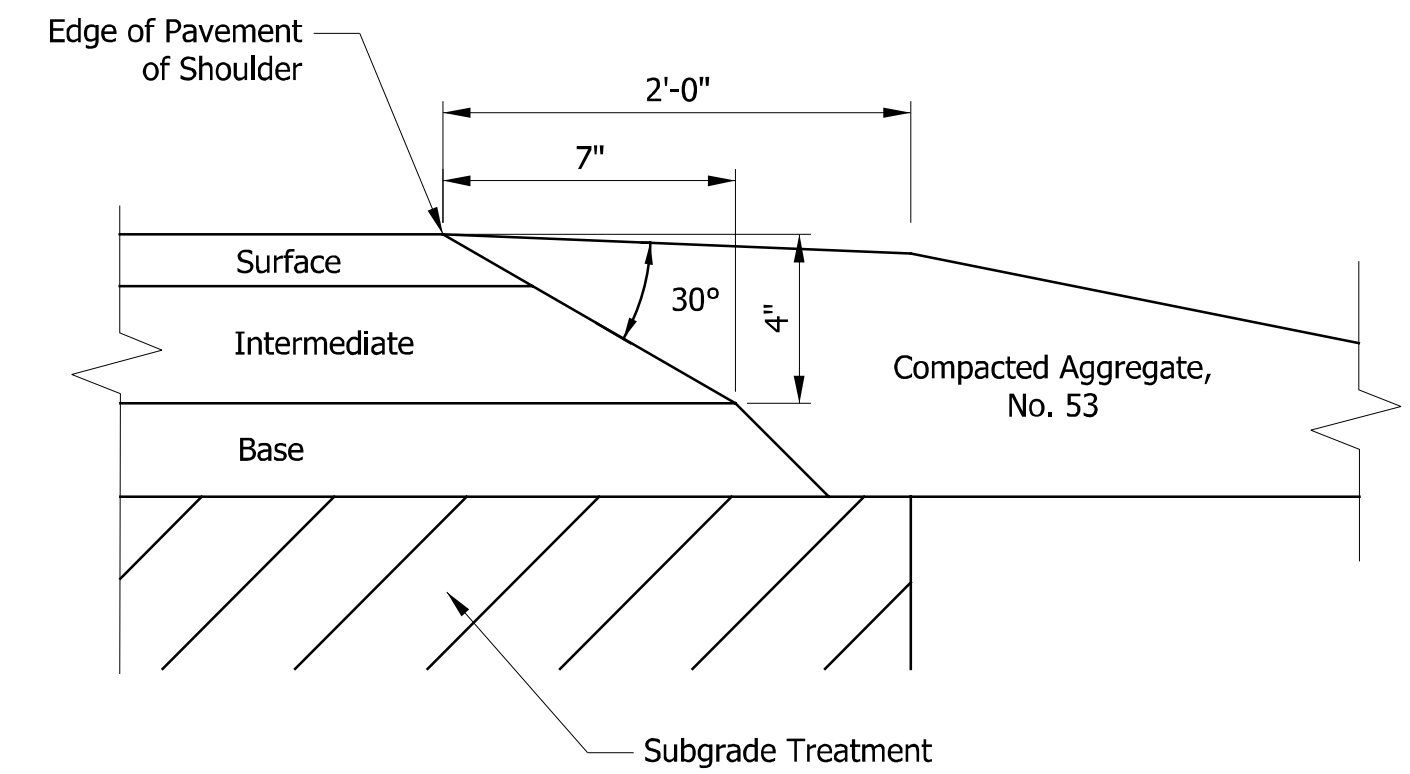
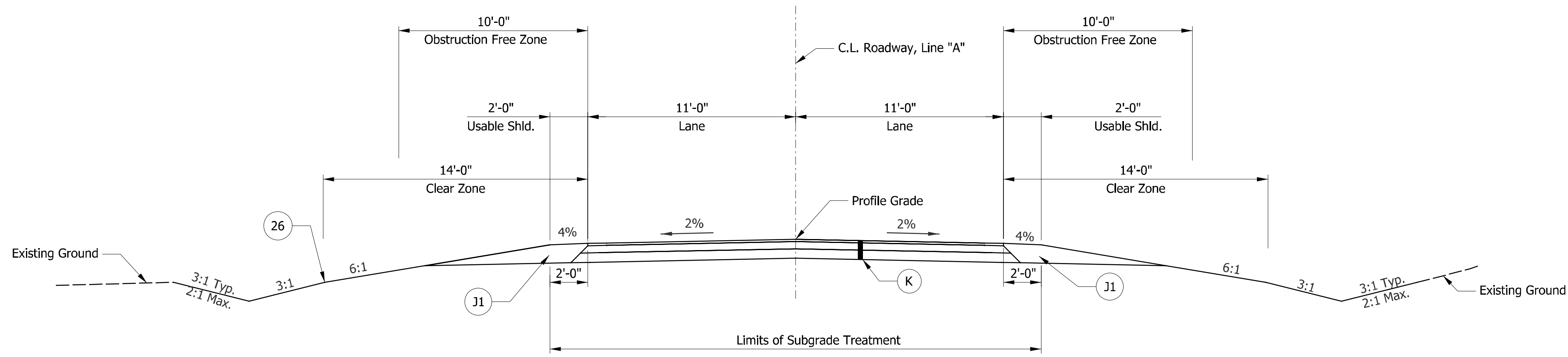


**TYPICAL SECTION - INCIDENTAL CONSTRUCTION**

Sta. 12+20.00 "A" to Sta. 14+10.00 "A"  
Sta. 15+60.00 "A" to Sta. 18+25.00 "A"



**SAFETY EDGE ON HMA PAVEMENT**



**TYPICAL ROADWAY SECTION**

Sta. 14+10 "A" to Sta. 15+60 "A"

**Legend**

- (26) Seed Mixture, R
- (J) Full Depth, HMA Shoulder  
165 lbs/syd QC/QA-HMA, 3, 64, Surface, 9.5 mm on  
275 lbs/syd QC/QA-HMA, 3, 64, Intermediate, 19.0 mm on  
660 lbs/syd QC/QA-HMA, 3, 64, Base, 25.0 mm on  
Subgrade Treatment, Type ID
- (J1) Compacted Aggregate No. 53
- (K) Full Depth HMA Pavement  
165 lbs/syd QC/QA-HMA, 3, 64, Surface, 9.5 mm on  
275 lbs/syd QC/QA-HMA, 3, 64, Intermediate, 19.0 mm on  
660 lbs/syd QC/QA-HMA, 3, 64, Base, 25.0 mm on  
Subgrade Treatment, Type ID
- (R) 165 lbs/syd QC/QA-HMA, 3, 64, Surface, 9.5 mm on  
Milling, Surface

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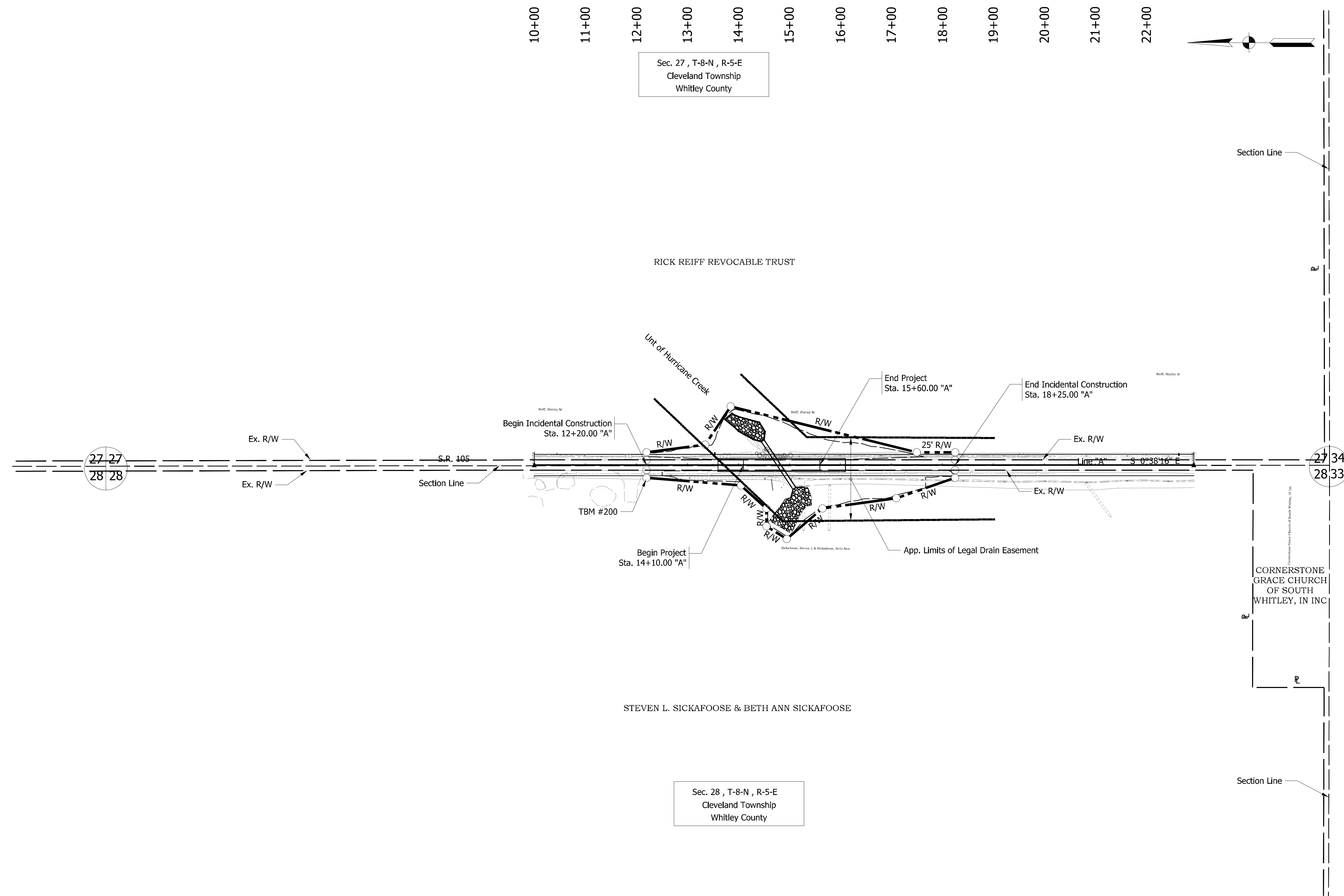
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DESIGNED: KJW	DRAWN: ACB		
CHECKED: JMH	CHECKED: JMH		

INDIANA DEPARTMENT OF TRANSPORTATION	
TYPICAL CROSS SECTION SR 105 OVER UNT HURRICANE CREEK	

HORIZONTAL SCALE 1/4" = 1'-0"	BRIDGE FILE NO. CV 105-092-27.82
VERTICAL SCALE NA	DESIGNATION NO. 1800184
SURVEY BOOK NO.	SHEETS 5 of 27
CONTRACT NO. R-43509	PROJECT NO. 1800184

