs 29° 29' 00" (RT)
θs 6° 15' 00"
Δc 16° 59' 00" (RT)
D 5° 00' 00"
R 1,145.92
Lc 339.67
Ts 427.07
Ls 250.00
SE 0.011 FT/FT (50 MPH)

DAVID D. & VICKIE L. WYATT
TRACT NO. (42)

AMANDA A. HAWN
TRACT NO. (43)

TOBY S. ALGER
TRACT NO. (30)

MATCH LINE STA. 115+00 SEE SHEET NO.8

MATCH LINE STA. 128+00 SEE SHEET NO.10

WMC-3

FOR INCIDENTALS ONLY

COORDINATE VALUES ARE NAD/83(1995) AND ARE DATUM ADJUSTED BY THE FACTOR 1.00033 & TIED TO THE TCRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

PRESENT LAYOUT

STA. 115+00 TO STA. 128+00

SCALE: 1" = 50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010		10

S.R. 101
PI 130+16.89
N 605,324.8139
E 2,281,354.7358
Δs 33° 29' 00" (LT)
θs 5° 00' 00"
Δc 23° 29' 00" (LT)
D 4° 00' 00"
R 1,432.39
Lc 587.08
Ts 556.39
Ls 250.00
SE 0.063 FT/FT (50 MPH)

STA. 134+30.00 S.R. 101 =
STA. 30+00.00 CHERRY BRANCH RD.
N 605558.4200
E 22281726.1930
Δ = 90°00'00" RT.

STA. 120+16.06 S.R. 101 =
STA. 10+00.00 FENCE LANE
N 605881.1150
E 22282242.6680
Δ = 91°43'01" RT.

N

JAMES N. & CYNTHIA A. PASQUINELLY
TRACT NO. 44
OPEN FIELD

130

135

140

LEAMON & CAROLYN BARNETT
TRACT NO. 54

GWEN F. GUITAR & DENNIS R. IRVING
TRACT NO. 48

INA MAE & BETTY L. GILBERT
TRACT NO. 49

J. RANDALL CROWDER
TRACT NO. 46

CHRISTINE J. SCHMITT
TRACT NO. 47

J. RANDALL CROWDER
TRACT NO. 45

DANO A. ANDERSON
TRACT NO. 50

BILLY L. & SUE HOPPER

JAMES N. PASQUINELLY
TRACT NO. 53

RONALD F. WEB & MICHAEL ELLIS
TRACT NO. 52

EQUITY TRUST
TRACT NO. 55

JACK & WANDA PLEASANT
TRACT NO. 51

WAYNE STEVENS, TRUSTEE
TRACT NO. 139

WT1-3
WWC-3
WWC-4

MATCH LINE STA. 128+00 SEE SHEET NO. 9
MATCH LINE STA. 141+00 SEE SHEET NO. 11

CHERRY BRANCH RD.
PI 31+62.07
N 605,419.4390
E 2,281,809.5710
Δ 24° 52' 05" (RT)
D 22° 45' 00"
R 251.85
Lc 109.31
T 55.53
SE 0.061 FT/FT (20 MPH)
RUNOFF 13% (60% OUTSIDE 40% INSIDE)

COORDINATE VALUES ARE NAD(83)(05) AND ARE DATUM ADJUSTED BY THE FACTOR 1.00013 & TIED TO THE TCRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

PRESENT LAYOUT

STA. 128+00 TO STA. 141+00

SCALE: 1" = 50'

FOR INCIDENTALS ONLY

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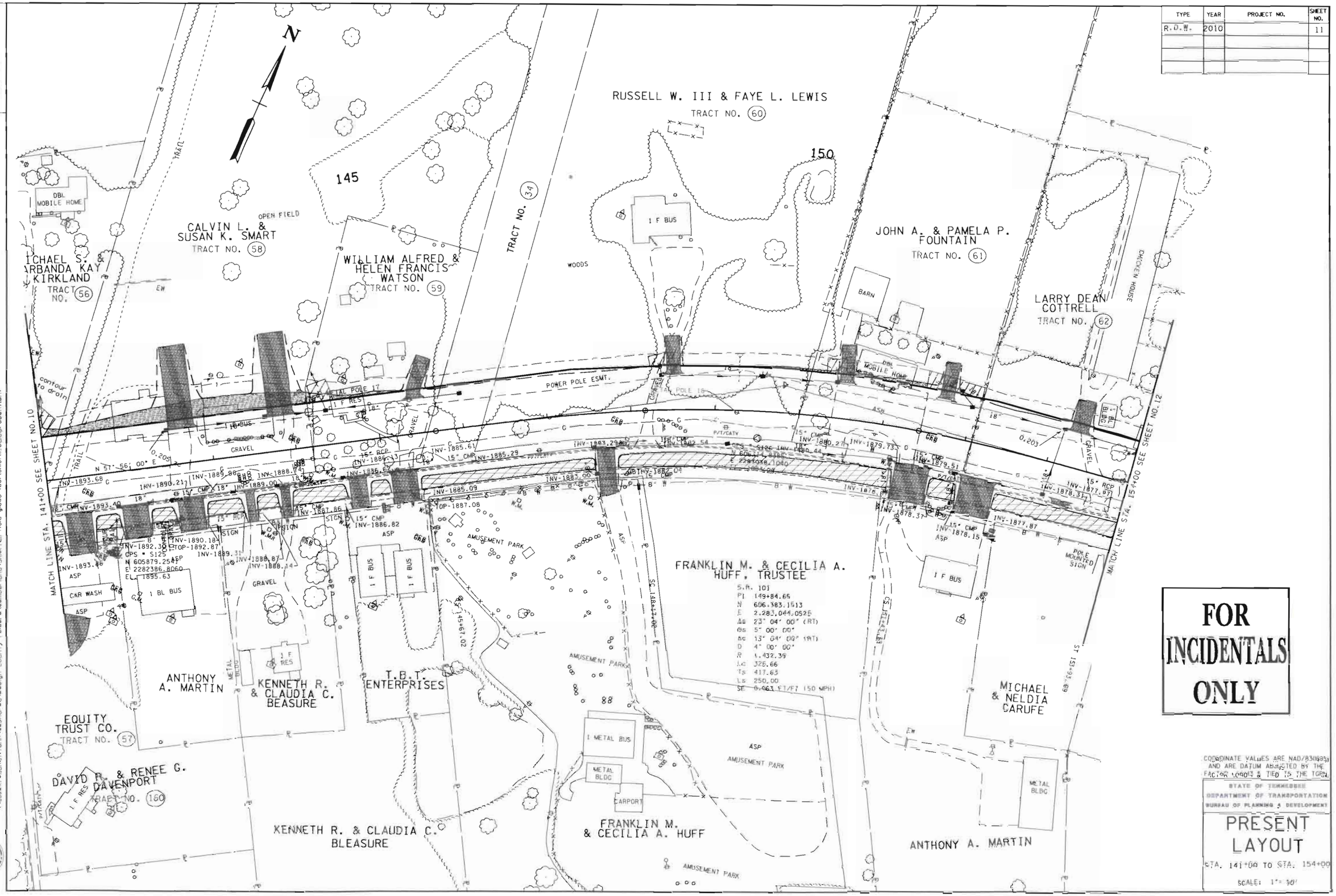
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010		11



FOR INCIDENTALS ONLY

COORDINATE VALUES ARE NAD/83(1986) AND ARE DATUM ADJUSTED BY THE FACTOR 1.00013 & TIED TO THE TGRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

PRESENT LAYOUT

STA. 141+00 TO STA. 154+00

SCALE: 1" = 50'

15-SEP-2009 13:47
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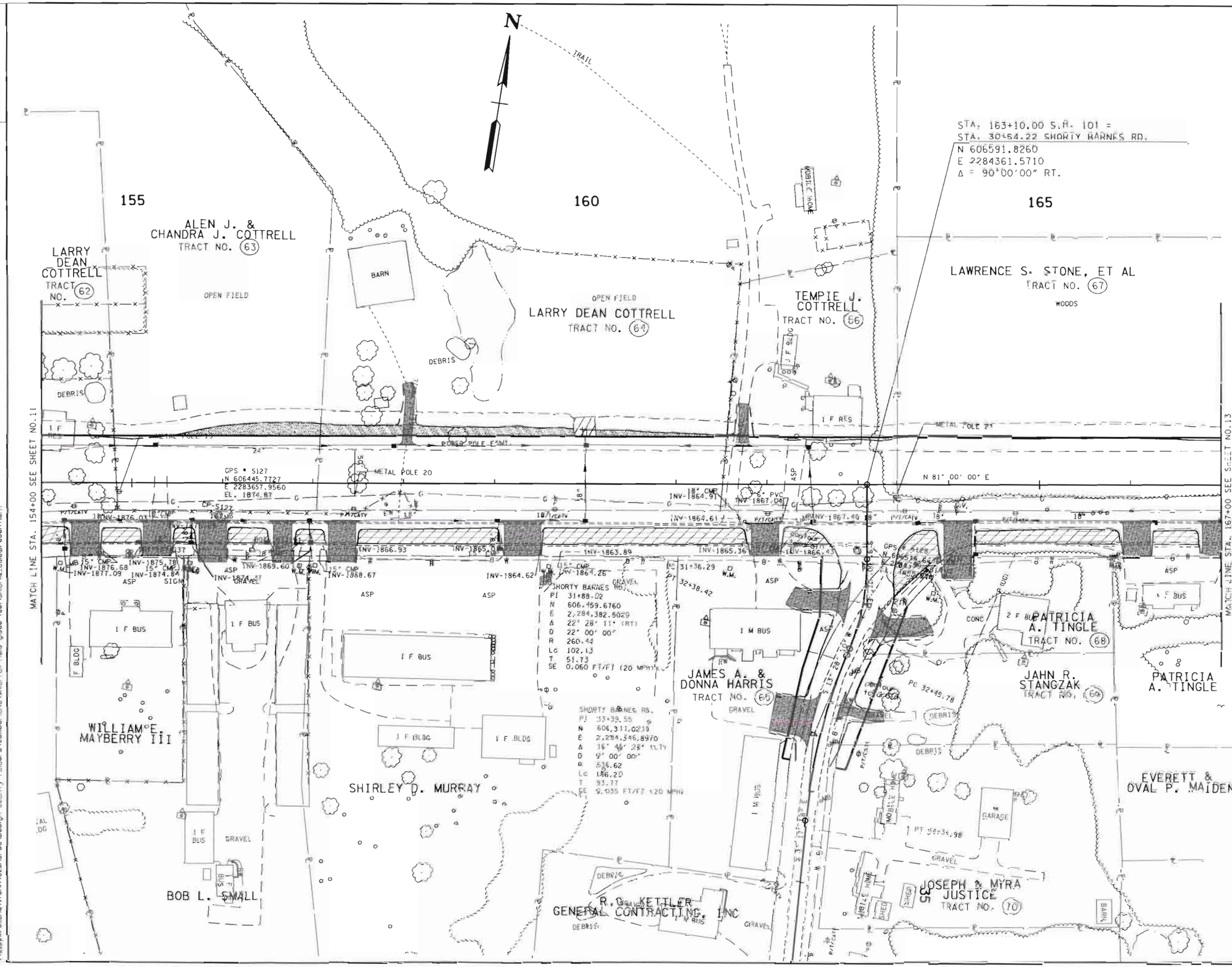
TYPE	YEAR	PROJECT NO.	SHEET NO.
R-A-W-	2010		12

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



FOR INCIDENTALS ONLY

COORDINATES ARE NAD/83(1995) ARE DATUM ADJUSTED BY THE FACTOR OF 1.0001 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 154+00 TO STA. 167+00

SCALE: 1" = 50'

5-SEP-2009 13:47
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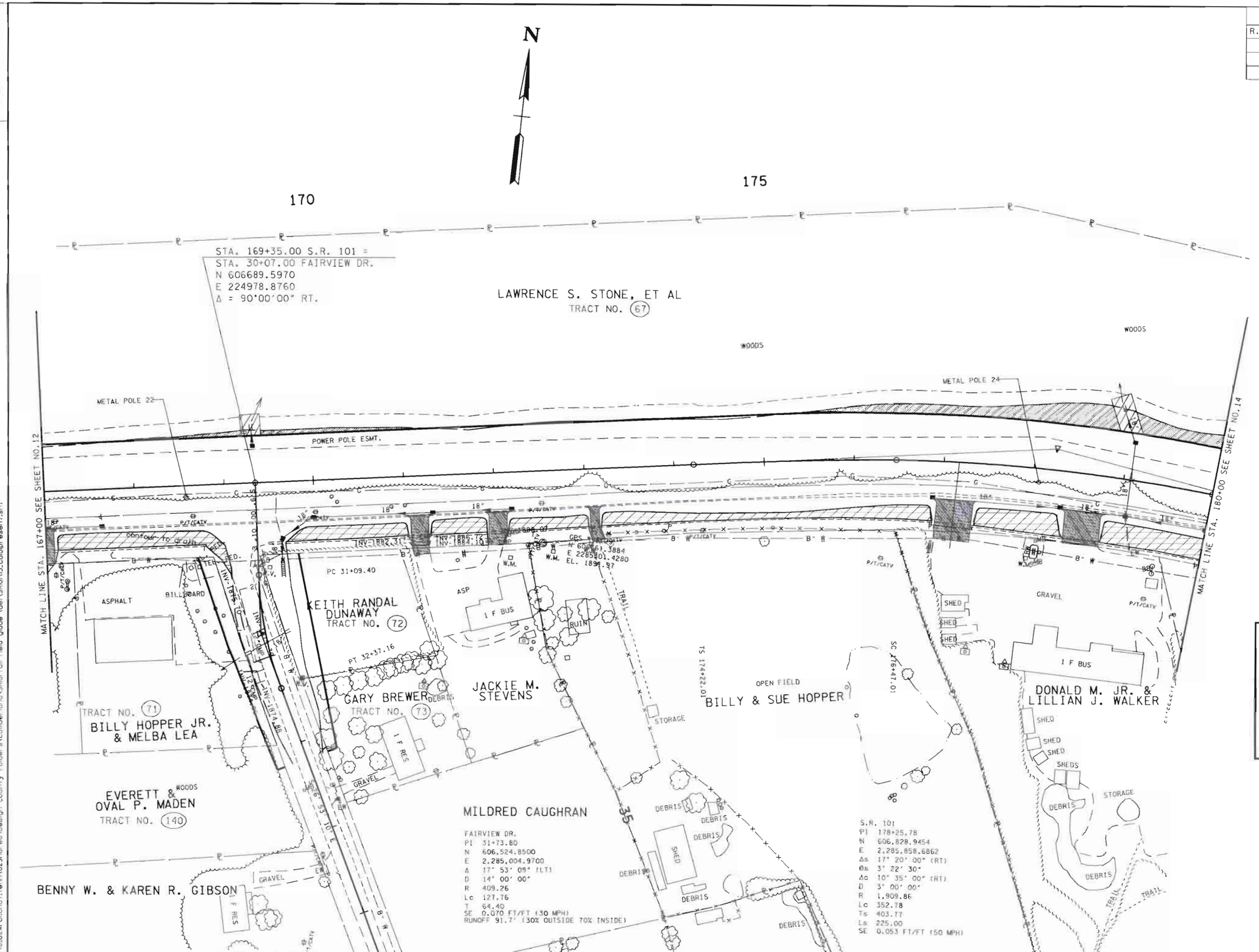
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010		13

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



FOR INCIDENTALS ONLY

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00013 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 167+00 TO STA. 180+00

SCALE: 1"= 50'

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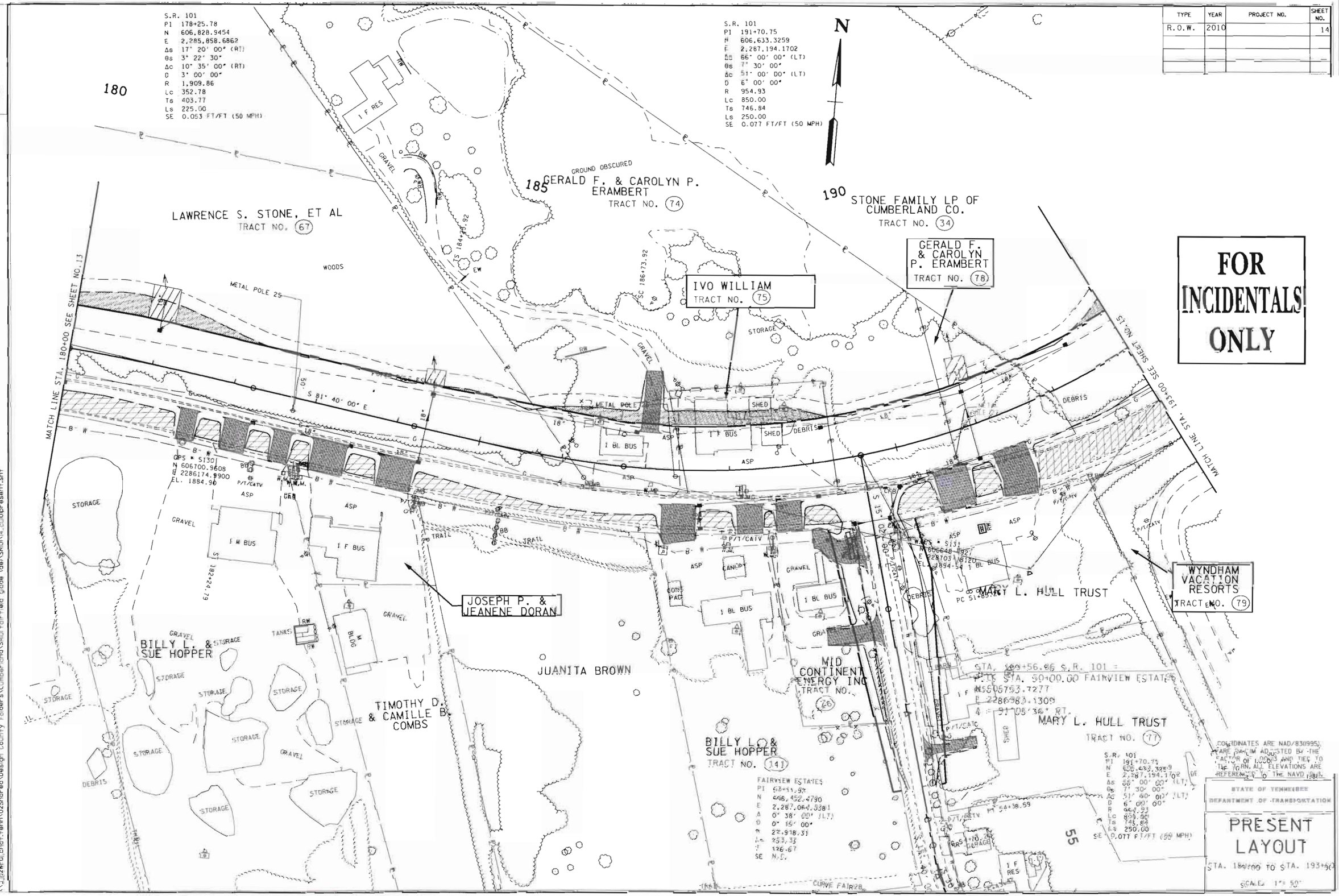
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010		14



FOR INCIDENTALS ONLY

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010		15

N

195

200

205

S.R. 101
PI 191+70.75
N 606,633.3259
E 2,287,194.1702
Δs 66° 00' 00" (LT)
θs 7° 30' 00"
Δc 51° 00' 00" (LT)
D 6° 00' 00"
R 954.93
Lc 850.00
Ts 746.84
Ls 250.00
SE 0.077 FT/FT (50 MPH)

S.R. 101
PI 206+54.13
N 608,008.0995
E 2,288,064.3858
Δ 12° 04' 00" (RT)
θ 1° 00' 00"
R 5,729.58
Lc 1,206.67
T 605.57
SE 0.021 FT/FT (50 MPH)
RUNOFF 150' (50 % INSIDE 50% OUTSIDE CURVE)

STA. 200+75.00 S.R. 101 =
P.I. STA. 30+00.00 ST. GEORGE RD.
N 607518.7670
E 2287754.6440
Δ = 90°00'00" RT.

CS 195+23.92
ST 197+23.92

STONE FAMILY LP OF CUMBERLAND COUNTY
TRACT NO. (34)

BEULAH L. COTTRELL
TRACT NO. (80)

OPEN FIELD
WOODS
GRAVEL
METAL POLE 29
METAL POLE 30
METAL POLE 28
BILLBOARD
TRAIL
N 32° 20' 00" E
INV-1873.02
INV-1866.76
INV-1881.27
INV-1862.26
INV-1860.92
N 27° 00' 00" E
S 27° 24' 08" E
WWC-5
MATCH LINE STA. 193+00 SEE SHEET NO.15
MATCH LINE STA. 206+00 SEE SHEET NO.16
R=681.20
L=89.42
POT 194+86.65
PC 7+19.25
PT 7+71.83
PC 32+46.02
PT 34+53.58

WYNDHAM VACATION RESORTS
TRACT NO. (79)

WYNDHAM VACATION RESORTS
TRACT NO. (81)

SPRING LAKE DR.
PI 7+18.82
N 607,234.9560
E 2,287,334.9580
Δ 5° 52' 06" (RT)
D 10° 00' 00"
R 572.96
Lc 58.68
T 29.37
SE 0.037 FT/FT (20 MPH)
RUNOFF 95'

SPRING LAKE ST. GEORGE RD.
PI 33+62.94
N 607,523.2360
E 2,288,360.4130
Δ 35° 38' 08" (RT)
D 19° 00' 00"
R 301.56
Lc 187.56
T 96.92
SE 0.078 FT/FT (30 MPH)
RUNOFF 80'

VIOLA M. SEEBODE
TRACT NO. (83)

ALFRED J. & NANCY D. OTT

FAIRFIELD COMMUNITIES LAND COMPANY
TRACT NO. (82)

STA. 31+35.04 ST. GEORGE RD. =
STA. 10+00.00 SPRING LAKE DR.
N 607446.0180
E 2287868.4080
Δ = 87°57' 00" RT.

I F RES
GAZEBO
POOL
AREA (I/G)
CONC
EW
SWD
RW

FOR INCIDENTALS ONLY

COORDINATES ARE NAD/83(1995). ARE DATUM ADJUSTED BY THE FACTOR OF 1.00003 AND TIED TO THE TCHN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 193+00 TO STA. 206+00

SCALE: 1" = 50'

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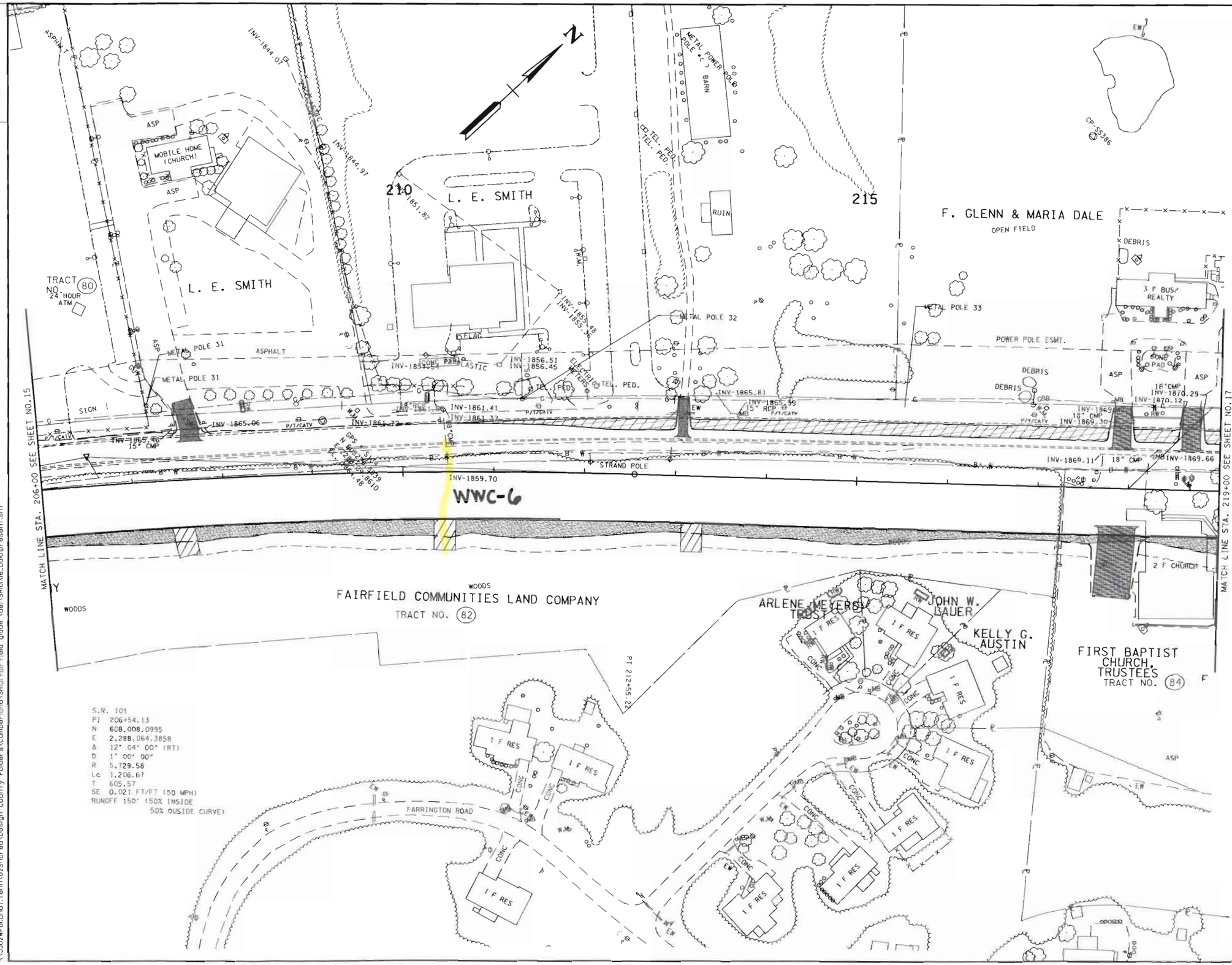
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010		16

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



S.R. 101
PI 206+54.13
N 608,008.0995
E 2,288,064.3858
Δ 12° 04' 00" (RT)
D 1° 00' 00"
R 5,729.58
Lc 1,206.67
T 605.57
SE 0.021 FT/FT (50 MPH)
RUNOFF 150' (50% INSIDE 50% OUSIDE CURVE)

FOR INCIDENTALS ONLY

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00013 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 206+00 TO STA. 219+00

SCALE: 1"= 50'

5-SEP-2009 13:51
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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010		17

End Phase I
STA. 220+85.00 S.R. 101 =
P.L. STA. 30+00.00 LAKEVIEW DR..
N 609033.6210
E 2289068.6510
Δ = 90°00'00" RT.

WOODLANDS CIRCLE
PI 34+48.08
N 609,851.5596
E 2,289,114.3932
Δ 1° 19' 59" (RT)
D 1° 15' 00"
R 4,583.66
Lc 106.65
T 53.33

LAKEVIEW DR.
PI 31+43.62
N 608,933.1320
E 2,289,171.2670
Δ 10° 18' 28" (RT)
D 10° 00' 00"
R 572.96
Lc 103.08
T 51.68
SE 0.060 FT/FT (30 MPH)
RUNOFF 145' (65% OUTSIDE 35% INSIDE)

STA. 228+17.41 S.R. 101 =
P.L. STA. 40+00.00 WOODLANDS CIR.
N 609556.9064
E 2289581.0895
Δ = 102°08'00" LT.

JASON & PAM B. RAY TRACT NO. 86
JASON & PAM B. RAY TRACT NO. 142
PHILLIP C. & MARY R. FREITAG TRACT NO. 143
RICHCO, LLC
MARIAN E. BRYAN
MATTHEW E. DILLMAN TRUSTEE
DOUGLAS S. & MARJORIE SUE SATTERLEE
DEDE JEAN EISCHIED TRACT NO. 88
LKM PROPERTIES LP TRACT NO. 87
F. GLENN & MARIA DALE
WYNDHAM VACATION RESORTS TRACT NO. 96
WYNDHAM VACATION RESORTS TRACT NO. 85
RST BAPTIST CHURCH, TRUSTEES TRACT NO. 84
DEBRINA McCARVER
WENDELL T & ROSETTA NEALON, TRACT NO. 89
DIANA F. BOJANZYK TRACT NO. 89

220 STORAGE
225
230

GPS • S135
N 609021.7121
E 2288953.1100
EL. 1871.88

MATCH LINE STA. 219+00 SEE SHEET NO.16
MATCH LINE STA. 232+00 SEE SHEET NO.18

FOR INCIDENTALS ONLY

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00015 AND TIED TO THE TCRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 219+00 TO STA. 232+00

SCALE: 1"= 50'

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
ENVIRONMENTAL DIVISION
SUITE 900, JAMES K. POLK BUILDING
505 DEADERICK STREET
NASHVILLE, TENNESSEE 37243-1402
(615) 741-3655

JOHN C. SCHROER
COMMISSIONER

BILL HASLAM
GOVERNOR

MEMORANDUM

To: Robert Rodgers
TDOT Design Division

From: Christina Richards
Ecology Section

Date: 23 October 2012

Subject: ENVIRONMENTAL BOUNDARIES AND MITIGATION DESIGN FOR: **Cumberland County: SR-101 (Peavine Rd): Phase 1 – from Firetower Road to Lakeview Drive; PE No. 18038-1230-04; PIN 10268.01**

An ecological re-evaluation of the subject project has been conducted with the following results:

STR-1b is no longer defined as a stream according to the new TDEC Hydrologic Determination process. Please remove that feature from the plans. A new Form J, hydrologic determination sheet, and additional photos are attached.

If you have any questions or comments please contact me at Christina.Richards@state.tn.us or 615-253-8690. Thank you very much.

Copy: Permits: Memo, Photos, TDEC HDF
Project file: Memo, Photos, TDEC HDF

Photo Summary 18 October 2012
SR 101 (Peavine Rd) From Firetower Rd to Lakeview Dr.; Cumberland Co.
P.E #.18038-1230-04; Pin #100268.01

Photo 1

Standing south of the old BP looking north along ditch line.

Photo 2

Standing south of the old BP looking south along ditch line.

Hydrologic Determination Field Data Sheet

Tennessee Division of Water Pollution Control, Version 1.2

County: Cumberland	Named Waterbody: n/a	Date/Time: 18 Oct 2012 1330
Assessors/Affiliation: C. Richards, D. Kathman - TDOT		Project ID : PIN100268.01 PE#18038-1230-04
Site Name/Description: SR-101 From Firetowerd Rd to Lakeview Dr		
Site Location: Cumberland County		
USGS quad: Dorton	HUC (12 digit): 060102080204	Lat/Long: 84 51' 32.84" W 35 59' 6.96"N
Previous Rainfall (7-days) : 0.8" in past 7 days (all within 12 hours)		

Precipitation this Season vs. Normal : very wet ☐ wet ☐ average ☑ dry ☐ drought ☐ unknown

Source of recent & seasonal precip data :

Watershed Size : Unknown	Photos: Yes	Number : 1 - 9
Soil Type(s) / Geology : Gilpin and Ramsey		Source: NRCS Soils
Surrounding Land Use : suburban area		

Degree of historical alteration to natural channel morphology & hydrology (circle one & describe fully in Notes) : Severe ☐ Moderate ☑ Slight ☐ Absent ☐

Primary Field Indicators Observed

Primary Indicators	NO	YES
1. Hydrologic feature exists solely due to a process discharge	x	WWC
2. Defined bed and bank absent, dominated by upland vegetation / grass	x	WWC
3. Watercourse dry anytime during February through April 15th, under normal precipitation / groundwater conditions	x	WWC
4. Daily flow and precipitation records showing feature only flows in direct response to rainfall	n/a	WWC
5. Presence of multiple populations of obligate lotic organisms with ≥ 2 months aquatic phase	x	Stream
6. Presence of fish (except *Gambusia*)	x	Stream
7. Presence of naturally occurring ground water table connection	x	Stream
8. Flowing water in channel and 7 days since last precipitation in local watershed	n/a	Stream
9. Evidence watercourse has been used as a supply of drinking water	x	Stream

NOTE : If any Primary Indicators 1-9 = "Yes", then STOP; absent directly contradictory evidence, determination is complete.

In the absence of a primary indicator, or other definitive evidence, complete the secondary indicator table on page 2 of this sheet, and provide score below.

Guidance for the interpretation and scoring of both the primary & secondary indicators is provided in *TDEC-WPC Guidance For Making Hydrologic Determinations, Version 1.2*

Overall Hydrologic Determination = wet weather conveyance

Secondary Indicator Score (if applicable) = 4

Justification / Notes :

0.8" of rain in last 12 hours yet some areas of the channel are dry

Secondary Field Indicator Evaluation

A. Geomorphology (Subtotal = 2)		**Absent**	**Weak**	**Moderate**	**Strong**
1. Continuous bed and bank	1	0	1	2	3
2. Sinuous channel	0	0	1	2	3
3. In-channel structure: riffle-pool sequences	0	0	1	2	3
4. Sorting of soil textures or other substrate	0	0	1	2	3
5. Active/relic floodplain	0	0	1	2	3
6. Depositional bars or benches	0	0	1	2	3
7. Braided channel	0	0	1	2	3
8. Recent alluvial deposits	0	0	0.5	1	1.5
9. Natural levees	0	0	1	2	3
10. Headcuts	1	0	1	2	3
11. Grade controls	0	0	0.5	1	1.5
12. Natural valley or drainageway	0	0	0.5	1	1.5
13. At least second order channel on existing USGS or NRCS map	0	No = 0		Yes = 3	

B. Hydrology (Subtotal = 1)		**Absent**	**Weak**	**Moderate**	**Strong**
14. Subsurface flow/discharge into channel	0	0	1	2	3
15. Water in channel and >48 hours since rain	1	0	1	2	3
16. Leaf litter in channel (January – September)	0	1.5	1	0.5	0
17. Sediment on plants or on debris	0	0	0.5	1	1.5
18. Organic debris lines or piles (wrack lines)	0	0	0.5	1	1.5
19. Hydric soils in stream bed or sides of channel	0	No = 0		Yes = 1.5	

C. Biology (Subtotal = 1)		**Absent**	**Weak**	**Moderate**	**Strong**
20. Fibrous roots in channel [1]	1	3	2	1	0
21. Rooted plants in channel [1]	0	3	2	1	0
22. Crayfish in stream (exclude in floodplain)	0	0	0.5	1	1.5
23. Bivalves/mussels	0	0	1	2	3
24. Amphibians	0	0	0.5	1	1.5
25. Macrobenthos (record type & abundance)	0	0	1	2	3
26. Filamentous algae; periphyton	0	0	1	2	3
27. Iron oxidizing bacteria/fungus	0	0	0.5	1	1.5
28.Wetland plants in channel [2]	0	0	0.5	1	2

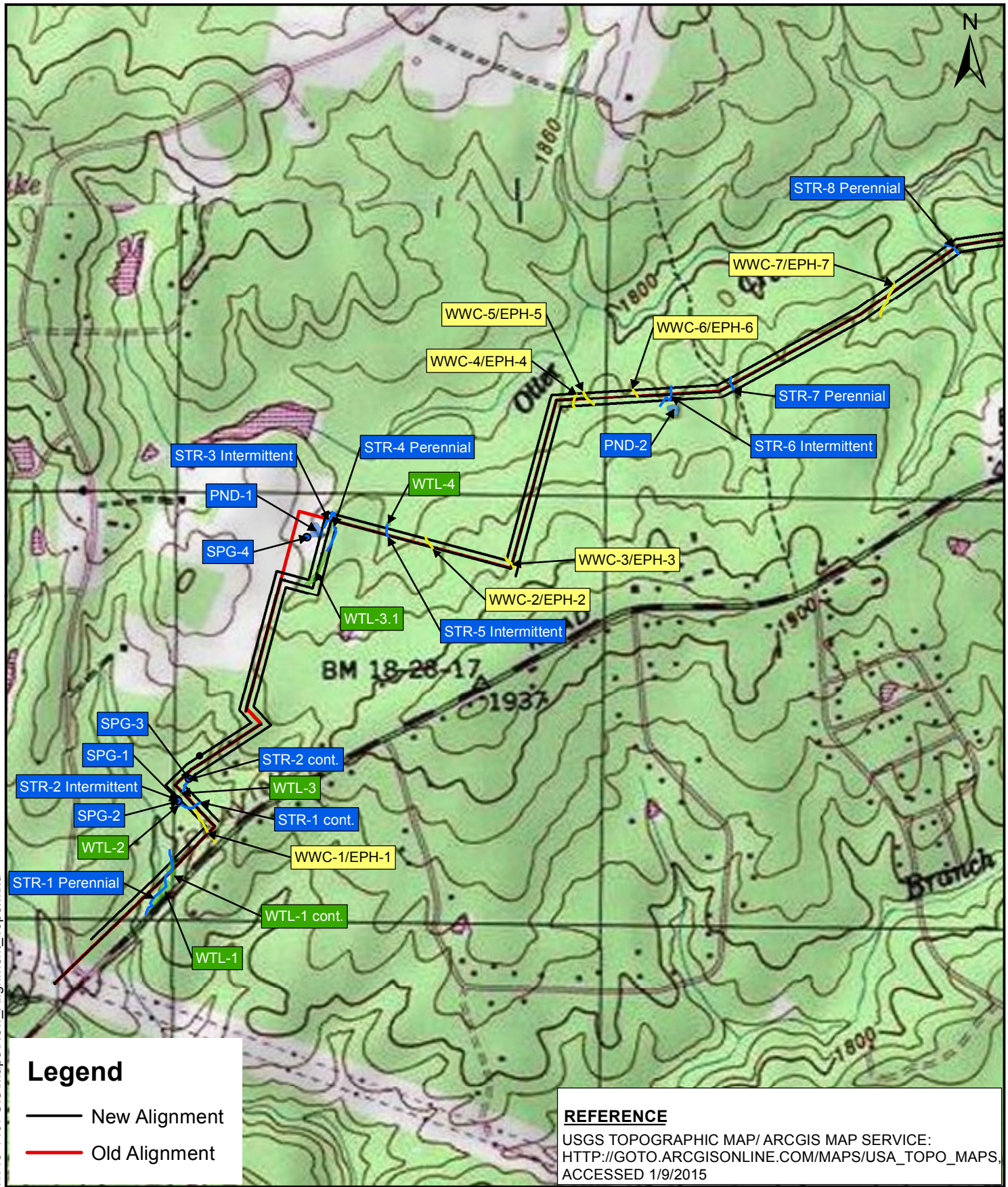
[1] Focus is on the presence of upland plants. [2] Focus is on the presence of aquatic or wetland plants.

Total Points = 4

Watercourse is a Wet Weather Conveyance if Secondary Indicator Score < 19 points

Notes :

Photos 1 and 2 - standing south of the old BP station looking up-channel and down-channel. It has been <12 hours since 0.8" of rain and sections of this channel are dry. There are pools of standing water. Absolutely no organisms in them though.



Legend

- New Alignment
- Old Alignment

REFERENCE

USGS TOPOGRAPHIC MAP/ ARCGIS MAP SERVICE: HTTP://GOTO.ARCGISONLINE.COM/MAPS/USA_TOPO_MAPS, ACCESSED 1/9/2015

0 250 500 1,000 Feet

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Environmental Boundaries Map (Topo)
SR-101 (Peavine Rd.)
Volunteer Electric CO-OP (VEC)
Powerline Location; Cumberland County
P.E.: 18038-1230-04; PIN: 100268.03

DWN. BY: CDH	SCALE: 1:12,000	DATE: 01-09-15	PROJECT NO.: 140-149	FIGURE: 1 SHEET 1 OF 3
APPRVD BY: RH * Hand signature on file				

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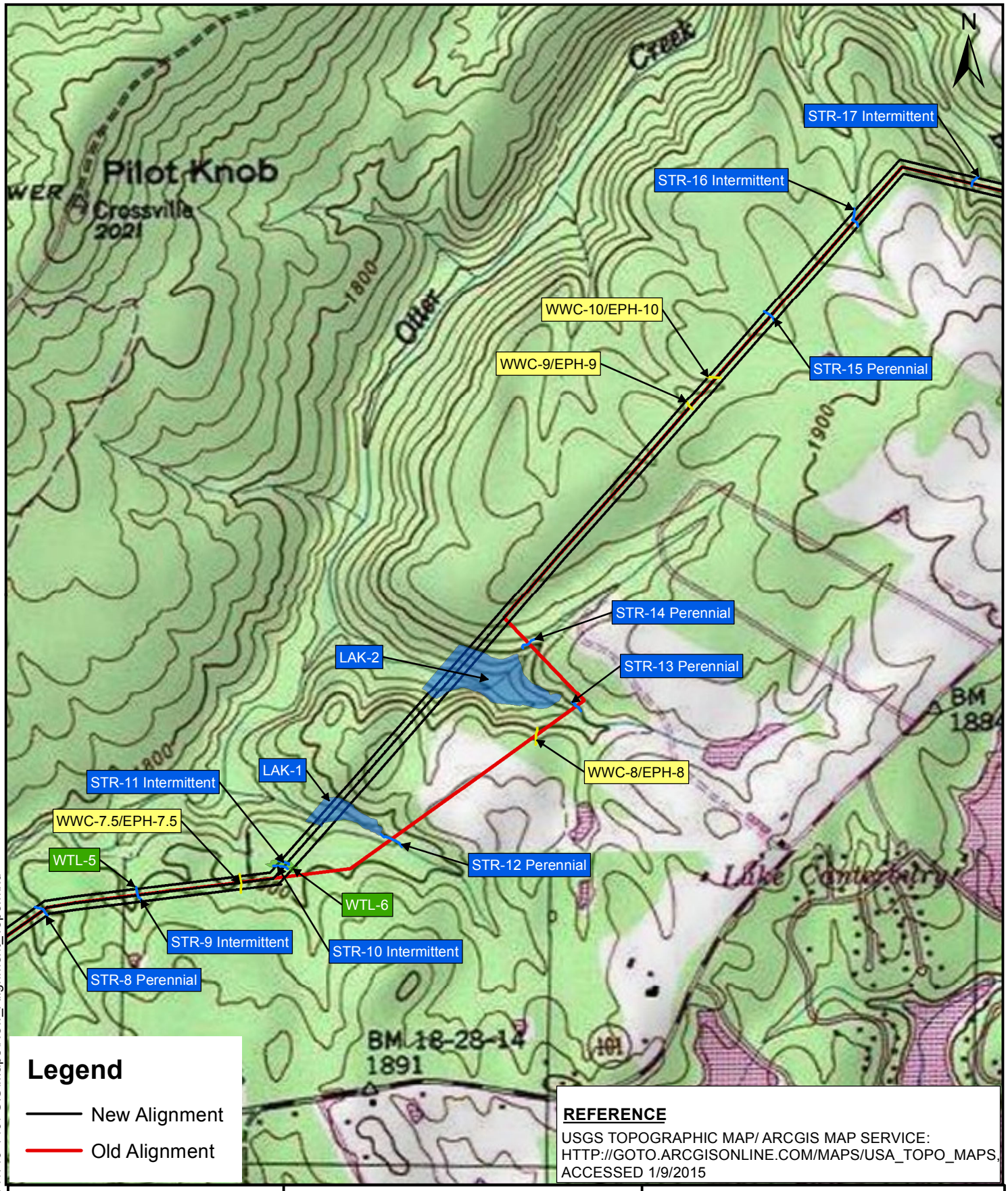

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P.E.: 18038-1230-04; PIN: 100268.03

DWN. BY: CDH	SCALE: 1:12,000	DATE: 01-09-15	PROJECT NO.: 140-149	FIGURE: 1 SHEET 2 OF 3
APPRVD BY: RH * Hand signature on file				

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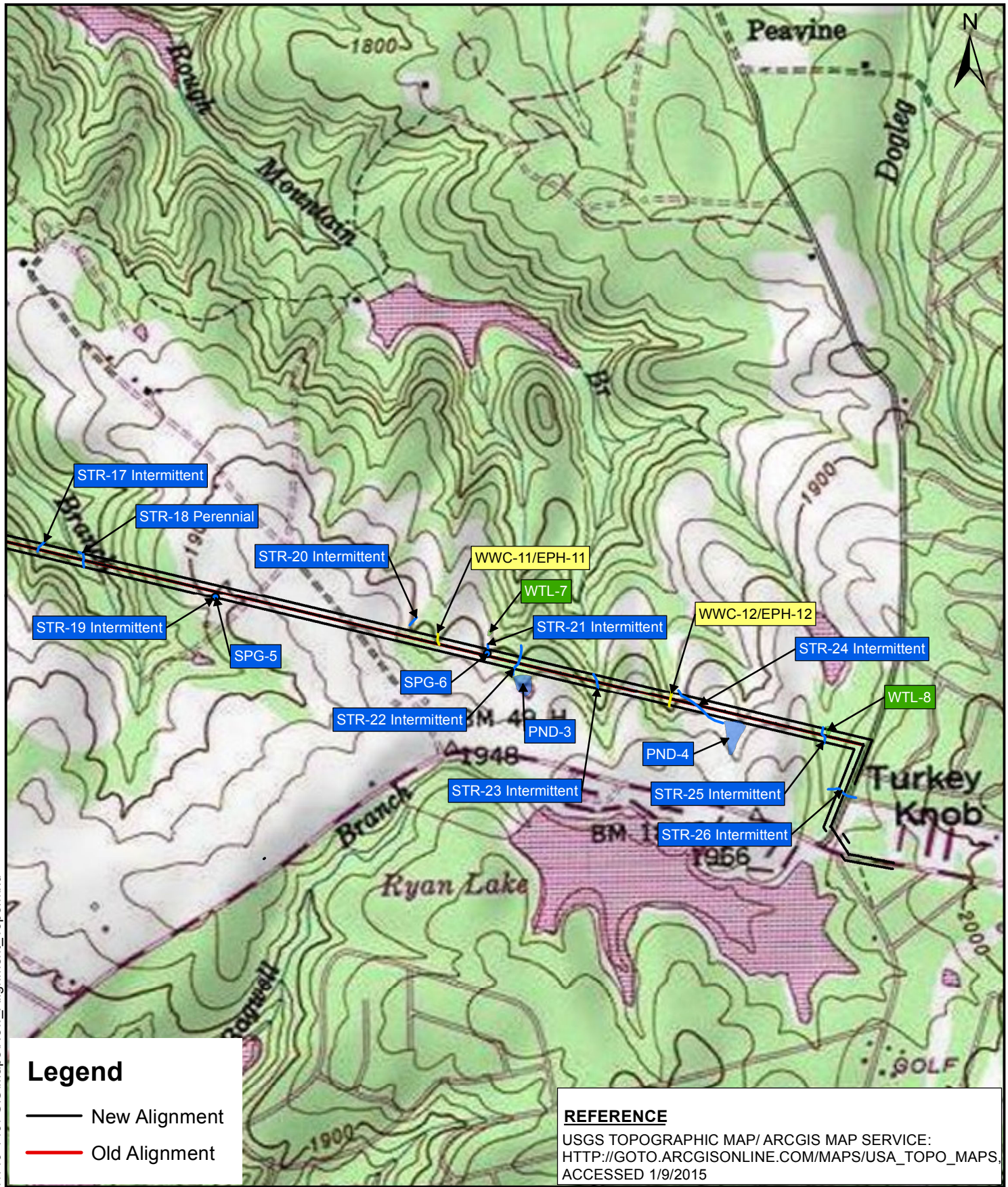

Legend

- New Alignment
- Old Alignment

REFERENCE

USGS TOPOGRAPHIC MAP/ ARCGIS MAP SERVICE: HTTP://GOTO.ARCGISONLINE.COM/MAPS/USA_TOPO_MAPS, ACCESSED 1/9/2015

0 250 500 1,000 Feet

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DWN. BY: CDH	SCALE: 1:12,000	DATE: 01-09-15	PROJECT NO.: 140-149	FIGURE: 1 SHEET 3 OF 3
APPRVD BY: RH * Hand signature on file				

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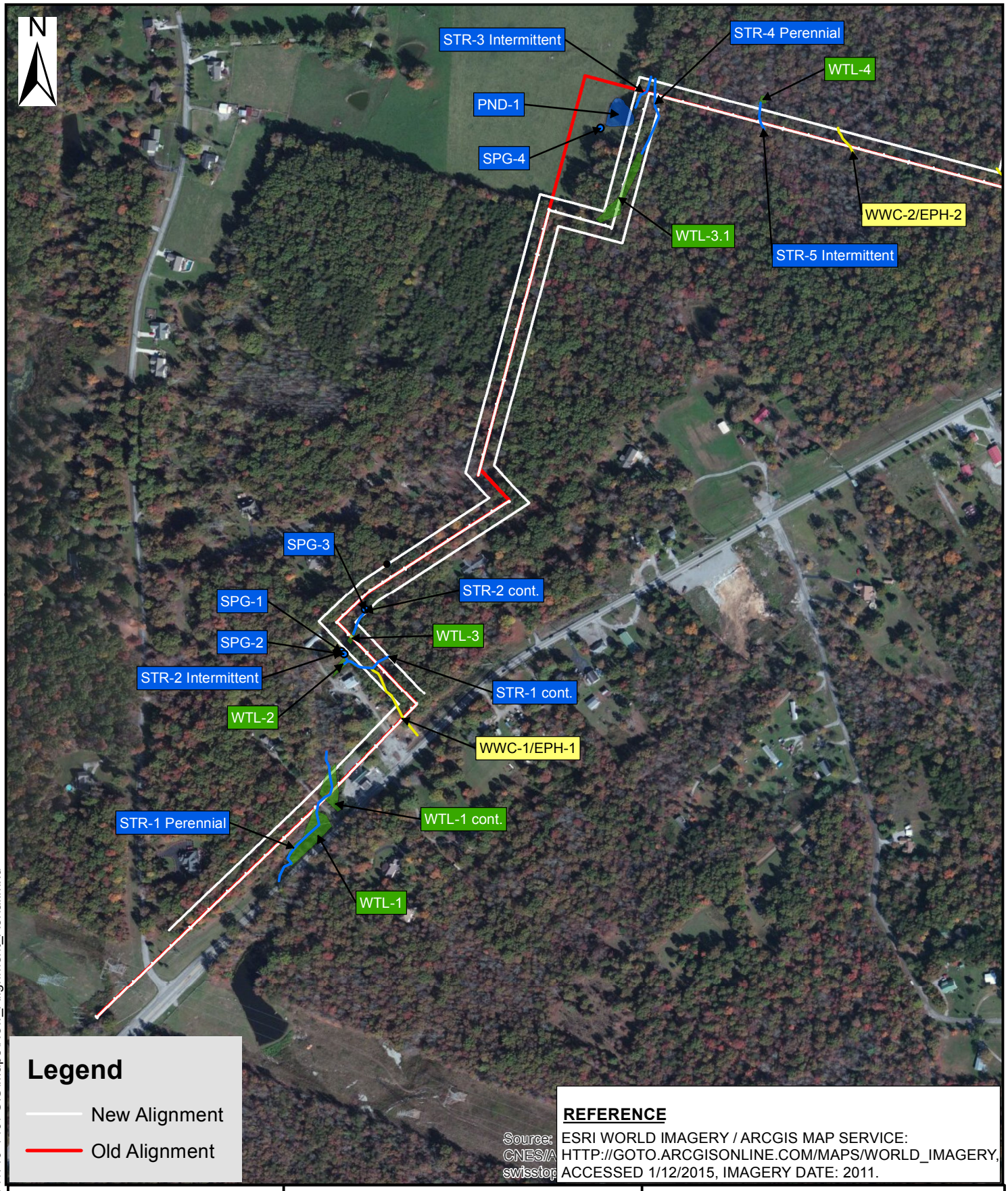

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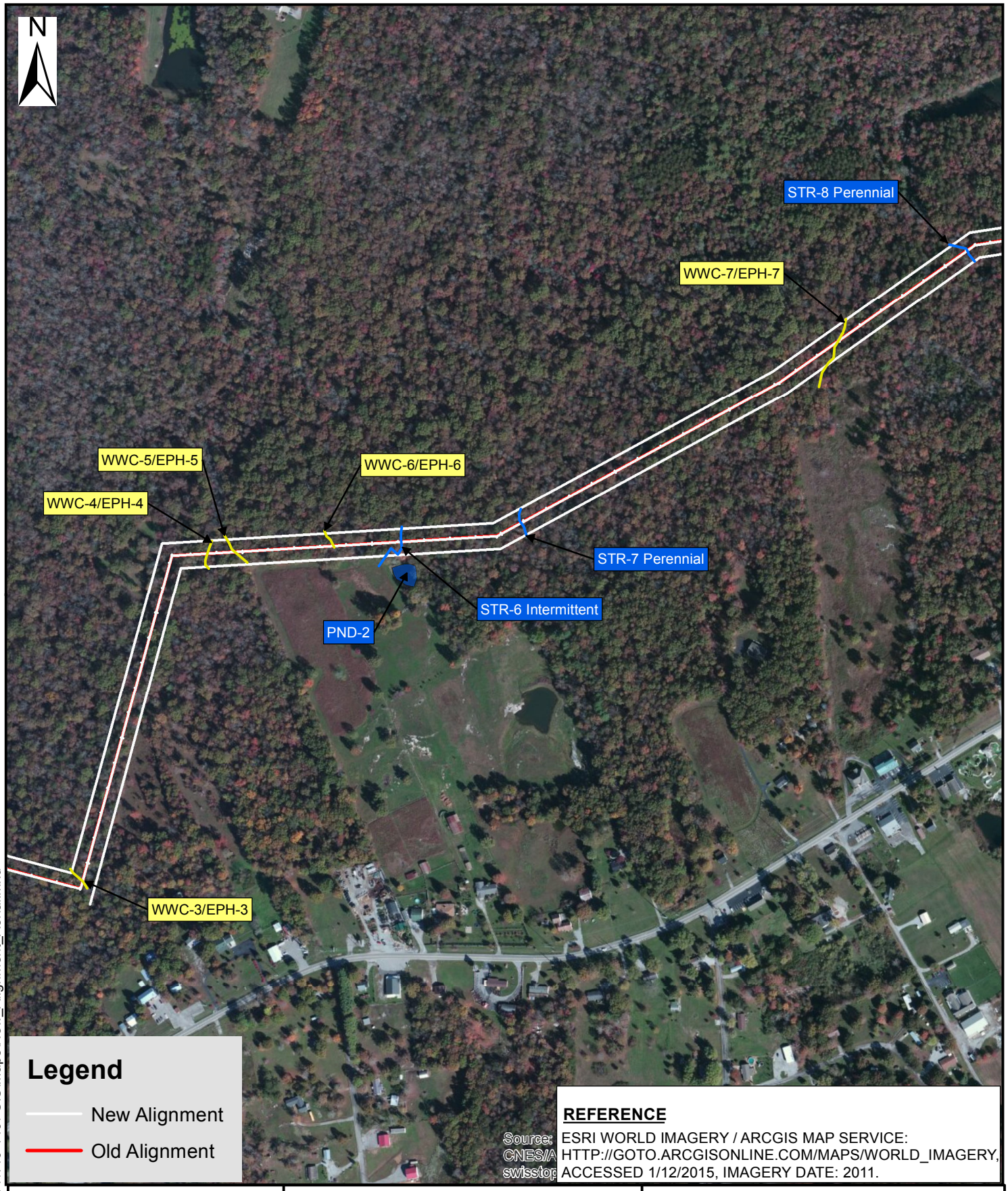
DWN. BY: CDH	SCALE: 1:6,000	DATE: 01-09-15	PROJECT NO.: 140-149	FIGURE: 2
APPRVD BY: RH * Hand signature on file				SHEET 1 OF 7



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APPRVD BY: RH * Hand signature on file				

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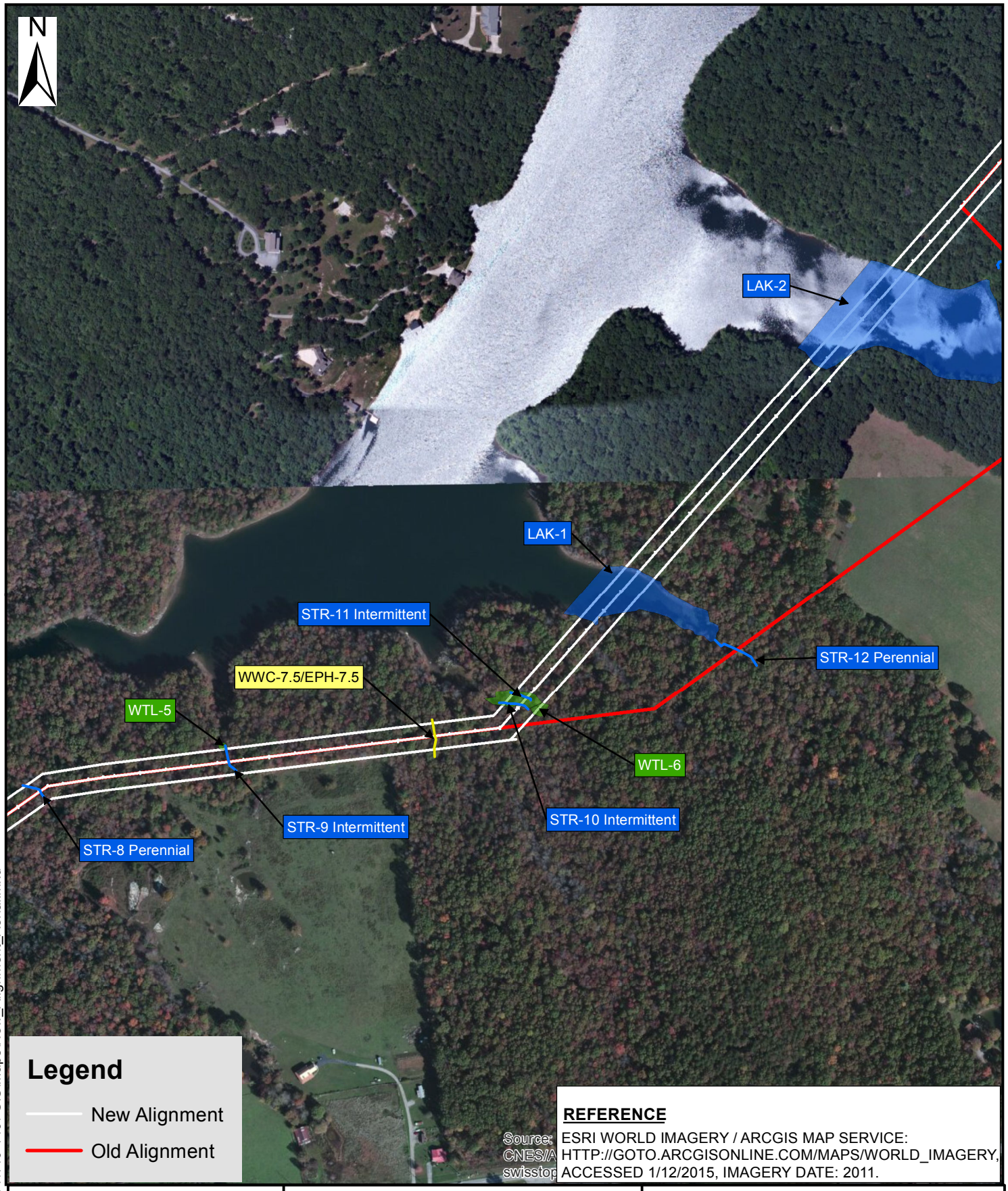

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SR-101 (Peavine Rd.)
Volunteer Electric CO-OP (VEC)
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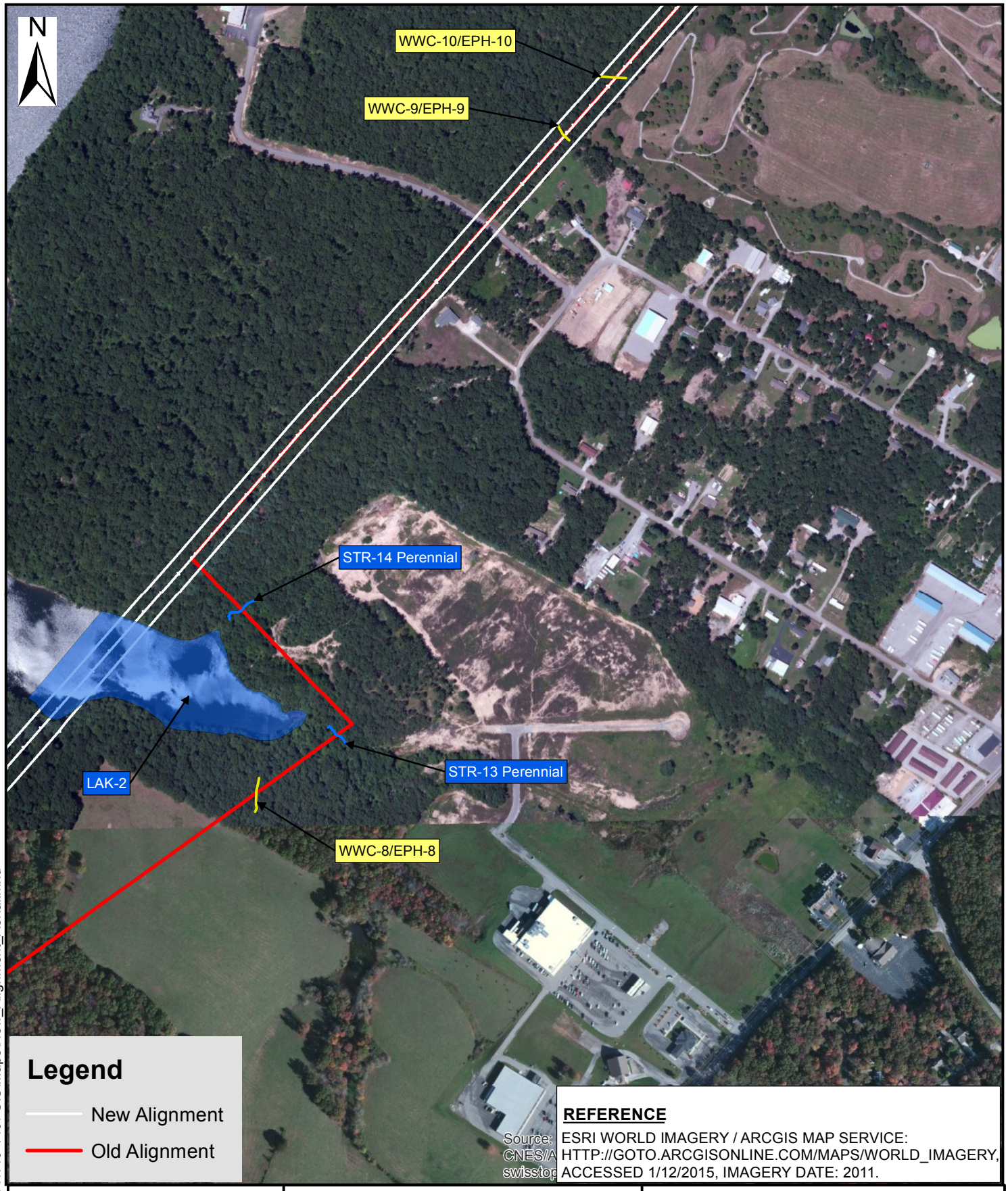
PROJECT NO.: 140-149

FIGURE: 2
SHEET 3 OF 7



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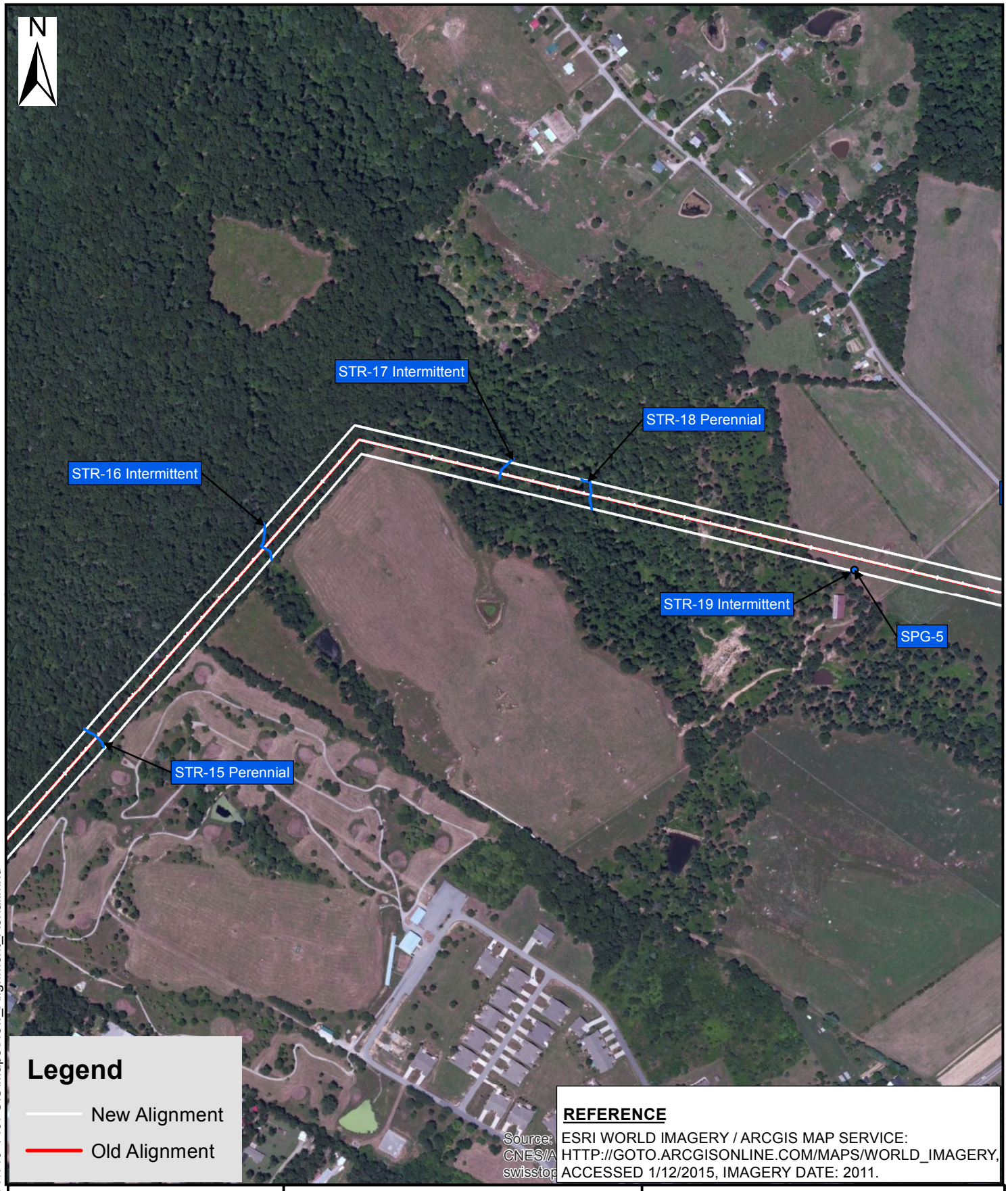
SR-101 (Peavine Rd.)
Volunteer Electric CO-OP (VEC)
Powerline Location; Cumberland County
P.E.: 18038-1230-04; PIN: 100268.03

PROJECT NO.: 140-149

FIGURE: 2
SHEET 4 OF 7



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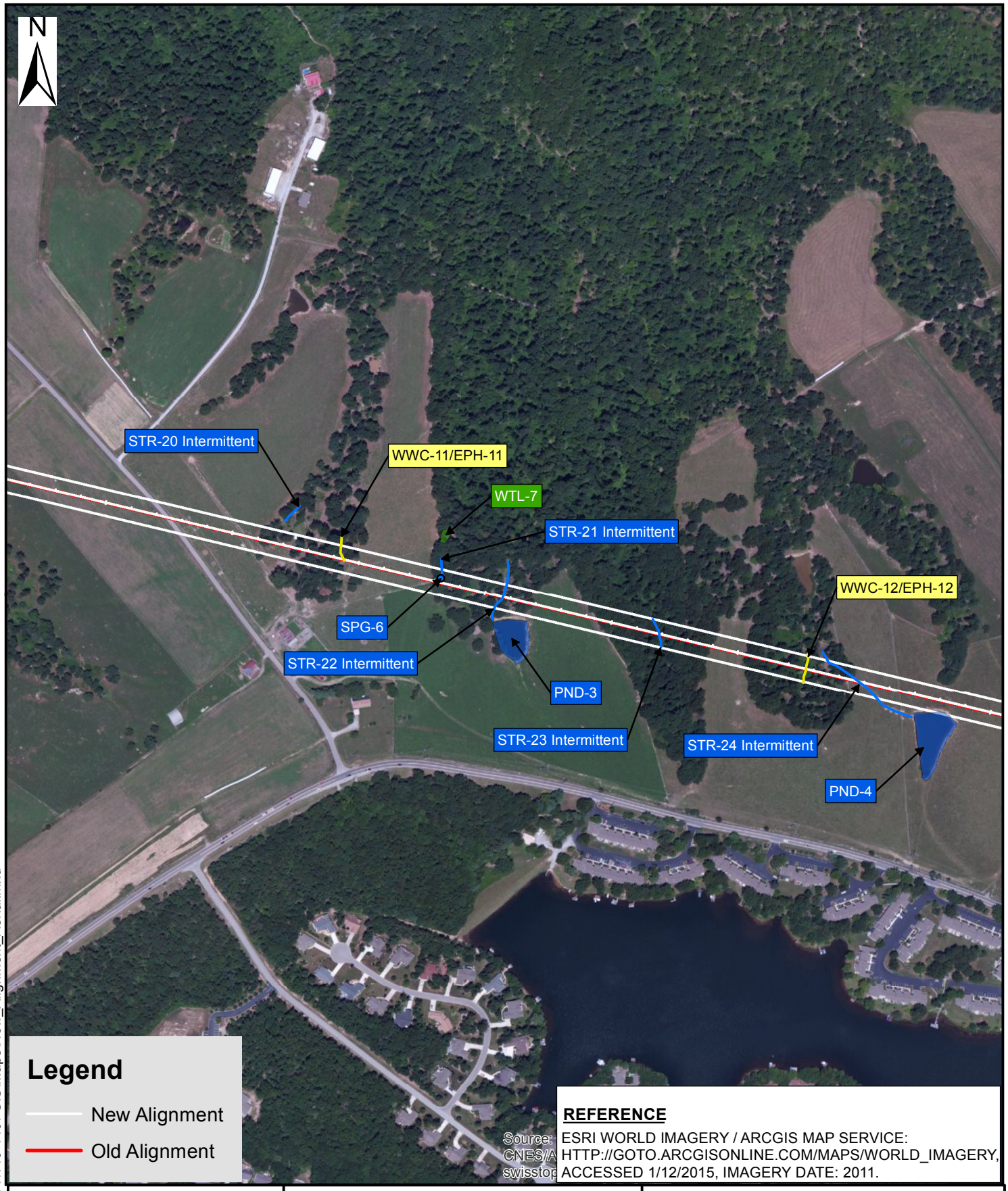
Environmental Boundaries Map (Aerial)
SR-101 (Peavine Rd.)
Volunteer Electric CO-OP (VEC)
Powerline Location; Cumberland County
P.E.: 18038-1230-04; PIN: 100268.03

PROJECT NO.: 140-149
FIGURE: 2
SHEET 5 OF 7



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Volunteer Electric CO-OP (VEC)
Powerline Location; Cumberland County
P.E.: 18038-1230-04; PIN: 100268.03

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APPRVD BY: RH * Hand signature on file				SHEET 6 OF 7

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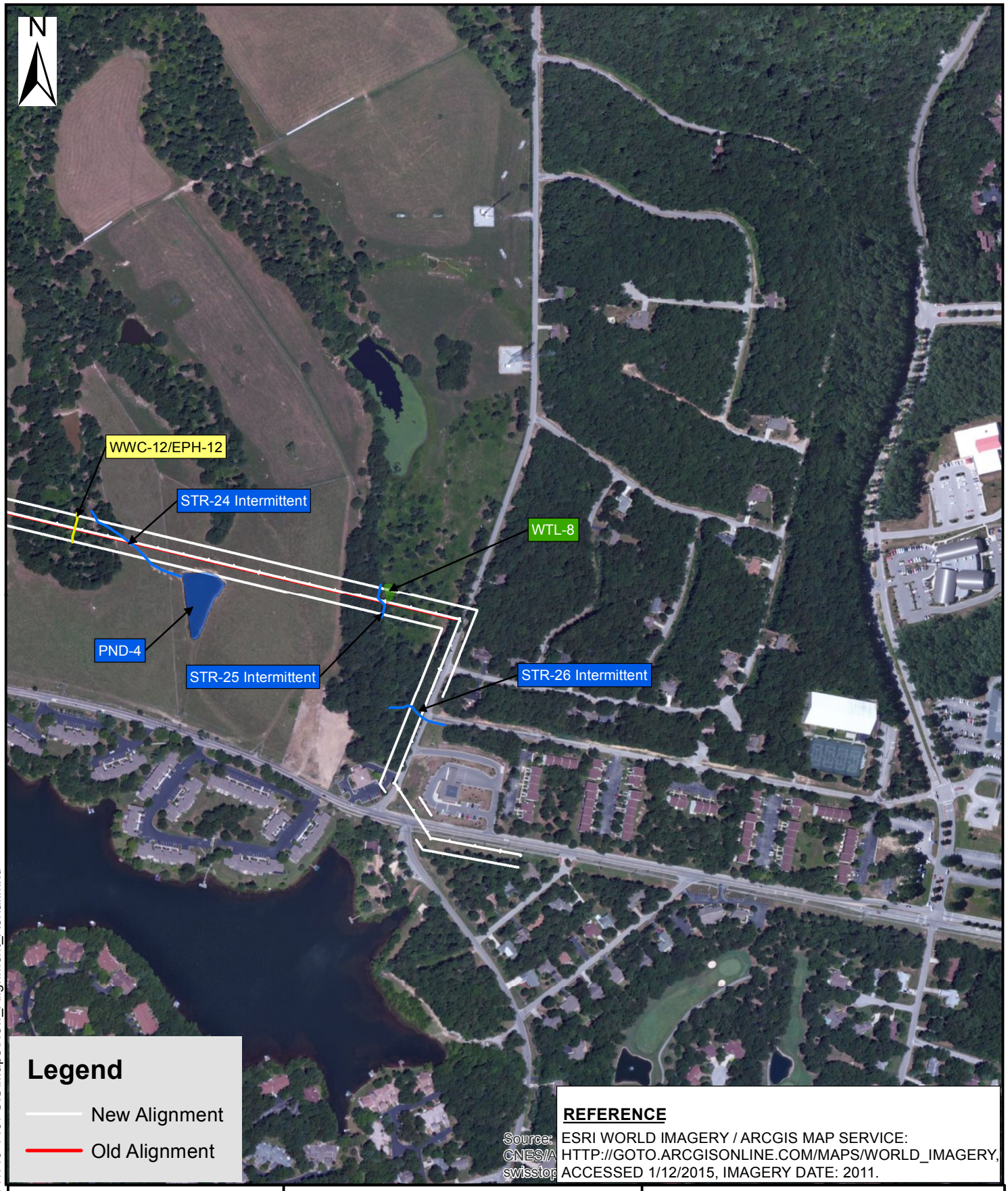

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DATE: 01-09-15

Environmental Boundaries Map (Aerial)
SR-101 (Peavine Rd.)
Volunteer Electric CO-OP (VEC)
Powerline Location; Cumberland County
P.E.: 18038-1230-04; PIN: 100268.03

PROJECT NO.: 140-149
FIGURE: 2
SHEET 7 OF 7

Ecology Field Data Sheet: **Water Resources**

Project: SR-101; Peavine Road, From Firetower Road to East of Westchester Drive/Catoosa Boulevard (Construction of 161KV Electric Line Relocation); Cumberland County; PIN: 100268.03; Project #: 18038-1230-04
Date of survey: January 27, 2014 **Biologist:** J. Garcia/C. Hertwig **Affiliation:** CEC, Inc.

1-Station: from plans	N/A
2-Map label and name	STR-1 Unnamed tributary to North Creek
3-Latitude/Longitude	N35.98540338, W84.95946512
4-Potential impact	Crossing/runoff
5-Feature description:	
what is it	Perennial stream
blue-line on topo? (y/n)	Y
defined channel (y/n)	Y
straight or meandering	Meandering
channel bottom width	3' – 4'
top of bank width	4' – 6'
bank height and slope ratio	1'; 1:1
avg. gradient of stream (%)	2%
substratum	Silt, sand
riffle/run/pool	10/60/30
width of buffer zone	LB: >100' RB: 10'
water flow	Yes
water depth	4"
water width	4'
general water quality	Good
OHWM indicators	Scouring, wrack lines
groundwater connection	Unknown
bank stability: LB, RB	Both: eroded
dominant species: LB, RB	Both: red maple, pin oak
overhead canopy (%)	40%
benthos	None seen
fish	None seen
algae or other aquatic life	None seen
habitat assessment score	114
photo number (s)	3 u/s, 4 d/s, 5 u/s, 6 d/s
rainfall information	Trace precipitation noted on 1/25/2014
6- HUC code & name (12-digit)	060102080202, Daddys Creek, Middle
7-Confirmed by:	Not required
8-Mitigation	No __X__ Yes_____ : (include on Form J)
9-ETW	No __X__ Yes_____
10-303 (d) List	No __X__ Yes_____: Habitat_____ Siltation_____
11-Assessed	No __X__ Yes_____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	STR-1 drains through WTL-1 and WTL-2 and crosses under a private driveway.

Ecology Field Data Sheet: **Water Resources**

Project: SR-101; Peavine Road, From Firetower Road to East of Westchester Drive/Catoosa Boulevard (Construction of 161KV Electric Line Relocation); Cumberland County; PIN: 100268.03; Project #: 18038-1230-04
Date of survey: January 27, 2014 **Biologist:** J. Garcia/C. Hertwig **Affiliation:** CEC, Inc.

1-Station: from plans	N/A
2-Map label and name	WWC-1/EPH-1
3-Latitude/Longitude	N35.98682704, W84.95816916
4-Potential impact	Crossing/runoff
5-Feature description:	
what is it	Wet weather conveyance/Ephemeral stream
blue-line on topo? (y/n)	N
defined channel (y/n)	Y
straight or meandering	Straight
channel bottom width	2' – 3'
top of bank width	4' – 6'
bank height and slope ratio	6"; 2:1
avg. gradient of stream (%)	2%
substratum	Silt, gravel
riffle/run/pool	N/A
width of buffer zone	LB: 0 RB: 0
water flow	No – pools only
water depth	2"
water width	3'
general water quality	Poor
OHWM indicators	None
groundwater connection	No
bank stability: LB, RB	Both: eroded
dominant species: LB, RB	LB: mulch RB: exposed silt/gravel
overhead canopy (%)	0
benthos	No
fish	No
algae or other aquatic life	No
habitat assessment score	N/A
photo number (s)	7 u/g, 8 d/g
rainfall information	Trace precipitation noted on 1/25/2014
6- HUC code & name (12-digit)	060102080202, Daddys Creek, Middle
7-Confirmed by:	Not required
8-Mitigation	No __X__ Yes_____ : (include on Form J)
9-ETW	No __X__ Yes_____
10-303 (d) List	No __X___ Yes_____: Habitat_____ Siltation_____
11-Assessed	No __X__ Yes_____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	This is a recently constructed ditch. Area on the left bank has been recently graded and left exposed. Hydrologic determination score 12.

Ecology Field Data Sheet: **Water Resources**

Project: SR-101; Peavine Road, From Firetower Road to East of Westchester Drive/Catoosa Boulevard (Construction of 161KV Electric Line Relocation); Cumberland County; PIN: 100268.03; Project #: 18038-1230-04
Date of survey: January 27, 2014 **Biologist:** J. Garcia/C. Hertwig **Affiliation:** CEC, Inc.

1-Station: from plans	N/A
2-Map label and name	STR-2 Unnamed tributary to North Creek
3-Latitude/Longitude	N35.9873839, W84.95884964
4-Potential impact	Crossing/runoff
5-Feature description:	
what is it	Intermittent stream
blue-line on topo? (y/n)	N
defined channel (y/n)	Y
straight or meandering	Meandering
channel bottom width	1' – 3'
top of bank width	2' – 6'
bank height and slope ratio	1' – 2'; 2:1 – 3:1
avg. gradient of stream (%)	2%
substratum	Silt, sand, vegetation
riffle/run/pool	5/80/15
width of buffer zone	LB: >100' RB: 0 - >100'
water flow	Yes
water depth	2"
water width	1' – 3'
general water quality	Good
OHWM indicators	Bent vegetation
groundwater connection	Yes – SPG-1, SPG-2, SPG-3
bank stability: LB, RB	Both: stable
dominant species: LB, RB	Both: Carex sedges, soft rush, bluestem, white oak, red oak, pin oak, red maple
overhead canopy (%)	0 – 95%
benthos	None seen
fish	None seen
algae or other aquatic life	None seen
habitat assessment score	107
photo number (s)	12 d/s, 17 d/s
rainfall information	Trace precipitation noted on 1/25/2014
6- HUC code & name (12-digit)	060102080202, Daddys Creek, Middle
7-Confirmed by:	Not required
8-Mitigation	No __X__ Yes_____ : (include on Form J)
9-ETW	No __X__ Yes_____
10-303 (d) List	No __X__ Yes_____: Habitat_____ Siltation_____
11-Assessed	No __X__ Yes_____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	SPG-3 is at the head of STR-2. SPR-1 and SPG-2 are located near the tree line in STR-2. This stream flows into WTL-2 and then into STR-1.

Ecology Field Data Sheet: **Water Resources**

Project: SR-101; Peavine Road, From Firetower Road to East of Westchester Drive/Catoosa Boulevard (Construction of 161KV Electric Line Relocation); Cumberland County; PIN: 100268.03; Project #: 18038-1230-04
Date of survey: January 27, 2014 **Biologist:** J. Garcia/C. Hertwig **Affiliation:** CEC, Inc.

1-Station: from plans	N/A
2-Map label and name	SPG-1
3-Latitude/Longitude	N35.98742311, W84.958888
4-Potential impact	Runoff
5-Feature description:	
what is it	Spring
blue-line on topo? (y/n)	N
defined channel (y/n)	N
straight or meandering	N/A
channel bottom width	N/A
top of bank width	N/A
bank height and slope ratio	N/A
avg. gradient of stream (%)	N/A
substratum	N/A
riffle/run/pool	N/A
width of buffer zone	LB: >100' RB: 0
water flow	Yes
water depth	2"
water width	1'
general water quality	Good
OHWM indicators	Bent vegetation
groundwater connection	Yes
bank stability: LB, RB	Stable
dominant species: LB, RB	Soft rush, Carex sedges, fescue
overhead canopy (%)	0
benthos	None seen
fish	No
algae or other aquatic life	No
habitat assessment score	N/A
photo number (s)	11
rainfall information	Trace precipitation noted on 1/25/2014
6- HUC code & name (12-digit)	060102080202, Daddys Creek, Middle
7-Confirmed by:	Not required
8-Mitigation	No __X__ Yes_____ : (include on Form J)
9-ETW	No __X__ Yes_____
10-303 (d) List	No __X__ Yes_____: Habitat_____ Siltation_____
11-Assessed	No __X__ Yes_____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	This spring provides hydrology for STR-2.

Ecology Field Data Sheet: **Water Resources**

Project: SR-101; Peavine Road, From Firetower Road to East of Westchester Drive/Catoosa Boulevard (Construction of 161KV Electric Line Relocation); Cumberland County; PIN: 100268.03; Project #: 18038-1230-04
Date of survey: January 27, 2014 **Biologist:** J. Garcia/C. Hertwig **Affiliation:** CEC, Inc.

1-Station: from plans	N/A
2-Map label and name	SPG-2
3-Latitude/Longitude	N35.98739561, W84.95885118
4-Potential impact	Runoff
5-Feature description:	
what is it	Spring
blue-line on topo? (y/n)	N
defined channel (y/n)	N
straight or meandering	N/A
channel bottom width	N/A
top of bank width	N/A
bank height and slope ratio	N/A
avg. gradient of stream (%)	N/A
substratum	N/A
riffle/run/pool	N/A
width of buffer zone	LB: >100' RB: 0
water flow	Yes
water depth	2"
water width	1'
general water quality	Good
OHWM indicators	Bent vegetation
groundwater connection	Yes
bank stability: LB, RB	Stable
dominant species: LB, RB	Fescue, Carex sedges
overhead canopy (%)	0
benthos	None seen
fish	No
algae or other aquatic life	No
habitat assessment score	N/A
photo number (s)	13
rainfall information	Trace precipitation noted on 1/25/2014
6- HUC code & name (12-digit)	060102080202, Daddys Creek, Middle
7-Confirmed by:	Not required
8-Mitigation	No __X__ Yes_____ : (include on Form J)
9-ETW	No __X__ Yes_____
10-303 (d) List	No __X__ Yes_____: Habitat_____ Siltation_____
11-Assessed	No __X__ Yes_____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	This spring provides hydrology for STR-2.

Ecology Field Data Sheet: **Water Resources**

Project: SR-101; Peavine Road, From Firetower Road to East of Westchester Drive/Catoosa Boulevard (Construction of 161KV Electric Line Relocation); Cumberland County; PIN: 100268.03; Project #: 18038-1230-04
Date of survey: January 27, 2014 **Biologist:** J. Garcia/C. Hertwig **Affiliation:** CEC, Inc.

1-Station: from plans	N/A
2-Map label and name	SPG-3
3-Latitude/Longitude	N35.98786238, W84.95857077
4-Potential impact	Runoff
5-Feature description:	
what is it	Spring
blue-line on topo? (y/n)	N
defined channel (y/n)	N
straight or meandering	N/A
channel bottom width	N/A
top of bank width	N/A
bank height and slope ratio	N/A
avg. gradient of stream (%)	N/A
substratum	N/A
riffle/run/pool	N/A
width of buffer zone	LB: >100' RB: >100'
water flow	Yes
water depth	2"
water width	1'
general water quality	Good
OHWM indicators	None
groundwater connection	Yes
bank stability: LB, RB	Stable
dominant species: LB, RB	Pin oak, northern red oak, white oak, red maple
overhead canopy (%)	90%
benthos	None seen
fish	No
algae or other aquatic life	No
habitat assessment score	N/A
photo number (s)	16
rainfall information	Trace precipitation noted on 1/25/2014
6- HUC code & name (12-digit)	060102080202, Daddys Creek, Middle
7-Confirmed by:	Not required
8-Mitigation	No __X__ Yes_____ : (include on Form J)
9-ETW	No __X__ Yes_____
10-303 (d) List	No __X__ Yes_____: Habitat_____ Siltation_____
11-Assessed	No __X__ Yes_____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	This spring provides hydrology for STR-2.

Ecology Field Data Sheet: **Water Resources**

Project: SR-101; Peavine Road, From Firetower Road to East of Westchester Drive/Catoosa Boulevard (Construction of 161KV Electric Line Relocation); Cumberland County; PIN: 100268.03; Project #: 18038-1230-04
Date of survey: January 27, 2014 **Biologist:** J. Garcia/C. Hertwig **Affiliation:** CEC, Inc.

1-Station: from plans	N/A
2-Map label and name	SPG-4
3-Latitude/Longitude	N35.99293536, W84.95543694
4-Potential impact	Runoff
5-Feature description:	
what is it	Spring
blue-line on topo? (y/n)	N
defined channel (y/n)	N
straight or meandering	N/A
channel bottom width	N/A
top of bank width	N/A
bank height and slope ratio	N/A
avg. gradient of stream (%)	N/A
substratum	N/A
riffle/run/pool	N/A
width of buffer zone	LB: 0 RB: 0
water flow	Yes
water depth	1”
water width	1’
general water quality	Good
OHWM indicators	Bent vegetation
groundwater connection	Yes
bank stability: LB, RB	Eroded
dominant species: LB, RB	Fescue, Carex sedges
overhead canopy (%)	0
benthos	No
fish	No
algae or other aquatic life	No
habitat assessment score	N/A
photo number (s)	18
rainfall information	Trace precipitation noted on 1/25/2014
6- HUC code & name (12-digit)	060102080104, Obed River
7-Confirmed by:	Not required
8-Mitigation	No __X__ Yes_____ : (include on Form J)
9-ETW	No __X__ Yes_____
10-303 (d) List	No __X__ Yes_____: Habitat_____ Siltation_____
11-Assessed	No __X__ Yes_____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	This spring provides hydrology for PND-1 and STR-3.

Ecology Field Data Sheet: **Water Resources**

Project: SR-101; Peavine Road, From Firetower Road to East of Westchester Drive/Catoosa Boulevard (Construction of 161KV Electric Line Relocation); Cumberland County; PIN: 100268.03; Project #: 18038-1230-04
Date of survey: January 27, 2014 **Biologist:** J. Garcia/C. Hertwig **Affiliation:** CEC, Inc.

1-Station: from plans	N/A
2-Map label and name	PND-1
3-Latitude/Longitude	N35.993125, W84.955148
4-Potential impact	Fill/runoff
5-Feature description:	
what is it	Farm pond
blue-line on topo? (y/n)	N
defined channel (y/n)	N
straight or meandering	N/A
channel bottom width	N/A
top of bank width	N/A
bank height and slope ratio	N/A
avg. gradient of stream (%)	N/A
substratum	N/A
riffle/run/pool	N/A
width of buffer zone	LB: 0 RB: 0
water flow	N/A
water depth	Unknown
water width	100' x 80'
general water quality	Poor
OHWM indicators	None
groundwater connection	Yes – SPG-4
bank stability: LB, RB	Unstable
dominant species: LB, RB	Fescue
overhead canopy (%)	0
benthos	Not sampled
fish	None seen
algae or other aquatic life	None seen
habitat assessment score	N/A
photo number (s)	19
rainfall information	Trace precipitation noted on 1/25/2014
6- HUC code & name (12-digit)	060102080104, Obed River
7-Confirmed by:	Not required
8-Mitigation	No __X__ Yes_____ : (include on Form J)
9-ETW	No __X__ Yes_____
10-303 (d) List	No __X__ Yes_____: Habitat_____ Siltation_____
11-Assessed	No __X__ Yes_____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	This pond is directly fed by SPG-4. STR-3 begins at the outlet of PND-1. The banks of PND-1 have been recently re-worked.

Ecology Field Data Sheet: **Water Resources**

Project: SR-101; Peavine Road, From Firetower Road to East of Westchester Drive/Catoosa Boulevard (Construction of 161KV Electric Line Relocation); Cumberland County; PIN: 100268.03; Project #: 18038-1230-04
Date of survey: January 27, 2014 **Biologist:** J. Garcia/C. Hertwig **Affiliation:** CEC, Inc.

1-Station: from plans	N/A
2-Map label and name	STR-3 Unnamed tributary to Otter Creek
3-Latitude/Longitude	N35.99330319, W84.95486533
4-Potential impact	Crossing/runoff
5-Feature description:	
what is it	Intermittent stream
blue-line on topo? (y/n)	N
defined channel (y/n)	Y
straight or meandering	Meandering
channel bottom width	1' – 3'
top of bank width	3' – 6'
bank height and slope ratio	6"; 3:1
avg. gradient of stream (%)	3%
substratum	Sand, silt, vegetation
riffle/run/pool	0/90/10
width of buffer zone	LB: 20' RB: > 100'
water flow	Yes - slight
water depth	1"
water width	2'
general water quality	Poor
OHWM indicators	Wrack lines, bent vegetation, deposition
groundwater connection	Yes – SPG-4
bank stability: LB, RB	Both: eroded
dominant species: LB, RB	Both: red maple, pin oak
overhead canopy (%)	90%
benthos	None seen
fish	None seen
algae or other aquatic life	None seen
habitat assessment score	N/A
photo number (s)	20 u/s, 21 d/s
rainfall information	Trace precipitation noted on 1/25/2014
6- HUC code & name (12-digit)	060102080104, Obed River
7-Confirmed by:	Not required
8-Mitigation	No __X__ Yes_____ : (include on Form J)
9-ETW	No __X__ Yes_____
10-303 (d) List	No __X__ Yes_____: Habitat_____ Siltation_____
11-Assessed	No __X__ Yes_____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	This stream has some slight flow directly out of PND-1 but downstream water in the channel was completely frozen. There is a significant amount of sediment deposition throughout this channel. The source of deposition could be from recent PND-1 construction. Unable to do a habitat assessment due to lack of flow.

Ecology Field Data Sheet: **Water Resources**

Project: SR-101; Peavine Road, From Firetower Road to East of Westchester Drive/Catoosa Boulevard (Construction of 161KV Electric Line Relocation); Cumberland County; PIN: 100268.03; Project #: 18038-1230-04
Date of survey: January 27, 2014 **Biologist:** J. Garcia/C. Hertwig **Affiliation:** CEC, Inc.

1-Station: from plans	N/A
2-Map label and name	STR-4 Unnamed tributary to Otter Creek
3-Latitude/Longitude	N35.99327573, W84.95472734
4-Potential impact	Crossing/runoff
5-Feature description:	
what is it	Perennial stream
blue-line on topo? (y/n)	N
defined channel (y/n)	Y
straight or meandering	Meandering
channel bottom width	2' – 4'
top of bank width	3' – 6'
bank height and slope ratio	6"; 2:1
avg. gradient of stream (%)	3%
substratum	Silt, vegetation, gravel
riffle/run/pool	5/55/40
width of buffer zone	LB: 50' RB: >100'
water flow	Yes
water depth	3"
water width	3'
general water quality	Good
OHWM indicators	Wrack lines
groundwater connection	Unknown
bank stability: LB, RB	Both: stable
dominant species: LB, RB	Both: red maple, white oak, pin oak, red oak, green briar
overhead canopy (%)	95%
benthos	None seen
fish	None seen
algae or other aquatic life	None seen
habitat assessment score	121
photo number (s)	22 u/s, 23 d/s
rainfall information	Trace precipitation noted on 1/25/2014
6- HUC code & name (12-digit)	060102080104, Obed River
7-Confirmed by:	Not required
8-Mitigation	No __X__ Yes_____ : (include on Form J)
9-ETW	No __X__ Yes_____
10-303 (d) List	No __X__ Yes_____: Habitat_____ Siltation_____
11-Assessed	No __X__ Yes_____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	This stream flows from south to north running parallel with STR-3.

Ecology Field Data Sheet: **Water Resources**

Project: SR-101; Peavine Road, From Firetower Road to East of Westchester Drive/Catoosa Boulevard (Construction of 161KV Electric Line Relocation); Cumberland County; PIN: 100268.03; Project #: 18038-1230-04
Date of survey: January 27, 2014 **Biologist:** J. Garcia/C. Hertwig **Affiliation:** CEC, Inc.

1-Station: from plans	N/A
2-Map label and name	STR-5 Unnamed tributary to Otter Creek
3-Latitude/Longitude	N35.99301962, W84.95337065
4-Potential impact	Crossing/runoff
5-Feature description:	
what is it	Intermittent stream
blue-line on topo? (y/n)	N
defined channel (y/n)	Y
straight or meandering	Meandering
channel bottom width	2' – 3'
top of bank width	3' – 4'
bank height and slope ratio	6"; 2:1
avg. gradient of stream (%)	3%
substratum	Silt, vegetation, some gravel
riffle/run/pool	0/60/40
width of buffer zone	LB: >100' RB: >100'
water flow	Yes
water depth	2"
water width	2' – 3'
general water quality	Good
OHWM indicators	Wrack lines
groundwater connection	Unknown
bank stability: LB, RB	Both: stable
dominant species: LB, RB	Both: red maple, white oak, pin oak, red oak, post oak
overhead canopy (%)	95%
benthos	None seen
fish	None seen
algae or other aquatic life	None seen
habitat assessment score	123
photo number (s)	24 u/s, 25 d/s
rainfall information	Trace precipitation noted on 1/25/2014
6- HUC code & name (12-digit)	060102080104, Obed River
7-Confirmed by:	Not required
8-Mitigation	No __X__ Yes_____ : (include on Form J)
9-ETW	No __X__ Yes_____
10-303 (d) List	No __X__ Yes_____: Habitat_____ Siltation_____
11-Assessed	No __X__ Yes_____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	This channel is slightly braided in some areas and provides hydrology for WTL-4.

Ecology Field Data Sheet: **Water Resources**

Project: SR-101; Peavine Road, From Firetower Road to East of Westchester Drive/Catoosa Boulevard (Construction of 161KV Electric Line Relocation); Cumberland County; PIN: 100268.03; Project #: 18038-1230-04
Date of survey: January 27, 2014 **Biologist:** J. Garcia/C. Hertwig **Affiliation:** CEC, Inc.

1-Station: from plans	N/A
2-Map label and name	WWC-2/EPH-2
3-Latitude/Longitude	N35.99272692, W84.95221111
4-Potential impact	Crossing/runoff
5-Feature description:	
what is it	Wet weather conveyance/Ephemeral stream
blue-line on topo? (y/n)	N
defined channel (y/n)	Y – poor
straight or meandering	Meandering
channel bottom width	1’
top of bank width	2’
bank height and slope ratio	6”; 2:1
avg. gradient of stream (%)	3%
substratum	Gravel, silt
riffle/run/pool	N/A
width of buffer zone	LB: >100’ RB: >100’
water flow	No
water depth	N/A
water width	N/A
general water quality	N/A
OHWM indicators	None
groundwater connection	No
bank stability: LB, RB	Both: stable
dominant species: LB, RB	Both: red maple, pine, white oak
overhead canopy (%)	100%
benthos	No
fish	No
algae or other aquatic life	No
habitat assessment score	N/A
photo number (s)	28 u/g, 29 d/g
rainfall information	Trace precipitation noted on 1/25/2014
6- HUC code & name (12-digit)	060102080104, Obed River
7-Confirmed by:	Not required
8-Mitigation	No __X__ Yes_____ : (include on Form J)
9-ETW	No __X__ Yes_____
10-303 (d) List	No __X__ Yes_____: Habitat_____ Siltation_____
11-Assessed	No __X__ Yes_____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	This conveyance drains to STR-5 off ROW. Hydrologic determination score 10.5

Ecology Field Data Sheet: **Water Resources**

Project: SR-101; Peavine Road, From Firetower Road to East of Westchester Drive/Catoosa Boulevard (Construction of 161KV Electric Line Relocation); Cumberland County; PIN: 100268.03; Project #: 18038-1230-04
Date of survey: January 27, 2014 **Biologist:** J. Garcia/C. Hertwig **Affiliation:** CEC, Inc.

1-Station: from plans	N/A
2-Map label and name	WWC-3/EPH-3
3-Latitude/Longitude	N35.99233459, W84.95013003
4-Potential impact	Crossing/runoff
5-Feature description:	
what is it	Wet weather conveyance/Ephemeral stream
blue-line on topo? (y/n)	N
defined channel (y/n)	Y – poor
straight or meandering	Meandering
channel bottom width	1’
top of bank width	2’
bank height and slope ratio	6”; 2:1
avg. gradient of stream (%)	3%
substratum	Silt, leaf litter
riffle/run/pool	N/A
width of buffer zone	LB: >100’ RB: >100’
water flow	No
water depth	N/A
water width	N/A
general water quality	N/A
OHWM indicators	None
groundwater connection	No
bank stability: LB, RB	Both: stable
dominant species: LB, RB	Both: red oak, white oak, pin oak, red maple
overhead canopy (%)	90%
benthos	No
fish	No
algae or other aquatic life	No
habitat assessment score	N/A
photo number (s)	30 u/g, 31 d/g
rainfall information	Trace precipitation noted on 1/25/2014
6- HUC code & name (12-digit)	060102080104, Obed River
7-Confirmed by:	Not required
8-Mitigation	No __X__ Yes_____ : (include on Form J)
9-ETW	No __X__ Yes_____
10-303 (d) List	No __X__ Yes_____: Habitat_____ Siltation_____
11-Assessed	No __X__ Yes_____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	Hydrologic determination score 11.

Ecology Field Data Sheet: **Water Resources**

Project: SR-101; Peavine Road, From Firetower Road to East of Westchester Drive/Catoosa Boulevard (Construction of 161KV Electric Line Relocation); Cumberland County; PIN: 100268.03; Project #: 18038-1230-04
Date of survey: January 27, 2014 **Biologist:** J. Garcia/C. Hertwig **Affiliation:** CEC, Inc.

1-Station: from plans	N/A
2-Map label and name	WWC-4/EPH-4
3-Latitude/Longitude	N35.99576875, W84.94846571
4-Potential impact	Crossing/runoff
5-Feature description:	
what is it	Wet weather conveyance/Ephemeral stream
blue-line on topo? (y/n)	N
defined channel (y/n)	Y
straight or meandering	Meandering
channel bottom width	2’
top of bank width	3’ – 4’
bank height and slope ratio	6”; 2:1
avg. gradient of stream (%)	3%
substratum	Silt, sand, leaf litter, vegetation
riffle/run/pool	N/A
width of buffer zone	LB: >100’ RB: >100’
water flow	No
water depth	N/A
water width	N/A
general water quality	N/A
OHWM indicators	None
groundwater connection	No
bank stability: LB, RB	Both: eroded
dominant species: LB, RB	Both: holly, red maple, red oak, white oak, American elm, pin oak
overhead canopy (%)	95%
benthos	No
fish	No
algae or other aquatic life	No
habitat assessment score	N/A
photo number (s)	32 u/g, 33 d/g
rainfall information	Trace precipitation noted on 1/25/2014
6- HUC code & name (12-digit)	060102080104, Obed River
7-Confirmed by:	Not required
8-Mitigation	No __X__ Yes_____ : (include on Form J)
9-ETW	No __X__ Yes_____
10-303 (d) List	No __X__ Yes_____: Habitat_____ Siltation_____
11-Assessed	No __X__ Yes_____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	Hydrologic determination score 11.5

Ecology Field Data Sheet: **Water Resources**

Project: SR-101; Peavine Road, From Firetower Road to East of Westchester Drive/Catoosa Boulevard (Construction of 161KV Electric Line Relocation); Cumberland County; PIN: 100268.03; Project #: 18038-1230-04
Date of survey: January 27, 2014 **Biologist:** J. Garcia/C. Hertwig **Affiliation:** CEC, Inc.

1-Station: from plans	N/A
2-Map label and name	WWC-5/EPH-5
3-Latitude/Longitude	N35.99581242, W84.94811673
4-Potential impact	Crossing/runoff
5-Feature description:	
what is it	Wet weather conveyance/Ephemeral stream
blue-line on topo? (y/n)	N
defined channel (y/n)	Y – poor
straight or meandering	Meandering
channel bottom width	1' – 2'
top of bank width	2' – 4'
bank height and slope ratio	6"; 2:1
avg. gradient of stream (%)	4%
substratum	Silt, sand, leaf litter, gravel
riffle/run/pool	N/A
width of buffer zone	LB: >100' RB: >100'
water flow	No
water depth	N/A
water width	N/A
general water quality	N/A
OHWM indicators	None
groundwater connection	No
bank stability: LB, RB	Both: eroded
dominant species: LB, RB	Both: red maple, white oak
overhead canopy (%)	90%
benthos	No
fish	No
algae or other aquatic life	No
habitat assessment score	N/A
photo number (s)	34 u/g, 35 d/g
rainfall information	Trace precipitation noted on 1/25/2014
6- HUC code & name (12-digit)	060102080104, Obed River
7-Confirmed by:	Not required
8-Mitigation	No __X__ Yes_____ : (include on Form J)
9-ETW	No __X__ Yes_____
10-303 (d) List	No __X__ Yes_____: Habitat_____ Siltation_____
11-Assessed	No __X__ Yes_____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	Hydrologic determination score 12.

Ecology Field Data Sheet: **Water Resources**

Project: SR-101; Peavine Road, From Firetower Road to East of Westchester Drive/Catoosa Boulevard (Construction of 161KV Electric Line Relocation); Cumberland County; PIN: 100268.03; Project #: 18038-1230-04
Date of survey: January 27, 2014 **Biologist:** J. Garcia/C. Hertwig **Affiliation:** CEC, Inc.

1-Station: from plans	N/A
2-Map label and name	WWC-6/EPH-6
3-Latitude/Longitude	N35.99592802, W84.94686864
4-Potential impact	Crossing/runoff
5-Feature description:	
what is it	Wet weather conveyance/Ephemeral stream
blue-line on topo? (y/n)	N
defined channel (y/n)	Y
straight or meandering	Meandering
channel bottom width	1' – 2'
top of bank width	3' – 4'
bank height and slope ratio	6"; 2:1
avg. gradient of stream (%)	4%
substratum	Silt, sand, leaf litter
riffle/run/pool	N/A
width of buffer zone	LB: >100; RB: >100'
water flow	No
water depth	N/A
water width	N/A
general water quality	N/A
OHWM indicators	None
groundwater connection	No
bank stability: LB, RB	Both: eroded
dominant species: LB, RB	Both: red maple, white oak, red oak
overhead canopy (%)	95%
benthos	No
fish	No
algae or other aquatic life	No
habitat assessment score	N/A
photo number (s)	36 u/g, 37 d/g
rainfall information	Trace precipitation noted on 1/25/2014
6- HUC code & name (12-digit)	060102080104, Obed River
7-Confirmed by:	Not required
8-Mitigation	No __X__ Yes_____ : (include on Form J)
9-ETW	No __X__ Yes_____
10-303 (d) List	No __X__ Yes_____: Habitat_____ Siltation_____
11-Assessed	No __X__ Yes_____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	Hydrologic determination score 12.

Ecology Field Data Sheet: **Water Resources**

Project: SR-101; Peavine Road, From Firetower Road to East of Westchester Drive/Catoosa Boulevard (Construction of 161KV Electric Line Relocation); Cumberland County; PIN: 100268.03; Project #: 18038-1230-04
Date of survey: January 27, 2014 **Biologist:** J. Garcia/C. Hertwig **Affiliation:** CEC, Inc.

1-Station: from plans	N/A
2-Map label and name	STR-6 Unnamed tributary to Otter Creek
3-Latitude/Longitude	N35.99576128, W84.94598376
4-Potential impact	Crossing/runoff
5-Feature description:	
what is it	Intermittent stream
blue-line on topo? (y/n)	N
defined channel (y/n)	Y
straight or meandering	Meandering
channel bottom width	2' – 3'
top of bank width	3' – 5'
bank height and slope ratio	6"; 2:1
avg. gradient of stream (%)	4%
substratum	Silt, gravel, cobble
riffle/run/pool	0/80/20
width of buffer zone	LB: >100' RB: >100'
water flow	Yes
water depth	1"
water width	2'
general water quality	Good
OHWM indicators	Bent vegetation
groundwater connection	Yes – PND-2
bank stability: LB, RB	Both: stable
dominant species: LB, RB	Both: red maple, white oak
overhead canopy (%)	90%
benthos	None seen
fish	No
algae or other aquatic life	None seen
habitat assessment score	N/A
photo number (s)	38 u/s, 39 d/s
rainfall information	Trace precipitation noted on 1/25/2014
6- HUC code & name (12-digit)	060102080104, Obed River
7-Confirmed by:	Not required
8-Mitigation	No __X__ Yes_____ : (include on Form J)
9-ETW	No __X__ Yes_____
10-303 (d) List	No __X__ Yes_____: Habitat_____ Siltation_____
11-Assessed	No __X__ Yes_____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	Unable to do a habitat assessment form because water in the channel was completely frozen in most areas. Hydrology for this channel is provided by PND-2.

Ecology Field Data Sheet: **Water Resources**

Project: SR-101; Peavine Road, From Firetower Road to East of Westchester Drive/Catoosa Boulevard (Construction of 161KV Electric Line Relocation); Cumberland County; PIN: 100268.03; Project #: 18038-1230-04
Date of survey: January 27, 2014 **Biologist:** J. Garcia/C. Hertwig **Affiliation:** CEC, Inc.

1-Station: from plans	N/A
2-Map label and name	PND-2
3-Latitude/Longitude	N35.99547172, W84.94592715
4-Potential impact	Runoff
5-Feature description:	
what is it	Pond
blue-line on topo? (y/n)	N
defined channel (y/n)	N
straight or meandering	N/A
channel bottom width	N/A
top of bank width	N/A
bank height and slope ratio	N/A
avg. gradient of stream (%)	N/A
substratum	N/A
riffle/run/pool	N/A
width of buffer zone	LB: 0 RB: 0
water flow	N/A
water depth	Unknown
water width	50' x 30'
general water quality	Fair
OHWM indicators	None
groundwater connection	Unknown
bank stability: LB, RB	Stable
dominant species: LB, RB	Fescue, red oak, Carex sedges
overhead canopy (%)	0
benthos	Not sampled
fish	None seen
algae or other aquatic life	None seen
habitat assessment score	N/A
photo number (s)	40
rainfall information	Trace precipitation noted on 1/25/2014
6- HUC code & name (12-digit)	060102080104, Obed River
7-Confirmed by:	Not required
8-Mitigation	No __X__ Yes_____ : (include on Form J)
9-ETW	No __X__ Yes_____
10-303 (d) List	No __X__ Yes_____: Habitat_____ Siltation_____
11-Assessed	No __X__ Yes_____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	This pond provides hydrology for STR-6.

Ecology Field Data Sheet: **Water Resources**

Project: SR-101; Peavine Road, From Firetower Road to East of Westchester Drive/Catoosa Boulevard (Construction of 161KV Electric Line Relocation); Cumberland County; PIN: 100268.03; Project #: 18038-1230-04
Date of survey: January 27, 2014 **Biologist:** J. Garcia/C. Hertwig **Affiliation:** CEC, Inc.

1-Station: from plans	N/A
2-Map label and name	STR-7 Unnamed tributary to Otter Creek
3-Latitude/Longitude	N35.99607991, W84.94437047
4-Potential impact	Crossing/runoff
5-Feature description:	
what is it	Perennial stream
blue-line on topo? (y/n)	N
defined channel (y/n)	Y
straight or meandering	Meandering
channel bottom width	4' – 5'
top of bank width	6' – 8'
bank height and slope ratio	6" – 1'; 2:1
avg. gradient of stream (%)	3%
substratum	Silt, gravel, bedrock, leaf litter
riffle/run/pool	5/55/40
width of buffer zone	LB: >100' RB: >100'
water flow	Yes
water depth	3"
water width	4'
general water quality	Good
OHWM indicators	Wrack lines
groundwater connection	Unknown
bank stability: LB, RB	Both: eroded
dominant species: LB, RB	Both: red maple, briar, white oak, red oak
overhead canopy (%)	95%
benthos	None seen
fish	None seen
algae or other aquatic life	None seen
habitat assessment score	125
photo number (s)	41 u/s, 42 d/s, 43 u/s
rainfall information	Trace precipitation noted on 1/25/2014
6- HUC code & name (12-digit)	060102080104, Obed River
7-Confirmed by:	Not required
8-Mitigation	No __X__ Yes_____ : (include on Form J)
9-ETW	No __X__ Yes_____
10-303 (d) List	No __X__ Yes_____: Habitat_____ Siltation_____
11-Assessed	No __X__ Yes_____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	This channel is slightly braided in some areas.

Ecology Field Data Sheet: **Water Resources**

Project: SR-101; Peavine Road, From Firetower Road to East of Westchester Drive/Catoosa Boulevard (Construction of 161KV Electric Line Relocation); Cumberland County; PIN: 100268.03; Project #: 18038-1230-04
Date of survey: January 27, 2014 **Biologist:** J. Garcia/C. Hertwig **Affiliation:** CEC, Inc.

1-Station: from plans	N/A
2-Map label and name	WWC-7/EPH-7
3-Latitude/Longitude	N35.99783279, W84.94027042
4-Potential impact	Crossing/runoff
5-Feature description:	
what is it	Wet weather conveyance/Ephemeral stream
blue-line on topo? (y/n)	N
defined channel (y/n)	Y
straight or meandering	Meandering
channel bottom width	2' – 3'
top of bank width	4' – 5'
bank height and slope ratio	1'; 2:1
avg. gradient of stream (%)	3%
substratum	Silt, gravel, leaf litter, vegetation
riffle/run/pool	N/A
width of buffer zone	LB: >100' RB: >100'
water flow	No
water depth	N/A
water width	N/A
general water quality	N/A
OHWM indicators	None
groundwater connection	No
bank stability: LB, RB	Both: eroded
dominant species: LB, RB	Both: red maple, post oak, holly, pin oak
overhead canopy (%)	90%
benthos	No
fish	No
algae or other aquatic life	No
habitat assessment score	N/A
photo number (s)	44 u/g, 45 d/g
rainfall information	Trace precipitation noted on 1/25/2014
6- HUC code & name (12-digit)	060102080104, Obed River
7-Confirmed by:	Not required
8-Mitigation	No __X__ Yes_____ : (include on Form J)
9-ETW	No __X__ Yes_____
10-303 (d) List	No __X__ Yes_____: Habitat_____ Siltation_____
11-Assessed	No __X__ Yes_____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	This conveyance drains to STR-8 off ROW. Hydrologic determination score 11.5.

Ecology Field Data Sheet: **Water Resources**

Project: SR-101; Peavine Road, From Firetower Road to East of Westchester Drive/Catoosa Boulevard (Construction of 161KV Electric Line Relocation); Cumberland County; PIN: 100268.03; Project #: 18038-1230-04
Date of survey: January 27, 2014 **Biologist:** J. Garcia/C. Hertwig **Affiliation:** CEC, Inc.

1-Station: from plans	N/A
2-Map label and name	STR-8 Unnamed tributary to Otter Creek
3-Latitude/Longitude	N35.99890056, W84.93851805
4-Potential impact	Crossing/runoff
5-Feature description:	
what is it	Perennial stream
blue-line on topo? (y/n)	Y
defined channel (y/n)	Y
straight or meandering	Meandering
channel bottom width	6’
top of bank width	8’
bank height and slope ratio	1’; 2:1
avg. gradient of stream (%)	2%
substratum	Silt, gravel, cobble, boulder
riffle/run/pool	20/40/40
width of buffer zone	LB: >100’ RB: >100’
water flow	Yes
water depth	2”
water width	6’
general water quality	Good
OHWM indicators	Wrack lines
groundwater connection	Unknown
bank stability: LB, RB	Both: moderately stable
dominant species: LB, RB	Both: holly, southern red oak, white oak, red maple, ornamental
overhead canopy (%)	95%
benthos	Isopoda, ephemeroptera, trichoptera
fish	None seen
algae or other aquatic life	None seen
habitat assessment score	147
photo number (s)	46 u/s, 47 d/s
rainfall information	Trace precipitation noted on 1/25/2014
6- HUC code & name (12-digit)	060102080104, Obed River
7-Confirmed by:	Not required
8-Mitigation	No __X__ Yes_____ : (include on Form J)
9-ETW	No __X__ Yes_____
10-303 (d) List	No __X__ Yes_____: Habitat_____ Siltation_____
11-Assessed	No __X__ Yes_____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	This stream flows under a rock cliff across the project ROW. This stream drains to LAK-1 off ROW.

