

February 11, 2013

Mr. M. Leonard Oliver, P.E.
Geotechnical Section
State of Tennessee
Department of Transportation
6601 Centennial Boulevard
Nashville, TN 37243-0360

**Re: State Route 32 (U.S. 321)
Cocke County
From S.R. 73 (Wilton Springs Rd.) to ½ Mile South of I-40
Sta. 102+51.42 to Sta. 372+64.07**

Dear Mr. Oliver:

This project will widen existing SR 32 (U.S. 321) to a four lane depressed median template. The original design was based on a four lane template, however only the westbound lanes were constructed. The geotechnical investigations for the existing roadway were performed by the Tennessee Department of Transportation (TDOT) based on an ultimate four lane facility. This abbreviated report and accompanying geotechnical drawings have been prepared solely utilizing the information included in the following subsurface investigations, prepared for existing State Route 32 by TDOT.

Geologic Report: Project No. 15005-1224-04
S.R. 32 - From 0.22 Miles South of
S.R. 73 to English Mountain Road
Sta. 430+37.86 to Sta. 618+50
Cocke County
(Dated November 15, 1993)

Geologic Report: Project No. 15005-1229-04
S.R. 32 - From English Mountain Road to I-40 at Newport
Sta. 616+91 to Sta. 730+00
Cocke County
(Dated February 8, 1991)

The horizontal and vertical geometry for the proposed widening of S.R. 32 is unchanged from the geometry utilized in the original design. However, the stationing along the alignment has been revised. The proposed widening is right of the existing roadway, thus the widening to the right will become the eastbound lanes. Right-of-Way was purchased for an ultimate four lane template at the time the original two lanes were constructed.

The geotechnical data utilized from the above referenced reports has been converted to coincide with the revised stationing. The intent is to use the same cut and fill slopes for the widening as were used to construct the existing two lanes. The proposed cut and fill slopes associated with the widening shall be designed to match the right cut and fill slopes of the existing roadway. All cut and fills shall be constructed no steeper than a 2H:1V slope. Embankment benching shall be installed as directed by the engineer, in accordance with standard specifications.

No additional analysis was performed to verify the stability of the proposed slopes. Recommendations are solely based on the information included in the reports prepared by TDOT as discussed above. Recommended Special Notes and or Specification are as follows.

Special Notes and or Specifications

1. The geotechnical investigations for existing SR 32 were performed by TDOT and summarized in reports dated February 8, 1991 and November 15, 1993. This current abbreviated report and accompanying drawings have been prepared to accommodate a proposed four lane depressed median template with updated stationing. This current report was prepared solely utilizing information included in the original TDOT reports.
2. The original subsurface investigation recommended a three (3) foot rock pad be placed beneath the subgrade from Station 199+50 to 207+00. This rock pad should be extended beneath the proposed widening and should be constructed of Graded Solid Rock wrapped in Type IV Geotextile Fabric, or 6 inches of #57 stone shall be utilized to “choke” the graded solid rock and prevent the migration of embankment soils into the layer.
3. Any Interpreted Rock Line shown is provided for informational purposes only. Bedrock in some areas may be “pinnacled” or slightly weathered to unweathered and visible at the existing ground surface. Rock may be encountered at elevations above the Interpreted Rock Line. Additionally, soils may be located below this line. The bidder’s attention is directed to the highly variable nature of the Interpreted Rock Line.

More specifically, Limestone pinnacles may be encountered between Station 117+00 to Station 212+50, particularly between Station 117+00 to Station 124+50 and from Station 163+00 to Station 173+50.

4. Small caves were present in the limestone cliffs above the Cosby Creek floodplain in the area of Station 119+00. The caves are not on the Right-of-Way, however the cut should be monitored during excavation for evidence of karst and dissolution features.
5. A small sinkhole and cave was found 78 feet right of Stations 133+50 to 134+50 during the original subsurface investigation. The proposed cut interval may further expose this cave and the excavation should be monitored during construction. Similar features may be encountered or uncovered during construction operations. Remediation for addressing sinkholes in this area or for others discovered during construction shall be in accordance

with the TDOT Sinkhole Standard Drawings "Sinkhole Treatment" or as directed by the Engineer.

6. The original subsurface investigation recommended treatment of a sinkhole near Station 155+00. Excavation within this area should be monitored during construction. Modification to this previously treated sinkhole may be required and shall be performed under direction of the Engineer.
7. The natural moisture contents of the overburden soils at the time of drilling are typically near or above the upper limit of the 95% compaction moisture range. Drying, handling, and manipulation of the soils are likely to be required in order to achieve the proper moisture content required to satisfy the compaction requirement.
8. The following station intervals shall require use of embankment benching to construct the proposed embankments. Embankment benching shall be in accordance with Section 205 of the Standard Specifications for Road and Bridge Construction. The nominal dimensions shown on the cross sections are the minimum recommended, however, other configurations may be utilized subject to the approval of the Engineer.

Station 109+00 to Station 116+50
Station 139+00 to Station 140+50
Station 143+00 to Station 152+50
Station 158+50 to Station 161+50
Station 228+50 to Station 231+00
Station 269+00 to Station 271+00
Station 272+50 to Station 277+50
Station 309+50 to Station 312+00
Station 319+00 to Station 323+50
Station 333+00 to Station 336+00
Station 345+00 to Station 350+50
Station 369+50 to Station 372+00

9. Rock embankment material shall consist of graded solid rock (GSR) unless otherwise specified, in accordance with Section 205 of the Standard Specifications for Road and Bridge Construction.
10. Embankments constructed of soil shall not exceed 45 feet in height. Embankments of greater heights can be achieved by constructing the lower portions with Graded Solid Rock with a minimum rock thickness of five (5) feet. A five (5) foot or greater drainage/stabilizing layer composed of graded solid rock is recommended within the following interval. Type IV Geotextile fabric or 6 inches of #57 stone shall be utilized to "choke" the graded solid rock and prevent the migration of embankment soils into the layer.

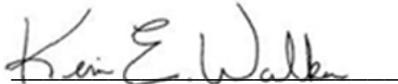
Station 145+50 to Station 149+00

11. The drainage/stabilizing layer shall not daylight on embankment slopes where roadway ditches are present or where on-site or off-site drainage may enter the drainage/stabilizing layer.
12. Where rock is encountered in thin intervals, the rock shall be excavated/removed to accommodate the proposed soil slopes, typically 2H:1V or flatter, as directed by the Engineer.
13. Between Station 369+00 to Station 370+50 a slope of 1.5: 1 shall be permitted due to interference with stream when using the maximum slope of 2:1. Embankment shall be constructed with graded solid rock.

Please call if you have any questions or comments.

Sincerely,

FLORENCE & HUTCHESON, INC.



Kevin E. Walker, P.E., AL
Geotechnical Engineer



Devin L. Chittenden, P.E.
Geotechnical Engineer

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.		TN-I-69(51)	

GEOTECHNICAL NOTES

- The geotechnical investigations for existing SR 32 were performed by TDOT and summarized in reports dated February 8, 1991 and November 15, 1993. This current abbreviated report and accompanying drawings have been prepared to accommodate a proposed four lane depressed median template with updated stationing. This current report was prepared solely utilizing information included in the original TDOT reports.
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 Station 309+50 to Station 312+00
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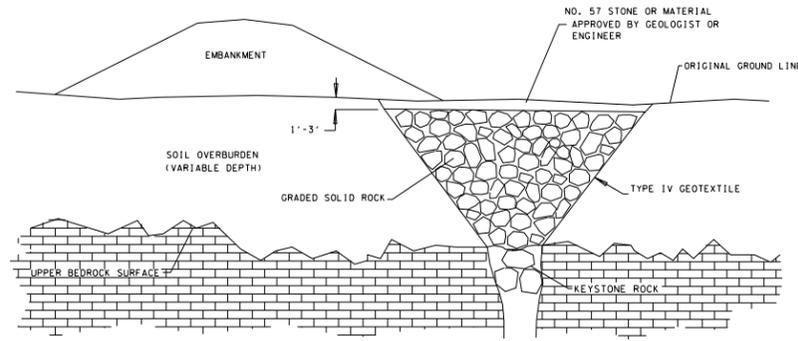
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Station 145+50 to Station 149+00
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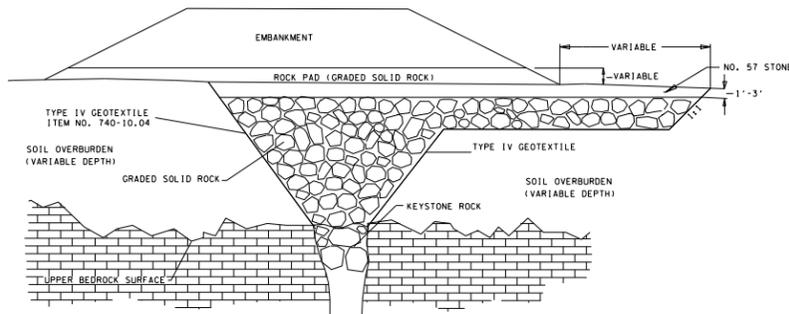
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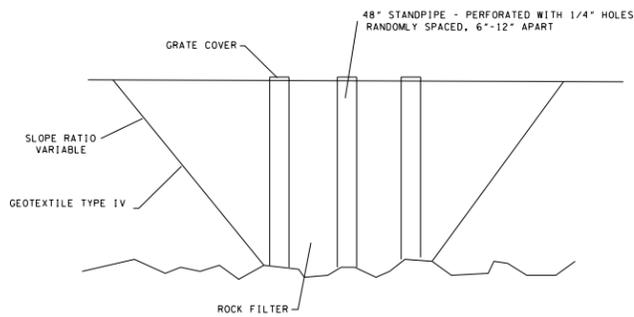
TYPE	YEAR	PROJECT NO.	SHEET NO.
ROW	2011	HPP-32(57)	



SINKHOLE TREATMENT 1



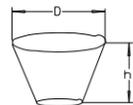
SINKHOLE TREATMENT 1A



SINKHOLE TREATMENT 3

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

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



SINKHOLE TREATMENT 1, ACTIVE

NOTE: AFTER EXCAVATION IS COMPLETE AND 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 FT. OF MATERIAL SHALL BE APPROVED BY A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEERING SECTION OF THE DIVISION OF MATERIALS AND TESTS.

SEQUENCE OF CONSTRUCTION:

1. EXCAVATE SINKHOLE TO DEFINED OPENING IN BEDROCK MAKING SURE TO REMOVE ALL SOIL AND DEBRIS.
2. FIT THE OPENING WITH KEYSTONE ROCK, WHICH SHALL BE OF SUFFICIENT SIZE TO LOCK IN PLACE WITHOUT CREATING AN AIRBLOCK TO SUBSURFACE DRAINAGE.
3. PLACE THE TYPE IV GEOTEXTILE FABRIC ON EXCAVATED SLOPES AND BASE OF SINKHOLE.
4. BACKFILL TO A MAXIMUM OF 1 FT. OF THE SPECIFIED GRADE WITH GRADED SOLID ROCK (CLASSIFICATION 203.02, BORROW EXCAVATION).
5. BACKFILL TO GRADE WITH A MINIMUM OF 1 FT. OF NO.57 STONE ON TOP OF THE GRADED SOLID ROCK AND TYPE IV GEOTEXTILE.

