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

June 1, 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 #71001-1195-44, PIN 101577.00
Construct Interchange at I-40 and Mine Lick Creek Unit
Putnam 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.

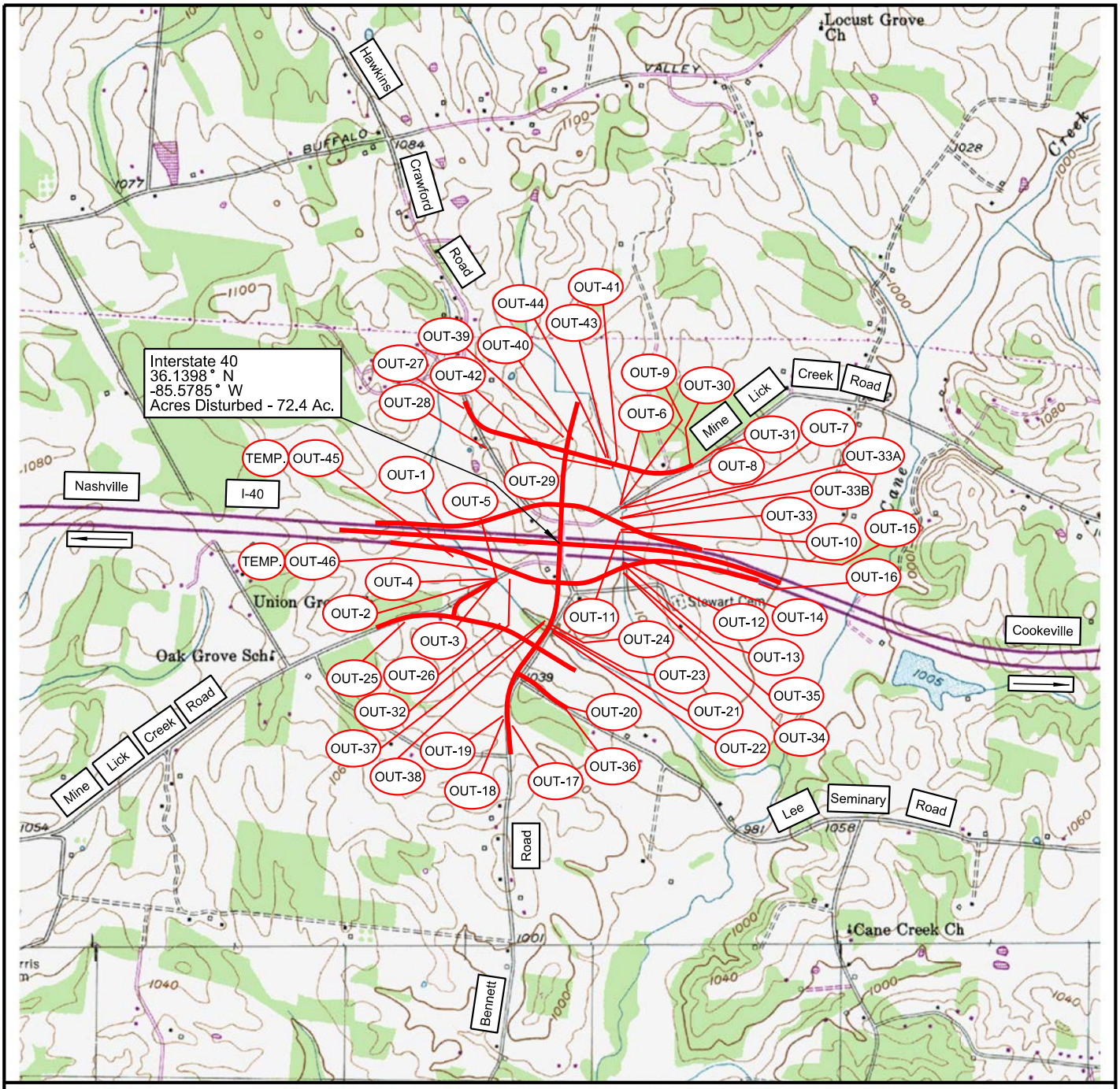
Sincerely,

Andrew Wisniewski
Environmental Permits Section

Enclosures

JLH: KMA:

Enclosures for:
cc: Mr. Ken Flynn, Region 2 Construction (CD)
Reading File, NPDES File



TOPOGRAPHIC MAP

N

OUT-1 Approximate Outfall Location

0 2000 4000

SCALE FEET

SOURCE: USGS Quad Map, U.S. Geological Survey 7.5 Minute Topographic Map, Cookeville West, Burgess Falls Tennessee Quadrangles

TDOT

Tennessee Department of Transportation

Nashville, Tennessee

Stormwater Pollution Prevention Plan

Interstate 40

Interchange at Mine Lick Creek Rd. & I-40

Log Mile - 15.560

Mile Marker - 282.392 to 283.370

Putnam County, Tennessee

Drawn By:	Checked By:
DAH	JBL
TDOT P.E. No.	TDOT PIN
71001-1195-44	101577.00
FED. No.	Figure
NH-I-40-6(130)	1

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-I-40-6(130)	S-1
P.E.	2015	71001-1195-44	

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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. DO 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. DO 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: INTERSTATE 40, INTERCHANGE AT MINE LICK CREEK RD. & I-40, LOG MILE 15.560, MILE MARKER - 282.392 TO 283.370
COUNTY: PUTNAM
PIN: 101577.00
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) 48-61, DRAINAGE MAP SHEET(S) 37-38, USGS QUAD 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): 123.6 ACRES
2.7. TOTAL AREA TO BE DISTURBED (3.5.1.c): 72.4 ACRES
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: ____
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			
PRIMARY SOIL NAME	HSG	% OF SITE	ERODIBILITY (k value)
BeB - BEWLEYVILLE SILT LOAM	B	7	0.43
BeC - BEWLEYVILLE SILT LOAM	B	0.8	0.43
BeC2 - BEWLEYVILLE SILT LOAM	B	14.2	0.43
BeD2 - BEWLEYVILLE SILT LOAM	B	0.2	0.43
CcC3 - CHRISTIAN SILTY CLAY LOAM	B	9.8	0.32
CcD3 - CHRISTIAN SILTY CLAY LOAM	B	3.3	0.32
CrC2 - CHRISTIAN SILT LOAM	B	6	0.37
Dk - DICKSON SILT LOAM	C/D	0.4	0.43
HnB - HOLSTON LOAM	B	11.7	0.32
HnC2 - HOLSTON LOAM	B	0.5	0.28
HoB - HOLSTON SILT LOAM	B	1.9	0.37
Hv - HUNTINGTON SILT LOAM	B	1.2	0.37
LaB - LANDISBURG SILT LOAM	C/D	11.9	0.43
LaC - LANDISBURG SILT LOAM	C/D	5.7	0.43
Ln - LINDELL SILT LOAM	B/D	9.1	0.32
MeC - MINVALE SILT LOAM	B	5.6	0.37
MvB - MOUNTVIEW SILT LOAN	C	0.1	0.43
MvC2 - MOUNTVIEW SILT LOAN	B	3	0.43
uChrD2 - CHRISTIAN LOAM	C	2.3	0.37
WaC2 - WAYNESBORO SILT LOAM	B	4.4	0.37
WbC3 - WAYNESBORO SILTY CLAY	B	0.9	0.37

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				
AREA TYPE	AREA(AC)	PERCENTAGE OF TOTAL AREA (%)	RUNOFF CN	C FACTOR
IMPERVIOUS	14.7	12	98	
PERVIOUS (GRASS, FORESTS, ETC.)	108.9	88	64	
WEIGHTED CURVE NUMBER =			68	

RUNOFF COEFFICIENTS FOR POST-CONSTRUCTION CONDITIONS				
AREA TYPE	AREA(AC)	PERCENTAGE OF TOTAL AREA (%)	RUNOFF CN	C FACTOR
IMPERVIOUS	28.7	23	98	
PERVIOUS (GRASS, FORESTS, ETC.)	94.9	77	64	
WEIGHTED CURVE NUMBER =			72	

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

3.1. SPECIAL SEQUENCING REQUIREMENTS (SEE SHEETS 50A-50B, 51A-51B, 55A)
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 STAGE AND/OR 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 ☐

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STORMWATER POLLUTION PREVENTION PLAN

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-1-40-6(130)	S-2
P.E.	2015	71001-1195-44	

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					
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 TRIB. TO CANE CREEK	YES	NO	YES	YES
STR-1A	UNNAMED TRIB. TO CANE CREEK	YES	NO	YES	YES
STR-2	UNNAMED TRIB. TO CANE CREEK	YES	NO	YES	YES
STR-3	UNNAMED TRIB. TO CANE CREEK	YES	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) 49-52, 54-55, 61

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-6 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				
WETLAND LABEL	FROM STATION LT OR RT	TO STATION LT OR RT	TEMPORARY IMPACTS (AC)	PERMANENT IMPACTS (AC)
N/A	N/A	N/A	N/A	N/A

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 ☐

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.

_____

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 5-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 STAGED 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 STAGES OF EPSC PLANS)

5.6.1.2. ☒ PROJECT DISTURBED AREA IS GREATER THAN 5 ACRES (MINIMUM OF THREE STAGES 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 2A-2A1 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 2A-2A1 (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-5. 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,

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STORMWATER POLLUTION PREVENTION PLAN

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 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. SITE ASSESSMENTS (3.1.2)

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

9. STORMWATER MANAGEMENT (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): RIP-RAP USED FOR OUTLET PROTECTION AND SLOPE STABIZATION.

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. NON-STORMWATER DISCHARGES (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. SPILL PREVENTION, MANAGEMENT AND NOTIFICATION (3.5.5.c, 5.1)

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

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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. 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

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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).

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

06-01-201
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.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STORMWATER POLLUTION PREVENTION PLAN

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-1-40-6(130)	S-6
P.E.	2015	71001-1195-44	

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

EPSC STAGE	OUTFALL LABEL	SUB OUT-FALL	STATION CL, LT OR RT	SLOPE WITHIN ROW (%)	STAGE 1 (P1) DRAINAGE AREA (AC)	STAGE 2 (P2) DRAINAGE AREA (AC)	STAGE 3 (P3) DRAINAGE AREA (AC)	SEDIMENT BASIN OR EQUIVALENT MEASURE(S) (YES, NO OR N/A)	RECEIVING NATURAL RESOURCE NAME OR LABEL	COMMENTS
1-3	OUT-1		26+70 RT RAMP A	2	14.675	14.658	15.575	YES	STR-1	
1-3	OUT-2		17+25 LT MINE LICK	6	1.64	2.084	2.703		STR-1	
1-3	OUT-3		17+25 RT MINE LICK	S1 – 5 S2/S3 – 4	1.827	1.764	1.323		STR-1	
1-3	OUT-4		17+85 LT MINE LICK	S1/S2 – 4 S3 – 3	1.413	0.271	0.197		STR-1	
1-3	OUT-5		17+95 RT MINE LICK	S1/S2 – 5 S3 – 2	0.184	0.112	0.105		STR-1	
1-3	OUT-6		22+38 RT RAMP B	2	28.241	26.525	2.178	YES	STR-3	
1-3	OUT-7		22+17 RT RAMP B	2	0.291	0.07	0.106		STR-3	
1-3	OUT-8		22+16 RT RAMP B	3	0.538	0.538	0.538		STR-3	
1-3	OUT-9		22+35 RT RAMP B	3	2.211	1.367	2.211		STR-3	
1-3	OUT-10		20+82 LT RAMP B	3	3.655	1.159	1.326		STR-3	
1-3	OUT-11		20+90 LT RAMP B	3	5.391	5.391	5.45	YES	STR-3	
1-3	OUT-12		19+28 LT RAMP C	6	0.969	0.669	0.707		STR-3	
1-3	OUT-13		19+33 LT RAMP C	3	3.599	7.384	3.599	YES	STR-3	
1-3	OUT-14		83+38 RT	2	7.61	7.61	7.61	YES	STR-3	
1-3	OUT-15		94+00 LT	1	107.395	107.395	102.703	YES		
1-3	OUT-16		102+15 RT	1	7.601	7.601	6.703	YES		
1-3	OUT-17		13+60 RT BENNETT RD	S1 – 4 S2/S3 - 1	1.776	2.147	1.763		STR-1A	
1-3	OUT-18		14+50 LT BENNETT RD	S1 – 2 S2/S3 – 1	0.611	7.75	7.75	YES	STR-1A	
1-3	OUT-19		15+00 LT BENNETT RD	S1 – 2 S2/S3 – 3	0.444	0.471	0.397		STR-1A	
1-3	OUT-20		18+10 LT LEE SEMINARY RD	2	0.412	0.251	0.244			
1-3	OUT-21		28+17 RT BENNETT RD	S1 – 3 S2/S3 – 2	1.964	2.64	4.898		STR-1	
1-3	OUT-22		28+45 RT BENNETT RD	3	1.003	1.019	2.26		STR-1	
1	OUT-23		28+40 LT BENNETT RD	3	1.282				STR-1	
1	OUT-24		28+95 LT BENNETT RD	4	1.781				STR-1	
1-3	OUT-25		14+00 RT LEE SEMINARY RD	S1 – 6 S2/S3 – 9	5.726	5.46	5.561	YES		
1	OUT-26		26+75 LT LEE SEMINARY RD	9	1.839					
1-3	OUT-27		10+45 RT HAWKINS CRAWFORD RD	S1 – 4 S2/S3 – 7	5.003	5.207	4.918	YES		
1-3	OUT-28		15+25 RT HAWKINS CRAWFORD RD	S1 – 3 S2/S3 - 5	0.23	0.23	0.23			
1-3	OUT-29		18+05 RT HAWKINS CRAWFORD RD	S1 – 3 S2/S3 – 1	4.888	4.79	5.407	YES		
1-3	OUT-30		42+65 LT MINE LICK	S1 – 3 S2/S3 – 2	2.323	2.931	2.983			
1-3	OUT-31		42+65 RT MINE LICK	S1 – 4 S2/S3 – 2	0.116	0.121	0.241			
2-3	OUT-32		26+60 RT RAMP D	2		14.299	15.575	YES	STR-1	
2-3	OUT-33		83+15 LT	2		7.19	7.277	YES	STR-3	
2-3	OUT-33A		22+65 RT RAMP B	3		19.857	19.857	YES	STR-3	
2-3	OUT-33B		22+50 RT RAMP B	5		7.951	7.951	YES	STR-3	
2-3	OUT-34		18+90 RT RAMP C	2		1.493	1.493		STR-3	
2-3	OUT-35		18+95 RT RAMP C	5		2.188	2.188		STR-3	
2-3	OUT-36		18+10 RT LEE SEMINARY RD	2		0.028	0.027			
2-3	OUT-37		29+00 LT BENNETT RD	4		1.54	1.54		STR-1	
2-3	OUT-38		28+60 LT BENNETT RD	3		1.898	11.648	YES	STR-1	
1-3	OUT-39		53+75 LT BENNETT RD	5	6.079	6.079	6.342	YES		
2-3	OUT-40		53+75 RT BENNETT RD	3		0.33	0.33			
2-3	OUT-41		31+41 LT MINE LICK	3		6.261	6.261	YES	STR-3	
2-3	OUT-42		31+85 RT MINE LICK	5		1.904	1.904		STR-3	
2-3	OUT-43		32+17 RT MINE LICK	2		0.6	0.6		STR-3	
2-3	OUT-44		31+11 LT MINE LICK	30		0.614	0.614		STR-3	
3	OUT-45		18+50 RT RAMP D	33			0.37		STR-2	TEMPORARY
3	OUT-46		23+45 RT RAMP D	25			0.55		STR-1	TEMPORARY

* SEE COMMENTS SECTION FOR ADDITIONAL INFORMATION REGARDING DRAINAGE AREA.

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

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STORMWATER POLLUTION PREVENTION PLAN

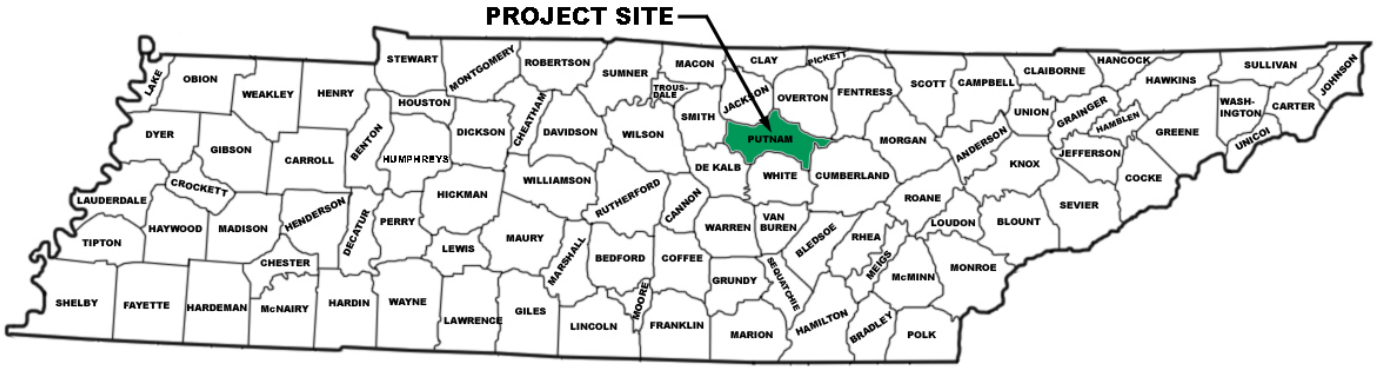
Documentation
and
Permits Binder

Project Name: Interstate 40, Interchange at Mine Lick Creek Rd. & I-40, Log Mile – 15.560, Mile Marker – 282.392 to 283.370

Project No.: 71001-1195-44; NH-I-40-6(130)

PIN: 101577.00

Putnam County, Tennessee



Prepared for:
Tennessee Department of Transportation – TDOT

Prepared by:
Palmer Engineering Company

Consultant Reference No.: 10863.37

Content Checklist

DOCUMENTS AND PERMITS BINDER

CHECKLIST

PROJECT NAME: INTERSTATE 40, INTERCHANGE AT MINE LICK CREEK RD. & I-40, LOG MILE – 15.560, MILE MARKER – 282.392 TO 283.370
PIN: 101577.00
PROJECT NO. : 71001-1195-44; NH-I-40-6(130)
COUNTY: PUTNAM

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

1. Index of Revisions

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

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

2. Rainfall Record Sheets

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								
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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: Cookeville, Tennessee, US*
Latitude: 36.1398°, Longitude: -85.5785°
Elevation: 1023 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	0.381 (0.349–0.418)	0.450 (0.412–0.493)	0.527 (0.483–0.576)	0.592 (0.540–0.647)	0.678 (0.615–0.740)	0.747 (0.673–0.814)	0.819 (0.732–0.893)	0.893 (0.791–0.973)	0.993 (0.868–1.08)	1.08 (0.930–1.17)
10-min	0.608 (0.557–0.667)	0.719 (0.660–0.788)	0.844 (0.773–0.923)	0.947 (0.864–1.04)	1.08 (0.980–1.18)	1.19 (1.07–1.30)	1.30 (1.16–1.42)	1.42 (1.25–1.54)	1.57 (1.37–1.71)	1.69 (1.46–1.85)
15-min	0.761 (0.697–0.834)	0.904 (0.829–0.991)	1.07 (0.978–1.17)	1.20 (1.09–1.31)	1.37 (1.24–1.50)	1.51 (1.36–1.64)	1.65 (1.47–1.79)	1.79 (1.58–1.95)	1.98 (1.73–2.16)	2.13 (1.84–2.32)
30-min	1.04 (0.955–1.14)	1.25 (1.15–1.37)	1.52 (1.39–1.66)	1.74 (1.58–1.90)	2.03 (1.84–2.22)	2.27 (2.04–2.47)	2.52 (2.25–2.75)	2.78 (2.46–3.03)	3.15 (2.75–3.43)	3.44 (2.98–3.76)
60-min	1.30 (1.19–1.43)	1.57 (1.44–1.72)	1.94 (1.78–2.13)	2.26 (2.06–2.47)	2.70 (2.45–2.95)	3.07 (2.77–3.35)	3.47 (3.10–3.78)	3.90 (3.45–4.25)	4.51 (3.95–4.92)	5.02 (4.34–5.49)
2-hr	1.53 (1.40–1.68)	1.83 (1.67–2.02)	2.27 (2.07–2.50)	2.64 (2.39–2.90)	3.16 (2.85–3.47)	3.60 (3.23–3.95)	4.07 (3.62–4.46)	4.58 (4.04–5.02)	5.32 (4.62–5.83)	5.94 (5.10–6.51)
3-hr	1.66 (1.52–1.84)	1.99 (1.82–2.20)	2.46 (2.24–2.71)	2.85 (2.59–3.14)	3.41 (3.08–3.74)	3.87 (3.48–4.25)	4.37 (3.90–4.79)	4.91 (4.34–5.39)	5.69 (4.96–6.25)	6.34 (5.45–6.97)
6-hr	2.04 (1.86–2.25)	2.43 (2.22–2.69)	2.96 (2.70–3.27)	3.42 (3.10–3.78)	4.07 (3.67–4.49)	4.61 (4.13–5.09)	5.19 (4.61–5.72)	5.81 (5.12–6.40)	6.70 (5.82–7.39)	7.44 (6.38–8.20)
12-hr	2.47 (2.27–2.69)	2.94 (2.70–3.21)	3.57 (3.29–3.91)	4.11 (3.77–4.49)	4.87 (4.44–5.32)	5.50 (4.98–6.00)	6.16 (5.55–6.72)	6.87 (6.13–7.48)	7.87 (6.93–8.58)	8.68 (7.55–9.50)
24-hr	3.05 (2.86–3.27)	3.65 (3.42–3.91)	4.45 (4.16–4.76)	5.08 (4.75–5.44)	5.95 (5.55–6.36)	6.66 (6.19–7.10)	7.37 (6.83–7.87)	8.12 (7.48–8.65)	9.14 (8.37–9.73)	9.94 (9.06–10.6)
2-day	3.69 (3.47–3.95)	4.41 (4.15–4.72)	5.39 (5.06–5.76)	6.17 (5.78–6.59)	7.24 (6.76–7.73)	8.10 (7.55–8.64)	8.99 (8.34–9.59)	9.91 (9.15–10.6)	11.2 (10.2–11.9)	12.2 (11.1–13.0)
3-day	3.94 (3.70–4.20)	4.71 (4.42–5.03)	5.72 (5.37–6.11)	6.52 (6.12–6.96)	7.61 (7.12–8.12)	8.48 (7.90–9.03)	9.36 (8.69–9.97)	10.3 (9.49–10.9)	11.5 (10.6–12.3)	12.5 (11.4–13.3)
4-day	4.18 (3.92–4.46)	5.00 (4.69–5.34)	6.06 (5.69–6.46)	6.88 (6.45–7.33)	7.99 (7.48–8.51)	8.86 (8.26–9.42)	9.74 (9.05–10.4)	10.6 (9.83–11.3)	11.8 (10.9–12.6)	12.7 (11.7–13.6)
7-day	5.03 (4.72–5.36)	6.00 (5.64–6.40)	7.24 (6.79–7.71)	8.19 (7.68–8.73)	9.48 (8.87–10.1)	10.5 (9.78–11.2)	11.5 (10.7–12.2)	12.5 (11.6–13.3)	13.9 (12.8–14.8)	15.0 (13.7–16.0)
10-day	5.74 (5.40–6.10)	6.82 (6.43–7.26)	8.15 (7.68–8.66)	9.18 (8.64–9.76)	10.6 (9.92–11.2)	11.6 (10.9–12.3)	12.7 (11.8–13.5)	13.7 (12.8–14.6)	15.2 (14.0–16.1)	16.2 (15.0–17.3)
20-day	7.87 (7.44–8.32)	9.30 (8.80–9.84)	10.9 (10.3–11.5)	12.0 (11.4–12.7)	13.5 (12.8–14.3)	14.6 (13.8–15.4)	15.7 (14.7–16.5)	16.6 (15.6–17.6)	17.9 (16.7–18.9)	18.8 (17.5–19.9)
30-day	9.71 (9.25–10.2)	11.4 (10.9–12.0)	13.2 (12.6–13.9)	14.5 (13.8–15.2)	16.1 (15.3–16.9)	17.3 (16.4–18.2)	18.4 (17.4–19.4)	19.5 (18.4–20.5)	20.8 (19.6–21.9)	21.8 (20.5–22.9)
45-day	12.3 (11.7–12.9)	14.4 (13.7–15.1)	16.5 (15.7–17.3)	18.0 (17.1–18.8)	19.8 (18.9–20.8)	21.2 (20.1–22.2)	22.4 (21.3–23.6)	23.6 (22.4–24.8)	25.1 (23.7–26.4)	26.1 (24.6–27.5)
60-day	14.8 (14.1–15.5)	17.4 (16.6–18.2)	19.7 (18.8–20.7)	21.5 (20.5–22.5)	23.5 (22.4–24.7)	25.0 (23.8–26.2)	26.4 (25.1–27.7)	27.6 (26.3–29.0)	29.1 (27.6–30.6)	30.2 (28.6–31.7)

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

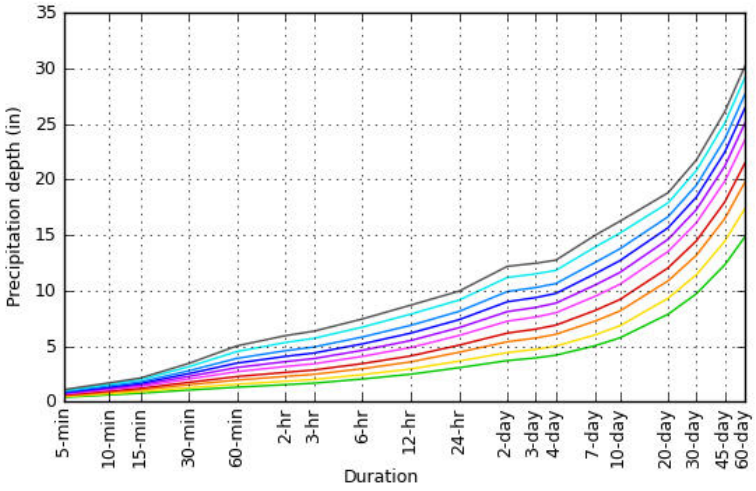
Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper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

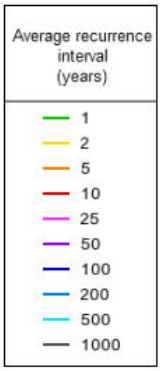
Please refer to NOAA Atlas 14 document for more information.

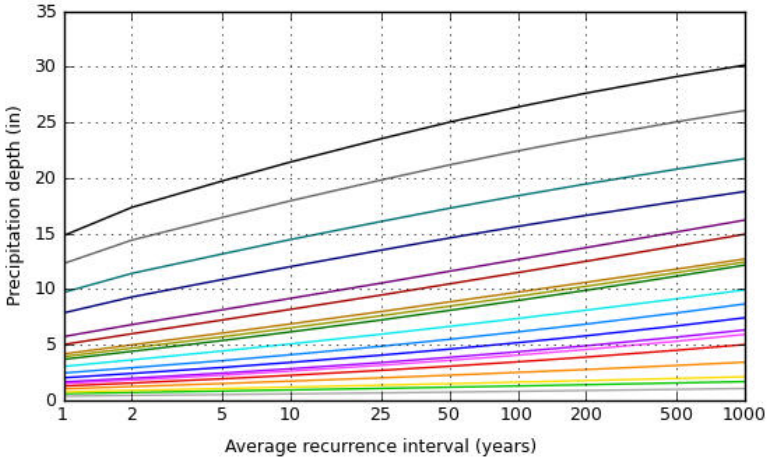
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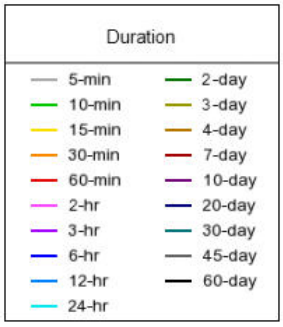
PF graphical

PDS-based depth-duration-frequency (DDF) curves
Latitude: 36.1398°, Longitude: -85.5785°









NOAA Atlas 14, Volume 2, Version 3

Created (GMT): Tue May 5 16:16:47 2015

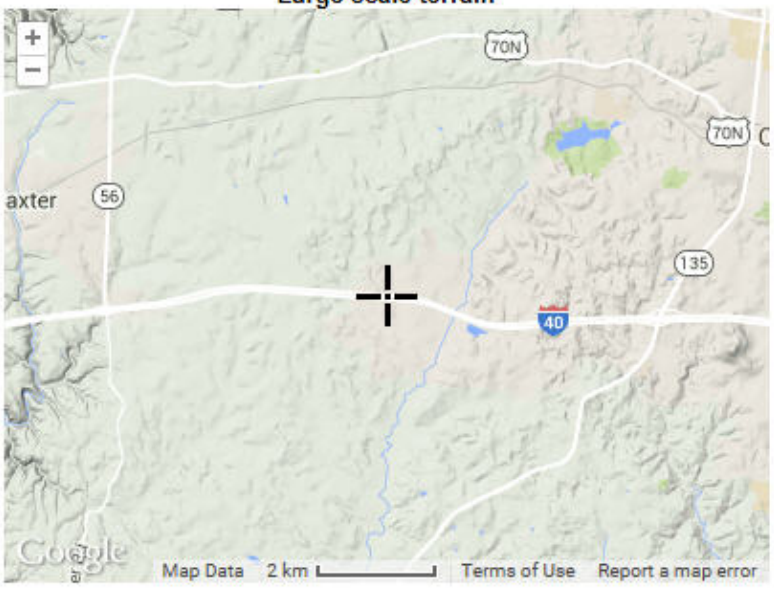
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Maps & aerials

Small scale terrain



Large scale terrain



Large scale map



Large scale aerial



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3. EPSC Inspection Reports

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

EPSC Chronological Log Sheet – Quarter 1 2 3 4 (Circle One)			
Date and Time	**Type of Visit (Rainfall Event Visit, Weekly Inspection, QA/QC meeting, Construction meeting etc.)**	**Representative of EPSC inspection services consultant**	**TDOT Project Supervisor (or designee)**

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): _____

4. NOI & NOC

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
Division of Water Resources
William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Ave., 11th Floor, Nashville, TN 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 101577.00; PROJECT # 71001-1195-44; NH-I-40-6(130)**		**Existing NPDES Tracking Number: TNR**	
Street Address or Location:	Interstate 40		Start date:	June 2015
			Estimated end date:	June 2020
Site Activity Description:	Interchange at Mine Lick Creek Rd. & I-40, Log Mile - 15.560, Mile Marker - 282.392 to 283.370 which includes grade, drain, bridge, pave, sign, and signals.		Latitude (dd.dddd):	36.1398 º N
			Longitude (dd.dddd):	-85.5785 º W
County(ies):	Putnam	MS4 Jurisdiction: TDOT	Acres Disturbed:	72.4
			Total Acres:	123.6

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.:

Receiving waters: Cane Creek and Unnamed Tributaries to Cane Creek within the Caney Watershed

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 - signs certification below): (individual responsible for site): 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 Project 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. 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.

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 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). There is no fee for sites less than 1 acre.

Acres Disturbed	= or > 150 acres	= or > 50 < 150 acres	= or > 5 < 50 acres	= or > 1 < 5 acres
Fee	$7,500	$4,000	$1,000	$250

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.

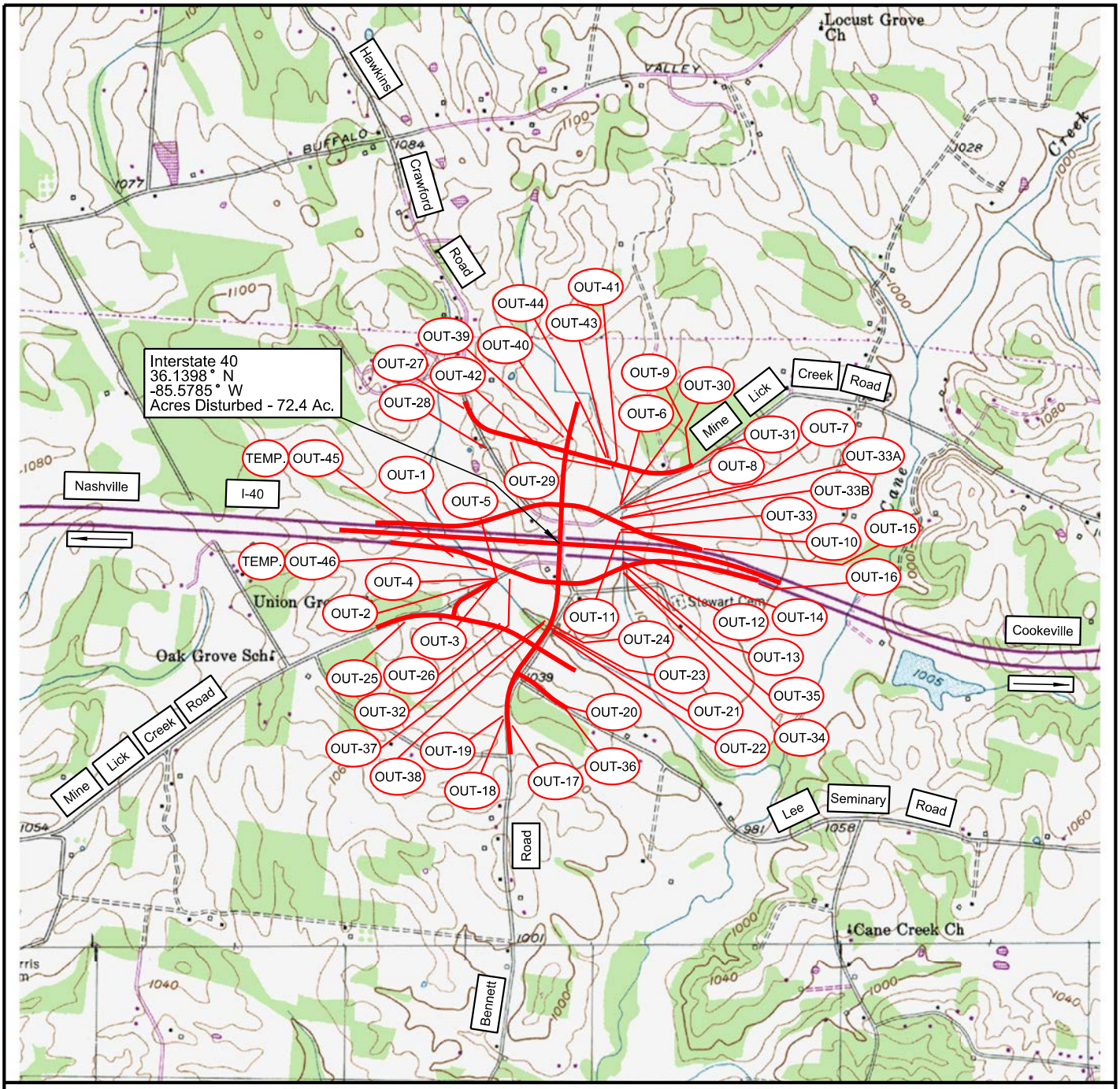
MS4 Jurisdiction: If this construction site is located within a Municipal Separate Storm Sewer System (MS4), please list name of MS4. A current list of MS4s in Tennessee may be found at http://www.tn.gov/environment/wpc/stormh2o/docs/MS4s_Jan2012.pdf

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 TDEC Nashville, TN address below, addressed to **Attention: Stormwater NOI Processing**.

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



TOPOGRAPHIC MAP

N

OUT-1 Approximate Outfall Location

0 2000 4000

SCALE FEET

SOURCE: USGS Quad Map, U.S. Geological Survey 7.5 Minute Topographic Map, Cookeville West, Burgess Falls Tennessee Quadrangles

TDOT

Tennessee Department of Transportation

Nashville, Tennessee

Stormwater Pollution Prevention Plan

Interstate 40

Interchange at Mine Lick Creek Rd. & I-40

Log Mile - 15.560

Mile Marker - 282.392 to 283.370

Putnam County, Tennessee

Drawn By:	Checked By:
DAH	JBL
TDOT P.E. No.	TDOT PIN
71001-1195-44	101577.00
FED. No.	Figure
NH-I-40-6(130)	1

5. **Blank NOT**

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

6. Construction General Permit



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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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://tn.gov/environment/wpc/stormh2o/qlp.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://www.tn.gov/environment/wpc/dataviewer/

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 (**Error! Reference source not found.**), 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 15 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 15 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 15 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, 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.
g) 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.

[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]

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
(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 docume*nt, 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) (http://www.tn.gov/environment/permits/arap.shtml). 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:

[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)

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 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://tn.gov/environment/wpc.

"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://tn.gov/environment/wpc/tmdl/approved.shtml

"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
(next page)

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
Division of Water Pollution Control
6th Floor Annex, L&C Tower, 401 Church Street, 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:		**NPDES Tracking Number: TNR**
Street Address or Location:		Construction Start Date:
		Estimated End Date:
Site Description:		Latitude (dd.dddd):
		Longitude (-dd.dddd):
County(ies):	MS4 Jurisdiction:	Acres Disturbed:
		Total Acres:

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 Number:

Receiving waters:

Attach the SWPPP with the NOI ☐ SWPPP Attached	Attach a site location map ☐ Map Attached

Name of Site Owner or Developer (Site-Wide Permittee): (person, company, or legal entity that has operational or design control over construction plans and specifications)

Site Owner or Developer Contact Name: (individual responsible for site)		Title or Position: (the party who signs the certification below):		
Mailing Address:		City:	State:	Zip:
Phone: ( )	Fax: ( )	E-mail:		

Optional Contact:		Title or Position:		
Mailing Address:		City:	State:	Zip:
Phone: ( )	Fax: ( )	E-mail:		

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 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.

Owner or Developer Name: (print or type)	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. 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.

Primary contractor name and address: (print or type)	Signature:	Date:
Other contractor name and address: (print or type)	Signature:	Date:
Other contractor name and address: (print or type)	Signature:	Date:

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:

APPENDIX A

APPENDIX B – Notice of Termination (NOT) Form

(next page)

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC)
Division of Water Pollution Control (WPC)
6th Floor Annex, L&C Tower, 401 Church Street, Nashville, Tennessee 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 local WPC Environmental Field Office (EFO) address (see table below). For more information, contact your local EFO at the toll-free number 1-888-891-8332 (TDEC).

Type or print clearly, using ink and not markers or pencil.

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

Name of Permittee Requesting Termination of Coverage:			
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 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 the site or portions of the site have obtained permit coverage by subsequent operators or that 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.

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

EFO	**Street Address**	**Zip Code**	**EFO**	**Street Address**	**Zip Code**
Memphis	8383 Wolf Lake Drive, Bartlett, TN	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

APPENDIX C – Twice-Weekly Inspection Report Form
(next page)

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC)
Division of Water Pollution Control (WPC)
6th Floor Annex, L&C Tower, 401 Church Street, Nashville, Tennessee 37243
1-888-891-8332 (TDEC)

General NPDES Permit for Stormwater Discharges from Construction Activities (CGP)

CGP Inspection Worksheet for Twice-Weekly Inspections of Erosion Prevention and Sediment Controls

Site or Project Name:		**NPDES Tracking Number: TNR**
Primary Permittee Name:		Date of Inspection:
Current approximate disturbed acreage:	Has daily rainfall been documented? ☐Yes ☐ No	Name of Inspector:
Current weather/site conditions:		Inspector's TNEPSC Certification Number:

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 Gage ☐ Off-site Reference Rain Gage Location: _____

Best Management Practices (BMPs):

Are the Erosion Prevention and Sediment Controls (EPSCs) functioning correctly in the following locations:			
1.	Disturbed areas/material storage areas	☐Yes	☐No
2.	Outfall points (or nearest accessible downstream point if an outfall is inaccessible)	☐Yes	☐No
3.	Construction ingress/egress points	☐Yes	☐No

If the answer is "No" for any of the above, please describe the problem and corrective actions to be taken. Otherwise, describe any pertinent observations:

4.	Are (EPSCs) installed and maintained in the field per SWPPP? If "No", describe below.	☐Yes	☐No
5.	Have site discharges caused an objectionable color contrast in the receiving stream (Permit section 5.3.2)? If "Yes", describe below the measures implemented to eliminate contrast.	☐Yes	☐No
6.	Have discharges from dewatering activities been managed by appropriate controls per Section 4.1.4 of the Permit? If "No", describe below the measures to be implemented to achieve compliance.	☐Yes	☐No
7.	If construction activity at any location on-site has temporarily/permanently ceased, was the area stabilized within 15 days per Section 3.5.3.2? If, "No", describe below each location and measures taken to stabilize the area(s).	☐Yes	☐No
8.	Are non-stormwater discharges (per Section 1.2.3) and housekeeping measures such as storing chemicals, construction related debris litter, oils, fuels, building products, truck wash (per Section 3.5.3.1 (f) and (g)) being properly managed? If "No", describe below the measures to be implemented to achieve compliance.	☐Yes	☐No
9.	If a concrete washout facility is located on site, is it clearly identified on the project and maintained? If "No", describe below the measures to be implemented to achieve compliance. ☐ N/A	☐Yes	☐No
10.	Have all previous deficiencies been addressed? If not, describe the remaining deficiencies. ☐ Check if deficiencies/corrective measures have been reported on a previous form.	☐Yes	☐No

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

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.

Inspector Name and Title (print or type):	Signature:	Date:
Permittee Name and Title (print or type):	Signature:	Date:

CGP Inspection Worksheet for Twice-Weekly Inspections of Erosion Prevention and Sediment Controls

Purpose of this form/ Instructions

An inspection, as described in section 3.5.8.2.of the General Permit for Stormwater Discharges from Construction Activities ("Permit"), shall be performed at least twice every calendar week and documented on this form. 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), such inspection only has to be conducted once per month until thawing results in runoff or construction activity resumes.

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. (http://www.tnepsc.org/). A copy of the certification or training record for inspector certification should be kept on site.

Qualified personnel, as defined in section 3.5.8.1 of the Permit (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.

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.

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.

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 if possible, but in no case more than 7 days after the need is identified.

Based on the results of the inspection, the site description identified in the SWPPP in accordance with section 3.5.1 of the Permit and pollution prevention measures identified in the SWPPP in accordance with section 3.5.2 of the Permit, 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.

All inspections shall be documented on this Construction Stormwater Inspection Certification form. Alternative inspection forms may be used as long as the form contents and the inspection certification language are, at a minimum, equivalent to the division's form 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 of the Permit.

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.

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7. Environmental Permits

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

October 14, 2014

Mr. Jimmy Smith
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 # 71001-1195-44
PIN 101577.00
Interstate 40
Interchange at Mine Lick Creek Road & I40
Putnam County

Dear Mr. Smith:

The Tennessee Department of Transportation is proposing to build an interchange at Mine Lick Creek Rd and Interstate (west of Cookeville) in Putnam County. The project involves building a diamond interchange which includes 4 ramps, and improving other various roads. Bennett Road is being upgraded to a four lane road with 12 ft. wide travel lanes and turn lanes for the interchange. The other local roads are being realigned and upgraded to 2-12 ft. wide travel lanes with four foot shoulders. Also included within the project scope is crossing/impact of four (4) streams, impacting of one (1) wet weather conveyance/ephemeral stream, and utility crossings. The project scope also includes all associated drainage improvements. The total proposed length of roadway construction and improvements equals 2.781 miles. 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 that the streams as described within the enclosed feature impact tables, meet the criteria of the nationwide permit.

Project Rationale/Purpose and Need (TDEC Section 7)

The Tennessee Department of Transportation has proposed a new highway connecting I-40 and US 70N (SR 24) in Putnam County, just west of the Cookeville City Limits. The proposed route would begin a Mine Lick Creek Road Interchange on I-40 and extend north and east, connecting with US 70N (SR 24). The project is to provide an additional north/south route for continually increasing volumes of traffic around Cookeville. In addition, traffic moving between I-40 and US 70N (SR 24) would be provided with a new, efficient route that would improve access to developable areas of Putnam County. Vehicular traffic moving between I-40 and US 70N is currently served mainly by SR-135, SR-136, and SR-56. The new north south connector will provide a roadway to facilitate sustained growth activities in a western area of Cookeville between the downtown commercial business district and SR-56. While the interchange would improve access to the Highland Business Park

Reasonable Alternatives (TDEC Section 10.1)

The alternatives under consideration in the Environmental Assessment include the "No-Build" alternative and two "Build" alternatives, designated as Alternative A and Alternative B. Please refer to enclosed Environmental Document for more details.

The proposed interchange location was evaluated according to environmental impacts, as well as existing land use. It was determined that the proposed interchange provides the fewest impacts to the environment and homes.

A "No Build" option was considered. The No Build option does not address the purpose and need to improve regional and local accessibility, traffic capacity along SR 56, SR 135, and SR 136, and providing positive economic benefits resulting from the existing and potential business development.

Impact Minimization (TDEC Section 10.1)

The proposed interchange will only disturb only the areas needed for construction. TDOT typically uses 6:1 slopes but over stream crossing slopes steeper than 4:1 were used to minimize impacts. Implementation and maintenance of effective erosion prevention and sediment control (EPSC) measures will minimize water quality impacts. Stream relocation is proposed rather than filling when feasible. The purchase of mitigation credits from TSMP as compensation for offsetting unavoidable impacts will allow the continued restoration, establishment, enhancement, and preservation of aquatic resources.

Supplemental Information

As mitigation for 694 ft. (694 ft. x 1.0) of stream [encapsulation] [length losses], we propose a payment of $166,650. A total payment of $ 166,650 is proposed to the In-Lieu Fee Stream Mitigation Program. Please cite this payment to the TWRF in your permits.

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. Mitigation for these impacts has been proposed on the project site, where practicable.

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.

An email was sent from TDOT to USFWS on March 5, 2014 requesting a review under section 7 of the Endangered Species Act (ESA) 1973. In a response email dated March 5, 2014, USFWS stated they are unaware of any federally listed species that would be impacted by the project. Therefore, based on the best information available at this time, they believe that the requirements of section 7 of the ESA 1973 are fulfilled.

A search of the TDEC Division of Natural Areas, endangered species database, was conducted on April 25, 2014. This database search identified two (2) listed species within one to four miles of the proposed site.

An email was sent from TDOT to the Tennessee Wildlife resource Agency (TWRA) on August 29, 2014, requesting information on species that may be present in the vicinity of the proposed project. In a response email dated September 18, 2014 (enclosed), TWRA stated that their data shows no occurrence of listed species within two miles of the project location. The implementation of BMPs would be sufficient to satisfy the needs of TWRA,

A letter was sent from TDOT to USFWS dated June 11, 2012, transmitting a habitat suitability assessment for potential impacts to federally endangered Indiana bat (*Myotis sodalis*) as a result of the proposed construction. TDOT has determined “not likely to adversely affect” the Indiana bat because minimal suitable habitat is present onsite. In a response dated July 10, 2012 USFWS concurs with TDOT’s determination of “not likely to adversely affect” for the Indiana bat due to marginal suitability of the habitat. USFWS is unaware of any federal listed or proposed species that could be impacted by this project. USFWS believe that the requirements of section 7 of the endangered Species Act of 1973, as amended, are fulfilled.

TDOT historian has conducted a survey to identify any resources either listed in or potentially eligible in the National Register of Historic Places. TDOT has worked with the State Historic Preservation Office (SHPO) on this survey to determine if any resources are eligible. TDOT historic surveys have been conducted to identify potential sites within project area that meets SHPO Guidelines for Archaeological Resource Management Studies. TDOT did not find any architectural or archaeological sites within the project site.

In coordination letter dated April 9, 2003 the SHPO stated considering available information, they find the proposed project will not adversely affect any architectural property that is eligible for listing in the National Register of Historic Places. In a coordination letter dated February 3, 2004, they also concur that the project area contains no archaeological resources eligible in the National Register of Historic Places. TDOT has complied with section 106 of the National Historic Preservation Act.

In addition to the impacts referenced above, we are requesting that the Tennessee Department of Environment and Conservation and the Corps of Engineers include approval for all proposed outfall structures (ditches, pipes, etc.) associated with the proposed project in your permits.

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.

By copy of this letter, we are also requesting that TDEC and the Corps of Engineers, please include approval of a potential temporary stream crossing in your permits. Temporary crossings will be located within right-of-way or easements. Copies of TDOT Standard Drawings EC-STR-25 (Temporary Road Stabilization and Temporary Culvert Crossing), EC-STR-31 (Temporary

Diversion Channels), EC-STR-31A (Temporary Diversion Channel Design), and EC-STR-32 (Temporary Diversion Culverts) are enclosed for your information and use.

This project is currently scheduled for the December 3, 2014 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

ec:

Region 2
Ms. Jeanene Woodruff, TDEC
Ms. Amber Thornton, Project Management Office
Mr. Ken Flynn, Region 2 Construction Office
Mr. Wesley Hughen, Region 2 Project Development
Mr. Jay Norris, HQ (Region 2) Construction Office
Mr. Tommy Paul, Region 2 Environmental Coordinator
Mr. Rob Howard, Region 2 Ecology Section
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						Impact Description							Mitigation Description					Comments
Location #	Feature Name	Jurisdictional Determination	Latitude	Longitude	Stationing	Brief Impact Description	Impact Acreage to Waters of the US (ac.)	Corps Non-Notification (Y/N)	Existing Open Stream	Existing Structure Length (ft.)	Total Existing Stream Length (ft.)	Total Proposed Stream Length (ft.)	In-Kind Stream Replace. Length (ft.)	Encapsul. Length @ 1.0 Ratio (ft.)	Stream Length Losses @ 1.0 Ratio (ft.)	Rip-rap Length @ .75 Ratio (ft.)	Total In-Lieu Fee **(@ $240 per LF)**	Location-Specific Miscellaneous Comments
1	STR-1	Stream	36.1406°	-85.5838°	25+92 Ramp A	Culvert Extension	0.012	N	65	190	255	255	-	15	0	-	$3,600	extending culvert from existing 190 ft of 8x7
2	STR-1	Stream	36.1383°	-85.5817°	19+93 Ramp D	Culvert Extension	0.030	N	163	146	309	302		122	7	-	$30,960	extending culvert from existing 146 ft of 8x7
3	STR-1	Stream	36.1396°	-85.5829°	17-90 Mine Lick Creek	Remove Pipe	0.007	N	0	40	40	40		-40		-	-$9,600	Remove existing culvert
4	STR-1	Stream	36.1368°	-85.5790°	28+60 Bennett Rd	Stream Encapsulation	0.044	N	220	21	241	210	-	127	31	-	$37,920	removing 21 ft of existing bridge
5	STR-1A	Stream	36.1332°	-85.5809°	14+11 Bennett Rd.	Stream Encapsulation	0.009	Y	130	41	171	163	-	102	8	-		Difference Stream Segment and less than 200 ft impact
6	STR-2	Stream	36.1393°	-85.5829°	19+00-20+50 Ramp D	Stream Relocation	0.016	N	134	0	134	160	160	0	134		$32,160	-
7	STR-3	Stream	36.1405°	-85.5761°	21+28 Ramp B	Stream Encapsulation	0.028	N	160	0	203	203		113	0	-	$27,120	-
7	STR-3	Strea,	36.1409°	-85.5757°		Remove Pipe	0.006	N	0	43	43	43		-43	0		-$10,320	Remove existing culvert
8	STR-3	Stream	36.1389°	-85.5757°	19+09 Ramp C	Stream Encapsulation	0.022	N	159	0	159	158	-	115	1	-	$27,840	-
9	STR-3	Stream	36.1427°	-85.5762°	31+62 Mine Lick Creek	Stream Encapsulation	0.021	N	151	0	151	151	-	112	0	-	$26,880	-
						Project Totals:	**0.195**	**-**			**1,706**	**1,685**	**160**	**623**	**181**	**0**	**$166,560**	**-**

521 173, instead of 623 181, does not include location 5, because different segment

(SummaryTable ALL OTHER FEATURES)

WET WEATHER CONVEYANCE SUMMARY TABLE:								
Location Information				**Impact Description**				**Comments**
Feature Name	Latitude	Longitude	Stationing	Brief Impact Description	Total Existing Feature Length (ft.)	Total Proposed Feature Length (ft.)	Total Feature Impact Area (ac.)	Location-Specific Miscellaneous Comments
WWC-1A/EPH -1A	36.1407°	-85.5834	26+60-25+00R Ramp A	Relocation to rip-rap ditch	168	190	0.012	-
WWC-2	36.1391°	-85.5750	16+00-19+00L Ramp C	No impact	355	0	0.000	-
					523	**190**	**0.012**	**-**

(SummaryTable WWCs ONLY)

FEATURE IMPACT TABLE:	STR-1 (Unnamed Tributary to Cane Creek) and SPG-1
Location Information	
Feature Name:	STR-1 (Unnamed Tributary to Cane Creek) and SPG-1
Latitude:	36.1406°
Longitude:	-85.5838°
Stationing:	Sta. 25+92 ± Rt. Ramp A, 19+93 ± Rt Ramp D, 17+90 Mine Lick Creek Road, and 28+60 Bennett Rd.
FEMA Floodplain Designation (if Zone AE, please enclose No-Rise Certification):	Zone X
Permits Required - TDEC:	ARAP: Does not fit criteria under GARAP because of cumulative impacts. Will cause more than de minimis degradation to water quality at this location.
Permits Required - Corps:	Pre-Construction Notification- Nationwide #14: Cumulative impacts at this site exceed one tenth of an acre; therefore, Pre-Construction Notification is required.
Permits Required - TVA:	N/A
CN-1091 Section 6: Project Description	
6.1: Narrative description of project scope	Extend existing culverts, construct new reinfornced concrete box bridge, remove existing 72" corrugated metal pipe (CMP), and utility relocations
6.2: USGS Topographic Map	Please see enclosed
6.3: Resource photographs	Please refer to photographs 2, 3, 7, 8, 9, 14, 16, and 18 in the enclosed Environmental Boundaries Report
6.4: Existing feature characteristics	STR-1 and SPG-1 Impact at 4 Locations Existing: **Sta. 25+92 (Ramp A),** 190 ft. of 8 ft. X7 ft. box culvert, 65 ft. of open stream, Total existing = 255 ft. **Sta 19+93 (Ramp D),** 146 ft. of 8 ft. X 7 ft. box culvert, 163 ft of open stream, Total existing = 309 ft. **Sta. 17+90 (Mine Lick Creek Road) ,** 40 ft. of 72 in. corrugated metal pipe (CMP), Total Existing = 40 ft. **Sta. 28+60 (Bennett Road.),** 21 ft. of bridge 220 ft. of open stream Total existing = 241 ft. Total existing length at 4 location = 845 ft. Existing SPG-1 Please refer to the enclosed Environmental Boundaries Report for more information

6.5: Proposed feature characteristics	Proposed **Sta. 25+92 (Ramp A),** 15 ft. of 8 ft. X7 ft. box culvert extension, 190 ft. of existing 8 ft. X 7 ft. culvert to remain, 50 ft. of rip-rap at inlet, Total proposed length = 255 ft. **Sta. 19+93 (Ramp D),** 122 ft. of 8 ft. X7 ft. box culvert extension, 146 ft. of existing 8 ft. X 7 ft. culvert to remain, 34 ft. of rip-rap at outlet, Total proposed length = 302 ft. **Sta. 17+90 (Mine Lick Creek Road),** 40 ft. remove existing 72 in. CMP Total proposed = 40 ft. Cookeville Water: Remove or retire line Twin Lakes Telephone: Remove line **Sta. 28+60 (Bennett Road)**, Remove existing 21 ft. bridge, 148 ft. of 2@16 ft. X 9 ft. Reinforned Concrete Box (RCB), 39 ft. of total rip-rap at inlet and outlet (19 ft. at inlet and 20 ft. out outlet), 23 ft. of open channel with rip-rap bank stabilization (12 ft. at inlet and 11 ft. at outlet), Total proposed = 210 ft. Twin Lakes Telephone: Remove and add line Cookeville Water: Remove and add 30" line Total proposed length at 4 loactions = 807 ft. Channel Loss= 38 ft. New Encapsulation = 264 ft. Remove 40 ft. Mitigation Required 264 + 38 - 40 = 262 ft. SPG-1-Rock fill is used in to allow continuation of water flow into STR-1
* Impact acreage to waters of the US (acres):	0.1/Cumulative impact with STR-1, STR-2, and STR-3 = 0.195
6.6: Wetland delineation documentation	N/A
6.7: Water resource hydrologic and jurisdictional determination documentation	Please refer to the enclosed Environmental Boundaries Report for more information.
CN-1091 Section 7: Project Rationale	
Description of the need for the proposed activity, alternatives, and impact minimization	Please refer to the enclosed cover letter for project rationale
CN-1091 Section 8: Technical Information	
8.1: Detailed plans, specifications, etc. included for present conditions and proposed activity	Please see enclosed
8.2: Sequencing of events and construction methods for proposed activity and compensatory mitigation	1. EPSC measures will be installed. Please refer to the enclosed EPSC sheets (46-47, 49-49B, 50-50B, and 55-55B). 2. For the construction method at this location, please refer to the enclosed , present layout (6, 7, and 12), proposed layout (6A, 7A, and 12A), profile layout (20, 25, and 12B), and culvert cross-section (41, 42, and 39)
* Proposed impact mitigation:	As mitigation for 262 ft. (262 ft. x 1.0) of stream [encapsulation] [length losses], we propose a payment of $62,880 to TSMP.
8.3: Depiction and narrative of EPSC measures	Please refer to the enclosed plan set, sheets 49 through 49B, for the EPSC plan sheets
CN-1091 Section 9: Water Resources Degradation (select one)	
My activity, as proposed, will not cause measurable degradation to water quality	
My activity, as proposed, will only cause de minimis degradation to water quality	
My activity, as proposed, will cause more than de minimis degradation to water quality (if selected, must complete Sections 10 and 11 below)	**X**
Unsure / need more information	
CN-1091 Section 10: Detailed Alternative Analysis	

10.1: Analysis of reasonable alternatives	1. A slab culvert (bottomless culvert) was considered for this impact. A bridge would not be cost effective in this instance. Disturbance of riparian vegetation along the stream channel shall be kept to a minimum. To help minimize over widening of the stream channel TDOT standard drawing STD-17-20 (Low Flow Channel Construction Details for Culvert inlet and Outlet) will be utilized during construction. 2. Longer culverts with typical 6:1 side slopes . Steepening the side slopes to 3.7:1 or steeper, allows for a shorter extension for minimal impact. 3. No-Build Option. No-Build does not fit the purpose and need. Refer to application cover letter and Environmental Document for more information.
10.2: Discussion of social and economic consequences	Construction of interchange helps economics development for the industrial park being built nearby. If the interchange is not built, then the area could lose more development. The existing local roads could not support this development without expansion. Current local roads are not designed for truck traffic. This could cause more accidents and congestion.
10.3: Demonstration that degradation from alternative will not violate WQ criteria	Best Management Practices (BMPs) which includes the design, installation, and maintenance of erosion prevention and sediment control measures will be implementated during construction, which will protect the receiving waters. Mitigation through TSMP as compensation for offsetting unavoidable impacts will allow the continued restoration, establishment, enhancement, and preservation fo the aquatic resource.
CN-1091 Section 11: Compensatory Mitigation	
11.1: Detailed discussion of proposed compensatory mitigation	As mitigation for 262 ft. (262 ft. x 1.0) of stream [encapsulation] [length losses], we propose a payment of $62,880 to In-Lieu Fee Stream Mitigation Program. Please cite this payment to TWRF in your permits.
11.2: Description of how compensatory mitig. will result in no net loss of resource value	TDOT has proposed to purchase credits from In-Leiu Fee Stream Mitigation Program for this impact. Therefore, the proposed impacts will result in no net loss of resource value.
11.3: Detailed monitoring plan	Will be provided by TSMP.
11.4: Long-term protection measures for compensatory mitigation site	Will be provided by TSMP.

FEATURE IMPACT TABLE:	STR-1A Unnamed Tributary
Location Information	
Feature Name:	STR-1A Unnamed Tributary
Latitude:	36.1333°
Longitude:	-85.5809°
Stationing:	14+11± Rt Bennett Rd.
FEMA Floodplain Designation (if Zone AE, please enclose No-Rise Certification):	Zone X
Permits Required - TDEC:	ARAP: Meets the General ARAP criteria for the [Construction and removal of Minor Road Crossings]. Will only cause de minimis degradation to water quality.
Permits Required - Corps:	Non-Notification - Nationwide #14: This roadway crossing meets all of the following criteria required for non-notification under Nationwide #14: • Discharge results in the loss of less than a tenth of an acre • Does not affect a special aquatic site • Does not affect federally listed species • Does not affect historic properties All conditions of the Nationwide #14 General Permit will be followed during construction
Permits Required - TVA:	N/A
CN-1091 Section 6: Project Description	
6.1: Narrative description of project scope	Remove existing culvert and place new 2@6'x3' box culvert
6.2: USGS Topographic Map	Please see enclosed
6.3: Resource photographs	Please refer to photographs 19 and 20 in the enclosed Environmental Boundaries Report
6.4: Existing feature characteristics	Existing Structure: 41 ft. of 36" CMP Existing open stream: 130 ft. Total Existing Length: 171 ft. Please refer to the enclosed Environmental Boundaries Report for more information
6.5: Proposed feature characteristics	Proposed Structure: 102 ft. of 2@6'X3' box culvert Proposed open stream: 61 ft. Total proposed length: 163 ft. Cookeville Gas: Install new line, Cookeville Sewer: Install new line, Cookeville Water: Remove or retired existing line and install new line, Twin Lakes Telephone: Remove line existing line and install new line.
* Impact acreage to waters of the US (acres):	0.01
6.6: Wetland delineation documentation	N/A
6.7: Water resource hydrologic and jurisdictional determination documentation	Please refer to the enclosed Environmental Boundaries Report for more information.
CN-1091 Section 7: Project Rationale	
Description of the need for the proposed activity, alternatives, and impact minimization	Please refer to the enclosed cover letter for project rationale
CN-1091 Section 8: Technical Information	
8.1: Detailed plans, specifications, etc. included for present conditions and proposed activity	Please see enclosed
8.2: Sequencing of events and construction methods for proposed activity and compensatory mitigation	1. EPSC measures will be installed. Please refer to the enclosed EPSC sheets (46, 47, and 54-54B). 2. For the construction method at this location, please refer to the enclosed , present layout (11), proposed layout (11A), profile layout (11B), and culvert cross-section (39).
* Proposed impact mitigation:	N/A
8.3: Depiction and narrative of EPSC measures	Please refer to the enclosed plan set, sheets 49 through 49B, for the EPSC plan sheets
CN-1091 Section 9: Water Resources Degradation (select one)	
My activity, as proposed, will not cause measurable degradation to water quality	

My activity, as proposed, will only cause de minimis degradation to water quality	x
My activity, as proposed, will cause more than de minimis degradation to water quality (if selected, must complete Sections 10 and 11 below)	
Unsure / need more information	
CN-1091 Section 10: Detailed Alternative Analysis	
10.1: Analysis of reasonable alternatives	N/A
10.2: Discussion of social and economic consequences	N/A
10.3: Demonstration that degradation from alternative will not violate WQ criteria	N/A
CN-1091 Section 11: Compensatory Mitigation	
11.1: Detailed discussion of proposed compensatory mitigation	N/A
11.2: Description of how compensatory mitig. will result in no net loss of resource value	N/A
11.3: Detailed monitoring plan	N/A
11.4: Long-term protection measures for compensatory mitigation site	N/A

FEATURE IMPACT TABLE:	STR-2 (Unnamed Tributary of Cane Creek)
Location Information	
Feature Name:	STR-2 (Unnamed Tributary of Cane Creek)
Latitude:	36.1393°
Longitude:	-85.5829°
Stationing:	19+00-20+50± Rt (Ramp D)
FEMA Floodplain Designation (if Zone AE, please enclose No-Rise Certification):	Zone X
Permits Required - TDEC:	ARAP: Does not fit criteria under GARAP because of relocation and cumulative impacts. Will cause more than de minimis degradation to water quality at this location.
Permits Required - Corps:	Pre-Construction Notification- Nationwide #14: Cumulative impacts at this site exceed one tenth of an acre; therefore, Pre-Construction Notification is required.
Permits Required - TVA:	N/A
CN-1091 Section 6: Project Description	
6.1: Narrative description of project scope	Relocate stream
6.2: USGS Topographic Map	Please see enclosed
6.3: Resource photographs	Please refer to photographs 8 through 11 in the enclosed Environmental Boundaries Report
6.4: Existing feature characteristics	Existing open stream: 134 ft Total Existing Length: 134 ft Please refer to the enclosed Environmental Boundaries Report for more information
6.5: Proposed feature characteristics	Proposed open stream: 160 ft Total proposed length: 160 ft
* Impact acreage to waters of the US (acres):	0.018/Cumulative impact with STR-1, STR-2, and STR-3 = 0.195
6.6: Wetland delineation documentation	N/A
6.7: Water resource hydrologic and jurisdictional determination documentation	Please refer to the enclosed Environmental Boundaries Report for more information.
CN-1091 Section 7: Project Rationale	
Description of the need for the proposed activity, alternatives, and impact minimization	Please refer to the enclosed cover letter for project rationale
CN-1091 Section 8: Technical Information	
8.1: Detailed plans, specifications, etc. included for present conditions and proposed activity	Please see enclosed
8.2: Sequencing of events and construction methods for proposed activity and compensatory mitigation	1. EPSC measures will be installed. Please refer to the enclosed EPSC sheets (46, 47, 50, and 50-50B). 2. For the construction method at this location, please refer to the enclosed , present layout (7), proposed layout (7A), and profile layout (25).
* Proposed impact mitigation:	As mitigation for 134 ft. (134ft. x 1.0) of rip-rap, we propose a payment of $ 32,160. Relocation will also allow continued flow into STR-1.
8.3: Depiction and narrative of EPSC measures	Please refer to the enclosed plan set, sheets 49 through 49B, for the EPSC plan sheets
CN-1091 Section 9: Water Resources Degradation (select one)	
My activity, as proposed, will not cause measurable degradation to water quality	
My activity, as proposed, will only cause de minimis degradation to water quality	
My activity, as proposed, will cause more than de minimis degradation to water quality (if selected, must complete Sections 10 and 11 below)	**X**
Unsure / need more information	
CN-1091 Section 10: Detailed Alternative Analysis	

10.1: Analysis of reasonable alternatives	1. Encapsulation. This would causes further degradtion and to prevent curved culvert the stream would have to be partial rerouted. Relocation will allow the stream to stay open and server its same function. Trees and bushes will be planted to help stabalize new stream and mimic natural stream layout. 2. Fill in STR-2 . Not filling is stream allows the normal function of stream to be be maintained. 3. No-Build Option. No-Build does not fit the purpose and need. Refer to application cover letter and Environmental Document for more information.
10.2: Discussion of social and economic consequences	Construction of interchange helps economics development for the industrial park being built nearby. If the interchange is not built, then the area could lose more development. The existing local roads could not support this development without expansion. Current local roads are not designed for truck traffic. This could cause more accidents and congestion.
10.3: Demonstration that degradation from alternative will not violate WQ criteria	Best Management Practices (BMPs) which includes the design, installation, and maintenance of erosion prevention and sediment control measures will be implementated during construction, which will protect the receiving waters. Mitigation through TSMP as compensation for offsetting unavoidable impacts will allow the continued restoration, establishment, enhancement, and preservation fo the aquatic resource. The proposed relocation allows continuation of flow into STR-1.
CN-1091 Section 11: Compensatory Mitigation	
11.1: Detailed discussion of proposed compensatory mitigation	As mitigation for 134 ft. (134ft. x 1.0) of rip-rap, we propose a payment of $32,160. Relocation will also allow continued flow into STR-1.
11.2: Description of how compensatory mitig. will result in no net loss of resource value	TDOT has proposed to purchase credits from In-Leiu Fee Stream Mitigation Program for this impact. Therefore, the proposed impacts will result in no net loss of resource value. The proposed relocation allows continuation of flow into STR-1.
11.3: Detailed monitoring plan	Will be provided by TSMP.
11.4: Long-term protection measures for compensatory mitigation site	Will be provided by TSMP.

