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 12, 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 # 47008-1143-44, PIN 103029.00
I-640 Modify interchange at North Broadway (Phase II) in Knoxville
Knox 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)532-4578 if I can be of any assistance.

Sincerely,

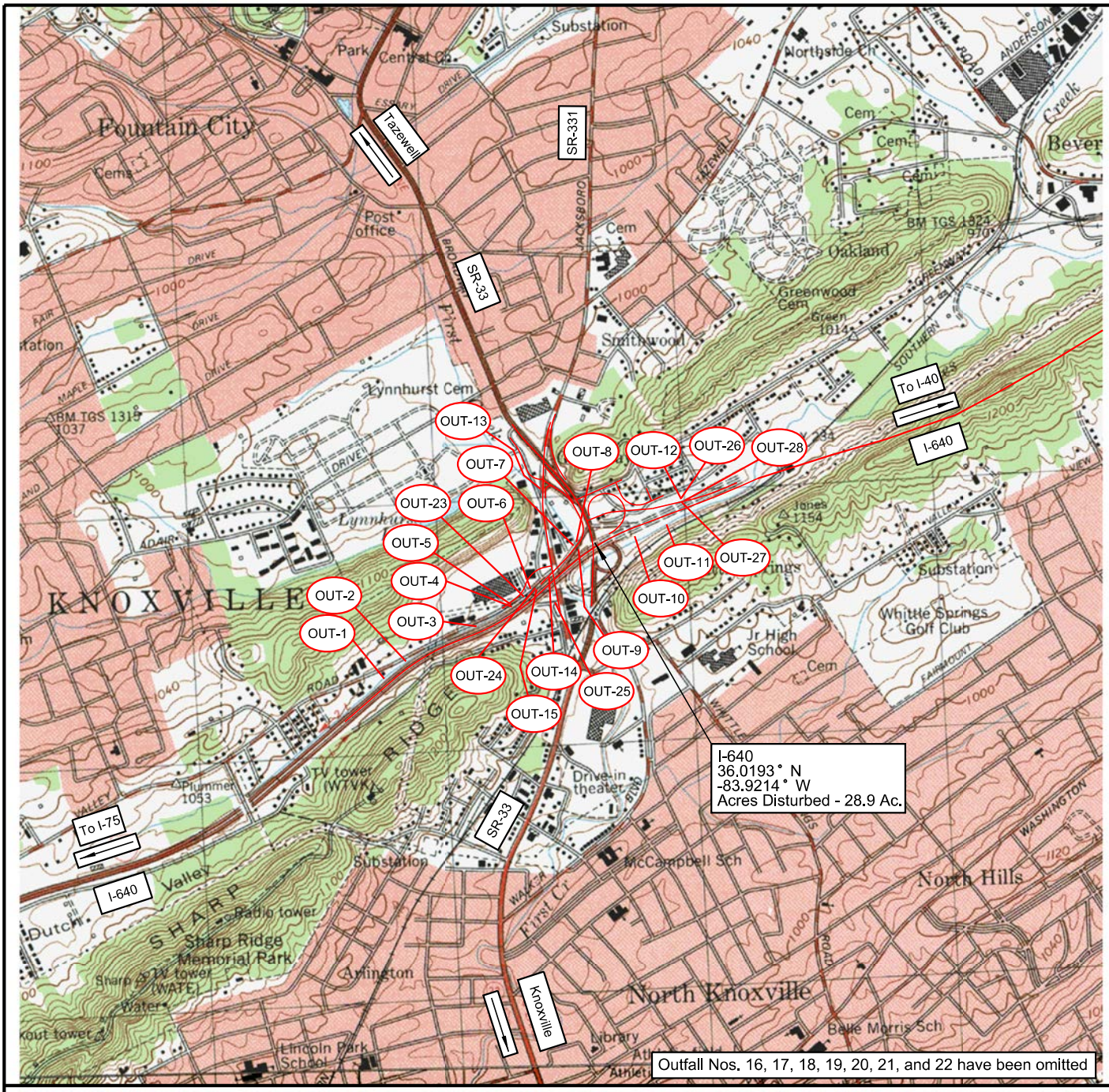
Lina S Khoury

Lina S Khoury
Environmental Permits Section

Enclosures

JLH: DJW: LK

Enclosures for:
cc: Ms. Mary Howard, Region 1 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, Knoxville (147 NW), Fountain City (146 SW) Tennessee Quadrangles

TN TDOT Department of Transportation

Tennessee Department of Transportation

Nashville, Tennessee

Stormwater Pollution Prevention Plan

Interstate 640

Interchange at North Broadway (Phase II) in Knoxville

I640: From L.M. 5.38 to L.M. 6.43

S.R 33: From Eastbound I640 Exit Ramp

To 0.1 Mile north of S.R. 331

Knox County, Tennessee

Drawn By:	Checked By:
DAH	JBL
TDOT P.E. No.	TDOT PIN
47008-1143-44	103029.00
FED. No.	Figure
NH-I-640-7(161)	1

Documentation and Permits Binder

Project Name: I-640 Interchange at North Broadway (Phase II) in Knoxville
I-640: From L.M. 5.38 to L.M. 6.43
SR-33: Eastbound I-640 Exit Ramp to 0.1 Mile North of SR-331

Project No.: 47008-1143-44; NH-I-640-7(161)

PIN: 103029.00

Knox County, Tennessee

Prepared by:
Tennessee Department of Transportation

Prepared by:
Palmer Engineering Company

Consultant Reference No.: 10863.24

Content Checklist

TN TDOT Department of Transportation

DOCUMENTS AND PERMITS BINDER

CHECKLIST

PROJECT NAME: I-640 INTERCHANGE AT NORTH BROADWAY (PHASE II) IN KNOXVILLE
I-640: FROM L.M. 5.38 TO L.M. 6.43
SR-33: FORM EASTBOUND I-640 EXIT RAMP TO 0.1 MILE NORTH OF SR-331
PIN: 103029.00
PROJECT NO. : 47008-1143-44; NH-I-640-7(161)
COUNTY: KNOX

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

TN TDOT Department of Transportation

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

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

[2] Predicted Precipitation Source: _____

NOAA Atlas 14, Volume 2, Version 3
Location name: Knoxville, Tennessee, US*
Latitude: 36.0191°, Longitude: -83.9215°
Elevation: 967 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	0.319 (0.291-0.353)	0.376 (0.343-0.416)	0.446 (0.406-0.492)	0.507 (0.459-0.558)	0.588 (0.529-0.647)	0.653 (0.585-0.716)	0.721 (0.641-0.791)	0.791 (0.696-0.867)	0.886 (0.768-0.972)	0.966 (0.829-1.06)
10-min	0.510 (0.465-0.564)	0.602 (0.548-0.665)	0.714 (0.651-0.788)	0.810 (0.735-0.893)	0.936 (0.844-1.03)	1.04 (0.931-1.14)	1.15 (1.02-1.26)	1.25 (1.10-1.38)	1.40 (1.22-1.54)	1.52 (1.31-1.67)
15-min	0.638 (0.581-0.706)	0.756 (0.689-0.836)	0.903 (0.823-0.997)	1.03 (0.929-1.13)	1.19 (1.07-1.31)	1.32 (1.18-1.45)	1.45 (1.29-1.59)	1.58 (1.39-1.74)	1.76 (1.53-1.94)	1.91 (1.64-2.10)
30-min	0.874 (0.796-0.967)	1.05 (0.952-1.16)	1.28 (1.17-1.42)	1.49 (1.35-1.64)	1.76 (1.58-1.94)	1.98 (1.78-2.18)	2.22 (1.97-2.43)	2.46 (2.17-2.70)	2.81 (2.43-3.08)	3.09 (2.65-3.40)
60-min	1.09 (0.993-1.21)	1.31 (1.19-1.45)	1.65 (1.50-1.82)	1.93 (1.75-2.13)	2.34 (2.11-2.58)	2.69 (2.41-2.95)	3.06 (2.72-3.35)	3.45 (3.04-3.79)	4.03 (3.49-4.42)	4.51 (3.87-4.97)
2-hr	1.27 (1.16-1.41)	1.53 (1.39-1.69)	1.91 (1.74-2.10)	2.24 (2.04-2.47)	2.72 (2.45-2.98)	3.13 (2.80-3.43)	3.56 (3.16-3.90)	4.04 (3.55-4.42)	4.72 (4.09-5.17)	5.30 (4.53-5.82)
3-hr	1.38 (1.26-1.52)	1.65 (1.51-1.81)	2.04 (1.87-2.24)	2.39 (2.18-2.62)	2.89 (2.61-3.15)	3.32 (2.97-3.62)	3.77 (3.36-4.11)	4.26 (3.75-4.65)	4.97 (4.31-5.44)	5.56 (4.76-6.11)
6-hr	1.71 (1.58-1.86)	2.02 (1.87-2.21)	2.47 (2.28-2.69)	2.87 (2.64-3.12)	3.44 (3.14-3.73)	3.92 (3.56-4.25)	4.43 (3.99-4.80)	4.98 (4.45-5.40)	5.76 (5.07-6.25)	6.41 (5.57-6.99)
12-hr	2.12 (1.97-2.30)	2.51 (2.33-2.73)	3.05 (2.83-3.31)	3.52 (3.26-3.81)	4.18 (3.84-4.50)	4.72 (4.32-5.09)	5.29 (4.81-5.70)	5.88 (5.31-6.35)	6.71 (6.00-7.26)	7.39 (6.54-8.02)
24-hr	2.59 (2.40-2.81)	3.09 (2.86-3.35)	3.78 (3.50-4.10)	4.35 (4.01-4.72)	5.17 (4.73-5.61)	5.85 (5.31-6.37)	6.57 (5.91-7.21)	7.35 (6.52-8.12)	8.47 (7.37-9.47)	9.39 (8.04-10.6)
2-day	3.14 (2.89-3.41)	3.75 (3.46-4.08)	4.59 (4.23-5.00)	5.28 (4.86-5.76)	6.26 (5.70-6.85)	7.07 (6.39-7.77)	7.92 (7.08-8.76)	8.83 (7.80-9.85)	10.1 (8.77-11.5)	11.2 (9.53-12.8)
3-day	3.37 (3.12-3.65)	4.03 (3.73-4.36)	4.91 (4.54-5.32)	5.63 (5.19-6.10)	6.63 (6.06-7.21)	7.45 (6.75-8.14)	8.30 (7.45-9.14)	9.20 (8.16-10.2)	10.5 (9.11-11.8)	11.5 (9.84-13.1)
4-day	3.61 (3.35-3.89)	4.31 (4.00-4.64)	5.24 (4.85-5.65)	5.98 (5.52-6.45)	7.00 (6.42-7.58)	7.83 (7.12-8.52)	8.68 (7.81-9.52)	9.58 (8.52-10.6)	10.8 (9.45-12.1)	11.8 (10.2-13.4)
7-day	4.41 (4.11-4.74)	5.26 (4.90-5.66)	6.36 (5.91-6.84)	7.22 (6.69-7.77)	8.38 (7.71-9.03)	9.29 (8.49-10.1)	10.2 (9.28-11.1)	11.2 (10.0-12.3)	12.4 (11.0-13.8)	13.5 (11.7-15.1)
10-day	5.08 (4.76-5.45)	6.04 (5.65-6.48)	7.23 (6.76-7.77)	8.17 (7.62-8.78)	9.45 (8.75-10.2)	10.5 (9.61-11.3)	11.5 (10.5-12.5)	12.5 (11.3-13.7)	13.9 (12.4-15.4)	15.0 (13.2-16.8)
20-day	7.09 (6.68-7.52)	8.38 (7.89-8.89)	9.81 (9.23-10.4)	10.9 (10.2-11.6)	12.2 (11.5-13.0)	13.3 (12.4-14.2)	14.2 (13.2-15.3)	15.2 (14.0-16.3)	16.4 (15.0-17.8)	17.2 (15.6-18.8)
30-day	8.74 (8.30-9.22)	10.3 (9.74-10.8)	11.8 (11.2-12.4)	12.9 (12.2-13.6)	14.3 (13.5-15.1)	15.3 (14.4-16.2)	16.3 (15.2-17.3)	17.1 (16.0-18.3)	18.2 (16.9-19.6)	19.0 (17.5-20.5)
45-day	11.0 (10.5-11.5)	12.9 (12.2-13.5)	14.6 (13.9-15.3)	15.8 (15.1-16.7)	17.4 (16.5-18.3)	18.5 (17.5-19.5)	19.6 (18.4-20.7)	20.5 (19.3-21.8)	21.7 (20.2-23.2)	22.5 (20.9-24.2)
60-day	13.2 (12.6-13.9)	15.4 (14.7-16.2)	17.4 (16.6-18.3)	18.9 (18.0-19.9)	20.7 (19.6-21.8)	22.0 (20.8-23.2)	23.1 (21.8-24.5)	24.2 (22.7-25.7)	25.4 (23.7-27.2)	26.3 (24.4-28.2)

[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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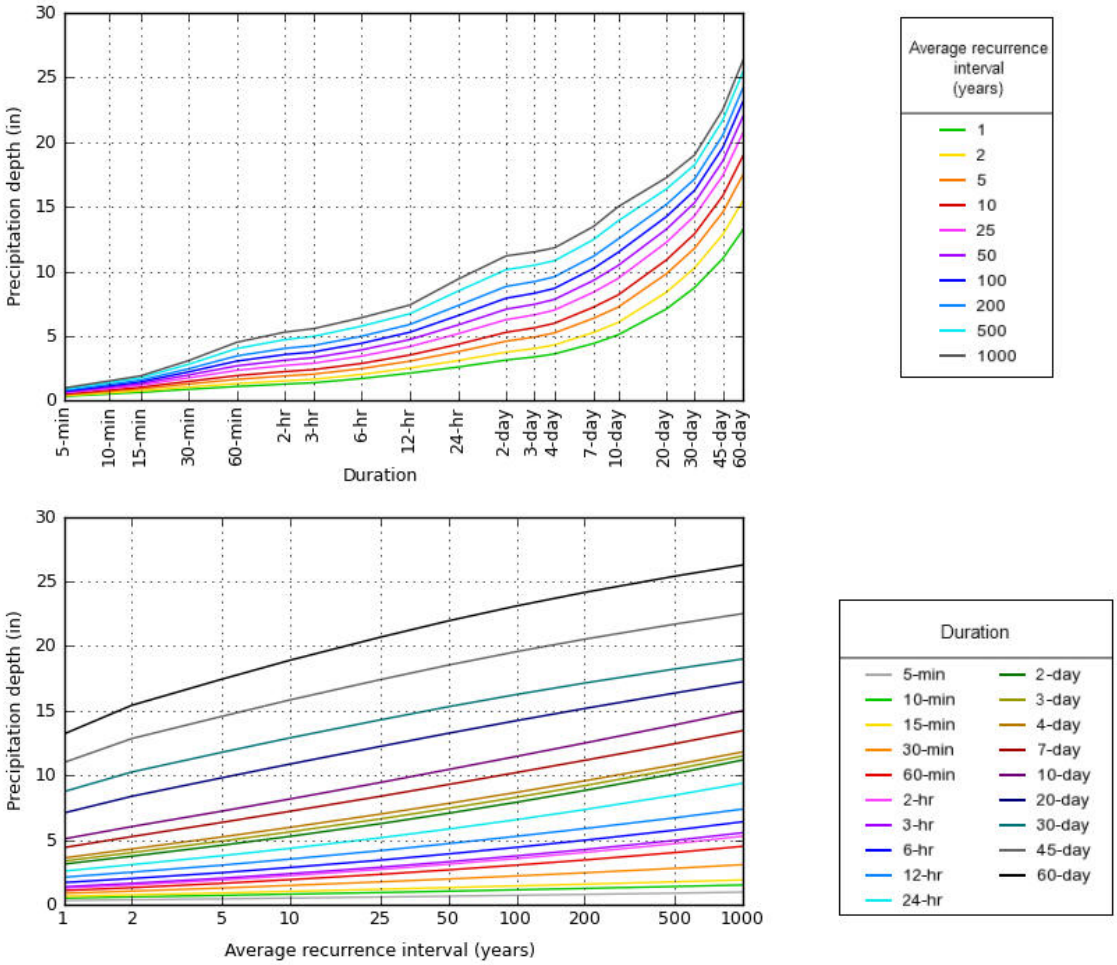
PF graphical

PDS-based depth-duration-frequency (DDF) curves
Latitude: 36.0191°, Longitude: -83.9215°



NOAA Atlas 14, Volume 2, Version 3

Created (GMT): Mon Sep 28 15:33:21 2015

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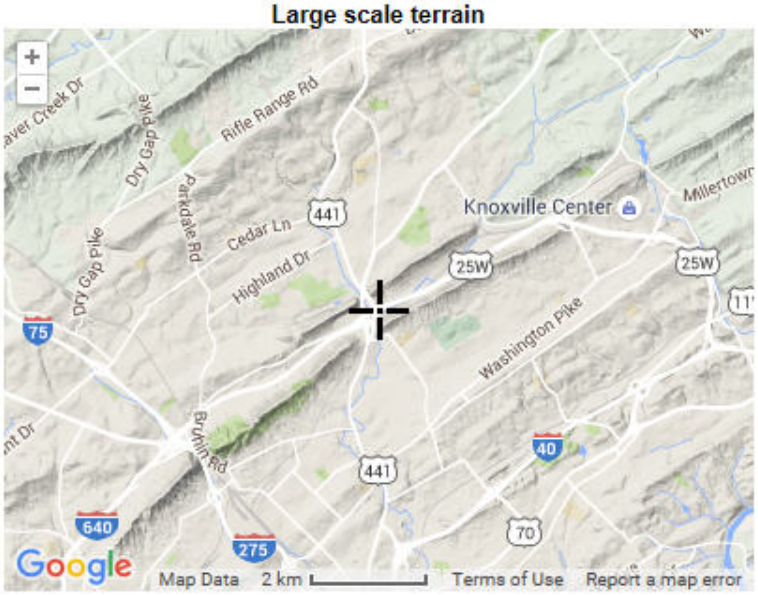
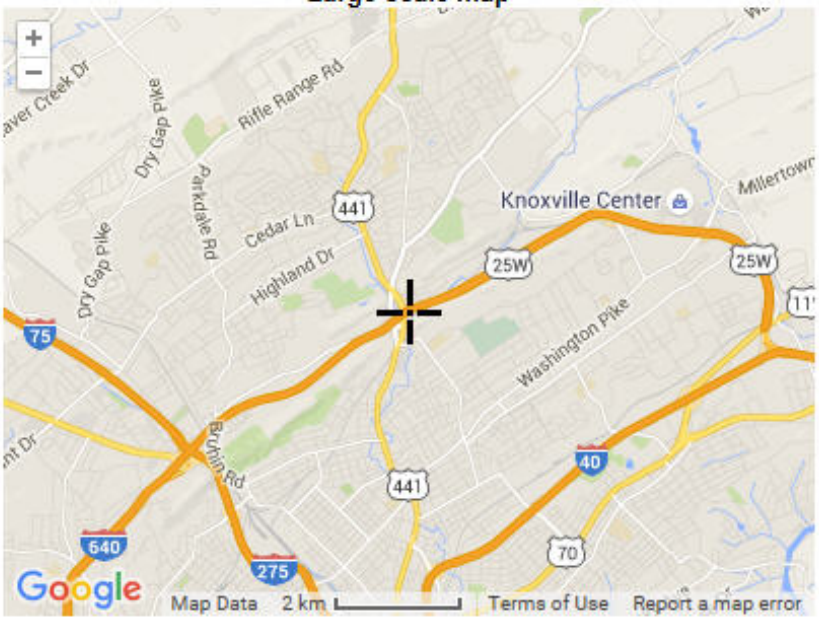
Maps & aerials

Small scale terrain

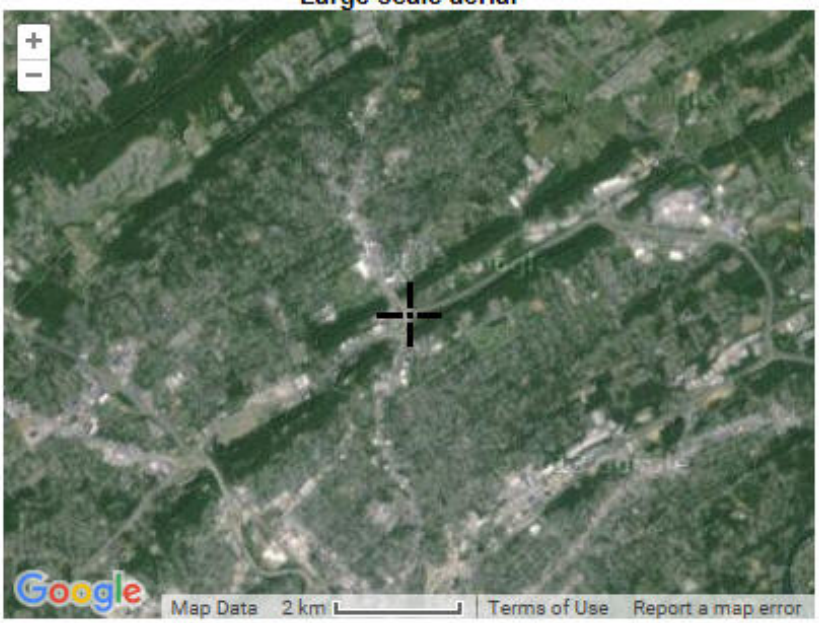
Large scale terrain



Large scale map



Large scale aerial



3. EPSC Inspection Reports

TN TDOT Department of Transportation

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 Avenue, 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 103029.00; PROJECT # 47008-1143-44; NH-I-640-7(161)	**Existing NPDES Tracking Number: TNR**
Street Address or Location: I-640 Interchange at North Broadway (Phase II) in Knoxville	Start date: January 2016
	Estimated end date: January 2020
Site Activity Description: I-640 from L.M. 5.38 to L.M. 6.43 SR-33 Eastbound I640 exit ramp to 0.1 mile north of SR-331	Latitude (dd.dddd): 36.0193 N
	Longitude (dd.dddd): -83.9214 W
County(ies): Knox / MS4 Jurisdiction: TDOT	Acres Disturbed: 28.9
	Total Acres: 56.2

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.: NRS#14.273

Receiving waters: Unnamed Trib. to First Creek, First Creek, and Whites Creek within the Fort Loudon Lake 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 Transportation

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): Environmental Division Director	
Mailing Address: 900 James K. Polk Building 505 Deaderick Street		City: Nashville	State: TN / Zip: 37243-0334
Phone: (615) 741-5373	Fax: ( ) N/A	E-mail: Environmental.NPDES TDOT@tn.gov	

Optional Contact: Lina Khoury		Title or Position: Senior Transportation Project Specialist	
Mailing Address: 900 James K. Polk Building 505 Deaderick Street		City: Nashville	State: TN / Zip: 37243-0334
Phone: (615) 532-4578	Fax: ( ) N/A	E-mail: Lina.Khoury@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: 10/14/15

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

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

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

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

OFFICIAL STATE USE ONLY

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

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

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

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

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

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

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

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

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

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

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

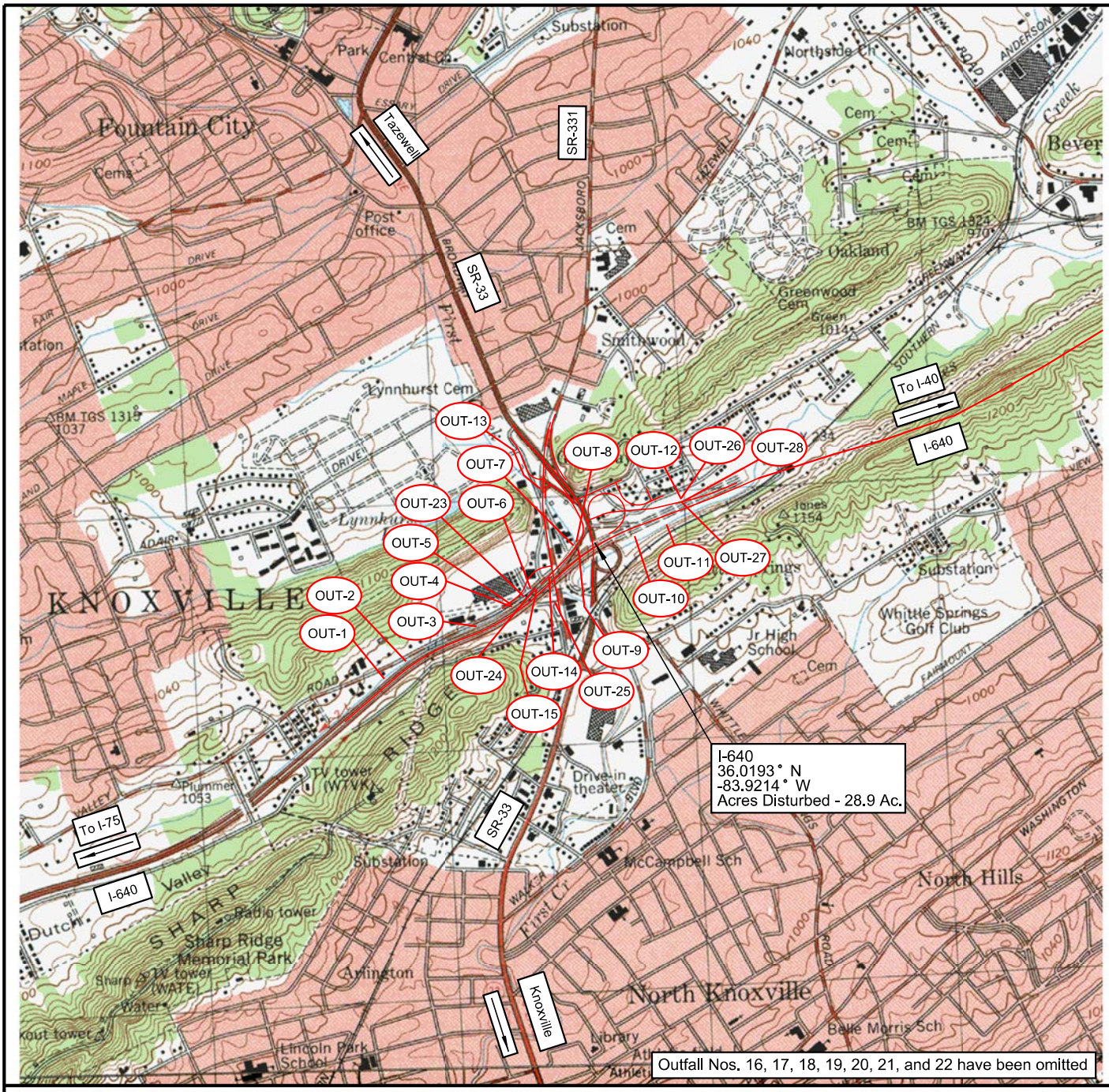
MS4 Jurisdiction: If this construction site is located within a Municipal Separate Storm Sewer System (MS4), please list name of MS4. A current list of MS4s in Tennessee may be found at http://www.state.tn.us/environment/water/water-quality_storm-water.shtml

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

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

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

Tennessee Department of Environment and Conservation
Division of Water Pollution Control, Permit Section
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, Knoxville (147 NW), Fountain City (146 SW) Tennessee Quadrangles

TN TDOT Department of Transportation

Tennessee Department of Transportation

Nashville, Tennessee

Stormwater Pollution Prevention Plan

Interstate 640

Interchange at North Broadway (Phase II) in Knoxville

I640: From L.M. 5.38 to L.M. 6.43

S.R 33: From Eastbound I640 Exit Ramp

To 0.1 Mile north of S.R. 331

Knox County, Tennessee

Drawn By:	Checked By:
DAH	JBL
TDOT P.E. No.	TDOT PIN
47008-1143-44	103029.00
FED. No.	Figure
NH-I-640-7(161)	1

5. Blank NOT

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC)
Division of Water Resources
William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 11th Floor, 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 DWR 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.

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 Pollution Control, Permit Section
Attn: Storm Water NOT 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 ENVIRONMENT AND CONSERVATION

DIVISION OF WATER RESOURCES

William R. Snodgrass - Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, Tennessee 37243-1102

March 6, 2015

D.J. Wiseman
Tennessee Department of Transportation
505 Deaderick Street, Suite 900
Nashville, TN 37243

Subject: §401 Water Quality Certification
TDOT Application NRS 14.273
I-640 Interchange Modification at US441/SR33

LOCATION: Interstate 640 and US441/SR33
Knoxville, Knox County, TN
Beginning Location: Latitude: 36.0128 Longitude: -83.9335
Ending Location: Latitude: 36.0205 Longitude: -83.1738

Dear Ms. Wiseman:

We have reviewed and approved your application to upgrade Interstate 640 and US441/SR31 in Knox County. Authorized waterbody impacts include the construction of a 77-foot culvert along an unnamed tributary to First Creek, construction of an 18-foot culvert extension along Whites Creek, and 2,820 feet of streambank stabilization consisting of native shrub and herbaceous plantings and biodegradable erosion control matting along an additional unnamed tributary of First Creek. The impacts to the State's resources will be offset through the purchase of 36 credits in The Upper Tennessee Service Area from the Tennessee Stream Mitigation Program.

The planned activity was reviewed and the Division has reasonable assurance that the activity as proposed in accordance with all permit conditions herein will not violate applicable water quality standards and has issued the attached permit (enclosed). This permit may also serve as a §401 water quality certification (pursuant to 40 C.F.R. §121.2).

The state of Tennessee may modify, suspend or revoke this authorization or seek modification or revocation should the State determine that the activity results in more than an insignificant violation of applicable water quality standards or violation of the TWQCA. Failure to comply with permit terms may result in penalty in accordance with T.C.A. §69-3-115.

It is the responsibility of the permittee to read and understand all permit conditions before the project begins. If you need any additional information or clarification, please contact me at 615-253-0709 or by e-mail at Robert.J.Wayne@tn.gov.

Sincerely,

Robert T. Wayne

Robert Wayne,
Natural Resources Unit
Enclosure: §401 Water Quality Certification

Cc: Knoxville EFO
David Hagerman, Program Manager, Knoxville MS4
USACE – Nashville District
File Copy

NRS14.273

Pursuant to §401 of *The Federal Clean Water Act* (33 U.S.C. 1341), any applicant for a Federal license or permit to conduct any activity which may result in any discharge into the waters of the U.S., shall provide the federal licensing or permitting agency a certification from the State in which the discharge originates or will originate. Accordingly, the Division of Water Resorces requires reasonable assurance that the activity will not violate provisions of *The Tennessee Water Quality Control Act of 1977* (T.C.A. §69-3-101 et seq.) or provisions of §§301, 302, 303, 306 or 307 of *The Clean Water Act*.

Subject to conformance with accepted plans, specifications and other information submitted in support of the application, pursuant to 33 U.S.C. 1341 the State of Tennessee hereby certifies the activity described below. This shall serve as authorization under T.C.A. §69-3-101 et seq.

PERMITTEE D.J. Wiseman
Tennessee Department of Transportation
505 Deaderick Street, Suite 900
Nashville, TN 37243

AUTHORIZED WORK: Authorized waterbody impacts include the construction of a 77-foot culvert along an unnamed tributary to First Creek, construction of an 18-foot culvert extension along Whites Creek, and 2,820 feet of streambank stabilization consisting of native shrub and herbaceous plantings and biodegradable erosion control matting along an additional unnamed tributary of First Creek. The impacts to the State's resources will be offset through the purchase of 36 credits in Upper Tennessee Service Area from the Tennessee Stream Mitigation Program.

LOCATION: I-640 Interchange Modification at US441/SR33
Knoxville, Knox County, TN

EFFECTIVE DATE: March 6, 2015

EXPIRATION DATE: March 5, 2020

Tisha Calabrese Benton
Director, Division of Water Resources

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PART I

Authorized Work:

The applicant is authorized to install two culverts totaling 95 feet and stabilize 2,820 feet of streambank through the use of bioengineering techniques.

STR-1- Unnamed tributary to First Creek

Latitude: 36.0140 Longitude: -83.9321
STA-105+80 to 134+00

a. Streambank stabilization consisting of native shrub and herbaceous plantings and biodegradable erosion control totaling 2,820 feet
b. Signs, Carsonite or similar material, shall be placed approximately every one hundred (100) feet clearly indicating that the area is a protected stream, and no mowing or other disturbance is permitted within the revegetated area.
c. Monitoring required for 2,820-foot protected stream corridor = three years

STR-4- Unnamed tributary to First Creek

Latitude: 36.0228 Longitude: -83.9247
STA-7+88

a. Installation of a 77-foot culvert

STR-5- Whites Creek

Latitude: 36.0184 Longitude: -83.9216
STA-152+64

a. Installation of 18-foot culvert extension along an existing 270-foot culvert
a. Mitigation required at 18 x 2 = 36 credits

Special Conditions:

a. Unless stated otherwise, all work shall be accomplished in conformance with the accepted plans, specifications, data and other information submitted in support of application NRS14.273
b. Associated utility line crossings shall be accomplished in conformance with the Tennessee Department of Environment and Conservation's (TDEC) "General Permit for Utility Line Crossings."
c. All box culverts with more than one barrel shall be constructed in a manner which will concentrate flow into one barrel and not result in channel over widening.
d. The bottom of culverts shall be constructed below the stream bed elevation in a manner that allows natural substrate to reestablish.
e. Culverts shall not be constructed in a manner that would permanently disrupt the movement of fish and aquatic life.
f. Construction and removal of bridges and culverts shall be in the dry to the maximum extent practicable, by diverting flow utilizing cofferdams, berms, and/or temporary channels or

pipes. Temporary diversion channels shall be protected by non-erodible material and lines to the expected high water level.

g. The use of monofilament-type erosion control netting or blanket is prohibited.

h. This does not authorize the removal of riparian trees or shrubs. Authorization may need to be obtained through the local jurisdiction before riparian zones are modified in any way.

i. The permitte shall notify this office of project completion within thirty (30) days of completion.

j. Permittee is responsible for any permanent reduction or loss of instream flow resulting from authorized activities.

k. If any relocated stream, riprap lined stream channel, daylighted stream, or adjoining stream channel fails to meet the assessment criteria to be classified as a stream, corrective action or additional mitigation will be required.

l. Best Management Practices (BMPs) shall be stringently implemented throughout the construction period to prevent sediments, oils, or other project-related pollutants from being discharged into waters of the state. All spills must be reported to the appropriate emergency management agency, and measures shall be taken immediately to prevent the pollution of waters of the state, including groundwater, should a spill occur.

m. Checkdams or other in-stream treatment are not authorized to be placed within streams.

n. Streambeds shall not be used as transportation routes for construction equipment. Temporary stream crossings shall be limited to one point in the construction area and EPSC measures shall be utilized where stream banks are disturbed.

General Conditions:

a. It is the responsibility of the applicant to convey all terms and conditions of this permit to all contractors. A copy of this permit, approved plans and any other documentation pertinent to the activities authorized by this permit shall be maintained on site at all times during periods of construction activity.

b. Work shall not commence until the applicant has received the federal §404 permit from the U. S. Army Corps of Engineers, a §26a permit from the Tennessee Valley Authority or authorization under a Tennessee NPDES Storm Water Construction Permit where necessary. The applicant is responsible for obtaining these permits.

c. All work shall be carried out in such a manner as will prevent violations of water quality criteria as stated in Rule 0400-40-03-.03 of the Rules of the Tennessee Department of Environment and Conservation. 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 by Rule 0400-40-04. These uses include fish and aquatic life (including trout streams and naturally reproducing trout streams), livestock watering and wildlife, recreation, irrigation, industrial water supply, domestic water supply, and navigation.

d. Impacts to waters of the state other than those specifically addressed in the plans and this permit are prohibited. All streams, springs and wetlands shall be fully protected prior, during and after construction until the area is stabilized. Any questions, problems or concerns that arise regarding any stream, spring or wetland either before or during construction, shall be addressed to the Division of Water Resource's Knoxville Environmental Field Office (865-594-6035), or the permit coordinator in the division's Natural Resources Unit (615-532-0709).

e. Adverse impact to formally listed state or federal threatened or endangered species or their critical habitat is prohibited.

f. This permit does not authorize adverse impacts to cultural, historical or archeological features or sites.

PART II

Mitigation Requirements and Monitoring Procedures

Required Mitigation Activities

1. To mitigate for stream resource value losses resulting from the authorized project not otherwise addressed, the applicant shall purchase 36 stream mitigation in-lieu fee credits in the Upper Tennessee Service Area from the Tennessee Stream Mitigation Program. Please be advised that the stream impacts associated with this mitigation are not authorized to proceed until the specified mitigation credits have been purchased. Payment must be made within 60 days of invoice. **Proof of credit purchase shall be submitted to this office within 30 days of payment.** With the purchase of the stream mitigation credits, legal responsibility for completion of this stream mitigation is legally transferred to the Tennessee Stream Mitigation Program.

Monitoring Requirements and Procedures

1. Monitoring for Stream 1 shall be consistent with "Level I Monitoring Requirements (3 Years)," detailed in the "Stream Mitigation Guidelines for the State of Tennessee." (http://www.tennessee.gov/environment/wpc/publications/pdf/StreamMitigationGuidelines.pdf). At a minimum monitoring reports should include:
    a. Narrative description and photos of pre-project conditions
    b. Pre-project habitat assessment
    c. Annual narrative description and photos
    d. Annual riparian vegetation survey
2. The channel must meet a channel stability rating index of "good" using the Pfankuch Stability Rating procedure.
3. All protective signs which clearly indicate the area is a protected stream and no mow riparian buffer shall be monitored with represenitive photos of the signs and buffer zone included in the annual monitoing report. All protective signs shall be properly maintained; any missing, damaged, or illegible signs shall be replaced.

Recording of Results

a. For each measurement, sample, or photograph taken pursuant to the requirements of this permit, the permittee shall record the following information and submit in the annual monitoring reports:

   1. The exact place, date and time;
   2. The exact person(s) collecting and/or documenting the information;
   3. The dates and times any analyses were performed and by whom;
   4. The results of all required analyses; and
   5. Any other data or documentation recorded at the time of assessment

b. In the event any portion or aspect of the project does not meet the specified success criteria based on reporting and/or additional visual observations in a monitoring year, the nature and cause(s) of the resulting condition shall be investigated and documented. If it is determined that corrective actions are not warranted at the time, the rationale for the decision shall be stated. Continued monitoring of the condition or area using more detailed methodology may be appropriate and must be documented. In instances where corrective actions are necessary, a plan shall be prepared that includes proposed actions, a time schedule for activities, and revised monitoring plan.

Submission of Monitoring Results

a. The permittee shall submit the required monitoring information on an annual basis, for a term of three (3) years:

   All monitoring reports and information shall be submitted in report-form to the Division's Natural Resources Unit, William R. Snodgrass - Tennessee Tower, 312 Rosa L. Parks Avenue, Nashville, Tennessee 37243-1102. Copies shall also be provided to the appropriate Water Resource Environmental Field Office, and the U.S. Army Corps of Engineers-Nashville District Office, located at 3701 Bell Road, Nashville, Tennessee 37214.

b. The first monitoring report shall be due by October 31st of each monitoring year.

c. The applicant should notify the agency in writing when the monitoring period is complete. Following receipt of the final report, the agency will contact the applicant (or agent) as soon as possible to schedule a site visit to confirm the completion of the compensatory mitigation site. The mitigation will not be considered complete without an on-site inspection by regulatory staff and written confirmation that the site is functioning as proposed.

Falsifying Results and/or Reports

Knowingly making any false statement on any report required by this permit or falsifying any result may result in the imposition of criminal penalties as provided for in Section 309 of the Federal Water Pollution Control Act, as amended, and in Section 69-3-115 of the Tennessee Water Quality Control Act.

Duty to Reapply

Permittee is not authorized to work after the expiration date of this permit. In order to receive authorization beyond the expiration date, the permittee shall submit such information and forms as are required to the Director of Water Resources. Such applications must be properly signed and certified.

Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State, or local laws or regulations.

Other Information

If the permittee becomes aware that he/she failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, then he/she shall promptly submit such facts or information.

Changes Affecting the Permit

Transfer/Change of Ownership

a. This permit may be transferred to another party, provided there are no activity or project modifications, no pending enforcement actions, or any other changes which might affect the permit conditions contained in the permit, by the permittee if:

b. The permittee notifies the Director of the proposed transfer at least 30 days in advance of the proposed transfer date;

c. The notice includes a written agreement between the existing and new permittees containing a specified date for transfer of permit responsibility, coverage, and contractual liability between them; and

d. The Director does not notify the current permittee and the new permittee, within 30 days, of his intent to modify, revoke, reissue, or terminate the permit, or require that a new application be filed rather than agreeing to the transfer of the permit.

e. The permittee must provide the following information to the division in their formal notice of intent to transfer ownership:

    1. the permit number of the subject permit;
    2. the effective date of the proposed transfer;
    3. the name and address of the transferor;
    4. the name and address of the transferee;
    5. the names of the responsible parties for both the transferor and transferee;
    6. a statement that the transferee assumes responsibility for the subject permit;
    7. a statement that the transferor relinquishes responsibility for the subject permit;

8. the signatures of the responsible parties for both the transferor and transferee, and;
9. a statement regarding any proposed modifications to the permitted activities or project, its operations, or any other changes which might affect the permit conditions contained in the permit.

Change of Mailing Address

The permittee shall promptly provide to the Director written notice of any change of mailing address. In the absence of such notice the original address of the permittee will be assumed to be correct.

Noncompliance

Effect of Noncompliance

All discharges shall be consistent with the terms and conditions of this permit. Any permit noncompliance constitutes a violation of applicable State and Federal laws and is grounds for enforcement action, permit termination, permit modification, or denial of permit reissuance.

Reporting of Noncompliance

24-Hour Reporting

a. In the case of any noncompliance which could cause a threat to public drinking supplies, or any other discharge which could constitute a threat to human health or the environment, the required notice of non-compliance shall be provided to the Division of Water Resources in the appropriate Environmental Field Office within 24-hours from the time the permittee becomes aware of the circumstances. (The Environmental Field Office should be contacted for names and phone numbers of environmental response personnel).

b. A written submission must be provided within five (5) days of the time the permittee becomes aware of the circumstances unless this requirement is waived by the Director on a case-by-case basis. The permittee shall provide the Director with the following information:

    1. A description of the discharge and cause of noncompliance;
    2. The period of noncompliance, including exact dates and times or, if not corrected, the anticipated time the noncompliance is expected to continue; and
    3. The steps being taken to reduce, eliminate, and prevent recurrence of the non-complying discharge.

Scheduled Reporting

For instances of noncompliance which are not reported under subparagraph a. above, the permittee shall report the noncompliance by contacting the permit

coordinator, and provide all information concerning the steps taken or planned to reduce, eliminate, and prevent recurrence of the violation and the anticipated time the violation is expected to continue.

Adverse Impact

The permittee shall take all reasonable steps to minimize any adverse impact to the waters of Tennessee resulting from noncompliance with this permit, including but not limited to, accelerated or additional monitoring as necessary to determine the nature and impact of the noncompliance. It shall not be a defense for the 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.

Liabilities

Civil and Criminal Liability

Nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance. Notwithstanding this permit, the permittee 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 of pollutants to any surface or subsurface waters. Additionally, notwithstanding this Permit, it shall be the responsibility of the permittee to conduct its discharge activities in a manner such that public or private nuisances or health hazards will not be created.

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 State law or the Federal Water Pollution Control Act, as amended.

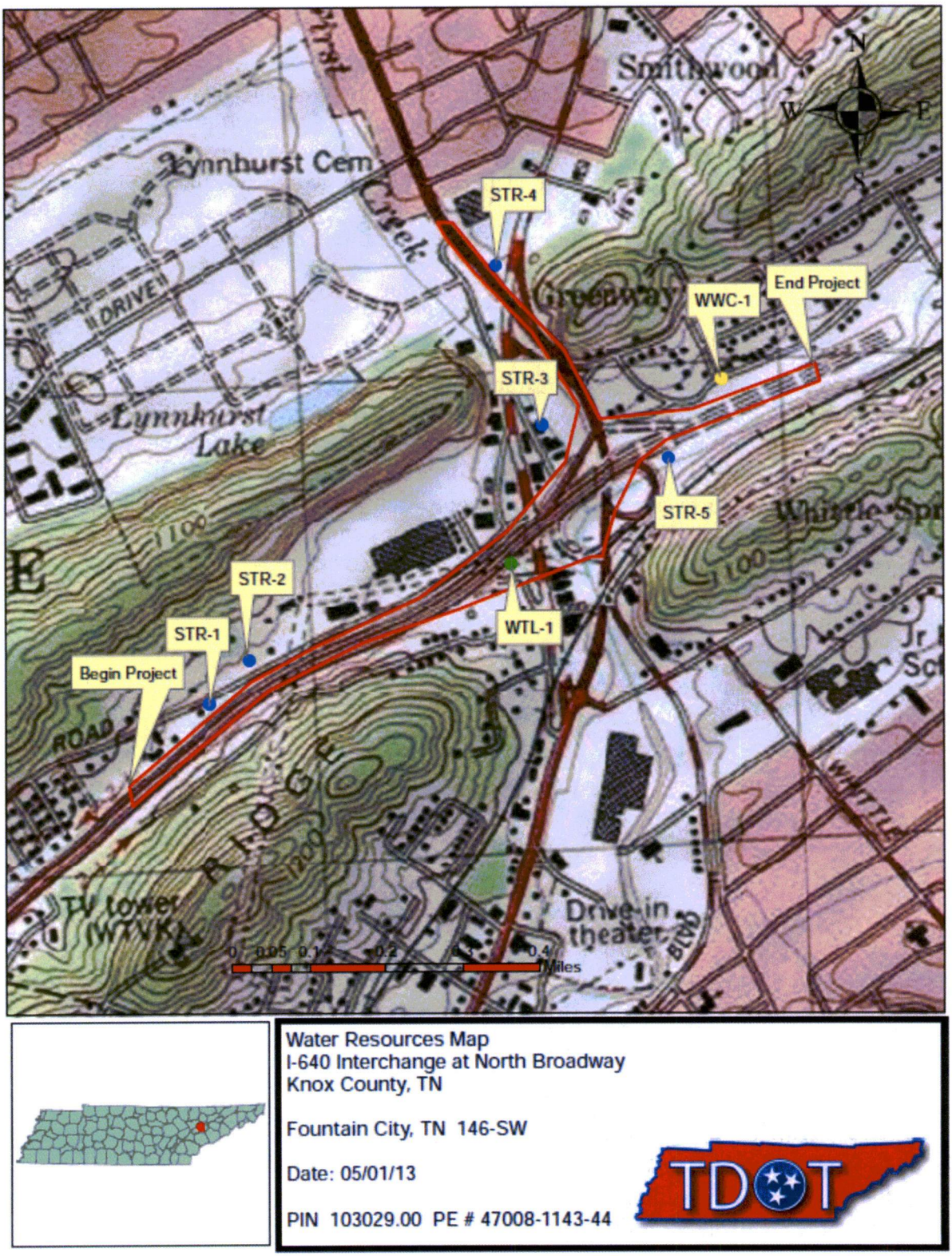
This permit does not preclude requirements of other federal, state or local laws. This permit also serves as a State of Tennessee Aquatic Resource Alteration Permit (ARAP) pursuant to the Tennessee Water Quality Control Act of 1977 (T.C.A. §69-3-101 et seq.).

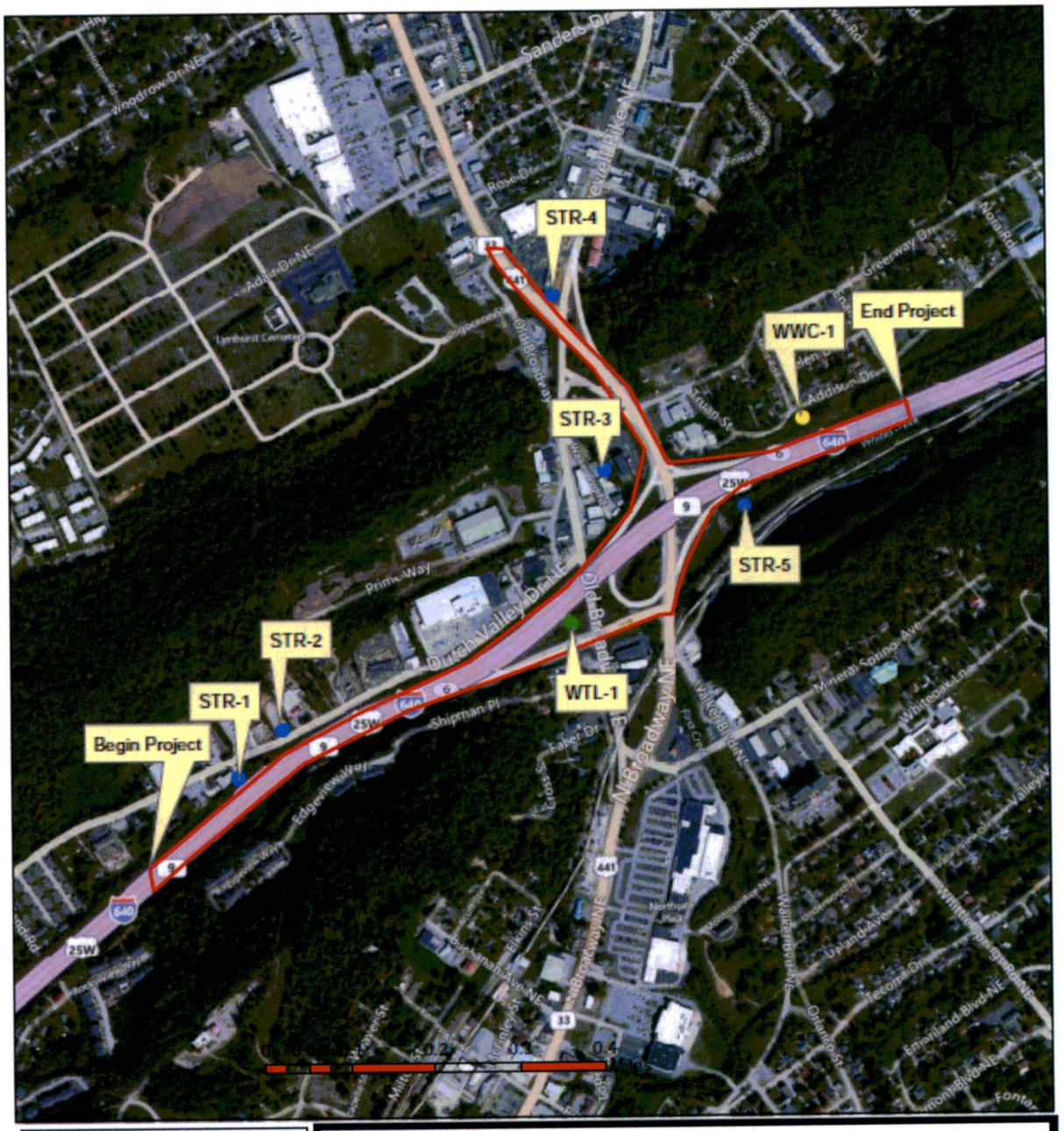
The State of Tennessee may modify, suspend or revoke this permit or seek modification or revocation should the state determine that the activity results in more than an insignificant violation of applicable water quality standards or violation of the act. Failure to comply with permit terms may result in penalty in accordance with T.C.A. §69-3-115.

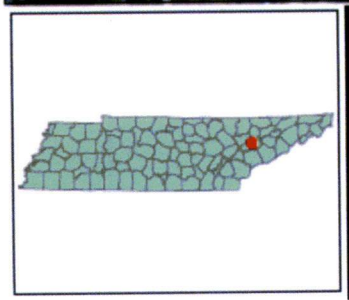
An appeal of this action may be made as provided in T.C.A. §69-3-105(i) and Rule 0400-40-05-.12 by submitting a petition for appeal. This petition must be filed within THIRTY (30) DAYS after public notice of the issuance of the permit. The petition must specify what provisions are being appealed and the basis for the appeal. It should be addressed to the technical secretary of the Tennessee Board of Water Quality, Oil and Gas at the following address: Tisha Calabrese Benton, Director, Division of Water Resources, William R. Snodgrass - Tennessee Tower, 312 Rosa L. Parks Avenue, Nashville, Tennessee 37243-1102. Any hearing would be in accordance with T.C.A. §§69-3-110 and 4-5-301 et seq.

APPENDIX I

Location:







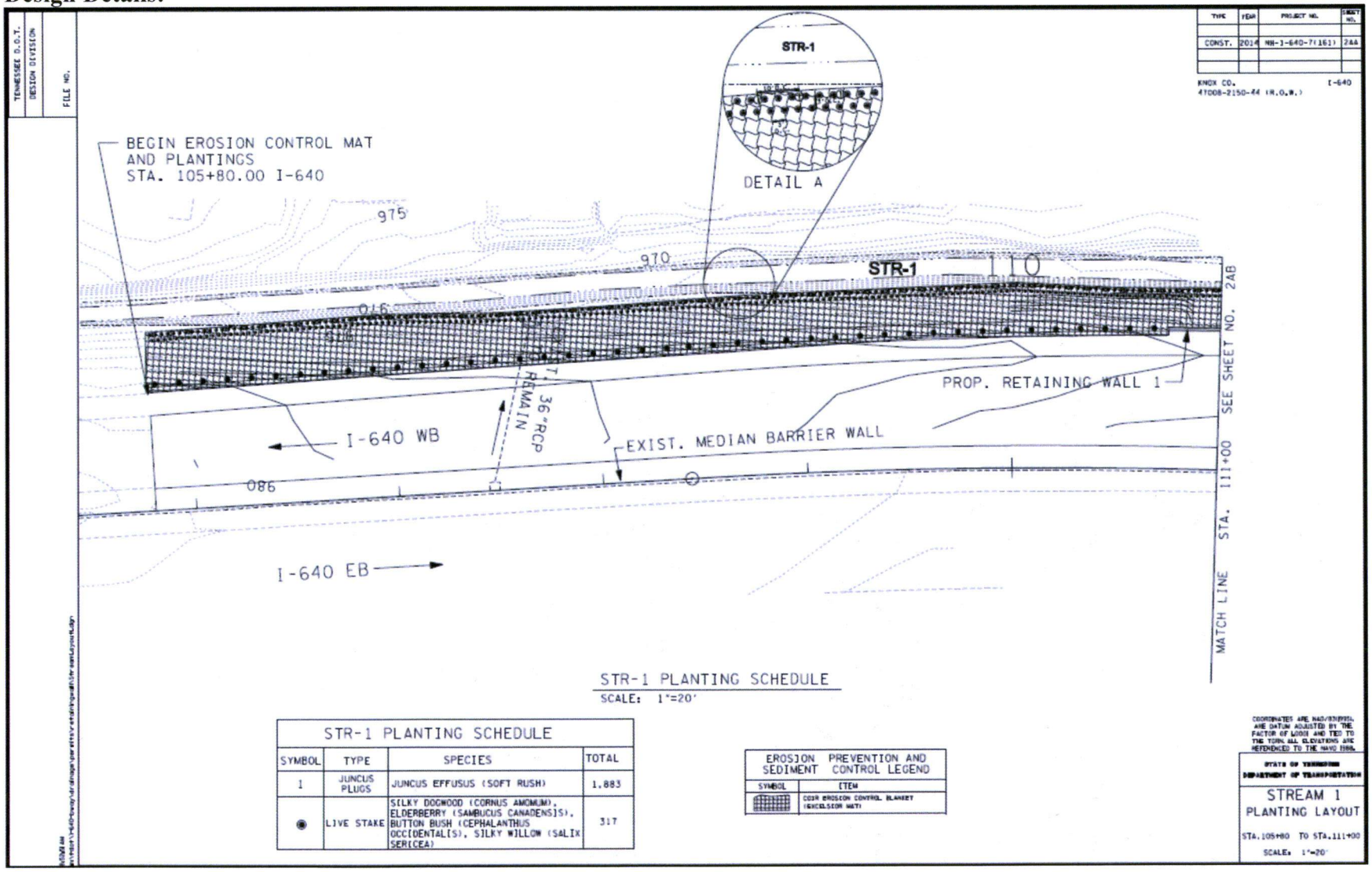
Water Resources Map
I-640 Interchange at North Broadway
Knox County, TN

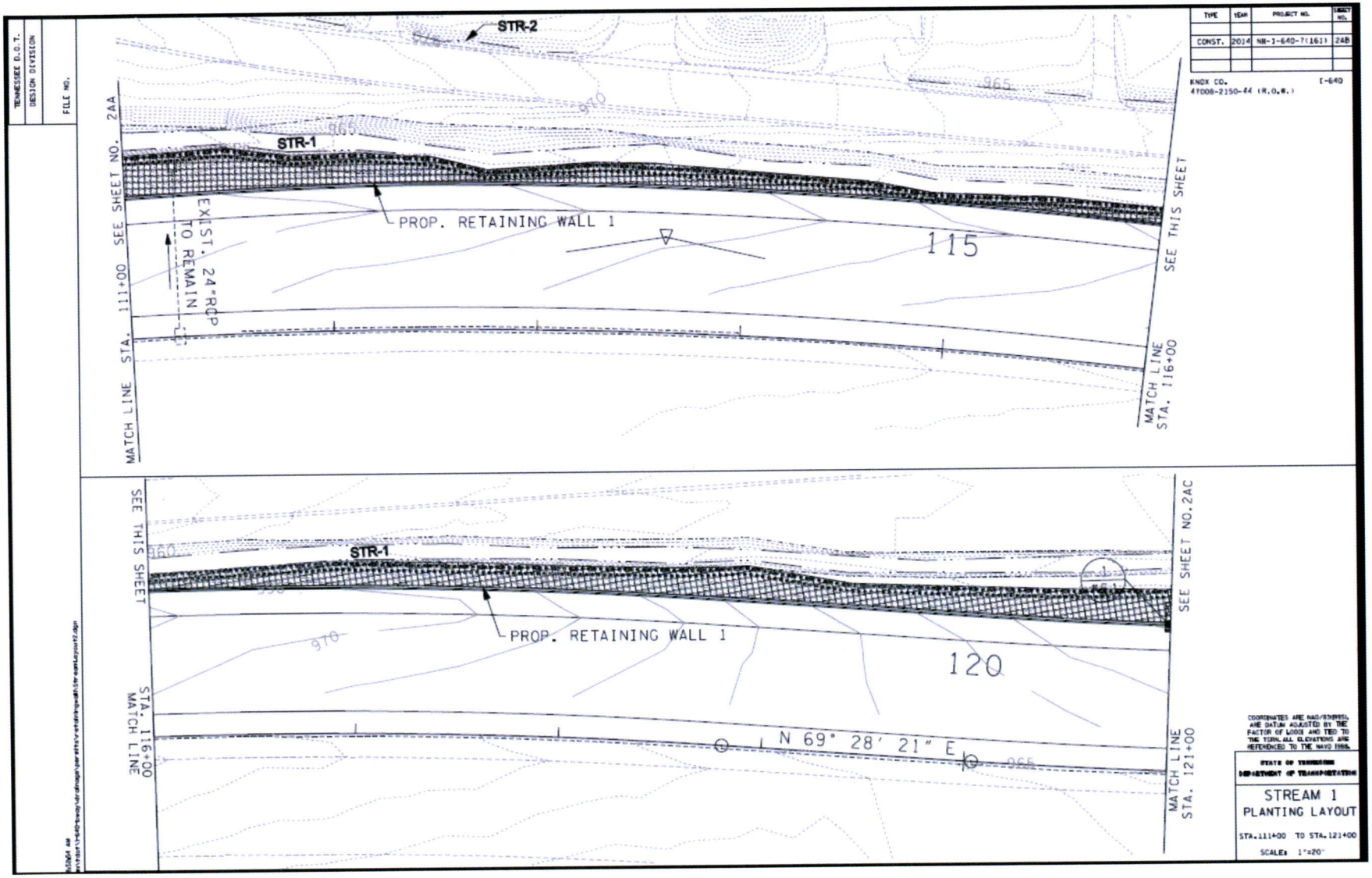
Fountain City, TN 146-SW

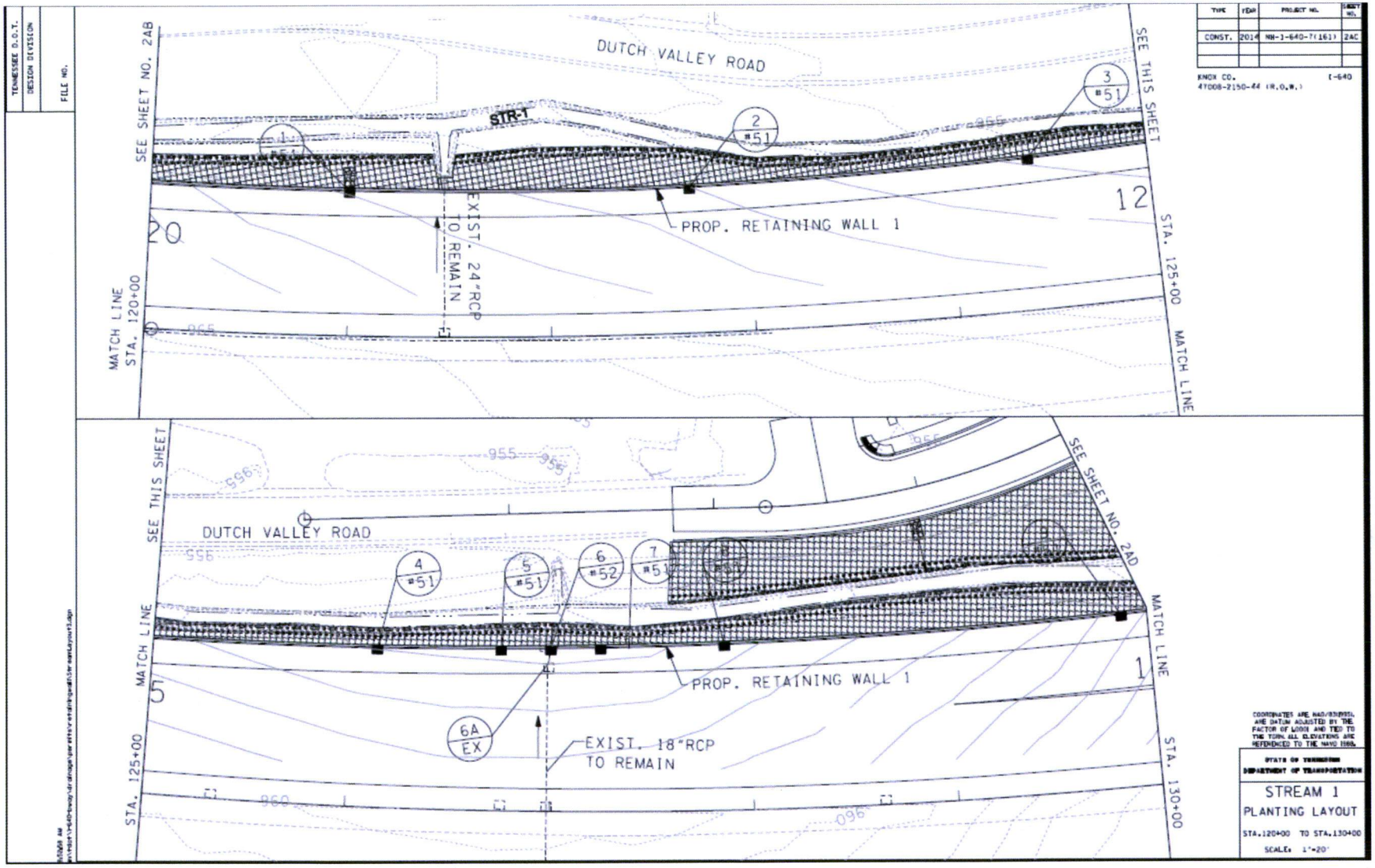
Date: 05/01/13

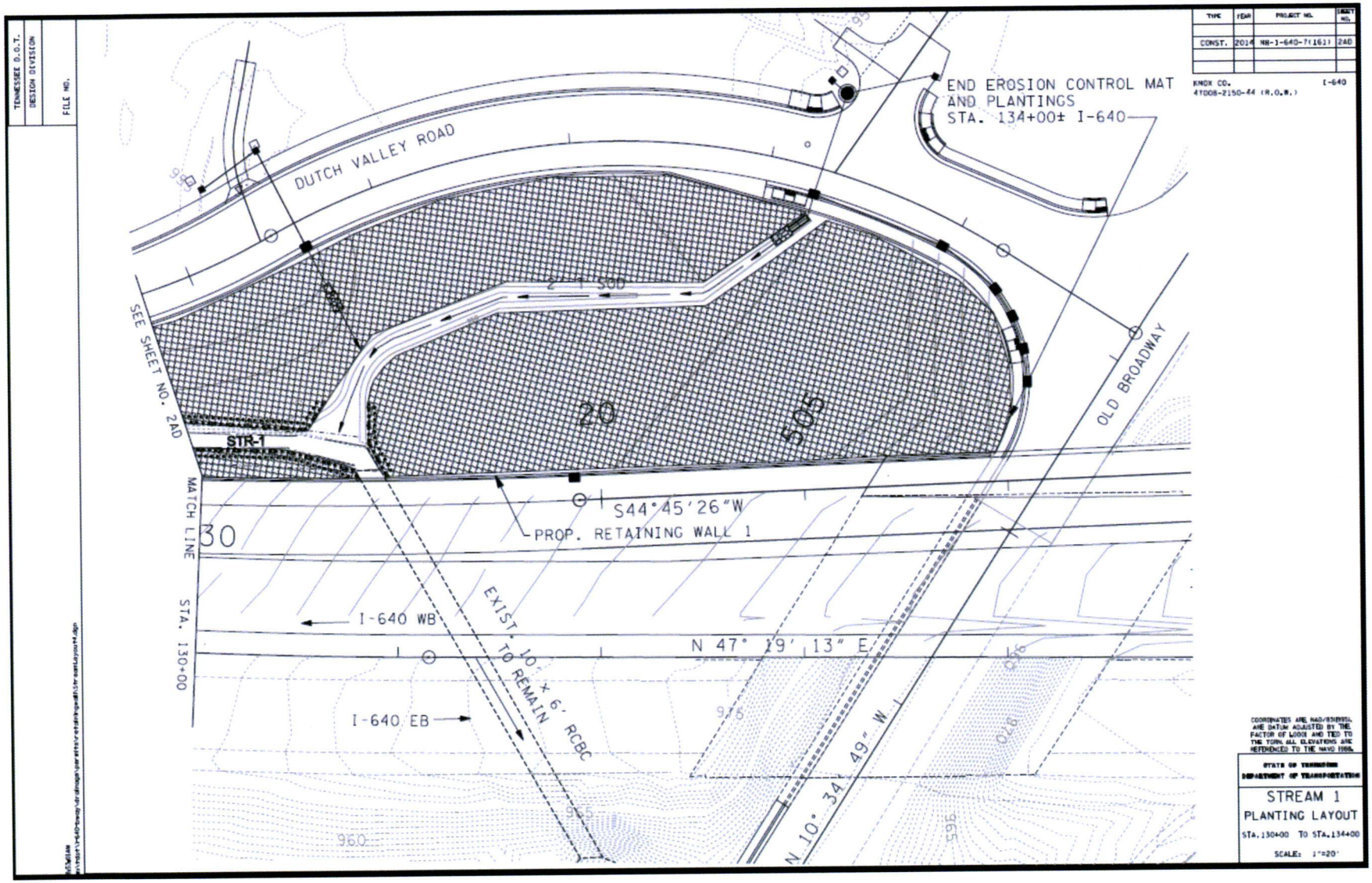
PIN 103029.00 PE # 47008-1143-44

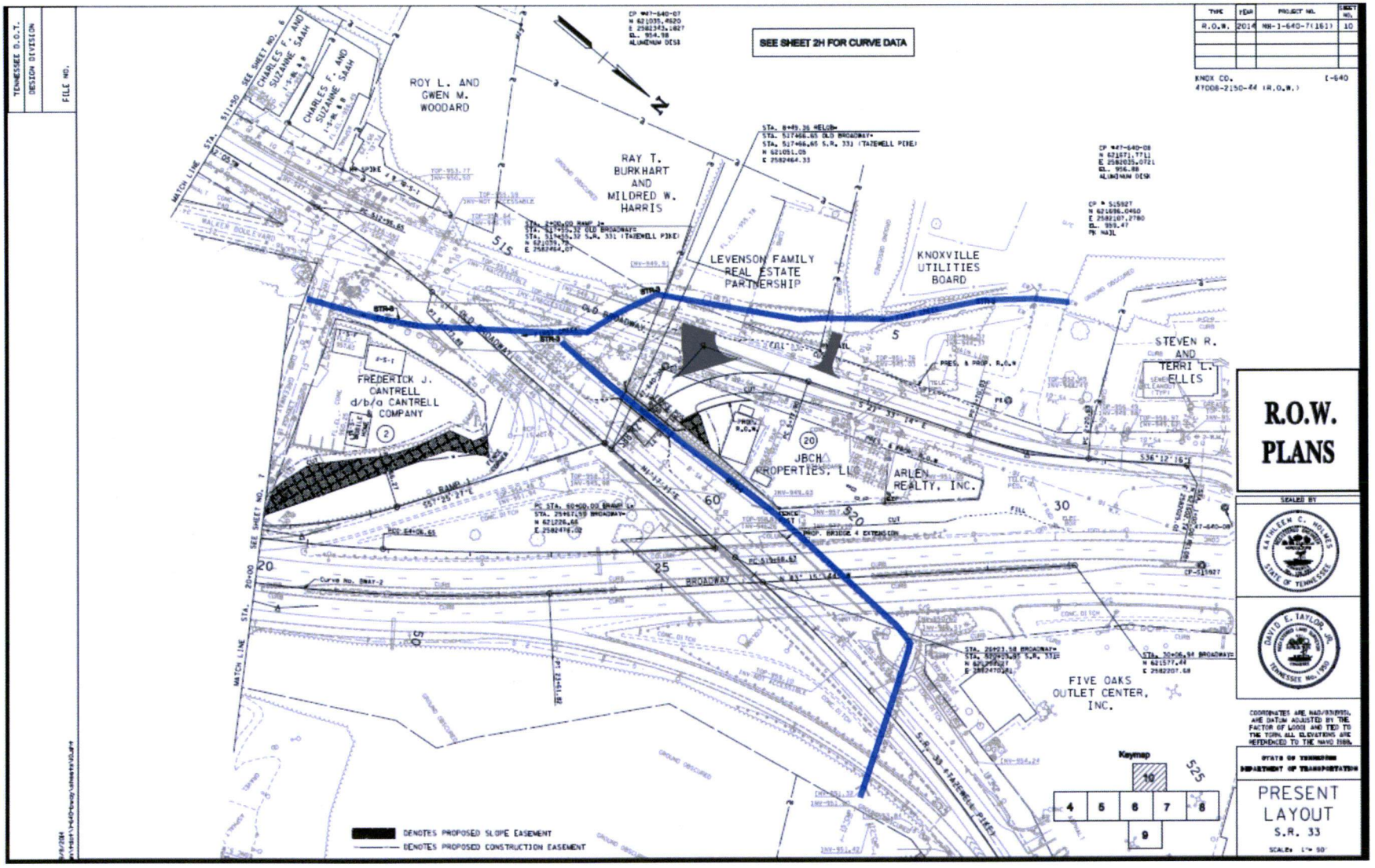
Design Details:

