

PROJECT	DESIGNATION
	0810241
CONTRACT	BRIDGE FILE
	(13) 21-27-2014C

INDEX				
STRUCTURE	TYPE	SPAN AND SKEW	OVER	STATION
(13) 21-27-2014C	COMPOSITE PRESTRESSED HYBRID BULB TEE	1 SPAN @ 103'-0" SKEW: 15°00'00" Lt.	KOKOMO GRAIN RAILROAD	1131+75.73 "LINE A"

INDIANA DEPARTMENT OF TRANSPORTATION



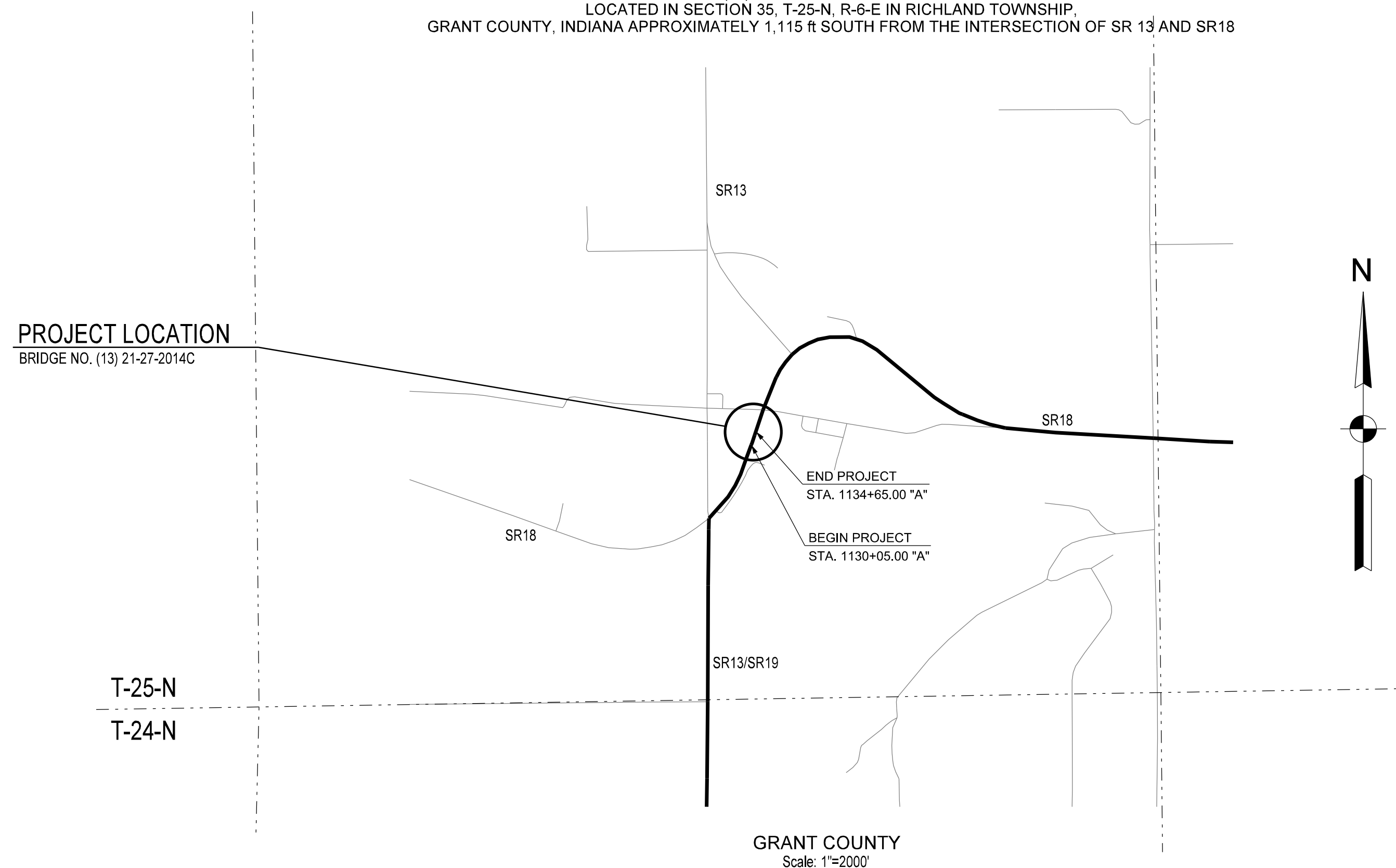
RIGHT-OF-WAY PLANS

FOR SPANS OVER 20 FEET
ON STATE ROAD 13
OVER KOKOMO GRAIN RAILROAD

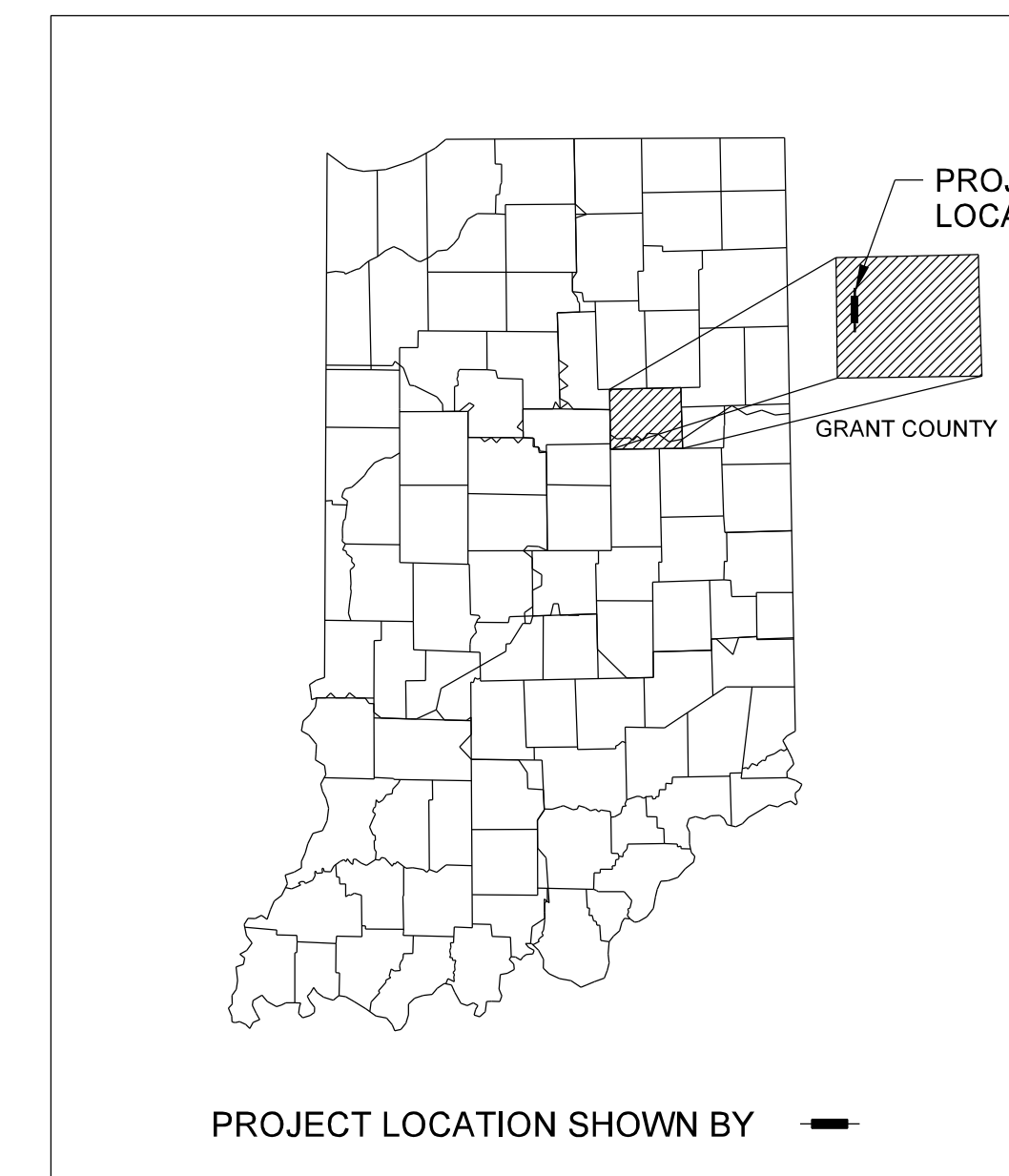
PROJECT NO. 0810241 PE
PROJECT NO. 0810241 RW
PROJECT NO. 0810241 CN
RP 46+26

BRIDGE REPLACEMENT TO STRUCTURE (13) 21-27-2014C CARRYING S.R. 13 OVER KOKOMO GRAIN RAILROAD
LOCATED IN SECTION 35, T-25-N, R-6-E IN RICHLAND TOWNSHIP,
GRANT COUNTY, INDIANA APPROXIMATELY 1,115 ft SOUTH FROM THE INTERSECTION OF SR 13 AND SR18

NOTE:
THE INFORMATION CONTAINED IN THESE PLANS IS NOT COMPLETE
FOR CONSTRUCTION. THESE PLANS ARE CERTIFIED FOR COMPLIANCE
WITH INDOT LEVEL ONE DESIGN CRITERIA.



TRAFFIC DATA		SR 13
A.A.D.T.	(2010)	4690 V.P.D.
A.A.D.T.	(2032)	5206 V.P.D.
D.H.V.	(2032)	521 V.P.H.
DIRECTIONAL DISTRIBUTION		50 % (NORTHBOUND)
TRUCKS		14 % D.H.V.
		14 % A.A.D.T.
DESIGN DATA		
DESIGN SPEED		45 MPH
PROJECT DESIGN CRITERIA		4R (NON-FREEWAY)
FUNCTIONAL CLASSIFICATION		ARTERIAL
RURAL/URBAN		RURAL
TERRAIN		LEVEL
ACCESS CONTROL		NONE