Ecology Field Data Sheet: **Water Resources**

Project: SR-101; Peavine Road, From Firetower Road to East of Westchester Drive/Catoosa Boulevard (Construction of 161KV Electric Line Relocation); Cumberland County; PIN: 100268.03; Project #: 18038-1230-04
Date of survey: January 30, 2014 **Biologist:** J. Garcia/C. Hertwig **Affiliation:** CEC, Inc.

1-Station: from plans	N/A
2-Map label and name	STR-9 Unnamed tributary to Otter Creek
3-Latitude/Longitude	N35.99920459, W84.9360706
4-Potential impact	Crossing/runoff
5-Feature description:	
what is it	Intermittent stream
blue-line on topo? (y/n)	N
defined channel (y/n)	Y
straight or meandering	Meandering
channel bottom width	2’
top of bank width	5’
bank height and slope ratio	1’; 2:1
avg. gradient of stream (%)	4%
substratum	Silt, gravel, cobble, bedrock
riffle/run/pool	0/50/50
width of buffer zone	LB: >100’ RB: >100’
water flow	Yes – slight
water depth	0.5”
water width	6”
general water quality	Good
OHWM indicators	Wrack lines, sorting
groundwater connection	Unknown
bank stability: LB, RB	Both: stable
dominant species: LB, RB	Both: red maple, pin oak, red oak, post oak, holly
overhead canopy (%)	95%
benthos	None seen
fish	None seen
algae or other aquatic life	None seen
habitat assessment score	N/A
photo number (s)	48 u/s, 49 d/s, 50 u/s
rainfall information	Trace precipitation noted on 1/25/2014
6- HUC code & name (12-digit)	060102080104, Obed River
7-Confirmed by:	Not required
8-Mitigation	No __X__ Yes_____ : (include on Form J)
9-ETW	No __X__ Yes_____
10-303 (d) List	No __X__ Yes_____: Habitat_____ Siltation_____
11-Assessed	No __X__ Yes_____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	Channel is flowing slightly upstream but is dry downstream. STR-9 drains to LAK-1 off ROW. Habitat assessment form not completed due to lack of flow.

Ecology Field Data Sheet: **Water Resources**

Project: SR-101; Peavine Road, From Firetower Road to East of Westchester Drive/Catoosa Boulevard (Construction of 161KV Electric Line Relocation); Cumberland County; PIN: 100268.03; Project #: 18038-1230-04
Date of survey: January 30, 2014 **Biologist:** J. Garcia/C. Hertwig **Affiliation:** CEC, Inc.

1-Station: from plans	N/A
2-Map label and name	WWC-7.5/EPH-7.5
3-Latitude/Longitude	N35.99938946, W84.93336937
4-Potential impact	Crossing/runoff
5-Feature description:	
what is it	Wet weather conveyance/Ephemeral stream
blue-line on topo? (y/n)	N
defined channel (y/n)	Y
straight or meandering	Straight
channel bottom width	2’
top of bank width	8’
bank height and slope ratio	6”; 3:1
avg. gradient of stream (%)	4%
substratum	Gravel, cobble, boulder
riffle/run/pool	N/A
width of buffer zone	LB: >100’ RB: >100’
water flow	No
water depth	N/A
water width	N/A
general water quality	N/A
OHWM indicators	Wrack lines
groundwater connection	No
bank stability: LB, RB	Both: stable
dominant species: LB, RB	Both: pin oak, white oak, red maple
overhead canopy (%)	95%
benthos	No
fish	No
algae or other aquatic life	No
habitat assessment score	N/A
photo number (s)	53 u/g, 54 d/g
rainfall information	Trace precipitation noted on 1/25/2014
6- HUC code & name (12-digit)	060102080104, Obed River
7-Confirmed by:	Not required
8-Mitigation	No __X__ Yes_____ : (include on Form J)
9-ETW	No __X__ Yes_____
10-303 (d) List	No __X__ Yes_____: Habitat_____ Siltation_____
11-Assessed	No __X__ Yes_____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	This conveyance drains to LAK-1 off ROW.

Ecology Field Data Sheet: **Water Resources**

Project: SR-101; Peavine Road, From Firetower Road to East of Westchester Drive/Catoosa Boulevard (Construction of 161KV Electric Line Relocation); Cumberland County; PIN: 100268.03; Project #: 18038-1230-04
Date of survey: January 30, 2014 **Biologist:** J. Garcia/C. Hertwig **Affiliation:** CEC, Inc.

1-Station: from plans	N/A
2-Map label and name	STR-10
3-Latitude/Longitude	N35.99974155, W84.93218032
4-Potential impact	Runoff
5-Feature description:	
what is it	Intermittent stream
blue-line on topo? (y/n)	N
defined channel (y/n)	Y
straight or meandering	Meandering
channel bottom width	6”
top of bank width	1’
bank height and slope ratio	6”; 1:1
avg. gradient of stream (%)	2%
substratum	Silt, sand, gravel
riffle/run/pool	0/0/100
width of buffer zone	LB: >100’ RB: >100’
water flow	No – isolated pools
water depth	1”
water width	6”
general water quality	Good
OHWM indicators	Bent vegetation
groundwater connection	Yes – WTL-6
bank stability: LB, RB	Both: stable
dominant species: LB, RB	Both: red maple, cinnamon fern, carex sedges
overhead canopy (%)	95%
benthos	No
fish	No
algae or other aquatic life	No
habitat assessment score	N/A
photo number (s)	57 d/s
rainfall information	Trace precipitation noted on 1/25/2014
6- HUC code & name (12-digit)	060102080104, Obed River
7-Confirmed by:	Not required
8-Mitigation	No __X__ Yes_____ : (include on Form J)
9-ETW	No __X__ Yes_____
10-303 (d) List	No __X__ Yes_____: Habitat_____ Siltation_____
11-Assessed	No __X__ Yes_____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	Hydrology for this stream is provided by WTL-6. STR-10 and STR-11 flow parallel to each other and eventually drain into LAK-1 off ROW. Habitat assessment form not completed due to lack of flow.

Ecology Field Data Sheet: **Water Resources**

Project: SR-101; Peavine Road, From Firetower Road to East of Westchester Drive/Catoosa Boulevard (Construction of 161KV Electric Line Relocation); Cumberland County; PIN: 100268.03; Project #: 18038-1230-04
Date of survey: January 30, 2014 **Biologist:** J. Garcia/C. Hertwig **Affiliation:** CEC, Inc.

1-Station: from plans	N/A
2-Map label and name	STR-11
3-Latitude/Longitude	N35.99984349, W84.93216515
4-Potential impact	Runoff
5-Feature description:	
what is it	Intermittent stream
blue-line on topo? (y/n)	N
defined channel (y/n)	Y
straight or meandering	Meandering
channel bottom width	6”
top of bank width	1’
bank height and slope ratio	6”; 1:1
avg. gradient of stream (%)	2%
substratum	Silt, sand, gravel
riffle/run/pool	0/50/50
width of buffer zone	LB: >100’ RB: >100’
water flow	Yes
water depth	2”
water width	6”
general water quality	Good
OHWM indicators	Wrack lines
groundwater connection	Yes – WTL-6
bank stability: LB, RB	Both: stable
dominant species: LB, RB	Both: red maple, pin oak, cinnamon fern, Carex sedges
overhead canopy (%)	95%
benthos	None seen
fish	None seen
algae or other aquatic life	None seen
habitat assessment score	124
photo number (s)	58 d/s
rainfall information	Trace precipitation noted on 1/25/2014
6- HUC code & name (12-digit)	060102080104, Obed River
7-Confirmed by:	Not required
8-Mitigation	No __X__ Yes_____ : (include on Form J)
9-ETW	No __X__ Yes_____
10-303 (d) List	No __X__ Yes_____: Habitat_____ Siltation_____
11-Assessed	No __X__ Yes_____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	Hydrology for this stream is provided by WTL-6. STR-10 and STR-11 flow parallel to each other and eventually drain into LAK-1 off ROW.

Ecology Field Data Sheet: **Water Resources**

Project: SR-101; Peavine Road, From Firetower Road to East of Westchester Drive/Catoosa Boulevard (Construction of 161KV Electric Line Relocation); Cumberland County; PIN: 100268.03; Project #: 18038-1230-04
Date of survey: January 30, 2014 **Biologist:** J. Garcia/C. Hertwig **Affiliation:** CEC, Inc.

1-Station: from plans	N/A
2-Map label and name	LAK-1
3-Latitude/Longitude	N36.00050104, W84.9297471
4-Potential impact	Runoff
5-Feature description:	
what is it	Lake
blue-line on topo? (y/n)	N
defined channel (y/n)	N
straight or meandering	N/A
channel bottom width	N/A
top of bank width	N/A
bank height and slope ratio	N/A
avg. gradient of stream (%)	N/A
substratum	Unknown
riffle/run/pool	N/A
width of buffer zone	LB: >100' RB: >100'
water flow	N/A
water depth	Unknown
water width	See aerial
general water quality	Good
OHWM indicators	N/A
groundwater connection	Unknown
bank stability: LB, RB	Stable
dominant species: LB, RB	Red maple, red oaks, white oaks, pine
overhead canopy (%)	50%
benthos	Not sampled
fish	None seen
algae or other aquatic life	None seen
habitat assessment score	N/A
photo number (s)	59
rainfall information	Trace precipitation noted on 1/25/2014
6- HUC code & name (12-digit)	060102080104, Obed River
7-Confirmed by:	Not required
8-Mitigation	No __X__ Yes_____ : (include on Form J)
9-ETW	No __X__ Yes_____
10-303 (d) List	No __X__ Yes_____: Habitat_____ Siltation_____
11-Assessed	No __X__ Yes_____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	LAK-1 is part of Otter Creek.

Ecology Field Data Sheet: **Water Resources**

Project: SR-101; Peavine Road, From Firetower Road to East of Westchester Drive/Catoosa Boulevard (Construction of 161KV Electric Line Relocation); Cumberland County; PIN: 100268.03; Project #: 18038-1230-04
Date of survey: January 30, 2014 **Biologist:** J. Garcia/C. Hertwig **Affiliation:** CEC, Inc.

1-Station: from plans	N/A
2-Map label and name	STR-12 Unnamed tributary to Otter Creek
3-Latitude/Longitude	N36.00032941, W84.9294343
4-Potential impact	Crossing/runoff
5-Feature description:	
what is it	Perennial stream
blue-line on topo? (y/n)	Y
defined channel (y/n)	Y
straight or meandering	Meandering
channel bottom width	4' – 6'
top of bank width	6' – 10'
bank height and slope ratio	2'; 2:1
avg. gradient of stream (%)	2%
substratum	Silt, gravel, cobble, sand
riffle/run/pool	20/40/40
width of buffer zone	LB: >100' RB: >100'
water flow	Yes
water depth	2" – 6"
water width	4' – 6'
general water quality	Good
OHWM indicators	Wrack lines
groundwater connection	Unknown
bank stability: LB, RB	Both: eroded
dominant species: LB, RB	Both: red maple, red oak, white oak
overhead canopy (%)	95%
benthos	Yes
fish	None seen
algae or other aquatic life	None seen
habitat assessment score	134
photo number (s)	60 u/s, 61 d/s
rainfall information	Trace precipitation noted on 1/25/2014
6- HUC code & name (12-digit)	060102080104, Obed River
7-Confirmed by:	Not required
8-Mitigation	No __X__ Yes_____ : (include on Form J)
9-ETW	No __X__ Yes_____
10-303 (d) List	No __X__ Yes_____: Habitat_____ Siltation_____
11-Assessed	No __X__ Yes_____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	This stream drains directly into LAK-1 just outside of ROW.

Ecology Field Data Sheet: **Water Resources**

Project: SR-101; Peavine Road, From Firetower Road to East of Westchester Drive/Catoosa Boulevard (Construction of 161KV Electric Line Relocation); Cumberland County; PIN: 100268.03; Project #: 18038-1230-04
Date of survey: January 30, 2014 **Biologist:** J. Garcia/C. Hertwig **Affiliation:** CEC, Inc.

1-Station: from plans	N/A
2-Map label and name	WWC-8/EPH-8
3-Latitude/Longitude	N36.0024729, W84.92564842
4-Potential impact	Crossing/runoff
5-Feature description:	
what is it	Wet weather conveyance/Ephemeral stream
blue-line on topo? (y/n)	N
defined channel (y/n)	Y – poor
straight or meandering	Straight
channel bottom width	1’
top of bank width	3’
bank height and slope ratio	6”; 2;1
avg. gradient of stream (%)	3%
substratum	Silt, gravel, cobble
riffle/run/pool	N/A
width of buffer zone	LB: >100’ RB: >100’
water flow	No
water depth	N/A
water width	N/A
general water quality	N/A
OHWM indicators	None
groundwater connection	No
bank stability: LB, RB	Both: stable
dominant species: LB, RB	Both: red maple, pin oak, pine, red oak
overhead canopy (%)	95%
benthos	No
fish	No
algae or other aquatic life	No
habitat assessment score	N/A
photo number (s)	62 u/g, 63 d/g
rainfall information	Trace precipitation noted on 1/25/2014
6- HUC code & name (12-digit)	060102080104, Obed River
7-Confirmed by:	Not required
8-Mitigation	No __X__ Yes_____ : (include on Form J)
9-ETW	No __X__ Yes_____
10-303 (d) List	No __X__ Yes_____: Habitat_____ Siltation_____
11-Assessed	No __X__ Yes_____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	Conveyance drains to LAK-1 off ROW. Hydrological determination score 14.

Ecology Field Data Sheet: **Water Resources**

Project: SR-101; Peavine Road, From Firetower Road to East of Westchester Drive/Catoosa Boulevard (Construction of 161KV Electric Line Relocation); Cumberland County; PIN: 100268.03; Project #: 18038-1230-04
Date of survey: January 30, 2014 **Biologist:** J. Garcia/C. Hertwig **Affiliation:** CEC, Inc.

1-Station: from plans	N/A
2-Map label and name	STR-13 Unnamed tributary to Otter Creek
3-Latitude/Longitude	N36.00310267, W84.92459714
4-Potential impact	Crossing/runoff
5-Feature description:	
what is it	Perennial stream
blue-line on topo? (y/n)	Y
defined channel (y/n)	Y
straight or meandering	Meandering
channel bottom width	10’
top of bank width	25’
bank height and slope ratio	5’; 1:1
avg. gradient of stream (%)	3%
substratum	Gravel, cobble, boulder
riffle/run/pool	20/60/20
width of buffer zone	LB: >100’ RB: >100’
water flow	Yes
water depth	4” – 6”
water width	10’
general water quality	Good
OHWM indicators	Scouring
groundwater connection	Unknown
bank stability: LB, RB	Both: eroded/unstable
dominant species: LB, RB	Both: tulip poplar, red maple, pin oak
overhead canopy (%)	95%
benthos	Yes
fish	None seen
algae or other aquatic life	None seen
habitat assessment score	135
photo number (s)	64 u/s, 65 d/s
rainfall information	Trace precipitation noted on 1/25/2014
6- HUC code & name (12-digit)	060102080104, Obed River
7-Confirmed by:	Not required
8-Mitigation	No __X__ Yes_____ : (include on Form J)
9-ETW	No __X__ Yes_____
10-303 (d) List	No __X__ Yes_____: Habitat_____ Siltation_____
11-Assessed	No __X__ Yes_____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	This stream drains into LAK-1 just outside of ROW.

Ecology Field Data Sheet: **Water Resources**

Project: SR-101; Peavine Road, From Firetower Road to East of Westchester Drive/Catoosa Boulevard (Construction of 161KV Electric Line Relocation); Cumberland County; PIN: 100268.03; Project #: 18038-1230-04
Date of survey: January 30, 2014 **Biologist:** J. Garcia/C. Hertwig **Affiliation:** CEC, Inc.

1-Station: from plans	N/A
2-Map label and name	STR-14 Unnamed tributary to Otter Creek
3-Latitude/Longitude	N36.0044546, W84.92578798
4-Potential impact	Crossing/runoff
5-Feature description:	
what is it	Perennial stream
blue-line on topo? (y/n)	Y
defined channel (y/n)	Y
straight or meandering	Meandering
channel bottom width	5’
top of bank width	6’
bank height and slope ratio	1’; 1:1
avg. gradient of stream (%)	3%
substratum	Silt, gravel, cobble, sand
riffle/run/pool	40/40/20
width of buffer zone	LB: >100’ RB: >100’
water flow	Yes
water depth	2”
water width	5’
general water quality	Good
OHWM indicators	Wrack lines
groundwater connection	Unknown
bank stability: LB, RB	Both: moderately stable
dominant species: LB, RB	Both: chestnut oak, pin oak, red maple, pine
overhead canopy (%)	95%
benthos	Yes
fish	None seen
algae or other aquatic life	None seen
habitat assessment score	139
photo number (s)	66 u/s, 67 d/s
rainfall information	Trace precipitation noted on 1/25/2014
6- HUC code & name (12-digit)	060102080104, Obed River
7-Confirmed by:	Not required
8-Mitigation	No __X__ Yes_____ : (include on Form J)
9-ETW	No __X__ Yes_____
10-303 (d) List	No __X__ Yes_____: Habitat_____ Siltation_____
11-Assessed	No __X__ Yes_____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	This stream drains into LAK-1 off ROW.

Ecology Field Data Sheet: **Water Resources**

Project: SR-101; Peavine Road, From Firetower Road to East of Westchester Drive/Catoosa Boulevard (Construction of 161KV Electric Line Relocation); Cumberland County; PIN: 100268.03; Project #: 18038-1230-04
Date of survey: January 30, 2014 **Biologist:** J. Garcia/C. Hertwig **Affiliation:** CEC, Inc.

1-Station: from plans	N/A
2-Map label and name	WWC-9/EPH-9
3-Latitude/Longitude	N36.00943575, W84.92156673
4-Potential impact	Crossing/runoff
5-Feature description:	
what is it	Wet weather conveyance/Ephemeral stream
blue-line on topo? (y/n)	N
defined channel (y/n)	Y – poor
straight or meandering	Meandering
channel bottom width	1’
top of bank width	4’
bank height and slope ratio	6”; 4:1
avg. gradient of stream (%)	2%
substratum	Silt, sand, leaf litter
riffle/run/pool	N/A
width of buffer zone	LB: >100’ RB: >100’
water flow	No
water depth	N/A
water width	N/A
general water quality	N/A
OHWM indicators	None
groundwater connection	No
bank stability: LB, RB	Both: unstable
dominant species: LB, RB	Both: red maple, pin oak, red oak, chestnut oak
overhead canopy (%)	95%
benthos	No
fish	No
algae or other aquatic life	No
habitat assessment score	N/A
photo number (s)	68 u/g, 69 d/g
rainfall information	Trace precipitation noted on 1/25/2014
6- HUC code & name (12-digit)	060102080104, Obed River
7-Confirmed by:	Not required
8-Mitigation	No __X__ Yes_____ : (include on Form J)
9-ETW	No __X__ Yes_____
10-303 (d) List	No __X__ Yes_____: Habitat_____ Siltation_____
11-Assessed	No __X__ Yes_____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	Hydrologic determination score 12.

Ecology Field Data Sheet: **Water Resources**

Project: SR-101; Peavine Road, From Firetower Road to East of Westchester Drive/Catoosa Boulevard (Construction of 161KV Electric Line Relocation); Cumberland County; PIN: 100268.03; Project #: 18038-1230-04
Date of survey: January 30, 2014 **Biologist:** J. Garcia/C. Hertwig **Affiliation:** CEC, Inc.

1-Station: from plans	N/A
2-Map label and name	WWC-10/EPH-10
3-Latitude/Longitude	N36.01003051, W84.92090905
4-Potential impact	Crossing/runoff
5-Feature description:	
what is it	Wet weather conveyance/Ephemeral stream
blue-line on topo? (y/n)	N
defined channel (y/n)	Y – poor
straight or meandering	Meandering
channel bottom width	6”
top of bank width	2’
bank height and slope ratio	3”; 3:1
avg. gradient of stream (%)	2%
substratum	Silt, sand, leaf litter
riffle/run/pool	N/A
width of buffer zone	LB: >100’ RB: >100’
water flow	No
water depth	N/A
water width	N/A
general water quality	N/A
OHWM indicators	None
groundwater connection	No
bank stability: LB, RB	Both: stable
dominant species: LB, RB	Both: pin oak, northern red oak, chestnut oak
overhead canopy (%)	95%
benthos	No
fish	No
algae or other aquatic life	No
habitat assessment score	N/A
photo number (s)	70 u/g, 71 d/g
rainfall information	Trace precipitation noted on 1/25/2014
6- HUC code & name (12-digit)	060102080104, Obed River
7-Confirmed by:	Not required
8-Mitigation	No __X__ Yes_____ : (include on Form J)
9-ETW	No __X__ Yes_____
10-303 (d) List	No __X__ Yes_____: Habitat_____ Siltation_____
11-Assessed	No __X__ Yes_____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	This conveyance is poorly defined. Hydrologic determination score 11.5.

Ecology Field Data Sheet: **Water Resources**

Project: SR-101; Peavine Road, From Firetower Road to East of Westchester Drive/Catoosa Boulevard (Construction of 161KV Electric Line Relocation); Cumberland County; PIN: 100268.03; Project #: 18038-1230-04
Date of survey: January 30, 2014 **Biologist:** J. Garcia/C. Hertwig **Affiliation:** CEC, Inc.

1-Station: from plans	N/A
2-Map label and name	STR-15 Unnamed tributary to Otter Creek
3-Latitude/Longitude	N36.01132043, W84.91941074
4-Potential impact	Crossing/runoff
5-Feature description:	
what is it	Perennial stream
blue-line on topo? (y/n)	N
defined channel (y/n)	Y
straight or meandering	Meandering
channel bottom width	3' – 4'
top of bank width	5' – 6'
bank height and slope ratio	1'; 2:1
avg. gradient of stream (%)	2%
substratum	Silt, sand, gravel
riffle/run/pool	10/45/45
width of buffer zone	LB: >100' RB: >100'
water flow	Yes
water depth	2"
water width	3' – 4'
general water quality	Good
OHWM indicators	Wrack lines
groundwater connection	Unknown
bank stability: LB, RB	Both: stable
dominant species: LB, RB	Both: red maple, pine, post oak
overhead canopy (%)	95%
benthos	Yes
fish	None seen
algae or other aquatic life	None seen
habitat assessment score	129
photo number (s)	72 u/s, 73 d/s
rainfall information	Trace precipitation noted on 1/25/2014
6- HUC code & name (12-digit)	060102080104, Obed River
7-Confirmed by:	Not required
8-Mitigation	No __X__ Yes_____ : (include on Form J)
9-ETW	No __X__ Yes_____
10-303 (d) List	No __X___ Yes_____: Habitat_____ Siltation_____
11-Assessed	No __X__ Yes_____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	

Ecology Field Data Sheet: **Water Resources**

Project: SR-101; Peavine Road, From Firetower Road to East of Westchester Drive/Catoosa Boulevard (Construction of 161KV Electric Line Relocation); Cumberland County; PIN: 100268.03; Project #: 18038-1230-04
Date of survey: January 30, 2014 **Biologist:** J. Garcia/C. Hertwig **Affiliation:** CEC, Inc.

1-Station: from plans	N/A
2-Map label and name	STR-16 Unnamed tributary to Bee Branch
3-Latitude/Longitude	N36.01332338, W84.91724043
4-Potential impact	Crossing/runoff
5-Feature description:	
what is it	Intermittent stream
blue-line on topo? (y/n)	Y
defined channel (y/n)	Y
straight or meandering	Meandering
channel bottom width	2’
top of bank width	4’
bank height and slope ratio	1’; 2:1
avg. gradient of stream (%)	2%
substratum	Silt, gravel, cobble
riffle/run/pool	5/35/60
width of buffer zone	LB: >100’ RB: >100’
water flow	Yes
water depth	2”
water width	2’
general water quality	Good
OHWM indicators	Wrack lines
groundwater connection	Unknown
bank stability: LB, RB	Both: stable
dominant species: LB, RB	Both: red maple, northern red oak
overhead canopy (%)	95%
benthos	Yes
fish	None seen
algae or other aquatic life	None seen
habitat assessment score	132
photo number (s)	74 u/s, 75 d/s
rainfall information	Trace precipitation noted on 1/25/2014
6- HUC code & name (12-digit)	060102080104, Obed River
7-Confirmed by:	Not required
8-Mitigation	No __X__ Yes_____ : (include on Form J)
9-ETW	No __X__ Yes_____
10-303 (d) List	No __X__ Yes_____: Habitat_____ Siltation_____
11-Assessed	No __X__ Yes_____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	

Ecology Field Data Sheet: **Water Resources**

Project: SR-101; Peavine Road, From Firetower Road to East of Westchester Drive/Catoosa Boulevard (Construction of 161KV Electric Line Relocation); Cumberland County; PIN: 100268.03; Project #: 18038-1230-04
Date of survey: January 30, 2014 **Biologist:** J. Garcia/C. Hertwig **Affiliation:** CEC, Inc.

1-Station: from plans	N/A
2-Map label and name	STR-17 Unnamed tributary to Bee Branch
3-Latitude/Longitude	N36.01414051, W84.91407555
4-Potential impact	Crossing/runoff
5-Feature description:	
what is it	Intermittent stream
blue-line on topo? (y/n)	N
defined channel (y/n)	Y
straight or meandering	Straight
channel bottom width	2’
top of bank width	6’
bank height and slope ratio	1’; 2:1
avg. gradient of stream (%)	4%
substratum	Silt, gravel, cobble, boulder
riffle/run/pool	N/A
width of buffer zone	LB: >100’ RB: >100’
water flow	No – pools only
water depth	1”
water width	1’
general water quality	Good
OHWM indicators	None
groundwater connection	Unknown
bank stability: LB, RB	Both: stable
dominant species: LB, RB	Both: chestnut oak, tulip poplar, red maple
overhead canopy (%)	95%
benthos	None seen
fish	None seen
algae or other aquatic life	No
habitat assessment score	N/A
photo number (s)	76 u/s, 77 d/s
rainfall information	Trace precipitation noted on 1/25/2014
6- HUC code & name (12-digit)	060102080104, Obed River
7-Confirmed by:	Not required
8-Mitigation	No __X__ Yes_____ : (include on Form J)
9-ETW	No __X__ Yes_____
10-303 (d) List	No __X__ Yes_____: Habitat_____ Siltation_____
11-Assessed	No __X__ Yes_____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	There were several pools noticed in the channel during the field survey.

Ecology Field Data Sheet: **Water Resources**

Project: SR-101; Peavine Road, From Firetower Road to East of Westchester Drive/Catoosa Boulevard (Construction of 161KV Electric Line Relocation); Cumberland County; PIN: 100268.03; Project #: 18038-1230-04
Date of survey: January 30, 2014 **Biologist:** J. Garcia/C. Hertwig **Affiliation:** CEC, Inc.

1-Station: from plans	N/A
2-Map label and name	STR-18 Bee Branch
3-Latitude/Longitude	N36.01387436, W84.91294709
4-Potential impact	Crossing/runoff
5-Feature description:	
what is it	Perennial stream
blue-line on topo? (y/n)	Y
defined channel (y/n)	Y
straight or meandering	Meandering
channel bottom width	12’
top of bank width	20’
bank height and slope ratio	2’; 2:1
avg. gradient of stream (%)	2%
substratum	Silt, gravel, cobble, boulder
riffle/run/pool	30/40/30
width of buffer zone	LB: >100’ RB: >100’
water flow	Yes
water depth	2” – 4”
water width	12’
general water quality	Good
OHWM indicators	Wrack lines, bent vegetation
groundwater connection	Unknown
bank stability: LB, RB	Both: stable
dominant species: LB, RB	Both: white oak, red oak, red maple, hickory
overhead canopy (%)	95%
benthos	Yes
fish	Yes
algae or other aquatic life	None seen
habitat assessment score	146
photo number (s)	78 u/s, 79 d/s
rainfall information	Trace precipitation noted on 1/25/2014
6- HUC code & name (12-digit)	060102080104, Obed River
7-Confirmed by:	Not required
8-Mitigation	No __X__ Yes_____ : (include on Form J)
9-ETW	No __X__ Yes_____
10-303 (d) List	No __X__ Yes_____: Habitat_____ Siltation_____
11-Assessed	No __X__ Yes_____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	Blue line stream.

Ecology Field Data Sheet: **Water Resources**

Project: SR-101; Peavine Road, From Firetower Road to East of Westchester Drive/Catoosa Boulevard (Construction of 161KV Electric Line Relocation); Cumberland County; PIN: 100268.03; Project #: 18038-1230-04
Date of survey: January 30, 2014 **Biologist:** J. Garcia/C. Hertwig **Affiliation:** CEC, Inc.

1-Station: from plans	N/A
2-Map label and name	SPG-5/STR-19
3-Latitude/Longitude	SPG-5: N36.01300393, W84.90952001; STR-19: N36.01298427, W84.90957609
4-Potential impact	Crossing/runoff
5-Feature description:	
what is it	Spring and intermittent stream
blue-line on topo? (y/n)	N
defined channel (y/n)	Y
straight or meandering	Straight
channel bottom width	1' – 2'
top of bank width	4' – 6'
bank height and slope ratio	1'; 1:1
avg. gradient of stream (%)	2%
substratum	Silt, vegetation
riffle/run/pool	0/0/100
width of buffer zone	LB: 0 RB: 0
water flow	Yes - slight
water depth	2"
water width	1' – 2'
general water quality	Good
OHWM indicators	Bent vegetation
groundwater connection	Yes – SPG-5
bank stability: LB, RB	Both: stable
dominant species: LB, RB	Both: soft rush, cinnamon fern, fescue
overhead canopy (%)	20%
benthos	No
fish	No
algae or other aquatic life	No
habitat assessment score	104
photo number (s)	80 @ SPG-5, 81 d/s
rainfall information	Trace precipitation noted on 1/25/2014
6- HUC code & name (12-digit)	060102080104, Obed River
7-Confirmed by:	Not required
8-Mitigation	No __X__ Yes_____ : (include on Form J)
9-ETW	No __X__ Yes_____
10-303 (d) List	No __X__ Yes_____: Habitat_____ Siltation_____
11-Assessed	No __X__ Yes_____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	STR-19 begins at SPG-5 in open field. Stream channel becomes obscured and highly disturbed in pasture. Channel is difficult to discern in pasture.

Ecology Field Data Sheet: **Water Resources**

Project: SR-101; Peavine Road, From Firetower Road to East of Westchester Drive/Catoosa Boulevard (Construction of 161KV Electric Line Relocation); Cumberland County; PIN: 100268.03; Project #: 18038-1230-04
Date of survey: January 30, 2014 **Biologist:** J. Garcia/C. Hertwig **Affiliation:** CEC, Inc.

1-Station: from plans	N/A
2-Map label and name	STR-20 Unnamed tributary to Rough Mountain Branch
3-Latitude/Longitude	N36.01245829, W84.90439416
4-Potential impact	Runoff
5-Feature description:	
what is it	Intermittent stream
blue-line on topo? (y/n)	N
defined channel (y/n)	Y
straight or meandering	Straight
channel bottom width	1’
top of bank width	3’
bank height and slope ratio	6”; 2:1
avg. gradient of stream (%)	2%
substratum	Silt, vegetation
riffle/run/pool	0/0/100
width of buffer zone	LB: 0 RB: 0
water flow	No – isolated pools
water depth	2”
water width	1’
general water quality	Good
OHWM indicators	Bent vegetation
groundwater connection	Unknown
bank stability: LB, RB	Both: stable
dominant species: LB, RB	Both: briar, white oak, fescue
overhead canopy (%)	40%
benthos	No
fish	No
algae or other aquatic life	No
habitat assessment score	N/A
photo number (s)	82 u/s, 83 d/s
rainfall information	Trace precipitation noted on 1/25/2014
6- HUC code & name (12-digit)	060102080104, Obed River
7-Confirmed by:	Not required
8-Mitigation	No __X__ Yes_____ : (include on Form J)
9-ETW	No __X__ Yes_____
10-303 (d) List	No __X__ Yes_____: Habitat_____ Siltation_____
11-Assessed	No __X__ Yes_____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	Water was located in isolated pools only – no flow.

Ecology Field Data Sheet: **Water Resources**

Project: SR-101; Peavine Road, From Firetower Road to East of Westchester Drive/Catoosa Boulevard (Construction of 161KV Electric Line Relocation); Cumberland County; PIN: 100268.03; Project #: 18038-1230-04
Date of survey: January 30, 2014 **Biologist:** J. Garcia/C. Hertwig **Affiliation:** CEC, Inc.

1-Station: from plans	N/A
2-Map label and name	WWC-11/EPH-11
3-Latitude/Longitude	N36.01207615, W84.9037637
4-Potential impact	Crossing/runoff
5-Feature description:	
what is it	Wet weather conveyance/Ephemeral stream
blue-line on topo? (y/n)	N
defined channel (y/n)	Y
straight or meandering	Straight
channel bottom width	1’
top of bank width	5’
bank height and slope ratio	6”; 3:1
avg. gradient of stream (%)	3%
substratum	Gravel, cobble, silt, leaf litter
riffle/run/pool	N/A
width of buffer zone	LB: 0 RB: 0
water flow	No
water depth	N/A
water width	N/A
general water quality	N/A
OHWM indicators	None
groundwater connection	No
bank stability: LB, RB	Both: stable
dominant species: LB, RB	Both: white oak, fescue, briar, cinnamon fern
overhead canopy (%)	40%
benthos	No
fish	No
algae or other aquatic life	No
habitat assessment score	N/A
photo number (s)	84 u/g, 85 d/g
rainfall information	Trace precipitation noted on 1/25/2014
6- HUC code & name (12-digit)	060102080104, Obed River
7-Confirmed by:	Not required
8-Mitigation	No __X__ Yes_____ : (include on Form J)
9-ETW	No __X__ Yes_____
10-303 (d) List	No __X__ Yes_____: Habitat_____ Siltation_____
11-Assessed	No __X__ Yes_____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	Hydrologic determination score 11.

Ecology Field Data Sheet: **Water Resources**

Project: SR-101; Peavine Road, From Firetower Road to East of Westchester Drive/Catoosa Boulevard (Construction of 161KV Electric Line Relocation); Cumberland County; PIN: 100268.03; Project #: 18038-1230-04
Date of survey: January 30, 2014 **Biologist:** J. Garcia/C. Hertwig **Affiliation:** CEC, Inc.

1-Station: from plans	N/A
2-Map label and name	SPG-6/STR-21 Unnamed tributary to Rough Mountain Branch
3-Latitude/Longitude	SPG-6: N36.01174864, W84.9024619; STR-21: N36.01185328, W84.90245292
4-Potential impact	Crossing/runoff
5-Feature description:	
what is it	Spring and intermittent stream
blue-line on topo? (y/n)	N
defined channel (y/n)	Y
straight or meandering	Straight
channel bottom width	2’
top of bank width	5’
bank height and slope ratio	1’; 2:1
avg. gradient of stream (%)	2%
substratum	Silt, leaf litter, cobble
riffle/run/pool	0/0/100
width of buffer zone	LB: 20’ RB: >100’
water flow	Yes - slight
water depth	2”
water width	2’
general water quality	Good
OHWM indicators	Bent vegetation
groundwater connection	Yes – SPG-6
bank stability: LB, RB	Both: stable
dominant species: LB, RB	Both: briar, white oak, red oak
overhead canopy (%)	80%
benthos	None seen
fish	No
algae or other aquatic life	No
habitat assessment score	N/A
photo number (s)	86 u/s, 87 d/s
rainfall information	Trace precipitation noted on 1/25/2014
6- HUC code & name (12-digit)	060102080104, Obed River
7-Confirmed by:	Not required
8-Mitigation	No __X__ Yes_____ : (include on Form J)
9-ETW	No __X__ Yes_____
10-303 (d) List	No __X__ Yes_____: Habitat_____ Siltation_____
11-Assessed	No __X__ Yes_____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	There was slight flow noticed at SPG-6, but no only pools noticed downstream. Hydrology for STR-21 is provided by SPG-6. A habitat assessment form was not filled out due to the small amount of flow observed during the field review.

Ecology Field Data Sheet: **Water Resources**

Project: SR-101; Peavine Road, From Firetower Road to East of Westchester Drive/Catoosa Boulevard (Construction of 161KV Electric Line Relocation); Cumberland County; PIN: 100268.03; Project #: 18038-1230-04
Date of survey: January 30, 2014 **Biologist:** J. Garcia/C. Hertwig **Affiliation:** CEC, Inc.

1-Station: from plans	N/A
2-Map label and name	STR-22 Unnamed tributary to Rough Mountain Branch
3-Latitude/Longitude	N36.01159405, W84.90164119
4-Potential impact	Crossing/runoff
5-Feature description:	
what is it	Intermittent stream
blue-line on topo? (y/n)	N
defined channel (y/n)	Y
straight or meandering	Straight
channel bottom width	2’
top of bank width	4’
bank height and slope ratio	6”; 3:1
avg. gradient of stream (%)	3%
substratum	Silt, cobble, gravel
riffle/run/pool	0/0/100
width of buffer zone	LB: >100’ RB: >100’
water flow	No – frozen
water depth	3”
water width	2’
general water quality	Good
OHWM indicators	Bent vegetation
groundwater connection	Unknown
bank stability: LB, RB	Both: stable
dominant species: LB, RB	Both: Carex sedges, soft rush, white oak, briar
overhead canopy (%)	80%
benthos	None seen
fish	None seen
algae or other aquatic life	None seen
habitat assessment score	N/A
photo number (s)	90 u/s, 91 d/s
rainfall information	Trace precipitation noted on 1/25/2014
6- HUC code & name (12-digit)	060102080104, Obed River
7-Confirmed by:	Not required
8-Mitigation	No __X__ Yes_____ : (include on Form J)
9-ETW	No __X__ Yes_____
10-303 (d) List	No __X__ Yes_____: Habitat_____ Siltation_____
11-Assessed	No __X__ Yes_____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	This stream was completely frozen solid. Unable to do a habitat assessment data sheet. STR-22 begins at the corner of PND-3 as an outlet to the pond.

Ecology Field Data Sheet: **Water Resources**

Project: SR-101; Peavine Road, From Firetower Road to East of Westchester Drive/Catoosa Boulevard (Construction of 161KV Electric Line Relocation); Cumberland County; PIN: 100268.03; Project #: 18038-1230-04
Date of survey: January 30, 2014 **Biologist:** J. Garcia/C. Hertwig **Affiliation:** CEC, Inc.

1-Station: from plans	N/A
2-Map label and name	PND-3
3-Latitude/Longitude	N36.01130233, W84.9017898
4-Potential impact	Runoff
5-Feature description:	
what is it	Pond
blue-line on topo? (y/n)	N
defined channel (y/n)	N
straight or meandering	N/A
channel bottom width	N/A
top of bank width	N/A
bank height and slope ratio	N/A
avg. gradient of stream (%)	N/A
substratum	N/A
riffle/run/pool	N/A
width of buffer zone	LB: 0 RB: 0
water flow	No
water depth	Unknown
water width	70' x 50'
general water quality	Good
OHWM indicators	None
groundwater connection	Unknown
bank stability: LB, RB	Stable
dominant species: LB, RB	White oak, Carex sedges, fescue
overhead canopy (%)	20%
benthos	Not sampled
fish	None seen
algae or other aquatic life	None seen
habitat assessment score	N/A
photo number (s)	92
rainfall information	Trace precipitation noted on 1/25/2014
6- HUC code & name (12-digit)	060102080104, Obed River
7-Confirmed by:	Not required
8-Mitigation	No __X__ Yes_____ : (include on Form J)
9-ETW	No __X__ Yes_____
10-303 (d) List	No __X__ Yes_____: Habitat_____ Siltation_____
11-Assessed	No __X__ Yes_____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	Pond was frozen during the time of survey. PND-3 provides hydrology for STR-22.

Ecology Field Data Sheet: **Water Resources**

Project: SR-101; Peavine Road, From Firetower Road to East of Westchester Drive/Catoosa Boulevard (Construction of 161KV Electric Line Relocation); Cumberland County; PIN: 100268.03; Project #: 18038-1230-04
Date of survey: January 30, 2014 **Biologist:** J. Garcia/C. Hertwig **Affiliation:** CEC, Inc.

1-Station: from plans	N/A
2-Map label and name	STR-23 Unnamed tributary to Rough Mountain Branch
3-Latitude/Longitude	N36.01116438, W84.89963305
4-Potential impact	Crossing/runoff
5-Feature description:	
what is it	Intermittent stream
blue-line on topo? (y/n)	N
defined channel (y/n)	Y
straight or meandering	Meandering
channel bottom width	2’
top of bank width	6’
bank height and slope ratio	1’; 3:1
avg. gradient of stream (%)	3%
substratum	Silt, cobble, gravel
riffle/run/pool	N/A
width of buffer zone	LB: >100’ RB: >100’
water flow	No – pools only
water depth	0.5”
water width	1’
general water quality	Good
OHWM indicators	Sorting
groundwater connection	Unknown
bank stability: LB, RB	Both: moderately stable
dominant species: LB, RB	Both: chestnut oak, red oak, red maple, briar
overhead canopy (%)	95%
benthos	No
fish	No
algae or other aquatic life	No
habitat assessment score	N/A
photo number (s)	93 u/s, 94 d/s
rainfall information	Trace precipitation noted on 1/25/2014
6- HUC code & name (12-digit)	060102080104, Obed River
7-Confirmed by:	Not required
8-Mitigation	No __X__ Yes_____ : (include on Form J)
9-ETW	No __X__ Yes_____
10-303 (d) List	No __X__ Yes_____: Habitat_____ Siltation_____
11-Assessed	No __X__ Yes_____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	This stream had some pools but no flow during the field review. A hydrologic determination form was filled out and this feature scored a 23.

Ecology Field Data Sheet: **Water Resources**

Project: SR-101; Peavine Road, From Firetower Road to East of Westchester Drive/Catoosa Boulevard (Construction of 161KV Electric Line Relocation); Cumberland County; PIN: 100268.03; Project #: 18038-1230-04
Date of survey: January 30, 2014 **Biologist:** J. Garcia/C. Hertwig **Affiliation:** CEC, Inc.

1-Station: from plans	N/A
2-Map label and name	WWC-12/EPH-12
3-Latitude/Longitude	N36.01060917, W84.89775495
4-Potential impact	Crossing/runoff
5-Feature description:	
what is it	Wet weather conveyance/Ephemeral stream
blue-line on topo? (y/n)	N
defined channel (y/n)	Y
straight or meandering	Straight
channel bottom width	2’
top of bank width	6’
bank height and slope ratio	2’; 2:1
avg. gradient of stream (%)	4%
substratum	Silt, vegetation
riffle/run/pool	N/A
width of buffer zone	LB: >100’ RB: >100’
water flow	No
water depth	N/A
water width	N/A
general water quality	N/A
OHWM indicators	None
groundwater connection	No
bank stability: LB, RB	Both: stable
dominant species: LB, RB	Both: white oak, red oak, briar
overhead canopy (%)	95%
benthos	No
fish	No
algae or other aquatic life	No
habitat assessment score	N/A
photo number (s)	95 u/g, 96 d/g
rainfall information	Trace precipitation noted on 1/25/2014
6- HUC code & name (12-digit)	060102080104, Obed River
7-Confirmed by:	Not required
8-Mitigation	No __X__ Yes_____ : (include on Form J)
9-ETW	No __X__ Yes_____
10-303 (d) List	No __X__ Yes_____: Habitat_____ Siltation_____
11-Assessed	No __X__ Yes_____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	This conveyance drains into STR-25 off ROW. Hydrologic determination score 12.5.

Ecology Field Data Sheet: **Water Resources**

Project: SR-101; Peavine Road, From Firetower Road to East of Westchester Drive/Catoosa Boulevard (Construction of 161KV Electric Line Relocation); Cumberland County; PIN: 100268.03; Project #: 18038-1230-04
Date of survey: January 30, 2014 **Biologist:** J. Garcia/C. Hertwig **Affiliation:** CEC, Inc.

1-Station: from plans	N/A
2-Map label and name	STR-24 Unnamed tributary to Rough Mountain Branch
3-Latitude/Longitude	N36.01040346, W84.89677575
4-Potential impact	Crossing/runoff
5-Feature description:	
what is it	Intermittent stream
blue-line on topo? (y/n)	N
defined channel (y/n)	Y
straight or meandering	Straight
channel bottom width	1’
top of bank width	3’ – 6’
bank height and slope ratio	3’ – 4’; 1:1
avg. gradient of stream (%)	3%
substratum	Silt, sand, vegetation
riffle/run/pool	0/90/10
width of buffer zone	LB: 0 RB: 0
water flow	Yes
water depth	0.5”
water width	1’
general water quality	Good
OHWM indicators	Scouring
groundwater connection	Unknown
bank stability: LB, RB	Both: eroded
dominant species: LB, RB	Both: fescue
overhead canopy (%)	0
benthos	No
fish	No
algae or other aquatic life	No
habitat assessment score	67
photo number (s)	97 u/s, 98 d/s
rainfall information	Trace precipitation noted on 1/25/2014
6- HUC code & name (12-digit)	060102080104, Obed River
7-Confirmed by:	Not required
8-Mitigation	No __X__ Yes_____ : (include on Form J)
9-ETW	No __X__ Yes_____
10-303 (d) List	No __X__ Yes_____: Habitat_____ Siltation_____
11-Assessed	No __X__ Yes_____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	Channel begins as an outlet to PND-4.

Ecology Field Data Sheet: **Water Resources**

Project: SR-101; Peavine Road, From Firetower Road to East of Westchester Drive/Catoosa Boulevard (Construction of 161KV Electric Line Relocation); Cumberland County; PIN: 100268.03; Project #: 18038-1230-04
Date of survey: January 30, 2014 **Biologist:** J. Garcia/C. Hertwig **Affiliation:** CEC, Inc.

1-Station: from plans	N/A
2-Map label and name	PND-4
3-Latitude/Longitude	N36.01022623, W84.89635619
4-Potential impact	Runoff
5-Feature description:	
what is it	Pond
blue-line on topo? (y/n)	N
defined channel (y/n)	N
straight or meandering	N/A
channel bottom width	N/A
top of bank width	N/A
bank height and slope ratio	N/A
avg. gradient of stream (%)	N/A
substratum	N/A
riffle/run/pool	N/A
width of buffer zone	LB: 0 RB: 0
water flow	No
water depth	Unknown
water width	100' x 80'
general water quality	Good
OHWM indicators	None
groundwater connection	Unknown
bank stability: LB, RB	Stable
dominant species: LB, RB	Fescue, Carex sedges
overhead canopy (%)	0
benthos	Not sampled
fish	None seen
algae or other aquatic life	None seen
habitat assessment score	N/A
photo number (s)	99
rainfall information	Trace precipitation noted on 1/25/2014
6- HUC code & name (12-digit)	060102080104, Obed River
7-Confirmed by:	Not required
8-Mitigation	No __X__ Yes_____ : (include on Form J)
9-ETW	No __X__ Yes_____
10-303 (d) List	No __X__ Yes_____: Habitat_____ Siltation_____
11-Assessed	No __X__ Yes_____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	This pond provides hydrology for STR-25.

Ecology Field Data Sheet: **Water Resources**

Project: SR-101; Peavine Road, From Firetower Road to East of Westchester Drive/Catoosa Boulevard (Construction of 161KV Electric Line Relocation); Cumberland County; PIN: 100268.03; Project #: 18038-1230-04
Date of survey: January 30, 2014 **Biologist:** J. Garcia/C. Hertwig **Affiliation:** CEC, Inc.

1-Station: from plans	N/A
2-Map label and name	STR-25 Unnamed tributary to Rough Mountain Branch
3-Latitude/Longitude	N36.00996141, W84.89377013
4-Potential impact	Crossing/runoff
5-Feature description:	
what is it	Intermittent stream
blue-line on topo? (y/n)	N
defined channel (y/n)	Y
straight or meandering	Meandering
channel bottom width	2' – 3'
top of bank width	4' – 6'
bank height and slope ratio	1' – 2'; 2:1
avg. gradient of stream (%)	2%
substratum	Silt, gravel, sand
riffle/run/pool	5/45/50
width of buffer zone	LB: >100' RB: >100'
water flow	Yes
water depth	2" – 4"
water width	2' – 3'
general water quality	Good
OHWM indicators	Wrack lines
groundwater connection	Unknown
bank stability: LB, RB	Both: eroded
dominant species: LB, RB	Both: briar, chestnut oak, red oak
overhead canopy (%)	95%
benthos	Yes
fish	None seen
algae or other aquatic life	None seen
habitat assessment score	126
photo number (s)	100 u/s, 101 d/s
rainfall information	Trace precipitation noted on 1/25/2014
6- HUC code & name (12-digit)	060102080104, Obed River
7-Confirmed by:	Not required
8-Mitigation	No __X__ Yes_____ : (include on Form J)
9-ETW	No __X__ Yes_____
10-303 (d) List	No __X__ Yes_____: Habitat_____ Siltation_____
11-Assessed	No __X__ Yes_____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.	This stream drains south to north and provides hydrology for WTL-8.

Ecology Field Data Sheet: **Water Resources**

Project: Cumberland Co, SR-101, VEC Powerline Relocation, PIN 10268.03, PE 18038-2238-04

Date of survey: 01.07.2015 **Biologist:** R.L. Howard **Affiliation:** TDOT

1-Station: from plans	277+00											
2-Map label and name	STR-26											
3-Latitude/Longitude	36.0086°N, -84.8931°W											
4-Potential impact	Runoff											
5-Feature description:												
what is it	Stream (Intermittent)											
blue-line on topo? (y/n)	yes	☐	no	☑								
defined channel (y/n)	yes	☑	no	☐								
straight or meandering	Straight											
channel bottom width	1-1.5'											
top of bank width	2'											
bank height and slope ratio	0.5', 1:1											
avg. gradient of stream (%)	5%											
substratum	Sandstone bedrock, silt, leaf litter											
riffle/pool complex	yes	☐	no	☑	HADS category 3 AND 7 BOTH MUST score 14 or greater.							
width of buffer zone	LDB: None, manicured lawn				RDB: None, adjacent to Wilshire Heights Drive							
water flow	Yes, moderate											
water depth	0.25-0.5'											
water width	1-1.5'											
general water quality	Poor											
OHWM indicators	Scour, bed / bank											
groundwater connection	Unknown											
bank stability: LDB, RDB	LDB:	Stable	☑	Eroding	☐	Undercutting	☐	Sloughing	☐	Exposed Roots	☐	
	RDB:	Stable	☑	Eroding	☐	Undercutting	☐	Sloughing	☐	Exposed Roots	☐	
dominant species: LDB, RDB	LDB: lawn grasses											
	RDB: lawn grasses											
overhead canopy (%)	None											
benthos	None observed											
fish	None Observed											
algae or other aquatic life	None observed											
habitat assessment score	47											
photo number (s)	--											
rainfall information	The area received 1.99" of precipitation in the ten (10) days prior to field visit [NOAA NCDC].											
6-HUC 12	Obed River Lower - 060102080305											
7-Confirmed by:	Not Required											
8-Mitigation	yes	☐	no	☐								
9-ETW	yes	☑	no	☐								
10-303 (d) List	yes	☑	siltation	☐	habitat:	☐	other:	☑				
	no	☐										
11-Assessed	yes	☑	no	☐								
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if TDEC hydrologic determination form completed.	STR-26 receives flow from an up gradient wetland beyond the project limits and drains to Bagwell Creek. STR-26 lies between maintained lawn adjacent to bank and Wilshire Heights Dr.; encapsulated beneath Dartmoor Dr.											

TRAINING CERTIFICATIONS

TO BE INSERTED BY THE CONSTRUCTION DIVISION

NO TMDL CONSULTATION IS REQUIRED FOR THIS PROJECT.

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

INDEX OF SHEETS

SEE SHEET NO. 1A FOR INDEX

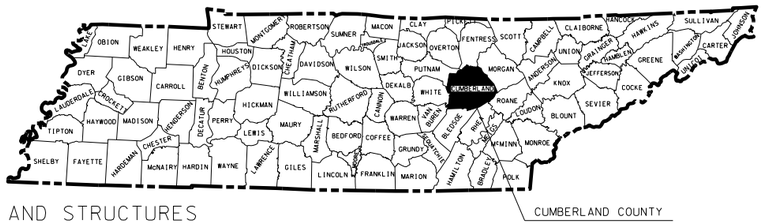
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

TENN.	YEAR	SHEET NO.
	2015	1
FED. AID PROJ. NO.	STP-101(16)	
STATE PROJ. NO.	18038-3240-14	

CUMBERLAND COUNTY

SR-101 (PEAVINE ROAD)

CONST. PHASE 1 -- FROM FIRE TOWER ROAD TO NEAR LAKEVIEW DRIVE



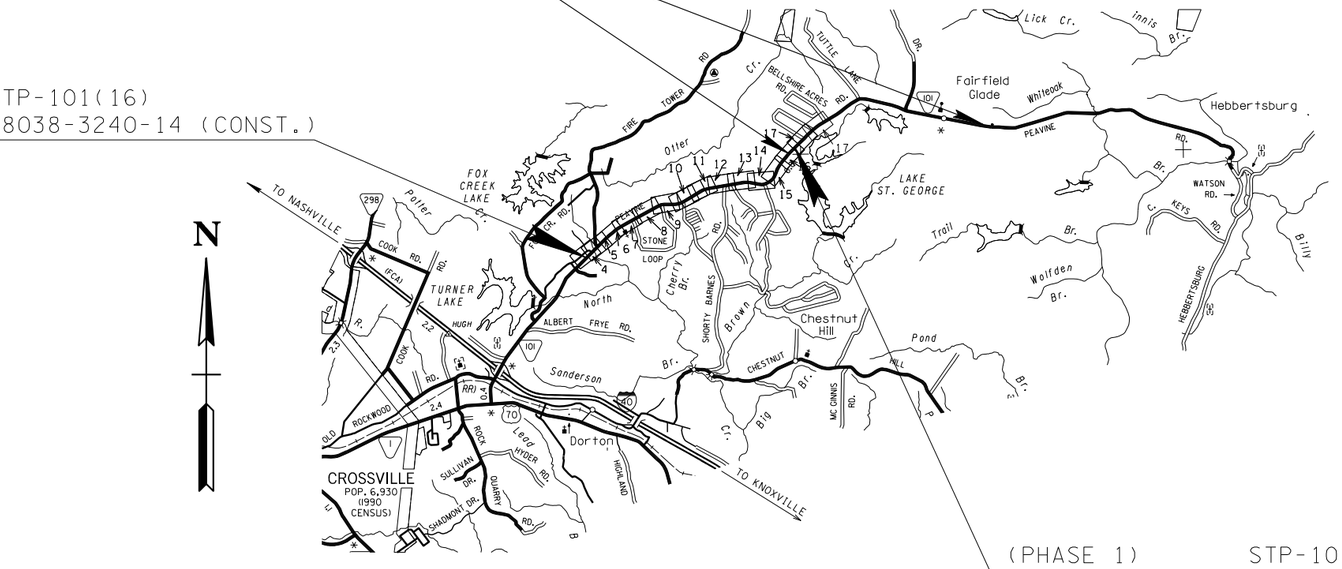
RESURFACING, GRADE, DRAIN, BASE, PAVE, GUARDRAIL, PAVEMENT MARKINGS, AND STRUCTURES

CONSTRUCTION: PHASE 1

STATE HIGHWAY NO. 101 F.A.H.S. NO. 101

(PHASE 2)(R.O.W.)
PROJECT NO. STP.101-(17)
STA. 213+00.00 TO STA. 355+10.00

(PHASE 1) STP-101(16)
BEGIN PROJECT NO. 18038-3240-14 (CONST.)
STA. 58+86.00



(PHASE 1) STP-101(16)
END PROJECT NO. 18038-3240-14 (CONST.)
STA 218+62.00

SCALE: 1"= 5000'

PHASE 1-	ROADWAY LENGTH	3.025 MILES
	BRIDGE LENGTH	0.000 MILES
	BOX BRIDGE LENGTH	0.000 MILES
	PROJECT LENGTH	3.025 MILES

NO EXCLUSIONS
NO EQUATIONS

SEALED BY

UNOFFICIAL SET
NOT FOR BIDDING

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

DATE:

APPROVED:
JOHN SCHROER, COMMISSIONER

SPECIAL NOTES

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

THIS PROJECT TO BE CONSTRUCTED UNDER THE STANDARD SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION DATED MARCH 1, 2006 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS AND IN THE PROPOSAL CONTRACT.

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

DESIGNER JASON INGRAM, P.E. DESIGNER CARL PERRY/GREG TAYLOR P.E.

P.E. NO. 18038-1230-04

PIN NO. 100268.01

TRAFFIC DATA	
ADT (2013)	14,640
ADT (2033)	18,640
DHV (2033)	1,864
D	55 - 45
T (ADT)	2 %
T (DHV)	1 %
V	50 MPH

SURVEY:

07-23-09
05-27-10
05-29-11
12-07-11
02-13-12
03-27-12
07-20-12
05-08-13

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR DATE

20-OCT-2014 11:09
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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

REV 02-20-15: ADDED ROW DETAILS SHT NOS. TO INDEX AND REVISED SHT NOS.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2015	STP-101(16)	1A

REV 02-27-15: ADDED PROJECT COMMITMENTS PER ENV REQ.

INDEX

SHEET NAME	SHEET NO.
TITLE SHEET	1
ROADWAY INDEX AND STANDARD DRAWINGS INDEX	1A-1B
PROJECT COMMITMENTS	1C
ESTIMATED ROADWAY QUANTITIES	2 - 2A
ESTIMATED SIGNAL QUANTITIES	2A2
ESTIMATED UTILITIES QUANTITIES	2B
TYPICAL SECTIONS AND PAVING SCHEDULE	2D – 2G
GENERAL NOTES AND SPECIAL NOTES	2H-2L
TABULATED QUANTITIES	2M – 2T
PROPERTY MAPS, RIGHT-OF-WAY ACQUISITION TABLES, AND REFERENCE CONTROL POINTS	3, 3A - 3B, 3E – 3F, 3H – 3L
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R.O.W.DETAILS	5A - 17A
PROPOSED LAYOUTS	4B – 17B
PROPOSED PROFILES	4C – 16C
PUBLIC SIDE ROADS AND RAMP PROFILES	28 – 28A
PRIVATE DRIVE AND FIELD RAMP PROFILES	29 – 29H
DRAINAGE MAPS	30 – 30A
CULVERT SECTIONS	31, 31A – 31C
EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) PLANS	32, 32(1A), 32(A1) – 32(N1), 32(A2) – 32(N2), 32(A3) – 32(N3), 32(A4) – 32(N4)
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SIGNING AND PAVEMENT MARKING PLANS	34, 34A – 34N
SIGN SCHEDULE SHEETS	35, 35A
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TRAFFIC CONTROL PHASE 2 TEMP ROAD CROSS SECTION	38 - 50
ROADWAY CROSS SECTIONS	51 - 143
SIDE ROAD CROSS SECTIONS	207 - 240
UTILITIES INDEX	U1-1
STORM WATER POLLUTION PREVENTION PLAN (SWPPP) INDEX	S-1
OMITTED SHEETS	18 - 27, 37, 144 - 206

STANDARD BRIDGE DRAWINGS

BRIDGE APPURTENANCES ENGLISH (BOX CULVERTS)

DWG. NO.	REV.	DESCRIPTION
STD-15-1	11-06-08	INDEX OF DRAWINGS AND TERMINOLOGY
STD-15-2	3-28-08	GENERAL NOTES
STD-15-3	2-28-03	DESIGN SECTION LIMITS
STD-15-4	12-07-01	TYPICAL SECTION AND DETAILS
STD-15-5	2-28-03	TYPICAL ELEVATION
STD-15-6	3-28-08	CURB AND RAIL DETAILS - SKEW NOT LESS THAN 45 DEG.
STD-15-8	12-07-01	INTERIOR WALL END TREATMENTS
STD-15-9	2-28-03	TYPICAL WINGWALL DETAILS AND NOTES
STD-15-10	11-06-08	WINGWALL DIMENSIONS AND QUANTITIES
STD-15-11		WINGWALL DIMENSIONS AND QUANTITIES
STD-15-12	3-28-08	WINGWALL & SPECIAL RETAINING WALL DESIGN SECTION
STD-15-13		WINGWALL DESIGN SECTION
STD-15-14	06-01-11	BACKFILL AND DRAINAGE DETAILS
STD-15-15		BACKFILL AND DRAINAGE DETAILS
STD-15-16A		LOW FLOW CHANNEL CONSTRUCTION DETAILS FOR CULVERT INLET AND OUTLET
STD-15-19		SIDEWALK AND MISCELLANEOUS DETAILS
STD-15-20		WARPED SLOPE DETAIL
STD-15-24	12-07-01	END SECTION DETAILS
STD-15-25	11-01-10	PRECAST BOX CULVERT DETAILS
STD-15-26		PRECAST BOX CULVERT DETAILS
STD-15-27		PRECAST BOX CULVERT DETAILS
STD-15-28		PRECAST BOX CULVERT DETAILS
STD-15-29		PRECAST BOX CULVERT DETAILS
STD-15-35		BOX BRIDGE, 1 BARREL AT 6', CLEAR HTS. 3' - 6', 0 - 60' FILL

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
RD-UD-3	09-05-96	UNDERDRAIN DETAILS
RD-UD-4	05-27-01	UNDERDRAIN LATERAL DETAILS
RD-UD-6	12-18-94	LATERAL UNDERDRAIN ENDWALL DETAIL FOR 1:1 & 2:1 SLOPES
RD-UD-7	12-18-94	LATERAL UNDERDRAIN ENDWALL DETAIL FOR 3:1 & 4:1 SLOPES
RD-UD-9	12-18-94	LATERAL UNDERDRAIN ENDWALL DETAIL FOR 6:1 SLOPES
RD01-S-11	04-04-03	DESIGN AND CONSTRUCTION DETAILS FOR ROADSIDE SLOPE DEVELOPMENT
RD01-S-11A	10-15-02	ROADSIDE DITCH DETAILS FOR DESIGN AND CONSTRUCTION
RD01-SD-1		INTERSECTION SIGHT DISTANCE DESIGN AND GENERAL NOTES
RD01-SD-2		INTERSECTION SIGHT DISTANCE LANDSCAPE AND OBSTRUCTION
RD01-SD-3		INTERSECTION SIGHT DISTANCE 2-LANE ROADWAYS
RD01-SD-4		INTERSECTION SIGHT DISTANCE 5-LANE AND 4-LANE UNDIVIDED ROADWAYS
RD01-SE-2	10-15-02	URBAN SUPERELEVATION DETAILS
RD01-SE-3	10-15-02	RURAL SUPERELEVATION DETAILS
RD01-TS-1	10-15-02	DESIGN STANDARDS FOR LOCAL ROADS AND STREETS
RD01-TS-2B	10-15-02	DESIGN STANDARDS 4 AND 6 LANE COLLECTOR HIGHWAYS WITH FLUSH MEDIANS
RD01-TS-3	10-15-02	DESIGN STANDARD FOR 2-LANE ARTERIAL HIGHWAYS
RD01-TS-6	07-31-13	TYPICAL CURB AND GUTTER SECTIONS WITH SHOULDER
RD01-TS-6A	07-31-13	TYPICAL CURB AND GUTTER SECTIONS WITHOUT SHOULDER

DRAINAGE - CULVERTS AND ENDWALL

DWG. NO.	REV.	DESCRIPTION
D-PB-1	01-02-13	STANDARD DETAILS CLASS "B" BEDDING AND CULVERT EXCAVATION
D-PB-2	01-29-14	STANDARD DETAILS FOR FLEXIBLE PIPE INSTALLATION
D-PE-18A	06-14-13	18" CONCRRETE ENDWALL CROSS DRAIN
D-PE-18B		18" CONCRRETE ENDWALL CROSS DRAIN
D-PE-24A	06-14-13	24" CONCRRETE ENDWALL CROSS DRAIN
D-PE-24B		24" CONCRRETE ENDWALL CROSS DRAIN
D-PE-30A	06-14-13	30" CONCRRETE ENDWALL CROSS DRAIN WITH STEEL PIPE GRATE
D-PE-30B		30" CONCRRETE ENDWALL CROSS DRAIN WITH STEEL PIPE GRATE
D-PG-3	04-15-97	FERROUS AND ALUMINUM CORRUGATED METAL PIPE
D-PS-1	03-15-76	STRUTTING DETAILS FOR CORR. METAL & STRUCTURAL PLATE ROUND PIPE
D-SEW-1A	06-14-13	SIDE DRAIN CONCRRETE ENDWALL WITH STEEL PIPE GRATE

DRAINAGE-CATCH BASINS AND MANHOLES

DWG. NO.	REV.	DESCRIPTION
D-CB-12LP	03-11-14	LOW PROFILE 32" X 32" SQUARE CONCRETE NO. 12LP CATCH BASIN
D-CB-12P	03-11-14	STANDARD PRECAST RECTANGULAR CONCRETE NO. 12 CATCH BASIN
D-CB-12RA	03-11-14	STANDARD PRECAST 48" CIRCULAR NO. 12 CATCH BASIN (FOR USE WITH 6" NONMOUNTABLE CURB)
D-CB-12RB	03-11-14	STANDARD PRECAST 60" AND 72" CIRCULAR NO. 12 CATCH BASIN (FOR USE WITH 6" NONMOUNTABLE CURB)
D-CB-12RC	03-11-14	STANDARD PRECAST 84" THRU 120" CIRCULAR NO. 12 CATCH BASIN (FOR USE WITH 6" NONMOUNTABLE CURB)
D-CB-12S	03-11-14	STANDARD RECTANGULAR CONCRETE NO. 12 CATCH BASIN
D-CB-12SB	03-11-14	STANDARD 4' X 4' SQUARE CONCRETE NO. 12 CATCH BASIN
D-CB-12SC	03-11-14	STANDARD 5'2" X 5'2" SQUARE CONCRETE NO. 12 CATCH BASIN
D-CB-12SD	03-11-14	STANDARD 7' X 7' SQUARE CONCRETE NO. 12 CATCH BASIN
D-CB-12SE	03-11-14	STANDARD 9' X 9' SQUARE CONCRETE NO. 12 CATCH BASIN
D-CB-14P	03-11-14	STANDARD PRECAST RECTANGULAR CONCRETE NO. 14 CATCH BASIN
D-CB-14RB	03-11-14	STANDARD PRECAST CIRCULAR NO. 14RB CATCH BASIN

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

INDEX AND STANDARD DRAWINGS

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

D-CB-14S	03-11-14	STANDARD RECTANGULAR CONCRETE NO. 14 CATCH BASIN
D-CB-14SE	03-11-14	STANDARD 9' X 9' SQUARE CONCRETE NO. 14 CATCH BASIN
D-CB-38RB	03-11-14	STANDARD PRECAST CIRCULAR NO. 38 CATCH BASIN
D-CB-38S	08-01-12	STANDARD 32" X 32" SQUARE CONCRETE NO. 38 CATCH BASIN
D-CB-38SB	03-11-14	STANDARD 4' X 4' SQUARE CONCRETE NO. 38 CATCH BASIN
D-CB-38SC	03-11-14	STANDARD 5'2" X 5'2" SQUARE CONCRETE NO. 38 CATCH BASIN
D-CB-42RB	03-11-14	STANDARD PRECAST CIRCULAR NO. 42 CATCH BASIN
D-CB-42S	08-01-12	STANDARD 32" X 32" SQUARE CONCRETE NO. 42 CATCH BASIN
D-CB-42SB	03-11-14	STANDARD 4' X 4' SQUARE CONCRETE NO. 42 CATCH BASIN
D-CB-42SC	03-11-14	STANDARD 5'2" X 5'2" SQUARE CONCRETE NO. 42 CATCH BASIN
D-CB-42SD	03-11-14	STANDARD 7' X 7' SQUARE CONCRETE NO. 42 CATCH BASIN

ROADWAY AND PAVEMENT APPURTENANCES

RP-CS-1	09-29-10	CONCRETE SHOULDER RUMBLE STRIP DETAIL (FOR 4-LANE DIVIDED HIGHWAY)
RP-D-15	07-15-08	DETAILS OF STANDARD CONCRETE DRIVEWAYS
RP-D-16	07-15-08	DETAILS OF LOWERED STANDARD CONCRETE DRIVEWAYS
RP-H-3	06-04-13	HANDICAP RAMP AND TRUNCATED DOME SURFACE DETAIL
RP-H-4	06-04-13	PERPENDICULAR CURB RAMP
RP-H-5	06-04-13	PARALLEL CURB RAMP
RP-H-7	06-04-13	PERPENDICULAR HANDICAP RAMP FOR 20' THRU 60' RADIUS
RP-H-8	06-04-13	PERPENDICULAR HANDICAP RAMP FOR 20' THRU 60' RADIUS
RP-H-9	06-04-13	PARALLEL HANDICAP RAMP FOR 20' THRU 60' RADIUS
RP-MC-2	02-28-02	STANDARD 6" SLOPING (MOUNTABLE) CONCRETE CURBS AND CONCRETE CURBS AND GUTTERS
RP-NMC-10	07-29-03	STANDARD VERTICAL (NONMOUNTABLE) CONCRETE CURBS AND CONCRETE CURBS AND GUTTERS
RP-NMC-11	02-28-02	STANDARD VERTICAL (NONMOUNTABLE) CONCRETE CURBS AND CONCRETE CURBS AND GUTTERS
RP-R-1	05-27-01	STANDARD RAMPS TO SIDE ROADS
RP-S-7	06-04-13	DETAILS FOR STANDARD CONCRETE SIDEWALKS

SAFETY APPURTENANCES AND FENCE

S-CZ-1		CLEAR ZONE CRITERIA
S-F-1	05-24-12	HIGH VISIBILITY FENCE
S-GR31-1	11-26-07	W-BEAM GUARDRAIL
S-GRA-3		GUARDRAIL ANCHOR FOR TYPE 21, 13 AND IN-LINE TERMINALS
S-GRC-1		GUARDRAIL CONNECTION TO BRIDGE ENDS OR BARRIER WALL
S-GRS-2		SPECIAL CASE:GUARDRAIL ATTACHMENT TO CONCRETE DECKS
S-GRT-2	11-03-14	TYPE 38 GUARDRAIL TERMINAL
S-GRT-3D		TYPE 21 GUARDRAIL TERMINAL(DETAILS)
S-GRT-2P		EARTH PAD FOR TYPE 38 TERMINAL
S-GRT-2R		EARTH PAD FOR TYPE 38 TERMINAL(RETROFIT)
S-GRT-4	11-06-14	TYPE 13 GUARDRAIL TERMINAL (TRAILING END)
S-PL-1		SAFETY PLAN AT ROADSIDE HAZARDS
S-PL-2		SAFETY PLAN AT SIDE ROADS OR PRIVATE DRIVES.
S-PL-3		SAFETY PLAN:MINIMUM INSTALLATION AT BRIDGE ENDS
S-RP-2	01-19-99	STANDARD CONCRETE RIGHT-OF-WAY MARKERS

TRAFFIC CONTROL APPURTENANCES

T-FAB-1	05-27-97	FLASHING YELLOW ARROW BOARD
T-M-1	07-24-14	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS AND MARKING ABBREVIATIONS
T-M-2	07-24-14	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS
T-M-3	07-24-14	MARKING STANDARDS FOR TRAFFIC ISLANDS, MEDIANS & PAVED SHOULDERS ON CONVENTIONAL ROADS
T-M-4	07-24-14	STANDARD INTERSECTION PAVEMENT MARKINGS
T-M-15A	11-01-11	ASPHALT SHOULDER RUMBLE STRIP INSTALLATION DETAILS FOR NON-ACCESS CONTROLLED ROUTES
T-PBR-1	06-30-09	INTERCONNECTED PORTABLE BARRIER RAIL
T-PBR-2	11-01-11	DETAIL FOR VERTICAL PANELS AND FLEXIBLE DELINEATORS
T-S-7	02-12-91	HIGHWAY SHIELDS USED ON INTERSTATE AND U.S. NUMBERED ROUTES
T-S-8	07-15-91	HIGHWAY SHIELDS USED ON STATE NUMBERED ROUTES AND ARROWS
T-S-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-16	06-05-14	GROUND MOUNTED ROADSIDE SIGN AND DETAILS
T-S-17	07-19-13	STANDARD GROUND MOUNTED SIGN USING PERFORATED/KNOCKOUT SQUARE TUBE
T-S-18	02-14-14	END OF ROADWAY, DEAD END SIGNS AND METAL BARRICADES (TYPE III)
T-S-19	07-19-13	STANDARD MEMBERS BENDAWAY SIGN SUPPORTS STEEL DESIGN
T-S-20	11-01-11	SIGN DETAILS
T-SG-1	11-01-11	WOOD POLE DETAILS FOR SPAN MOUNTED SIGNALS
T-SG-2	07-29-04	LOOP LEAD-INS, CONDUIT AND PULL BOXES
T-SG-3	11-11-04	STANDARD NOTES AND DETAILS OF INDUCTIVE LOOPS
T-SG-4		SPAN WIRE AND MESSENGER CABLE 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-7A	11-01-11	TYPICAL SIGNAL HEAD PLACEMENT
T-SG-8	12-04-13	STRAIN POLE DETAILS FOR SPAN MOUNTED SIGNALS
T-SG-9A	05-01-14	MISC. SIGNAL DETAILS
T-SG-10	06-11-14	MAST ARM POLE AND STRAIN POLES FOUNDATION DETAILS
T-SG-11	07-08-14	MAINTENANCE OF EXISTING SIGNALS DURING HIGHWAY CONSTRUCTION
T-SG-12	11-01-11	TYPICAL WIRING FOR SIGNAL HEADS AND DETECTION LOOPS
T-WZ-10	04-02-12	ADVANCE ROAD WORK SIGNING ON HIGHWAYS AND FREEWAYS
T-WZ-21	03-15-11	LANE CLOSURE WITH LEFT HAND MERGE AND LANE SHIFT
T-WZ-30	09-01-05	TRAFFIC CONTROL 2-LANE, 2-WAY DIVERSION (40 MPH OR LESS)

EROSION PREVENTION AND SEDIMENT CONTROL

EC-STR-2	08-01-12	SEDIMENT FILTER BAG
EC-STR-3B	04-01-08	SILT FENCE
EC-STR-3C	08-01-12	SILT FENCE WITH WIRE BACKING
EC-STR-3E	04-01-08	SILT FENCE FABRIC JOINING DETAILS
EC-STR-6A	08-01-12	ENHANCED ROCK CHECK DAM
EC-STR-11	08-01-12	CULVERT PROCTECTION TYPE 1
EC-STR-25	08-01-12	TEMPORARY CULVERT CROSSING, CONSTRUCTION EXIT, CONSTRUCTION FORD
EC-STR-27	08-01-12	TEMPORARY SLOPE DRAIN AND BERM
EC-STR-29	08-01-12	PERMANENT SLOPE DRAIN PIPE
EC-STR-31	08-01-12	TEMPORARY DIVERSION CHANNEL
EC-STR-31A	04-01-08	TEMPORARY DIVERSION CHANNEL DESIGN
EC-STR-32	08-01-12	TEMPORARY DIVERSION CULVERTS
EC-STR-33	08-01-12	SUSPENDED PIPE DIVERSON (DOWNSTREAM)
EC-STR-33A	08-01-12	SUSPENDED PIPE DIVERSON (UPSTREAM)
EC-STR-34	08-01-12	EROSION CONTROL BLANKET FOR SLOPE INSTALLATION
EC-STR-37	06-10-14	SEDIMENT TUBE
EC-STR-39	08-01-12	CURB INLET PROTECTION TYPE 1 & 2
EC-STR-39A	08-01-12	CURB INLET PROTECTION TYPE 3 & 4
EC-STR-42		CATCH BASIN FILTER ASSEMBLY (TYPE 2)
EC-STR-42A		CATCH BASIN FILTER ASSEMBLY (TYPE 2) SLIPCOVER DETAILS
EC-STR-47		CATCH BASIN FILTER ASSEMBLY (TYPE 7)
EC-STR-47A		CATCH BASIN FILTER ASSEMBLY (TYPE 7) SLIPCOVER DETAILS
EL-W-2	05-27-01	STANDARD GRAVITY-TYPE RETAINING WALLS

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2015	STP-101(16)	1B

REVISED 12-15-14:REVISED STD DWG S-GRT-2 AND S-GRT-4.

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INDEX AND STANDARD DRAWINGS

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2015	STP-101(16)	1C

REV 02-27-15: ADDED PROJECT COMMITMENTS PER ENV REQ.

PROJECT COMMITMENTS

COMMITMENT ID	SOURCE DIVISON	DESCRIPTION	STA. / LOCATION
EDHZ001	ENVIRONMENTAL DIVISION, HAZARDOUS MATERIALS	Some of the soil on Tract 4, located at 2529 Peavine Road (former C and K Market)Crossville, Cumberland County, Tennessee, that was used to backfill the tank pit excavation has concentrations of benzene and xylenes that are above TDUST residential Initial Screening Levels (ISLs), but below commercial ISLs. In order to prevent direct contact with the soil and possible exposure through contact and/or ingestion, contractors should follow their company's Health and Safety Plan regarding use of proper personal protective equipment (PPE) for work activities in this location. It is recommended that all personnel use engineered controls (rubber boots, gloves) and good hygienic practices if they must come into contact with the soil. If excess soil is generated at this location, it must not be removed from the tract without prior approval by the TDOT Hazmat Section. Contact TDOT Hazmat at 615-532-8684 for further information or to obtain a copy of the UST Closure Report.	Tract 4, located at 2529 Peavine Road (former C and K Market)

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DEPARTMENT OF TRANSPORTATION

PROJECT COMMITMENTS

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2015	STP-101(16)	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.)	202-06.01	REMOVAL OF BUILDINGS (TRACT NO.1)	LS	1
12.)	202-06.02	REMOVAL OF BUILDINGS (TRACT NO.4)	LS	1
12.)	202-06.03	REMOVAL OF BUILDINGS (TRACT NO.32)	LS	1
12.)	202-06.04	REMOVAL OF BUILDINGS (TRACT NO.36)	LS	1
12.)	202-06.05	REMOVAL OF BUILDINGS (TRACT NO.55)	LS	1
12.)	202-06.06	REMOVAL OF BUILDINGS (TRACT NO.58)	LS	1
12.)	202-06.07	REMOVAL OF BUILDINGS (TRACT NO.59)	LS	1
12.)	202-06.08	REMOVAL OF BUILDINGS (TRACT NO.62)	LS	1
12.)	202-06.09	REMOVAL OF BUILDINGS (TRACT NO.66)	LS	1
12.)	202-06.10	REMOVAL OF BUILDINGS (TRACT NO.74)	LS	1
12.)	202-06.11	REMOVAL OF BUILDINGS (TRACT NO.75)	LS	1
12.)	202-06.12	REMOVAL OF BUILDINGS (TRACT NO.76)	LS	1
12.)	202-06.13	REMOVAL OF BUILDINGS (TRACT NO.79)	LS	1
12.)	202-06.14	REMOVAL OF BUILDINGS (TRACT NO.80)	LS	1
10.)	203-01	ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED)	C.Y.	67808
	203-02.01	BORROW EXCAVATION (GRADED SOLID ROCK)	TON	5646
	203-03	BORROW EXCAVATION (UNCLASSIFIED)	C.Y.	65869
	203-04	PLACING AND SPREADING TOPSOIL	C.Y.	1131
	203-06	WATER	M.G.	23980
	204-08	FOUNDATION FILL MATERIAL	C.Y.	30
10.)	209-02.07	18" TEMPORARY SLOPE DRAIN	L.F.	154
10.)	209-05	SEDIMENT REMOVAL	C.Y.	3519
10.)	209-08.02	TEMPORARY SILT FENCE (WITH BACKING)	L.F.	3653
10.)	209-08.03	TEMPORARY SILT FENCE (WITHOUT BACKING)	L.F.	39196
10.)	209-08.07	ROCK CHECK DAM	EACH	20
10.)	209-08.08	ENHANCED ROCK CHECK DAM	EACH	88
10.)	209-09.01	SANDBAGS	BAG	1174
10.)	209-09.03	SEDIMENT FILTER BAG (15' X 15')	EACH	4
10.)	209-09.21	POLYACHLAMIDE GEL LOGS	EACH	886
10.)	209-09.22	POLYACHLAMIDE POWDER	LB.	4898
10.)	209-09.41	CURB INLET PROTECTION (TYPE 2)	EACH	27
10.)	209-09.43	CURB INLET PROTECTION (TYPE 4)	EACH	177
10.)	209-20.03	POLYETHYLENE SHEETING (6 MIL. MINIMUM)	S.Y.	81
10.)	209-40.41	CATCH BASIN FILTER ASSEMBLY(TYPE 1)	EACH	14
10.)	209-40.42	CATCH BASIN FILTER ASSEMBLY(TYPE 2)	EACH	12
10.)	209-40.45	CATCH BASIN FILTER ASSEMBLY(TYPE 5)	EACH	1
10.)	209-40.46	CATCH BASIN FILTER ASSEMBLY(TYPE 6)	EACH	84
10.)	209-40.47	CATCH BASIN FILTER ASSEMBLY(TYPE 7)	EACH	39
10.)	209-65.03	TEMPORARY DIVERSION CHANNEL	L.F.	431
	303-01	MINERAL AGGREGATE, TYPE A BASE, GRADING D	TON	117606
	303-01.01	GRANULAR BACKFILL (ROADWAY)	TON	391
11.)	303-01.03	GRANULAR BACKFILL (RETAINING WALLS)	TON	68
10.)	303-10.01	MINERAL AGGREGATE (SIZE 57)	TON	773
11.)	303-10.03	MINERAL AGGREGATE (SIZE 68)	TON	39
	307-01.08	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING B-M2	TON	1911
	307-02.01	ASPHALT CONCRETE MIX (PG70-22) (BPMB-HM) GRADING A	TON	22594
	307-02.02	ASPHALT CEMENT (PG70-22)(BPMB-HM) GRADING A-S	TON	548
	307-02.03	AGGREGATE (BPMB-HM) GRADING A-S MIX	TON	16301
	307-02.08	ASPHALT CONCRETE MIX (PG70-22) (BPMB-HM) GRADING B-M2	TON	16226
	402-01	BITUMINOUS MATERIAL FOR PRIME COAT (PC)	TON	246
	402-02	AGGREGATE FOR COVER MATERIAL (PC)	TON	942
	403-01	BITUMINOUS MATERIAL FOR TACK COAT (TC)	TON	140
	411-01.07	ACS MIX (PG64-22) GRADING E SHOULDER	TON	883
	411-01.10	ACS MIX(PG64-22) GRADING D	TON	2307
	411-02.10	ACS MIX(PG70-22) GRADING D	TON	9467
	411-12.02	SCORING SHOULDERS (NON-CONTINUOUS) (16IN WIDTH)	L.M.	2
	415-01.01	COLD PLANING BITUMINOUS PAVEMENT	TON	5707
11.)	604-01.01	CLASS A CONCRETE (ROADWAY)	C.Y.	187
	604-02.01	CLASS A CONCRETE (BOX BRIDGES)	C.Y.	95

ESTIMATED ROADWAY QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
	604-03.02	STEEL BAR REINFORCEMENT (BRIDGES)	LB.	21644
	607-03.02	18" CONCRETE PIPE CULVERT (CLASS III)	L.F.	17098
	607-05.02	24" CONCRETE PIPE CULVERT (CLASS III)	L.F.	1922
	607-06.02	30" CONCRETE PIPE CULVERT (CLASS III)	L.F.	437
	607-09.02	48" CONCRETE PIPE CULVERT (CLASS III)	L.F.	80
	611-07.31	18IN ENDWALL (SIDE DRAIN)	EACH	34
	611-07.54	18IN ENDWALL (CROSS DRAIN) 3:1	EACH	15
	611-07.56	18IN ENDWALL (CROSS DRAIN) 6:1	EACH	2
	611-07.57	24IN ENDWALL (CROSS DRAIN) 3:1	EACH	3
	611-07.58	24IN ENDWALL (CROSS DRAIN) 4:1	EACH	1
	611-07.60	30IN ENDWALL (CROSS DRAIN) 3:1	EACH	1
	611-07.61	30IN ENDWALL (CROSS DRAIN) 4:1	EACH	1
	611-12.01	CATCH BASINS, TYPE 12, 0' - 4' DEPTH	EACH	37
	611-12.02	CATCH BASINS, TYPE 12, > 4' - 8' DEPTH	EACH	35
	611-12.03	CATCH BASINS, TYPE 12, > 8' - 12' DEPTH	EACH	17
	611-12.04	CATCH BASINS, TYPE 12, > 12' - 16' DEPTH	EACH	6
	611-14.01	CATCH BASINS, TYPE 14, 0' - 4' DEPTH	EACH	11
	611-14.02	CATCH BASINS, TYPE 14, > 4' - 8' DEPTH	EACH	16
	611-14.03	CATCH BASINS, TYPE 14, > 8' - 12' DEPTH	EACH	4
	611-14.04	CATCH BASINS, TYPE 14, > 12' - 16' DEPTH	EACH	1
	611-38.01	CATCH BASINS, TYPE 38, 0' - 4' DEPTH	EACH	1
	611-42.01	CATCH BASINS, TYPE 42, 0' - 4' DEPTH	EACH	1
	611-42.02	CATCH BASINS, TYPE 42, > 4' - 8' DEPTH	EACH	1
	611-42.03	CATCH BASINS, TYPE 42, > 8' - 12' DEPTH	EACH	2
10.)	621-03.02	18" TEMPORARY DRAINAGE PIPE	L.F.	444
10.)	621-03.04	30" TEMPORARY DRAINAGE PIPE	L.F.	220
	701-01.02	CONCRETE SIDEWALK (6 ")	S.F.	55155
	701-02.03	CONCRETE HANDICAP RAMP	S.F.	9555
	702-03	CONCRETE COMBINED CURB & GUTTER	C.Y.	700
	705-02.02	SINGLE GUARDRAIL (TYPE 2)	L.F.	406
	705-04.03	GUARDRAIL TERMINAL (TYPE 13)	EACH	1
	705-04.07	TAN ENERGY ABSORBING TERM (NCHRP 350, TL3)	EACH	5
8.)	705-04.09	EARTH PAD FOR TYPE 38 GR END TREATMENT	EACH	5
10.)	705-08.51	PORTABLE IMPACT ATTENUATOR NCHRP350 TL-3	EACH	201
	707-08.11	HIGH-VISIBILITY CONSTRUCTION FENCE	L.F.	2501
10.)	708-02.01	MARKERS (CONCRETE R.O.W. POSTS)	EACH	154
10.)	709-05.05	MACHINED RIP-RAP (CLASS A-3)	TON	1457
	709-05.06	MACHINED RIP-RAP (CLASS A-1)	TON	3316
	709-05.08	MACHINED RIP-RAP (CLASS B)	TON	696
5.)	710-02	AGGREGATE UNDERDRAINS (WITH PIPE)	L.F.	22886
	712-01	TRAFFIC CONTROL	LS	1
	712-02.02	INTERCONNECTED PORTABLE BARRIER RAIL	L.F.	30040
	712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	EACH	521
	712-06	SIGNS (CONSTRUCTION)	S.F.	2547
	712-07.03	TEMPORARY BARRICADES (TYPE III)	L.F.	1214
	712-08.03	ARROW BOARD (TYPE C)	EACH	1
	712-09.04	REMOVABLE PAVEMENT MARKING (STOP LINE)	L.F.	20
	713-02.36	FLEXIBLE BARRIER DELINEATOR	EACH	43
	713-11.01	"U" SECTION STEEL POSTS	LB.	720
	713-11.02	PERFORATED/KNOCKOUT SQUARE TUBE POST	LB.	984
9.)	713-13.02	FLAT SHEET ALUMINUM SIGNS (0.080" THICK)	S.F.	133
	713-13.03	FLAT SHEET ALUMINUM SIGNS (0.100" THICK)	S.F.	291
	713-15	REMOVAL OF SIGNS, POSTS AND FOOTINGS	LS	1
	713-16.07	END OF ROADWAY SIGN AND SUPPORT	EACH	2
7.)	713-16.01	CHANGEABLE MESSAGE SIGN UNIT	EACH	3
6.)	716-01.11	RAISED PVMT MARKERS (BI-DIRECTIONAL) (1 COLOR LENS)	EACH	905
	716-01.13	RAISED PVMT MARKERS (BI-DIRECTIONAL) (2 COLOR LENS)	EACH	289
	716-01.21	SNWPLWBLE PVMT MRKRS (Bi-Dir)(1 Color)	EACH	423
	716-01.23	SNWPLWBLE PVMT MRKRS (Bi-Dir)(2 Color)	EACH	403
	716-02.04	PLASTIC PAVEMENT MARKING(CHANNELIZATION STRIPING)	S.Y.	88
	716-02.05	PLASTIC PAVEMENT MARKING (STOP LINE)	L.F.	410

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ESTIMATED ROADWAY QUANTITIES

SHEET 1 OF 2

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2015	STP-101(16)	2A

ESTIMATED ROADWAY QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
	716-02.06	PLASTIC PAVEMENT MARKING (TURN LANE ARROW)	EACH	38
	716-02.08	PLASTIC PAVEMENT MARKING (8" DOTTED LINE)	L.F.	200
	716-02.09	PLASTIC PAVEMENT MARKING (LONGITUDINAL CROSS-WALK)	L.F.	160
	716-04.01	PLASTIC PAVEMENT MARKING (STRAIGHT-TURN ARROW)	EACH	1
	716-04.05	PLASTIC PAVEMENT MARKING (STRAIGHT ARROW)	EACH	1
	716-04.14	PLASTIC PAVEMENT MARKING (LANE REDUCTION ARROW)	EACH	2
	716-05.01	PAINTED PAVEMENT MARKING (4" LINE)	L.M.	34.3
	716-05.04	PAINTED PAVEMENT MARKING (CHANNELIZATION STRIPING)	S.Y.	175
	716-05.05	PAINTED PAVEMENT MARKING (STOP LINE)	L.F.	774
	716-05.06	PAINTED PAVEMENT MARKING (TURN LANE ARROW)	EACH	45
	716-05.11	PAINTED PAVEMENT MARKING(STRAIGHT ARROW)	EACH	2
	716-05.21	PAINTED PAVEMENT MARKING(4"DOTTED LINE)	L.F.	400
5.)	716-05.22	PAINTED PAVEMENT MARKING (LONGITUDINAL CROSS-WALK)	L.F.	160
5.)	716-08.01	REMOVAL OF PAVEMENT MARKING (LINE)	L.F.	42243
5.)	716-08.04	STRIPING)	S.Y.	107
	716-08.05	REMOVAL OF PAVEMENT MARKING (STOP LINE)	L.F.	60
	716-12.02	ENHANCED FLATLINE THERMO PVMT MRKNG (6IN LINE)	L.M.	19.9
10.)	717-01	MOBILIZATION	LS	1
10.)	740-10.03	GEOTEXTILE (TYPE III)(EROSION CONTROL)	S.Y.	11332
	740-10.04	GEOTEXTILE (TYPE IV)(STABILIZATION)	S.Y.	4840
	740-11.03	TEMPORARY SEDIMENT TUBE 18IN (DESCRIPTION)	L.F.	13530
1.)	801-01	SEEDING (WITH MULCH)	UNIT	153
	801-01.02	CROWN VETCH MIXTURE (WITH MULCH)	UNIT	154
3.)	801-02	SEEDING (WITHOUT MULCH)	UNIT	67
	801-03	WATER (SEEDING & SODDING)	M.G.	2443
	801-07	SEED (SUPPLEMENTAL APPLICATION)	LB.	34
	801-07.01	CROWN VETCH SEED (SUPPLEMENTAL APPLICATION)	LB.	35
	801-08	FERTILIZER (SUPPLEMENTAL APPLICATION)	TON	1
	802-11.02	ACER RUBRUM (RED MAPLE 2-5FT CNTNR GRWN)	EACH	7
	802-11.39	QUERCUS RUBRA (NORTHERN RED OAK 2-5FT CNTNR GRWN)	EACH	8
	802-12.01	ACER NEGUNDO (BOX ELDER SEEDLNG B.R.)	EACH	8
	802-12.02	ACER RUBRUM (RED MAPLE SEEDLNG B.R.)	EACH	7.00
	802-12.40	SALIX NIGRA (BLACK WILLOW SEEDLNG B.R.)	EACH	8
2.)	803-01	SODDING (NEW SOD)	S.Y.	25521
	805-01.02	TURF REINFORCEMENT MAT (CLASS II)	S.Y.	1859
10.)	805-12.02	EROSION CONTROL BLANKET (TYPE II)	S.Y.	9962
4.)	806-02.03	PROJECT MOWING	CYCL	6

FOOTNOTES

1.) ITEM NO.801-01.02, CROWN VETCH MIXTURE(WITH MULCH), AND DESCRIPTION SHALL BE USED ON SLOPES 3H:1V OR STEEPER AND OTHER AREAS, AS INDICATED IN THE PLANS, THAT ARE INACCESSIBLE FOR MOWING.
2.) INCLUDES 732 S.Y. FOR DITCHES.
3.) INCLUDES 188 THOUSAND GALLONS FOR EROSION PREVENTION AND SEDIMENT CONTROL.
4.) ITEM INCLUDES LITTER AND TRASH REMOVAL. THIS WORK WILL NOT BE MEASURED AND PAID FOR DIRECTLY BUT WILL BE INCLUDED IN THE COST OF ITEM NO.806-02.03, PROJECT MOWING, CYCL.
5.) ANY ADDITIONAL REMOVAL OF PAVEMENT MARKINGS WILL BE PAID FOR UNDER ITEM 712-01
6.) CLEAR/RED
7.) YELLOW
8.) THIS ITEM SHALL BE A PORTABLE ENERGY ABSORBING TERMINAL MEETING THE REQUIRMENTS 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.
9.) REMOVE SIGN FACE AND SUPPORT (NO FOOTINGS ON THESE SIGNS) ON SIGN NO'S. 1 & 2 AND APPROXIMATELY 30 EXISTING SIGNS AND SUPPORTS WITHIN THE GRADING LIMITS OF THE PROJECT AND ANY OTHER CONFLICTING SIGNING OR AS DIRECTED BY THE ENGINEER.
10.) SEE SUBSECTION 209.07 OF THE STANDARD SPECIFICATIONS FOR MAINTENANCE REPLACEMENT AND ALL QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER.
11.) QUANTITIES INCLUDED FOR RETAINING WALL. (SEE SHEET 2F FOR DETAILS)
12.) BID PRICE INCLUDES ALL SALVAGE VALUE OF MATERIAL. SEE TABULATED QUANTITIES SHEET NO. 2T FOR REMOVAL OF BUILDINGS AND OBSTRUCTIONS DESCRIPTION BLOCK.

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ESTIMATED ROADWAY QUANTITIES

SHEET 2 OF 2

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GENERAL NOTES

GRADING

(1) ANY AREA THAT IS DISTURBED OUTSIDE LIMITS OF CONSTRUCTION DURING THE LIFE 0F THIS PROJECT SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.

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

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

SEEDING AND SODDING

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

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

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

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

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

GUARDRAIL

(1) THE CONTRACTOR SHALL NOT REMOVE ANY SECTIONS OF EXISTING GUARDRAIL TO REWORK SHOULDERS OR FLATTEN SLOPES UNTIL THE ENGINEER CONCURS IN THE NECESSITY OF REMOVAL DUE TO CONSTRUCTION REQUIREMENTS AND THE APPROPRIATE WARNING DEVICES ARE INSTALLED. THE PROPOSED GUARDRAIL, INCLUDING ANY ANCHOR SYSTEM, SHALL BE INSTALLED QUICKLY TO MINIMIZE TRAFFIC EXPOSURE TO ANY HAZARD. NO PAYMENT WILL BE MADE FOR A SECTION OF PROPOSED GUARDRAIL, INCLUDING ANCHORS, UNTIL IT IS COMPLETE IN PLACE.

(2) 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.

(3) 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.

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

DRAINAGE

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

(2) EXCAVATION FOR PROPOSED 6' X 4' BOX WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT WILL BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF PIPE (PIPE CULVERTS, STORM SEWERS, CONDUITS, ALL OTHER CULVERTS AND MINOR STRUCTURES).

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

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

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

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

UTILITIES

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

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

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

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

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

MISCELLANEOUS

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

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

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

PAVEMENT MARKINGS

TEMPORARY PAVEMENT MARKING ON INTERMEDIATE LAYERS

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

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GENERAL NOTES
AND
SPECIAL NOTES

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GENERAL NOTES CONTINUED...

FINAL PAVEMENT MARKING IF 6" ENHANCED FLATLINE THERMOPLASTIC IS USED

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

DETOURS, LANE SHIFTS AND MEDIAN CROSS-OVERS

(3) THE PAVEMENT MARKING ON THE LANE SHIFT FOR SR-101 ON PHASE 2 WILL BE INSTALLED AND MAINTAINED TO THE SAME STANDARDS AS FOR PERMANENT MARKINGS ON THE MAIN ROADWAY. THESE MARKINGS SHALL BE IN PLACE PRIOR TO ALLOWING TRAFFIC ONTO THE PAVEMENT. THESE PAVEMENT MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-05.01, LIN. MI.

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

PAVEMENT

PAVING

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

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

RESURFACING

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

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

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

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

SIGNING

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

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

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

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

(5) 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 ROADWAY 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.

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

TRAFFIC CONTROL DIRECTIONAL SIGNING

(1) ON ALL ACCESS CONTROLLED AND INTERSTATE RECONSTRUCTION AND NEW CONSTRUCTION PROJECTS, THE CONTRACTOR SHALL UTILIZE ALL EXISTING DIRECTIONAL SIGNING FOR AS LONG AS POSSIBLE. THESE EXISTING SIGNS CAN BE MOVED USING TEMPORARY SUPPORTS AS NEEDED. AS SOON AS THESE EXISTING DIRECTIONAL SIGNS COME DOWN PERMANENTLY, THE CONTRACTOR SHALL HAVE UP AT LEAST ONE NEW TEMPORARY "ADVANCE GUIDE SIGN" AND ONE NEW TEMPORARY "EXIT DIRECTIONAL SIGN" AT ALL EXIT RAMPS. THESE SIGNS ARE TO BE MAINTAINED WITHIN CLEAR VIEW OF THE PUBLIC ON THE RIGHT SIDE OF THE HIGHWAY AND SHALL BE REPLACED IF DAMAGED, DURING ALL PHASES OF CONSTRUCTION, AS DIRECTED BY THE ENGINEER.

(2) THE SIZE OF THESE NEW TEMPORARY SIGNS WILL BE DETERMINED BY THE MESSAGE. THE MESSAGE SHALL BE THE SAME AS THE EXISTING SIGN THAT THESE NEW TEMPORARY SIGNS WILL BE REPLACING. THE LETTER SIZE SHALL BE A MINIMUM OF 8 INCH, "D" UPPER CASE LETTER. THE DIRECTIONAL ARROW WILL BE A "B" ARROW AT A 45 DEGREE ANGLE (SAME ANGLE AS THE EXISTING ARROW). THE MATERIAL SHALL BE 0.100 INCH SHEET ALUMINUM; THE COLOR SHALL BE A REFLECTIVE GREEN BACKGROUND WITH REFLECTIVE WHITE COPY.

(3) ALL WORK AND MATERIAL TO MAKE THESE NEW TEMPORARY DIRECTIONAL SIGNS ALONG WITH ADEQUATE SUPPORTS AND TO MOVE THEM AS NEEDED DURING EACH PHASE OF CONSTRUCTION WILL BE PAID FOR UNDER ITEM NO. 712-01 AS DIRECTED BY THE ENGINEER.

(4) ALL EXISTING "EMERGENCY REFERENCE MARKERS" AND "HOSPITAL SIGNS" SHALL BE MAINTAINED WITHIN FULL VIEW OF THE MOTORING PUBLIC THROUGHOUT ALL PHASES OF CONSTRUCTION. ALL WORK IN MOVING AND TEMPORARY SUPPORTS SHALL BE PAID FOR UNDER ITEM NO. 712-01.

(5) WHEN "LOGO" SIGNS ARE ON ACCESS CONTROLLED AND INTERSTATE RECONSTRUCTION AND NEW CONSTRUCTION PROJECTS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING THESE SIGNS IN FULL VIEW TO THE MOTORING PUBLIC DURING ALL PHASES OF CONSTRUCTION.

(6) THE CONTRACTOR SHALL BE HELD RESPONSIBLE TO THE DEPARTMENT FOR THE REIMBURSEMENT OF THE SIGN FACE IF IT IS DAMAGED. ALL WORK IN MOVING THESE "LOGO" SIGNS AND THE TEMPORARY SUPPORTS ARE TO BE PAID FOR UNDER ITEM NO. 712-01, AS DIRECTED BY THE ENGINEER. THE SUPPORTS FOR THE FINAL LOCATION OF THESE SIGNS WILL BE PAID FOR UNDER OTHER ITEMS OF CONSTRUCTION.

(7) WHEN EXISTING "TOURIST ORIENTED DIRECTIONAL SIGNS" (TODS) ARE ON NON-ACCESS CONTROLLED CONSTRUCTION PROJECTS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING THESE SIGNS IN FULL VIEW TO THE MOTORING PUBLIC DURING ALL PHASES OF CONSTRUCTION. ALL WORK IN MOVING THESE "TODS" AND TEMPORARY SUPPORTS ARE TO BE PAID FOR UNDER ITEM NO. 712-01, AS DIRECTED BY THE ENGINEER. NEW SUPPORTS AND SIGN FACE FOR FINAL LOCATION WILL BE PAID FOR UNDER OTHER ITEMS OF CONSTRUCTION.

SIGNALIZATION

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

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

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

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

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

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

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.

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STATE OF TENNESSEE
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GENERAL NOTES AND SPECIAL NOTES

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GENERAL NOTES CONTINUED...

(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

(7) 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.

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

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

EROSION PREVENTION AND SEDIMENT CONTROL

DISTURBED AREA

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

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

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

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

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

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

SEDIMENT CONTROL

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

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

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

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

(11) FOR AN OUTFALL IN A DRAINAGE AREA OF 10 ACRES OR MORE, A TEMPORARY (OR PERMANENT) SEDIMENT BASIN OR EQUIVALENT CONTROL MEASURES THAT PROVIDES STORAGE FOR A CALCULATED VOLUME OF RUNOFF FROM A MINIMUM 2-YEAR/ 24-HOUR STORM EVENT, SHALL BE PROVIDED UNTIL FINAL STABILIZATION OF THE SITE. THE ENVIRONMENTAL AND ROADWAY DESIGN DIVISIONS MAY BE CONTACTED TO REVIEW AND CONCUR WITH ANY REVISION OF THE SWPPP BEFORE DISTURBANCE OF THE OUTFALL PROCEEDS.

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

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

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

STREAM/WETLAND

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

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

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

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

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

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

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

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

SPECIES

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

INSPECTION, MAINTENANCE, REPAIR

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

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

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

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

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GENERAL NOTES AND SPECIAL NOTES

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2015	STP-101(16)	2L

GENERAL NOTES CONTINUED...

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

(29) UPON CONCLUSION OF THE INSPECTIONS, EPSC MEASURES FOUND TO BE INEFFECTIVE SHALL BE REPAIRED, REPLACED, OR MODIFIED BEFORE THE NEXT RAIN EVENT, IF POSSIBLE, BUT IN NO CASE MORE THAN 24 HOURS AFTER THE INSPECTION OR WHEN THE CONDITION IS IDENTIFIED. IF THE REPAIR, REPLACEMENT OR MODIFICATION IS NOT PRACTICAL WITHIN THE TIMEFRAME, WRITTEN DOCUMENTATION MUST BE PROVIDED IN THE FIELD BOOK AND AN ESTIMATED REPAIR, REPLACEMENT OR MODIFICATION SCHEDULE SHALL BE DOCUMENTED WITHIN 24 HOURS AFTER IDENTIFICATION.

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

MATERIALS

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

SWPPP, PERMITS, PLANS, RECORDS

(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 ENGINEER. THE ENVIRONMENTAL DIVISION, ROADWAY DESIGN DIVISION, AND HEADQUARTERS CONSTRUCTION OFFICE SHALL BE CONTACTED IN THESE INSTANCES AND DECIDE WHICH HAS PRECEDENCE AND WHETHER PERMIT OR PLANS REVISIONS ARE NEEDED. IN GENERAL, PERMIT CONDITIONS WILL PREVAIL.

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

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

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

(37) THE SWPPP SHALL BE UPDATED BY CONSTRUCTION WHENEVER EPSC INSPECTIONS INDICATE, OR WHERE STATE OR FEDERAL OFFICIALS DETERMINE EPSC MEASURES ARE PROVING INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANT SOURCES OR ARE OTHERWISE NOT ACHIEVING THE GENERAL OBJECTIVES OF CONTROLLING POLLUTANTS IN STORM WATER DISCHARGES ASSOCIATED WITH THE CONSTRUCTION ACTIVITY. THE ENVIRONMENTAL DIVISION SHALL BE CONTACTED WHEN MAJOR DESIGN REVISIONS ARE REQUESTED BY CONSTRUCTION. THE ENVIRONMENTAL DIVISION MAY BE CONTACTED FOR GUIDANCE ON SPECIFIC SWPPP NEEDS. A COPY OF ANY CORRESPONDENCE REGARDING THE EFFECTIVENESS OF THE SWPPP OR EPSC CONTROLS SHALL BE RETAINED IN THE SWPPP.

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

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

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

LITTER, DEBRIS, WASTE, PETROLEUM

(41) 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.

(42) 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.

SPECIAL NOTES

GRADING

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

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

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

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

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

PAVEMENT RESURFACING

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

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

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

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

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

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

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

SIGNALIZATION

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

EROSION PREVENTION AND SEDIMENT CONTROL

NPDES

(1) REFER TO THE EROSION PREVENTION AND SEDIMENT CONTROL PLAN, SHEET 32A, FOR NOTES REGARDING SEASONAL WORK LIMITATION OR LIMITATION ON THE TOTAL AREA OF EXPOSED SOIL.

ENVIRONMENTAL

ECOLOGY

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

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

STREAM RELOCATION

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

SOILS

(1) SOILS ON PLATEAU ARE COMMONLY SANDY SILTS (A-2-4, A-4, ETC.), WHICH ARE THE WEATHERING PRODUCTS OF SANDSTONE AND SHALE. CUTS ON THE JOB RARELY EXCEED 5 FEET, WHEREAS FILL DEPTHS MAY BE UP TO 10 FEET DEEP. SOME CUTS MAY INCLUDE WEATHERED SANDSTONE CHARECTERIZED BY THIN BEDS LOOSELY HELD TOGETHER AND EASILY RIPPABLE. HENCE, TREAT ALL CUTS AS SOIL SLOPES.

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GENERAL NOTES AND SPECIAL NOTES

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	30
CONST	2015	STP-101(16)	30

REV. 08-20-12 - ADDED CONTOURS, ENVIRONMENTAL FEATURES, AND DRAINAGE TABLE
REV. 11-26-12 - ADDED DRAINAGE AREA 3
REV. 5-22-13 - REVISED DRAINAGE MAP. CHANGED SCALE. REMOVED PHASE 2.

STP-101(16)
BEGIN PROJECT
NO. 18038-3240-14
(CONST.)
STA. 58+86.00

STP-101(16)
BEGIN PROJECT NO. 18038-2237-14(R.O.W.)
STA. 66+54.40

DRAINAGE TABLE

DRAINAGE AREA	AREA (ac.)	Q_{50} (cfs)	Q_{100} (cfs)	C COEFFICIENT OF RUNOFF	T_c (min)
1	89.82	143.71	172.45	0.40	37
2	81.04	129.67	155.61	0.40	37
3	1.20	2.64	2.98	0.40	19

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DRAINAGE MAP

STA.58+86 TO STA.150+00
SCALE: 1"=400'

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	30A
CONST	2015	STP-101(16)	30A

REV. 08-20-12 - ADDED CONTOURS AND ENVIRONMENTAL FEATURES.

REV. 11-26-12 - ADDED DRAINAGE AREA 3

REV. 5-22-13 - REVISED DRAINAGE MAP. CHANGED SCALE. REMOVED PHASE 2.

N

STP-101(16)
END PHASE 1 PROJ. NO. 18038-3240-14 (CONST.)
STA. 218+62.00

STP-101(16)
END PHASE 1 PROJ. NO. 18038-2237-14 (R.O.W.)
STP-101(17)
BEGIN PHASE 2 PROJ. NO. 18038-2238-14 (R.O.W.)
STA. 220+85.00

MATCH LINE STA. 150+00 SEE SHEET NO.30

6.156 ACRES

6.156 ACRES

11.678 ACRES

24.687 ACRES

1.521 ACRES

15" CMP
STA. 210+46

15" CMP
STA. 208+80

SHORTY BARNES RD.

FAIRVIEW DR.

FAIRVIEW ESTATES

SPRING LAKE

GEORGE DR.

LAKE ST. GEORGE

3

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DRAINAGE MAP

STA.150+00 TO STA.218+62

SCALE: 1"=400'

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	31
CONST	2015	STP-101(16)	31

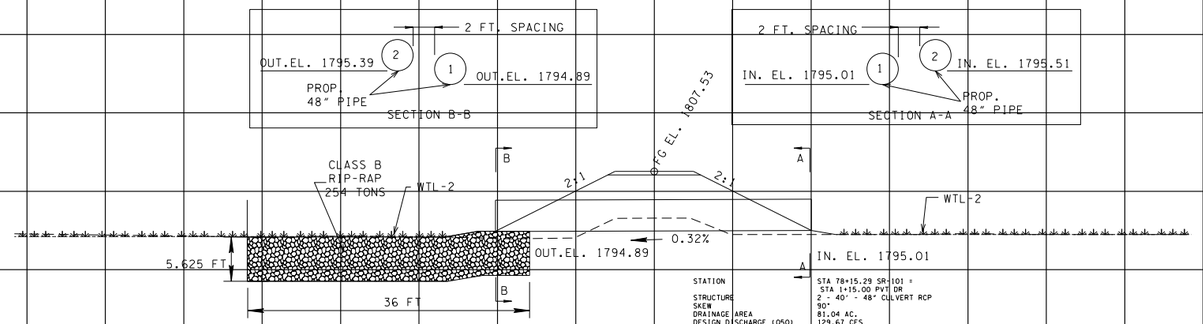
REV. 08-20-12 - REMOVED 24" CULVERT CROSS-SECTION AND ADDED SR101 STA 75+43.76 AND SR101 STA 78+15.29 CROSS SECTION

REV. 09-24-12 - CHANGED CULV ON PRIVATE DRIVE. REVISED BOX CULV AT STA.75+43. ADDED SPECIAL DITCH PROFILE.

REV. 11-26-12 - ADDED BACKFILL CROSS SECTIONS

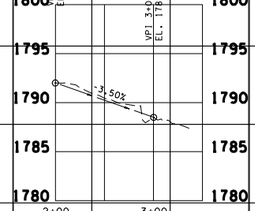
REV. 5-22-13 - UPDATE YEAR.
REV. 5-29-13 - ADJUSTED QTYS AT STA.75+43.76.

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

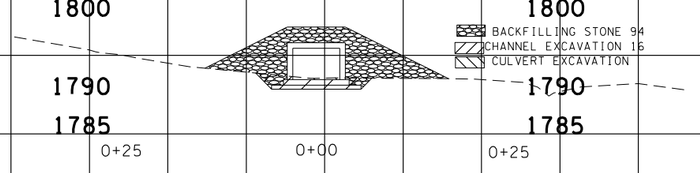


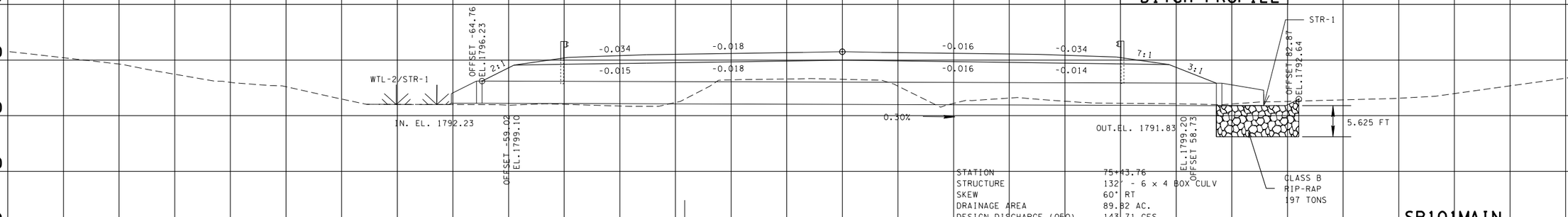
STATION	STA 78+15.29 SR-101 = STA 1+15.00 PVT DR
STRUCTURE	2 - 40" - 48" CULVERT RCP
SKEW	90°
DRAINAGE AREA	81.04 AC.
DESIGN DISCHARGE (050)	129.67 CFS
DESIGN DISCHARGE (0100)	155.61 CFS
OVERTOPPING ELEV.	1802.53
ALLOWABLE HEADWATER ELEV.	1799.42
050 HEADWATER ELEV.	1798.93
0100 HEADWATER ELEV.	1799.42
OUTLET VELOCITY (050)	8.12 FT/S
OUTLET VELOCITY (0100)	8.77 FT/S
INLET ELEVATION	1795.01
OUTLET ELEVATION	1794.89
STANDARD DRAWINGS NUMBERS	D-PB-1

SR101MAIN
78+15.29



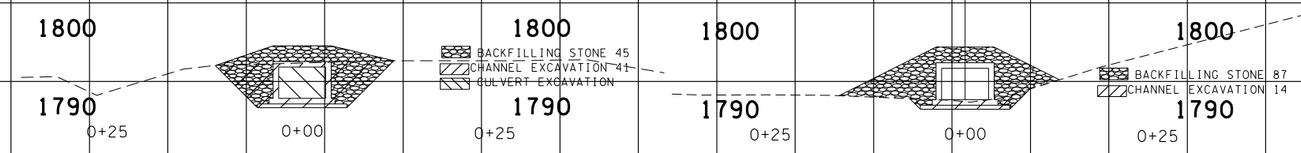
STR-1 SPECIAL DITCH PROFILE





STATION	75+43.76
STRUCTURE	132' - 6 x 4 BOX CULV
SKEW	60° RT
DRAINAGE AREA	89.82 AC.
DESIGN DISCHARGE (050)	143.71 CFS
DESIGN DISCHARGE (0100)	172.45 CFS
OVERTOPPING ELEV.	1799.10
ALLOWABLE HEADWATER ELEV.	1799.10
050 HEADWATER ELEV.	1796.63
0100 HEADWATER ELEV.	1797.19
OUTLET VELOCITY (050)	9.15 FT/S
OUTLET VELOCITY (0100)	9.72 FT/S
INLET ELEVATION	1792.23
OUTLET ELEVATION	1791.83
STANDARD DRAWING NUMBERS	STD-15-16A, STD-15-35
CLASS "A" CONCRETE	94.96 C.Y.
STEEL BAR REINFORCING	21644 LB.
FOUNDATION FILL MATERIAL	30.14 C.Y.

