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

TYPE	YEAR	PROJECT NO.	SHEET NO.
P.E.	2014	95012-1222-14	
CONST.	2017	NH-109(32)	S-1

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 LICENSING AND/OR CERTIFICATIONS (3.1.1)?

☒ YES (CHECK ALL THAT APPLY BELOW) OR ☐ NO

- ☒ CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC)
- ☒ A TN LICENSED PROFESSIONAL ENGINEER OR LANDSCAPE ARCHITECT
- ☒ HAS SUCCESSFULLY COMPLETED TDEC LEVEL II COURSE

1.2. DO THE EPSC PLANS INVOLVE STRUCTURAL DESIGN, HYDRAULIC, HYDROLOGIC OR OTHER ENGINEERING CALCULATIONS FOR EPSC STRUCTURAL MEASURES (E.G. SEDIMENT BASINS) (3.1.1)? YES ☐ NO ☒

IF YES, HAVE THE EPSC PLANS BEEN PREPARED, STAMPED AND CERTIFIED BY A TN LICENSED PROFESSIONAL ENGINEER OR LANDSCAPE ARCHITECT? ☒ YES ☐ NO

1.3. DO THE PROJECT STORMWATER OUTFALLS DIRECTLY DISCHARGE INTO THE FOLLOWING (5.4.1)? ☐ YES (CHECK ALL THAT APPLY BELOW) ☒ NO

- ☐ WATERS WITH UNAVAILABLE PARAMETERS (303d FOR SILTATION OR HABITAT ALTERATION)
- ☐ EXCEPTIONAL TENNESSEE WATERS

IF YES TO SECTION 1.3, HAS THE SWPPP TEMPLATE BEEN PREPARED BY AN INDIVIDUAL THAT HAS THE FOLLOWING LICENSING AND/OR CERTIFICATIONS (5.4.1.b)?

☐ YES (CHECK ALL THAT APPLY BELOW) ☐ NO

- ☐ CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC)
- ☐ A TN LICENSED PROFESSIONAL ENGINEER OR LANDSCAPE ARCHITECT
- ☐ HAS SUCCESSFULLY COMPLETED TDEC LEVEL II COURSE

2. SITE DESCRIPTION (3.5.1)

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

2.2. PROJECT DESCRIPTION (3.5.1.a):

TITLE: SR-109; from South of Dry Fork Creek to South of Cumberland River
COUNTY: Wilson
PIN: 100281.03

2.3. SITE MAP(S) (2.6.2.): REFER TO TITLE SHEET

2.4. DESCRIPTION OF EXISTING SITE TOPOGRAPHY (3.5.1.d): REFER TO EXISTING CONTOURS SHEET(S) 48-48S, DRAINAGE MAP SHEET(S) 35-39, USGS QUAD MAP, AND THE OUTFALL TABLE IN SECTION 4.3.

2.5. MAJOR SOIL DISTURBING ACTIVITIES (3.5.1.b) (CHECK ALL THAT APPLY):

- ☒ CLEARING AND GRUBBING
- ☒ EXCAVATION
- ☒ CUTTING AND FILLING
- ☒ FINAL GRADING AND SHAPING
- ☒ UTILITIES
- ☐ OTHER (DESCRIBE): _____

2.6. TOTAL PROJECT AREA (3.5.1.c): 107.57 ACRES

2.7. TOTAL AREA TO BE DISTURBED (3.5.1.c): 107.57 ACRES

2.8. NO MORE THAN 50 ACRES OF ACTIVE SOIL DISTURBANCE IS ALLOWED AT ANY TIME DURING THE CONSTRUCTION OF THE PROJECT.

2.9. ARE THERE ANY SEASONAL LIMITATIONS ON WORK? ☒ YES ☐ NO

IF YES, LIST THE CORRESPONDING PLAN SHEET: 2C1 & 2D

2.10. 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)

2.11. SOIL PROPERTIES (3.5.1.f) (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)
AnC - Arents, 2-15% slopes	-	4.2%	-
ArB - Armour silt loam, 2-5% slopes	B	0.3%	0.43
ArC2 - Armour silt loam, 5-12% slopes	B	5.0%	0.43
BeB2 - Bewleyville silt loam, 2-5% slopes, eroded	B	13.3%	0.37
BrC2 - Bradyville silt loam, 5-12%	C	7.0%	0.43
ByB - Byler silt loam, 2-5% slopes	C	16.8%	0.43
HaD2 - Hampshire silt loam, 12-20% slopes, eroded	C	0.6%	0.37
HoB2 - Holston loam, 2-8% slopes, eroded	B	5.5%	0.28
InC2 - Inman flaggy silty clay loam, 5-12% slopes, eroded	C	0.1%	0.24
InD2 - Inman flaggy silty clay loam, 12-20% slopes, eroded	C	11.0%	0.24
Ld - Lindell silt loam, 0-2% slopes, occasionally flooded	B/D	9.4%	0.32
TaC2 - Talbott silt loam, 5-12% slopes, eroded	C	0.8%	0.43
TrC2 - Talbott silt loam, 5-20% slopes, eroded, rocky	C	4.4%	0.43
W - Water	-	5.6%	-
WaC2 - Waynesboro loam, 5-12% slopes, eroded	B	9.3%	0.28
WaD2 - Waynesboro loam, 12-20% slopes, eroded	B	6.7%	0.28

2.12. IS ACID PRODUCING ROCK (APR) (i.e. PYRITE) LOCATED WITHIN THE PROJECT LIMITS? ☐ YES ☒ NO

2.12.1. IF YES TO SECTION 2.13, 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.g).

RUNOFF COEFFICIENTS FOR EXISTING CONDITIONS

AREA TYPE	AREA(AC)	PERCENTAGE OF TOTAL AREA (%)	RUNOFF CN	C FACTOR
IMPERVIOUS	16.98	15.7%		0.90
PERVIOUS (B)	36.44	33.9%		0.20
PERVIOUS (B/D)	8.23	7.7%		0.30
PERVIOUS (C)	41.06	38.2%		0.30
PERVIOUS (-)	4.86	4.5%		0.00
WEIGHTED CURVE NUMBER OR C-FACTOR =				0.35

RUNOFF COEFFICIENTS FOR POST-CONSTRUCTION CONDITIONS

AREA TYPE	AREA(AC)	PERCENTAGE OF TOTAL AREA (%)	RUNOFF CN	C FACTOR
IMPERVIOUS	42.14	39.1%		0.90
PERVIOUS (B)	26.04	24.2%		0.20
PERVIOUS (B/D)	5.78	5.4%		0.30
PERVIOUS (C)	30.43	28.3%		0.30
PERVIOUS (-)	3.18	3.0%		0.00
WEIGHTED CURVE NUMBER OR C-FACTOR =				0.50

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

CONSTRUCTION SHALL BE SEQUENCED AND STAGED TO: MINIMIZE THE EXPOSURE TIME OF GRADED OR DENUDED SOIL AREAS, PRESERVE TOPSOIL, AND MINIMIZE SOIL COMPACTION. 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 ORDER OF CONSTRUCTION ACTIVITIES AND THE BASIC EPSC DEVICES DEPICTED ON THE EPSC PLAN CONTAINED WITHIN THE APPROVED SWPPP.

3.1. SPECIAL SEQUENCING REQUIREMENTS (SEE SHEETS 49C, 49J-49L, 49T)

3.2. INSTALL STABILIZED CONSTRUCTION EXITS.

3.3. INSTALL PERIMETER PROTECTION WHERE RUNOFF SHEET FLOWS FROM THE SITE.

3.4. INSTALL INITIAL EPSC MEASURES BEFORE CLEARING, GRUBBING, EXCAVATION, GRADING, CULVERT OR BRIDGE CONSTRUCTION, CUTTING, FILLING, OR ANY OTHER EARTHWORK OCCURS, EXCEPT AS SUCH WORK MAY BE NECESSARY TO INSTALL EPSC MEASURES.

3.5. PERFORM CLEARING AND GRUBBING (NOT MORE THAN 14 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.)

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3.14. REMOVE TEMPORARY EROSION CONTROLS AND ACCUMULATED SEDIMENT FROM AREAS THAT HAVE ESTABLISHED AT LEAST 70 PERCENT UNIFORM PERMANENT VEGETATIVE COVER.

3.15. RE-STABILIZE AREAS DISTURBED BY REMOVAL ACTIVITIES.

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

4.1. STREAM INFORMATION (3.5.1.j, 3.5.1.k)

4.1.1. WILL CONSTRUCTION AND/OR EROSION PREVENTION AND SEDIMENT CONTROLS IMPACT ANY STREAMS WITHIN THE PROJECT LIMITS? ☒ YES ☐ NO

IF YES, THE IMPACT(S) HAVE BEEN INCLUDED IN THE TOTAL PROJECT IMPACTS AND HAVE BEEN INCLUDED IN THE WATER QUALITY PERMITS.

4.1.2. HAVE ANY OF THE RECEIVING STATE 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):

☐ 303d WITH UNAVAILABLE PARAMETERS FOR SILTATION

☐ 303d WITH UNAVAILABLE PARAMETERS FOR HABITAT ALTERATION

☐ EXCEPTIONAL TENNESSEE WATERS (ETW)

4.1.3. RECEIVING WATERS OF THE STATE (3.5.1.k).

RECEIVING WATERS OF THE STATE INFORMATION

TDOT STATE WATER LABEL FROM EBR	NAME OF RECEIVING STATE WATER	303d WITH UNAVAILABLE PARAMETERS FOR SILTATION OR HABITAT ALTERATION (YES OR NO)	ETW (YES OR NO)	LOCATED WITHIN PROJECT LIMITS (YES OR NO)	LOCATED WITHIN ≤ 1 FLOW MILE DOWN GRADIENT OF PROJECT LIMITS (YES OR NO)
	Dry Fork Branch	YES	NO	NO	NO
Please note: At the beginning of this project, a portion of Dry Fork Branch that is listed on the 303d List for Siltation and Habitat Alteration is located adjacent to the project. However, our project does not directly or indirectly discharge into this portion of Dry Fork Branch.					
STR-1	Dry Fork Branch/ Old Hickory Reservoir	NO	NO	YES	YES
STR-2	Tributary to Old Hickory Reservoir	NO	NO	YES	YES
STR-3		NO	NO	YES	YES
STR-4		NO	NO	YES	YES
STR-4.5		NO	NO	YES	YES
STR-5		NO	NO	YES	YES
STR-6		NO	NO	YES	YES

4.1.4. ARE THERE ANY WATER QUALITY RIPARIAN BUFFER ZONES REQUIRED FOR WATERS OF THE STATE? (4.1.2, 5.4.2)

☐ YES ☒ NO

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

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

IF YES, CHECK THE APPROPRIATE BOX BELOW FOR SIZE OF BUFFER.

☐ 60-FEET FOR WATERS WITH UNAVAILABLE PARAMETERS AND EXCEPTIONAL TENNESSEE WATERS (AVERAGE WIDTH PER SIDE WITH A MINIMUM OF 30-FEET).

A 60 FOOT NATURAL WATER QUALITY RIPARIAN BUFFER ZONE ADJACENT TO AND ON BOTH SIDES OF THE RECEIVING STATE STREAM WITH THIS DESIGNATION SHALL BE PRESERVED TO THE MAXIMUM EXTENT PRACTICABLE DURING CONSTRUCTION ACTIVITIES AT THE SITE. 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. IF THE CONSTRUCTION SITE ENCOMPASSES BOTH SIDES OF A STREAM, BUFFER AVERAGING CAN BE APPLIED TO BOTH SIDES, BUT MUST BE APPLIED INDEPENDENTLY.

☐ 30-FEET FOR ALL OTHER STREAMS (AVERAGE WIDTH PER SIDE WITH A MINIMUM OF 15-FEET).

A 30 FOOT NATURAL WATER QUALITY RIPARIAN BUFFER ZONE ADJACENT TO AND ON BOTH SIDES OF THE RECEIVING STATE STREAM SHALL BE PRESERVED TO THE MAXIMUM EXTENT PRACTICABLE DURING CONSTRUCTION ACTIVITIES AT THE SITE. 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. IF THE CONSTRUCTION SITE ENCOMPASSES BOTH SIDES OF A STREAM, BUFFER AVERAGING CAN BE APPLIED TO BOTH SIDES, BUT MUST BE APPLIED INDEPENDENTLY.

4.1.5. ARE THERE ANY WATER QUALITY RIPARIAN BUFFER ZONES NOT REQUIRED FOR STATE WATERS DUE TO A TDEC ARAP? (9.0)

☒ YES ☐ NO

4.1.6. ARE THERE WATER QUALITY RIPARIAN BUFFER ZONE EXEMPTIONS? (4.1.2.1) ☐ YES ☒ NO

IF YES, EXISTING CONDITIONS DESCRIPTION:_____

4.1.7. EVERY ATTEMPT SHOULD BE MADE FOR CONSTRUCTION ACTIVITIES TO NOT TAKE PLACE WITHIN THE WATER QUALITY RIPARIAN BUFFER ZONE AND FOR EXISTING FORESTED AREAS TO BE PRESERVED. (5.4.2.)

4.1.8. BECAUSE OF HEAVY SEDIMENT LOAD ASSOCIATED WITH CONSTRUCTION SITE RUNOFF, WATER QUALITY RIPARIAN BUFFER ZONES ARE NOT SEDIMENT CONTROL MEASURES AND SHOULD NOT BE RELIED UPON AS PRIMARY SEDIMENT CONTROL MEASURES. THE WATER QUALITY RIPARIAN BUFFER ZONE SHALL BE ESTABLISHED BETWEEN THE TOP OF THE STREAM BANK AND THE DISTURBED CONSTRUCTION AREA.

4.1.9. WHERE IT IS NOT PRACTICABLE TO MAINTAIN A FULL WATER QUALITY RIPARIAN BUFFER, BEST MANAGEMENT PRACTICES (BMPS) PROVIDING EQUIVALENT PROTECTION AS THE NATURAL RIPARIAN ZONE MUST 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 CGP. WHERE ISSUED, ARAP/401 REQUIREMENTS WILL PREVAIL IF IN CONFLICT WITH THESE BUFFER ZONE REQUIREMENTS.

4.2. RECEIVING WATERS OF THE UNITED STATES (WOTUS) (EPHEMERAL)

WILL CONSTRUCTION AND/OR EROSION AND SEDIMENT CONTROLS IMPACT ANY WOTUS (EPHEMERAL)? ☒ YES ☐ NO

RECEIVING WOTUS (EPHEMERAL) INFORMATION

TDOT WOTUS LABEL	LOCATED WITHIN PROJECT LIMITS (YES OR NO)	LOCATED WITHIN 15-FT OF THE PROJECT LIMITS (YES OR NO)
WWC-1/EPH-1	YES	YES
WWC-2/EPH-2	YES	YES
WWC-3/EPH-3	YES	YES
WWC-4/EPH-4	YES	YES
WWC-5/EPH-5	YES	YES
WWC-6/EPH-6	YES	YES
WWC-7/EPH-7	YES	YES
WWC-8/EPH-8	YES	YES
WWC-9/EPH-9	YES	YES

4.2.1. ARE WATER QUALITY RIPARIAN BUFFER ZONES REQUIRED FOR WOTUS (4.1.2)? ☒ YES ☐ NO

IF YES, A 15 FOOT NATURAL WATER QUALITY RIPARIAN BUFFER ZONE ADJACENT TO AND ON BOTH SIDES OF THE RECEIVING EPHEMERAL STREAM IDENTIFIED AS A WOTUS (EPHEMERAL) BY THE U.S. ARMY CORPS OF ENGINEERS (USACE) OR THE ENVIRONMENTAL PROTECTION AGENCY SHALL BE PRESERVED TO THE MAXIMUM EXTENT PRACTICABLE DURING CONSTRUCTION ACTIVITIES AT THE SITE.

IF YES, THEY HAVE BEEN INCLUDED ON PLAN SHEET(S) 48L

4.2.2. ARE THERE ANY WATER QUALITY RIPARIAN BUFFER ZONES NOT REQUIRED FOR WOTUS (EPHEMERAL) DUE TO A USACE PERMIT?

☒ YES ☐ NO

4.3. OUTFALL INFORMATION

4.3.1. OUTFALL TABLE (3.5.1.e). SEE SWPPP SHEET S-8 – S-10 FOR OUTFALL INFORMATION.

4.3.2. HAVE ALL OUTFALLS BEEN LABELED ON THE EPSC PLAN SHEETS (3.5.1.h)? ☒ YES ☐ NO

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

4.3.4. WHERE POSSIBLE, HAS NON-PROJECT RUN-ON BEEN DIVERTED AROUND OR THROUGH THE PROJECT TO ELIMINATE CONTACT WITH DISTURBED AREAS OF THE PROJECT AND SEPARATE IT FROM PROJECT RUN-OFF THEREBY REDUCING THE DRAINAGE AREA OF TO THE OUTFALLS IN THIS AREA?

☒ YES ☐ NO ☐ N/A

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

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

OF TEN ACRES OR MORE FOR AN OUTFALL(S) THAT DOES NOT DISCHARGE TO A STATE STREAM WITH UNAVAILABLE PARAMETERS OR EXCEPTIONAL TENNESSEE WATERS. 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. (3.5.3.3)

IN BOTH INSTANCES, 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.

4.4. 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 IMPACTS AND IN THE WATER QUALITY PERMITS.

WETLAND INFORMATION

TDOT WETLAND LABEL	FROM STATION LT OR RT	TO STATION LT OR RT	TEMPORARY IMPACTS (AC)	PERMANENT IMPACTS (AC)
WTL-1	184+30 RT	190+40 RT	0.00	0.00
WTL-2	30+40 RT	31+90 RT	0.00	0.162
WTL-3	96+00 LT	98+00 LT	0.00	0.260
WTL-4	113+40 RT	115+30 RT	0.00	0.00
WTL-5	117+00 RT	118+15 RT	0.00	0.00
WTL-6	119+80 RT	123+00 RT	0.00	0.00
WTL-7	128+10 LT	128+45 LT	0.00	0.014
WTL-8	155+30 LT	156+10 LT	0.00	0.00

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DEPARTMENT OF TRANSPORTATION

STORMWATER POLLUTION PREVENTION PLAN

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
P.E.	2014	95012-1222-14	
CONST.	2017	NH-109(32)	S-3

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

4.5.1. IS THIS PROJECT LOCATED IN A HUC-8 WATERSHED THAT MAINTAINS AN EPA APPROVED TMDL FOR SILTATION AND HABITAT ALTERATION?

☐YES ☒ NO

4.5.2. IF YES, IS THIS PROJECT LOCATED WITHIN A HUC-12 SUBWATERSHED WITH A WASTE LOAD ALLOCATION (WLA)?

☐ YES ☐ NO

4.5.3. IF YES, DOES THE PROJECT HAVE A DIRECT DISCHARGE TO A 303(d) LISTED STREAM FOR SILTATION OR HABITAT ALTERATION?

☐ YES ☐ NO

4.5.4. IF YES, HAS A SUMMARY OF THE CONSULTATION LETTER BEEN SUBMITTED/RECEIVED?

☐ YES ☐ NO

4.6. ECOLOGY INFORMATION (3.5.5.e)

DOES THE TDOT ENVIRONMENTAL BOUNDARIES REPORT SPECIFY SPECIAL NOTES TO BE ADDED TO THE PLAN SHEETS?

☒ YES ☐ NO

IF YES, THEY HAVE BEEN INCLUDED ON PLAN SHEET(S) 2C1.

4.7. ENVIRONMENTAL COMMITMENTS

ARE THERE ANY NOTES ON THE ENVIRONMENTAL COMMITMENT SHEET?

☒ YES ☐ NO

IF YES, THEY HAVE BEEN INCLUDED ON PLAN SHEET(S) 1B.

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 PER THE SIZE AND SLOPE OF THE DISTURBED DRAINAGE AREA (3.5.3.3)?

☒YES ☐ NO

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

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

5.6. AREAS TO BE UNDISTURBED SHALL BE CLEARLY MARKED IN THE FIELD BEFORE CONSTRUCTION ACTIVITIES BEGIN.

5.7. UNLESS OTHERWISE NOTED IN THE PLANS, THE CONTRACTOR SHALL NOT CLEAR/DISTURB ANY AREA BEYOND 15 FEET FROM SLOPE LINES OR ROW/ EASEMENT LINE, WHICHEVER IS LESSER.

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

5.9. HAVE STAGED EPSC PLANS BEEN PREPARED FOR THE PROJECT (3.5.2)?

YES ☒ NO ☐ (IF YES, CHECK ONE BELOW)

5.9.1. ☐ PROJECT DISTURBED AREA IS THAN LESS THAN 5 ACRES (MINIMUM OF TWO STAGES OF EPSC PLANS)

5.9.2. ☒ PROJECT DISTURBED AREA IS GREATER THAN 5 ACRES (MINIMUM OF THREE STAGES OF EPSC PLANS)

5.10. STEEP SLOPES ARE DEFINED AS A NATURAL OR CREATED SLOPE OF 35% GRADE OR GREATER REGARDLESS OF HEIGHT. HAVE STEEP SLOPES 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

5.11. 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.j). REFER TO THE LIST OF APPLICABLE ENVIRONMENTAL PERMITS LOCATED ON SWPPP SHEET S-7. ALL PERMITS WILL BE MAINTAINED ON SITE WITHIN THE "DOCUMENTATION AND PERMITS" BINDER.

5.12. THE EPSC CONTROL MEASURES LISTED IN THE QUANTITIES TABLE ON SHEET 47 HAVE BEEN SELECTED IN ACCORDANCE WITH TDOT STANDARD DRAWINGS AND GOOD ENGINEERING PRACTICES (3.5.3.1.b).

5.13. EPSC MEASURES SHALL BE INSTALLED PER TDOT STANDARDS (i.e. STANDARD DRAWINGS) AND SHALL BE FUNCTIONAL PRIOR TO ANY EARTH MOVING OPERATIONS.

5.14. EPSC MEASURES WILL NOT BE INSTALLED WITHIN A STREAM WITHOUT FIRST OBTAINING APPROVAL FROM THE PERMITS SECTION.

5.15. TEMPORARY EPSC MEASURES MAY BE REMOVED AT THE BEGINNING OF THE WORKDAY, BUT MUST BE REINSTALLED AT THE END OF THE WORKDAY OR BEFORE A PRECIPITATION EVENT.

5.16. EPSC MEASURES LOCATED IN WOTUS (EPHEMERAL STREAMS) MUST BE CONSIDERED TEMPORARY AND SHALL BE REMOVED AT THE END OF CONSTRUCTION.

5.17. THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT THE OFF-SITE MIGRATION OR DEPOSIT OF SEDIMENT OFF THE PROJECT LIMITS (E.G. R.O.W., EASEMENTS, ETC.), INTO WATERS OF THE STATE/U.S., OR ONTO ROADWAYS USED BY THE PUBLIC. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFF-SITE ACCUMULATIONS OF SEDIMENT THAT HAVE NOT REACHED A STREAM MUST BE REMOVED TO A LEVEL 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. SEDIMENT THAT MIGRATES INTO WATERS OF THE STATE/US SHALL NOT BE REMOVED WITHOUT GUIDANCE FROM TDOT ENVIRONMENTAL PERSONNEL.

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

5.19. THE QUANTITIES REQUIRED FOR STABILIZED CONSTRUCTION EXITS PER TDOT STANDARDS HAVE BEEN SPECIFIED ON SHEET 47 (3.5.3.1.n).

5.20. DISCHARGES FROM DEWATERING ACTIVITIES ARE PROHIBITED UNLESS MANAGED BY APPROPRIATE CONTROLS THAT PROVIDE THE LEVEL OF TREATMENT (FILTRATION) NECESSARY TO COMPLY WITH PERMIT REQUIREMENTS. (4.1.4).

5.21. SETTLING BASINS AND SEDIMENT TRAPS SHALL BE PROPERLY DESIGNED PER 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.

5.22. DISCHARGES FROM SEDIMENT BASINS AND IMPOUNDMENTS SHALL UTILIZE OUTLET STRUCTURES THAT ONLY WITHDRAW WATER FROM NEAR THE SURFACE OF THE BASIN OR IMPOUNDMENT. TREATED WATER MUST BE DISCHARGED THROUGH A PIPE, WELL- VEGETATED AND/OR LINED CHANNEL, SO THAT THE DISCHARGE DOES NOT CAUSE EROSION OR SEDIMENT TRANSPORT. (4.1.7).

5.23. THE DEWATERING OF WORK AREAS, TRENCHES, FOUNDATIONS, EXCAVATIONS, ETC. THAT HAVE COLLECTED STORMWATER, WATER FROM VEHICLE WASH AREAS, OR GROUNDWATER SHALL BE EITHER HELD IN SETTLING BASINS OR TREATED BY FILTRATION AND/OR CHEMICAL TREATMENT PRIOR TO ITS DISCHARGE. ALL CHEMICAL TREATMENTS MUST BE APPLIED PER SECTION 6 FLOCCULANTS.

5.24. WATER DISCHARGED FROM DEWATERING ACTIVITIES SHALL NOT CAUSE AN OBJECTIONABLE COLOR CONTRAST WITHIN THE RECEIVING NATURAL RESOURCE. WATER MUST BE HELD WITHIN SETTLING BASINS UNTIL IT IS AT LEAST AS CLEAR AS THE RECEIVING WATERS.

5.25. DEWATERING STRUCTURES, SEDIMENT FILTER BAGS, SEDIMENT BASINS AND TRAPS SHALL NOT BE LOCATED CLOSER THAN 30 FEET (60 FEET DESIRABLE VEGETATIVE BUFFER) FOR WATERS WITH UNAVAILABLE PARAMETERS AND EXCEPTIONAL TENNESSEE WATERS AND 15 FEET (30 FEET DESIRABLE VEGETATIVE BUFFER) FOR ALL OTHER FEATURES FROM THE TOP BANK OF A STREAM, WOTUS (EPHEMERAL), WETLAND OR OTHER NATURAL RESOURCE AND SHALL BE PROPERLY DESIGNED PER THE SIZE OF THE DRAINAGE AREAS OR VOLUME OF WATER TO BE TREATED.

5.26. STABILIZATION PRACTICES: PRE-CONSTRUCTION VEGETATIVE COVER WILL NOT BE DESTROYED, REMOVED OR DISTURBED MORE THAN 14 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).

5.27. 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).

5.28. PRIORITY SHALL BE GIVEN TO FINISHING OPERATIONS AND PERMANENT EPSC MEASURES OVER TEMPORARY EPSC MEASURES ON ALL PROJECTS. UNPACKED GRAVEL CONTAINING FINES (SILT AND CLAY SIZED PARTICLES) OR CRUSHER-RUN WILL NOT BE CONSIDERED A NON-ERODIBLE SURFACE

5.29. DELAYING THE PLANTING OF COVER VEGETATION UNTIL WINTER MONTHS OR DRY MONTHS SHOULD BE AVOIDED, IF POSSIBLE.

5.30. A SOIL ANALYSIS SHALL BE PERFORMED PRIOR TO THE APPLICATION OF FERTILIZERS TO ANY PORTION OF THE STE. SOILS SHOULD BE ANALYZED FOR pH, BUFFER VALUE, PHOSPHOROUS, POTASSIUM, CALCIUM AND MAGNESIUM. SOIL SAMPLES SHOULD BE REPRESENTATIVE OF THE AREA FOR WHICH FERTILIZER WILL BE APPLIED. SAMPLE TYPE SHOULD BE COLLECTED AND ANALYZED IN ACCORDANCE WITH THE UT EXTENSION "SOIL TESTING" BROCHURE PB1061. (4.1.5.)

5.31. FERTILIZERS SHALL BE APPLIED ONLY IN THE AMOUNTS SPECIFIED FROM THE ANALYSES. ONCE APPLIED, FERTILIZERS SHALL BE WORKED INTO THE SOIL TO LIMIT THE EXPOSURE TO STORMWATER.

5.32. STEEP SLOPES SHALL BE TEMPORARILY STABILIZED NOT LATER THAN 7 DAYS AFTER CONSTRUCTION ACTIVITY ON THE SLOPE HAS TEMPORARILY OR PERMANENTLY CEASED. (3.5.3.2).

6. FLOCCULANTS (3.5.3.1.b)

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

IF YES, THE FOLLOWING NOTES APPLY:

6.1. POLYACRYLAMIDES (PAM) SHALL BE OF THE ANIONIC OR NEUTRALLY CHARGED TYPE ONLY. PAM REQUIREMENTS ARE AS FOLLOWS:

6.1.1. CATIONIC PAM IS NOT ALLOWED BECAUSE OF ITS TOXICITY TO FISH AND AQUATIC LIFE.

6.1.2. ANIONIC AND NEUTRALLY CHARGED PAM SHALL MEET THE EPA AND FDA ACRYLAMIDE MONOMER LIMITS OF EQUAL TO OR LESS THAN 0.05% BY WEIGHT ACRYLAMIDE MONOMER.

6.1.3. ANIONIC AND NEUTRALLY CHARGED PAM SHALL HAVE A DENSITY OF 10% TO 55% BY WEIGHT AND A MOLECULAR WEIGHT OF 16 TO 24 MG/MOLES.

6.1.4. PAM MIXTURES SHALL BE NON-COMBUSTIBLE.

6.1.5. PAM SHALL CONTAIN ONLY MANUFACTURER-RECOMMENDED ADDITIVES.

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

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

6.4. ALL VENDORS AND SUPPLIERS OF FLOCCULANTS SHALL PRESENT OR SUPPLY A WRITTEN TOXICITY REPORT FOR BOTH ACUTE AND CHRONIC TOXICITY TESTS WHICH VERIFIES THAT THE FLOCCULANT 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.

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6.5. DO NOT APPLY FLOCCULANTS DIRECTLY TO, OR WITHIN 60 FEET, OF ANY STREAMS, WETLANDS, OR OTHER NATURAL WATER RESOURCE LOCATED ON OR ADJACENT TO THE CONSTRUCTION SITE. DO NOT APPLY FLOCCULANTS DIRECTLY INTO WATERS CONTAINED WITHIN SEDIMENT PONDS OR TO SLOPES THAT PRODUCE RUNOFF DIRECTLY INTO A STREAM, WETLAND, OR OTHER NATURAL WATER RESOURCE. DO NOT APPLY FLOCCULANTS IMMEDIATELY AT A STORMWATER OUTFALL WHERE RUNOFF LEAVES THE PROJECT LIMITS.

6.6. BEFORE FLOCCULANTS CAN BE USED ON A CONSTRUCTION PROJECT, SITE-SPECIFIC SOIL SAMPLES MUST BE OBTAINED AND TESTED BY THE MANUFACTURER OR THEIR REPRESENTATIVE, TO IDENTIFY THE OPTIMUM FLOCCULANT TYPE AND APPLICATION RATE. SINCE FLOCCULANT EFFICACY IS HIGHLY DEPENDENT ON SOIL TYPE, SOIL SAMPLES WILL NEED TO BE OBTAINED FROM EACH SOIL HORIZON THAT WILL BE ACCESSED DURING EXCAVATION. FLOCCULANTS SHOULD BE APPLIED ON A CONSTRUCTION SITE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED APPLICATION OR DOSAGE RATE. APPLICATION METHOD SHALL ENSURE UNIFORM COVERAGE TO THE TARGET AREA. DO NOT APPLY EMULSION FORMS OF FLOCCULANTS DIRECTLY TO STORMWATER RUNOFF OR TO STREAMS, WETLANDS, OR OTHER WATER RESOURCES DUE TO SURFACTANT TOXICITY.

6.7. FLOCCULANT POWDER MAY BE APPLIED BY A HAND SPREADER OR A MECHANICAL SPREADER. IF APPROVED BY THE MANUFACTURER, FLOCCULANT MAY BE MIXED WITH DRY SILICA SAND, FERTILIZER, SEED, OR OTHER SOIL AMENDMENTS TO AID IN SPREADING. FLOCCULANTS MAY ALSO BE APPLIED WITH A WATER TRUCK OR AS PART OF HYDRO-SEEDING. APPLICATION METHOD SHALL ENSURE UNIFORM COVERAGE TO THE TARGET AREA.

6.8. MANUFACTURER'S GUIDANCE SHOULD BE FOLLOWED FOR BLOCK, LOG AND SOCK SPACING CONFIGURATIONS. BEFORE FLOCCULANTS CAN BE USED ON A CONSTRUCTION PROJECT, SITE-SPECIFIC SOIL SAMPLES MUST BE OBTAINED AND TESTED BY THE MANUFACTURER OR THEIR REPRESENTATIVE, TO IDENTIFY THE OPTIMUM FLOCCULANT TYPE AND APPLICATION RATE. SINCE FLOCCULANT EFFICACY IS HIGHLY DEPENDENT ON SOIL TYPE, SOIL SAMPLES WILL NEED TO BE OBTAINED FROM EACH SOIL HORIZON THAT WILL BE ACCESSED DURING EXCAVATION. FLOCCULANTS SHOULD BE APPLIED ON A CONSTRUCTION SITE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED APPLICATION OR DOSAGE RATE.

7. UTILITY RELOCATION

ARE UTILITIES INCLUDED IN THE CONTRACT? ☒ YES ☐ NO

IF YES, THE FOLLOWING APPLY:

7.1. STORMWATER WHICH COLLECTS IN THE UTILITY TRENCH SHALL BE PUMPED INTO A DEWATERING STRUCTURE OR SEDIMENT FILTER BAG AND TREATED PRIOR TO DISCHARGE.

7.2. SILT FENCE SHALL BE INSTALLED ON THE DOWNGRADIENT SIDE OF STOCKPILED SOIL. ANY TRENCHING ACROSS WET WEATHER CONVEYANCES SHALL BE DONE DURING DRY CONDITIONS, REMOVED AND STABILIZED BY THE END OF THE WORK DAY.

7.3. UTILITY CROSSINGS IN ENVIRONMENTAL FEATURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH TDOT STANDARDS AND NO WORK SHALL BE CONDUCTED IN FLOWING WATERS. ENVIRONMENTAL PERMITS APPLY TO UTILITIES IN THIS PROJECT. THE STATE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE PERMITS.

7.4. IT IS THE RESPONSIBILITY OF THE STATE UTILITY CONTRACTOR TO PROTECT EXPOSED EARTH FROM EROSION AND TO PROVIDE FOR CONTAINMENT OF SEDIMENT THAT MAY RESULT FROM THEIR WORK. PRIOR TO BEGINNING WORK, ADEQUATE EPSC 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.

7.5. FOR THE INSTALLATION OF BURIED UTILITIES (PIPES AND CABLES), TRENCHES SHALL BE BACKFILLED DAILY AS CONSTRUCTION PROCEEDS. BACKFILLED TRENCHES SHALL BE SEEDED AND MULCHED OR SODDED DAILY IF POSSIBLE, BUT NO LATER THAN FOURTEEN DAYS AFTER BEING BACKFILLED. ANY TEMPORARY SPOILS OF EXCAVATED EARTH SHALL BE LOCATED WITHIN TDOT 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 THE TRENCH IS BACKFILLED.

7.6. IN REGARDS TO EPSC, TDEC REGULATIONS APPLY TO THE STATE UTILITY CONTRACTORS ON THIS PROJECT. THE STATE CONTRACTOR IS RESPONSIBLE FOR EPSC MEASURES RELATED TO UTILITY CONSTRUCTION INCLUDED IN THE STATE CONTRACT.

7.7. TRENCHES FORMED FOR THE INSTALLATION OF BURIED UTILITIES MAY CAUSE STORMWATER RUNOFF TO CONCENTRATE AT THE TRENCH LINE. ADDITIONAL EPSC MEASURES MAY BE REQUIRED TO BE INSTALLED AS APPROVED BY THE TDOT PROJECT ENGINEER.

7.8. FOR THE INSTALLATION OF UNDERGROUND UTILITIES OUTSIDE OF THE TDOT RIGHT-OF-WAY, EPSC MEASURES 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.

7.9. THE UTILITY CONTRACTOR SHALL RESTORE ALL AFFECTED WET WEATHER CONVEYANCES TO THE EXISTING TOPOGRAPHIC CONDITIONS AS APPROVED BY THE TDOT RESPONSIBLE PARTY.

7.10. THE UTILITY CONTRACTOR WILL PROVIDE APPROPRIATE EPSC MEASURES TO REPLACE ONSITE EPSC MEASURES REMOVED TO FACILITATE THE INSTALLATION OF UTILITIES. REPLACEMENT OF EPSC MEASURES WILL BE COORDINATED WITH THE TDOT ENGINEER BEFORE COMMENCING WORK.

7.11. FOR UTILITY CROSSINGS THAT UTILIZE HORIZONTAL DIRECTIONAL DRILLING THE FOLLOWING SHALL APPLY:

7.11.1. THE ENTRY AND EXIT POINTS SHALL BE AT LEAST 50 FEET FROM THE STREAM BANK OR WETLAND BOUNDARY.

7.11.2. THE DEPTH OF BORE BELOW THE STREAMBED IS SUFFICIENT TO PREVENT RELEASE OF DRILLING FLUID, BASED ON THE PARENT MATERIAL.

7.11.3. A SITE-SPECIFIC CONTINGENCY AND CONTAINMENT PLAN FOR INADVERTENT RELEASE OF DRILLING FLUID SHALL BE ESTABLISHED PRIOR TO COMMENCEMENT OF WORK. THIS PLAN SHALL BE SUBMITTED TO THE TDOT PROJECT ENGINEER AND THE TDOT ENVIRONMENTAL DIVISION PERMITS AND/OR COMPLIANCE AND FIELD SERVICES OFFICE FOR REVIEW AND APPROVAL.

8. MAINTENANCE AND INSPECTION

8.1. INSPECTION PRACTICES (3.5.8)

8.1.1. PROJECT EPSC INSPECTORS AND ENGINEERS (INCLUDING TDOT STAFF, CONSULTANTS AND CONTRACTOR STAFF) RESPONSIBLE FOR THE INSPECTION, IMPLEMENTATION, MAINTENANCE. AND/OR REPAIR OF EPSC MEASURES SHALL MEET ONE OF THE FOLLOWING REQUIREMENTS (3.5.8.1.):

8.1.1.1. SUCCESSFULLY COMPLETED THE TDOT EPSC INSPECTIONS TRAINING AND ANY RECERTIFICATION COURSE AS REQUIRED.

8.1.1.2. SUCCESSFULLY COMPLETED THE TDEC "LEVEL I - FUNDAMENTALS OF EROSION PREVENTION AND SEDIMENT CONTROL" COURSE AND ANY RECERTIFICATION COURSES AS REQUIRED.

8.1.1.3. BE A CURRENT TN LICENSED PROFESSIONAL ENGINEER OR LANDSCAPE ARCHITECT.

8.1.1.4. BE A CURRENT CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC).

8.1.1.5. SUCCESSFULLY COMPLETED TDEC "LEVEL II – DESIGN PRINCIPLES FOR EROSION PREVENTION AND SEDIMENT CONTROL FOR CONSTRUCTION SITES" COURSE AND ANY RECERTIFICATION COURSE AS REQUIRED.

8.1.2. THE TDOT CONSTRUCTION ENGINEER (OR THEIR DULY AUTHORIZED REPRESENTATIVE) AND THE CONTRACTOR'S SITE SUPERINTENDENT ARE RESPONSIBLE FOR INSPECTIONS. MAINTENANCE AND REPAIR ACTIVITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE TDOT CONSTRUCTION ENGINEER OR THEIR DULY AUTHORIZED REPRESENTATIVE SHALL COMPLETE THE EPSC INSPECTION REPORTS AND DISTRIBUTE COPIES PER THE CONTRACT.

8.1.3. 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.o).

8.1.4. EPSC CONTROLS SHALL BE INSPECTED TO VERIFY MEASURES HAVE BEEN INSTALLED AND MAINTAINED IN ACCORDANCE WITH TDOT STANDARD DRAWINGS, SPECIFICATIONS, AND GOOD ENGINEERING PRACTICES. EPSC INSPECTIONS SHALL BE DOCUMENTED ON THE TDOT EPSC INSPECTION REPORT FORM AND THE TDEC CONSTRUCTION STORMWATER INSPECTION CERTIFICATION (TWICE-WEEKLY INSPECTIONS) FORM.

8.1.5. OUTFALL POINTS SHALL BE INSPECTED TO ASCERTAIN WHETHER EPSC MEASURES ARE EFFECTIVE IN PREVENTING EROSION AND CONTROLLING SEDIMENT INCLUDING SIGNIFICANT IMPACTS TO SURROUNDING STATE WATERS, WOTUS (EPHEMERAL), WETLANDS, OTHER NATURAL RESOURCES AND ADJACENT PROPERTY OWNERS. WHERE DISCHARGE LOCATIONS ARE INACCESSIBLE, NEARBY DOWN GRADIENT LOCATIONS SHALL BE INSPECTED. LOCATIONS WHERE VEHICLES ENTER AND EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFF-SITE ROADWAY SEDIMENT TRACKING.

8.1.6. INSPECTIONS WILL BE CONDUCTED AT LEAST TWICE EVERY CALENDAR WEEK AND AT LEAST 72 HOURS APART (3.5.8.2.a). A CALENDAR WEEK IS DEFINED AS SUNDAY THROUGH SATURDAY. QUALITY ASSURANCE INSPECTIONS OF TDOT EPSC, NPDES AND WATER QUALITY PERMIT REQUIREMENTS SHALL BE PERFORMED PER THE TDOT ENVIRONMENTAL DIVISION COMPLIANCE AND FIELD SERVICES OFFICE.

8.1.7. THE FREQUENCY OF EPSC INSPECTIONS MAY BE REDUCED TO ONCE A MONTH WHERE SITES OR PORTIONS OF SITES HAVE BEEN TEMPORARILY STABILIZED UNTIL CONSTRUCTION ACTIVITIES RESUME WITH WRITTEN NOTIFICATION BY THE TDOT REGIONAL ENGINEER 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).

8.1.8. 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).

8.1.9. THE INSPECTOR WILL OVERSEE THE REQUIREMENTS OF OTHER CONSTRUCTION-RELATED WATER QUALITY PERMITS (I.E. TDEC ARAP, USACE SECTION 404, AND TVA SECTION 26a PERMITS) FOR CONSTRUCTION ACTIVITIES AROUND WATERS OF THE STATE (10 "INSPECTOR").

8.1.10. 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 (3.5.8.2.e AND 3.5.8.2.f).

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

8.1.12. 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.

8.1.13. TRAINED CERTIFIED INSPECTORS SHALL COMPLETE INSPECTION 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 (3.5.8.2.h).

8.2. DULY AUTHORIZED REPRESENTATIVE (7.7.3)

THE PROJECT ENGINEER MAY DELEGATE AN INDIVIDUAL AND/OR CONSULTANT TO SIGN EPSC INSPECTIONS REPORTS. FOR SATISFYING SIGNATORY REQUIREMENTS FOR EPSC INSPECTION REPORTS, THE PROJECT ENGINEER AND NEWLY AUTHORIZED INDIVIDUAL ACCEPTING RESPONSIBILITY MUST COMPLETE AND SIGN THE TDOT CONSTRUCTION DIVISION EPSC DELEGATION OF AUTHORITY.

8.3. MAINTENANCE PRACTICES (3.5.3.1 AND 3.5.7)

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

8.3.2. MAINTENANCE AND REPAIR ACTIVITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR.

8.3.3. 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 24-HOUR TIMEFRAME, WRITTEN DOCUMENTATION PROVIDED BY THE CONTRACTOR SHALL BE PLACED IN THE FIELD DIARY AND EPSC INSPECTION REPORT. AN ESTIMATED REPAIR, REPLACEMENT OR MODIFICATION SCHEDULE SHALL BE DOCUMENTED WITHIN 24 HOURS AFTER IDENTIFICATION. (3.5.8.2.e).

8.3.4. SEDIMENT SHALL BE REMOVED FROM SEDIMENT CONTROL STRUCTURES (SEDIMENT TRAPS, SILT FENCE, SEDIMENT BASINS, OTHER CONTROLS, ETC.) WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT (50%). (3.5.3.1.e).

8.3.5. DURING SEDIMENT REMOVAL, THE CONTRACTOR SHALL TAKE STEPS TO ENSURE THAT STRUCTURAL COMPONENTS OF EPSC MEASURES ARE NOT DAMAGED AND THUS MADE INEFFECTIVE. IF DAMAGE DOES OCCUR, THE CONTRACTOR SHALL REPAIR THE EPSC MEASURES AT THE CONTRACTOR'S OWN EXPENSE.

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

8.3.7. SEDIMENT REMOVED FROM SEDIMENT CONTROL STRUCTURES SHALL BE PLACED AND TREATED IN A MANNER SO THAT THE SEDIMENT IS CONTAINED WITHIN THE PROJECT LIMITS, DOES NOT MIGRATE INTO FEATURES REMOVED FROM, AND DOES NOT MIGRATE ONTO ADJACENT PROPERTIES AND/OR INTO WATERS OF THE STATE/U.S.

8.3.8. 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 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).

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

9. SITE ASSESSMENTS (3.1.2)

QUALITY ASSURANCE SITE ASSESSMENTS OF EROSION PREVENTION AND SEDIMENT CONTROLS SHALL BE PERFORMED PER THE TDOT ENVIRONMENTAL DIVISION COMPLIANCE AND FIELD SERVICES OFFICE GUIDELINES.

10. STORMWATER MANAGEMENT (3.5.4)

10.1. 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 DEPICTED ON THE PLANS AND NOTED AS PERMANENT.

10.2. DESCRIBE ANY SPECIFIC POST-CONSTRUCTION MEASURES THAT WILL CONTROL VELOCITY, POLLUTANTS, AND/OR EROSION (3.5.4): Final side slopes will be protected with seed and mulch or sod. Steep slopes will be protected with seeding and erosion control blankets.

10.3. OTHER ITEMS NEEDING CONTROL (3.5.5)

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

☒ LUMBER, GUARDRAIL, TRAFFIC CONTROL DEVICES
☒ CONCRETE WASHOUT
☒ PIPE CULVERTS (I.E. CONCRETE, CORRUGATED METAL, HDPE, ETC.)
☒ MINERAL AGGREGATES, ASPHALT
☒ EARTH
☒ LIQUID TRAFFIC STRIPING MATERIALS, PAINT
☒ ROCK
☒ CURING COMPOUND
☒ EXPLOSIVES
☐ OTHER _____

THESE MATERIALS WILL BE HANDLED AS NOTED IN THIS SWPPP.

10.4. 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 IN ACCORDANCE WITH THE TDOT CONSTRUCTION CONTRACT AND FEDERAL AND STATE REGULATIONS. IMPACTS TO WATERS OF THE STATE/U.S. SHALL BE AVOIDED IF POSSIBLE. IF UNAVOIDABLE, THE CONTRACTOR WILL OBTAIN 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.

10.5. 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 ALL NECESSARY PERMITS TO DISPOSE OF HAZARDOUS MATERIAL.

10.6. 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 ALL NECESSARY PERMITS TO DISPOSE OF SANITARY WASTE.

10.7. OTHER MATERIALS

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

☒ FERTILIZERS AND LIME
☒ PESTICIDES AND/OR HERBICIDES
☒ DIESEL AND GASOLINE
☒ MACHINERY LUBRICANTS (OIL AND GREASE)

THESE MATERIALS WILL BE HANDLED AS NOTED IN THIS SWPPP.

11. NON-STORMWATER DISCHARGES (3.5.9)

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

☒ DEWATERING OF WORK AREAS OF COLLECTED STORMWATER AND GROUND WATER.
☒ 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 THE SITE.
☒ WATER USED TO CONTROL DUST. (3.5.3.1.n)
☒ POTABLE WATER SOURCES INCLUDING WATERLINE FLUSHING FROM WHICH CHLORINE HAS BEEN REMOVED TO THE MAXIMUM EXTENT PRACTICABLE.
☒ UNCONTAMINATED GROUNDWATER OR SPRING WATER.
☒ FOUNDATION OR FOOTING DRAINS WHERE FLOWS ARE NOT CONTAMINATED WITH POLLUTANTS.
☐ OTHER: _____

11.2. 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. ALL CHEMICAL TREATMENTS MUST BE APPLIED PER SECTION 6 FLOCCULANTS.

11.3. 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.

11.4. 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.

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

☐ YES ☒ NO

IF YES, SPECIFY THE LOCATION OF THE ACTIVITY AND ITS PERMIT NUMBER: _____

12. SPILL PREVENTION, MANAGEMENT AND NOTIFICATION (3.5.5.c, 5.1)

12.1. SPILL PREVENTION (3.5.5.c)

12.1.1. CONTRACTOR'S BULK FUEL AND PETROLEUM PRODUCTS STORED ON-SITE OR ADJACENT TO THE R.O.W. IN ABOVE GROUND STORAGE TANKS WITH AGGREGATE STORAGE CAPACITY IN EXCESS OF 1,320 GALLONS SHALL HAVE SECONDARY CONTAINMENT.

12.1.2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING A SPILL PREVENTION CONTROL AND COUNTERMEASURE (SPCC) PLAN AS REQUIRED BY TDOT SPECIAL PROVISION 107FP (REGARDING WATER QUALITY AND STORM WATER PERMITS) AND THE LAW.

12.1.3. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR OBTAINING ANY NECESSARY LOCAL, STATE, AND FEDERAL PERMITS. THE SPCC PLAN AND/OR PERMITS SHALL BE KEPT ON-SITE AND A COPY PROVIDED TO THE TDOT CONSTRUCTION ENGINEER.

12.2. MATERIAL MANAGEMENT

12.2.1. 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.

12.2.2. HAZARDOUS MATERIALS

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

12.3. PRODUCT SPECIFIC PRACTICES

12.3.1. PETROLEUM PRODUCTS: ALL ON-SITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE.

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PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED.

12.3.2. FERTILIZERS: FERTILIZERS WILL BE APPLIED ONLY IN THE AMOUNTS SPECIFIED BY THE SOIL ANALYSIS OR 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.

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

12.3.4. 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.

12.4. SPILL MANAGEMENT

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

12.4.1. 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.

12.4.2. 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.

12.4.3. 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.

12.4.4. THE CONTRACTOR'S RESPONSIBLE PARTY 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.

12.4.5. 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.

12.4.6. IF AN 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.

12.4.7. IF A SPILL OCCURS THE CONTRACTOR'S SITE SUPERINTENDENT SHALL BE RESPONSIBLE FOR COMPLETING THE SPILL REPORTING FORM AND FOR REPORTING THE SPILL TO THE TDOT CONSTRUCTION ENGINEER AND/OR PROJECT ENGINEER. 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.

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

12.5. SPILL NOTIFICATION (5.1)

WHERE A RELEASE CONTAINING A HAZARDOUS SUBSTANCE IN AN AMOUNT EQUAL TO, OR MORE THAN A REPORTABLE QUANTITY ESTABLISHED UNDER EITHER 40 CFR 117 OR 40 CFR 302 OCCURS DURING A 24 HOUR PERIOD:

12.5.1. THE TDOT PROJECT ENGINEER IS RESPONSIBLE FOR NOTIFYING THE REGIONAL PROJECT DEVELOPMENT OFFICE (E.G. TRANSPORTATION ENVIRONMENTAL STUDIES SPECIALIST) AS SOON AS HE OR SHE HAS KNOWLEDGE OF THE DISCHARGE.

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

12.5.3. IN ADDITION TO ANY FOLLOW UP NOTIFICATIONS REQUIRED BY FEDERAL LAW, 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.

12.5.4. 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.

13. RECORD-KEEPING

13.1. REQUIRED RECORDS

TDOT OR THEIR DULY AUTHORIZED REPRESENTATIVE WILL MAINTAIN AT THE SITE THE FOLLOWING RECORDS OF CONSTRUCTION ACTIVITIES (3.5.3.1.m) (4.1.5.) (6.2.1):

13.1.1. THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR.

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

13.1.3. THE DATES WHEN STABILIZATION MEASURES ARE INITIATED.

13.1.4. RECORDS EPSC INSPECTION REPORTS AND CORRECTIVE MEASURES.

13.1.5. RECORDS OF QUALITY ASSURANCE SITE ASSESSMENTS.

13.1.6. COPY OF SITE EPSC INSPECTOR'S CERTIFICATION AND/OR LICENSING

13.1.7. COPY OF REQUIRED SOIL ANALYSIS

13.1.8. A COPY OF ANY REGULATORY CORRESPONDENCE REGARDING THE EFFECTIVENESS OF THE *SWPPP* OR EPSC CONTROLS.

13.2. RAINFALL MONITORING PLAN (3.5.3.1.o):

13.2.1. 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.

13.2.2. 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.

13.2.3. METHODS

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.

13.2.4. 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.

13.2.5. 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.

13.2.6. IF 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.

13.2.7. 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.

13.3. KEEPING PLANS CURRENT (3.4)

13.3.1. THE EPSC PLAN IS TO SERVE AS AN INITIAL GUIDE FOR SITE PERSONNEL AS THE CONSTRUCTION PROCESS DEVELOPS. IT MUST BE AMENDED, MODIFIED, AND UPDATED WHENEVER EPSC INSPECTIONS INDICATE, OR WHERE STATE OR FEDERAL REGULATORY 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 STORMWATER DISCHARGES ASSOCIATED WITH THE CONSTRUCTION ACTIVITY.

13.3.2. THE STAGES DEPICTED WITHIN THE EPSC PLANS MAY NOT COINCIDE WITH THE ACTUAL STAGES OF CONSTRUCTION ESTABLISHED BY THE CONTRACTOR DURING CONSTRUCTION, THUS MODIFICATIONS WILL BE REQUIRED TO ENSURE THE EPSC PLAN IS MAINTAINED TO DEPICT CURRENT SITE CONDITIONS. IT SHOULD BE MAINTAINED SUCH THAT IT WILL ALWAYS REFLECT THE MEASURES THAT ARE INSTALLED DURING THE VARIOUS STAGES OF CONSTRUCTION. IT IS IMPRACTICAL TO DETERMINE ALL THE INTERMEDIATE STAGES OF CONSTRUCTION THAT WILL OCCUR, THUS THESE DOCUMENTS MUST BE UPDATED THROUGHOUT THE LIFE OF THE CONSTRUCTION PROJECT.

13.3.3. THE TDOT EPSC INSPECTOR OR THEIR DULY AUTHORIZED REPRESENTATIVE WILL MODIFY AND UPDATE THE SWPPP WHEN ANY OF THE FOLLOWING CONDITIONS APPLY:

13.3.3.1. 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;

13.3.3.2. 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

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SOURCES, A COPY OF ANY CORRESPONDENCE TO THAT EFFECT MUST BE RETAINED IN THE SWPPP;

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

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

13.3.3.5. 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.

13.3.3.6. ALL SWPPP REVISION(S) SHALL BE RECORDED WITHIN 7 DAYS BY THE PROJECT EPSC INSPECTOR.

13.3.3.7. WHEN A TMDL IS DEVELOPED FOR THE RECEIVING WATERS FOR A POLLUTANT OF CONCERN (SILTATION AND/OR HABITAT ALTERATION), CONSTRUCTION SHALL NOTIFY THE PERMITS SECTION FOR PROPER COORDINATION.

13.4. MAKING PLANS ACCESSIBLE

13.4.1. 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).

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

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

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

13.4.2.3. A BRIEF DESCRIPTION OF THE PROJECT; AND

13.4.2.4. THE LOCATION OF THE SWPPP.

13.4.3. ALL INFORMATION DESCRIBED IN SECTION 13.4.2 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.

13.5. NOTICE OF TERMINATION (8.0)

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

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

13.5.2.1. 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

13.5.2.2. 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

13.5.2.3. 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

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

13.5.2.5. 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

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

13.5.2.7. 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.

13.6. 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.

14. SITE WIDE/PRIMARY PERMITTEE CERTIFICATION (7.7.5)

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.

John L. Hewitt

AUTHORIZED TDOT PERSONNEL SIGNATURE (3.3.1)

JOHN HEWITT

PRINTED NAME

CIVIL ENGINEER MANAGER 2

TITLE

6/12/17

DATE

15. 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 ONSITE 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. AS SPECIFIED IN TENNESSEE CODE ANNOTATED SECTION 39-16-702(a)(4), THIS DECLARATION IS MADE UNDER PENALTY OF PERJURY.