FEATURE IMPACT TABLE:	STR-3 (Unnamed Tributary to Cane Creek)
Location Information	
Feature Name:	STR-3 (Unnamed Tributary to Cane Creek)
Latitude:	36.1405°
Longitude:	-85.5757°
Stationing:	Sta. 21+28 ± Rt. (Ramp B), Existing Mine Lick Creek Road, 19+09± Rt (Ramp C), and 31+62 ± Mine Lick Creek Rd.
FEMA Floodplain Designation (if Zone AE, please enclose No-Rise Certification):	Zone X
Permits Required - TDEC:	ARAP: Does not fit criteria under GARAP because of cumulative impacts. Will cause more than de minimis degradation to water quality at this location.
Permits Required - Corps:	Pre-Construction Notification- Nationwide #14: Cumulative impacts at this site exceed one tenth of an acre; therefore, Pre-Construction Notification is required.
Permits Required - TVA:	N/A
CN-1091 Section 6: Project Description	
6.1: Narrative description of project scope	Construct 3 new crossings and removing 48" existing pipe
6.2: USGS Topographic Map	Please see enclosed
6.3: Resource photographs	Please refer to photographs 23, 24, 25, and 27 in the enclosed Environmental Boundaries Report
6.4: Existing feature characteristics	Existing: **Sta. 21+28 (Ramp B and Existing Mine Lick Creek Road),** 43 ft of 48 in. Reinforned Concrete Pipe (RCP), 160 ft of open stream, Total existing = 203 ft. **Sta 19+09 (Ramp C),** 0 ft. structure, 159 ft. of open stream, Total existing = 159 ft. **Sta. 31+62 (Mine Lick Creek Road)**, 0 ft. of structure, 151 ft. of open stream Total existing = 151 ft. Total Existing Length = 513 ft Please refer to the enclosed Environmental Boundaries Report for more information

6.5: Proposed feature characteristics	Proposed: **Sta. 21+28 (Ramp B and Existing Mine Lick Creek Road),** 113 ft. of 10 ft. X 6 ft. box culvert, 27 ft. of open channel with rip-rap at outlet, 20 ft. of open channel with rip-rap at inlet, 43 ft. remove 48 in. RCP, Total proposed length = 203 ft. Cookeville Gas: Remove or retire line Twin Lakes Telephone: Remove and add new line **Sta 19+09 (Ramp C),** 115 ft. of 8 ft. X 7 ft. box culvert, 20 ft. of open stream with rip-rap at inlet, 23 ft. of open stream with rip-rap at outlet, Total proposed length = 158 ft. **Sta.31+62 (Mine Lick Creek Road),** 112 ft. of 12 ft. X 5 ft. box culvert, 17 ft. of open stream and rip-rap at inlet, 22 ft. of open stream and rip-rap at outlet, Total proposed = 151 ft. Cookeville Gas: Install new line Cookeville Water: Install new line Twin Lakes Telephone: Install new line Double Springs Water: Install new line Total proposed length: = 512 ft Channel Loss= 1 ft. New Encapsulation = 340 ft. Remove 43 ft. Mitigation Required 340 + 1 - 43 = 298 ft.
* Impact acreage to waters of the US (acres):	0.077/Cumulative impact with STR-1, STR-2, and STR-3 = 0.195
6.6: Wetland delineation documentation	N/A
6.7: Water resource hydrologic and jurisdictional determination documentation	Please refer to the enclosed Environmental Boundaries Report for more information.
CN-1091 Section 7: Project Rationale	
Description of the need for the proposed activity, alternatives, and impact minimization	Please refer to the enclosed cover letter for project rationale
CN-1091 Section 8: Technical Information	
8.1: Detailed plans, specifications, etc. included for present conditions and proposed activity	Please see enclosed
8.2: Sequencing of events and construction methods for proposed activity and compensatory mitigation	1. EPSC measures will be installed. Please refer to the enclosed EPSC sheets (46, 47, 51-51B, 52-52B, and 61-61B). 2. For the construction method at this location, please refer to the enclosed , present layout (8,9,and 18), proposed layout (8A, 9A, and 18A), profile layout (21, 23, and 30), and culvert cross-section (41, 42, and 44).
* Proposed impact mitigation:	As mitigation for 298 ft. (298 ft. x 1.0) of stream [encapsulation] [length losses], we propose a payment of $71,520.
8.3: Depiction and narrative of EPSC measures	Please refer to the enclosed plan set, sheets 49 through 49B, for the EPSC plan sheets
CN-1091 Section 9: Water Resources Degradation (select one)	
My activity, as proposed, will not cause measurable degradation to water quality	
My activity, as proposed, will only cause de minimis degradation to water quality	
My activity, as proposed, will cause more than de minimis degradation to water quality (if selected, must complete Sections 10 and 11 below)	**X**
Unsure / need more information	
CN-1091 Section 10: Detailed Alternative Analysis	

10.1: Analysis of reasonable alternatives	1. A slab culvert (bottomless culvert) was considered for this impact. A bridge would not be cost effective in this instance. Disturbance of riparian vegetation along the stream channel shall be kept to a minimum. To help minimize over widening of the stream channel TDOT standard drawing STD-17-20 (Low Flow Channel Construction Details for Culvert inlet and Outlet) will be utilized during construction. 2. Longer culverts with typical 6:1 side slopes . Steepening the side slopes to 3.6:1 or steeper, allows for a shorter extension for minimal impact. 3. No-Build Option. No-Build does not fit the purpose and need. Refer to application cover letter and Environmental Document for more information.
10.2: Discussion of social and economic consequences	Construction of interchange helps economics development for the industrial park being built nearby. If the interchange is not built, then the area could lose more development. The existing local roads could not support this development without expansion. Current local roads are not designed for truck traffic. This could cause more accidents and congestion.
10.3: Demonstration that degradation from alternative will not violate WQ criteria	Best Management Practices (BMPs) which includes the design, installation, and maintenance of erosion prevention and sediment control measures will be implementated during construction, which will protect the receiving waters. Mitigation through TSMP as compensation for offsetting unavoidable impacts will allow the continued restoration, establishment, enhancement, and preservation fo the aquatic resource.
CN-1091 Section 11: Compensatory Mitigation	
11.1: Detailed discussion of proposed compensatory mitigation	As mitigation for 298 ft. (298 ft. x 1.0) of stream [encapsulation] [length losses], we propose a payment of $71,520 to In-Lieu Fee Stream Mitigation Program. Please cite this payment to TWRF in your permits.
11.2: Description of how compensatory mitig. will result in no net loss of resource value	TDOT has proposed to purchase credits from In-Leiu Fee Stream Mitigation Program for this impact. Therefore, the proposed impacts will result in no net loss of resource value.
11.3: Detailed monitoring plan	Will be provided by TSMP.
11.4: Long-term protection measures for compensatory mitigation site	Will be provided by TSMP.

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: x	
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: I-40 Interchange at Mine Lick Creek Rd.	Nearest City, Town or Major Landmark: Cookeville	
Street Address or Location: Interstate 40-midway between exit 280 and 286. See plan cover sheet.		
County(ies): Putnam	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: Unnamed tributaries of Cane Creek and Unnamed Tributary

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

Construct I-40 Interchange at Mine Lick Creek Rd. and realign a few local roads for industrial access

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: x

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: May 2015	Estimated end date: May 2020

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

N/A

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

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. Please refer to the enclosed feature impact and summary tables.

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	10-14-2014
Printed Name	Official Title	Signature	Date

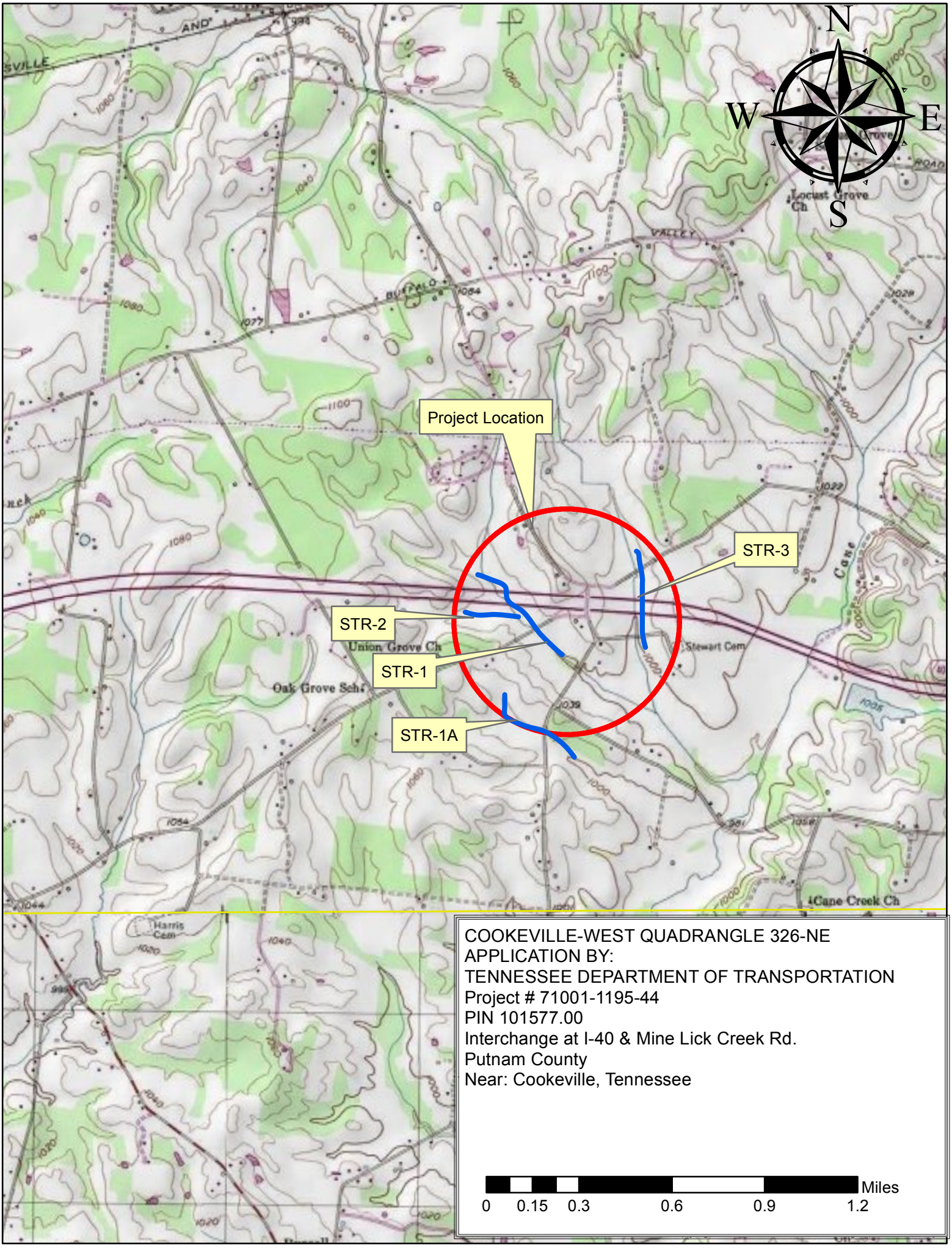
Submitting the form and obtaining more information Note that this form must be signed by the principal executive officer, partner or proprietor, or a ranking elected official in the case of a municipality; for details see **Certification and Signature** statement above. For more information, contact 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



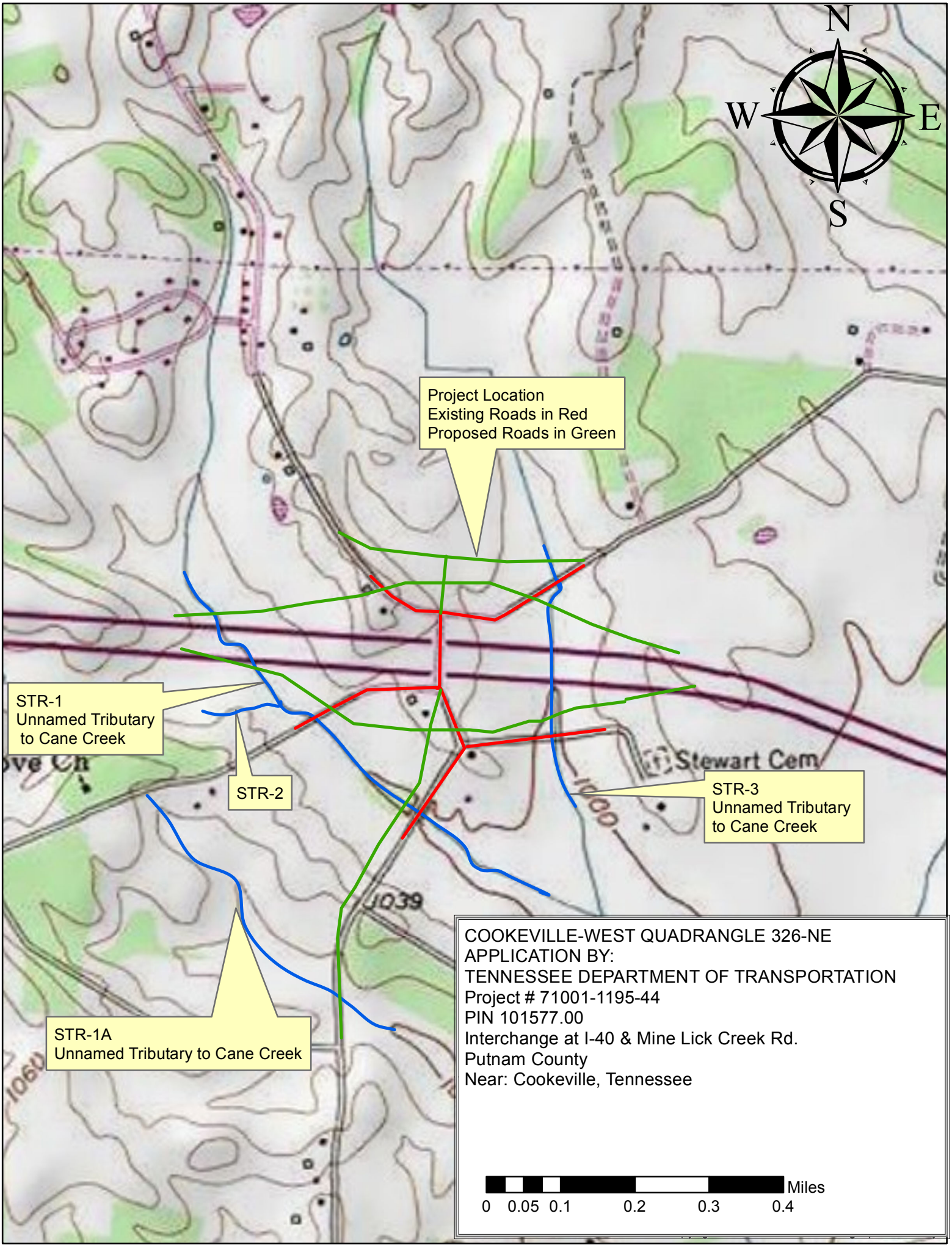
OFFICIAL STATE USE ONLY

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:



COOKEVILLE-WEST QUADRANGLE 326-NE
APPLICATION BY:
TENNESSEE DEPARTMENT OF TRANSPORTATION
Project # 71001-1195-44
PIN 101577.00
Interchange at I-40 & Mine Lick Creek Rd.
Putnam County
Near: Cookeville, Tennessee

8. Ecology Report


N
W
E
S
Project Location
Existing Roads in Red
Proposed Roads in Green
STR-1
Unnamed Tributary
to Cane Creek
STR-2
STR-3
Unnamed Tributary
to Cane Creek
STR-1A
Unnamed Tributary to Cane Creek
Stewart Cem
1039
1000
COOKEVILLE-WEST QUADRANGLE 326-NE
APPLICATION BY:
TENNESSEE DEPARTMENT OF TRANSPORTATION
Project # 71001-1195-44
PIN 101577.00
Interchange at I-40 & Mine Lick Creek Rd.
Putnam County
Near: Cookeville, Tennessee
Miles
0 0.05 0.1 0.2 0.3 0.4

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

County: Putnam **Route:** I-40 **LM:** N/A **PE No.:** 71001-1195-44 **PIN:** 101577.00
Project Description: Interchange at Mine Lick Creek Road
Date of survey 06/04/2012 **Biologist** E. Schmidt / T. Hendon **Affiliation** ARCADIS

1-Station: from plans	16+00, RT, Ramp A
2-Map label and name	PND-1
3-Latitude/Longitude	36.14126075890N, 85.58080187500W
4-Potential impact	None
5-Feature description:	
what is it	Man-made 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	Mud, silt
riffle/run/pool	N/A
width of buffer zone	N/A
water flow	No inflow or outflow of surface waters
water depth	Estimated 1-3 ft.
water width	Approximately 25 ft. x 50 ft.
general water quality	Poor; turbid, agricultural runoff
OHWM indicators	N/A
groundwater connection	Unknown
bank stability: LB, RB	N/A
dominant species: LB, RB	Actively grazed pasture
overhead canopy (%)	None
benthos	None observed
fish	None observed
algae or other aquatic life	Green algae
habitat assessment score	N/A
photo number (s)	1
rainfall information	0.00 on 05/28; 0.00 on 05/29; 0.00 on 05/30; 0.00 on 05/31; 0.23 on 06/01; 0.00 on 06/02; 0.00 on 06/03; 0.00 on 06/04
6- HUC code & name (12-digit)	0513010809 – Cane Creek
7-Confirmed by:	
8-Mitigation	No_____ Yes_____ : (include on Form J)
9-ETW	No__x___ Yes_____
10-303 (d) List	No __ ___ Yes_____: Habitat_____ Siltation_____
11-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form completed	Rainfall Data Reference: Gage ID 0706: Cookeville, TN (TVA): http://www.tva.gov/river/lakeinfo/precip.htm

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

County: Putnam **Route:** I-40 **LM:** N/A **PE No.:** 71001-1195-44 **PIN:** 101577.00
Project Description: Interchange at Mine Lick Creek Road
Date of survey 08/28/2012 **Biologist** E. Schmidt **Affiliation** ARCADIS

1-Station: from plans	29+00R, Ramp D; 36+25L, Tennessee Ave.
2-Map label and name	PND-2
3-Latitude/Longitude	36.13869815490N, 85.57973313560W
4-Potential impact	None; outside limits of disturbance
5-Feature description:	
what is it	Man-made 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	Mud, silt, organic debris
riffle/run/pool	N/A
width of buffer zone	N/A
water flow	No inflow or outflow of surface waters
water depth	N/A; dry at time of study
water width	Approximately 30 ft. in diameter
general water quality	N/A
OHWM indicators	N/A
groundwater connection	Unknown
bank stability: LB, RB	N/A
dominant species: LB, RB	Black walnut, black willow, willow oak, sycamore, sweetgum, red maple
overhead canopy (%)	30
benthos	None observed
fish	None
algae or other aquatic life	None
habitat assessment score	N/A
photo number (s)	29-32
rainfall information	08/21/2012-08/28/2012: None
6- HUC code & name (12-digit)	0513010809 – Cane Creek
7-Confirmed by:	
8-Mitigation	No_____ Yes_____ : (include on Form J)
9-ETW	No_____ Yes_____
10-303 (d) List	No _____ Yes_____: Habitat_____ Siltation_____
11-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form completed	Rainfall Data Reference: Gage ID 0706: Cookeville, TN (TVA): http://www.tva.gov/river/lakeinfo/precip.htm

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

County: Putnam **Route:** I-40 **LM:** N/A **PE No.:** 71001-1195-44 **PIN:** 101577.00
Project Description: Interchange at Mine Lick Creek Road
Date of survey 06/04/2012 **Biologist** E. Schmidt / T. Hendon **Affiliation** ARCADIS

1-Station: from plans	Sta. 19+50L, Ramp D; Sta. 28+75, Tennessee Ave.
2-Map label and name	STR-1, Unnamed tributary to Cane Creek
3-Latitude/Longitude	36.13931045170N, 85.58342845840W; 36.13660130750N, 85.57943669710W
4-Potential impact	Multiple crossings/encapsulations
5-Feature description:	
what is it	Stream
blue-line on topo? (y/n)	Y
defined channel (y/n)	Y
straight or meandering	Generally straight
channel bottom width	6-8 ft. (channel dimensions are exaggerated at outlet of 8' x 7' RCBC under I-40 and upstream and downstream of 21' x 30' bridge under Tennessee Ave.)
top of bank width	8-10 ft.
bank height and slope ratio	1.5-3 ft.; 2:1 to vertical/undercutting
avg. gradient of stream (%)	0-2
substratum	Near I-40: Silt 30%; gravel 60%; cobble 10%; Near Tennessee Ave.: Cobble 30%, gravel 60%, boulder 10%
riffle/run/pool	20/40/40
width of buffer zone	North/South of I-40, LB/RB: 5-10 ft.; East/West of Tennessee Ave., LB/RB: 20-100 ft.
water flow	Y; absent upstream/downstream of I-40; present as pools up to 200' upstream of Tennessee Ave., then fills bottom of bank width near spring house (SPG-1) just upstream of Tennessee Ave.
water depth	0-12 in.
water width	0-8 ft. (wider at bridge inlet/outlet at Tennessee Ave.)
general water quality	Generally good, spring-fed (SPG-1), but agricultural runoff from adjacent land use
OHWM indicators	Defined bed and bank, wrested vegetation, change in soil characteristics
groundwater connection	Y; SPG-1
bank stability: LB, RB	Generally stable
dominant species: LB, RB	LB/RB: Red maple, Chinese privet, river birch, tulip poplar
overhead canopy (%)	30-60
benthos	Gastropoda, trichoptera, amphipoda
fish	Minnows
algae or other aquatic life	Green algae, frogs
habitat assessment score	114
photo number (s)	2-3, 10-12
rainfall information	0.00 on 05/28; 0.00 on 05/29; 0.00 on 05/30; 0.00 on 05/31; 0.23 on 06/01; 0.00 on 06/02; 0.00 on 06/03; 0.00 on 06/04
6- HUC code & name (12-digit)	0513010809 – Cane Creek
7-Confirmed by:	
8-Mitigation	No_____ Yes__x__ : (include on Form J)
9-ETW	No__x___ Yes_____
10-303 (d) List	No _____ Yes__x___: Habitat__x___ Siltation__x__
11-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form completed	Rainfall Data Reference: Gage ID 0706: Cookeville, TN (TVA): http://www.tva.gov/river/lakeinfo/precip.htm A TDEC Hydrologic Determination Field Data Sheet was completed for this feature.

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS

STREAM NAME Unnamed trib to Cane Creek	LOCATION I-40 interchange at Mine Lick Creek Road in Putnam Co	
STATION # 19+50 REACH ID# STR-1	STREAM CLASS Stream	
UTM N 36.139310454 UTM E -85.583428458	RIVER BASIN Cane Creek	
STORET #	AGENCY	
INVESTIGATORS E. Schmidt / T. Hendon		
FORM COMPLETED BY E. Schmidt	DATE 06/04/12 TIME _ AM	REASON FOR SURVEY

Parameters to be evaluated in sampling reach

Habitat Parameter	Condition Category			
	Optimal	Suboptimal	Marginal	Poor
1. Epifaunal Substrate/ Available Cover	Greater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient).	30-50% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).	10-30% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 10% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
SCORE 12	20 19 18 17 16	15 14 13 **(12)** 11	10 9 8 7 6	5 4 3 2 1 0
2. Pool Substrate Characterization	Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common.	Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation present.	All mud or clay or sand bottom; little or no root mat; no submerged vegetation.	Hard-pan clay or bedrock; no root mat or vegetation.
SCORE 16	20 19 18 17 **(16)**	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
3. Pool Variability	Even mix of large-shallow, large-deep, small-shallow, small-deep pools present.	Majority of pools large-deep; very few shallow.	Shallow pools much more prevalent than deep pools.	Majority of pools small-shallow or pools absent.
SCORE 6	20 19 18 17 16	15 14 13 12 11	10 9 8 7 **(6)**	5 4 3 2 1 0
4. Sediment Deposition	Little or no enlargement of islands or point bars and less than <20% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 20-50% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 50-80% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 80% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
SCORE 13	20 19 18 17 16	15 14 **(13)** 12 11	10 9 8 7 6	5 4 3 2 1 0
5. Channel Flow Status	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
SCORE 8	20 19 18 17 16	15 14 13 12 11	10 9 **(8)** 7 6	5 4 3 2 1 0

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS

Parameters to be evaluated broader than sampling reach

Habitat Parameter	Condition Category			
	Optimal	Suboptimal	Marginal	Poor
6. Channel Alteration	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
SCORE 12	20 19 18 17 16	15 14 13 **(12)** 11	10 9 8 7 6	5 4 3 2 1 0
7. Channel Sinuosity	The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. (Note - channel braiding is considered normal in coastal plains and other low-lying areas. This parameter is not easily rated in these areas.)	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	Channel straight; waterway has been channelized for a long distance.
SCORE 7	20 19 18 17 16	15 14 13 12 11	10 9 8 **(7)** 6	5 4 3 2 1 0
8. Bank Stability (score each bank)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
SCORE 8 (LB)	Left Bank 10 9	**(8)** 7 6	5 4 3	2 1 0
SCORE 8 (RB)	Right Bank 10 9	**(8)** 7 6	5 4 3	2 1 0
9. Vegetative Protection (score each bank) Note: determine left or right side by facing downstream.	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
SCORE 8 (LB)	Left Bank 10 9	**(8)** 7 6	5 4 3	2 1 0
SCORE 8 (RB)	Right Bank 10 9	**(8)** 7 6	5 4 3	2 1 0
10. Riparian Vegetative Zone Width (score each bank riparian zone)	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.
SCORE 4 (LB)	Left Bank 10 9	8 7 6	5 **(4)** 3	2 1 0
SCORE 4 (RB)	Right Bank 10 9	8 7 6	5 **(4)** 3	2 1 0

Total Score 114

Hydrologic Determination Field Data Sheet

Tennessee Division of Water Pollution Control, Version 1.4

County: Putnam	Named Waterbody: Unnamed Tributary to Cane Creek	Date/Time: 06/04/2012
Assessors/Affiliation: E. Schmidt, T. Hendon/ ARCADIS		Project ID : STR-1
Site Name/Description: I-40 Interchange at Mine Lick Creek Road		
Site Location: Near Cookeville, TN		
USGS quad: Cookeville West	HUC (12 digit): 0513010809	Lat/Long:
Previous Rainfall (7-days) : 0.00 on 05/28; 0.00 on 05/29; 0.00 on 05/30; 0.00 on 05/31; 0.23 on 06/01; 0.00 on 06/02; 0.00 on 06/03; 0.00 on 06/04		36.13931045170N/ 85.58342845840W
Precipitation this Season vs. Normal : very wet wet average (dry) drought unknown Source of recent & seasonal precip data : Gage ID 0706: Cookeville, TN (TVA)		
Watershed Size : Approx. 678 acres	Photos: (Y) or N (circle) Number : 2-3, 10-12	
Soil Type(s) / Geology : Lindside silt loam (Ln)		Source: NRCS Web Soil Survey
Surrounding Land Use : Forested, roadway facilities, agricultural, residential, utility easements		
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	N/A	WWC
4. Daily flow and precipitation records showing feature only flows in direct response to rainfall	NI	WWC
5. Presence of multiple populations of obligate lotic organisms with ≥ 2 month aquatic phase	X	Stream
6. Presence of fish (except *Gambusia*)		(Stream)
7. Presence of naturally occurring ground water table connection		(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		(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 1.4*

Overall Hydrologic Determination = Stream

Secondary Indicator Score (if applicable) = N/A

Justification / Notes : Presence of minnows (not *Gambusia*) satisfies primary indicator 6. Presence of surface water across the full width of the channel beginning immediately adjacent to a spring house is evidence for primary indicator 7. Presence of the spring house is evidence for primary indicator 9. Although not identified to the level of genus, multiple macrobenthic invertebrate specimens were observed, including trichoptera, gastropoda, and amphipoda.

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

County: Putnam **Route:** I-40 **LM:** N/A **PE No.:** 71001-1195-44 **PIN:** 101577.00
Project Description: Interchange at Mine Lick Creek Road
Date of survey 06/04/2012 **Biologist** E. Schmidt / T. Hendon **Affiliation** ARCADIS

1-Station: from plans	Sta. 19+50L, Ramp D
2-Map label and name	STR-2, Unnamed tributary to Cane Creek
3-Latitude/Longitude	36.13931045170N, 85.58342845840W
4-Potential impact	Crossing/encapsulation, relocation
5-Feature description:	
what is it	Stream
blue-line on topo? (y/n)	N
defined channel (y/n)	Y
straight or meandering	Generally straight
channel bottom width	Within ROW: 2-3 ft.; upstream of ROW: 4-8 ft.
top of bank width	Within ROW: 3-5 ft.; upstream of ROW: 6-10 ft.
bank height and slope ratio	1-3 ft.; 2:1 to vertical/undercutting
avg. gradient of stream (%)	1-2
substratum	Within ROW: Gravel 60%, silt 40%; upstream of ROW: Silt 70%; gravel 30%
riffle/run/pool	Within ROW: 20/60/20; upstream of ROW: 20/40/40
width of buffer zone	LB/RB: 0-20 ft.
water flow	Within ROW: N; just upstream of ROW: Y, only as standing pool approx. 100 ft. long
water depth	0 - 12 in.
water width	0 - 10 ft.
general water quality	Poor; turbid, agricultural runoff, algae
OHWM indicators	Defined bed and bank; wrested vegetation; change in soil characteristics
groundwater connection	Unknown
bank stability: LB, RB	LB/RB: Stable to vertical/eroding due to channelization
dominant species: LB, RB	LB/RB: Chinese privet, winged elm
overhead canopy (%)	0-80
benthos	None observed
fish	None observed
algae or other aquatic life	Green algae
habitat assessment score	66
photo number (s)	2, 4-6
rainfall information	0.00 on 05/28; 0.00 on 05/29; 0.00 on 05/30; 0.00 on 05/31; 0.23 on 06/01; 0.00 on 06/02; 0.00 on 06/03; 0.00 on 06/04
6- HUC code & name (12-digit)	0513010809 – Cane Creek
7-Confirmed by:	
8-Mitigation	No_____ Yes __x__ : (include on Form J)
9-ETW	No__x___ Yes_____
10-303 (d) List	No _____ Yes __x___: Habitat __x__ Siltation __x__
11-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form completed	Rainfall Data Reference: Gage ID 0706: Cookeville, TN (TVA): http://www.tva.gov/river/lakeinfo/precip.htm A TDEC Hydrologic Determination Field Data Sheet was completed for this feature.

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS

STREAM NAME Unnamed trib to Cane Creek	LOCATION I-40 interchange at Mine Lick Creek Road in Putnam Co	
STATION # 19+50 R REACH ID# STR-2	STREAM CLASS Stream	
UTM N 36.139310451 UTM E -85.583428584	RIVER BASIN Cane Creek	
STORET #	AGENCY	
INVESTIGATORS E. Schmidt / T. Hendon		
FORM COMPLETED BY E. Schmidt	DATE 06/04/12 TIME _ AM	REASON FOR SURVEY

Parameters to be evaluated in sampling reach

Habitat Parameter	Condition Category			
	Optimal	Suboptimal	Marginal	Poor
1. Epifaunal Substrate/ Available Cover	Greater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient).	30-50% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).	10-30% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 10% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
SCORE 6	20 19 18 17 16	15 14 13 12 11	10 9 8 7 **(6)**	5 4 3 2 1 0
2. Pool Substrate Characterization	Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common.	Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation present.	All mud or clay or sand bottom; little or no root mat; no submerged vegetation.	Hard-pan clay or bedrock; no root mat or vegetation.
SCORE 13	20 19 18 17 16	15 14 **(13)** 12 11	10 9 8 7 6	5 4 3 2 1 0
3. Pool Variability	Even mix of large-shallow, large-deep, small-shallow, small-deep pools present.	Majority of pools large-deep; very few shallow.	Shallow pools much more prevalent than deep pools.	Majority of pools small-shallow or pools absent.
SCORE 5	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	**(5)** 4 3 2 1 0
4. Sediment Deposition	Little or no enlargement of islands or point bars and less than <20% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 20-50% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 50-80% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 80% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
SCORE 13	20 19 18 17 16	15 14 **(13)** 12 11	10 9 8 7 6	5 4 3 2 1 0
5. Channel Flow Status	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
SCORE 5	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	**(5)** 4 3 2 1 0

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS

Parameters to be evaluated broader than sampling reach

Habitat Parameter	Condition Category			
	Optimal	Suboptimal	Marginal	Poor
6. Channel Alteration	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
SCORE 6	20 19 18 17 16	15 14 13 12 11	10 9 8 7 **(6)**	5 4 3 2 1 0
7. Channel Sinuosity	The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. (Note - channel braiding is considered normal in coastal plains and other low-lying areas. This parameter is not easily rated in these areas.)	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	Channel straight; waterway has been channelized for a long distance.
SCORE 2	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 **(2)** 1 0
8. Bank Stability (score each bank)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
SCORE 4 (LB)	Left Bank 10 9	8 7 6	5 **(4)** 3	2 1 0
SCORE 4 (RB)	Right Bank 10 9	8 7 6	5 **(4)** 3	2 1 0
9. Vegetative Protection (score each bank) Note: determine left or right side by facing downstream.	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
SCORE 4 (LB)	Left Bank 10 9	8 7 6	5 4 3	**(2)** 1 0
SCORE 4 (RB)	Right Bank 10 9	8 7 6	5 4 3	**(2)** 1 0
10. Riparian Vegetative Zone Width (score each bank riparian zone)	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.
SCORE 2 (LB)	Left Bank 10 9	8 7 6	5 4 3	**(2)** 1 0
SCORE 2 (RB)	Right Bank 10 9	8 7 6	5 4 3	**(2)** 1 0

Total Score 70

Hydrologic Determination Field Data Sheet

Tennessee Division of Water Pollution Control, Version 1.4

County: Putnam	Named Waterbody: Unnamed Tributary to Cane Creek	Date/Time: 06/04/2012
Assessors/Affiliation: E. Schmidt, T. Hendon/ ARCADIS		Project ID : STR-2
Site Name/Description: I-40 Interchange at Mine Lick Creek Road		
Site Location: Near Cookeville, TN		
USGS quad: Cookeville West	HUC (12 digit): 0513010809	Lat/Long:
Previous Rainfall (7-days) : 0.00 on 05/28; 0.00 on 05/29; 0.00 on 05/30; 0.00 on 05/31; 0.23 on 06/01; 0.00 on 06/02; 0.00 on 06/03; 0.00 on 06/04		36.13931045170N/ 85.58342845840W
Precipitation this Season vs. Normal : very wet wet average (dry) drought unknown Source of recent & seasonal precip data : Gage ID 0706: Cookeville, TN (TVA)		
Watershed Size : Approx. 125 acres	Photos: (Y) or N (circle) Number : 2, 4-6	
Soil Type(s) / Geology : Lindside silt loam (Ln)		Source: NRCS Web Soil Survey
Surrounding Land Use : Agricultural, residential, roadway facility		
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	N/A	WWC
4. Daily flow and precipitation records showing feature only flows in direct response to rainfall	NI	WWC
5. Presence of multiple populations of obligate lotic organisms with ≥ 2 month aquatic phase	X	Stream
6. Presence of fish (except *Gambusia*)	X	Stream
7. Presence of naturally occurring ground water table connection	Unknown	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 1.4*

Overall Hydrologic Determination = Stream

Secondary Indicator Score (if applicable) = 21.5

Justification / Notes :

Secondary Field Indicator Evaluation

STR-2

A. Geomorphology (Subtotal = 10.75)	**Absent**	**Weak**	**Moderate**	**Strong**
1. Continuous bed and bank	0	1	2	3
2. Sinuous channel	0	1	2	3
3. In-channel structure: riffle-pool sequences	0	1	2	3
4. Sorting of soil textures or other substrate	0	1	2	3
5. Active/relic floodplain	0	1	2	3
6. Depositional bars or benches	0	1	2	3
7. Braided channel	0	1	2	3
8. Recent alluvial deposits	0	0.5	1	1.5
9. Natural levees	0	1	2	3
10. Headcuts	0	1	2	3
11. Grade controls	0	0.5	1	1.5
12. Natural valley or drainageway	0	0.5	1	1.5
13. At least second order channel on existing USGS or NRCS map	No = 0		Yes = 3	

B. Hydrology (Subtotal = 5)	**Absent**	**Weak**	**Moderate**	**Strong**
14. Subsurface flow/discharge into channel	0	1	2	3
15. Water in channel and >48 hours since sig. rain	0	1	2	3
16. Leaf litter in channel (January – September)	1.5	1	0.5	0
17. Sediment on plants or on debris	0	0.5	1	1.5
18. Organic debris lines or piles (wrack lines)	0	0.5	1	1.5
19. Hydric soils in stream bed or sides of channel	No = 0		Yes = 1.5	

C. Biology (Subtotal = 5.75)	**Absent**	**Weak**	**Moderate**	**Strong**
20. Fibrous roots in channel [1]	3	2	1	0
21. Rooted plants in channel [1]	3	2	1	0
22. Crayfish in stream (exclude in floodplain)	0	0.5	1	1.5
23. Bivalves/mussels	0	1	2	3
24. Amphibians	0	0.5	1	1.5
25. Macrobenthos (record type & abundance)	0	1	2	3
26. Filamentous algae; periphyton	0	1	2	3
27. Iron oxidizing bacteria/fungus	0	0.5	1	1.5
28.Wetland plants in channel [2]	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 = ____21.50_____

Under Normal Conditions, Watercourse is a Wet Weather Conveyance if Secondary Indicator Score < 19 points

Notes :

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

County: Putnam **Route:** I-40 **LM:** N/A **PE No.:** 71001-1195-44 **PIN:** 101577.00
Project Description: Interchange at Mine Lick Creek Road
Date of survey 06/04/2012 **Biologist** E. Schmidt / T. Hendon **Affiliation** ARCADIS

1-Station: from plans	Sta. 22+00, Ramp B; Sta. 19+00L, Ramp C
2-Map label and name	STR-3, Unnamed tributary to Cane Creek
3-Latitude/Longitude	36.14094864890N, 85.57623144900W; 36.13873860180N, 85.57622957210W
4-Potential impact	Multiple crossings/encapsulations
5-Feature description:	
what is it	Stream
blue-line on topo? (y/n)	Y
defined channel (y/n)	Y
straight or meandering	Generally straight
channel bottom width	4-5 ft.
top of bank width	6-8 ft.
bank height and slope ratio	2-3 ft.; 2:1 to vertical/undercutting
avg. gradient of stream (%)	2-3
substratum	Gravel 70%, silt 30%
riffle/run/pool	30/40/30
width of buffer zone	LB/RB: 10-20 ft. (>100 ft. for approximately 100 ft. north of I-40WB)
water flow	N
water depth	N/A
water width	N/A
general water quality	N/A
OHWM indicators	Defined bed and bank; wrested vegetation; change in soil characteristics
groundwater connection	Unknown
bank stability: LB, RB	LB/RB: Stable to vertical/eroding
dominant species: LB, RB	LB/RB: Chinese privet, winged elm, sugarberry, green ash, black willow, hazel alder
overhead canopy (%)	0-70
benthos	None observed
fish	None observed
algae or other aquatic life	None observed
habitat assessment score	88
photo number (s)	17-21
rainfall information	0.00 on 05/28; 0.00 on 05/29; 0.00 on 05/30; 0.00 on 05/31; 0.23 on 06/01; 0.00 on 06/02; 0.00 on 06/03; 0.00 on 06/04
6- HUC code & name (12-digit)	0513010809 – Cane Creek
7-Confirmed by:	
8-Mitigation	No_____ Yes __x__ : (include on Form J)
9-ETW	No __x___ Yes_____
10-303 (d) List	No _____ Yes __x___: Habitat __x___ Siltation __x__
11-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form completed	Rainfall Data Reference: Gage ID 0706: Cookeville, TN (TVA): http://www.tva.gov/river/lakeinfo/precip.htm A TDEC Hydrologic Determination Field Data Sheet was completed for this feature.

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS

STREAM NAME Unnamed trib to Cane Creek	LOCATION I-40 interchange at Mine Lick Creek Road in Putnam Co	
STATION # 22+00 Ra REACH ID# STR-3	STREAM CLASS Stream	
UTM N 36.140948 UTM E -85.576231	RIVER BASIN Cane Creek	
STORET #	AGENCY	
INVESTIGATORS E. Schmidt / T. Hendon		
FORM COMPLETED BY E. Schmidt	DATE 06/04/12 TIME _ AM	REASON FOR SURVEY

Parameters to be evaluated in sampling reach

Habitat Parameter	Condition Category			
	Optimal	Suboptimal	Marginal	Poor
1. Epifaunal Substrate/ Available Cover	Greater than 50% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are not new fall and not transient).	30-50% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).	10-30% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 10% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
SCORE 8	20 19 18 17 16	15 14 13 12 11	10 9 **(8)** 7 6	5 4 3 2 1 0
2. Pool Substrate Characterization	Mixture of substrate materials, with gravel and firm sand prevalent; root mats and submerged vegetation common.	Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation present.	All mud or clay or sand bottom; little or no root mat; no submerged vegetation.	Hard-pan clay or bedrock; no root mat or vegetation.
SCORE 16	20 19 18 17 **(16)**	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
3. Pool Variability	Even mix of large-shallow, large-deep, small-shallow, small-deep pools present.	Majority of pools large-deep; very few shallow.	Shallow pools much more prevalent than deep pools.	Majority of pools small-shallow or pools absent.
SCORE 4	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 **(4)** 3 2 1 0
4. Sediment Deposition	Little or no enlargement of islands or point bars and less than <20% of the bottom affected by sediment deposition.	Some new increase in bar formation, mostly from gravel, sand or fine sediment; 20-50% of the bottom affected; slight deposition in pools.	Moderate deposition of new gravel, sand or fine sediment on old and new bars; 50-80% of the bottom affected; sediment deposits at obstructions, constrictions, and bends; moderate deposition of pools prevalent.	Heavy deposits of fine material, increased bar development; more than 80% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
SCORE 15	20 19 18 17 16	**(15)** 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
5. Channel Flow Status	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.	Water fills >75% of the available channel; or <25% of channel substrate is exposed.	Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed.	Very little water in channel and mostly present as standing pools.
SCORE 0	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 **(0)**

HABITAT ASSESSMENT FIELD DATA SHEET—LOW GRADIENT STREAMS

Parameters to be evaluated broader than sampling reach

Habitat Parameter	Condition Category			
	Optimal	Suboptimal	Marginal	Poor
6. Channel Alteration	Channelization or dredging absent or minimal; stream with normal pattern.	Some channelization present, usually in areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yr) may be present, but recent channelization is not present.	Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.	Banks shored with gabion or cement; over 80% of the stream reach channelized and disrupted. Instream habitat greatly altered or removed entirely.
SCORE 15	20 19 18 17 16	(15) 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
7. Channel Sinuosity	The bends in the stream increase the stream length 3 to 4 times longer than if it was in a straight line. (Note - channel braiding is considered normal in coastal plains and other low-lying areas. This parameter is not easily rated in these areas.)	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	The bends in the stream increase the stream length 1 to 2 times longer than if it was in a straight line.	Channel straight; waterway has been channelized for a long distance.
SCORE 2	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 (2) 1 0
8. Bank Stability (score each bank)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.	Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.	Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
SCORE 6 (LB)	Left Bank 10 9	8 7 (6)	5 4 3	2 1 0
SCORE 6 (RB)	Right Bank 10 9	8 7 (6)	5 4 3	2 1 0
9. Vegetative Protection (score each bank) Note: determine left or right side by facing downstream.	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.	70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well-represented; disruption evident but not affecting full plant growth potential to any great extent; more than one-half of the potential plant stubble height remaining.	50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than one-half of the potential plant stubble height remaining.	Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.
SCORE 5 (LB)	Left Bank 10 9	8 7 6	(5) 4 3	2 1 0
SCORE 5 (RB)	Right Bank 10 9	8 7 6	(5) 4 3	2 1 0
10. Riparian Vegetative Zone Width (score each bank riparian zone)	Width of riparian zone >18 meters; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, or crops) have not impacted zone.	Width of riparian zone 12-18 meters; human activities have impacted zone only minimally.	Width of riparian zone 6-12 meters; human activities have impacted zone a great deal.	Width of riparian zone <6 meters: little or no riparian vegetation due to human activities.
SCORE 3 (LB)	Left Bank 10 9	8 7 6	5 4 (3)	2 1 0
SCORE 3 (RB)	Right Bank 10 9	8 7 6	5 4 (3)	2 1 0

Total Score 88

Hydrologic Determination Field Data Sheet

Tennessee Division of Water Pollution Control, Version 1.4

County: Putnam	Named Waterbody: Unnamed Tributary to Cane Creek	Date/Time: 06/04/2012
Assessors/Affiliation: E. Schmidt, T. Hendon/ ARCADIS		Project ID : STR-3
Site Name/Description: I-40 Interchange at Mine Lick Creek Road		
Site Location: Near Cookeville, TN		
USGS quad: Cookeville West	HUC (12 digit): 0513010809	Lat/Long:
Previous Rainfall (7-days) : 0.00 on 05/28; 0.00 on 05/29; 0.00 on 05/30; 0.00 on 05/31; 0.23 on 06/01; 0.00 on 06/02; 0.00 on 06/03; 0.00 on 06/04		36.13873860180N/ 85.57622957210W
Precipitation this Season vs. Normal : very wet wet average (dry) drought unknown Source of recent & seasonal precip data : Gage ID 0706: Cookeville, TN (TVA)		
Watershed Size : Approx. 410 acres	Photos: (Y) or N (circle) Number : 17-21	
Soil Type(s) / Geology : Lindside silt loam (Ln)		Source: NRCS Web Soil Survey
Surrounding Land Use : Agricultural, residential, roadway facility		
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	N/A	WWC
4. Daily flow and precipitation records showing feature only flows in direct response to rainfall	NI	WWC
5. Presence of multiple populations of obligate lotic organisms with ≥ 2 month aquatic phase	X	Stream
6. Presence of fish (except *Gambusia*)	X	Stream
7. Presence of naturally occurring ground water table connection	Unknown	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 1.4*

Overall Hydrologic Determination = Stream

Secondary Indicator Score (if applicable) = 24.0

Justification / Notes :

Secondary Field Indicator Evaluation

STR-3

A. Geomorphology (Subtotal = 14.0)	**Absent**	**Weak**	**Moderate**	**Strong**
1. Continuous bed and bank	0	1	2	(3)
2. Sinuous channel	0	(1)	2	3
3. In-channel structure: riffle-pool sequences	0	1	(2)	3
4. Sorting of soil textures or other substrate	0	1	2	(3)
5. Active/relic floodplain	0	(1)	2	3
6. Depositional bars or benches	0	1	(2)	3
7. Braided channel	(0)	1	2	3
8. Recent alluvial deposits	0	(0.5)	1	1.5
9. Natural levees	(0)	1	2	3
10. Headcuts	0	(1)	2	3
11. Grade controls	0	(0.5)	1	1.5
12. Natural valley or drainageway	0	0.5	(1)	1.5
13. At least second order channel on existing USGS or NRCS map	No = (0)		Yes = 3	

B. Hydrology (Subtotal = 5.0)	**Absent**	**Weak**	**Moderate**	**Strong**
14. Subsurface flow/discharge into channel	(0)	1	2	3
15. Water in channel and >48 hours since sig. rain	(0)	1	2	3
16. Leaf litter in channel (January – September)	1.5	(1)	0.5	0
17. Sediment on plants or on debris	0	0.5	(1)	1.5
18. Organic debris lines or piles (wrack lines)	0	0.5	(1)	1.5
19. Hydric soils in stream bed or sides of channel	No = 0		Yes = (1.5)	

C. Biology (Subtotal = 6.0)	**Absent**	**Weak**	**Moderate**	**Strong**
20. Fibrous roots in channel [1]	3	(2)	1	0
21. Rooted plants in channel [1]	3	(2)	1	0
22. Crayfish in stream (exclude in floodplain)	(0)	0.5	1	1.5
23. Bivalves/mussels	(0)	1	2	3
24. Amphibians	(0)	0.5	1	1.5
25. Macrobenthos (record type & abundance)	(0)	1	2	3
26. Filamentous algae; periphyton	0	(1)	2	3
27. Iron oxidizing bacteria/fungus	(0)	0.5	1	1.5
28.Wetland plants in channel [2]	(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 = 24.0

Under Normal Conditions, Watercourse is a Wet Weather Conveyance if Secondary Indicator Score < 19 points

Notes :

Ecology Field Data Sheet: **Water Resources**

Project: I-40 Interchange at Mine Lick Creek Road; Putnam County, TN; PIN 117577.00

Date of survey: December 17, 201 **Biologist:** E. Schmidt, T. Becktold **Affiliation:** ARCADIS on behalf of TDOT

1-Station: from plans	14+25, Tennessee Ave.
2-Map label and name	STR-1A
3-Latitude/Longitude	36.13306382830N, 85.58146568120W
4-Potential impact	Crossing/encapsulation
5-Feature description:	
what is it	Intermittent stream
blue-line on topo? (y/n)	No ☑ Yes ☐
defined channel (y/n)	No ☑ Yes ☐
straight or meandering	Straight ☑ Meandering ☐
channel bottom width	1-2 ft.
top of bank width	2-3 ft.
bank height and slope ratio	6 in.; 1:1
avg. gradient of stream (%)	1-2
substratum	Silt, gravel
riffle/run/pool	N/A
width of buffer zone	LDB: None (pasture) RDB: None (pasture)
water flow	N
water depth	N/A
water width	N/A
general water quality	N/A
OHWM indicators	N/A
groundwater connection	No
bank stability: LDB, RDB	LDB: Stable ☑ Eroding ☐ Undercutting ☐ Slumping/Sloughing ☐ Roots Exposed ☐ RDB: Stable ☑ Eroding ☐ Undercutting ☐ Slumping/Sloughing ☐ Roots Exposed ☐
dominant species: LDB, RDB	LDB: grasses RDB: grasses; Eastern Cottonwood (2)
overhead canopy (%)	0
benthos	None
fish	None
algae or other aquatic life	None
habitat assessment score	103 - Marginal; impaired
photo number (s)	19-20
rainfall information	0.16 on 12/10; 0.00 on 12/11; 0.00 on 12/12; 0.00 on 12/13; 0.55 on 12/14; 0.01 on 12/15; 0.00 on 12/16; 0.00 on 12/17
6-HUC code & name (12-digit)	051301080703 - Cane Creek
7-Confirmed by:	USACE (C. Nelson, T. Wiley), 12/17/2013
8-Mitigation	No ☑ Yes ☐ *(include on Mitigation Form)*
9-ETW	No ☑ Yes ☐
10-303 (d) List	No ☑ Yes ☐ Habitat ☐ Siltation ☐ Other ☐
11-Assessed	No ☑ 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.	Rainfall Data Reference: Station KTNCOOKE23; http://www.wunderground.com/ STR-1A is a moderately defined stream which originates from a wetland located west of Tennessee Ave. (outside of the project right-of-way) with a poorly-moderately defined channel and livestock access-related impacts down-gradient (east) of Tennessee Ave. This feature was determined by the USACE (C. Nelson, T. Wiley) to be an intermittent stream during a regulatory site confirmation visit performed on 12/17/2013. A TDEC Hydrologic Determination Field Data Sheet was completed for this feature (Score: 19.5).

Hydrologic Determination Field Data Sheet

Tennessee Division of Water Pollution Control, Version 1.4

County: Putnam	Named Waterbody: N/A	Date/Time: 06/04/2012
Assessors/Affiliation: E. Schmidt, T. Hendon/ ARCADIS		Project ID : WWC-1
Site Name/Description: I-40 Interchange at Mine Lick Creek Road		
Site Location: Near Cookeville, TN		
USGS quad: Cookeville West	HUC (12 digit): 0513010809	Lat/Long:
Previous Rainfall (7-days) : 0.00 on 05/28; 0.00 on 05/29; 0.00 on 05/30; 0.00 on 05/31; 0.23 on 06/01; 0.00 on 06/02; 0.00 on 06/03; 0.00 on 06/04		36.13931045170N/ 85.58342845840W
Precipitation this Season vs. Normal : very wet wet average (dry) drought unknown Source of recent & seasonal precip data : Gage ID 0706: Cookeville, TN (TVA)		
Watershed Size : Approx. 13 acres	Photos: (Y) or N (circle) Number : 13-14	
Soil Type(s) / Geology : Lindside silt loam (Ln)		Source: NRCS Web Soil Survey
Surrounding Land Use : Agricultural, roadway facility, residential		
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	N/A	WWC
4. Daily flow and precipitation records showing feature only flows in direct response to rainfall	NI	WWC
5. Presence of multiple populations of obligate lotic organisms with ≥ 2 month 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 1.4*

Overall Hydrologic Determination = Wet weather conveyance

Secondary Indicator Score (if applicable) = 8.0

Justification / Notes :

Secondary Field Indicator Evaluation

WWC-1

A. Geomorphology (Subtotal = 4)	**Absent**	**Weak**	**Moderate**	**Strong**
1. Continuous bed and bank	0	(1)	2	3
2. Sinuous channel	(0)	1	2	3
3. In-channel structure: riffle-pool sequences	(0)	1	2	3
4. Sorting of soil textures or other substrate	0	(1)	2	3
5. Active/relic floodplain	(0)	1	2	3
6. Depositional bars or benches	(0)	1	2	3
7. Braided channel	(0)	1	2	3
8. Recent alluvial deposits	(0)	0.5	1	1.5
9. Natural levees	(0)	1	2	3
10. Headcuts	(0)	1	2	3
11. Grade controls	0	(0.5)	1	1.5
12. Natural valley or drainageway	0	(0.5)	1	1.5
13. At least second order channel on existing USGS or NRCS map	No = (0)		Yes = 3	

B. Hydrology (Subtotal = 2)	**Absent**	**Weak**	**Moderate**	**Strong**
14. Subsurface flow/discharge into channel	(0)	1	2	3
15. Water in channel and >48 hours since sig. rain	(0)	1	2	3
16. Leaf litter in channel (January – September)	(1.5)	1	0.5	0
17. Sediment on plants or on debris	0	(0.5)	1	1.5
18. Organic debris lines or piles (wrack lines)	(0)	0.5	1	1.5
19. Hydric soils in stream bed or sides of channel	No = (0)		Yes = 1.5	

C. Biology (Subtotal = 2)	**Absent**	**Weak**	**Moderate**	**Strong**
20. Fibrous roots in channel [1]	3	2	(1)	0
21. Rooted plants in channel [1]	3	2	(1)	0
22. Crayfish in stream (exclude in floodplain)	(0)	0.5	1	1.5
23. Bivalves/mussels	(0)	1	2	3
24. Amphibians	(0)	0.5	1	1.5
25. Macrobenthos (record type & abundance)	(0)	1	2	3
26. Filamentous algae; periphyton	(0)	1	2	3
27. Iron oxidizing bacteria/fungus	(0)	0.5	1	1.5
28.Wetland plants in channel [2]	(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 = 8

Under Normal Conditions, Watercourse is a Wet Weather Conveyance if Secondary Indicator Score < 19 points

Notes :

Ecology Field Data Sheet: **Water Resources**

Project: I-40 Interchange at Mine Lick Creek Road; Putnam County, TN; PIN 117577.00

Date of survey: December 17, 201 **Biologist:** E. Schmidt, T. Becktold **Affiliation:** ARCADIS on behalf of TDOT

1-Station: from plans	14+25, Tennessee Ave.
2-Map label and name	STR-1A
3-Latitude/Longitude	36.13306382830N, 85.58146568120W
4-Potential impact	Crossing/encapsulation
5-Feature description:	
what is it	Intermittent stream
blue-line on topo? (y/n)	No ☑ Yes ☐
defined channel (y/n)	No ☑ Yes ☐
straight or meandering	Straight ☑ Meandering ☐
channel bottom width	1-2 ft.
top of bank width	2-3 ft.
bank height and slope ratio	6 in.; 1:1
avg. gradient of stream (%)	1-2
substratum	Silt, gravel
riffle/run/pool	N/A
width of buffer zone	LDB: None (pasture) RDB: None (pasture)
water flow	N
water depth	N/A
water width	N/A
general water quality	N/A
OHWM indicators	N/A
groundwater connection	No
bank stability: LDB, RDB	LDB: Stable ☑ Eroding ☐ Undercutting ☐ Slumping/Sloughing ☐ Roots Exposed ☐ RDB: Stable ☑ Eroding ☐ Undercutting ☐ Slumping/Sloughing ☐ Roots Exposed ☐
dominant species: LDB, RDB	LDB: grasses RDB: grasses; Eastern Cottonwood (2)
overhead canopy (%)	0
benthos	None
fish	None
algae or other aquatic life	None
habitat assessment score	103 - Marginal; impaired
photo number (s)	19-20
rainfall information	0.16 on 12/10; 0.00 on 12/11; 0.00 on 12/12; 0.00 on 12/13; 0.55 on 12/14; 0.01 on 12/15; 0.00 on 12/16; 0.00 on 12/17
6-HUC code & name (12-digit)	051301080703 - Cane Creek
7-Confirmed by:	USACE (C. Nelson, T. Wiley), 12/17/2013
8-Mitigation	No ☑ Yes ☐ *(include on Mitigation Form)*
9-ETW	No ☑ Yes ☐
10-303 (d) List	No ☑ Yes ☐ Habitat ☐ Siltation ☐ Other ☐
11-Assessed	No ☑ 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.	Rainfall Data Reference: Station KTNCOOKE23; http://www.wunderground.com/ STR-1A is a moderately defined stream which originates from a wetland located west of Tennessee Ave. (outside of the project right-of-way) with a poorly-moderately defined channel and livestock access-related impacts down-gradient (east) of Tennessee Ave. This feature was determined by the USACE (C. Nelson, T. Wiley) to be an intermittent stream during a regulatory site confirmation visit performed on 12/17/2013. A TDEC Hydrologic Determination Field Data Sheet was completed for this feature (Score: 19.5).

HABITAT ASSESSMENT FIELD SHEET- MODERATE TO HIGH GRADIENT STREAMS (FRONT)
(See Protocol E for detailed descriptions and rank information)

STATION ID: STR-1A	HABITAT ASSESSED BY: E. Schmidt, T. Becktold
STREAM NAME: Unnamed tributary to Cane Creek	DATE: TIME:
STATION LOCATION: 14+25, Tennessee Ave.	ECOREGION: QC: Consensus Duplicate
WBID/HUC: GROUP:	ASSOCIATED LOG #:

	Optimal	Suboptimal	Marginal	Poor
1. Epifaunal Substrate/ Available Cover	Over 70% of stream reach has natural stable habitat suitable for colonization by fish and/or macroinvertebrates. Four or more productive habitats are present.	Natural stable habitat covers 40-70% of stream reach. Three or more productive habitats present. (If near 70% and more than 3 go to optimal.)	Natural stable habitat covers 20 -40% of stream reach or only 1-2 productive habitats present. (If near 40% and more than 2 go to suboptimal.)	Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
SCORE 10	20 19 18 17 16	15 14 13 12 11	(10) 9 8 7 6	5 4 3 2 1
Comments				
2.Embeddedness of Riffles	Gravel, cobble, and boulders 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space. If near 25% drop to suboptimal if riffle not layered cobble.	Gravel, cobble and boulders 25-50% surrounded by fine sediment. Niches in bottom layers of cobble compromised. If near 50% & riffles not layered cobble drop to marginal.	Gravel, cobble, and boulder s are 50-75% surrounded by fine sediment. Niche space in middle layers of cobble is starting to fill with fine sediment.	Gravel, cobble, and boulders are more than 75% surrounded by fine sediment. Niche space is reduced to a single layer or is absent.
SCORE 8	20 19 18 17 16	15 14 13 12 11	10 9 (8) 7 6	5 4 3 2 1
Comments				
3. Velocity/ Depth Regime	All four velocity/depth regimes present (slow-deep, slow-shallow, fast-deep, fast-shallow).	Only 3 of the 4 regimes present (if fast-shallow is missing score lower). If slow-deep missing score 15.	Only 2 of the 4 habitat regimes present (if fast-shallow or slow-shallow are missing, score low).	Dominated by 1 velocity/depth regime. Others regimes too small or infrequent to support aquatic populations.
SCORE 6	20 19 18 17 16	15 14 13 12 11	10 9 8 7 (6)	5 4 3 2 1
Comments				
4. Sediment Deposition	Sediment deposition affects less than 5% of stream bottom in quiet areas. New deposition on islands and point bars is absent or minimal.	Sediment deposition affects 5-30% of stream bottom. Slight deposition in pool or slow areas. Some new deposition on islands and point bars. Move to marginal if build-up approaches 30%.	Sediment deposition affects 30-50% of stream bottom. Sediment deposits at obstruction, constrictions and bends. Moderate pool deposition.	Heavy deposits of fine material, increased bar development; more than 50% of the bottom changing frequently; pools almost absent due to substantial sediment deposition.
SCORE 10	20 19 18 17 16	15 14 13 12 11	(10) 9 8 7 6	5 4 3 2 1
Comments				
5. Channel Flow Status. .	Water reaches base of both lower banks and streambed is covered by water throughout reach. Minimal productive habitat is exposed.	Water covers > 75% of streambed or 25% of productive habitat is exposed.	Water covers 25-75% of streambed and/or productive habitat is mostly exposed.	Very little water in channel and mostly present as standing pools. Little or no productive habitat due to lack of water.
SCORE 19	20 (19) 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Comments				

HABITAT ASSESSMENT FIELD SHEET- MODERATE TO HIGH GRADIENT STREAMS (BACK)

Station ID STR-1A Date 12/17/2013 Initials ES/TB

	Optimal	Suboptimal	Marginal	Poor
6. Channel Alteration	Channelization, dredging rock removal or 4-wheel activity (past or present) absent or minimal; natural meander pattern. NO artificial structures in reach. Upstream or downstream structures do not affect reach.	Channelization, dredging or 4-wheel activity up to 40%. Channel has stabilized. If larger reach, channelization is historic and stable. Artificial structures in or out of reach do not affect natural flow patterns.	Channelization, dredging or 4-wheel activity 40-80% (or less that has not stabilized.) Artificial structures in or out of reach may have slight affect.	Over 80% of reach channelized, dredged or affected by 4-wheelers. Instream habitat greatly altered or removed. Artificial structures have greatly affected flow pattern.
SCORE 15	20 19 18 17 16	(15) 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Comments				
7. Frequency of re-oxygenation zones. Use frequency of riffle or bends for category. Rank by quality.	Occurrence of re-oxygenation zones relatively frequent; ratio of distance between areas divided by average stream width <7:1.	Occurrence of re-oxygenation zones infrequent; distance between areas divided by average stream width is 7 - 15.	Occasional re-oxygenation area. The distance between areas divided by average stream width is over 15 and up to 25.	Generally all flat water or flat bedrock; little opportunity for re-oxygenation. Distance between areas divided by average stream width >25.
SCORE 7	20 19 18 17 16	15 14 13 12 11	10 9 8 (7) 6	5 4 3 2 1
Comments				
8. Bank Stability (score each bank) Determine left or right side by facing downstream.	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems <5% of bank affected.	Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion. If approaching 30% score marginal if banks steep.	Moderately unstable; 30-60 % of bank in reach has areas of erosion; high erosion potential during floods, If approaching 60% score poor if banks steep.	Unstable; many eroded area; raw areas frequent along straight sections and bends; obvious bank sloughing; 60-100% of bank has erosional scars.
SCORE 6 (LB)	Left Bank 10 9	8 7 (6)	5 4 3	2 1 0
SCORE 6 (RB)	Right Bank 10 9	8 7 (6)	5 4 3	2 1 0
Comments				
9. Vegetative Protective (score each bank) includes vegetation from top of bank to base of bank. Determine left or right side by facing downstream	More than 90% of the bank covered by undisturbed vegetation. All 4 classes (mature trees, understory trees, shrubs, groundcover) are represented and allowed to grow naturally. All plants are native.	70-90% of the bank covered by undisturbed vegetation. One class may not be well represented. Disruption evident but not effecting full plant growth. Non-natives are rare (< 30%)	50-70% of the bank covered by undisturbed vegetation. Two classes of vegetation may not be well represented. Non-native vegetation may be common (30-50%).	Less than 50% of the bank covered by undisturbed vegetation or more than 2 classes are not well represented or most vegetation has been cropped. Non-native vegetation may dominate (> 50%)
SCORE 6 (LB)	Left Bank 10 9	8 7 (6)	5 4 3	2 1 0
SCORE 6 (RB)	Right Bank 10 9	8 7 (6)	5 4 3	2 1 0
Comments				
10. Riparian Vegetative Zone Width (score each bank.) Zone begins at top of bank.	Average width of riparian zone > 18 meters. Unpaved footpaths may score 9 if run-off potential is negligible.	Average width of riparian zone 12-18 meters. Score high if areas < 18 meters are small or are minimally disturbed.	Average width of riparian zone 6-11 meters. Score high if areas less than 12 meters are small or are minimally disturbed.	Average width of riparian zone <6 meters. Score high if areas less than 6 meters are small or are minimally disturbed.
SCORE 2 (LB)	Left Bank 10 9	8 7 6	5 4 3	(2) 1 0
SCORE 2 (RB)	Right Bank 10 9	8 7 6	5 4 3	(2) 1 0
Comments				

Total Score 103 **Comparison to Ecoregion Guidelines (circle): ABOVE or (BELOW)**

If score is below guidelines , result of (circle): Natural Conditions or Human Disturbance

Describe Result of historic human disturbance (channelization, encapsulation), as well as impacts caused by active cattle access.

