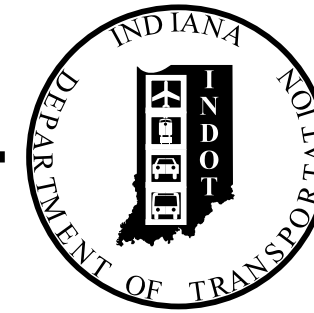


INDIANA DEPARTMENT OF TRANSPORTATION

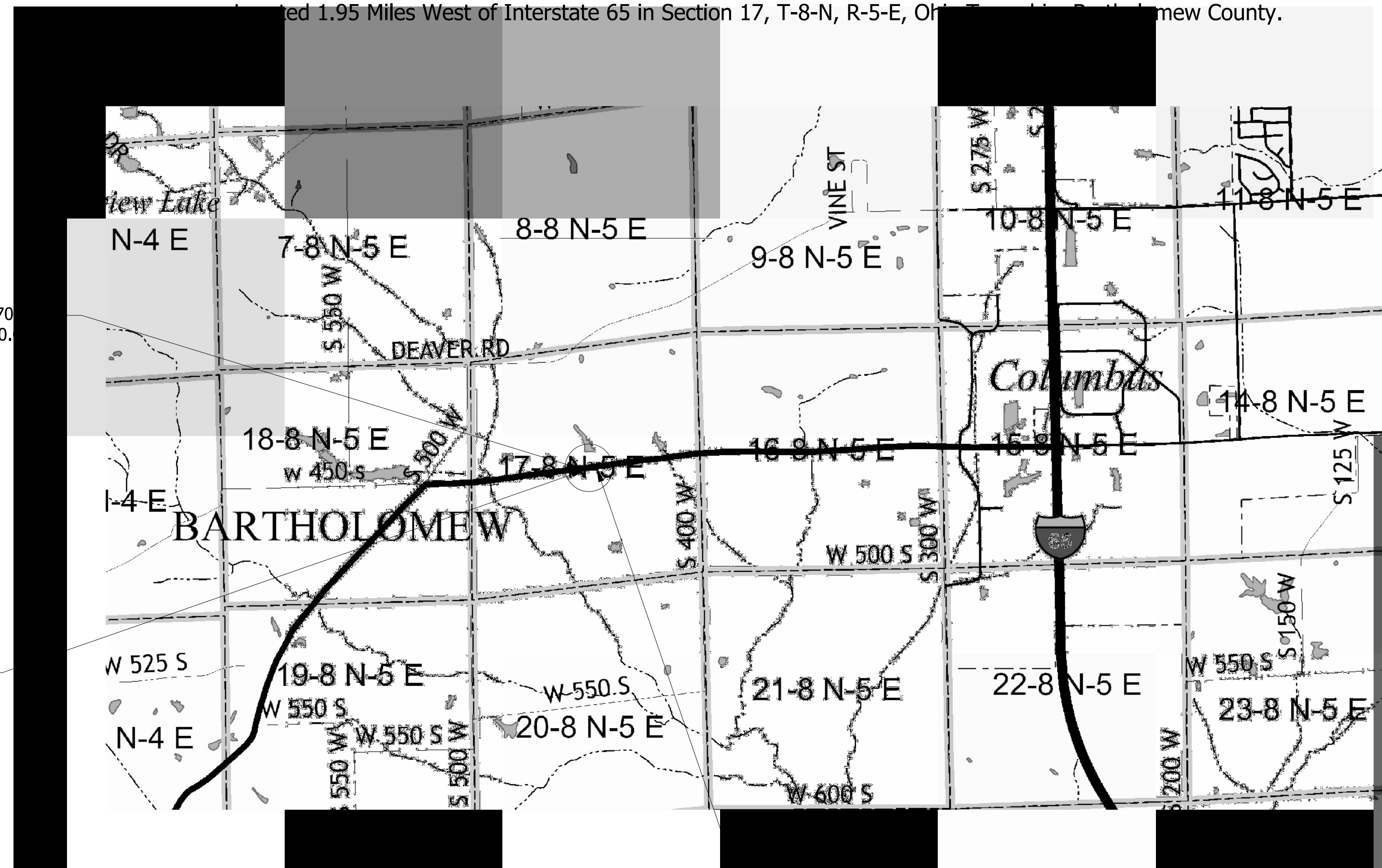


ROAD PLANS

ROUTE: SR 58 AT: RP 120+30

PROJECT NO. 1700012 P.E.
 1700012 R/W
 1700012 CONST.

Small Structure Replacement on SR 58 over UNT to East Fork White Creek
 located 1.95 Miles West of Interstate 65 in Section 17, T-8-N, R-5-E, Oldenburg Township, Bartholomew County.



Begin Project 170
Sta. 14+50.0

Structure CV 058-003-120.30
Over Tributary (UNT) to East Fork White Creek
Sta. 15+20.0 "A"

PROJECT	DESIGNATION
1700012	1700012
CONTRACT	BRIDGE FILE NO.
B-40407	N/A

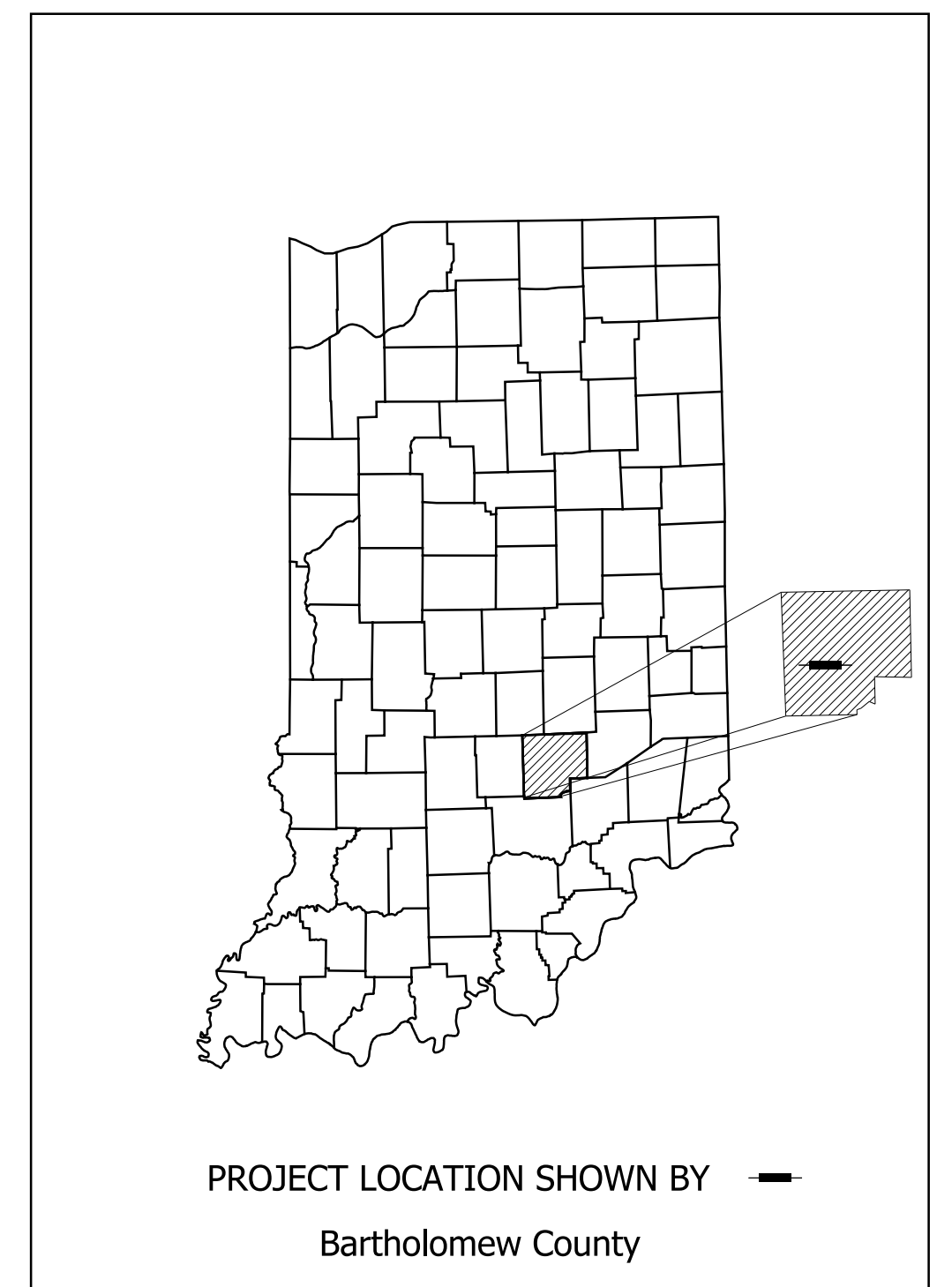
STRUCTURE INFORMATION				
STRUCTURE	TYPE	SPAN AND SKEW	OVER	STATION
CV 058-003-120.30	REINF. CONC. BOX CULVERT	1 @ 9'-0" 16° Skew Rt.	UNT East Fork White Creek	15+20 "A"

KIN PROJECT INFORMATION	
DESIGNATION	PROJECT DESCRIPTION
1600503 (Lead Des.)	Bridge Replacement on SR 58, 3.35 miles west of I-65
1700012	Small Structure Replacement on SR 58 1.95 miles west of I-65
1700171	Superstructure Replacement on SR 58 0.84 miles east of SR 258
1701428	Bridge Replacement on SR 58 1.89 miles east of SR 258
1701431	Bridge Replacement on SR 58 2.28 miles east of SR 258

CULVERT ASSETS	
DES. NO.	CULVERT ASSET ID
1700012	CV 058-003-120.30

TRAFFIC DATA		
A.A.D.T. (2022)		5,070 V.P.D.
A.A.D.T. (2042)		5,120 V.P.D.
D.H.V (2042)		455 V.P.H.
DIRECTIONAL DISTRIBUTION		51.43 %
TRUCKS		3.13 % A.A.D.T. 3.81 % D.H.V.

DESIGN DATA	
DESIGN SPEED	45 M.P.H.
PROJECT DESIGN CRITERIA	3R (NON-FREEWAY)
FUNCTIONAL CLASSIFICATION	STATE COLLECTOR
RURAL/URBAN	RURAL
TERRAIN	LEVEL
ACCESS CONTROL	NONE



PROJECT LOCATION SHOWN BY —
Bartholomew County

LATITUDE: 39° 07' 59.92" N LONGITUDE: 85° 59' 42" W

HUC: 05120206050040

BRIDGE LENGTH:	NA	MI.
ROADWAY LENGTH:	0.047	MI.
TOTAL LENGTH:	0.047	MI.
MAX. GRADE:	3.08	%

INDIANA DEPARTMENT OF TRANSPORTATION
STANDARD SPECIFICATIONS DATED 2020
TO BE USED WITH THESE PLANS

(812) 372-9911 PHONE NUMBER	BRIDGE FILE NO. NA
DATE	DESIGNATION 1700012
DATE	SURVEY BOOK
	SHEETS 1 of 16
	CONTRACT B-40407
	PROJECT 1700012

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UTILITIES

TELEPHONE: AT&T Distribution 420 7th St. Columbus, IN 47201 ATTN: Troy Bishop EMAIL: tb2932@att.com	CABLE: Vectren 16000 Allisonville Rd Noblesville IN 46061 (317) 419-6145 ATTN: Whitney Land EMAIL: wland@enengineering.com	WATER: Southwestern Bartholomew Water Corp. 4735 W Carlos Folger Drive Columbus, IN 47201 (812) 342-4421 ATTN: Doug Prather EMAIL: dprat@swbwc.com
ELECTRIC: Bartholomew Country R.E.M.C. 1697 W. Deaver Road Columbus, IN 47201 (812) 372-2546 ATTN: Colton Carden Email: ccarden@bcremc.com		

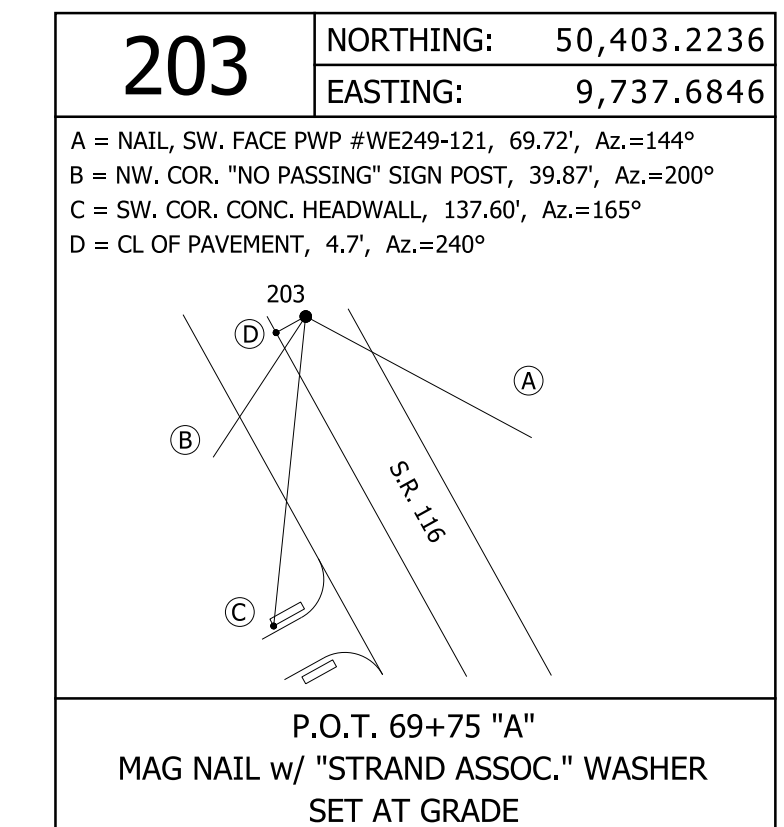
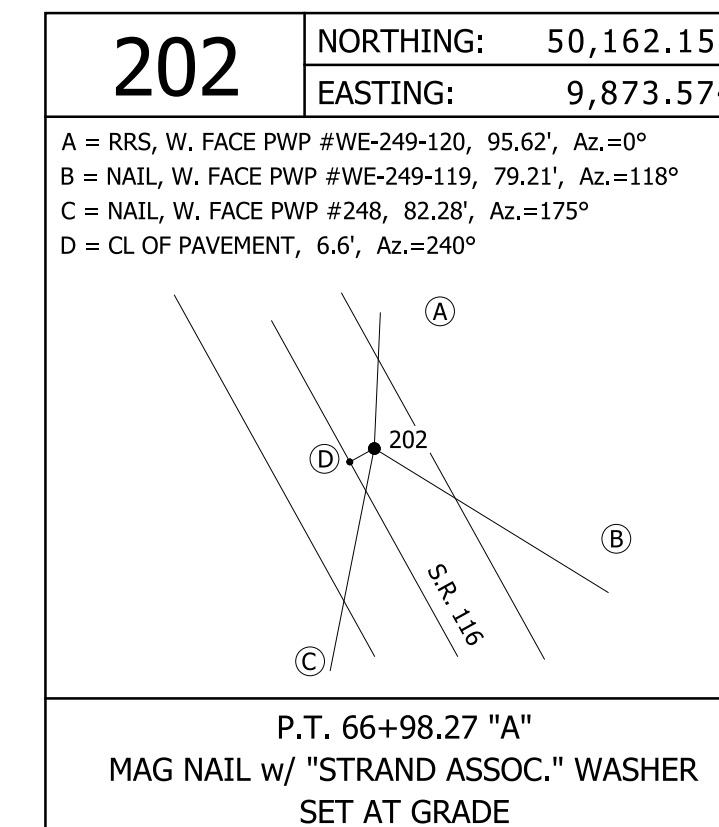
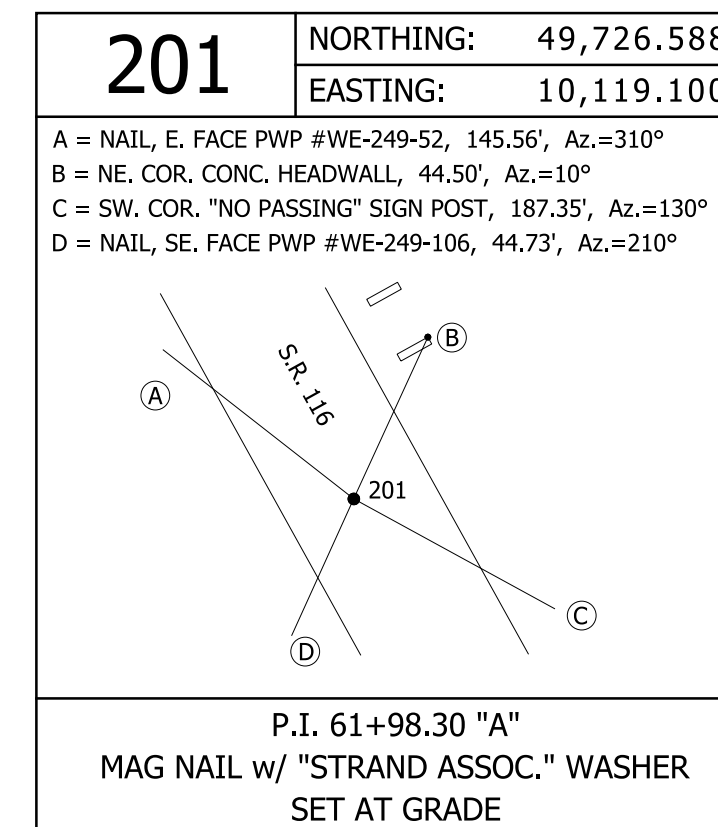
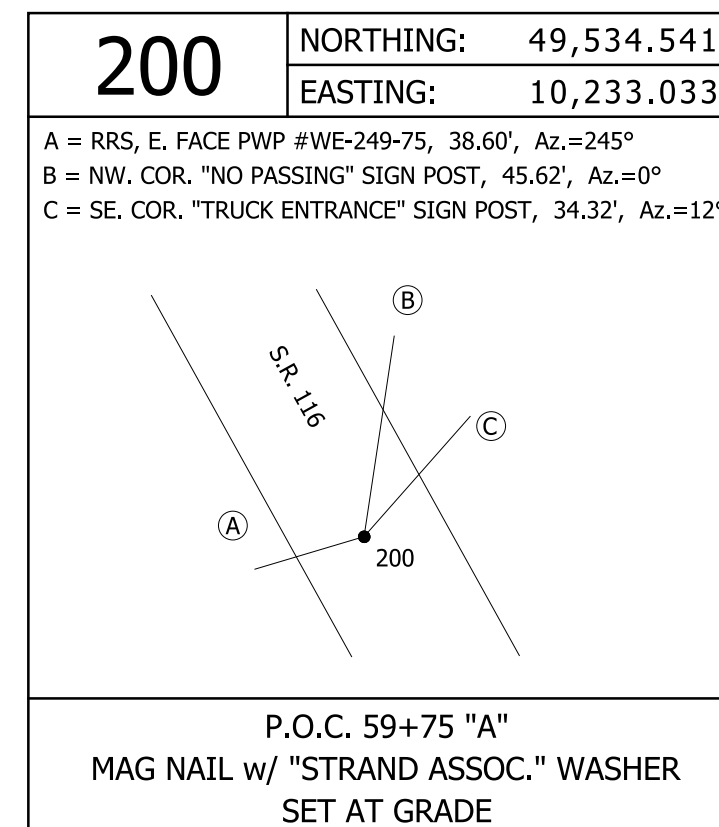
GENERAL NOTES