SINKHOLE TREATMENT 1A ACTIVE

NOTE: AFTER EXCAVATION IS COMPLETE AND 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 FT. MATERIAL SHALL BE APPROVED BY A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEERING SECTION OF THE DIVISION OF MATERIALS AND TESTS.

SEQUENCE OF CONSTRUCTION:

1. EXCAVATE SINKHOLE TO DEFINED OPENING IN BEDROCK AND EXCAVATE TONGUE DOWN TO THE DEPTH SHOWN MAKING SURE TO REMOVE ALL SOIL AND DEBRIS FROM THESE EXCAVATIONS.
2. FIT THE OPENING WITH KEYSTONE ROCK, WHICH SHALL BE OF SUFFICIENT SIZE TO LOCK IN PLACE WITHOUT CREATING AN AIRBLOCK TO SUBSURFACE DRAINAGE.
3. PLACE THE TYPE IV GEOTEXTILE FABRIC.
4. BACKFILL TO WITHIN 1.5-3 FT. OF THE SPECIFIED GRADE WITH GRADED SOLID ROCK.
5. PLACE THE TYPE IV GEOTEXTILE ON TOP OF GRADED SOLID ROCK.
6. BACKFILL TO GRADE WITH NO. 57 STONE.

SINKHOLE TREATMENT 3, ACTIVE

NOTE: AFTER EXCAVATION IS COMPLETE AND ROCK 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.

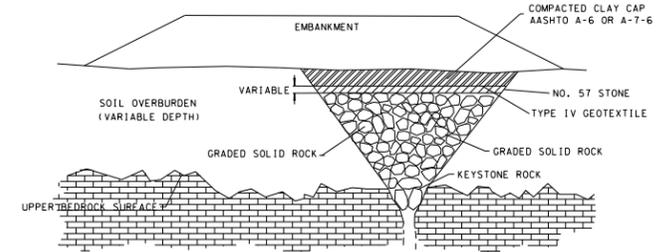
SEQUENCE OF CONSTRUCTION

1. EXCAVATE SOIL DOWN TO BEDROCK TO LIMITS SPECIFIED BY THE ENGINEER OR GEOLOGIST.
2. LOCATE ALL OPENINGS WITHIN THE PITS, REMOVE ALL LOOSENED MATERIAL. ALL EXCAVATED MATERIALS SHALL BE REMOVED FROM THE BASIN.
3. INSTALL 48" DIAMETER VERTICAL STANDPIPES OVER THE LOCATED OPENINGS. THESE PIPES SHOULD BE PERFORATED FOR AT LEAST THE LOWER 5 FT. WITHIN 1/4" HOLES SPACES 6-12" APART.
4. PLACE TYPE IV GEOTEXTILE FABRIC AS SHOWN OR AS DIRECTED BY THE ENGINEER OR GEOLOGIST TO PREVENT THE LATERAL INFLOW OF FINES.
5. BACKFILL WITH A ROCK FILTER TO A HEIGHT OF 3.5" BELOW THE TOP OF THE STANDPIPE.

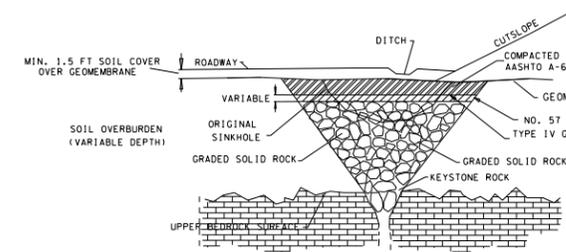
THE ROCK FILTER MATERIAL SHALL CONSIST OF A MIXTURE OF LIMESTONE SHOT ROCK AND CRUSHED STONE TO MEET THE FOLLOWING GRADATION:

SIZE RANGE (ALONG ITS MAXIMUM DIMENSION)	VOLUME
2'-1'	60-40%
1'-6"	40-20%
6'-2"	20-10%
LESS THAN 2"	5-0%

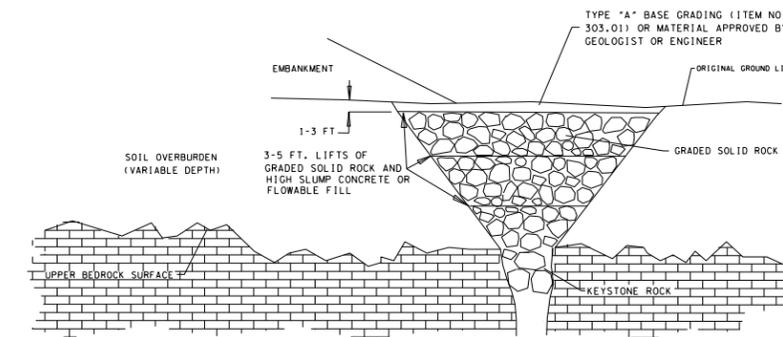
6. THE ROCK FILTER MATERIAL SHALL BE PLACED WITH A CLAMSHELL. NO END DUMPING WILL BE PERMITTED.



SINKHOLE TREATMENT 2



SINKHOLE TREATMENT 2A



SINKHOLE TREATMENT 4

SINKHOLE TREATMENT 4, INACTIVE

NOTE: AFTER EXCAVATION IS COMPLETE AND 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 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

1. EXCAVATE SINKHOLE TO DEFINED OPENING IN BEDROCK AS DEFINED BY THE ENGINEER OR GEOLOGIST MAKING SURE TO REMOVE ALL SOIL DEBRIS.
2. FIT THE OPENING WITH KEYSTONE ROCK, WHICH SHALL BE OF SUFFICIENT SIZE TO LOCK IN PLACE WITHOUT CREATING AN AIRBLOCK TO SUBSURFACE DRAINAGE.
3. ALTERNATE LAYERS OF GRADED SOLID ROCK (CLASSIFICATION 203.02, BORROW EXCAVATION) (3-5 FT. IN DEPTH) AND HIGH SLUMP CONCRETE (OR FLOWABLE FILL). HIGH 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 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 IS 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 A SPECIFIED INTERVAL, WORK MAY BE STOPPED ONLY AFTER A COMPLETE LAYER OF GRADED SOLID ROCK HAS BEEN PLACED.
4. AFTER THE FINAL LAYER OF CONCRETE (OR FLOWABLE FILL) HAS BEEN SET, BACKFILL TO GRADE WITH TYPE "A" BASE GRADING (ITEM NO. 303.01) OR OTHER MATERIAL APPROVED BY THE ENGINEER OR GEOLOGIST.

SINKHOLE TREATMENT 2 AND 2A, INACTIVE

NOTE: AFTER EXCAVATION IS COMPLETE AND 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 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:

1. EXCAVATE SINKHOLE TO DEFINED OPENING IN BEDROCK MAKING SURE TO REMOVE ALL SOIL AND DEBRIS.
2. FIT THE OPENING WITH KEYSTONE ROCK, WHICH SHALL BE OF SUFFICIENT SIZE TO LOCK IN PLACE WITHOUT CREATING AN AIRBLOCK TO SUBSURFACE DRAINAGE.
3. BACKFILL WITH GRADED SOLID ROCK (CLASSIFICATION 203.02, BORROW EXCAVATION) UP TO SPECIFIED GRADE.
4. PLACE NO. 57 STONE ON TOP OF THE GRADED SOLID ROCK. PLACE TYPE IV GEOTEXTILE ON TOP OF THE NO. 57 STONE.
5. CONSTRUCT COMPACT CLAY CAP. SOIL SHOULD BE OF TYPE AASHTO A-6 OR A-7-6.
6. PLACE GEOMEMBRANE ON TOP OF SOIL CAP BEFORE CONSTRUCTION OF ANY OVERLYING STRUCTURES OR EMBANKMENTS. THERE SHOULD BE A MINIMUM OF 1.5 FT. OF SOIL PLACED OVER THE MEMBRANE.
7. DITCH SHOULD BE PAVED OR LINED WITH A GEOMEMBRANE.

SPECIFICATIONS FOR GRADED SOLID ROCK

BORROW EXCAVATION (GRADED SOLID ROCK) SHALL CONSIST OF THE REMOVAL AND SATISFACTORY PLACEMENT OF SOUND, NON-DEGRADABLE ROCK WITH A MAXIMUM SIZE OF 1 METER (3 FEET). AT LEAST 50 PERCENT OF THE SHALL BE UNIFORMLY DISTRIBUTED BETWEEN 300 MILLIMETERS (1 FOOT) AND 1 METER (3 FEET) IN DIAMETER AND NO GREATER THAN 10 PERCENT SHALL BE LESS THAN 50 MILLIMETERS (2 INCHES) 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 ACCEPTABLE MECHANICAL SCREENING PROCESS THAT PRODUCES THE REQUIRED GRADATION. WHEN THE MATERIAL IS SUBJECTED TO FIVE ALTERATIONS OF THE SODIUM SULFATE SOUNDNESS TEST (AASHTO T 104), THE WEIGHTED PERCENTAGE OF LOSS SHALL BE NOT MORE THAN 12. THE MATERIAL SHALL BE APPROVED BY THE ENGINEER BEFORE USE.