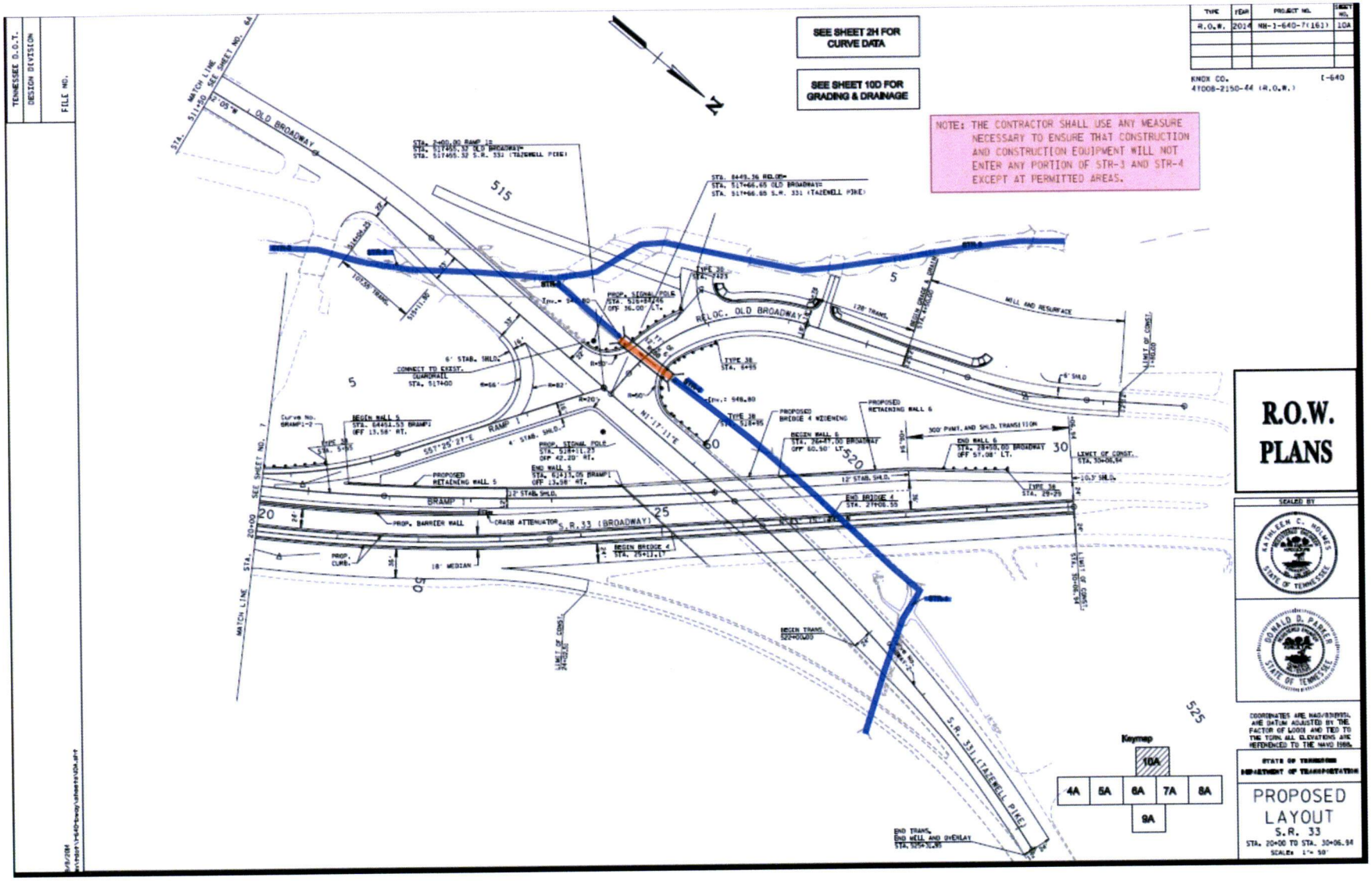


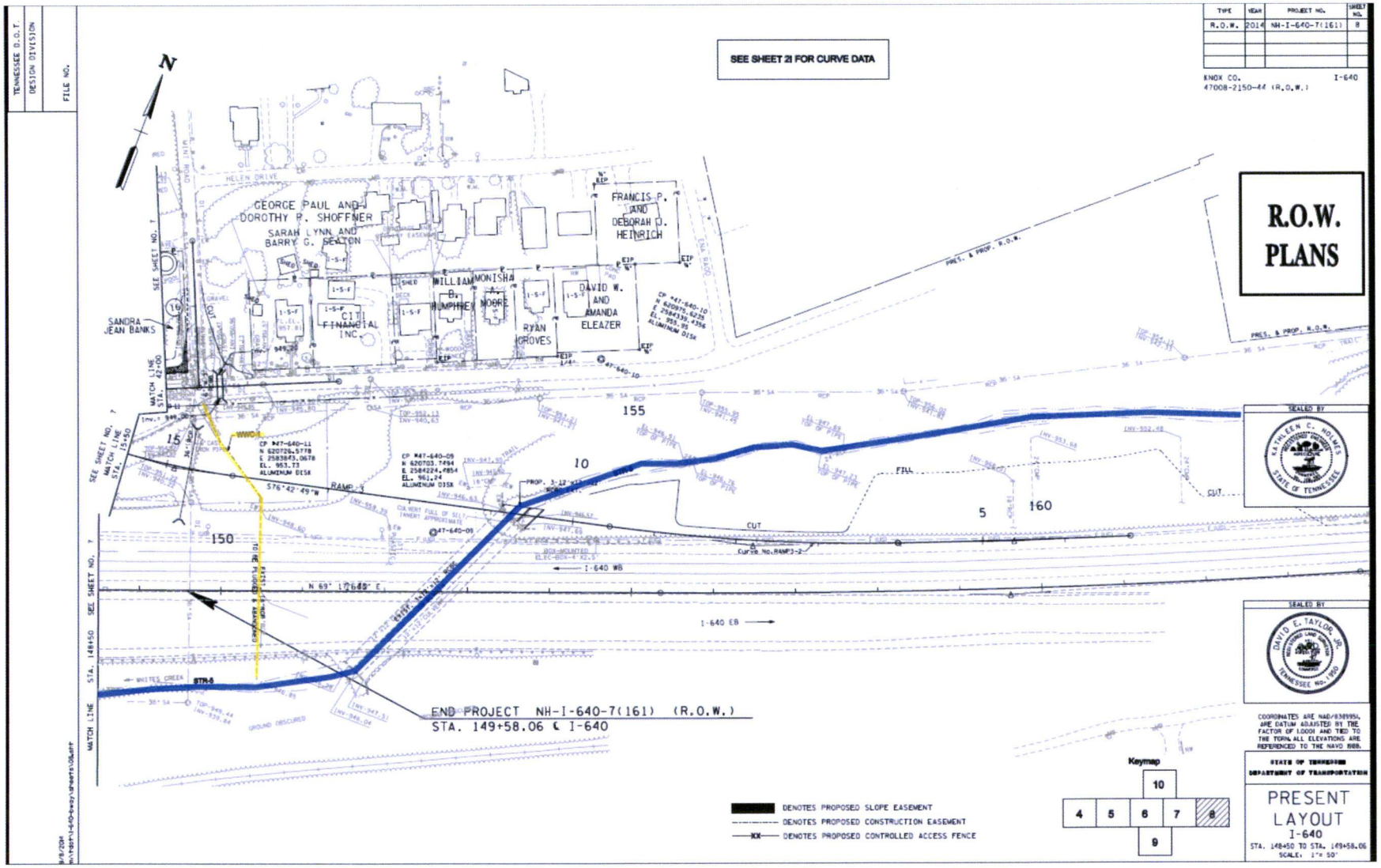

STR-2
STR-1
PROP. RETAINING WALL 1
EXIST. 24"RCP TO REMAIN
115
MATCH LINE STA. 111+00 SEE SHEET NO. 2AA
SEE THIS SHEET
MATCH LINE STA. 116+00
STR-1
PROP. RETAINING WALL 1
120
N 69° 28' 21" E
SEE THIS SHEET
MATCH LINE STA. 116+00
SEE SHEET NO. 2AC
MATCH LINE STA. 121+00
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.
TYPE
YEAR
PROJECT NO.
SHEET NO.
CONST.
2014
NR-1-640-7(161)
2AB
KNOX CO.
I-640
47008-2150-44 (R.O.W.)
COORDINATES ARE NAD/83TN93L AND DATUM ADJUSTED BY THE FACTOR OF 1.0001 AND TIED TO THE TDOT ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
STREAM 1
PLANTING LAYOUT
STA. 111+00 TO STA. 121+00
SCALE: 1"=20'

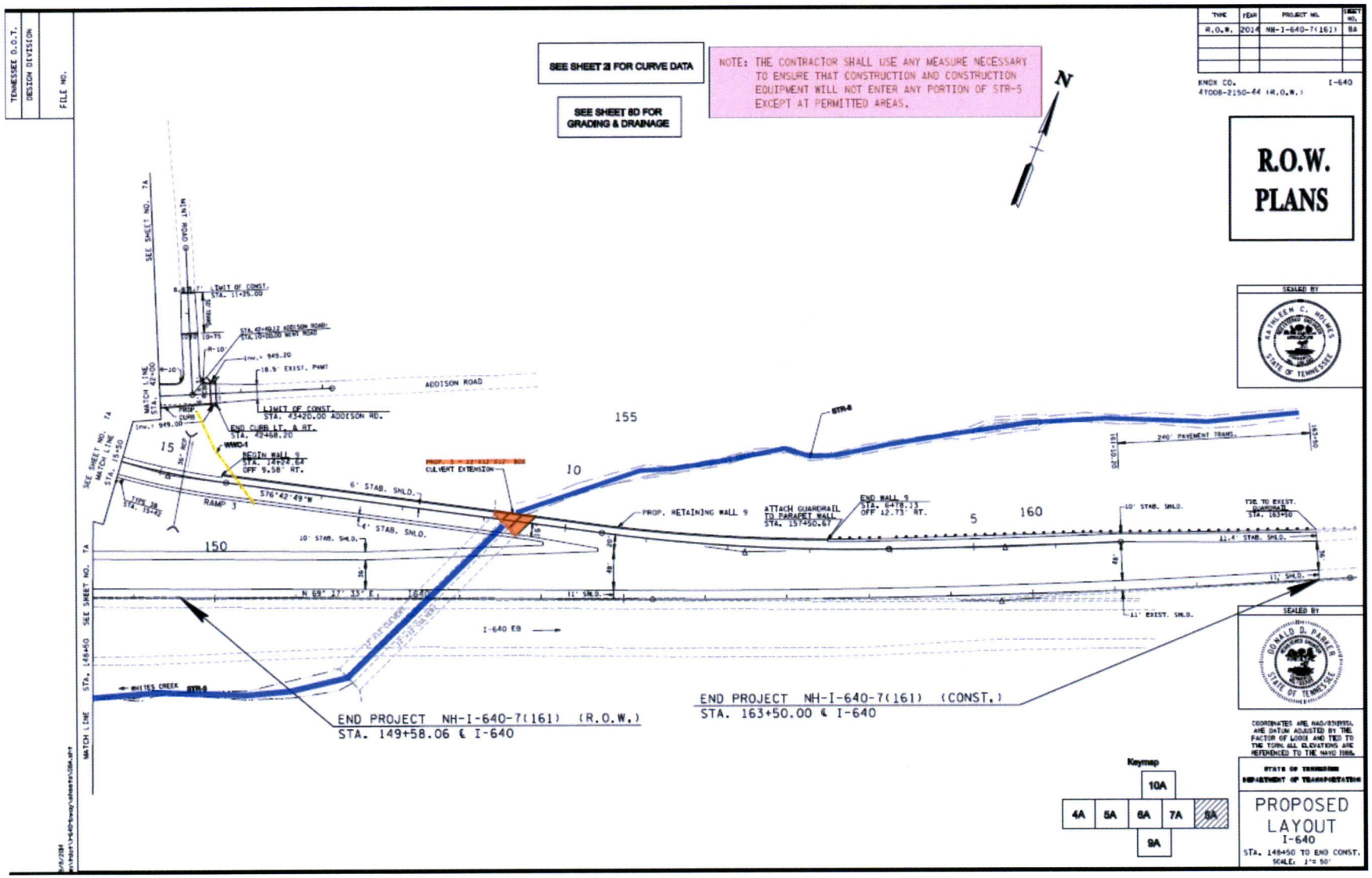

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.
SEE SHEET NO. 2AB
DUTCH VALLEY ROAD
STR-1
EXIST. 24"RCP TO REMAIN
PROP. RETAINING WALL 1
MATCH LINE STA. 120+00
SEE THIS SHEET
STA. 125+00 MATCH LINE
TYPE
YEAR
PROJECT NO.
SHEET NO.
CONST.
2014
NH-1-640-7(161)
2AC
KNOX CO.
I-640
47008-2150-44 (R.O.W.)
SEE THIS SHEET
DUTCH VALLEY ROAD
SEE SHEET NO. 2AD
MATCH LINE STA. 125+00
PROP. RETAINING WALL 1
EXIST. 18"RCP TO REMAIN
STA. 130+00 MATCH LINE
COORDINATES ARE NAD/83(HPGN), AND DATUM ADJUSTED BY THE FACTOR OF 0.9998 AND TIED TO THE TDPM. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
STREAM 1
PLANTING LAYOUT
STA.120+00 TO STA.130+00
SCALE: 1"=20'


TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.
TYPE
YEAR
PROJECT NO.
SHEET NO.
CONST.
2014
NH-I-640-7(16)1
24D
KNOX CO.
47D08-2150-44 (R.O.W.)
I-640
END EROSION CONTROL MAT
AND PLANTINGS
STA. 134+00± I-640
DUTCH VALLEY ROAD
OLD BROADWAY
SEE SHEET NO. 24D
MATCH LINE
STA. 130+00
STR-1
20
505
30
S44°45'26"W
PROP. RETAINING WALL 1
I-640 WB
I-640 EB
N 47° 19' 13" E
EXIST. 10' x 6' RCBC
TO REMAIN
N 10° 34' 49" W
960
975
COORDINATES ARE NAD/83/2011
AND DATUM ADJUSTED BY THE
FACTOR OF 1.0001 AND TIED TO
THE TDOT. ALL ELEVATIONS ARE
REFERENCED TO THE NAVD 1988.
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
STREAM 1
PLANTING LAYOUT
STA. 130+00 TO STA. 134+00
SCALE: 1"=20'


SEE SHEET 2H FOR CURVE DATA
ROY L. AND GWEN M. WOODARD
RAY T. BURKHART AND MILDRED W. HARRIS
LEVENSON FAMILY REAL ESTATE PARTNERSHIP
KNOXVILLE UTILITIES BOARD
STEVEN R. AND TERRI L. ELLIS
FREDERICK J. CANTRELL d/b/a CANTRELL & COMPANY
JBCH PROPERTIES, LLC
ARLEN REALTY, INC.
FIVE OAKS OUTLET CENTER, INC.
CHARLES F. AND SUZANNE SAAH
OLD BROADWAY
BROADWAY
S.R. 33 (TAZEWELL PIKE)
DENOTES PROPOSED SLOPE EASEMENT
DENOTES PROPOSED CONSTRUCTION EASEMENT
R.O.W. PLANS
PRESENT LAYOUT
S.R. 33
KNOX CO.
I-640
Keymap


TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.
SEE SHEET 2H FOR CURVE DATA
SEE SHEET 10D FOR GRADING & DRAINAGE
NOTE: THE CONTRACTOR SHALL USE ANY MEASURE NECESSARY TO ENSURE THAT CONSTRUCTION AND CONSTRUCTION EQUIPMENT WILL NOT ENTER ANY PORTION OF STR-3 AND STR-4 EXCEPT AT PERMITTED AREAS.
TYPE | YEAR | PROJECT NO. | SHEET NO.
R.O.W. | 2014 | NH-1-640-7(161) | 10A
KNOX CO. I-640
47008-2150-44 (R.O.W.)
OLD BROADWAY
RELOC. OLD BROADWAY
S.R. 33 (BROADWAY)
S.R. 331 (TAZEWELL PIKE)
RAMP 1
MILL AND RESURFACE
PROPOSED RETAINING WALL 5
PROPOSED RETAINING WALL 6
PROPOSED BRIDGE 4 WIDENING
PROP. BARRIER WALL
CRASH ATTENUATOR
18' MEDIAN
PROP. CURB
12' STAB. SHLD.
6' STAB. SHLD.
CONNECT TO EXIST. GUARDRAIL
PROP. SIGNAL POLE
BEGIN BRIDGE 4
END BRIDGE 4
BEGIN TRANS.
END TRANS, END MILL AND OVERLAY
LIMIT OF CONST.
MATCH LINE
SEE SHEET NO. 64
SEE SHEET NO. 1
R.O.W. PLANS
SEALED BY
KATHLEEN C. HOLMES
REGISTERED ENGINEER
STATE OF TENNESSEE
DONALD D. PARKER
REGISTERED LANDSCAPE ARCHITECT
STATE OF TENNESSEE
COORDINATES ARE NAD/83/2011 AND DATUM ADJUSTED BY THE FACTOR OF 1.0001 AND TIED TO THE TDOT ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
PROPOSED LAYOUT
S.R. 33
STA. 20+00 TO STA. 30+06.94
SCALE: 1" = 50'
Keymap
10A
4A 5A 6A 7A 8A
9A


SEE SHEET 21 FOR CURVE DATA
R.O.W. PLANS
GEORGE PAUL AND DOROTHY P. SHOFFNER
SARAH LYNN AND BARRY G. SEATON
FRANCIS P. AND DEBORAH D. HEINRICH
WILLIAM B. HUMPHREY
MONISHA A. MOORE
DAVID W. AND AMANDA ELEAZER
RYAN GROVES
SANDRA JEAN BANKS
CIT FINANCIAL INC.
END PROJECT NH-I-640-7(161) (R.O.W.)
STA. 149+58.06 ℄ I-640
DENOTES PROPOSED SLOPE EASEMENT
DENOTES PROPOSED CONSTRUCTION EASEMENT
DENOTES PROPOSED CONTROLLED ACCESS FENCE
PRESENT LAYOUT
I-640
STA. 148+50 TO STA. 149+58.06
SCALE: 1"= 50'


TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.
SEE SHEET 2I FOR CURVE DATA
SEE SHEET 8D FOR GRADING & DRAINAGE
NOTE: THE CONTRACTOR SHALL USE ANY MEASURE NECESSARY TO ENSURE THAT CONSTRUCTION AND CONSTRUCTION EQUIPMENT WILL NOT ENTER ANY PORTION OF STR-5 EXCEPT AT PERMITTED AREAS.
TYPE R.O.W.
YEAR 2014
PROJECT NO. NH-I-640-7(161)
SHEET NO. 8A
KNOX CO. I-640
47008-2150-44 (R.O.W.)
R.O.W. PLANS
SEALED BY
KATHLEEN C. HOLMES
SEALED BY
DONALD D. PARKER
ADDISON ROAD
LIMIT OF CONST. STA. 43420.00 ADDISON RD.
BEGIN WALL 9 STA. 149+29.64 OFF 9.58' RT.
PROP. RETAINING WALL 9
ATTACH GUARDRAIL TO PARAPET WALL STA. 157+50.67
END WALL 9 STA. 164+76.13 OFF 12.73' RT.
240' PAVEMENT TRANS.
RAMP 3
N 76°42'49" W
N 69° 27' 33" E, 1640'
I-640 EB
WHITES CREEK
END PROJECT NH-I-640-7(161) (R.O.W.)
STA. 149+58.06 ℄ I-640
END PROJECT NH-I-640-7(161) (CONST.)
STA. 163+50.00 ℄ I-640
Keymap
10A
4A 5A 6A 7A 8A
9A
PROPOSED LAYOUT
I-640
STA. 148+50 TO END CONST.
SCALE: 1"= 50'

DEPARTMENT OF THE ARMY
NASHVILLE DISTRICT, CORPS OF ENGINEERS
501 ADESA PKWY, SUITE 250
LENOIR CITY, TENNESSEE 37771

REPLY TO
ATTENTION OF:

November 25, 2014

Regulatory Branch

SUBJECT: File No. LRN-2014-01141; Proposed Bank Stabilization and Linear Transportation Projects at I-640 at North Broadway (US 441/SR 33) Phase II - Unnamed Tributary to First Creek and Whites Creek, Tennessee River Mile 647.8R, Knoxville, Knox County, Tennessee (PIN 103029.00)

Tennessee Department of Transportation
Attn: D. J. Wiseman
505 Deaderick Street
Suite 900, J.K. Polk Building
Nashville, TN 37243

Dear Mr. Wiseman:

This refers to your recent application requesting a Department of the Army (DA) permit for a modified alignment to at I-640 at North Broadway (US 441/SR 33) Phase II. Please refer to File Number LRN-2014-01141 in reference to this project.

Based upon the information submitted to this office, we have determined your proposed work meets the criteria of DA Nationwide Permit (NWP) #13 Bank Stabilization and NWP #14 Linear Transportation Projects which became effective March 19, 2012 [77 FR 10184]. The proposed activity includes the impacts listed in the table below.

Feature	Latitude	Longitude	Impact Type	Measurement	Compensatory Mitigation
STR-1 Perennial Location #1 Unnamed Trib to First Creek	36.0165	-83.9273	-1495 feet of riprap bank stabilization, also protects a retaining wall constructed in uplands (reporting NWP #13)	- 1495 feet riprap (1495 ft x 0.75 feet = 1106.25 ft impact below the ordinary high water mark)	- Purchase 1106.25 credits from TSMP In-Lieu Fee Stream Mitigation Program.
STR-5 Perennial Location #2 Whites Creek	35.0219	-83.9147	-18ft of 3@12 x 12 box culvert construction (non-reporting NWP #14) - Temporary stream crossing	- 18 feet new box culvert -432 sq ft impact	- No compensatory mitigation required.
STR-4 Perennial Location #3 Unnamed Trib to First Creek	36.0219	-83.9247	-77 ft of 12ft x 6ft concrete box culvert for minor road crossing (non-reporting NWP #14) - Temporary stream crossing	Approx 77 ft x 12 ft Fill Area: 924 sq ft	- No compensatory mitigation required.

The proposed work must be constructed in accordance with the enclosed plans, NWP Conditions and Special Conditions. This verification is valid until March 18, 2017, unless the NWP authorization is modified, suspended, or revoked. If the work has not been completed by that time, you should contact this office to obtain another permit determination in accordance with the rules and regulations in effect at that time.

In order for this Nationwide Permit to be valid, you must obtain a water quality certification from the state. You must provide our office with a copy of the required certification or waiver of certification from the state prior to proceeding with the work. You must also comply with all conditions of the state certification. You may also need to obtain approval from the Tennessee Valley Authority. In addition, you are responsible for obtaining any other federal, state, and/or local permits, approvals, or authorizations.

If changes in the location or approved plans are necessary, revised plans shall be submitted promptly to this office for review and approval. NWP General Condition #30 requires that you submit a signed certification. **Please sign and return the enclosed "Compliance Certification" form upon completion of the proposed activity.**

If you have any questions, please contact Cathy Elliott at the above address, telephone (865) 986-7296, or email catherine.b.elliott@usace.army.mil .

Sincerely,

Eric Reusch
Chief, Eastern Regulatory Section
Operations Division

Enclosures

1. Special Conditions
2. NWP #13 Conditions
3. NWP #14 Conditions
3. NWP General Conditions
4. Project Plans
5. Location Map
6. Compliance Certification

Copy Furnished:

TVA - Via Email

SPECIAL CONDITIONS FOR DA PERMIT LRN-2014-01141, TDOT; I-640 and North Broadway ROAD IMPROVEMENT PROJECT

1. In-Lieu Fee Program (ILF) Credit Purchase: Within 30 days from the date of initiating the authorized work, the Permittee shall provide verification to the Corps that 1106.25 ILF credits have been purchased from the TSMP ILF. The required verification shall reference this project's permit number (LRN-2014-01141).

2. All work shall be performed in accordance with the Tennessee Department of Environment and Conservation Water Quality Certification. A copy of TDEC's water quality certification should be sent to this office prior to start of construction.

US Army Corps
of Engineers ®
Nashville District

Nationwide Permit

File No. LRN-2014-01141

No. 13, Bank Stabilization

Bank stabilization activities necessary for erosion prevention, provided the activity meets all of the following criteria:

(a) No material is placed in excess of the minimum needed for erosion protection;

(b) The activity is no more than 500 feet in length along the bank, unless the district engineer waives this criterion by making a written determination concluding that the discharge will result in minimal adverse effects;

(c) The activity will not exceed an average of one cubic yard per running foot placed along the bank below the plane of the ordinary high water mark or the high tide line, unless the district engineer waives this criterion by making a written determination concluding that the discharge will result in minimal adverse effects;

(d) The activity does not involve discharges of dredged or fill material into special aquatic sites, unless the district engineer waives this criterion by making a written determination concluding that the discharge will result in minimal adverse effects;

(e) No material is of a type, or is placed in any location, or in any manner, that will impair surface water flow into or out of any waters of the United States;

(f) No material is placed in a manner that will be eroded by normal or expected high flows (properly anchored trees and treetops may be used in low energy areas); and,

(g) The activity is not a stream channelization activity.

This NWP also authorizes temporary structures, fills, and work necessary to construct the bank stabilization activity. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

Invasive plant species shall not be used for bioengineering or vegetative bank stabilization.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if the bank stabilization activity: (1) Involves discharges into special aquatic sites; or (2) is in excess of 500 feet in length; or (3) will involve the discharge of greater than an average of one cubic yard per running foot along the bank below the plane of the ordinary high water mark or the high tide line. (See general condition 31.)

(Sections 10 and 404)

US Army Corps
of Engineers ®
Nashville District

Nationwide Permit

File No. 2014-01141

No. 14, Linear Transportation Projects

Activities required for the construction, expansion, modification, or improvement of linear transportation projects (e.g., roads, highways, railways, trails, airport runways, and taxiways) in waters of the United States. For linear transportation projects in non-tidal waters, the discharge cannot cause the loss of greater than ½-acre of waters of the United States. For linear transportation projects in tidal waters, the discharge cannot cause the loss of greater than ⅓-acre of waters of the United States. Any stream channel modification, including bank stabilization, is limited to the minimum necessary to construct or protect the linear transportation project; such modifications must be in the immediate vicinity of the project.

This NWP also authorizes temporary structures, fills, and work necessary to construct the linear transportation project. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. Temporary fills must be removed in their entirety and the affected areas returned to preconstruction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

This NWP cannot be used to authorize non-linear features commonly associated with transportation projects, such as vehicle maintenance or storage buildings, parking lots, train stations, or aircraft hangars.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if: (1) The loss of waters of the United States exceeds $^{1}/_{10}$-acre; or (2) there is a discharge in a special aquatic site, including wetlands. (See general condition 31.)

(Sections 10 and 404)

Note: Some discharges for the construction of farm roads or forest roads, or temporary roads for moving mining equipment, may qualify for an exemption under Section 404(f) of the Clean Water Act (see 33 CFR 323.4).

US Army Corps of Engineers ®
Nashville District

File No. LRN-2014-01141

Nationwide Permit General Conditions

The following General Conditions must be followed in order for any authorization by NWP to be valid:

1. **Navigation**. (a) No activity may cause more than a minimal adverse effect on navigation. (b) Any safety lights and signals prescribed by the US Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the US. (c) The permittee understands and agrees that, if future operations by the US require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the US. No claim shall be made against the US on account of any such removal or alteration.

2. **Aquatic Life Movements**. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species.

3. **Spawning Areas**. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. **Migratory Bird Breeding Areas**. Activities in waters of the US that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. **Shellfish Beds**. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.

6. **Suitable Material**. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).

7. **Water Supply Intakes**. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. **Adverse Effects From Impoundments**. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. **Management of Water Flows**. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization and storm water management activities, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. **Fills Within 100-Year Floodplains**. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. **Equipment**. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. **Soil Erosion and Sediment Controls**. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the US during periods of low-flow or no-flow.

13. **Removal of Temporary Fills**. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. **Proper Maintenance**. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

15. **Single and Complete Project**. The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

16. **Wild and Scenic Rivers**. No activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, US Forest Service, US Fish and Wildlife Service).

17. **Tribal Rights**. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

18. **Endangered Species**. (a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed. (b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will review the documentation and determine whether it is sufficient to address ESA compliance for the NWP activity, or whether additional ESA consultation is necessary. (c) Non-federal permittees must submit a pre-construction notification (PCN) to the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, and shall not begin work on the activity until notified by the

district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the PCN must include the name(s) of the endangered or threatened species that might be affected by the proposed work or that utilize the designated critical habitat that might be affected by the proposed work. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete PCN. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the project, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification the proposed activities will have "no effect" on listed species or critical habitat, or until Section 7 consultation has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from Corps. (d) As a result of formal or informal consultation with the USFWS or NMFS the district engineer may add species-specific regional endangered species conditions to the NWPs. (e) Authorization of an activity by a NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the USFWS or the NMFS, The Endangered Species Act prohibits any person subject to the jurisdiction of the US to take a listed species, where "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word "harm" in the definition of "take" means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering. (f) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the USFWS and NMFS at http://www.fws.gov/ or http://www.fws.gov/ipac and http://www.noaa.gov/fisheries.html respectively.

19. Migratory Birds and Bald and Golden Eagles. The permittee is responsible for obtaining any "take" permits required under the USFWS's regulations governing compliance with the Migratory Bird Treaty Act or the Bald and Golden Eagle Protection Act. The permittee should contact the appropriate local office of the USFWS to determine if such "take" permits are required for a particular activity.

20. Historic Properties. (a) In cases where the district engineer determines that the activity may affect properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied. (b) Federal permittees should follow their own procedures for complying with the requirements of Section 106 of the National Historic Preservation Act. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will review the documentation and determine whether it is sufficient to address section 106 compliance for the NWP activity, or whether additional section 106 consultation is necessary. (c) Non-federal permittees must submit a pre-construction notification to the district engineer if the authorized activity may have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties may be affected by the proposed work or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of or potential for the presence of historic resources can be sought from the State Historic Preservation Officer or Tribal Historic Preservation Officer, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of Section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted and these efforts, the district engineer shall determine whether the proposed activity has the potential to cause an effect on the historic properties. Where the non-Federal applicant has identified historic properties on which the activity may have the potential to cause effects and notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects or that consultation under Section 106 of the NHPA is complete. (d) The district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA Section 106 consultation is required. Section 106 consultation is not required when the Corps determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR §800.3(a)). If NHPA section 106 consultation is required and will occur, the district engineer will notify the non-Federal applicant that he or she cannot begin work until Section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps. (e) Prospective permittees should be aware that section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the activity on historic properties.

21. Discovery of Previously Unknown Remains and Artifacts. If you discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by this permit, you must immediately notify the district engineer of what you have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal and state coordination required to determine if the items or remains warrant recovery effort or if the site is eligible for listing in the National Register of Historic Places.

22. Designated Critical Resource Waters. Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment. (a) Discharges of dredged or fill material into waters of the US are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, and 52 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters. (b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, and 38, notification is required in accordance with general condition 31, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after it is determined that the impacts to the critical resource waters will be no more than minimal.

23. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that adverse effects on the aquatic environment are minimal: (a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the US to the maximum extent practicable at the project site (i.e., on site). (b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the adverse effects to the aquatic environment are minimal. (c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse effects of the proposed activity are minimal, and provides a project-specific waiver of this

requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in minimal adverse effects on the aquatic environment. Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332. (1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in minimal adverse effects on the aquatic environment. (2) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, wetland restoration should be the first compensatory mitigation option considered. (3) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) – (14) must be approved by the district engineer before the permittee begins work in waters of the US, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)). (4) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan only needs to address the baseline conditions at the impact site and the number of credits to be provided. (5) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan. (d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation, such as stream rehabilitation, enhancement, or preservation, to ensure that the activity results in minimal adverse effects on the aquatic environment. (e) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any project resulting in the loss of greater than 1/2-acre of waters of the US, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that a project already meeting the established acreage limits also satisfies the minimal impact requirement associated with the NWPs. (f) Compensatory mitigation plans for projects in or near streams or other open waters will normally include a requirement for the restoration or establishment, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, riparian areas may be the only compensatory mitigation required. Riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to establish a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or establishing a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses. (g) Permittees may propose the use of mitigation banks, in-lieu fee programs, or separate permittee-responsible mitigation. For activities resulting in the loss of marine or estuarine resources, permittee-responsible compensatory mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management. (h) Where certain functions and services of waters of the US are permanently adversely affected, such as the conversion of a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse effects of the project to the minimal level.

24. Safety of Impoundment Structures. To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

25. Water Quality. Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA Section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

26. Coastal Zone Management. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). The district engineer or a State may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

27. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or USEPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

28. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the US authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the US for the total project cannot exceed 1/3-acre.

29. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature: "When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below."

_____ _____

Transferee Date

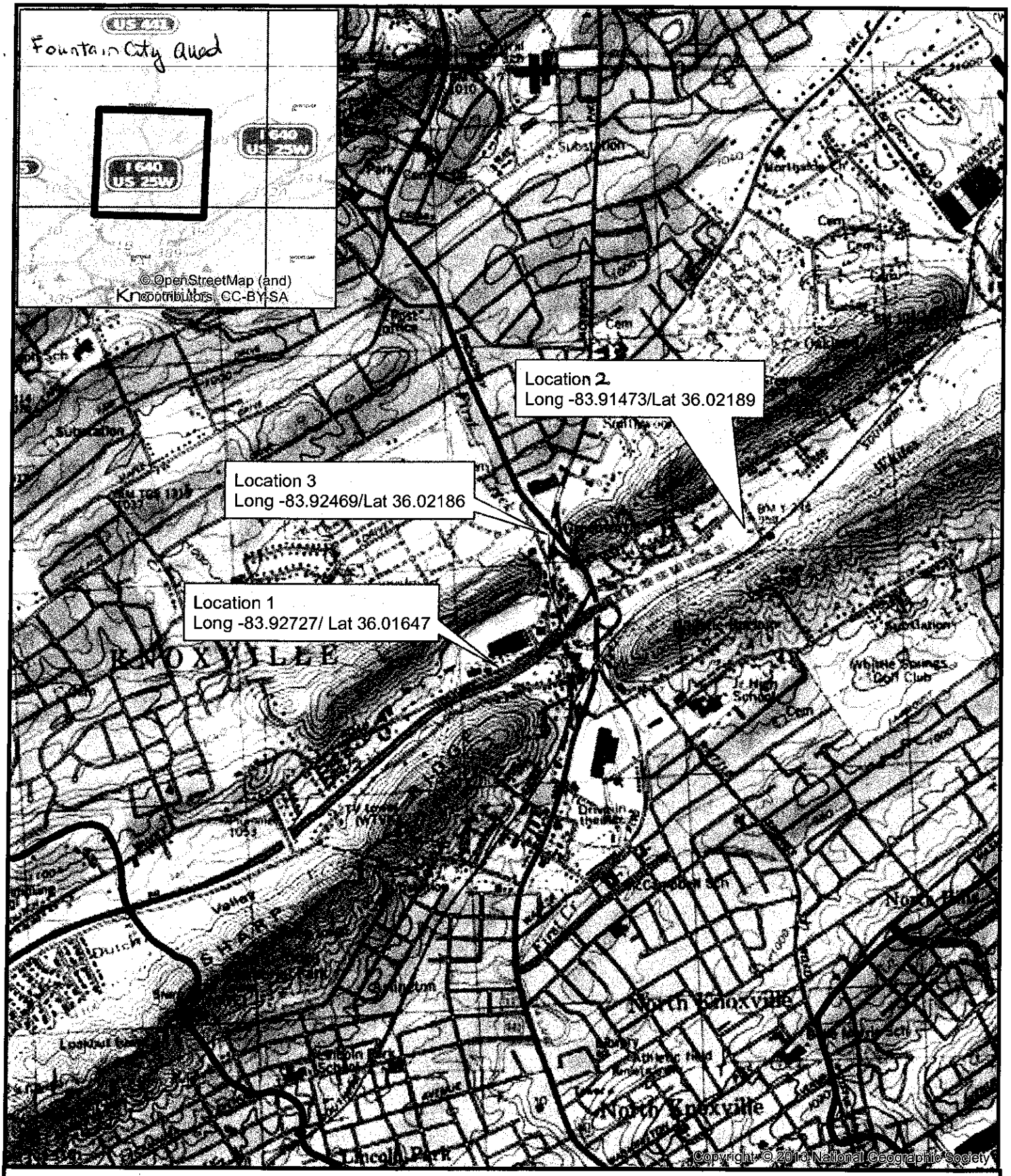
30. Compliance Certification. Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include: (a) A statement that the authorized work was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions; (b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification

must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and (c) The signature of the permittee certifying the completion of the work and mitigation.

31. Pre-Construction Notification (PCN). (a) Timing. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a PCN as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either: (1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or (2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or in the vicinity of the project, or to notify the Corps pursuant to general condition 20 that the activity may have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or Section 106 of the National Historic Preservation (see 33 CFR 330.4(g)) has been completed. Also, work cannot begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2). (b) Contents of Pre-Construction Notification: The PCN must be in writing and include the following information: (1) Name, address and telephone numbers of the prospective permittee; (2) Location of the proposed project; (3) A description of the proposed project; the project's purpose; direct and indirect adverse environmental effects the project would cause, including the anticipated amount of loss of water of the US expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. The description should be sufficiently detailed to allow the district engineer to determine that the adverse effects of the project will be minimal and to determine the need for compensatory mitigation. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the project and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans); (4) The PCN must include a delineation of wetlands, other special aquatic sites, and waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many waters of the US. The 45 day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate; (5) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse effects are minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan. (6) If any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, for non-Federal applicants the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed work or utilize the designated critical habitat that may be affected by the proposed work. Federal applicants must provide documentation demonstrating compliance with the Endangered Species Act; and (7) For an activity that may affect a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, for non-Federal applicants the PCN must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property. Federal applicants must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act. (c) Form of PCN Notification: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is a PCN and must include all of the information required in paragraphs (b)(1) through (7) of this general condition. A letter containing the required information may also be used. (d) Agency Coordination: (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the project's adverse environmental effects to a minimal level. (2) For all NWP activities that require PCN notification and result in the loss of greater than 1/2-acre of waters of the US, for NWP 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52 activities that require PCN notification and will result in the loss of greater than 300 linear feet of intermittent and ephemeral stream bed, and for all NWP 48 activities that require PCN notification, the district engineer will immediately provide (e.g., via e-mail, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (USFWS, state natural resource or water quality agency, EPA, State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Office (THPO), and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to telephone or fax the district engineer notice that they intend to provide substantive, site-specific comments. The comments must explain why the agency believes the adverse effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the PCN notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWPs, including the need for mitigation to ensure the net adverse environmental effects to the aquatic environment of the proposed activity are minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each PCN notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5. (3) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act. (4) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of PCN notifications to expedite agency coordination.

Further Information

1. District Engineers have authority to determine if an activity complies with the terms and conditions of an NWP.
2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.
3. NWPs do not grant any property rights or exclusive privileges.
4. NWPs do not authorize any injury to the property or rights of others.
5. NWPs do not authorize interference with any existing or proposed Federal project.



LRN-2014-01141 **Scale:1:24,000**

Whites Creek and UT to First Creek

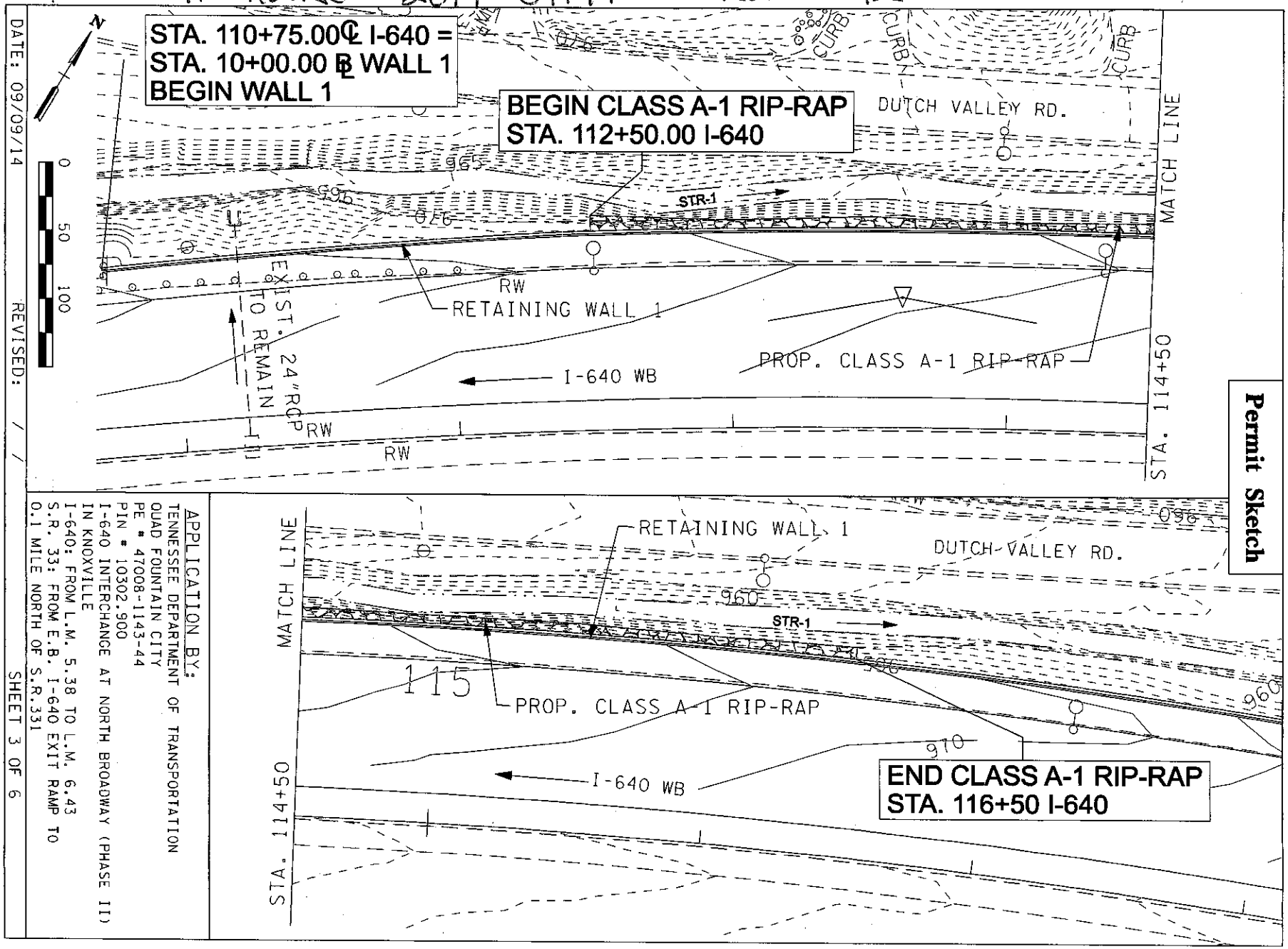
Tennessee River Mile 647.8R, Knox County, TN

Knox County, TN

N

Nashville District

File No. LRN-2014-01141 Location 1



Permit Sketch

DATE: 09/09/14

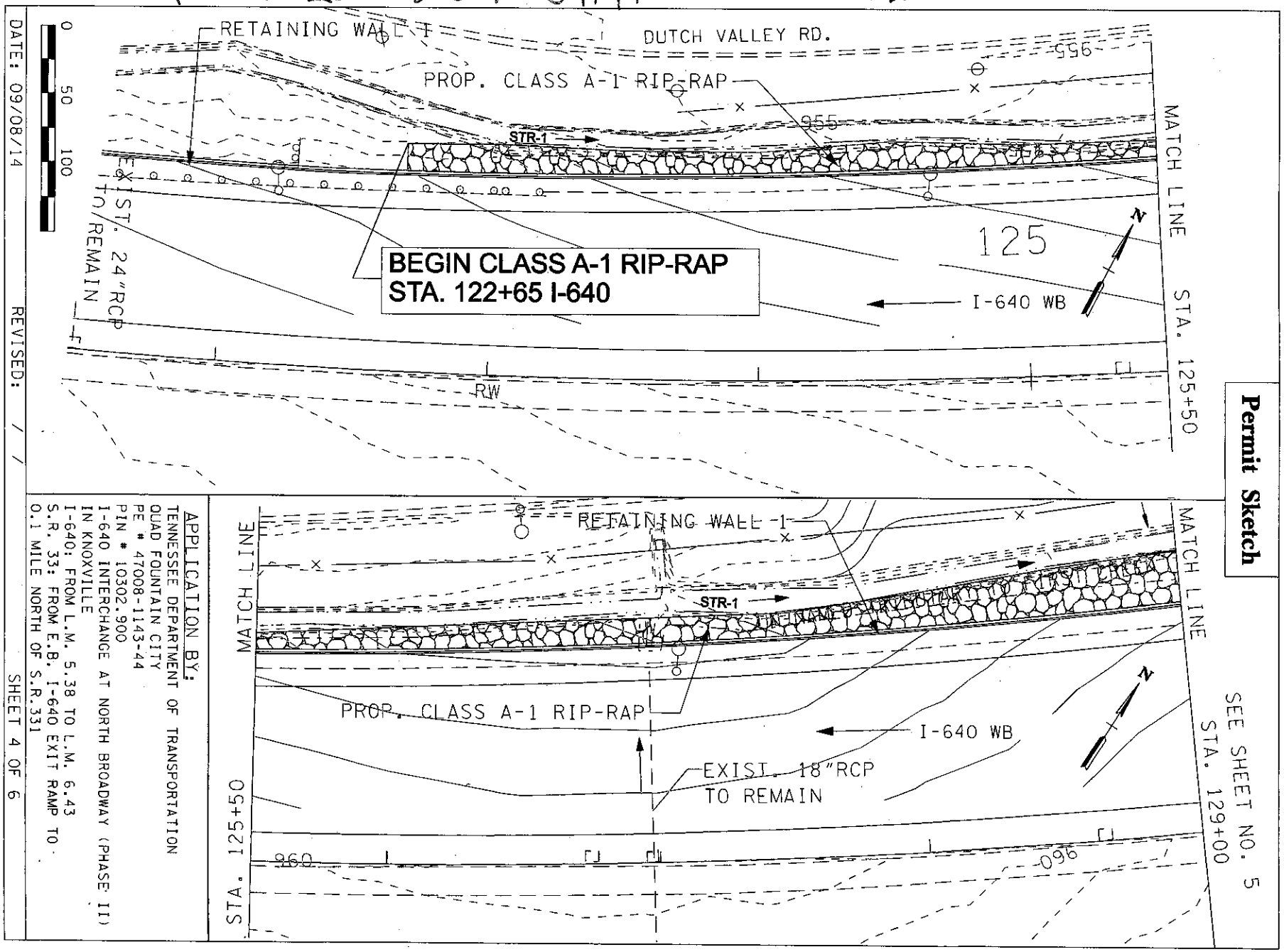
REVISED: / /

APPLICATION BY:

TENNESSEE DEPARTMENT OF TRANSPORTATION
QUAD FOUNTAIN CITY
PE # 47008-1143-44
PIN # 10302.900
I-640 INTERCHANGE AT NORTH BROADWAY (PHASE II)
IN KNOXVILLE
I-640: FROM L.M. 5.38 TO L.M. 6.43
S.R. 33: FROM E.B. I-640 EXIT RAMP TO
0.1 MILE NORTH OF S.R.331

SHEET 3 OF 6

File No. LRN-2014-01141 Location 1



DATE: 09/08/14 REVISED: / /

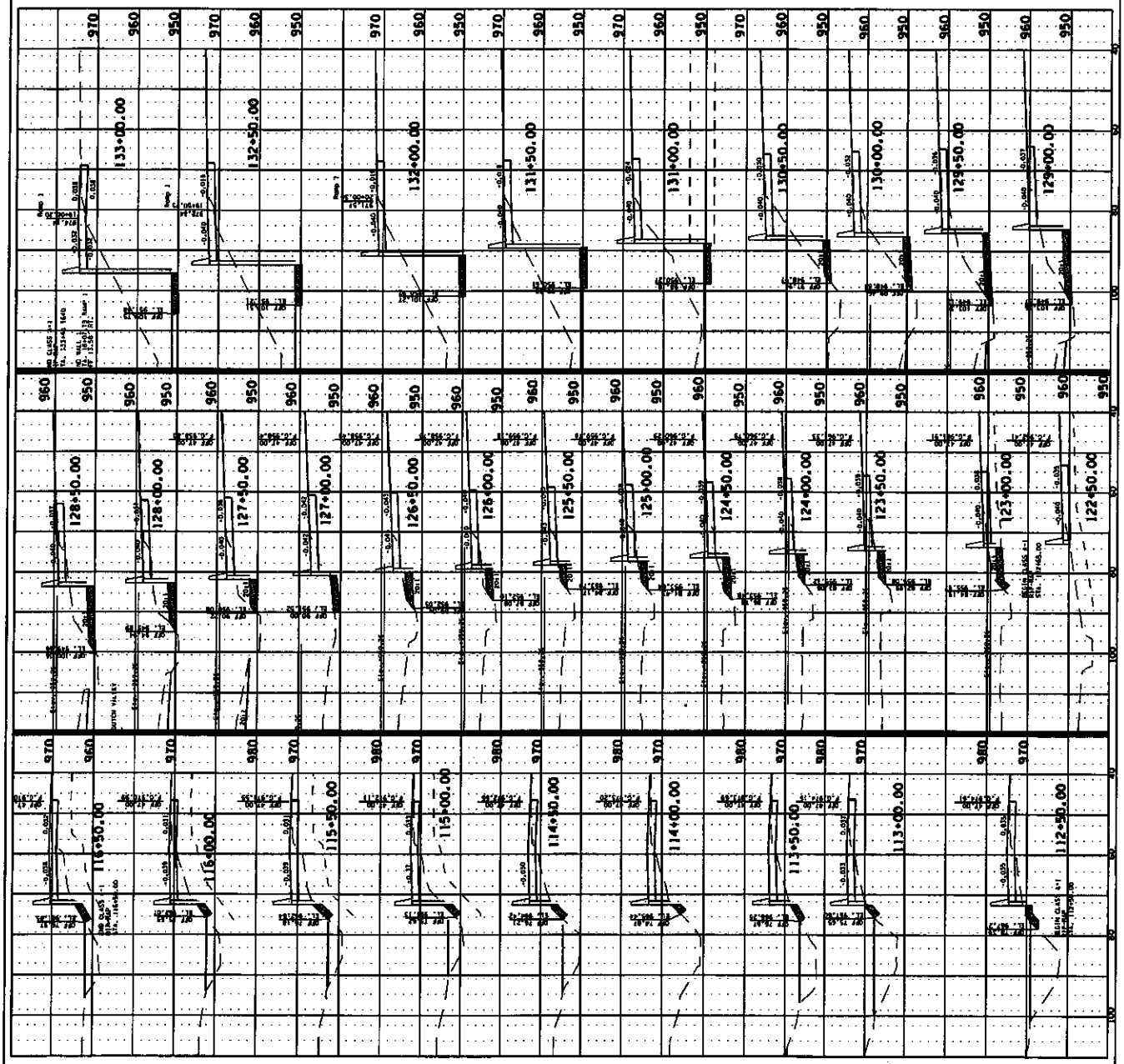
APPLICATION BY:
TENNESSEE DEPARTMENT OF TRANSPORTATION
QUAD FOUNTAIN CITY
PE # 47008-1143-44
PIN # 103O2.900
I-640 INTERCHANGE AT NORTH BROADWAY (PHASE II)
IN KNOXVILLE
I-640: FROM L.M. 5.38 TO L.M. 6.43
S.R. 33: FROM E.B. I-640 EXIT RAMP TO
0.1 MILE NORTH OF S.R.331

File No. KN-2014-01141 Location 1

4

File No LRN-2014-01141 Location 1

Permit Sketch



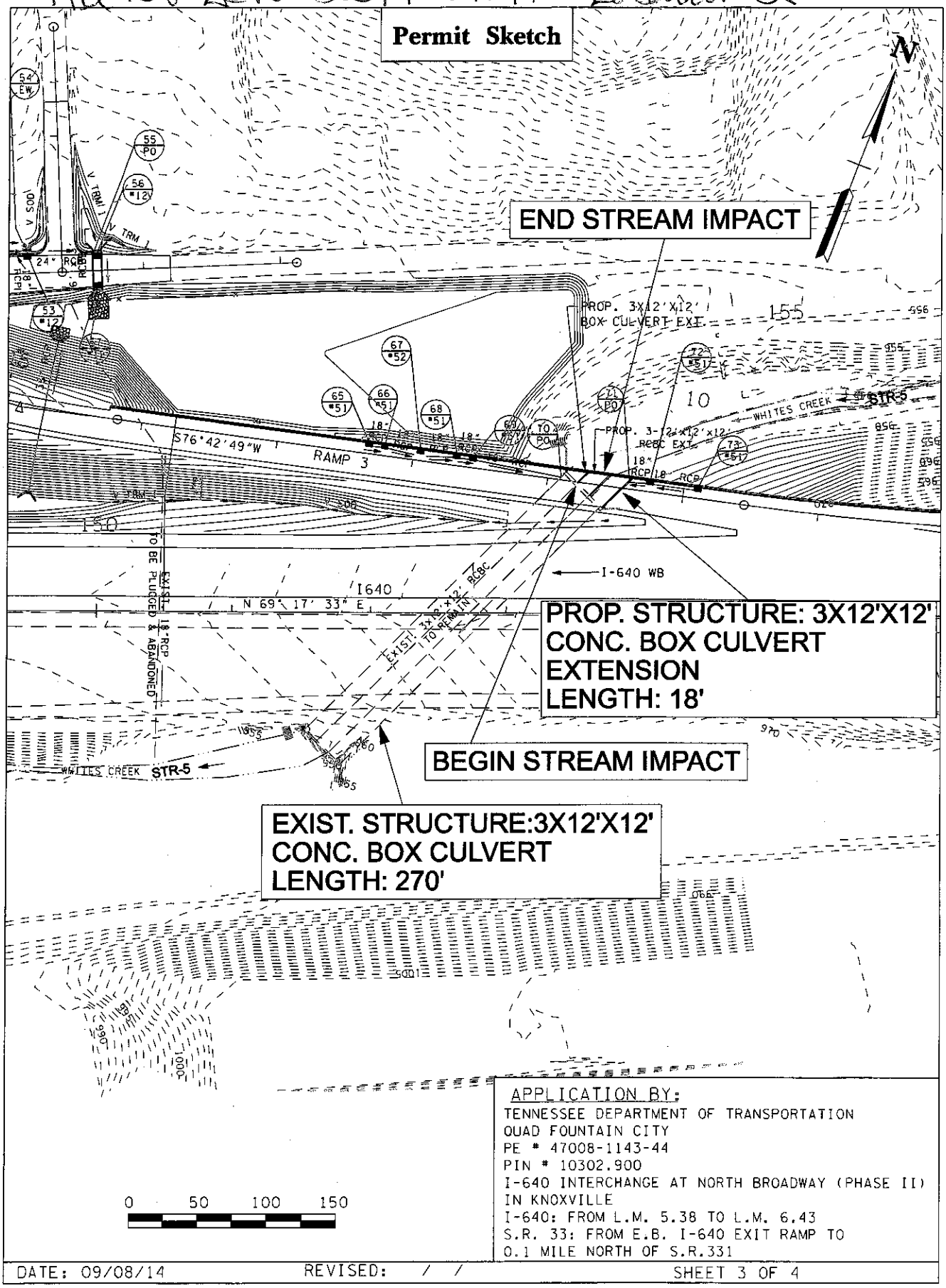
0 20 40

APPLICATION BY:
TENNESSEE DEPARTMENT OF TRANSPORTATION
QUAD FOUNTAIN CITY (146 SE)
PE # 47008-1143-44
PIN # 103029.00
I-640 INTERCHANGE AT NORTH BROADWAY (PHASE II)
IN KNOXVILLE
I-640; FROM L.M. 5.38 TO L.M. 6.43
S.R. 33: FROM E.B. I-640 EXIT RAMP TO
0.1 MILE NORTH OF S.R. 331

DATE: 09/08/14 REVISED: / /

SHEET 6 OF 6

File No LEN-2014-01141 Location 2



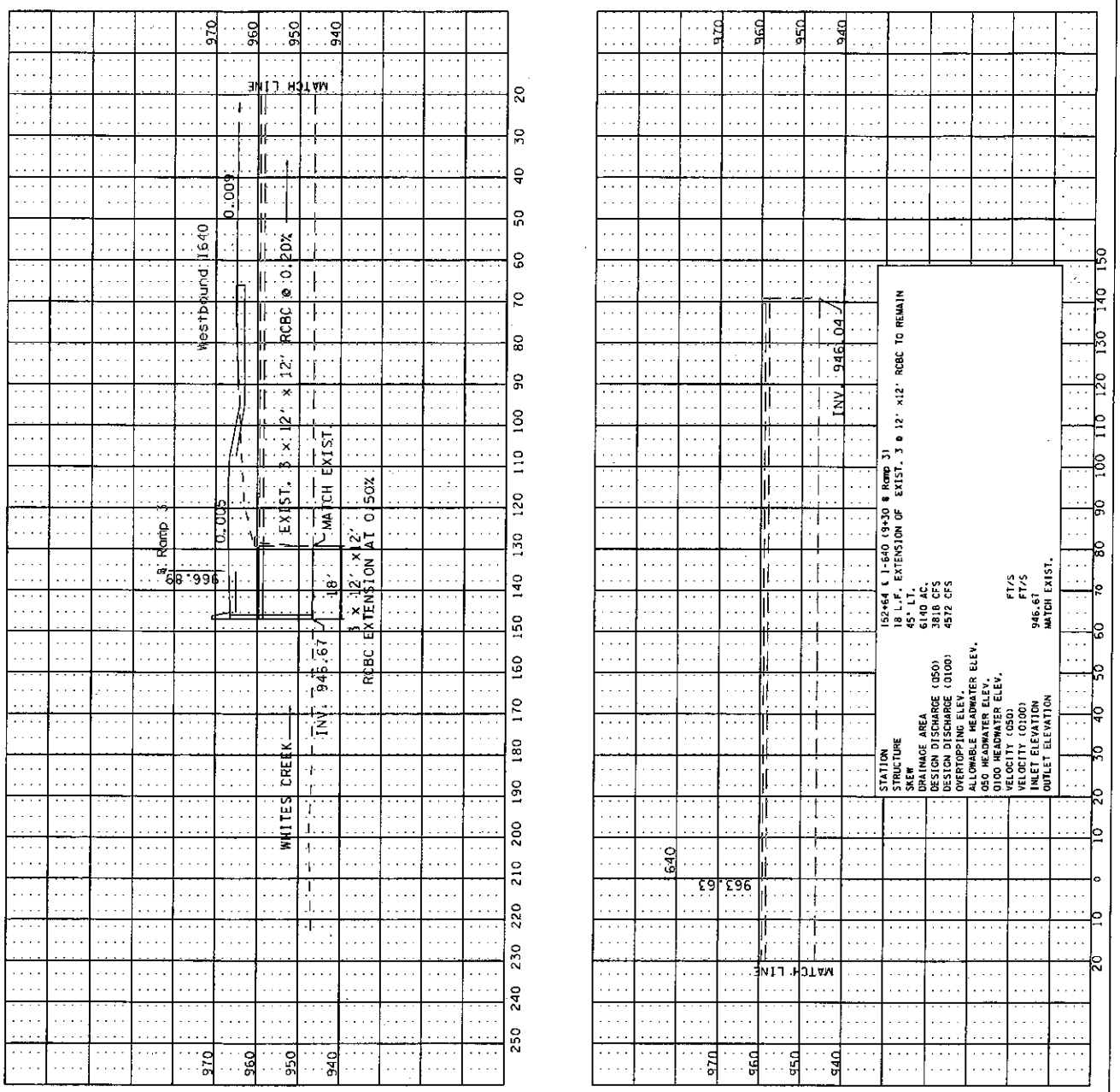
APPLICATION BY:
TENNESSEE DEPARTMENT OF TRANSPORTATION
QUAD FOUNTAIN CITY
PE # 47008-1143-44
PIN # 10302.900
I-640 INTERCHANGE AT NORTH BROADWAY (PHASE II) IN KNOXVILLE
I-640: FROM L.M. 5.38 TO L.M. 6.43
S.R. 33: FROM E.B. I-640 EXIT RAMP TO 0.1 MILE NORTH OF S.R.331

DATE: 09/08/14 REVISED: / / SHEET 3 OF 4

(4)

File No. LRN-2014-01141 Location

Permit Sketch



APPLICATION BY:
TENNESSEE DEPARTMENT OF TRANSPORTATION
QUAD FOUNTAIN CITY (146 SE)
PE # 47008-1143-44
PIN # 103029.00
I-640 INTERCHANGE AT NORTH BROADWAY (PHASE II)
IN KNOXVILLE
I-640; FROM L.M. 5.38 TO L.M. 6.43
S.R. 33: FROM E.B. I-640 EXIT RAMP TO
0.1 MILE NORTH OF S.R. 331

DATE: 09/08/14 REVISED: / / SHEET 4 OF 4

File No. LRN-2014-01141 Location 2

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-I-640-7(161)	8A

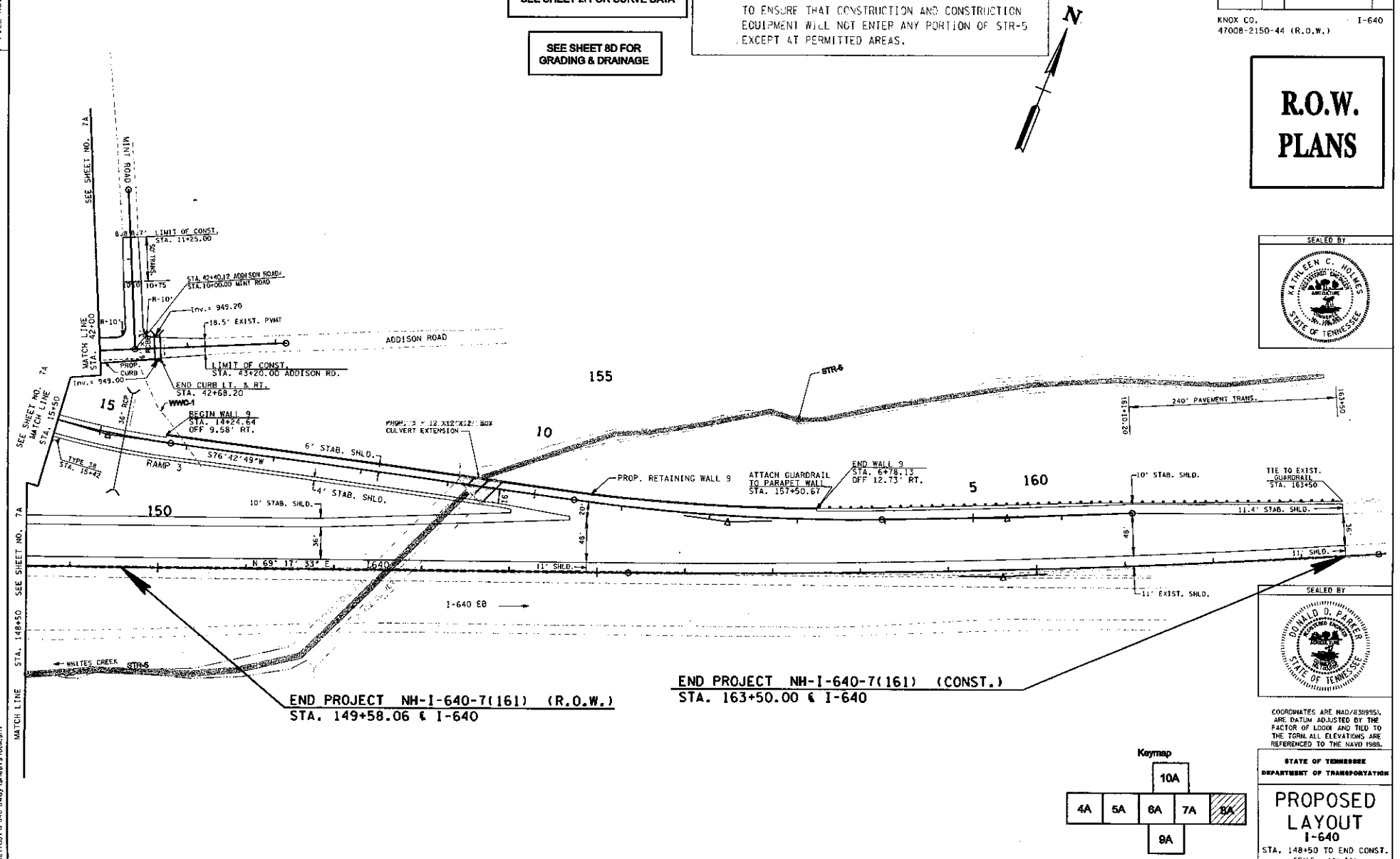
KNOX CO. I-640
47008-2150-44 (R.O.W.)

