



INDIANA DEPARTMENT OF TRANSPORTATION

Driving Indiana's Economic Growth

Seymour District
185 Agrico Lane
Seymour, IN 47274

PHONE: (812) 524-3700
FAX: (812) 522-7658

Mitchell E. Daniels, Jr., Governor
Michael B. Cline, Commissioner

June 7, 2011

Re: Des. #0800197, Repair of five drainage structures, Clark County

Reviewer,

The Indiana Department of Transportation intends to proceed with a project involving the aforementioned small structure replacement in Clark County. This letter is part of the early coordination phase of the environmental review process. We are requesting comments from your area of expertise regarding any possible environmental effects associated with this project. **Please use the above designation numbers and description in your reply.** We will incorporate your comments into a study of the project's environmental impacts.

This project consists of the repair of five drainage structures as shown on the attached maps. New permanent right-of-way will be required for the structures as shown on the attached maps.

Total new right-of-way in the amount of 0.053 acres is required for this project and consists of 0.464 acres permanent and 0.079 acres temporary right-of-way. The amount of right-of-way required for individual structures are shown in the table below:

Culvert	Reference Post	Permanent Right-of-Way	Temporary Right-of-Way
A	22+80	0.015	0.000
B	29+20	0.008	0.000
C	46+30	0.056	0.000
D	47+10	0.310	0.079
E	58+65	0.075	0.000

Should we not receive your response **within thirty (30) calendar days** from the date of this letter, it will be assumed that your agency feels that there will be no adverse effects incurred as a result of the proposed project. However, should you find that an extension to the response time is necessary; a reasonable amount may be granted upon request. If you have any questions regarding this matter, please feel free to contact Brad Williamson, of the INDOT Seymour District Environmental Section, at (812)-524-3971 or bwilliamson@indot.in.gov

Thank you in advance for your input.

Sincerely,

Brad Williamson
Environmental Manager
INDOT Seymour District

FARMLAND CONVERSION IMPACT RATING

PART I (To be completed by Federal Agency)					Date Of Land Evaluation Request				
Name of Project Designation #0800197					Federal Agency Involved INDOT (Federally funded project)				
Proposed Land Use INDOT Right-of-Way					County and State Clark County, Indiana				
PART II (To be completed by NRCS)					Date Request Received By NRCS			Person Completing Form:	
Does the site contain Prime, Unique, Statewide or Local Important Farmland? (If no, the FPPA does not apply - do not complete additional parts of this form)					YES ☐	NO ☐	Acres Irrigated		Average Farm Size
Major Crop(s)			Farmable Land In Govt. Jurisdiction Acres: %			Amount of Farmland As Defined in FPPA Acres: %			
Name of Land Evaluation System Used			Name of State or Local Site Assessment System			Date Land Evaluation Returned by NRCS			
PART III (To be completed by Federal Agency)					Alternative Site Rating				
					Site A	Site B	Site C	Site D	
A. Total Acres To Be Converted Directly					0.464				
B. Total Acres To Be Converted Indirectly									
C. Total Acres In Site					0.464				
PART IV (To be completed by NRCS) Land Evaluation Information									
A. Total Acres Prime And Unique Farmland									
B. Total Acres Statewide Important or Local Important Farmland									
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted									
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value									
PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)									
PART VI (To be completed by Federal Agency) Site Assessment Criteria (Criteria are explained in 7 CFR 658.5 b. For Corridor project use form NRCS-CPA-106)					Maximum Points	Site A	Site B	Site C	Site D
1. Area In Non-urban Use					(15)				
2. Perimeter In Non-urban Use					(10)				
3. Percent Of Site Being Farmed					(20)				
4. Protection Provided By State and Local Government					(20)				
5. Distance From Urban Built-up Area					(15)				
6. Distance To Urban Support Services					(15)				
7. Size Of Present Farm Unit Compared To Average					(10)				
8. Creation Of Non-farmable Farmland					(10)				
9. Availability Of Farm Support Services					(5)				
10. On-Farm Investments					(20)				
11. Effects Of Conversion On Farm Support Services					(10)				
12. Compatibility With Existing Agricultural Use					(10)				
TOTAL SITE ASSESSMENT POINTS					160				
PART VII (To be completed by Federal Agency)									
Relative Value Of Farmland (From Part V)					100				
Total Site Assessment (From Part VI above or local site assessment)					160				
TOTAL POINTS (Total of above 2 lines)					260				
Site Selected:			Date Of Selection			Was A Local Site Assessment Used? YES ☐ NO ☐			
Reason For Selection:									
Name of Federal agency representative completing this form:								Date:	

(See Instructions on reverse side)

Form AD-1006 (03-02)

STEPS IN THE PROCESSING THE FARMLAND AND CONVERSION IMPACT RATING FORM

- Step 1 - Federal agencies (or Federally funded projects) involved in proposed projects that may convert farmland, as defined in the Farmland Protection Policy Act (FPPA) to nonagricultural uses, will initially complete Parts I and III of the form. For Corridor type projects, the Federal agency shall use form NRCS-CPA-106 in place of form AD-1006. The Land Evaluation and Site Assessment (LESA) process may also be accessed by visiting the FPPA website, <http://fppa.nrcs.usda.gov/lesa/>.
- Step 2 - Originator (Federal Agency) will send one original copy of the form together with appropriate scaled maps indicating location(s) of project site(s), to the Natural Resources Conservation Service (NRCS) local Field Office or USDA Service Center and retain a copy for their files. (NRCS has offices in most counties in the U.S. The USDA Office Information Locator may be found at http://offices.usda.gov/scripts/ndISAPI.dll/oip_public/USA_map, or the offices can usually be found in the Phone Book under U.S. Government, Department of Agriculture. A list of field offices is available from the NRCS State Conservationist and State Office in each State.)
- Step 3 - NRCS will, within 10 working days after receipt of the completed form, make a determination as to whether the site(s) of the proposed project contains prime, unique, statewide or local important farmland. (When a site visit or land evaluation system design is needed, NRCS will respond within 30 working days.
- Step 4 - For sites where farmland covered by the FPPA will be converted by the proposed project, NRCS will complete Parts II, IV and V of the form.
- Step 5 - NRCS will return the original copy of the form to the Federal agency involved in the project, and retain a file copy for NRCS records.
- Step 6 - The Federal agency involved in the proposed project will complete Parts VI and VII of the form and return the form with the final selected site to the servicing NRCS office.
- Step 7 - The Federal agency providing financial or technical assistance to the proposed project will make a determination as to whether the proposed conversion is consistent with the FPPA.

INSTRUCTIONS FOR COMPLETING THE FARMLAND CONVERSION IMPACT RATING FORM (For Federal Agency)

Part I: When completing the "County and State" questions, list all the local governments that are responsible for local land use controls where site(s) are to be evaluated.