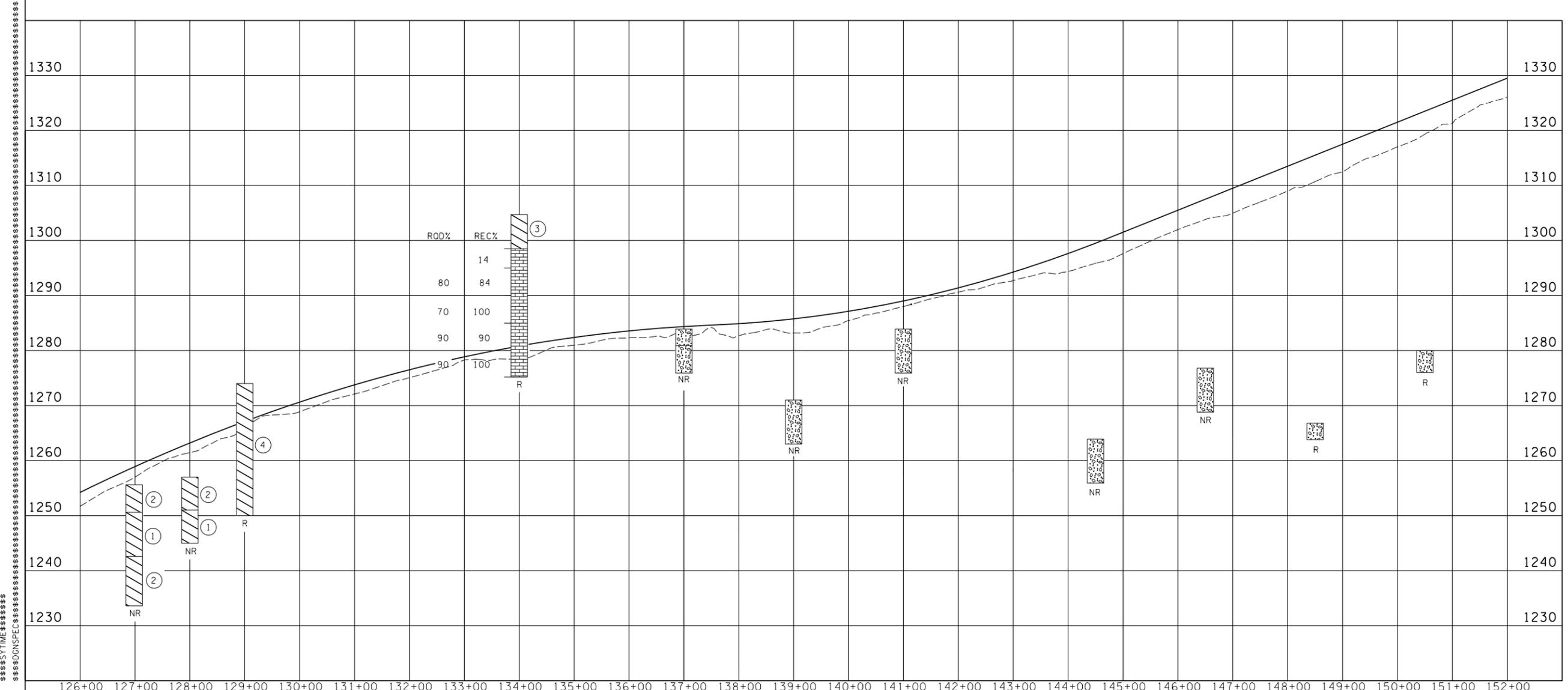
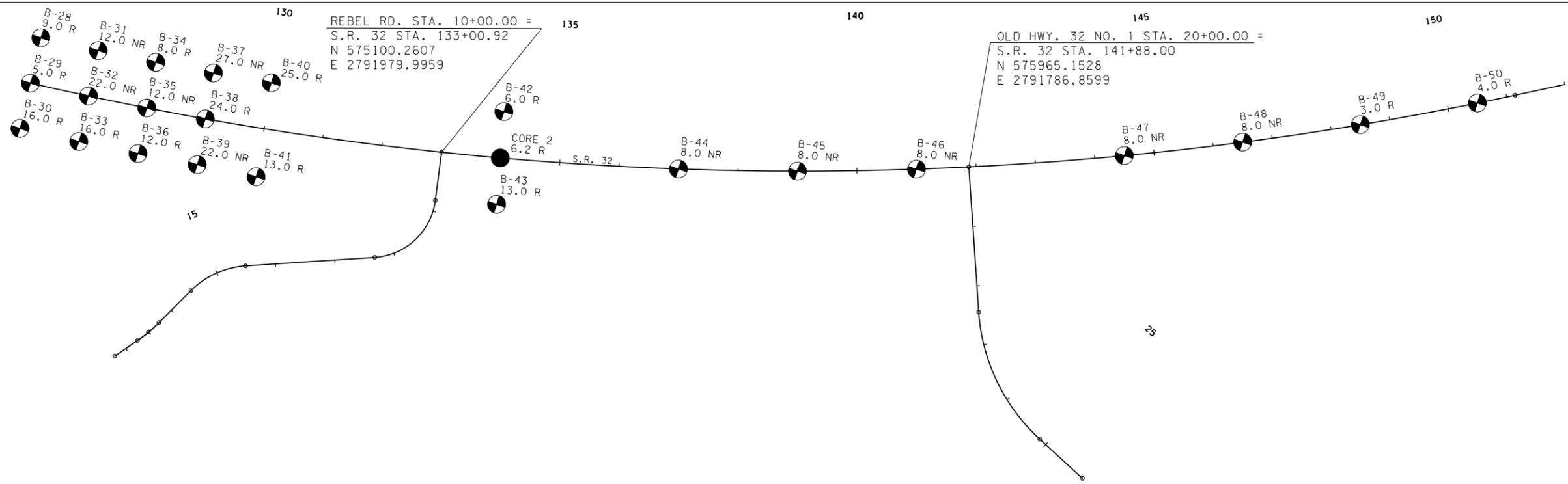
Sample No.	Description	Maximum Density, (pcf)	Moisture Range, (%)	L.L.	P.I.	AASHTO Class.	C.B.R.
1	Orange Silty Clay	96.3	17.7 - 26.6	56	30	A-7-6	4
2	Orange Shaley Clay	97.5	19.5 - 26.5	50	21	A-7-6	
3	Orange Shaley Clay	106.3	14.0 - 20.5	42	23	A-7-6	
4	Reddish-Brown Sandy Clay	97.2	19.7 - 26.4	57	26	A-7-5	
5	Reddish-Brown Shaley Clay	102.0	17.8 - 24.2	50	20	A-7-5	10
6	Yellowish-Brown Shaley Clay	106.8	14.6 - 21.2	46	24	A-7-6	
7	Light Brown Shaley Clay	104.8	16.0 - 22.8	46	21	A-7-6	
8	Orange Silty Clay	87.0	22.6 - 33.8	66	34	A-7-5	
9	Orange Silty Clay	93.6	23.0 - 29.6	61	30	A-7-5	
10	Orange Silty Clay	100.0	20.0 - 25.4	57	26	A-7-5	6
11	Brown Silty Clay	98.3	16.5 - 26.5	64	37	A-7-6	
12	Orange to Red Sandy Clay	103.5	16.6 - 23.3	42	16	A-7-6	
13	Sandy Clay	96.3	19.3 - 28.1	60	27	A-7-5	6
14	Orange to Brown Silty Clay	104.5	14.5 - 22.0	55	26	A-7-6	
15	Orange Silty Clay	82.7	26.8 - 39.3	97	50	A-7-5	
16	Light Brown Shaley Clay	103.5	15.3 - 18.0	31	11	A-6	
17	Orange to Brown Shaley Clay	103.5	15.5 - 23.5	54	28	A-7-6	7
18	Reddish-Brown Silty Clay	102.8	15.2 - 23.4	47	21	A-7-6	
19	Light Brown Shale	119.5	8.4 - 14.7	33	13	A-6	
20	Greenish-Gray Shale	122.2	7.6 - 14.5	28	9	A-4	
21	Orangish-Brown Sandy Shale	94.5	17.8 - 26.0	36	11	A-6	

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1A	Orange Sandy Clay	102.5	17.5 - 23.5	54	29	A-7-6	4
2A	Red Brown Clay	86.0	27.0 - 38.0	77	39	A-7-5	
3A	Orange Clay	87.0	25.5 - 36.5	75	39	A-7-5	3
4A	Orange Brown Clay	83.5	29.0 - 39.0	83	44	A-7-5	
5A	Dark Brown Cherty Clay	107.0	15.5 - 21.5	45	20	A-7-6	
6A	Reddish Brown Clay	104.5	17.5 - 23.0	47	21	A-7-6	
7A	Reddish Brown Clay	104.5	17.5 - 23.0	47	20	A-7-6	7
8A	Orange Brown Clay	83.5	29.0 - 39.0	80	40	A-7-5	
9A	Orange Clay	83.5	29.0 - 39.0	81	42	A-7-5	3
10A	Orange Brown Silty Clay	83.5	29.0 - 39.0	82	42	A-7-5	
11A	Yellowish Brown Silty Clay	89.0	26.5 - 33.0	59	32	A-7-6	
12A	Light Brown Clay	121.0	9.0 - 14.0	26	11	A-6	
13A	Reddish Brown Clay	99.5	21.0 - 26.5	51	23	A-7-6	

\$\$\$\$SYTIME\$\$\$\$
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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2011	HPP-32(57)	



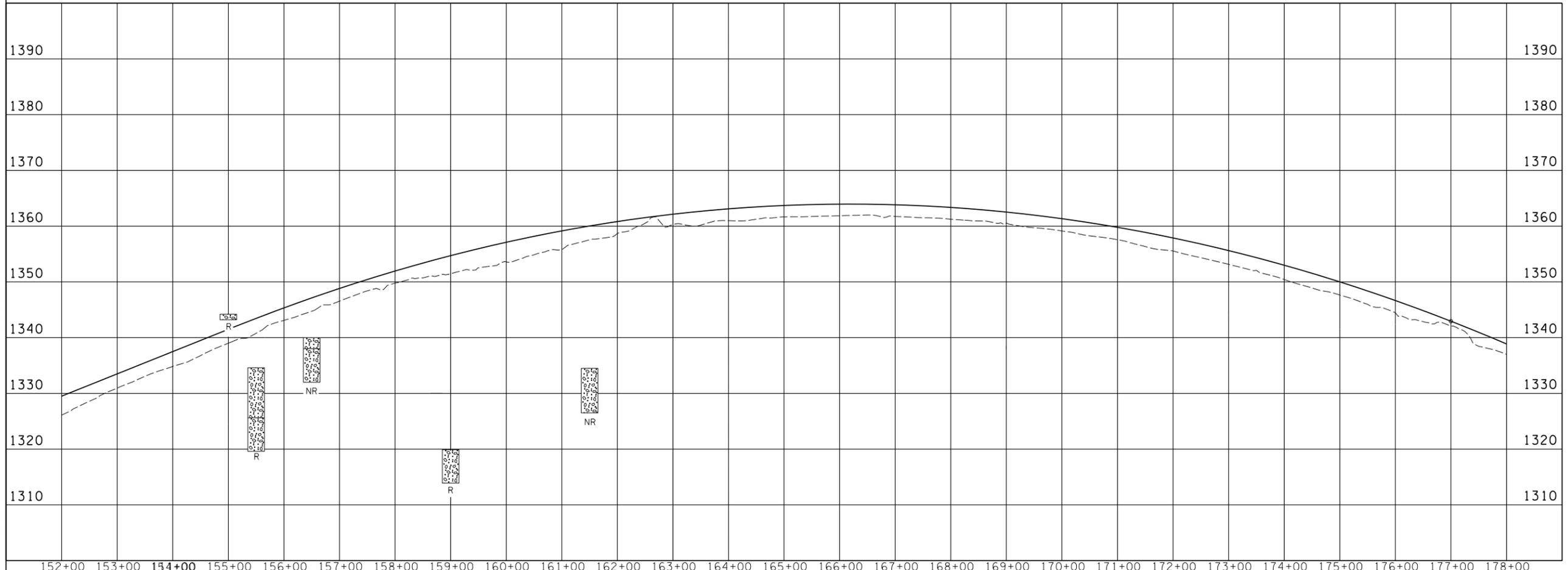
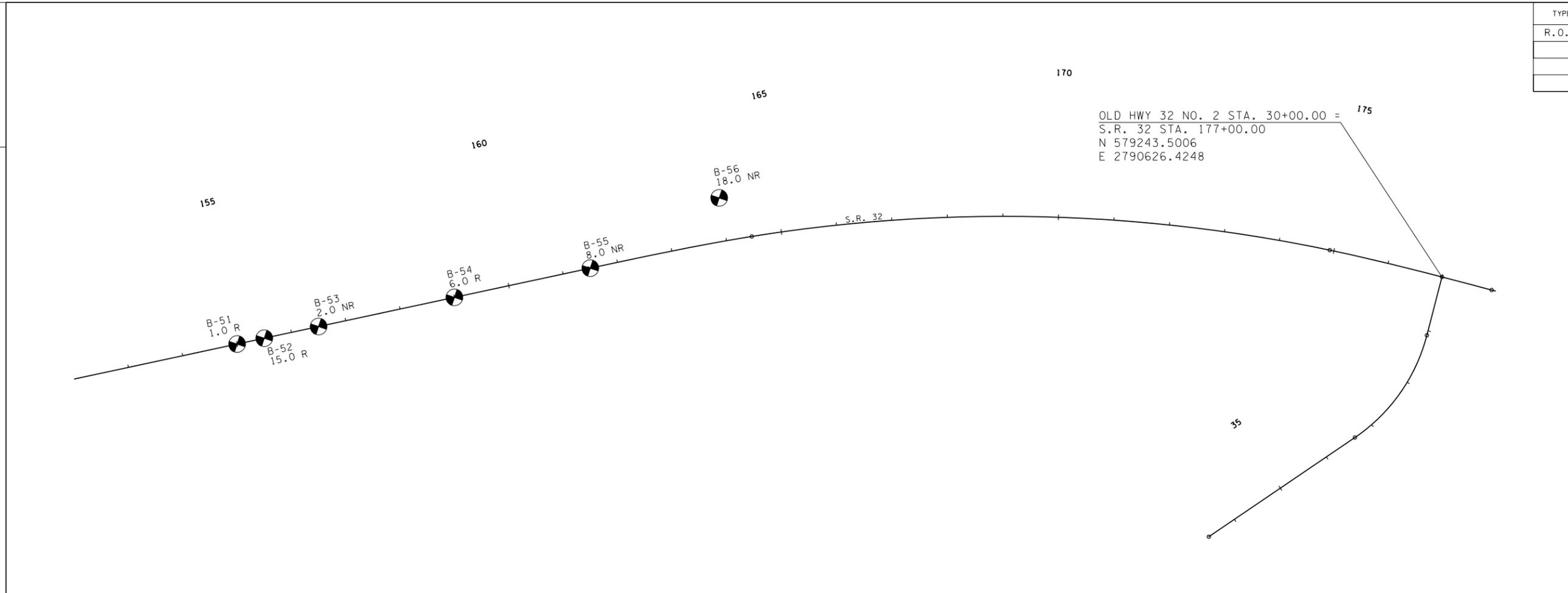
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT AND PROFILE

