

SOILS DEFINITIONS

THE TERMS AND ASSOCIATED DEFINITIONS BELOW SHALL BE USED TO CHARACTERIZE THE GEOLOGIC NATURE OF THE SUBSURFACE MATERIAL.

A. SOIL MATERIAL

SOIL MATERIAL IS MATERIAL THAT IS PREDOMINANTLY MADE UP OF NATURALLY OCCURRING MINERAL PARTICLES WHICH ARE FAIRLY READILY SEPARATED INTO RELATIVELY SMALL PIECES, AND IN WHICH THE MASS MAY CONTAIN AIR, WATER OR ORGANIC MATERIALS. THIS MATERIAL MAY CONTAIN ROCK PIECES IN THE FORM OF DISCONNECTED SLABS, LENSES, OR BOULDERS OF LESS THAN APPROXIMATELY 0.5 CUBIC YARDS. THE MAIN SOIL GROUPS CONSIST OF CLAY, SILT, SAND, GRAVEL, COBBLES, BOULDERS (LESS THAN 0.5 CUBIC YARD VOLUME) OR A COMBINATION OF ANY OF THE CONSTITUENTS. FOR CONSTRUCTION PURPOSES, THIS MATERIAL WOULD TYPICALLY BE CONSIDERED TO BE EXCAVATABLE BY CONVENTIONAL EXCAVATION MACHINERY SUCH AS PANS, TRACK HOES, OR FRONT END EXCAVATORS/LOADERS. THIS MATERIAL WOULD HAVE A SHRINK FACTOR AS GIVEN IN THE SHRINK FACTORS SHOWN IN SECTION 2-145.10 OF THE DESIGN GUIDELINES OR AS RECOMMENDED BY THE GEOTECHNICAL ENGINEERING SECTION OF THE MATERIALS AND TESTS DIVISION.

B. SOLID ROCK MATERIAL

SOLID ROCK MATERIAL IS THAT NATURALLY OCCURRING MATERIAL COMPOSED OF MINERAL PARTICLES SO FIRMLY BONDED TOGETHER THAT RELATIVELY GREAT EFFORT IS REQUIRED TO SEPARATE THE PARTICLES (I.E. BLASTING OR HEAVY CRUSHING FORCES). FOR CONSTRUCTION PURPOSES, THIS MATERIAL WOULD TYPICALLY HAVE TO BE BLASTED TO SEPARATE INTO PIECES SMALL ENOUGH TO LOAD AND TRANSPORT ON EARTH MOVING TRUCKS AND WHICH WHEN SUBJECTED TO PROPER PRE-SPLIT AND PRODUCTION BLASTING WOULD RESULT IN A UNIFORM STABLE ROCK CUT FACE. NOTE THAT THIS MATERIAL WOULD NOT BY DEFINITION NECESSARILY BE A PROVEN SOURCE OF ANY ROCK TYPE AGGREGATE SUCH AS SOLID ROCK, GRADED SOLID ROCK, RIP RAP, OR OTHER ROCK AGGREGATE CONSTRUCTION PRODUCTS. THIS MATERIAL WOULD HAVE A SIGNIFICANT SWELL FACTOR AS GIVEN IN SWELL FACTORS SHOWN IN SECTION 2-145.10 OF THE DESIGN GUIDELINES OR AS RECOMMENDED BY THE GEOTECHNICAL ENGINEERING SECTION OF THE MATERIALS AND TESTS DIVISION.

C. SOFT ROCK OR DEGRADABLE ROCK

THIS MATERIAL IS THAT NATURALLY OCCURRING MATERIAL COMPOSED OF MINERAL PARTICLES THAT ARE SO FIRMLY BONDED SUCH THAT THEY ARE NOT FAIRLY READILY SEPARATED INTO SMALL PIECES YET HAS SUCH RELATIVELY LOW BONDING STRENGTH THAT WOULD ALLOW FOR SEPARATING INTO SMALL PIECES THROUGH MODERATE TO HEAVY CRUSHING FORCES. FOR CONSTRUCTION PURPOSES THIS MATERIAL WOULD HAVE TO BE SUBJECTED TO RIPPING TYPE EQUIPMENT, HOE RAMS, OR RUGGED USE OF A LARGE BULLDOZER IN ORDER TO SEPARATE THE MATERIAL SUCH THAT IT CAN BE READILY LOADED INTO EARTH MOVING TRUCKS. THESE MATERIALS WOULD TYPICALLY BE SHALES, CLAYSTONES, SILTSTONES, WEATHERED SANDSTONES, WEATHERED SCHIST AND WEATHERED GNEISS. THIS MATERIAL WOULD HAVE A RELATIVELY SMALL SHRINK OR SWELL FACTOR DEPENDING ON THE TYPE MATERIAL AND THE DEGREE OF WEATHERING, DISINTEGRATION, OR DEGRADATION.

D. TRANSITIONAL MATERIALS

THIS MATERIAL IS THAT MATERIAL COMPRISED OF A COMBINATION OF SOIL AND ROCK (MATERIALS A, B, AND C AS DEFINED IN SECTION 4-203.02) OCCURRING IN EITHER NON-UNIFORM INTERBEDDED LAYERS OF THE ABOVE MATERIALS (I.E. SHALE MATERIAL WITH RELATIVELY THIN LAYERS OF SOLID ROCK SUCH AS HARD LIMESTONE) OR ERRATIC LOCALIZED CHANGES OF MATERIAL TYPES BOTH Laterally AND WITH DEPTH (SUCH AS A GEOLOGIC FORMATION RESULTING IN PINNACLED ROCK COLUMNS, FLOATING BOULDERS OR LENSES INTERCALATED WITH CLAY SOIL, A COMMON OCCURRENCE IN CERTAIN REGIONS OF TENNESSEE). FOR CONSTRUCTION PURPOSES, THIS MATERIAL MAY HAVE TO BE EXCAVATED USING A COMBINATION OF EXCAVATION METHODS SUCH AS BLASTING OF ROCK PINNACLES, LAYERS OR BOULDERS ALONG WITH A RIPPING OF WEATHERED ROCK AND EXCAVATING OF SOIL WITH TRACK HOES OR LOADERS ALL WITHIN A LOCALIZED AREA. THIS MATERIAL WOULD NOT BE SUITABLE FOR THE USE OF EXCAVATING PAN TYPE EQUIPMENT.

NOTE REGARDING CONSTRUCTION SLOPES

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING EXCAVATIONS IN ACCORDANCE WITH OSHA AND OTHER APPLICABLE STATE AND LOCAL REGULATIONS REGARDING CONSTRUCTION SLOPES AND TRENCHES. IN ADDITION TO FOLLOWING APPLICABLE REGULATORY REQUIREMENTS, AS A MINIMUM REQUIREMENT, ALL TEMPORARY CONSTRUCTION SLOPES SHALL BE INCLINED AT A MAXIMUM OF A 1:1 SLOPE IN SOIL AND SHALL NOT BE LEFT OPEN FOR ANY LONGER THAN ABSOLUTELY NECESSARY. THE CONTRACTOR SHALL ENSURE THAT ALL TEMPORARY SLOPES ARE NOT AND DO NOT BECOME UNSTABLE. IF A SLOPE IS UNSTABLE, BECOMES UNSTABLE, IS CUT STEEPER THAN A 1:1 SLOPE OR IS UNACCEPTABLE FOR ANY OTHER REASON, THEN TEMPORARY SHORING SHALL BE USED. ANY UNUSUAL SOIL CONDITIONS OTHER THAN THOSE ASSUMED SHOULD BE REPORTED TO THE PROJECT ENGINEER.

SINKHOLE TREATMENT

EXCEPT AS APPROVED BY A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEERING SECTION OF THE DIVISION OF MATERIALS AND TESTS, LOCAL DEPRESSIONS (SNK-1) BETWEEN STATIONS 463+27 AND 463+45 BETHESDA ROAD SHALL RECEIVE SINKHOLE TREATMENT 2 AS ILLUSTRATED ON INCLUDED "GEOTECHNICAL - SINKHOLE TREATMENT 2", AND (SNK-2) BETWEEN STATIONS 211+66 AND 215+17 S.R. 34 LT SHALL RECEIVE SINKHOLE TREATMENT 3 AS ILLUSTRATED ON INCLUDED "GEOTECHNICAL - SINKHOLE TREATMENT 3" ON SHEET G2.

ESTIMATED GEOTECHNICAL QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
1, 3	203-02.01 BORROW EXCAVATION (GRADED SOLID ROCK)	TON	557
1, 3	203-15.03 COMPACTED CLAY	CY	3
1, 3	303-10.01 MINERAL AGGREGATE (SIZE 57)	TON	5
2, 3	607-09.30 48" PIPE CULVERT	LF	48
1, 3	740-10.04 GEOTEXTILE (TYPE IV) (STABILIZATION)	S.Y.	356

- 1 SEE GEOTECH SHEET G2 - SINKHOLE TREATMENTS 2 AND 3
- 2 48" STANDPIPE, PERFORATED WITH 1/4" HOLES. SEE GEOTECH SHEET G2 - SINKHOLE TREATMENT 3
- 3 MAY BE INCREASED OR DECREASED BY THE ENGINEER.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2024	NH-34(86)	G1

S.R. 34

HAMBLÉN CO.

CONSTRUCTION
FIELD
REVIEW

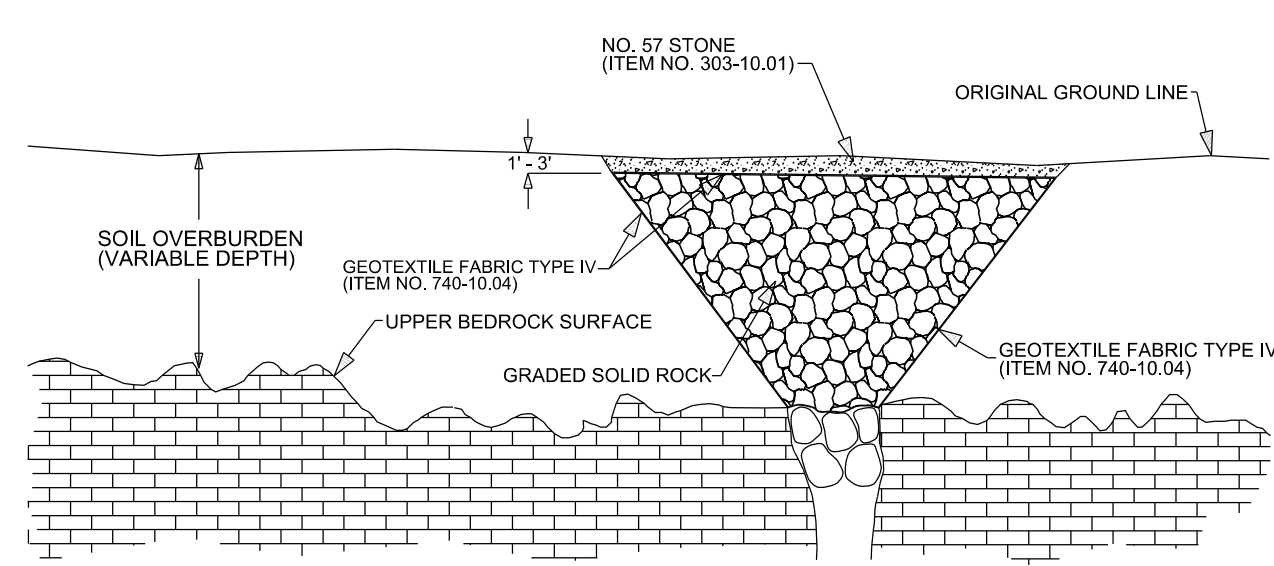
SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GEOTECHNICAL
NOTES AND
ESTIMATED
QUANTITIES

TYPE	YEAR	PROJECT NO.	SHEET NO.
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CONST.	2024	NH-34(86)	02
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S.R. 34 HAMBLÉN CO.



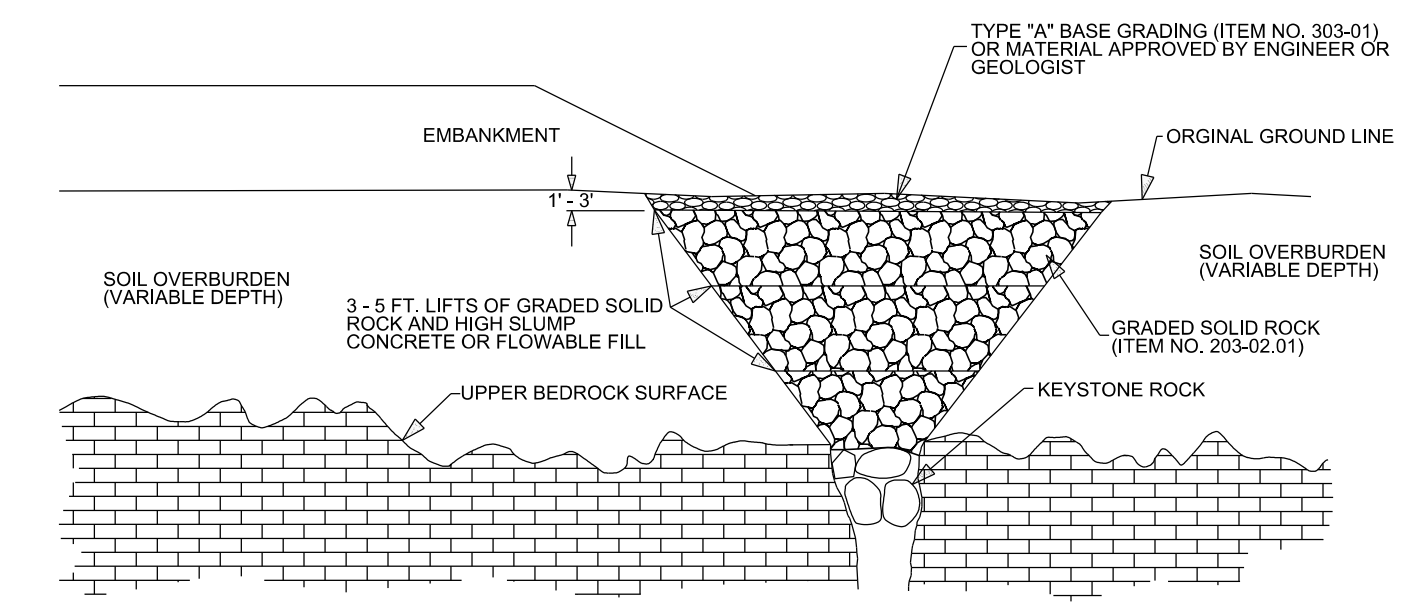
SINKHOLE TREATMENT 1, ACTIVE

SINKHOLE TREATMENT 1, ACTIVE

NOTE: AFTER EXCAVATION IS COMPLETE AND THE ROCK OPENING IS EXPOSED, THE SITE AND TREATMENT METHOD SHALL BE APPROVED BY A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEERING SECTION OF THE DIVISION OF MATERIALS AND TESTS. THE TOP 1' - 3' OF MATERIAL SHALL BE APPROVED BY A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEERING SECTION OF THE DIVISION OF MATERIALS AND TESTS.

SEQUENCE OF CONSTRUCTION:

- EXCAVATE THE SINKHOLE TO DEFINE THE OPENING IN THE BEDROCK, MAKING SURE TO REMOVE ALL SOIL AND DEBRIS.
- FIT THE OPENING WITH KEYSTONE ROCK, WHICH SHALL BE OF SUFFICIENT SIZE TO LOCK IN PLACE WITHOUT CREATING AN AIR BLOCK TO SUBSURFACE DRAINAGE.
- PLACE GEOTEXTILE FABRIC TYPE IV (ITEM NO. 740-10.04) ON THE EXCAVATED SLOPES AND THE BASE OF THE SINKHOLE.
- BACK FILL TO A MAXIMUM OF 1' OF THE SPECIFIED GRADE WITH GRADED SOLID ROCK (ITEM NO. 203-02.01 BORROW EXCAVATION).
- BACK FILL TO GRADED WITH A MINIMUM OF 1' OF NO. 57 STONE (ITEM NO. 303-10.01 MINERAL AGGREGATE) ON TOP OF THE GRADED SOLID ROCK AND GEOTEXTILE FABRIC TYPE IV.



SINKHOLE TREATMENT 4, ACTIVE

NOTE: AFTER EXCAVATION IS COMPLETE AND THE ROCK OPENING IS EXPOSED, THE SITE AND TREATMENT METHOD SHALL BE APPROVED BY A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEERING SECTION OF THE DIVISION OF MATERIALS AND TESTS. ANY CHANGE IN THE NO. 57 STONE FILL SHALL BE APPROVED BY A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEERING SECTION OF THE DIVISION OF MATERIALS AND TESTS.

SEQUENCE OF CONSTRUCTION:

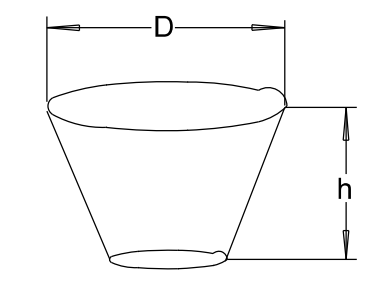
- EXCAVATE THE SINKHOLE TO DEFINE THE OPENING IN THE BEDROCK, MAKING SURE TO REMOVE ALL SOIL AND DEBRIS.
- FIT THE OPENING WITH KEYSTONE ROCK, WHICH SHALL BE OF SUFFICIENT SIZE TO LOCK IN PLACE WITHOUT CREATING AN AIR BLOCK TO SUBSURFACE DRAINAGE.
- ALTERNATE LAYERS OF GRADED SOLID ROCK (ITEM NO. 203-02.01 BORROW EXCAVATION) 3 - 5 FT. IN DEPTH AND HIGH SLUMP CONCRETE (OR FLOWABLE FILL). HEIGHT SLUMP CONCRETE SHALL BE CONCRETE WITH A SLUMP OF 7 - 9".

HIGH SLUMP CONCRETE OR FLOWABLE FILL SHALL BE APPLIED AFTER A LAYER OF GRADED SOLID ROCK UNTIL THE CONCRETE (OR FLOWABLE FILL) JUST COVERS THE GRADED SOLID ROCK LAYER. THE NEXT LAYER OF GRADED SOLID ROCK SHALL BE PLACED IMMEDIATELY AFTER THE PLACEMENT OF THE CONCRETE (OR FLOWABLE FILL). THE PURPOSE OF THIS TO INTERMIX THE MATERIALS. THE WORK SHALL NOT BE INTERRUPTED AFTER THE PLACEMENT OF CONCRETE (OR FLOWABLE FILL) EXCEPT FOR THE TOP LAYER. IF WORK CANNOT BE FINISHED IN THE SPECIFIED INTERVAL, WORK MAY BE STOPPED ONLY AFTER A COMPLETE LAYER OF THE GRADED SOLID ROCK HAS BEEN PLACED.
- AFTER THE FINAL LAYER OF CONCRETE (OR FLOWABLE FILL) HAS BEEN SET, BACK FILL TO GRADED WITH TYPE "A" BASE GRADING (ITEM NO. 303-01) OR OTHER MATERIAL APPROVED BY THE ENGINEER OR GEOLOGIST.