R.O.W. PLANS

SEE SHEET 2I FOR CURVE DATA

SEE SHEET 8D FOR GRADING & DRAINAGE

NOTE: THE CONTRACTOR SHALL USE ANY MEASURE NECESSARY TO ENSURE THAT CONSTRUCTION AND CONSTRUCTION EQUIPMENT WILL NOT ENTER ANY PORTION OF STR-5 EXCEPT AT PERMITTED AREAS.



END PROJECT NH-I-640-7(161) (R.O.W.)
STA. 149+58.06 ℄ I-640

END PROJECT NH-I-640-7(161) (CONST.)
STA. 163+50.00 ℄ I-640

SEALED BY
KATHLEEN C. HOLMES
REGISTERED ENGINEER
STATE OF TENNESSEE

SEALED BY
DONALD D. PARKER
REGISTERED ENGINEER
STATE OF TENNESSEE

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.0001 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

Keymap

		10A		
4A	5A	6A	7A	8A
		9A		

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT
I-640
STA. 148+50 TO END CONST.
SCALE: 1" = 50'

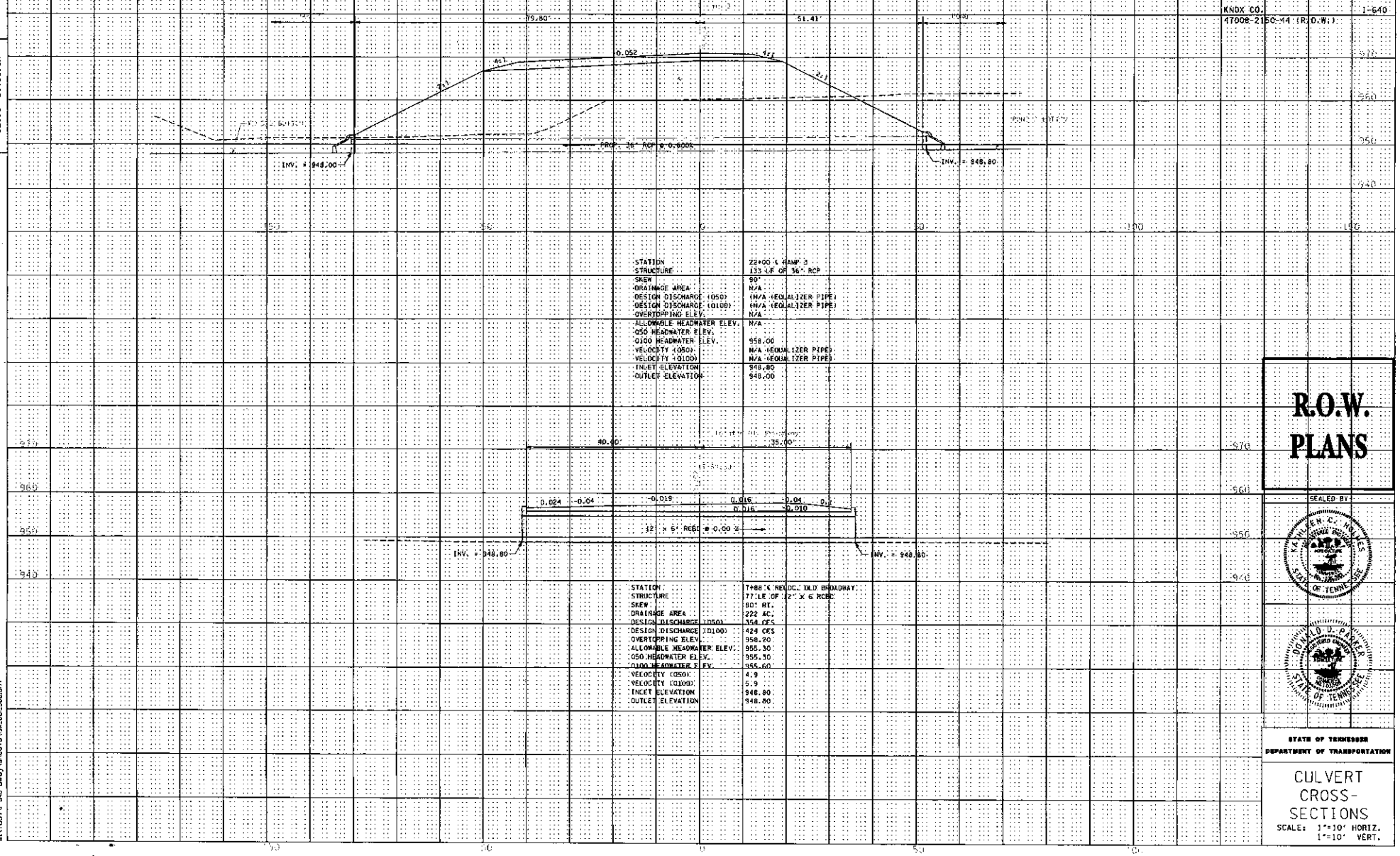
9/8/2014
m:\roll\I-640-body\sheets\008A.sht

File No. LRN-2014-01141 Location 3

TENNESSEE D.O.T. DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-I-640-7(16)	19A
KNOX CO.			I-640
47008-2150-44 (R.O.W.)			



STATION	22+00 & RAMP 3
STRUCTURE	133 LF OF 36" RCP
SKEW	90°
DRAINAGE AREA	N/A
DESIGN DISCHARGE (Q50)	(N/A (EQUALIZER PIPE)
DESIGN DISCHARGE (Q100)	(N/A (EQUALIZER PIPE)
OVERTOPPING ELEV.	N/A
ALLOWABLE HEADWATER ELEV.	N/A
Q50 HEADWATER ELEV.	
Q100 HEADWATER ELEV.	958.00
VELOCITY (Q50)	N/A (EQUALIZER PIPE)
VELOCITY (Q100)	N/A (EQUALIZER PIPE)
INLET ELEVATION	948.80
OUTLET ELEVATION	948.00

STATION	7+88 & REVOC. OLD BROADWAY
STRUCTURE	77 LF OF 12' X 6' RCBC
SKEW	60° RT.
DRAINAGE AREA	222 AC.
DESIGN DISCHARGE (Q50)	358 CFS
DESIGN DISCHARGE (Q100)	424 CFS
OVERTOPPING ELEV.	958.20
ALLOWABLE HEADWATER ELEV.	955.30
Q50 HEADWATER ELEV.	955.10
Q100 HEADWATER ELEV.	955.60
VELOCITY (Q50)	4.9
VELOCITY (Q100)	5.9
INLET ELEVATION	948.80
OUTLET ELEVATION	948.80

R.O.W. PLANS

SEALED BY

K. WALKER HOLMES — REGISTERED ENGINEER — STATE OF TENNESSEE

DONALD D. O. PARKER — REGISTERED ENGINEER — STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CULVERT CROSS-SECTIONS

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

9/8/2014
m:\tdot\i-640-bwoy\sheets\194_Cul_Sec.sht

File No LEN-2014-01141 Location 3

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

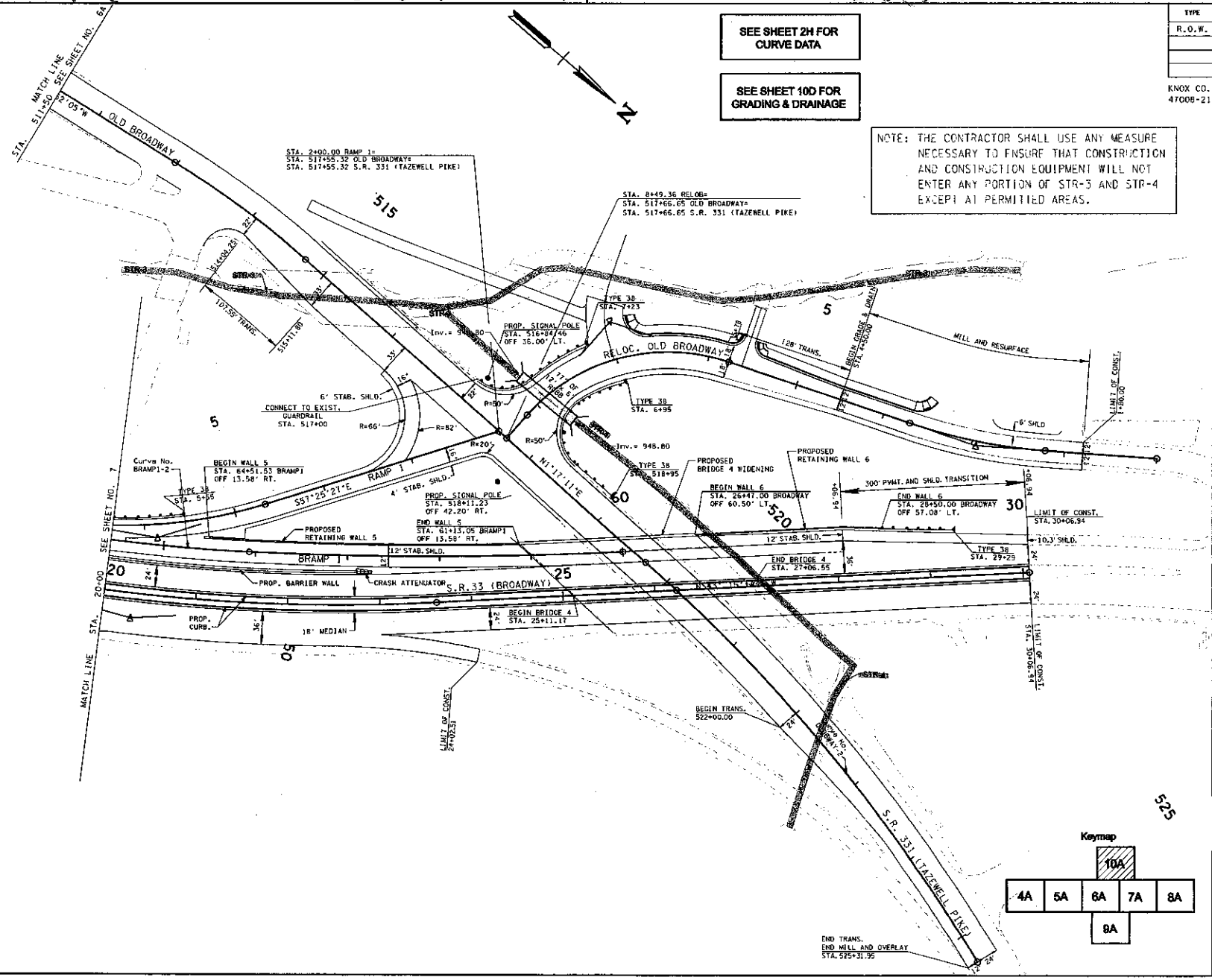
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-I-640-7(161)	10A

KNOX CO. I-640
47008-2150-44 (R.O.W.)

SEE SHEET 2H FOR CURVE DATA

SEE SHEET 10D FOR GRADING & DRAINAGE

NOTE: THE CONTRACTOR SHALL USE ANY MEASURE NECESSARY TO ENSURE THAT CONSTRUCTION AND CONSTRUCTION EQUIPMENT WILL NOT ENTER ANY PORTION OF STR-3 AND STR-4 EXCEPT AT PERMITTED AREAS.



Keymap

R.O.W. PLANS

SEALED BY

KATHLEEN C. HOLMES
REGISTERED ENGINEER
AGRICULTURE
STATE OF TENNESSEE

DONALD D. PARKER
REGISTERED ENGINEER
AGRICULTURE
STATE OF TENNESSEE

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.0001 AND TIED TO THE TCRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT
S.R. 33
STA. 20+00 TO STA. 30+06.94
SCALE: 1" = 50'

9/8/2014
m:\640\I-640-brdy\sheets\RDA.dft

ATTENTION

YOU ARE REQUIRED TO SUBMIT THIS SIGNED CERTIFICATION REGARDING THE COMPLETED ACTIVITY AND MITIGATION.

Nationwide Permit General Condition 30. Compliance Certification. Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and any required compensatory mitigation. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately at a compliance inspection.

I hereby certify that the work authorized by **Permit No. 2014-01141** and any required mitigation was done in accordance with the Corps authorization, including any general, regional, or special conditions.

_____
Permittee Signature

Date_____

Submit this signed certification to:

Eastern Regulatory Field Office
501 Adesa Pkwy, Suite 250
Lenoir City, TN 37771

I-640 at North Broadway (US 441/SR 33) Phase II - Unnamed Tributary to First Creek and Whites Creek, Tennessee River Mile 647.8R, Knoxville, Knox County, Tennessee (PIN 103029.00)

Tennessee Valley Authority
Section 26a Approval

Permit # 266068 **Reservoir** Lenoir City - Off **Category** 3

DOT Project # 47008-1143-44 - I-640 Modification at North Broadway - PIN 103029.00

Name	Company	Address	Phone/Email
	Tennessee Department of Transportation	505 Deaderick Street Suite 900 James K. Polk Building Nashville TN 37243	615-532-4554 DJ.Wiseman@tn.gov

Tract(s)

Subdivision/Lot(s)	Stream	Mile	Bank	Map Sheet(s)
Subdivision: N/A				146 Quad Sheet SW

The facilities and/or activities listed below are APPROVED subject to the plans and general and special conditions attached.

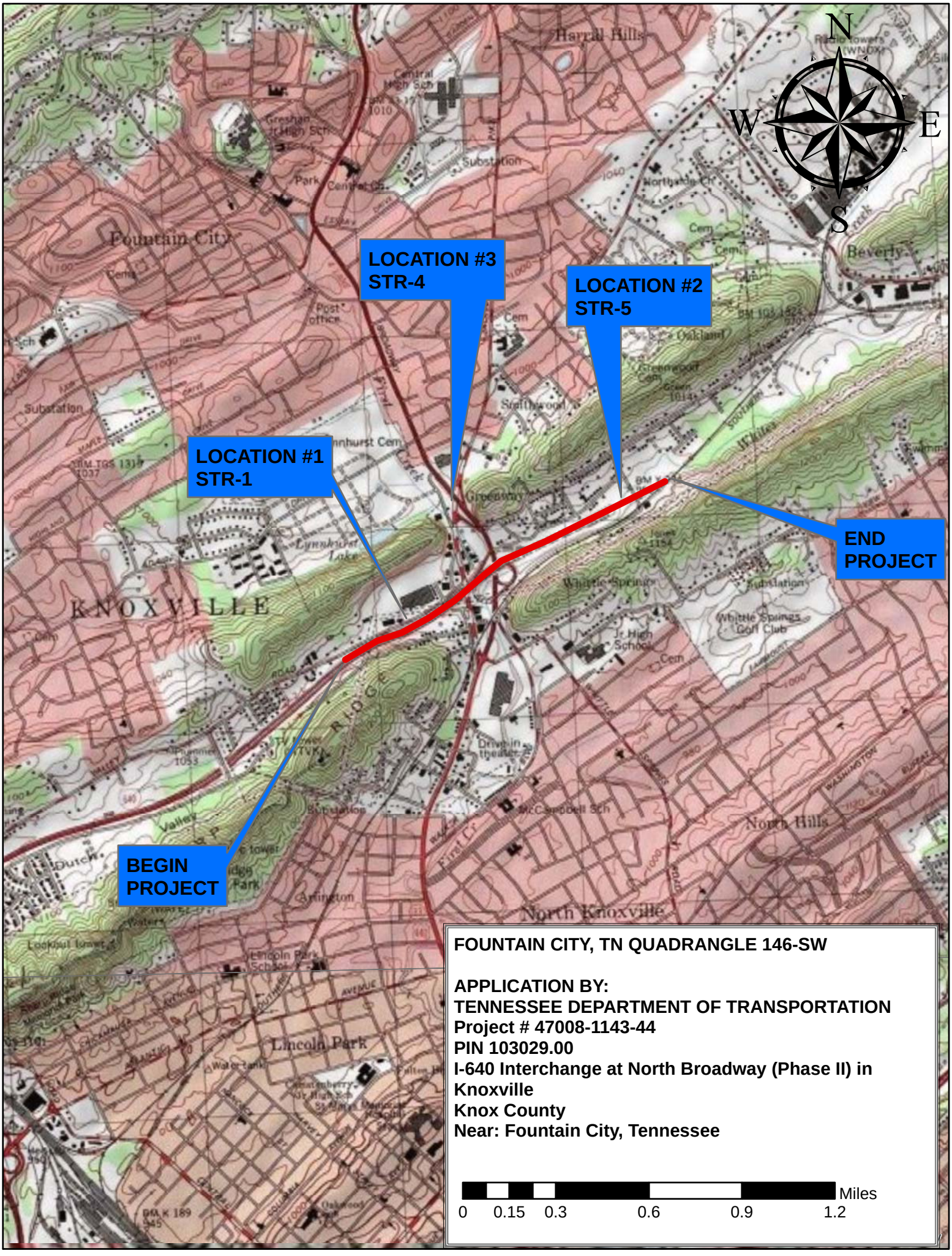
1. Culvert - Roadway — Length (ft., in.): 18'; Width (ft., in.): 12'
2. Riprap — Height (ft., in.): 1'; Length (ft., in.): 1475'
3. Culvert - Roadway — Length (ft., in.): 18'; Width (ft., in.): 12'
4. Culvert - Roadway — Length (ft., in.): 18'; Width (ft., in.): 12'
5. Culvert - Roadway — Length (ft., in.): 77'; Width (ft., in.): 12'

This permit SUPERSEDES all previous TVA approvals at this location including permits approved under land record numbers:

TVA Representative: Anne W Patrick **Date:** 12-01-2014

May require review by U.S. Army Corps of Engineers (USACE). Plans have been forwarded to the USACE.
No construction shall commence until you have written approval or verification that no permit is required.

Applicant is also responsible for all local and state approvals that may be required relating to water quality.
No construction shall commence until you have written approval or verification that no permit is required.



FOUNTAIN CITY, TN QUADRANGLE 146-SW

APPLICATION BY:
TENNESSEE DEPARTMENT OF TRANSPORTATION
Project # 47008-1143-44
PIN 103029.00
I-640 Interchange at North Broadway (Phase II) in Knoxville
Knox County
Near: Fountain City, Tennessee

GENERAL AND STANDARD CONDITIONS
Section 26a

General Conditions

1) You agree to make every reasonable effort to construct and operate the facility authorized herein in a manner so as to minimize any adverse impact on water quality, aquatic life, wildlife, vegetation, and natural environmental values.

2) This permit may be revoked by TVA by written notice if:

a) the structure is not completed in accordance with approved plans;

b) if in TVA's judgment the structure is not maintained in a good state of repair and in good, safe, and substantial condition;

c) the structure is abandoned;

d) the structure or work must be altered or removed to meet the requirements of future reservoir or land management operations of the United States or TVA;

e) TVA finds that the structure has an adverse effect upon navigation, flood control, or public lands or reservations;

f) all invoices related to this permit are not timely paid;

g) you no longer have sufficient property rights to maintain a structure at this location; or

h) a land use agreement (e.g., license, easement, lease) for use of TVA land at this location related to this permit expires, is terminated or cancelled, or otherwise ceases to be effective.

3) If this permit for this structure is revoked, you agree to remove the structure, at your expense, upon written notice from TVA. In the event you do not remove the structure within 30 days of written notice to do so, TVA shall have the right to remove or cause to have removed, the structure or any part thereof. You agree to reimburse TVA for all costs incurred in connection with removal.

4) In issuing this Approval of Plans, TVA makes no representations that the structures or work authorized or property used temporarily or permanently in connection therewith will not be subject to damage due to future operations undertaken by the United States and/or TVA for the conservation or improvement of navigation, for the control of floods, or for other purposes, or due to fluctuations in elevations of the water surface of the river or reservoir, and no claim or right to compensation shall accrue from any such damage. By the acceptance of this approval, applicant covenants and agrees to make no claim against TVA or the United States by reason of any such damage, and to indemnify and save harmless TVA and the United States from any and all claims by other persons arising out of any such damage.

5) In issuing this Approval of Plans, TVA assumes no liability and undertakes no obligation or duty (in tort, contract, strict liability or otherwise) to the applicant or to any third party for any damages to property (real or personal) or personal injuries (including death) arising out of or in any way connected with applicant's construction, operation, or maintenance of the facility which is the subject of this Approval of Plans.

6) This approval shall not be construed to be a substitute for the requirements of any federal, state, or local statute, regulation, ordinance, or code, including, but not limited to, applicable building codes, now in effect or hereafter enacted. State 401 water quality certification may apply.

7) The facility will not be altered, or modified, unless TVA's written approval has been obtained prior to commencing work.

8) You understand that covered second stories are prohibited by Section 1304.204 of the Section 26a Regulations.

9) You agree to notify TVA of any transfer of ownership of the approved structure to a third party. Third party is required to make application to TVA for permitting of the structure in their name (1304.10). Any permit which is not transferred within 60 days is subject to revocation.

10) You agree to stabilize all disturbed areas within 30 days of completion of the work authorized. All land-disturbing activities shall be conducted in accordance with Best Management Practices as defined by Section 208 of the Clean Water Act to control erosion and sedimentation to prevent adverse water quality and related aquatic impacts. Such practices shall be consistent with sound engineering and construction principles; applicable federal, state, and local statutes, regulations, or ordinances; and proven techniques for controlling erosion and sedimentation, including any required conditions under Section 6 of the Standard Conditions.

11) You agree not to use or permit the use of the premises, facilities, or structures for any purposes that will result in draining or dumping into the reservoir of any refuse, sewage, or other material in violation of applicable standards or requirements relating to pollution control of any kind now in effect or hereinafter established.

12) The Native American Graves Protection and Repatriation Act and the Archaeological Resources Protection Act apply to archaeological resources located on the premises of land connected to any application made unto TVA. If LESSEE {or licensee or grantee (for easement) or applicant (for 26a permit)} discovers human remains, funerary objects, sacred objects, objects of cultural patrimony, or any other archaeological resources on or under the premises, LESSEE {or licensee, grantee, or applicant} shall immediately stop activity in the area of the discovery, make a reasonable effort to protect the items, and notify TVA by telephone (865-228-1374). Work may not be resumed in the area of the discovery until approved by TVA.

13) You should contact your local government official(s) to ensure that this facility complies with all applicable local floodplain regulations.

14) You agree to abide by the conditions of the vegetation management plan. Unless otherwise stated on this permit, vegetation removal is prohibited on TVA land.

15) You agree to securely anchor all floating facilities to prevent them from floating free during major floods.

16) You are responsible for accurately locating your facility, and this authorization is valid and effective only if your facility is located as shown on your application or as otherwise approved by TVA in this permit. The facility must be located on land owned or leased by you, or on TVA land at a location approved by TVA.

17) You agree to allow TVA employees access to your water use facilities to ensure compliance with any TVA issued approvals.

18) It is understood that you own adequate property rights at this location. If at any time it is determined that you do not own sufficient property rights, or that you have only partial ownership rights in the land at this location, this permit may be revoked. TVA may require the applicant to provide appropriate verification of ownership.

19) In accordance with 18 CFR Part 1304.9, Approval for construction covered by this permit expires 18 months after the date of issuance unless construction has been initiated.

Standard Conditions (Only items that pertain to this request have been listed.)

2) Ownership Rights

e) You recognize and understand that this authorization conveys no property rights, grants no exclusive license, and in no way restricts the general public's privilege of using shoreland owned by or subject to public access rights owned by TVA. It is also subject to any existing rights of third parties. Nothing contained in this approval shall be construed to detract or deviate from the rights of the United States and TVA held over this land under the Grant of Flowage Easement. This Approval of Plans does not give any property rights in real estate or material and does not authorize any injury to private property or invasion of private or public rights. It merely constitutes a finding that the facility, if constructed at the location specified in the plans submitted and in accordance with said plans, would not at this time constitute an obstruction unduly affecting navigation, flood control, or public lands or reservations.

3) Shoreline Modification and Stabilization

a) For purposes of shoreline bank stabilization, all portions will be constructed or placed, on average, no more than two feet from the existing shoreline at normal summer pool elevation.

c) Bank, shoreline, and floodplain stabilization will be permanently maintained in order to prevent erosion, protect water quality, and preserve aquatic habitat.

5) Bridges and Culverts

a) You agree to design/construct any instream piers in such a manner as to discourage river scouring or sediment deposition.

b) Applicant agrees to construct culvert in phases, employing adequate streambank protection measures, such that the diverted streamflow is handled without creating streambank or streambed erosion/sedimentation and without preventing fish passage.

c) Concrete box culverts and pipe culverts (and their extensions) must create/maintain velocities and flow patterns which offer refuge for fish and other aquatic life, and allow passage of indigenous fish species, under all flow conditions. Culvert floor slabs and pipe bottoms must be buried below streambed elevation, and filled with naturally occurring streambed materials. If geologic conditions do not allow burying the floor, it must be otherwise designed to allow passage of indigenous fish species under all flow conditions.

d) All natural stream values (including equivalent energy dissipation, elevations, and velocities; riparian vegetation; riffle/pool sequencing; habitat suitable for fish and other aquatic life) must be provided at all stream modification sites. This must be accomplished using a combination of rock and bioengineering, and is not accomplished using solid, homogeneous riprap from bank to bank.

e) You agree to remove demolition and construction by-products from the site for recycling if practicable, or proper disposal--outside of the 100-year floodplain. Appropriate BMPs will be used during the removal of any abandoned roadway or structures.

6) Best Management Practices

a) You agree that removal of vegetation will be minimized, particularly any woody vegetation providing shoreline/streambank stabilization.

b) You agree to installation of cofferdams and/or silt control structures between construction areas and surface waters prior to any soil-disturbing construction activity, and clarification of all water that accumulates behind these devices to meet state water quality criteria at the stream mile where activity occurs before it is returned to the unaffected portion of the stream. Cofferdams must be used wherever construction activity is at or below water elevation.

c) A floating silt screen extending from the surface to the bottom is to be in place during excavation or dredging to prevent sedimentation in surrounding areas. It is to be left in place until disturbed sediments are visibly settled.

d) You agree to keep equipment out of the reservoir or stream and off reservoir or stream banks, to the extent practicable (i.e., performing work "in the dry").

e) You agree to avoid contact of wet concrete with the stream or reservoir, and avoid disposing of concrete washings, or other substances or materials, in those waters.

f) You agree to use erosion control structures around any material stockpile areas.

g) You agree to apply clean/shaken riprap or shot rock (where needed at water/bank interface) over a water permeable/soil impermeable fabric or geotextile and in such a manner as to avoid stream sedimentation or disturbance, or that any rock used for cover and stabilization shall be large enough to prevent washout and provide good aquatic habitat.

h) You agree to remove, redistribute, and stabilize (with vegetation) all sediment which accumulates behind cofferdams or silt control structures.

i) You agree to use vegetation (versus riprap) wherever practicable and sustainable to stabilize streambanks, shorelines, and adjacent areas. These areas will be stabilized as soon as practicable, using either an appropriate seed mixture that includes an annual (quick cover) as well as one or two perennial legumes and one or two perennial grasses, or sod. In winter or summer, this will require initial planting of a quick cover annual only, to be followed by subsequent establishment of the perennials. Seed and soil will be protected as appropriate with erosion control netting and/or mulch and provided adequate moisture. Streambank and shoreline areas will also be permanently stabilized with native woody plants, to include trees wherever practicable and sustainable (this vegetative prescription may be altered if dictated by geologic conditions or landowner requirements). You also agree to install or perform additional erosion control structures/techniques deemed necessary by TVA.

Additional Conditions

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

September 26, 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 #47008-1143-44
PIN 103029.00
I-640
Modify interchange at North Broadway (Phase II) in Knoxville
Knox County

Dear Mr. Smith:

The Tennessee Department of Transportation is proposing to modify the existing I-640 and Broadway (US 441/SR 33) interchange in Knox County. The proposed interchange improvements will provide a safer operating environment at the southbound weave maneuver and at the westbound I-640 merge and diverge movements to and from Broadway. The project scope also includes all associated drainage improvements. The total proposed length of roadway construction and improvements equals 0.17 miles. In accordance with T.C.A. 69-3-108(b), this office is submitting form CN-1091 identifying where permits may be needed.

This proposed interchange modification is needed to meet current passenger and freight transportation demands, to address safety and congestion concerns, to support the current and future pattern of development, to provide good access to the businesses located in the vicinity of the interchange and to improve the Level of Service (LOS) before the 2034 planning horizon. According to the Interchange Modification Study (IMS), the need to minimize the acquisition of businesses and impacts to the environment is also of high priority.

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

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

As mitigation for 18 ft. (18 ft. x 1.0) of stream encapsulation, we propose a payment of $4,320. As mitigation for 1,106.25 ft. (1,475 ft. x 0.75) of rip-rap, we propose a payment of $265,500. A total payment of $269,820 is proposed to the In-Lieu Fee Stream Mitigation Program. Please cite this payment to the TSMP 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.

A letter was sent from TDOT to the USFWS on May 17, 2013, requesting information on species that may be present in the vicinity of the proposed project. In a response letter included in the Environmental Boundaries, the USFWS concluded that no significant adverse impacts to wetlands or federally listed endangered or threatened species are anticipated from this proposal. The USFWS believe the requirements of Section 7 of the Endangered Species Act of 1973, as amended, are fulfilled.

A search of the TDEC Division of Natural Areas, endangered species database, was conducted on September 22, 2014. This database search, paired with the findings from a site visit conducted on April 29, 2013 and May 3, 2013, identified zero (0) listed species within one mile of the proposed site and fourteen (14) listed species within four miles of the proposed site.

An email was sent from TDOT to the TWRA on May 17, 2013, requesting information on species that may be present in the vicinity of the proposed project. In a response email dated May 20, 2013 (enclosed), the TWRA stated that the proposed BMP's would be sufficient to minimize impacts to rare species for this project.

In a letter dated January 4, 2011, the TN-SHPO state that the area of potential effect for the subject project contains no cultural resources eligible for listing in the National Register of Historic Places.

In 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.

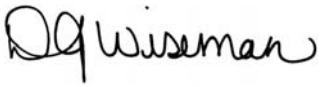
By copy of this letter, we are also requesting that the TDEC, Corps of Engineers, and the TVA please include approval of a potential temporary stream crossing at each location in your permits. Temporary crossings will be located within right-of-way or easements. Copies of TDOT Standard Drawings EC-STR-25 (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 April 29, 2015 turn-in. We would greatly appreciate your initial review and request for additional information needed, or issuance of the public notice, within 15 days of receipt of our application; and issuance of the permits as soon as possible.

If you have any questions or we can be of further assistance please contact me at (615) 532-4554 or Marshall Boyd at (615) 741-3809.

Sincerely,



D.J. Wiseman, PE, CPESC
Senior Transportation Project Specialist, Environmental Permits Section

Enclosures

JLH: DJW: WMB

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

ec:
Ms. Jeanene Woodruff, TDEC
Ms. Kelly Baxter, TVA
Mr. Mike Russell, Project Management Office
Mr. Brandon Crowley, HQ (Region 1) Construction Office
Ms. Mary Howard, Region 1 Construction Office
Mr. Danny Oliver, Region 1 Project Development
Mr. Mark Doty, Region 1 Environmental Coordinator
Mr. Keven Brown, Region 1 Ecology Section
Mr. Matt Richards, HQ Ecology Section
Mr. Ronnie Porter, Program Operations Office
Mr. Baxter Wilson, TDOT Compliance
Mr. Hugh (Chip) Hannah, TDOT Compliance
Mr. John Hewitt, Natural Resources Office
Ms. DJ Wiseman, Region 1 Permits Section
Permit File

FEATURE IMPACT TABLE:	Location #1 / STR-1 (UT to First Creek)
Location Information	
Location #	Location #1
Feature Name:	STR-1 (UT to First Creek)
Latitude:	36.0140°
Longitude:	-83.9321°
Stationing:	Sta. 112+50 ± Lt. through 116+50 ± Lt., 122+65 ± Lt. through 133+40 ± Lt. (I-640)
FEMA Floodplain Designation (if Zone AE, please enclose No-Rise Certification):	Zone AE, The project is in a FEMA defined floodplain, but no detailed FEMA study has been done. The TDOT environmental office has conducted a hydraulic study on the project area and the existing base flood elevation was not increased by more than one foot.
Permits Required - TDEC:	IARAP
Permits Required - Corps:	Pre-Construction Notification- Nationwide #14: Impacts at this site exceed one tenth of an acre; therefore, Pre-Construction Notification is required.
Permits Required - TVA:	Section 26A
CN-1091 Section 6: Project Description	
6.1: Narrative description of project scope	1475 total linear feet of riprap bank stabilization along STR-1 at two different locations
6.2: USGS Topographic Map	Please see enclosed
6.3: Resource photographs	Please refer to photographs #1 and #2 in the enclosed Environmental Boundaries Report
6.4: Existing feature characteristics	Existing open stream: 1475 ft Total Existing Length: 1475 ft Please refer to the enclosed Environmental Boundaries Report for more information
6.5: Proposed feature characteristics	Proposed open stream: 1475 ft Total proposed length: 1475 ft
* Impact acreage to waters of the US (acres):	0.12
6.6: Wetland delineation documentation	N/A
6.7: Water resource hydrologic and jurisdictional determination documentation	N/A
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 (20, 20A, 20B, 20G, 20H, 20I, 20N, 20O, 20P). 2. For the construction method at this location, please refer to the enclosed, present layout (4,5,6), proposed layout (4A,5A,6A), profile (4B, 5B, 6B).
* Proposed impact mitigation:	THE ACTIVITY WILL CAUSE MORE THAN DE MINIMIS DEGRADATION Please refer to Section 11.1 below.
8.3: Depiction and narrative of EPSC measures	Please refer to the enclosed EPSC sheets (20, 20A, 20B, 20G, 20H, 20I, 20N, 20O, 20P).
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	The riprap for bank stabilization was needed for the protection of the retaining wall. The alternative to use the proposed retaining wall minimized the impact to the stream and as a result was the best option.
10.2: Discussion of social and economic consequences	Refer to attached NEPA document.
10.3: Demonstration that degradation from alternative will not violate WQ criteria	Proposed mitigation. See Section 11.1.
CN-1091 Section 11: Compensatory Mitigation	
11.1: Detailed discussion of proposed compensatory mitigation	As mitigation for 1106.25 ft. (1475 ft. x 0.75) of rip-rap, we propose a payment of $ 265,500. A total payment of $265,500 is proposed to the In-Lieu Fee Stream Mitigation Program. Please cite this payment to the TSMP in your permits.
11.2: Description of how compensatory mitig. will result in no net loss of resource value	This stream is not habitat impaired, and therefore in-system mitigation is not required. Thus, payment into the in lieu fee system, will result in no net loss of resurece value.
11.3: Detailed monitoring plan	N/A
11.4: Long-term protection measures for compensatory mitigation site	N/A

FEATURE IMPACT TABLE:	Location #2 / STR-5 (Whites Creek)
Location Information	
Location #	Location #2
Feature Name:	STR-5 (Whites Creek)
Latitude:	36.0184°
Longitude:	-83.9216°
Stationing:	Sta. 152+64 ± Lt. (I-640)
FEMA Floodplain Designation (if Zone AE, please enclose No-Rise Certification):	Zone AE, The project is in a FEMA defined floodplain, but no detailed FEMA study has been done. The TDOT environmental office has conducted a hydraulic study on the project area and the existing base flood elevation was not increased by more than one foot.
Permits Required - TDEC:	IARAP
Permits Required - Corps: No verification required	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:	Section 26A
CN-1091 Section 6: Project Description	
6.1: Narrative description of project scope	Extend existing culvert
6.2: USGS Topographic Map	Please see enclosed
6.3: Resource photographs	Please refer to photograph #11 in the enclosed Environmental Boundaries Report.
6.4: Existing feature characteristics	Existing structure: 270 ft of 3 @ 12' x 12' box culvert (to remain) Existing open stream: 18 ft Total Existing Length: 288 ft Please refer to the enclosed Environmental Boundaries Report for more information
6.5: Proposed feature characteristics	Proposed inlet extension: 18 ft of 3 @ 12' x 12' box culvert Proposed open stream: 0 ft Total proposed length: 288 ft
* 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	N/A
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 (#20D, 20K, 20R). 2. For the construction method at this location, please refer to the enclosed present layout (#8), proposed layout (#8A), profile (#8B), and culvert cross-section (#19).
* Proposed impact mitigation:	THE ACTIVITY WILL CAUSE MORE THAN DE MINIMIS DEGRADATION Please refer to Section 11.1 below.
8.3: Depiction and narrative of EPSC measures	Please refer to the enclosed EPSC sheets (#20D, 20K, 20R).
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	The proposed culvert extension is the most feasible alternative for the widening of the roadway. A span bridge for this location is not economical and would not work as an extension to the existing culvert.
10.2: Discussion of social and economic consequences	Refer to attached NEPA document.
10.3: Demonstration that degradation from alternative will not violate WQ criteria	Proposed mitigation. See Section 11.1.
CN-1091 Section 11: Compensatory Mitigation	
11.1: Detailed discussion of proposed compensatory mitigation	As mitigation for 18 ft. (18 ft. x 1.00) of rip-rap, we propose a payment of $ 4,320. A total payment of $4,320 is proposed to the In-Lieu Fee Stream Mitigation Program. Please cite this payment to the TSMP in your permits.
11.2: Description of how compensatory mitig. will result in no net loss of resource value	This stream is not habitat impaired, and therefore in-system mitigation is not required. Thus, payment into the in lieu fee system, will result in no net loss of resurece value.
11.3: Detailed monitoring plan	N/A
11.4: Long-term protection measures for compensatory mitigation site	N/A

FEATURE IMPACT TABLE:	Location #3 / STR-4 (UT to First Creek)
Location Information	
Location #	Location #3
Feature Name:	STR-4 (UT to First Creek)
Latitude:	36.0228°
Longitude:	-83.9247°
Stationing:	Sta. 7+88 (Old Broadway)
FEMA Floodplain Designation (if Zone AE, please enclose No-Rise Certification):	Zone AE, The project is in a FEMA defined floodplain, but no detailed FEMA study has been done. The TDOT environmental office has conducted a hydraulic study on the project area and the existing base flood elevation was not increased by more than one foot.
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: No permit required	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:	Section 26A
CN-1091 Section 6: Project Description	
6.1: Narrative description of project scope	Construct 77 ft of 12' x 6' concrete box culvert
6.2: USGS Topographic Map	Please see enclosed
6.3: Resource photographs	Please refer to photographs in the enclosed Environmental Boundaries Report
6.4: Existing feature characteristics	Existing open stream: 77 ft Existing stream length: 77 ft Please refer to the enclosed Environmental Boundaries Report for more information
6.5: Proposed feature characteristics	Proposed structure:77 ft of 12’ x 6' concrete box culvert Proposed stream length: 77 ft Proposed open stream: 0 ft
* 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	**N/A**
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 (20F, 20M, and 20T). 2. For the construction method at this location, please refer to the enclosed present layout (10A), proposed layout (10B), and profile (16A).
* Proposed impact mitigation:	MITIGATION NOT REQUIRED N/A
8.3: Depiction and narrative of EPSC measures	Please refer to the enclosed EPSC sheets (20F, 20M, and 20T).
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	THE ACTIVITY WILL ONLY CAUSE DE MINIMIS DEGRADATION 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

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: D.J. Wiseman			
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) 532-4554	Fax: N/A	E-mail: DJ.Wiseman@tn.gov	

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

Alternate Contact Name: Marshall Boyd			
Company: Tennessee Department of Transportation		Title or Position: TDOT Consultant	
Mailing Address: 505 Deaderick Street Suite 900 J.K. Polk Bldg.		City: Nashville	State: TN Zip: 37243
Phone: (615) 741-3809	Fax: N/A	E-mail: Marshall.Boyd@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-640: Modify Interchange at North Broadway (Phase II)	Nearest City, Town or Major Landmark: Knoxville, TN	
Street Address or Location: I-640		
County(ies): Knox	MS4 Jurisdiction: TDOT	Latitude (dd.dddd): See Feature Summary Tables Longitude (dd.dddd): See Feature Summary Tables

Resource Proposed for Alteration: ✓ Stream Wetland Reservoir

Name of Water Resource: UT to First Creek, Whites Creek, First Creek

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

Project No. 47008-1143-44, PIN 103029.00
Refer to the application cover letter for additional information.

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: Permits pending

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

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

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

N/A

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

Start date: 8/10/15	Estimated end date: 8/10/20

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	☒	☐

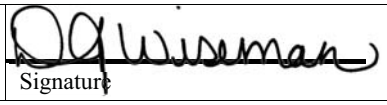
Application for Aquatic Resource Alteration Permit (ARAP) & State §401 Water Quality Permit

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

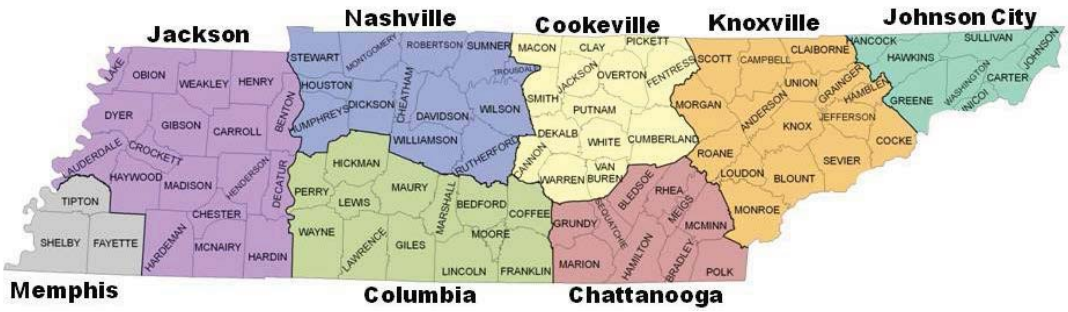
An application submitted by a corporation must be signed by a principal executive officer; from a partnership or proprietorship, by the partner or proprietor respectively; from a municipal, state, federal or other public agency or facility, the application must be signed by either a principal executive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

D.J. Wiseman	Sr. Transportation Project Specialist		September 26, 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:

JOINT APPLICATION FORM
Department of the Army/TVA

OMB No. 3316-0060
Exp. Date 08/31/2016

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

Name and Mailing Address of Applicant:	Name, Mailing Address, and Title of Authorized Agent:
Email Address: DJ.Wiseman@tn.gov	Email Address:
Telephone Number: Home	Telephone Number: Home
Office (615) 532-4554	Office
Mobile	Mobile

Facility/Activity Location (include all known information):

Address: I-640: Modify Interchange at North Broadway (Phase II); Knox County

Subdivision, Lot No., and/or Tax Parcel No.: See Roadway Plans

Stream Name and Mile: See Cover Letter Longitude/Latitude: See Cover Letter

Application submitted to ☑ DA ☑ TVA

Date activity is proposed to commence: 8/10/15 Date activity is proposed to be completed: 8/10/20

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

PIN 103029.00

The Tennessee Department of Transportation is proposing to modify the existing I-640 and Broadway (US 441/SR 33) interchange in Knox County. The proposed interchange improvements will provide a safer operating environment at the southbound weave maneuver and at the westbound I-640 merge and diverge movements to and from Broadway. The project scope also includes all associated drainage improvements. The total proposed length of roadway construction and improvements equals 0.17 miles.

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

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

9/26/2014	D.J. Wiseman	D.J. Wiseman
Date	*Name of Applicant (Printed)*	*Signature of Applicant*

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

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

N/A

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

Previous Property Owner (if known) _____

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

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

Issuing Agency	Type Approval	Identification No.	Date of Application	Date of Approval
TDEC	ARAP		Pending	
TDEC	CGP		Pending	

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

Project plans or drawings, on paper suitable for reproduction no larger than 11 x 17 inches or in electronic format (dxf, docx, or pdf), must accompany the application. Submit the application to the appropriate TVA and U.S. Army Corps of Engineers offices. An application that is not complete will be returned for additional information.

U.S.A.C.E. Offices

U.S. Army Corps of Engineers
Eastern Regulatory Field Office
501 Adesa Parkway., Suite 250
Lenoir City, Tennessee 37771
(865) 986-7296

U.S. Army Corps of Engineers
Regulatory Branch
3701 Bell Road
Nashville, Tennessee 37214
(615) 369-7500

U.S. Army Corps of Engineers
Norfolk District
P.O. Box 338
Abingdon, Virginia 24212
(276) 623-5259

U.S. Army Corps of Engineers
Savannah District
The Plaza, Suite 130
1590 Adamson Parkway
Morrow, Georgia 30260-1763
(678) 422-2729

U.S. Army Corps of Engineers
Western Regulatory Field Office
2042 Beltline Road, SW, Bldg C, Suite 415
Decatur, Alabama 35602
(256) 350-5620

U.S. Army Corps of Engineers
Asheville Regulatory Field Office
151 Patton Avenue, Room 208
Asheville, North Carolina 28801-5006
(828) 271-4856

TVA Offices

Tennessee Valley Authority
Chattanooga Regional Office
1101 Market Street, PSC 1E-C
Chattanooga, Tennessee 37402-2801
1-800-882-5263

Tennessee Valley Authority
Gray Regional Office
106 Tri-Cities Business Park Drive
Gray, Tennessee 37615
1-800-882-5263

Tennessee Valley Authority
Guntersville Regional Office
3696 Alabama Highway 69, CAB 1A-GVA
Guntersville, Alabama 35976-7196
1-800-882-5263

Tennessee Valley Authority
Lenoir City Regional Office
260 Interchange Park Drive, LCB 1A-LCT
Lenoir City, Tennessee 37772-5664
1-800-882-5263

Tennessee Valley Authority
Morristown Regional Office
3726 E. Morris Boulevard
Morristown, Tennessee 37813-1270
1-800-882-5263

Tennessee Valley Authority
Murphy Regional Office
4800 US Highway 64 West, Suite 102
Murphy, North Carolina 28906
1-800-882-5263

Tennessee Valley Authority
Muscle Shoals Regional Office
Post Office Box 1010, MPB 1H
Muscle Shoals, Alabama 35662-1010
1-800-882-5263

Tennessee Valley Authority
Paris Regional Office
2835-A East Wood Street
Paris, Tennessee 38242-5948
1-800-882-5263

Privacy Act Statement

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

Burden Estimate Statement

Public reporting burden for this collection of information is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Agency Clearance Officer, Tennessee Valley Authority, 1101 Market Street, Chattanooga, Tennessee 37402; and to the Office of Management and Budget, Paperwork Reduction Project (3316-0060), Washington, D.C. 20503.

OMB No. 3316-0060
Exp. Date 08/31/2016

TVA

Section 26a Permit and Land Use Application
Applicant Disclosure Form

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

Project #47008-1143-44
PIN 103029.00
I-640: Modify Interchange at North Broadway (Phase II) in Knoxville
Knox County

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

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

_____

_____

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

_____

_____

_____

- ☑ None of the above

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

_____

_____

_____

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

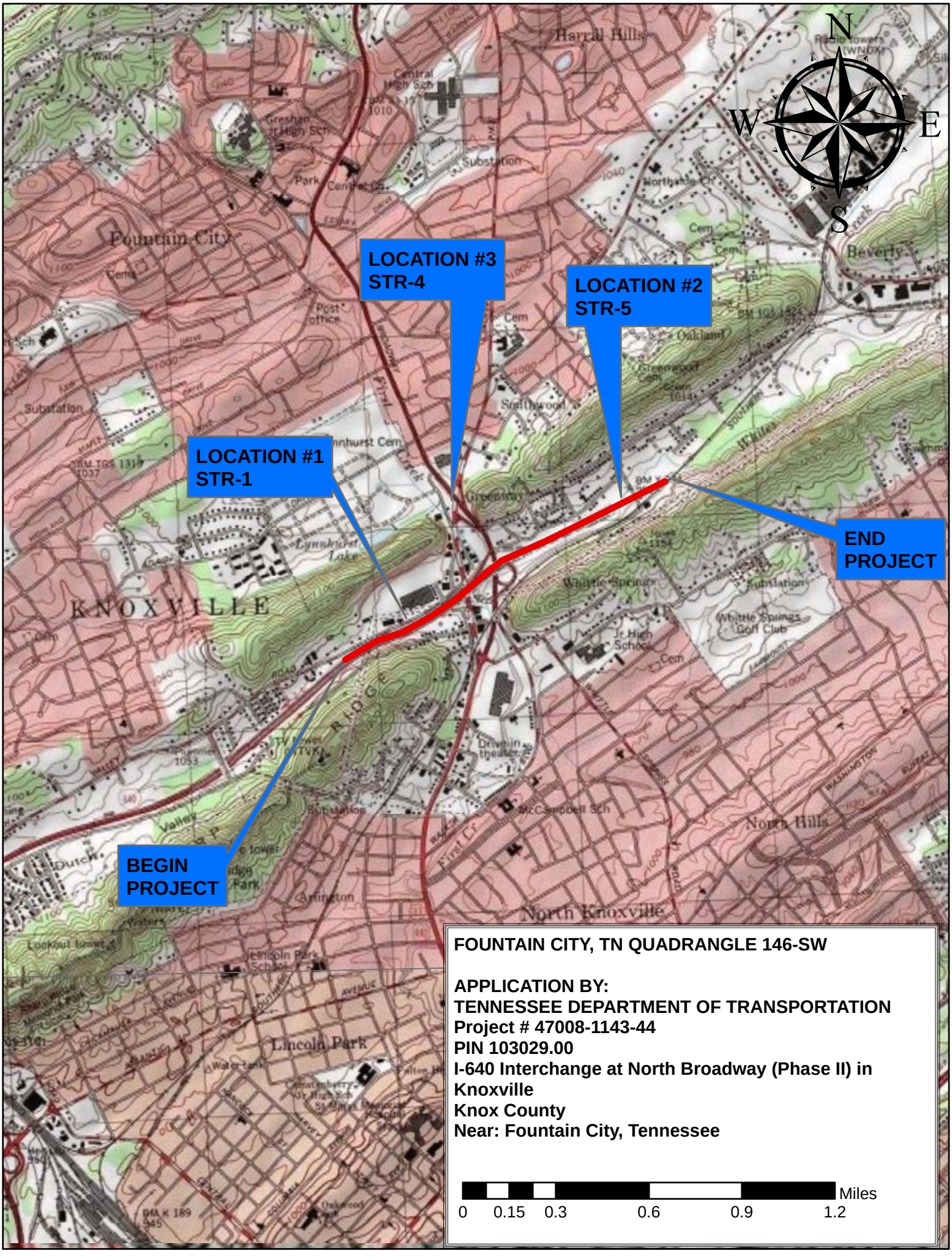
Please sign and return this form with your application package. Your application cannot be processed without receipt of this signed form.

D.J. Wiseman	D.J. Wiseman	09/15/2014
Name of applicant (Printed)	Signature of Applicant	Date

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

Privacy Act Statement

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



FOUNTAIN CITY, TN QUADRANGLE 146-SW

APPLICATION BY:
TENNESSEE DEPARTMENT OF TRANSPORTATION
Project # 47008-1143-44
PIN 103029.00
I-640 Interchange at North Broadway (Phase II) in Knoxville
Knox County
Near: Fountain City, Tennessee

8. Ecology Report

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

JOHN C. SCHROER
COMMISSIONER

BILL HASLAM
GOVERNOR

MEMORANDUM

TO: Freddy Miller
Region 1 Design

FROM: Keven Brown
Region 1 Ecology

DATE: August 14, 2013

SUBJECT: **REVISED EBR**, I-640 Interchange @ North Broadway
Knox County, TN
PIN: 103029.00 P.E. # 47008-1143-44

An ecological evaluation of the subject project has been conducted with the following results:

___ No wetlands identified:

__X__ Wetlands identified in project impact area: WTL-1

___ No streams present:

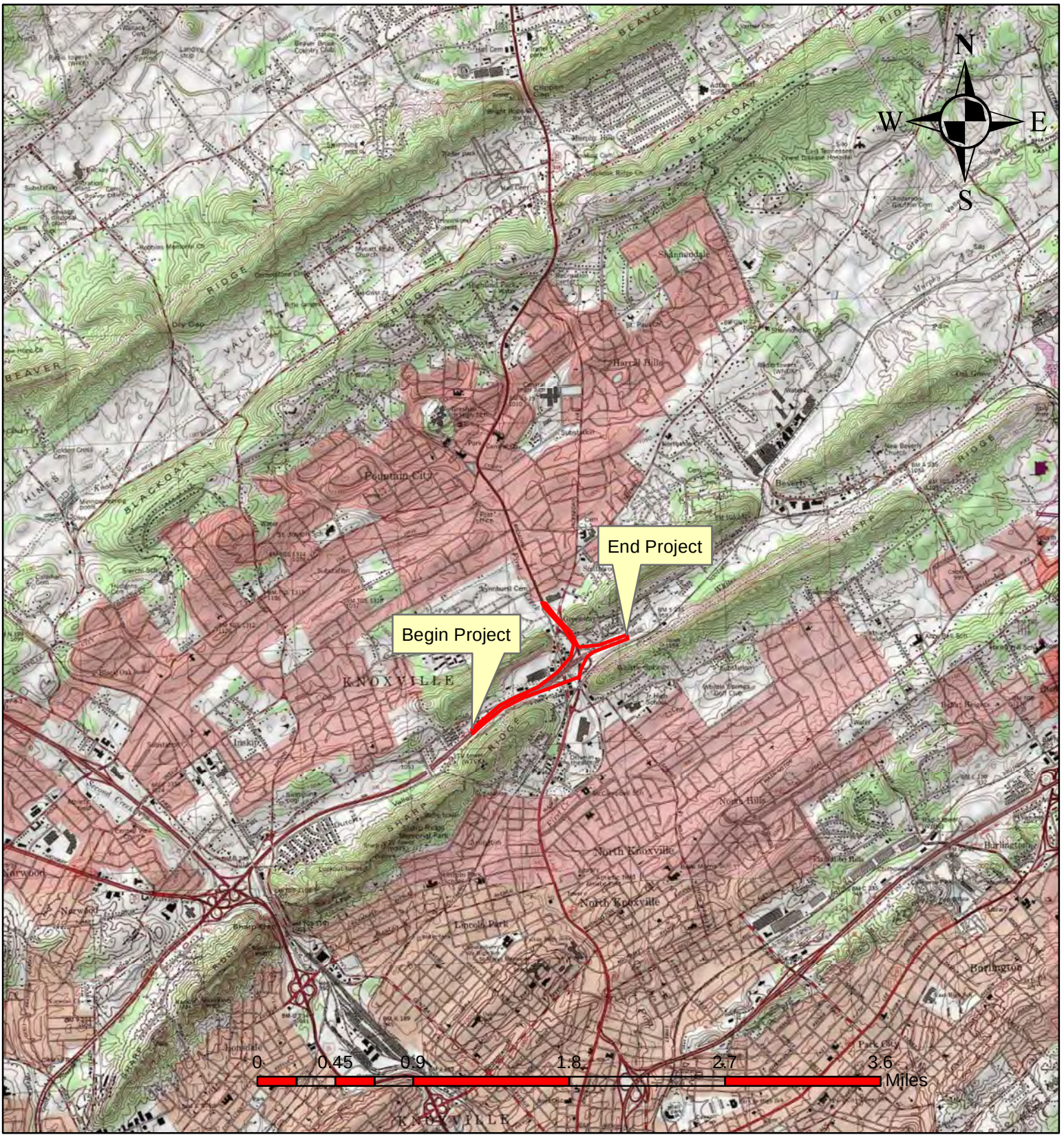
__X__ Streams present: STR-1, STR-2, STR-3, STR-4 and STR-5

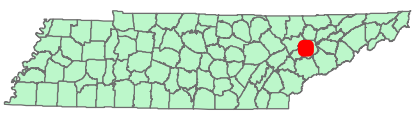
__X__ Protected species not present within project impact area:

___ Protected species identified within project impact area:

Please incorporate this information into the project plans as needed. Thank you for your assistance with this project. If you have any questions or comments please contact me at Keven.Brown@tn.gov or 865-594-2437.

Copy: Ataur Rahman – w/attachment
John Hewitt: - w/attachments
Jon Zirkle – w/attachments
Dennis McClure – w/attachments
Ann Andrews – w/attachments
Project File: - w/attachments





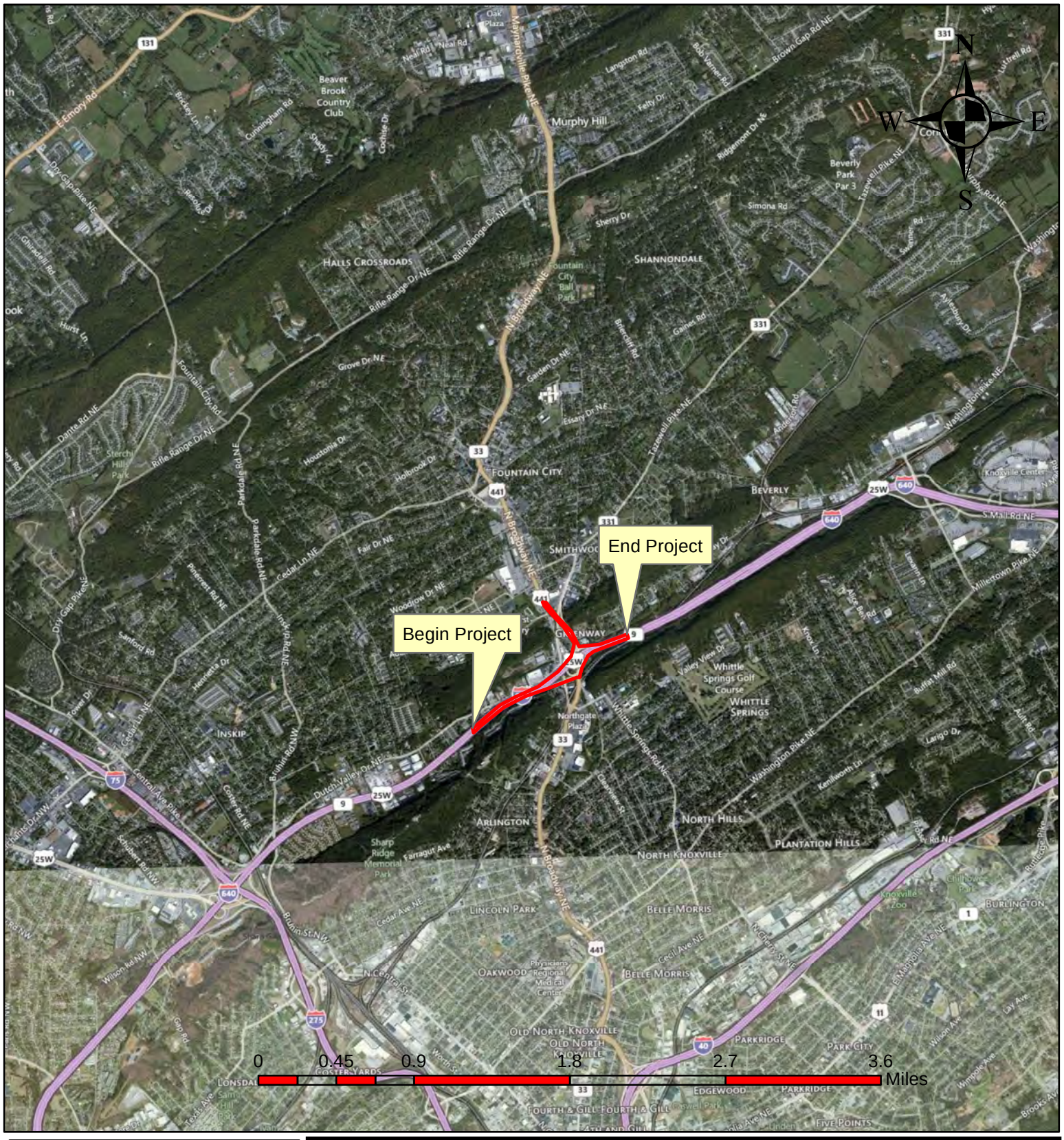
Project Location Map
I-640 Interchange at North Broadway
Knox County, TN

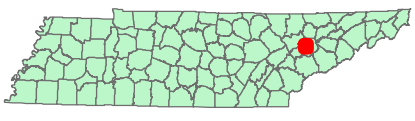
Fountain City, TN 146-SW

Date: 04/29/13

PIN 103029.00 PE # 47008-1143-44

TDOT



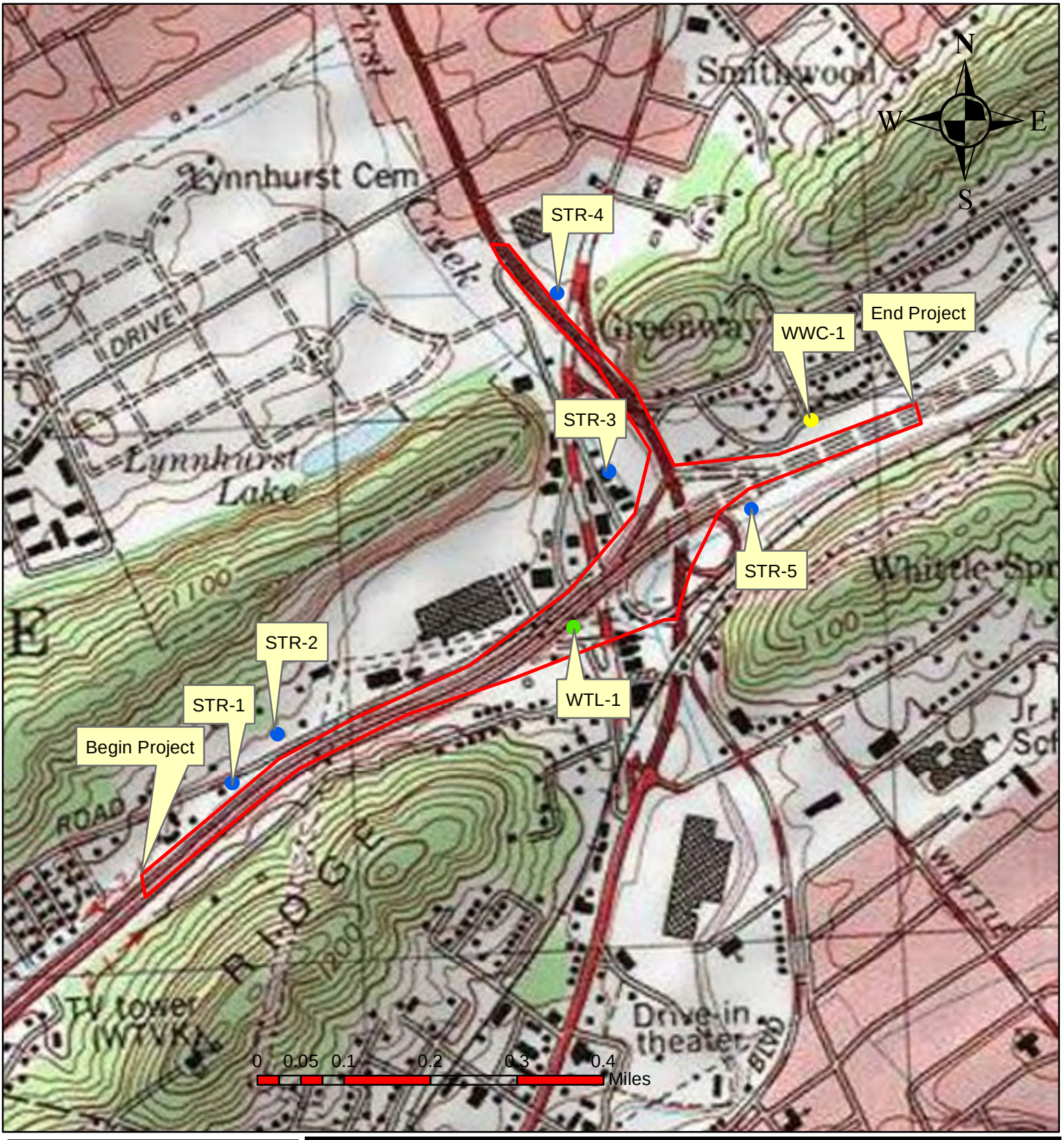


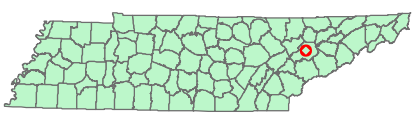
Project Location Map
I-640 Interchange at North Broadway
Knox County, TN

Fountain City, TN 146-SW

Date: 04/29/13

PIN 103029.00 PE # 47008-1143-44



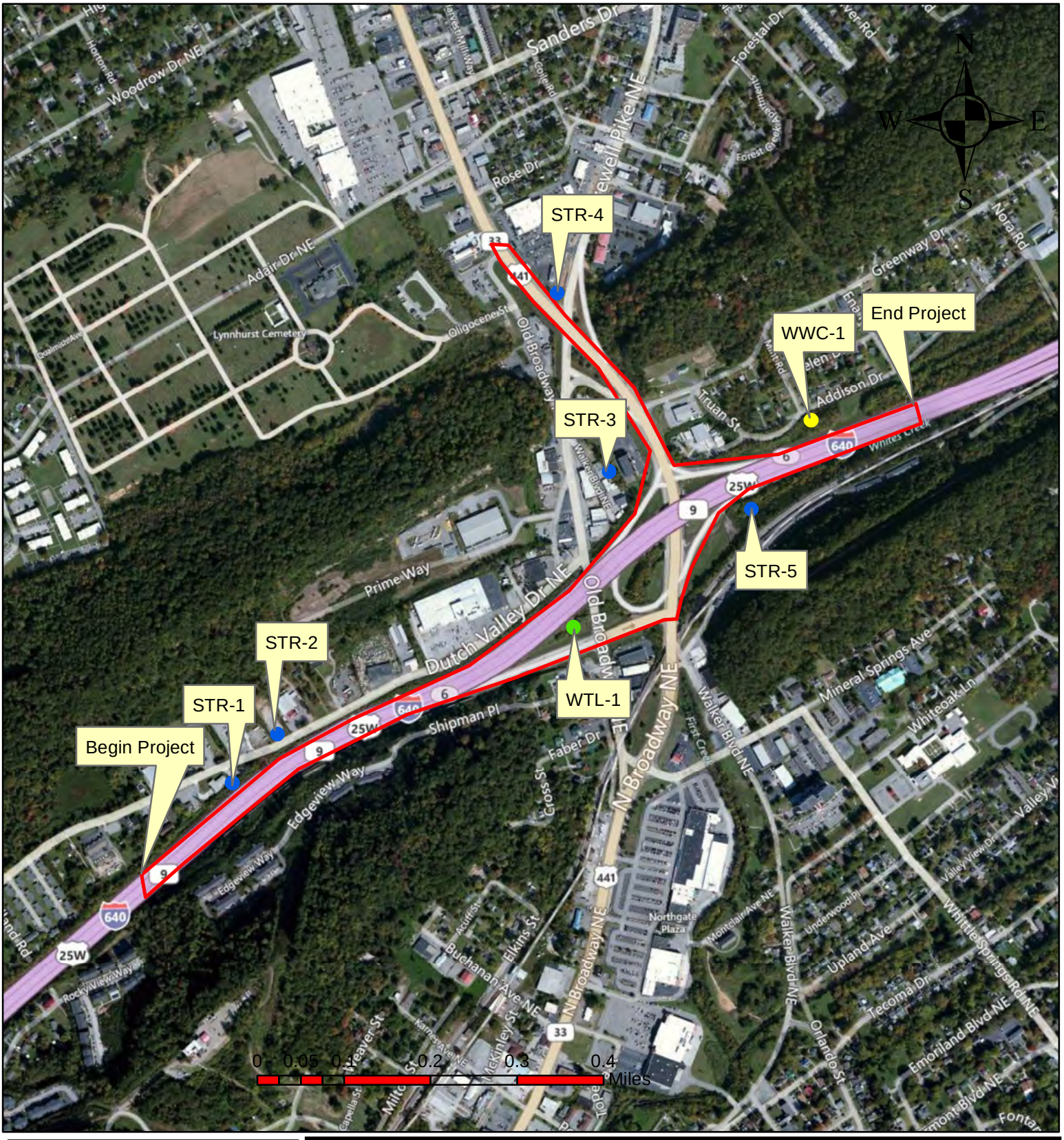


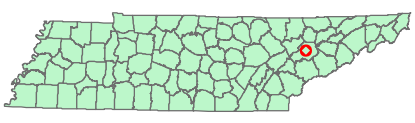
Water Resources Map
I-640 Interchange at North Broadway
Knox County, TN

Fountain City, TN 146-SW

Date: 05/01/13

PIN 103029.00 PE # 47008-1143-44





Water Resources Map
I-640 Interchange at North Broadway
Knox County, TN

Fountain City, TN 146-SW

Date: 05/01/13

PIN 103029.00 PE # 47008-1143-44

Ecology Field Data Sheet: **Water Resources**

Project: (Knox: Interchange @ North Broadway, PE No., 47008-1143-44 PIN 103029.00)

Date of survey: 05/03/13 **Biologist: Matt Bowling** **Affiliation: AMEC**

1-Station: from plans	STA 105+00 LT to STA 131+00 LT	STA 112+00 LT to STA 122+00 LT
2-Map label and name	STR-1 (unnamed tributary to First Creek)	STR-2
3-Latitude/Longitude	36.01401 -83.93207	36.01484 -83.93143
4-Potential impact	Runoff/crossing	Runoff/crossing
5-Feature description:		
what is it	Stream	Stream
blue-line on topo? (y/n)	y	n
defined channel (y/n)	y	y
straight or meandering	straight	straight
channel bottom width	6’	1’
top of bank width	10’	2’
bank height and slope ratio	3’, 1:1	1’, 1:1
avg. gradient of stream (%)	>5%	>5%
substratum	gravel-95% cobble- 5%	soil-90% gravel- 10%
riffle/run/pool	25% 50% 25%	10% 80% 10%
width of buffer zone	RB-10’+ LB-10’	RB-0’+ LB-0’
water flow	y	y
water depth	2”-2’	6”
water width	6’	1’
general water quality	good	fair
OHWM indicators	Wrack lines	Wrack lines, water staining on culverts
groundwater connection	yes	yes
bank stability: LB, RB	LB-poor RB-poor	LB-poor RB-poor
dominant species: LB, RB	Bush honeysuckle	fescue
overhead canopy (%)	75%	0%
benthos	Caddis flies	None observed
fish	minnows	minnows
algae or other aquatic life	crayfish	algae
habitat assessment score	117	68
photo number (s)	1 & 2	3 & 4
rainfall information	5/1-0.0” 5/2-0.0” 5/3-0.0”	5/1-0.0” 5/2-0.0” 5/3-0.0”
6- HUC code & name (12-digit)	060102010201, First Creek	060102010201, First Creek
7-Confirmed by:	not needed-obvious	not needed-obvious
8-Mitigation	No__X___ Yes_____ : (include on Form J)	No__X___ Yes_____ : (include on Form J)
9-ETW	No__X___ Yes_____	No__X___ Yes_____
10-303 (d) List	No__X___ Yes_____: Habitat_____ Siltation_____	No__X___ Yes_____: Habitat_____ Siltation_____
11-Assessed	No__X___ Yes_____	No__X___ Yes_____
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.		