Part III: When completing item B (Total Acres To Be Converted Indirectly), include the following:

1. Acres not being directly converted but that would no longer be capable of being farmed after the conversion, because the conversion would restrict access to them or other major change in the ability to use the land for agriculture.
2. Acres planned to receive services from an infrastructure project as indicated in the project justification (e.g. highways, utilities planned build out capacity) that will cause a direct conversion.

Part VI: Do not complete Part VI using the standard format if a State or Local site assessment is used. With local and NRCS assistance, use the local Land Evaluation and Site Assessment (LESA).

1. Assign the maximum points for each site assessment criterion as shown in § 658.5(b) of CFR. In cases of corridor-type project such as transportation, power line and flood control, criteria #5 and #6 will not apply and will, be weighted zero, however, criterion #8 will be weighed a maximum of 25 points and criterion #11 a maximum of 25 points.
2. Federal agencies may assign relative weights among the 12 site assessment criteria other than those shown on the FPPA rule after submitting individual agency FPPA policy for review and comment to NRCS. In all cases where other weights are assigned, relative adjustments must be made to maintain the maximum total points at 160. For project sites where the total points equal or exceed 160, consider alternative actions, as appropriate, that could reduce adverse impacts (e.g. Alternative Sites, Modifications or Mitigation).

Part VII: In computing the "Total Site Assessment Points" where a State or local site assessment is used and the total maximum number of points is other than 160, convert the site assessment points to a base of 160.

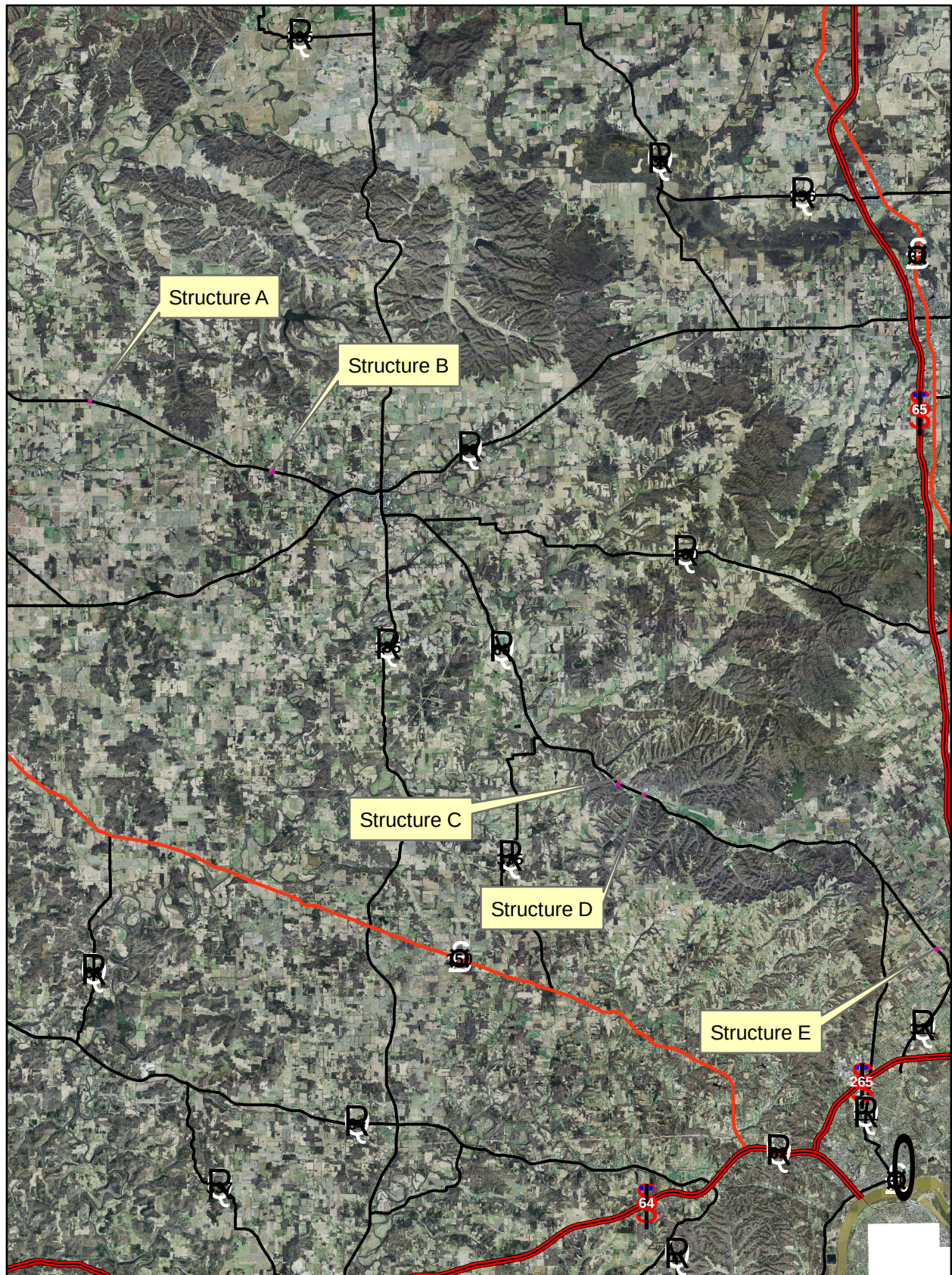
Example: if the Site Assessment maximum is 200 points, and the alternative Site "A" is rated 180 points:

$\frac{\text{Total points assigned Site A}}{\text{Maximum points possible}} = \frac{180}{200} \times 160 = 144 \text{ points for Site A}$

For assistance in completing this form or FPPA process, contact the local NRCS Field Office or USDA Service Center.

NRCS employees, consult the FPPA Manual and/or policy for additional instructions to complete the AD-1006 form.