SR101MAIN
75+43.76



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CULVERT CROSS-SECTIONS

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

140+00 120+00 100+00 80+00 60+00 40+00 20+00 0+00 20+00 40+00 60+00 80+00 100+00 120+00

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	31A
CONST	2015	STP-101(16)	31A

REV. 5-22-13 - ADDED SHEET.

TENNESSEE D.O.T.
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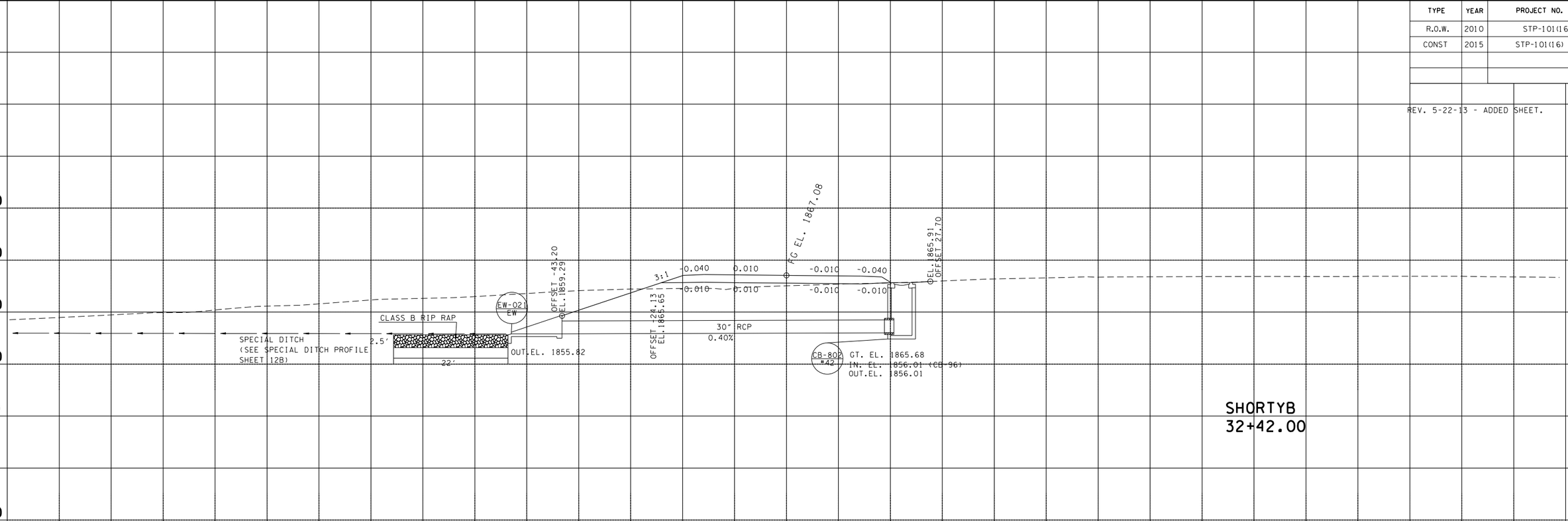
FILE NO.



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CULVERT CROSS-SECTIONS

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

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	31B
CONST	2015	STP-101(16)	31B

REV. 09-24-12 - ADDED SHEET.
REV. 11-26-12 - ADDED SPRING LAKE RD CULVERT
REV. 5-22-13 - RENUMBERED SHEET 31D TO 31B.
UPDATE YEAR, ADDED SR101 CROSS DRAIN .

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

STA. 8+25.00
43' OF 18" PIPE CULVERT
SKEW 90°
ENDWALLS REQD. : TYPE U W/O GRATE
STD. DWG. NOS. D-PE-18A, D-PE-18B
D.A. = 1.20 AC.
Q50 = 2.64 CFS
Q100 = 2.98 CFS
W.S. ELEV. (50) = 1864.45
W.S. ELEV. (100) = 1864.52

SPRING LAKE ROAD
8+25.00

SR101MAIN
179+85.26

STA. 32+37.16
49'-18" PIPE CULVERT
SKEW 90°
ENDWALLS REQD. : TYPE U W/O GRATE
STD. DWG. NOS. D-PE-18A, D-PE-18B
D.A. = 3.02 AC.
Q50 = 6.64 CFS
Q100 = 7.48 CFS
W.S. ELEV. (50) = 1875.39
W.S. ELEV. (100) = 1875.60

FAIRVIEW DRIVE
32+37.16

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CULVERT CROSS-SECTIONS

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

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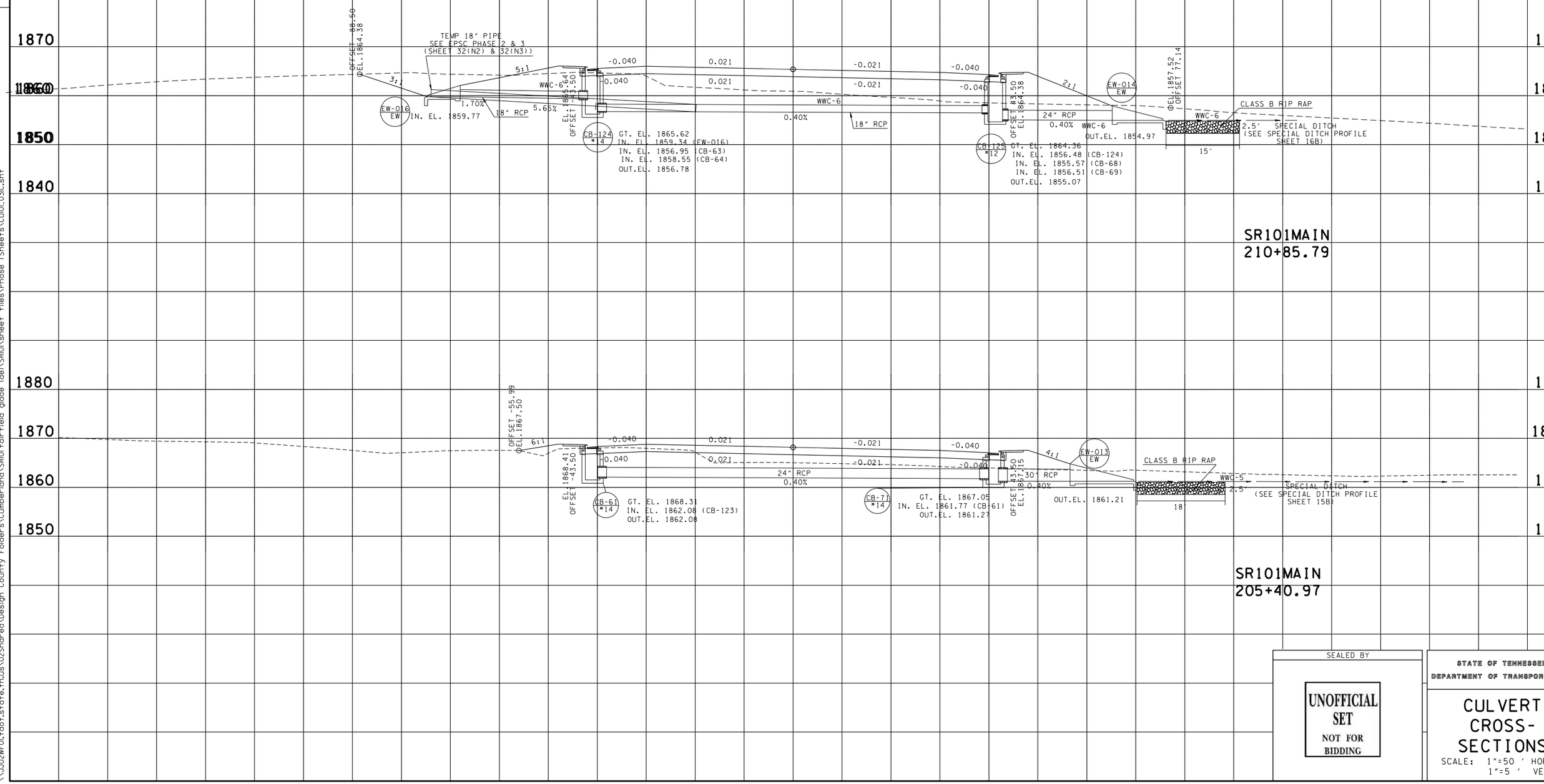
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	31C
CONST	2015	STP-101(16)	31C

REV. 5-22-13 - ADDED SHEET.

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



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CULVERT CROSS-SECTIONS

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

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

EROSION PREVENTION AND SEDIMENT CONTROL NOTES

STREAM/WETLAND

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

(2) A 30 FOOT NATURAL RIPARIAN BUFFER ZONE ADJACENT TO AND ON BOTH SIDES OF THE RECEIVING STREAM SHALL BE PRESERVED, TO THE MAXIMUM EXTENT PRACTICABLE, DURING CONSTRUCTION ACTIVITIES AT THE SITE. BUFFER ZONES ARE NOT SEDIMENT CONTROL MEASURES AND SHOULD NOT BE RELIED UPON AS PRIMARY SEDIMENT CONTROL MEASURES. THE RIPARIAN BUFFER ZONE SHALL BE ESTABLISHED BETWEEN THE TOP OF THE STREAM BANK AND THE DISTURBED CONSTRUCTION AREA. THE 30 FOOT CRITERION FOR THE WIDTH OF THE BUFFER ZONE CAN BE ESTABLISHED ON AN AVERAGE WIDTH BASIS AT A PROJECT, AS LONG AS THE MINIMUM WIDTH OF THE BUFFER ZONE IS MORE THAN 15 FEET AT ANY MEASURED LOCATION. EVERY ATTEMPT SHALL BE MADE FOR CONSTRUCTION ACTIVITIES NOT TO TAKE PLACE WITHIN THE BUFFER ZONES. BEST MANAGEMENT PRACTICES (BMPS) PROVIDING EQUIVALENT PROTECTION AS THE NATURAL RIPARIAN ZONE MAY BE USED. A JUSTIFICATION FOR USE AND DESIGN EQUIVALENCY SHALL BE DOCUMENTED WITHIN THE SWPPP. THE ENVIRONMENTAL AND DESIGN DIVISIONS SHALL REVIEW AND APPROVE THIS REVISION OF THE SWPPP BEFORE DISTURBANCE OF THE SITE PROCEEDS, UNLESS PREVIOUSLY EXEMPT IN THE NPDES CONSTRUCTION GENERAL PERMIT. WHERE ISSUED, ARAP/401 REQUIREMENTS WILL PREVAIL IF IN CONFLICT WITH THESE BUFFER ZONE REQUIREMENTS.

NPDES

(3) NO WORK SHALL BE STARTED UNTIL THE CONTRACTOR'S PLAN FOR THE STAGING OF THEIR OPERATIONS, INCLUDING THE PLAN FOR STAGING OF TEMPORARY AND PERMANENT EPSC MEASURES, HAS BEEN ACCEPTED BY THE ENGINEER. THE CONTRACTOR'S EPSC PLAN SHALL INCORPORATE AND SUPPLEMENT, AS ACCEPTABLE, THE BASIC EPSC DEVICES ON THE EPSC PLAN CONTAINED IN THE APPROVED SWPPP.

(4) 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.

(5) THE ACCEPTED EPSC PLAN SHALL REQUIRE THAT EPSC MEASURES BE IN PLACE BEFORE CLEARING, GRUBBING, EXCAVATION, GRADING, CUTTING OR FILLING OCCURS, EXCEPT AS SUCH WORK MAY BE NECESSARY TO INSTALL EPSC MEASURES, INCLUDING WITHOUT LIMITATION AS FOLLOWS:

A. INITIAL CLEARING AND GRUBBING SHALL BE LIMITED TO THAT NECESSARY FOR THE INSTALLATION OF APPLICABLE EPSC MEASURES IN ACCORDANCE WITH THE ACCEPTED EPSC PLAN INCORPORATED INTO THE SWPPP.

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

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

D. NO GRADING, EXCAVATION, CUTTING, FILLING, OR OTHER EARTHWORK SHALL BE STARTED BEFORE EPSC MEASURES ARE IN PLACE IN ACCORDANCE WITH THE ACCEPTED EPSC PLAN INCORPORATED INTO THE SWPPP.

(6) 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.

(7) 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.

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

(9) 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

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

(11) 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

(12) 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).

(13) 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.

(14) 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.

(15) 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.

(16) 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.

(17) 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.

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

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

POLYACRYLAMIDE

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

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

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

(25) MIXTURE IS NON-COMBUSTIBLE.

(26) CONTAINS ONLY MANUFACTURER'S RECOMMENDED ADDITIVES.

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

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

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

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

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

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

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	32
CONST	2015	STP-101(16)	32

REV. 08-20-12 - UPDATED EPSC NOTES.

REV. 5-22-13 - UPDATED EPSC NOTES. UPDATE YEAR.

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EROSION PREVENTION AND SEDIMENT CONTROL NOTES

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	32(1A)
CONST	2015	STP-101(16)	32(1A)

REV 11-26-12- ADDED SHEET
REV 5-22-13- UPDATE SHEET. UPDATE YEAR.

EPSC QUANTITIES

PHASE	PAY ITEMS																										
	203-01 (C.Y.)	209-02.07 (L.F.)	209-05 (C.Y.)	209-08.02 (L.F.)	209-08.03 (L.F.)	209-08.07 (EACH)	209-08.08 (EACH)	209-09.01 (BAG)	209-09.03 (EACH)	209-09.41 (EACH)	209-09.43 (EACH)	209-20.03 (S.Y.)	209-40.41 (L.F.)	209-40.42 (L.F.)	209-40.45 (L.F.)	209-40.46 (L.F.)	209-40.47 (L.F.)	209-65.03 (L.F.)	303-10.01 (TON)	621-03.02 (L.F.)	621-03.03 (L.F.)	621-03.04 (L.F.)	707-08.11 (L.F.)	709-05.05 (TON)	709-05.06 (TON)	740-10.03 (S.Y.)	740-11.03 (L.F.)	805-12.02 (S.Y.)
1	50			948	17705	7	25									2	2		4	0			578	250	23	1051	1229	
2	1531		1453	888	11790	1	20		1				13	8	1	44	20	237	437	224		220	1266	550	1670	4914	4747	
3	2379	154	1797	942	8201	9	25	1174	2	27	46	81	1	2		38	16	194	290	254	34		147	557	1396	4658	5034	1197
4	283		269	875	1500	3	18		1		131			2			1		42				510	100	227	710	2520	8765
TOTALS	4244	154	3519	3653	39196	20	88	1174	4	27	177	81	14	12	1	84	39	431	773	478	34	220	2501	1457	3316	11332	13530	9962

EROSION PREVENTION AND SEDIMENT CONTROL QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
203-01	ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED)	C.Y.	4244
209-02.07	18" TEMPORARY SLOPE DRAIN	L.F.	154
209-05	SEDIMENT REMOVAL	C.Y.	3519
209-08.02	TEMPORARY SILT FENCE (WITH BACKING)	L.F.	3653
209-08.03	TEMPORARY SILT FENCE (WITHOUT BACKING)	L.F.	39196
209-08.07	ROCK CHECK DAM	EACH	20
209-08.08	ENHANCED ROCK CHECK DAM	EACH	88
209-09.01	SANDBAGS	BAG	1761
209-09.03	SEDIMENT FILTER BAG (15' X 15')	EACH	4
209-09.21	POLYACHLAMIDE GEL LOGS	EACH	886
209-09.22	POLYACHLAMIDE POWDER	LB.	4898
209-09.41	CURB INLET PROTECTION (TYPE 2)	EACH	27
209-09.43	CURB INLET PROTECTION (TYPE 4)	EACH	177
209-20.03	POLYETHYLENE SHEETING (6 MIL. MINIMUM)	S.Y.	122
209-40.41	CATCH BASIN FILTER ASSEMBLY(TYPE 1)	EACH	14
209-40.42	CATCH BASIN FILTER ASSEMBLY(TYPE 2)	EACH	12
209-40.45	CATCH BASIN FILTER ASSEMBLY(TYPE 5)	EACH	1
209-40.46	CATCH BASIN FILTER ASSEMBLY(TYPE 6)	EACH	84
209-40.47	CATCH BASIN FILTER ASSEMBLY(TYPE 7)	EACH	39
209-65.03	TEMPORARY DIVERSION CHANNEL	L.F.	431
303-10.01	MINERAL AGGREGATE (SIZE 57)	TON	773
621-03.02	18" TEMPORARY DRAINAGE PIPE	L.F.	478
621-03.03	24" TEMPORARY DRAINAGE PIPE	L.F.	34
621-03.04	30" TEMPORARY DRAINAGE PIPE	L.F.	220
707-08.11	HIGH-VISIBILITY CONSTRUCTION FENCE	L.F.	2501
709-05.05	MACHINED RIP-RAP (CLASS A-3)	TON	1457
709-05.06	MACHINED RIP-RAP (CLASS A-1)	TON	3316
740-10.03	GEOTEXTILE (TYPE III)(EROSION CONTROL)	S.Y.	11332
740-11.03	TEMPORARY SEDIMENT TUBE 18IN (DESCRIPTION)	L.F.	13530
805-12.02	EROSION CONTROL BLANKET (TYPE II)	S.Y.	9962
ALL QUANTITIES ARE TO BE USED AS DIRECTED BY ENGINEER.			

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
SFB SFB SFB SFB	SEDIMENT FILTER BAG	EC-STR-2
SF SF SF SF	SILT FENCE	EC-STR-3B
SFB SFB SFB	SILT FENCE WITH WIRE BACKING	EC-STR-3C
	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
	CULVERT PROTECTION (TYPE 1)	EC-STR-11
TCE	TEMPORARY CONSTRUCTION EXIT	EC-STR-25
TCP	TEMPORARY CULVERT CROSSING (DESCRIBE NUMBER AND SIZE OF PIPES)	EC-STR-25
	TEMPORARY SLOPE DRAIN WITH TEMPORARY BERM	EC-STR-27
	RIPRAP	EC-STR-27

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
	TEMPORARY DIVERSION CHANNEL (DESCRIBE-SIZE AND TYPE OF LINING)	EC-STR-31
	TEMPORARY DIVERSION CULVERT (DESCRIBE NUMBER AND SIZE OF PIPES)	EC-STR-32
	SAND BAG BERM	EC-STR-33
	SUSPENDED PIPE DIVERSION	EC-STR-33 EC-STR-33A
	EROSION CONTROL BLANKET	EC-STR-34
TUBE TUBE	SEDIMENT TUBE	EC-STR-37
2	CURB INLET PROTECTION (TYPE 2)	EC-STR-39
4	CURB INLET PROTECTION (TYPE 4)	EC-STR-39A
1	CATCH BASIN FILTER ASSEMBLY (TYPE 1)	EC-STR-41
2	CATCH BASIN FILTER ASSEMBLY (TYPE 2)	EC-STR-42
5	CATCH BASIN FILTER ASSEMBLY (TYPE 5)	EC-STR-45
6	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EC-STR-46
7	CATCH BASIN FILTER ASSEMBLY (TYPE 7)	EC-STR-47
HVF HVF	HIGH VISIBILITY FENCE	S-F-1

SEALED BY

UNOFFICIAL SET
NOT FOR BIDDING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL NOTES

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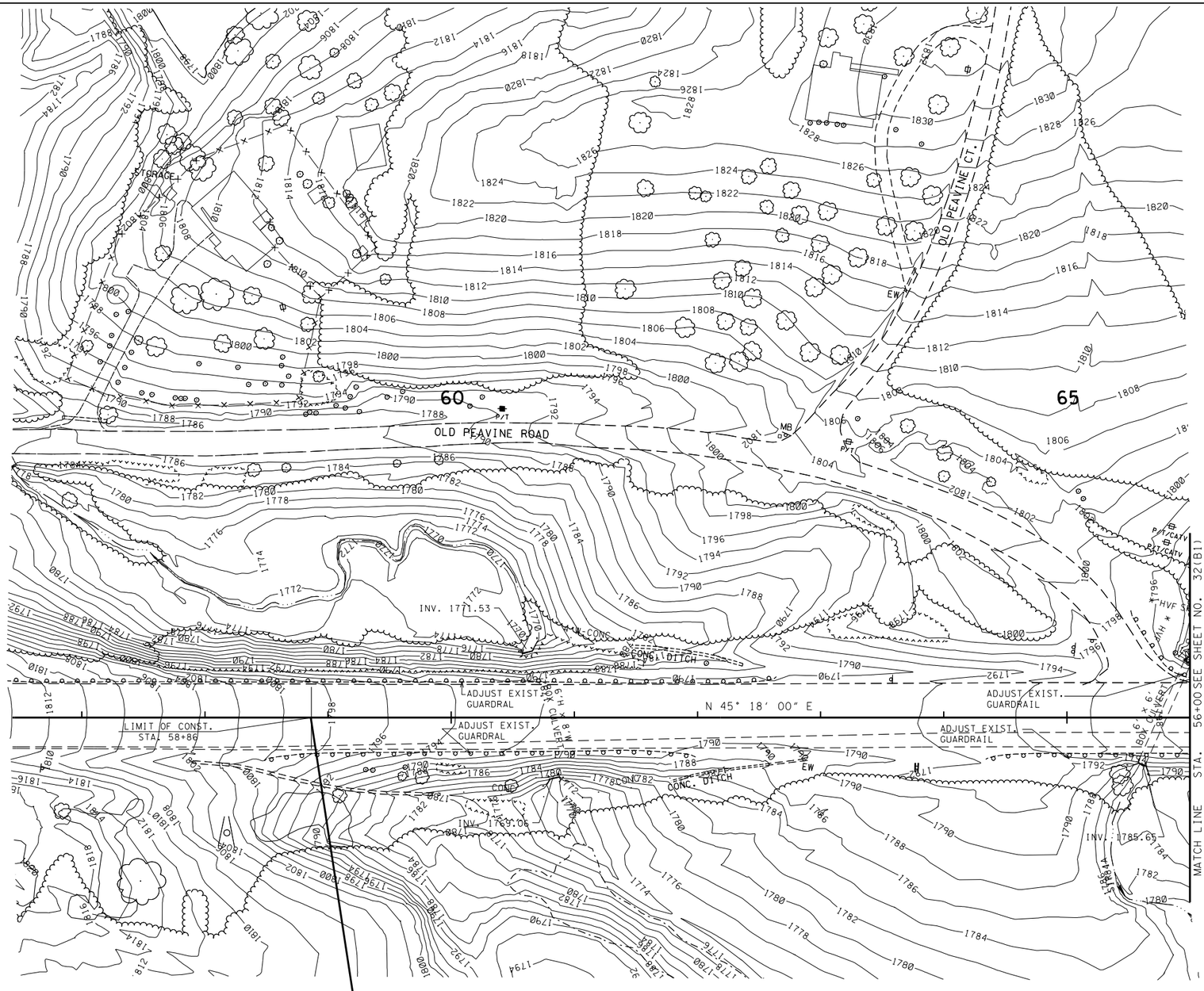
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	32(A1)
CONST	2015	STP-101(16)	32(A1)

REV. 5-22-13 - ADDED SHEET.



STP-101(16)
BEGIN PROJECT NO. 18038-3240-14 (CONST.)
STA. 58+86.00

CLEARING & GRUBBING-PHASE 1
EXISTING GROUND CONTOURS SHOWN

SEALED BY

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NOT FOR BIDDING

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00013 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 56+00 TO STA. 66+00
SCALE: 1"= 50'

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

OUTFALL	AREA (AC.)	SLOPE (%)
OUT-1	0.09	10.00
OUT-4	4.40	5.00
OUT-5	3.00	2.00

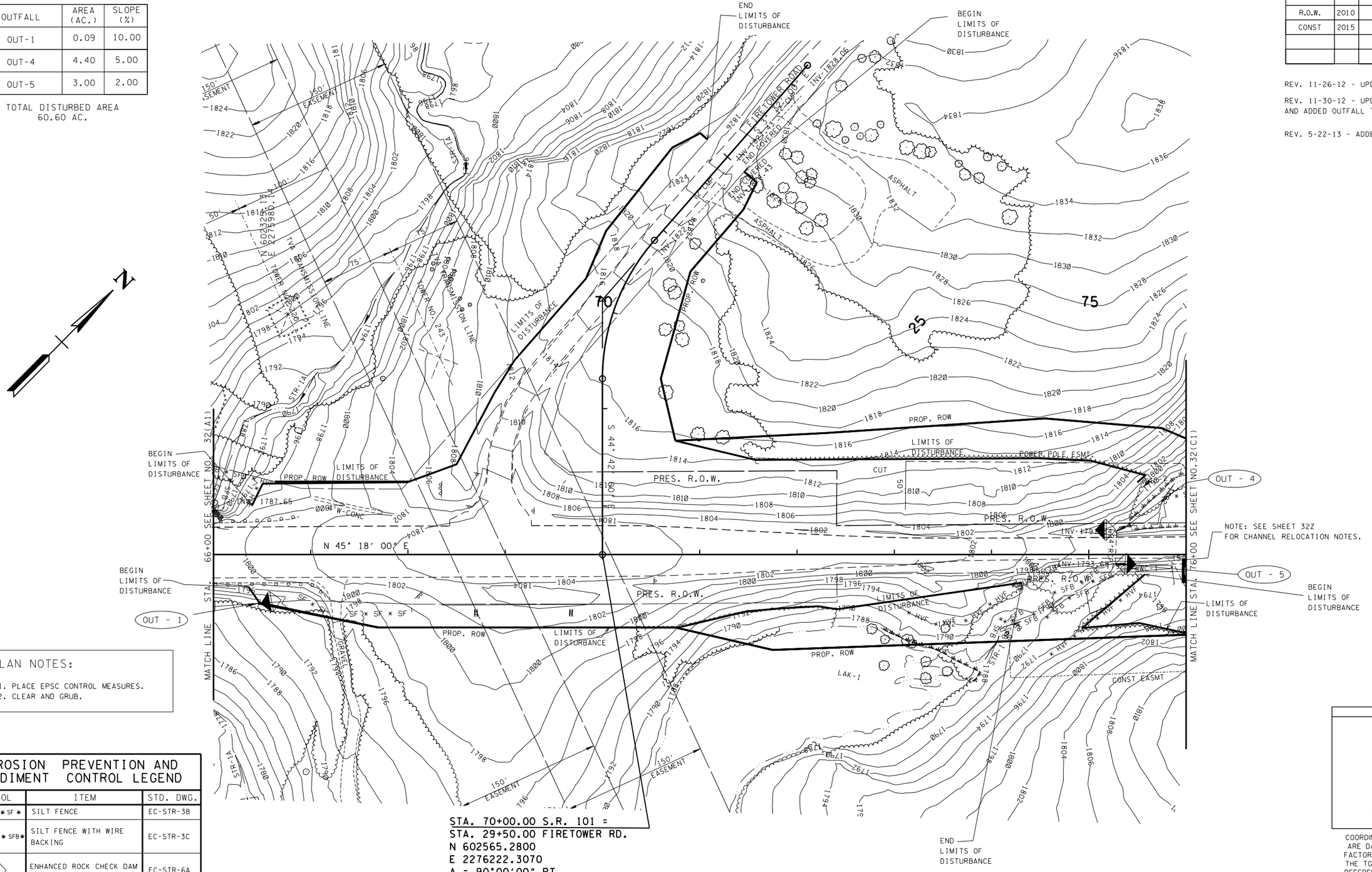
TOTAL DISTURBED AREA
60.60 AC.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	32(B1)
CONST	2015	STP-101(16)	32(B1)

REV. 11-26-12 - UPDATED EPSC PLANS

REV. 11-30-12 - UPDATED OUTFALLS AND ADDED OUTFALL TABLE.

REV. 5-22-13 - ADDED SHEET.



PLAN NOTES:

1. PLACE EPSC CONTROL MEASURES.
2. CLEAR AND GRUB.

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SF * SF * SF *	SILT FENCE	EC-STR-3B
* SFB * SFB * SFB *	SILT FENCE WITH WIRE BACKING	EC-STR-3C
	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
TCE	TEMPORARY CONSTRUCTION EXIT	EC-STR-25
* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 66+00 TO STA. 76+00
SCALE: 1"= 50'

CLEARING & GRUBBING-PHASE 1
EXISTING GROUND CONTOURS SHOWN

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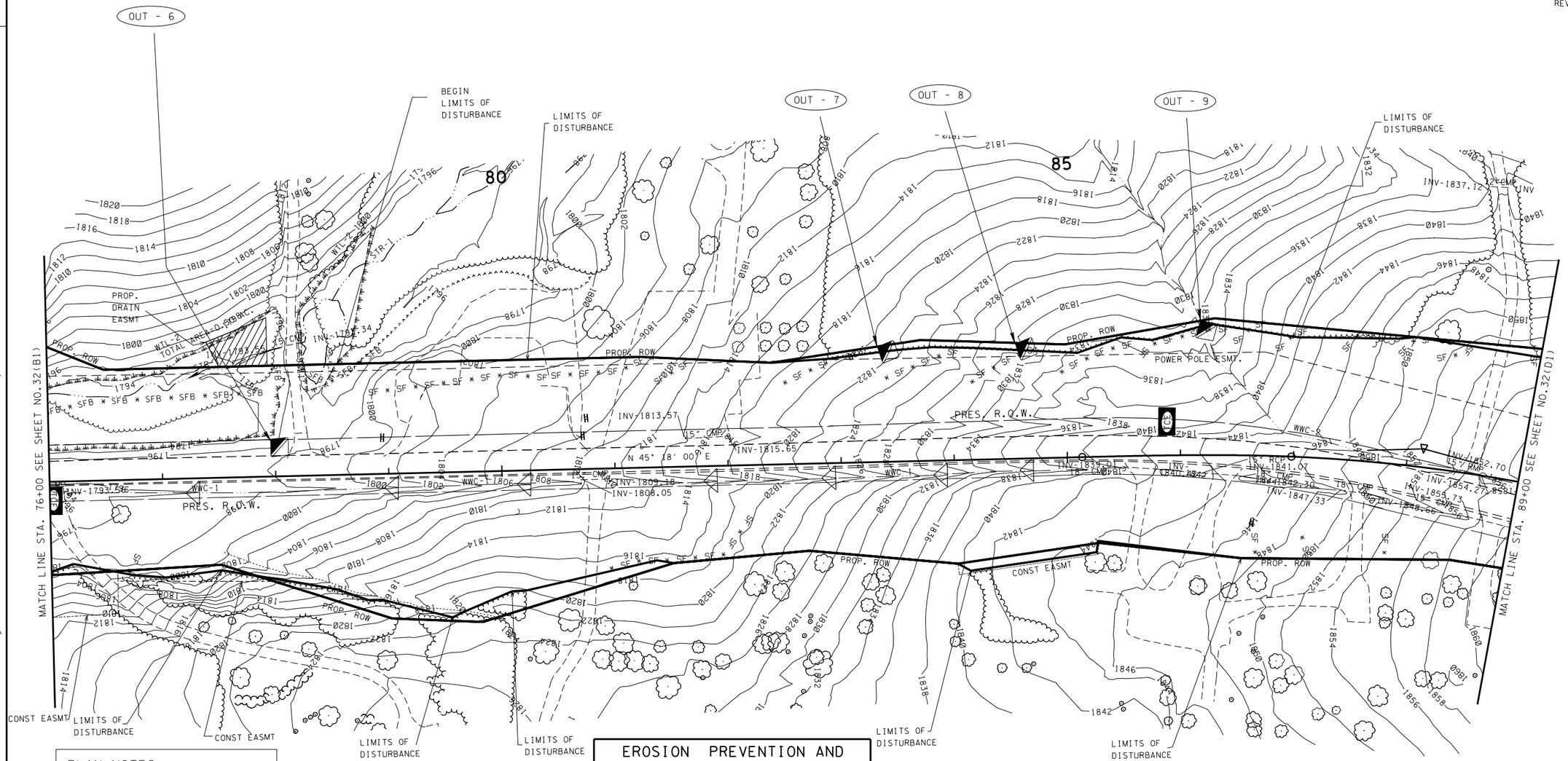
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	32(C1)
CONST	2015	STP-101(16)	32(C1)

REV. 11-26-12- UPDATED EPSC PLAN
REV. 11-30-12 - UPDATED OUTFALLS AND ADDED OUTFALL TABLE.

REV. 5-22-13 - ADDED SHEET.



PLAN NOTES:

1. PLACE EPSC CONTROL MEASURES.
2. CLEAR AND GRUB.

OUTFALL	AREA (AC.)	SLOPE (%)
OUT-6	0.03	4.00
OUT-7	0.23	10.00
OUT-8	0.06	10.00
OUT-9	0.90	10.00

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SF * SF * SF *	SILT FENCE	EC-STR-3B
* SFB * SFB * SFB *	SILT FENCE WITH WIRE BACKING	EC-STR-3C
	ROCK CHECK DAM (V-DITCH)	EC-STR-6
	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
TCE	TEMPORARY CONSTRUCTION EXIT	EC-STR-25
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 76+00 TO STA. 89+00
SCALE: 1"= 50'

CLEARING & GRUBBING-PHASE 1
EXISTING GROUND CONTOURS SHOWN

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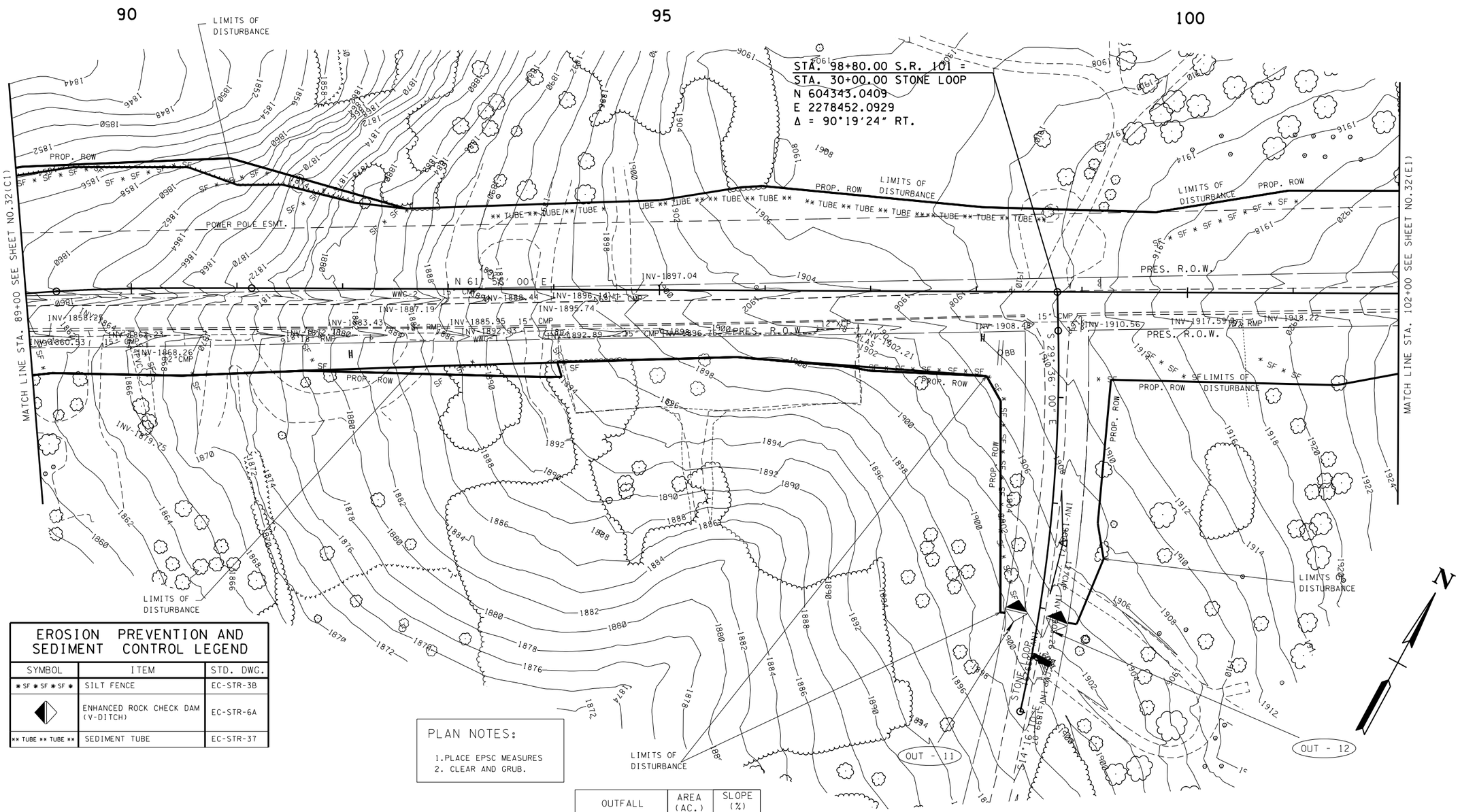
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	32(D1)
CONST	2015	STP-101(16)	32(D1)

REV. 11-26-12 - UPDATED EPSC PLANS

REV. 11-30-12 - UPDATED OUTFALLS AND ADDED OUTFALL TABLE.

REV. 5-22-13 - ADDED SHEET.



EROSION PREVENTION AND SEDIMENT CONTROL LEGEND		
SYMBOL	ITEM	STD. DWG.
* SF * SF * SF *	SILT FENCE	EC-STR-3B
	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37

PLAN NOTES:

1. PLACE EPSC MEASURES
2. CLEAR AND GRUB.

OUTFALL	AREA (AC.)	SLOPE (%)
OUT-11	0.03	5.00
OUT-12	0.08	2.85

CLEARING & GRUBBING-PHASE 1
EXISTING GROUND CONTOURS SHOWN

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 89+00 TO STA. 102+00

SCALE: 1"= 50'

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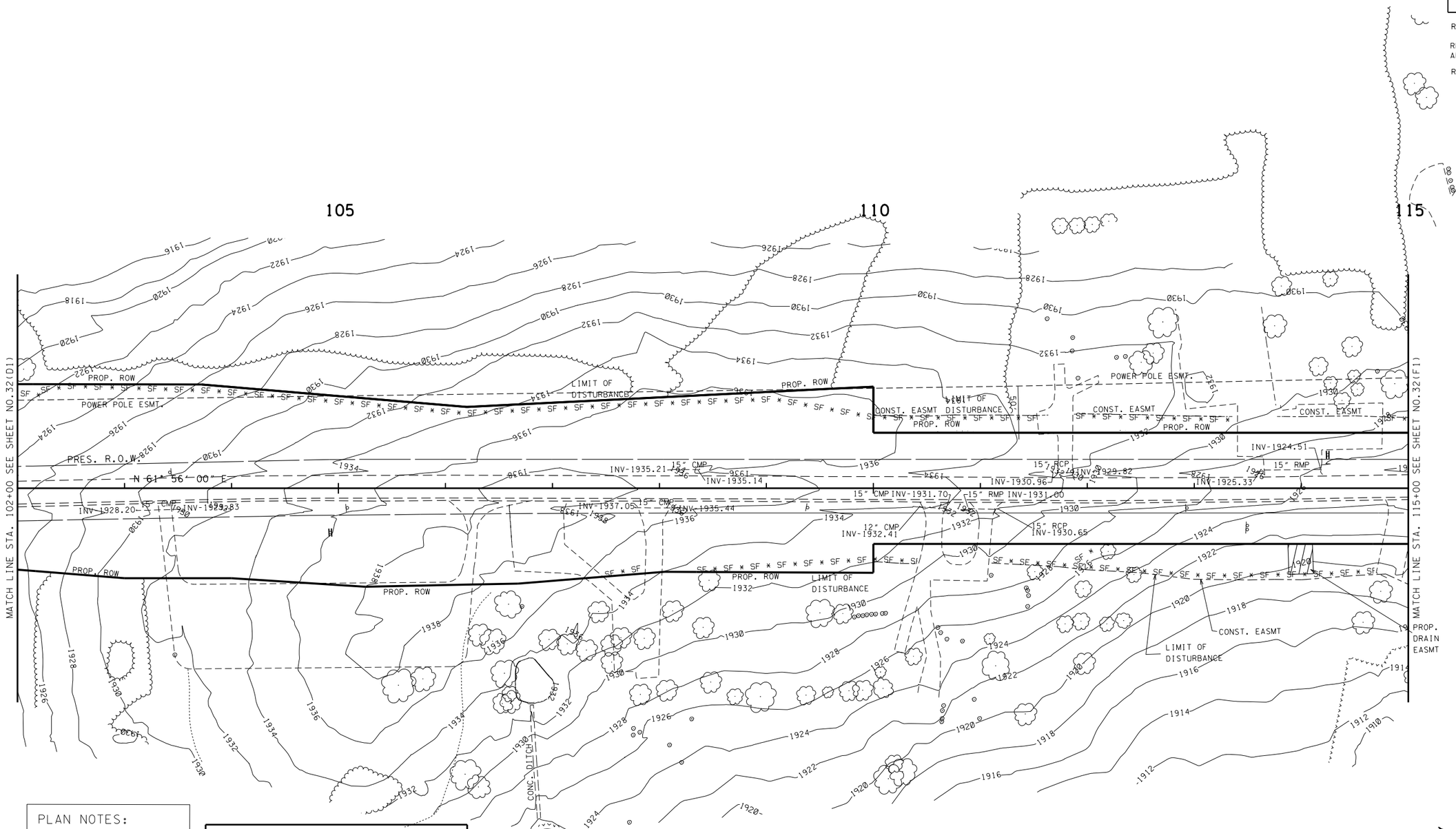
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
ROW	2010	STP-101(16)	32(E1)
CONST	2015	STP-101(16)	32(E1)

REV. 11-26-12 - UPDATED EPSC PLANS

REV. 11-30-12 - UPDATED OUTFALLS AND ADDED OUTFALL TABLE.

REV. 5-22-13 - ADDED SHEET.



PLAN NOTES:

1. PLACE EPSC MEASURE AND THEN CLEAR AND GRUB.

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SF * SF * SF *	SILT FENCE	EC-STR-3B

CLEARING & GRUBBING-PHASE 1
EXISTING GROUND CONTOURS SHOWN

SEALED BY

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 102+00 TO STA. 115+00
SCALE: 1"= 50'

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

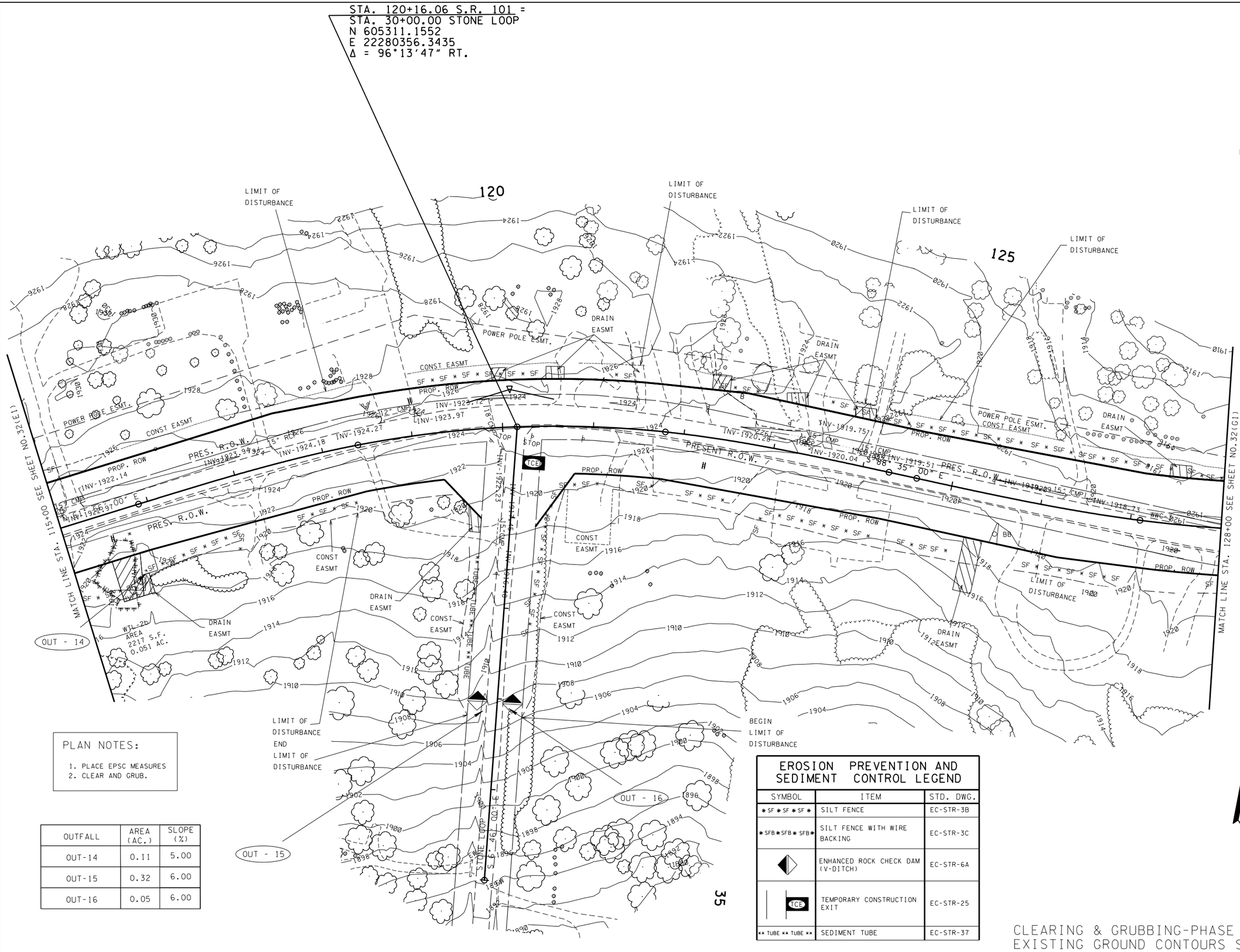
TYPE	YEAR	PROJECT NO.	SHEET NO.
ROW	2010	STP-101(16)	32(F1)
CONST	2015	STP-101(16)	32(F1)

REV. 7-27-12 - ADDED SPECIAL DITCH AT STA. 123+30.

REV. 11-26-12 - UPDATED EPSC PLANS

REV. 11-30-12 - UPDATED OUTFALLS AND ADDED OUTFALL TABLE.

REV. 5-22-13 - ADDED SHEET.



PLAN NOTES:

1. PLACE EPSC MEASURES
2. CLEAR AND GRUB.

OUTFALL	AREA (AC.)	SLOPE (%)
OUT-14	0.11	5.00
OUT-15	0.32	6.00
OUT-16	0.05	6.00

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SF * SF * SF *	SILT FENCE	EC-STR-3B
* SFB * SFB * SFB *	SILT FENCE WITH WIRE BACKING	EC-STR-3C
	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
TCE	TEMPORARY CONSTRUCTION EXIT	EC-STR-25
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37

CLEARING & GRUBBING-PHASE 1
EXISTING GROUND CONTOURS SHOWN

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 115+00 TO STA. 128+00
SCALE: 1"= 50'

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TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
ROW	2010	STP-101(16)	32(G1)
CONST	2015	STP-101(16)	32(G1)

REV. 11-26-12 - UPDATE EPSC PLANS

REV. 11-30-12 - UPDATED OUTFALLS
AND ADDED OUTFALL TABLE.

REV. 5-22-13 - ADDED SHEET.

REV. 3-9-15 - ADDED HVF TO LEGEND PER ENV REQ.

PLAN NOTES:

1. PLACE EPSC MEASURES
2. CLEAR AND GRUB.

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND		
SYMBOL	ITEM	STD. DWG.
* SF * SF * SF *	SILT FENCE	EC-STR-3B
* SFB * SFB * SFB *	SILT FENCE WITH WIRE BACKING	EC-STR-3C
(symbol)	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37
* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1

OUTFALL	AREA (AC.)	SLOPE (%)
OUT-22	0.07	4.00
OUT-50	0.16	0.50
OUT-51	0.75	0.50
OUT-52	1.14	0.50

CLEARING & GRUBBING-PHASE 1
EXISTING GROUND CONTOURS SHOWN

SEALED BY

ROBERT W. RODGERS REGISTERED ENGINEER AGRICULTURE COMMERCE No. 22299 STATE OF TENNESSEE

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00013 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 128+00 TO STA. 141+00

SCALE: 1"= 50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
ROW	2010	STP-101(16)	32(H1)
CONST	2015	STP-101(16)	32(H1)

REV. 11-26-12 - UPDATED EPSC PLANS

REV. 11-30-12 - UPDATED OUTFALLS AND ADDED OUTFALL TABLE.

REV. 5-22-13 - ADDED SHEET.

PLAN NOTES:

1. PLACE ESPC MEASURES
2. CLEAR AND GRUB.

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SF * SF * SF *	SILT FENCE	EC-STR-3B

CLEARING & GRUBBING-PHASE 1
EXISTING GROUND CONTOURS SHOWN

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UNOFFICIAL SET
NOT FOR BIDDING

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 141+00 TO STA. 154+00

SCALE: 1"= 50'

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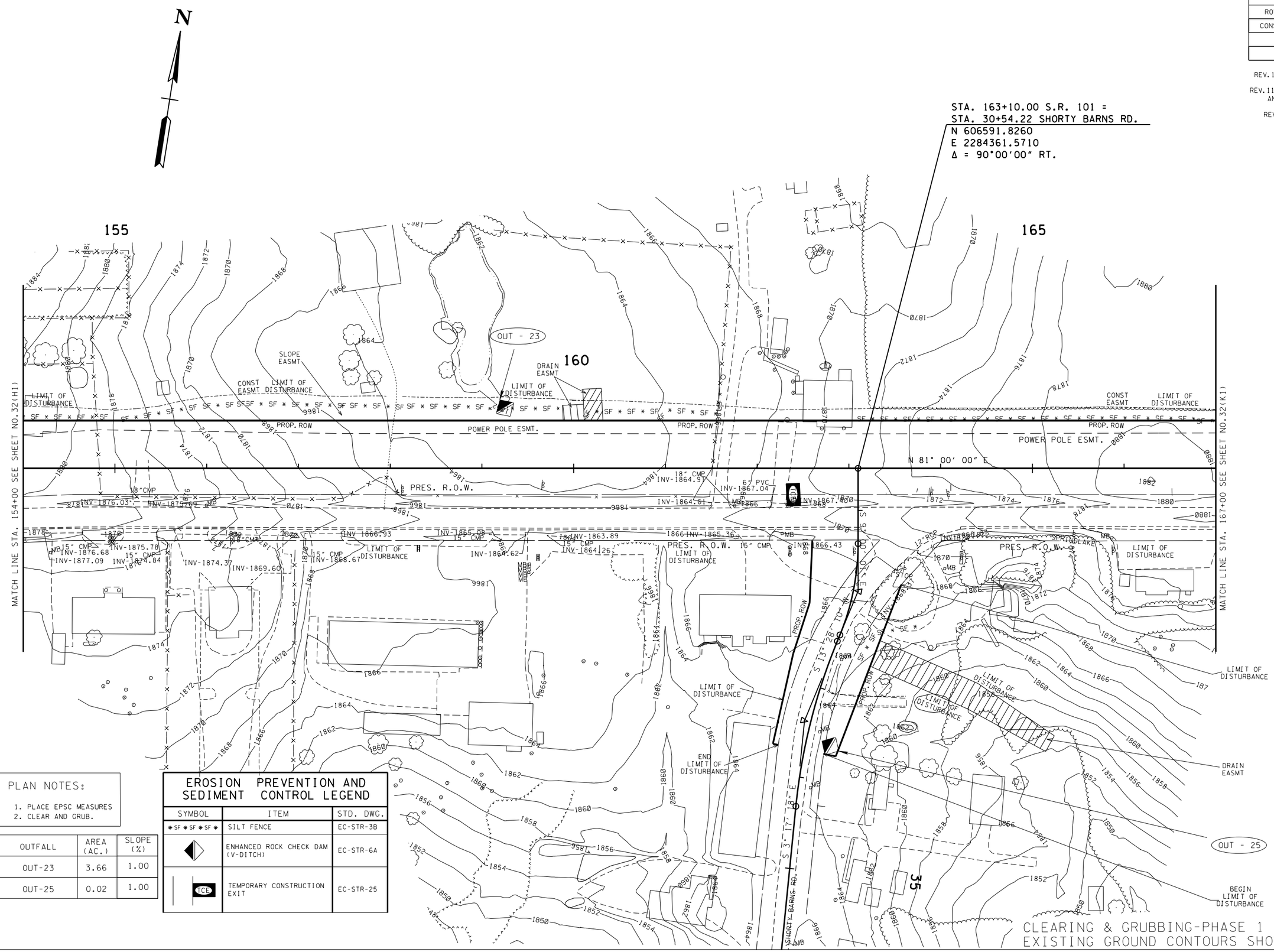
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
ROW	2010	STP-101(16)	32(J1)
CONST	2015	STP-101(16)	32(J1)

REV. 11-26-12 - UPDATE EPSC PLANS

REV. 11-30-12 - UPDATED OUTFALLS AND ADDED OUTFALL TABLE.

REV. 5-22-13 - ADDED SHEET.



PLAN NOTES:

1. PLACE EPSC MEASURES
2. CLEAR AND GRUB.

OUTFALL	AREA (AC.)	SLOPE (%)
OUT-23	3.66	1.00
OUT-25	0.02	1.00

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
SF SF SF SF	SILT FENCE	EC-STR-3B
	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
TCE	TEMPORARY CONSTRUCTION EXIT	EC-STR-25

SEALED BY

UNOFFICIAL SET
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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 154+00 TO STA. 167+00
SCALE: 1"= 50'

CLEARING & GRUBBING-PHASE 1
EXISTING GROUND CONTOURS SHOWN

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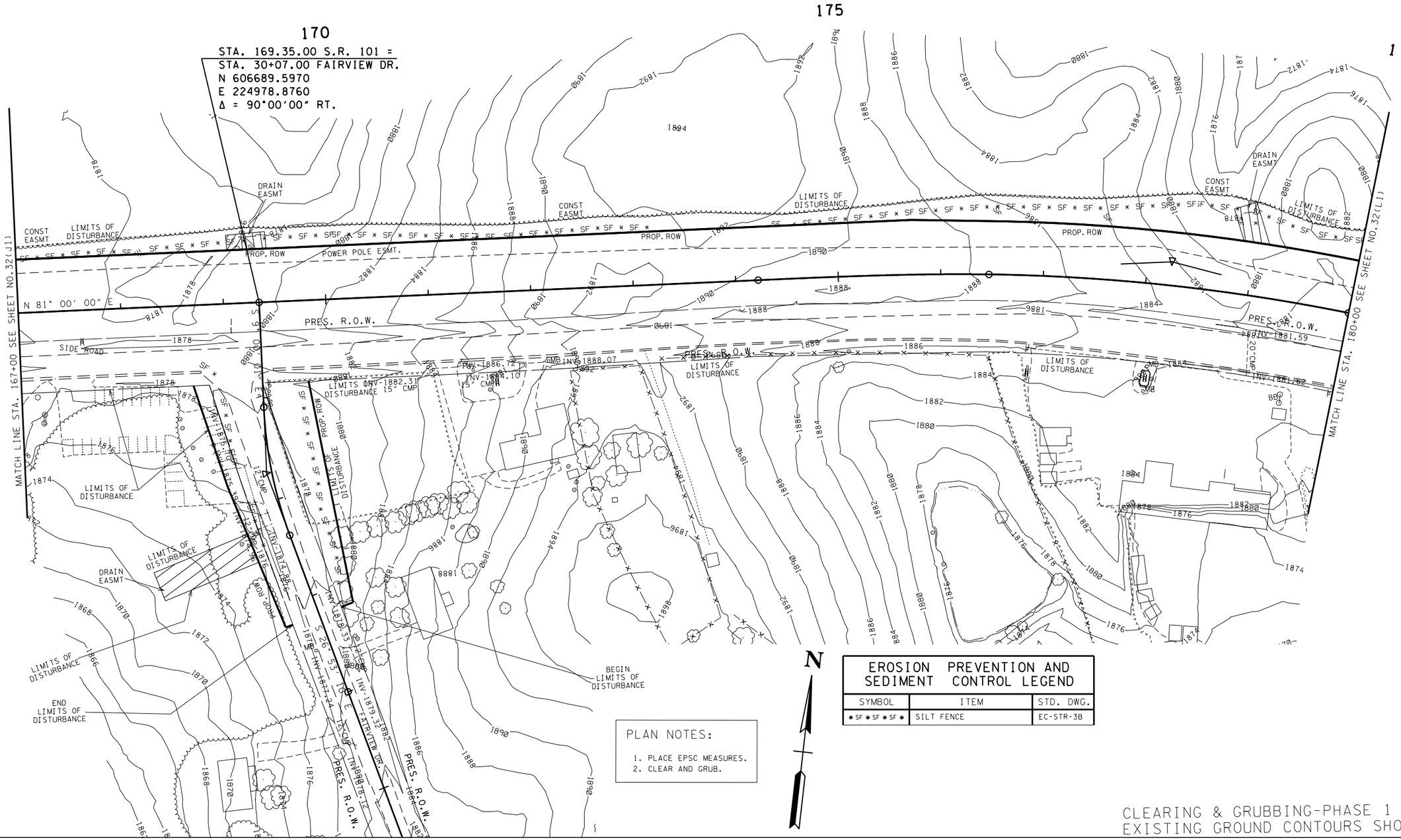
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
ROW	2010	STP-101(16)	32(K1)
CONST	2015	STP-101(16)	32(K1)

REV. 11-26-12 - UPDATE EPSC PLANS

REV. 11-30-12 - UPDATED OUTFALLS AND ADDED OUTFALL TABLE.

REV. 5-22-13 - ADDED SHEET.



EROSION PREVENTION AND SEDIMENT CONTROL LEGEND		
SYMBOL	ITEM	STD. DWG.
* SF * SF * SF *	SILT FENCE	EC-STR-3B

PLAN NOTES:

1. PLACE EPSC MEASURES.
2. CLEAR AND GRUB.

CLEARING & GRUBBING-PHASE 1
EXISTING GROUND CONTOURS SHOWN.

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 167+00 TO STA. 180+00

SCALE: 1"= 50'

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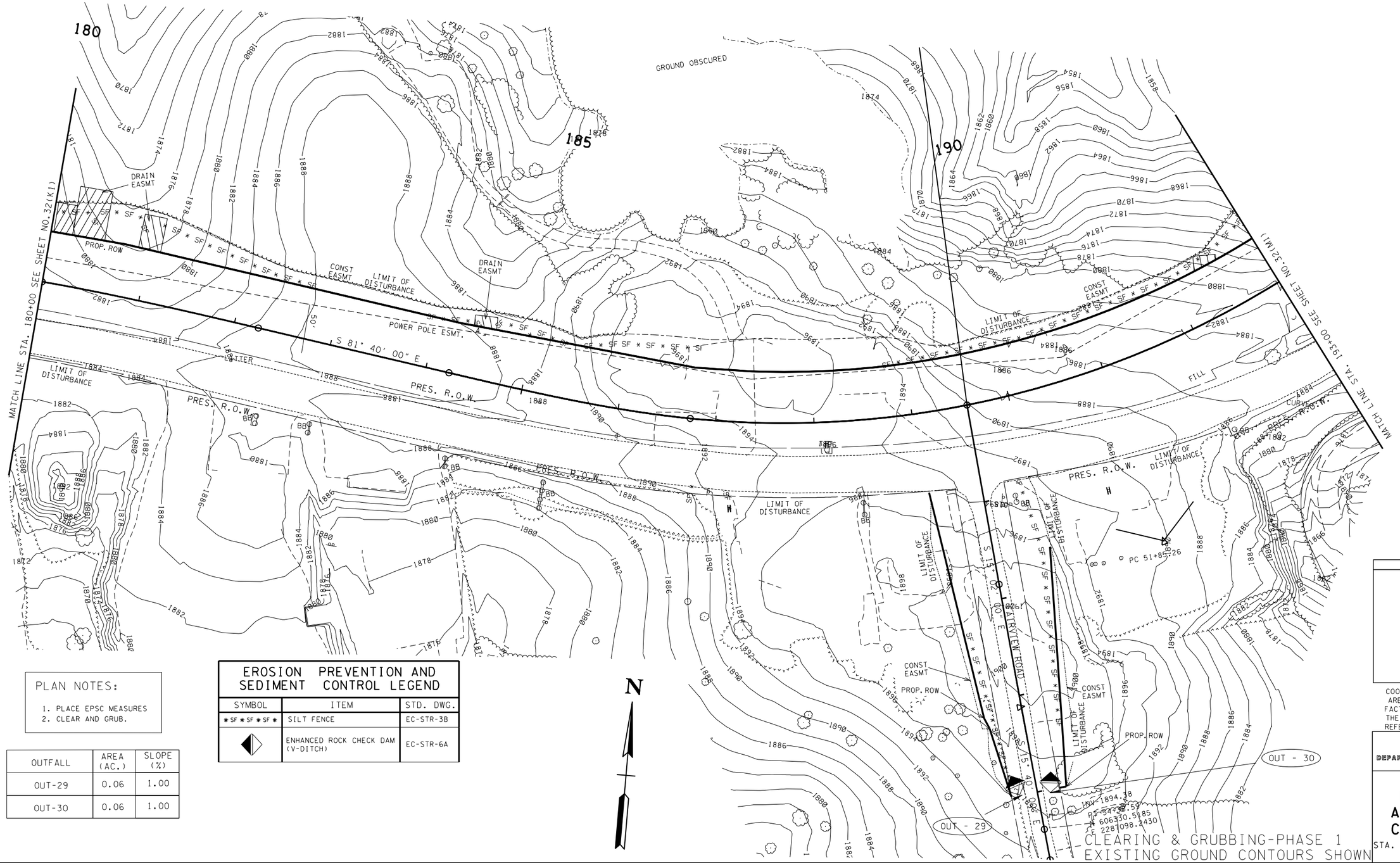
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
ROW	2010	STP-101(16)	32(L1)
CONST	2015	STP-101(16)	32(L1)

REV. 11-26-12 - UPDATE EPSC PLANS

REV. 11-30-12 - UPDATED OUTFALLS AND ADDED OUTFALL TABLE.

REV. 5-22-13 - ADDED SHEET.



PLAN NOTES:
1. PLACE EPSC MEASURES
2. CLEAR AND GRUB.

OUTFALL	AREA (AC.)	SLOPE (%)
OUT-29	0.06	1.00
OUT-30	0.06	1.00

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND		
SYMBOL	ITEM	STD. DWG.
* SF * SF * SF *	SILT FENCE	EC-STR-3B
	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A

N

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COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00013 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 180+00 TO STA. 193+00

SCALE: 1"= 50'

CLEARING & GRUBBING-PHASE 1
EXISTING GROUND CONTOURS SHOWN

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TYPE	YEAR	PROJECT NO.	SHEET NO.
ROW	2010	STP-101(16)	32(M1)
CONST	2015	STP-101(16)	32(M1)

REV. 11-26-12 - UPDATE EPSC PLANS

REV. 11-30-12 - UPDATED OUTFALLS
AND ADDED OUTFALL TABLE.
REV. 5-22-13 - ADDED SHEET.

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

PLAN NOTES:

1. PLACE EPSC MEASURES
2. CLEAR AND GRUB.

OUTFALL	AREA (AC.)	SLOPE (%)
OUT-32	0.84	8.00
OUT-33	0.06	4.00
OUT-34	0.05	3.33
OUT-35	1.58	2.00

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SF * SF * SF *	SILT FENCE	EC-STR-3B
	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
TCE	TEMPORARY CONSTRUCTION EXIT	EC-STR-25
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37

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COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00013 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 193+00 TO STA. 206+00
SCALE: 1″= 50′

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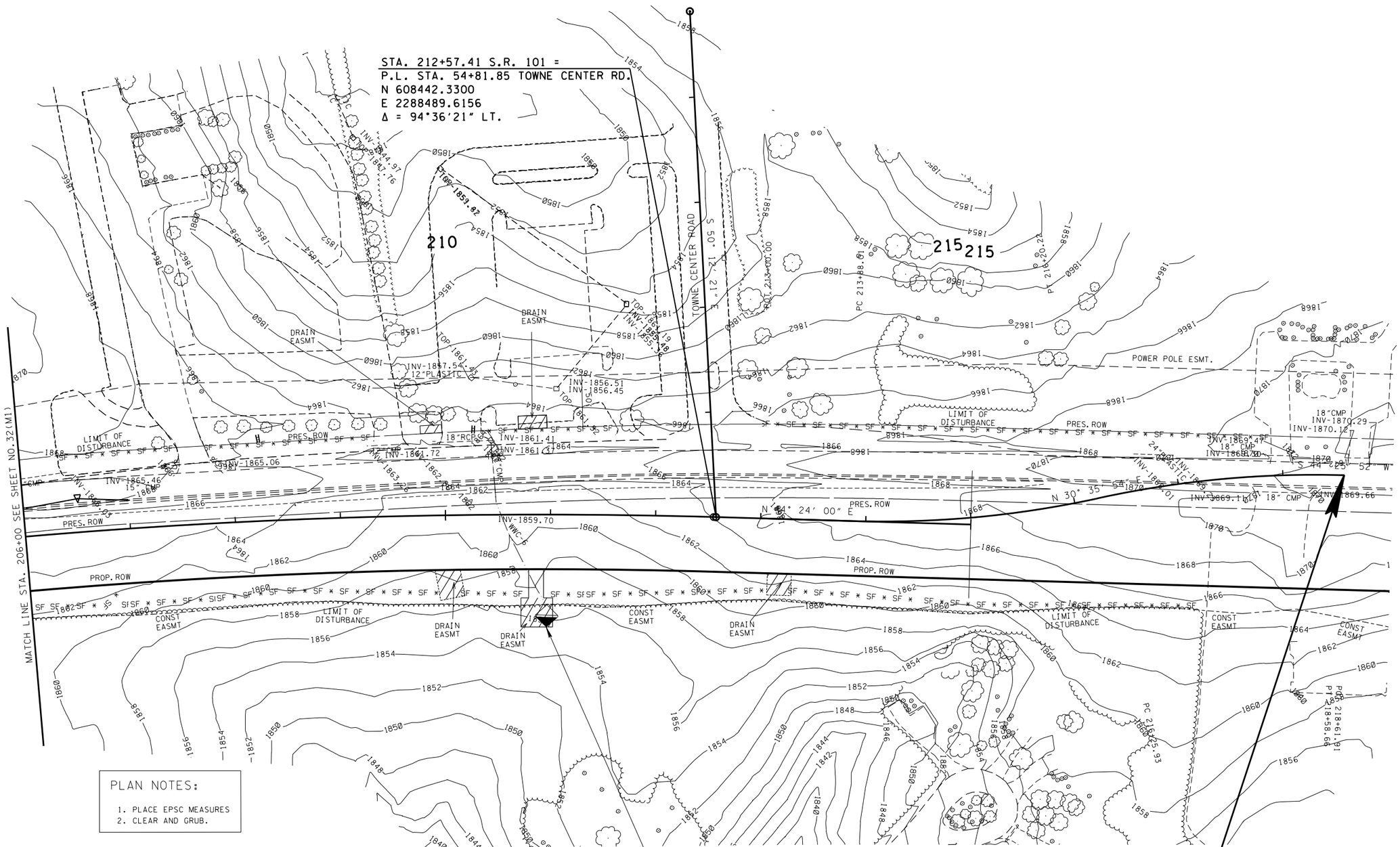
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
ROW	2010	STP-101(16)	32(N1)
CONST	2015	STP-101(16)	32(N1)

REV. 11-26-12 - UPDATE EPSC PLANS

REV. 11-30-12 - UPDATED OUTFALLS AND ADDED OUTFALL TABLE.

REV. 5-22-13 - ADDED SHEET.



PLAN NOTES:

1. PLACE EPSC MEASURES
2. CLEAR AND GRUB.

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND		
SYMBOL	ITEM	STD. DWG.
*SFB*SFB*SFB*	SILT FENCE WITH WIRE BACKING	EC-STR-3C
	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A

OUTFALL	AREA (AC.)	SLOPE (%)
OUT-37	0.40	4.00

CURVE TCP1FIVE
PI 215+04.68
N 608,618.9963
E 2,288,662.6201
Δ 13° 48' 06" (LT)
D 5° 56' 37"
R 964.00
L 232.21
T 116.67
NORMAL CROWN
DESIGN SPEED 45 MPH

CURVE TCP1SIX
PI 217+42.86
N 608,824.9895
E 2,288,784.4360
Δ 13° 49' 58" (RT)
D 5° 56' 37"
R 964.00
L 232.74
T 116.94
NORMAL CROWN
DESIGN SPEED 45 MPH

STP-101(16)
END PHASE 1 PROJ. NO. 18038-3240-14 (CONST.)
STA. 218+62.00

CLEARING & GRUBBING-PHASE 1
EXISTING GROUND CONTOURS SHOWN

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COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.000013 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN
STA. 206+00 TO STA. 219+00
SCALE: 1"= 50'

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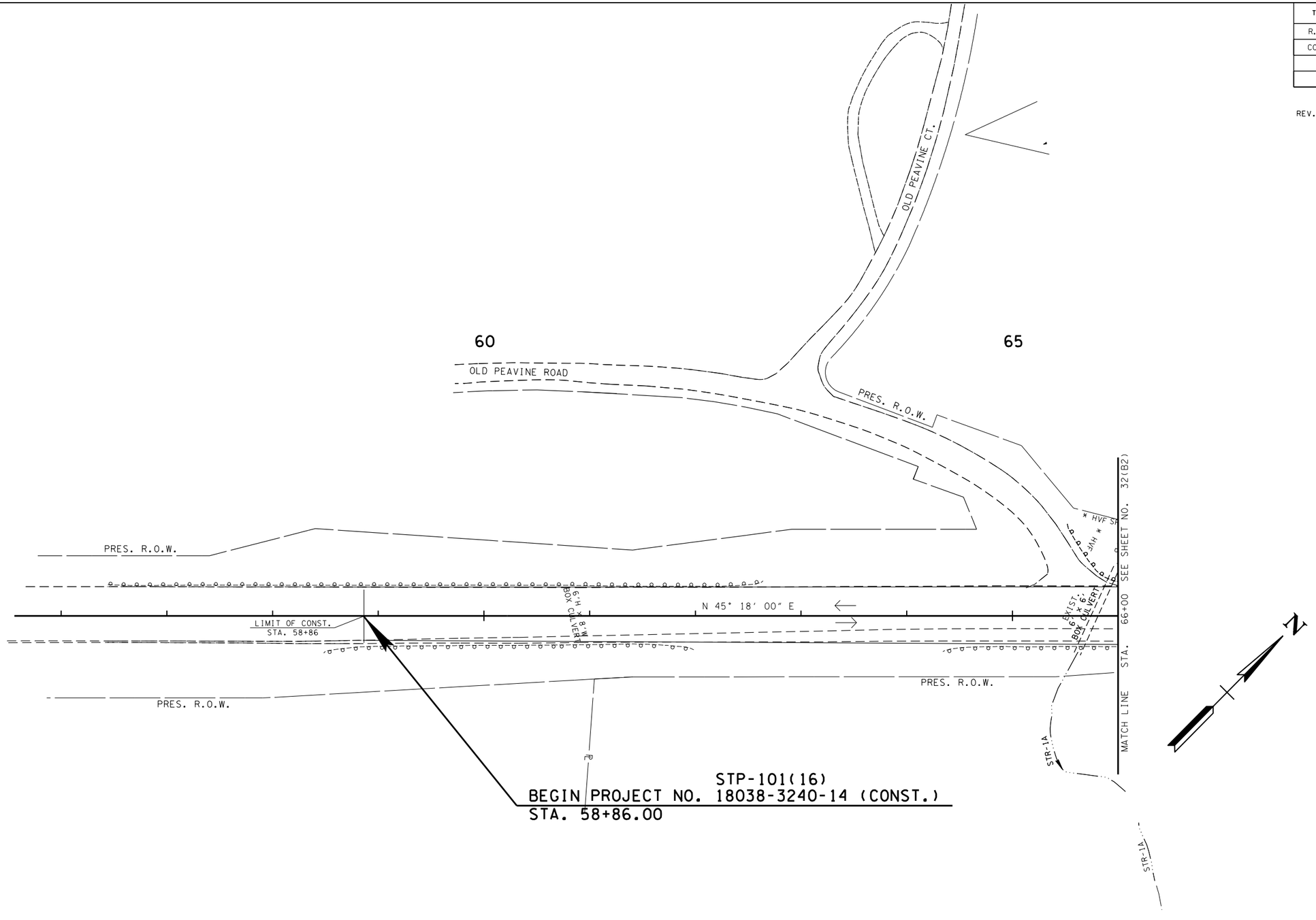
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	32(A2)
CONST	2015	STP-101(16)	32A(2)

REV. 5-22-13-ADDED SHEET



TRAFFIC CONTROL LEGEND	
SYMBOL	ITEM
→	TRAFFIC FLOW

EPSC PHASE 2 =
TRAFFIC CONTROL PHASE 1

SEALED BY

UNOFFICIAL SET
NOT FOR BIDDING

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00013 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA.56+00 TO STA.66+00
SCALE: 1"=50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	32(B2)
CONST	2015	STP-101(16)	32B(2)

REV. 5-22-13-ADDED SHEET.
REV. 3-09-15-REMOVED ERCD FROM DETAIL C PER ENV REQ.

SPECIAL NOTES

THE CONTRACTOR SHALL USE ANY MEASURE NECESSARY TO ENSURE THAT CONSTRUCTION EQUIPMENT WILL NOT ENTER ANY PORTION OF THE NON-IMPACTED WATER QUALITY FEATURES.

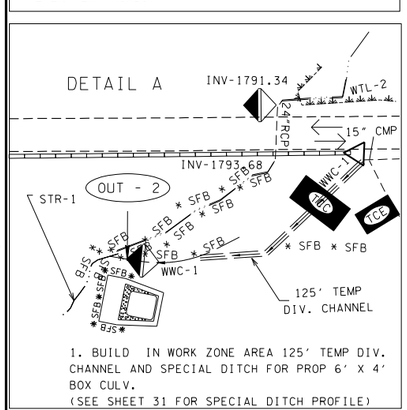
HIGH VISIBILITY FENCE SHALL BE PLACED ALONG THE WATER QUALITY FEATURE AREAS (WITHIN ROW) THAT ARE NOT TO BE DISTURBED BEFORE CONSTRUCTION ACTIVITY BEGINS.

TRAFFIC CONTROL LEGEND

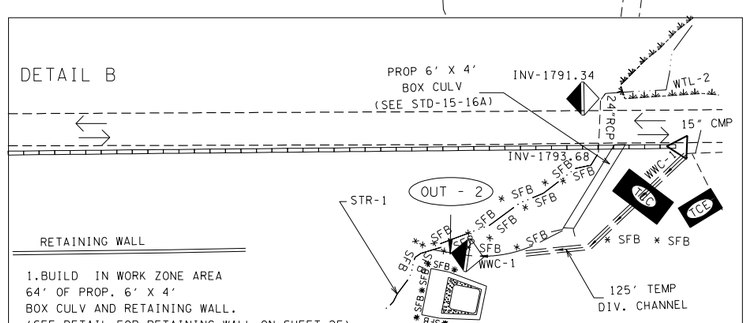
SYMBOL	ITEM
▨	WORK ZONE
→	TRAFFIC FLOW
▭	PORTABLE BARRIER RAIL
* HVF * HVF	HIGH VISIBILITY CONSTRUCTION FENCE
◁	TEMPORARY ATTENUATOR

PLAN NOTES:

1. PLACE EPSC MEASURES AND MAINTAIN TRAFFIC ON EXIST. ROADWAY.
2. SEE DETAIL A, B, & C.
3. BUILD TEMP ROAD TRANSITIONING TO EXIST. ROAD AS DIRECTED BY TDOT SUPERVISOR.(SEE SHEET 33(R)-33(S) FOR TYPICALS AND PROFILE OF 2 LN TEMP ROAD & SHEET 40-50 FOR CROSS-SECTIONS OF 2 LN TEMP ROAD.)

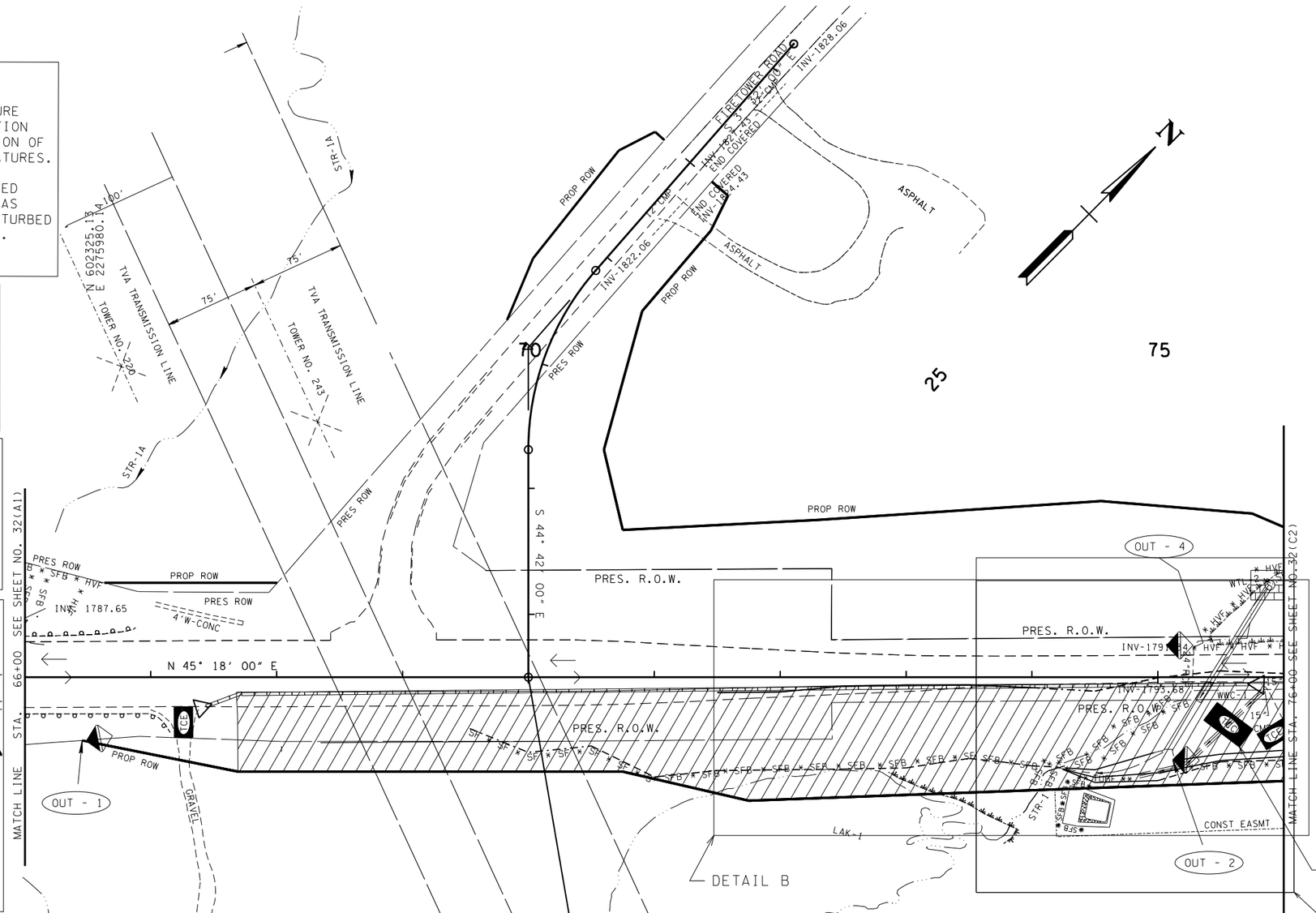


1. BUILD IN WORK ZONE AREA 125' TEMP DIV. CHANNEL AND SPECIAL DITCH FOR PROP 6' X 4' BOX CULV.
(SEE SHEET 31 FOR SPECIAL DITCH PROFILE)

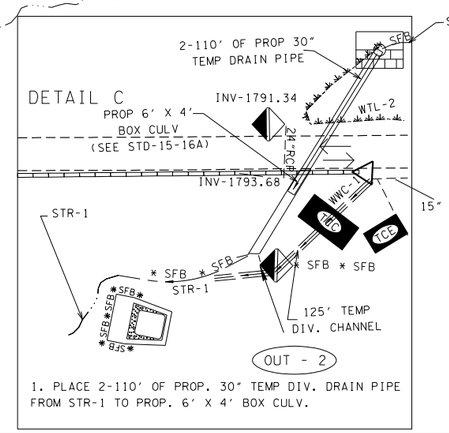


1.BUILD IN WORK ZONE AREA 64' OF PROP. 6' X 4' BOX CULV AND RETAINING WALL.
(SEE DETAIL FOR RETAINING WALL ON SHEET 2F)

THE CONTRACTOR WILL BE RESPONSIBLE TO PROVIDE ANY NECESSARY WORK IN INSTALLING THE RETAINING WALL WHICH WILL BE INCLUDED IN THE COST OF THE RETAINING WALL.



OUTFALL	AREA (AC.)	SLOPE (%)
OUT-1	0.09	10.00
OUT-2	3.11	5.71
OUT-4	4.40	5.00



1. PLACE 2-110' OF PROP. 30" TEMP DIV. DRAIN PIPE FROM STR-1 TO PROP. 6' X 4' BOX CULV.

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SFB * SFB * SFB *	SEDIMENT FILTER BAG	EC-STR-2
* SF * SF * SF *	SILT FENCE	EC-STR-3B
* SFB * SFB * SFB *	SILT FENCE WITH WIRE BACKING	EC-STR-3C
◆	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
TCE	TEMPORARY CONSTRUCTION EXIT	EC-STR-25
TCC	TEMPORARY CULVERT CROSSING (DESCRIBE NUMBER AND SIZE OF PIPES)	EC-STR-25
	TEMPORARY DIVERSION CHANNEL (DESCRIBE-SIZE AND TYPE OF LINING)	EC-STR-31
	TEMPORARY DIVERSION CULVERT (DESCRIBE NUMBER AND SIZE OF PIPES)	EC-STR-32
	SUSPENDED PIPE DIVERSION	EC-STR-33 EC-STR-33A
* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1

SEALED BY

ROBERT W. RODGERS — REGISTERED ENGINEER — AGRICULTURE — COMMERCE — NO. 22293 — STATE OF TENNESSEE

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00013 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA.66+00 TO STA.76+00
SCALE: 1"=50'

EPSC PHASE 2 =
TRAFFIC CONTROL PHASE 1

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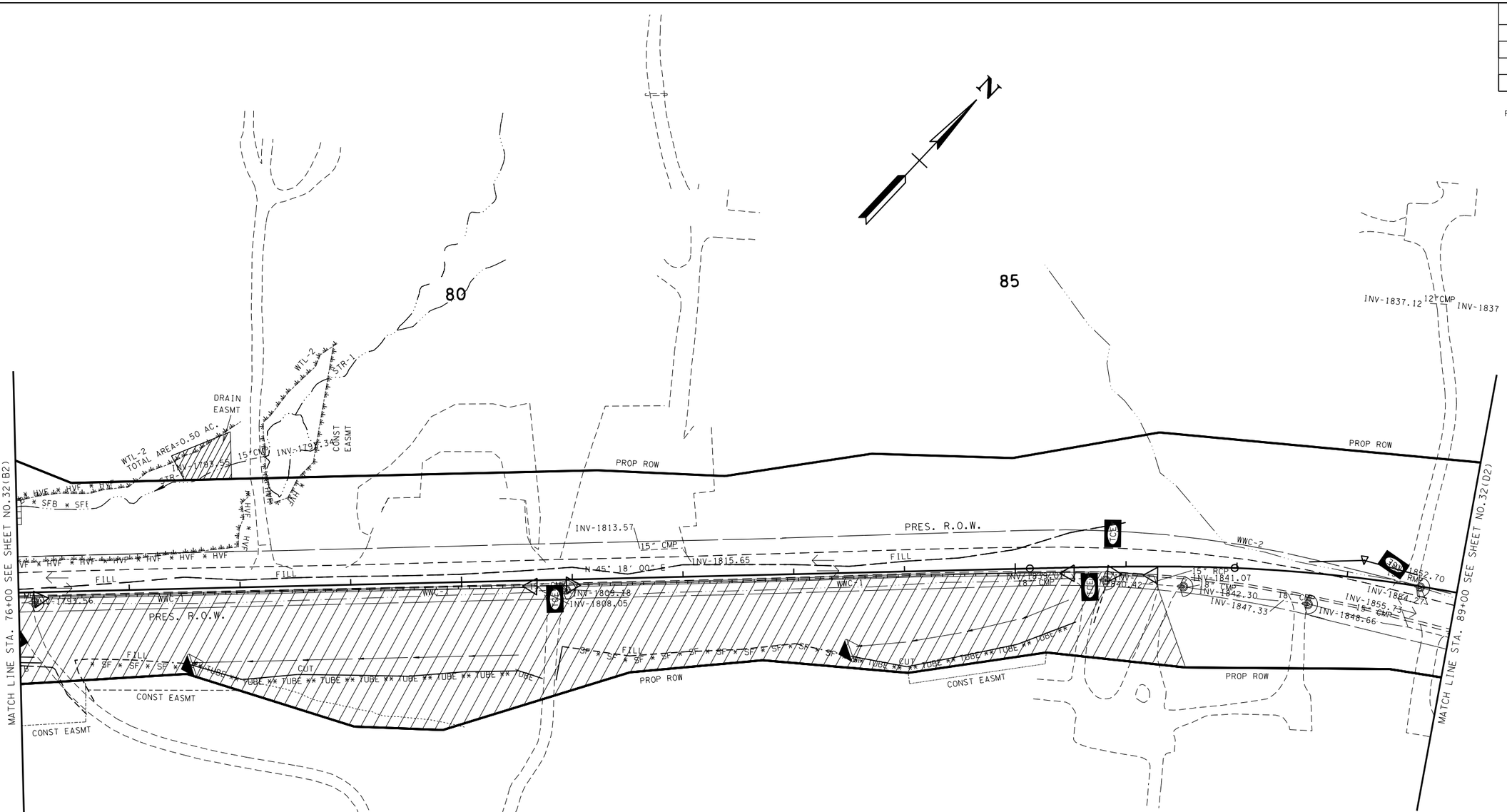
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	32(C2)
CONST	2015	STP-101(16)	32(C2)

REV. 5-22-13- ADDED SHEET.



PLAN NOTES:

1. PLACE EPSC MEASURES AND MAINTAIN TRAFFIC ON EXIST. ROADWAY.
2. BUILD TEMP ROAD TRANSITIONING TO EXIST. ROAD AS DIRECTED BY TDOT SUPERVISOR.(SEE SHEET 33(R)-33(S) FOR TYPICALS AND PROFILE OF 2 LN TEMP ROAD & SHEET 40-50 FOR CROSS-SECTIONS OF 2 LN TEMP ROAD.)

SPECIAL NOTES

THE CONTRACTOR SHALL USE ANY MEASURE NECESSARY TO ENSURE THAT CONSTRUCTION EQUIPMENT WILL NOT ENTER ANY PORTION OF THE NON-IMPACTED WATER QUALITY FEATURES.

HIGH VISIBILITY FENCE SHALL BE PLACED ALONG THE WATER QUALITY FEATURE AREAS (WITHIN ROW) THAT ARE NOT TO BE DISTURBED BEFORE CONSTRUCTION ACTIVITY BEGINS.

TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	WORK ZONE
→	TRAFFIC FLOW
	PORTABLE BARRIER RAIL
* HVF * HVF	HIGH VISIBILITY CONSTRUCTION FENCE
	TEMPORARY ATTENUATOR

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SF * SF * SF *	SILT FENCE	EC-STR-3B
* SFB * SFB * SFB *	SILT FENCE WITH WIRE BACKING	EC-STR-3C
	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
	CULVERT PROTECTION (TYPE 1)	EC-STR-11
TCE	TEMPORARY CONSTRUCTION EXIT	EC-STR-25
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37
* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1

EPSC PHASE 2 =
TRAFFIC CONTROL PHASE 1

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA.76+00 TO STA.89+00
SCALE: 1"=50'

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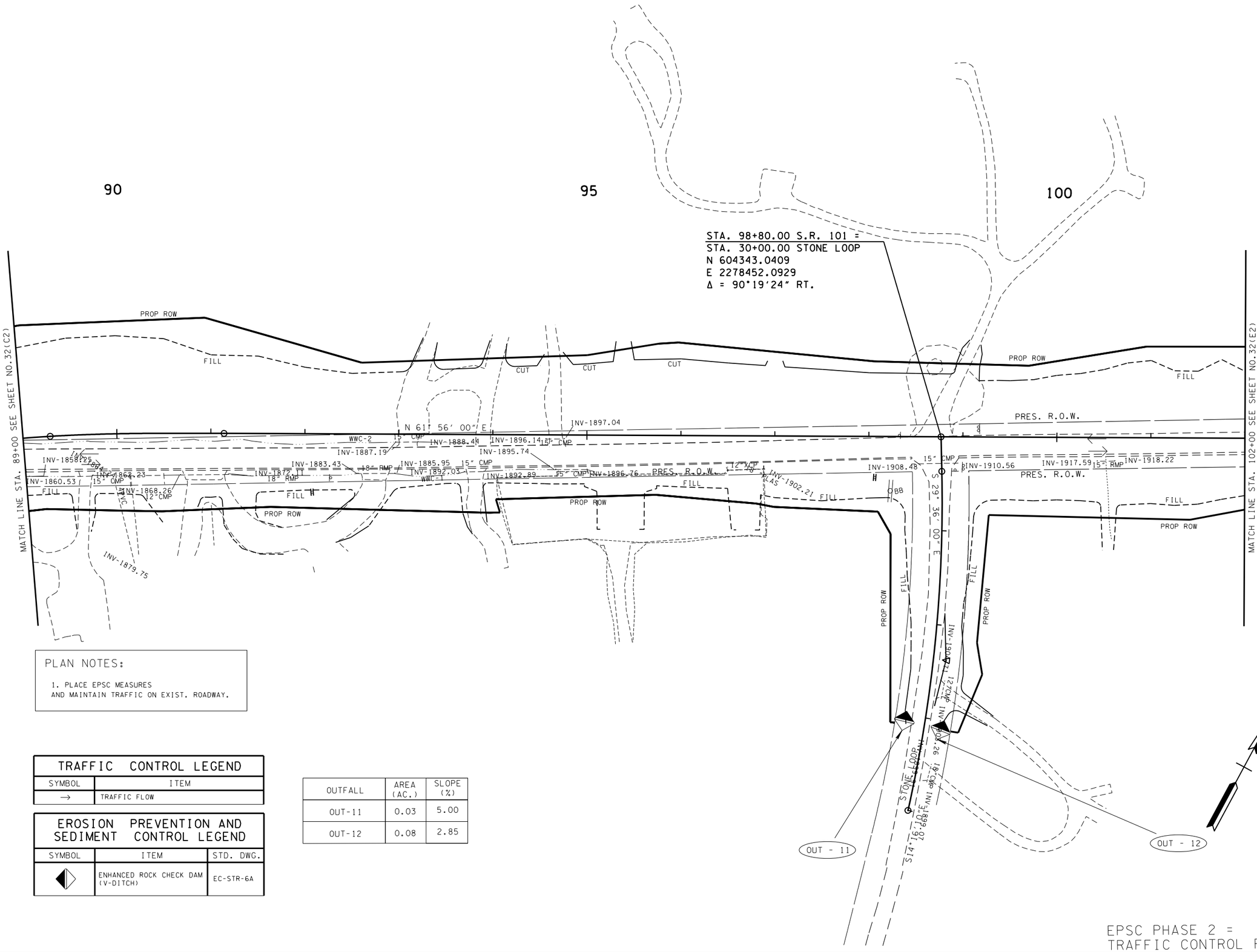
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	32(D2)
CONST	2015	STP-101(16)	32(D2)

REV. 5-22-13-ADDED SHEET.



PLAN NOTES:

1. PLACE EPSC MEASURES AND MAINTAIN TRAFFIC ON EXIST. ROADWAY.

TRAFFIC CONTROL LEGEND	
SYMBOL	ITEM
→	TRAFFIC FLOW

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND		
SYMBOL	ITEM	STD. DWG.
◆	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A

OUTFALL	AREA (AC.)	SLOPE (%)
OUT-11	0.03	5.00
OUT-12	0.08	2.85

EPSC PHASE 2 =
TRAFFIC CONTROL PHASE 1

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UNOFFICIAL SET
NOT FOR BIDDING

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA.89+00 TO STA.102+00
SCALE: 1"=50'

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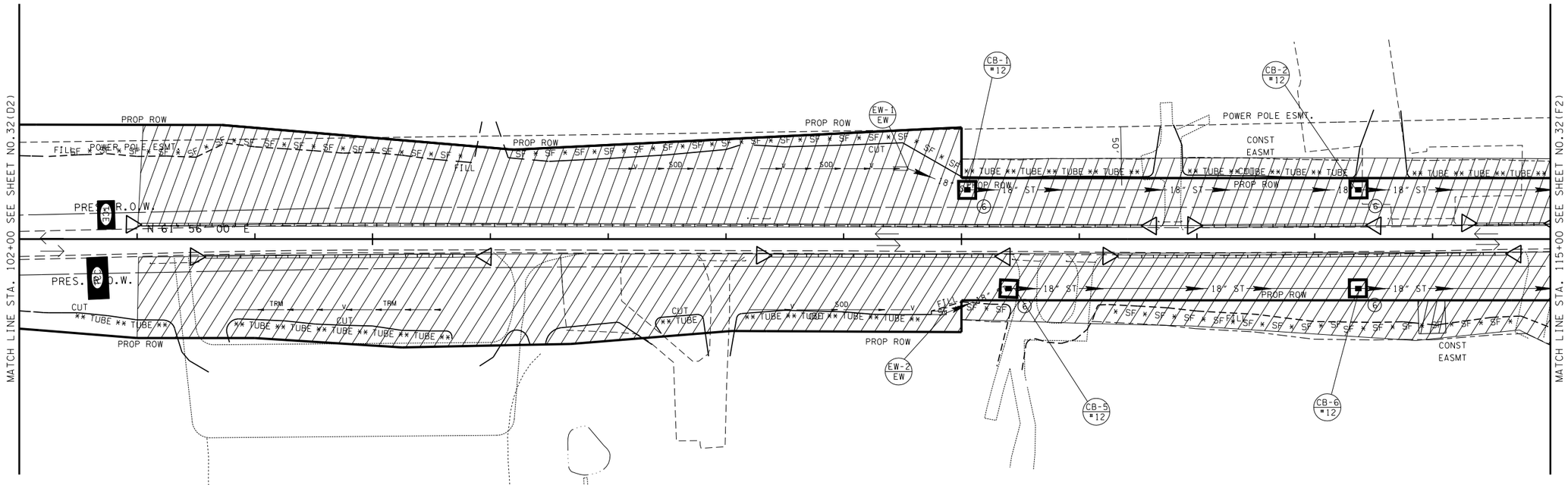
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	33(E2)
CONST	2015	STP-101(16)	32(E2)

REV. 5-22-13-ADDED SHEET.

105 110 115



PLAN NOTES:

1. PLACE EPSC MEASURES.
2. MAINTAIN TRAFFIC ON EXIST. ROADWAY.
3. BUILD IN WORK ZONE AREAS NORTH AND SOUTH OF EXIST. ROADWAY AS DIRECTED BY TDOT SUPERVISOR

TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	WORK ZONE
→	TRAFFIC FLOW
	PORTABLE BARRIER RAIL
	TEMPORARY ATTENUATOR

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SF * SF * SF *	SILT FENCE	EC-STR-3B
	CULVERT PROTECTION (TYPE 1)	EC-STR-11
TCE	TEMPORARY CONSTRUCTION EXIT	EC-STR-25
TCC	TEMPORARY CULVERT CROSSING (DESCRIBE NUMBER AND SIZE OF PIPES)	EC-STR-25
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37
6	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EC-STR-46

N

EPSC PHASE 2 =
TRAFFIC CONTROL PHASE 1

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA.102+00 TO STA.115+00

SCALE: 1"=50'

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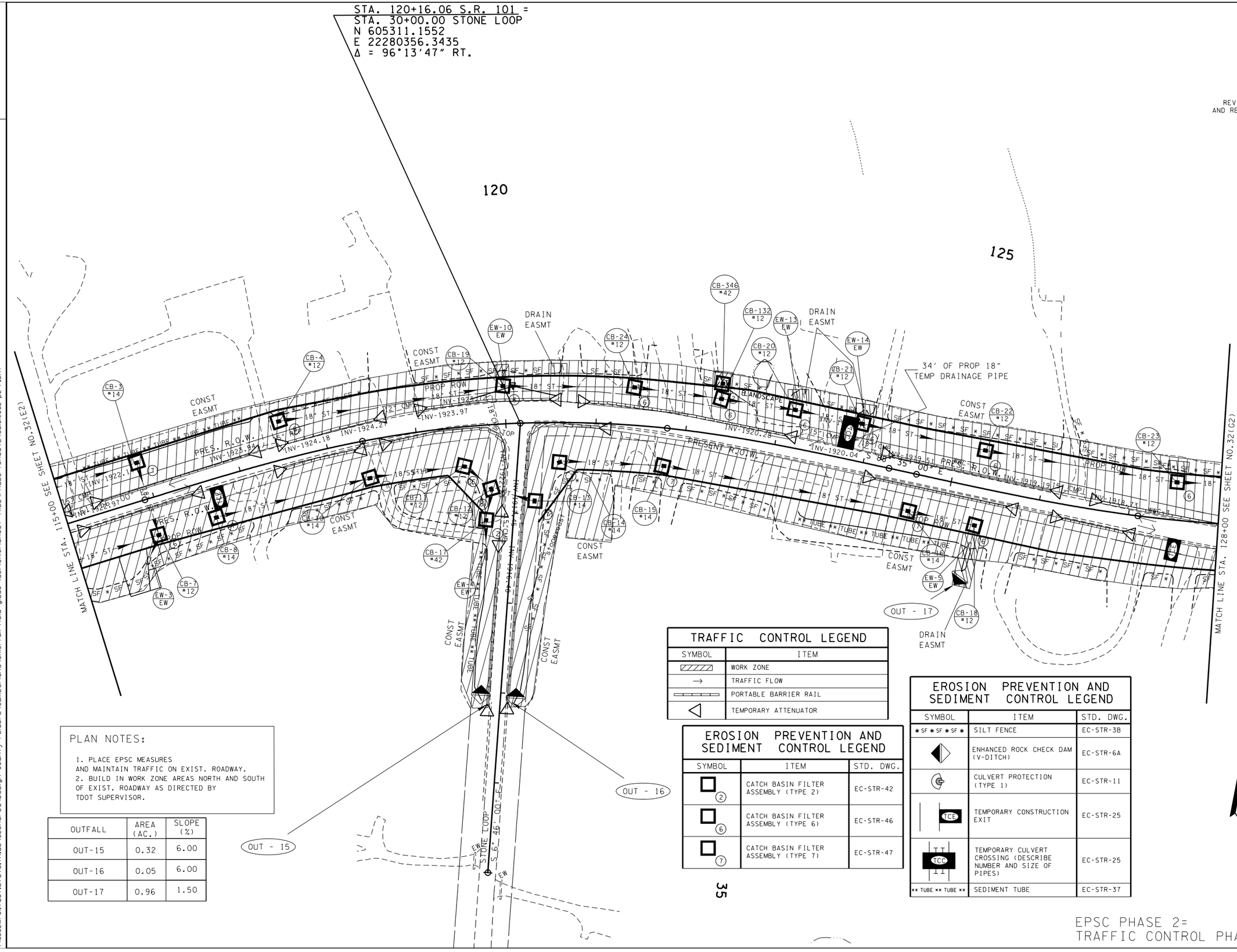
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	32(F2)
CONST	2015	STP-101(16)	32(F2)

REV. 5-22-13-ADDED SHEET.
REV. 5-13-15-REVISED OUT-53 TO OUT-17
AND REMOVED OUT-14 FROM TABLE PER ENV REQ.



TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	WORK ZONE
→	TRAFFIC FLOW
	PORTABLE BARRIER RAIL
◁	TEMPORARY ATTENUATOR

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
□ 2	CATCH BASIN FILTER ASSEMBLY (TYPE 2)	EC-STR-42
□ 6	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EC-STR-46
□ 7	CATCH BASIN FILTER ASSEMBLY (TYPE 7)	EC-STR-47

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SF * SF * SF *	SILT FENCE	EC-STR-3B
	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
	CULVERT PROTECTION (TYPE 1)	EC-STR-11
TCE	TEMPORARY CONSTRUCTION EXIT	EC-STR-25
TCC	TEMPORARY CULVERT CROSSING (DESCRIBE NUMBER AND SIZE OF PIPES)	EC-STR-25
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37

PLAN NOTES:

1. PLACE EPSC MEASURES AND MAINTAIN TRAFFIC ON EXIST. ROADWAY.
2. BUILD IN WORK ZONE AREAS NORTH AND SOUTH OF EXIST. ROADWAY AS DIRECTED BY TDOT SUPERVISOR.

OUTFALL	AREA (AC.)	SLOPE (%)
OUT-15	0.32	6.00
OUT-16	0.05	6.00
OUT-17	0.96	1.50

EPSC PHASE 2=
TRAFFIC CONTROL PHASE 1

SEALED BY

ROBERT W. RODGERS
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 22299
STATE OF TENNESSEE

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00013 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA.115+00 TO STA.128+00
SCALE: 1"=50'

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	32(G2)
CONST	2015	STP-101(16)	32(G2)

REV. 5-22-13- ADDED SHEET.

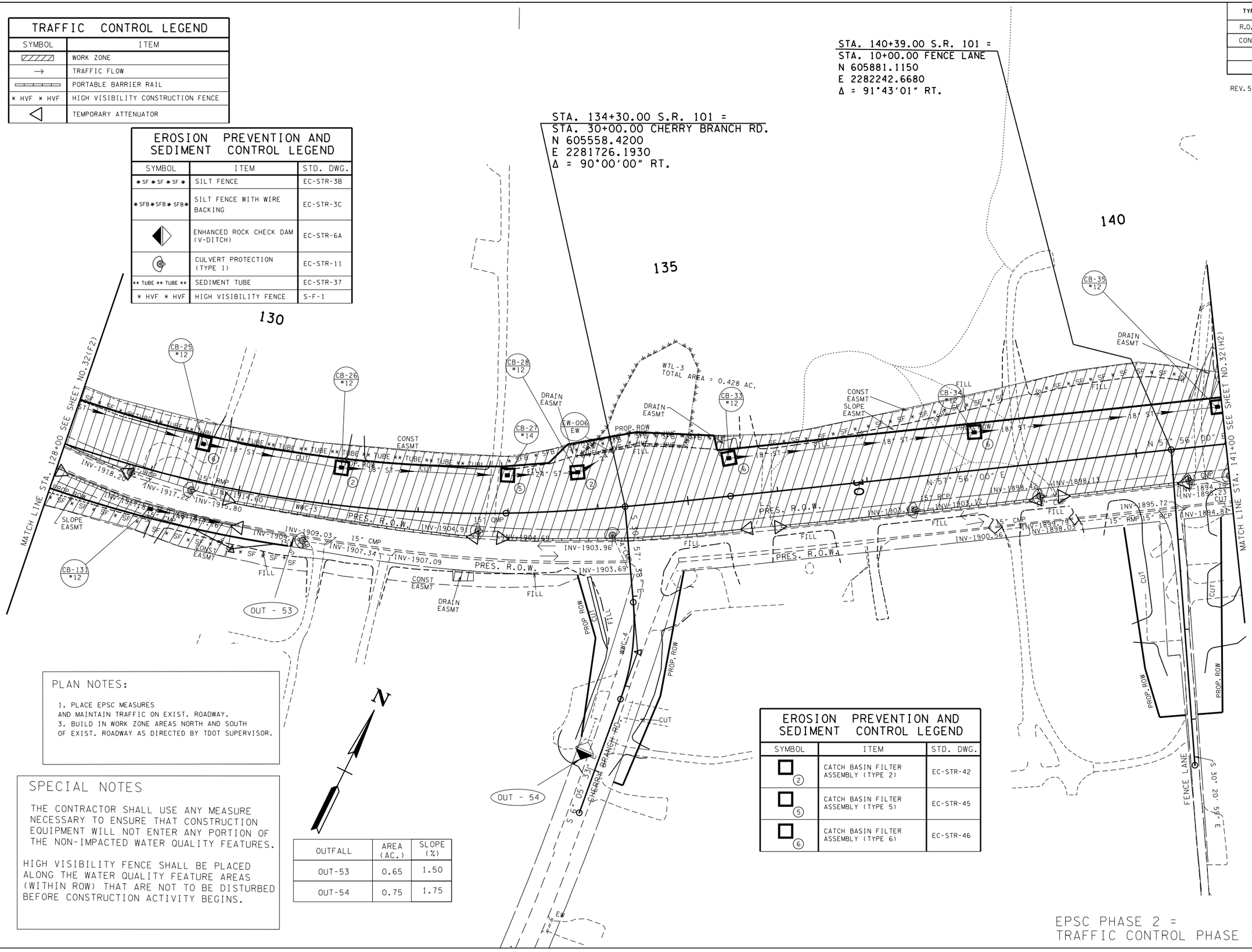
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	WORK ZONE
→	TRAFFIC FLOW
	PORTABLE BARRIER RAIL
* HVF * HVF	HIGH VISIBILITY CONSTRUCTION FENCE
◁	TEMPORARY ATTENUATOR

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SF * SF * SF *	SILT FENCE	EC-STR-3B
* SFB * SFB * SFB *	SILT FENCE WITH WIRE BACKING	EC-STR-3C
	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
	CULVERT PROTECTION (TYPE 1)	EC-STR-11
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37
* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1



PLAN NOTES:

1. PLACE EPSC MEASURES AND MAINTAIN TRAFFIC ON EXIST. ROADWAY.
3. BUILD IN WORK ZONE AREAS NORTH AND SOUTH OF EXIST. ROADWAY AS DIRECTED BY TDOT SUPERVISOR.

SPECIAL NOTES

THE CONTRACTOR SHALL USE ANY MEASURE NECESSARY TO ENSURE THAT CONSTRUCTION EQUIPMENT WILL NOT ENTER ANY PORTION OF THE NON-IMPACTED WATER QUALITY FEATURES.

HIGH VISIBILITY FENCE SHALL BE PLACED ALONG THE WATER QUALITY FEATURE AREAS (WITHIN ROW) THAT ARE NOT TO BE DISTURBED BEFORE CONSTRUCTION ACTIVITY BEGINS.

OUTFALL	AREA (AC.)	SLOPE (%)
OUT-53	0.65	1.50
OUT-54	0.75	1.75

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
□ (2)	CATCH BASIN FILTER ASSEMBLY (TYPE 2)	EC-STR-42
□ (5)	CATCH BASIN FILTER ASSEMBLY (TYPE 5)	EC-STR-45
□ (6)	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EC-STR-46

EPSC PHASE 2 =
TRAFFIC CONTROL PHASE 1

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NOT FOR BIDDING

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00013 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA.128+00 TO STA.141+00
SCALE: 1"=50'

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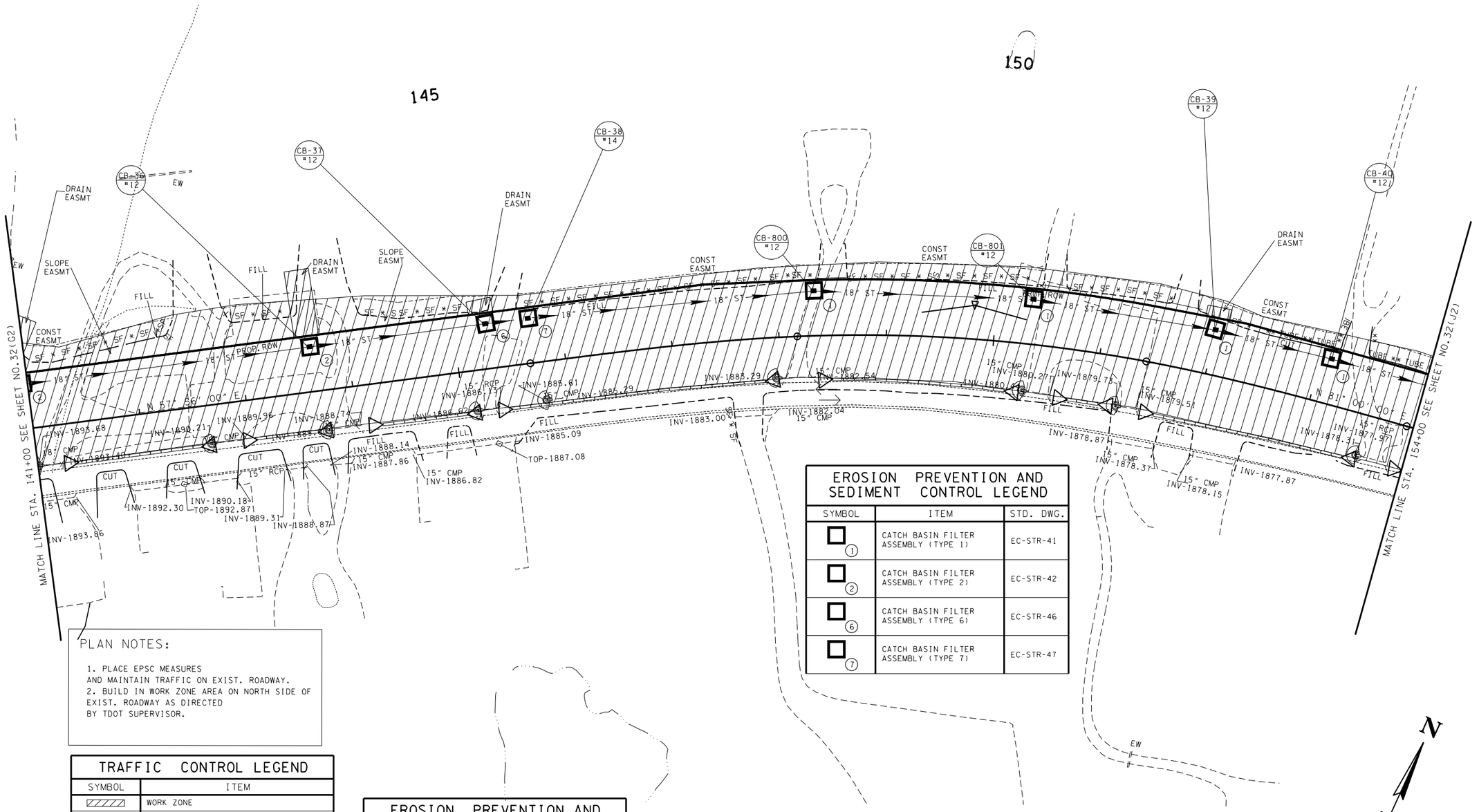
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	32(H2)
CONST	2015	STP-101(16)	32(H2)

REV. 5-22-13- ADDED SHEET.



PLAN NOTES:

1. PLACE EPSC MEASURES AND MAINTAIN TRAFFIC ON EXIST. ROADWAY.
2. BUILD IN WORK ZONE AREA ON NORTH SIDE OF EXIST. ROADWAY AS DIRECTED BY TDOT SUPERVISOR.

TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	WORK ZONE
→	TRAFFIC FLOW
	PORTABLE BARRIER RAIL
	TEMPORARY ATTENUATOR

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SF * SF * SF *	SILT FENCE	EC-STR-3B
	CULVERT PROTECTION (TYPE 1)	EC-STR-11
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
1	CATCH BASIN FILTER ASSEMBLY (TYPE 1)	EC-STR-41
2	CATCH BASIN FILTER ASSEMBLY (TYPE 2)	EC-STR-42
6	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EC-STR-46
7	CATCH BASIN FILTER ASSEMBLY (TYPE 7)	EC-STR-47

EPSC PHASE 2 = TRAFFIC CONTROL PHASE 1

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA.141+00 TO STA.154+00
SCALE: 1"=50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	32(J2)
CONST	2015	STP-101(16)	32(J2)

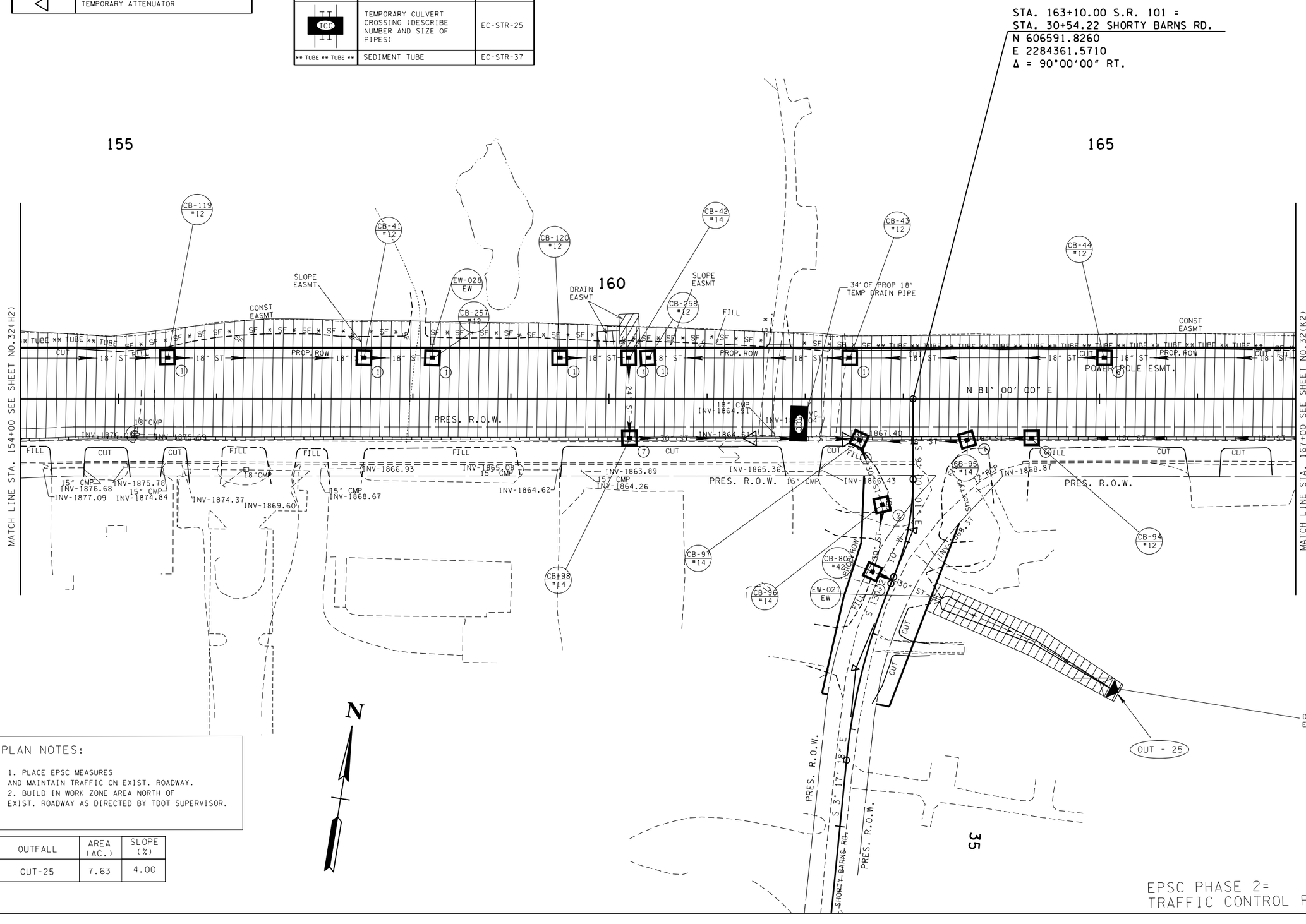
REV. 5-22-13- ADDED SHEET.

TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	WORK ZONE
→	TRAFFIC FLOW
	PORTABLE BARRIER RAIL
◁	TEMPORARY ATTENUATOR

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SF * SF * SF *	SILT FENCE	EC-STR-3B
	CULVERT PROTECTION (TYPE 1)	EC-STR-11
TCC	TEMPORARY CULVERT CROSSING (DESCRIBE NUMBER AND SIZE OF PIPES)	EC-STR-25
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37



PLAN NOTES:

1. PLACE EPSC MEASURES AND MAINTAIN TRAFFIC ON EXIST. ROADWAY.
2. BUILD IN WORK ZONE AREA NORTH OF EXIST. ROADWAY AS DIRECTED BY TDOT SUPERVISOR.

OUTFALL	AREA (AC.)	SLOPE (%)
OUT-25	7.63	4.00

EPSC PHASE 2=
TRAFFIC CONTROL PHASE 1

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UNOFFICIAL SET
NOT FOR BIDDING

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA.154+00 TO STA.167+00
SCALE: 1"=50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	32(K2)
CONST	2015	STP-101(16)	32(K2)

REV. 5-22-13- ADDED SHEET.

N

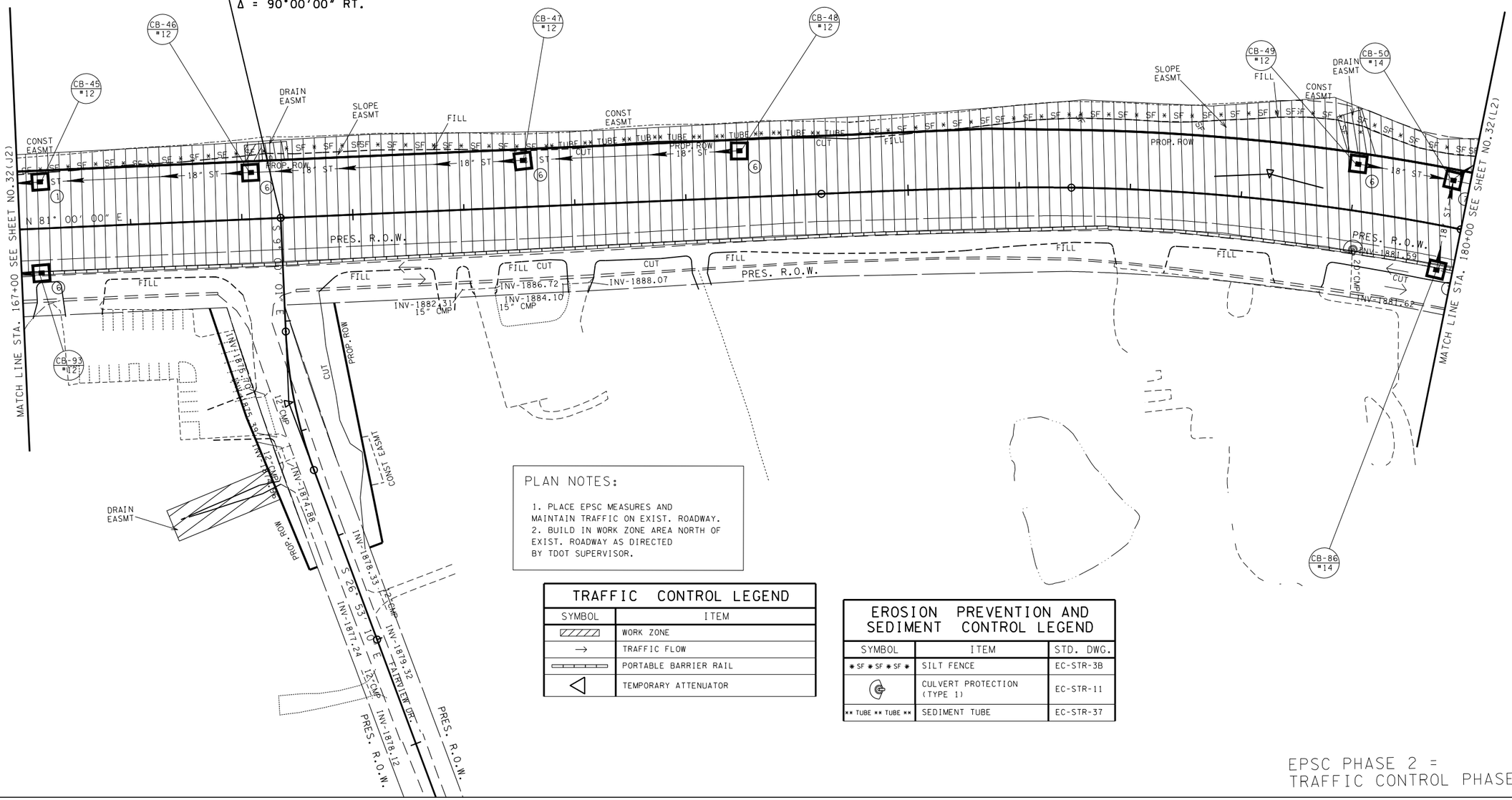
170

STA. 169.35.00 S.R. 101 =
STA. 30+07.00 FAIRVIEW DR.
N 606689.5970
E 224978.8760
Δ = 90°00'00" RT.

175

1

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND		
SYMBOL	ITEM	STD. DWG.
①	CATCH BASIN FILTER ASSEMBLY (TYPE 1)	EC-STR-41
⑥	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EC-STR-46
⑦	CATCH BASIN FILTER ASSEMBLY (TYPE 7)	EC-STR-47



PLAN NOTES:
1. PLACE EPSC MEASURES AND MAINTAIN TRAFFIC ON EXIST. ROADWAY. 2. BUILD IN WORK ZONE AREA NORTH OF EXIST. ROADWAY AS DIRECTED BY TDOT SUPERVISOR.

TRAFFIC CONTROL LEGEND	
SYMBOL	ITEM
▨	WORK ZONE
→	TRAFFIC FLOW
▭▭▭	PORTABLE BARRIER RAIL
◁	TEMPORARY ATTENUATOR

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND		
SYMBOL	ITEM	STD. DWG.
* SF * SF * SF *	SILT FENCE	EC-STR-3B
ⓒ	CULVERT PROTECTION (TYPE 1)	EC-STR-11
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37

EPSC PHASE 2 =
TRAFFIC CONTROL PHASE 1

SEALED BY

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 167+00 TO STA. 180+00

SCALE: 1"=50'

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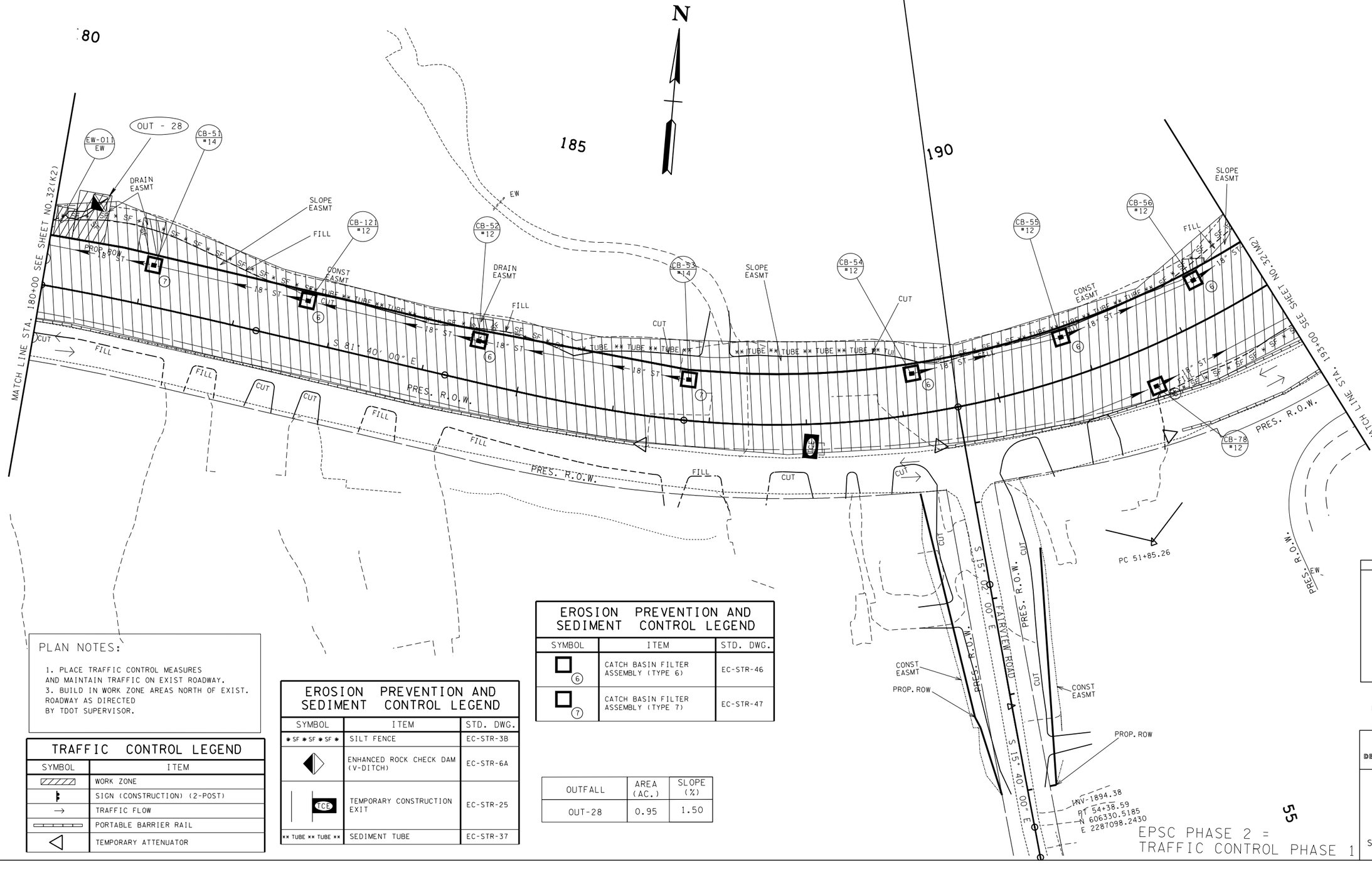
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	32(L2)
CONST	2015	STP-101(16)	32(L2)

REV. 5-22-13- ADDED SHEET.

STA. 189+56.86 S.R. 101 =
P.L. STA. 50+00.00 FAIRVIEW ROAD
N 606753.7277
E 2286983.1309
Δ = 91°06'36" RT.



PLAN NOTES:

1. PLACE TRAFFIC CONTROL MEASURES AND MAINTAIN TRAFFIC ON EXIST ROADWAY.
3. BUILD IN WORK ZONE AREAS NORTH OF EXIST. ROADWAY AS DIRECTED BY TDOT SUPERVISOR.

TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	WORK ZONE
	SIGN (CONSTRUCTION) (2-POST)
→	TRAFFIC FLOW
	PORTABLE BARRIER RAIL
	TEMPORARY ATTENUATOR

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
✱SF✱SF✱SF✱	SILT FENCE	EC-STR-3B
	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
TCE	TEMPORARY CONSTRUCTION EXIT	EC-STR-25
✱✱TUBE✱✱TUBE✱✱	SEDIMENT TUBE	EC-STR-37

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
⑥	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EC-STR-46
⑦	CATCH BASIN FILTER ASSEMBLY (TYPE 7)	EC-STR-47

OUTFALL	AREA (AC.)	SLOPE (%)
OUT-28	0.95	1.50

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA.180+00 TO STA.193+00

SCALE: 1"=50'

EPSC PHASE 2 =
TRAFFIC CONTROL PHASE 1

55

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

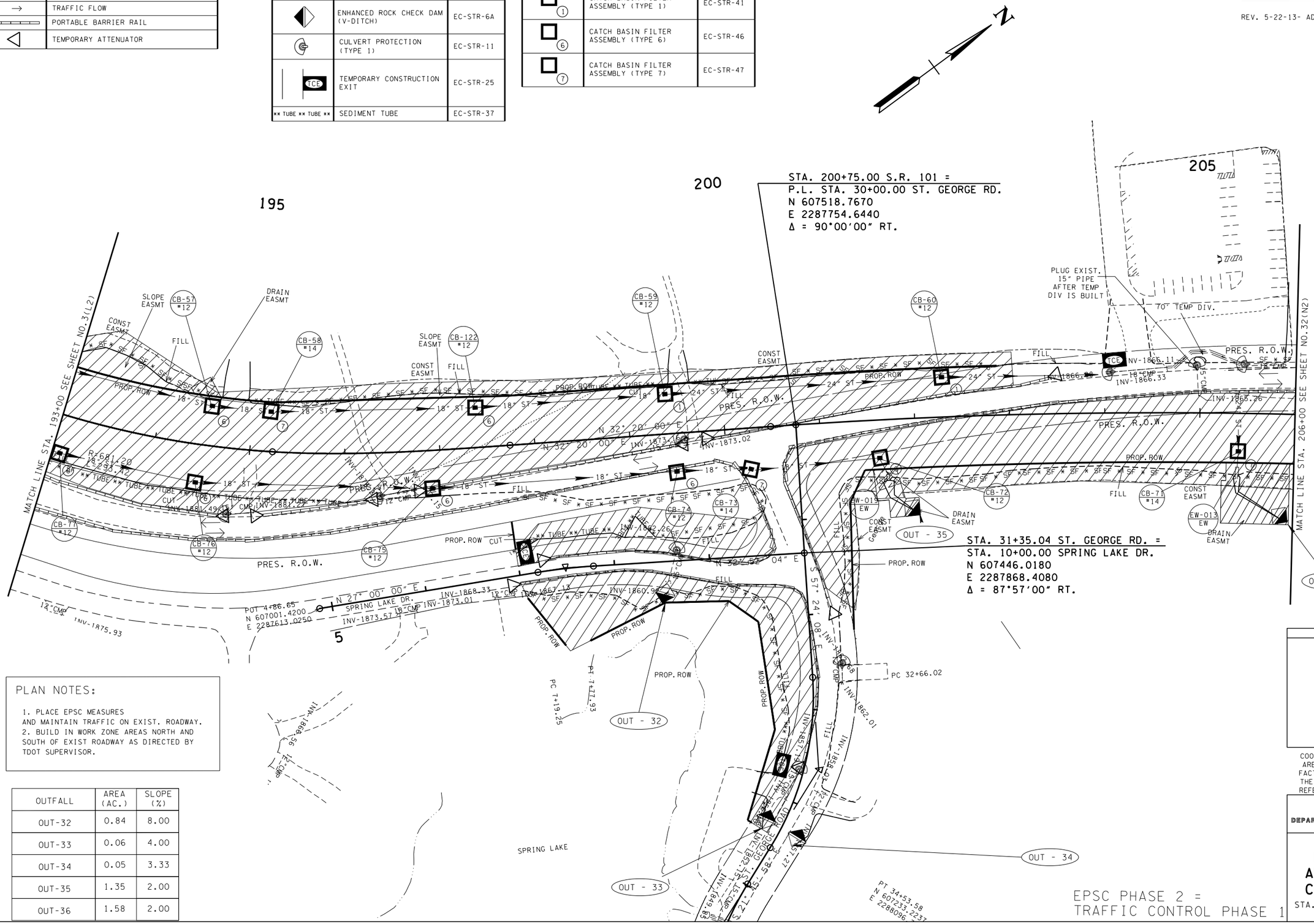
TRAFFIC CONTROL LEGEND	
SYMBOL	ITEM
	WORK ZONE
→	TRAFFIC FLOW
	PORTABLE BARRIER RAIL
	TEMPORARY ATTENUATOR

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND		
SYMBOL	ITEM	STD. DWG.
* SF * SF * SF *	SILT FENCE	EC-STR-3B
	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
	CULVERT PROTECTION (TYPE 1)	EC-STR-11
TCE	TEMPORARY CONSTRUCTION EXIT	EC-STR-25
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND		
SYMBOL	ITEM	STD. DWG.
1	CATCH BASIN FILTER ASSEMBLY (TYPE 1)	EC-STR-41
6	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EC-STR-46
7	CATCH BASIN FILTER ASSEMBLY (TYPE 7)	EC-STR-47

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	32(M2)
CONST	2015	STP-101(16)	32(M2)

REV. 5-22-13- ADDED SHEET.



PLAN NOTES:

1. PLACE EPSC MEASURES AND MAINTAIN TRAFFIC ON EXIST. ROADWAY.
2. BUILD IN WORK ZONE AREAS NORTH AND SOUTH OF EXIST ROADWAY AS DIRECTED BY TDOT SUPERVISOR.

OUTFALL	AREA (AC.)	SLOPE (%)
OUT-32	0.84	8.00
OUT-33	0.06	4.00
OUT-34	0.05	3.33
OUT-35	1.35	2.00
OUT-36	1.58	2.00

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA.193+00 TO STA.206+00

SCALE: 1"=50'

EPSC PHASE 2 =
TRAFFIC CONTROL PHASE 1

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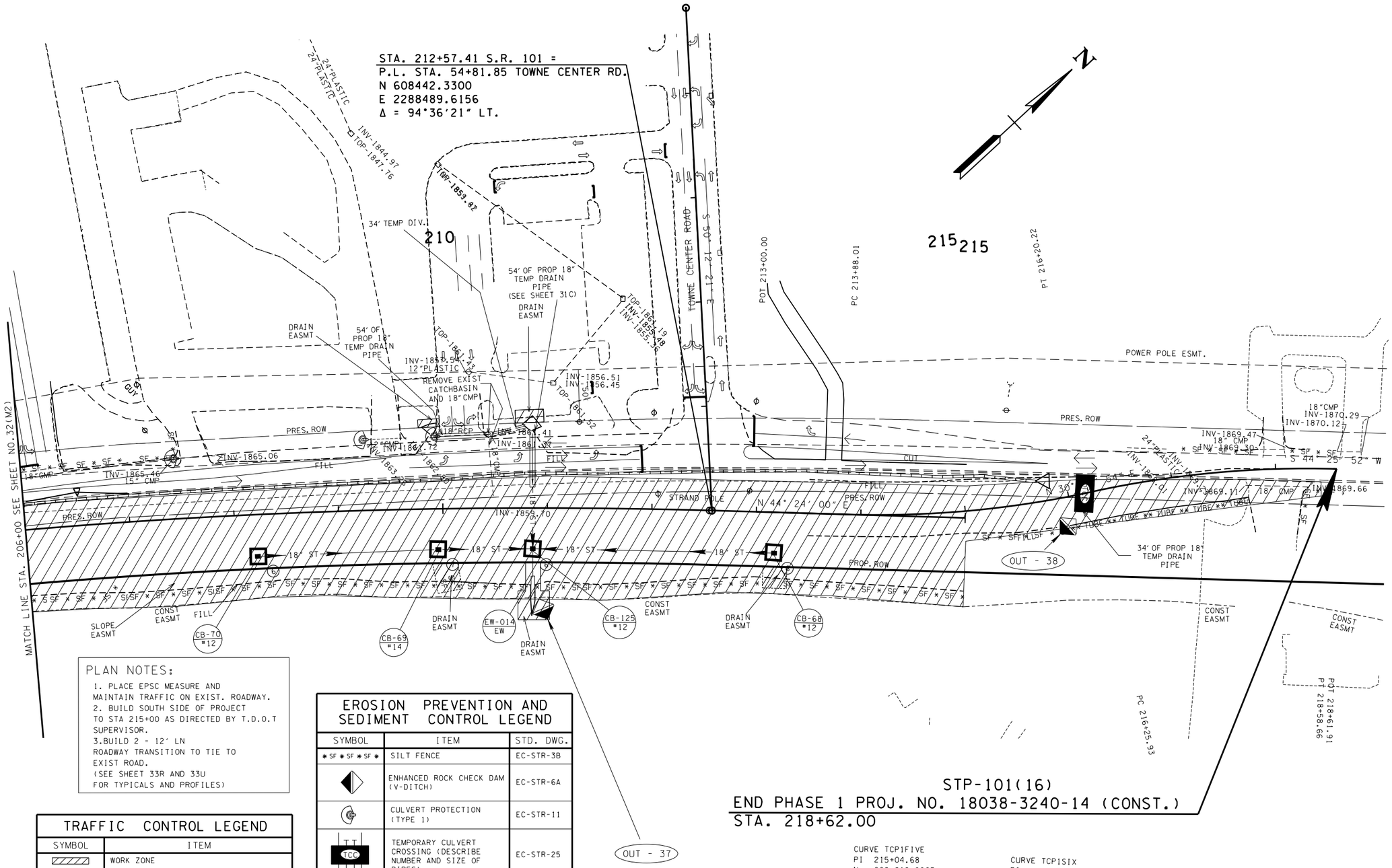
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	32(N2)
CONST	2015	STP-101(16)	32(N2)

REV. 5-22-13- ADDED SHEET.



PLAN NOTES:

1. PLACE EPSC MEASURE AND MAINTAIN TRAFFIC ON EXIST. ROADWAY.
2. BUILD SOUTH SIDE OF PROJECT TO STA 215+00 AS DIRECTED BY T.D.O.T SUPERVISOR.
3. BUILD 2 - 12' LN ROADWAY TRANSITION TO TIE TO EXIST ROAD.
(SEE SHEET 33R AND 33U FOR TYPICALS AND PROFILES)

TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	WORK ZONE
→	TRAFFIC FLOW
	PORTABLE BARRIER RAIL
	TEMPORARY ATTENUATOR

OUTFALL	AREA (AC.)	SLOPE (%)
OUT-37	0.40	4.00
OUT-38	0.54	4.00

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SF * SF * SF *	SILT FENCE	EC-STR-3B
	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
	CULVERT PROTECTION (TYPE 1)	EC-STR-11
TCC	TEMPORARY CULVERT CROSSING (DESCRIBE NUMBER AND SIZE OF PIPES)	EC-STR-25
	TEMPORARY DIVERSION CHANNEL (DESCRIBE-SIZE AND TYPE OF LINING)	EC-STR-31
	TEMPORARY DIVERSION CULVERT (DESCRIBE NUMBER AND SIZE OF PIPES)	EC-STR-32
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37
6	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EC-STR-46
7	CATCH BASIN FILTER ASSEMBLY (TYPE 7)	EC-STR-47

STP-101(16)
END PHASE 1 PROJ. NO. 18038-3240-14 (CONST.)
STA. 218+62.00

CURVE TCP1FIVE
PI 215+04.68
N 608,618.9963
E 2,288,662.6201
Δ 13° 48' 06" (LT)
D 5° 56' 37"
R 964.00
L 232.21
T 116.67
NORMAL CROWN
DESIGN SPEED 45 MPH

CURVE TCP1SIX
PI 217+42.86
N 608,824.9895
E 2,288,784.4360
Δ 13° 49' 58" (RT)
D 5° 56' 37"
R 964.00
L 232.74
T 116.94
NORMAL CROWN
DESIGN SPEED 45 MPH

EPSC PHASE 2 =
TRAFFIC CONTROL PHASE 1

SEALED BY

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA.206+00 TO STA.219+00
SCALE: 1"=50'

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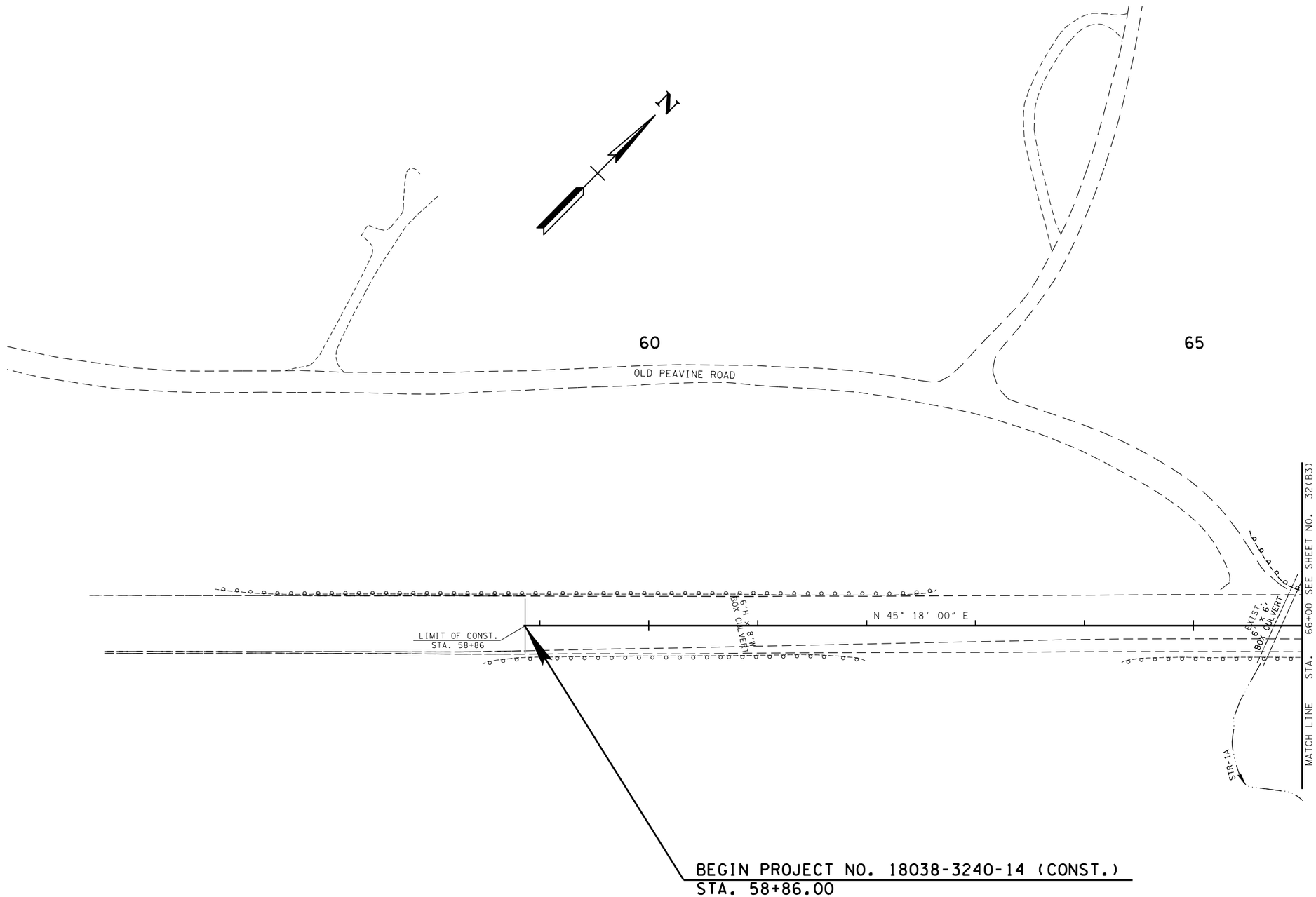
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	32(A3)
CONST	2015	STP-101(16)	32(A3)

REV. 5-22-13- ADDED SHEET.



PHASE NOTES

1. MAINTAIN TRAFFIC ON EXIST. ROAD.

EPSC PHASE 3 =
TRAFFIC CONTROL PHASE 2

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA.56+00 TO STA.66+00
SCALE: 1"=50'

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

OUTFALL	AREA (AC.)	SLOPE (%)
OUT-2	3.11	5.71
OUT-4	4.40	5.00
OUT-3	0.47	0.50

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
SFB SFB SFB	SEDIMENT FILTER BAG	EC-STR-2
* SFB * SFB * SFB *	SILT FENCE WITH WIRE BACKING	EC-STR-3C
	ROCK CHECK DAM (V-DITCH)	EC-STR-6
	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
TCE	TEMPORARY CONSTRUCTION EXIT	EC-STR-25
	TEMPORARY BERM	EC-STR-27
	TEMPORARY SLOPE DRAIN WITH TEMPORARY BERM	EC-STR-27
	TEMPORARY DIVERSION CHANNEL (DESCRIBE-SIZE AND TYPE OF LINING)	EC-STR-31
	TEMPORARY DIVERSION CULVERT (DESCRIBE NUMBER AND SIZE OF PIPES)	EC-STR-32
	SUSPENDED PIPE DIVERSION	EC-STR-33 EC-STR-33A
	EROSION CONTROL BLANKET	EC-STR-34
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37
* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1

TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	WORK ZONE
	FLEXIBLE DRUMS (CHANNELIZING)
→	TRAFFIC FLOW
	PORTABLE BARRIER RAIL
* HVF * HVF	HIGH VISIBILITY CONSTRUCTION FENCE
	TEMPORARY ATTENUATOR
	TEMPORARY BARRICADE (TYPE III) 12 FT

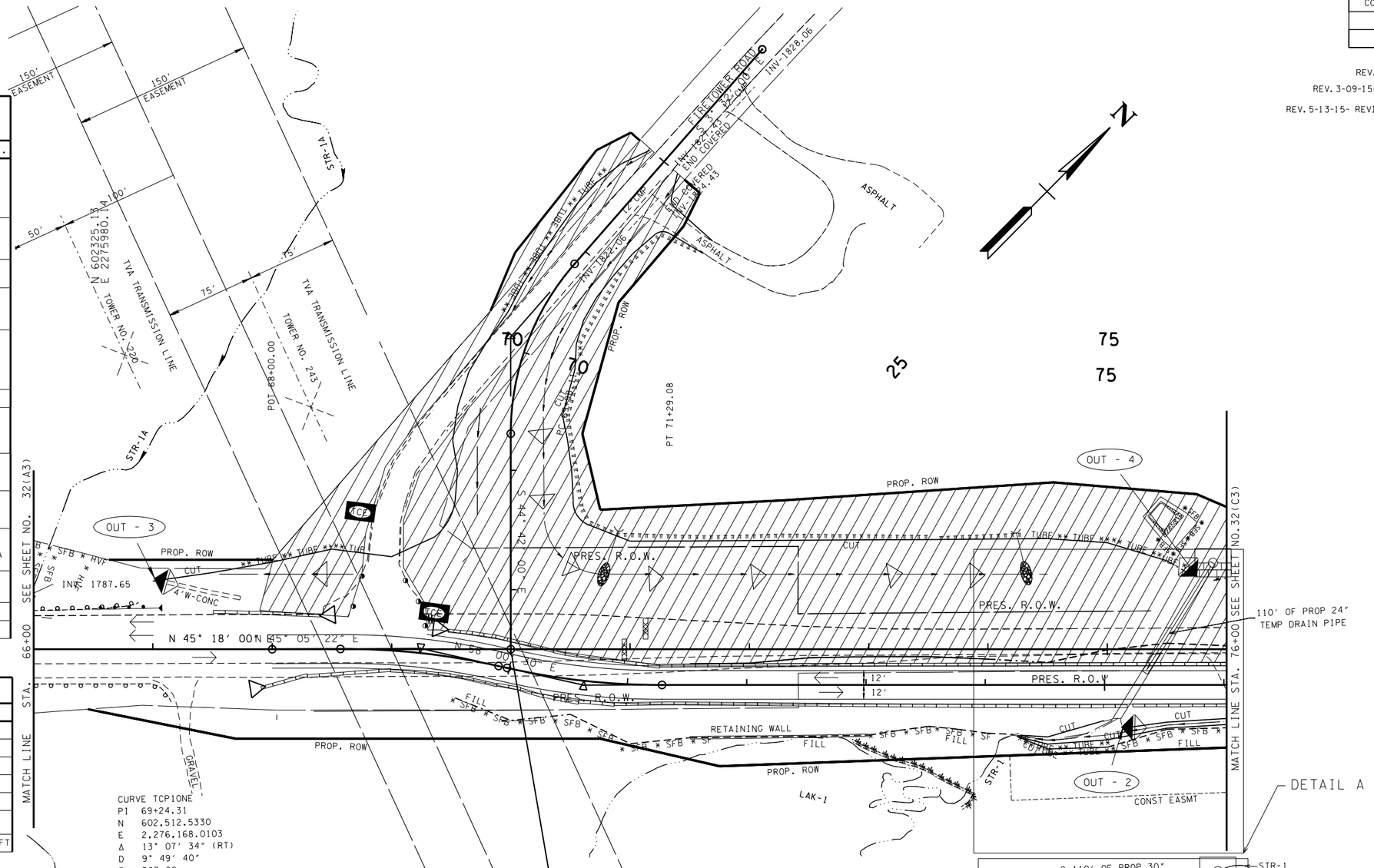
PLAN NOTES:

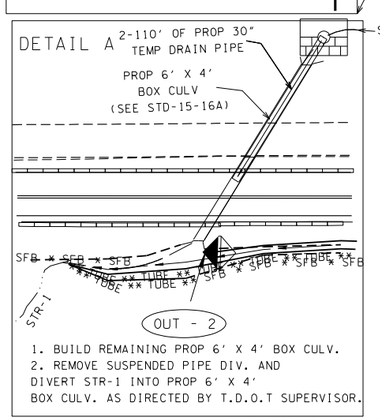
1. PLACE EPSC MEASURES AND DETOUR TRAFFIC FROM EXIST ROADWAY TO PROP 2 LN TEMP. ROAD.
2. SEE DETAIL A.
3. BUILD IN WORK ZONE AREA ON NORTH SIDE AS DIRECTED BY TDOT SUPERVISOR.

SPECIAL NOTES

THE CONTRACTOR SHALL USE ANY MEASURE NECESSARY TO ENSURE THAT CONSTRUCTION EQUIPMENT WILL NOT ENTER ANY PORTION OF THE NON-IMPACTED WATER QUALITY FEATURES.

HIGH VISIBILITY FENCE SHALL BE PLACED ALONG THE WATER QUALITY FEATURE AREAS (WITHIN ROW) THAT ARE NOT TO BE DISTURBED BEFORE CONSTRUCTION ACTIVITY BEGINS.





1. BUILD REMAINING PROP 6' X 4' BOX CULV.
2. REMOVE SUSPENDED PIPE DIV. AND DIVERT STR-1 INTO PROP 6' X 4' BOX CULV. AS DIRECTED BY T.D.O.T SUPERVISOR.

EPSC PHASE 3 =
TRAFFIC CONTROL PHASE 2

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	32(B3)
CONST	2015	STP-101(16)	32(B3)

REV. 5-22-13- ADDED SHEET.
REV. 3-09-15- REMOVED WTL-2 PER ENV REQ.
REV. 5-13-15- REVISED OUT-54 TO OUT-3 PER ENV REQ.

SEALED BY

ROBERT W. RODGERS
REGISTERED ENGINEER
AGRICULTURE
No. 22299
STATE OF TENNESSEE

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00013 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA.66+00 TO STA.76+00
SCALE: 1"=50'

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

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
SFB SFB SFB	SEDIMENT FILTER BAG	EC-STR-2
* SF * SF * SF *	SILT FENCE	EC-STR-3B
* SFB * SFB * SFB *	SILT FENCE WITH WIRE BACKING	EC-STR-3C
	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
	CULVERT PROTECTION (TYPE 1)	EC-STR-11

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
TCE	TEMPORARY CONSTRUCTION EXIT	EC-STR-25
	TEMPORARY DIVERSION CHANNEL (DESCRIBE-SIZE AND TYPE OF LINING)	EC-STR-31
	SAND BAG BERM	EC-STR-33
	EROSION CONTROL BLANKET	EC-STR-34
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37
* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1

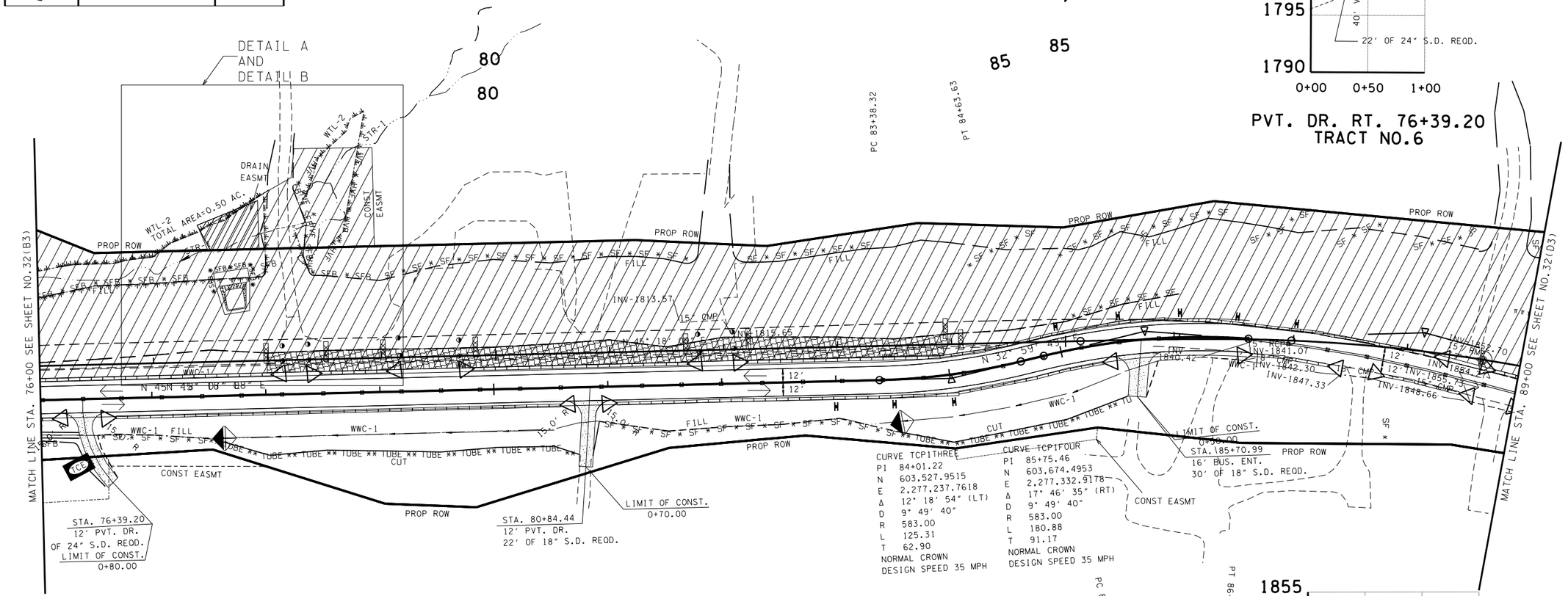
TRAFFIC CONTROL LEGEND

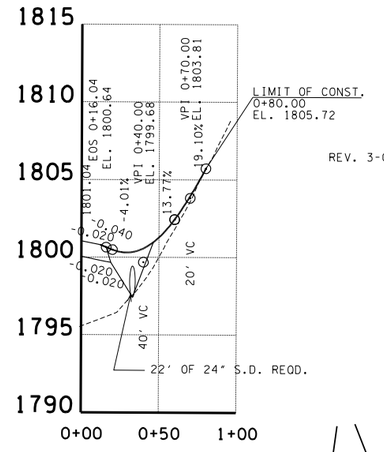
SYMBOL	ITEM
	WORK ZONE
→	TRAFFIC FLOW
	PORTABLE BARRIER RAIL
* HVF * HVF	HIGH VISIBILITY CONSTRUCTION FENCE
	TEMPORARY ATTENUATOR
	TEMPORARY BARRICADE (TYPE III) 12 FT

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	32(C3)
CONST	2015	STP-101(16)	32(C3)

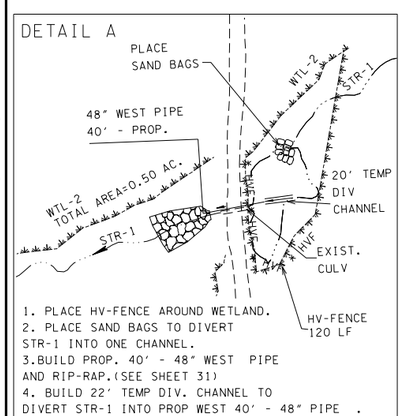
REV. 5-22-13- ADDED SHEET.

REV. 3-09-15- REMOVED HVF AT STA.76+00LT PER ENV REQ.

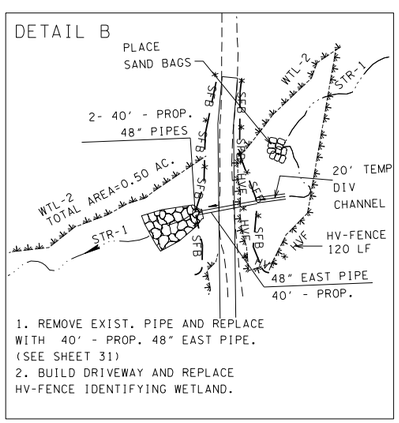




PVT. DR. RT. 76+39.20
TRACT NO.6



1. PLACE HV-FENCE AROUND WETLAND.
2. PLACE SAND BAGS TO DIVERT STR-1 INTO ONE CHANNEL.
3.BUILD PROP. 40' - 48" WEST PIPE AND RIP-RAP.(SEE SHEET 31)
4. BUILD 22' TEMP DIV. CHANNEL TO DIVERT STR-1 INTO PROP WEST 40' - 48" PIPE .



1. REMOVE EXIST. PIPE AND REPLACE WITH 40' - PROP. 48" EAST PIPE. (SEE SHEET 31)
2. BUILD DRIVEWAY AND REPLACE HV-FENCE IDENTIFYING WETLAND.

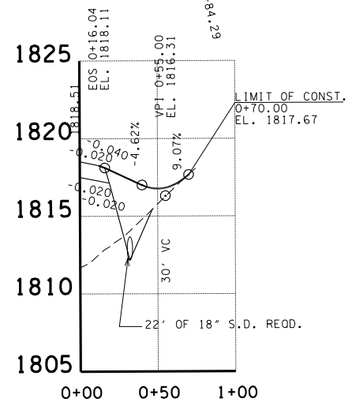
PLAN NOTES:

1. PLACE EPSC MEASURES AND DETOUR TRAFFIC ON PROP 2 LN TEMP. ROAD TO EXIST. ROADWAY.
2. SEE DETAIL A & B
3. BUILD IN WORK ZONE AREA ON NORTH SIDE OF EXIST. ROAD AS DIRECTED BY TDOT SUPERVISOR.

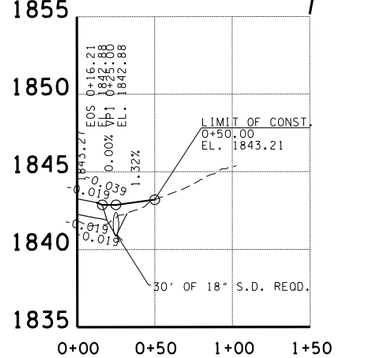
SPECIAL NOTES

THE CONTRACTOR SHALL USE ANY MEASURE NECESSARY TO ENSURE THAT CONSTRUCTION EQUIPMENT WILL NOT ENTER ANY PORTION OF THE NON-IMPACTED WATER QUALITY FEATURES.

HIGH VISIBILITY FENCE SHALL BE PLACED ALONG THE WATER QUALITY FEATURE AREAS (WITHIN ROW) THAT ARE NOT TO BE DISTURBED BEFORE CONSTRUCTION ACTIVITY BEGINS.



PVT. DR. RT. 80+84.44
TRACT NO.7



BUS. ENT. RT. 85+70.99
TRACT NO.9

EPSC PHASE 3 =
TRAFFIC CONTROL PHASE 2

SEALED BY

ROBERT W. RODGERS
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 22230
STATE OF TENNESSEE

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00013 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA.76+00 TO STA.89+00

SCALE: 1"=50'

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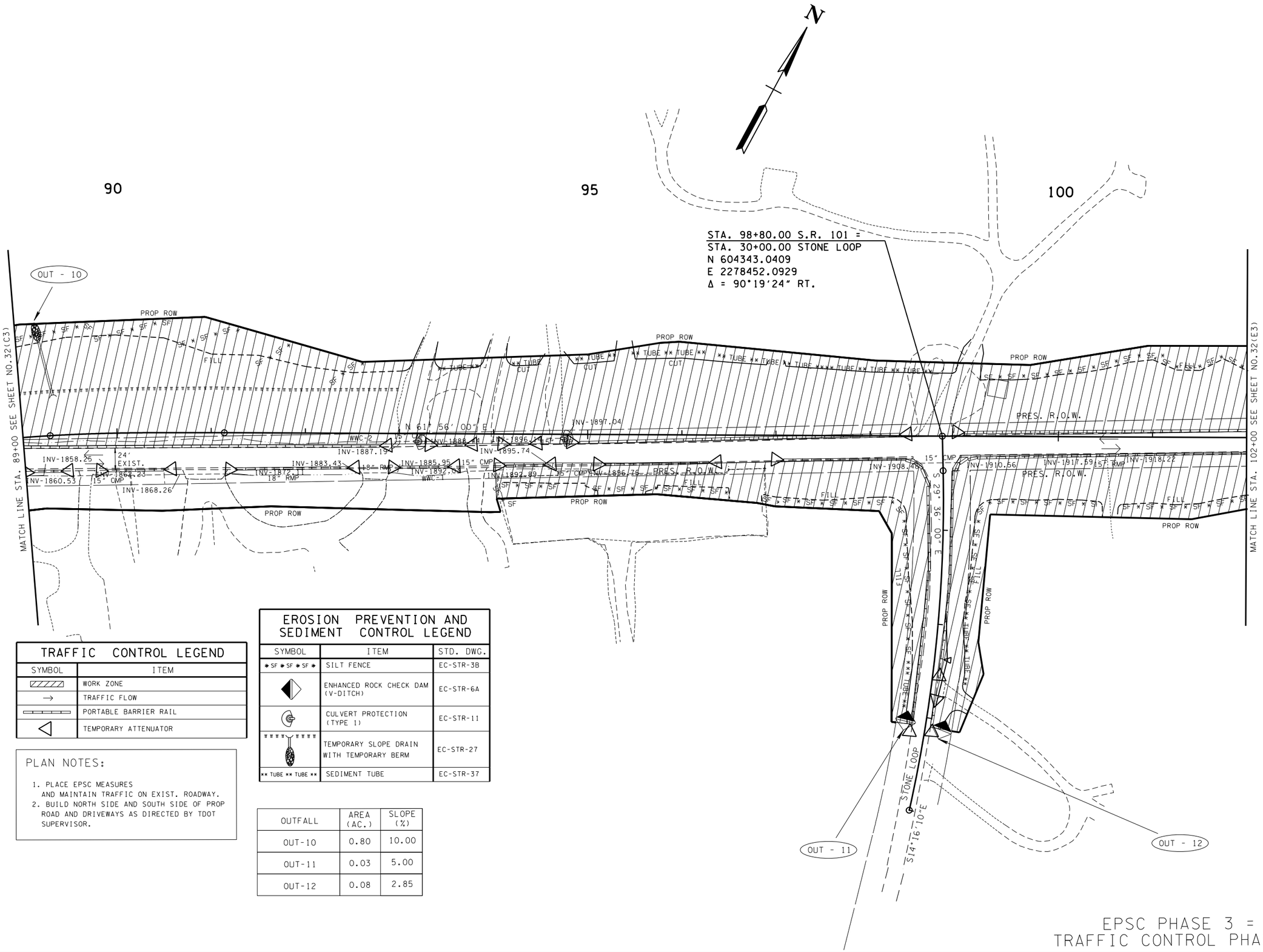
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	32(D3)
CONST	2015	STP-101(16)	32(D3)

REV. 5-22-13- ADDED SHEET.



TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
▨	WORK ZONE
→	TRAFFIC FLOW
▭	PORTABLE BARRIER RAIL
◁	TEMPORARY ATTENUATOR

PLAN NOTES:

1. PLACE EPSC MEASURES AND MAINTAIN TRAFFIC ON EXIST. ROADWAY.
2. BUILD NORTH SIDE AND SOUTH SIDE OF PROP ROAD AND DRIVEWAYS AS DIRECTED BY TDOT SUPERVISOR.

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SF * SF * SF *	SILT FENCE	EC-STR-3B
◆	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
◎	CULVERT PROTECTION (TYPE 1)	EC-STR-11
▽	TEMPORARY SLOPE DRAIN WITH TEMPORARY BERM	EC-STR-27
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37

OUTFALL	AREA (AC.)	SLOPE (%)
OUT-10	0.80	10.00
OUT-11	0.03	5.00
OUT-12	0.08	2.85

EPSC PHASE 3 =
TRAFFIC CONTROL PHASE 2

SEALED BY

UNOFFICIAL SET
NOT FOR BIDDING

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00013 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA.89+00 TO STA.102+00
SCALE: 1"=50'

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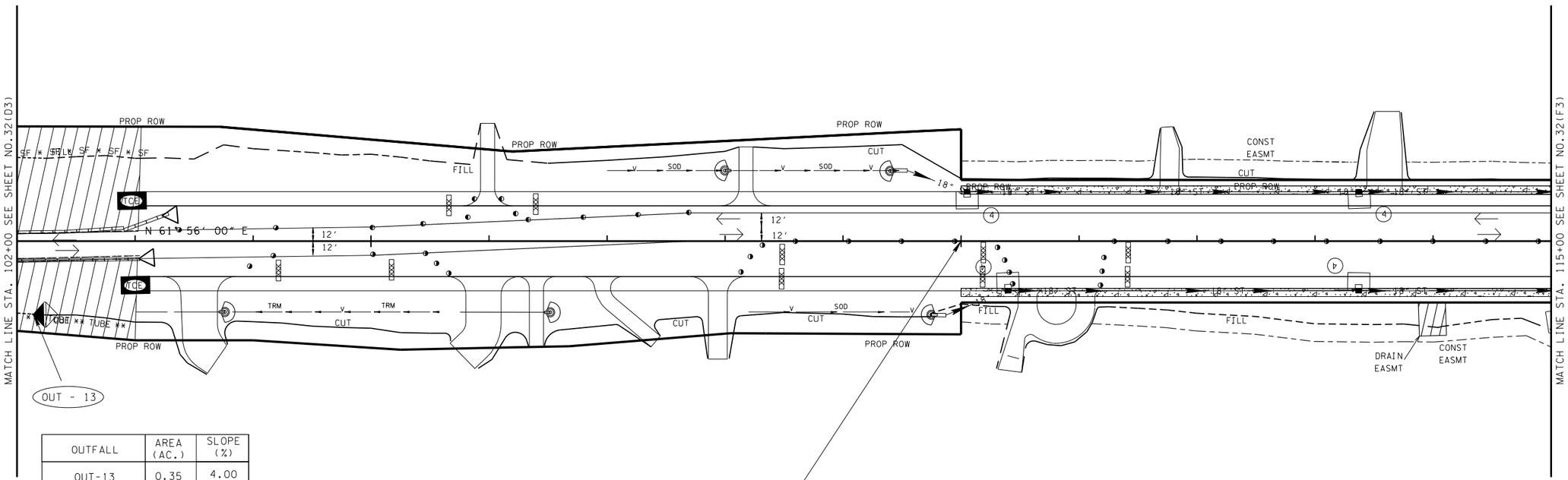
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	32(E3)
CONST	2015	STP-101(16)	32(E3)

REV. 5-22-13- ADDED SHEET.

105 110 1



OUTFALL	AREA (AC.)	SLOPE (%)
OUT-13	0.35	4.00

PHASE NOTES

1. PLACE EPSC MEASURES AND MAINTAIN TRAFFIC ON EXISTING ROADWAY TO STA 105+00 THEN DETOUR TRAFFIC TO PROP. 2 LN ROADWAY.
2. BUILD NORTH AND SOUTH SIDE OF PROP ROADWAY TO STA 103+00 AS DIRECTED BY TDOT SUPERVISOR.

BEGIN CURB AND GUTTER
STA. 110+00.00

TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	WORK ZONE
	FLEXIBLE DRUMS (CHANNELIZING)
→	TRAFFIC FLOW
	PORTABLE BARRIER RAIL
	TEMPORARY ATTENUATOR
	TEMPORARY BARRICADE (TYPE III) 12 FT

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SF * SF * SF *	SILT FENCE	EC-STR-3B
	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
TCE	TEMPORARY CONSTRUCTION EXIT	EC-STR-25
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37

EPSC PHASE 3=
TRAFFIC CONTROL PHASE 2

SEALED BY

UNOFFICIAL SET
NOT FOR BIDDING

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00013 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA.102+00 TO STA.115+00
SCALE: 1"=50'

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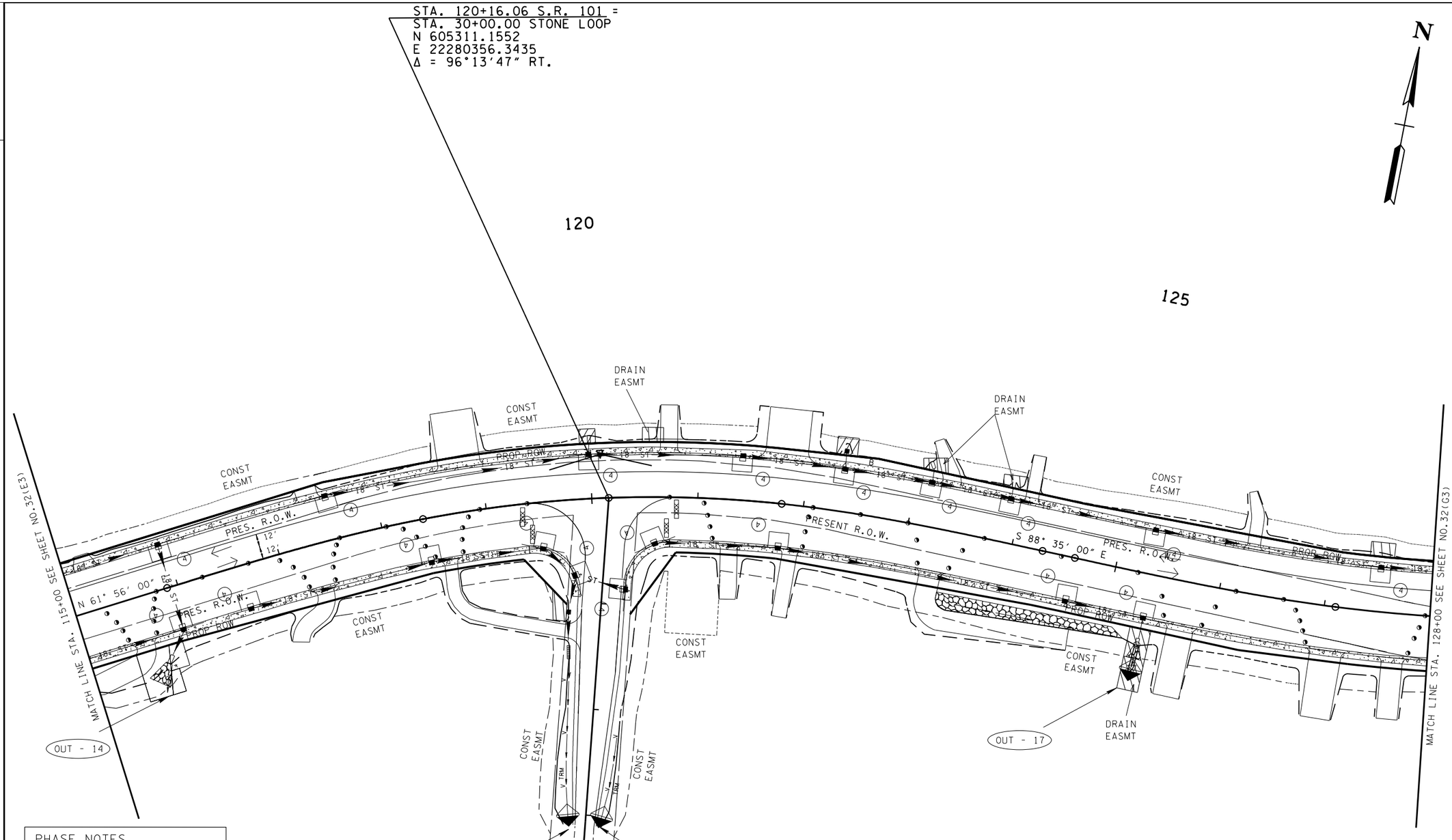
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	32(F3)
CONST	2015	STP-101(16)	32(F3)

REV. 5-22-13- ADDED SHEET.

STA. 120+16.06 S.R. 101 =
STA. 30+00.00 STONE LOOP
N 605311.1552
E 22280356.3435
Δ = 96°13'47" RT.



PHASE NOTES

1. PLACE EPSC MEASURES AND MAINTAIN TRAFFIC ON PROP. 2 LN ROADWAY.

TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
◑	FLEXIBLE DRUMS (CHANNELIZING)
→	TRAFFIC FLOW
▭	TEMPORARY BARRICADE (TYPE III) 12 FT

OUTFALL	AREA (AC.)	SLOPE (%)
OUT-14	3.59	5.00
OUT-15	1.06	6.00
OUT-16	0.06	6.00
OUT-17	0.96	2.00

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
◆	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
(4)	CURB INLET PROTECTION (TYPE 4)	EC-STR-39A

EPSC PHASE 3 =
TRAFFIC CONTROL PHASE 2

SEALED BY

UNOFFICIAL SET
NOT FOR BIDDING

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN
STA.115+00 TO STA.128+00
SCALE: 1"=50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	33(G3)
CONST	2015	STP-101(16)	32(G3)

REV. 5-22-13- ADDED SHEET.

SPECIAL NOTES

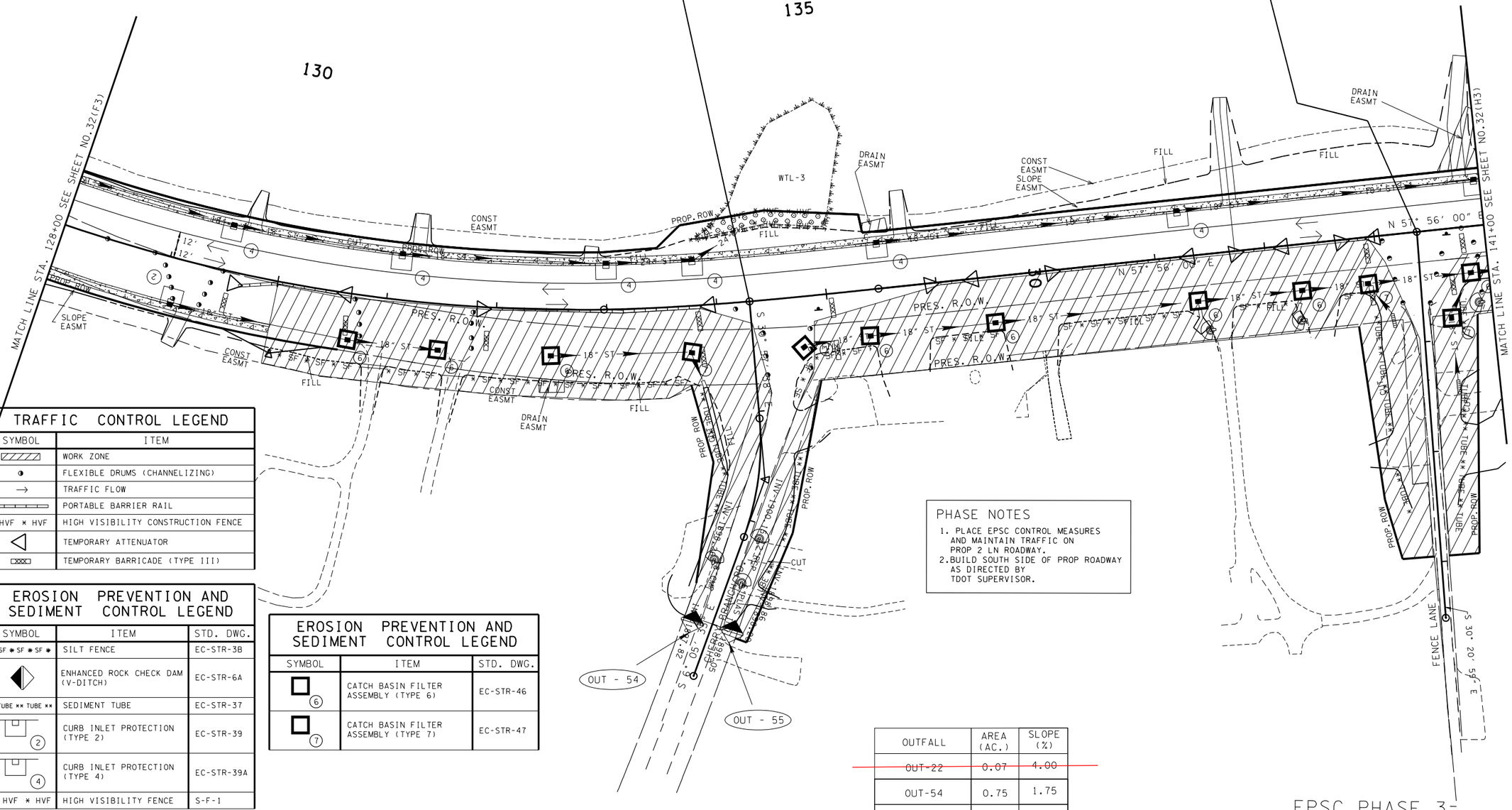
THE CONTRACTOR SHALL USE ANY MEASURE NECESSARY TO ENSURE THAT CONSTRUCTION EQUIPMENT WILL NOT ENTER ANY PORTION OF THE NON-IMPACTED WATER QUALITY FEATURES.

HIGH VISIBILITY FENCE SHALL BE PLACED ALONG THE WATER QUALITY FEATURE AREAS (WITHIN ROW) THAT ARE NOT TO BE DISTURBED BEFORE CONSTRUCTION ACTIVITY BEGINS.

N

STA. 134+30.00 S.R. 101 =
STA. 30+00.00 CHERRY BRANCH RD.
N 605558.4200
E 2281726.1930
Δ = 90°00'00" RT.

STA. 140+39.00 S.R. 101 =
STA. 10+00.00 FENCE LANE
N 605881.1150
E 2282242.6680
Δ = 91°43'01" RT.



TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	WORK ZONE
	FLEXIBLE DRUMS (CHANNELIZING)
→	TRAFFIC FLOW
	PORTABLE BARRIER RAIL
* HVF * HVF	HIGH VISIBILITY CONSTRUCTION FENCE
	TEMPORARY ATTENUATOR
	TEMPORARY BARRICADE (TYPE III)

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SF * SF * SF *	SILT FENCE	EC-STR-3B
	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37
(2)	CURB INLET PROTECTION (TYPE 2)	EC-STR-39
(4)	CURB INLET PROTECTION (TYPE 4)	EC-STR-39A
* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
(6)	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EC-STR-46
(7)	CATCH BASIN FILTER ASSEMBLY (TYPE 7)	EC-STR-47

PHASE NOTES

1. PLACE EPSC CONTROL MEASURES AND MAINTAIN TRAFFIC ON PROP 2 LN ROADWAY.
2. BUILD SOUTH SIDE OF PROP ROADWAY AS DIRECTED BY TDOT SUPERVISOR.

OUTFALL	AREA (AC.)	SLOPE (%)
~~OUT-22~~	~~0.07~~	~~4.00~~
OUT-54	0.75	1.75
OUT-55	0.50	1.75

EPSC PHASE 3=
TRAFFIC CONTROL PHASE 2

SEALED BY

UNOFFICIAL SET
NOT FOR BIDDING

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA.128+00 TO STA.141+00
SCALE: 1"=50'

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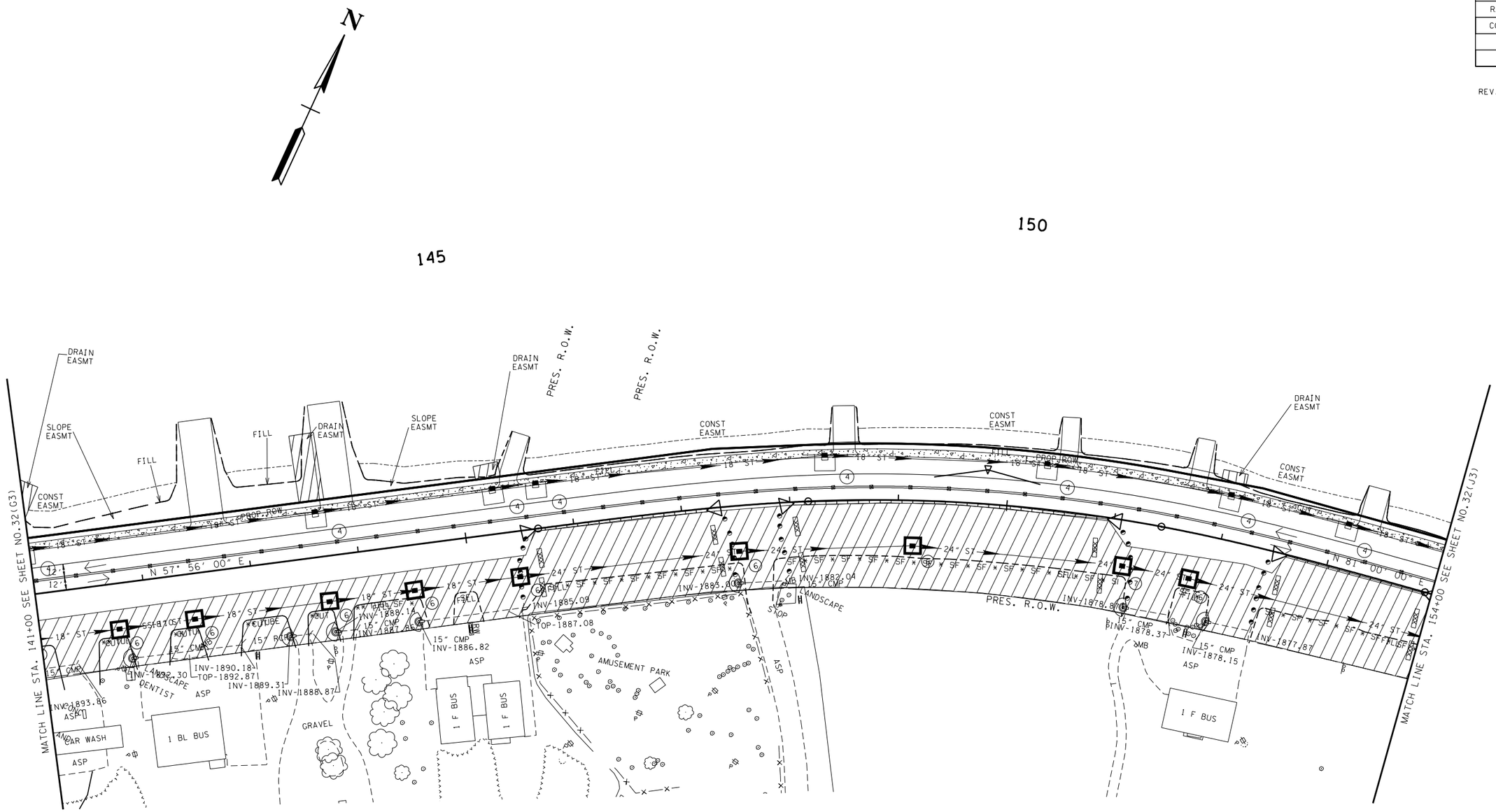
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	32(H3)
CONST	2015	STP-101(16)	32(H3)

REV. 5-22-13- ADDED SHEET.



PHASE NOTES

1. PLACE EPSC MEASURES AND MAINTAIN TRAFFIC ON PROP 2 LN ROADWAY.
2. BUILD SOUTH SIDE OF PROP ROADWAY AS DIRECTED BY TDOT SUPERVISOR.

TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	WORK ZONE
	FLEXIBLE DRUMS (CHANNELIZING)
	TRAFFIC FLOW
	PORTABLE BARRIER RAIL
	TEMPORARY ATTENUATOR
	TEMPORARY BARRICADE (TYPE III) 12 FT

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
	CULVERT PROTECTION (TYPE 1)	EC-STR-11
4	CURB INLET PROTECTION (TYPE 4)	EC-STR-39A
6	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EC-STR-46
7	CATCH BASIN FILTER ASSEMBLY (TYPE 7)	EC-STR-47

EPSC PHASE 3=
TRAFFIC CONTROL PHASE 2

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UNOFFICIAL SET
NOT FOR BIDDING

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA.141+00 TO STA.154+00
SCALE: 1"=50'

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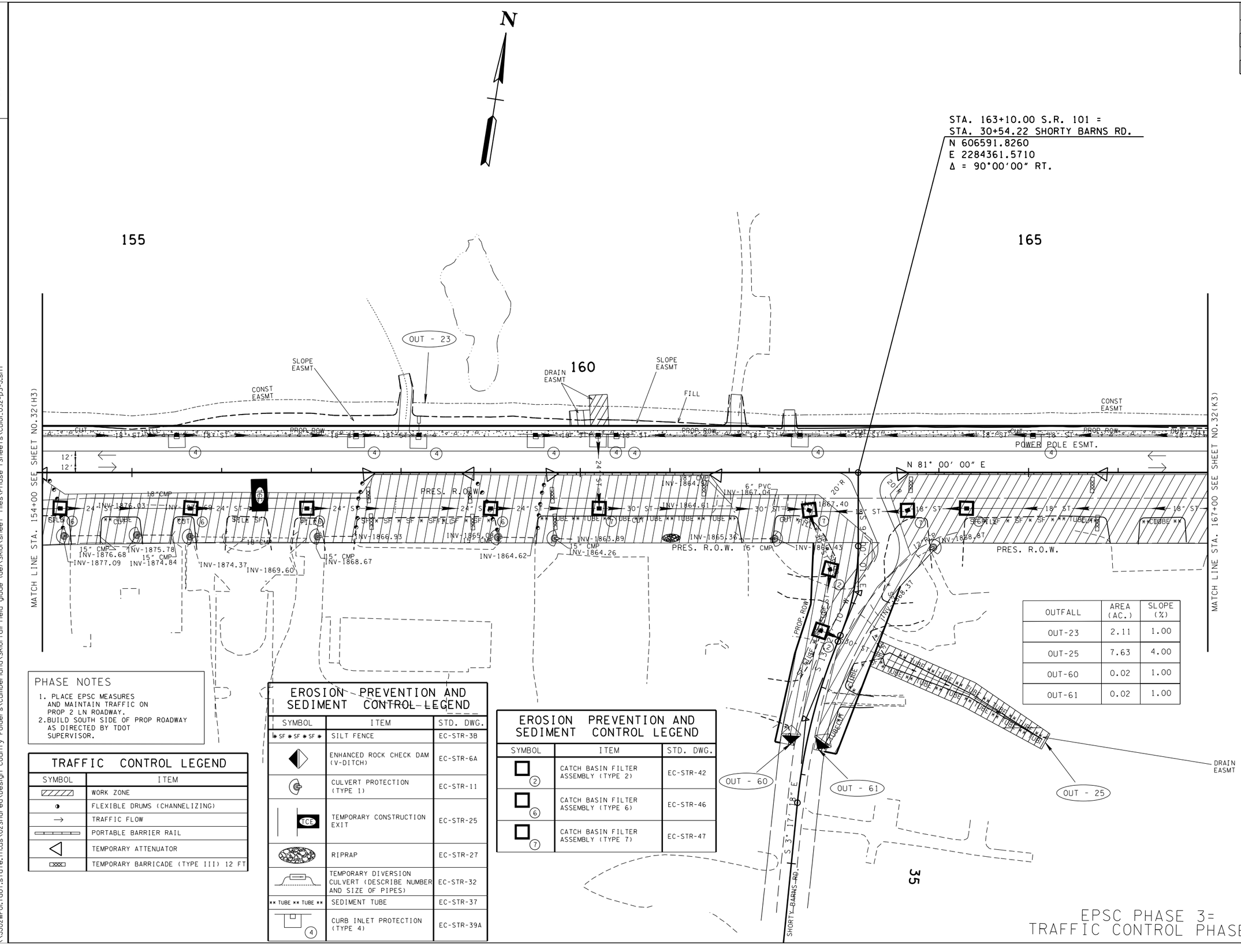
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	32(J3)
CONST	2015	STP-101(16)	32(J3)

REV. 5-22-13- ADDED SHEET.



OUTFALL	AREA (AC.)	SLOPE (%)
OUT-23	2.11	1.00
OUT-25	7.63	4.00
OUT-60	0.02	1.00
OUT-61	0.02	1.00

PHASE NOTES

1. PLACE EPSC MEASURES AND MAINTAIN TRAFFIC ON PROP 2 LN ROADWAY.
2. BUILD SOUTH SIDE OF PROP ROADWAY AS DIRECTED BY TDOT SUPERVISOR.

TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	WORK ZONE
	FLEXIBLE DRUMS (CHANNELIZING)
	TRAFFIC FLOW
	PORTABLE BARRIER RAIL
	TEMPORARY ATTENUATOR
	TEMPORARY BARRICADE (TYPE III) 12 FT

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
SF SF SF SF	SILT FENCE	EC-STR-3B
	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
	CULVERT PROTECTION (TYPE 1)	EC-STR-11
TCE	TEMPORARY CONSTRUCTION EXIT	EC-STR-25
	RIPRAP	EC-STR-27
	TEMPORARY DIVERSION CULVERT (DESCRIBE NUMBER AND SIZE OF PIPES)	EC-STR-32
TUBE TUBE TUBE	SEDIMENT TUBE	EC-STR-37
4	CURB INLET PROTECTION (TYPE 4)	EC-STR-39A

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
2	CATCH BASIN FILTER ASSEMBLY (TYPE 2)	EC-STR-42
6	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EC-STR-46
7	CATCH BASIN FILTER ASSEMBLY (TYPE 7)	EC-STR-47

SEALED BY

UNOFFICIAL SET
NOT FOR BIDDING

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA.154+00 TO STA.167+00

SCALE: 1"=50'

EPSC PHASE 3=
TRAFFIC CONTROL PHASE 2

35

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	32(K3)
CONST	2015	STP-101(16)	32(K3)

REV. 5-22-13- ADDED SHEET.

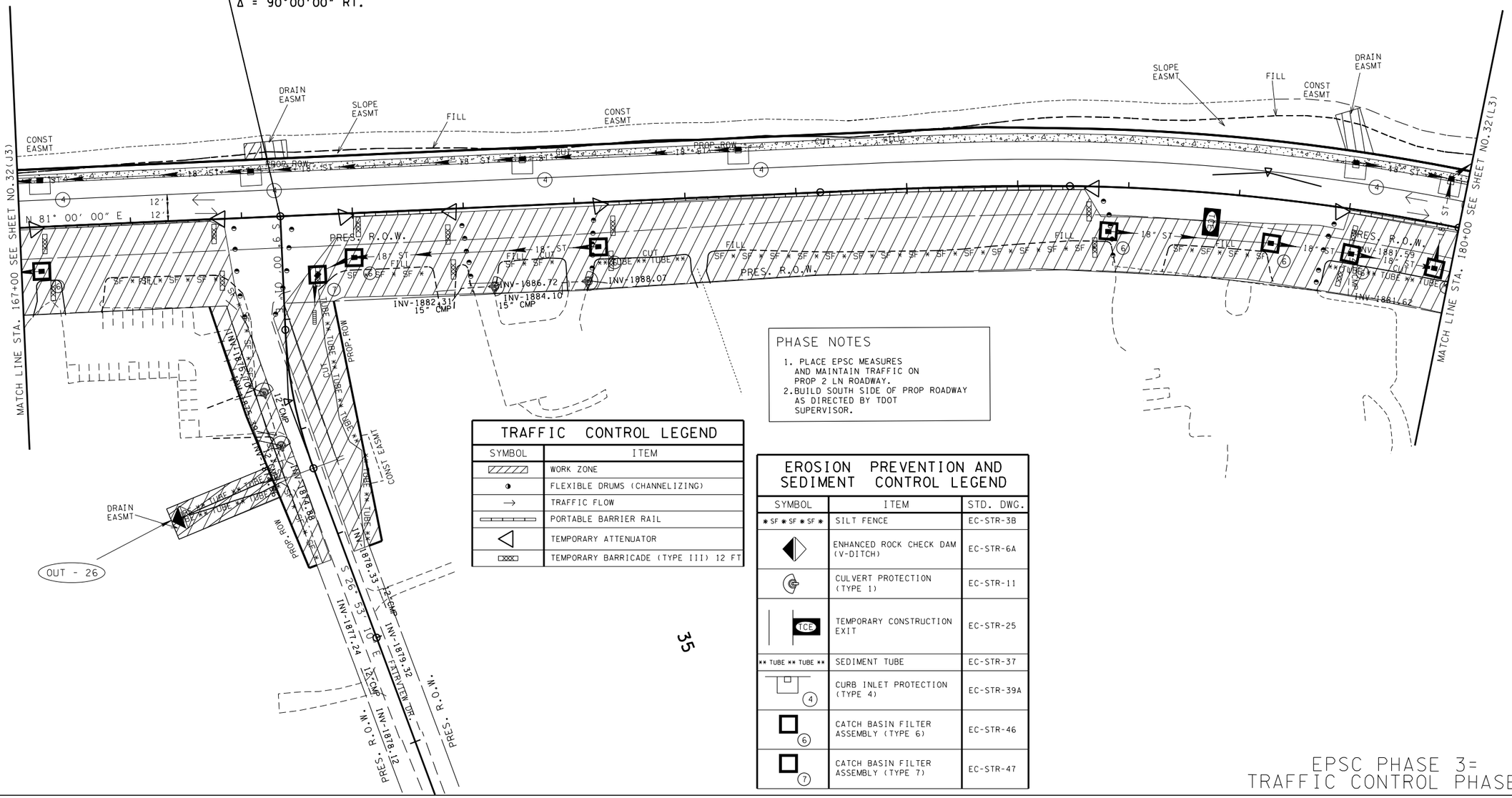
OUTFALL	AREA (AC.)	SLOPE (%)
OUT-26	3.02	2.00

N

170

STA. 169.35.00 S.R. 101 =
STA. 30+07.00 FAIRVIEW DR.
N 606689.5970
E 224978.8760
Δ = 90°00'00" RT.

175



35

PHASE NOTES

1. PLACE EPSC MEASURES AND MAINTAIN TRAFFIC ON PROP 2 LN ROADWAY.
2. BUILD SOUTH SIDE OF PROP ROADWAY AS DIRECTED BY TDOT SUPERVISOR.

TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	WORK ZONE
	FLEXIBLE DRUMS (CHANNELIZING)
→	TRAFFIC FLOW
	PORTABLE BARRIER RAIL
	TEMPORARY ATTENUATOR
	TEMPORARY BARRICADE (TYPE III) 12 FT

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SF * SF * SF *	SILT FENCE	EC-STR-3B
	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
	CULVERT PROTECTION (TYPE 1)	EC-STR-11
TCE	TEMPORARY CONSTRUCTION EXIT	EC-STR-25
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37
4	CURB INLET PROTECTION (TYPE 4)	EC-STR-39A
6	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EC-STR-46
7	CATCH BASIN FILTER ASSEMBLY (TYPE 7)	EC-STR-47

SEALED BY

UNOFFICIAL SET
NOT FOR BIDDING

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 167+00 TO STA. 180+00

SCALE: 1"=50'

EPSC PHASE 3=
TRAFFIC CONTROL PHASE 2

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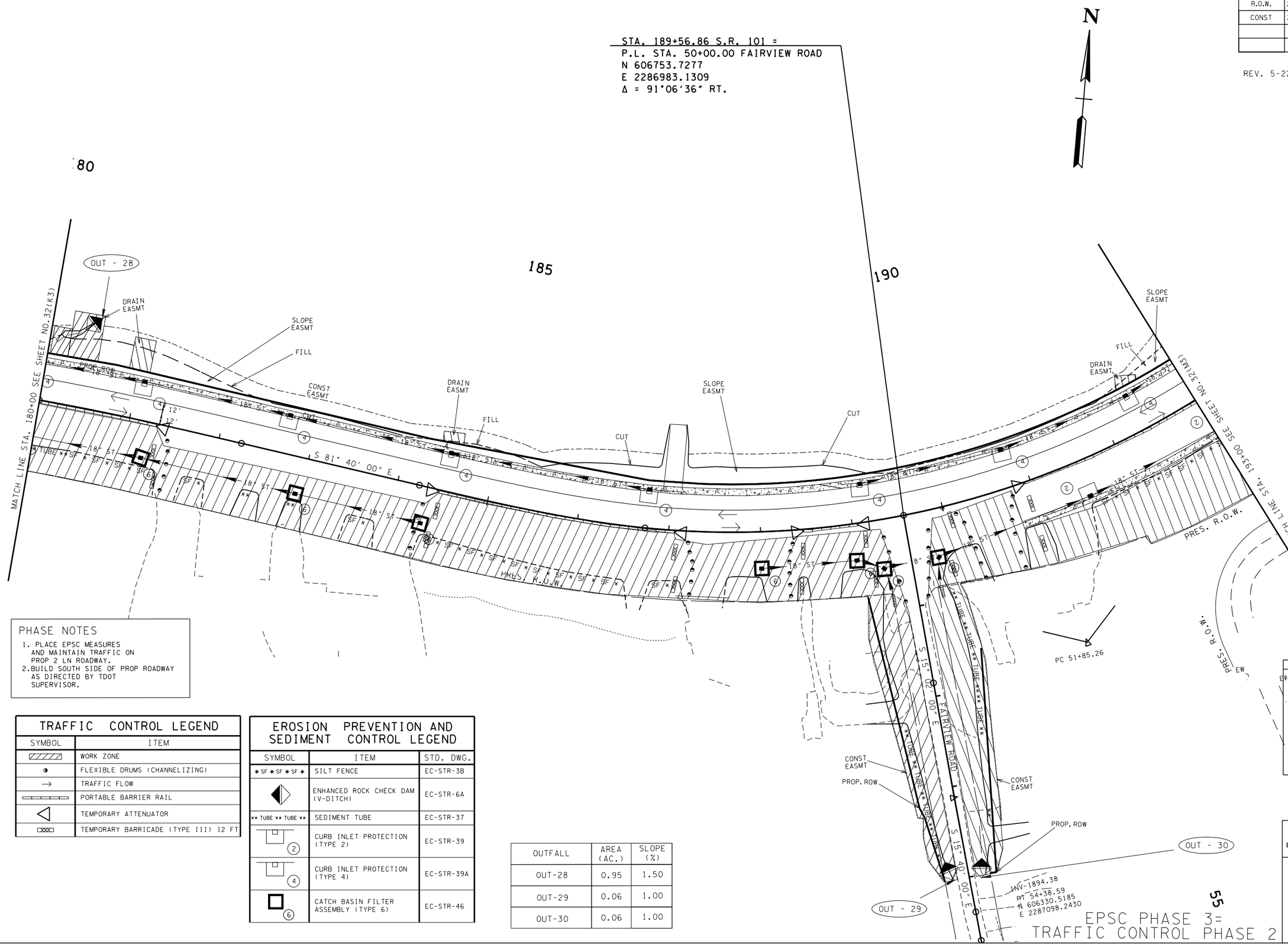
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	32(L3)
CONST	2015	STP-101(16)	32(L3)

REV. 5-22-13- ADDED SHEET.

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



PHASE NOTES

1. PLACE EPSC MEASURES AND MAINTAIN TRAFFIC ON PROP 2 LN ROADWAY.
2. BUILD SOUTH SIDE OF PROP ROADWAY AS DIRECTED BY TDOT SUPERVISOR.

TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	WORK ZONE
	FLEXIBLE DRUMS (CHANNELIZING)
→	TRAFFIC FLOW
	PORTABLE BARRIER RAIL
	TEMPORARY ATTENUATOR
	TEMPORARY BARRICADE (TYPE III) 12 FT

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SF * SF * SF *	SILT FENCE	EC-STR-3B
	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37
2	CURB INLET PROTECTION (TYPE 2)	EC-STR-39
4	CURB INLET PROTECTION (TYPE 4)	EC-STR-39A
6	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EC-STR-46

OUTFALL	AREA (AC.)	SLOPE (%)
OUT-28	0.95	1.50
OUT-29	0.06	1.00
OUT-30	0.06	1.00

EPSC PHASE 3=
TRAFFIC CONTROL PHASE 2

SEALED BY

UNOFFICIAL SET
NOT FOR BIDDING

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA.180+00 TO STA.193+00
SCALE: 1"=50'

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

PHASE NOTES

1. PLACE EPSC MEASURES AND MAINTAIN TRAFFIC ON PROP 2 LN ROADWAY.
2. BUILD NORTH AND SOUTH SIDE OF PROP ROADWAY AS DIRECTED BY TDOT SUPERVISOR.

TRAFFIC CONTROL LEGEND

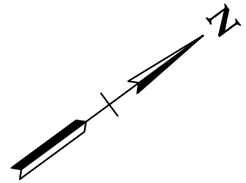
SYMBOL	ITEM
	WORK ZONE
	FLEXIBLE DRUMS (CHANNELIZING)
→	TRAFFIC FLOW
	PORTABLE BARRIER RAIL
	TEMPORARY ATTENUATOR
	TEMPORARY BARRICADE (TYPE III)

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SF * SF * SF *	SILT FENCE	EC-STR-3B
	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
	CULVERT PROTECTION (TYPE 1)	EC-STR-11
TCE	TEMPORARY CONSTRUCTION EXIT	EC-STR-25
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37
2	CURB INLET PROTECTION (TYPE 2)	EC-STR-39
4	CURB INLET PROTECTION (TYPE 4)	EC-STR-39A
1	CATCH BASIN FILTER ASSEMBLY (TYPE 1)	EC-STR-41
6	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EC-STR-46
7	CATCH BASIN FILTER ASSEMBLY (TYPE 7)	EC-STR-47

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	32(M3)
CONST	2015	STP-101(16)	32(M3)

REV. 5-22-13- ADDED SHEET.



195

200

205

STA. 200+75.00 S.R. 101 =
P.L. STA. 30+00.00 ST. GEORGE RD.
N 607518.7670
E 2287754.6440
Δ = 90°00'00" RT.

MATCH LINE STA. 193+00 SEE SHEET NO.32(L3)

MATCH LINE STA. 206+00 SEE SHEET NO.32(N3)

R=681.20
Δ=18°51'20"
L=224.14'

N 32° 20' 00" E

N 32° 52' 04" E

N 27° 00' 00" E

S 57° 24' 08" E

S 21° 35' 58" E

SPRING LAKE DR.

ST. GEORGE ROAD

POT 4+86.65
N 607001.4200
E 2287613.0250

PT 34+53.58
N 607233.2237
E 2288096.

PC 32+66.02

PC 7+19.25

PT 7+27.93

STA. 31+35.04 ST. GEORGE RD. =
STA. 10+00.00 SPRING LAKE DR.
N 607446.0180
E 2287868.4080
Δ = 87°57'00" RT.

SLOPE EASMT
DRAIN EASMT
CONST EASMT
FILL
CUT
PROP. ROW
PRES. R.O.W.
LOADING
SPRING LAKE
34' OF PROP 18" TEMP DRAIN PIPE

OUT - 32
OUT - 33
OUT - 34
OUT - 35
OUT - 36

OUTFALL	AREA (AC.)	SLOPE (%)
OUT-32	0.84	8.00
OUT-33	0.06	4.00
OUT-34	0.05	3.33
OUT-35	0.21	2.00
OUT-36	1.58	1.50

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UNOFFICIAL SET
NOT FOR BIDDING

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00013 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA.193+00 TO STA.206+00

SCALE: 1"=50'

EPSC PHASE 3 = TRAFFIC CONTROL PHASE 2

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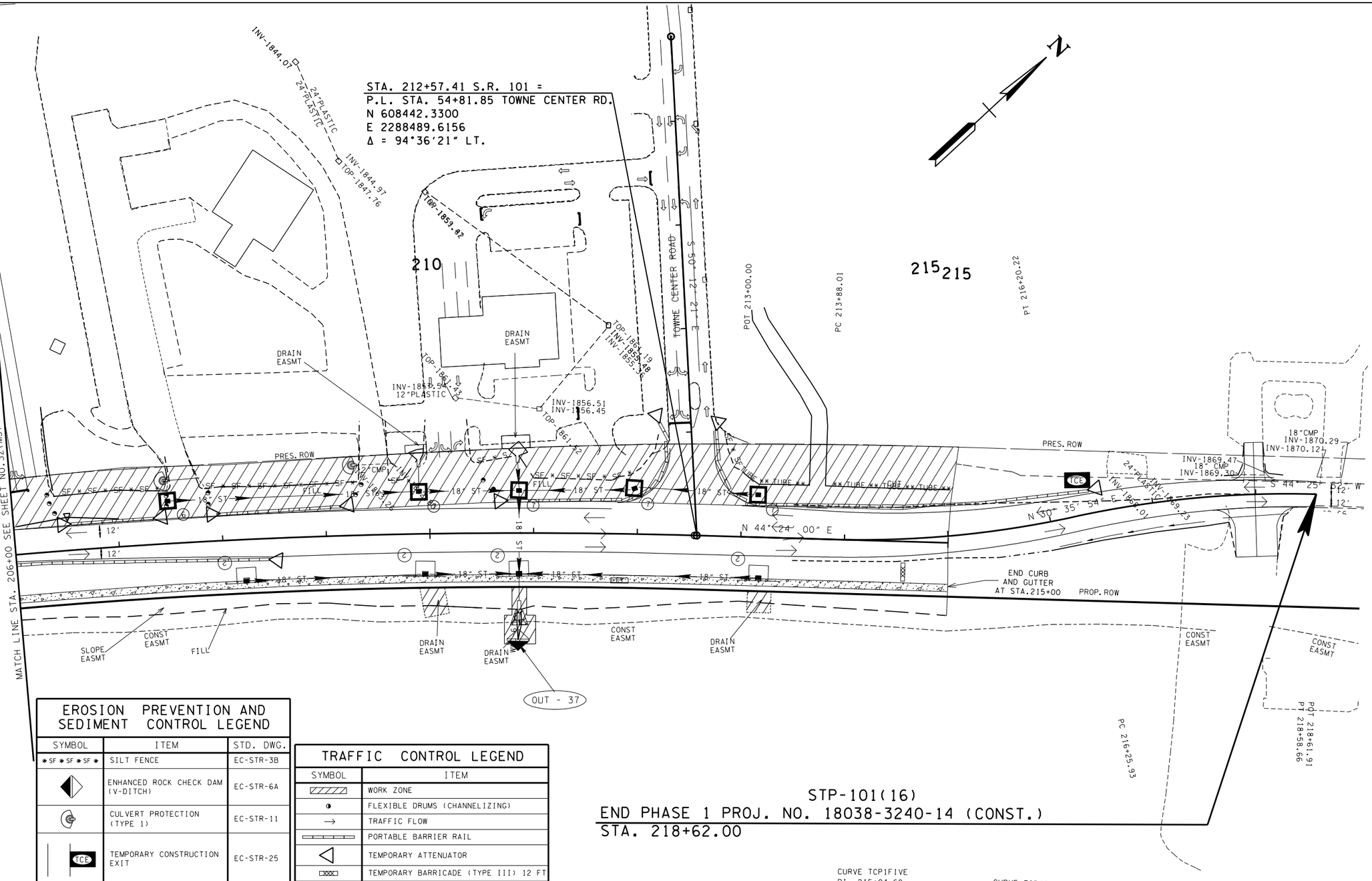
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	32(N3)
CONST	2015	STP-101(16)	32(N3)

REV. 5-22-13- ADDED SHEET.



EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
SF SF SF SF	SILT FENCE	EC-STR-3B
	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
	CULVERT PROTECTION (TYPE 1)	EC-STR-11
TCE	TEMPORARY CONSTRUCTION EXIT	EC-STR-25
2	CURB INLET PROTECTION (TYPE 2)	EC-STR-39
6	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EC-STR-46
7	CATCH BASIN FILTER ASSEMBLY (TYPE 7)	EC-STR-47

TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	WORK ZONE
	FLEXIBLE DRUMS (CHANNELIZING)
→	TRAFFIC FLOW
	PORTABLE BARRIER RAIL
	TEMPORARY ATTENUATOR
XXX	TEMPORARY BARRICADE (TYPE III) 12 FT

PHASE NOTES

1. PLACE EPSC CONTROL MEASURES, PLACE PROP TEMP SIGNAL FOR INTERSECTION, AND MAINTAIN TRAFFIC ON PROP 2 LN ROADWAY AND TURN LANE.
2. BUILD NORTH SIDE OF PROP ROADWAY AS DIRECTED BY TDOT SUPERVISOR.

OUTFALL	AREA (AC.)	SLOPE (%)
OUT-37	0.40	1.50

STP-101(16)
END PHASE 1 PROJ. NO. 18038-3240-14 (CONST.)
STA. 218+62.00

CURVE TCP1FIVE
PI 215+04.68
N 608,618.9963
E 2,288,662.6201
Δ 13° 48' 06" (LT)
D 5° 56' 37"
R 964.00
L 232.21
T 116.67
NORMAL CROWN
DESIGN SPEED 45 MPH

CURVE TCP1SIX
PI 217+42.86
N 608,824.9895
E 2,288,784.4360
Δ 13° 49' 58" (RT)
D 5° 56' 37"
R 964.00
L 232.74
T 116.94
NORMAL CROWN
DESIGN SPEED 45 MPH

SEALED BY

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA.206+00 TO STA.219+00
SCALE: 1"=50'

EPSC PHASE 3=
TRAFFIC CONTROL PHASE 2

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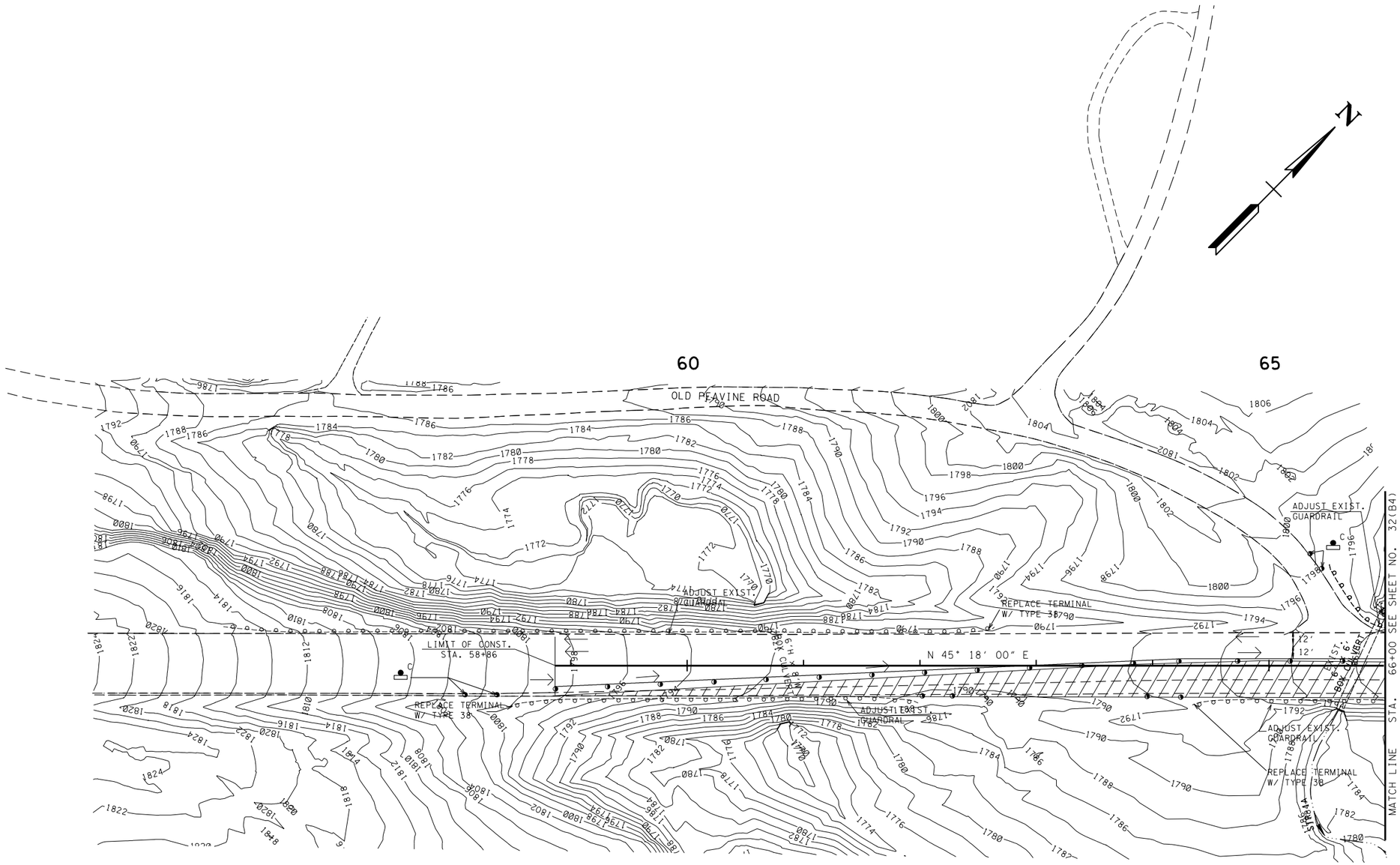
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	32(A4)
CONST	2015	STP-101(16)	32(A4)

REV. 5-22-13- ADDED SHEET.



PHASE NOTES

1. DETOUR TRAFFIC TO PROP 2 LN ROADWAY.
2. RESURFACE 814' AS DIRECTED BY T.D.O.T SUPERVISOR.

TRAFFIC CONTROL LEGEND	
SYMBOL	ITEM
◑	FLEXIBLE DRUMS (CHANNELIZING)
→	TRAFFIC FLOW
C	WARNING LIGHT (TYPE C) (STEADY)
▨	WORK ZONE

EPSC PHASE 4=
TRAFFIC CONTROL PHASE 3
PROPOSED CONTOURS SHOWN

SEALED BY

UNOFFICIAL SET
NOT FOR BIDDING

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 56+00 TO STA. 66+00
SCALE: 1"=50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	32(B4)
CONST	2015	STP-101(16)	32(B4)

REV. 5-22-13- ADDED SHEET.

SPECIAL NOTES

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

FOR TREE PLANTINGS SEE SHEET 32Y AND 32Z FOR WETLAND AND STREAM MITIGATION INFORMATION.

SPECIAL NOTES

THE CONTRACTOR SHALL USE ANY MEASURE NECESSARY TO ENSURE THAT CONSTRUCTION EQUIPMENT WILL NOT ENTER ANY PORTION OF THE NON-IMPACTED WATER QUALITY FEATURES.

HIGH VISIBILITY FENCE SHALL BE PLACED ALONG THE WATER QUALITY FEATURE AREAS (WITHIN ROW) THAT ARE NOT TO BE DISTURBED BEFORE CONSTRUCTION ACTIVITY BEGINS.

PLAN NOTES:

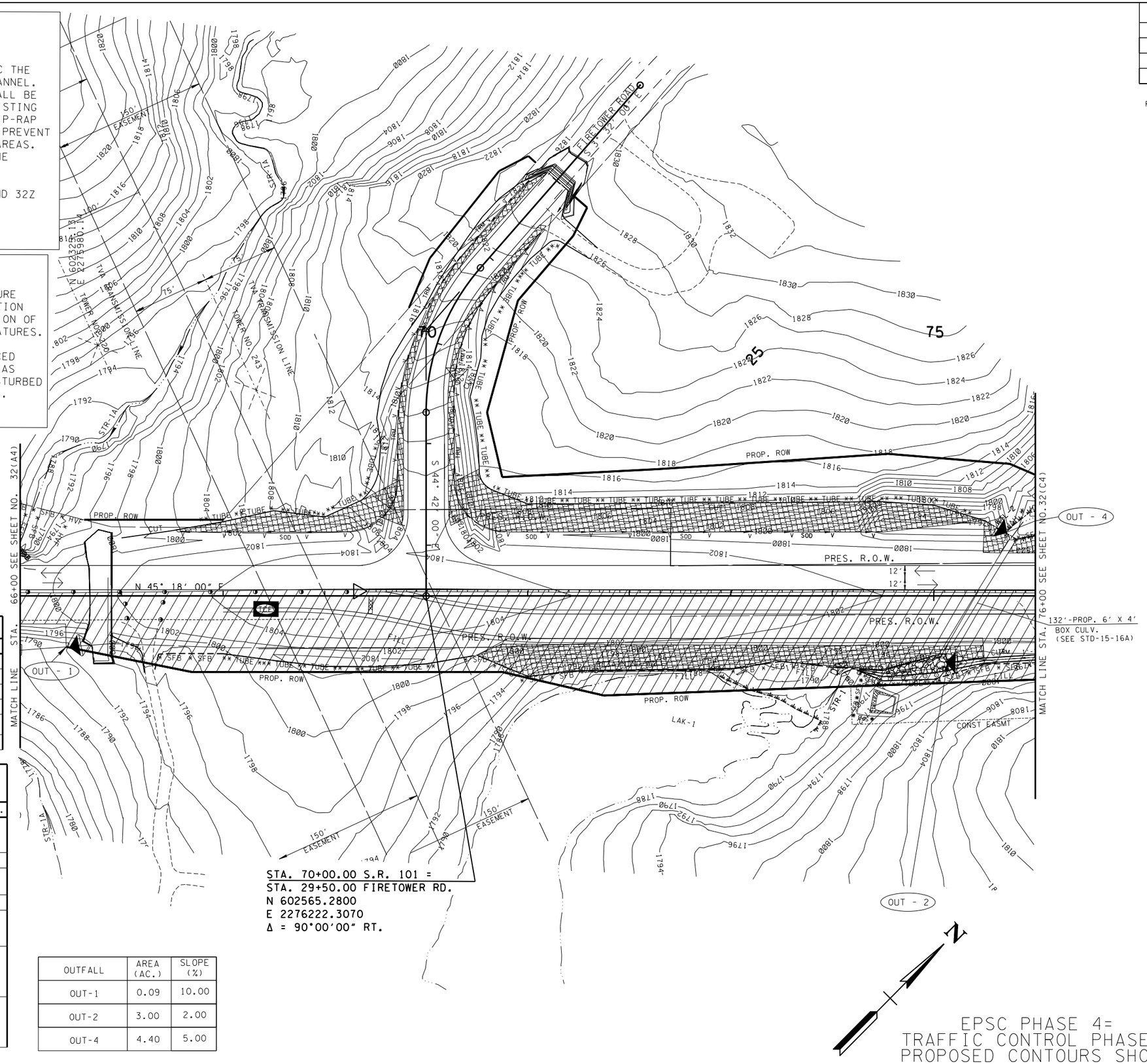
1. PLACE EPSC MEASURES, REMOVE STRIPING FROM PHASE 2, AND MAINTAIN TRAFFIC ON PROP 2 LN ROADWAY.
2. REMOVE 2 LN TEMP ROADWAY FROM STA. 68+00 TO STA. 76+00. (ALL COSTS ASSOCIATED WITH REMOVAL OF 2 LN TEMP ROAD WILL BE PAID FOR UNDER OTHER ITEMS.)
3. FINISH PROP ROADWAY IN WORK ZONE AREA ON SOUTH SIDE AS DIRECTED BY T.D.O.T SUPERVISOR.
4. FINISH ROAD.

TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
◑	FLEXIBLE DRUMS (CHANNELIZING)
▨	WORK ZONE
→	TRAFFIC FLOW
▭	PORTABLE BARRIER RAIL
◁	TEMPORARY ATTENUATOR
▭	TEMPORARY BARRICADE (TYPE III) 12 FT

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SFB * SFB * SFB *	SILT FENCE WITH WIRE BACKING	EC-STR-3C
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37
	EROSION CONTROL BLANKET	EC-STR-34
* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1
	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
TCE	TEMPORARY CONSTRUCTION EXIT	EC-STR-25
SFB SFB SFB SFB	SEDIMENT FILTER BAG	EC-STR-2



STA. 70+00.00 S.R. 101 =
STA. 29+50.00 FIRETOWER RD.
N 602565.2800
E 2276222.3070
Δ = 90°00'00" RT.

OUTFALL	AREA (AC.)	SLOPE (%)
OUT-1	0.09	10.00
OUT-2	3.00	2.00
OUT-4	4.40	5.00

EPSC PHASE 4=
TRAFFIC CONTROL PHASE 3
PROPOSED CONTOURS SHOWN

SEALED BY

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA.66+00 TO STA.76+00

SCALE: 1"=50'

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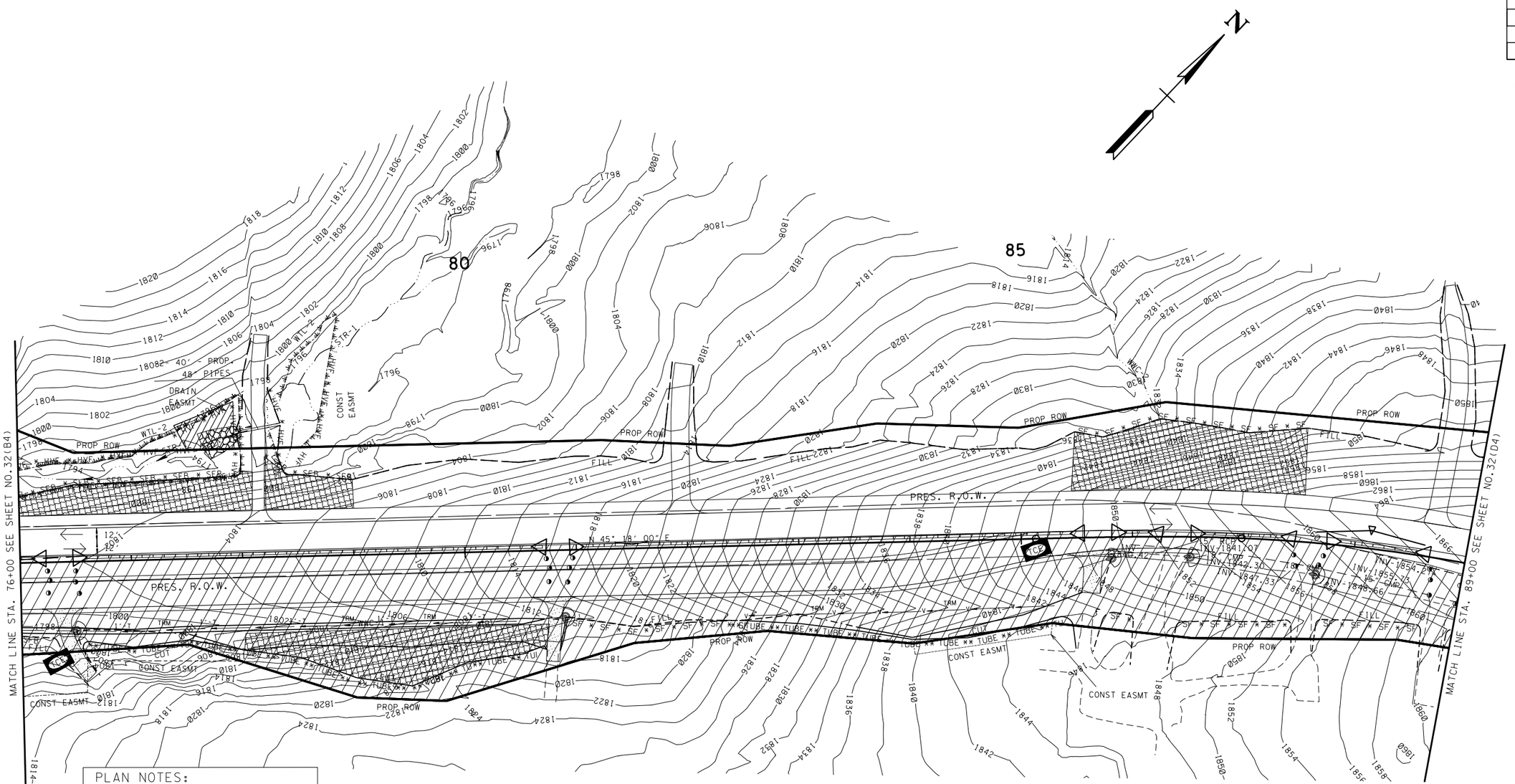
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	32(C4)
CONST	2015	STP-101(16)	32(C4)

REV. 5-22-13- ADDED SHEET.



PLAN NOTES:

1. PLACE EPSC MEASURES AND MAINTAIN TRAFFIC ON PROP 2 LN ROADWAY.
2. REMOVE 2 LN TEMP ROADWAY FROM STA. 76+00 TO STA. 86+60. (ALL COSTS ASSOCIATED WITH REMOVAL OF 2 LN TEMP ROAD WILL BE PAID FOR UNDER OTHER ITEMS.)
3. FINISH PROP ROADWAY IN WORK ZONE AREA ON SOUTH SIDE AS DIRECTED BY T.D.O.T SUPERVISOR.
4. FINISH ROAD.

SPECIAL NOTES

THE CONTRACTOR SHALL USE ANY MEASURE NECESSARY TO ENSURE THAT CONSTRUCTION EQUIPMENT WILL NOT ENTER ANY PORTION OF THE NON-IMPACTED WATER QUALITY FEATURES.

HIGH VISIBILITY FENCE SHALL BE PLACED ALONG THE WATER QUALITY FEATURE AREAS (WITHIN ROW) THAT ARE NOT TO BE DISTURBED BEFORE CONSTRUCTION ACTIVITY BEGINS.

TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	WORK ZONE
◑	FLEXIBLE DRUMS (CHANNELIZING)
→	TRAFFIC FLOW
	PORTABLE BARRIER RAIL
◁	TEMPORARY ATTENUATOR

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SF * SF * SF *	SILT FENCE	EC-STR-3B
* SFB * SFB * SFB *	SILT FENCE WITH WIRE BACKING	EC-STR-3C
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37
	EROSION CONTROL BLANKET	EC-STR-34
TCE	TEMPORARY CONSTRUCTION EXIT	EC-STR-25
* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1
	CULVERT PROTECTION (TYPE 1)	EC-STR-11

EPSC PHASE 4=
TRAFFIC CONTROL PHASE 3
PROPOSED CONTOURS SHOWN

SEALED BY

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA.76+00 TO STA.89+00

SCALE: 1"=50'

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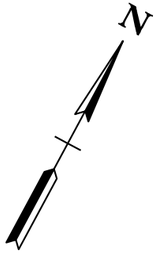
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

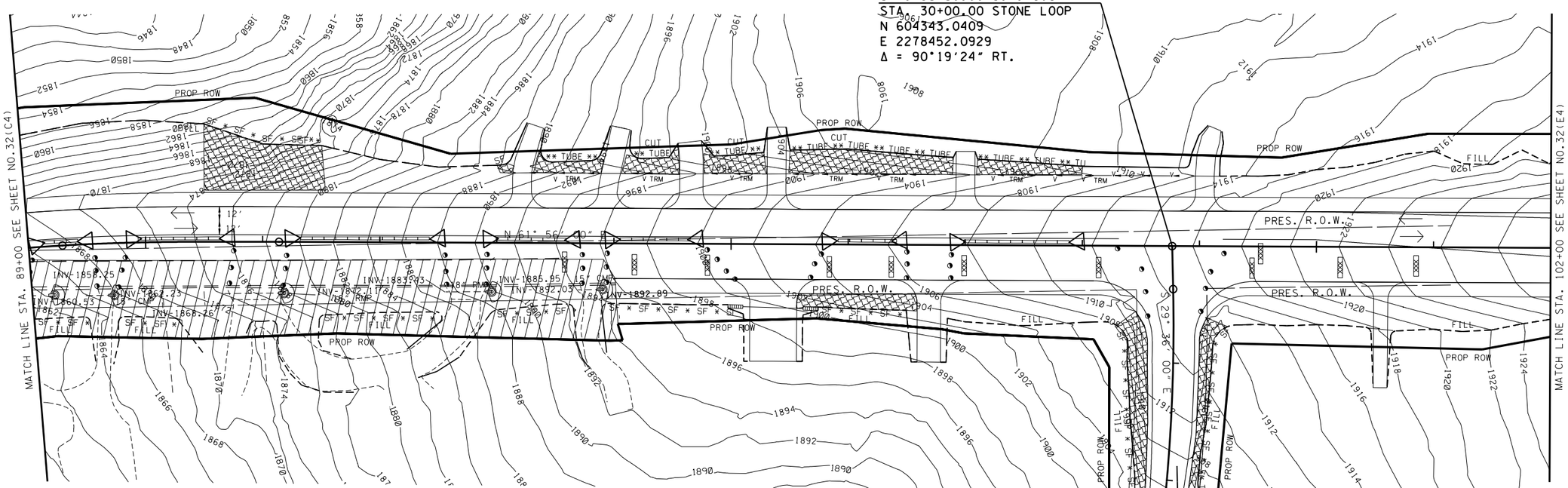
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	32(D4)
CONST	2015	STP-101(16)	32(D4)

REV. 5-22-13- ADDED SHEET.