AUTHORIZED TDOT PERSONNEL SIGNATURE (3.3.1)

PRINTED NAME

TITLE

DATE

16. 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 DULY AUTHORIZED REPRESENTATIVE)**:

ENVIRONMENTAL PERMITS			
PERMIT	**YES OR NO**	**PERMIT OR TRACKING NO.**	**EXPIRATION DATE***
TDEC ARAP			
CORPS OF ENGINEERS (USACE)			
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.
P.E.	2014	95012-1222-14	
CONST.	2017	NH-109(32)	S-8

OUTFALL TABLE (3.5.1.d, 5.4.1.g)

EPSC STAGE	OUTFALL LABEL	SUB OUT-FALL	STATION CL, LT OR RT	SLOPE WITHIN ROW (%)	STAGE 1 DRAINAGE AREA (AC)	STAGE 2 DRAINAGE AREA (AC)	STAGE 3 DRAINAGE AREA (AC)	SEDIMENT BASIN OR EQUIVALENT MEASURE(S) (YES, NO OR N/A)	RECEIVING RESOURCE (TDOT EBR LABEL) OR OTHER	COMMENTS
1	1		185+00 RT	2.6	9.97			N/A	WTL-1	
1	2		190+11 RT	1.9	0.77			N/A	WTL-1	
1	3		195+61 RT	0.7	9.41			N/A	STR-1	SUB OUTFALLS
1		3A	194+41 LT	0.7	7.32			N/A	STR-1	
1		3B	194+68 LT	4.6	0.67			N/A	STR-1	
1		3C	195+61 RT	0.5	1.42			N/A	STR-1	
1, 2 & 3	4		201+64 LT	12.9	1.57	1.68	1.68	N/A	WWC-1/EPH-1	SLOPE IN STAGES 2 & 3 = 0.5%
1, 2 & 3	5		31+30 LT	4.4	0.26	0.26	1.66	N/A	STR-1	SLOPE IN STAGE 3 = 3.2%
1 & 2	6		34+56 LT	3.0	1.25	1.25		N/A		
1, 2 & 3	7		36+00 RT	3.2	2.97	25.81	25.81	NO	WWC-2/EPH-2	SEE SEQUENCING NOTES STATION IN STAGES 2 & 3 = 35+60 RT SLOPE IN STAGES 2 & 3 = 4.2%
1, 2 & 3	8		41+22 LT	3.7	4.57	1.44	1.44	N/A		SLOPE IN STAGES 2 & 3 = 3.8%
1, 2 & 3	9		ACADEMY RD 29+22 RT	4.7	0.27	0.27	0.27	N/A		
1, 2 & 3	10		44+32 LT	10.6	22.44	22.44	3.38	NO		SUB OUTFALLS
1 & 2		10A	44+00 RT	7.1	0.25	0.25		N/A		
1 & 2		10B	44+40 RT	3.1	4.97	4.97		N/A		
1 & 2		10C	45+24 RT	3.9	4.42	4.42		N/A		
1 & 2		10D	45+39 RT	4.4	9.42	9.42		N/A		
1, 2 & 3		10E	44+32 LT	10.6	3.38	3.38	3.38	N/A		
1, 2 & 3	11		45+79 LT	5.1	2.36	2.36	2.36	N/A		
1, 2 & 3	12		62+18 RT	5.7	5.6	6.27	6.27	N/A	STR-2	SLOPE IN STAGES 2 & 3 = 0.6%
1, 2 & 3	13		62+55 RT	13.7	0.10	0.31	0.31	N/A	STR-2	SLOPE IN STAGES 2 & 3 = 10.5%
1, 2 & 3	14		63+67 RT	19.3	0.11	0.19	0.19	N/A	WWC-3/EPH-3	SLOPE IN STAGES 2 & 3 = 17.6%
1, 2 & 3	15		64+24 RT	9.9	0.30	0.55	0.55	N/A	WWC-3/EPH-3	SLOPE IN STAGES 2 & 3 = 7.8%
1, 2 & 3	16		64+27 LT	8.9	0.38	0.88	0.88	N/A	STR-2	SLOPE IN STAGES 2 & 3 = 6.5%
1, 2 & 3	17		64+75 LT	9.4	0.23	0.11	0.11	N/A	STR-2	SLOPE IN STAGES 2 & 3 = 18.9%
1, 2 & 3	18		65+57 LT	9.4	0.24	0.11	0.11	N/A	STR-3	SLOPE IN STAGES 2 & 3 = 18.7%
1, 2 & 3	19		66+15 LT	7.5	0.72	0.57	0.57	N/A	STR-3	SLOPE IN STAGES 2 & 3 = 5.4%
1, 2 & 3	20		66+74 RT	7.2	0.25	0.44	0.44	N/A	STR-3	SLOPE IN STAGES 2 & 3 = 6.8%
1, 2 & 3	21		67+14 RT	10.9	0.17	0.40	0.40	N/A	STR-3	SLOPE IN STAGES 2 & 3 = 6.9%
1, 2 & 3	22		TYREE ACCESS RD 0+38 LT	3.6	2.54	2.92	2.92	N/A	STR-1	SLOPE IN STAGES 2 & 3 = 4.3%
1, 2 & 3	23		69+07 RT	4.3	2.05	2.64	2.64	N/A	STR-3	SLOPE IN STAGES 2 & 3 = 3.5%
1, 2 & 3	24		78+03 LT	3.0	2.18	1.19	1.19	N/A		SLOPE IN STAGES 2 & 3 = 2.7%
1	25		86+76 RT	1.7	0.61			N/A		
1, 2 & 3	26		96+16 LT	1.1	6.21	7.90	7.90	N/A	WTL-3/STR-4	
1, 2 & 3	27		BENDING CHESTNUT 11+60 RT	5.2	0.79	1.26	1.26	N/A	STR-4.5	SLOPE IN STAGES 2 & 3 = 3.3%
1, 2 & 3	28		BENDING CHESTNUT 11+60 LT	9.7	0.08	0.17	0.17	N/A	STR-4.5	SLOPE IN STAGES 2 & 3 = 7.8%
1, 2 & 3	29		CREIGHTON LN 12+45 RT	0.1	0.76	0.15	0.15	N/A		
1, 2 & 3	30		CREIGHTON LN 12+45 LT	1.2	0.15	0.15	0.15	N/A		

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STORMWATER POLLUTION PREVENTION PLAN

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
P.E.	2014	95012-1222-14	
CONST.	2017	NH-109(32)	S-9

EPSC STAGE	OUTFALL LABEL	SUB OUT-FALL	STATION CL, LT OR RT	SLOPE WITHIN ROW (%)	STAGE 1 DRAINAGE AREA (AC)	STAGE 2 DRAINAGE AREA (AC)	STAGE 3 DRAINAGE AREA (AC)	SEDIMENT BASIN OR EQUIVALENT MEASURE(S) (YES, NO OR N/A)	RECEIVING RESOURCE (TDOT EBR LABEL) OR OTHER	COMMENTS
1, 2 & 3	31		114+64 LT	5.6	2.39	2.39	2.39	N/A	STR-5	SLOPE IN STAGES 2 & 3 = 5.2%
1, 2 & 3	32		114+99 LT	8.8	0.73	11.85	11.85	NO	STR-5	SEE SEQUENCING NOTES SLOPE IN STAGES 2 & 3 = 4.9%
1, 2 & 3	33		115+02 RT	7.2	0.34	0.84	0.84	N/A	STR-4.5	SLOPE IN STAGES 2 & 3 = 6.8%
1 & 2	34		117+23 RT	7.0	3.30	3.30		N/A	STR-6	
1, 2 & 3	35		118+26 RT	3.9	0.34	0.75	0.75	N/A	STR-5/WTL-5	SLOPE IN STAGES 2 & 3 = 2.8%
1 & 2	36		123+37 LT	8.4	2.83	7.10		N/A	STR-5	SLOPE IN STAGE 2 = 7.3%
2 & 3	37		125+41 RT	4.6		20.16	20.16	NO	STR-5	SEE SEQUENCING NOTES
1	37A		127+88 LT	3.5	6.29			N/A	STR-5	
1	37B		128+03 RT	5.1	9.93			N/A	STR-5	
1 & 2	38		136+57 LT	7.1	0.26	0.26		N/A		
1	39		138+98 LT	15.5	0.32			N/A		
1, 2 & 3	40		141+30 LT	14.6	0.40	0.40	0.06	N/A	WWC-4/EPH-4	SLOPE IN STAGE 3 = 4.1%
1 & 2	41		142+54 LT	11.8	0.20	0.20		N/A	PND-5	
1 & 2	42		142+86 LT	11.3	0.45	0.45		N/A	WWC-5/EPH-5	
1, 2 & 3	43		146+20 RT	10.1	3.77	3.77	4.14	N/A	WWC-6/EPH-6	SLOPE IN STAGE 3 = 9.7%
1, 2 & 3	44		145+32 LT	13.5	0.65	0.65	0.25	N/A	WWC-6/EPH-6	SLOPE IN STAGE 3 = 19.5%
1, 2 & 3	45		145+76 LT	13.5	0.55	0.55	0.52	N/A	WWC-6/EPH-6	SLOPE IN STAGE 3 = 12.9%
1, 2 & 3	46		151+94 RT	4.8	1.48	1.50	1.50	N/A	WWC-7/EPH-7	SLOPE IN STAGES 2 & 3 = 18.6%
1, 2 & 3	47		151+36 LT	17.1	0.49	0.35	0.35	N/A	WWC-7/EPH-7	SLOPE IN STAGES 2 & 3 = 12.1%
1	48		153+64 LT	3.4	0.59			N/A	WWC-8/EPH-8	
1, 2 & 3	49		BLOODWORTH RD 15+82 RT	13.0	0.15	0.15	0.15	N/A		SLOPE IN STAGES 2 & 3 = 12.7%
1, 2 & 3	50		BLOODWORTH RD 15+82 LT	4.6	0.33	0.18	0.18	N/A		SLOPE IN STAGES 2 & 3 = 4.6%
1, 2 & 3	51		163+49 RT	2.9	1.11	1.11	2.42	N/A	WWC-9/EPH-9	SLOPE IN STAGE 3 = 2.6%
1, 2 & 3	52		168+37 LT	8.6	6.92	6.92	5.14	N/A	WWC-9/EPH-9	SLOPE IN STAGE 3 = 7.5%
1 & 2	53		171+97 RT	8.0	0.29	0.29		N/A	WWC-9/EPH-9	
1, 2 & 3	54		188+40 LT	2.0	5.66	8.58	8.58	N/A		SUB OUTFALLS
1		54A	180+73 LT	4.7	4.26			N/A		
2 & 3		54A1	107+54 LT	4.4		0.71	0.71	N/A		
2 & 3		54A2	170+75 LT	4.3		0.08	0.08	N/A		
2 & 3		54A3	174+24 LT	2.6		1.35	1.35	N/A		
2 & 3		54A4	174+25 LT	4.0		0.39	0.39	N/A		
2 & 3		54A5	175+59 LT	3.1		0.28	0.28	N/A		
2 & 3		54A6	175+59 LT	3.9		0.15	0.15	N/A		
2 & 3		54A7	177+83 LT	5.6		0.86	0.86	N/A		
2 & 3		54A8	177+83 LT	4.0		0.25	0.25	N/A		
2 & 3		54A9	108+93 LT	5.5		0.52	0.52	N/A		
2 & 3		54A10	181+05 LT	3.6		0.19	0.19	N/A		
2 & 3		54A11	180+99 LT	4.0		0.35	0.35	N/A		
2 & 3		54A12	181+50 LT	4.9		0.06	0.06	N/A		
2 & 3		54A13	183+50 LT	4.0		0.17	0.17	N/A		
2 & 3		54A14	185+50 LT	3.2		0.22	0.22	N/A		

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STORMWATER POLLUTION PREVENTION PLAN

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DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
P.E.	2014	95012-1222-14	
CONST.	2017	NH-109(32)	S-10

EPSC STAGE	OUTFALL LABEL	SUB OUT-FALL	STATION CL, LT OR RT	SLOPE WITHIN ROW (%)	STAGE 1 DRAINAGE AREA (AC)	STAGE 2 DRAINAGE AREA (AC)	STAGE 3 DRAINAGE AREA (AC)	SEDIMENT BASIN OR EQUIVALENT MEASURE(S) (YES, NO OR N/A)	RECEIVING RESOURCE (TDOT EBR LABEL) OR OTHER	COMMENTS
2 & 3		54A15	187+60 LT	4.9		0.23	0.23	N/A		
2 & 3		54A16	188+29 LT	4.9		0.23	0.23	N/A		
1, 2 & 3		54B	186+97 RT	3.8	1.02	1.81	1.81	N/A		SUB OUTFALLS
2 & 3		54B1	175+67 RT	4.0		0.62	0.62	N/A		
2 & 3		54B2	179+50 RT	4.0		0.42	0.42	N/A		
2 & 3		54B3	183+50 RT	4.0		0.44	0.44	N/A		
2 & 3		54B4	186+45 RT	2.9		0.33	0.33	N/A		
1, 2 & 3		54C	187+66 RT	2.5	0.30	0.67	0.67	N/A		SUB OUTFALLS STATION IN STAGES 2 & 3 = 188+58 RT SLOPE IN STAGES 2 & 3 = 0.5% CONTRIBUTING DRAINAGE AREA FOR STAGES 2 & 3 = 0.05 ACRES
2 & 3		54C1	189+35 RT	2.2		0.53	0.53	N/A		
2 & 3		54C2	189+75 RT	2.2		0.09	0.09	N/A		
1, 2 & 3		54D	188+58 LT	5.9	0.08	0.06	0.06	N/A		SLOPE IN STAGES 2 & 3 = 3.1%
1, 2 & 3	55		WILSON RD 2+47 RT	1.9	2.57	2.57	2.57	N/A	STR-1	
1, 2 & 3	56		WILSON RD 3+23 LT	5.7	0.19	0.19	0.19	N/A	STR-1	
2 & 3	101		184+20 RT	1.4		9.92	9.92	N/A	STR-1	
2 & 3	102		194+45 RT	2.8		9.85	9.85	N/A	STR-1	
2 & 3	103		164+42 LT	2.9		3.68	3.68	N/A		
2 & 3	104		194+30 LT	0.5		2.50	2.50	N/A	STR-1	SUB OUTFALLS
2 & 3		104A	190+00 LT	0.6		0.27	0.27	N/A	STR-1	
2 & 3		104B	192+33 RT	3.2		1.60	1.60	N/A	STR-1	
2 & 3		104C	192+40 RT	0.7		0.25	0.25	N/A	STR-1	
2 & 3		104D	192+40 LT	0.5		0.27	0.27	N/A	STR-1	
2 & 3		104E	193+40 LT	0.5		0.11	0.11	N/A	STR-1	
3	201		ACADEMY RD 22+75 RT	0.5			0.08	N/A		
3	202		144+09 LT	10.4			0.38	N/A	WWC-5/EPH-5	
3	203		144+38 LT	18.9			0.10	N/A	WWC-5/EPH-5	
3	204		151+68 LT	11.1			0.84	N/A		

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

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STORMWATER POLLUTION PREVENTION PLAN

TENNESSEE D.O.T.
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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

TENN.	YEAR	SHEET NO.
	2017	1
FED. AID PROJ. NO.	NH-109(32)	
STATE PROJ. NO.	95012-3225-14	

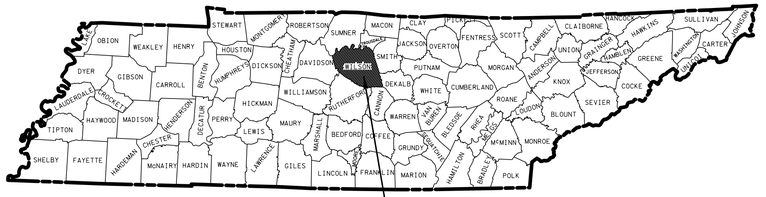
WILSON COUNTY

STATE ROUTE 109
FROM SOUTH OF DRY FORK CREEK
TO SOUTH OF CUMBERLAND RIVER

GRADE, DRAIN, BASE, SURFACE, STRUCTURES, SIGNING, STRIPING, AND GUARDRAIL

CONSTRUCTION

STATE HIGHWAY NO. 109 F.A.H.S. NO. 109



ADJACENT PROJECT
NO. BR-NHE-109 (19) CONST.

PROJECT LOCATION

95012-3225-14
BEGIN PROJECT NO. NH-109(32) (CONST.)
STA. 180+50.00

95012-3225-14
END PROJECT NO. NH-109(32) (CONST.)
STA. 194+48.79

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 TRANSPORATION MANAGER 1 JERRY HUGHES, SR.
DESIGNED BY ALFRED BENESCH & COMPANY
DESIGNER BRIAN N. GAFFNEY, P.E. CHECKED BY SAMMIE MCCOY, P.E.
P.E. NO. 95012-1222-14
PIN NO. 100281.03

ROADWAY LENGTH	3.759 MILES
BRIDGE LENGTH	0.038 MILES
BOX BRIDGE LENGTH	0.004 MILES
PROJECT LENGTH	3.801 MILES

EQUATION

DESCRIPTION	NET EFFECT ON ENUMERATION
STA. 206+64.30 BK. = STA. 20+00.00 AH.	+ 18664.30
STA. 79+67.34 BK. = STA. 79+64.18 AH.	+ 3.16
STA. 104+04.90 BK. = STA. 104+01.30 AH.	+ 3.60
TOTAL	+18671.06

TRAFFIC DATA

ADT (2018)	21680
ADT (2038)	39020
DHV (2038)	4292
D	60 - 40
T (ADT)	18 %
T (DHV)	12 %
V	60 MPH

SEALED BY

UNOFFICIAL SET
NOT FOR BIDDING

SURVEY DATE: NOV. 2011

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

APPROVED:
JOHN SCHROER, COMMISSIONER

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:
DIVISION ADMINISTRATOR DATE

5/26/2017 1:5:40 PM
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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-109(32)	1A

ROADWAY INDEX

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STANDARD ROADWAY DRAWINGS

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RD-L-2	09-05-01	STANDARD LEGEND FOR UTILITY INSTALLATIONS
RD-L-3	03-16-17	STANDARD LEGEND FOR SIGNALIZATION AND LIGHTING
RD-L-4	03-16-17	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
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RD01-TS-1A	02-05-16	DESIGN STANDARDS FOR LOW-VOLUME LOCAL ROADS (ADT<=400)
RD01-TS-2	03-16-17	DESIGN STANDARDS FOR COLLECTOR ROADS AND STREETS
RD01-TS-2B	10-15-02	DESIGN STANDARDS 4 AND 6 LANE COLLECTOR HIGHWAYS WITH FLUSH MEDIANS
RD01-TS-6	10-10-16	TYPICAL CURB AND GUTTER SECTIONS WITH SHOULDER
RD01-TS-6A	07-31-13	TYPICAL CURB AND GUTTER SECTIONS WITHOUT SHOULDER
RD01-SE-3	10-15-02	RURAL SUPERELEVATION DETAILS
RD01-S-11	04-04-03	DESIGN AND CONSTRUCTION DETAILS FOR ROADSIDE SLOPE DEVELOPMENT
RD01-S-11A	10-15-02	ROADSIDE DITCH DETAILS FOR DESIGN AND CONSTRUCTION
RD01-SD-1		INTERSECTION SIGHT DISTANCE DESIGN AND GENERAL NOTES
RD01-SD-3		INTERSECTION SIGHT DISTANCE 2-LANE ROADWAYS
RD01-SD-4		INTERSECTION SIGHT DISTANCE 5-LANE AND 4-LANE UNDIVIDED ROADWAYS
RD-UD-3	09-05-96	UNDERDRAIN DETAILS
RD-UD-4	01-25-16	UNDERDRAIN LATERAL DETAILS
RD-UD-9	12-18-94	LATERAL UNDERDRAIN ENDWALL DETAIL FOR 6:1 SLOPES
PIPE CULVERTS AND ENDWALLS		
D-PB-1	03-16-17	STANDARD DETAILS FOR CONCRETE PIPE INSTALLATION
D-PB-3		INDUCED TRENCH SOIL EMBANKMENT FOR PIPE CULVERT INSTALLATION
D-PG-3	04-15-97	FERROUS AND ALUMINUM CORRUGATED METAL PIPE
D-PO-1	05-27-01	OVAL & FLAT BASE CONCRETE CULVERT PIPE
D-PE-18A	01-06-15	18” CONCRETE ENDWALL CROSS DRAIN (FOR 3:1, 4:1 & 6: SLOPES)
D-PE-18B		18” CONCRETE ENDWALL CROSS DRAIN (FOR 3:1, 4:1 & 6:1 SLOPES)
D-PE-30A	10-10-16	30” CONCRETE ENDWALL CROSS DRAIN WITH STEEL PIPE GRATE (FOR 3:1, 4:1 & 6: SLOPES)
D-PE-30B		30” CONCRETE ENDWALL CROSS DRAIN WITH STEEL PIPE GRATE (FOR 3:1, 4:1 & 6: SLOPES)
D-PE-36A	06-14-13	36” CONCRETE ENDWALL CROSS DRAIN WITH STEEL PIPE GRATE (FOR 3:1, 4:1 & 6: SLOPES)
D-PE-36B		36” CONCRETE ENDWALL CROSS DRAIN WITH STEEL PIPE GRATE (FOR 3:1, 4:1 & 6: SLOPES)
D-PE-42A	06-14-13	42” CONCRETE ENDWALL CROSS DRAIN WITH STEEL PIPE GRATE (FOR 3:1, 4:1 & 6: SLOPES)
D-PE-42B		42” CONCRETE ENDWALL CROSS DRAIN WITH STEEL PIPE GRATE (FOR 3:1, 4:1 & 6: SLOPES)
D-PE-99	11-01-13	PIPE GRATE & SKEWED CONNECTION DETAILS FOR “U” ENDWALLS (FOR 3:1, 4:1 & 6: SLOPES)
D-SEW-1A	03-16-17	SIDE DRAIN CONCRETE ENDWALL WITH STEEL PIPE GRATE FOR 15” THRU 48” PIPES – 6:1 SLOPE
D-PE-9	04-25-90	CONCRETE ENDWALLS TYPE "B" (FOR ROUND & SIDE TAPERED INLETS, PIPE SIZES 15" TO 78", ALL SKEWS, 2:1 AND 4:1 SLOPES) 1976
D-PE-9A	10-25-82	GENERAL DIMENSION QUANTITIES, ROUND PIPE CONCRETE ENDWALLS TYPE “B” (PIPE SIZES 15" TO 78", ALL SKEWS, 2:1 AND 4:1 SLOPES) 1976
CATCH BASINS AND MANHOLES		
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-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-14P	03-11-14	STANDARD PRECAST RECTANGULAR CONCRETE NO. 14 CATCH BASIN
D-CB-14S	03-11-14	STANDARD RECTANGULAR CONCRETE NO. 14 CATCH BASIN
D-CBB-12A	05-27-01	TYPE "B" CAST IRON FRAME, GRATE & NONMOUNTABLE INLET DETAILS FOR NOS. 10, 12, 14, 16, AND 17 TYPE CATCH BASINS
ROADWAY AND PAVEMENT APPURTENANCES		
RP-R-1	05-27-01	STANDARD RAMPS TO SIDE ROADS
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
SAFETY DEVICES AND FENCES		
S-CZ-1		CLEAR ZONE CRITERIA
S-PL-1		SAFETY PLAN AT ROADSIDE HAZARDS
S-PL-2	10-10-16	SAFETY PLAN AT SIDE ROADS OR PRIVATE DRIVES
S-PL-3	10-10-16	SAFETY PLAN: MINIMUM INSTALLATION AT BRIDGE ENDS
S-PL-6	10-10-16	SAFETY PLAN: SAFETY HARDWARE PLACEMENT ON OUTSIDE EDGE
S-GR31-1	03-28-17	W-BEAM GUARDRAIL
S-GRC-1	10-10-16	GUARDRAIL CONNECTION TO BRIDGE ENDS OR BARRIER WALL

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ROADWAY INDEX AND STANDARD ROADWAY DRAWINGS

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-109(32)	1A1

S-GRT-2	03-28-17	TYPE 38 GUARDRAIL TERMINAL
S-GRT-2P	10-10-16	EARTH PAD FOR TYPE 38 AND TYPE 21 TERMINALS
S-GRT-3	03-28-17	TYPE 21 GUARDRAIL END TERMINAL
S-GRA-3	03-28-17	TYPE 13 GUARDRAIL ANCHOR
S-GRA-4	03-28-17	IN-LINE GUARDRAIL ANCHOR
S-F-1	05-24-12	HIGH VISIBILITY FENCE
S-F-10B	05-14-10	STANDARD RIGHT-OF-WAY CHAIN LINK FENCE
S-RP-2	02-08-16	STANDARD CONCRETE RIGHT-OF-WAY MARKERS

DESIGN - TRAFFIC CONTROL

T-M-1	07-24-14	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS AND MARKING ABBREVIATIONS
T-M-2	10-10-16	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	10-10-16	STANDARD INTERSECTION PAVEMENT MARKINGS
T-M-16	01-30-15	ASPHALT SHOULDER RUMBLE STRIP INSTALLATION DETAILS FOR NON-ACCESS CONTROLLED ROUTES
T-FAB-1	05-27-97	FLASHING YELLOW ARROW BOARD
T-PBR-1	03-16-17	INTERCONNECTED PORTABLE BARRIER RAIL
T-PBR-2	03-16-17	DETAIL FOR VERTICAL PANELS AND FLEXIBLE DELINEATORS
T-WZ-10	04-02-12	ADVANCE ROAD WORK SIGNING ON HIGHWAYS AND FREEWAYS
T-WZ-36	03-05-17	LANE CLOSURE ON LOW-VOLUME 2-LANE HIGHWAY

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-27	08-01-12	TEMPORARY SLOPE DRAIN AND BERM
EC-STR-34	08-01-12	EROSION CONTROL BLANKET FOR SLOPE INSTALLATION
EC-STR-37	06-10-14	SEDIMENT TUBE
EC-STR-6	05-06-16	ROCK CHECK DAM
EC-STR-6A	05-06-16	ENHANCED ROCK CHECK DAM
EC-STR-7	08-01-12	SEDIMENT TRAP WITH CHECK DAM
EC-STR-11	08-01-12	CULVERT PROTECTION TYPE 1
EC-STR-19	04-01-08	CATCH BASIN PROTECTION
EC-STR-39	08-01-12	CURB INLET PROTECTION TYPE 1 & 2
EC-STR-39A	08-01-12	CURB INLET PROTECTION TYPE 3 & 4
EC-STR-42		CATCH BASIN FILTER ASSEMBLY (TYPE 2)
EC-STR-42A		CATCH BASIN FILTER ASSEMBLY (TYPE 2) SLIPCOVER DETAILS
EC-STR-43		CATCH BASIN FILTER ASSEMBLY (TYPE 3)
EC-STR-43A		CATCH BASIN FILTER ASSEMBLY (TYPE 3) SLIPCOVER DETAILS
EC-STR-47		CATCH BASIN FILTER ASSEMBLY (TYPE 7)
EC-STR-47A		CATCH BASIN FILTER ASSEMBLY (TYPE 7) SLIPCOVER DETAILS

EC-STR-11A	08-01-12	CULVERT PROTECTION TYPE 2
EC-STR-25	08-01-12	TEMPORARY CULVERT CROSSING, CONSTRUCTION EXIT, CONSTRUCTION FORD
EC-STR-30		INSTREAM DIVERSION (WITHOUT TRAFFIC)
EC-STR-30A		INSTREAM DIVERSION (WITH TRAFFIC)
EC-STR-31	08-01-12	TEMPORARY DIVERSION CHANNEL
EC-STR-31A	04-01-08	TEMPORARY DIVERSION CHANNEL DESIGN
EC-STR-32	08-01-12	TEMPORARY DIVERSION CULVERTS
EC-STR-33	08-01-12	SUSPENDED PIPE DIVERSION (DOWNSTREAM)
EC-STR-33A	08-01-12	SUSPENDED PIPE DIVERSION (UPSTREAM)
EC-STR-38	08-01-12	FLOATING TURBIDITY CURTAIN

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ROADWAY INDEX AND STANDARD ROADWAY DRAWINGS

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-109 (32)	1B

PROJECT COMMITMENTS

COMMITMENT ID	SOURCE DIVISON	DESCRIPTION	STA. / LOCATION	COMPLETE
EDHZ001	ENVIRONMENTAL DIVISION, HAZARDOUS MATERIALS	AN ASBESTOS-CONTAINING MATERIAL (ACM) SURVEY WAS CONDUCTED ON BRIDGE #95SR1090007, SR-109 OVER DRY FORK CREEK, LM 11.41 (95-SR109-11.41). NO ACM WAS DETECTED. NO SPECIAL ACCOMMODATIONS FOR DEMOLITION AND WASTE DISPOSAL ARE ANTICIPATED FOR THIS BRIDGE AND THE MATERIAL CAN BE DEPOSITED IN A C&D LANDFILL. PLEASE NOTE THAT EVEN THOUGH THE SAMPLES WERE FOUND TO CONTAIN NO ASBESTOS, THE DEMOLITION CONTRACTOR IS REQUIRED TO SUBMIT THE NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS STANDARD 10-DAY NOTICE OF DEMOLITION TO THE TENNESSEE DIVISION OF AIR POLLUTION CONTROL.	SR-109 OVER DRY FORK CREEK, LM 11.41 (95-SR109-11.41)	

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PROJECT COMMITMENTS

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-109 (32)	2A

ESTIMATED ROADWAY QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
	105-01	CONSTRUCTION STAKES, LINES AND GRADES	LS	1
	201-01	CLEARING AND GRUBBING	LS	1
(14)	202-01	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	1
(15)	202-06.01	REMOVAL OF BUILDINGS (TRACT NO. 4)	LS	1
(15)	202-06.02	REMOVAL OF BUILDINGS (TRACT NO. 16)	LS	1
(15)	202-06.03	REMOVAL OF BUILDINGS (TRACT NO. 20)	LS	1
(15)	202-06.04	REMOVAL OF BUILDINGS (TRACT NO. 55)	LS	1
(15)	202-06.05	REMOVAL OF BUILDINGS (TRACT NO. 63)	LS	1
(15)	202-06.06	REMOVAL OF BUILDINGS (TRACT NO. 67)	LS	1
	203-01	ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED)	C.Y.	342824
	203-01.11	PRESPLITTING OF ROCK EXCAVATION	S.Y.	789
(11)	203-02.02	BORROW EXCAVATION (GRADED SOLID ROCK)	C.Y.	115954
	203-04	PLACING AND SPREADING TOPSOIL	C.Y.	21539
	203-05	UNDERCUTTING	C.Y.	890
	203-06	WATER	M.G.	4561
	204-08	FOUNDATION FILL MATERIAL	C.Y.	224
(2)	209-02.04	10" TEMPORARY SLOPE DRAIN	L.F.	108
(2)	209-02.06	15" TEMPORARY SLOPE DRAIN	L.F.	260
(2)	209-02.07	18" TEMPORARY SLOPE DRAIN	L.F.	644
(2)	209-05	SEDIMENT REMOVAL	C.Y.	6037
(2)	209-08.02	TEMPORARY SILT FENCE (WITH BACKING)	L.F.	27619
(2)	209-08.03	TEMPORARY SILT FENCE (WITHOUT BACKING)	L.F.	29355
(2)	209-08.07	ROCK CHECK DAM PER	EACH	251
(2)	209-08.08	ENHANCED ROCK CHECK DAM	EACH	146
(2)	209-09.01	SANDBAGS	BAG	635
(2)	209-09.04	SEDIMENT FILTER BAG (15' X 10')	EACH	2
(2)	209-09.41	CURB INLET PROTECTION (TYPE 2)	EACH	36
(2)	209-09.43	CURB INLET PROTECTION (TYPE 4)	EACH	2
(2)	209-10.20	TEMPORARY SEDIMENT TRAP	C.Y.	2568
(2)	209-13.04	TURBIDITY CURTAIN (WITH LIGHTED BUOYS)	L.F.	3460
(2)	209-20.03	POLYETHYLENE SHEETING (6 MIL. MINIMUM)	S.Y.	320
(2)	209-40.30	CATCH BASIN PROTECTION (TYPE A)	EACH	3
(2)	209-65.03	TEMPORARY DIVERSION CHANNEL	L.F.	1200
(2)	209-65.04	TEMPORARY IN STREAM DIVERSION	L.F.	400
ALT. A	303-01	MINERAL AGGREGATE, TYPE A BASE, GRADING D	TON	172630
ALT. A	307-01.01	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING A	TON	2387
ALT. A	307-01.08	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING B-M2	TON	2312
ALT. A	307-01.21	ASPHALT CONCRETE MIX (PG70-22) (BPMB-HM) GRADING A-S	TON	599
ALT. A	307-02.01	ASPHALT CONCRETE MIX (PG70-22) (BPMB-HM) GRADING A	TON	47068
ALT. A	307-02.02	ASPHALT CEMENT (PG70-22)(BPMB-HM) GRADING A-S	TON	798
ALT. A	307-02.03	AGGREGATE (BPMB-HM) GRADING A-S MIX	TON	23759
ALT. A	307-02.08	ASPHALT CONCRETE MIX (PG70-22) (BPMB-HM) GRADING B-M2	TON	15417
ALT. A	402-01	BITUMINOUS MATERIAL FOR PRIME COAT (PC)	TON	236
ALT. A	402-02	AGGREGATE FOR COVER MATERIAL (PC)	TON	936
ALT. A	403-01	BITUMINOUS MATERIAL FOR TACK COAT (TC)	TON	90
ALT. A	411-01.07	ACS MIX (PG64-22) GRADING E SHOULDER	TON	2868
ALT. A	411-01.10	ACS MIX (PG64-22) GRADING D	TON	1338
ALT. A	411-02.10	ACS MIX (PG70-22) GRADING D	TON	9039
ALT. B	303-01	MINERAL AGGREGATE, TYPE A BASE, GRADING D	TON	121841
ALT. B	307-01.01	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING A	TON	2387
ALT. B	307-01.08	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING B-M2	TON	2312
ALT. B	307-01.21	ASPHALT CONCRETE MIX (PG70-22) (BPMB-HM) GRADING A-S	TON	599
ALT. B	307-02.01	ASPHALT CONCRETE MIX (PG70-22) (BPMB-HM) GRADING A	TON	47068
ALT. B	307-02.02	ASPHALT CEMENT (PG70-22)(BPMB-HM) GRADING A-S	TON	798
ALT. B	307-02.03	AGGREGATE (BPMB-HM) GRADING A-S MIX	TON	23759
ALT. B	307-02.08	ASPHALT CONCRETE MIX (PG70-22) (BPMB-HM) GRADING B-M2	TON	15417
ALT. B	309-01.01	MINERAL AGGREGATE (A-CBC)	TON	36867
ALT. B	309-01.02	PORTLAND CEMENT (A-CBC)	TON	1423
ALT. B	309-02	BITUMINOUS MATERIAL (A-CBC)	TON	118
ALT. B	402-01	BITUMINOUS MATERIAL FOR PRIME COAT (PC)	TON	236
ALT. B	402-02	AGGREGATE FOR COVER MATERIAL (PC)	TON	936
ALT. B	403-01	BITUMINOUS MATERIAL FOR TACK COAT (TC)	TON	131
ALT. B	411-01.07	ACS MIX (PG64-22) GRADING E SHOULDER	TON	2869
ALT. B	411-01.10	ACS MIX (PG64-22) GRADING D	TON	1338

ESTIMATED ROADWAY QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
(1)	303-10.01	MINERAL AGGREGATE (SIZE 57)	TON	5656
	411-12.02	SCORING SHOULDERS (NON-CONTINUOUS) (16IN WIDTH)	L.M.	5.77
(10)	415-01.02	COLD PLANING BITUMINOUS PAVEMENT	S.Y.	4750
	604-01.01	CLASS A CONCRETE (ROADWAY)	C.Y.	837
	604-01.02	STEEL BAR REINFORCEMENT (ROADWAY)	LB.	180197
	604-02.41	ENERGY DISSIPATOR (USBR TYPE VI) (4' X 5.417')	EACH	2
	604-02.42	ENERGY DISSIPATOR (USBR TYPE VI) (6' X 8')	EACH	1
	607-03.30	18" PIPE CULVERT	L.F.	2192
	607-05.30	24" PIPE CULVERT	L.F.	1355
	607-06.30	30" PIPE CULVERT	L.F.	924
	607-07.30	36" PIPE CULVERT	L.F.	318
	607-08.30	42" PIPE CULVERT	L.F.	90
	607-16.02	30"X 19" HORIZONTAL OVAL CONCRETE PIPE CULVERT	L.F.	112
	607-16.04	38"X 24" HORIZONTAL OVAL CONCRETE PIPE CULVERT	L.F.	77
	607-39.02	18" PIPE CULVERT (SIDE DRAIN)	L.F.	1079
	607-39.03	24" PIPE CULVERT (SIDE DRAIN)	L.F.	70
	607-39.06	42" PIPE CULVERT (SIDE DRAIN)	L.F.	70
(3)	610-07.03	18" PIPE DRAIN (BRIDGE DRAIN)	L.F.	80
	611-07.01	CLASS A CONCRETE (PIPE ENDWALLS)	C.Y.	19
	611-07.02	STEEL BAR REINFORCEMENT (PIPE ENDWALLS)	LB.	1862
	611-07.35	42 IN ENDWALL (SIDE DRAIN)	EACH	4
	611-07.54	18 IN ENDWALL (CROSS DRAIN) 3:1	EACH	2
	611-07.55	18 IN ENDWALL (CROSS DRAIN) 4:1	EACH	4
	611-07.60	30 IN ENDWALL (CROSS DRAIN) 3:1	EACH	2
	611-07.62	30 IN ENDWALL (CROSS DRAIN) 6:1	EACH	1
	611-07.65	36 IN ENDWALL (CROSS DRAIN) 6:1	EACH	2
	611-07.67	42 IN ENDWALL (CROSS DRAIN) 4:1	EACH	2
	611-12.02	CATCH BASINS, TYPE 12, > 4' - 8' DEPTH	EACH	13
	611-12.03	CATCH BASINS, TYPE 12, > 8' - 12' DEPTH	EACH	4
	611-14.02	CATCH BASINS, TYPE 14, > 4' - 8' DEPTH	EACH	2
(4)	621-03.02	18" TEMPORARY DRAINAGE PIPE	L.F.	298
(4)	621-03.07	48" TEMPORARY DRAINAGE PIPE	L.F.	642
	701-02	CONCRETE DRIVEWAY	S.F.	2177
	702-01	CONCRETE CURB	C.Y.	10
	702-03	CONCRETE COMBINED CURB & GUTTER	C.Y.	408
	705-01.01	GUARDRAIL AT BRIDGE ENDS	L.F.	108
	705-06.01	W BEAM GR (TYPE 2) MASH TL3	L.F.	7318
	705-06.10	GUARDRAIL TERMINAL TRAILING END (TYPE 13) MASH TL3	EACH	3
	705-06.11	GUARDRAIL TERMINAL (IN-INLINE) MASH TL3	EACH	3
	705-06.20	TANGENT ENERGY ABSORBING TERM MASH TL-3	EACH	13
(5)	705-08.51	PORTABLE IMPACT ATTENUATOR NCHRP350 TL-3	EACH	17
	706-01	GUARDRAIL REMOVED	L.F.	4576
(23)	707-01.11	CHAIN LINK FENCE (6 FOOT)	L.F.	175
(2)	707-08.11	HIGH-VISIBILITY CONSTRUCTION FENCE	L.F.	3140
	708-02.01	MARKERS (CONCRETE RIGHT-OF-WAY POSTS)	EACH	130

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ESTIMATED ROADWAY QUANTITIES

SHEET 1 OF 2

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-109 (32)	2A1

ESTIMATED ROADWAY QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
(2)(6)	709-05.05	MACHINED RIP-RAP (CLASS A-3)	TON	550
(18)	709-05.06	MACHINED RIP-RAP (CLASS A-1)	TON	7170
	709-05.08	MACHINED RIP-RAP (CLASS B)	TON	593
	705-05.09	MACHINED RIP-RAP (CLASS C)	TON	508
	710-02	AGGREGATE UNDERDRAINS (WITH PIPE)	L.F.	37686
	710-06.13	LATERAL UNDERDRAIN ENDWALL (4:1)	EACH	47
	710-06.15	LATERAL UNDERDRAIN ENDWALL (6:1)	EACH	141
(12)	710-10.08	18" PERFORATED PLASTIC PIPE	L.F.	400
	712-01	TRAFFIC CONTROL	LS	1
	712-02.02	INTERCONNECTED PORTABLE BARRIER RAIL	L.F.	19280
	712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	EACH	1193
	712-04.50	PORTABLE BARRIER RAIL DELINEATOR	EACH	120
	712-05.01	WARNING LIGHTS (TYPE A)	EACH	56
	712-05.03	WARNING LIGHTS (TYPE C)	EACH	400
	712-06	SIGNS (CONSTRUCTION)	S.F.	1040
	712-07.03	TEMPORARY BARRICADES (TYPE III)	L.F.	1080
	712-08.03	ARROW BOARD (TYPE C)	EACH	6
	713-11.01	"U" SECTION STEEL POSTS	LB.	511
	713-11.02	PERFORATED/KNOCKOUT SQUARE TUBE POST	LB.	711
	713-13.02	FLAT SHEET ALUMINUM SIGNS (0.080" THICK)	S.F.	139
	713-13.03	FLAT SHEET ALUMINUM SIGNS (0.100" THICK)	S.F.	177
(7)	713-15	REMOVAL OF SIGNS, POSTS AND FOOTINGS	LS	1
	713-16.01	CHANGEABLE MESSAGE SIGN UNIT	EACH	2
	716-01.05	TEMPORARY RAISED PAVEMENT MARKER	EACH	300
	716-01.21	SNWPLWBLE PVMT MARKERS (BI-DIR) (1 COLOR)	EACH	446
	716-01.22	SNWPLWBLE PVMT MARKERS (MONO-DIR) (1 COLOR)	EACH	536
	716-02.04	PLASTIC PAVEMENT MARKING(CHANNELIZATION STRIPING)	S.Y.	106
	716-02.05	PLASTIC PAVEMENT MARKING (STOP LINE)	L.F.	440
	716-02.06	PLASTIC PAVEMENT MARKING (TURN LANE ARROW)	EACH	49
	716-02.07	PLASTIC PAVEMENT MARKING (24" BARRIER LINE)	L.F.	122
(20)	716-05.01	PAINTED PAVEMENT MARKING (4" LINE)	L.M.	1.663
	716-05.20	PAINTED PAVEMENT MARKING (6" LINE)	L.M.	27.048
	716-05.21	PAINTED PAVEMENT MARKING (4" DOTTED LINE)	L.F.	187
(21)	716-05.49	PAINTED PAVEMENT MARKINGS (8" LINE)	L.M.	31.309
	716-12.02	ENHANCED FLATLINE THERMO PVMT MRKNG (6IN LINE)	L.M.	19.57
(19)	716-13.01	SPRAY THERMO PVMT MRKNG (60 MIL) (4IN LINE)	L.M.	0.646
	717-01	MOBILIZATION	LS	1
(22)	730-01.04	MODIFICATION OF EXISTING TRAFFIC SIGNAL EQUIPMENT	LS	1
(17)	740-06.01	GEOMEMBRANE	S.Y.	302
(8)(2)	740-10.03	GEOTEXTILE (TYPE III) (EROSION CONTROL)	S.Y.	22973
(13)	740-10.04	GEOTEXTILE (TYPE IV) (STABILIZATION)	S.Y.	4042
(2)	740-11.03	TEMPORARY SEDIMENT TUBE (18 INCH)	L.F.	73569
	801-01	SEEDING (WITH MULCH)	UNIT	4652
	801-01.07	TEMPORARY SEEDING (WITH MULCH)	UNIT	11165
	801-03	WATER (SEEDING & SODDING)	M.G.	580
	801-07	SEED (SUPPLEMENTAL APPLICATION)	LB.	1047
	801-08	FERTILIZER (SUPPLEMENTAL APPLICATION)	TON	8

ESTIMATED ROADWAY QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
	802-11.02	ACER RUBRUM (RED MAPLE 2-5FT CNTNR GRWN)	EACH	105
	802-11.04	ACER SACCHARUM (SUGAR MAPLE 2-5FT CNTNR GRWN)	EACH	5
	802-11.09	CARYA OVATA (SHAGBARK HICKORY 2-5FT CNTNR GRWN)	EACH	5
	802-11.15	FAGUS GRANDIFOLIA (BEECH 2-5FT CNTNR GRWN)	EACH	105
	802-11.16	FRAXINUS PENNSYLVANICA (GREEN ASH 2-5FT CNTNR GRWN)	EACH	105
	802-11.18	LIQUIDAMBER STYRACIFLUA (SWEETGUM 2-5FT CNTNR GRWN)	EACH	7
	802-11.26	PLATANUS OCCIDENTALIS (SYCAMORE 2-5FT CNTNR GRWN)	EACH	111
	802-11.30	QUERCUS BICOLOR (SWAMP WHITE OAK 2-5FT CNTNR GRWN)	EACH	105
	802-11.31	QUERCUS FALCATA (SOUTHERN RED OAK 2-5FT CNTNR GRWN)	EACH	6
	802-11.33	QUERCUS MICHAUXII (SWMP CHSTNT OAK 2-5FT CNTNR GRWN)	EACH	105
	802-11.41	SASSAFRAS ALBIDUM (SASSAFRAS 2-5FT CNTNR GRWN)	EACH	105
	802-12.01	ACER NEGUNDO (BOX ELDER SEEDLNG B.R.)	EACH	25
	802-12.18	LIQUIDAMBER STYRACIFLUA (SWEETGUM SEEDLNG B.R.)	EACH	24
	802-12.35	QUERCUS NIGRA (WATER OAK SEEDLNG B.R.)	EACH	25
	802-12.37	QUERCUS PALUSTRIS (PIN OAK SEEDLNG B.R.)	EACH	12
	802-12.40	SALIX NIGRA (BLACK WILLOW SEEDLNG B.R.)	EACH	21
	802-13.54	CORNUS AMOMUM (SILKY DOGWOOD SDLNG BARE ROOT)	EACH	105
	802-13.53	CEPHALANTHUS OCCIDENTALIS (BUTTONBUSH SDLNG BARE ROOT)	EACH	105
	802-13.37	VIBURNUM NUDUM (POSSUMHAW VIBURNUM 2-5 FT CNTNR GRWN)	EACH	105
	803-01	SODDING (NEW SOD)	S.Y.	11504
	805-12.02	EROSION CONTROL BLANKET (TYPE II)	S.Y.	56033
(9)	806-02.03	PROJECT MOWING	CYCL	4

(1) INCLUDES 4803 TONS FOR BACKFILLING PROPOSED WATER LINE TRENCH AND 853 TONS FOR EROSION CONTROL.
(2) SEE SUBSECTION 209.07 OF THE STANDARD SPECIFICATIONS FOR MAINTENANCE REPLACEMENT.
(3) STANDARD DRAWING STD-1-7 IS TO BE USED FOR BURIAL OF THE OUTLET PIPE AND FOR END TREATMENT DETAILS.
(4) FOR EROSION PREVENTION AND SEDIMENT CONTROL.
(5) THIS ITEM SHALL BE PORTABLE ENERGY ABSORBING TERMINAL MEETING THE REQUIREMENTS OF NCHRP 350 FOR TEST LEVEL 3, EXAMPLE WOULD BE A QUAD-GUARD.
(6) FOR TEMPORARY CONSTRUCTION EXITS DURING EROSION PREVENTION AND SEDIMENT CONTROL PHASES.
(7) REMOVE SIGNS AND SUPPORTS ON ALL EXISTING SIGNS WITHIN THE PROJECT LIMITS AND ANY OTHER CONFLICTING SIGNING AS DIRECTED BY THE ENGINEER.
(8) INCLUDES 77 S.Y. FOR TEMPORARY CULVERT CROSSINGS, 9663 S.Y. FOR WATER LINE CONSTRUCTION, 944 S.Y. FOR TEMPORARY CONSTRUCTION EXITS (TO BE LOCATED BY THE ENGINEER), AND 12,289 S.Y. FOR OTHER ELEMENTS OF EROSION CONTROL.
(9) ITEM INCLUDES LITTER AND TRASH REMOVAL. THIS WORK WILL NOT BE MEASURED AND PAID FOR DIRECTLY BUT WILL BE INCLUDED IN THE COST OF ITEM NO. 806-02.03, PROJECT MOWING, CYCL.
(10) ON ADJACENT PROJECT (STA. 194+48.79 TO STA. 203+00.00).
(11) INCLUDES 1914 C.Y. FOR FRENCH DRAINS AND 365 C.Y. FOR SINKHOLE TREATMENT.
(12) FOR USE IN FRENCH DRAIN CONSTRUCTION.
(13) INCLUDES 3237 S.Y. FOR FRENCH DRAINS AND 805 S.Y. FOR SINKHOLE TREATMENT.
(14) SEE SHEET NO. 2E FOR STRUCTURES TO BE REMOVED.
(15) BID PRICE INCLUDES ALL SALVAGE VALUE OF MATERIAL. SEE TABULATED QUANTITIES SHEET NO. 2E FOR REMOVAL OF BUILDINGS AND OBSTRUCTIONS DESCRIPTION BLOCK.
(16) INCLUDES 68 TONS FOR SINKHOLE TREATMENT AND 853 TONS FOR EROSION CONTROL.
(17) FOR SINKHOLE TREATMENT.
(18) QUANTITY INCLUDES 11 TONS FOR BRIDGE END DRAINS AND 5553 TONS FOR EROSION CONTROL.
(19) FOR PAVEMENT MARKING ON ACADEMY ROAD.
(20) FOR PAVEMENT MARKING ON ALL SIDE ROADS EXCEPT ACADEMY ROAD.
(21) FOR MAINTENANCE OF TRAFFIC.
(22) FOR RELOCATION OF ACADEMY ROAD TRAFFIC SIGNAL DURING TRAFFIC CONTROL.
(23) BID PRICE INCLUDES ALL ITEMS NECESSARY FOR INSTALLATION AND REMOVAL OF TEMPORARY CHAIN LINK FENCE ON TRACT NO. 88. SEE DETAIL ON SHEET NO. 19B.

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ESTIMATED ROADWAY QUANTITIES

SHEET 2 OF 2

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-109 (32)	2A4

ESTIMATED BOX BRIDGE QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
604-02.01	CLASS A CONCRETE (BOX BRIDGES)	C.Y.	593
604-02.02	STEEL BAR REINFORCEMENT (BOX BRIDGES)	LB.	112529

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ESTIMATED
BOX BRIDGE
QUANTITIES

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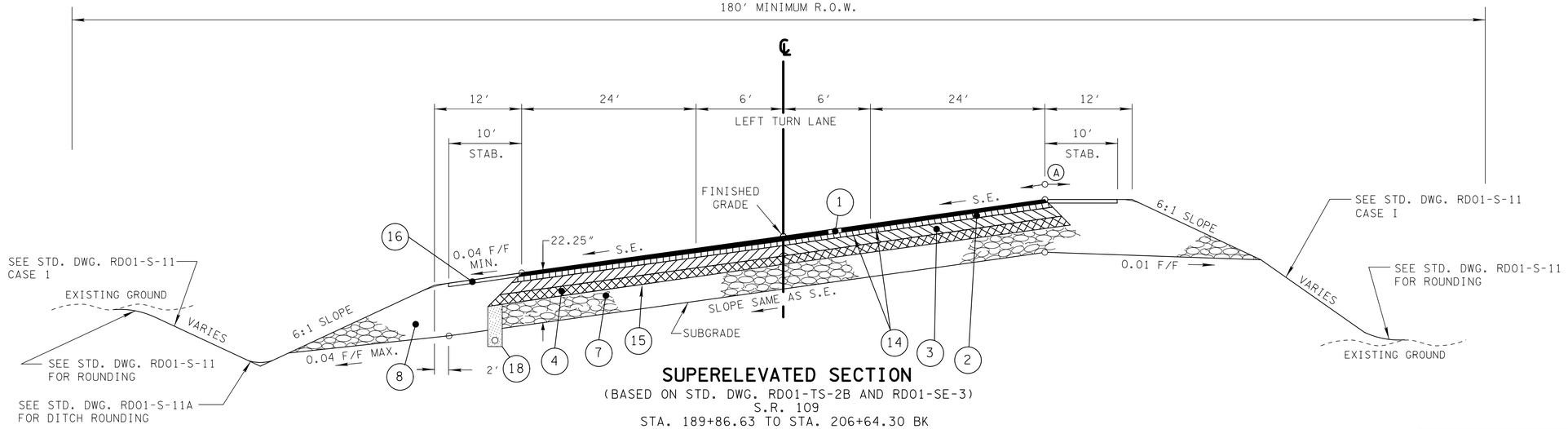
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	2
CONST.	2017	NH-109(32)	2B

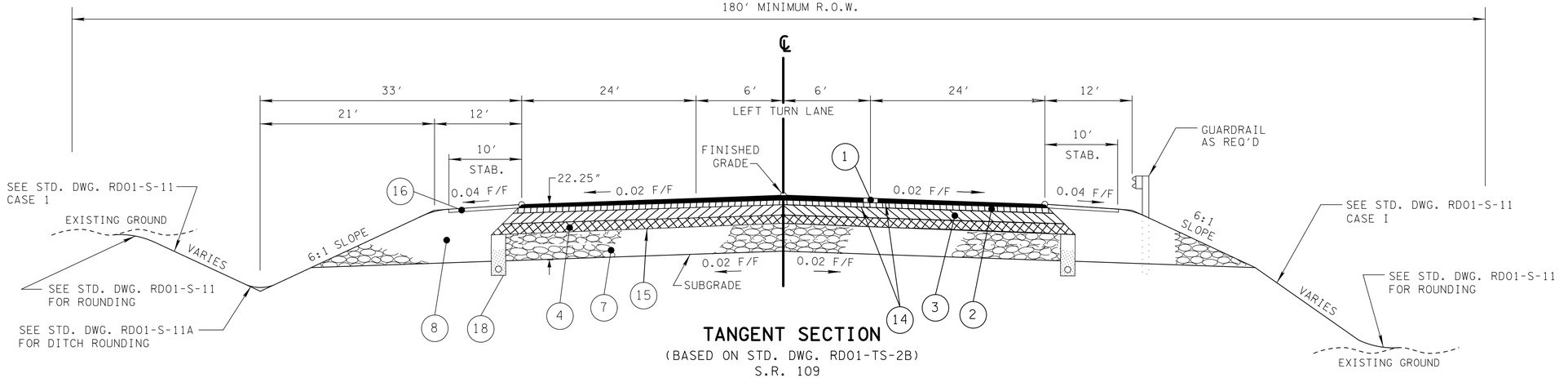


SUPERELEVATED SECTION

(BASED ON STD. DWG. RD01-TS-2B AND RD01-SE-3)
S.R. 109
STA. 189+86.63 TO STA. 206+64.30 BK
STA. 20+00.00 AH TO STA. 21+00.00
STA.41+13.81 TO STA. 44+86.19
T.S. STA. 56+44.97 TO S.T. STA. 67+09.81
STA. 68+47.85 TO STA. 79+67.34 BK.
STA. 103+01.30 TO STA. 108+91.35
STA. 112+08.15 TO STA. 121+88.25
STA. 125+05.05 TO STA. 130+95.10
STA. 155+73.19 TO STA. 167+97.01

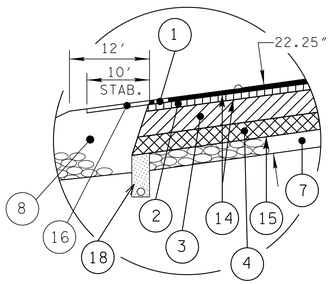
NOTE:
ALL SLOPES, UNLESS OTHERWISE NOTED, ARE TO BE SEEDED AND MULCHED.

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

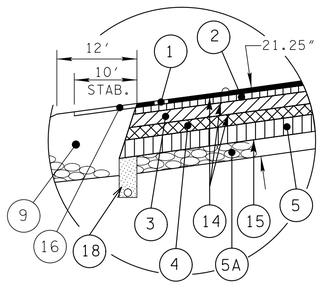


TANGENT SECTION

(BASED ON STD. DWG. RD01-TS-2B)
S.R. 109
STA. 183+00.00 TO STA. 189+86.63
STA. 21+00.00 TO STA. 41+13.81
STA. 44+86.19 TO STA. 56+44.97
STA. 67+09.87 TO STA. 68+47.85
STA. 79+64.18 AH. TO STA. 103+01.30
STA. 108+91.35 TO STA. 112+08.15
STA. 121+88.25 TO STA. 125+05.05
STA. 130+95.10 TO STA. 155+73.19
STA. 167+97.01 TO STA. 170+00.00

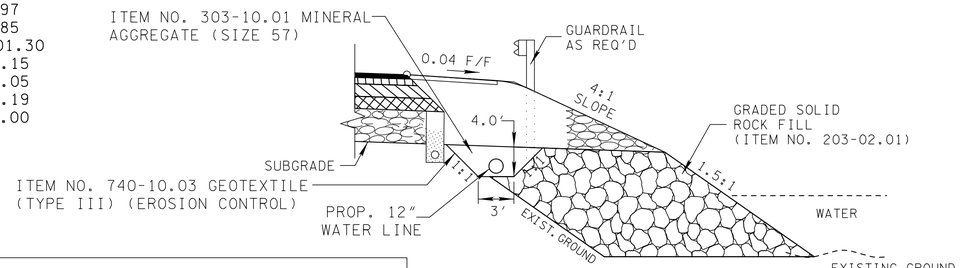


ALT. "A"
(SHOWN ON TYPICALS)



ALT. "B"

NOTE:
USE 1.5:1 SLOPES WHERE THE TOE OF THE SLOPE WILL BE INUNDATED BENEATH THE WATERS OF THE DRY FORK CREEK EMBAYMENT OF OLD HICKORY LAKE.
STA. 183+22± TO STA. 34+36± S.R. 109 (RT)



ROCK FILL DETAIL

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TYPICAL SECTIONS

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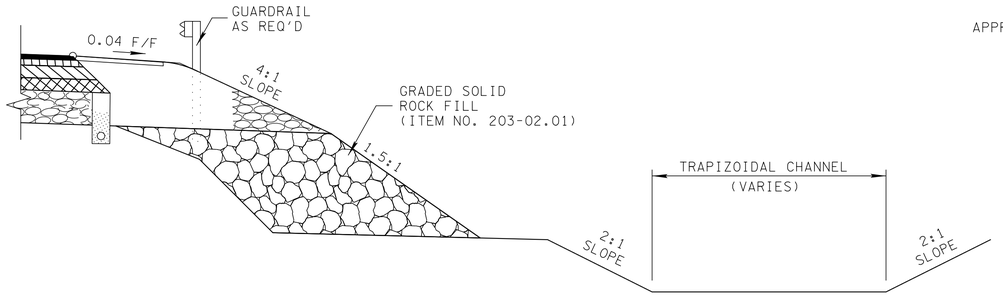
TENNESSEE D.O.T.

DESIGN DIVISION

FILE NO.

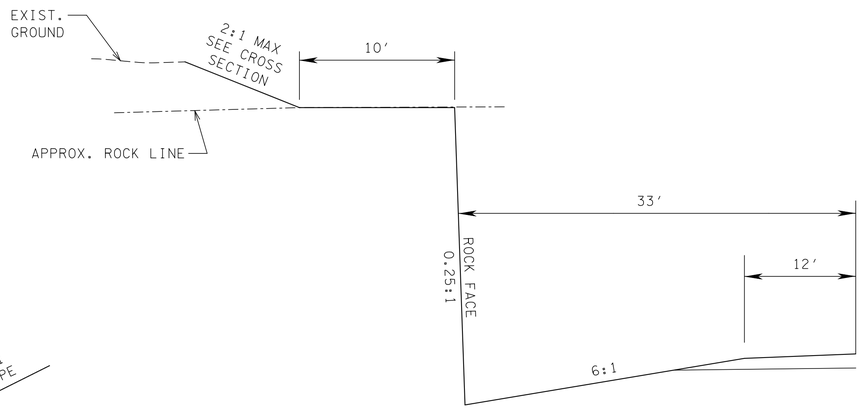
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	2A
CONST.	2017	NH-109(32)	2B1

REV. 08-10-16: ADDED TRAPIZOIDAL CHANNEL DETAIL



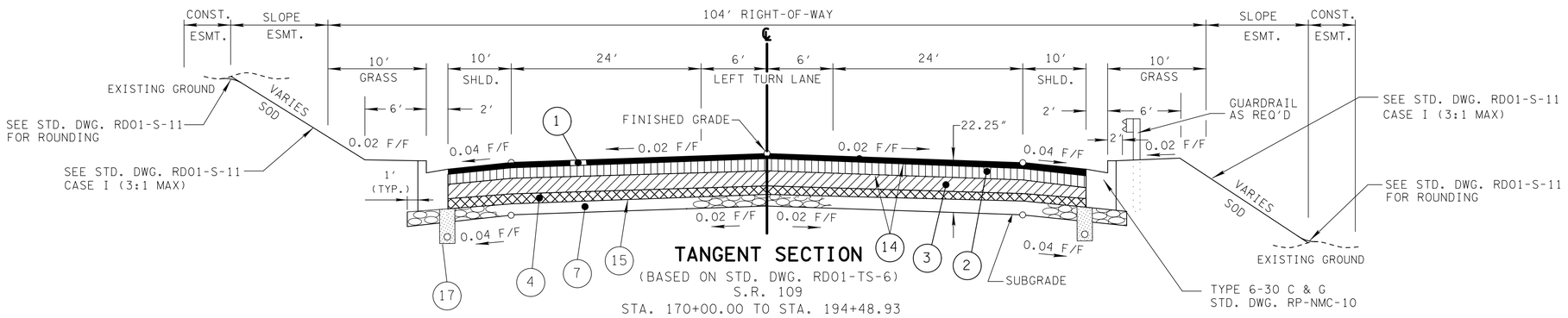
TRAPIZOIDAL CHANNEL DETAIL

STA. 180+50 TO STA. 202+00 RT. (S.R. 109)



ROCK CUT DETAIL

STA. 137+00 TO STA. 140+00 LT. (S.R. 109)
STA. 137+50 TO STA. 141+50 RT. (S.R. 109)



TANGENT SECTION

(BASED ON STD. DWG. RD01-TS-6)
S.R. 109
STA. 170+00.00 TO STA. 194+48.93

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TYPICAL SECTIONS

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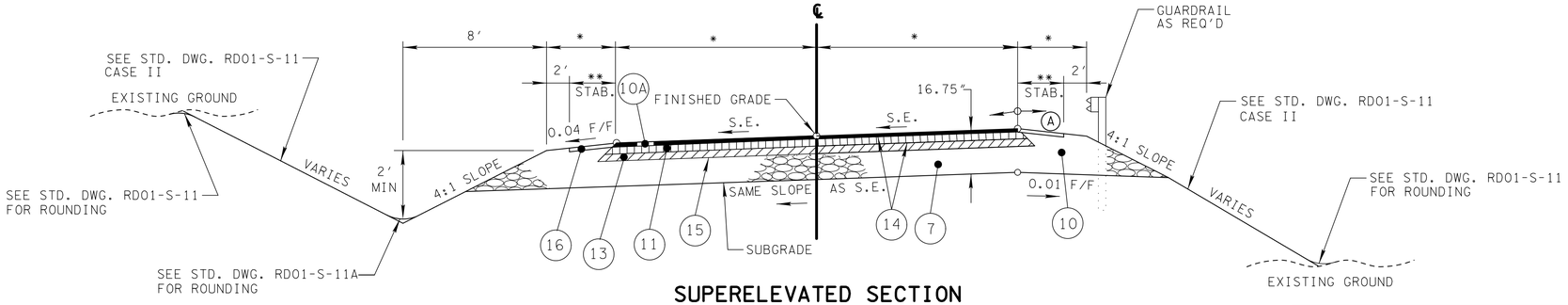
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	2B
CONST.	2017	NH-109(32)	2B2



SUPERELEVATED SECTION

(BASED ON STD. DWG. RD01-TS-2)

ACADEMY ROAD (STA. 40+74.05 RT.) STA. 24+30.98 TO STA. 29+70.08

* SEE TABLE A FOR DIMENSIONS

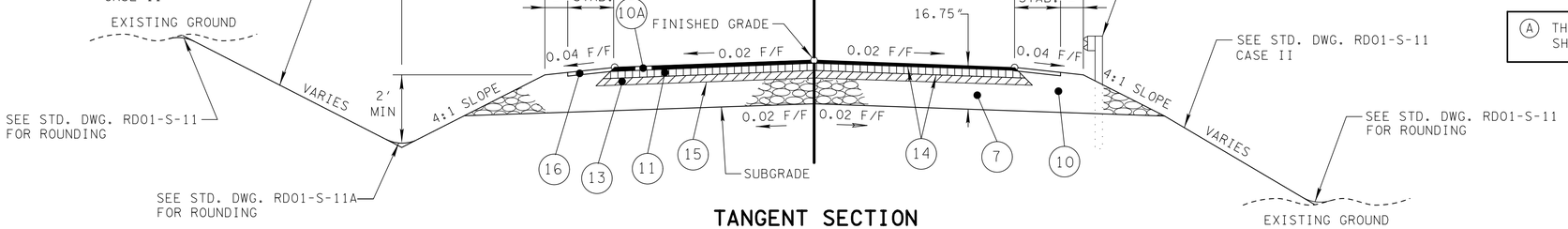
** STABILIZE ONLY WHEN SHOULDER WIDTH EXCEEDS 2'

TABLE A

ACADEMY ROAD TYPICAL WIDTHS			
LEFT SHLD.	LEFT PAVEMENT	RIGHT PAVEMENT	RIGHT SHLD.
2.00' @ STA. 22+25.00	10.00' @ STA. 22+25.00	10.00' @ STA. 22+25.00	2.00' @ STA. 22+25.00
2.00' @ STA. 22+76.90	12.50' @ STA. 22+76.89 *	20.26' @ STA. 23+35.73 *	2.00' @ STA. 23+22.68
8.00' @ STA. 24+84.62	18.00' @ STA. 26+66.00 *	12.00' @ STA. 27+95.56 *	8.00' @ STA. 24+80.71
8.00' @ STA. 28+82.58	12.00' @ STA. 28+82.58	12.00' @ STA. 28+82.58	8.00' @ STA. 28+82.58
2.00' @ STA. 29+75.00	10.00' @ STA. 29+75.00	10.00' @ STA. 29+75.00	2.00' @ STA. 29+75.00

* BEGINNING OR END OF INTERSECTION RADIUS

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



TANGENT SECTION

(BASED ON STD. DWG. RD01-TS-2)

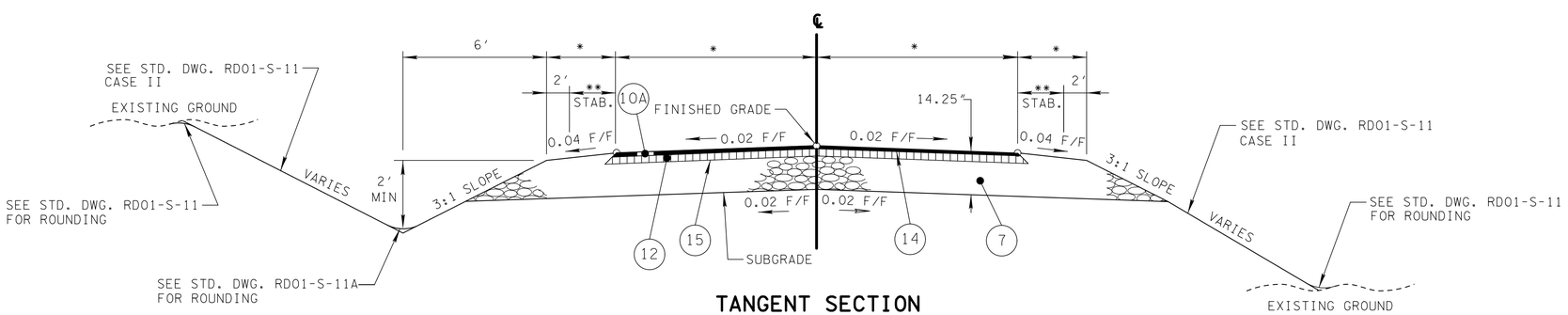
ACADEMY ROAD (STA. 40+74.05 RT.) STA. 29+70.08 TO STA. 30+50.00

* SEE TABLE A FOR DIMENSIONS

UNOFFICIAL SET

NOT FOR BIDDING

NOTE:
ALL SLOPES, UNLESS OTHERWISE NOTED, ARE TO BE SEEDED AND MULCHED.