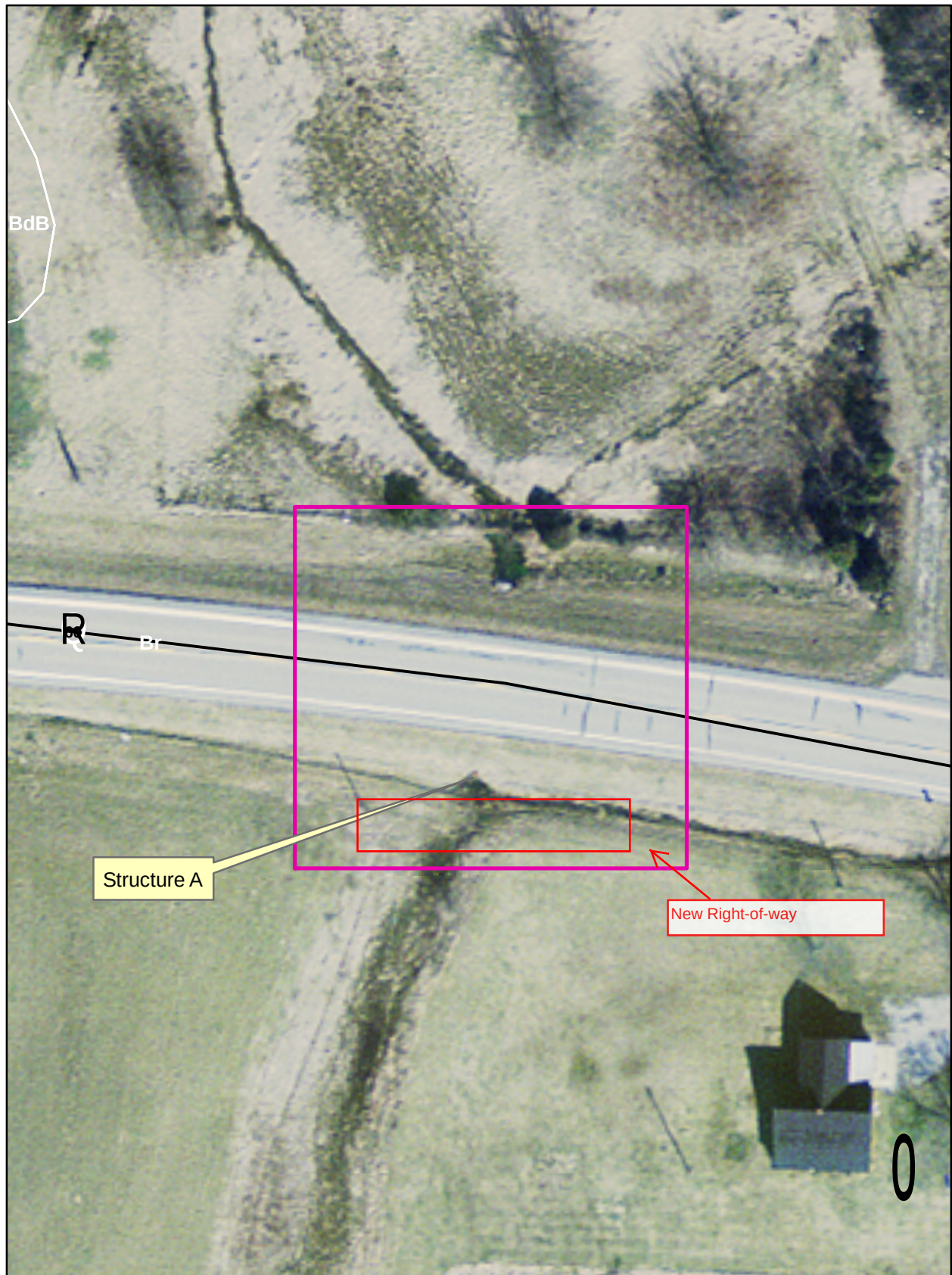
**SR 60, Clark County
Des. # 0800197, Pipe Liners,
Various Locations**



0 2.5 5 10
Miles

Aerial Photograph 2005
Source: 2005 Indiana Orthophotography (IndianaMap
Framework Data www.indianamap.org)

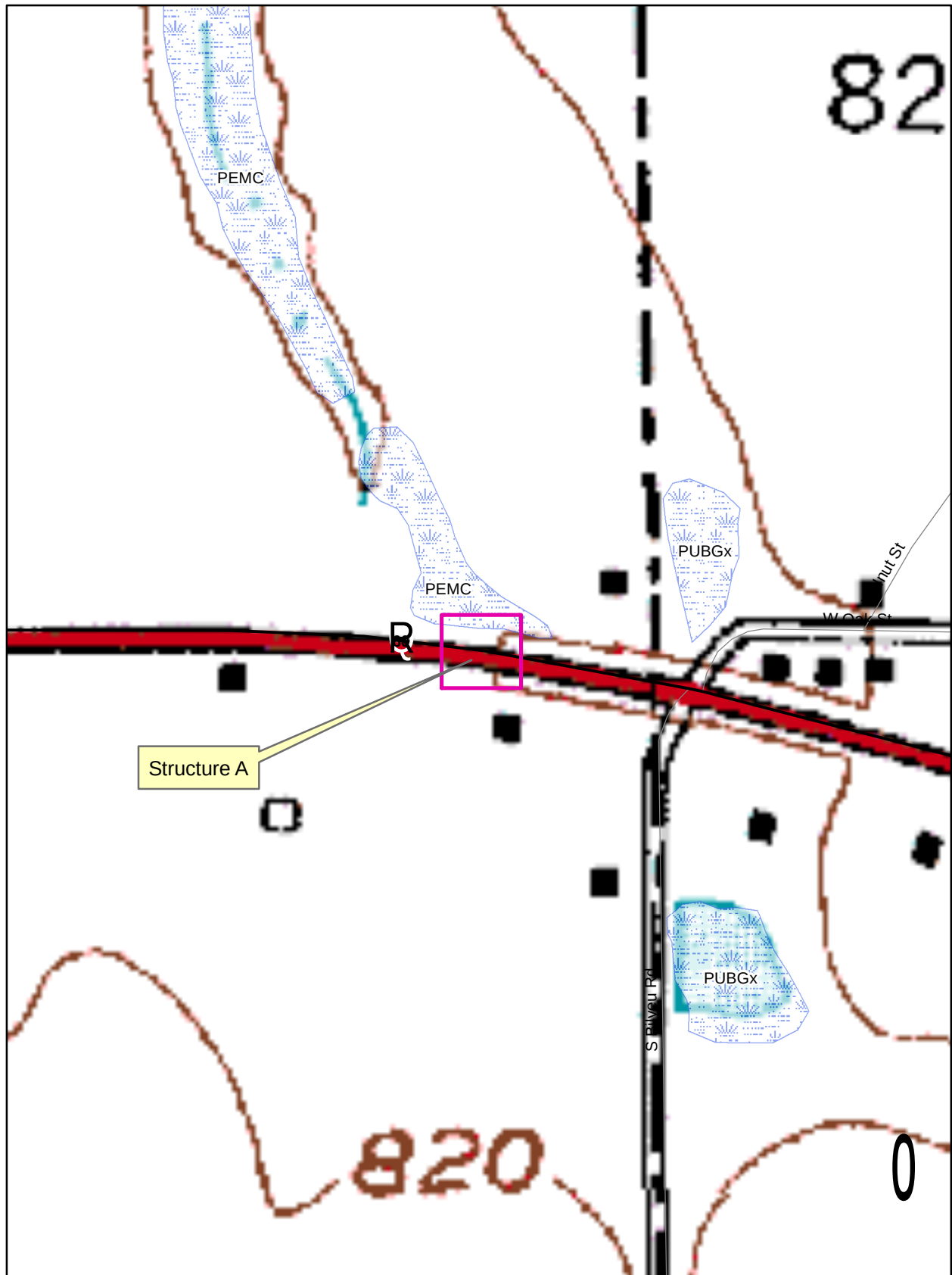
**SR 60, Washington County
Des. # 0800197, Pipe Liners, Various Locations
Structure A @ RP 22+80**