INDEX

SHEET NO.	DRAWINGS INDEX
1	TITLE SHEET
2	INDEX AND GENERAL NOTES
3	MAINTENANCE OF TRAFFIC
4	TYPICAL CROSS SECTIONS
5-6	LOCATION CONTROL ROUTE SURVEY
7	PLAT NO. 1
8	PLAN & PROFILE
9	LAYOUT
10	GENERAL PLANS
11	MISCELLANEOUS TABLES
12-16	CROSS SECTIONS

REVISIONS

SHEET NO.	DATE	REVISED



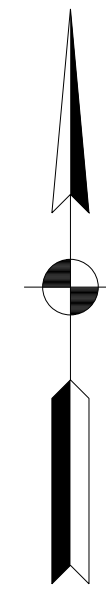
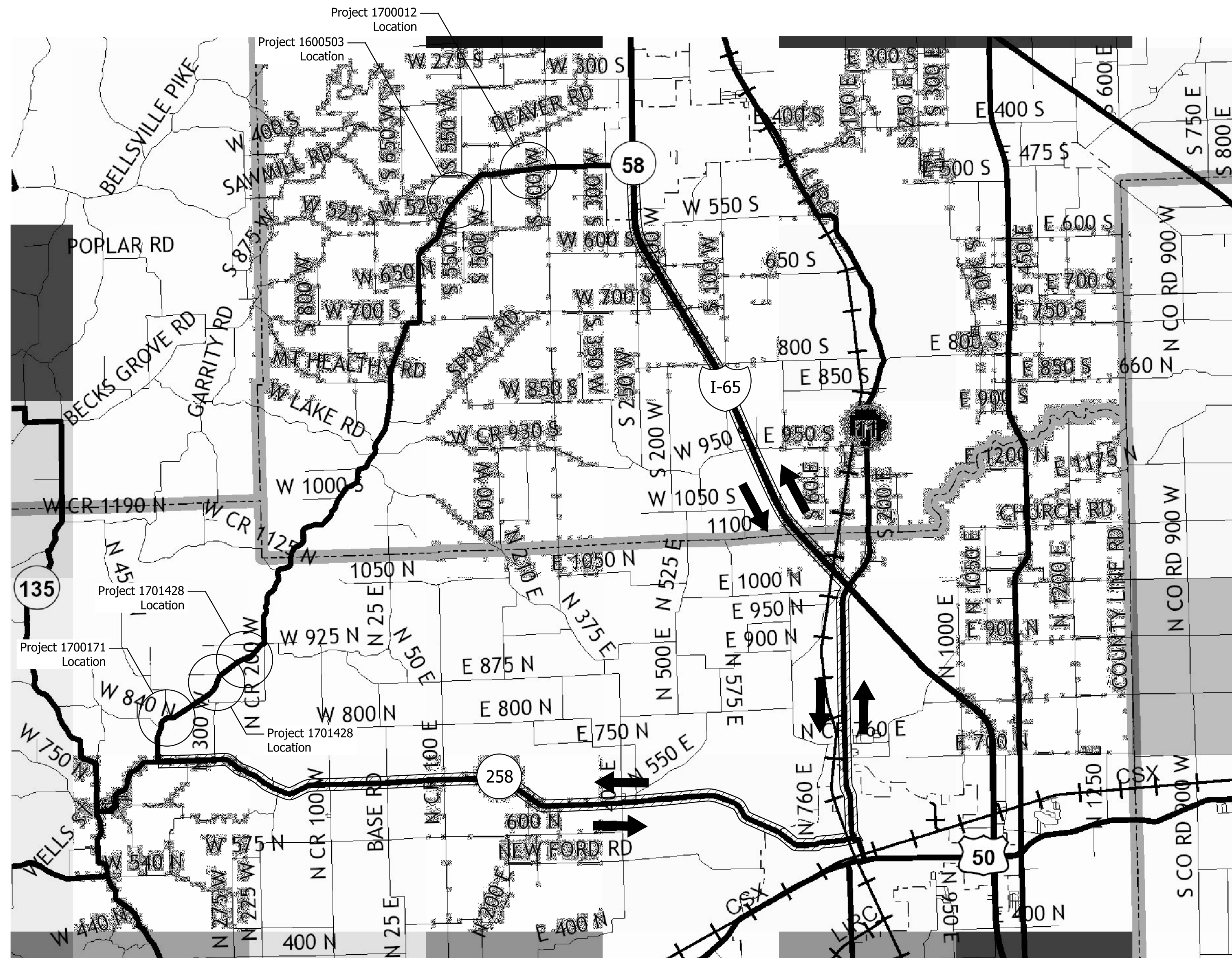
RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE	DESIGNED: DHS DRAWN: DHS CHECKED: JMH CHECKED: JMH
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INDIANA
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES AND INDEX

HORIZONTAL SCALE	BRIDGE FILE NO.
NA	NA
VERTICAL SCALE	DESIGNATION NO.
NA	1700012
SURVEY BOOK NO.	SHEETS
	2 of 16
CONTRACT NO.	PROJECT NO.
B-40407	1700012

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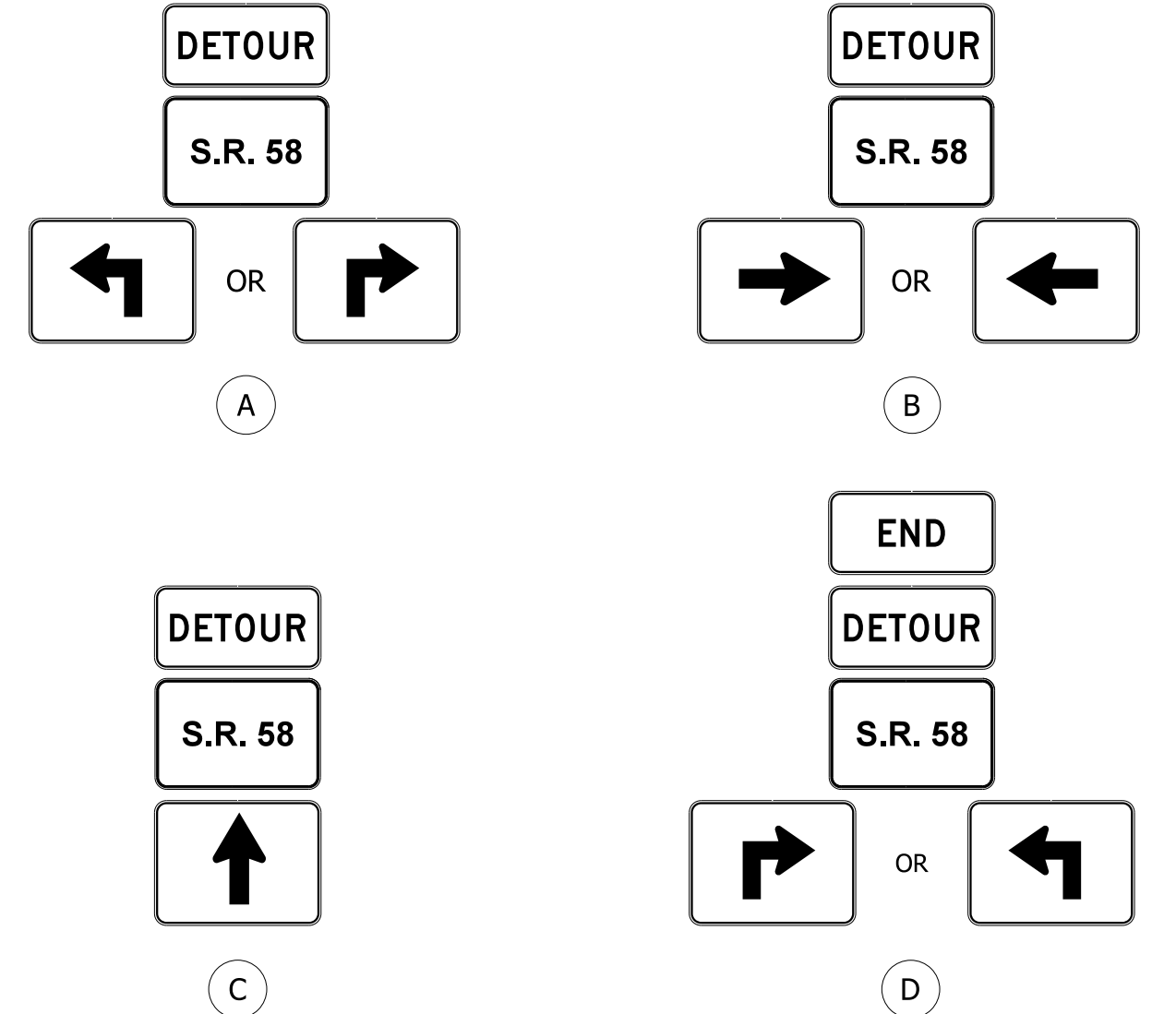


Legend

- Posted Detour Route
- Traffic Flow Arrow
- Construction Sign
- Barricade III-A
- Barricade III-B

Detour Route Marker Assemblies

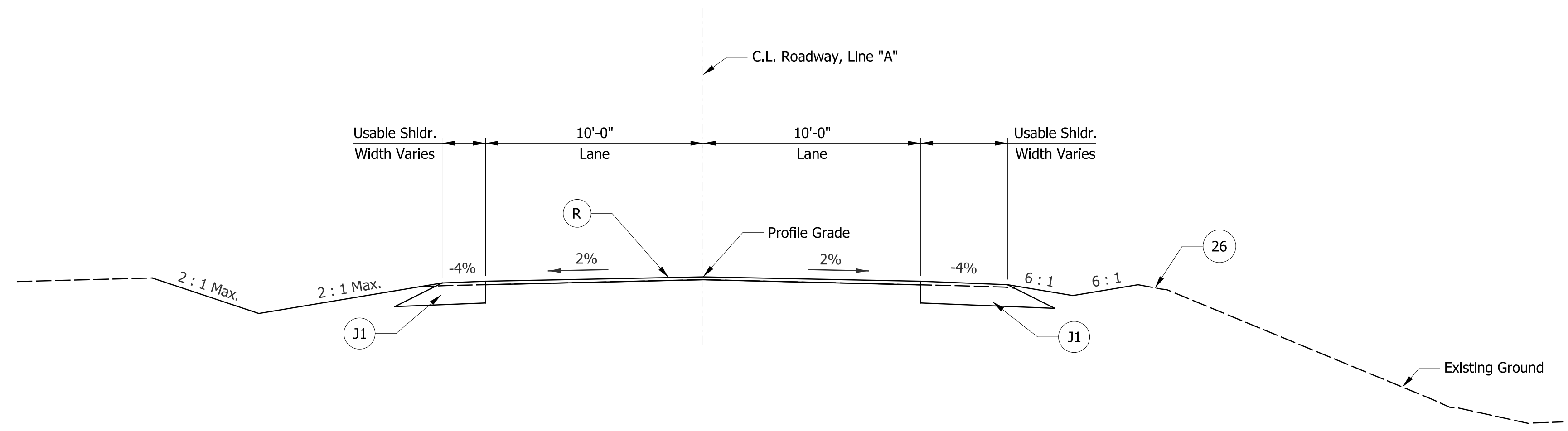
- (A) DRMA (Advance Turn) - Ea.
- (B) DRMA (Directional) - Ea.
- (C) DRMA (Confirming) - Ea.
- (D) DRMA (End) - Ea.
- Type A Construction Signs**
- (E) XW20-2 (Detour Ahead) - Ea.
- (F) XW20-3 (Road Closed) - Ea.
- (G) XG20-5 (Closure Date) - Ea.
- Type A Construction Signs**
- (I) XG20-2 (End Construction) - Ea.
- (J) XW20-1 (Road Construction Ahead) - Ea.
- Barricades**
- (K) Barricade, Type III-A (No. of 12' Units) - Lft. (-)
- (L) Barricade, Type III-B (No. of 12' Units) - Lft. (-)
- Road Closure Sign Assemblies**
- (N) RCSA (R11-3) - Ea.
- (O) RCSA (R11-3) - Ea.
- (P) RCSA (R11-2) - Ea.
- Type C Construction Signs**
- (Q) XG20-7 Worksite Penalty Sign - Ea.



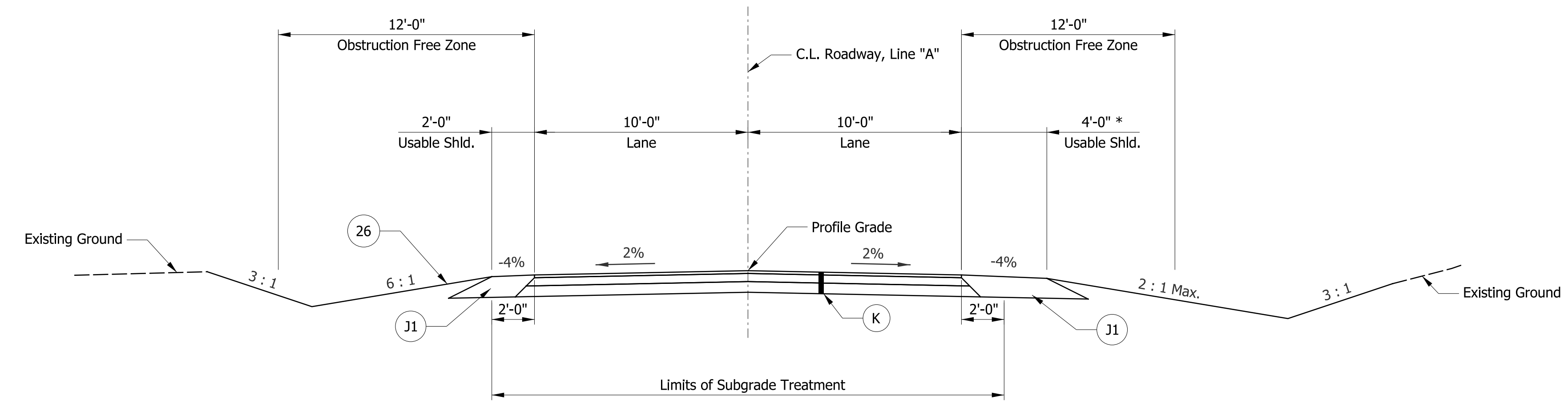
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Note to Reviewer: Quantities, Labels, and additional details to be updated after scheme is agreed upon at PFC.