STA. 126+00 TO STA. 152+00
SCALE: 1"=100'

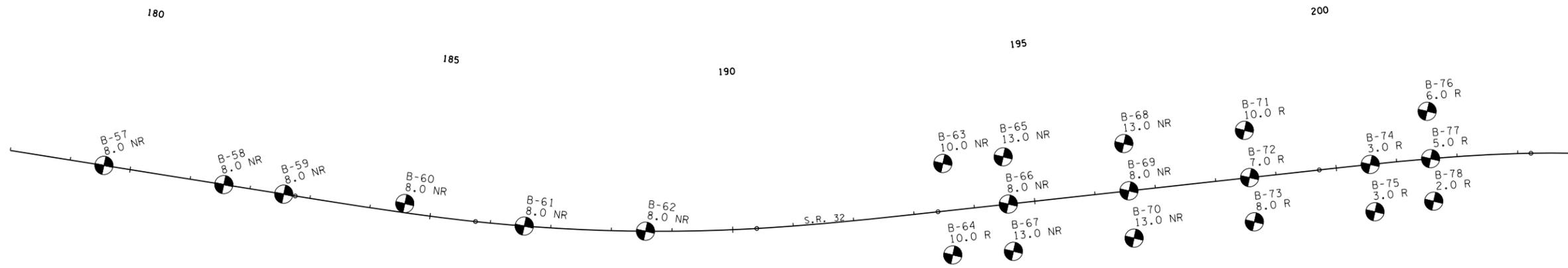
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2011	HPP-32(57)	

OLD HWY 32 NO. 2 STA. 30+00.00 =
 S.R. 32 STA. 177+00.00
 N 579243.5006
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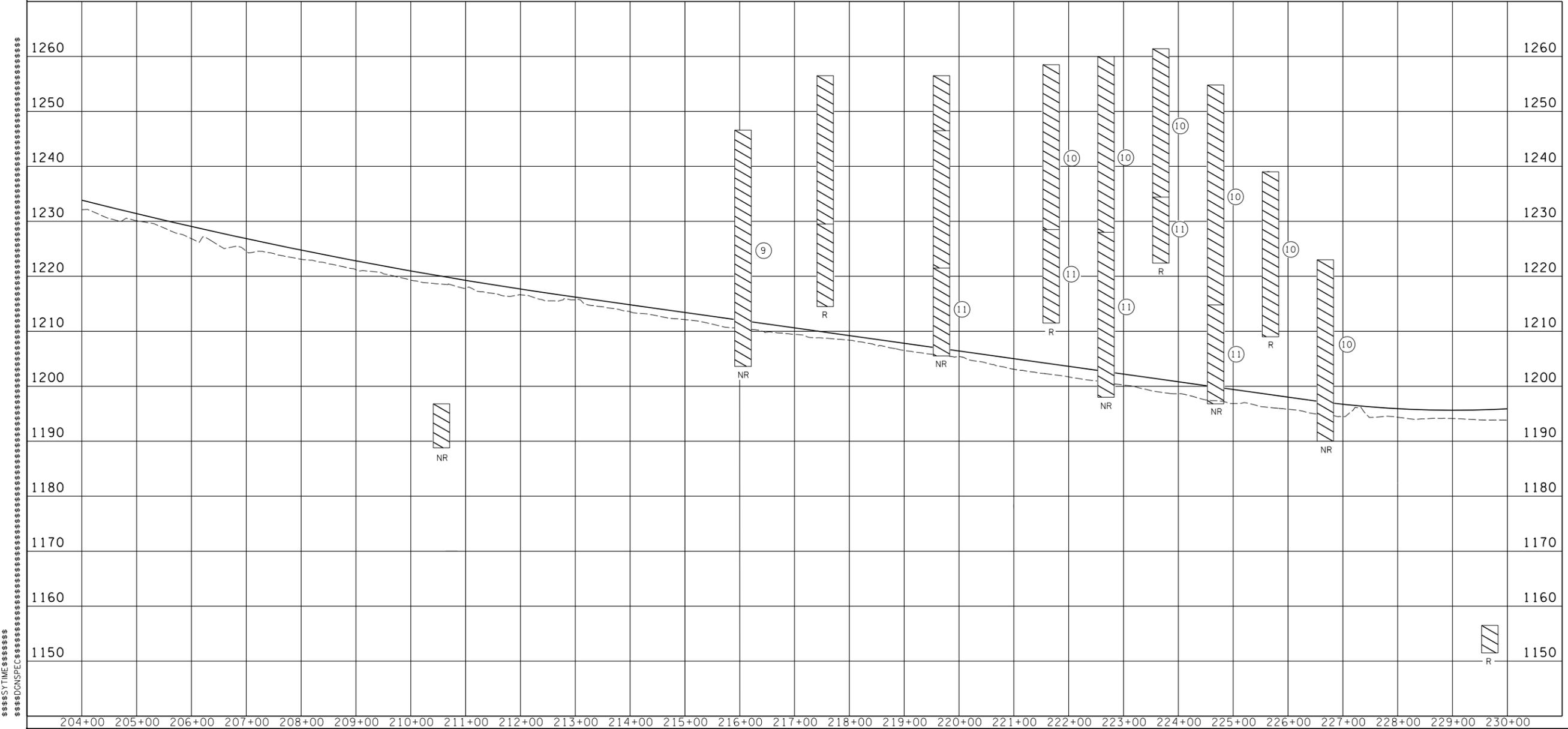
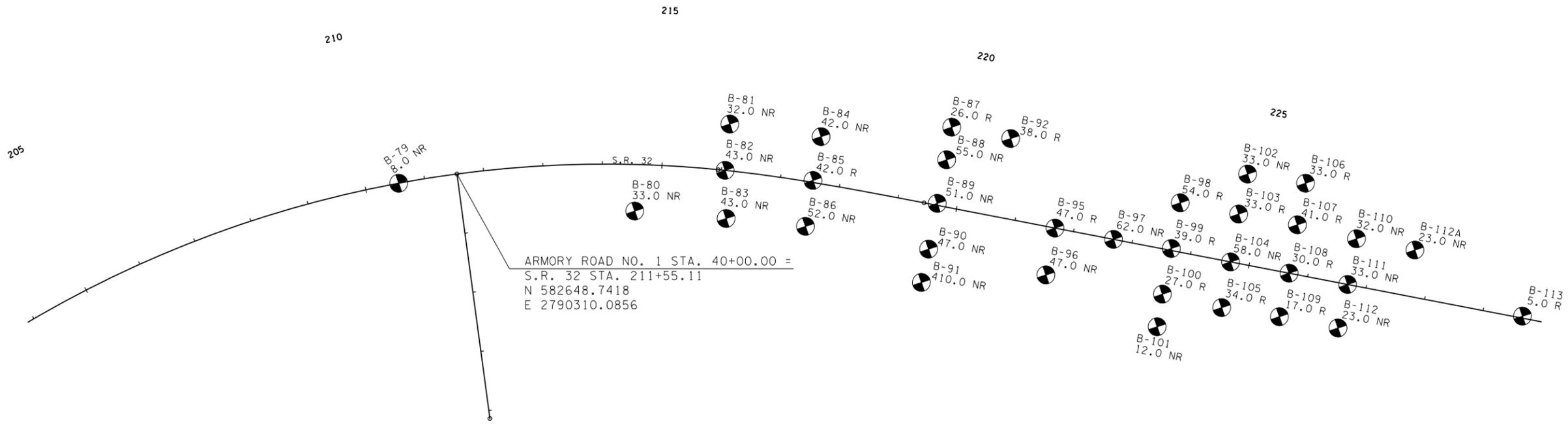


STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION
**PROPOSED
 LAYOUT
 AND PROFILE**
 STA. 152+00 TO STA. 178+00
 SCALE: 1"=100'

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2011	HPP-32(57)	



TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2011	HPP-32(57)	