0 25 50 100
Feet

Aerial Photograph 2005
Town 3N, Range 2E, Section 34
Aerial Source: 2005 Indiana Orthophotography
(IndianaMap Framework Data www.indianamap.org)
Soils Source: U.S.D.A., N.R.C.S., Soil Survey Geographic
(SSURGO) Database for Washington County, Indiana

SR 60, Washington County
Des. # 0800197, Pipe Liners, Various Locations
Structure A @ RP 22+80



0 135 270 540
Feet

Campbellsburg, Indiana Quadrangle
Town 3N, Range 2E, Section 34
Source: U.S.G.S. 7.5 Minute Series Topographic Map
Source: US Fish and Wildlife Service,
National Wetland Inventory

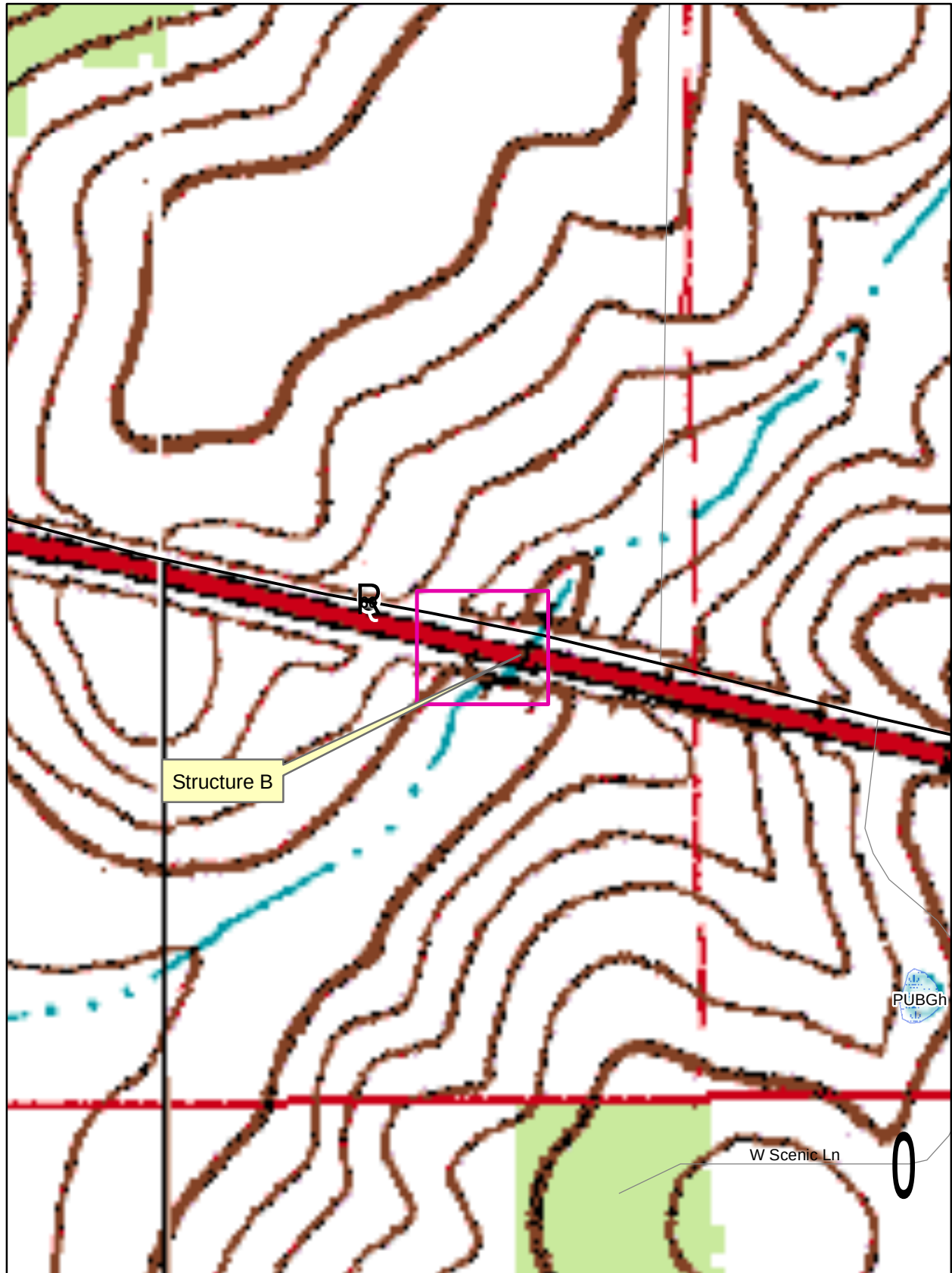
**SR 60, Washington County
Des. # 0800197, Pipe Liners, Various Locations
Structure B @ RP 29+20**



0 30 60 120
Feet

Aerial Photograph 2005
Town 2N, Range 3E, Section 10
Aerial Source: 2005 Indiana Orthophotography
(IndianaMap Framework Data www.indianamap.org)
Soils Source: U.S.D.A., N.R.C.S., Soil Survey Geographic
(SSURGO) Database for Washington County, Indiana