Ecology Field Data Sheet: **Water Resources**

Project: (Knox: Interchange @ North Broadway, PE No., 47008-1143-44 PIN 103029.00)

Date of survey: 05/03/13 **Biologist: Matt Bowling** **Affiliation: AMEC**

1-Station: from plans	STA 501+00 LT (Old Broadway)	STA 10+00 LT to STA 30+00 LT
2-Map label and name	WTL-1	STR-3 (First Creek)
3-Latitude/Longitude	36.01727 -83.92439	36.01925 -83.92319
4-Potential impact	Runoff	Runoff/crossing
5-Feature description:		
what is it	Wetland	Stream
blue-line on topo? (y/n)	n/a	y
defined channel (y/n)	n/a	y
straight or meandering	n/a	straight
channel bottom width	n/a	20’
top of bank width	n/a	25’
bank height and slope ratio	n/a	5’, 1:1
avg. gradient of stream (%)	n/a	>5%
substratum	n/a	gravel-90% cobble- 10%
riffle/run/pool	n/a	30% 40% 30%
width of buffer zone	n/a	RB-10’+ LB-10’
water flow	n/a	y
water depth	n/a	6”-2’
water width	n/a	20’
general water quality	n/a	good
OHWM indicators	n/a	Wrack lines, water staining on culverts
groundwater connection	yes	yes
bank stability: LB, RB	n/a	LB-good RB-good
dominant species: LB, RB	Black willow, cattails	Bush honeysuckle
overhead canopy (%)	75%	50%
benthos	n	Caddis flies
fish	minnows	minnows
algae or other aquatic life	n/a	algae
habitat assessment score	n/a	122
photo number (s)	5	6 & 7
rainfall information	5/1-0.0” 5/2-0.0” 5/3-0.0”	5/1-0.0” 5/2-0.0” 5/3-0.0”
6- HUC code & name (12-digit)	060102010201, First Creek	060102010201, First Creek
7-Confirmed by:	not needed-obvious	not needed-obvious
8-Mitigation	No__X___ Yes_____ : (include on Form J)	No__X___ Yes_____ : (include on Form J)
9-ETW	No__X___ Yes_____	No__X___ Yes_____
10-303 (d) List	No__X___ Yes_____: Habitat_____ Siltation_____	No_____ Yes__X___: Habitat__X___ Siltation_____
11-Assessed	No__X___ Yes_____	No_____ Yes__X___ (not supporting)
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.		

Ecology Field Data Sheet: **Water Resources**

Project: (Knox: Interchange @ North Broadway, PE No., 47008-1143-44 PIN 103029.00)

Date of survey: 05/03/13 **Biologist: Matt Bowling** **Affiliation: AMEC**

1-Station: from plans	STA 26+00 CL (Broadway)	STA 138+00 RT to STA 161+00 LT
2-Map label and name	STR-4	STR-5 (Whites Creek)
3-Latitude/Longitude	36.02279 -83.92469	36.01842 -83.9216
4-Potential impact	Runoff/Crossing	Runoff/crossing
5-Feature description:		
what is it	Stream	Stream
blue-line on topo? (y/n)	n	y
defined channel (y/n)	Y (concrete)	y
straight or meandering	straight	straight
channel bottom width	4’	15’
top of bank width	8’	20’
bank height and slope ratio	4’, 2:1	3’, 1:1
avg. gradient of stream (%)	>5%	>5%
substratum	concrete-90% gravel- 10%	gravel-90% cobble- 10%
riffle/run/pool	10% 90% 0%	30% 40% 30%
width of buffer zone	RB-10’+ LB-10’	RB-10’+ LB-20’
water flow	y	y
water depth	1”-2”	6”-2’
water width	4’	15’
general water quality	good	good
OHWM indicators	Wrack lines, water staining on culverts	Wrack lines, water staining on culverts
groundwater connection	yes	yes
bank stability: LB, RB	LB-good RB-good	LB-good RB-good
dominant species: LB, RB	Bush honeysuckle	Bush honeysuckle, Boxelder
overhead canopy (%)	50%	80%
benthos	Caddis flies	Caddis flies
fish	minnows	minnows
algae or other aquatic life	algae	algae
habitat assessment score	n/a-concrete channel	134
photo number (s)	9	11
rainfall information	5/1-0.0” 5/2-0.0” 5/3-0.0”	5/1-0.0” 5/2-0.0” 5/3-0.0”
6- HUC code & name (12-digit)	060102010201, First Creek	060102010201, First Creek
7-Confirmed by:	not needed-obvious	not needed-obvious
8-Mitigation	No__X___ Yes_____ : (include on Form J)	No__X___ Yes_____ : (include on Form J)
9-ETW	No__X___ Yes_____	No__X___ Yes_____
10-303 (d) List	No__X___ Yes_____: Habitat_____ Siltation_____	No_____ Yes__X___: Habitat__X___ Siltation_____
11-Assessed	No__X___ Yes_____	No_____ Yes__X___ (not supporting)
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.		

Ecology Field Data Sheet: **Water Resources**

Project: (Knox: Interchange @ North Broadway, PE No., 47008 -1143-44 PIN 103029.00)

Date of survey: 05/03/13 **Biologist: Matt Bowling** **Affiliation: AMEC**

1-Station: from plans	STA 14+75 (ramp 3)	
2-Map label and name	WWC-1	
3-Latitude/Longitude	35.02033 -83.91941	
4-Potential impact	Runoff/crossing	
5-Feature description:		
what is it	Wet weather conveyance	
blue-line on topo? (y/n)	n	
defined channel (y/n)	y	
straight or meandering	straight	
channel bottom width	1’	
top of bank width	2’	
bank height and slope ratio	1’, 1:1	
avg. gradient of stream (%)	>5%	
substratum	soil-100%	
riffle/run/pool	10% 80% 10%	
width of buffer zone	RB-0’+ LB-0’	
water flow	y	
water depth	6”	
water width	1’	
general water quality	fair	
OHWM indicators	none	
groundwater connection	no	
bank stability: LB, RB	LB-poor RB-poor	
dominant species: LB, RB	Honeysuckle	
overhead canopy (%)	20%	
benthos	None observed	
fish	None observed	
algae or other aquatic life	None observed	
habitat assessment score	n/a	
photo number (s)	12	
rainfall information	5/1-0.0” 5/2-0.0” 5/3-0.0”	
6- HUC code & name (12-digit)	060102010201, First Creek	
7-Confirmed by:	Obvious, not needed	
8-Mitigation	No_____ Yes_____ : (include on Form J)	
9-ETW	No_____ Yes_____	
10-303 (d) List	No_____ Yes_____: Habitat_____ Siltation_____	
11-Assessed	No__X___ Yes_____	
12-Notes Estimate size (acres) of lake or pond if applicable; provide any pertinent information needed to better describe feature; indicate if hydrologic determination form was completed.		

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont

Project/Site: Knox Co, I-640 over Broadway Map Label: WTL-1

P.E. and PIN: 47008-1143-44 103029.00 Date: 05/03/13 Station: STA 510+00L old broadway

Investigator(s): MWB HUC 12 (code and name): 060102010201-First Creek

Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): none Slope (%): n/a

Subregion (LRR or MLRA): _____ Lat: 36.01727 Long: -83.92439 Datum: NAD-83

Soil Map Unit Name: Apison NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ✓ No _____ Hydric Soil Present? Yes ✓ No _____ Wetland Hydrology Present? Yes ✓ No _____	**Is the Sampled Area within a Wetland?** **Yes ✓ No _____**
Remarks: Photos: 5 & 6 Buffer (ft.): _____ Approximate Size (ac.): <1/10 ac Portion Affected (permanent) (ac.): _____ Portion Affected (temporary) (ac.): _____	Confirmation (by, date): _____ Mitigation (to be included in design): _____ Notes:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ✓ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ✓ No _____ Depth (inches): 10"

Water Table Present? Yes _____ No _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

YTD Rainfall totals are greater than Normal

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Map Label: WTL-1

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 10' x10')			
1. Boxelder (acer negundo)		y	FACW
2. Green Ash (fraxinus pennsylvanica)		y	FACW
3. Black Willow (salix nigra)		y	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	= Total Cover		
Herb Stratum (Plot size:)			
1. Cattails (typha lattifolia)		y	OBL
2. Polygonium sp.		y	n/a
3. Carex sp.		y	n/a
4. .			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	= Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	2	x 1 =	2
FACW species	2	x 2 =	4
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	4 (A)		6 (B)

Prevalence Index = B/A = 1.6

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

✓ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ✓ **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

Photo 5 & 6

SOIL

Map Label: WTL-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10"	7.5YR		4/1				silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ___ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ✓ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ✓ **No** _____

Remarks:

Soils exhibit hydric characteristics.

	**Photo 1:** STA 120+00 LT, view of STR-1 facing southeast.
	**Photo 2.** STA 120+00 LT, view of STR-1 facing southwest.

Photo 3: STA 115+00 LT, view of STR-2 facing southeast.

Photo 4: STA 113+00 LT, view of STR-2 facing southeast.

	**Photo 5:** STA 131+00 RT, view of WTL-1 facing northwest.
	**Photo 6:** STA 138+00 LT, view of STR-3 facing north.

	**Photo 7:** STA 138+00 LT, view of STR-3 facing west.
	**Photo 8:** STA 138+00 LT, view of STR-3 facing southeast.

	**Photo 9:** STA 60+00 LT, (Tazewell pike), View of STR-4 facing south.
	**Photo 10:** STA 522+00 RT, (Old Broadway), view of STR-4 facing east.

	**Photo 11:** STA 152+50 RT, View of STR-5 facing west.
	**Photo 12:** STA 15+50 RT, (ramp-3) View of WWC-1 facing south.

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

Index Of Sheets

SHEET NAME	SHEET NO.
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TRAFFIC DATA SHEET	2F
PROPERTY MAP	3 THRU 3C
ACQUISITION TABLE	3D
PRESENT LAYOUT	4 THRU 10
PROPOSED LAYOUT	4A THRU 10A
MAINLINE PROFILE	4B THRU 7B, 7C, 8B THRU 10B
R.O.W. DETAIL SHEET	7D THRU 7E
PROFILES OF RAMPS AND SIDE ROADS	11 THRU 16
DRAINAGE MAPS	17
CULVERT SECTIONS	18 & 19
I640 CROSS SECTIONS	1 THRU 31
SR 33 CROSS SECTIONS	32 THRU 52
RAMP CROSS SECTIONS	53 THRU 61

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

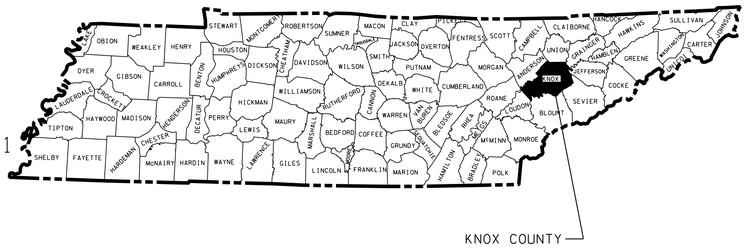
TENN.	YEAR	SHEET NO.
	2012	1
FED. AID PROJ. NO.	NH-I-640-7(161)	
STATE PROJ. NO.	47008-3150-44	

I-640 KNOX CO.

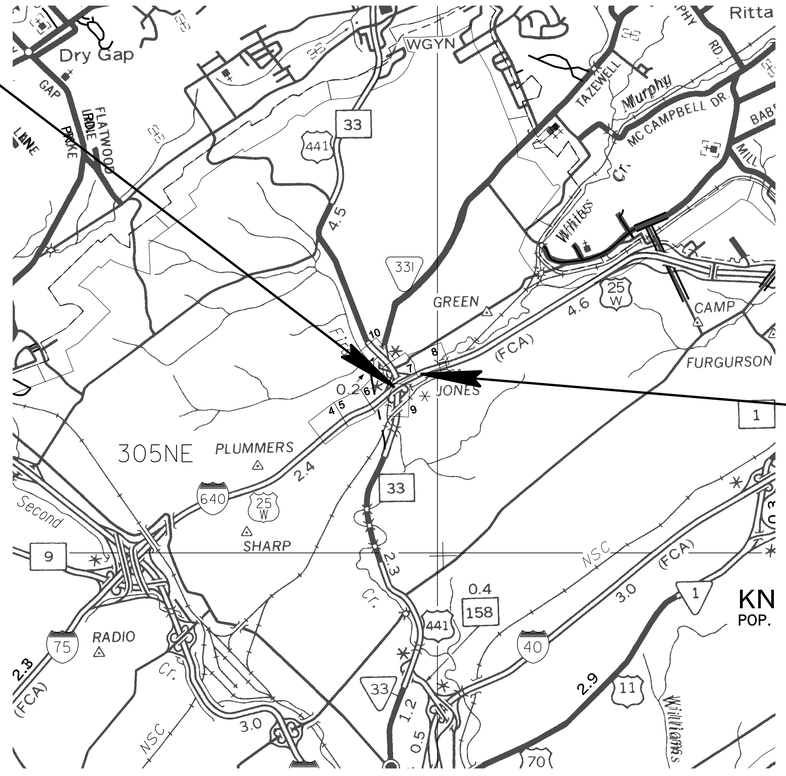
KNOX COUNTY

I-640 INTERCHANGE AT NORTH BROADWAY
(PHASE II) IN KNOXVILLE
I640: FROM L.M. 5.38 TO LOG MILE 6.43
S.R. 33: FROM EASTBOUND I640 EXIT RAMP TO 0.1 MILE NORTH OF S.R.331
PRELIMINARY

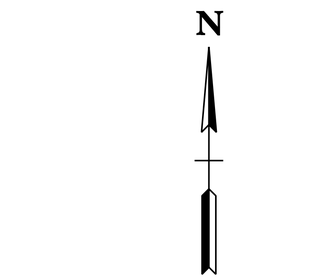
STATE HIGHWAY NO. 640 F.A.H.S. NO. 640



BEGIN PROJECT NH-I-640-7(161) R.O.W.
STA. 140+11.27



SCALE: 1"= 5280'



R.O.W. PROJECT LENGTH 0.179 MILE

END PROJECT NH-I-640-7 (161) R.O.W.
STA. 149+58.06

NO EXCLUSIONS
NO EQUATIONS

PRELIMINARY FIELD REVIEW

APPROVED: Paul D. Degges
CHIEF ENGINEER

DATE:

APPROVED:
COMMISSIONER

SPECIAL NOTES

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

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

TDOT DESIGN MANAGER FREDERICK MILLER, P.E.
DESIGNED BY CDM Smith
DESIGNER KATHLEEN C. HOLMES, P.E. CHECKED BY PATRICK FIVEASH, P.E.
P.E. NO. 47008-1143-44
PIN NO. 103029.00

ORIGINAL SURVEY 2006
UPDATED SURVEY 2012

TRAFFIC DATA-SR33	
ADT (2014)	46,700
ADT (2034)	56,000
DHV (2034)	6,720
D	61 - 39
T (ADT)	4 %
T (DHV)	4 %
V	55 MPH

TRAFFIC DATA-I640	
ADT (2014)	63,500
ADT (2034)	76,200
DHV (2034)	9,140
D	57 - 43
T (ADT)	4 %
T (DHV)	4 %
V	55 MPH

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:
DIVISION ADMINISTRATOR DATE

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM	2012	NH-I-640-7(161)	4
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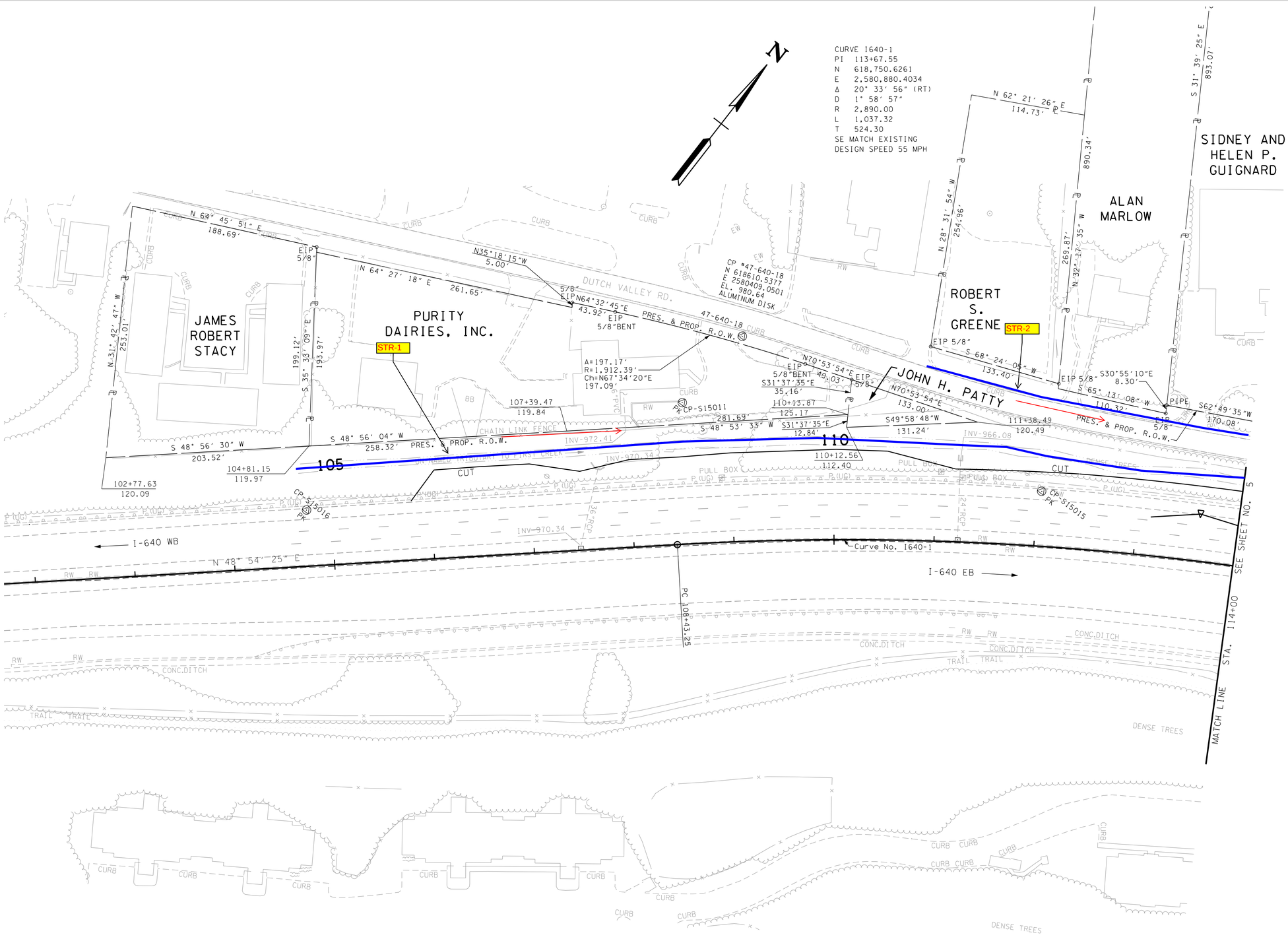
.	.	.	.

KNOX CO. I-640
47008-3150-44 (R.O.W.)



DENOTES PROPOSED SLOPE EASEMENT
DENOTES PROPOSED PERMANENT DRAINAGE EASEMENT
DENOTES PROPOSED CONSTRUCTION EASEMENT
——XX—— DENOTES PROPOSED CONTROLLED ACCESS FENCE

PRELIMINARY FIELD REVIEW

SEALED BY

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.0001 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

SCALE: 1″= 50′

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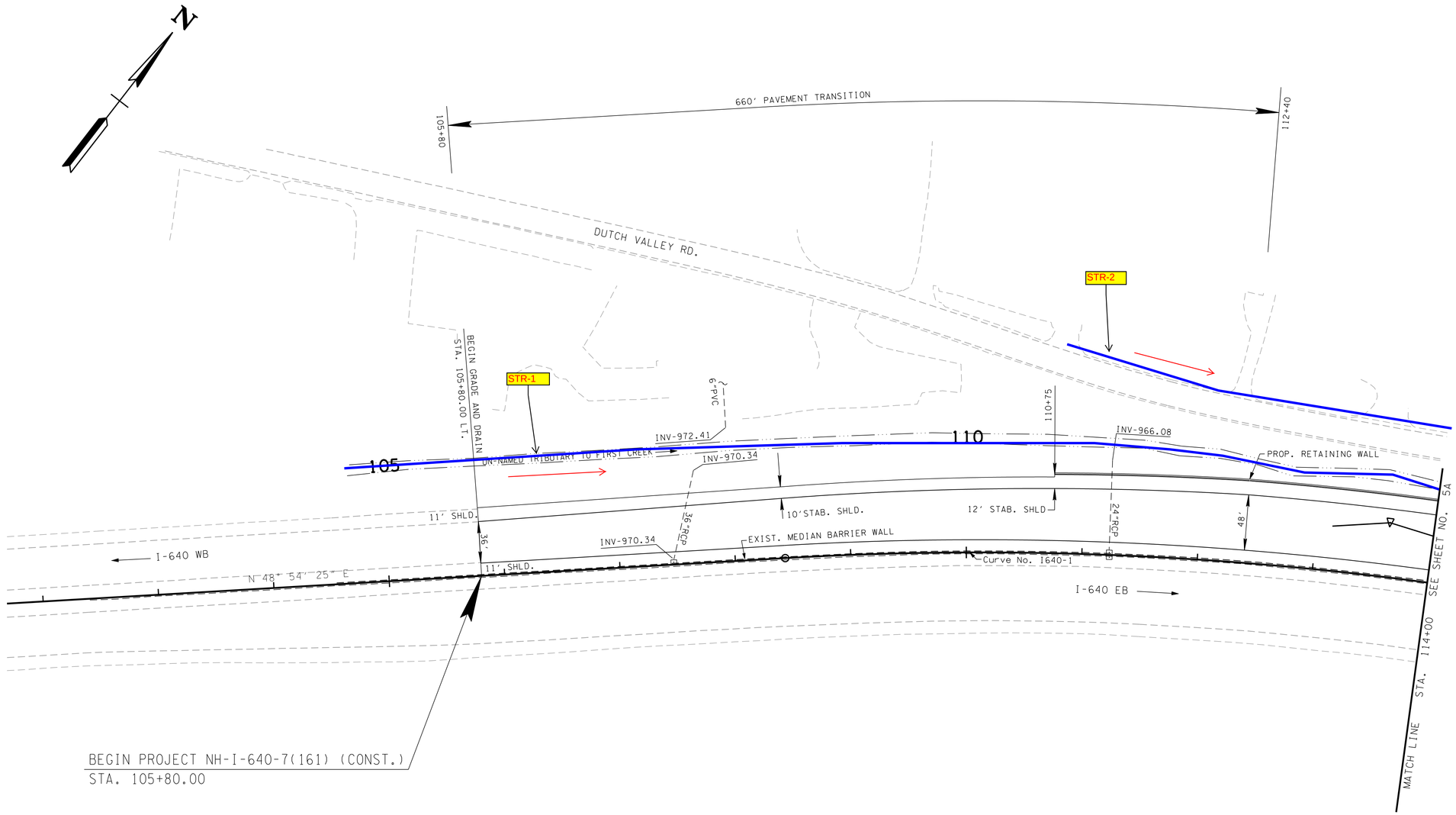
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM	2012	NH-I-640-7(161)	4A

KNOX CO. I-640
47008-3150-44 (R.O.W.)



CURVE I640-1
PI 113+67.55
N 618,750.6261
E 2,580,880.4034
Δ 20° 33' 56" (RT)
D 1° 58' 57"
R 2,890.00
L 1,037.32
T 524.30
SE MATCH EXISTING
DESIGN SPEED 55 MPH

PRELIMINARY FIELD REVIEW

SEALED BY

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.0001 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 105+80 TO STA. 114+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-640-7(161)	5
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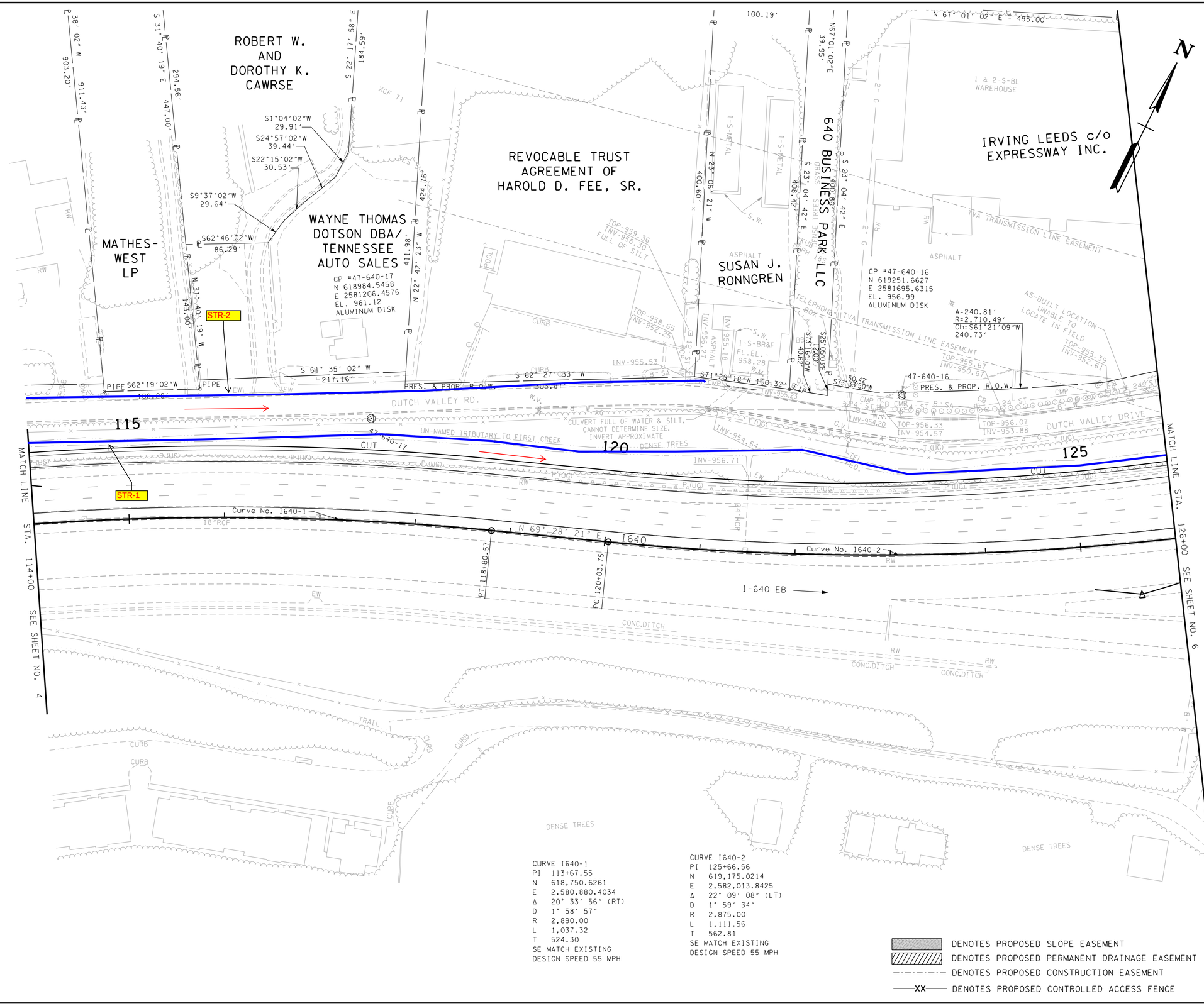
KNOX CO. I-640
47008-3150-44 (R.O.W.)



CURVE I640-1
PI 113+67.55
N 618,750.6261
E 2,580,880.4034
Δ 20° 33′ 56″ (RT)
D 1° 58′ 57″
R 2,890.00
L 1,037.32
T 524.30
SE MATCH EXISTING
DESIGN SPEED 55 MPH

CURVE I640-2
PI 125+66.56
N 619,175.0214
E 2,582,013.8425
Δ 22° 09′ 08″ (LT)
D 1° 59′ 34″
R 2,875.00
L 1,111.56
T 562.81
SE MATCH EXISTING
DESIGN SPEED 55 MPH

DENOTES PROPOSED SLOPE EASEMENT
DENOTES PROPOSED PERMANENT DRAINAGE EASEMENT
DENOTES PROPOSED CONSTRUCTION EASEMENT
XX DENOTES PROPOSED CONTROLLED ACCESS FENCE

PRELIMINARY FIELD REVIEW

SEALED BY

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.0001 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 114+00 TO STA. 126+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-640-7(161)	5A
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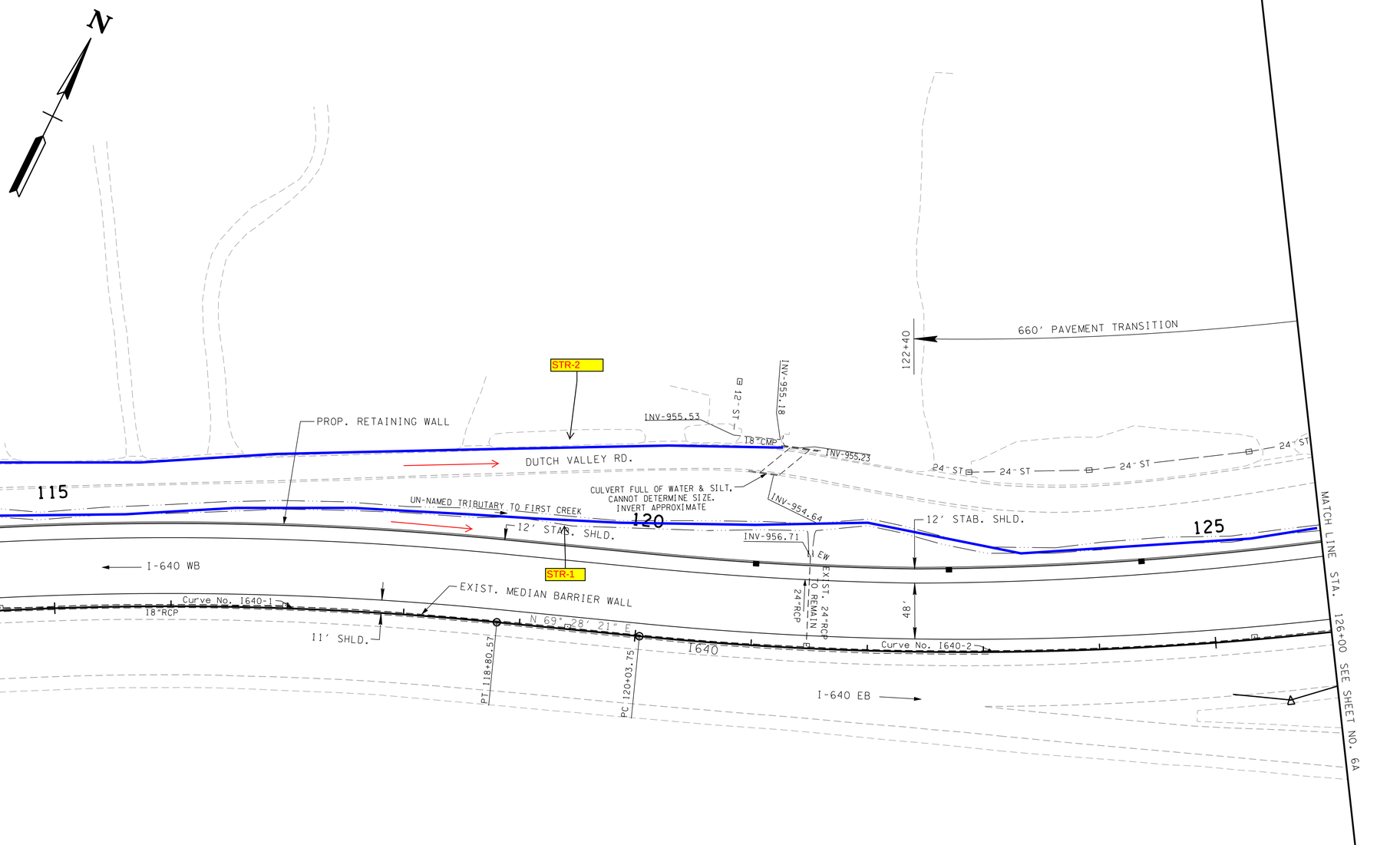
KNOX CO. I-640
47008-3150-44 (R.O.W.)



CURVE I640-1
PI 113+67.55
N 618,750.6261
E 2,580,880.4034
Δ 20° 33' 56" (RT)
D 1° 58' 57"
R 2,890.00
L 1,037.32
T 524.30
SE MATCH EXISTING
DESIGN SPEED 55 MPH

CURVE I640-2
PI 125+66.56
N 619,175.0214
E 2,582,013.8425
Δ 22° 09' 08" (LT)
D 1° 59' 34"
R 2,875.00
L 1,111.56
T 562.81
SE MATCH EXISTING
DESIGN SPEED 55 MPH

PRELIMINARY FIELD REVIEW

SEALED BY

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.0001 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 114+00 TO STA. 126+00

SCALE: 1"= 50'

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

(11) GORDON E. AND CARLAINE S. TREECE
(12) D. JIMMY AND TAMMY. BRINIAS
(13) MILDRED L., ROY EDGAR AND WILLIAM LYNN MULLINS TRUSTEES
(14) ALLISON ROSE LEEDS SEXTON
(15) IRVING LEEDS

DENOTES PROPOSED SLOPE EASEMENT
DENOTES PROPOSED PERMANENT DRAINAGE EASEMENT
DENOTES PROPOSED CONSTRUCTION EASEMENT
DENOTES PROPOSED CONTROLLED ACCESS FENCE

TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM	2012	NH-I-640-7(161)	6
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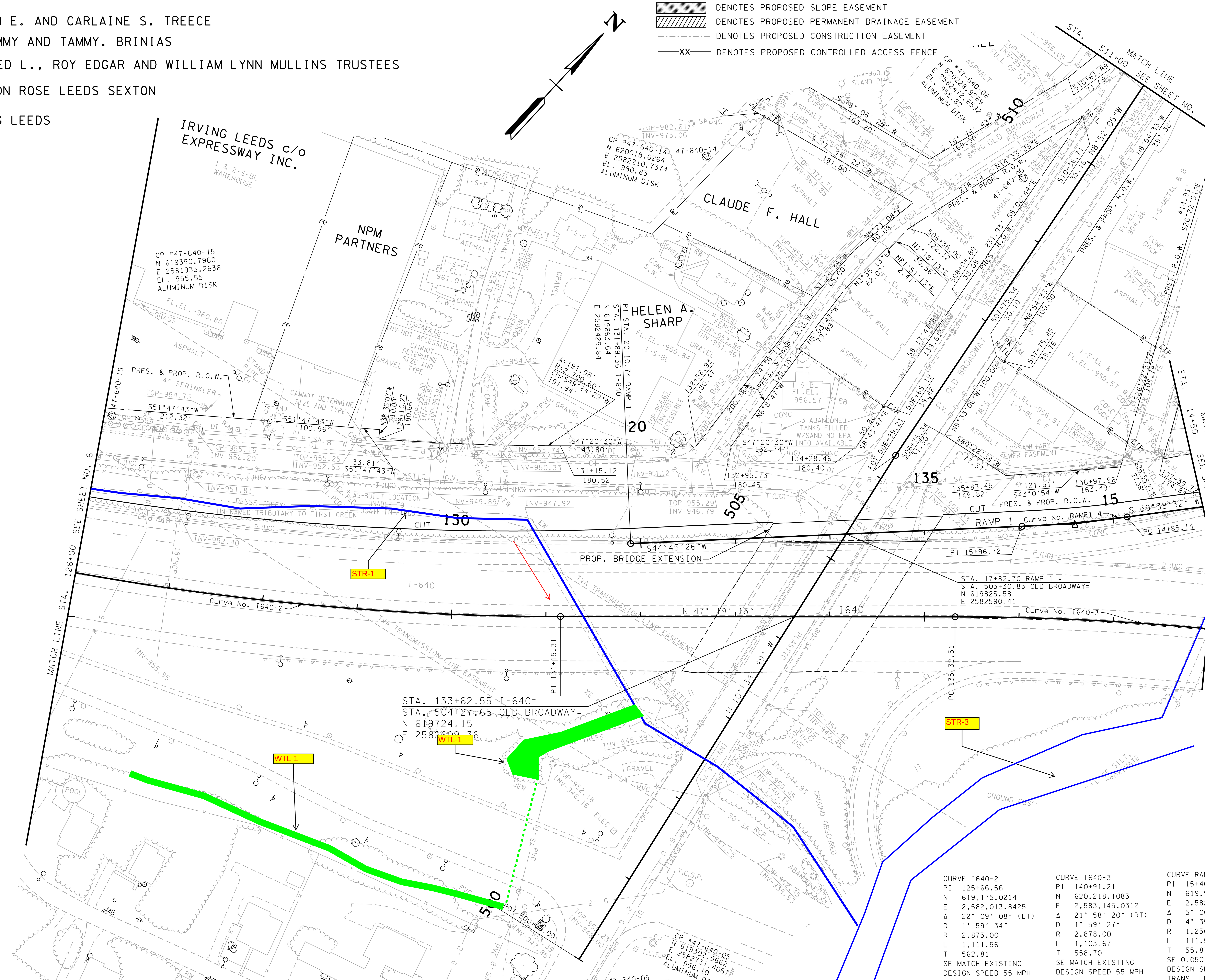
KNOX CO. I-640
47008-3150-44 (R.O.W.)



PRELIMINARY FIELD REVIEW

CURVE I640-2
PI 125+66.56
N 619,175.0214
E 2,582,013.8425
Δ 22° 09' 08" (LT)
D 1° 59' 34"
R 2,875.00
L 1,111.56
T 562.81
SE MATCH EXISTING
DESIGN SPEED 55 MPH

CURVE I640-3
PI 140+91.21
N 620,218.1083
E 2,583,145.0312
Δ 21° 58' 20" (RT)
D 1° 59' 27"
R 2,878.00
L 1,103.67
T 558.70
SE MATCH EXISTING
DESIGN SPEED 55 MPH

CURVE RAMP1-4
PI 15+40.97
N 619,997.2857
E 2,582,760.6676
Δ 5° 06' 53" (RT)
D 4° 35' 01"
R 1,250.00
L 111.59
T 55.83
SE 0.050 FT/FT
DESIGN SPEED 50 MPH
TRANS. LENGTH 110

SEALED BY

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.0001 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

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-640-7(161)	6A
.	.	.	.
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.	.	.	.

KNOX CO. I-640
47008-3150-44 (R.O.W.)

N

660' PAVEMENT TRANSITION

129+00

PT STA. 20+10.74 RAMP 1 =
STA. 131+89.56 I-640=
N 619663.64
E 2582429.84

20

24' ST

24' ST

24' ST

15' ST

12' ST

15' ST

510

STA. 511+00 MATCH LINE SEE SHEET NO. 10A

N8°52'05"W

OLD BROADWAY

POT 506+29.21

135

PROP. BRIDGE WIDENING

PROP. RETAINING WALL

STA. 14+00 MATCH LINE SEE SHEET NO. 7A

15

Curve No. RAMP1-4

S 39°38'32" W

RAMP 1

PC 14+85.14

PT 15+96.72

24'

STA. 17+82.70 RAMP 1 =
STA. 505+30.83 OLD BROADWAY=
N 619825.58
E 2582590.41

+32.51
48'

Curve No. I640-3

I640

I-640 EB

PC 135+32.51

RAMP TO I-640 EB

STR-3

10

505

PROP. RETAINING WALL

12' STAB. SHLD

130

12' STAB. SHLD.

24'

S44°45'26"W

RAMP 1

36'

+32.51

I-640 WB

EXIST. MEDIAN BARRIER WALL

Curve No. I640-2

11' SHLD.

PT 131+15.31

EXIST. TO REMAIN 6' RCBC

N 47° 19' 13" E

11' SHLD

N 10° 34' 49" W

STA. 133+62.55 I-640=
STA. 504+27.65 OLD BROADWAY=
N 619724.15
E 2582609.36

WTL-1

WTL-1

I-640EB EXIT RAMP

UN-NAMED TRIBUTARY TO FIRST CREEK

UN-NAMED TRIBUTARY TO FIRST CREEK

DUTCH VALLEY RD.

STR-1

18' ST

18' ST

ST

ST

18 18

18 18

EXTEND EXIST. 18" RCP TO REMAIN

EXIST. 18" RCP TO REMAIN

MATCH LINE STA. 126+00 SEE SHEET NO. 5A

500

POT 500+00.00

CURVE I640-2
PI 125+66.56
N 619,175.0214
E 2,582,013.8425
Δ 22° 09' 08" (LT)
D 1° 59' 34"
R 2,875.00
L 1,111.56
T 562.81
SE MATCH EXISTING
DESIGN SPEED 55 MPH

CURVE I640-3
PI 140+91.21
N 620,218.1083
E 2,583,145.0312
Δ 21° 58' 20" (RT)
D 1° 59' 27"
R 2,878.00
L 1,103.67
T 558.70
SE MATCH EXISTING
DESIGN SPEED 55 MPH

CURVE RAMP1-4
PI 15+40.97
N 619,997.2857
E 2,582,760.6676
Δ 5° 06' 53" (RT)
D 4° 35' 01"
R 1,250.00
L 111.59
T 55.83
SE 0.050 FT/FT
DESIGN SPEED 50 MPH
TRANS. LENGTH 110

PRELIMINARY FIELD REVIEW

SEALED BY

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.0001 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 126+00 TO STA. 138+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-640-7(161)	7
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.	.	.	.

KNOX CO. I-640
47008-3150-44 (R.O.W.)

CURVE RAMP1-2
PI 8+30.62
N 620,619.1043
E 2,582,918.1226
Δ 7° 13' 43" (RT)
D 2° 55' 53"
R 1,954.51
L 246.59
T 123.46
SE 0.025 FT/FT
DESIGN SPEED 30 MPH
TRANS. LENGTH 125

CURVE RAMP1-1
PI 5+88.92
N 620,830.3221
E 2,582,791.8056
Δ 26° 32' 35" (RT)
D 11° 01' 06"
R 520.00
L 240.90
T 122.65
SE 0.063 FT/FT
DESIGN SPEED 30 MPH
TRANS. LENGTH 105

CURVE BRAMP 1-1
PI 62+03.50
N 621,078.4615
E 2,582,615.4842
Δ 5° 50' 32" (RT)
D 1° 26' 12"
R 3,988.00
L 406.65
T 203.50
SE 0.020 FT/FT (R.C.)
DESIGN SPEED 30 MPH
TRANS. LENGTH 100

CURVE RAMP1-3
PI 11+38.66
N 620,336.6467
E 2,583,041.8341
Δ 63° 17' 42" (RT)
D 19° 05' 55"
R 300.00
L 331.41
T 184.90
SE 0.078 FT/FT
DESIGN SPEED 30 MPH
TRANS. LENGTH 160

CURVE BRAMP 1-2
PI 65+18.98
N 620,827.6263
E 2,582,807.4000
Δ 6° 32' 19" (RT)
D 2° 54' 49"
R 1,966.51
L 224.42
T 112.33
SE 0.025 FT/FT
DESIGN SPEED 30 MPH
TRANS. LENGTH 100

CURVE RAMP 2-1
PI 11+42.34
N 620,701.1577
E 2,583,017.4951
Δ 70° 52' 45" (RT)
D 28° 38' 52"
R 200.00
L 247.41
T 142.34
SE 0.074 FT/FT
DESIGN SPEED 25 MPH
TRANS. LENGTH 161

CURVE RAMP 2-2
PI 40+44.55
N 622,704.2561
E 2,585,168.7997
Δ 169° 47' 07" (RT)
D 22° 55' 06"
R 250.00
L 740.83
T 2,797.13
SE 0.080 FT/FT
DESIGN SPEED 30 MPH
TRANS. LENGTH 180

CURVE RAMP 2-3
PI 20+94.64
N 620,380.1672
E 2,583,428.3615
Δ 25° 46' 36" (RT)
D 12° 19' 18"
R 465.00
L 209.20
T 106.40
SE 0.080 FT/FT
DESIGN SPEED 40 MPH
TRANS. LENGTH 210

CURVE RAMP 3-4
PI 20+61.61
N 620,617.8867
E 2,583,331.3038
Δ 16° 53' 22" (LT)
D 12° 19' 18"
R 465.00
L 137.07
T 69.04
SE 0.080 FT/FT
DESIGN SPEED 40 MPH
TRANS. LENGTH 210

CURVE I640-3
PI 140+91.21
N 620,218.1083
E 2,583,145.0312
Δ 21° 58' 20" (RT)
D 1° 59' 27"
R 2,878.00
L 1,103.67
T 558.70
SE MATCH EXISTING
DESIGN SPEED 55 MPH

CURVE BWAY-1
PI 14+25.21
N 620,301.4063
E 2,583,135.4658
Δ 26° 28' 59" (LT)
D 4° 43' 11"
R 1,214.00
L 561.13
T 285.67
SE MATCH EXISTING
DESIGN SPEED 45 MPH

CURVE BWAY-2
PI 20+34.22
N 620,864.7490
E 2,582,878.4045
Δ 18° 44' 03" (LT)
D 2° 50' 01"
R 2,022.01
L 661.15
T 333.55
SE MATCH EXISTING
DESIGN SPEED 45 MPH

MATCH LINE STA. 20+00 SEE SHEET NO. 10

STA. 19+50.05 BROADWAY=
STA. 50+00.00 GREENWAY=
N 620781.22
E 2582899.64

CP #47-640-13
N 620906.9475
E 2583114.0877
EL. 1009.82
ALUMINUM DISK

STA. 54+45.00
N 620959.91
E 2583307.19

JUANITA IRENE AND CARROLL EDWARD REYNOLDS

Curve No. RAMP1-1
PT STA. 66+31.07 BRAMP 1=
STA. 7+07.17 RAMP 1=
N 620731.22
E 2582865.06

1 R. LARRY AND SHARON C. SMITH

R. LARRY & SHARON SMITH

R. LARRY & SHARON SMITH

ROBERT E. AND ALLISON L. SEXTON

ABILITY INC.

STR-3

GJM PROPERTIES

6

Curve No. RAMP2-1
47-640-12

CP #47-640-12
N 620673.5388
E 2583098.1858
EL. 988.34
ALUMINUM DISK

Curve No. RAMP2-2

PT STA. 10+00.00 RAMP 2=
STA. 16+86.01 BROADWAY=
N 620570.96
E 2583075.02

3 ARROW PROPERTIES

4 AVALEE LEABOW

5 ARROW PROPERTIES

Curve No. RAMP3-4

CLAYTON T. ACUFF

7

8

SECRETARY OF H.U.D.

9

WAYNE BARTON HILL

10

WAYNE BARTON HILL

PAUL DAVID DILLIAM

11

12 ROY AND RUBY DAVIS

ROY DAVIS

13

SAM AND EDITH BUTCHER

14

15 VICKIE BELL AND STEVEN JOHNSON

PRES. R.O.W.
PRES. & PROP. R.O.W.
PROP. R.O.W. & CA FENCE
PROP. R.O.W.
PROP. CA FENCE
PROP. BRIDGE
PROP. BRIDGE EXTENSION

RAMP 1
RAMP 2
RAMP 3

Curve No. BRAMP1-2
Curve No. BWAY-2
Curve No. BWAY-1
Curve No. RAMP1-3
Curve No. ADDISON-1

PCC 17+00.67
PCC 9+53.75
PC 19+92.57
PCC 19+88.24
PC 40+60.12
PT 15+62.03
PT 12+85.17
PC 11+39.54
PT 146+36.18

S68°26'32"W
S85°19'55"W
S87°14'41"E
S39°38'32"W
N66°19'31"E
N2°08'42"E
N 69° 17' 33" E

STA. 16+37.74 S.R. 33 =
STA. 23+75.21 RAMP 3 =
N 620503.3937
E 2583041.5035

STA. 18+07.69 RAMP 2=
STA. 18+50.97 RAMP 3=
N 620635.0294
E 2583541.2427

STA. 21+97.41 RAMP 2=
STA. 143+00.27 I-640=
N 620331.22
E 2583333.92

STA. 140+25.53 I-640=
STA. 12+64.69 BROADWAY=
N 620140.99
E 2583123.54

STR-5

I640
Curve No. I640-3

MATCH LINE STA. 14+00 SEE SHEET NO. 6
MATCH LINE STA. 138+00 SEE SHEET NO. 6
MATCH LINE STA. 11+00 SEE SHEET NO. 9
MATCH LINE STA. 41+75 SEE SHEET NO. 8
MATCH LINE STA. 15+50 SEE SHEET NO. 8
MATCH LINE STA. 148+50 SEE SHEET NO. 8

S.R. 33 BROADWAY
GREENWAY DRIVE
ADDISON DRIVE
TRUAN ROAD
WHITES CREEK

BEGIN PROJECT NH-I-640-7(161) (R.O.W.)
STA. 140+11.27 ℄ I-640

DENOTES PROPOSED SLOPE EASEMENT
DENOTES PROPOSED PERMANENT DRAINAGE EASEMENT
DENOTES PROPOSED CONSTRUCTION EASEMENT
DENOTES PROPOSED CONTROLLED ACCESS FENCE

PRELIMINARY FIELD REVIEW

SEALED BY

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.0001 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 140+11.27 TO STA. 148+50

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-640-7(161)	7A
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KNOX CO. I-640
47008-3150-44 (R.O.W.)

PRELIMINARY FIELD REVIEW

CURVE RAMP1-2
PI 8+30.62
N 620,619.1043
E 2,582,918.1226
Δ 7° 13′ 43″ (RT)
D 2° 55′ 53″
R 1,954.51
L 246.59
T 123.46
SE 0.025 FT/FT
DESIGN SPEED 30 MPH
TRANS. LENGTH 125

CURVE RAMP1-3
PI 11+38.66
N 620,336.6467
E 2,583,041.8341
Δ 63° 17′ 42″ (RT)
D 19° 05′ 55″
R 300.00
L 331.41
T 184.90
SE 0.078 FT/FT
DESIGN SPEED 30 MPH
TRANS. LENGTH 160

CURVE RAMP 2-1
PI 11+42.34
N 620,701.1577
E 2,583,017.4951
Δ 70° 52′ 45″ (RT)
D 28° 38′ 52″
R 200.00
L 247.41
T 142.34
SE 0.074 FT/FT
DESIGN SPEED 25 MPH
TRANS. LENGTH 161

CURVE RAMP 2-2
PI 40+44.55
N 622,704.2561
E 2,585,168.7997
Δ 169° 47′ 07″ (RT)
D 22° 55′ 06″
R 250.00
L 740.83
T 2,797.13
SE 0.080 FT/FT
DESIGN SPEED 30 MPH
TRANS. LENGTH 180

CURVE RAMP 2-3
PI 20+94.64
N 620,380.1672
E 2,583,428.3615
Δ 25° 46′ 36″ (RT)
D 12° 19′ 18″
R 465.00
L 209.20
T 106.40
SE 0.080 FT/FT
DESIGN SPEED 40 MPH
TRANS. LENGTH 210

CURVE RAMP 3-3
PI 14+90.34
N 620,664.4019
E 2,583,900.9526
Δ 8° 37′ 05″ (RT)
D 5° 59′ 58″
R 955.00
L 143.65
T 71.96
SE 0.062 FT/FT
DESIGN SPEED 40 MPH
TRANS. LENGTH 175

CURVE I640-3
PI 140+91.21
N 620,218.1083
E 2,583,145.0312
Δ 21° 58′ 20″ (RT)
D 1° 59′ 27″
R 2,878.00
L 1,103.67
T 558.70
SE MATCH EXISTING
DESIGN SPEED 55 MPH

CURVE RAMP1-1
PI 5+88.92
N 620,830.3221
E 2,582,791.8056
Δ 26° 32′ 35″ (RT)
D 11° 01′ 06″
R 520.00
L 240.90
T 122.65
SE 0.063 FT/FT
DESIGN SPEED 30 MPH
TRANS. LENGTH 105

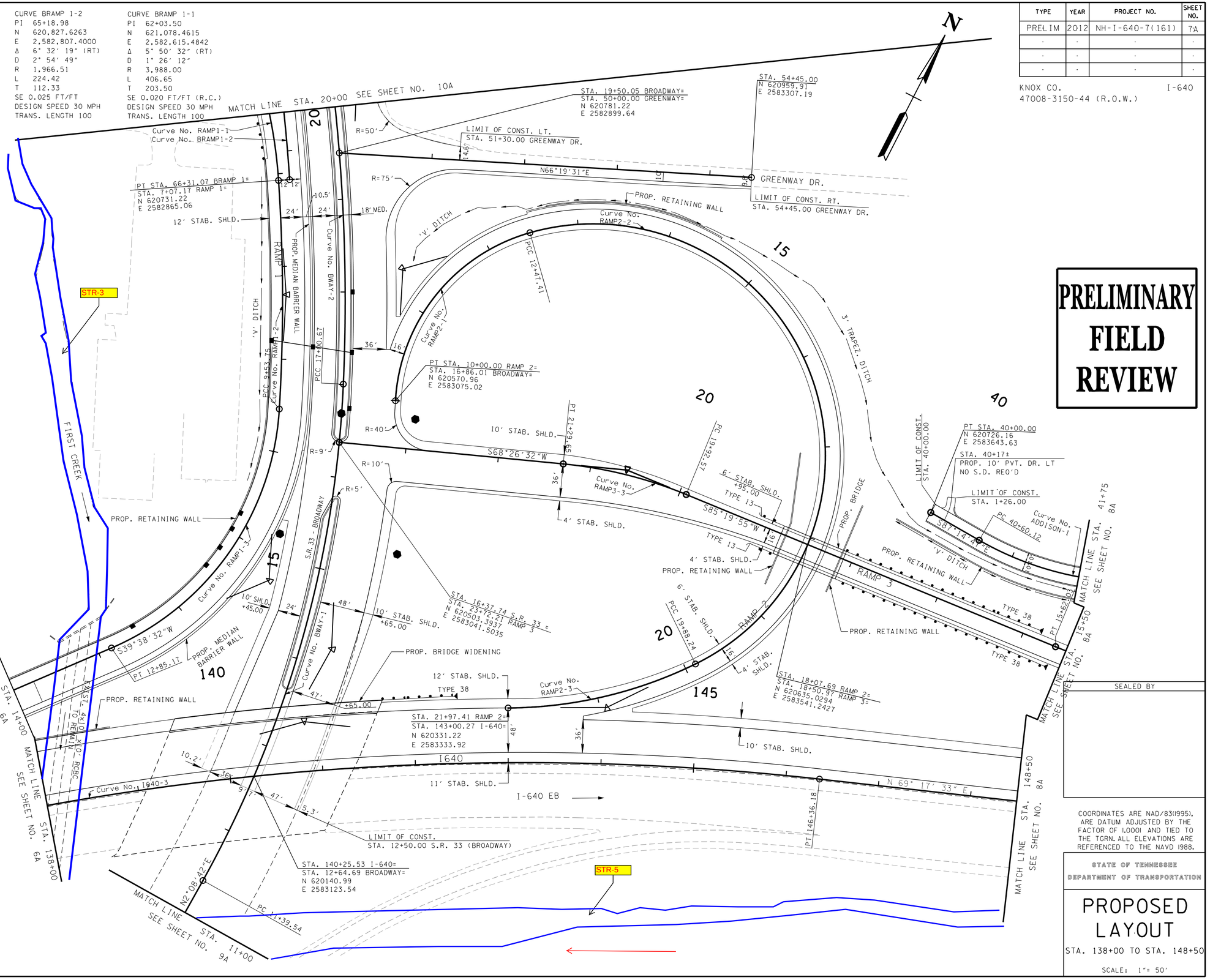
CURVE BWAY-1
PI 14+25.21
N 620,301.4063
E 2,583,135.4658
Δ 26° 28′ 59″ (LT)
D 4° 43′ 11″
R 1,214.00
L 561.13
T 285.67
SE MATCH EXISTING
DESIGN SPEED 45 MPH

CURVE BWAY-2
PI 20+34.22
N 620,864.7490
E 2,582,878.4045
Δ 18° 44′ 03″ (LT)
D 2° 50′ 01″
R 2,022.01
L 661.15
T 333.55
SE MATCH EXISTING
DESIGN SPEED 45 MPH

CURVE ADDISON-1
PI 41+39.65
N 620,719.4515
E 2,583,783.1180
Δ 26° 10′ 50″ (LT)
D 16° 45′ 11″
R 342.00
L 156.27
T 79.52
SE 0.030 FT/FT
DESIGN SPEED 20 MPH
TRANS. LENGTH 83

CURVE BRAMP 1-2
PI 65+18.98
N 620,827.6263
E 2,582,807.4000
Δ 6° 32′ 19″ (RT)
D 2° 54′ 49″
R 1,966.51
L 224.42
T 112.33
SE 0.025 FT/FT
DESIGN SPEED 30 MPH
TRANS. LENGTH 100

CURVE BRAMP 1-1
PI 62+03.50
N 621,078.4615
E 2,582,615.4842
Δ 5° 50′ 32″ (RT)
D 1° 26′ 12″
R 3,988.00
L 406.65
T 203.50
SE 0.020 FT/FT (R.C.)
DESIGN SPEED 30 MPH
TRANS. LENGTH 100



SEALED BY

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.0001 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 138+00 TO STA. 148+50

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-640-7(161)	8
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.	.	.	.

KNOX CO. I-640
47008-3150-44 (R.O.W.)

CURVE RAMP 3-1
PI 4+81.67
N 620,939.7958
E 2,584,869.4592
Δ 1° 08′ 52″ (RT)
D 0° 28′ 18″
R 12,148.39
L 243.34
T 121.67
SE MATCH EXISTING
DESIGN SPEED 55 MPH

CURVE RAMP 3-2
PI 7+79.33
N 620,827.9631
E 2,584,593.6048
Δ 8° 46′ 54″ (RT)
D 2° 29′ 59″
R 2,292.00
L 351.29
T 175.99
SE 0.0460 FT/FT
DESIGN SPEED 50 MPH
TRANS. LENGTH 160

CURVE RAMP 3-3
PI 14+90.34
N 620,664.4019
E 2,583,900.9526
Δ 8° 37′ 05″ (RT)
D 5° 59′ 58″
R 955.00
L 143.65
T 71.96
SE 0.062 FT/FT
DESIGN SPEED 40 MPH
TRANS. LENGTH 175

CURVE I640-4
PI 159+61.79
N 620,884.3932
E 2,584,907.6081
Δ 3° 59′ 55″ (LT)
D 0° 28′ 10″
R 12,207.39
L 851.95
T 426.15
SE MATCH EXISTING
DESIGN SPEED 55 MPH

CURVE ADDISON-1
PI 41+39.65
N 620,719.4515
E 2,583,783.1180
Δ 26° 10′ 50″ (LT)
D 16° 45′ 11″
R 342.00
L 156.27
T 79.52
SE 0.030 FT/FT
DESIGN SPEED 20 MPH
TRANS. LENGTH 83

PRELIMINARY FIELD REVIEW

N

GEORGE PAUL AND DOROTHY P. SHOFFNER
SARAH LYNN AND BARRY G. SEATON
SANDRA JEAN BANKS
CITI FINANCIAL INC.
WILLIAM B. HUMPHREY
MONISHA A. MOORE
RYAN GROVES
DAVID W. AND AMANDA ELEAZER
FRANCIS P. AND DEBORAH J. HEINRICH

HELEN DRIVE
WINN ROAD
ENA ROAD
PRES. & PROP. R.O.W.
MATCH LINE STA. 41+75 SEE SHEET NO. 7
MATCH LINE STA. 14+00 SEE SHEET NO. 7
MATCH LINE STA. 148+50 SEE SHEET NO. 7

CP #47-640-10
N 620975.6235
E 2584339.4356
EL. 955.95
ALUMINUM DISK

CP #47-640-11
N 620726.5778
E 2583843.0678
EL. 953.73
ALUMINUM DISK

CP #47-640-09
N 620703.7494
E 2584224.4854
EL. 961.24
ALUMINUM DISK

PT STA. 44+29.18
N 620835.67
E 2584051.33

3x12'x12' RCBC EXTENSION

STA. 160+70.00 I-640=
PC. STA.3+60.00 RAMP 3
N 620987.7580
E 2584981.2798

PT STA. 163+87.59
N 621082.5080
E 2585294.7482

PC 155+35.64
PC 6+03.34
PT 9+54.63

Curve No. RAMP3-3
Curve No. RAMP3-2
Curve No. RAMP3-1
Curve No. 1640-4

RAMP 3
S76°42′49″W
CUT
I-640 WB
I-640 EB
N 69° 17′ 40″ E

EXIST. 3'x12'x12' RCBC TO REMAIN
EXIST. 18" RCP TO BE PLUGGED & ABANDONED
3'x12'x12' RCBC
WHITES CREEK
WWC-1
STR-5

END PROJECT NH-I-640-7(161) (R.O.W.)
STA. 149+58.06 ℄ I-640

DENOTES PROPOSED SLOPE EASEMENT
DENOTES PROPOSED PERMANENT DRAINAGE EASEMENT
DENOTES PROPOSED CONSTRUCTION EASEMENT
DENOTES PROPOSED CONTROLLED ACCESS FENCE

SEALED BY

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.0001 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 148+50 TO STA. 149+58.06

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-640-7(161)	8A
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KNOX CO. I-640
47008-3150-44 (R.O.W.)

CURVE ADDISON-1
PI 41+39.65
N 620,719.4515
E 2,583,783.1180
Δ 26° 10′ 50″ (LT)
D 16° 45′ 11″
R 342.00
L 156.27
T 79.52
SE 0.030 FT/FT
DESIGN SPEED 20 MPH
TRANS. LENGTH 83

CURVE I640-4
PI 159+61.79
N 620,884.3932
E 2,584,907.6081
Δ 3° 59′ 55″ (LT)
D 0° 28′ 10″
R 12,207.39
L 851.95
T 426.15
SE MATCH EXISTING
DESIGN SPEED 55 MPH

CURVE RAMP 3-1
PI 4+81.67
N 620,939.7958
E 2,584,869.4592
Δ 1° 08′ 52″ (RT)
D 0° 28′ 18″
R 12,148.39
L 243.34
T 121.67
SE MATCH EXISTING
DESIGN SPEED 55 MPH

CURVE RAMP 3-2
PI 7+79.33
N 620,827.9631
E 2,584,593.6048
Δ 8° 46′ 54″ (RT)
D 2° 29′ 59″
R 2,292.00
L 351.29
T 175.99
SE 0.0460 FT/FT
DESIGN SPEED 50 MPH
TRANS. LENGTH 160

CURVE RAMP 3-3
PI 14+90.34
N 620,664.4019
E 2,583,900.9526
Δ 8° 37′ 05″ (RT)
D 5° 59′ 58″
R 955.00
L 143.65
T 71.96
SE 0.062 FT/FT
DESIGN SPEED 40 MPH
TRANS. LENGTH 175

N

PRELIMINARY FIELD REVIEW

MATCH LINE STA. 41+75 SEE SHEET NO. 7A
Curve No. ADDISON-1
PI 42+16.39
PROP. CURB
MINT ROAD
R-12′
17.7′ EXIST. PVMT
N66°34′22″E
ADDISON ROAD
PROP. CURB
'V' DITCH
PROP. RETAINING WALL
PC 14+18.38
3′ TRAPEZ. DITCH
PT STA. 44+29.18
N 620835.67
E 2584051.33
3x12′x12′ RCBC EXTENSION
MATCH LINE STA. 14+00 SEE SHEET NO. 7A
WWC-1
S76°42′49″W
RAMP 3
6′ STAB. SHLD.
4′ STAB. SHLD.
10′ STAB. SHLD.
150
15
10
155
PT 9+54.63
STR-5
WHITES CREEK
160+70
280′ PAVEMENT TRANS.
163+50
STA. 160+70.00 I-640=
PC. STA.3+60.00 RAMP 3
N 620987.7580
E 2584981.2798
PCC 6+03.34
PROP. RETAINING WALL
ATTACH GUARDRAIL TO PARAPET WALL
5
160
10′ STAB. SHLD.
TIE TO EXIST. GUARDRAIL
PT STA. 163+87.59
N 621062.5080
E 2585294.7482
11.4′ STAB. SHLD.
11′ SHLD.
11.92′ EXIST. SHLD.
Curve No. I640-4
36′
48′
16′
20′
EXIST. 10′ PLUGGED & ABANDONED TO BE PLUGGED & ABANDONED
18"RCP
N 69° 17′ 33″ E
EXIST. 3x12′ RCBC TO REMAIN
I-640 EB
PC 155+35.64
WHITES CREEK
MATCH LINE STA. 148+50 SEE SHEET NO. 7A

END PROJECT NH-I-640-7(161) (CONST.)
STA. 163+50.00 ℄ I-640

SEALED BY

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 148+50 TO END CONST.