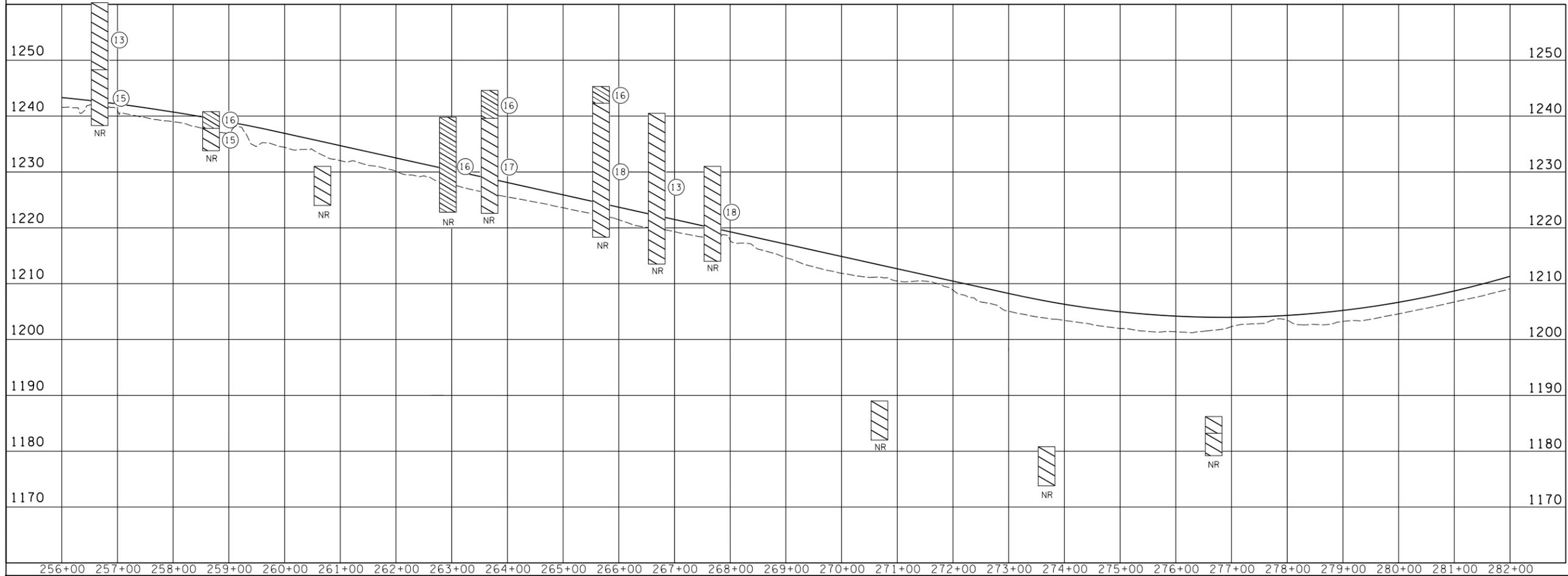
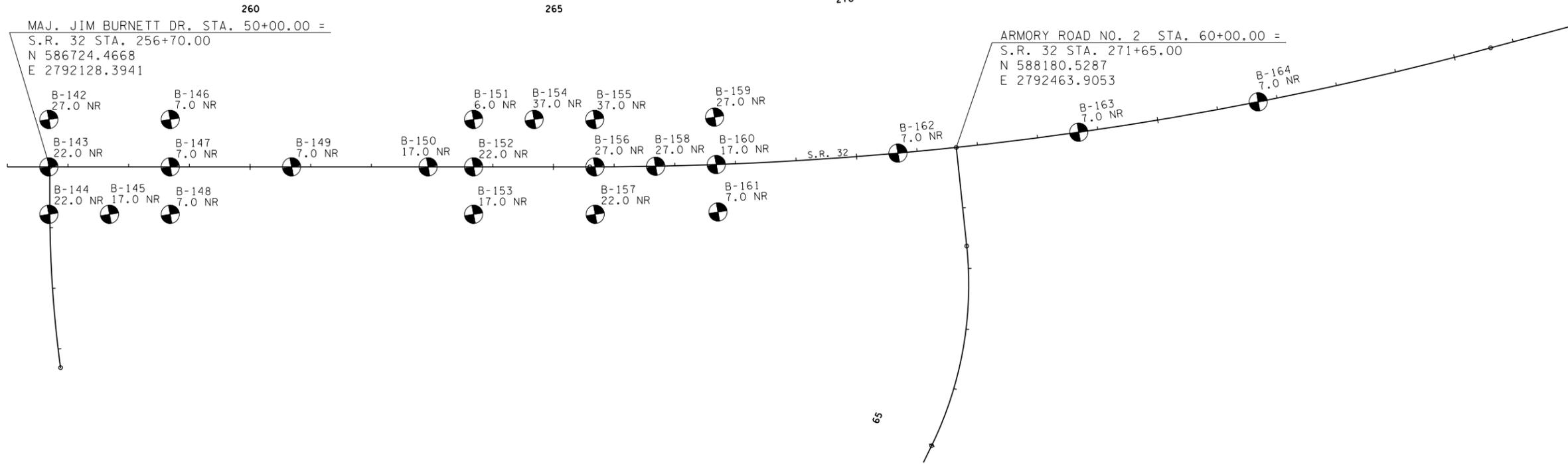


STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT AND PROFILE

STA. 204+00 TO STA. 230+00
 SCALE: 1"=100'

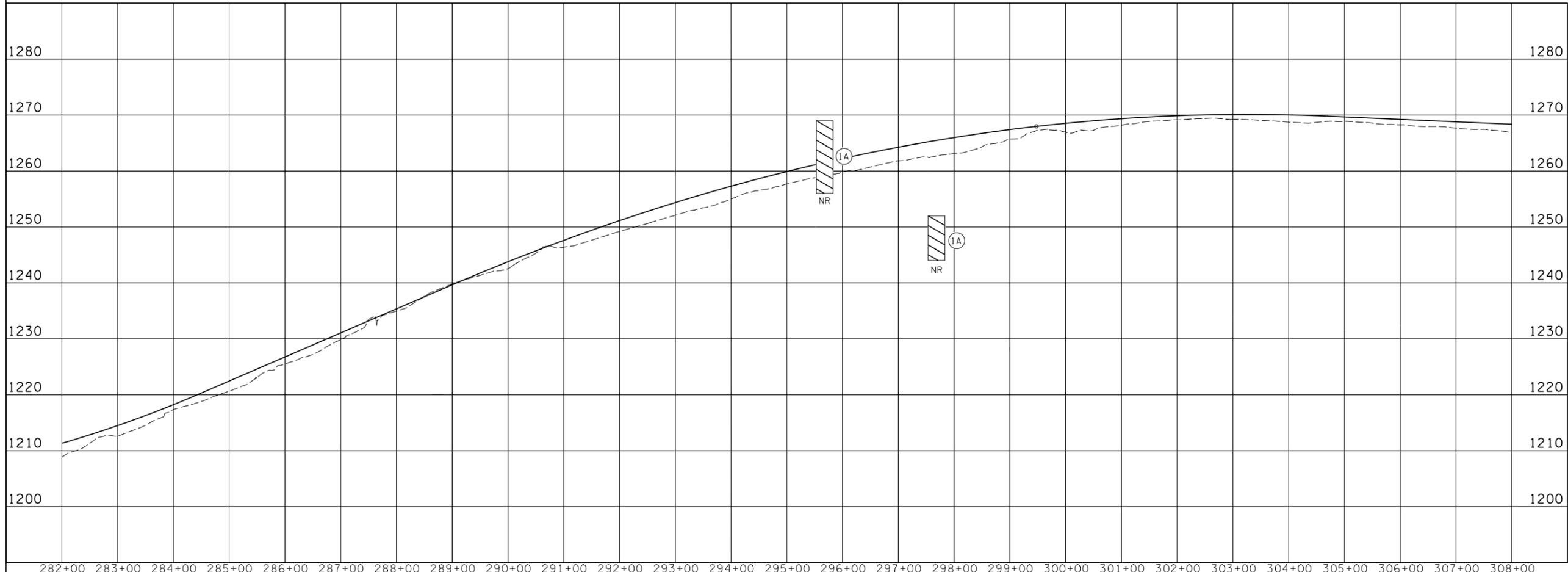
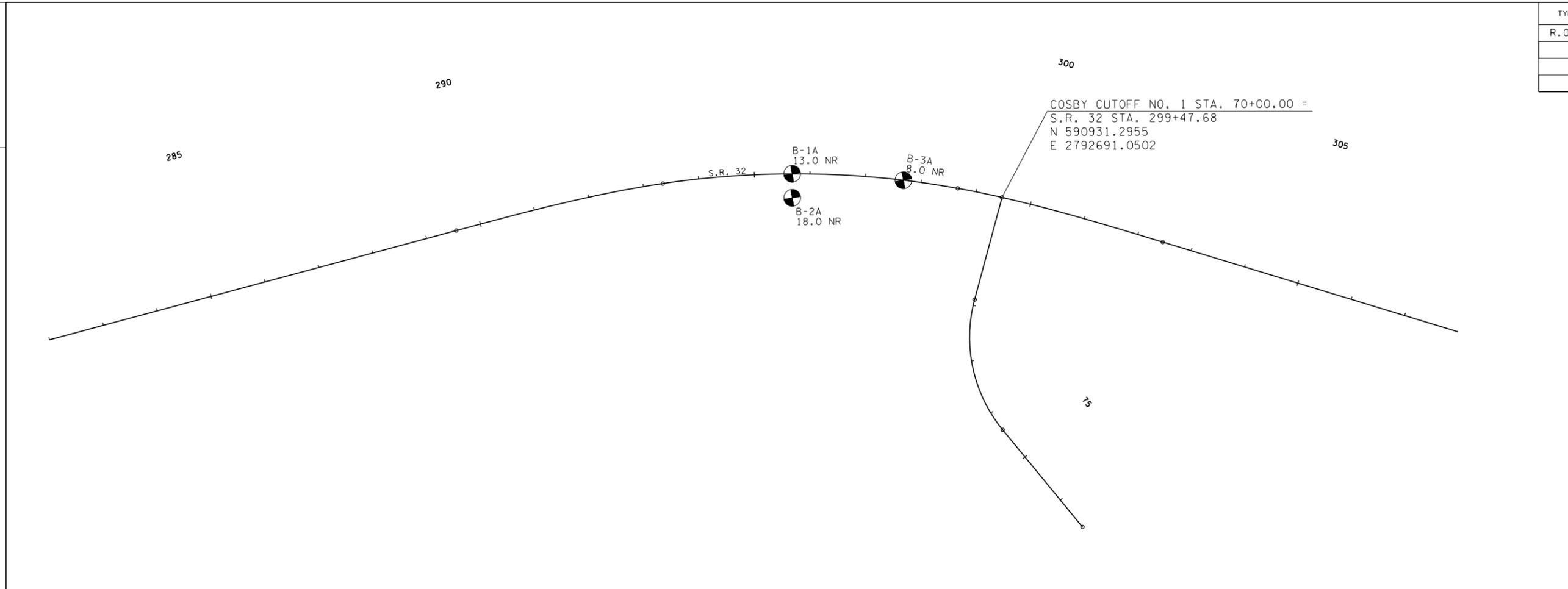
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2011	HPP-32(57)	



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
PROPOSED LAYOUT AND PROFILE
STA. 256+00 TO STA. 282+00
SCALE: 1"=100'