90 95 100

STA. 98+80.00 S.R. 101 =
STA. 30+00.00 STONE LOOP
N 604343.0409
E 2278452.0929
Δ = 90°19'24" RT.



PLAN NOTES:

1. PLACE EPSC MEASURES AND MAINTAIN TRAFFIC ON PROP 2 LN ROADWAY THEN DETOUR FROM STA 100+00 TO STA. 105+40 TO PROP 5 LN ROADWAY.
2. FINISH ROADWAY IN WORK ZONE AREA ON SOUTH SIDE AS DIRECTED BY T.D.O.T SUPERVISOR.
3. FINISH ROAD.

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SF * SF * SF *	SILT FENCE	EC-STR-3B
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37
	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
	EROSION CONTROL BLANKET	EC-STR-34
	CULVERT PROTECTION (TYPE 1)	EC-STR-11

TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	WORK ZONE
	FLEXIBLE DRUMS (CHANNELIZING)
→	TRAFFIC FLOW
	PORTABLE BARRIER RAIL
	TEMPORARY ATTENUATOR
	TEMPORARY BARRICADE (TYPE III) 12 FT

OUTFALL	AREA (AC.)	SLOPE (%)
OUT-11	0.03	5.00
OUT-12	0.08	2.85

EPSC PHASE 4=
TRAFFIC CONTROL PHASE 3
PROPOSED CONTOURS SHOWN

SEALED BY

UNOFFICIAL SET
NOT FOR BIDDING

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA.89+00 TO STA.102+00
SCALE: 1"=50'

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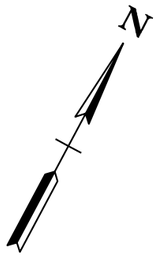
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

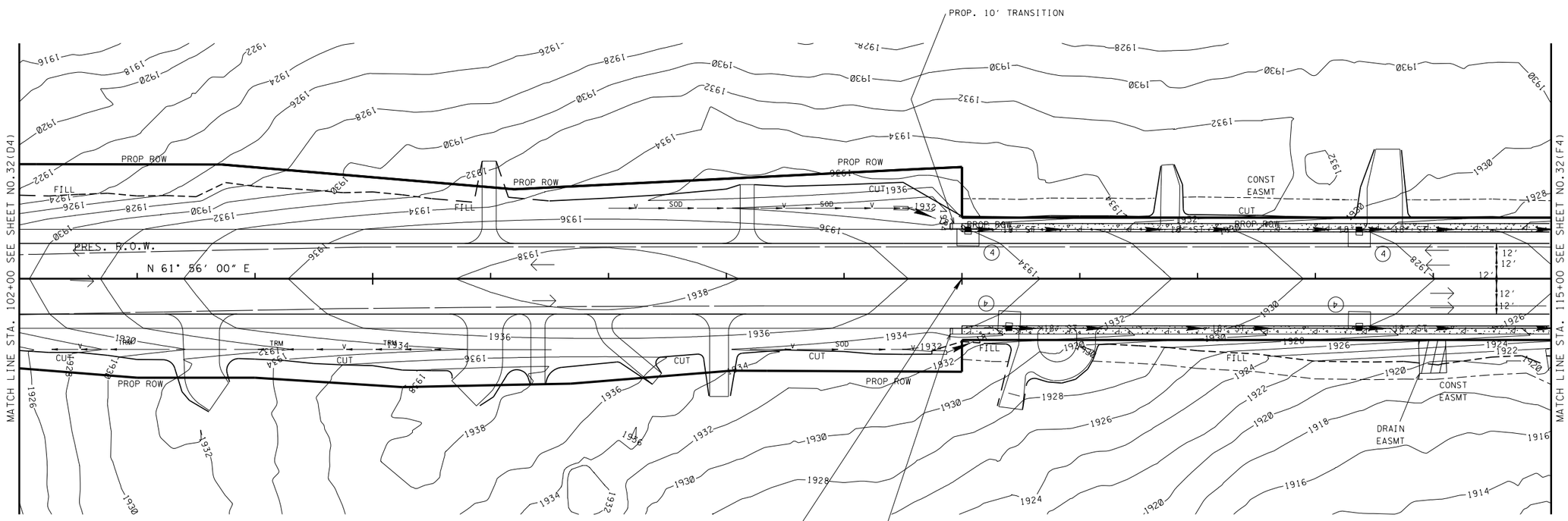
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2010	STP-101(16)	32(E4)
CONST	2015	STP-101(16)	32(E4)

REV. 5-22-13- ADDED SHEET.



105

110



BEGIN CURB AND GUTTER
STA. 110+00.00

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND		
SYMBOL	ITEM	STD. DWG.
④	CURB INLET PROTECTION (TYPE 4)	EC-STR-39A

PHASE NOTES

1. PLACE EPSC MEASURES AND DETOUR TRAFFIC ON PROP 2 LN ROADWAY TO PROP 5 LN ROADWAY.
2. FINISH ROAD.

EPSC PHASE 4=
TRAFFIC CONTROL PHASE 3
PROPOSED CONTOURS SHOWN

SEALED BY

UNOFFICIAL SET
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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 102+00 TO STA. 115+00

SCALE: 1"=50'

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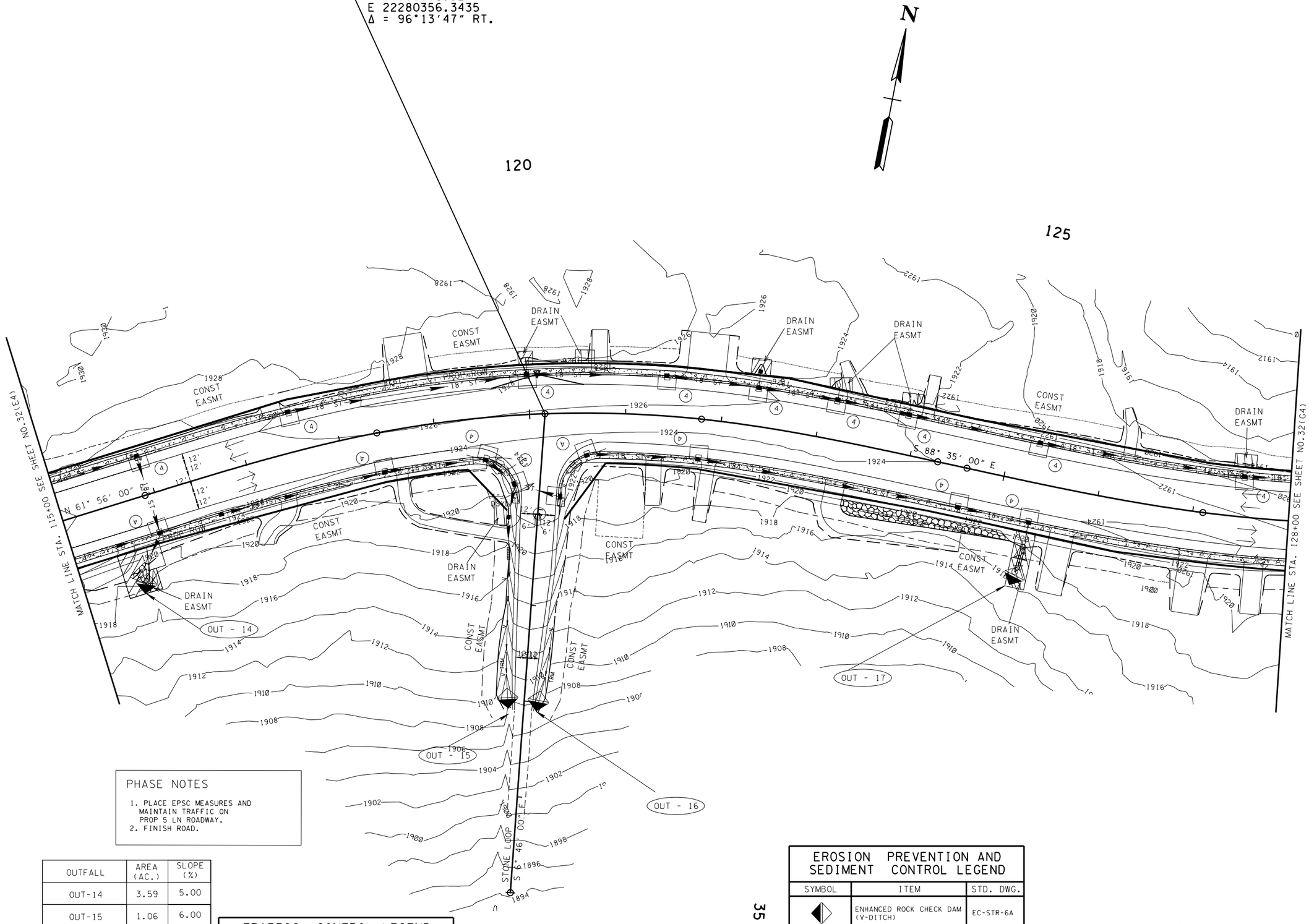
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2010	STP-101(16)	32(F4)
CONST	2015	STP-101(16)	32(F4)

REV. 5-22-13- ADDED SHEET.

STA. 120+16.06 S.R. 101 =
STA. 30+00.00 STONE LOOP
N 605311.1552
E 22280356.3435
Δ = 96°13'47" RT.



PHASE NOTES

1. PLACE EPSC MEASURES AND MAINTAIN TRAFFIC ON PROP 5 LN ROADWAY.
2. FINISH ROAD.

OUTFALL	AREA (AC.)	SLOPE (%)
OUT-14	3.59	5.00
OUT-15	1.06	6.00
OUT-16	0.06	6.00
OUT-17	0.96	1.50

TRAFFIC CONTROL LEGEND	
SYMBOL	ITEM
→	TRAFFIC FLOW

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND		
SYMBOL	ITEM	STD. DWG.
◆	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
(4)	CURB INLET PROTECTION (TYPE 4)	EC-STR-39A

35

EPSC PHASE 4 =
TRAFFIC CONTROL PHASE 3
PROPOSED CONTOURS SHOWN

SEALED BY

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA.115+00 TO STA.128+00
SCALE: 1"=50'

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

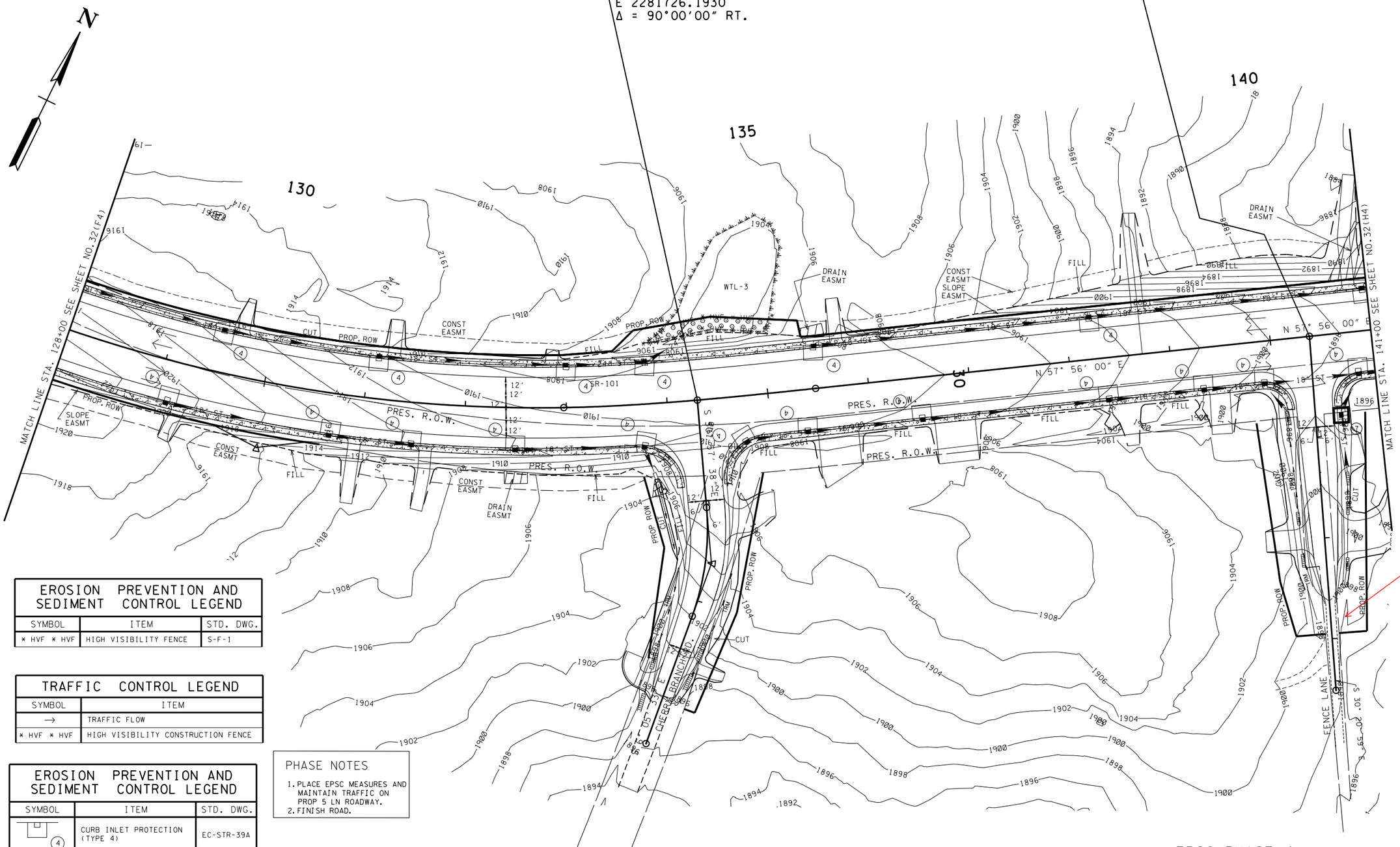
OUTFALL	AREA (AC.)	SLOPE (%)
~~OUT-18~~	~~2.94~~	~~1.00~~
OUT-22	0.07	4.00

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	32(G4)
CONST	2015	STP-101(16)	32(G4)

REV. 5-22-13- ADDED SHEET.

STA. 140+39.00 S.R. 101 =
STA. 10+00.00 FENCE LANE
N 605881.1150
E 2282242.6680
Δ = 91°43'01" RT.

STA. 134+30.00 S.R. 101 =
STA. 30+00.00 CHERRY BRANCH RD.
N 605558.4200
E 2281726.1930
Δ = 90°00'00" RT.



EROSION PREVENTION AND SEDIMENT CONTROL LEGEND		
SYMBOL	ITEM	STD. DWG.
* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1

TRAFFIC CONTROL LEGEND	
SYMBOL	ITEM
→	TRAFFIC FLOW
* HVF * HVF	HIGH VISIBILITY CONSTRUCTION FENCE

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND		
SYMBOL	ITEM	STD. DWG.
(4)	CURB INLET PROTECTION (TYPE 4)	EC-STR-39A
(7)	CATCH BASIN FILTER ASSEMBLY (TYPE 7)	EC-STR-47

PHASE NOTES

1. PLACE EPSC MEASURES AND MAINTAIN TRAFFIC ON PROP 5 LN ROADWAY.
2. FINISH ROAD.

EPSC PHASE 4 =
TRAFFIC CONTROL PHASE 3
PROPOSED CONTOURS SHOWN

SEALED BY

UNOFFICIAL SET
NOT FOR BIDDING

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00013 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 128+00 TO STA. 141+00

SCALE: 1"=50'

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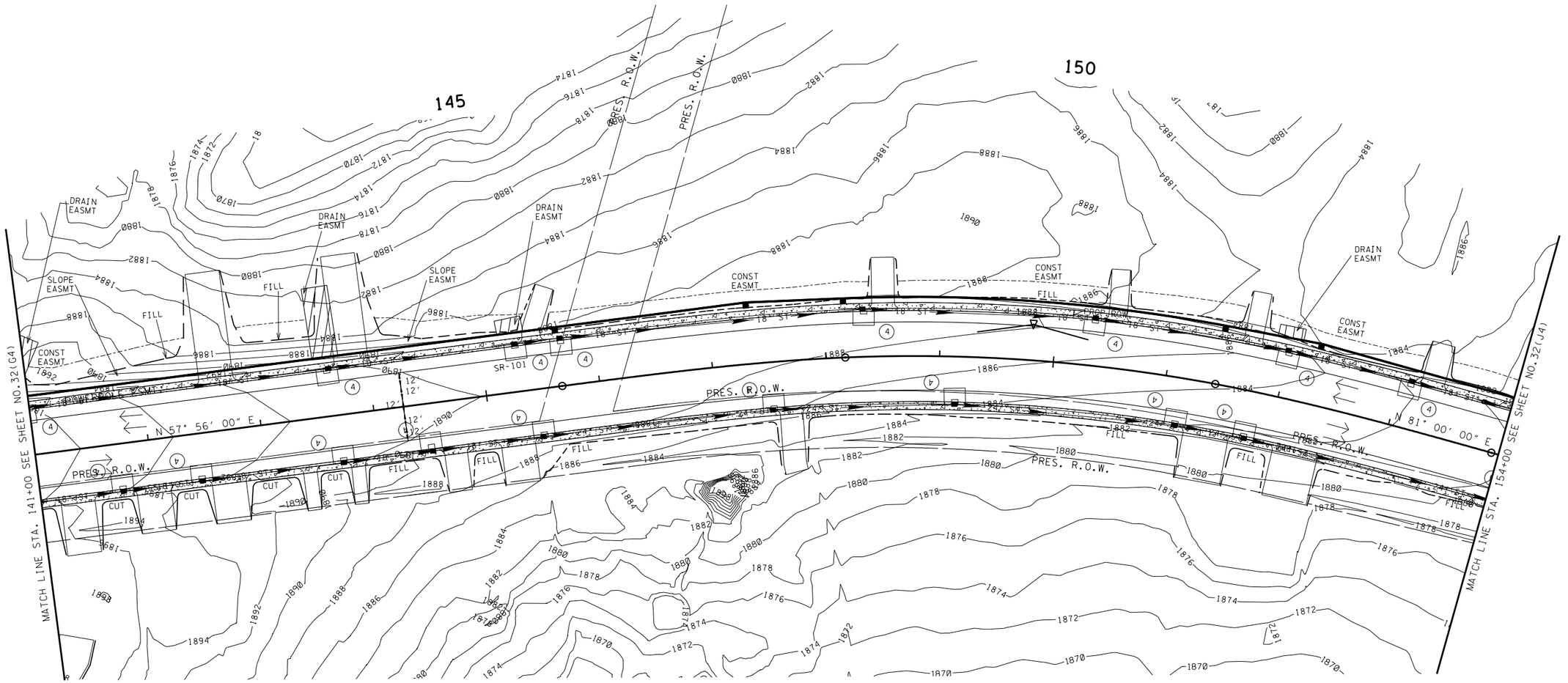
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	32(H4)
CONST	2015	STP-101(16)	32(H4)

REV. 5-22-13- ADDED SHEET.



PHASE NOTES

1. PLACE EPSC MEASURES AND MAINTAIN TRAFFIC ON PROP 5 LN ROADWAY.
2. FINISH ROAD.

TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
→	TRAFFIC FLOW

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
(2)	CURB INLET PROTECTION (TYPE 2)	EC-STR-39

EPSC PHASE 4 =
TRAFFIC CONTROL PHASE 3

SEALED BY

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 141+00 TO STA. 154+00
SCALE: 1"=50'

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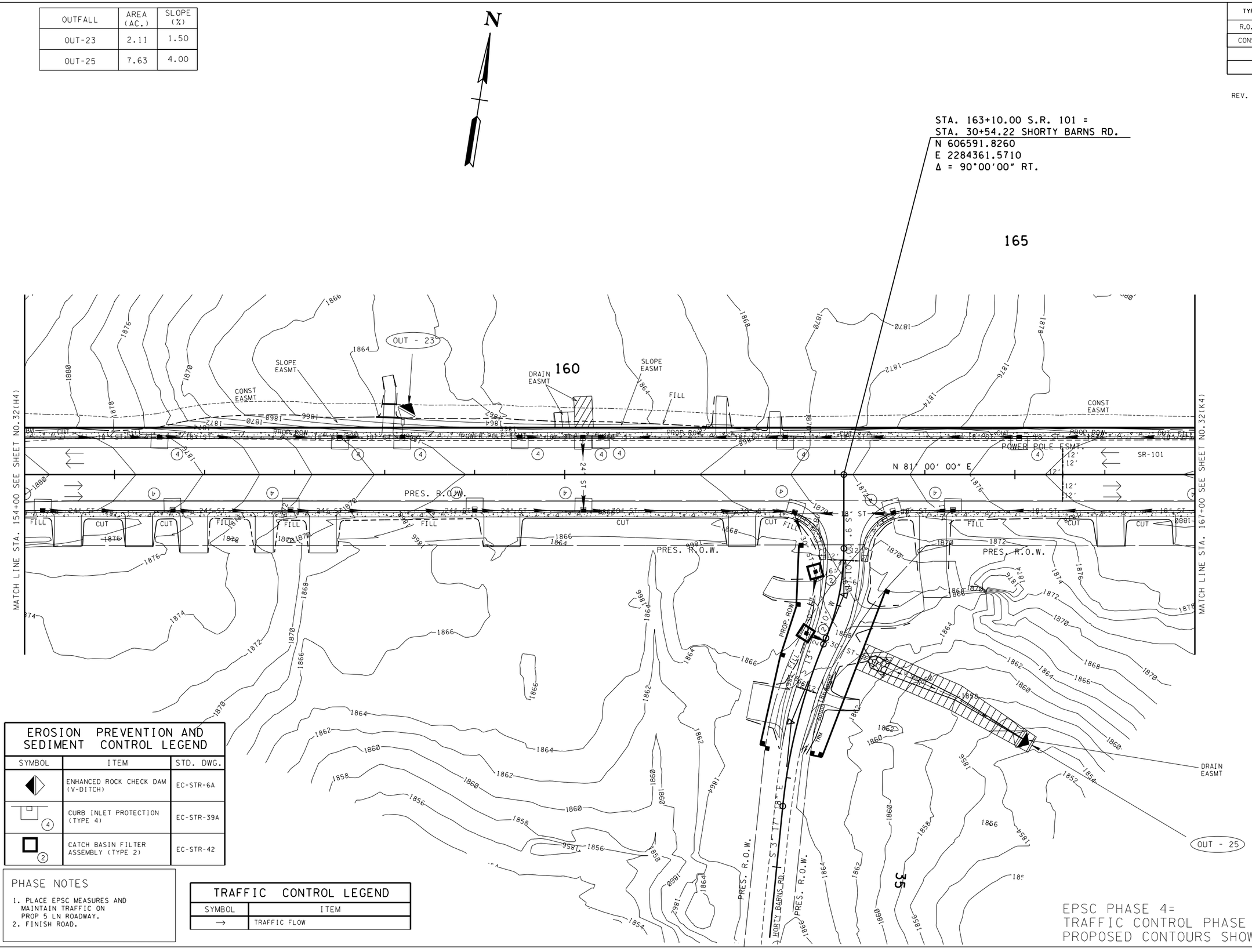
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

OUTFALL	AREA (AC.)	SLOPE (%)
OUT-23	2.11	1.50
OUT-25	7.63	4.00

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	32(J4)
CONST	2015	STP-101(16)	32(J4)

REV. 5-22-13- ADDED SHEET.



EROSION PREVENTION AND SEDIMENT CONTROL LEGEND		
SYMBOL	ITEM	STD. DWG.
◆	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
(4)	CURB INLET PROTECTION (TYPE 4)	EC-STR-39A
(2)	CATCH BASIN FILTER ASSEMBLY (TYPE 2)	EC-STR-42

PHASE NOTES

1. PLACE EPSC MEASURES AND MAINTAIN TRAFFIC ON PROP 5 LN ROADWAY.
2. FINISH ROAD.

TRAFFIC CONTROL LEGEND	
SYMBOL	ITEM
→	TRAFFIC FLOW

EPSC PHASE 4=
TRAFFIC CONTROL PHASE 3
PROPOSED CONTOURS SHOWN

SEALED BY

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA.154+00 TO STA.167+00

SCALE: 1"=50'

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

OUTFALL	AREA (AC.)	SLOPE (%)
OUT-26	3.02	2.00

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	32(K4)
CONST	2015	STP-101(16)	32(K4)

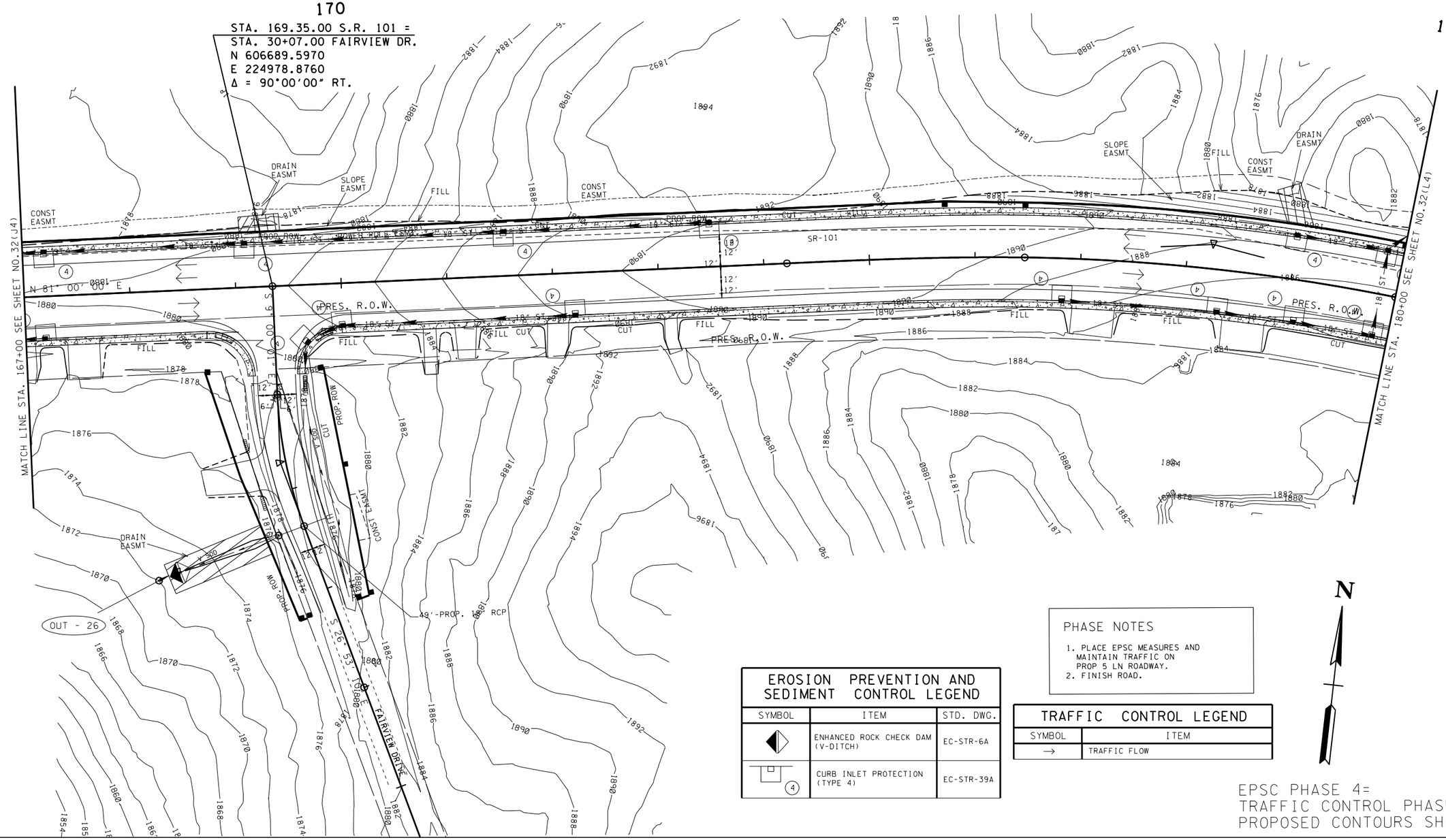
REV. 5-22-13- ADDED SHEET.

170

STA. 169.35.00 S.R. 101 =
STA. 30+07.00 FAIRVIEW DR.
N 606689.5970
E 224978.8760
Δ = 90°00'00" RT.

175

1



EROSION PREVENTION AND SEDIMENT CONTROL LEGEND		
SYMBOL	ITEM	STD. DWG.
◆	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
④	CURB INLET PROTECTION (TYPE 4)	EC-STR-39A

PHASE NOTES

1. PLACE EPSC MEASURES AND MAINTAIN TRAFFIC ON PROP 5 LN ROADWAY.
2. FINISH ROAD.

TRAFFIC CONTROL LEGEND	
SYMBOL	ITEM
→	TRAFFIC FLOW

N

EPSC PHASE 4=
TRAFFIC CONTROL PHASE 3
PROPOSED CONTOURS SHOWN

SEALED BY

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NOT FOR BIDDING

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00013 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA.167+00 TO STA.180+00

SCALE: 1"=50'

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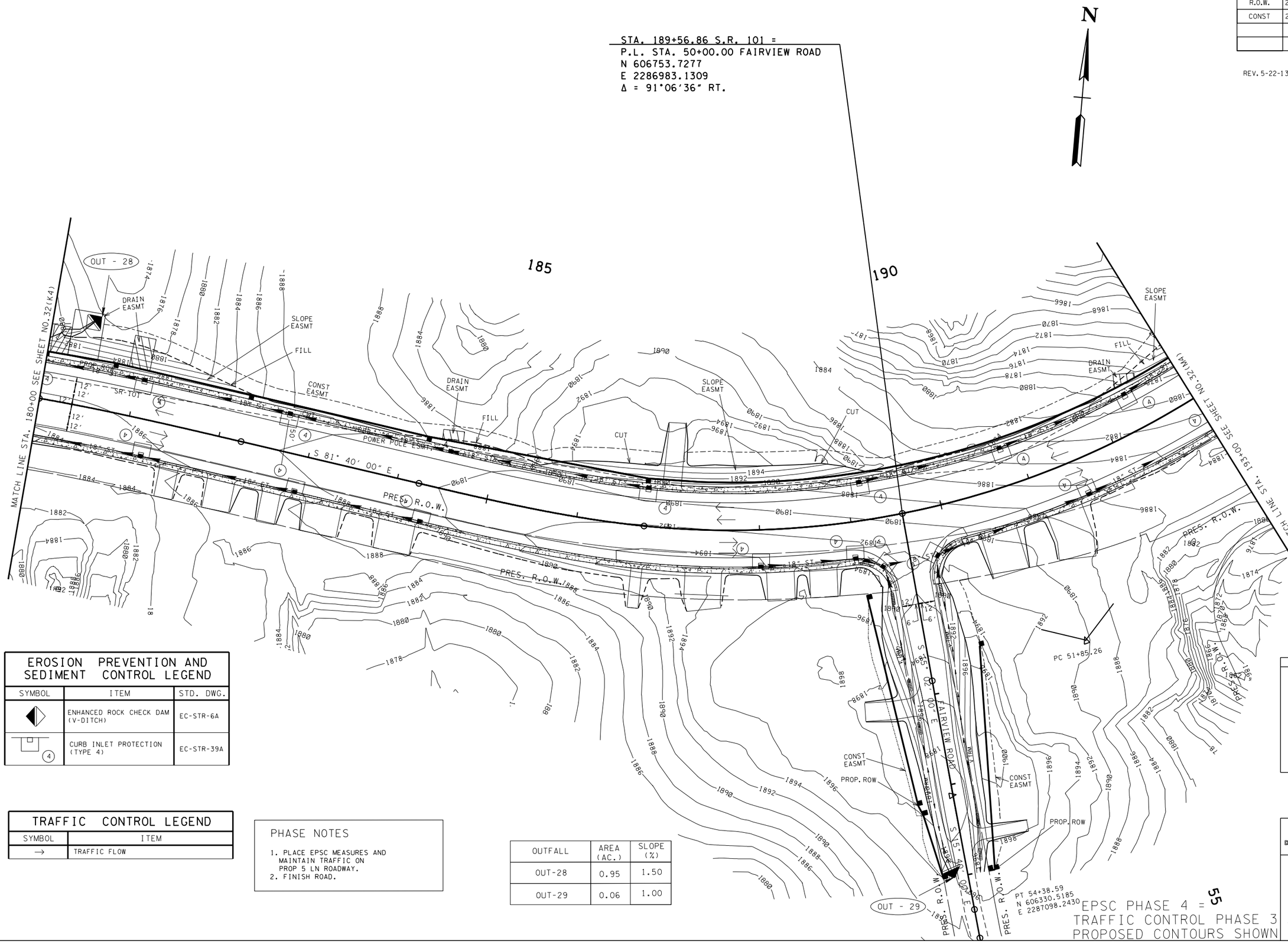
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	32(L4)
CONST	2015	STP-101(16)	32(L4)

REV. 5-22-13- ADDED SHEET.

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



EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
◆	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
▭ (4)	CURB INLET PROTECTION (TYPE 4)	EC-STR-39A

TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
→	TRAFFIC FLOW

PHASE NOTES

1. PLACE EPSC MEASURES AND MAINTAIN TRAFFIC ON PROP 5 LN ROADWAY.
2. FINISH ROAD.

OUTFALL	AREA (AC.)	SLOPE (%)
OUT-28	0.95	1.50
OUT-29	0.06	1.00

EPSC PHASE 4 =
TRAFFIC CONTROL PHASE 3
PROPOSED CONTOURS SHOWN

SEALED BY

UNOFFICIAL SET
NOT FOR BIDDING

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA.180+00 TO STA.193+00
SCALE: 1"=50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	32(M4)
CONST	2015	STP-101(16)	32(M4)

REV. 5-22-13- ADDED SHEET.

195

200

205

STA. 200+75.00 S.R. 101 =
P.L. STA. 30+00.00 ST. GEORGE RD.
N 607518.7670
E 2287754.6440
Δ = 90°00'00" RT.

MATCH LINE STA. 193+00 SEE SHEET NO.32(L4)

MATCH LINE STA. 206+00 SEE SHEET NO.32(N4)

SR-101

PRES. R.O.W.

PROP. ROW

CUT

FILL

SLOPE EASMT

DRAIN EASMT

CONST EASMT

18" ST

24" ST

WWC-5

N 32° 20' 00" E

N 32° 52' 04" E

S 57° 24' 08" E

N 27° 00' 00" E

SPRING LAKE DR.

GEORGE ROAD

POT 4+86.65
N 607001.4200
E 2287613.0250

PC 7+19.25

PT 7+27.93

PC 32+86.02

STA. 31+35.04 ST. GEORGE RD. =
STA. 10+00.00 SPRING LAKE DR.
N 607446.0180
E 2287868.4080
Δ = 87°57'00" RT.

OUT - 32

OUT - 33

OUT - 34

OUT - 35

OUT - 36

SPRING LAKE

5

PHASE NOTES

1. PLACE EPSC MEASURES AND MAINTAIN TRAFFIC ON PROP 5 LN ROADWAY.
2. FINISH ROAD.

TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
→	TRAFFIC FLOW

OUTFALL	AREA (AC.)	SLOPE (%)
OUT-32	1.20	8.00
OUT-33	0.06	4.00
OUT-34	0.05	3.33
OUT-35	1.35	2.00
OUT-36	4.32	1.50

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
4	CURB INLET PROTECTION (TYPE 4)	EC-STR-39A

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA.193+00 TO STA.206+00

SCALE: 1"=50'

EPSC PHASE 4 =
TRAFFIC CONTROL PHASE 3
PROPOSED CONTOURS SHOWN

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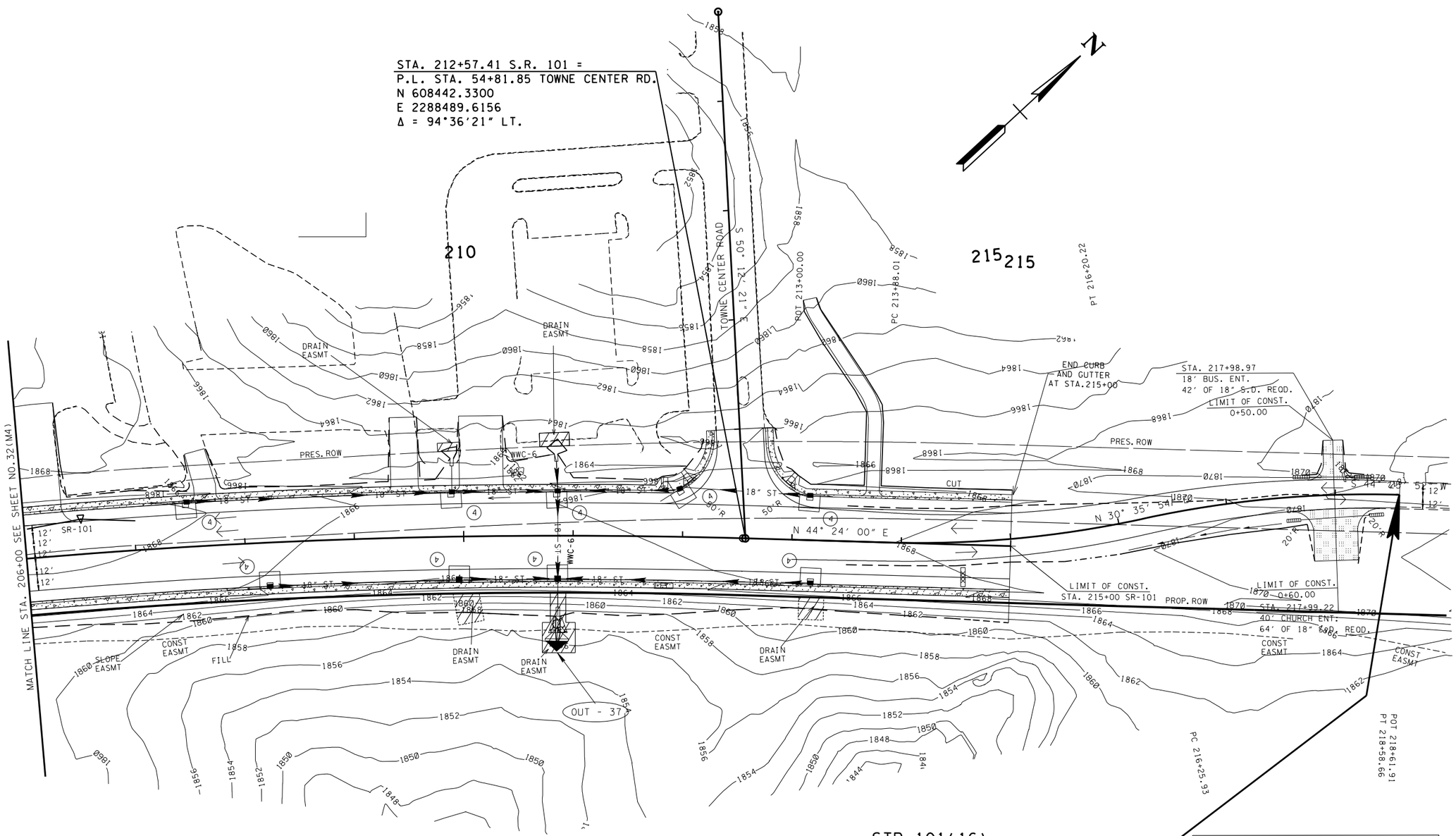
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	32(N4)
CONST	2015	STP-101(16)	32(N4)

REV. 5-22-13- ADDED SHEET.



STP-101(16)
END PHASE 1 PROJ. NO. 18038-3240-14 (CONST.)
STA. 218+60.00

CURVE TCP1FIVE
PI 215+04.68
N 608,618.9963
E 2,288,662.6201
Δ 13° 48' 06" (LT)
D 5° 56' 37"
R 964.00
L 232.21
T 116.67
NORMAL CROWN
DESIGN SPEED 45 MPH

CURVE TCP1SIX
PI 217+42.86
N 608,824.9895
E 2,288,784.4360
Δ 13° 49' 58" (RT)
D 5° 56' 37"
R 964.00
L 232.74
T 116.94
NORMAL CROWN
DESIGN SPEED 45 MPH

PHASE NOTES

1. PLACE EPSC MEASURES AND MAINTAIN TRAFFIC ON PROP ROADWAY AND TURN LANE.
2. FINISH ROAD.

OUTFALL	AREA (AC.)	SLOPE (%)
OUT-37	2.95	1.50

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND		
SYMBOL	ITEM	STD. DWG.
④	CURB INLET PROTECTION (TYPE 4)	EC-STR-39A

TRAFFIC CONTROL LEGEND	
SYMBOL	ITEM
→	TRAFFIC FLOW
⊠⊠⊠	TEMPORARY BARRICADE (TYPE III) 12FT

EPSC PHASE 4 =
TRAFFIC CONTROL PHASE 3
PROPOSED CONTOURS SHOWN

SEALED BY

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA.206+00 TO STA.219+00
SCALE: 1"=50'

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2010	STP-101(16)	32Y
CONST	2015	STP-101(16)	32Y

REV. 08-20-12 - ADDED SHEET 32Y

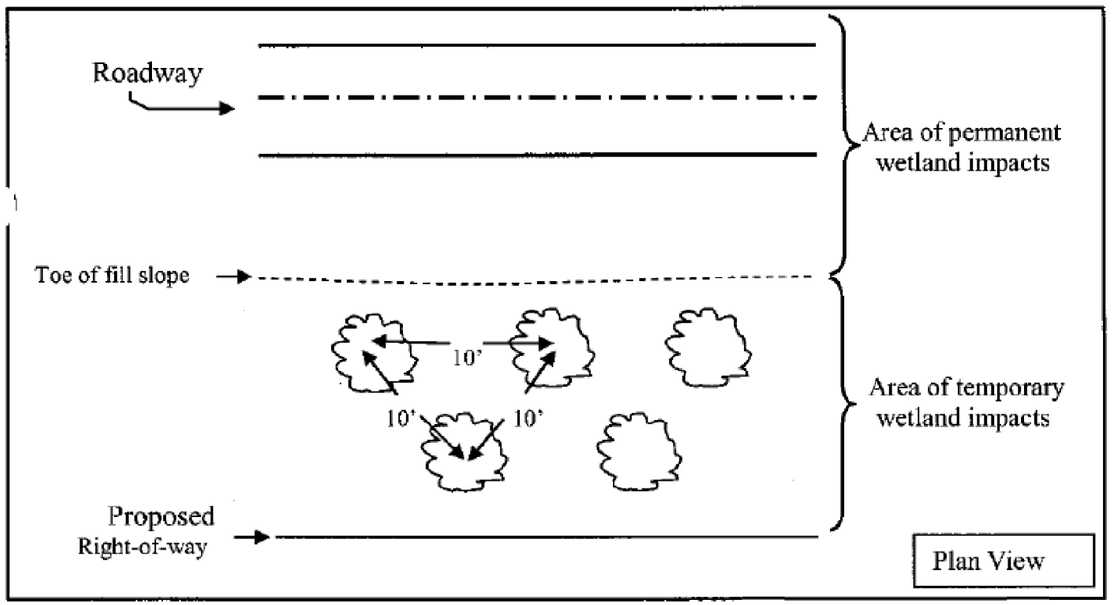
REV. 09-24-12 - REMOVED WTL-2 TREE QTYS AND ADDED WTL-3 ONLY TO PLANTING SCHEME PER ENV. REQ.

REV. 5-22-13 - UPDATE YEAR.

Standard On-site Mitigation for Temporary Wetland Impact Areas (if required)

Apply these measures to all applicable temporary wetland impact areas listed in Form J. For temporary wetland impact areas, remove the top 12" of topsoil and stockpile it until construction is complete. Once construction activities are completed, restore all temporary wetland impact areas to pre-construction conditions. This includes removing haul roads (if applicable), restoring the site to the original (pre-construction) elevation and spreading stockpiled topsoil back over the wetland site. The area of temporary impacts will then be seeded, covered with straw and planted with tree seedlings to stabilize the site. Seedlings will be planted on 10-foot centers. Place a note on the present and proposed layout sheets to protect wetland areas located beyond the limits of the fill slope and proposed ROW.

Tree planting scheme for temporary wetland impact areas (WTL-3 ONLY)



TREES

No substitutions of tree species or sizes shall be allowed without the written approval of TDOT Environmental Division. Concerning **stream mitigation**, trees shall be of the variety requested, between 2 and 5 feet in height, containerized, and first quality. Concerning **temporary wetland mitigation**, trees shall be of the variety requested, well branched, **bare root (roots must be kept moist at all times),** and first quality. No clones or cultivars will be accepted. Any found to be incorrect species, or improperly planted, at any time prior to termination of the contract shall be removed and replaced at the contractor's expense. Stakes and wires shall be removed immediately prior to contract termination, unless otherwise directed by the engineer.

The contractor should arrange several months ahead of time to obtain the correct tree species, as some may require some time to locate.

All trees planted shall be wrapped as per section 802.07 of TDOT standard specifications for the road and bridge construction.

Trees shall be watered as required through the period of establishment to ensure survival.

Topsoil is to be removed from all areas of temporary wetland impacts and stockpiled prior to construction.

Upon completion of construction activities, temporary haul roads are to be removed. Excavated material from the haul roads is to be disposed of as directed by the engineer.

Upon completion of construction activities, all temporary wetland impact areas are to be restored to pre-construction contours and the stockpiled wetland topsoil spread to restore these areas to pre-construction elevation.

ESTIMATED TREE QUANTITIES (WTL-3)

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
802-12.01	ACER NEGUNDO (BOX ELDER SEEDLNG B.R.)	EACH	7
802-12.02	ACER RUBRUM (RED MAPLE SEEDLNG B.R.)	EACH	7
802-12.40	SALIX NIGRA (BLACK WILLOW SEEDLNG B.R.)	EACH	7

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

WETLAND MITIGATION PLAN

20-OCT-2014 11:36
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REV. 08-20-12 - ADDED SHEET 32Z
REV. 09-24-12 - ADDED CHANNEL LOCATION SEQUENCE NOTES, STR-1 TREE QTYS, AND REVISED STR-1B TREE QTYS AND TREE PLANTING.
REV. 10-24-12 - REMOVED STR-1B TREE QTYS AND TREE PLANTING.
REV. 5-22-13 - UPDATE YEAR.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2010	STP-101(16)	32Z
CONST	2015	STPO-101(16)	32Z

TREES

No substitutions of tree species or sizes shall be allowed without the written approval of TDOT Environmental Division. Concerning **stream mitigation**, trees shall be of the variety requested, between 2 and 5 feet in height, containerized, and first quality. Concerning **temporary wetland mitigation**, trees shall be of the variety requested, well branched, **bare root (roots must be kept moist at all times),** and first quality. No clones or cultivars will be accepted. Any found to be incorrect species, or improperly planted, at any time prior to termination of the contract shall be removed and replaced at the contractor's expense. Stakes and wires shall be removed immediately prior to contract termination, unless otherwise directed by the engineer.

The contractor should arrange several months ahead of time to obtain the correct tree species, as some may require some time to locate.

All trees planted shall be wrapped as per section 802.07 of TDOT standard specifications for the road and bridge construction.

Trees shall be watered as required through the period of establishment to ensure survival.

Standard Stream Mitigation (if required)

Apply these measures to all applicable streams listed in Form J. Duplicate the length, bottom channel widt elevations, side slopes, meander wavelength, and curvature of the existing channels to the extent possible. Each channel should transition smoothly from its beginning elevation to its tie-in elevation in the receiving stream, without profile drops or jumps. Locate the new channels in as flat an area as possible to avoid unusually high side slopes; this may require some additional right-of-way. Channel length placed in spring-boxes or culverts counts as part of the new channel length (but may require off-site compensatory mitigation that would not be required for an open channel). Channel side slopes should mimic existing channel side slopes, unless otherwise indicated, and be stabilized using appropriate BMPs – the use of rip-rap should be avoided if possible. If rip-rap is required, the rip-rap should be embedded into the soi such that (1) the top of the rip-rap is flush with the bottom and sides of the channel, (2) the voids are filled with material similar to the original channel bottom, and (3) water will flow on top of the embedded riprap and soil material to enable the water to be visible.

Plant two alternating rows of tree or shrub species on both sides of the new channels; the first row shall be bare root seedlings that are planted on the channel slope, centered on the midpoint of the slope. Along top of bank, two- to five-foot (2-5 ft) container grown trees are to be planted within one foot of the top of bank. If needed, black willow (*Salix nigra)* stakes will be installed along the edge of water in the new channel. The stakes will be fresh material cut in approximately foot lengths. The stakes will be installed on approximately five foot centers at the edge of water in the new channel. The stakes are to be driven in such that approximately six inches of the stake are left above ground. The bare root seedlings will be the same species as the trees, unless otherwise indicated. If required by FWHA clearance requirements, plantings can be restricted to one bank.

Rip-rap, if required, should be limited to ends of culverts. All relocated channels and their accompanying mitigation features, including trees, are to be placed in right-of-way rather than easements; this may require acquisition of additional right-of-way. Use the following specifications for planted species.

ESTIMATED TREE QUANTITIES (STR-1)

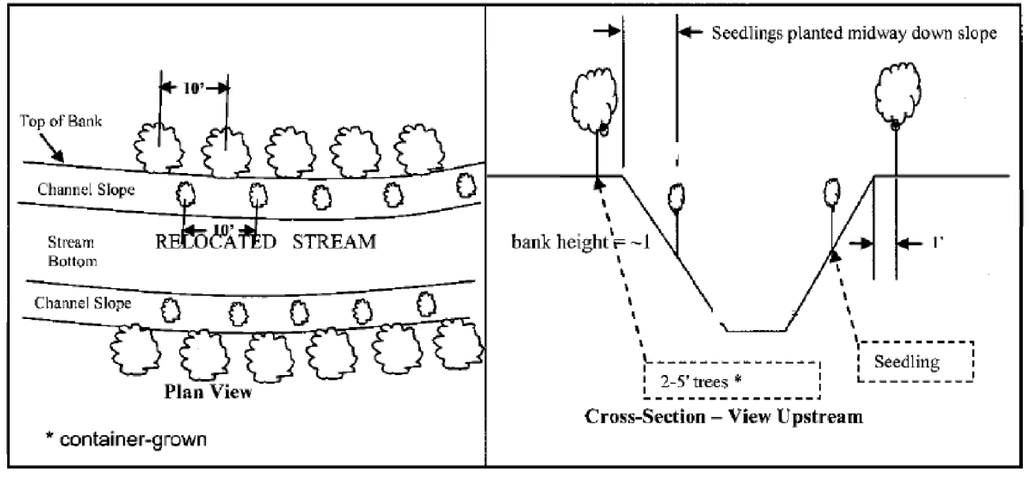
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
802-11.02	ACER RUBRUM (RED MAPLE 2-5FT CNTNR GRWN)	EACH	7
802-11.39	QUERCUS RUBRA (NORTHERN RED OAK 2-5FT CNTNR GRWN)	EACH	8
802-12.01	ACER NEGUNDO (BOX ELDER SEEDLNG B.R.)	EACH	1
802-12.40	SALIX NIGRA (BLACK WILLOW SEEDLNG B.R.)	EACH	1

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

1. If the relocated channel flows into a proposed culvert, the new channel shall be relocated prior to installation of the culver. to ensure correct elevation levels are set for the inlet. The new channel shall be excavatec and stabilized during a low-water period. Rip-rap (only as shown on plans), seeding, and/or sod shall be installed immediately following channel completion. Trees shall be installed in the frst planting season following channel excavation. Water shal be diverted into the new channel only after it is completely stabilized, and only during a low-water period. Stabilized means that all specified rock, erosion control blankets, seeding, sod, or materials are in place and established.

2. CHANNEL RELOCATION SEQUENCE
   a. Flag edge of the new channel top bank prior to clearing. Do not clear large trees in position to shade the new channel. Leave as many trees and shrubs as possible between toe of the new highway slope and the stream.
   b. Excavate the new channel "in the cry" by leaving areas of undsturbed earth (diversion berms) in place at both ends.
   c. Shape channel to specifications shown. Remove loose soils and debris.
   d. Place topsoil, erosion control blanket. seed, sod, or other material as specified.
   e. Remove diversion berms, beginning with the most downstream; banks and bottom elevation of the old channel should transition smoothly into the new channel. The elevations of the new channel bottom at each end of the relocation sequence should match the elevations of the existing channel, and a steady percent slope should be maintainec throughout the relocated channel centerline or as specified.
   f. Install trees according to standard specifications section 802.
3. Only rip-rap shown on plans should be used in the relocated channel reach. Any other proposed rip-rap should be coordinated with the Environmental Division through the TDOT Construction Office.
4. Requests by any agency that would require the modfication of channels, ditches, elevations, rip-rap or any other stream mitigation items associated with the channel relocations shall be referred to the TDOT Environmental Division via the Headquarters Construction Office for coordination with all involved agencies and TDOT divisions. Tennessee Department of Environment and Conservation may make recommendations concerning erosion control via the engineer without such referal.

SPACING FOR PLANTING ALONG RELOCATED STREAM



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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STREAM MITIGATION PLAN

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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO. 1

INDEX OF SHEETS

SEE SHEET NO. 1 FOR INDEX

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

CUMBERLAND COUNTY

TENN.	YEAR	SHEET NO.
	2015	0
FED. AID PROJ. NO.	STP-101(21)	
STATE PROJ. NO.	18038-3241-14	

SR-101 (PEAVINE ROAD)

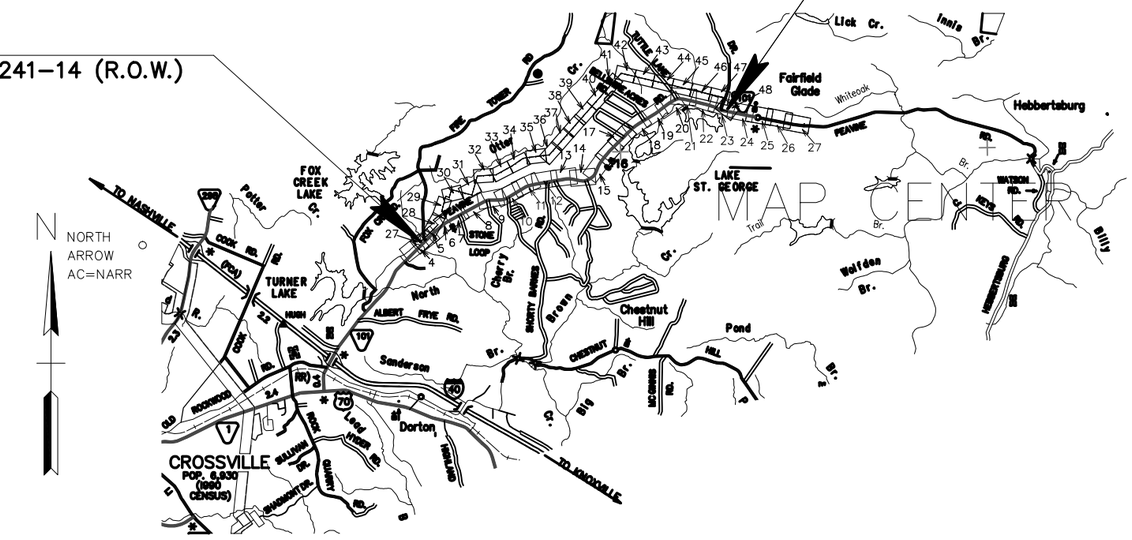
FROM FIRE TOWER ROAD TO EAST OF
WESTCHESTER DRIVE/ CATOOSA BOULEVARD
IN FAIRFIELD GLADE

CONSTRUCTION

STATE HIGHWAY NO. 101 F.A.H.S. NO. 101

STA. 282+39.136
END PROJECT NO. 18038-3241-14 (R.O.W.)
STA. 307+68.39 S.R. 101

STA. 00+00.00
BEGIN PROJECT NO. 18038-3241-14 (R.O.W.)
STA. 67+99.1098 S.R. 101



NO EXCLUSIONS
NO EQUATIONS

APPROVED:

CHIEF ENGINEER

DATE:

APPROVED:

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 XXXX XX, 2015 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS AND IN THE PROPOSAL CONTRACT.

SCALE: 1"= 5000

EASEMENT LENGTH 5.418 MILES

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR DATE

TDOT ROAD SP. SV. 2 ROBERT RODGERS

DESIGNER BRIAN KING / JOHN PANKEY

P.E. NO. 18038-1230-04

PIN NO. 100268.01 & 100268.02

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-101(21)	1

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STANDARD ROADWAY DRAWINGS

SHEET NO.	REV.	DESCRIPTION
EROSION PREVENTION AND SEDIMENT CONTROL		
EC-STR-3C	08/01/2012	SILT FENCE WITH WIRE BACKING
EC-STR-8	06/10/2014	FILTER SOCK

EROSION PREVENTION AND SEDIMENT CONTROL PLAN PHASE 1	
FROM STATION 0+00 TO STATION 23+00	62
FROM STATION 23+00 TO STATION 48+00	63
FROM STATION 48+00 TO STATION 72+00	64
FROM STATION 72+00 TO STATION 95+00	65
FROM STATION 95+00 TO STATION 119+00	66
FROM STATION 119+00 TO STATION 143+00	67
FROM STATION 143+00 TO STATION 168+00	68
FROM STATION 168+00 TO STATION 192+00	69
FROM STATION 192+00 TO STATION 215+00	70
FROM STATION 215+00 TO STATION 239+00	71
FROM STATION 239+00 TO STATION 263+00	72
FROM STATION 263+00 TO STATION 285+00	73
FROM STATION 285+00 TO STATION 296+05	74
EROSION PREVENTION AND SEDIMENT CONTROL PLAN PHASE 2	
FROM STATION 0+00 TO STATION 23+00	75
FROM STATION 23+00 TO STATION 48+00	76
FROM STATION 48+00 TO STATION 72+00	77
FROM STATION 72+00 TO STATION 95+00	78
FROM STATION 95+00 TO STATION 119+00	79
FROM STATION 119+00 TO STATION 143+00	80
FROM STATION 143+00 TO STATION 168+00	81
FROM STATION 168+00 TO STATION 192+00	82
FROM STATION 192+00 TO STATION 215+00	83
FROM STATION 215+00 TO STATION 239+00	84
FROM STATION 239+00 TO STATION 263+00	85
FROM STATION 263+00 TO STATION 285+00	86
FROM STATION 285+00 TO STATION 296+05	87
EROSION PREVENTION AND SEDIMENT CONTROL PLAN PHASE 3	
FROM STATION 0+00 TO STATION 23+00	88
FROM STATION 23+00 TO STATION 48+00	89
FROM STATION 48+00 TO STATION 72+00	90
FROM STATION 72+00 TO STATION 95+00	91
FROM STATION 95+00 TO STATION 119+00	92
FROM STATION 119+00 TO STATION 143+00	93
FROM STATION 143+00 TO STATION 168+00	94
FROM STATION 168+00 TO STATION 192+00	95
FROM STATION 192+00 TO STATION 215+00	96
FROM STATION 215+00 TO STATION 239+00	97
FROM STATION 239+00 TO STATION 263+00	98
FROM STATION 263+00 TO STATION 285+00	99
FROM STATION 285+00 TO STATION 296+05	100

All material must be approved by Volunteer Energy Cooperative and meet "List of Materials" as shown in RUS Publications 202-1

Guy wire shall be 1/2" 7 strand high strength steel (EHSS)

Guy attachment must meet or exceed an ultimate strength of 70,000 lbs.

Dead end arms are Aluma Form HD-DEA-86-EB-REA

Retired Items to be located in one staging area and returned to Volunteer Energy Cooperative for disposal (Crossvile Service Center, 235 O'Brien Dr., Crossville, TN 38555).

Retired service and secondary conductors shall be coiled up in a manner to prevent uncoiling. Retired primary conductors shall be coiled on reels. Conductor sizes shall not be mixed on the reels.

All work shall be done under energized conditions. All switching activities and energization of new line construction shall be coordinated with Volunteer Energy Cooperative.

Contractor is responsible to maintain minimum NESC (latest addition) code requirements during construction

All new distribution and transmission construction shall adhere to Volunteer Electric Cooperative's "Engineering Specification Handbook".

New pole installations are based on the "final" grade construction. If poles are installed before final grade, contact Volunteer Energy Cooperative. Any temporary poles needed due to the construction process are the responsibility of the contractor, including installation and removal cost.

No items shall be reused without the prior written approval of Volunteer Energy Cooperative.

All items needed for construction of this project as shown on the plans and/or detailed in the specifications are the sole responsibility of the contractor with the exception of the poles provided by VEC as shown in the scope of work.

The project shall be constructed consecutively. Any piecemeal construction must be approved prior to construction by Volunteer Energy Cooperative. Any line angles created where not shown on the plans due to piecemeal construction will be fixed at the contractor's expense.

The anchors and pole symbols are pictorial representations only. The unit callouts shall be used for construction, not the picture.

Subsurface is anticipated to be rock. All holes will require core drilling or blasting.

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VOLUNTEER ENERGY COOPERATIVE

ELECTRIC RELOCATION

ESTIMATED QUANTITIES

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-101(21)	2

ESTIMATED UTILITY QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	UNIT PRICE	QUANTITY	% Utility
					Betterment
209-03.22	FILTER SOCK (18 INCH)	L.F.		25760	0.00%
209-08.02	TEMPORARY SILT FENCE (WITH BACKING)	L.F.		7400	0.00%
209-09.01	SANDBAGS	BAG		962	0.00%
209-20.03	POLYETHYLENE SHEETING (9 MIL. MINIMUM)	S.Y.		3375	0.00%
707-08.11	HIGH-VISIBILITY CONSTRUCTION FENCE	L.F.		6480	0.00%
709-05.05	MACHINED RIP-RAP (CLASS A-3)	TON		1800	0.00%
740-10.03	GEOTEXTILE (TYPE II)(EROSION CONTROL)	S.Y.		2400	0.00%
801-01-00	SEEDING (WITH MULCH)	UNIT		1800	0.00%
801-01.07	TEMPORARY SEEDING (WITH MULCH)	UNIT		1800	0.00%
801-01.16	BONDED FIBER MATRIX HYDROMULCH (W/PERMANENT SEED)	UNIT		400	0.00%
802-11.11	CERCIS CANADENSIS (REDBUD 2-3FT CNTNR GRWN)	EACH		100	0.00%
802-13.57	ILEX OPACA (AMERICAN HOLLY SELNG BARE ROOT)	EACH		100	0.00%
750-20.01	POLE (H1-S5 GALVANIZED STEEL)[1]	EACH		2	0.00%
750-20.02	POLE (H1-S5 GALVANIZED STEEL)[1]	EACH		3	0.00%
750-10.05	POLE 75FT CLASS H2 METAL[1]	EACH		1	0.00%
750-11.05	POLE 80FT CLASS H2 METAL[1]	EACH		7	0.00%
750-12.05	POLE 85FT CLASS H2 METAL[1]	EACH		6	0.00%
750-13.05	POLE 90FT CLASS H2 METAL[1]	EACH		3	0.00%
750-20.03	POLE (H2-100 GALVANIZED STEEL)[1]	EACH		3	0.00%
750-20.04	POLE (H2-105 GALVANIZED STEEL)[1]	EACH		2	0.00%
750-20.05	POLE (H2-110 GALVANIZED STEEL)[1]	EACH		1	0.00%
750-11.06	POLE 80FT CLASS H3 METAL	EACH		3	0.00%
750-20.06	POLE (H3-S5 GALVANIZED STEEL)[1]	EACH		10	0.00%
750-13.06	POLE 90FT CLASS H3 METAL[1]	EACH		12	0.00%
750-14.06	POLE 95FT CLASS H3 METAL[1]	EACH		3	0.00%
750-20.08	POLE (H3-100 GALVANIZED STEEL)[1]	EACH		2	0.00%
750-20.07	POLE (H3-110 GALVANIZED STEEL)[1]	EACH		1	0.00%
750-10.07	POLE 75FT CLASS H4 METAL[1]	EACH		1	0.00%
750-12.07	POLE 85FT CLASS H4 METAL[1]	EACH		1	0.00%
750-14.07	POLE 95FT CLASS H4 METAL[1]	EACH		2	0.00%
750-15.01	POLE 100FT CLASS H4 METAL[1]	EACH		1	0.00%
750-16.01	POLE 105FT CLASS H4 METAL[1]	EACH		1	0.00%
750-17.01	POLE 110FT CLASS H4 METAL[1]	EACH		1	0.00%
750-18.01	POLE 115FT CLASS H4 METAL[1]	EACH		1	0.00%
750-17.02	POLE 110FT CLASS H5 METAL[1]	EACH		5	0.00%
750-71.06	TANGENT W/ UPSWEPT ARMS 161KV MAX	EACH		53	0.00%
750-71.67	HORIZ POST TANGENT 161KV MAX	EACH		0	0.00%
750-71.68	HORIZ POST SM ANG 161KV MAX	EACH		2	0.00%
750-71.69	VERTICAL DDE 161KV MAX	EACH		14	0.00%
	TS3V 161kV INTERMEDIATE ANGLE	EACH		2	0.00%
	TS4V 161kV LARGE ANGLE	EACH		1	0.00%
203-40.02	ROCK ANCHORS	EACH		284	0.00%
753-02.90	GUY WIRE (1/2" 7 STRAND EXTRA HIGH STRENGTH)	EACH		284	0.00%
750-72.15	MEDIUM DUTY GUYING TEE	EACH		284	0.00%
750-08.01	POLE GROUND ROD TYPE	EACH		72	0.00%
201-01.03	CLEARING AND GRUBBING	LS		1	0.00%
203-01.70	EXCAVATION/BACKFILL	C.Y.		660	0.00%
000-01.12	TRAFFIC CONTROL SYSTEMS	LS		1	0.00%
750-40.24	OH COND 795 26/7 ACSR DRAKE	L.F.		62843	0.00%
750-40.76	OH STATIC COND 7 NO. 6 ALUMOWELD	L.F.		27748	0.00%
303-01.09	MINERAL AGGREGATE, TYPE A BASE, GRADING D	TON		1000	0.00%

[1] POLES TO BE SUPPLIED BY VOLUNTEER ENERGY COOPERATIVE.

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Layout Name: UE-2
Plotted: Monday, April 27, 2015 - 4:39 pm
By: Boland

BRIAN P. KING
REGISTERED ENGINEER
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4/27/2015

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VOLUNTEER ENERGY COOPERATIVE

ELECTRIC RELOCATION

ESTIMATED QUANTITIES

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST	2015	STP-101(21)	3

POLE TABLE			
POLE #	PAGE #	NORTHING	EASTING
2	27	602710.270	2276171.14
3	27	603016.873	2160352.63
4	28	603325.127	2276805.99
5	28	603612.280	2277085.80
6	28	603931.373	2276780.20
7	28	604051.340	2276907.32
8	29	604226.255	2277177.65
9	29	604397.703	2277442.63
10	29	604519.279	2277330.38
11	29	604847.418	2277417.97
12	29	605182.047	2277507.28
13	30	605517.520	2277596.82
14	30	605451.341	2277843.60
15	30	605969.410	2277981.21
16	30	605848.070	2278436.39
17	31	605725.694	2278895.47
18	31	605600.966	2279363.38
19	31	606026.836	2279479.81
20	32	606460.767	2279598.45
21	32	606885.628	2279714.61
22	32	606911.136	2280133.93
23	32	606936.376	2280548.85
24	33	606961.786	2280966.55
25	33	607158.001	2281327.31
26	33	607357.664	2281694.39
27	34	607553.023	2282053.57
28	34	607735.035	2282312.08
29	34	607909.124	2282559.34
30	34	608082.307	2282805.32
31	35	608141.571	2283228.69

POLE TABLE			
POLE #	PAGE #	NORTHING	EASTING
32	35	608194.693	2283655.28
33	35	608238.991	2284011.01
34	35	608257.569	2284183.38
35	36	608297.835	2284556.96
36	36	608617.442	2284837.00
37	37	608945.354	2285124.30
38	37	609214.692	2285360.30
39	37	609406.340	2285528.21
40	37	609647.151	2285739.21
41	38	610105.715	2286140.99
42	38	610314.303	2286323.75
43	38	610623.820	2286591.87
44	39	610931.388	2164783.60
45	39	611238.550	2287134.97
46	39	611552.500	2287412.34
47	40	611885.904	2287706.90
48	40	612215.554	2287998.15
49	40	612524.454	2288271.06
50	41	612838.944	2288548.91
51	41	613156.837	2288829.77
52	41	613473.128	2289109.21
53	42	613790.523	2289389.62
54	42	613698.811	2289776.12
55	43	613494.812	2290635.82
56	43	613404.987	2291014.39
57	43	613304.707	2291436.97
58	44	613202.824	2291866.32
59	44	613102.098	2292290.81
60	44	613009.494	2292681.06
61	45	612895.090	2293163.19

POLE TABLE			
POLE #	PAGE #	NORTHING	EASTING
62	45	612798.343	2293570.91
63	45	612698.753	2293990.61
64	46	612585.272	2294468.84
65	46	612505.154	2294806.47
66	46	612422.722	2295153.87
67	47	612339.594	2295504.18
68	47	612257.624	2295849.63
69	47	612155.418	2296280.35
70	47	611815.395	2296144.55
71	48	611526.745	2296029.27
72	48	611314.125	2296167.24
73	48	611248.928	2296515.86

NOTE: POLE AND GUY STAKING COORDINATES WILL BE PROVIDED PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE ENGINEER A MINIMUM OF THREE WEEKS PRIOR TO COMMENCING STAKING.

BRIAN P. KING
REGISTERED ENGINEER
No. 111958
STATE OF TENNESSEE

COORDINATES ARE NAD/83(1995) AND ARE DATUM ADJUSTED BY THE FACTOR 1.00013 & TIED TO THE TGRN. REFERNCED TO THE NAVD 1988.

VOLUNTEER ENERGY COOPERATIVE

ELECTRIC RELOCATION

POLE LOCATION TABLULATION

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Layout Name: Table 1
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By: BookerS

EROSION PREVENTION AND SEDIMENT CONTROL NOTES

STREAM/WETLAND

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

(2) A 30 FOOT NATURAL A 30 FOOT NATURAL RIPARIAN BUFFER ZONE ADJACENT TO AND ON BOTH SIDES OF THE RECEIVING STREAM SHALL BE PRESERVED, TO THE MAXIMUM EXTENT PRACTICABLE, DURING CONSTRUCTION ACTIVITIES AT THE SITE. BUFFER ZONES ARE NOT SEDIMENT CONTROL MEASURES AND SHOULD NOT BE RELIED UPON AS PRIMARY SEDIMENT CONTROLMEASURES. THE RIPARIAN BUFFER ZONE SHALL BE ESTABLISHED BETWEEN THE TOP OF THE STREAM BANK AND THE DISTURBED CONSTRUCTION AREA. THE 30 FOOT CRITERION FOR THE WIDTH OF THE BUFFER ZONE CAN BE ESTABLISHED ON AN AVERAGE WIDTH BASIS AT A PROJECT, AS LONG AS THE MINIMUM WIDTH OF THE BUFFER ZONE IS MORE THAN 15 FEET AT ANY MEASURED LOCATION. EVERY ATTEMPT SHALL BE MADE FOR CONSTRUCTION ACTIVITIES NOT TO TAKE PLACE WITHIN THE BUFFER ZONES. BEST MANAGEMENT PRACTICES (BMPS) PROVIDING EQUIVALENT PROTECTION AS THE NATURAL RIPARIAN ZONE MAY BE USED. A JUSTIFICATION FOR USE AND DESIGN EQUIVALENCY SHALL BE DOCUMENTED WITHIN THE SWPPP. THE ENVIRONMENTAL AND ROADWAY DESIGN DIVISIONS SHALL REVIEW AND APPROVE THIS REVISION OF THE SWPPP BEFORE DISTURBANCE OF THE SITE PROCEEDS, UNLESS PREVIOUSLY EXEMPT IN THE NPDES CONSTRUCTION GENERAL PERMIT. WHERE ISSUED, ARAP/401 REQUIREMENTS WILL PREVAIL IF IN CONFLICT WITH THESE BUFFER ZONE REQUIREMENTS.

NPDES

(3) NO WORK SHALL BE STARTED UNTIL THE CONTRACTOR'S PLAN FOR THE STAGING OF THEIR OPERATIONS, INCLUDING THE PLAN FOR STAGING OF TEMPORARY AND PERMANENT EPSC MEASURES, HAS BEEN ACCEPTED BY THE ENGINEER. THE CONTRACTOR'S EPSC PLAN SHALL INCORPORATE AND SUPPLEMENT, AS ACCEPTABLE, THE BASIC EPSC DEVICES ON THE EPSC PLAN CONTAINED IN THE APPROVED SWPPP.

(4) 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.

(5) THE ACCEPTED EPSC PLAN SHALL REQUIRE THAT EPSC MEASURES BE IN PLACE BEFORE CLEARING, GRUBBING, EXCAVATION, GRADING, CUTTING OR FILLING OCCURS, EXCEPT AS SUCH WORK MAY BE NECESSARY TO INSTALL EPSC MEASURES, INCLUDING WITHOUT LIMITATION AS FOLLOWS:

A. INITIAL CLEARING AND GRUBBING SHALL BE LIMITED TO THAT NECESSARY FOR THE INSTALLATION OF APPLICABLE EPSC MEASURES IN ACCORDANCE WITH THE ACCEPTED EPSC PLAN INCORPORATED INTO THE SWPPP.

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

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

D. NO GRADING, EXCAVATION, CUTTING, FILLING, OR OTHER EARTHWORK SHALL BE STARTED BEFORE EPSC MEASURES ARE IN PLACE IN ACCORDANCE WITH THE ACCEPTED EPSC PLAN INCORPORATED INTO THE SWPPP.

(6) 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.

(7) 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.

(8) 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

(9) 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.

(10) 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.

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

(12) 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.

(13) 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).

(14) 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.

ECOLOGY

(2) DUE TO CONCERNS FOR THE BLACK MOUNTAIN DUSKY SALAMANDER, DESMOGNATHUS WELTERI, TWRA REQUESTS A PRESENCE/ABSENCE SURVEY/SWEEP OF THE RIPARIAN AREAS ADJACENT TO STREAMS WITHIN THE PROJECT LIMITS PRIOR TO CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL CONTACT TDOT ECOLOGY SECTION FOUR WEEKS PRIOR TO START OF CONSTRUCTION.

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND		
SYMBOL	ITEM	STD. DWG.
* SFB * SFB * SFB *	SILT FENCE WITH WIRE BACKING	EC-STR-3C
** SOCK ** SOCK **	FILTER SOCK	EC-STR-8
* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1
	POLE EXCAVATION SOIL TEMPORARY STORAGE	
	AREAS TO BE SEEDED AS DIRECTED BY THE ENGINEER	
PCF	PERMANENT CONSTRUCTION FORD	EC-STR-25

ESTIMATED ROADWAY QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
209-03.22	FILTER SOCK (18 INCH)	L.F.	25750
209-08.02	TEMPORARY SILT FENCE (WITH BACKING)	L.F.	7100
209-09.01	SANDBAGS	BAG	962
209-20.03	POLYETHYLENE SHEETING (6 MIL. MINIMUM)	S.Y.	3375
707-08.11	HIGH-VISIBILITY CONSTRUCTION FENCE	L.F.	6450
709-05.05	MACHINED RIP-RAP (CLASS A-3)	TON	1500
740-10.03	GEOTEXTILE (TYPE III)(EROSION CONTROL)	S.Y.	2400
801-01	SEEDING (WITH MULCH)	UNIT	1800
801-01.07	TEMPORARY SEEDING (WITH MULCH)	UNIT	1800
801-01.16	BONDED FIBER MATRIX HYDROMULCH (W/PERMANENT SEED)	UNIT	400

NOTE: ALL QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER.

OUTFALL POINTS	
OUTFALL	AREA (ACRES)
1	11.5
2	4.1
3	16.97
4	3.34
5	4.12
6	9.51
7	11.79
8	3.48
9	6
10	6.45
11	4.38

PHASING NOTES

PHASE 1: EROSION PREVENTION AND SEDIMENT CONTROLS ARE TO BE INSTALLED INCLUDING BUT NOT LIMITED TO SILT FENCING, FILTER SOCKS, AND HIGH VISIBILITY FENCING. PERMANENT CONSTRUCTION FORDS ARE TO BE CONSTRUCTED. TREES ARE TO BE SHREDDED TO GROUND WITH STUMP AND ROOT BALL TO REMAIN, THE RESULTING MULCH SHALL BE SPREAD EVENLY ACROSS PROJECT EASEMENT.

PHASE 2: ELECTRICAL POLES AND WIRING ARE TO BE INSTALLED. EXCAVATION MATERIAL SHALL BE TEMPORARILY STORED DURING POLE INSTALLATION. EXISTING EPSC MEASURES ARE TO REMAIN AND BE MAINTAINED.

PHASE 3: NON-DEGRADABLE EPSC MEASURES SHALL BE REMOVED INCLUDING BUT NOT LIMITED TO SILT FENCING AND HIGH VISIBILITY FENCING. AREAS LACKING IN VEGETATION SHALL BE SEEDED AT THE DIRECTION OF THE ENGINEER.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-101(21)	59

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JOHN T. PANNELL REGISTERED ENGINEER AGRICULTURE COMMERCE AND 102351 STATE OF TENNESSEE 4/27/15

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.000 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL NOTES, LEGEND & DETAILS

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-101(21)	60

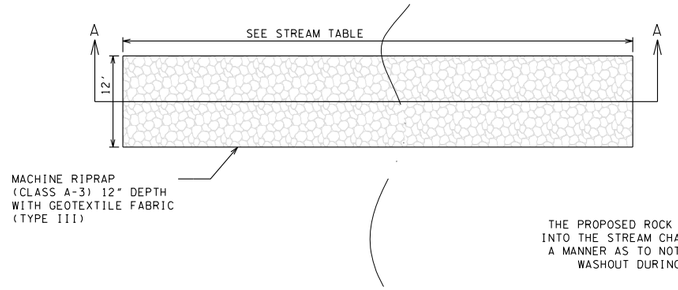
STREAM TABLE

STREAM	METHOD OF CROSSING (L' X W')	DESCRIPTION OF IMPACTION
STR-1	N/A	VEGETATION REMOVAL (152')
STR-2	ROCK FORD (105 x 12)	VEGETATION REMOVAL (133')
STR-3	ROCK FORD (40 x 12)	VEGETATION REMOVAL (155')
STR-4	ROCK FORD (64 x 12)	VEGETATION REMOVAL (127')
STR-5	ROCK FORD (73 x 12)	VEGETATION REMOVAL (114')
STR-6	ROCK FORD (150 x 12)	VEGETATION REMOVAL (121')
STR-7	ROCK FORD (130 x 12)	VEGETATION REMOVAL (121')
STR-8	ROCK FORD (66 x 12)	VEGETATION REMOVAL (114')
STR-9	ROCK FORD (108 x 12)	VEGETATION REMOVAL (114')
STR-10	ROCK FORD (50 X 12)	VEGETATION REMOVAL (96')
STR-11	ROCK FORD (50 X 12)	VEGETATION REMOVAL (66')
STR-12/LAKE-1	N/A	N/A
LAKE - 2	N/A	N/A
STR-14	N/A	N/A
STR-15	ROCK FORD (96 x 12)	VEGETATION REMOVAL (121')
STR-16	ROCK FORD (117 x 12)	VEGETATION REMOVAL (144')
STR-17	ROCK FORD (75 x 12)	VEGETATION REMOVAL (111')
STR-18	ROCK FORD (125 x 12)	VEGETATION REMOVAL (111')
STR-19	N/A	N/A
STR-20	ROCK FORD (120 x 12)	VEGETATION REMOVAL (108')
STR-21	N/A	VEGETATION REMOVAL (49')
STR-22	ROCK FORD (117 x 12)	VEGETATION REMOVAL (112')
STR-23	ROCK FORD (50 x 12)	VEGETATION REMOVAL (104')
STR-24	ROCK FORD (42 x 12)	VEGETATION REMOVAL (99')
STR-25	ROCK FORD (75 x 12)	VEGETATION REMOVAL (119')
STR-26	N/A	N/A

* ROCK FORDS TO BE LEFT IN PLACE UPON CONSTRUCTION COMPLETION

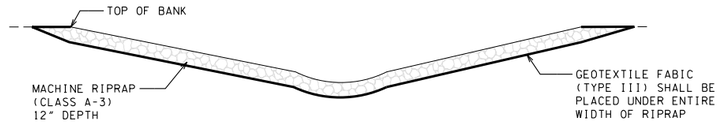
WETLAND TABLE

WETLAND	TYPE OF IMPACTION	TOTAL AREA OF WETLAND (Ac.)	AREA OF IMPACTION (Ac.)
WTL-1A	VEGETATION REMOVAL	0.398	0.057
WTL-1B	VEGETATION REMOVAL	0.100	0.079
WTL-2	VEGETATION REMOVAL	0.074	0.000
WTL-3	VEGETATION REMOVAL	0.029	0.029
WTL-3-1	VEGETATION REMOVAL	0.230	0.230
WTL-4	VEGETATION REMOVAL	0.033	0.000
WTL-5	VEGETATION REMOVAL	0.012	0.003
WTL-6	VEGETATION REMOVAL	0.240	0.145
WTL-7	VEGETATION REMOVAL	0.042	0.000
WTL-8	VEGETATION REMOVAL	0.058	0.041



THE PROPOSED ROCK FORDS SHALL BE EMBEDDED INTO THE STREAM CHANNELS AND PLACED IN SUCH A MANNER AS TO NOT OBSTRUCT FLOW OR ALLOW WASHOUT DURING HEAVY RAIN EVENTS.

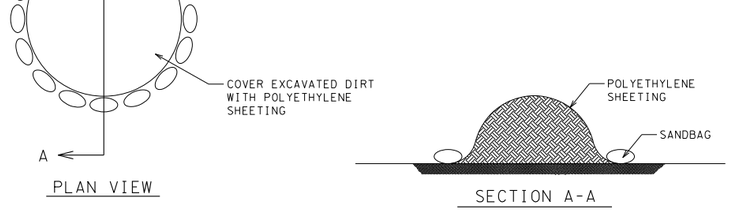
PLAN VIEW OF PERMANENT CONSTRUCTION FORD



SECTION A-A

PERMANENT CONSTRUCTION FORD

NOT TO SCALE



PLAN VIEW

SECTION A-A

POLE EXCAVATION SOIL TEMPORARY STORAGE DETAIL

NOT TO SCALE

R.O.W. ACQUISITION TABLE

TRACT NO.	PROPERTY OWNERS	COUNTY RECORDS				TOTAL AREA ACRES			AREA TO BE ACQUIRED ACRES			AREA REMAINING ACRES		EASEMENT (SQUARE FEET)		
		TAX MAP NO.	PARCEL NO.	DEED DOCUMENT REFERENCE BK.	PAGE	LEFT	RIGHT	TOTAL	LEFT	RIGHT	TOTAL	LEFT	RIGHT	PERM. DRAINAGE	SLOPE	CONST.
1	WILLIAM F. GRAHAM	088	16.01	1007	1139	4.686		4.686	1.038		1.038	3.648				
2	RALPH T. ELLIOTT	088	15.02	1402	1712	3.058		3.058	2687 S.F.		2687 S.F.	2.996				
3	GAMA MANAGEMENT INC	088	15.01	1212	219	0.466		0.466	0.466		0.466					
4	BETTY J PARSONS	088	15.00	1189	1226	2.697		2.697	0.445		0.445	2.252				
5	COLONIAL SQUARE LLC	089	02.01	1196	1486		9.160	9.160		3.110	3.110		6.050			
6	J.H. GRAHAM III, TRUSTEE	089	01.01	357	591	3.300		3.300	0.159		0.159	3.141				
7	GARY WARREN WHITTAKER	089	01.00	1240	1462	25.000		25.000	1.216		1.216	23.784				
8	TIMOTHY JAY AND CYNTHA POTTER	089	04.03	523	5		18.260	18.260		1.262	1.262		16.998			
9	JAMES P JR AND JUDY A SMITH	076	08.00	1021	1	59.833	3.187	63.020	0.965	0.850	1.815	58.868	2.337			
10	LOWELL R POTTER TRUST	076	07.00	1032	454	164.800		164.800	6.452		6.452	158.348				
11	STONE FAMILY LP	076	20.00	1063	889	499.800		499.800	13.023		13.023	486.777				
15	STONE FAMILY LP	076	23.04	1063	889	172.500		172.500	6.943		6.943	165.557				
16	BETTY TURNER	077	01.03	1196	1173	7.279	114.721	122.000	1.652	1.864	3.516	5.627	112.857			
17	ANDREW H TURNER	077	01.00	1229	2395	170.811	24.389	195.200	3.519	3.344	6.863	167.292	21.045			
18	ANDREW H TURNER	077	01.02	1229	2395	182.154	28.146	210.300	3.098	2.976	6.074	179.268	24.97			
19	CUMBERLAND CO BANK	077		242	318	2.275	0.497	2.772	0.497	0.649	1.146		1.626			

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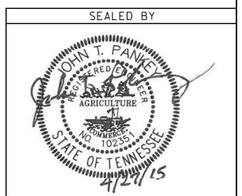

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL NOTES, LEGEND & DETAILS

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-101(21)	61

PROJECT COMMITMENTS

COMMITMENT ID	SOURCE DIVISION	DESCRIPTION	STA./LOCATION
EDHZ001	ENVIRONMENTAL DIVISION, HAZARDOUS MATERIALS	Some of the soil on Tract 3 [Project STP-101(16)], located at 2529 Peavine Road (former C and K Market) Crossville, Cumberland County, Tennessee, that was used to backfill the tank pit excavation has concentrations of benzene and xylenes that are above TDUST residential Initial Screening Levels (ISLs), but below commercial ISLs. In order to prevent direct contact with the soil and possible exposure through contact and/or ingestion, contractors should follor their company's Health and Safety Plan regarding use of proper personal protective equipment (PPE) for work activities in this location. It is recommended that all personnel use engineered controls (rubber boots, gloves) and good hygenic practices if they must come into contact with the soil. If excess soil is generated at this location, it must not be removed from the tract without prior approval by the TDOT Hazmat Section. Contact TDOT Hazmat at 615-532-8684 for further information or to obtain a copy of the UST Closure Report.	Tract 3 [Project STP - 101(16)], located at 2529 Peavine Road (former C and K Market)

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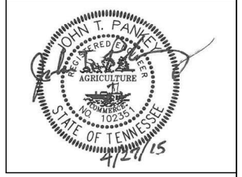

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL NOTES, LEGEND & DETAILS

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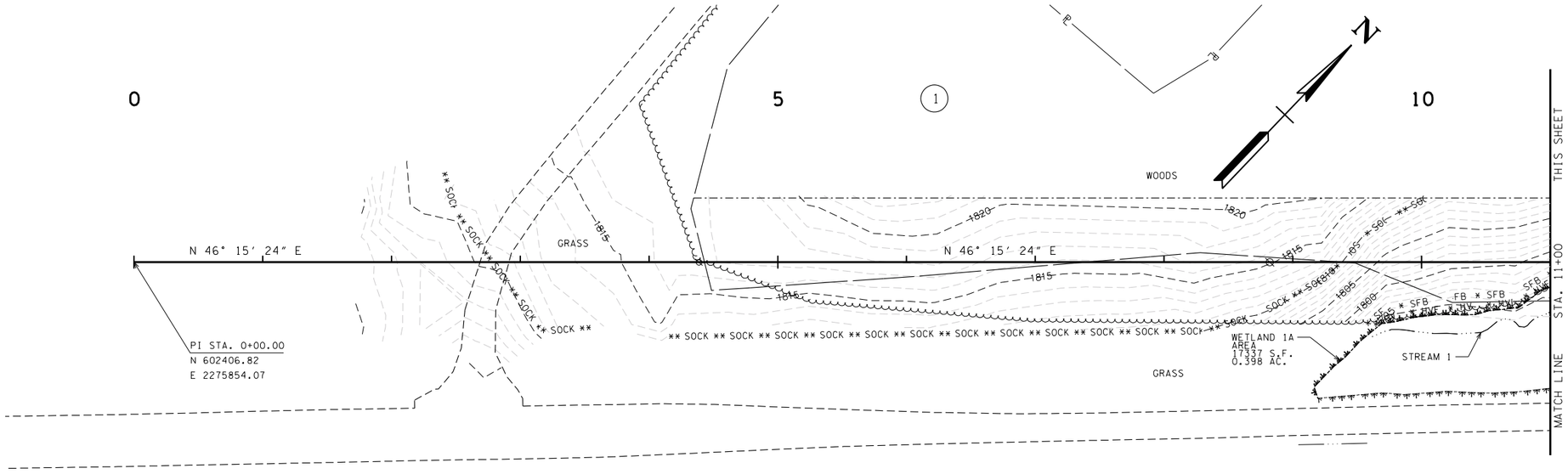
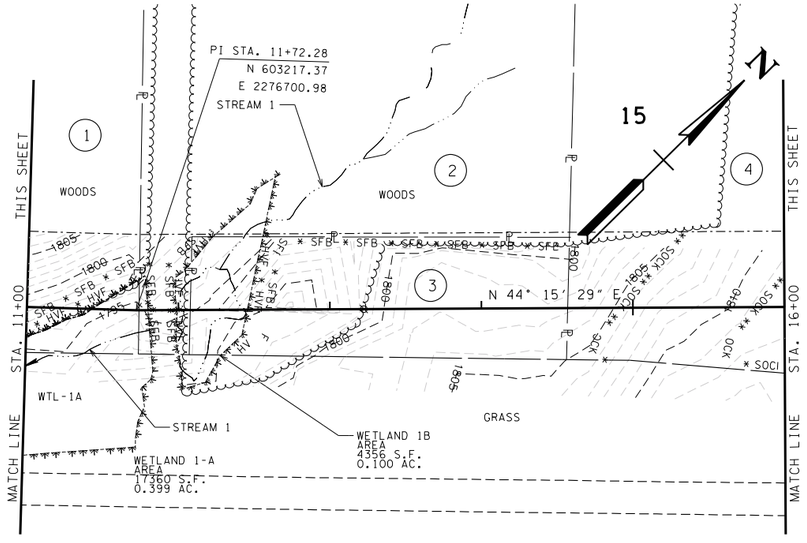
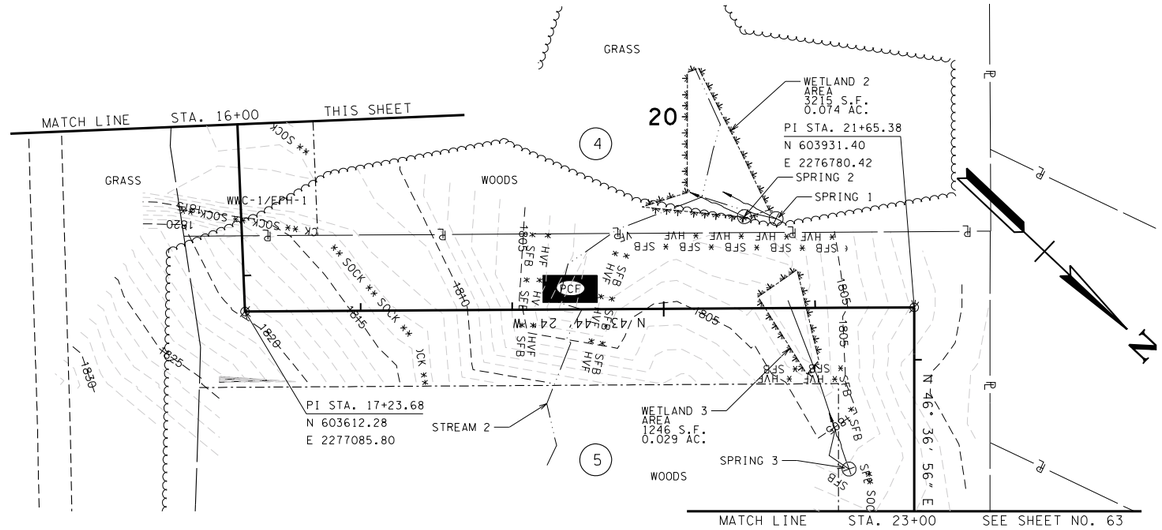
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-101(21)	62







PHASE 1

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AGRICULTURE
No. 102351
STATE OF TENNESSEE
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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 0+00 TO STA. 23+00

SCALE: 1"= 50'

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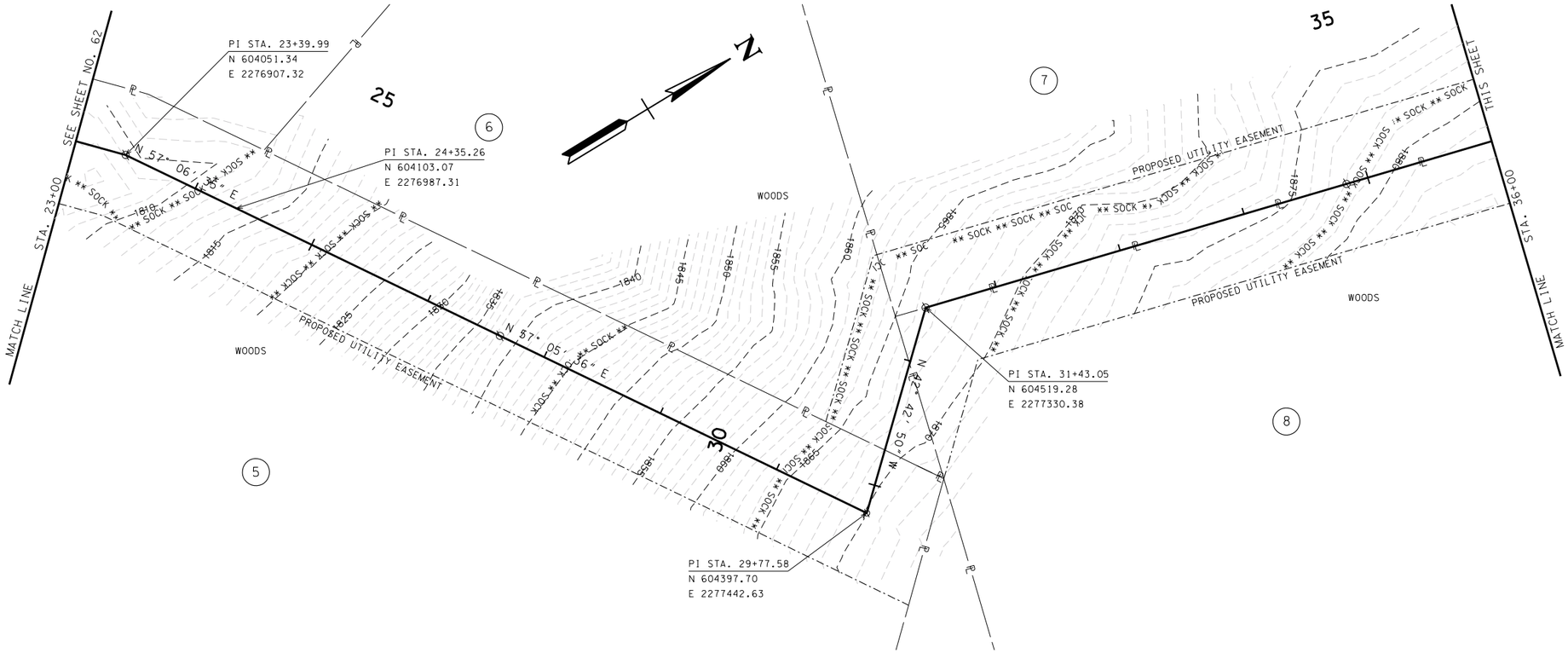
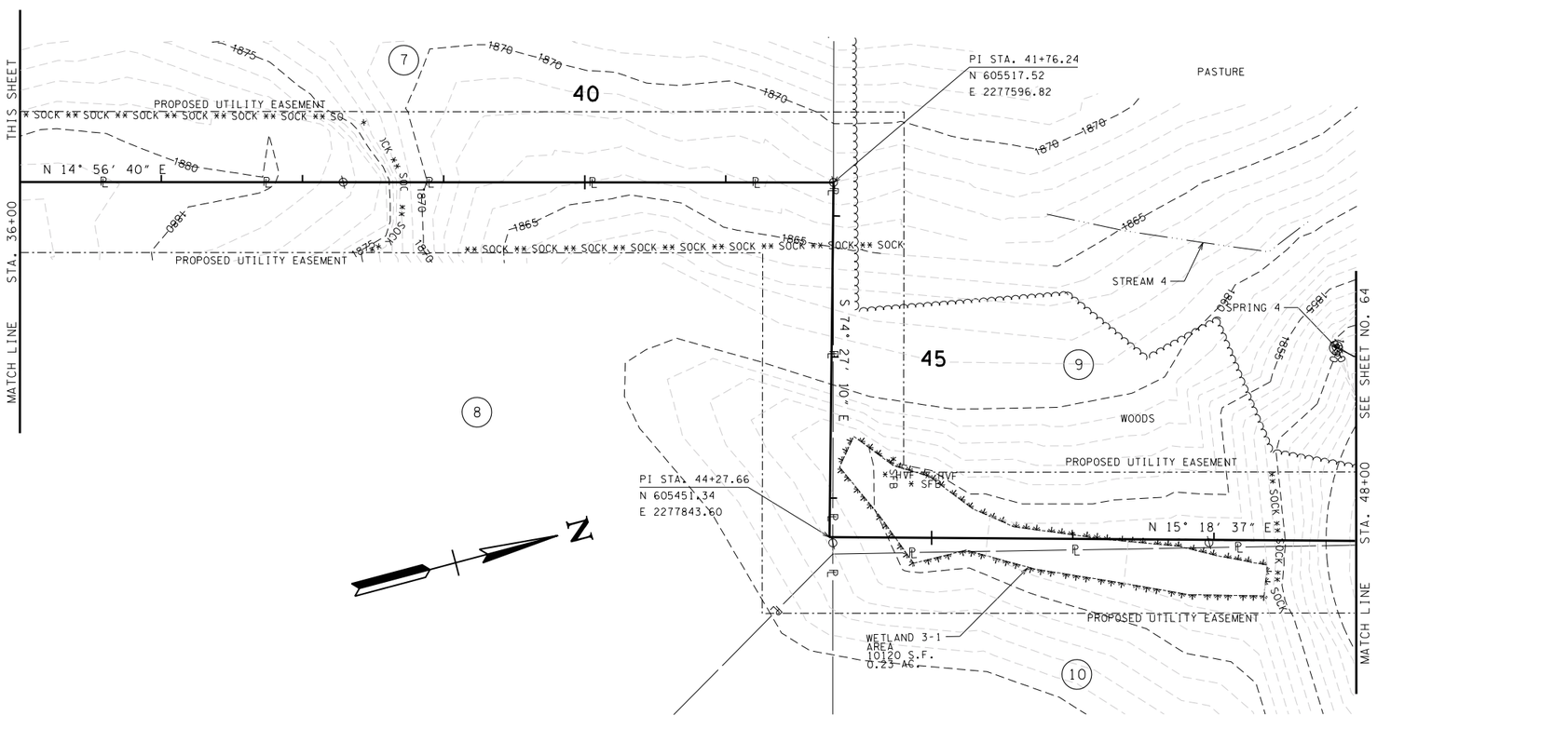
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-101(21)	63





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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 23+00 TO STA. 48+00

SCALE: 1"= 50'

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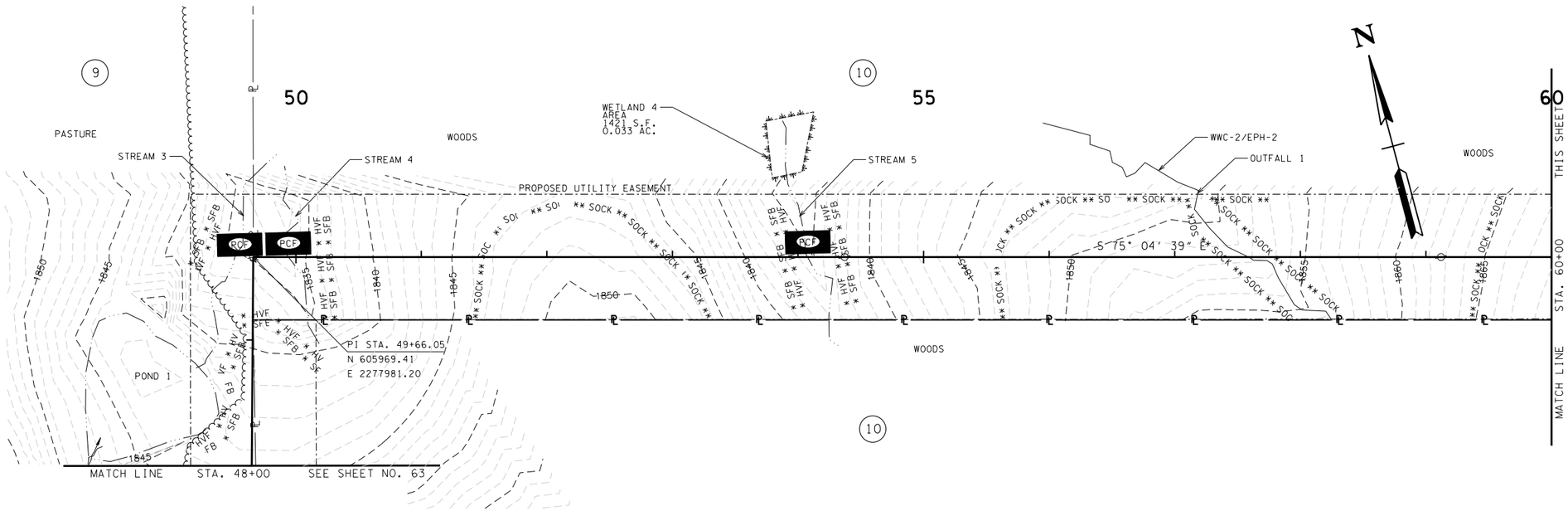
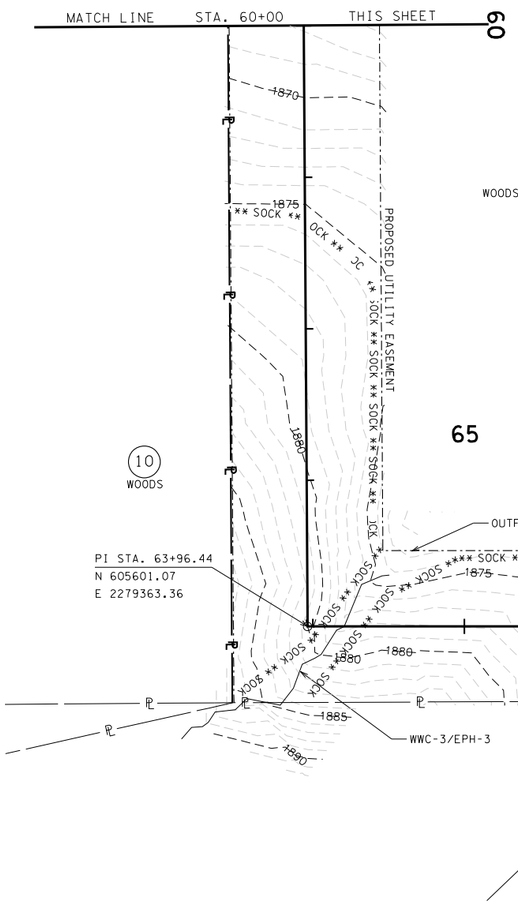
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-101(21)	64





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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 48+00 TO STA. 72+00

SCALE: 1"= 50'

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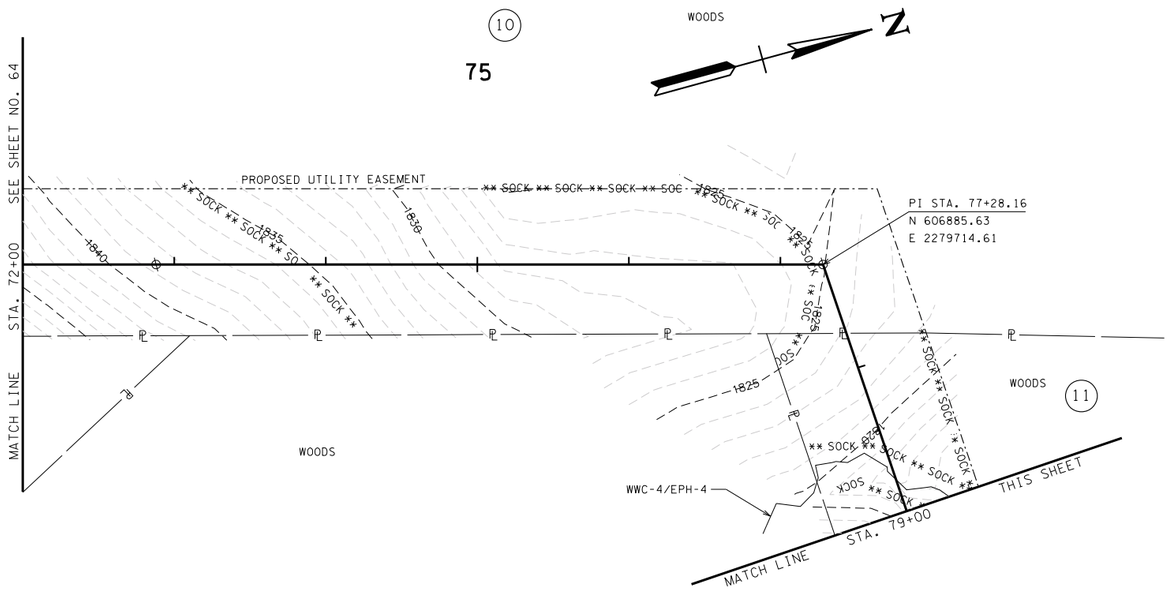
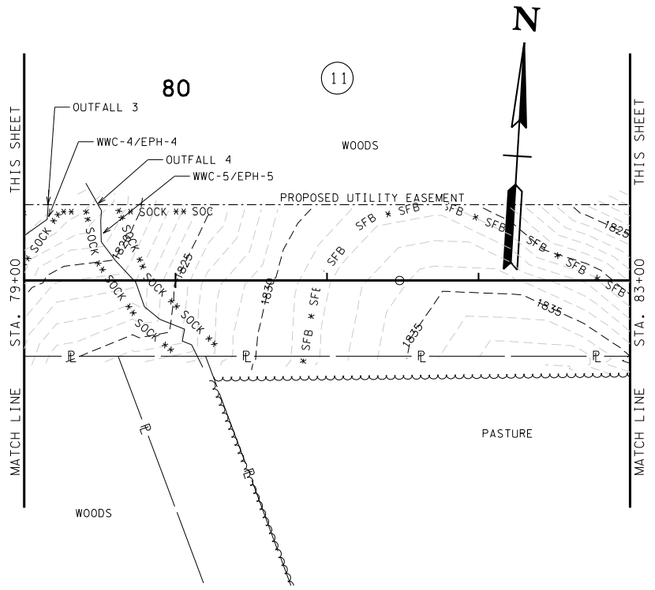
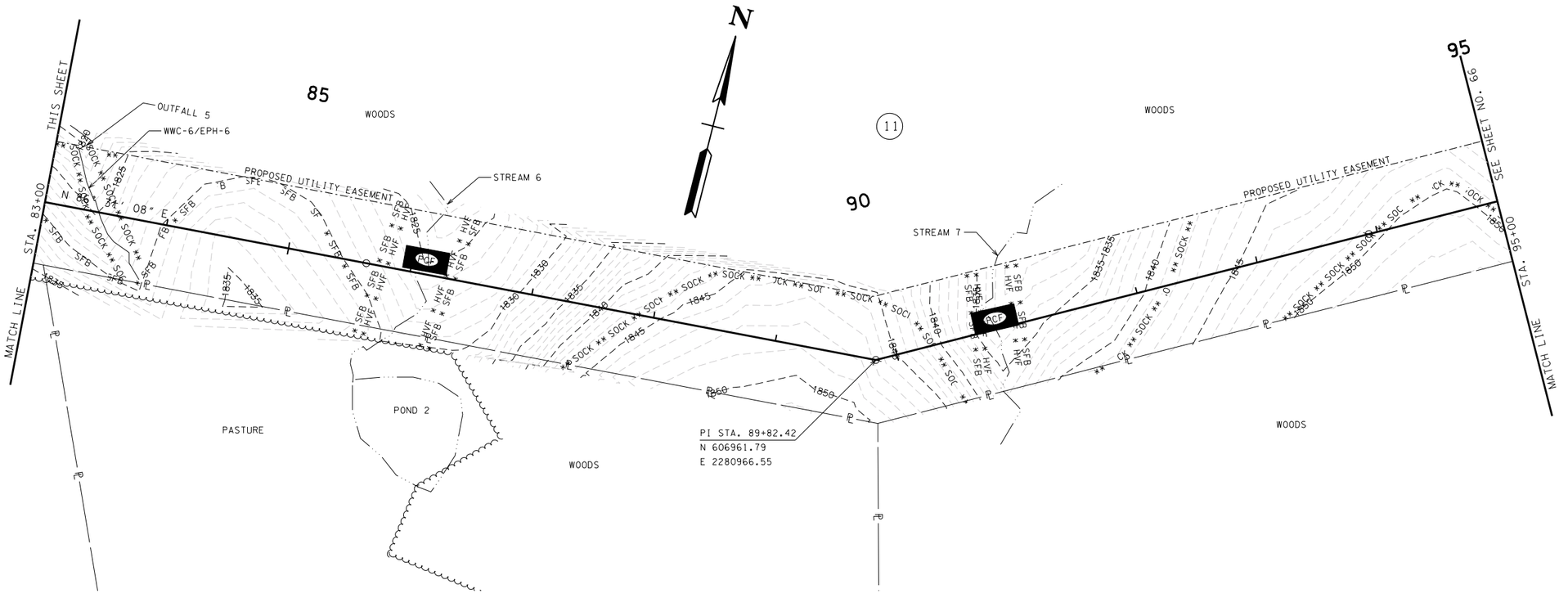
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-101(21)	65







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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 72+00 TO STA. 95+00

SCALE: 1"= 50'

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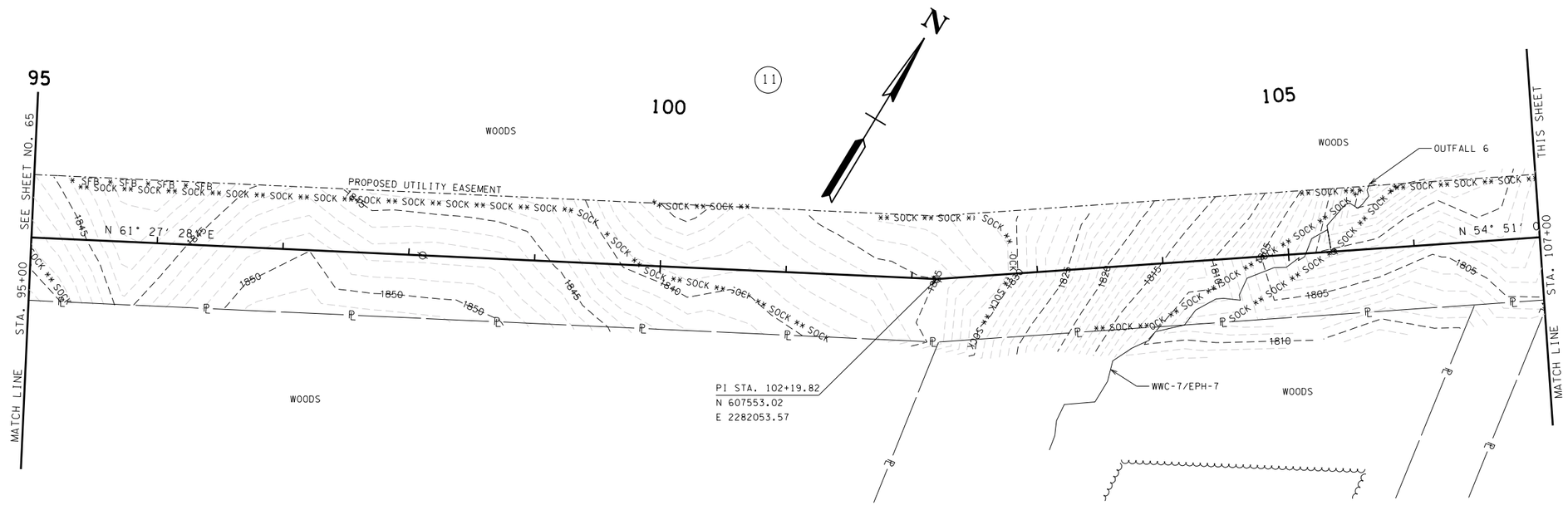
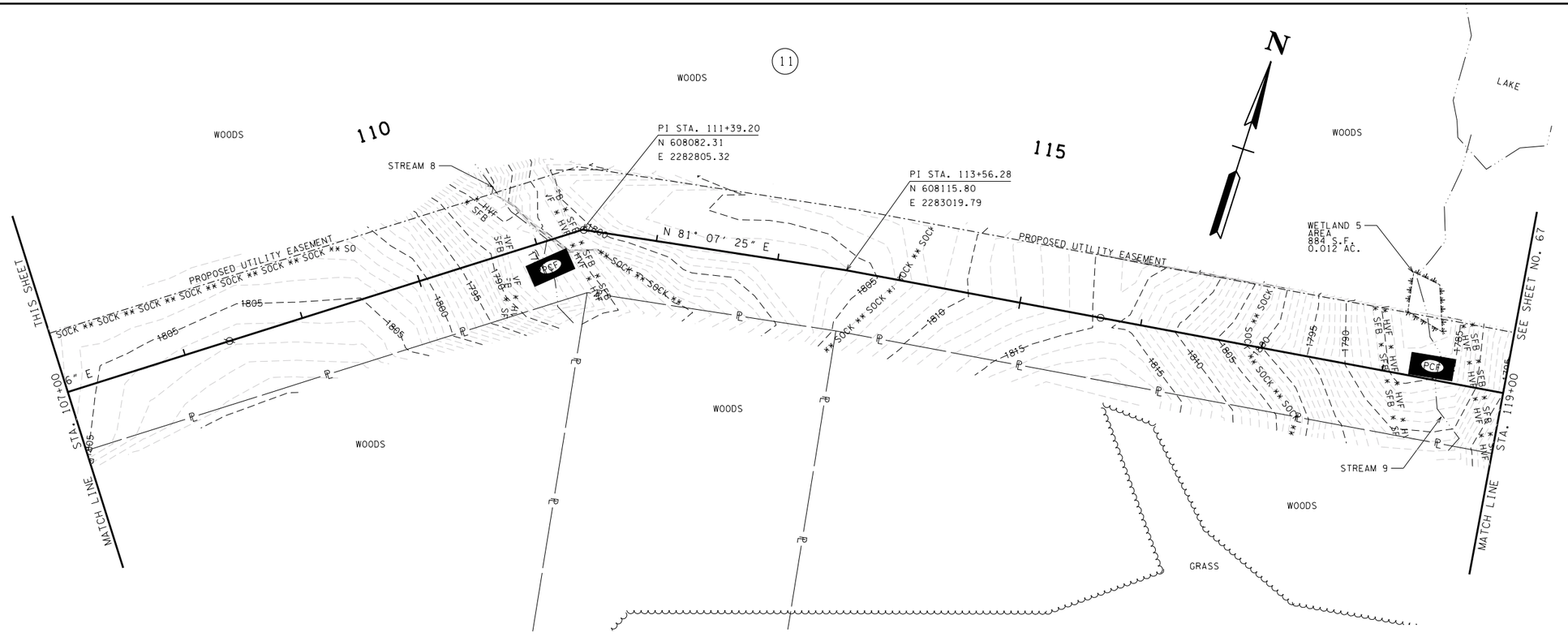
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-101(21)	66