TANGENT SECTION

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

ACADEMY ROAD (STA. 40+74.05 LT.) STA. 22+25.00 TO STA. 23+70.49

* SEE TABLE A FOR DIMENSIONS

** STABILIZE ONLY WHEN SHOULDER WIDTH EXCEEDS 2'

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TYPICAL SECTIONS

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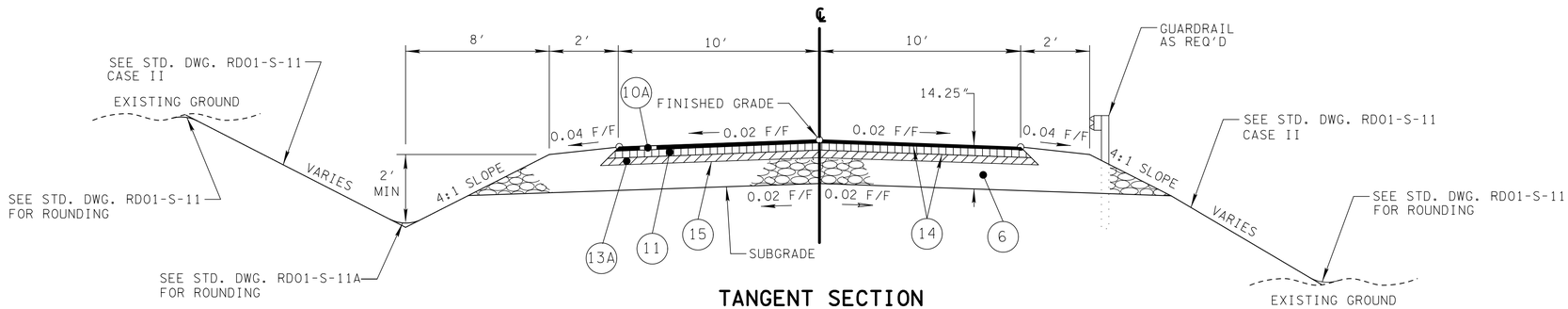
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	2C
CONST.	2017	NH-109(32)	2B3

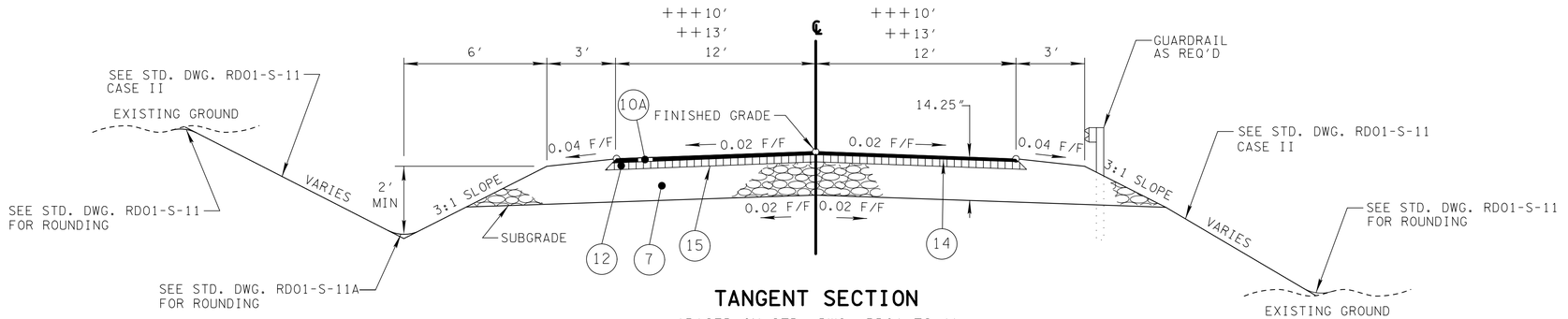


TANGENT SECTION

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

BATES ROAD (STA. 125+12.69 RT.) STA. 10+10.33 TO STA. 11+00.00

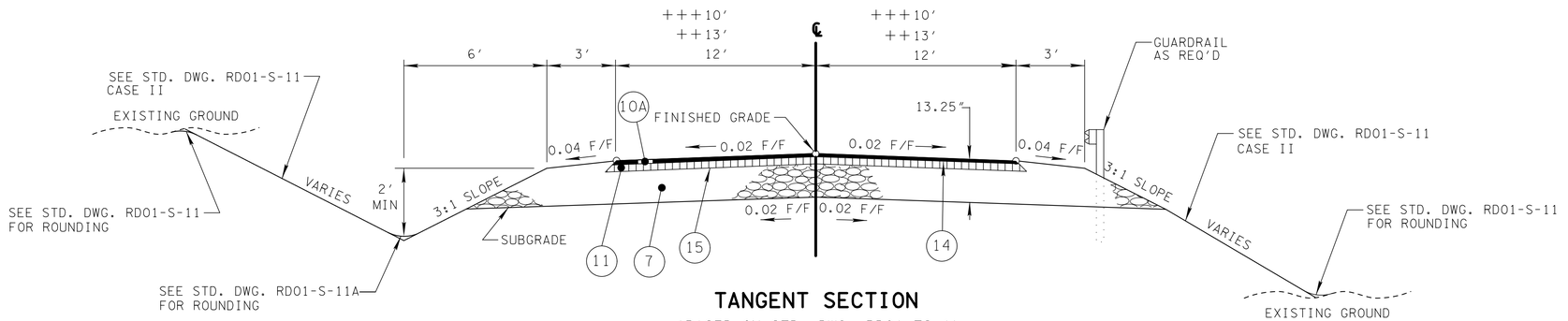
NOTE:
ALL SLOPES, UNLESS OTHERWISE NOTED, ARE TO BE SEEDED AND MULCHED.



TANGENT SECTION

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

CREIGHTON LANE (STA. 108+21.88 LT.) STA. 12+50.00 TO STA. 14+54.64



TANGENT SECTION

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

++ WOODS FERRY ROAD CONNECTOR (STA. 55+17.16 LT.)STA. 3+91.20 TO STA. 4+70.00

+++ STEWART ROAD (STA. 45+45.00 LT.)STA. 32+20.00 TO STA. 33+00.00

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TYPICAL SECTIONS

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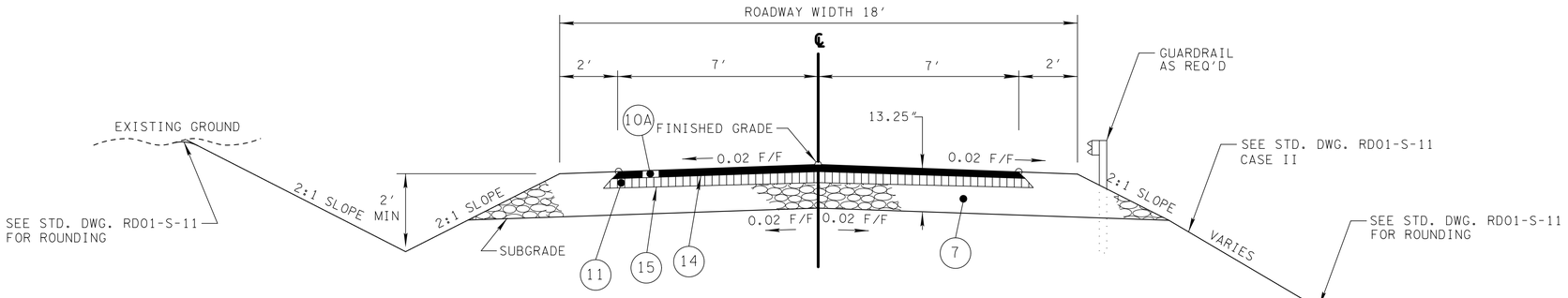
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	2D
CONST.	2017	NH-109(32)	2B4

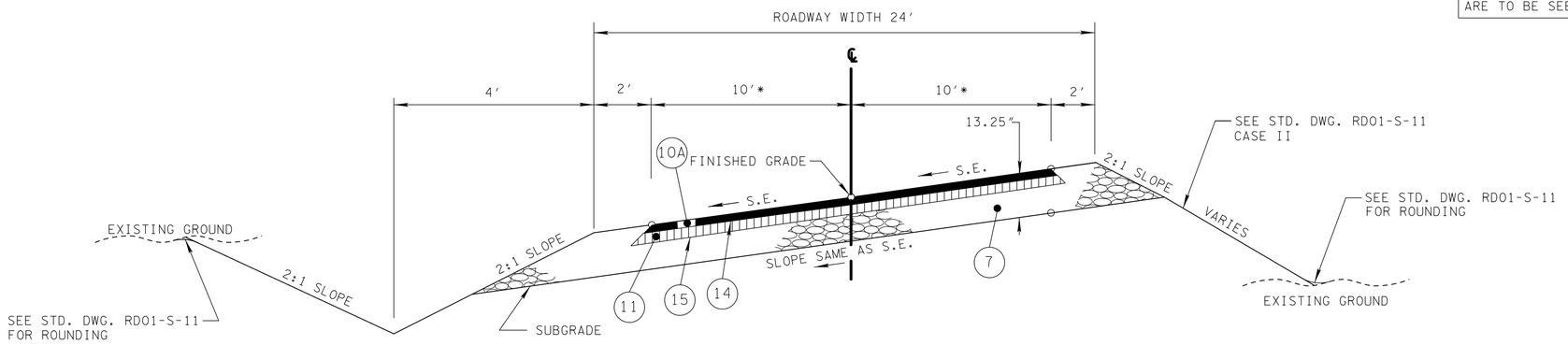


TANGENT SECTION

(BASED ON STD. DWG. RDO1-TS-1A)

ACCESS ROAD 2 (STA. 150+91.07 RT.) STA. 0+30.00 TO STA. 1+25.00
BLOODWORTH ROAD (STA. 159+78.08 LT.) STA. 15+68.00 TO STA. 19+70.00

NOTE:
ALL SLOPES, UNLESS OTHERWISE NOTED, ARE TO BE SEEDED AND MULCHED.



SUPERELEVATED SECTION

(BASED ON STD. DWG. RDO1-TS-1A & RDO1-SE-3)
TYREE ACCESS ROAD (STA. 68+73.08 LT.) STA. 0+10.00 TO STA. 4+93.44
NW WILLIAMS ROAD (STA. 68+73.08 RT.) STA. 10+30.00 TO STA. 10+75.08

* PAVEMENT WIDTH DETERMINED FROM EXISTING WIDTH

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TYPICAL SECTIONS

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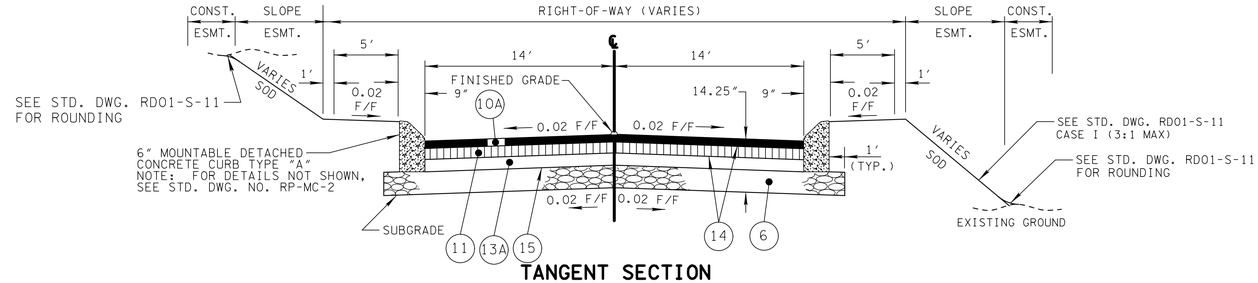
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	2E
CONST.	2017	NH-109(32)	2B5



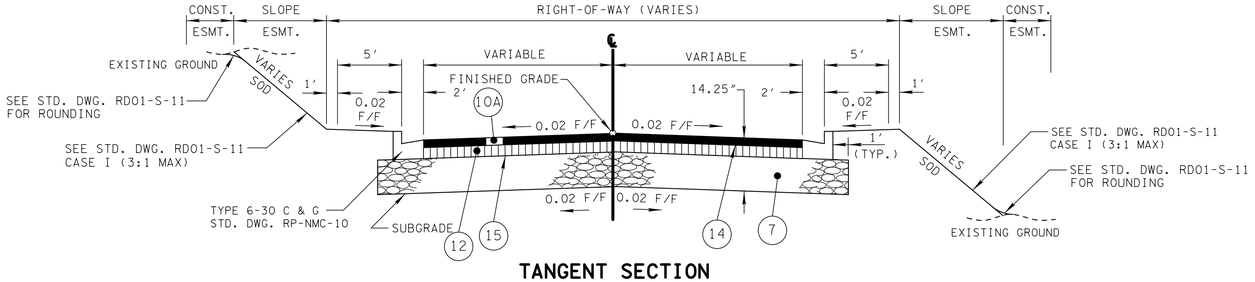
TANGENT SECTION

(BASED ON STD. DWG. RDO1-TS-1A & RDO1-TS-6A)

BENDING CHESTNUT DRIVE (STA. 110+69.66 RT.) STA. 9+97.66 TO STA. 11+50.00

LEFT PAVEMENT	RIGHT PAVEMENT
24.30′ @ STA. 10+25.57 **	22.73′ @ STA. 10+25.00 **
14.00′@ STA. 10+59.19 *	14.00′@ STA. 10+56.17 *
14.00′@ STA. 11+50.00	14.00′@ STA. 11+50.00

** BEGINNING OF CURB IN RADIUS
* END OF INTERSECTION RADIUS



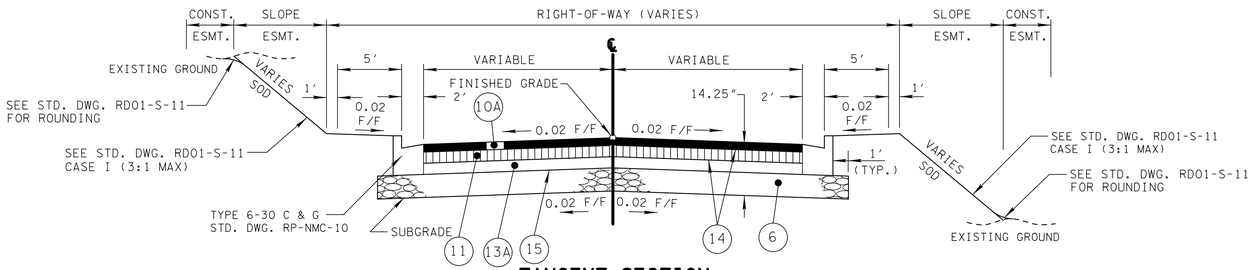
TANGENT SECTION

(BASED ON STD. DWG. RDO1-TS-1A & RDO1-TS-6A)

APPLE VALLEY ROAD (STA. 181+48.10 LT.) STA. 8+50.00 TO STA. 9+70.00

LEFT PAVEMENT	RIGHT PAVEMENT
11.81′ @ STA. 8+50	11.81′ @ STA. 8+50
14.17′@ STA. 9+42.65 *	15.88′@ STA. 9+43.02 *

* BEGINNING OF INTERSECTION RADIUS



TANGENT SECTION

(BASED ON STD. DWG. RDO1-TS-1A & RDO1-TS-6A)

CHEROKEE BOAT DOCK ROAD (STA. 189+60.87) STA. 7+30.00 TO STA. 8+95.00

LEFT PAVEMENT	RIGHT PAVEMENT
12.08′ @ STA.7+69.49 *	19.42′ @ STA. 7+69.33 *
10.36′@ STA. 8+95.00	10.36′@ STA. 8+95.00

* END OF INTERSECTION RADIUS

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TYPICAL SECTIONS

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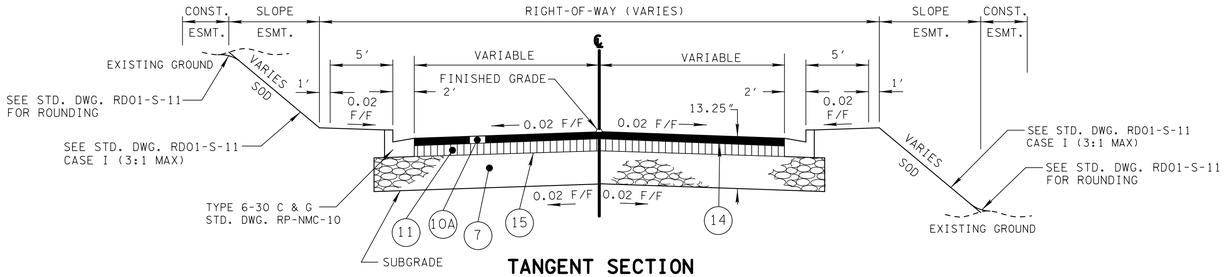
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	2F
CONST.	2017	NH-109(32)	2B6



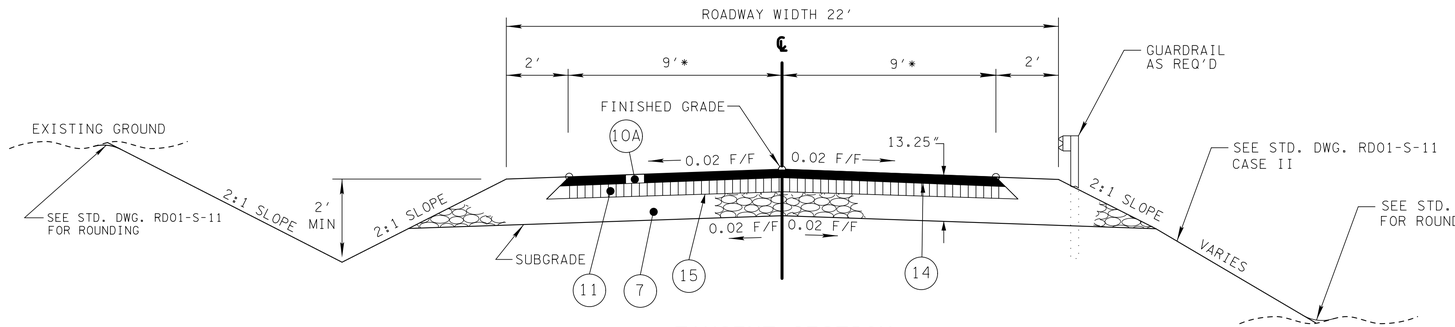
TANGENT SECTION

(BASED ON STD. DWG. RDO1-TS-1A & RDO1-TS-6A)
WILSON ROAD (STA. 193+85.29) STA. 3+35.00 TO STA. 4+70.00

LEFT PAVEMENT	RIGHT PAVEMENT
8.58′ @ STA. 2+35.00	8.58′ @ STA. 2+35.00
8.58′ @ STA. 3+35.09	8.58′ @ STA. 3+35.09
12.04′@ STA. 4+24.70 *	11.73′@ STA. 4+28.98 *

* BEGINNING OF INTERSECTION RADIUS

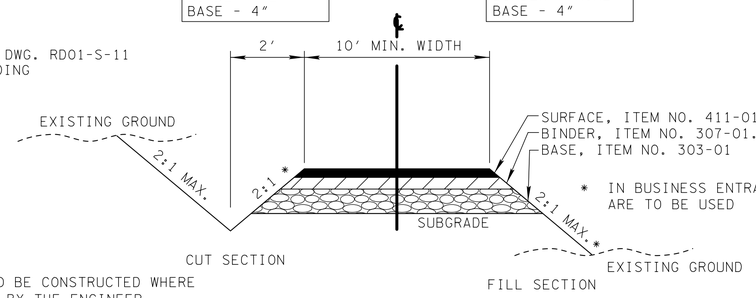
NOTE:
ALL SLOPES, UNLESS OTHERWISE NOTED, ARE TO BE SEEDED AND MULCHED.



TANGENT SECTION

(BASED ON STD. DWG. RDO1-TS-1A)
WILSON ROAD (STA. 193+85.29)
STA. 2+35.00 TO STA. 3+35.00
* PAVEMENT WIDTH DETERMINED FROM EXISTING WIDTH

BUSINESS	FIELD OR RESIDENTIAL
SURFACE - 1¼" BINDER - 2" BASE - 4"	SURFACE - 1½" BINDER - NONE BASE - 4"



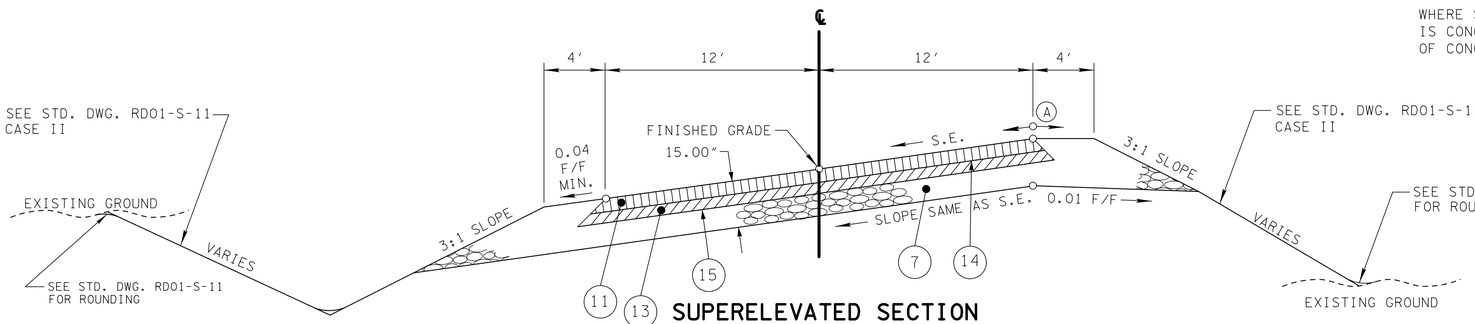
* IN BUSINESS ENTRANCES 12:1 SLOPES ARE TO BE USED

NOTES: DITCH TO BE CONSTRUCTED WHERE DIRECTED BY THE ENGINEER

WHERE SURFACE OF EXISTING DRIVE IS CONCRETE, SUBSTITUTE 6 INCHES OF CONCRETE FOR BASE AND SURFACE

TYPICAL SECTION

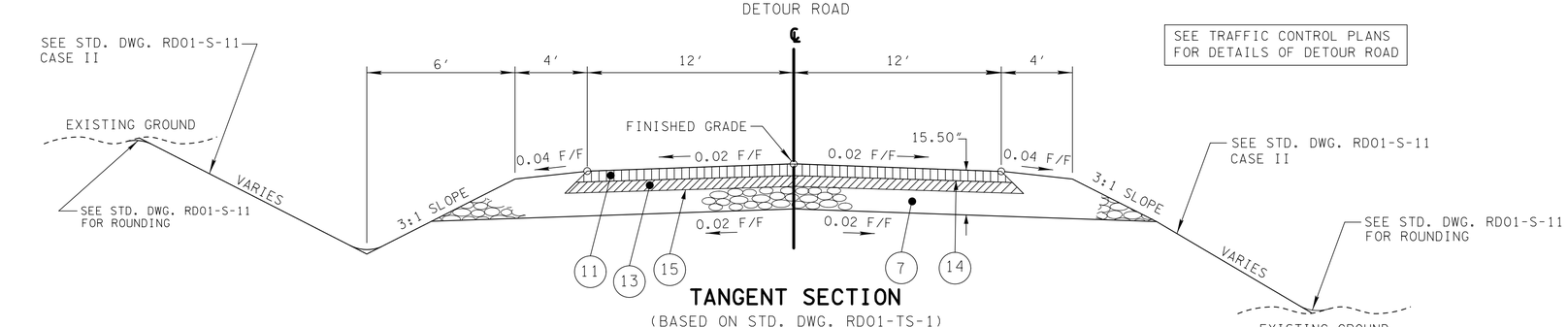
PRIVATE DRIVE TO BUSINESS, FIELD, OR RESIDENTIAL PROPERTY



SUPERELEVATED SECTION

(BASED ON STD. DWG. RDO1-TS-1)
DETOUR ROAD

SEE TRAFFIC CONTROL PLANS FOR DETAILS OF DETOUR ROAD



TANGENT SECTION

(BASED ON STD. DWG. RDO1-TS-1)
DETOUR ROAD

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TYPICAL SECTIONS

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	2G
CONST.	2017	NH-109(32)	2B7

PROPOSED PAVEMENT SCHEDULE

(1) ASPHALTIC CONCRETE SURFACE AT 1.25 IN. THICK
(APPROX. 132.5 LBS/SY)

ITEM NO. 411-02.10 ACS MIX (PG70-22) GRADING "D"

(2) BITUMINOUS PLANT MIX BASE AT 2.0 IN. THICK
(APPROX. 226 LBS/SY)

ITEM NO. 307-02.08 ASPHALT CONCRETE MIX (PG70-22) (BPMB-HM)
GRADING "B-M2"

(3) BITUMINOUS BASE COURSE AT 6.0 IN THICK (APPROX. 690 LBS/SY)
ITEM NO. 307-02.01 ASPHALT CONCRETE MIX (PG70-22)(BPMB-HM)
GRADING "A"
(TO BE PLACED IN 2 EQUAL LAYERS)

(4) BITUMINOUS BASE COURSE AT 3.0 IN THICK (APPROX. 270 LBS/SY)

ITEM NO. 307-01.21 ASPHALT CONCRETE MIX (PG70-22)(BPMB-HM)
GRADING "A-S"

(5) AGGREGATE-CEMENT BASE COURSE-LIMESTONE AT 5.0 IN. THICK

ITEM NO. 309-01.01 MINERAL AGGREGATE (A-CBC)
ITEM NO. 309-01.02 PORTLAND CEMENT (A-CBC)
ITEM NO. 309-02 BITUMINOUS MATERIAL (A-CBC)

(5A) MINERAL AGGREGATE BASE COURSE AT 4.0 IN THICK (ROADWAY)

ITEM NO. 303-01 MINERAL AGGREGATE, TYPE A BASE, GRADING "D"

(6) MINERAL AGGREGATE BASE COURSE AT 8.0 IN THICK (ROADWAY)

ITEM NO. 303-01 MINERAL AGGREGATE, TYPE A BASE, GRADING "D"
(TO BE PLACED IN 2 EQUAL LAYERS)

(7) MINERAL AGGREGATE BASE COURSE AT 10.0 IN THICK (ROADWAY)

ITEM NO. 303-01 MINERAL AGGREGATE, TYPE A BASE, GRADING "D"
(TO BE PLACED IN 2 EQUAL LAYERS)

(8) MINERAL AGGREGATE BASE COURSE AT 20.75 IN THICK (ROADWAY)

ITEM NO. 303-01 MINERAL AGGREGATE, TYPE A BASE, GRADING "D"

(9) MINERAL AGGREGATE BASE COURSE AT 19.75 IN THICK (ROADWAY)

ITEM NO. 303-01 MINERAL AGGREGATE, TYPE A BASE, GRADING "D"

(10) MINERAL AGGREGATE BASE COURSE AT 15.25 IN THICK (ROADWAY)

ITEM NO. 303-01 MINERAL AGGREGATE, TYPE A BASE, GRADING "D"

(10A) ASPHALTIC CONCRETE SURFACE AT 1.25 IN. THICK
(APPROX. 132.5 LBS/SY)

ITEM NO. 411-01.10 ACS MIX (PG64-22) GRADING "D"

(11) BITUMINOUS PLANT MIX BASE AT 2.0 IN. THICK
(APPROX. 226 LBS/SY)

ITEM NO. 307-01.08 ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM)
GRADING "B-M2"

(12) BITUMINOUS PLANT MIX BASE AT 3.0 IN. THICK
(APPROX. 282.5 LBS/SY)

ITEM NO. 307-01.08 ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM)
GRADING "B-M2"

(13) BITUMINOUS BASE COURSE AT 3.5 IN THICK (APPROX. 402.5 LBS/SY)

ITEM NO. 307-01.01 ASPHALT CONCRETE MIX (PG64-22)(BPMB-HM)
GRADING "A"

(13A) BITUMINOUS BASE COURSE AT 3.0 IN THICK (APPROX. 345 LBS/SY)

ITEM NO. 307-01.01 ASPHALT CONCRETE MIX (PG64-22)(BPMB-HM)
GRADING "A"

(14) TACK COAT

ITEM NO. 403-01 BITUMINOUS MATERIAL FOR TACK COAT (TC)
(APPROX. 0.02 GAL/SY)

(15) PRIME COAT
ITEM NO. 402-01 BITUMINOUS MATERIAL FOR PRIME COAT (PC)
(APPROX. 0.30 - 0.35 GAL/SY)
ITEM NO. 402-02 AGGREGATE FOR COVER MATERIAL (PC)
(APPROX. 8-12 LBS/SY)

(16) BITUMINOUS BASE COURSE AT 1.50 IN THICK (SHOULDER)
(APPROX. 154.5 LBS/SY)

ITEM NO. 411-01.07 ASPHALT CONCRETE MIX (PG64-22)(ACS)
GRADING "E" (SHOULDER)

(17) SUBSURFACE DRAINAGE

ITEM NO. 710-02 AGGREGATE UNDERDRAINS (WITH PIPE) (DETAIL "A")
STD. DWG. RD-UD-3

(18) SUBSURFACE DRAINAGE

ITEM NO. 710-02 AGGREGATE UNDERDRAINS (WITH PIPE) (DETAIL "D")
STD. DWG. RD-UD-3

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PAVEMENT SCHEDULE

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-109(32)	2C

GENERAL NOTES

GRADING

(1) ANY AREA THAT IS DISTURBED OUTSIDE LIMITS OF CONSTRUCTION DURING THE LIFE OF 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

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

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

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

GUARDRAIL

(7) 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.

(8) 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.

DRAINAGE

(9) 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.

(10) EXCAVATION FOR PIPE CULVERTS, PIPE ENDWALLS, AND STORM SEWERS 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).

(11) 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.

(12) 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).

(13) 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.

(14) 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

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

(16) 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

(17) 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.

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

(19) 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

ROAD CLOSURE

(20) NO LESS THAN SEVEN (7) DAYS PRIOR TO THE CLOSURE OF THE ROAD, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING INDIVIDUALS OR AGENCIES COMPLETELY DESCRIBING THE AFFECTED ROADS AND THE APPROXIMATE DURATION OF THE CONSTRUCTION: THESE PARTIES INCLUDE, BUT ARE NOT LIMITED TO: (1) LOCAL LAW ENFORCEMENT OFFICE, (2) LOCAL FIRE DEPARTMENT, (3) AMBULANCE SERVICE, (4) LOCAL SCHOOL SUPERINTENDENT, (5) UNITED STATES POSTAL SERVICE, AND (6) LOCAL ROAD SUPERINTENDENT.

PAVEMENT MARKINGS

TEMPORARY PAVEMENT MARKING ON INTERMEDIATE LAYERS

(21) 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.

FINAL PAVEMENT MARKING

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

DETOURS, LANE SHIFTS AND MEDIAN CROSS-OVERS

(23) THE PAVEMENT MARKING ON THE DETOUR FOR CENTERLINE AND EDGELINES WILL BE INSTALLED AND MAINTAINED TO THE SAME STANDARDS AS FOR PERMANENT MARKINGS ON THE MAIN ROADWAY. THESE MARKINGS SHALL BE IN PLACE PRIOR TO ALLOWING TRAFFIC ONTO THE PAVEMENT. THESE PAVEMENT MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-05.01, PAINTED PAVEMENT MARKING (4" LINE), L.M.

(24) BEFORE OPENING THE DETOUR 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

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

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

GRADED SOLID ROCK

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

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

SIGNING

(29) 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.

(30) THE LENGTHS OF ALL SIGN SUPPORTS SHOWN ON THE SIGN SCHEDULE ARE APPROXIMATE AND ARE FOR ESTIMATING PURPOSES ONLY. THE LENGTHS WERE COMPUTED FROM THE CROSS-SECTIONS CONTAINED IN THE CONSTRUCTION PLANS. IN THE EVENT THE SUPPORT LENGTHS ARE 2 FEET SHORTER OR LONGER THAN SHOWN ON THE PLANS, THE ENGINEER SHALL VERIFY THE SUPPORT TYPE WITH THE TRAFFIC OPERATIONS DIVISION, SIGNING SECTION, TELEPHONE NO. (615)-741-0802. THE CONTRACTOR SHALL VERIFY ALL SUPPORT LENGTHS AT THE SITE PRIOR TO ORDERING MATERIAL.

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

(32) 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.

(33) 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 TRAFFIC OPERATIONS DIVISION, SIGNING SECTION, TELEPHONE NO. (615)-741-0802, SUITE 1200, J. K. POLK BUILDING, NASHVILLE, TN 37243-1402.

(34) 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.

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

UNOFFICIAL SET

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DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-109(32)	2C1

GENERAL NOTES (CONT'D)

CONSTRUCTION WORK ZONE & TRAFFIC CONTROL

(36) 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.

(37) 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.

(38) 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.

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

(40) 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.

(41) 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 AN 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.

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

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

EROSION PREVENTION AND SEDIMENT CONTROL

NATURAL RESOURCES

(44) SOIL MATERIALS MUST BE PREVENTED FROM ENTERING WATERS OF THE STATE/U.S. EPSC MEASURES TO PROTECT NATURAL RESOURCES AND WATER QUALITY SHALL 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 NATURAL RESOURCES IN CLEARED AREAS TO PREVENT SEDIMENT MIGRATION INTO STREAMS, WETLANDS OR OTHER NATURAL FEATURES IN ACCORDANCE WITH TDOT STANDARDS. EPSC MEASURES SHALL BE INSTALLED ON THE CONTOUR, ENTRENCHED AND STAKED, AND EXTEND THE WIDTH OF THE AREA TO BE CLEARED.

(45) 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.

(46) INSTREAM EPSC DEVICES REQUIRE THE TDOT ENVIRONMENTAL DIVISION, PERMITS SECTION REVIEW AND MUST BE PROCESSED BY THE PERMITS SECTION TO OBTAIN WATER QUALITY PERMITS.

(47) THE OPERATION OF EQUIPMENT IN WATERS OF THE STATE/U.S., INCLUDING WETLANDS AND EPHEMERAL, INTERMITTENT, AND PERENNIAL STREAMS, SHALL BE ONLY AS DEPICTED ON THE CONSTRUCTION PLANS AND/OR AS SO SPECIFIED IN THE WATER QUALITY PERMITS, IF APPLICABLE. ANY DISCREPANCIES BETWEEN PLANS AND PERMITS SHALL BE BROUGHT TO THE ATTENTION OF THE TDOT RESPONSIBLE PARTY AS SOON AS POSSIBLE. ADDITIONAL PERMITS REQUIRED BY THE CONTRACTOR'S METHOD OF OPERATION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN AFTER RECEIVING THE APPROVAL OF THE TDOT ENVIRONMENTAL DIVISION, PERMITS SECTION.

(48) THE WIDTH OF THE FILL ASSOCIATED WITH TEMPORARY CROSSINGS SHALL BE LIMITED TO THE MINIMUM NECESSARY FOR THE ACTUAL CROSSING, NOT TO EXCEED THE WIDTH SPECIFIED IN THE STANDARD DRAWING.

(49) STREAM BEDS SHALL NOT BE USED AS TRANSPORTATION ROUTES FOR CONSTRUCTION EQUIPMENT. TEMPORARY CULVERT CROSSINGS SHALL BE LIMITED TO ONE POINT PER STREAM AND EPSC MEASURES SHALL BE USED WHERE THE STREAM BANKS ARE DISTURBED. WHERE THE STREAMBED IS NOT COMPOSED OF BEDROCK, A PAD OF CLEAN ROCK SHALL 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 SHALL BE COMPLETELY REMOVED IN THEIR ENTIRETY AFTER THE WORK IS COMPLETED AND THE AFFECTED AREAS RETURNED TO PREEXISTING ELEVATIONS. ALL TEMPORARY CROSSINGS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. DWG. EC-STR-25 UNLESS SPECIFICALLY ADDRESSED IN THE EPSC PLANS. ALTERNATIVELY, PLACING A TEMPORARY BRIDGE (E.G. 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.

(50) HEAVY EQUIPMENT WORKING IN WETLANDS WITH PERMITTED TEMPORARY IMPACTS SHALL BE PLACED ON MATS, OR OTHER MEASURES MUST BE TAKEN TO MINIMIZE SOIL DISTURBANCE AND COMPACTION UNLESS SPECIFICALLY ADDRESSED IN THE CONSTRUCTION PLANS. ANY MATS AND OTHER MEASURES USED FOR HEAVY EQUIPMENT SHALL BE REMOVED IN THEIR ENTIRETY AFTER THE WORK IS COMPLETED. ALL AFFECTED AREAS SHOULD BE RETURNED TO PRE-EXISTING CONDITIONS.

(51) WETLANDS SHALL NOT BE USED AS EQUIPMENT STORAGE, STAGING, OR TRANSPORTATION AREAS, UNLESS SPECIFICALLY PROVIDED FOR IN THE CONSTRUCTION PLANS AND PERMITS.

(52) THE CONTRACTOR SHALL TAKE APPROPRIATE STEPS BEFORE ALL CONSTRUCTION AND MAINTENANCE ACTIVITIES TO ENSURE THAT ENVIRONMENTAL FEATURES (E.G., STREAMS, WETLANDS, SPRINGS, ETC.) ARE NOT IMPACTED BEYOND PERMITTED LOCATIONS. IF THE CONTRACTOR OR TDOT INSPECTOR IS UNSURE OF THE IDENTITY OF AN ENVIRONMENTAL FEATURE, THE INSPECTOR SHALL CONTACT THE TDOT REGION ENVIRONMENTAL TECH GROUP IMMEDIATELY.

SPECIES

(53) 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.

(54) SHOULD CLIFF SWALLOW OR BARN SWALLOW NESTS, EGGS, OR BIRDS (YOUNG AND ADULTS) BE PRESENT, THE CONTRACTOR SHALL CONTACT THE REGIONAL ECOLOGY OFFICE TO DETERMINE IF SEASONAL RESTRICTIONS WILL BE NECESSARY. GENERALLY, BIRDS, NESTS, AND EGGS MAY NOT BE DISTURBED BETWEEN APRIL 15 AND JULY 31. FROM AUGUST 1 TO APRIL 14, NESTS CAN BE REMOVED OR DESTROYED SO LONG AS BIRDS OR EGGS ARE NOT PRESENT, AND MEASURES IMPLEMENTED TO PREVENT FUTURE NEST BUILDING AT THE SITE (I.E., CLOSING OFF AREA USING NETTING).

(55) IF THE REMOVAL OF ANY TREES WITH A DIAMETER AT BREAST HEIGHT (DBH) GREATER THAN 3 INCHES IS DEEMED NECESSARY THE TDOT SUPERVISOR SHALL CONTACT THE TDOT ENVIRONMENTAL DIVISION, ECOLOGY SECTION IMMEDIATELY.

INSPECTION, MAINTENANCE & REPAIR

(56) REFER TO THE STORM WATER POLLUTION AND PREVENTION PLAN SHEETS (S-1) FOR SWPPP, PERMITS, AND RECORDS NOTES.

PERMITS, PLANS & RECORDS

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

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

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

(60) THE CONTRACTOR SHALL REVIEW ALL EXISTING PERMITS TO ENSURE THAT WORK AT PERMITTED SITES DOES NOT EXCEED EXPIRATION DATE. IF WORK IS GOING TO BE CONTINUED AFTER EXPIRATION DATES, THE CONTRACTOR SHALL CONTACT THE TDOT PROJECT RESPONSIBLE PARTY TO COMMENCE PERMIT RENEWAL PROCESS

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

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GENERAL NOTES (CONT'D)

GOOD HOUSEKEEPING MEASURES & WASTE DISPOSAL

(62) THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT LITTER AND CONSTRUCTION WASTES FROM ENTERING WATERS OF THE STATE/U.S. THESE MATERIALS SHALL BE REMOVED FROM STORMWATER EXPOSURE PRIOR TO ANTICIPATED STORM EVENTS OR BEFORE BEING CARRIED OFFSITE BY WIND, OR OTHERWISE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORMWATER DISCHARGES. AFTER USE, MATERIALS USED FOR EPSC SHALL BE REMOVED FROM THE SITE.

(63) 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. APPROPRIATE CONTAINMENT MEASURES FOR THESE AREAS SHALL BE USED.

(64) CONTRACTORS SHALL PROVIDE DESIGNATED TRUCK WASHOUT AREAS ON THE SITE. THESE AREAS MUST BE SELF CONTAINED, NOT CONNECTED TO ANY STORMWATER OUTLET OF THE SITE, AND PROPERLY SIGNED. WASH DOWN OR WASTE DISCHARGE OF CONCRETE TRUCKS SHALL NOT BE PERMITTED ONSITE UNLESS PROPER SETTLEMENT AREAS HAVE BEEN PROVIDED IN ACCORDANCE WITH BOTH STATE AND FEDERAL REGULATIONS.

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

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

(67) ONLY CONSTRUCTION PRODUCTS NEEDED SHALL BE STORED ONSITE BY THE CONTRACTOR. THE CONTRACTOR SHALL STORE ALL MATERIALS UNDER COVER AND IN APPROPRIATE CONTAINERS. PRODUCTS MUST BE STORED IN ORIGINAL CONTAINERS AND LABELED. MATERIAL MIXING SHALL BE CONDUCTED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE CONTRACTOR'S RESPONSIBLE PARTY SHALL INSPECT MATERIALS STORAGE AREAS REGULARLY TO ENSURE PROPER USE AND DISPOSAL.

(68) WHEN POSSIBLE, ALL PRODUCTS SHALL BE USED COMPLETELY BEFORE PROPERLY DISPOSING OF THE CONTAINER OFFSITE. THE MANUFACTURER'S DIRECTIONS FOR DISPOSAL OF MATERIALS AND CONTAINERS SHALL BE FOLLOWED.

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

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

(71) OPEN BURNING IS PROHIBITED UNLESS IT IS SPECIFICALLY ALLOWED BY LAW. IF ALLOWED, NATURAL VEGETATION, TREES, AND UNTREATED LUMBER SHALL BE THE ONLY MATERIALS THAT CAN BE OPEN BURNED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL APPLICABLE STATE AND LOCAL PERMITS PRIOR TO ANY BURNING.

(72) DISPOSAL OF ONSITE VEGETATION AND TREES BY CHIPPING THEM INTO MULCH IS PREFERABLE TO OPEN BURNING. THIS MULCH MAY BE USED AS AN ONSITE SOIL STABILIZATION MEASURE WHERE APPROPRIATE.

(73) WASTE MATERIAL (EARTH, ROCK, ASPHALT, CONCRETE, ETC.) NOT REQUIRED FOR THE CONSTRUCTION OF THE PROJECT WILL BE DISPOSED OF BY THE CONTRACTOR. IMPACTS TO WATERS OF THE STATE/U.S. SHALL BE AVOIDED IF POSSIBLE. IF UNAVOIDABLE, 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.

SUPPORT ACTIVITIES

(74) MATERIALS AND STAGING AREAS SHALL NOT AFFECT ANY WATERS OF THE STATE/U.S. UNLESS THESE AREAS ARE SPECIFICALLY COVERED BY ENVIRONMENTAL PERMITS, OBTAINED SOLELY BY THE CONTRACTOR. THE CONTRACTOR SHALL REVIEW ALL EXISTING PERMITS TO ENSURE THAT WORK AT PERMITTED SITES DOES NOT EXCEED EXPIRATION DATES. IF WORK IS GOING TO BE CONTINUED AFTER EXPIRATION DATES, THE CONTRACTOR SHALL CONTACT THE TDOT PROJECT RESPONSIBLE PARTY TO COMMENCE PERMIT RENEWAL PROCESS.

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-109(32)	2D

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.

DEMOLITION

DEMOLITION OF BUILDINGS

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

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

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

DEMOLITION, REPAIR, OR REHABILITATION OF BRIDGES

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

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

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

HISTORICAL

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

EROSION PREVENTION AND SEDIMENT CONTROL

ENVIRONMENTAL

(13) STAFF FROM THE TDOT ENVIRONMENTAL DIVISION COMPLIANCE AND FIELD SERVICES OFFICE SHALL BE INVITED TO ALL PRE-CONSTRUCTION MEETINGS.

ECOLOGY

(14) STAFF FROM THE TDOT ENVIRONMENTAL DIVISION OR A DESIGNEE SHALL ADVISE THE CONTRACTOR DURING THE PRE-CONSTRUCTION MEETING WHEN ENVIRONMENTAL DIVISION PERSONNEL OR A DESIGNATED CONSULTANT WILL NEED TO BE ONSITE FOR WORK BEING DONE WHICH COULD AFFECT WATERS OF THE STATE/U.S. OR SPECIES.

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

(16) ALL PROJECTS WITH LEGALLY PROTECTED SPECIES OR CRITICAL HABITAT IDENTIFIED SHALL HAVE MEASURES IN PLACE TO CONTAIN CONCRETE DUST, CEMENT DUST AND ALL OTHER MATERIALS. THESE MATERIALS ARE NOT ALLOWED TO ENTER WATERS OF THE STATE/U.S.

(17) IN ORDER TO PROTECT THE INDIANA BAT (MYOTIS GRISESCENS) AND NORTHERN LONG-EARED BAT (M. SEPTENTRIONALIS) THE FISH & WILDLIFE SERVICE REQUIRES THAT TDOT RESTRICT TREE CUTTING FOR THIS PROJECT FROM OCTOBER 15 - MARCH 31ST. NO TREE CUTTING IS ALLOWED FROM APRIL 1ST – OCTOBER 14TH.

(18) INSTALL BRIGHT ORANGE FLAGGING OR FENCING PRIOR TO TREE CLEARING TO ENSURE THAT THE CONTRACTOR STAYS WITHIN CLEARING LIMITS. ENSURE THAT THE CONTRACTOR KNOWS WHERE THE CLEARING LIMITS ARE AND HOW THEY ARE MARKED IN THE FIELD.

PROJECT COMMITMENTS

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

SEQUENCE OF CONSTRUCTION

(20) THE CONTRACTOR SHALL COMPLETE ALL WORK NECESSARY TO FULLY IMPROVE THE INTERSECTION OF STATE ROUTE 109 AND ACADEMY ROAD. THIS WORK SHALL INCLUDE ALL GRADING, DRAINAGE, PAVING, STRIPING AND SIGNALS NEEDED TO COMPLETE THE INTERSECTION AS SHOWN IN THE PLANS.

(21) EXISTING USACE PROPERTY MONUMENTS ARE TO BE REUSED AND RELOCATED. THIS IS TO BE COORDINATED WITH:

JOHN BAIRD
EPS
OLD HICKORY LAKE
NO. 5 POWER PLANT ROAD
HENDERSONVILLE, TN 37075
(615)822-4846

SCOPE OF WORK

THE GRADING, DRAINING AND PAVING OF S.R.-109 WITHIN THE PROJECT LIMITS.

THE CONSTRUCTION OF SIDE ROAD CONNECTIONS.

THE SIGNING AND PAVEMENT MARKINGS ON S.R.-109 AND SIDE ROADS.

THE CONSTRUCTION OF A TRAFFIC SIGNAL AT THE INTERSECTION OF SR-109 AND ACADEMY ROAD. ALL NECESSARY CONSTRUCTION ACTIVITIES TO INSTALL THIS SIGNAL WILL BE CONSTRUCTED AT THE BEGINNING OF THE PROJECT.

THE CONSTRUCTION OF ALL DRIVES AND FIELD ENTRANCES WITHIN THE PROJECT LIMITS.

THE CONSTRUCTION OF ALL DRAINAGE STRUCTURES INCLUDING BUT NOT LIMITED TO STORM DRAINAGE, CROSS DRAINS AND ENDWALLS AS SHOWN ON THE PLANS.

THE CONSTRUCTION OF BRIDGE OVER DRY FORK CREEK (OLD HICKORY LAKE).

THE INSTALLATION AND MAINTENANCE OF ALL NECESSARY TRAFFIC AND EROSION CONTROL MEASURES AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

THE CONSTRUCTION OF AN OFFSET BASIN FOR THE CORPS OF ENGINEERS.

THE INSTALLATION OF ALL GUARDRAIL AND ALL INCIDENTALS NECESSARY FOR THE COMPLETION OF THIS PROJECT.

THE MILLING, OVERLAY AND STRIPING NECESSARY ON THE NORTH AND SOUTH ENDS OF THE PROJECT TO TIE INTO THE EXISTING ROADWAY.