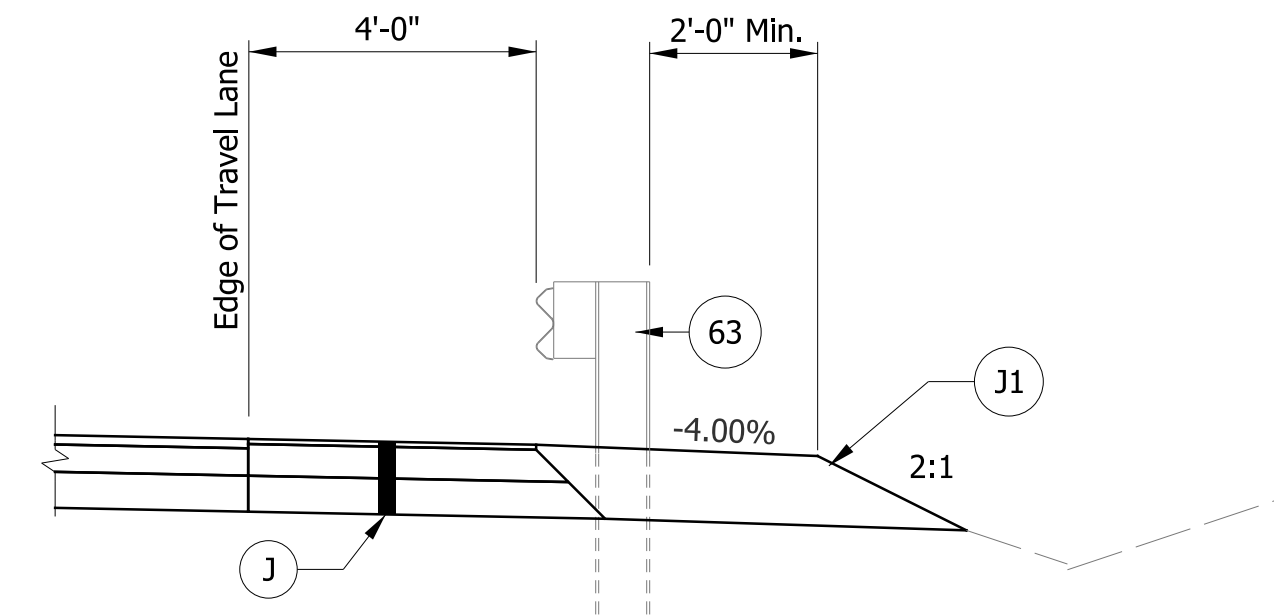
RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE	INDIANA DEPARTMENT OF TRANSPORTATION		HORIZONTAL SCALE	BRIDGE FILE NO.	
			NA	NA	
DESIGNED: DHS CHECKED: JMH	DRAWN: DHS CHECKED: JMH	MAINTENANCE OF TRAFFIC SR 58 OVER UNT E. FORK WHITE CREEK		VERTICAL SCALE NA SURVEY BOOK NO. CONTRACT NO. B-40407	DESIGNATION NO. 1700012 SHEETS 3 of 16 PROJECT NO. 1700012



TYPICAL SECTION - INCIDENTAL CONSTRUCTION
 Sta. 13+50.00 "A" to Sta. 14+50.00 "A"
 Sta. 17+00.00 "A" to Sta. 18+00.00 "A"



TYPICAL ROADWAY SECTION
 Sta. 14+50 "A" to Sta. 17+00 "A"



SHOULDER TREATMENT WITH GUARDRAIL
 Sta. 13+56.33 "A" to Sta. 15+87.58 "A"

Legend

- 26 Seed Mixture, R
- 63 Guardrail, MGS W-Beam, 6'-3" Spacing
- J Full Depth, HMA Shoulder
 165 lbs/syd QC/QA-HMA, 2, 64, Surface, 9.5 mm on
 275 lbs/syd QC/QA-HMA, 2, 64, Intermediate, 19.0 mm on
 660 lbs/syd QC/QA-HMA, 2, 64, Base, 19.0 mm on
 Subgrade Treatment, Type IC
- J1 Compacted Aggregate No. 53
- K Full Depth HMA Pavement
 165 lbs/syd QC/QA-HMA, 2, 64, Surface, 9.5 mm on
 275 lbs/syd QC/QA-HMA, 2, 64, Intermediate, 19.0 mm on
 660 lbs/syd QC/QA-HMA, 2, 64, Base, 19.0 mm on
 Subgrade Treatment, Type IC
- R 165 lbs/syd QC/QA-HMA, 2, 64, Surface, 9.5 mm on
 Milling, Surface, 1½"

Note to Reviewer: Legend to be updated after the completion of the pavement design

RECOMMENDED FOR APPROVAL		DESIGN ENGINEER	DATE
DESIGNED: DHS	DRAWN: DHS		
CHECKED: JMH	CHECKED: JMH		

INDIANA DEPARTMENT OF TRANSPORTATION

TYPICAL CROSS SECTION
SR 58 OVER UNT E. FORK WHITE CREEK

HORIZONTAL SCALE	BRIDGE FILE NO.
1/4" = 1'-0"	NA
VERTICAL SCALE	DESIGNATION NO.
NA	1700012
SURVEY BOOK NO.	SHEETS
	4 of 16
CONTRACT NO.	PROJECT NO.
B-40407	1700012

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SURVEYOR'S REPORT

GENERAL

- All units of measure are in English units.
- All monument reference ties are shown on this Route Survey Plat.
- The item numbers on this Route Survey Plat refer to actual field survey monument numbers used for control and topography.
- The number of significant digits shown are for calculation purposes only and do not intend to imply the precision of the original measurements.
- The field work for this survey was started on August 14, 2018 and completed in October 23, 2018.

LOCATION OF SURVEY

This Location Control Route Survey was completed for a small structure replacement project. The entirety of this project is within the bounds of the INDOT Seymour District. This survey is located at the center of Section 17, Township 8 North, Range 5 East of the Second Principal Meridian, Ohio Township, Bartholomew County, Indiana. This project is located on S.R. 58, 1.95 miles west of I-65 and has a total length of 1,000 feet.

PURPOSE OF SURVEY

The purpose of this survey was to obtain data, establish a horizontal alignment (Line "A"), and vertical control for the design and construction of said project and reference said alignment to the United States Public Land Survey Subdivision Corners along the above mentioned route. Although found monuments and property lines are depicted, this survey is not intended to be an original survey or retracement survey. Property lines, corners, and right-of-way lines are shown as approximate location only.

CONTROL AND BASIS OF BEARING

The basis of bearing and horizontal control for this survey was established using the Indiana Geospatial Coordinate System's (InGCS) "Bartholomew" zone per NAD 83 (2011) epoch 2010.00 and reported in U.S. Survey Feet. This zone was created to minimize the differences between ground-measured horizontal distances and the corresponding grid coordinate distances within the county.

The InGCS "Bartholomew" zone coordinates and associated metadata are listed here on to facilitate a seamless workflow between various geospatial industries (e.g. surveying, civil engineering, construction, etc.), to provide a means of reestablishment of the aforementioned alignment(s) or any monumentation that has become destroyed.

InGCS "Bartholomew" Zone Parameters
 Geometric Datum: NAD 83(2011) epoch 2010.00
 Projection Type: Transverse Mercator
 Latitude of Grid Origin: 39°00' 00" North Latitude
 Central Meridian: 85°51' 00" West Longitude
 Central Meridian Scale Factor: 1.000026
 False Northing: 36,000,000 m (118,110,000 U.S. Ft)
 False Easting: 240,000,000 m (787,400,000 U.S. Ft)

ALIGNMENTS

The horizontal alignment for Line "A" was created by using a best fit line in correlation with centerline of pavement as field located.

VERTICAL DATUM

Vertical datum for this Survey Book was obtained from an U.S.G.S. standard table, stamped "TT 49 RCD 1946 645" with a published elevation of 644.71' (NAVD 88). The benchmark is located at the southwest corner of S.R. 58 and C.R. 300 W; 53-foot south of S.R. 58, 72-foot west of C.R. 300 W.

Temporary benchmarks were set along the aforementioned route for easy retrieval during construction.

FINDINGS OF FACTS (MONUMENTS)

In accordance with title 865, Article 1, Chapter 12 of the Indiana Administrative Code ("Rule 12"), the following observations and opinions are submitted regarding the various uncertainties in the locations of the lines and corners established in this survey as a result of uncertainties in reference monuments, in record descriptions and plats, and as introduced by random errors in measurement.

All section corners on the Route Survey Plat were located by information obtained from the Bartholomew County Surveyor's and Recorder's Office:

A Bartholomew County Surveyor's Monument was found at the southeast corner of Section 17, Point #100. Said monument was found undisturbed using the reference ties obtained from said Bartholomew County Surveyor's Office.

FINDINGS OF FACTS (cont)

A Bartholomew County Surveyor's Monument was found at the northeast corner of Section 17, Point #101. Said monument was found undisturbed using the reference ties obtained from said Bartholomew County Surveyor's Office.

A sand stone with chiseled "X" was found at the north quarter corner of Section 17, Point #102. Said stone was found undisturbed using the reference ties obtained from said Bartholomew County Surveyor's Office.

A Bartholomew County Surveyor's Monument was found at the northwest corner of Section 17, Point #103. Said monument was found undisturbed using the reference ties obtained from said Bartholomew County Surveyor's Office.

A Bartholomew County Surveyor's Monument was found at the southwest corner of Section 17, Point #104. Said monument was found undisturbed using the reference ties obtained from said Bartholomew County Surveyor's Office.

A survey nail was found at the west quarter corner of Section 17, Point #105. Said nail was found undisturbed using the reference ties obtained from said Bartholomew County Surveyor's Office.

A survey nail was found at the center of Section 17, Point #106. Said nail was found undisturbed using the reference ties obtained from said Bartholomew County Surveyor's Office.

A survey nail was found at the east quarter corner of Section 17, Point #107. Said nail was found undisturbed using the reference ties obtained from said Bartholomew County Surveyor's Office.

The coordinate datasheet sheet for Section 17, Township 8 North, Range 5 East, as obtained from said Bartholomew County Surveyor's Office, was used to verify section lines as field located and to establish the south quarter corner of said Section 17.

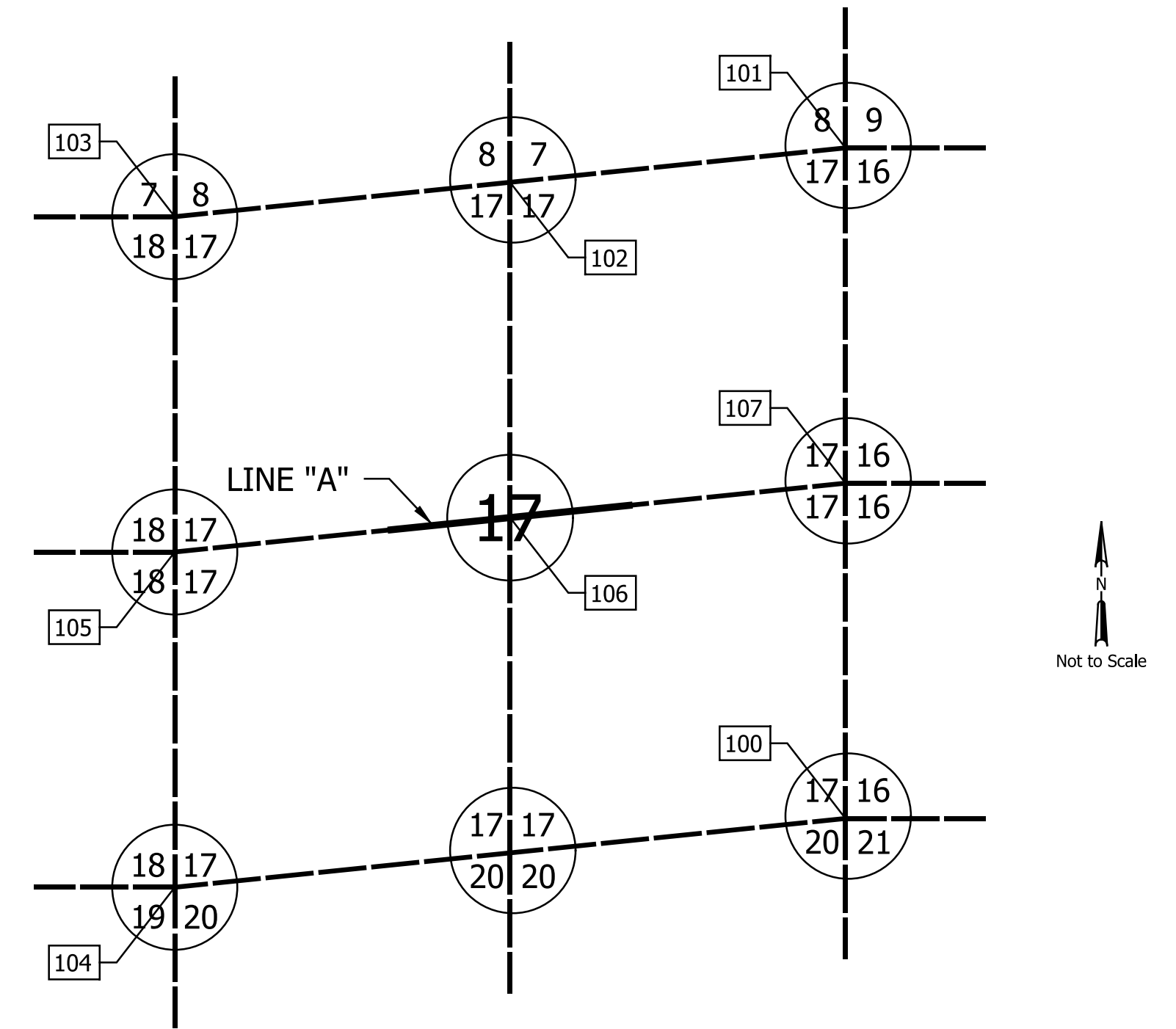
The uncertainties in the location of these monuments is estimated to be 0.50 foot, more or less. This uncertainty arises from the absence of the original survey monuments and the certainty that the monuments used to perpetuate the corners are not in the exact location of the true corners.

A request to the INDOT Records and Documents Library was made and no roadway plans, right-of-way grants, or deeds exist. There was also no evidence of grants or deeds found in the Office of the Recorder of Bartholomew County, Indiana. The apparent existing right-of-way was determined by toe-of-slope and other improvements as being 20-feet. It is this surveyor's opinion that any acquisition of right-of-way would need to be reacquired to the extents of the owner's parcel.

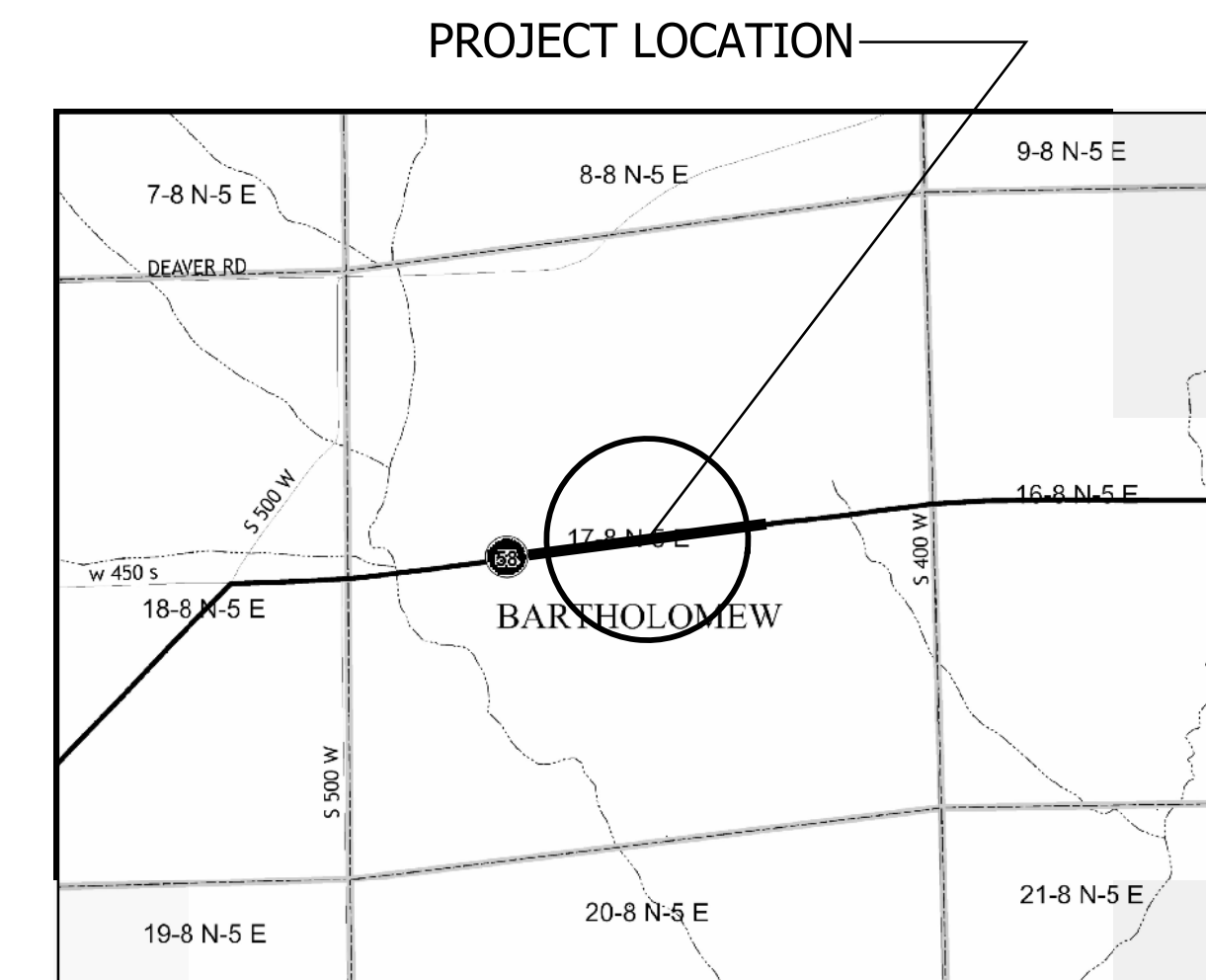
CENTERLINE AND CONTROL POINT MONUMENTATION

The centerline points for Line "A" are set survey nails with a stainless steel washer stamped "STRAND ASSOC. FIRM NO. 0110". These monuments have an estimated uncertainty of 0.10 feet, more or less, relative to the above said section corner monuments as located in this survey. The control points for this location control route survey are as noted on the included reference boxes.