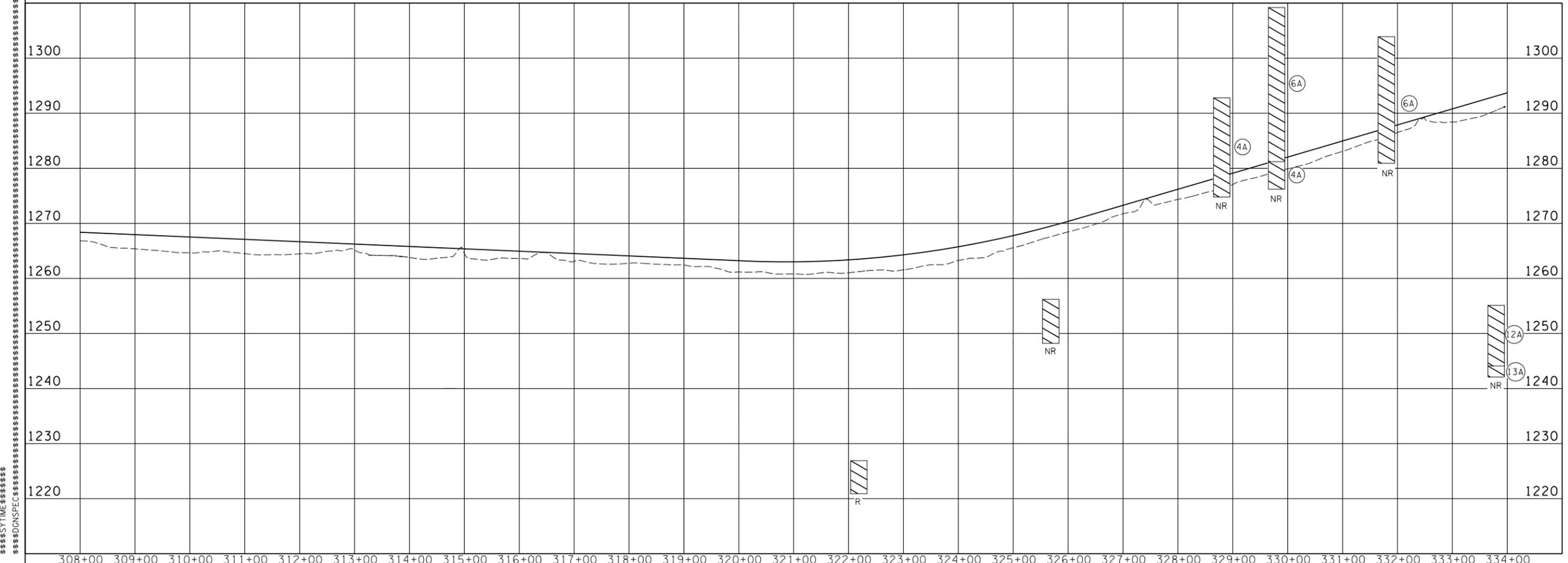
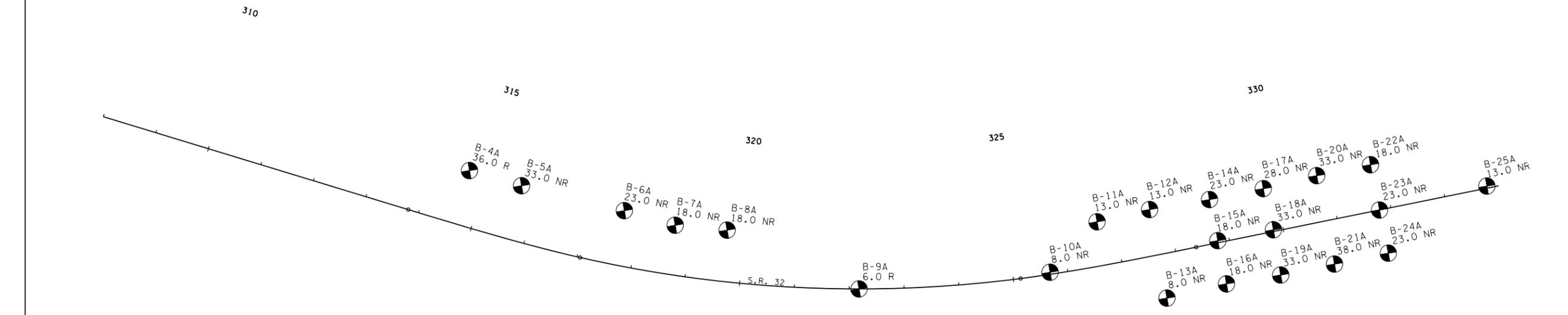
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2011	HPP-32(57)	

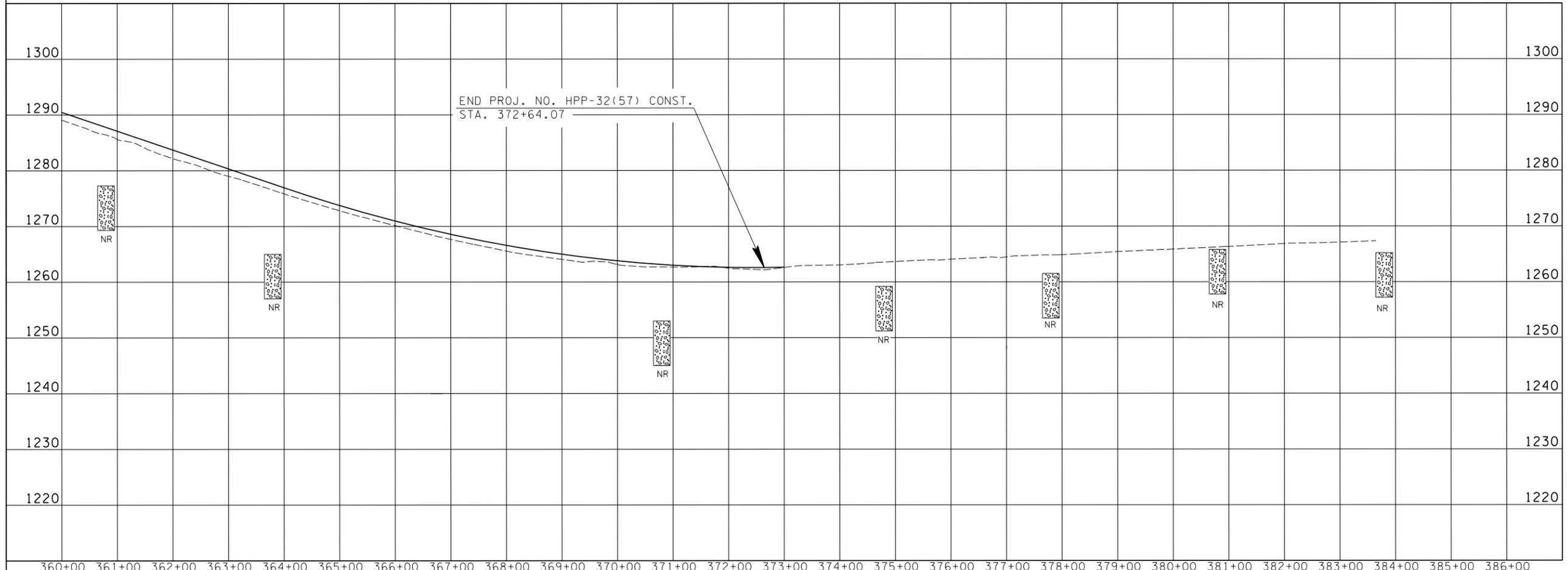
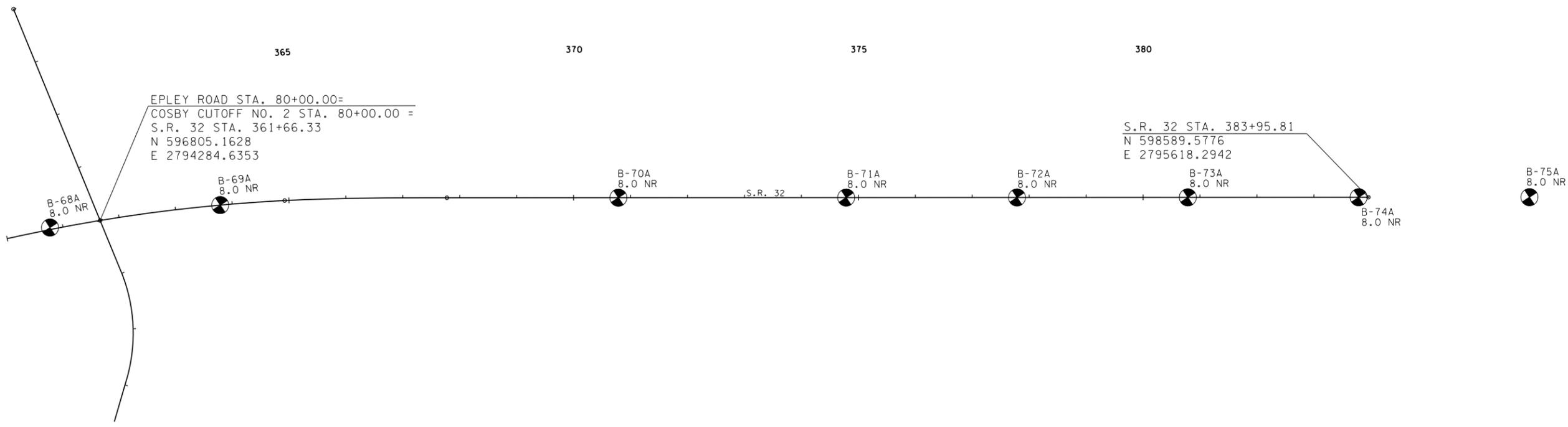


STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
**PROPOSED
LAYOUT
AND PROFILE**
STA. 282+00 TO STA. 308+00
SCALE: 1"=100'

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2011	HPP-32(57)	



TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2011	HPP-32(57)	