LATITUDE: 40°34'28" N LONGITUDE: 85°49'26" W

BRIDGE LENGTH : 0.020 mi.
ROADWAY LENGTH : 0.067 mi.
TOTAL LENGTH : 0.087 mi.
MAX. GRADE : 3.91%

HUC: 05120101170030

PRELIMINARY RIGHT-OF-WAY PLANS

INDIANA DEPARTMENT OF TRANSPORTATION
STANDARD SPECIFICATIONS DATED 2012
TO BE USED WITH THESE PLANS

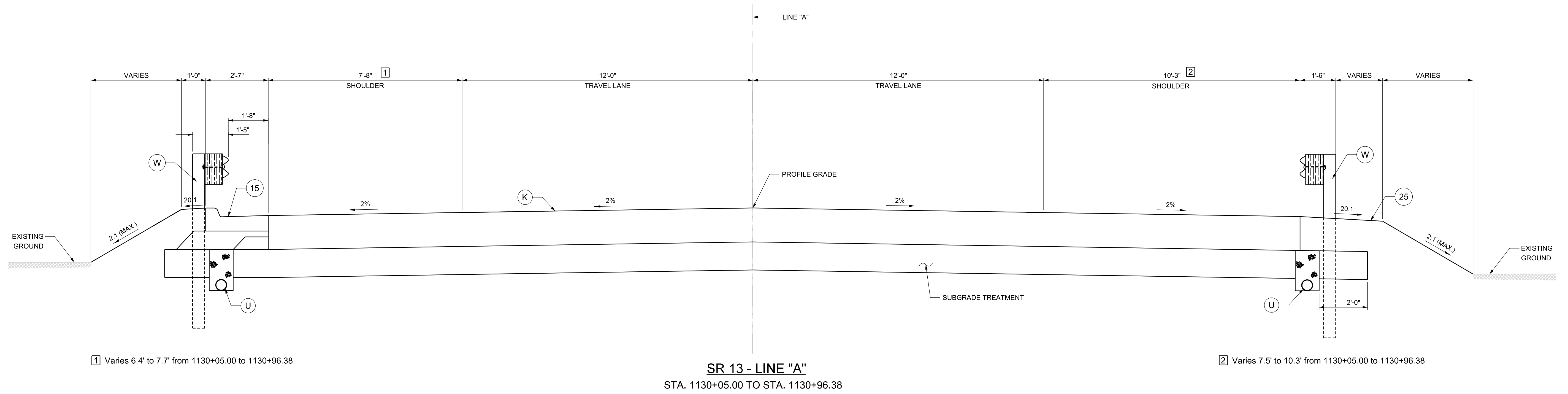


7321 Shadeland Station
Suite 160
Indianapolis, Indiana 46256
(i) 317.841.4799 (f) 317.841.4790

PLANS PREPARED BY: SHREWSBERRY & ASSOCIATES, LLC	317-841-4799 PHONE NUMBER
CERTIFIED BY:	03/01/2013 DATE
APPROVED FOR LETTING: INDIANA DEPARTMENT OF TRANSPORTATION	DATE

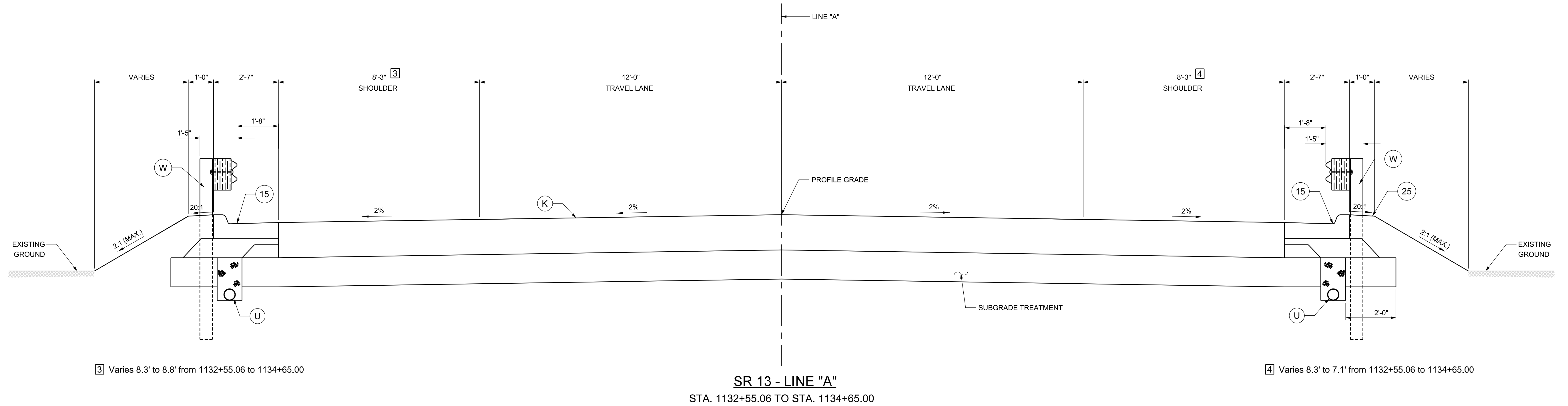
CONTRACT
B-33507

BRIDGE FILE (13) 21-27-2014C DESIGNATION NO. 0810241
SHEETS 1 of 15
PROJECT NO. 0810241



1 Varies 6.4' to 7.7' from 1130+05.00 to 1130+96.38

2 Varies 7.5' to 10.3' from 1130+05.00 to 1130+96.38



3 Varies 8.3' to 8.8' from 1132+55.06 to 1134+65.00

4 Varies 8.3' to 7.1' from 1132+55.06 to 1134+65.00

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LEGEND

- (15) CURB & GUTTER, CONCRETE
- (25) SEED MIXTURE, R
- (K) FULL DEPTH PAVEMENT (TO BE DETERMINED)
- (U) UNDERDRAIN
- (W) W-BEAM GUARDRAIL



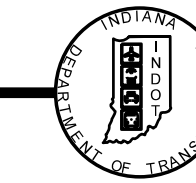
RECOMMENDED FOR APPROVAL _____	
DESIGN ENGINEER	DATE
DESIGNED: _____ BSE	DRAWN: _____ BSE
CHECKED: _____ JMT	CHECKED: _____ JMT

INDIANA
DEPARTMENT OF TRANSPORTATION

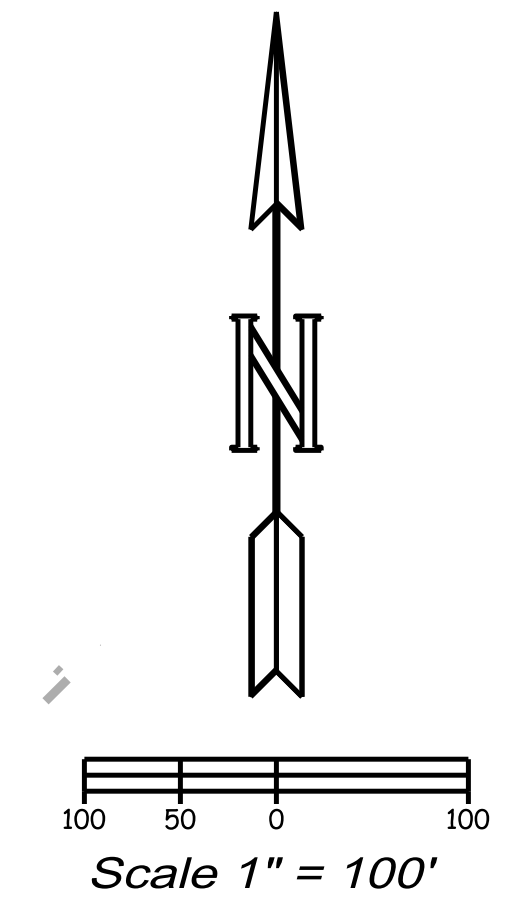
TYPICAL CROSS SECTION
LINE "A"

HORIZONTAL SCALE 1/2" = 1'	BRIDGE FILE (13) 21-27-2014C
VERTICAL SCALE N/A	DESIGNATION NO. 0810241
SURVEY BOOK	SHEETS 3 of 15
CONTRACT B-33507	PROJECT NO. 0810241

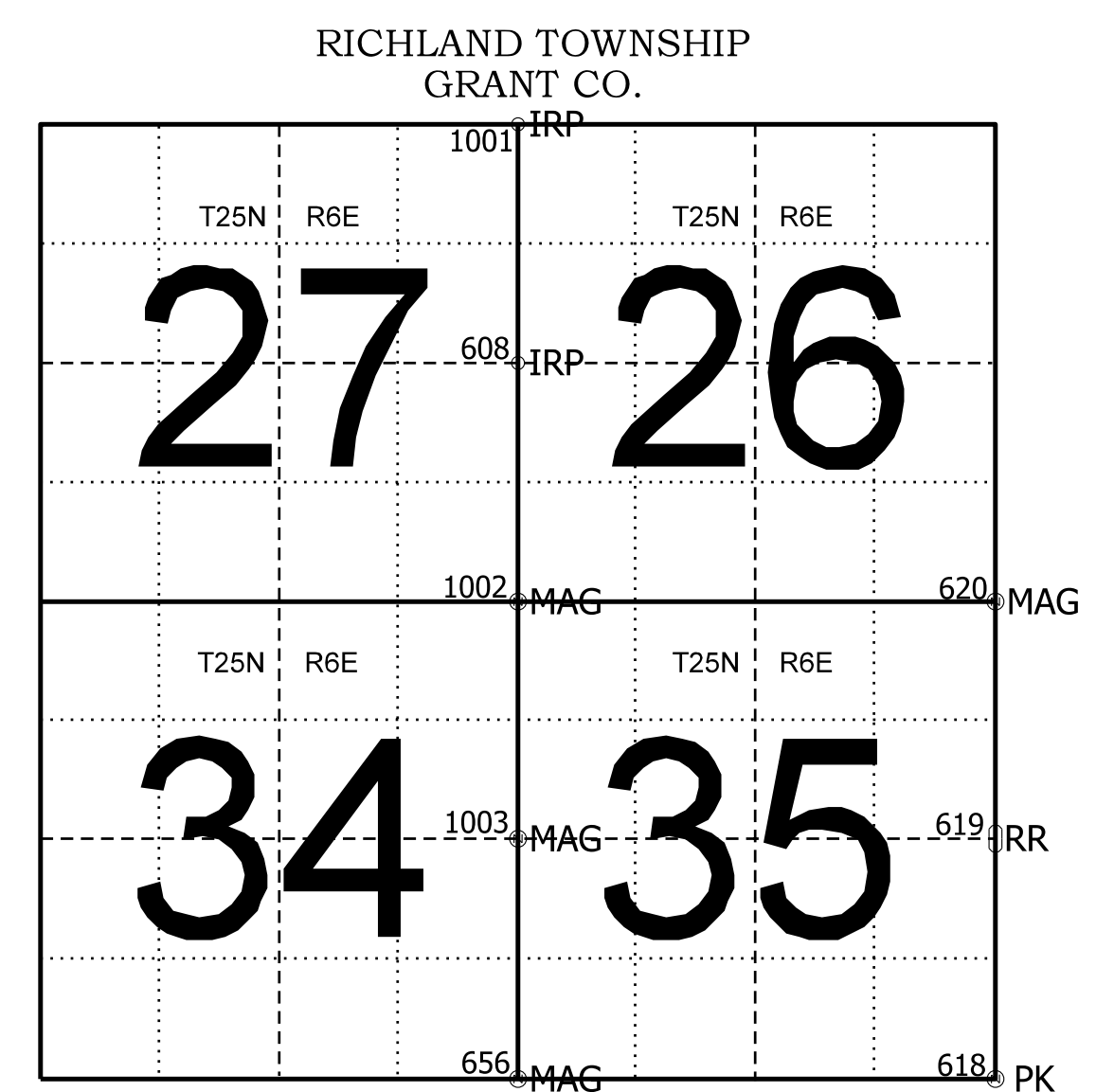
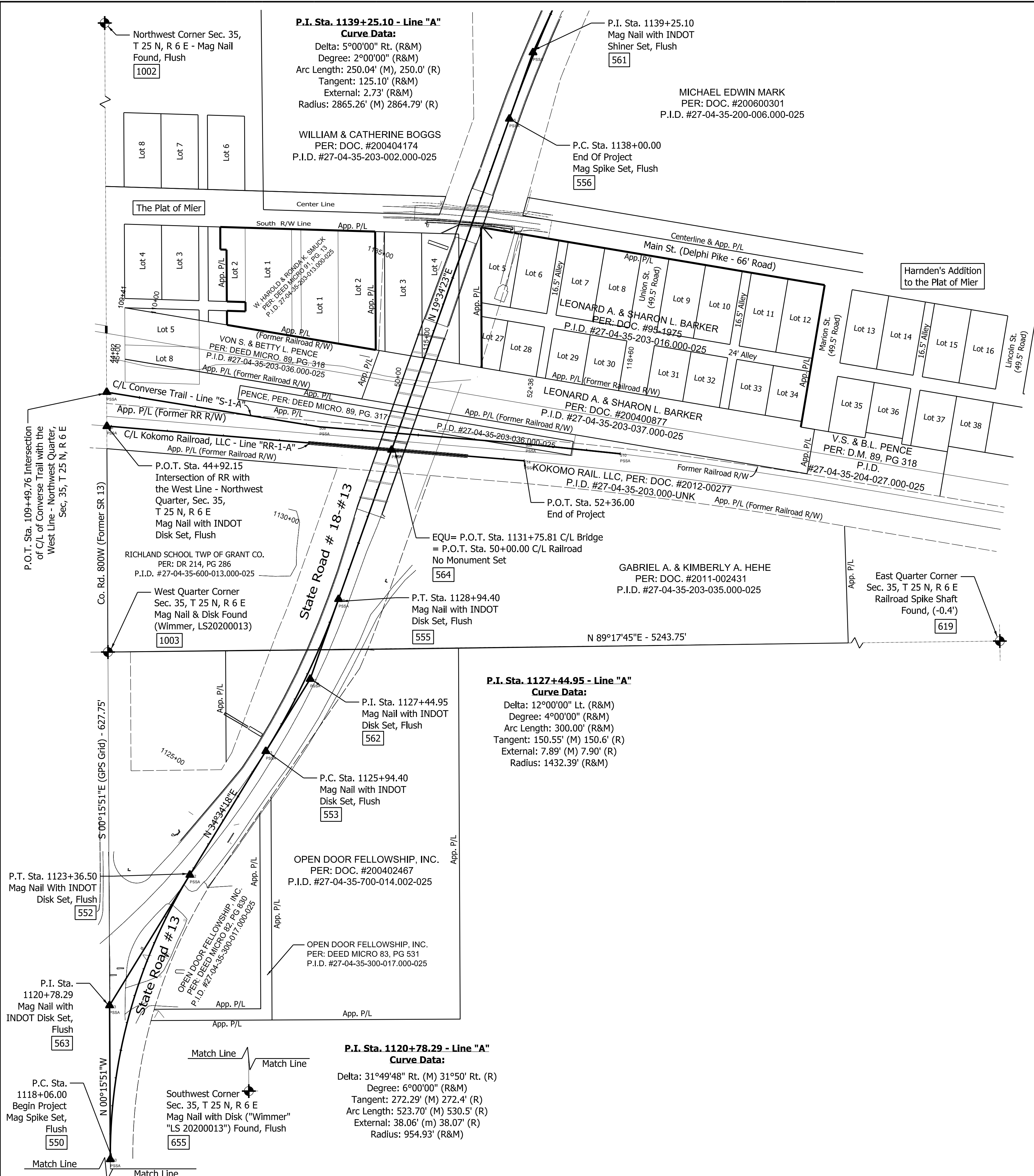
INDIANA DEPARTMENT OF TRANSPORTATION