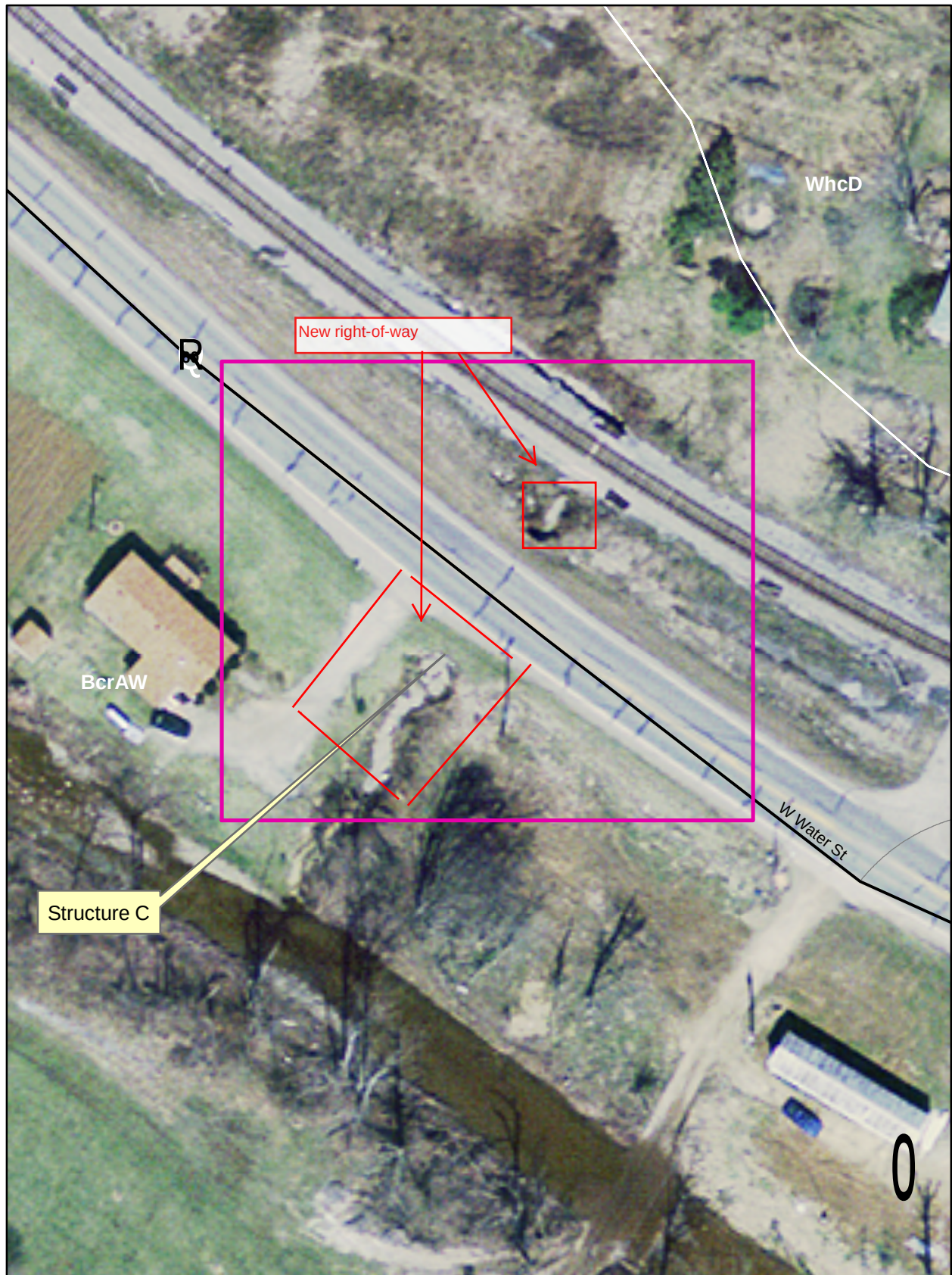
SR 60, Washington County
Des. # 0800197, Pipe Liners, Various Locations
Structure B @ RP 29+20



0 150 300 600
Feet

Becks Mill, Indiana Quadrangle
Town 2N, Range 3E, Section 10
Source: U.S.G.S. 7.5 Minute Series Topographic Map
Source: US Fish and Wildlife Service,
National Wetland Inventory

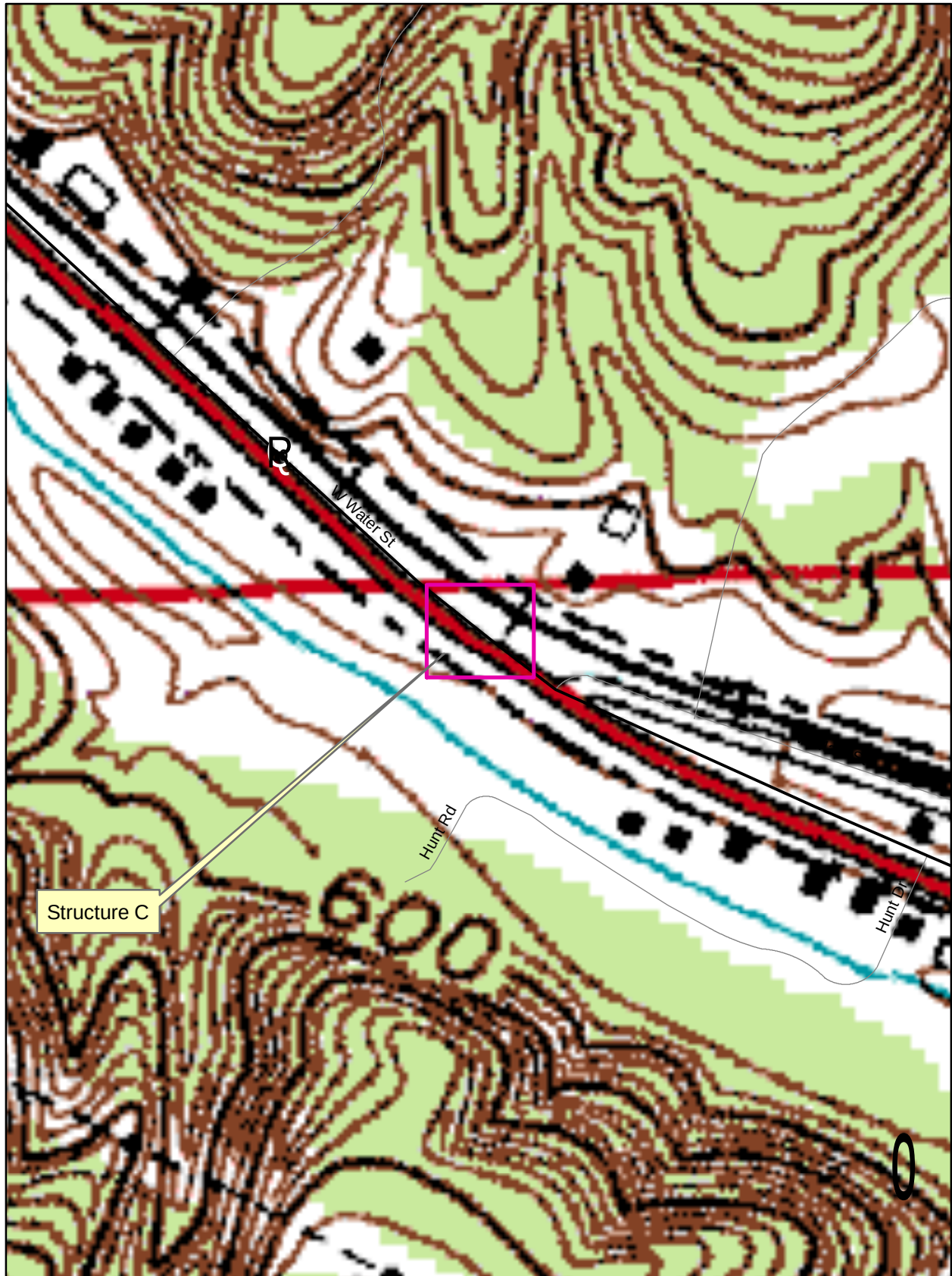
SR 60, Clark County
Des. # 0800197, Pipe Liners, Various Locations
Structure C @ RP 46+30



0 30 60 120
Feet

Aerial Photograph 2005
Town 1S, Range 5E, Section 4
Aerial Source: 2005 Indiana Orthophotography
(IndianaMap Framework Data www.indianamap.org)
Soils Source: U.S.D.A., N.R.C.S., Soil Survey Geographic
(SSURGO) Database for Clark County, Indiana