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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 95+00 TO STA. 119+00

SCALE: 1"= 50'

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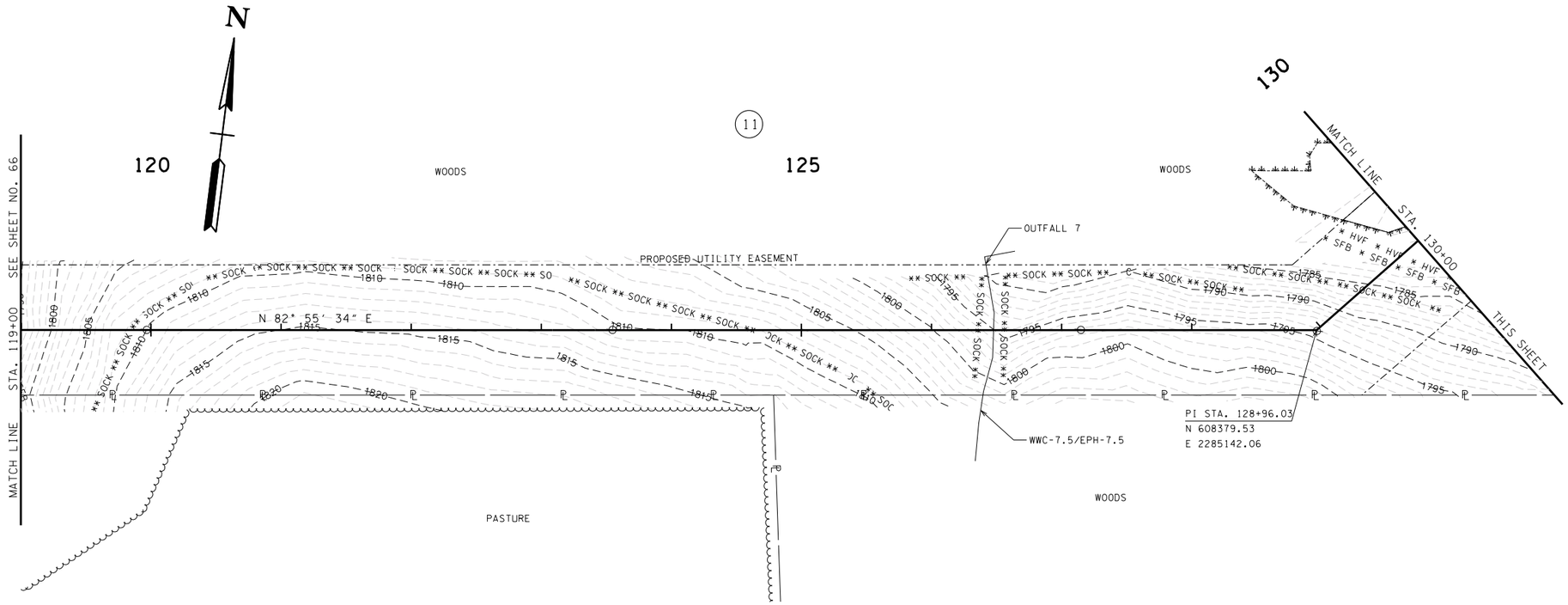
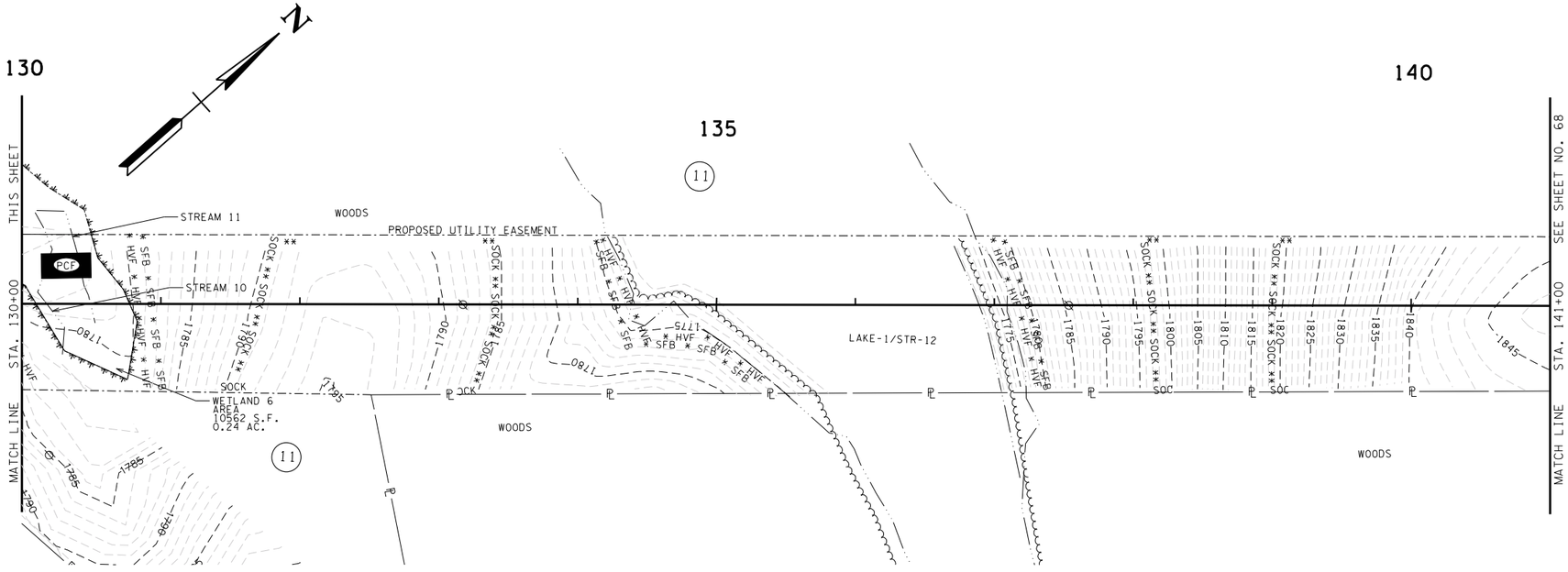
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-101(21)	67





PHASE 1

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 119+00 TO STA. 143+00

SCALE: 1"= 50'

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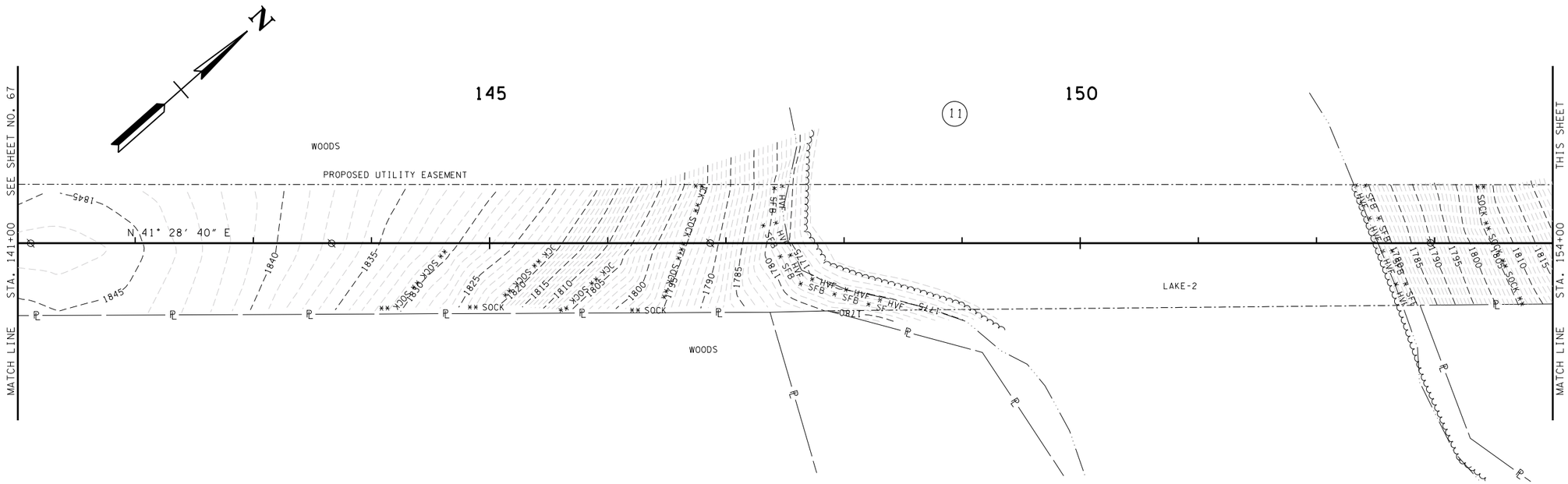
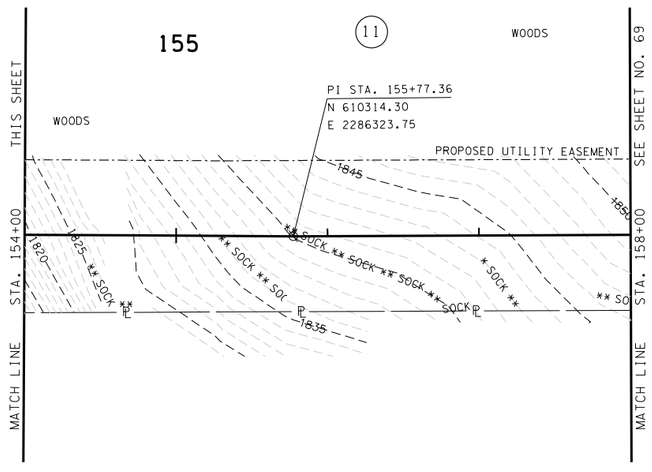
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-101(21)	68





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102361
STATE OF TENNESSEE
4/27/15

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 143+00 TO STA. 168+00

SCALE: 1"= 50'

4/27/2015 10:30:07 AM
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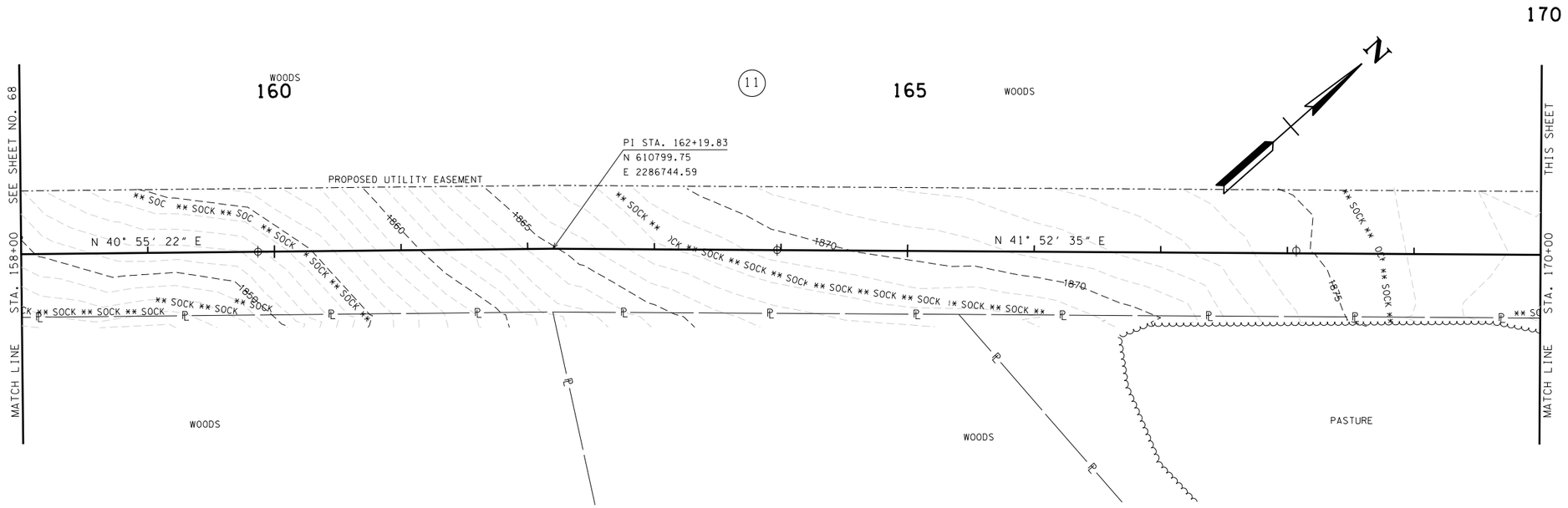
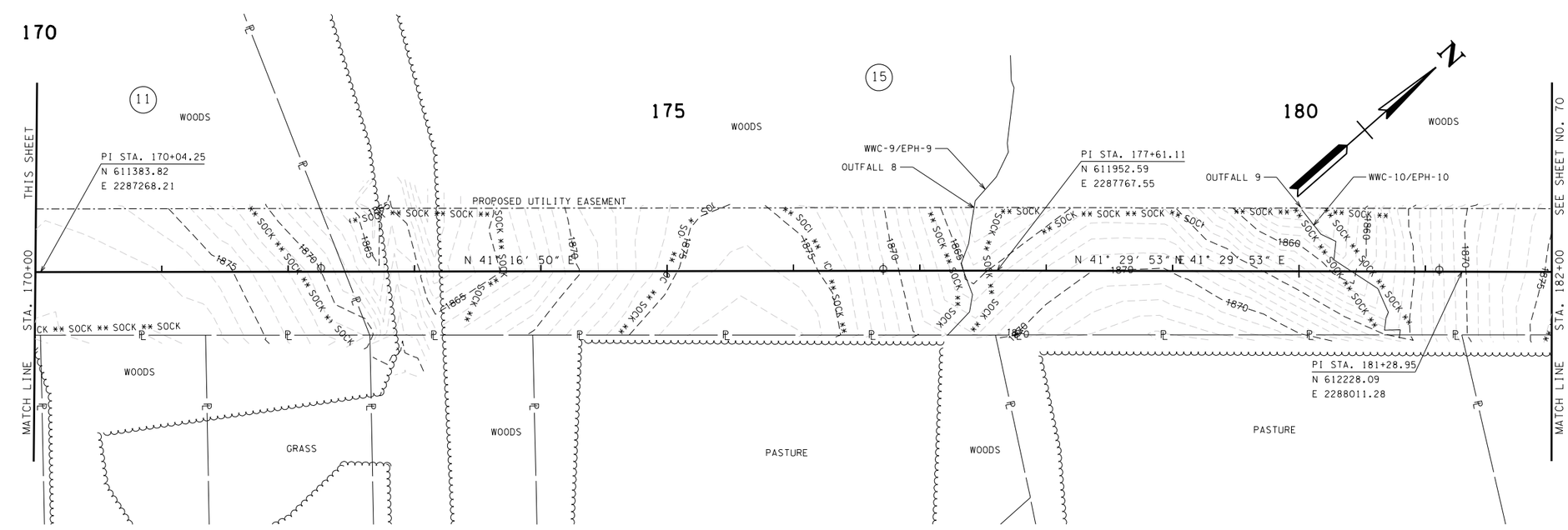
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-101(21)	69





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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 168+00 TO STA. 192+00

SCALE: 1"= 50'

4/27/2015 10:30:09 AM
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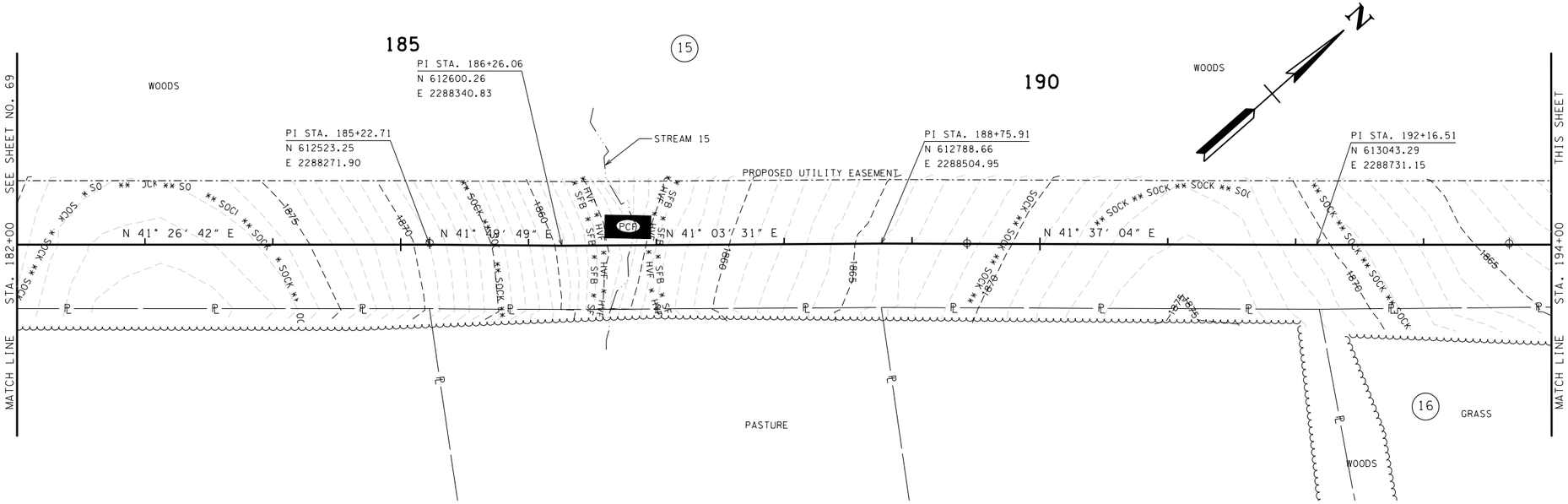
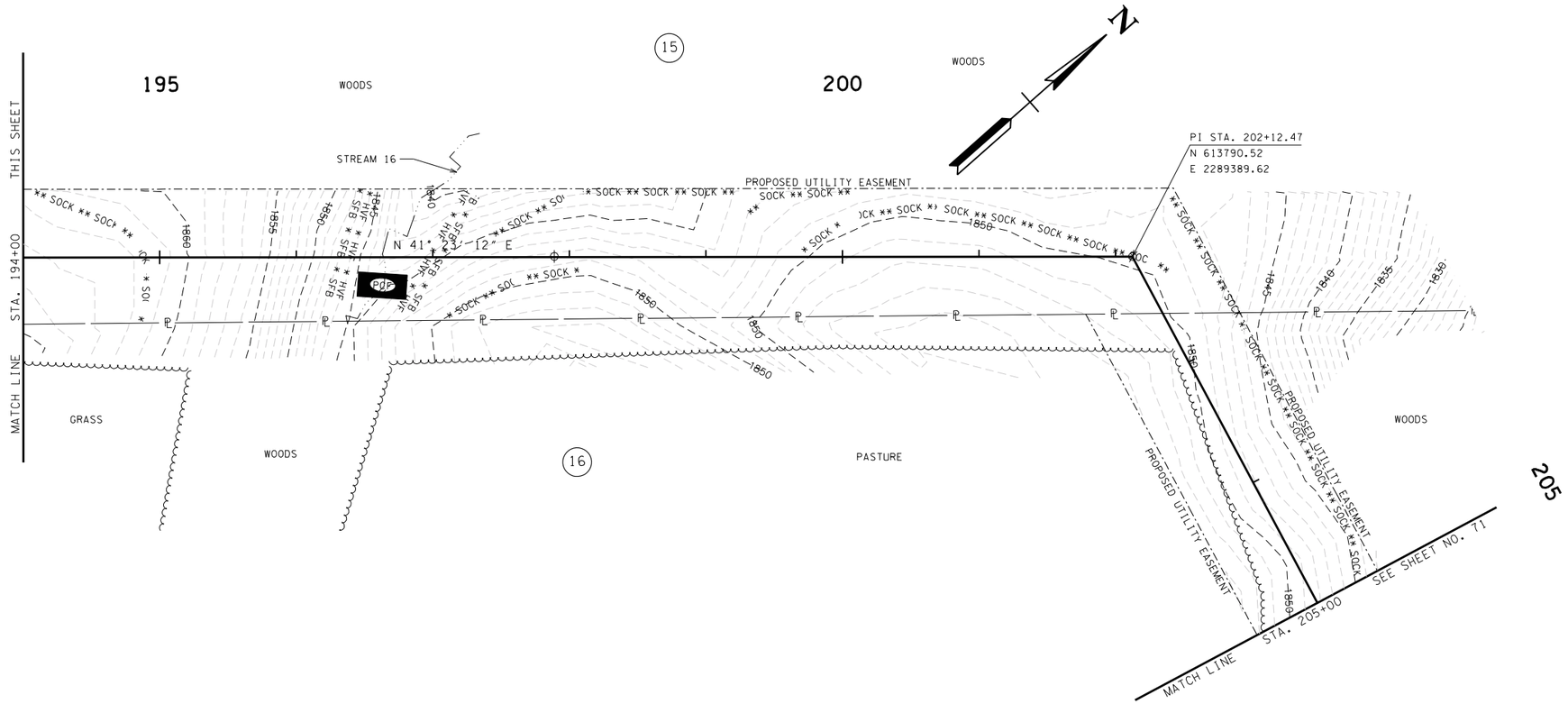
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-101(21)	70





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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 192+00 TO STA. 215+00

SCALE: 1"= 50'

4/27/2015 10:30:11 AM
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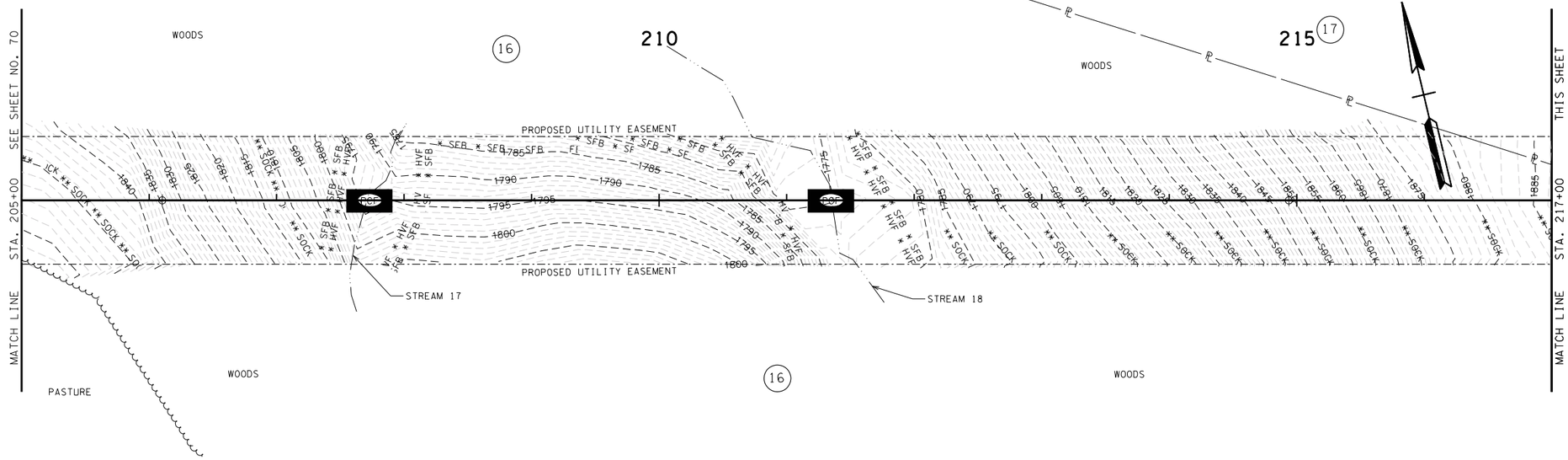
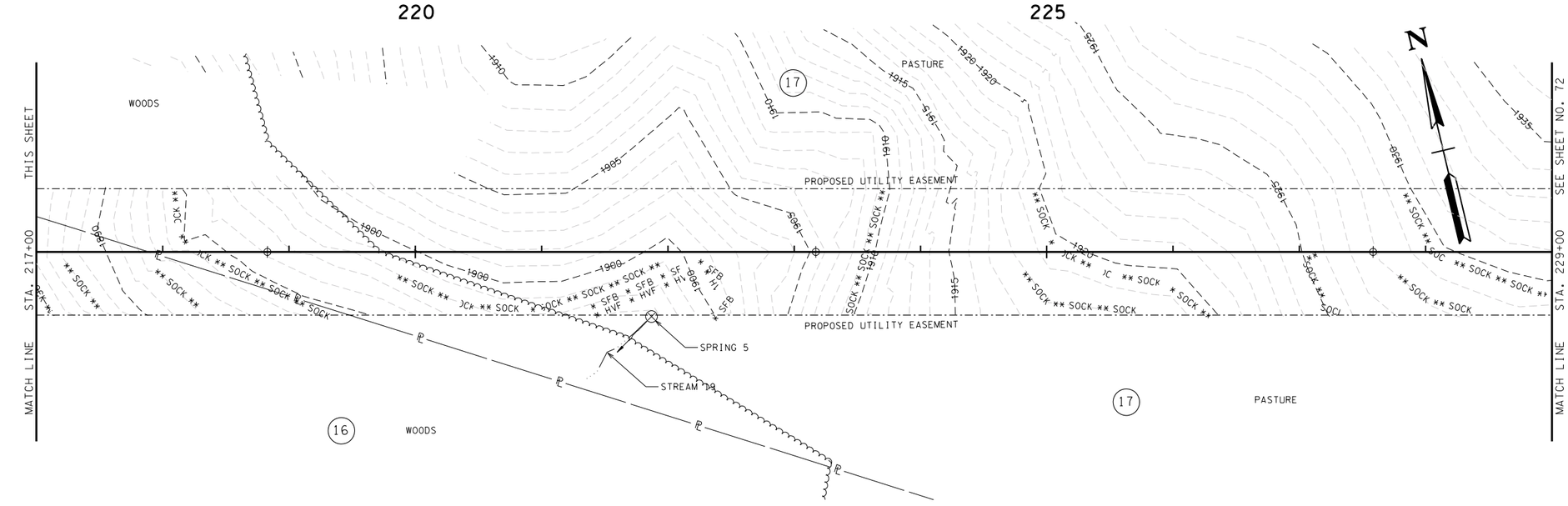
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-101(21)	71

205





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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 215+00 TO STA. 239+00

SCALE: 1"= 50'

4/27/2015 10:30:13 AM
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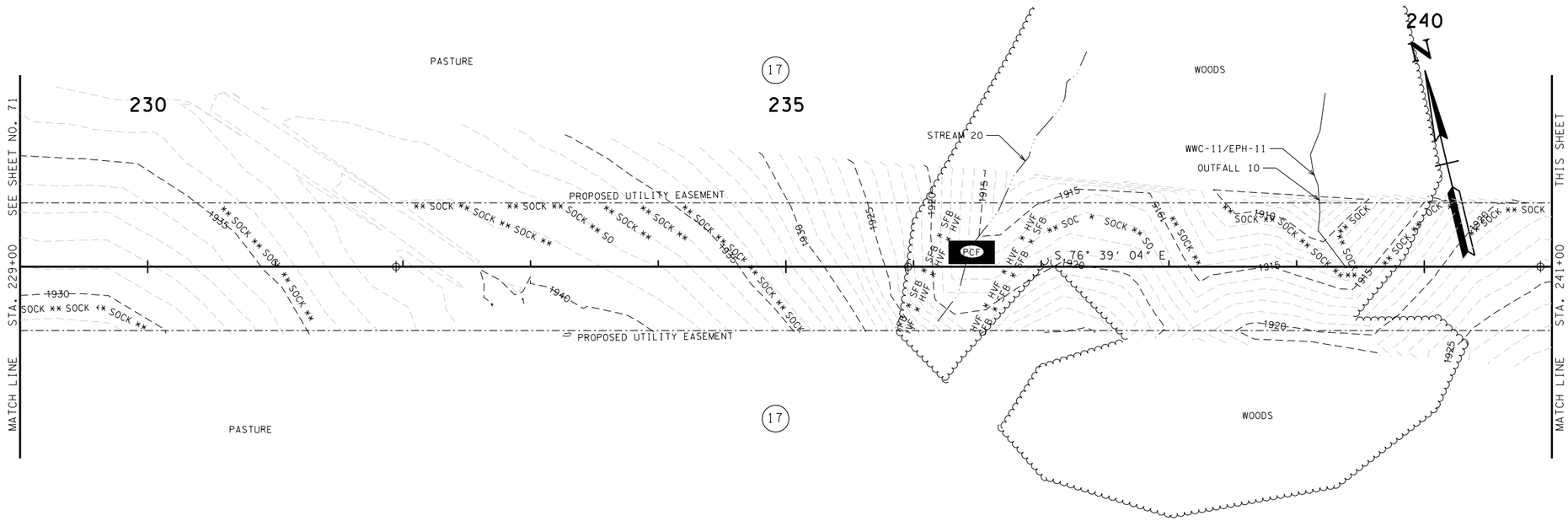
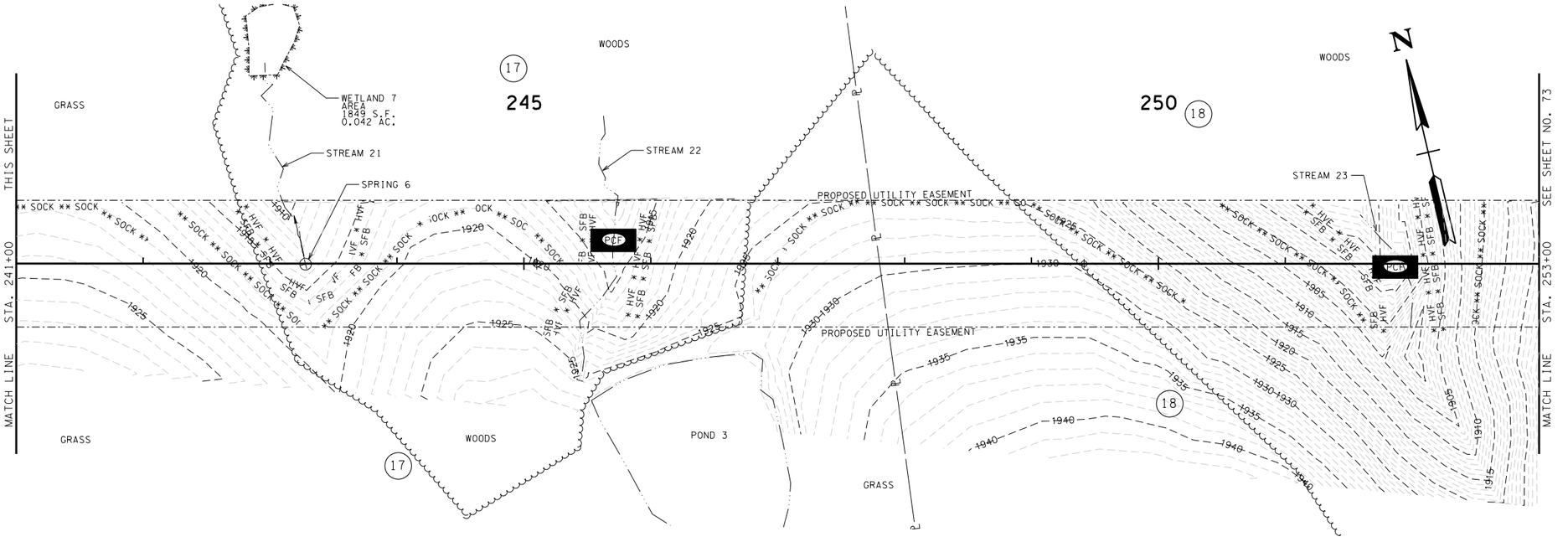
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-101(21)	72





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TENNESSEE
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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

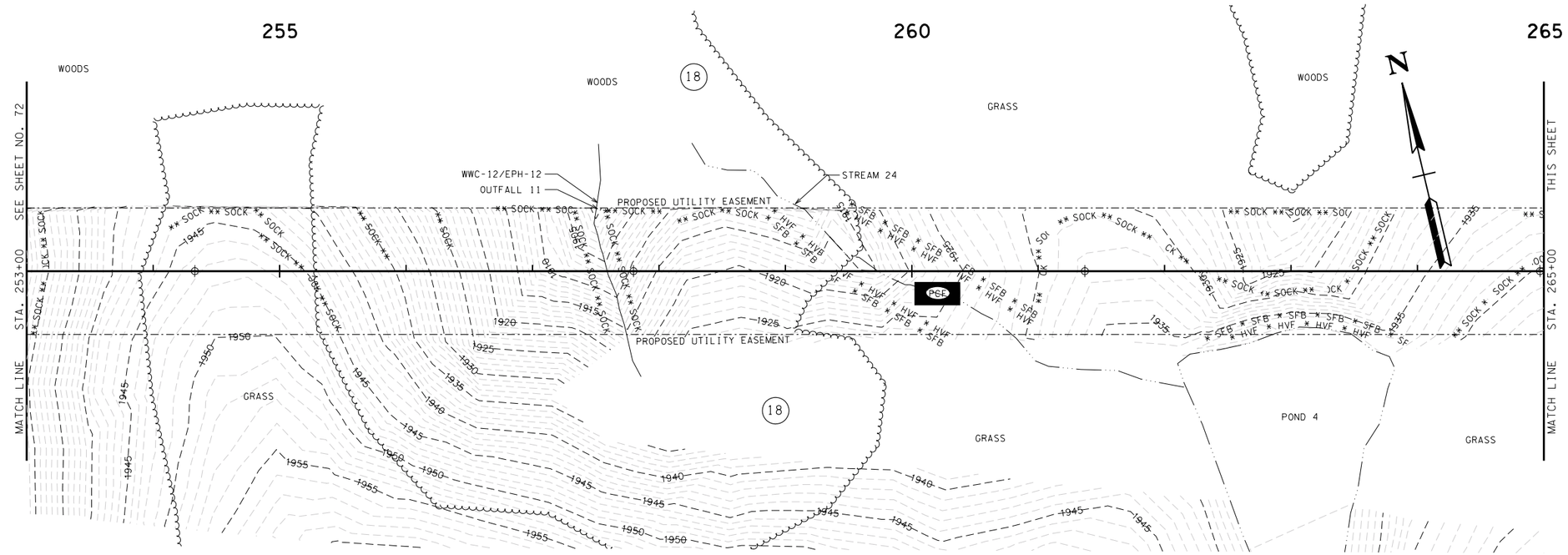
EROSION PREVENTION AND SEDIMENT CONTROL PLAN

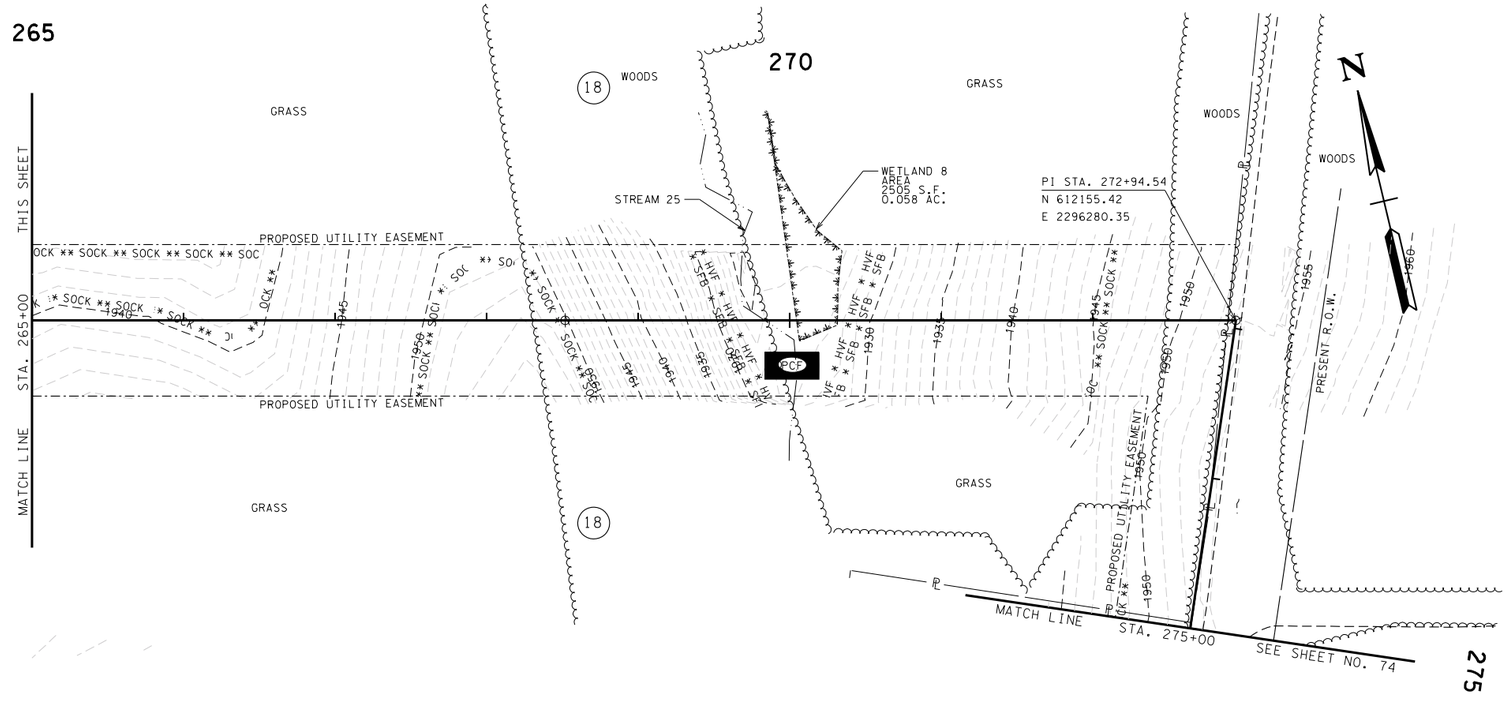
STA. 239+00 TO STA. 263+00

SCALE: 1"= 50'

4/27/2015 10:30:23 AM
W:\8024\Transportation\8024 EPSC II - PHASE 1.sht

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-101(21)	73





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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 263+00 TO STA. 285+00

SCALE: 1"= 50'

4/27/2015 10:30:25 AM
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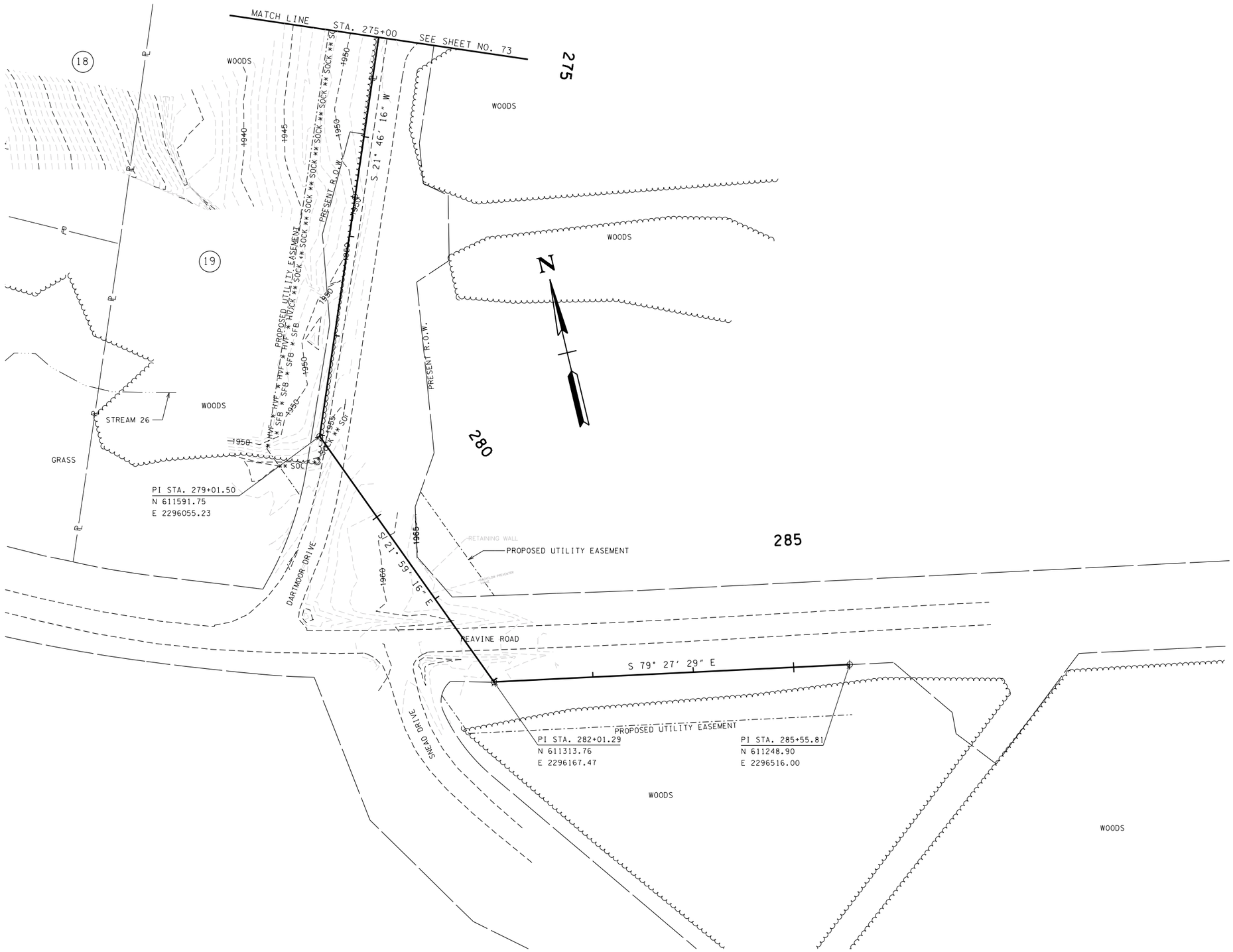
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-101(21)	74



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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 285+00 TO STA. 296+05

SCALE: 1"= 50'

4/27/2015 10:30:27 AM
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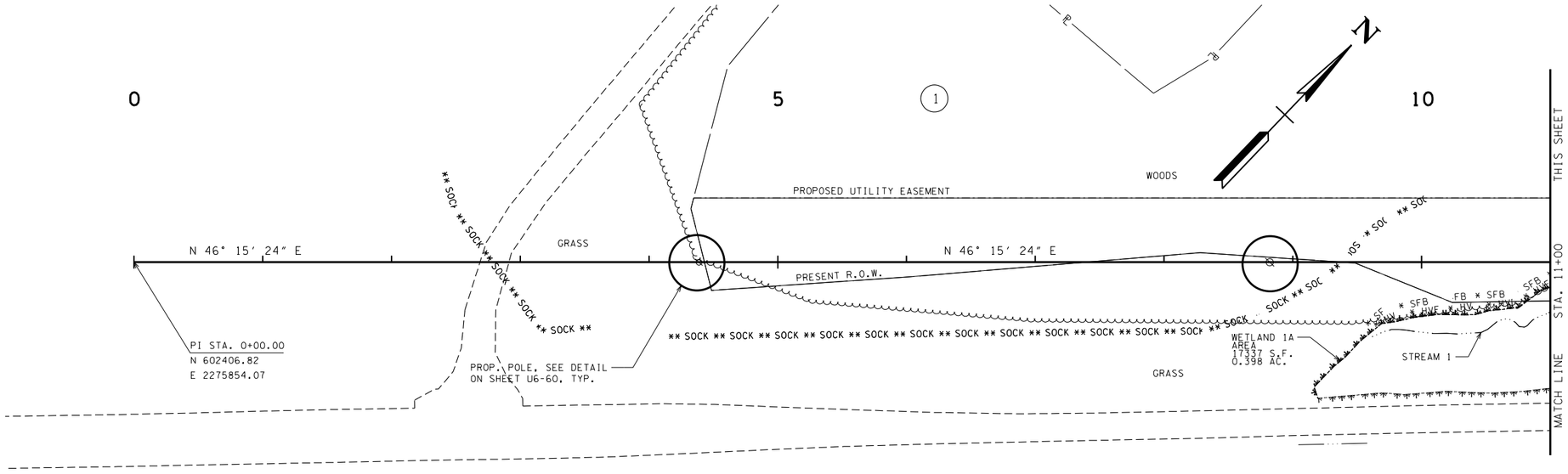
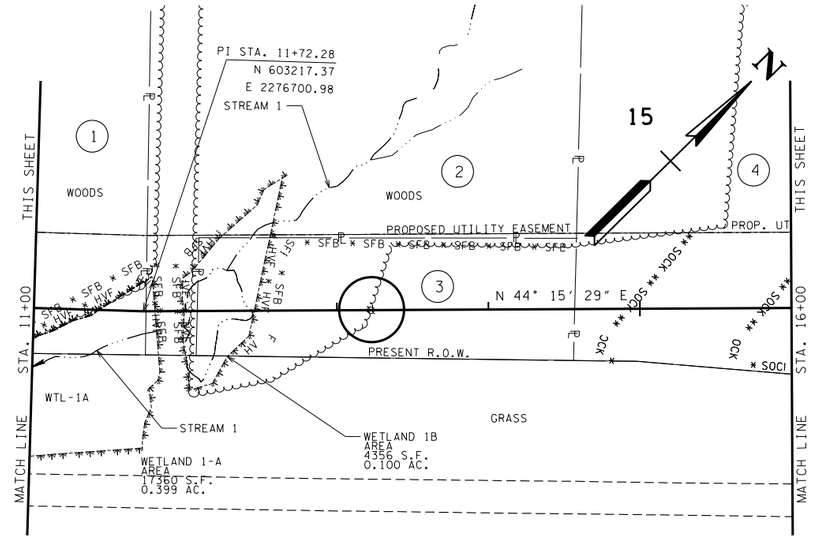
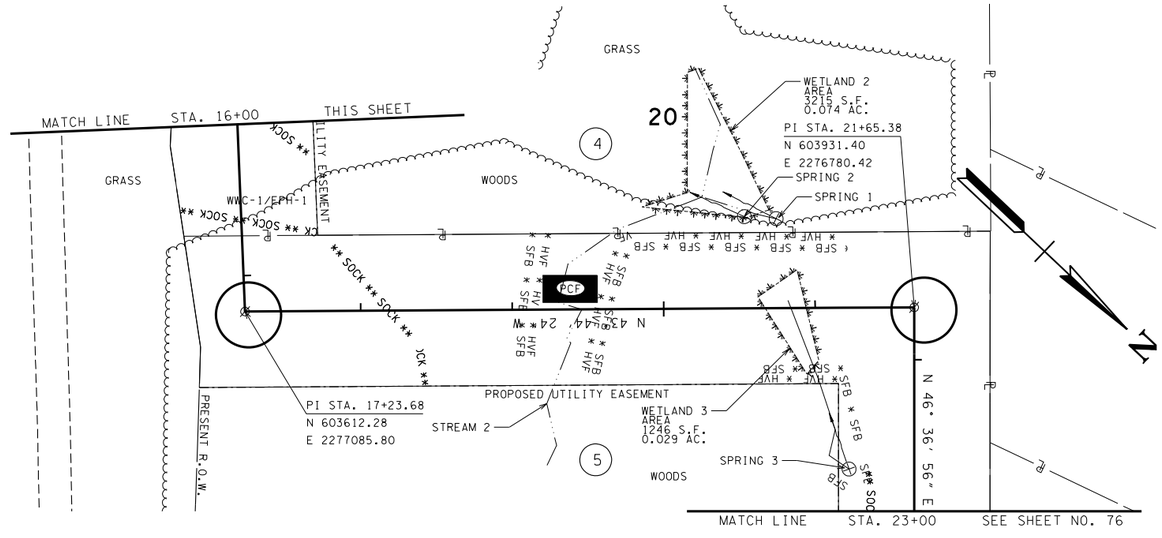
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-101(21)	75







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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 0+00 TO STA. 23+00

SCALE: 1"= 50'

4/27/2015 10:30:29 AM
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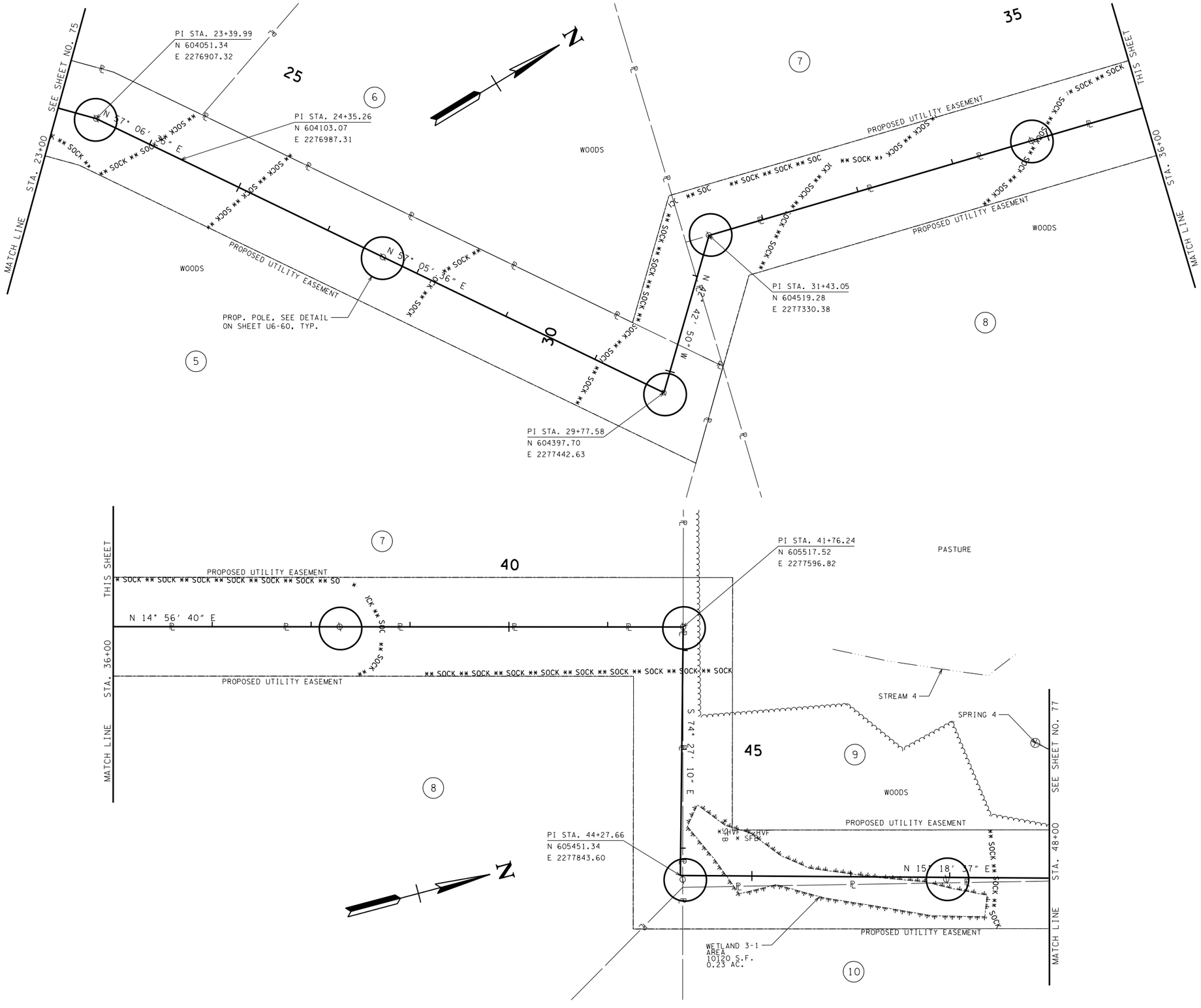
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-101(21)	76



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NO. 102361
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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 23+00 TO STA. 48+00

SCALE: 1"= 50'

4/27/2015 10:30:31 AM
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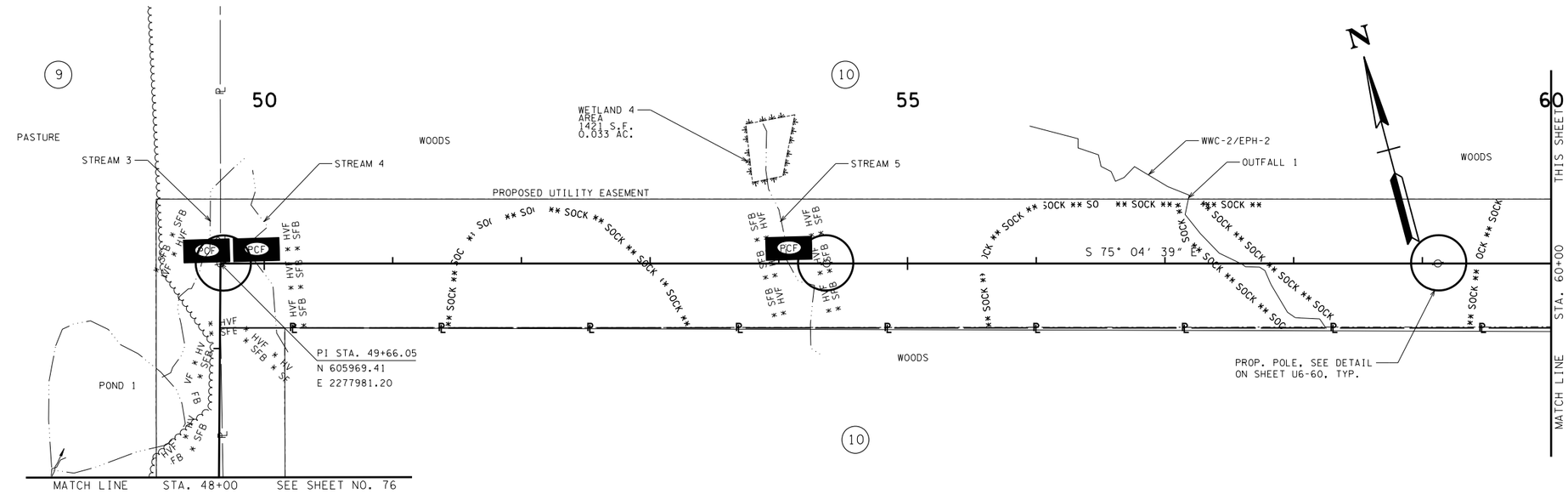
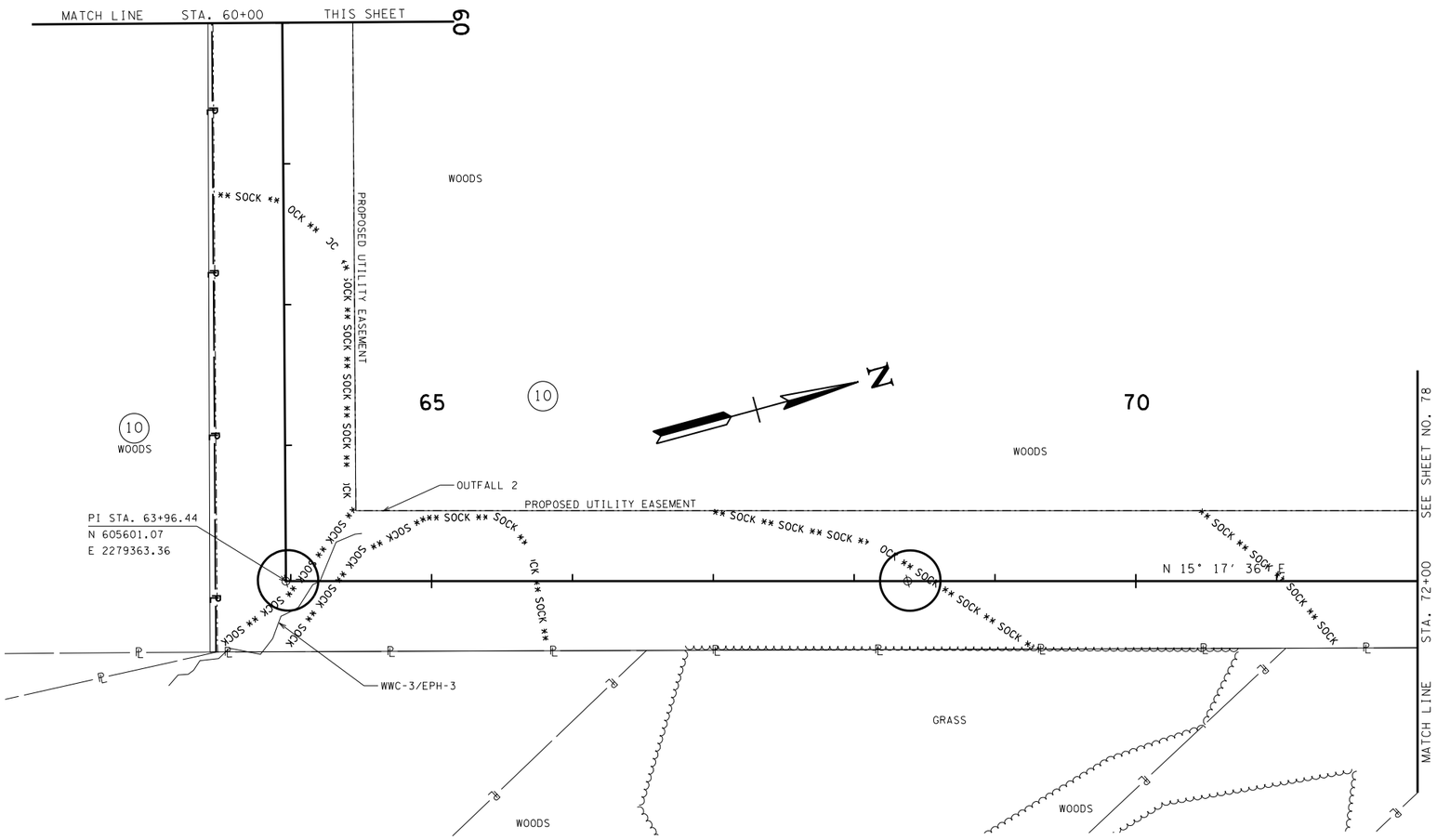
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-101(21)	77





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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 48+00 TO STA. 72+00

SCALE: 1"= 50'

4/27/2015 10:30:33 AM
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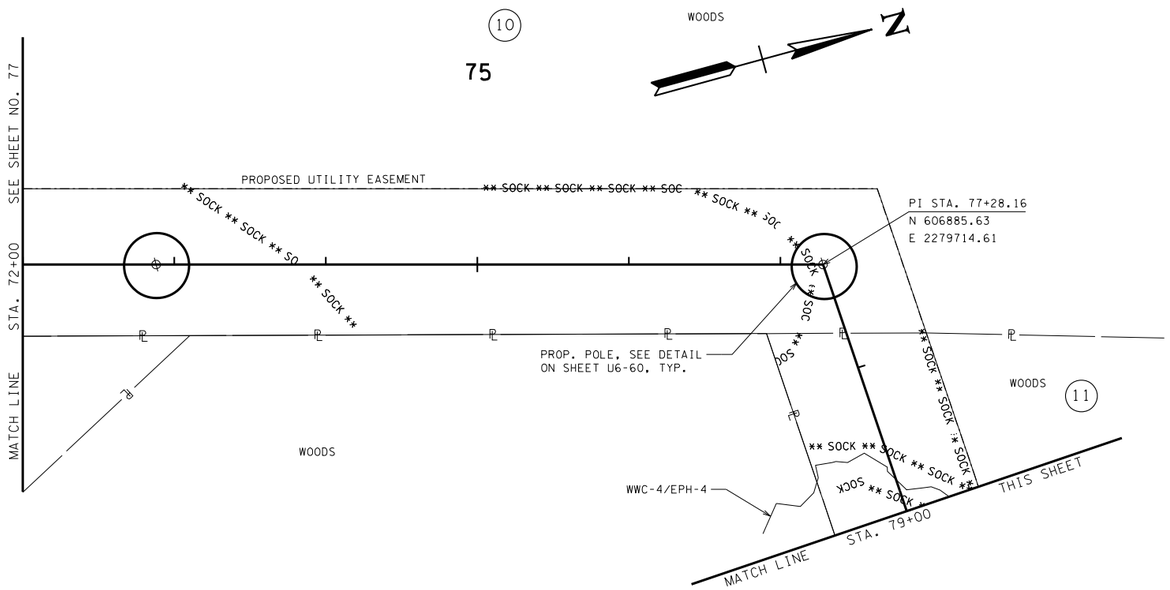
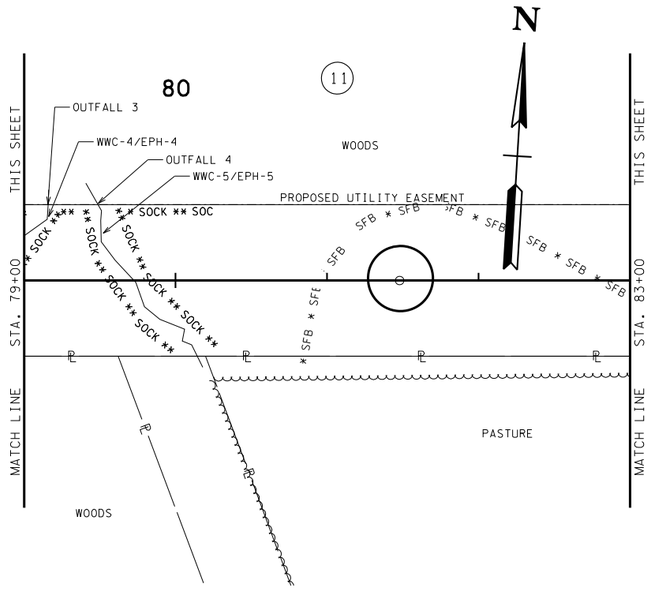
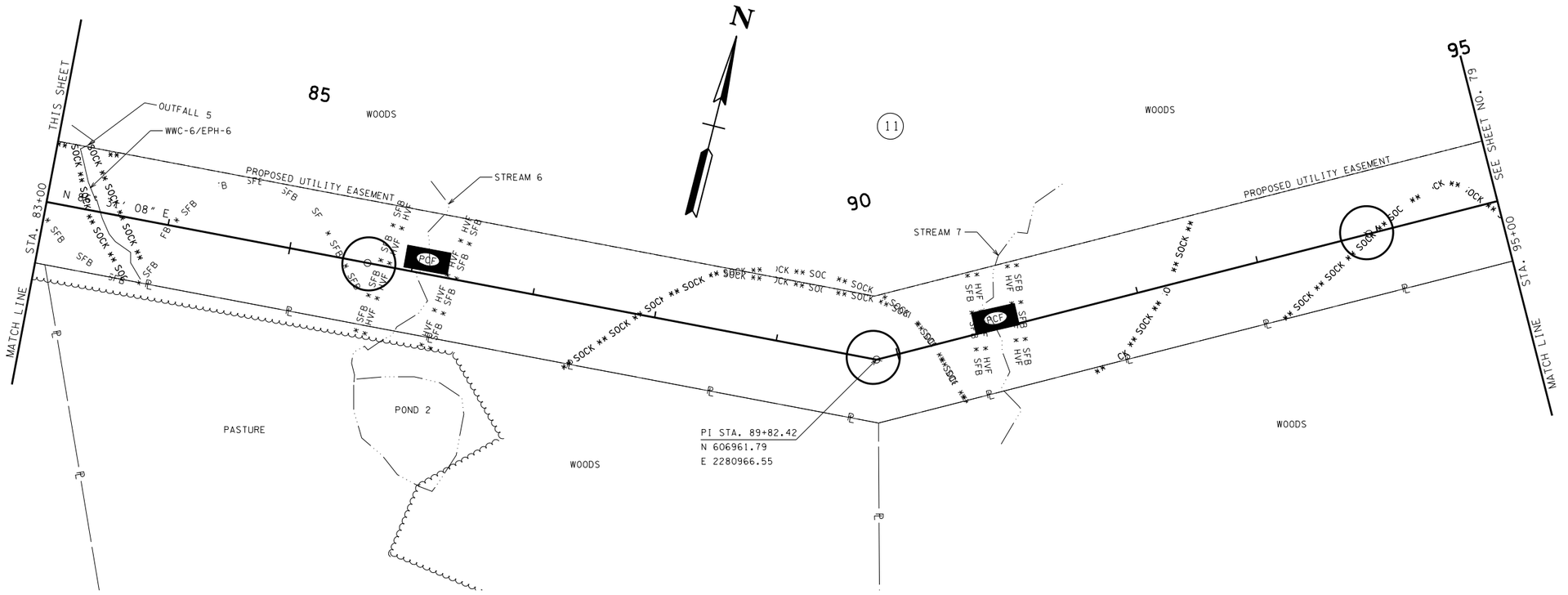
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-101(21)	78







PHASE 2

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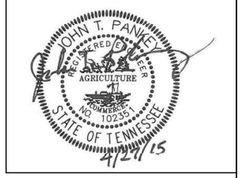

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 72+00 TO STA. 95+00

SCALE: 1"= 50'

4/27/2015 10:30:35 AM
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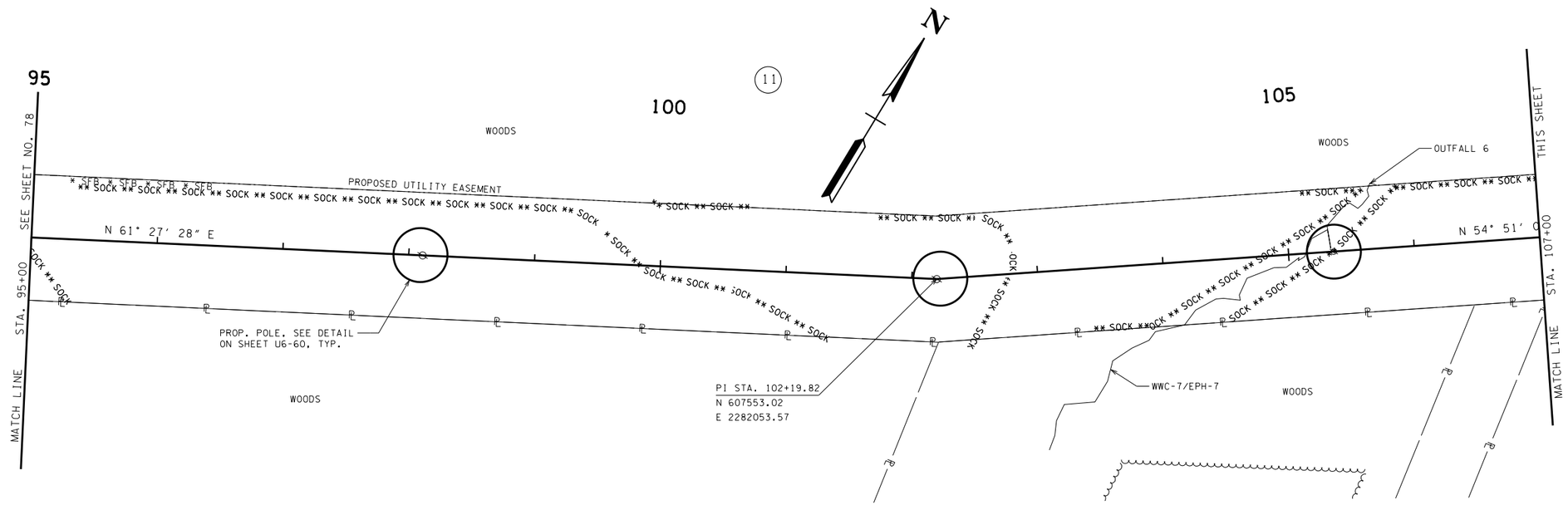
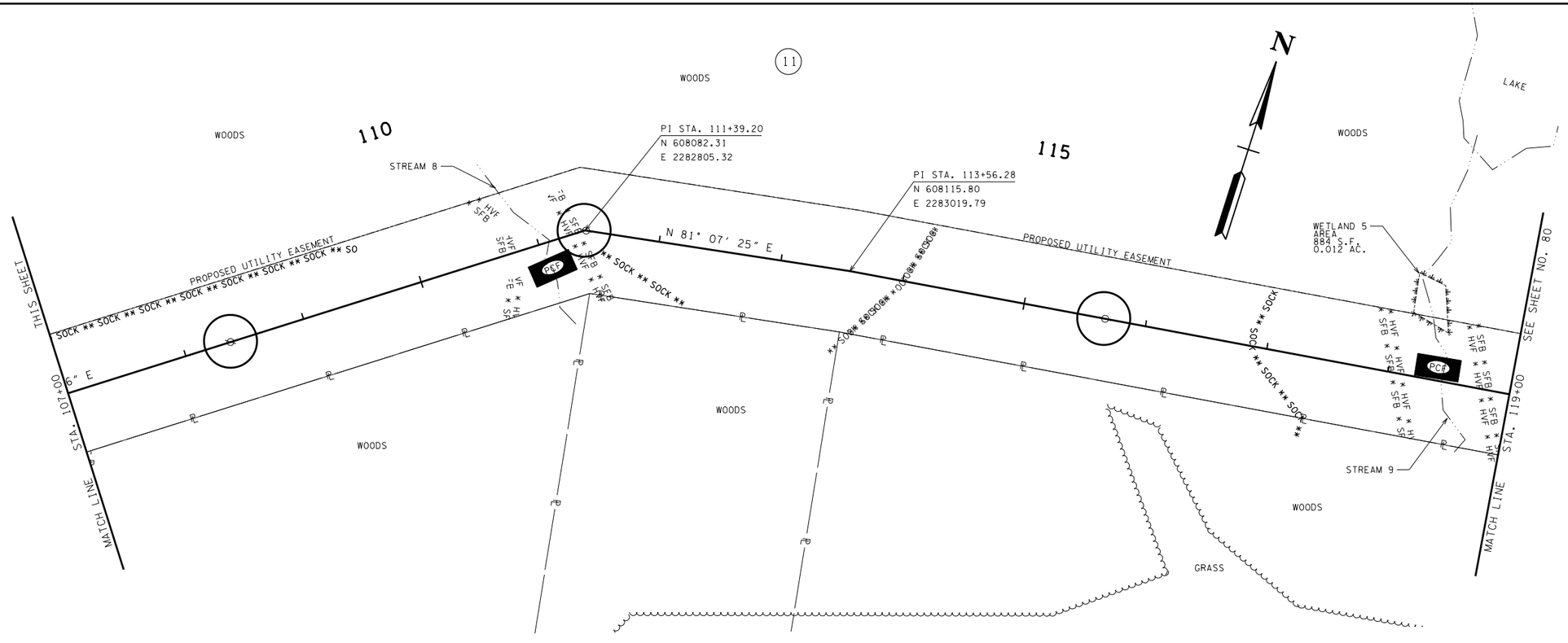
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-101(21)	79





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JOHN T. PANKEY
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ARCHITECT
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AND
102361
STATE OF TENNESSEE
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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 95+00 TO STA. 119+00

SCALE: 1"= 50'

4/27/2015 10:30:37 AM
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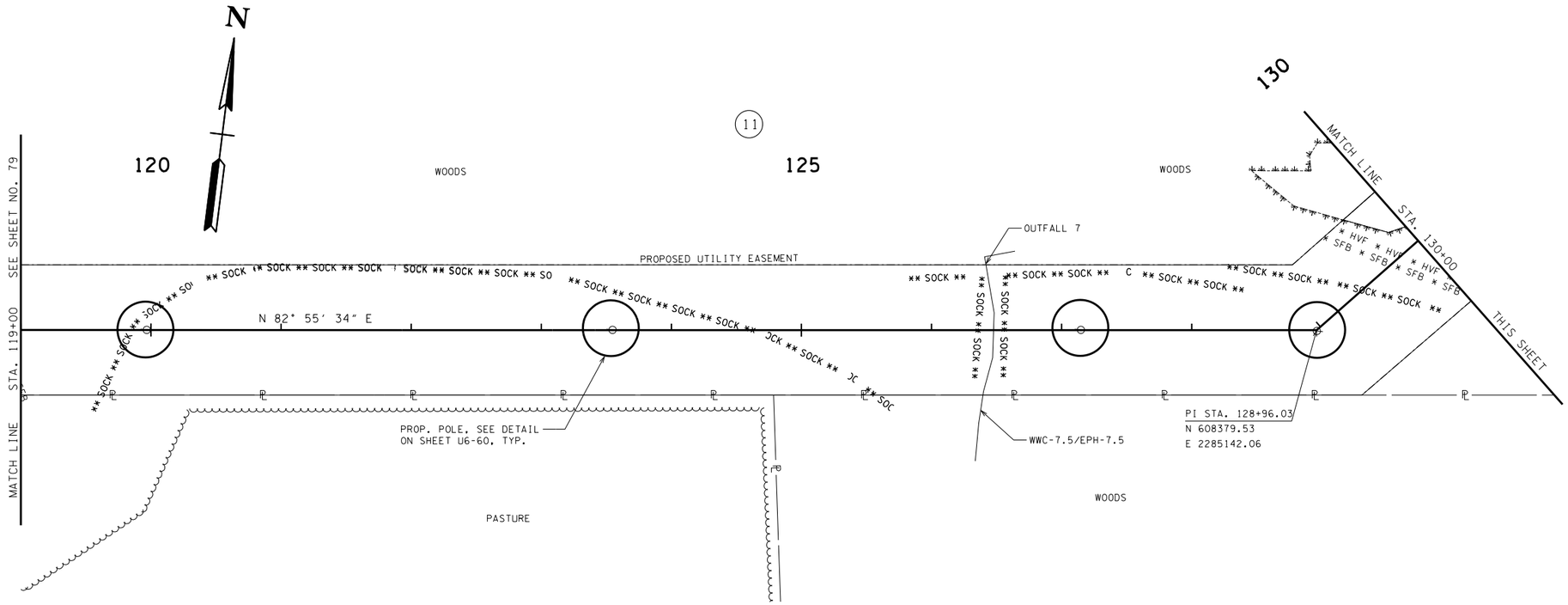
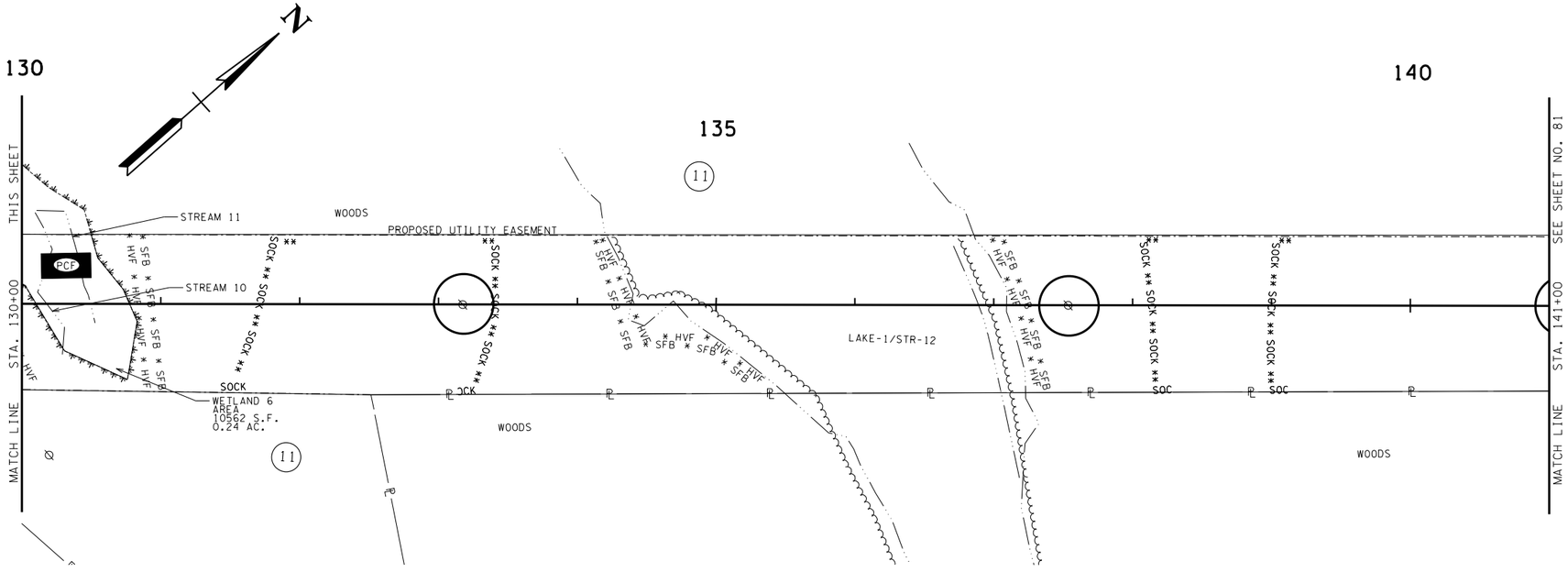
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-101(21)	80





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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 119+00 TO STA. 143+00

SCALE: 1"= 50'

4/27/2015 10:30:39 AM
W:\8024\Transportation\8024 EPSC 06 - PHASE 2.sht

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-101(21)	81

4/27/2015 10:30:41 AM
W:\8024\Transportation\8024 EPSC 07 - PHASE 2.sht

PHASE 2

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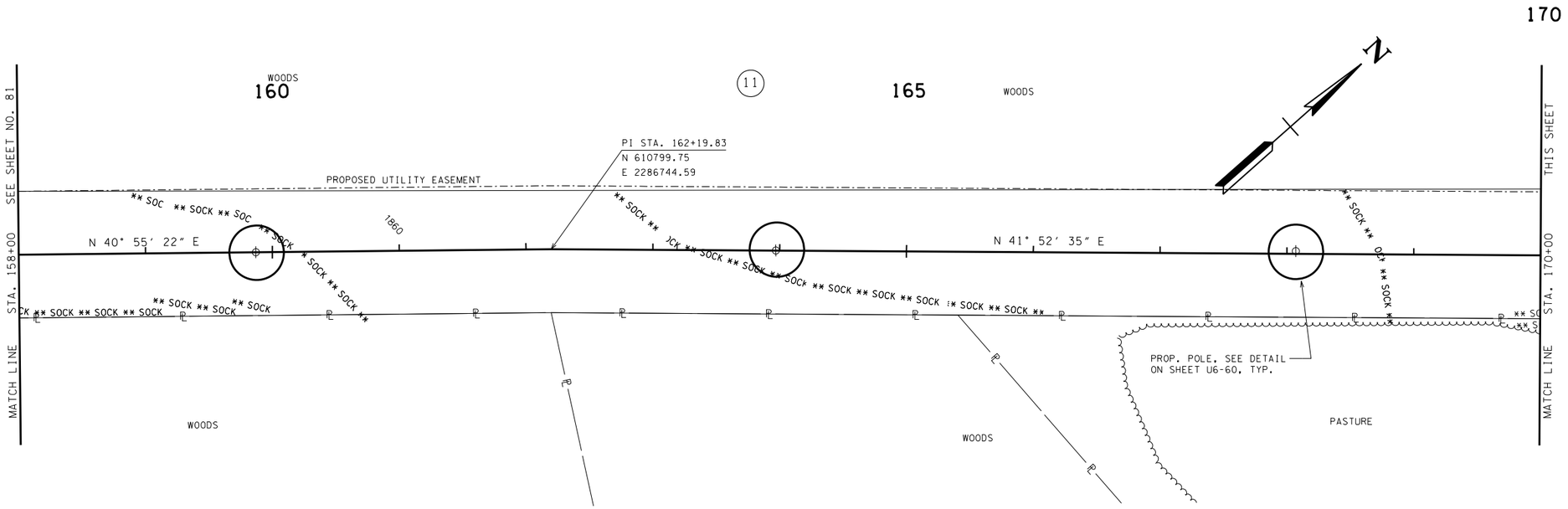
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

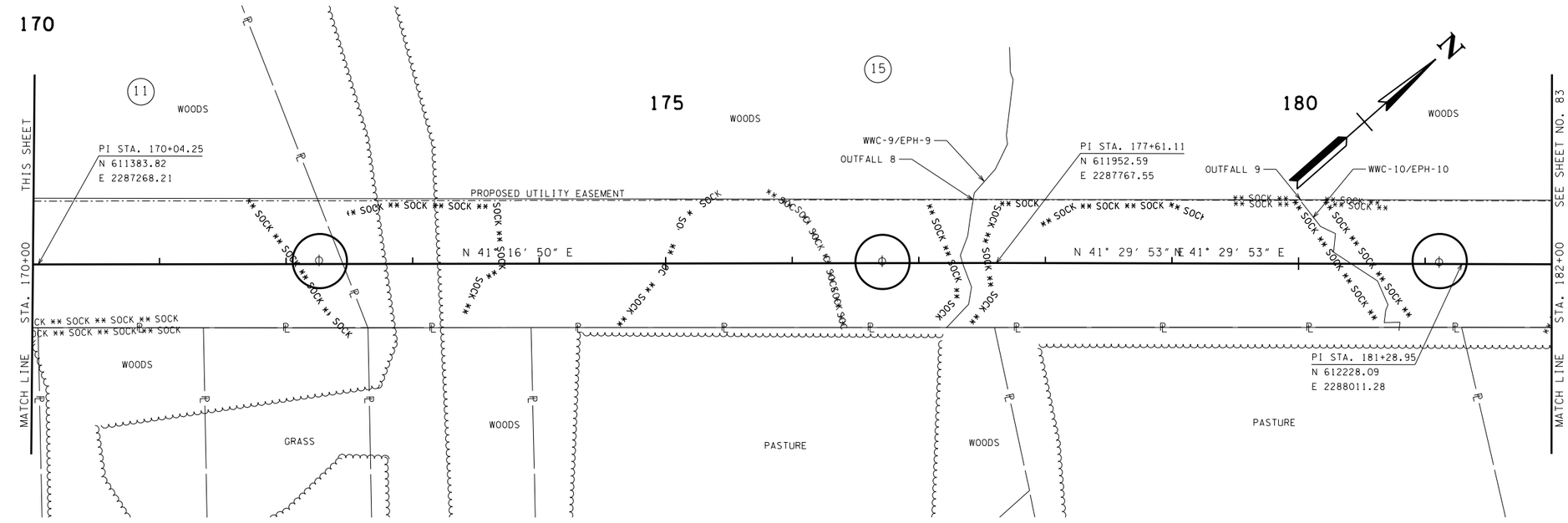
EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 143+00 TO STA. 168+00

SCALE: 1″= 50′

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-101(21)	82





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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

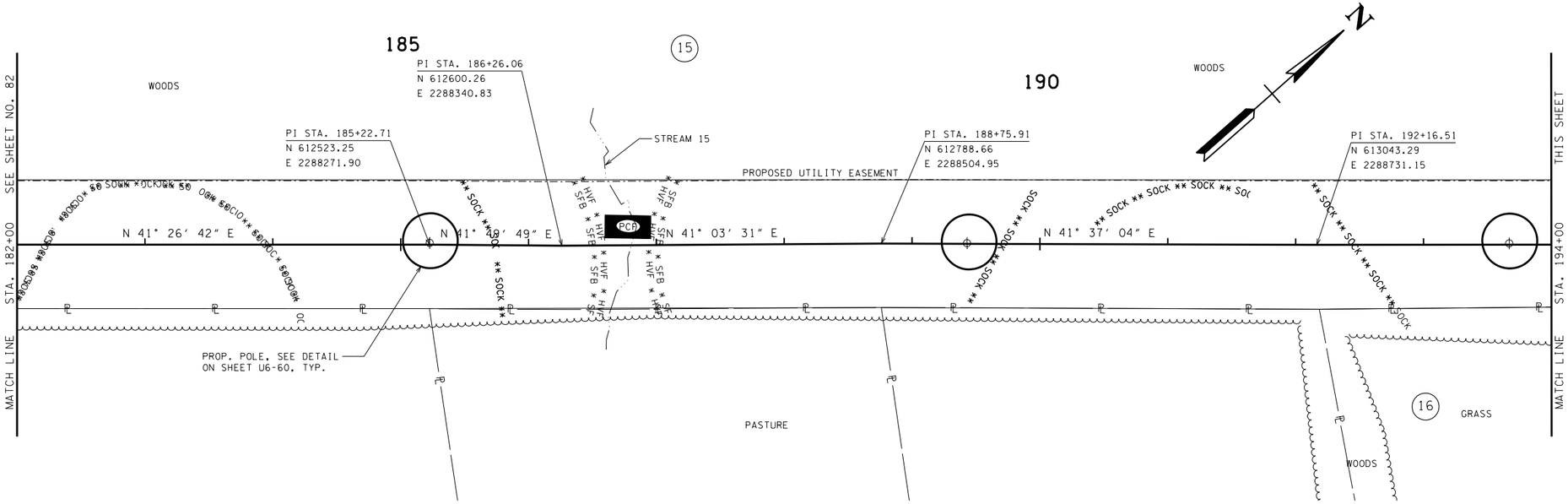
EROSION PREVENTION AND SEDIMENT CONTROL PLAN

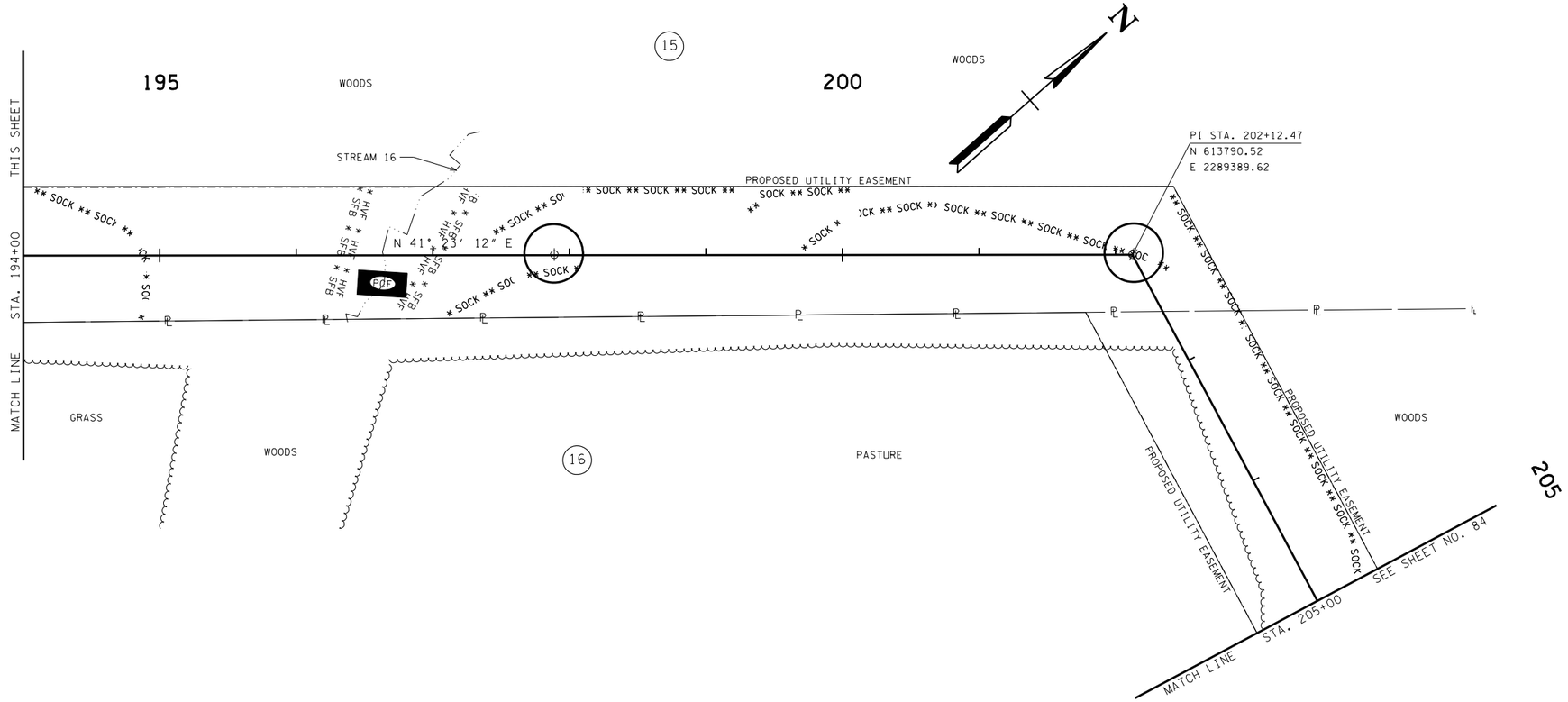
STA. 168+00 TO STA. 192+00

SCALE: 1"= 50'

4/27/2015 10:30:43 AM
W:\8024\Transportation\8024 EPSC 08 - PHASE 2.sht

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-101(21)	83





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NO. 102351
STATE OF TENNESSEE
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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

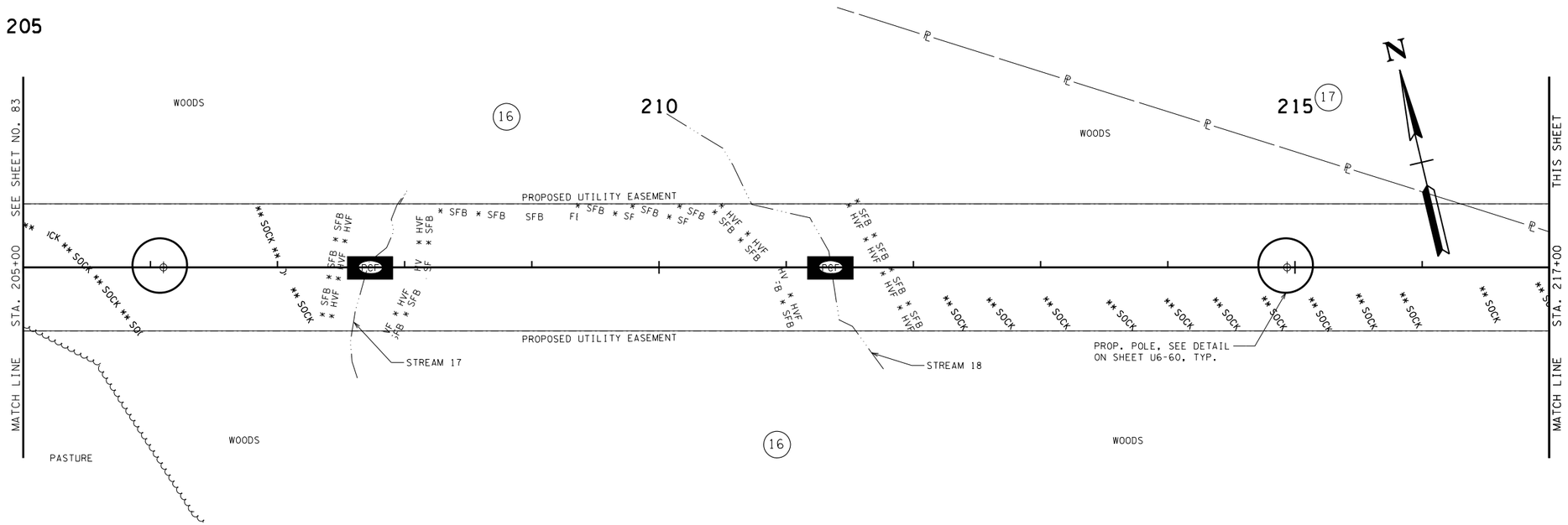
EROSION PREVENTION AND SEDIMENT CONTROL PLAN

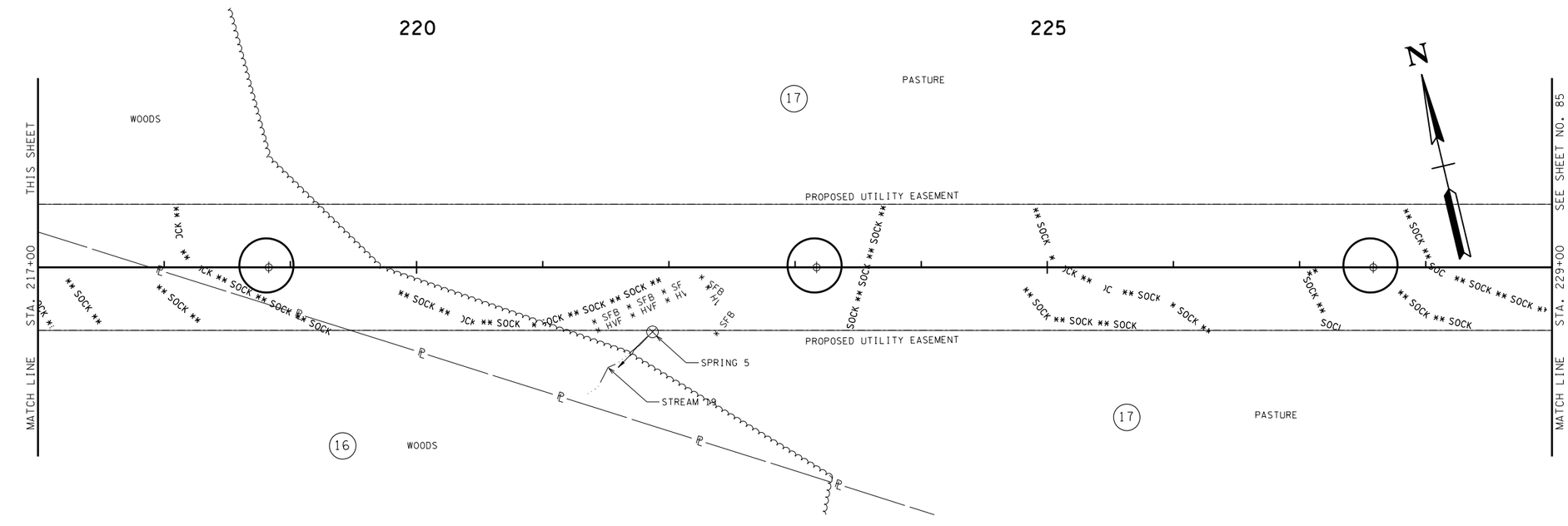
STA. 192+00 TO STA. 215+00

SCALE: 1"= 50'

4/27/2015 10:30:46 AM
W:\8024\Transportation\8024 EPSC 09 - PHASE 2.sht

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-101(21)	84





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COMMERCE
102351
STATE OF TENNESSEE
4/27/15

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

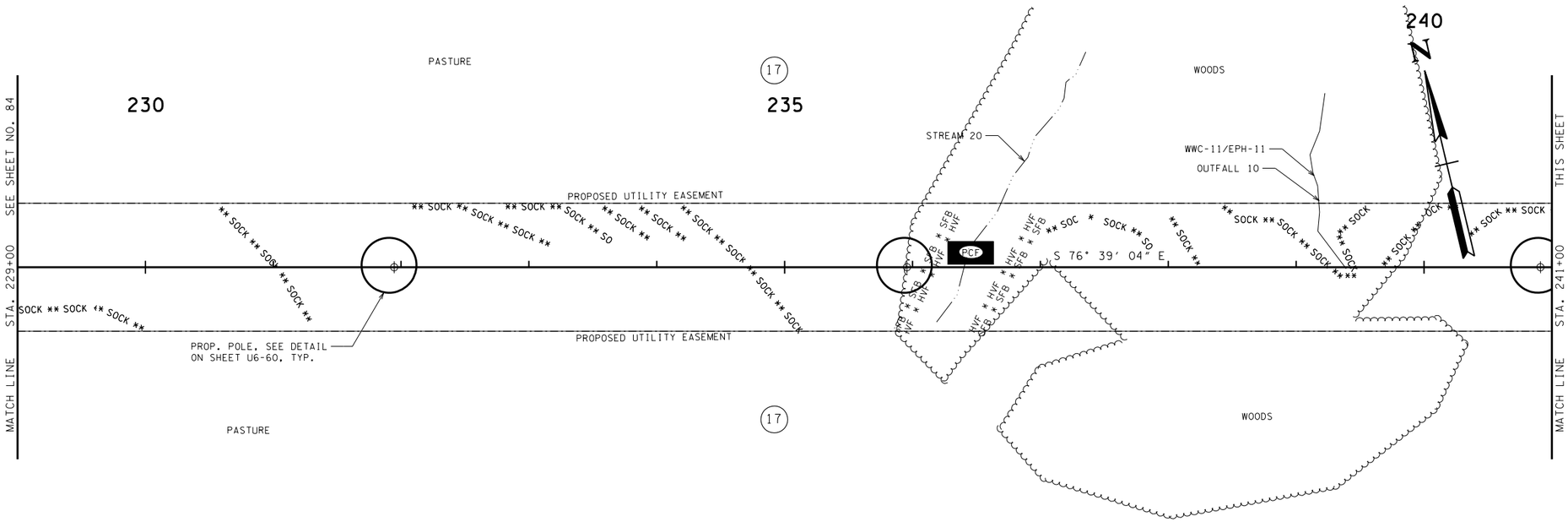
EROSION PREVENTION AND SEDIMENT CONTROL PLAN

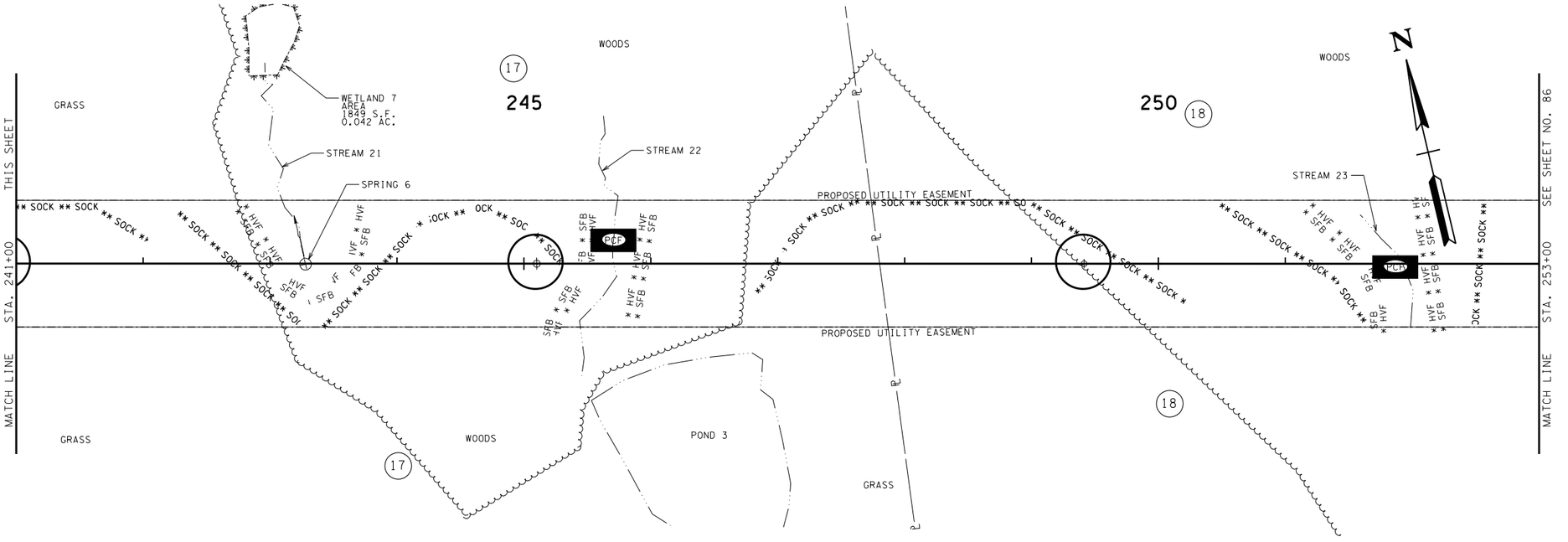
STA. 215+00 TO STA. 239+00

SCALE: 1"= 50'

4/27/2015 10:30:48 AM
W:\8024\Transportation\8024 EPSC 10 - PHASE 2.sht

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-101(21)	85





PHASE 2

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JOHN T. PANKEY
REGISTERED
AGRICULTURE
COMMERCE
102361
STATE OF TENNESSEE
4/27/15

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.000 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

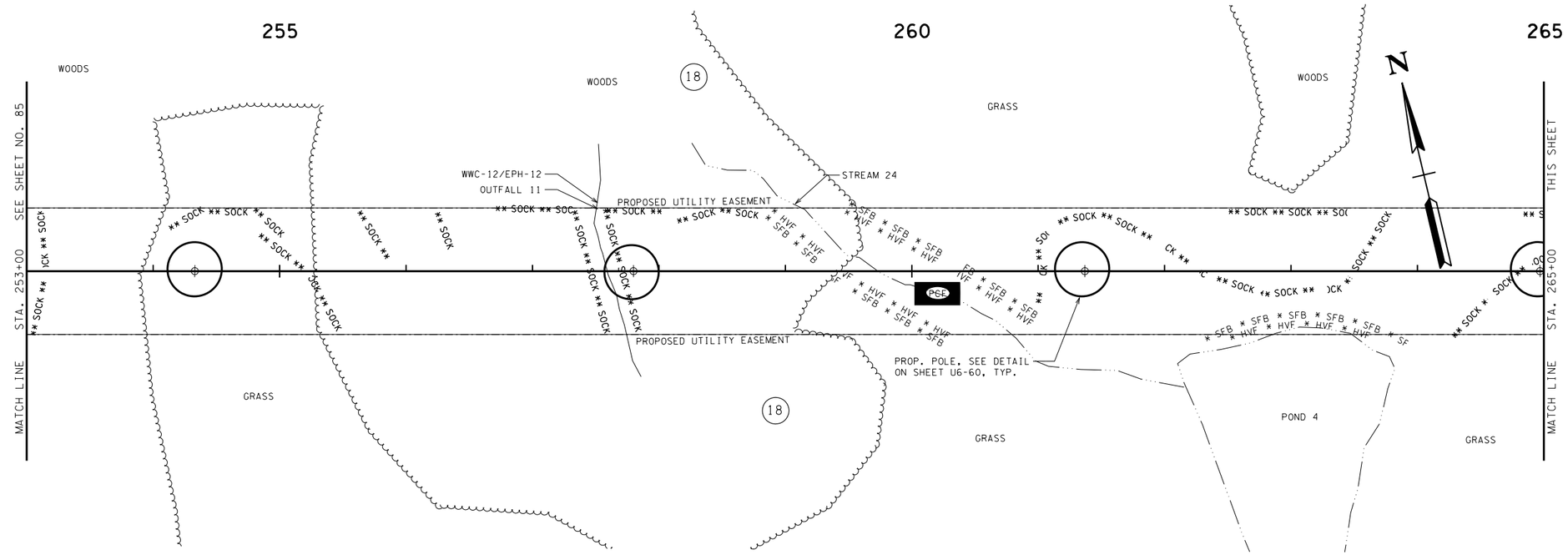
EROSION PREVENTION AND SEDIMENT CONTROL PLAN

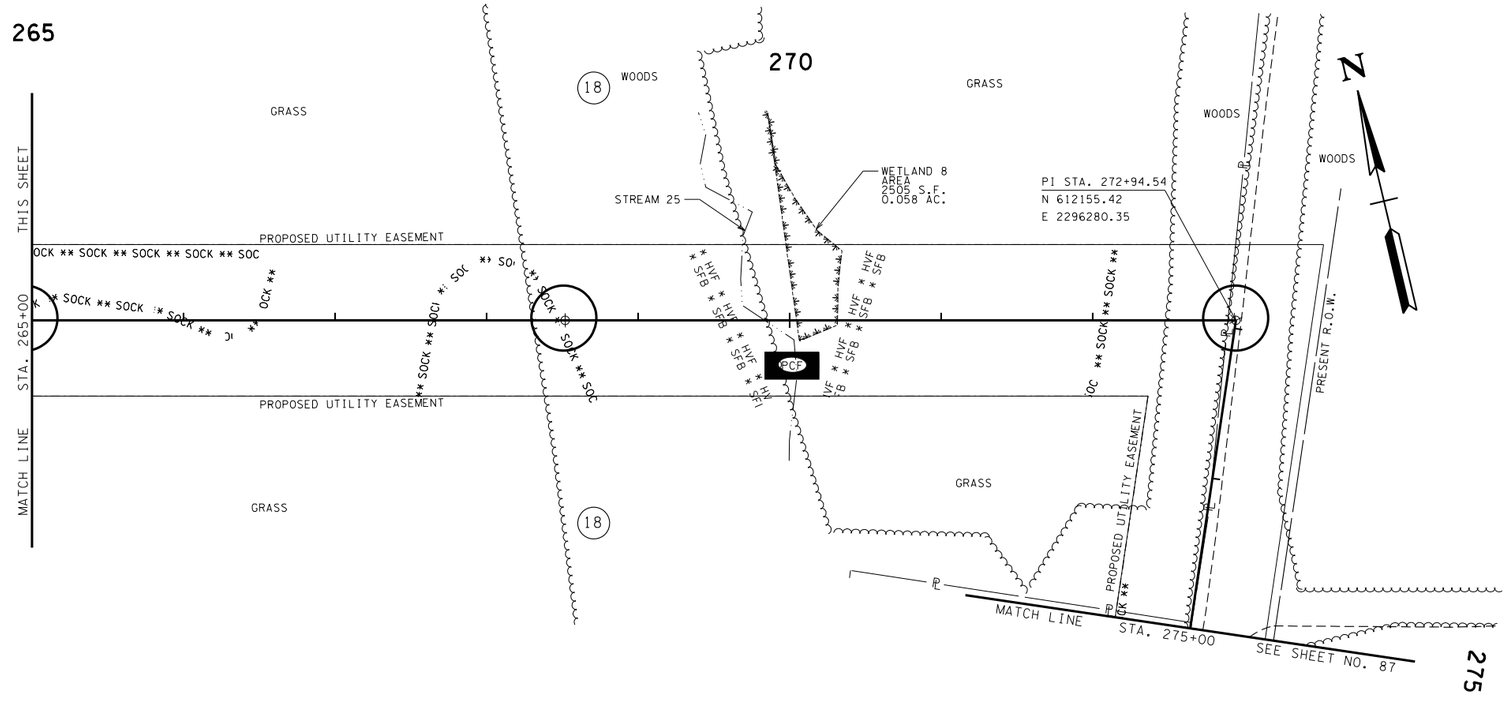
STA. 239+00 TO STA. 263+00

SCALE: 1"= 50'

4/27/2015 10:30:50 AM
W:\8024\Transportation\8024 EPSC II - PHASE 2.sht

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-101(21)	86





PHASE 2

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JOHN T. PANKEY
REGISTERED
AGRICULTURE
COMMERCE
102361
STATE OF TENNESSEE
4/27/15

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.000 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

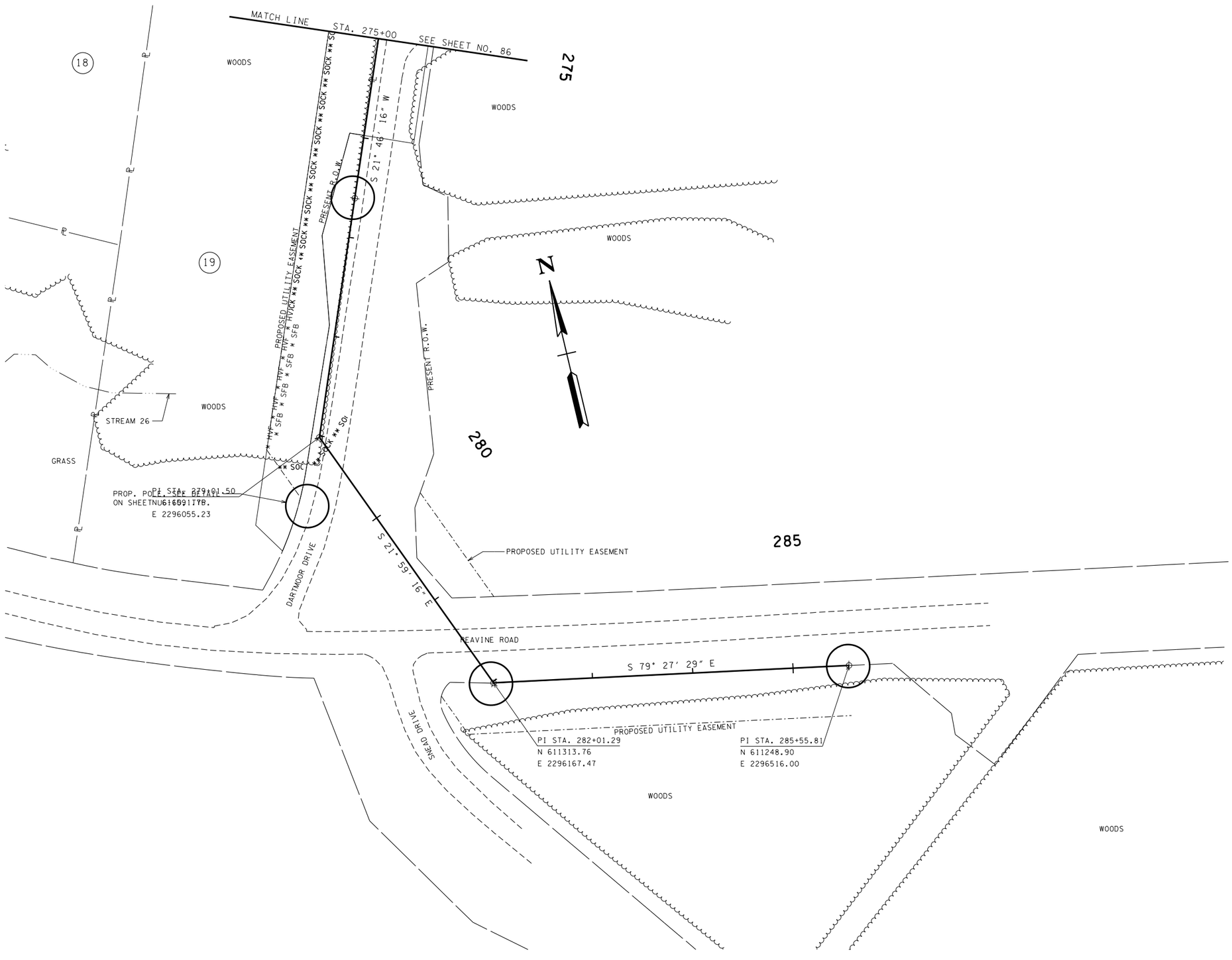
EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 263+00 TO STA. 285+00

SCALE: 1"= 50'

4/27/2015 10:30:52 AM
W:\8024\Transportation\8024 EPSC 12 - PHASE 2.sht

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-101(21)	87



PHASE 2

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JOHN T. PANKEY REGISTERED ENGINEER AGRICULTURE 102561 STATE OF TENNESSEE 4/27/15

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.000 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 285+00 TO STA. 296+05

SCALE: 1"= 50'