LOCATION CONTROL ROUTE SURVEY PLAT GRANT COUNTY, INDIANA S.R. 18 over KOKOMO RAIL LLC, MIER



- LEGEND**
- - 3/4" Iron Pipe Set This Survey.
 - - 5/8" Iron Pin Set This Survey.
 - ▲ - M.A.G. Nail Set This Survey.
 - - Iron Pins & Pipes Found This Survey.
 - - Nail Found This Survey.
 - ▲ - R. Spike Found This Survey.



SURVEY STARTED	
04/25/2012	
SURVEY COMPLETED	
XX/XX/2012	
ROUTE PLAT SHEETS	
1	of 2

**SR 18 over Kokomo Rail, LLC
in Richland Township,
Grant County, Indiana**

FIELD SURVEYOR STATEMENT

THIS SURVEY, TO THE BEST OF MY KNOWLEDGE AND BELIEF, WAS EXECUTED ACCORDING TO THE PROVISIONS OF TITLE 865 I.A.C. 1-12-20 THROUGH 1-12-26 REGARDING ROUTE SURVEYS, EXCEPT THAT ANY DATA SHOWN REGARDING THE LOCATION OR DESCRIPTION OF THE EXISTING PARCELS IS NOT A PART OF THIS SURVEY.

Michael E. Ruff
INDIANA REGISTERED LAND SURVEYOR No. ENL 8600123

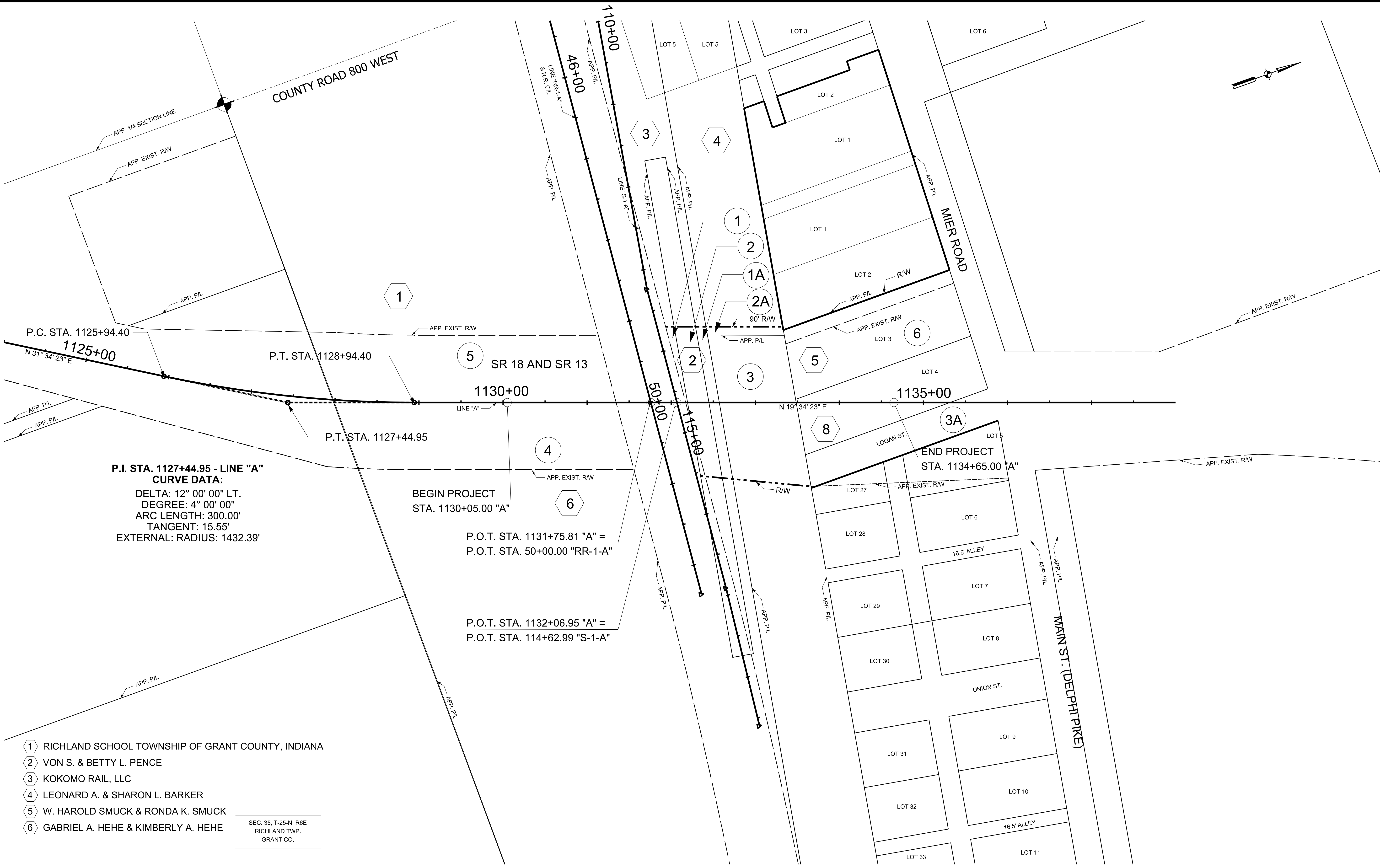
DATE
XX/XX/2012

INDIANA
DEPARTMENT OF TRANSPORTATION

LOCATION CONTROL ROUTE SURVEY

HORIZONTAL SCALE	BRIDGE FILE
1" = 100'	
COUNTY	DESIGNATION
GRANT	0810241
SURVEY BOOK	SHEETS
	1 of 2
CONTRACT	PROJECT
	0810241

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P.I. STA. 1127+44.95 - LINE "A"
CURVE DATA:
 DELTA: 12° 00' 00" LT.
 DEGREE: 4° 00' 00"
 ARC LENGTH: 300.00'
 TANGENT: 15.55'
 EXTERNAL: RADIUS: 1432.39'

BEGIN PROJECT
 STA. 1130+05.00 "A"

P.O.T. STA. 1131+75.81 "A" =
 P.O.T. STA. 50+00.00 "RR-1-A"

P.O.T. STA. 1132+06.95 "A" =
 P.O.T. STA. 114+62.99 "S-1-A"

- ① RICHLAND SCHOOL TOWNSHIP OF GRANT COUNTY, INDIANA
- ② VON S. & BETTY L. PENCE
- ③ KOKOMO RAIL, LLC
- ④ LEONARD A. & SHARON L. BARKER
- ⑤ W. HAROLD SMUCK & RONDA K. SMUCK
- ⑥ GABRIEL A. HEHE & KIMBERLY A. HEHE

SEC. 35, T-25-N, R-6E
 RICHLAND TWP.
 GRANT CO.