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Sec. 34 , T-8-N , R-5-E  
Cleveland Township  
Whitley County

Sec. 33 , T-8-N , R-5-E  
Cleveland Township  
Whitley County

Sec. 27 , T-8-N , R-5-E  
Cleveland Township  
Whitley County

Sec. 28 , T-8-N , R-5-E  
Cleveland Township  
Whitley County

Note to Reviewer:  
Entire parcel from which R/W  
will be taken is shown  
per IDM 85-2.05

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

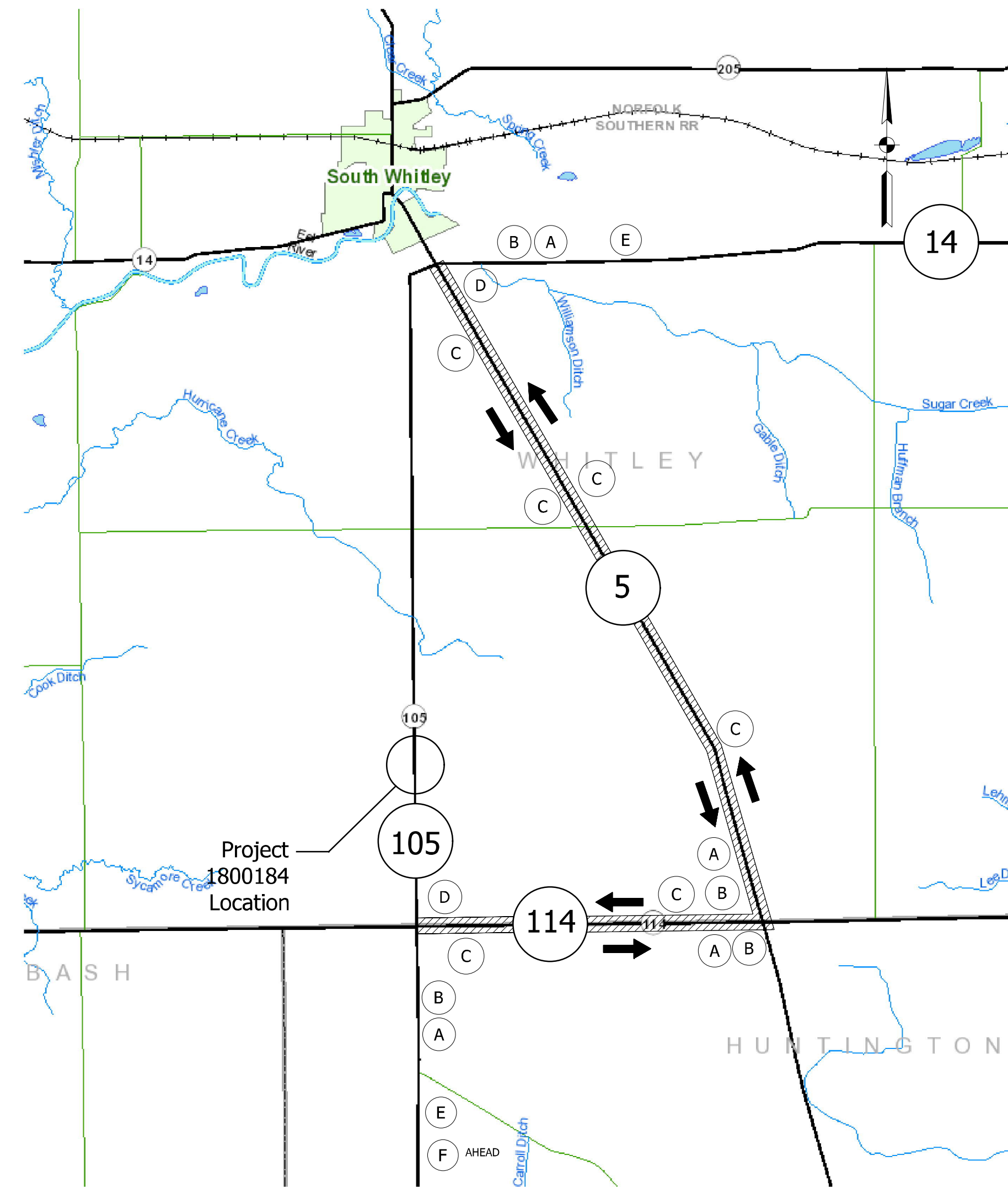
INDIANA  
DEPARTMENT OF TRANSPORTATION

PLAT NO. 1  
SR 105 OVER UNT HURRICANE CREEK

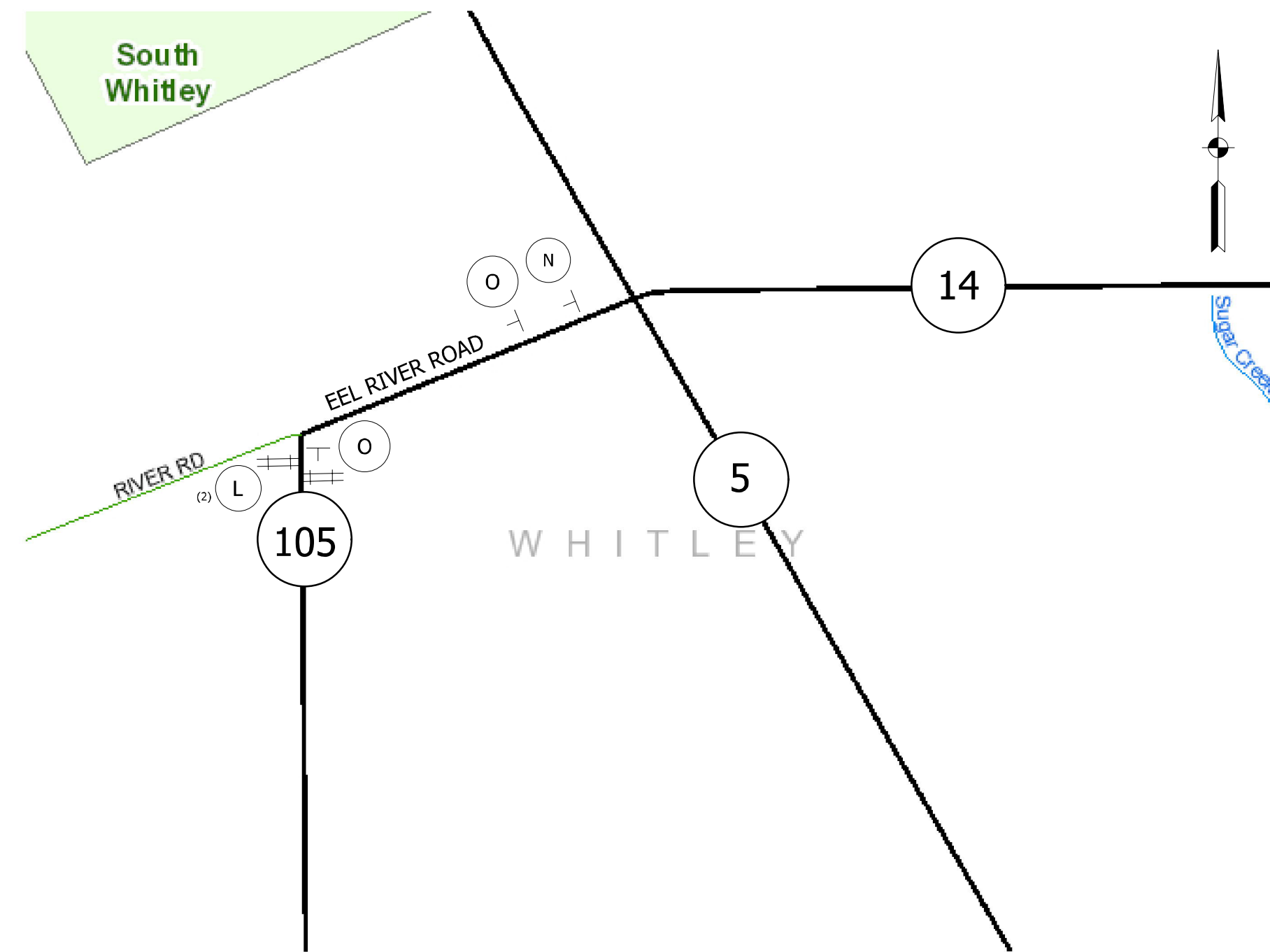
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VERTICAL SCALE NA	DESIGNATION NO.
SURVEY BOOK NO.	SHEETS 1 of
CONTRACT NO.	PROJECT NO.

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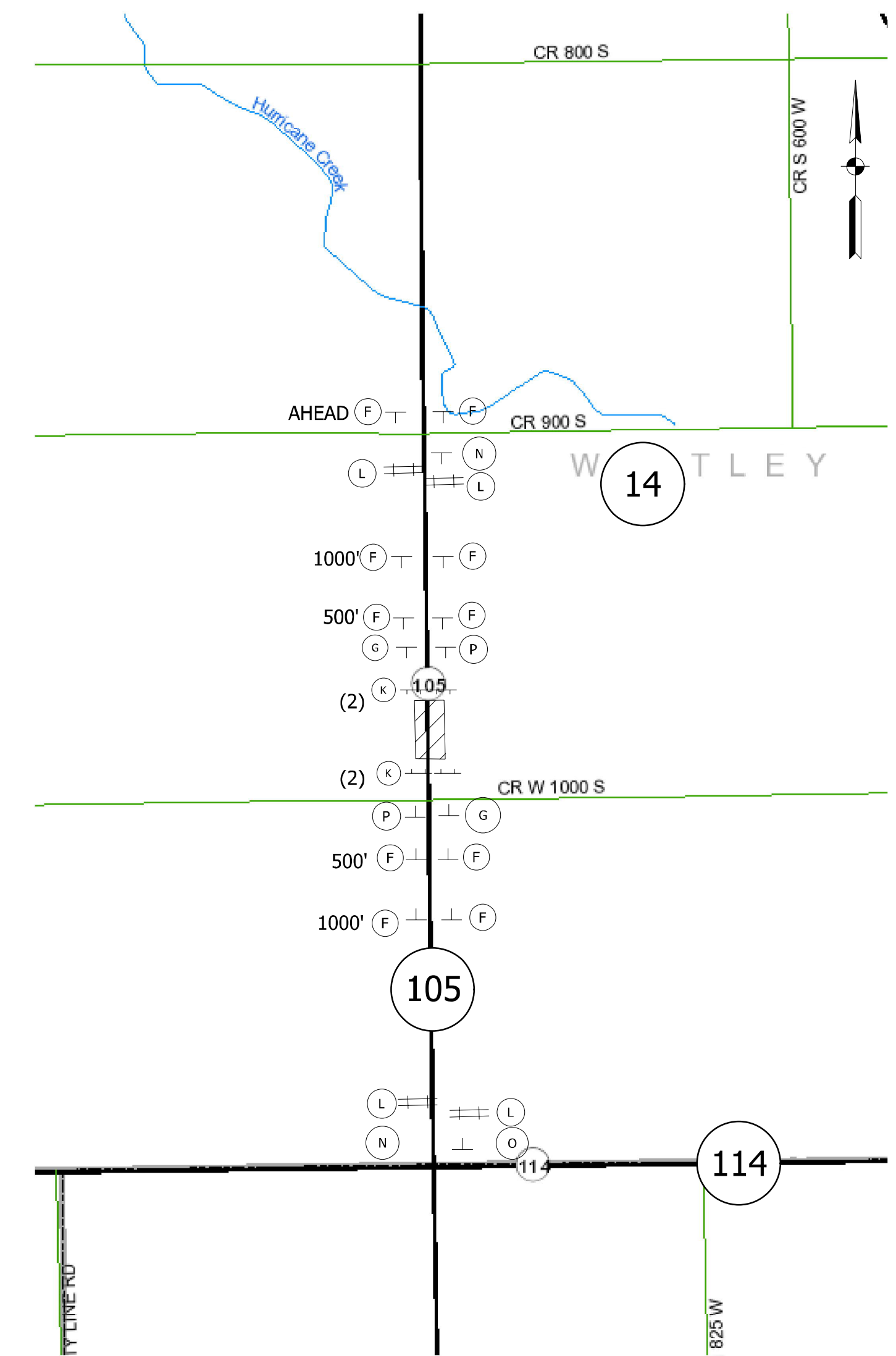
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DETOUR MAP