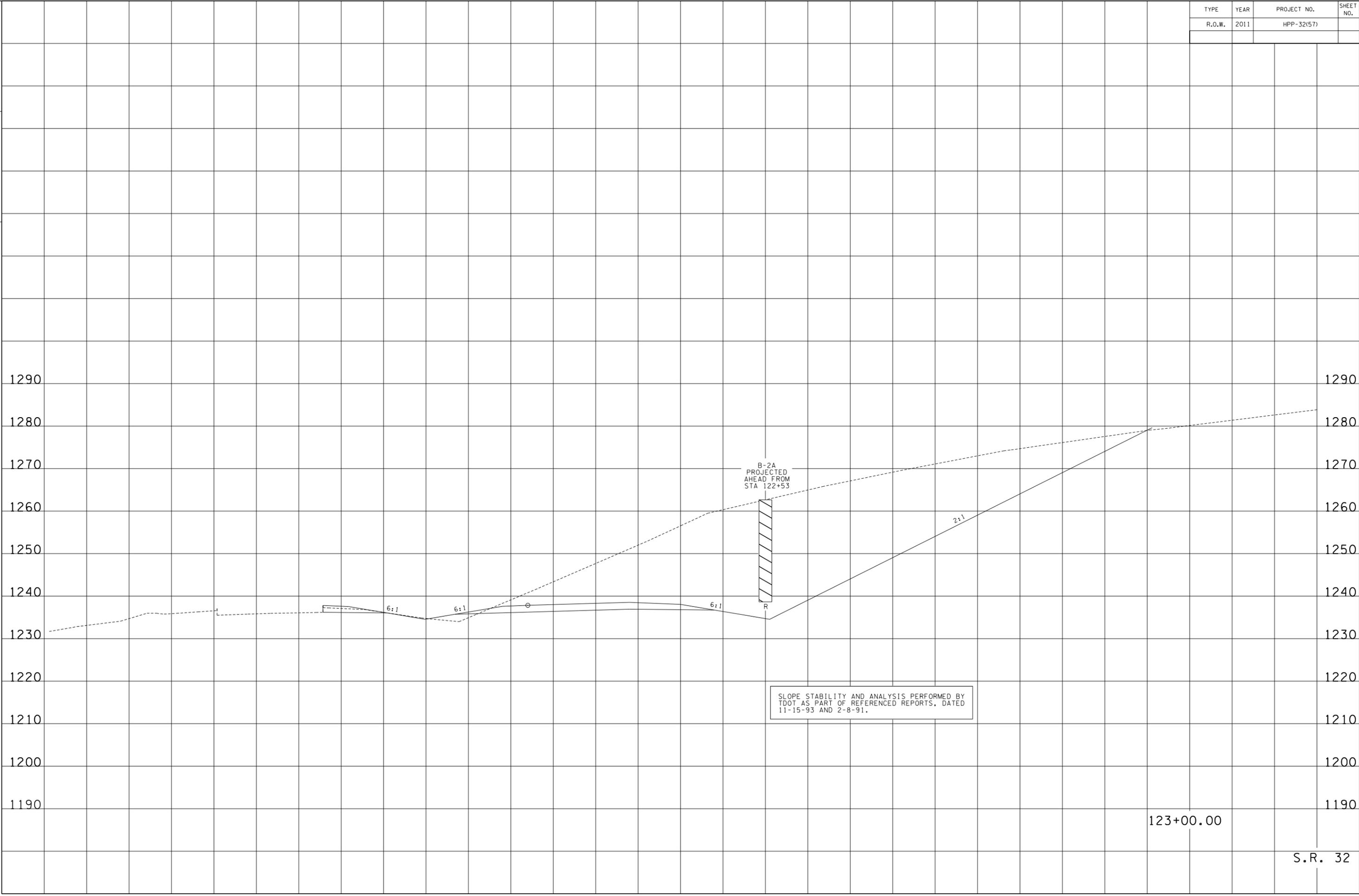


TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2011	HPP-32(57)	

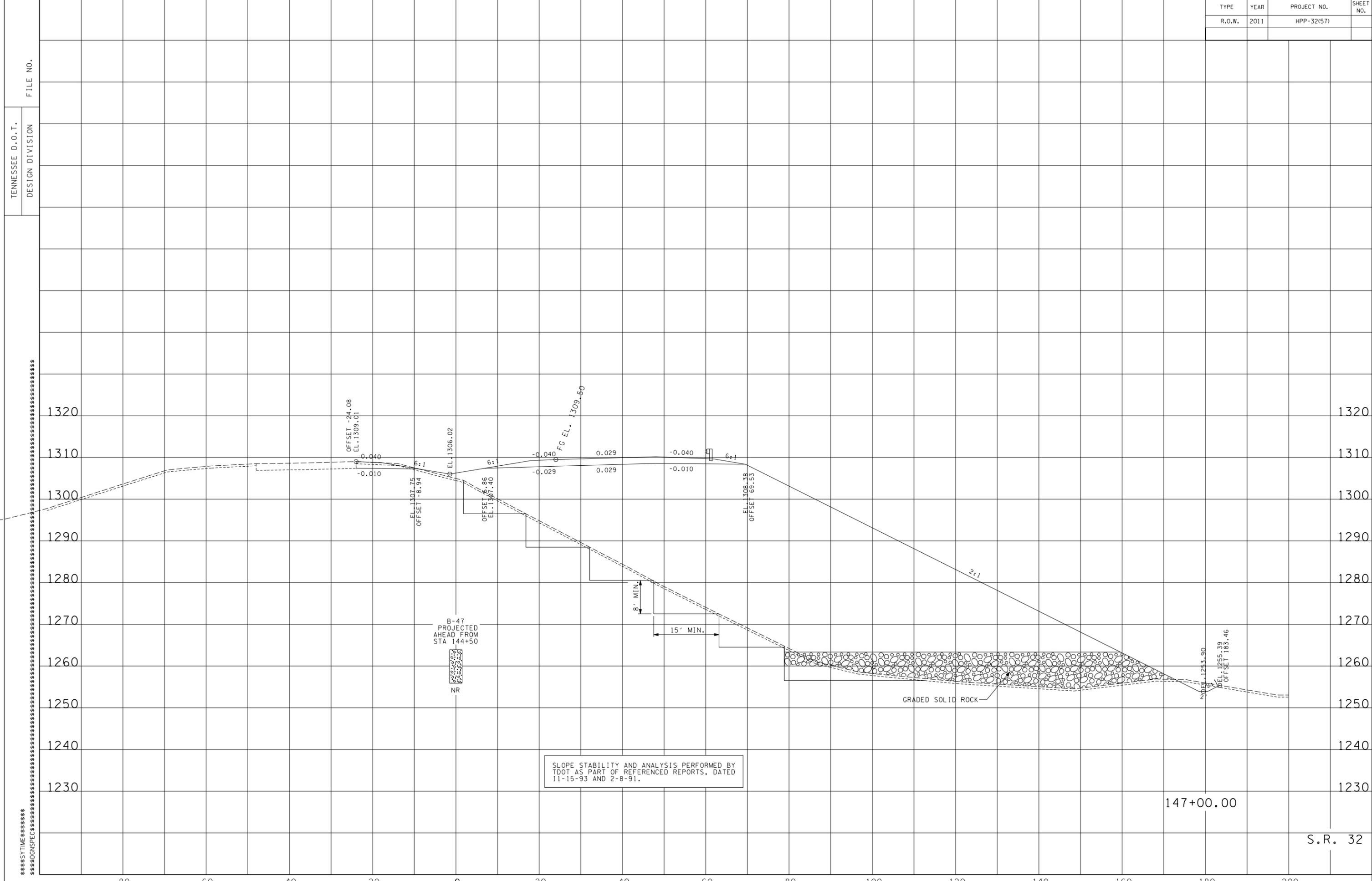
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

SYTIME
DONSPEC



TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2011	HPP-32(57)	



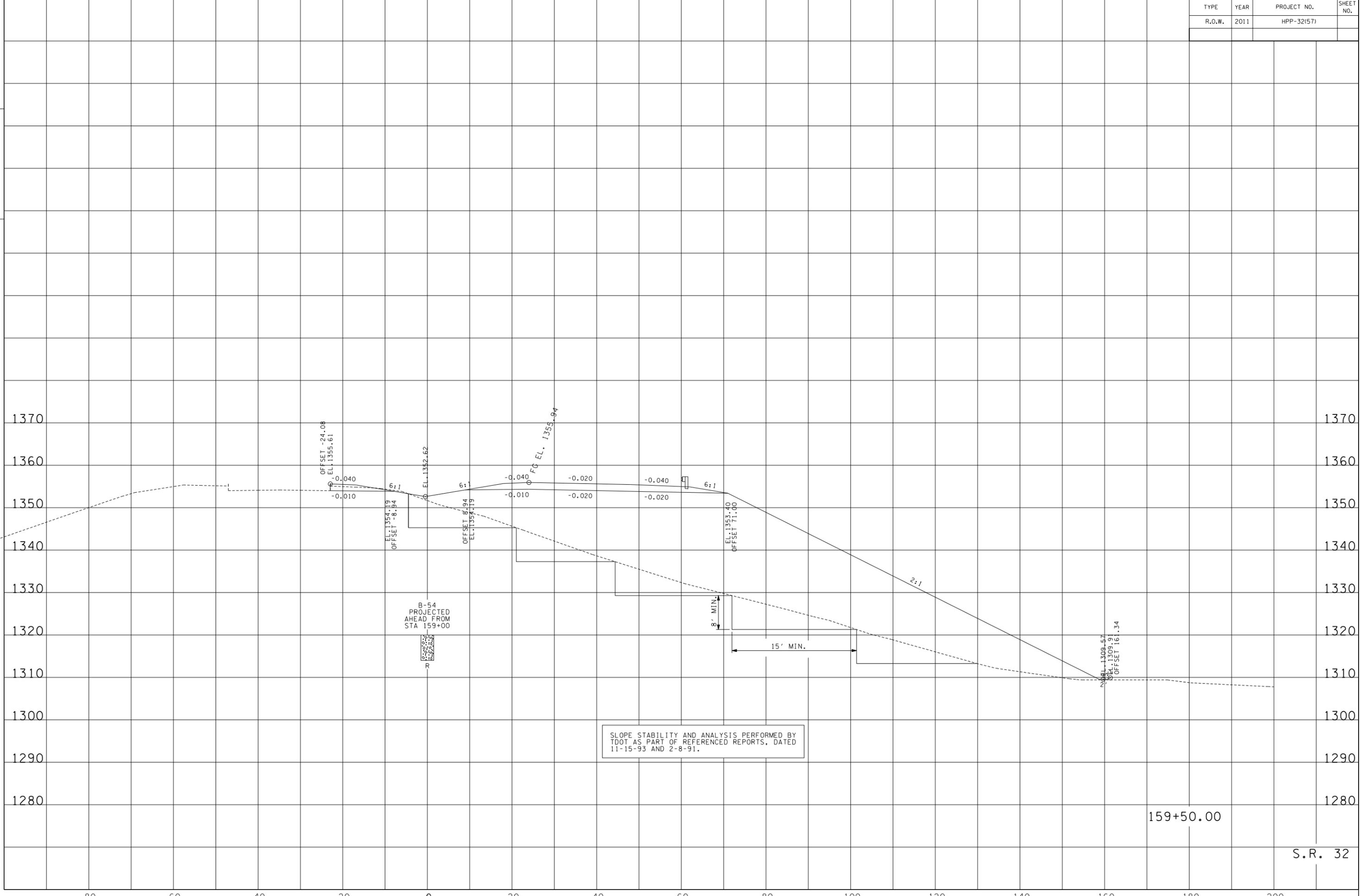
147+00.00

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2011	HPP-32(57)	