○ PARCEL NUMBER



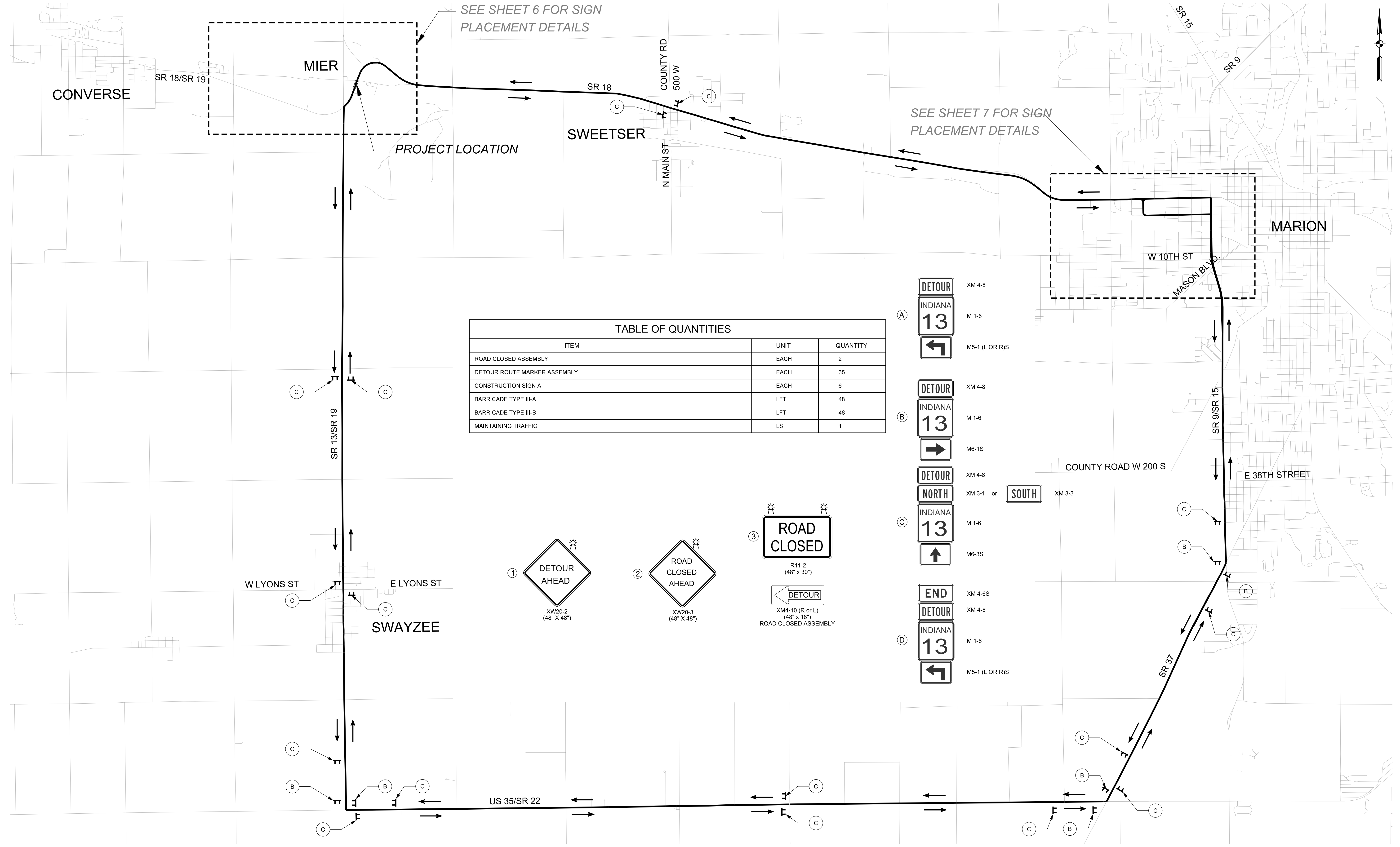
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: BSE	DRAWN: BSE	
CHECKED: JMT	CHECKED: JMT	

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAT NO. 1

HORIZONTAL SCALE	BRIDGE FILE
1" = 50'	(13) 21-27-2014C
VERTICAL SCALE	DESIGNATION NO.
N/A	0810241
SURVEY BOOK	SHEETS
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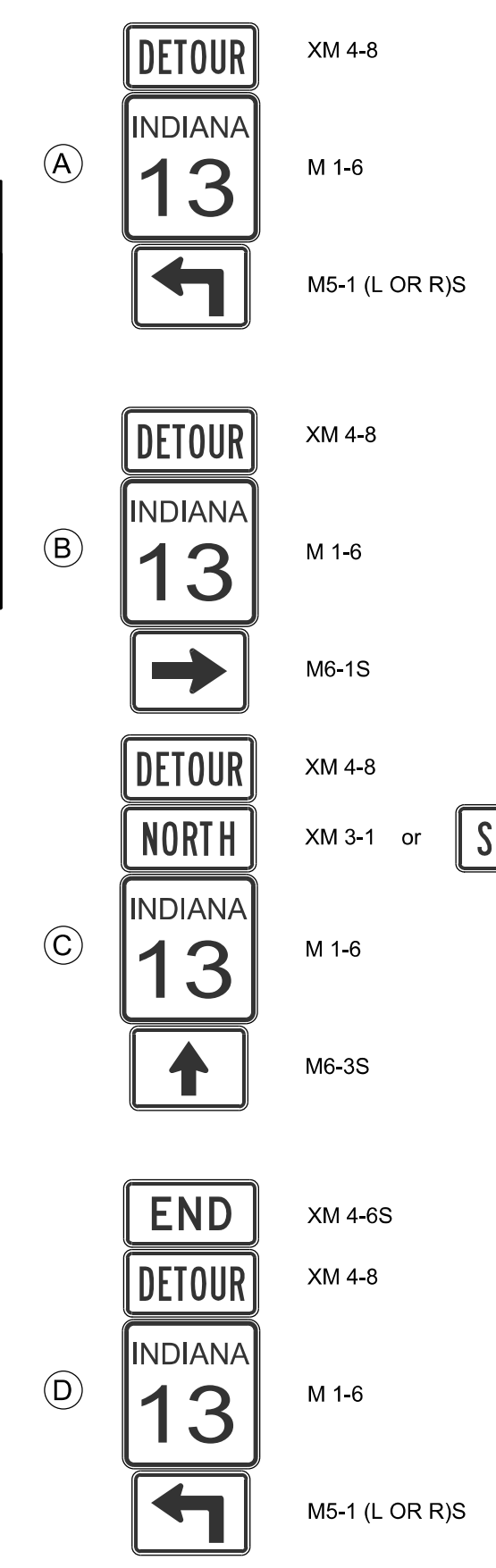
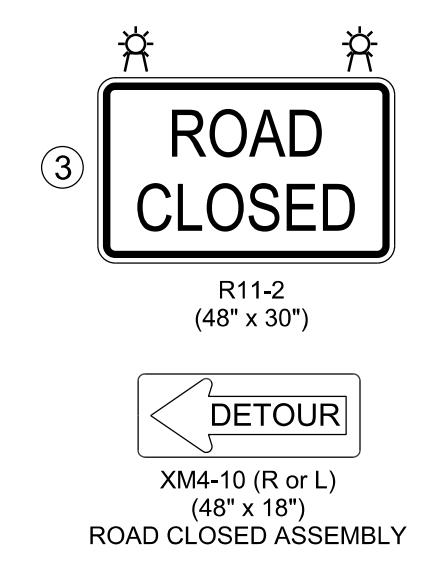
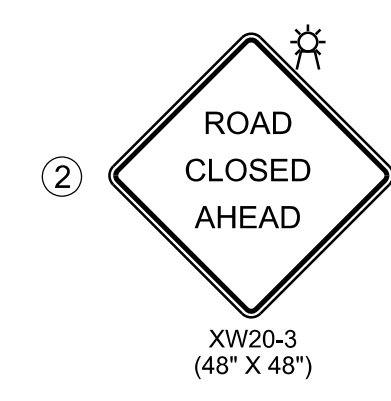
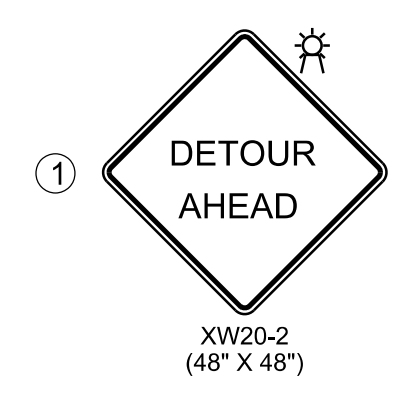
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SEE SHEET 6 FOR SIGN PLACEMENT DETAILS

SEE SHEET 7 FOR SIGN PLACEMENT DETAILS

TABLE OF QUANTITIES		
ITEM	UNIT	QUANTITY
ROAD CLOSED ASSEMBLY	EACH	2
DETOUR ROUTE MARKER ASSEMBLY	EACH	35
CONSTRUCTION SIGN A	EACH	6
BARRICADE TYPE III-A	LFT	48
BARRICADE TYPE III-B	LFT	48
MAINTAINING TRAFFIC	LS	1



LEGEND

- CONSTRUCTION SIGN
- INDICATES TRAFFIC FLOW
- CONSTRUCTION AREA



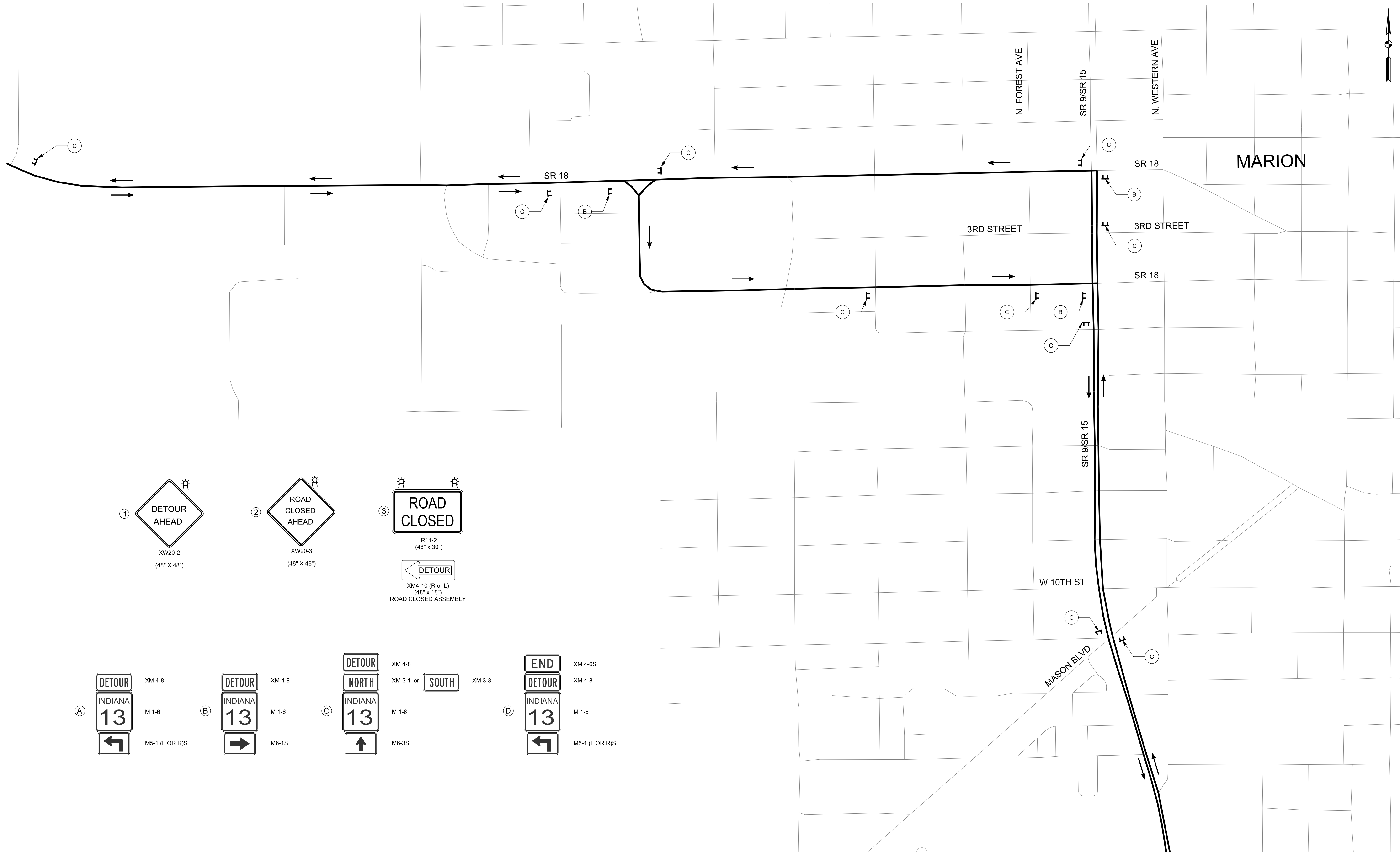
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DESIGNED: BSE	DRAWN: BSE	
CHECKED: JMT	CHECKED: JMT	