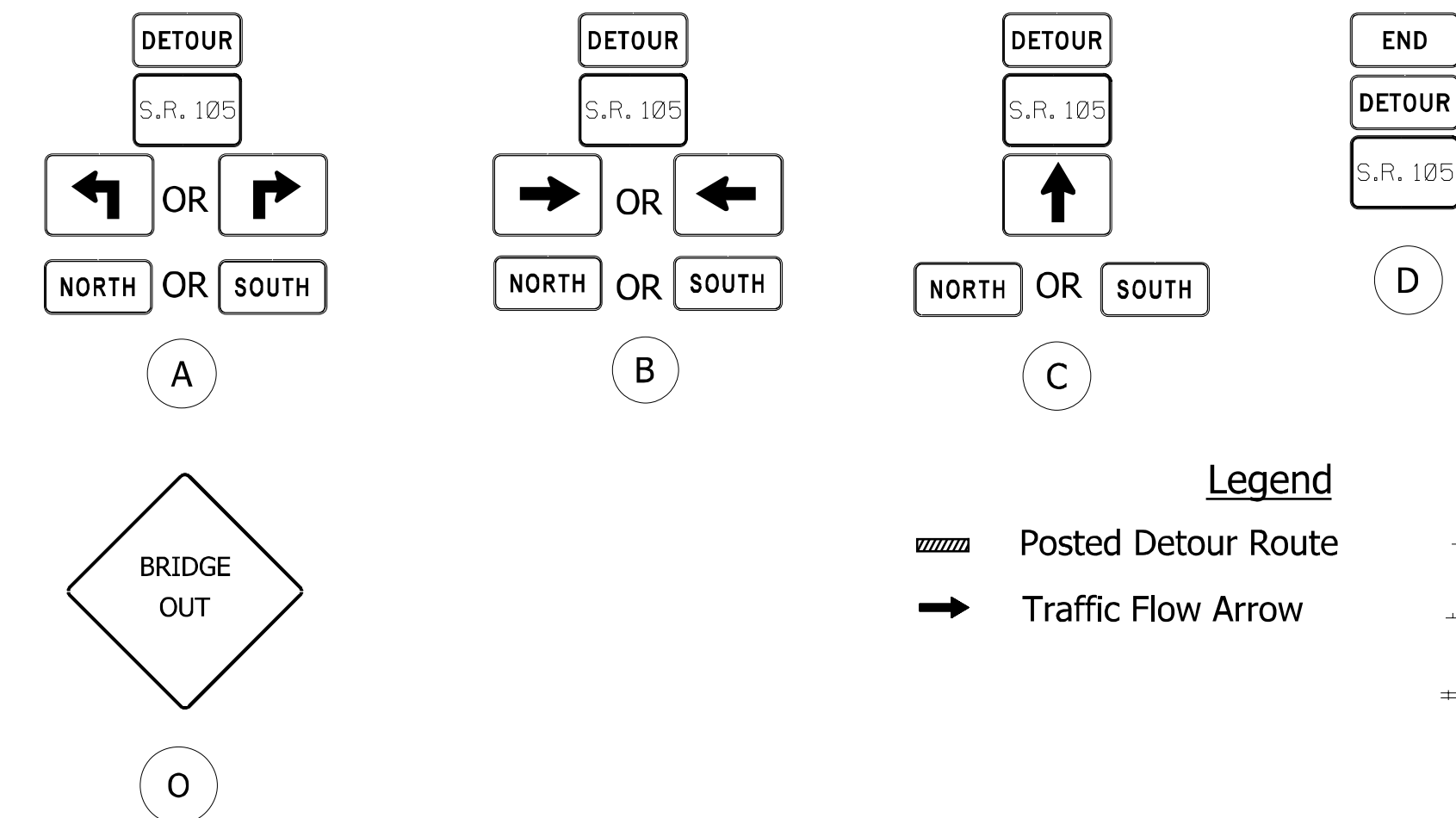


SR 105 & EEL RIVER RD INTERSECTION

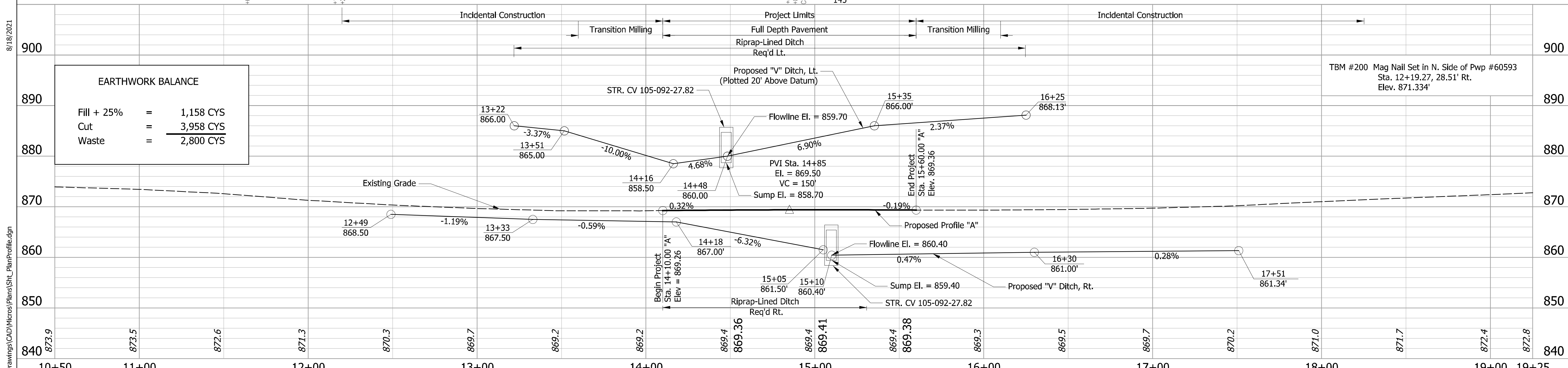
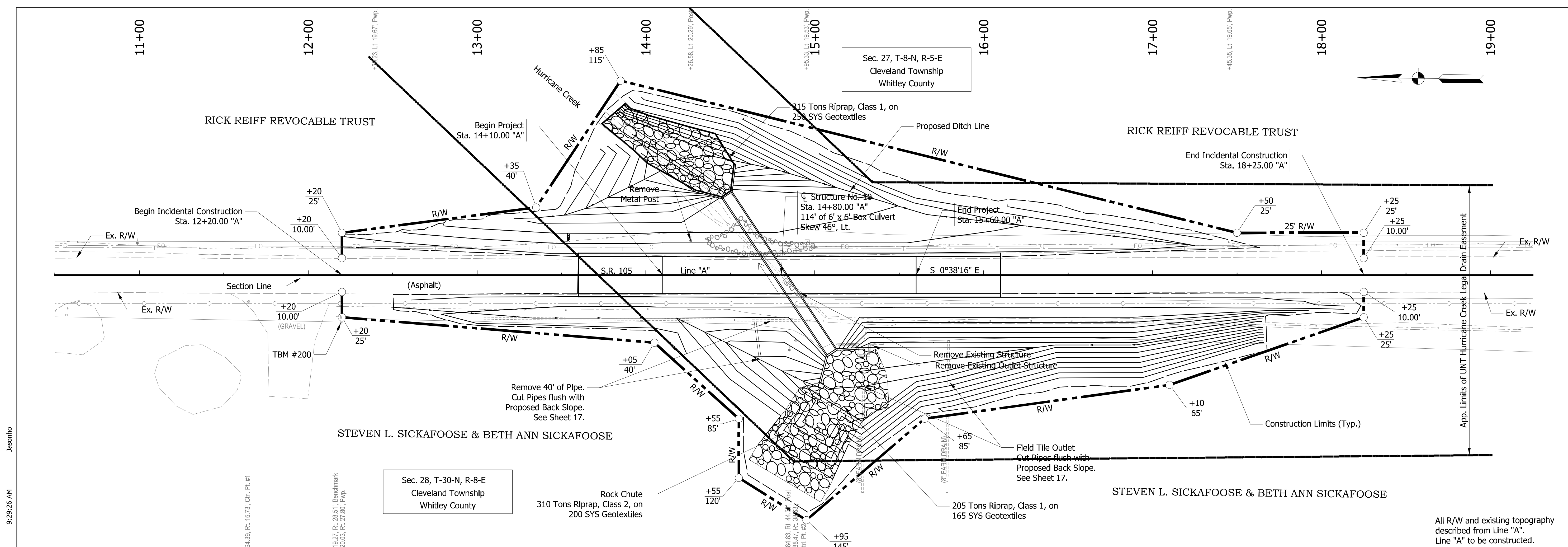


PROJECT LOCATION MAP

Detour Route Marker Assemblies		Type A Construction Signs	
(A) DRMA (Advance Turn)	4 Ea.	(E) XW20-2 (Detour Ahead)	2 Ea.
(B) DRMA (Directional)	4 Ea.	(F) XW20-3 (Road Closed _____)	14 Ea.
(C) DRMA (Confirming)	7 Ea.	(G) XG20-5 (Closure Date)	2 Ea.
(D) DRMA (End)	2 Ea.		
Road Closure Sign Assemblies		Barricades	
(N) RCSA (R11-4)	3 Ea.	(K) Barricade, Type III-A (No. of 12' Units)	48 Lft
(P) RCSA (R11-2)	2 Ea.	(L) Barricade, Type III-B (No. of 12' Units)	64 Lft
(O) Modified RCSA (R11-2 BRIDGE OUT)	2 Ea.		



RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE _____	INDIANA DEPARTMENT OF TRANSPORTATION		HORIZONTAL SCALE	BRIDGE FILE NO.	
			CUSTOM 48000	CV 105-092-27.82	
DESIGNED: KJW	DRAWN: ACB	DETOUR ROUTE SR 105 OVER UNT HURRICANE CREEK		VERTICAL SCALE	DESIGNATION NO.
CHECKED: JMH	CHECKED: JMH			1800184	
		SURVEY BOOK NO.	SHEETS		
		CONTRACT NO. R-43509	7 of 27		
		PROJECT NO.		1800184	



EARTHWORK BALANCE		
Fill + 25%	=	1,158 CYS
Cut	=	3,958 CYS
Waste	=	2,800 CYS

DESIGNED: KJW	DRAWN: ACB	<b>INDIANA DEPARTMENT OF TRANSPORTATION</b>  <b>PLAN AND PROFILE</b>	HORIZONTAL SCALE 1" = 30'	BRIDGE FILE NO. CV 105-092-27.82
CHECKED: JMH	CHECKED: JMH		VERTICAL SCALE 1" = 10'	DESIGNATION NO. 1800184
			SURVEY BOOK NO. 8	SHEETS of 27
		CONTRACT NO. R-43509	PROJECT NO. 1800184	

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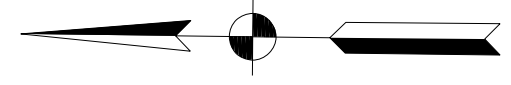
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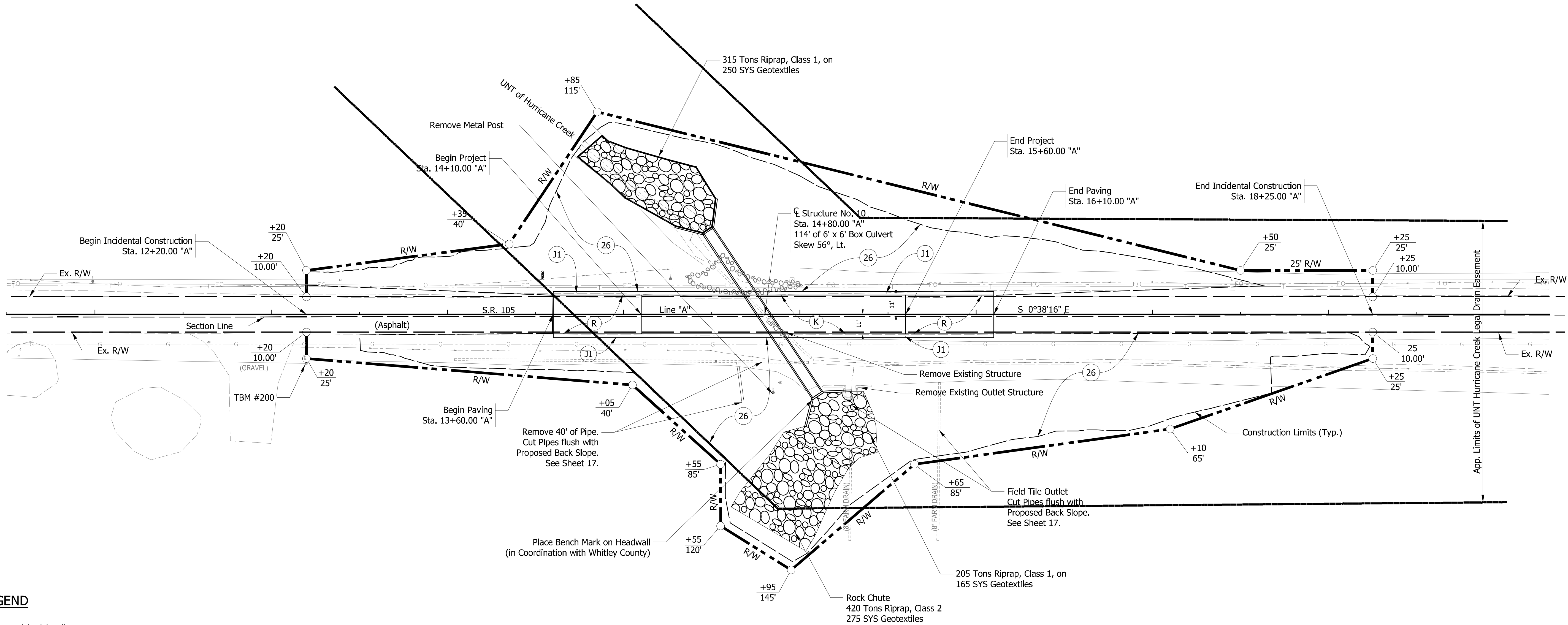
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Sec. 27, T-8-N, R-5-E  
Cleveland Township  
Whitley County



RICK REIFF REVOCABLE TRUST



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**LEGEND**

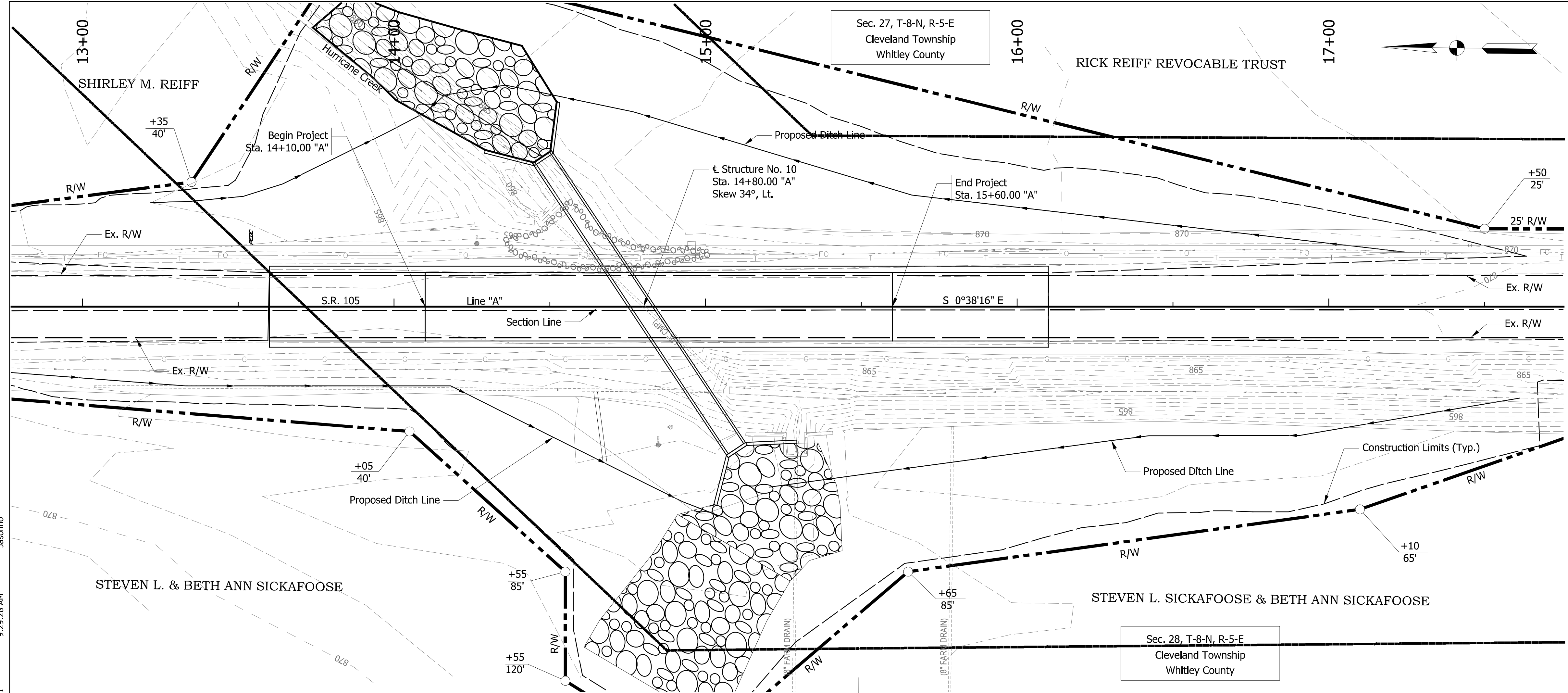
- (26) Mulched Seeding, R
- (J) Full Depth, HMA Shoulder  
165 lbs/syd QC/QA-HMA, 3, 64, Surface, 9.5 mm on  
275 lbs/syd QC/QA-HMA, 3, 64, Intermediate, 19.0 mm on  
660 lbs/syd QC/QA-HMA, 3, 64, Base, 25.0 mm on  
Subgrade Treatment, Type ID
- (J1) Compacted Aggregate No. 53
- (K) Full Depth HMA Pavement  
165 lbs/syd QC/QA-HMA, 3, 64, Surface, 9.5 mm on  
275 lbs/syd QC/QA-HMA, 3, 64, Intermediate, 19.0 mm on  
660 lbs/syd QC/QA-HMA, 3, 64, Base, 25.0 mm on  
Subgrade Treatment, Type ID
- (R) 165 lbs/syd QC/QA-HMA, 3, 64, Surface, 9.5 mm on  
Milling, Surface

STEVEN L. SICKAFOOSE & BETH ANN SICKAFOOSE

Sec. 28, T-8-N, R-5-E  
Cleveland Township  
Whitley County

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

RECOMMENDED FOR APPROVAL _____ DESIGNED: KJW CHECKED: JMH	DESIGN ENGINEER _____ DATE _____ DRAWN: ACB CHECKED: JMH	INDIANA DEPARTMENT OF TRANSPORTATION <b>CONSTRUCTION DETAIL</b>		HORIZONTAL SCALE 1" = 30'	BRIDGE FILE NO. CV 105-092-27.82
				VERTICAL SCALE NA	DESIGNATION NO. 1800184
				SURVEY BOOK NO.	SHEETS 9 of 27
				CONTRACT NO. R-43509	PROJECT NO. 1800184