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SPECIAL NOTES

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-109(32)	2E

PAVEMENT QUANTITIES

LOCATION	PAY ITEMS																	
	303-01 (TON)	307-01.01 (TON)	307-01.08 (TON)	307-01.21 (TON)	307-02.01 (TON)	307-02.02 (TON)	307-02.03 (TON)	307-02.08 (TON)	309-01.01 (TON)	309-01.02 (TON)	309-02 (TON)	402-01 (TON)	402-02 (TON)	403-01 (TON)	411-01.07 (TON)	411-01.10 (TON)	411-02.10 (TON)	701-02 (SQ.FT.)
S.R. 109 (ALT A)	154289.47			598.59	47068.47	798.12	23759.34	15416.63				206.71	818.58	82.69	2842.20		9038.51	
S.R. 109 (ALT B)	103499.87			598.59	47068.47	798.12	23759.34	15416.63	36866.51	1423.04	118.12	206.71	818.58	124.03	2842.20		9038.51	
ACADEMY ROAD (LT)	505.39		113.38									1.01	4.01	0.20	6.11	44.24		
ACADEMY ROAD (RT)	2302.61	421.81	236.80									3.18	12.58	1.27	19.72	138.67		
STEWART ROAD	182.81		24.07									0.32	1.28	0.07		14.10		
WOODS FERRY ROAD	316.54		43.39									0.58	2.30	0.12		25.44		
TYREE ACCESS ROAD	969.49		136.64									1.83	7.26	0.37		80.11		
N.W. WILLIAMS ROAD	116.14		16.18									0.22	0.86	0.04		9.47		
CREIGHTON LANE	578.71		116.03									1.04	4.11	0.21		45.35		
BENDING CHESTNUT DRIVE	319.13	109.46	72.94									0.98	3.88	0.39		42.71		
BATES ROAD	213.84	43.83	28.72									0.39	1.53	0.15		16.84		
ACCESS ROAD 2	196.49		26.41									0.35	1.40	0.07		15.46		
BLOODWORTH ROAD	615.15		75.47									1.01	4.01	0.20		44.19		
APPLE VALLEY ROAD	279.28		68.54									0.61	2.43	0.12		26.74		
CHEROKEE DOCK ROAD	336.44		66.18									0.89	3.52	0.36		38.75		
WILSON ROAD	447.20		65.75									0.88	3.49	0.18		38.49		
BUSINESS ENTRANCE	930.93	466.38	466.38									6.25	24.76	1.25		273.43		786.77
PRIVATE/FIELD ENTRANCE	1373.42													1.85		484.08		1390.41
DETOUR ROAD	8657.11	1345.03	755.09									10.13	40.11	0.58				
TOTALS (ALT A)	**172630.15**	**2386.51**	**2311.97**	**598.59**	**47068.47**	**798.12**	**23759.34**	**15416.63**	**0.00**	**0.00**	**0.00**	**236.38**	**936.11**	**90.12**	**2868.03**	**1338.07**	**9038.51**	**2177.18**
TOTALS (ALT B)	**121840.55**	**2386.51**	**2311.97**	**598.59**	**47068.47**	**798.12**	**23759.34**	**15416.63**	**36866.51**	**1423.04**	**118.12**	**236.38**	**936.11**	**131.46**	**2868.03**	**1338.07**	**9038.51**	**2177.18**

BRIDGE DRAINS

STATION	LOCATION	SPILLWAY WIDTH	MACHINED RIP-RAP (CL. A-1) 709-05.06 (TON)	18" PIPE DRAIN (BRIDGE DRAIN) 610-07.03 (L.F.)	REMARKS
21+15	S.R. 109 (LT.)		2.6	20	
21+15	S.R. 109 (RT.)		2.6	20	
23+32	S.R. 109 (LT.)		2.6	20	
23+32	S.R. 109 (RT.)		2.6	20	
TOTALS			**10.4**	**80**	

REMOVAL OF BUILDINGS AND OBSTRUCTIONS

PAY ITEM	TRACT NO.	DESCRIPTION
202-06.01	4	BILLBOARD
202-06.02	16	1 STORY BRICK BUILDING
202-06.03	20	1 STORY FRAME RESIDENCE, WOOD GARAGE, AND WOOD OUTBUILDING
202-06.04	55	BRICK SIGN
202-06.05	63	1 STORY BLOCK BUILDING AND 1 MOBILE HOME
202-06.06	67	1 STORY FRAME RESIDENCE W/BASEMENT AND 1 METAL SHED

REMOVAL OF STRUCTURES (202-01)

SHEET NO.	STATION	LOCATION	DESCRIPTION	REMARKS
8	44+35	EXIST. S.R. 109	24" CMP WITH EW'S	
9	62+50	EXIST. S.R. 109	10'X4' BOX CULV.	
10	64+00	EXIST. S.R. 109	10'X5' BOX CULV.	
10	66+50	EXIST. S.R. 109	5'X5' BOX CULV.	
11	78+50	EXIST. S.R. 109	18" RCP WITH EW'S	
12	96+15	EXIST. S.R. 109	30" RCP WITH EW'S	
14	115+50	EXIST. S.R. 109	4'X6' BOX CULV.	
14	123+50	EXIST. S.R. 109	30" PIPE WITH EW'S	
14	127+90	EXIST. S.R. 109	24" RCP WITH EW'S	
16	142+50	EXIST. S.R. 109	18" RCP WITH EW'S	
16	146+20	EXIST. S.R. 109	24" RCP WITH EW'S	
16	151+90	EXIST. S.R. 109	18" RCP WITH EW'S	
18	168+35	EXIST. S.R. 109	36" RCP WITH EW'S	
18	173+35	EXIST. S.R. 109	18" RCP WITH EW'S	
19	181+05	EXIST. S.R. 109	24" RCP WITH EW'S	
19	187+15	EXIST. S.R. 109	4'X6' BOX CULV.	
20	191+85	EXIST. S.R. 109	18" RCP WITH EW'S	

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-109(32)	2E1

CATCH BASINS

SHEET NO.	LOCATION	STATION	OFFSET (FT.)	DRAINAGE CODE	GRATE/TOP ELEV.	STRUCTURE TYPE	INSIDE DIMENSIONS	DEPTH (FT.)	STANDARD DRAWING	PAY ITEMS				
										TYPE 12 611-12.01 0' - 4'	TYPE 12 611-12.02 4' - 8'	TYPE 12 611-12.03 8' - 12'	TYPE 14 611-14.02 4' - 8'	
18B	S.R.109	170+75.00	41.96 LT.	2	525.09	NO. 12	4' DIA.	5.76	D-CB-12RA, D-CBB-12A		1			
18B	S.R.109	174+25.00	41.96 LT.	4	511.09	NO. 12	4'X3'	5.83	D-CB-12S, D-CBB-12A		1			
18B	S.R.109	175+59.00	41.96 LT.	5	505.73	NO. 12	4'X3'	6.00	D-CB-12S, D-CBB-12A		1			
18B	S.R.109	177+83.00	41.96 LT.	8	496.77	NO. 12	4'X3'	6.17	D-CB-12S, D-CBB-12A		1			
19B	S.R.109	180+99.00	41.96 LT.	9 *	484.13	NO. 12	4'X4'	10.32	D-CB-12SB, D-CBB-12A			1		
19B	S.R.109	181+50.00	41.96 LT.	11A	482.09	NO. 12	4'X4'	10.56	D-CB-12SB, D-CBB-12A			1		
19B	S.R.109	183+50.00	41.96 LT.	11	474.09	NO. 12	4'X4'	8.38	D-CB-12SB, D-CBB-12A			1		
19B	S.R.109	185+50.00	41.96 LT.	12	467.51	NO. 12	4'X4'	5.97	D-CB-12SB, D-CBB-12A		1			
19B	S.R.109	187+60.00	41.96 LT.	13	463.60	NO. 12	5'2"X5'2"	5.44	D-CB-12SC, D-CBB-12A		1			
18B	S.R.109	175+67.00	41.96 RT.	27	505.41	NO. 12	4'X3'	5.48	D-CB-12S, D-CBB-12A		1			
19B	S.R.109	179+50.00	41.96 RT.	28	490.09	NO. 12	4'X3'	5.45	D-CB-12S, D-CBB-12A		1			
19B	S.R.109	183+50.00	41.96 RT.	29	474.09	NO. 12	4'X3'	9.47	D-CB-12S, D-CBB-12A			1		
19B	S.R.109	186+45.00	41.96 RT.	30	465.36	NO. 12	4'X3'	5.26	D-CB-12S, D-CBB-12A		1			
20B	S.R.109	192+35.00	41.96 RT.	39	460.90	NO. 12	4'X3'	5.11	D-CB-12S, D-CBB-12A		1			
19B	S.R.109	190+00.00	41.96 LT.	40A	462.10	NO. 12	4'X3'	4.42	D-CB-12S, D-CBB-12A		1			
20B	S.R.109	192+40.00	41.96 LT.	40	460.88	NO. 12	4'X3'	5.68	D-CB-12S, D-CBB-12A		1			
20B	S.R.109	193+40.00	41.96 LT.	41	460.37	NO. 12	4'X4'	5.95	D-CB-12SB, D-CBB-12A		1			
19B	CHEROKEE BOAT DOCK RD.	7+60.00	24.19 RT.	52	461.98	NO. 14	8'X3'	4.32	D-CB-14S, D-CBB-12A				1	
19B	CHEROKEE BOAT DOCK RD.	7+60.00	14.72 LT.	53	462.15	NO. 14	8'X3'	4.05	D-CB-14S, D-CBB-12A				1	
TOTALS										**0**	**13**	**4**	**2**	**0**

* SEE SHEET 19B FOR FRENCH DRAIN AND PIPE CONNECTION DETAILS

CROSS DRAIN TABULATION

STA. AND ROAD	RCP CLASS III OR CMP 10 GA. OR HDPE OR PVC (L.F.) FILL HEIGHT < OR = 16 FT.					HORIZONTAL OVAL CONC. PIPE (L.F.)	SKEW	END TREATMENT										REMARKS
								INLET					OUTLET					
	18"	24"	30"	36"	42"	30' X 19"		TYPE	DRAWING NO.	ITEM NO.	CONCRETE C.Y.	REINF. STL. LB.	TYPE	DRAWING NO.	ITEM NO.	CONCRETE C.Y.	REINF. STL. LB.	
183+93.49 S.R. 109						112	70°00'00" RT.	"U"	D-PE-30A D-PE-30B	611-07.62			"ST"	D-PE-5	611-07.01 611-07.02	1.1	81	OUTLET QUANT. BASED ON SKEW 75°
194+28.14 S.R. 109				116			77°00'00" RT.	"U"	D-PE-36A D-PE-36B	611-07.65			"B"	D-PE-9 D-PE-9A		2.99	309	OUTLET QUANT. BASED ON CONC. PIPE
24+73 ACADEMY RD.					90		86°10'27" RT.	"U"	D-PE-42A D-PE-42B	611-07.67			"U"	D-PE-42A D-PE-42B	611-07.67			
96+13.50 S.R. 109			186				89°00'00" LT.	"B"	D-PE-9 D-PE-9A		3.82	383	"B"	D-PE-9 D-PE-9A		3.82	383	EW QUANT. BASED ON CONC. PIPE
145+91.73 S.R. 109		220					69°18'39" RT.	"B"	D-PE-9 D-PE-9A		3.51	353		USBR TYPE VI DISS.				EW QUANT. BASED ON CONC. PIPE
151+75.10 S.R. 109		210					78°18'36" RT.	"B"	D-PE-9 D-PE-9A		3.51	353		USBR TYPE VI DISS.				EW QUANT. BASED ON CONC. PIPE
168+70.42 S.R. 109				202			53°22'52" RT.	"U"	D-PE-36A D-PE-36B	611-07.65				USBR TYPE VI DISS.				
14+21 CREIGHTON LN.	42						90°00'00"	"U"	D-PE-18A D-PE-18B	611-17.54			"U"	D-PE-18A D-PE-18B	611-17.54			
10+55 BATES RD.			51				77°16'00" LT.	"U"	D-PE-30A D-PE-30B	611-07.60			"U"	D-PE-30A D-PE-30B	611-07.60			
4+28.25 WOODS FERRY CONN.	52						90°00'00"	"U"	D-PE-18A D-PE-18B	611-07.55			"U"	D-PE-18A D-PE-18B	611-07.55			
19+36.74 BLOODWORTH	34						90°00'00"	"U"	D-PE-18A D-PE-18B	611-07.55			"U"	D-PE-18A D-PE-18B	611-07.55			
TOTALS	**128**	**430**	**237**	**318**	**90**	**112**					**10.84**	**1089**				**7.91**	**773**	

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-109(32)	2E2

STORM DRAINAGE PIPES

SHEET NO.	FROM CODE	FROM OUTLET ELEV.	TO CODE	TO INLET ELEV.	% GRADE	REINFORCED CONC. PIPE - CLASS III SIZE & LENGTH (L.F.) 18"	24"	30"	36"	48"	38"X24" HOR. OVAL	RIP-RAP 709-05.06 (TON)
18B	1	523.14	2	519.50	17.33	21						
18B	2	519.33	4	505.43	3.99	348						
18B	3	506.98	4	505.64	8.93	15						
18B	4	505.26	5	499.90	4.00	134						
18B	6	503.06	5	500.11	29.50	10						
18B	5	499.73	8	490.77	4.00	224						
18B	7	491.52	8	490.98	3.86	14						
18B/19B	8	490.60	9	478.10	3.96	316						
19B	10	474.90	9	474.44	1.77			26				
19B	9	473.81	11A	472.92	1.75			51				
19B	11A	471.53	11	467.65	1.94			200				
19B	11	465.71	12	461.71	2.00			200				
19B	12	461.54	13	458.38	1.50			210				
19B	13	458.16	STUB	457.10	1.38						77	
19B/20B	40A	457.68	40	455.37	0.96		240					
20B	40	455.20	41	454.59	0.61		100					
20B	41	454.42	43	453.98	0.50		88					
18B/19B	27	499.93	28	484.81	3.95	383						
19B	28	484.64	29	468.84	3.95	400						
19B	29	464.62	30	460.27	1.47		295					
19B	30	460.10	31	460.00	0.56		18					
19B	53	458.10	52	457.66	0.50	39						
19B	52	457.79	51	457.24	0.50	62						
20B	44	455.99	39	455.92	0.50	14						
20B	39	455.79	40	455.37	0.50	84						
20B	40	455.20	41	454.59	0.64		96					
20B	41	454.42	43	453.98	0.50		88					
TOTALS						**2064**	**925**	**687**	**0**		**77**	**0**

REMOVAL OF GUARDRAIL

SHEET NO.	STATION TO	STATION FROM	ROADWAY	LOCATION	LENGTH
6	200+30	21+40	S.R. 109	RT	774.30
6	204+50	21+40	S.R. 109	LT	354.30
6 - 7	22+45	33+62	S.R. 109	LT	1117.00
6 - 7	22+45	31+85	S.R. 109	RT	940.00
9 - 10	61+25	68+35	S.R. 109	RT	710.00
9 - 10	61+55	68+35	S.R. 109	LT	680.00
TOTAL					4575.60

PROPOSED GUARDRAIL

SHEET NO.	LOCATION	SIDE LT	SIDE RT	STATION FROM	STATION TO	GUARDRAIL BRIDGE ENDS 705-01.01 (L.F.)	GUARDRAIL SINGLE TYPE 2 705-06.01 (L.F.)	TERMINAL ANCHORS TYPE IN-LINE 705-06.11 (EA.)	TERMINAL ANCHORS TYPE 38 705-06.20 (EA.)	TERMINAL ANCHORS TYPE 13 705-06.10 (EA.)	REMARKS
4B-6B	S.R. 109		X	183+00	21+25	26.90	2415.53		1		
6B	S.R. 109	X		202+00	21+25	26.90	515.53		1		
6B-7B	S.R. 109	X		23+25	33+90	26.90	991.23		1		
6B-7B	S.R. 109		X	23+25	34+80	26.90	1081.23		1		
9B-10B	S.R. 109	X		61+95	68+15		526.25		2		
9B-10B	S.R. 109		X	60+90	68+40		656.25		2		
19B	S.R. 109	X		187+70	188+77		86.26	1	1	1	
19B	S.R. 109		X	187+70	189+10		46.25		2		
16B	S.R. 109	X		143+45	147+75		392.31	1	1	1	
16B-17B	S.R. 109	X		147+75	154+00		607.15	1	1	1	
TOTALS						**107.60**	**7317.99**	**3**	**13**	**3**	

R.O.W. MARKERS

SHEET NO.	QUANTITIES "A"	"B"	"C"	USACE	TOTALS
4	0	0	0	4	**4**
5	0	0	0	2	**2**
6	0	0	0		**0**
7	1	2	1		**4**
8	4	1	5		**10**
9	7	2	5		**14**
10	3	2	3		**8**
11	14	0	1		**15**
12	3	4	3		**10**
13	2	1	5		**8**
14	3	0	3		**6**
15	6	2	3		**11**
16	5	3	5		**13**
17	6	4	4		**14**
18	1	3	3		**7**
19	4	1	4		**9**
20	0	0	1		**1**
TOTALS	**59**	**25**	**46**	**6**	**130**

NOTE: EXISTING USACE MONUMENTS ARE TO BE REUSED. IF NEW MONUMENTS ARE NEEDED, SEE NOTE 21 ON SHEET NO. 2D.

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-109(32)	2E3

BOX CULVERT TABULATION

STATION	LOCATION	SPAN	HEIGHT	LENGTH	SKEW	TYPE STRUCTURE	DRAINAGE AREA ACRES	BOX CULVERT				RIP-RAP TONS		DRAWING NO'S. (INCL. DWG. NO. STD-9-1)	GRANULAR BACKFILL ITEM 303-01.01 DWG. STD-10-1 TONS	FOUNDATION FILL MATERIAL ITEM 204-08 CU. YD.
								BOX		WINGWALLS						
								CLASS "A" CONC. C.Y. 604-01.01	REINF. STL. LBS. 604-01.02	CLASS "A" CONC. C.Y. 604-01.01	REINF. STL. LBS. 604-01.02	INLET CL. "B"	OUTLET CL. "C"			
64+06.19	S.R. 109	14'	10'	154'	70°51'07"	BOX	2.02 SQ. MI.	355.74	69454	43	5191	375.37	153.74	STD-17-14, STD-17-60	4284.03	54.18
66+33.92	S.R. 109	10'	10'	154'	56°45'57"	BOX	2.02 SQ. MI.	194.04	54670	43	5191	38.89	89.38	STD-17-14, STD-17-55	4191.4	42.77
115+61.39	S.R. 109	4'	6"	186'	60°12'23"	BOX	114 AC.	113.46	28272	11.1	1060	0	110.77	STD-17-13, STD-17-51	2433.27	20.66
188+39.97	S.R. 109	6'	3'	110'	90°	BOX	12.3 AC.	69.3	15510	6.9	849	0	0	STD-17-3, STD-17-7, STD-17-11, STD-17-16	727.77	22.4
TOTALS								**732.54**	**167906**	**104**	**12291**	**414.26**	**353.89**		**11636.47**	**140.01**

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

BOX BRIDGE TABULATION

STATION	LOCATION	SPAN	HEIGHT	LENGTH	SKEW	TYPE STRUCTURE	DRAINAGE AREA ACRES	BOX BRIDGE				RIP-RAP TONS		DRAWING NO'S. (INCL. DWG. NO. STD-9-1)	GRANULAR BACKFILL ITEM 303-01.01 DWG. STD-10-1 TONS	FOUNDATION FILL MATERIAL ITEM 204-08 CU. YD.
								BOX		WINGWALLS						
								CLASS "A" CONC. C.Y. 604-02.01	REINF. STL. LBS. 604-02.02	CLASS "A" CONC. C.Y. 604-02.01	REINF. STL. LBS. 604-02.02	INLET CL. "B"	OUTLET CL. "C"			
63+27.07	S.R. 109	14'	10'	238'	43°17'59"	BOX	2.02 SQ. MI.	550	107338	43	5191	35.48	153.74	STD 17-14, STD-17-60	6621	84
TOTALS								**550**	**107338**	**43**	**5191**	**35.48**	**153.74**		**6621**	**84**

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

SPECIAL DITCHES & DITCH LINING TABULATION

ROAD	LOCATION	STATION		DITCH TYPE	SOD (S.Y.) 803-01	BOTTOM WIDTH (FT.)	MACHINED RIP-RAP CL. A-1 (TON) 709-05.06	MACHINED RIP-RAP CL. B (TON) 709-05.08	MACHINED RIP-RAP CL. C (TON) 709-05.09
		FROM	TO						
S.R. 109	LT.	189+90	193+00	V	276				
S.R. 109	LT.	196+00	202+95	V	618				
S.R. 109	RT.	31+65	34+70	T	136	2.00	119		
S.R. 109	RT.	35+55	40+00	T	198	2.00	173		
S.R. 109	RT.	41+25	43+05	T	80	2.00	70		
S.R. 109	RT.	43+80	47+15	T	149	2.00	131		
S.R. 109	LT.	62+50	64+50	T	89	2.00	78		
S.R. 109	RT.	90+50	91+65	V	102				
S.R. 109	RT.	92+00	96+00	V	356				
S.R. 109	LT.	90+50	90+75	V	22				
S.R. 109	LT.	90+90	91+65	V	67				
S.R. 109	LT.	91+85	92+80	V	84				
S.R. 109	LT.	93+00	94+35	V	120				
S.R. 109	LT.	94+55	95+70	V	102				
S.R. 109	LT.	99+30	100+45	V	51			75.00	
S.R. 109	LT.	100+65	101+70	V	47			68	
S.R. 109	LT.	111+00	114+75	T	167	4.00	146		
S.R. 109	LT.	115+05	118+15	T	138	4.00	121		
S.R. 109	LT.	118+35	120+50	V	96	6.00	84		
S.R. 109	RT.	125+65	133+00	T	327	6.00	286		
S.R. 109	RT.	133+00	135+50	T	222	6.00			
S.R. 109	LT.	125+55	129+90	V	193	6.00	169		
S.R. 109	LT.	130+10	136+00	V	262	6.00	229		
S.R. 109	RT.	142+50	144+50	V	178				
S.R. 109	RT.	186+45	188+35	V	169				
TOTALS					**4249**		**1606**	**143**	**0.00**

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TABULATED QUANTITIES

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-109(32)	2E4

ESTIMATED GRADING QUANTITIES

STATION TO STATION	ROAD & DRAINAGE EXC. (UNCL.)		BORROW EXCAVATION		EMB. C.Y.
	COMMON - C.Y.	S. ROCK - C.Y.	UNCL. - C.Y.	GRADED S. ROCK - C.Y.	
STATE ROUTE 109	313087	11959			227004
ACADEMY ROAD	1431				690
STEWART ROAD	23				0
WOODS FERRY CONNECTOR	135				435
TYREE ACCESS ROAD	335				1962
NW WILLIAMS ROAD	285				0
CREIGHTON LANE	659				2
BENDING CHESTNUT DRIVE	308				104
BATES ROAD	127				8
ACCESS ROAD 2	17				69
BLOODWORTH ROAD	7617			822	0
APPLE VALLEY ROAD	139				368
CHEROKEE BOAT DOCK ROAD	524				12
WILSON ROAD	71				912
DETOUR ROAD	①				①
CORPS PROPERTY BALANCE	17676				0
EROSION CONTROL	390				
GRADED SOLID ROCK (BORROW)				62621	
TOTALS	**342824**	**11959**	**0**	**63443**	**231566**

① INCLUDED IN STATE ROUTE 109 QUANTITIES.

EARTHWORK

EXC. (UNCL.) 342824 C.Y. COMMON EXC. (INCLUDES 4889 CY TOPSOIL FROM EXC. AREAS, 21840 C.Y. TOPSOIL FROM EMB AREAS, AND 390 C.Y. FOR EROSION CONTROL)

11959 C.Y. ROCK

EMBANKMENT 253406 C.Y. (INCLUDES 21840 CY TO REPLACE STRIPPED TOPSOIL)

SHRINKAGE 15%
SWELL 15%

$$\frac{342824}{1.15} + (11959 \times 1.15) \quad VS \quad 253406 \text{ C.Y.}$$

298108 C.Y. + 13753 C.Y = 311861 C.Y. VS 253406 C.Y.

58455 C.Y. EXCESS MATERIAL

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TABULATED QUANTITIES

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-109(32)	2E5

RAMP AND SIDE DRAIN TABULATION

STATION	LOCATION		DESCRIPTION	SURFACE WIDTH	RCP CLASS III OR CMP 16 GA. OR HDPE (L.F.) FILL HEIGHT < OR = 10 FT.					RCP CLASS III OR CMP 14 GA. (L.F.) OR HDPE (L.F.) FILL HEIGHT > 10 FT. AND < OR = 18 FT.						END TREATMENT					REMARKS
	LT	RT		(L.F.)	18"	24"	30"	36"	42"	18"	24"	30"	36"	42"	60"	TYPE	DRAWING NO.	CLASS A CONC. 611-07.01 (C.Y.)	REINF. STEEL 611-07.02 (LB.)	STRUC. STEEL 611-07.03 (LB.)	
201+79.41 (S.R. 109)	X		PVT. DR.	10		28															
34+23.23 (S.R. 109)	X		BUS. ENT.	36	44																
34+88.12 (S.R. 109)	X		BUS. ENT.	36	44																
35+10 (S.R. 109)		X	BUS. ENT.	24					32							U	D-PE-42A/42B				
35+73.60 (S.R. 109)	X		BUS. ENT.	35	42																
37+91.19 (S.R. 10)	X		BUS. ENT.	40	48																
38+79.19 (S.R. 109)	X		BUS. ENT.	40	48																
25+92.72 (ACADEMY RD)		X	BUS. ENT.	24	28																
26+50 (ACADEMY RD)	X		FIELD ENT.	16	26																
26+72.84 (ACADEMY RD)		X	BUS. ENT.	39	54																
43+44.26 (S.R. 109)		X	FIELD ENT.	16										38		U	D-PE-42A/42B				
43+58.45 (S.R. 109)	X		PVT. DR.	24																	NO S.D. REQUIRED
54+58.76 (S.R. 109)		X	PVT. DR.	10	18																
54+99 (S.R. 109)		X	BUS. ENT.	10	18																
56+11.79 (S.R. 109)		X	BUS. ENT.	12	20																
56+56.37 (S.R. 109)		X	BUS. ENT.	14	22																
56+62.05 (S.R. 109)	X		BUS. ENT.	40																	NO S.D. REQUIRED
58+52.21 (S.R. 109)		X	BUS. ENT.	14	22																
58+79.70 (S.R. 109)	X		BUS. ENT.	40																	NO S.D. REQUIRED
59+51.60 (S.R. 109)		X	PVT. DR.	20	28																
78+56.45 (S.R. 109)	X		FIELD ENT.	16																	NO S.D. REQUIRED
80+28.00 9(S.R. 109)		X	BUS. ENT.	20	28																
81+94.54 (S.R. 109)		X	BUS. ENT.	33	41																
83+84.88 (S.R. 109)		X	PVT. DR.	10																	NO S.D. REQUIRED
84+59.03 (S.R. 109)	X		PVT. DR.	10	14																
84+82.05 (S.R. 109)	X		PVT. DR.	10	14																
86+86.03 (S.R. 109)	X		PVT. DR.	10	18																
87+11.31 (S.R. 109)		X	PVT. DR.	10																	NO S.D. REQUIRED
87+39.84 (S.R. 109)	X		PVT. DR.	10	18																
87+77.90 (S.R. 109)	X		PVT. DR.	10	18																
88+90.74 (S.R. 109)	X		PVT. DR.	10	18																
88+99.66 (S.R. 109)		X	PVT. DR.	10																	NO S.D. REQUIRED
90+84.73 (S.R. 109)	X		PVT. DR.	10	18																
91+77.92 (S.R. 109)	X		PVT. DR.	10	16																
91+82.15 (S.R. 109)		X	BUS. ENT.	22	33																
92+89.59 (S.R. 109)	X		PVT. DR.	10	18																
94+39.78 (S.R. 109)	X		PVT. DR.	10	16																
95+78.48 (S.R. 109)	X		PVT. DR.	10	18																
99+10.62 (S.R. 109)	X		PVT. DR.	10	50																
100+52.60 (S.R. 109)	X		PVT. DR.	10	34																
101+53.28 (S.R. 109)		X	PVT. DR.	15	18																
0+64 OFF DR 101+53.28		X	PVT. DR.	10																	NO S.D. REQUIRED
101+79.03 (S.R. 109)	X		PVT. DR.	10	18																
102+98.21 (S.R. 109)	X		PVT. DR.	10	18																
104+07.11 (S.R. 109)	X		PVT. DR.	10																	NO S.D. REQUIRED
105+53.30 (S.R. 109)	X		PVT. DR.	10	14																
110+67.27 (S.R. 109)	X		FIELD ENT.	16	20																
115+37.88 (S.R. 109)		X	PVT. DR.	10																	NO S.D. REQUIRED
118+40.55 (S.R. 109)	X		PVT. DR.	10	20																
129+99.65 (S.R. 109)	X		FIELD ENT.	16	23																
135+95.53 (S.R. 109)		X	PVT. DR.	10	14																
136+57.12 (S.R. 109)	X		PVT. DR.	10	18																
147+74.99 (S.R. 109)	X		PVT. DR.	12																	NO S.D. REQUIRED
17+09.66 (BLOODWORTH RD)	X		PVT. DR.	12	26																
170+63.91 (S.R. 109)	X		PVT. DR.	12																	NO S.D. REQUIRED
172+06.70 (S.R. 109)	X		FIELD ENT.	22																	NO S.D. REQUIRED
172+13.21 (S.R. 109)		X	PVT. DR.	10																	NO S.D. REQUIRED
174+06.76 (S.R. 109)	X		PVT. DR.	13	26																
175+71.40 (S.R. 109)	X		PVT. DR.	12																	NO S.D. REQUIRED
175+96.49 (S.R. 109)	X		PVT. DR.	12																	NO S.D. REQUIRED
178+14.20 (S.R. 109)	X		PVT. DR.	11																	NO S.D. REQUIRED
179+54.05 (S.R. 109)	X		PVT. DR.	10	30																
180+43.57 (S.R. 109)		X	PVT. DR.	20		42															
186+63.90 (S.R. 109)	X		BUS. ENT.	21																	NO S.D. REQUIRED
188+89.65 (S.R. 109)	X		FIELD ENT.	16																	NO S.D. REQUIRED
190+52.18 (S.R. 109)	X		BUS. ENT.	30																	NO S.D. REQUIRED
191+51.23 (S.R. 109)	X		BUS. ENT.	30																	NO S.D. REQUIRED
4+21.03 (WILSON RD)		X	BUS. ENT.	28																	NO S.D. REQUIRED
8+76.00 (APPLE VALLEY RD)	X		PVT. DR.	10																	NO S.D. REQUIRED
TOTALS					**1079**	**70**	**0**	**0**	**32**	**0**	**0**	**0**	**0**	**38**	**0**			**0**	**0**	**0**	

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TABULATED QUANTITIES

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2016	NH-109(32)	3
CONST.	2017	NH-109(32)	3

RIGHT-OF-WAY

(1) IT IS INTENDED THAT ALL BUILDINGS AND/OR PORTIONS OF BUILDINGS THAT ARE WITHIN THE PROPOSED RIGHT-OF-WAY AND/OR EASEMENT LINES FOR THE PROJECT BE REMOVED THERE FROM IN THE PROCESS OF RIGHT-OF-WAY ACQUISITION. IF ANY SUCH BUILDINGS OR IMPROVEMENTS ARE NOT REMOVED IN THE COURSE OF RIGHT-OF-WAY ACQUISITION, THE CIVIL ENGINEERING MANAGER 2, ROADWAY DESIGN DIVISION IS TO BE NOTIFIED IN SUFFICIENT TIME TO PERMIT HAVING SUCH REMOVALS DESIGNATED AS A PART OF THE CONSTRUCTION CONTRACT.

(2) ALL RAMPS MUST CONFORM TO THE DEPARTMENT'S "POLICY ON FINANCING CONSTRUCTION OF PUBLIC ROAD INTERSECTIONS AND DRIVEWAYS ON HIGHWAY RESURFACING, RECONSTRUCTION AND CONSTRUCTION PROJECTS ON NEW LOCATIONS", THE MANUAL ON RULES AND REGULATIONS FOR CONSTRUCTING DRIVEWAYS ON STATE HIGHWAY RIGHT-OF-WAY, STANDARD DRAWING RP-R-1, AND OTHER ACCEPTED DESIGN AND SAFETY STANDARDS.

(3) EXISTING PAVED DRIVEWAY PER TRACT REMAINDER WILL BE REPLACED IN KIND TO A TOUCHDOWN POINT.

(4) WHERE THE EXISTING DRIVEWAY IS UNPAVED AND THE PROPOSED DRIVEWAY EXCEEDS 7 PERCENT IN GRADE, EACH DRIVEWAY WILL BE PAVED TO A TOUCHDOWN POINT OR UNTIL THE GRADE IS LESS THAN 7 PERCENT.

(5) WHERE THE EXISTING DRIVEWAY IS UNPAVED AND THE PROPOSED DRIVEWAY IS LESS THAN 7 PERCENT IN GRADE, EACH DRIVEWAY WILL BE PAVED A SHOULDER WIDTH FROM THE EDGE OF PAVEMENT AND THE REMAINDER OF THAT DRIVEWAY REPLACED IN KIND TO A TOUCHDOWN POINT.

(6) ANY NECESSARY PAVING OF DRIVEWAYS WILL BE DONE DURING PAVING OPERATIONS ON THE MAIN ROADWAY.

(7) NEW DRIVEWAYS PROVIDED IN THE PLANS WILL BE PAVED BASED ON THE 7 PERCENT CRITERIA. THOSE 7 PERCENT OR STEEPER IN GRADE WILL BE PAVED AND THOSE FLATTER THAN 7 PERCENT WILL BE COVERED WITH BASE STONE.

(8) ON PROJECTS WITHOUT CURB AND GUTTER THAT ARE ON STATE ROUTES, IT WILL BE THE RESPONSIBILITY OF THE OWNER TO SECURE A PERMIT AND TO CONSTRUCT ADDITIONAL DRIVEWAYS AND FIELD ENTRANCES OTHER THAN THOSE PROVIDED IN THE PLANS.

(9) ON PROJECTS WITH CURB AND GUTTER THAT ARE ON STATE ROUTES, IT WILL BE THE RESPONSIBILITY OF THE OWNER TO SECURE A PERMIT. AFTER THE PERMIT HAS BEEN GRANTED, THE DEPARTMENT WILL CONSTRUCT THE DRIVEWAY OR FIELD ENTRANCE THROUGH THE CURB AND SIDEWALK, PROVIDED THE CURB AND SIDEWALK HAVE NOT BEEN CONSTRUCTED. IT WILL BE THE RESPONSIBILITY OF THE PROPERTY OWNER TO CONSTRUCT THE DRIVEWAY OR FIELD ENTRANCE FROM BACK OF SIDEWALK TO TOUCHDOWN POINT FOR ANY ADDITIONAL DRIVEWAYS OR FIELD ENTRANCES OTHER THAN THOSE PROVIDED IN THE PLANS.

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

UTILITIES

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

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

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

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

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

UTILITY OWNERS

CABLE:
COMCAST
660 MAINSTREAM DRIVE
NASHVILLE, TN 37228
CONTACT: LARRY K. WINBORN
OFFICE PHONE: 615 244 7462
CELL PHONE: ___ ___ ____
Email: larry_winburn@cable.comcast.com

TELEPHONE:
AT&T
333 COMMERCE STREET, RM 23C142
NASHVILLE, TN 37201
CONTACT: KIM BEAN
OFFICE PHONE: 615 214 7318
CELL PHONE: ___ ___ ____
Email: Kb1078@att.com

GAS:
ATMOS ENERGY CORPORATION
810 CRESCENT CENTRE DR. SUITE 600
FRANKLIN, TN 37067
CONTACT: ROBERT H. ARNOLD, JR.
OFFICE PHONE: 615 771 8311
CELL PHONE: ___ ___ ____
Email: robert.arnold@atmosenergy.com

FIBER OPTIC:
AT&T FIBER OPTIC
360 GEES MILL BUSINESS PARKWAY
CONYERS, GA 30013
CONTACT: SCOTT LOGEMAN
OFFICE PHONE: 770 335 8255
CELL PHONE: ___ ___ ____
Email: sl1213@att.com

POWER:
MIDDLE TENNESSEE ELECTRIC MEMBERSHIP CORPORATION
555 NEW SALEM ROAD
MURFREESBORO, TN 37129
CONTACT: TALLEY FLOYD
OFFICE PHONE: 615 494 1540
CELL PHONE: 615 890 9762_
Email: tfloyd@mtemc.com

CABLE:
CHARTER COMMUNICATION
215 INDUSTRIAL BOULEVARD
TULLAHOMA, TN 37388
CONTACT: RICHARD RIDDLE
OFFICE PHONE: 931 461 4315
CELL PHONE: ___ ___ ____
Email: richard.riddle@charter.com

WATER:
LAGUARDO UTILITY DISTRICT
355 WOODS FERRY ROAD
LEBANON, TN 37087
CONTACT: JOEY HARDIN
OFFICE PHONE: 615 444 3378
CELL PHONE: ___ ___ ____
Email: jhardin@laguardoud.com

GAS:
CITY OF LEBANON GAS DEPARTMENT
215 MADDOX SIMPSON PKWY.
LEBANON, TN 37090
CONTACT: JERRY SNODGRASS
OFFICE PHONE: 615 443 2835
CELL PHONE: ___ ___ ____
Email: jsnodgrass@lebanontn.org

FIBER OPTIC:
LEVEL 3 COMMUNICATIONS, INC.
1025 ELDORADO BLVD., 43C-420
BROOMFIELD, CO 80021
CONTACT: PATRICK PROVOST
OFFICE PHONE 720 888 4686
CELL PHONE ___ ___ ____
Email patrick.provost@level3.com

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RIGHT-OF-WAY NOTES, UTILITY NOTES AND UTILITY OWNERS

CONTROL POINTS

POINT	NORTH	EAST	ELEV.	STATION	OFFSET
SCP29	727310.3290	1840066.9680	477.38	182+83.93	27.07' (RT)
SCP30	727330.1740	1839828.9580	478.14	181+97.30	211.39' (LT)
SCP31	728127.1230	1840379.8000	464.57	190+08.92	317.59' (RT)
SCP32	728494.9750	1840040.9940	458.18	193+67.43	31.09' (LT)
SCP38	711722.2870	1837800.5130	455.79	23+69.22	9.98' (LT)
SCP41	725134.8060	1839921.7670	579.91	160+01.51	16.85' (LT)
SCP40	713368.3590	1837815.6360	474.66	40+15.28	6.91' (RT)
SCP39	712880.1840	1837761.1450	460.45	35+27.16	48.10' (LT)
SCP42	725520.7080	1839958.0210	568.11	163+90.52	25.01' (LT)
SCP50	714315.5980	1837814.7980	500.75	49+62.54	4.32' (LT)
SCP51	714982.6470	1837782.8670	491.71	56+28.98	47.01' (LT)
SCP52	716176.5460	1838043.6870	477.31	68+46.87	3.22' (LT)
SCP53	716816.2410	1838186.6900	500.78	75+02.76	22.21' (LT)
SCP54	717767.3230	1838386.2350	522.07	84+74.91	22.60' (LT)

CONTROL POINTS

POINT	NORTH	EAST	ELEV.	STATION	OFFSET
SCP55	718404.2320	1838560.6940	514.78	91+34.03	17.92' (RT)
SCP56	719389.1720	1838767.4660	540.80	101+40.44	18.90' (RT)
SCP57	720092.2220	1838864.9890	538.79	108+48.58	29.42' (LT)
SCP58	720340.3920	1838972.0200	529.80	111+13.39	24.59' (RT)
SCP59	721098.5530	1839085.2720	511.71	118+78.69	19.60' (LT)
SCP60	721731.7590	1839282.2000	523.61	125+38.79	43.67' (RT)
SCP61	722243.3580	1839372.1370	529.39	130+57.97	27.08' (RT)
SCP62	722790.7380	1839451.4970	553.58	136+10.01	7.18' (LT)
SCP63	723430.2870	1839627.0360	561.18	142+71.94	33.86' (RT)
SCP64	724292.4990	1839812.7050	573.22	151+56.05	37.42' (RT)
SCP65	724645.9600	1839893.4180	582.10	155+16.05	45.99' (RT)
SCP66	726355.2540	1840029.3140	516.91	172+28.18	15.39' (RT)
SCP67	726783.5030	1840041.0880	498.33	176+56.59	15.52' (RT)

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	3A
CONST.	2017	NH-109(32)	3A

REV. 08-10-16: REVISED SLOPE LINES AND ADDED TEMPORARY CONSTRUCTION EASEMENT ALONG RIGHT SIDE OF S.R. 109 ON TRACT NO. 1.

N

95012-2222-14
BEGIN PROJECT NO. NH-109(32) (R.O.W.)
STA. 184+36.86
N 709134.9471
E 1837927.2928

165 170 175 180 185 190 195

BURTON ROAD

PROP. R.O.W. (BY OTHERS)

S.R. 109

PROP. R.O.W. (BY OTHERS)

S.R. 109

15' TEMP.CONST. ESM'T

PROP. R.O.W. (BY OTHERS)

PROP. R.O.W.

15' TEMP.CONST. ESM'T

DOUBLE LOG CABIN ROAD

MATCH LINE 196+00 SEE SHEET NO. 3B

95012-3225-14
BEGIN PROJECT NO. NH-109(32) (CONST.)
STA. 180+50.00
N 708751.8140
E 1837980.8619

SPECIAL NOTE:
EXISTING USACE PROPERTY MONUMENTS ARE TO BE REUSED AND RELOCATED.

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PROPERTY MAP

B.O.P. TO STA. 196+00
SCALE: 1"=200'

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	3B
CONST.	2017	NH-109(32)	3B

REV. 9-3-14: ADDED TRACT NO. 7A. LINED THRU TRACT NO. 26.

REV. 5-5-15: ADDED TRACT NO. 6A.

REV. 08-10-16: REVISED SLOPE LINES AND ADDED TEMPORARY CONSTRUCTION EASEMENT ALONG RIGHT SIDE OF S.R. 109 ON TRACT NO. 1. ADDED TEMPORARY CONSTRUCTION EASEMENT FOR REMOVAL OF BUILDING ON TRACT NO. 14

REV. 1-4-17: DIVIDED TRACT NO 8 INTO TRACT NOS. 8 & 8A. STRIKE THROUGH TRACT NO. 8.

N

200 20 25 30 35 40 45 50 55

OLD HICKORY LAKE

WESTVIEW DRIVE

ACADEMY ROAD

STEWART ROAD

WOODS FERRY ROAD

TEMP. CONST. EASEMENT

PRES. R.O.W.

PROP. R.O.W.

PROP. R.O.W. (BY OTHERS)

PRES. & PROP. R.O.W.

S.R. 109

SEE SHEET NO. 3A

SEE SHEET NO. 3C

MATCH LINE 196+00

MATCH LINE 58+00

15' TEMP. CONST. ESM'T

EQUATION:
STA. 204+64.30 BK
=STA. 20+00.00 AH

S.R. 109 STA. 40+74.05 =
ACADEMY RD. STA. 24+00.00

S.R. 109 STA. 45+45.00 =
STEWART RD. STA. 33+00.00

S.R. 109 STA. 55+17.16 =
WOODS FERRY ROAD CONN. STA. 5+00.00

END PROJECT NO. NHE-109(31) R.O.W.
STA. 203+44.66
N 711033.5781
E 1837802.4984

SPECIAL NOTE:
EXISTING USACE PROPERTY MONUMENTS ARE TO BE REUSED AND RELOCATED.

UNOFFICIAL SET

NOT FOR BIDDING

SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPERTY MAP

STA. 196+00 TO STA. 58+00

SCALE: 1"=200'

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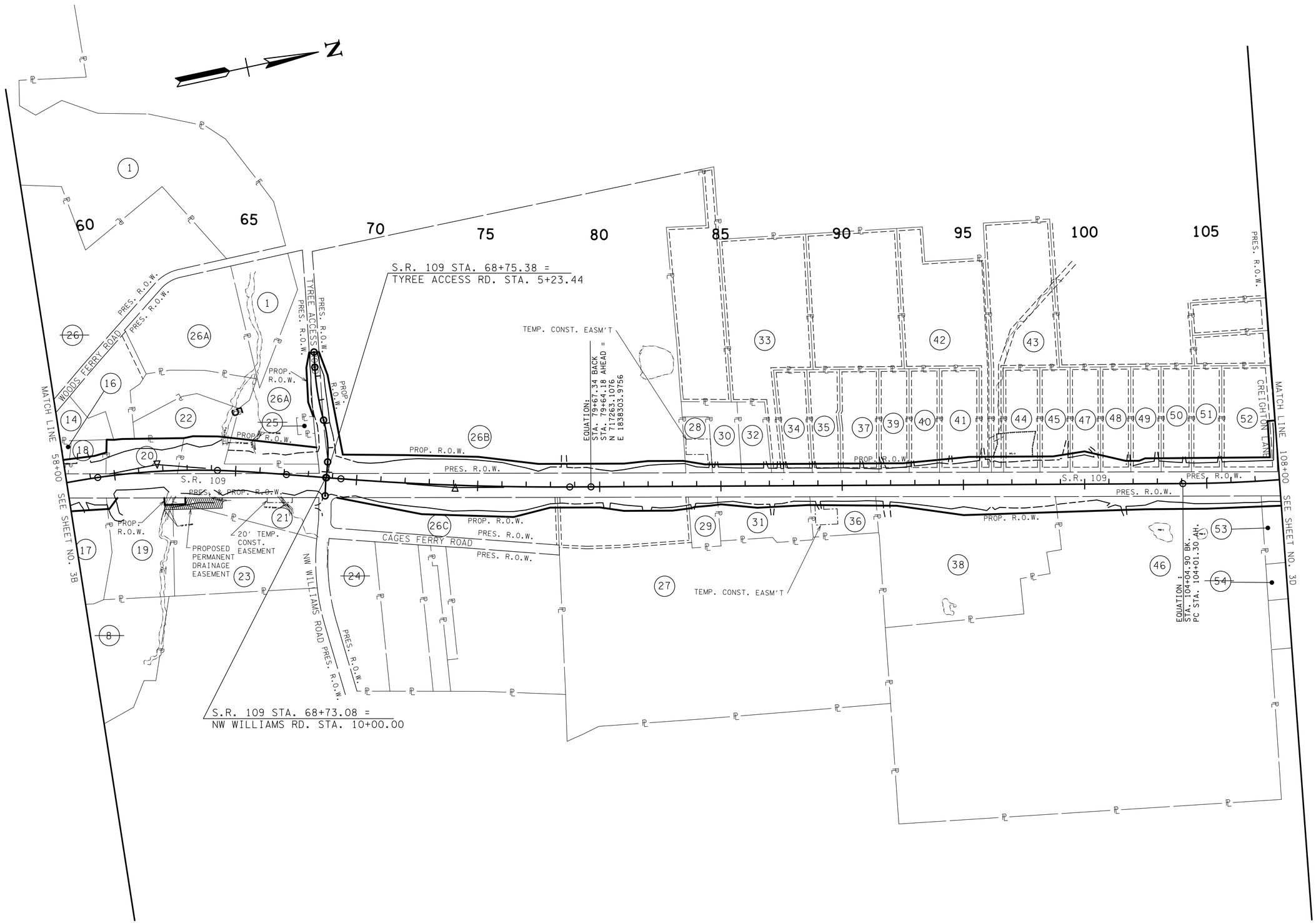
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	3C
CONST.	2017	NH-109(32)	3C

REV. 9-3-14: ADDED TRACT NO. 26A, 26B AND 26C. LINED THRU TRACT NO. 26.

REV. 08-10-16: REVISED PROPOSED R.O.W. ON TRACT NO. 29

REV. 1-4-17: STRIKE THROUGH TRACT NO. 8. ADDED TEMPORARY CONSTRUCTION EASEMENTS TO TRACT NO. 28 AND TRACT NO. 36.



UNOFFICIAL SET
NOT FOR BIDDING

SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPERTY MAP

STA. 58+00 TO STA. 108+00

SCALE: 1"=200'

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

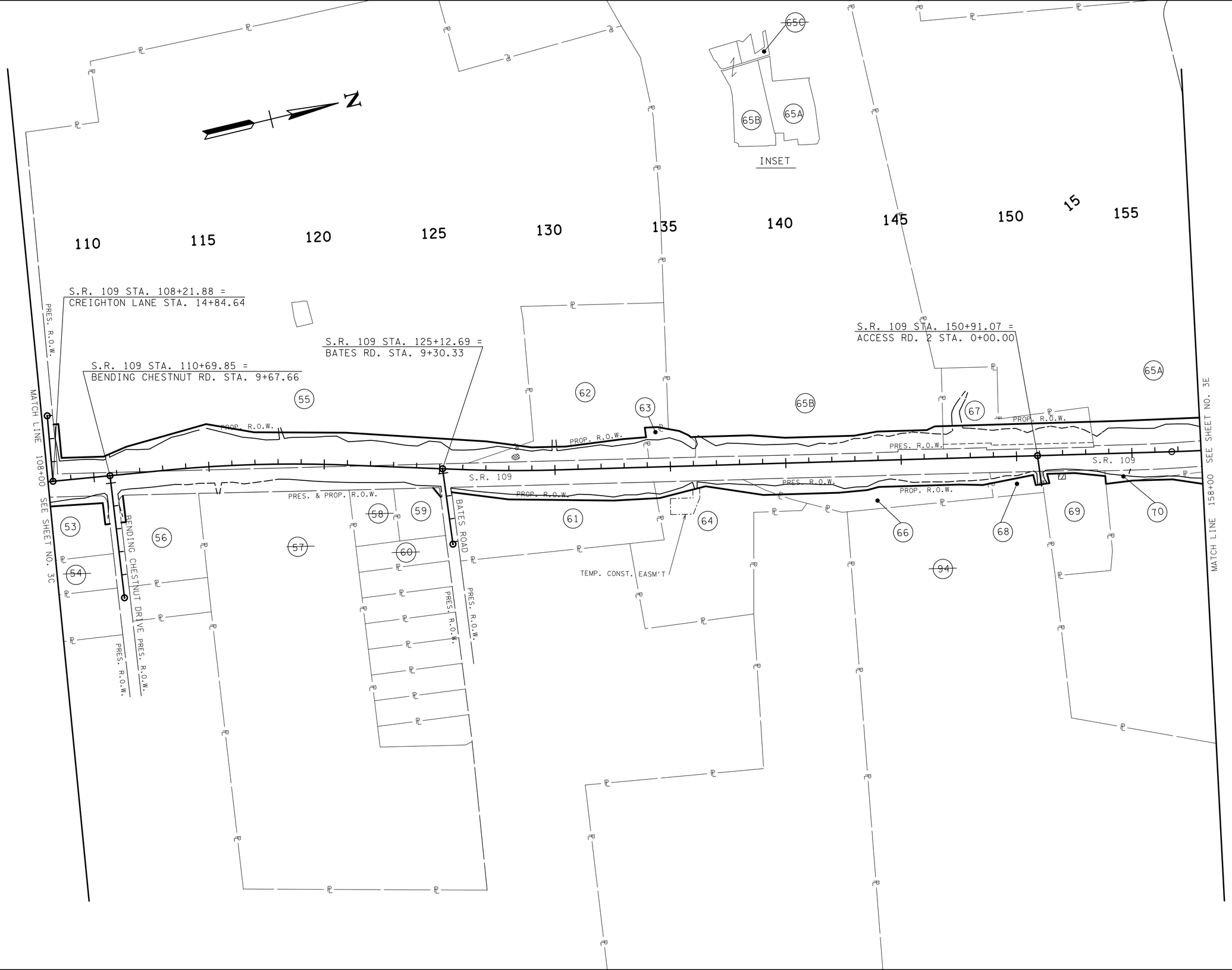
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	3D
CONST.	2017	NH-109(32)	3D

REV. 08-10-16 REMOVED TRACT NO. 65. ADDED TRACT NO. 65A, 65B AND 65C.

REV. 9-16-16 REVISED PROPOSED R.O.W. ON TRACT NO. 66.

REV. 10-24-16 REMOVED ACCESS ROAD 1. REVISED PROPOSED R.O.W. ON TRACT NO. 66. LINED THROUGH TRACT NO. 94.

REV. 2-9-17 ADDED TEMPORARY CONSTRUCTION EASEMENT ON TRACT NO. 64.



UNOFFICIAL SET

NOT FOR BIDDING

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPERTY MAP

STA. 108+00 TO STA. 158+00

SCALE: 1"=200'

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

95012-3225-14
END PROJECT NO. NH-109(32) (CONST.)
STA. 194+48.79
N 728575.4660
E 1840074.2830

95012-2222-14
END PROJECT NO. NH-109(32) (R.O.W.)
STA. 194+48.79
N 728575.4660
E 1840074.2830

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	3E
CONST.	2017	NH-109(32)	3E

REV. 08-10-16 REMOVED TRACT NO. 65. ADDED TRACT NO. 65A

REV. 9-16-16 REVISED DRIVEWAY SLOPE LINES AND PROPOSED CONSTRUCTION EASEMENT FOR TRACT NO. 88. REVISED CONSTRUCTION EASEMENT ON TRACT NO. 85.

REV. 2-9-17 ADDED DRIVEWAY AND REVISED PERMANENT DRAINAGE EASEMENT, SLOPE EASEMENT AND CONSTRUCTION EASEMENT FOR TRACT NO. 89

N

160 165 170 175 180 185 190 195

S.R. 109 STA. 159+78.08 =
BLOODWORTH RD. STA. 20+00.00

S.R. 109 STA. 189+60.87 =
CHEROKEE DOCK RD. STA. 7+00.00

BLOODWORTH ROAD
PRES. R.O.W.
PRES. R.O.W.
APPLE VALLEY ROAD
PRES. R.O.W.
PRES. R.O.W.
WILSON ROAD
PRES. R.O.W.
S.R. 109
PRES. R.O.W.
CHEROKEE DOCK ROAD

MATCH LINE 158+00 SEE SHEET NO. 3D

PROP. R.O.W.
S.R. 109
10' TEMP. CONST. EASM'T
SLOPE EASEMENT
PERM. DRAINAGE EASEMENT
PERM. DRAINAGE EASEMENT
PROP. R.O.W.
PERM. DRAINAGE EASEMENT
PROP. R.O.W.
PROP. R.O.W.
SLOPE EASEMENT
10' CONST. EASM'T
PERM. DRAINAGE EASEMENT
PERM. DRAINAGE EASEMENT

65A 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93

S.R. 109 STA. 181+84.10 =
APPLE VALLEY RD.STA. 10+00.00

S.R. 109 STA. 193+85.29 =
WILSON RD. STA. 5+00.00

UNOFFICIAL SET

NOT FOR BIDDING

SEALED BY

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DEPARTMENT OF TRANSPORTATION

PROPERTY MAP

STA. 158+00 TO E.O.P.

SCALE: 1"=200'

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

R.O.W. ACQUISITION TABLE

TRACT NO.	PROPERTY OWNERS	COUNTY RECORDS				TOTAL AREA ACRES			AREA TO BE ACQUIRED ACRES			AREA REMAINING ACRES		EASEMENT (SQUARE FEET)		
		TAX MAP NO.	PARCEL NO.	DEED DOCUMENT REFERENCE BK.	PAGE	LEFT	RIGHT	TOTAL	LEFT	RIGHT	TOTAL	LEFT	RIGHT	PERM. DRAINAGE	SLOPE	CONST.
1	UNITED STATES ARMY CORPS OF ENGINEERS								0.230	2.984	3.214					2.587 AC
~~2~~	~~A.A. ADAMS, JR.~~	~~27~~	~~53~~	~~137~~	~~13~~											
~~3~~	~~A.A. ADAMS, VI~~	~~27~~	~~53.02~~	~~1383~~	~~955~~	~~6.888~~		~~6.888~~				~~6.888~~				
4	CAIRO BEND FARMS, LLC	27	15.05	1058	709		1.000	1.000		0.620	0.620		0.380			
5	STEWART INVESTMENTS, LLC	27	15.02	949	944	1.500		1.500	2951 S.F.		2951 S.F.	1.432				
6	DJTD INVESTMENTS, LLC , A TENNESSEE LIMITED COMPANY	27	15.06	1058	705	2.263		2.263	0.122		0.122	2.141				
6A	DJTD INVESTMENTS, LLC , A TENNESSEE LIMITED COMPANY	27	15.06	1058	705		1.901	1.901		0.712	0.712		1.189			
7	C.D. STEWART, ETUX BETTY F. STEWART	27	15.00	241	174	1.941		1.941	1967 S.F.		1967 S.F.	1.896				
7A	C.D. STEWART, ETUX BETTY F. STEWART	27	15	241	174	1.436		1.436	0.411		0.411	1.025				
~~8~~	~~TATUM FAMILY LIMITED PARTNERSHIP, LTD. , L.P.~~	~~27~~	~~43~~	~~838~~	~~507~~		~~40.830~~	~~40.830~~					~~40.830~~			
8A	CHARLES B. (BARRY) TATUM, PHILIP S. TATUM AND SUSAN T. BEADLE	27	43.01	1708	502		20.150	20.150		3.506	3.506		16.644			
~~9~~	~~CAIRO BEND FARMS, LLC~~	~~27~~	~~15.04~~	~~1058~~	~~709~~	~~19.500~~		~~19.500~~				~~19.500~~				
~~10~~	~~MARY F. JOHNSON~~	~~27F "B"~~	~~11~~	~~453~~	~~393~~	~~0.640~~		~~0.640~~				~~0.640~~				
~~11~~	~~LAGUARDO CME CHURCH~~	~~27~~	~~9~~			~~2.181~~		~~2.181~~				~~2.181~~				
~~12~~	~~CHARLES D. STEWART, ETUX BETTYE J. STEWART~~	~~27~~	~~7.01~~	~~1112~~	~~1893~~	~~0.503~~		~~0.503~~				~~0.503~~				
~~13~~	~~ESTELLE K. CHAPMAN AND RICHARD WALLER~~	~~27~~	~~7~~	~~1120~~	~~201~~	~~2.754~~		~~2.754~~				~~2.754~~				
14	LAGUARDO UTILITY DISTRICT OF WILSON COUNTY TENNESSEE	27	16	397	328	1.370		1.370	3250 S.F.		3250 S.F.	1.295				0.154 AC ①
15	LAGUARDO CUMBERLAND PRESBYTERIAN CHURCH ELDERS	27	26	459	413		3.040	3.040		0.501	0.501		2.539			
16	WILLIAM GREEN KIRKPATRICK	27	25	986	72	0.341		0.341	0.133		0.133	0.208				
17	KENTUCKY-TENNESSEE CONFERENCE ASSOCIATION OF SEVENTH-DAY ADVENTISTS, INC.	27	27	1557	1443		1.590	1.590		0.177	0.177		1.413			
18	LAGUARDO UTILITY DISTRICT	27	24	440	583	0.480		0.480	0.252		0.252	0.228				
19	DEACONS OF THE LAGUARDO MISSIONARY BAPTIST CHURCH	27	28	812	1201		2.537	2.537		2167 S.F.	2167 S.F.		2.487	674		
20	ROBERT WAYNE MURPHY, ETUX JACKIE ANN MURPHY	27	23	1031	1986	0.977	1604 S.F.	1.014	0.977	1604 S.F.	1.014					
~~21~~	~~MARY P. BENFORD~~	~~27~~	~~29~~	~~413~~	~~181~~		~~1.287~~	~~1.287~~		~~1141 S.F.~~	~~1141 S.F.~~		~~1.261~~	~~0.144 AC~~		~~2669~~
22	JAMES THOMAS BLOODWORTH, ETUX ANNIE E. BLOODWORTH	27	22.01	350	199	1.690	3917 S.F.	1.780	0.919	3917 S.F.	1.009	0.771				
~~23~~	~~DAVID L. TIPTON, ETUX DONNA R. TIPTON~~	~~27~~	~~41.01~~	~~464~~	~~27~~		~~3.992~~	~~3.992~~		~~253 S.F.~~	~~253 S.F.~~		~~3.986~~	~~1585~~		
~~24~~	~~LILLIE MAI MCCALL C/O ROBERT L. STEWART~~	~~27~~	~~36~~	~~188~~	~~270~~	~~2.629~~		~~2.629~~				~~2.629~~				
~~25~~	~~WRIGHT CEMETERY~~	~~27~~	~~21~~			~~0.112~~		~~0.112~~				~~0.112~~				
26	NANCY VOIGHT	27	5	106	117	23.008		23.008				23.008				
26A	NANCY VOIGHT	27	5	106	117	7.461		7.461	0.832		0.832	6.629				
26B	NANCY VOIGHT	27	5	106	117	37.079		37.079	2.348		2.348	34.731				
26C	NANCY VOIGHT	27	5	106	117		3.452	3.452		1.163	1.163		2.289			
27	LAGUARDO BAPTIST CHURCH, TRUSTEE, JULIAN STONE, DON STEWART AND RICK HARDIN	13	37.01	461	367		22.160	22.160		0.617	0.617		21.543			
28	THE PHILLIP WAYNE ALLISON AND SANDRA KAYE ALLISON REVOCABLE LIVING TRUST	13	38	1506	1299	0.580		0.580	4335 S.F.		4335 S.F.	0.480				0.164 AC ①
29	DAVID CARL MELVIN, ETUX LINDA MELVIN	13	37	344	79		0.569	0.569		0.106	0.106		0.463			
30	ANTHONY DAMON SCHULTZ	13	38.01	1353	2204	0.970		0.970	4172 S.F.		4172 S.F.	0.874				
31	RICHARD W. SINDORF, ETUX DEBORAH A. SINDORF	13	36	398	152		1.557	1.557		0.334	0.334		1.223			
32	J.L. WHITEHEAD, ETUX THELMA WHITEHEAD	13	39	899	498	0.796		0.796	4344 S.F.		4344 S.F.	0.696				
33	KENARD V. PETERMAN,ETUX ANITA PETERMAN	13N "A"	1	1027	1126	5.343		5.343	1784 S.F.		1784 S.F.	5.302				
34	KENARD V. PETERMAN, A MARRIED PERSON	13N "A"	2	1027	1351	1.239		1.239	4235 S.F.		4235 S.F.	1.142				
35	WHITNEY A. STIREWALT AND BRADFORD T. STAIREWALT, WIFE AND HUSBAND	13N "A"	3	1562	1998	1.224		1.224	4276 S.F.		4276 S.F.	1.126				
36	ALTON Y. VAUGHN, ETUX JOANN VAUGHN	13	35	439	374		0.982	0.982		0.222	0.222		0.760			0.146 AC ①
37	JOHN L. WOODALL, ETUX JUDY O'GUIN WOODALL	13N "A"	4	458	643	1.564		1.564	0.132		0.132	1.432				
38	KENNETH D. ANDERSON	13	34.01	1584	1550		7.901	7.901		1.050	1.050		6.851			
39	CHARLES C. MCDONALD	13N "A"	5	1029	2199	1.224		1.224	0.108		0.108	1.116				
40	SAKINEH T. BANEADAM	13N "A"	6	915	1913	1.227		1.227	0.132		0.132	1.095				
41	BANK OF AMERICA N.A.	13N "A"	7	1598	2336	1.614		1.614	0.222		0.222	1.392				
42	GREGORIO BAHENA AND MAYELA ZUNIGA-ESCOBAR, HUSBAND AND WIFE	13N "A"	8	1569	1972	4.516		4.516	3180 S.F.		3180 S.F.	4.443				
43	JERRY L. SMALLWOOD	13N "A"	9	1475	1370	4.359		4.359	3189 S.F.		3189 S.F.	4.286				
44	CLAYTON GRAY, ETUX ROBBIE GRAY	13N "A"	10	1281	114	1.483		1.483	0.221		0.221	1.262				
45	CHRISTOPHER D. CLARK	13N "A"	11	1092	50	1.239		1.239	0.194		0.194	1.045				
46	RONALD MARK GRAY WITH LIFE ESTATE RETAINED BY HAROLD W. GRAY	13	34	446	217		41.000	41.000		1.050	1.050		39.950			
47	MICHAEL P. BRADLEY, ETUX LORA L. BRADLEY	13N "A"	12	869	436	1.241		1.241	0.226		0.226	1.015				
48	BRANDON LEE, ETUX AMANDA LEE	13N "A"	13	1628	598	1.244		1.244	0.159		0.159	1.085				
49	CHARLES DAVID BARNETT, III, AND WIFE KARI DEE BARNETT	13N "A"	14	1517	577	1.246		1.246	0.149		0.149	1.097				
50	DENNIS STARR AND PENELOPE STARR, HUSBAND AND WIFE	13N "A"	15	1668	2396	1.249		1.249	0.162		0.162	1.087				

① FOR REMOVAL OF EXISTING BUILDINGS

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	3F
CONST.	2017	NH-109(32)	3F

REV. 9-3-14: ADDED TRACT NOS. 7A, 26A, 26B AND 26C. LINED THRU TRACT NO. 26.

REV. 10-3-14: REVISED PROPERTY OWNER NAME, DEED BOOK AND PAGE ON TRACT NOS. 41 AND 48.

REV. 11-18-14: REVISED PROPERTY OWNER NAME, DEED BOOK AND PAGE ON TRACT NOS. 38.

REV. 5-5-15: ADDED TRACT NO. 6A.

REV. 08-10-16: ADDED TEMPORARY CONSTRUCTION EASEMENT ON TRACT NO. 1. ADDED TEMPORARY CONSTRUCTION EASEMENT FOR REMOVAL OF BUILDING ON TRACT NO. 14. REVISED TOTAL AREA ACRES ON TRACT NO. 28. REVISED PROPOSED R.O.W. ON TRACT NO. 29. REVISED PROPERTY OWNER NAME, DEED BOOK AND PAGE ON TRACT 48. REVISED DEED BOOK AND PAGE FOR TRACT NO. 50.

REV. 9-16-16: REVISED CONSTRUCTION EASEMENT FOR TRACT NO. 1. REVISED PROPERTY OWNER NAME ON TRACT NO. 49.

REV. 1-4-17: REVISED TOTAL AREA AND AREA TO BE ACQUIRED FOR TRACT NO. 8. ADDED TRACT NO. 8A. STRIKE THROUGH TRACT NO. 8. ADDED CONSTRUCTION EASEMENTS FOR TRACT NO. 28 AND TRACT NO. 36.