INDIANA
DEPARTMENT OF TRANSPORTATION

SR 13/ SR 18 DETOUR PLAN

HORIZONTAL SCALE 1" = 2000'	BRIDGE FILE (13) 21-27-2014C
VERTICAL SCALE N/A	DESIGNATION NO. 0810241
SURVEY BOOK	SHEETS 6 of 15
CONTRACT B-33507	PROJECT NO. 0810241

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LEGEND

① **DETOUR AHEAD**
XW20-2
(48" X 48")

② **ROAD CLOSED AHEAD**
XW20-3
(48" X 48")

③ **ROAD CLOSED**
R11-2
(48" X 30")

DETOUR
XM4-10 (R or L)
(48" X 18")
ROAD CLOSED ASSEMBLY

A **DETOUR** XM 4-8
INDIANA 13 M 1-6
 M5-1 (L OR R/S)

B **DETOUR** XM 4-8
INDIANA 13 M 1-6
 M6-1S

C **DETOUR** XM 4-8
NORTH XM 3-1 or **SOUTH** XM 3-3
INDIANA 13 M 1-6
 M6-3S

D **END** XM 4-6S
DETOUR XM 4-8
INDIANA 13 M 1-6
 M5-1 (L OR R/S)

LEGEND

CONSTRUCTION SIGN

INDICATES TRAFFIC FLOW

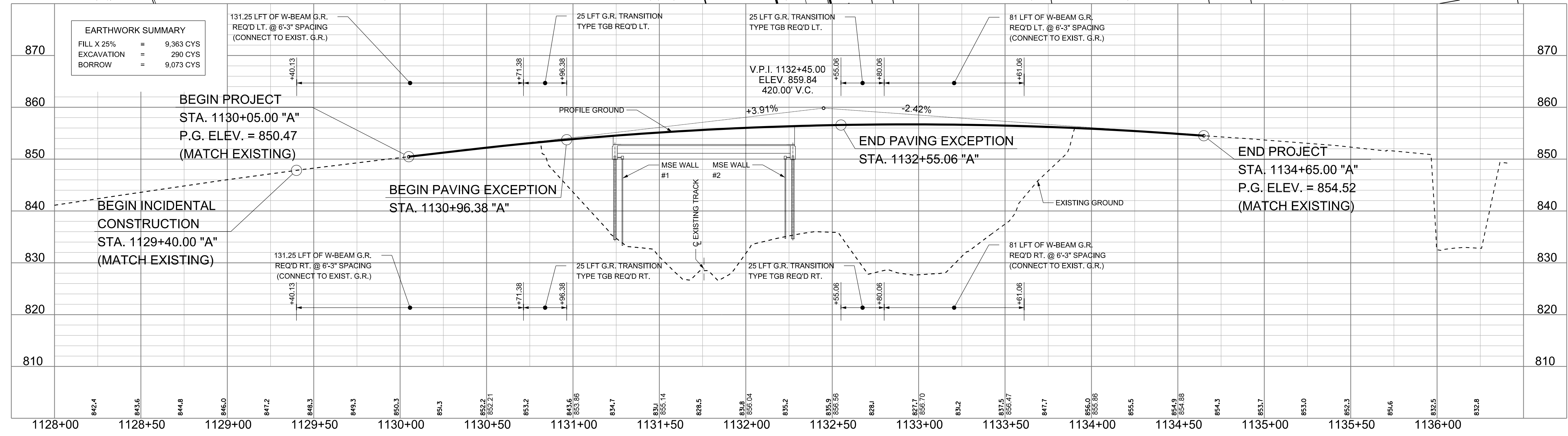
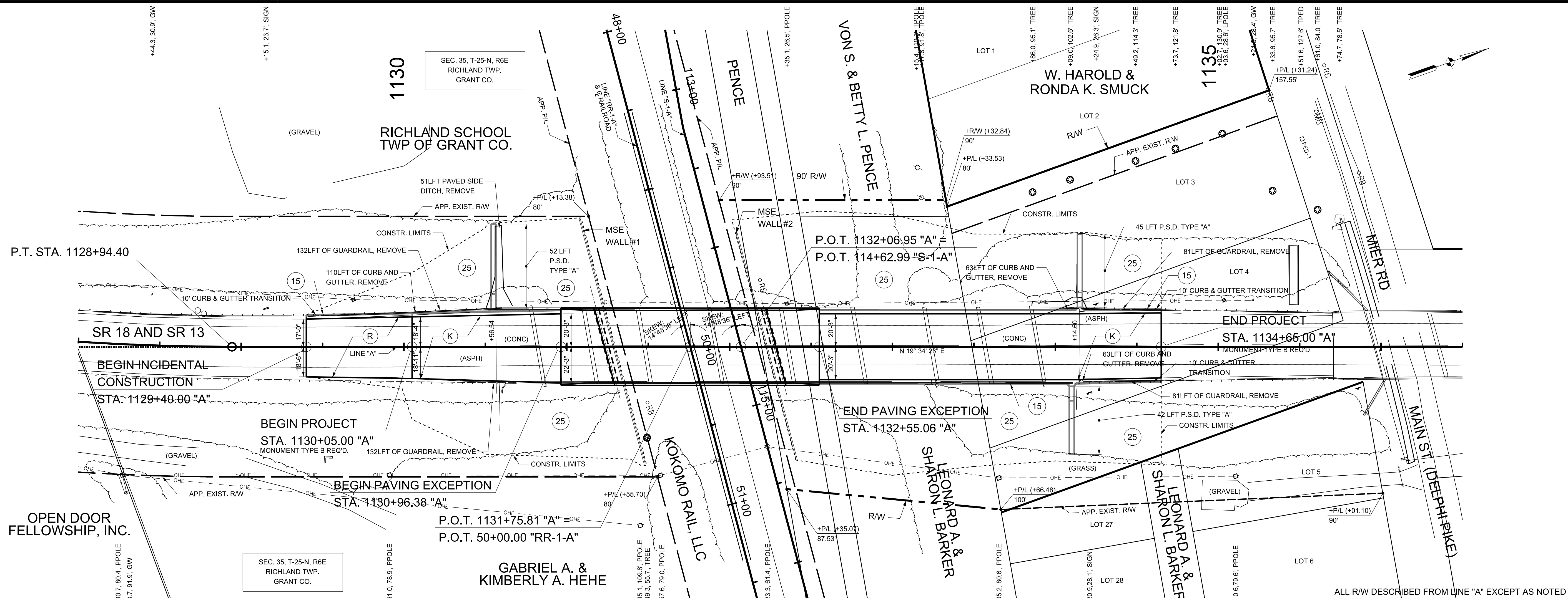


RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: _____ BSE _____	DRAWN: _____ BSE _____	
CHECKED: _____ JMT _____	CHECKED: _____ JMT _____	

INDIANA
DEPARTMENT OF TRANSPORTATION

SR 13/ SR 18 DETOUR PLAN
CITY OF MARION

HORIZONTAL SCALE 1" = 300'	BRIDGE FILE (13) 21-27-2014C
VERTICAL SCALE N/A	DESIGNATION NO. 0810241
SURVEY BOOK	SHEETS 8 of 15
CONTRACT B-33507	PROJECT NO. 0810241



EARTHWORK SUMMARY

FILL X 25%	=	9,363 CYS
EXCAVATION	=	290 CYS
BORROW	=	9,073 CYS

LEGEND

- (15) CURB & GUTTER, CONCRETE
- (25) SEED MIXTURE, R
- (K) FULL DEPTH PAVEMENT (TO BE DETERMINED)
- (U) UNDERDRAIN
- (W) W-BEAM GUARDRAIL
- (R) MILL AND RESURFACE 1 1/2 INCH



RECOMMENDED FOR APPROVAL

DESIGNED: BSE	DRAWN: BSE
CHECKED: JMT	CHECKED: JMT

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
SR-13 - LINE "A"

HORIZONTAL SCALE 1" = 30'	BRIDGE FILE (13) 21-27-2014C
VERTICAL SCALE 1" = 10'	DESIGNATION NO. 0810241
SURVEY BOOK	SHEETS 9 of 15
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TO BE POPULATED WITH BORING LOGS WHEN GEOTECH IS COMPLETE