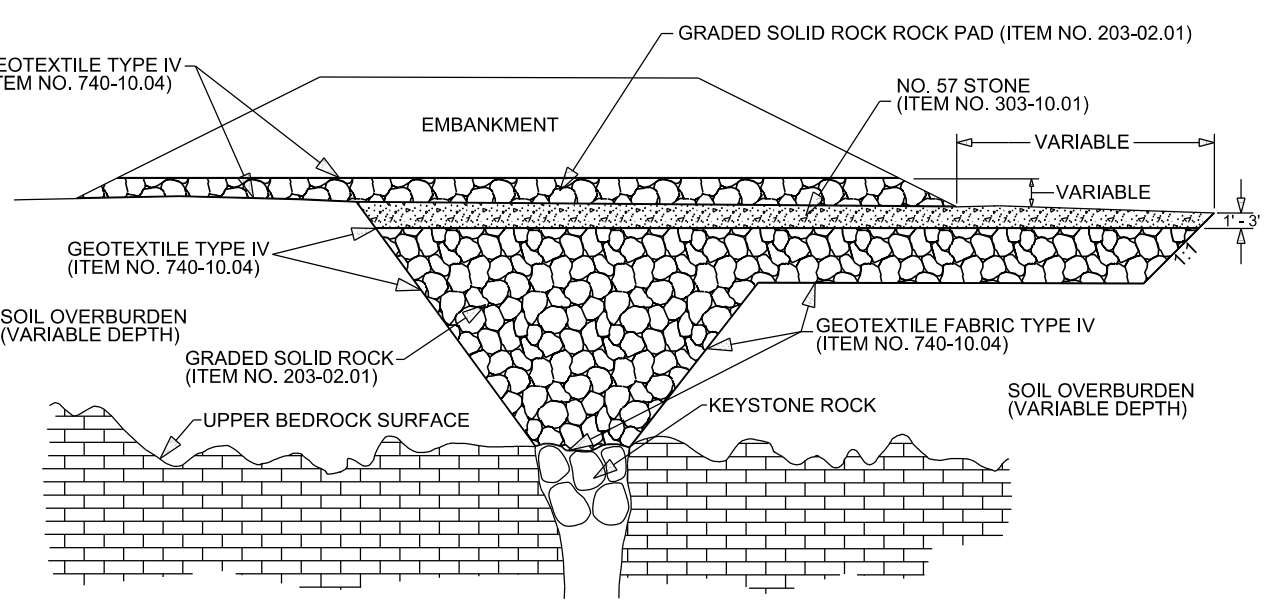
EQUATION FOR ESTIMATING SINKHOLE VOLUME, WHERE THE SIDES OF THE SINKHOLE ARE AT 1:1 SLOPES.

$$VOL. \frac{1:1}{27} \approx 0.13D^3 - (0.5D - h)^3$$

FOR ESTIMATION PURPOSES, USE 1.7636 TONS C.Y.



BORROW EXCAVATION (GRADED SOLID ROCK) SHALL CONSIST OF THE REMOVAL AND SATISFACTORY PLACEMENT OF SOUND, NON- DEGRADABLE ROCK WITH A MAXIMUM SIZE OF 3 FEET (1 METER). AT LEAST 50 PERCENT OF THE ROCK SHALL BE UNIFORMLY DISTRIBUTED BETWEEN 1 FOOT (30 CENTIMETERS) AND 3 FEET (1 METER) IN DIAMETER AND NO GREATER THAN 10 PERCENT SHALL BE LESS THAN 2 INCHES (50 MILLIMETERS) IN DIAMETER. THE MATERIAL SHALL BE ROUGHLY EQUI-DIMENSIONAL IN SHAPE. THIN, SLABBY MATERIAL WILL NOT BE ACCEPTED. THE CONTRACTOR SHALL BE REQUIRED TO PROCESS THE MATERIAL WITH AN ACCEPTABLE MECHANICAL SCREENING PROCESS THAT PRODUCES THE REQUIRED GRADATION. WHEN THE MATERIAL IS SUBJECTED TO FIVE ALTERATIONS OF THE SODIUM SULFATE SOUNDNESS TESTS (AASHTO 104), THE WEIGHTED PERCENTAGE OF LOSS SHALL BE NOT MORE THAN 12. THE MATERIAL SHALL BE APPROVED BY THE ENGINEER BEFORE USE.



SINKHOLE TREATMENT 1A, ACTIVE

SINKHOLE TREATMENT 1A, ACTIVE

NOTE: AFTER EXCAVATION IS COMPLETE AND THE ROCK OPENING IS EXPOSED, THE SITE AND TREATMENT METHOD SHALL BE APPROVED BY A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEERING SECTION OF THE DIVISION OF MATERIALS AND TESTS. THE TOP 1' - 3' OF MATERIAL SHALL BE APPROVED BY A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEERING SECTION OF THE DIVISION OF MATERIALS AND TESTS.

SEQUENCE OF CONSTRUCTION:

- EXCAVATE THE SINKHOLE TO DEFINE THE OPENING IN THE BEDROCK, MAKING SURE TO REMOVE ALL SOIL AND DEBRIS.
- FIT THE OPENING WITH KEYSTONE ROCK, WHICH SHALL BE OF SUFFICIENT SIZE TO LOCK IN PLACE WITHOUT CREATING AN AIR BLOCK TO SUBSURFACE DRAINAGE.
- PLACE GEOTEXTILE FABRIC TYPE IV (ITEM NO. 740-10.04) ON THE EXCAVATED SLOPES AND THE BASE OF THE SINKHOLE.
- BACK FILL TO WITHIN 1.5' - 3' OF THE SPECIFIED GRADE WITH GRADED SOLID ROCK (ITEM NO. 203-02.01 BORROW EXCAVATION).
- PLACE THE GEOTEXTILE FABRIC TYPE IV ON TOP OF THE GRADED SOLID ROCK.
- BACK FILL TO GRADE WITH NO. 57 STONE (ITEM NO. 303-10.01 MINERAL AGGREGATE).
- CONSTRUCT THE EMBANKMENT, INCLUDING ANY REQUIRED ROCK PAD, IN ACCORDANCE WITH THE CONTRACT PLANS AND CROSS- SECTIONS.

SINKHOLE TREATMENT 2 AND 2A, INACTIVE

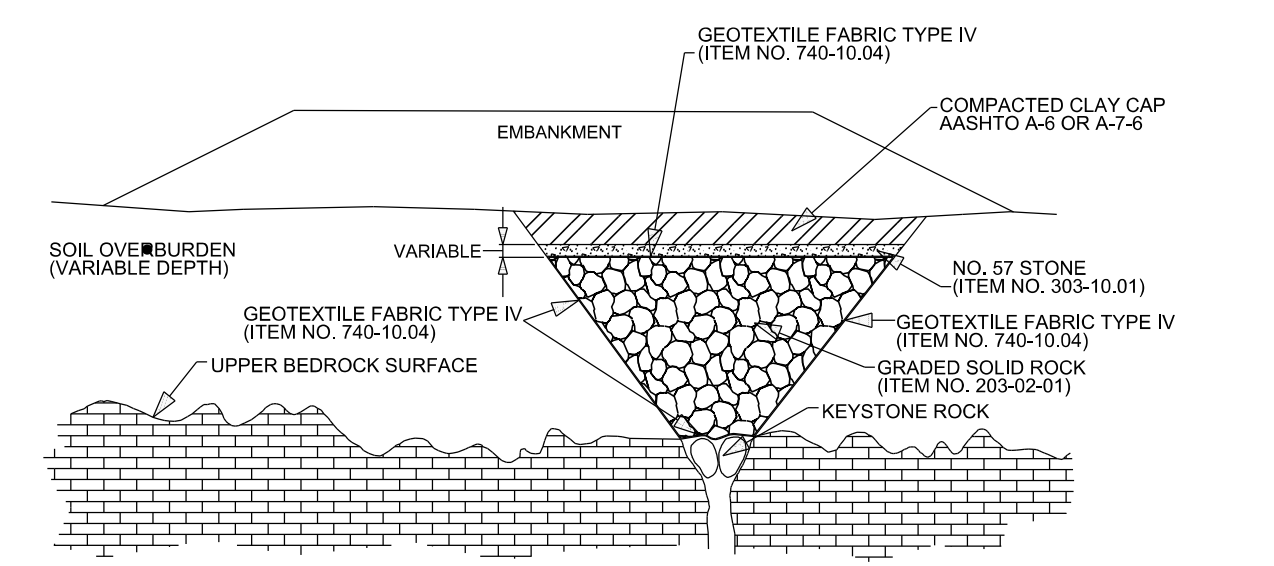
NOTE: AFTER EXCAVATION IS COMPLETE AND THE ROCK OPENING IS EXPOSED, THE SITE AND TREATMENT SECTION OF THE DIVISION OF MATERIALS AND TESTS. ANY CHANGE IN THE NO. 57 STONE FILL OR THE CLAY CAP SHALL BE APPROVED BY A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEERING SECTION OF THE DIVISION OF MATERIALS AND TESTS.

SEQUENCE OF CONSTRUCTION:

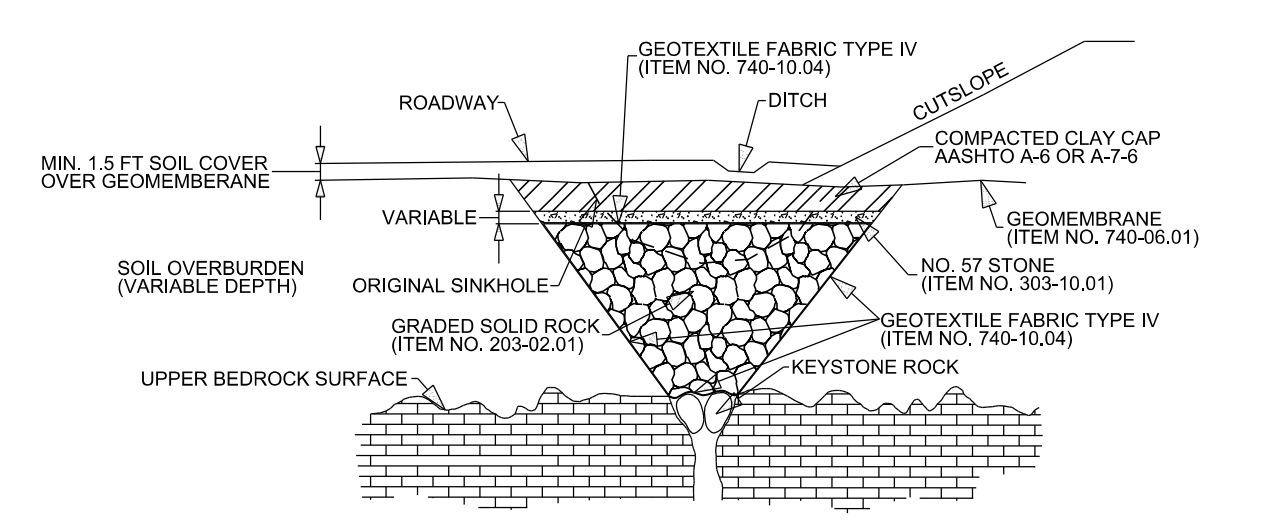
- EXCAVATE THE SINKHOLE TO DEFINE THE OPENING IN THE BEDROCK MAKING SURE TO REMOVE ALL SOIL AND DEBRIS.
- FIT THE OPENING WITH KEYSTONE ROCK, WHICH SHALL BE OF SUFFICIENT SIZE TO LOCK IN PLACE WITHOUT CREATING AN AIR BLOCK TO SUBSURFACE DRAINAGE.
- PLACE GEOTEXTILE FABRIC TYPE IV (ITEM NO. 740-10.04) ON THE EXCAVATED SLOPES AND THE BASE OF THE SINKHOLE.
- BACK FILL WITH GRADED SOLID ROCK (ITEM NO. 203-02.01 BORROW EXCAVATION) UP TO THE SPECIFIED GRADE.
- PLACE GEOTEXTILE FABRIC TYPE IV ON TOP OF THE GRADED SOLID ROCK. PLACE NO. 57 STONE (ITEM NO. 303-10.01 MINERAL AGGREGATE) ON TOP OF THE GEOTEXTILE FABRIC.
- CONSTRUCT A COMPACTED CLAY CAP. THE SOIL SHOULD BE TYPE AASHTO A-6 OR A-7-6.

FOR SINKHOLE TREATMENT 2A ONLY:

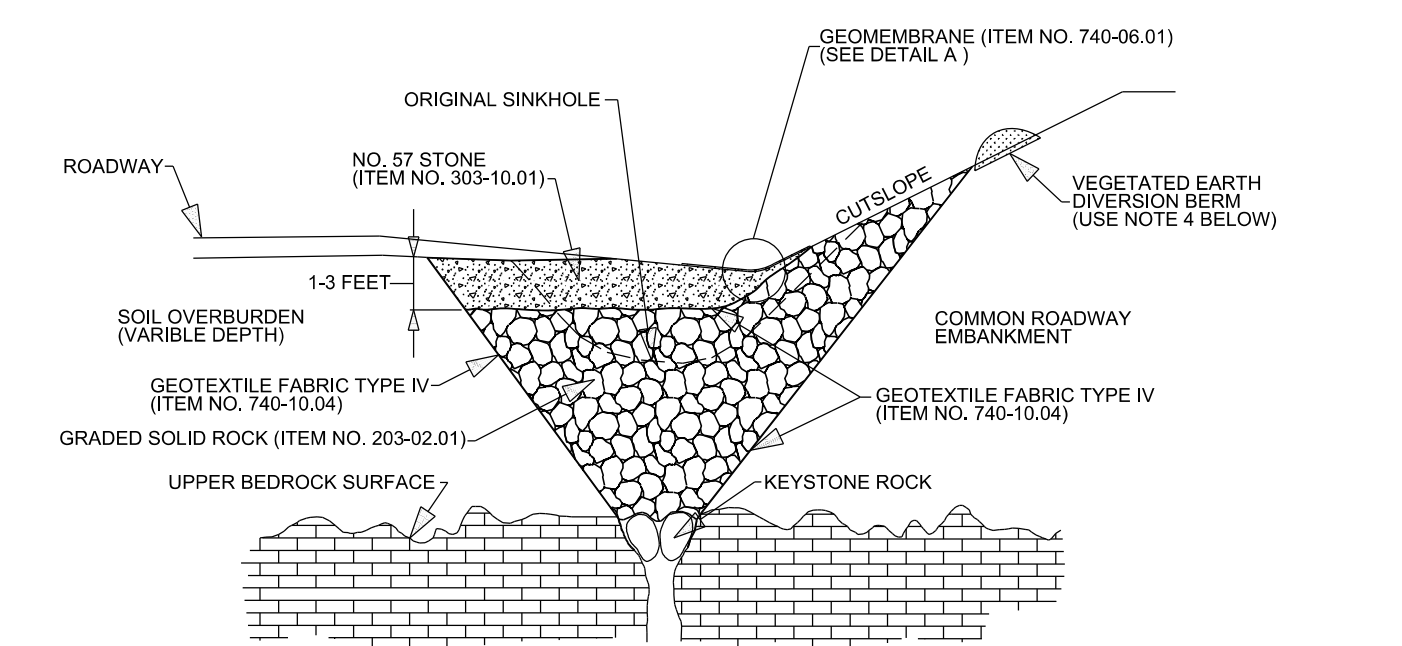
- PLACE GEOMEMBRANE (ITEM NO. 710-06.01) ON TOP OF THE SOIL CAP BEFORE THE CONSTRUCTION OF ANY OVERLYING STRUCTURES OR EMBANKMENTS. THERE SHOULD BE A MINIMUM OF 1.5' OF SOIL PLACED OVER THE GEOMEMBRANE.
- THE DITCH SHOULD BE PAVED OR LINED WITH A GEOMEMBRANE.



SINKHOLE TREATMENT 2, INACTIVE



SINKHOLE TREATMENT 2A, INACTIVE

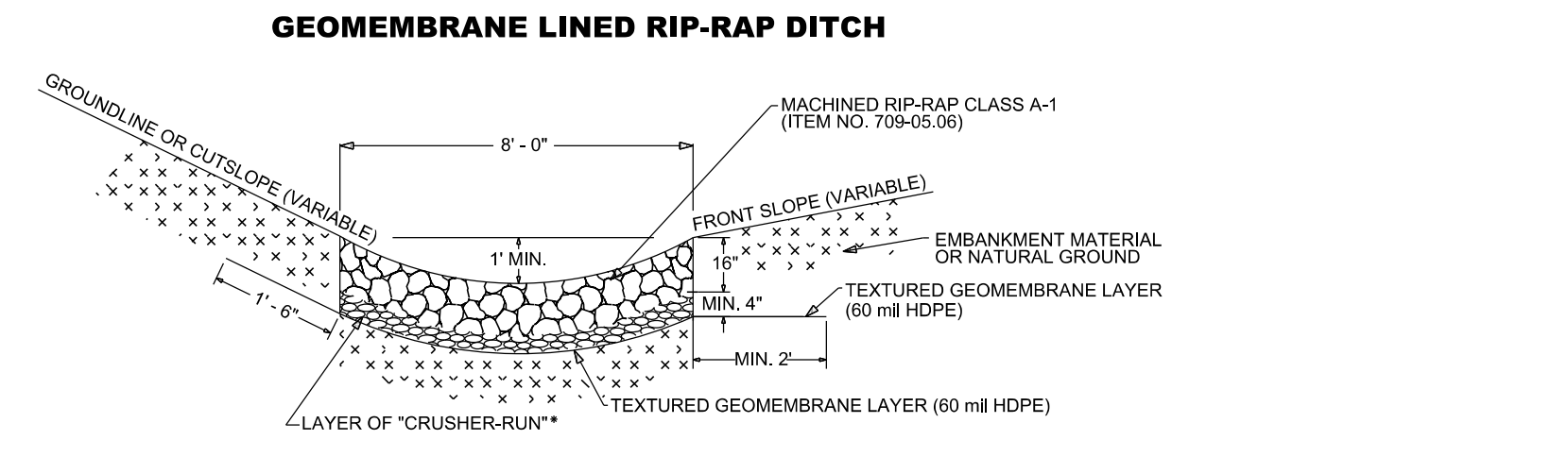


SINKHOLE TREATMENT 5, ACTIVE

NOTE: AFTER EXCAVATION IS COMPLETE AND THE ROCK OPENING IS EXPOSED, THE SITE AND TREATMENT METHOD SHALL BE APPROVED BY A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEERING SECTION OF THE DIVISION OF MATERIALS AND TESTS. ANY CHANGE IN THE NO. 57 STONE FILL SHALL BE APPROVED BY A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEERING SECTION OF THE DIVISION OF MATERIALS AND TESTS.