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

County: Putnam **Route:** I-40 **LM:** N/A **PE No.:** 71001-1195-44 **PIN:** 101577.00
Project Description: Interchange at Mine Lick Creek Road
Date of survey 08/28/2012 **Biologist** E. Schmidt **Affiliation** ARCADIS

1-Station: from plans	60+00L, I-40
2-Map label and name	WWC-1A
3-Latitude/Longitude	36.14051468190N, 85.58430658870W
4-Potential impact	None; outside limits of disturbance
5-Feature description:	
what is it	Wet weather conveyance
blue-line on topo? (y/n)	N
defined channel (y/n)	Y; moderately defined; dissipates prior to confluence with STR-1
straight or meandering	Generally straight
channel bottom width	2-3 ft.; up to 10 ft. at headcut near beginning of channel
top of bank width	3-4 ft.
bank height and slope ratio	<6-24 in.; 1:1 to vertical
avg. gradient of stream (%)	1-2
substratum	Clay (60%), silt (20%), gravel (20%)
riffle/run/pool	N/A
width of buffer zone	LB: 50-75 ft.; RT: 25-50 ft.
water flow	N
water depth	N/A
water width	N/A
general water quality	N/A
OHWM indicators	N/A
groundwater connection	None
bank stability: LB, RB	LB/RB: Stable to eroding undercutting (especially at beginning of channel)
dominant species: LB, RB	LB/RB: Chinese privet, red maple
overhead canopy (%)	75
benthos	None
fish	None
algae or other aquatic life	None
habitat assessment score	N/A
photo number (s)	4-6
rainfall information	08/21/2012-08/28/2012: None
6- HUC code & name (12-digit)	0513010809 – Cane Creek
7-Confirmed by:	
8-Mitigation	No __x__ Yes_____ : (include on Form J)
9-ETW	No _____ Yes_____ N/A __x__
10-303 (d) List	No _____ Yes_____: Habitat____ Siltation____
11-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form completed	Rainfall Data Reference: Gage ID 0706: Cookeville, TN (TVA): http://www.tva.gov/river/lakeinfo/precip.htm A TDEC Hydrologic Determination Field Data Sheet was completed for this feature.

Hydrologic Determination Field Data Sheet

Tennessee Division of Water Pollution Control, Version 1.4

County: Putnam	Named Waterbody: N/A	Date/Time: 08/28/2012
Assessors/Affiliation: E. Schmidt/ ARCADIS		Project ID : WWC-1A
Site Name/Description: I-40 Interchange at Mine Lick Creek Road		
Site Location: Near Cookeville, TN		
USGS quad: Cookeville West	HUC (12 digit): 0513010809	Lat/Long:
Previous Rainfall (7-days) : 08/21/2012-08/28/2012: None		36.14051468190N/ 85.58430658870W
Precipitation this Season vs. Normal : very wet wet average dry drought unknown Source of recent & seasonal precip data : http://www.tva.gov/river/lakeinfo/precip.htm		
Watershed Size : Approximately 17 acres	Photos: Y or N (circle) Number : 4-7	
Soil Type(s) / Geology : Christian silty clay loam, 5-12% slopes, severely eroded (CcC3); Christian silt loam, 5-12% slopes (CrC2); Landisburg silt loam, 2-5% slopes (LaB); Minvale silt loam, 5-12% slopes(MeC) Source: NRCS Web Soil Survey		
Surrounding Land Use : Agricultural, wooded, county and interstate roadway facilities		
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	N/A	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 month aquatic phase	X	Stream
6. Presence of fish (except *Gambusia*)	X	Stream
7. Presence of naturally occurring ground water table connection	Unknown	Stream
8. Flowing water in channel and 7 days since last precipitation in local watershed	X	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 1.4*

Overall Hydrologic Determination = Wet weather conveyance

Secondary Indicator Score (if applicable) = 14.0

Justification / Notes :

Secondary Field Indicator Evaluation

WWC-1A

A. Geomorphology (Subtotal = 8.75)	**Absent**	**Weak**	**Moderate**	**Strong**
1. Continuous bed and bank	0	1	**2**	3
2. Sinuous channel	0	**1**	2	3
3. In-channel structure: riffle-pool sequences	0	**1**	2	3
4. Sorting of soil textures or other substrate	0	1	**2**	3
5. Active/relic floodplain	**0**	1	2	3
6. Depositional bars or benches	0	**1**	2	3
7. Braided channel	**0**	1	2	3
8. Recent alluvial deposits	0	**0.5**	1	1.5
9. Natural levees	**0**	1	2	3
10. Headcuts	0	1	**2**	3
11. Grade controls	**0**	0.5	1	1.5
12. Natural valley or drainageway	0	**0.5**	1	1.5
13. At least second order channel on existing USGS or NRCS map	No = 0		Yes = 3	

B. Hydrology (Subtotal = 2.0)	**Absent**	**Weak**	**Moderate**	**Strong**
14. Subsurface flow/discharge into channel	**0**	1	2	3
15. Water in channel and >48 hours since sig. rain	**0**	1	2	3
16. Leaf litter in channel (January – September)	1.5	1	**0.5**	0
17. Sediment on plants or on debris	0	0.5	**1**	1.5
18. Organic debris lines or piles (wrack lines)	0	**0.5**	1	1.5
19. Hydric soils in stream bed or sides of channel	No = 0		Yes = 1.5	

C. Biology (Subtotal = 3.25)	**Absent**	**Weak**	**Moderate**	**Strong**
20. Fibrous roots in channel [1]	3	2	**1**	0
21. Rooted plants in channel [1]	3	**2**	1	0
22. Crayfish in stream (exclude in floodplain)	**0**	0.5	1	1.5
23. Bivalves/mussels	**0**	1	2	3
24. Amphibians	**0**	0.5	1	1.5
25. Macrobenthos (record type & abundance)	**0**	1	2	3
26. Filamentous algae; periphyton	**0**	1	2	3
27. Iron oxidizing bacteria/fungus	**0**	0.5	1	1.5
28.Wetland plants in channel [2]	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 = __14.0_____

Under Normal Conditions, Watercourse is a Wet Weather Conveyance if Secondary Indicator Score < 19 points

Notes : WWC-1A begins as a headcut in a poorly defined natural drainage which is dominated by a dense understory of Chinese privet and a canopy of semi-mature red maple trees. The conveyance is over-widened (up to 10 feet) in the location of the headcut then quickly transitions to a more narrow channel (2-3 feet at bottom). Just down-gradient of a barbed wire fence, channel definition rapidly diminishes and completely ceases approximately 10-15 feet down-gradient of the fence. This portion of the channel is near the left descending bank of STR-1 in an area that is heavily impacted by cattle access. The distance between the headcut and this area is approximately 150 feet. Although some hydrologic indicators are present, insufficient indicators were present at the time of the site visit for a positive stream determination.

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

County: Putnam **Route:** I-40 **LM:** N/A **PE No.:** 71001-1195-44 **PIN:** 101577.00
Project Description: Interchange at Mine Lick Creek Road
Date of survey 06/04/2012 **Biologist** E. Schmidt / T. Hendon **Affiliation** ARCADIS

1-Station: from plans	Sta. 19+00L, Ramp C
2-Map label and name	WWC-2
3-Latitude/Longitude	36.13895517910N, 85.57663825380W
4-Potential impact	Fill
5-Feature description:	
what is it	Wet weather conveyance
blue-line on topo? (y/n)	N
defined channel (y/n)	N; vegetated swale
straight or meandering	Generally straight
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	Silt, grasses
riffle/run/pool	N/A
width of buffer zone	Actively maintained ROW
water flow	N
water depth	N/A
water width	N/A
general water quality	N/A
OHWM indicators	N/A
groundwater connection	None
bank stability: LB, RB	N/A
dominant species: LB, RB	LB/RB: Various grasses
overhead canopy (%)	0
benthos	None
fish	None
algae or other aquatic life	None
habitat assessment score	N/A
photo number (s)	20-21
rainfall information	0.00 on 05/28; 0.00 on 05/29; 0.00 on 05/30; 0.00 on 05/31; 0.23 on 06/01; 0.00 on 06/02; 0.00 on 06/03; 0.00 on 06/04
6- HUC code & name (12-digit)	0513010809 – Cane Creek
7-Confirmed by:	
8-Mitigation	No __x__ Yes_____ : (include on Form J)
9-ETW	No _____ Yes_____ N/A __x__
10-303 (d) List	No _____ Yes_____: Habitat____ Siltation____
11-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form completed	Rainfall Data Reference: Gage ID 0706: Cookeville, TN (TVA): http://www.tva.gov/river/lakeinfo/precip.htm A TDEC Hydrologic Determination Field Data Sheet was completed for this feature.

Hydrologic Determination Field Data Sheet

Tennessee Division of Water Pollution Control, Version 1.4

County: Putnam	Named Waterbody: N/A	Date/Time: 06/04/2012
Assessors/Affiliation: E. Schmidt, T. Hendon/ ARCADIS		Project ID : WWC-2
Site Name/Description: I-40 Interchange at Mine Lick Creek Road		
Site Location: Near Cookeville, TN		
USGS quad: Cookeville West	HUC (12 digit): 0513010809	Lat/Long:
Previous Rainfall (7-days) : 0.00 on 05/28; 0.00 on 05/29; 0.00 on 05/30; 0.00 on 05/31; 0.23 on 06/01; 0.00 on 06/02; 0.00 on 06/03; 0.00 on 06/04		36. 13895517910N/ 85. 57663825380W
Precipitation this Season vs. Normal : very wet wet average (dry) drought unknown Source of recent & seasonal precip data : Gage ID 0706: Cookeville, TN (TVA)		
Watershed Size : Approx. 248 acres	Photos: (Y) or N (circle) Number : 20-21	
Soil Type(s) / Geology : Lindside silt loam (Ln)		Source: NRCS Web Soil Survey
Surrounding Land Use : Agricultural, roadway facility, residential		
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		(WWC)
3. Watercourse dry anytime during February through April 15th, under normal precipitation / groundwater conditions	N/A	WWC
4. Daily flow and precipitation records showing feature only flows in direct response to rainfall	NI	WWC
5. Presence of multiple populations of obligate lotic organisms with ≥ 2 month 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 1.4*

Overall Hydrologic Determination = Wet weather conveyance

Secondary Indicator Score (if applicable) = N/A

Justification / Notes :

Secondary Field Indicator Evaluation

WWC-2

A. Geomorphology (Subtotal =)	**Absent**	**Weak**	**Moderate**	**Strong**
1. Continuous bed and bank	0	1	2	3
2. Sinuous channel	0	1	2	3
3. In-channel structure: riffle-pool sequences	0	1	2	3
4. Sorting of soil textures or other substrate	0	1	2	3
5. Active/relic floodplain	0	1	2	3
6. Depositional bars or benches	0	1	2	3
7. Braided channel	0	1	2	3
8. Recent alluvial deposits	0	0.5	1	1.5
9. Natural levees	0	1	2	3
10. Headcuts	0	1	2	3
11. Grade controls	0	0.5	1	1.5
12. Natural valley or drainageway	0	0.5	1	1.5
13. At least second order channel on existing USGS or NRCS map	No = 0		Yes = 3	

B. Hydrology (Subtotal =)	**Absent**	**Weak**	**Moderate**	**Strong**
14. Subsurface flow/discharge into channel	0	1	2	3
15. Water in channel and >48 hours since sig. rain	0	1	2	3
16. Leaf litter in channel (January – September)	1.5	1	0.5	0
17. Sediment on plants or on debris	0	0.5	1	1.5
18. Organic debris lines or piles (wrack lines)	0	0.5	1	1.5
19. Hydric soils in stream bed or sides of channel	No = 0		Yes = 1.5	

C. Biology (Subtotal =)	**Absent**	**Weak**	**Moderate**	**Strong**
20. Fibrous roots in channel [1]	3	2	1	0
21. Rooted plants in channel [1]	3	2	1	0
22. Crayfish in stream (exclude in floodplain)	0	0.5	1	1.5
23. Bivalves/mussels	0	1	2	3
24. Amphibians	0	0.5	1	1.5
25. Macrobenthos (record type & abundance)	0	1	2	3
26. Filamentous algae; periphyton		1	2	3
27. Iron oxidizing bacteria/fungus	0	0.5	1	1.5
28.Wetland plants in channel [2]	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 = ____N/A_____

Under Normal Conditions, Watercourse is a Wet Weather Conveyance if Secondary Indicator Score < 19 points

Notes :

Project Photos

ARCADIS

Ecological Study
June 4, 2012 & August 28, 2012
I-40 Interchange at Mine Lick Creek Road
Putnam County, Tennessee
PIN 101577.00
State Project No. 71001-1195-44



Photograph # 1

STA. 16+00R, Ramp A

Lat./Long.: N 36.14126075890
W 85.58080187500

View looking northwest.

Note: This photo depicts pond PND-1, which is located north of Ramp A and west of the existing Hawkins Crawford Road. There are no jurisdictional surface waters entering or discharging from PND-1.



Photograph # 2

STA. 58+50L, I-40

Lat./Long.: N 36.14043199410
W 85.58436822360

View looking northwest.

Note: Upstream view of stream STR-1 near the project right-of-way north of the westbound lanes of I-40. The channel and banks of STR-1 downstream of the area depicted in this photo and upstream of the existing box culvert under I-40 are highly impacted by active cattle access.

ARCADIS

Project Photos

Ecological Study
June 4, 2012 & August 28, 2012
I-40 Interchange at Mine Lick Creek Road
Putnam County, Tennessee
PIN 101577.00
State Project No. 71001-1195-44



Photograph # 3

STA. 58+50L, I-40

Lat./Long.: N 36.14043199410
W 85.58436822360

View looking southeast.

Note: Downstream view of STR-1, as taken near the area depicted in Photo 2. As noted, the channel and banks of STR-1 are heavily impacted by cattle access in this area. The inlet headwall of the existing box culvert under I-40 is depicted in center right background. Drainage from WWC-1A discharges to STR-1 in the area depicted at center left background, left of the culvert inlet.



Photograph # 4

STA. 60+00, LT, I-40

Lat./Long.: N 36.14051468190
W 85.58430658870

View looking east.

Note: Up-gradient view of wet weather conveyance WWC-1A. This conveyance begins as a wide headcut (up to 10 ft.), then narrows to approximately 2-3 feet wide (see foreground of this photo and center right background of Photo 5).



Photograph # 5

STA. 60+00, LT, I-40

Lat./Long.: N 36.14051468190
W 85.58430658870

View looking southwest.

Note: Down-gradient view of WWC-1A, as taken near the area depicted in Photo 4. As noted, the channel of WWC-1A narrows down-gradient of the headcut where it begins. This short conveyance exits the wooded area and enters an open herbaceous area near the upper right background of this photo. See Photo 6.



Photograph # 6

STA. 59+50, LT, I-40

Lat./Long.: N 36.14048194790
W 85.58439806930

View looking east.

Note: Up-gradient view of WWC-1A near the area depicted in the upper right background of Photo 5. This open herbaceous area is located adjacent to the left descending bank of STR-1. In this area, the channel of WWC-1A dissipates before reaching a confluence with STR-1.



Photograph # 7

STA. 59+50, LT, I-40

Lat./Long.: N 36.14048194790
W 85.58439806930

View looking southwest.

Note: Down-gradient view as taken from the area depicted in Photo 6. As noted in Photo 6, the channel of WWC-1A dissipates in the herbaceous area depicted in this photo before reaching a confluence with the channel of STR-1 (located across background of this photo).



Photograph # 8

STA. 19+50L, Ramp D

Lat./Long.: N 36.13931045170
W 85.58342845840

View looking north.

Note: Upstream view of stream STR-1 at the outlet of the existing box culvert under I-40. The confluence with a smaller tributary, STR-2, is located at lower right of this photo.



Photograph # 9

STA. 20+00R, Ramp D

Lat./Long.: N 36.13931045170
W 85.58342845840

View looking southeast.

Note: Downstream view of STR-1, as taken from just downstream of the confluence with STR-2. Surface water was absent in this location at the time of the study.



Photograph # 10

STA. 18+75R, Ramp D

Lat./Long.: N 36.13908750760
W 85.58388363250

View looking east.

Note: Downstream view of STR-2 as taken upstream of the confluence with STR-1. Surface waters were absent in this portion of STR-2, which has been channelized. See photos 11-12.



Photograph # 11

STA. 18+50R, Ramp D.

Lat./Long.: N 36.13909443260
W 85.58388396860

View looking northeast.

Note: Downstream view of STR-2, as taken just downstream of a minor agricultural crossing of the channel. This area is near the proposed project right-of-way.



Photograph # 12

STA. 18+50R, Ramp D.

Lat./Long.: N 36.13909443260
W 85.58388396860

View looking southwest.

Note: Upstream view of STR-2, just upstream of the crossing noted in Photo 11. The majority of this reach of stream channel, where surface water is present, is upstream of the project right-of-way.



Photograph # 13

STA.17+00R, Ramp D

Lat./Long.: N 36.13909443260
W 85.58388396860

View looking east.

Note: View of area located west of STR-2 near the project right-of-way. Although some wetland vegetation was present around the dirt bike trail depicted in this photo, hydric soils and wetland hydrology were absent. The crossing of STR-2 noted in photos 11-12 is depicted in the background of this photo.



Photograph # 14

Approximately STA. 4+00R, Existing Mine Lick Creek Road

View looking northeast.

Note: View of the existing alignment of Mine Lick Creek Road. An existing crossing of STR-1 is located at center background of this photo.



Photograph # 15

STA. 25+50CL, Lee Seminary Road

Lat./Long.: N 36.13667438380
W 85.58222625080

View looking southeast.

Note: This photo depicts an area representative of the proposed alignment of Lee Seminary Road, west of Tennessee Ave. No jurisdictional features are present in this area or will be impacted by the proposed alignment of Lee Seminary Road.



Photograph # 16

STA. 28+75L, Tennessee Ave.

Lat./Long.: N 36.13660130750
W 85.57943669710

View looking southeast.

Note: Downstream view of STR-1, just upstream of an existing bridge associated with Tennessee Ave. Surface flow becomes across the full width of the channel in this area due to the presence of a spring (SPG-1). The edge of a spring house built over SPG-1 is depicted at right of this photo.



Photograph # 17

STA. 28+75L, Tennessee Ave.

Lat./Long.: N 36.13660130750
W 85.57943669710

View looking southwest.

Note: Close-up view of the spring house associated with SPG-1 and noted in Photo 16.



Photograph # 18

STA. 28+90L, Tennessee Ave.

Lat./Long.: N 36.13660130750
W 85.57943669710

View looking northwest.

Note: Upstream view of STR-1, approximately 100 feet upstream of SPG-1. Surface is absent upstream of SPG-1 with the exception of standing pools.



Photograph # 19

STA. 14+25L, Tennessee Ave.

Lat./Long.: N 36.13306382830
W 85.58146568120

View looking northwest.

Note: Up-gradient view of WWC-1, just west of Tennessee Ave.



Photograph # 20

STA. 14+25R, Tennessee Ave.

Lat./Long.: N 36.13306382830
W 85.58146568120

View looking southeast.

Note: Down-gradient view of WWC-1, just east of Tennessee Ave.

Project Photos

ARCADIS

Ecological Study
June 4, 2012 & August 28, 2012
I-40 Interchange at Mine Lick Creek Road
Putnam County, Tennessee
PIN 101577.00
State Project No. 71001-1195-44



Photograph # 21

STA. 30+00L, Existing Mine Lick Creek Road; STA. 71+50R, I-40EB

View looking west.

Note: View of a densely wooded area located between the existing alignment of Mine Lick Creek Road and the eastbound lanes of I-40. Although hydrophytic vegetation is dominant in this area (sweetgum, red maple, etc.) and drainage patterns are present, hydric soil is absent. The area is therefore not a wetland.



Photograph # 22

STA. 12+00R, Ramp A

View looking northeast.

Note: Overall view of the location of the beginning of the proposed Ramp A, west of the proposed Tennessee Ave. extension. No jurisdictional features are present in this area.



Photograph # 23

STA. 22+00R, Ramp B

Lat./Long.: N 36.14094864890
W 85.57623144900

View looking north.

Note: Upstream view of STR-3, just upstream of the existing alignment of Mine Lick Creek Road.



Photograph # 24

STA. 22+00R, Ramp B

Lat./Long.: N 36.14094864890
W 85.57623144900

View looking south.

Note: Downstream view of STR-3, just downstream of the existing alignment of Mine Lick Creek Road. Surface water was absent at the time of the study.



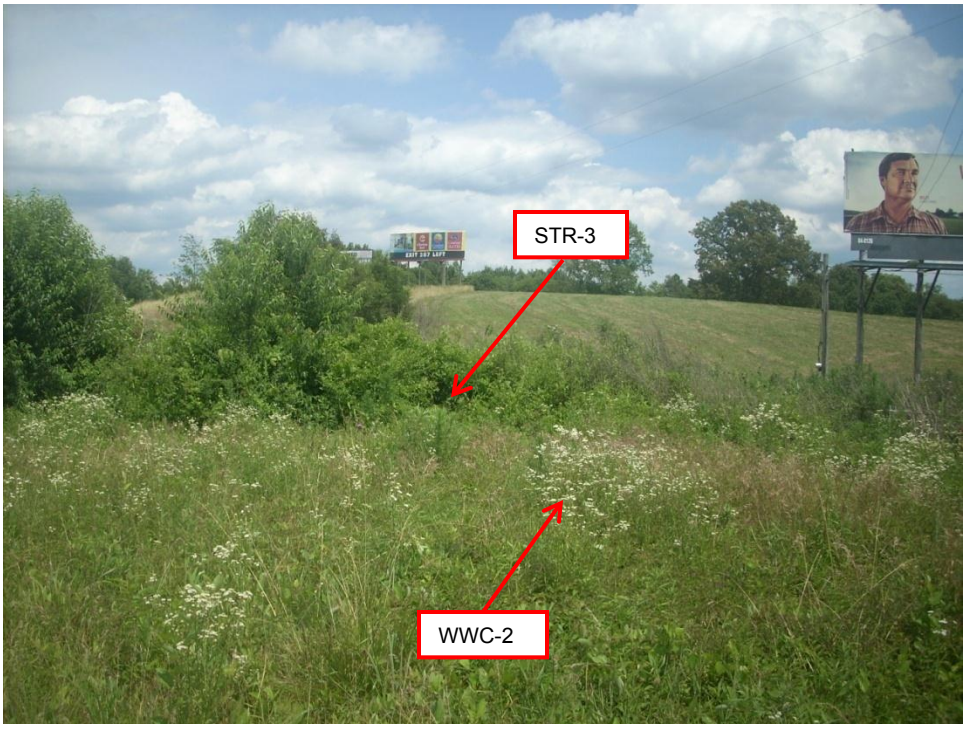
Photograph # 25

STA. 22+50R, Ramp B

Lat./Long.: N 36.14094864890
W 85.57623144900

View looking southeast.

Note: This photo depicts another area suspected of jurisdictional wetland status due to the prevalence of hydrophytic vegetation (green ash) and proximity to STR-3. However, hydric soils and wetland hydrology are absent in this area.



Photograph # 26

STA. 19+00L, Ramp C

Lat./Long.: N 36.13873860180
W 85.57622957210

View looking east-southeast.

Note: Overall view of the area where the proposed eastbound on-ramp (Ramp C) to I-40 will cross the channel of STR-3. A wet weather conveyance (WWC-3) which drains runoff from the eastbound lanes of I-40 and the Tennessee Ave. overpass is also located in this area (obscured by vegetation) .



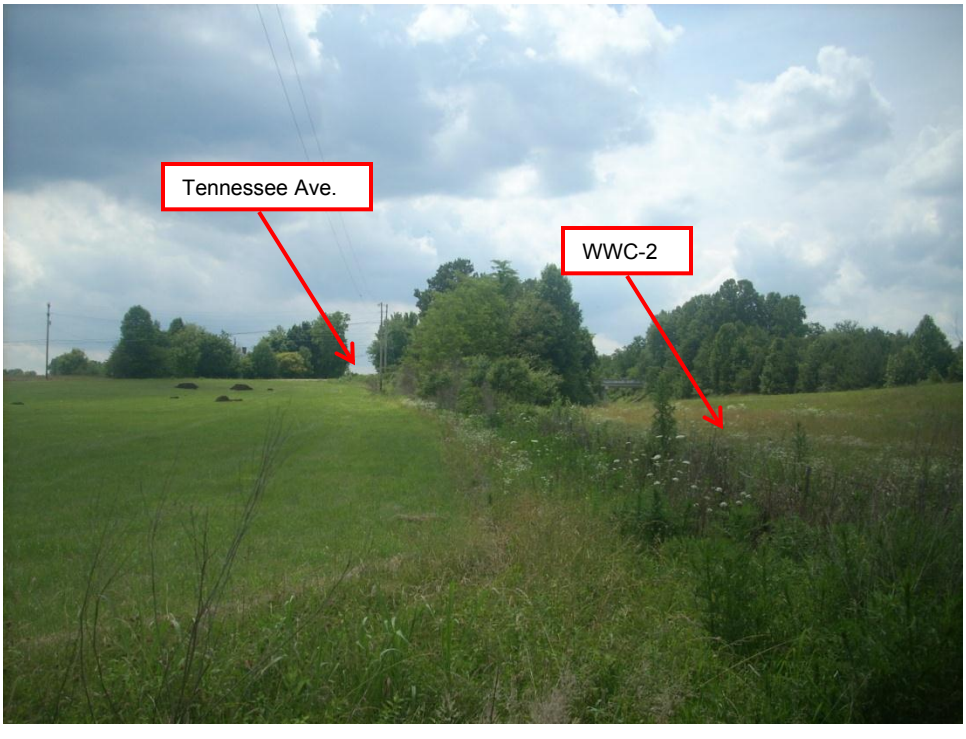
Photograph # 27

STA. 19+00CL, Ramp C

Lat./Long.: N 36.13873860180
W 85.57622957210

View looking south.

Note: Downstream view of STR-3 near the approximate centerline of the proposed Ramp C.



Photograph # 28

STA. 18+50R, Ramp C

Lat./Long.: N 36.13895517910
W 85.57663825380

View looking west.

Note: Overall view of the location of Ramp C, east of Tennessee Ave.



Photograph # 29

STA. 37+00L, Tennessee Ave.

View looking west.

Note: View of the existing alignment of Mine Lick Creek Road, just west of Bennett Road (Tennessee Ave.). Pond PND-2 is located down-gradient (southwest) of the wooded area depicted at upper left of this photo.



Photograph # 30

STA. 29+00, RT, Ramp D.

Lat./Long.: N 36.13869815490
W 85.57973313560

View looking southeast.

Note: Up-gradient view of PND-2. Although PND-2 is outside the limits of disturbance, it could potentially be impacted by project runoff. However, there are no jurisdictional surface water connections associated with the pond (no inflow or outflow). See Photo 31.



Photograph # 31

STA. 29+00, RT, Ramp D.

Lat./Long.: N 36.13869815490
W 85.57973313560

View looking northwest.

Note: Down-gradient view of PND-2. As noted in Photo 30, there are no inflows or outflows of jurisdictional surface waters associated with this pond.

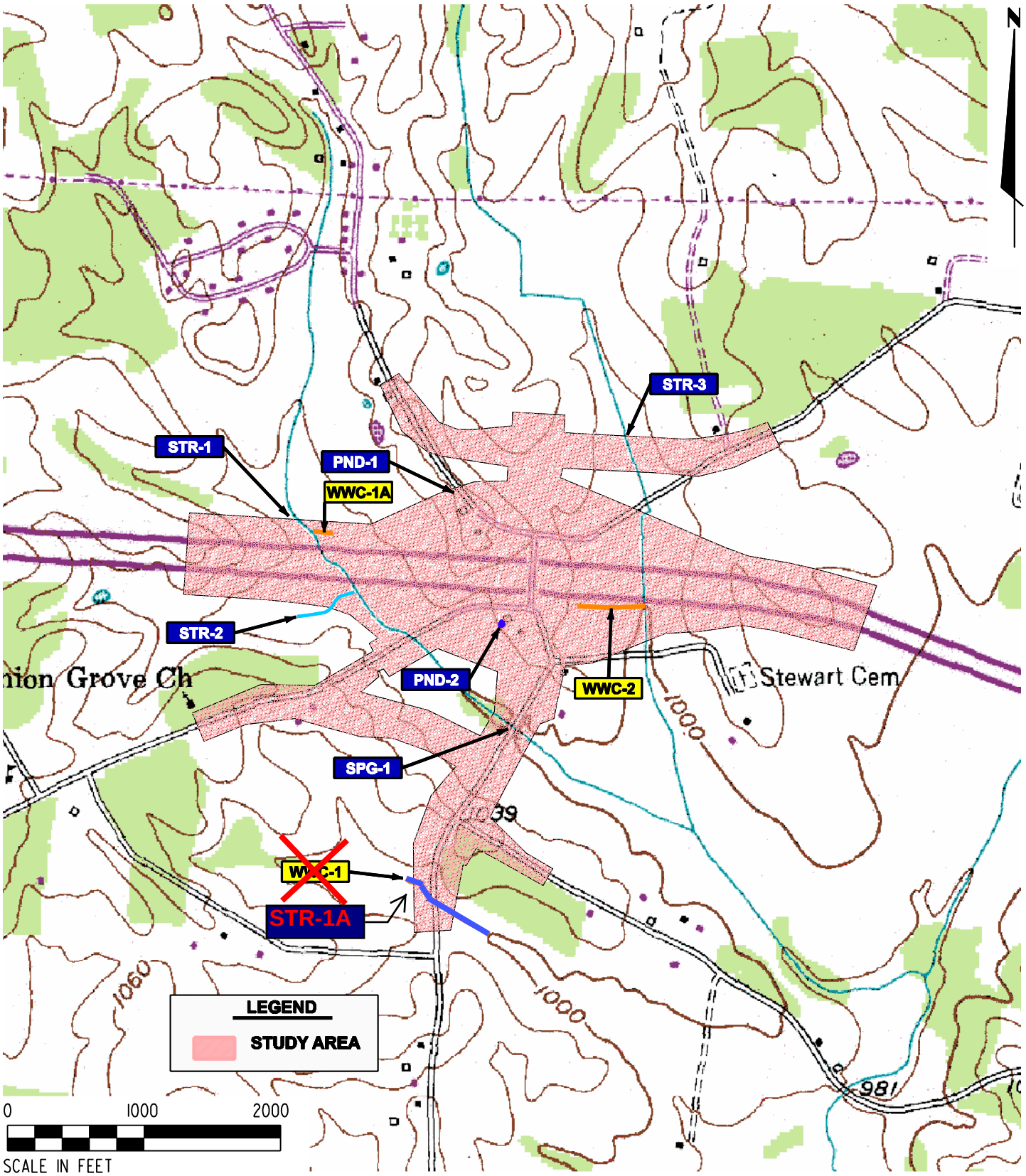


Photograph # 32

STA. 30+00R, Ramp D.

View looking west.

Note: Overall view of the area down-gradient of PND-2. The existing alignment of Mine Lick Creek Road is depicted in the background (center) of this photo.



FEATURE DESIGNATOR LEGEND

- STR-X - STREAMS
- WWC-X - WET WEATHER CONVEYANCE
- PND-X - PONDS
- SPG-X - SPRINGS

SCOPE G MAP

I-40 INTERCHANGE AT MINE LICK CREEK ROAD
PUTMAN COUNTY, TENNESSEE

TDOT

DRAWN BY:	CHECKED BY:
JRC	E SCHMIDT

DATE OF SURVEY: JUNE 4, 2012

TDOT PIN: 101577.00

P.E. No.: 71001-1195-44

FIGURE 1

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

Index Of Sheets

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2,2A-2E.....	TYPICAL SECTIONS
3-3A	PROPERTY MAP & RIGHT-OF-WAY ACQUISITION TABLE
4	INTERCHANGE ALIGNMENT
5-18	PRESENT LAYOUTS
5A-18A	PROPOSED LAYOUTS
11B-14B.....	PROFILES
19-26	RAMP PROFILES
27-31	SIDE ROAD PROFILES
32	PRIVATE DRIVE PROFILES
33-34	DRAINAGE MAPS
35-39	CULVERT CROSS-SECTIONS
.....	EPSC SHEETS
.....	PROPOSED CONTOURS
100-241.....	CROSS-SECTIONS

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

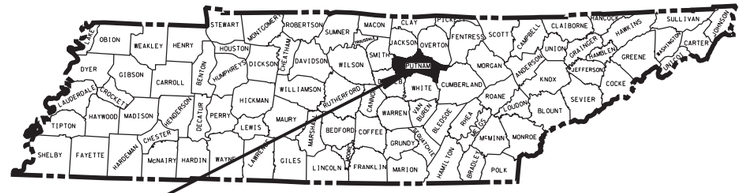
PUTNAM COUNTY

INTERSTATE 40

INTERCHANGE AT
MINE LICK CREEK RD. &
I-40, LOG MILE - 15.560

PRELIMINARY

TENN.	YEAR	SHEET NO.
	2012	1
FED. AID PROJ. NO.	NH-I-40-6(130)280	
STATE PROJ. NO.	71001-1195-44	



PROJ. NH-I-40-6(130)280
71001-1195-44

BEGIN PROJECT (PRELIM.).
NH-I-40-6(130)280; 71001-1195-44
STA. 50+52.48 I-40
N = 657977.9426
E = 2090513.7896



END PROJECT (PRELIM.).
NH-I-40-6(130)280; 71001-1195-44
STA. 99+00.42 I-40
N = 657513.4653
E = 2095329.3250

N

PRELIMINARY FIELD REVIEW

SCALE: 1"= 5280'

0 1 2 3 MILES

PRELIM. LENGTH 0.701 MILES (TENNESSEE AVE.)

NO EXCLUSIONS

EQUATION

DESCRIPTION (LEE SEMINARY RD.)	NET EFFECT ON ENUMERATION
STA. 32+85.36 BK. = STA. 10+22.78 AH.	2262.58
TOTAL	2262.58

SEALED BY

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

DATE:

APPROVED:
JOHN SCHROER, COMMISSIONER

TRAFFIC DATA

ADT (2013)(TENNESSEE AVE.)	28700
ADT (2033)(TENNESSEE AVE.)	29500
DHV (2033)(TENNESSEE AVE.)	2339
D	-
T (ADT)	5 %
T (DHV)	5 %
V (TENNESSEE AVE.)	45 MPH
V (I-40)	70 MPH

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR DATE

SPECIAL NOTES

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

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

ASSISTANT DIRECTOR FREDERICK MILLER, P.E.

DESIGNER HMB PROFESSIONAL ENGINEERS, INC. CHECKED BY MICHAEL A. BIGGS, P.E.

P.E. NO. 71001-1195-44

PIN NO. 101577.00

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM.	2012	NH-I-40-6(130)280	5

POINT	NORTH	EAST	ELEVATION	FEATURE	DESCRIPTION	STATION (TENNESSEE AVE.)	OFFSET
GPS1	657267.1074	2093085.0822	1026.4680	XCP	GPS71-ML-01	34+25.94	156.8666 RT
GPS2	657556.6278	2092988.0322	1038.5770	XCP	GPS71-ML-02	37+08.77	41.7732 RT
GPS3	658120.2822	2092983.7746	1042.8590	XCP	GPS71-ML-03	42+71.04	2.0208 RT
GPS4	658097.9148	2093415.5454	1019.1970	XCP	GPS71-ML-04	42+75.91	434.3431 RT
GPS6	657216.6508	2093576.4457	1002.9470	XCP	GPS71-ML-00	34+06.53	650.4326 RT

N

STR-1

UNNAMED TRIBUTARY TO CANEY CREEK

21

CLAUDE LAVERN CRAWFORD

22

CLAUDE LAVERN CRAWFORD

50

55

30

N 86° 22′ 59″ W
818.10′

END RAMP A
STA. 32+15.71=
STA. 53+52.48 I-40
BEGIN TRANS.
N = 658094.7951
E = 2090821.7491

TOE OF FILL

N 86° 23′ 32″ W

RAMP A

BEGIN PROJECT (PRELIM.).
NH-I-40-6(130)280; 71001-1195-44
STA. 50+52.48 I-40
N = 657977.9426
E = 2090513.7896

EXISTING ℄ I-40

SEE SHEET NO. 6

STA. 57+00

I-40

MATCH LINE

EXISTING I-40 STA. 50+00.00
N 657981.2450
E 2090461.4136

S 83° 23′ 32″ E

RAMP D

BEGIN RAMP D
STA. 10+00.00=
STA. 52+72.84 I-40
N = 657840.3220
E = 2090725.9053

TOE OF FILL

N 86° 51′ 21″ W
409.76′

N 86° 21′ 54″ W
117.88′

N 86° 21′ 54″ W
881.34′

14+40.53
116.50′

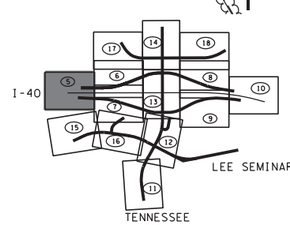
11

CHARLES CRAWFORD AND WIFE LINDA

12

TOMMIE KYLE HANNA AND WIFE KIMBERLY JOYCE

10



PRELIMINARY FIELD REVIEW

SEALED BY

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

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 50+00 TO STA. 57+00

SCALE: 1"= 50'

2/10/2012 8:34:50 AM
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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM.	2012	NH-I-40-6(130)280	5A

N

STR-1

UNNAMED TRIBUTARY TO CANE CREEK

30

50

55

END TRANS. RAMP A.
STA. 50+52.48 I-40
N = 658101.6971
E = 2090521.5886

END RAMP A
STA. 32+15.71=
STA. 53+52.48 I-40
BEGIN TRANS.
N = 658094.7951
E = 2090821.7491

N 86° 23′ 32″ W
12′
RAMP A

BEGIN PROJECT (PRELIM.).
NH-I-40-6(130)280; 71001-1195-44
STA. 50+52.48 I-40
N = 657977.9426
E = 2090513.7896

EXISTING ℄ I-40

SEE SHEET NO. 6A

57+00

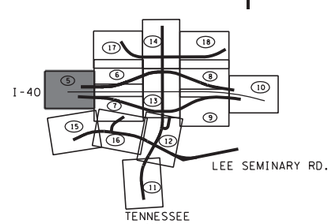
I-40 STA.

EXISTING I-40 STA. 50+00.00
N 657981.2450
E 2090461.4136

S 83° 23′ 32″ E
16′
RAMP D

BEGIN RAMP D
STA. 10+00.00=
STA. 52+72.84 I-40
N = 657840.3220
E = 2090725.9053

MATCH LINE



PRELIMINARY FIELD REVIEW

SEALED BY

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

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 50+00 TO STA. 57+00

SCALE: 1"= 50'

2/10/2012 8:34:52 AM
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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM.	2012	NH-I-40-6(130)280	6

N

22

CLAUDE LAVERN CRAWFORD

RAMP A
PI 23+43.42
N 658,039.4998
E 2,091,698.7226
Δs 21° 04′ 54″ (RT)
θs 4° 00′ 00″
Δc 13° 04′ 54″ (RT)
Dc 4° 00′ 00″
Rc 1,432.39
Lc 327.04
Ts 366.73
Ls 200.00
SE 0.063 FT/FT
DESIGN SPEED 50 MPH
TRANS. LENGTH 200

SEE SHEET NO. 5

MATCH LINE I-40 STA. 57+00

ST 27+03.73

CS 25+03.73

25

20

TS 19+76.69

SC 21+76.69

N 55° 48′ 10″ E
10.63′

EXIST. PAVEMENT TO BE SCARIFIED

R=1915.72′
L=205.85′

EXISTING HAWKINS CRAWFORD RD.

16+04.82
161.56′

N 40° 44′ 02″ W
97.24′

15+36.85
92.02′

PND-1

16+43.86
120.22′

POND

15+24.99

PASTURE

PROPOSED R.O.W. & C.A. FENCE

TOP OF CUT

BEGIN C.A. FENCE

RAMP A

S 72° 31′ 35″ W

S 3° 40′ 51″ W
50.00′

TOP OF CUT

STR-1

WWC-1A

60

65

27+38.84
57.77′

25+75.16

N 86° 22′ 59″ W
818.10′

N 86° 22′ 59″ W
173.57′

N 86° 22′ 59″ W
125.80′

UNNAMED TRIBUTARY TO CANE CREEK

PRESENT R.O.W.

PROP. 18″ RCP

TOE OF FILL

INV=1007.87

TOP OF CUT

8′ x 7′ R. C. BOX CULVERT

EXISTING I-40 WESTBOUND

EXISTING ℄ I-40

S 86° 23′ 32″ E

MATCH LINE I-40 SEE SHEET NO. 7

SEE SHEET NO. 13

STA. 70+00

MATCH LINE I-40

I-40

LEE SEMINARY RD.

TENNESSEE AVE.

PRELIMINARY FIELD REVIEW

SEALED BY

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

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

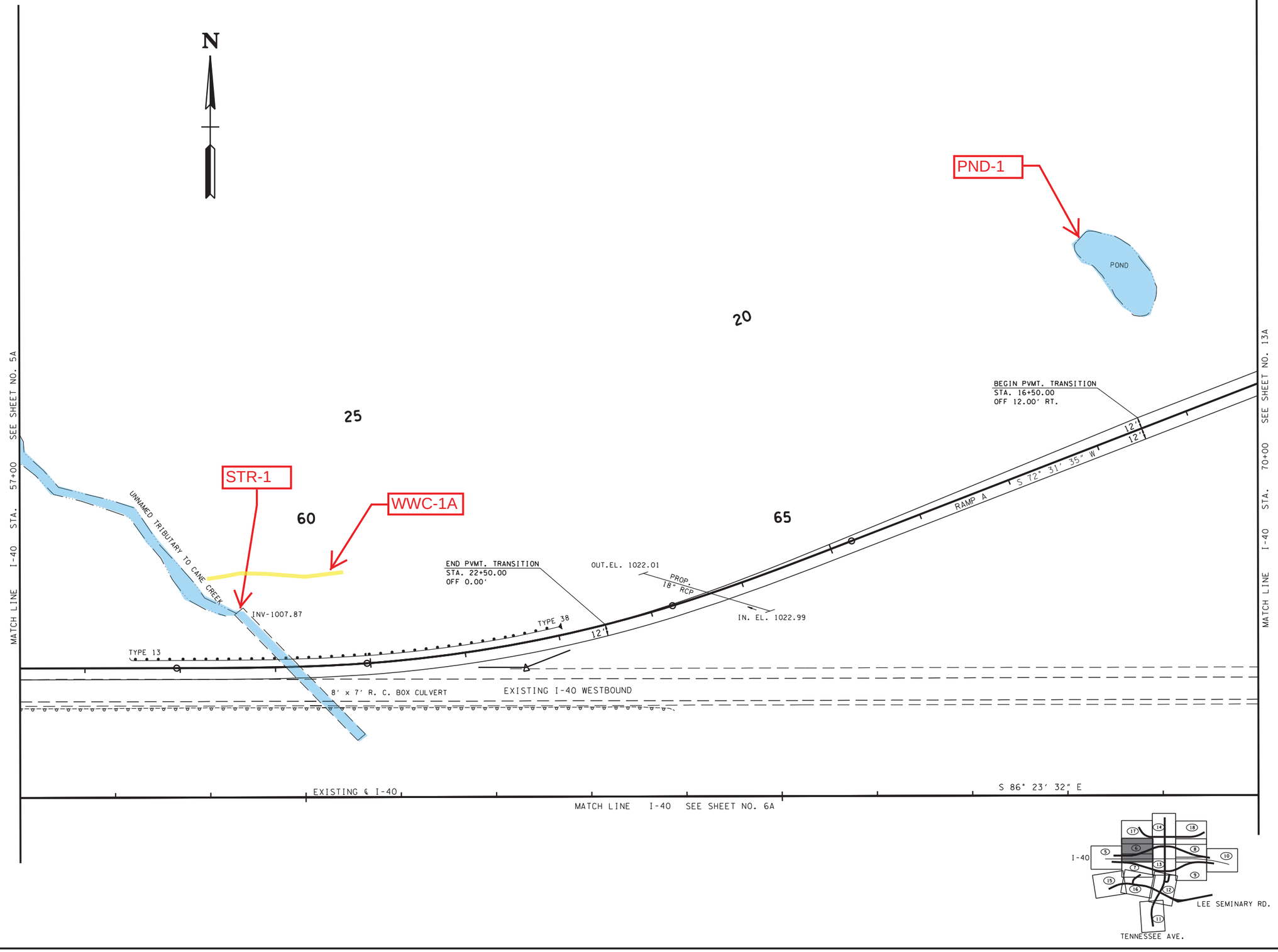
STA. 57+00 TO STA. 70+00

SCALE: 1″= 50′

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM.	2012	NH-I-40-6(130)280	6A



PRELIMINARY FIELD REVIEW

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 57+00 TO STA. 70+00

SCALE: 1"= 50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM.	2012	NH-I-40-6(130)280	7

60

65

N

STR-1

EXISTING ℄ I-40

MATCH LINE I-40 SEE SHEET NO. 6

S 86° 23′ 32″ E

8′ x 7′ R. C. BOX CULVERT

SEE SHEET NO. 5

EXISTING I-40 EASTBOUND

INV-1005.44

EW

TOE OF FILL

TOE OF FILL

N 86° 21′ 54″ W
142.80′

N 86° 22′ 32″ W
362.97′

N 86° 22′ 32″ W
822.46′

PRESENT R.O.W.

TOP OF CUT

18+88.99

TOP OF CUT

RAMP D

EXTEND EX. 8′ X 7′
BOX CULV. 112′

27+30.91
229.35′

S 53° 53′ 38″ W
101.76′

27+37.92
127.78′

BEGIN C.A. FENCE

15+92.45
92.03′

PROPOSED R.O.W. & C.A. FENCE

TOE OF FILL

PASTURE

S 69° 13′ 58″ E

S 60° 17′ 25″ W
81.84′

S 61° 31′ 49″ W
119.04′

MATCH LINE I-40 STA. 57+00

TS 15+38.82

ST 17+28.82

15

CS 19+43.38

PASTURE

PROPOSED C.A. FENCE

25+75.48

26+37.32
54.97′

18″ RCP

S 63° 09′ 35″ W
82.05′

S 62° 27′ 24″ W
134.08′

27+24.93
62.87′

S 60° 17′ 25″ W
17.16′

25+63.12
11.85′

26+48.64
8.62′

S 61° 54′ 28″ W
13.67′

PROPOSED R.O.W.

S 61° 43′ 43″ W
133.64′

EXIST. PAVEMENT
TO BE SCARIFIED

S 61° 54′ 28″ W
67.21′

26+38.00

UNNAMED TRIBUTARY TO CANE CREEK

24+71.24
105.26′

INV-999.89

INV-999.64

25+87.51
43.49′

PROPOSED R.O.W.

20

13

JOHN MEDLEY

RAMP D
PI 18+37.24
N 657,743.9780
E 2,091,557.5830
Δs 14° 09′ 33″ (RT)
Θs 3° 19′ 30″
Δc 7° 30′ 33″ (RT)
Dc 3° 30′ 00″
Rc 1,637.02
Lc 214.55
Ts 298.41
Ls 190.00
SE 0.058 FT/FT
DESIGN SPEED 50 MPH
TRANS. LENGTH 190

BARN

S 60° 15′ 12″ W
226.55′

EXISTING MINE LICK CREEK RD.

S 57° 30′ 09″ W
98.53′

S 61° 35′ 30″ W
61.61′

S 60° 21′ 50″ W
71.76′

S 62° 42′ 19″ W
27.11′

25

25+05.05
131.38′

5+24.08
64.85′

MATCH LINE EX. MINE LICK CREEK RD.
SEE SHEET NO. 16

2

BILLY L. WILLIAMS
AND WIFE EVELYN P.

STR-2

I-40

LEE SEMINARY RD.

TENNESSEE AVE.

SEE SHEET NO. 13

MATCH LINE I-40 STA. 70+00

PRELIMINARY
FIELD
REVIEW

SEALED BY

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

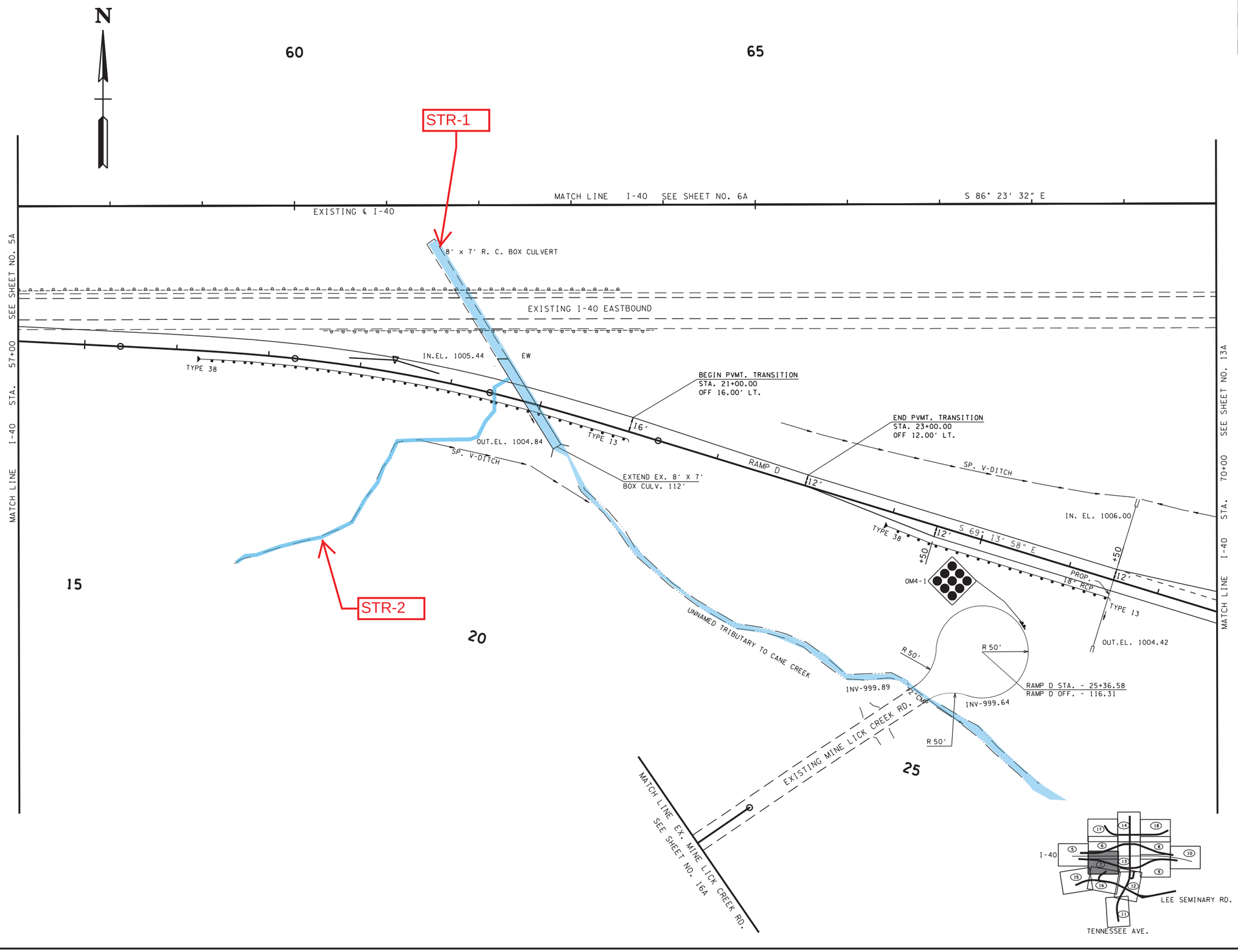
STA. 57+00 TO STA. 70+00

SCALE: 1"= 50′

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM.	2012	NH-I-40-6(130)280	7A



PRELIMINARY FIELD REVIEW

SEALED BY

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

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 57+00 TO STA. 70+00

SCALE: 1"= 50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM.	2012	NH-I-40-6(130)280	8

STR-3

N

UNNAMED TRIBUTARY TO CANE CREEK

SHERIDAN FAMILY PARTNERS L P

23

25

EXISTING MINE LICK CREEK RD.

S 59° 28' 22" W
332.46'

N 58° 31' 12" E
649.43'

EXIST. PAVEMENT TO BE SCARIFIED

INV-1002.29

S 59° 17' 42" W
198.21'

INV-1001.78

TOE OF FILL

T (UG)

TEL. PED.

6B

PUTNAM COUNTY AND COOKEVILLE CITY

20

RAMP B
PI 16+55.13
N 657,888.7022
E 2,094,215.3842
Δs 11° 48' 02" (RT)
θs 3° 19' 30"
Δc 5° 09' 02" (RT)
Dc 3° 30' 00"
Rc 1,637.02
Lc 147.16
Ts 264.26
Ls 190.00
SE 0.058 FT/FT
DESIGN SPEED 50 MPH
TRANS. LENGTH 190

ST 19+18.03

CS 17+28.03

SC 15+80.87

15

N 59° 31' 15" E
61.37'

N 65° 05' 06" W

N 60° 27' 08" E
83.75'

N 3° 34' 28" E
107.59'

REMOVE ROAD & GRADE TO DRAIN.

80

85

RAMP B

TOP OF CUT

PROPOSED R.O.W. & C.A. FENCE

S 3° 28' 45" W
49.65'

PRESENT R.O.W.

S 86° 21' 52" E
495.72'

90

END C.A. FENCE

R=5929.58'
L=508.68'

TOE OF FILL

N 76° 53' 08" W

TOP OF CUT

EXISTING I-40 WESTBOUND

INV-1000.92

INV-998.67

EXISTING ℄ I-40

MATCH LINE I-40 SEE SHEET NO. 9

STA. 79+50

I-40

MATCH LINE

SEE SHEET NO. 13

FLAG

1 F RES

1 F RES

POND

1 F RES

16

TIFFANY K. MACKIE

STA. 13+90.87

I-40 STA. 92+00

MATCH LINE

SEE SHEET NO. 10

I-40

LEE SEMINARY RD.

TENNESSEE AVE.

PRELIMINARY FIELD REVIEW

SEALED BY

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 79+50 TO STA. 92+00

SCALE: 1"= 50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM.	2012	NH-I-40-6(130)280	8A

STR-3

N

25

UNNAMED TRIBUTARY TO CANE CREEK

REMOVE EX. 48" RCP
RESTORE CHANNEL TO
EXISTING CONDITIONS

20

SEE SHEET NO. 13A

+25

IN. EL. 1001.67

PROP. 8' X 6'
BOX CULV. 152'

+25

N 65° 05' 06" W

12'

RAMP B

15

80

85

SP. V-DITCH

90

END PVMT. TRANSITION
STA. 21+75.00
OFF 12.00' LT.

OUT.EL. 999.36

16'

BEGIN PVMT. TRANSITION
STA. 19+75.00
OFF 16.00' LT.

MATCH LINE I-40 STA. 79+50

N 76° 53' 08" W

16'

EXISTING I-40 WESTBOUND

INV-1000.92

INV-998.67

EXISTING ℄ I-40

EXISTING ℄ I-40 MATCH LINE I-40 SEE SHEET NO. 9A

MATCH LINE I-40 STA. 92+00 SEE SHEET NO. 10A

I-40

LEE SEMINARY RD.

TENNESSEE AVE.

PRELIMINARY FIELD REVIEW

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 79+50 TO STA. 92+00

SCALE: 1"= 50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM.	2012	NH-I-40-6(130)280	9

80 85 90

MATCH LINE I-40 SEE SHEET NO. 8

EXISTING ℄ I-40

STR-3

WWC-2

INV-998.59 INV-997.98

EXISTING I-40 EASTBOUND

INV-997.83 INV-998.34 EW

SEE SHEET NO. 13

I-40 STA. 79+50

MATCH LINE

N 86° 23' 37" W 773.63'

PRESENT R.O.W.

S 3° 49' 07" W 49.95'

BB

TOP OF CUT

R=5629.58' L=754.66'

PCC 25+63.69

END C.A. FENCE

PROPOSED R.O.W. & C.A. FENCE

SEE SHEET NO. 10

STA. 92+00

I-40

MATCH LINE

N 57° 52' 53" E 327.54'

N 66° 15' 22" E RAMP C

TOE OF FILL

PASTURE

PROP. 8' X 6' BOX CULV. 120'

UNNAMED TRIBUTARY TO CANE CREEK

PC 18+04.90

PT 15+30.68

6

PUTNAM COUNTY AND COOKEVILLE CITY

14+86.86 95.80'

N 86° 52' 26" E 228.91'

EP OPSB

EL-1002.95

71-ML-00

S 86° 52' 23" W 228.03'

17+09.00 74.17'

18+46.49 75.59'

N 87° 58' 22" E 142.86'

INV-995.15

S 87° 58' 22" W 144.45'

INV-995.80

21 CMP

19+26.91 76.45'

R=738.98' L=85.66'

R=744.86' L=84.44'

EXISTING STEWART CEMETERY RD.

N 81° 29' 09" E 154.69'

S 81° 28' 40" W 156.49'

20+77.48 77.99'

N 79° 30' 15" E 126.75'

S 79° 30' 31" W 127.31'

22+04.23 77.21'

22+62.68 78.94'

22+92.86 82.18'

23+21.13 87.20'

23+68.79 98.29'

23+93.44 106.53'

25+22.94 140.38'

N 79° 01' 22" E 60.07'

20

25

15

L1 L2 L3 L4 L5 L6 L7 L8 L9 L10 L11 L12 L13 L14 L15 L16 L17 L18 L19 L20 L21 L22 L23 L24 L25 L26 L27 L28 L29 L30 L31 L32

WALL

CEM

STEWART CEMETERY

N 32° 05' 09" W 284.39'

N 1° 15' 49" W 121.11'

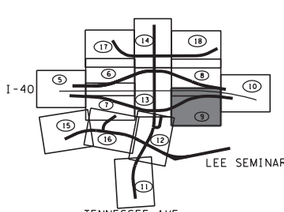
S 65° 17' 32" E 199.75'

N 26° 04' 58" W 152.00'

N 59° 51' 34" E 41.40'

Element	Direction	Distance
L1	S 22° 35' 17" E	46.25
L2	S 17° 0' 16" E	47.56
L3	S 18° 13' 30" E	99.30
L4	S 63° 29' 58" E	56.79
L5	S 30° 2' 45" E	192.09
L6	S 42° 20' 33" E	17.43
L7	S 54° 18' 10" E	30.44
L8	S 60° 8' 43" E	13.73
L9	S 67° 13' 49" E	17.00
L10	S 74° 47' 24" E	54.50
L11	S 77° 43' 23" E	49.30
L12	S 81° 38' 43" E	25.99
L13	S 87° 2' 33" E	48.93
L14	N 89° 55' 20" E	28.71
L15	N 85° 58' 35" E	30.36
L16	S 39° 59' 13" E	11.36
L17	S 32° 12' 20" E	17.04
L18	S 22° 35' 17" E	64.59
L19	S 17° 10' 12" E	49.99
L20	S 18° 13' 30" E	73.45
L21	S 23° 43' 19" E	36.54
L22	S 61° 23' 48" E	33.45
L23	S 66° 41' 1" E	21.25
L24	S 28° 7' 15" E	164.48
L25	N 32° 12' 44" W	17.05
L26	N 36° 35' 14" W	12.39
L27	N 41° 57' 13" W	7.42
L28	N 52° 31' 57" W	11.40
L29	N 61° 31' 30" W	23.59
L30	N 73° 30' 11" W	48.22
L31	N 77° 48' 59" W	58.11
L32	N 80° 51' 31" W	16.75

RAMP C
PI 21+93.42
N 657,630.2544
E 2,094,057.6522
Δ 30° 21' 06" (RT)
D 4° 00' 00"
R 1,432.39
L 758.79
T 388.52
SE 0.063 FT/FT
DESIGN SPEED 50 MPH
TRANS. LENGTH 200



N

PRELIMINARY FIELD REVIEW

SEALED BY

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

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 79+50 TO STA. 92+00

SCALE: 1"= 50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM.	2012	NH-I-40-6(130)280	9A

80 85 90

MATCH LINE I-40 SEE SHEET NO. 8A

EXISTING ℄ I-40

STR-3

WWC-2

INV-998.59 INV-997.98

EXISTING I-40 EASTBOUND

INV-997.83 INV-998.34

EW

IN. EL. 996.60

TYPE 13

TYPE 13

12'

SP. V-DITCH

END PVMT. TRANSITION
STA. 22+50.00
OFF 0.00'

RAMP C

N 66° 15' 22" E

PROP. 8' X 6'
BOX CULV.
120'

OUT.EL. 995.69

TYPE 38

12'

12'

TYPE 38

BEGIN PVMT. TRANSITION
STA. 16+50.00
OFF 12.00' RT.

MATCH LINE I-40 STA. 79+50 SEE SHEET NO. 13A

UNNAMED TRIBUTARY TO CANE CREEK

25

MATCH LINE I-40 STA. 92+00 SEE SHEET NO. 10A

20

INV-995.75

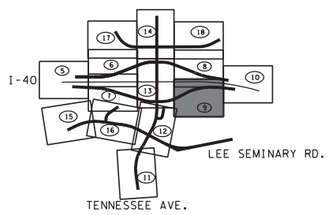
EXISTING STEWART CEMETERY RD.