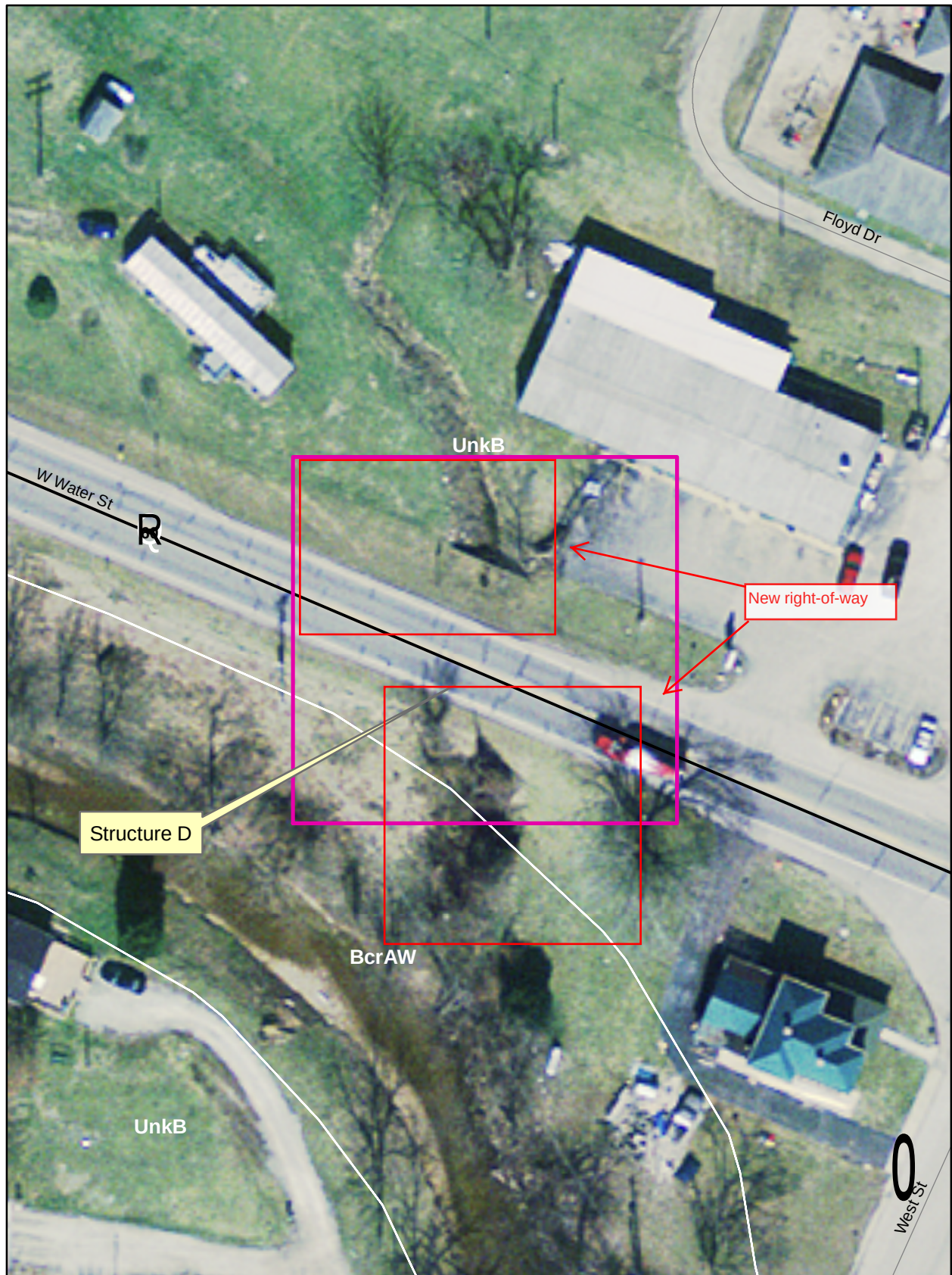
SR 60, Clark County
Des. # 0800197, Pipe Liners, Various Locations
Structure C @ RP 46+30



0 150 300 600
Feet

Borden, Indiana Quadrangle
Town 1S, Range 5E, Section 4
Source: U.S.G.S. 7.5 Minute Series Topographic Map
Source: US Fish and Wildlife Service,
National Wetland Inventory

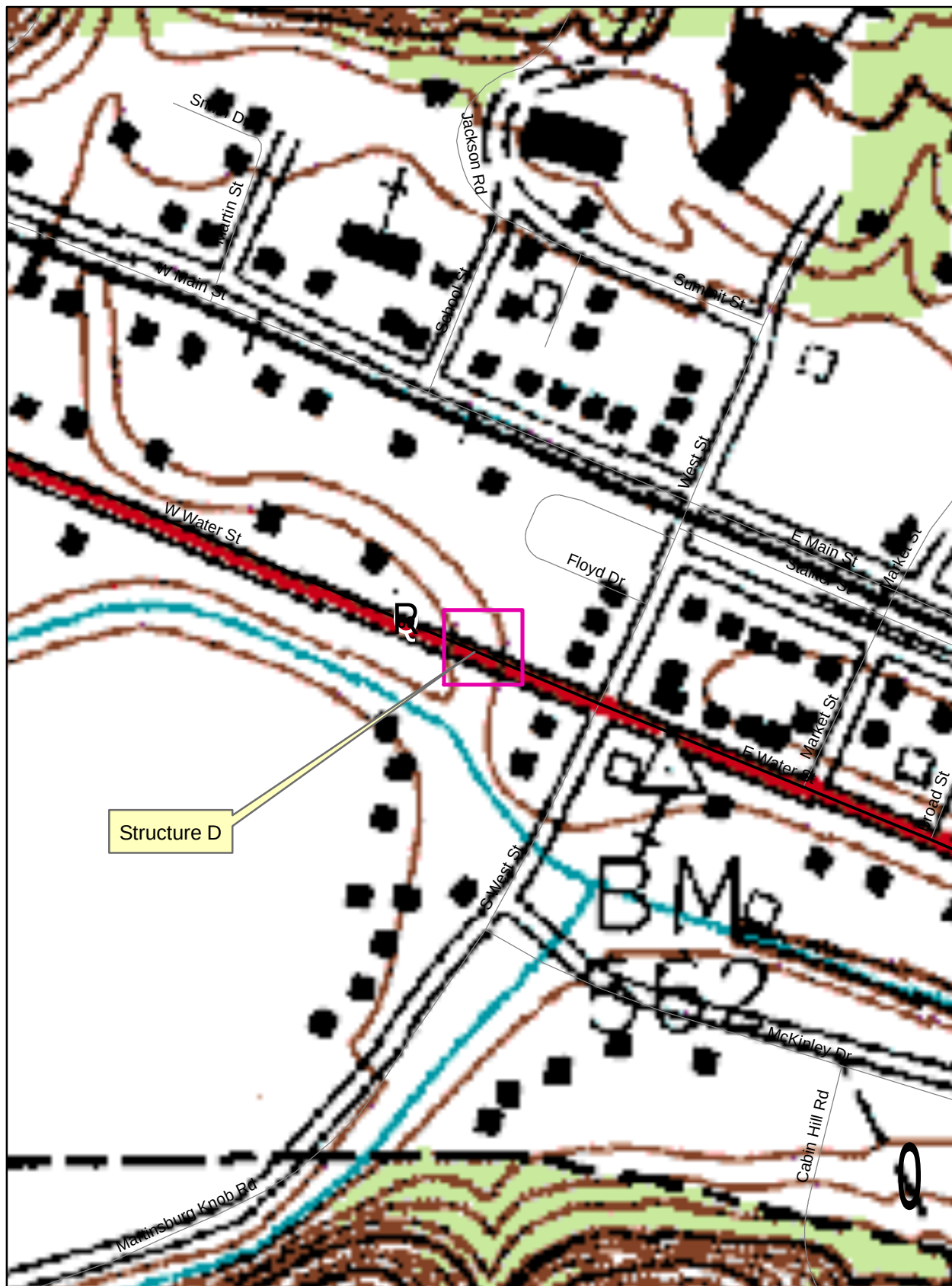
SR 60, Clark County
Des. # 0800197, Pipe Liners, Various Locations
Structure D @ RP 47+10