SEQUENCE OF CONSTRUCTION:

- EXCAVATE THE SINKHOLE TO DEFINE THE OPENING IN THE BEDROCK, MAKING SURE TO REMOVE ALL SOIL AND DEBRIS. COVER ALL EXPOSED SOIL SURFACED WITH GEOTEXTILE FABRIC TYPE IV (ITEM NO. 740-10.04) PRIOR TO BACK FILLING.
- FIT THE OPENING WITH KEYSTONE ROCK, WHICH SHALL BE OF SUFFICIENT SIZE TO LOCK IN PLACE WITHOUT CREATING AN AIR BLOCK TO SUBSURFACE DRAINAGE.
- BACK FILL WITH GRADED SOLID ROCK (ITEM NO. 203-02.01 BORROW EXCAVATION) UP TO 1 - 3 FT. OF EXISTING DITCH LINE GRADE. CONTINUE FILLING THE EXCAVATION WITH GRADED SOLID ROCK ABOVE THE PLANNED EDGE OF THE GEOMEMBRANE LINER (ITEM NO. 740-10.04) EDGE, GRADING THE GRADED SOLID ROCK TO CONFORM WITH THE SLOPE PROFILE AS SHOWN IN THE ILLUSTRATION.
- WHEN THE GRADED SOLID ROCK PLACEMENT IS COMPLETE, A SMALL DRAINAGE DIVERSION BERM OF COMPACTED SOIL SHALL BE CONSTRUCTED AROUND THE TOP OF THE EXCAVATION LIMITS TO DIVERT SURFACE RUNOFF AROUND THE REPAIR TO THE DITCH BELOW. THE BERM SHALL BE NO MORE THAN 3 FT. WIDE AT THE BASE AND 1 FT. TALL ABOVE THE SURROUNDING SLOPE. THE BERM SHALL BE KEYED INTO THE SOIL APPROXIMATELY 0.5 FT. AND NOT PLACED ON TOP OF THE EXISTING VEGETATION. AFTER THE CONSTRUCTION OF THE BERM IS COMPLETED, SEED AND STRAW WILL BE REQUIRED TO CONTROL EROSION.
- PLACE GEOTEXTILE FABRIC TYPE IV ON TOP OF THE GRADED SOLID ROCK. PLACE NO. 57 STONE (ITEM NO. 303-10.01) ON TOP OF THE GEOTEXTILE FABRIC.
- THE DITCH SHOULD BE LINED WITH A GEOMEMBRANE AND COVER WITH A MINIMUM OF 16" OF MACHINED RIP- RAP CLASS A-1 (ITEM NO. 709-05.06) OR MATERIAL APPROVED BY HYDRAULIC DESIGN.



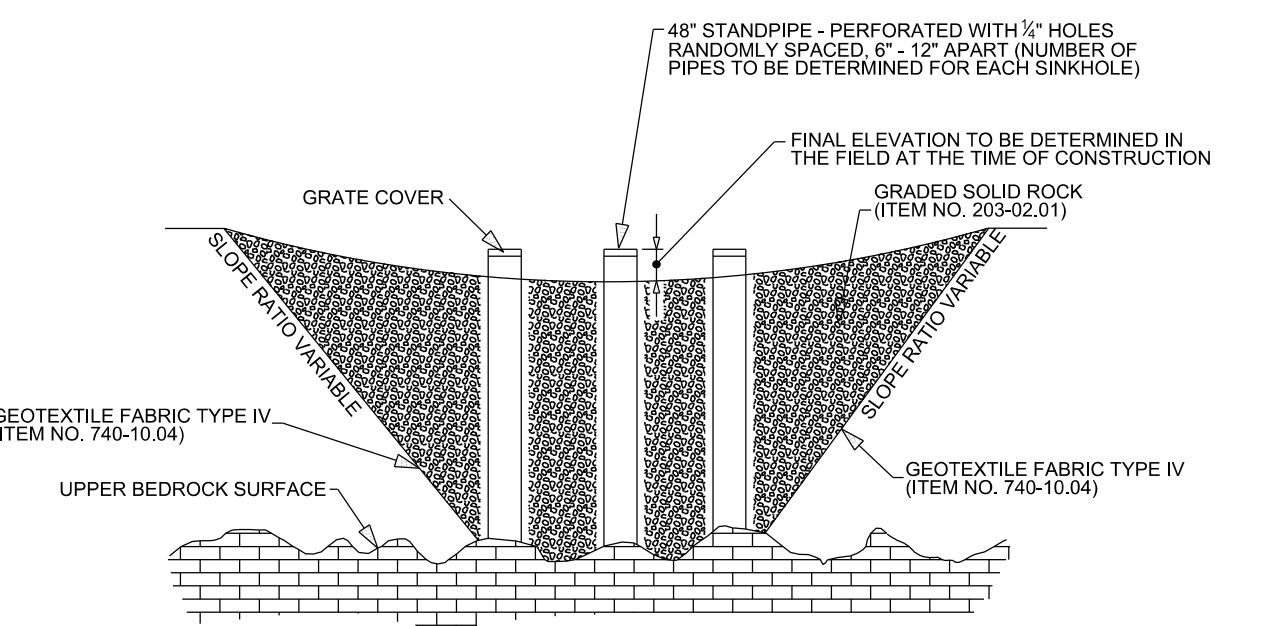
DETAIL A

SINKHOLE TREATMENT 3, ACTIVE

NOTE: AFTER EXCAVATION IS COMPLETE AND THE ROCK IS EXPOSED, THE SITE AND TREATMENT METHOD SHALL BE APPROVED BY A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEERING SECTION OF THE DIVISION MATERIALS AND TESTS.

SEQUENCE OF CONSTRUCTION:

- EXCAVATE THE SOIL DOWN TO BEDROCK OR THE LIMITS SPECIFIED BY THE ENGINEER OR GEOLOGIST.
- LOCATE ALL OPENINGS WITH THE PITS, REMOVING ALL LOOSENED MATERIAL. ALL EXCAVATED MATERIALS SHALL BE REMOVED FROM THE BASIN.
- INSTALL 48" DIAMETER VERTICAL STANDPIPES OVER THE LOCATED OPENINGS. THESE PIPES SHOULD BE PERFORATED FOR AT LEAST THE LOWER 5' WITH 1/4" HOLES SPACED 6" - 12" APART.
- PLACE GEOTEXTILE FABRIC TYPE IV (ITEM NO. 740-10.04) AS SHOWN OR AS DIRECTED BY THE ENGINEER OR GEOLOGIST TO PREVENT LATERAL INFLOW OF FINES.
- BACK FILL WITH GRADED SOLID ROCK (203-20.01) TO A HEIGHT OF 3.5' BELOW THE TOP OF THE STANDPIPE.
- THE ROCK FILTER MATERIAL SHALL BE PLACED WITH A CLAMSHELL. NO END DUMPING WILL BE PERMITTED.

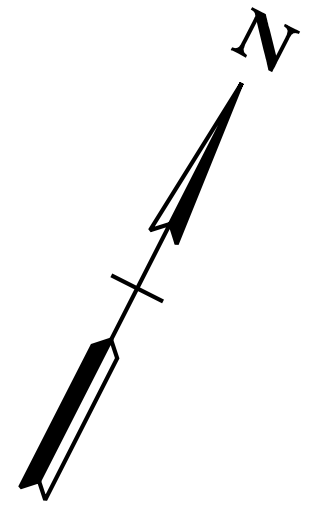


SINKHOLE TREATMENT 3, ACTIVE

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2024	NH-34(86)	G3

S.R. 34

HAMBLEN CO.



32004-2233-14
 BEGIN PROJECT - NH-34(86) CONST.
 STA. 100+45.00
 N 700980.1199
 E 2777531.7273

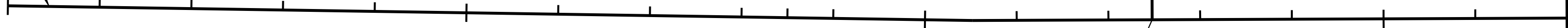
100

105

110

115

JESSE DR.



STA. 570+00.00 JESSE DR =
 STA. 112+47.64 S.R. 34
 N 701513.0857
 E 2778609.7873

MATCH LINE STA. 117+00 SEE SHEET NO. G5

LEGEND
 GEOTECHNICAL BORING

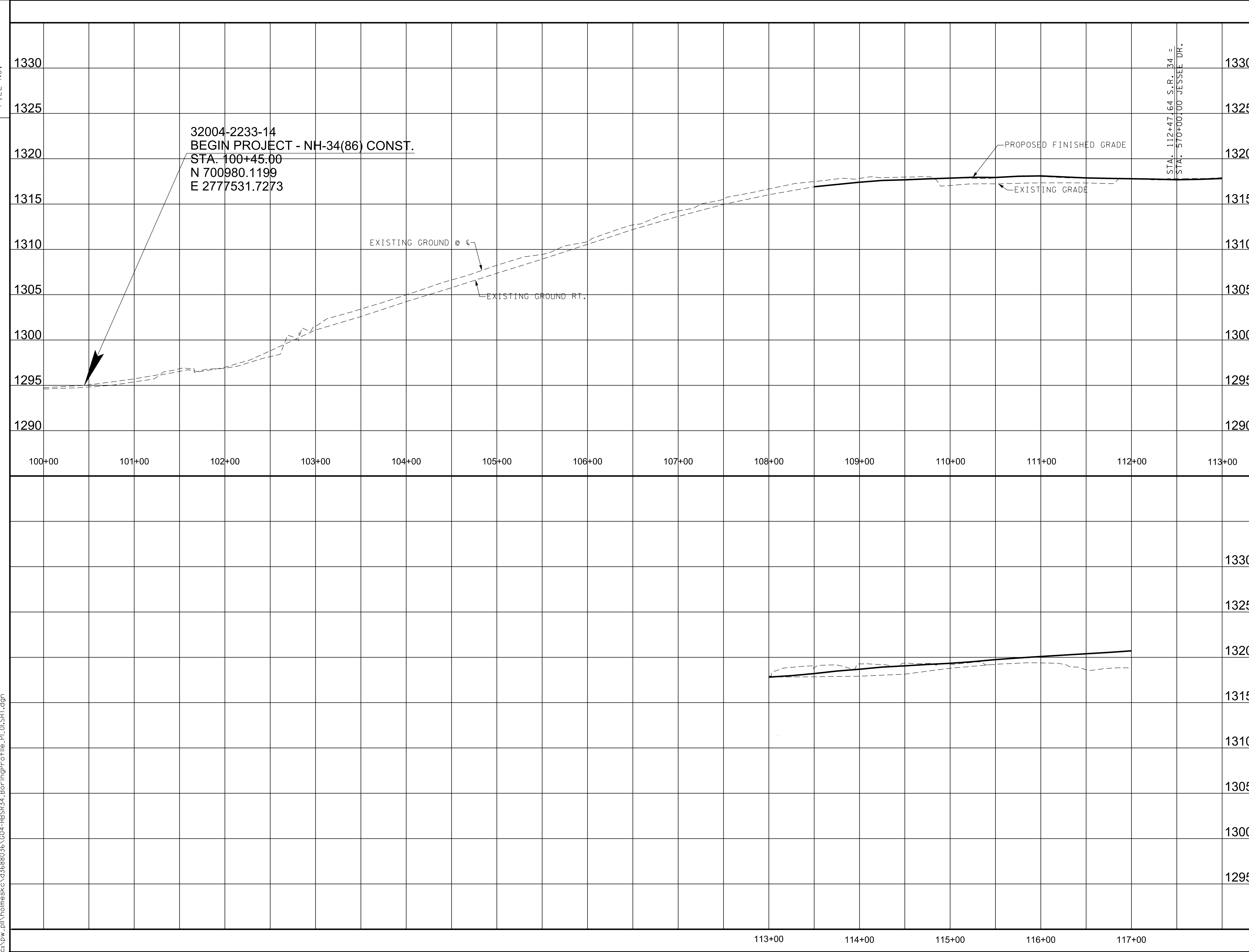
**CONSTRUCTION
 FIELD
 REVIEW**

SEALED BY

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

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

**GEOTECHNICAL
 BORING LAYOUT**
 STA. 100+45 TO STA. 117+00
 SCALE: 1"=100'



TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2024	NH-34(86)	G4

S.R. 34 HAMLEN CO.

LEGEND

- 115-2 BORING NO.
- 114+33 STATION
- 50' R OFFSET
- 701 GROUND ELEV. (ft.)
- SPT N-VALUE (8) GROUNDWATER AT ≥24 HOURS
- (bpf) GROUNDWATER AT TIME OF BORING (TOB)
- (50/0) AUGER REFUSAL
- RQD % 63
- REC % 87

MATERIAL GRAPHICS

- AGGREGATE BASE COURSE
- ASPHALT
- FAT CLAY
- FAT CLAY WITH SAND, SANDY FAT CLAY
- LEAN CLAY
- SILTY CLAY
- LEAN CLAY WITH SAND, SANDY LEAN CLAY
- IDENTIFIED OR POTENTIAL FILL
- LIMESTONE
- WEATHERED ROCK
- CLAYEY SAND
- CLAYEY SAND WITH GRAVEL
- TOPSOIL
- VOID
- GRAVELLY FAT CLAY
- DOLOSTONE
- ELASTIC SILT
- PORTLAND CEMENT CONCRETE
- GRAVELLY LEAN CLAY
- CLAYEY GRAVEL, CLAYEY GRAVEL WITH SAND
- GRAVELLY SILT
- LOW PLASTICITY SILT

SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

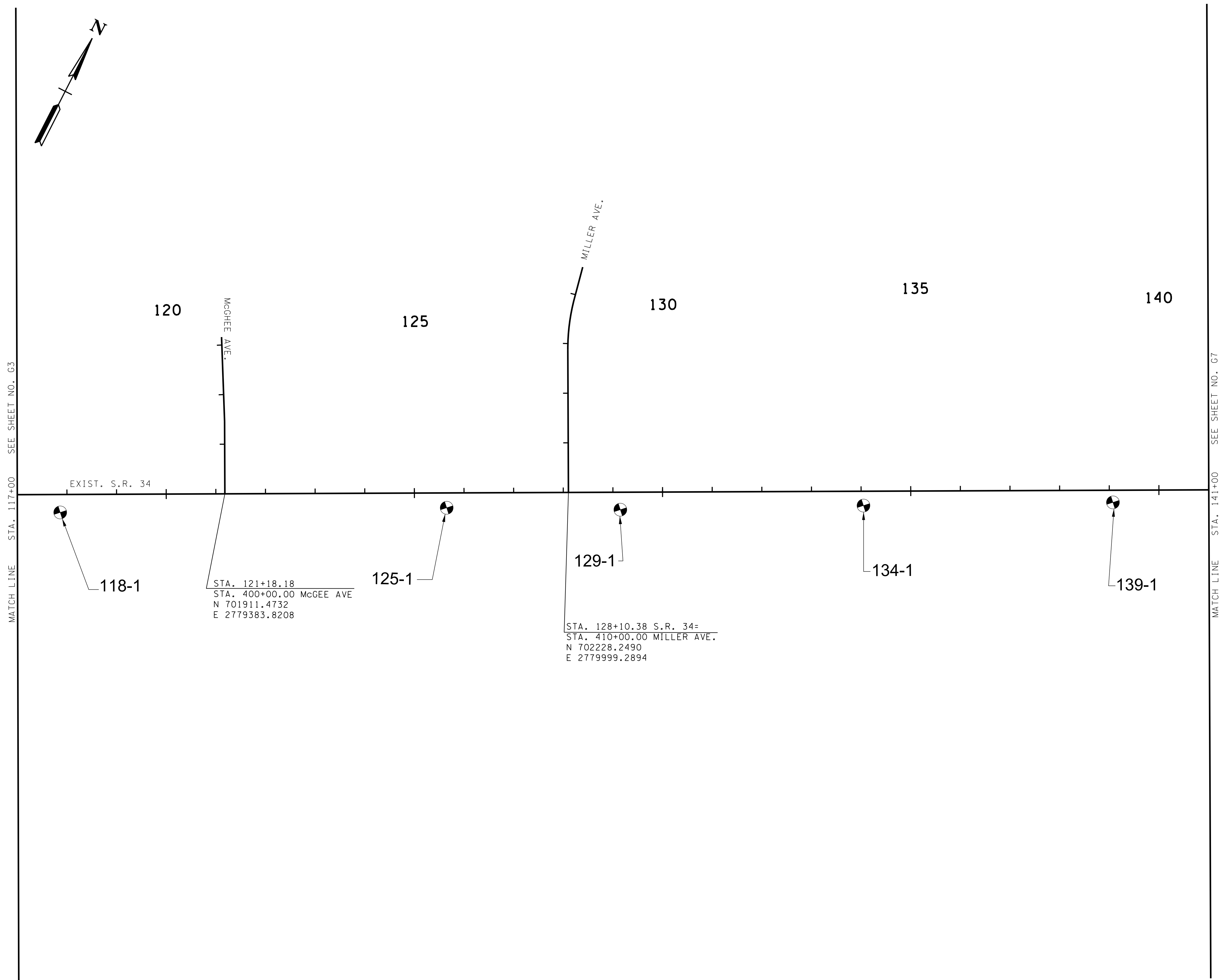
GEOTECHNICAL BORING PROFILE
STA. 100+00 TO STA. 117+00
SCALE: 1"=100' HORIZ.
SCALE: 1"=10' VERT.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2024	NH-34(86)	G5

S.R. 34

HAMBLEN CO.

7/14/2023 8:06:56 AM
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LEGEND
 GEOTECHNICAL BORING