42" CMP

INV-995.88

15

N



PRELIMINARY FIELD REVIEW

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

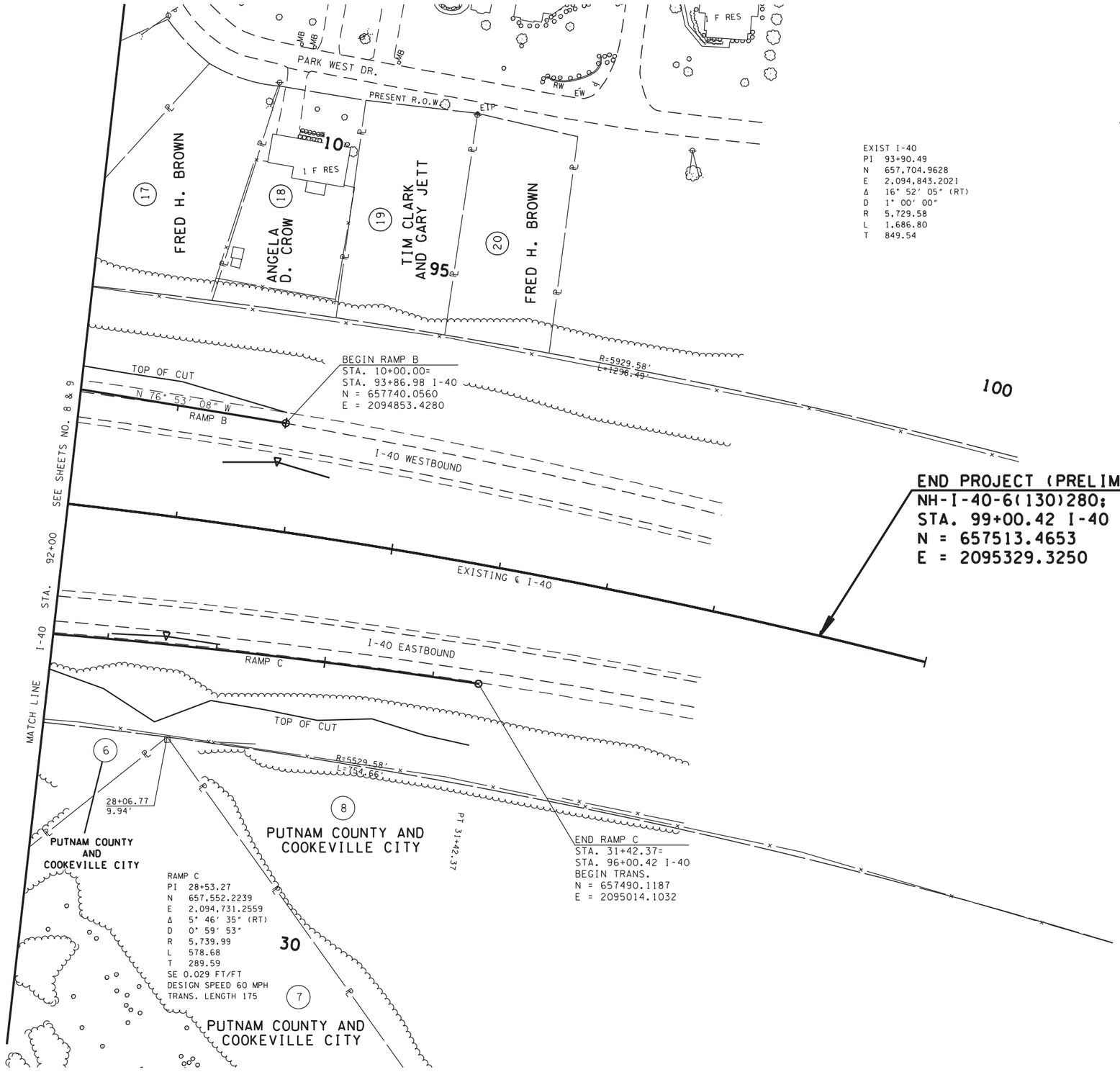
STA. 79+50 TO STA. 92+00

SCALE: 1"= 50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM.	2012	NH-I-40-6(130)280	10



PRELIMINARY FIELD REVIEW

SEALED BY

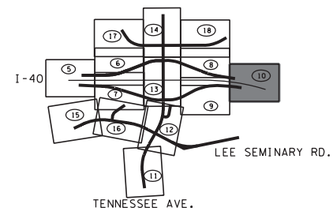
COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.0000749 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 92+00 TO EOP

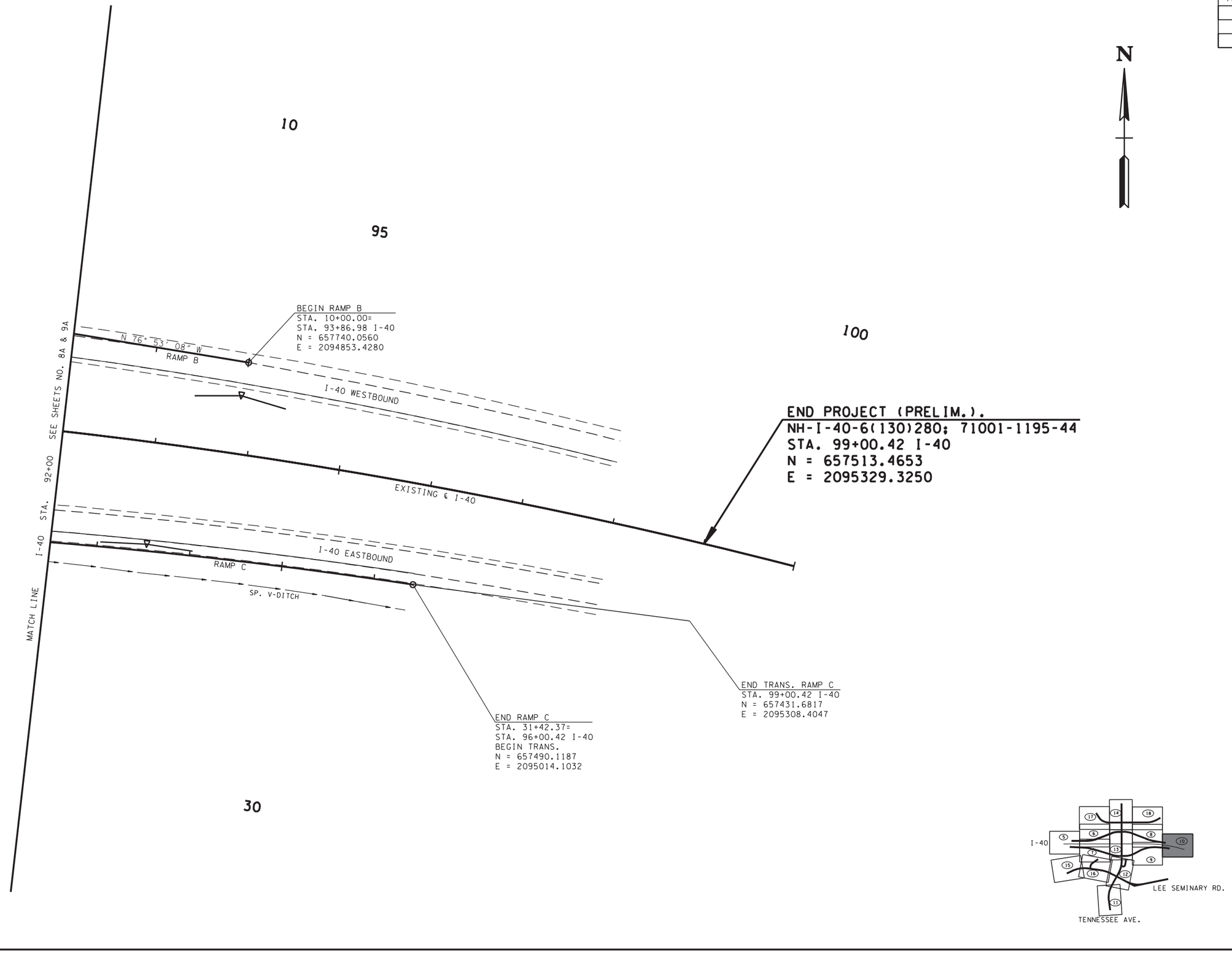
SCALE: 1"= 50'



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

TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM.	2012	NH-I-40-6(130)280	10A



PRELIMINARY FIELD REVIEW

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 92+00 TO EOP

SCALE: 1"= 50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM.	2012	NH-I-40-6(130)280	11

35.76'
N 88° 44' 20" W
74.84'
N 86° 13' 02" W
52.57'
N 88° 56' 49" W
47.18'
N 86° 36' 27" W
33.70'
N 88° 14' 57" W
39.73'
N 86° 14' 05" W
54.13'
N 87° 40' 38" W
49.20'
S 87° 27' 05" W
29.25'
S 89° 55' 45" W
35.03'
S 88° 31' 07" W
28.31'
10
OLD STEWART RD.
N 3° 57' 22" W
377.50'
INV-1007.06
N 4° 13' 59" W
30 CMP
N 3° 45' 51" W
366.49'
INV-1006.79
W

TENNESSEE AVE.
PI 17+57.69
N 655,769.4543
E 2,092,228.5560
Δs 37° 01' 59" (RT)
θs IN 6° 09' 00"
θs OUT 9° 09' 00"
Δc 21° 43' 59" (RT)
Dc 6° 00' 00"
Rc 954.93
Lc 362.22
Ts IN 426.59
Ts OUT 469.86
Ls IN 205.00
Ls OUT 305.00
SE 0.070 FT/FT
DESIGN SPEED 45 MPH
TRANS. LENGTH (IN) 205'
TRANS. LENGTH (OUT) 305'

WWC-1
15
N
2
BILLY L. WILLIAMS AND WIFE EVELYN P.
PROPOSED R.O.W.
N 2° 44' 11" E
52.61'
TOP OF CUT
PROP. 8' X 3' I08' BOX CULV.
52+16.97
15.19'
50+34.10
27.79'
N 5° 40' 38" E
183.92'
INV-1007.54
GRASSY
N 32° 48' 01" E
53+34.44
1.77'
N 14° 53' 14" E
119.40'
N 19° 33' 02" E
100.17'
54+34.65
2.41'
55+30.33
6.33'
N 27° 21' 38" E
95.11'
SEE SHEET NO. 12
N 4° 39' 35" E
135.47'
12" RCP
12" CMP
INV-1007.40
51+08.43
23.72'
R=910.19'
L=210.78'
N 4° 32' 35" E
18.92'
51+27.32
24.70'
53+45.52
46.82'
TOP OF CUT
R=910.19'
L=229.68'
PROPOSED R.O.W.
S 65° 42' 15" E
277.07'
JASON D. THOMAS AND WIFE STACY
4
1 F RES
42+17.73
35.23'
TENNESSEE AVE. STA. 20+00
MATCH LINE
43+56.96
38.11'
LIMIT OF CONSTRUCTION
STA. 13+00.00
N = 655313.0154
E = 2092262.3390
GEORGE D. STEPHENS AND WIFE LINDA
5
SC 15+36.10
1 F RES
TS 13+31.10
1
VERNON WILSON
S 62° 56' 14" E
127.06'
S 7° 38' 25" W
220.67'
PL
1 F RES
19+18.22
S 64° 31' 56" E
155.42'
3
WALTER E. PRESLEY AND WIFE BRENDA I.
N 19° 18' 38" E
398.22'

I-40
LEE SEMINARY RD.
TENNESSEE AVE.

PRELIMINARY FIELD REVIEW

SEALED BY

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

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 10+00 TO STA. 20+00

SCALE: 1"= 50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM.	2012	NH-I-40-6(130)280	11A

WWC-1

10

15

OLD STEWART RD.

EXISTING BENNETT RD.

INV-1007.06

N 4° 13' 59" W

INV-1006.79

8.7'

10'

12'

12'

100' TRANS. TO EXISTING

+00

+00

IN. EL. 1007.76

PROP. 8' X 3' 108' BOX CULV.

OUT.EL. 1006.98

BEGIN PVMT. TRANSITION
STA. 16+00.00
OFF 12.00' RT.
OFF 12.00' LT.

N 32° 48' 01" E

12'

12'

SEE SHEET NO. 12A

MATCH LINE TENNESSEE AVE. STA. 20+00

LIMIT OF CONSTRUCTION
STA. 13+00.00
N = 655313.0154
E = 2092262.3390

LIMIT OF CONST.
12+10.00

10' PVT. DR.
STA. 14+50.00
W/ 18' OF 18" SD

PRELIMINARY FIELD REVIEW

SEALED BY

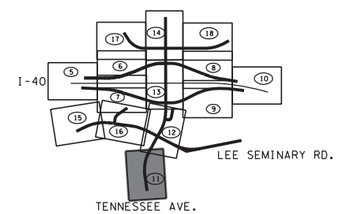
COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.0000749 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 10+00 TO STA. 20+00

SCALE: 1"= 50'



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

TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM.	2012	NH-I-40-6(130)280	12

N

MATCH LINE LEE SEMINARY RD. STA. 29+00

SEE SHEET NO. 16

BILLY L. WILLIAMS AND WIFE EVELYN P.

STA. 25+27.09 TENNESSEE AVE. =
STA. 32+53.44 LEE SEMINARY RD.
N = 656436.5506
E = 2092658.4737

CS 29+05.33

ST 30+50.33

PROPOSED R.O.W.

TOP OF CUT

25

TOP OF CUT

PROPOSED R.O.W.

TS 25+62.41

BEGIN C.A. FENCE

30

CS 29+96.39

STR-1

STA. 10+00.00 CEMETERY RD. =
STA. 30+18.18 TENNESSEE AVE.
N 656873.0360
E 2092878.1424

SEE SHEET NO. 13

SEE SHEET NO. 11

STA. 20+00

MATCH LINE TENNESSEE AVE. STA.

56+60.66
5.07'

59+39.90
10.98'

60+55.92
9.54'

63+84.88
5.45'

℄ TENNESSEE AVE.

S 31° 29' 29" W
139.88'

S 58° 30' 31" E
103.78'

N 31° 29' 29" E
139.88'

N 58° 30' 31" W
103.78'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM.	2012	NH-I-40-6(130)280	12A

MATCH LINE LEE SEMINARY RD. STA. 29+00 SEE SHEET NO. 16A

SEE SHEET NO. 11A

MATCH LINE TENNESSEE AVE. STA. 20+00

STA. 25+27.09 TENNESSEE AVE. =
STA. 32+53.44 LEE SEMINARY RD.
N = 656436.5506
E = 2092658.4737

END PVMT. TRANSITION
STA. 22+00.00
OFF 24.00' LT.
OFF 24.00' RT.

END PVMT. TRANSITION
STA. 29+75.00
OFF 18.00' RT.
OFF 18.00' LT.

℄ TENNESSEE AVE.
℄ LEE SEMINARY RD.
N 35° 48' 01" E
S 58° 46' 08" E
R50' (TYP.)
IN. EL. 1002.00
PROP. 24" RCP
OUT. EL. 1001.25
SP. V-DITCH
TYPE 13
TYPE 38
IN. EL. 1001.18
18" RCP
OUT.EL. 998.98
N 3° 36' 41" E
R 35'
IN. EL. 1008.75
PROP. 18" RCP
OUT.EL. 1000.20
CEMETERY RD.
TYPE 13

STR-1
SPG-1

UNNAMED TRIBUTARY TO CANE CREEK

STA. 10+00.00 CEMETERY RD. =
STA. 30+18.18 TENNESSEE AVE.
N 656873.0360
E 2092878.1424

MATCH LINE TENNESSEE AVE. STA. 33+00 SEE SHEET NO. 13A

EXISTING R.O.W.
EXISTING R.O.W.
℄ LEE SEMINARY RD. (BY OTHERS)
S 58° 46' 08" E

LEE SEMINARY RD.

	121 [237]	279 [80]
222 [68]	7 [5] 36 [159] 12 [33]	43 [30] 125 [42] 7 [5] 38 [13]	646 [2339]
TENNESSEE AVE.			TENNESSEE AVE.
82 [234]	33 [33] 42 [158] 418 [268]	147 [30] 1883 [345] 2004 [451]
	556 [2619]	2212 [4408]

2033 DHV
PM
[AM]

LEE SEMINARY RD.

I-40

TENNESSEE AVE.

PRELIMINARY FIELD REVIEW

SEALED BY

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

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 20+00 TO STA. 33+00

SCALE: 1"= 50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM.	2012	NH-I-40-6(130)280	13

N

MATCH LINE EXIST. I-40 STA. 70+00 SEE SHEETS NO. 6 & 7

RAMP D
PI 30+28.68
N 657,320.7196
E 2,092,673.7452
Δ 17° 09' 33" (LT)
D 7° 00' 00"
R 818.51
L 245.13
T 123.49
SE 0.028 FT/FT
DESIGN SPEED 20 MPH
TRANS. LENGTH 80

RAMP A
PI 12+79.30
N 658,360.0559
E 2,092,717.0272
Δ 21° 04' 54" (LT)
D 7° 00' 00"
R 818.51
L 301.16
T 152.30
SE 0.028 FT/FT
DESIGN SPEED 20 MPH
TRANS. LENGTH 80

PROPOSED R.O.W. & C.A. FENCE
TOE OF FILL
TOP OF CUT
EXIST. PAVEMENT TO BE SCARIFIED
EXISTING MINE LICK CREEK RD.
EXISTING I-40 EASTBOUND
EXISTING I-40 WESTBOUND
EXISTING I-40
EXISTING TENNESSEE RIDGE CEMETERY RD.
EXISTING STEWART CEMETERY RD.
EXISTING HAWKINS CRAWFORD RD.
TENNESSEE AVE.
LEE SEMINARY RD.
I-40

PND-2
POND

BILLY L. WILLIAMS AND WIFE EVELYN P. (2)

BRICIE RICE & PAUL SWALLOWS, CPA (14)

SHERIDAN FAMILY PARTNERS L P (23)

STA. 34+53.55 TENNESSEE AVE. =
STA. 10+00.00 RAMP C
STA. 32+83.86 RAMP D
N = 657304.5454
E = 2092930.2663

STA. 44+93.55 TENNESSEE AVE. =
STA. 10+00.00 RAMP A =
STA. 29+66.71 RAMP B
N = 658342.4802
E = 2092995.7734

EX. I-40 STA. 75+06.57=
TENNESSEE AVE. STA. 39+73.55
N = 657823.5128
E = 2092963.0198

LIMIT OF CONST.
14+50.00
N = 657149.6753
E = 2093108.4004

RAMP C
PI 13+39.10
N 657,283.2065
E 2,093,268.6966
Δ 27° 21' 06" (LT)
D 7° 00' 00"
R 818.51
L 390.74
T 199.17
SE 0.028 FT/FT
DESIGN SPEED 20 MPH
TRANS. LENGTH 80

RAMP B
PI 26+88.90
N 658,324.7743
E 2,093,276.5863
Δ 21° 18' 25" (LT)
D 7° 00' 00"
R 818.51
L 304.39
T 153.97
SE 0.028 FT/FT
DESIGN SPEED 20 MPH
TRANS. LENGTH 80

MATCH LINE TENNESSEE AVE. STA. 33+00
MATCH LINE TENNESSEE AVE. STA. 46+00
SEE SHEET NO. 12
SEE SHEET NO. 14
MATCH LINE EXIST. I-40 STA. 79+50 SEE SHEETS NO. 8 & 9

PRELIMINARY FIELD REVIEW

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 33+00 TO STA. 46+00

SCALE: 1"= 50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM.	2012	NH-I-40-6(130)280	13A

N

MATCH LINE EXIST. I-40 STA. 70+00 SEE SHEETS NO. 6A & 7A

SEE SHEET NO. 12A

STA. 33+00

MATCH LINE TENNESSEE AVE.

30 35 40 45

S 69° 13' 58" E

+00

12' 12' 12'

SP. V-DITCH

PND-2

POND

STA. 34+53.55 TENNESSEE AVE. =
STA. 10+00.00 RAMP C =
STA. 32+83.86 RAMP D
N = 657304.5454
E = 2092930.2663

RAMP D

S 86° 23' 32" E

R 75'

R 50'

TYPE 13

+40

+45

EXISTING ℄ I-40

EXISTING I-40 EASTBOUND

EXISTING I-40 WESTBOUND

+45

RAMP A

804 [229]

639 [1715]

531 [846]

423 [745]

108 [101]

TENNESSEE AVE.

1311 [395]

794 [435]

615 [267]

636 [728]

216 [70]

175 [168]

395 [1138]

2033 DHV
PM
[AM]

RAMP B

S 72° 31' 35" W

+95

IN. EL. 1034.41

TYPE 38

TYPE 13

R 50'

R 75'

RAMP A

N 86° 23' 32" W

12' 12'

N 3° 36' 41" E

SEE SHEET NO. 14A

STA. 46+00

MATCH LINE TENNESSEE AVE.

24'

12' 12' 12' 12' 12' 12' ℄ TENNESSEE AVE.

LIMIT OF CONST.
14+50.00
N = 657149.6753
E = 2093108.4004

+85

R 35'

EXISTING STEWART CEMETERY RD.

S 86° 23' 32" E

RAMP C

.21 .21

TYPE 38

R 50'

BEGIN BRIDGE STA. 37+81.89

END BRIDGE STA. 39+36.89

BEGIN BRIDGE STA. 40+10.69

END BRIDGE STA. 41+65.69

RAMP D

327 [914]

646 [2339]

479 [1544]

639 [1715]

167 [185]

160 [171]

169 [171]

TENNESSEE AVE.

2004 [451]

1151 [276]

1311 [395]

853 [172]

1013 [346]

2033 DHV
PM
[AM]

RAMP C

EX. I-40 STA. 75+06.57=
TENNESSEE AVE. STA. 39+73.55
N = 657823.5128
E = 2092963.0198

N 66° 15' 22" W

18" RCP

OUT.EL. 1021.00

STA. 44+93.55 TENNESSEE AVE. =
STA. 10+00.00 RAMP A =
STA. 29+66.71 RAMP B
N = 658342.4802
E = 2092995.7734

I-40

2111 [2139]

1840 [1811]

639 [1715]

639 [1715]

TENNESSEE AVE.

1311 [395]

1311 [395]

2033 DHV
PM
[AM]

I-40

N 65° 05' 06" W

12' 12'

+75

I-40

LEE SEMINARY RD.

TENNESSEE AVE.

MATCH LINE EXIST. I-40 STA. 79+50 SEE SHEETS NO. 8A & 9A

PRELIMINARY FIELD REVIEW

SEALED BY

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

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

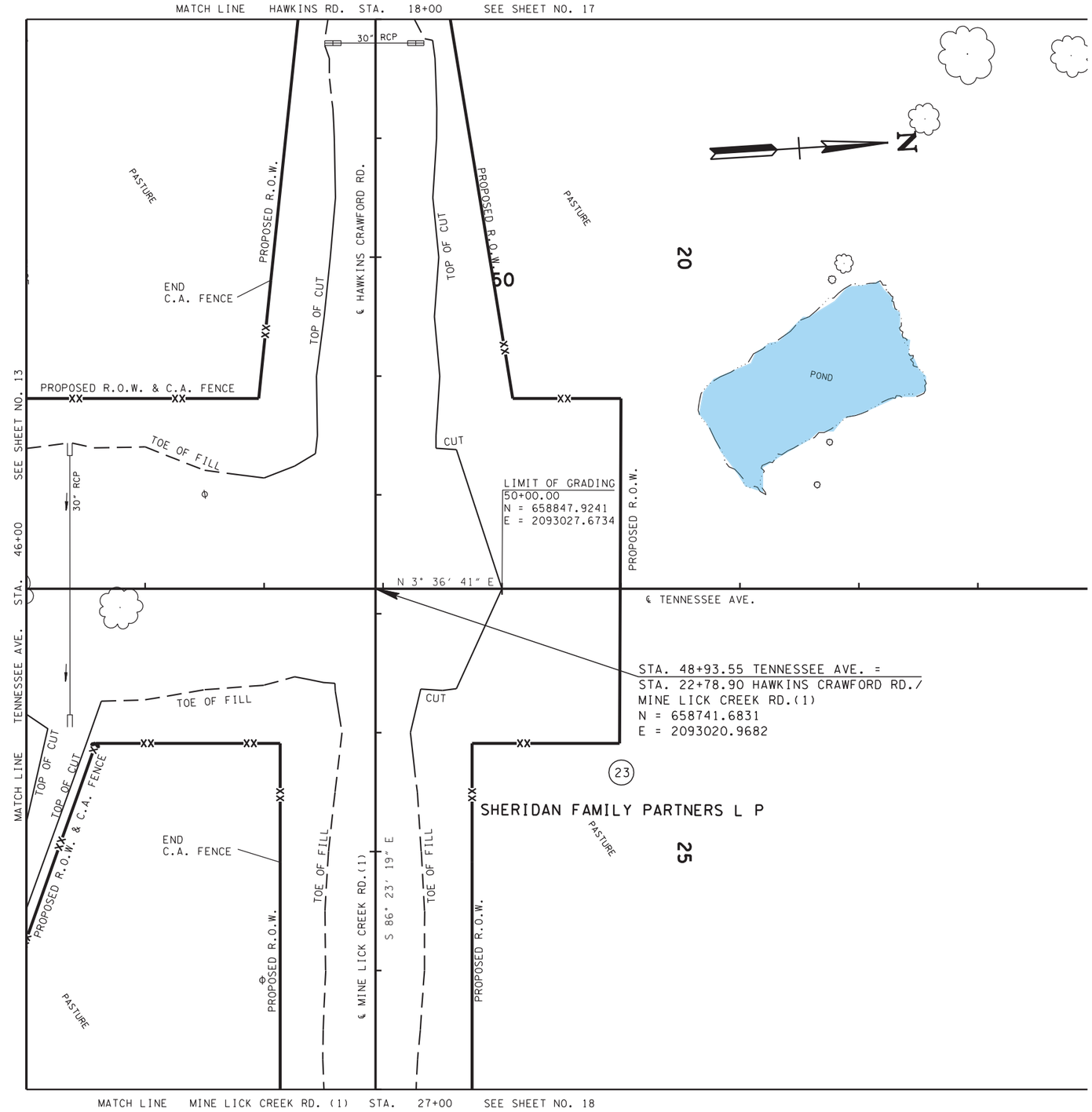
STA. 33+00 TO STA. 46+00

SCALE: 1"= 50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM.	2012	NH-I-40-6(130)280	14



PRELIMINARY FIELD REVIEW

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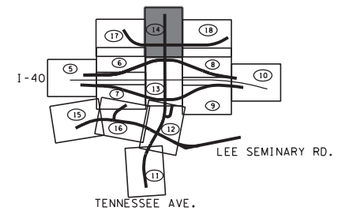
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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 46+00 TO STA. 50+00

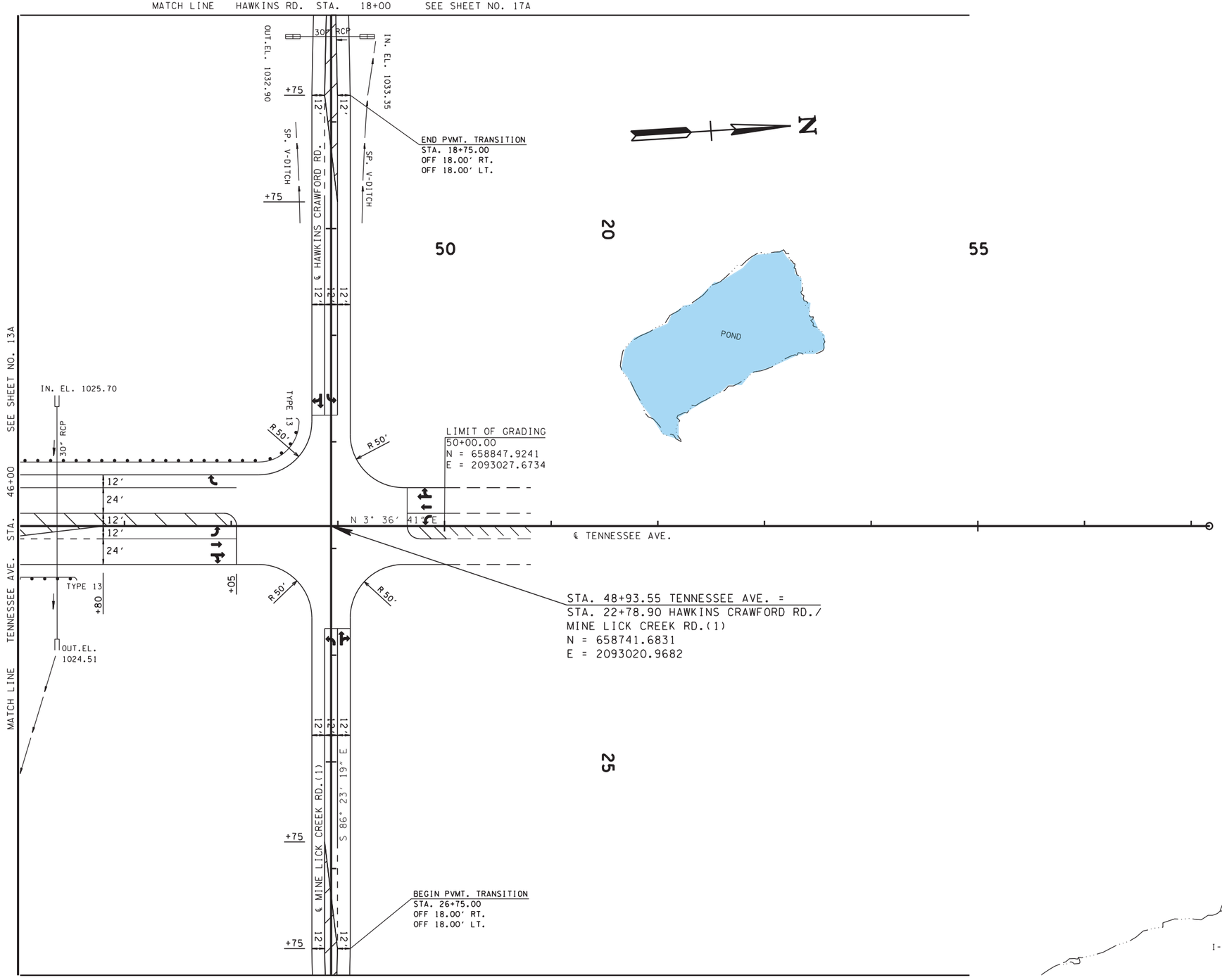
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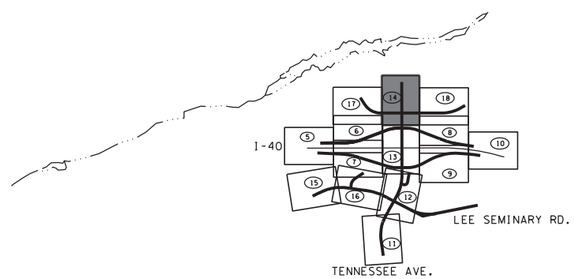


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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM.	2012	NH-I-40-6(130)280	14A





PRELIMINARY FIELD REVIEW

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 46+00 TO STA. 50+00

SCALE: 1"= 50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM.	2012	NH-I-40-6(130)280	15

N

(11)

CHARLES CRAWFORD AND WIFE LINDA

(12)

TOMMIE KYLE HANNA AND WIFE KIMBERLY JOYCE

15

ALL SEPTIC OFF PROJECT

ALL SEPTIC OFF PROJECT

N 30° 50' 08" W
1067.47'

N 67° 40' 17" E
347.10'
10

S 26° 11' 39" E
229.83'

S 31° 23' 35" E
231.28'

N 67° 47' 47" E
272.56'

EXISTING MINE LICK CREEK RD.

N 67° 47' 47" E
326.15'

N 68° 10' 53" E

(10)

UNION GRAVE BAPTIST CHURCH

LIMIT OF CONST.
11+25.00
N = 656754.5571
E = 2090639.1039

20+17.06
24.57'

21+69.46
24.68'

22+72.82
23.72'

N 68° 47' 32" E
103.36'

N 68° 47' 32" E
36.58'

PROPOSED R.O.W.

23+08.38
24.06'

24+56.10
29.79'

24+86.45
31.76'

TOP OF CUT

R=770.61'
L=153.36'

℄ LEE SEMINARY RD.

N 79° 22' 08" E
103.18'

25+82.39
48.74'

ASP.

SEE SHEET NO. 16

STA. 17+00

LEE SEMINARY RD.

MATCH LINE

INV-1054.52

18" CMP TO BE REMOVED

INV-1052.06

22+63.95
20.23'

24+07.37
15.70'

24+46.61
15.96'

25+25.99
3.81'

25+50.92

25+70.49
3.68'

PROPOSED R.O.W.

22+05.56
19.47'

23+49.17
19.22'

23+23.53
19.86'

21+49.59
19.23'

21+02.30
19.94'

12+05.01
195.81'

Element	Direction	Distance
L33	N 65° 9' 34" E	85.36
L34	N 67° 23' 57" E	47.29
L35	N 68° 30' 26" E	55.98
L36	N 69° 0' 45" E	58.40
L37	N 69° 17' 32" E	58.29
L38	N 71° 29' 29" E	24.95
L39	N 72° 45' 43" E	56.87
L40	N 76° 35' 11" E	38.52
L41	N 78° 7' 35" E	78.95
L42	N 80° 17' 0" E	25.16
L43	N 80° 17' 0" E	19.96
L44	N 80° 58' 11" E	99.62

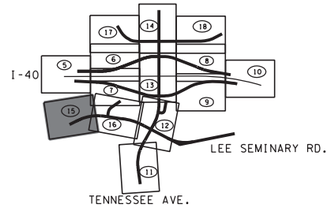
SC 13+54.92

TS 11+94.92

(2)

BILLY L. WILLIAMS AND
WIFE EVELYN P.

LEE SEMINARY RD
PI 16+20.96
N 656,938.8892
E 2,091,099.5317
Δs 33° 34' 53" (RT)
θs 4° 00' 00"
Δc 25° 34' 53" (RT)
Dc 5° 00' 00"
Rc 1,145.92
Lc 511.63
Ts 426.04
Ls 160.00
SE 0.055 FT/FT
DESIGN SPEED 40 MPH
TRANS. LENGTH 160



PRELIMINARY FIELD REVIEW

SEALED BY

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

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

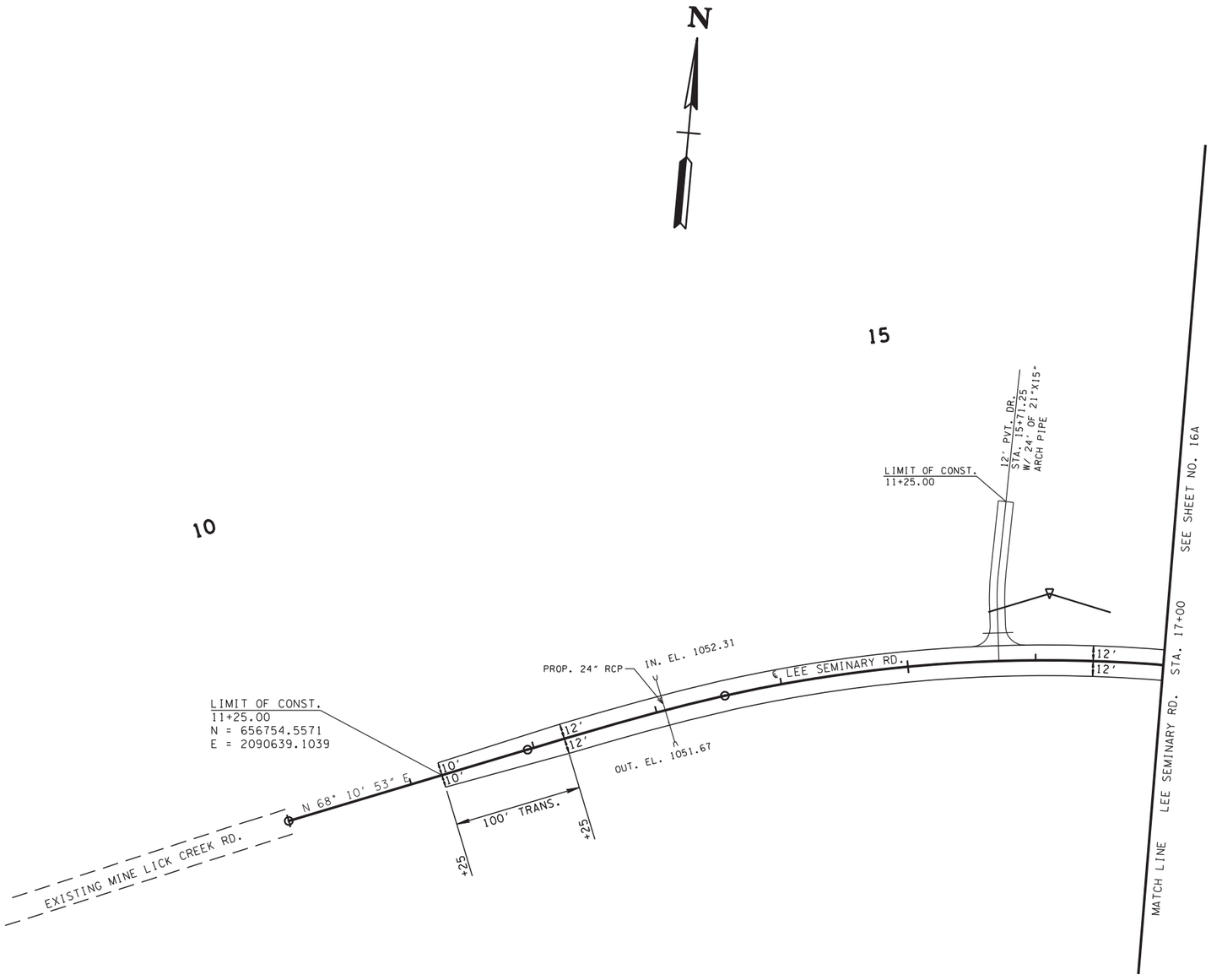
STA. 10+00 TO STA. 17+00

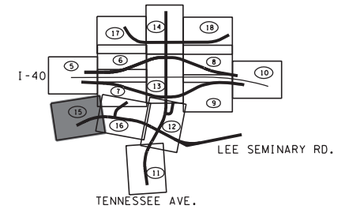
SCALE: 1"= 50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM.	2012	NH-I-40-6(130)280	15A





PRELIMINARY FIELD REVIEW

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

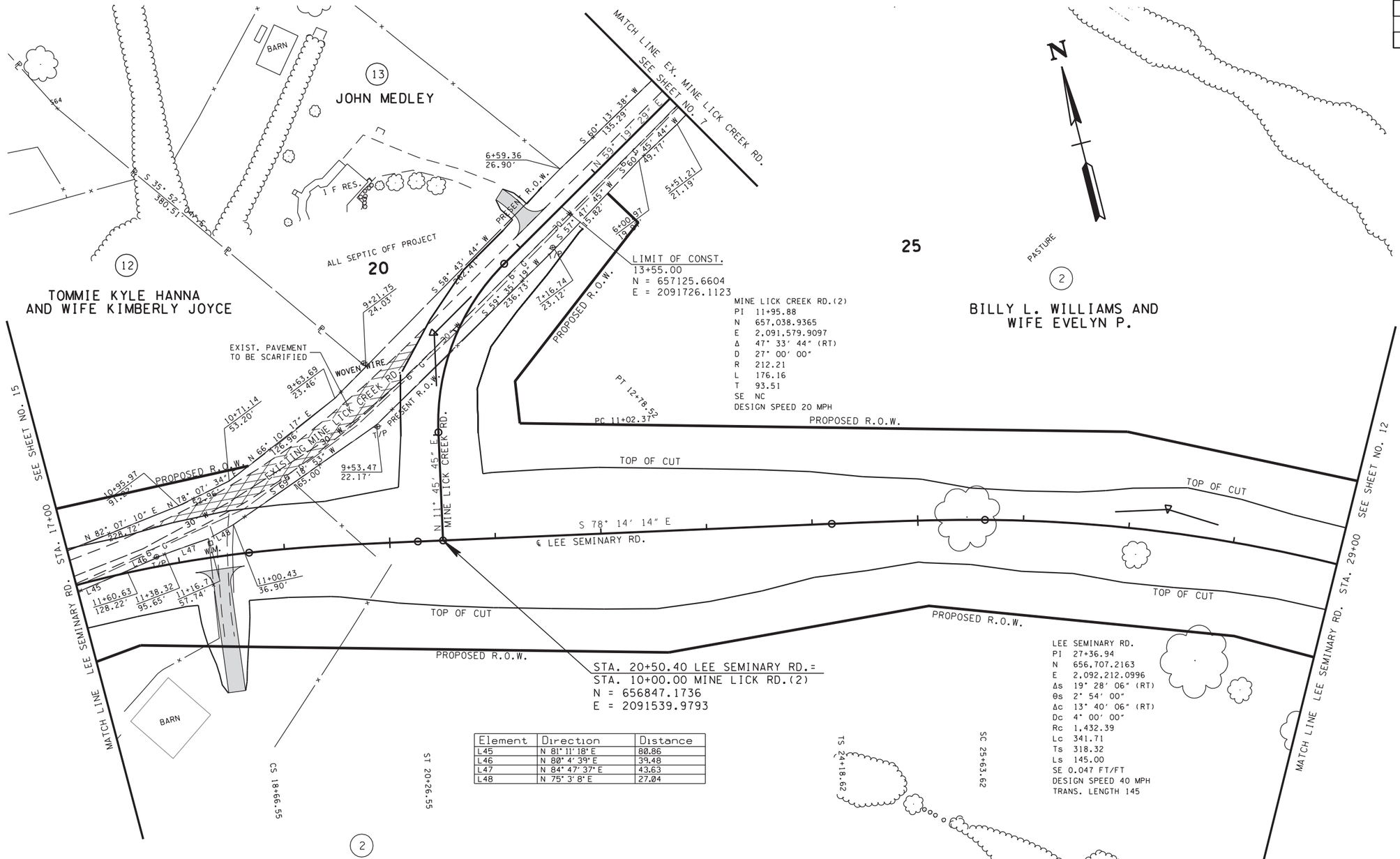
STA. 10+00 TO STA. 17+00

SCALE: 1"= 50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM.	2012	NH-I-40-6(130)280	16



Element	Direction	Distance
L45	N 81° 11′ 18″ E	80.86
L46	N 80° 4′ 39″ E	39.48
L47	N 84° 47′ 37″ E	43.63
L48	N 75° 3′ 8″ E	27.04

2

BILLY L. WILLIAMS AND WIFE EVELYN P.

PRELIMINARY FIELD REVIEW

SEALED BY

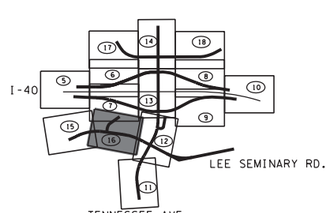
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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 17+00 TO STA. 29+00

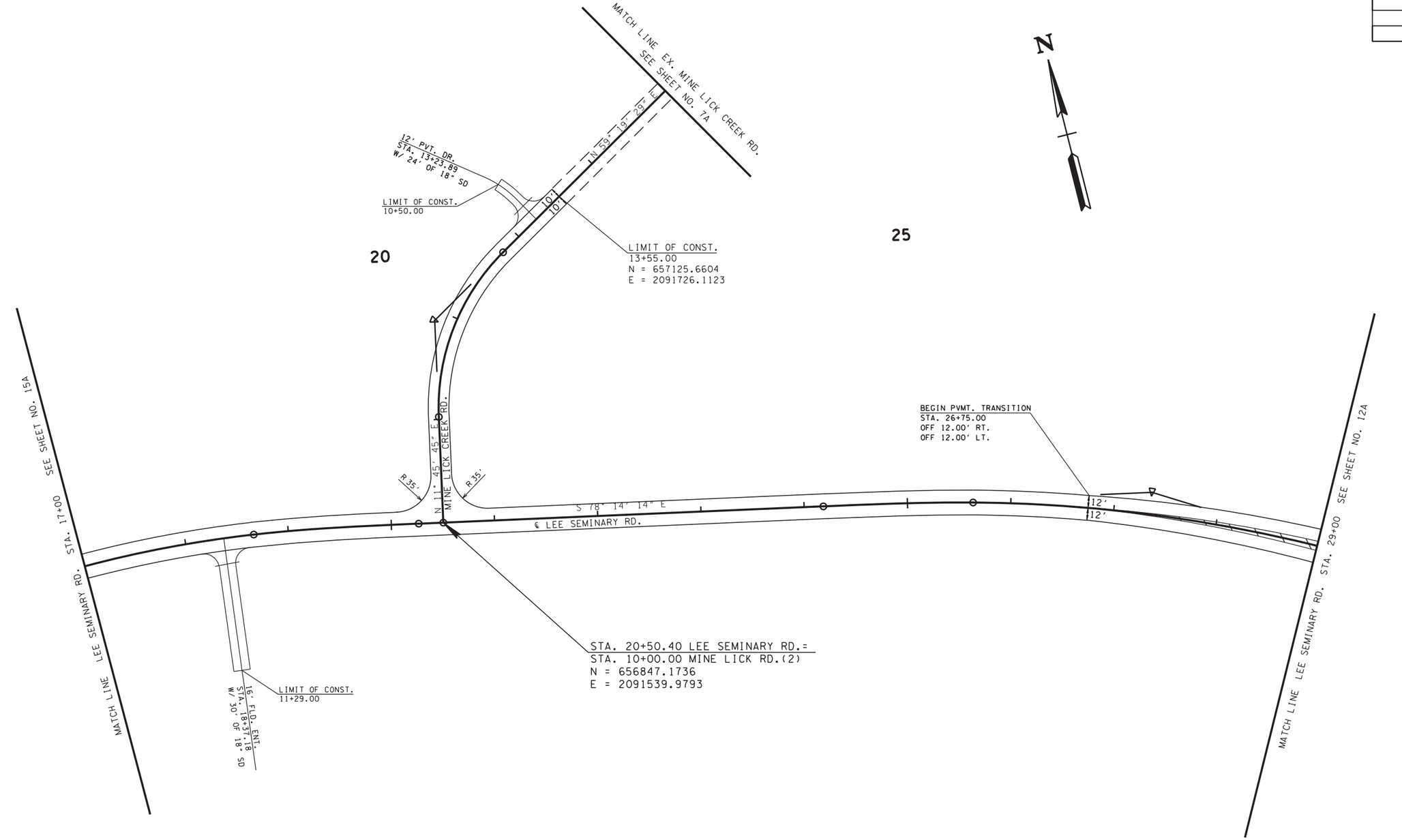
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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

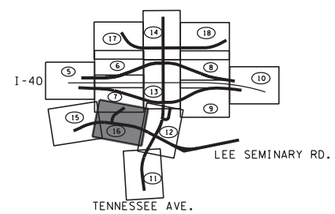
TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM.	2012	NH-I-40-6(130)280	16A



PRELIMINARY FIELD REVIEW

SEALED BY

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



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

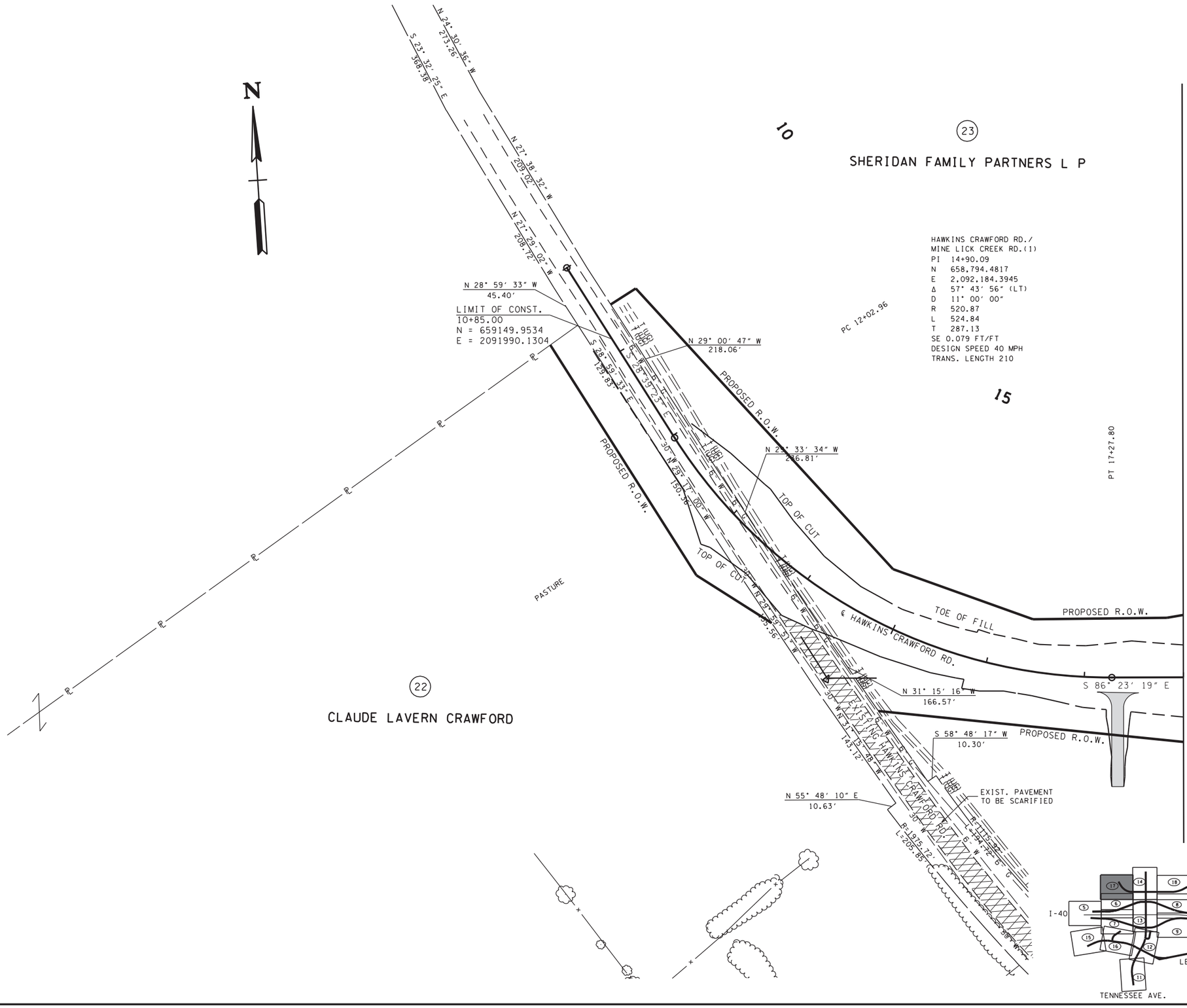
STA. 17+00 TO STA. 29+00

SCALE: 1"= 50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM.	2012	NH-I-40-6(130)280	17



PRELIMINARY FIELD REVIEW

SEALED BY

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

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

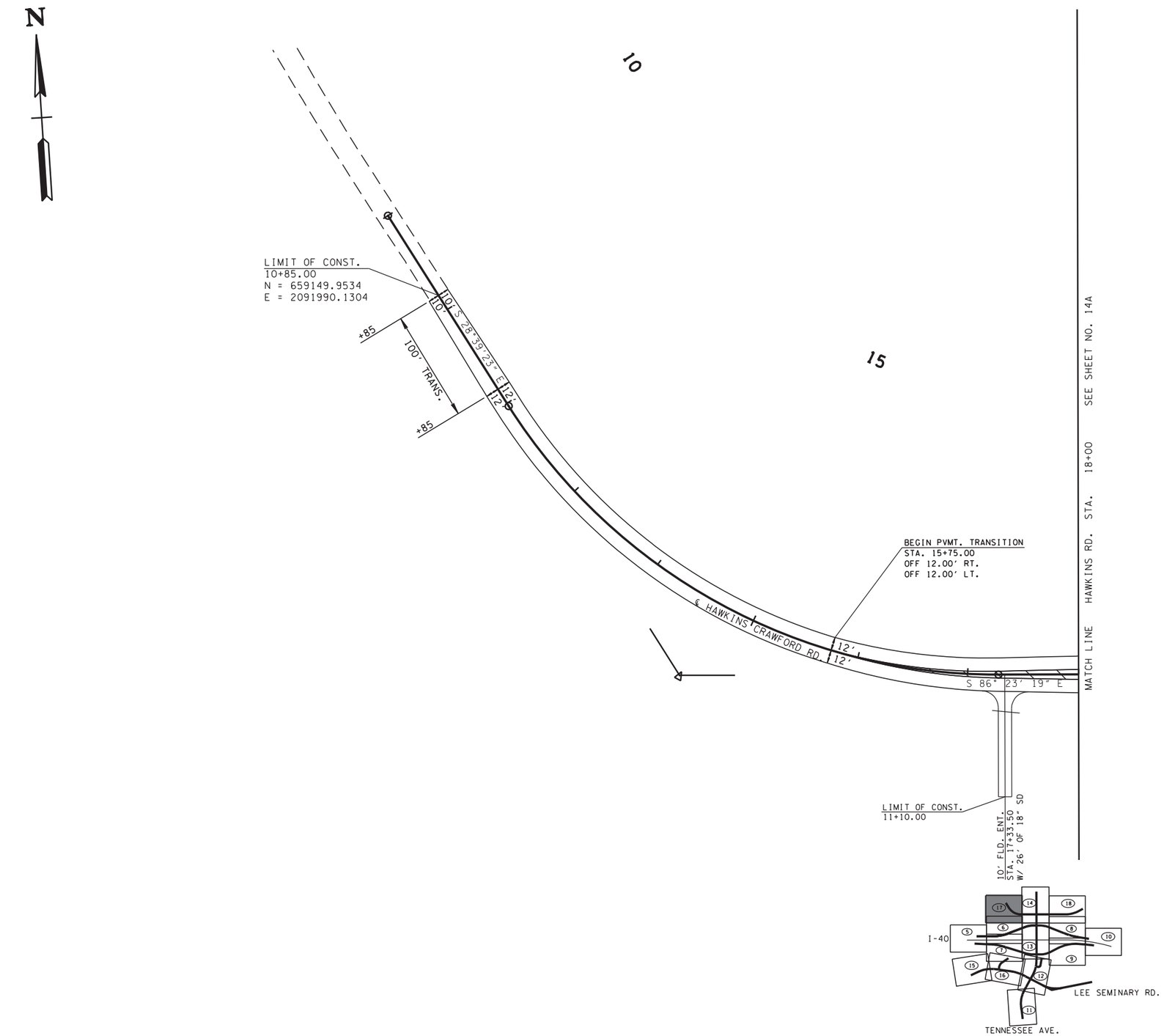
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SCALE: 1"= 50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM.	2012	NH-I-40-6(130)280	17A



PRELIMINARY FIELD REVIEW

SEALED BY

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

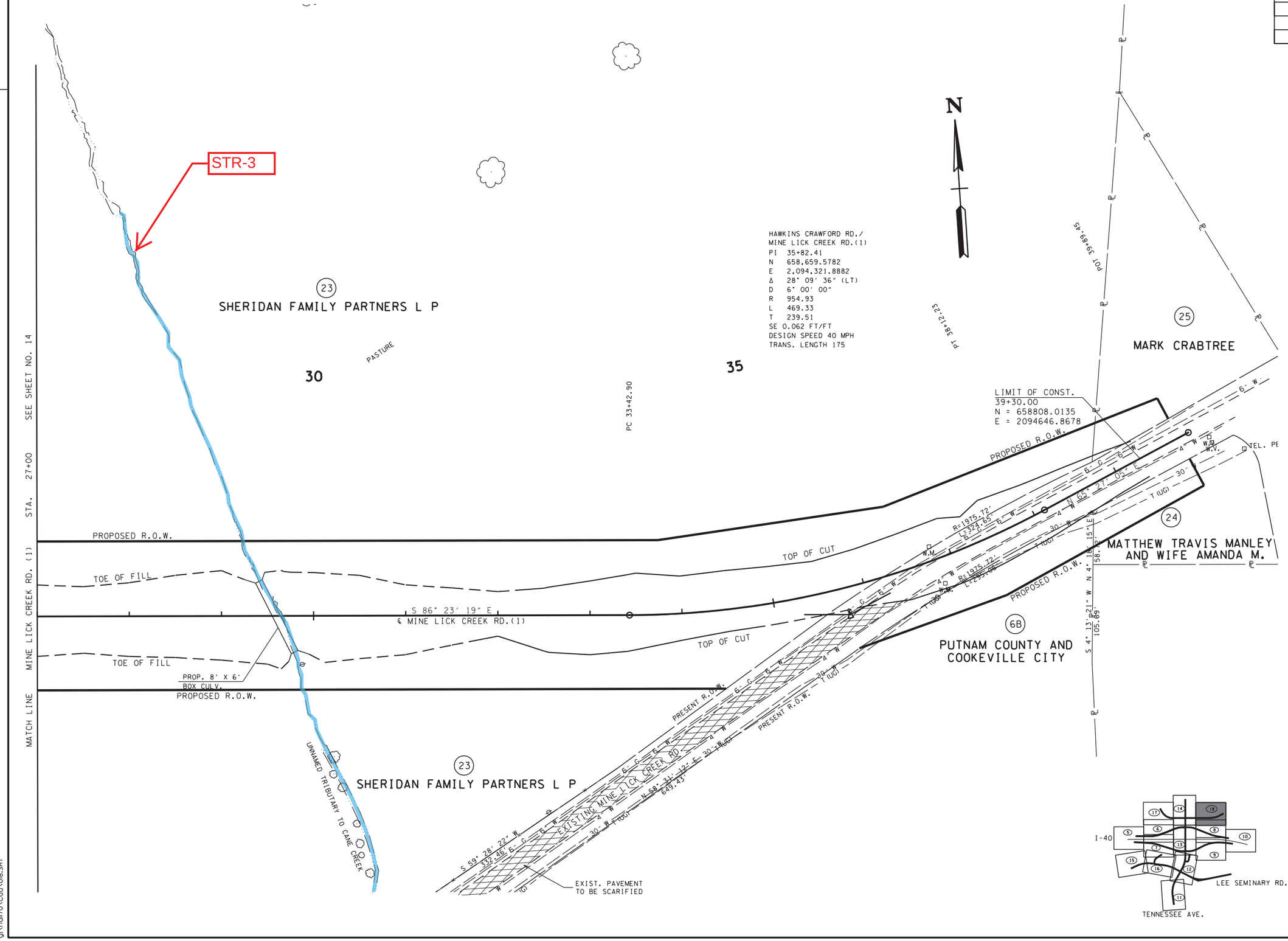
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SCALE: 1"= 50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM.	2012	NH-I-40-6(130)280	18



PRELIMINARY FIELD REVIEW

SEALED BY

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

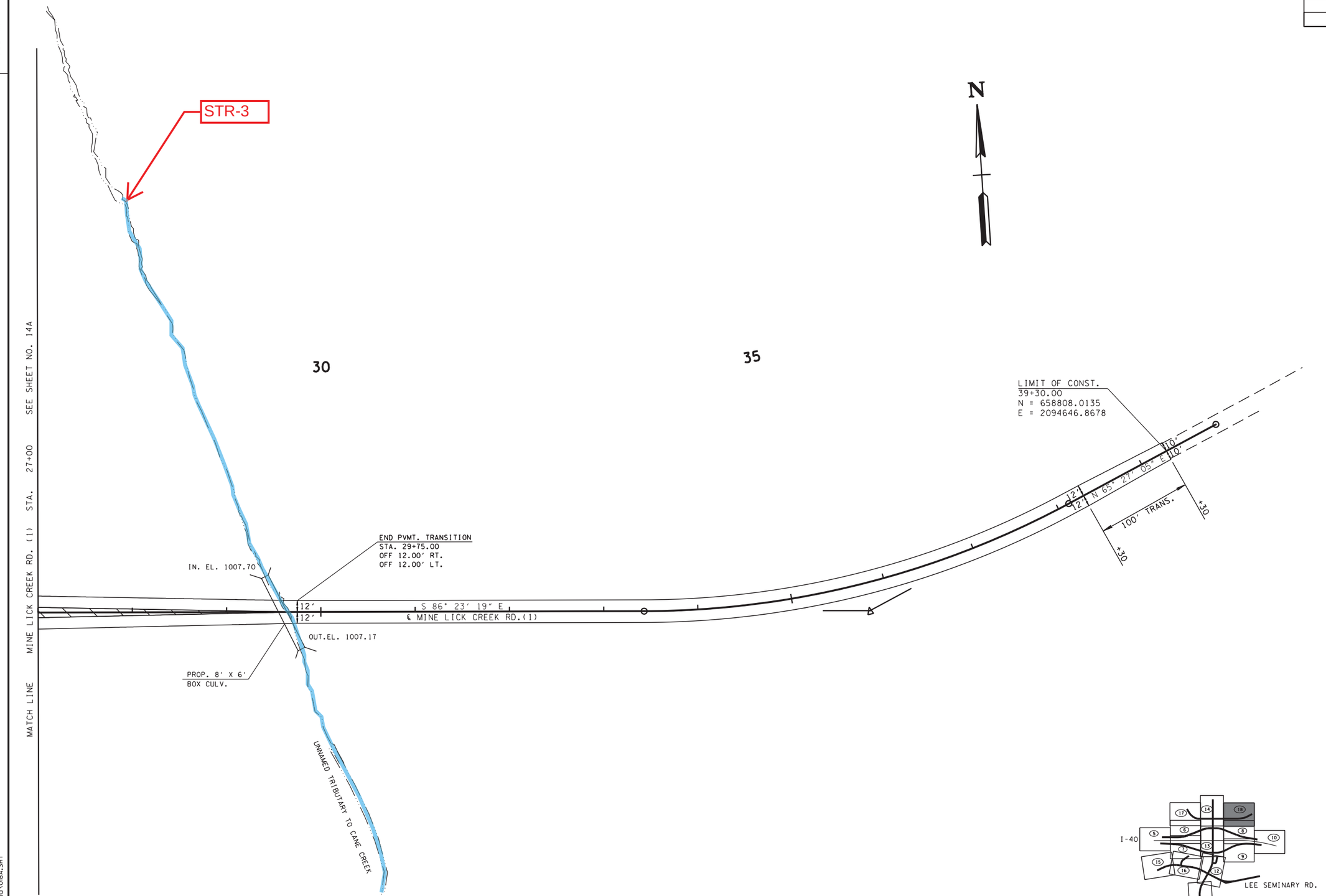
STA. 27+00 TO STA. 40+00

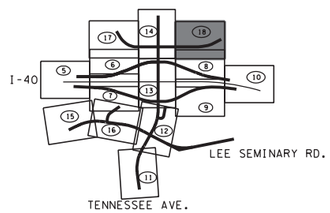
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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM.	2012	NH-I-40-6(130)280	18A





PRELIMINARY FIELD REVIEW

SEALED BY

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

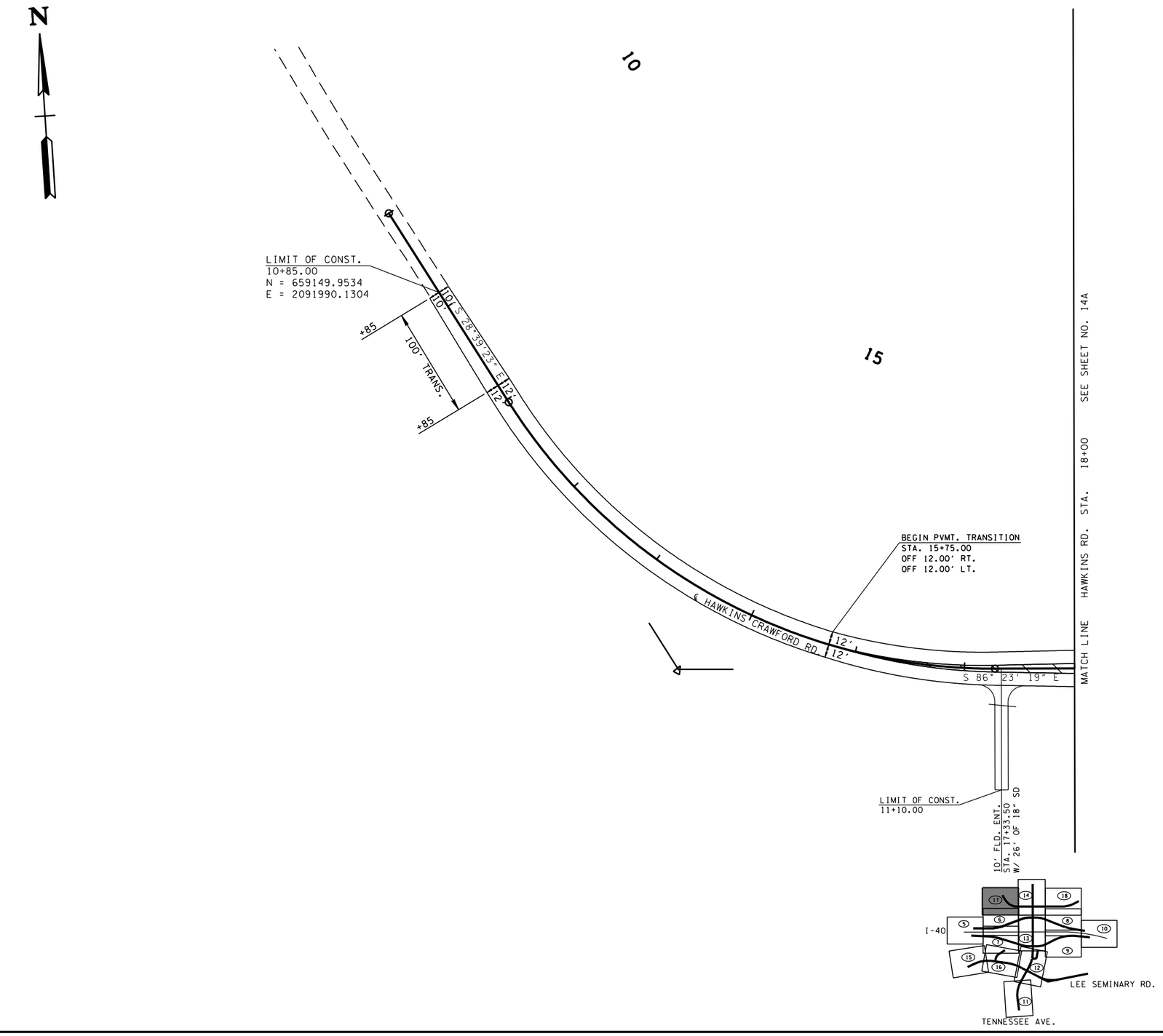
STA. 27+00 TO STA. 40+00

SCALE: 1"=50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM.	2012	NH-I-40-6(130)280	17A



PRELIMINARY FIELD REVIEW

SEALED BY

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

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

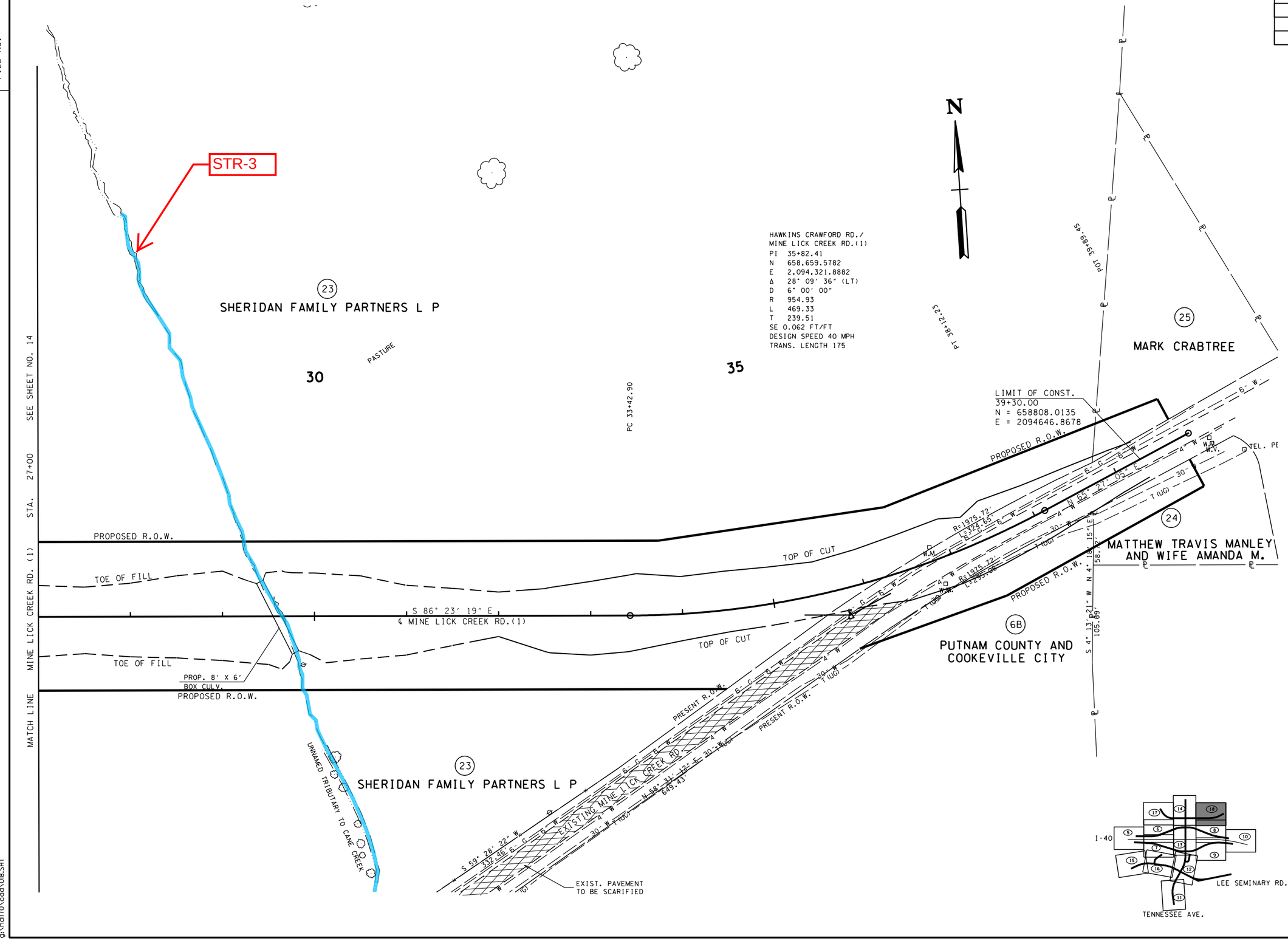
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SCALE: 1"= 50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM.	2012	NH-I-40-6(130)280	18



PRELIMINARY FIELD REVIEW

SEALED BY

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

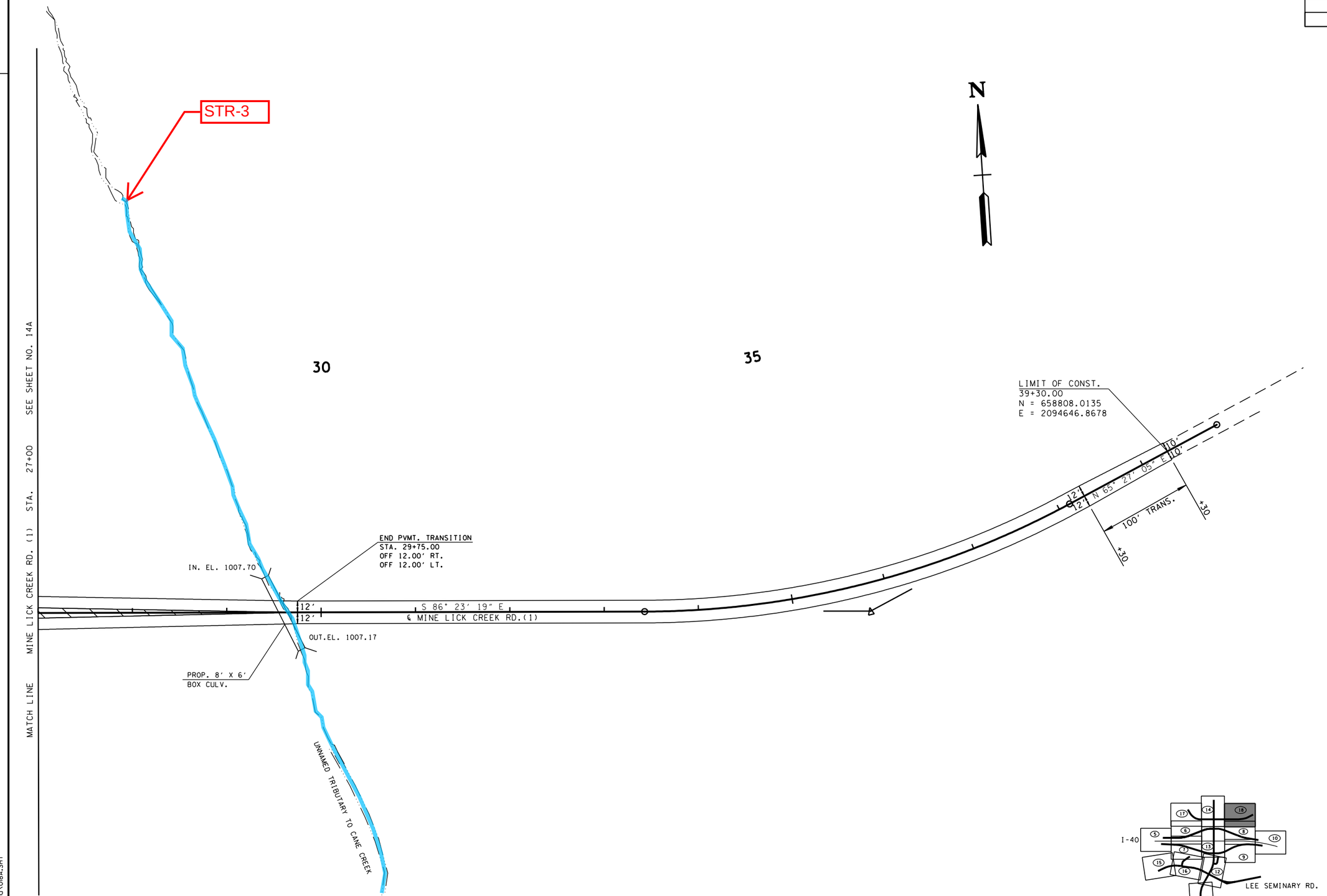
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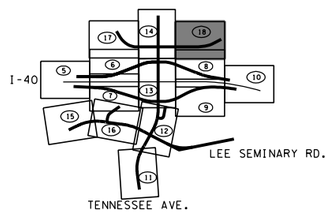
SCALE: 1"= 50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM.	2012	NH-I-40-6(130)280	18A





PRELIMINARY FIELD REVIEW

SEALED BY

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 27+00 TO STA. 40+00

SCALE: 1"=50'

2/10/2012 8:35:44 AM
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9. Training Certifications

10. TMDL Information

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

May 11, 2015

Mr. Vojin Janjić
Manager, Permit Section
Tennessee Department of Environment and Conservation - Division of Water Pollution Control
6th Floor L&C Annex
401 Church Street
Nashville, Tennessee 37243-1534

Re: Consultation Regarding Adherence to TMDL for Siltation under NPDES Construction General Permit (CGP)

Project Reference: TDOT # 71001-1195-44, PIN 101577.00, Interstate 40, Interchange at Mine Lick Creek Rd. & I-40, Log Mile – 15.560, Mile Marker – 282.392 to 283.370, Putnam County Latitude: 36.1398, Longitude: -85.5785

Dear Mr. Janjić:

Our office requests consultation with TDEC to confirm adherence to the requirements of the General NPDES Permit for Discharges of Storm Water Associated with Construction Activities (CGP) for an approved TMDL for siltation on the **Caney Watershed (HUC 05130108)**.