4/27/2015 10:30:54 AM
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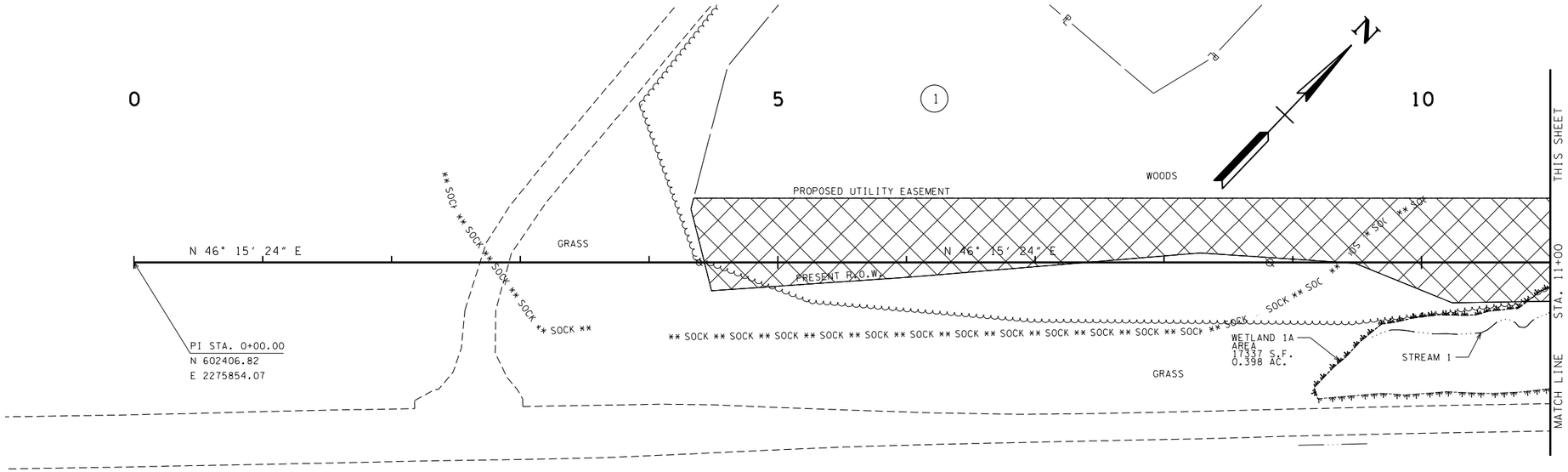
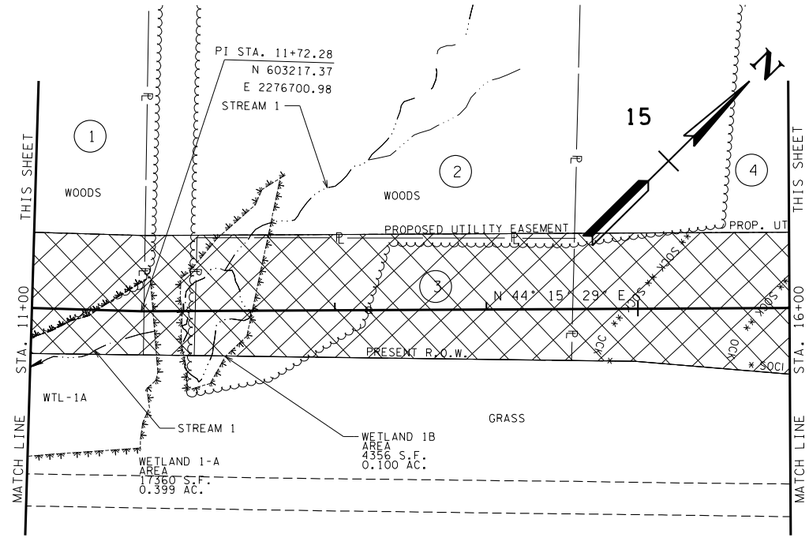
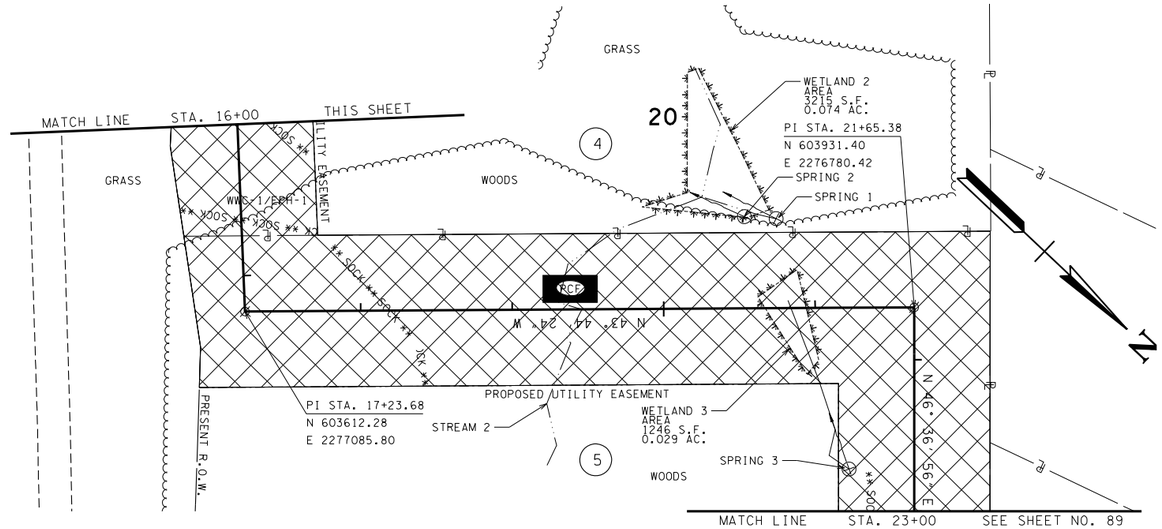
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-101(21)	88







PHASE 3

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JOHN T. PANKEY
REGISTERED
LICENSED
LANDSCAPE
ARCHITECT
AGRICULTURE
No. 102351
STATE OF TENNESSEE
4/27/15

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.000 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 0+00 TO STA. 23+00

SCALE: 1"= 50'

4/27/2015 10:30:56 AM
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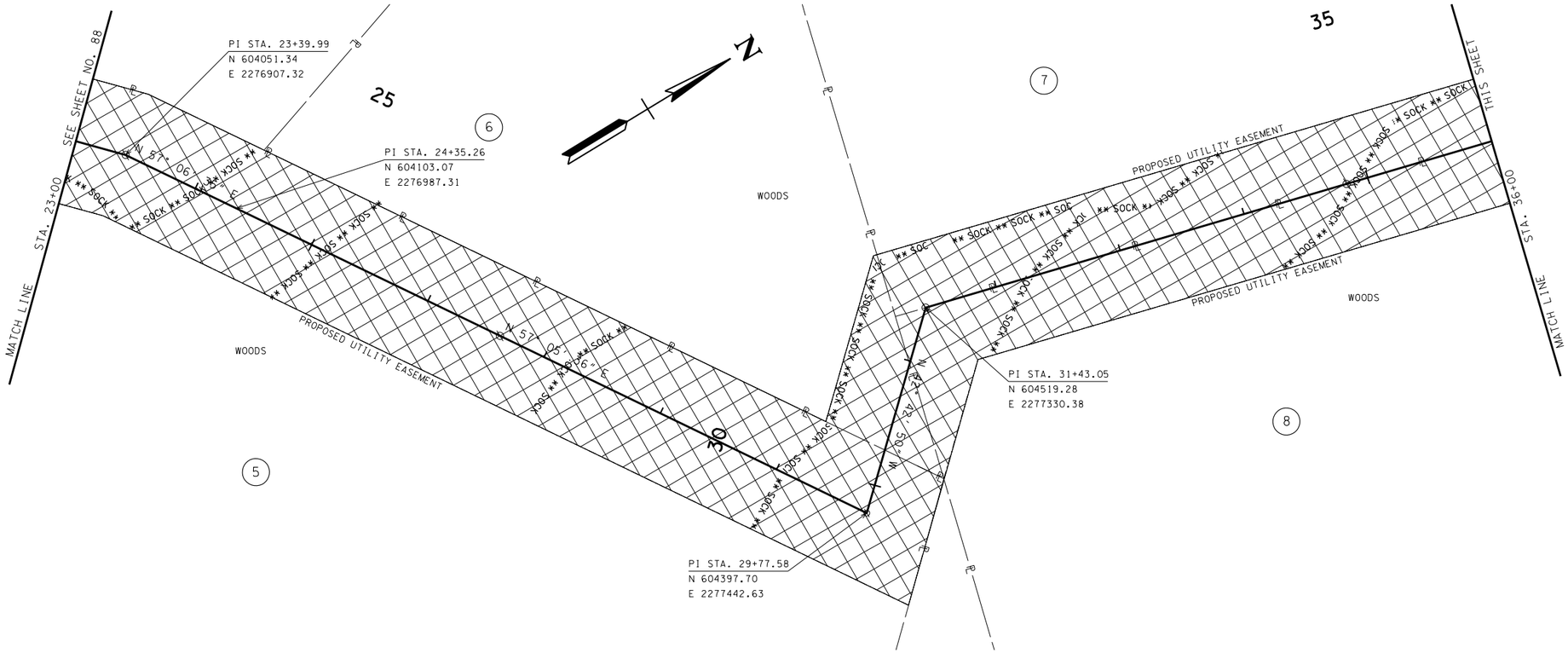
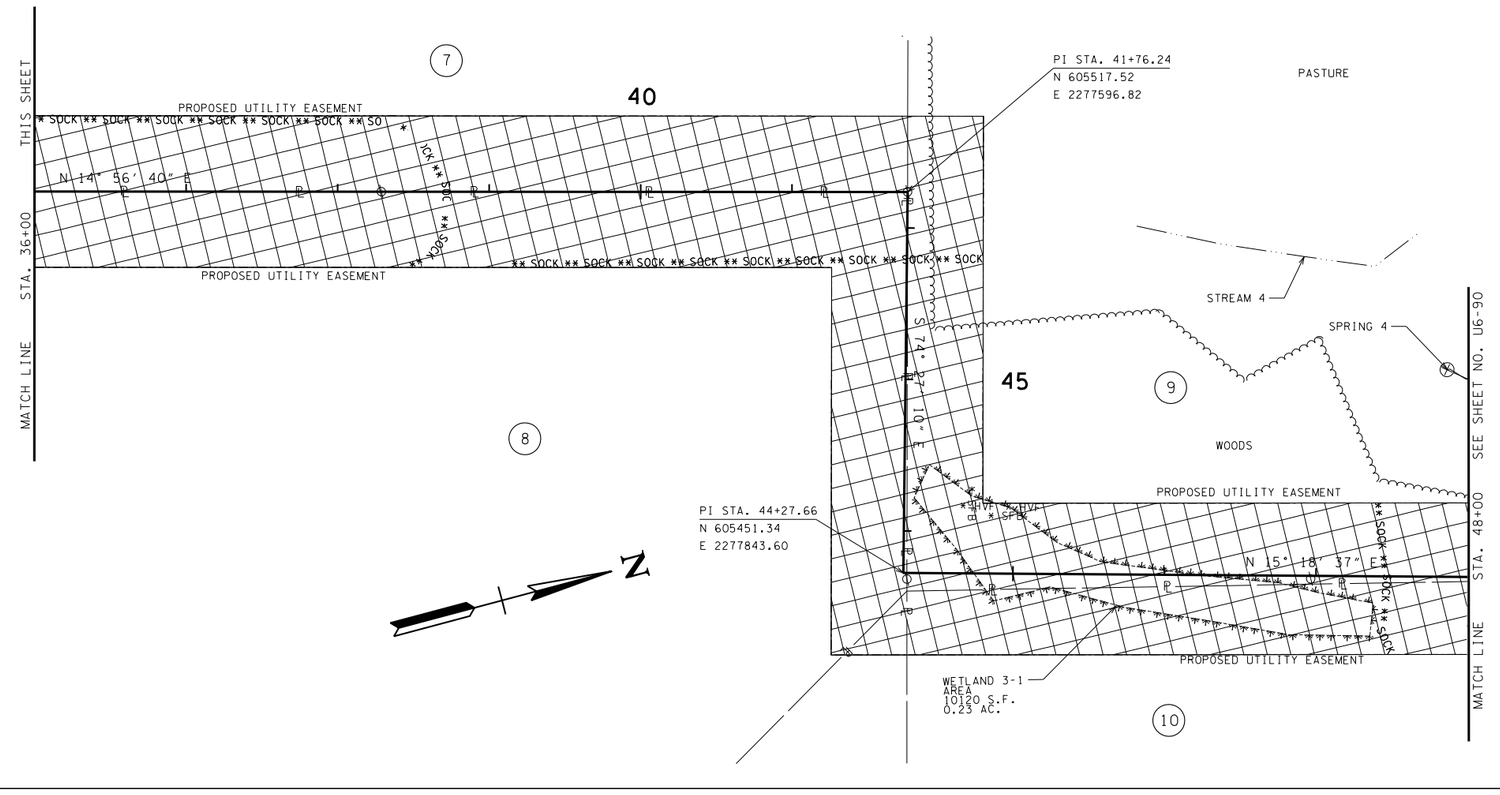
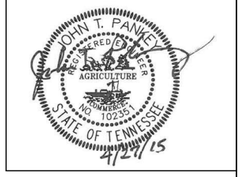
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-101(21)	89





PHASE 3

SEALED BY



COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.000 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 23+00 TO STA. 48+00

SCALE: 1"= 50'

4/27/2015 10:30:58 AM
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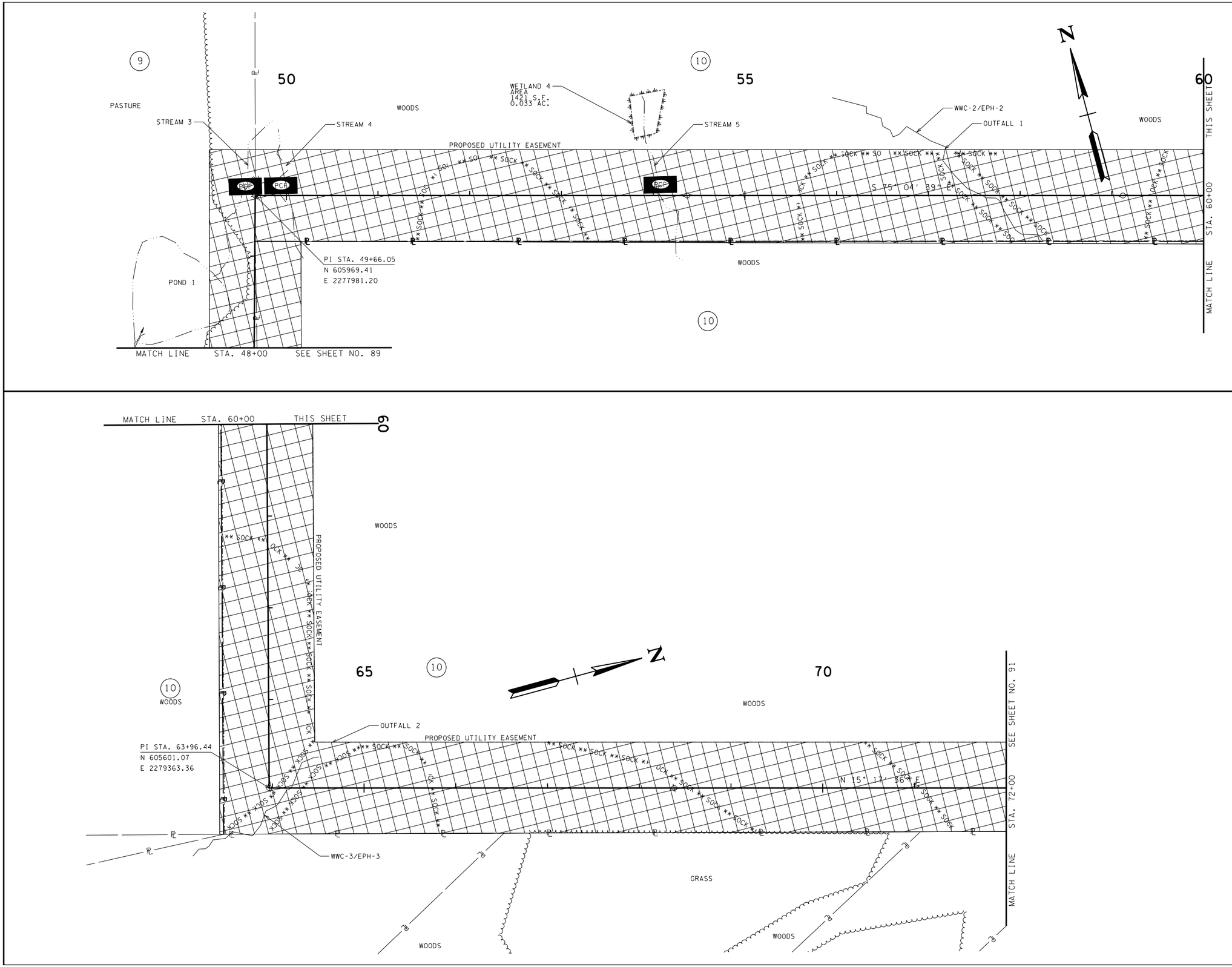
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-101(21)	90



PHASE 3

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JOHN T. PANKEY
REGISTERED ENGINEER
AGRICULTURE
TENNESSEE
NO. 102351
STATE OF TENNESSEE
4/27/15

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.000 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

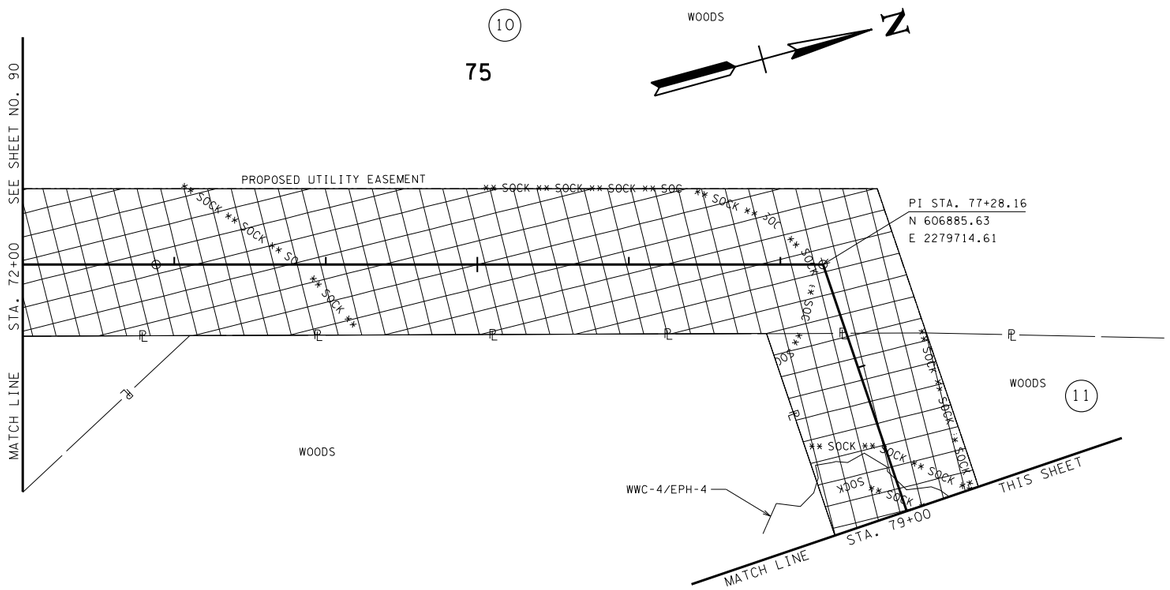
EROSION PREVENTION AND SEDIMENT CONTROL PLAN

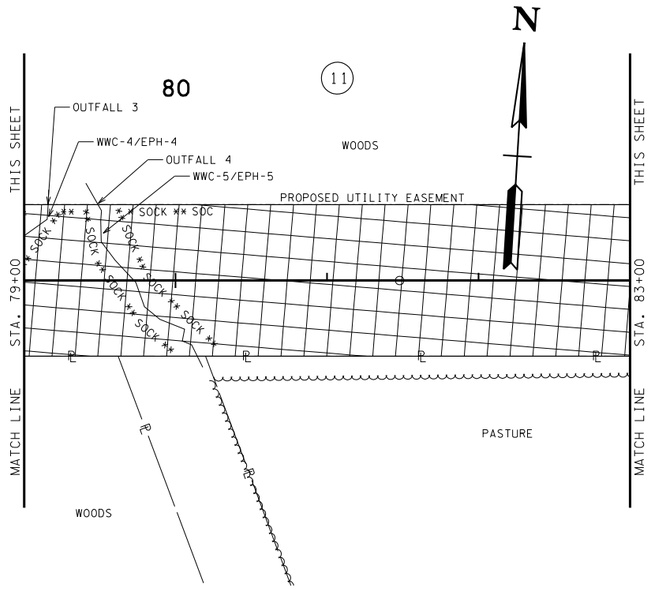
STA. 48+00 TO STA. 72+00

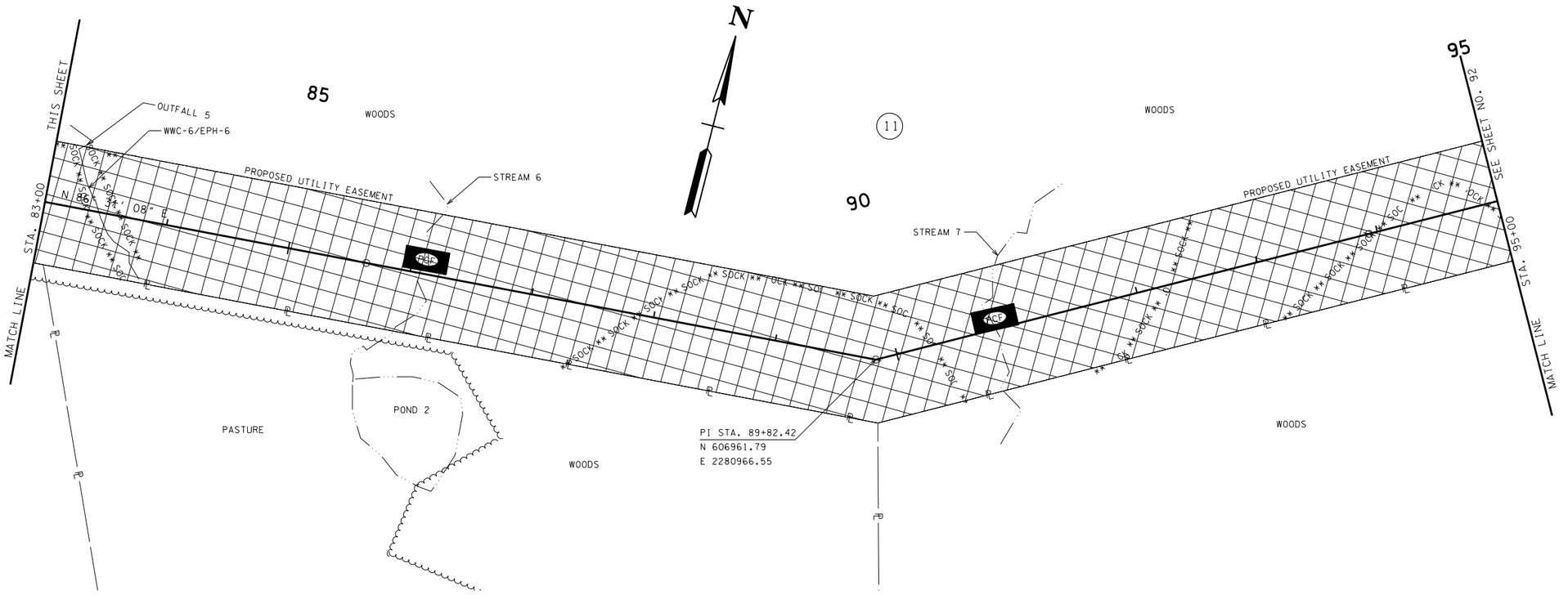
SCALE: 1"= 50'

4/27/2015 10:31:00 AM
W:\8024\Transportation\8024 EPSC 03 - PHASE 3.sht

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-101(21)	91







PHASE 3

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JOHN T. PANKEY
REGISTERED ENGINEER
AGRICULTURE
TENNESSEE
NO. 102351
STATE OF TENNESSEE
4/27/15

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.000 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 72+00 TO STA. 95+00

SCALE: 1"= 50'

4/27/2015 10:31:02 AM
W:\8024\Transportation\8024 EPSC 04 - PHASE 3.sht

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-101(21)	92

PHASE 3

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JOHN T. PANKEY REGISTERED ENGINEER AGRICULTURE COMMERCE NO. 102351 STATE OF TENNESSEE 4/27/15

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 95+00 TO STA. 119+00

SCALE: 1"= 50'

4/27/2015 10:31:04 AM
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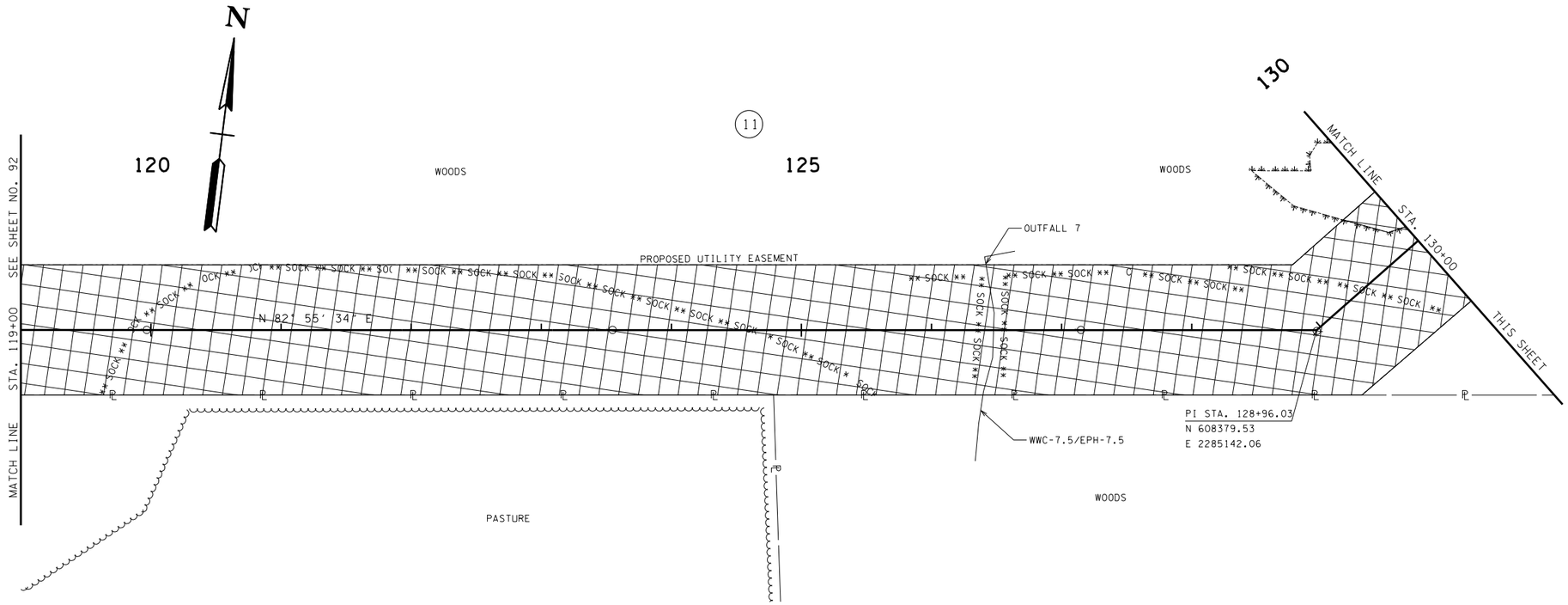
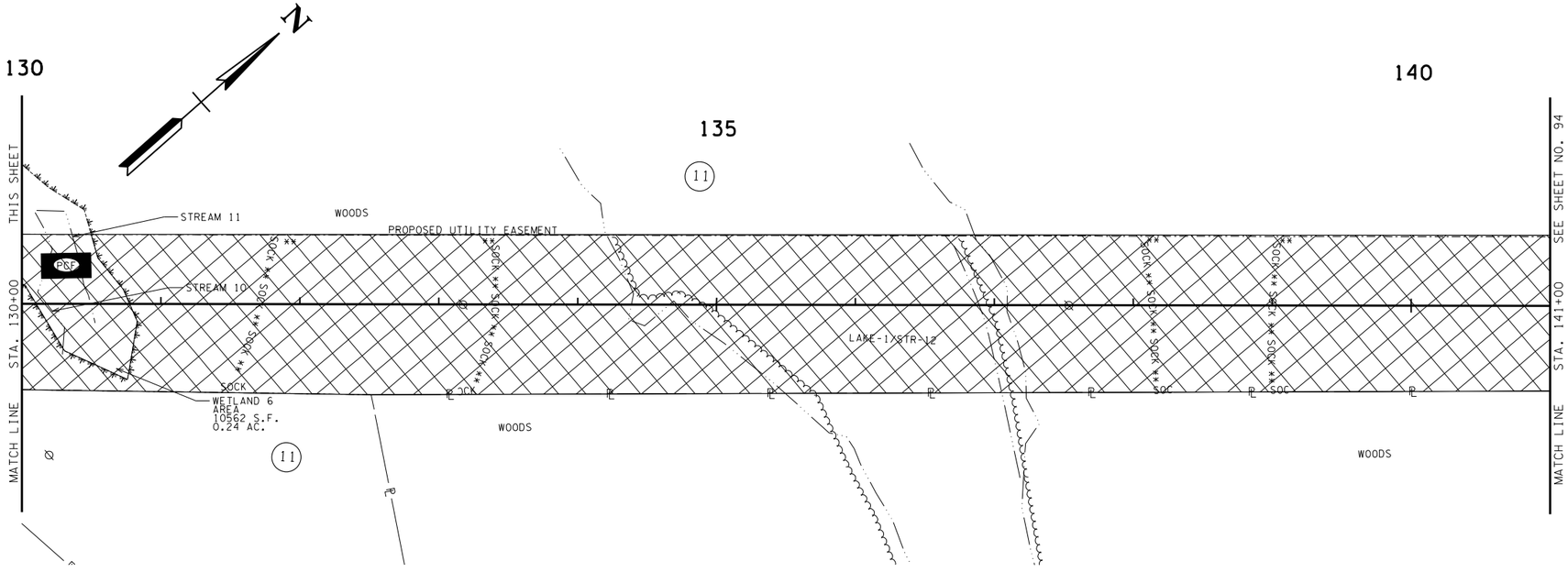
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-101(21)	93





PHASE 3

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JOHN T. PANKEY
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ARCHITECT
AGRICULTURE
COMMERCE
AND
1023561
STATE OF TENNESSEE
4/27/15

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 119+00 TO STA. 143+00

SCALE: 1"= 50'

4/27/2015 10:31:06 AM
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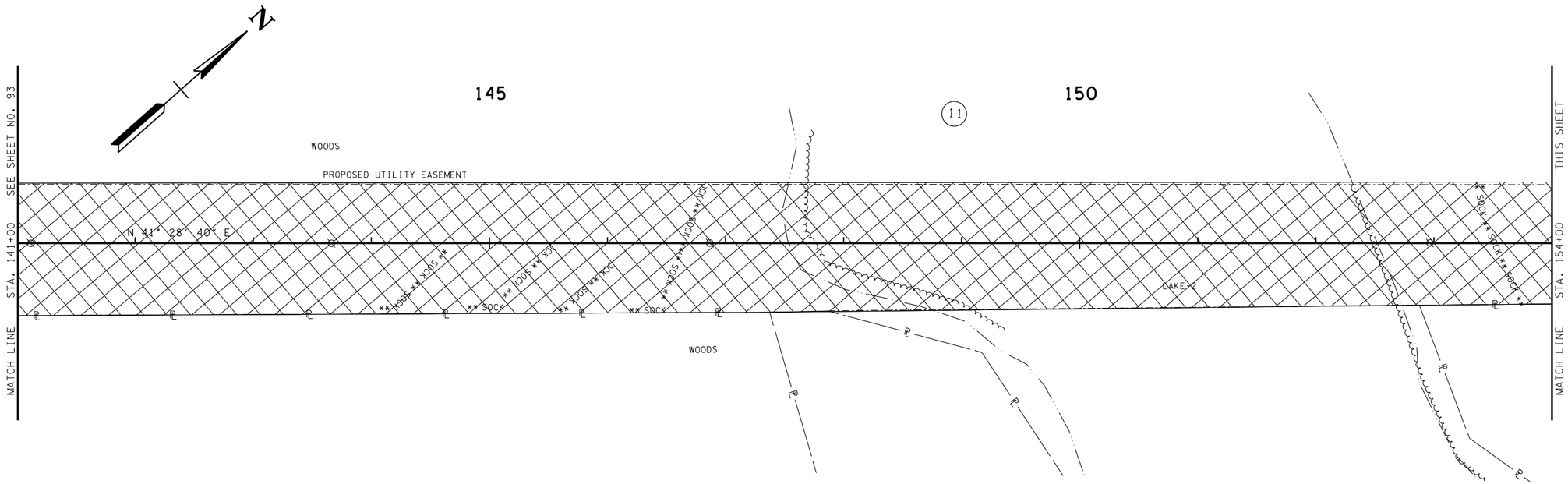
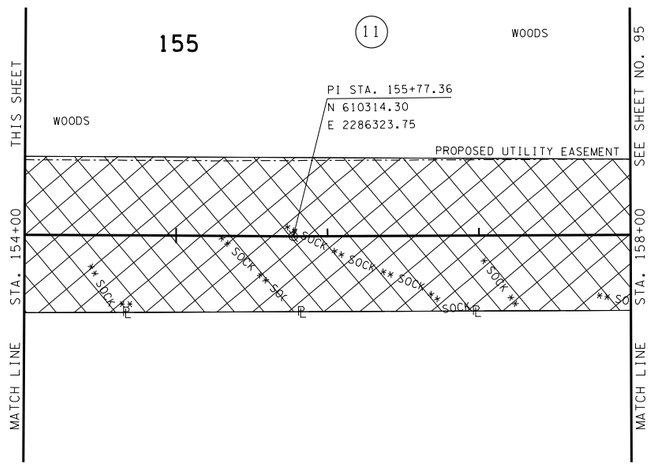
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-101(21)	94





PHASE 3

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JOHN T. PANNELL
REGISTERED
AGRICULTURE
COMMERCE
102351
STATE OF TENNESSEE
4/27/15

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.000 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

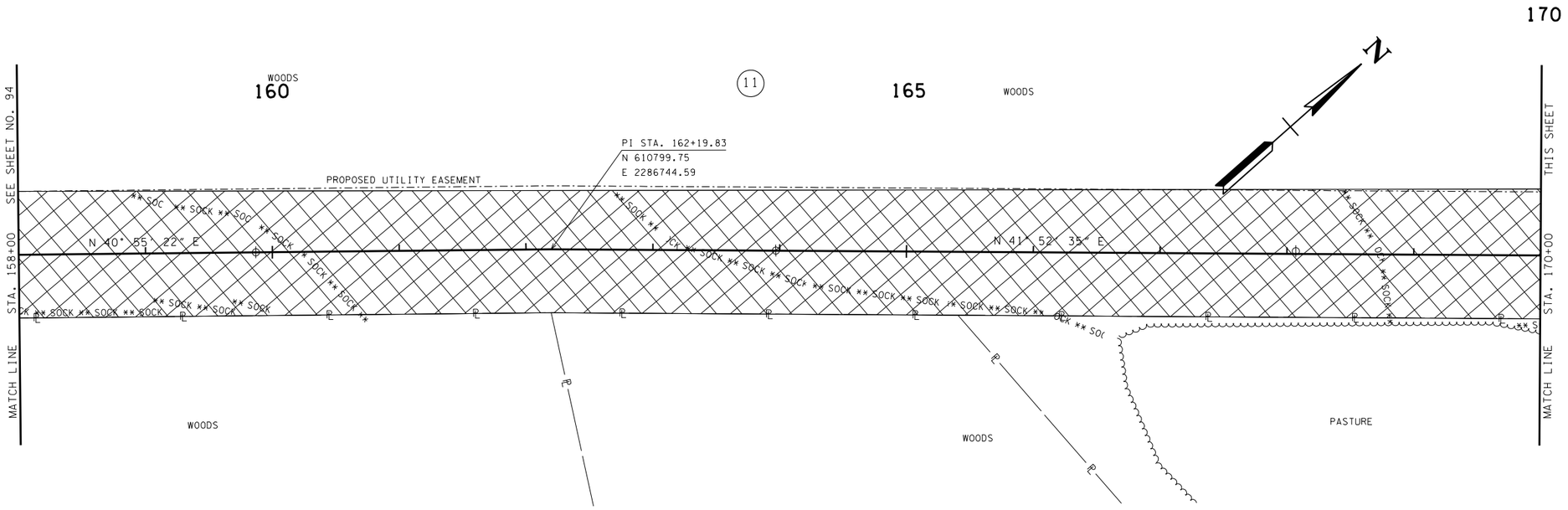
EROSION PREVENTION AND SEDIMENT CONTROL PLAN

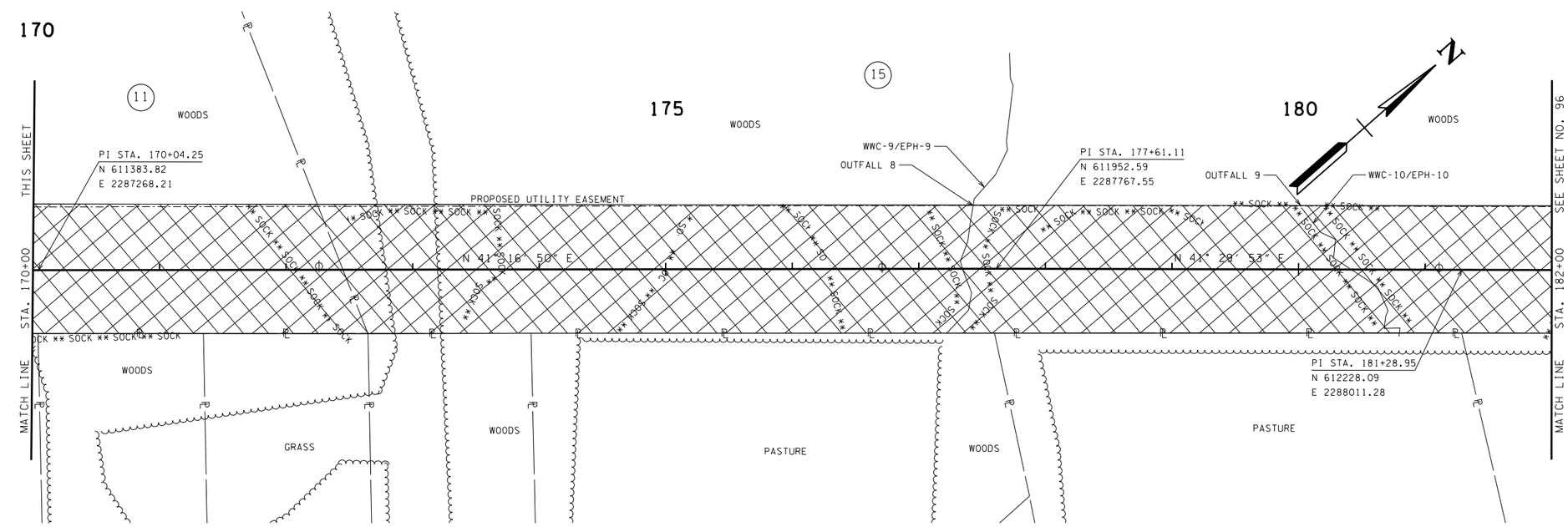
STA. 143+00 TO STA. 168+00

SCALE: 1"= 50'

4/27/2015 10:31:08 AM
W:\8024\Transportation\8024 EPSC 07 - PHASE 3.sht

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-101(21)	95





PHASE 3

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JOHN T. PANNELL
REGISTERED
LANDSCAPE
ARCHITECT
AGRICULTURE
COMMERCE
AND
102361
STATE OF TENNESSEE
4/27/15

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.000 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

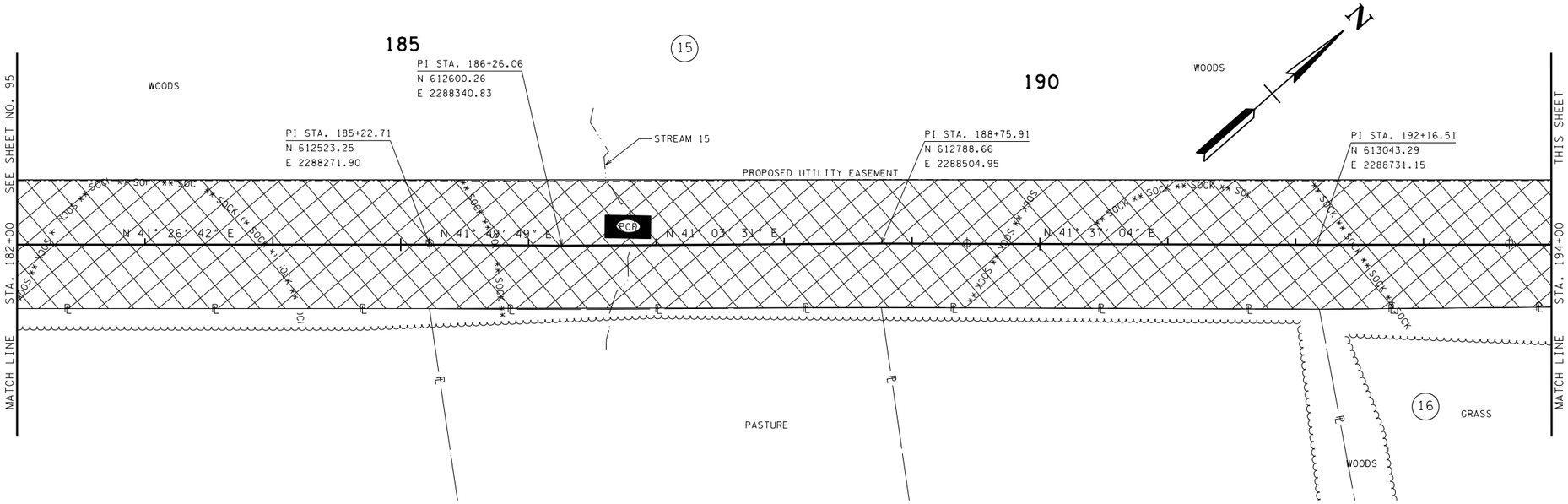
EROSION PREVENTION AND SEDIMENT CONTROL PLAN

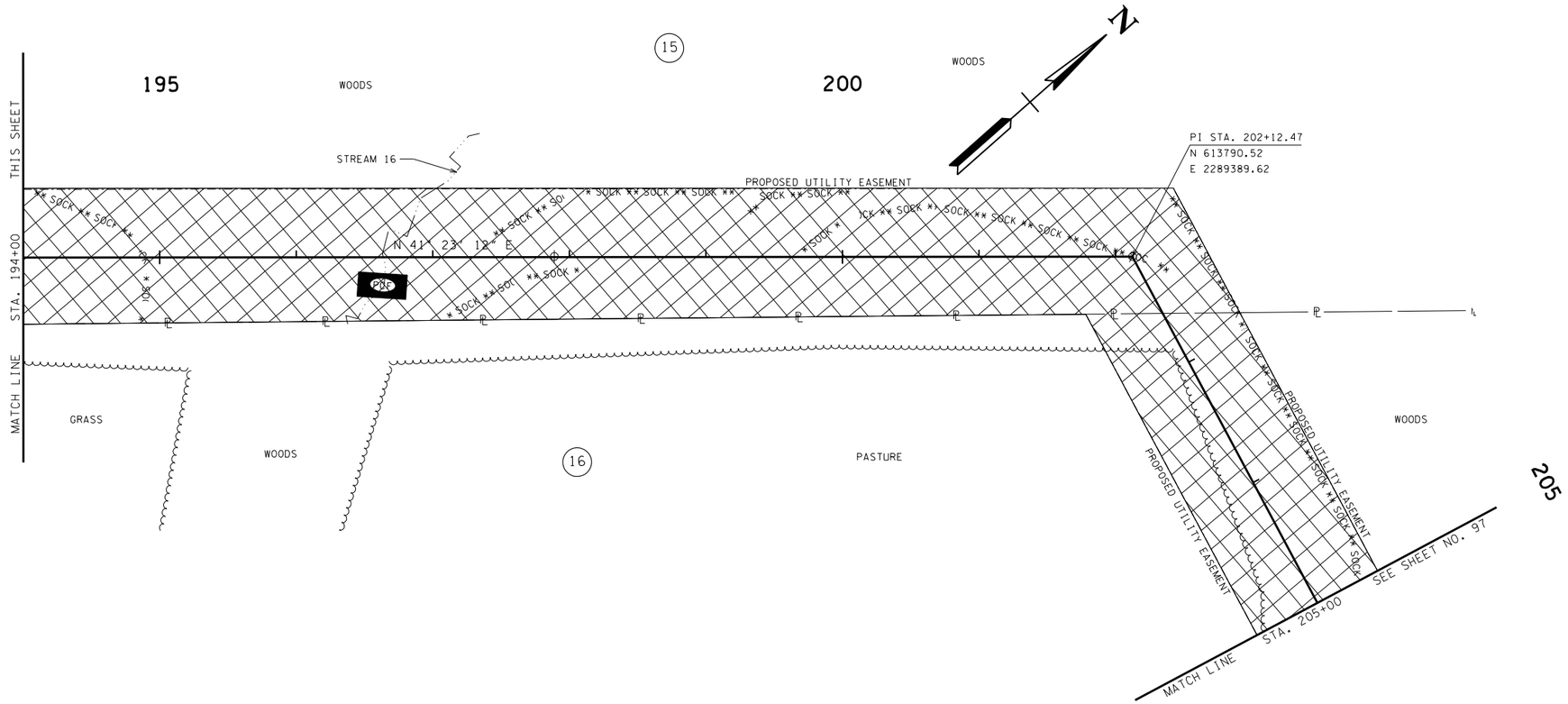
STA. 168+00 TO STA. 192+00

SCALE: 1"= 50'

4/27/2015 10:31:11 AM
W:\8024\Transportation\8024 EPSC 08 - PHASE 3.sht

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-101(21)	96





PHASE 3

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JOHN T. PANKEY
REGISTERED
AGRICULTURE
ENGINEER
102351
STATE OF TENNESSEE
4/27/15

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.000 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

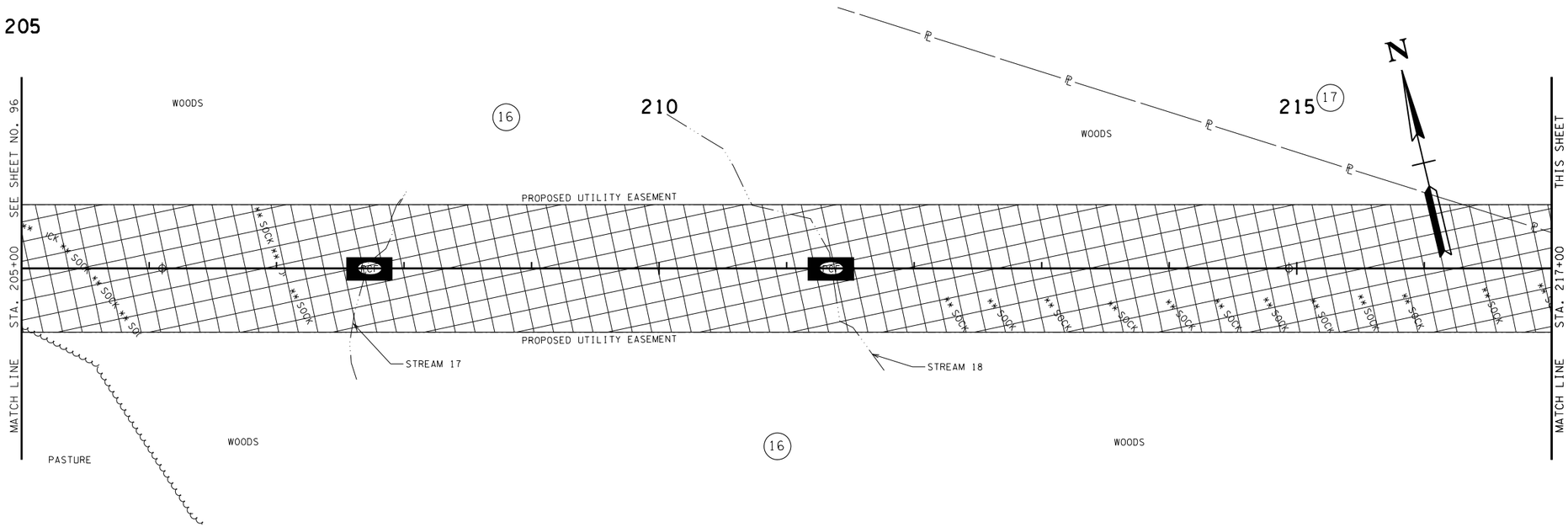
STA. 192+00 TO STA. 215+00

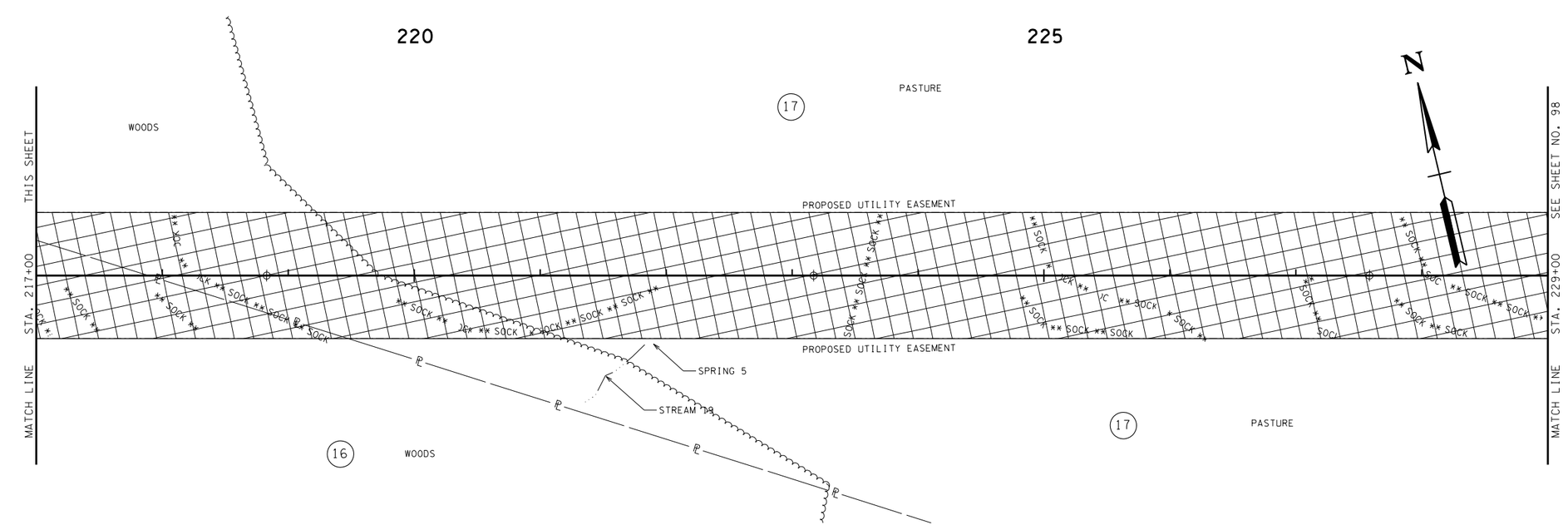
SCALE: 1"= 50'

4/27/2015 10:3:3 AM
W:\8024\Transportation\8024 EPSC 09 - PHASE 3.sht

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-101(21)	97

205





PHASE 3

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JOHN T. PANNELL
REGISTERED
LANDSCAPE
ARCHITECT
AGRICULTURE
COMMERCE
AND
102351
STATE OF TENNESSEE
4/27/15

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.000 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

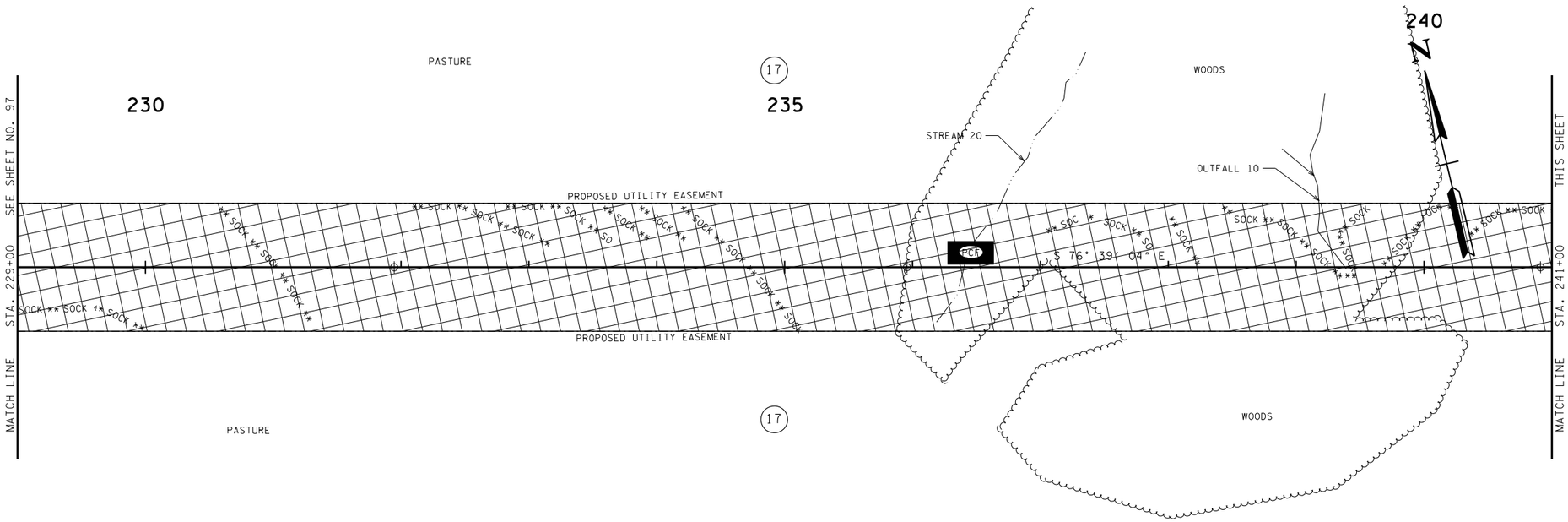
EROSION PREVENTION AND SEDIMENT CONTROL PLAN

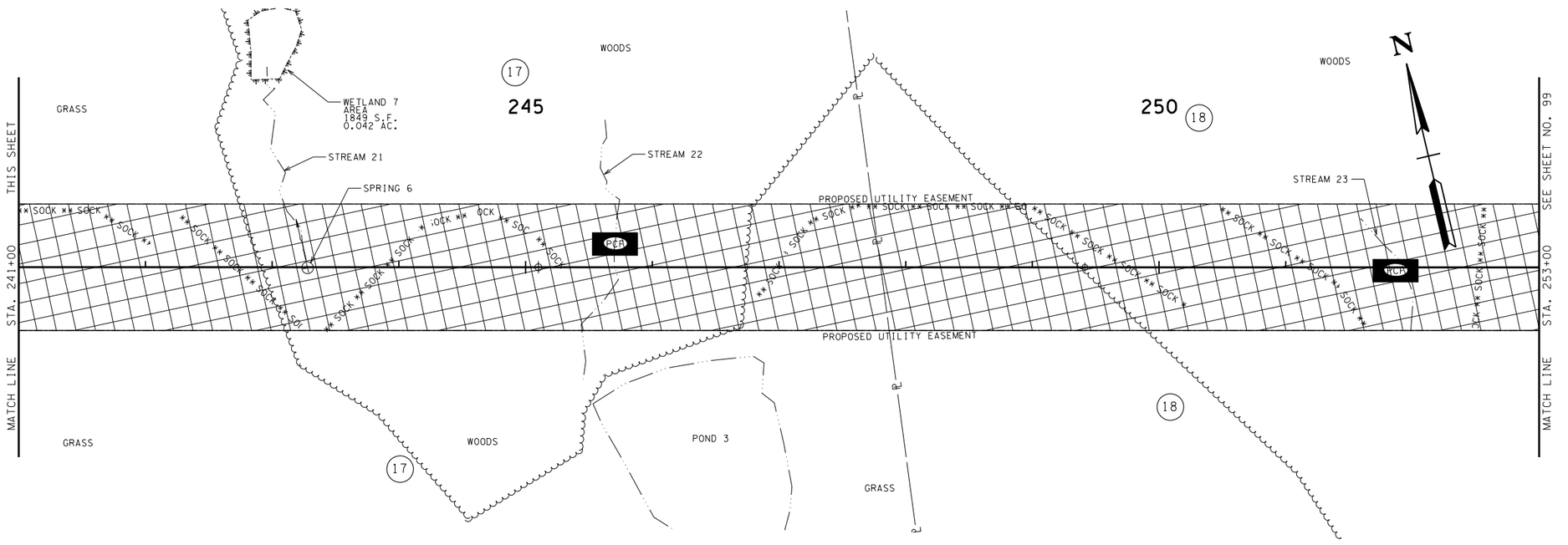
STA. 215+00 TO STA. 239+00

SCALE: 1"= 50'

4/27/2015 10:31:5 AM
W:\8024\Transportation\8024 EPSC 10 - PHASE 3.sht

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-101(21)	98





PHASE 3

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ARCHITECT
AGRICULTURE
COMMERCE
AND
102351
STATE OF TENNESSEE
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COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.000 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

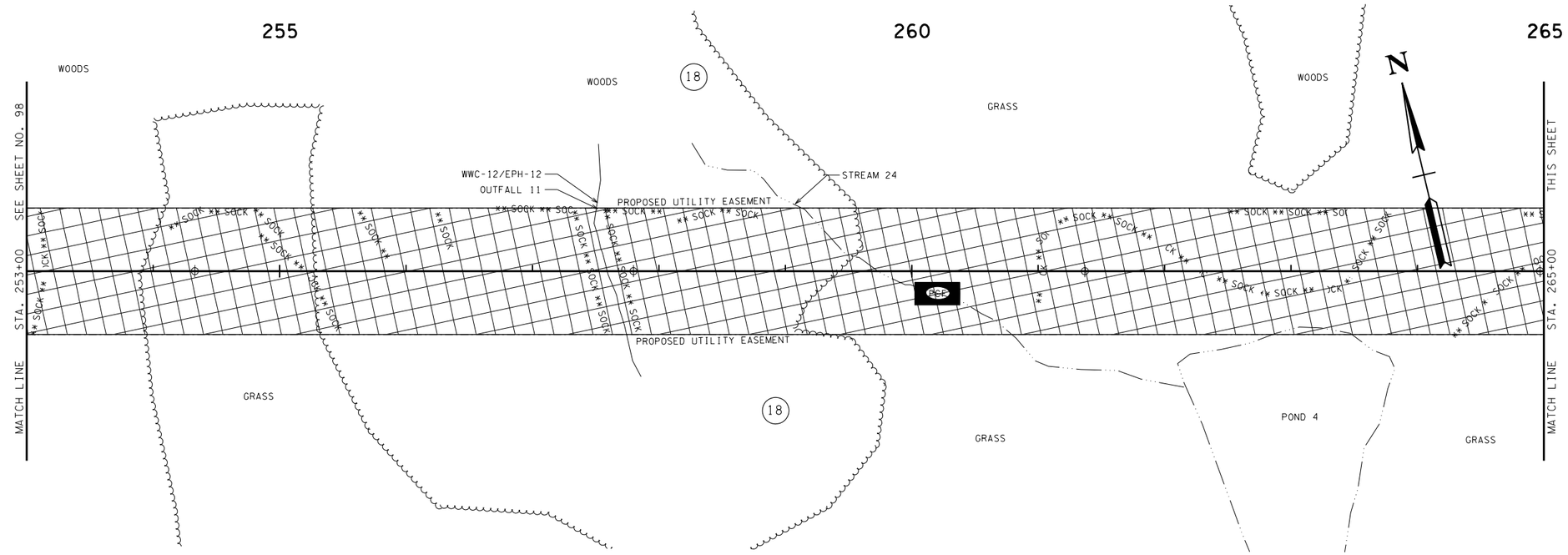
EROSION PREVENTION AND SEDIMENT CONTROL PLAN

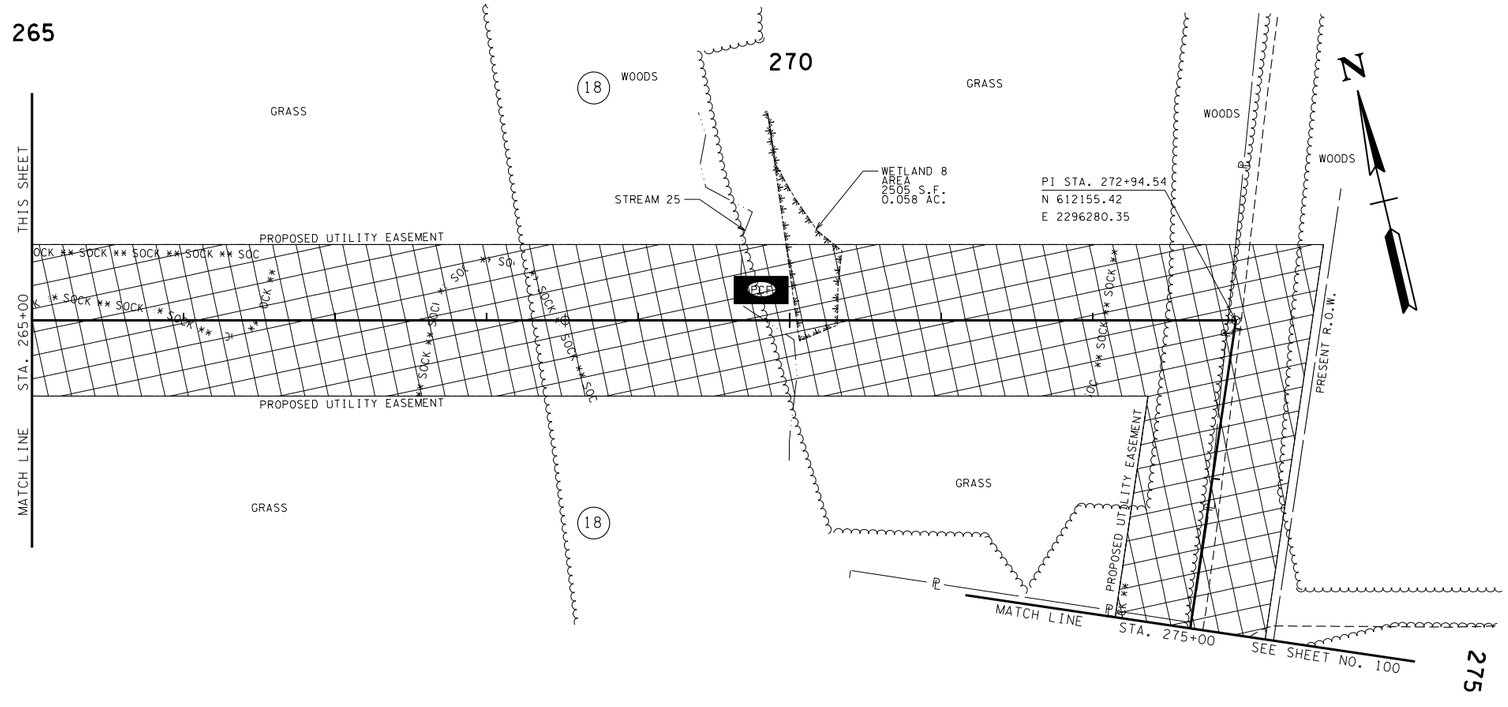
STA. 239+00 TO STA. 263+00

SCALE: 1"= 50'

4/27/2015 10:31:17 AM
W:\8024\Transportation\8024 EPSC II - PHASE 3.sht

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-101(21)	99





PHASE 3

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ARCHITECT
AGRICULTURE
COMMERCE
102361
STATE OF TENNESSEE
4/27/15

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.000 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

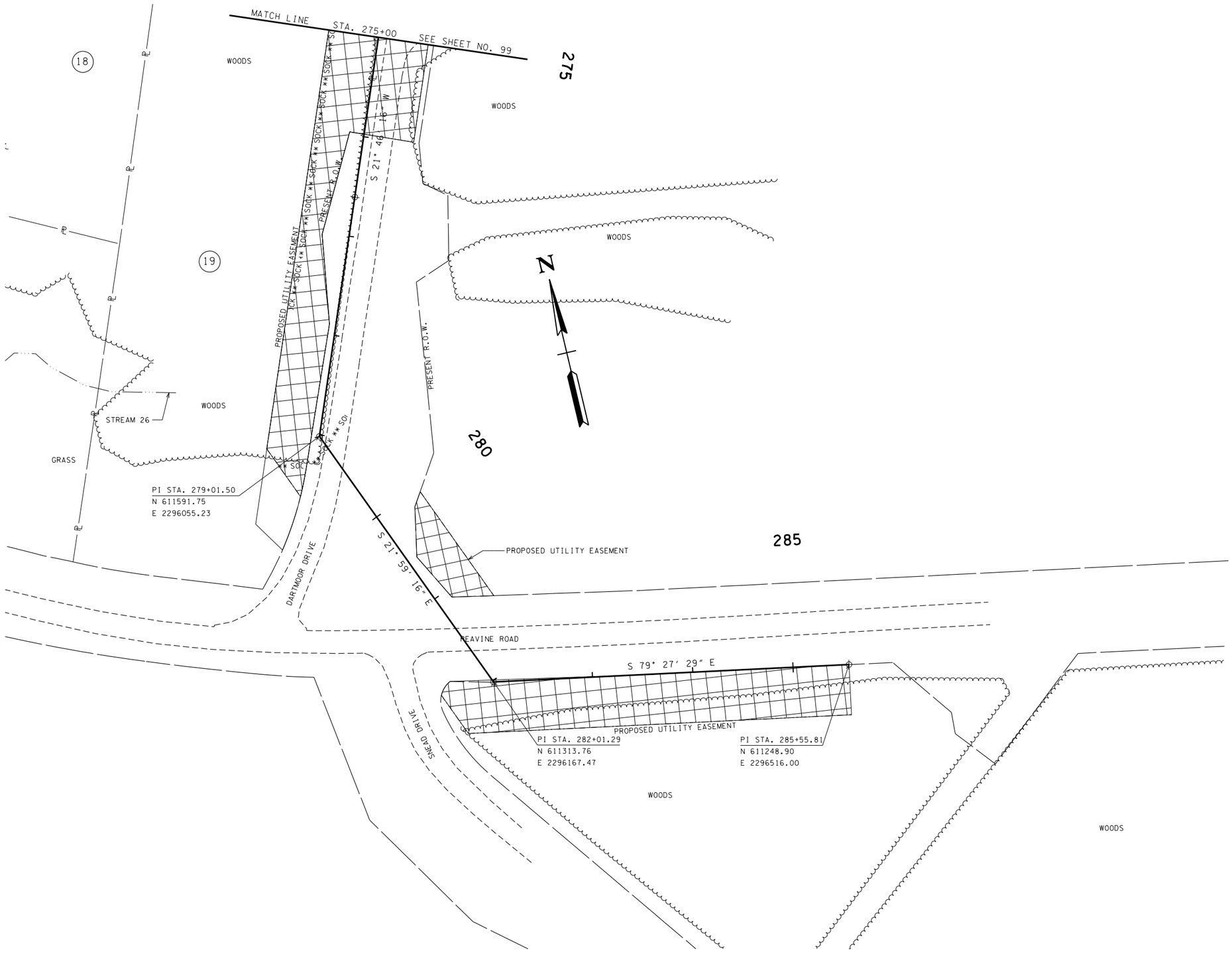
EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 263+00 TO STA. 285+00

SCALE: 1"= 50'

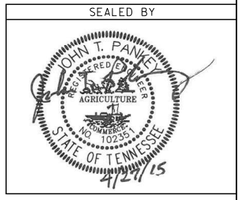
4/27/2015 10:31:9 AM
W:\8024\Transportation\8024 EPSC 12 - PHASE 3.sht

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	STP-101(21)	100



PHASE 3

SEALED BY



COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.000 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 285+00 TO STA. 296+05

SCALE: 1"= 50'

4/27/2015 10:31:21 AM
W:\8024\Transportation\8024 EPSC 13 - PHASE 3.sht

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.
TYPE | YEAR | PROJECT NO. | SHEET NO.
R.O.W. | 2010 | STP-101(16) | 5B
L-01514
AE2-22(10M)
L-01514
AE2-22(10M)
CB,1-3+DA,129+CB,5-13+DA,114+CB,15-200
WOODS
FIRETOWER ROAD
S 3° 32' 00" E
STA. 23+74.84
N 603071.1137
E 2276018.2988
CP-S4749
ASPHALT
POT 23+74.84
2 B RES
PC 26+13.87
PT 27+69.22
L-01500
+YFD72-SMDE(10M)A-1
FC913,1-2+FC104,1-2+
FC913,5-8+FC105,9-12+XD,13-72
+AKF400-24(10M)B-1
CB,1-200+XD,121+122-203
+XD,204+205-300+
CB,801-892+XD,393-395+
+C5,101-104+XD,400
L-01500
XXYFD12-SMDE(10M)
FC913,1-2+FC104,1-2+
FC913,5-8+FC105,9-12
XXAES106-22D(10M)
CB,801-892+DA,393-400
+C5,101-104+XD,105-106
XXAE3-24(10M)
CB,1-200+XD,121+122-203
+XD,204+205-300
75
WOODS
FRONTIER Communications
150' EASEMENT
150' EASEMENT
100'
50'
75'
75'
N 602325.13
E 2275980.14
TVA TRANSMISSION LINE
TOWER NO. 220
TVA TRANSMISSION LINE
TOWER NO. 243
STR-1a
70
POLE 58
REMOVE:
XXPOLE
POLE 58
ADD:
POLE 58
POLE 59
ADD:
POLE 60
ADD:
METAL POLE 1
L-01500
YFD12-SMDE(10M)
AES106-22D(10M)
AE1-24(10M)
P/T/CATV
+250'
+264'
WOODS
POWER POLE ESMT.
PRES. R.O.W.
SEE SHEET NO. 6B
WTL2
STR-1
POLE 58
RUC BOUNDARY UMC17
POLE 59
REMOVE:
POLE 60
REMOVE:
POT 29+50.00
PRES. R.O.W.
REMOVE: XXPOLE
POLE 60X
STR-1b
STR-1
N 45° 18' 00" E
SEE SHEET NO.
STA. 66+00
MATCH LINE
MATCH LINE STA. 76+00
PRES. R.O.W.
DEBRIS
GRAVEL
LAKE
LAK-1
WETLAND AREA (W-1)
STR-1a
STP-101(16)
150' EASEMENT
150' EASEMENT
BEGIN PHASE 1 PROJ. NO. 18038-2237-14 (R.O.W.)
STA. 66+54.40
STA. 70+00.00 S.R. 101 =
STA. 29+50.00 FIRETOWER RD.
N 902565.2800
E 2276222.3070
~ = 90°00'00" RT.
1 F RES
GRAVEL
F GAR
U/C
POOL
WOODS
COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00013 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
PROPOSED LAYOUT
STA. 63+00 TO STA. 76+00
SCALE: 1"= 50'

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.
TYPE | YEAR | PROJECT NO. | SHEET NO.
R.O.W. | 2010 | STP-101(16) | 6B
WOODS
L-01500
+YFD72-SMDE(10M)A-1
FC913,1-2+FC104,1-2
+FC,913,5-8+FC,105,9-12+XD,13-72
+AKF400-24(10M)B-1
CB,1-120+XD,121+CB,122-203+
XD,204+CB,205-300
CB,801-892+XD,393-395+
+C5,101-104+XD,400
POLE 62C
L-01500
XXYFD12-SMDE(10M)
FC913,1-2+FC104,1-2
+FC,913,5-8+FC,105,9-12
XXAES106-22(10M)
CB,801-892+DA,393-400
+C5,101-104+XD,105-106
XXAE3-24(10M)
CB,1-120+XD,121+CB,122-203+
XD,204+CB,205-300
ADD:
POLE 62
SWING DROP
ADD:
POLE 61
POLE 61
REMOVE:
METAL BLDGS.
1 F RES
METAL GARAGE
METAL BLDG.
STR-1
WETLAND AREA (W-2)
OWNER ID # 156859
FACILITY # 4-180107
TANK 1 - 8000 GAL. (GAS)
TANK 2 - 5000 GAL. (GAS)
TANK 3 - 4000 GAL. (GAS)
ADD:
POLE 63
SWING DROP
ABOVE GROUND KEROSENE TANKS
1 BL BUS
U.G. TANKS
CANOPY (PUMPS)
ASP.
GRAVEL
METAL GARAGE
STORAGE
STORAGE
1 B RES
POLE 63B
ADD:
POLE 64
ADD:
POLE 65
WOODS
METAL POLE 3
POWER POLE ESMT.
PRES. R.O.W.
N 45° 18' 00" E
POLE 66
ADD:
SWING DROP
+YFD72-SMDE(LOOP)=300'
DEBRIS
1 BR RES
1 B RES/
C&G AUTO SALES
POLE 66C
POLE 65
REMOVE:
L-01500
XXYFD12-SMDE(10M)
FC913,1-2+FC104,1-2
+FC,913,5-8+FC,105,9-12
XXAES104-22(10M)
CB,801-892+DA,393-400
+C5,101-104
XXAE3-24(10M)
CB,1-300
L-01500
+YFD72-SMDE(10M)A-1
FC913,1-2+FC104,1-2
+FC,913,5-8+FC,105,9-12+XD,13-72
AKF400-24(10M)B-1
CB,1-300+
CB,801-892+XD,393-395+
+C5,101-104+XD,400
METAL POLE 4
SWING DROP
WWC-2
POLE 66B
REMOVE: XXPOLE
MATCH LINE STA. 76+00 SEE SHEET NO.5B
MATCH LINE STA. 89+00 SEE SHEET NO.7B
STR-1
WTR-2
STR1-b
WWC-1
POLE 62A
REMOVE: XXPOLE
POLE 62
REMOVE:
POLE 63
REMOVE:
POLE 64A
REMOVE:
POLE 64B
REMOVE:
POLE 64
REMOVE:
POLE 65A
REMOVE: XXPOLE
GPS #S116
GPS #S117
GPS #S118
GRAVEL
POLE 61A
POLE 62B
POLE 63A
2 F RES
DBL MOBIL HOME
STORAGE
MOBILE HOME
F GARAGE
STORAGE
1 FR RES
GRAVEL
NINA'S SHEAR MAGIC
FRANKLIN AUTO SALES
BL GAR
1 B RES
1 B RES
POLE 65B
ASP
COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00013 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
PROPOSED
LAYOUT
STA. 76+00 TO STA. 89+00
SCALE: 1"= 50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	7B

POLE 67
ADD
+PS1-50=E
+PS2-54=E
+PS11=E
+PS24=E
+YFD72-SMDX(10K)=220'
+AKF400-24(10K)=220'
+6" SLACK
+ANAR-52=412'
+JC1=E
WWF
WSC=E

POLE 68.5
ADD
+PS52
+PS24=E
+YFD72-SMDX(10K)=184'
+AKF400-24(10K)=184'
+6" SLACK
+JC1=E
WSS=E
XXHS=E
WSC=E
SWING DROP

POLE 69C

POLE 69B

POLE 69
ADD
+PS24=E
+YFD72-SMDX(10K)=220'
+AKF400-24(10K)=220'
+6" SLACK
+JC1=E
WSS=E
XXHS=E
WSC=E
SWING DROP

POLE 70
ADD
+PS52
+PS24=E
+YFD72-SMDX(10K)=220'
+AKF400-24(10K)=220'
+6" SLACK
+JC1=E
WSS=E
XXHS=E
WSC=E
SWING DROP

POLE 75A

POLE 68
ADD
+PS1-50=E
+PS2-54=E
+PS11=E
+PS24=E
+YFD72-SMDX(10K)=204'
+AKF400-24(10K)=204'
+6" SLACK
+ANAR-52=274'
+JC1=E
WWF
WSC=E

POLE 66
REMOVE:
XXPOLE
XXHS=E
XXCA=276'
XXCA=276'
XXCA=276'

L-01500
+YFD72-SMDX(10K)A-1
FC913,1-2+FC104,1-2
+FC,913,5-8+FC,105,9-12+XD,13-72
+AKF400-24(10K)B-1
CB,1-300
CB,801-892+XD,393-395+
C5,101-104+XD,400

L-01500
XXYFD12-SMDX(10K)
FC913,1-2+FC104,1-2
+FC,913,5-8+FC,105,9-12
XXAES104-22(10K)
CB,801-892+DA,393-400
+C5,101-104
XXAE3-24(10K)
CB,1-300

POLE 69
REMOVE
XXPOLE
XXHS=E
XXCA=276'
XXCA=276'
XXCA=276'

POLE 69A
REMOVE: XXPOLE

POLE 67A
REMOVE: XXPOLE

POLE 67
REMOVE
XXPOLE
XXHS=E
XXCA=276'
XXCA=276'
XXCA=276'

POLE 68
REMOVE
XXPOLE
XXHS=E
XXCA=276'
XXCA=276'
XXCA=276'

POLE 70
REMOVE
XXPOLE
XXHS=E
XXCA=276'
XXCA=276'
XXCA=276'
XXPE1-E=E
XXPE6-E=E

POLE 14
ADD
+PS1-50
+PS2-54
+PS11
+PS24
+PS52
WSC
'D'-GUARD
WSS=E0
+6" SLACK
WWPCR

POLE 14
REMOVE
XXPOLE
XXHS=E
XXFT
XXCA=264'

L-01517
XXAE30-22(10K)
CB,601-603+XD,4-5+
606-621+XD,22+623+
XD,24+625+XD,26-50

L-01517
XXAE30-22(10K)
CB,601-603+XD,4-5+
606-621+XD,22+623+
XD,24+625+XD,26-50

WWC-2
WWC-1

SWING DROP
CUT OPEN
POLE LEFT INSIDE SLOPE LINE
METAL POLE
METAL PIPE
POWER POLE ESMT.
PRES. R.O.W.
MATCH LINE STA. 89+00 SEE SHEET NO.6B
MATCH LINE STA. 102+00 SEE SHEET NO.8B
WOODS
GRAVEL
DEBRIS
JUNK YARD
MOBILE HOME
DBL MOBILE HOME
1 B RES
1 F RES
1 F CHURCH (LIGHTHOUSE CHURCH OF GOD)
GAR/ LINDLE BOBB AUTO BODY
BARN
SHED
METAL BLDG
RUIN
ASP
TRAIL
4' SHLD
2' SHLD
12" CMP
12" RCP
P/T/CATV
W/M
GAS #5120

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00013 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 89+00 TO STA. 102+00

SCALE: 1"= 50'

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

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	BB

BEGIN CURB AND GUTTER
STA. 110+00.00

L-01500
+YFD72-SMDEC10MDA-1
FC913,1-2+FC104,1-2
+FC,913,5-8+FC,105,9-12+XD,13-72
+AKF400-24C10MD
CB,1-300+
CB,801-892+XD,393-395+
C5,101-104+XD,400

POLE 71
ADD:
+PSB24=2
+YFD72-SMDBR(10M)=81'
+AEF400-24(10M)=81'
REMOVE:
XXPOLE
XXOA=84'
XXOA=84'
XXOA=84'

POLE 72
ADD:
+PSB24=3
+YFD72-SMDBR(10M)=81'
+AEF400-24(10M)=81'
REMOVE:
XXPOLE
XXOA=83'
XXOA=83'
XXOA=83'

POLE 73
ADD:
+PSB24=3
+YFD72-SMDBR(10M)=167'
+AEF400-24(10M)=165'
+6" SLACK
+DCT=6
YBC=6
YFT=3
+SBAR-SB-060'
REMOVE:
XXPOLE
XXOA=83'
XXOA=83'
XXOA=83'
XXSB=3

POLE 74
ADD:
+PSB24=2
+YFD72-SMDBR(10M)=245'
+AEF400-24(10M)=245'
+YFD72-SMDBR(LOOP)=200'
+PSB24(XX)=2
REMOVE:
XXPOLE
XXOA=194'
XXOA=194'
XXOA=194'

POLE 75
ADD:
+PSB24=4
+PSB28
+YFD72-SMDBR(10M)=81'
+AEF400-24(10M)=81'
+6" SLACK
YBC=4
YFT=
+DCT=4
+SBAR-SB-240'
REMOVE:
XXPOLE
XXOA=363'
XXOA=363'
XXOA=358'
XXSB=3

POLE 76
ADD:
+PSB24=5
+YFD72-SMDBR(10M)=194'
+AEF400-24(10M)=194'
+6" SLACK
YBC=4
+DCT=4

POLE 76B
POLE 75B
POLE 73A
POLE 75A
POLE 76

L-01500
+YFD72-SMDEC10MDA-1
FC913,1-2+FC104,1-2
+FC,913,5-8+FC,105,9-12+XD,13-72
+AKF400-24C10MD
CB,1-300+
CB,801-892+XD,393-395+
C5,101-104+XD,400
WOODS

L-01500
XXYFD12-SMDEC10MD
FC913,1-2+FC104,1-2
+FC,913,5-8+FC,105,9-12
XXAES104-22C10MD
CB,801-892+DA,393-400
+C5,101-104
XXAE3-24C10MD
CB,1-300

L-01500
XXYFD12-SMDEC10MD
FC913,1-2+FC104,1-2
+FC,913,5-8+FC,105,9-12
XXAES104-22C10MD
CB,801-892+XD,393-395+
C5,101-104+XD,400
CB,1-300

MILE MARK 19
HWY 101

METAL POLE 7
METAL POLE 8
METAL POLE 9
METAL POLE 10

1 F RES
1 F BLDG
1 B RES
1 STUCCO RES
1 F BLDG/ GREAT EXPECTATIONS VACATION CLUB
1 B BUS/ EXOTIC BIRD RANCH
BILLBOARD
BARN
SHED
GARAGE FARR ELECTRIC
OPEN FIELD
POWER POLE ESMT
METAL BLDG
CONC
GRAVEL
WOODS
TRAIL
PRES. R.O.W.
SWING DROP

MATCH LINE STA. 102+00 SEE SHEET NO. 7B
MATCH LINE STA. 115+00 SEE SHEET NO. 9B

N28°48'40"W 1485.00
N28°48'40"W 398.01
N28°33'19"W 350.73
N28°51'03"W 1683.00
N15°52'07"W 375.05
N15°52'07"W 195.00
N61°56'00"E 639.29
N61°56'00"E 128.20
S61°56'00"W 360.41.00"W
N 61°56'00"E
S61°56'00"W
N15°41'00"E 829.00
N4°11'20"E 725.00
N28°48'40"W 1029
N B3°10'53"E 109.5

280.18
225.25
200.00
209.55
280.08
570.00
0.492 ac
0.0ac
0.404 ac

102+15.72 18.81'
104+95.83 25.00'
107+21.08 25.00'
109+21.08 25.00'
102+16.37 31.19'
104+96.38 25.00'
106+24.58 25.00'
108+34.13 25.00'
114+25.43 25.00'

WTC-26

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00013 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 102+00 TO STA. 115+00

SCALE: 1" = 50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2003	STP-101(16)	9B

STA. 102+16.06 S.R. 101 =
STA. 50+00.00 STONE LOOP
N 605311.1552
E 22280356.3435
∠ = 96°13'47" RT.

PROPOSED CURVE DATA
CHERRY BRANCH ROAD
S.R. 101
PI 120+16.89
N 605,324.8130
E 2281,354.7858
Δ 33° 29' 00" (LT)
Δs 9° 00' 00" (LT)
Δc 23° 29' 00"
Dc 4° 00' 00"
Rc 1,432.39
Lc 587.08
Ts 556.39
Ls 250.00
SE 0.063 FT/FT
DESIGN SPEED 50 MPH
PI 314+62.07
N 605,419.4390
E 2,281,809.5710
Δ 24° 52' 05" (RT)
Δs 22° 45' 00"
Dc 251.85
Rc 109.31
T 55.53
SE 0.064 FT/FT
DESIGN SPEED 20 MPH
RUNOFF 135' (60% OUTSIDE 40% INSIDE)

POLE 77
REMOVE:
XXPOLE
XXDA=888'
XXDA=888'
XXDA=888'
XXDB

POLE 77A P/T
POLE 78
REMOVE:
XXPOLE
XXDA=890'
XXDA=890'
XXDA=890'
XXDB=4

POLE 79
REMOVE:
XXPOLE
XXDA=90'
XXDA=190'
XXDA=188'
XXDB
XXPT1=2=4
XXPP4=84

POLE 80
REMOVE:
XXPOLE
XXDA=143'
XXDA=143'
XXDA=143'
XXDB=4

POLE 81
REMOVE:
XXPOLE
XXDA=188'
XXDA=188'
XXDA=188'
XXDB=4
XXPP4=84
XXPT1=2=4

POLE 81A
POLE 82
REMOVE:
XXPOLE
XXDA=814'
XXDA=814'
XXDA=814'
XXDB=4

POLE 82A
POLE 82B
POLE 83
ADD:
+PST1=80=4
+PP5=84=4
+PN11=4
+PN88=4
+YFD72-SMDR(10K)=200'
+AKF400-24(10K)=200'
+5" SLACK
+DC1=4
WDC=4
WDD=4
WT7=4
+SEA8-88=780'

POLE 1
ADD:
+PST1=80=4
+PP5=84=4
+PN11=4
+PN88=4
+AKF400-24(10K)=875'
+YFD12-SMDR(2)=874'
+AKF400-24(10K)=875'

POLE 2
ADD:
+PN88=4
+AKF400-24(10K)=886'
+YFD12-SMDR(2)=886'
+AKF400-24(10K)=886'

POLE 3
ADD:
+AKF400-24(10K)=96'
+AKF400-24(10K)=96'
+YFD12-SMDR(10K)=96'
+YFD12-SMDR(LOOP)=100'
+DU12=100'
WDC=4
WDD
WDC=600
+PN88=12
+DC1=12
XXDB=12

POLE 77
ADD:
+PN88=4
+YFD72-SMDR(10K)=881'
+AKF400-24(10K)=881'
+5" SLACK
WDC=4
+DC1=4
WDC=4

POLE 78
ADD:
+PST1=80=4
+PP5=84=4
+PN11=4
+PN88=4
+YFD72-SMDR(10K)=886'
+AKF400-24(10K)=886'
+5" SLACK
+SEA8-88=100'
+SEA8-88=480'
+SM88
+DA88
+DC1=4
WDC=4
WT7=4

L-01500
+YFD72-SMDEC10HDA-1
FC913,1-2+FC104,1-2
+FC,913,5-8+FC,105,9-12+XD,13-72
+AKF400-24C10HDB-1
CB,1-300
CB,801-892+XD,393-395+
C5,101-104+XD,400

L-01500
XXYFD12-SMDEC10HD
FC913,1-2+FC104,1-2
+FC,913,5-8+FC,105,9-12
XXAES104-22C10HD
CB,801-892+DA,393-400
+C5,101-104
XXAE3-24C10HD
CB,1-300

L-01500
XXYFD12-SMDEC10HD
FC913,1-2+FC104,1-2
+FC,913,5-8+FC,105,9-12
XXAES104-22C10HD
CB,801-892+DA,393-400
+C5,101-104
XXAE3-24C10HD
CB,1-300
XXAE16-22CEDEAD

L-01500
XXYFD12-SMDEC10HD
XD,1-44
+FC,913,5-8+FC,105,9-12+XD,13-72
XXAES104-22C10HD
CB,701-773+CD,74-75+
CB,776-800+C5,101-104
XXAE3-24C10HD
CB,301-436+XD,139+
CB,440-600

L-01500
+YFD72-SMDEC10HDA-1
XD,1-44
+FC,913,5-8+FC,105,9-12+XD,13-72
+AKF400-24C10HDB-1
CB,301-436+XD,139+
CB,440-600
CB,701-773+CD,74-75+
CB,776-795+C5,101-104+CB,800

L-01517
XXYFD12-SMDECE
FC913,1-2+FC104,1-2+XD,5-12
XXDEAD CABLE10HD
XXAE9-26C10HD
CB,1-600+XD,601-700+
CB,701-773+CD,74-75+
CB,776-900

L-01517
+AKF300-24C10HDA-1
+XD,1-100+
CB,701-773+CD,74-75+
CB,776-900
+YFD12-SMDECEDA-2
FC913,1-2+FC104,1-2+XD,5-12
+AKF600-24C10HDB-1
CB,1-600

WWC-3

STONE LOOP REMOTE
CLAIX SWITCH

SWING DROP

MATCH LINE STA. 115+00 SEE SHEET NO.8B
MATCH LINE STA. 128+00 SEE SHEET NO.8B

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00013 AND TIED TO THE TCRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 115+00 TO STA. 128+00

SCALE: 1" = 50'

TENNESSEE D.O.T.

DESIGN DIVISION

FILE NO.

PROPOSED CURVE DATA

S.R. 101		CHERRY BRANCH ROAD	
PI	130+16.89	PI	31+62.07
N	605,324.8139	N	605,419.4390
E	2,281,354.7358	E	2,281,609.5710
∩s	33° 29' 00" (LT)	∼	24° 52' 05" (RT)
's	5° 00' 00"	D	22° 45' 00"
∩c	23° 29' 00" (LT)	R	251.85
Dc	4° 00' 00"	L	109.31
Rc	1,432.39	T	55.53
Lc	587.08	SE	0.064 FT/FT
Ts	556.39	DESIGN SPEED	20 MPH
Ls	250.00	RUNOFF	135' (60% OUTSIDE 40% INSIDE)
SE	0.063 FT/FT		
DESIGN SPEED	50 MPH		

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	10B

MATCH LINE A

STA. 102+16.06 S.R. 101 =
STA. 10+00.00 FENCE LANE
N 605881.1150
E 22282242.6680
∼ = 91^43'01" RT.

MATCH LINE A

STA. 134+30.00 S.R. 101 =
STA. 30+00.00 CHERRY BRANCH RD.
N 605558.4200
E 22281726.1930
∼ = 90^00'00" RT.

POLE 2
ADD:
+PS1=30
+PS9=54
+PS11
+PM5A
+PM5B
+5' SLACK
+SCT=50
W3C=4
+AEP35-24(10K)=858'

POLE 87C

POLE 84
ADD:
+PS1=30
+PS9=54
+PS11=2
+PM5A=2
+YF372-SMDB(10K)=148'
+AEP400-24(10K)=148'
+5' SLACK
W3C=4
+SCT=50

POLE 84F

POLE 83.5
ADD:
+PS1=30
+PS9=54
+PS11=2
+PM5A=2
+YF372-SMDB(10K)=811'
+AEP400-24(10K)=811'
+5' SLACK
W3C=4
W3C=5'
+SCT=50

L-01500
XXYFD12-SMDEC10MD
XD,1-44
+FC,913,5-8+FC,105,9-12
XXAES104-22C10MD
CB,701-773+CD,74-75+
CB,776-800+C5,101-104
XXAE3-24C10MD
CB,301-438+XD,139+
CB,440-600

L-01500
+YFD72-SMDEC10MD-1
XD,1-44+
+FC,913,5-8+FC,105,9-12+XD,13-72
+AKF400-24C10MDB-1
CB,301-438+XD,139+
CB,440-600
CB,701-773+CD,74-75+
CB,776-795+C5,101-104+CB,800

POLE 84E

POLE 84D

POLE 84C

POLE 84B

POLE 84
REMOVE:
XXPOLE
XXPS1-30=2
XXPS9-54=2
XXW3=7
XXC1=170'
XXC2=170'
XXC3=170'

POLE 83
REMOVE:
XXPOLE
XXPOLE
XXPW4
XXC1=830'
XXC2=830'
XXC3=830'

POLE 85
REMOVE:
XXPOLE
XXPS1-30=2
XXPS9-54
XXC1=340'
XXC2=340'
XXC3=340'

POLE 85
ADD:
+PS1=30=2
+PS9=54=2
+PS11=2
+PM5A=2
+PM5B
+YF372-SMDB(10K)=118'
+AEP400-24(10K)=118'
+5' SLACK
+SCT=100

POLE 86
REMOVE:
XXPOLE
XXW3=8
XXYF
XXBUS
XXC1=886'
XXC2=886'
XXC3=886'

POLE 86
ADD:
+PM5A=2
+YF372-SMDB(10K)=166'
+AEP400-24(10K)=166'
+5' SLACK
+SEA8-55=150'
+SEB8-55=90'
+SW8=2
+W7
W7F
+SCT=50
W3C=4

POLE 87
ADD:
+PS1=30
+PS9=54
+PS11
+PM5A=2
+PM5B
+YF372-SMDB(10K)=800'
+AEP400-24(10K)=800'
+5' SLACK
+SCT=50
+YF372-SMDB(1000P)=800'
+PM5B(A)(B)=2

POLE 87
REMOVE:
XXPOLE
XXW3=8
XXC1=800'
XXC2=800'
XXC3=800'

POLE 87A
REMOVE: XXPOLE

POLE 86B

POLE 86A

POLE 87B
POLE 1
ADD:
+PM5A
+PM5B
+AEP35-24(10K)=876'
+AKF25-24C10MD

POLE 1
ADD:
+PS1=30
+PS9=54
+PS11
+PM5A
+PM5B
+5' SLACK
+SCT=50
W3C=4
+AEP35-24(10K)=813'

POLE 88C

POLE 1
POLE 88B
140

+AKF25-24C10MD

L-01500
+YFD72-SMDEC10MD
XD,1-44+
+FC,913,5-8+FC,105,9-12+XD,13-72
+AKF400-24C10MD
CB,301-438+XD,139+
CB,440-500+XD,201-275+
CB,576-593+XD,294+CB,595-600+
CB,701-773+CD,74-75+
CB,776-795+C5,101-104+CB,800

POLE 88
ADD:
+PM5A=2
+PM5B
+YF372-SMDB(10K)=838'
+AEP400-24(10K)=838'
+5' SLACK
+SCT=50

POLE 88
REMOVE:
XXPOLE
XXW3=7
XXC1=800'
XXC2=800'
XXC3=800'
XXPS1-2

L-01500
XXYDF12-SMDEC10MD
XD,1-44+
+FC,913,5-8+FC,105,9-12
XXAES104-22C10MD
CB,701-773+CD,74-75+
CB,776-800+C5,101-104
XXAE3-24C10MD
CB,301-438+XD,139+
CB,440-500+XD,201-275+
CB,576-593+XD,294+CB,595-600

L-02145
XXAE25-24C6MD
CB,576-593+XD,19+
CB,595-600
L-02145
+AKF25-24C10MD
CB,576-593+XD,19+
CB,595-600

POLE 1
XXC1=850'
XXPOLE

POLE 1
ADD:
+PS1=30
+PS9=54
+PS11
+PM5A
+PM5A
+AEP35-24(10K)=180'

POLE 2
XXC1=180'
XXPOLE

POLE 2
ADD:
+PS1=30
+PM5A
W3C
+PS9=54
+5' SLACK
+AEP35-24(10K)=180'

POLE 88A
REMOVE: XXPOLE

POLE 1A

POLE 2A

POLE 2
REMOVE: XXPOLE
XXPS1-30=2
XXC1=80'

ATTACH TO NEW POLE

POLE 2
ADD:
+AEP100-24(10K)=894'
+PM5A
+5' SLACK
W3C
W3E
W3C=100
XXBR
W7F
+SEA8-55=178'

POLE 2X
ADD:
+PS1=30
+PS9=54
+PM11

OMIT POLE 1
POLE 1
REMOVE:
XXPOLE
XXPS1-30=2
XXPS1-54
XXC1=830'
XXBR=2

MOVED VEC POLE BACK, STAKED IN EXISTING ROAD

MOVED VEC POLE AHEAD TO OVERHEAD IN FENCE

MAKE VEC POLE STRAIGHT LINE

POLE 84.5
ADD:
+PM5A=2
+PM5B
+YF372-SMDB(10K)=894'
+AEP2104-22(10K)=894'
+AEP400-24(10K)=894'

SWING DROP

SWING DROPS

SWING DROP

L-01518
XXAEF1-24C10MD
CB,501-575+XD,76-100

L-01518
+AKF100-24C10MD
CB,501-575+XD,76-100

WWC-3

WTZ-3

WWC-4

POLE 83.5A
POLE 84A

POLE 83A

POLE 84C

POLE 84B

POLE 84

POLE 1A

POLE 2A

POLE 86A

POLE 87A

POLE 88A

POLE 1
POLE 88B

POLE 2X

POLE 2

POLE 1

POLE 83

POLE 84F

POLE 84E

POLE 84D

POLE 84C

POLE 84B

POLE 84

POLE 83.5A
POLE 84A

POLE 83A

POLE 85

POLE 86

POLE 86B

POLE 87

POLE 87A

POLE 87B

POLE 88C

POLE 88

POLE 88A

POLE 1
POLE 88B

POLE 1A

POLE 2A

POLE 86A

POLE 2X

POLE 2

POLE 1

OUT BLDG.

STORAGE

BARN

1 F RES

1 B RES

1 BL RES

1 BL BUS

DBL MOBILE HOME

MOBILE HOME

F GARAGE

POOL

CONC.

TANKS

ASP

ASP CANOPY

OWNER ID # - 5098
FACILITY # - 4-180021
TANK 1 - 1000 GAL (GAS)
TANK 2 - 1000 GAL (GAS, LEAKS)
TANK 3 - 1000 GAL (GAL)

DEBRIS

GRAVEL

TRAIL

WOODS

METAL POLE

METAL GUY POLE

POLE MOUNTED SIGN

POWER POLE ESMT.

GAS

W.M.

OHP

SEE SHEET NO 11A

SEE SHEET NO 11B

FENCE LANE

BEGIN CHERRY BRANCH ROAD

MATCH LINE STA 128+00

S.V.F. 05° 56' E
CHERRY BRANCH RD. ℄ S 6° 05' 33" E 88.84'
S 70° 14' 47" W
145.80'

POT 34+00.17

31+06.54

GPS #S124

EL-1906.73

EL-1905.54

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 128+00 TO STA. 141+00

SCALE: 1"= 50'

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

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	11B

PROPOSED CURVE DATA

S.R. 101
PI 149+84.65
N 606,383.1513
E 2,283,044.0528
∼s 23° 04' 00" (RT)
's 5° 00' 00"
∼c 13° 04' 00" (RT)
Dc 4° 00' 00"
Rc 1,432.39
Lc 326.66
Ts 417.63
Ls 250.00
SE 0.063 FT/FT
DESIGN SPEED 50 MPH

N

TRAIL
DBL MOBILE HOME
OPEN FIELD
145
150
WOODS
1 F BUS
BARN
CHICKEN HOUSE
MOBILE HOME
BURIED
BURIED DROP
POWER POLE CRUT
METAL POLE 18
METAL POLE 17
GRAVEL
PRES. R.O.W.
ASP
CAR WASH
METAL BLDG
AMUSEMENT PARK
SIGN
SWING DRIVE
1 METAL BUS
SUPPORT
INSET M
INSET N
INSET O
MATCH LINE STA. 143+00 SEE SHEET NO.10B
MATCH LINE STA. 154+00 SEE SHEET 2NO.11B

POLE 89.5
ADD
+PSDA=2
+PHSS
+YFD72-SMDEC10NOA-1(10N)=110'
+AKF400-24(10N)=110'
+6" SLICE
+PCT=8
+BBC=8

POLE 89
REMOVE
POLE
POLE 89A
REMOVE
XXEC4=60'
POLE 89A
ADD
+PSDA
+PHSS=60
+6" SLICE
+AKF400-24(10N)=100'

POLE 89
ADD
+PSDA=2 +PHSS-18(88)
+PHSS
+YFD72-SMDEC10NOA-1(10N)=100'
+AKF400-24(10N)=100'
+6" SLICE
+PCT=60

POLE 89B
REMOVE
XXEC3=110'
XXEC4=110'

POLE 90C
REMOVE
XXEPOLE
XXEC3=80'
XXEC4=80'

XXAE50-24C25"D
CB,401-438+XD,39+
CB,440-447+XD,48+
CB,449-450

POLE 91
ADD
+PSDA=2
+PHSS
+PHSS2
+YFD72-SMDEC10NOA-1(10N)=180'
+AKF400-24(10N)=180'
+6" SLICE
+PCT=80

POLE 91
REMOVE
XXEPOLE
XXEC3=330'
XXEC4=330'
XXEPCT=8

POLE 92
REMOVE
XXEPOLE
XXEC3=335'
XXEC4=335'
XXEPCT=8
XXEPCT-2=8
XXEPCT-4=4
XXEPCT-6=4
XXEBB8
XXEPCT=8

POLE 92X
ADD
+PSDA=80-8
+PHSS=84
+PHSS

POLE 93B
REMOVE
XXEC4=140'
XXEPCT=8
XXEPCT-2=8
XXEBB8=8

POLE 93X
ADD
+PSDA=80-8
+PHSS=84
+PHSS

POLE 93
ADD
+PSDA=8
+PHSS=8
+YFD72-SMDEC10NOA-1(10N)=140'
+AKF400-24(10N)=140'
+6" SLICE
+PCT=80
+BBB8-88-883'

POLE 93
REMOVE
XXEPOLE
XXEC4=275'
XXEPCT=8
XXEBB

POLE 93A
ADD
+PSDA
+PHSS=80
+6" SLICE
+AKF400-24(10N)=100'

POLE 93A
REMOVE
XXEC4=270'
XXEPCT=8
XXEPBB=8

POLE 92
ADD
+PSDA=80-8
+PHSS=8
+YFD72-SMDEC10NOA-1(10N)=300'
+AKF400-24(10N)=300'
+6" SLICE
+PCT=8
+BBB8-88-800'
+BBB8-88-800'
+BBB8
+BBB8

POLE 91A
ADD
+6" SLICE
+PHSS=88
+PHSS
+AKF36-24(.88N)=180'

POLE 91A
REMOVE
XXEC4=800'

POLE 90
ADD
+PHSS=8
+PHSS2
+YFD72-SMDEC10NOA-1(10N)=138'
+AKF400-24(10N)=138'

POLE 90
REMOVE
XXEPOLE
XXEC3=100'
XXEC4=100'
XXEC5=100'
XXEBB=8

POLE 90A

XXAKF50-24C6"D
CB,351-375+XD,26-50

XXAKF25-24C25"D
CB,451-475

+AKF25-24C25"D
CB,451-475

XXAKF25-24C25"D
CB,476-485+XD,11-13+
CB,489+XD,15-CB,491+
XD,12-23+CB,499-500

+AKF25-24C10"D
CB,426-438+XD,14+
CB,440-447+XD,23+
CB,449-450

XXAE25-24C10"D DW
CB,426-438+XD,14+
CB,440-447+XD,23+
CB,449-450

L-01500
+YFD72-SMDEC10NOA-1
XD,1-4+
+FC,913,5-8+FC,105,9-12+XD,13-72

+AKF400-24C10NOB-1
CB,301-438+XD,139+
CB,440-500+XD,201-275+
CB,576-593+XD,294+
CB,595-600
CB,701-773+CD,74-75+
CB,776-395+C5,101-104+CB,800

L-01500
XXYFD12-SMDEC10N0
XD,1-4+
+FC,913,5-8+FC,105,9-12
XXAES104-22C10N0
CB,701-773+CD,74-75+
CB,776-800+
+C5,101-104
XXAE3-24C10N0
CB,301-438+XD,139+
CB,440-500+XD,201-275+
CB,576-593+XD,294+
CB,595-600

VEC NEEDS TO MOVE POLES TO PROPERTY LINES

VEC NEEDS TO MOVE POLES SO OVERHEADS ARE ON BISECT

N 57° 56' 00" E
N 57° 24' 53" E 128.95
N 81° 00' 00" E
S 57° 56' 0" W 22.92'
S 53° 38' 24" W 22.92
S 36° 21' 36" E 14.02
S 33° 26' 41" E 62.57'
S 33° 26' 41" E 62.02'
S 13° 3' 48" E 10.40
N 76° 56' 12" E 22.92'
N 76° 39' 59" E 22.89'
S 13° 3' 48" E 10.02'

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00013 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 141+00 TO STA. 154+00

SCALE: 1" = 50'

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

PROPOSED CURVE DATA

SHORTY BARNS ROAD		SHORTY BARNS ROAD	
PI	31+88.02	PI	33+39.55
N	606,459.6760	N	606,311.0210
E	2,284,382.5020	E	2,284,346.8970
~	22° 28' 11" (RT)	~	16° 45' 28" (LT)
D	22° 00' 00"	D	9° 00' 00"
R	260.44	R	636.62
L	102.13	Lc	186.20
T	51.73	T	93.77
SE	0.060 FT/FT	SE	0.035 FT/FT
DESIGN SPEED	20 MPH	DESIGN SPEED	20 MPH

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	12B

STA. 163+10.00 S.R. 101 =
STA. 30-54.22 SHORTY BARNS RD.
N 606591.8260
E 2284361.5710
~ = 90°00'00" RT.

L-01500
XXYFD12-SMDEC10MDA-1
XD,1-4+
FC,913,5-8+FC,105,9-12+XD,13-72

+AKF400-24C10MD
CD,1-75+XD,76-215+
CD,216-237+XD,238-239+
CD,240-250+XD,251-275+
CD,476-500+XD,301-395+
C5,101-104+XD,400

L-01500
XXYFD12-SMDEC10MD
XD,1-4+
FC,913,5-84FC,105,9-12
XXAES104-22C10MD
CB,701-773+CD,74-75+
CB,776-800+
C5,101-104
XXAE3-24C10MD
CB,301-438+XD,139+
CB,440-500+XD,201-275+
CB,576-593+XD,294+
CB,595-600

+YFD72-SMDEC10MDA-1
XD,1-4+
+FC,913,5-8+FC,105,9-12+XD,13-72

+AKF400-24C10MDB-1
CB,301-438+XD,139+
CB,440-500+XD,201-275+
CB,576-593+XD,294+
CB,595-600
CB,701-773+CD,74-75+
+CB,776-795+C5,101-104+CB,800

+AKF100-24C10MD
CB,701-750
+CD,1-2+XD,53-100

POLE 94
REMOVE:
XXPOLE
XXCU=240'
XXCU=240'
XXCU=240'
XXPE1-8
XXPP6-8A
XXHH

REMOVE:
XXCU=120'

POLE 94X
ADD:
+PB1-80
+PP6-8A
+PM11

POLE 94
ADD:
+PB1-80
+PM88
+PM88=8
+TP9P8-SMDB(10K)=184'
+AKF400-24(10K)=184'
+8" SLUICE
WBC=100

POLE 1
ADD:
WBC
+PM88
+8" SLUICE
WBC=100
+AKF100-24(10K)=72'

POLE 95
REMOVE:
XXPOLE
XXCU=300'
XXCU=300'
XXCU=300'
XXHH

POLE 95
ADD:
+PB1-80
+PM88
+PM88=8
+TP9P8-SMDB(10K)=276'
+AKF400-24(10K)=276'
+8" SLUICE
WBC=80

POLE 96
REMOVE:
XXPOLE
XXCU=333'
XXCU=333'
XXCU=334'
XXHH=8
XXPE1-8
XXPP6-8A

POLE 96
ADD:
+PB1-80
+PP6-8A
+PM88
+PM88=8
+TP9P8-SMDB(10K)=270'
+AKF400-24(10K)=270'
+8" SLUICE
WBC=80
+PM88(A)(X)=8
+TP9P8-SMDB(100K)=200'

POLE 96A
ADD:
+PB1-80
+PP6-8A
+PM11
+8" SLUICE
WBC=80
+AKF80-24(10K)=150'

POLE 96X
ADD:
+PB1-80
+PP6-8A
+PM11

POLE 1
ADD:
+PB1-80
+PP6-8A
+8" SLUICE
WBC=80
+AKF80-24(10K)=180'

POLE 2
ADD:
+PB1-80
+PP6-8A
+PM11
+PM88
+8" SLUICE
WBC=8
WBC=4
+JBC1=8A
+AKF80-24(10K)=150'

POLE 97
REMOVE:
XXPOLE
XXCU=180'
XXCU=180'
XXCU=180'
XXHH
XXPP6

POLE 97
ADD:
+PB1-80
+PP6-8A
+PM11
+PM88=8
+PM88
+TP9P8-SMDB(10K)=280'
+AKF400-24(10K)=280'
+8" SLUICE
WBC=80
+JBC1=80
+PM91-8S-84-80'
+8" SLUICE

POLE 98
REMOVE:
XXPOLE
XXCU=180'
XXCU=180'
XXCU=180'
XXPP6-8A

POLE 98
ADD:
+PM88=8
+TP9P8-SMDB(10K)=184'
+AKF400-24(10K)=184'

POLE 99
REMOVE:
XXPOLE
XXCU=135'
XXCU=135'
XXCU=135'
XXPE1-10
XXPP6-8A=4
XXPE1-4=8

POLE 99
ADD:
+PM88=8
+TP9P8-SMDB(10K)=150'
+AKF400-24(10K)=150'
8" SLUICE
WBC=4
WBC=8
+JBC1=4

POLE 1
REMOVE:
XXPOLE
XXCU=180'
XXHH=8

POLE 2
REMOVE:
XXCU=176'
XXHH

REMOVE:
XXCU=176'
XXPE1-10

VEC ADD OVERHEAD GUY&POLE

VEC ADD OVERHEAD GUY&POLE

VEC ADD POLE

VEC USE EX. SITE

+AKF25-24C10MD

+AKF50-24C10MD
CB,401-425+XD,26-50

XXAE50-24C6MD
CB,401-425+XD,26-50

XXAKF1-24C6MD
CB,701-750+CD,1-2+XD,53-100

L-01520
XXAKF2-22C10MD
XD,1-75+CB,776-800+
CB,301-400

L-01520
+AKF200-22C10MD
XD,1-75+CB,776-800+
CB,301-400

XXAE25-24IM
XD,1-14+CD,240+XD,16-18+
CD,244-250

POLE 1
REMOVE:
XXPOLE
XXCU=180'
XXHH=8

POLE 2
REMOVE:
XXCU=176'
XXHH

POLE 2
ADD:
+PB1-80
+PP6-8A
+PM11
+PM88
+PM88
WBC
WBC
WBC=8
+8" SLUICE
WBC=200
+AKF80-24(10K)=224'

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00013 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 154+00 TO STA. 167+00

SCALE: 1"= 50'

$$$$$SYTIME$$$$$$$

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	13B

N

1451.26
N81°00'00"E

170 175 180

734.91

L-01500
+YFD72-SMDE10MDA-1
XD,1-4+
FC,913.5-8+FC,105.9-12+XD,13-72

+AKF400-24C10MD
CD,1-75+XD,76-215+
CD,216-237+XD,238-239+
CD,240-250+XD,251-275+
CD,476-500+XD,301-395+
C5,101-104+XD,400

L-01500
XXYFD12-SMDE10MD
XD,1-4+
FC,913.5-8+FC,105.9-12
XXAES104-22C10MD
XD,1-75+CD,476-500+
C5,101-104
XXAE6-25C10MD
CD,1-75+XD,76-515+
CD,216-237+XD,538-539+
CD,240-250+XD,551-600

POLE 100
ADD
+PSDA=S
+PSDS
+YFD72-SMDE(10M)=180°
+AEF400-24(10M)=180°
+S" SLACK
VSE=S
VEC=S
+SCT=S

POLE 100
REMOVE
XXPOLE
XXDA=S
XXPOLE
XXDA=040'
XXDA=040'
XXPS1-S=S
XXPS1-SA
METAL POLE 22

POLE 101
ADD
+PSDA=S
+PSDS
+YFD72-SMDE(10M)=134°
+AEF400-24(10M)=134°
+S" SLACK
+SCT=100

POLE 101
REMOVE
XXPOLE
XXDA=163'
XXDA=163'
XXDA=163'
XXPS1-S=S
XXPS6-SA
XXSE=S

POLE 101X
ADD
+PS1-SS
+PS9-SA
+PS11

POLE 102
ADD
+PSDA=S
+YFD72-SMDE(10M)=170°
+AEF400-24(10M)=170°

POLE 102
REMOVE
XXPOLE
XXDA=136'
XXDA=136'
XXDA=136'

POLE 103
REMOVE
XXPOLE
XXDA=052'
XXDA=052'
XXDA=052'
XXPS1-S=S
XXPS1-SA=S
XXSE=S

POLE 103
ADD
+PSDA=S
+YFD72-SMDE(10M)=188°
+AEF400-24(10M)=188°
VSE=S
VEC=S
+S" SLACK XXPOLE
+SCT=S

POLE 103.5
ADD
+PS1-SS=S
+PSDA=S
+PSDS
+YFD72-SMDE(10M)=196°
+AEF400-24(10M)=196°

WOODS

POLE 103.5X
ADD
+PS1-SS=S
+PS9-SA
+PS11

POLE 103.75
REMOVE
XXPOLE
XXDA=180'

VEC ADD OVERHEAD GUY&POLE

VEC ADD OVERHEAD GUY&POLE

COPPER
FIBER

N 81°00'00" E
1877.88

0.147 ac
0.245 ac
234.43
0.093 ac
0.399 ac
0.277 ac
0.125 ac
0.321 ac

R=1457.39
L=234.86
177.40
N82°02'00"E
R=1885.09
29.19
S88°44'00"E
R=1407.39
L=180.28
R=1997.20
L=85.58
R=1407.39
L=46.52

174+18.15
26.18'
175+96.43
27.34'
176+34.63
28.19'
178+64.26
28.61'
175+97.39
27.33'
174+18.11
76.19'
176+45.64
76.77'
178+63.92
78.60'
179+53.19
79.01'
177+74.58
78.15

171+83.75
30.00'
169+36.74
80.00'
168+85.04
80.00'
167+29.30
80.00'
170+92.66
80.00'
172+35.50
80.00'

155.74
155.90
124.26
91.46
182.73
129.40
384.84
S29°59'21"E
S82°48'

POLE 103.5
REMOVE
XXPOLE
XXDA=90°
XXDA=90°
XXPS1-S=S
XXPS1-SA=S

POLE 104
REMOVE
XXPOLE
XXDA=90°
XXDA=90°
XXPS14

POLE 104
ADD
+PSDA=S
+YFD72-SMDE(10M)=90°
+AEF400-24(10M)=90°
VSE=S
VEC=S
+S" SLACK XXPOLE
+SCT=S

POLE 104
ADD
+PSDA=S
+YFD72-SMDE(10M)=286°
+AEF400-24(10M)=286°
+S" SLACK
+SCT=S
VSE=S
VEC=S
VEC-GUARD
VSPCR
VPT
XXPOLE
+YFD72-SMDE(LOOP)=200°
+FOSD(A)(R)=S

POLE 105
REMOVE
XXPOLE
XXDA=286°
XXDA=286°
XXDA=286°
XXPS14

L-01500
XXYFD12-SMDE10MD
XD,1-4+
+FC,913.5-8+FC,105.9-12
XXAES104-22C10MD
XD,1-75+CD,476-500+
C5,101-104
XXAE6-25C10MD
CD,1-75+XD,76-100+
CD,101-250+XD,251-500+
CD,501-586+XD,587+
CD,588-591+XD,592+CD,593-600

L-01500
+YFD72-SMDE10MDA-1
XD,1-4+
FC,913.5-8+FC,105.9-12+XD13-72XDS

+AKF400-24C10MDB-1
CD,1-75+XD,76-100+
CD,101-250+XD,251-275+CD,476-500
CD,501-595+
C5,101-104+XD,400

SEE SHEET NO.12B

SEE SHEET NO.14B

MATCH LINE STA. 167+00

MATCH LINE STA. 180+00

POLE 100A

POLE 1
REMOVE
XXDA=90°

ADD
+S" SLACK
VEC
+PSDA
VEC=100

+AKF100-24(10M)=356°

L-01557
XXAKF1-24C10MD
CD,101-200

L-01557
+AKF100-24C10MD
CD,101-200

VEC MOVE TO PROPERTY LINE

VEC MOVE TO EX SITE

EXISTING POLE

ASPHALT
BILLBOARD
GRAVEL
OPEN FIELD
RUIN
TRAIL
STORAGE
DEBRIS
SHED
SHEDS
1 F RES
1 F BUS
E9114382

N81°10'07"E
146.44
217.98
364.42
210.26
S9°41'11"E
N80°16'10"E
400.56
N70°42'34"E
288.25
S66°08'48"W
130.54
171.49
75.50
S26°53'10"E
230.76
S52°55'29"E
130.82
N66°05'40"E
97.06
130.00
S80°04'00"E

32+35.14
25.00'
32+72.34
25.00'
32+94.47
25.00'
32+72.54
25.00'
33+80.10
25.00'
34+18.57
25.00'

0.912 ac
0.147 ac
0.093 ac
0.245 ac
0.399 ac
0.277 ac
0.125 ac
0.321 ac

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00013 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 167+00 TO STA. 180+00

SCALE: 1"= 50'

$$$$TIME$$$$
$$$$CONSPEC$$$$

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	14B

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	15B

POLE 115
ADD:
+PS1-35-L
+PS6-35-L
+PS11-L
+PS88-L
+PS93
+6" BLOCK
+6" BLOCK
+ST1=1350
+BLOCK(75)
+ST1=12
+TP978-SNDB(100')=100'
+TP978-SNDB(100')=100'
+TP978-SNDB(100')=100'
+POSS(A)(X)=L
+TP978-SNDB(10K)=810'
+AEP600-24(10K)=810'

POLE 116 +6" BLOCK
ADD: +PCSS-18(SS)
+PS1-35-L
+PS6-35-L
+PS11-L
+PS88-L
+TP978-SNDB(10K)=810'
+AEP600-24(10K)=810'

L-01500
+YFD72-SMDEC10WDA-1
XD,1-4+
FC,913,5-8+FC,105,9-12+XD,13-72
+AKF600-24C10WDB-1
CD,1-100+
CD,101-395+C5,101-104+CD,500+
CD,501-586+XD,587+CD,588-600

POLE 113
ADD:
+PS1-35-L
+PS6-35-L
+PS11-L
+PS88-L
+TP978-SNDB(10K)=800'
+AEP600-24(10K)=800'

L-01500
XXYF012-SMDEC10WD
XD,1-4+
+FC,913,5-8+FC,105,9-12
XXAES104-22C10WD
XD,1-75+CD,476-500+
C5,101-104
XXAE56-26C10WD
CD,1-475+XD,476-500+
CD,501-586+XD,587+CD,588-600

POLE 114
ADD:
+PS88-L
+6" BLOCK
+ST1=L
WBD=S
+TP978-SNDB(10K)=800'
+AEP600-24(10K)=800'

POLE 114
REMOVE:
XXPOLE
XXCU=35'
XXCU=35'
XXCU=35'
XXPS1=L

POLE 115
REMOVE:
XXPOLE
XXCU=35'
XXCU=35'
XXCU=35'
XXPS1-35=S
XXPS6-35

POLE 116
REMOVE:
XXPOLE
XXCU=30'
XXCU=30'
XXCU=30'
XXPS1-35=S
XXPS1-35
XXPS84

POLE 116.5
REMOVE:
XXPOLE
XXCU=18'
XXCU=18'
XXCU=18'
XXPS1-35=S
XXPS1-35=S

L-01500
+YFD72-SMDEC10WDA-1
XD,1-4+
FC,913,5-8+FC,105,9-12+
FFB01,1-4+XD,5-12+XD,25-72
+AKF600-24C10WDB-1
CD,1201-1500+XD,301-395+C5,101-104+XD400+
FC2,401-425+XD,426-500+
FF5,51-70+XD,71-91+
FF5,92-100

L-01500
XXYDF12-SMDE(10WD
XD,1-4+
+FC,913,5-8+FC,105,9-12
XXYDF12-SMDE(E)
FFB01,1-4+XD,5-12
XXAES104-22C10WD
XD,1-50+FF5,51-70+XD,71-91+
FF5,92-100+C5,101-104
XXAE56-26C10WD
CD,1201-1500+XD,301-400+
FC2,401-425+XD,426-600

POLE 112
ADD:
+PS1-35-L
+PS6-35-L
+PS11-L
+PS88-L
+PS93
+6" BLOCK
+6" BLOCK
+ST1=35
WBD=S
+TP978-SNDB(10K)=850'
+AEP600-24(10K)=850'

POLE 112
REMOVE:
XXPOLE
XXCU=35'
XXCU=35'
XXCU=35'
XXPS1-35=S
XXPS6-35
XXPOLE

POLE 113
REMOVE:
XXPOLE
XXCU=35'
XXCU=35'
XXCU=35'
XXPS6-S

AKF25-24(6W)
CD,76-100

VEC REWORK TAP
SPAN OVER INTERSECTION
TOO LONG

MOVED VEC POLE
CANNOT DEADEND

SWING DROP

POLE 1
ADD:
+PS1-35-S
+PS6-35-S +35-S
+PS11-S
+PS88-S
+AEP600-24(10K)=175'
+TP978-SNDB(E)=175'
+AEP600-24(10K)=175'

POLE 1
REMOVE:
XXPOLE
XXCU=40'
XXCU=40'
XXPS1-35=S
XXPS6-35

L-01521
XXKF3-24C10WD
XD,1-200+FC2,401-425+
XD,226-250+FF5,51-70+XD,271-300
XXYDF12-SMDE(E)
FFB01,1-4+XD,5-12
XXAKF3-24C10WD
CD,1201-1500
XXAKF6-26(E)
CD,1-600

L-01521
+AKF600-24C10WDA-1
XD,1-200+FC2,401-425+
XD,226-250+FF5,51-70+XD,271-300
CD,1201-1500
+YDF12-SMDE(E)A-2
FFB01,1-4+XD,5-12
+AKF600-24C10WDB-1
CD,1-600

POLE 2
REMOVE:
XXCU=15'
XXCU=15'

POLE 2
ADD:
WCU=S
+PS88=S
+6" BLOCK
+6" BLOCK
WBD=1200
+TP978-SNDB(100')=100'
WCU=100
+BLCO(15)
+POSS(A)(X)
WBD=12
+AEP600-24(10K)=800'
+TP978-SNDB(E)=800'
+AEP600-24(10K)=800'

STA. 200+75.00 S.R. 101 =
P.L. STA. 30+00.00 ST. GEORGE RD.
N 607518.7670
E 2287754.6440
~ = 90°00'00" RT.