**CONSTRUCTION
 FIELD
 REVIEW**

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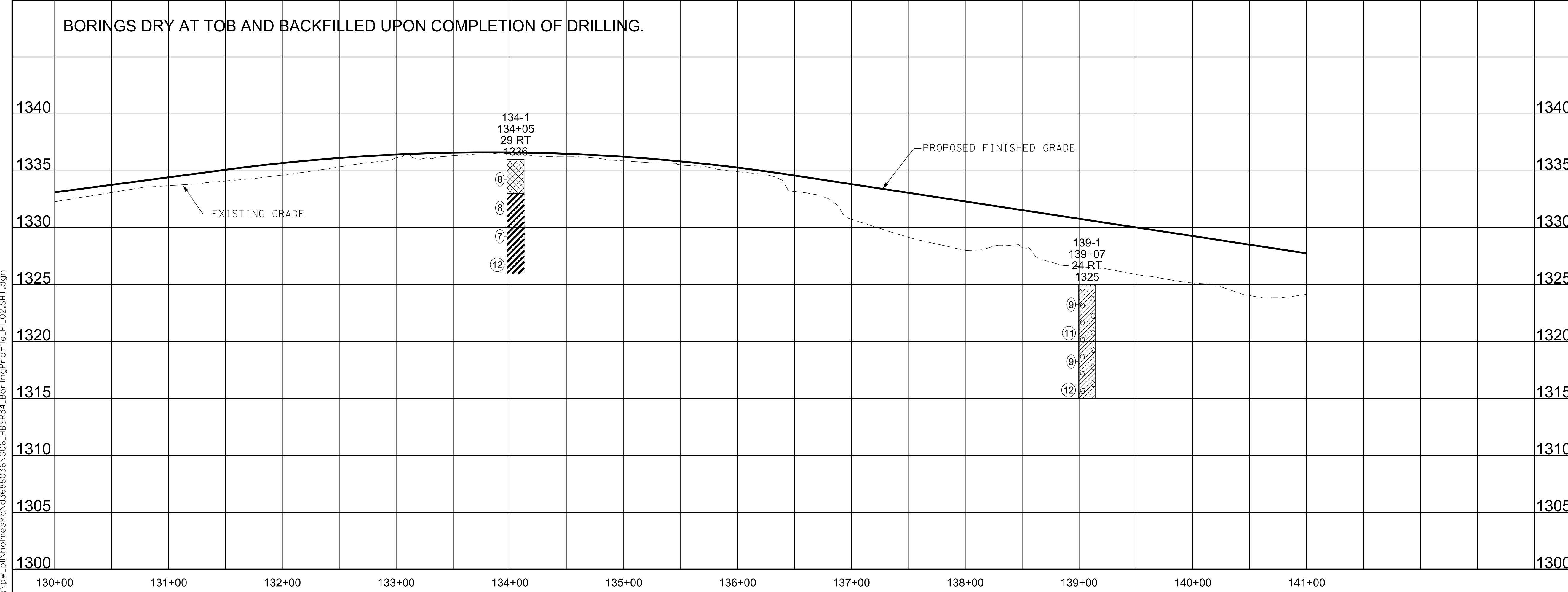
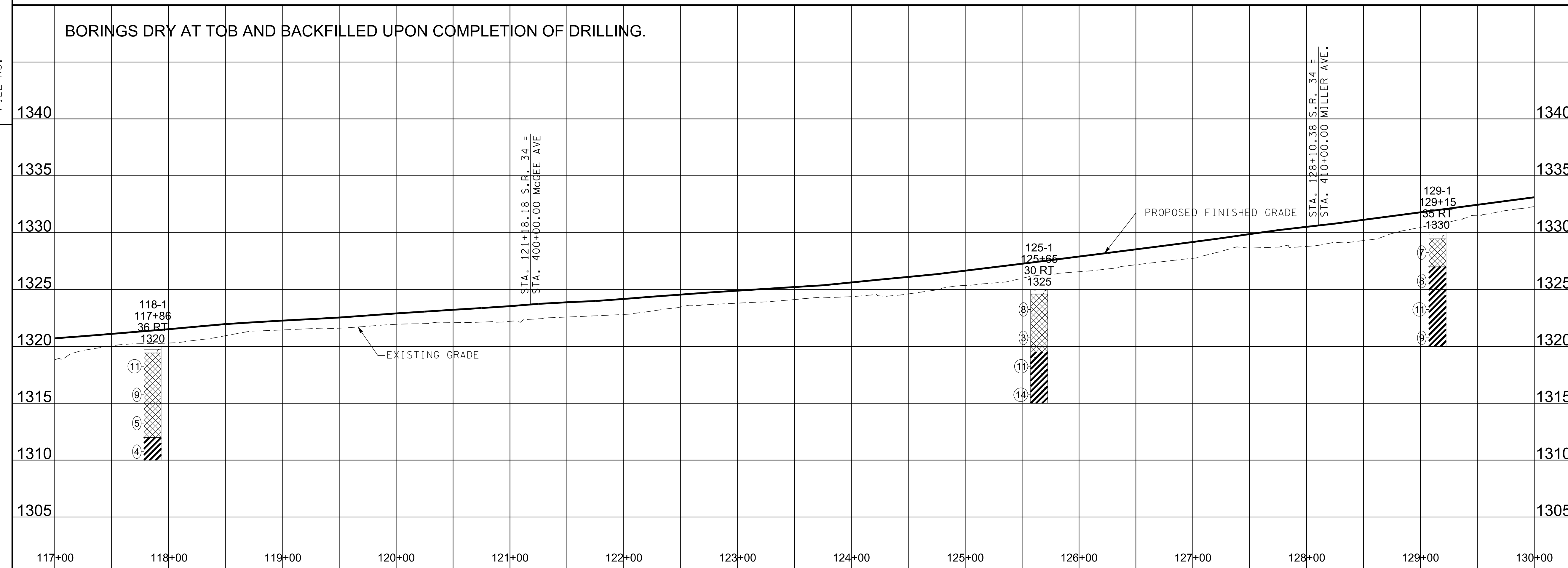
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STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

**GEOTECHNICAL
 BORING LAYOUT**
 STA. 117+00 TO STA. 141+00
 SCALE: 1"=100'

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2024	NH-34(86)	G6

S.R. 34
HAMBLEN CO.



LEGEND

115-2 BORING NO.
114+33 STATION
50' R OFFSET
701 GROUND ELEV. (ft.)

SPT N-VALUE (bpf) (8)
(50/0)

RQD % 63
REC % 87

GROUNDWATER AT >24 HOURS
GROUNDWATER AT TIME OF BORING (TOB)
AUGER REFUSAL

MATERIAL GRAPHICS

- AGGREGATE BASE COURSE
- ASPHALT
- FAT CLAY
- FAT CLAY WITH SAND, SANDY FAT CLAY
- LEAN CLAY
- SILTY CLAY
- LEAN CLAY WITH SAND, SANDY LEAN CLAY
- IDENTIFIED OR POTENTIAL FILL
- LIMESTONE
- WEATHERED ROCK
- CLAYEY SAND
- CLAYEY SAND WITH GRAVEL
- TOPSOIL
- VOID
- GRAVELLY FAT CLAY
- DOLOSTONE
- ELASTIC SILT
- PORTLAND CEMENT CONCRETE
- GRAVELLY LEAN CLAY
- CLAYEY GRAVEL, CLAYEY GRAVEL WITH SAND
- GRAVELLY SILT
- LOW PLASTICITY SILT

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

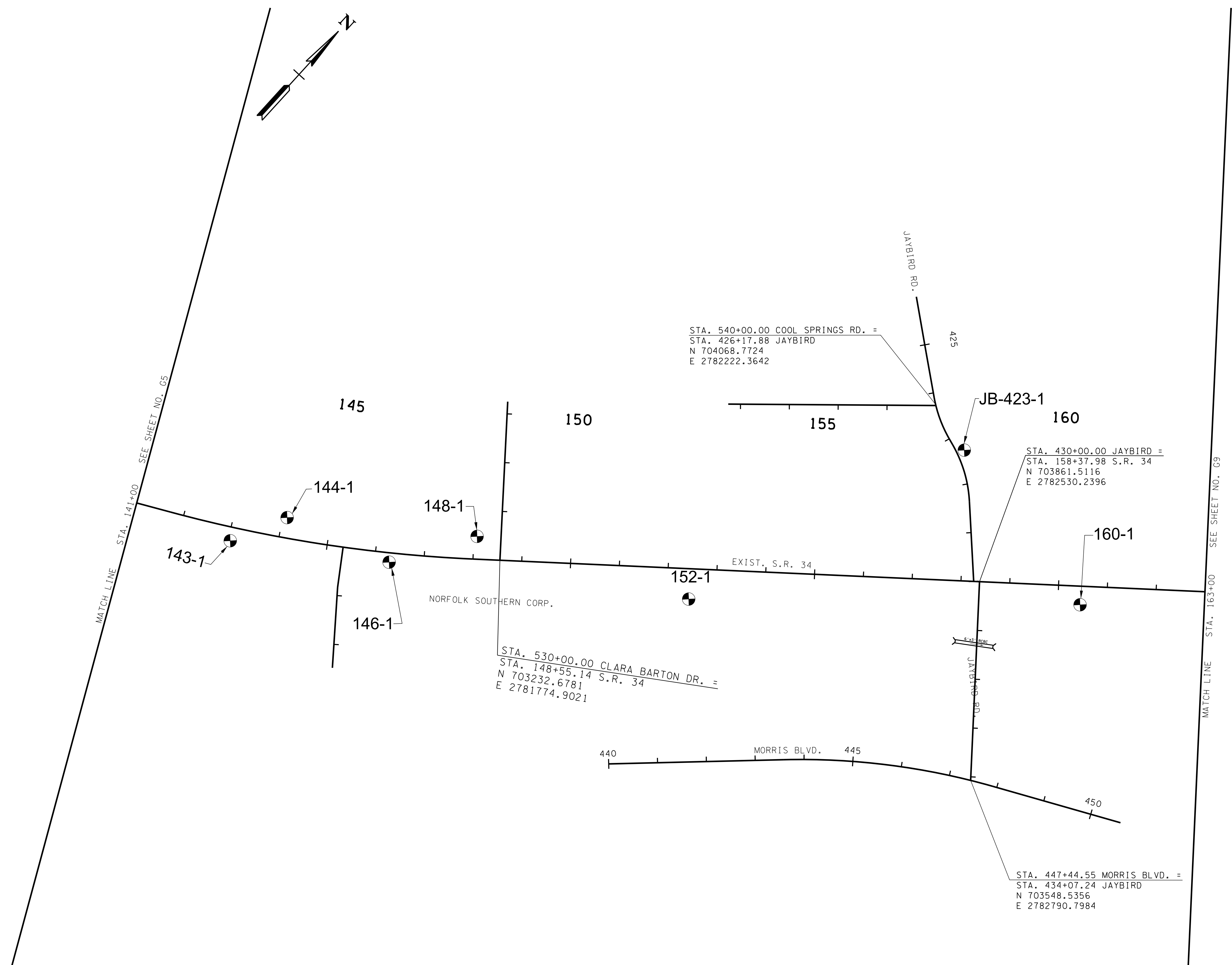
GEOTECHNICAL BORING PROFILE
STA. 117+00 TO STA. 141+00
SCALE: 1"=100' HORIZ.
SCALE: 1"=10' VERT.

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2024	NH-34(86)	G7

S.R. 34

HAMBLEN CO.



STA. 540+00.00 COOL SPRINGS RD. =
STA. 426+17.88 JAYBIRD
N 704068.7724
E 2782222.3642

STA. 430+00.00 JAYBIRD =
STA. 158+37.98 S.R. 34
N 703861.5116
E 2782530.2396

STA. 530+00.00 CLARA BARTON DR. =
STA. 148+55.14 S.R. 34
N 703232.6781
E 2781774.9021

STA. 447+44.55 MORRIS BLVD. =
STA. 434+07.24 JAYBIRD
N 703548.5356
E 2782790.7984

LEGEND



CONSTRUCTION
FIELD
REVIEW

SEALED BY

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

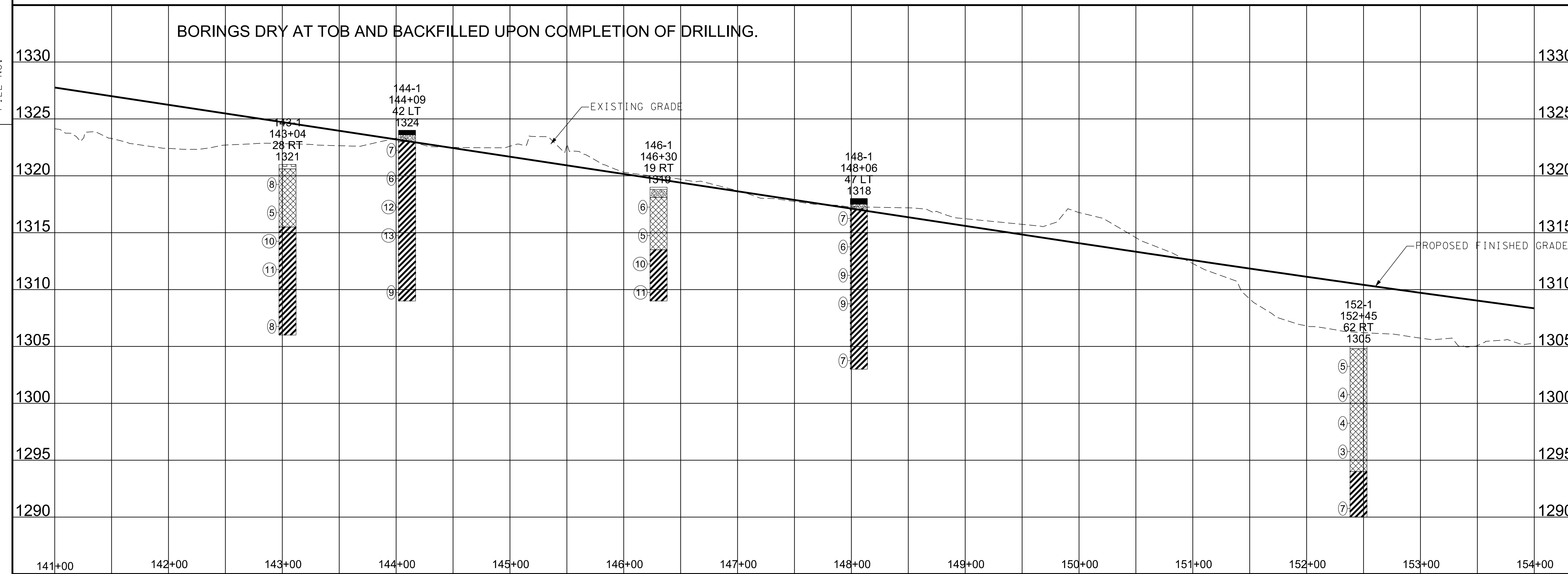
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GEOTECHNICAL
BORING LAYOUT
STA. 141+00 TO STA. 163+00
SCALE: 1"=100'

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2024	NH-34(86)	G8

S.R. 34 HAMBLEN CO.

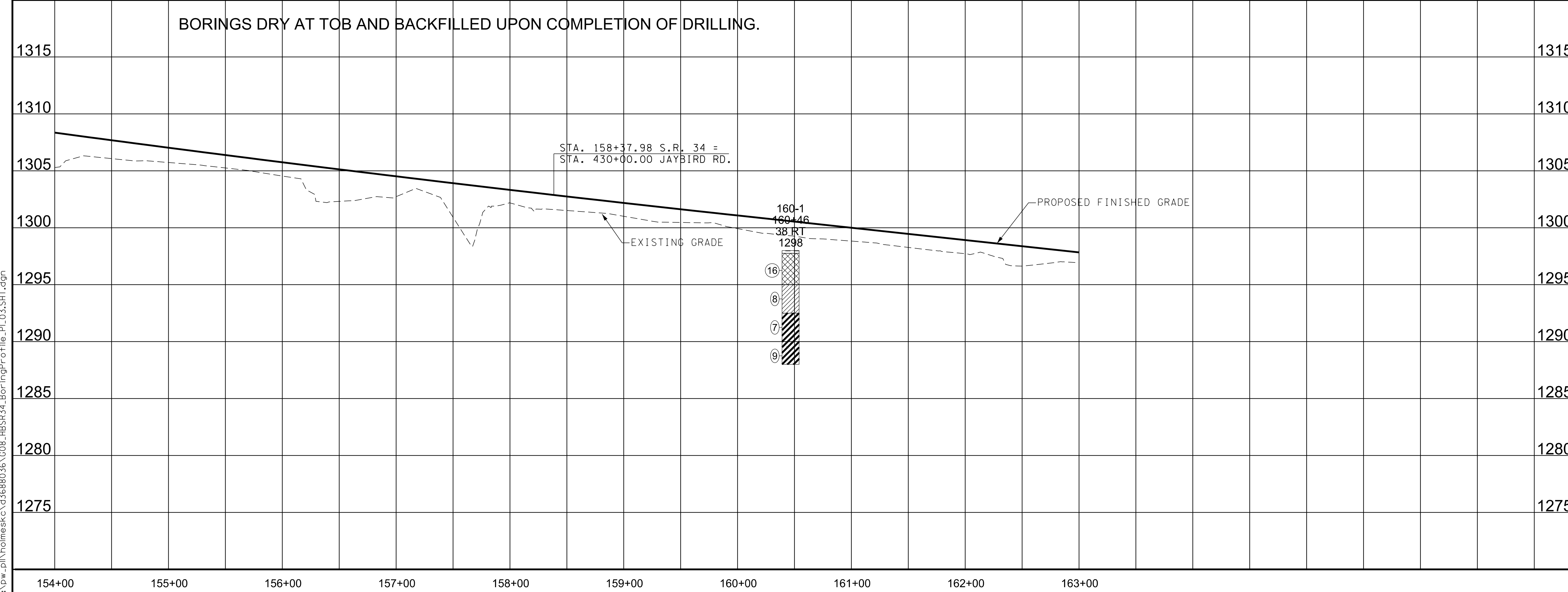


LEGEND

- 115-2 BORING NO.
- 114+33 STATION
- 50' R OFFSET
- 701 GROUND ELEV. (ft.)
- SPT N-VALUE (bpf) 8
- 50/0'
- RQD % 63
- REC % 87
- GROUNDWATER AT >24 HOURS
- GROUNDWATER AT TIME OF BORING (TOB)
- AUGER REFUSAL

MATERIAL GRAPHICS

- AGGREGATE BASE COURSE
- ASPHALT
- FAT CLAY
- FAT CLAY WITH SAND, SANDY FAT CLAY
- LEAN CLAY
- SILTY CLAY
- LEAN CLAY WITH SAND, SANDY LEAN CLAY
- IDENTIFIED OR POTENTIAL FILL
- LIMESTONE
- WEATHERED ROCK
- CLAYEY SAND
- CLAYEY SAND WITH GRAVEL
- TOPSOIL
- VOID
- GRAVELLY FAT CLAY
- DOLOSTONE
- ELASTIC SILT
- PORTLAND CEMENT CONCRETE
- GRAVELLY LEAN CLAY
- CLAYEY GRAVEL, CLAYEY GRAVEL WITH SAND
- GRAVELLY SILT
- LOW PLASTICITY SILT



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DEPARTMENT OF TRANSPORTATION

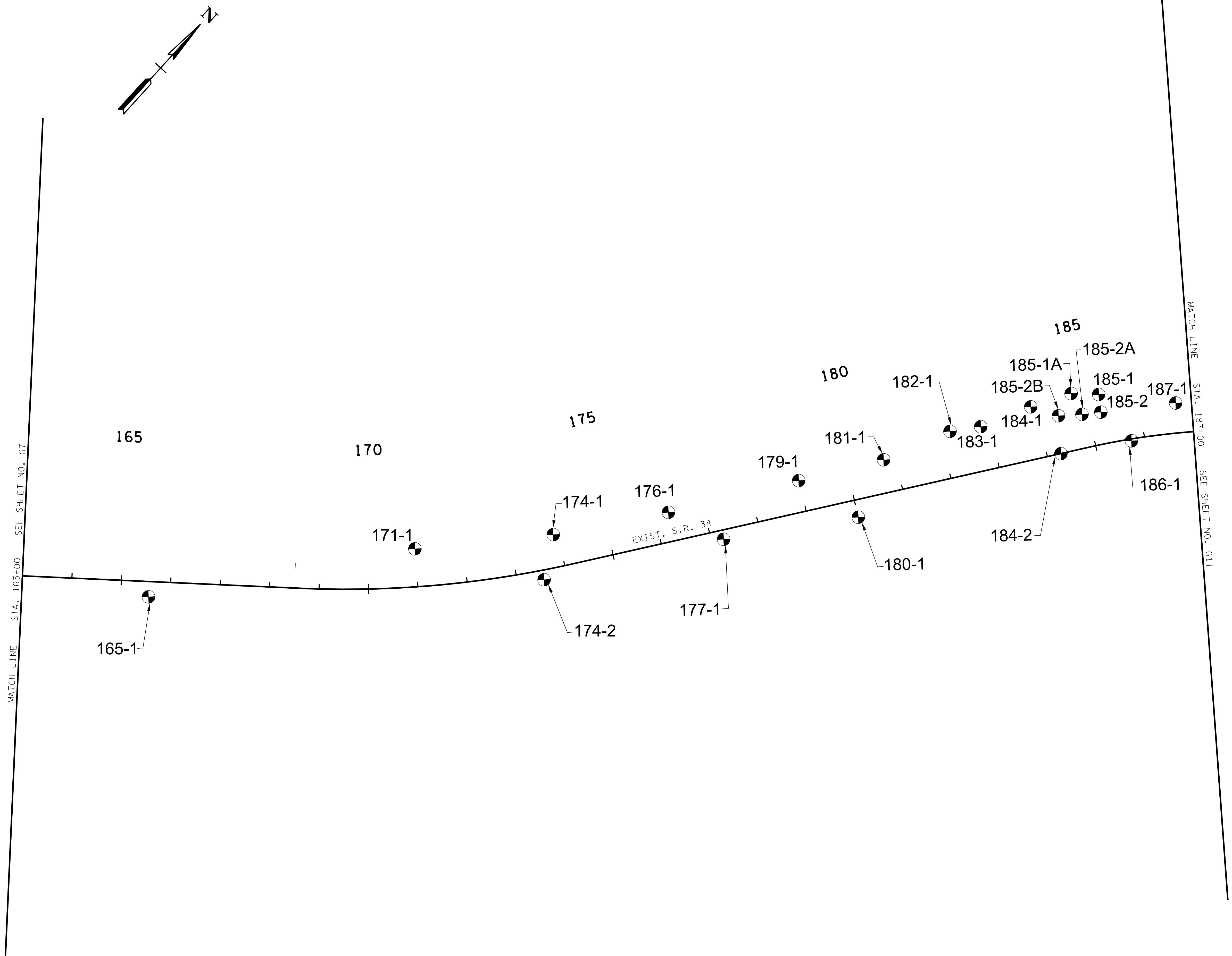
GEOTECHNICAL BORING PROFILE
STA. 141+00 TO STA. 163+00
SCALE: 1"=100' HORIZ.
SCALE: 1"=10' VERT.