On the subject project, TDOT is proposing **the construction of an interchange at Interstate 40 and Mine Lick Creek Rd., which consists of grading, drainage, bridge, pavement, signs, and signals.** (Figure 1 attached). This project will require approximately **72.4** acres of land disturbance.

During our SWPPP preparation process on the subject project, TDOT determined that the project will discharge to the **Caney** watershed, which has an approved TMDL for siltation. More specifically, it will discharge to **Unnamed Trib. to Cane Creek (WATERBODY ID: TN05130108045_0150)** which is within the sub-watershed boundary **0704**. **Unnamed Trib. to Cane Creek** is listed as not supporting or partially supporting in the final TMDL. Sub-watershed **0704** has an approved Waste Load Allocation (WLA); however, the final TMDL states that "The WLAs provided to the NPDES regulated construction activities will be implemented as Best Management Practices (BMPs), as specified in the CGP". Our office submits that the special requirements of section 8.1.3 of the final TMDL will apply to the subject project as **Unnamed Trib. to Cane Creek** in **Putnam** County is listed for siltation on the 20**12** 303(d) list.

Based on the information above, our offices submits that the potential discharge of siltation under the CGP is specifically identified and approved in the final TMDL provided that BMPs as specified in the CGP are implemented. TDOT respectfully requests that TDEC confirm in

writing that a SWPPP for the subject project that meets the requirements of the CGP is consistent with the allowances of the final TMDL. With this confirmation, TDOT will be allowed to obtain a Notice of Coverage for this site under the CGP. This written confirmation will be used in the SWPPP to satisfy the "Documentation of permit eligibility related to TMDL" requirements of section 3.5.10.b) of the CGP.

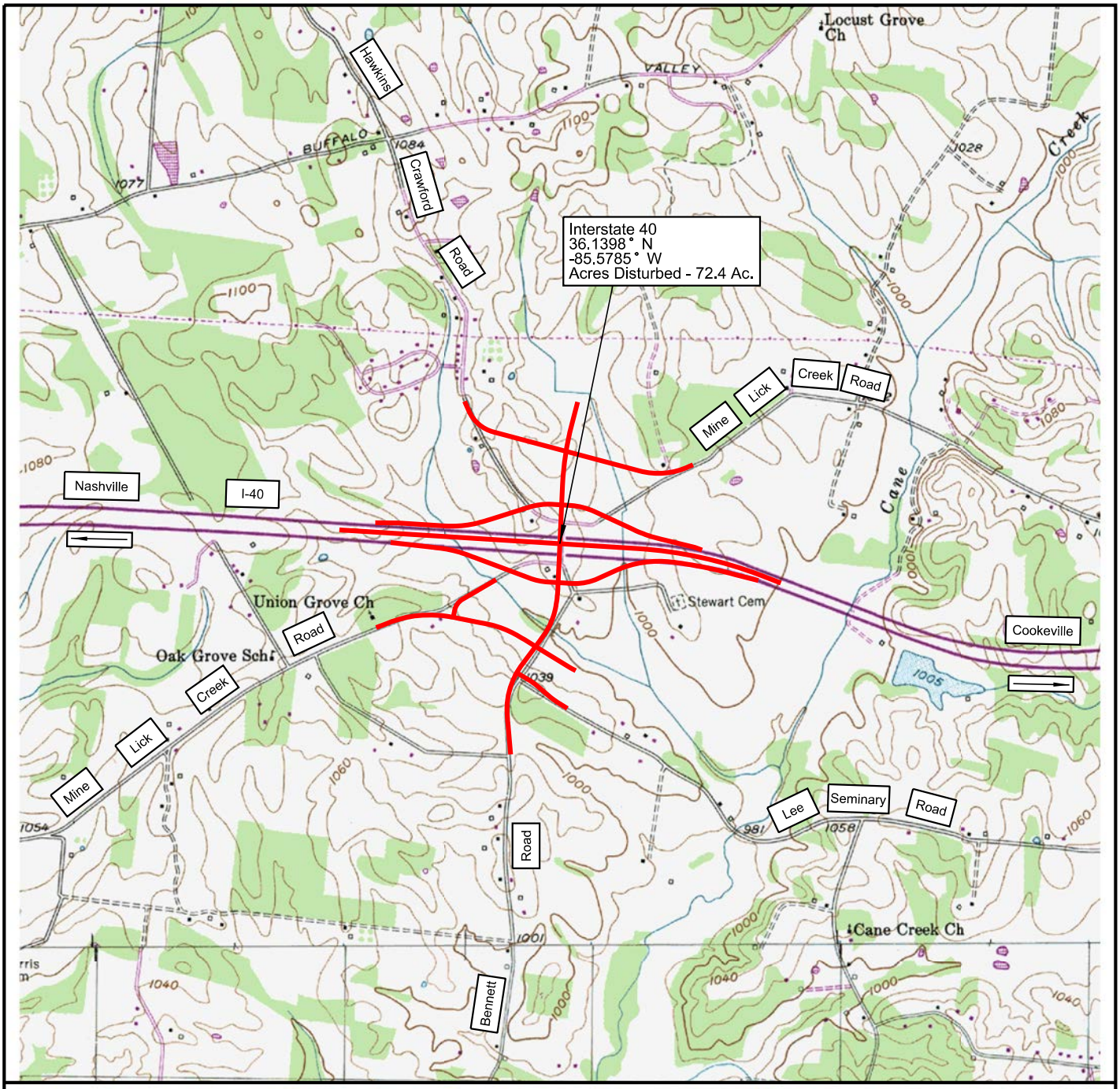
TDOT appreciates your swift assistance in this matter. Please contact me at **(615) 253-0021** or Khalid.ahmed@tn.gov if you have any questions or need additional information.

Sincerely,

Khalid Ahmed
TDOT Natural Resources Office

JLH:KA:pc

cc: Mr. Jim McAdoo, TDEC WPC
Project File
Reading file



LOCATION MAP

N

0 2000 4000

SCALE FEET

SOURCE: USGS Quad Map, U.S. Geological Survey 7.5 Minute Topographic Map, Cookeville West, Burgess Falls Tennessee Quadrangles

Tennessee Department of Transportation

Nashville, Tennessee

Stormwater Pollution Prevention Plan

Interstate 40

Interchange at Mine Lick Creek Rd. & I-40

Log Mile - 15.560

Mile Marker - 282.392 to 283.370

Putnam County, Tennessee

Drawn By:	Checked By:
DAH	JBL
TDOT P.E. No.	TDOT PIN
71001-1195-44	101577.00
FED. No.	Figure
NH-I-40-6(130)	1

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

TENN.	YEAR	SHEET NO.
	2014	1
FED. AID PROJ. NO.	NH-I-40-6(130)	
STATE PROJ. NO.	71100-2112-44	

Index Of Sheets

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2,2A-2E.....	TYPICAL SECTIONS
3,3A-3B.....	PROPERTY MAP & RIGHT-OF-WAY ACQUISITION TABLE
4	INTERCHANGE ALIGNMENT
5-18	PRESENT LAYOUTS
5A-18A	PROPOSED LAYOUTS
11B-14B.....	PROFILES
11C	DIVERSION LAYOUT
19-26	RAMP PROFILES
27-33	SIDE ROAD PROFILES
34-36	PRIVATE DRIVE PROFILES
37-38	DRAINAGE MAPS
39-45	CULVERT CROSS-SECTIONS
46-47	EPSC NOTES
48-61	EPSC STAGE 1
48A-61A.....	EPSC STAGE 2
48B-61B.....	EPSC STAGE 3
62-99	NOT USED
100-252.....	CROSS-SECTIONS

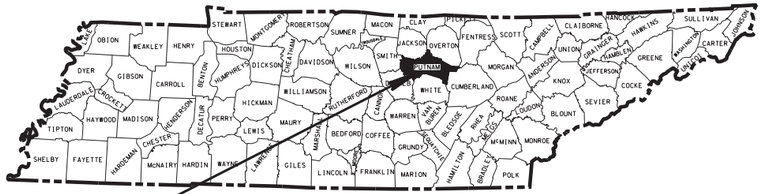
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

PUTNAM COUNTY

INTERSTATE 40

INTERCHANGE AT
MINE LICK CREEK RD. & I-40
LOG MILE - 15.560
MILE MARKER - 282.392 TO 283.370

RIGHT-OF-WAY



PROJ. NH-I-40-6(130)
71100-2112-44

BEGIN PROJECT (R.O.W.)
NH-I-40-6(130); 71100-2112-44
STA. 50+52.48 I-40
N = 657977.9426
E = 2090513.7896



END PROJECT (R.O.W.).
NH-I-40-6(130); 71100-2112-44
STA. 102+15.92 I-40
N = 657411.9084
E = 2095627.9870

N

NO EXCLUSIONS

EQUATION	
DESCRIPTION (LEE SEMINARY RD.)	NET EFFECT ON ENUMERATION
STA. 32+85.36 BK. = STA. 10+22.78 AH.	-2262.58
TOTAL	-2262.58

SEALED BY
WESLEY R. MATTINGLY
REGISTERED ENGINEER
No. 110049
STATE OF TENNESSEE
04/03/2014

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.

SCALE: 1"= 2640'

0 0.5 1 1.5 MILES

R.O.W. LENGTH

0.978± MILES (I-40)
0.768± MILES (BENNETT RD.)
0.420± MILES (LEE SEMINARY RD.)
0.617± MILES (HAWKINS CRAWFORD RD./ MINE LICK CREEK RD.)

TRAFFIC DATA	
ADT (2014)(BENNETT ROAD)	7600
ADT (2034)(BENNETT ROAD)	8330
DHV (2034)(BENNETT ROAD)	792
D	-
T (ADT)	7 %
T (DHV)	5 %
V (BENNETT ROAD)	45 MPH
V (I-40)	70 MPH

TRAFFIC UPDATE 7/2013

ORIGINAL SURVEY DATE	5/2011
SURVEY UPDATE	5/2012
SURVEY UPDATE	12/2012
SURVEY UPDATE	7/2013

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR DATE

TDOT ROADWAY SPECIALIST SUPERVISOR II JIM BIVENS

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

P.E. NO. 71001-1195-44

PIN NO. 101577.00

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

Index Of Sheets

(SEE SHEET NO. 1A)

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

TENN.	YEAR	SHEET NO.
	2015	1
FED. AID PROJ. NO.	NH-I-40-6(130)	
STATE PROJ. NO.	71100-3118-44	

PUTNAM COUNTY

INTERSTATE 40

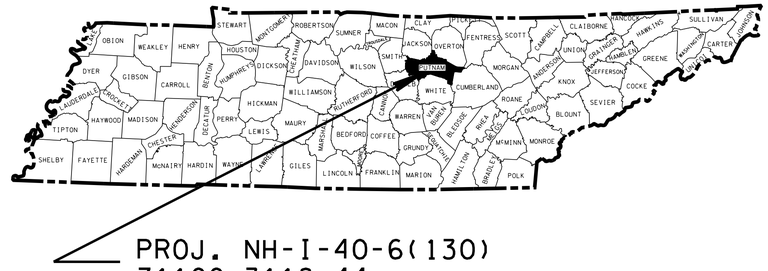
INTERCHANGE AT
MINE LICK CREEK RD. & I-40
LOG MILE - 15.560
MILE MARKER - 282.392 TO 283.370

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

CONSTRUCTION

GRADE, DRAIN, BRIDGE, PAVE, SIGN & SIGNALS

STATE HWY. NO.: NONE F.A.H.S. NO.: I-40



BEGIN PROJECT (CONST.)
NH-I-40-6(130); 71100-3118-44
STA. 38+00.00 I-40
N = 658056.7579
E = 2089263.7919

END PROJECT (CONST.)
NH-I-40-6(130); 71100-3118-44
STA. 113+15.00 I-40
N = 657027.4353
E = 2096657.6668



N

NO EXCLUSIONS

EQUATION	
DESCRIPTION (LEE SEMINARY RD.)	NET EFFECT ON ENUMERATION
STA. 32+85.36 BK. = STA. 10+22.78 AH.	-2262.58
TOTAL	-2262.58

SCALE: 1"= 2640'

0 0.5 1 1.5 MILES

CONST. LENGTH	1.423 MILES (I-40) 0.719 MILES (BENNETT RD.)
BRIDGE LENGTH	0.059 MILES (BENNETT RD.)
BOX BRIDGE LENGTH	0.006 MILES (NOT INCLUDED IN PROJECT LENGTH)
PROJECT LENGTH	2.201 MILES

TRAFFIC DATA	
ADT (2014)(I-40)	50150
ADT (2034)(I-40)	66520
DHV (2034)(I-40)	4676
D	55 - 45
T (ADT)	28 %
T (DHV)	19 %
V (BENNETT ROAD)	45 MPH
V (I-40)	70 MPH
TRAFFIC UPDATE	7/2013

TRAFFIC DATA	
ADT (2014)(BENNETT ROAD)	7600
ADT (2034)(BENNETT ROAD)	8330
DHV (2034)(BENNETT ROAD)	792
D	50 - 50
T (ADT)	7 %
T (DHV)	5 %
V (BENNETT ROAD)	45 MPH
V (I-40)	70 MPH
TRAFFIC UPDATE	7/2013
ORIGINAL SURVEY DATE	5/2011
SURVEY UPDATE	5/2012
SURVEY UPDATE	12/2012
SURVEY UPDATE	7/2013

UNOFFICIAL SET
NOT FOR BIDDING

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

DATE:

APPROVED:
JOHN SCHROER, COMMISSIONER

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR DATE

SPECIAL NOTES

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TDOT TRANSPORTATION SPECIALIST SUPERVISOR II JIM BIVENS

DESIGNED BY HMB PROFESSIONAL ENGINEERS, INC.

DESIGNER WESLEY MATTINGLY, P.E. CHECKED BY KELLY HENSHAW, P.E.

P.E. NO. 71001-1195-44

PIN NO. 101577.00

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-I-40-6(130)	1A

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ESTIMATED UTILITIES QUANTITIES	2B
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SHEET NOT INCLUDED: 2I, 66-99

STANDARD BRIDGE DRAWINGS

DWG. NO.	REV.	DESCRIPTION

BRIDGE APPURTENANCES ENGLISH (LRFD BOX CULVERTS)

STANDARD ROADWAY DRAWINGS

DWG. NO	REV.	DESCRIPTION
STD-17-1		INDEX OF DRAWINGS
STD-17-2		TERMINOLOGY
STD-17-3		GENERAL NOTES
STD-17-4		DESIGN SECTION LIMITS
STD-17-5		TYPICAL SECTION AND DETAILS
STD-17-6		TYPICAL ELEVATIONS
STD-17-7		CURB, RAIL & EDGE BEAM DETAILS - SKEW NOT LESS THAN 45 DEG
STD-17-8		EDGE BEAM DETAILS FOR FILLS GREATER THAN 3' – 6"
STD-17-9		INTERIOR WALL END TREATMENTS
STD-17-10		TYPICAL WINGWALL DETAILS AND NOTES
STD-17-11		WINGWALL DIMENSIONS AND QUANTITIES
STD-17-12		WINGWALL DIMENSIONS AND QUANTITIES
STD-17-13		WINGWALL DIMENSIONS AND QUANTITIES
STD-17-14		WINGWALL DIMENSIONS AND QUANTITIES
STD-17-15		WINGWALL & SPECIAL RETAINING WALL DESIGN SECTIONS
STD-17-16		WINGWALL DESIGN SECTION
STD-17-17		BACKFILL AND DRAINAGE DETAILS
STD-17-18		BACKFILL DETAILS
STD-17-20		LOW FLOW CHANNEL CONSTRUCTION DETAILS FOR CULVERT INLET AND OUTLET
STD-17-24		WARPED SLOPE DETAIL
STD-17-25		STAGE CONSTRUCTION JOINT DETAIL (FILL ABOVE TOP OF SLAB NOT GREATER THAN 3'-6")
STD-17-26		EXTENSION DETAILS
STD-17-27		EXTENSION DETAILS FOR SCOURED OUTLET
STD-17-28		END SECTION DETAILS
STD-17-29		PRECAST BOX CULVERT DETAILS
STD-17-53		BOX BRIDGE, 1 BARREL AT 8', CLEAR HTS. 6' - 8', 0 - 60' FILL
STD-17-54		BOX BRIDGE, 1 BARREL AT 10', CLEAR HTS. 4' - 6', 0 - 60' FILL
STD-17-56		BOX BRIDGE, 1 BARREL AT 12', CLEAR HTS. 4' - 6', 0 - 60' FILL
STD-17-83		BOX BRIDGE, 2 BARRELS AT 16', CLEAR HTS. 9' - 12', 0 - 60' FILL

ROADWAY DESIGN STANDARDS

RD-A-1	12-18-99	STANDARD ABBREVIATIONS
RD-L-1	10-26-94	STANDARD LEGEND
RD-L-2	09-05-01	STANDARD LEGEND FOR UTILITY INSTALLATIONS
RD-L-3	04-15-04	STANDARD LEGEND FOR SIGNALIZATION AND LIGHTING
RD-L-4	04-15-04	STANDARD LEGEND FOR SIGNALIZATION AND LIGHTING
RD-L-5	05-01-08	STANDARD LEGEND FOR EROSION PREVENTION AND SEDIMENT CONTROL
RD-L-6	03-30-10	STANDARD LEGEND FOR EROSION PREVENTION AND SEDIMENT CONTROL
RD-L-7	05-24-12	STANDARD LEGEND FOR EROSION PREVENTION AND SEDIMENT CONTROL
RD-UD-3	09-05-96	UNDERDRAIN DETAILS
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-SA-1	10-15-02	SAFETY APPROACH TO UNDERPASSES GRADING DESIGN & SLOPE PROTECTION
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-3	10-15-02	RURAL SUPERELEVATION DETAILS
RD01-TS-1	10-15-02	DESIGN STANDARDS FOR LOCAL ROADS AND STREETS
RD01-TS-1A		DESIGN STANDARDS FOR LOW-VOLUME LOCAL ROADS (ADT<=400)
RD01-TS-3C	10-15-02	DESIGN STANDARDS 4 AND 6 LANE ARTERIAL HIGHWAYS WITH FLUSH MEDIANS
RD01-TS-4	07-23-13	DESIGN STANDARDS 1 AND 2 LANE RAMPS
RD01-TS-5	10-15-02	DESIGN STANDARDS FREEWAYS WITH DEPRESSED MEDIANS

DRAINAGE - CULVERTS AND ENDWALL

D-PB-1	01-02-13	STANDARD DETAILS CLASS "B" BEDDING AND CULVERT EXCAVATION
D-PB-2	01-29-14	STANDARD DETAILS FOR PLASTIC PIPE INSTALLATION
D-PB-3		INDUCED TRENCH SOIL EMBANKMENT FOR PIPE CULVERT INSTALLATION
D-PE-4	12-01-14	STRAIGHT CONCRETE ENDWALL
D-PE-18A	01-06-15	18" CONCRETE ENDWALL CROSS DRAIN
D-PE-18B		18" CONCRETE ENDWALL CROSS DRAIN
D-PE-24A	01-06-15	24" CONCRETE ENDWALL CROSS DRAIN
D-PE-24B		24" CONCRETE ENDWALL CROSS DRAIN
D-PE-30A	01-06-15	30" CONCRETE ENDWALL CROSS DRAIN WITH STEEL PIPE GRATE
D-PE-30B		30" CONCRETE ENDWALL CROSS DRAIN WITH STEEL PIPE GRATE
D-PE-36A	06-14-13	36" CONCRETE ENDWALL CROSS DRAIN WITH STEEL PIPE GRATE
D-PE-36B		36" CONCRETE ENDWALL CROSS DRAIN WITH STEEL PIPE GRATE

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D-PE-99	11-01-13	PIPE GRATE & SKEWED CONNECTION DETAILS FOR "U" ENDWALLSCONCRRETE ENDWALL CROSS DRAIN WITH STEEL PIPE GRATE
D-PG-3	04-15-97	FERROUS AND ALUMINUM CORRUGATED METAL PIPE
D-PO-1	05-27-01	STANDARD OVAL & FLAT BASE CONCRETE CULVERT PIPE
D-PS-1	03-15-76	STRUTTING DETAILS FOR CORR. METAL & STRUCTURAL PLATE ROUND PIPE

ROADWAY AND PAVEMENT APPURTENANCES

RP-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	01-30-15	HANDICAP RAMP AND TRUNCATED DOME SURFACE DETAIL
RP-H-4	01-30-15	PERPENDICULAR CURB RAMP
RP-H-7	01-30-15	PERPENDICULAR CURB RAMP TYPE 1
RP-I-5	12-18-96	EXAMPLES OF STREET AND ALLEY INTERSECTIONS
RP-J-1	10-26-00	PORTLAND CEMENT CONCRETE PAVEMENT JOINT TYPES AND SPACING
RP-J-3	10-26-00	PORTLAND CEMENT CONCRETE PAVEMENT JOINT TYPES AND SPACING
RP-J-5	07-01-01	TYPICAL ACCELERATION AND DECELERATION LANE JOINT TYPES AND SPACING FOR CONCRETE RAMPS
RP-J-7	07-14-14	CONCRETE RAMP JOINT TYPES AND SPACING
RP-J-9	02-02-12	CONTRACTION AND CONSTRUCTION JOINTS FOR CONCRETE PAVEMENT
RP-J-11	07-29-96	3/4" AND 1-3/4" EXPANSION AND EDGE PAVEMENT JOINTS
RP-J-13	03-20-91	3/4" AND 1-3/4" ELASTOMERIC COMPRESSION JOINT SEALS
RP-J-15	01-19-02	LONGITUDINAL CONTRACTION AND CONSTRUCTION JOINTS
RP-J-17	02-02-12	DOWEL ASSEMBLY DEVICES
RP-J-18	02-02-12	DOWEL ASSEMBLY DEVICES
RP-J-19	02-02-12	DOWEL ASSEMBLY DEVICES
RP-NMC-10	07-29-03	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-F-1	05-24-12	HIGH VISIBILITY FENCE
S-F-10	06-01-09	STANDARD RIGHT-OF-WAY STOCK FENCE
S-F-10C	05-14-10	RIGHT-OF-WAY FENCE AT BRIDGES AND BOX CULVERTS
S-F-10D		RIGHT-OF-WAY FENCE LOCATIONS AT INTERCHANGES
S-FG-11	05-14-10	STANDARD STOCK FENCE GATE
S-RP-2	01-19-99	STANDARD CONCRETE RIGHT-OF-WAY MARKERS
S-CZ-1		CLEAR ZONE CRITERIA
S-PL-1		SAFETY PLAN AT ROADSIDE HAZARDS
S-PL-2		SAFETY PLAN AT SIDE ROADS OR PRIVATE DRIVES
S-PL-3		SAFETY PLAN: MINIMUM INSTALLATION AT BRIDGE ENDS
S-PL-4	04-11-14	SAFETY PLAN FOR BRIDGE PIERS IN CLEAR ZONE
S-PL-5	04-11-14	SAFETY PLAN FOR BRIDGE ENDS IN MEDIANS
S-PL-6	12-01-14	SAFETY PLAN SAFETY HARDWARE PLACEMENT
S-GR31-1	12-01-14	W-BEAM GUARDRAIL
S-GRC-1		GUARDRAIL CONNECTION TO BRIDGE ENDS OR BARRIER WALL
S-GRT-2	11-03-14	TYPE 38 GUARDRAIL TERMINAL
S-GRT-2P		EARTH PAD FOR TYPE 38 TERMINAL
S-GRT-3		TYPE 21 GUARDRAIL TERMINAL
S-GRT-3D		TYPE 21 GUARDRAIL TERMINAL (DETAILS)
S-GRT-3P		EARTH PAD FOR TYPE 21 TERMINAL
S-GRT-4	11-06-14	TYPE 13 GUARDRAIL TERMINAL (TRAILING END)
S-GRA-3		GUARDRAIL ANCHOR FOR TYPE 12, 13 AND IN-LINE TERMINALS

TRAFFIC CONTROL APPURTENANCES

T-FAB-1	05-27-97	FLASHING YELLOW ARROW BOARD
T-FO-2		FIBER OPTIC UNDERGROUND ENTRANCE DETAILS
T-FO-4		FIBER OPTIC PULL BOX, CABINET & POLE DETAILS
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-5	04-23-13	MARKING DETAILS FOR EXPRESSWAYS & FREEWAYS
T-M-6	06-22-12	MARKING DETAIL FOR EXPRESSWAY & FREEWAY INTERCHANGES
T-M-7	01-12-12	GORE MARKING DETAILS FOR EXPRESSWAY & FREEWAY INTERCHANGES
T-M-8	01-12-12	MARKING DETAILS FOR EXPRESSWAYS & FREEWAYS
T-M-9	11-01-11	MARKING DETAILS FOR RAMP INTERSECTIONS
T-M-15		ASPHALT SHOULDER RUMBLE STRIP INSTALLATION DETAILS FOR INTERSTATE AND 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-6	02-12-91	STANDARD MOUNTING DETAILS - BOLTED EXTRUDED PANELS
T-S-7	02-12-91	HIGHWAY SHIELDS USED ON INTERSTATE AND U.S. NUMBERED ROUTES
T-S-8	07-15-91	HIGHWAY SHIELDS USED ON STATE NUMBERED ROUTES AND ARROWS
T-S-9	06-10-14	STANDARD LAYOUT GROUND MOUNTED SIGNS
T-S-10	04-04-12	STANDARD MOUNTING DETAILS FLAT SHEET SIGNS ALUMINUM-STEEL DESIGN
T-S-11	06-06-11	DELINEATOR AND MILEPOST DETAILS
T-S-13	07-20-12	STANDARD STEEL GROUND MOUNTED SIGNS, BREAK-AWAY TYPE POST FOOTING DETAILS, I-BEAMS
T-S-14	08-17-12	STANDARD STEEL GROUND MOUNTED SIGNS, BREAK-AWAY TYPE POST FOOTING DETAILS, WF-BEAMS
T-S-16	06-05-14	GROUND MOUNTED ROADSIDE SIGN AND DETAILS
T-S-16A	11-01-11	GROUND MOUNTED ROADSIDE SIGN PLACEMENT DETAILS
T-S-17	07-19-13	STANDARD GROUND MOUNTED SIGN USING PERFORATED/KNOCKOUT SQUARE TUBE
T-S-18	02-14-14	END OF ROADWAY AND DEAD END SIGNS, METAL BARRICADES (TYPE III) & WORK ZONE SPEED SIGNS
T-S-19	07-19-13	STANDARD STEEL SIGN SUPPORTS
T-S-20	11-01-11	SIGN DETAILS
T-S-23A	07-19-13	MULTI-DIRECTIONAL SLIP BASE BREAKAWAY SQUARE TUBE SIGN SUPPORT
T-SG-2	07-29-04	LOOP LEAD-INS, CONDUIT AND PULL BOXES
T-SG-3	11-11-04	STANDARD NOTES AND DETAILS OF INDUCTIVE LOOPS
T-SG-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-9	12-04-13	DETAILS OF CANTILEVER SIGNAL SUPPORT
T-SG-9A	05-01-14	MISCELLANEOUS SIGNAL DETAILS
T-SG-10	06-11-14	MAST ARM POLE AND STRAIN POLES FOUNDATION DETAILS
T-SG-12	11-01-11	TYPICAL WIRING FOR SIGNAL HEADS AND DETECTION LOOPS
T-WZ-10	04-02-12	ADVANCE ROAD WORK SIGNING ON HIGHWAYS AND FREEWAYS
T-WZ-14	03-13-09	TWO-OUTSIDE LANE CLOSURE ON INTERSTATES AND EXPRESSWAYS (PORTABLE BARRIER RAIL)
T-WZ-15	04-02-12	INTERIOR LANE CLOSURE ON FREEWAYS OR EXPRESSWAYS
T-WZ-16	03-13-09	LANE SHIFT ON DIVIDED HIGHWAYS AND FREEWAYS
T-WZ-18	03-13-09	SHOULDER CLOSURE DETAIL FOR FREEWAYS AND DIVIDED HIGHWAYS
T-WZ-21	03-15-11	LANE CLOSURE WITH LEFT HAND MERGE AND LANE SHIFT
T-WZ-30	09-01-05	TRAFFIC CONTROL 2-LANE, 2-WAY DIVERSION (40 MPH OR LESS)
T-WZ-36	04-02-12	LANE CLOSURE ON LOW-VOLUME 2-LANE HIGHWAY

EROSION PREVENTION AND SEDIMENT CONTROL

EC-STR-1	08-01-12	DEWATERING STRUCTURE
EC-STR-2	08-01-12	SEDIMENT FILTER BAG
EC-STR-3B	08-01-12	SILT FENCE
EC-STR-3C	08-01-12	SILT FENCE WITH WIRE BACKING
EC-STR-3D	04-01-08	ENHANCED SILT FENCE
EC-STR-3E	04-01-08	SILT FENCE FABRIC JOINING DETAILS
EC-STR-6	08-01-12	ROCK CHECK DAM
EC-STR-6A	08-01-12	ENHANCED ROCK CHECK DAM
EC-STR-7	08-01-12	SEDIMENT TRAP WITH CHECK DAM
EC-STR-11	08-01-12	CULVERT PROCTECTION TYPE 1
EC-STR-11A	08-01-12	CULVERT PROCTECTION TYPE 2
EC-STR-25	08-01-12	TEMPORARY CULVERT CROSSING, CONSTRUCTION EXIT, CONSTRUCTION FORD
EC-STR-27	08-01-12	TEMPORARY SLOPE DRAIN AND BERM
EC-STR-30		INSTREAM DIVERSION (WITHOUT TRAFFIC)
EC-STR-30A		INSTREAM DIVERSION (WITH TRAFFIC)
EC-STR-31	08-01-12	TEMPORARY DIVERSION CHANNEL
EC-STR-31A	04-01-08	TEMPORARY DIVERSION CHANNEL DESIGN
EC-STR-33	08-01-12	SUSPENDED PIPE DIVERSON (DOWNSTREAM)
EC-STR-33A	08-01-12	SUSPENDED PIPE DIVERSON (UPSTREAM)
EC-STR-34	08-01-12	EROSION CONTROL BLANKET FOR SLOPE INSTALLATION
EC-STR-37	06-10-14	SEDIMENT TUBE

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-I-40-6(130)	1B

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-I-40-6(130)	1C

PROJECT COMMITMENTS

COMMITMENT ID	SOURCE DIVISION	DESCRIPTION	STA./ LOCATION
1	TENNESSEE DEPARTMENT OF ENVIRONMENT & CONSERVATION (TDEC)	EDHZ002 Environmental Division, Hazardous Materials To minimize the risk to construction workers, TDOT is committed to the removal of Asbestos-Containing Materials (ACM) from bridges that are being demolished, rehabilitated or repaired. ACM abatement should be completed prior to any demolition activities. Abatement should be accomplished per SP202ACM SpecialProvision Regarding Removal of Asbestos-Containing Materials. Bridge No. 71I00400021, Mine Lick Creek Road over I-40 EBL, LM 2.64 and 71I00400065, Mine Lick Creek Road over I-40 WBL, LM 2.68 have ACM in the bearing pads.	Bennett Road at LM 2.44, Mine Lick Creek Road over I-40 EBL LM 2.64 and WBL LM 2.68
2	TENNESSEE DEPARTMENT OF ENVIRONMENT & CONSERVATION (TDEC)	EDHZ00 Environmental Division, State of Tennessee State of Tennessee asbestos accreditation requirements (TCA 1200-01-20) mandate that ACM abatement work be performed by an accredited firm (contractor) using accredited abatement workers and supervisors. The contractor shall be responsible for submitting a notice to the TDEC, Division of Air Pollution Control ten (10) days in advance of any ACM abatement activities. Ten day advance notice to the TDEC, Division of Air Pollution Control is required prior to commencement of any demolition activities.	Bennett Road at LM 2.44, Mine Lick Creek Road over I-40 EBL LM 2.64 and WBL LM 2.68

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PROJECT COMMITTMENTS

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-I-40-6(130)	2A

ESTIMATED ROADWAY QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
	105-01	CONSTRUCTION STAKES, LINES AND GRADES	LS	0.75
(1)	201-01	CLEARING AND GRUBBING	LS	0.75
(23)	201-07.01	REMOVAL AND DISPOSAL OF BRUSH & TREES	LS	1
(2)	202-01	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	0.75
(3)	203-01	ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED)	C.Y.	285820
(4)	203-02.01	BORROW EXCAVATION (GRADED SOLID ROCK)	TON	43348
	203-03	BORROW EXCAVATION (UNCLASSIFIED)	C.Y.	117418
	203-04	PLACING AND SPREADING TOPSOIL	C.Y.	24444
	203-04.02	STRIPPING & STOCKPILE TOPSOIL	C.Y.	6682
(5)	203-05	UNDERCUTTING	C.Y.	21064
(6)	203-06	WATER	M.G.	1404
	203-07	FURNISHING & SPREADING TOPSOIL	C.Y.	2774
	204-08	FOUNDATION FILL MATERIAL	C.Y.	250
(7)	209-02.03	8" TEMPORARY SLOPE DRAIN	L.F.	399
(7)	209-02.05	12" TEMPORARY SLOPE DRAIN	L.F.	116
(7)	209-02.06	15" TEMPORARY SLOPE DRAIN	L.F.	292
(7)	209-02.07	18" TEMPORARY SLOPE DRAIN	L.F.	44
(7)	209-05	SEDIMENT REMOVAL	C.Y.	1977
(7)	209-06.02	12" DIA COIR LOG	L.F.	355
(7)	209-08.02	TEMPORARY SILT FENCE (WITH BACKING)	L.F.	83263
(7)	209-08.03	TEMPORARY SILT FENCE (WITHOUT BACKING)	L.F.	22988
(7)	209-08.07	ROCK CHECK DAM PER	EACH	643
(7)	209-08.08	ENHANCED ROCK CHECK DAM	EACH	232
(7)(8)	209-09.01	SANDBAGS	BAG	12720
(7)	209-09.03	SEDIMENT FILTER BAG (15' X 15')	EACH	8
(9)	209-09.22	POLYACRYLAMIDE POWDER	LB.	6416
(7)	209-10.20	TEMPORARY SEDIMENT TRAP	C.Y.	1953
(7)(8)	209-20.03	POLYETHYLENE SHEETING (6 MIL. MINIMUM)	S.Y.	707
(7)	209-65.03	TEMPORARY DIVERSION CHANNEL	L.F.	801
	209-65.04	TEMPORARY IN STREAM DIVERSION	L.F.	200
(12)	303-01	MINERAL AGGREGATE, TYPE A BASE, GRADING D	TON	71949
	303-01.01	GRANULAR BACKFILL (ROADWAY)	TON	5161
(7)(10)	303-10.01	MINERAL AGGREGATE (SIZE 57)	TON	2752
	307-01.01	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING A	TON	5254
	307-01.02	ASPHALT CEMENT (PG64-22) (BPMB-HM) GRADING A-S	TON	137
	307-01.03	AGGREGATE (BPMB-HM) GRADING A-S MIX	TON	4016
	307-01.08	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING B-M2	TON	7333
	307-03.01	ASPHALT CONCRETE MIX (PG76-22) (BPMB-HM) GRADING A	TON	3225
	307-03.02	PERF. GRADE ASPH. CEMENT(PG76-22)GRADING AS	TON	49
	307-03.03	AGGREGATE(BPMB-HM) GRADING AS	TON	1443
	307-03.08	ASPHALT CONCRETE MIX (PG76-22) (BPMB-HM) GRADING B-M2	TON	1389
	313-03	TREATED PERMEABLE BASE	S.Y.	21071
	402-01	BITUMINOUS MATERIAL FOR PRIME COAT (PC)	TON	106
	402-02	AGGREGATE FOR COVER MATERIAL (PC)	TON	416
	403-01	BITUMINOUS MATERIAL FOR TACK COAT (TC)	TON	52
	411-01.07	ACS MIX (PG64-22) GRADING E SHOULDER	TON	1515
	411-01.10	ACS MIX(PG64-22) GRADING D	TON	3767
	411-03.10	ACS MIX(PG76-22) GRADING D	TON	3631
	411-12.01	SCORING SHOULDERS (CONTINUOUS) (16IN WIDTH)	L.M.	4.94
(11)	415-01.01	COLD PLANING BITUMINOUS PAVEMENT	TON	4066
	501-01.03	PORTLAND CEMENT CONCRETE PAVEMENT (PLAIN) 10"	S.Y.	21071
	604-01.01	CLASS A CONCRETE (ROADWAY)	C.Y.	791
	604-01.02	STEEL BAR REINFORCEMENT (ROADWAY)	LB.	146752
	607-03.30	18" PIPE CULVERT	L.F.	293
	607-05.30	24" PIPE CULVERT	L.F.	294
	607-06.30	30" PIPE CULVERT	L.F.	365
	607-07.30	36" PIPE CULVERT	L.F.	60
	607-39.01	15" PIPE CULVERT (SIDE DRAIN)	L.F.	31
	607-39.02	18" PIPE CULVERT (SIDE DRAIN)	L.F.	394
	607-40.02	CORRUGATED METAL PIPE ARCH (SIZE EQUIV. 18" ROUND)	L.F.	135
	610-07.03	18" PIPE DRAIN (BRIDGE DRAIN)	L.F.	202
	611-06.10	BRIDGE END DRAIN (2' X 3')	EACH	4
	611-07.01	CLASS A CONCRETE (PIPE ENDWALLS)	C.Y.	6
	611-07.02	STEEL BAR REINFORCEMENT (PIPE ENDWALLS)	LB.	192
	611-07.54	18IN ENDWALL (CROSS DRAIN) 3:1	EACH	2
	611-07.57	24IN ENDWALL (CROSS DRAIN) 3:1	EACH	9
	611-07.58	24IN ENDWALL (CROSS DRAIN) 4:1	EACH	1
	611-07.60	30IN ENDWALL (CROSS DRAIN) 3:1	EACH	2
	611-07.61	30IN ENDWALL (CROSS DRAIN) 4:1	EACH	2
	611-07.63	36IN ENDWALL (CROSS DRAIN) 3:1	EACH	2
	621-03.02	18" TEMPORARY DRAINAGE PIPE	L.F.	660
	621-03.08	54" TEMPORARY DRAINAGE PIPE	L.F.	560
	701-01.01	CONCRETE SIDEWALK (4 ")	S.F.	590

ESTIMATED ROADWAY QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
	701-02.03	CONCRETE CURB RAMP	S.F.	250
	702-03	CONCRETE COMBINED CURB & GUTTER	C.Y.	12
	705-01.01	GUARDRAIL AT BRIDGE ENDS	L.F.	216
	705-02.02	SINGLE GUARDRAIL (TYPE 2)	L.F.	5250
	705-04.03	GUARDRAIL TERMINAL (TYPE 13)	EACH	13
	705-04.05	GUARDRAIL TERMINAL (TYPE-IN-LINE)	EACH	3
	705-04.07	TAN ENERGY ABSORBING TERM (NCHRP 350, TL3)	EACH	17
(20)(13)	705-08.51	PORTABLE IMPACT ATTENUATOR NCHRP350 TL-3	EACH	4
	706-01	GUARDRAIL REMOVED	L.F.	1667
	707-03.01	STOCK FENCE	L.F.	8805
	707-03.02	END, BRACED LINE, CORNER POST ASSEMBLY(STOCK FENCE)	EACH	60
(7)(14)	707-08.11	HIGH-VISIBILITY CONSTRUCTION FENCE	L.F.	4832
	708-02.01	MARKERS (CONCRETE R.O.W. POSTS)	EACH	38
(7)(15)	709-01.02	RUBBLE STONE RIP-RAP	TON	12
(7)(16)	709-05.05	MACHINED RIP-RAP (CLASS A-3)	TON	2103
(7)(17)	709-05.06	MACHINED RIP-RAP (CLASS A-1)	TON	14497
(7)(18)	709-05.08	MACHINED RIP-RAP (CLASS B)	TON	4861
(7)(19)	709-05.09	MACHINED RIP-RAP (CLASS C)	TON	1313
	710-02	AGGREGATE UNDERDRAINS (WITH PIPE)	L.F.	15594
	710-05	LATERAL UNDERDRAIN	L.F.	3215
	710-06.11	LATERAL UNDERDRAIN ENDWALL (2:1)	EACH	19
	710-06.12	LATERAL UNDERDRAIN ENDWALL (3:1)	EACH	20
	710-06.13	LATERAL UNDERDRAIN ENDWALL (4:1)	EACH	19
	710-06.15	LATERAL UNDERDRAIN ENDWALL (6:1)	EACH	20
	712-01	TRAFFIC CONTROL	LS	0.75
(20)	712-02.02	INTERCONNECTED PORTABLE BARRIER RAIL	L.F.	14400
(20)	712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	EACH	345
(20)	712-04.50	PORTABLE BARRIER RAIL DELINEATOR	EACH	720
(20)	712-05.01	WARNING LIGHTS (TYPE A)	EACH	12
(20)	712-06	SIGNS (CONSTRUCTION)	S.F.	1214
(20)	712-06.01	VERTICAL PANELS	S.F.	60
(20)	712-07.03	TEMPORARY BARRICADES (TYPE III)	L.F.	416
(20)	712-08.03	ARROW BOARD (TYPE C)	EACH	2
	713-01.01	CLASS A CONCRETE (FOUNDATION FOR SIGN SUPPORTS)	C.Y.	5
	713-01.02	STEEL BAR REINFORCEMENT (FOUNDATION FOR SIGN SUPPORTS)	LB.	1162
	713-02.04	DELINEATOR (MILE MARKER) & STEEL POST	EACH	2
(21)	713-02.14	FLEXIBLE DELINEATOR (WHITE)	EACH	130
(21)	713-02.15	FLEXIBLE DELINEATOR (YELLOW)	EACH	18
	713-06	STEEL I-BEAMS & WF-BEAMS (BREAKAWAY) SIGN SUPPORT	LB.	656
	713-11.02	PERFORATED/KNOCKOUT SQUARE TUBE POST	LB.	698
	713-11.03	2 1/2" DIA ROUND STEEL TUBE SIGN POST	LB.	174
	713-11.21	P POST SLIP BASE	EACH	6
	713-11.23	ROUND POST SLIP BASE	EACH	4
	713-13.02	FLAT SHEET ALUMINUM SIGNS (0.080" THICK)	S.F.	201
	713-13.03	FLAT SHEET ALUMINUM SIGNS (0.100" THICK)	S.F.	403
	713-14	EXTRUDED ALUMINUM PANEL SIGNS	S.F.	1290
(22)	713-15	REMOVAL OF SIGNS, POSTS AND FOOTINGS	LS	0.75
	713-15.04	INSTALLATION OF LETTERS & ARROWS	LS	0.75
(9)	713-16.01	CHANGEABLE MESSAGE SIGN UNIT	EACH	2
	713-16.07	END OF ROADWAY SIGN AND SUPPORT	EACH	4
(44)	713-16.20	SIGNS (STREET NAME SIGNS - INSTALL ONLY)	EACH	6
	713-17.02	INSTALL AUXILIARY SUPPORT FOR EXIT NUMBER PANEL	EACH	6
(45)	713-99.91	SIGNS	LS	1
(46)	714-05.04	PULL BOXES (TYPE C)	EACH	9
(20)	716-01.06	TEMPORARY RAISED PAVEMENT MARKER,WHITE	EACH	1192
(20)	716-01.07	TEMPORARY RAISED PAVEMENT MARKER,YELLOW	EACH	624
	716-01.23	Snwplwble Pvmt Mrkrs (Bi-Dir)(2 Color)	EACH	370
(24)	716-02.03	PLASTIC PAVEMENT MARKING (CROSS-WALK)	L.F.	95
(24)	716-02.04	PLASTIC PAVEMENT MARKING(CHANNELIZATION STRIPING)	S.Y.	282
(24)	716-02.05	PLASTIC PAVEMENT MARKING (STOP LINE)	L.F.	571
(24)	716-02.06	PLASTIC PAVEMENT MARKING (TURN LANE ARROW)	EACH	58
(24)	716-02.07	PLASTIC PAVEMENT MARKING (24" BARRIER LINE)	L.F.	1151
(24)(25)	716-02.08	PLASTIC PAVEMENT MARKING (8" DOTTED LINE)	L.F.	1222
(24)	716-02.09	PLASTIC PAVEMENT MARKING (LONGITUDINAL CROSS-WALK)	L.F.	68
(24)	716-03.01	PLASTIC WORD PAVEMENT MARKING (ONLY)	EACH	4
(24)	716-04.01	PLASTIC PAVEMENT MARKING (STRAIGHT-TURN ARROW)	EACH	9
(24)	716-04.05	PLASTIC PAVEMENT MARKING (STRAIGHT ARROW)	EACH	11
(9)(24)	716-04.06	PLASTIC PAVEMENT MARKING (WRONG WAY ARROW)	EACH	2
(24)	716-04.12	PLASTIC PAVEMENT MARKING (YIELD LINE)	S.F.	12
(26)	716-05.01	PAINTED PAVEMENT MARKING (4" LINE)	L.M.	20.45
(20)(43)	716-05.02	PAINTED PAVEMENT MARKING (8" BARRIER LINE)	L.F.	26400
(27)	716-05.05	PAINTED PAVEMENT MARKING (STOP LINE)	L.F.	300
(38)	716-05.49	PAINTED PAVEMENT MARKINGS(8" LINE)	L.M.	25.60
(28)	716-12.02	ENHANCED FLATLINE THERMO PVMT MRKNG (6IN LINE)	L.M.	8.92
(28)(42)	716-12.03	ENHANCED FLATLINE THERMO PVMT MRKNG (8IN BARRIER LINE)	L.F.	3629
(28)	716-12.05	ENHANCED FLATLINE THERMO PVMT MRKNG (6IN DOTTED LINE)	L.F.	1405
(39)	716-13.01	SPRAY THERMO PVMT MRKNG (60 mil) (4IN LINE)	L.M.	4.22
(40)	716-13.06	SPRAY THERMO PVMT MRKNG (40 mil) (4IN LINE)	L.M.	4.54
(41)	716-13.08	SPRAY THERMO PVMT MRKNG (40 mil) (8IN BARRIER LINE)	L.F.	592
	716-13.09	SPRAY THERMO PVMT MRKNG (40 mil) (4IN DOTTED LINE)	L.F.	479
	717-01	MOBILIZATION	LS	0.75

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ESTIMATED ROADWAY QUANTITIES

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-I-40-6(130)	2A1

ESTIMATED ROADWAY QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
(47)	730-02.09	SIGNAL HEAD ASSEMBLY (130 WITH BACKPLATE)	EACH	14
(47)(48)	730-02.17	SIGNAL HEAD ASSEMBLY (150 A2H WITH BACKPLATE)	EACH	3
(47)(49)	730-02.30	SIGNAL HEAD ASSEMBLY (130 A3 WITH BACKPLATE)	EACH	12
	730-03.20	INSTALL PULL BOX (TYPE A)	EACH	5
	730-03.21	INSTALL PULL BOX (TYPE B)	EACH	18
(50)	730-05.01	ELECTRICAL SERVICE CONNECTION	EACH	3
(51)	730-05.03	SERVICE CABLE (#2 AWG)	L.F.	1270
	730-08.02	SIGNAL CABLE - 5 CONDUCTOR	L.F.	165
	730-08.03	SIGNAL CABLE - 7 CONDUCTOR	L.F.	3400
(52)	730-08.40	INTERCONNECT CABLE - FIBER OPTIC (HYBRID)	L.F.	860
	730-12.01	CONDUIT 1" DIAMETER (PVC)	L.F.	965
	730-12.02	CONDUIT 2" DIAMETER (PVC)	L.F.	2920
	730-13.01	VEHICLE LOOP DETECTOR (SHELF MOUNT)	EACH	20
(53)	730-13.07	VEHICLE DETECTOR (SIREN ACTIVATED PRIORITY CONTROL)	EACH	6
	730-14.01	SHIELDED DETECTOR CABLE	L.F.	5310
	730-14.02	SAW SLOT	L.F.	4404
	730-14.03	LOOP WIRE	L.F.	10688
	730-15.32	CABINET (EIGHT PHASE BASE MOUNTED)	EACH	3
(54)	730-16.02	EIGHT PHASE ACTUATED CONTROLLER	EACH	3
(55)	730-18.01	MASTER CONTROLLER	EACH	1
	730-21.01	WOOD POLE (SIGNAL SUPPORT) CLASS 3, 35' LENGTH	EACH	1
(47)(56)	730-23.80	CANTILEVER SIGNAL SUPPORT (1 ARM @ 40')	EACH	1
(47)(56)(57)	730-23.88	CANTILEVER SIGNAL SUPPORT (1 ARM @ 45')	EACH	1
(47)(56)	730-23.97	CANTILEVER SIGNAL SUPPORT (1 ARM @ 55')	EACH	2
(47)(56)(57)	730-23.98	CANTILEVER SIGNAL SUPPORT (1 ARM @ 60')	EACH	1
(47)(58)	730-23.99	CANTILEVER SIGNAL SUPPORT (1 ARM @ 65')	EACH	1
(47)(57)(58)	730-23.100	CANTILEVER SIGNAL SUPPORT (1 ARM @ 65')	EACH	1
(47)(57)(58)	730-23.101	CANTILEVER SIGNAL SUPPORT (1 ARM @ 70')	EACH	1
(47)(57)(58)	730-23.102	CANTILEVER SIGNAL SUPPORT (2 @ 45' & 65')	EACH	1
(59)	730-35.01	RF DATA SYSTEM (BROAD SPECTRUM)	EACH	2
(59)	730-35.05	DATA SYSTEM POWER SUPPLY	EACH	2
(59)	730-35.20	RF DATA SYSTEM CABLE	L.F.	150
(59)	730-35.11	ANTENNA (YAGI)	EACH	2
(7)(29)	740-10.03	GEOTEXTILE (TYPE III)(EROSION CONTROL)	S.Y.	25511
(7)(30)	740-10.04	GEOTEXTILE (TYPE IV)(STABILIZATION)	S.Y.	46769
(7)	740-11.02	TEMPORARY SEDIMENT TUBE (12IN)	L.F.	17364
(7)	740-11.03	TEMPORARY SEDIMENT TUBE (18IN)	L.F.	121537
(9)(31)	801-01	SEEDING (WITH MULCH)	UNIT	327
(7)(9)	801-01.07	TEMPORARY SEEDING (WITH MULCH)	UNIT	4164
(32)	801-01.34	GRASS SEED MIX (RIPZN/FLPL)	UNIT	2
(33)	801-02	SEEDING (WITHOUT MULCH)	UNIT	841
(33)	801-02.01	CROWN VETCH MIXTURE (WITHOUT MULCH)	UNIT	893
(16)	801-03	WATER (SEEDING & SODDING)	M.G.	723
(9)	801-07	SEED (SUPPLEMENTAL APPLICATION)	LB.	210
(9)	801-07.01	CROWN VETCH SEED (SUPPLEMENTAL APPLICATION)	LB.	201
(9)	801-08	FERTILIZER (SUPPLEMENTAL APPLICATION)	TON	2
	802-02.30	CUTTINGS: SALIX NIGRA (18IN-24IN LENGTH)	EACH	3
	802-02.31	CUTTINGS: SALIX SERICEA (18IN-24IN)	EACH	2
	802-02.32	CUTTINGS: CORNUS AMOMUM (18IN-24IN)	EACH	2
	802-02.33	CUTTINGS: SAMBUCUS CANADENSIS (18IN-24IN)	EACH	2
	802-02.34	CUTTINGS: SALIX INTERIOR (18IN-24IN)	EACH	2
	802-02.35	CUTTINGS: CEPHALANTHUS OCCIDENTALIS (18IN-24IN)	EACH	2
	802-11.02	ACER RUBRUM (RED MAPLE 2-5FT CNTNR GRWN)	EACH	3
	802-11.07	BETULA NIGRA (RIVER BIRCH 2-5FT CNTNR GRWN)	EACH	2
	802-11.16	FRAXINUS PENNSYLVANICA (GREEN ASH 2-5FT CNTNR GRWN)	EACH	2
	802-11.18	LIQUIDAMBER STYRACIFLUA (SWEETGUM 2-5FT CNTNR GRWN)	EACH	2
	802-11.19	LIRIODENDRON TULIPIFERA (TULIP POPLAR 2-5FT CNTNR GRWN)	EACH	2
	802-11.26	PLATANUS OCCIDENTALIS (SYCAMORE 2-5FT CNTNR GRWN)	EACH	2
	802-11.40	SALIX NIGRA (BLACK WILLOW 2-5FT CNTNR GRWN)	EACH	2
	802-12.02	ACER RUBRUM (RED MAPLE SEEDLNG B.R.)	EACH	3
	802-12.07	BETULA NIGRA (RIVER BIRCH SEEDLNG B.R.)	EACH	2
	802-12.16	FRAXINUS PENNSYLVANICA (GREEN ASH SEEDLNG B.R.)	EACH	2
	802-12.18	LIQUIDAMBER STYRACIFLUA (SWEETGUM SEEDLNG B.R.)	EACH	2
	802-12.19	LIRIODENDRON TULIPIFERA (TULIP POPLAR SEEDLNG B.R.)	EACH	2
	802-12.26	PLATANUS OCCIDENTALIS (SYCAMORE SEEDLNG B.R.)	EACH	2
	802-12.40	SALIX NIGRA (BLACK WILLOW SEEDLNG B.R.)	EACH	2
(34)	803-01	SODDING (NEW SOD)	S.Y.	10000
(37)	805-12.02	EROSION CONTROL BLANKET (TYPE II)	S.Y.	188352
(35)	805-12.03	EROSION CONTROL BLANKET (TYPE III)	S.Y.	5215
(36)	806-02.03	PROJECT MOWING	CYCL	6

FOOTNOTES

(1) CLEARING AND GRUBBING AREA IS APPROX. 80.5 ACRES.
(2) SEE REMOVAL OF STRUCTURES BLOCK ON THIS SHEET FOR LIST OF STRUCTURES TO BE REMOVED
(3) 910 C.Y. FOR TEMP. CONST. EXITS, 65 C.Y. FOR TEMP. SLOPE DRAINS, & 2374 C.Y. FOR EARTH BERM
(4) INCLUDES 6200 TONS FOR FILLING PONDS AND STREAMS, AND 37148 TONS FOR UNDERCUT.
(5) SEE SOIL SHEETS FOR LOCATIONS OF UNDERCUTTING.
(6) INCLUDES 874 M.G. FOR EMBANKMENT AND 530 M.G. FOR AGGREGATE BASE MATERIAL.
(7) SEE SUBSECTION 209.07 OF THE STANDARD SPECIFICATIONS FOR MAINTENANCE REPLACEMENT.
(8) FOR USE WITH TEMPORARY DIVERSION CHANNEL & SANDBAG BERMS.
(9) TO BE USED AS DIRECTED BY PROJECT ENGINEER.
(10) INCLUDES 252 TONS FOR EPSC AND 2500 TONS TO BE USED AS DIRECTED BY THE ENGINEER.
(11) 3864 TONS FOR COLD PLANING 1.25" OF I-40 FROM STA. 38+00 TO STA. 113+15 INCLUDING SHOULDERS, AND 202 TONS FOR COLD PLANING BENNETT RD. FROM APPROXIMATELY. STA. 19+90 TO STA. 23+80.
(12) INCLUDES 1000 TONS FOR TRAFFIC CONTROL AS DIRECTED BY THE ENGINEER.