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-640-7(161)	9
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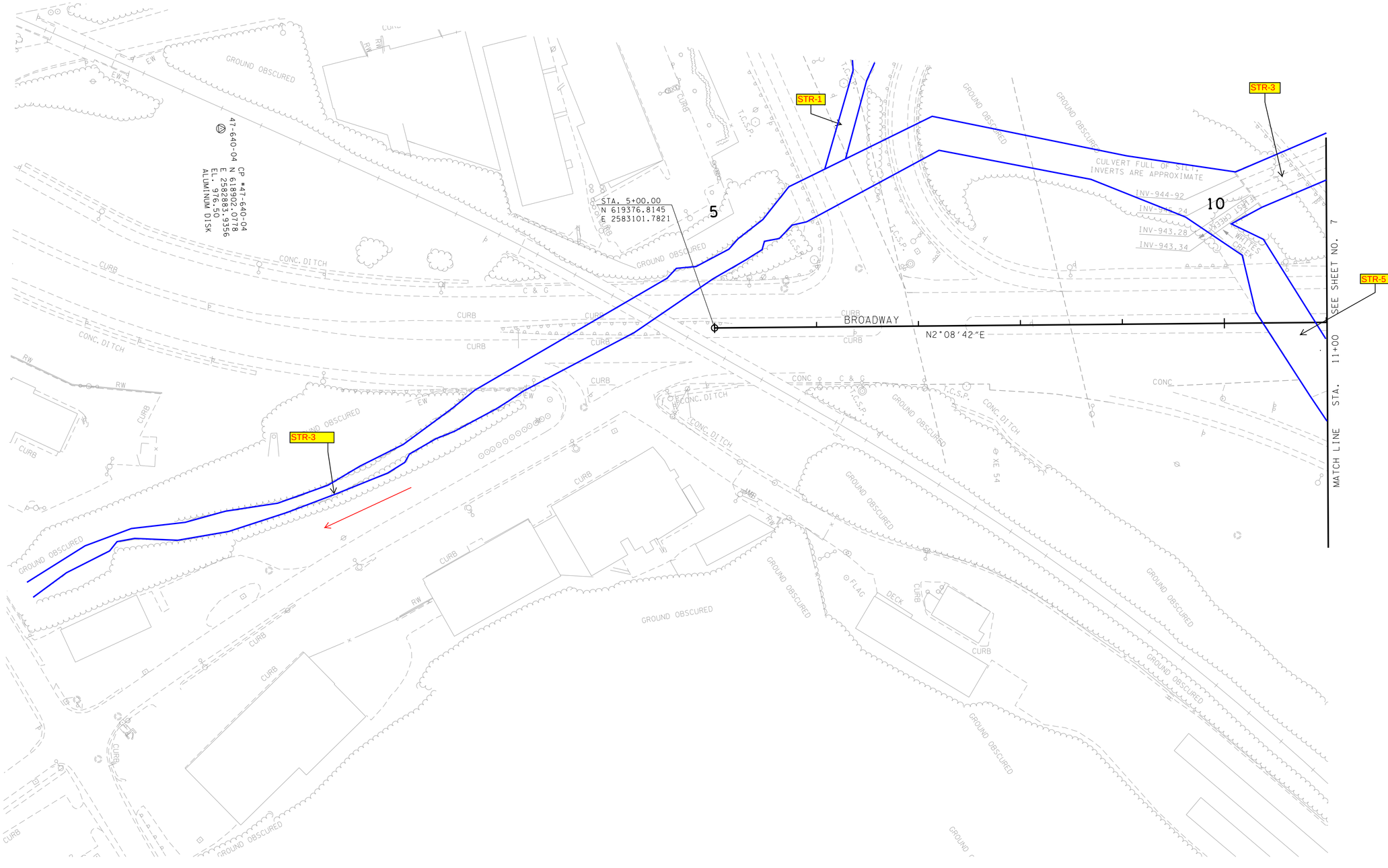
KNOX CO. I-640
47008-3150-44 (R.O.W.)



PRELIMINARY FIELD REVIEW

SEALED BY

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

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-640-7(161)	9A
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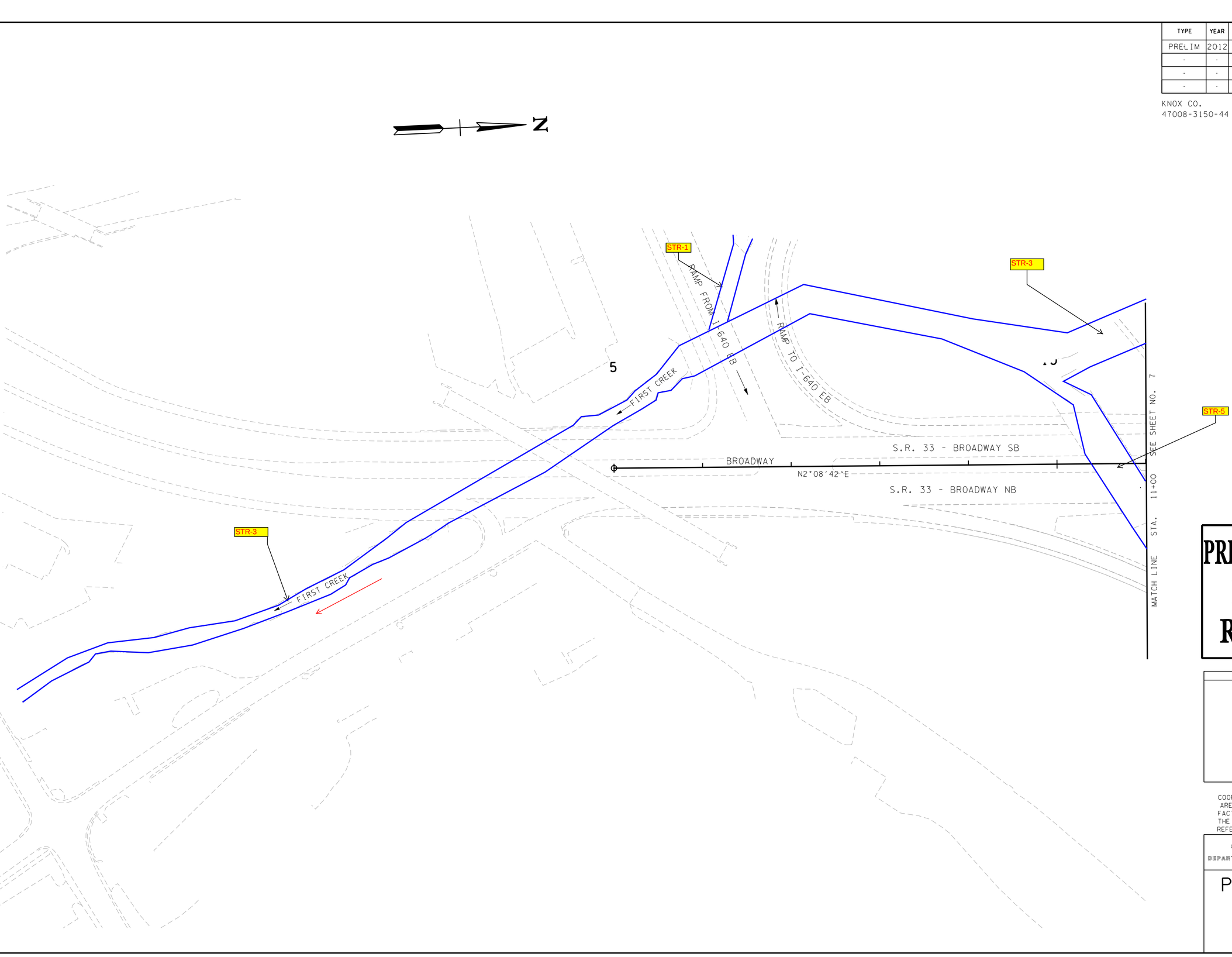
KNOX CO. I-640
47008-3150-44 (R.O.W.)



PRELIMINARY FIELD REVIEW

SEALED BY

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

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-640-7(161)	10
.	.	.	.
.	.	.	.
.	.	.	.

KNOX CO. I-640
47008-3150-44 (R.O.W.)

CURVE BRAMP 1-1
PI 62+03.50
N 621,078.4615
E 2,582,615.4842
Δ 5° 50′ 32″ (RT)
D 1° 26′ 12″
R 3,988.00
L 406.65
T 203.50
SE 0.020 FT/FT (R.C.)
DESIGN SPEED 30 MPH
TRANS. LENGTH 100

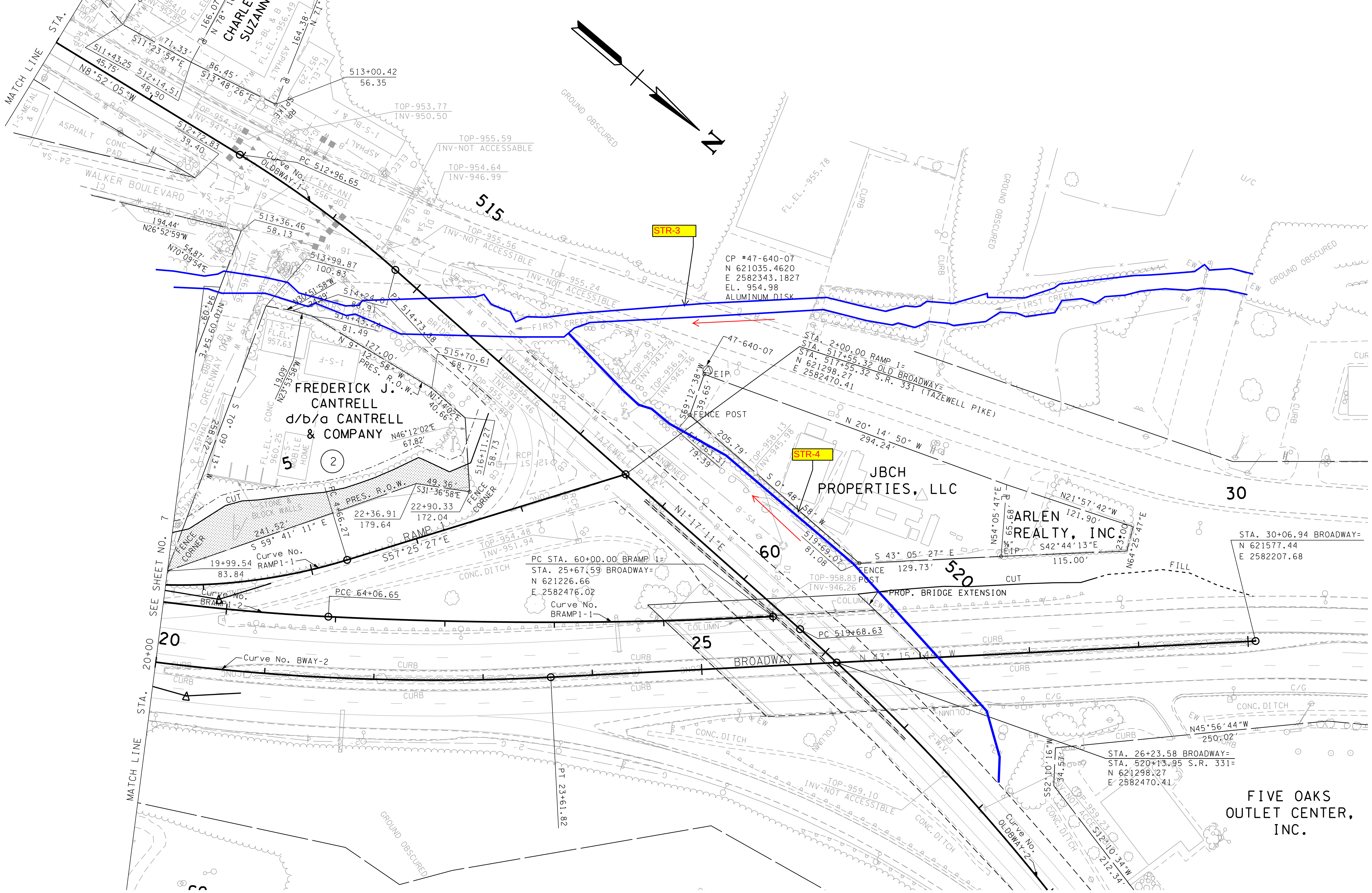
CURVE BRAMP 1-2
PI 65+18.98
N 620,827.6263
E 2,582,807.4000
Δ 6° 32′ 19″ (RT)
D 2° 54′ 49″
R 1,966.51
L 224.42
T 112.33
SE 0.025 FT/FT
DESIGN SPEED 30 MPH
TRANS. LENGTH 100

CURVE BWAY-2
PI 20+34.22
N 620,864.7490
E 2,582,878.4045
Δ 18° 44′ 03″ (LT)
D 2° 50′ 01″
R 2,022.01
L 661.15
T 333.55
SE MATCH EXISTING
DESIGN SPEED 45 MPH

CURVE RAMP1-1
PI 5+88.92
N 620,830.3221
E 2,582,791.8056
Δ 26° 32′ 35″ (RT)
D 11° 01′ 06″
R 520.00
L 240.90
T 122.65
SE 0.063 FT/FT
DESIGN SPEED 30 MPH
TRANS. LENGTH 105

CURVE OLDBWAY-1
PI 513+85.49
N 620,669.5258
E 2,582,455.7574
Δ 10° 09′ 17″ (RT)
D 5° 43′ 46″
R 1,000.00
L 177.23
T 88.85

CURVE OLDBWAY-2
PI 522+52.33
N 621,536.6119
E 2,582,475.2291
Δ 16° 50′ 43″ (RT)
D 2° 59′ 25″
R 1,916.01
L 563.32
T 283.71



PRELIMINARY FIELD REVIEW

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

SCALE: 1″= 50′

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TYPE	YEAR	PROJECT NO.	SHEET NO.
PRELIM	2012	NH-I-640-7(161)	10A
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KNOX CO. I-640
47008-3150-44 (R.O.W.)

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

CURVE BRAMP 1-1
PI 62+03.50
N 621,078.4615
E 2,582,615.4842
Δ 5° 50′ 32″ (RT)
D 1° 26′ 12″
R 3,988.00
L 406.65
T 203.50
SE 0.020 FT/FT (R.C.)
DESIGN SPEED 30 MPH
TRANS. LENGTH 100

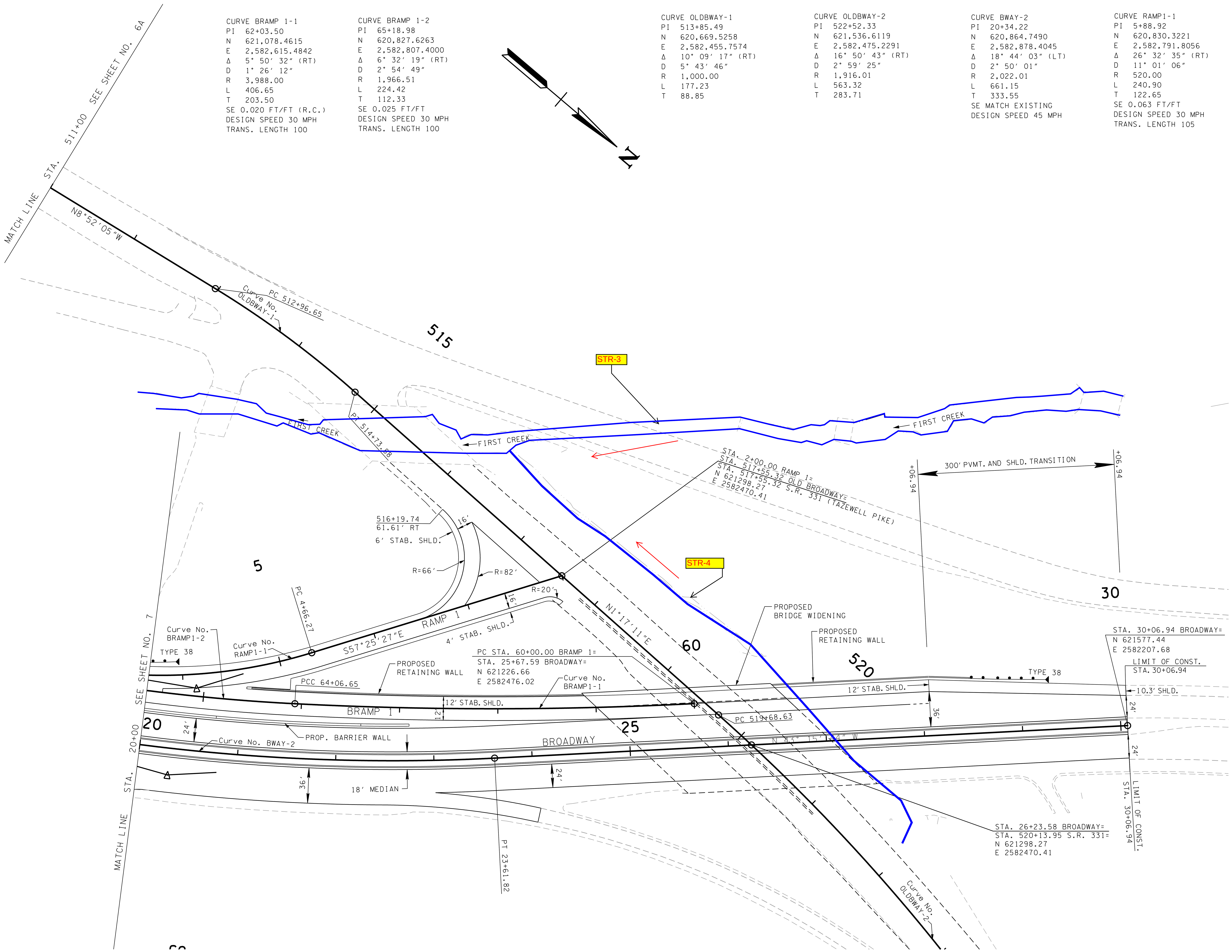
CURVE BRAMP 1-2
PI 65+18.98
N 620,827.6263
E 2,582,807.4000
Δ 6° 32′ 19″ (RT)
D 2° 54′ 49″
R 1,966.51
L 224.42
T 112.33
SE 0.025 FT/FT
DESIGN SPEED 30 MPH
TRANS. LENGTH 100

CURVE OLDBWAY-1
PI 513+85.49
N 620,669.5258
E 2,582,455.7574
Δ 10° 09′ 17″ (RT)
D 5° 43′ 46″
R 1,000.00
L 177.23
T 88.85

CURVE OLDBWAY-2
PI 522+52.33
N 621,536.6119
E 2,582,475.2291
Δ 16° 50′ 43″ (RT)
D 2° 59′ 25″
R 1,916.01
L 563.32
T 283.71

CURVE BWAY-2
PI 20+34.22
N 620,864.7490
E 2,582,878.4045
Δ 18° 44′ 03″ (LT)
D 2° 50′ 01″
R 2,022.01
L 661.15
T 333.55
SE MATCH EXISTING
DESIGN SPEED 45 MPH

CURVE RAMP1-1
PI 5+88.92
N 620,830.3221
E 2,582,791.8056
Δ 26° 32′ 35″ (RT)
D 11° 01′ 06″
R 520.00
L 240.90
T 122.65
SE 0.063 FT/FT
DESIGN SPEED 30 MPH
TRANS. LENGTH 105



PRELIMINARY FIELD REVIEW

SEALED BY

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 20+00 TO STA. 30+06.94

SCALE: 1″= 50′

9. Training Certifications

10. TMDL Information

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES
William R. Snodgrass - Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, Tennessee 37243-1102

October 1, 2015

Ms Lina Khoury
TDOT Natural Resources Office
Lina.Khoury@tn.gov

Subject: **TMDL Consultation in Construction General Permit (CGP)**
I-640 Interchange at North Broadway (Phase II)
Project 47008-1143-44, PIN 103029.00
Knoxville, Knox County
Latitude: 36.0193, Longitude: -83.9214

Dear Ms Khoury:

This letter is to acknowledge receipt of your letter dated September 30, 2015 satisfying the conditions of Section 3.5.10 Documentation of permit eligibility related to Total Maximum Daily Load (TMDL) of the General NPDES permit for Discharges of Storm Water Associated with Construction Activities (CGP).

This proposed TDOT project is to modify the I-640 iterchange at North Broadway in Knoxville, YN. The total land disturbance for this project is approximately 28.9 acres.

This proposed project will discharge into the Fort Loudoun Lake Watershed, specifically into First Creek (HUC: TN06010201080_1000) and Whites Creek (HUC: TN06010201080_0100). Both streams are listed as impaired for sedimentation and other anthropogenic substrate alterations from "Discharges from Municipal Separate Storm Sewer Systems (MS4)".

The *Total Maximum Daily Load (TMDL) for Siltation and Habitat Alteration in the Fort Loudoun Lake Watershed (HUC: TN06010201)* on February 1, 2006, identifies both of the above mentioned creeks as impaired. The TMDL stablishes an existing sediment load and a corresponding annual percentage reduction of sediment load for point sources (waste load allocation – WLA) and non-point sources (load allocation – LA). The existing sediment load was expressed as pounds of sediment per acre per year, and calculated on the HUC-12 subwatershed basis. At the same time, the TMDL document requires that the WLAs provided to the NPDES regulated construction activities be implemented as Best Management Practices (BMPs) specified in the CGP.

Section 8.1.3 NPDES Regulated Construction Storm Water of the TMDL states, in part:

> "Strict compliance with the provisions of the General NPDES Permit for Storm Water Discharges Associated With Construction Activity (TDEC, 2005a) can reasonably be expected to achieve reduced sediment loads to streams."

Based on the information in the letter and a review of the CGP and the TMDL, the Division of Water Resources agrees that complying with Sections 4.1.1 and 4.1.2 of the CGP will be protective of the waters of the State.

Upon receipt of a complete application, a notice of intent (NOI), and a storm water pollution prevention plan (SWPPP), we do not anticipate significant obstacles for obtaining coverage under the CGP. A reminder that a complete application should be submitted at least 30 days prior to anticipated commencement of construction activities, or in the case of TDOT, letting of the project. However, if our NOI and/or SWPPP review show any inadequacies or we conclude that additional BMPs would be required to assure compliance with the WLA, we will address such issues in a separate correspondence.

If you have questions, please contact Mr. Jim McAdoo at (615) 532-0684 or by E-mail at *Jim.McAdoo@tn.gov*.

Sincerely,

Vojin Janjić
Manager, Water-Based Systems

CC: Environmental.NPDES.TDOT@TN.gov
Shari.Winburn@tn.gov, Knoxville Environmental Field Office
Division of Water Resources, Permit File

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

September 30, 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 # 47008-1143-44, PIN 103029.00, I-640 Interchange at North Broadway (Phase II) in Knoxville, Knox County Latitude: 36.0193, Longitude: -83.9214

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 Fort Loudoun Lake Watershed (HUC 06010201).

On the subject project, TDOT is proposing to modify the I-640 Interchange at North Broadway (Phase II) in Konxville (Figure 1 attached). This project will require approximately 28.9 acres of land disturbance.

During our SWPPP preparation process on the subject project, TDOT determined that the project will discharge to the Fort Loudoun Lake watershed, which has an approved TMDL for siltation. More specifically, it will discharge to First Creek (**(WATERBODY ID: TN06010201080_1000)** and Whites Creek **(WATERBODY ID: TN06010201080_0100)** which is within the sub-watershed boundary 0202. First Creek and Whites Creek are listed as not supporting or partially supporting in the final TMDL. Sub-watershed **0202** 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 First Creek and Whites Creek in **Knox** County is listed for siltation on the 2012 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) **532-4578** or Lina.khoury@tn.gov if you have any questions or need additional information.

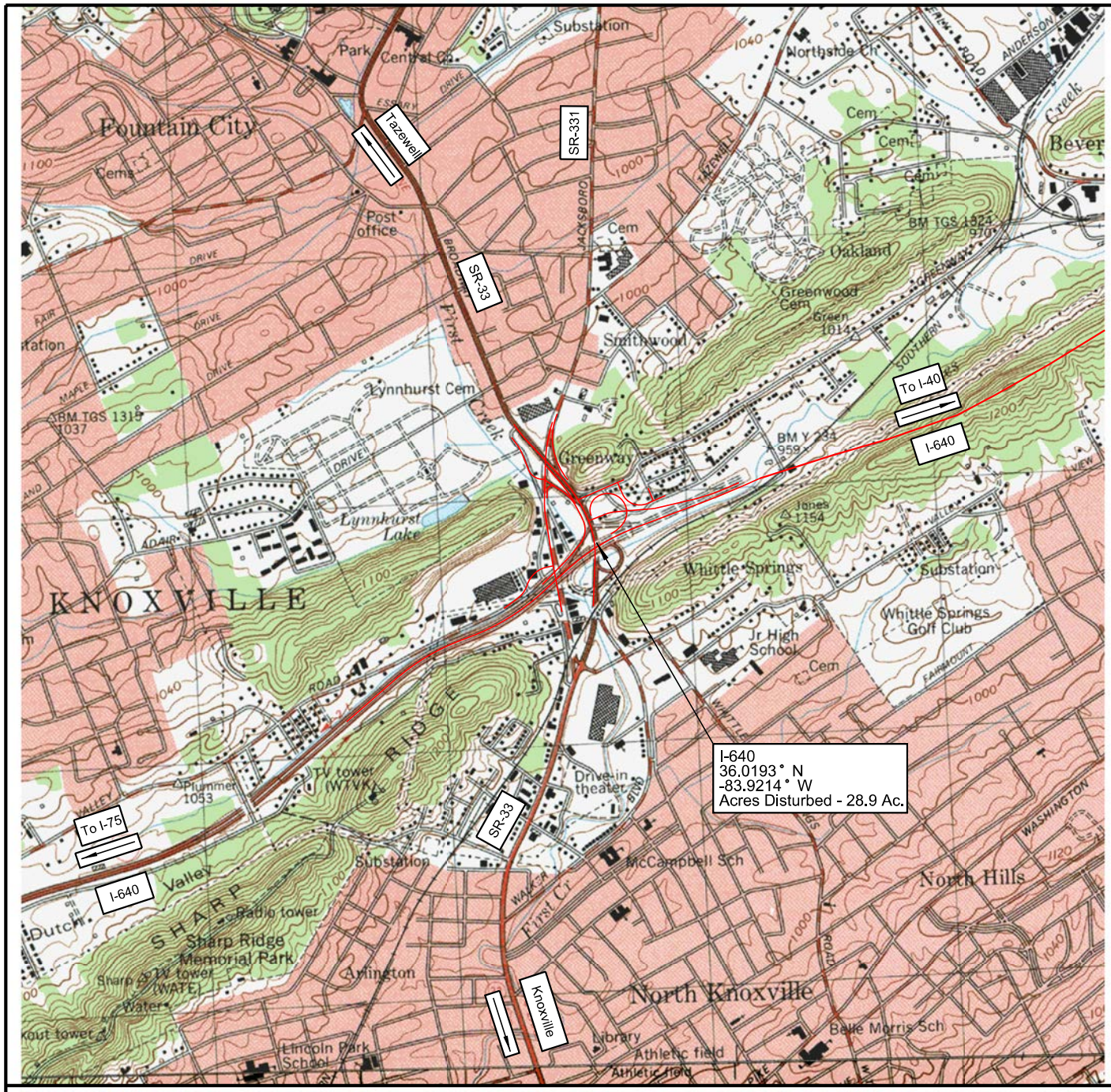
Sincerely,

Lina S Khoury

Lina Khoury, M.E, P.E
TDOT Natural Resources Office

JLH:**INT**:pc

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



GENERAL LOCATION MAP

N

0 2000 4000

SCALE FEET

SOURCE: USGS Quad Map, U.S. Geological Survey 7.5 Minute Topographic Map, Knoxville (147 NW), Fountain City (146 SW) Tennessee Quadrangles

TN TDOT Department of Transportation

Tennessee Department of Transportation

Nashville, Tennessee

Stormwater Pollution Prevention Plan

Interstate 640

Interchange at North Broadway (Phase II) in Knoxville

I640: From L.M. 5.38 to L.M. 6.43

S.R 33: From Eastbound I640 Exit Ramp

To 0.1 Mile north of S.R. 331

Knox County, Tennessee

Drawn By:	Checked By:
DAH	JBL
TDOT P.E. No.	TDOT PIN
47008-1143-44	103029.00
FED. No.	Figure
NH-I-640-7(161)	1

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-I-640-7(161)	S-1
P.E.	2015	47008-1143-44	

SWPPP INDEX OF SHEETS

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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 (KETW)
IF YES TO SECTION 1.3, HAVE THE EPSC PLANS BEEN PREPARED BY AN INDIVIDUAL WHO IS TDEC LEVEL II CERTIFIED? (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 IS TDEC LEVEL II CERTIFIED? (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: I-640 INTERCHANGE AT NORTH BROADWAY (PHASE II) IN KNOXVILLE
COUNTY: KNOXVILLE
PIN: 103029.00
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) 20-20F, DRAINAGE MAP SHEET(S) 17, USGS QUAD MAP, AND THE OUTFALL TABLE IN SECTION 4.2.3.
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): 56.2 ACRES
2.7. TOTAL AREA TO BE DISTURBED (3.5.1.c): 28.9 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 ☒
IF YES, SEE SHEET ____ FOR NOTE RESTRICTING CONSTRUCTION ACTIVITIES TO LESS THAN 50 ACRES.
2.8. ARE THERE ANY SEASONAL LIMITATIONS ON WORK? YES ☐ NO ☒
IF YES, 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)
AmC - APISON-MONTEVALLO COMPLEX	C	0.9	0.20
AmD - APISON-MONTEVALLO COMPLEX	C	6.1	0.20
AmF - APISON-MONTEVALLO COMPLEX	C	4.5	0.20
Bd - BLOOMINGDALE SILT LOAM	C/D	0.2	0.43
Bh - BLOOMINGDALE-HAMBLEN COMPLEX	C/D	14.1	0.43
Ur - URBAN LAND		11.7	
Uu - URBAN LAND		35.1	

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	23.5	42	98	
PERVIOUS (GRASS, FORESTS, ETC.)	32.7	58	78	
WEIGHTED CURVE NUMBER =			86	

RUNOFF COEFFICIENTS FOR POST-CONSTRUCTION CONDITIONS				
AREA TYPE	AREA(AC)	PERCENTAGE OF TOTAL AREA (%)	RUNOFF CN	C FACTOR
IMPERVIOUS	25.4	45	98	
PERVIOUS (GRASS, FORESTS, ETC.)	30.8	55	78	
WEIGHTED CURVE NUMBER =			87	

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

3.1. SPECIAL SEQUENCING REQUIREMENTS (SEE SHEETS 2L-2L3, 20, 20K, 20U-20V)
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 ☐
4.1.2. HAVE ANY OF THE RECEIVING WATERS LESS THAN OR EQUAL TO 1 FLOW MILE DOWN GRADIENT OF THE PROJECT LIMITS BEEN CLASSIFIED BY TDEC AS FOLLOWS (CHECK ALL THAT APPLY):
4.1.2.1. ☒ 303d IMPAIRED FOR SILTATION
4.1.2.2. ☒ 303d IMPAIRED FOR HABITAT ALTERATION
4.1.2.3. ☐ KNOWN EXCEPTIONAL TENNESSEE WATERS (KETW)
4.1.3. 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)	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 FIRST CREEK	NO	NO	YES	YES
STR-2	UNNAMED TRIB. TO FIRST CREEK	NO	NO	YES	YES

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-I-640-7(161)	S-2
P.E.	2015	47008-1143-44	

RECEIVING STREAM INFORMATION					
NATURAL RESOURCE LABEL	NAME OF RECEIVING NATURAL RESOURCE	303d IMPAIRED FOR SILTATION OR HABITAT ALTERATION (YES OR NO)	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-3	FIRST CREEK	YES	NO	YES	YES
STR-4	UNNAMED TRIB. TO FIRST CREEK	NO	NO	YES	YES
STR-5	WHITES CREEK	YES	NO	YES	YES

4.1.4. ARE BUFFER ZONES REQUIRED (4.1.2, 5.4.2)? YES ☐ NO ☒

IF YES, THEY HAVE BEEN INCLUDED ON PLAN SHEET(S) ____

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.)

4.1.5. 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)
WTL-1	130+39 RT	131+96 RT	N/A	N/A

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

4.4.1. IS THIS PROJECT LOCATED IN A HUC-8 WATERSHED THAT MAINTAINS AN EPA APPROVED TMDL FOR SILTATION? YES ☒ NO ☐

4.4.2. IF YES, IS THIS PROJECT LOCATED WITHIN A HUC-12 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 S-6 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, 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

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STORMWATER POLLUTION PREVENTION PLAN

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): TRM AND CONCRETE USED IN DITCHES FOR STABILZATION.

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 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

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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 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;

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-I-640-7(161)	S-5
P.E.	2015	47008-1143-44	

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

10/14/2015
DATE

14. SECONDARY PERMITTEE (OPERATOR) CERTIFICATION (7.7.6)

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

AUTHORIZED OPERATOR (CONTRACTOR) SIGNATURE (3.3.1)

PRINTED NAME

TITLE

DATE

15. ENVIRONMENTAL PERMITS (9.0)

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

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

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

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-I-640-7(161)	S-6
P.E.	2015	47008-1143-44	

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 (%)	C&G (P1) DRAINAGE AREA (AC)	STAGE 1 (P2) DRAINAGE AREA (AC)	STAGE 2 (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		107+64 LT	2.4	0.215	0.215	0.215	N/A	STR-1	
1-3	OUT-2		111+23 LT	1.4	0.340	0.523	0.523	N/A	STR-1	
1-3	OUT-3	A-D	121+50 LT	1.7	0.898	1.092	1.092	N/A	STR-1	
1	OUT-4	A-G	127+00 LT	0.8	1.85			N/A	STR-1	
1-3	OUT-5		127+03 LT	0.8	7.55	7.55	7.55	YES	STR-1	
1	OUT-6	A-G	130+47 LT	0.89	5.75			YES	STR-1	
1-3	OUT-7		13+37 RT RAMP 1	10.5	0.59	0.33	0.33	N/A	STR-3	
1-3	OUT-8		12+80 RT RAMP 1	5.1	1.245	2.865	2.865	N/A	STR-3	
1-3	OUT-9	A-I	13+25 LT RAMP 1	1.6	14.218	10.421	10.421	YES	STR-3	
1-3	OUT-10	A-C	146+00 RT	4.3	1.094	1.128	1.128	N/A	STR-5	
1-3	OUT-11	A-C	150+45 RT	0.8	22.607	22.607	22.607	YES	STR-5	
1-3	OUT-12		10+90 RT RAMP 3	1.2	1.1	1.1	1.1	N/A	STR-5	
1-3	OUT-13	A-C	516+40 LT OLD BROADWAY	1.5	2.087	2.087	2.087	N/A	STR-3	
1	OUT-14		18+60 LT RAMP 1	2.0	0.417			N/A	STR-1	
2-3	OUT-15	A-L	131+08 LT	4.1		4.573	4.573	N/A	STR-1	
2-3	OUT-23	A-B	5+88 LT DUTCH VALLEY RD	5.0		0.393	0.393	N/A	STR-1	
2-3	OUT-24	A-O	131+08 LT	0.6		6.493	6.493	YES	STR-1	
2-3	OUT-25		501+34 LT OLD BROADWAY	1.2		0.262	0.262	N/A	STR-1	
2-3	OUT-26	A-I	10+90 RT RAMP 3	0.5		25.968	25.968	YES	STR-5	
2-3	OUT-27		10+90 RT RAMP 3	6.3		0.242	0.242	N/A	STR-5	
2-3	OUT-28		10+40 RT RAMP 3	24.4		0.517	0.517	N/A	STR-5	

* 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.

OUTFALL NOS. 16-22 HAVE BEEN OMITTED.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STORMWATER POLLUTION PREVENTION PLAN

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

Index Of Sheets

SHEET NAME	SHEET NO.
TITLE SHEET	1
TYPICAL SECTIONS	2 THRU 2E, 2E-1
TRAFFIC DATA SHEET	2F
GEOMETRIC LAYOUT	2G, 2H & 2I
CROSS-SECTION PATTERN LAYOUT	2J & 2K
PROPERTY MAP	3 THRU 3C
ACQUISITION TABLE	3D
PRESENT LAYOUT	4 THRU 10
PROPOSED LAYOUT	4A THRU 10A
MAINLINE PROFILE	4B THRU 7B, 7C, 8B THRU 10B
R.O.W. DETAIL SHEETS	6C, 7D THRU 7E, 8C, 10C
GRADING AND DRAINAGE SHEETS	4C, 5C, 6D, 7F, 8D, 9C AND 10D
PROFILES OF RAMPS AND SIDE ROADS	11 THRU 16-16B
DRAINAGE MAPS	17
CULVERT SECTIONS	18, 19-19B
EROSION PREVENTION & SEDIMENT CONTROL PLANS	20 THRU 20F; 20H THRU 20S
EROSION PREVENTION & SEDIMENT CONTROL NOTES	20G THRU 20G-1
TRAFFIC CONTROL PLAN w/CONST. PHASING NOTES	21 THRU 21L
PAVEMENT EDGE DROP-OFF NOTES	21M
SIGNING & PAVEMENT MARKING PLANS	22, 22A THRU 22G
SIGN REMOVAL	23, 23A THRU 23C
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SR 33 CROSS SECTIONS	35-58
RAMP CROSS SECTIONS	59-72
SIDE RD CROSS SECTIONS	73-86

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

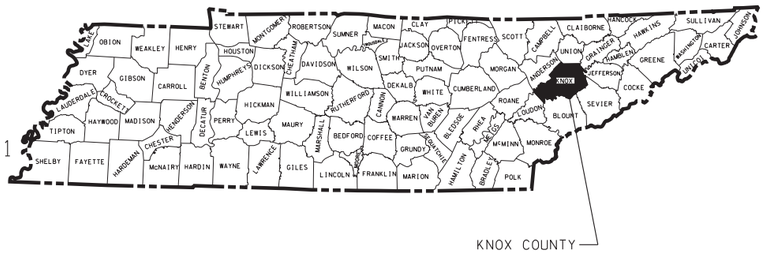
TENN.	YEAR	SHEET NO.
	2013	1
FED. AID PROJ. NO.	NH-I-640-7(161)	
STATE PROJ. NO.	47008-2150-44	

I-640 KNOX CO.

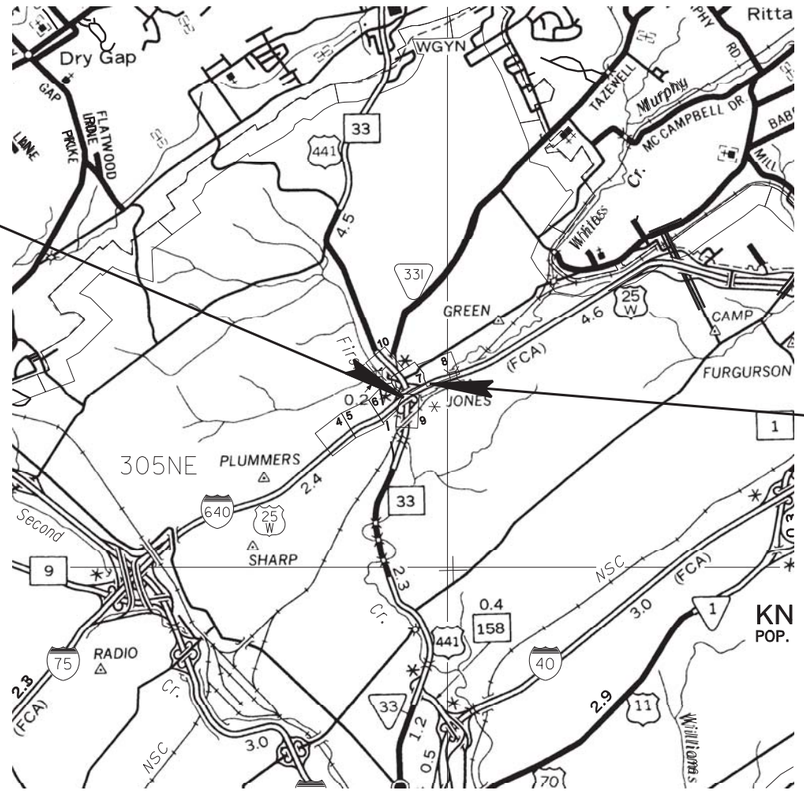
KNOX COUNTY

I-640 INTERCHANGE AT NORTH BROADWAY
(PHASE II) IN KNOXVILLE
I640: FROM L.M. 5.38 TO LOG MILE 6.43
S.R. 33: FROM EASTBOUND I640 EXIT RAMP TO 0.1 MILE NORTH OF S.R.331
RIGHT-OF-WAY

STATE HIGHWAY NO. 640 F.A.H.S. NO. 640



BEGIN PROJECT NH-I-640-7(161) R.O.W.
STA. 140+11.27



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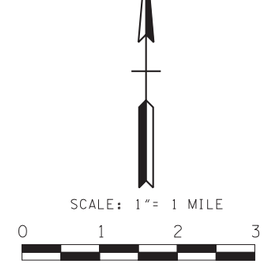
END PROJECT NH-I-640-7 (161) R.O.W.
STA. 149+58.06



R.O.W. PROJECT LENGTH 0.179 MILE

NO EXCLUSIONS
NO EQUATIONS

SPECIAL NOTES

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

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

TDOT DESIGN MANAGER FREDERICK MILLER, P.E.

DESIGNED BY CDM Smith

DESIGNER KATHLEEN C. HOLMES, P.E. CHECKED BY DOUG PARKER, P.E.; KRYSTLE BRATTON, P.E.

P.E. NO. 47008-1143-44

PIN NO. 103029.00

APPROVED: Paul D. Degges
CHIEF ENGINEER

DATE:

APPROVED:
COMMISSIONER

ORIGINAL SURVEY 2006
UPDATED SURVEY 2012

TRAFFIC DATA-SR33	
ADT (2014)	46,700
ADT (2034)	56,000
DHV (2034)	6,720
D	61 - 39
T (ADT)	4 %
T (DHV)	4 %
V	55 MPH

TRAFFIC DATA-I640	
ADT (2014)	63,500
ADT (2034)	76,200
DHV (2034)	9,140
D	57 - 43
T (ADT)	4 %
T (DHV)	4 %
V	55 MPH

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR DATE

10/18/2013
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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

TENN.	YEAR	SHEET NO.
	2015	1
FED. AID PROJ. NO.	NH-I-640-7(161)	
STATE PROJ. NO.	47008-3150-44	

I-640 KNOX CO.

Index Of Sheets

SEE INDEX SHEET 1A

KNOX COUNTY

I-640 INTERCHANGE AT NORTH BROADWAY
(PHASE II) IN KNOXVILLE

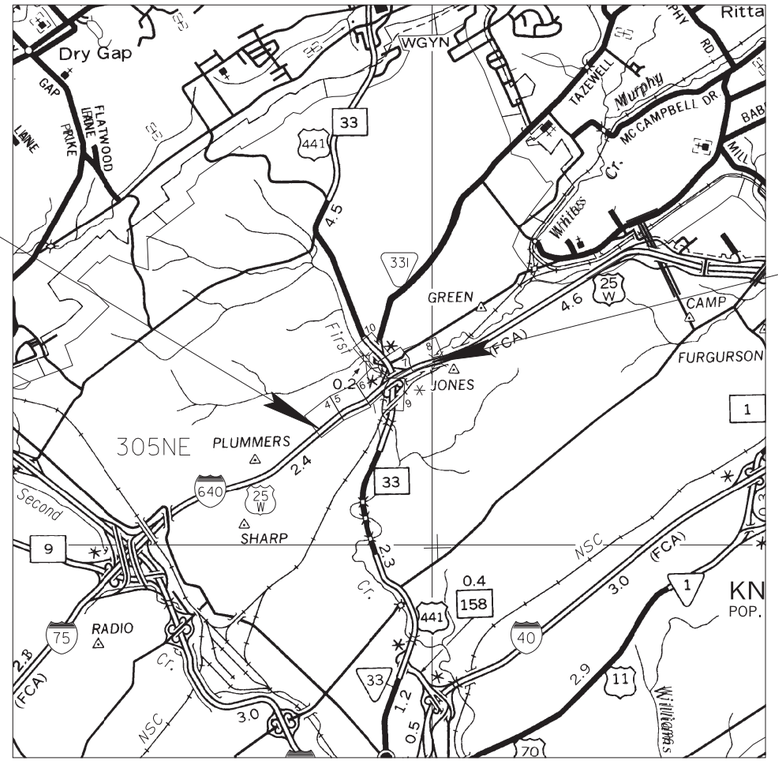
I640: FROM L.M. 5.38 TO LOG MILE 6.43
S.R. 33: FROM EASTBOUND I640 EXIT RAMP TO 0.1 MILE NORTH OF S.R.331

GRADE, DRAIN, BASE, PAVE, BRIDGE, RETAINING WALLS, SIGNALIZATION, SIGNS, LIGHTING, PAVEMENT MARKING, & UTILITIES

STATE HIGHWAY NO. 33 F.A.H.S. NO. 640

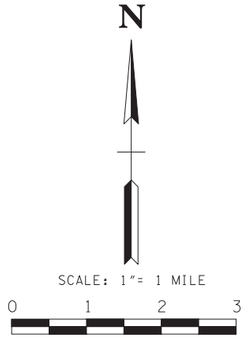
NO EXCLUSIONS
NO EQUATIONS

BEGIN PROJECT NH-I-640-7(161) (CONST.)
STA. 105+80.00



SCALE: 1"= 5280'

END PROJECT NH-I-640-7 (161) (CONST.)
STA. 163+50.00



UNOFFICIAL SET
NOT FOR BIDDING

APPROVED: Paul D. Doggett
CHIEF ENGINEER

DATE:

APPROVED:
COMMISSIONER

SPECIAL NOTES

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

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

TDOT DESIGN MANAGER FREDERICK MILLER, P.E.
DESIGNED BY CDM Smith
DESIGNER KATHLEEN C. HOLMES, P.E. CHECKED BY DOUG PARKER, P.E
P.E. NO. 47008-1143-44
PIN NO. 103029.00

ROADWAY LENGTH (I-640) 1.034 MILES
BRIDGE LENGTH (I-640) 0.059 MILES
PROJECT LENGTH (I-640) 1.093 MILES

ORIGINAL SURVEY 2006
UPDATED SURVEY 2012

TRAFFIC DATA-SR33	
ADT (2015)	48,568
ADT (2035)	58,240
DHV (2035)	6,989
D	61 - 39
T (ADT)	4 %
T (DHV)	4 %
V	55 MPH

TRAFFIC DATA-I640	
ADT (2015)	66,040
ADT (2035)	74,248
DHV (2035)	9,506
D	57 - 43
T (ADT)	4 %
T (DHV)	4 %
V	55 MPH

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:
DIVISION ADMINISTRATOR DATE

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

INDEX

STANDARD ROADWAY DRAWINGS

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-I-640-7(161)	1A

KNOX CO. I-640
47008-3150-44 (CONST.)

SHEET NAME	SHEET NO.
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ESTIMATED BRIDGE QUANTITIES AND BRIDGE INDEX	2, 2-1
ESTIMATED ROADWAY QUANTITIES	2A - 2A1
ESTIMATED UTILITIES QUANTITIES	2B – 2B4
TYPICAL SECTIONS AND PAVING SCHEDULE	2C – 2K
GENERAL NOTES AND SPECIAL NOTES	2L - 2L3
TABULATED QUANTITIES	2M - 2Q
TRAFFIC DATA SHEETS	2R - 2R1
GEOMETRIC LAYOUTS	2S - 2S2
CROSS-SECTION PATTERN LAYOUTS	2T - 2T1
STREAM 1 DETAIL	2U
STREAM 1 PLANTING LAYOUT	2U1 – 2U4
CONSTRUCTION DETAILS	2V-2W
PROPERTY MAPS	3, 3A – 3C
RIGHT-OF-WAY ACQUISITION TABLES	3D
PRESENT LAYOUTS	4 - 10
PROPOSED LAYOUTS	4A - 10A
PROPOSED PROFILES	4B-7B,7C, 8B-10B
RIGHT-OF-WAY DETAIL SHEETS	6C,7D-7E 8C, 10C
GRADING AND DRAINAGE SHEETS	4C,5C,6D,7F,8D 9C,10D
PRIVATE DRIVE AND FIELD RAMP PROFILES	11-16, 16A-16C
DRAINAGE MAPS	17
CULVERT SECTIONS	18, 19-19B
EROSION PREVENTION AND SEDIMENT CONTROL PLANS	20,20A-20T
EROSION PREVENTION AND SEDIMENT CONTROL NOTES	20U-20V
TRAFFIC CONTROL PLANS WITH CONSTRUCTION PHASING NOTES	21-21L
PAVEMENT EDGE DROP-OFF NOTES	21M
SIGNING AND PAVEMENT MARKING PLANS	22, 22A-22G
SIGN REMOVAL	23, 23A-23C
SIGN SCHEDULE SHEETS	24, 24A-24F
MISCELLANEOUS SIGNING DETAILS	25, 25A – 25H
SIGNAL LAYOUTS & COMMUNICATIONS PLAN	26, 26A-26D
LIGHTING LAYOUTS	27, 27A – 27M
SOILS SHEETS	28, 28A – 28Z
ROADWAY CROSS SECTIONS	29 - 91
SIDE ROAD CROSS SECTIONS	92 - 120
UTILITIES INDEX	U1-1
STORM WATER POLLUTION PREVENTION PLAN (SWPPP) INDEX	S-1

DWG. NO	REV.	DESCRIPTION
STANDARD CULVERT DRAWINGS		
STD-17-3		GENERAL NOTES
STD-17-5		TYPICAL SECTION AND DETAILS
STD-17-6		CURB, RAIL & EDGE BEAM DETAILS – SKEW NOT LESS THAN 45°
STD-17-8		EDGE BEAM DETAILS FOR FILLS GREATER THAN 3'-6"
STD-17-10		TYPICAL WINGWALL DETAILS AND NOTES
STD-17-11		WINGWALL DIMENSIONS AND QUANTITIES
STD-17-17	6-1-11	BACKFILL AND DRAINAGE DETAILS
STD-17-18		BACKFILL DETAILS
STD-17-26		EXTENSION DETAILS
STD-17-51	5-1-14	BOX BRIDGE, 1 BARREL AT 6'; CLEAR HTS. 3'-6', 0-60' FILL
STD-17-56		BOX BRIDGE, 1 BARREL AT 12'; CLEAR HTS. 4'-6', 0 TO 60' FILL
STD-17-98		BOX BRIDGE, 3 BARRELS AT 12', CLEAR HTS. 10' – 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-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-SE-2	10-15-02	URBAN 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-2B	10-15-02	DESIGN STANDARDS 4 AND 6 LANE COLLECTOR HIGHWAYS WITH FLUSH MEDIANS
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-5B	10-15-02	DESIGN STANDARDS FREEWAYS WITH MEDIAN BARRIER
RD01-TS-6	07-31-13	TYPICAL CURB AND GUTTER SECTIONS WITH SHOULDER
RD01-TS-6A	07-31-13	TYPICAL CURB AND GUTTER SECTIONS WITHOUT SHOULDER
DRAINAGE - CULVERTS AND ENDWALL		
D-PE-1	02-12-76	TYPE "A" CONCRETE ENDWALL 2:1 SLOPE, 36" TO 78"
D-PE-4	04-23-15	STRAIGHT CONCRETE ENDWALL
D-PE-18A	01-06-15	18" CONCRRETE ENDWALL CROSS DRAIN
D-PE-18B		18" CONCRRETE ENDWALL CROSS DRAIN
D-PE-24A	01-06-15	24" CONCRRETE ENDWALL CROSS DRAIN
D-PE-24B		24" CONCRRETE ENDWALL CROSS DRAIN
D-PE-36A	06-14-13	36" CONCRRETE ENDWALL CROSS DRAIN WITH STEEL PIPE GRATE
D-PE-36B		36" CONCRRETE ENDWALL CROSS DRAIN WITH STEEL PIPE GRATE
DRAINAGE-CATCH BASINS AND MANHOLES		
D-CB-12LP	08-01-12	LOW PROFILE 32" X 32" SQUARE CONCRETE NO. 12LP CATCH BASIN
D-CB-12P	03-11-14	STANDARD PRECAST RECTANGULAR CONCRETE NO. 12 CATCH BASIN
D-CB-12RA	03-11-14	STANDARD PRECAST 48" CIRCULAR NO. 12 CATCH BASIN (FOR USE WITH 6" NONMOUNTABLE CURB)
D-CB-12RB	03-11-14	STANDARD PRECAST 60" AND 72" CIRCULAR NO. 12 CATCH BASIN (FOR USE WITH 6" NONMOUNTABLE CURB)
D-CB-12RC	03-11-14	STANDARD PRECAST 84" THRU 120" CIRCULAR NO. 12 CATCH BASIN (FOR USE WITH 6" NONMOUNTABLE CURB)
D-CB-12S	03-11-14	STANDARD RECTANGULAR CONCRETE NO. 12 CATCH BASIN
D-CB-12SB	03-11-14	STANDARD 4' X 4' SQUARE CONCRETE NO. 12 CATCH BASIN
D-CB-12SC	03-11-14	STANDARD 5'2" X 5'2" SQUARE CONCRETE NO. 12 CATCH BASIN
D-CB-12SD	03-11-14	STANDARD 7' X 7' SQUARE CONCRETE NO. 12 CATCH BASIN
D-CB-12SE	03-11-14	STANDARD 9' X 9' SQUARE CONCRETE NO. 12 CATCH BASIN
D-CB-14P	03-11-14	STANDARD PRECAST RECTANGULAR CONCRETE NO. 14 CATCH BASIN
D-CB-14RB	03-11-14	STANDARD PRECAST CIRCULAR NO. 14RB CATCH BASIN
D-CB-14S	03-11-14	STANDARD RECTANGULAR CONCRETE NO. 14 CATCH BASIN
D-CB-14SE	03-11-14	STANDARD 9' X 9' SQUARE CONCRETE NO. 14 CATCH BASIN
D-CB-25LP	08-01-12	LOW PROFILE 32" X 32" SQUARE CONCRETE NO. 25LP CATCH BASIN (FOR USE WITH 6" MOUNTABLE CURB)
D-CB-25P	03-11-14	STANDARD PRECAST RECTANGULAR CONCRETE NO. 25 CATCH BASIN (FOR USE WITH 6" MOUNTABLE CURB)
D-CB-25RA	03-11-14	STANDARD PRECAST 48" CIRCULAR NO. 25 CATCH BASIN (FOR USE WITH 6" MOUNTABLE CURB)

UNOFFICIAL SET

NOT FOR BIDDING

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.0001 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

INDEX AND STANDARD DRAWINGS

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

DWG. NO	REV.	DESCRIPTION
D-CB-25RB	03-11-14	STANDARD PRECAST CIRCULAR NO. 25 CATCH BASIN (FOR USE WITH 6" MOUNTABLE CURB)
D-CB-25S	03-11-14	STANDARD RECTANGULAR CONCRETE NO. 25 CATCH BASIN (FOR USE WITH 6" MOUNTABLE CURB)
D-CB-25SB	03-11-14	STANDARD 4' X 4' SQUARE CONCRETE NO. 25 CATCH BASIN (FOR USE WITH 6" MOUNTABLE CURB)
D-CB-25SC	03-11-14	STANDARD 5'2" X 5'2' SQUARE CONCRETE NO. 25 CATCH BASIN (FOR USE WITH 6" MOUNTABLE CURB)
D-CB-25SD	03-11-14	STANDARD 7' X 7' SQUARE CONCRETE NO. 25 CATCH BASIN (FOR USE WITH 6" MOUNTABLE CURB)
D-CB-25SE	03-11-14	STANDARD 9' X 9' SQUARE CONCRETE NO. 25 CATCH BASIN (FOR USE WITH 6" MOUNTABLE CURB)
D-CB-41LP	08-01-12	LOW PROFILE 32" X 32" SQUARE CONCRETE NO. 41LP CATCH BASIN (FOR USE UNDER CONCRETE MEDIAN BARRIER WALL)
D-CB-41P	03-11-14	STANDARD 4' X 3' PRECAST RECTANGULAR CONCRETE NO. 41 CATCH BASIN (FOR USE UNDER CONCRETE MEDIAN BARRIER WALL)
D-CB-41RB	03-11-14	STANDARD PRECAST CIRCULAR NO. 41 CATCH BASIN (FOR USE UNDER CONCRETE MEDIAN BARRIER WALL)
D-CB-41S	03-11-14	STANDARD 4' X 3' RECTANGULAR CONCRETE NO. 41 CATCH BASIN (FOR USE UNDER CONCRETE MEDIAN BARRIER WALL)
D-CB-41SB	03-11-14	STANDARD 4' X 4' SQUARE CONCRETE NO. 41 CATCH BASIN (FOR USE UNDER CONCRETE MEDIAN BARRIER WALL)
D-CB-41SC	03-11-14	STANDARD 5'2" X 5'2' SQUARE CONCRETE NO. 41 CATCH BASIN (FOR USE UNDER CONCRETE MEDIAN BARRIER WALL)
D-CB-41SD	03-11-14	STANDARD 7' X 7' SQUARE CONCRETE NO. 41 CATCH BASIN (FOR USE UNDER CONCRETE MEDIAN BARRIER WALL)
D-CB-41SE	03-11-14	STANDARD 9' X 9' SQUARE CONCRETE NO. 41 CATCH BASIN (FOR USE UNDER CONCRETE MEDIAN BARRIER WALL)
D-CB-42RB	03-11-14	STANDARD PRECAST CIRCULAR NO. 42 CATCH BASIN
D-CB-42S	08-01-12	STANDARD 32" X 32" SQUARE CONCRETE NO. 42 CATCH BASIN
D-CB-42SB	03-11-14	STANDARD 4' X 4' SQUARE CONCRETE NO. 42 CATCH BASIN
D-CB-42SC	03-11-14	STANDARD 5'2" X 5'2' SQUARE CONCRETE NO. 42 CATCH BASIN
D-CB-42SD	03-11-14	STANDARD 7' X 7' SQUARE CONCRETE NO. 42 CATCH BASIN
D-CB-51SC	03-11-14	STANDARD 5'2" X 5'2' SQUARE CONCRETE NO. 51 CATCH BASIN (FOR USE IN FRONT OF CONCRETE RETAINING WALL)
D-CB-51SD	03-11-14	STANDARD 7' X 7' SQUARE CONCRETE NO. 51 CATCH BASIN (FOR USE IN FRONT OF CONCRETE RETAINING WALL)
D-CB-51SE	03-11-14	STANDARD 9' X 9' SQUARE CONCRETE NO. 51 CATCH BASIN
D-CB-52SE	03-11-14	STANDARD 9' x 9' SQUARE CONCRETE NO. 52 CATCH BASIN
D-CB-99	05-07-13	MISCELLANEOUS DETAILS FOR RECTANGULAR STRUCTURES
D-CB-99R	03-11-14	MISCELLANEOUS DETAILS FOR ROUND STRUCTURES
D-CB-99RA	03-19-14	BILL OF STEEL FOR ROUND CATCH BASIN LIDS
D-CBB-12A	05-27-01	TYPE "B" CAST IRON FRAME, GRATE & NONMOUNTABLE INLET DETAILS FOR NOS. 10, 12, 14, 16, & 17 TYPE CATCH BASINS
D-CBB-12B	05-27-01	TYPE "B" CAST IRON FRAME, GRATE & 6" MOUNTABLE INLET DETAILS FOR NOS. 25, 26 & 27 TYPE CATCH BASINS
D-CBB-12C	05-27-01	TYPE "B" CAST IRON FRAME, GRATE & 4" MOUNTABLE INLET DETAILS FOR NOS. 28 AND 29 TYPE CATCH BASINS
D-CBB-31	05-27-01	TYPE "B" CAST IRON FRAME, GRATE & INLET DETAILS FOR NOS. 31, 41, 45, 46, & 51 TYPE CATCH BASINS
D-CBB-42	05-27-01	CAST IRON GRATE DETAILS FOR NOS. 42, 43 & 44 TYPE CATCH BASINS
D-MH-2	08-01-12	STANDARD MASONRY & PRECAST NO. 3 MANHOLE
D-MH-3	04-21-14	STANDARD PRECAST CIRCULAR LID DETAILS FOR NO. 3 MANHOLE
D-MH-3A	08-01-12	STANDARD PRECAST CIRCULAR LID DETAILS FOR NO. 3 MANHOLE (96" AND 108" DIA.)
D-MH-4	04-01-14	STANDARD NO. 3 MANHOLE CASTINGS AND STEPS
D-MH-5	04-01-14	STANDARD 5'2" X 5'2" SQUARE CONCRETE NO. 3 MANHOLE
D-MH-6	04-01-14	STANDARD 7' X 7' SQUARE CONCRETE NO. 3 MANHOLE
D-MH-7	04-01-14	STANDARD 9' X 9' SQUARE CONCRETE NO. 3 MANHOLE
D-RF-1		STANDARD PRECAST RISER

ROADWAY AND PAVEMENT APPURTENANCES

RP-CS-1	09-29-10	CONCRETE SHOULDER RUMBLE STRIP DETAIL (FOR 4-LANE DIVIDED HIGHWAY)
RP-CS-2	09-29-10	CONCRETE SHOULDER RUMBLE STRIP DETAIL (FOR 6-LANE OR WIDER DIVIDED HIGHWAY)
RP-D-15	07-15-08	DETAILS OF STANDARD CONCRETE DRIVEWAYS
RP-D-16	07-15-08	DETAILS OF LOWERED STANDARD CONCRETE DRIVEWAYS
RP-H-3	01-30-15	HANDICAP RAMP AND TRUNCATED DOME SURFACE DETAIL
RP-H-4	01-30-15	PERPENDICULAR CURB RAMP
RP-H-5	01-30-15	PARALLEL CURB RAMP
RP-H-7	01-30-15	PERPENDICULAR CURB RAMP TYPE 1
RP-H-8	06-04-13	PERPENDICULAR CURB RAMP TYPE 2
RP-H-9	01-30-15	PARALLEL CURB RAMP TYPE 3 AND 4
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-J-23	07-25-12	CONCRETE PAVEMENT REPAIR DETAILS
RP-J-24	05-27-01	CONCRETE PAVEMENT SPALL AND RANDOM CRACK REPAIR DETAILS
RP-J-25	05-27-01	CONCRETE PAVEMENT JOINT REPAIR DETAILS
RP-MC-2	02-28-02	STANDARD 6" SLOPING (MOUNTABLE) CONCRETE CURBS AND CONCRETE CURBS AND GUTTERS
RP-NMC-10	07-29-03	STANDARD VERTICAL (NONMOUNTABLE) CONCRETE CURBS AND CONCRETE CURBS AND GUTTERS
RP-NMC-11	02-28-02	STANDARD VERTICAL (NONMOUNTABLE) CONCRETE CURBS AND CONCRETE CURBS AND GUTTERS
RP-R-1	05-27-01	STANDARD RAMPS TO SIDE ROADS
RP-S-7	06-04-13	DETAILS FOR STANDARD CONCRETE SIDEWALKS

SAFETY APPURTENANCES AND FENCE

S-F-1	05-24-12	HIGH VISIBILITY FENCE
S-F-10B	05-14-10	STANDARD RIGHT-OF-WAY CHAIN LINK 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-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-CC-1		CRASH CUSHION
S-CC-2		CRASH CUSHION (GATING) BARREL ARRAY
S-GR31-1	12-01-14	W-BEAM GUARDRAIL
S-GRS-2		SPECIAL CASE: GUARDRAIL ATTACHMENT TO CONCRETE DECKS
S-GRS-3		SPECIAL CASE GUARDRAIL FOOTING
S-GRC-1		GUARDRAIL CONNECTION TO BRIDGE ENDS OR BARRIER WALL
S-GRC-3		MEDIAN DIVIDER GUARDRAIL TRANSITION TO CONCRETE MEDIAN BARRIER
S-GRT-2	11-03-14	TYPE 38 GUARDRAIL TERMINAL
S-GRT-2P		EARTH PAD FOR TYPE 38 TERMINAL
S-GRT-2R		EARTH PAD FOR TYPE 38 TERMINAL (RETROFIT)
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	04-23-15	TYPE 13 GUARDRAIL TERMINAL (TRAILING END)
S-GRA-3		GUARDRAIL ANCHOR FOR TYPE 12, 13 AND IN-LINE TERMINALS
S-SSMB-2	08-19-13	51" SINGLE SLOPE CONCRETE BARRIER WALL
S-SSMB-3	07-16-13	51" HALF SIZE SINGLE SLOPE CONCRETE BARRIER WALL
S-SSMB-4	07-30-10	FLARED SINGLE SLOPE CONCRETE MEDIAN BARRIER WALL (VERTICAL BACK)

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CONST.	2015	NH-I-640-7(161)	1B

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

DWG. NO	REV.	DESCRIPTION
S-SSMB-5		SINGLE SLOPE MEDIAN BARRIER WALL CATCH BASIN DETAIL
S-SSMB-6	10-24-13	GUARDRAIL ATTACHMENT TO SINGLE SLOPE CONCRETE BARRIER WALL
S-SSMB-8	05-20-14	FOOTING DETAILS FOR OVERHEAD SIGN STRUCTURE 51" MEDIAN BARRIER WALL
S-SSMB-9	07-16-13	SINGLE SLOPE BARRIER WALL FOR GRADE SEPARATED MEDIAN

LIGHTING AND UTILITY POLE APPURTENANCES

T-FO-1		FIBER OPTIC AERIAL ENTRANCE DETAILS
T-FO-2		FIBER OPTIC UNDERGROUND ENTRANCE DETAILS
T-FO-3		FIBER OPTIC AERIAL CONNECTION DETAILS
T-FO-4		FIBER OPTIC PULL BOX, CABINET & POLE DETAILS
T-L-1	12-04-13	STANDARD LIGHTING FOUNDATION DETAILS
T-L-1SA	09-11-13	STANDARD LIGHTING DETAILS FOR SINGLE ARM SUPPORTS
T-L-1TM		STANDARD LIGHTING DETAILS TENON MOUNTED OFFSET LIGHTING SUPPORTS
T-L-2	12-04-13	FOUNDATION DETAIL FOR LUMINAIRE MOUNTED ON A CONCRETE MEDIAN BARRIER
T-L-3	04-15-96	STANDARD LIGHTING DETAILS PULL BOXES
T-L-4	05-25-11	STANDARD LIGHTING DETAILS CONDUIT, CABLE INSTALLATION

TRAFFIC CONTROL APPURTENANCES

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-12	01-30-15	SIGNING AND PAVEMENT MARKINGS FOR URBAN BICYCLE LANES
T-M-13		SIGNING AND PAVEMENT MARKINGS FOR BICYCLE LANES
T-M-14	11-01-11	SIGNING AND PAVEMENT MARKINGS FOR BICYCLE LANES AT INTERSECTIONS
T-M-15		ASPHALT SHOULDER RUMBLE STRIP INSTALLATION DETAILS FOR INTERSTATE AND ACCESS CONTROLLED ROUTES
T-M-15A	01-30-15	ASPHALT SHOULDER RUMBLE STRIP INSTALLATION DETAILS FOR NON-ACCESS CONTROLLED ROUTES
T-M-16	12-01-14	ASPHALT SHOULDER RUMBLE STRIPE INSTALLATION DETAILS FOR NON-ACCESS CONTROLLED ROUTES
T-FAB-1	05-27-97	FLASHING YELLOW ARROW BOARD
T-PBR-1	06-30-09	INTERCONNECTED PORTABLE BARRIER RAIL