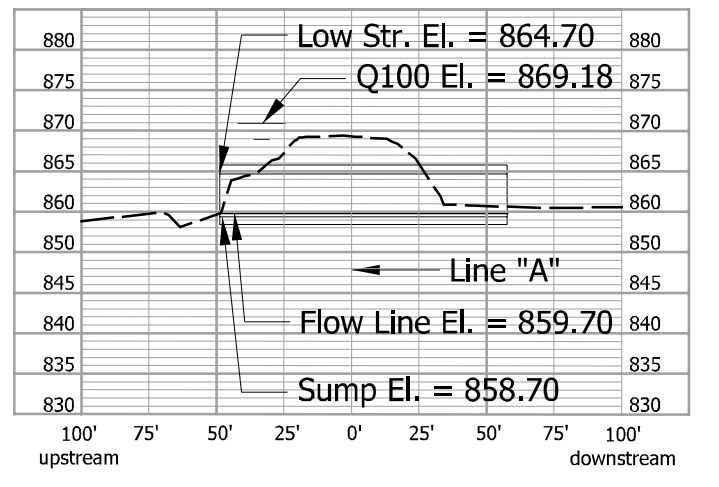
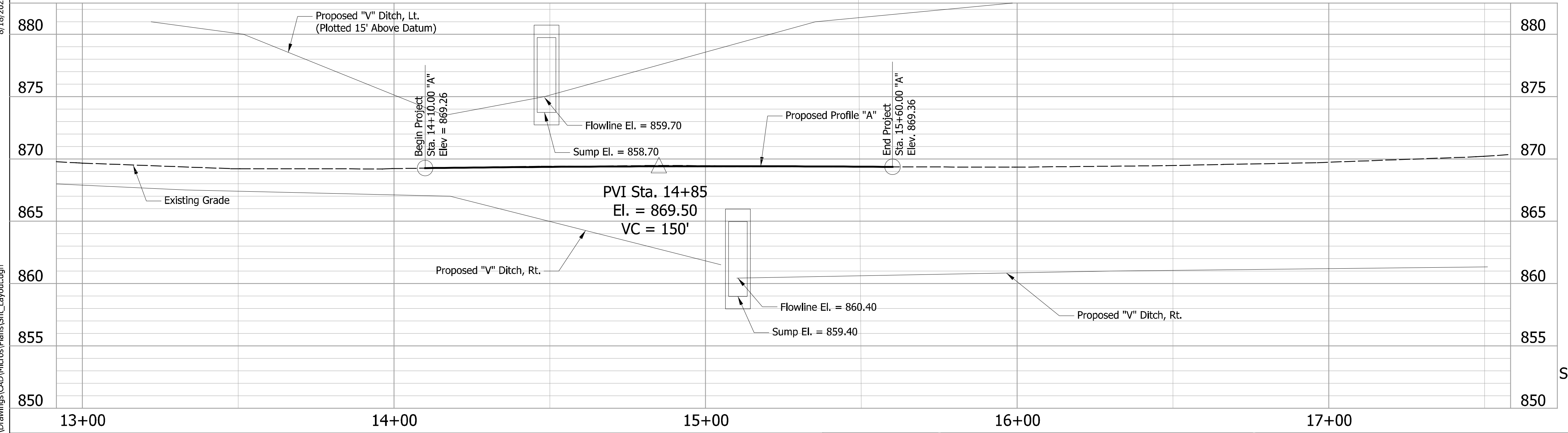


**EXISTING STRUCTURE**

The existing culvert (CV 105-092-27.82) is a corrugated metal pipe originally constructed at an unknown date and is a legal drain with flared end sections and a span of 4 feet. Existing culvert to be removed.

**HYDRAULIC DATA**

Waterway Opening Provided	29	sq ft
Drainage Area	336.86	ac
Drainage Discharge, Q100	424	cfs
Velocity	7.71	ft/s
Q100 Elev.	869.18	ft
Backwater at Q100	2.89	ft
Existing Waterway Opening	12.56	sq ft
Existing Backwater	3.59	ft
Low Structure Elev.	864.7	ft
Existing Low Structure Elev.	863.2	ft

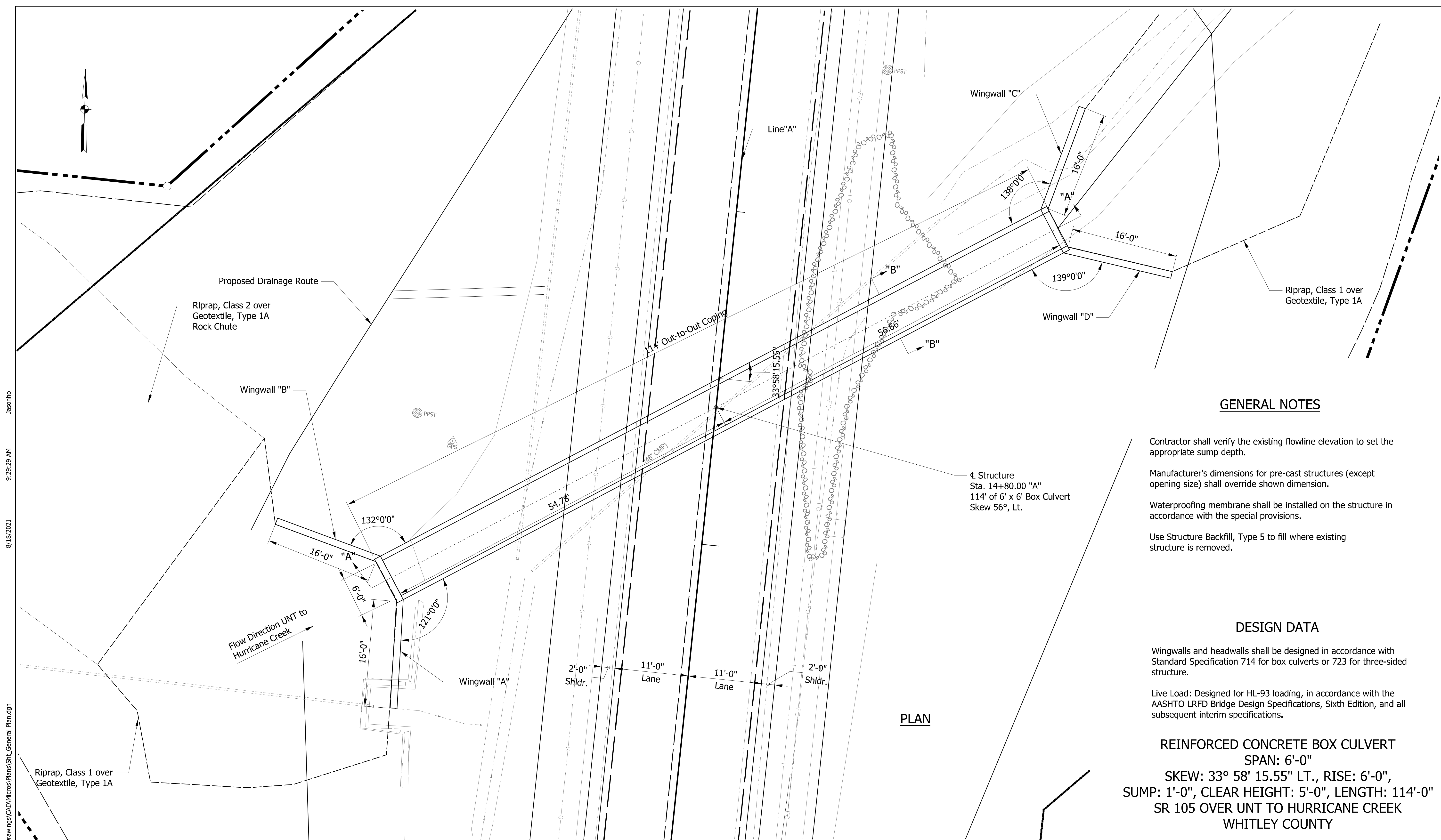


STREAM PROFILE

**REINFORCED CONCRETE BOX CULVERT**  
 SPAN: 6'-0"  
 SKEW: 33° 58' 15.55" LT., RISE: 6'-0",  
 SUMP: 1'-0", CLEAR HEIGHT: 5'-0", LENGTH: 114'-0"  
 SR 105 OVER UNT TO HURRICANE CREEK  
 WHITLEY COUNTY

DESIGNED: KJW CHECKED: JMH	DRAWN: ACB CHECKED: JMH	RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE	<b>INDIANA DEPARTMENT OF TRANSPORTATION</b>		HORIZONTAL SCALE 1" = 20'	BRIDGE FILE NO. CV 105-092-27.82
			<b>LAYOUT</b>		VERTICAL SCALE 1" = 4'	DESIGNATION NO. 1800184
					SURVEY BOOK NO.	SHEETS 10 of 27
					CONTRACT NO. R-43509	PROJECT NO. 1800184

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**GENERAL NOTES**

- 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.
- Use Structure Backfill, Type 5 to fill where existing structure is removed.

**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: 6'-0"**  
**SKEW: 33° 58' 15.55" LT., RISE: 6'-0",**  
**SUMP: 1'-0", CLEAR HEIGHT: 5'-0", LENGTH: 114'-0"**  
**SR 105 OVER UNT TO HURRICANE CREEK**  
**WHITLEY COUNTY**

**PLAN**

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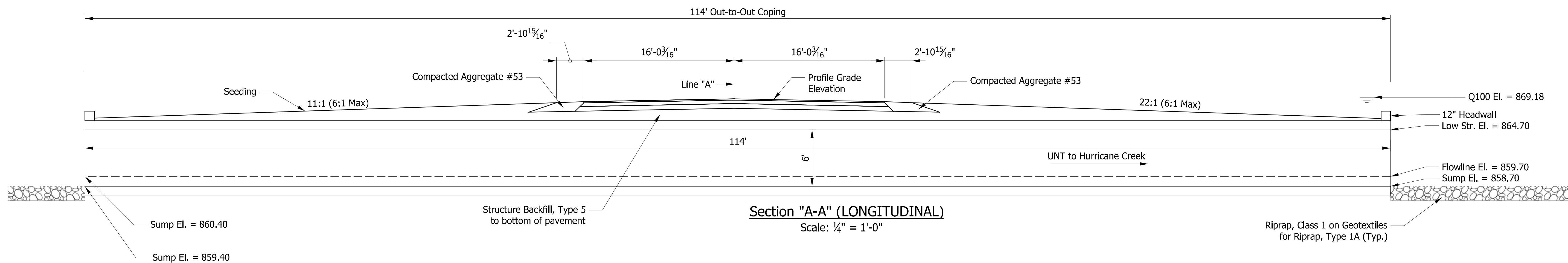
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DESIGNED: KJW	DRAWN: ACB	
CHECKED: JMH	CHECKED: JMH	