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2024	NH-34(86)	G9

S.R. 34

HAMBLÉN CO.



LEGEND
 GEOTECHNICAL BORING

**CONSTRUCTION
 FIELD
 REVIEW**

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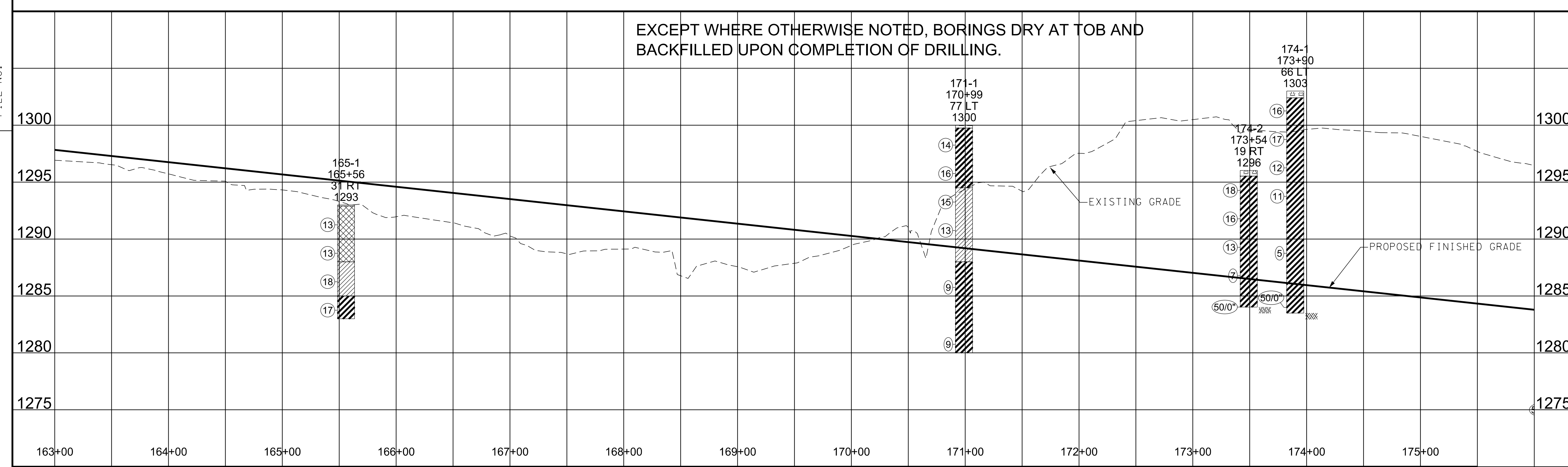
STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

**GEOTECHNICAL
 BORING LAYOUT**
 STA.163+00 TO STA.187+00
 SCALE: 1"=100'

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2024	NH-34(86)	G10

S.R. 34 HAMBLLEN CO.

EXCEPT WHERE OTHERWISE NOTED, BORINGS DRY AT TOB AND BACKFILLED UPON COMPLETION OF DRILLING.



LEGEND

115-2 BORING NO.
114+33 STATION
50' R OFFSET
701 GROUND ELEV. (ft.)

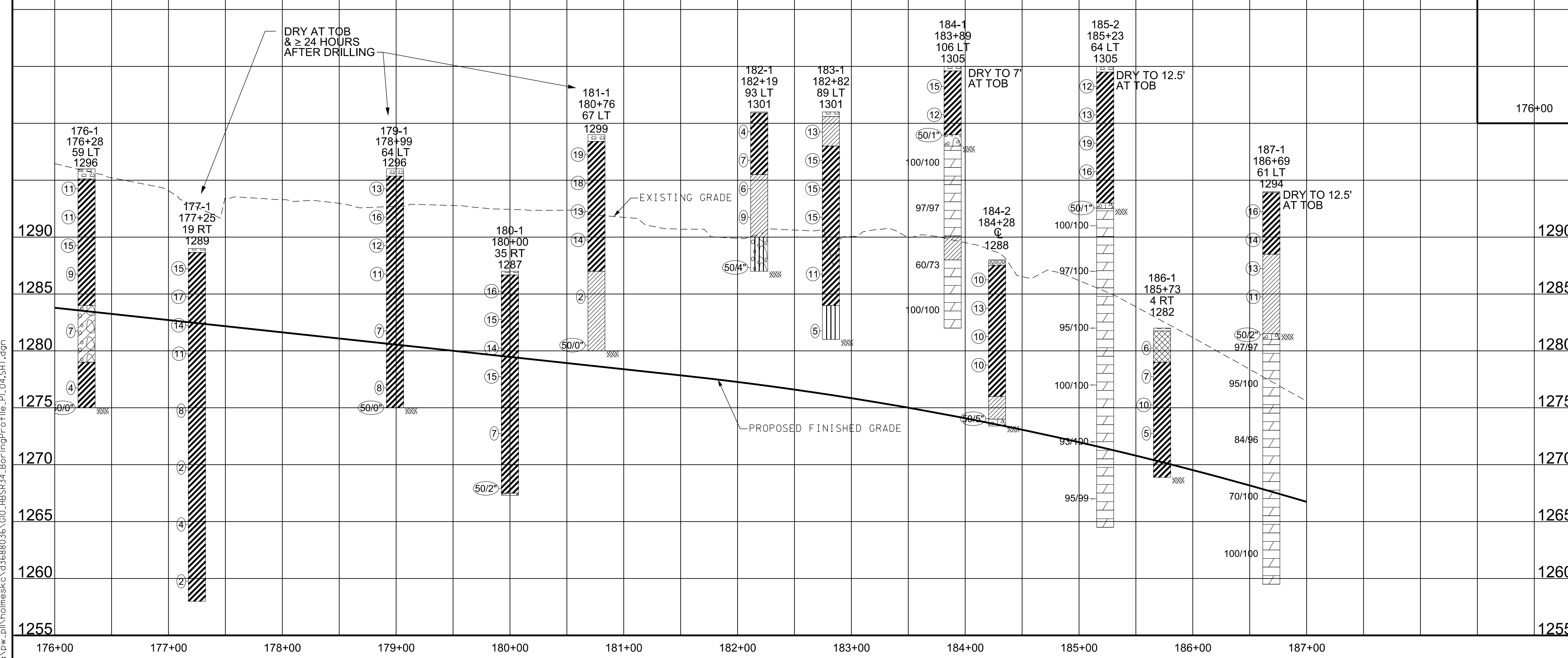
SPT N-VALUE (8) (bpf) GROUNDWATER AT ≥24 HOURS
 GROUNDWATER AT TIME OF BORING (TOB)
 AUGER REFUSAL

RQD % 63
REC % 87

MATERIAL GRAPHICS

- AGGREGATE BASE COURSE
- ASPHALT
- FAT CLAY
- FAT CLAY WITH SAND, SANDY FAT CLAY
- LEAN CLAY
- SILTY CLAY
- LEAN CLAY WITH SAND, SANDY LEAN CLAY
- IDENTIFIED OR POTENTIAL FILL
- LIMESTONE
- WEATHERED ROCK
- CLAYEY SAND
- CLAYEY SAND WITH GRAVEL
- TOPSOIL
- VOID
- GRAVELLY FAT CLAY
- DOLOSTONE
- ELASTIC SILT
- PORTLAND CEMENT CONCRETE
- GRAVELLY LEAN CLAY
- CLAYEY GRAVEL, CLAYEY GRAVEL WITH SAND
- GRAVELLY SILT
- LOW PLASTICITY SILT

EXCEPT WHERE OTHERWISE NOTED, BORINGS DRY AT TOB AND BACKFILLED UPON COMPLETION OF DRILLING.



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DEPARTMENT OF TRANSPORTATION

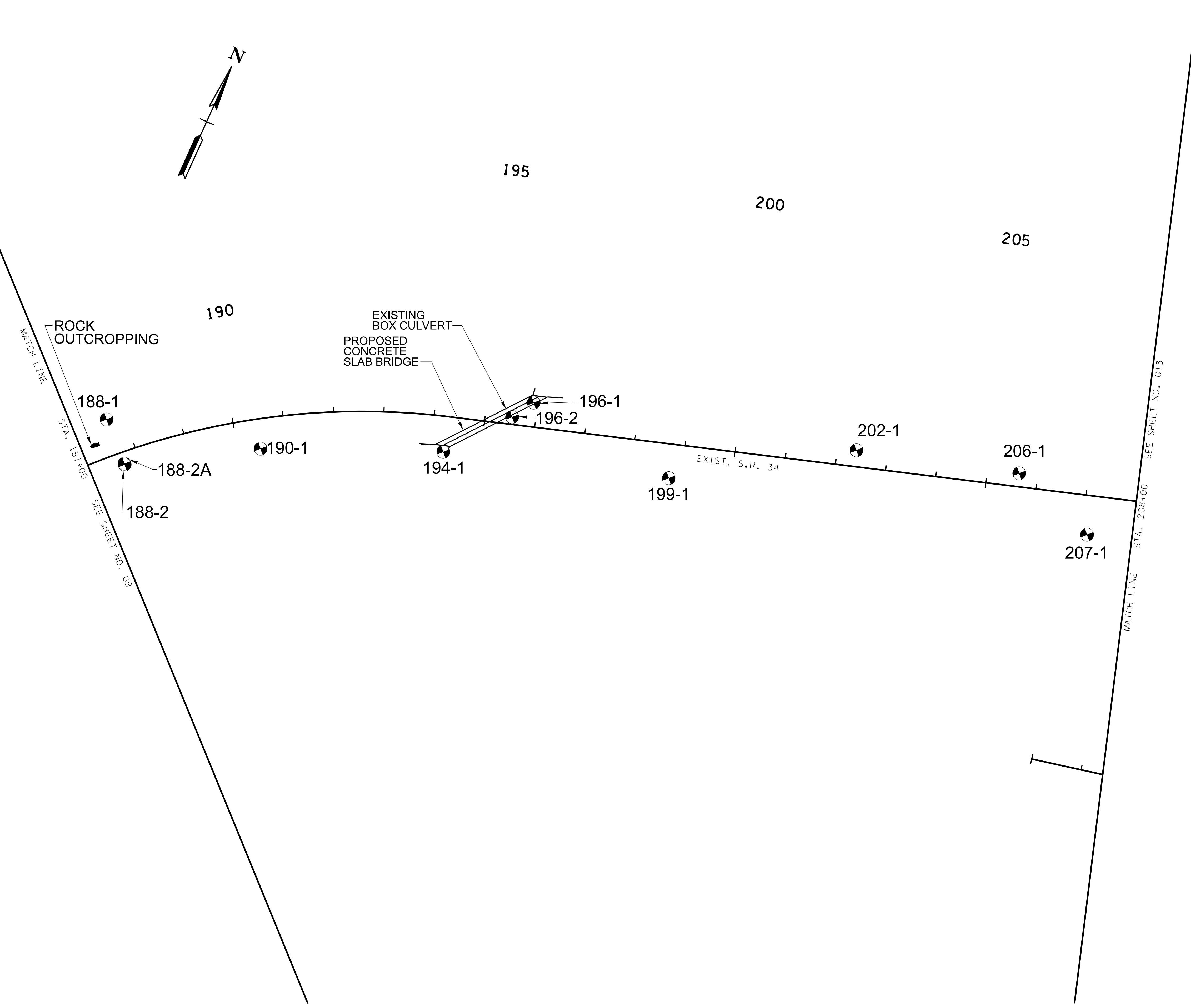
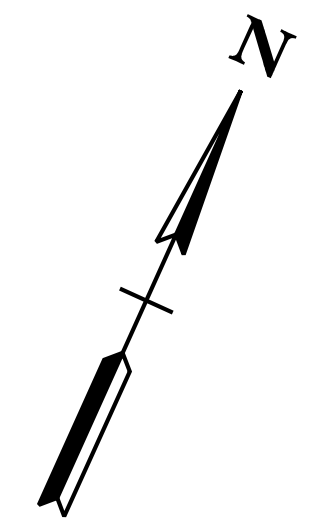
GEOTECHNICAL BORING PROFILE
STA. 163+00 TO STA. 187+00
SCALE: 1"=100' HORIZ.
SCALE: 1"=10' VERT.

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2024	NH-34(86)	G11

S.R. 34

HAMBLÉN CO.



LEGEND
 GEOTECHNICAL BORING

**CONSTRUCTION
 FIELD
 REVIEW**

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 ARE REFERENCED TO THE NAVD 1988.

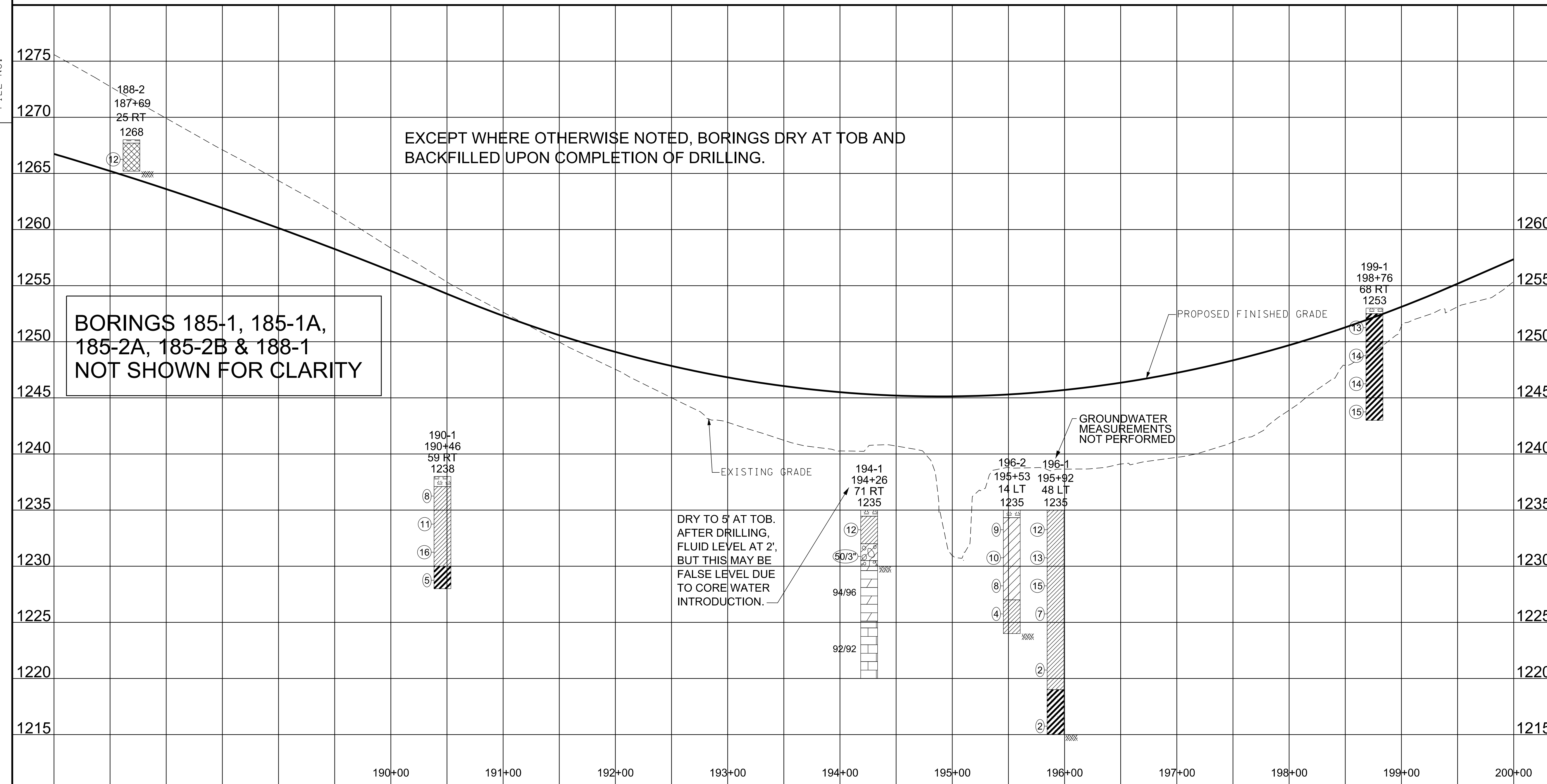
STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

**GEOTECHNICAL
 BORING LAYOUT**
 STA. 187+00 TO STA. 208+00
 SCALE: 1"=100'

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2024	NH-34(86)	G12

S.R. 34 HAMBLLEN CO.