 Jacob E. Fitzsimmons
 Registered Land Surveyor #LS21200011
 October 18, 2018



SECTION DETAIL
 NOT TO SCALE



VICINITY MAP
 NOT TO SCALE

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SURVEY STARTED	
AUGUST 14, 2018	
SURVEY COMPLETED	
OCTOBER 23, 2018	
ROUTE SURVEY SHEETS	
1	of 2



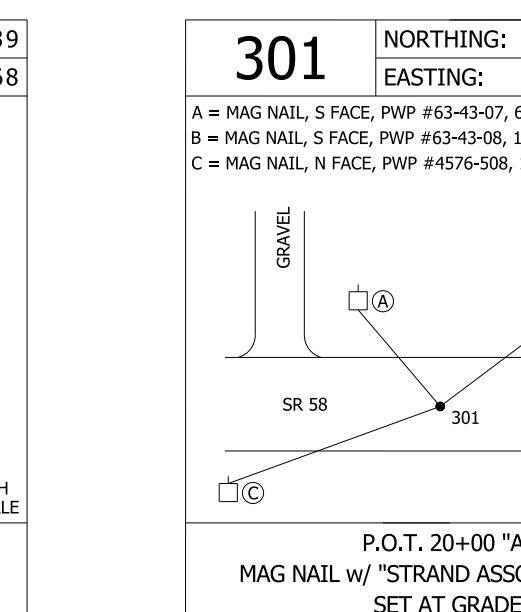
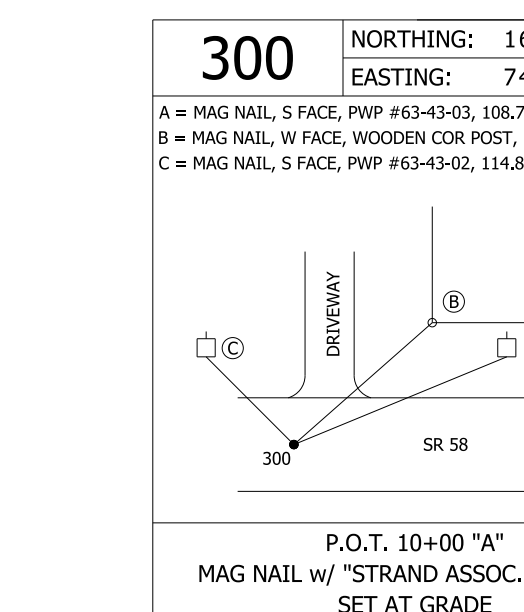
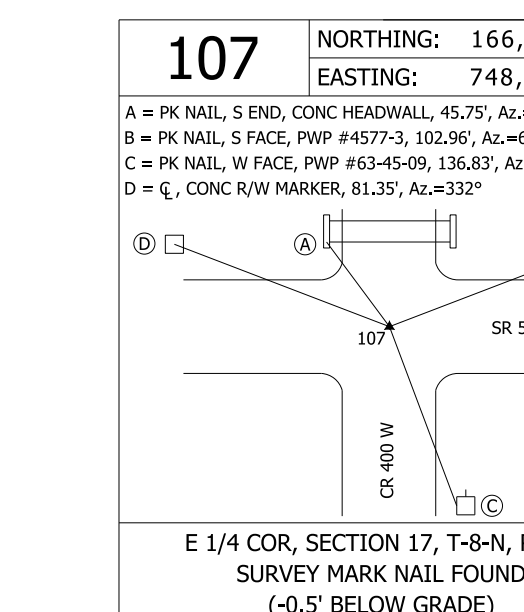
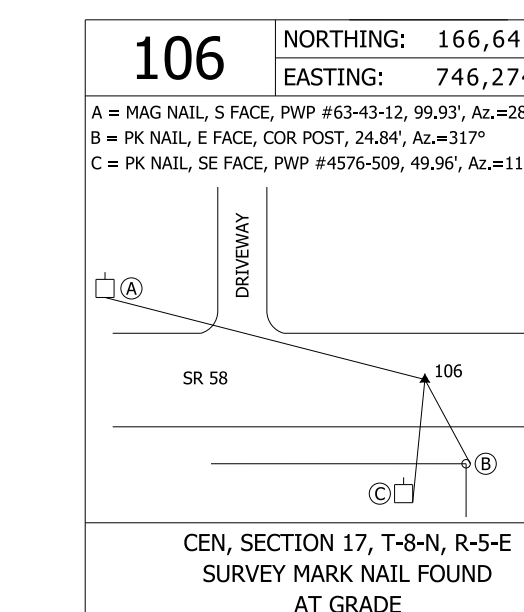
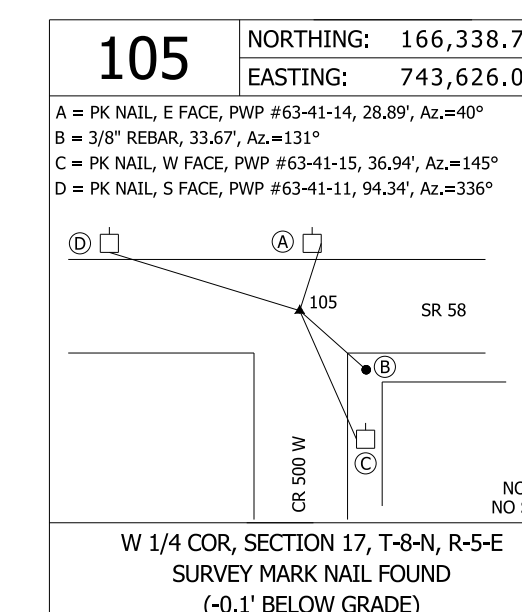
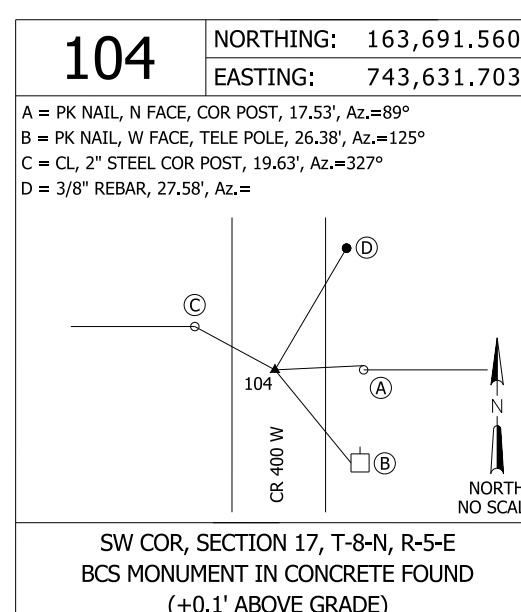
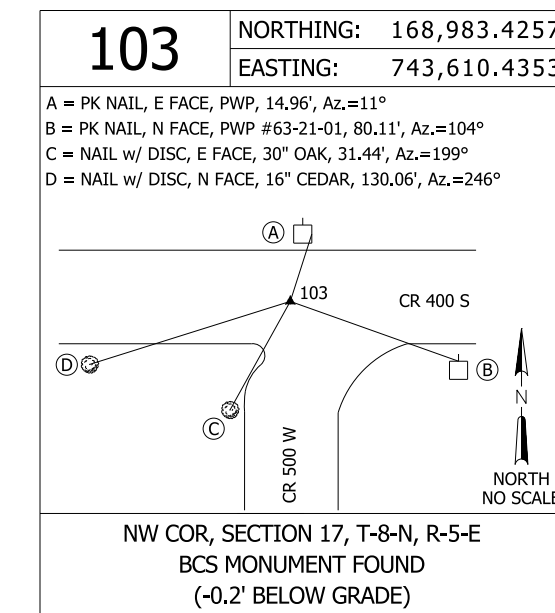
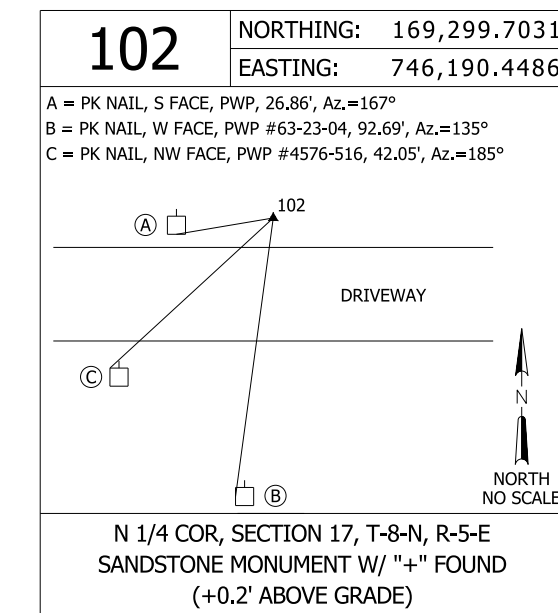
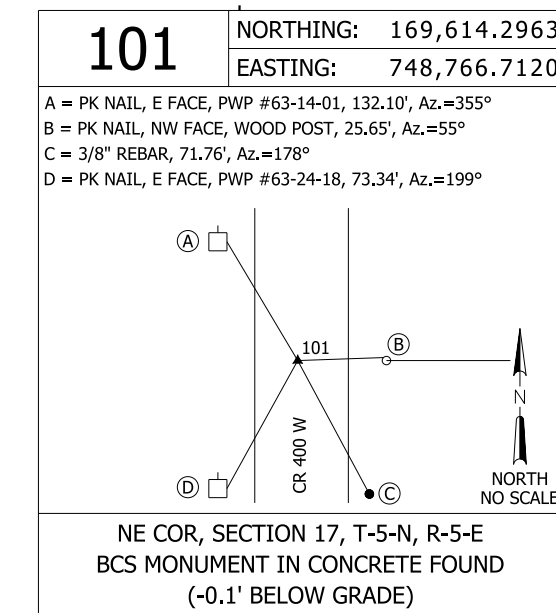
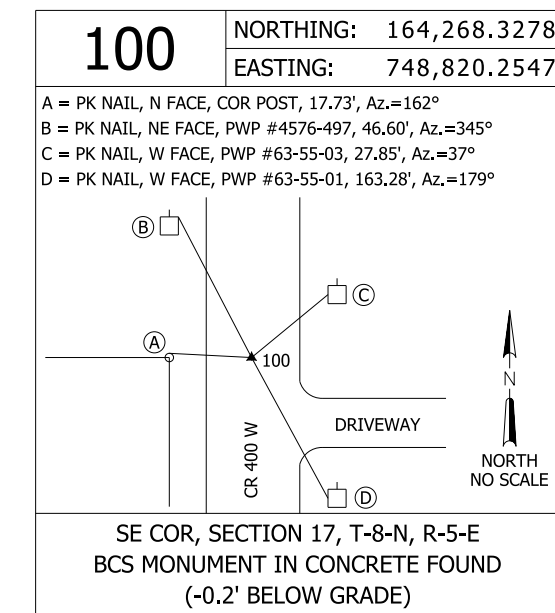
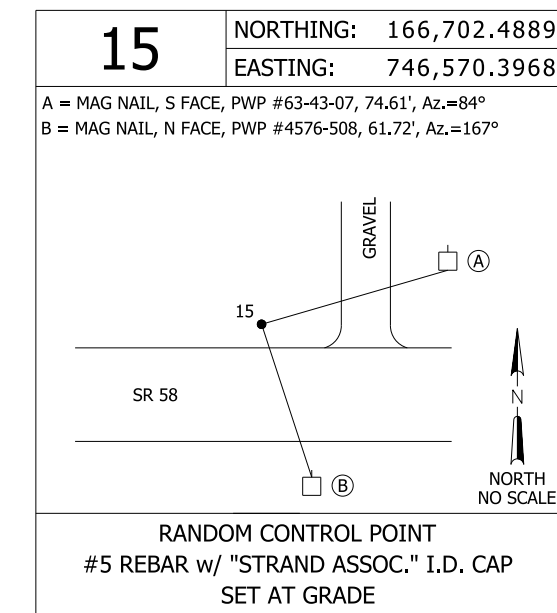
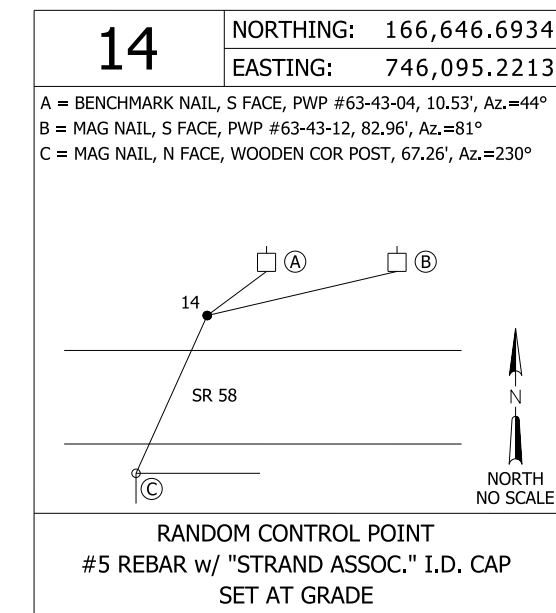
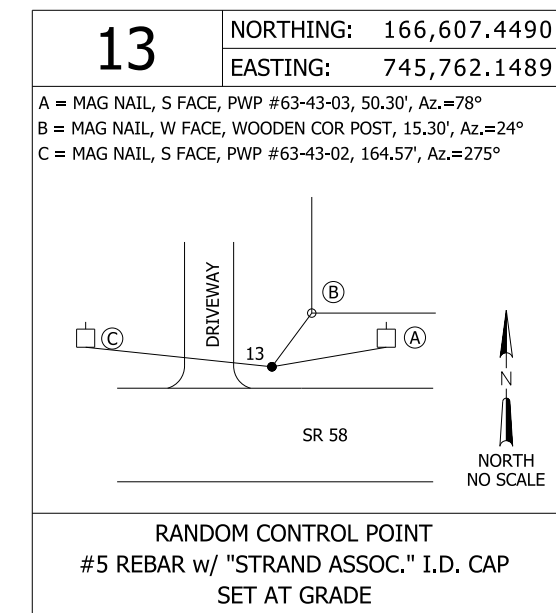
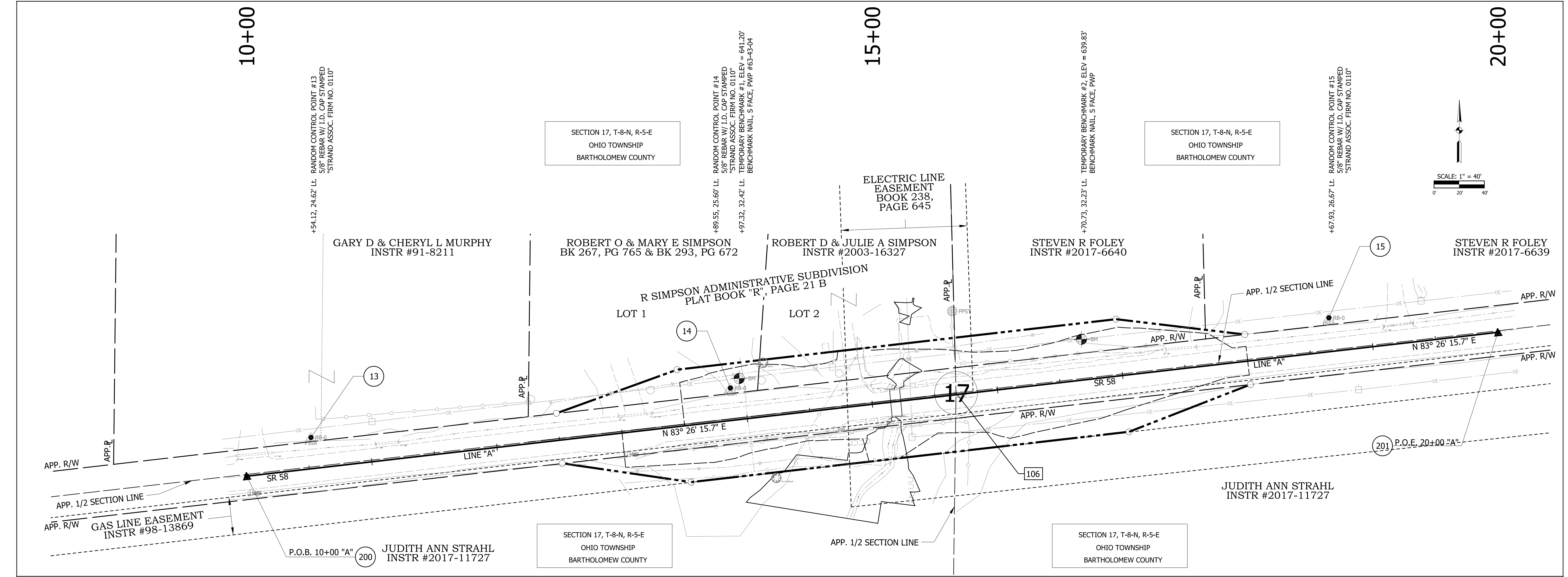
DRAWN: MCP
CHECKED: JEF

FIELD SURVEYOR STATEMENT	
THIS SURVEY, TO THE BEST OF MY KNOWLEDGE AND BELIEF, IS EXECUTED ACCORDING TO THE PROVISIONS OF 865 I.A.C. 1-12-20 THROUGH 1-12-25 REGARDING ROUTE SURVEYS, EXCEPT THAT ANY DATA SHOWN REGARDING THE LOCATION OF DESCRIPTION OF THE EXISTING PARCELS IS NOT A PART OF THIS SURVEY.	