**INDIANA DEPARTMENT OF TRANSPORTATION**

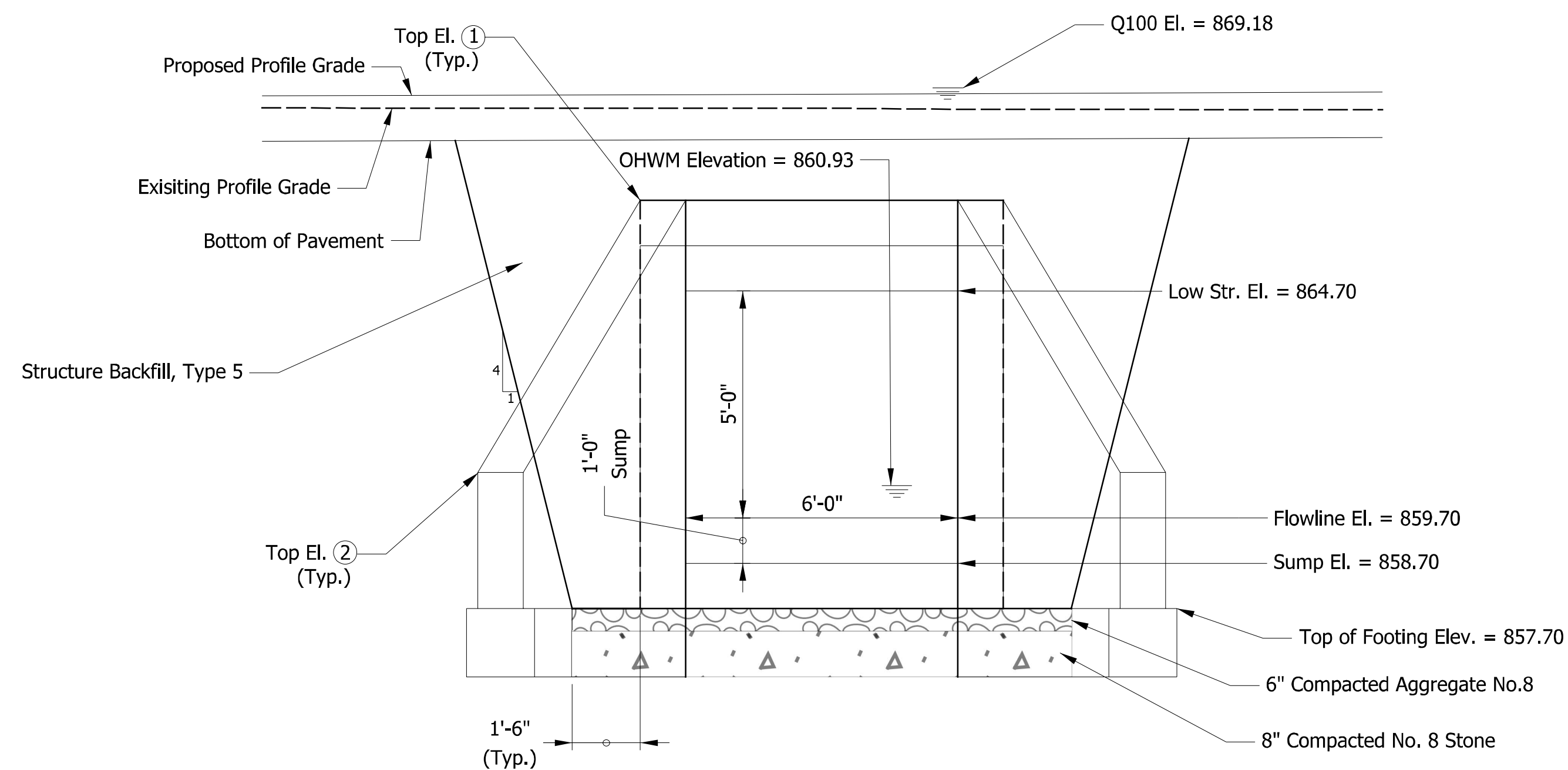
**GENERAL PLAN - STRUCTURE DETAILS**  
**SR 105 OVER UNT HURRICANE CREEK**

HORIZONTAL SCALE 1/8" = 1'-0"	BRIDGE FILE NO. CV 105-092-27.82
VERTICAL SCALE	DESIGNATION NO. 1800184
SURVEY BOOK NO.	SHEETS 11 of 27
CONTRACT NO. R-43509	PROJECT NO. 1800184





Section "A-A" (LONGITUDINAL)  
Scale: 1/4" = 1'-0"



Section "B-B" (TRANSVERSE)  
Scale: 3/8" = 1'-0"

WINGWALL TABLE				
WING	TOP ELEV ①	TOP ELEV ②	LENGTH "L"	AREA
"A"	867.40	861.00	16'-0"	104 Sft.
"B"	867.40	861.00	16'-0"	104 Sft.
"C"	866.70	860.00	16'-0"	90.4 Sft.
"D"	866.70	860.00	16'-0"	90.4 Sft.

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	2,385 psf
Resistance factor ( $\phi$ )	0.45
Nominal Bearing Resistance	5,300 psf
Friction angle between wingwall and soil backfill ( $\delta$ )	20°
Friction factor between footer, foundation soil (f)	N/A
Cohesion of foundation soil (C)	1000
Adhesion of foundation soil (Ca)	800
Angle of internal friction of foundation soil ( $\phi$ )	N/A

### GENERAL NOTES

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.

Use Structure Backfill, Type 5 to fill where existing structure is removed.

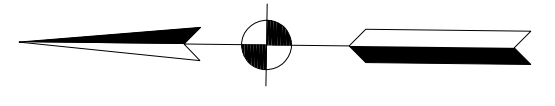
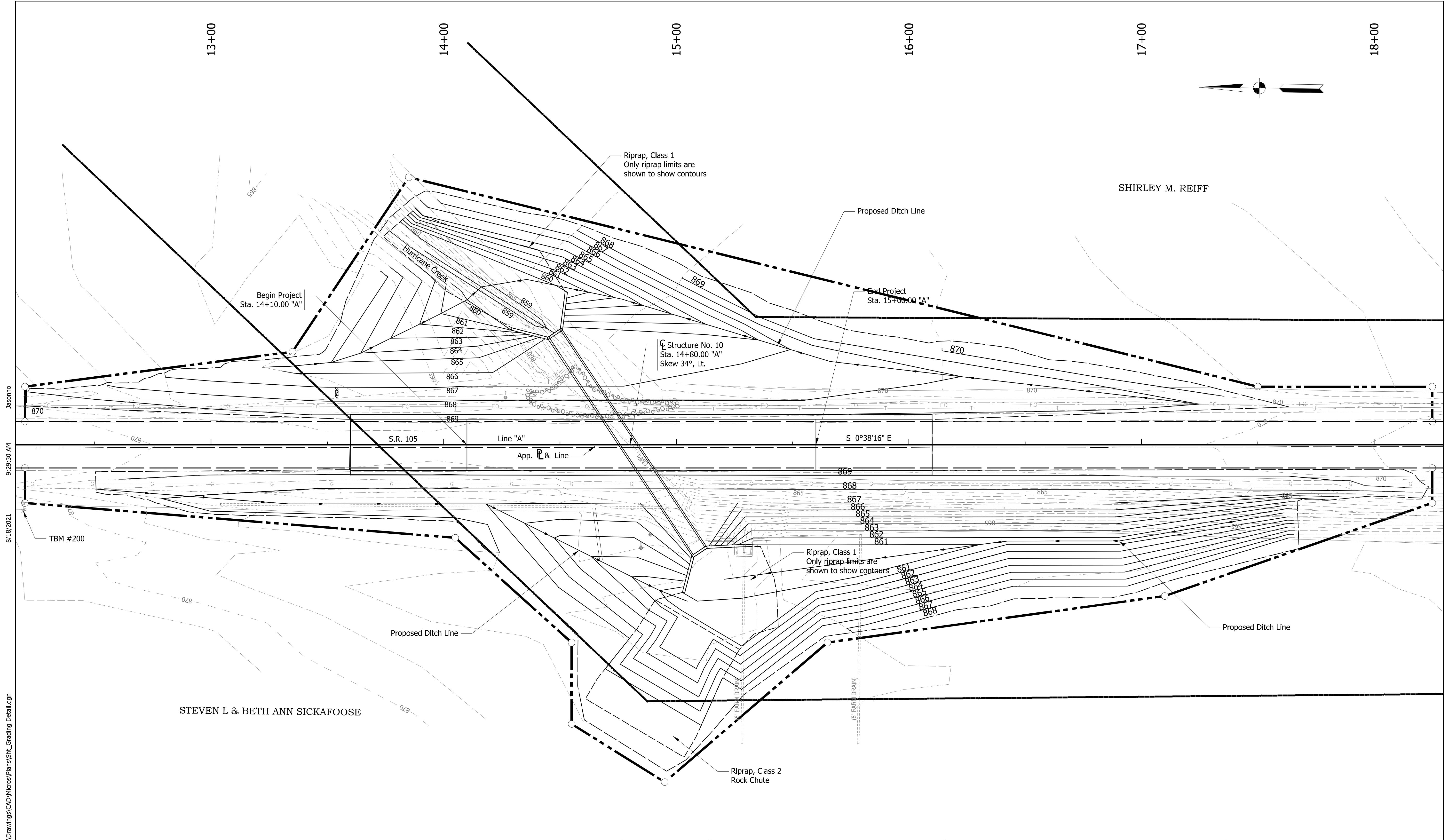
### DESIGN DATA

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: 6'-0"**  
**SKEW: 33° 58' 15.55" LT., RISE: 6'-0",**  
**SUMP: 1'-0", CLEAR HEIGHT: 5'-0", LENGTH: 114'-0"**  
**SR 105 OVER UNT TO HURRICANE CREEK**  
**WHITLEY COUNTY**

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE	INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE	BRIDGE FILE NO.
	DESIGNED: KJW	DRAWN: ACB		VERTICAL SCALE	DESIGNATION NO.
CHECKED: JMH	CHECKED: JMH		GENERAL PLAN - STRUCTURE DETAILS	NA	1800184
			SR 105 OVER UNT HURRICANE CREEK	SURVEY BOOK NO.	SHEETS
				R-43509	12 of 27
				CONTRACT NO.	PROJECT NO.
					1800184