0 30 60 120
Feet

Aerial Photograph 2005
Town 1S, Range 5E, Section 3
Aerial Source: 2005 Indiana Orthophotography
(IndianaMap Framework Data www.indianamap.org)
Soils Source: U.S.D.A., N.R.C.S., Soil Survey Geographic
(SSURGO) Database for Clark County, Indiana

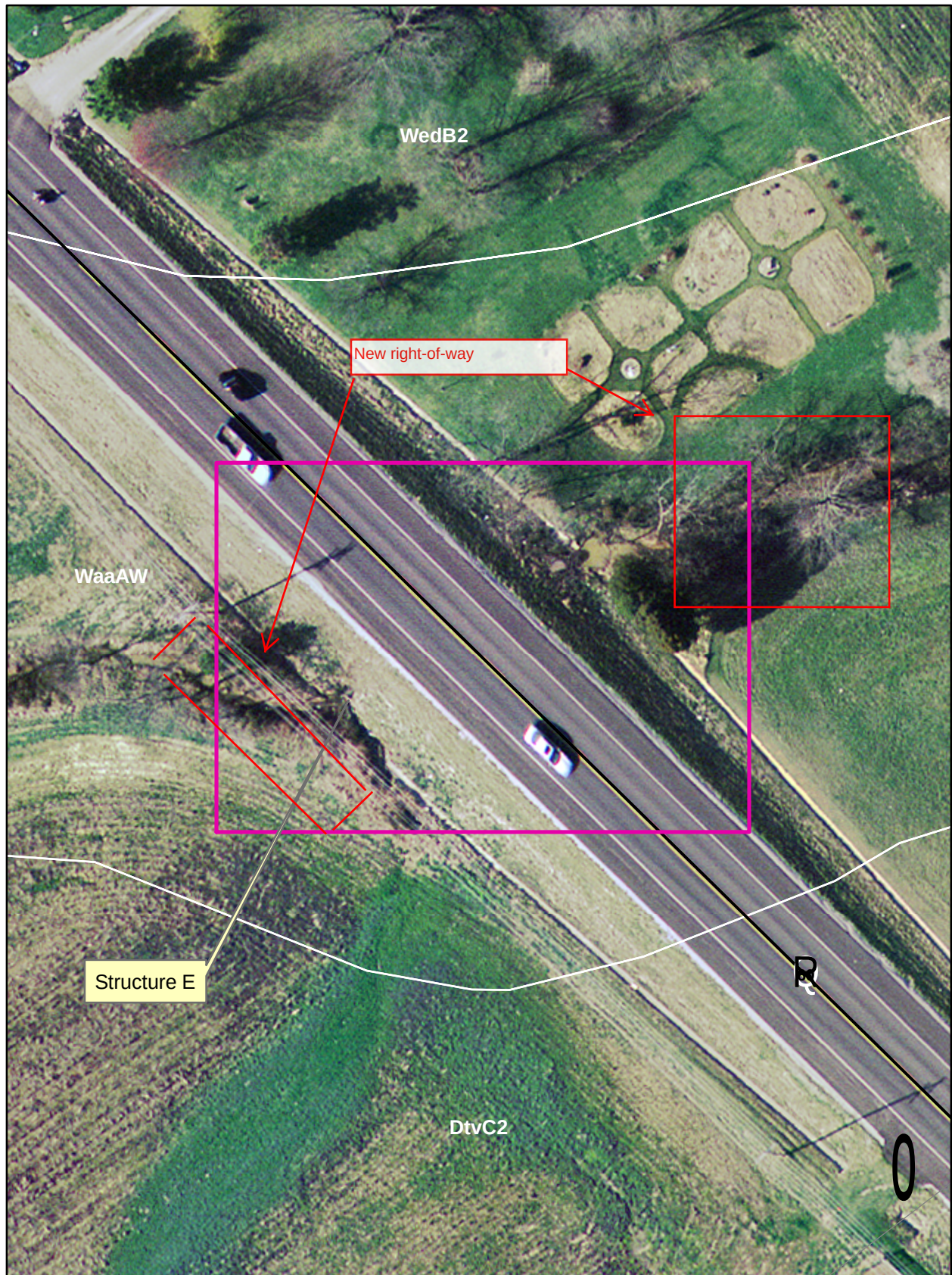
SR 60, Clark County
Des. # 0800197, Pipe Liners, Various Locations
Structure D @ RP 47+10



0 150 300 600
Feet

Borden, Indiana Quadrangle
Town 1S, Range 5E, Section 3
Source: U.S.G.S. 7.5 Minute Series Topographic Map
Source: US Fish and Wildlife Service,
National Wetland Inventory

SR 60, Clark County
Des. # 0800197, Pipe Liners, Various Locations
Structure E @ RP 58+65