I AFFIRM, UNDER THE PENALTIES FOR PERJURY, THAT I HAVE TAKEN REASONABLE CARE TO REDACT EACH SOCIAL SECURITY NUMBER IN THIS DOCUMENT, UNLESS REQUIRED BY LAW.	
PREPARED BY:	DATE
REGISTERED LAND SURVEYOR	

INDIANA DEPARTMENT OF TRANSPORTATION	
SR 58 OVER UNT TO EF OF WHITE CREEK LOCATION CONTROL ROUTE SURVEY	

HORIZONTAL SCALE	BRIDGE FILE NO.
N/A	NA
VERTICAL SCALE	DESIGNATION NO.
N/A	1700012
SURVEY BOOK NO.	
SHEETS	
5 of 16	
CONTRACT NO.	PROJECT NO.
B-40407	1700012



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SURVEY STARTED	AUGUST 14, 2018
SURVEY COMPLETED	OCTOBER 23, 2018
ROUTE SURVEY SHEETS	2 of 2



DRAWN: MCP
CHECKED: JEF

FIELD SURVEYOR STATEMENT

THIS SURVEY, TO THE BEST OF MY KNOWLEDGE AND BELIEF, IS EXECUTED ACCORDING TO THE PROVISIONS OF 865 I.A.C. 1-12-20 THROUGH 1-12-25 REGARDING ROUTE SURVEYS, EXCEPT THAT ANY DATA SHOWN REGARDING THE LOCATION OF DESCRIPTION OF THE EXISTING PARCELS IS NOT A PART OF THIS SURVEY.

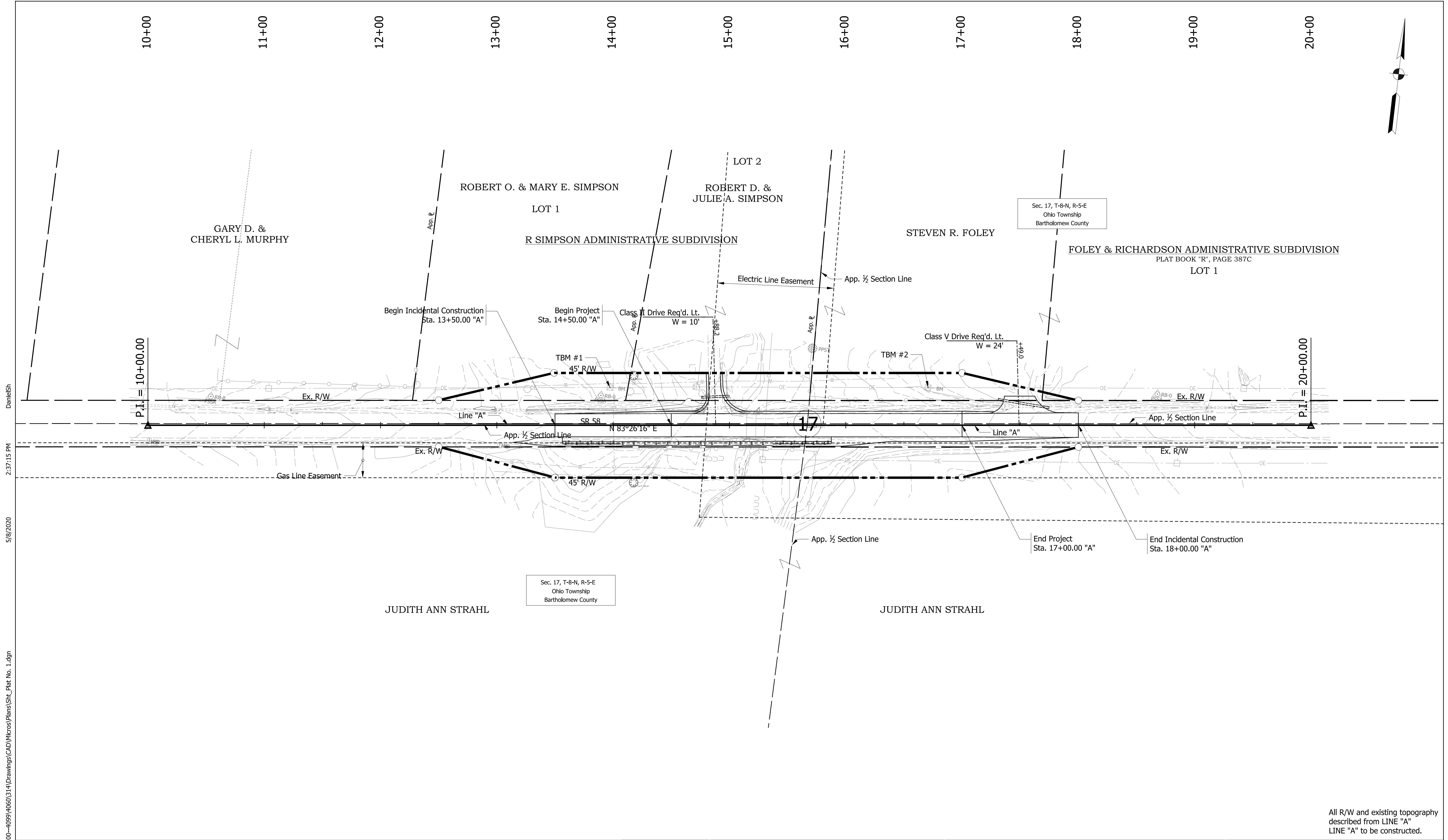
I AFFIRM, UNDER THE PENALTIES FOR PERJURY, THAT I HAVE TAKEN REASONABLE CARE TO REDACT EACH SOCIAL SECURITY NUMBER IN THIS DOCUMENT, UNLESS REQUIRED BY LAW.

PREPARED BY: _____
REGISTERED LAND SURVEYOR DATE: _____

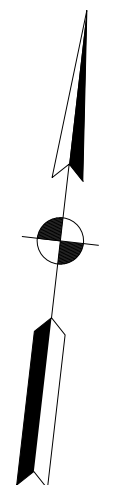
INDIANA
DEPARTMENT OF TRANSPORTATION

SR 58 OVER UNT TO EF OF WHITE CREEK
LOCATION CONTROL ROUTE SURVEY

HORIZONTAL SCALE	1" = 40'
VERTICAL SCALE	N/A
SURVEY BOOK NO.	6 of 16
CONTRACT NO.	B-40407
BRIDGE FILE NO.	NA
DESIGNATION NO.	1700012
SHEETS	1700012
PROJECT NO.	1700012

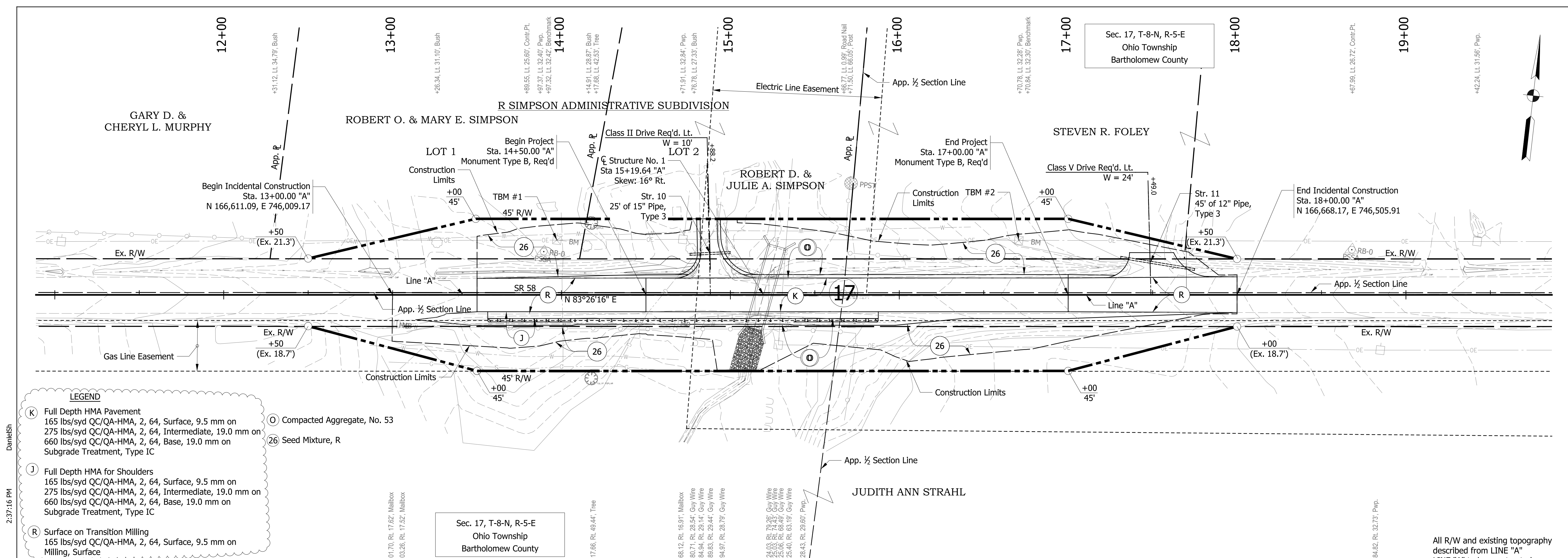


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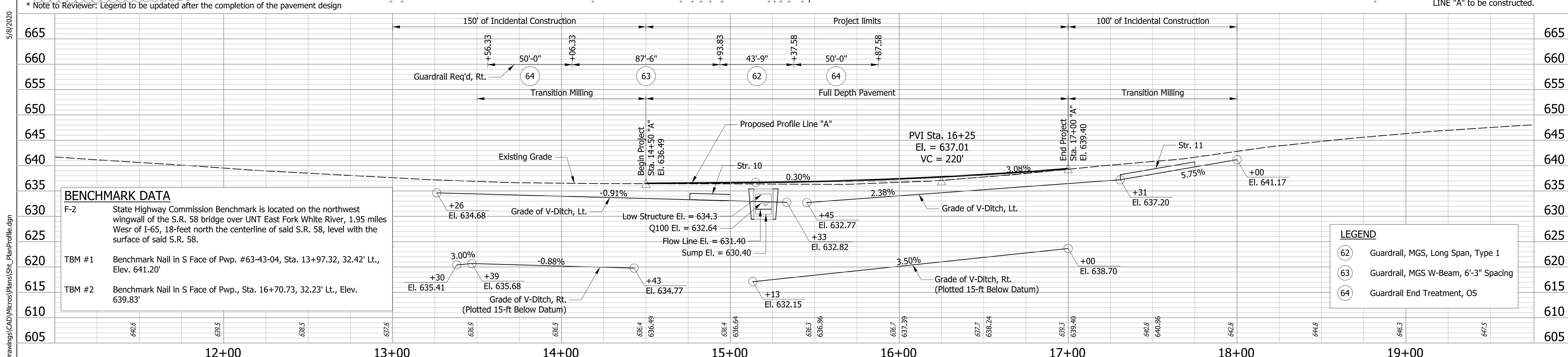


All R/W and existing topography described from LINE "A" LINE "A" to be constructed.

	RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE	INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE 1" = 40' VERTICAL SCALE NA
DESIGNED: DHS CHECKED: JMH	DRAWN: DHS CHECKED: JMH	PLAT NO. 1 SR 58 OVER UNT E. FORK WHITE CREEK	BRIDGE FILE NO. NA DESIGNATION NO. 1700012 SURVEY BOOK NO. CONTRACT NO. B-40407
			SHEETS 7 of 16 PROJECT NO. 1700012



- LEGEND**
- (K) Full Depth HMA Pavement
165 lbs/syd QC/QA-HMA, 2, 64, Surface, 9.5 mm on
275 lbs/syd QC/QA-HMA, 2, 64, Intermediate, 19.0 mm on
660 lbs/syd QC/QA-HMA, 2, 64, Base, 19.0 mm on
Subgrade Treatment, Type IC
 - (J) Full Depth HMA for Shoulders
165 lbs/syd QC/QA-HMA, 2, 64, Surface, 9.5 mm on
275 lbs/syd QC/QA-HMA, 2, 64, Intermediate, 19.0 mm on
660 lbs/syd QC/QA-HMA, 2, 64, Base, 19.0 mm on
Subgrade Treatment, Type IC
 - (R) Surface on Transition Milling
165 lbs/syd QC/QA-HMA, 2, 64, Surface, 9.5 mm on
Milling, Surface
 - (O) Compacted Aggregate, No. 53
 - (26) Seed Mixture, R



BENCHMARK DATA

F-2 State Highway Commission Benchmark is located on the northwest wingwall of the S.R. 58 bridge over UNT East Fork White River, 1.95 miles West of I-65, 18-feet north the centerline of said S.R. 58, level with the surface of said S.R. 58.

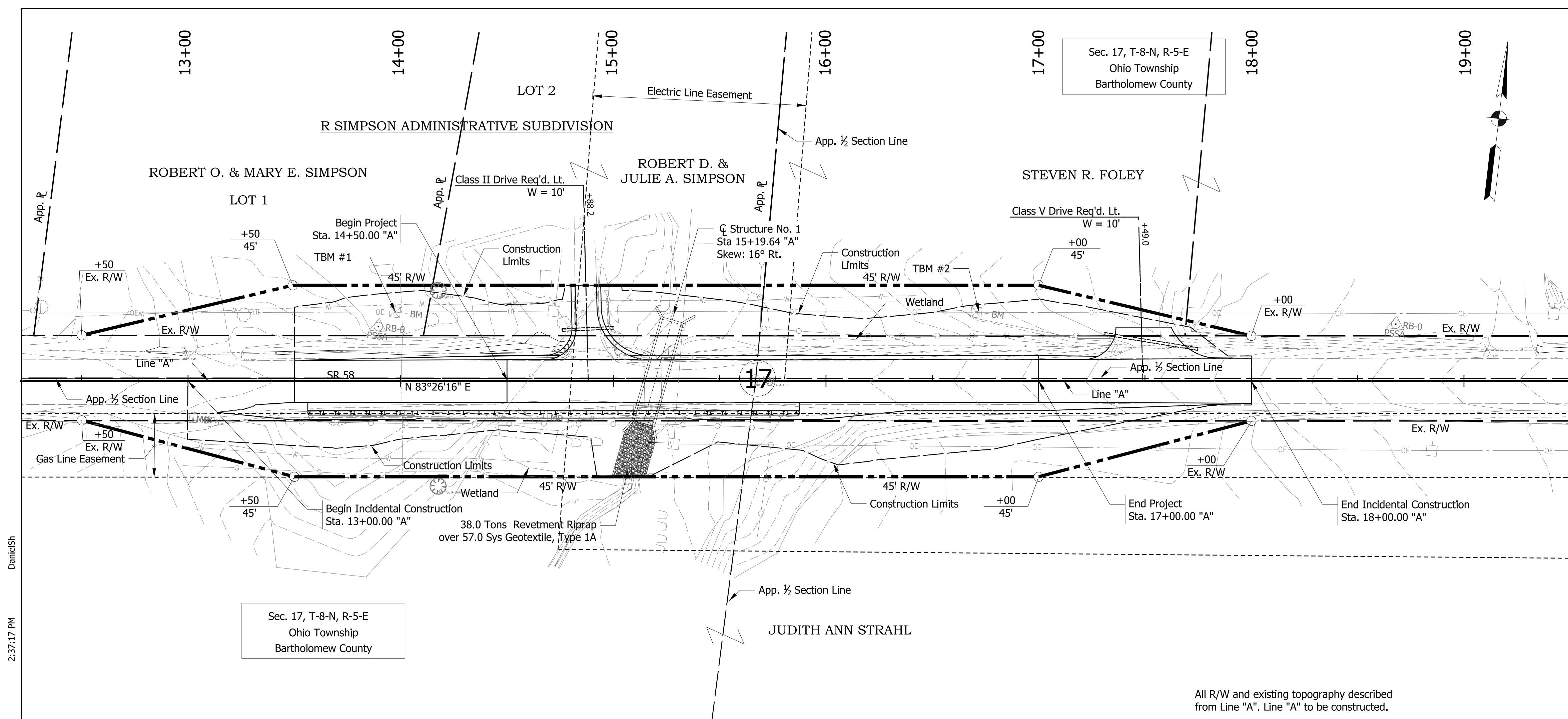
TBM #1 Benchmark Nail in S Face of Pwp. #63-43-04, Sta. 13+97.32, 32.42' Lt., Elev. 641.20'