DWG. NO	REV.	DESCRIPTION
T-PBR-2	11-01-11	DETAIL FOR VERTICAL PANELS AND FLEXIBLE DELINEATORS
T-WZ-10	04-02-12	ADVANCE ROAD WORK SIGNING ON HIGHWAYS AND FREEWAYS
T-WZ-11	03-13-09	ONE LANE CLOSURE DETAIL ON DIVIDED HIGHWAYS
T-WZ-12	03-13-09	ONE LANE CLOSURE DETAIL FOR BRIDGES ON DIVIDED HIGHWAYS
T-WZ-13	03-13-09	TWO-OUTSIDE LANE CLOSURE ON FREEWAY OR EXPRESSWAY
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-19	04-02-12	MEDIAN CROSS-OVER DETAIL ON DIVIDED HIGHWAYS
T-WZ-20	12-18-99	GEOMETRIC MEDIAN CROSS-OVER DETAIL ON DIVIDED HIGHWAYS
T-WZ-21	03-15-11	LANE CLOSURE WITH LEFT HAND MERGE AND LANE SHIFT
T-WZ-36	04-02-12	LANE CLOSURE ON LOW-VOLUME 2-LANE HIGHWAY
T-WZ-40	04-02-12	RIGHT LANE CLOSURES AT NEAR SIDE OF INTERSECTIONS
T-WZ-41	04-02-12	LEFT LANE CLOSURES AT NEAR SIDE OF INTERSECTIONS
T-WZ-42	04-02-12	CENTER LANE CLOSURES AT NEAR SIDE OF INTERSECTIONS
T-WZ-55	06-30-14	SIDEWALK TRAFFIC CONTROL

SIGNING APPURTENANCES

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-12	05-27-03	STANDARD STEEL GROUND MOUNTED SIGNS, BREAK-AWAY TYPE POST FOOTING DETAILS, SQUARE TUBES
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-15	12-07-90	STANDARD CONDUIT & GROUND DETAILS FOR OVERHEAD & CANTILEVER SIGN STRUCTURES
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

DWG. NO	REV.	DESCRIPTION
T-S-21	02-28-13	DETAILS FOR SIGNS MOUNTS ON CONCRETE MEDIAN BARRIERS
T-S-23A	07-19-13	MULTI-DIRECTIONAL SLIP BASE BREAKAWAY SQUARE TUBE SIGN SUPPORT
T-S-23B	07-19-13	MULTI-DIRECTIONAL SLIP BASE BREAKAWAY STRUCTURAL PIPE SIGN SUPPORT
T-S-23C	07-19-13	BREAKAWAY U-POST SIGN SUPPORTS
T-S-24	08-02-13	DETAILS OF SIGN WITH SOLAR FLASHING ASSEMBLY

SIGNAL APPURTENANCES

T-SG-2	07-29-04	LOOP LEAD-INS, CONDUIT AND PULL BOXES
T-SG-3	11-11-04	STANDARD NOTES AND DETAILS OF INDUCTIVE LOOPS
T-SG-3A		ALTERNATE DETECTION DETAILS
T-SG-4		SPAN WIRE AND MESSENGER CABLE DETAILS
T-SG-5	12-04-13	CONTROLLER CABINET DETAILS
T-SG-7	11-01-11	SIGNAL HEAD ASSEMBLIES AND PEDESTRIAN PUSH BUTTON SIGNS
T-SG-7A	11-01-11	TYPICAL SIGNAL HEAD PLACEMENT
T-SG-8	12-04-13	STRAIN POLE DETAILS FOR SPAN MOUNTED SIGNALS
T-SG-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-11	07-28-14	MAINTENANCE OF EXISTING SIGNALS DURING HIGHWAY CONSTRUCTION
T-SG-12	11-01-11	TYPICAL WIRING FOR SIGNAL HEADS AND DETECTION LOOPS

EROSION PREVENTION AND SEDIMENT CONTROL

EC-STR-2	08-01-12	SEDIMENT FILTER BAG
EC-STR-3B	08-01-12	SILT FENCE
EC-STR-3C	08-01-12	SILT FENCE WITH WIRE BACKING
EC-STR-3E	04-01-08	SILT FENCE FABRIC JOINING DETAILS
EC-STR-6	08-01-12	ROCK CHECK DAM
EC-STR-6A	08-01-12	ENHANCED ROCK CHECK DAM
EC-STR-8	06-10-14	FILTER SOCK
EC-STR-11	08-01-12	CULVERT PROCTECTION TYPE 1
EC-STR-11A	08-01-12	CULVERT PROCTECTION TYPE 2
EC-STR-19	04-01-08	CATCH BASIN PROTECTION
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-31	08-01-12	TEMPORARY DIVERSION CHANNEL
EC-STR-31A	04-01-08	TEMPORARY DIVERSION CHANNEL DESIGN
EC-STR-32	08-01-12	TEMPORARY DIVERSION CULVERTS
EC-STR-34	08-01-12	EROSION CONTROL BLANKET FOR SLOPE INSTALLATION
EC-STR-37	06-10-14	SEDIMENT TUBE
EC-STR-39	08-01-12	CURB INLET PROTECTION TYPE 1 & 2
EC-STR-39A	08-01-12	CURB INLET PROTECTION TYPE 3 & 4

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

DWG. NO	REV.	DESCRIPTION
EC-STR-40		CATCH BASIN FILTER ASSEMBLY FOR CIRCULAR STRUCTURES
EC-STR-41		CATCH BASIN FILTER ASSEMBLY (TYPE 1)
EC-STR-41A		CATCH BASIN FILTER ASSEMBLY (TYPE 1) SLIPCOVER DETAILS
EC-STR-42		CATCH BASIN FILTER ASSEMBLY (TYPE 2)
EC-STR-42A		CATCH BASIN FILTER ASSEMBLY (TYPE 2) SLIPCOVER DETAILS
EC-STR-43		CATCH BASIN FILTER ASSEMBLY (TYPE 3)
EC-STR-43A		CATCH BASIN FILTER ASSEMBLY (TYPE 3) SLIPCOVER DETAILS
EC-STR-44		CATCH BASIN FILTER ASSEMBLY (TYPE 4)
EC-STR-44A		CATCH BASIN FILTER ASSEMBLY (TYPE 4) SLIPCOVER DETAILS
EC-STR-45		CATCH BASIN FILTER ASSEMBLY (TYPE 5)
EC-STR-45A		CATCH BASIN FILTER ASSEMBLY (TYPE 5) SLIPCOVER DETAILS
EC-STR-46		CATCH BASIN FILTER ASSEMBLY (TYPE 6)
EC-STR-46A		CATCH BASIN FILTER ASSEMBLY (TYPE 6) SLIPCOVER DETAILS
EC-STR-47		CATCH BASIN FILTER ASSEMBLY (TYPE 7)
EC-STR-47A		CATCH BASIN FILTER ASSEMBLY (TYPE 7) SLIPCOVER DETAILS
EC-STR-48		CATCH BASIN FILTER ASSEMBLY (TYPE 8)
EC-STR-48A		CATCH BASIN FILTER ASSEMBLY (TYPE 8) SLIPCOVER DETAILS
EC-STR-49		CATCH BASIN FILTER ASSEMBLY (TYPE 9)
EC-STR-49A		CATCH BASIN FILTER ASSEMBLY (TYPE 9) SLIPCOVER DETAILS
EC-STR-50		CATCH BASIN FILTER ASSEMBLY (TYPE 10)
EC-STR-50A		CATCH BASIN FILTER ASSEMBLY (TYPE 10) SLIPCOVER DETAILS
EC-STR-51		CATCH BASIN FILTER ASSEMBLY (TYPE 11)
EC-STR-51A		CATCH BASIN FILTER ASSEMBLY (TYPE 11) SLIPCOVER DETAILS

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

ESTIMATED ROADWAY QUANTITIES

	ITEM NO.	DESCRIPTION	QUANTITY	UNIT
	105-01	CONSTRUCTION STAKES, LINES AND GRADES	1	LS
	201-01	CLEARING AND GRUBBING	1	LS
	202-02.16	REMOVAL OF BUILDINGS (TRACT NO. 3)	1	LS
	202-02.17	REMOVAL OF BUILDINGS (TRACT NO. 5)	1	LS
	202-02.18	REMOVAL OF BUILDINGS (TRACT NO. 6)	1	LS
	202-02.19	REMOVAL OF BUILDINGS (TRACT NO. 7)	1	LS
	202-02.20	REMOVAL OF BUILDINGS (TRACT NO. 8)	1	LS
	202-02.21	REMOVAL OF BUILDINGS (TRACT NO. 9)	1	LS
	202-02.22	REMOVAL OF BUILDINGS (TRACT NO. 14)	1	LS
	202-02.23	REMOVAL OF BUILDINGS (TRACT NO. 15)	1	LS
	202-02.24	REMOVAL OF BUILDINGS (TRACT NO. 18)	1	LS
	202-02.25	REMOVAL OF BUILDINGS (TRACT NO. 19)	1	LS
(1)	203-01	ROAD AND DRAINAGE EXCAVATION (UNCLASSIFIED)	192,470	CY
(43)	203-01.60	ROAD AND DRAINAGE EXCAVATION (ROCK)	8,253	CY
(27)	203-02.01	BORROW EXCAVATION (GRADED SOLID ROCK)	26,283	TON
	203-04	PLACING AND SPREADING TOPSOIL	8,934	CY
	203-06	WATER	556	MG
(26)	203-15.03	COMPACTED CLAY	1,459	CY
(2)	204-08	FOUNDATION FILL MATERIAL	93	CY
(41)	204-08.01	BACKFILL MATERIAL (FLOWABLE FILL)	21	CY
	209-02.03	8" TEMPORARY SLOPE DRAIN	2640	L.F.
(4)	209-05	SEDIMENT REMOVAL	5000	CY
	209-08.02	TEMPORARY SILT FENCE (WITH BACKING)	23795	LF
	209-08.03	TEMPORARY SILT FENCE (WITHOUT BACKING)	1306	LF
	209-08.07	ROCK CHECK DAM	137	EACH
	209-08.08	ENHANCED ROCK CHECK DAM	42	EACH
	209-09.01	SANDBAGS	500	BAGS
	209-09.03	SEDIMENT FILTER BAG (15"X15')	5	EACH
	209-20.03	POLYETHYLENE SHEETING (6 MIL. MINIMUM)	33	SY
(3)	209-40.30	CATCH BASIN PROTECTION (TYPE A)	9	EACH
	209-40.33	CATCH BASIN PROTECTION (TYPE D)	66	EACH
	209-40.34	CATCH BASIN PROTECTION (TYPE E)	6	EACH
	209-40.41	CATCH BASIN FILTER ASSEMBLY (TYPE 1)	22	EACH
	209-40.43	CATCH BASIN FILTER ASSEMBLY (TYPE 3)	30	EACH
	209-40.45	CATCH BASIN FILTER ASSEMBLY (TYPE 5)	4	EACH
	209-40.46	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	34	EACH
	209-40.47	CATCH BASIN FILTER ASSEMBLY (TYPE 7)	2	EACH
	209-65.03	TEMPORARY DIVERSION CHANNEL	180	LF
	209-65.04	TEMPORARY IN STREAM DIVERSION	144	LF
(5)	303-01	MINERAL AGGREGATE, TYPE A BASE, GRADING D	47,764	TON
(6)	303-01.01	GRANULAR BACKFILL (ROADWAY)	13,069	TON
(3) (7)	303-10.01	MINERAL AGGREGATE (SIZE 57)	884	TON
	307-01.08	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING B-M2	1,552	TON
	307-02.01	ASPHALT CONCRETE MIX (PG70-22) (BPMB-HM) GRADING A	270	TON
	307-02.08	ASPHALT CONCRETE MIX (PG70-22) (BPMB-HM) GRADING B-M2	1,490	TON
	307-03.01	ASPHALT CONCRETE MIX (PG76-22) (BPMB-HM) GRADING A	1,983	TON
	307-03.02	ASPHALT CEMENT (PG76-22) (BPMB-HM) GRADING A-S	26	TON
	307-03.03	AGGREGATE (BPMB-HM) GRADING "A-S" MIX	751	TON
	307-03.08	ASPHALT CONCRETE MIX (PG76-22) (BPMB-HM) GRADING B-M2	650	TON
	313-03	TREATED PERMEABLE BASE	18,882	SY
	402-01	BITUMINOUS MATERIAL FOR PRIME COAT (PC)	90	TON
	402-02	AGGREGATE FOR COVER MATERIAL (PC)	354	TON
	403-01	BITUMINOUS MATERIAL FOR TACK COAT (TC)	17	TON
(28)	403-02.02	HOT APPLIED TACK COAT	7	TON
	411-01.07	ACS MIX (PG64-22) GRADING "E" SHOULDERS	565	TON
	411-01.10	ACS MIX(PG64-22) GRADING D	546	TON
	411-02.10	ACS MIX(PG70-22) GRADING D	1,117	TON
	411-03.10	ACS MIX(PG76-22) GRADING D	2,968	TON
	411-03.22	ASPHALT CONCRETE MIX (PG76-22) FOR OGFC SURFACE	1,005	TON
	411-12.01	SCORING SHOULDERS (CONTINUOUS) (16IN WIDTH)	1.7	L.M.
(44)	415-01.02	COLD PLANING BITUMINOUS PAVEMENT	66,903	SY
	501-01.03	PORTLAND CEMENT CONCRETE PAVEMENT (PLAIN) 10"	18,882	SY
	501-03.10	CONCRETE RUMBLE STRIPS	397	LF
(29) (8)	604-01.01	CLASS A CONCRETE (ROADWAY)	227	CY
(9)	604-01.02	STEEL BAR REINFORCEMENT (ROADWAY)	46238	LB
	607-03.02	18" CONCRETE PIPE CULVERT (CLASS III)	2,583	LF
(24)	607-05.02	24" CONCRETE PIPE CULVERT (CLASS III)	398	LF
	607-06.02	30" CONCRETE PIPE CULVERT (CLASS III)	274	LF
	607-07.02	36" CONCRETE PIPE CULVERT (CLASS III)	348	LF
	611-01.02	MANHOLES TYPE 3, > 4' - 8' DEPTH	2	EACH
	611-01.03	MANHOLES TYPE 3, > 8' - 12' DEPTH	1	EACH
	611-07.01	CLASS A CONCRETE (PIPE ENDWALLS)	19	C.Y.
	611-07.02	STEEL BAR REINFORCEMENT (PIPE ENDWALLS)	400	LB.
	611-07.54	18IN ENDWALL (CROSS DRAIN) 3:1	2	EACH
	611-07.55	18IN ENDWALL (CROSS DRAIN) 4:1	1	EACH
	611-07.58	24IN ENDWALL (CROSS DRAIN) 4:1	1	EACH
	611-07.63	36IN ENDWALL (CROSS DRAIN) 3:1	1	EACH
	611-09.02	REWORK CATCH BASIN	2	EACH
	611-12.01	CATCHBASINS, TYPE 12, DEPTH 0' - 4'	4	EACH

ESTIMATED ROADWAY QUANTITIES

	ITEM NO.	DESCRIPTION	QUANTITY	UNIT
	611-12.02	CATCHBASINS, TYPE 12, DEPTH > 4' - 8'	8	EACH
	611-14.02	CATCHBASINS, TYPE 14, DEPTH > 4' - 8'	1	EACH
	611-25.01	CATCHBASINS, TYPE 25, DEPTH 0' - 4'	2	EACH
	611-25.02	CATCHBASINS, TYPE 25, DEPTH > 4' - 8'	2	EACH
	611-25.03	CATCHBASINS, TYPE 25, DEPTH > 8' - 12'	1	EACH
	611-41.03	CATCHBASINS, TYPE 41, DEPTH 8' - 12'	1	EACH
	611-41.08	CATCH BASINS, TYPE 41, DEPTH >28'	2	EACH
	611-42.01	CATCHBASINS, TYPE 42, DEPTH 0' - 4'	6	EACH
	611-42.02	CATCHBASINS, TYPE 42, DEPTH 4'-8'	4	EACH
	611-51.02	CATCHBASINS, TYPE 51, DEPTH > 4' - 8'	19	EACH
	611-51.03	CATCHBASINS, TYPE 51, DEPTH > 8' - 12'	1	EACH
	611-51.04	CATCHBASINS, TYPE 51, DEPTH > 12' - 16'	1	EACH
	611-52.02	CATCHBASINS, TYPE 52, DEPTH > 4' - 8'	2	EACH
	611-52.03	CATCHBASINS, TYPE 52, DEPTH > 8' - 12'	1	EACH
(3)	621-03.07	48" TEMPORARY DRAINAGE PIPE	85	LF
	701-01.01	CONCRETE SIDEWALK (4")	5,474	SF
	701-02.03	CONCRETE HANDICAP RAMPS	1,341	SF
(10)	701-03	CONCRETE MEDIAN PAVEMENT	21	CY
	702-01	CONCRETE CURB	200	CY
	702-03	CONCRETE COMBINED CURB AND GUTTER	112	CY
(42)	702-01.03	MODULAR CURB WITH DELINEATOR	1,064	LF
	703-01	CEMENT CONCRETE DITCH PAVING	20	CY
	705-01.01	GUARDRAIL AT BRIDGE ENDS	404	LF
	705-02.02	SINGLE GUARDRAIL (TYPE 2)	4,790	LF
	705-04.03	GUARDRAIL TERMINAL (TYPE 13)	4	EACH
	705-04.04	GUARDRAIL TERMINAL (TYPE 21)	1	EACH
	705-04.07	TAN ENERGY ABSORBING TERMINAL (NCHRP 350, TL3)	9	EACH
(15)	705-08.10	PORTABLE IMPACT ATTENUATOR NCHRP350 TL-2	27	EACH
	705-17.97	ATTENUATOR (NARROW-LOW MAINTENANCE)	1	EACH
	707-01.11	CHAIN LINK FENCE (6 FOOT)	4,770	LF
	707-01.12	END & CORNER POST ASSEMBLY (CHAIN-LINK FENCE 6')	15	EACH
	707-06.01	REMOVAL OF FENCE (CHAIN LINK)	4,770	LF
(3)	707-08.11	HIGH VISIBILITY CONSTRUCTION FENCE	15,620	LF
	709-05.05	MACHINED RIP-RAP (CLASS A-3)	1,000	TON
(23)	709-05.06	MACHINED RIP-RAP (CLASS A-1)	2,303	TON
(22)	709-05.08	MACHINED RIP-RAP (CLASS B)	600	TON
(11)	710-02	AGGREGATE UNDERDRAIN (WITH PIPE)	17,110	LF
	710-05	LATERAL UNDERDRAIN	1,120	LF
	710-06.13	LATERAL UNDERDRAIN END WALL (4:1)	8	EACH
	710-06.15	LATERAL UNDERDRAIN END WALL (6:1)	28	EACH
	711-05.71	51IN SINGLE SLOPE CONCRETE BARRIER WALL	518	LF
	711-05.72	SINGLE SLOPE HALF CONCRETE BARRIER WALL	328	LF
	711-05.77	FLARED SINGLE SLOPE CONCRETE MEDIAN BARRIER WALL	105	LF
	711-05.78	GRADE SEPARATED SINGE SLOPE MEDIAN WALL	190	LF
	712-01	TRAFFIC CONTROL	1	LS
(4)	712-02.02	INTERCONNECTED PORTABLE BARRIER RAIL	9,500	LF
(4)	712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	833	EACH
(12)	712-05.01	WARNING LIGHTS (TYPE A)	8	EACH
	712-05.03	WARNING LIGHTS (TYPE C)	30	EACH
	712-06	SIGNS (CONSTRUCTION)	1,846	SF
	712-06.01	VERTICAL PANELS	256	SF
	712-07.03	TEMPORARY BARRICADES (TYPE III)	199	LF
	712-08.03	ARROW BOARD (TYPE C)	6	EACH
	712-09.30	REMOVABLE BLACK OUT TAPE (6")	2,500	LF
	713-01.01	CLASS A CONCRETE (FOUNDATION FOR SIGN SUPPORTS)	3	CY
	713-01.02	STEEL BAR REINFORCEMENT (FOUNDATION FOR SIGN SUPPORTS)	701	LB
	713-06	STEEL I-BEAMS & WF BEAMS	1,368	LB
	713-09.01	STEEL OVERHEAD SIGN STRUCTURE (SPAN 96' - 6") (SIGNS 23 AND 24)	1	EACH
	713-09.02	STEEL OVERHEAD SIGN STRUCTURE (SPAN 83' - 0") (SIGN 44)	1	EACH
	713-09.03	STEEL OVERHEAD SIGN STRUCTURE (SPAN 90' - 0") (SIGN 47)	1	EACH
	713-09.04	STEEL OVERHEAD SIGN STRUCTURE (SPAN 60' - 0") (SIGNS 62 AND 63)	1	EACH
	713-09.05	STEEL OVERHEAD SIGN STRUCTURE (SPAN 62' - 6") (SIGN 67)	1	EACH
	713-11.01	"U" SECTION STEEL POST	218	LB
	713-11.02	PERFORATED/KNOCKOUT SQUARE TUBE POST	2,238	LB
	713-13.02	FLAT SHEET ALUMINUM SIGNS (0.08" THICK)	533	SF
	713-13.03	FLAT SHEET ALUMINUM SIGNS (0.10" THICK)	265	SF
	713-14	EXTRUDED ALUMINUM PANEL SIGNS	2,228	SF
(16)	713-15	REMOVAL OF SIGNS, POSTS AND FOOTINGS	1	LS
	713-15.11	SIGN SUPPORT ASSEMBLY ON BRIDGES (SIGN 16)	1	LS
	713-15.12	SIGN SUPPORT ASSEMBLY ON BRIDGES (SIGN 17)	1	LS
	713-16.01	CHANGEABLE MESSAGE SIGN UNIT	4	EA
	713-17.30	MODIFY EXISTING OVERHEAD SIGN STRUCTURE (SIGN 45)	1	LS
	713-17.31	MODIFY EXISTING OVERHEAD SIGN STRUCTURE (SIGN 46)	1	LS
	713-17.32	MODIFY EXISTING OVERHEAD SIGN STRUCTURE (SIGN 55)	1	LS
	713-17.33	MODIFY EXISTING OVERHEAD SIGN STRUCTURE (SIGNS 71 AND 72)	1	LS
	713-17.63	SIGN MOUNTED ON CONCRETE MEDIAN BARRIER (SIDE WALL MOUNT)	4	EACH
	713-30.09	BARRIER MOUNTED SIGN SUPPORT (MOUNTED ON BARRIER WALL)	3	EACH
(32)	714-02.01	ENCASED CONDUIT (2" PVC, SCHEDULE 80)	1900	L.F.
(32)	714-03.01	DIRECT BURIAL CONDUIT (2" PVC, SCHEDULE 40)	5308	L.F.
	714-04.02	CONDUIT (STRUCTURES - 2" RGS)	500	L.F.
	714-05.03	PULL BOXES (TYPE B)	15	EACH
	714-05.46	WOOD POLE (40' - CLASS 4)	7	EACH

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-I-640-7(161)	2A

KNOX CO. I-640
47008-3150-44 (CONST.)

UNOFFICIAL SET
NOT FOR BIDDING

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-640-7(161)	2A1

KNOX CO. I-640
47008-3150-44 (CONST.)

ESTIMATED ROADWAY QUANTITIES

	ITEM NO.	DESCRIPTION	QUANTITY	UNIT
(32)	714-06.06	CABLE (1/C # 4 AWG)	38750	L.F.
(33)	714-08.01	LIGHT STANDARDS (45' M.H., 15' ARM)	37	EACH
	714-08.09	LIGHT STANDARDS (45' M.H., RETAINING WALL MOUNTED)	25	EACH
	714-08.10	LIGHT STANDARDS (45' M.H., BRIDGE MOUNTED)	1	EACH
	714-08.32	REMOVAL OF LIGHT STANDARD & FOUNDATION	56	EACH
	714-08.33	REMOVAL OF EXISTING COBRA HEAD LUMINAIRE	32	EACH
(34)	714-09.03	LUMINAIRES (250 WATT)	25	EACH
(35)	714-09.09	LUMINAIRES (250 WATT OFFSET)	2	EACH
(36)	714-09.10	LUMINAIRES (157 WATT LED)	71	EACH
(37)	714-09.11	LUMINAIRES (107 WATT LED)	6	EACH
(32)	714-10.01	OVERHEAD CONDUCTORS (#6 DPX)	500	L.F.
(38)	714-12.01	CONTROL CENTER (NO. 616)	1	LS
(38)	714-12.02	CONTROL CENTER (NO. 617)	1	LS
(39)	714-12.03	CONTROL CENTER (NO. 618)	1	LS
	714-25.22	INSTALL SVC RISER	1	EACH
(40)	714-25	ELECTRICAL CONNECTION	3	EACH
	716-01.05	TEMPORARY RAISED REFLECTIVE MARKER	300	EACH
(19)	716-01.22	SNOWPLOWABLE PAVEMENT MARKERS (MONO-DIRECTIONAL) (1 COLOR)	28	EACH
	716-01.23	SNOWPLOWABLE MARKERS (BI-DIRECTIONAL)	328	EACH
	716-02.03	PLASTIC PAVEMENT MARKING (CROSS-WALK)	113	LF
	716-02.04	PLASTIC PAVEMENT MARKING (CHANNELIZATION STRIPING)	89	SY
	716-02.05	PLASTIC PAVEMENT MARKING (STOP LINE)	327	LF
	716-02.06	PLASTIC PAVEMENT MARKING (TURN LANE ARROWS)	17	EACH
	716-02.07	PLASTIC PAVEMENT MARKING (24 INCH BARRIER LINE)	1391	LF
	716-02.08	PLASTIC PAVEMENT MARKING (8" DOTTED LINE)	176	LF
	716-02.09	PLASTIC PAVEMENT MARKING (LONGITUDINAL CROSS-WALK)	35	LF
	716-02.11	PLASTIC PAVEMENT MARKING (6" DOTTED LINE)	876	LF
	716-02.12	PLASTIC PAVEMENT MARKING (8IN LINE)	0.9	LM
	716-03.01	PLASTIC WORD PAVEMENT MARKING (ONLY)	5	EACH
	716-04.01	PLASTIC PAVEMENT MARKING (STRAIGHT-TURN ARROW)	1	EACH
	716-04.03	PLASTIC PAVEMENT MARKING (4" DOTTED LINE)	148	LF
	716-04.05	PLASTIC PAVEMENT MARKING (STRAIGHT ARROW)	1	EACH
	716-04.14	PLASTIC PAVEMENT MARKING (LANE REDUCTION ARROW)	6	EACH
	716-04.15	PLASTIC PAVEMENT MARKING-BIKE SYMBOL/ARROW SHARED	20	EACH
	716-05.01	PAINTED PAVEMENT MARKING (4 IN LINE)	3.6	LM
(13)	716-05.04	PAINTED PAVEMENT MARKING (CHANNELIZATION STRIPING)	178	SY
	716-05.05	PAINTED PAVEMENT MARKING (STOP LINE)	654	LF
	716-05.06	PAINTED PAVEMENT MARKING (TURN LANE ARROW)	17	EACH
	716-05.07	PAINTED PAVEMENT MARKING (24" BARRIER LINE)	1391	LF
	716-05.09	PAINTED PAVEMENT MARKING (STRAIGHT-TURN ARROW)	2	EACH
	716-05.20	PAINTED PAVEMENT MARKING (6" LINE)	18.0	LM
	716-05.21	PAINTED PAVEMENT MARKING (4" DOTTED LINE)	296	LF
	716-05.51	PAINTED PAVEMENT MARKING (8" LINE)	1000	LF
	716-08.30	HYDROBLAST REMOVAL OF PAVEMENT MARKING (LINE)	7.8	LM
	716-12.01	ENHANCED FLATLINE THERMO PVMT MRKNG (4IN LINE)	2.1	LM
	716-12.02	ENHANCED FLATLINE THERMO PVMT MRKNG (6IN LINE)	6.2	LM
	716-13.01	SPRAY THERMO PAVEMENT MARKING (60 mil) (4IN LINE)	1.4	LM
	717-01	MOBILIZATION	1	LS
(30)	730-01.02	REMOVAL OF SIGNAL EQUIPMENT	2	EACH
(21)	730-01.03	MODIFICATION OF EXISTING TRAFFIC SIGNAL EQUIPMENT	1	EACH
	730-02.09	SIGNAL HEAD ASSEMBLY (130 WITH BACKPLATE)	9	EACH
(17)	730-02.17	SIGNAL HEAD ASSEMBLY (150 A2H WITH BACKPLATE)	2	EACH
	730-02.30	SIGNAL HEAD ASSEMBLY (130 A3 WITH BACKPLATE)	3	EACH
	730-03.21	INSTALL PULL BOX (TYPE B)	8	EACH
	730-03.23	INSTALL PULL BOX (FIBER OPTIC-TYPE A)	4	EACH
	730-03.24	INSTALL PULL BOX (FIBER OPTIC-TYPE B)	3	EACH
(18)	730-05.01	ELECTRICAL SERVICE CONNECTION	2	EACH
	730-08.01	SIGNAL CABLE - 3 CONDUCTOR	200	L.F.
	730-08.02	SIGNAL CABLE - 5 CONDUCTOR	1110	L.F.
	730-08.03	SIGNAL CABLE - 7 CONDUCTOR	430	L.F.
	730-08.40	INTERCONNECT CABLE - FIBER OPTIC (SM-12-MM HYBRID)	3750	L.F.
	730-12.01	CONDUIT 1" DIAMETER (PVC)	100	L.F.
	730-12.02	CONDUIT 2" DIAMETER (PVC)	7500	L.F.
	730-12.08	CONDUIT 2" DIAMETER (RGS)	1305	L.F.
	730-12.30	TRENCHING	3550	L.F.
	730-13.07	VEHICLE DETECTOR (SIREN ACTIVATED PRIORITY CONTROL)	6	EACH
	730-13.08	VEHICLE DETECTOR (RF)	6	EACH
(31)	730-15.32	CABINET (EIGHT PHASE BASE MOUNTED)	3	EACH
	730-23.30	PEDESTAL POLE (20-ft)	1	EACH
	730-23.72	CANTILEVER SIGNAL SUPPORT (1 ARM @ 35)	1	EACH
	730-23.80	CANTILEVER SIGNAL SUPPORT (1 ARM @ 40)	1	EACH
(20)	730-23.96	CANTILEVER SIGNAL SUPPORT (2 @ 50' & 45')	2	EACH
	730-26.11	COUNTDOWN PED SIGNAL WITH AUDIBLE PUSH BUTTON AND 15 IN SIGN	2	EACH
	730-35.06	BATTERY BACK-UP AND POWER CONDITIONER	3	EACH
(14)	740-10.03	GEOTEXTILE (TYPE III, EROSION CONTROL)	7,196	S.Y.
(27)	740-10.04	GEOTEXTILE (TYPE IV, STABILIZATION)	8,018	S.Y.
	740-11.03	TEMPORARY SEDIMENT TUBE (18 IN)	15,995	LF
	801-01.07	TEMPORARY SEEDING (WITH MULCH)	1,500	UNIT
(4)	801-02	SEEDING (WITHOUT MULCH)	1,116	UNIT
	801-03	WATER (SEEDING & SODDING)	111	MG
	803-01	SODDING (NEW SOD)	61,752	SY

ESTIMATED ROADWAY QUANTITIES

	ITEM NO.	DESCRIPTION	QUANTITY	UNIT
(25)	802-02.32	CUTTINGS: CORNUS AMOMUM (18-24 IN)	471	EACH
	802-02.33	CUTTINGS: SAMBUCUS CANADENSIS (18IN-24IN)	471	EACH
	802-03.35	CUTTINGS: CEPHALANTUS OCCIDENTALIS (18IN-24IN)	471	EACH
	802-02.31	CUTTINGS: SALIX SERICEA (18IN-24IN)	471	EACH
	802-15.04	JUNCUS EFFUSUS (SOFT RUSH)	317	EACH
	805-01.01	TURF REINFORCEMENT MAT (CLASS I)	831	SY
	805-12.02	EROSION CONTROL BLANKET (TYPE II)	61,560	SY
(25)	805-12.04	EROSION CONTROL BLANKET TYPE IV (EXCELSIOR MAT)	6,000	SY
	806-02.03	PROJECT MOWING	6	CYCL

FOOTNOTES

(1) INCLUDES 1327 CY FOR TEMPORARY BERM.

(2) INCLUDES 30 CY FOR 3@12'X12' BOX CULVERT EXTENSION, 50 CY FOR 12'X6' REINF. CONCRETE BOX CULVERT, AND 13 CY FOR 3'X6' REINF. CONCRETE BOX CULVERT.

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

(4) MAY BE INCREASED OR DECREASED BY THE T.D.O.T. SUPERVISOR.

(5) INCLUDES 3000 TONS FOR MAINTENANCE OF TRAFFIC AND 9,552 TONS FOR TEMPORARY WIDENIN

(6) INCLUDES 317 TONS FOR 3@12'X12' BOX CULVERT EXTENSION, 10,062 TONS FOR 12'X6' REINF. CONCRETE BOX CULVERT, AND 2,690 TONS FOR 3'X6' REINF. CONCRETE BOX CULVERT.

(7) FOR EROSION CONTROL.

(8) INCLUDES 81 CY FOR 3@12'X12' BOX CULVERT EXTENSION, 123 CY FOR 12'X6' REINF. CONCRETE BOX CULVERT, AND 23 CY FOR 3'X6' REINF. CONCRETE BOX CULVERT.

(9) INCLUDES 16,720 LBS. FOR 3@12'X12' BOX CULVERT EXTENSION, 23,895 LBS. FOR 12'X6' CULVERT REINF. CONCRETE BOX CULVERT, AND 5,622 LBS. FOR 3'X6' REINF. CONCRETE BOX

(10) TO BE USED IN RAISED MEDIANS WHERE THE WIDTH IS 4' OR LESS, AND RAISED ISLAND AT GREENWAY DRIVE. SEE PROPOSED LAYOUTS FOR LOCATIONS.

(11) WHERE UNDERDRAIN TIES TO PROPOSED DRAINAGE SYSTEM, THE COST WILL NOT BE MEASURED AND PAID FOR SEPARATELY, BUT THE COST SHALL BE INCLUCED IN THE PRICE BID FOR ITEM 710-02, AGGREGATE UNDERDRAIN (WITH PIPE)

(12) TWO TYPE "A" WARNING LIGHTS TO BE MOUNTED ON EACH "ROAD CLOSED" SIGN.

(13) FOR TEMPORARY PAVEMENT MARKING ON INTERMEDIATE LAYERS OF PAVEMENT AND FOR MAINTENANCE OF TRAFFIC.

(14) FOR EROSION CONTROL.

(15) THIS ITEMS SHALL BE A PORTABLE ENERGY ABSORBING TERMINAL MEETING THE REQUIREMENTS OF NCHRP 350 FOR TEST LEVEL 3. EXAMPLES WOULD A QUAD-GUARD, A REACT 350 OR A TRACC. THE PAY ITEM WILL INCLUDE FURNISHING AND INSTALLING ALL COMPONENTS AS SHOWN IN THE MANUFACTURER'S DRAWINGS.

(16) REMOVE SIGN AND SUPPORT ON 55± SIGNS.

(17) COST OF SIGNAL HEADS SHALL INCLUDE MOUNTING HARDWARE. SIGNAL HEADS SHALL BE BLACK IN COLOR WITH ALUMINUM TOP SECTION AND TWO POLYCARBONATE BOTTOM SECTIONS, HAVING A 12-INCH SIGNAL FACE AND BLACK POLYCARBONATE VACUUM FORM BACKPLATES WITH LOUVRES.

(18) CONTRACTOR IS RESPONSIBLE FOR ELECTRICAL SERVICE AND ANY ASSOCIATED FEES.

(19) SEE DETAIL SHEET 2W

(20) ANY COST ASSOCIATED WITH THE FOUNDATION AND POLE DESIGN SHALL BE INCLUDED IN THIS ITEM. ITEM INCLUDES FOUNDATION AND POLE INSTALLATION.

(21) MODIFICATION IS THE INSTALLATION OF A PEDESTAL POLE AND PEDESTRIAN SIGNALS.

(22) FOR EROSION CONTROL - BANK STABILIZATION OF STR-4 DOWNSTREAM OF 12'X6' RCBC .

(23) FOR APRONS AT PIPE OUTLETS AND EROSION CONTROL.

(24) THE COST OF TYING PROPOSED PIPES INTO EXISTING CATCH BASINS WILL NOT BE MEASURED AND PAID FOR DIRECTLY BUT INCLUDED IN THE COST OF THE PIPE.

(25) FOR BANK STABILIZATION ALONG STREAM 1 ADJACENT TO RETAINING WALL 1. SEE SHEETS 2U - 2U4 FOR DETAILS.

(26) TO BE USED ON SR33, RAMP 2, AND RAMP 3 CUT SLOPES ADJACENT TO PONDS. SEE SOILS SHEET 28Z AND CROSS-SECTIONS FOR DETAILS AND LOCATIONS.

(27) TO BE USED IN I-640, RAMP 2, RAMP 3 AND ADDISON FILL EMBANKMENT ADJACENT TO PONDS. SEE SOILS SHEETS 28W-28Y AND CROSS-SECTIONS FOR DETAILS AND LOCATIONS.

(28) TACK COAT FOR OGFC SHALL BE HOT APPLIED, ASPHALT CEMENT OF PERFORMANCE GRADE PG76-22 OR NON-TRACKING, HOT-APPLIED, POLYMER MODIFIED TACK COAT (NTHAP). PG 76-22 BINDER SHALL MEET THE REQUIREMENTS OF SECTION 904.01 OF THE STANDARD SPECIFICATIONS. NTHAP SHALL MEET THE FOLLOWING MATERIAL REQUIREMENTS:

Specificaions for Non-Tracking, Hot-Applied, Polymer Modified Tack (NTHAP)			
Test Requirement	Test Method	Minimum	Maximum
Rotational Viscosity @ 149 °C, cP	T 316	----------	3,000
Penetration @ 25 °C (77 °F), 100 g 5 Sec.	T 49	----------	25
Softening Point, °C	T 53	70	----------
Dynamic Shear, G* sin δ	T 315	1.0 kPa @ 82 °C	----------

(29) COST OF REMOVING SEDIMENT FROM EXISTING BOX CULVERTS SHALL NOT BE PAID FOR DIRECTLY BUT INCLUDED IN THE COST OF OTHER ITEMS.

(30) REMOVE EXISTING SIGNALS AT SR33 AND I-640 WESTBOUND EXIT RAMP, AND OLD BROADWAY AT TAZEWELL PIKE AND GREENWAY DR.

(31) COST OF CABINET INCLUDES CONTROLLER AND CABINET FOUNDATION. CABINET SHALL BE AN 8 PHASE CABINET FOR A F.O CLOSED SIGNAL LOOP SYSTEM. CABINET SHALL INCLUDE CONTROLLER AND ALL DEVICES FOR F.O. COMMUNICATION CONTROLLERS SHALL BE NAZTEC ATC.

(32) QUANTITIES OF CABLE AND CONDUIT ARE ENGINEERS ESTIMATED GROUND LINE DISTANCES. THE CONTRACTOR SHOULD ALLOW FOR CABLE AND CONDUIT SPLICES AND MAKE UP AT EACH LIGHT AND PULL BOX.

(33) ITEM TO INCLUDE A BREAKAWAY BASE AND FOUNDATION.

(34) TOTAL LUMEN USED 27,500, DESIGN IS BASED ON TYPE III MEDIUM-CUTOFF DISTRIBUTION AND COOPER OVH25SCW3E.

(35) TOTAL LUMEN USED 28,000, DESIGN IS BASED ON OFFSET FIXTURE AND HOLOPHANEG25(HP00HDRXXX.

(36) TOTAL LUMEN USED 15,620, DESIGN IS BASED ON LED ROADWAY FIXTURE COOPER NVN-AE-03-D-U-T3-10K-4-AP.

(37) TOTAL LUMEN USED 10,504, DESIGN IS BASED ON LED ROADWAY FIXTURE COOPER NVN-AE-02-D-U-T3-10K-4-AP.

(38) INCLUDES ALL MATERIALS AND LABOR FOR INSTALLATION OF THE LIGHTING CONTROL CENTER, INCLUDING SERVICE POLE AND FOUNDATION. SEE DETAIL SHEET 27I.

(39) INCLUDES ALL MATERIALS AND LABOR FOR INSTALLATION OF THE LIGHTING CONTROL CENTER, INCLUDING SERVICE POLE AND FOUNDATION. SEE DETAIL SHEET 27J.

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

(41) TO BE USED AS BACKFILL FOR LATERAL UNDERDRAINS ON I-640 AND TO PLUG ABANDONED PIPE.

(42) TO BE USED ON BRAMP 2 AT TAZEWELL PIKE (SEE SIGNING AND PAVEMENT MARKING SHEET 22G), AND FOR TEMPORARY LANE CHANNELIZATION DURING CONSTRUCTION.

(43) FOR ROCK EXCAVATION ADJACENT TO RAMP 1. BLASTING OF ROCK SHALL NOT BE PERMITTED. ITEM INCLUDES ALL MONITORING OF ADJACENT STRUCTURES INCLUDING THE KUB PUMP STATION SEE SHEET 7A, 10A FOR DETAILS AND LIMITS OF ROCK EXCAVATION.

(44) INCLUDES MILLING OF I-640 WB INSIDE SHOULDER TO REMOVE RUMBLE STRIPS DURING CONSTRUCTION, AND FINAL MILLING OF I-640, SR33, AND OLD BROADWAY AS INDICATED IN THE TYPICAL SECTIONS AND PROPOSED LAYOUTS.

UNOFFICIAL SET

NOT FOR BIDDING

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-640-7(161)	2L

KNOX CO. I-640
47008-3150-44 (CONST.)

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 ITEM 203-04. SEEDING, IN ACCORDANCE WITH SECTION 801 OF THE STANDARD SPECIFICATIONS. WILL BE MEASURED AND PAID FOR UNDER ITEM 801-02.

(2) ITEM NO. 803-01, SOD (NEW SOD), SHALL BE USED ON SLOPES STEEPER THAN 3:1 AND OTHER AREAS AS INDICATED IN THE PLANS THAT ARE INACCESSIBLE FOR MOWING.

(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 CATCH BASINS, MANHOLES, PIPES, AND ENDWALLS 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.

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. 716-05.20, PAINTED PAVEMENT MARKING (6" LINE), L.M.

FINAL PAVEMENT MARKING IF 4" ENHANCED FLATLINE THERMOPLASTIC IS USED

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

FINAL PAVEMENT MARKING IF 6" ENHANCED FLATLINE THERMOPLASTIC IS USED

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

(5) 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.

DETOURS, LANE SHIFTS AND MEDIAN CROSS-OVERS

(6) THE PAVEMENT MARKING ON THE LANE SHIFTS FOR I-640, RAMPS, AND S.R. 33 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. 716-05.20, LIN. MI.

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

PAVEMENT

PAVING

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

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

SIGNING

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

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

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

(4) 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.

(5) 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.

(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.

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NOT FOR BIDDING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-I-640-7(161)	2L1

KNOX CO. I-640
47008-3150-44 (CONST.)

(CONTINUED)

TRAFFIC CONTROL DIRECTIONAL SIGNING

(1) ON ALL ACCESS CONTROLLED AND INTERSTATE RECONSTRUCTION AND NEW CONSTRUCTION PROJECTS, THE CONTRACTOR SHALL UTILIZE ALL EXISTING DIRECTIONAL SIGNING FOR AS LONG AS POSSIBLE. THESE EXISTING SIGNS CAN BE MOVED USING TEMPORARY SUPPORTS AS NEEDED. AS SOON AS THESE EXISTING DIRECTIONAL SIGNS COME DOWN PERMANENTLY, THE CONTRACTOR SHALL HAVE UP AT LEAST ONE NEW TEMPORARY "ADVANCE GUIDE SIGN" AND ONE NEW TEMPORARY "EXIT DIRECTIONAL SIGN" AT ALL EXIT RAMPS. THESE SIGNS ARE TO BE MAINTAINED WITHIN CLEAR VIEW OF THE PUBLIC ON THE RIGHT SIDE OF THE HIGHWAY AND SHALL BE REPLACED IF DAMAGED, DURING ALL PHASES OF CONSTRUCTION, AS DIRECTED BY THE ENGINEER.

(2) THE SIZE OF THESE NEW TEMPORARY SIGNS WILL BE DETERMINED BY THE MESSAGE. THE MESSAGE SHALL BE THE SAME AS THE EXISTING SIGN THAT THESE NEW TEMPORARY SIGNS WILL BE REPLACING. THE LETTER SIZE SHALL BE A MINIMUM OF 8 INCH, "D" UPPER CASE LETTER. THE DIRECTIONAL ARROW WILL BE A "B" ARROW AT A 45 DEGREE ANGLE (SAME ANGLE AS THE EXISTING ARROW). THE MATERIAL SHALL BE 0.100 INCH SHEET ALUMINUM; THE COLOR SHALL BE A REFLECTIVE GREEN BACKGROUND WITH REFLECTIVE WHITE COPY.

(3) ALL WORK AND MATERIAL TO MAKE THESE NEW TEMPORARY DIRECTIONAL SIGNS ALONG WITH ADEQUATE SUPPORTS AND TO MOVE THEM AS NEEDED DURING EACH PHASE OF CONSTRUCTION WILL BE PAID FOR UNDER ITEM NO. 712-01, AS DIRECTED BY THE ENGINEER.

(4) SOME OF THESE DIRECTIONAL SIGNS WILL NEED AN INTERSTATE, U.S., OR A STATE HIGHWAY SHIELD, A CARDINAL DIRECTION, AND A DIRECTION ARROW TO ACCOMPANY THE DIRECTIONAL SIGN. THESE SIGNS SHALL BE MOUNTED BELOW THE DIRECTIONAL SIGN.

(5) ALL EXISTING "EMERGENCY REFERENCE MARKERS" AND "HOSPITAL SIGNS" SHALL BE MAINTAINED WITHIN FULL VIEW OF THE MOTORING PUBLIC THROUGHOUT ALL PHASES OF CONSTRUCTION. ALL WORK IN MOVING AND TEMPORARY SUPPORTS SHALL BE PAID FOR UNDER ITEM NO. 712-01.

SIGNALIZATION

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

(2) SALVAGEABLE EQUIPMENT SHALL BECOME THE PROPERTY OF THE CITY OF KNOXVILLE AND SHALL BE STOCKPILED AT A LOCATION DESIGNATED BY THE ENGINEER FOR PICKUP BY THE CITY.

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

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

(5) THE PROJECT ENGINEER SHALL NOTIFY THE LOCAL GOVERNMENTAL AGENCY RESPONSIBLE FOR TRAFFIC CONTROL MAINTENANCE AT LEAST ONE DAY IN ADVANCE OF THE COLD PLANING ACTIVITY AT SIGNALIZED INTERSECTIONS WHERE DETECTOR LOOPS ARE ON THE PAVEMENT. THE MAINTAINING AGENCY WILL THEN BE RESPONSIBLE FOR DISCONNECTING THE LOOP DETECTORS AND MAKING ANY NECESSARY TIMING ADJUSTMENTS IN THE SIGNAL CONTROLLER PRIOR TO THE CONSTRUCTION.

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

(7) LOOP REPLACEMENT SHALL BE IN ACCORDANCE WITH SECTION 730 OF THE STANDARD SPECIFICATIONS.

CONSTRUCTION WORK ZONE & TRAFFIC CONTROL

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

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

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

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

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

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

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

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

LIGHTING

(1) ALL WIRING SHALL BE CONCEALED UNDERGROUND IN 2-INCH SCHEDULE 40 PVC RIGID CONDUIT.

(2) EXISTING FOUNDATIONS TO BE REMOVED A MINIMUM OF SIX INCHES BELOW GRADE.

(3) ALL INCIDENTAL EQUIPMENT AND MATERIAL REQUIRED FOR THE SUCCESSFUL EXECUTION OF THIS WORK SHALL BE FURNISHED IN 714 ITEMS WHETHER SPECIFICALLY NOTED OR NOT.

(4) STANDARDS SHALL BE DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORT FOR HIGHWAY SIGNS, LUMINARIES AND TRAFFIC SIGNALS PUBLISHED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS.

(5) ALL NEW ROADWAY LIGHT STANDARDS SHALL BE MOUNTED ON BASES WITH ACCESS DOOR. TRANSFORMER BASES SHALL MEET AASHTO SPECIFICATIONS AND HAVE FHWA APPROVAL. STANDARDS SHALL BE ALUMINUM WITH TRANSFORMER BASES.

(6) BRACKET ARMS SHALL BE ROUND TAPERED TRUSS TYPE WITH STRAP MOUNTING AND LENGTHS AS SCHEDULED.

(7) BRACKET ARM UPSWEEP SHALL BE THE SAME FOR ALL LIGHT STANDARDS OF THE SAME TYPE.

EROSION PREVENTION AND SEDIMENT CONTROL

DISTURBED AREA

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

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

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

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

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

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

SEDIMENT CONTROL

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

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

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

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

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

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

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

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

(CONTINUED)

(1) 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.

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

STREAM/WETLAND

(3) 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.

(4) 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.

(5) 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.

(6) 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.

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

(8) 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.

(9) 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.

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

SPECIES

(11) 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

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

(13) 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.

(14) 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.

(15) 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.

(16) 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.

(17) 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.

(18) 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.

(19) 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

(20) 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

(21) 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.

(22) 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.

(23) 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.

(24) 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.

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

(26) 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.

(27) 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.

(28) 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.

(29) 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

(30) 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.

(31) 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.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-I-640-7(161)	2L2

KNOX CO. I-640
47008-3150-44 (CONST.)

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.

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.

(6) SCARIFICATION TO BE PAID FOR UNDER ITEM NO. 203-01, ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED)

(7) BLASTING OF ROCK ADJACENT TO RAMP 1 SHALL NOT BE PERMITTED. CONTRACTOR SHALL PROTECT THE KUB PUMP STATION LOCATED ADJACENT TO THE ROCK CUT RIGHT OF RAMP 1 FROM STA. 3+50 TO STA. 7+00. CONTRACTOR SHALL NOTIFY KUB PRIOR TO BEGINNING EXCAVATION OF THE ROCK, AND SHALL CONDUCT PRE- AND POST-CONSTRUCTION SURVEYS TO ENSURE NO IMPACTS HAVE OCCURRED. ROCK EXCAVATION ALONG RAMP 1 WILL BE PAID FOR UNDER ITEM 203-01.60 ROAD AND DRAINAGE EXCAVATION (ROCK), CY. SEE SHEETS 7A, 10A FOR DETAILS AND LIMITS OF ROCK EXCAVATION.

DRAINAGE

(1) THE COST OF SEDIMENT REMOVAL FROM EXISTING BOX CULVERTS WILL NOT BE PAID FOR DIRECTLY, BUT SHALL BE INCLUDED IN THE COST OF OTHER ITEMS.

(2) THE INSTALLATION OF PROPOSED DRAINAGE SHALL BE COORDINATED WITH THE INSTALLATION OF PROPOSED UTILITIES ALONG DUTCH VALLEY ROAD.

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.

LIGHTING

(1) SEE SHEET 27H FOR LIGHTING SPECIAL NOTES.

SIGNALIZATION

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

UTILITIES

(1) THE INSTALLATION OF PROPOSED UTILITIES SHALL BE COORDINATED WITH THE INSTALLATION OF THE PROPOSED DRAINAGE ALONG DUTCH VALLEY ROAD.

EROSION PREVENTION AND SEDIMENT CONTROL

NPDES

(1) REFER TO THE EROSION PREVENTION AND SEDIMENT CONTROL PLAN SHEET 20G, FOR NOTES REGARDING SEASONAL WORK LIMITATION OR LIMITATION ON THE TOTAL AREA OF EXPOSED SOIL.

ENVIRONMENTAL

ECOLOGY

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

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

(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.

SCOPE OF WORK

(1) THIS PROJECT INCLUDES THE GRADING, DRAINAGE, BASE, PAVEMENT, BRIDGE, RETAINING WALL, AND GUARDRAIL OF I-640 AND RAMP, AND S.R. 33 (BROADWAY) IN KNOX COUNTY TO THE LINES AND GRADES AS INDICATED ON THE TYPICAL CROSS-SECTIONS AND PLAN AND PROFILE SHEETS OR AS DIRECTED BY THE T.D.O.T. SUPERVISOR.

(2) THIS PROJECT INCLUDES THE CONSTRUCTION OF A 12'X6' REINFORCED CONCRETE BOX CULVERT ON RELOCATED OLD BROADWAY, AND THE EXTENSION OF A 3-@ 12'X12' REINFORCED CONCRETE BOX CULVERT ON RAMP 3 OVER WHITES CREEK.

(3) CONSTRUCTION OF THE BRIDGE WIDENING OF I-640 OVER OLD BROADWAY, THE BRIDGE WIDENING OF I-640 OVER S.R. 33 (BROADWAY), AND THE BRIDGE WIDENING OF S.R. 33 OVER S.R. 331 (TAZEWELL PIKE) AS INDICATED IN THE PLANS OR AS DIRECTED BY THE T.D.O.T. SUPERVISOR.

(4) CONSTRUCTION OF THE BRIDGE ON RAMP 3 OVER RAMP 2 AS INDICATED IN THE PLANS OR AS DIRECTED BY THE T.D.O.T. SUPERVISOR.

(5) CONSTRUCTION OF A COMPLETE DRAINAGE SYSTEM INCLUDING CATCH BASINS AND STORM DRAINAGE AS INDICATED ON THE PLANS OR AS DIRECTED BY THE T.D.O.T. SUPERVISOR.

(6) CONSTRUCTION OF ALL SIDE ROADS, PRIVATE DRIVES AND BUSINESS ENTRANCES TO LINES AND GRADES AS INDICATED ON THE PLANS OR AS DIRECTED BY THE T.D.O.T. SUPERVISOR.

(7) CONSTRUCTION OF ALL DITCHES, APPLICATION OF EROSION CONTROL DEVICES, INSTALLATION OF GUARDRAIL, TRAFFIC CONTROL DEVICES, PAVEMENT MARKINGS, SIGNING, SEEDING , AND OTHER DESIGN FEATURES AS INDICATED IN THE PLANS OR AS DIRECTED BY THE T.D.O.T. SUPERVISOR.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-I-640-7(161)	2L3

KNOX CO. I-640
47008-3150-44 (CONST.)

UNOFFICIAL SET
NOT FOR BIDDING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SPECIAL NOTES

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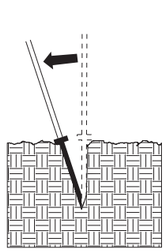
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

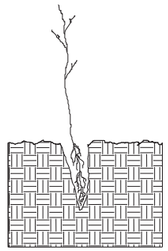
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-I-640-7(161)	2U

KNOX CO. I-640
47008-3150-44 (CONST.)

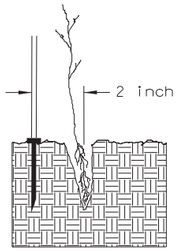
DIBBLE PLANTING METHOD
USING THE KBC PLANTING BAR



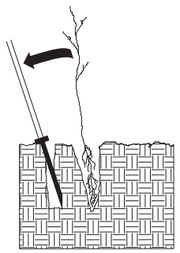
1. INSERT PLANTING BAR AS SHOWN AND PULL HANDLE TOWARD PLANTER.



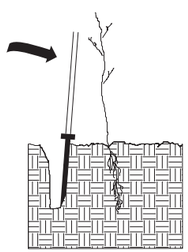
2. REMOVE PLANTING BAR AND PLACE SEEDLING AT CORRECT DEPTH.



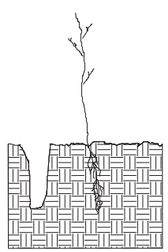
3. INSERT PLANTING BAR 2" TOWARD PLANTER FROM SEEDLING.



4. PULL HANDLE OF BAR TOWARD PLANTER, FIRMING SOIL AT BOTTOM.



5. PUSH HANDLE FORWARD FIRMING SOIL AT TOP.



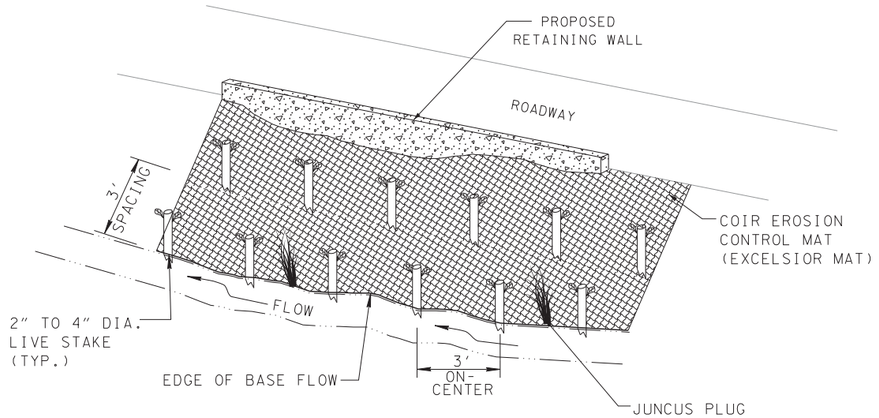
6. LEAVE COMPACTION HOLE OPEN. WATER THOROUGHLY.

PLANTING NOTES:

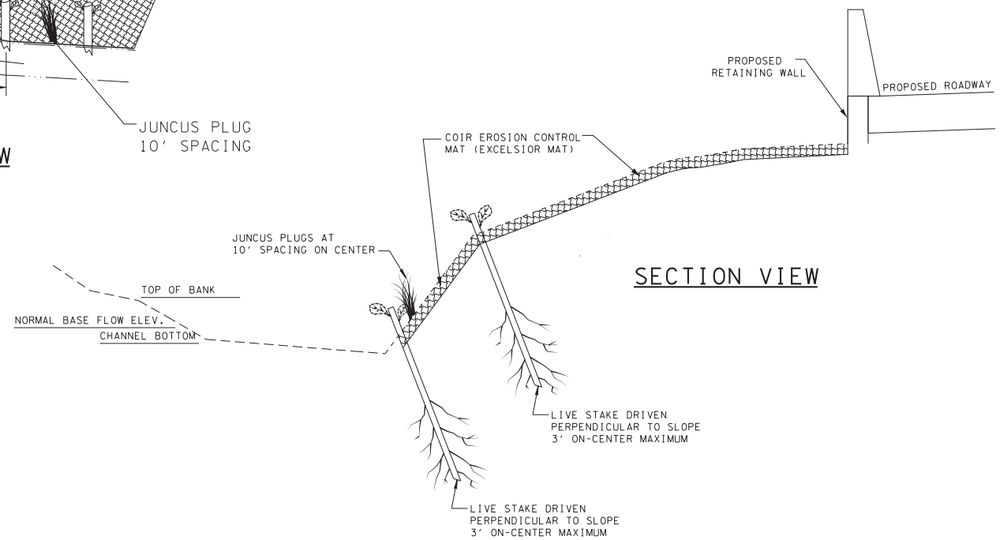
PLANTING BAG:
DURING PLANTING, SEEDLINGS SHALL BE KEPT IN A MOIST CANVAS BAG OR SIMILAR CONTAINER TO PREVENT THE ROOT SYSTEMS FROM DRYING.

KBC PLANTING BAR:
PLANTING BAR SHALL HAVE A BLADE WITH A TRIANGULAR CROSS SECTION, AND SHALL BE 1' LONG, 4" WIDE AND 1" THICK AT CENTER.

ROOT PRUNING:
ALL SEEDLINGS SHALL BE ROOT PRUNED, IF NECESSARY, SO THAT NO ROOTS EXTEND MORE THAN 10" BELOW THE ROOT COLLAR.

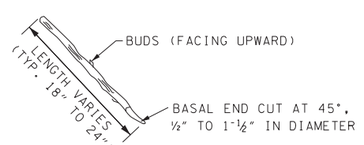


ISOMETRIC VIEW



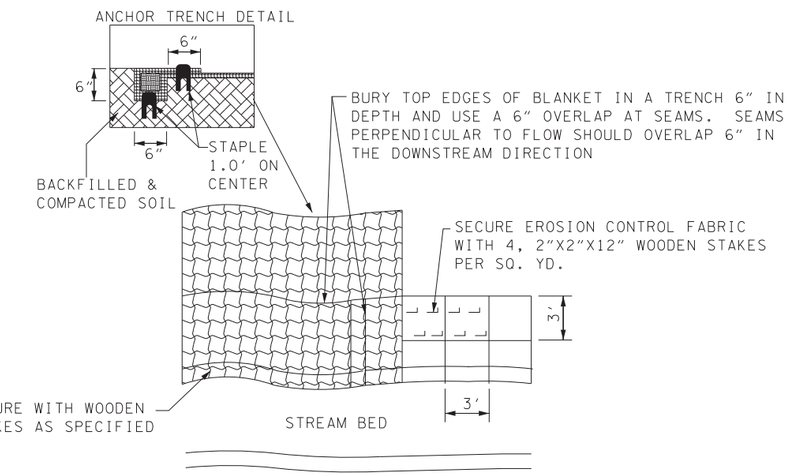
SECTION VIEW

1. LIVE CUTTINGS SHALL BE INSTALLED IN TWO STAGGERED ROWS BETWEEN THE WESTBOUND LANES OF I-640 AND THE STREAM. ONE ROW SHALL BE LOCATED AT THE EDGE OF BASE FLOW AND THE OTHER SHALL BE OFFSET 3' FROM CENTER. SPACING BETWEEN THE CUTTINGS SHALL BE 3'.
2. LIVE CUTTINGS SHALL BE CUT FROM AN APPROVED SOURCE WITH A SHARP TOOL OR ORDERED FROM A REPUTABLE SUPPLIER. CUTTING SHALL BE FREE FROM DISEASE OR EXCESS DEAD TWIGS, 18"-24" IN LENGTH WITH A BASAL END 0.5 TO 1.5 INCHES IN DIAMETER. PRIOR TO INSTALLATION BASAL END SHALL BE CUT AT A 45 DEGREE ANGLE AND THE END SHALL BE CUT FLAT WITHOUT CRACKS.
3. LIVE CUTTINGS SHALL BE INSTALLED BY PUSHING OR GENTLY TAMPING INTO THE SOIL LEAVING 4 TO 8 INCHES EXPOSED.
4. LIVE CUTTINGS SHALL BE INSTALLED WHEN THEY ARE DORMANT, WHICH TYPICALLY OCCURS BETWEEN NOVEMBER 15 AND MARCH 15. LIVE CUTTINGS TO BE PAID FOR UNDER ITEM NOS. 802-02.32, CUTTINGS: CORNUS AMOMUM (18-24IN), 802-02.33, CUTTINGS: SAMBUCUS CANADENSIS (18-24IN), 802-02.35, CUTTINGS: CEPHALANTHUS OCCIDENTALIS (18-24IN), AND 802-02.31, CUTTINGS: SALIX SERICEA (18-24IN). PAYMENT SHALL INCLUDE ALL MATERIALS, EQUIPMENT, AND LABOR NECESSARY TO CONSTRUCT AS SHOWN IN THE DETAIL.



*SEE PLANTING SCHEDULE FOR LIVE CUTTING SPECIES

DETAIL - LIVE CUTTING
NOT TO SCALE



TYPICAL PLAN

1. PREPARE THE SEEDBED AND PLACE SEED PRIOR TO INSTALLING EROSION CONTROL BLANKETS.
2. EROSION CONTROL BLANKET IS TO BE PAID FOR UNDER ITEM NO. 805-12.04, EROSION CONTROL BLANKET TYPE IV (EXCELSIOR MAT). THE ECB SHALL BE BIODEGRADABLE. PAYMENT SHALL INCLUDE ALL MATERIALS, EQUIPMENT, AND LABOR NECESSARY TO CONSTRUCT AS SHOWN IN THE DETAIL.

DETAIL - COIR FIBER EROSION BLANKET (FOR STREAM BANKS)
NOT TO SCALE

UNOFFICIAL SET
NOT FOR BIDDING

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.0001 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STREAM 1 DETAIL

N.T.S.

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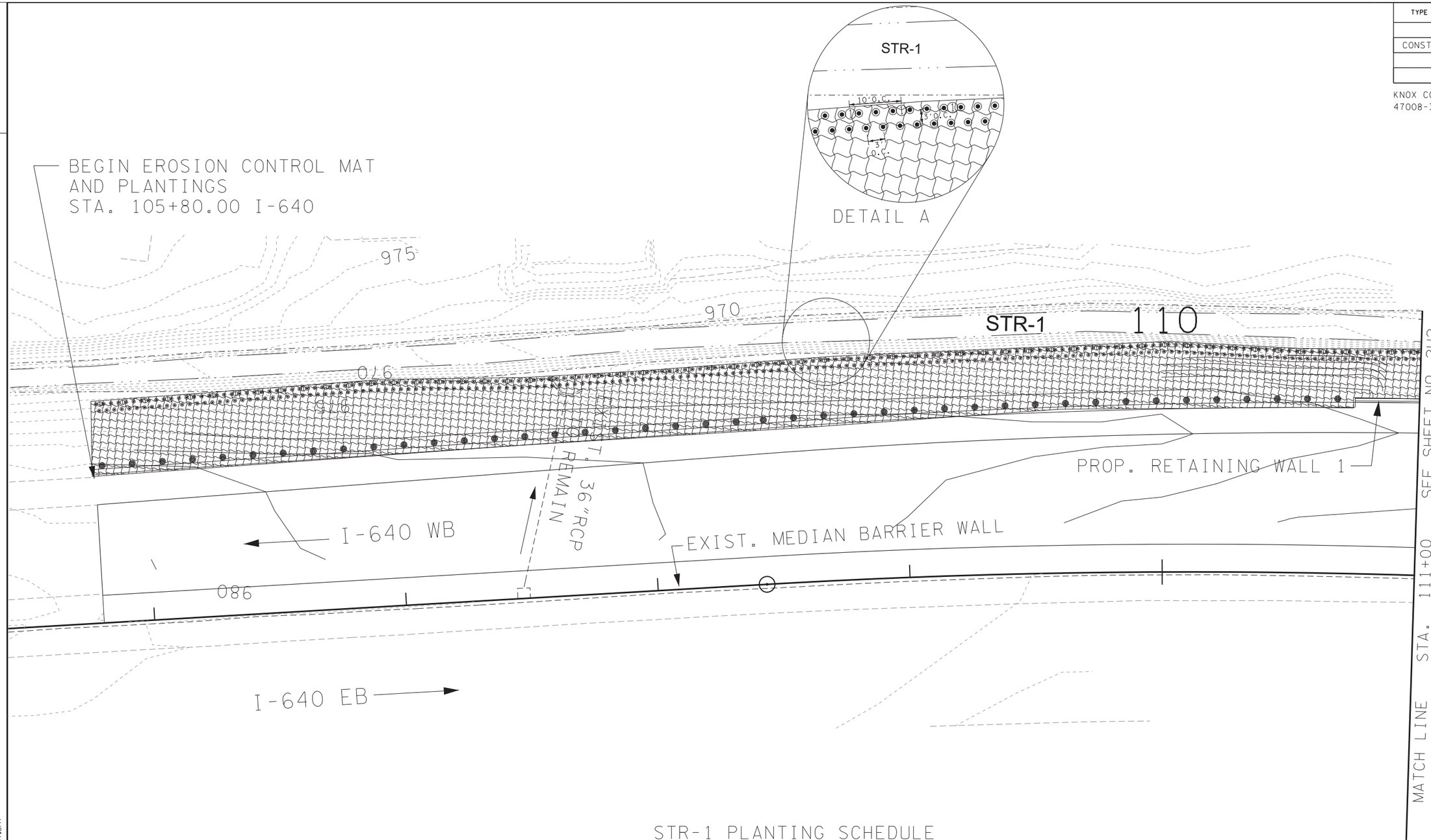
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-I-640-7(161)	2U1

KNOX CO. I-640
47008-3150-44 (CONST.)