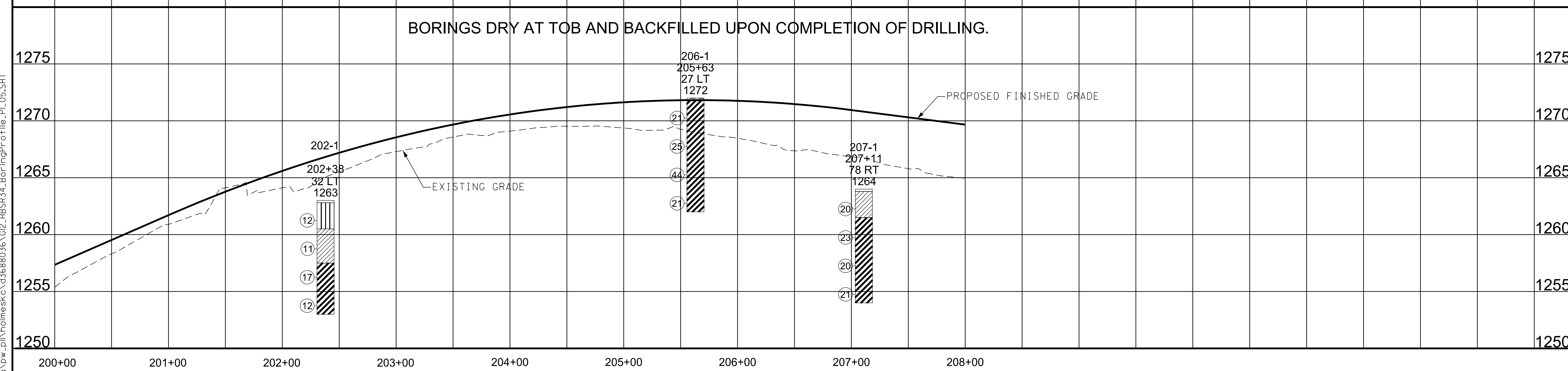


LEGEND

- 115-2 BORING NO.
- 114+33 STATION
- 50' R OFFSET
- 701 GROUND ELEV. (ft.)
- SPT N-VALUE (bpf)
- 50/0'
- RQD % 63
- REC % 87
- GROUNDWATER AT ≥24 HOURS
- GROUNDWATER AT TIME OF BORING (TOB)
- AUGER REFUSAL

MATERIAL GRAPHICS

- AGGREGATE BASE COURSE
- ASPHALT
- FAT CLAY
- FAT CLAY WITH SAND, SANDY FAT CLAY
- LEAN CLAY
- SILTY CLAY
- LEAN CLAY WITH SAND, SANDY LEAN CLAY
- IDENTIFIED OR POTENTIAL FILL
- LIMESTONE
- WEATHERED ROCK
- CLAYEY SAND
- CLAYEY SAND WITH GRAVEL
- TOPSOIL
- VOID
- GRAVELLY FAT CLAY
- DOLOSTONE
- ELASTIC SILT
- PORTLAND CEMENT CONCRETE
- GRAVELLY LEAN CLAY
- CLAYEY GRAVEL, CLAYEY GRAVEL WITH SAND
- GRAVELLY SILT
- LOW PLASTICITY SILT



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DEPARTMENT OF TRANSPORTATION

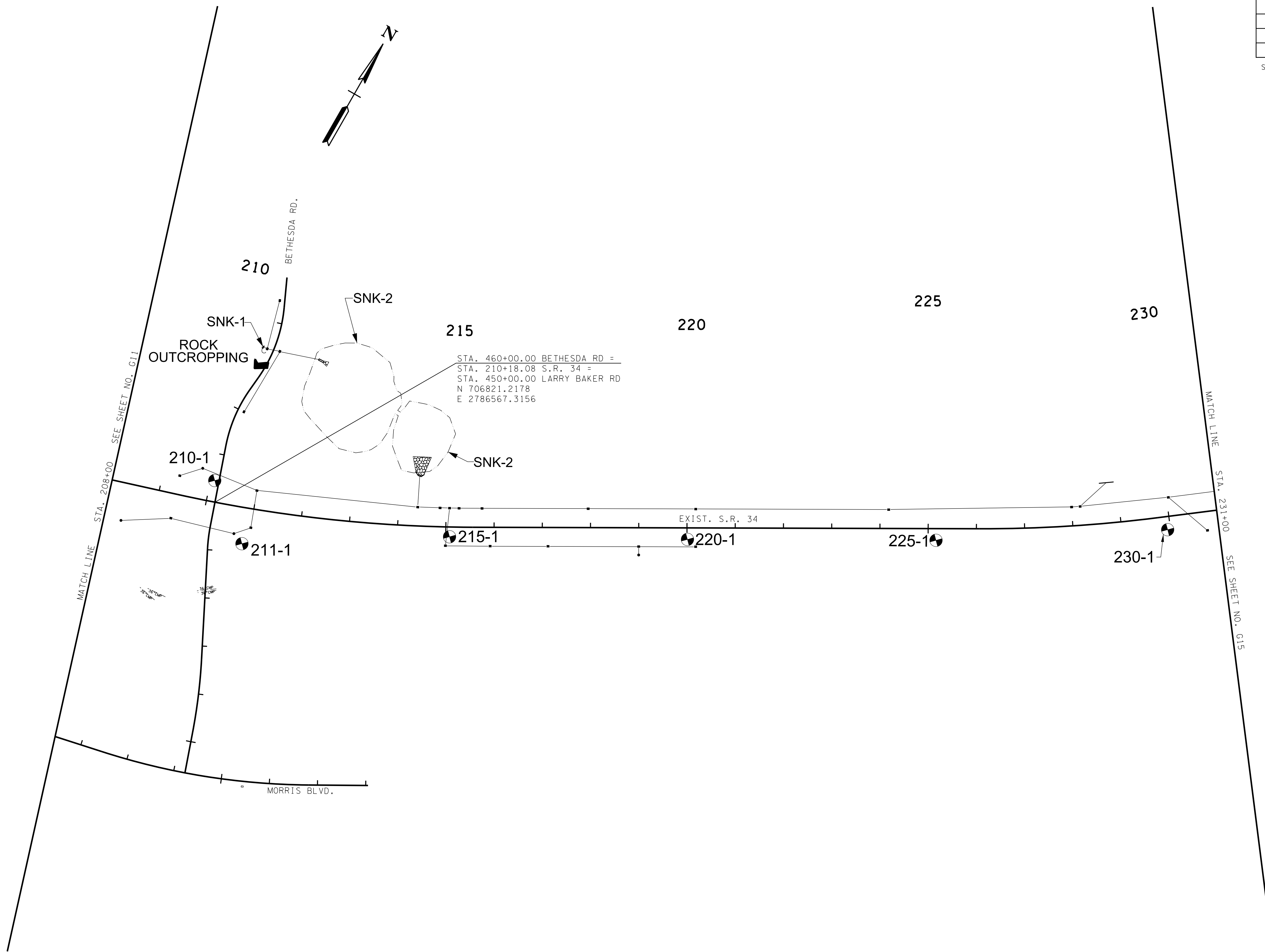
GEOTECHNICAL BORING PROFILE
STA. 187+00 TO STA. 208+00
SCALE: 1"=100' HORIZ.
SCALE: 1"=10' VERT.

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2024	NH-34(86)	G13

S.R. 34

HAMBLÉN CO.



LEGEND
 GEOTECHNICAL BORING

CONSTRUCTION FIELD REVIEW

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

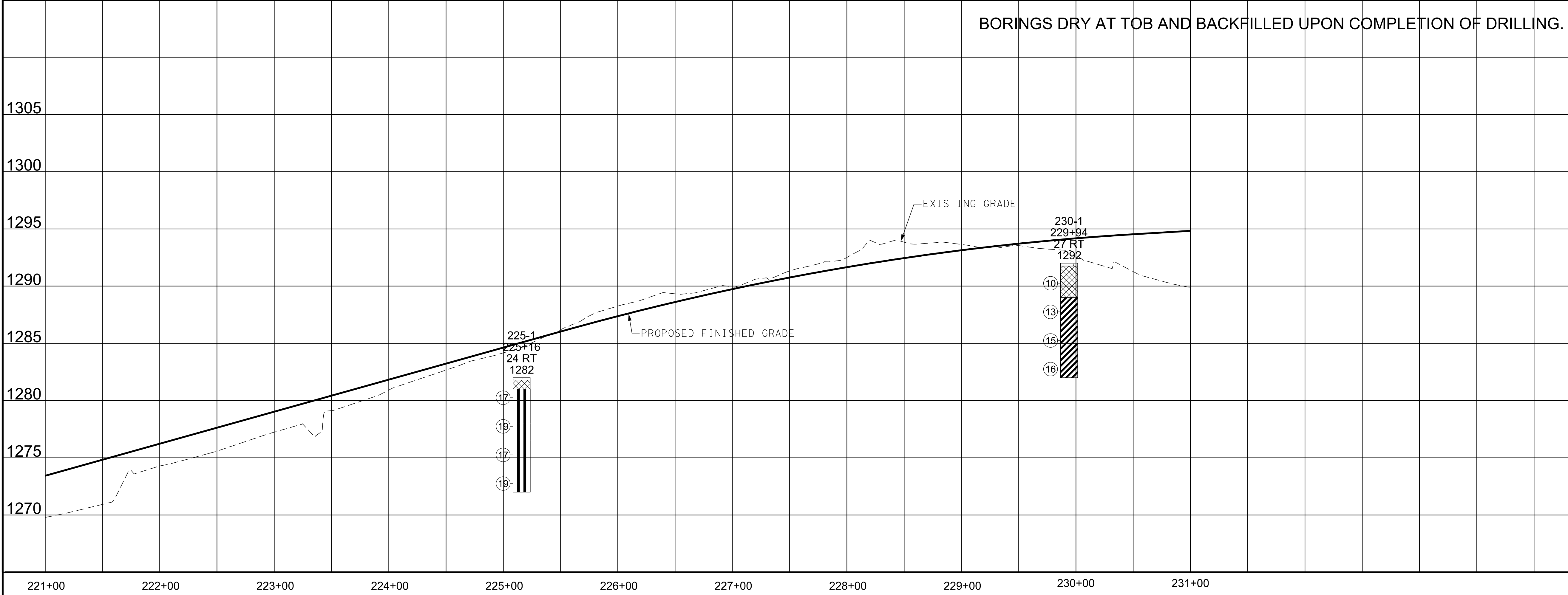
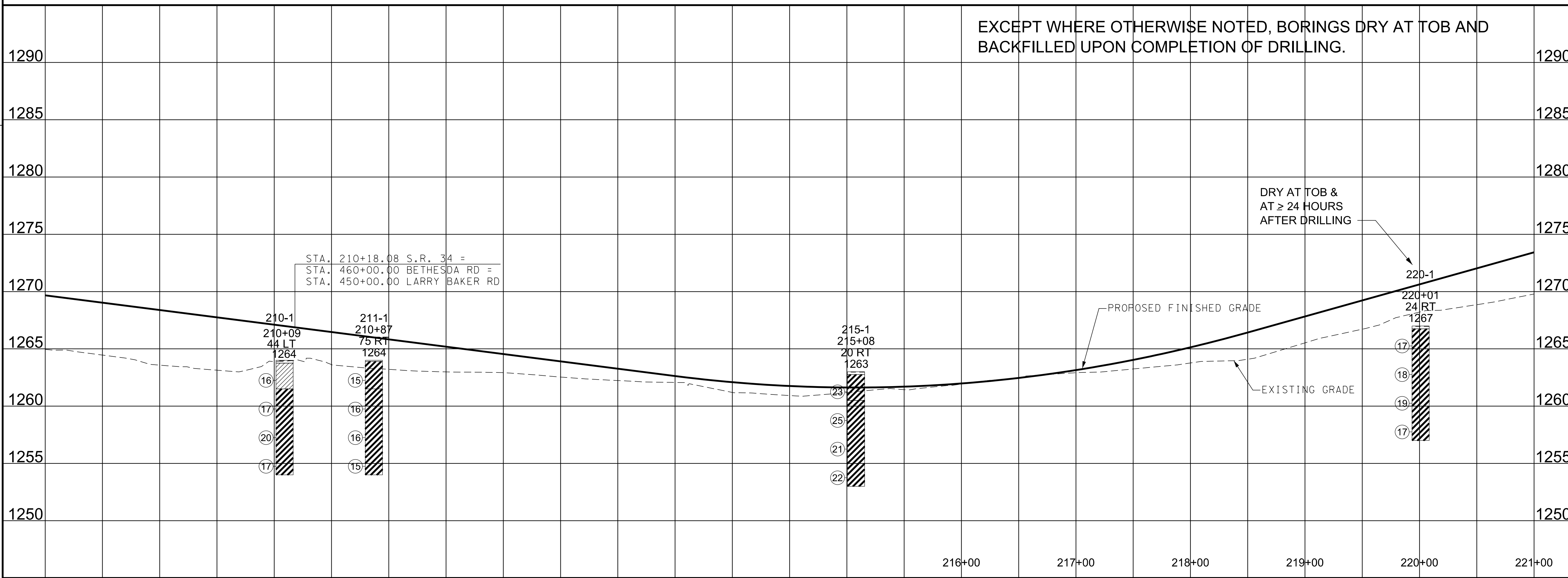
STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

GEOTECHNICAL BORING LAYOUT
 STA. 208+00 TO STA. 231+00
 SCALE: 1"=100'

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2024	NH-34(86)	G1 4

S.R. 34 HAMBLEN CO.



LEGEND

115-2 BORING NO.
114+33 STATION
50' R OFFSET
701 GROUND ELEV. (ft.)

SPT N-VALUE (8) (bpf) GROUNDWATER AT >=24 HOURS
 GROUNDWATER AT TIME OF BORING (TOB)
 AUGER REFUSAL
 RQD % 63
 REC % 87

MATERIAL GRAPHICS

- AGGREGATE BASE COURSE
- ASPHALT
- FAT CLAY
- FAT CLAY WITH SAND, SANDY FAT CLAY
- LEAN CLAY
- SILTY CLAY
- LEAN CLAY WITH SAND, SANDY LEAN CLAY
- IDENTIFIED OR POTENTIAL FILL
- LIMESTONE
- WEATHERED ROCK
- CLAYEY SAND
- CLAYEY SAND WITH GRAVEL
- TOPSOIL
- VOID
- GRAVELLY FAT CLAY
- DOLOSTONE
- ELASTIC SILT
- PORTLAND CEMENT CONCRETE
- GRAVELLY LEAN CLAY
- CLAYEY GRAVEL, CLAYEY GRAVEL WITH SAND
- GRAVELLY SILT
- LOW PLASTICITY SILT

SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

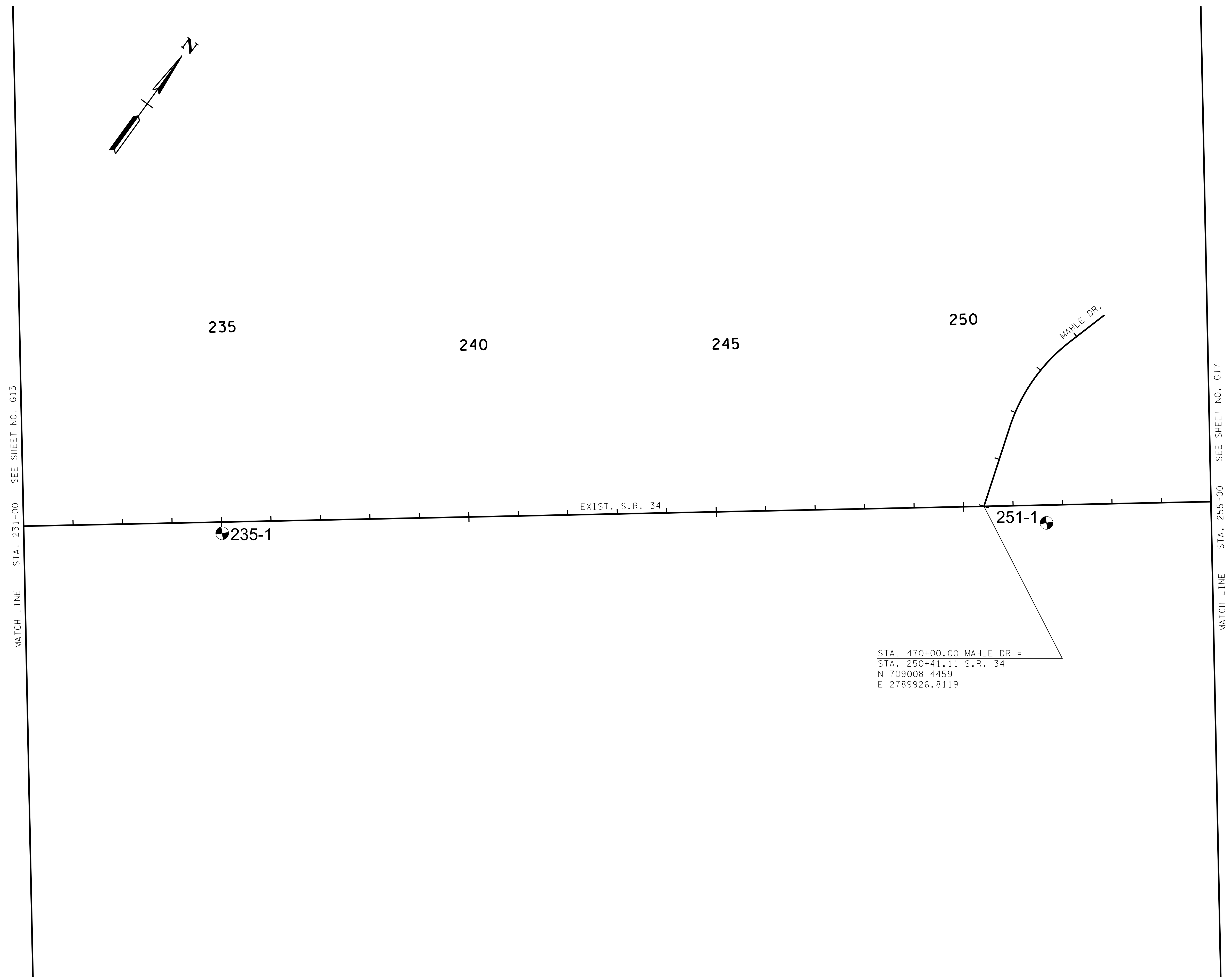
GEOTECHNICAL BORING PROFILE
STA. 208+00 TO STA. 231+00
SCALE: 1"=100' HORIZ.
SCALE: 1"=10' VERT.

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2024	NH-34(86)	G15

S.R. 34

HAMBLÉN CO.



LEGEND
 GEOTECHNICAL BORING

**CONSTRUCTION
 FIELD
 REVIEW**

STA. 470+00.00 MAHLE DR =
 STA. 250+41.11 S.R. 34
 N 709008.4459
 E 2789926.8119

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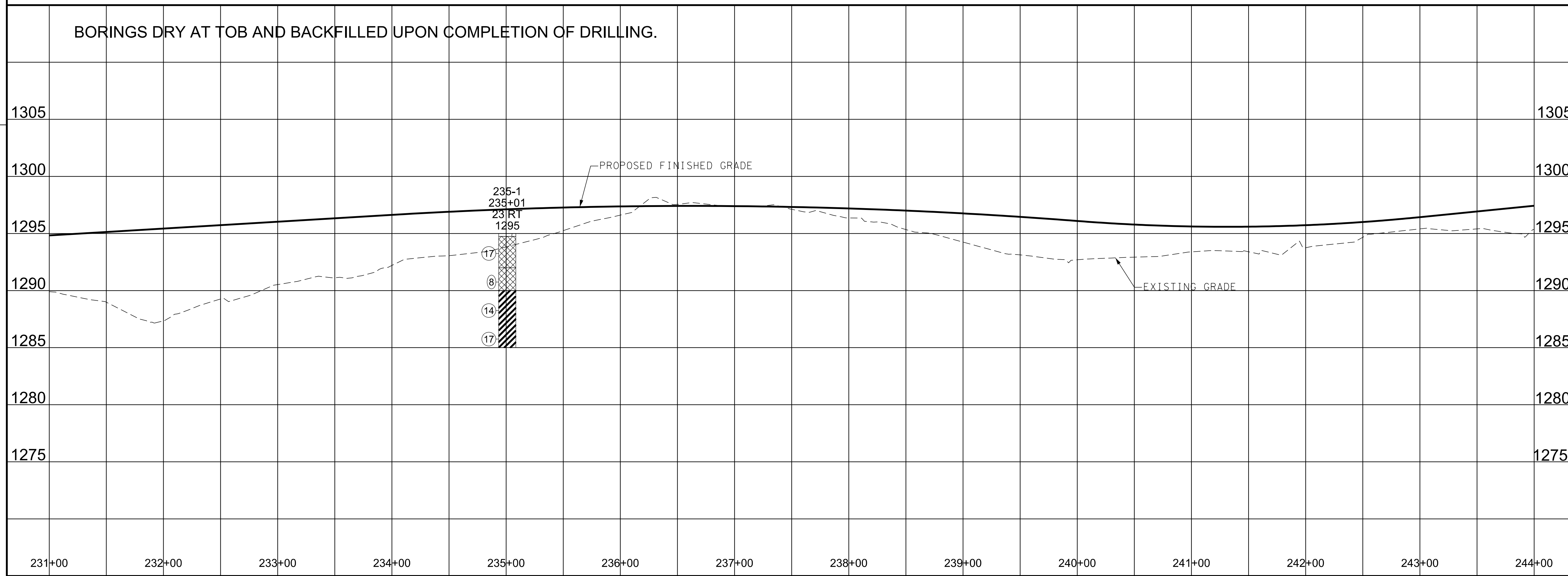
COORDINATES ARE NAD 83(1995).
 ARE DATUM ADJUSTED BY THE
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STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

**GEOTECHNICAL
 BORING LAYOUT**
 STA. 231+00 TO STA. 255+00
 SCALE: 1"=100'

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2024	NH-34(86)	G16

S.R. 34 HAMBLLEN CO.