TBM #2 Benchmark Nail in S Face of Pwp., Sta. 16+70.73, 32.23' Lt., Elev. 639.83'

- LEGEND**
- (62) Guardrail, MGS, Long Span, Type 1
 - (63) Guardrail, MGS W-Beam, 6'-3" Spacing
 - (64) Guardrail End Treatment, OS

RECOMMENDED FOR APPROVAL _____		DESIGN ENGINEER _____ DATE _____		INDIANA DEPARTMENT OF TRANSPORTATION		HORIZONTAL SCALE 1" = 30'		BRIDGE FILE NO. NA	
DESIGNED: DHS		DRAWN: DHS				VERTICAL SCALE 1" = 10'		DESIGNATION NO. 1700012	
CHECKED: JMH		CHECKED: JMH		PLAN AND PROFILE SR 58 OVER UNT E. FORK WHITE CREEK		SURVEY BOOK NO.		SHEETS 8 of 16	
						CONTRACT NO. B-40407		PROJECT NO. 1700012	

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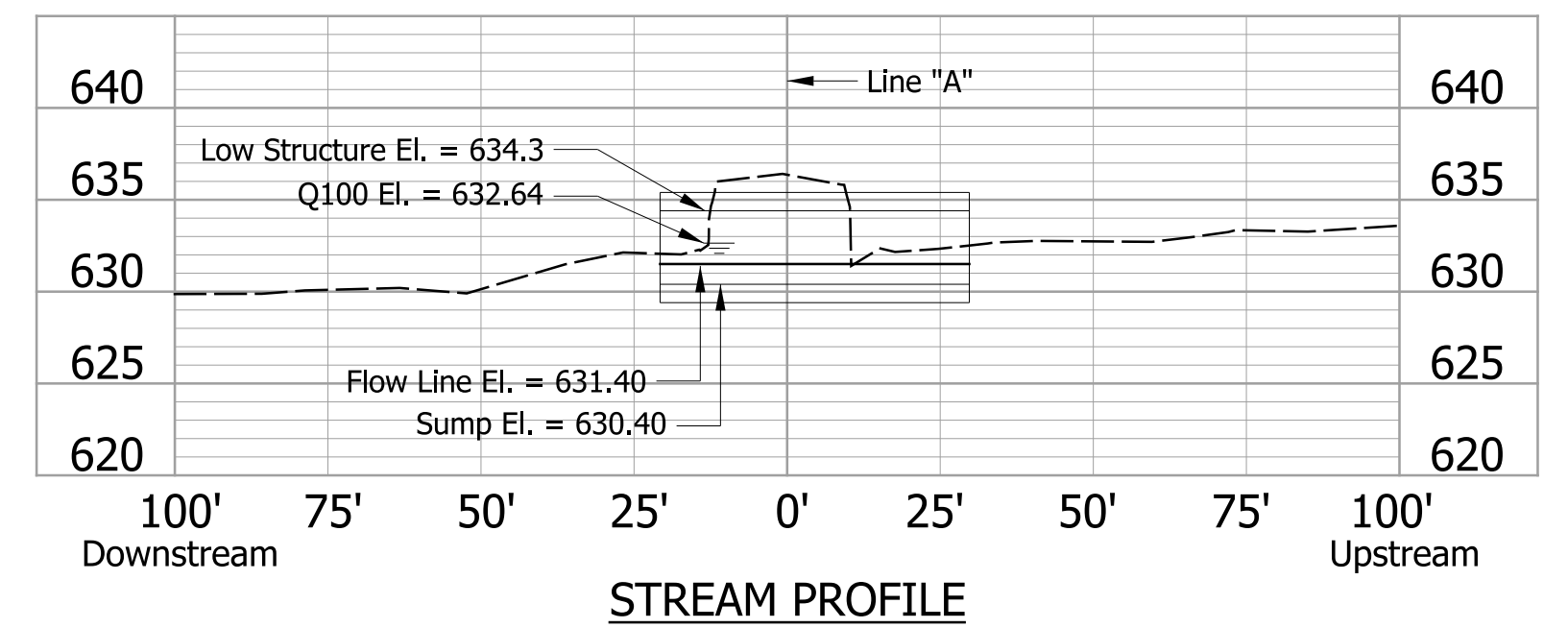
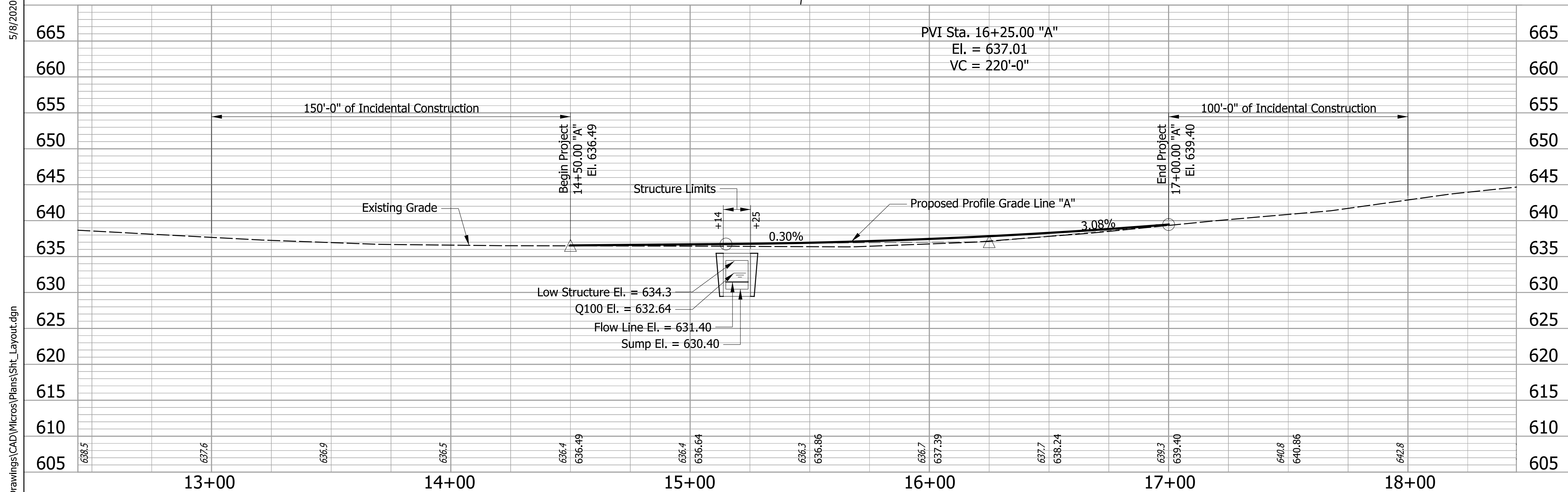
EXISTING STRUCTURE
 The existing structure (CV 058-003-120.30) is a reinforced concrete culvert that was installed at an unknown construction date. The structure has an 8.0 ft. culvert with a 3.0 ft. opening that is approximately 22.0 ft. in length. Existing structure is to be removed.

HYDRAULIC DATA

Drainage Area	70.40	Acres.
Q100 Discharge	74.64	cfs.
Q100 Water Surface Elevation	632.64	ft.
Design Roadway Serviceability	634.80	ft.
Elevation		
Sump Depth		
Existing	3.6	in.
Proposed	12	in.
Q100 Headwater Elevation	633.72	ft.
Backwater		
Existing	1.22	ft.
Proposed	1.08	ft.
Outlet Velocity @ Q50		
Existing	6.26	ft./sec.
Proposed	5.62	ft./sec.
Natural Channel Velocity @ Q50		
Existing	2.03	ft./sec.
Proposed	2.03	ft./sec.

EARTHWORK BALANCE

Fill + 25%	=	437 CYS
Common Excavation	=	541 CYS
Waste	=	104 CYS

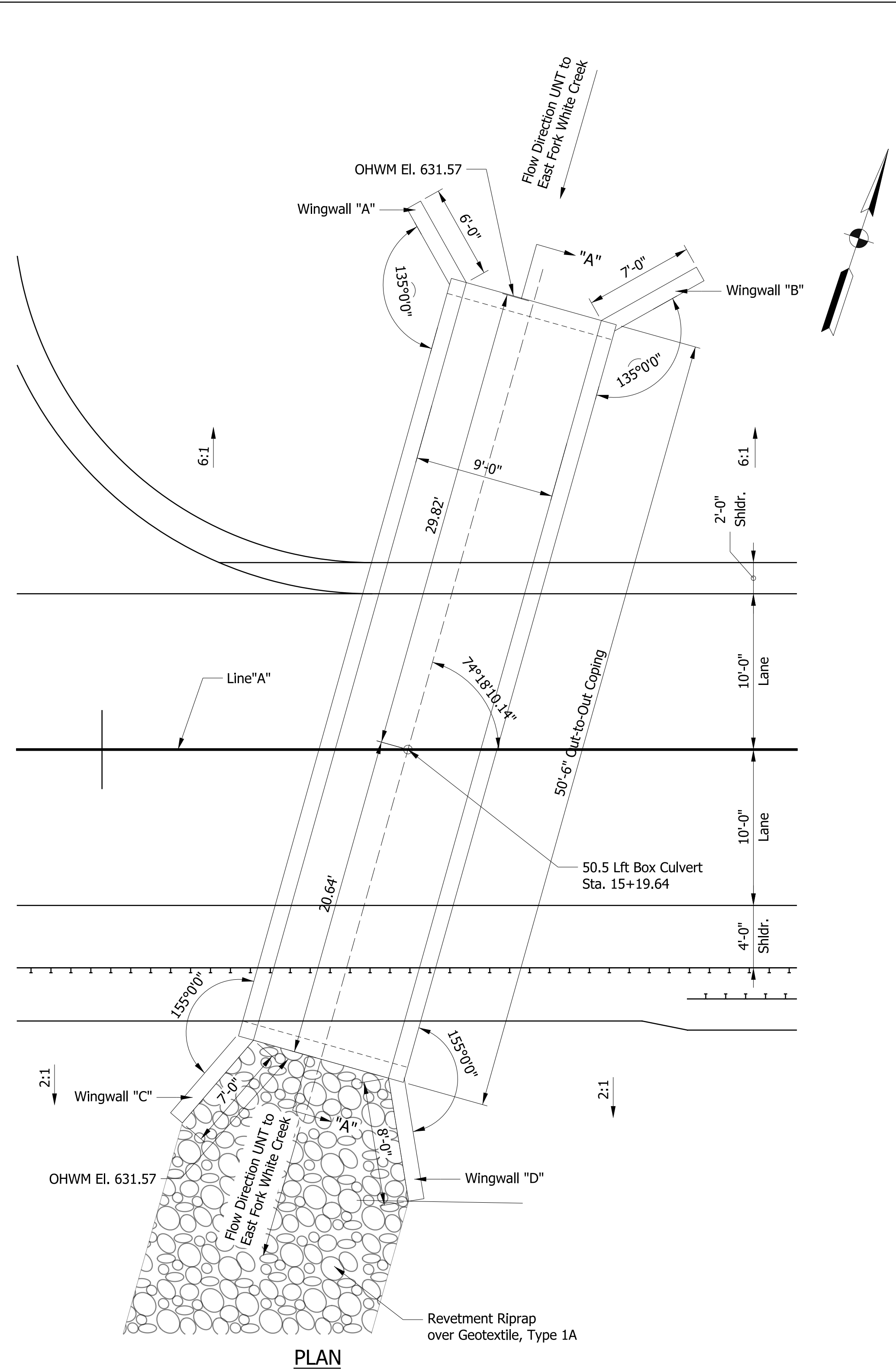


REINFORCED CONCRETE BOX CULVERT
 SPAN: 9'-0"
 SKEW: 16° 41' 49.86" RT., RISE: 4'-0",
 SUMP: 1'-0", CLEAR HEIGHT: 3'-0", LENGTH: 50'-6"
 SR 58 OVER UNT TO EAST FORK WHITE RIVER
 BARTHOLOMEW COUNTY

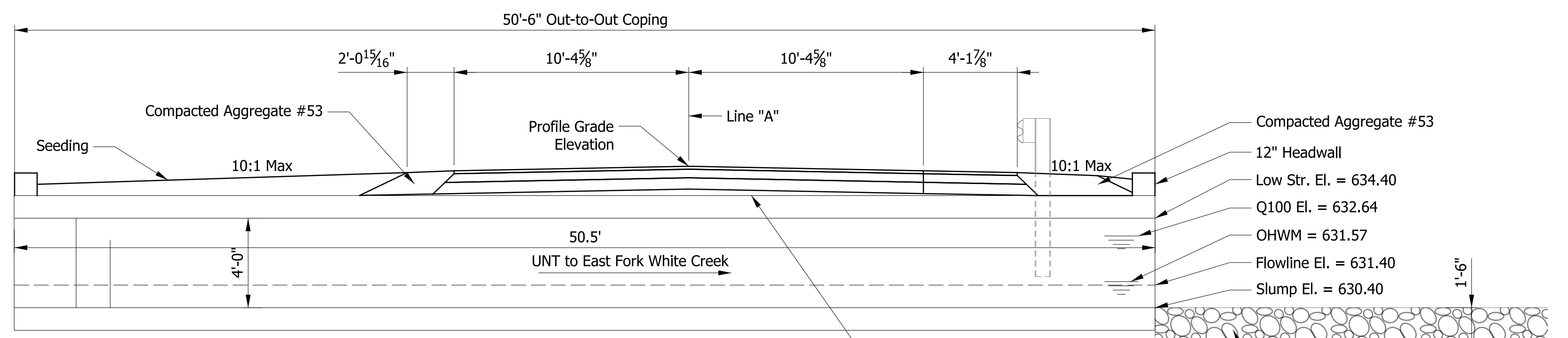
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RECOMMENDED FOR APPROVAL	DESIGNED: DHS	DRAWN: DHS	INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE	BRIDGE FILE NO.
	CHECKED: JM	CHECKED: JM		LAYOUT	1" = 30'
			SR 58 OVER UNT E. FORK WHITE CREEK	VERTICAL SCALE	DESIGNATION NO.
				1" = 10'	1700012
				SURVEY BOOK NO.	SHEETS
				9	of 16
				CONTRACT NO.	PROJECT NO.
				B-40407	1700012

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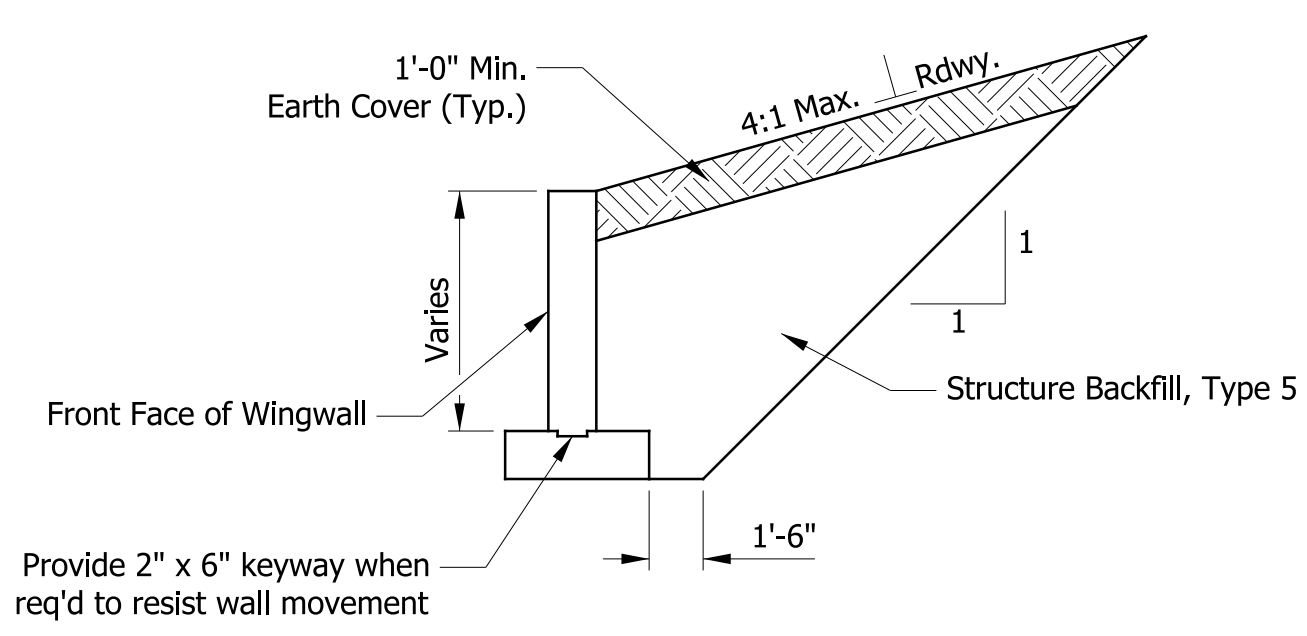
PLAN