STR-1 PLANTING SCHEDULE

SCALE: 1"=20'

STR-1 PLANTING SCHEDULE			
SYMBOL	TYPE	SPECIES	TOTAL
1	JUNCUS PLUGS	JUNCUS EFFUSUS (SOFT RUSH)	317
◉	LIVE STAKE	SILKY DOGWOOD (CORNUS AMOMUM), ELDERBERRY (SAMBUCUS CANADENSIS), BUTTON BUSH (CEPHALANTHUS OCCIDENTALIS), SILKY WILLOW (SALIX SERICEA)	1,884

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND	
SYMBOL	ITEM
	COIR EROSION CONTROL BLANKET (EXCELSIOR MAT)

UNOFFICIAL SET
NOT FOR BIDDING

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.0001 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STREAM 1 PLANTING LAYOUT

STA.105+80 TO STA.111+00

SCALE: 1"=20'

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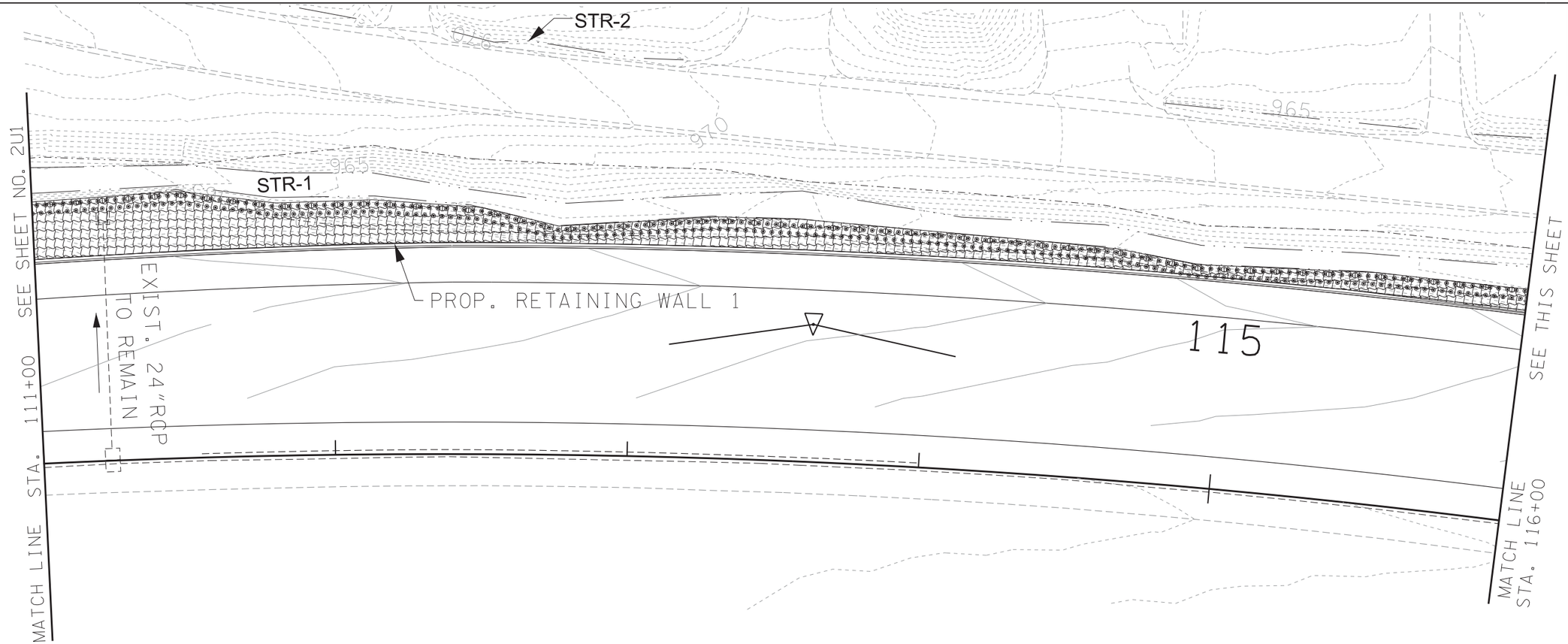
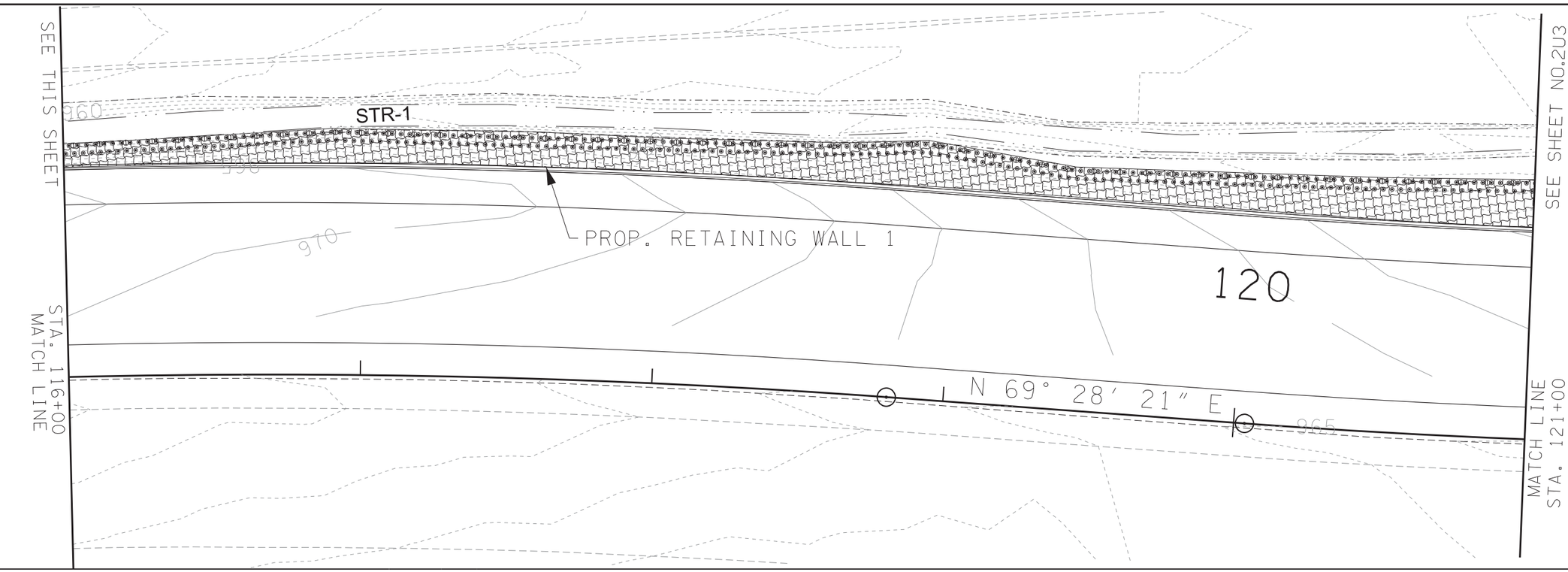
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-I-640-7(161)	2U2

KNOX CO. I-640
47008-3150-44 (CONST.)





UNOFFICIAL SET

NOT FOR BIDDING

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.0001 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STREAM 1 PLANTING LAYOUT

STA.111+00 TO STA.121+00

SCALE: 1"=20'

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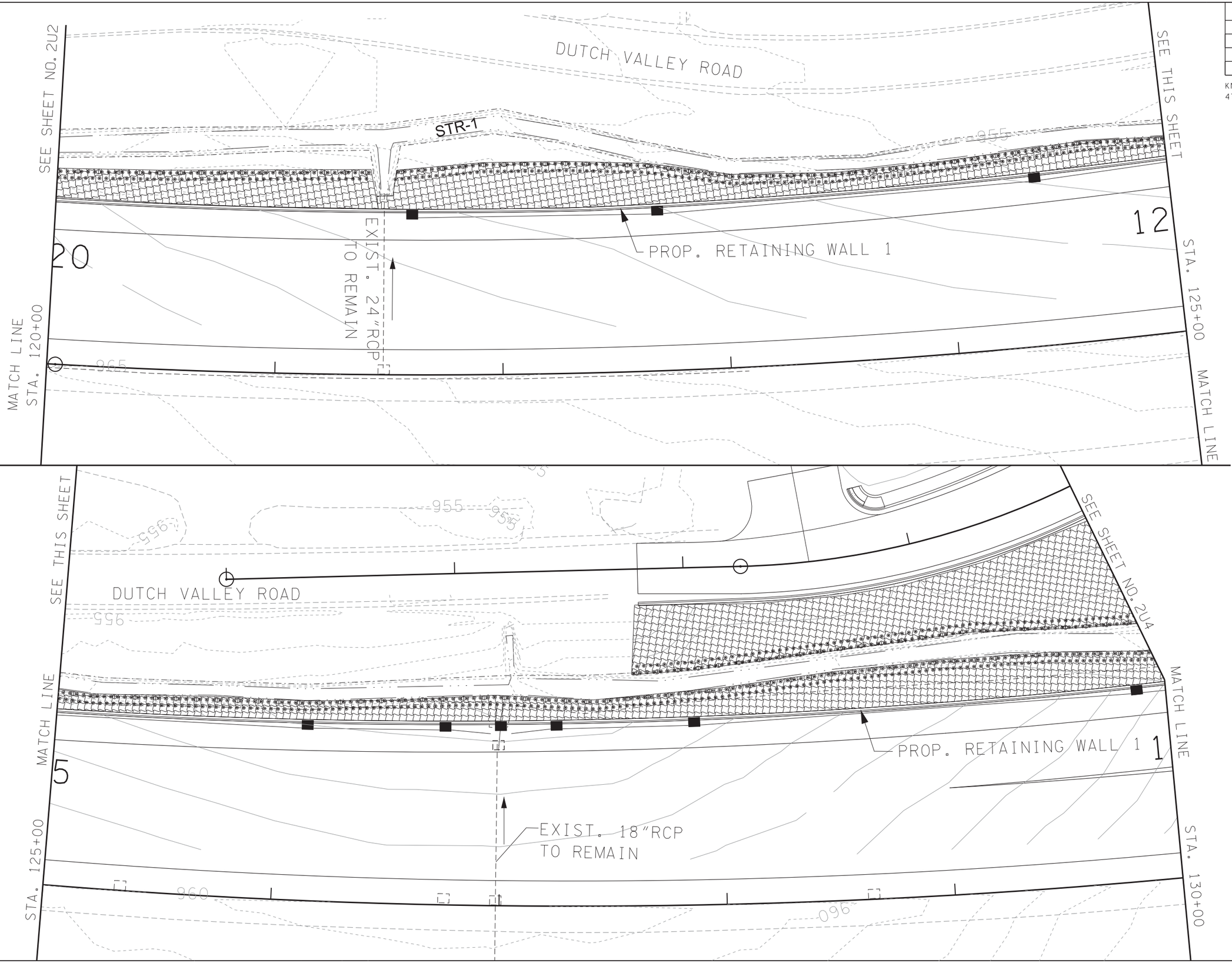
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-I-640-7(161)	2U3

KNOX CO. I-640
47008-3150-44 (CONST.)



UNOFFICIAL SET
NOT FOR BIDDING

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.0001 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STREAM 1
PLANTING LAYOUT

STA.120+00 TO STA.130+00

SCALE: 1"=20'

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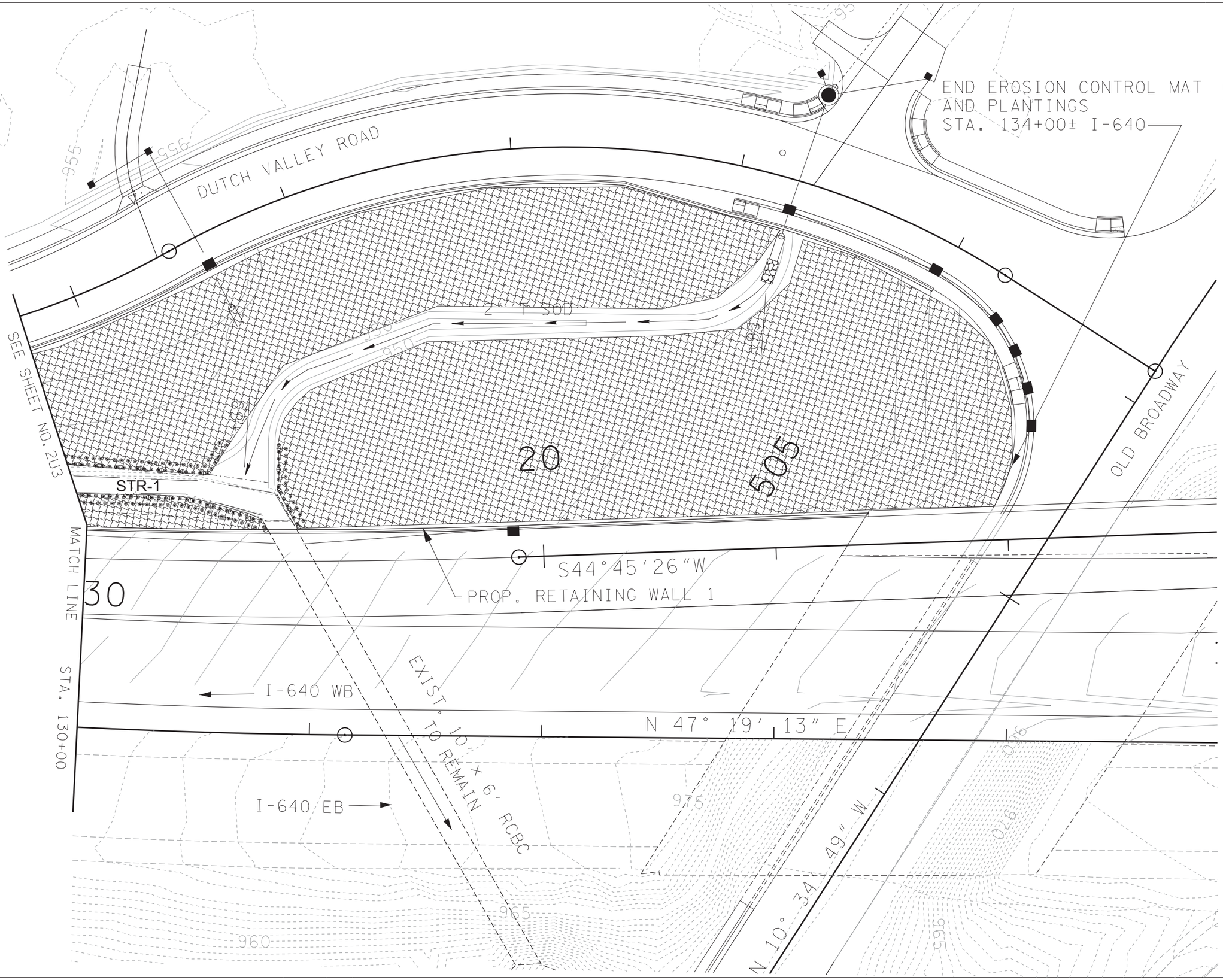
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-I-640-7(161)	2U4

KNOX CO. I-640
47008-3150-44 (CONST.)



UNOFFICIAL SET

NOT FOR BIDDING

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.0001 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STREAM 1
PLANTING LAYOUT

STA. 130+00 TO STA. 134+00

SCALE: 1"=20'

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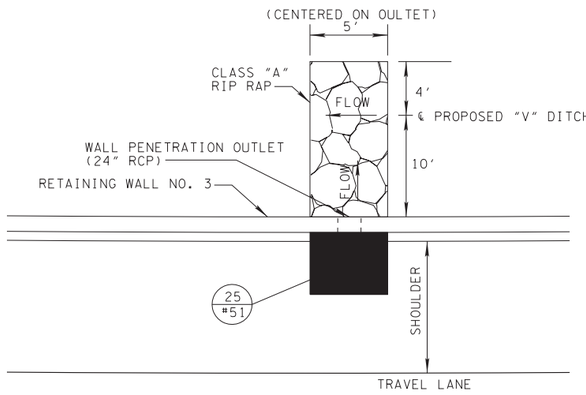
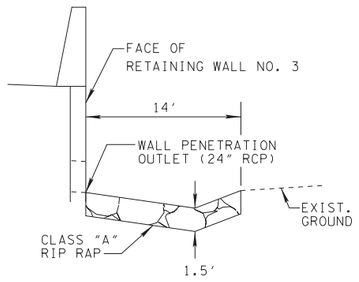
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	NH-I-640-7(161)	2V

KNOX CO. I-640
47008-3150-44 (CONST.)



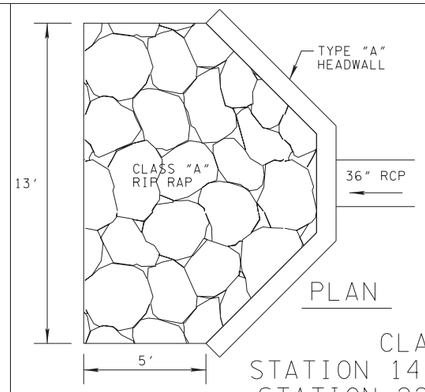
PLAN



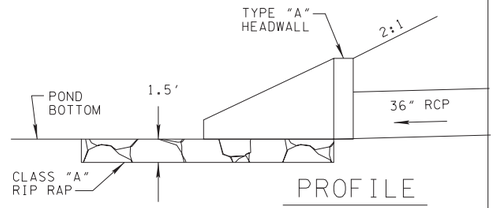
PROFILE

CLASS "A" RIP RAP APRON
INSTALLATION BELOW RETAINING WALL PENETRATION OULTET
(DRAINAGE STRUCTURE NUMBER 25)

(N.T.S.)



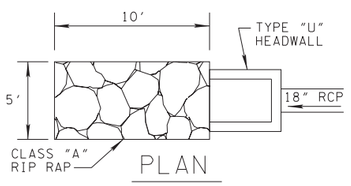
PLAN



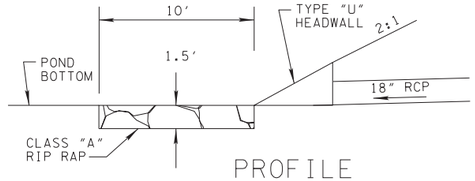
PROFILE

CLASS "A" RIP RAP APRON
STATION 14+72.00, 50.0' RIGHT ℄ RAMP 3
STATION 22+00.00, 80.0' LEFT ℄ RAMP 3

(N.T.S.)



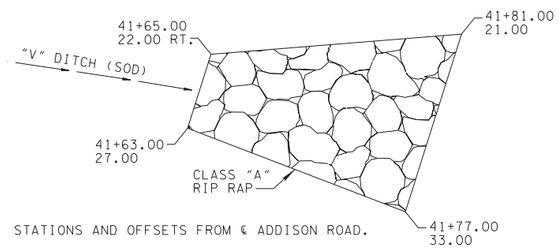
PLAN



PROFILE

CLASS "A" RIP RAP APRON
STATION 16+00.00, 34.0' RIGHT ℄ RAMP 2
STATION 8+25.00, 25.0' RIGHT ℄ DUTCH VALLEY RD.

(N.T.S.)



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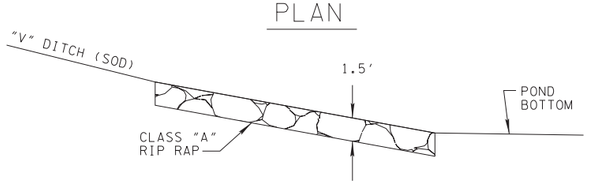
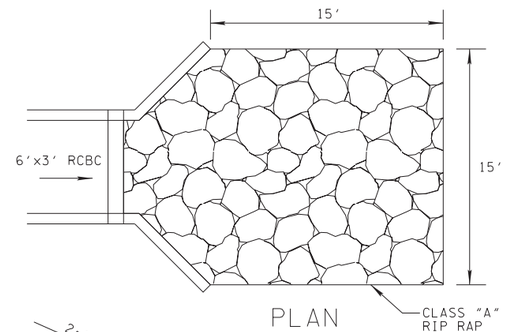


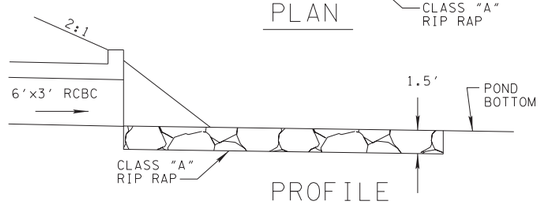
PROFILE

CLASS "A" RIP RAP APRON
STA. 41+63.00 TO STA. 41+81.00, RT.
℄ ADDISON ROAD

(N.T.S.)



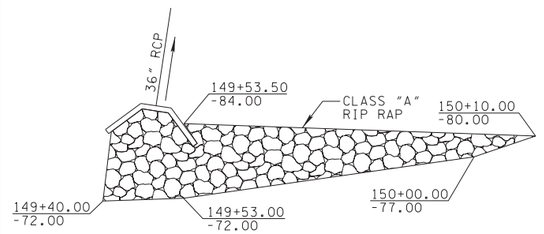
PLAN



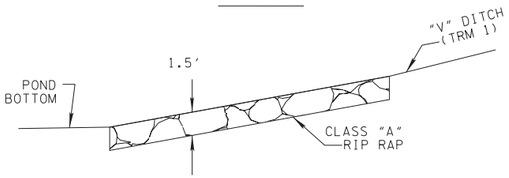
PROFILE

CLASS "A" RIP RAP APRON
STA. 42+66.00, 15.0' RT. ℄ ADDISON ROAD

(N.T.S.)



PLAN



PROFILE

CLASS "A" RIP RAP APRON
STA. 149+40.00 TO STA. 150+10.00, LT.
℄ I-640

(N.T.S.)

UNOFFICIAL SET

NOT FOR BIDDING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-I-640-7(161)	20
CONST.	2015	NH-I-640-7(161)	20

KNOX CO. I-640
47008-3150-44 (CONST.)

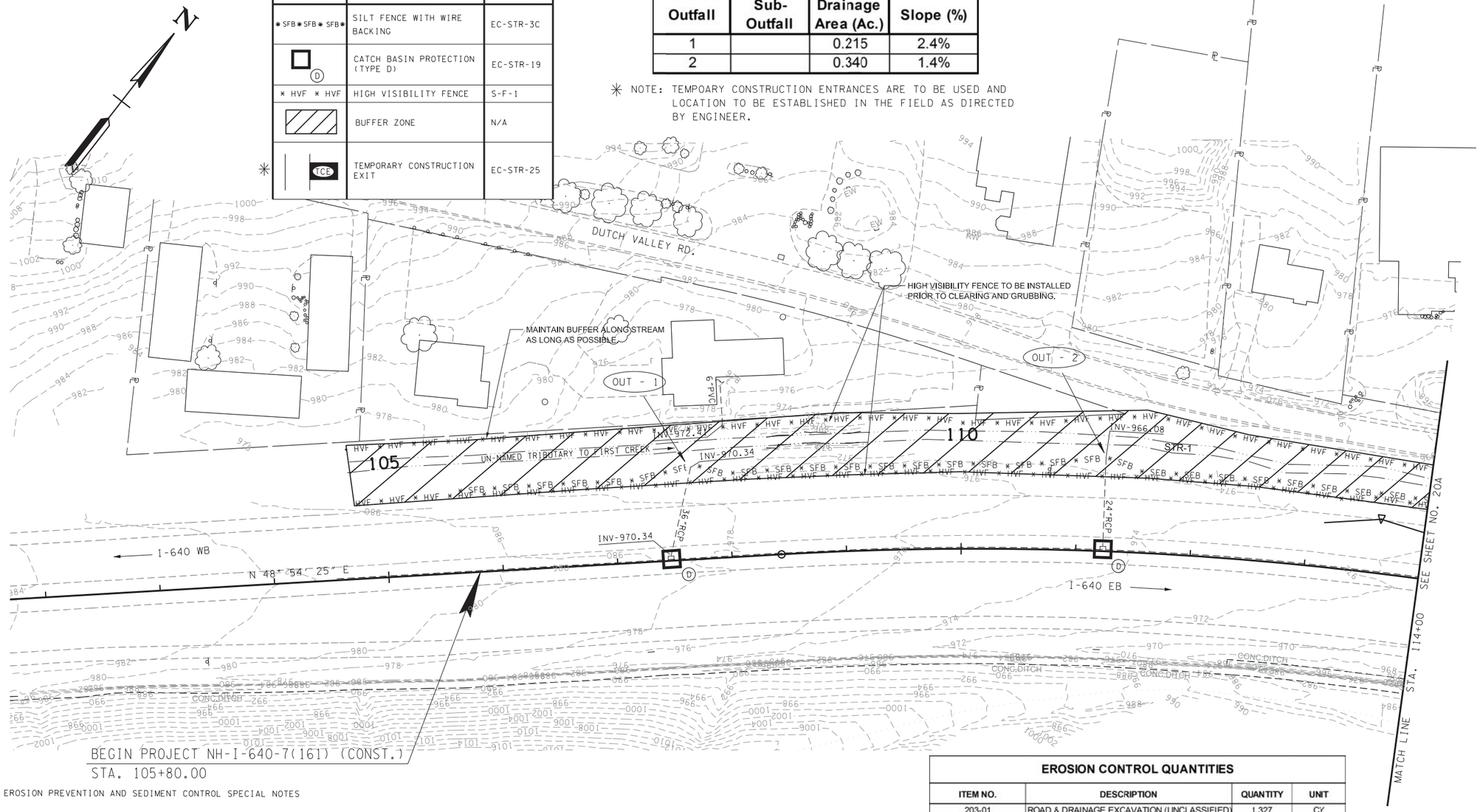
EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SFB * SFB * SFB *	SILT FENCE WITH WIRE BACKING	EC-STR-3C
D	CATCH BASIN PROTECTION (TYPE D)	EC-STR-19
* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1
	BUFFER ZONE	N/A
* TCE	TEMPORARY CONSTRUCTION EXIT	EC-STR-25

EXCEPT AS OTHERWISE STATED, 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.

Outfall	Sub-Outfall	Drainage Area (Ac.)	Slope (%)
1		0.215	2.4%
2		0.340	1.4%

* NOTE: TEMPOARY CONSTRUCTION ENTRANCES ARE TO BE USED AND LOCATION TO BE ESTABLISHED IN THE FIELD AS DIRECTED BY ENGINEER.



BEGIN PROJECT NH-I-640-7(161) (CONST.)
STA. 105+80.00

EROSION PREVENTION AND SEDIMENT CONTROL SPECIAL NOTES

STREAM/WETLAND

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

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

KNOWN EXCEPTIONAL TENNESSEE WATERS

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

(4) FOR PROJECTS THAT DISCHARGE INTO KNOWN EXCEPTIONAL TENNESSEE WATERS OR WATERS IMPAIRED BY SILTATION, A 60 FOOT NATURAL RIPARIAN BUFFER ZONE ADJACENT TO AND ON BOTH SIDES OF THE RECEIVING STREAM WITH THIS DESIGNATION SHALL BE PRESERVED, TO THE MAXIMUM EXTENT PRACTICABLE, DURING CONSTRUCTION ACTIVITIES AT THE SITE. BUFFER ZONES ARE NOT SEDIMENT CONTROL MEASURES AND SHOULD NOT BE RELIED UPON AS PRIMARY SEDIMENT CONTROL MEASURES. THE RIPARIAN BUFFER ZONE SHALL BE ESTABLISHED BETWEEN THE TOP OF THE STREAM BANK AND THE DISTURBED CONSTRUCTION AREA. THE 60 FOOT CRITERION FOR THE WIDTH OF THE BUFFER ZONE CAN BE ESTABLISHED ON AN AVERAGE WIDTH BASIS AT A PROJECT, AS LONG AS THE MINIMUM WIDTH OF THE BUFFER ZONE IS MORE THAN 30 FEET AT ANY MEASURED LOCATION. EVERY ATTEMPT SHALL BE MADE FOR CONSTRUCTION ACTIVITIES NOT TO TAKE PLACE WITHIN THE BUFFER ZONES. BEST MANAGEMENT PRACTICES (BMPS) PROVIDING EQUIVALENT PROTECTION AS THE NATURAL RIPARIAN ZONE MAY BE USED. A JUSTIFICATION FOR USE AND DESIGN EQUIVALENCY SHALL BE DOCUMENTED WITHIN THE SWPPP. THE ENVIRONMENTAL AND ROADWAY DESIGN DIVISIONS SHALL REVIEW AND APPROVE THIS REVISION OF THE SWPPP BEFORE DISTURBANCE OF THE SITE PROCEEDS, UNLESS PREVIOUSLY EXEMPT IN THE NPDES CONSTRUCTION GENERAL PERMIT. WHERE ISSUED, ARAP/401 REQUIREMENTS WILL PREVAIL IF IN CONFLICT WITH THESE BUFFER ZONE REQUIREMENTS.

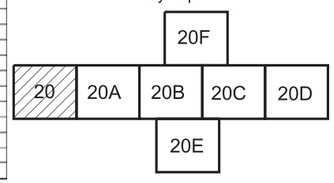
EROSION CONTROL QUANTITIES

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
203-01	ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED)	1,327	CY
209-02.03	8" TEMPORARY SLOPE DRAIN	2,640	L.F.
209-05	SEDIMENT REMOVAL	5,000	CY
209-08.02	TEMPORARY SILT FENCE (WITH BACKING)	23,795	LF
209-08.03	TEMPORARY SILT FENCE (WITHOUT BACKING)	1,306	LF
209-08.07	ROCK CHECK DAM	137	EACH
209-08.08	ENHANCED ROCK CHECK DAM	42	EACH
209-09.01	SANDBAGS	500	EACH
209-09.03	SEDIMENT FILTER BAG (15'X15')	5	EACH
209-20.03	POLYETHYLENE SHEETING (6 MIL. MINIMUM)	33	SY
209-40.30	CATCH BASIN PROTECTION (TYPE A)	9	EACH
209-40.33	CATCH BASIN PROTECTION (TYPE D)	66	EACH
209-40.34	CATCH BASIN PROTECTION (TYPE E)	6	EACH
209-40.41	CATCH BASIN FILTER ASSEMBLY (TYPE 1)	22	EACH
209-40.43	CATCH BASIN FILTER ASSEMBLY (TYPE 3)	30	EACH
209-40.45	CATCH BASIN FILTER ASSEMBLY (TYPE 5)	4	EACH
209-40.46	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	34	EACH
209-40.47	CATCH BASIN FILTER ASSEMBLY (TYPE 7)	2	EACH
209-65.03	TEMPORARY DIVERSION CHANNEL	180	LF
209-65.04	TEMPORARY IN STREAM DIVERSION	144	LF
303-10.01	MINERAL AGGREGATE (SIZE 57)	884	TON
621-03.07	48" TEMPORARY DRAINAGE PIPE	85	LF
707-08.11	HIGH VISIBILITY CONSTRUCTION FENCE	15,620	LF
709-05.05	MACHINED RIP-RAP (CLASS A-3)	1,000	TON
709-05.06	MACHINED RIP-RAP (CLASS A-1)	2,172	TON
709-05.08	MACHINED RIP-RAP (CLASS B)	600	TON
740-10.03	GEOTEXTILE (TYPE III)(EROSION CONTROL)	7,196	SY
740-11.03	TEMPORARY SEDIMENT TUBE (18 IN)	15,995	LF

UNOFFICIAL SET
NOT FOR BIDDING

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.0001 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

Keymap



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL CLEARING & GRUBBING
I-640
STA. 105+80 TO STA. 114+00
SCALE: 1" = 50'

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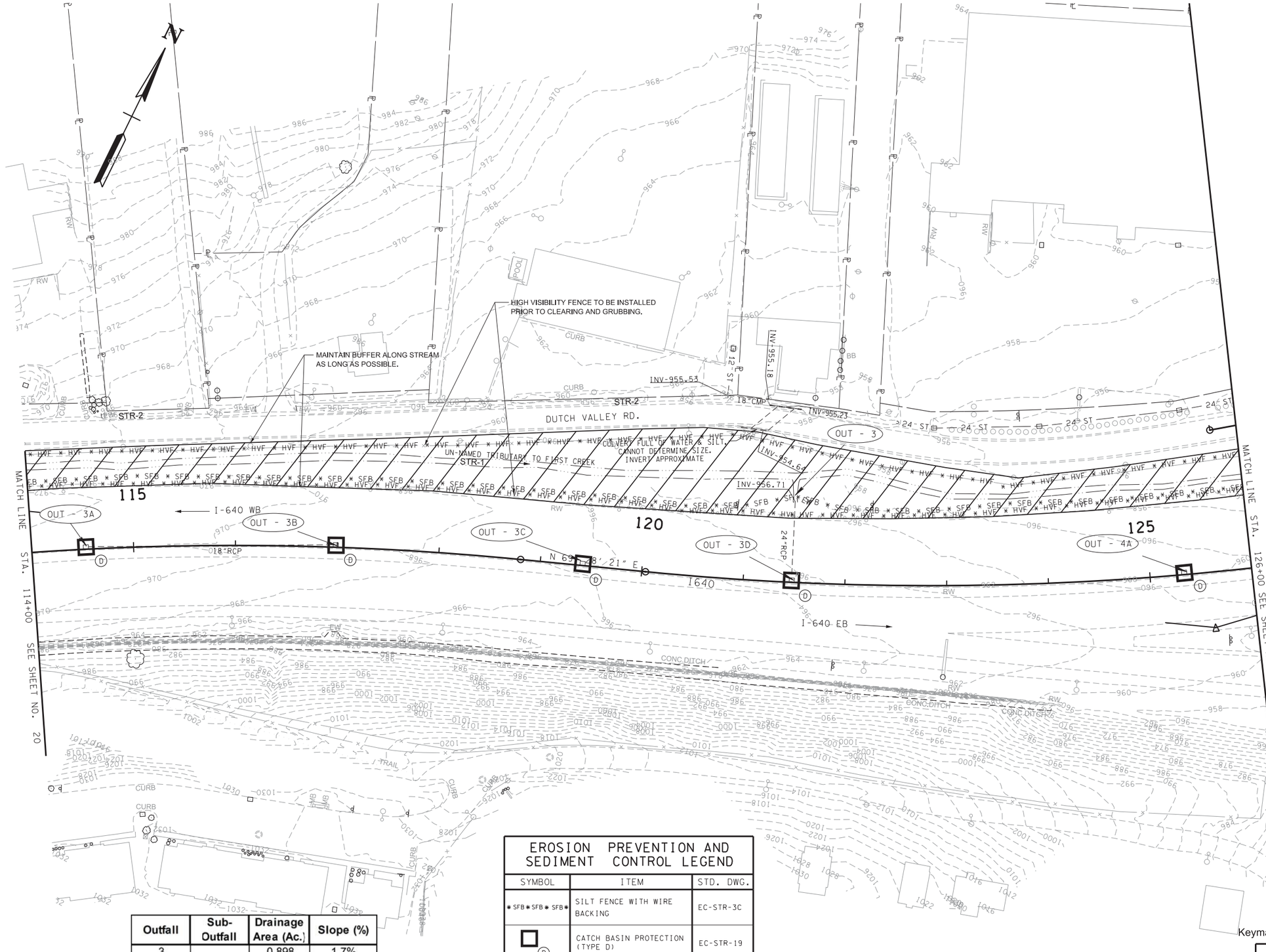
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-I-640-7(161)	20A
CONST.	2015	NH-I-640-7(161)	20A

KNOX CO. I-640
47008-3150-44 (CONST.)

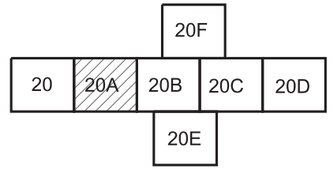


Outfall	Sub-Outfall	Drainage Area (Ac.)	Slope (%)
3		0.898	1.7%
	3A	0.345	1.1%
	3B	0.268	1.5%
	3C	0.235	1.3%
	3D	0.05	1.1%
	4A	0.097	1.4%

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SFB * SFB * SFB *	SILT FENCE WITH WIRE BACKING	EC-STR-3C
D	CATCH BASIN PROTECTION (TYPE D)	EC-STR-19
* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1
	BUFFER ZONE	N/A

Keymap



UNOFFICIAL SET
NOT FOR BIDDING

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL CLEARING & GRUBBING
I-640
STA. 114+00 TO STA. 126+00
SCALE: 1"= 50'

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

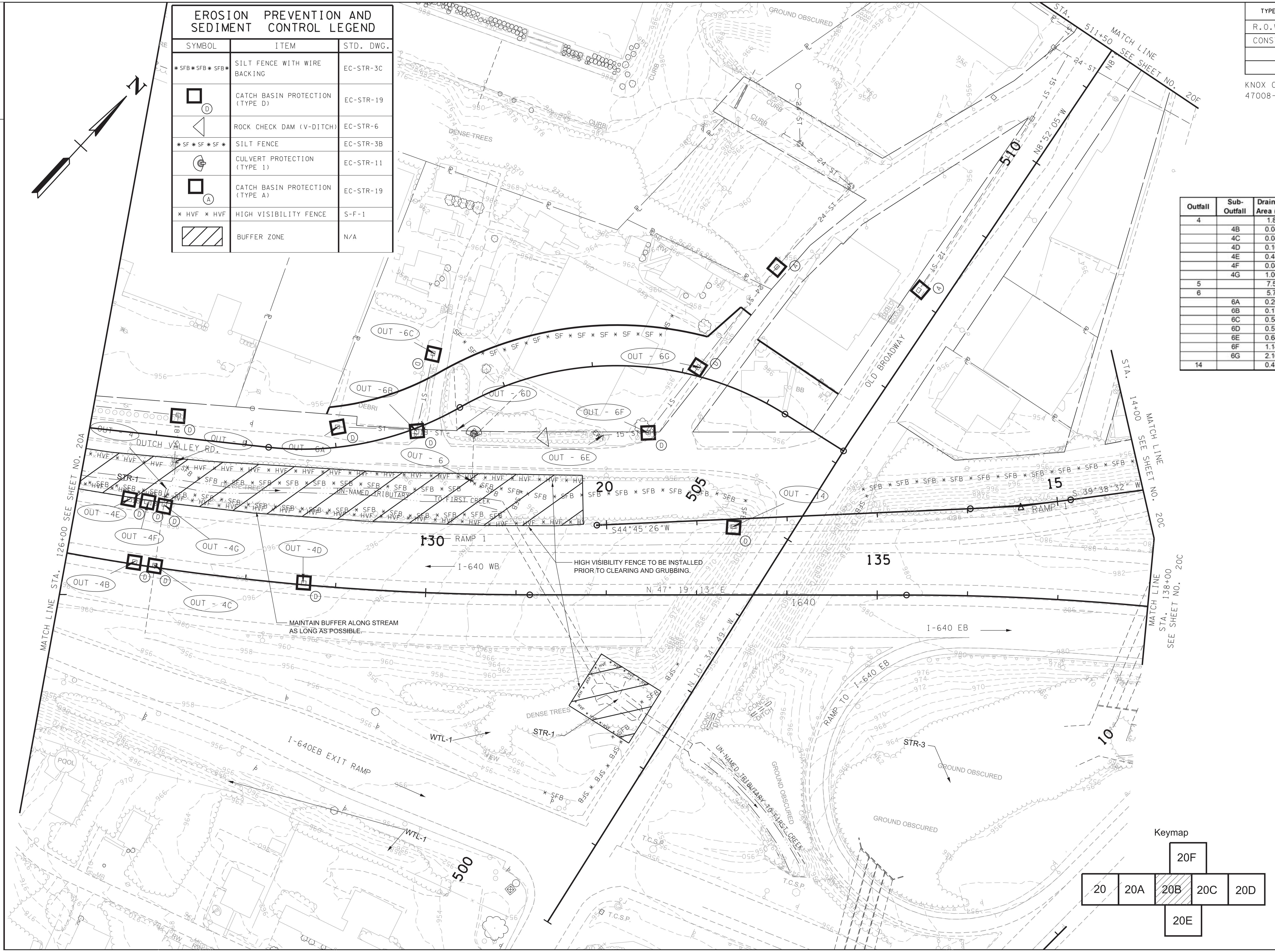
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-I-640-7(161)	20B
CONST.	2015	NH-I-640-7(161)	20B

KNOX CO. I-640
47008-3150-44 (CONST.)

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SFB * SFB * SFB *	SILT FENCE WITH WIRE BACKING	EC-STR-3C
□ (D)	CATCH BASIN PROTECTION (TYPE D)	EC-STR-19
◁	ROCK CHECK DAM (V-DITCH)	EC-STR-6
* SF * SF * SF *	SILT FENCE	EC-STR-3B
	CULVERT PROTECTION (TYPE 1)	EC-STR-11
□ (A)	CATCH BASIN PROTECTION (TYPE A)	EC-STR-19
* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1
	BUFFER ZONE	N/A

Outfall	Sub-Outfall	Drainage Area (Ac.)	Slope (%)
4		1.85	0.8%
	4B	0.044	0.4%
	4C	0.043	0.8%
	4D	0.107	2.9%
	4E	0.455	0.8%
	4F	0.041	0.3%
	4G	1.063	0.8%
5		7.55	0.800%
6		5.75	0.890%
	6A	0.266	2.0%
	6B	0.171	2.1%
	6C	0.544	0.5%
	6D	0.516	2.8%
	6E	0.641	
	6F	1.143	
	6G	2.166	
14		0.417	2.0%



UNOFFICIAL SET

NOT FOR BIDDING

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Keymap

	20F			
20	20A	20B	20C	20D
		20E		

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL CLEARING & GRUBBING

I-640, OLD BWAY

STA. 126+00 TO STA. 138+00

SCALE: 1"= 50'

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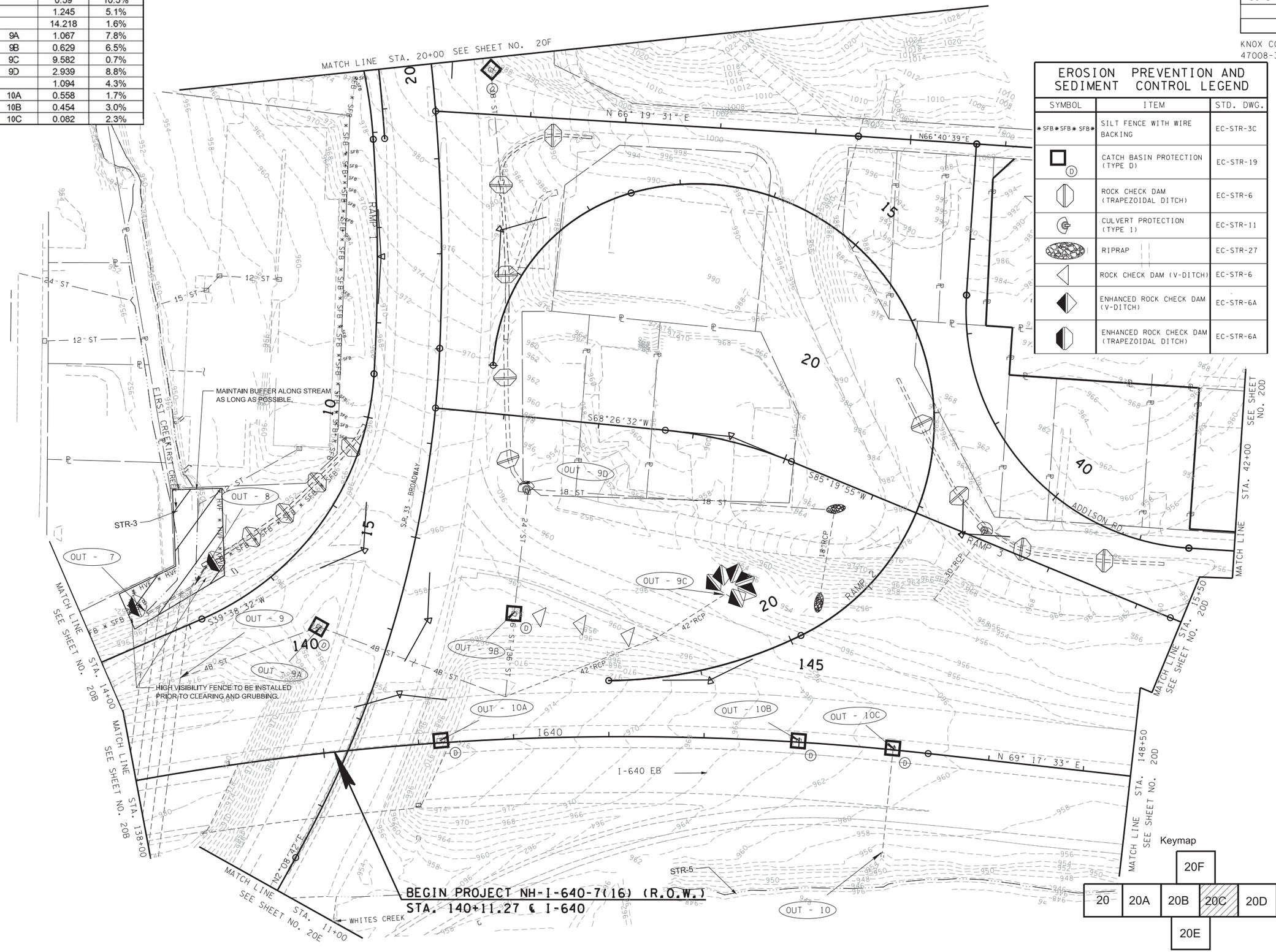
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

Outfall	Sub-Outfall	Drainage Area (Ac.)	Slope (%)
7		0.59	10.5%
8		1.245	5.1%
9		14.218	1.6%
	9A	1.067	7.8%
	9B	0.629	6.5%
	9C	9.582	0.7%
	9D	2.939	8.8%
10		1.094	4.3%
	10A	0.558	1.7%
	10B	0.454	3.0%
	10C	0.082	2.3%

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-I-640-7(161)	20C
CONST.	2015	NH-I-640-7(161)	20C

KNOX CO. I-640
47008-3150-44 (CONST.)



EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
SFB SFB SFB	SILT FENCE WITH WIRE BACKING	EC-STR-3C
D	CATCH BASIN PROTECTION (TYPE D)	EC-STR-19
	ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6
	CULVERT PROTECTION (TYPE 1)	EC-STR-11
	RIPRAP	EC-STR-27
	ROCK CHECK DAM (V-DITCH)	EC-STR-6
	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
	ENHANCED ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6A

N

UNOFFICIAL SET

NOT FOR BIDDING

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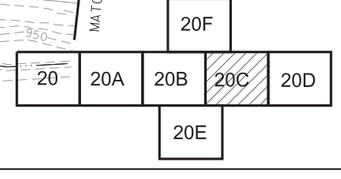
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL CLEARING & GRUBBING
I-640
STA. 138+00 TO STA. 148+50
SCALE: 1"= 50'

Keymap



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

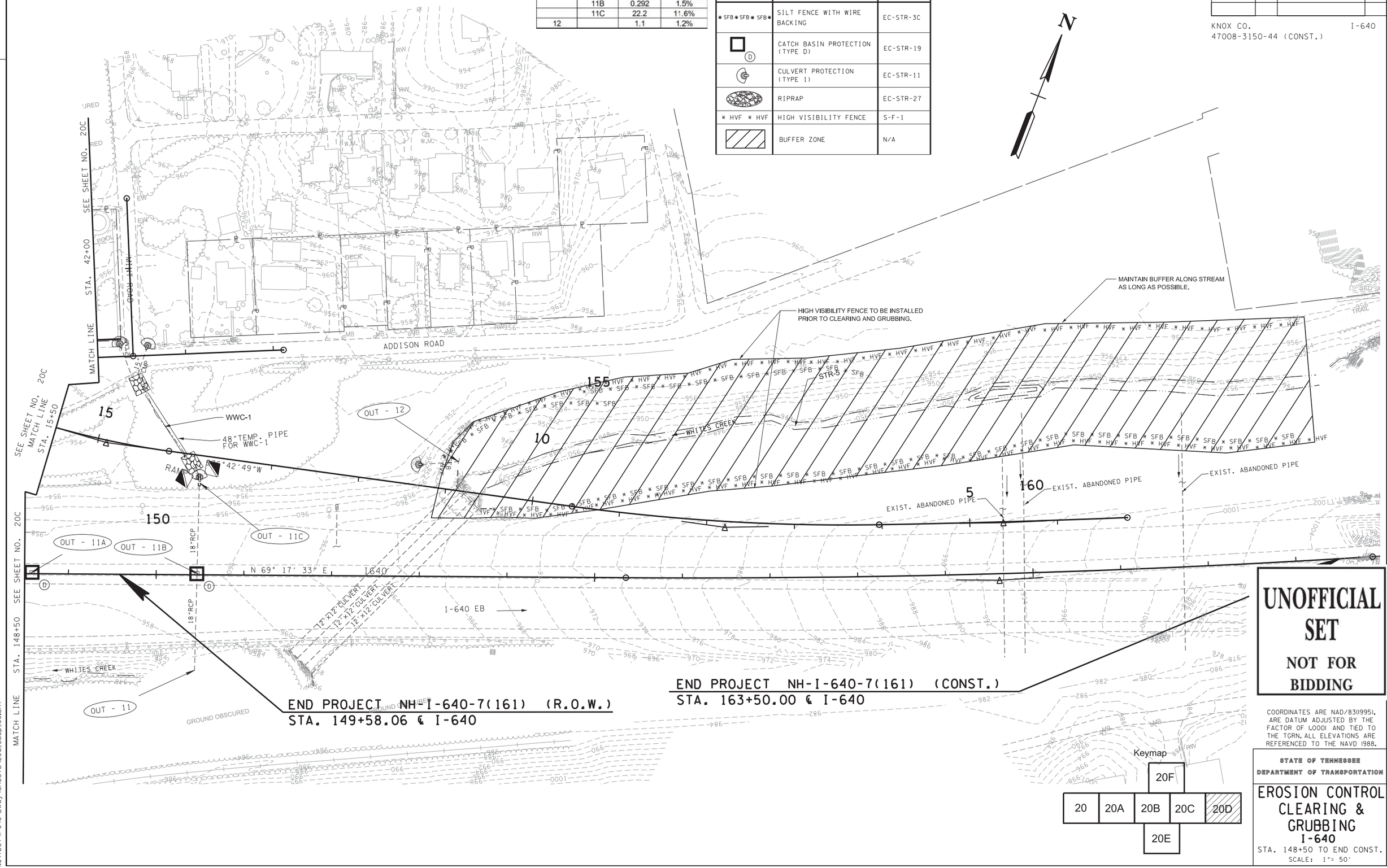
Outfall	Sub-Outfall	Drainage Area (Ac.)	Slope (%)
11		22.607	0.8%
	11A	0.111	0.2%
	11B	0.292	1.5%
	11C	22.2	11.6%
12		1.1	1.2%

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SFB * SFB * SFB *	SILT FENCE WITH WIRE BACKING	EC-STR-3C
D	CATCH BASIN PROTECTION (TYPE D)	EC-STR-19
	CULVERT PROTECTION (TYPE 1)	EC-STR-11
	RIPRAP	EC-STR-27
* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1
	BUFFER ZONE	N/A

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-I-640-7(161)	20D
CONST.	2015	NH-I-640-7(161)	20D

KNOX CO. I-640
47008-3150-44 (CONST.)



UNOFFICIAL SET
NOT FOR BIDDING

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Keymap

		20F		
20	20A	20B	20C	20D
		20E		

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL CLEARING & GRUBBING
I-640
STA. 148+50 TO END CONST.
SCALE: 1"= 50'

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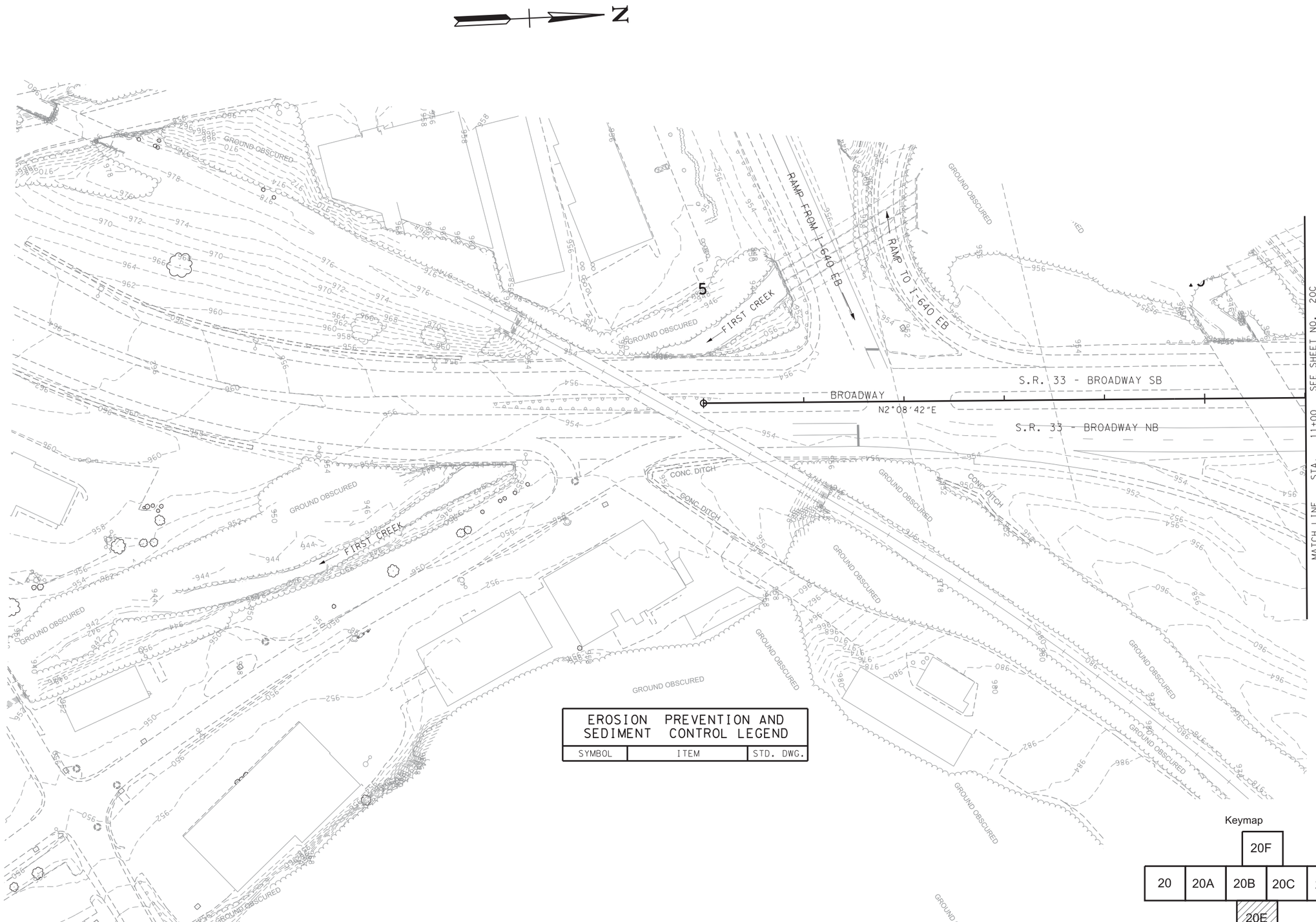
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-I-640-7(161)	20E
CONST.	2015	NH-I-640-7(161)	20E

KNOX CO. I-640
47008-3150-44 (CONST.)



EROSION PREVENTION AND SEDIMENT CONTROL LEGEND		
SYMBOL	ITEM	STD. DWG.

Keymap

		20F		
20	20A	20B	20C	20D
		20E		

UNOFFICIAL SET
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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL CLEARING & GRUBBING
S.R. 33

SCALE: 1"= 50'

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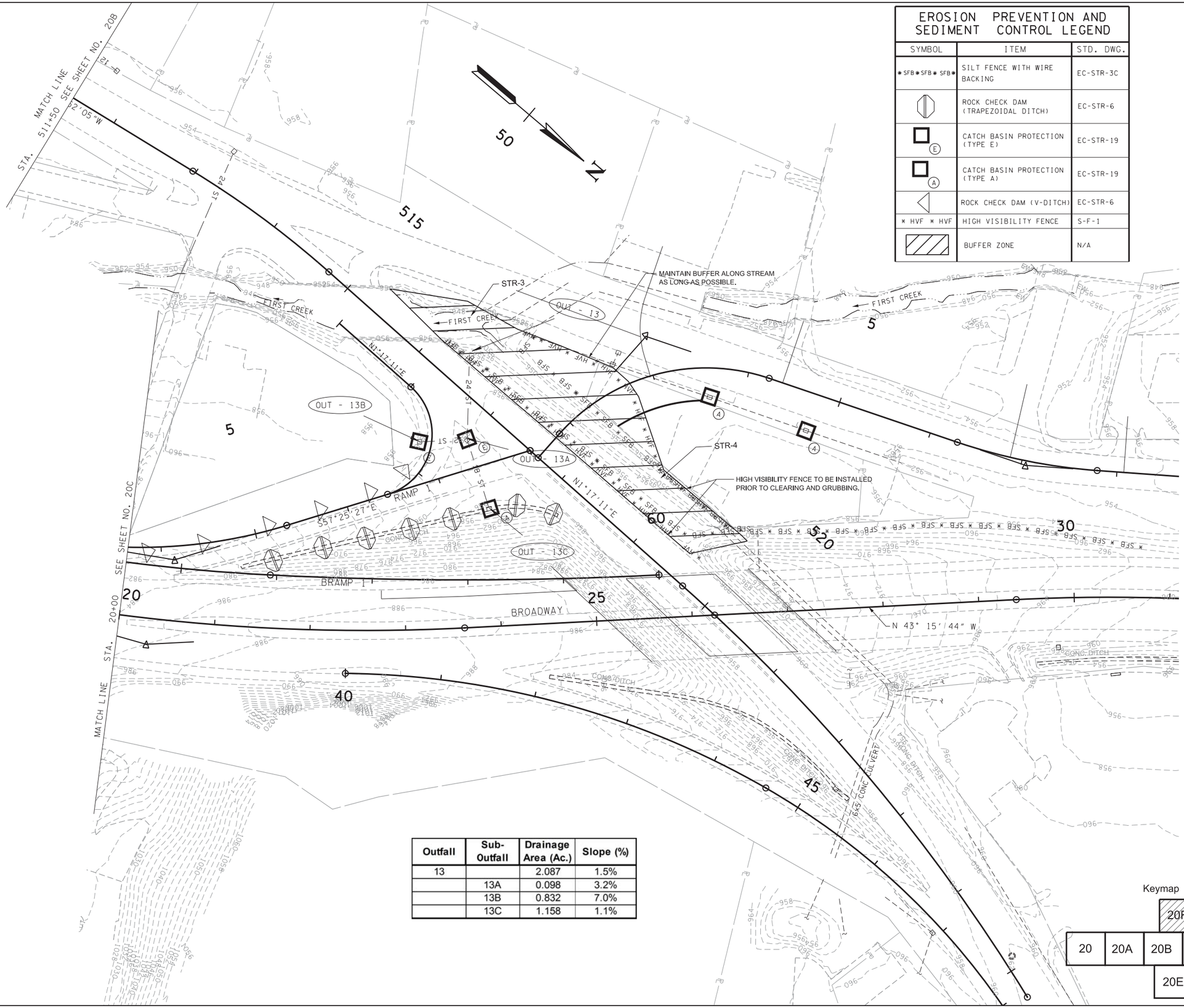
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-I-640-7(161)	20F
CONST.	2015	NH-I-640-7(161)	20F

KNOX CO. I-640
47008-3150-44 (CONST.)

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SFB * SFB * SFB *	SILT FENCE WITH WIRE BACKING	EC-STR-3C
	ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6
E	CATCH BASIN PROTECTION (TYPE E)	EC-STR-19
A	CATCH BASIN PROTECTION (TYPE A)	EC-STR-19
	ROCK CHECK DAM (V-DITCH)	EC-STR-6
* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1
	BUFFER ZONE	N/A



Outfall	Sub-Outfall	Drainage Area (Ac.)	Slope (%)
13		2.087	1.5%
	13A	0.098	3.2%
	13B	0.832	7.0%
	13C	1.158	1.1%

UNOFFICIAL SET
NOT FOR BIDDING

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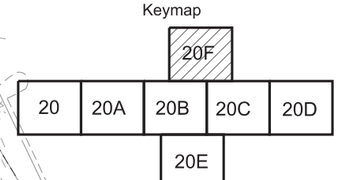
Keymap



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL CLEARING & GRUBBING
S.R. 33
STA. 20+00 TO STA. 30+06.94
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-640-7(161)	20G
CONST.	2015	NH-I-640-7(161)	20G

KNOX CO. I-640
47008-3150-44 (CONST.)

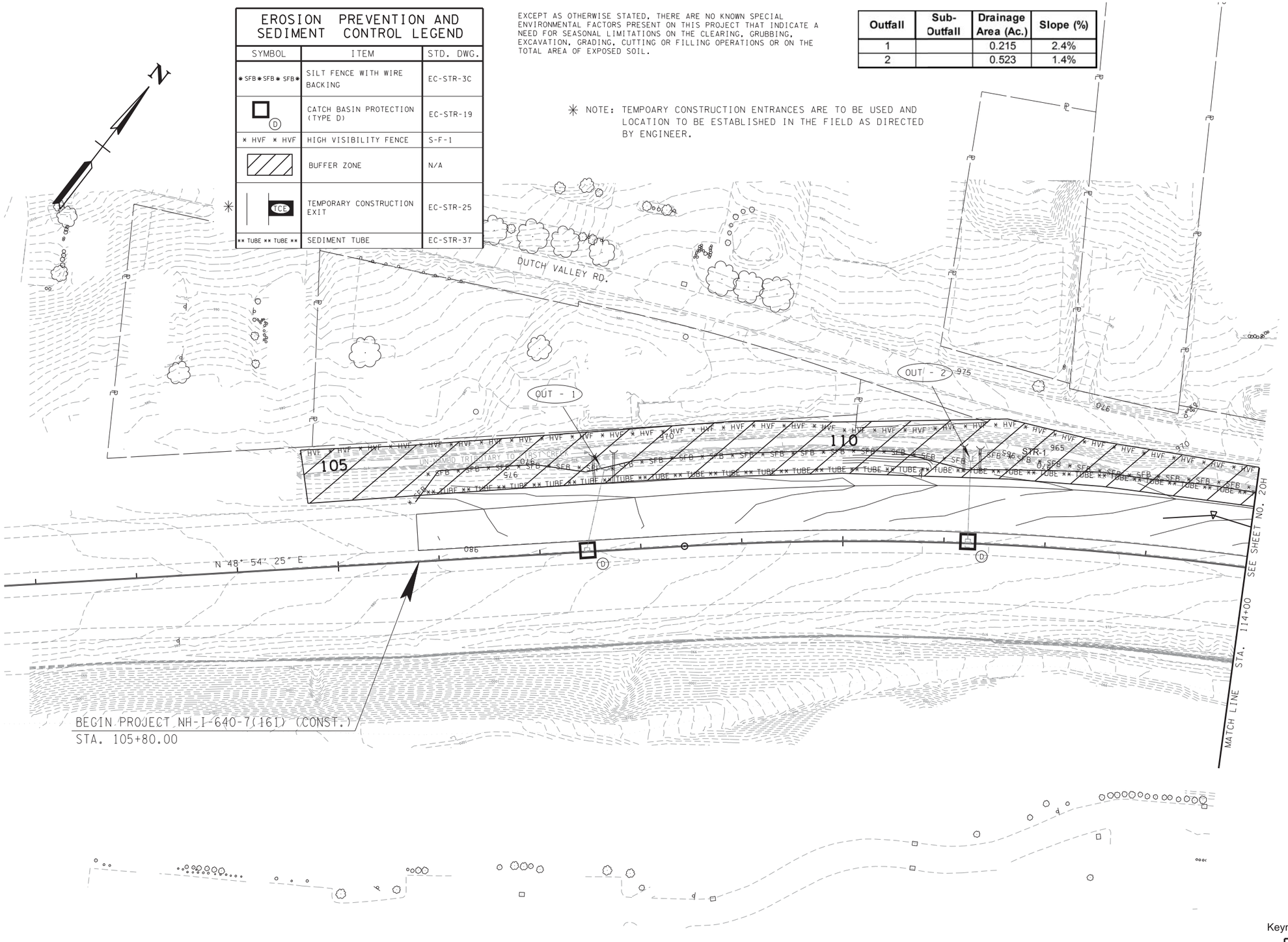
EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SFB * SFB * SFB *	SILT FENCE WITH WIRE BACKING	EC-STR-3C
D	CATCH BASIN PROTECTION (TYPE D)	EC-STR-19
* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1
	BUFFER ZONE	N/A
TCE	TEMPORARY CONSTRUCTION EXIT	EC-STR-25
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37

EXCEPT AS OTHERWISE STATED, 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.

Outfall	Sub-Outfall	Drainage Area (Ac.)	Slope (%)
1		0.215	2.4%
2		0.523	1.4%

✳ NOTE: TEMPOARY CONSTRUCTION ENTRANCES ARE TO BE USED AND LOCATION TO BE ESTABLISHED IN THE FIELD AS DIRECTED BY ENGINEER.



Keymap

	20M			
20G	20H	20I	20J	20K
	20L			

UNOFFICIAL SET
NOT FOR BIDDING

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION AND SEDIMENT CONTROL STAGE I

I-640

STA. 105+80 TO STA. 114+00
SCALE: 1" = 50'

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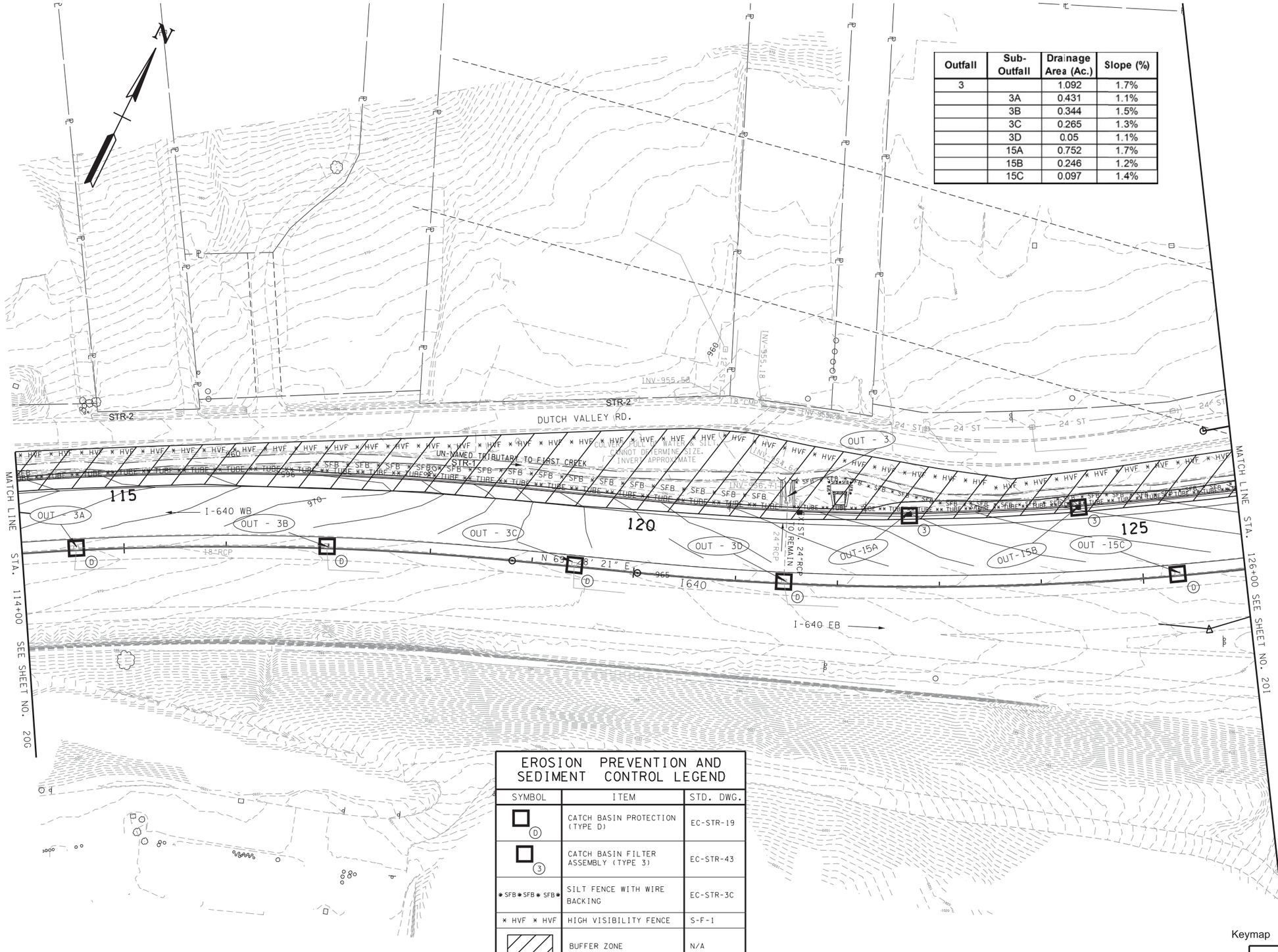
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-I-640-7(161)	20H
CONST.	2015	NH-I-640-7(161)	20H

KNOX CO. I-640
47008-3150-44 (CONST.)