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

\$\$\$\$SYTIME\$\$\$\$
\$\$\$\$SONSPC\$\$\$\$

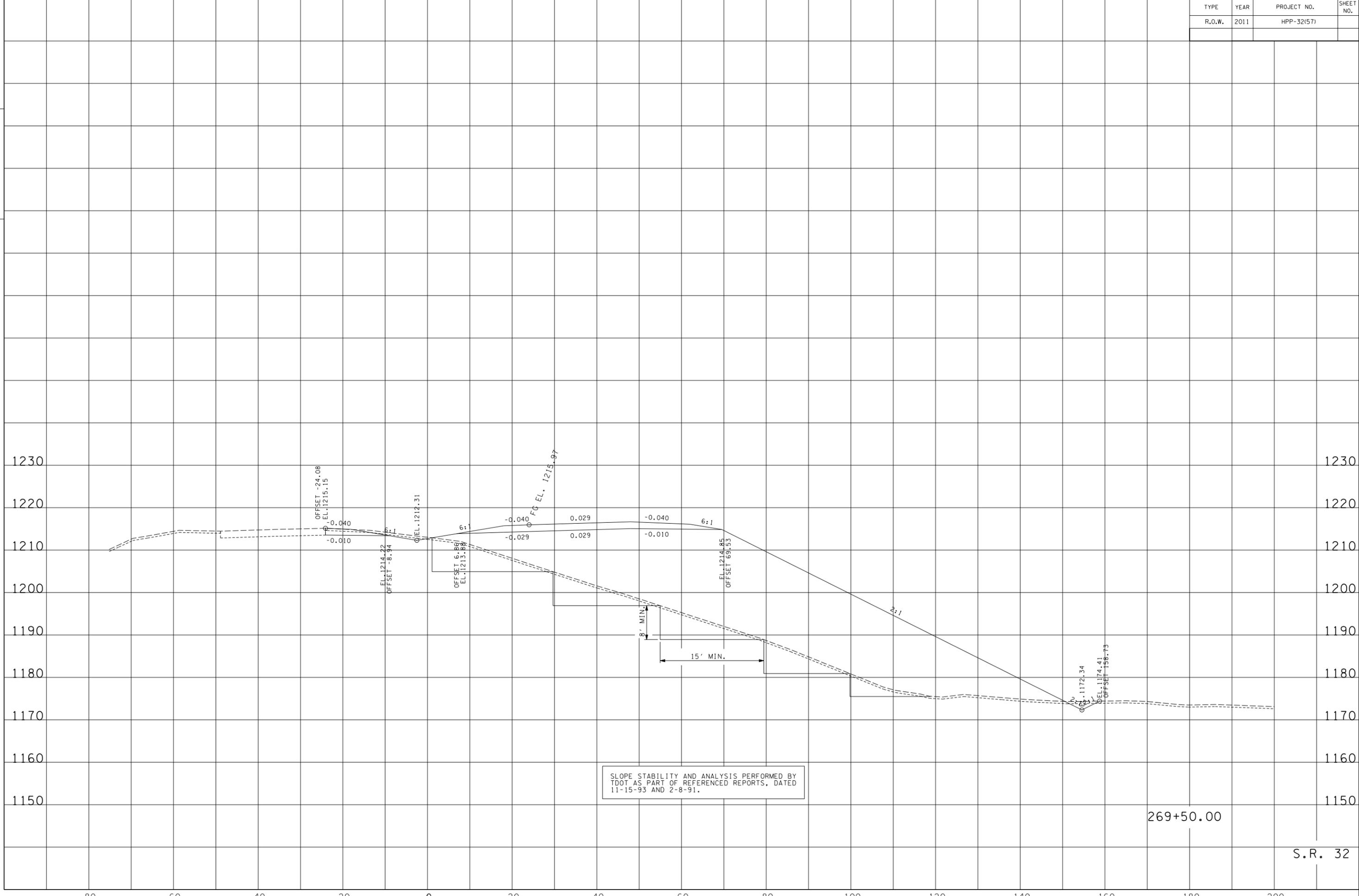


TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2011	HPP-32(57)	

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

\$\$\$\$SYTIME\$\$\$\$
\$\$\$\$SONSPC\$\$\$\$



SLOPE STABILITY AND ANALYSIS PERFORMED BY
TDOT AS PART OF REFERENCED REPORTS, DATED
11-15-93 AND 2-8-91.

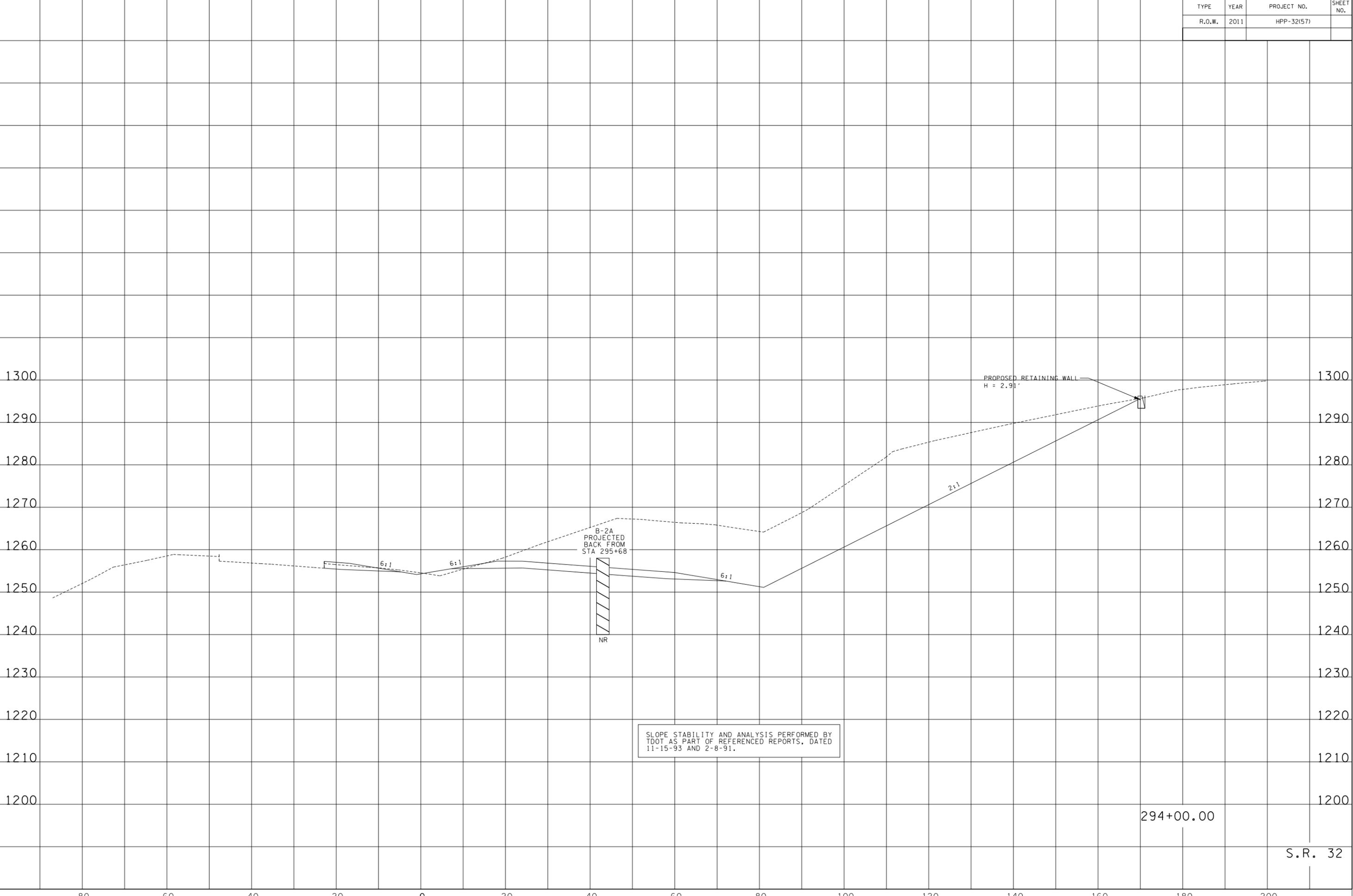
269+50.00

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2011	HPP-32(57)	

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

\$\$\$\$SYTIME\$\$\$\$
\$\$\$\$DONSPEC\$\$\$\$

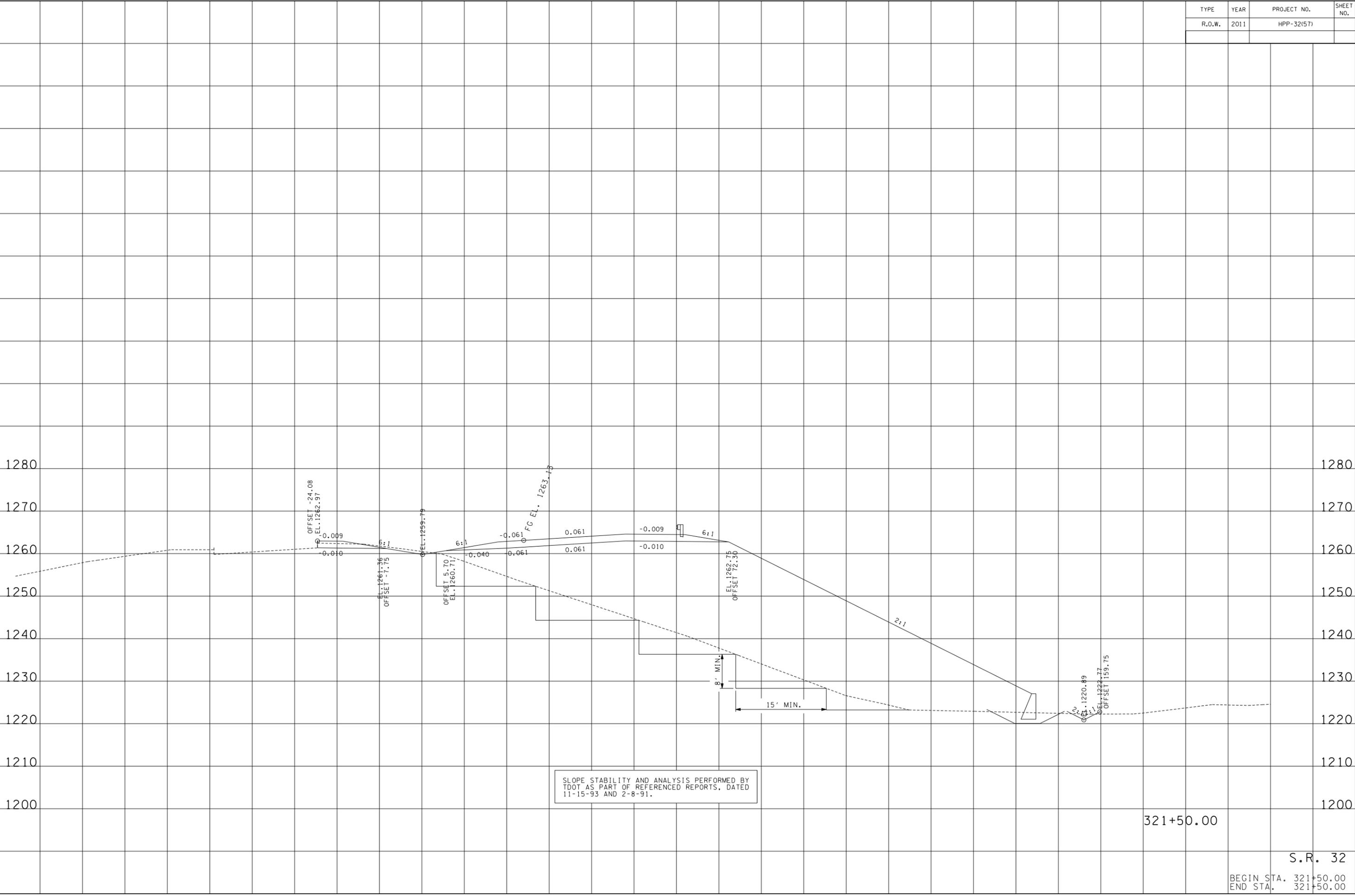


TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2011	HPP-32(57)	

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

SYTIME\$\$\$\$\$
SDNSPEC\$\$\$\$\$



321+50.00

S.R. 32
BEGIN STA. 321+50.00
END STA. 321+50.00