Section "A-A" (Transverse)

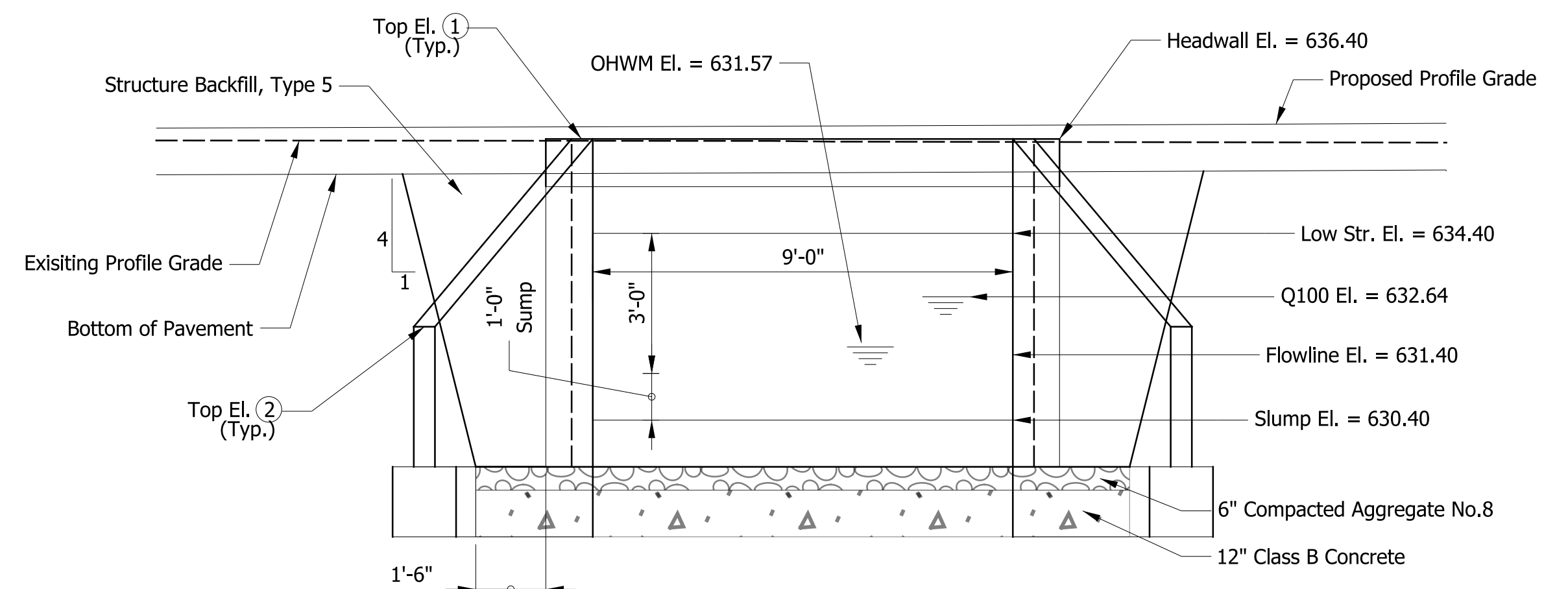
Scale: 1/4" = 1'-0"

WINGWALL TABLE				
WING	TOP ELEV ①	TOP ELEV ②	LENGTH "L"	AREA
"A"	636.40	633.39	6'-0"	27.0 Sft.
"B"	636.40	633.24	7'-0"	31.0 Sft.
"C"	636.40	633.19	7'-0"	30.8 Sft.
"D"	636.40	633.40	8'-0"	36.0 Sft.



WINGWALL BACKFILL

Not to Scale



ELEVATION

Scale: 3/8" = 1'-0"

GENERAL NOTES

An alternate three-sided flat-top structure with a 12-ft skewed span and a 4-ft high opening may be substituted for the structure shown. An alternate three-sided arch-topped structure with a 12-ft skewed span and a 4-ft high opening may be substituted.

Contractor shall verify the existing flowline elevation to set the appropriate sump depth.

Manufacturer's dimensions for pre-cast structures (except opening size) shall override shown dimension.

Waterproofing membrane shall be installed on the structure in accordance with the special provisions.

Up to 12" of Class B concrete may be used at the discretion of the Project Engineer for the structure foundation due to presence of highly fractured limestone.

DESIGN STRENGTH	
Reinforcing Steel (Grade 60)	f _y = 60,000 psi
Class C Concrete	f _c = 4,000 psi
Class B Concrete	f _c = 3,000 psi
Class A Concrete	f _c = 3,500 psi

FOUNDATION DESIGN	
Factored Bearing Resistance	7,450 psf
Resistance factor (φ)	0.45
Nominal Bearing Resistance	16,555 psf
Friction angle between wingwall and soil backfill (δ)	20°
Friction factor between footer, foundation soil (f)	0.34
Cohesion of foundation soil (C)	2,400
Adhesion of foundation soil (Ca)	2,400
Angle of internal friction of foundation soil (φ)	120

DESIGN DATA

Wingwalls and headwalls shall be designed in accordance with Standard Specification 714 for box culverts or 723 for three-sided structure.

Live Load: Designed for HL-93 loading, in accordance with the AASHTO LRFD Bridge Design Specifications, Sixth Edition, and all subsequent interim specifications.

REINFORCED CONCRETE BOX CULVERT
SPAN: 9'-0"
SKEW: 16° 41' 49.86" RT., RISE: 4'-0",
SUMP: 1'-0", CLEAR HEIGHT: 3'-0", LENGTH: 50'-6"
SR 58 OVER UNT TO EAST FORK WHITE RIVER
BARTHOLOMEW COUNTY

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: DHS	DRAWN: DHS	
CHECKED: JMH	CHECKED: JMH	

INDIANA
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN - STRUCTURE DETAILS
SR 58 OVER UNT E. FORK WHITE CREEK

HORIZONTAL SCALE	BRIDGE FILE NO.
3/16" = 1'-0"	NA
VERTICAL SCALE	DESIGNATION NO.
NA	1700012
SURVEY BOOK NO.	SHEETS
	10 of 16
CONTRACT NO.	PROJECT NO.
B-40407	1700012

STRUCTURE DATA

* IF CONTRACTOR ELECTS TO USE METAL PIPE, THICKNESS AS SHOWN BELOW ARE TO BE USED.

STRUCTURE NUMBER	LOCATION				PIPE TYPE	MANHOLE, INLET, CATCH BASIN, OR SPECIALTY STRUCTURE	FLOW LINE				SERVICE LIFE YR.	SITE DESIGNATION	PH	BACKFILL METHOD	STRUCTURE BACKFILL	REVENEMENT RIPRAP	GEOTEXTILES FOR RIPRAP, TYPE LA	PIPE END SECTION	GRATED BOX END SECTION			SAFETY METAL END SECTION			CONNECT TO STR.	REMARKS					
	STATION	LEFT	CROSS	RIGHT			SIZE 9' x 4'	LENGTH LFT	SKEW	COVER									UP STREAM	DOWN STREAM	TYPE	SLOPE	EA.	TYPE			SLOPE	EA.	TYPE	SLOPE	EA.
1	Sta. 15+19.64 "A"	X			CONCRETE BOX	50.5	74.3	1.25	631.40	631.40				5	67	52	73														
10	Sta. 14+88.20 "A"	X				25.0'								2	2																
11	Sta. 17+49.00 "A"	X				45.0'								2	2																

PAVEMENT MARKINGS TABLE

LOCATION	LINE, PAINT			SNOWPLOWABLE RAISED PAVEMENT MARKER*	
	SOLID YELLOW 4 IN. FT	SOLID WHITE 4 IN. FT	BROKEN YELLOW 4 IN. FT	SPACING 80'	SPACING 80'
				REMOVE EACH	INSTALL EACH
LINE "A"		900	900		
TOTAL		900	900		

* Do not install RPM's on bridge deck and approach slabs

MONUMENT TABLE

STATION	OFFSET	MONUMENT
14+50 "A"	0.0'	Type B
17+00 "A"	0.0'	Type B

R/W MARKER TABLE

STATION	OFFSET
12+50.00 "A"	Ex. R/W Lt.
13+50.00 "A"	45.00' Lt.
17+00.00 "A"	45.00' Lt.
18+00.00 "A"	Ex. R/W Lt.
12+50.00 "A"	Ex. R/W Rt.
13+50.00 "A"	45.00' Rt.
17+00.00 "A"	45.00' Rt.
18+00.00 "A"	Ex. R/W Rt.

PAVEMENT QUANTITIES AND APPROACH TABLE

LOCATION	DESCRIPTION (APPROACH TYPE OR CLASS)	WIDTH FT	LENGTH FT	RADI FT	SURFACE BEYOND R/W LINE			GRADE		EXCAVATION		CLEAR ZONE AT DRIVE FT	SUBBASE FOR PCCP CYS	QC/QA-HMA			MILLED HMA CORRUGATIONS LFT	MILLING, ASPHALT, 1½ IN. SYS	TACK COAT SYS	RETROFITTED TIE BARS EACH	TERMINAL JOINT LFT	SAWCUT LFT	COMPACTED AGGREGATE NO. 53		COMPACTED AGGREGATE NO. 73		SUBGRADE TREATMENT TYPE IC SYS	PAVEMENT REMOVAL SYS	REMARKS
					DISTANCE BEYOND R/W/LINE	COMPACTED AGGREGATE BASE	HMA	PCCP	1 %	2 %	CUT CYS			FILL CYS	2.64 SURFACE, 9.5 mm	2.64 INTERMID, 19.0 mm							2.64 BASE, 19.0 mm	DEPTH	DEPTH				
																										FT			
					FT	FT	FT	FT	SYSD	SYSD	SYSD			%	%	CYS							CYS	TONS	TONS	TONS			
Line "A"										X	X			X	X	X		X	X					X	X				
Sta. 14+88.20 "A"	II	10'	35'	25/15				4.00%	0.40%					X	X	X									X	X			
Sta. 17+49.00 "A"	V	24'	23'	25/15				4.00%	-6.62%					X	X	X									X	X			
TOTAL																													

GUARDRAIL SUMMARY TABLE

LOCATION		MGS GUARDRAIL LENGTH											CURVED W-BEAM GUARDRAIL SYSTEM								REMARKS							
FROM STATION	TO STATION	LEFT	MEDIAN LEFT	MEDIAN RIGHT	RIGHT	STANDARD POST AT 6 FT 3 IN. SPA.	STANDARD POST AT 3 FT 1.5 IN. SPA.	DOUBLE FACED AT 6 FT 3 IN. SPA.	DOUBLE FACED AT 3 FT 1.5 IN. SPA.	LONG SPAN, TYPE 1	SHOP CURVED AT FT. SPA.	NESTING GUARDRAIL	GUARDRAIL FLARE RATE	TRANSITION W/O CURB	GUARDRAIL TRANSITION TYPE TPF-1	GUARDRAIL HEIGHT TRANSITION	GUARDRAIL END TREATMENT TYPE OS	TERMINAL SYSTEM		CONNECTOR SYSTEM		GUARDRAIL REMOVE	GUARDRAIL RESET	IMPACT ATTENUATOR TYPE	IMPACT ATTENUATOR TYPE			
																		TYPE	EACH	TYPE						EACH	LFT	LFT
Sta. 13+56.33 "A"	Sta. 15+87.58 "A"				X	87.5				43.75							2											
TOTALS																												

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE _____

DESIGNED: DHS DRAWN: DHS

CHECKED: JMH CHECKED: JMH

INDIANA DEPARTMENT OF TRANSPORTATION

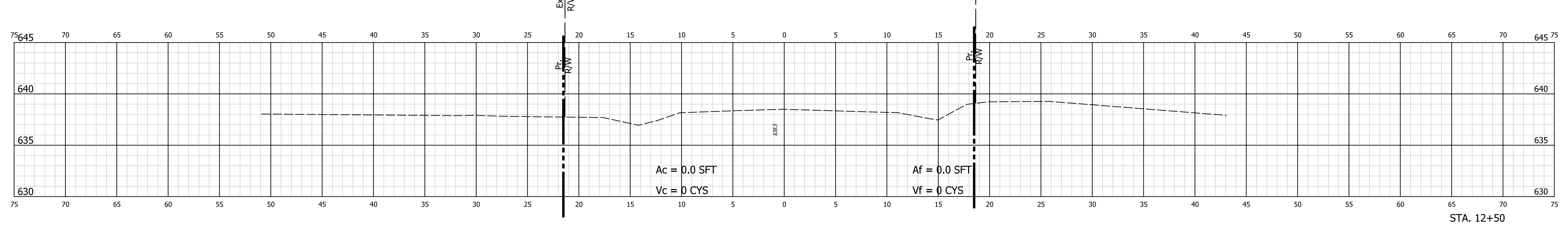
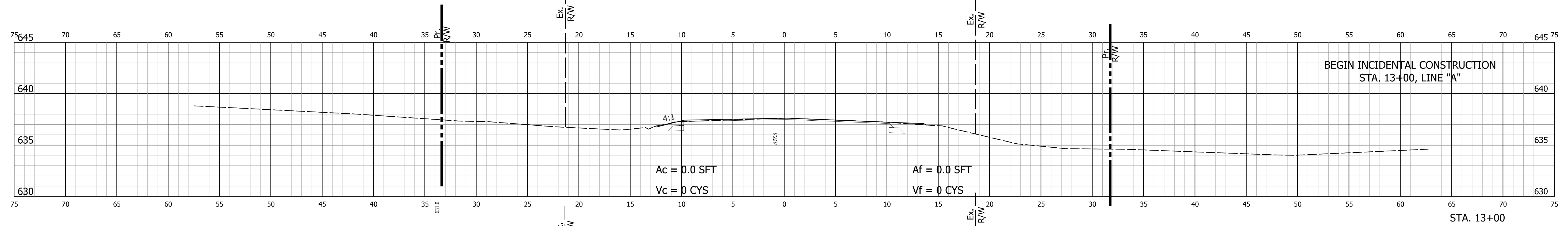
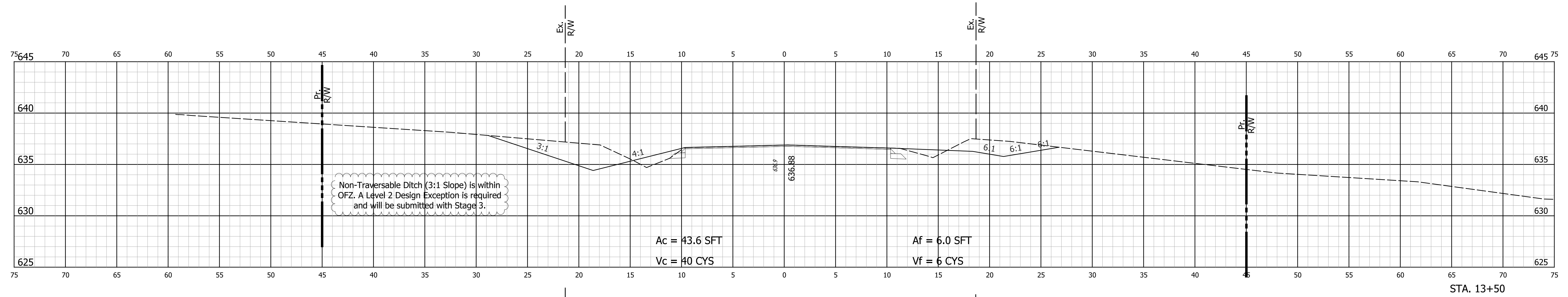
MISCELLANEOUS TABLES SR 58 OVER UNT E. FORK WHITE CREEK