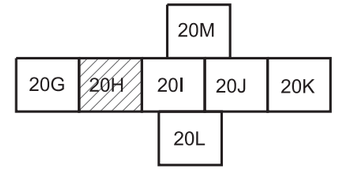
Outfall	Sub-Outfall	Drainage Area (Ac.)	Slope (%)
3		1.092	1.7%
	3A	0.431	1.1%
	3B	0.344	1.5%
	3C	0.265	1.3%
	3D	0.05	1.1%
	15A	0.752	1.7%
	15B	0.246	1.2%
	15C	0.097	1.4%



EROSION PREVENTION AND SEDIMENT CONTROL LEGEND		
SYMBOL	ITEM	STD. DWG.
(D)	CATCH BASIN PROTECTION (TYPE D)	EC-STR-19
(3)	CATCH BASIN FILTER ASSEMBLY (TYPE 3)	EC-STR-43
* SFB * SFB * SFB *	SILT FENCE WITH WIRE BACKING	EC-STR-3C
* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1
	BUFFER ZONE	N/A
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37
	PERMANENT SLOPE DRAIN PIPE (SHOW SIZE)	EC-STR-29
	SEDIMENT FILTER BAG	EC-STR-2

NOTE: IF THE RETAINING WALL AREA NEEDS TO BE DEWATERED, SEDIMENT FILTER BAG(S) WILL NEED TO BE ST UP AND USED. SEE STD. DWG. EC-STR-2.

Keymap



UNOFFICIAL SET
NOT FOR BIDDING

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.0001 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION AND SEDIMENT CONTROL STAGE I
I-640
STA. 114+00 TO STA. 126+00
SCALE: 1"= 50'

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

Outfall	Sub-Outfall	Drainage Area (Ac.)	Slope (%)
5		7.55	0.8%
15		4.573	4.1%
	15D	0.254	0.3%
	15E	0.092	0.5%
	15F	0.044	0.4%
	15G	0.043	0.8%
	15H	1.063	0.8%
	15I	0.098	0.5%
	15J	0.388	2.3%
	15K	0.107	2.9%
	15L	0.322	4.5%
23		0.393	5.0%
	23A	0.164	3.9%
	23B	0.216	4.0%
24		6.493	0.6%
	24A	1.184	0.8%
	24B	3.32	0.5%
	24C	0.743	3.6%
	24D	0.265	2.4%
	24E	0.077	0.5%
	24F	0.562	0.9%
	24G	0.535	8.0%
	24H	0.173	3.9%
	24I	0.959	3.0%
	24J	0.138	1.3%
	24K	0.044	2.6%
	24L	0.034	1.3%
	24M	0.001	0.5%
	24N	0.099	0.1%
	24O	0.001	0.1%
25		0.262	1.2%

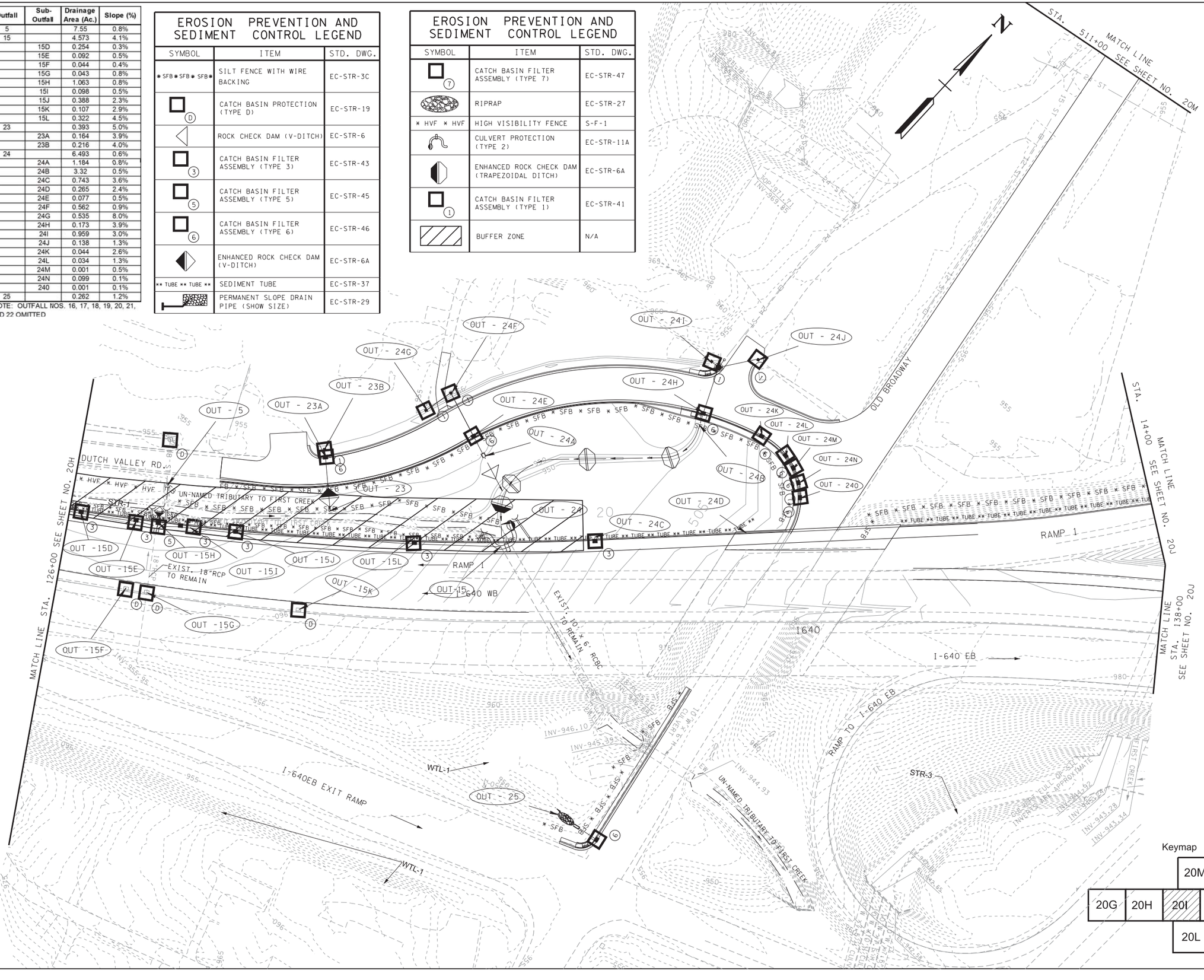
*NOTE: OUTFALL NOS. 16, 17, 18, 19, 20, 21, AND 22 OMITTED

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SFB * SFB * SFB *	SILT FENCE WITH WIRE BACKING	EC-STR-3C
(D)	CATCH BASIN PROTECTION (TYPE D)	EC-STR-19
	ROCK CHECK DAM (V-DITCH)	EC-STR-6
(3)	CATCH BASIN FILTER ASSEMBLY (TYPE 3)	EC-STR-43
(5)	CATCH BASIN FILTER ASSEMBLY (TYPE 5)	EC-STR-45
(6)	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EC-STR-46
	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37
	PERMANENT SLOPE DRAIN PIPE (SHOW SIZE)	EC-STR-29

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
(7)	CATCH BASIN FILTER ASSEMBLY (TYPE 7)	EC-STR-47
	RIPRAP	EC-STR-27
* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1
	CULVERT PROTECTION (TYPE 2)	EC-STR-11A
	ENHANCED ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6A
(1)	CATCH BASIN FILTER ASSEMBLY (TYPE 1)	EC-STR-41
	BUFFER ZONE	N/A



TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-I-640-7(161)	20I
CONST.	2015	NH-I-640-7(161)	20I

KNOX CO. I-640
47008-3150-44 (CONST.)

UNOFFICIAL SET
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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION AND SEDIMENT CONTROL STAGE I
I-640, OLD BWAY
STA. 126+00 TO STA. 138+00
SCALE: 1" = 50'

Keymap

	20M			
20G	20H	20I	20J	20K
	20L			

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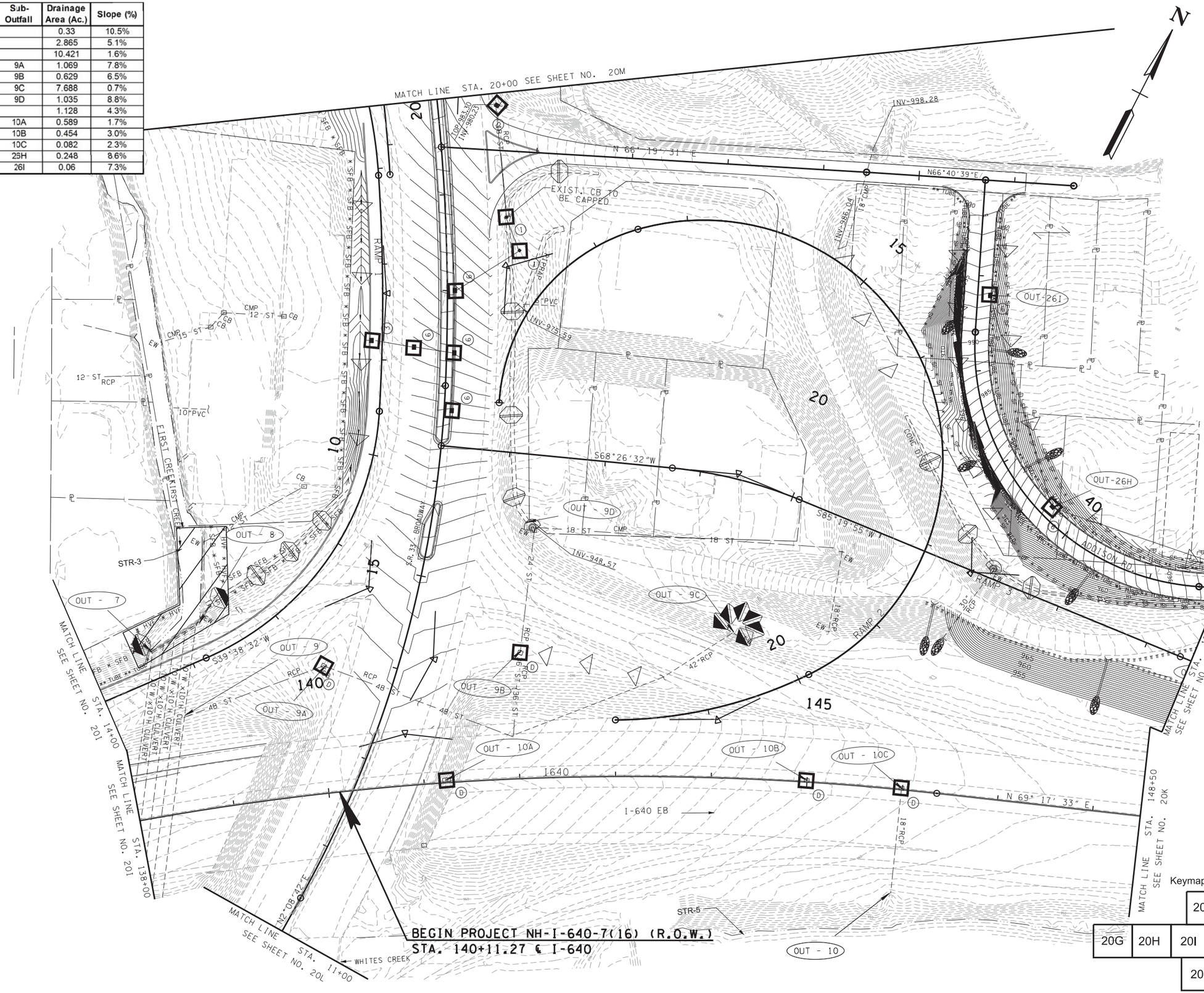
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

Outfall	Sub-Outfall	Drainage Area (Ac.)	Slope (%)
7		0.33	10.5%
8		2.865	5.1%
9		10.421	1.6%
	9A	1.069	7.8%
	9B	0.629	6.5%
	9C	7.688	0.7%
	9D	1.035	8.8%
10		1.128	4.3%
	10A	0.589	1.7%
	10B	0.454	3.0%
	10C	0.082	2.3%
	25H	0.248	8.6%
	26I	0.06	7.3%

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-I-640-7(161)	20J
CONST.	2015	NH-I-640-7(161)	20J

KNOX CO. I-640
47008-3150-44 (CONST.)



EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
	ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6
	ROCK CHECK DAM (V-DITCH)	EC-STR-6
	CULVERT PROTECTION (TYPE 1)	EC-STR-11
1	CATCH BASIN FILTER ASSEMBLY (TYPE 1)	EC-STR-41
3	CATCH BASIN FILTER ASSEMBLY (TYPE 3)	EC-STR-43
6	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EC-STR-46
* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1
	ENHANCED ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6A
	RIPRAP	EC-STR-27
	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
	PERMANENT SLOPE DRAIN PIPE (SHOW SIZE)	EC-STR-29
TTTTTTTTT	TEMPORARY BERM	EC-STR-27
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37
* SFB * SFB * SFB *	SILT FENCE WITH WIRE BACKING	EC-STR-3C
D	CATCH BASIN PROTECTION (TYPE D)	EC-STR-19

UNOFFICIAL SET
NOT FOR BIDDING

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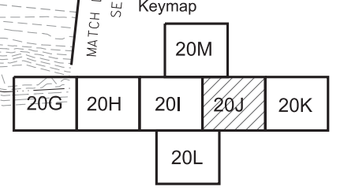
Keymap



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION AND SEDIMENT CONTROL STAGE I
I-640
STA. 138+00 TO STA. 148+50
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-640-7(161)	20K
CONST.	2015	NH-I-640-7(161)	20K

KNOX CO. I-640
47008-3150-44 (CONST.)

* SEE SHEET 21 FOR CURVE DATA

GENERAL PHASING NOTES FOR RELOCATION OF WWC-1.

1. DURING THE CLEARING AND GRUBBING STAGE, INSTALL TEMPORARY DIVERSION PIPE FROM OUTFALL OF EXIST. PIPES UNDER ADDISON DRIVE TO INLET OF 18" PIPE UNDER I-640.
2. BEGIN CONSTRUCTION OF THE STORM SEWER AND BOX CULVERT ON ADDISON DRIVE, LEAVING EXIST. PIPES IN PLACE AS LONG AS POSSIBLE. BEGIN GRADING OF PROP. DITCH TO WHITES CREEK.
3. ONCE NEW DITCH AND GRADING HAS BEEN STABILIZED COMPLETE CONSTRUCTION OF NEW DRAINAGE STRUCTURES ON ADDISON AND DIVERT STORM WATER INTO NEW STRUCTURES AND INTO NEW DITCH.
4. REMOVE TEMPORARY DIVERSION PIPE AND BEGIN GRADING OF RAMP 3 AND CONSTRUCTION OF WALL 9.

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

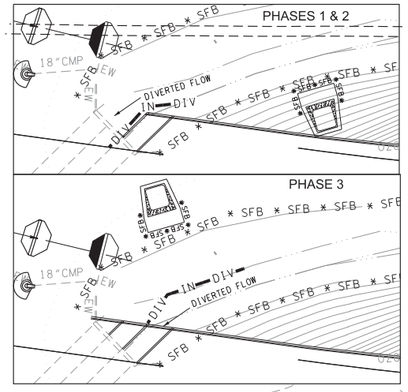
SYMBOL	ITEM	STD. DWG.
* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1
	BUFFER ZONE	N/A
	ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6
	ENHANCED ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6A
	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
	RIP-RAP IN CHANNEL	EC-STR-31

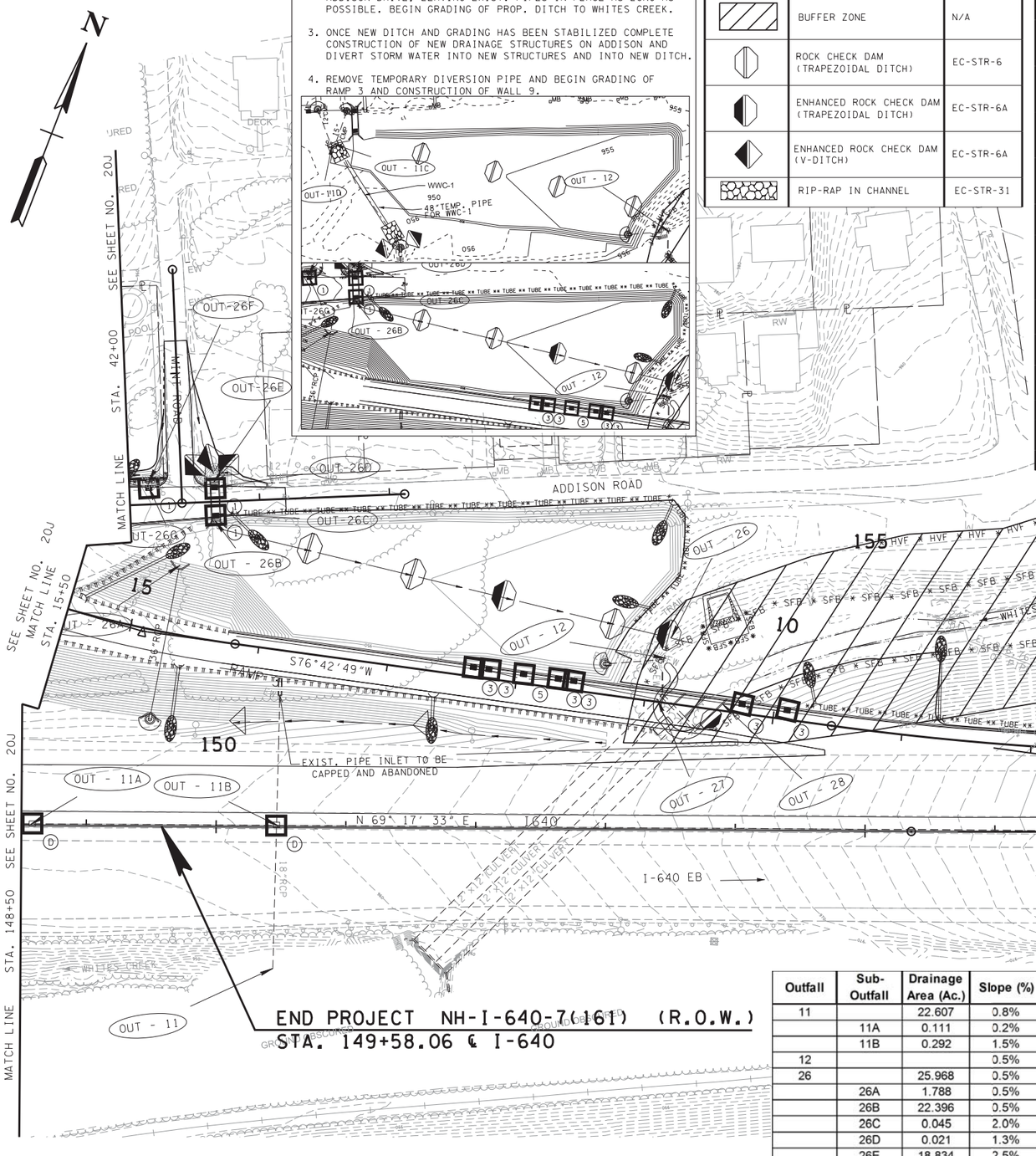
EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SFB * SFB * SFB *	SILT FENCE WITH WIRE BACKING	EC-STR-3C
D	CATCH BASIN PROTECTION (TYPE D)	EC-STR-19
1	CATCH BASIN FILTER ASSEMBLY (TYPE 1)	EC-STR-41
3	CATCH BASIN FILTER ASSEMBLY (TYPE 3)	EC-STR-43
5	CATCH BASIN FILTER ASSEMBLY (TYPE 5)	EC-STR-45
	ROCK CHECK DAM (V-DITCH)	EC-STR-6
	SEDIMENT FILTER BAG	EC-STR-2
	CULVERT PROTECTION (TYPE 1)	EC-STR-11
IN DIV	INSTREAM DIVERSION	EC-STR-30 EC-STR-30A
	CULVERT PROTECTION (TYPE 2)	EC-STR-11A
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37
	PERMANENT SLOPE DRAIN PIPE (SHOW SIZE)	EC-STR-29
	TEMPORARY BERM	EC-STR-27

GENERAL PHASING NOTES FOR CONSTRUCTION OF BOX CULVERT EXTENSION STA. 152+64 I-640 (9+30 RAMP 3) ON WHITES CREEK

1. DIVERT FLOW IN STREAM 5 INTO WESTERN BARREL USING AN APPROVED INSTREAM DIVERSION DEVICE.
2. CONSTRUCT PROP. BOX EXTENSION AND PROP. RETAINING WALL FOR TWO EASTERN BARRELS WITH NO FLOW.
3. DIVERT FLOW BACK INTO TWO BARRELS THAT WERE EXTENDED AND CONSTRUCT PROP. BOX EXTENSION AND RETAINING WALL FOR THE WESTERN BARREL.





END PROJECT NH-I-640-7(161) (R.O.W.)
STA. 149+58.06 ℄ I-640

END PROJECT NH-I-640-7(161) (CONST.)
STA. 163+50.00 ℄ I-640

Outfall	Sub-Outfall	Drainage Area (Ac.)	Slope (%)
11		22.607	0.8%
	11A	0.111	0.2%
	11B	0.292	1.5%
12			0.5%
26		25.968	0.5%
	26A	1.788	0.5%
	26B	22.396	0.5%
	26C	0.045	2.0%
	26D	0.021	1.3%
	26E	18.834	2.5%
	26F	2.891	3.3%
	26G	0.161	3.8%
27		0.242	6.3%
28		0.517	24.4%

UNOFFICIAL SET
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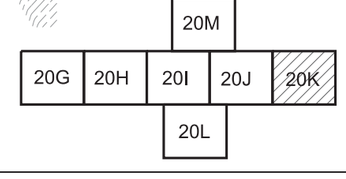
Keymap



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION AND SEDIMENT CONTROL STAGE I
I-640
STA. 148+50 TO END CONST.
SCALE: 1"= 50'

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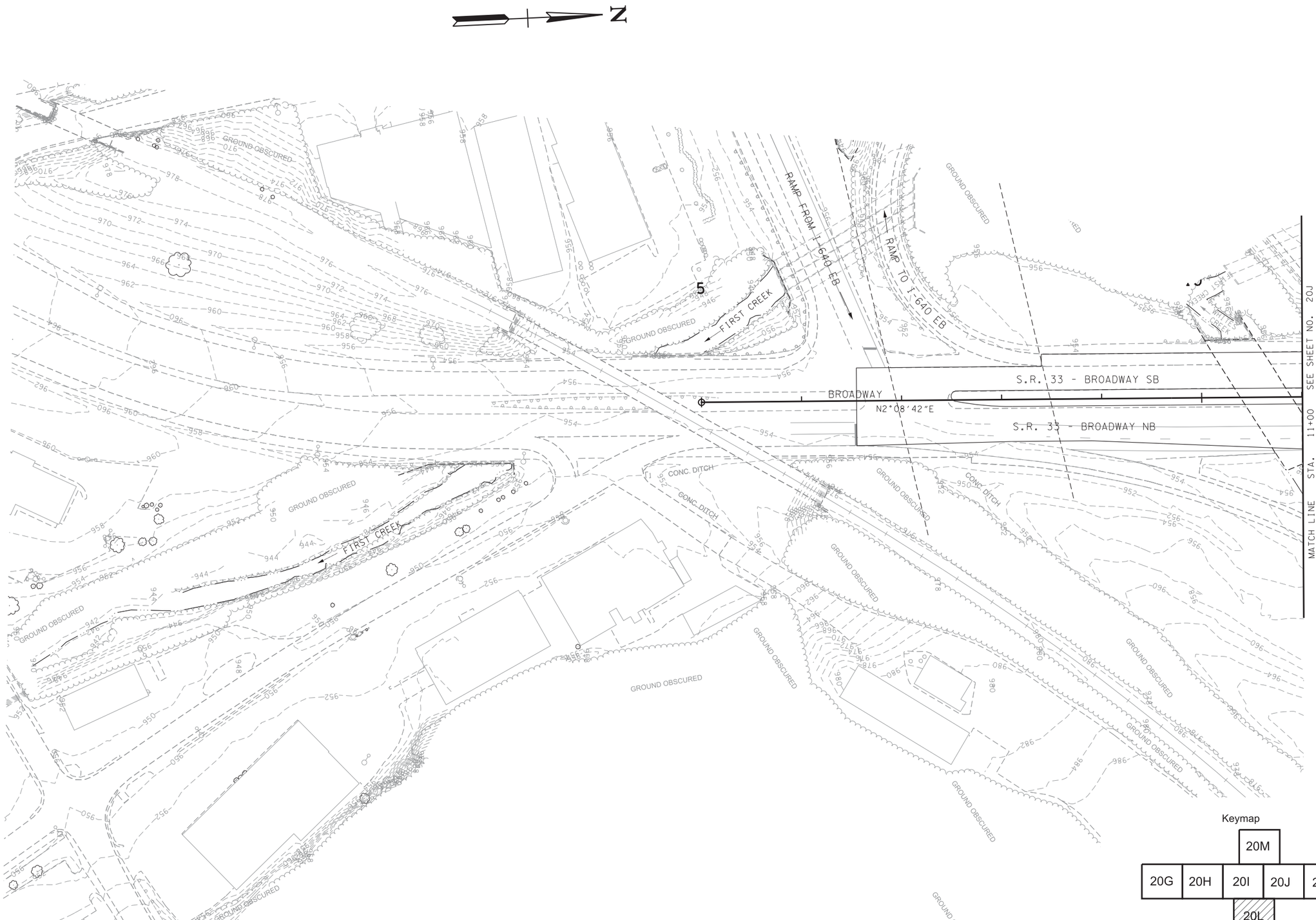
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-I-640-7(161)	20L
CONST.	2015	NH-I-640-7(161)	20L

KNOX CO. I-640
47008-3150-44 (CONST.)



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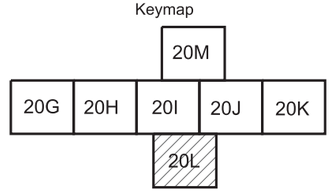

UNOFFICIAL SET

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION AND SEDIMENT CONTROL STAGE I

S.R. 33

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-640-7(161)	20M
CONST.	2015	NH-I-640-7(161)	20M

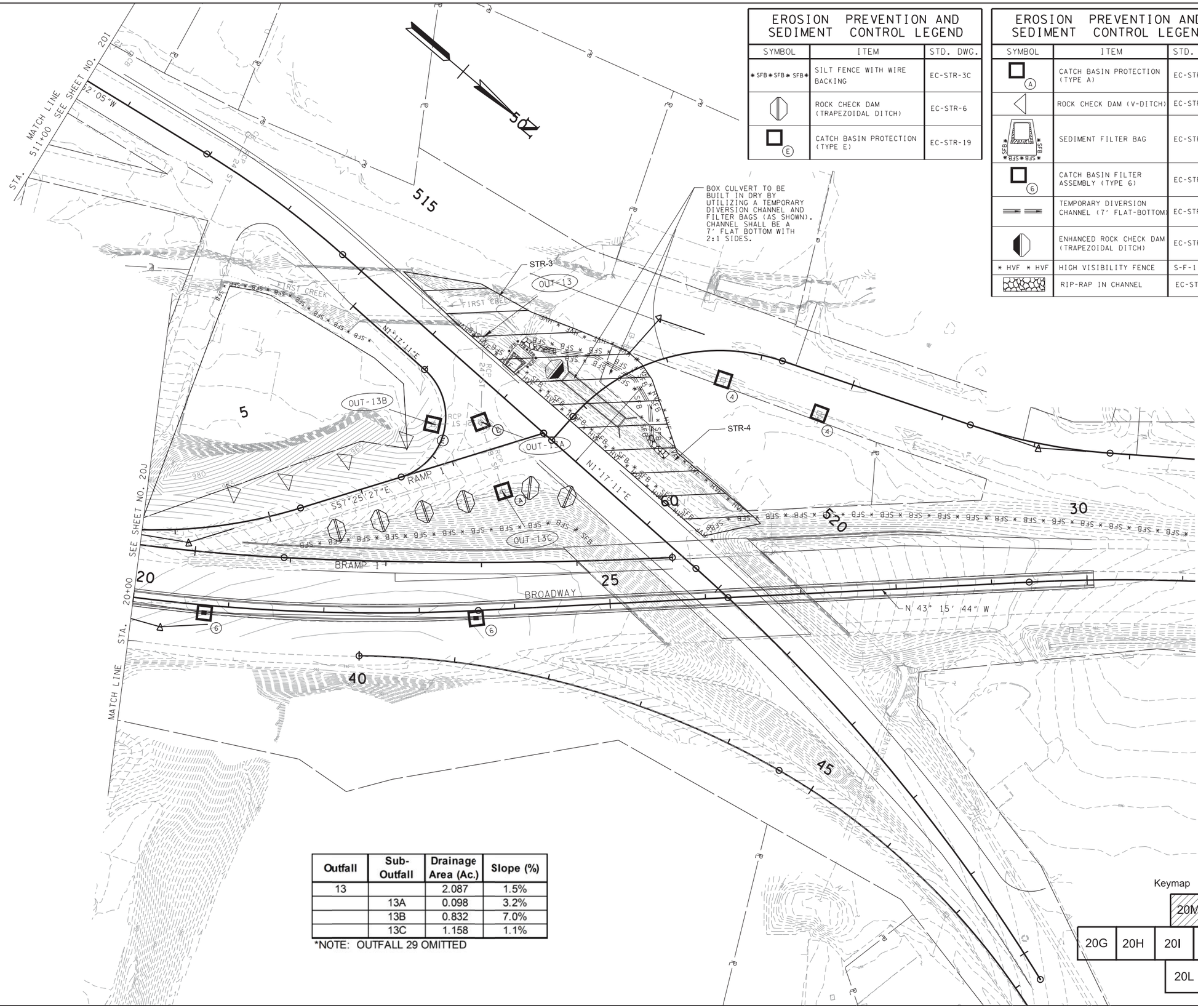
KNOX CO. I-640
47008-3150-44 (CONST.)

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SFB * SFB * SFB *	SILT FENCE WITH WIRE BACKING	EC-STR-3C
	ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6
(E)	CATCH BASIN PROTECTION (TYPE E)	EC-STR-19

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

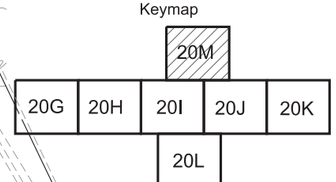
SYMBOL	ITEM	STD. DWG.
(A)	CATCH BASIN PROTECTION (TYPE A)	EC-STR-19
	ROCK CHECK DAM (V-DITCH)	EC-STR-6
SFB SFB SFB SFB	SEDIMENT FILTER BAG	EC-STR-2
(6)	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EC-STR-46
	TEMPORARY DIVERSION CHANNEL (7' FLAT-BOTTOM)	EC-STR-31
	ENHANCED ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6A
* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1
	RIP-RAP IN CHANNEL	EC-STR-31



Outfall	Sub-Outfall	Drainage Area (Ac.)	Slope (%)
13		2.087	1.5%
	13A	0.098	3.2%
	13B	0.832	7.0%
	13C	1.158	1.1%

*NOTE: OUTFALL 29 OMITTED

Keymap



UNOFFICIAL SET
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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION AND SEDIMENT CONTROL STAGE I
S.R. 33
STA. 20+00 TO STA. 30+06.94
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-640-7(161)	20N
CONST.	2015	NH-I-640-7(161)	20N

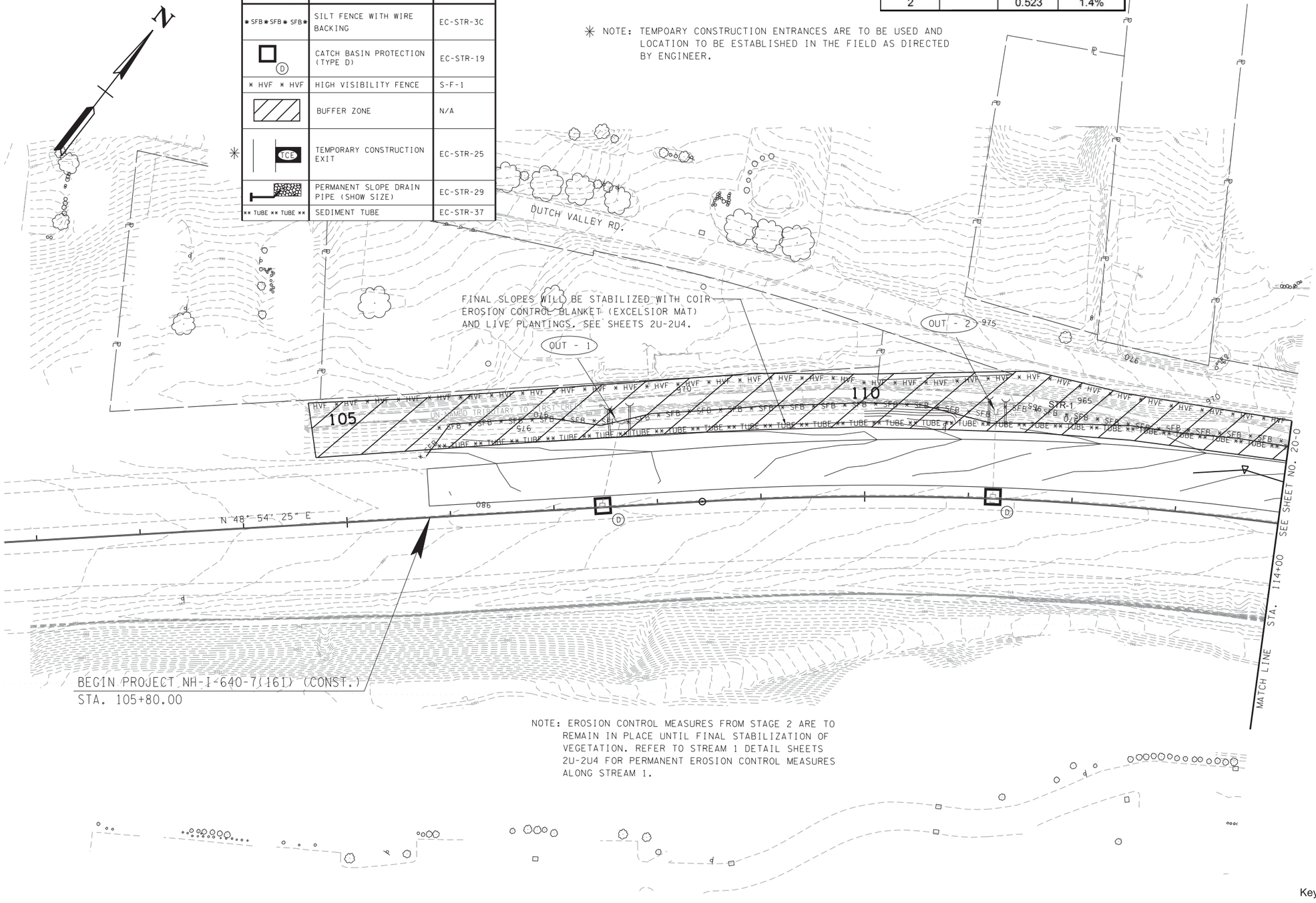
KNOX CO. I-640
47008-3150-44 (CONST.)

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SFB * SFB * SFB *	SILT FENCE WITH WIRE BACKING	EC-STR-3C
(D)	CATCH BASIN PROTECTION (TYPE D)	EC-STR-19
* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1
	BUFFER ZONE	N/A
TCE	TEMPORARY CONSTRUCTION EXIT	EC-STR-25
	PERMANENT SLOPE DRAIN PIPE (SHOW SIZE)	EC-STR-29
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37

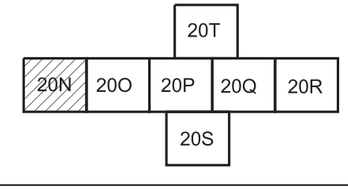
Outfall	Sub-Outfall	Drainage Area (Ac.)	Slope (%)
1		0.215	2.4%
2		0.523	1.4%

✳ NOTE: TEMPOARY CONSTRUCTION ENTRANCES ARE TO BE USED AND LOCATION TO BE ESTABLISHED IN THE FIELD AS DIRECTED BY ENGINEER.



NOTE: EROSION CONTROL MEASURES FROM STAGE 2 ARE TO REMAIN IN PLACE UNTIL FINAL STABILIZATION OF VEGETATION. REFER TO STREAM 1 DETAIL SHEETS 2U-2U4 FOR PERMANENT EROSION CONTROL MEASURES ALONG STREAM 1.

Keymap



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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION AND SEDIMENT CONTROL STAGE II

I-640

STA. 105+80 TO STA. 114+00
SCALE: 1"= 50'

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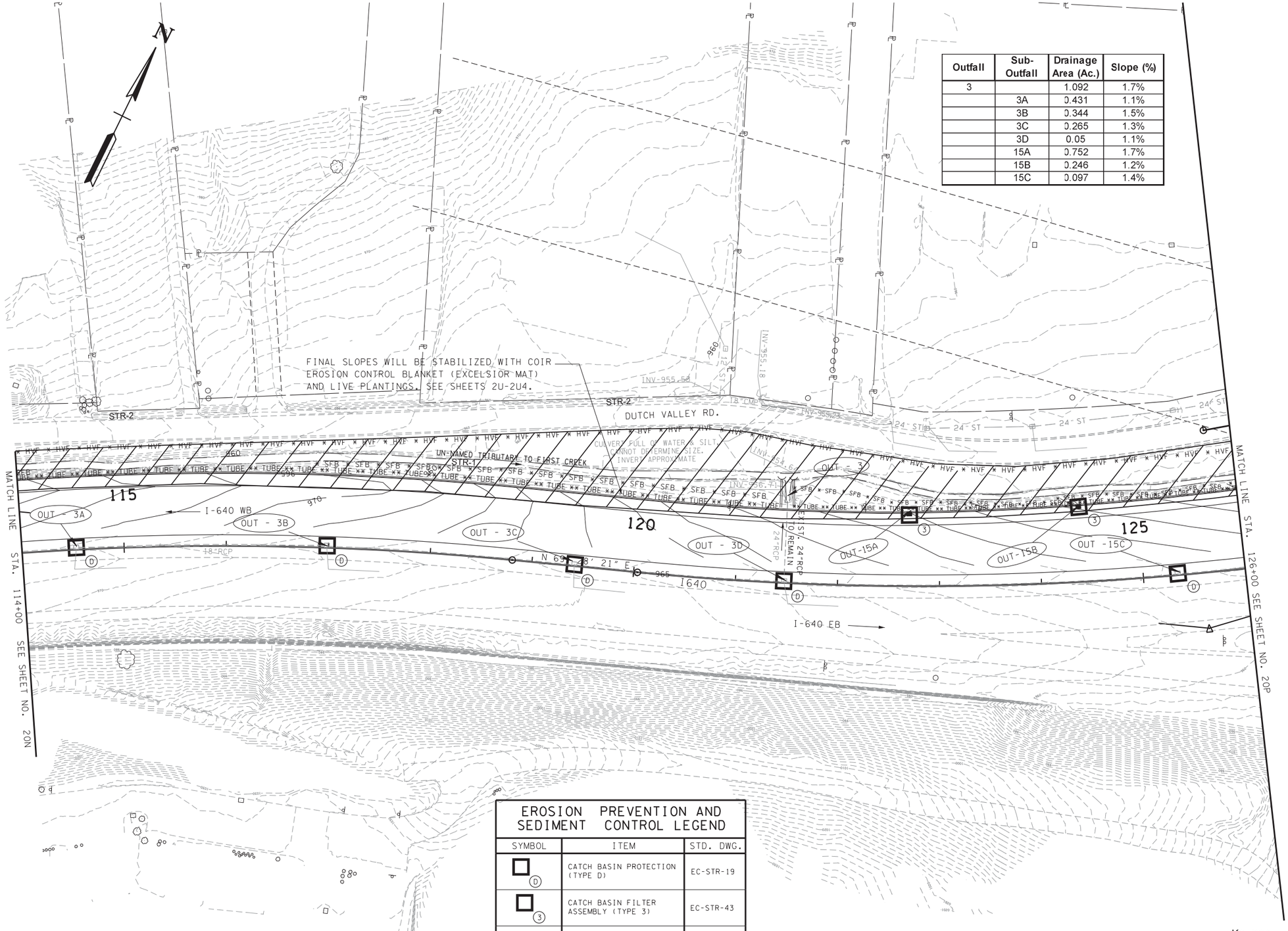
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-I-640-7(161)	20-O
CONST.	2015	NH-I-640-7(161)	20-O

KNOX CO. I-640
47008-3150-44 (CONST.)

Outfall	Sub-Outfall	Drainage Area (Ac.)	Slope (%)
3		1.092	1.7%
	3A	0.431	1.1%
	3B	0.344	1.5%
	3C	0.265	1.3%
	3D	0.05	1.1%
	15A	0.752	1.7%
	15B	0.246	1.2%
	15C	0.097	1.4%

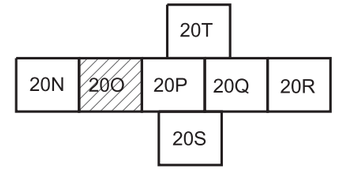


EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
(D)	CATCH BASIN PROTECTION (TYPE D)	EC-STR-19
(3)	CATCH BASIN FILTER ASSEMBLY (TYPE 3)	EC-STR-43
* SFB * SFB * SFB *	SILT FENCE WITH WIRE BACKING	EC-STR-3C
* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1
	BUFFER ZONE	N/A
	PERMANENT SLOPE DRAIN PIPE (SHOW SIZE)	EC-STR-29
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37

NOTE: EROSION CONTROL MEASURES FROM STAGE 2 ARE TO REMAIN IN PLACE UNTIL FINAL STABILIZATION OF VEGETATION. REFER TO STREAM 1 DETAIL SHEETS 2U-2U4 FOR PERMANENT EROSION CONTROL MEASURES ALONG STREAM 1.

Keymap



UNOFFICIAL SET
NOT FOR BIDDING

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION AND SEDIMENT CONTROL STAGE II
I-640
STA. 114+00 TO STA. 126+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-640-7(161)	20P
CONST.	2015	NH-I-640-7(161)	20P

KNOX CO. I-640
47008-3150-44 (CONST.)

Outfall	Sub-Outfall	Drainage Area (Ac.)	Slope (%)
5		7.55	0.8%
15		4.573	4.1%
	15D	0.254	0.3%
	15E	0.092	0.5%
	15F	0.044	0.4%
	15G	0.043	0.8%
	15H	1.063	0.8%
	15I	0.098	0.5%
	15J	0.388	2.3%
	15K	0.107	2.9%
	15L	0.322	4.5%
23		0.393	5.0%
	23A	0.164	3.9%
	23B	0.216	4.0%
24		6.493	0.6%
	24A	1.184	0.8%
	24B	3.32	0.5%
	24C	0.743	3.6%
	24D	0.265	2.4%
	24E	0.077	0.5%
	24F	0.562	0.9%
	24G	0.535	8.0%
	24H	0.173	3.9%
	24I	0.959	3.0%
	24J	0.138	1.3%
	24K	0.044	2.6%
	24L	0.034	1.3%
	24M	0.001	0.5%
	24N	0.099	0.1%
	24O	0.001	0.1%
25		0.262	1.2%

*NOTE: OUTFALL NOS. 16, 17, 18, 19, 20, 21, AND 22 OMITTED

FINAL SLOPES WILL BE STABILIZED WITH COIR EROSION CONTROL BLANKET (EXCELSIOR MAT) AND LIVE PLANTINGS. SEE SHEETS 2U-2U4.

FINAL SLOPES WILL BE STABILIZED WITH SOD.

NOTE: EROSION CONTROL MEASURES FROM STAGE 2 ARE TO REMAIN IN PLACE UNTIL FINAL STABILIZATION OF VEGETATION. REFER TO STREAM 1 DETAIL SHEETS 2U-2U4 FOR PERMANENT EROSION CONTROL MEASURES ALONG STREAM 1.

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SFB * SFB * SFB *	SILT FENCE WITH WIRE BACKING	EC-STR-3C
* SF * SF * SF *	SILT FENCE	EC-STR-3B
D	CATCH BASIN PROTECTION (TYPE D)	EC-STR-19
	ROCK CHECK DAM (V-DITCH)	EC-STR-6
3	CATCH BASIN FILTER ASSEMBLY (TYPE 3)	EC-STR-43
5	CATCH BASIN FILTER ASSEMBLY (TYPE 5)	EC-STR-45
6	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EC-STR-46
7	CATCH BASIN FILTER ASSEMBLY (TYPE 7)	EC-STR-47
	RIPRAP	EC-STR-27
1	CATCH BASIN FILTER ASSEMBLY (TYPE 1)	EC-STR-41
	PERMANENT SLOPE DRAIN PIPE (SHOW SIZE)	EC-STR-29
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37

UNOFFICIAL SET
NOT FOR BIDDING

COORDINATES ARE NAD/83(1995), ARE DATUM ADJUSTED BY THE FACTOR OF 1.0001 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

Keymap

		20T		
20N	20O	20P	20Q	20R
		20S		

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION AND SEDIMENT CONTROL STAGE II
I-640, OLD BWAY
STA. 126+00 TO STA. 138+00
SCALE: 1" = 50'

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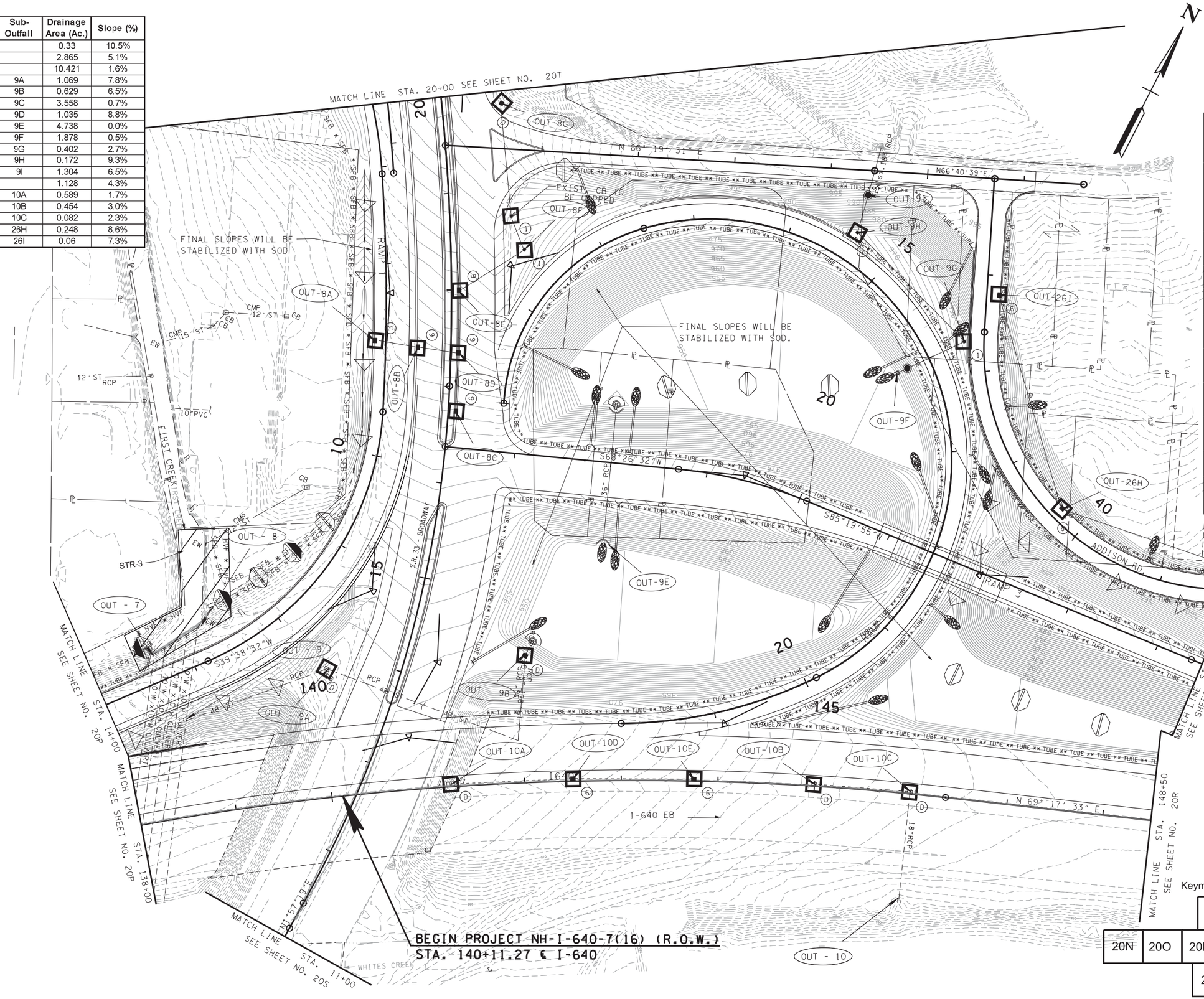
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

Outfall	Sub-Outfall	Drainage Area (Ac.)	Slope (%)
7		0.33	10.5%
8		2.865	5.1%
9		10.421	1.6%
	9A	1.069	7.8%
	9B	0.629	6.5%
	9C	3.558	0.7%
	9D	1.035	8.8%
	9E	4.738	0.0%
	9F	1.878	0.5%
	9G	0.402	2.7%
	9H	0.172	9.3%
	9I	1.304	6.5%
10		1.128	4.3%
	10A	0.589	1.7%
	10B	0.454	3.0%
	10C	0.082	2.3%
	26H	0.248	8.6%
	26I	0.06	7.3%

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-I-640-7(161)	20O
CONST.	2015	NH-I-640-7(161)	20O

KNOX CO. I-640
47008-3150-44 (CONST.)



EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SFB * SFB * SFB *	SILT FENCE WITH WIRE BACKING	EC-STR-3C
(D)	CATCH BASIN PROTECTION (TYPE D)	EC-STR-19
	ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6
	ROCK CHECK DAM (V-DITCH)	EC-STR-6
	CULVERT PROTECTION (TYPE 1)	EC-STR-11
(1)	CATCH BASIN FILTER ASSEMBLY (TYPE 1)	EC-STR-41
(3)	CATCH BASIN FILTER ASSEMBLY (TYPE 3)	EC-STR-43
(6)	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EC-STR-46
	ENHANCED ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6A
	RIPRAP	EC-STR-27
	PERMANENT SLOPE DRAIN PIPE (SHOW SIZE)	EC-STR-29
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37

UNOFFICIAL SET
NOT FOR BIDDING

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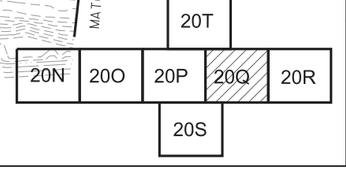
Keymap



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION AND SEDIMENT CONTROL STAGE II
I-640
STA. 138+00 TO STA. 148+50
SCALE: 1"= 50'

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

Outfall	Sub-Outfall	Drainage Area (Ac.)	Slope (%)
11		22.607	0.8%
	11A	0.111	0.2%
	11B	0.292	1.5%
12			0.5%
26		25.968	0.5%
	26A	1.788	0.5%
	26B	22.396	0.5%
	26C	0.045	2.0%
	26D	0.021	1.3%
	26E	18.834	2.5%
	26F	2.891	3.3%
	26G	0.161	3.8%
27		0.242	6.3%
28		0.517	24.4%

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
* SFB * SFB * SFB *	SILT FENCE WITH WIRE BACKING	EC-STR-3C
(D)	CATCH BASIN PROTECTION (TYPE D)	EC-STR-19
(1)	CATCH BASIN FILTER ASSEMBLY (TYPE 1)	EC-STR-41
(3)	CATCH BASIN FILTER ASSEMBLY (TYPE 3)	EC-STR-43
(5)	CATCH BASIN FILTER ASSEMBLY (TYPE 5)	EC-STR-45
	RIPRAP	EC-STR-27
	ROCK CHECK DAM (V-DITCH)	EC-STR-6

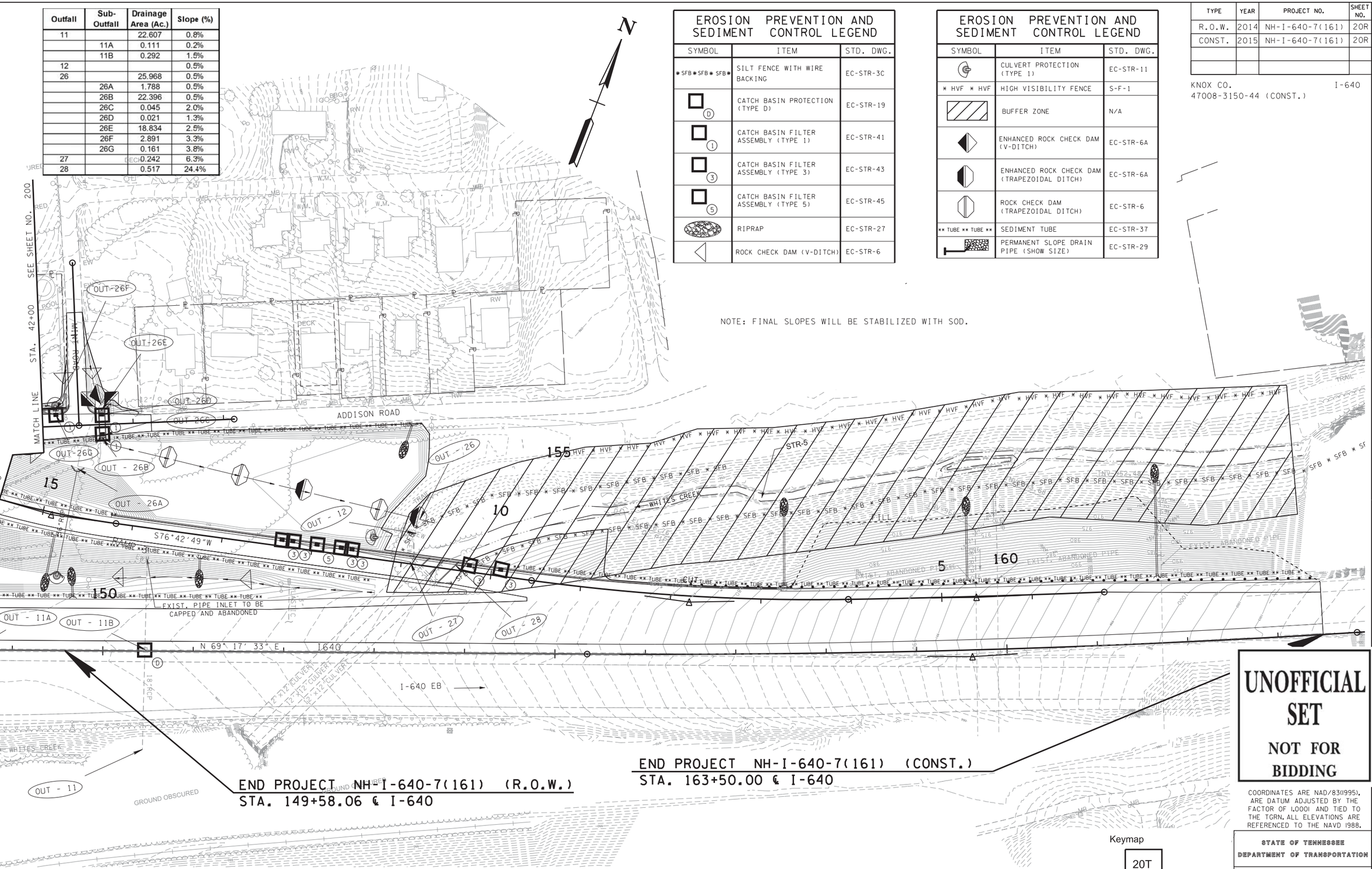
EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
	CULVERT PROTECTION (TYPE 1)	EC-STR-11
* HVF * HVF	HIGH VISIBILITY FENCE	S-F-1
	BUFFER ZONE	N/A
	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
	ENHANCED ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6A
	ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6
** TUBE ** TUBE **	SEDIMENT TUBE	EC-STR-37
	PERMANENT SLOPE DRAIN PIPE (SHOW SIZE)	EC-STR-29

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-I-640-7(161)	20R
CONST.	2015	NH-I-640-7(161)	20R

KNOX CO. I-640
47008-3150-44 (CONST.)

NOTE: FINAL SLOPES WILL BE STABILIZED WITH SOD.



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Keymap

		20T		
20N	20O	20P	20Q	20R
		20S		

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION AND SEDIMENT CONTROL
STAGE II
I-640
STA. 148+50 TO END CONST.
SCALE: 1"= 50'

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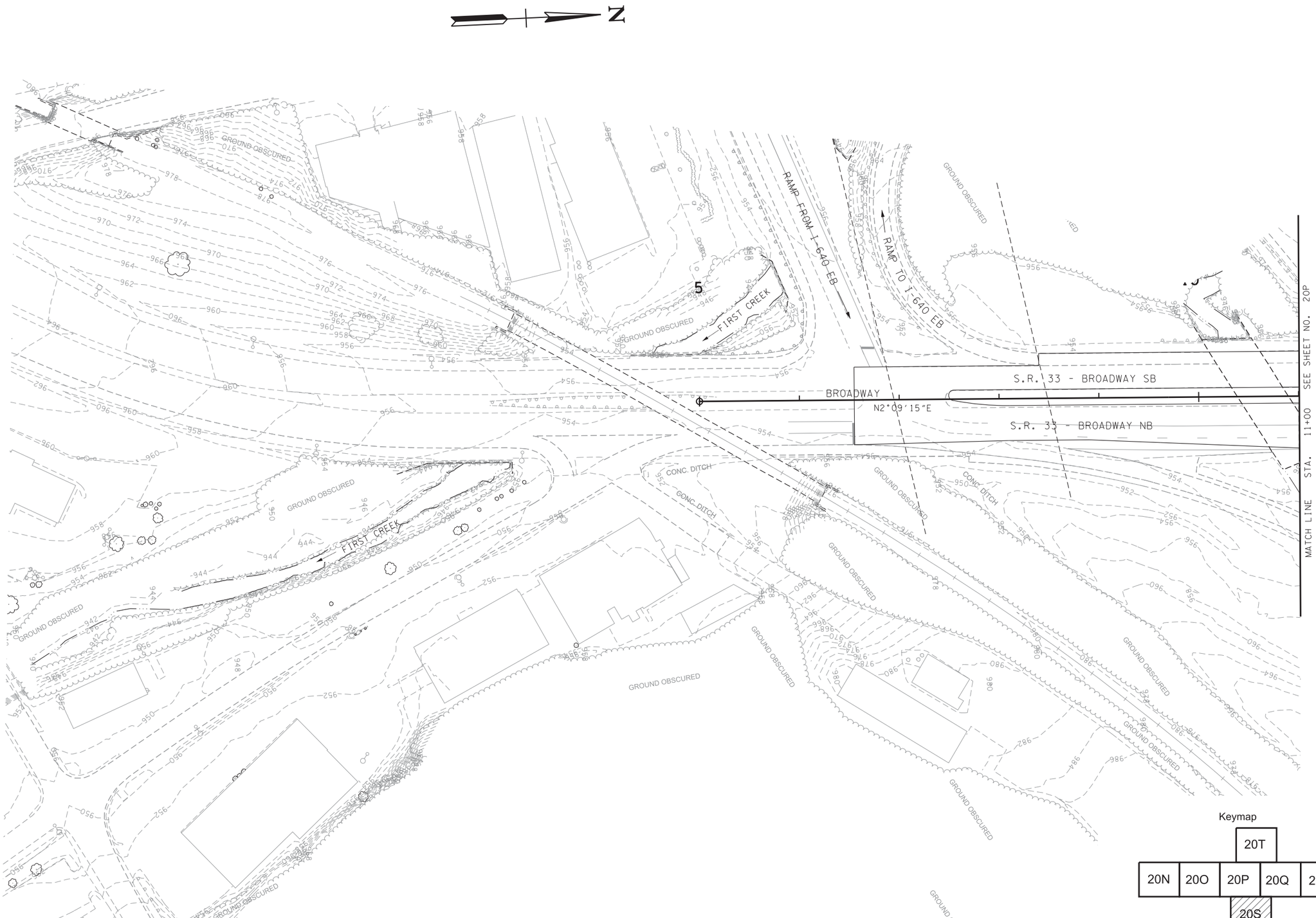
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-I-640-7(161)	20S
CONST.	2015	NH-I-640-7(161)	20S

KNOX CO. I-640
47008-3150-44 (CONST.)



Keymap

		20T		
20N	20O	20P	20Q	20R
		20S		

UNOFFICIAL SET

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION AND SEDIMENT CONTROL STAGE II

S.R. 33

SCALE: 1"= 50'

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

NOTE: FINAL SLOPES WILL BE STABILIZED WITH SOD.

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND		
SYMBOL	ITEM	STD. DWG.
SFB SFB SFB	SILT FENCE WITH WIRE BACKING	EC-STR-3C
	ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6
E	CATCH BASIN PROTECTION (TYPE E)	EC-STR-19
	ROCK CHECK DAM (V-DITCH)	EC-STR-6
SFB SFB SFB SFB	SEDIMENT FILTER BAG	EC-STR-2
6	CATCH BASIN FILTER ASSEMBLY (TYPE 6)	EC-STR-46
	ENHANCED ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6A
A	CATCH BASIN PROTECTION (TYPE A)	EC-STR-19

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-I-640-7(161)	20T
CONST.	2015	NH-I-640-7(161)	20T

KNOX CO. I-640
47008-3150-44 (CONST.)

Outfall	Sub-Outfall	Drainage Area (Ac.)	Slope (%)
13		2.087	1.5%
	13A	0.098	3.2%
	13B	0.832	7.0%
	13C	1.158	1.1%

Keymap

		20F		
20	20A	20B	20C	20D
		20E		

UNOFFICIAL SET
NOT FOR BIDDING

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION AND SEDIMENT CONTROL STAGE II
S.R. 33
STA. 20+00 TO STA. 30+06.94
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-640-7(161)	20U
CONST.	2015	NH-I-640-7(161)	20U

KNOX CO. I-640
47008-3150-44 (CONST.)

EROSION PREVENTION AND SEDIMENT CONTROL NOTES

STREAM/WETLAND

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

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

KNOWN EXCEPTIONAL TENNESSEE WATERS

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

(4) FOR PROJECTS THAT DISCHARGE INTO KNOWN EXCEPTIONAL TENNESSEE WATERS OR WATERS IMPAIRED BY SILTATION, A 60 FOOT NATURAL RIPARIAN BUFFER ZONE ADJACENT TO AND ON BOTH SIDES OF THE RECEIVING STREAM WITH THIS DESIGNATION SHALL BE PRESERVED, TO THE MAXIMUM EXTENT PRACTICABLE, DURING CONSTRUCTION ACTIVITIES AT THE SITE. BUFFER ZONES ARE NOT SEDIMENT CONTROL MEASURES AND SHOULD NOT BE RELIED UPON AS PRIMARY SEDIMENT CONTROL MEASURES. THE RIPARIAN BUFFER ZONE SHALL BE ESTABLISHED BETWEEN THE TOP OF THE STREAM BANK AND THE DISTURBED CONSTRUCTION AREA. THE 60 FOOT CRITERION FOR THE WIDTH OF THE BUFFER ZONE CAN BE ESTABLISHED ON AN AVERAGE WIDTH BASIS AT A PROJECT, AS LONG AS THE MINIMUM WIDTH OF THE BUFFER ZONE IS MORE THAN 30 FEET AT ANY MEASURED LOCATION. EVERY ATTEMPT SHALL BE MADE FOR CONSTRUCTION ACTIVITIES NOT TO TAKE PLACE WITHIN THE BUFFER ZONES. BEST MANAGEMENT PRACTICES (BMPS) PROVIDING EQUIVALENT PROTECTION AS THE NATURAL RIPARIAN ZONE MAY BE USED. A JUSTIFICATION FOR USE AND DESIGN EQUIVALENCY SHALL BE DOCUMENTED WITHIN THE SWPPP. THE ENVIRONMENTAL AND ROADWAY DESIGN DIVISIONS SHALL REVIEW AND APPROVE THIS REVISION OF THE SWPPP BEFORE DISTURBANCE OF THE SITE PROCEEDS, UNLESS PREVIOUSLY EXEMPT IN THE NPDES CONSTRUCTION GENERAL PERMIT. WHERE ISSUED, ARAP/401 REQUIREMENTS WILL PREVAIL IF IN CONFLICT WITH THESE BUFFER ZONE REQUIREMENTS.

NPDES

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

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

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

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

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

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

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

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

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

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

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

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.

LITTER, DEBRIS, WASTE, PETROLEUM

(22) THE CONTRACTOR SHALL MAINTAIN A COMPLETE AND COMPREHENSIVE EROSION PREVENTION AND SEDIMENT CONTROL PLAN TO PREVENT ROADWAY AND/OR CONSTRUCTION SEDIMENT OR DEBRIS AND ANY PETROLEUM BASED PRODUCTS OR CHLORINATED SOLVENTS, PAINTS OR COATINGS ETC. FROM FALLING ONTO THE RAILROAD'S RIGHTS-OF-WAY AND/OR FROM ENTERING THE DRAINAGE DITCHES OR DRAINAGE STRUCTURES OF THE RAILROAD, AND ANY SEDIMENT OR DEBRIS OR PETROLEUM BASED PRODUCTS OR CHLORINATED SOLVENTS, ETC. THAT DO ENTER SUCH DRAINAGE AREAS OF THE RAILROAD'S RIGHTS-OF-WAY ARE TO BE REMOVED IN ACCORDANCE WITH RULES SET FORTH BY _____ AND AT THE CONTRACTOR'S EXPENSE.

POLYACRYLAMIDE

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

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

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

(26) MIXTURE IS NON-COMBUSTIBLE.

(27) CONTAINS ONLY MANUFACTURER'S RECOMMENDED ADDITIVES.

UNOFFICIAL SET
NOT FOR BIDDING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL NOTES

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-I-640-7(161)	20V
CONST.	2015	NH-I-640-7(161)	20V

KNOX CO. I-640
47008-3150-44 (CONST.)

EROSION PREVENTION AND SEDIMENT CONTROL NOTES (CONT.)

(28) 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.

(29) 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.

(30) 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.

(31) 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.

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

(33) 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.

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

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL NOTES

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