FOOTNOTES CONT'D

(13) THIS ITEM SHALL BE A PORTABLE ENERGY ABSORBING TERMINAL MEETING THE REQUIREMENTS OF NCHRP 350 FOR TEST LEVEL 3. EXAMPLES WOULD BE A QUAD-GUARD, A REACT 350 OR A TRACC. THE PAY ITEM WILL INCLUDE FURNISHING AND INSTALLING ALL COMPONENTS AS SHOWN ON THE MANUFACTURER'S DRAWING. PAID ONLY ONCE AND RELOCATION INCLUDED.
(14) INCLUDES 3856 L.F. FOR BUFFER PROTECTION AND 1000 FT TO BE USED AS DIRECTED BY PROJECT ENGINEER.
(15) STANDARD DRAWING STD-1-7 IS TO BE USED FOR BURIAL OF THE OUTLET PIPE AND FOR END TREATMENT DETAILS.
(16) 1251 TONS TO BE USED FOR EPSC AND 852 TONS TO BE USED FOR SLOPE STABILIZATION AT BRIDGE ABUTMENTS.
(17) INCLUDES 9207 TONS FOR DITCHES, 5216 TONS FOR EPSC, 16 TONS FOR SIDE DRAINS, AND 58 TONS FOR CULVERTS.
(18) INCLUDES 4402 TONS FOR DITCHES, 7.2 TONS FOR SIDE DRAINS, 45.3 TONS FOR CROSS DRAINS, AND 406 TONS FOR CULVERT INLETS/OUTLETS.
(19) INCLUDES 285 TONS FOR RAMP D FILL SLOPE, 510 TONS FOR DITCHES, 7.8 TONS FOR SIDE DRAINS, 25.1 TONS FOR CROSS DRAINS, AND 485 TONS FOR CULVERT INLETS/OUTLETS.
(20) FOR TRAFFIC CONTROL; USE AS DIRECTED.
(21) TO BE USED AT RAMPS AT I-40 AND ALONG BENNETT RD. AT INTERCHANGE.
(22) INCLUDES THE REMOVAL OF ANY CONFLICTING SIGNS WITHIN THE PROJECT LIMITS AS DIRECTED BY THE ENGINEER.
(23) INCLUDES BRUSH REMOVAL FOR PROPOSED I-40 PERMANENT SIGNS AS DIRECTED BY THE ENGINEER. SEE SIGNING & MARKING SHEETS FOR LOCATIONS OF PROPOSED SIGNS.
(24) THE CONTRACTOR MAY ELECT TO SUBSTITUTE PREFORMED PLASTIC FOR THERMOPLASTIC. PREFORMED PLASTIC SHALL BE PAID FOR AT THE SAME UNIT PRICE AS BID FOR THERMOPLASTIC.
(25) INCLUDES 500 L.F. FOR OPTIONAL 8IN DOTTED YELLOW LINE AS SHOWN ON THE TYPICAL MARKING FOR DOUBLE LEFT TURN LANES (STD. DWG. T-M-4).
(26) 1.43 L.M. FOR MINE LICK CREEK RD.(2), LEE SEMINARY RD.(2), THE TWO ACCESS DRIVES OFF HAWKINS CRAWFORD RD. AND MINE LICK CREEK RD.(1), AND 19.02 L.M. FOR TEMPORARY TRAFFIC CONTROL MARKINGS.
(27) TO BE USED ON INTERMEDIATE PAVEMENT LAYERS.
(28) TO BE USED ON I-40 CONTRACTOR SHALL USE THE RIBBON METHOD FOR APPLICATION.
(29) INCLUDES 9651 S.Y. FOR EPSC, 15294 S.Y. FOR RIP-RAP DITCHES, 27 S.Y. FOR RIP-RAP AT SIDE DRAIN OUTLET, 43.4 S.Y. FOR CROSS DRAINS, 256 S.Y. FOR BOX BRIDGE, AND 240 FOR CULVERTS.
(30) INCLUDES 223 S.Y. FOR ROCK EMBANKMENTS, 2289 S.Y. FOR FILLING PONDS, 126 S.Y. FOR FILLING STR-1, 80 S.Y. FOR FILLING STR-2, 56 S.Y. FOR FILLING SPG-1, AND 43995 S.Y. FOR UNDERCUT.
(31) INCLUDES 92 UNITS FOR SCARIFIED AREAS.
(32) 1.9 UNITS FOR BOX CULVERTS.
(33) TO BE USED WITH EROSION CONTROL BLANKET TYPE II.
(34) TO BE USED ON SLOPES AS DIRECTED BY THE ENGINEER.
(35) 215 S.Y. OF ECB III FOR BOX BRIDGE UNDER BENNETT RD. AT STA. 28+60, AND 5000 S.Y. AS DIRECTED BY THE ENGINEER.
(36) SHALL INCLUDE OFFSITE LITTER AND DEBRIS PICK UP.
(37) 154182 S.Y. OF ECB II FOR EPSC, AND 34170 S.Y. FOR DITCHES.
(38) FOR TRAFFIC CONTROL ON I-40.
(39) FOR BENNETT RD.
(40) FOR LEE SEMINARY RD., HAWKINS CRAWFORD RD., AND MINE LICK CREEK RD.(1).
(41) FOR RIGHT TURN ONLY LANES OFF BENNETT RD. AND HIGHLAND PARK BLVD.
(42) FOR GORE BOUNDARY AT RAMPS.
(43) TO BE USED WITH PORTABLE BARRIER RAIL ALONG I-40 DURING TRAFFIC CONTROL.
(44) INCLUDED FOR INSTALLATION OF ILLUMINATED STREET NAME SIGNS. INCLUDES A 10 FT. PIG TAIL TO BE STORED IN THE LIGHTING PULL BOX AT THE BASE OF THE SIGNAL POLE FOR CONNECTION TO THE LIGHTING CIRCUITRY.
(45) INCLUDED FOR SUSPENDED FLAT SHEET ALUMINUM SIGNS (0.080" THICK). INCLUDES TWO (2) R3-1 (30" X 30"), TWO (2) R3-2 (30" X 30"), SIX (6) R10-5 (30" X 36"), AND THREE (3) R10-12 (30" X 36").
(46) A LIGHTING PULL BOX SHALL BE INSTALLED AT THE BASE OF SIGNAL POLES SP1 THRU SP9 FOR CONNECTION OF THE ILLUMINATED STREET NAME SIGNS AND SIGNAL POLE LUMINAIRES TO THE LIGHTING CIRCUITRY.
(47) SIGNAL HEADS, STRAIN POLES AND MAST ARMS SHALL BE BLACK. INCLUDES THE COST OF SUPPLYING AND INSTALLING REFLECTIVE DELINEATION AROUND THE BACKPLATES.
(48) SHALL BE FOR LEFT TURN OPERATION.
(49) INCLUDES EIGHT (8) FOR LEFT TURN AND FOUR (4) FOR RIGHT TURN OPERATION.
(50) THE CONTRACTOR SHALL CONTACT THE LOCAL UTILITY TO OBTAIN THE ESTIMATE FOR ANY CHARGES BY THE UTILITY FOR PROVIDING ELECTRICAL SERVICE TO THE SIGNAL CONTROL CABINET(S). THESE CHARGES SHALL BE INCLUDED IN THE BID FOR THIS ITEM. ALSO INCLUDES THE COSTS FOR SUPPLYING THE DISCONNECT, METER (AS REQUIRED), TRANSFORMERS, 2-RISERS (SHEETS 66C & 66E), OVERHEAD CABLE AS NEEDED, AND ALL APPURTENANCES FOR THE ELECTRICAL CONNECTION.
(51) INCLUDES TWO (2) WIRES FOR SERVICE TO THE THREE SIGNALS. INCLUDES 775 L.F. OF OVERHEAD CABLE AND 495 L.F. OF UNDERGROUND CABLE.
(52) SHALL BE 6-SINGLE MODE & 6-MULTI-MODE HYBRID FIBER OPTIC CABLE.
(53) INCLUDES ALL EQUIPMENT FOR COMPLETE SIREN DETECTION SYSTEMS AT THREE (3) INTERSESCTIONS. EMERGENCY PRE-EMPT SYSTEM SHALL BE 3M OPTICOM AS MANUFACTURERED BY GLOBAL TRAFFIC TECHNOLOGIES (GTT). INCLUDES SIX (6) SONEM SOUND ACTIVATED EMERGENCY PRE-EMPT SENSORS, THREE (3) 2 PHASE SELECTORS, AND INTERFACE PANELS, AS REQUIRED, TO DETECT EMERGENCY VEHICLES APPROACHING BENNETT ROAD (MINE LICK CREEK ROAD).
(54) SHALL BE LATEST MODEL EAGLE M50 CONTROLLER AS MANUFACTURED BY SIEMANS WITH SINGLE MODE FIBER CONNECTION.
(55) SHALL BE INSTALLED AT INTERSECTION OF BENNETT ROAD AND I-40 EB OFF RAMP.
(56) INCLUDES CLASS 'A' CONCRETE FOUNDATION. FOUNDATION SHALL BE 3'-0" DIAMETER WITH MIN. 15'-00" DEEP FOOTING, REFER TO TDOT STD. DWG T-SG-10.
(57) SHALL BE MINIMUM 35 FOOT POLE TO ACCOMMODATE LIGHTING.
(58) INCLUDES CLASS 'A' CONCRETE FOUNDATION. FOUNDATION SHALL BE 4'-0" DIAMETER WITH MIN. 15'-00" DEEP FOOTING. FOR 4' -0" ESTIMATED FOUNDATION QUANTITIES, SEE SHEET 66.
(59) FOR INSTALLATION AT INTERSECTIONS OF I-40 EB AND WB OFF RAMPS.

ESTIMATED BRIDGE QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
604-02.01	CLASS A CONCRETE (BOX BRIDGES)	C.Y.	699
604-02.02	STEEL BAR REINFORCEMENT (BOX BRIDGES)	LB.	139054

NOTE:
SEE SHEETS 2N-2S FOR TABULATED QUANTITIES
SEE SHEET 47 FOR EPSC QUANTITIES

REMOVAL OF STRUCTURES

SHEET NO.	STATION	LOCATION	DESCRIPTION	REMARKS
7/7A	17+91.31	MINE LICK CREEK RD. (2)	40' OF 72" CMP	202-01
8/8A	22+26.41	RAMP B	43' OF 48" RCP	202-01
11	15+55	BENNETT RD.	50' OF 18" RCP	202-01
11		BENNETT RD.	1 RESIDENTIAL BUILDING	202-01
12	31+09.72	BENNETT RD.	23' OF 12" CMP	202-01
12/12A	28+40	BENNETT RD.	21'X30' CONC. & STEEL BRIDGE	202-01
13	38+58.24	BENNETT RD.	BRIDGE OVER I-40 EB	202-01
13	40+87.51	BENNETT RD.	BRIDGE OVER I-40 WB	202-01
13	42+63.52	BENNETT RD.	53' OF CROSS DRAIN	202-01
13		BENNETT RD.	3 RESIDENTIAL BUILDINGS	202-01
13		BENNETT RD.	2 SHEDS	202-01
15/15A	13+11.75	LEE SEMINARY RD.	37' OF 18" CMP	202-01
17/17A	10+47.29	HAWKINS CRAWFORD RD.	32' OF 18" CMP	202-01
18	41+85.56	MINE LICK CREEK RD. (1)	20' OF 12" CMP	202-01

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ESTIMATED ROADWAY AND BRIDGE QUANTITIES

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-I-40-6(130)	2J

GENERAL NOTES

GRADING

(1) ANY AREA THAT IS DISTURBED OUTSIDE LIMITS OF CONSTRUCTION DURING THE LIFE 0F THIS PROJECT SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.

(2) CERTIFICATION FOR ALL BORROW PITS MUST BE OBTAINED IN ACCORDANCE WITH SUBSECTION 107.06 OF THE STANDARD SPECIFICATIONS.

(3) THE CONTRACTOR SHALL NOT DISPOSE OF ANY MATERIAL EITHER ON OR OFF STATE-OWNED R.O.W. IN A REGULATORY FLOOD WAY AS DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY WITHOUT APPROVAL BY SAME. ALL MATERIAL SHALL BE DISPOSED OF IN UPLAND (NON-WETLAND) AREAS AND ABOVE ORDINARY HIGH WATER OF ANY ADJACENT WATERCOURSE. THIS DOES NOT ELIMINATE THE NEED TO OBTAIN ANY OTHER LICENSES OR PERMITS THAT MAY BE REQUIRED BY ANY OTHER FEDERAL, STATE OR LOCAL AGENCY.

SEEDING AND SODDING

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

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

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

GUARDRAIL

(1) THE CONTRACTOR SHALL NOT REMOVE ANY SECTIONS OF EXISTING GUARDRAIL TO REWORK SHOULDERS OR FLATTEN SLOPES UNTIL THE ENGINEER CONCURS IN THE NECESSITY OF REMOVAL DUE TO CONSTRUCTION REQUIREMENTS AND THE APPROPRIATE WARNING DEVICES ARE INSTALLED. THE PROPOSED GUARDRAIL, INCLUDING ANY ANCHOR SYSTEM, SHALL BE INSTALLED QUICKLY TO MINIMIZE TRAFFIC EXPOSURE TO ANY HAZARD. NO PAYMENT WILL BE MADE FOR A SECTION OF PROPOSED GUARDRAIL, INCLUDING ANCHORS, UNTIL IT IS COMPLETE IN PLACE.

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

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

DRAINAGE

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

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

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

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

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

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

UTILITIES – SEE SHEET NO. 3 FOR UTILITY NOTES

RIGHT-OF-WAY – SEE SHEET NO. 3 FOR R.O.W NOTES

FENCING

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

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

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

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

MISCELLANEOUS

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

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

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

PAVEMENT MARKINGS

TEMPORARY PAVEMENT MARKING ON INTERMEDIATE LAYERS

(1) TEMPORARY PAVEMENT LINE MARKINGS ON INTERMEDIATE LAYERS OF PAVEMENT SHALL BE REFLECTIVE TAPE OR REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAYS WORK. SHORT, UNMARKED SECTIONS SHALL NOT BE ALLOWED. THESE MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-05.01, PAINTED PAVEMENT MARKING (4" LINE), L.M.

(2) TEMPORARY PAVEMENT LINE MARKINGS ON INTERMEDIATE LAYERS OF PAVEMENT SHALL BE REFLECTIVE TAPE OR REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAYS WORK. SHORT, UNMARKED SECTIONS SHALL NOT BE ALLOWED. THESE MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-05.02, PAINTED PAVEMENT MARKING (8" BARRIER LINE), L.F.

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

FINAL PAVEMENT MARKING IF 6" ENHANCED FLATLINE THERMOPLASTIC IS USED

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

FINAL PAVEMENT MARKING IF 8" ENHANCED FLATLINE THERMOPLASTIC IS USED

(1) PERMANENT PAVEMENT LINE MARKINGS SHALL BE 8" 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. 716-12.03, ENHANCED FLATLINE THERMO PVMT MRKNG (8IN BARRIER LINE), L.F. THE CONTRACTOR SHALL HAVE THE OPTION OF USING REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK AND THEN INSTALLING THE PERMANENT MARKINGS AFTER THE PAVING OPERATION IS COMPLETED. THE TEMPORARY MARKINGS FOR THE FINAL SURFACE WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COSTS ARE TO BE INCLUDED IN THE PRICE BID FOR THE PERMANENT MARKINGS.

FINAL PAVEMENT MARKING IF 4" SPRAY THERMOPLASTIC (60 mil) IS USED

(1) PERMANENT PAVEMENT LINE MARKINGS SHALL BE 4" SPRAY THERMOPLASTIC (60 mil) INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK. SHORT UNMARKED SECTIONS SHALL NOT BE ALLOWED. PAVEMENT MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-13.01, SPRAY THERMO PVMT MRKNG (60 mil) (4IN LINE), L.M. THE CONTRACTOR SHALL HAVE THE OPTION OF USING REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK AND THEN INSTALLING THE PERMANENT MARKINGS AFTER THE PAVING OPERATION IS COMPLETED. THE TEMPORARY MARKINGS FOR THE FINAL SURFACE WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COSTS ARE TO BE INCLUDED IN THE PRICE BID FOR THE PERMANENT MARKINGS.

FINAL PAVEMENT MARKING IF 8" SPRAY THERMOPLASTIC (40 mil) IS USED

(1) PERMANENT PAVEMENT LINE MARKINGS SHALL BE 8" SPRAY THERMOPLASTIC (40 mil) INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK. SHORT UNMARKED SECTIONS SHALL NOT BE ALLOWED. PAVEMENT MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-13.08, SPRAY THERMO PVMT MRKNG (40 mil) (8IN BARRIER LINE), L.F. THE CONTRACTOR SHALL HAVE THE OPTION OF USING REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK AND THEN INSTALLING THE PERMANENT MARKINGS AFTER THE PAVING OPERATION IS COMPLETED. THE TEMPORARY MARKINGS FOR THE FINAL SURFACE WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COSTS ARE TO BE INCLUDED IN THE PRICE BID FOR THE PERMANENT MARKINGS.

FINAL PAVEMENT MARKING IF REFLECTORIZED PAINT IS USED

(1) PERMANENT PAVEMENT LINE MARKINGS SHALL BE REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK. SHORT, UNMARKED SECTIONS SHALL NOT BE ALLOWED. THESE MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-05.01 PAINTED PAVEMENT MARKING (4IN LINE), L.M.

DETOURS, LANE SHIFTS AND MEDIAN CROSS-OVERS

(1) THE PAVEMENT MARKING ON THE LANE SHIFT FOR CENTERLINE, EDGE LINES, AND LANE LINES WILL BE INSTALLED AND MAINTAINED TO THE SAME STANDARDS AS FOR PERMANENT MARKINGS ON THE MAIN ROADWAY. THESE MARKINGS SHALL BE IN PLACE PRIOR TO ALLOWING TRAFFIC ONTO THE PAVEMENT. THESE PAVEMENT MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-05.01 PAINTED PAVEMENT MARKING (4IN LINE), L.M., AND ITEM NO. 716-05.02, PAINTED PAVEMENT MARKING (8IN BARRIER LINE), L.F.

(2) BEFORE OPENING THE DETOUR AND 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.

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-I-40-6(130)	2K

GENERAL NOTES CON'T.

PAVEMENT

PAVING

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

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

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

GRADED SOLID ROCK

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

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

SIGNING

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

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

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

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

(5) THE 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.

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

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.713-15 AND 713-15.04, AS DIRECTED BY THE ENGINEER.

CONSTRUCTION WORK ZONE & TRAFFIC CONTROL

(SEE SHEET NO. 62)

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

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

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

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

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

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

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

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

EROSION PREVENTION AND SEDIMENT CONTROL

DISTURBED AREA (SEE SHEET NO. 46)

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

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

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

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

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

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

SEDIMENT CONTROL

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

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

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

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

(5) FOR AN OUTFALL IN A DRAINAGE AREA OF 10 ACRES OR MORE, A TEMPORARY (OR PERMANENT) SEDIMENT BASIN OR EQUIVALENT CONTROL MEASURES THAT PROVIDES STORAGE FOR A CALCULATED VOLUME OF RUNOFF FROM A MINIMUM 2-YEAR/ 24-HOUR STORM EVENT, SHALL BE PROVIDED UNTIL FINAL STABILIZATION OF THE SITE. THE ENVIRONMENTAL AND ROOADWAY DESIGN DIVISIONS MAY BE CONTACTED TO REVIEW AND CONCUR WITH ANY REVISION OF THE SWPPP BEFORE DISTURBANCE OF THE OUTFALL PROCEEDS.

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

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

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

UNOFFICIAL SET

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-I-40-6(130)	2L

GENERAL NOTES CON'T.

STREAM/WETLAND

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

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

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

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

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

(6) 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.

(7) 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.

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

SPECIES

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

INSPECTION, MAINTENANCE, REPAIR

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

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

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

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

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

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

(7) UPON CONCLUSION OF THE INSPECTIONS, EPSC MEASURES FOUND TO BE INEFFECTIVE SHALL BE REPAIRED, REPLACED, OR MODIFIED BEFORE THE NEXT RAIN EVENT, IF POSSIBLE, BUT IN NO CASE MORE THAN 24 HOURS AFTER THE INSPECTION OR WHEN THE CONDITION IS IDENTIFIED. IF THE REPAIR, REPLACEMENT OR MODIFICATION IS NOT PRACTICAL WITHIN THE TIMEFRAME, WRITTEN DOCUMENTATION MUST BE PROVIDED IN THE FIELD BOOK AND AN ESTIMATED REPAIR, REPLACEMENT OR MODIFICATION SCHEDULE SHALL BE DOCUMENTED WITHIN 24 HOURS AFTER IDENTIFICATION.

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

MATERIALS

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

SWPPP, PERMITS, PLANS, RECORDS

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

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

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

(4) ALL WATER QUALITY AND STORM WATER PERMITS, INCLUDING A COPY OF THE NOC WITH NPDES PERMIT TRACKING NUMBER AND THE LOCATION OF THE SWPPP, SHALL BE POSTED NEAR THE MAIN ENTRANCE OF THE CONSTRUCTION SITE ACCESSIBLE TO THE PUBLIC. THE NAME, COMPANY NAME, EMAIL ADDRESS, TELEPHONE NUMBER AND ADDRESS OF THE PROJECT SITE OWNER, OPERATOR, OR A LOCAL CONTACT PERSON WITH A BREIF DESCRIPTION OF THE PROJECT SHALL ALSO BE POSTED. IF POSTING THIS INFORMATION NEAR A MAIN ENTRANCE IS INFEASIBLE, THE INFORMATION SHALL BE PLACED IN A PUBLICLY ACCESSIBLE LOCATION NEAR WHERE THE CONSTRUCTION IS ACTIVELY UNDERWAY AND MOVED AS NECESSARY. THIS LOCATION SHALL BE POSTED AT THE CONSTRUCTION SITE. ALL POSTINGS SHALL BE MAINTAINED IN LEGIBLE CONDITION.

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

(6) THE SWPPP SHALL BE UPDATED BY CONSTRUCTION WHENEVER EPSC INSPECTIONS INDICATE, OR WHERE STATE OR FEDERAL OFFICIALS DETERMINE EPSC MEASURES ARE PROVING INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANT SOURCES OR ARE OTHERWISE NOT ACHIEVING THE GENERAL OBJECTIVES OF CONTROLLING POLLUTANTS IN STORM WATER DISCHARGES ASSOCIATED WITH THE CONSTRUCTION ACTIVITY. THE ENVIRONMENTAL DIVISION SHALL BE CONTACTED WHEN MAJOR DESIGN REVISIONS ARE REQUESTED BY CONSTRUCTION. THE ENVIRONMENTAL DIVISION MAY BE CONTACTED FOR GUIDANCE ON SPECIFIC SWPPP NEEDS. A COPY OF ANY CORRESPONDENCE REGARDING THE EFFECTIVENESS OF THE SWPPP OR EPSC CONTROLS SHALL BE RETAINED IN THE SWPPP.

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

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

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

LITTER, DEBRIS, WASTE, PETROLEUM

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

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

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

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

SPECIAL NOTES

GRADING

(1) THE GRADING TABULATIONS AND RESULTING EARTHWORK ASSOCIATED BID QUANTITIES WERE PREPARED UTILIZING AVAILABLE GEOTECHNICAL INFORMATION AND/OR REPORTS PREPARED FOR THIS PROJECT. THIS INFORMATION IS PROVIDED FOR GENERAL INFORMATION AND ESTIMATION GUIDANCE ONLY.

(2) BORING DEPICTIONS SHOWN ON THE FOUNDATION DATA SHEETS, SOILS SHEETS, PLANS, AND CROSS-SECTIONS INDICATE SOIL AND ROCK CONDITIONS AT THE SPECIFIC BORING LOCATIONS. ANY SOIL PROFILE AND/OR ROCK LINE IS INTERPRETIVE BASED ON THE JUDGMENT OF THE GEOTECHNICAL ENGINEER/GEOLOGIST. THE TRANSITION BETWEEN BORINGS AND LAYERS MAY VARY SIGNIFICANTLY DEPENDING ON THE GEOLOGIC FORMATIONS ENCOUNTERED.

(3) TO ASSIST IN BID PREPARATION FOR EARTHWORK AND FOUNDATION CONSTRUCTION, DETAIL ROCK AND SOIL DESCRIPTION AND ON SOME PROJECTS, ROCK CORE SAMPLES ARE AVAILABLE FOR INSPECTION AT THE MATERIALS AND TESTS HEADQUARTERS AT 6601 CENTENNIAL BOULEVARD, NASHVILLE, TN OR AT THE TDOT REGION 1 BUILDING IN KNOXVILLE, TN.

(4) THE CONTRACTOR SHALL UTILIZE ALL INFORMATION PROVIDED IN THE PLANS, CROSS-SECTIONS AND CONTRACT DOCUMENTS INCLUDING ANY SPECIAL PROVISIONS AS WELL AS UTILIZING HIS PAST EXPERIENCE WITH PROJECTS OF SIMILAR NATURE, SCOPE AND LOCATION IN PREPARATION OF HIS BID FOR EARTHWORK ITEMS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE AND PROVIDE EQUIPMENT AND MEANS NECESSARY TO CONDUCT THE EXCAVATION ACTIVITIES IN ACCORDANCE WITH PLANS AND SPECIFICATIONS.

(5) EARTHWORK IS PAID FOR UNDER ITEM 203-01, ROAD AND DRAINAGE EXCAVATION (UNCLASSIFIED). NO ADDITIONAL PAYMENT WILL BE MADE FOR EARTHWORK QUANTITIES BASED SOLELY ON A CLAIM THAT THE QUANTITIES SHOWN IN THE GRADING TABULATION OR ELSEWHERE IN THE PLANS ARE INACCURATE WITH RESPECT TO THE TYPE OF MATERIALS ENCOUNTERED DURING CONSTRUCTION EXCEPT AS PROVIDED FOR BY SECTION 104.02 IN THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION OR AS AMENDED IN SUPPLEMENTAL SPECIFICATIONS.

PAVEMENT

RESURFACING

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

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

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

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

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

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

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

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

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

EROSION PREVENTION AND SEDIMENT CONTROL

NPDES

(2) REFER TO THE EROSION PREVENTION AND SEDIMENT CONTROL PLAN, SHEET 46, FOR NOTES REGARDING SEASONAL WORK LIMITATION OR LIMITATION ON THE TOTAL AREA OF EXPOSED SOIL.

ENVIRONMENTAL

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

ECOLOGY

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

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

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

STREAM RELOCATION

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

STANDARD STREAM MITIGATION

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

CHANNEL RELOCATION SEQUENCE

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

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

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

(4) PLACE TOPSOIL, EROSION CONTROL BLANKET, SEED AND SOD AS SPECIFIED.

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

(6) INSTALL TREES ACCORDING TO STANDARD SPECIFICATIONS SECTION 802.

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

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

TREES

(4) NO SUBSTITUTIONS OF TREE SPECIES OR SIZES SHALL BE ALLOWED WITHOUT THE WRITTEN APPROVAL OF TDOT ENVIRONMENTAL DIVISION. TREES SHALL BE THE VARIETY REQUESTED 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.

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

(6) ALL TREES PLANTED SHALL BE WRAPPED AS PER SECTION 802.07 OF TDOT STANDARD SPECIFICATIONS FOR THE ROAD AND BRIDGE CONSTRUCTION.

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

SEEDING AND SODDING

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

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

HISTORICAL

(10) THE CONTRACTOR WILL BE RESPONSIBLE FOR REMOVING AND COORDINATING WITH THE TDOT REGIONAL SIGN SHOP FOR STORING HISTORICAL MARKER(S). AT THE END OF CONSTRUCTION, MARKER(S) WILL BE RESET BY THE SIGN SHOP AT THE DIRECTION OF THE REGIONAL TRAFFIC ENGINEER. IF THE MARKER CANNOT BE RESET OUSIDE OF THE CLEAR ZONE, THE REGIONAL TRAFFIC ENGINEER WILL CONCACT THE TENNESSEE HISTORIC COMMISSION AND RETURN THE MARKER(S).

CONSTRUCTION WORK ZONE & TRAFFIC CONTROL

(11) THE CONTRACTOR SHALL NOT HAUL MATERIAL ACROSS THE PROPOSED BRIDGE.

DEMOLITION, REPAIR, OR REHABILITATION OF BRIDGES

(12) THE CONTRACTOR SHALL VERIFY THAT AN ASBESTOS SURVEY HAS BEEN COMPLETED PRIOR TO ANY DEMOLITION, REPAIR OR REHABILITATIONS ACTIVITIES (NOT INCLUDING ASPHALT MILLING OR OVERLAY).

(13) ASBESTOS-CONTAINING MATERIALS (ACM) ABATEMENT IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE COMPLETED PRIOR TO ANY DEMOLITION, REPAIR OR REHABILITATION OF BRIDGE(S). ABATEMENT SHOULD BE ACCOMPLISHED PER SP202ACM SPECIAL PROVISION REGARDING REMOVAL OF ASBESTOS-CONTAINING MATERIALS. STATE OF TENNESSEE ASBESTOS ACCREDITATION REQUIREMENTS (TCA 1200-01-20) MANDATE THAT ACM ABATEMENT WORK BE PERFORMED BY AN ACCREDITED FIRM (CONTRACTOR) USING ACCREDITED ABATEMENT WORKERS AND SUPERVISORS.

(14) THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING A NOTICE TO THE TDEC, DIVISION OF AIR POLLUTION CONTROL TEN (10) DAYS IN ADVANCE OF ANY ACM ABATEMENT, DEMOLITION, OR MAJOR REPAIR INVOLVING THE REMOVAL/REPLACEMENT OF A STRUCTURAL COMPONENT.

DEMOLITION OF BUILDINGS

(1) IF THE ASBESTOS SURVEY AND ABATEMENT IS NOT PART OF THE CONTRACT, THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE TDOT HAZARDOUS MATERIALS OFFICE TO VERIFY THAT AN ASBESTOS SURVEY HAS BEEN COMPLETED FOR ANY BUILDING TO BE REMOVED. IN THE CASE THAT NO SURVEY HAS BEEN COMPLETED THE CONTRACTOR SHALL COORDINATE WITH THE HAZARDOUS MATERIAL OFFICE IN SCHEDULING A SURVEY.

(2) ASBESTOS-CONTAINING MATERIALS (ACM) ABATEMENT SHALL BE COMPLETED PRIOR TO ANY DEMOLITION ACTIVITIES FOR BUILDINGS INCLUDED IN THE PROJECT. ABATEMENT SHOULD BE ACCOMPLISHED PER SP202ACM SPECIAL PROVISION REGARDING REMOVAL OF ASBESTOS-CONTAINING MATERIALS. STATE OF TENNESSEE ASBESTOS ACCREDITATION REQUIREMENTS (TCA 1200-01-20) MANDATE THAT ACM ABATEMENT WORK BE PERFORMED BY AN ACCREDITED FIRM IB 14-17

(3) (CONTRACTOR) USING ACCREDITED ABATEMENT WORKERS AND SUPERVISORS.

(4) THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING A NOTICE TO THE TDEC, DIVISION OF AIR POLLUTION CONTROL TEN (10) DAYS IN ADVANCE OF ANY ACM ABATEMENT OR DEMOLITION.

PROJECT COMMITMENTS

(1) SEE PROJECT COMMITMENTS, SHEET 1C, FOR DETAILS RELATING TO SPECIAL ENVIRONMENTAL COMMITMENTS REQUIRED BY THIS PROJECT.

CULVERT EXCAVATION

(1) 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.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-I-40-6(130)	2M

UNOFFICIAL SET

NOT FOR BIDDING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-I-40-6(130)	37
CONST.	2015	NH-I-40-6(130)	37

BEGIN PROJECT (R.O.W.)
NH-I-40-6(130); 71100-2112-44
STA. 50+52.48 I-40
N = 657977.9426
E = 2090513.7896

BEGIN PROJECT (CONST.)
NH-I-40-6(130); 71100-3118-44
STA. 38+00.00 I-40
N = 658056.7579
E = 2089263.7919

END PROJECT (CONST.)
NH-I-40-6(130); 71100-3118-44
STA. 113+15.00 I-40
N = 657027.4353
E = 2096657.6668

END PROJECT (R.O.W.).
NH-I-40-6(130); 71100-2112-44
STA. 102+15.92 I-40
N = 657411.9084
E = 2095627.9870

N

MATCH LINE ℄ I-40 SEE SHEET NO. 38

℄ I-40
EX. I-40 EASTBOUND
EXTEND EX. 8' X 7' BOX
DA 2F
DA 2D
DA 3 (INCL. 3A-3F)
PROP. 12' X 6' BOX
RAMP C
RAMP D
MINE LICK CREEK RD. (2)
PROP. 30" RCP
EX. 72" CMP TO BE REMOVED
DA 2 (INCL. 2A-2E)
DA 4
EX. STEWART CEMETERY RD.
DA 1A
EX. 18" CMP TO BE REMOVED
PROP. 18" RCP
EX. BRIDGE TO BE REMOVED
PROPOSED 2 @ 16'X9' RCB
EX. MINE LICK CREEK RD.
℄ LEE SEMINARY RD.
PROP. 24" RCP
LIMIT OF CONSTRUCTION
MINE LICK CREEK RD.
STA. 11+00.00
PROP. 36" RCP
EX. 24" RCP
℄ UNNAMED TRIBUTARY TO CANE CREEK
DA 2E
PROP. 24" RCP
℄ HIGHLAND PARK BLVD. (BY OTHERS)
DA 5 (INCL 5A)
LIMIT OF CONSTRUCTION
STA. 18+10.00
DA 1 (INCL. 1A)
EX. 18" RCP
DA 5A
EX. LEE SEMINARY RD.
EX. 2 @ 6'X3' RCB
℄ BENNETT RD.
EX. OLD STEWART RD.
LIMIT OF CONSTRUCTION
BENNETT RD.
STA. 12+50.00

DRAINAGE TABLE

DRAINAGE AREA	AREA* (Ac.)	Q_{50} (CFS)	Q_{100} (CFS)	Q_{500} (CFS)	C COEFFICIENT OF RUNOFF	TYPE	SIZE	STATION
2	480.00		602.00	810.00	N/A	DBL BOX	16' X 9'	28+60.00
2D	7.36	26.00	28.45		0.43	RCP	30"	26+50.21
2E	9.72	31.34	34.33		0.38	RCP	36"	31+58.09
2F	365.46	455.56	528.83		N/A	BOX	8' X 7'	19+93.86
1	78.09	124.71	137.09		0.30	DBL BOX	6' X 3'	14+11.31 **
1A	5.14	12.02	13.16		0.39	RCP	24"	13+11.75
3	247.45	494.52	576.40		0.32	BOX	12' X 6'	19+08.97
4	1.80	8.79	9.62		0.60	RCP	18"	11+13.40
5	4.03	18.30	20.08		0.51	RCP	24"	10+40.75
5A	2.16	9.68	10.62		0.50	RCP	24"	10+55.07

*CULVERT'S TOTAL CUMULATIVE DRAINAGE AREA.
**DBL 6' X 3' BOX CONSTRUCTED BY ADJACENT PROJECT

UNOFFICIAL SET
NOT FOR BIDDING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DRAINAGE MAP

STA.10+00 TO STA.39+73.55
SCALE: 1"=200'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W	2014	NH-I-40-6(130)	38
CONST.	2015	NH-I-40-6(130)	38

N

DRAINAGE TABLE

DRAINAGE AREA	AREA* (Ac.)	Q_{50} (CFS)	Q_{100} (CFS)	C COEFFICIENT OF RUNOFF	TYPE	SIZE	STATION
2A	4.34	9.10	9.95	0.32	RCP	24"	10+44.53
2B	3.55	10.52	11.50	0.43	RCP	24"	21+17.53
2C	347.74	439.83	510.62	N/A	BOX	8' X 7'	25+92.33
3A	170.50	371.29	433.72	0.31	BOX	12' X 5'	31+62.07
3B	4.19	7.59	8.31	0.30	RCP	24"	17+88.50
3C	17.12	30.46	33.43	0.31	RCP	30"	46+10.18
3D	2.71	6.54	7.17	0.40	RCP	18"	24+98.40
3E	217.26	469.92	547.49	0.31	BOX	12' X 6'	21+28.37
3F	2.02	6.31	6.90	0.38	RCP	24"	43+99.49

*CULVERT'S TOTAL CUMULATIVE DRAINAGE AREA.

BEGIN PROJECT (CONST.)
NH-I-40-6(130); 71100-3118-44
STA. 38+00.00 I-40
N = 658056.7579
E = 2089263.7919

END PROJECT (CONST.)
NH-I-40-6(130); 71100-3118-44
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LIMIT OF CONSTRUCTION
HAWKINS CRAWFORD RD.
STA. 10+00.00

LIMIT OF GRADING
BENNETT ROAD.
STA. 53+54.56

LIMIT OF CONSTRUCTION
MINE LICK CREEK RD.
STA. 42+65.05

EX. HAWKINS CRAWFORD RD.

DA 2A
DA 2B
DA 2C (INCL. 2A-2B)
DA 3A (INCL. 3D)
DA 3B
DA 3C (INCL. 3B)
DA 3D
DA 3E (INCL. 3A-3D)
DA 3F

PROP. 24" RCP
PROP. 18" RCP
PROP. 30" RCP
PROP. CHANNEL CHANGE
PROP. 12'X5' BOX
PROP. 12'X6' BOX
EXTEND. EX. 8'X7' BOX
EX. 48" RCP TO BE REMOVED
EX. 8'X7' BOX TO REMAIN

UNNAMED TRIBUTARY TO CANE CREEK STR-3

℄ HAWKINS CRAWFORD RD.
℄ BENNETT RD.
℄ MINE LICK CREEK RD.(1)
EX. MINE LICK CREEK RD.
RAMP A
RAMP B
℄ I-40
EX. I-40 WESTBOUND

MATCH LINE ℄ I-40 SEE SHEET NO. 37

UNOFFICIAL SET
NOT FOR BIDDING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DRAINAGE MAP

STA.39+73.55 TO EOP
SCALE: 1"=200'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-I-40-6(130)	46
CONST.	2015	NH-I-40-6(130)	46

EROSION PREVENTION AND SEDIMENT CONTROL NOTES

STREAM/WETLAND

(1) ANY WORK WITHIN THE STREAM CHANNEL AREA (E.G., FOR PIER FOOTING, RIP-RAP PLACEMENT, MULTI-BARREL CULVERT/BRIDGE CONSTRUCTION, ETC.) SHALL BE SEPARATED FROM FLOWING WATER OR EXPECTED FLOW PATH AND PERFORMED DURING LOW FLOW CONDITIONS. ALL ITEMS USED WITHIN THE STREAM CHANNEL AREA FOR DIVERSION OF FLOW (OR EXPECTED FLOW), UNLESS SPECIFIED IN THE PLANS, SHALL NOT BE PAID FOR DIRECTLY BUT SHALL BE INCLUDED IN THE COST OF OTHER ITEMS. THIS NOTE EXCLUDES ANY ITEMS SPECIFIED IN THE PLANS FOR THE TEMPORARY DIVERSION CHANNELS, EC-STR-31 AND TEMPORARY DIVERSION CULVERTS, EC-STR-32 FOR SINGLE BARREL CULVERT CONSTRUCTION.

(2) A 30 FOOT NATURAL RIPARIAN BUFFER ZONE ADJACENT TO AND ON BOTH SIDES OF THE RECEIVING STREAM SHALL BE PRESERVED, TO THE MAXIMUM EXTENT PRACTICABLE, DURING CONSTRUCTION ACTIVITIES AT THE SITE. BUFFER ZONES ARE NOT SEDIMENT CONTROL MEASURES AND SHOULD NOT BE RELIED UPON AS PRIMARY SEDIMENT CONTROL MEASURES. THE RIPARIAN BUFFER ZONE SHALL BE ESTABLISHED BETWEEN THE TOP OF THE STREAM BANK AND THE DISTURBED CONSTRUCTION AREA. THE 30 FOOT CRITERION FOR THE WIDTH OF THE BUFFER ZONE CAN BE ESTABLISHED ON AN AVERAGE WIDTH BASIS AT A PROJECT, AS LONG AS THE MINIMUM WIDTH OF THE BUFFER ZONE IS MORE THAN 15 FEET AT ANY MEASURED LOCATION. EVERY ATTEMPT SHALL BE MADE FOR CONSTRUCTION ACTIVITIES NOT TO TAKE PLACE WITHIN THE BUFFER ZONES. BEST MANAGEMENT PRACTICES (BMPS) PROVIDING EQUIVALENT PROTECTION AS THE NATURAL RIPARIAN ZONE MAY BE USED. A JUSTIFICATION FOR USE AND DESIGN EQUIVALENCY SHALL BE DOCUMENTED WITHIN THE SWPPP. THE ENVIRONMENTAL AND ROADWAY DESIGN DIVISIONS SHALL REVIEW AND APPROVE THIS REVISION OF THE SWPPP BEFORE DISTURBANCE OF THE SITE PROCEEDS, UNLESS PREVIOUSLY EXEMPT IN THE NPDES CONSTRUCTION GENERAL PERMIT. WHERE ISSUED, ARAP/401 REQUIREMENTS WILL PREVAIL IF IN CONFLICT WITH THESE BUFFER ZONE REQUIREMENTS.

HIGH QUALITY WATERS

(3) FOR PROJECTS THAT DISCHARGE INTO HIGH QUALITY WATERS OR WATERS IMPAIRED BY SILTATION, AN OUTFALL IN A DRAINAGE AREA OF 5 ACRES OR MORE, A TEMPORARY (OR PERMANENT) SEDIMENT BASIN THAT PROVIDES STORAGE FOR A CALCULATED VOLUME OF RUNOFF FROM A 5-YEAR/ 24-HOUR STORM EVENT AND RUNOFF FROM EACH ACRE DRAINED, OR EQUIVALENT CONTROL MEASURES, SHALL BE PROVIDED UNTIL FINAL STABILIZATION OF THE SITE. THE ENVIRONMENTAL AND DESIGN DIVISIONS MAY BE CONTACTED TO REVIEW AND CONCUR WITH ANY REVISION OF THE SWPPP BEFORE DISTURBANCE OF THE OUTFALL PROCEEDS, UNLESS PREVIOUSLY EXEMPT IN THE NPDES CONSTRUCTION GENERAL PERMIT.

(4) FOR PROJECTS THAT DISCHARGE INTO HIGH QUALITY WATERS OR WATERS IMPAIRED BY SILTATION, A 60 FOOT NATURAL RIPARIAN BUFFER ZONE ADJACENT TO AND ON BOTH SIDES OF THE RECEIVING STREAM WITH THIS DESIGNATION SHALL BE PRESERVED, TO THE MAXIMUM EXTENT PRACTICABLE, DURING CONSTRUCTION ACTIVITIES AT THE SITE. BUFFER ZONES ARE NOT SEDIMENT CONTROL MEASURES AND SHOULD NOT BE RELIED UPON AS PRIMARY SEDIMENT CONTROL MEASURES. THE RIPARIAN BUFFER ZONE SHALL BE ESTABLISHED BETWEEN THE TOP OF THE STREAM BANK AND THE DISTURBED CONSTRUCTION AREA. THE 60 FOOT CRITERION FOR THE WIDTH OF THE BUFFER ZONE CAN BE ESTABLISHED ON AN AVERAGE WIDTH BASIS AT A PROJECT, AS LONG AS THE MINIMUM WIDTH OF THE BUFFER ZONE IS MORE THAN 25 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

(5) NO WORK SHALL BE STARTED UNTIL THE CONTRACTOR'S PLAN FOR THE STAGING OF THEIR OPERATIONS, INCLUDING THE PLAN FOR STAGING OF TEMPORARY AND PERMANENT EPSC MEASURES, HAS BEEN ACCEPTED BY THE ENGINEER. THE CONTRACTOR'S EPSC PLAN SHALL INCORPORATE AND SUPPLEMENT, AS ACCEPTABLE, THE BASIC EPSC DEVICES ON THE EPSC PLAN CONTAINED IN THE APPROVED SWPPP.

(6) THE EPSC MEASURES AND/OR PLAN SHALL BE MODIFIED AS NECESSARY SO THAT THEY ARE EFFECTIVE AT ALL TIMES THROUGHOUT THE COURSE OF THE PROJECT.

(7) THE ACCEPTED EPSC PLAN SHALL REQUIRE THAT EPSC MEASURES BE IN PLACE BEFORE CLEARING, GRUBBING, EXCAVATION, GRADING, CUTTING OR FILLING OCCURS, EXCEPT AS SUCH WORK MAY BE NECESSARY TO INSTALL EPSC MEASURES, INCLUDING WITHOUT LIMITATION AS FOLLOWS:

A. INITIAL CLEARING AND GRUBBING SHALL BE LIMITED TO THAT NECESSARY FOR THE INSTALLATION OF APPLICABLE EPSC MEASURES IN ACCORDANCE WITH THE ACCEPTED EPSC PLAN INCORPORATED INTO THE SWPPP.

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

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

D. NO GRADING, EXCAVATION, CUTTING, FILLING, OR OTHER EARTHWORK SHALL BE STARTED BEFORE EPSC MEASURES ARE IN PLACE IN ACCORDANCE WITH THE ACCEPTED EPSC PLAN INCORPORATED INTO THE SWPPP.

(8) PERMANENT EPSC MEASURES SHALL BE INITIATED WITHIN 14 CALENDAR DAYS AFTER FINAL GRADING OF ANY SEQUENCE OR PHASE. TEMPORARY OR PERMANENT STABILIZATION SHALL BE INITIATED WITHIN 14 CALENDAR DAYS AFTER FINAL GRADING OR WHEN CONSTRUCTION ACTIVITIES ON A PORTION OF THE SITE ARE TEMPORARILY CEASED AND EARTH DISTURBING ACTIVITIES WILL NOT RESUME UNTIL AFTER 14 CALENDAR DAYS. PERMANENT STABILIZATION WITH PERENNIAL VEGETATION OR OTHER PERMANENTLY STABLE NON-ERODING SURFACE SHALL REPLACE ANY TEMPORARY MEASURES AS SOON AS PRACTICABLE. UNPACKED GRAVEL CONTAINING FINES (SILT AND CLAY SIZED PARTICLES) OR CRUSHER-RUN WILL NOT BE CONSIDERED A NON-ERODIBLE SURFACE.

(9) STEEP SLOPES (A NATURAL OR CREATED SLOPE OF 35% GRADE (2.8H:1V) OR GREATER REGARDLESS OF HEIGHT) SHALL BE TEMPORARILY STABILIZED NO LATER THAN 7 CALENDAR DAYS AFTER CONSTRUCTION ACTIVITY ON THE SLOPE HAS TEMPORARILY OR PERMANENTLY CEASED.

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

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

UTILITY RELOCATION

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

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

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

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

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

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

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

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

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

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

POLYACRYLAMIDE

(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.

SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN NOTES

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-I-40-6(130)	47
CONST.	2015	NH-I-40-6(130)	47

EROSION PREVENTION AND SEDIMENT CONTROL NOTES CON'T.

POLYACRYLAMIDE

(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 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.

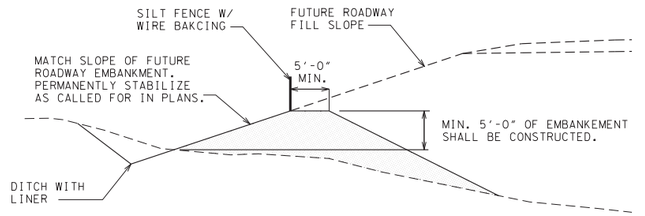
(33) PAM LOGS OR BLOCKS SHALL BE APPLIED FOLLOWING SITE TESTING RESULTS TO ENSURE PROPER PLACEMENT AND PERFORMANCE AND SHALL MEET OR EXCEED STATE AND FEDERAL WATER QUALITY REQUIREMENTS.

EROSION CONTROL QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	PHASE 1 QUANTITY	PHASE 2 QUANTITY	PHASE 3 QUANTITY	TOTAL
(1)	203-01	ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED)	C.Y.	910		2439	3349
	209-02.03	8" TEMPORARY SLOPE DRAIN	L.F.			399	399
	209-02.05	12" TEMPORARY SLOPE DRAIN	L.F.			116	116
	209-02.06	15" TEMPORARY SLOPE DRAIN	L.F.			292	292
	209-02.07	18" TEMPORARY SLOPE DRAIN	L.F.			44	44
	209-05	SEDIMENT REMOVAL	C.Y.			1977	1977
(14)	209-08.02	TEMPORARY SILT FENCE (W/ BACKING)	L.F.	55269	8228	16766	83263
	209-08.03	TEMPORARY SILT FENCE (W/O BACKING)	L.F.	21719	1269		22988
	209-08.07	ROCK CHECK DAM PER	EACH	54	12	577	643
	209-08.08	ENHANCED ROCK CHECK DAM	EACH	37	21	174	232
(8)	209-09.01	SANDBAGS	BAGS		12720		12720
	209-09.03	SEDIMENT FILTER BAGS (15' X 15')	EACH	2	6		8
(2)	209-09.22	POLYACRYLAMIDE POWDER	LB.			6416	6416
	209-10.20	TEMPORARY SEDIMENT TRAP	C.Y.			1953	1953
(8)	209-20.03	POLYETHYLENE SHEETING (6 MIL. MINIMUM)	S.Y.		707		707
	209-65.03	TEMPORARY DIVERSION CHANNEL	L.F.		801		801
	209-65.04	TEMPORARY IN STREAM DIVERSION	L.F.		200		200
(9)	303-10.01	MINERAL AGGREGATE (SIZE 57)	TON	93	75	84	252
(13)	621-03.02	18" TEMPORARY DRAINAGE PIPE	L.F.	660			660
	621-03.08	54" TEMPORARY DRAINAGE PIPE	L.F.		560		560
(11)	707-08.11	HIGH-VISIBILITY CONSTRUCTION FENCE	L.F.	3832			4832
(10)	709-05.05	MACHINED RIPRAP (CLASS A-3)	TON	1251			1251
(3)	709-05.06	MACHINED RIPRAP (CLASS A-1)	TON	3035	1762	419	5216
(12)	740-10.03	GEOTEXTILE TYPE III (EROSION CONTROL)	S.Y.	6133	2676	842	9651
	740-11.02	TEMPORARY SEDIMENT TUBE (12IN)	L.F.		877	16487	17364
	740-11.03	TEMPORARY SEDIMENT TUBE (18IN)	L.F.	4522	905	116110	121537
(4)	801-01	SEEDING (WITH MULCH)	UNIT			327	327
(2)	801-01.07	TEMPORARY SEEDING (WITH MULCH)	UNIT	1388	1388	1388	4164
(5)	801-02	SEEDING (WITHOUT MULCH)	UNIT			841	841
(2)(6)	801-02.01	CROWN VETCH MIXTURE (WITHOUT MULCH)	UNIT			893	893
	801-03	WATER (SEEDING & SODDING)	M.G.			723	723
(2)	801-07	SEED (SUPPLEMENTAL APPLICATION)	LB.			210	210
(2)	801-07.01	CROWN VETCH SEED (SUPPLEMENTAL APPLICATION)	LB.			201	201
(2)	801-08	FERTILIZER (SUPPLEMENTAL APPLICATION)	TON			2	2
(2)	803-01	SODDING (NEW SOD)	S.Y.			10000	10000
(7)	805-12.02	EROSION CONTROL BLANKET (TYPE II)	S.Y.			154182	154182

(1) 910 C.Y. FOR CONSTRUCTION EXITS, 65 C.Y. FOR TEMP. SLOPE DRAINS, AND 2374 C.Y. FOR EARTH BERMS.
(2) TO BE USED AS DIRECTED BY PROJECT ENGINEER.
(3) 396 TON FOR CULVERT PROTECTION, 1762 TONS DIVERSION CHANNELS, 3058 TONS TEMPORARY SLOPE DRAINS & BERMS, & TONS FOR TEMP. SED. TRAPS.
(4) FOR USE ON SCARIFIED AREAS.
(5) TO BE USED ON ALL SLOPES 3:1 OR FLATTER.
(6) TO BE USED ON ALL SLOPES 2.5:1 OR STEEPER.
(7) TO BE USED FOR FINAL STABILIZATION OF ALL SLOPES.
(8) FOR USE WITH TEMPORARY DIVERSION CHANNEL & SANDBAG BERMS.
(9) 152 TONS FOR CULVERT PROTECTION AND 100 TONS FOR SEDIMENT FILTER BAGS.
(10) FOR TEMPORARY CONSTRUCTION EXITS.
(11) INCLUDES 3832 L.F. FOR BUFFER PROTECTECTION AND 1000 FT TO BE USED AS DIRECTED BY PROJECT ENGINEER.
(12) INCLUDES 1842 S.Y. FOR T.C.E., 765 S.Y. FOR SED. FILTER BAGS, 2103 S.Y. FOR TEMP. DIV. CHANNELS, 1314 S.Y. FOR CULVERT PROTECTION, & 3627 S.Y. FOR TEMP. BERMS IN PHASE 1.
(13) 660 L.F. FOR TEMP. CONSTRUCTION EXITS.
(14) 778 L.F. FOR SEDIMENT FILTER BAGS.

NOTES:
1. EMBANKMENT BERMS SHOULD BE CONSTRUCTED AS SHOWN IN THE PLANS TO CREATE CLEAN DIVERSION.
2. EARTH EMBANKMENT TO BE INCIDENTAL TO 203-01 ROAD AND DRAINAGE EXCAVION (UNCLASSIFIED).



DIVERSION BERM DETAIL

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
✱ESF✱ESF✱ESF✱	ENHANCED SILT FENCE	EC-STR-3D
	TEMPORARY BERM	EC-STR-27
	DIVERSION BERM	SEE DETAIL
	TEMPORARY SLOPE DRAIN	EC-STR-27
✱✱TUBE✱✱TUBE✱✱	SEDIMENT TUBE	EC-STR-37
	ROCK CHECK DAM (V-DITCH)	EC-STR-6
	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
	TEMPORARY DIVERSION CHANNEL (DESCRIBE-SIZE AND TYPE OF LINING)	EC-STR-31
	SUSPENDED PIPE DIVERSION	EC-STR-33 EC-STR-33A
	SAND BAG BERM	EC-STR-33
	SEDIMENT TRAP WITH ENHANCED ROCK CHECK DAM	EC-STR-7
	CULVERT PROTECTION (TYPE 1)	EC-STR-11
	CULVERT PROTECTION (TYPE 2)	EC-STR-11A
SFB✱ ✱SFB ✱SFB ✱SFB	SEDIMENT FILTER BAG	EC-STR-2
TCE	TEMPORARY CONSTRUCTION EXIT	EC-STR-25
✱HVF✱HVF	HIGH VISIBILITY FENCE	S-F-1
IN DIV	INSTREAM DIVERSION	EC-STR-30 EC-STR-30A
	SEDIMENT TUBE INLET PROTECTION	EC-STR-37

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EPSC QUANTITIES

DETAILS & LEGEND

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-I-40-6(130)	47A

SEDIMENT TRAP WITH CHECK DAM

SHEET NO.	LOCATION	STATION	PHASE	LT/RT	DESCRIPTION	TEMPORARY SEDIMENT TRAP 209-10.20 (C.Y.)	MACHINED RIP-RAP (CLASS A-1) (1) (TON)	GEOTEXTILE (TYPE III) (EROSION CONTROL) (1) (S.Y.)	ENHANCED ROCK CHECK DAM (EACH) 209-08.08 (S.Y.)
11B	BENNETT RD.	14+00	3	RT	29 X 14.5 X 4	96.7	53.3	98.3	1
11B	BENNETT RD.	21+50	3	RT	45 X 22.5 X 4	203.3	79.9	124.1	1
12B	BENNETT RD.	24+50	3	LT	35 X 17.5 X 4	132.2	69.5	107.9	1
12B	BENNETT RD.	27+50	3	RT	36 X 18 X 4	138.7	70.5	109.6	1
12B	BENNETT RD.	28+00	3	LT	40 X 20 X 4	165.9	74.7	116.0	1
12B	BENNETT RD.	29+00	3	RT	64 X 32 X 1.5	124.4	11.1	69.7	1
12B	BENNETT RD.	29+50	3	LT	48 X 24 X 1.5	72.0	8.8	55.0	1
14B	BENNETT RD.	46+00	3	RT	28 X 14 X 3	62.2	30.3	69.3	1
14B	BENNETT RD.	53+50	3	RT	19 X 9.5 X 2.5	25.5	15.8	46.6	1
9B	RAMP C	19+30	3	RT	39 X 19.5 X 4	158.9	73.6	114.4	1
10B	RAMP C	37+00	3	RT	46 X 23 X 4	211.3	80.9	125.7	1
12B	LEE SEMINARY RD.	31+00	3	RT	49 X 24.5 X 4	235.9	84.0	130.5	1
17B	HAWKINS CRAWFORD RD.	11+50	3	RT	35 X 17.5 X 1.5	39.9	6.9	43.1	1
17B	HAWKINS CRAWFORD RD.	17+50	3	RT	26 X 13 X 2.5	43.3	18.6	54.9	1
13B	MINE LICK CREEK RD. (1)	30+50	3	LT	23 X 11.5 X 2.5	35.1	17.4	51.4	1
13B	MINE LICK CREEK RD. (1)	31+60	3	RT	35 X 17.5 X 4	132.2	69.5	107.9	1
13B	MINE LICK CREEK RD. (1)	32+75	3	RT	26 X 13 X 2.5	43.3	18.6	54.9	1
7B	MINE LICK CREEK RD. (2)	16+50	3	LT	21 X 10.5 X 1.5	15.8	4.8	30.3	1
7B	MINE LICK CREEK RD. (2)	16+70	3	RT	21 X 10.5 X 1.5	15.8	4.8	30.3	1
TOTALS						**1952**	**803**	**1540**	**19**

(1) QUANTITY AND COST TO BE INCLUDED IN ITEM 209-10.20

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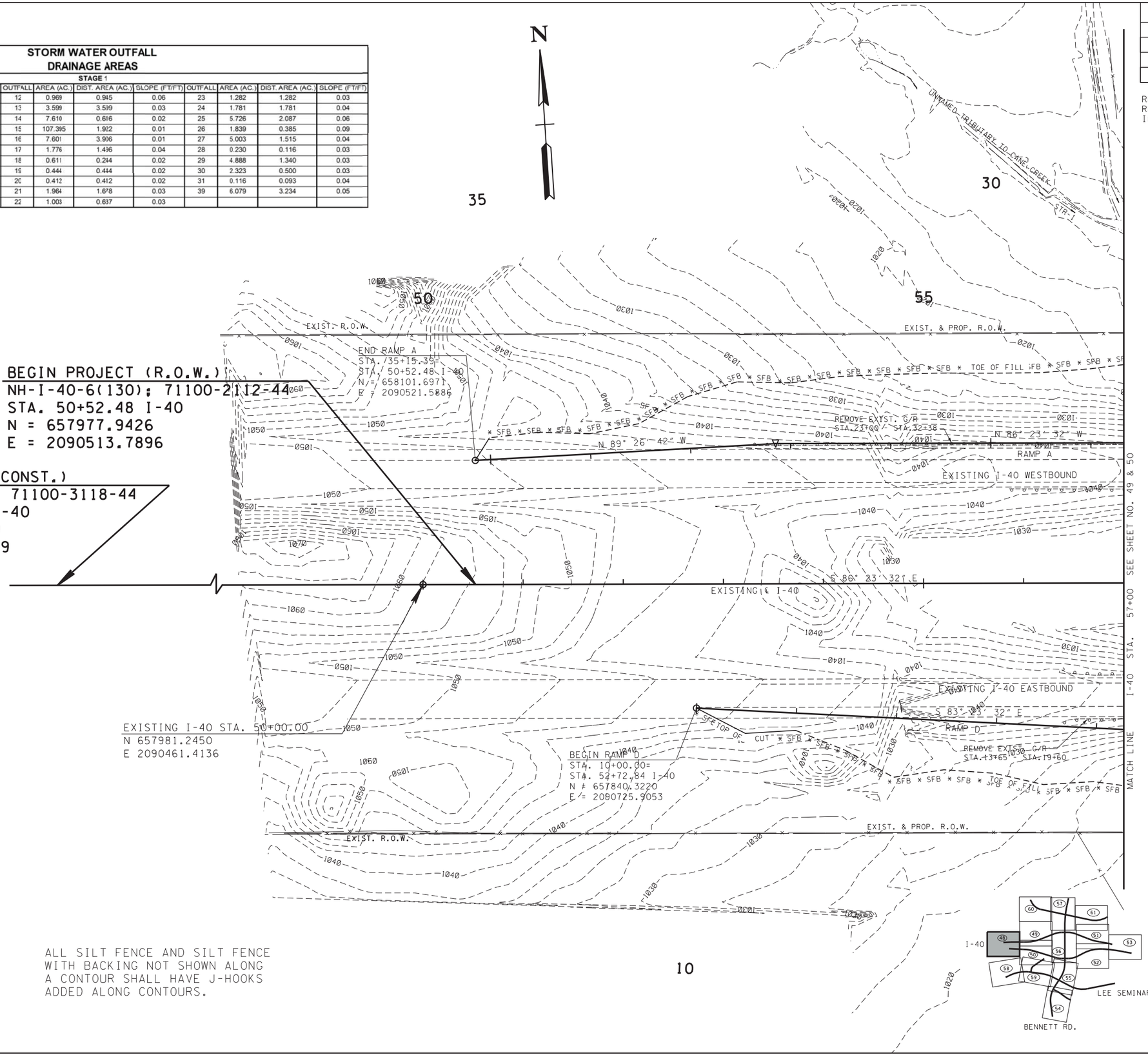
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-I-40-6(130)	48
CONST.	2015	NH-I-40-6(130)	48

REV. 05/20/2015:
REVISED OUTFALL DATA TABLE TO INCLUDE OUTFALL 39.

STORM WATER OUTFALL DRAINAGE AREAS

STAGE 1

OUTFALL	AREA (AC.)	DIST. AREA (AC.)	SLOPE (FT/FT)	OUTFALL	AREA (AC.)	DIST. AREA (AC.)	SLOPE (FT/FT)	OUTFALL	AREA (AC.)	DIST. AREA (AC.)	SLOPE (FT/FT)
1	14.675	6.351	0.02	12	0.969	0.945	0.06	23	1.282	1.282	0.03
2	1.640	0.753	0.06	13	3.599	3.599	0.03	24	1.781	1.781	0.04
3	1.827	1.602	0.05	14	7.610	0.616	0.02	25	5.726	2.087	0.06
4	1.413	1.397	0.04	15	107.395	1.922	0.01	26	1.839	0.385	0.09
5	0.184	0.184	0.05	16	7.601	3.906	0.01	27	5.003	1.515	0.04
6	28.241	12.490	0.02	17	1.776	1.496	0.04	28	0.230	0.116	0.03
7	0.291	0.291	0.02	18	0.611	0.214	0.02	29	4.888	1.340	0.03
8	0.538	0.374	0.03	19	0.444	0.444	0.02	30	2.323	0.500	0.03
9	2.211	0.940	0.03	20	0.412	0.412	0.02	31	0.116	0.093	0.04
10	3.655	2.057	0.03	21	1.964	1.678	0.03	39	6.079	3.234	0.05
11	5.391	0.535	0.03	22	1.003	0.637	0.03				



ALL SILT FENCE AND SILT FENCE WITH BACKING NOT SHOWN ALONG A CONTOUR SHALL HAVE J-HOOKS ADDED ALONG CONTOURS.

10

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 50+00 TO STA. 57+00

SCALE: 1"= 50'

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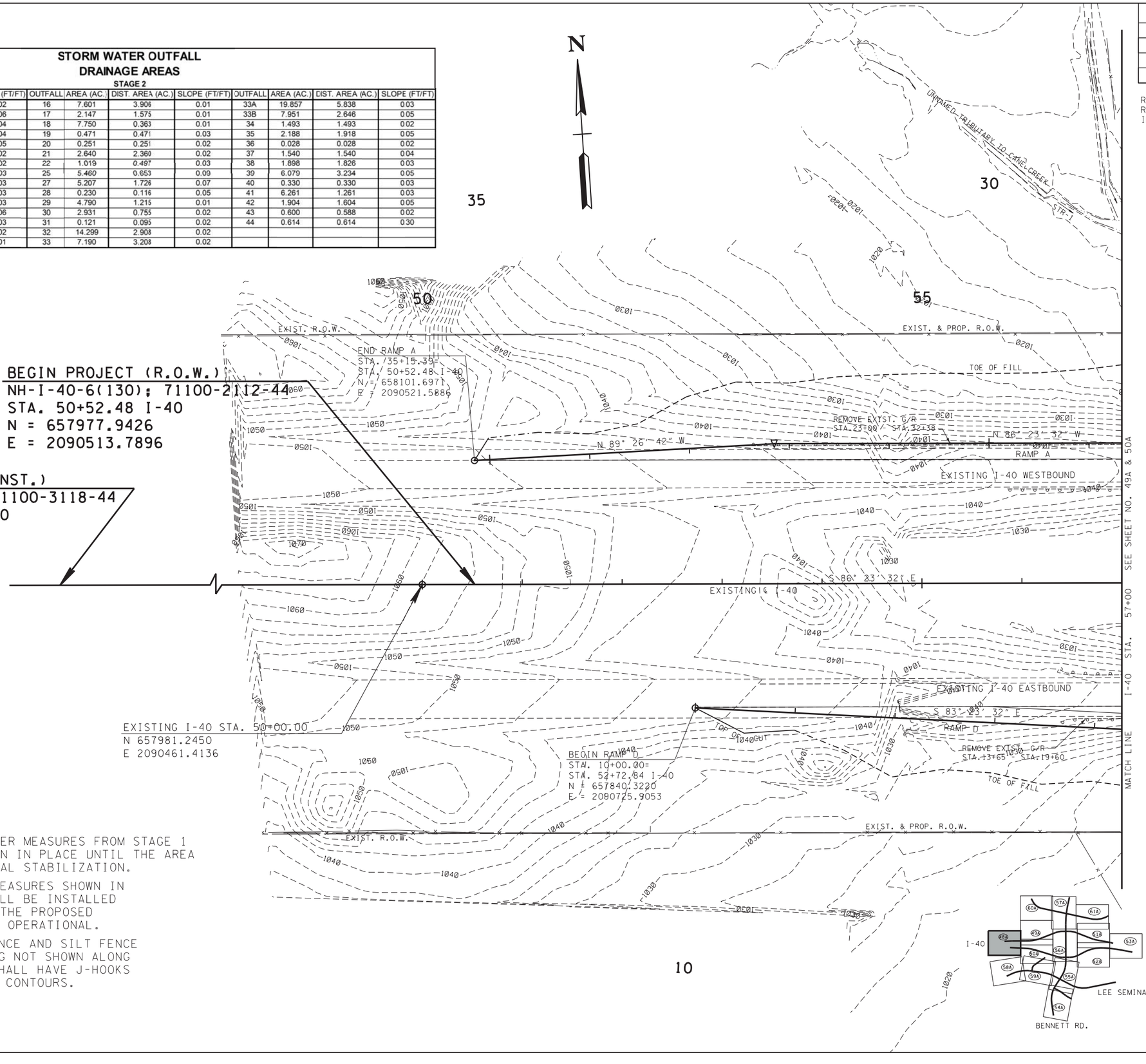
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-I-40-6(130)	48A
CONST.	2015	NH-I-40-6(130)	48A

REV. 05/20/2015:
REVISED OUTFALL DATA TABLE TO INCLUDE OUTFALLS 33A & 33B.