HORIZONTAL SCALE: NA BRIDGE FILE NO.: NA
 VERTICAL SCALE: NA DESIGNATION NO.: 1700012

SURVEY BOOK NO.: SHEETS 11 of 16

CONTRACT NO.: B-40407 PROJECT NO.: 1700012

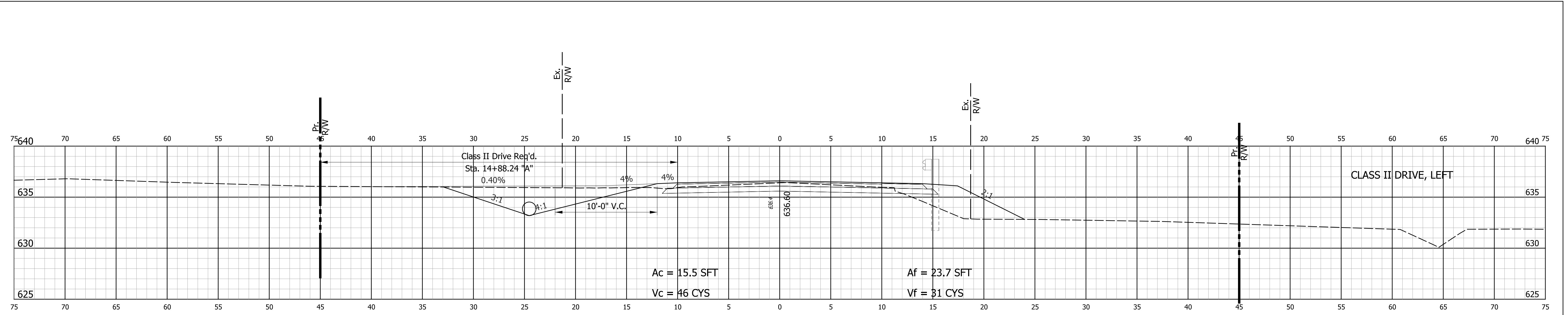
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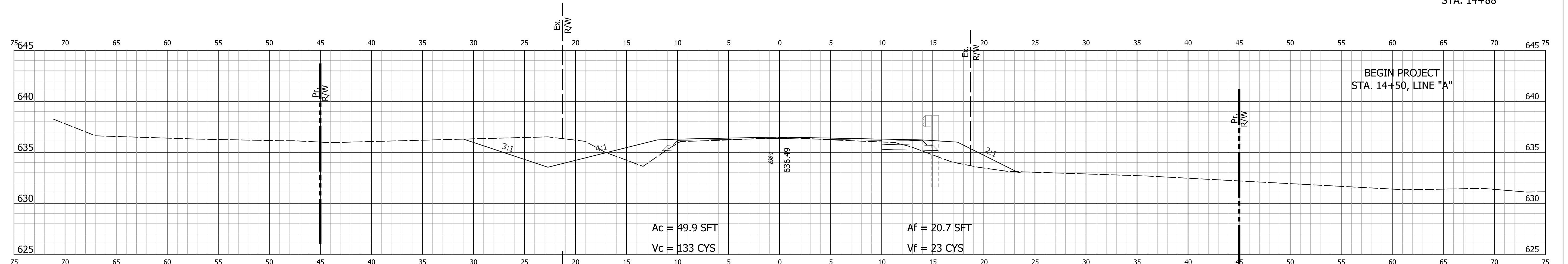
RECOMMENDED FOR APPROVAL		DESIGN ENGINEER	DATE
DESIGNED: DHS	DRAWN: DHS		
CHECKED: JMH	CHECKED: JMH		

INDIANA DEPARTMENT OF TRANSPORTATION
CROSS SECTIONS
STA. 12+50 "A" TO STA. 13+50 "A"

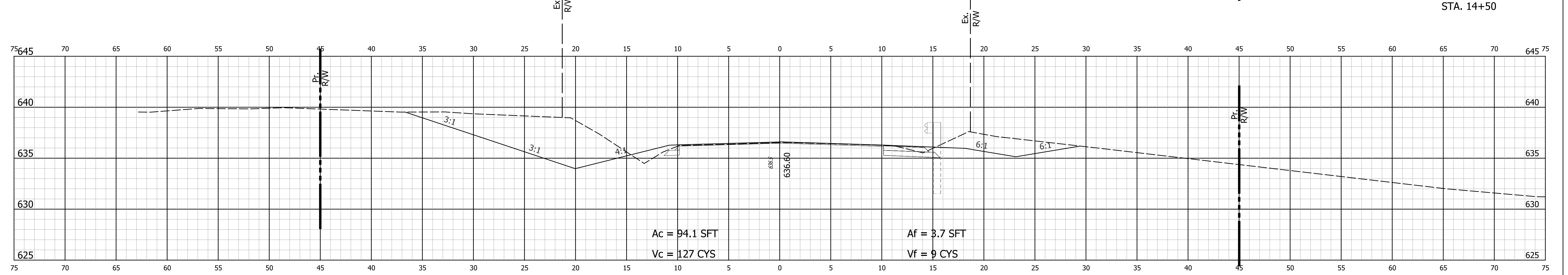
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VERTICAL SCALE 1" = 5'	DESIGNATION NO. 1700012
SURVEY BOOK NO.	SHEETS 12 of 16
CONTRACT NO. B-40407	PROJECT NO. 1700012



STA. 14+88



STA. 14+50



STA. 14+00

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: DHS	DRAWN: DHS	
CHECKED: JMH	CHECKED: JMH	

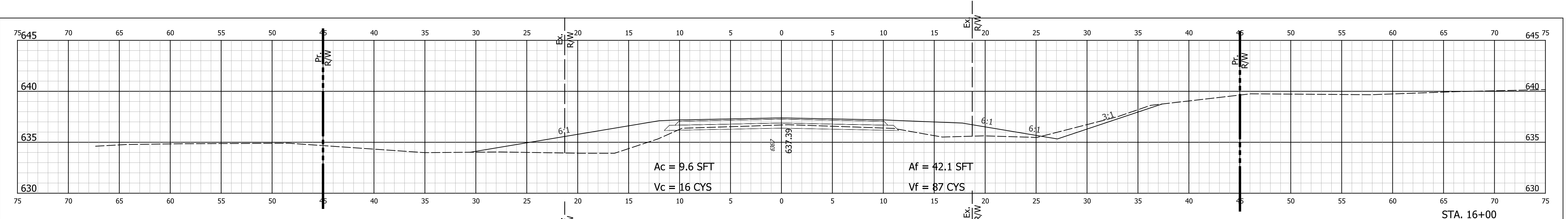
INDIANA
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
STA. 14+00 "A" TO STA. 14+88 "A"

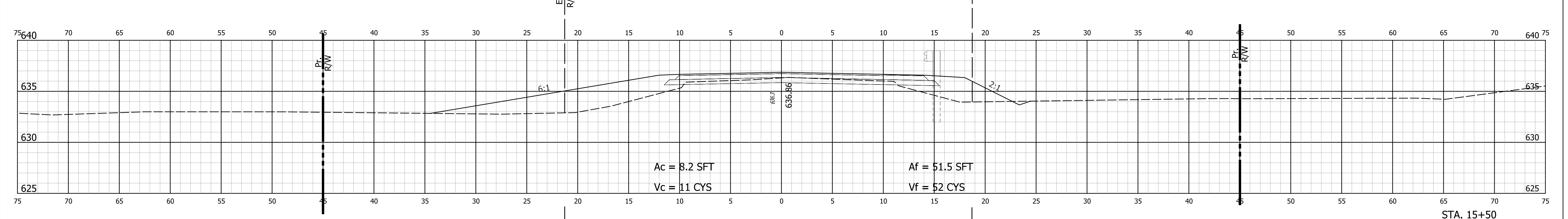
HORIZONTAL SCALE 1" = 5'	BRIDGE FILE NO. NA
VERTICAL SCALE 1" = 5'	DESIGNATION NO. 1700012
SURVEY BOOK NO.	SHEETS 13 of 16
CONTRACT NO. B-40407	PROJECT NO. 1700012

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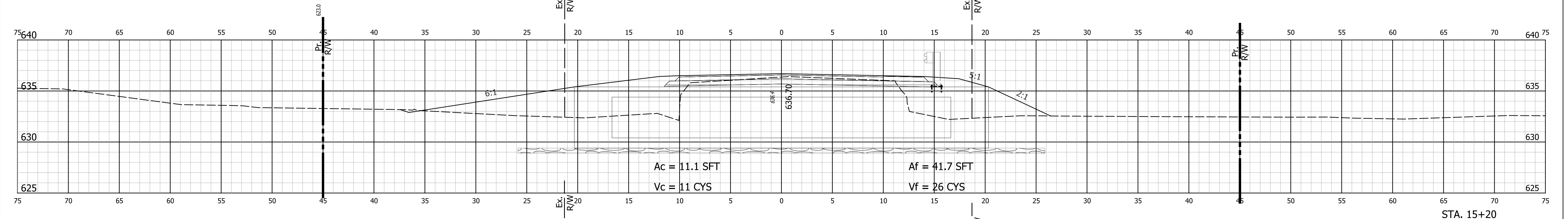
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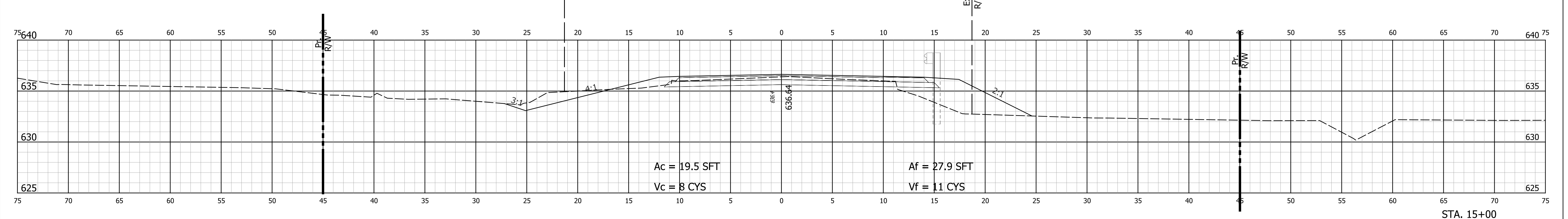
STA. 16+00



STA. 15+00



STA. 15+20



STA. 15+00

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: DHS	DRAWN: DHS	
CHECKED: JMH	CHECKED: JMH	

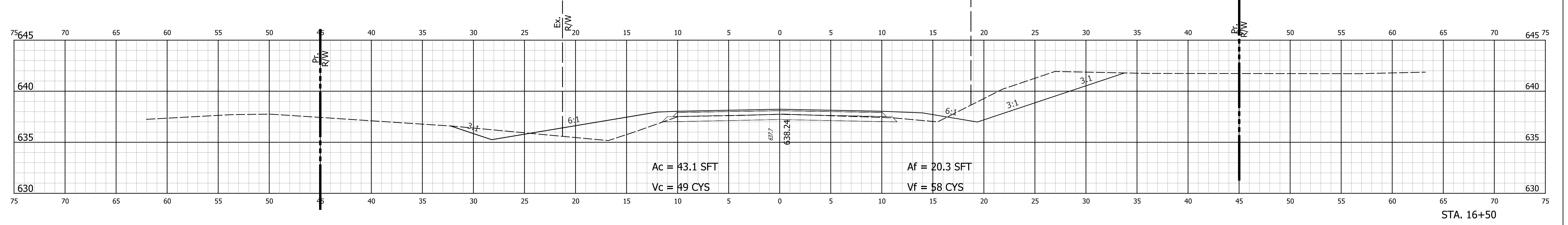
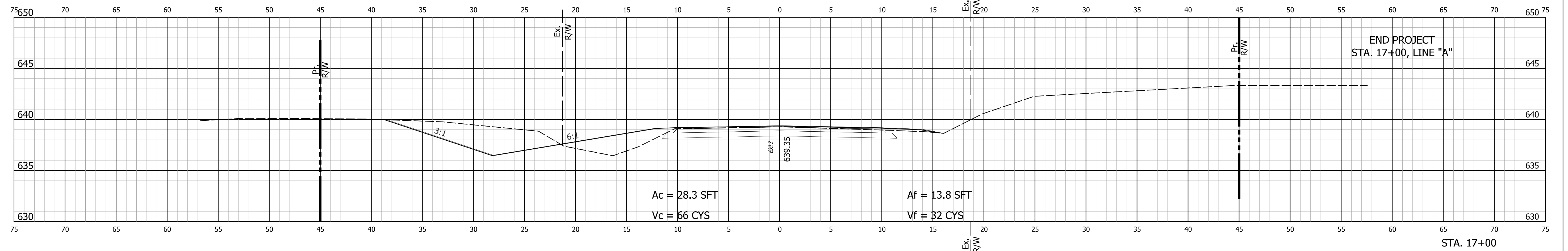
INDIANA
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
STA. 15+00 "A" TO STA. 16+00 "A"

HORIZONTAL SCALE 1" = 5'	BRIDGE FILE NO. NA
VERTICAL SCALE 1" = 5'	DESIGNATION NO. 1700012
SURVEY BOOK NO.	SHEETS 14 of 16
CONTRACT NO. B-40407	PROJECT NO. 1700012

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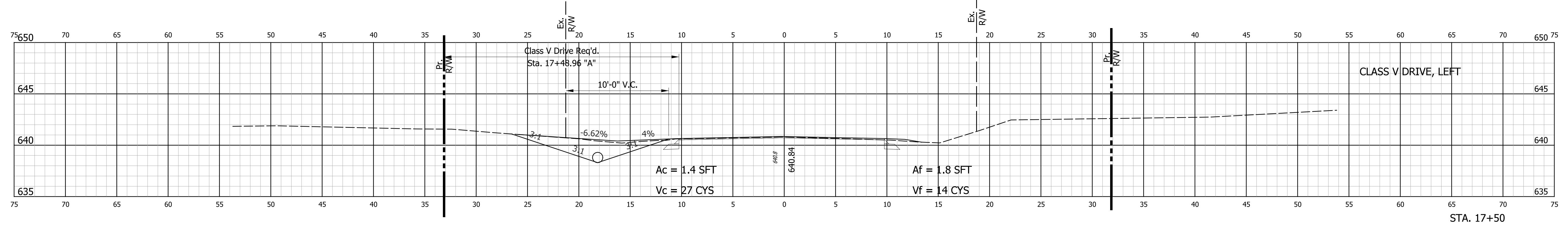
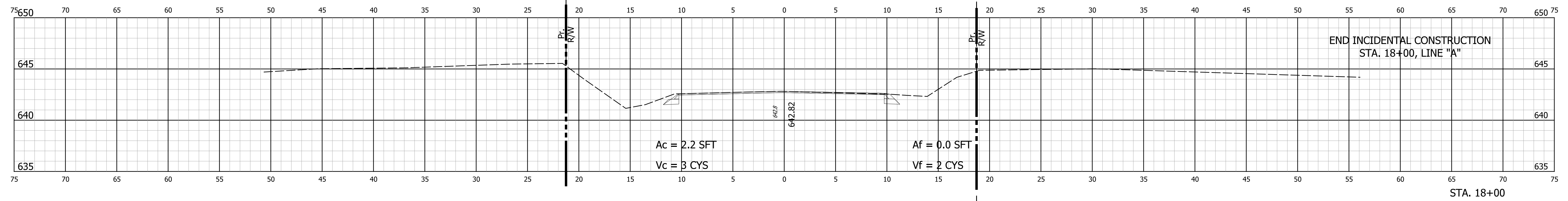
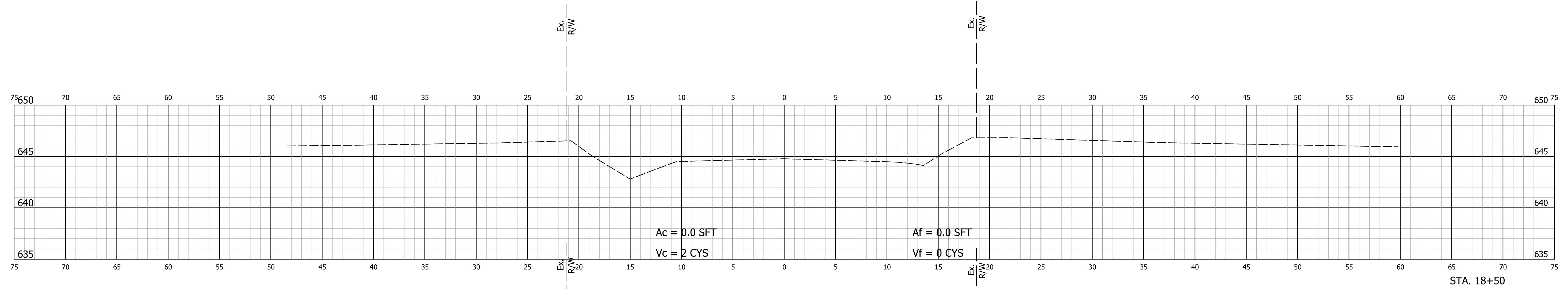
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DESIGNED: DHS	DRAWN: DHS		
CHECKED: JMH	CHECKED: JMH		

**INDIANA
DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS
STA. 16+50 "A" TO STA. 17+49 "A"**

HORIZONTAL SCALE 1" = 5'	BRIDGE FILE NO. NA
VERTICAL SCALE 1" = 5'	DESIGNATION NO. 1700012
SURVEY BOOK NO.	SHEETS 15 of 16
CONTRACT NO. B-40407	PROJECT NO. 1700012

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RECOMMENDED FOR APPROVAL	
DESIGNED: DHS	DRAWN: DHS
CHECKED: JMH	CHECKED: JMH

INDIANA
 DEPARTMENT OF TRANSPORTATION

 CROSS SECTIONS
 STA. 17+50 "A" TO STA. 18+50 "A"

HORIZONTAL SCALE 1" = 5'	BRIDGE FILE NO. NA
VERTICAL SCALE 1" = 5'	DESIGNATION NO. 1700012
SURVEY BOOK NO.	SHEETS 16 of 16
CONTRACT NO. B-40407	PROJECT NO. 1700012