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RIGHT-OF-WAY ACQUISITION TABLE

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	3G
CONST.	2017	NH-109(32)	3G

R.O.W. ACQUISITION TABLE

TRACT NO.	PROPERTY OWNERS	COUNTY RECORDS				TOTAL AREA ACRES			AREA TO BE ACQUIRED ACRES			AREA REMAINING ACRES		EASEMENT (SQUARE FEET)		
		TAX MAP NO.	PARCEL NO.	DEED DOCUMENT REFERENCE BK.	DEED DOCUMENT REFERENCE PAGE	LEFT	RIGHT	TOTAL	LEFT	RIGHT	TOTAL	LEFT	RIGHT	PERM. DRAINAGE	SLOPE	CONST.
51	BILLY D. CULLEN, ETUX CLAUDETTE CULLEN	13N "A"	16	1282	1750	1.253		1.253	0.165		0.165	1.088				
52	RITA COOK, ETVIR DAVID COOK	13N "A"	17	900	697	2.175		2.175	0.412		0.412	1.763				
53	S & C MANAGEMENT, LLC	13L "B"	20	1524	1249		2.023	2.023		0.319	0.319		1.704			
~~54~~	~~MICHELLE R. GLENN~~	~~13L "B"~~	~~21~~	~~1229~~	~~19~~		~~1.155~~	~~1.155~~					~~1.155~~			
55	RONALD MARK GRAY WITH LIFE ESTATE RETAINED BY HAZEL H. GRAY (NOW DECEASED)	13	5	446	217	102.753	0.247	103.000	5.643	0.247	5.890	97.110				
56	S & C MANAGEMENT, LLC	13L "B"	19	1524	1249		3.021	3.021		2171 S.F.	2171 S.F.		2.971			
~~57~~	~~CHESTER O. DIXON, JR.~~	~~13~~	~~29.02~~	~~458~~	~~538~~		~~41.430~~	~~41.430~~					~~41.430~~			
~~58~~	~~J.T. MURPHREE, ETUX WINIFRED MURPHREE~~	~~13~~	~~28.00~~	~~240~~	~~231~~		~~1.045~~	~~1.045~~					~~1.045~~			
59	JAMES R. MILLER, ETUX DOROTHY P. MILLER	13	28.08	359	171		0.995	0.995		557 S.F.	557 S.F.		0.982			
~~60~~	~~DARREN A. JACKSON, ETUX DAWN M. JACKSON~~	~~13~~	~~28.07~~	~~1185~~	~~341~~		~~1.004~~	~~1.004~~					~~1.004~~			
61	THOMAS G. MORTHEL	13	17	823	1320		5.816	5.816		1.232	1.232		4.584			
62	EDDIE N. MORTHEL	13	6	823	1318	9.239		9.239	1.100		1.100	8.139				
63	JASON M. ROBERTS	13	7	1498	2113	0.568		0.568	0.568		0.568					
64	CHARLES L. CARTER, ETUX JOAN CARTER	13	29	421	165		6.860	6.860		0.488	0.488		6.372			0.208 AC (1)
~~65~~	~~DOUGLAS TIPTON, ETUX YVONNE~~	~~13~~	~~8.03~~	~~1635~~	~~2151~~	~~67.570~~		~~67.570~~	~~2.061~~		~~2.061~~	~~65.509~~				
65A	M. ELIZABETH TIPTON	13	8.02	1682	1867	58.000		58.000	1.613		1.613	56.387				
65B	DOUGLAS TIPTON, ETUX YVONNE	13	8.03	1635	2151	67.570		67.570	2.061		2.061	65.509				
~~65C~~	DOUGLAS TIPTON IV ETUX LIBBY & BRYAN TIPTON ETUX TWIGGY	~~13~~	~~8.04~~	~~1690~~	~~1259~~	~~9.490~~		~~9.490~~				~~9.490~~				
66	DOUGLAS TIPTON, ETUX FANNIE LOU TIPTON	13	15	138	340		2.809	2.809		1.341	1.341		1.468			
67	JOHN H. BUCHANAN,JR. , ETUX BARBARA J. BUCHANAN	13	9	1063	381	3.362		3.362	1.575		1.575	1.787				
68	JERYL W. STEWART AND PAULINE S. STEWART	13	13	414	513		0.511	0.511		0.179	0.179		0.332			
69	HORACE T. DARNELL, ETUX RUTH A. DARNELL	13	12	1464	248		2.704	2.704		0.118	0.118		2.586	750		
70	DOUGLAS TIPTON, ETUX FANNIE LOU TIPTON	13	10	138	340		0.621	0.621		0.621	0.621					
71	MARY E. KIRKPATRICK FAMILY LIMITED PARTNERSHIP	13	11	454	119		78.400	78.400		2.445	2.445		75.955			
72	ANN S. BOYD	13	8.01	445	204	5.100		5.100	0.665		0.665	4.435				
73	ROBERT H. BLOODWORTH, ETUX WILLADEAN BLOODWORTH	10	9.01	332	223	7.391		7.391	0.555		0.555	6.836				
74	CONWAY STOCKTON, ETUX JEAN STOCKTON	10	10	436	37	0.325		0.325				0.325		200		
75	MARION B. KIRKPATRICK, ETAL	10	33	913	728		1.274	1.274		0.187	0.187		1.087		0.118 AC	2013
~~76~~	~~MARION B. KIRKPATRICK, ETAL~~	~~10~~	~~33.02~~	~~913~~	~~728~~		~~0.905~~	~~0.905~~					~~0.905~~			
77	BRENDA A. MCCARTY	10	11	1480	1723	0.866		0.866				0.866			700	1267
78	ROBERT K. PARTIN AND WIFE, JO A. PARTIN	10M "A"	1	1478	1491	0.928		0.928				0.928			1809	1282
79	NARVEL W. BLACKSTOCK, TRUSTEE OF ALEXANDER TRUST AND TRUSTEE FOR THE REBA MCENTIRE BLACKSTOCK TRUSTEE FOR THE SMITH TRUST	10	29	1491	396		18.100	18.100		0.265	0.265		17.835	752	0.418 AC	0.322 AC
80	KIMBERLY J. BIRCHETT	10M "A"	2	1084	1298	0.930		0.930				0.930		300	919	916
81	JASON BARRETT	10M "A"	3	1716	2140	0.953		0.953				0.953		200	208	958
82	TOMMY R. CURTIS, ETUX BARBARA F. CURTIS	10M "A"	4	405	218	0.941		0.941				0.941			362	1121
83	TOMMY R. CURTIS, ETUX BARBARA F. CURTIS	10M "A"	5	405	218	0.939		0.939				0.939		400	652	920
84	PATRICK C. LYDON	10M "A"	6	916	1351	0.955		0.955				0.955			3206	1322
85	THOMAS D. MILLER, ETUX KATHERINE A. MILLER	10M "A"	7	436	757	0.914		0.914	92 S.F.		92 S.F.	0.912		1050	3588	1835
86	WILLIAM G. NOSBISCH	10M "A"	64	829	376	0.921		0.921	625 S.F.		625 S.F.	0.907			3543	3094
~~87~~	~~RICHARD J. BLEAM, ETUX JAYNE L. BLEAM~~	~~10M "A"~~	~~63~~	~~448~~	~~536~~	~~0.925~~		~~0.925~~				~~0.925~~				
88	LAKESIDE NASHVILLE, LLC	10L "B"	1	1608	1364	5.114		5.114	1639 S.F.		1639 S.F.	5.076		579	1594	2758
89	P & H MANAGEMENT CO., INC.	10L "B"	4	419	4	2.035		2.035	326 S.F.		326 S.F.	2.028		1074	39	62
90	STEVE FANN	10	16	1464	1847	1.514		1.514	1167 S.F.		1167 S.F.	1.487			2103	3164
91	NARVEL W. BLACKSTOCK, TRUSTEE OF ALEXANDER TRUST AND TRUSTEE FOR THE REBA MCENTIRE BLACKSTOCK TRUSTEE FOR THE SMITH TRUST	10	22	1491	384		3.286	3.286					3.286	750	2590	3939
92	ANN S. BOYD AND ROBERT H. BLOODWORTH	10	18	445	205	1.042		1.042				1.042		561	920	983
~~93~~	~~NARVEL W. BLACKSTOCK AND REBA McENTIRE~~	~~10~~	~~20~~	~~413~~	~~479~~		~~7.599~~	~~7.599~~					~~7.599~~			
~~94~~	~~PAULINE S. STEWART~~	~~13~~	~~14~~	~~446~~	~~518~~		~~100.000~~	~~100.000~~					~~100.000~~			
95	F. LEE ELLIS AND THOMAS E. ELLIS	27	51	1613	1459		3.170	3.170		0.195	0.195		2.975			

(1) FOR REMOVAL OF EXISTING BUILDINGS

REV. 10-3-14: REVISED PROPERTY OWNER NAME, DEED BOOK AND PAGE ON TRACT NO. 88.

REV. 08-10-16 STRIKE THROUGH TRACT NO. 65 AND 65C. ADDED TRACT NO. 65A, 65B & 65C. REVISED PROPERTY OWNER NAME, DEED BOOK AND PAGE ON TRACT 95.

REV. 9-16-16: REVISED CONSTRUCTION EASEMENT FOR TRACT NOS. 85 AND 88. REVISED AREA TO BE ACQUIRED AND AREA REMAINING ON TRACT NO. 66.

REV. 10-24-16: REVISED AREA TO BE ACQUIRED AND AREA REMAINING ON TRACT NO. 66. LINED THROUGH TRACT NO. 94.

REV. 1-4-17: REVISED PROPERTY OWNER NAME, DEED BOOK AND PAGE ON TRACT NO. 81.

REV. 2-9-17: ADDED CONSTRUCTION EASEMENT FOR TRACT NO. 64. REVISED PERMANENT DRAINAGE EASEMENT, SLOPE EASEMENT AND CONSTRUCTION EASEMENT FOR TRACT NO. 89.

DISTURBED AREA	
AREA WITHIN SLOPE LINES	87.814 (AC)
AREA WITHIN EASEMENT AND RIGHT OF WAY	19.759 (AC)
TOTAL AREA DISTURBED	107.573 (AC)

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RIGHT-OF-WAY ACQUISITION TABLE

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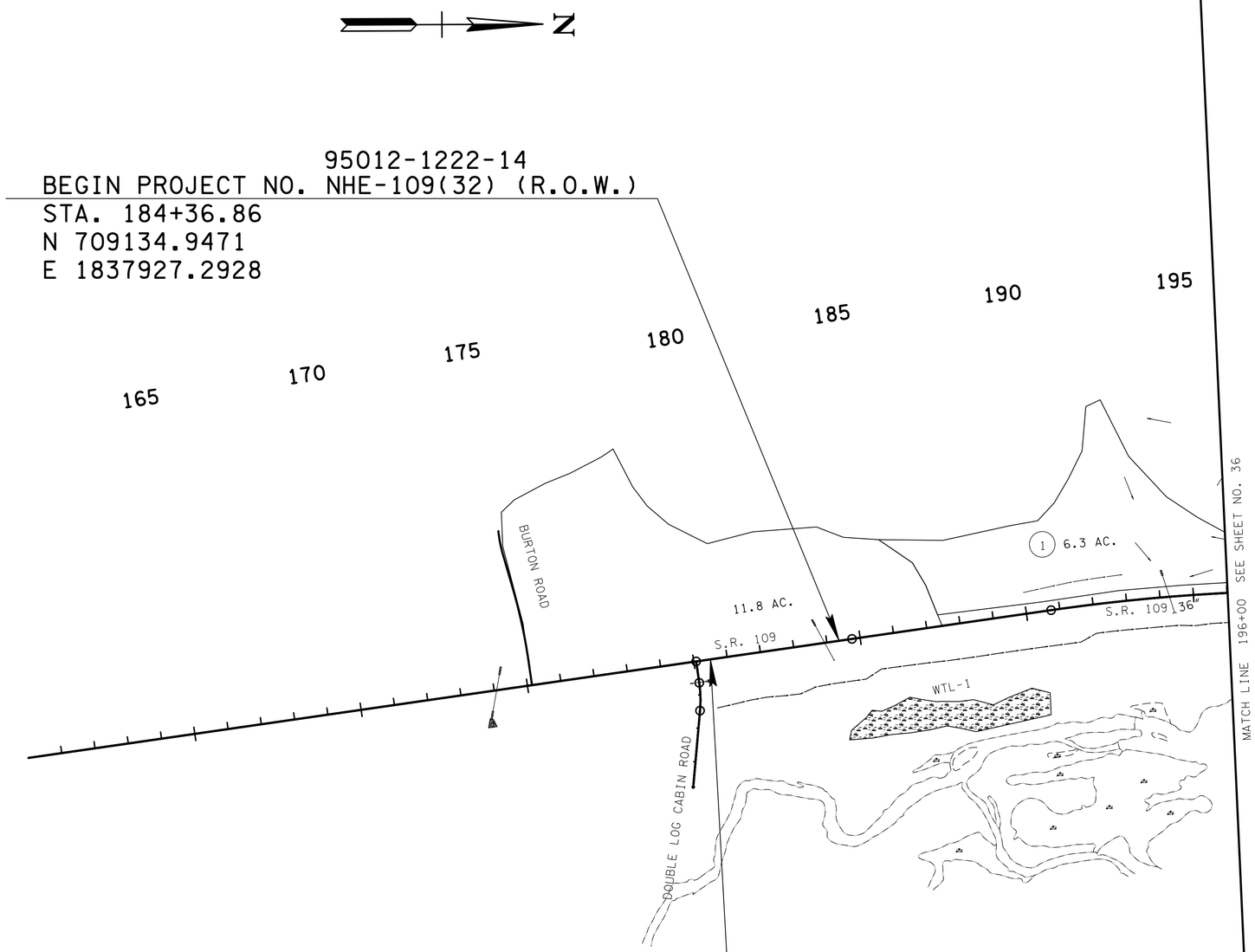
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	35
CONST.	2017	NH-109(32)	35

95012-1222-14
BEGIN PROJECT NO. NHE-109(32) (R.O.W.)
STA. 184+36.86
N 709134.9471
E 1837927.2928



95012-3225-14
BEGIN PROJECT NO. NH-109(32) (CONST.)
STA. 180+50.00
N 708751.8140
E 1837980.8619

DRAINAGE TABLE

DRAINAGE AREA	AREA (ACRE)	C	Q(50) CFS	Q(100) CFS
1	6.3	0.30	12.0	14.4

UNOFFICIAL SET
NOT FOR BIDDING

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DEPARTMENT OF TRANSPORTATION

DRAINAGE MAP

B.O.P. TO STA. 196+00
SCALE: 1"=200'

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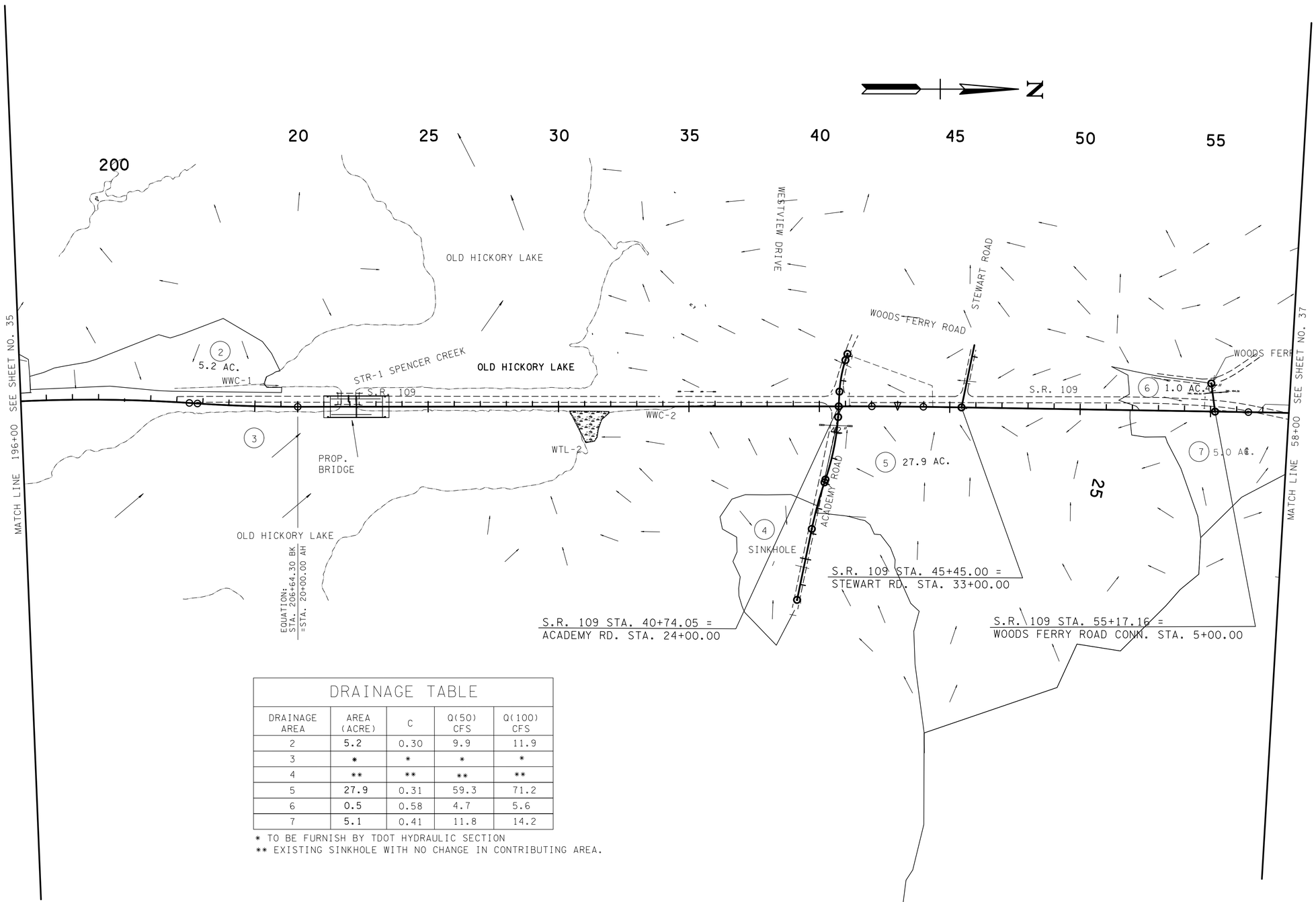
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	36
CONST.	2017	NH-109(32)	36



DRAINAGE TABLE

DRAINAGE AREA	AREA (ACRE)	C	Q(50) CFS	Q(100) CFS
2	5.2	0.30	9.9	11.9
3	*	*	*	*
4	**	**	**	**
5	27.9	0.31	59.3	71.2
6	0.5	0.58	4.7	5.6
7	5.1	0.41	11.8	14.2

* TO BE FURNISH BY TDOT HYDRAULIC SECTION
** EXISTING SINKHOLE WITH NO CHANGE IN CONTRIBUTING AREA.

UNOFFICIAL SET
NOT FOR BIDDING

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DRAINAGE MAP

STA. 196+00 TO STA. 58+00
SCALE: 1"=200'

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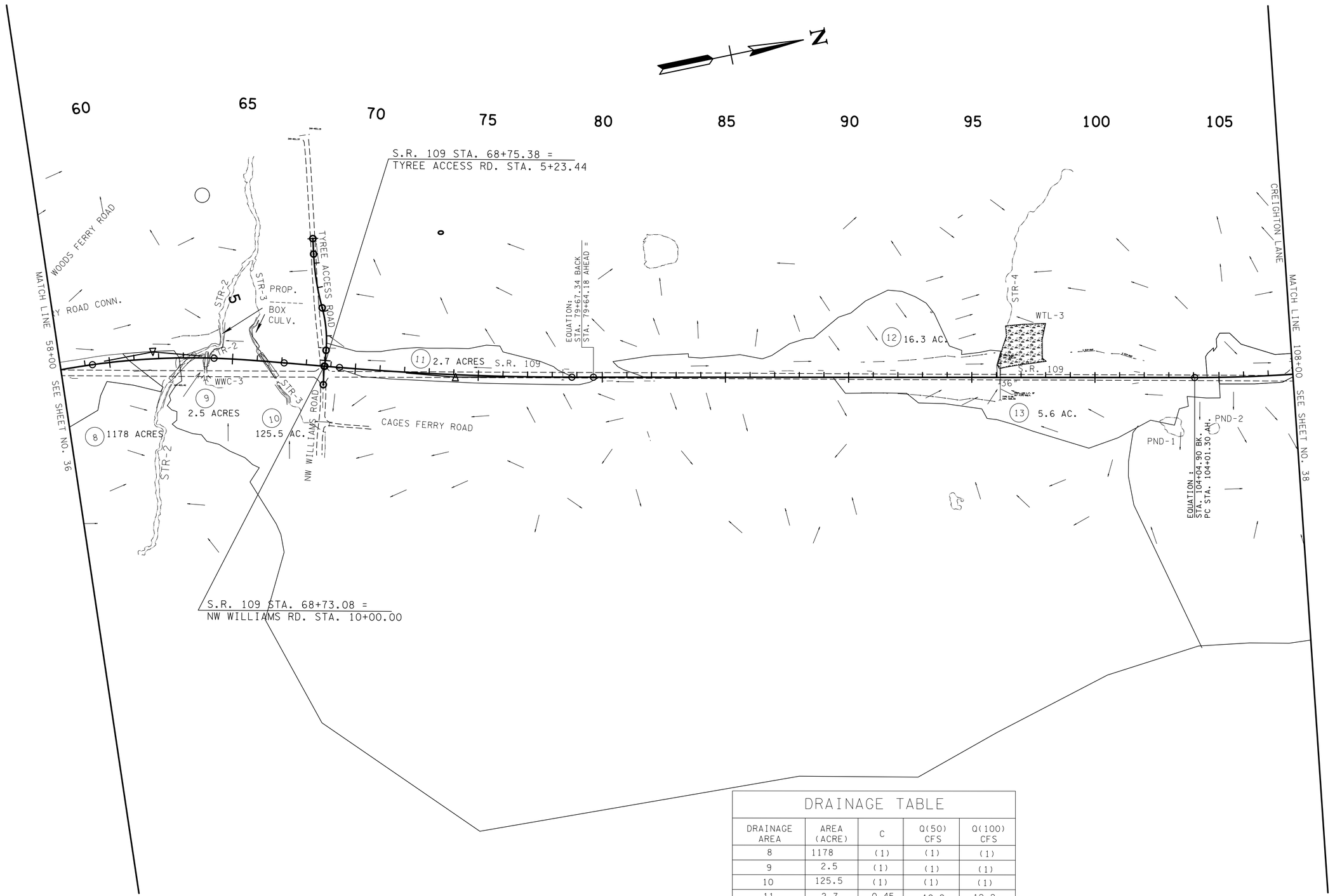
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	37
CONST.	2017	NH-109(32)	37



DRAINAGE TABLE				
DRAINAGE AREA	AREA (ACRE)	C	Q(50) CFS	Q(100) CFS
8	1178	(1)	(1)	(1)
9	2.5	(1)	(1)	(1)
10	125.5	(1)	(1)	(1)
11	2.7	0.45	10.2	12.2
12	16.7	0.44	12.3	14.8
13	5.6	0.44	14.4	17.8

(1) RESULTS WILL BE FURNISHED BY TDOT HYDRAULIC SECTION -INCLUDES OVERFLOW.

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DRAINAGE MAP

STA. 58+00 TO STA.108+00

SCALE: 1"=200'

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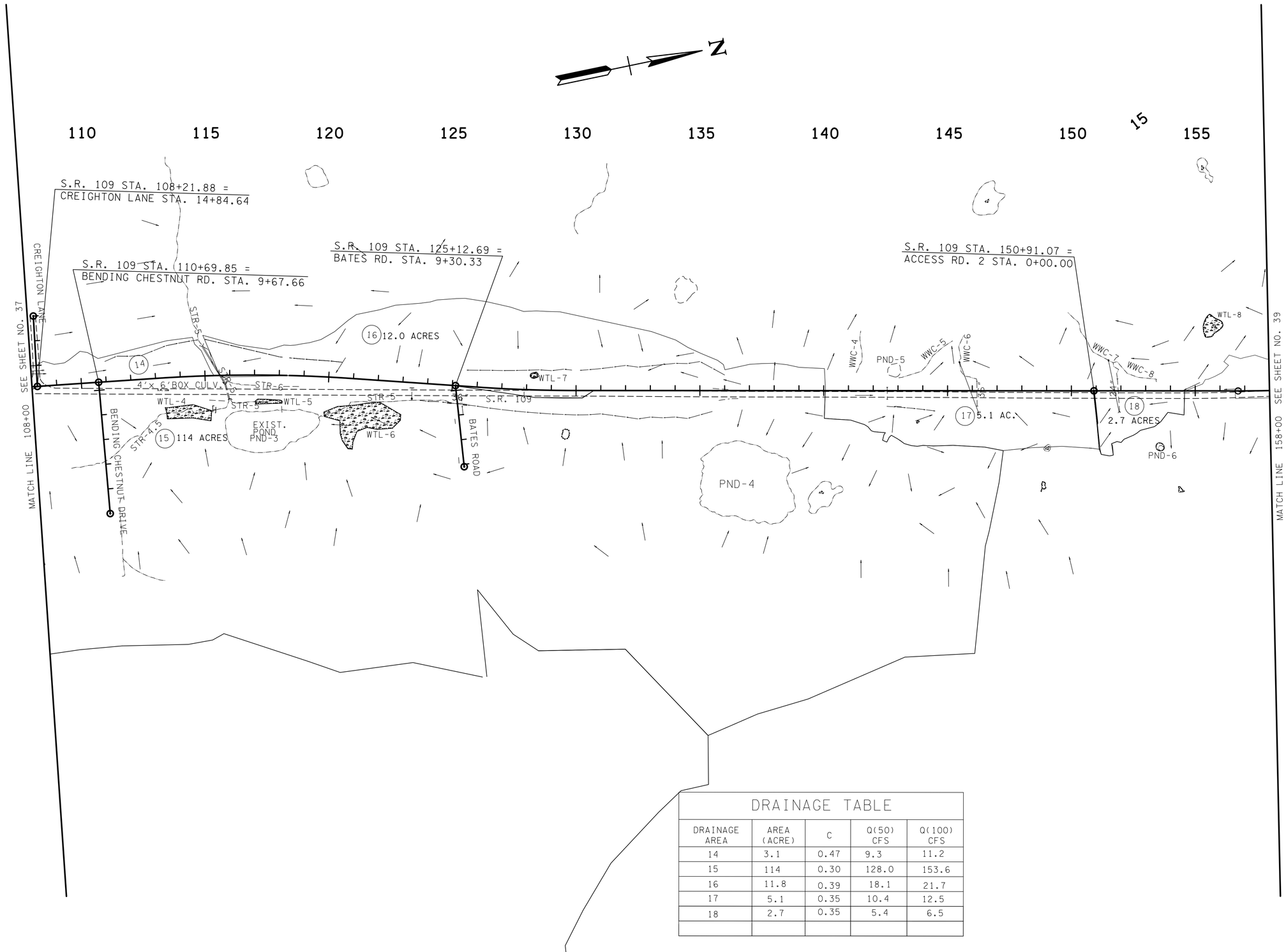
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	38
CONST.	2017	NH-109(32)	38

REV. 10-24-16: DELETED ALIGNMENT FOR ACCESS ROAD NO. 1. DELETED DRAINAGE AREA NO. 17A.



DRAINAGE TABLE

DRAINAGE AREA	AREA (ACRE)	C	Q(50) CFS	Q(100) CFS
14	3.1	0.47	9.3	11.2
15	114	0.30	128.0	153.6
16	11.8	0.39	18.1	21.7
17	5.1	0.35	10.4	12.5
18	2.7	0.35	5.4	6.5

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DRAINAGE MAP

STA.108+00 TO STA.158+00

SCALE: 1"=200'

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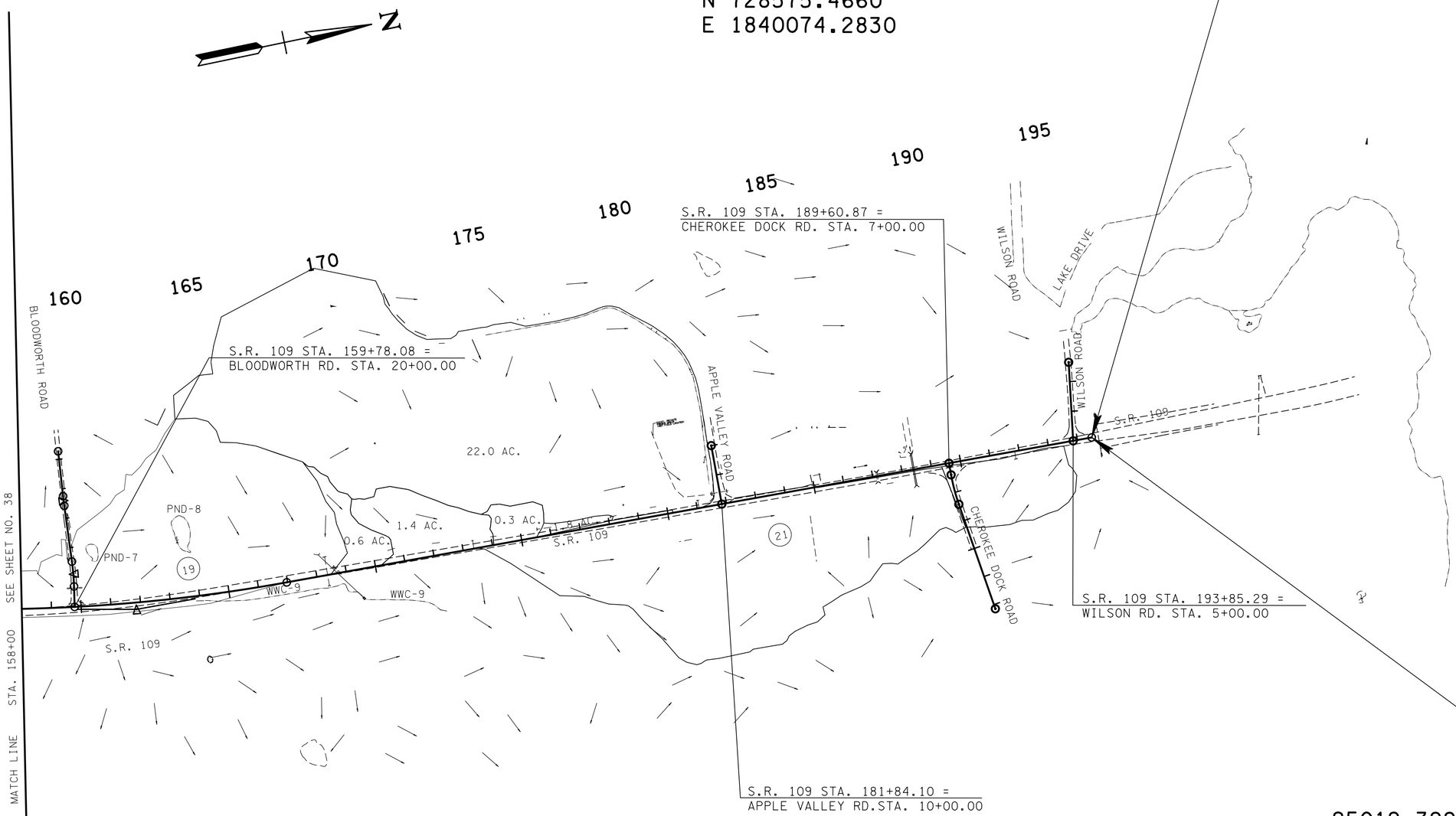
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	39
CONST.	2017	NH-109(32)	39

95012-1222-14
END PROJECT NO. NHE-109(32) (R.O.W.)
STA. 194+48.79
N 728575.4660
E 1840074.2830



UNOFFICIAL SET
NOT FOR BIDDING

DRAINAGE TABLE				
DRAINAGE AREA	AREA (ACRE)	C	Q(50) CFS	Q(100) CFS
19	11.0	0.30	24.0	28.8
21	12.3	0.30	16.0	19.2

95012-3225-14
END PROJECT NO. NHE-109(32) (CON
STA. 194+48.79
N 728575.4660
E 1840074.2830

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DRAINAGE MAP

STA.158+00
TO END OF PROJECT
SCALE: 1"=200'

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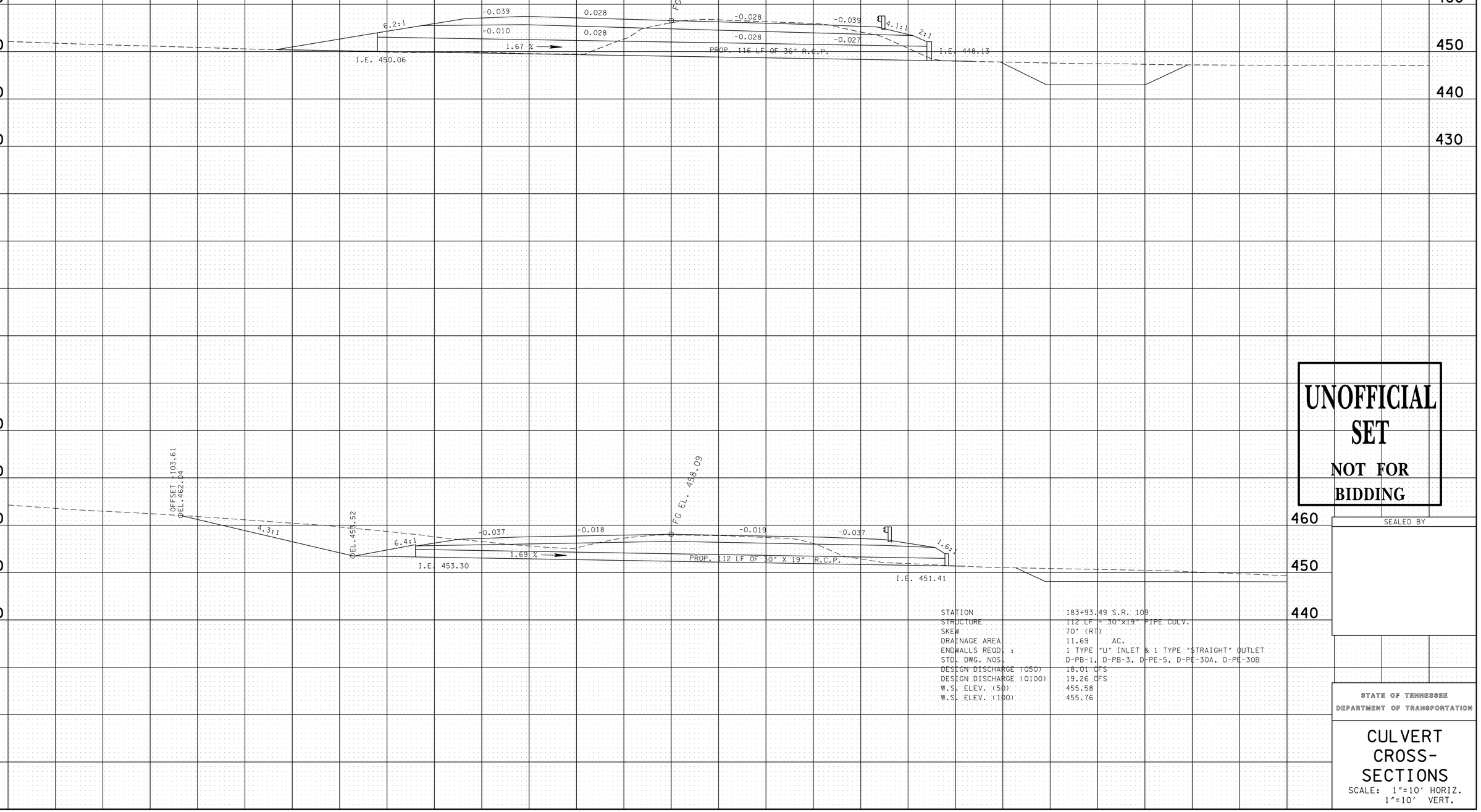
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	40
CONST.	2017	NH-109(32)	40

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



STATION	194+28.14 S.R. 109
STRUCTURE	116 LF - 36" PIPE CULV.
SKEW	77° (RT)
DRAINAGE AREA	6.3 AC.
ENDWALLS REQD. :	1 TYPE "U" INLET & 1 TYPE "B" OUTLET
STD. DWG. NOS.	D-PB-1, D-PB-3, D-PE-9, D-PE-9A, D-PE-36A, D-PE-36B
DESIGN DISCHARGE (Q50)	12.0 CFS
DESIGN DISCHARGE (Q100)	14.4 CFS
W.S. ELEV. (50)	451.55
W.S. ELEV. (100)	451.73

STATION	183+93.49 S.R. 109
STRUCTURE	112 LF - 30"x19" PIPE CULV.
SKEW	70° (RT)
DRAINAGE AREA	11.69 AC.
ENDWALLS REQD. :	1 TYPE "U" INLET & 1 TYPE "STRAIGHT" OUTLET
STD. DWG. NOS.	D-PB-1, D-PB-3, D-PE-5, D-PE-30A, D-PE-30B
DESIGN DISCHARGE (Q50)	18.01 CFS
DESIGN DISCHARGE (Q100)	19.26 CFS
W.S. ELEV. (50)	455.58
W.S. ELEV. (100)	455.76

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CULVERT CROSS-SECTIONS

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

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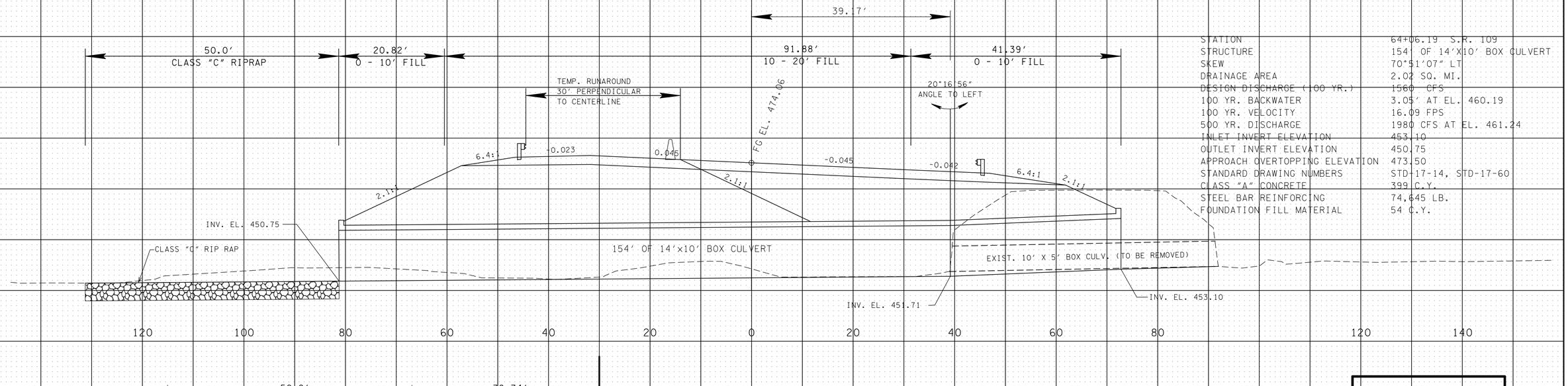
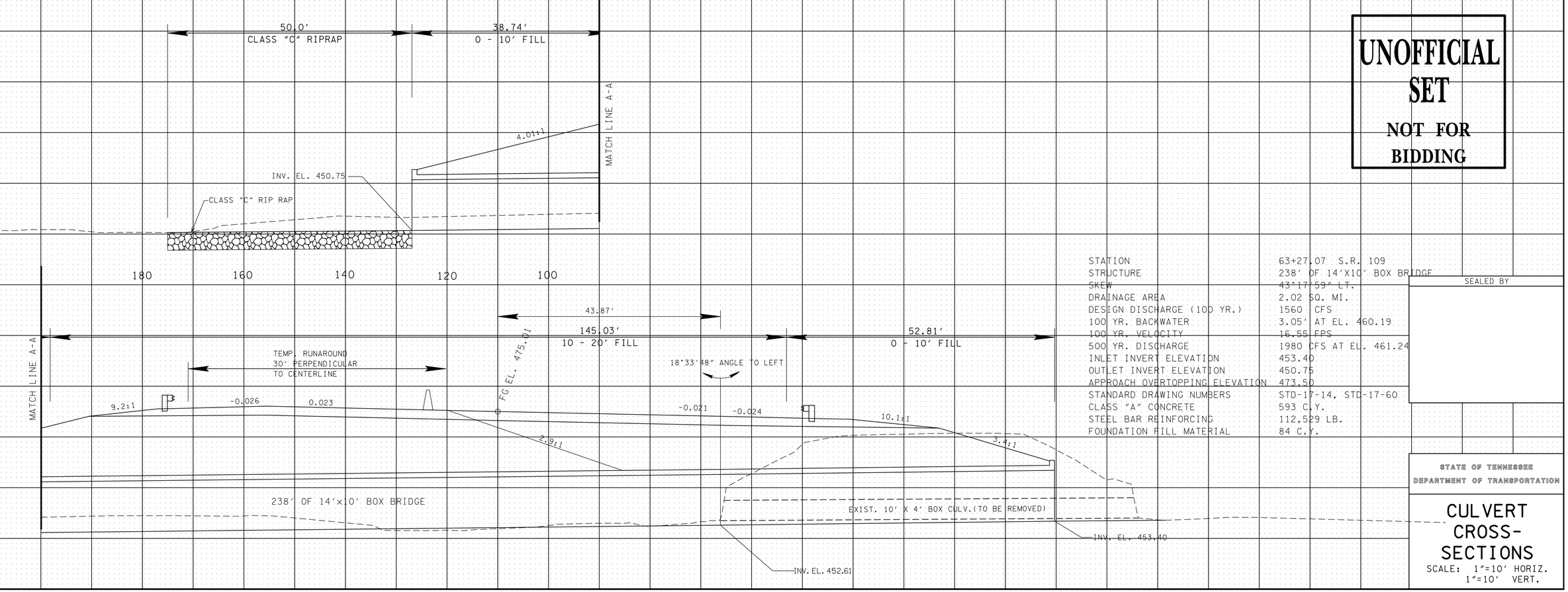
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	41
CONST.	2017	NH-109(32)	41

FILE NO.

TENNESSEE D.O.T.
DESIGN DIVISION



STATION	64+06.19 S.R. 109
STRUCTURE	154' OF 14'X10' BOX CULVERT
SKEW	70°51'07" LT
DRAINAGE AREA	2.02 SQ. MI.
DESIGN DISCHARGE (100 YR.)	1560 CFS
100 YR. BACKWATER	3.05' AT EL. 460.19
100 YR. VELOCITY	16.09 FPS
500 YR. DISCHARGE	1980 CFS AT EL. 461.24
INLET INVERT ELEVATION	453.10
OUTLET INVERT ELEVATION	450.75
APPROACH OVERTOPPING ELEVATION	473.50
STANDARD DRAWING NUMBERS	STD-17-14, STD-17-60
CLASS "A" CONCRETE	399 C.Y.
STEEL BAR REINFORCING	74,645 LB.
FOUNDATION FILL MATERIAL	54 C.Y.



STATION	63+27.07 S.R. 109
STRUCTURE	238' OF 14'X10' BOX BRIDGE
SKEW	43°17'59" LT.
DRAINAGE AREA	2.02 SQ. MI.
DESIGN DISCHARGE (100 YR.)	1560 CFS
100 YR. BACKWATER	3.05' AT EL. 460.19
100 YR. VELOCITY	16.55 FPS
500 YR. DISCHARGE	1980 CFS AT EL. 461.24
INLET INVERT ELEVATION	453.40
OUTLET INVERT ELEVATION	450.75
APPROACH OVERTOPPING ELEVATION	473.50
STANDARD DRAWING NUMBERS	STD-17-14, STD-17-60
CLASS "A" CONCRETE	593 C.Y.
STEEL BAR REINFORCING	112,529 LB.
FOUNDATION FILL MATERIAL	84 C.Y.

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CULVERT CROSS-SECTIONS

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

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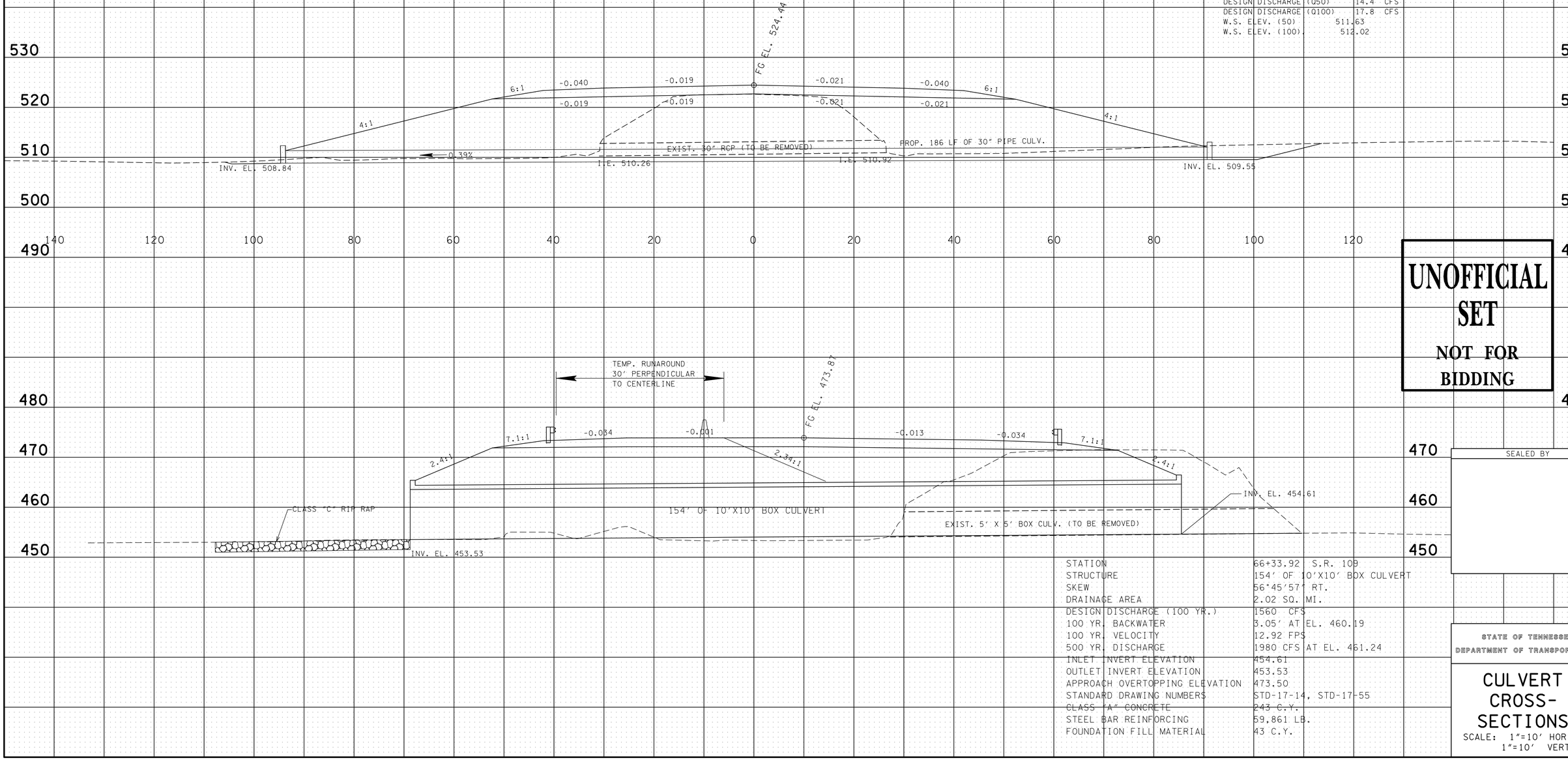
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	42
CONST.	2017	NH-109(32)	42

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.



STATION	96+13.50 S.R. 109
STRUCTURE	186 LF OF 30" PIPE CULV.
SKEW	89° LT
DRAINAGE AREA	5.6 AC.
ENDWALLS REQD. :	2 TYPE "B" ENDWALLS REQ'D.
STD. DWG. NOS.	D-PE-9, D-PE-9A, D-PB-1
DESIGN DISCHARGE (Q50)	14.4 CFS
DESIGN DISCHARGE (Q100)	17.8 CFS
W.S. ELEV. (50)	511.63
W.S. ELEV. (100).	512.02

STATION	66+33.92 S.R. 109
STRUCTURE	154' OF 10'X10' BOX CULVERT
SKEW	56°45'57" RT.
DRAINAGE AREA	2.02 SQ. MI.
DESIGN DISCHARGE (100 YR.)	1560 CFS
100 YR. BACKWATER	3.05' AT EL. 460.19
100 YR. VELOCITY	12.92 FPS
500 YR. DISCHARGE	1980 CFS AT EL. 461.24
INLET INVERT ELEVATION	454.61
OUTLET INVERT ELEVATION	453.53
APPROACH OVERTOPPING ELEVATION	473.50
STANDARD DRAWING NUMBERS	STD-17-14, STD-17-55
CLASS "A" CONCRETE	243 C.Y.
STEEL BAR REINFORCING	59,861 LB.
FOUNDATION FILL MATERIAL	43 C.Y.

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CULVERT CROSS-SECTIONS

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

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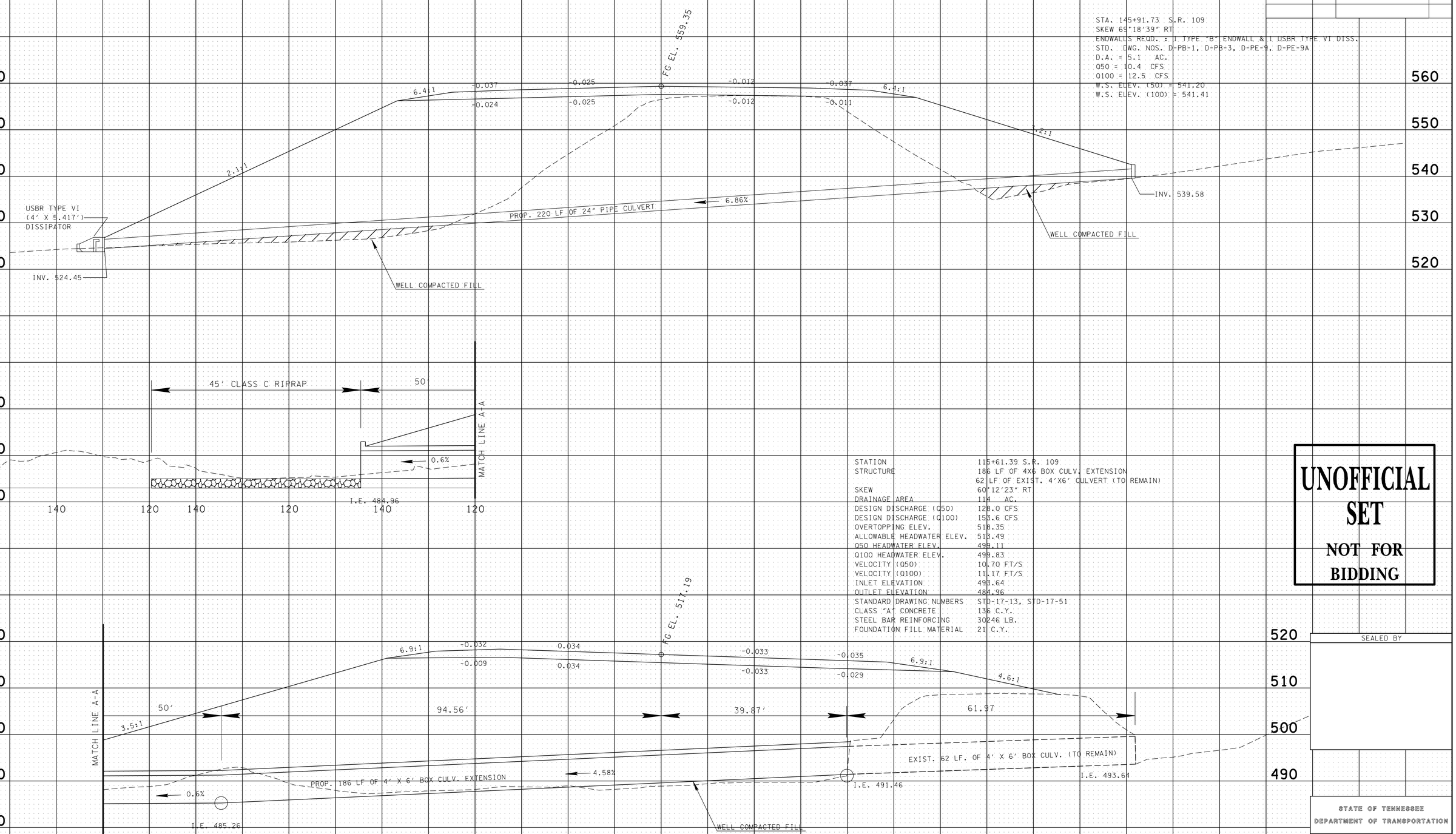
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	43
CONST.	2017	NH-109(32)	43

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

STA. 145+91.73 S.R. 109
SKEW 69°18'39" RT
ENDWALLS REQD. : 1 TYPE "B" ENDWALL & 1 USBR TYPE VI DISS.
STD. DWG. NOS. D-PB-1, D-PB-3, D-PE-9, D-PE-9A
D.A. = 5.1 AC.
Q50 = 10.4 CFS
Q100 = 12.5 CFS
W.S. ELEV. (50) = 541.20
W.S. ELEV. (100) = 541.41



STATION	115+61.39 S.R. 109
STRUCTURE	186 LF OF 4X6 BOX CULV. EXTENSION 62 LF OF EXIST. 4'X6' CULVERT (TO REMAIN)
SKEW	60°12'23" RT
DRAINAGE AREA	114 AC.
DESIGN DISCHARGE (Q50)	128.0 CFS
DESIGN DISCHARGE (Q100)	153.6 CFS
OVERTOPPING ELEV.	518.35
ALLOWABLE HEADWATER ELEV.	513.49
Q50 HEADWATER ELEV.	499.11
Q100 HEADWATER ELEV.	499.83
VELOCITY (Q50)	10.70 FT/S
VELOCITY (Q100)	11.17 FT/S
INLET ELEVATION	493.64
OUTLET ELEVATION	484.96
STANDARD DRAWING NUMBERS	STD-17-13, STD-17-51
CLASS "A" CONCRETE	136 C.Y.
STEEL BAR REINFORCING	30246 LB.
FOUNDATION FILL MATERIAL	21 C.Y.

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CULVERT CROSS-SECTIONS

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

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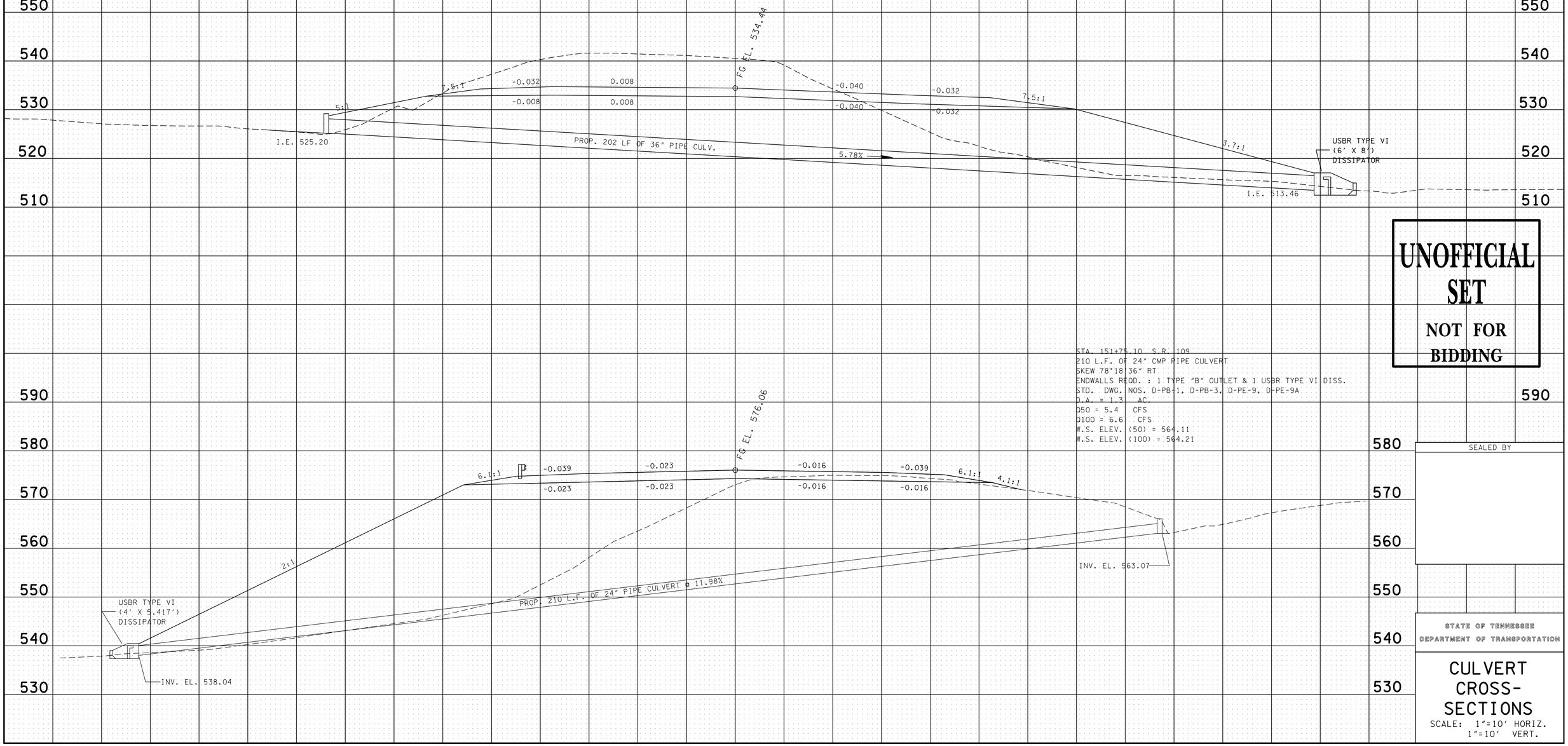
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	44
CONST.	2017	NH-109(32)	44

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

STATION 168+70.42 S.R. 109
STRUCTURE 202 LF OF 36" CMP PIPE CULV.
SKEW 53°22'52" RT.
DRAINAGE AREA 11.0 AC.
ENDWALLS REQD. : 1 TYPE "B" INLET & 1 USBR TYPE VI DISS.
STD. DWG. NOS. D-PB-1, D-PE-9, D-PE-9A
DESIGN DISCHARGE (Q50) 24.0 CFS
DESIGN DISCHARGE (Q100) 28.8 CFS
W.S. ELEV. (50) 527.31
W.S. ELEV. (100) 527.55



STA. 151+75.10 S.R. 109
210 L.F. OF 24" CMP PIPE CULVERT
SKEW 78°18'36" RT
ENDWALLS REQD. : 1 TYPE "B" OUTLET & 1 USBR TYPE VI DISS.
STD. DWG. NOS. D-PB-1, D-PB-3, D-PE-9, D-PE-9A
D.A. = 1.3 AC.
Q50 = 5.4 CFS
Q100 = 6.6 CFS
W.S. ELEV. (50) = 564.11
W.S. ELEV. (100) = 564.21

UNOFFICIAL SET
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CULVERT CROSS-SECTIONS

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

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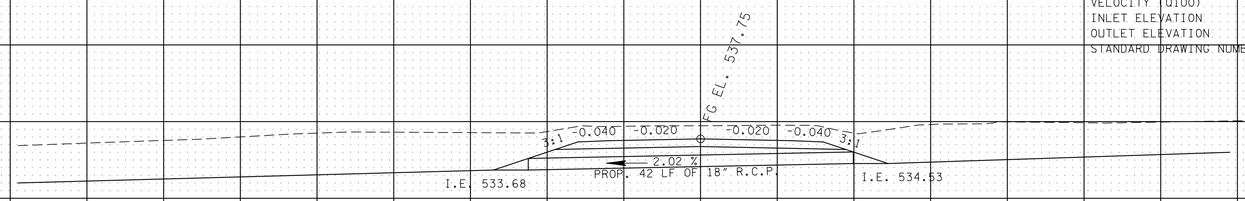
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	45
CONST.	2017	NH-109(32)	45

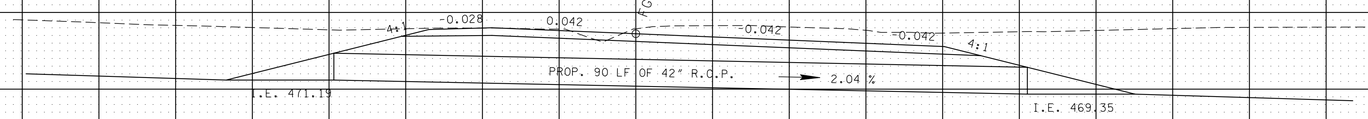
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

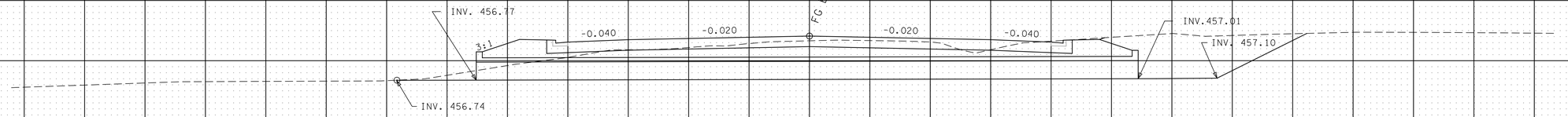
STATION	14+21 CREIGHTON LANE
STRUCTURE	42 LF OF 18" PIPE CULV.
SKEW	90°
DRAINAGE AREA	1.2 AC.
DESIGN DISCHARGE (Q50)	4.4 CFS
DESIGN DISCHARGE (Q100)	5.2 CFS
OVERTOPPING ELEV.	537.75
ALLOWABLE HEADWATER ELEV.	536.37
Q50 HEADWATER ELEV.	535.65
Q100 HEADWATER ELEV.	535.80
VELOCITY (Q50)	2.5 FT/S
VELOCITY (Q100)	2.9 FT/S
INLET ELEVATION	534.53
OUTLET ELEVATION	533.68
STANDARD DRAWING NUMBERS	D-PB-1, D-PE-18A, D-PE-18B



STATION	24+73 ACADEMY ROAD
STRUCTURE	90 LF OF 42" PIPE CULV.
SKEW	86° 10'27" RT
DRAINAGE AREA	27.9 AC.
DESIGN DISCHARGE (Q50)	59.3 CFS
DESIGN DISCHARGE (Q100)	71.6 CFS
OVERTOPPING ELEV.	477.22
ALLOWABLE HEADWATER ELEV.	476.89
Q50 HEADWATER ELEV.	474.85
Q100 HEADWATER ELEV.	475.47
VELOCITY (Q50)	6.2 FT/S
VELOCITY (Q100)	7.5 FT/S
INLET ELEVATION	471.19
OUTLET ELEVATION	469.35
STANDARD DRAWING NUMBERS	D-PB-1, D-PE-42A, D-PE-42B



STATION	188+39.97 S.R. 109
STRUCTURE	110 LF OF 6'x3' CONC. BOX CULVERT
SKEW	90°
DRAINAGE AREA	12.3 AC.
DESIGN DISCHARGE (Q50)	16.0 CFS
DESIGN DISCHARGE (Q100)	19.2 CFS
OVERTOPPING ELEV.	464.71
ALLOWABLE HEADWATER ELEV.	464.71
Q50 HEADWATER ELEV.	457.98
Q100 HEADWATER ELEV.	458.10
VELOCITY (Q50)	4.41 FT/S
VELOCITY (Q100)	4.69 FT/S
INLET ELEVATION	457.01
OUTLET ELEVATION	456.77
STANDARD DRAWING NUMBERS	STD-17-3,STD-17-7, STD-17-11,STD-17-16, STD-17-18 ,STD-17-51
CLASS "A" CONCRETE	83.10 C.Y.*
STEEL BAR REINFORCING	17208 LB.*
FOUNDATION FILL MATERIAL	45 C.Y.
* WINGWALL QUANTITIES BASED ON H=5', W=8'	



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CULVERT CROSS-SECTIONS

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

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TENNESSEE D.O.T.
DESIGN DIVISION

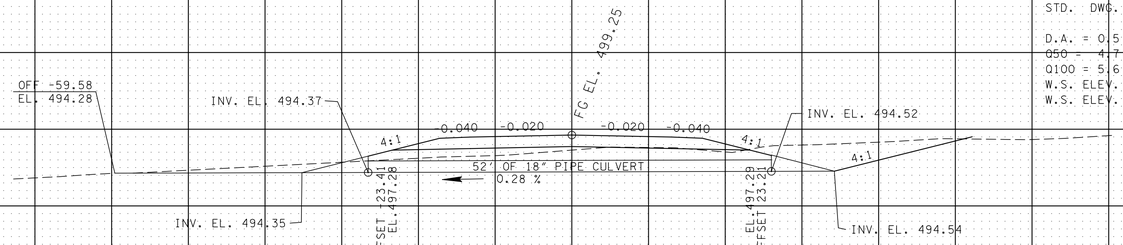
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	46
CONST.	2017	NH-109(32)	46

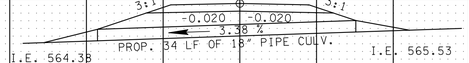
REV. 10-24-16: DELETED CULVERT SECTION FOR PIPE AT STA. 0+63 ACCESS ROAD NO. 1.