SHIRLEY M. REIFF

STEVEN L & BETH ANN SICKAFOOSE

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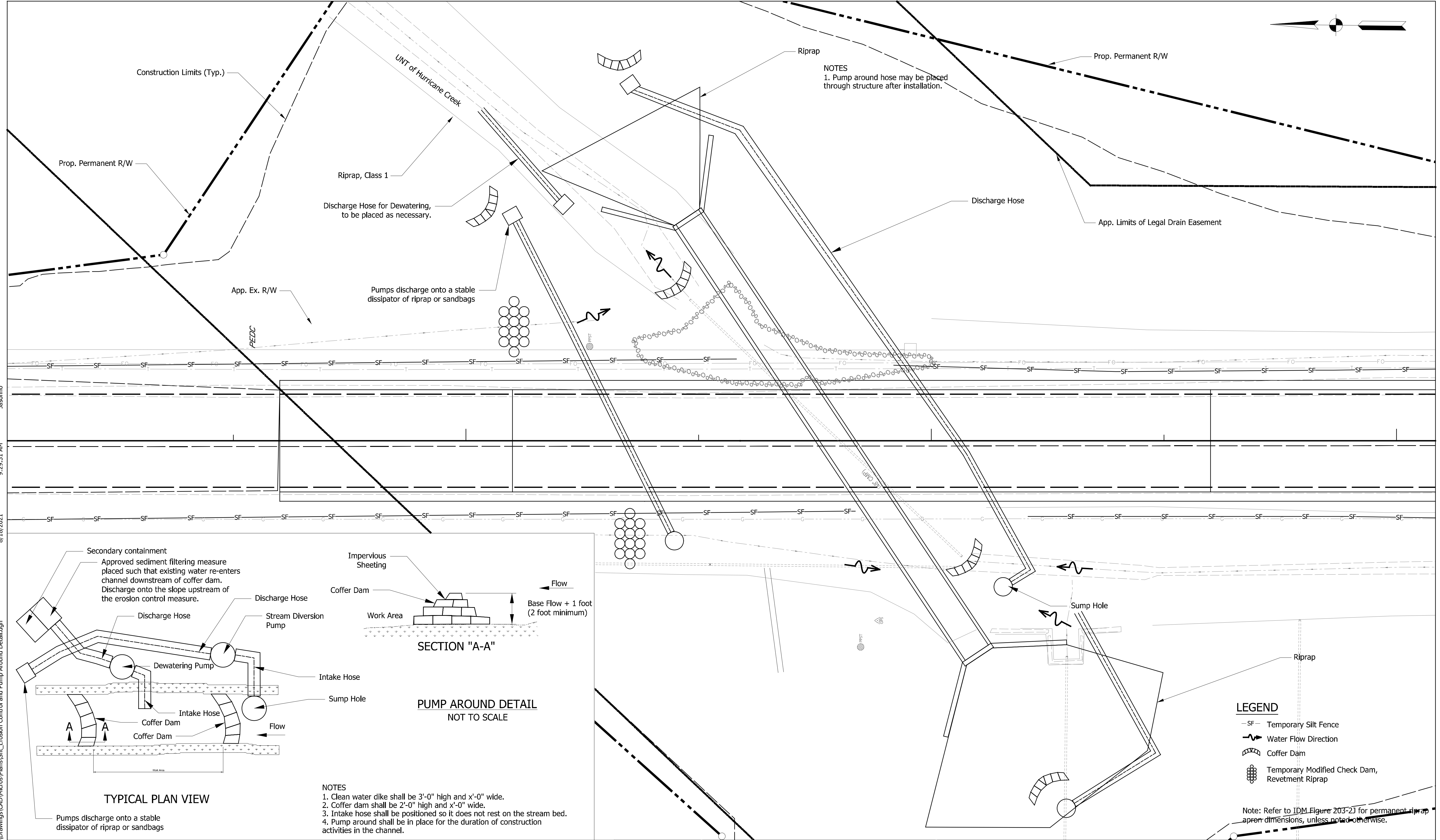
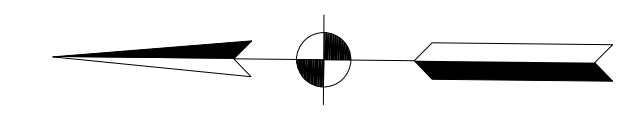
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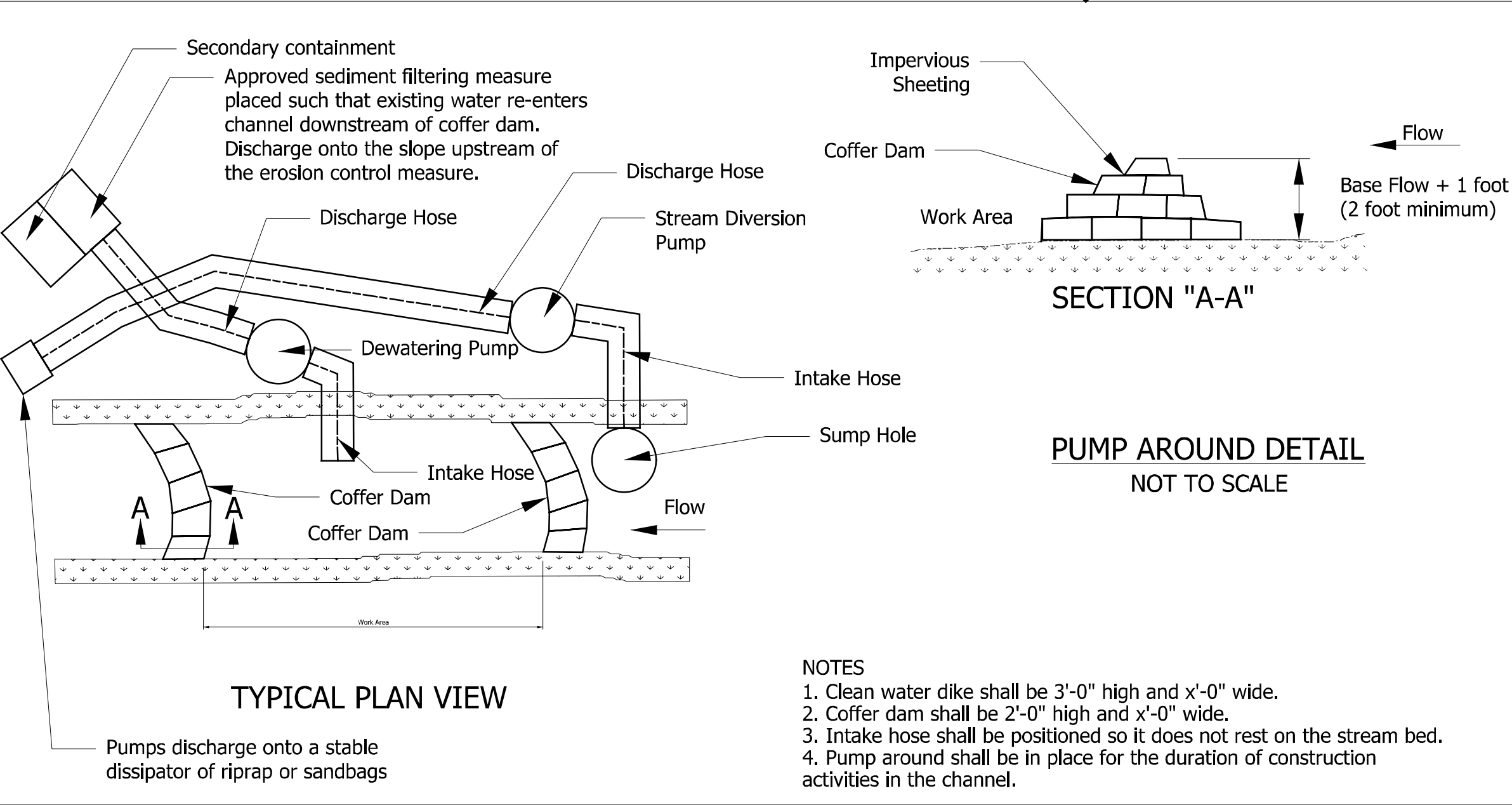
**INDIANA DEPARTMENT OF TRANSPORTATION**

**GRADING DETAIL**

HORIZONTAL SCALE 1" = 20'	BRIDGE FILE NO. CV 105-092-27.82
VERTICAL SCALE NA	DESIGNATION NO. 1800184
SURVEY BOOK NO.	SHEETS 13 of 27
CONTRACT NO. R-43509	PROJECT NO. 1800184



**NOTES**  
 1. Pump around hose may be placed through structure after installation.



**NOTES**  
 1. Clean water dike shall be 3'-0" high and x'-0" wide.  
 2. Cofferdam shall be 2'-0" high and x'-0" wide.  
 3. Intake hose shall be positioned so it does not rest on the stream bed.  
 4. Pump around shall be in place for the duration of construction activities in the channel.

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: KJW	DRAWN: ACB	
CHECKED: JMH	CHECKED: JMH	

**INDIANA DEPARTMENT OF TRANSPORTATION**  
**DEWATERING DETAIL**

HORIZONTAL SCALE 1" = 10'	BRIDGE FILE NO. CV 105-092-27.82
VERTICAL SCALE NA	DESIGNATION NO. 1800184
SURVEY BOOK NO.	SHEETS 14 of 27
CONTRACT NO. R-43509	PROJECT NO. 1800184

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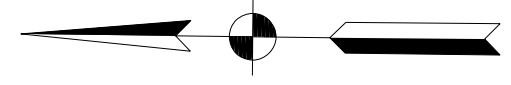
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Sec. 27, T-8-N, R-5-E  
Cleveland Township  
Whitley County



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SHIRLEY M. REIFF

SHIRLEY M. REIFF

STEVEN L & BETH ANN SICKAFOOSE

TEMPORARY SILT FENCE			
STATION	TO STATION	LT/RT	LENGTH
12+20	17+75	LT	555'
12+50	18+25	RT	575'

EROSION CONTROL BLANKET			
STATION	TO STATION	LT/RT	AREA
12+20	17+75	LT	2286 SYS
12+50	18+25	RT	2891 SYS

TEMPORARY MODIFIED CHECK DAMS				
STATION	STATION	Lt./ Rt.	# CHECKS	REVET. RIPRAP
LINE "A"				TON
13+50		LT	1	4.8
14+10		RT	1	4.8
15+20		LT	1	4.8
TOTALS				14.4

**LEGEND**

- SF- Temporary Silt Fence
- Water Flow Direction
- ▒ Coffey Dam
- ⊞ Temporary Modified Check Dam, Revetment Riprap
- 27 Erosion Control Blanket

Sec. 28, T-8-N, R-5-E  
Cleveland Township  
Whitley County

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: KJW	DRAWN: ACB	
CHECKED: JMH	CHECKED: JMH	

**INDIANA  
DEPARTMENT OF TRANSPORTATION**

**EROSION CONTROL DETAIL**

HORIZONTAL SCALE 1" = 30'	BRIDGE FILE NO. CV 105-092-27.82
VERTICAL SCALE NA	DESIGNATION NO. 1800184
SURVEY BOOK NO.	SHEETS 15 of 27
CONTRACT NO. R-43509	PROJECT NO. 1800184