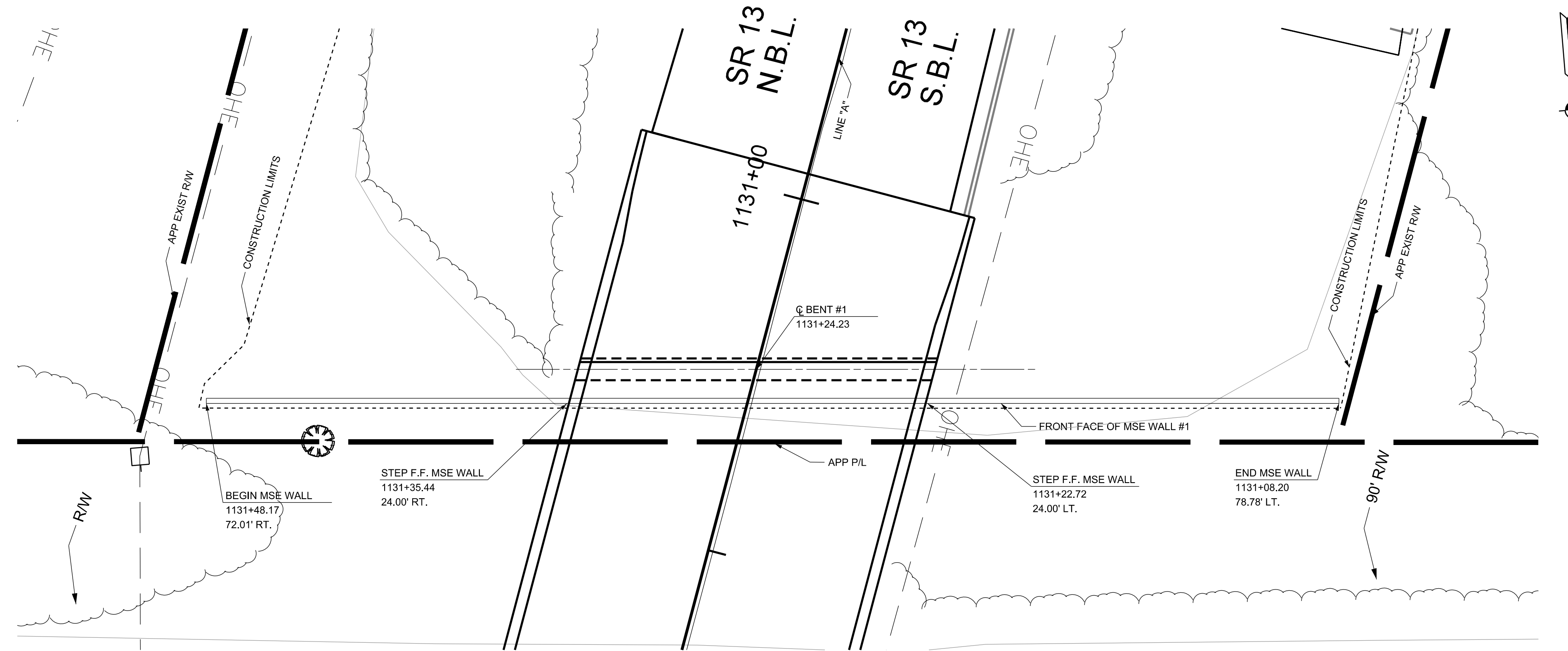


RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: _____ BSE _____	DRAWN: _____ BSE _____	
CHECKED: _____ JMT _____	CHECKED: _____ JMT _____	

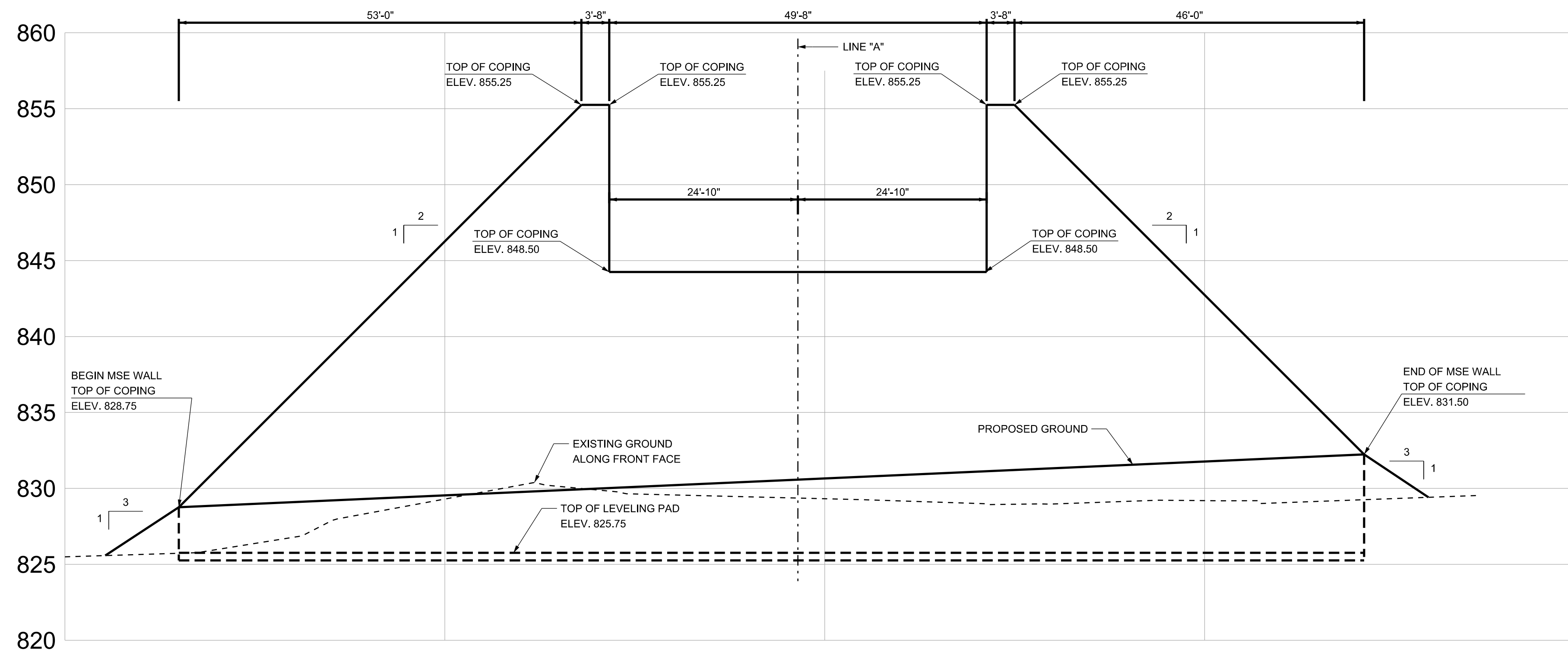
INDIANA
DEPARTMENT OF TRANSPORTATION

SOIL BORING

HORIZONTAL SCALE	BRIDGE FILE (13) 21-27-2014C
VERTICAL SCALE	DESIGNATION NO. 0810241
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PLAN



ELEVATION

NOTES:
 CALLOUTS ARE DESCRIBED FROM LINE "A" UNLESS OTHERWISE NOTED
 ELEVATIONS SHOWN ALONG FRONT FACE OF MSE WALL

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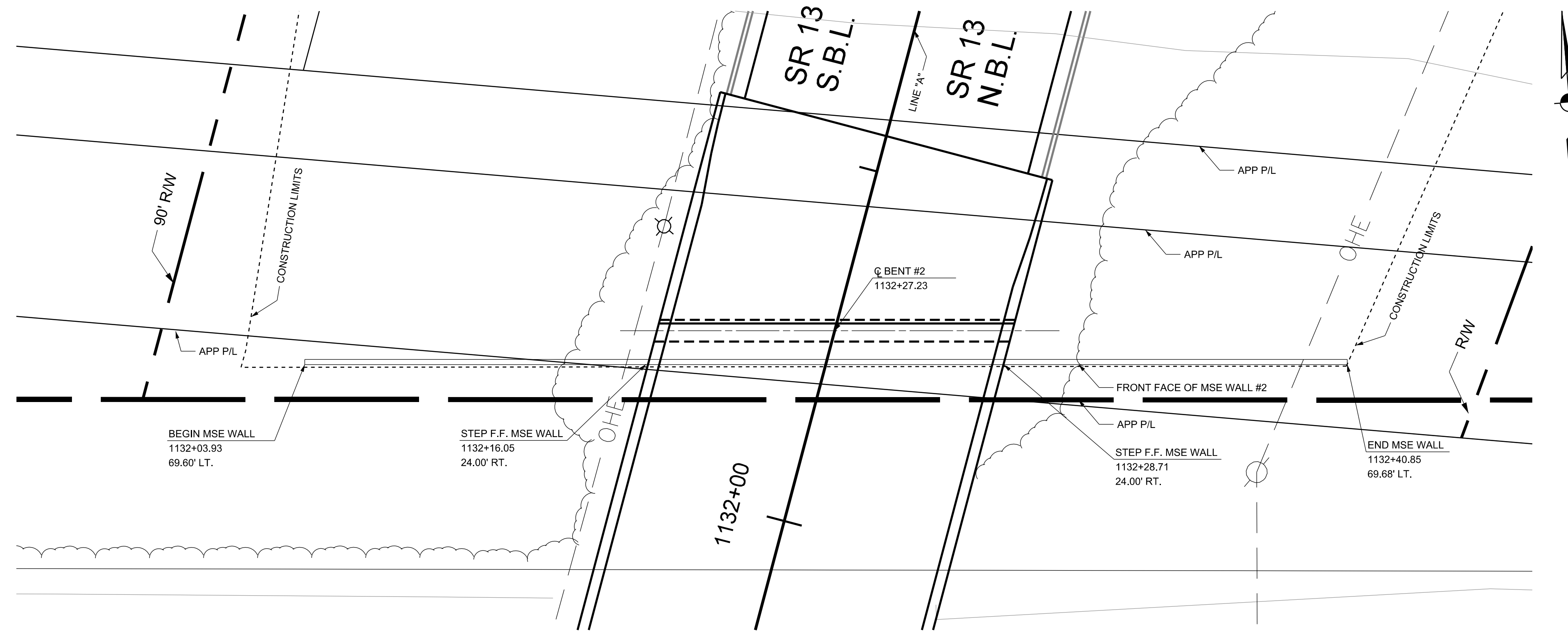


RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: BSE	DRAWN: BSE	
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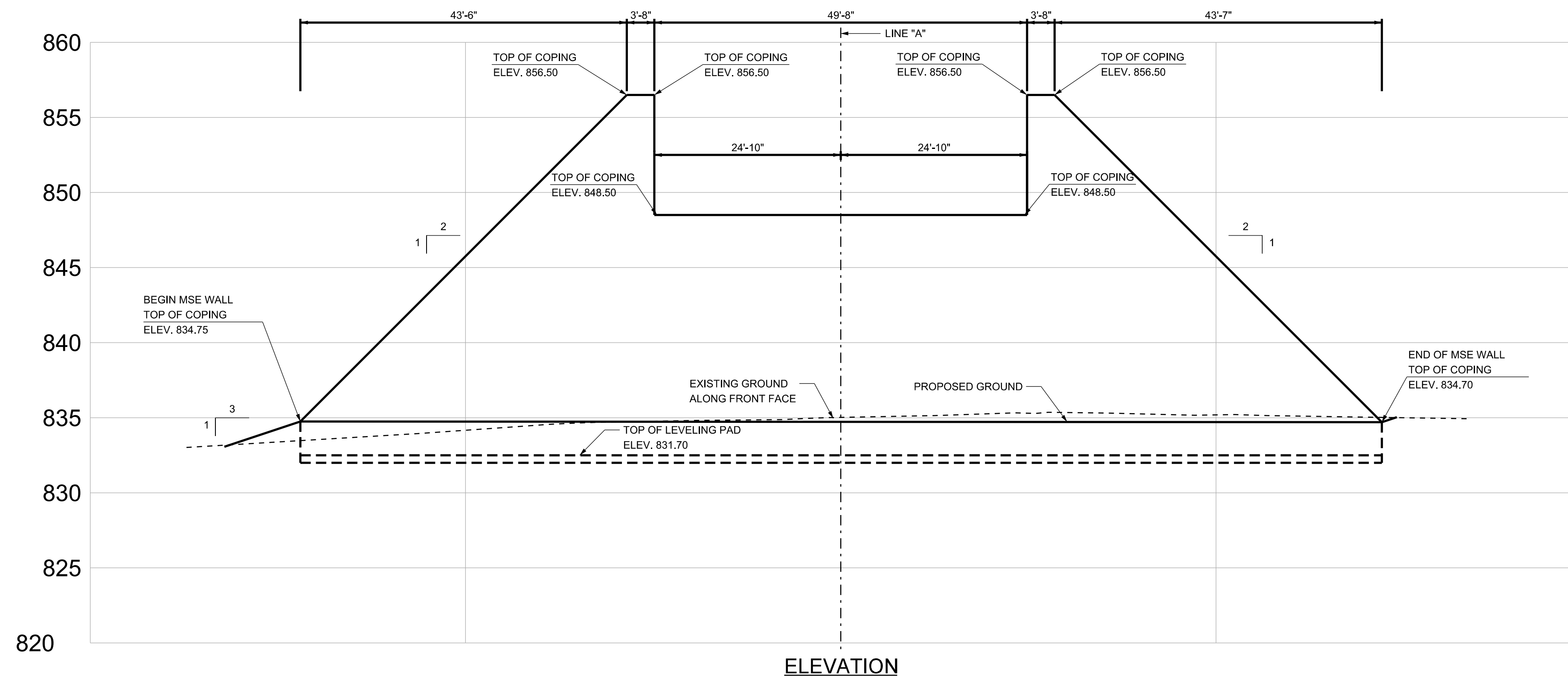
INDIANA
DEPARTMENT OF TRANSPORTATION

RETAINING WALL DETAIL
WALL #1

HORIZONTAL SCALE	BRIDGE FILE
1" = 10'	(13) 21-27-2014C
VERTICAL SCALE	DESIGNATION NO.
	0810241
SURVEY BOOK	SHEETS
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PLAN



ELEVATION

NOTES:
 CALLOUTS ARE DESCRIBED FROM LINE "A" UNLESS OTHERWISE NOTED
 ELEVATIONS SHOWN ALONG FRONT FACE OF MSE WALL

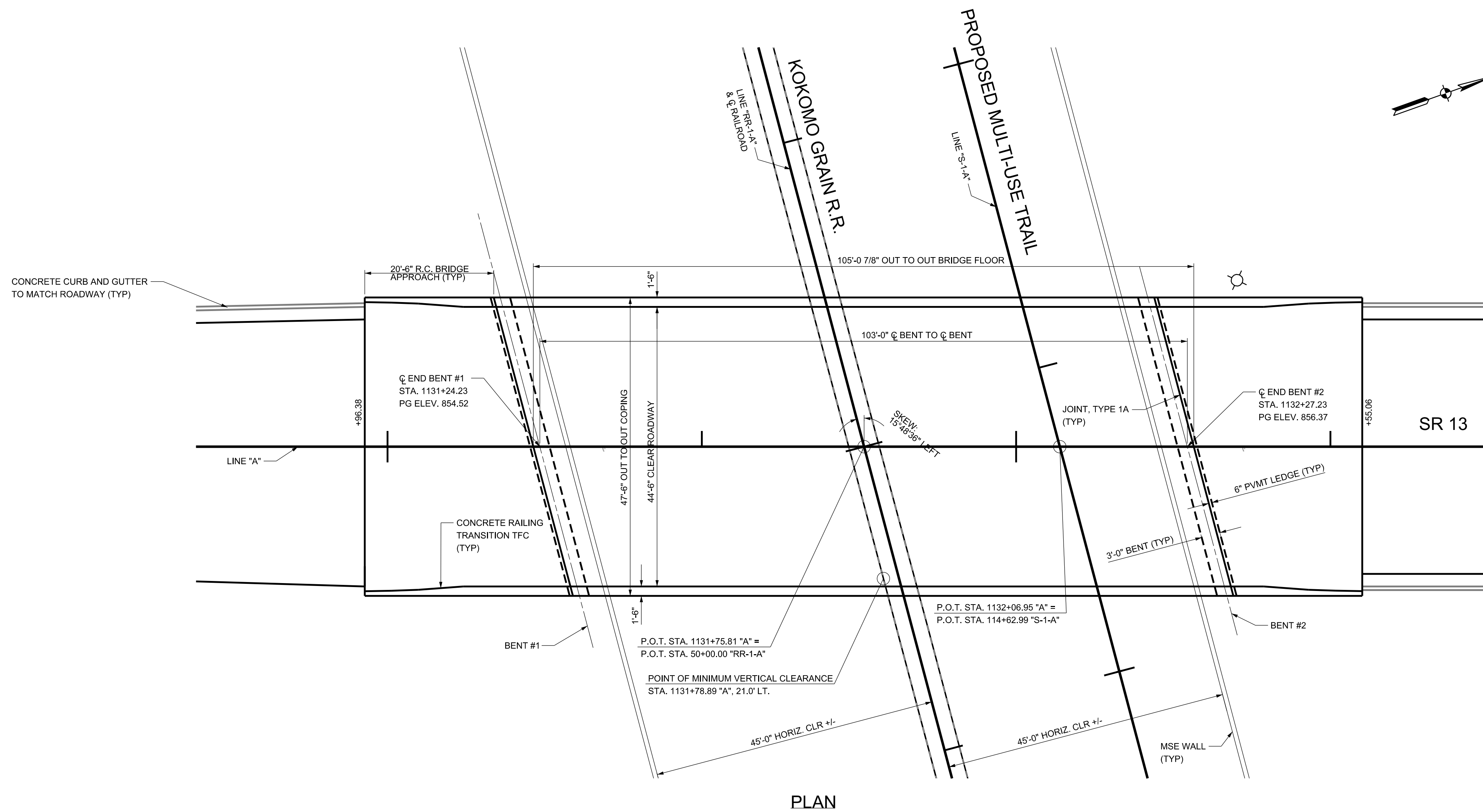
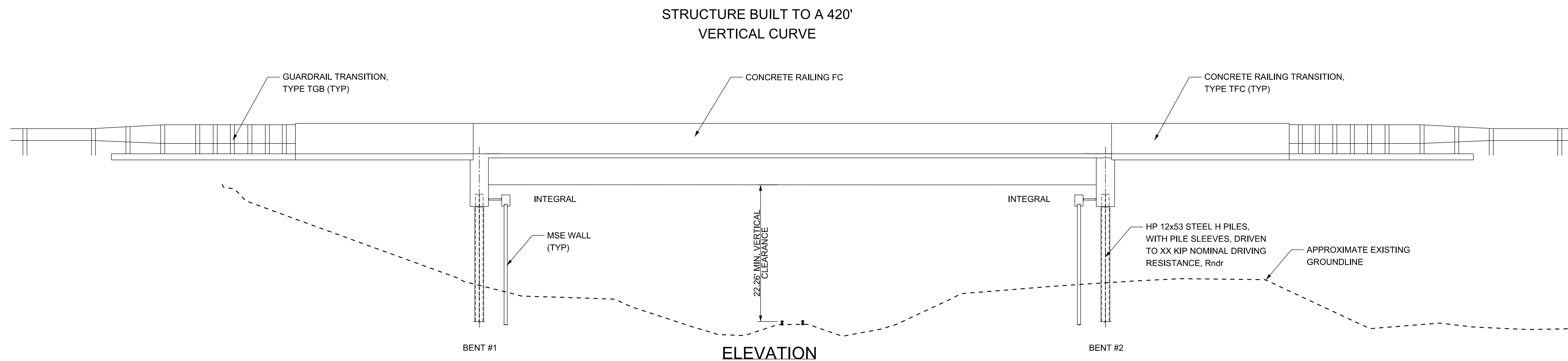
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DESIGNED: BSE	DRAWN: BSE	
CHECKED: JMT	CHECKED: JMT	

INDIANA
 DEPARTMENT OF TRANSPORTATION
 RETAINING WALL DETAIL
 WALL #2

HORIZONTAL SCALE 1" = 10'	BRIDGE FILE (13) 21-27-2014C
VERTICAL SCALE	DESIGNATION NO. 0810241
SURVEY BOOK	SHEETS 12 of 15
CONTRACT B-33507	PROJECT NO. 0810241



EXISTING STRUCTURE (TO BE REMOVED)
 COMPOSITE ADJACENT PRESTRESSED BOX BEAMS
 2 SPANS AT 33'-0", 4 SPANS AT 44'-0", 2 SPANS AT 33'-0"
 SKEW: 10° LEFT
 44'-6" CLEAR ROADWAY
 EXISTING BRIDGE PLANS ON FILE WITH INDOT CENTRAL OFFICE
 BRIDGE FILES (13)21-27-2014, (13)21-27-2014A, (13)21-27-2014B

**COMPOSITE 42" PRESTRESSED
 CONCRETE HYBRID BULB-TEE
 BEAM BRIDGE**
 1 SPAN AT 103'-0"
 SKEW: 14°48'36" LEFT
 44'-6" CLEAR ROADWAY ON SR 13
 OVER KOKOMO GRAIN RAILROAD

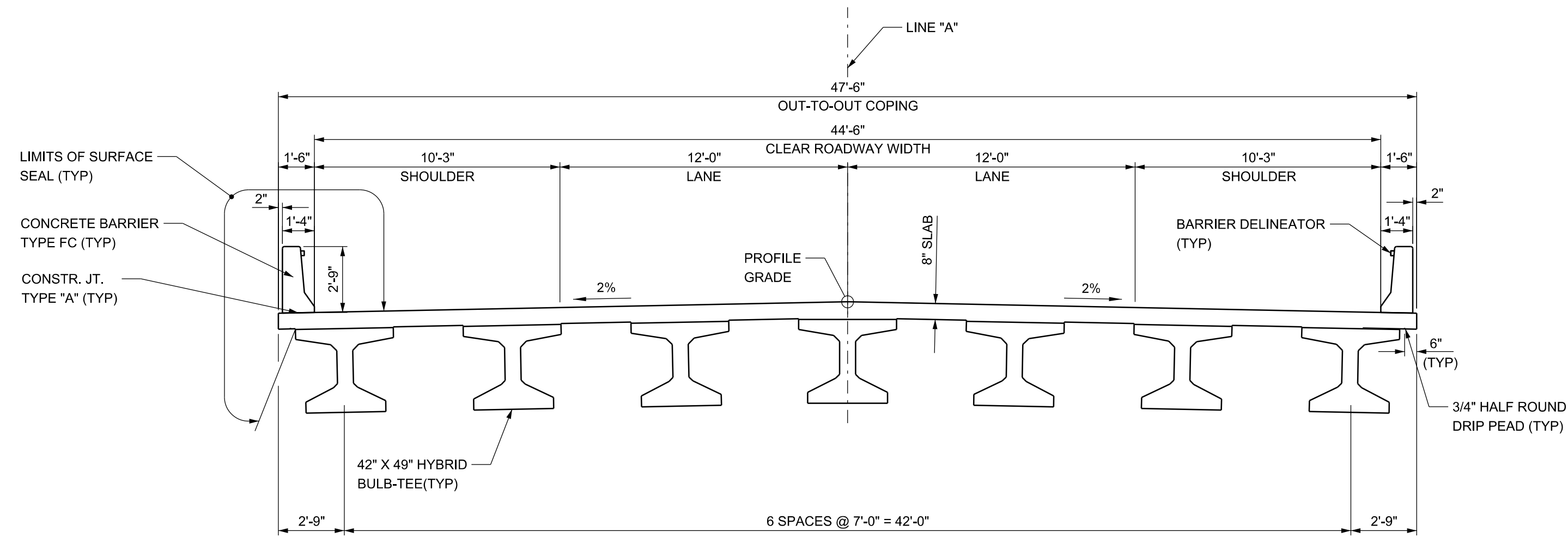
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RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: ELA	DRAWN: JMT	
CHECKED: ELS	CHECKED: ELS	