STA. 4+28.25 WOODS FERRY CONNECTOR
52' OF 18" PIPE CULVERT
SKEW 90°
ENDWALLS REQD. :
STD. DWG. NOS. D-PB-1, D-PE-18A, D-PE-18B

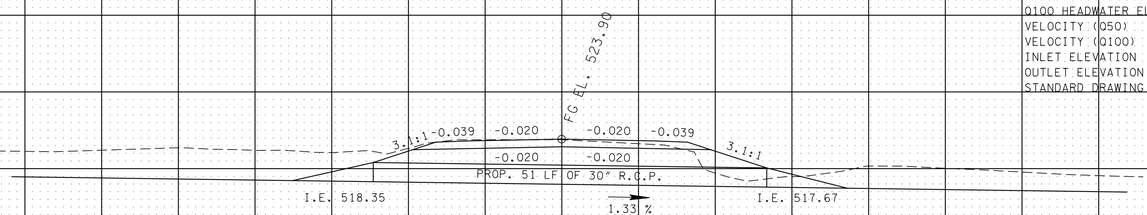
D.A. = 0.5 AC.
Q50 = 4.7 CFS
Q100 = 5.6 CFS
W.S. ELEV. (50) = 495.82
W.S. ELEV. (100) = 495.95



STATION	19+36 BLOODWORTH ROAD
STRUCTURE	34 LF OF 18" PIPE CULV.
SKEW	90°
DRAINAGE AREA	1.3 AC.
DESIGN DISCHARGE (Q50)	3.0 CFS
DESIGN DISCHARGE (Q100)	3.6 CFS
OVERTOPPING ELEV.	569.25
ALLOWABLE HEADWATER ELEV.	568.01
Q50 HEADWATER ELEV.	566.44
Q100 HEADWATER ELEV.	566.55
VELOCITY (Q50)	1.7 FT/S
VELOCITY (Q100)	2.0 FT/S
INLET ELEVATION	565.53
OUTLET ELEVATION	564.38
STANDARD DRAWING NUMBERS	D-PB-1, D-PB-3, D-PE-18A, D-PE-18B



STATION	10+55 BATES ROAD
STRUCTURE	51 LF OF 30" PIPE CULV.
SKEW	77° 16'LT
DRAINAGE AREA	65.2 AC.
DESIGN DISCHARGE (Q50)	36.1 CFS
DESIGN DISCHARGE (Q100)	43.3 CFS
OVERTOPPING ELEV.	523.90
ALLOWABLE HEADWATER ELEV.	522.53
Q50 HEADWATER ELEV.	521.26
Q100 HEADWATER ELEV.	521.68
VELOCITY (Q50)	10.2 FT/S
VELOCITY (Q100)	12.2 FT/S
INLET ELEVATION	518.35
OUTLET ELEVATION	517.65
STANDARD DRAWING NUMBERS	D-PB-1, D-PE-30A, D-PE-30B



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CULVERT CROSS-SECTIONS

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

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	47
CONST.	2017	NH-109(32)	47

EPSC NOTES

STREAMS, WETLANDS & BUFFER ZONES

(1) ANY WORK WITHIN THE STREAM CHANNEL AREA (E.G., PIER FOOTING, RIP-RAP PLACEMENT, 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) ONCE WATER IS DIVERTED INTO A NEWLY CONSTRUCTED AND STABILIZED RELOCATED STREAM / CHANNEL, THE ECOLOGY SECTION SHALL BE NOTIFIED. THE STREAM NAME, STREAM NUMBER, AND DATE THE WATER WAS DIVERTED INTO THE NEWLY CONSTRUCTED STREAM / CHANNEL SHALL BE SUPPLIED WITH THE NOTIFICATION.

ENVIRONMENTAL

(1) 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.

EROSION PREVENTION AND SEDIMENT CONTROL QUANTITIES

	ITEM	DESCRIPTION	UNIT	QUANTITY
	209-02.04	10" TEMPORARY SLOPE DRAIN	L.F.	108
	209-02.06	15" TEMPORARY SLOPE DRAIN	L.F.	260
	209-02.07	18" TEMPORARY SLOPE DRAIN	L.F.	644
	209-05	SEDIMENT REMOVAL	C.Y.	6037
	209-08.02	TEMPORARY SILT FENCE (WITH BACKING)	L.F.	27619
	209-08.03	TEMPORARY SILT FENCE (WITHOUT BACKING)	L.F.	29355
	209-08.07	ROCK CHECK DAM PER	EACH	251
	209-08.08	ENHANCED ROCK CHECK DAM	EACH	146
	209-09.01	SANDBAGS	BAG	635
	209-09.04	SEDIMENT FILTER BAG (15' X 10')	EACH	2
	209-09.41	CURB INLET PROTECTION (TYPE 2)	EACH	36
	209-09.43	CURB INLET PROTECTION (TYPE 4)	EACH	2
	209-10.20	TEMPORARY SEDIMENT TRAP	C.Y.	2568
	209-13.04	TURBIDITY CURTAIN (WITH LIGHTED BUOYS)	L.F.	3460
	209-20.03	POLYETHYLENE SHEETING (6 MIL. MINIMUM)	S.Y.	320
	209-40.30	CATCH BASIN PROTECTION (TYPE A)	EACH	3
	209-40.42	CATCH BASIN FILTER ASSEMBLY (TYPE 2)	EACH	19
	209-65.03	TEMPORARY DIVERSION CHANNEL	L.F.	1200
	209-65.04	TEMPORARY IN STREAM DIVERSION	L.F.	400
	303-10.01	MINERAL AGGREGATE (SIZE 57)	TON	853
	621-03.02	18" TEMPORARY DRAINAGE PIPE	L.F.	298
	621-03.07	48" TEMPORARY DRAINAGE PIPE	L.F.	642
	707-08.11	HIGH-VISIBILITY CONSTRUCTION FENCE	L.F.	3140
(1)	709-05.05	MACHINED RIP-RAP (CLASS A-3)	TON	550
	709-05.06	MACHINED RIP-RAP (CLASS A-1)	TON	5553
(2)	740-10.03	GEOTEXTILE (TYPE III) (EROSION CONTROL)	S.Y.	13234
	740-11.03	TEMPORARY SEDIMENT TUBE (18 INCH)	L.F.	73569
	805-12.02	EROSION CONTROL BLANKET (TYPE II)	S.Y.	56033

(1) FOR TEMPORARY CONSTRUCTION EXITS.
(2) QUANTITY INCLUDES 944 S.Y. FOR TEMPORARY CONSTRUCTION EXITS.

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
SFB ✱ SFB ✱ SFB ✱ SFB ✱ SFB	SEDIMENT FILTER BAG	EC-STR-2
✱ SF ✱ SF ✱ SF ✱	SILT FENCE	EC-STR-3B
✱ SFB ✱ SFB ✱ SFB ✱	SILT FENCE WITH WIRE BACKING	EC-STR-3C
	ROCK CHECK DAM (V-DITCH)	EC-STR-6
	ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6
	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
	ENHANCED ROCK CHECK DAM (TRAPEZOIDAL DITCH)	EC-STR-6A
	SEDIMENT TRAP WITH ENHANCED ROCK CHECK DAM	EC-STR-7
	CULVERT PROTECTION (TYPE 1)	EC-STR-11
(A)	CATCH BASIN PROTECTION (TYPE A)	EC-STR-19
TCC	TEMPORARY CULVERT CROSSING (DESCRIBE NUMBER AND SIZE OF PIPES)	EC-STR-25
(A) TCE	TEMPORARY CONSTRUCTION EXIT	EC-STR-25
	TEMPORARY BERM	EC-STR-27
	TEMPORARY SLOPE DRAIN	EC-STR-27
	TEMPORARY DIVERSION CHANNEL (DESCRIBE-SIZE AND TYPE OF LINING)	EC-STR-31
	EROSION CONTROL BLANKET	EC-STR-34
✱✱ TUBE ✱✱ TUBE ✱✱	SEDIMENT TUBE	EC-STR-37
	FLOATING TURBIDITY CURTAIN	EC-STR-38
(2)	CURB INLET PROTECTION (TYPE 2)	EC-STR-39
(4)	CURB INLET PROTECTION (TYPE 4)	EC-STR-39A
(2)	CATCH BASIN FILTER ASSEMBLY (TYPE 2)	EC-STR-42
	SAND BAG BERM	EC-STR-33

(A) TEMPORARY CONSTRUCTION EXITS TO BE LOCATED AS DIRECTED BY THE ENGINEER.

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EROSION PREVENTION & SEDIMENT CONTROL (EPSC) NOTES

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	47B
CONST.	2017	NH-109(32)	47A

OUTFALL INFORMATION												
		STAGE I			STAGE II			STAGE III				
OUTFALL LABEL	SUB-OUTFALL (e.g. A, B, C)	STATION LT OR RT	SLOPE WITHIN ROW (%)	DRAINAGE AREA (AC)	STATION LT OR RT	SLOPE WITHIN ROW (%)	DRAINAGE AREA (AC)	STATION LT OR RT	SLOPE WITHIN ROW (%)	DRAINAGE AREA (AC)	SEDIMENT BASIN OR EQUIVALENT MEASURE(S) (YES, NO OR N/A)	RECEIVING NATURAL RESOURCE NAME OR LABEL
OUTFALL 1		185+00 RT	2.6%	9.97							N/A	Wetland 1
OUTFALL 2		190+11 RT	1.9%	0.77							N/A	Wetland 1
OUTFALL 3											N/A	Old Hickory Lake
	3A	194+41 LT	0.7%	7.32							N/A	Old Hickory Lake
	3B	194+68 LT	4.6%	0.67							N/A	Old Hickory Lake
	3C	195+61 RT	0.5%	1.42							N/A	Old Hickory Lake
OUTFALL 4		201+64 LT	12.9%	1.57	201+64 LT	0.5%	1.68	201+64 LT	0.5%	1.68	N/A	WWC-1 / EPH-1
OUTFALL 5		31+30 LT	4.4%	0.26	31+30 LT	4.4%	0.26	31+30 LT	3.2%	1.66	N/A	Old Hickory Lake
OUTFALL 6		34+56 LT	3.0%	1.25	34+56 LT	3.0%	1.25				N/A	
OUTFALL 7		36+00 RT	3.2%	2.97	35+60 RT	4.2%	25.81	35+60 RT	4.2%	25.81	Seq. Notes	WWC-2 / EPH-2
OUTFALL 8		41+22 LT	3.7%	4.57	41+22 LT	3.8%	1.44	41+22 LT	3.8%	1.44	N/A	
OUTFALL 9		29+22 RT Academy Rd	4.7%	0.27	29+22 RT Academy Rd	4.7%	0.27	29+22 RT Academy Rd	4.7%	0.27	N/A	
OUTFALL 10												
	10A	44+00 RT	7.1%	0.25	44+00 RT	7.1%	0.25				N/A	
	10B	44+40 RT	3.1%	4.97	44+40 RT	3.1%	4.97				N/A	
	10C	45+24 RT	3.9%	4.42	45+24 RT	3.9%	4.42				N/A	
	10D	45+39 RT	4.4%	9.42	45+39 RT	4.4%	9.42				N/A	
	10E	44+32 LT	10.6%	3.38	44+32 LT	10.6%	3.38	44+32 LT	10.6%	3.38	N/A	
OUTFALL 11		45+79 LT	5.1%	2.36	45+79 LT	5.1%	2.36	45+79 LT	5.1%	2.36	N/A	
OUTFALL 12		62+18 RT	5.7%	5.60	62+18 RT	0.6%	6.27	62+18 RT	0.6%	6.27	N/A	Stream 2
OUTFALL 13		62+55 RT	13.7%	0.10	62+55 RT	10.5%	0.31	62+55 RT	10.5%	0.31	N/A	Stream 2
OUTFALL 14		63+67 RT	19.3%	0.11	63+67 RT	17.6%	0.19	63+67 RT	17.6%	0.19	N/A	WWC-3 / EPH-3
OUTFALL 15		64+24 RT	9.9%	0.30	64+24 RT	7.8%	0.55	64+24 RT	7.8%	0.55	N/A	WWC-3 / EPH-3
OUTFALL 16		64+27 LT	8.9%	0.38	64+27 LT	6.5%	0.88	64+27 LT	6.5%	0.88	N/A	Stream 2
OUTFALL 17		64+75 LT	9.4%	0.23	64+75 LT	18.9%	0.11	64+75 LT	18.9%	0.11	N/A	Stream 2
OUTFALL 18		65+57 LT	9.4%	0.24	65+57 LT	18.7%	0.11	65+57 LT	18.7%	0.11	N/A	Stream 3
OUTFALL 19		66+15 LT	7.5%	0.72	66+15 LT	5.4%	0.57	66+15 LT	5.4%	0.57	N/A	Stream 3
OUTFALL 20		66+74 RT	7.2%	0.25	66+74 RT	6.8%	0.44	66+74 RT	6.8%	0.44	N/A	Stream 3
OUTFALL 21		67+14 RT	10.9%	0.17	67+14 RT	6.9%	0.40	67+14 RT	6.9%	0.40	N/A	Stream 3
OUTFALL 22		0+38 LT Tyree Access Rd	3.6%	2.54	0+38 LT Tyree Access Rd	4.3%	2.92	0+38 LT Tyree Access Rd	4.3%	2.92	N/A	Old Hickory Lake
OUTFALL 23		69+07 RT	4.3%	2.05	69+07 RT	3.5%	2.64	69+07 RT	3.5%	2.64	N/A	Stream 3
OUTFALL 24		78+03 LT	3.0%	2.18	78+03 LT	2.7%	1.19	78+03 LT	2.7%	1.19	N/A	
OUTFALL 25		86+76 RT	1.7%	0.61							N/A	
OUTFALL 26		96+16 LT	1.1%	6.21	96+16 LT	1.1%	7.90	96+16 LT	1.1%	7.90	N/A	Wetland 3 / Stream 4
OUTFALL 27		11+60 RT Bending Chesnut	5.2%	0.79	11+60 RT Bending Chesnut	3.3%	1.26	11+60 RT Bending Chesnut	3.3%	1.26	N/A	Stream 4.5
OUTFALL 28		11+60 LT Bending Chesnut	9.7%	0.08	11+60 LT Bending Chesnut	7.8%	0.17	11+60 LT Bending Chesnut	7.8%	0.17	N/A	Stream 4.5
OUTFALL 29		12+45 RT Creighton Ln	0.10%	0.76	12+45 RT Creighton Ln	0.10%	0.15	12+45 RT Creighton Ln	0.10%	0.15	N/A	
OUTFALL 30		12+45 LT Creighton Ln	1.2%	0.15	12+45 LT Creighton Ln	1.2%	0.15	12+45 LT Creighton Ln	1.2%	0.15	N/A	
OUTFALL 31		114+64 LT	5.6%	2.39	114+64 LT	5.2%	2.39	114+64 LT	5.2%	2.39	N/A	Stream 5
OUTFALL 32		114+99 LT	8.8%	0.73	114+99 LT	4.9%	11.85	114+99 LT	4.9%	11.85	Seq. Notes	Stream 5
OUTFALL 33		115+02 RT	7.2%	0.34	115+02 RT	6.8%	0.84	115+02 RT	6.8%	0.84	N/A	Stream 4.5
OUTFALL 34		117+23 RT	7.0%	3.30	117+23 RT	7.0%	3.30				N/A	Stream 6
OUTFALL 35		118+26 RT	3.9%	0.34	118+26 RT	2.8%	0.75	118+26 RT	2.8%	0.75	N/A	Wetland 5
OUTFALL 36		123+37 LT	8.4%	2.83	123+37 LT	7.3%	7.10				N/A	Stream 5
OUTFALL 37					125+41 RT	4.6%	20.16	125+41 RT	4.6%	20.16	Seq. Notes	Stream 5
	37A	127+88 LT	3.5%	6.29							N/A	Stream 5
	37B	128+03 RT	5.1%	9.93							N/A	Stream 5
OUTFALL 38		136+57 LT	7.1%	0.26	136+57 LT	7.1%	0.26				N/A	
OUTFALL 39		138+98 LT	15.5%	0.32							N/A	
OUTFALL 40		141+30 LT	14.6%	0.40	141+30 LT	14.6%	0.40	141+30 LT	4.1%	0.06	N/A	WWC-4 / EPH-4
OUTFALL 41		142+54 LT	11.8%	0.20	142+54 LT	11.8%	0.20				N/A	Pond 5
OUTFALL 42		142+86 LT	11.3%	0.45	142+86 LT	11.3%	0.45				N/A	WWC-5 / EPH-5
OUTFALL 43		146+20 RT	10.1%	3.77	146+20 RT	10.1%	3.77	146+20 RT	9.7%	4.14	N/A	WWC-6 / EPH-6
OUTFALL 44		145+32 LT	13.5%	0.65	145+32 LT	13.5%	0.65	145+32 LT	19.5%	0.25	N/A	WWC-6 / EPH-6

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EPSC OUTFALLS

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	47B
CONST.	2017	NH-109(32)	47B

OUTFALL INFORMATION

OUTFALL LABEL	SUB-OUTFALL (e.g. A, B, C)	STAGE I			STAGE II			STAGE III			SEDIMENT BASIN OR EQUIVALENT MEASURE(S) (YES, NO OR N/A)	RECEIVING NATURAL RESOURCE NAME OR LABEL
		STATION LT OR RT	SLOPE WITHIN ROW (%)	DRAINAGE AREA (AC)	STATION LT OR RT	SLOPE WITHIN ROW (%)	DRAINAGE AREA (AC)	STATION LT OR RT	SLOPE WITHIN ROW (%)	DRAINAGE AREA (AC)		
OUTFALL 45		145+76 LT	13.5%	0.55	145+76 LT	13.5%	0.55	145+76 LT	12.9%	0.52	N/A	WWC-6 / EPH-6
OUTFALL 46		151+94 RT	4.8%	1.48	151+94 RT	18.6%	1.50	151+94 RT	18.6%	1.50	N/A	WWC-7 / EPH-7
OUTFALL 47		151+36 LT	17.1%	0.49	151+36 LT	12.1%	0.35	151+36 LT	12.1%	0.35	N/A	WWC-7 / EPH-7
OUTFALL 48		153+64 LT	3.4%	0.59							N/A	WWC-8 / EPH-8
OUTFALL 49		15+82 RT Bloodworth Rd	13.0%	0.15	15+82 RT Bloodworth Rd	12.7%	0.15	15+82 RT Bloodworth Rd	12.7%	0.15	N/A	
OUTFALL 50		15+82 LT Bloodworth Rd	4.9%	0.33	15+82 LT Bloodworth Rd	4.6%	0.18	15+82 LT Bloodworth Rd	4.6%	0.18	N/A	
OUTFALL 51		163+49 RT	2.9%	1.11	163+49 RT	2.9%	1.11	163+49 RT	2.6%	2.42	N/A	WWC-9 / EPH-9
OUTFALL 52		168+37 LT	8.6%	6.92	168+37 LT	8.6%	6.92	168+37 LT	7.5%	5.14	N/A	WWC-9 / EPH-9
OUTFALL 53		171+97 RT	8.0%	0.29	171+97 RT	8.0%	0.29				N/A	WWC-9 / EPH-9
OUTFALL 54												
	54A	180+73 LT	4.7%	4.26							N/A	
	54A1				170+54 LT	4.4%	0.71	170+54 LT	4.4%	0.71	N/A	
	54A2				170+75 LT	4.3%	0.08	170+75 LT	4.3%	0.08	N/A	
	54A3				174+24 LT	2.6%	1.35	174+24 LT	2.6%	1.35	N/A	
	54A4				174+25 LT	4.0%	0.39	174+25 LT	4.0%	0.39	N/A	
	54A5				175+59 LT	3.1%	0.28	175+59 LT	3.1%	0.28	N/A	
	54A6				175+59 LT	3.9%	0.15	175+59 LT	3.9%	0.15	N/A	
	54A7				177+83 LT	5.6%	0.86	177+83 LT	5.6%	0.86	N/A	
	54A8				177+83 LT	4.0%	0.25	177+83 LT	4.0%	0.25	N/A	
	54A9				180+93 LT	5.5%	0.52	180+93 LT	5.5%	0.52	N/A	
	54A10				181+05 LT	3.6%	0.19	181+05 LT	3.6%	0.19	N/A	
	54A11				180+99 LT	4.0%	0.35	180+99 LT	4.0%	0.35	N/A	
	54A12				181+50 LT	4.9%	0.06	181+50 LT	4.9%	0.06	N/A	
	54A13				183+50 LT	4.0%	0.17	183+50 LT	4.0%	0.17	N/A	
	54A14				185+50 LT	3.2%	0.22	185+50 LT	3.2%	0.22	N/A	
	54A15				187+60 LT	4.9%	0.23	187+60 LT	4.9%	0.23	N/A	
	54A16				188+29 LT	4.9%	0.23	187+60 LT	4.9%	0.23	N/A	
	54B	186+97 RT	3.8%	1.02							N/A	
	54B1				175+67 RT	4.0%	0.62	175+67 RT	4.0%	0.62	N/A	
	54B2				179+50 RT	4.0%	0.42	179+50 RT	4.0%	0.42	N/A	
	54B3				183+50 RT	4.0%	0.44	183+50 RT	4.0%	0.44	N/A	
	54B4				186+45 RT	2.9%	0.33	186+45 RT	2.9%	0.33	N/A	
	54C	187+66 RT	2.5%	0.30	188+58 RT	0.5%	0.05	188+58 RT	0.5%	0.05	N/A	
	54C1				189+35 RT	2.2%	0.53	189+35 RT	2.2%	0.53	N/A	
	54C2				189+75 RT	2.2%	0.09	189+75 RT	2.2%	0.09	N/A	
	54D	188+58 LT	5.9%	0.08	188+58 LT	3.1%	0.06	188+58 LT	3.1%	0.06	N/A	
OUTFALL 55		2+47 RT Wilson Rd	1.9%	2.57	2+47 RT Wilson Rd	1.9%	2.57	2+47 RT Wilson Rd	1.9%	2.57	N/A	Old Hickory Lake
OUTFALL 56		3+23 LT Wilson Rd	5.7%	0.19	3+23 LT Wilson Rd	5.7%	0.19	3+23 LT Wilson Rd	5.7%	0.19	N/A	Old Hickory Lake
OUTFALL 101					184+20 RT	1.4%	9.92	184+20 RT	1.4%	9.92	N/A	Old Hickory Lake
OUTFALL 102					194+45 RT	2.8%	9.85	194+45 RT	2.8%	9.85	N/A	Old Hickory Lake
OUTFALL 103					164+42 LT	2.9%	3.68	164+42 LT	2.9%	3.68	N/A	
OUTFALL 104												
	104A				190+00 LT	0.6%	0.27	190+00 LT	0.6%	0.27	N/A	Old Hickory Lake
	104B				192+33 RT	3.2%	1.60	192+33 RT	3.2%	1.60	N/A	Old Hickory Lake
	104C				192+40 RT	0.7%	0.25	192+40 RT	0.7%	0.25	N/A	Old Hickory Lake
	104D				192+40 LT	0.5%	0.27	192+40 LT	0.5%	0.27	N/A	Old Hickory Lake
	104E				193+40 LT	0.5%	0.11	193+40 LT	0.5%	0.11	N/A	Old Hickory Lake
OUTFALL 201								22+75 RT Academy Rd	0.5%	0.08	N/A	
OUTFALL 202								144+09 LT	10.4%	0.38	N/A	
OUTFALL 203								144+38 LT	18.9%	0.10	N/A	
OUTFALL 204								151+68 LT	11.1%	0.84	N/A	

UNOFFICIAL SET

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EPSC OUTFALLS

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	48
CONST.	2017	NH-109(32)	48

95012-3225-14
BEGIN PROJECT NO. NH-109(32) (CONST.)
STA. 180+50.00
N 708751.8140
E 1837980.8619

95012-2222-14
BEGIN PROJECT NO. NH-109(32) (R.O.W.)
STA. 184+36.86
N 709134.9471
E 1837927.2928

STA. 180+07.17 S.R. 109
= STA. 51+00.00 DOUBLE LOG CABIN ROAD
N 708709.3958
E 1837986.7927

STA. 175+13.64 S.R. 109
= STA. 50+00.00 BURTON ROAD
N 708220.6223
E 1838055.1324

180

185

N 74° 02' 34" E

BURTON ROAD

N 82° 02' 26" E

N 7° 57' 34" W

S 12° 02' 26" E

N 82° 02' 26" E

S 84° 39' 47" E

S.R. 109

OLD LAGUARDO ROAD - EAST

DOUBLE LOG CABIN ROAD

DRY FORK BRANCH

15"

18"

TUBE

HVE

SFB

OUT - 1

WTL-1

NOTE:
THIS FEATURE (WTL-1) IS NOT TO BE IMPACTED BY THE PROPOSED WORK.

MATCH LINE 186+00 SEE SHEET NO. 48A

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

P.O.B. TO STA.186+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-109(32)	48A
CONST.	2017	NH-109(32)	48A

190

195

N

SEE SHEET NO. 48

SEE SHEET NO. 48B

MATCH LINE STA. 186+00

MATCH LINE 199+00

OUT - 3A

OUT - 3B

OUT - 3C

OUT - 2

10″

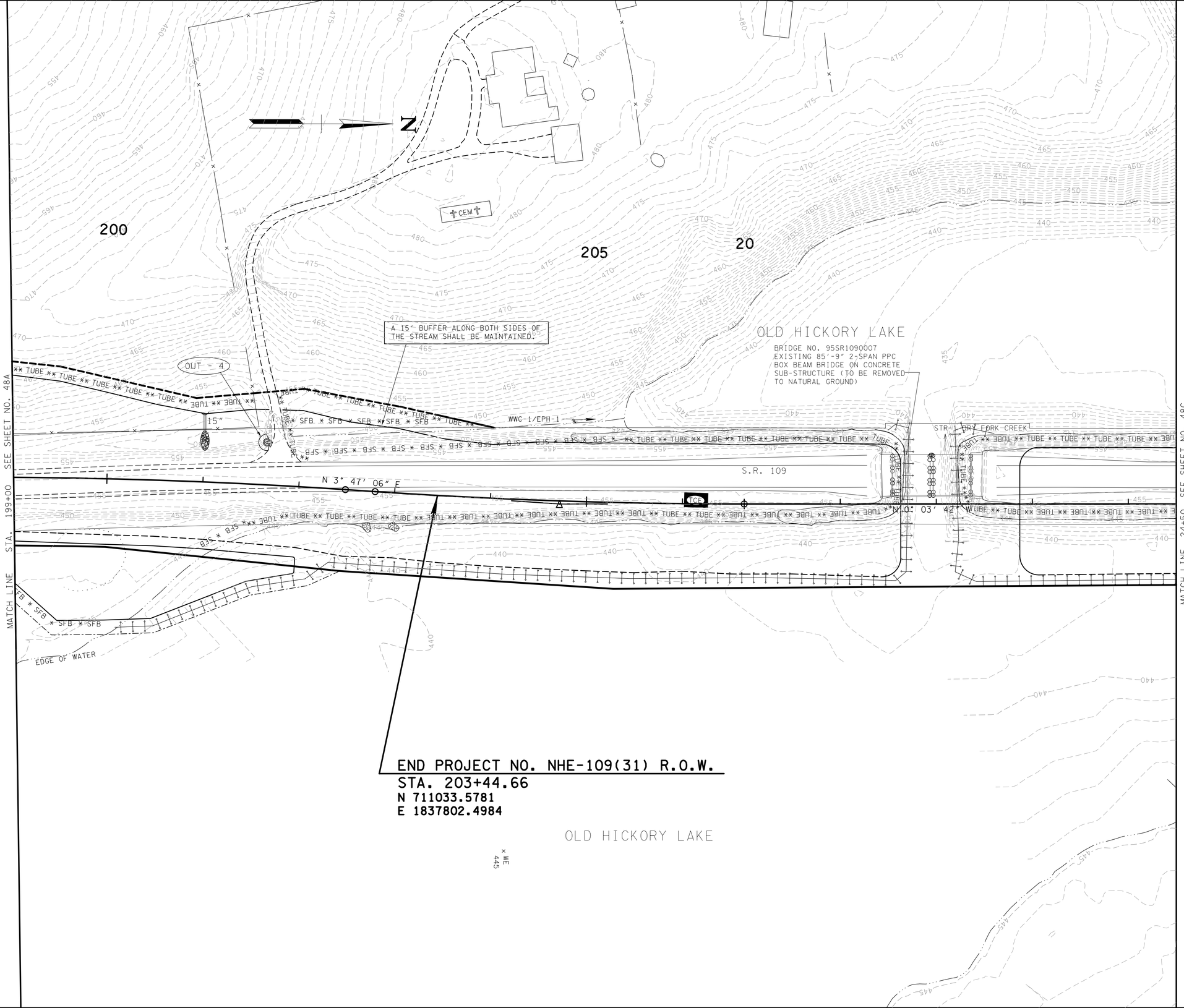
18″

18″

TUBE ** TUBE ** TUBE **

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	48B
CONST.	2017	NH-109(32)	48B



UNOFFICIAL SET

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 199+00 TO STA. 24+50

SCALE: 1"= 50'

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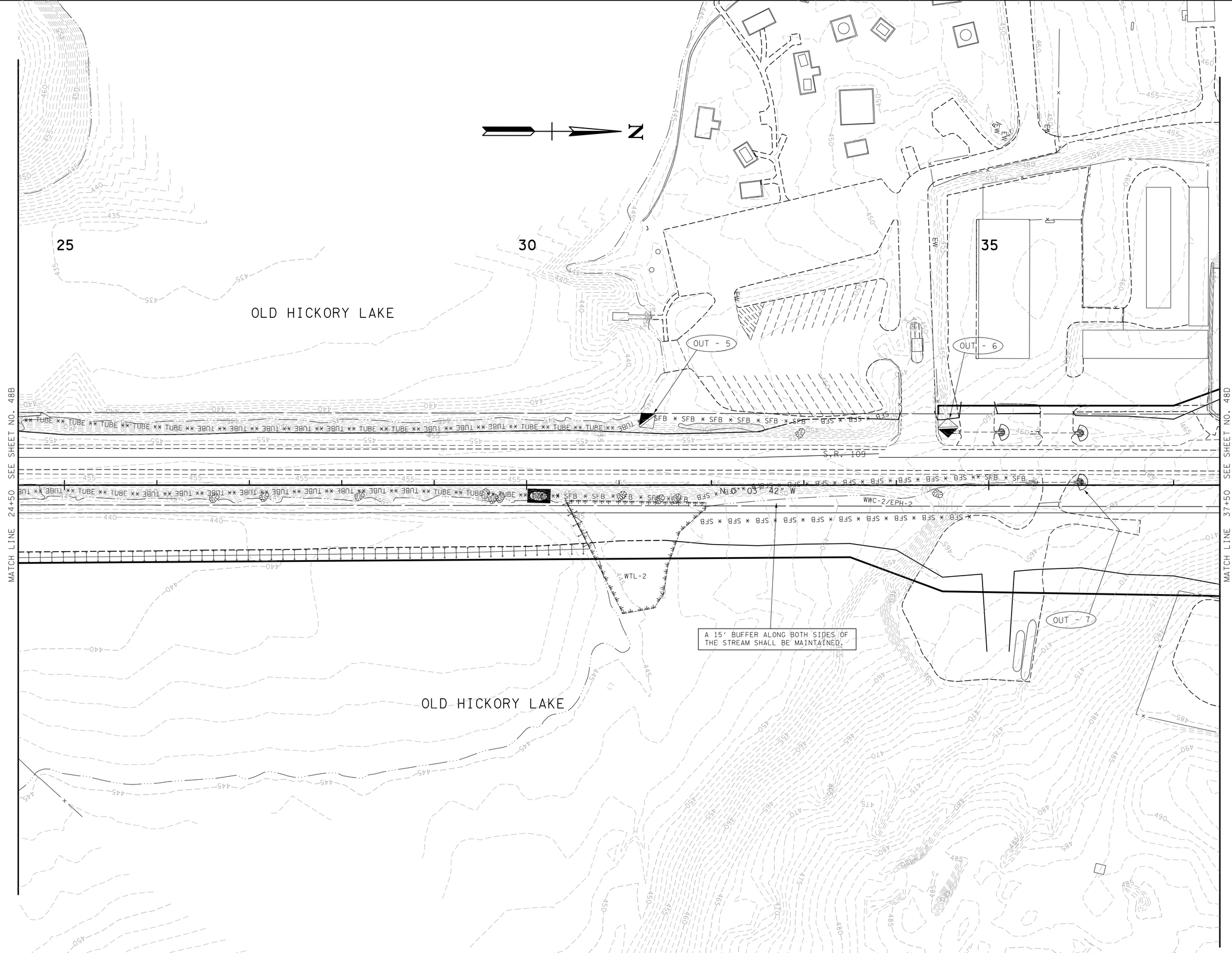
TENNESSEE D.O.T.

DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	48C
CONST.	2017	NH-109(32)	48C



UNOFFICIAL SET

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 24+50 TO STA. 37+50

SCALE: 1"= 50'

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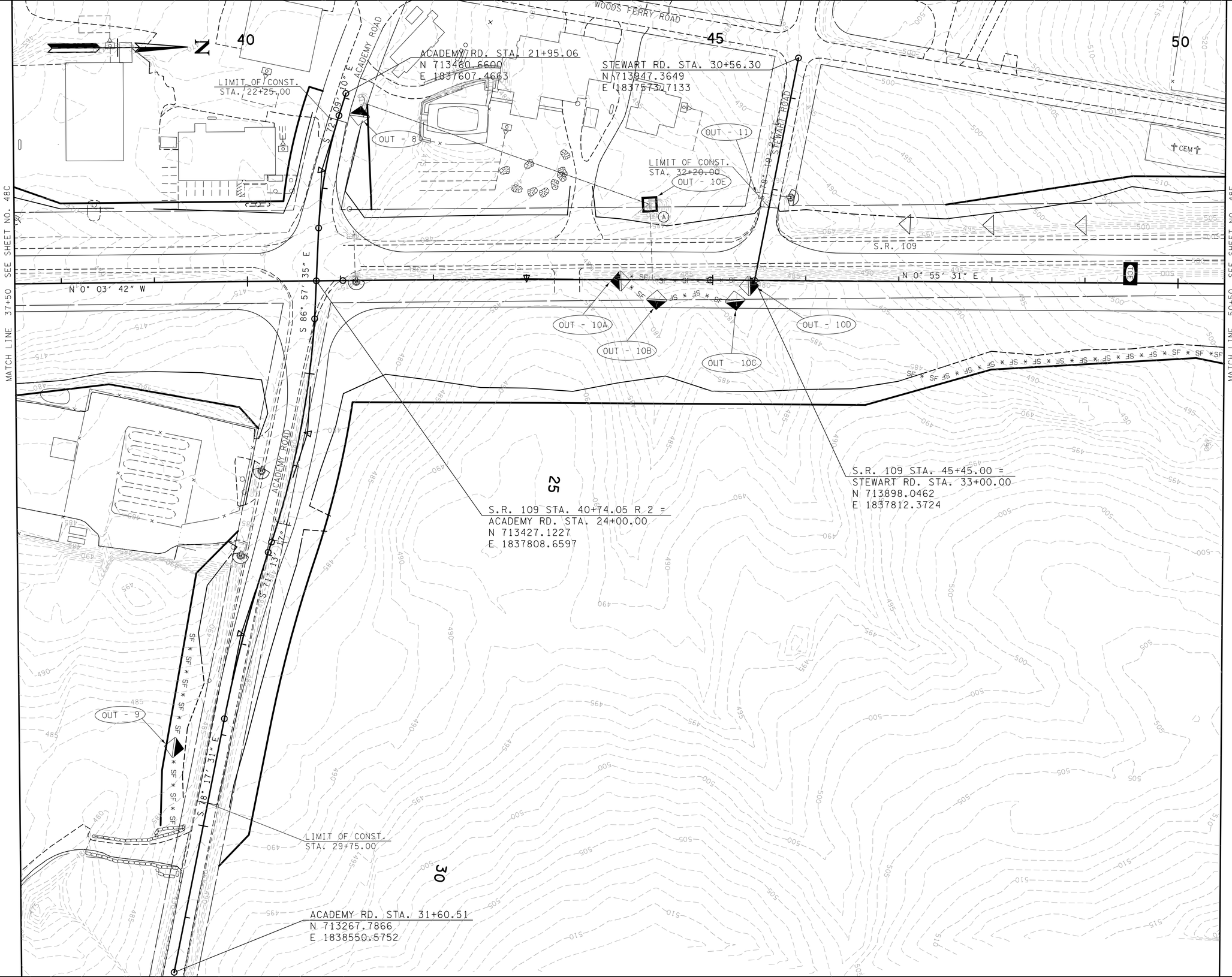
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	48D
CONST.	2017	NH-109(32)	48D



UNOFFICIAL SET
NOT FOR BIDDING

SEALED BY

STAGE I

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 37+50 TO STA. 50+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-109(32)	48E
CONST.	2017	NH-109(32)	48E

N

WOODS FERRY CON. STA. 3+91.20
N 714855.8101
E 1837720.2091

55

60

CEM

WOODS FERRY ROAD

LIMIT OF CONST.
STA. 3+91.2

WOODS FERRY ROAD

S.R. 109

N 0° 55' 31" E

N 82° 27' 51" E

MATCH LINE 50+50 SEE SHEET NO. 48D

MATCH LINE 63+50 SEE SHEET NO. 48F

SF * SF * SF *

TENNESSEE D.O.T.

DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	48F
CONST.	2017	NH-109(32)	48F

TYREE ACCESS RD. STA. 0+00.00
N 716262.9030
E 1837520.6937

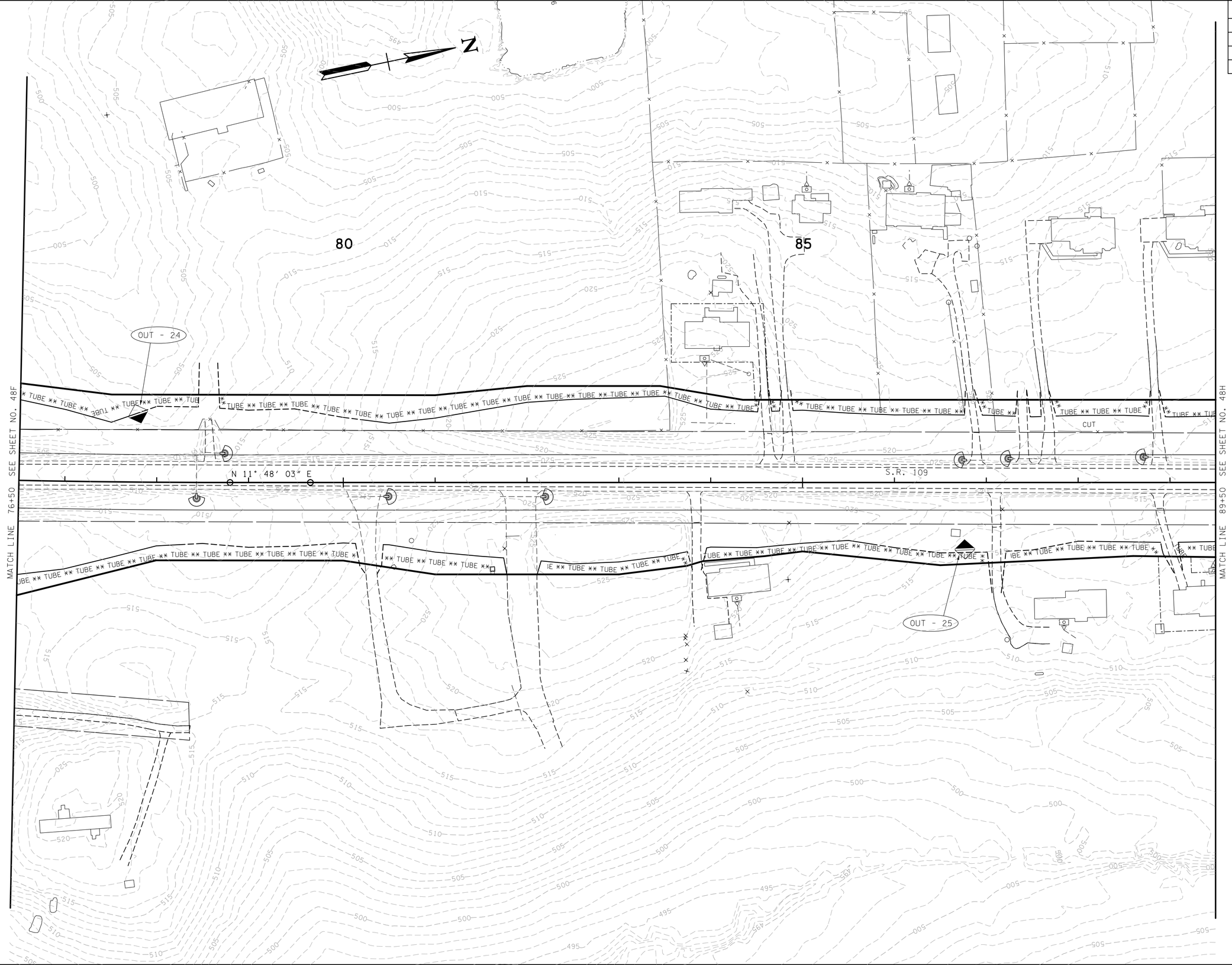
LIMIT OF CONST.
STA. 0+10.00

OUT - 22

** TUBE ** TUBE ** TUBE

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	48G
CONST.	2017	NH-109(32)	48G



UNOFFICIAL SET

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SEALED BY

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 76+50 TO STA. 89+50

SCALE: 1"= 50'

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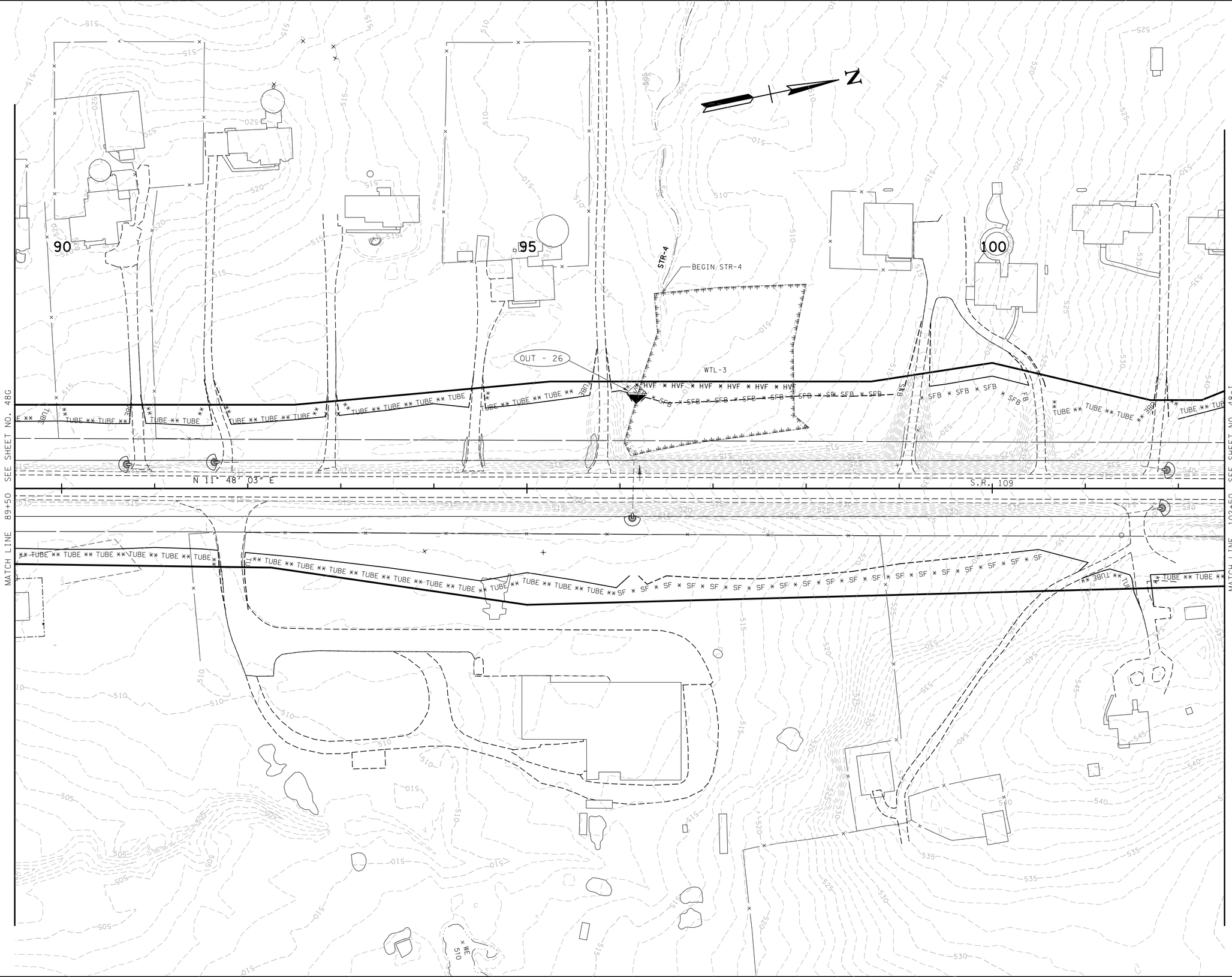
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	48H
CONST.	2017	NH-109(32)	48H



UNOFFICIAL SET

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SEALED BY

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 89+50 TO STA. 102+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-109(32)	48I
CONST.	2017	NH-109(32)	48J

CREIGHTON LANE STA. 12+00.00
N 720108.4826
E 1838592.4820

110

115

105

N

3@48" TEMPORARY DRAINAGE PIPES @ 20' EACH

END STR-5 IMPACT STA. 114+77

S.R. 109 STA. 108+21.88=
CREIGHTON LANE STA. 14+84.64
N 720066.7045
E 1838874.0352

OUT - 29
OUT - 30
OUT - 31
OUT - 32
OUT - 33
OUT - 27
OUT - 28

CREIGHTON LANE
S 81° 33' 35" E

N 11° 48' 03" E
N 7° 54' 01" E
S.R. 109

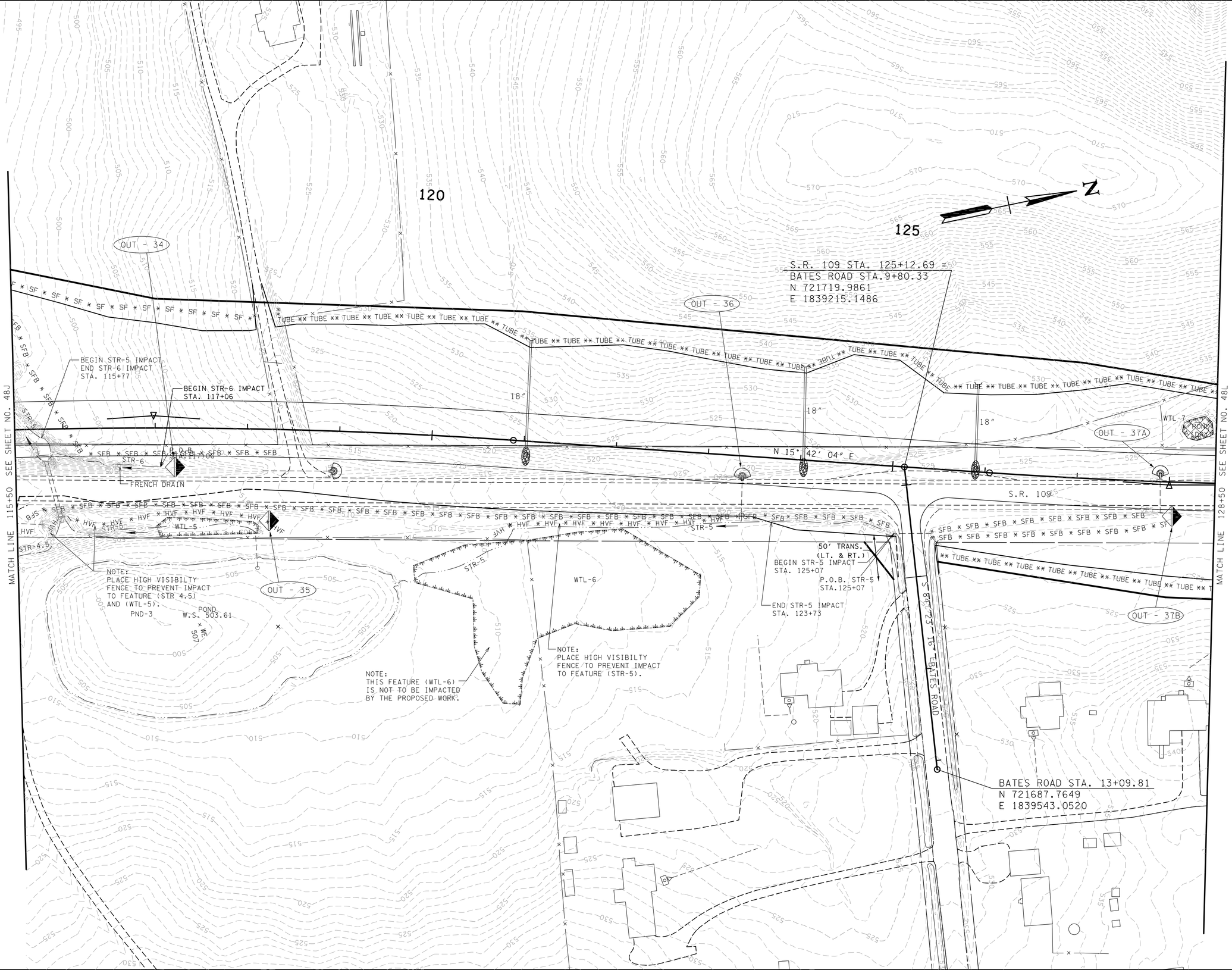
TUBE ** TUBE ** TUBE **

TENNESSEE D.O.T.

DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	48J
CONST.	2017	NH-109(32)	48K



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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 115+50 TO STA. 128+50

SCALE: 1"= 50'

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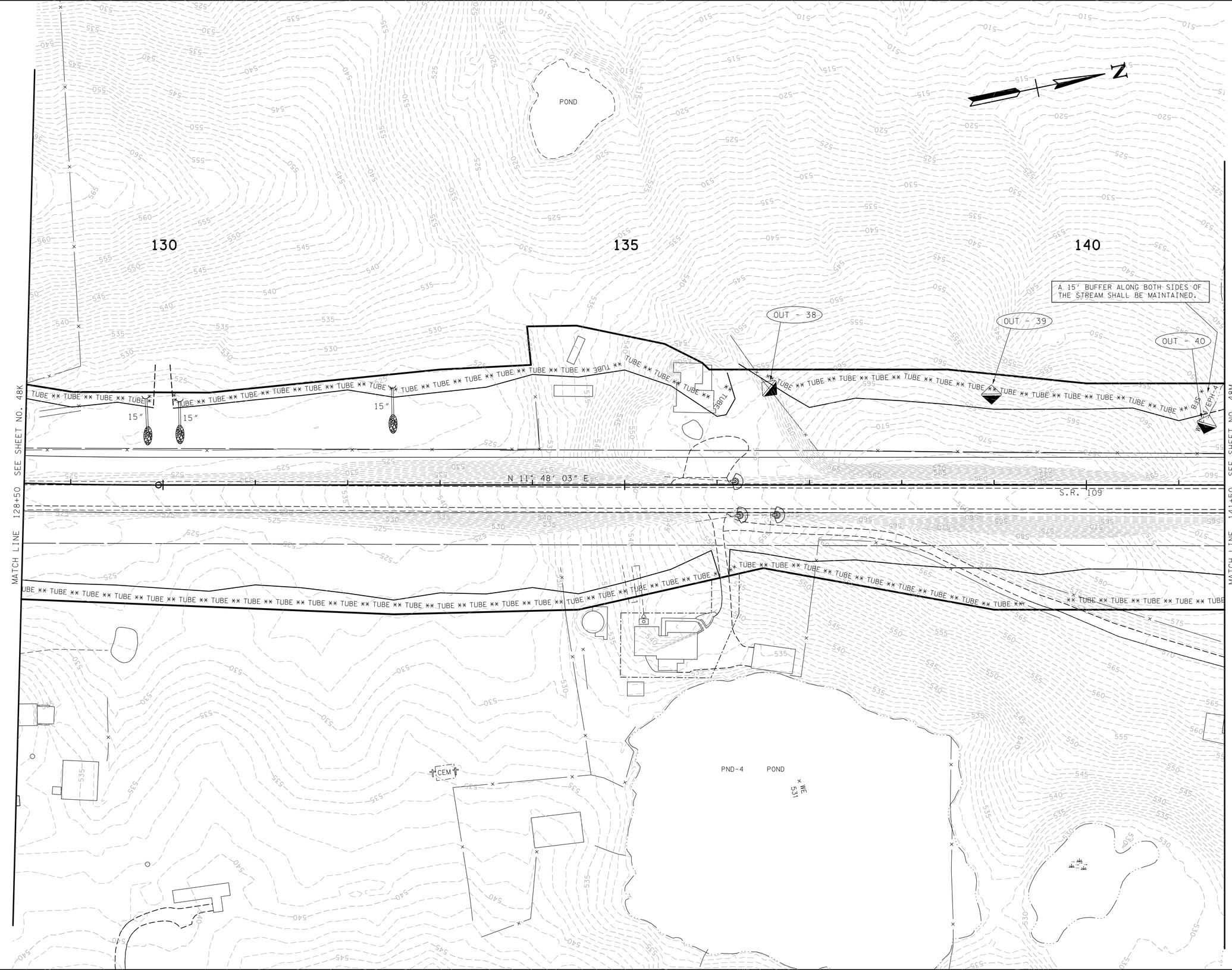
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	48K
CONST.	2017	NH-109(32)	48L



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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 128+50 TO STA. 141+50

SCALE: 1"= 50'

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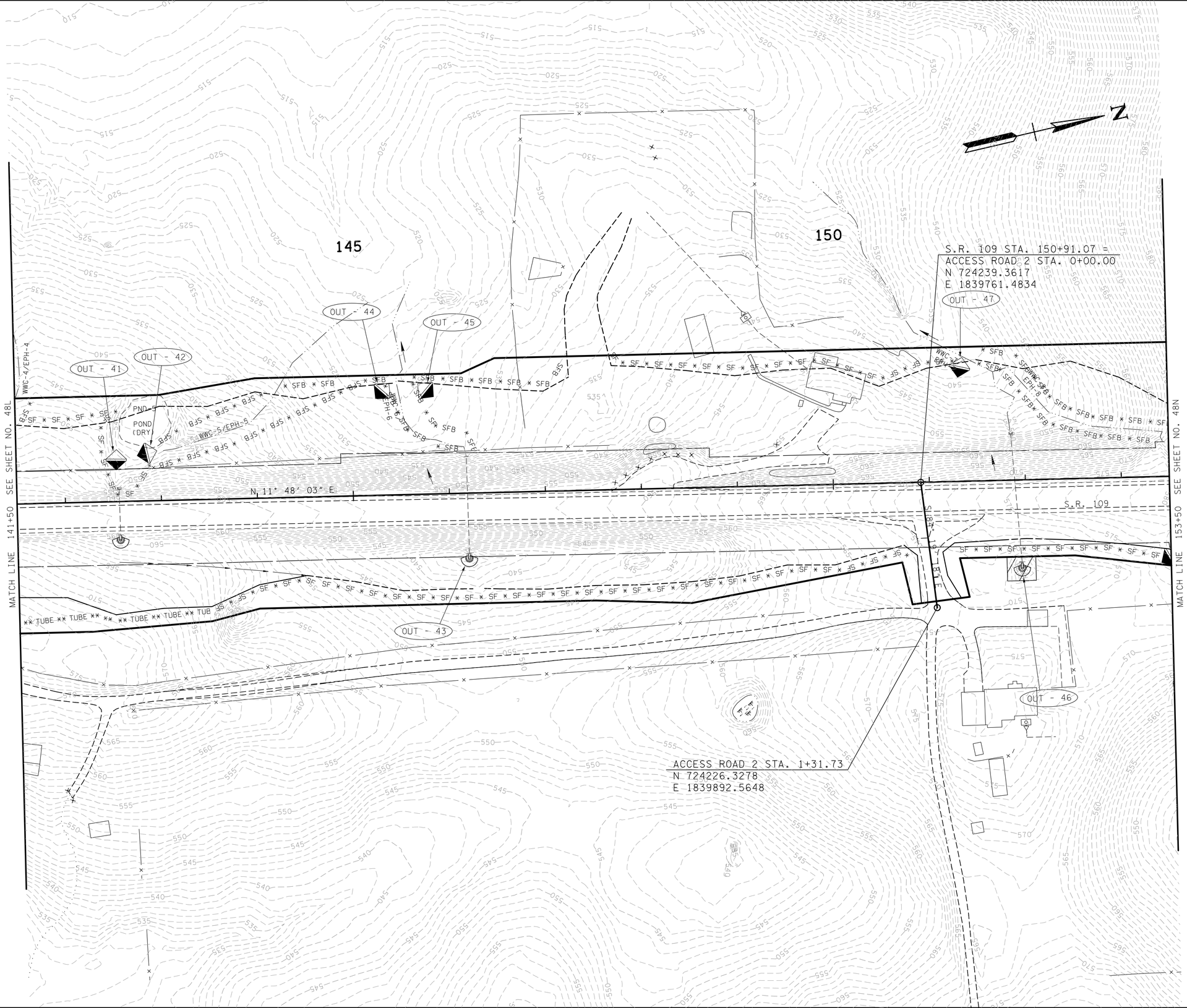
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	48L
CONST.	2017	NH-109(32)	48M

REV. 10-24-16: DELETED ALIGNMENT FOR ACCESS ROAD NO. 1 AND PVT. DR. RT. ACCESS ROAD NO. 1 STA. 1+50. EROSION CONTROL DEVICES REVISED ACCORDINGLY.