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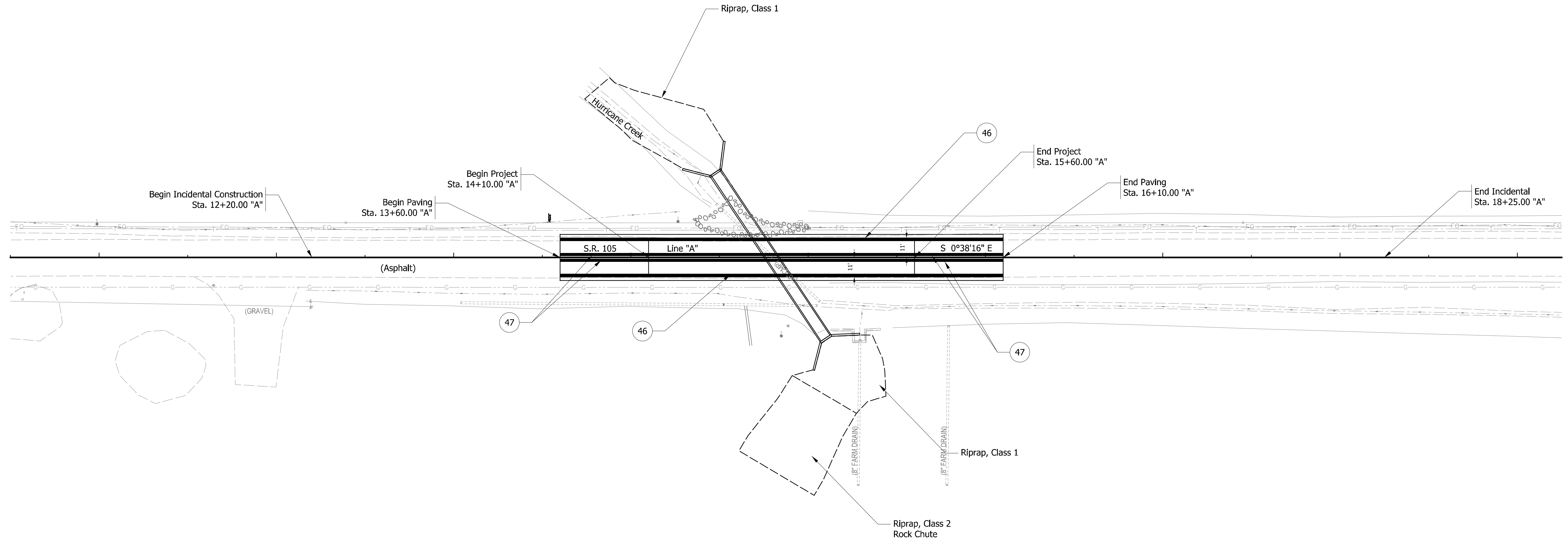
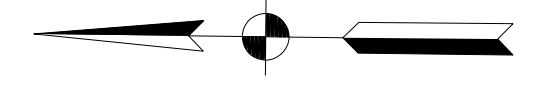
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**LEGEND**

- ④ Line, Paint, White, 4 in.
- ④ Line, Paint, Yellow, 4 in.

RECOMMENDED FOR APPROVAL		DESIGN ENGINEER	DATE
DESIGNED: KJW	DRAWN: ACB		
CHECKED: JMH	CHECKED: JMH		

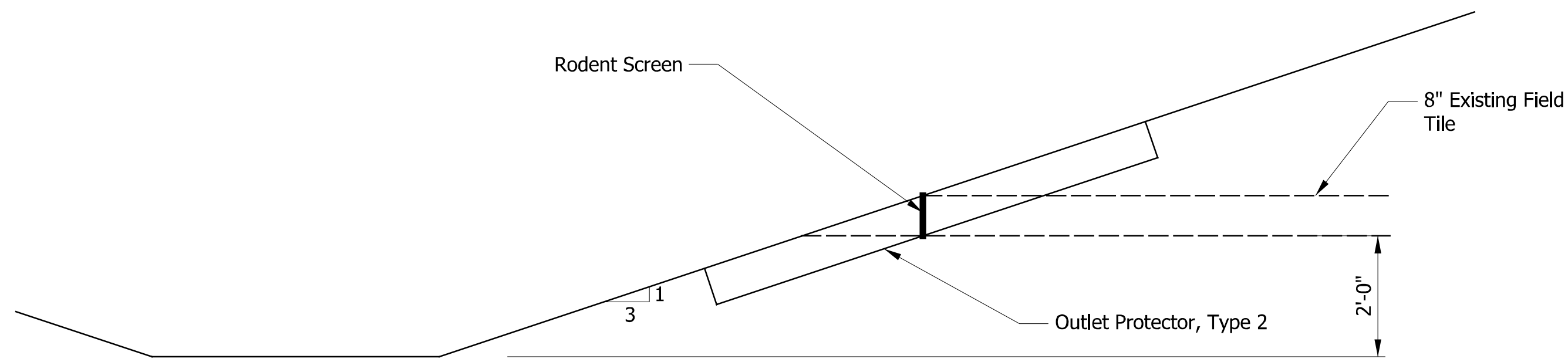
**INDIANA  
DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING DETAIL**

HORIZONTAL SCALE 1" = 30'	BRIDGE FILE NO. CV 105-092-27.82
VERTICAL SCALE NA	DESIGNATION NO. 1800184
SURVEY BOOK NO.	SHEETS 16 of 27
CONTRACT NO. R-43509	PROJECT NO. 1800184

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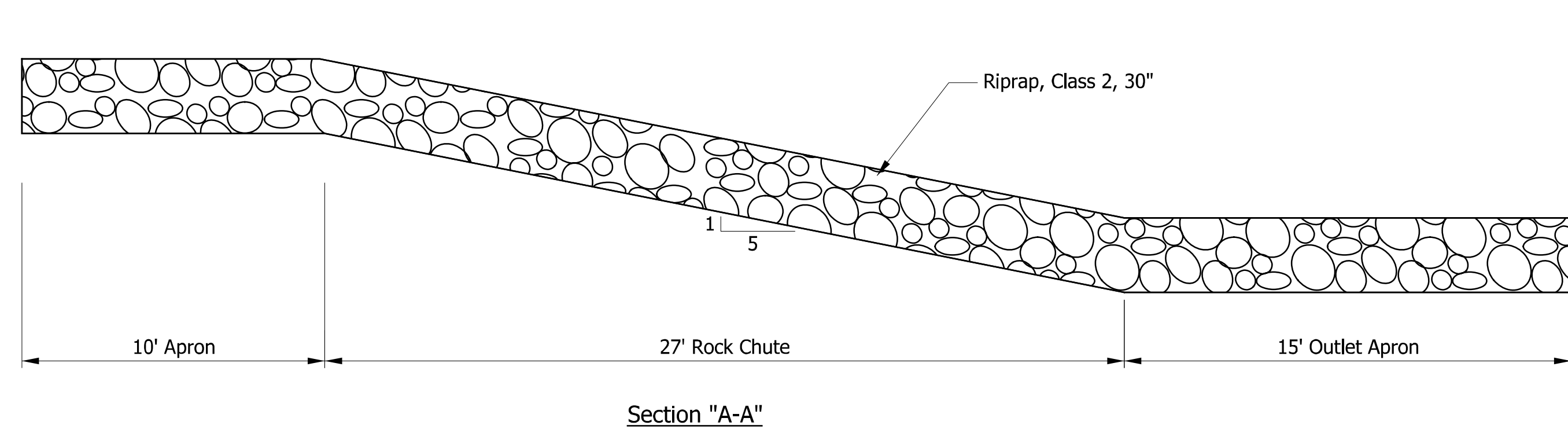


**DITCH OUTLET DETAIL**

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

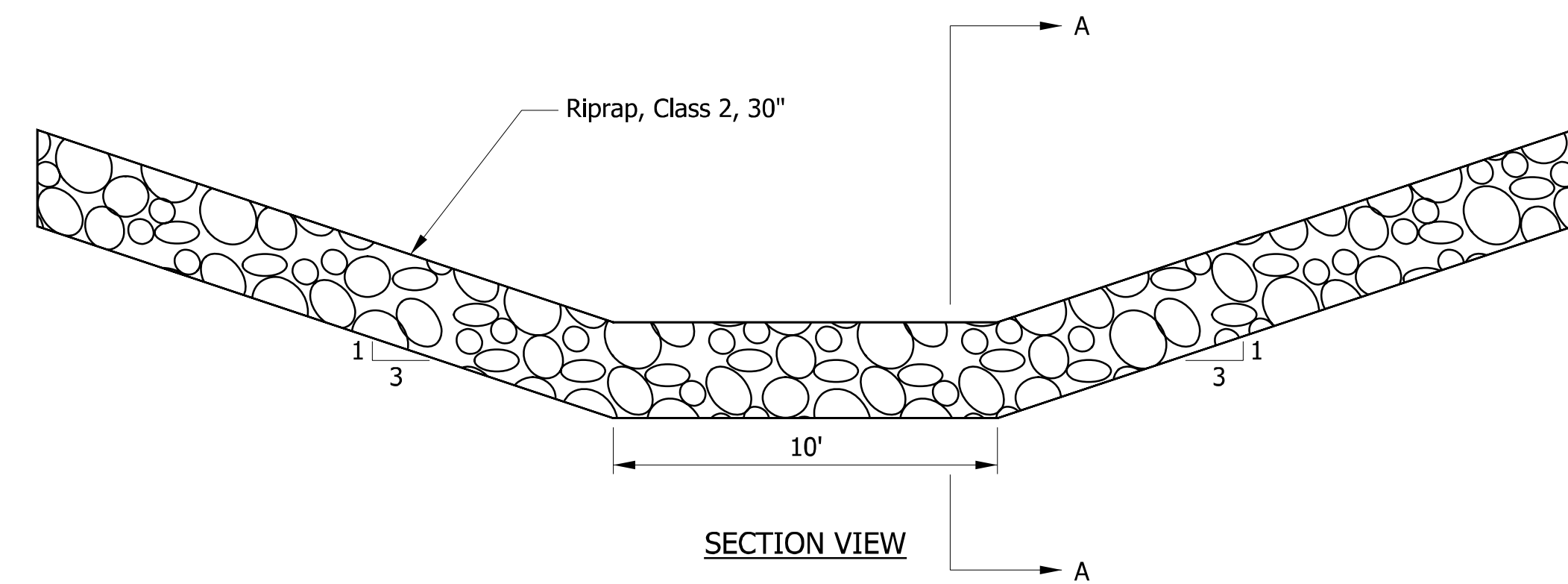
**NOTES**

1. Ditch Outlet detail modified from Standard Drawing E 718-UDR-03.
2. Outlet Protector, Type 2 in accordance with Standard Drawing E 718-UNDR-05 using 8" pipe.



**ROCK CHUTE DETAIL**

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



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RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: KJW	DRAWN: ACB	
CHECKED: JMH	CHECKED: JMH	

**INDIANA  
DEPARTMENT OF TRANSPORTATION**

**GENERAL PLAN - STRUCTURE DETAILS  
SR 105 OVER UNT HURRICANE CREEK**

HORIZONTAL SCALE	BRIDGE FILE NO.
1/8"=1'-0"	CV 105-092-27.82
VERTICAL SCALE	DESIGNATION NO.
NA	1800184
SURVEY BOOK NO.	SHEETS
	17 of 27
CONTRACT NO.	PROJECT NO.
R-43509	1800184