STA. 31+35.04 ST. GEORGE RD. =
STA. 10+00.00 SPRING LAKE DR.
N 607446.0180
E 2287868.4080
~ = 87°27'00" RT.

PC 32+66.02

PT 34+53.38

PC 2+19.25

PC 200+45.00

ST 197+73.92

CS 195+23.92

MATCH LINE STA. 193+00 SEE SHEET NO. 14B

MATCH LINE STA. 206+00 SEE SHEET NO. 16B

METAL POLE 28

METAL POLE 29

METAL POLE 30

POWER POLE ESMT.

PRES. R.O.W.

SPRING LAKE DR.

ST GEORGE DR.

S.R. 101

SPRING LAKE

OPEN FIELD

WOODS

GRAVEL

BILLBOARD

1 F RES

AREA U/C

2032 DAILY
PM
[AM]

FOR
R.O.W.
ONLY

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 193+00 TO STA. 206+00

SCALE: 1" = 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	16B

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

TO FOOD CITY

POT 50+00.00

L-02146
AKFUG100-24
CD,1251-1285+XD,86-100

STA. 212+57.41 S.R. 101 =
P.I. STA. 50+00.00 TOWNE CENTER RD.
N 608442.33
E 2288489.62
~ = 85^00'00" RT.

ADD:
POLE 117
+PXSA=2
+PXS3
+5" SLAVE
+I" SLAVE
WEC=50
+JCT=50
+FXST-50-84-00'
+77DT2-SMDE(10M)=250'
+AEP600-24(10M)=250'

POLE 117
REMOVE:
XXCA=184'
XXCA=184'
XXCA=184'

ADD:
POLE 118
+PXSA=3
+77DT2-SMDE(10M)=195'
+AEP600-24(10M)=195'

POLE 118
REMOVE:
XXCA=185'
XXCA=185'
XXCA=185'

24 HOUR ATM

BURIED

AKF30-24(10M)
XD,1-10+CD,1311-1350

OVERHEADS=3

AERIAL

METAL POLE 31

CHANGED VEC TO HIT METAL POLE

GPS #5144

W.M.

UG

AKFUG50-24'
XD,1-35+CD,1286-1300

FIRST NATIONAL BANK

CONC PAD

METAL POLE 32

ELECTRIC METERS

ELEC. PED.

STRAND POLE

4" SHLD

WOODS

POLE 119
REMOVE:
XXCA=240'
XXCA=240'
XXCA=240'

POLE 120
REMOVE:
XXCA=215'
XXCA=215'
XXCA=215'

ADD:
POLE 119
+PXSA=4
+PXS3
+5" SLAVE
WEC=150
+JCT=150
+77DT2-SMDE(10M)=250'
+AEP600-24(10M)=250'

ADD:
POLE 120
+PXSA=4
+PXS3
+77DT2-SMDE(10M)=215'
+AEP600-24(10M)=215'

L-01500
XXYDF12-SMDE(10M)
XD,1-4+
+FC,913,5-8+FC,105,9-12
XXYDF12-SMDE(E)
FF801,1-4+XD,5-12
XXAE2104-22(10M)
XD,1-50+FF5,51-70+XD,71-91+
FF5,92-100+C5,101-104
XXAE6-26(10M)
CD,1201-1500+XD,301-400+
FC2,401-425+XD,426-600

L-01500
+YFD72-SMDE(10M)A-1
XD,1-4+
FC,913,5-8+FC,105,9-12+
FF801,1-4+XD,5-12+XD,25-72
+AKF600-24(10M)B-1
CD,1201-1500+XD,301-395+C5,101-104+XD,400+
FC2,401-425+XD,426-500+
FF5,51-70+XD,71-91+
FF5,92-100

ADD:
POLE 121
+PXSA=2
+PXS3
+77DT2-SMDE(10M)=195'
+AEP600-24(10M)=195'
+5" SLAVE
WEC=50
+JCT=50
+SMDE2-22=242'
WEC=2

POLE 120.5
REMOVE:
XXCA=195'
XXCA=195'
XXCA=195'
XXPST-2=2
PF1-SME

POLE 121
REMOVE:
XXCA=195'
XXCA=195'
XXCA=195'
XXPST-2=2
XXPST-2=2
XXBS=2
XXBSBO=2

POLE 121X
REMOVE:
XXPOLE
XXPST-2=2
XXPST-2=2

POLE 121A
XXPOLE

ADD:
POLE 121X
+PST-2
+PST-50-2
+FTP-24
+PWI1=2

POLE 121B

OPEN FIELD

215

POWER POLE ESMT.

METAL POLE 33

OVERHEAD

OVERHEAD GUY

N 44° 24' 00" E

N 28° 26' 41" E
140.24'

N 50° 41' 31" E
156.40'

3 F BUS./ DALE REALTY

2 F BUS

DEBRIS

CONC

ASP

4" SHLD

FAIRFIELD GLADE

2 F. CHURCH

1 F. RES

FARRINGTON ROAD

P.I. 212+65.22

0.219 ac

0.738 ac

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 206+00 TO STA. 219+00

SCALE: 1"= 50'

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

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	17B

POLE 122
ADD
+PW3A=2
+PW5B
+TF073-SMDB(10M)=25'
+AEP600-24(10M)=25'
+5' SLACK
+3' SLACK
FD0=50
+PW7=50
+PW3T-50-24-25'
WGA

POLE 123
ADD
+PW7=50=2
+TF73-24=2
+PW11=2
+PW8A=2
+PW8B
+TF073-SMDB(LOOP)=100'
+YDF24-SMDE(LOOP)=100'
+SLACK(V3)
WGA=100'
FD0=50'
+PW8A(A)(X)=2
+1' SLACK=2
+5' SLACK=2
FD0=50
FD0=2
+TF073-SMDB(10M)=194'
+AEP600-24(10M)=194'

POLE 121.5
ADD
+PW5B
+PW3A=2
+TF073-SMDB(10M)=275'
+AEP600-24(10M)=275'

POLE 121.5
REMOVE
XXPOLE
XXD4=275'
XXD4=275'
XXD4=275'

POLE 122
REMOVE
XXPOLE
XXD4=25'
XXD4=25'
XXD4=25'
XXPT
XXD8
XXPW8B

POLE 123
REMOVE
XXPOLE
XXD4=194'
XXD4=194'
XXD4=194'
XXD8=2

POLE 1
REMOVE
XXPOLE
XXD4=100'
XXD4=100'
XXPT1-2=2
XXPT8-24
XXPT1-24

POLE 2
ADD
PT1=2
+PW8A=2

POLE 2
REMOVE
XXPOLE
PT1=2

POLE 1
ADD
+PT1-50=2
+PT8-24=2
+PW11=2
+PW8A=2
+PW8B
+5' SLACK=2
+POSITION(A)(X)
FD0=50
WGA=100'
+SLACK(24)
+TF108-SMDB(LOOP)=100'
FD0=50
XXD4=50'
XXD4=50'
+TF108-SMDB(.35X)=168'
+AEP60-24(10M)=168'
+AEP100-24(E)=168'

L-01500
XXYF012-SMDE(10M)
XD,1-4+
FC,913,5-8+FC,105,9-12
XXYF012-SMDE(E)
FF801,1-4+XD,5-12
XXAES104-22(10M)
FF5,1-100+C5-101-104
XXAE6-24(10M)
CD,1201-1500+XD,301-400+
FC2,401-425+XD,426-600

L-01500
+YF072-SMDE(10M)=1'
XD,1-4+
FC,913,5-8+FC,105,9-12+
FF801,1-4+XD,5-12+XD,25-72
+AKF600-24(10M)=1'
CD,1201-1500+XD,301-395+C5,101-104+XD400+
FC2,401-425+XD,426-500+
FF5,1-100

AKF50-24(25M)
XD,1-25+CD,1476-1500'

L-01500
+YDF12-SMDE(10M)
XD,1-4+
+FC,913,5-8+FC,105,9-12
YDF12-SMDE(E)
FF801,1-4+XD,5-12
YDF24-SMDE(E)
XD,1-8+FF801,9-12+
FC104,61-68+FC105,9-12
AES104-22(10M)
FF5,1-100+C5-101-104
AES2-24(E)
FC4,601-708+XD,109+
FC4,710-728+XD,129+
FC4,730-750+CD,1351-1400
AE6-24(10M)
FC4,1-175+XD,176-200+
FC4,201-250+
CD,1451-1475+XD,276-350+
CD,351-374+XD,375+CD,376-400+
FC2,401-425+XD,426-500+
FC4,501-581+XD,582+FC4,583-593+
XD,594+FC4,595-600
AKF1-24(E)
XD,1-65+FF5,66-75+XD,76-100

L-01583
XXYDF24-SMDE(25M)
XD,1-8+FF801,9-12+
FC104,61-68+FC105,9-12
XXAE50-22(10M)
FC4,151-175+XD,26-50
XXAE1-24(E)
FC4,601-700

L-01583
+YDF24-SMDE(25M)
XD,1-8+FF801,9-12+
FC104,61-68+FC105,9-12
+AKF50-24(10M)
FC4,151-175+XD,26-50
+AKF100-24(E)
FC4,601-700

STA. 220+85.00 S.R. 101 =
P.L. STA. 30+00.00 LAKEVIEW DR.
N 609033.6210
E 2289068.6510
~ 90°00'00" RT.

STA. 228+17.41 S.R. 101 =
P.L. STA. 40+00.00 WOODLANDS CIR.
N 609556.9264
E 2289581.0895
~ 102°08'00" LT.

VEC MOVE POLE BACK

ONE WAY SIGNS

OPEN FIELD

N 44° 24' 00" E

S 45° 36' 00" E

S 35° 17' 00" E

S 57° 44' 00" E

PT 35+01.40

PT 31+95.02

LAKEVIEW DR.

WOODLANDS CIR.

GRAVEL

ASPHALT

STORAGE

DEBRIS

POWER POLE ESMT

METAL POLE 34

METAL POLE 35

ATT TO METAL POLE

(28') CABLE

1 BL BUS (STORAGE)

1 BL BUS

1 B BUS (CARWASH)

2 F BUS/ BETTY'S BED & BREAKFAST

2 F BUS/ DALE DESIGNS

1 F BUS/ DUTCHMASTERS CABINETRY

1 BL BUS/FREITAG CONST.

STUCCO BUS

1 F RES

220

225

230

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 219+00 TO STA. 232+00

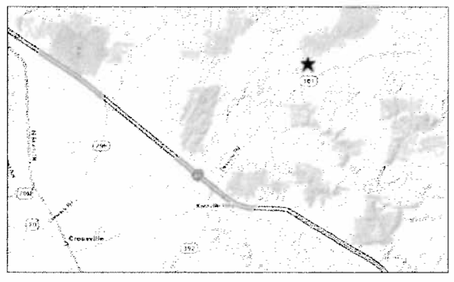
SCALE: 1"= 50'

UPPER CUMBERLAND GAS UTILITY DISTRICT

S.R 101 (PEAVINE ROAD) GAS LINE RELOCATION

PROJECT # 18038-2237-14

DEVELOPED BY:
UPPER CUMBERLAND GAS UTILITY DISTRICT
POST OFFICE BOX 807
CROSSVILLE, TENNESSEE 38577
(931) 484-9380



VICINITY MAP

BOARD MEMBERS :
ARTHUR GODSEY - CHAIRMAN
JEFF WELCH - VICE CHAIRMAN
STEVE STONE - SECRETARY
CHARLES D. HERSCHER - GENERAL MANAGER

PREPARED BY:

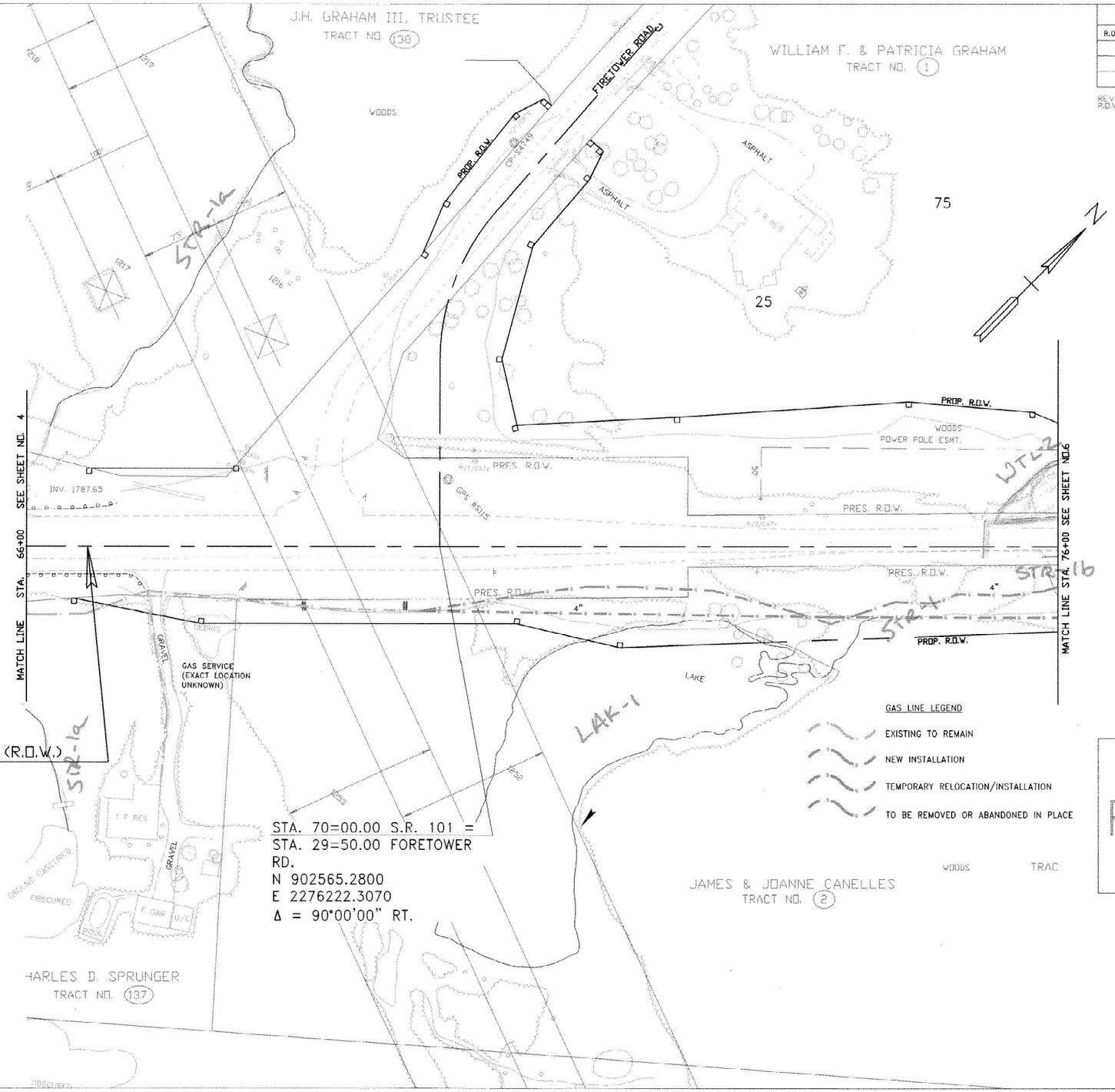
FECS

FIELD'S ENGINEERING CONSULTANT SERVICES
77 COTHER STREET
CROSSVILLE, TN 38555
(931) 456-6071
MAY 2011

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	5

REV. 1-27-11: LABELED PRESENT & PROP. R.O.W.

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



FOR R.O.W. ONLY

PROPOSED CURVE DATA

FIRETOWER ROAD
PI 26+95.07
N 602,751.4920
E 2,276,038.0340
~ 41° 10' 01" (LT)
D 26° 30' 00"
R 216.21
L 155.35
T 81.20
SE 0.065 FT/FT (20 MPH)
RUNOFF 74.12' 94% INSIDE
6% OUTSIDE CURVE

COORDINATE VALUES ARE NAD/83(1995) AND ARE DATUM ADJUSTED BY THE FACTOR 1.00013 & TIED TO THE TGRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

PRESENT LAYOUT

STA. 66+00 TO STA. 76+00

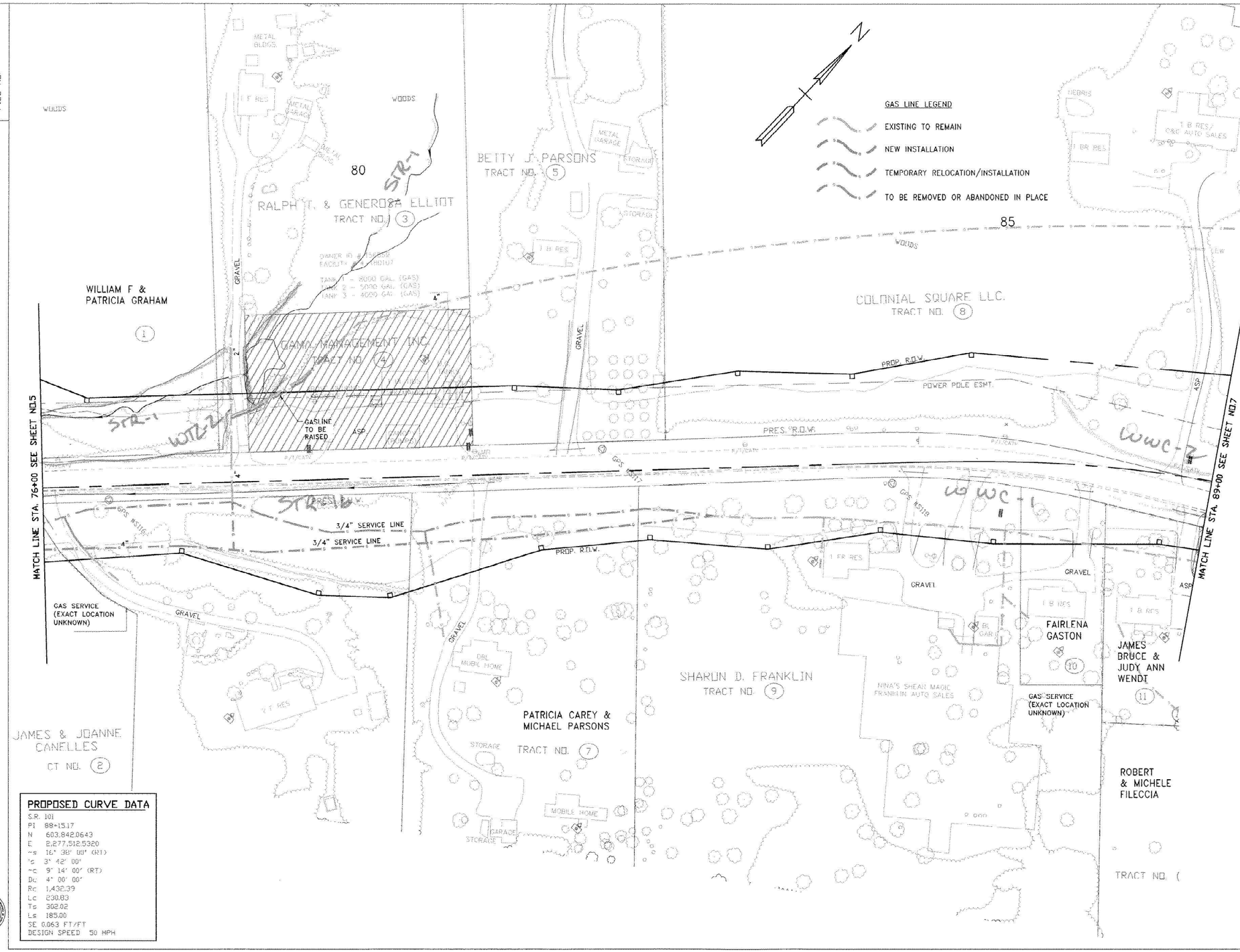
SCALE: 1"= 50'

Survey & Design Division

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	6

REV. 1-27-11: LABELED PROPOSED R.O.W. CORRECTED LOSS OF ACCESS PATTERN, TRACT 4.

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



FOR R.O.W. ONLY

PROPOSED CURVE DATA

S.R. 101
PI 88+15.17
N 603,842.0643
E 2,277,512.5320
~s 16° 38' 00" (RT)
's 3° 42' 00"
~c 9° 14' 00" (RT)
Dc 4° 00' 00"
Rc 1,432.39
Lc 230.83
Ts 302.02
Ls 185.00
SE 0.063 FT/FT
DESIGN SPEED 50 MPH

COORDINATE VALUES ARE NAD/83(1995) AND ARE DATUM ADJUSTED BY THE FACTOR 1.00013 & TIED TO THE TGRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

PRESENT LAYOUT

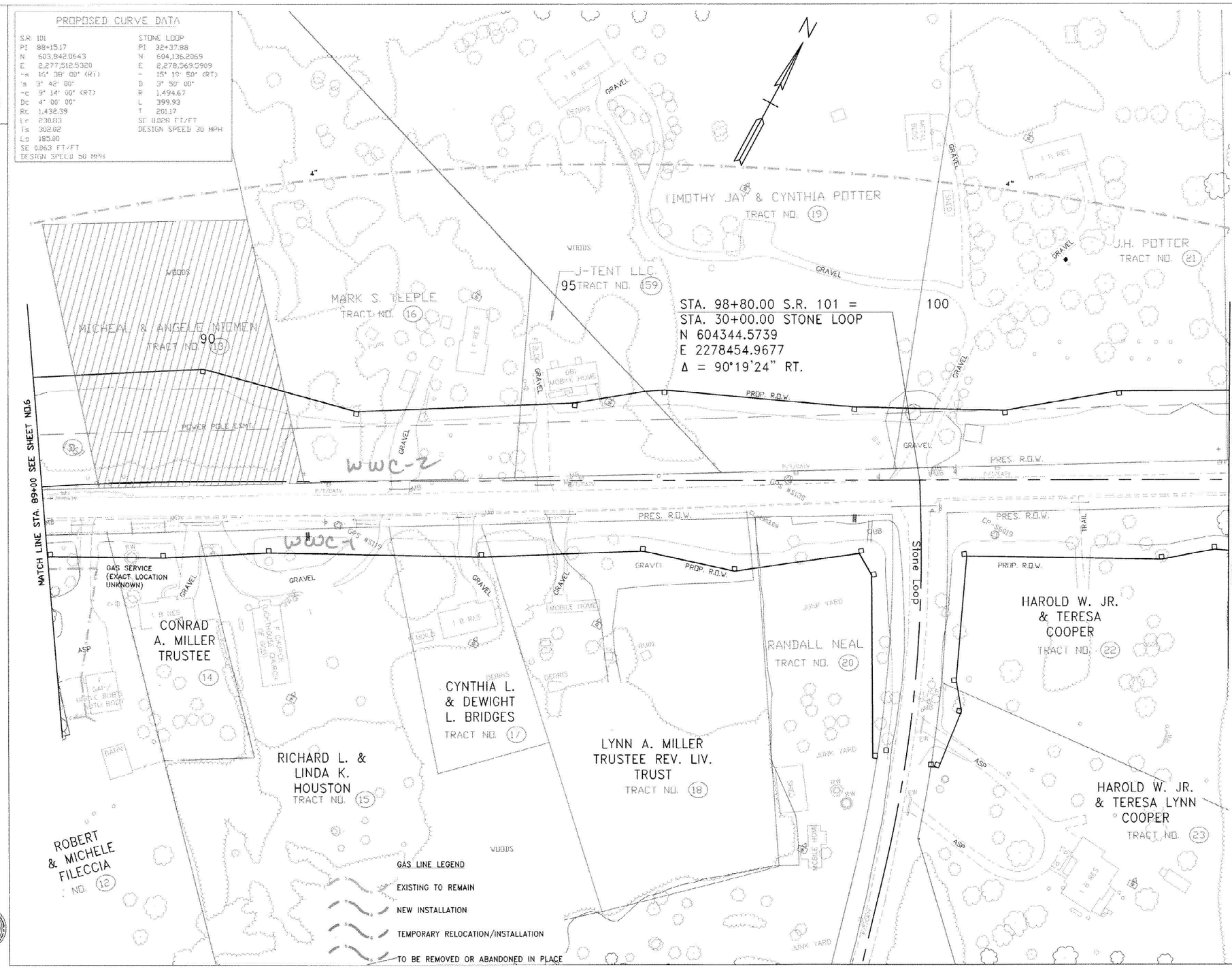
STA. 76+00 TO STA. 89+00

SCALE: 1"= 50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	7

REV. 1-27-11: LABELED PROP. R.O.W. CORRECTED LOSS OF ACCESS PATTERN, TRACT 13.



FOR R.O.W. ONLY

COORDINATE VALUES ARE NAD/83(1995) AND ARE DATUM ADJUSTED BY THE FACTOR 1.00013 & TIED TO THE TGRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

PRESENT LAYOUT

STA. 89+00 TO STA. 102+00

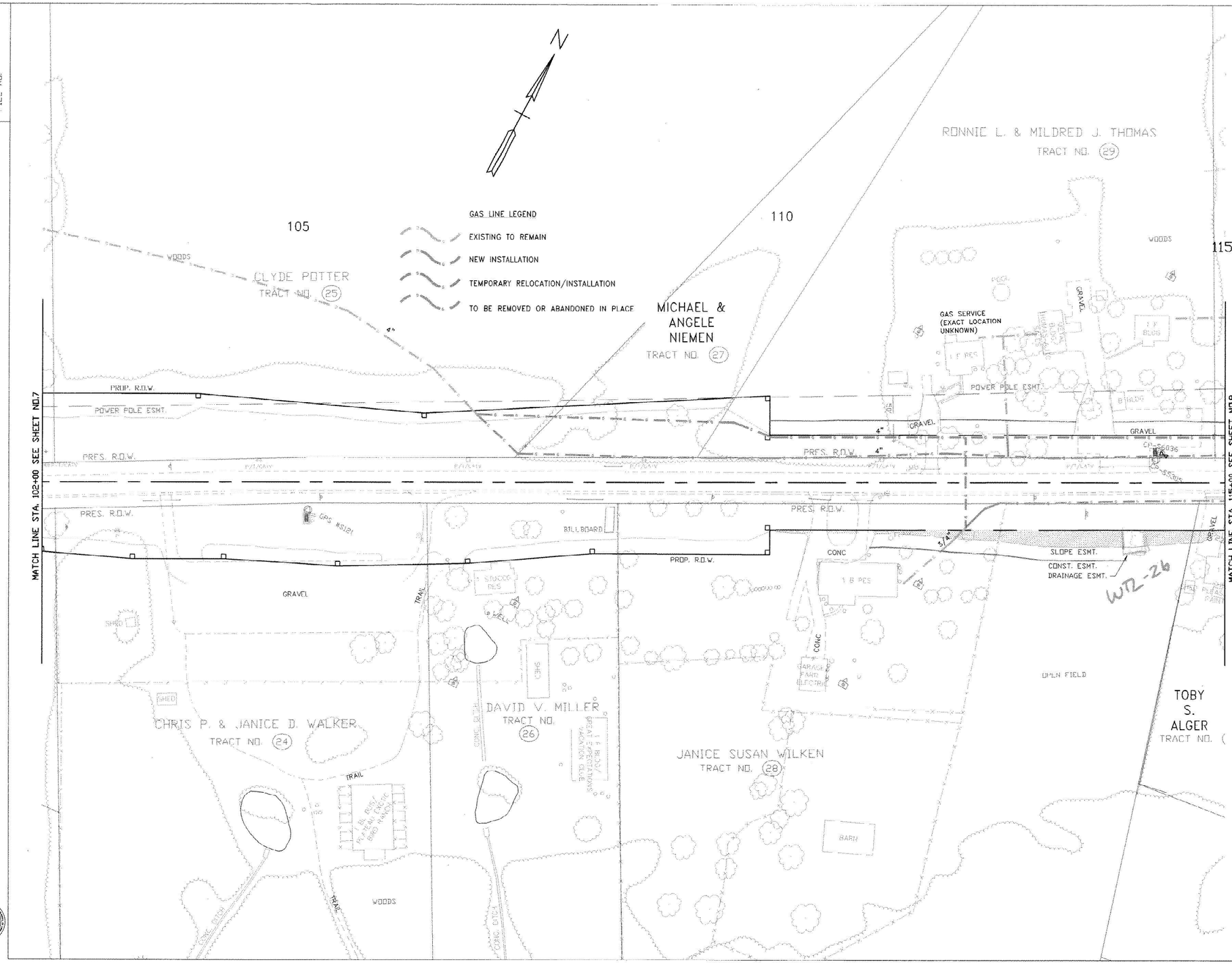
SCALE: 1"= 50'

Survey & Design Division

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	8

REV. 1-27-11: LABELED PROP. R.O.W., SLOPE, DRAINAGE, & CONST. ESMT.

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



FOR R.O.W. ONLY

COORDINATE VALUES ARE NAD/83(1995) AND ARE DATUM ADJUSTED BY THE FACTOR 1.00013 & TIED TO THE TGRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

PRESENT LAYOUT

STA. 102+00 TO STA. 115+00

SCALE: 1"= 50'

Survey Design Division

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	9

REV. 1-27-11: LABELED PROPOSED R.O.W., SLOPE, CONST., & DRAINAGE EASEMENTS.

STA 102+16.06 S.R. 101
=
STA. 50+00.00 STONE LOOP
N 605311.1552
E 22280356.3435
Δ = 96°13'47" RT.

GAS LINE LEGEND
- EXISTING TO REMAIN
- NEW INSTALLATION
- TEMPORARY RELOCATION/INSTALLATION
- TO BE REMOVED OR ABANDONED IN PLACE

N

PEAVINE PLAZA INC.
TRACT NO. (31)

J. RANDALL CROWDER
TRACT NO. (33)

STONE FAMILY LP OF CUMBERLAND CO.
TRACT NO. (34)

LANDSCAPE SOLUTIONS CO.
TRACT NO. (37)

JAMES & CAROLYN SULLIVAN
TRACT NO. (35)

IRIS L. LAWSON FARMS
TRACT NO. (39)

KENNETH A. BANEGAS
TRACT NO. (40)

AUSTIN & LARUE HAMBY
TRACT NO. (41)

JAMES N. & CYNTHIA A. PASQUINELLY
TRACT NO. (44)

LINVIL & VIRGINIA PARSONS BLAYLOCK
TRACT NO. (32)

DELOY & BETTY J. DAVENPORT
TRACT NO. (36)

VICKIE & DAVID D. WYATT
TRACT NO. (38)

DAVID D. & VICKIE L. WYATT
TRACT NO. (42)

AMANDA A. HAWN
TRACT NO. (43)

120
125

GAS SERVICE (EXACT LOCATION UNKNOWN)

MATCH LINE STA. 115+00 SEE SHEET NO.8

MATCH LINE STA. 128+00 SEE SHEET NO.10

Stone Loop

PROPOSE CURVE DATA
STR 101
PI 120+16.72
N 805,349.8987
E 8,280,340.4132
's 29° 29' 00" (RT)
's 6° 15' 00"
'c 16° 59' 00" (RT)
Dc 5° 00' 00"
Rc 1,145.92
Lc 339.67
Ts 427.07
Ls 250.00
SE 0.071 FT/FT
DESIGN SPEED 50 MPH

FOR R.O.W. ONLY

COORDINATE VALUES ARE NAD/83(1995) AND ARE DATUM ADJUSTED BY THE FACTOR 1.00013 & TIED TO THE TGRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

PRESENT LAYOUT

STA. 115+00 TO STA. 128+00

SCALE: 1"= 50'

Survey & Design Division

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	10

REV. 1-27-11: LABELED PROP. R.O.W., SLOPE, CONST., & DRAINAGE EASEMENTS.

PROPOSED CURVE DATA

S.R. 101	CHERRY BRANCH ROAD
PI 130+16.89	PI 31+62.07
N 605,324.8139	N 605,419.4390
E 2,281,354.7358	E 2,281,809.5710
Ts 33° 29' 00" (LT)	Δ 24° 52' 03" (RT)
Ys 5° 00' 00"	D 22° 45' 00"
Ys 23° 29' 00" (LT)	R 251.65
Dc 4° 00' 00"	L 109.31
Rc 1,432.39	T 55.53
LL 587.08	SE 0.064 FT/FT
Ts 556.39	DESIGN SPEED 20 MPH
Ls 250.00	RUNOFF 135' (60% OUTSIDE 40% INSIDE)
SE 0.063 FT/FT	
DESIGN SPEED 30 MPH	

GAS LINE LEGEND

- EXISTING TO REMAIN
- NEW INSTALLATION
- TEMPORARY RELOCATION/INSTALLATION
- TO BE REMOVED OR ABANDONED IN PLACE

STA 134.30.00 S.R. 101 =
STA. 30+00.00 CHERRY BRANCH RD.
N 605558.4200
E 22281726.1930
Δ = 90°00'00" RT.

STA 102+16.06 S.R. 101 =
STA. 10+00.00 FENCE LAND
N 605881.1150
E 22282242.6680
Δ = 91°43'01" RT.

JAMES N. & CYNTHIA A. PASQUINELLY
TRACT NO. 44
OPEN FIELD

130

135

140

LEAMON & CAROLYN BARNETT
TRACT NO. 54

INA MAE & BETTY L. GILBERT
TRACT NO. 42

GWEN F. GUITAR & DENNIS R. IRVING
TRACT NO. 48

J. RANDALL CROWDER
TRACT NO. 46

CHRISTINE J. SCHMIDT
TRACT NO. 47

J. RANDALL CROWDER
TRACT NO. 45

DANO A. ANDERSON
TRACT NO. 50

BILLY L. & SUE HOPPER

JAMES N. PAQUINELLY
TRACT NO. 53

RONALD F. WEB & MICHAEL ELLIS
TRACT NO. 52

EQUITY TRUST CO.
55

JACK & WANDA PLEASANT
TRACT NO. 51

WAYNE STEVENS, TRUSTEE
TRACT NO. 139

Cherry Branch Road

MATCH LINE STA. 128+00 SEE SHEET NO.9

MATCH LINE STA. 141+00 SEE SHEET NO.11

FOR R.O.W. ONLY

COORDINATE VALUES ARE NAD/83(1995) AND ARE DATUM ADJUSTED BY THE FACTOR 1.00013 & TIED TO THE TGRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

PRESENT LAYOUT

STA. 128+00 TO STA. 141+00

SCALE: 1"= 50'

Survey & Design Division

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	11

REV. 1-27-11: LABELED PROP. R.O.W., CONST., SLOPE, AND DRAINAGE EASEMENTS.

N

S.R. 101
PI 149+84.65
N 606,383.1510
E 2,283,044.0526
"s 23° 04' 00" (RT)
's 5° 00' 00"
"c 13° 04' 00" (RT)
Dc 4° 00' 00"
Rc 1,432.39
Lc 326.66
Ts 417.63
Ls 250.00
SE 0.063 FT/FT
DESIGN SPEED 50 MPH

MICHAEL S. & ARBANDA KAY KIRKLAND (56)

CALVIN L. & SUSAN K. SMART TRACT NO. (58)

WILLIAM ALFRED & HELEN FRANCIS WATSON TRACT NO. (59)

RUSSELL W. III & FAYE L. LEWIS TRACT NO. (60)

JOHN A. & PAMELA P. FOUNTAIN TRACT NO. (61)

LARRY DEAN COTTRELL TRACT NO. (62)

EQUITY TRUST CO. TRACT NO. (57)

DAVID R. & RENEE G. DAVENPORT TRACT NO. (160)

ANTHONY A. MARTIN

KENNETH R. & CLAUDIA C. BLEASURE

T.B.T. ENTERPRISES

FRANKLIN M. & CECILIA A. HUFF, TRUSTEE

FRANKLIN M. & CECILIA A. HUFF

MICHAEL & NELDIA CARUFE

145 150

TRACT NO. 34

TRAIL
SBR MOBILE HOME
OPEN FIELD
WOODS
1 F BUS
BARN
MOBILE HOME
DRAINAGE ESMT.
CONST ESMT.
SLOPE ESMT.
GAS SERVICE (EXACT LOCATION UNKNOWN)
PROP. R.O.W.
4"
POWER POLE ESMT.
GRAVEL
PRES. R.O.W.
3/4"
GPS #S125
GPS #S126
ASP
GAS
SIGN
CAR WASH
1 BU BUS
2 BUS
1 METAL BUS
METAL BLDG
CARPORT
AMUSEMENT PARK
METAL BLDG
JOHN NEWLAND
2128

MATCH LINE STA. 141+00 SEE SHEET NO.10

MATCH LINE STA. 154+00 SEE SHEET NO.12

R.O.W. FIELD REVIEW

COORDINATE VALUES ARE NAD/83(1995) AND ARE DATUM ADJUSTED BY THE FACTOR 1.00013 & TIED TO THE TGRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

PRESENT LAYOUT

STA. 141+00 TO STA. 154+00

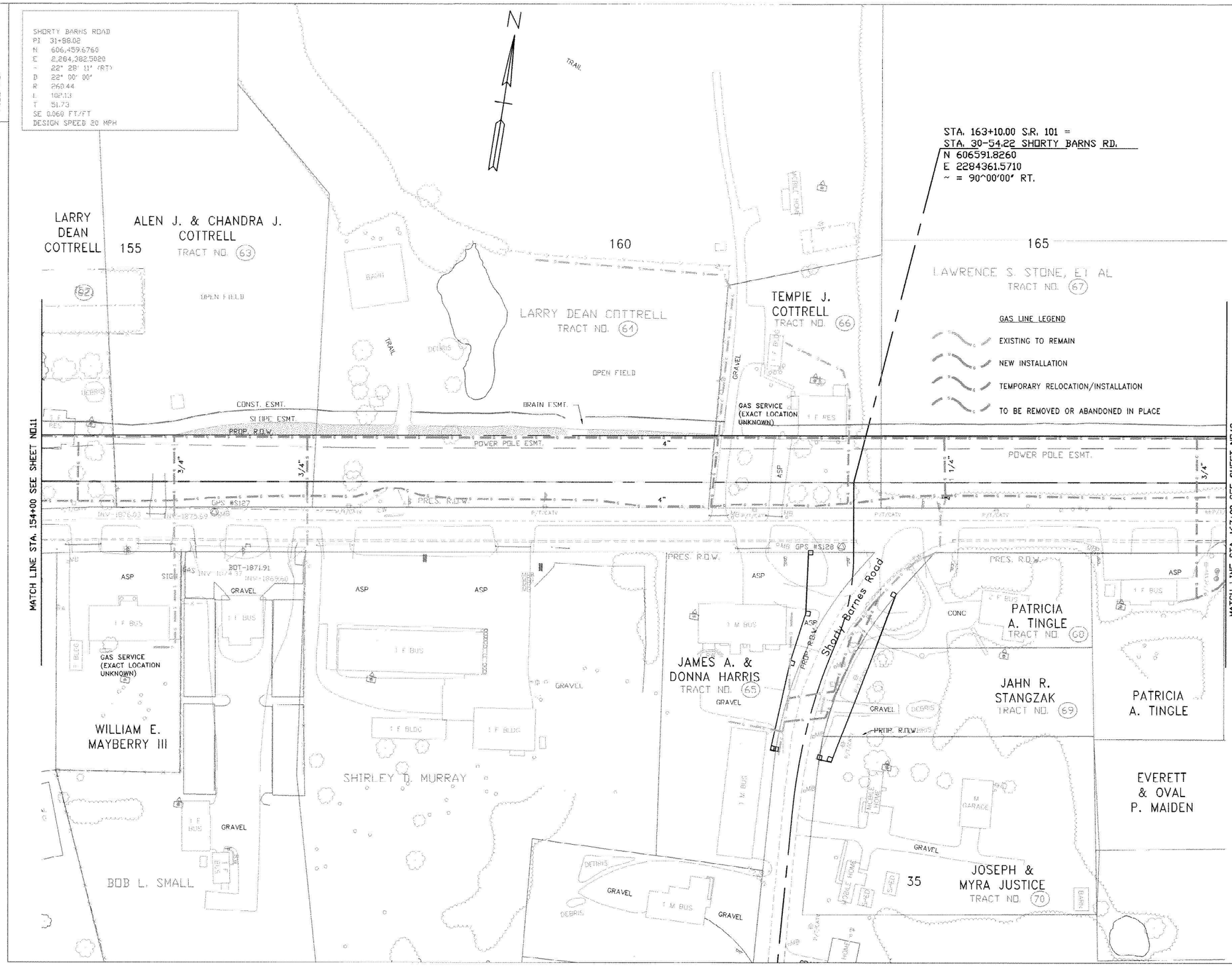
SCALE: 1"= 50'

Structural Design

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	12

REV. 1-27-11: LABELED PROP. R.O.W. AND SLOPE, DRAINAGE, AND CONSTRUCTION EASEMENTS.



FOR R.O.W. ONLY

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00013 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 154+00 TO STA. 167+00

SCALE: 1"= 50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	13

REV. 1-27-11: LABELED PROP. R.O.W., SLOPE, CONSTRUCTION, AND DRAINAGE EASEMENTS. ADDED SLOPE EASEMENT PATTERN.

N

GAS LINE LEGEND

EXISTING TO REMAIN

NEW INSTALLATION

TEMPORARY RELOCATION/INSTALLATION

TO BE REMOVED OR ABANDONED IN PLACE

170 175

STA. 169+35.00 S.R. 101 =
STA. 30+07.00 FAIRVIEW DR.
N 606689.5970
E 224978.8760
Δ = 90°00'00" RT.

LAWRENCE S. STONE, ET AL
TRACT NO. (67)

MATCH LINE STA. 167+00 SEE SHEET NO.12

MATCH LINE STA. 180+00 SEE SHEET NO.14

CONST. ESMT.
SLOPE ESMT.
DRAIN. ESMT.
POWER POLE ESMT.
PROP. R.O.W.
PRES. R.O.W.
Fairview Drive
WOODS
ASPHALT
BILLBOARD
KEITH RANDALL DUNAWAY (2)
BILLY HOPPER JR. & MELBA LEA TRACT NO. (71)
GARY BREWER TRACT NO. (73)
JACKIE M. STEVENS
MILDRED CAUGHRAN
BILLY & SUE HOPPER
OPEN FIELD
DONALD M. JR. & LILLIAN J. WALKER
EVERETT & OVAL P. MADEN TRACT NO. (140)
BENNY W. & KAREN R. GIBSON
GRAVEL
SHED
SHEDS
STORAGE
DEBRIS
TRAIL
UPS #S129
1" GAS
1" WTR
1" TEL
1" ELEC
1" CATV
BB
ASP
3/4"
2"
4"

FOR R.O.W. ONLY

COORDINATES ARE NAD/83(1995). ARE DATUM ADJUSTED BY THE FACTOR OF 1.00013 AND TIED TO THE TCRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 167+00 TO STA. 180+00

SCALE: 1"= 50'

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

GAS LINE LEGEND
EXISTING TO REMAIN
NEW INSTALLATION
TEMPORARY RELOCATION/INSTALLATION
TO BE REMOVED OR ABANDONED IN PLACE

STA. 189+56.86 S.R. 101 =
P.I. STA. 50+00.00 FAIRVIEW ROAD
N 606753.7277
E 2286983.1309
Δ = 91°06'36" RT.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	14

REV. 1-27-11: LABELED PROP. R.O.W., SLOPE, CONSTRUCTION, AND DRAINAGE EASEMENTS. ADDED SLOPE EASEMENT PATTERN.

FOR R.O.W. ONLY

N

STONE FAMILY LP
OF CUMBERLAND CO.
TRACT NO. (34)

GERALD F. & CAROLYN P. ERAMBERT
TRACT NO. (74)

LAWRENCE S. STONE, ET AL
TRACT NO. (67)

IVO WILLIAM
TRACT NO. (75)

GERALD F. & CAROLYN P. ERAMBERT
TRACT NO. (78)

WYNDHAM VACATION RESORTS 2160
TRACT NO. (79)

MARY L. HULL TRUST

MARY L. HULL TRUST
TRACT NO. (77)

BILLY L. & SUE HOPPER

JOSEPH P. & JEANENE DORAN

JUANITA BROWN

TIMOTHY D. & CAMILLE B. COMBS

BILLY L. & SUE HOPPER
TRACT NO. (141)

MID CONTINENT ENERGY INC.
TRACT NO. (76)

GAS SERVICE (EXACT LOCATION UNKNOWN)

MATCH LINE STA. 180+00 SEE SHEET NO13

MATCH LINE STA 193+00 SEE SHEET NO15

TS 184+23.92

SC 186+73.92

PC 51+85.26

PT 54+38.59

S 15° 02' 00" E

S 15° 40' 00" E

FAIRVIEW ROAD

CONST. ESMT.
SLOPE ESMT.
PROP. R.O.W.
DRAIN. ESMT.
POWER POLE ESMT.
PRES. R.O.W.

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00013 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 180+00 TO STA. 193+00

SCALE: 1"= 50'

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

PROPOSED CURVE DATA

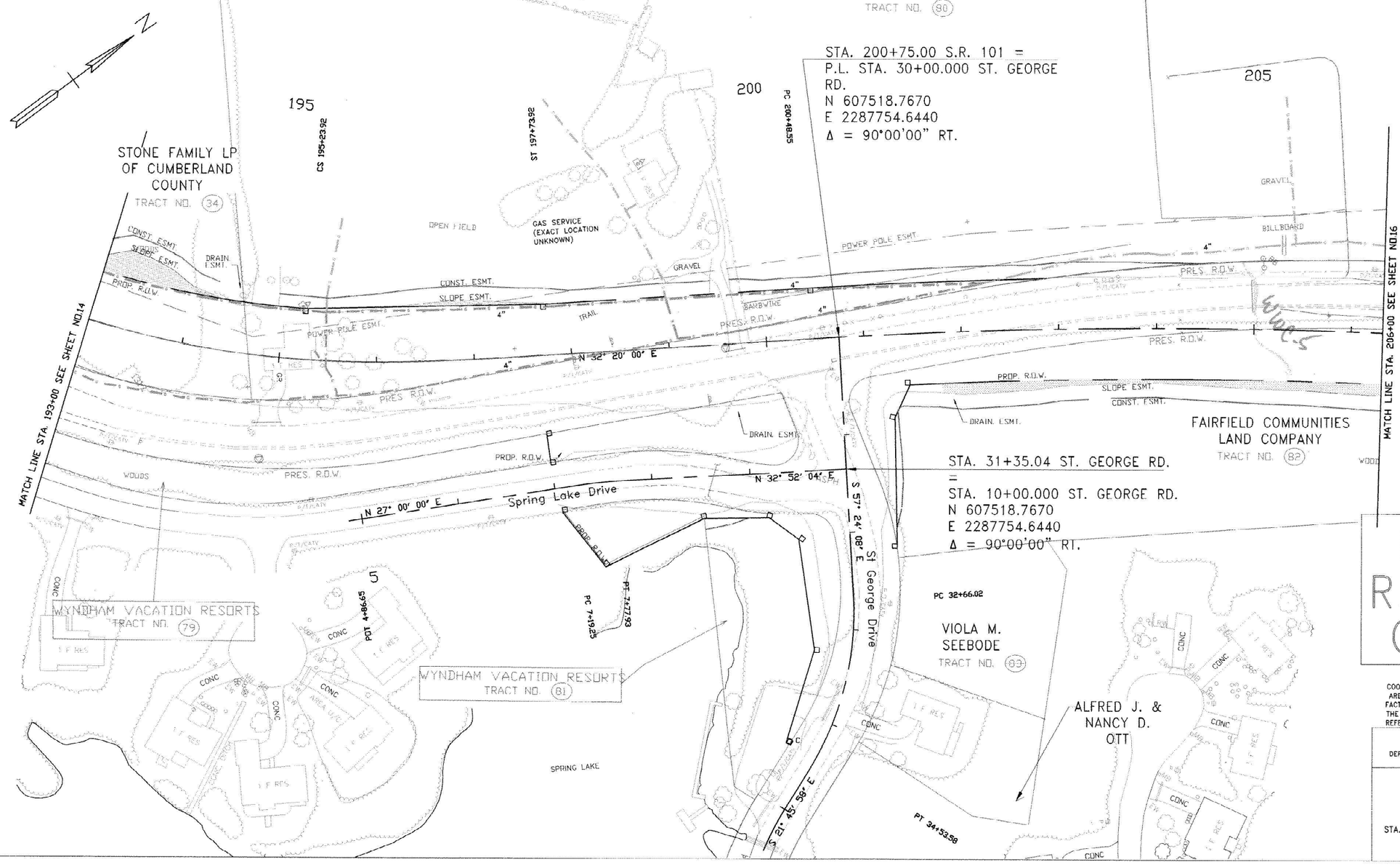
S.R. 101	S.R. 101	ST. GEORGE RD.	SPRING LAKE DR.
PI 191+70.75	PI 206+54.13	PI 33+62.94	PI 7+48.62
N 606,633.3259	N 608,008.0995	N 607,323.2360	N 607,234.8360
E 2,287,194.1702	E 2,288,064.3858	E 2,288,060.4130	E 2,287,731.9560
~s 66° 00' 00" (LT)	~ 12° 04' 00" (RT)	~ 35° 38' 08" (RT)	~ 5° 52' 05" (RT)
's 7° 30' 00"	D 1° 00' 00"	D 19° 00' 00"	D 10° 00' 00"
~c 51° 00' 00" (LT)	R 5,729.58	R 301.56	R 572.96
Dc 6° 00' 00"	L 1,206.67	L 187.56	L 58.68
Rc 954.93	T 605.57	T 96.92	T 29.37
Lc 850.00	SE 0.021 FT/FT	SE 0.078 FT/FT	SE 0.037 FT/FT
Ts 746.84	DESIGN SPEED 50 MPH	DESIGN SPEED 30 MPH	DESIGN SPEED 20 MPH
Ls 250.00	RUNOFF 150' (50% INSIDE 50% OUTSIDE CURVE)	RUNOFF 80'	RUNOFF 95'
SE 0.077 FT/FT			
DESIGN SPEED 50 MPH			

GAS LINE LEGEND

- EXISTING TO REMAIN
- NEW INSTALLATION
- TEMPORARY RELOCATION/INSTALLATION
- TO BE REMOVED OR ABANDONED IN PLACE

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	15

LABELED POPOSED R.O.W., SLOPE, CONSTRUCTION, AND DRAINAGE EASEMENTS. ADDED SLOPE EASEMENT PATTERN.



FOR R.O.W. ONLY

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00013 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 193+00 TO STA. 206+00

SCALE: 1"= 50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	16

REV. 1-27-11: LABELED PROPOSED R.O.W., SLOPE, CONSTRUCTION, AND DRAINAGE EASEMENTS. ADDED SLOPE EASEMENT PATTERN.

STA. 212+54.41 S.R. 101 =
P.L. STA. 50+00.00 TOWNE CENTRE DR.
N 608442.33
E 2288489.62
Δ = 85°00'00" RT.

MATCH LINE STA. 206+00 SEE SHEET NO.15

MATCH LINE STA. 219+00 SEE SHEET NO.17

Towne Centre Drive

L. E. SMITH

210

215

F. GLENN & MARIA DALE
(OPEN FIELD)

ASPHALT
POWER POLE ESMT.

PRES. R.O.W.

PROP. R.O.W.

SLOPE ESMT.

CONST. ESMT.

DRAIN. ESMT.

WOODS

FAIRFIELD COMMUNITIES LAND COMPANY
TRACT NO. (82)

ARLENE MEYERS TRUST

JOHN W. LAUER

KELLY G. AUSTIN

FIRST BAPTIST CHURCH TRUSTEES
TRACT NO. (84)

WYNDHAM VACATION RESORTS
TRACT NO. (85)

TRACT NO. (86)

FARRINGTON ROAD

GAS LINE LEGEND

EXISTING TO REMAIN

NEW INSTALLATION

TEMPORARY RELOCATION/INSTALLATION

TO BE REMOVED OR ABANDONED IN PLACE

PROPOSED CURVE DATA
S.R. 101
PI 206+54.13
N 608,008.0995
E 2,288,064.3858
Δ 12° 04' 00" (RT)
D 1° 00' 00"
R 5,729.58
L 1,206.67
T 605.57
SE 0.021 FT/FT
DESIGN SPEED 50 MPH
RUNOFF 150' (50% INSIDE 50% OUTSIDE CURVE)

FOR R.O.W. ONLY

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00013 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 206+00 TO STA. 219+00

SCALE: 1"= 50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	17

REV. 1-27-11: LABLED PROP. R.O.W., SLOPE, CONSTRUCTION, AND DRAINAGE EASEMENTS. REMOVED CONSTRUCTION EASEMENT PATTERN.

PROPOSED CURVE DATA

LAKEVIEW DR.		WOODLANDS CIRCLE	
PI	31+43.62	PI	34+48.08
N	608,933.1320	N	609,651.5396
E	2,289,171.2670	E	2,289,114.3932
~	10° 18' 28" (RT)	~	1° 19' 59" (RT)
D	10° 00' 00"	D	1° 15' 00"
R	572.96	R	4,583.66
L	103.08	L	100.65
T	51.68	T	50.33

SE 0.060 FT/FT
DESIGN SPEED 30 MPH
RUNOFF 145' (65% OUTSIDE 35% INSIDE)

GAS LINE LEGEND
- EXISTING TO REMAIN
- NEW INSTALLATION
- TEMPORARY RELOCATION/INSTALLATION
- TO BE REMOVED OR ABANDONED IN PLACE

MATCH LINE STA. 219+00 SEE SHEET NO.16

MATCH LINE STA. 232+00 SEE SHEET NO.18

OPEN FIELD

RICHCO LLC

MARIAN F. BRYAN

MATTHEW E. DILLMAN TRUSTEE

GLENN & MARIA DALE

JASON & PAM B. RAY TRACT NO. (142)

DOUGLAS S. & MARJORIE SUE SATTERLEE TRACT NO. (127)

JASON & PAM B. RAY TRACT NO. (86)

PHILLIP C. & MARY R. FRIETAG TRACT NO. (143)

DEDE JEAN EISCHIED TRACT NO. (88)

LKM PROPERTIES LP TRACT NO. (87)

225

Woodlands Circle

Lakeview Drive

GRAVEL

ASP

ASPHALT

POWER POLE ESMT.

GAS SERVICE (EXACT LOCATION UNKNOWN)

PRES. R.O.W.

PROP. R.O.W.

SLOPE ESMT.

CONST. ESMT.

DRAIN. ESMT.

FIRST BAPTIST CHURCH TRUSTEES TRACT NO. (84)

NO. (85)

STA. 220+85.00 S.R. 101 = P.L. STA. 30+00.00 LAKEVIEW DR.
N 609033.6210
E 2289068.6510
Δ = 90°00'00" RT.

WYNDHAM VACATION RESORTS TRACT NO. (96)

STA. 228+17.41 S.R. 101 = P.L. STA. 40+00.00 WOODLANDS CIR.
N 609556.9264
E 2289581.0895
Δ = 102°08'00" LT.

WOODS

DEBRINA McCARVER

DIANA F. BOJANZKY TRACT No. 89

WENDELL & ROSETTA C. NEALON TRACT No. 90

STP-101(16)
END PHASE 1 PROJ. NO. 18038-2237-14 (R.O.W.)
STP-101(17)
BEGIN PHASE 2 PROJ. NO. 18038-2238-14 (R.O.W.)
STA. 220+85.00

FOR R.O.W. ONLY

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00013 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 219+00 TO STA. 232+00

SCALE: 1"= 50'

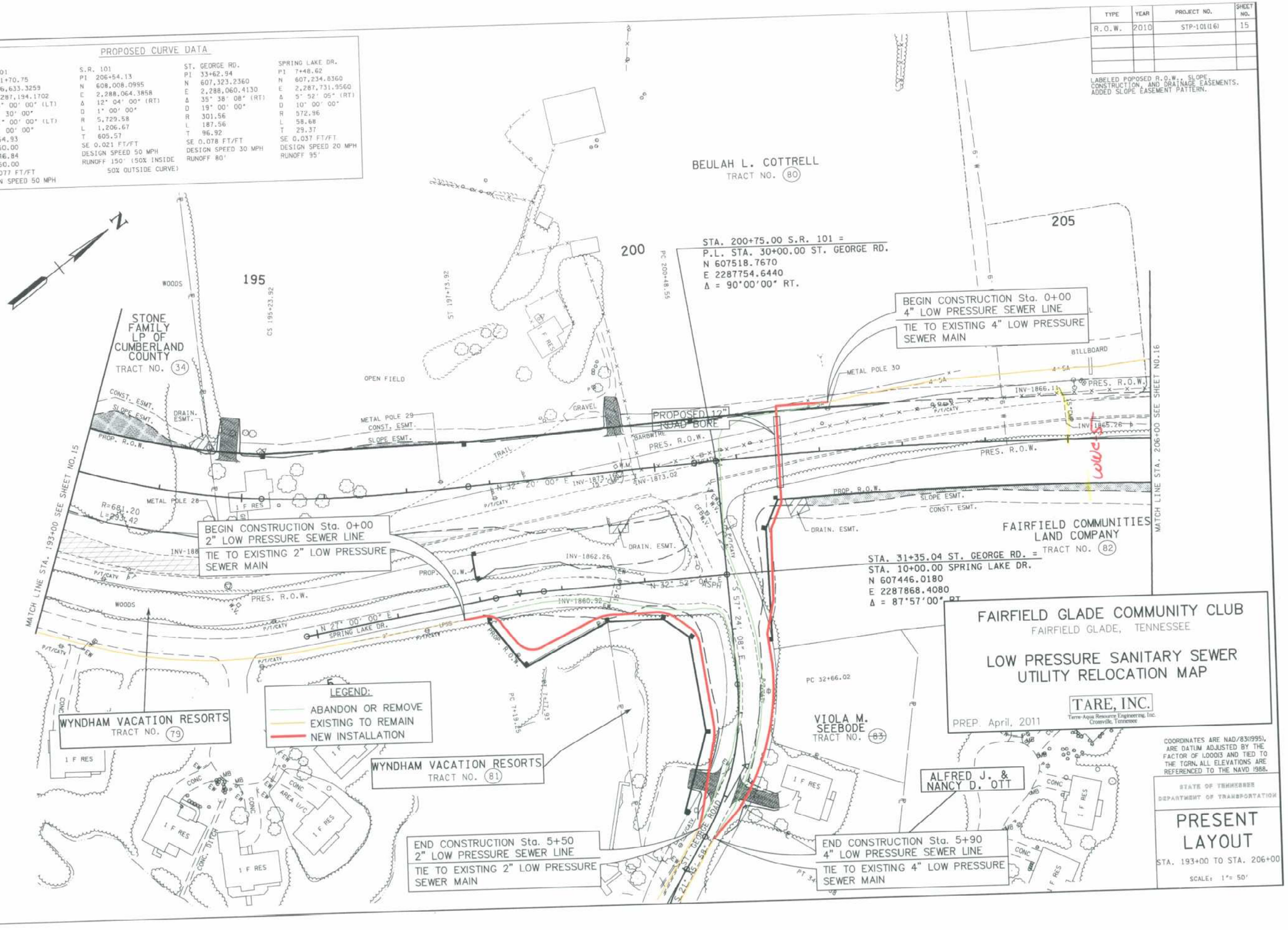
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	15

LABELED POPOSED R.O.W., SLOPE, CONSTRUCTION, AND DRAINAGE EASEMENTS. ADDED SLOPE EASEMENT PATTERN.

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

PROPOSED CURVE DATA

S.R. 101	S.R. 101	ST. GEORGE RD.	SPRING LAKE DR.
PI 191+70.75	PI 206+54.13	PI 33+62.94	PI 7+48.62
N 606,633.3259	N 608,008.0995	N 607,323.2360	N 607,234.8360
E 2,287,194.1702	E 2,288,064.3858	E 2,288,060.4130	E 2,287,731.9560
Δs 66° 00' 00" (LT)	Δ 12° 04' 00" (RT)	Δ 35° 38' 08" (RT)	Δ 5° 52' 05" (RT)
θs 7° 30' 00"	D 1° 00' 00"	D 19° 00' 00"	D 10° 00' 00"
Δc 51° 00' 00" (LT)	R 5,729.58	R 301.56	R 572.96
Dc 6° 00' 00"	L 1,206.67	L 187.56	L 58.68
Rc 954.93	T 605.57	T 96.92	T 29.37
Lc 850.00	SE 0.021 FT/FT	SE 0.078 FT/FT	SE 0.037 FT/FT
Ts 746.84	DESIGN SPEED 50 MPH	DESIGN SPEED 30 MPH	DESIGN SPEED 20 MPH
Ls 250.00	RUNOFF 150' (50% INSIDE 50% OUTSIDE CURVE)	RUNOFF 80'	RUNOFF 95'
SE 0.077 FT/FT			
DESIGN SPEED 50 MPH			



FAIRFIELD GLADE COMMUNITY CLUB

FAIRFIELD GLADE, TENNESSEE

LOW PRESSURE SANITARY SEWER UTILITY RELOCATION MAP

TARE, INC.
Terre-Aqua Resource Engineering, Inc.
Crossville, Tennessee

PREP. April, 2011

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00013 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 193+00 TO STA. 206+00

SCALE: 1"= 50'

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CRAB ORCHARD UTILITY DISTRICT

S.R 101 (PEAVINE ROAD) WATERLINE RELOCATION

PROJECT # 18038-2237-14

DEVELOPED BY:
CRAB ORCHARD UTILITY DISTRICT
2089 EAST 1ST STREET
CROSSVILLE, TENNESSEE 38555
(931) 484-6987

VICINITY MAP

BOARD MEMBERS :
JAMES P. SMITH - PRESIDENT
CLAUDE "RED" TURNER - VICE PRESIDENT
GEORGE ED HARRISON - SECRETARY/TREASURER
EVERETT BOLIN, JR. - GENERAL MANAGER

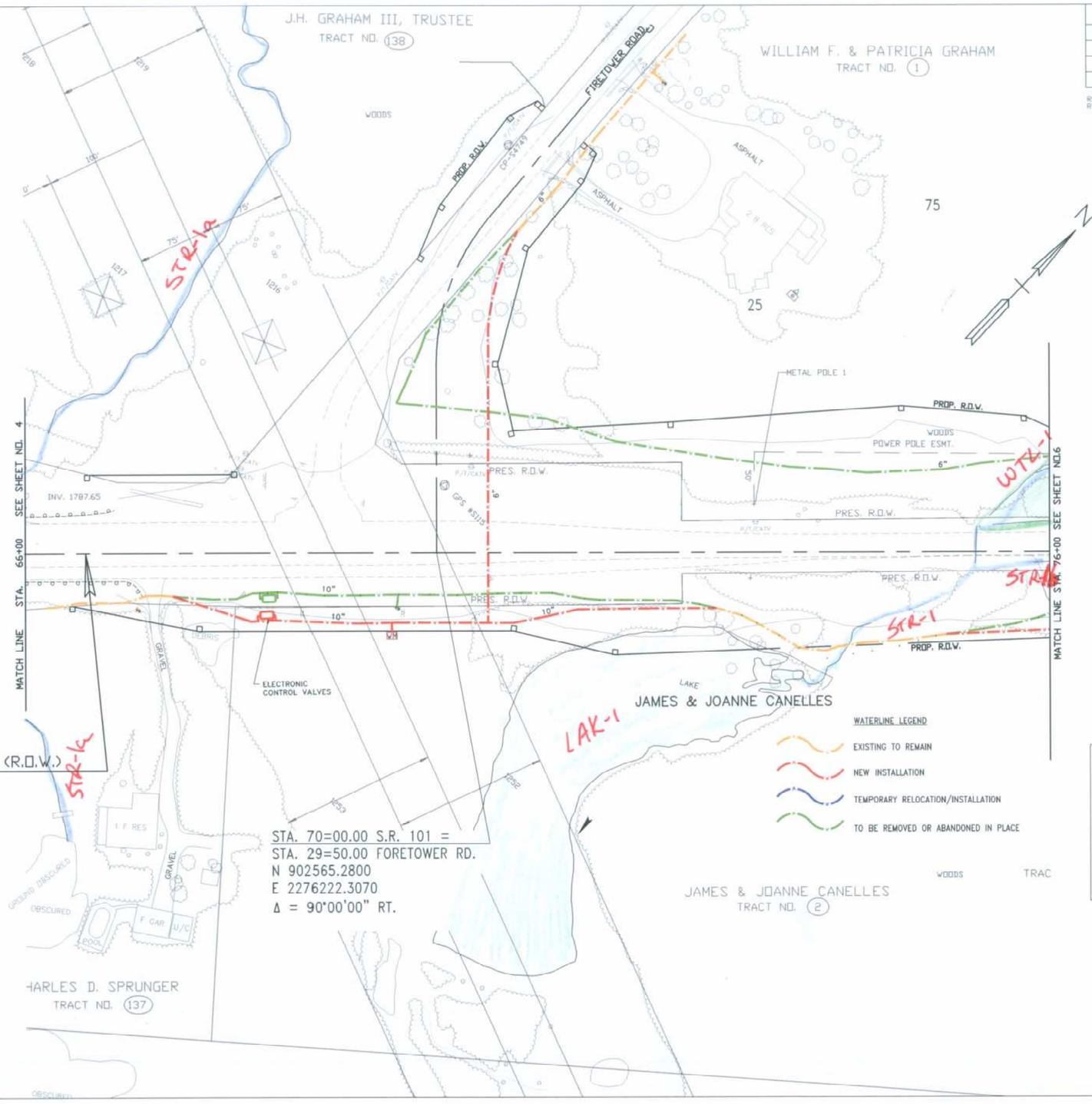
PREPARED BY:
FECS
FIELD'S ENGINEERING CONSULTANT SERVICES
77 COTHER STREET
CROSSVILLE, TN 38555
(931) 456-6071

MAY 2011

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	5

REV. 1-27-11: LABELED PRESENT & PROP. R.O.W.

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



FOR R.O.W. ONLY

PROPOSED CURVE DATA

FIRETOWER ROAD
PI 26+95.07
N 602,751.4920
E 2,276,038.0340
- 41° 10' 01" (LT)
D 26° 30' 00"
R 216.21
L 155.35
T 81.20
SE 0.065 FT/FT (20 MPH)
RUNOFF 74.12' 94% INSIDE
6% OUTSIDE CURVE

COORDINATE VALUES ARE NAD/83(1995) AND ARE DATUM ADJUSTED BY THE FACTOR 1.00013 & TIED TO THE TGRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

PRESENT LAYOUT

STA. 66+00 TO STA. 76+00

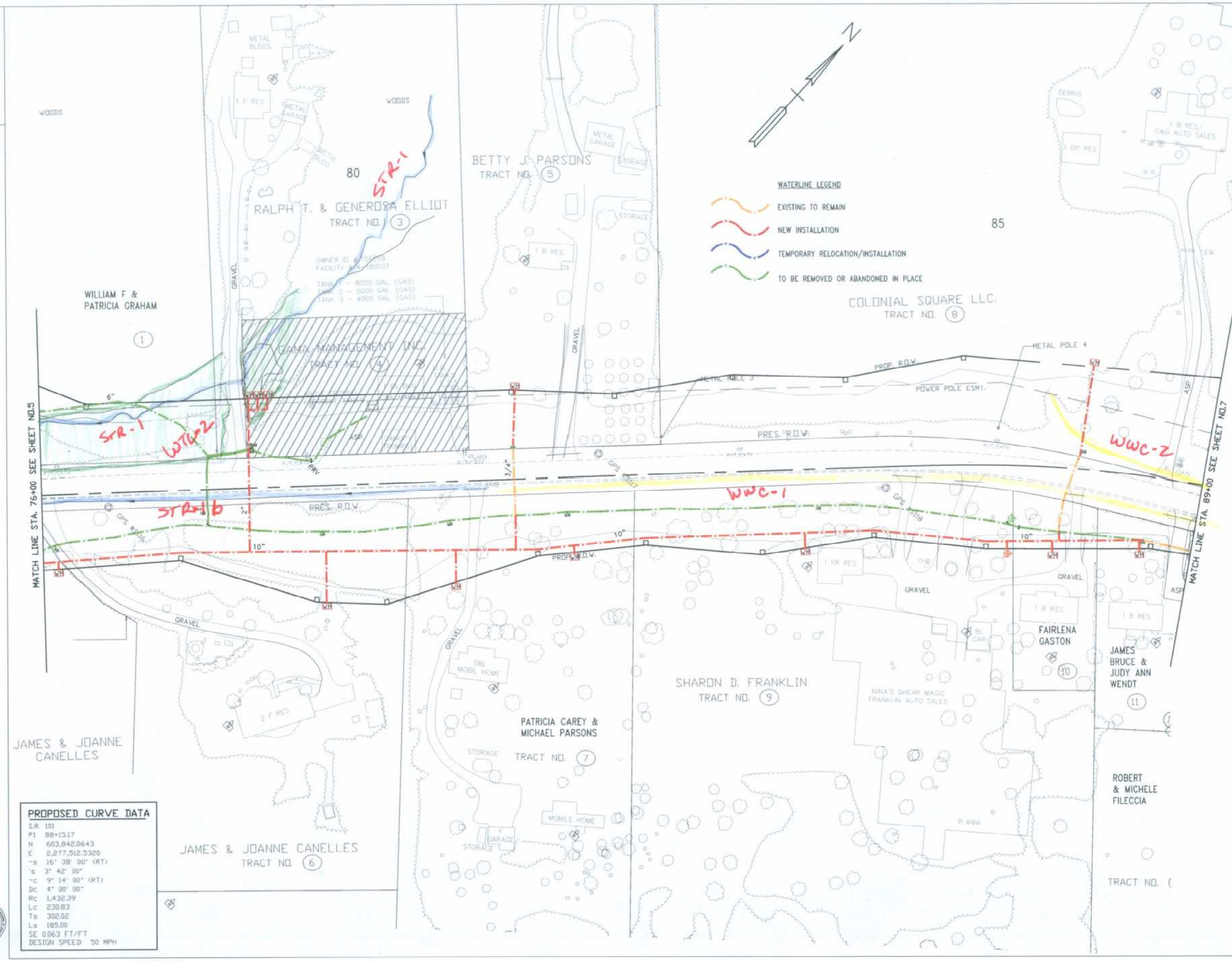
SCALE: 1"= 50'

Survey & Design Division

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	6

REV. 1-27-11: LABELED PROPOSED R.O.W. CORRECTED LOSS OF ACCESS PATTERN, TRACT 4.

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



FOR R.O.W. ONLY

PROPOSED CURVE DATA

S.R. 101
PI 88+15.17
N 603,842.0643
E 2,277,512.5320
-s 16° 38' 00" (RT)
's 3° 42' 00"
-c 9° 14' 00" (RT)
Dc 4° 00' 00"
Rc 1,432.39
Lc 230.83
Ts 302.02
Ls 185.00
SE 0.063 FT/FT
DESIGN SPEED 50 MPH

COORDINATE VALUES ARE NAD/83(1995) AND ARE DATUM ADJUSTED BY THE FACTOR 1.00013 & TIED TO THE TGRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

PRESENT LAYOUT

STA. 76+00 TO STA. 89+00

SCALE: 1"= 50'

Survey & Design Division

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

PROPOSED CURVE DATA

S.R. 101		STONE LOOP	
PI	88+15.17	PI	32+37.88
N	603,842.0643	N	604,136.2969
E	2,277,512.5320	E	2,278,569.5909
~s	16° 38' 00" (RT)	~	15° 19' 50" (RT)
's	3° 42' 00"	D	3° 50' 00"
~c	9° 14' 00" (RT)	R	1,494.67
Dc	4° 00' 00"	L	399.93
Rc	1,432.39	T	201.17
Lc	230.83	SE	0.028 FT/FT
Ts	302.02	DESIGN SPEED	30 MPH
Ls	185.00		
SE	0.063 FT/FT		
DESIGN SPEED	50 MPH		

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	7

REV. 1-27-11: LABELED PROP. R.O.W. CORRECTED LOSS OF ACCESS PATTERN, TRACT 13.

N

WATERLINE LEGEND
- EXISTING TO REMAIN
- NEW INSTALLATION
- TEMPORARY RELOCATION/INSTALLATION
- TO BE REMOVED OR ABANDONED IN PLACE

MATCH LINE STA. 89+00 SEE SHEET NO.6

MATCH LINE STA. 102+00 SEE SHEET NO.8

TIMOTHY JAY & CYNTHIA POTTER
TRACT NO. (19)

MICHEAL & ANGELO NIEMEN
TRACT NO. (10)

MARK S. TEEPLE
TRACT NO. (16)

J-TENT LLC
TRACT NO. (159)

J.H. POTTER
TRACT NO. (21)

CONRAD A. MILLER TRUSTEE
TRACT NO. (11)

CYNTHIA L. & DEWIGHT L. BRIDGES
TRACT NO. (17)

RANDALL NEAL
TRACT NO. (20)

HAROLD W. JR. & TERESA COOPER
TRACT NO. (22)

RICHARD L. & LINDA K. HOUSTON
TRACT NO. (15)

LYNN A. MILLER TRUSTEE REV. LIV. TRUST
TRACT NO. (18)

ROBERT & MICHELE FILECCIA
TRACT NO. (12)

HAROLD W. JR. & TERESA LYNN COOPER
TRACT NO. (23)

WWC-2

WWC-1

Stone Loop

PROP. R.O.W.

PRES. R.O.W.

POWER POLE ESMT.

METAL POLE ?

FOR R.O.W. ONLY

COORDINATE VALUES ARE NAD/83(1995) AND ARE DATUM ADJUSTED BY THE FACTOR 1.00013 & TIED TO THE TCRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

PRESENT LAYOUT

STA. 89+00 TO STA. 102+00

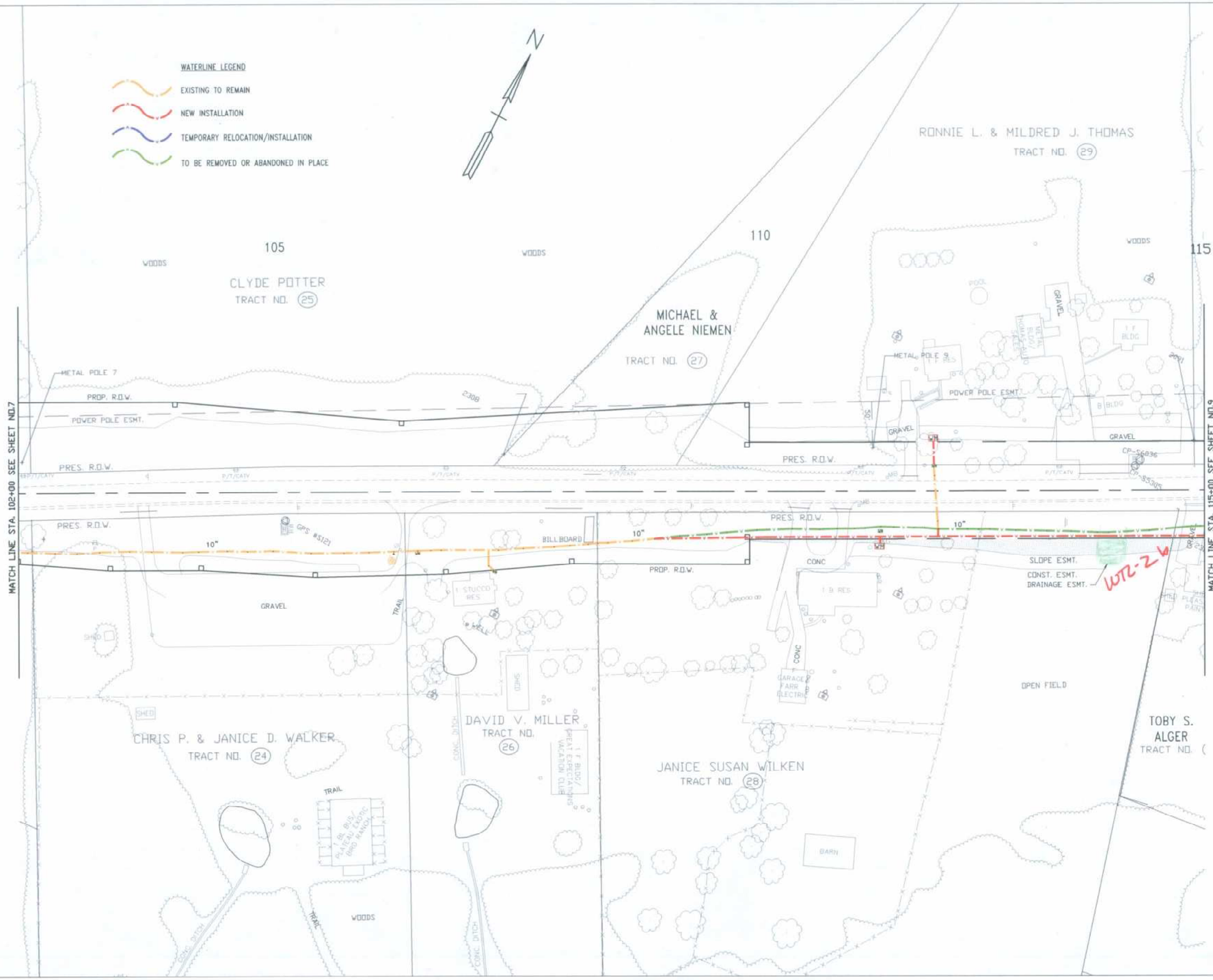
SCALE: 1"= 50'

Survey Division Design

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	8

REV. 1-27-11: LABELED PROP. R.O.W., SLOPE, DRAINAGE, & CONST. ESMT.

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



FOR R.O.W. ONLY

COORDINATE VALUES ARE NAD/83(1995) AND ARE DATUM ADJUSTED BY THE FACTOR 1.00013 & TIED TO THE TGRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

PRESENT LAYOUT

STA. 102+00 TO STA. 115+00

SCALE: 1"= 50'

Survey & Design Division

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	9

REV. 1-27-11: LABELED PROPOSED R.O.W., SLOPE, CONST., & DRAINAGE EASEMENTS.

STA 102+16.06 S.R. 101 =
STA. 50+00.00 STONE LOOP
N 605311.1552
E 22280356.3435
Δ = 96°13'47" RT.

STONE FAMILY LP OF CUMBERLAND CO.
TRACT NO. (34)

LANDSCAPE SOLUTIONS CO.
TRACT NO. (37)

PEAVINE PLAZA INC.
TRACT NO. (31)

J. RANDALL CROWDER
TRACT NO. (33)

JAMES & CAROLYN SULLIVAN
TRACT NO. (35)

IRIS L. LAWSON FARMS
TRACT NO. (39)

KENNETH A. BANEGAS
TRACT NO. (40)

AUSTIN & LARUE HAMBY
TRACT NO. (41)

JAMES N. & CYNTHIA A. PASQUINELLY
TRACT NO. (44)

LINVIL & VIRGINIA PARSONS BLAYLOCK
TRACT NO. (32)

DELOY & BETTY J. DAVENPORT
TRACT NO. (36)

VICKIE & DAVID D. WYATT
TRACT NO. (38)

DAVID D. & VICKIE L. WYATT
NO. (42)

AMANDA A. HAWN
TRACT NO. (43)

Stone Loop

MATCH LINE STA. 115+00 SEE SHEET NO.8

MATCH LINE STA. 128+00 SEE SHEET NO.10

S.R. 101

PROP. R.O.W.

SLOPE ESMT.
CONST. ESMT.

DRAIN. ESMT.

POWER POLE ESMT.

GRAVEL

ASP

WWC 3

FOR R.O.W. ONLY

PROPOSE CURVE DATA
S.R. 101
PI 120+16.72
N 605,349.8987
E 2,280,340.4132
~s 29° 29' 00" (RT)
's 6° 15' 00"
~c 16° 59' 00" (RT)
Dc 5° 00' 00"
Rc 1,145.92
Lc 339.67
Ts 427.07
Ls 250.00
SE 0.071 FT/FT
DESIGN SPEED 50 MPH

WATERLINE LEGEND
EXISTING TO REMAIN
NEW INSTALLATION
TEMPORARY RELOCATION/INSTALLATION
TO BE REMOVED OR ABANDONED IN PLACE

COORDINATE VALUES ARE NAD/83(1995) AND ARE DATUM ADJUSTED BY THE FACTOR 1.00013 & TIED TO THE TGRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

PRESENT LAYOUT

STA. 115+00 TO STA. 128+00

SCALE: 1"= 50'

Survey Design

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	10

REV. 1-27-11: LABELED PROP. R.O.W., SLOPE, CONST., & DRAINAGE EASEMENTS.

PROPOSED CURVE DATA

S.R. 101		CHERRY BRANCH ROAD	
PI	130+16.89	PI	31+62.07
N	605,324.8139	N	605,419.4390
E	2,281,354.7358	E	2,281,809.5710
~s	33° 29' 00" (LT)	~	24° 52' 05" (RT)
's	5° 00' 00"	D	22° 45' 00"
~c	23° 29' 00" (LT)	R	251.85
Dc	4° 00' 00"	L	109.31
Rc	1,432.39	T	55.53
Lc	587.08	SE 0.064 FT./FT	
Ts	556.39	DESIGN SPEED 20 MPH	
Ls	250.00	RUNOFF 135' (60% OUTSIDE	
SE 0.063 FT./FT		40% INSIDE)	
DESIGN SPEED 50 MPH			

STA 134.30.00 S.R. 101 =
STA. 30+00.00 CHERRY BRANCH RD.
N 605558.4200
E 22281726.1930
Δ = 90°00'00" RT.

STA 102+16.06 S.R. 101 =
STA. 10+00.00 FENCE LAND
N 605881.1150
E 22282242.6680
Δ = 91°43'01" RT.

JAMES N. & CYNTHIA A. PASQUINELLY
TRACT NO. (44)

GWEN F. GUITAR & DENNIS R. IRVING
TRACT NO. (48)

INA MAE & BETTY L. GILBERT
TRACT NO. (49)

LEAMON & CAROLYN BARNETT
TRACT NO. (54)

J. RANDALL CROWDER
TRACT NO. (46)

CHRISTINE J. SCHMIDT
TRACT NO. (47)

J. RANDALL CROWDER
TRACT NO. (45)

DANO A. ANDERSON
TRACT NO. (50)

BILLY L. & SUE HOPPER

JAMES N. PAQUINELLY
TRACT NO. (53)

RONALD F. WEB & MICHAEL ELLIS
TRACT NO. (52)

JACK & WANDA PLEASANT
TRACT NO. (51)

EQUITY TRUST CO. (55)

WAYNE STEVENS, TRUSTEE
TRACT NO. (139)

Cherry Branch Road

WWC-3 WWC-4

MATCH LINE STA. 128+00 SEE SHEET NO.9

MATCH LINE STA. 141+00 SEE SHEET NO.11

FOR R.O.W. ONLY

COORDINATE VALUES ARE NAD/83(1995) AND ARE DATUM ADJUSTED BY THE FACTOR 1.00013 & TIED TO THE TGRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

PRESENT LAYOUT

STA. 128+00 TO STA. 141+00

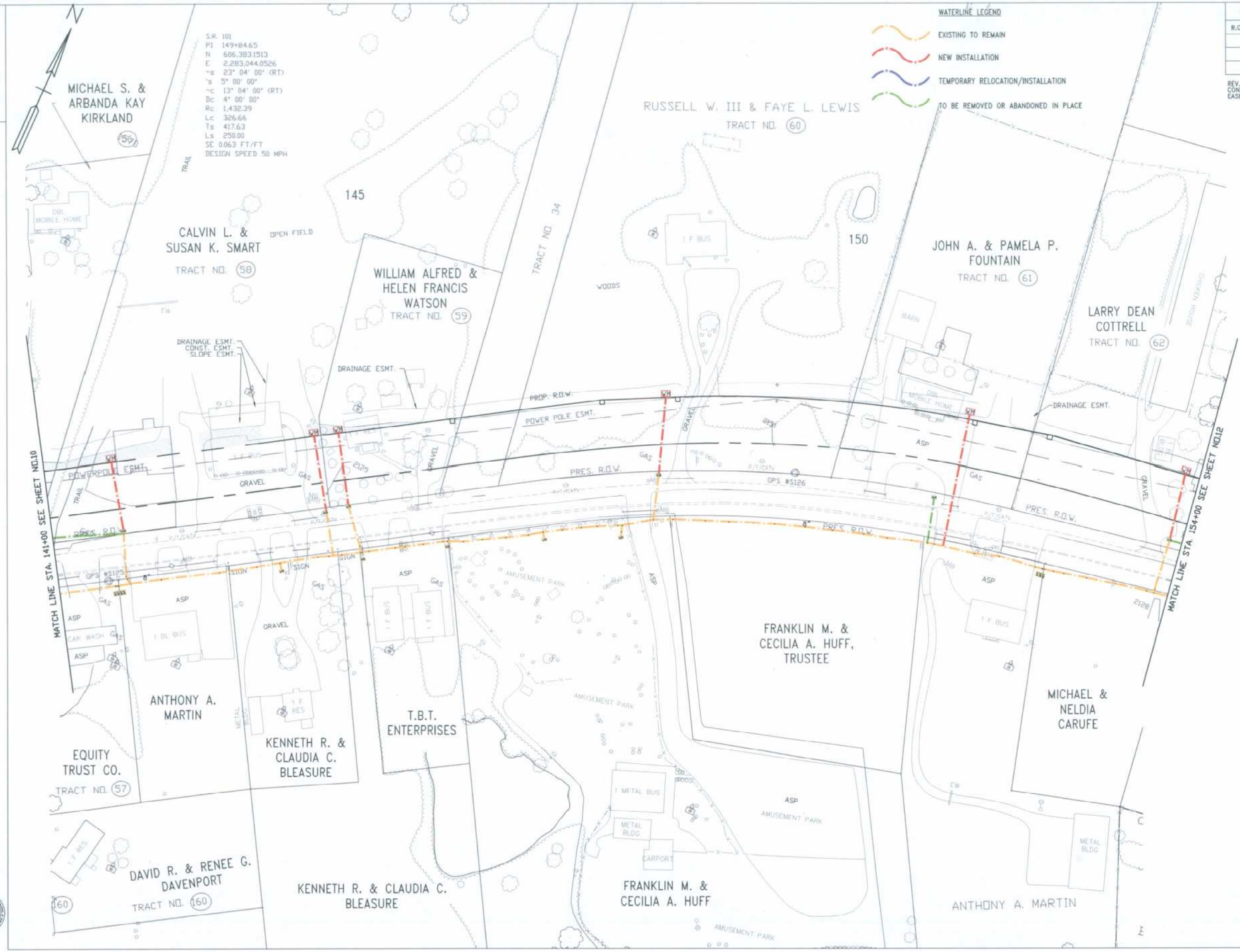
SCALE: 1"= 50'

Surveying & Design Division

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	11

REV. 1-27-11: LABELED PROP. R.O.W., CONST., SLOPE, AND DRAINAGE EASEMENTS.



WATERLINE LEGEND

- EXISTING TO REMAIN
- NEW INSTALLATION
- TEMPORARY RELOCATION/INSTALLATION
- TO BE REMOVED OR ABANDONED IN PLACE

R.O.W. FIELD REVIEW

COORDINATE VALUES ARE NAD/83(1995) AND ARE DATUM ADJUSTED BY THE FACTOR 1.00013 & TIED TO THE TGRN.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

PRESENT LAYOUT

STA. 141+00 TO STA. 154+00

SCALE: 1"= 50'

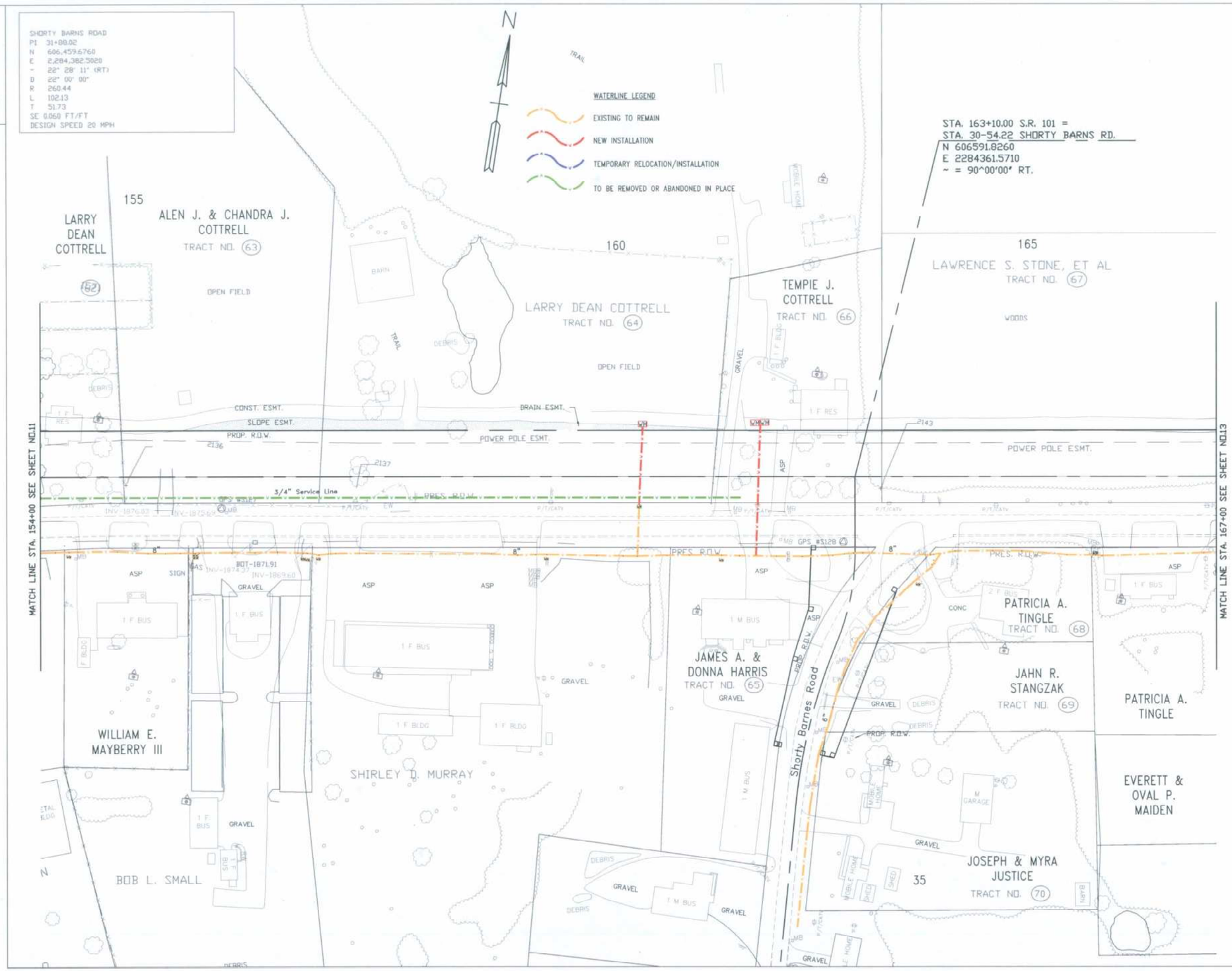
Survey & Design Division

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

SHORTY BARNS ROAD
PI 31+88.02
N 606,459.6760
E 2,284,382.5020
~ 22° 28' 11" (RT)
D 22° 00' 00"
R 260.44
L 102.13
T 51.73
SE 0.060 FT/FT
DESIGN SPEED 20 MPH

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	12

REV. 1-27-11: LABELED PROP. R.O.W. AND SLOPE, DRAINAGE, AND CONSTRUCTION EASEMENTS.



FOR R.O.W. ONLY

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 154+00 TO STA. 167+00

SCALE: 1"= 50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	13

REV. 1-27-11: LABELED PROP. R.O.W., SLOPE, CONSTRUCTION, AND DRAINAGE EASEMENTS. ADDED SLOPE EASEMENT PATTERN.

FOR R.O.W. ONLY

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00013 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 167+00 TO STA. 180+00

SCALE: 1"= 50'

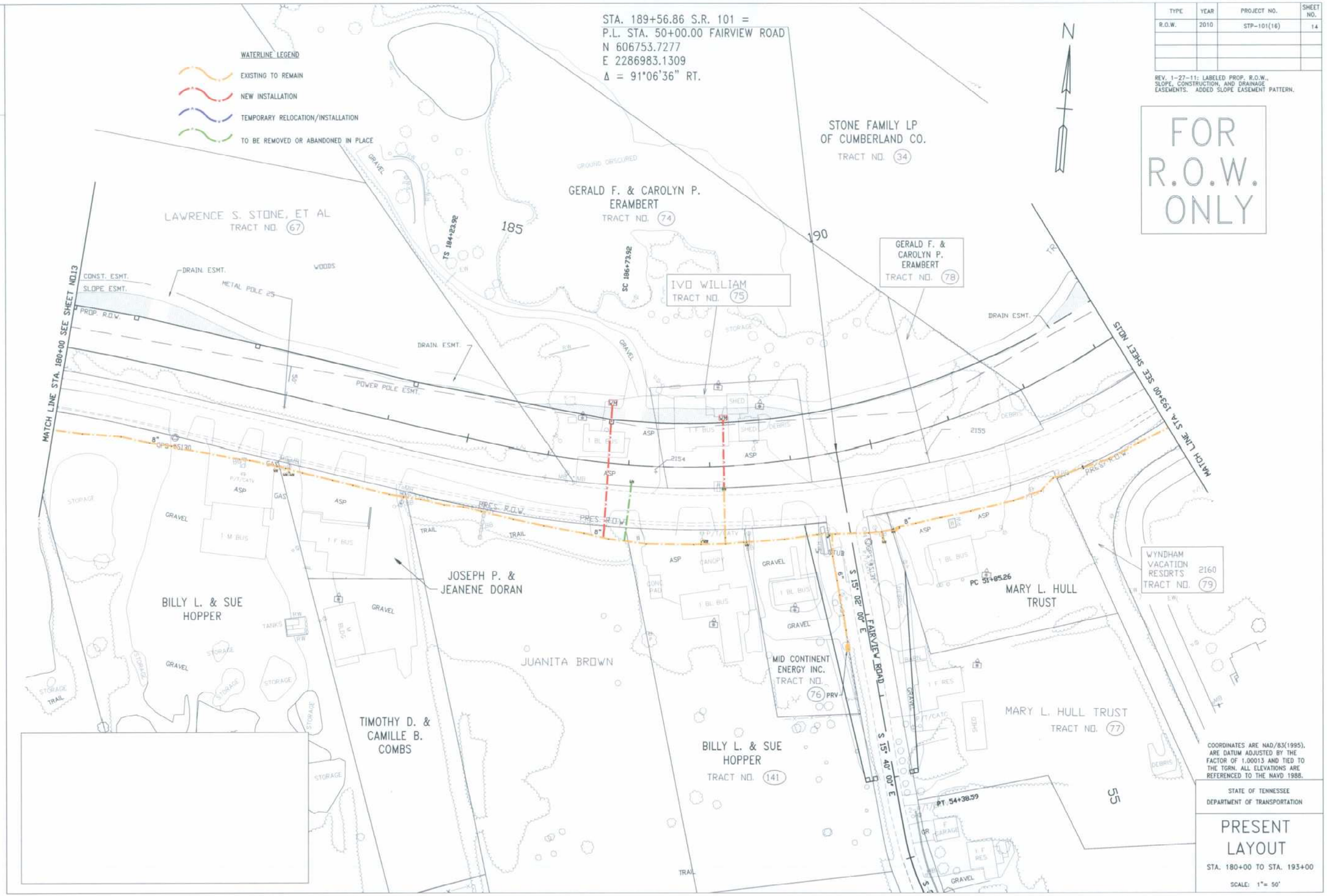
$$$$SYTIME$$$$$$$
$$$DGNSPEC$$

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	14

REV. 1-27-11: LABELED PROP. R.O.W., SLOPE, CONSTRUCTION, AND DRAINAGE EASEMENTS. ADDED SLOPE EASEMENT PATTERN.

FOR R.O.W. ONLY



COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00013 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 180+00 TO STA. 193+00

SCALE: 1"= 50'

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

PROPOSED CURVE DATA

S.R. 101	S.R. 101	ST. GEORGE RD.	SPRING LAKE DR.
PI 191+70.75	PI 206+54.13	PI 33+62.94	PI 7+48.62
N 606,633.3259	N 608,008.0995	N 607,323.2360	N 607,234.8360
E 2,287,194.1702	E 2,288,064.3858	E 2,288,060.4130	E 2,287,731.9560
-s 66° 00' 00" (LT)	- 12° 04' 00" (RT)	- 25° 38' 08" (RT)	- 5° 52' 05" (RT)
's 7° 30' 00"	D 1° 00' 00"	D 19° 00' 00"	D 10° 00' 00"
-c 51° 00' 00" (LT)	R 5,729.58	R 301.56	R 572.96
Dc 6° 00' 00"	L 1,206.67	L 187.56	L 58.68
Rc 954.93	T 605.57	T 96.92	T 29.37
Lc 850.00	SE 0.021 FT/FT	SE 0.078 FT/FT	SE 0.037 FT/FT
Ts 746.84	DESIGN SPEED 50 MPH	DESIGN SPEED 30 MPH	DESIGN SPEED 20 MPH
Ls 250.00	RUNOFF 150' (50% INSIDE	RUNOFF 80'	RUNOFF 95'
SE 0.077 FT/FT	50% OUTSIDE CURVE)		
DESIGN SPEED 50 MPH			

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	15

LABELED PROPOSED R.O.W., SLOPE, CONSTRUCTION, AND DRAINAGE EASEMENTS. ADDED SLOPE EASEMENT PATTERN.

WATERLINE LEGEND
- EXISTING TO REMAIN
- NEW INSTALLATION
- TEMPORARY RELOCATION/INSTALLATION
- TO BE REMOVED OR ABANDONED IN PLACE

STONE FAMILY LP OF CUMBERLAND COUNTY
TRACT NO. (34)

BEULAH L. COTTRELL
TRACT NO. (80)

STA. 200+75.00 S.R. 101 =
P.L. STA. 30+00.000 ST. GEORGE RD.
N 607518.7670
E 2287754.6440
Δ = 90°00'00" RT.

WYNDHAM VACATION RESORTS
TRACT NO. (79)

WYNDHAM VACATION RESORTS
TRACT NO. (81)

FAIRFIELD COMMUNITIES LAND COMPANY
TRACT NO. (82)

VIOLA M. SEEBODE
TRACT NO. (83)

ALFRED J. & NANCY D. OTT

STA. 31+35.04 ST. GEORGE RD. =
STA. 10+00.000 ST. GEORGE RD.
N 607518.7670
E 2287754.6440
Δ = 90°00'00" RT.

MATCH LINE STA. 193+00 SEE SHEET NO.14

MATCH LINE STA. 206+00 SEE SHEET NO.16

FOR R.O.W. ONLY

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00013 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 193+00 TO STA. 206+00

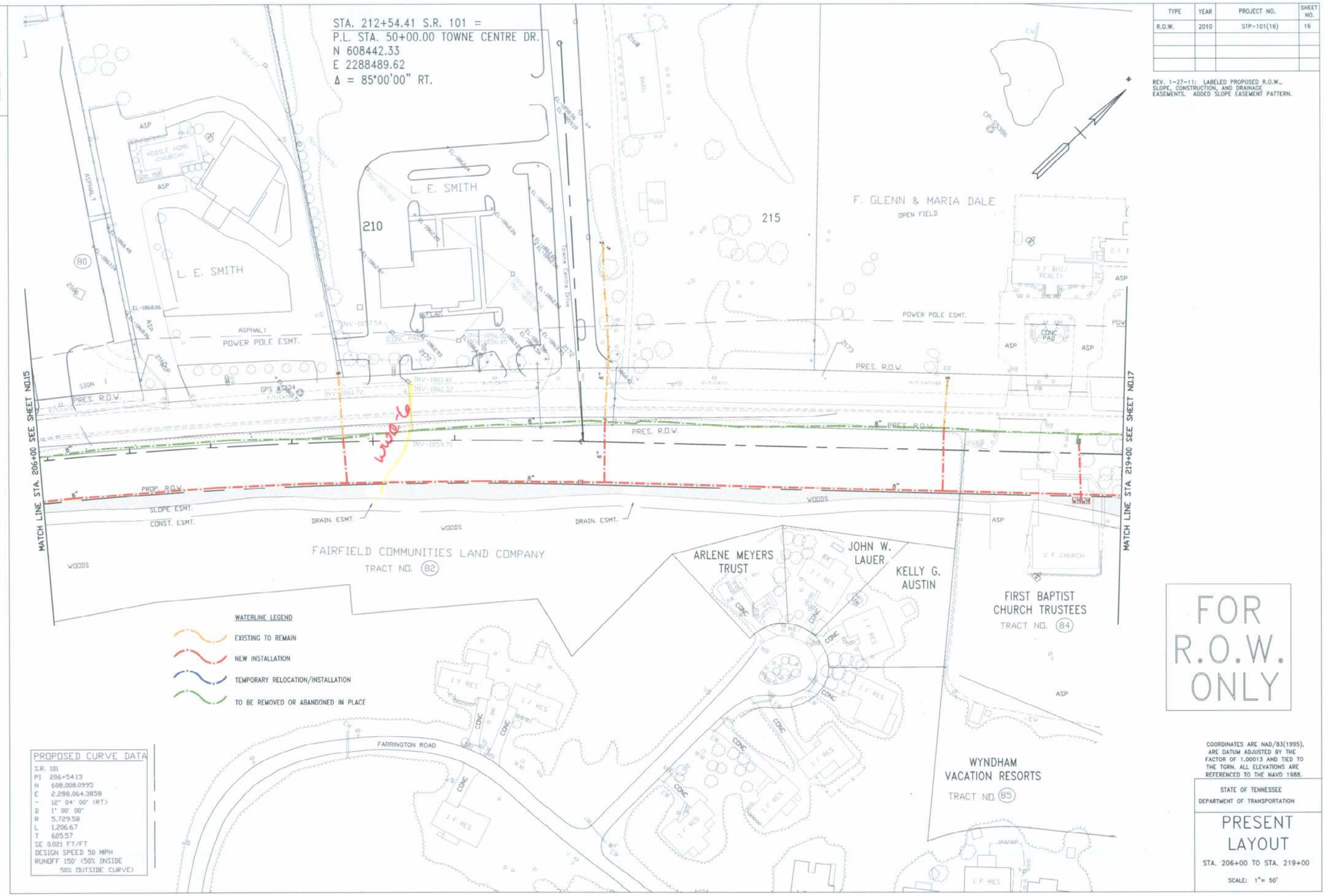
SCALE: 1"= 50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	16

REV. 1-27-11: LABELED PROPOSED R.O.W., SLOPE, CONSTRUCTION, AND DRAINAGE EASEMENTS. ADDED SLOPE EASEMENT PATTERN.

STA. 212+54.41 S.R. 101 =
P.L. STA. 50+00.00 TOWNE CENTRE DR.
N 608442.33
E 2288489.62
Δ = 85°00'00" RT.



PROPOSED CURVE DATA
S.R. 101
PI 206+54.13
N 608,008.0995
E 2,288,064.3858
- 12° 04' 00" (RT)
D 1° 00' 00"
R 5,729.58
L 1,206.67
T 605.57
SE 0.021 FT/FT
DESIGN SPEED 50 MPH
RUNOFF 150' (50% INSIDE 50% OUTSIDE CURVE)

FOR R.O.W. ONLY

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00013 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 206+00 TO STA. 219+00

SCALE: 1"= 50'

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

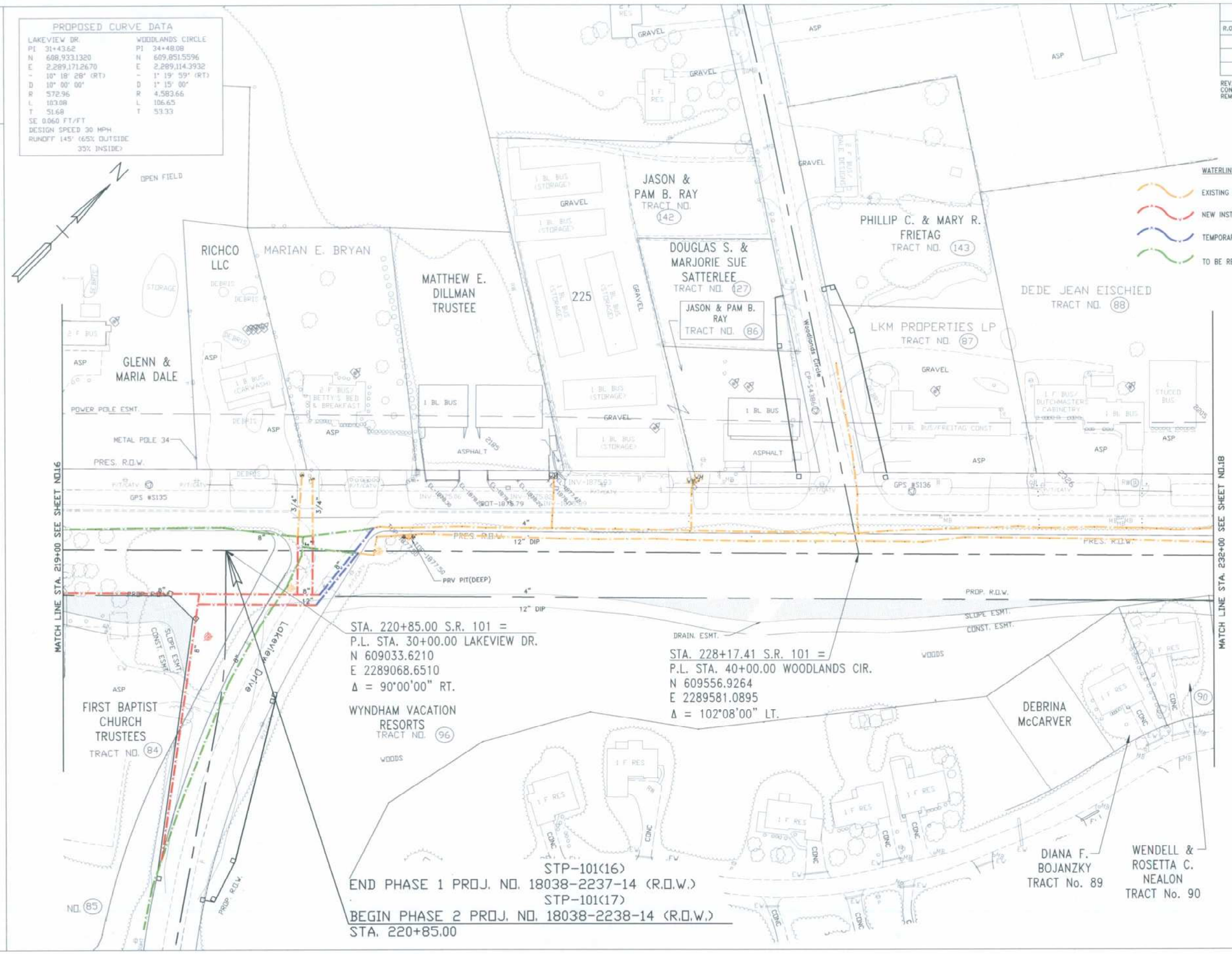
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2010	STP-101(16)	17

REV. 1-27-11: LABLED PROP. R.O.W., SLOPE, CONSTRUCTION, AND DRAINAGE EASEMENTS. REMOVED CONSTRUCTION EASEMENT PATTERN.

PROPOSED CURVE DATA

LAKEVIEW DR.		WOODLANDS CIRCLE	
PI	31+43.62	PI	34+48.08
N	608,933.1320	N	609,851.5596
E	2,289,171.2670	E	2,289,114.3932
-	10° 18' 28" (RT)	-	1° 19' 59" (RT)
D	10° 00' 00"	D	1° 15' 00"
R	572.96	R	4,583.66
L	103.08	L	106.65
T	51.68	T	53.33

SE 0.060 FT/FT
DESIGN SPEED 30 MPH
RUNOFF 145' (65% OUTSIDE 35% INSIDE)



WATERLINE LEGEND
- EXISTING TO REMAIN
- NEW INSTALLATION
- TEMPORARY RELOCATION/INSTALLATION
- TO BE REMOVED OR ABANDONED IN PLACE

FOR R.O.W. ONLY

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 219+00 TO STA. 232+00

SCALE: 1"= 50'