UNOFFICIAL SET

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 141+50 TO STA. 153+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-109(32)	48M
CONST.	2017	NH-109(32)	48N

BLOODWORTH RD. STA. 14+72.89
N 725161.5332
E 1839410.7703

BLOODWORTH ROAD

N

NOTE:
THIS FEATURE (WTL-8)
IS NOT TO BE IMPACTED
BY THE PROPOSED WORK.

WTL-8

155

160

165

15

POND
WE
546
PND-8

POND
S. 580.26
PND-7

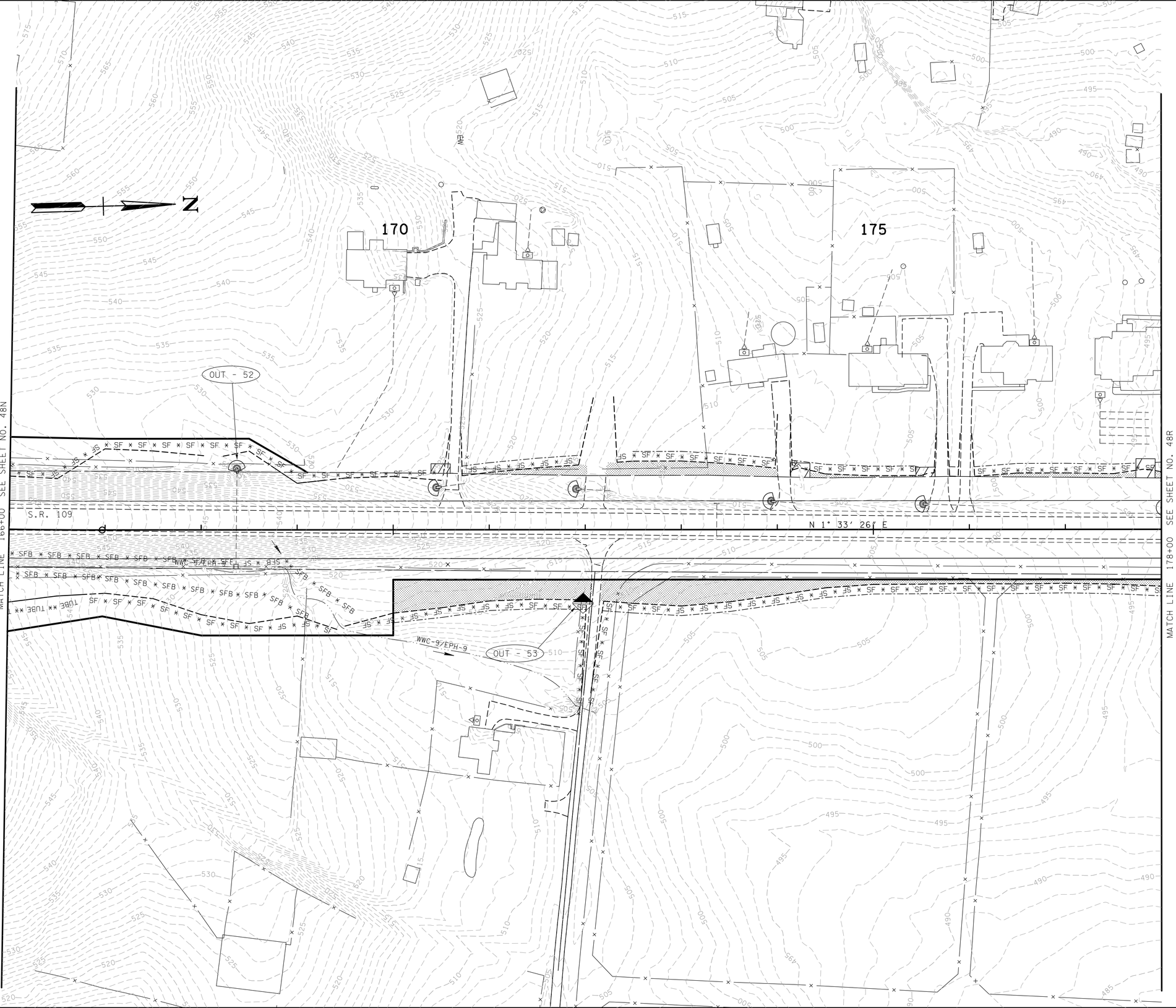
PND-6

OUT - 48
OUT - 49
OUT - 50
OUT - 51

TUBE ** TUBE ** TUBE **

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	48N
CONST.	2017	NH-109(32)	48P



UNOFFICIAL SET
NOT FOR BIDDING

SEALED BY

STAGE I

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 166+00 TO STA. 178+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-109(32)	48-O
CONST.	2017	NH-109(32)	48R

EXIST. PRIVATE FRENCH DRAIN (NOT FIELD LOCATED)

180

185

190

APPLE VALLEY ROAD

S 88° 26' 15" E

APPLE VALLEY RD. STA. 8+00.00
N 727316.6901
E 1839840.1235

S.R. 109 STA. 189+60.87 =
CHEROKEE BOAT DOCK RD. STA. 7+00
N 728087.7185
E 1840061.2301

NOTE: CONTRACTOR TO ADJUST SLOPES TO AVOID DAMAGES TO BUILDING AND BILLBOARD.

OUT - 54A

OUT - 54

OUT - 54D

OUT - 54C

OUT - 54B

S.R. 109

N 1° 33' 26" E

N 82° 30' 53" E

CHEROKEE BOAT DOCK ROAD

S.R. 109 STA. 181+84.10 =
APPLE VALLEY RD. STA. 10+00.00
N 727311.2365
E 1840040.0491

CHEROKEE BOAT DOCK RD. STA. 12+15.09
N 728140.4682
E 1840572.8835

MATCH LINE 178+00 SEE SHEET NO. 48P

MATCH LINE 191+00 SEE SHEET NO. 48S

UNOFFICIAL SET
NOT FOR BIDDING

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DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 178+00 TO STA. 191+00

SCALE: 1"= 50'

6/7/2017 4:54:32 PM
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TENNESSEE D.O.T.

DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	48P
CONST.	2017	NH-109(32)	48S

95012-3225-14
END PROJECT NO. NH-109(32) (CONST.)
STA. 194+48.79
N 728575.4660
E 1840074.2830

95012-2222-14
END PROJECT NO. NH-109(32) (R.O.W.)
STA. 194+48.79
N 728575.4660
E 1840074.2830

WILSON ROAD

LAKE DRIVE

OLD HICKORY LAKE

LAK-1

NOTE:
THIS FEATURE (LAK-1)
IS NOT TO BE IMPACTED
BY THE PROPOSED WORK.

WILSON RD.STA. 2+35.00
N 728551.1139
E 1839810.7135

195

200

OUT - 55

OUT - 56

S 81° 30′ 18″ E

N 1° 12′ 58″ E

S.R. 109

SEE SHEET NO. 48R

MATCH LINE 191+00 SEE SHEET NO. 48R

S.R. 109 STA. 193+85.28 =
WILSON RD. STA. 5+00.00
N 728511.9780
E 1840072.8031

UNOFFICIAL SET

NOT FOR BIDDING

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DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 191+00 TO E.O.P.

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-109(32)	49
CONST.	2017	NH-109(32)	49

95012-3225-14
BEGIN PROJECT NO. NH-109(32) (CONST.)
STA. 180+50.00
N 708751.8140
E 1837980.8619

95012-2222-14
BEGIN PROJECT NO. NH-109(32) (R.O.W.)
STA. 184+36.86
N 709134.9471
E 1837927.2928

STA. 180+07.17 S.R. 109
= STA. 51+00.00 DOUBLE LOG CABIN ROAD
N 708709.3958
E 1837986.7927

180

185

N

N 74° 02' 34" E

BURTON ROAD

N 82° 02' 26" E

(BY OTHERS)
PROP.
38" x 24"
R.C.P.

N 7° 57' 34" W

PROP.
30" X 19"
R.C.P.
INV. 453.30

S.R. 109

S 82° 02' 26" E

(BY OTHERS)
PROP.
18" R.C.P.

N 82° 02' 26" E

S 84° 39' 47" E

SHEET NO. 49A

MATCH LINE 186+00 SEE SHEET

OUT - 101

BEGIN OFFSET PLAN
STA. 180+50

WTL-1

NOTE:
THIS FEATURE (WTL-1) IS NOT TO BE IMPACTED BY THE PROPOSED WORK.

STA. 175+13.64 S.R. 109
= STA. 50+00.00 BURTON ROAD
N 708220.6223
E 1838055.1324

OLD LAGUARDO ROAD - EAST

DOUBLE LOG CABIN ROAD

DRY FORK BRANCH

UNOFFICIAL SET

NOT FOR BIDDING

SEALED BY

STAGE II

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

P.O.B. TO STA.186+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-109(32)	49A
CONST.	2017	NH-109(32)	49A

N

190

195

SEE SHEET NO. 49

STA. 186+00

MATCH LINE

SEE SHEET NO. 49B

STA. 199+00

MATCH LINE

TUBE ** TUBE ** TUBE **

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	49B
CONST.	2017	NH-109(32)	49B

N

200

205

20

CEM

WWC-1 / EPH-1
FLOW TO BE MAINTAINED IN AN 18" TEMPORARY PIPE PLACED IN THE FLOW LINE OF THE STREAM. ONCE THE NEW CHANNEL HAS BEEN CONSTRUCTED, FLOW CAN BE DIVERTED TO THE NEW CHANNEL AND THE TEMPORARY PIPE REMOVED/ABANDONED.

OUT - 4

OLD HICKORY LAKE

BRIDGE NO. 95SR1090007
EXISTING 85'-9" 2-SPAN PPC BOX BEAM BRIDGE ON CONCRETE SUB-STRUCTURE (TO BE REMOVED TO NATURAL GROUND)

WWC-1/EPH-1

STR- DRY FORK CREEK

S.R. 109

N 3° 47' 06" E

N 0° 03' 42" W

SEE SHEET NO. 49A

STA. 199+00

MATCH LINE

MATCH LINE 24+50 SEE SHEET NO. 49C

END BRIDGE
STA. 23+25

BEG. BRIDGE
STA. 21+25

END OFFSET PLAN
STA. 202+00

EDGE OF WATER

END PROJECT NO. NHE-109(31) R.O.W.
STA. 203+44.66
N 711033.5781
E 1837802.4984

OLD HICKORY LAKE

STA 22+25 DRY FORK CREEK
PROPOSED BRIDGE 200' 2 SPANS PRECAST, PRESTRESSED CONCRETE BULB-TEE (BT-54) WITH COMPOSITE CONCRETE DECK SLAB

UNOFFICIAL SET

NOT FOR BIDDING

SEALED BY

STAGE II

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 199+00 TO STA. 24+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-109(32)	49C
CONST.	2017	NH-109(32)	49C

25

30

35

OLD HICKORY LAKE

OUT - 5

OUT - 6

OUT - 7

SEE SHEET NO. 49B

SEE SHEET NO. 49D

MATCH LINE 24+50

MATCH LINE 37+50

S.R. 109

N 0° 03' 42" W

WWC-2/EPH-2

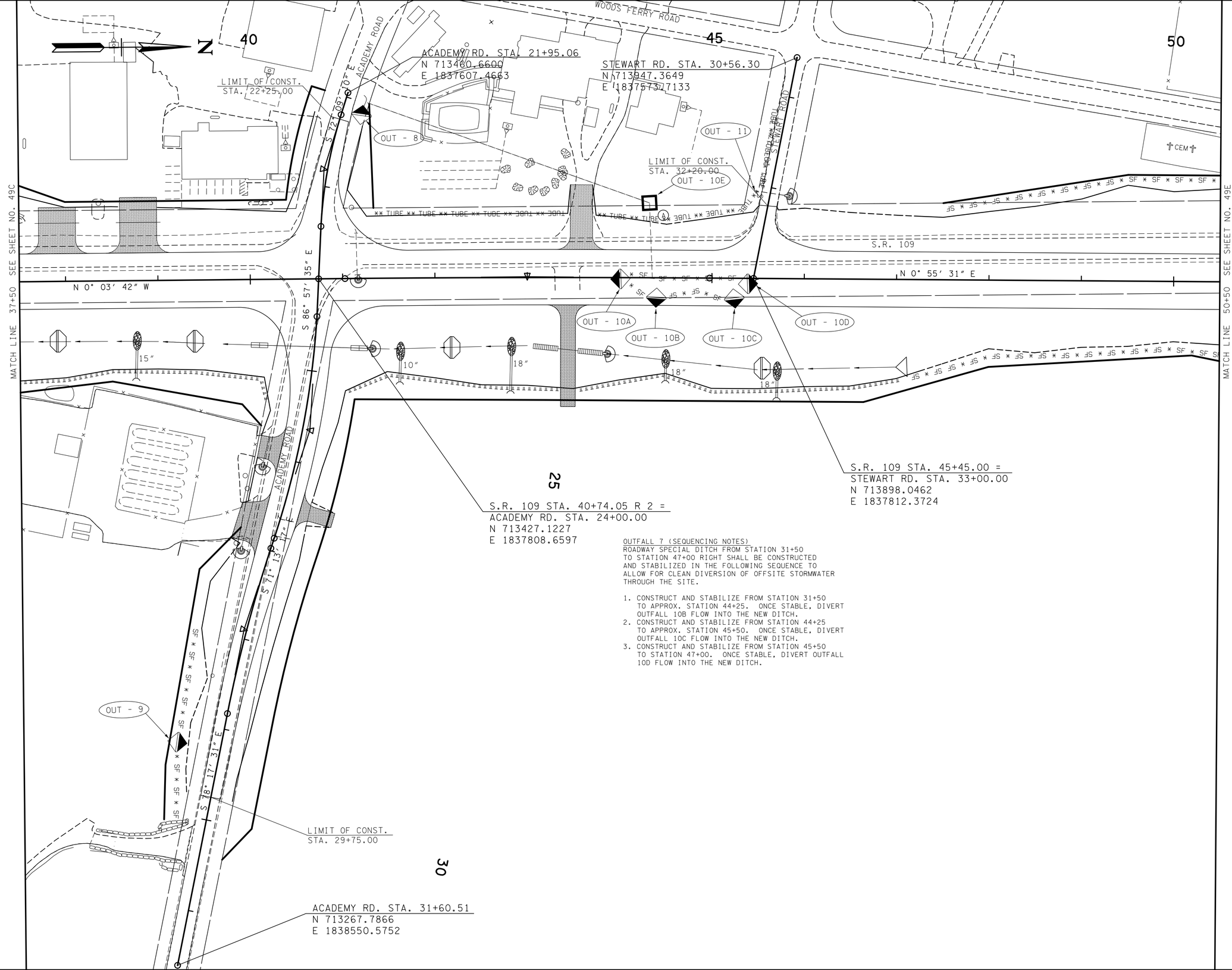
WTL-2

18"

SFB * SFB * SFB *

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	49D
CONST.	2017	NH-109(32)	49D



OUTFALL 7 (SEQUENCING NOTES)
ROADWAY SPECIAL DITCH FROM STATION 31+50 TO STATION 47+00 RIGHT SHALL BE CONSTRUCTED AND STABILIZED IN THE FOLLOWING SEQUENCE TO ALLOW FOR CLEAN DIVERSION OF OFFSITE STORMWATER THROUGH THE SITE.

1. CONSTRUCT AND STABILIZE FROM STATION 31+50 TO APPROX. STATION 44+25. ONCE STABLE, DIVERT OUTFALL 10B FLOW INTO THE NEW DITCH.
2. CONSTRUCT AND STABILIZE FROM STATION 44+25 TO APPROX. STATION 45+50. ONCE STABLE, DIVERT OUTFALL 10C FLOW INTO THE NEW DITCH.
3. CONSTRUCT AND STABILIZE FROM STATION 45+50 TO STATION 47+00. ONCE STABLE, DIVERT OUTFALL 10D FLOW INTO THE NEW DITCH.

UNOFFICIAL SET
NOT FOR BIDDING

SEALED BY

STAGE II

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 37+50 TO STA. 50+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-109(32)	49E
CONST.	2017	NH-109(32)	49E

N

WOODS FERRY CON. STA. 3+91.20
N 714855.8101
E 1837720.2091

55

60

CEM

WOODS FERRY ROAD

LIMIT OF CONST.
STA. 3+91.2

WOODS FERRY ROAD

INV. 494.54

N 0° 55' 31" E

N 82° 27' 51" E

INV. 493.35

SF * SF * SF *

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	49F
CONST.	2017	NH-109(32)	49F

TEMPORARY DIVERSION NOTES 66+34.14

1. AT STATION 66+34.14 INSTALL 48 INCH PIPE DIVERSION THROUGH (5 FOOT X 5 FOOT EXISTING BOX CULVERT) AND PROPOSED WORK AREA. TEMPORARY PLUG SHOULD BE PLACED UPSTREAM AND DOWNSTREAM OF WORK AREA IN ACCORDANCE WITH TDOT STANDARD EC-STR-32. INSTALL SEDIMENT FILTER BAG AS DEPICTED (MINIMUM OF 20 FOOT FROM STREAM CHANNEL).

2. AFTER IN-STREAM CONSTRUCTION IS COMPLETE, RESTORE STREAM TRANSITIONS TO MATCH EXISTING CONDITIONS (AS CLOSELY AS POSSIBLE). INSTALL RIPRAP AS DEPICTED.

NOTE: BOX CULVERT AT STATION 66+34.14 TEMPORARY DIVERSION PIPE IS DESIGNED FOR ACUTAL (125.5 ACRE) DRAINAGE AREA WITH NO FLOOD CONDTIONS (I.E. NO OVERFLOW FROM STREAM 2 AT BOX CULVERT 63+47.7).

TYREE ACCESS RD. STA. 0+00.00
N 716262.9030
E 1837520.6937

LIMIT OF CONST. STA. 0+10.00

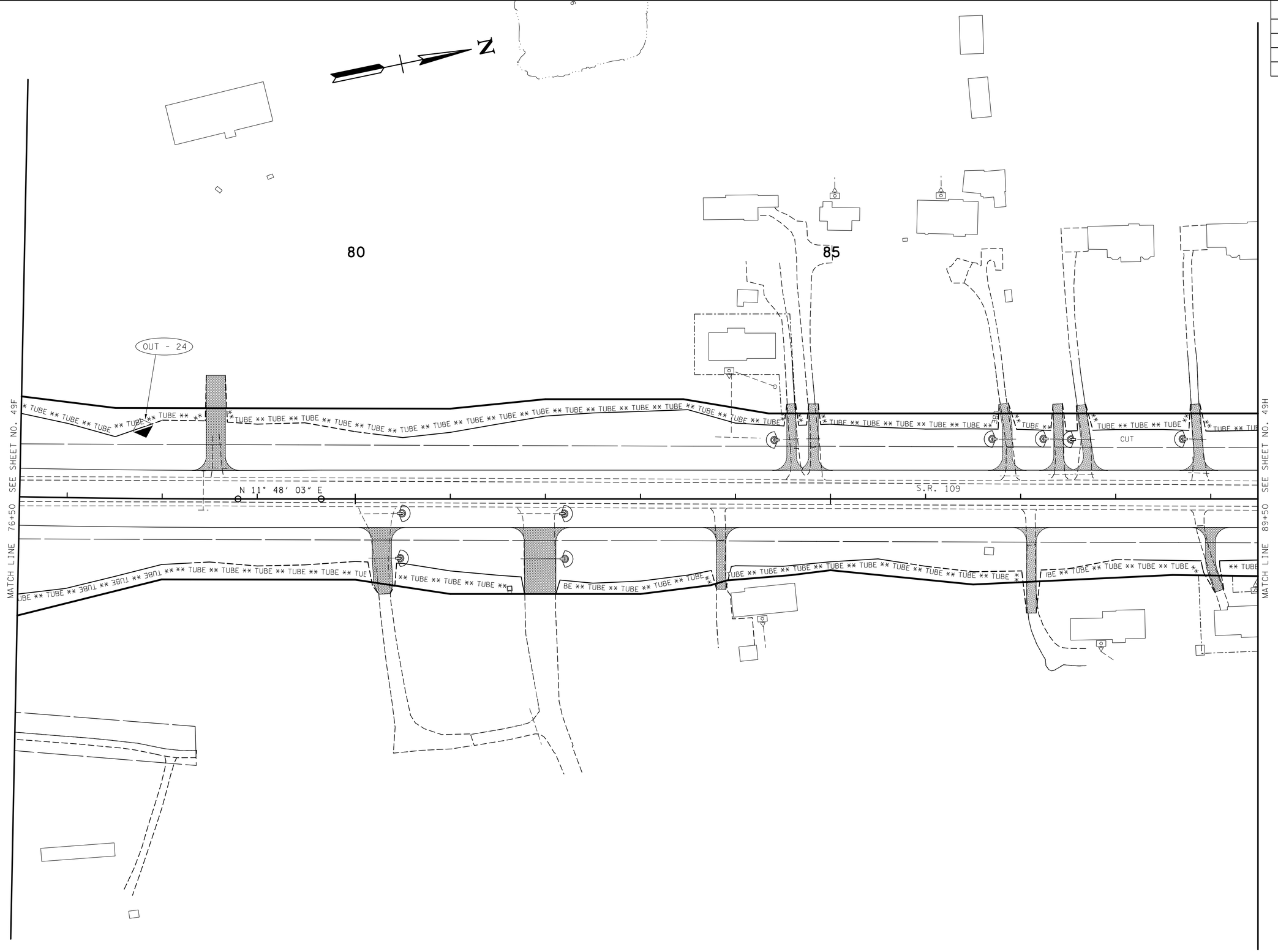
OUT - 22

S 15° 28' 27" E 282.27'

** TUBE ** TUBE ** TUBE ** TUBE ** TUBE ** TUBE ** TUBE ** TUBE ** TUBE SF * SF * SF *

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	49G
CONST.	2017	NH-109(32)	49G



UNOFFICIAL SET

NOT FOR BIDDING

SEALED BY

STAGE II

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 76+50 TO STA. 89+50

SCALE: 1"= 50'

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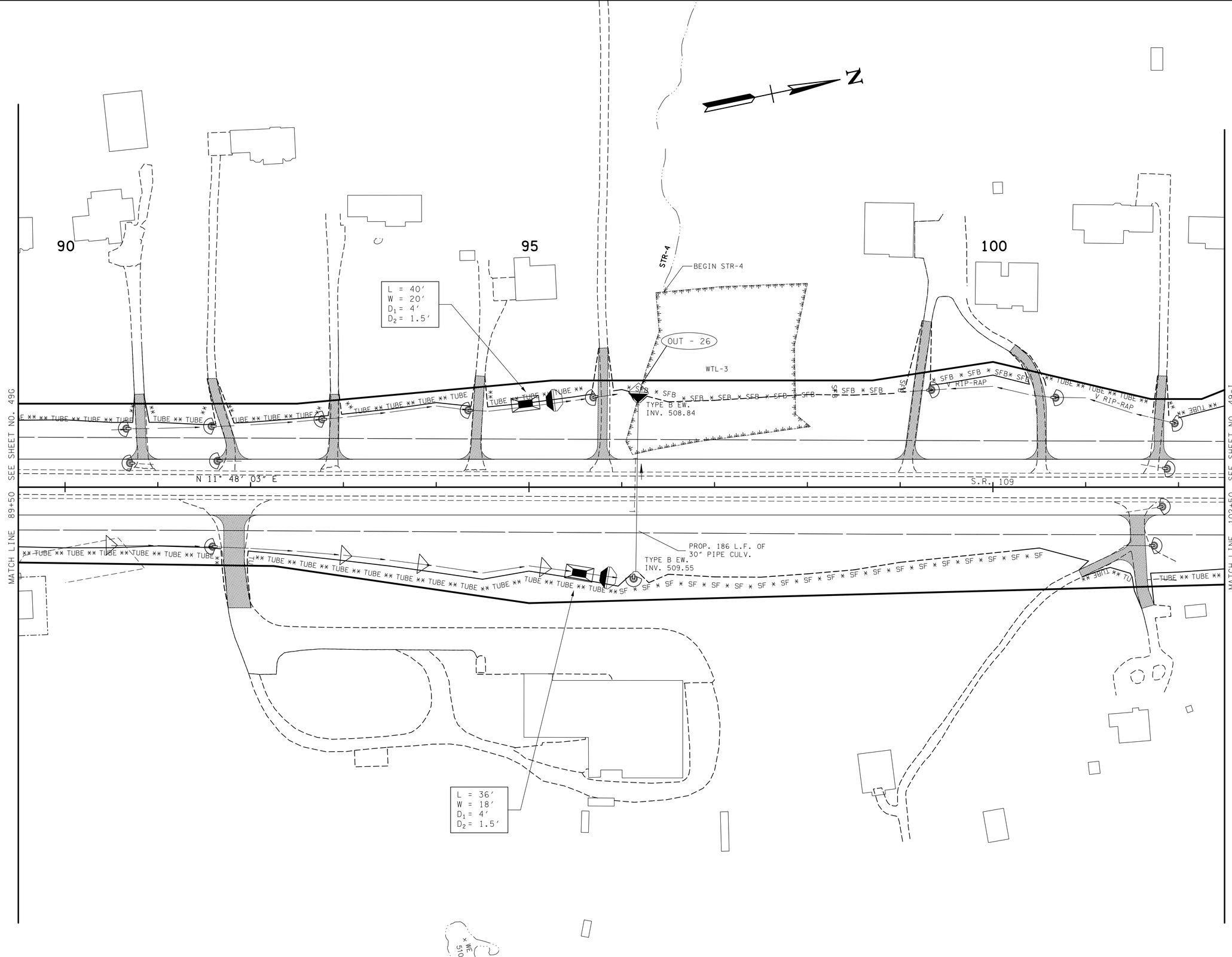
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	49H
CONST.	2017	NH-109(32)	49H



UNOFFICIAL SET

NOT FOR BIDDING

SEALED BY

STAGE II

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 89+50 TO STA. 102+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-109(32)	49-I
CONST.	2017	NH-109(32)	49J

CREIGHTON LANE STA. 12+00.00
N 720108.4826
E 1838592.4820

110

105

115

OUT - 29

OUT - 30

OUT - 31

OUT - 32

OUT - 27

OUT - 28

OUT - 33

L = 28'
W = 14'
D_1 = 4'
D_2 = 3'

L = 28'
W = 14'
D_1 = 4'
D_2 = 2.5'

L = 32'
W = 16'
D_1 = 4'
D_2 = 3'

S.R. 109 STA. 108+21.88=
CREIGHTON LANE STA. 14+84.64
N 720066.7045
E 1838874.0352

END STR-5 IMPACT
STA. 114+77

STR-5

STR-4.5

CREIGHTON LANE
S 81° 33' 35" E

N 11° 48' 03" E

N 7° 54' 01" E

S 83° 16' 14" E

BENDING CHESTNUT DRIVE

TEMPORARY DIVERSION 48" PIPE

S.R. 109

NOTE:
PLACE HIGH VISIBILITY FENCE TO PREVENT IMPACT TO FEATURE (WTL-4).

WTL-4

NOTE:
THIS FEATURE (WTL-4) IS NOT TO BE IMPACTED BY THE PROPOSED WORK.

NOTE:
THIS FEATURE (STR-4.5) IS NOT TO BE IMPACTED BY THE PROPOSED WORK.

S.R. 109 STA. 110+69.85 =
BENDING CHESTNUT DR. STA. 9+67.66
N 720312.3222
E 1839215.1486

BENDING CHESTNUT DR. STA. 15+00.00
N 720249.9417
E 1839436.7936

PND-1

PND-2

MATCH LINE 102+50 SEE SHEET NO. 49H

MATCH LINE 115+50 SEE SHEET NO. 49K

OUTFALL 32 (SEQUENCING NOTES)
ROADWAY SPECIAL DITCH FROM STATION 124+00 TO STATION 141+00 LEFT SHALL BE CONSTRUCTED AND STABILIZED IN THE FOLLOWING SEQUENCE TO ALLOW FOR CLEAN DIVERSION OF OFFSITE STORMWATER THROUGH THE SITE.

1. CONSTRUCT AND STABILIZE FROM STATION 115+00 TO APPROX. STATION 124+00. ONCE STABLE, DIVERT A PORTION OF OUTFALL 36 FLOW (COMING FROM THE WEST) INTO THE NEW DITCH.
2. CONSTRUCT AND STABILIZE FROM STATION 124+00 TO APPROX. STATION 136+50. ONCE STABLE, DIVERT THE REMAINING OUTFALL 36 FLOW INTO THE NEW DITCH.
3. CONSTRUCT AND STABILIZE FROM STATION 136+50 TO STATION 141+00. ONCE STABLE, DIVERT OUTFALL 38 FLOW INTO THE NEW DITCH.

NOTE: EXCAVATION FROM APPROX. STA. 136+50 TO STA. 141+00 IS ASSUMED TO BE ROCK CUT.

UNOFFICIAL SET

NOT FOR BIDDING

SEALED BY

STAGE II

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 102+50 TO STA. 115+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-109(32)	49J
CONST.	2017	NH-109(32)	49K

OUTFALL 32 (SEQUENCING NOTES)
ROADWAY SPECIAL DITCH FROM STATION 124+00 TO STATION 141+00 LEFT SHALL BE CONSTRUCTED AND STABILIZED IN THE FOLLOWING SEQUENCE TO ALLOW FOR CLEAN DIVERSION OF OFFSITE STORMWATER THROUGH THE SITE.

1. CONSTRUCT AND STABILIZE FROM STATION 115+00 TO APPROX. STATION 124+00. ONCE STABLE, DIVERT A PORTION OF OUTFALL 36 FLOW (COMING FROM THE WEST) INTO THE NEW DITCH.
2. CONSTRUCT AND STABILIZE FROM STATION 124+00 TO APPROX. STATION 136+50. ONCE STABLE, DIVERT THE REMAINING OUTFALL 36 FLOW INTO THE NEW DITCH.
3. CONSTRUCT AND STABILIZE FROM STATION 136+50 TO STATION 141+00. ONCE STABLE, DIVERT OUTFALL 38 FLOW INTO THE NEW DITCH.

NOTE: EXCAVATION FROM APPROX. STA. 136+50 TO STA. 141+00 IS ASSUMED TO BE ROCK CUT.

OUTFALL 37 (SEQUENCING NOTES)
ROADWAY SPECIAL DITCH FROM STATION 125+50 TO STATION 140+00 RIGHT SHALL BE CONSTRUCTED AND STABILIZED IN THE FOLLOWING SEQUENCE TO ALLOW FOR CLEAN DIVERSION OF OFFSITE STORMWATER THROUGH THE SITE.

1. CONSTRUCT AND STABILIZE FROM STATION 126+00 TO APPROX. STATION 130+50. MAINTAIN FLOW IN IN EXISTING ROADSIDE DITCH AND UTILIZE EPSC MEASURES IN PROPOSED DITCH UNTIL STABLE.
2. CONSTRUCT AND STABILIZE FROM STATION 130+50 TO APPROX. STATION 136+00. ONCE STABLE, OFFSITE FLOW (FROM THE EAST) WILL USE THE DITCH AS A CLEAN DIVERSION TO OUTFALL 37. THE REMAINING FLOW (FROM THE NORTH) WILL BE MAINTAINED IN THE EXISTING ROADSIDE DITCH.
3. CONSTRUCT AND STABILIZE FROM STATION 136+00 TO STATION 140+00. ONCE STABLE, DIVERT ALL FLOW FOR OUTFALL 37 INTO THE NEW DITCH.

NOTE: EXCAVATION FROM APPROX. STA. 136+00 TO STA. 140+00 IS ASSUMED TO BE ROCK CUT.

120

125

N

L = 32′
W = 16′
D_1 = 4′
D_2 = 3′

L = 32′
W = 16′
D_1 = 4′
D_2 = 1.5′

S.R. 109 STA. 125+12.69 =
BATES ROAD STA.9+80.33
N 721719.9861
E 1839215.1486

ROADWAY SPECIAL DITCH FROM STATION 125+00 TO STATION 136+00 LEFT SHALL BE CONSTUCTED AND STABILIZED TO ALLOW FOR CLEAN DIVERSION OF OFFSITE STORMWATER THROUGH THE SITE.

L = 50′
W = 25′
D_1 = 4′
D_2 = 1.5′

OUT - 36

OUT - 34
BEGIN STR-6 IMPACT
STA. 117+06

BEGIN STR-5 IMPACT
END STR-6 IMPACT
STA. 115+77

P.O.B. STR-6
STA. 117+06

FRENCH DRAIN

N 15° 42′ 04″ E

S.R. 109

MATCH LINE 115+50 SEE SHEET NO. 49J

MATCH LINE 128+50 SEE SHEET NO. 49L

NOTE:
PLACE HIGH VISIBILTY FENCE TO PREVENT IMPACT TO FEATURE (STR 4.5) AND (WTL-5).

NOTE:
THIS FEATURE (STR-4.5) IS NOT TO BE IMPACTED BY THE PROPOSED WORK.

POND
PND-3
W.S. 503.61

NOTE:
THIS FEATURE (WTL-5) AND (STR-5) ARE NOT TO BE IMPACTED BY THE PROPOSED WORK.

OUT - 35

WTL-6

NOTE:
THIS FEATURE (WTL-6) IS NOT TO BE IMPACTED BY THE PROPOSED WORK.

NOTE:
PLACE HIGH VISIBILTY FENCE TO PREVENT IMPACT TO FEATURE (STR-5).

50′ TRANS.
(LT. & RT.)
BEGIN STR-5 IMPACT
STA. 125+07

P.O.B. STR-5
STA.125+07

END STR-5 IMPACT
STA. 123+73

S 84° 23′ 16″ E BATES ROAD

OUT - 37

L = 50′
W = 25′
D_1 = 4′
D_2 = 1.5′

BATES ROAD STA. 13+09.81
N 721687.7649
E 1839543.0520

L = 50′
W = 25′
D_1 = 4′
D_2 = 1.5′

WTL-7
POND
PND-4

UNOFFICIAL SET

NOT FOR BIDDING

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 115+50 TO STA. 128+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-109(32)	49K
CONST.	2017	NH-109(32)	49L

OUTFALL 32 (SEQUENCING NOTES)
ROADWAY SPECIAL DITCH FROM STATION 124+00 TO STATION 141+00 LEFT SHALL BE CONSTRUCTED AND STABILIZED IN THE FOLLOWING SEQUENCE TO ALLOW FOR CLEAN DIVERSION OF OFFSITE STORMWATER THROUGH THE SITE.

1. CONSTRUCT AND STABILIZE FROM STATION 115+00 TO APPROX. STATION 124+00. ONCE STABLE, DIVERT A PORTION OF OUTFALL 36 FLOW (COMING FROM THE WEST) INTO THE NEW DITCH.
2. CONSTRUCT AND STABILIZE FROM STATION 124+00 TO APPROX. STATION 136+50. ONCE STABLE, DIVERT THE REMAINING OUTFALL 36 FLOW INTO THE NEW DITCH.
3. CONSTRUCT AND STABILIZE FROM STATION 136+50 TO STATION 141+00. ONCE STABLE, DIVERT OUTFALL 38 FLOW INTO THE NEW DITCH.

NOTE: EXCAVATION FROM APPROX. STA. 136+50 TO STA. 141+00 IS ASSUMED TO BE ROCK CUT.

POND

N

130 135 140

L = 50′
W = 25′
D_1 = 4′
D_2 = 1.5′

OUT - 38

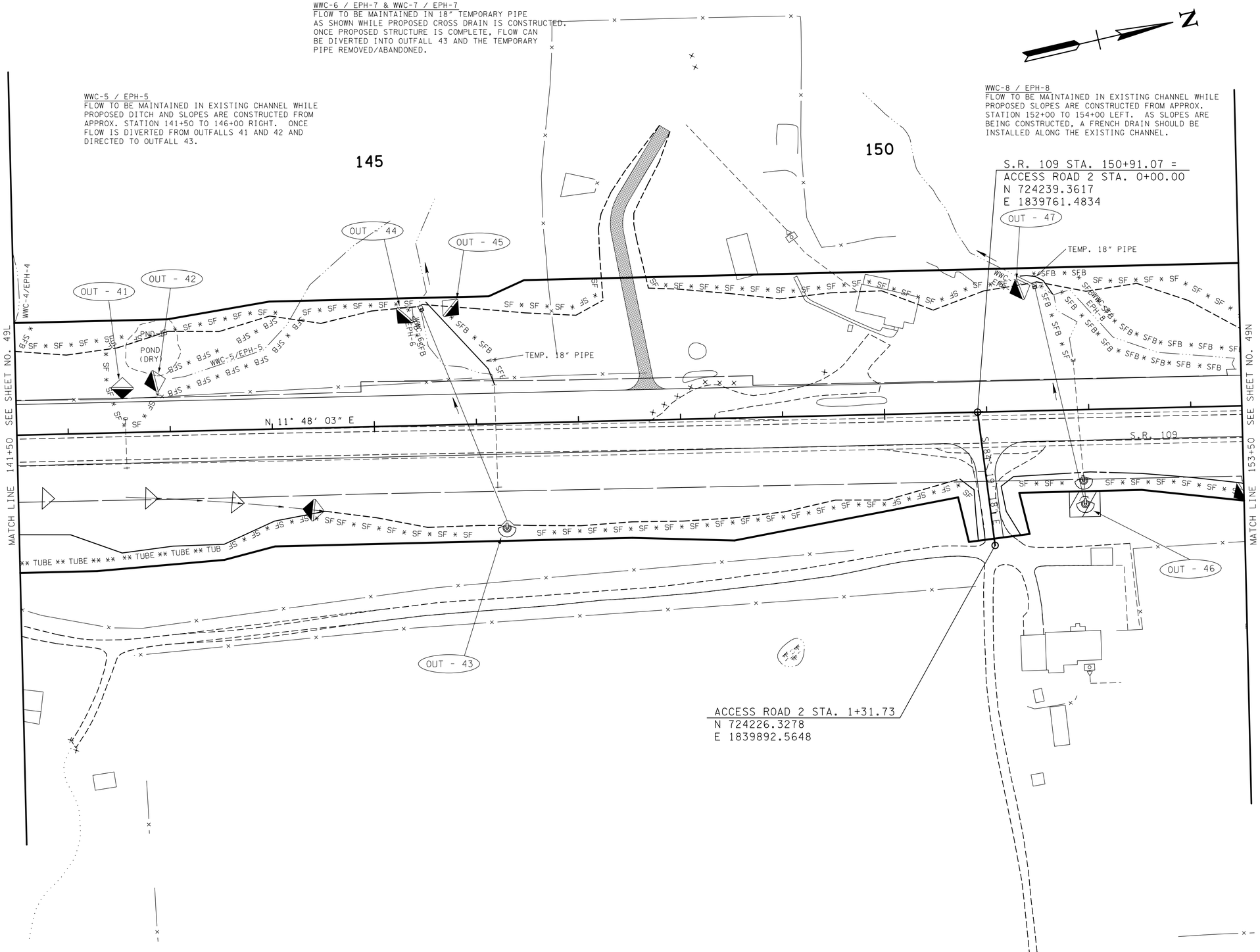
OUT - 40

TUBE ** TUBE ** TUBE **

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	49L
CONST.	2017	NH-109(32)	49M

REV. 10-24-16: DELETED ALIGNMENT FOR ACCESS ROAD NO. 1 AND PVT. DR. RT. ACCESS ROAD NO. 1 STA. 1+50. EROSION CONTROL DEVICES REVISED ACCORDINGLY.



UNOFFICIAL SET
NOT FOR BIDDING

SEALED BY

STAGE II

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 141+50 TO STA. 153+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-109(32)	49M
CONST.	2017	NH-109(32)	49N

BLOODWORTH RD. STA. 14+72.89
N 725161.5332
E 1839410.7703

BLOODWORTH ROAD

OUT - 49

OUT - 50

OUT - 103

OUT - 51

NOTE:
THIS FEATURE (WTL-8) IS NOT TO BE IMPACTED BY THE PROPOSED WORK.

WTL-8

POND
W.S. 580.26
PND-7

POND
WE 546
PND-8

PND-6

155

160

165

MATCH LINE 153+50 SEE SHEET NO. 49M

MATCH LINE 166+00 SEE SHEET NO. 49P

S.R. 109 STA. 159+78.08 =
BLOODWORTH RD. STA. 20+00.00
N 725109.1529
E 1839934.9184

WWC-9 / EPH-9
FLOW TO BE MAINTAINED IN EXISTING CHANNEL (OR TEMPORARY 18" PIPE AS NEEDED) WHILE PROPOSED DITCH IS CONSTRUCTED FROM APPROX. STATION 159+00 TO 169+50 RIGHT. ONCE DITCH IS COMPLETE AND STABLE, FLOW CAN BE DIVERTED INTO THE NEW DITCH.

UNOFFICIAL SET
NOT FOR BIDDING

SEALED BY

STAGE II

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 153+50 TO STA. 166+00
SCALE: 1"= 50'

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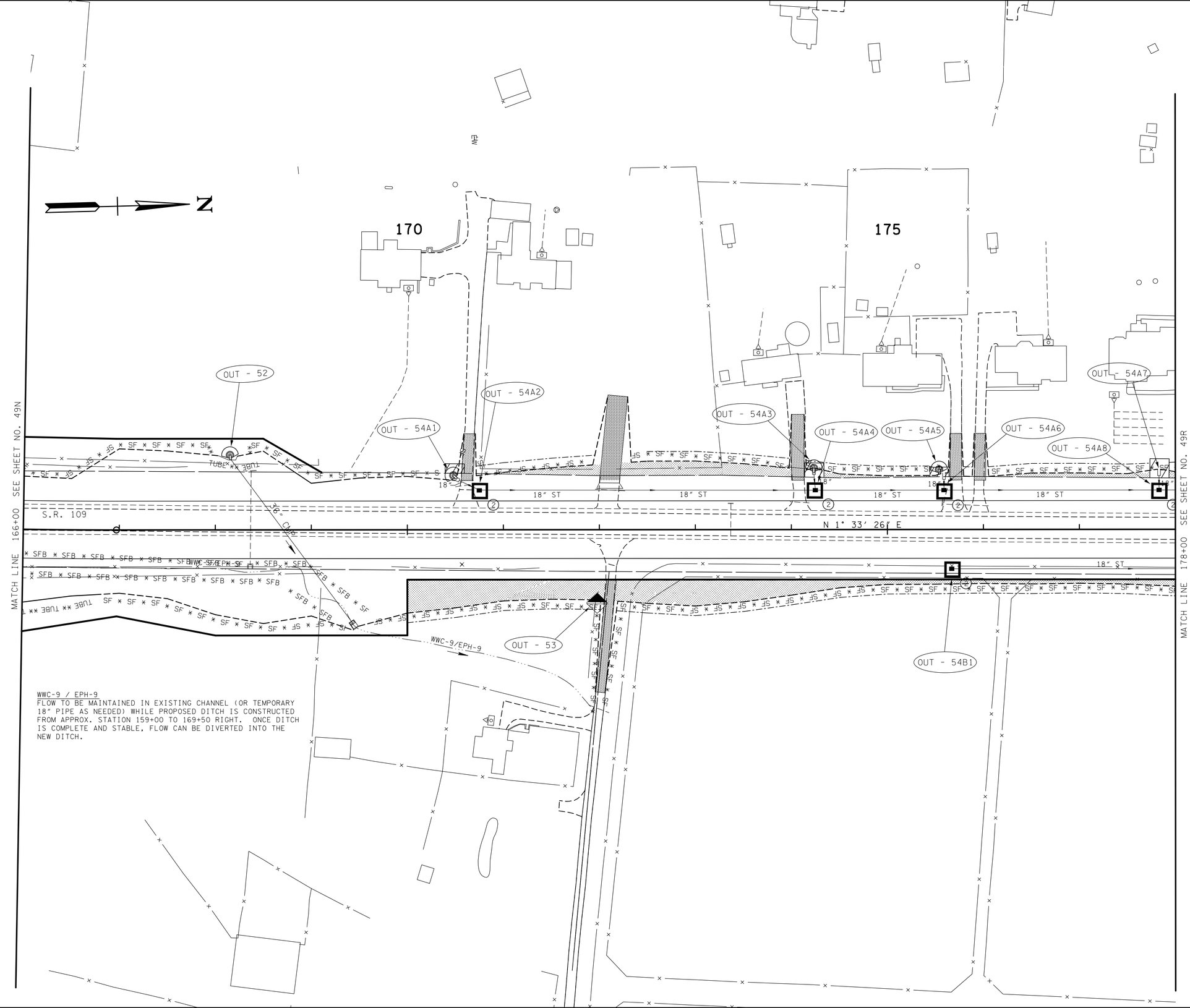
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	49N
CONST.	2017	NH-109(32)	49P



WWC-9 / EPH-9
FLOW TO BE MAINTAINED IN EXISTING CHANNEL (OR TEMPORARY 18" PIPE AS NEEDED) WHILE PROPOSED DITCH IS CONSTRUCTED FROM APPROX. STATION 159+00 TO 169+50 RIGHT. ONCE DITCH IS COMPLETE AND STABLE, FLOW CAN BE DIVERTED INTO THE NEW DITCH.

UNOFFICIAL SET
NOT FOR BIDDING

SEALED BY

STAGE II

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 166+00 TO STA. 178+00

SCALE: 1"= 50'

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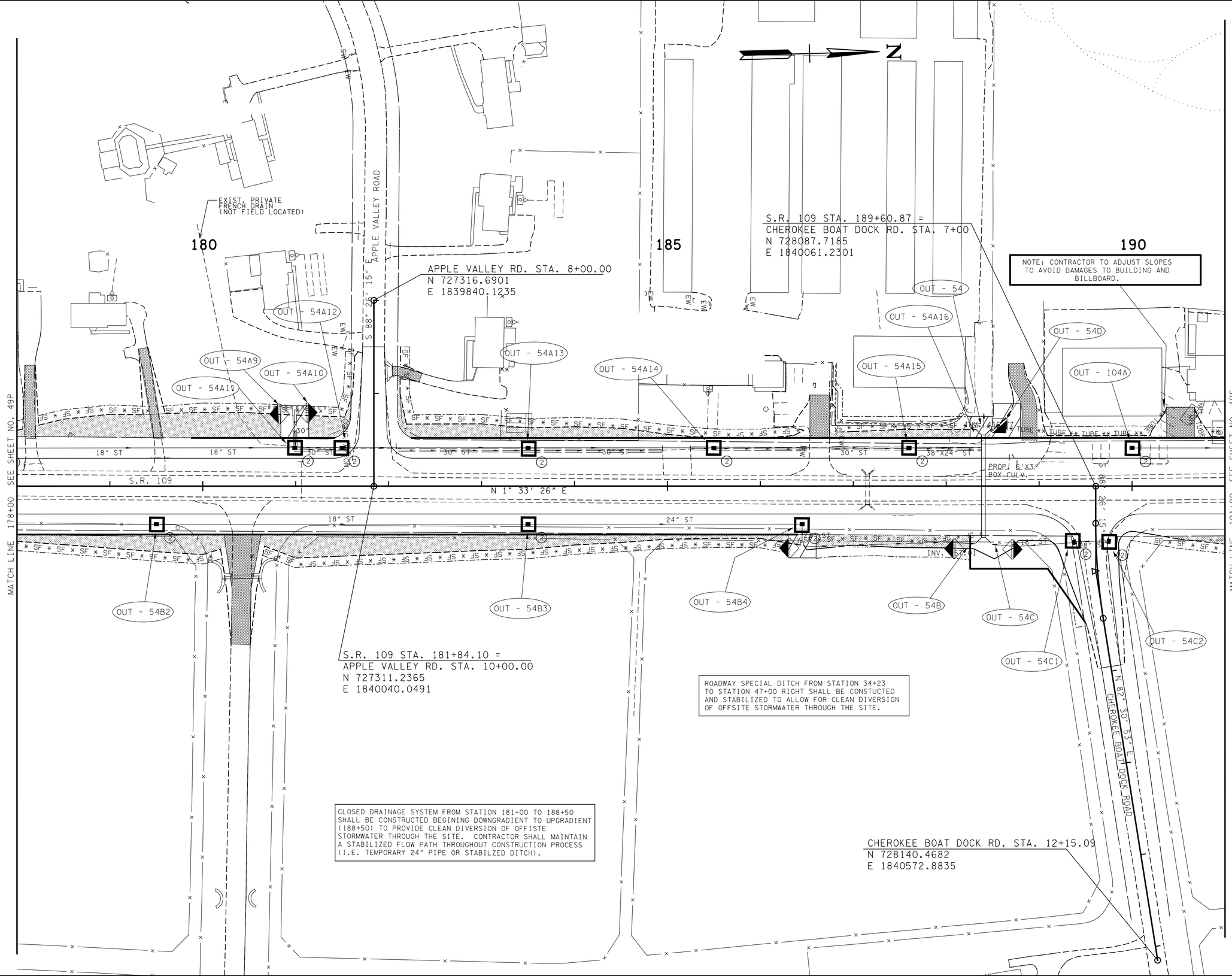
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	49-O
CONST.	2017	NH-109(32)	49R



UNOFFICIAL SET

NOT FOR BIDDING

SEALED BY

STAGE II

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 178+00 TO STA. 191+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-109(32)	49P
CONST.	2017	NH-109(32)	49S

95012-3225-14
END PROJECT NO. NH-109(32) (CONST.)
STA. 194+48.79
N 728575.4660
E 1840074.2830

95012-2222-14
END PROJECT NO. NH-109(32) (R.O.W.)
STA. 194+48.79
N 728575.4660
E 1840074.2830

WILSON ROAD
LAKE DRIVE
OLD HICKORY LAKE
LAK-1
NOTE:
THIS FEATURE (LAK-1) IS NOT TO BE IMPACTED BY THE PROPOSED WORK.
WILSON RD.STA. 2+35.00
N 728551.1139
E 1839810.7135
195
200
OUT - 55
OUT - 56
OUT - 104E
OUT - 104D
OUT - 104
OUT - 104B
OUT - 104C
S 81° 30' 24" E
N 1° 12' 58" E
S.R. 109
MB
TUBE
SF
SILT FENCE
CB
MATCH LINE 191+00 SEE SHEET NO. 49R
S.R. 109 STA. 193+85.28 =
WILSON RD. STA. 5+00.00
N 728511.9780
E 1840072.8031

UNOFFICIAL SET

NOT FOR BIDDING

SEALED BY

STAGE II

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 191+00 TO E.O.P.
SCALE: 1"= 50'

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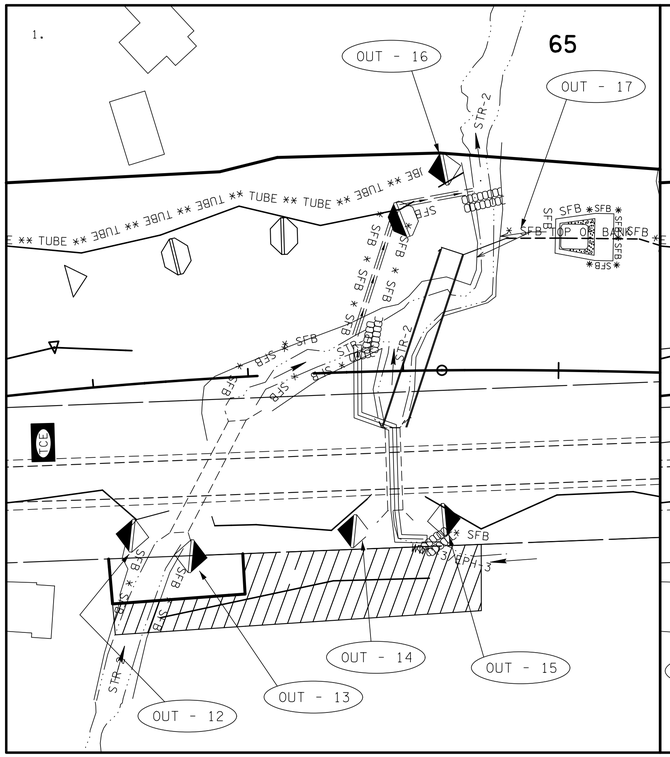
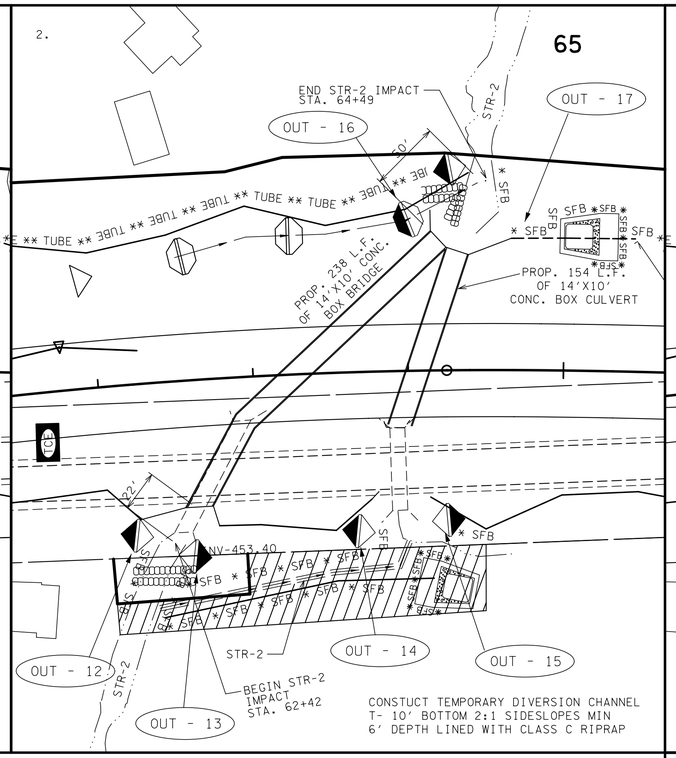
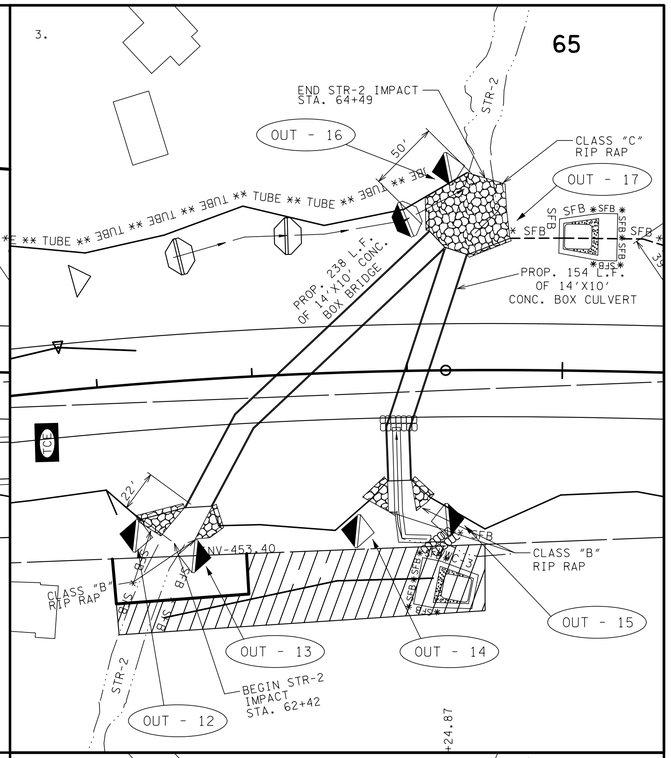
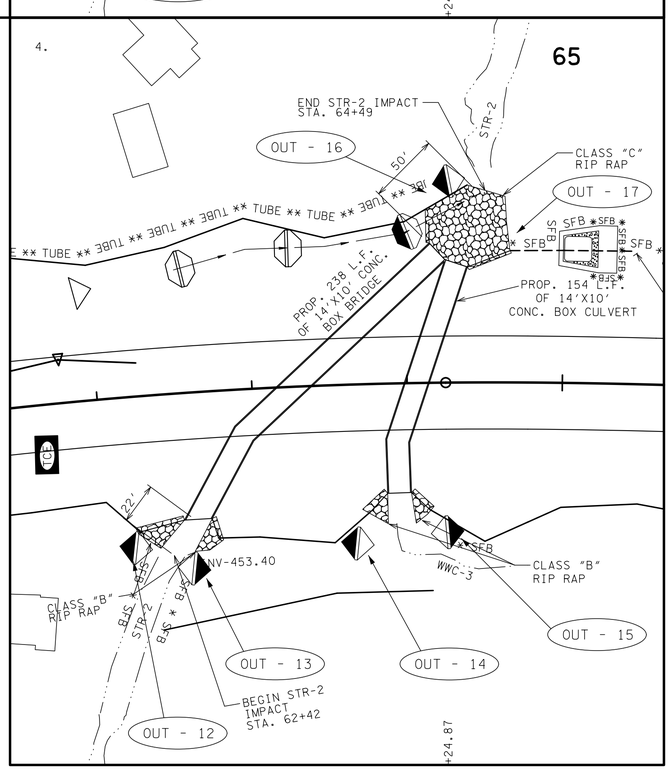
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	49Q
CONST.	2017	NH-109(32)	49T









DIVERSION STAGING

1. AT STATION 64+25.5 INSTALL 30 INCH PIPE DIVERSION THROUGH (10 FOOT X 4 FOOT EXISTING BOX CULVERT) AND PROPOSED WORK AREA. TEMPORARY PLUG SHOULD BE PLACED UPSTREAM AND DOWNSTREAM OF WORK AREA IN ACCORDANCE WITH TDOT STANDARD EC-STR-32. 10 FOOT BOTTOM WIDTH TEMPORARY DIVERSION CHANNEL SHOULD BE CONSTRUCTED FOR OUTLET CONSTRUCTION AS DEPICTED. INSTALL SEDIMENT FILTER BAG AT NEAR OUTLET AS DEPICTED (MINIMUM OF 20 FOOT FROM STREAM CHANNEL).