STORM WATER OUTFALL DRAINAGE AREAS
STAGE 2

OUTFALL	AREA (AC.)	DIST. AREA (AC.)	SLOPE (FT/FT)	OUTFALL	AREA (AC.)	DIST. AREA (AC.)	SLOPE (FT/FT)	OUTFALL	AREA (AC.)	DIST. AREA (AC.)	SLOPE (FT/FT)
1	14.655	6.310	0.02	16	7.601	3.906	0.01	33A	19.857	5.838	0.03
2	2.084	0.869	0.06	17	2.147	1.575	0.01	33B	7.951	2.646	0.05
3	1.764	1.540	0.04	18	7.750	0.363	0.01	34	1.493	1.493	0.02
4	0.271	0.238	0.04	19	0.471	0.471	0.03	35	2.188	1.918	0.05
5	0.112	0.112	0.05	20	0.251	0.251	0.02	36	0.028	0.028	0.02
6	26.525	10.929	0.02	21	2.640	2.360	0.02	37	1.540	1.540	0.04
7	0.070	0.070	0.02	22	1.019	0.497	0.03	38	1.898	1.826	0.03
8	0.538	0.374	0.03	25	5.460	0.653	0.09	39	6.079	3.234	0.05
9	1.367	0.469	0.03	27	5.207	1.726	0.07	40	0.330	0.330	0.03
10	1.159	1.159	0.03	28	0.230	0.116	0.05	41	6.261	1.261	0.03
11	5.391	0.535	0.03	29	4.790	1.215	0.01	42	1.904	1.604	0.05
12	0.669	0.669	0.06	30	2.931	0.755	0.02	43	0.600	0.588	0.02
13	7.384	7.384	0.03	31	0.121	0.095	0.02	44	0.614	0.614	0.30
14	7.610	0.616	0.02	32	14.299	2.908	0.02				
15	107.395	1.922	0.01	33	7.190	3.208	0.02				



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

THE DITCH MEASURES SHOWN IN STAGE 3 SHALL BE INSTALLED AS SOON AS THE PROPOSED DITCHES ARE OPERATIONAL.

ALL SILT FENCE AND SILT FENCE WITH BACKING NOT SHOWN ALONG A CONTOUR SHALL HAVE J-HOOKS ADDED ALONG CONTOURS.

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INTERMEDIATE GRADING

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DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

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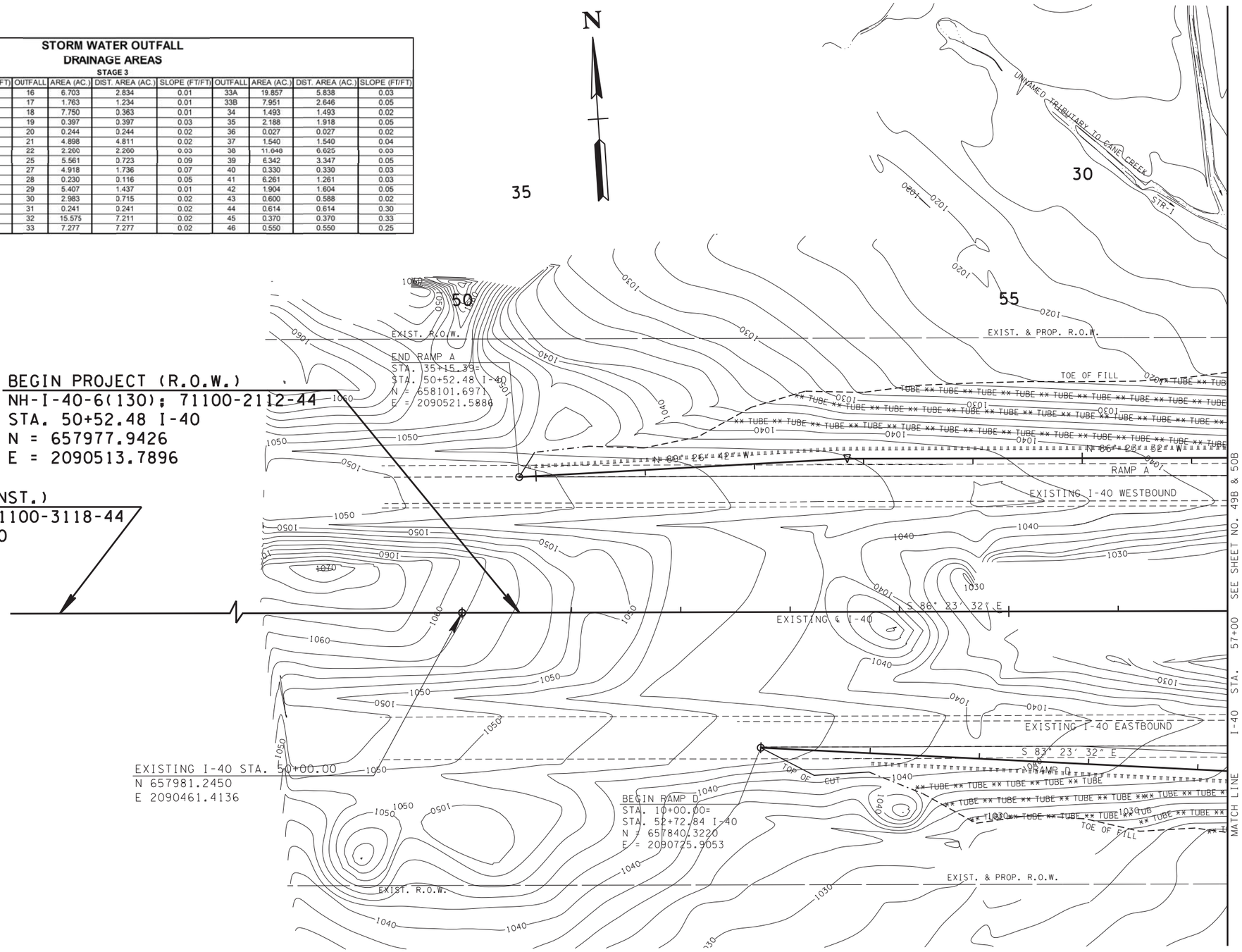
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-I-40-6(130)	48B
CONST.	2015	NH-I-40-6(130)	48B

REV. 05/20/2015:
REVISED OUTFALL DATA TABLE TO INCLUDE OUTFALLS 33A, 33B, 45, & 46.

STORM WATER OUTFALL DRAINAGE AREAS
STAGE 3

OUTFALL	AREA (AC.)	DIST. AREA (AC.)	SLOPE (FT/FT)	OUTFALL	AREA (AC.)	DIST. AREA (AC.)	SLOPE (FT/FT)	OUTFALL	AREA (AC.)	DIST. AREA (AC.)	SLOPE (FT/FT)
1	15.575	7.211	0.02	16	6.703	2.834	0.01	33A	19.857	5.838	0.03
2	2.703	1.585	0.06	17	1.763	1.234	0.01	33B	7.951	2.646	0.05
3	1.323	0.871	0.04	18	7.750	0.363	0.01	34	1.493	1.493	0.02
4	0.197	0.165	0.03	19	0.397	0.397	0.03	35	2.188	1.918	0.05
5	0.105	0.105	0.02	20	0.244	0.244	0.02	36	0.027	0.027	0.02
6	2.178	0.095	0.02	21	4.898	4.811	0.02	37	1.540	1.540	0.04
7	0.106	0.106	0.02	22	2.260	2.260	0.03	38	11.640	6.625	0.03
8	0.538	0.374	0.03	25	5.561	0.723	0.09	39	6.342	3.347	0.05
9	2.211	0.940	0.03	27	4.918	1.736	0.07	40	0.330	0.330	0.03
10	1.326	1.326	0.03	28	0.230	0.116	0.05	41	6.261	1.261	0.03
11	5.450	0.547	0.03	29	5.407	1.437	0.01	42	1.904	1.604	0.05
12	0.707	0.707	0.06	30	2.983	0.715	0.02	43	0.600	0.588	0.02
13	3.599	3.599	0.03	31	0.241	0.241	0.02	44	0.614	0.614	0.30
14	7.610	0.618	0.02	32	15.575	7.211	0.02	45	0.370	0.370	0.33
15	102.703	0.715	0.01	33	7.277	7.277	0.02	46	0.550	0.550	0.25

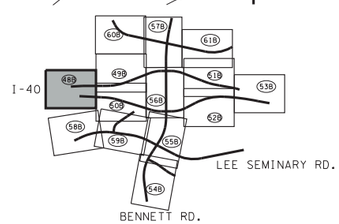


BEGIN PROJECT (R.O.W.)
NH-I-40-6(130); 71100-2112-44
STA. 50+52.48 I-40
N = 657977.9426
E = 2090513.7896

BEGIN PROJECT (CONST.)
NH-I-40-6(130); 71100-3118-44
STA. 38+00.00 I-40
N = 658056.7579
E = 2089263.7919

ALL PERIMETER MEASURES FROM STAGE 2 SHALL REMAIN IN PLACE UNTIL THE AREA REACHES FINAL STABILIZATION.

ITEM NO. 801-02 SEEDING (WITHOUT MULCH) & ITEM NO. 805-12.02 EROSION CONTROL BLANKET (TYPE II) SHALL BE PLACED WITHIN THE SLOPE LIMITS THROUGHOUT THIS PROJECT EXCEPT WHERE SLOPES ARE 2.5:1 OR STEEPER. 803-01 SODDING (NEW SOD)MAY BE SUBSTITUTED AS DIRECTED BY THE ENGINEER.



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STAGE 3
FINAL STABILIZATION

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DEPARTMENT OF TRANSPORTATION

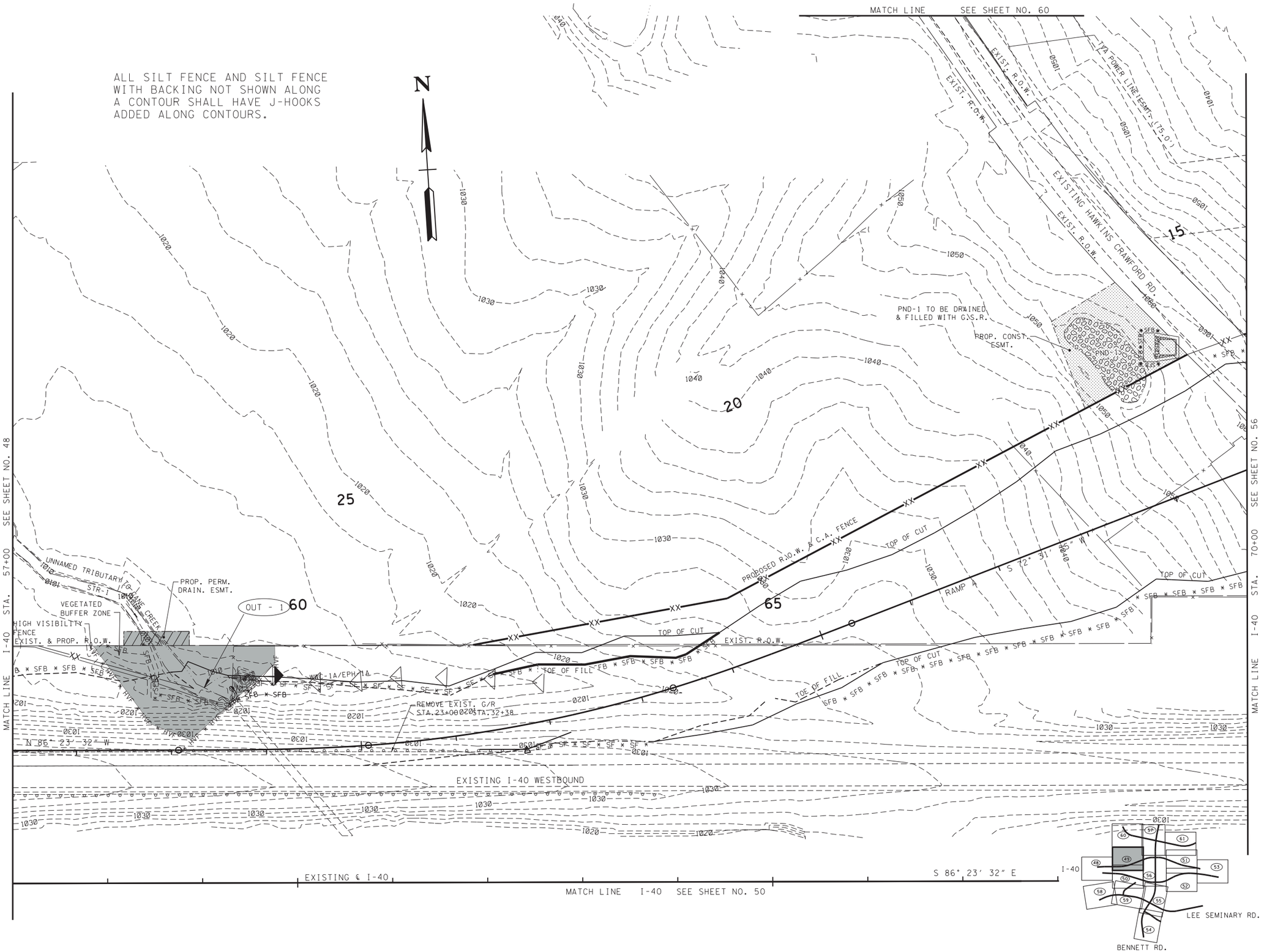
EROSION CONTROL
PROPOSED CONTOURS

STA. 50+00 TO STA. 57+00
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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-I-40-6(130)	49
CONST.	2015	NH-I-40-6(130)	49



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DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 57+00 TO STA. 70+00
SCALE: 1"= 50'

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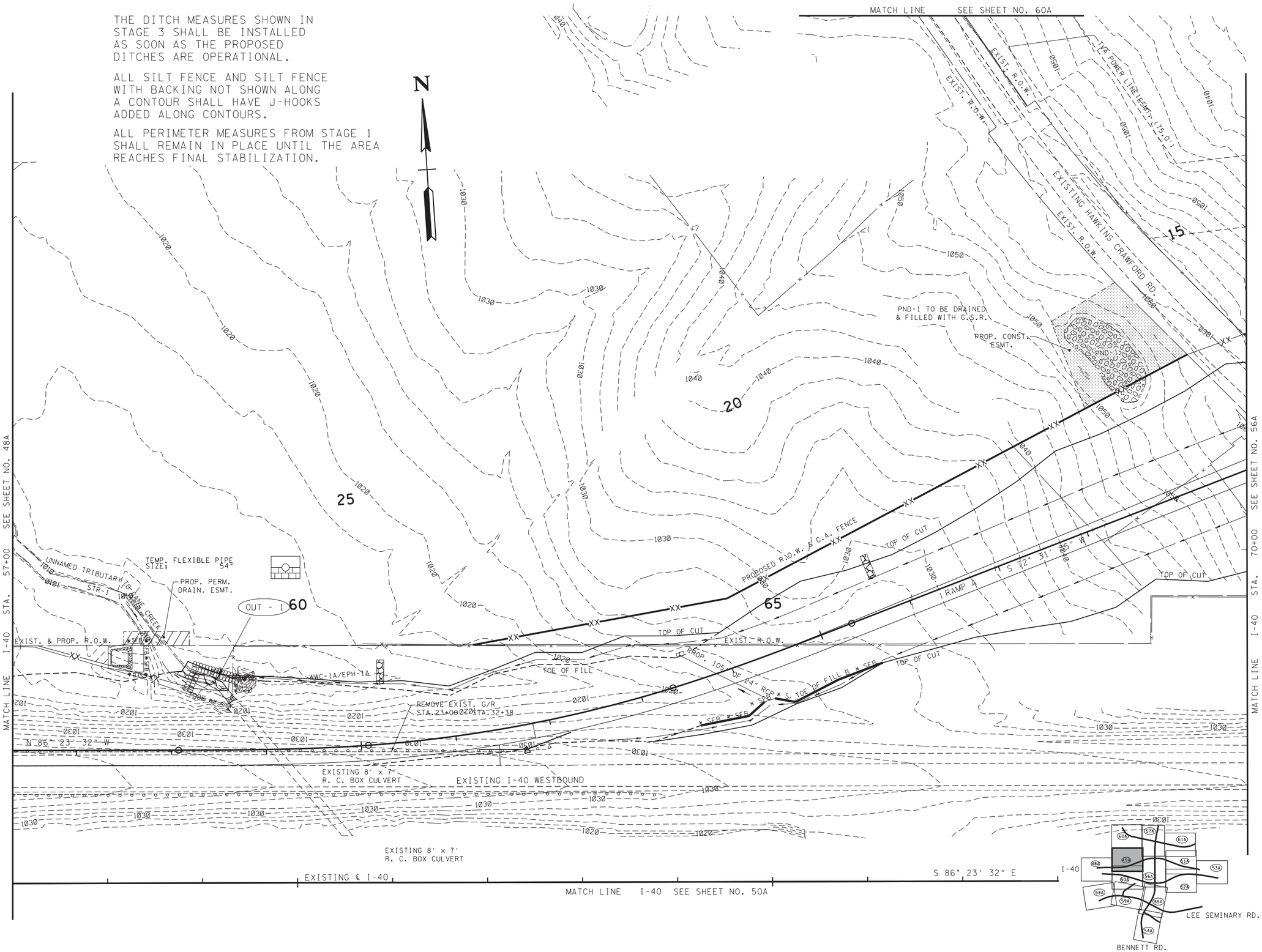
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-I-40-6(130)	49A
CONST.	2015	NH-I-40-6(130)	49A

THE DITCH MEASURES SHOWN IN STAGE 3 SHALL BE INSTALLED AS SOON AS THE PROPOSED DITCHES ARE OPERATIONAL.

ALL SILT FENCE AND SILT FENCE WITH BACKING NOT SHOWN ALONG A CONTOUR SHALL HAVE J-HOOKS ADDED ALONG CONTOURS.

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



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STAGE 2 INTERMEDIATE GRADING

STATE OF TENNESSEE
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EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 57+00 TO STA. 70+00
SCALE: 1"= 50'

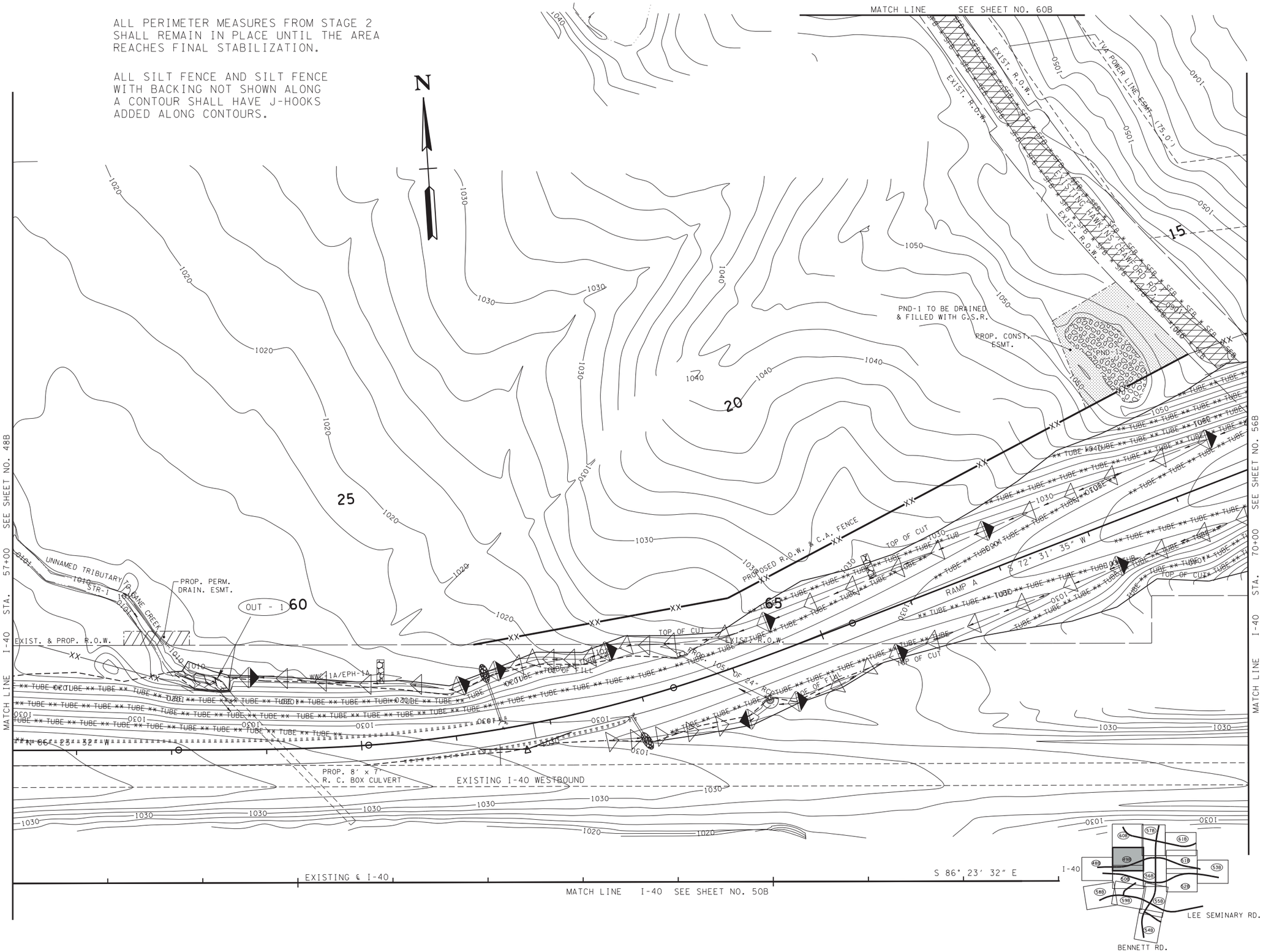
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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-I-40-6(130)	49B
CONST.	2015	NH-I-40-6(130)	49B

ALL PERIMETER MEASURES FROM STAGE 2 SHALL REMAIN IN PLACE UNTIL THE AREA REACHES FINAL STABILIZATION.

ALL SILT FENCE AND SILT FENCE WITH BACKING NOT SHOWN ALONG A CONTOUR SHALL HAVE J-HOOKS ADDED ALONG CONTOURS.



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STAGE 3
FINAL STABILIZATION

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL
PROPOSED CONTOURS

STA. 57+00 TO STA. 70+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.	2014	NH-I-40-6(130)	50
CONST.	2015	NH-I-40-6(130)	50

60

65

N

MATCH LINE I-40 SEE SHEET NO. 49

S 86° 23' 32" E

SEE SHEET NO. 48

I-40 STA. 57+00

MATCH LINE I-40

REMOVE EXIST. G/R
STA.13+65 - STA.20+94

EXISTING I-40 EASTBOUND

S 83° 23' 32" E

HIGH VISIBILITY FENCE

TOP OF FILL

TOE OF FILL

EXIST. & PROP. R.O.W.

PROPOSED R.O.W. & C.A. FENCE

TOP OF CUT

VEGETATED BUFFER ZONE

RAMP D

EXIST. R.O.W.

S 69° 13' 08" E

PROPOSED R.O.W.

STR-1

UNNAMED TRIBUTARY TO CANE CREEK

OUT - 4

OUT - 2

OUT - 5

OUT - 3

TVA POWER LINE ESMT. (75.0')

BARN

N 60° 00' 30" E

MATCH LINE MINE LICK CREEK RD. (2) SEE SHEET NO. 59

END 1.25" OVERLAY
BEGIN CUL-DE-SAC
15+70.00

I-40 STA. 70+00

SEE SHEET NO. 56

MATCH LINE I-40

I-40

LEE SEMINARY RD.

BENNETT RD.

15

20

25

ALL SILT FENCE AND SILT FENCE WITH BACKING NOT SHOWN ALONG A CONTOUR SHALL HAVE J-HOOKS ADDED ALONG CONTOURS.

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STAGE I
CLEARING & GRUBBING

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EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 57+00 TO STA. 70+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.	2014	NH-I-40-6(130)	50A
CONST.	2015	NH-I-40-6(130)	50A

60

65

N

MATCH LINE I-40 SEE SHEET NO. 49A

S 86° 23' 32" E

SEE SHEET NO. 48A

I-40 STA. 57+00

EXISTING 8' x 7' R. C. BOX CULVERT

REMOVE EXIST. G/R STA.13+65 - STA.20+94

EXISTING I-40 EASTBOUND

S 83° 23' 32" E

TOE OF FILL

TEMP. FLEXIBLE PIPE SIZE: 54"

EXTEND EX. 8' X 7' BOX CULV. 122'

EXIST. R.O.W.

EXIST. & PROP. R.O.W.

PROPOSED R.O.W. & C.A. FENCE

TOP OF CUT

RAMP D

TOE OF FILL

PROPOSED R.O.W.

BEGIN STR-2 PROP. STREAM RELOCATION
RAMP D STA. 18+87.26

15

CONSTRUCT CHANNEL CHANGE IN THE DRY BEFORE CONSTRUCTING THE RAMP EMBANKMENT AND EXTENDING THE BOX CULVERT. ONCE THE CHANNEL CHANGE IS COMPLETE, OPEN IT TO WATER AND BEGIN PLACING EMBANKMENT.

20

END STR-2 PROP. STREAM RELOCATION
RAMP D STA. 20+45.31

UNNAMED TRIBUTARY TO CANE CREEK

OUT - 4

OUT - 2

EXIST. R.O.W.

EXIST. TEMP. DIVERSION CHANNEL 4' F.B. REMOVE 40' EXIST. 72" CMP

OUT - 32

OUT - 15

PROPOSED R.O.W. & C.A. FENCE

THE EXISTING 72" CMP MUST BE REMOVED IN THE DRY AND THE CHANNEL NEEDS TO BE CONSTRUCTED SIMILAR TO THE EXISTING CHANNEL.

S 64° 13' 38" E

PROP. 133' OF 30" RCP

TVA POWER LINE ESMT. (75.0')

MATCH LINE I-40 STA. 70+00

SEE SHEET NO. 56A

MATCH LINE MINE LICK CREEK RD. (2) STA. 15+00

SEE SHEET NO. 59A

25

OUT - 3

PROPOSED R.O.W.

EXIST. R.O.W.

N 60° 00' 30" W

END 1.25" OVERLAY
BEGIN CUL-DE-SAC
15+70.00

TVA POWER LINE ESMT. (75.0')

I-40

LEE SEMINARY RD.

BENNETT RD.

THE DITCH MEASURES SHOWN IN STAGE 3 SHALL BE INSTALLED AS SOON AS THE PROPOSED DITCHES ARE OPERATIONAL.

ALL SILT FENCE AND SILT FENCE WITH BACKING NOT SHOWN ALONG A CONTOUR SHALL HAVE J-HOOKS ADDED ALONG CONTOURS.

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

SEALED BY

STAGE 2
INTERMEDIATE GRADING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 57+00 TO STA. 70+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.	2014	NH-I-40-6(130)	50B
CONST.	2015	NH-I-40-6(130)	50B

REV. 05/20/2015:
REVISED THE NUMBERS ON BOTH TEMPORARY OUTFALLS ALONG RAMP D.

60

65

N

MATCH LINE I-40 SEE SHEET NO. 49B

S 86° 23' 32" E

SEE SHEET NO. 48B

STA. 57+00

I-40

MATCH LINE

EXISTING I-40 EASTBOUND

S 83° 23' 32" E

TOE OF FILL

EXIST. & PROP. R.O.W.

PROPOSED R.O.W. & C.A. FENCE

TOP OF CUT

OUT - 45
TEMPORARY

PROPOSED R.O.W.

15

20

RAMP D

TOE OF FILL

PROPOSED R.O.W. & C.A. FENCE

OUT - 46
TEMPORARY

OUT - 4

OUT - 2

UNNAMED TRIBUTARY TO CANE CREEK

21'L X 10.5'W

PROPOSED R.O.W.

EXIST. R.O.W.

N 60° 00' 30" W

OUT - 32

OUT - 5

25

OUT - 3

PROPOSED R.O.W. & C.A. FENCE

THE EXISTING 72" CMP MUST BE REMOVED IN THE DRY AND THE CHANNEL NEEDS TO BE CONSTRUCTED SIMILAR TO THE EXISTING CHANNEL.

MATCH LINE MINE LICK CREEK RD. (2) STA. 15+00 SEE SHEET NO. 59B

PROPOSED R.O.W.

END 1.25" OVERLAY
BEGIN CUL-DE-SAC
15+70.00

TVA POWER LINE ESMT. (75.0')

EXIST. R.O.W.

1020

TOP OF CUT

TOE OF FILL

S 69° 13' 58" E

PROP. 133' OF 40" SCP

EXIST. R.O.W.

SEE SHEET NO. 56B

STA. 70+00

I-40

MATCH LINE

I-40

LEE SEMINARY RD.

BENNETT RD.

ALL PERIMETER MEASURES FROM STAGE 2 SHALL REMAIN IN PLACE UNTIL THE AREA REACHES FINAL STABILIZATION.

ALL SILT FENCE AND SILT FENCE WITH BACKING NOT SHOWN ALONG A CONTOUR SHALL HAVE J-HOOKS ADDED ALONG CONTOURS.

SEALED BY

STAGE 3
FINAL STABILIZATION

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

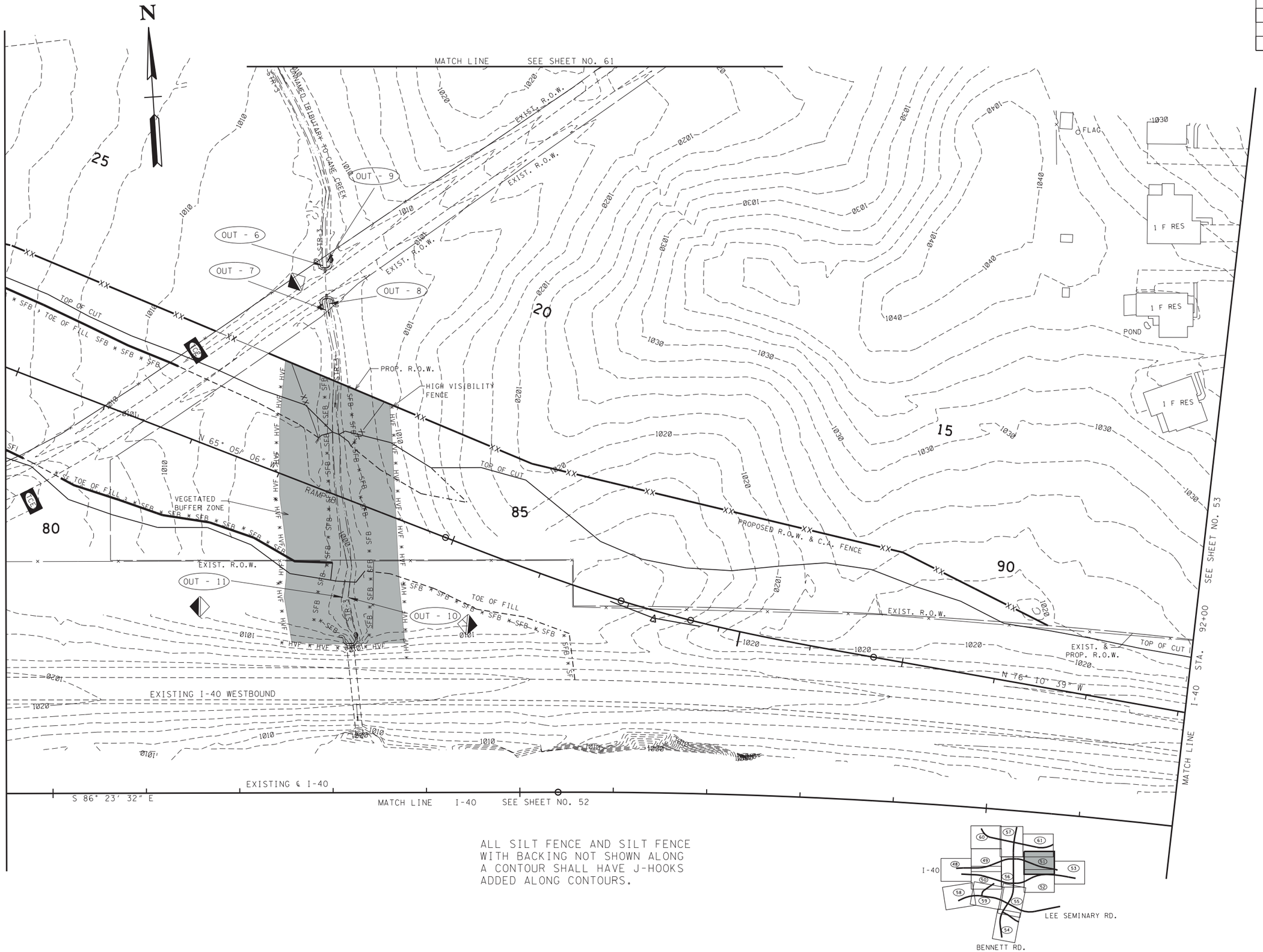
EROSION CONTROL PROPOSED CONTOURS

STA. 57+00 TO STA. 70+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.	2014	NH-I-40-6(130)	51
CONST.	2015	NH-I-40-6(130)	51



ALL SILT FENCE AND SILT FENCE WITH BACKING NOT SHOWN ALONG A CONTOUR SHALL HAVE J-HOOKS ADDED ALONG CONTOURS.

SEALED BY

STAGE I
CLEARING & GRUBBING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

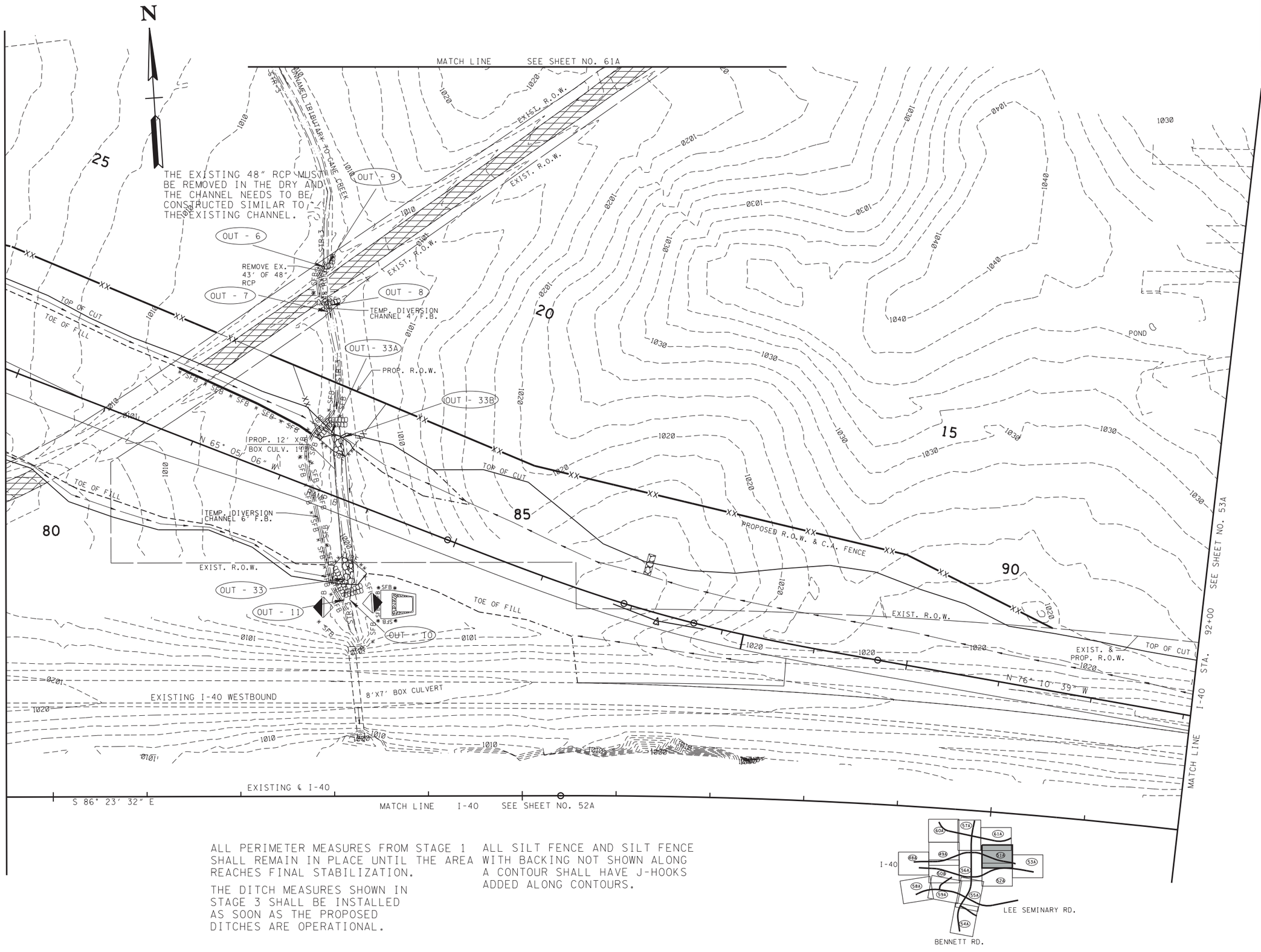
STA. 79+50 TO STA. 92+00
SCALE: 1"= 50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-I-40-6(130)	51A
CONST.	2015	NH-I-40-6(130)	51A

REV. 05/20/2015:
REVISED THE NUMBERS ON BOTH OUTFALLS GOING INTO STR-3 AT INLET SIDE OF THE PROP. BOX CULV. UNDER RAMP B.



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

THE DITCH MEASURES SHOWN IN STAGE 3 SHALL BE INSTALLED AS SOON AS THE PROPOSED DITCHES ARE OPERATIONAL.

ALL SILT FENCE AND SILT FENCE WITH BACKING NOT SHOWN ALONG A CONTOUR SHALL HAVE J-HOOKS ADDED ALONG CONTOURS.

SEALED BY

STAGE 2
INTERMEDIATE GRADING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

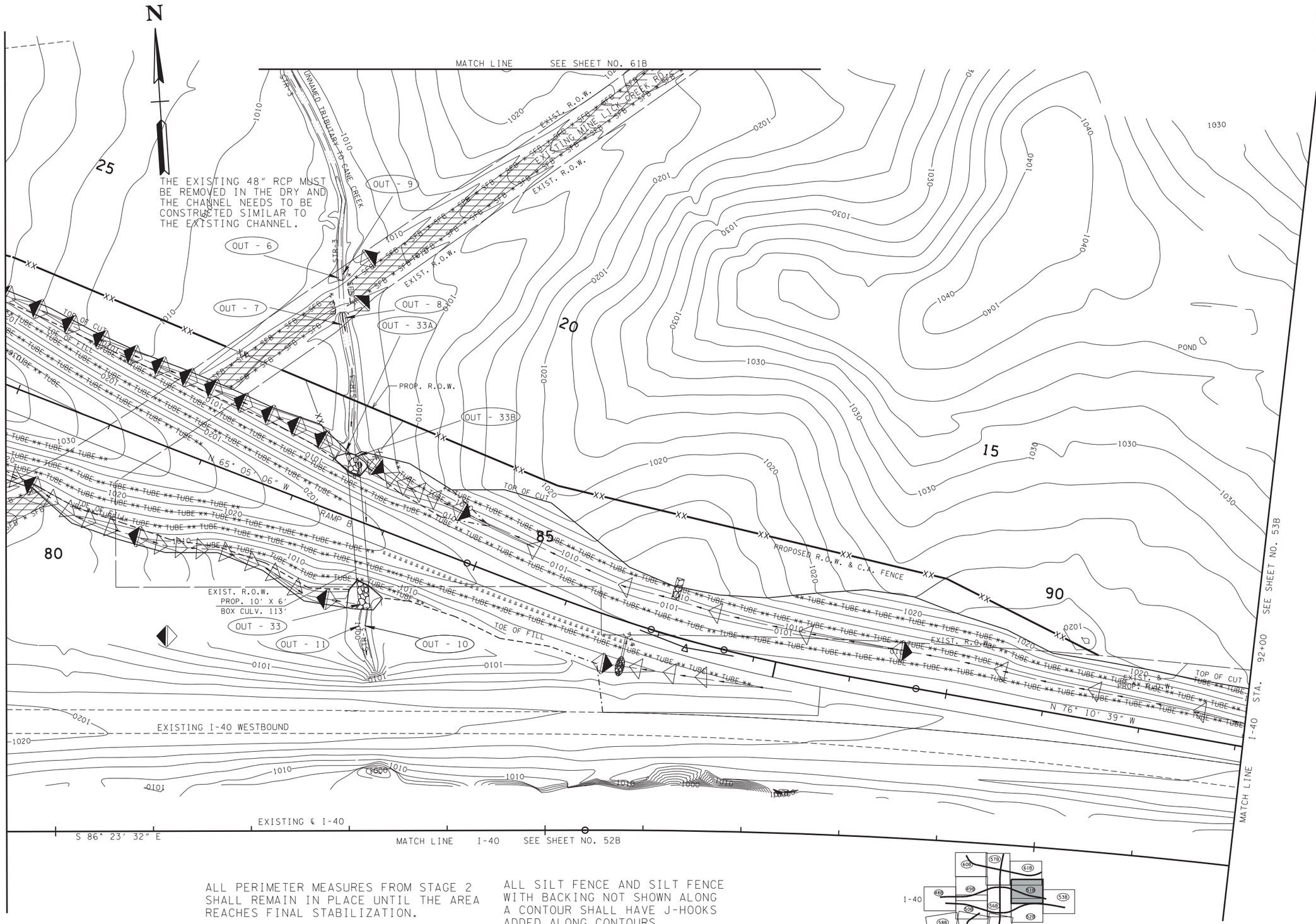
STA. 79+50 TO STA. 92+00
SCALE: 1"= 50'

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

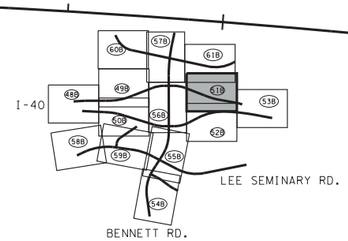
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-I-40-6(130)	51B
CONST.	2015	NH-I-40-6(130)	51B

REV. 05/20/2015:
REVISED THE NUMBERS ON BOTH OUTFALLS GOING INTO STR-3 AT INLET SIDE OF THE PROP. BOX CULV. UNDER RAMP B.



ALL PERIMETER MEASURES FROM STAGE 2 SHALL REMAIN IN PLACE UNTIL THE AREA REACHES FINAL STABILIZATION.

ALL SILT FENCE AND SILT FENCE WITH BACKING NOT SHOWN ALONG A CONTOUR SHALL HAVE J-HOOKS ADDED ALONG CONTOURS.



SEALED BY

STAGE 3
FINAL STABILIZATION

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PROPOSED CONTOURS

STA. 79+50 TO STA. 92+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.	2014	NH-I-40-6(130)	52
CONST.	2015	NH-I-40-6(130)	52

80 85 90

MATCH LINE I-40 SEE SHEET NO. 51

S 86° 23' 32" E

EXISTING ℄ I-40

OUT - 14

EXISTING I-40 EASTBOUND

OUT - 13

OUT - 12

HIGH VISIBILITY FENCE

EXIST. R.O.W.

TOP OF CUT

TOE OF FILL

N 66° 15' 22" E RAMP

VEGETATED BUFFER ZONE

PROPOSED R.O.W. & C.A. FENCE

PROP. R.O.W. AND C.A. FENCE

END PROP. C.A. FENCE STA. 25+93. OFF. 73.27'

EXIST. & PROP. R.O.W.

UNNAMED TRIBUTARY TO CANE CREEK

STR.

PROP. R.O.W.

EXIST. R.O.W.

EXISTING STEWART CEMETERY RD.

WALL

CEM

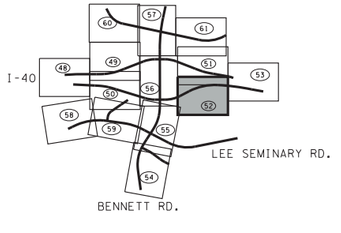
CEM

MATCH LINE I-40 STA. 79+50 SEE SHEET NO. 56

MATCH LINE I-40 STA. 92+00 SEE SHEET NO. 53

15 20 25

ALL SILT FENCE AND SILT FENCE WITH BACKING NOT SHOWN ALONG A CONTOUR SHALL HAVE J-HOOKS ADDED ALONG CONTOURS.



SEALED BY

STAGE I
CLEARING & GRUBBING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 79+50 TO STA. 92+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.	2014	NH-I-40-6(130)	52A
CONST.	2015	NH-I-40-6(130)	52A

80 85 90

MATCH LINE I-40 SEE SHEET NO. 51A

S 86° 23' 32" E

EXISTING ℄ I-40

OUT - 14

8' X 7' BOX CULVERT

EXISTING I-40 EASTBOUND

OUT - 12

OUT - 13

WWC-2

TEMP. DIVERSION CHANNEL 4' F.B.

EXIST. R.O.W.

TOP OF CUT

TOE OF FILL

N 66° 15' 22" E - RAMP C

PROP. 12' X 6' BOX CULVERT 115'

OUT - 35

PROP. R.O.W. AND C.A. FENCE

END PROP. C.A. FENCE STA. 25+± OFF. 73.27

EXIST. & PROP. R.O.W.

OUT - 34

PROP. R.O.W.

EXIST. R.O.W.

UNNAMED TRIBUTARY TO CANE CREEK

EXISTING STEWART CEMETERY RD.

25' EXIST. 42" CMP TO REMAIN.

PROPOSED R.O.W. & C.A. FENCE

MATCH LINE I-40 STA. 79+50 SEE SHEET NO. 56A

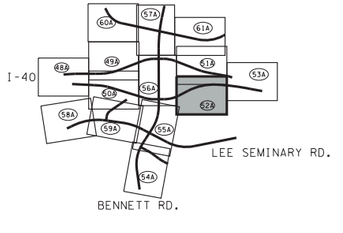
SEE SHEET NO. 53A I-40 STA. 92+00 MATCH LINE

N

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

THE DITCH MEASURES SHOWN IN STAGE 3 SHALL BE INSTALLED AS SOON AS THE PROPOSED DITCHES ARE OPERATIONAL.

ALL SILT FENCE AND SILT FENCE WITH BACKING NOT SHOWN ALONG A CONTOUR SHALL HAVE J-HOOKS ADDED ALONG CONTOURS.



SEALED BY

STAGE 2
INTERMEDIATE GRADING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

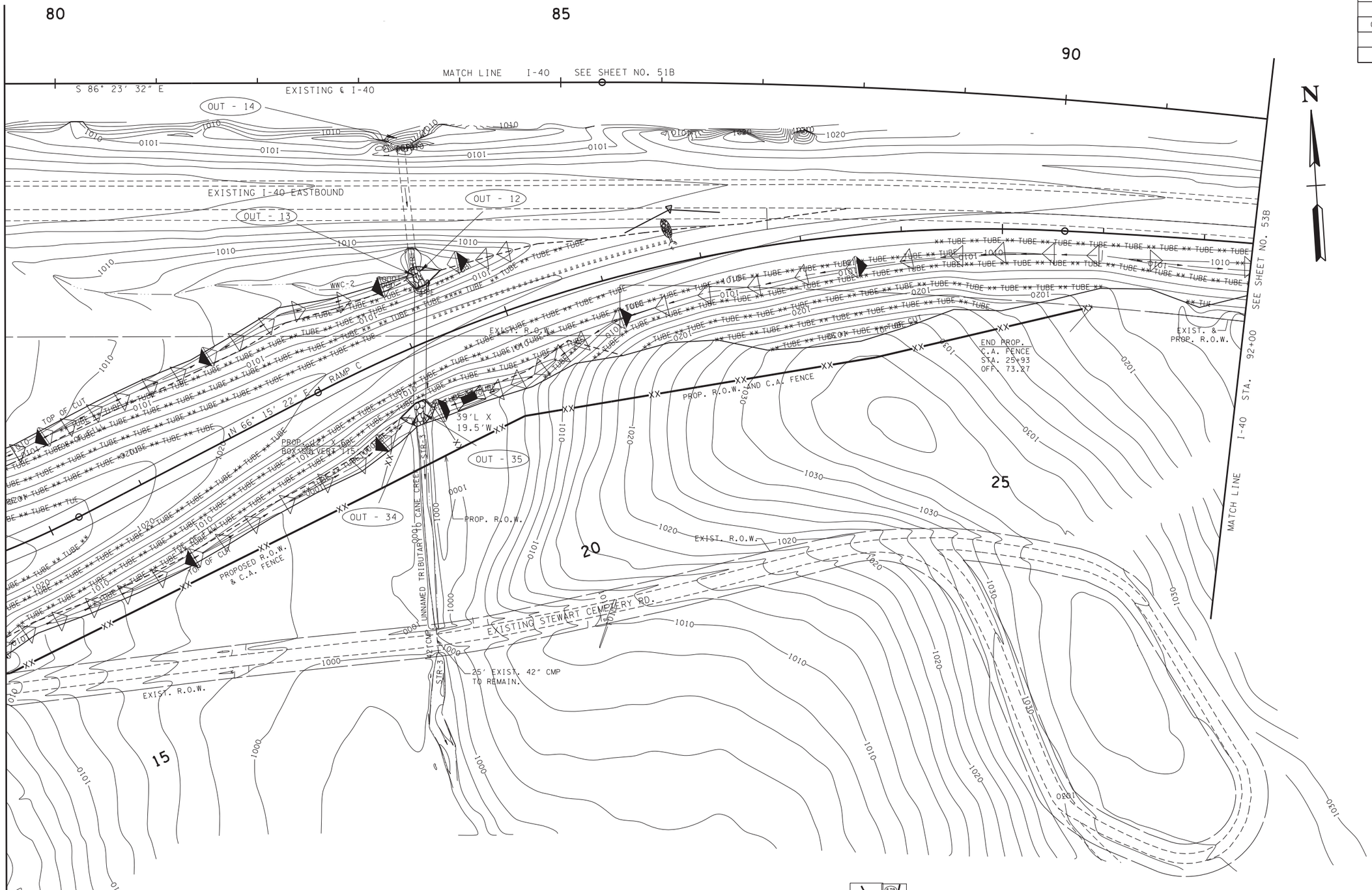
STA. 79+50 TO STA. 92+00

SCALE: 1"= 50'

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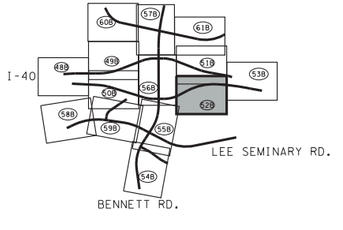
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-I-40-6(130)	52B
CONST.	2015	NH-I-40-6(130)	52B



ALL SILT FENCE AND SILT FENCE WITH BACKING NOT SHOWN ALONG A CONTOUR SHALL HAVE J-HOOKS ADDED ALONG CONTOURS.

ALL PERIMETER MEASURES FROM STAGE 2 SHALL REMAIN IN PLACE UNTIL THE AREA REACHES FINAL STABILIZATION.



SEALED BY

STAGE 3
FINAL STABILIZATION

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PROPOSED CONTOURS

STA. 79+50 TO STA. 92+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.	2014	NH-I-40-6(130)	53
CONST.	2015	NH-I-40-6(130)	53

ALL SILT FENCE AND SILT FENCE WITH BACKING NOT SHOWN ALONG A CONTOUR SHALL HAVE J-HOOKS ADDED ALONG CONTOURS.

N

END PROJECT (CONST.)
NH-I-40-6(130); 71100-3118-44
STA. 113+15.00 I-40
N = 657027.4353
E = 2096657.6668

END PROJECT (R.O.W.).
NH-I-40-6(130); 71100-2112-44
STA. 102+15.92 I-40
N = 657411.9084
E = 2095627.9870

SEE SHEETS NO. 51 & 52

I-40 STA. 92+00

MATCH LINE

PARK WEST DR.

EXIST. R.O.W.

1 F RES

EXIST. & PROP. R.O.W.

TOP OF CUT

OUT - 15

BEGIN RAMP B
BPB - 10+00.00=
STA. 93+86.98 I-40
N = 657140.0560
E = 2094853.4280

N 76° 10' 39" W

N 68° 15' 26" W

RAMP B

I-40 WESTBOUND

EXISTING ℄ I-40

RAMP C

TOP OF CUT

S 76° 06' 03" E

EXIST. & PROP. R.O.W.

* SAB * SFB * SFB * SFB * SFB * SFB * SFB

OUT - 16

END RAMP C
STA. 37+46.96=
STA. 102+15.92 I-40
N = 657340.2712
E = 2095601.4057

S 69° 31' 27" E

WOVEN WIRE

(ASP.)

95 100 30 35

I-40

LEE SEMINARY RD.

BENNETT RD.

SEALED BY

STAGE I
CLEARING & GRUBBING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 92+00 TO EOP

SCALE: 1"= 50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-I-40-6(130)	53A
CONST.	2015	NH-I-40-6(130)	53A

ALL SILT FENCE AND SILT FENCE WITH BACKING NOT SHOWN ALONG A CONTOUR SHALL HAVE J-HOOKS ADDED ALONG CONTOURS.

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

THE DITCH MEASURES SHOWN IN STAGE 3 SHALL BE INSTALLED AS SOON AS THE PROPOSED DITCHES ARE OPERATIONAL.

END PROJECT (CONST.)
NH-I-40-6(130); 71100-3118-44
STA. 113+15.00 I-40
N = 657027.4353
E = 2096657.6668

END PROJECT (R.O.W.).
NH-I-40-6(130); 71100-2112-44
STA. 102+15.92 I-40
N = 657411.9084
E = 2095627.9870

BEGIN RAMP B
STA. 10+00.00=
STA. 93+86.98 I-40
N = 657740.0560
E = 2094853.4280

END RAMP C
STA. 37+46.96=
STA. 102+15.92 I-40
N = 657340.2712
E = 2095601.4057

SEALED BY

STAGE 2
INTERMEDIATE GRADING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

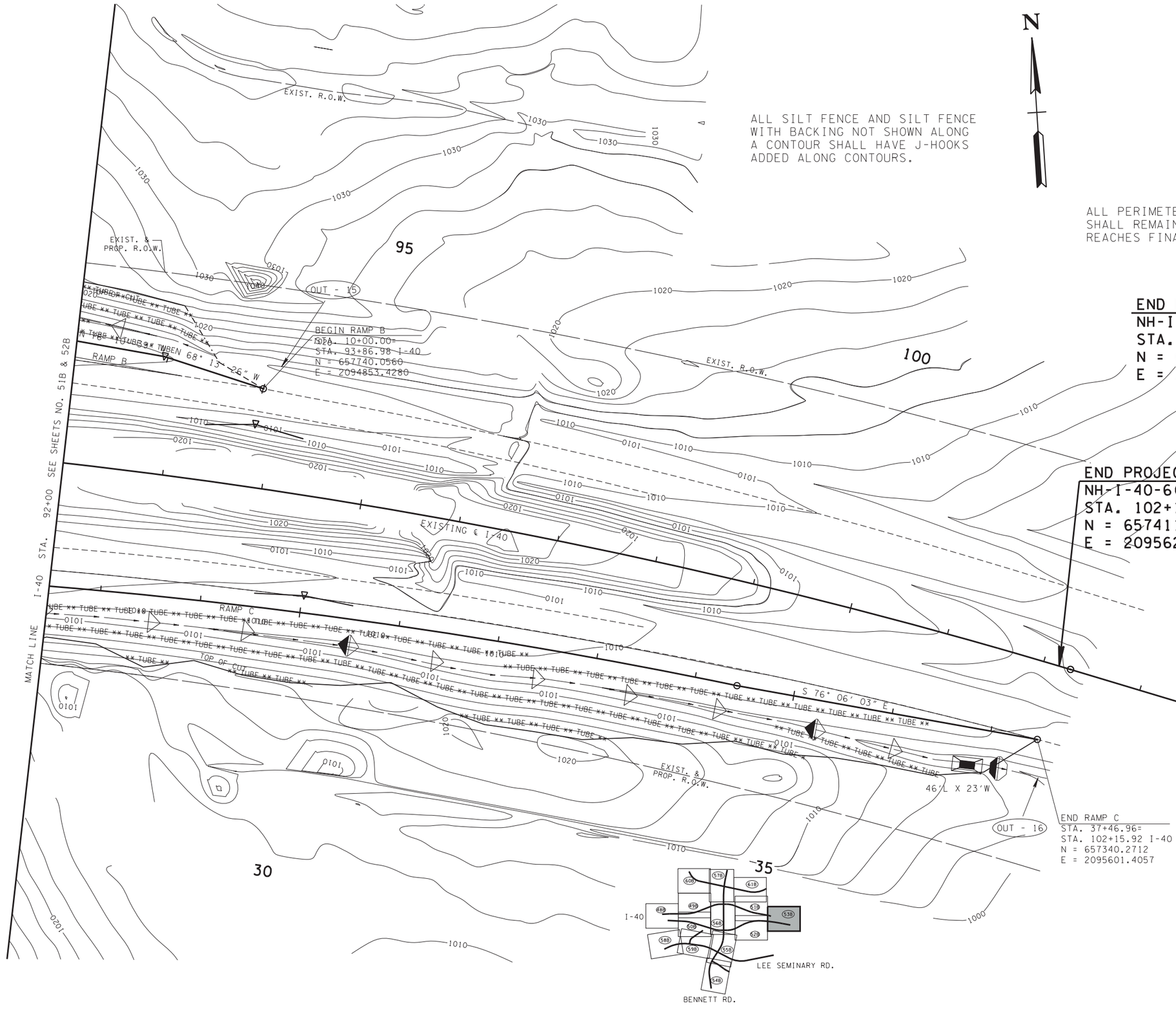
EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 92+00 TO EOP
SCALE: 1"= 50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-I-40-6(130)	53B
CONST.	2015	NH-I-40-6(130)	53B



ALL SILT FENCE AND SILT FENCE WITH BACKING NOT SHOWN ALONG A CONTOUR SHALL HAVE J-HOOKS ADDED ALONG CONTOURS.

ALL PERIMETER MEASURES FROM STAGE 2 SHALL REMAIN IN PLACE UNTIL THE AREA REACHES FINAL STABILIZATION.

END PROJECT (CONST.)
NH-I-40-6(130); 71100-3118-44
STA. 113+15.00 I-40
N = 657027.4353
E = 2096657.6668

END PROJECT (R.O.W.).
NH-I-40-6(130); 71100-2112-44
STA. 102+15.92 I-40
N = 657411.9084
E = 2095627.9870

SEALED BY

STAGE 3
FINAL STABILIZATION

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PROPOSED CONTOURS

STA. 92+00 TO EOP
SCALE: 1"= 50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-I-40-6(130)	54
CONST.	2015	NH-I-40-6(130)	54

REV. 10/01/2014:
REVISED EXIST. R.O.W. LINE ON THE EAST SIDE OF BENNETT RD. FROM BEGINNING OF BENNETT RD. TO STA. 15+22.54.

REV. 05/20/2015:
REMOVED OUTFALL ON LEE SEMINARY RD. (2) RT. OF STA. 18+10.00.

ALL SILT FENCE AND SILT FENCE WITH BACKING NOT SHOWN ALONG A CONTOUR SHALL HAVE J-HOOKS ADDED ALONG CONTOURS.

STA. 10+00.00 LEE SEMINARY RD. (2) =
STA. 21+00.00 BENNETT RD.
N 656102.3512
E 2092381.6459

VEGETATED BUFFER ZONE
PROPOSED R.O.W.
HIGH VISIBILITY FENCE
OUT - 19
OUT - 18
OUT - 17
OUT - 20
EXISTING OLD STEWART RD.
BENNETT RD. STA R.O.W.
EXISTING BENNETT RD.
℄ BENNETT RD.
EXISTING BENNETT RD.
EXIST. TOP OF CUT
EXIST. TOE OF FILL
EXIST. R.O.W.
EXIST. POWER LINE
TEMP. CUT
PROP. CONST. ESMT.
1 F RES
LIMIT OF CONST.
12+50.00
N:655277.9613
E:2092264.9335
LIMIT OF CONST.
18+10.00
N = 655636.7108
E = 2093042.0789
N 4° 13' 59" W
S 49° 58' 23" E
SEE SHEET NO. 55
STA. 22+00
MATCH LINE BENNETT RD.
EXISTING LEE SEMINARY RD.
PROPOSED R.O.W.
PROP. R.O.W.
EXIST. R.O.W.
TOE OF FILL
TOP OF CUT
I-40
LEE SEMINARY RD.
BENNETT RD.

SEALED BY

STAGE I
CLEARING & GRUBBING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 10+00 TO STA. 22+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.	2014	NH-I-40-6(130)	54A
CONST.	2015	NH-I-40-6(130)	54A

REV. 10/01/2014:
REVISED EXIST. R.O.W. LINE ON THE EAST SIDE OF BENNETT RD. FROM BEGINNING OF BENNETT RD. TO STA. 15+22.54.

STA. 10+00.00 LEE SEMINARY RD.(2)=
STA. 21+00.00 BENNETT RD.
N 656102.3512
E 2092381.6459

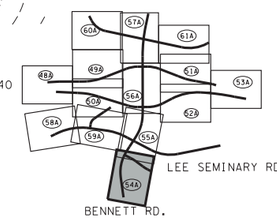
EXIST. 2 @ 6' X 3' BOX CULV. 102'
PROPOSED R.O.W.
OUT - 19
OUT - 18
EXIST. TOP OF CUT
TOE OF FILL
EXIST. TVA POWER LINE ESMT. (75.0')
℄ BENNETT RD.
EXISTING BENNETT RD.
BENNETT RD. SIA R.O.W.
EXIST. PROPOSED R.O.W.
EXIST. 35' OF 18" RCP
EXIST. R.O.W.
PROP. 38' OF 24" RCP
SEE SHEET NO. 55A
STA. 22+00
EXISTING OLD STEWART RD.
N 4° 13' 59" W
LIMIT OF CONST.
12+50.00
N:655277.9613
E:2092264.9335
PROPOSED R.O.W.
OUT - 17
EXIST. 47" OF 68" X 43" HORIZ. OVAL RCP
PROP. CONST. ESMT.
EXIST. 18" RCP TO BE REMOVED.
TEMP. CUT
MATCH LINE BENNETT RD.
EXISTING LEE SEMINARY RD.
S 59° 16' 04" E
S 49° 58' 23" E
PROP. CONST. ESMT.
PROPOSED R.O.W.
OUT - 36
OUT - 20
LIMIT OF CONST.
18+10.00
N = 655636.7108
E = 2093042.0789

ALL SILT FENCE AND SILT FENCE WITH BACKING NOT SHOWN ALONG A CONTOUR SHALL HAVE J-HOOKS ADDED ALONG CONTOURS.

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

THE DITCH MEASURES SHOWN IN STAGE 3 SHALL BE INSTALLED AS SOON AS THE PROPOSED DITCHES ARE OPERATIONAL.

SEALED BY



STAGE 2
INTERMEDIATE GRADING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 10+00 TO STA. 22+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.	2014	NH-I-40-6(130)	54B
CONST.	2015	NH-I-40-6(130)	54B

REV. 10/01/2014:
REVISED EXIST. R.O.W. LINE ON THE EAST SIDE OF BENNETT RD. FROM BEGINNING OF BENNETT RD. TO STA. 15+22.54.

REV. 05/20/2015:
REVISED THE OUTFALL NUMBER ON LEE SEMINARY RD. (2) RT. OF STA. 18+10.00.

ALL SILT FENCE AND SILT FENCE WITH BACKING NOT SHOWN ALONG A CONTOUR SHALL HAVE J-HOOKS ADDED ALONG CONTOURS.

STA. 10+00.00 LEE SEMINARY RD. (2) =
STA. 21+09.00 BENNETT RD.
N 656102.3512
E 2092381.6459

OUT - 19
OUT - 18
OUT - 17
OUT - 36
OUT - 20

PROPOSED R.O.W.
EXIST. R.O.W.
EXISTING BENNETT RD.
EXISTING OLD STEWART RD.
BENNETT RD. SIA R.O.W.
℄ BENNETT RD.
MATCH LINE BENNETT RD. STA. 22+00
SEE SHEET NO. 55B

EXIST. TOP OF CUT
TOE OF FILL
EXIST. TOE OF FILL
EXIST. TOP OF CUT
EXIST. 138 KV POWER LINE ESMT. (75.0')
PROP. CONST. ESMT.
TEMP. CUT
EXIST. & PROP. R.O.W.