INDIANA
 DEPARTMENT OF TRANSPORTATION
 GENERAL PLAN
 SR 13 OVER KOKOMO GRAIN RAILROAD

HORIZONTAL SCALE	BRIDGE FILE
1"=10'	(13) 21-27-2014C
VERTICAL SCALE	DESIGNATION NO.
1"=10'	0810241
SURVEY BOOK	SHEETS
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TYPICAL SECTION
1/4" = 1'

GENERAL NOTES

REINFORCING STEEL COVER TO BE 2 1/2 INCHES IN TOP AND 1 INCH IN BOTTOM OF FLOOR SLABS, 3 INCHES IN FOOTING EXCEPT BOTTOM STEEL WHICH SHALL BE 4 INCHES, AND 2 INCHES IN ALL OTHER PARTS UNLESS NOTED.

ALL DIMENSIONS AND ELEVATIONS ARE IN FEET (FT) UNLESS OTHERWISE NOTED.

SEE THE SPECIAL PROVISIONS FOR THE GEOTECHNICAL REPORT AND PILE DRIVING CRITERIA.

CONCRETE IN FLOOR SLAB, DIAPHRAGMS AND BARRIERS TO BE CLASS "C". REINFORCING STEEL IN DECK, BARRIER, AND END BENTS TO BE EPOXY COATED.

ALL THE EXPOSED FACES OF THE END BENT CAPS, THE PIERS, AND THE BARRIERS SHALL BE SEALED WITH A PENETRATING EPOXY SEALER. ALL SURFACE SEAL WILL BE PAID FOR AS A LUMP SUM.

DESIGN DATA

DESIGN STRENGTHS

BEAM CONCRETE	FC = 7000 PSI
CLASS C CONCRETE	FC = 4000 PSI
CLASS A CONCRETE	FC = 3500 PSI
CLASS B CONCRETE	FC = 3000 PSI
REINFORCING STEEL	Fy = 60,000 PSI
STRUCTURAL STEEL	Fy = 50,000 PSI

LIVE LOAD

SUPERSTRUCTURE AND SUBSTRUCTURE DESIGNED FOR HL-93 LOADING WITH IMPACT AND DISTRIBUTION IN ACCORDANCE WITH 2012 AASHTO LRFD SPECIFICATIONS, 6TH EDITION, WITH SUBSEQUENT INTERIMS.

DEAD LOAD

FLOOR SLAB DESIGNED WITH A 7 1/2 INCH STRUCTURAL DEPTH AND 1/2 INCH INTEGRAL WEARING SURFACE.

ACTUAL WEIGHT PLUS 35 PSF (COMPOSITE) FOR FUTURE WEARING SURFACE AND 15 PSF (NON-COMPOSITE) FOR PERMANENT METAL DECK FORMS.

SEISMIC LOAD

THIS STRUCTURE IS DESIGNED FOR SEISMIC LOADING USING AN ACCELERATION COEFFICIENT OF 0.06 AND A SEISMIC PERFORMANCE CATEGORY OF A.

CONSTRUCTION LOAD

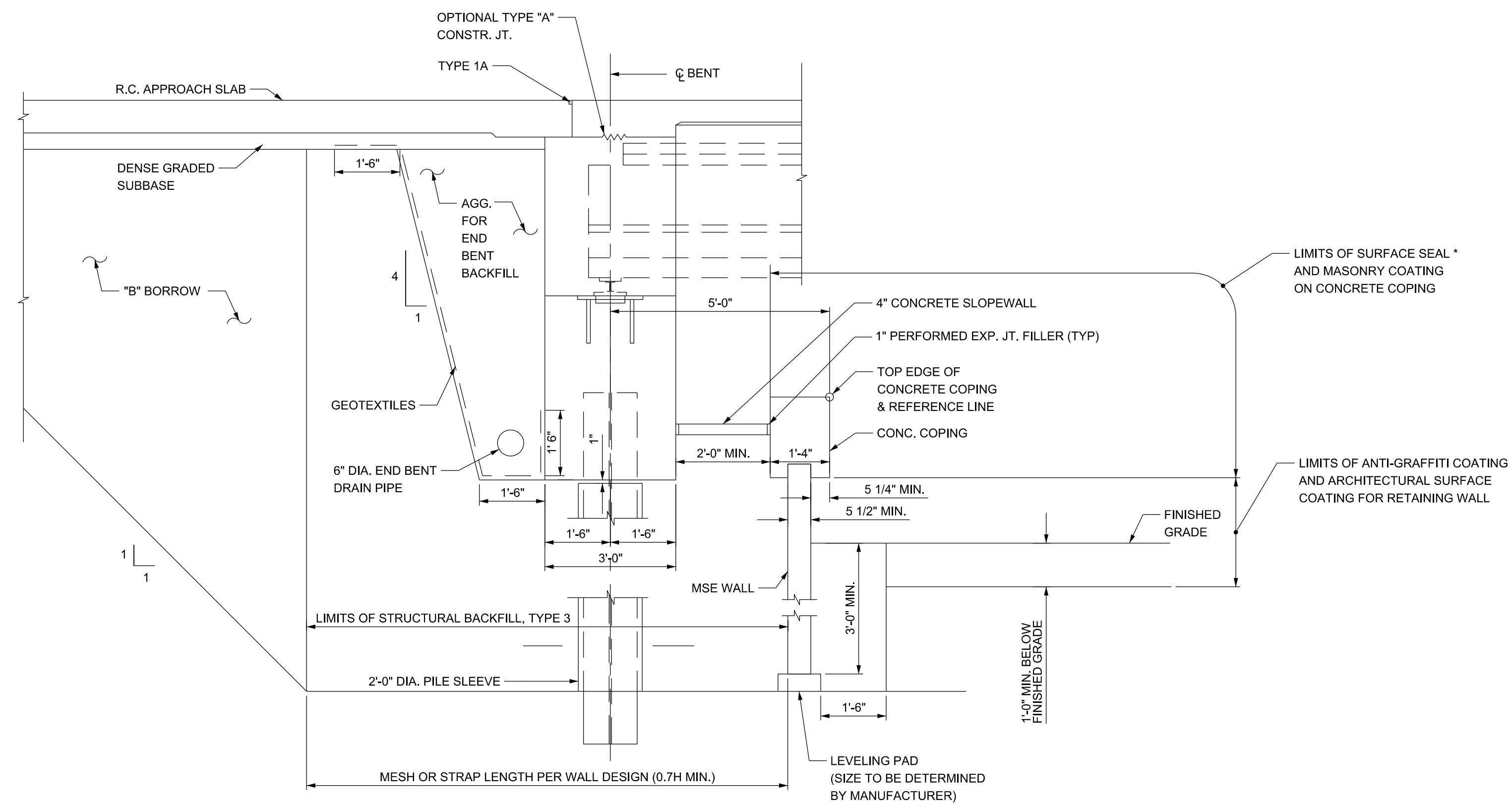
THE EXTERIOR BEAM HAS BEEN CHECKED FOR STRENGTH, DEFLECTION, AND OVERTURNING USING THE CONSTRUCTION LOADS SHOWN BELOW. CANTILEVER OVERHANG BRACKETS WERE ASSUMED FOR SUPPORT OF THE DECK OVERHANG PAST THE EDGE OF THE EXTERIOR GIRDER. THE FINISHING MACHINE WAS ASSUMED TO BE SUPPORTED 6 INCHES OUTSIDE THE VERTICAL COPING FORM. THE BOTTOM OVERHANG BRACKETS WERE ASSUMED TO BE BRACED AGAINST THE INTERSECTION OF THE BEAM BOTTOM FLANGE AND WEB.

DECK FALSWORK LOADS: DESIGNED FOR 4 LBS./SFT. FOR PERMANENT METAL STAY-IN-PLACE DECK FORMS, REMOVABLE DECK FORMS AND 2 FOOT EXTERIOR WALKWAY.

CONSTRUCTION LIVE LOAD: DESIGNED FOR 20LBS./SFT. EXTENDING 2FT. PAST THE EDGE OF COPING AND 75 LBS./SFT. VERTICAL FORCE APPLIED AT A DISTANCE OF 6 INCHES OUTSIDE THE FACE OF COPING OVER A 30 FOOT LENGTH OF THE DECK CENTERED WITH THE FINISHING MACHINE.

FINISHING MACHINE LOAD: 4500 LBS. DISTRIBUTED OVER 10 FOOT ALONG THE COPING.

WIND LOAD: DESIGNED FOR 70 MPH HORIZONTAL WIND LOADING OF 50 LBS./FT. IN ACCORDANCE WITH AASHTO GUIDE DESIGN SPECIFICATIONS FOR BRIDGE TEMPORARY WORKS (1995), FIGURE 2.I.



TYPICAL END BENT DETAIL
SCALE: 1/2" = 1'

* AS DESIRED BY INDOT FORT WAYNE DISTRICT



RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: ELA	DRAWN: BSE	
CHECKED: ELS	CHECKED: ELS	

INDIANA
DEPARTMENT OF TRANSPORTATION
GENERAL PLAN DETAILS
SR 13 OVER KOKOMO GRAIN RAILROAD

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	(13) 21-27-2014C
VERTICAL SCALE	DESIGNATION NO.
N/A	0810241
SURVEY BOOK	SHEETS
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TO BE POPULATED WITH BRIDGE DATA WHEN BRIDGE DESIGN IS COMPLETE



RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: _____ BSE _____	DRAWN: _____ BSE _____	
CHECKED: _____ JMT _____	CHECKED: _____ JMT _____	

INDIANA
DEPARTMENT OF TRANSPORTATION

BRIDGE SUMMARY

HORIZONTAL SCALE	BRIDGE FILE (13) 21-27-2014C
VERTICAL SCALE	DESIGNATION NO. 0810241
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