LEGEND

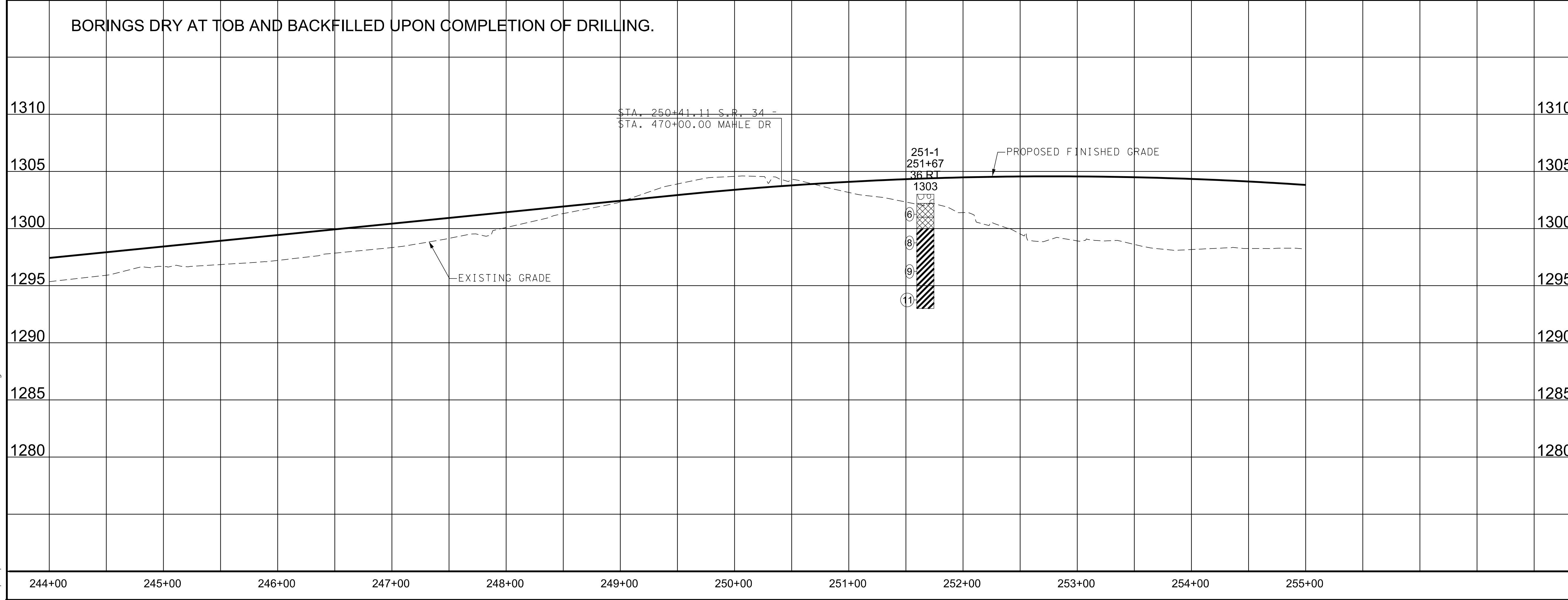
115-2 BORING NO.
114+33 STATION
50' R OFFSET
701 GROUND ELEV. (ft.)

SPT N-VALUE (8) (bpf) GROUNDWATER AT >24 HOURS
(50/0) GROUNDWATER AT TIME OF BORING (TOB)

RQD % 63
REC % 87 AUGER REFUSAL

MATERIAL GRAPHICS

- AGGREGATE BASE COURSE
- ASPHALT
- FAT CLAY
- FAT CLAY WITH SAND, SANDY FAT CLAY
- LEAN CLAY
- SILTY CLAY
- LEAN CLAY WITH SAND, SANDY LEAN CLAY
- IDENTIFIED OR POTENTIAL FILL
- LIMESTONE
- WEATHERED ROCK
- CLAYEY SAND
- CLAYEY SAND WITH GRAVEL
- TOPSOIL
- VOID
- GRAVELLY FAT CLAY
- DOLOSTONE
- ELASTIC SILT
- PORTLAND CEMENT CONCRETE
- GRAVELLY LEAN CLAY
- CLAYEY GRAVEL, CLAYEY GRAVEL WITH SAND
- GRAVELLY SILT
- LOW PLASTICITY SILT



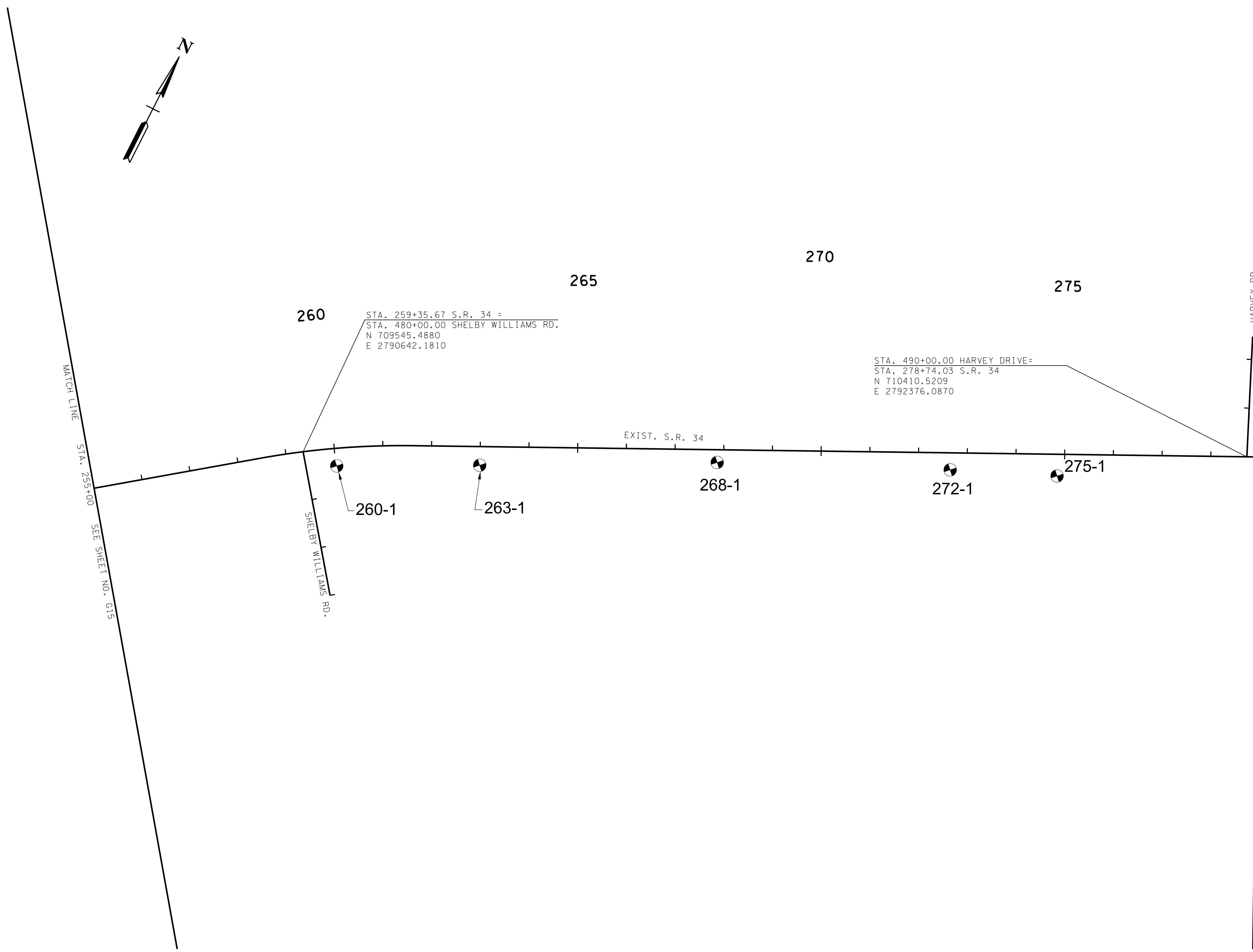
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DEPARTMENT OF TRANSPORTATION

GEOTECHNICAL BORING PROFILE
STA. 231+00 TO STA. 255+00
SCALE: 1"=100' HORIZ.
SCALE: 1"=10' VERT.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2024	NH-34(86)	G17

S.R. 34 HAMBLEN CO.



LEGEND
 GEOTECHNICAL BORING

**CONSTRUCTION
 FIELD
 REVIEW**

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COORDINATES ARE NAD 83(1995).
 ARE DATUM ADJUSTED BY THE
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 ARE REFERENCED TO THE NAVD 1988.

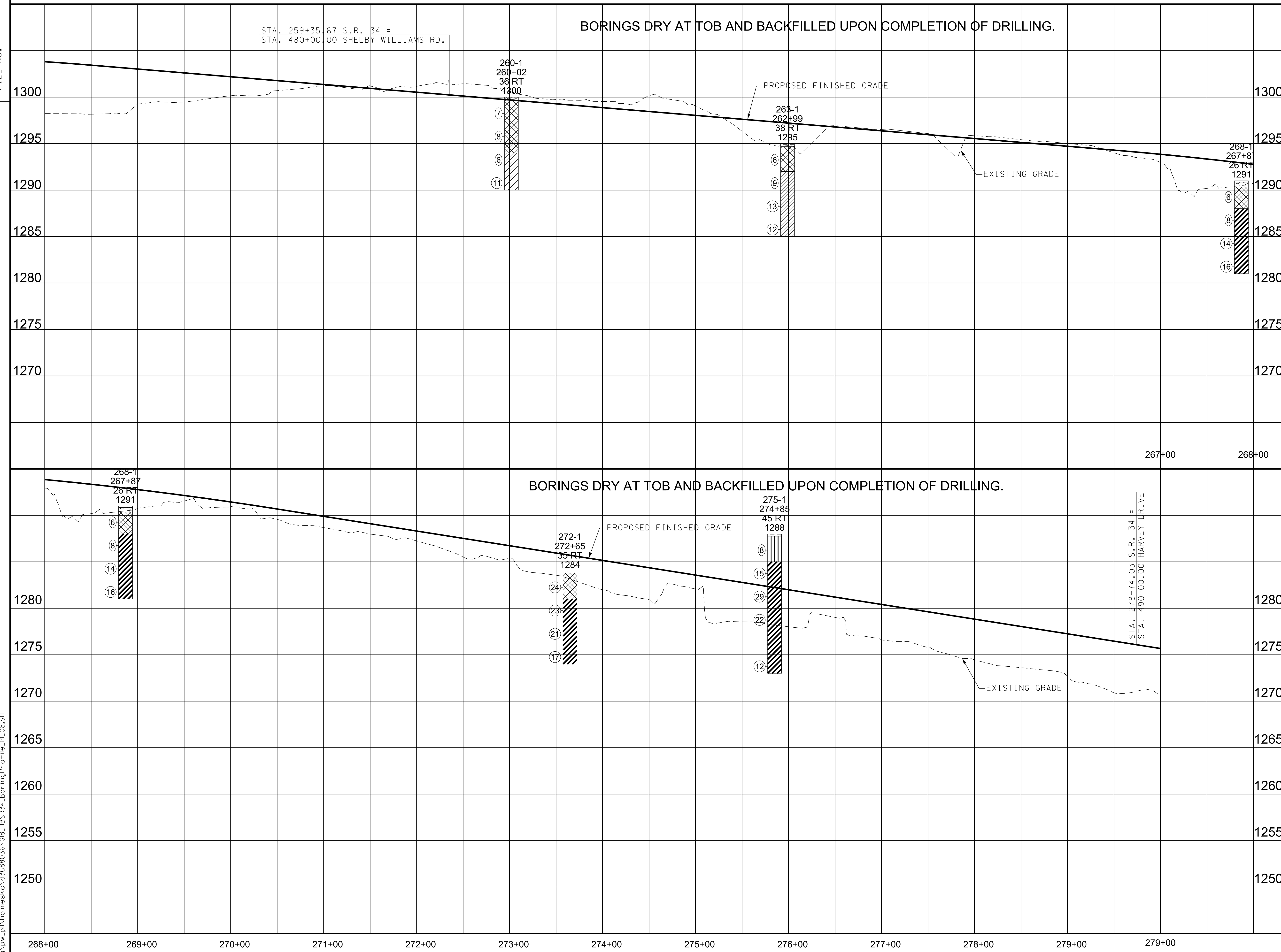
STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

**GEOTECHNICAL
 BORING LAYOUT**
 STA. 255+00 TO STA. 279+00
 SCALE: 1"=100'

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2024	NH-34(86)	G18

S.R. 34
HAMBLEN CO.



LEGEND

115-2 BORING NO.
114+33 STATION
50' R OFFSET
701 GROUND ELEV. (ft.)

SPT N-VALUE (bpf) (8) (50/0)

GROUNDWATER AT ≥24 HOURS
GROUNDWATER AT TIME OF BORING (TOB)

RQD % 63
REC % 87

AGGREGATE BASE COURSE
ASPHALT
FAT CLAY
FAT CLAY WITH SAND, SANDY FAT CLAY
LEAN CLAY
SILTY CLAY
LEAN CLAY WITH SAND, SANDY LEAN CLAY
IDENTIFIED OR POTENTIAL FILL
LIMESTONE
WEATHERED ROCK
CLAYEY SAND
CLAYEY SAND WITH GRAVEL
TOPSOIL
VOID
GRAVELLY FAT CLAY
DOLOSTONE
ELASTIC SILT
PORTLAND CEMENT CONCRETE
GRAVELLY LEAN CLAY
CLAYEY GRAVEL, CLAYEY GRAVEL WITH SAND
GRAVELLY SILT
LOW PLASTICITY SILT

MATERIAL GRAPHICS

AGGREGATE BASE COURSE

ASPHALT

FAT CLAY

FAT CLAY WITH SAND, SANDY FAT CLAY

LEAN CLAY

SILTY CLAY

LEAN CLAY WITH SAND, SANDY LEAN CLAY

IDENTIFIED OR POTENTIAL FILL

LIMESTONE

WEATHERED ROCK

CLAYEY SAND

CLAYEY SAND WITH GRAVEL

TOPSOIL

VOID

GRAVELLY FAT CLAY

DOLOSTONE

ELASTIC SILT

PORTLAND CEMENT CONCRETE

GRAVELLY LEAN CLAY

CLAYEY GRAVEL, CLAYEY GRAVEL WITH SAND

GRAVELLY SILT

LOW PLASTICITY SILT

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DEPARTMENT OF TRANSPORTATION

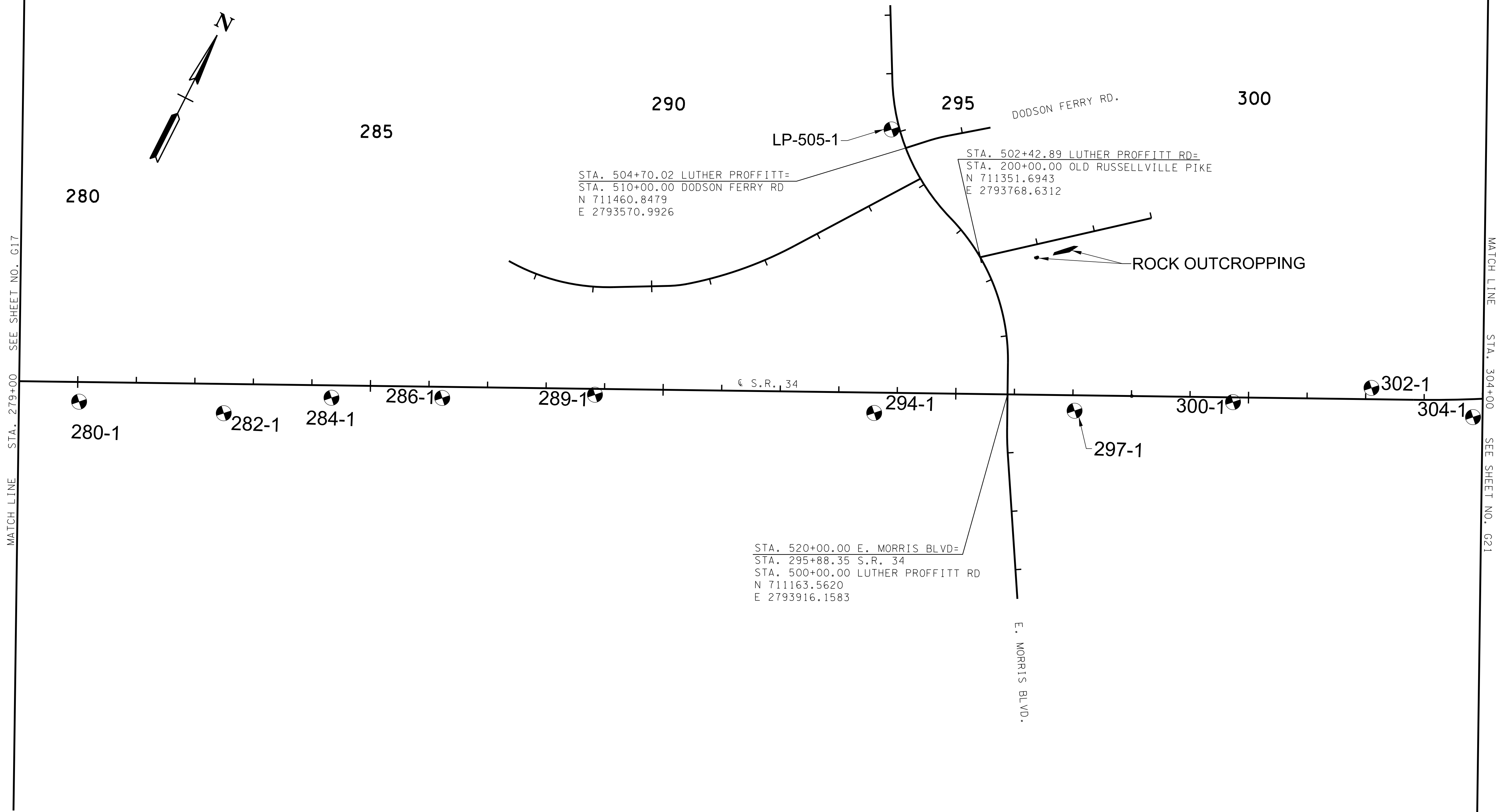
GEOTECHNICAL BORING PROFILE
STA. 255+00 TO STA. 279+00
SCALE: 1"=100' HORIZ.
SCALE: 1"=10' VERT.

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2024	NH-34(86)	G19

S.R. 34

HAMBLÉN CO.