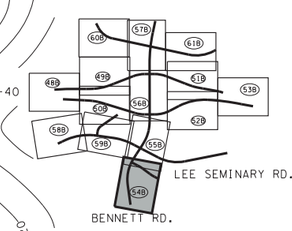
STR-14
29'L X 14.5'W
STR-15
45'L X 22.5'W
STR-16
23'L X 19'W

N 4° 13' 59" W
S 52° 16' 04" E

LIMIT OF CONST.
12+50.00
N:655277.9613
E:2092264.9335

LIMIT OF CONST.
18+10.00
N = 655636.7108
E = 2093042.0789

ALL PERIMETER MEASURES FROM STAGE 2 SHALL REMAIN IN PLACE UNTIL THE AREA REACHES FINAL STABILIZATION.



SEALED BY

STAGE 3
FINAL STABILIZATION

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PROPOSED CONTOURS

STA. 10+00 TO STA. 22+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.	2014	NH-I-40-6(130)	55
CONST.	2015	NH-I-40-6(130)	55

ALL SILT FENCE AND SILT FENCE WITH BACKING NOT SHOWN ALONG A CONTOUR SHALL HAVE J-HOOKS ADDED ALONG CONTOURS.

MATCH LINE LEE SEMINARY RD. STA. 29+00 SEE SHEET NO. 59

SEE SHEET NO. 54

STA. 22+00 BENNETT RD.

MATCH LINE

STA. 25+30.73 BENNETT RD. =
STA. 32+23.35 LEE SEMINARY RD.
N = 656452.4588
E = 2092632.2383

EQUATION:
STA. 32+85.36 (BK) =
STA. 10+22.78 (AH)

LIMIT OF CONST.
10+85.00 R ☐
N = 656388.0470
E = 2092738.4644

OUT - 21
OUT - 22
OUT - 23
OUT - 24

HIGH VISIBILITY FENCE
VEGETATED BUFFER ZONE
PROPOSED R.O.W. & C.A. FENCE
PROP. R.O.W.
TOE OF FILL
TOP OF CUT
TRIBUTARY 1 TO BEECH CREEK
TVA POWER LINE ESMT. (75.0')
EXIST. & PROP. R.O.W.
EXIST. R.O.W.
BARN (TO BE REMOVED BY OTHERS)
SEP
CB

SEE SHEET NO. 56

STA. 33+00 BENNETT RD.

MATCH LINE

LEE SEMINARY RD.

I-40

SEALED BY

STAGE I
CLEARING & GRUBBING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 22+00 TO STA. 33+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.	2014	NH-I-40-6(130)	55A
CONST.	2015	NH-I-40-6(130)	55A

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

THE DITCH MEASURES SHOWN IN STAGE 3 SHALL BE INSTALLED AS SOON AS THE PROPOSED DITCHES ARE OPERATIONAL.

ALL SILT FENCE AND SILT FENCE WITH BACKING NOT SHOWN ALONG A CONTOUR SHALL HAVE J-HOOKS ADDED ALONG CONTOURS.

N

MATCH LINE LEE SEMINARY RD. STA. 29+00

SEE SHEET NO. 59A

SEE SHEET NO. 54A

STA. 22+00

BENNETT RD.

MATCH LINE

PROPOSED R.O.W.

PROP. R.O.W.

TOP OF CUT

PROP. 60' OF 36" RCP

N 36° 44' 31" E

S 58° 46' 15" E

℄ LEE SEMINARY RD.

STA. 25+30.73 BENNETT RD. =
STA. 32+23.35 LEE SEMINARY RD.
N = 656452.4588
E = 2092632.2383

EQUATION:
STA. 32+85.36 (BK) =
STA. 10+22.78 (AH)

25

30

30

REFER TO STD. DWG. EC-STR-30A INSTREAM DIVERSION (WITH TRAFFIC) FOR PHASES 1-4 ON CONSTRUCTION OF THE DBL. BARREL 16' X 9' RCB.

OUT - 38

OUT - 37

TRIBUTARY TO SANDY CREEK

PROPOSED R.O.W. & C.A. FENCE

PROP. R.O.W.

PROP. 148' OF 2 @ 16' X 9' RCB

TOE OF FILL

SEE SHEET NO. 56A

STA. 33+00

BENNETT RD.

TVA POWER LINE ESMT. (75.0')

EXIST. & PROP. R.O.W.

EX. 24" RCP

NO. TC-A2 AREA DRAIN
OUT (EL. 1005.78)
IN (EL. 1002.83)

SPD-1

1066

EXIST. R.O.W.

PROPOSED R.O.W. & C.A. FENCE

OUT - 21

PROP. R.O.W.

OUT - 22

PROPOSED R.O.W. & C.A. FENCE

EXISTING BRIDGE 21' X 30' CONC. AND STEEL BEAM. SKEW 0°. TO BE REMOVED. ID NO. 11OA5250001 (I-40-A525-02.44)

EXIST. R.O.W.

MATCH LINE

BENNETT RD.

EXIST. R.O.W.

TVA POWER LINE ESMT. (75.0')

LIMIT OF CONST.
10+85.00 R 2
N 656388.0470
E 2092738.4644

LIMIT OF MARKING
14+22.80 R 2

℄ HIGHLAND PARK BLVD. (BY OTHERS)

I-40

LEE SEMINARY RD.

BENNETT RD.

SEALED BY

STAGE 2
INTERMEDIATE GRADING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 22+00 TO STA. 33+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.	2014	NH-I-40-6(130)	55B
CONST.	2015	NH-I-40-6(130)	55B

ALL SILT FENCE AND SILT FENCE WITH BACKING NOT SHOWN ALONG A CONTOUR SHALL HAVE J-HOOKS ADDED ALONG CONTOURS.

ALL PERIMETER MEASURES FROM STAGE 2 SHALL REMAIN IN PLACE UNTIL THE AREA REACHES FINAL STABILIZATION.

MATCH LINE LEE SEMINARY RD. STA. 29+00

SEE SHEET NO. 59B

SEE SHEET NO. 54B

STA. 22+00

BENNETT RD.

MATCH LINE

STA. 25+30.73 BENNETT RD. =
STA. 32+23.35 LEE SEMINARY RD.
N = 656452.4588
E = 2092632.2383

EQUATION:
STA. 32+85.36 (BK) =
STA. 10+22.78 (AH)

N 36° 44' 37" E

S 58° 46' 08" E

S 58° 46' 08" E

TVA POWER LINE ESMT. (75.0')

EXIST. & PROP. R.O.W.

PROPOSED R.O.W.

PROP. R.O.W.

PROPOSED R.O.W. & C.A. FENCE

49'L X 24.5'W

35'L X 17.5'W

PROP. 60' OF 16' RCB

40'L X 20'W

PROP. 148' OF 2 @ 16' X 9' RCB

48'L X 24'W

36'L X 18'W

64'L X 32'W

OUT - 38

OUT - 37

OUT - 21

OUT - 22

TRIBUTARY TO CANEY CREEK

STR-1

STR-2

STR-3

STR-4

TOP OF CUT

TOE OF FILL

LIMIT OF CONST.
10+85.00 R 2
N 656388.0470
E 2092738.4644

LIMIT OF MARKING
14+22.80 R 2

EXIST. R.O.W.

& HIGHLAND PARK BLVD. (BY OTHERS)

& LEE SEMINARY RD.

& BENNETT RD.

EXIST. R.O.W.

MATCH LINE

BENNETT RD. STA. 33+00

SEE SHEET NO. 56B

I-40

LEE SEMINARY RD.

BENNETT RD.

SEALED BY

STAGE 3
FINAL STABILIZATION

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL
PROPOSED CONTOURS

STA. 22+00 TO STA. 33+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.	2014	NH-I-40-6(130)	56
CONST.	2015	NH-I-40-6(130)	56

N

MATCH LINE EXIST. I-40 STA. 70+00 SEE SHEETS NO. 49 & 50

ALL SILT FENCE AND SILT FENCE WITH BACKING NOT SHOWN ALONG A CONTOUR SHALL HAVE J-HOOKS ADDED ALONG CONTOURS.

STA. 34+53.55 BENNETT RD. ℄
STA. 10+80.00 RAMP C
STA. 32+84.07 RAMP D
N = 657304.5454
E = 2092930.2663

EX. I-40 STA. 75+06.57=
BENNETT RD. STA. 39+73.55
N = 657823.5128
E = 2092963.0198

STA. 44+93.65 BENNETT RD.
STA. 10+00.00 RAMP A =
STA. 29+65.18 RAMP B
N = 658342.4802
E = 2092995.7734

EXISTING I-40 EASTBOUND
EXISTING I-40 WESTBOUND
EXISTING ℄ I-40
EXISTING MINE LICK CREEK RD.
EXISTING HAWKINS CRAWFORD RD.
EXISTING STEWART CEMETERY RD.
EXISTING BENNETT RD.
PROPOSED R.O.W. & C.A. FENCE
TVA POWER LINE ESMT. (75.0')
C.A. FENCE ONLY
TOP OF CUT
TOE OF FILL
RAMP A
RAMP B
RAMP C
RAMP D
S 86° 23' 32" E
N 86° 23' 32" W
N 66° 15' 22" E
N 3° 13' 58" E
S 69° 13' 58" E
BENNETT RD. STA. 33+00
BENNETT RD. STA. 46+00
SEE SHEET NO. 55
SEE SHEET NO. 57
MATCH LINE
I-40
LEE SEMINARY RD.
BENNETT RD.

MATCH LINE EXIST. I-40 STA. 79+50 SEE SHEETS NO. 51 & 52

SEALED BY

STAGE I
CLEARING & GRUBBING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 33+00 TO STA. 46+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.	2014	NH-I-40-6(130)	56A
CONST.	2015	NH-I-40-6(130)	56A

N

MATCH LINE EXIST. I-40 STA. 70+00 SEE SHEETS NO. 49A & 50A

SEE SHEET NO. 55A

STA. 33+00

BENNETT RD.

MATCH LINE

S 88° 23' 32" E

RAMP D

RAMP C

S 69° 13' 58" E

TVA POWER LINE ESMT. (75.0')

PROPOSED R.O.W. & C.A. FENCE

TOE OF FILL

EXISTING MINE LICK CREEK RD.

EXISTING I-40 EASTBOUND

EXISTING I-40 WESTBOUND

EXISTING ℄ I-40

STA. 34+53.55 BENNETT RD. ℄
STA. 10+00.00 RAMP C
STA. 32+84.07 RAMP D
N = 657304.5454
E = 2092930.2663

EXIST. BRIDGE NO. 71004000021 (71-A52-02.64)

EXIST. BRIDGE NO. 71004000065 (71-A52-02.68)

℄ BENNETT RD.

N 3° 13' 41" E

TOP OF CUT

PROPOSED R.O.W. & C.A. FENCE

EXISTING HAWKINS CRAWFORD RD.

RAMP A

N 86° 23' 32" W

PROP. 228' OF 84" RCP

PROP. 232' OF 30" RCP

STA. 46+00

SEE SHEET NO. 57A

TVA POWER LINE ESMT. (75.0')

C.A./ FENCE ONLY

EXISTING BENNETT RD.

EXIST. R.O.W.

TOE OF FILL

EXISTING STEWART CEMETERY RD.

PROP. R.O.W. & C.A. FENCE

N 66° 15' 22" E

EX. I-40 STA. 75+06.57=
BENNETT RD. STA. 39+73.55
N = 657823.5128
E = 2092963.0198

STA. 44+93.55 BENNETT RD.
STA. 10+00.00 RAMP A =
STA. 29+65.78 RAMP B
N = 658342.4802
E = 2092995.7734

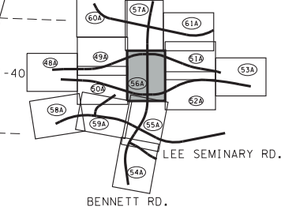
MATCH LINE EXIST. I-40 STA. 79+50 SEE SHEETS NO. 51A & 52A

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

THE DITCH MEASURES SHOWN IN STAGE 3 SHALL BE INSTALLED AS SOON AS THE PROPOSED DITCHES ARE OPERATIONAL.

ALL SILT FENCE AND SILT FENCE WITH BACKING NOT SHOWN ALONG A CONTOUR SHALL HAVE J-HOOKS ADDED ALONG CONTOURS.

SEALED BY



STAGE 2
INTERMEDIATE GRADING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 33+00 TO STA. 46+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.	2014	NH-I-40-6(130)	56B
CONST.	2015	NH-I-40-6(130)	56B

N

MATCH LINE EXIST. I-40 STA. 70+00 SEE SHEETS NO. 49B & 50B

ALL SILT FENCE AND SILT FENCE WITH BACKING NOT SHOWN ALONG 1030 CONTOUR SHALL HAVE J-HOOKS ADDED ALONG CONTOURS.

SEE SHEET NO. 55B

SEE SHEET NO. 57B

STA. 33+00

STA. 46+00

BENNETT RD.

MATCH LINE

RAMP C

RAMP D

RAMP A

RAMP B

S 86° 23' 32" E

N 86° 23' 32" W

S 69° 13' 58" E

N 3° 36' 41" E

EXISTING I-40 EASTBOUND

EXISTING I-40 WESTBOUND

EXISTING ℄ I-40

℄ BENNETT RD.

PROPOSED R.O.W. & C.A. FENCE

TOE OF FILL

TOP OF CUT

EXIST. R.O.W.

TVA POWER LINE ESMT. (75.0')

C.A. FENCE

EXISTING STEWART CEMETERY RD.

PROP. 228' OF 24" RCP

PROP. 232' OF 30" RCP

POND 2

STA. 34+53.55 BENNETT RD. =
STA. 10+00.00 RAMP C =
STA. 32+84.07 RAMP D
N = 657304.5454
E = 2092930.2663

EX. I-40 STA. 75+06.57=
BENNETT RD. STA. 39+73.55
N = 657823.5128
E = 2092963.0198

STA. 44+93.56 BENNETT RD.
STA. 10+00.00 RAMP B
STA. 29+65.78 RAMP B
N = 658342.4804
E = 2092995.7784

MATCH LINE EXIST. I-40 STA. 79+50 SEE SHEETS NO. 51B & 52B

ALL PERIMETER MEASURES FROM STAGE 2 SHALL REMAIN IN PLACE UNTIL THE AREA REACHES FINAL STABILIZATION.

SEALED BY

STAGE 3
FINAL STABILIZATION

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PROPOSED CONTOURS

STA. 33+00 TO STA. 46+00
SCALE: 1"= 50'

I-40

LEE SEMINARY RD.

BENNETT RD.

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-I-40-6(130)	57
CONST.	2015	NH-I-40-6(130)	57

REV. 05/20/2015:
REVISED THE OUTFALL NUMBER ON BENNETT RD. LT. OF STA. 53+75.36.

ALL SILT FENCE AND SILT FENCE WITH BACKING NOT SHOWN ALONG A CONTOUR SHALL HAVE J-HOOKS ADDED ALONG CONTOURS.

MATCH LINE HAWKINS RD. STA. 20+00

SEE SHEET NO. 60

N

HAWKINS CRAWFORD RD. (1)

S 14° 15' 03" E

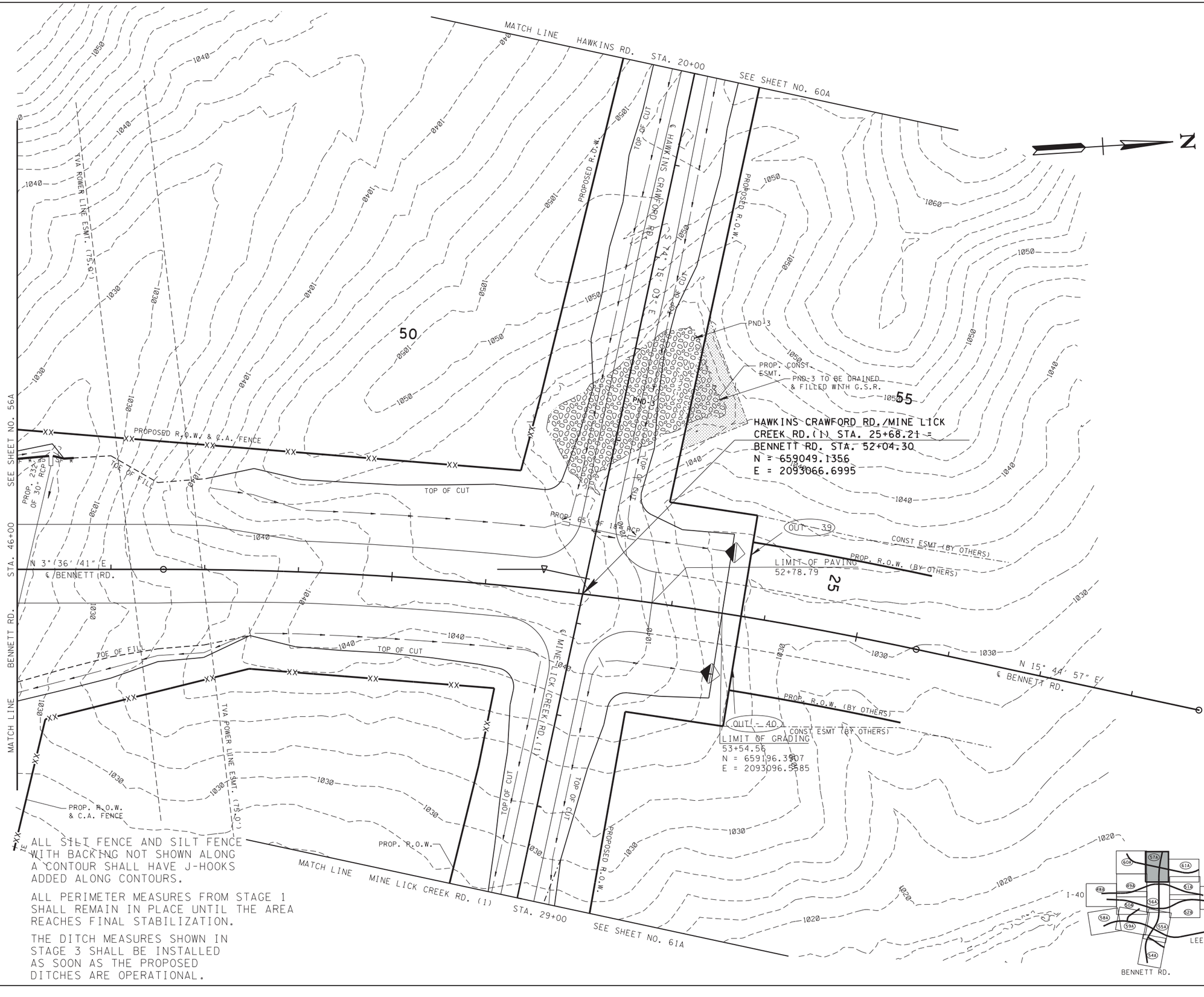
PROPOSED R.O.W.

TOP OF CUT

SFB * SFB * SFB *

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-I-40-6(130)	57A
CONST.	2015	NH-I-40-6(130)	57A



ALL SILT FENCE AND SILT FENCE WITH BACKING NOT SHOWN ALONG A CONTOUR SHALL HAVE J-HOOKS ADDED ALONG CONTOURS.

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

THE DITCH MEASURES SHOWN IN STAGE 3 SHALL BE INSTALLED AS SOON AS THE PROPOSED DITCHES ARE OPERATIONAL.

SEALED BY

STAGE 2 INTERMEDIATE GRADING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

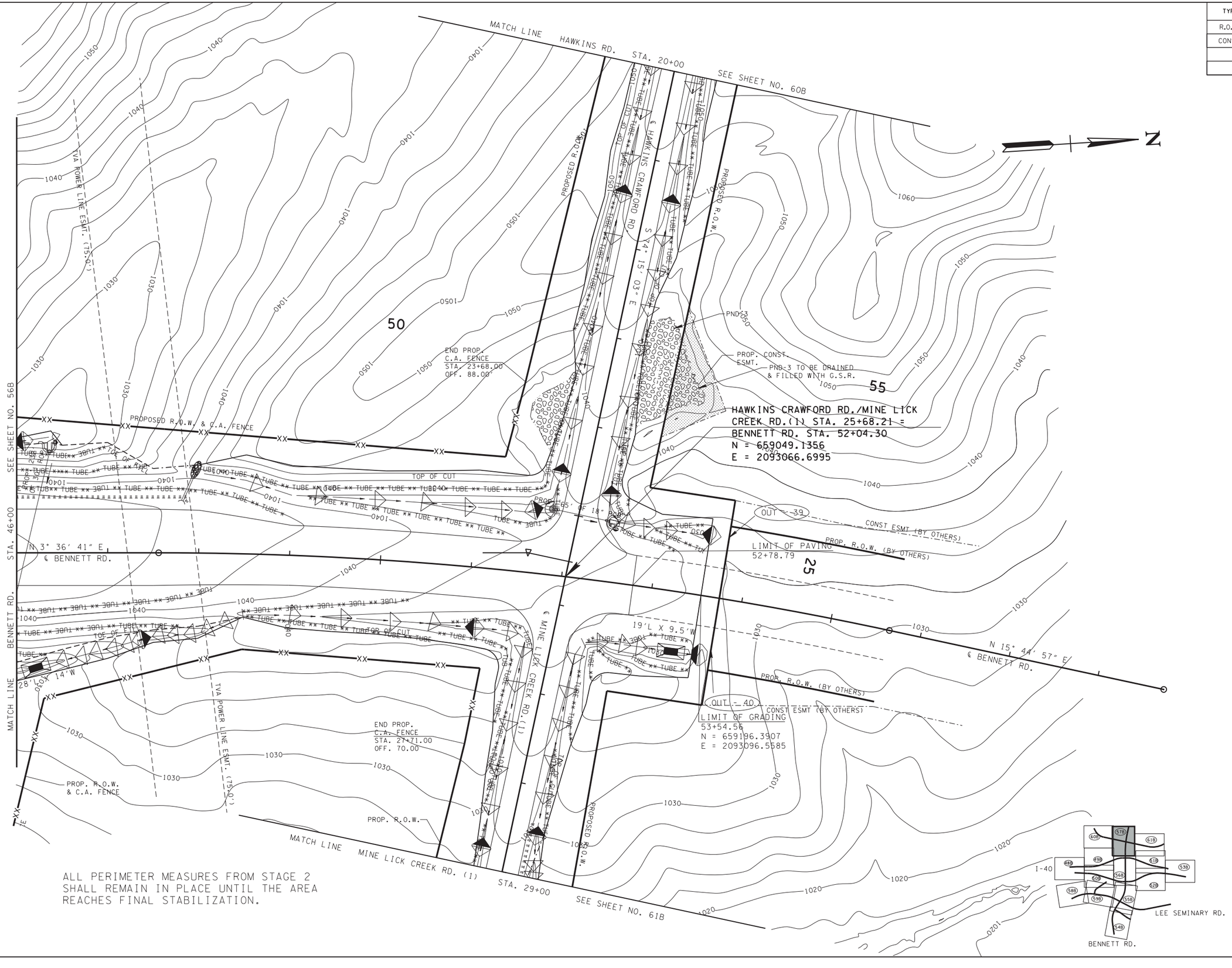
STA. 46+00 TO STA. 50+00

SCALE: 1"= 50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-I-40-6(130)	57B
CONST.	2015	NH-I-40-6(130)	57B



ALL PERIMETER MEASURES FROM STAGE 2 SHALL REMAIN IN PLACE UNTIL THE AREA REACHES FINAL STABILIZATION.

SEALED BY

STAGE 3
FINAL STABILIZATION

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PROPOSED CONTOURS

STA. 46+00 TO STA. 50+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.	2014	NH-I-40-6(130)	58
CONST.	2015	NH-I-40-6(130)	58

N

ALL SILT FENCE AND SILT FENCE WITH BACKING NOT SHOWN ALONG A CONTOUR SHALL HAVE J-HOOKS ADDED ALONG CONTOURS.

ALL SEPTIC OFF PROJECT

10

15

ALL SEPTIC OFF PROJECT
2 B RES

1 BR CHURCH

1 FR CHURCH

LIMIT OF CONST.
11+00.00
N = 656743.4815
E = 2090611.4391

GRv

EXIST. R.O.W.

EXISTING MINE LICK CREEK RD. N 68° 10' 53" E

PROPOSED R.O.W.

PROPOSED R.O.W.

MINE LICK CREEK RD. STA R.O.W.

TVA POWER LINE ESMT. (75.0')

℄ LEE SEMINARY RD.

OUT - 25

ASP.

EXIST. & PROP. R.O.W.

TOP OF CUT

TOE OF FILL

SEE SHEET NO. 59

LEE SEMINARY RD. STA. 17+00

MATCH LINE

1070
1060
1050
1040
1030

I-40

LEE SEMINARY RD.

BENNETT RD.

SEALED BY

STAGE I
CLEARING & GRUBBING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 10+00 TO STA. 17+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.	2014	NH-I-40-6(130)	58A
CONST.	2015	NH-I-40-6(130)	58A

N

ALL SILT FENCE AND SILT FENCE WITH BACKING NOT SHOWN ALONG A CONTOUR SHALL HAVE J-HOOKS ADDED ALONG CONTOURS.

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

THE DITCH MEASURES SHOWN IN STAGE 3 SHALL BE INSTALLED AS SOON AS THE PROPOSED DITCHES ARE OPERATIONAL.

10

15

ASP.

PROPOSED R.O.W.

EXIST. & PROP. R.O.W.

1060

1070

TOP OF CUT

LIMIT OF CONST.
11+00.00
N = 656743.4815
E = 2090611.4391

GRv

EXIST. R.O.W.

℄ LEE SEMINARY RD.

N 68° 10' 53" E

18" CMP TO BE REMOVED

PROP. 51' OF 24" RCP

TOE OF FILL

1050

1040

EXISTING MINE LICK CREEK RD.

PROPOSED R.O.W.

MINE LICK CREEK RD. STA R.O.W.

TVA POWER LINE ESMT. (75.0')

OUT - 25

SEE SHEET NO. 59A

STA. 17+00

LEE SEMINARY RD.

MATCH LINE

I-40

BENNETT RD.

LEE SEMINARY RD.

SEALED BY

STAGE 2
INTERMEDIATE GRADING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 10+00 TO STA. 17+00

SCALE: 1"= 50'

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

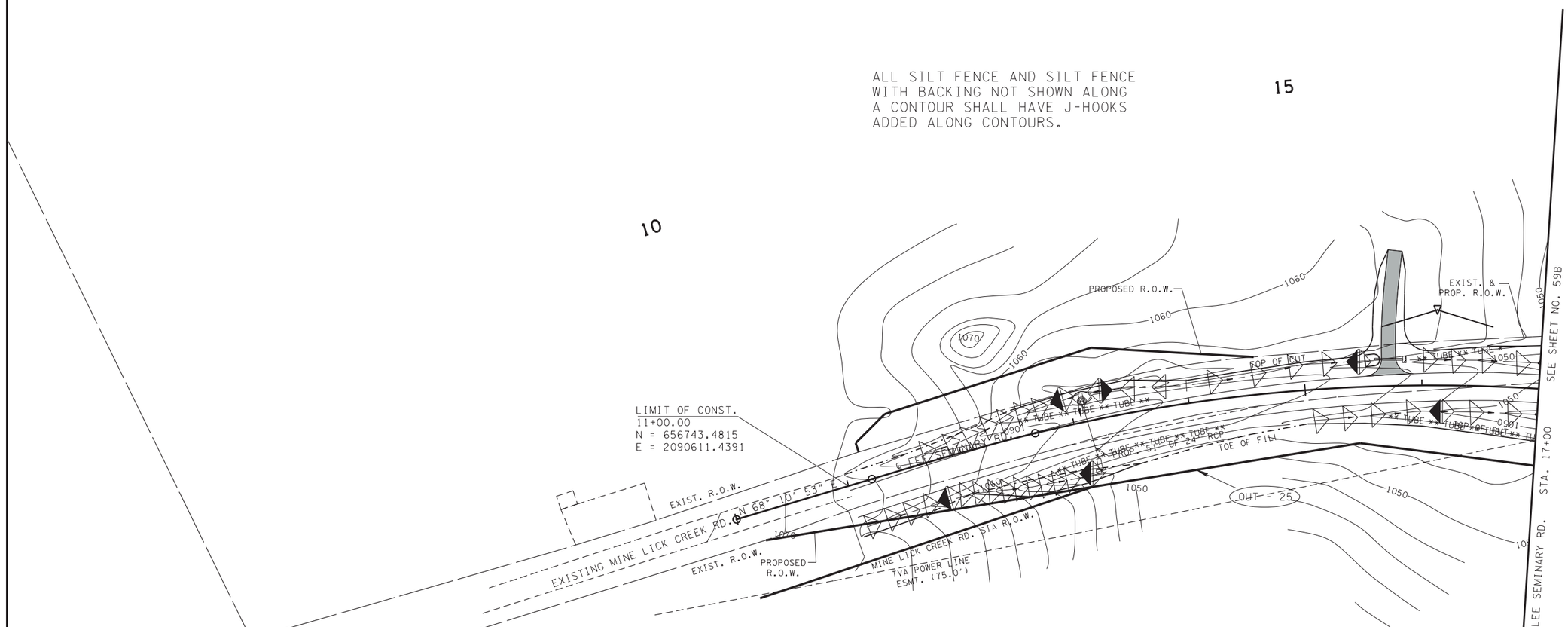
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-I-40-6(130)	588
CONST.	2015	NH-I-40-6(130)	588

N

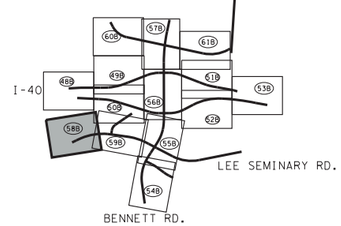
ALL SILT FENCE AND SILT FENCE WITH BACKING NOT SHOWN ALONG A CONTOUR SHALL HAVE J-HOOKS ADDED ALONG CONTOURS.

10

15



ALL PERIMETER MEASURES FROM STAGE 2 SHALL REMAIN IN PLACE UNTIL THE AREA REACHES FINAL STABILIZATION.



SEALED BY

STAGE 3
FINAL STABILIZATION

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

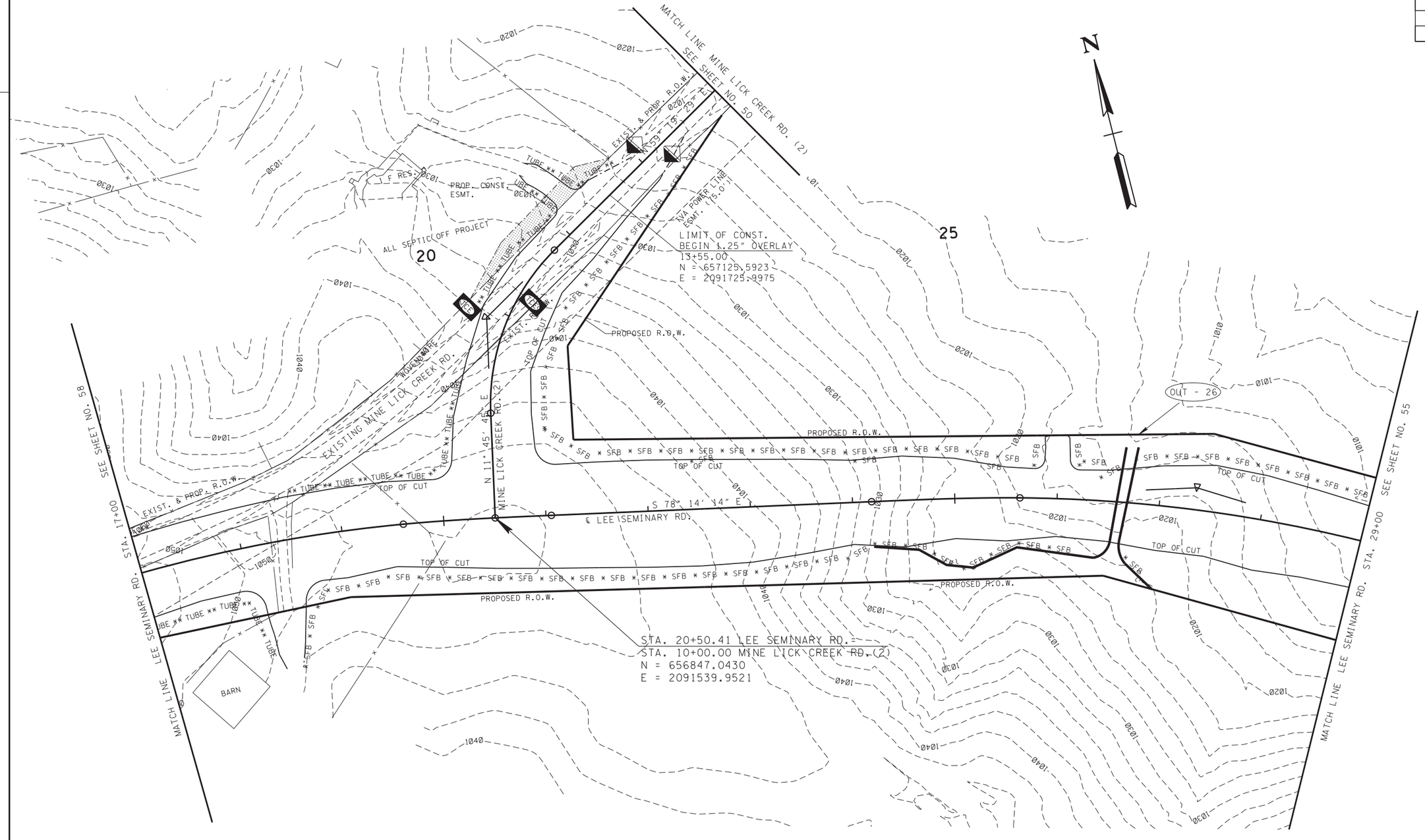
EROSION CONTROL PROPOSED CONTOURS

STA. 10+00 TO STA. 17+00
SCALE: 1"= 50'

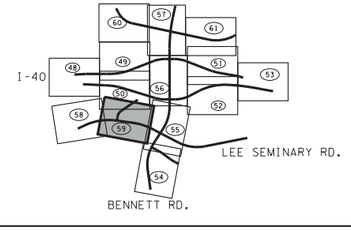
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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-I-40-6(130)	59
CONST.	2015	NH-I-40-6(130)	59



ALL SILT FENCE AND SILT FENCE WITH BACKING NOT SHOWN ALONG A CONTOUR SHALL HAVE J-HOOKS ADDED ALONG CONTOURS.



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STAGE I
CLEARING & GRUBBING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

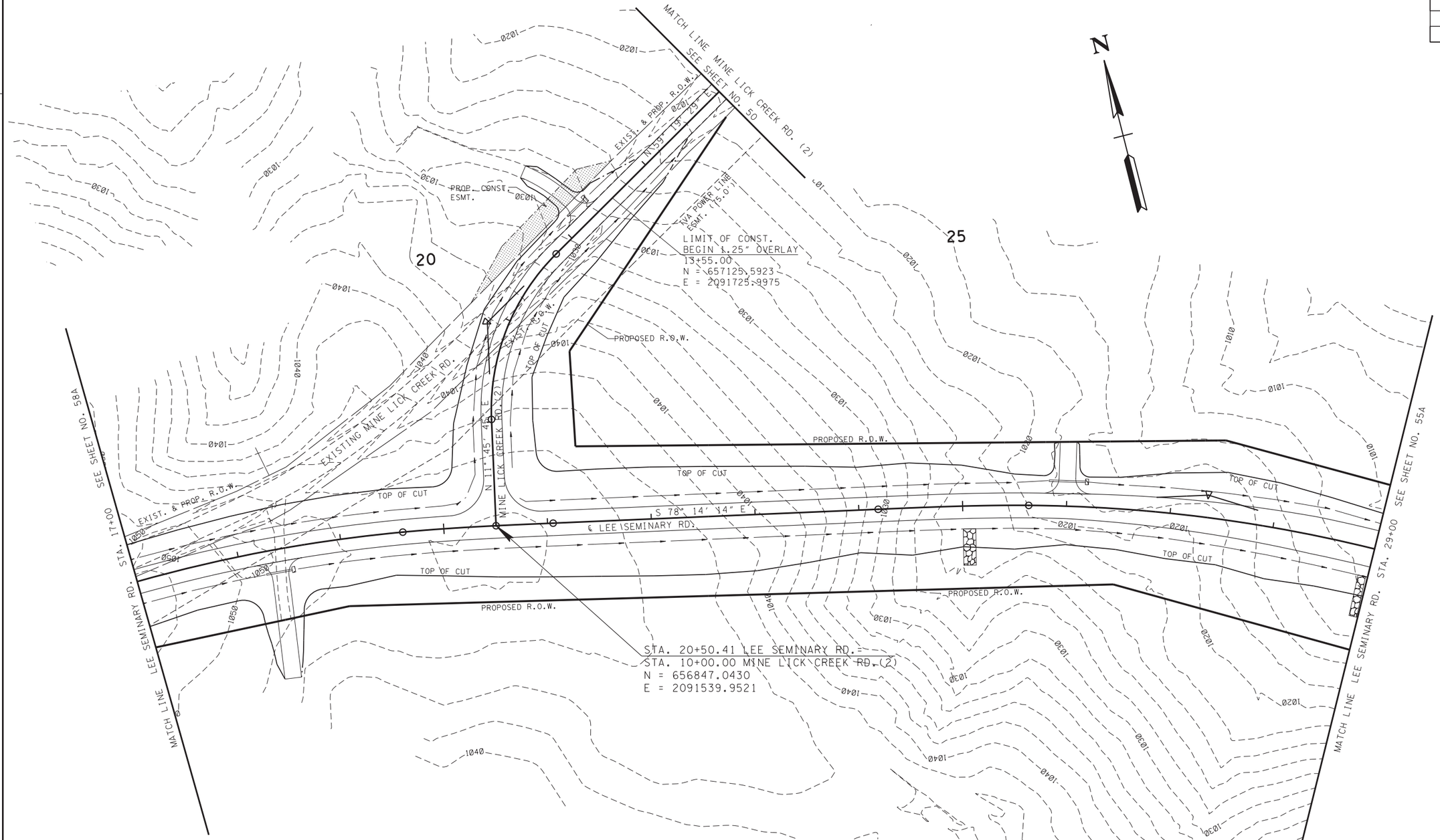
STA. 17+00 TO STA. 29+00

SCALE: 1"= 50'

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

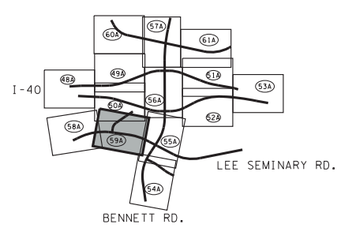
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-I-40-6(130)	59A
CONST.	2015	NH-I-40-6(130)	59A



ALL SILT FENCE AND SILT FENCE WITH BACKING NOT SHOWN ALONG A CONTOUR SHALL HAVE J-HOOKS ADDED ALONG CONTOURS.

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

THE DITCH MEASURES SHOWN IN STAGE 3 SHALL BE INSTALLED AS SOON AS THE PROPOSED DITCHES ARE OPERATIONAL.



SEALED BY

STAGE 2
INTERMEDIATE GRADING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

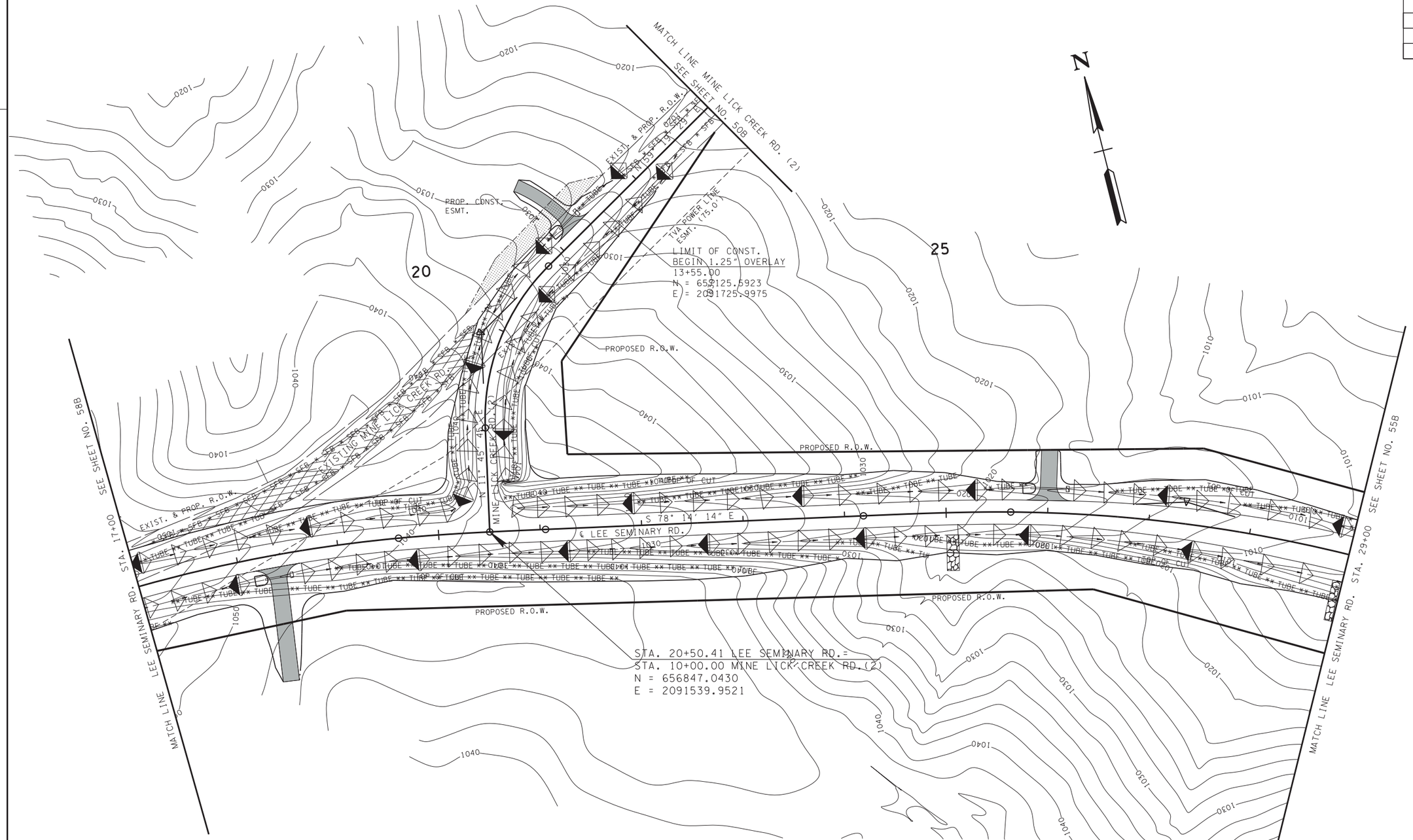
EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 17+00 TO STA. 29+00
SCALE: 1"= 50'

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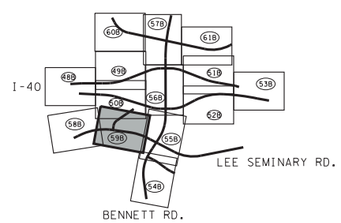
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-I-40-6(130)	59B
CONST.	2015	NH-I-40-6(130)	59B



ALL SILT FENCE AND SILT FENCE WITH BACKING NOT SHOWN ALONG A CONTOUR SHALL HAVE J-HOOKS ADDED ALONG CONTOURS.

ALL PERIMETER MEASURES FROM STAGE 2 SHALL REMAIN IN PLACE UNTIL THE AREA REACHES FINAL STABILIZATION.



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STAGE 3
FINAL STABILIZATION

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PROPOSED CONTOURS

STA. 17+00 TO STA. 29+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.	2014	NH-I-40-6(130)	60
CONST.	2015	NH-I-40-6(130)	60

LIMIT OF CONST.
10+00.00
N = 659706.3583
E = 2091719.6804

HAWKINS CRAWFORD RD.

OUT - 27

OUT - 28

OUT - 29

EXIST. R.O.W.

PROPOSED R.O.W.

TOP OF CUT

TOE OF FILL

EXIST. & PROP. R.O.W.

EXISTING HAWKINS CRAWFORD RD.

℄ HAWKINS CRAWFORD RD.
S 74° 15' 03" E

TVA POWER LINE ESMT. (TYP.)

I-BR-RES

BARN

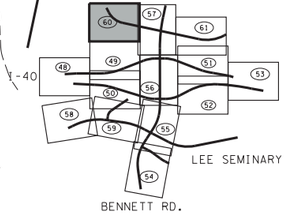
POND

GR

MATCH LINE SEE SHEET NO. 49

MATCH LINE HAWKINS RD. STA. 20+00 SEE SHEET NO. 57

ALL SILT FENCE AND SILT FENCE WITH BACKING NOT SHOWN ALONG A CONTOUR SHALL HAVE J-HOOKS ADDED ALONG CONTOURS.



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STAGE I
CLEARING & GRUBBING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 10+00 TO STA. 20+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.	2014	NH-I-40-6(130)	60A
CONST.	2015	NH-I-40-6(130)	60A

LIMIT OF CONST.
10+00.00
N = 659706.3583
E = 2091719.6804

HAWKINS CRAWFORD RD.

PROP. 41'
OF 24" RCP

EX. 18" CMP
TO BE REMOVED

PROP. 24" RCP
S 24° 19' 06" E

EXIST. & PROP. R.O.W.

PROPOSED R.O.W.

TOP OF CUT

TOE OF FILL

PROPOSED R.O.W.

℄ HAWKINS CRAWFORD RD.
S 74° 19' 03" E

TOP OF CUT

TOE OF FILL

PROP. 59'
OF 24" RCP

PROPOSED R.O.W.

TOP OF CUT

SEE SHEET NO. 57A

OUT - 27

OUT - 28

OUT - 29

GR

POND

EXIST. & PROP. R.O.W.

STA. 10+00.00
N = 659089.9849
E = 2092023.3219

EXISTING HAWKINS CRAWFORD RD.

TVA POWER LINE ESMT. (75'±)

TVA POWER LINE ESMT. (75'±)

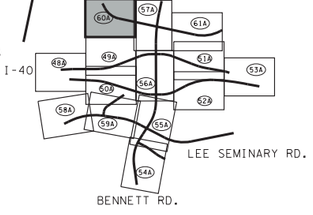
MATCH LINE HAWKINS RD. STA. 20+00

MATCH LINE SEE SHEET NO. 49A

ALL SILT FENCE AND SILT FENCE WITH BACKING NOT SHOWN ALONG A CONTOUR SHALL HAVE J-HOOKS ADDED ALONG CONTOURS.

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THE DITCH MEASURES SHOWN IN STAGE 3 SHALL BE INSTALLED AS SOON AS THE PROPOSED DITCHES ARE OPERATIONAL.



SEALED BY

STAGE 2
INTERMEDIATE GRADING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

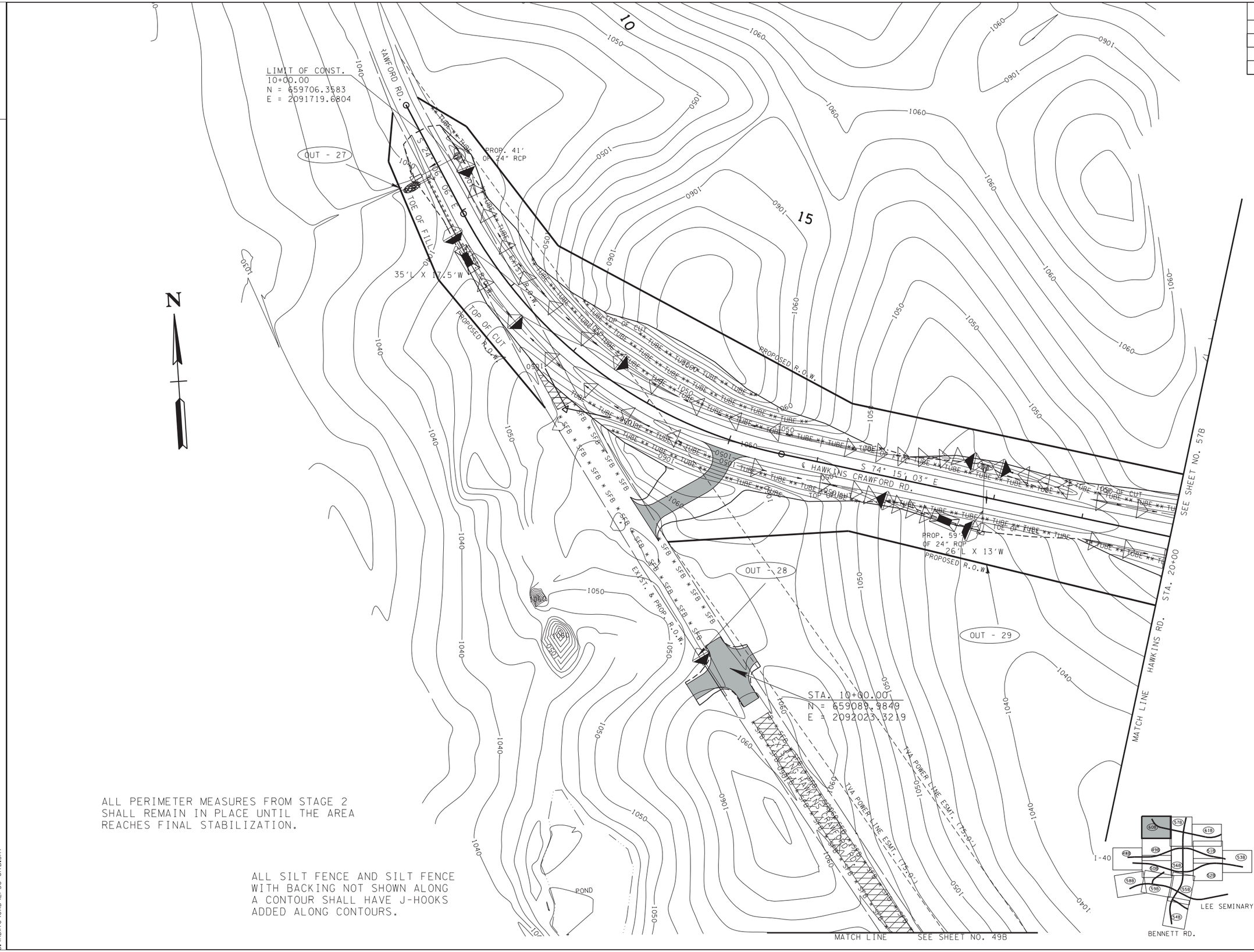
STA. 10+00 TO STA. 20+00

SCALE: 1"= 50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-I-40-6(130)	60B
CONST.	2015	NH-I-40-6(130)	60B



ALL PERIMETER MEASURES FROM STAGE 2 SHALL REMAIN IN PLACE UNTIL THE AREA REACHES FINAL STABILIZATION.

ALL SILT FENCE AND SILT FENCE WITH BACKING NOT SHOWN ALONG A CONTOUR SHALL HAVE J-HOOKS ADDED ALONG CONTOURS.

SEALED BY

STAGE 3
FINAL STABILIZATION

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PROPOSED CONTOURS

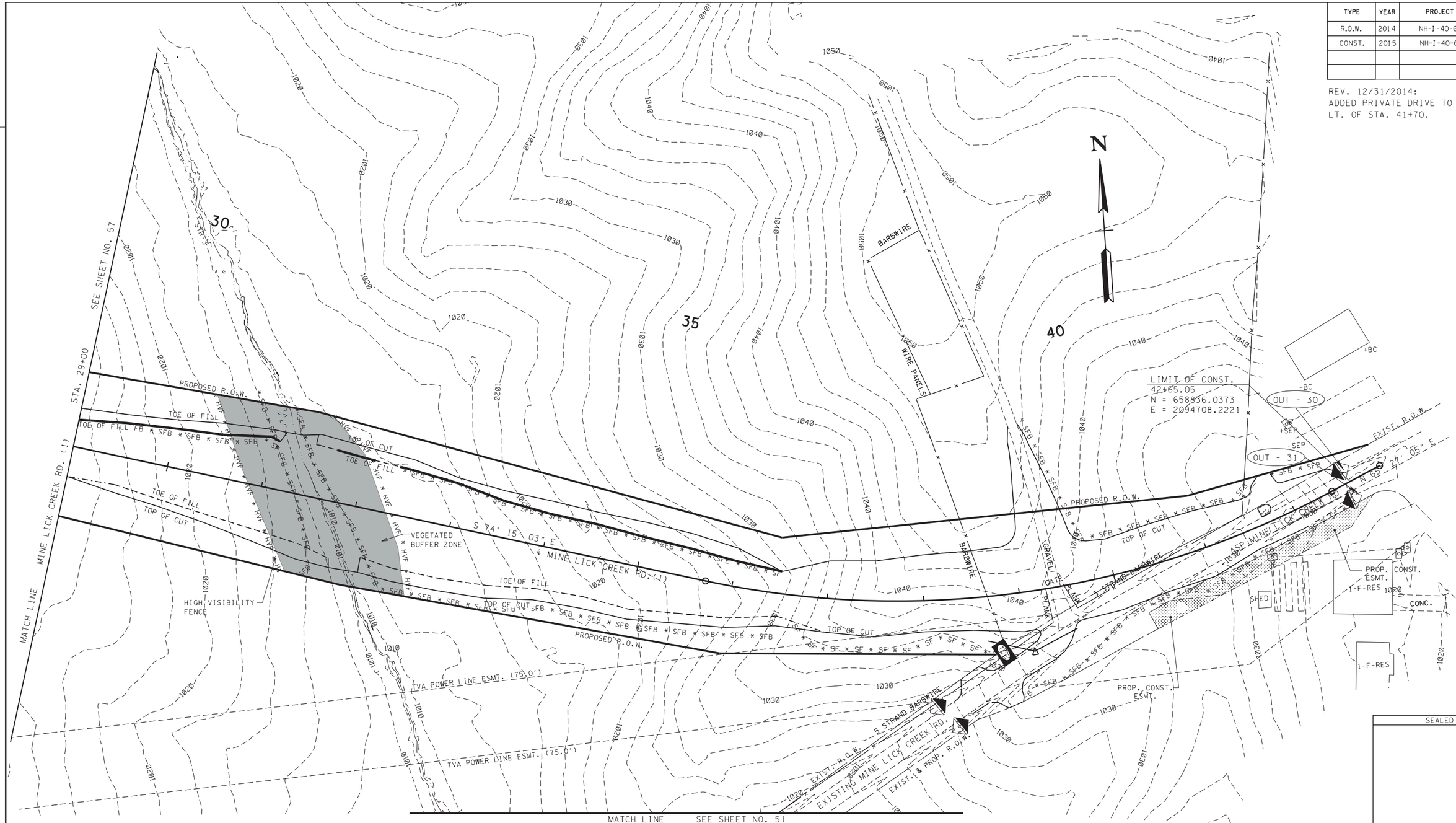
STA. 10+00 TO STA. 20+00
SCALE: 1"= 50'

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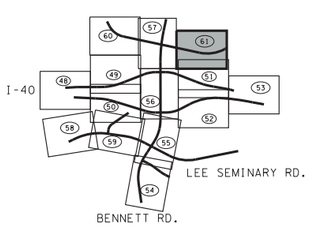
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-I-40-6(130)	61
CONST.	2015	NH-I-40-6(130)	61

REV. 12/31/2014:
ADDED PRIVATE DRIVE TO TRACT 25
LT. OF STA. 41+70.



ALL SILT FENCE AND SILT FENCE WITH BACKING NOT SHOWN ALONG A CONTOUR SHALL HAVE J-HOOKS ADDED ALONG CONTOURS.



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STAGE I
CLEARING & GRUBBING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

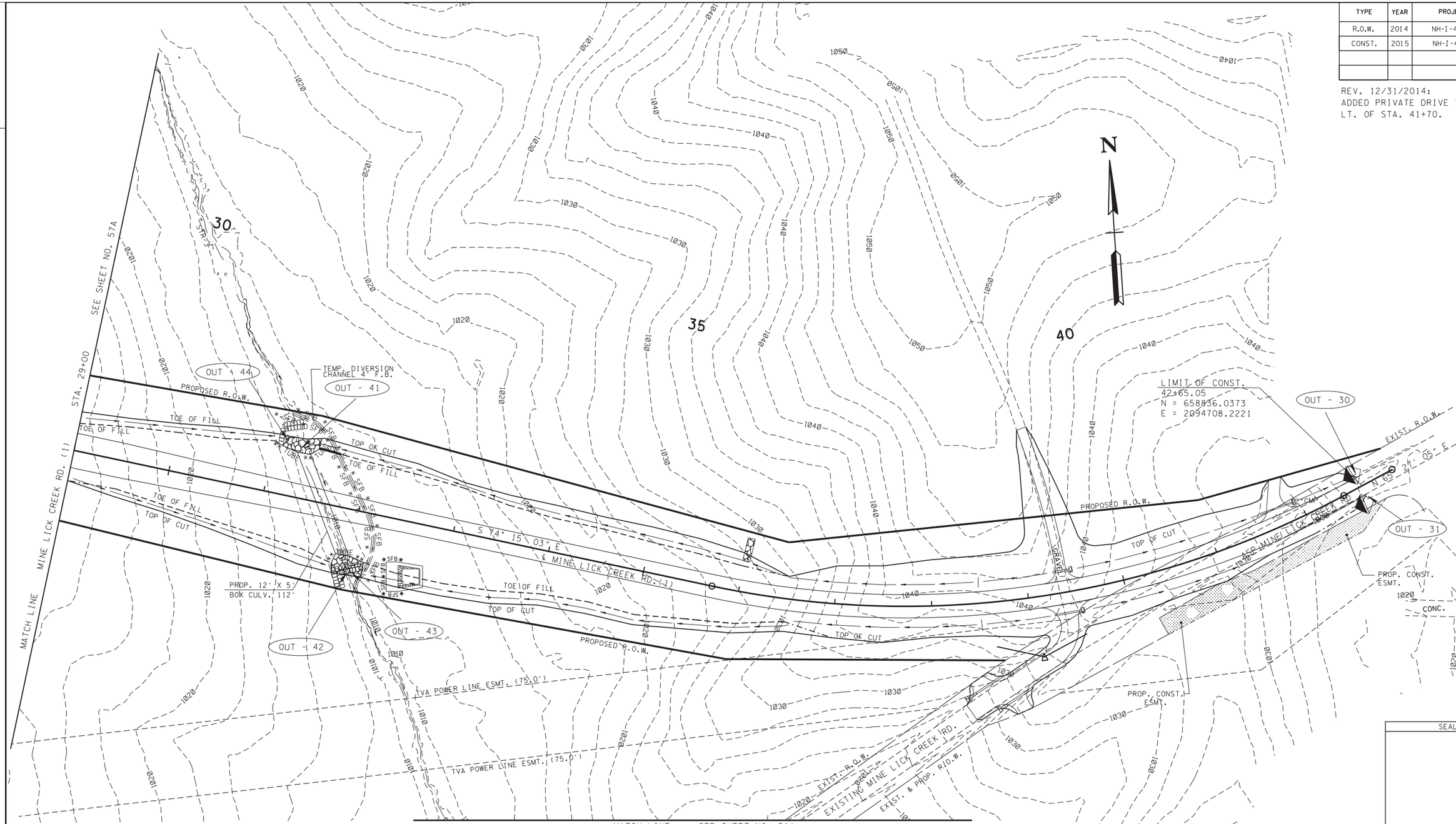
STA.29+00 TO STA.42+65.05
SCALE: 1"= 50'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-I-40-6(130)	61A
CONST.	2015	NH-I-40-6(130)	61A

REV. 12/31/2014:
ADDED PRIVATE DRIVE TO TRACT 25
LT. OF STA. 41+70.

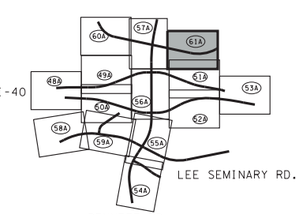


ALL SILT FENCE AND SILT FENCE WITH BACKING NOT SHOWN ALONG A CONTOUR SHALL HAVE J-HOOKS ADDED ALONG CONTOURS.

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

THE DITCH MEASURES SHOWN IN STAGE 3 SHALL BE INSTALLED AS SOON AS THE PROPOSED DITCHES ARE OPERATIONAL.

SEALED BY



STAGE 2
INTERMEDIATE GRADING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

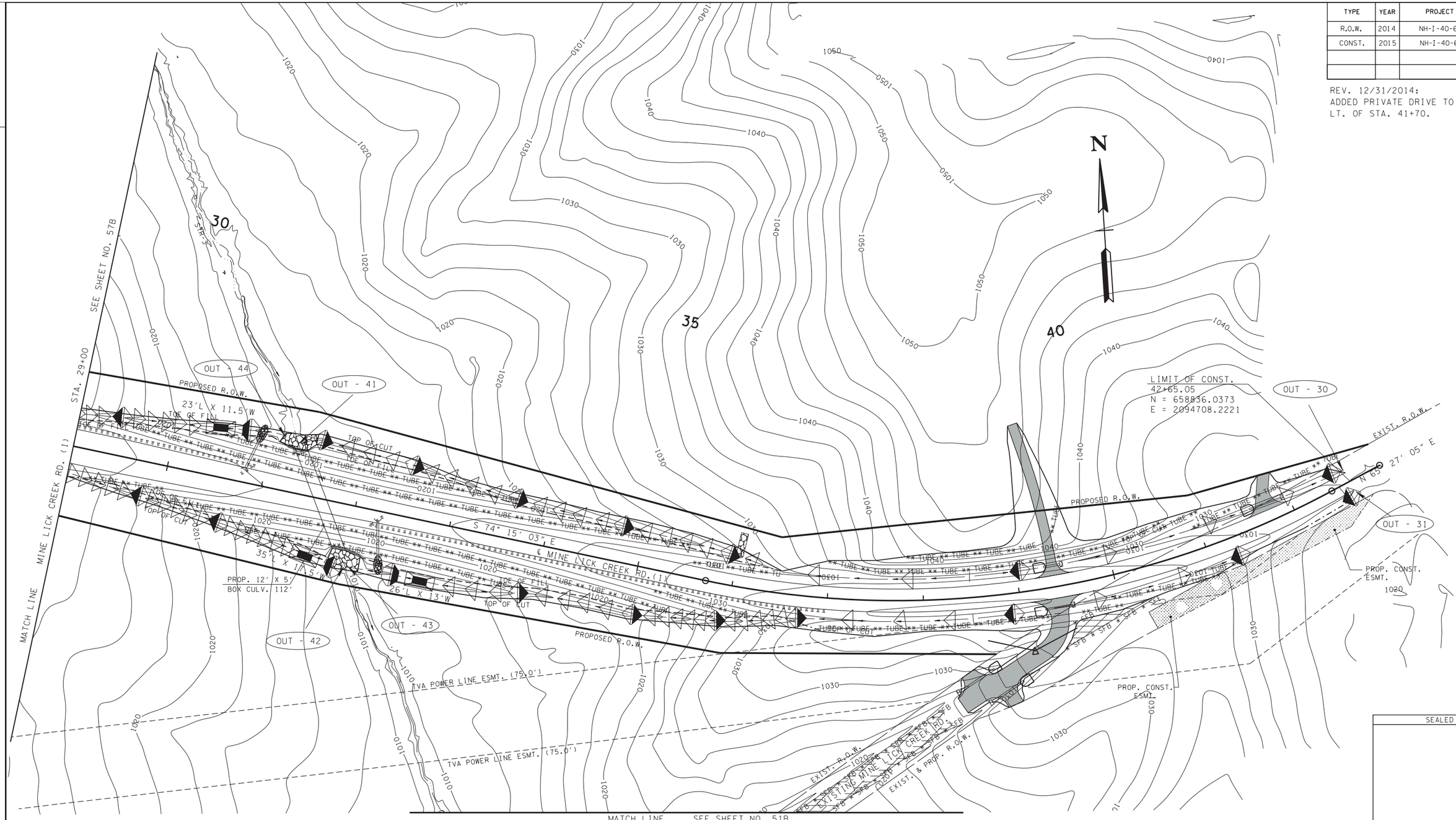
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SCALE: 1"= 50'

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

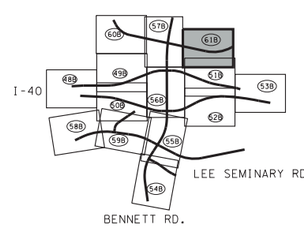
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-I-40-6(130)	61B
CONST.	2015	NH-I-40-6(130)	61B

REV. 12/31/2014:
ADDED PRIVATE DRIVE TO TRACT 25
LT. OF STA. 41+70.



ALL PERIMETER MEASURES FROM STAGE 2 SHALL REMAIN IN PLACE UNTIL THE AREA REACHES FINAL STABILIZATION.

ALL SILT FENCE AND SILT FENCE WITH BACKING NOT SHOWN ALONG A CONTOUR SHALL HAVE J-HOOKS ADDED ALONG CONTOURS.



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STAGE 3
FINAL STABILIZATION

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PROPOSED CONTOURS

STA.29+00 TO STA.42+65.05
SCALE: 1"= 50'

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