2. CONSTRUCT 10 FOOT TEMPORARY DIVERSION CHANNEL FROM STATION 63+47.7 (10 FOOT X 4 FOOT EXISTING BOX CULVERT) TO STATION 64+25.5 (10 FOOT X 4 FOOT EXISTING BOX CULVERT). STATION 64+25.5 (10 FOOT X 4 FOOT EXISTING BOX CULVERT) WILL BE USED TO CONVEY FLOW FROM STREAM 2 DURING CONSTRUCTION OF PROPOSED 14 FOOT X 10 FOOT BOX CULVERT AT STATION 63+47.7 (DURING LEFT SIDE AND RIGHT SIDE CONSTUCTION). TEMPORARY PLUG SHOULD BE PLACED AT UPSTREAM AND DOWNSTREAM OF WORK AREA IN ACCORDANCE WITH TDOT STANDARD EC-STR-31. UTILIZE SEDIMENT FILTER BAG INSTALLED IN STAGE 1 AND INSTALL SEDIMENT FILTER BAG AT INLET AS DEPICTED (MINIMUM OF 20 FOOT FROM STREAM CHANNEL).

3. AT STATION 64+25.5 INSTALL 30 INCH PIPE DIVERSION THROUGH (10 FOOT X4 FOOT EXISTING BOX CULVERT) AND PROPOSED WORK AREA. 30 INCH PIPE DIVERSION WILL CONVEY FLOW DURING REMOVAL OF EXISTING BOX AND CONSTRUCTION OF PROPOSED 14 FOOT X 10 FOOT BOX CULVERT AT STATION 64+25.5. TEMPORARY PLUG SHOULD BE PLACED UPSTREAM AND DOWNSTREAM OF WORK AREA IN ACCORDANCE WITH TDOT STANDARD EC-STR-32.

4. AFTER IN-STREAM CONSTRUCTION IS COMPLETE, RESTORE STREAM AND WWC TRANSITIONS TO MATCH EXISTING CONDITIONS (AS CLOSELY AS POSSIBLE). INSTALL RIPRAP AS DEPICTED.

NOTE: BOX CULVERT AT STATION 64+25.5 TEMPORARY DIVERSION PIPE IS DESIGNED FOR ACUTAL (2.5 ACRE) DRAINAGE AREA WITH NO FLOOD CONDTIONS (I.E. NO OVERFLOW FROM STREAM 2 AT BOX CULVERT 63+47.7).

UNOFFICIAL SET

NOT FOR BIDDING

SEALED BY

STAGE II

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

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-109(32)	50
CONST.	2017	NH-109(32)	50

95012-3225-14
BEGIN PROJECT NO. NH-109(32) (CONST.)
STA. 180+50.00
N 708751.8140
E 1837980.8619

95012-2222-14
BEGIN PROJECT NO. NH-109(32) (R.O.W.)
STA. 184+36.86
N 709134.9471
E 1837927.2928

STA. 180+07.17 S.R. 109
= STA. 51+00.00 DOUBLE LOG CABIN ROAD
N 708709.3958
E 1837986.4927

STA. 175+13.64 S.R. 109
= STA. 50+00.00 BURTON ROAD
N 708220.6223
E 1838055.1324

180

185

N 74° 02' 34" E

N 82° 02' 26" E

N 7° 57' 34" W

S 82° 02' 26" W

S 84° 39' 47" E

BURTON ROAD

S.R. 109

DOUBLE LOG CABIN ROAD

OLD LAGUARDO ROAD - EAST

DRY FORK BRANCH

(BY OTHERS)
PROP.
38" x 24"
R.C.P.

(BY OTHERS)
PROP.
46018" R.C.P.

PROP.
30" x 18"
R.C.P.
INV. 453.30

OUT - 101

BEGIN OFFSET PLAN
STA. 180+50

WTL-1

NOTE:
THIS FEATURE (WTL-1) IS NOT TO BE IMPACTED BY THE PROPOSED WORK.

MATCH LINE 186+00 SEE SHEET NO. 50A

UNOFFICIAL SET
NOT FOR BIDDING

SEALED BY

STAGE III

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

P.O.B. TO STA.186+00
SCALE: 1"= 50'

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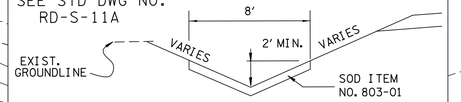
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	50A
CONST.	2017	NH-109(32)	50A

FOR DETAILS
NOT SHOWN
SEE STD DWG NO.
RD-S-11A



SEE CROSS SECTIONS FOR INVERTS AND SIDESLOPES
PROP. V SOD DITCH
STA. 189+90 TO STA. 193+00 LT.
STA. 199+00 TO STA. 203+25 LT.

190

195

STA. 186+00 SEE SHEET NO. 50

MATCH LINE

MATCH LINE 199+00 SEE SHEET NO. 50B

PROP. 36" PIPE CULV.

S.R. 109

N 7° 57' 34" W

INV. 448.1

OUT - 102

NOTE:
THIS FEATURE (WTL-1) IS NOT TO BE IMPACTED BY THE PROPOSED WORK.

WTL-1

DRY FORK BRANCH

OLD HICKORY LAKE

UNOFFICIAL SET
NOT FOR BIDDING

SEALED BY

STAGE III

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA.186+00 TO STA.199+00

SCALE: 1"= 50'

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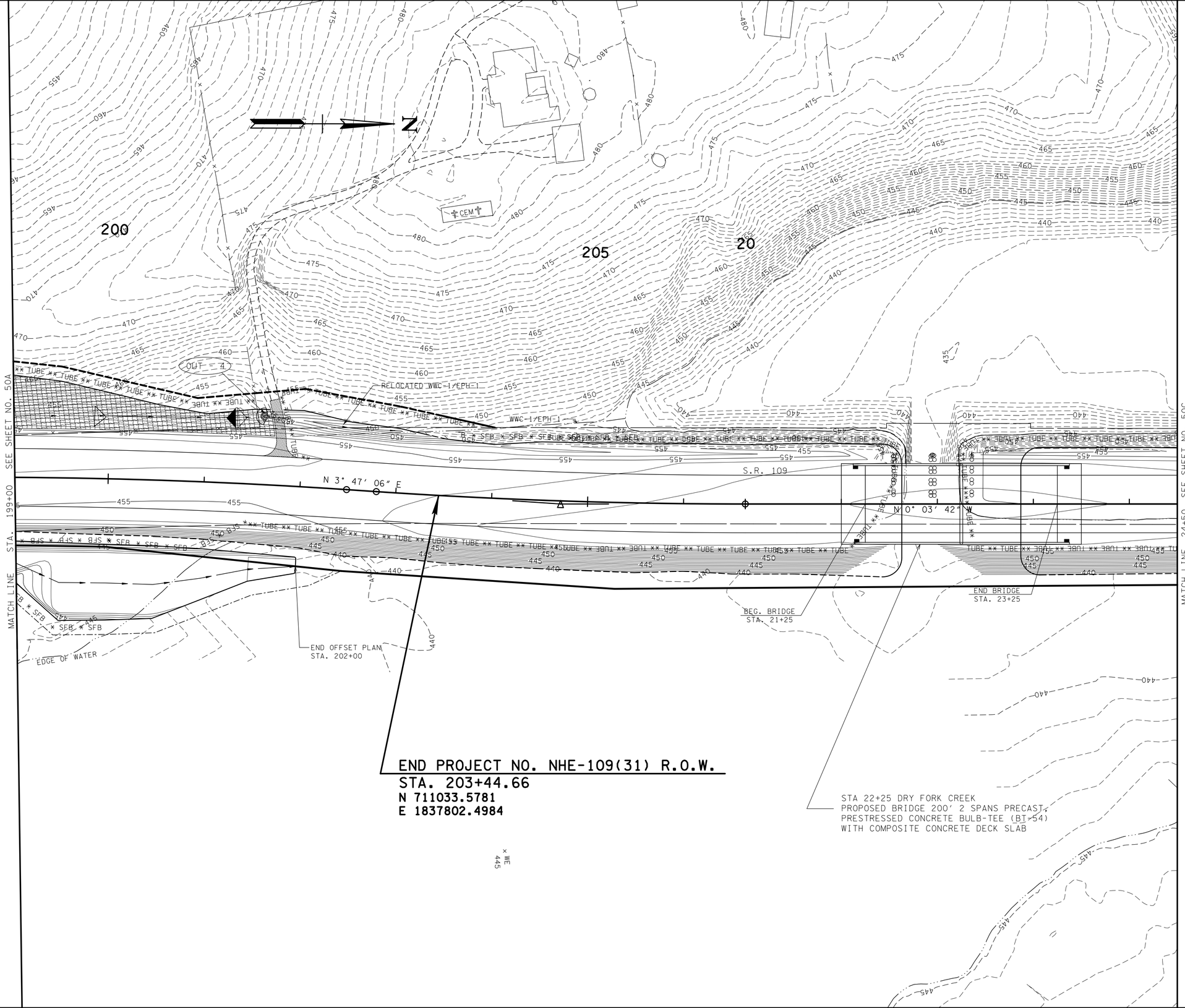
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	50B
CONST.	2017	NH-109(32)	50B



END PROJECT NO. NHE-109(31) R.O.W.
STA. 203+44.66
N 711033.5781
E 1837802.4984

STA 22+25 DRY FORK CREEK
PROPOSED BRIDGE 200′ 2 SPANS PRECAST,
PRESTRESSED CONCRETE BULB-TEE (BT-54)
WITH COMPOSITE CONCRETE DECK SLAB

UNOFFICIAL SET

NOT FOR BIDDING

SEALED BY

STAGE III

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 199+00 TO STA. 24+50

SCALE: 1"= 50'

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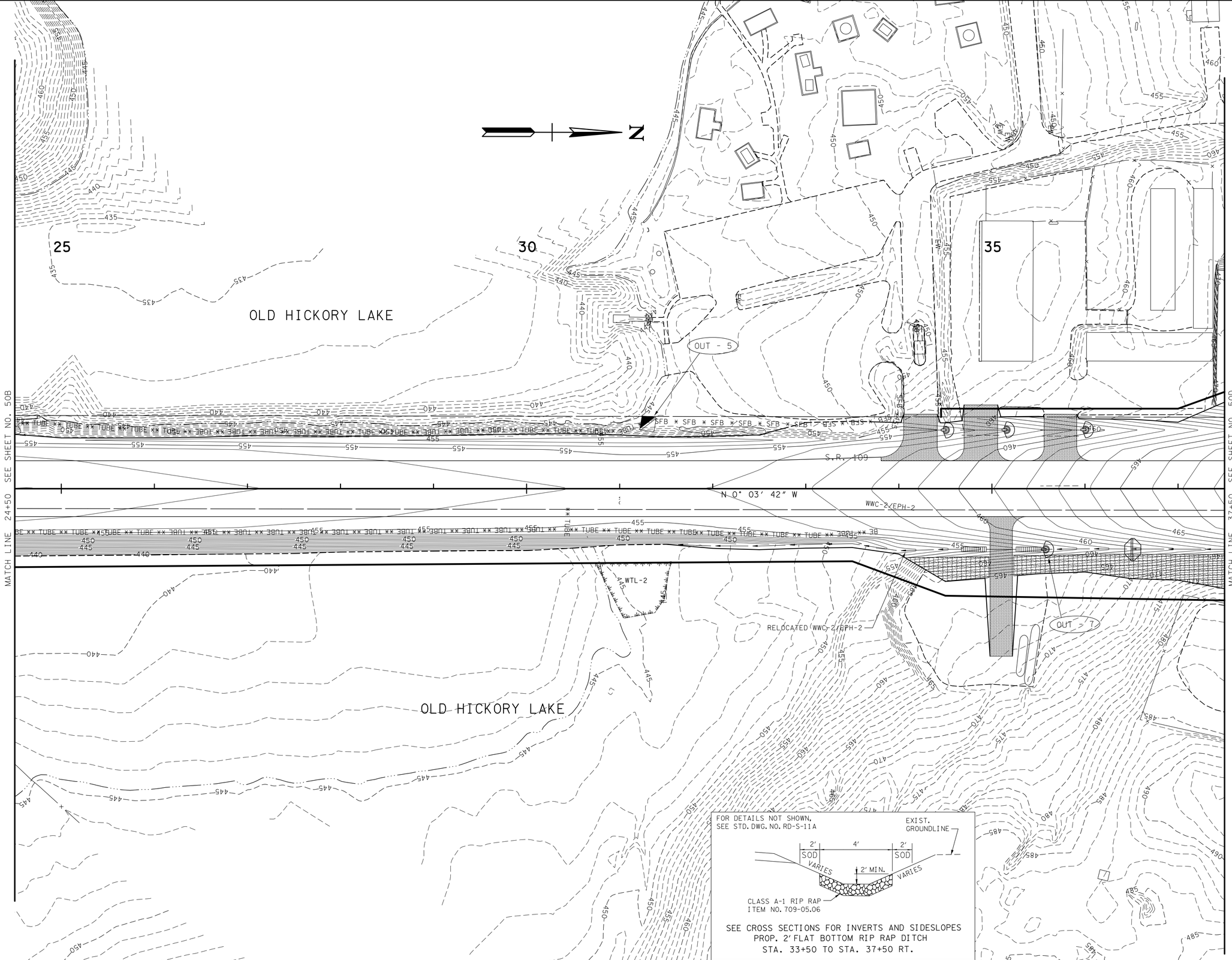
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	50C
CONST.	2017	NH-109(32)	50C



UNOFFICIAL SET

NOT FOR BIDDING

SEALED BY

STAGE III

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 24+50 TO STA. 37+50

SCALE: 1"= 50'

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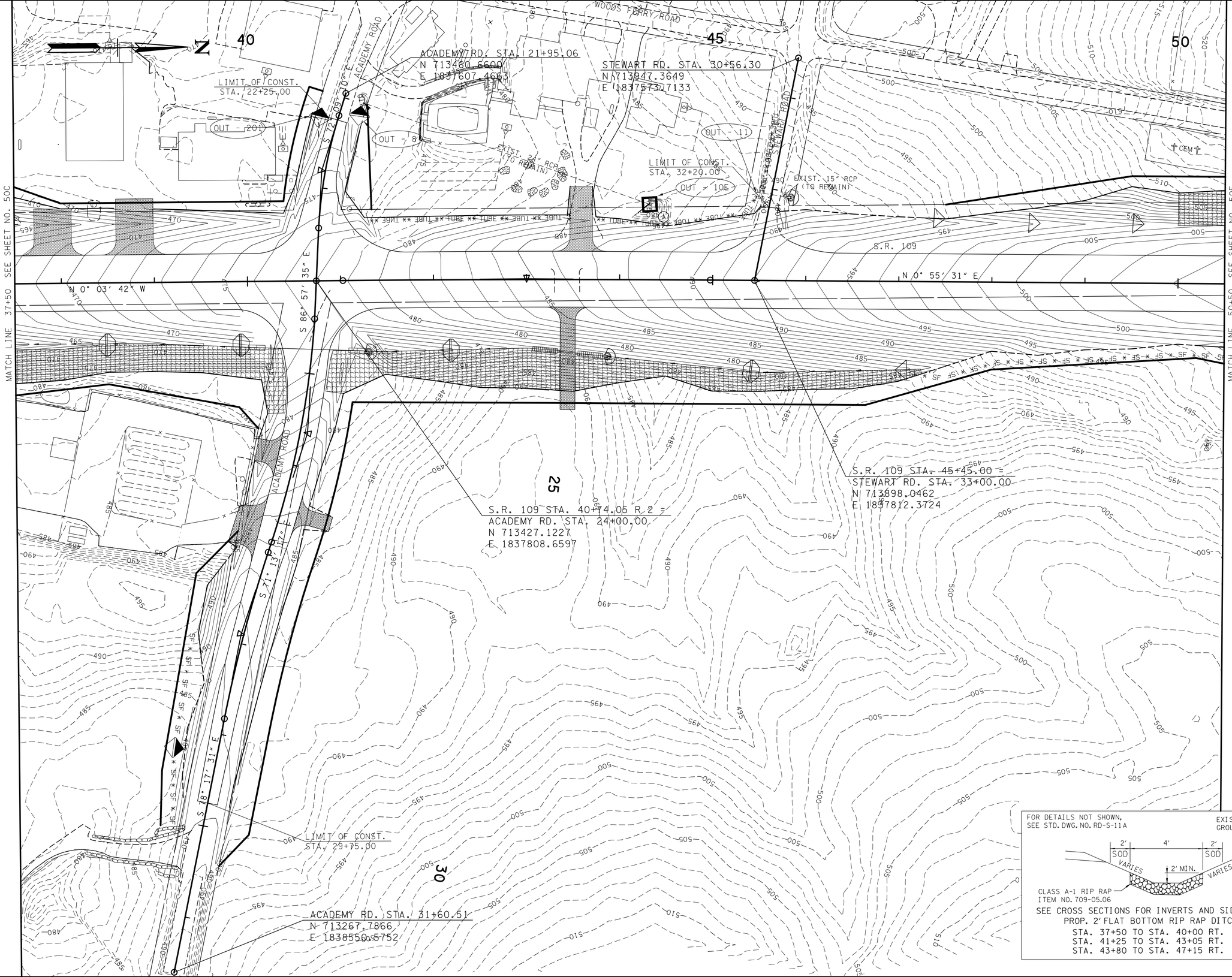
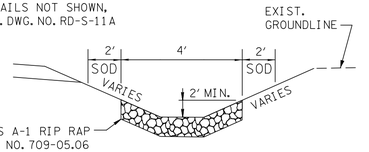
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	50D
CONST.	2017	NH-109(32)	50D



FOR DETAILS NOT SHOWN, SEE STD. DWG. NO. RD-S-11A



SEE CROSS SECTIONS FOR INVERTS AND SIDESLOPES
PROP. 2' FLAT BOTTOM RIP RAP DITCH
STA. 37+50 TO STA. 40+00 RT.
STA. 41+25 TO STA. 43+05 RT.
STA. 43+80 TO STA. 47+15 RT.

UNOFFICIAL SET
NOT FOR BIDDING

SEALED BY

STAGE III

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 37+50 TO STA. 50+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-109(32)	50E
CONST.	2017	NH-109(32)	50E

WOODS FERRY CON. STA. 3+91.20
N 714855.8101
E 1837720.2091

55

60

WOODS FERRY ROAD

LIMIT OF CONST.
STA. 3+91.2

INV. 494.35

N 82° 27' 51" E

N 0° 55' 31" E

SEE SHEET NO. 50D

MATCH LINE 50+50

S.R.109 STA. 55+17.16 =
WOODS FERRY CON. STA. 5+00.00
N 714870.0789
E 1837828.0699

SEE SHEET NO. 50F

MATCH LINE 63+50

END STA.

INV. 463.40

BEGIN STR-2 IMPACT STA. 62+42

TOP OF BANK

STR-2

EXIST. GROUNDLINE

FOR DETAILS NOT SHOWN, SEE STD. DWG. NO. RD-S-11A

2' SOD | 4' | 2' SOD

VARIES | 2' MIN. | VARIES

CLASS A-1 RIP RAP
ITEM NO. 709-05.06

SEE CROSS SECTIONS FOR INVERTS AND SIDESLOPES
PROP. 2' FLAT BOTTOM RIP RAP DITCH
STA. 62+20 TO STA. 64+15 LT.

UNOFFICIAL SET

NOT FOR BIDDING

SEALED BY

STAGE III

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 50+50 TO STA. 63+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-109(32)	50F
CONST.	2017	NH-109(32)	50F

TYREE ACCESS RD. STA. 0+00.00
N 716262.9030
E 1837520.6937

LIMIT OF CONST.
STA. 10+10.00

S.R. 109 STA. 68+75.38 =
TYREE ACCESS RD. STA. 5+23.44
N 716204.4396
E 1838038.0091

S.R. 109 STA. 68+73.08 =
NW WILLIAMS RD. STA. 10+00.00
N 716202.2296
E 1838037.3536

NW WILLIAMS RD STA. 10+75.08
N 716183.4287
E 1838110.0465

N 16° 31' 23" E

N 69° 15' 00" E

S 73° 28' 37" E

S 16° 31' 23" W

S 69° 15' 00" W

TYREE ACCESS ROAD

NW WILLIAMS ROAD

CAGES FERRY ROAD

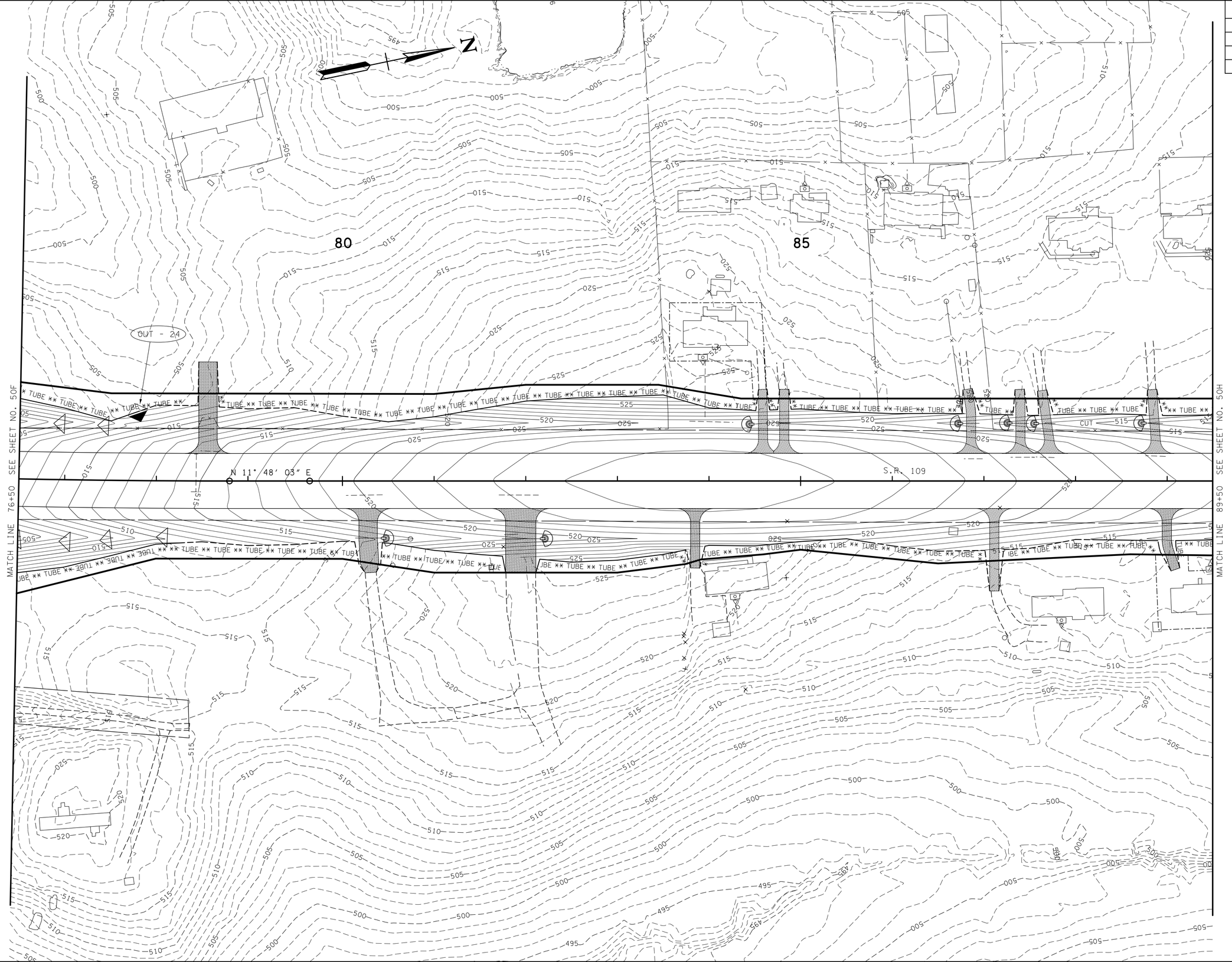
S.R. 109

OUT - 14
OUT - 15
OUT - 16
OUT - 17
OUT - 18
OUT - 19
OUT - 20
OUT - 21
OUT - 22
OUT - 23

CLASS "A" RIP RAP
CLASS "B" RIP RAP
CLASS "C" RIP RAP
TOP OF BANK
END STR-3 IMPACT STA. 65+68
BEGIN STR-3 IMPACT STA. 66+90
STR-2 IMPACT 62+49
STR-2
STR-3
CONC. BOX CULVERT
SF * SFB * SFB * SFB * SFB * SFB * SFB * SFB * SFB
TUBE ** TUBE ** TUBE **

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	50G
CONST.	2017	NH-109(32)	50G



UNOFFICIAL SET

NOT FOR BIDDING

SEALED BY

STAGE III

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 76+50 TO STA. 89+50

SCALE: 1"= 50'

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TENNESSEE D.O.T.

DESIGN DIVISION

FILE NO.

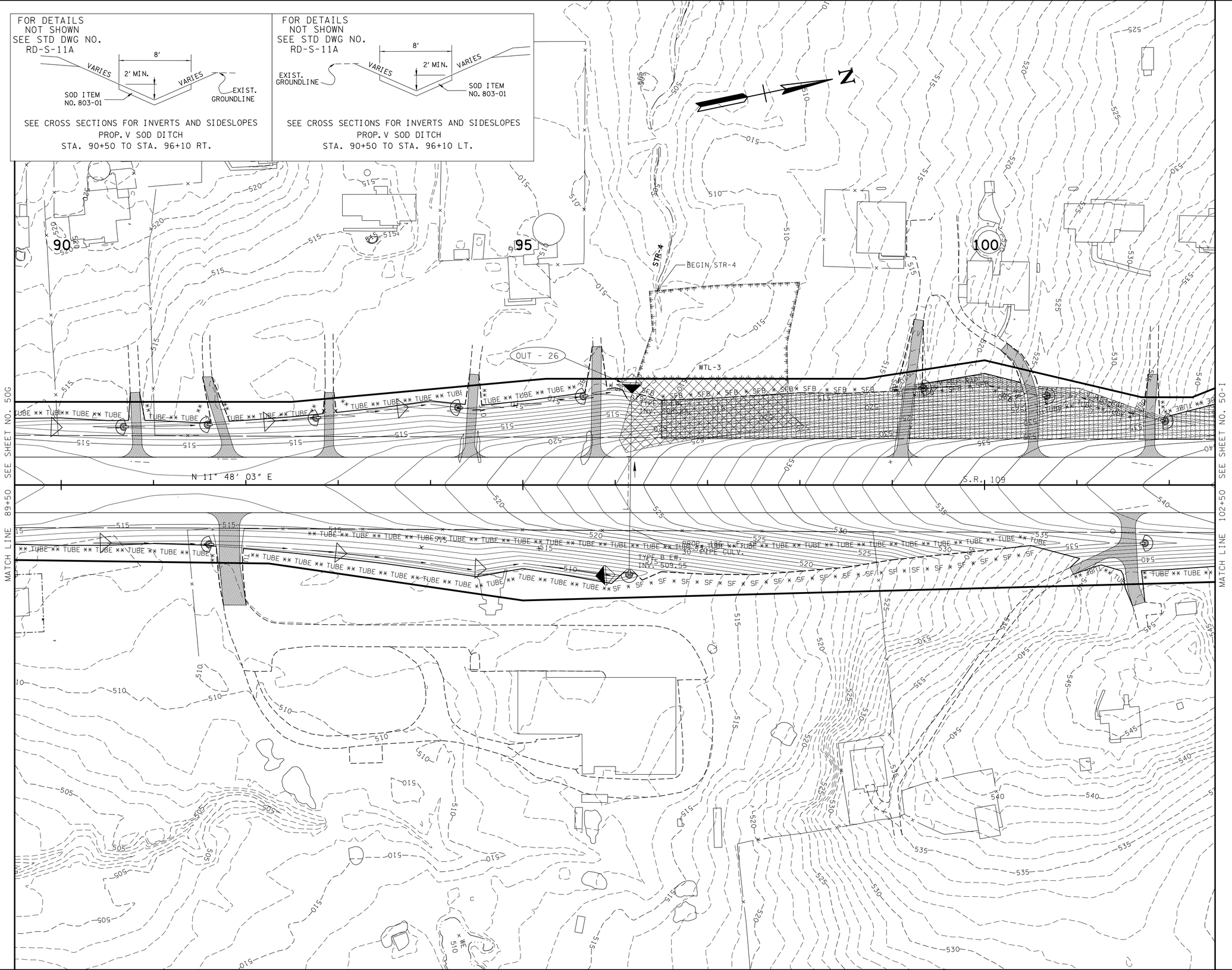
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	50H
CONST.	2017	NH-109(32)	50H

FOR DETAILS
NOT SHOWN
SEE STD DWG NO.
RD-S-11A

SEE CROSS SECTIONS FOR INVERTS AND SIDESLOPES
PROP. V SOD DITCH
STA. 90+50 TO STA. 96+10 RT.

FOR DETAILS
NOT SHOWN
SEE STD DWG NO.
RD-S-11A

SEE CROSS SECTIONS FOR INVERTS AND SIDESLOPES
PROP. V SOD DITCH
STA. 90+50 TO STA. 96+10 LT.



UNOFFICIAL SET

NOT FOR BIDDING

SEALED BY

STAGE III

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 89+50 TO STA. 102+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-109(32)	50-I
CONST.	2017	NH-109(32)	50J

EXIST. GROUNDLINE
2' SOD 4' 2' SOD
2' MIN.
VARIES VARIES
CLASS A-1 RIP RAP
ITEM NO. 709-05.06

FOR DETAILS NOT SHOWN, SEE STD. DWG. NO. RD-S-11A

SEE CROSS SECTIONS FOR INVERTS AND SIDESLOPES
PROP. 2' FLAT BOTTOM RIP RAP DITCH
STA. 110+50 TO STA. 118+00 LT.

CREIGHTON LANE STA. 12+00.00
N 720108.4826
E 1838592.4820

S.R. 109 STA. 108+21.88 =
CREIGHTON LANE STA. 14+84.64
N 720066.7045
E 1838874.0352

S.R. 109 STA. 110+69.85 =
BENDING CHESTNUT DR. STA. 9+67.66
N 720312.3222
E 1839215.1486

BENDING CHESTNUT DR. STA. 15+00.00
N 720249.9417
E 1839436.7936

CREIGHTON LANE
S 81° 33' 35" E
N 7° 54' 01" E
N 11° 48' 03" E
BENDING CHESTNUT DRIVE
S 83° 16' 14" E

105 110 115

L = 28'
W = 14'
D_1 = 4'
D_2 = 2.5'

L = 32'
W = 16'
D_1 = 4'
D_2 = 3'

L = 28'
W = 14'
D_1 = 4'
D_2 = 3'

END STR-5 IMPACT
STA. 114+77

OUT - 29
OUT - 30
OUT - 31
OUT - 32
OUT - 33
OUT - 27
OUT - 28

PND-1
PND-2

TUBE ** TUBE ** TUBE **

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	50J
CONST.	2017	NH-109(32)	50K

MATCH LINE 115+50 SEE SHEET NO. 50J

MATCH LINE 128+50 SEE SHEET NO. 50L

L = 32'
W = 16'
D_1 = 4'
D_2 = 3'

L = 32'
W = 16'
D_1 = 4'
D_2 = 1.5'

120

125

S.R. 109 STA. 125+12.69
BATES ROAD STA. 9+80.33
N 721719.9861
E 1839215.1486

L = 50'
W = 25'
D_1 = 4'
D_2 = 1.5'

BEGIN STR-6 IMPACT
STA. 117+06

END STR-6 IMPACT
STA. 119+77

FRENCH DRAIN

N 15° 42' 04" E

S.R. 109

WTL-7

POND

50' TRANS.
(LT. & RT.)
BEGIN STR-5 IMPACT
STA. 125+07

END STR-5 IMPACT
STA. 123+73

S 87° 23' 16" E

BATES ROAD

BATES ROAD STA. 13+09.81
N 721687.7649
E 1839543.0520

L = 50'
W = 25'
D_1 = 4'
D_2 = 1.5'

L = 50'
W = 25'
D_1 = 4'
D_2 = 1.5'

OUT - 35

OUT - 37

WTL-5

WTL-6

STR-5

STR-4.5

NOTE:
PLACE HIGH VISIBILITY FENCE TO PREVENT IMPACT TO FEATURE (STR-4.5) AND (WTL-5).

NOTE:
THIS FEATURE (STR-4.5) IS NOT TO BE IMPACTED BY THE PROPOSED WORK.

NOTE:
THIS FEATURE (WTL-5) AND (STR-5) ARE NOT TO BE IMPACTED BY THE PROPOSED WORK.

NOTE:
THIS FEATURE (WTL-6) IS NOT TO BE IMPACTED BY THE PROPOSED WORK.

NOTE:
PLACE HIGH VISIBILTY FENCE TO PREVENT IMPACT TO FEATURE (STR-5).

EXIST. GROUNDLINE

FOR DETAILS NOT SHOWN, SEE STD. DWG. NO. RD-S-11A

2' SOD | 2' | 2' SOD
2' MIN.
VARIES
CLASS A-1 RIP RAP ITEM NO. 709-05.06

SEE CROSS SECTIONS FOR INVERTS AND SIDESLOPES
PROP. 2' FLAT BOTTOM RIP RAP DITCH
STA. 124+00 TO STA. 128+50 RT.
STA. 115+00 TO STA. 118+00 LT.

FOR DETAILS NOT SHOWN SEE STD DWG NO. RD-S-11A

2' | 6' | 2'
2' MIN.
VARIES
EXIST. GROUNDLINE
CLASS A-1 RIP RAP ITEM NO. 709-05.06 (18" DEPTH)
SOD ITEM NO. 803-01

SEE CROSS SECTIONS FOR INVERTS AND SIDESLOPES
PROP. V RIP RAP DITCH
STA. 118+00 TO STA. 120+50 LT.
STA. 125+13 TO STA. 128+50 LT.

UNOFFICIAL SET
NOT FOR BIDDING

SEALED BY

STAGE III

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 115+50 TO STA. 128+50

SCALE: 1"= 50'

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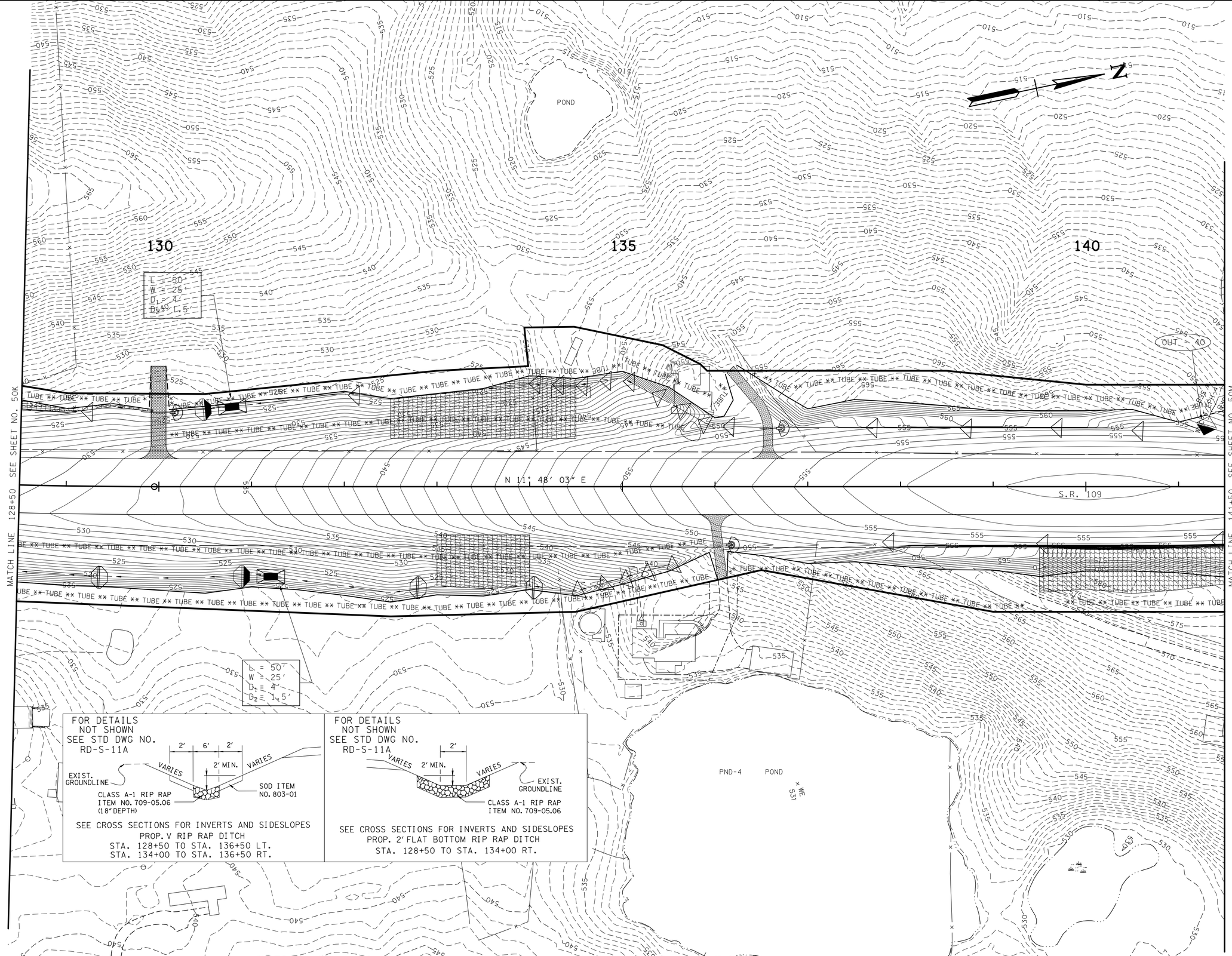
TENNESSEE D.O.T.

DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	50K
CONST.	2017	NH-109(32)	50L



UNOFFICIAL SET

NOT FOR BIDDING

SEALED BY

STAGE III

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 128+50 TO STA. 141+50

SCALE: 1"= 50'

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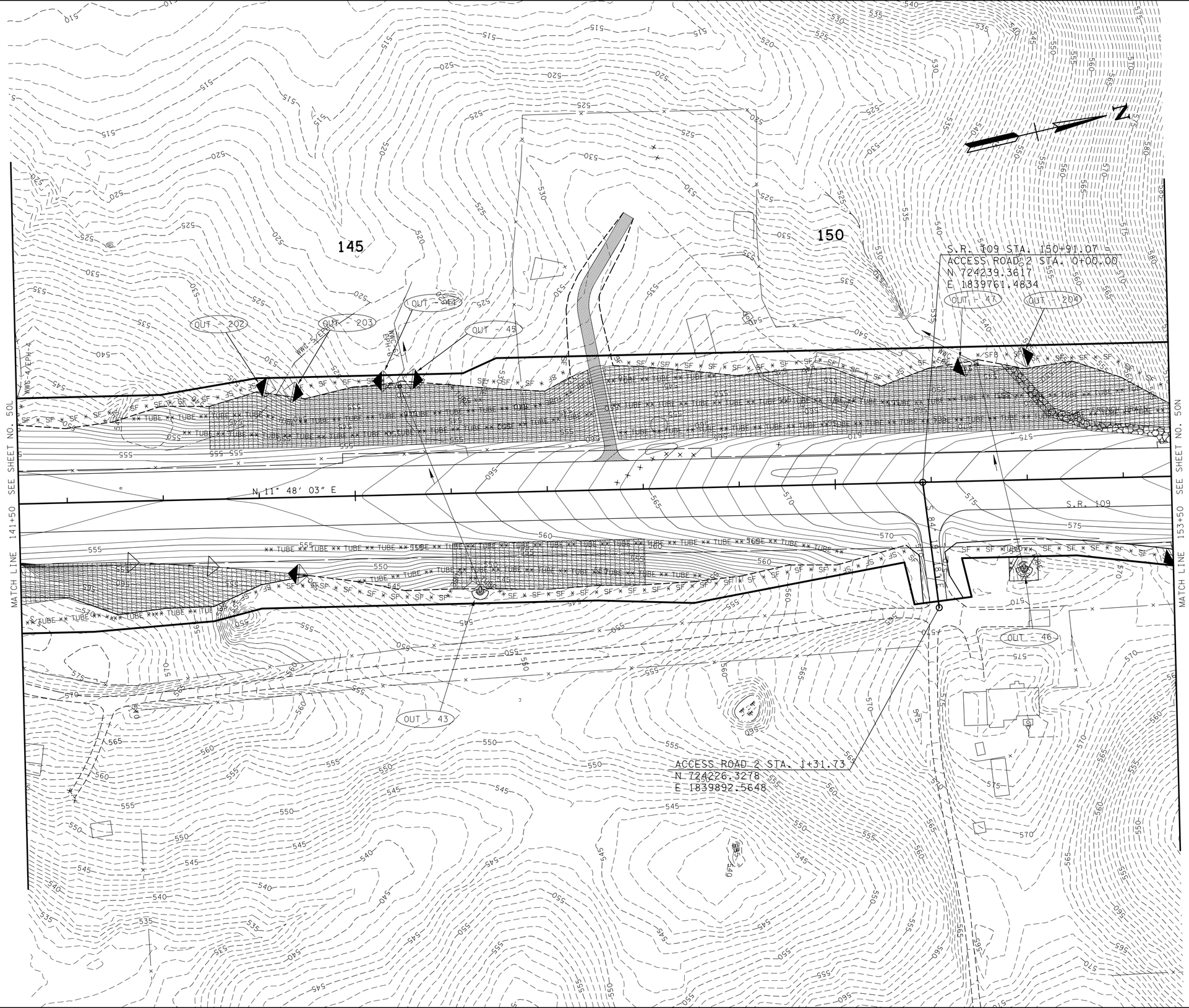
TENNESSEE D.O.T.

DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	50L
CONST.	2017	NH-109(32)	50M

REV. 10-24-16: DELETED ALIGNMENT FOR ACCESS ROAD NO. 1. PROPOSED CONTOURS, SLOPE LINES, AND EROSION CONTROL DEVICES ADJUSTED ACCORDINGLY.



UNOFFICIAL SET

NOT FOR BIDDING

SEALED BY

STAGE III

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 141+50 TO STA. 153+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-109(32)	50M
CONST.	2017	NH-109(32)	50N

BLOODWORTH RD. STA. 14+72.89
N 725161.5332
E 1839410.7703

N

NOTE:
THIS FEATURE, (WTL-8)
IS NOT TO BE IMPACTED
BY THE PROPOSED WORK.

WTL-8

155

160

165

15

POND
S. 580.26
PND-7

POND
WE
546
PND-8

OUT - 49

OUT - 50

OUT - 51

OUT - 103

12" E

MATCH LINE 153+50 SEE SHEET NO. 50M

MATCH LINE 166+00 SEE SHEET NO. 50P

RELOCATED WWC-9/EPH-9

S.R. 109 STA. 159+78.08 = 550
BLOODWORTH RD. STA. 20+00.00
N 725109.1529
E 1839934.9184

UNOFFICIAL SET
NOT FOR BIDDING

SEALED BY

STAGE III

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 153+50 TO STA. 166+00

SCALE: 1"= 50'

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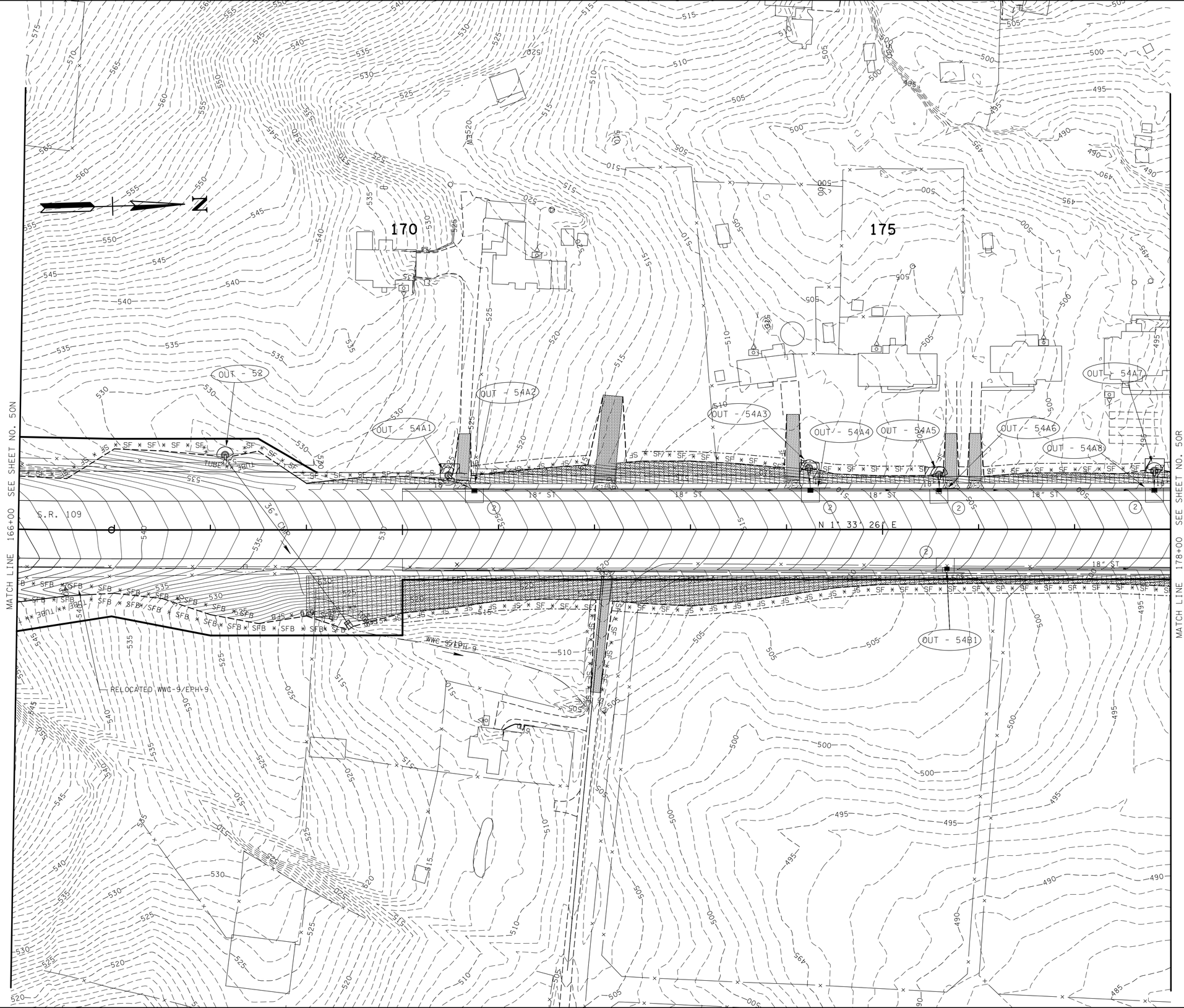
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	50N
CONST.	2017	NH-109(32)	50P



UNOFFICIAL SET

NOT FOR BIDDING

SEALED BY

STAGE III

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 166+00 TO STA. 178+00

SCALE: 1"= 50'

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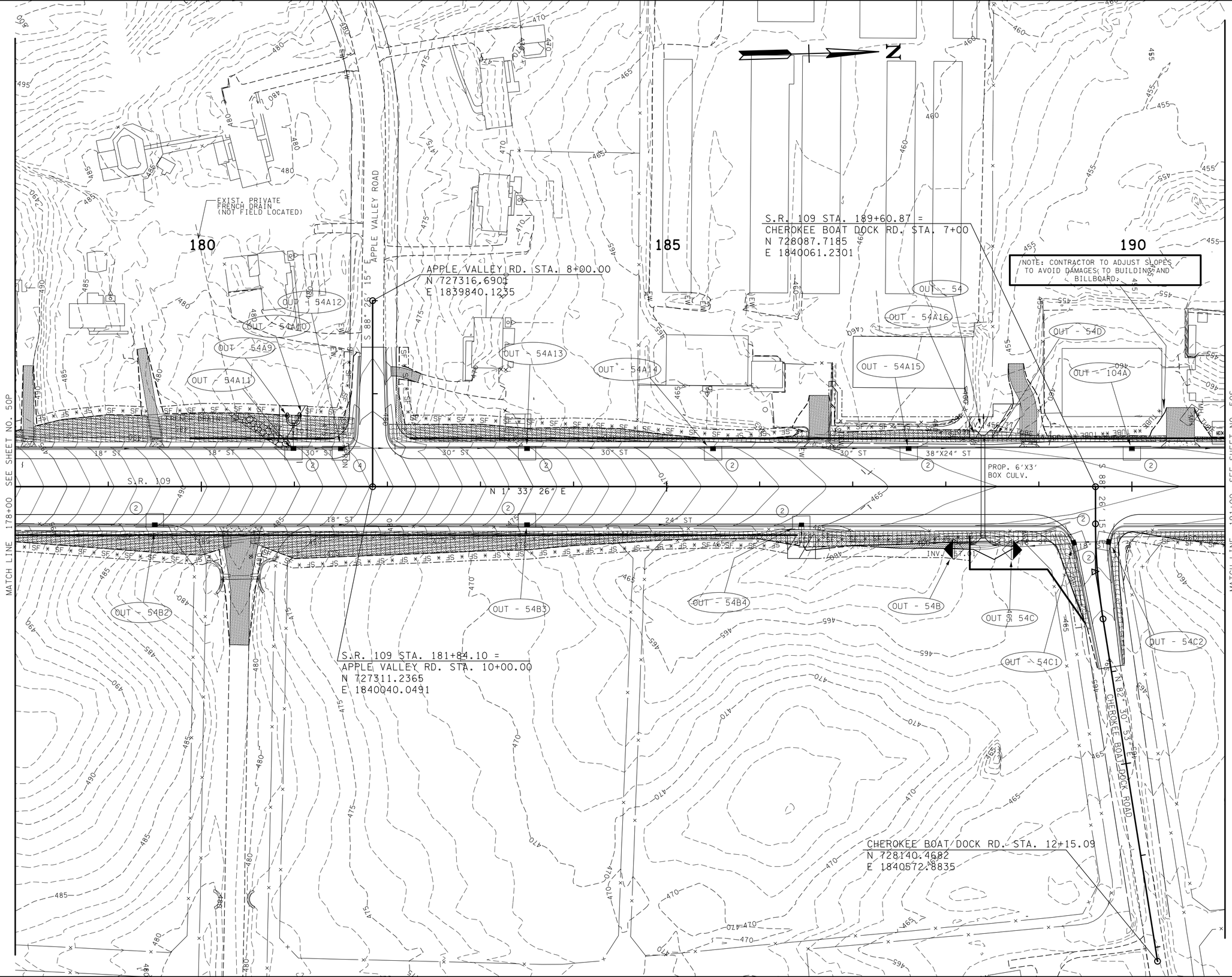
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2014	NH-109(32)	50-O
CONST.	2017	NH-109(32)	50R



UNOFFICIAL SET

NOT FOR BIDDING

SEALED BY

STAGE III

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 178+00 TO STA. 191+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-109(32)	50P
CONST.	2017	NH-109(32)	50S

95012-3225-14
END PROJECT NO. NH-109(32) (CONST.)
STA. 194+48.79
N 728575.4660
E 1840074.2830

95012-2222-14
END PROJECT NO. NH-109(32) (R.O.W.)
STA. 194+48.79
N 728575.4660
E 1840074.2830

OLD HICKORY LAKE
LAK-1

NOTE:
THIS FEATURE, (LAK-1) IS NOT TO BE IMPACTED BY THE PROPOSED WORK.

WILSON RD.STA. 2+35.00
N 728551.1139
E 1839810.7135

WILSON ROAD

LAKE DRIVE

195

200

OUT - 55

OUT - 56

OUT - 104E

OUT - 104D

OUT - 104

OUT - 104B

OUT - 104C

S.R. 109

N 1° 12' 58" E

S.R. 109 STA. 193+85.28 =
WILSON RD. STA. 5+00.00
N 728511.9780
E 1840072.8031

MATCH LINE 191+00 SEE SHEET NO. 50R

UNOFFICIAL SET

NOT FOR BIDDING

SEALED BY

STAGE III

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION AND SEDIMENT CONTROL PLAN

STA. 191+00 TO E.O.P.

SCALE: 1"= 50'

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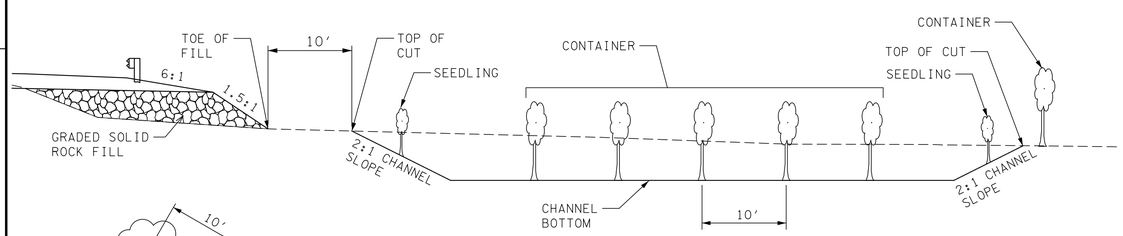
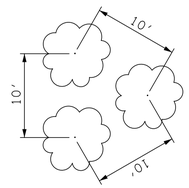
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2017	NH-109(32)	50T

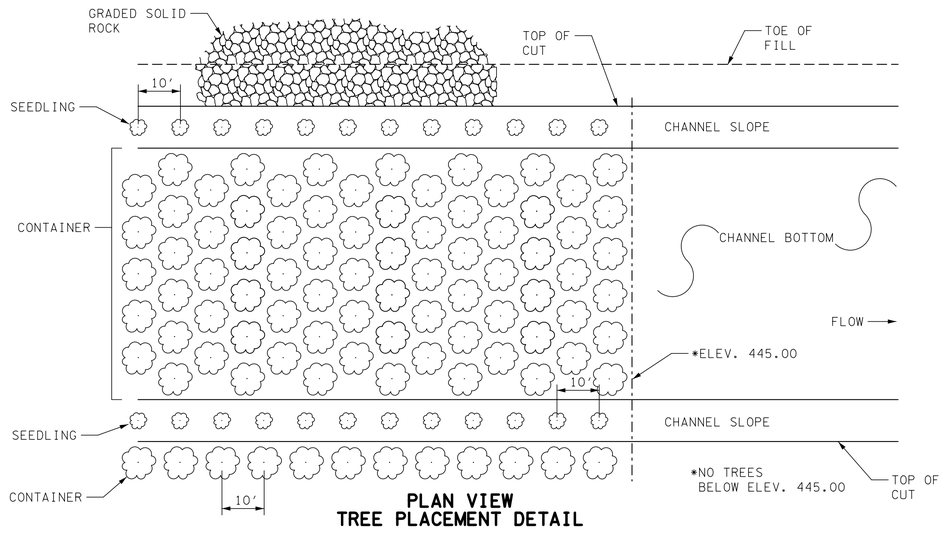
TREE PLACEMENT AT THE PROPOSED OFFSET SITE STA. 180+50 TO STA. 190+50



TYPICAL SECTION
TREE PLACEMENT DETAIL



TREE SPACING DETAIL



PLAN VIEW
TREE PLACEMENT DETAIL

TREE SPECIES:

ITEM NO.	DESCRIPTION	UNIT	QUANT.
802-13.54	SEEDLING: CORNUS AMOMUM (SILKY DOGWOOD) 18"-24" IN HEIGHT, BR	EACH	69
802-13.53	SEEDLING: CEPHANLANTHUS OCCIDENTALIS (BUTTONBUSH) 18"-24" IN HEIGHT, BR	EACH	68
802-13.37	SEEDLING: VIBURNUM NUDUM (POSSUMHAW VIBURNUM) 18"-24" IN HEIGHT, BR	EACH	68

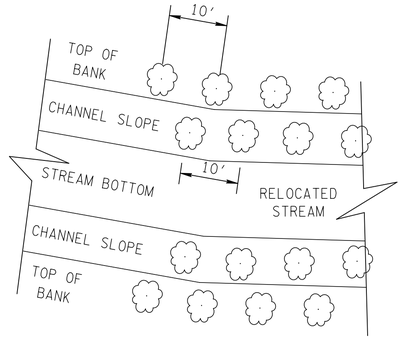
BR = BARE ROOT

TREE AND SHRUB SPECIES:

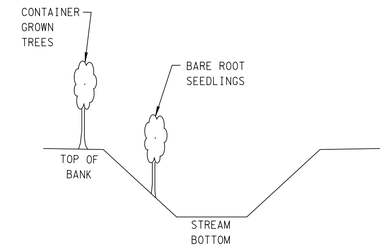
ITEM NO.	DESCRIPTION	UNIT	QUANT.
802-11.02	ACER RUBRUM (RED MAPLE) 2-5' IN HEIGHT, CONTAINERIZED	EACH	117
802-11.15	FAGUS GRANDIFOLIA (BEECH) 2-5' IN HEIGHT, CONTAINERIZED	EACH	117
802-11.16	FRAXINUS PENNSYLVANICA (GREEN ASH) 2-5' IN HEIGHT, CONTAINERIZED	EACH	117
802-11.26	PLATANUS OCCIDENTALIS (SYCAMORE) 2-5' IN HEIGHT, CONTAINERIZED	EACH	117
802-11.30	QUERCUS BICOLOR (SWAMP WHITE OAK) 2-5' IN HEIGHT, CONTAINERIZED	EACH	117
802-11.33	QUERCUS MICHAUXII (SWAMP CHESTNUT OAK) 2-5' IN HEIGHT, CONTAINERIZED	EACH	117
802-11.41	SASSAFRAS ALBIDUM (SASSAFRAS) 2-5' IN HEIGHT, CONTAINERIZED	EACH	116

IF ANY OF THESE SPECIES OF SEEDLINGS OR CONTAINERIZED TREES ARE NOT AVAILABLE, CHECK WITH THE TDOT BIOLOGIST FOR SPECIES THAT MAY BE SUBSTITUTED.

TREE PLACEMENT FOR STREAM 5 RELOCATION



PLAN VIEW



CROSS SECTION VIEW

CANTAINER GROWN

ITEM NO.	DESCRIPTION	UNIT	QUANT.
802-11.04	ACER SACHARIUM, SUGAR MAPLE 2-5 FT (CONTAINER GROWN)	EACH	4
802-11.18	LIQUIDAMBER STYRACIFLUA, SWEETGUM 2-5 FT (CONTAINER GROWN)	EACH	4
802-11.26	PLANTANUS OCCIDENTALS, SYCAMORE 2-5 FT (CONTAINER GROWN)	EACH	3
802-11.31	QUERCUS FALCATA, SOUTHERN RED OAK 2-5 FT (CONTAINER GROWN)	EACH	3
802-11.09	CARYA OVATA, SHAGBARK HICKORY 2-5 FT (CONTAINER GROWN)	EACH	3

BARE ROOT SEEDLINGS

ITEM NO.	DESCRIPTION	UNIT	QUANT.
802-12.18	LIQUIDAMBER STYRACIFLUA, SWEETGUM 18"-24" (SEEDLING B.R.)	EACH	5
802-12.01	ACER NEGUNDO, BOX ELDER 18"-24" (SEEDLING B.R.)	EACH	6
802-12.40	SALIX NIGRA, BLACK WILLOW 18"-24" (SEEDLING B.R.)	EACH	6

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

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

TREES SHALL BE WATERED AS REQUIRED THROUGH THE PERIOD OF ESTABLISHMENT TO ENSURE SURVIVAL.

SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ENVIRONMENTAL MITIGATION PLANS

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