MATCH LINE STA. 279+00 SEE SHEET NO. G17

MATCH LINE STA. 304+00 SEE SHEET NO. G21

LEGEND
 GEOTECHNICAL BORING

CONSTRUCTION FIELD REVIEW

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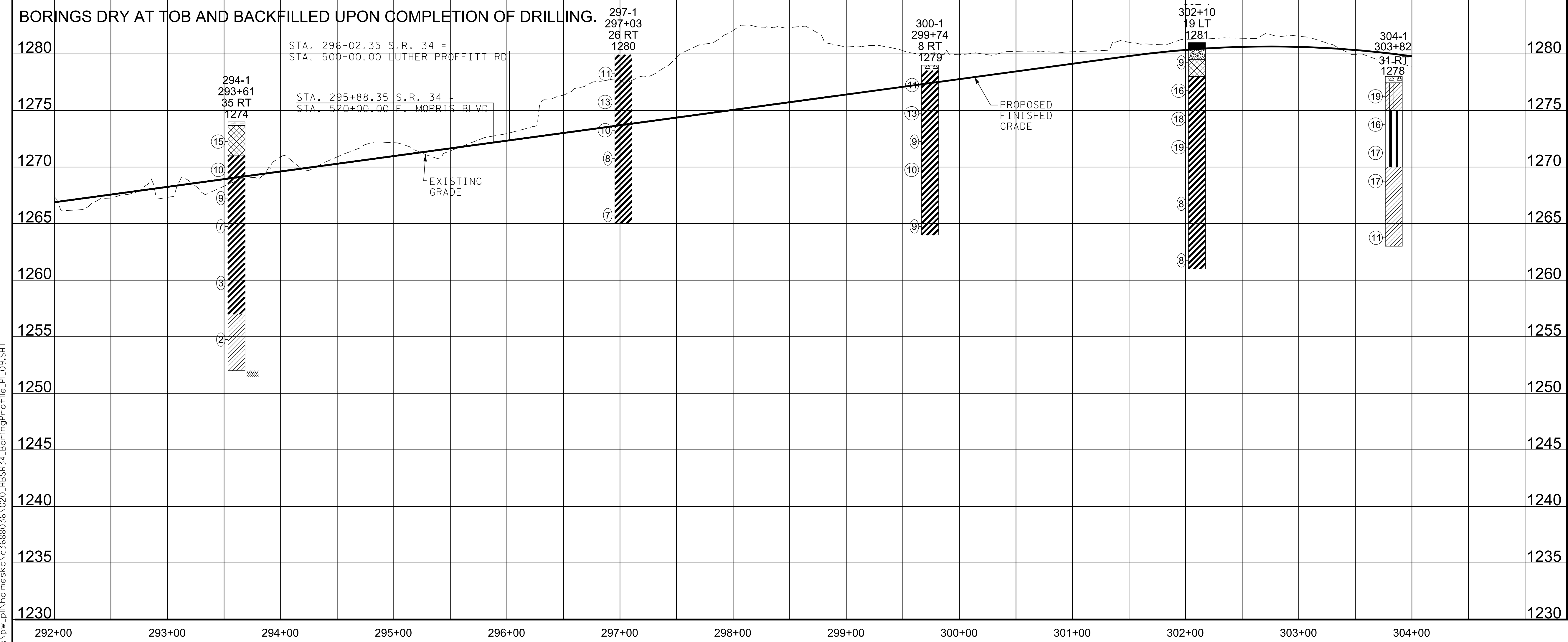
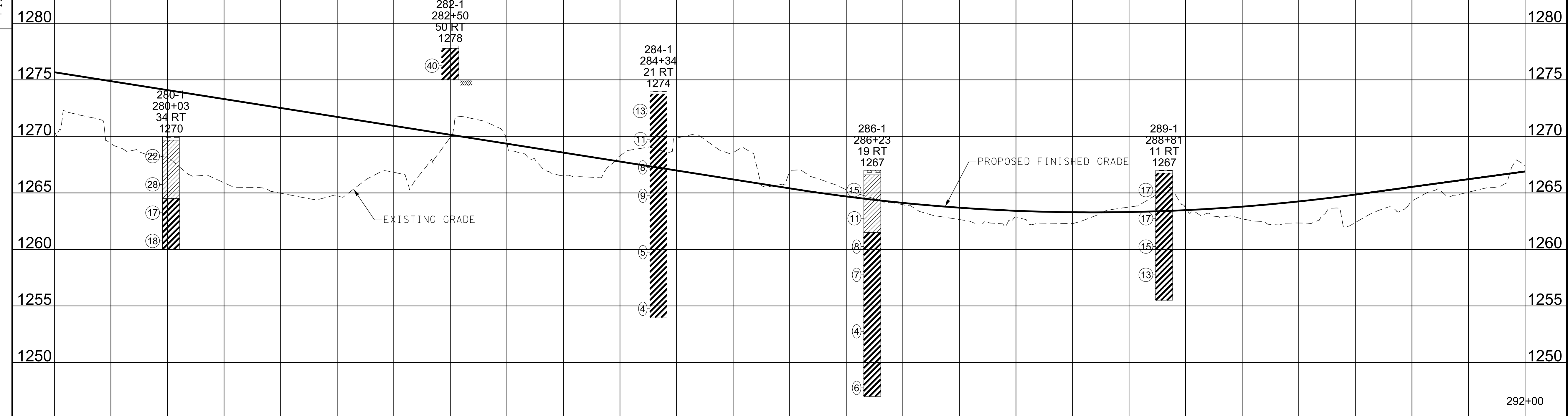
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GEOTECHNICAL PLANS
BORING LAYOUT
 STA. 279+00 TO STA. 304+00
 SCALE: 1"=100'

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2024	NH-34(86)	G20

S.R. 34 HAMBLEN CO.

BORINGS DRY AT TOB AND BACKFILLED UPON COMPLETION OF DRILLING.



LEGEND

- 115-2 BORING NO.
- 114+33 STATION
- 50' R OFFSET
- 701 GROUND ELEV. (ft.)
- SPT N-VALUE (bpf) (8)
- (50/0)
- RQD % 63
- REC % 87
- GROUNDWATER AT >24 HOURS
- GROUNDWATER AT TIME OF BORING (TOB)
- AUGER REFUSAL

MATERIAL GRAPHICS

- AGGREGATE BASE COURSE
- ASPHALT
- FAT CLAY
- FAT CLAY WITH SAND, SANDY FAT CLAY
- LEAN CLAY
- SILTY CLAY
- LEAN CLAY WITH SAND, SANDY LEAN CLAY
- IDENTIFIED OR POTENTIAL FILL
- LIMESTONE
- WEATHERED ROCK
- CLAYEY SAND
- CLAYEY SAND WITH GRAVEL
- TOPSOIL
- VOID
- GRAVELLY FAT CLAY
- DOLOSTONE
- ELASTIC SILT
- PORTLAND CEMENT CONCRETE
- GRAVELLY LEAN CLAY
- CLAYEY GRAVEL, CLAYEY GRAVEL WITH SAND
- GRAVELLY SILT
- LOW PLASTICITY SILT

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DEPARTMENT OF TRANSPORTATION

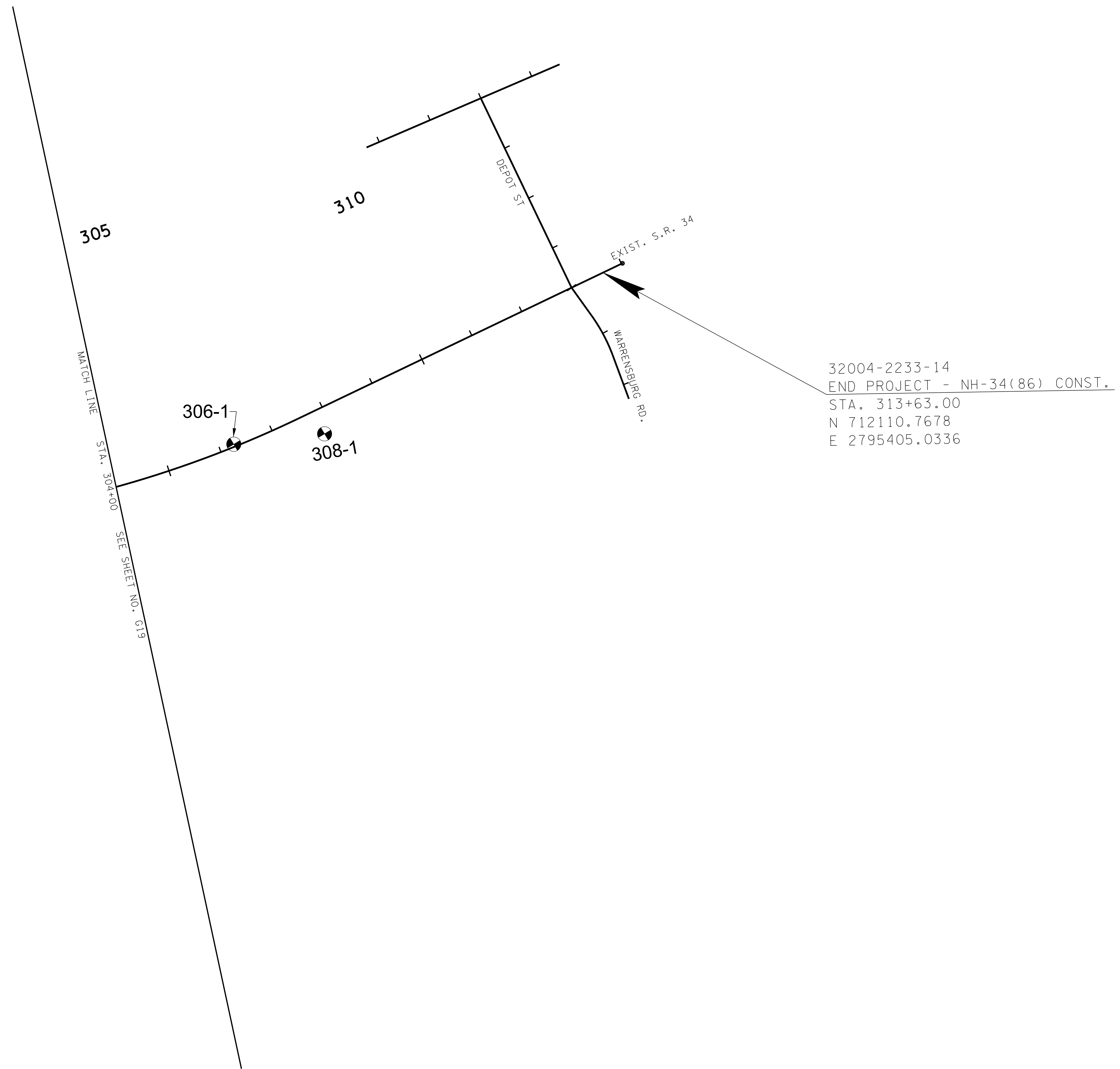
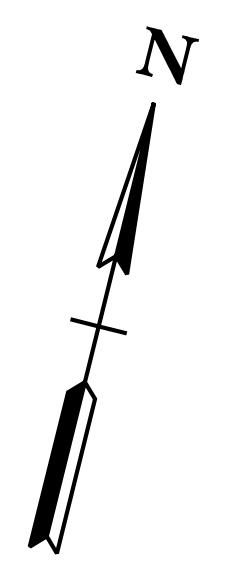
GEOTECHNICAL BORING PROFILE
STA. 279+00 TO STA. 304+00
SCALE: 1"=100' HORIZ.
SCALE: 1"=10' VERT.

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2024	NH-34(86)	G21

S.R. 34

HAMBLEN CO.



LEGEND

 GEOTECHNICAL BORING

**CONSTRUCTION
 FIELD
 REVIEW**

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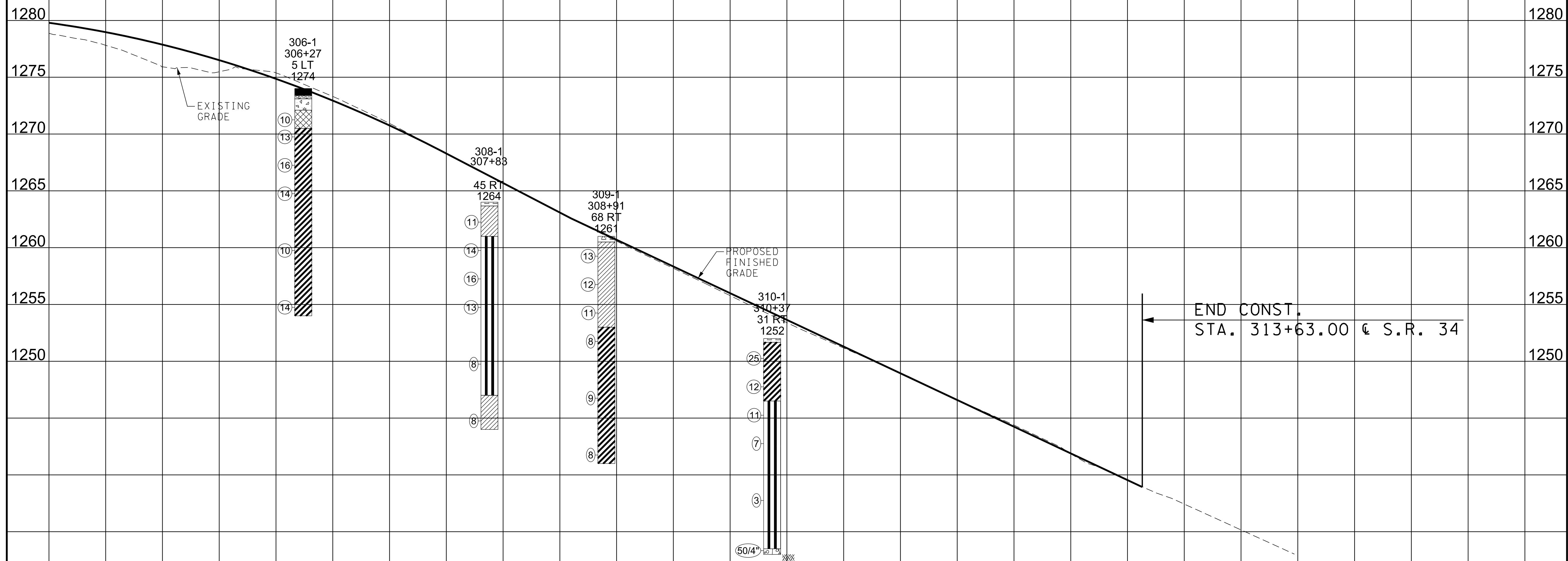
STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

**GEOTECHNICAL
 BORING LAYOUT**
 STA. 304+00 TO
 END PROJECT
 SCALE: 1"=100'

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2024	NH-34(86)	G22

S.R. 34
HAMBLEN CO.

BORINGS DRY AT TOB AND BACKFILLED UPON COMPLETION OF DRILLING.



LEGEND

115-2	BORING NO.
114+33	STATION
50' R	OFFSET
701	GROUND ELEV. (ft.)
SPT N-VALUE (bpf)	GROUNDWATER AT ≥24 HOURS
(50/0)	GROUNDWATER AT TIME OF BORING (TOB)
RQD % 63	AUGER REFUSAL
REC % 87	

MATERIAL GRAPHICS

[Hatching]	AGGREGATE BASE COURSE
[Hatching]	ASPHALT
[Hatching]	FAT CLAY
[Hatching]	FAT CLAY WITH SAND, SANDY FAT CLAY
[Hatching]	LEAN CLAY
[Hatching]	SILTY CLAY
[Hatching]	LEAN CLAY WITH SAND, SANDY LEAN CLAY
[Hatching]	IDENTIFIED OR POTENTIAL FILL
[Hatching]	LIMESTONE
[Hatching]	WEATHERED ROCK
[Hatching]	CLAYEY SAND
[Hatching]	CLAYEY SAND WITH GRAVEL
[Hatching]	TOPSOIL
[Hatching]	VOID
[Hatching]	GRAVELLY FAT CLAY
[Hatching]	DOLOSTONE
[Hatching]	ELASTIC SILT
[Hatching]	PORTLAND CEMENT CONCRETE
[Hatching]	GRAVELLY LEAN CLAY
[Hatching]	CLAYEY GRAVEL, CLAYEY GRAVEL WITH SAND
[Hatching]	GRAVELLY SILT
[Hatching]	LOW PLASTICITY SILT

SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GEOTECHNICAL BORING PROFILE
STA. 304+00 TO END PROJECT
SCALE: 1"=100' HORIZ.
SCALE: 1"=10' VERT.

303+00

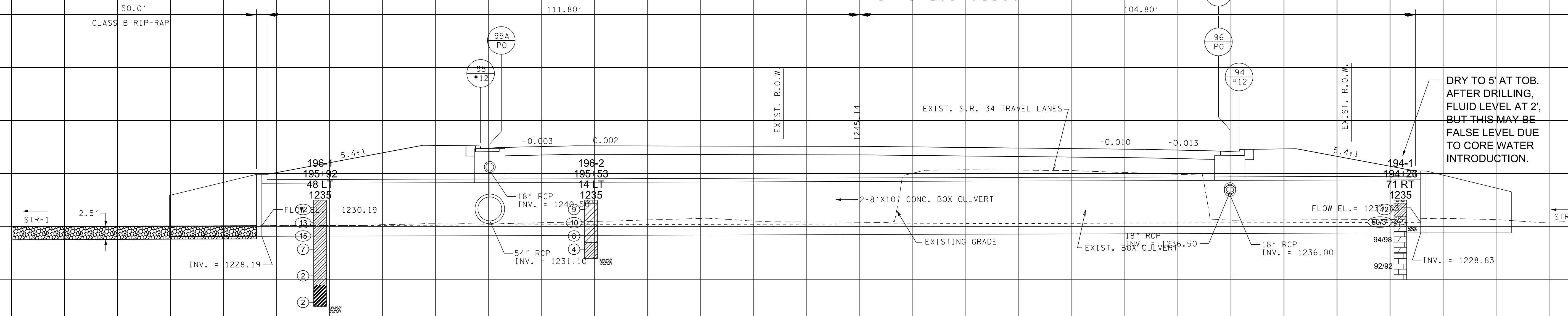
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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2024	NH-34(86)	G24
S.R. 34		HAMBLEN CO.	

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

EXCEPT WHERE NOTED OTHERWISE, BORINGS DRY AT TOB
AND BACKFILLED UPON COMPLETION OF DRILLING.

S.R. 34
STA. 195+01.00



DRY TO 5' AT TOB.
AFTER DRILLING,
FLUID LEVEL AT 2',
BUT THIS MAY BE
FALSE LEVEL DUE
TO CORE WATER
INTRODUCTION.

BOX CULVERT	
STATION:	195+10 C/L SR 34
STRUCTURE:	217 L.F. OF 2 @ 8' x 10' REINF. CONC. BOX CULVERT EMBEDDED 2.0-FT
SKEW	34 LT.
DRAINAGE AREA	2.24 SQ. MI.
DESIGN DISCHARGE (Q50)	657 CFS
DESIGN DISCHARGE (Q100)	777 CFS
DESIGN DISCHARGE (Q500)	1070 CFS at El. 1239.96
APPROACHING OVERTOPPING ELEV.	1245.23
100 YEAR BACKWATER	1.08 ft. at El. 1238.33
50 YEAR VELOCITY	7.89 fps
100 YEAR VELOCITY	8.89 fps
INLET ELEVATION	1228.83
OUTLET ELEVATION	1228.19
STANDARD DRAWING NOS.	N/A
QUANTITIES:	

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
**GEOTECHNICAL
PLANS
CULVERT SECTION**
SCALE: 1"=10' HORIZ.
1"=10' VERT.