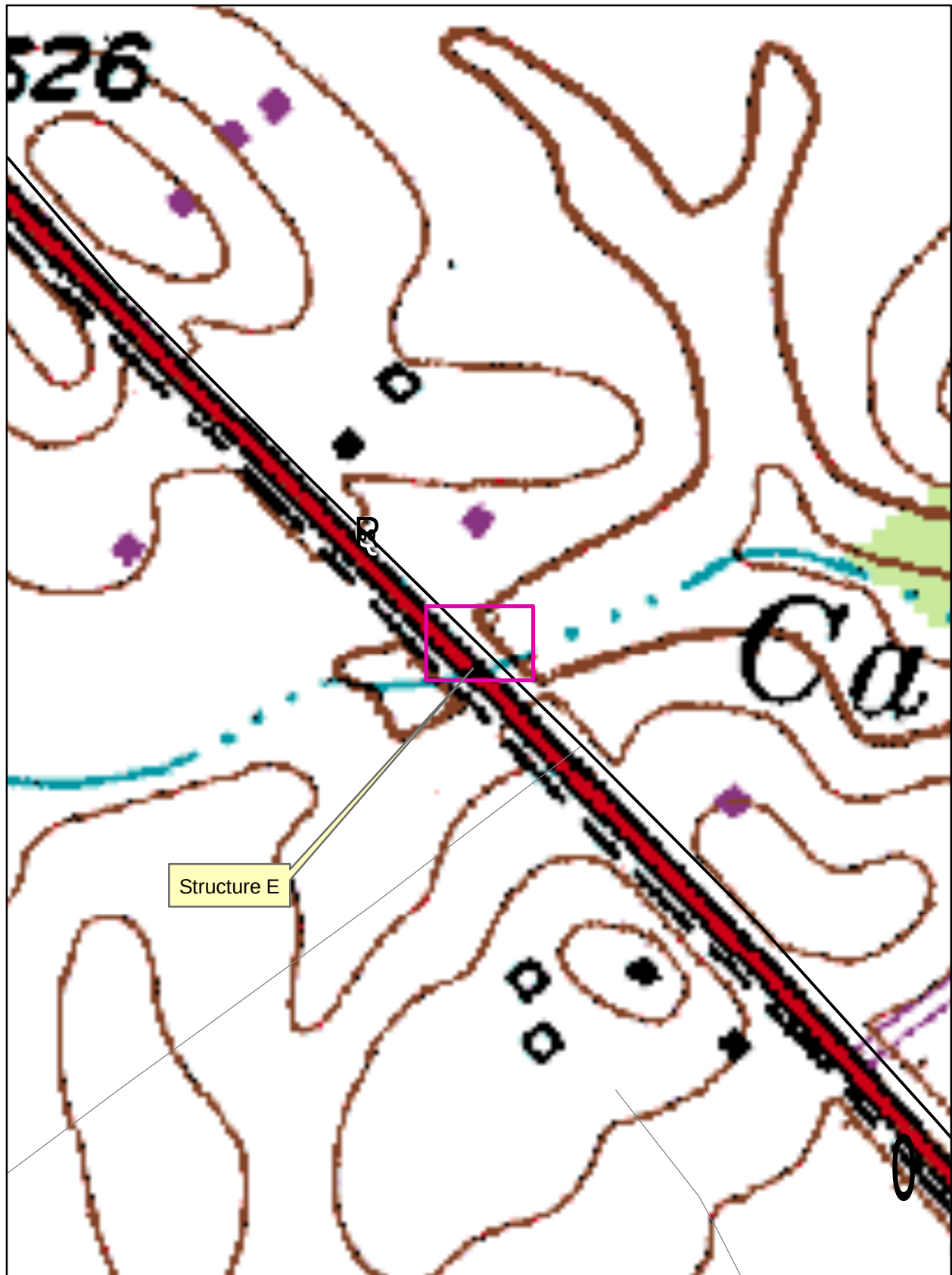


0 30 60 120
Feet

Aerial Photograph 2005
Section 109

Aerial Source: 2005 Indiana Orthophotography
(IndianaMap Framework Data www.indianamap.org)
Soils Source: U.S.D.A., N.R.C.S., Soil Survey Geographic
(SSURGO) Database for Clark County, Indiana

SR 60, Clark County
Des. # 0800197, Pipe Liners, Various Locations
Structure E @ RP 58+65



0 150 300 600
Feet

Speed, Indiana Quadrangle
Section 109

Source: U.S.G.S. 7.5 Minute Series Topographic Map

Source: US Fish and Wildlife Service,
National Wetland Inventory



Photo 1. Structure A, UNT 1; north side of SR 60 facing north.



Photo 2. Structure A, UNT 1; north side of SR 60 facing northwest toward NWI-listed wetland.



Photo 3. Structure A, UNT 1; north side of SR 60 facing east.



Photo 4. Structure A, UNT 1; south side of SR 60 at pipe.



Photo 5. Structure A, UNT 1; south side of SR 60 facing west.



Photo 6. Structure A, UNT 1; south side of SR 60 facing east.



Photo 7. Structure B, UNT 2; north side of SR 60 facing east-northeast.



Photo 8. Structure B, UNT 2; north side of SR 60 facing pipe.



Photo 9. Structure B, UNT 2; south side of SR 60 facing south.



Photo 10. Structure B, UNT 2; south side of SR 60 facing pipe.



Photo 11. Structure B, UNT 2; south side of SR 60 facing east.



Photo 12. Structure C, UNT 3; north side of SR 60 facing northeast.



Photo 13. Structure C, UNT 3; north side of SR 60 facing southeast.



Photo 14. Structure C, UNT 3; north side of SR 60 facing northwest.



Photo 15. Structure C, UNT 3; north side of SR 60 facing pipe.



Photo 16. Structure C, UNT 3; south side of SR 60 facing southwest.



Photo 17. Structure C, UNT 3; south side of SR 60 looking down from structure.



Photo 18. Structure C, UNT 3; south side of SR 60 facing pipe.



Photo 19. Structure C, UNT 3; south side of SR 60 downstream from pipe.



Photo 20. Structure D, UNT 4; north side of SR 60 facing north.



Photo 21. Structure D, UNT 4; north side of SR 60 facing pipe.



Photo 22. Structure D, UNT 4; south side of SR 60 facing pipe.



Photo 23. Structure D, UNT 4; south side of SR 60 facing south.



Photo 24. Structure D, UNT 4; south side of SR 60 – connection of UNT4 to Muddy Fork.



Photo 25. Structure E, UNT 5; east side of SR 60 facing east - northeast.



Photo 26. Structure E, UNT 5; east side of SR 60 facing southeast.



Photo 27. Structure E, UNT 5; east side of SR 60 facing northwest.



Photo 28. Structure E, UNT 5; east side of SR 60 facing pipe.



Photo 29. Structure E, UNT 5; west side of SR 60 facing west - southwest.



Photo 30. Structure E, UNT 5; west side of SR 60 facing southeast



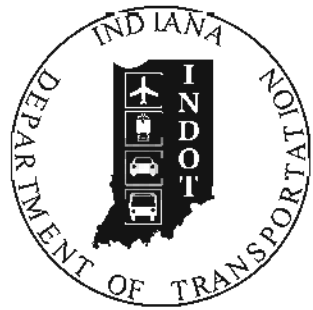
Photo 31. Structure E, UNT 5; west side of SR 60 facing northwest.



Photo 32. Structure E, UNT 5; west side of SR 60 facing pipe.

PROJECT	DESIGNATION
0800197	0800197
CONTRACT	
R- 30822	

INDIANA DEPARTMENT OF TRANSPORTATION



ROAD PLANS

FOR SPANS UNDER 20 FEET

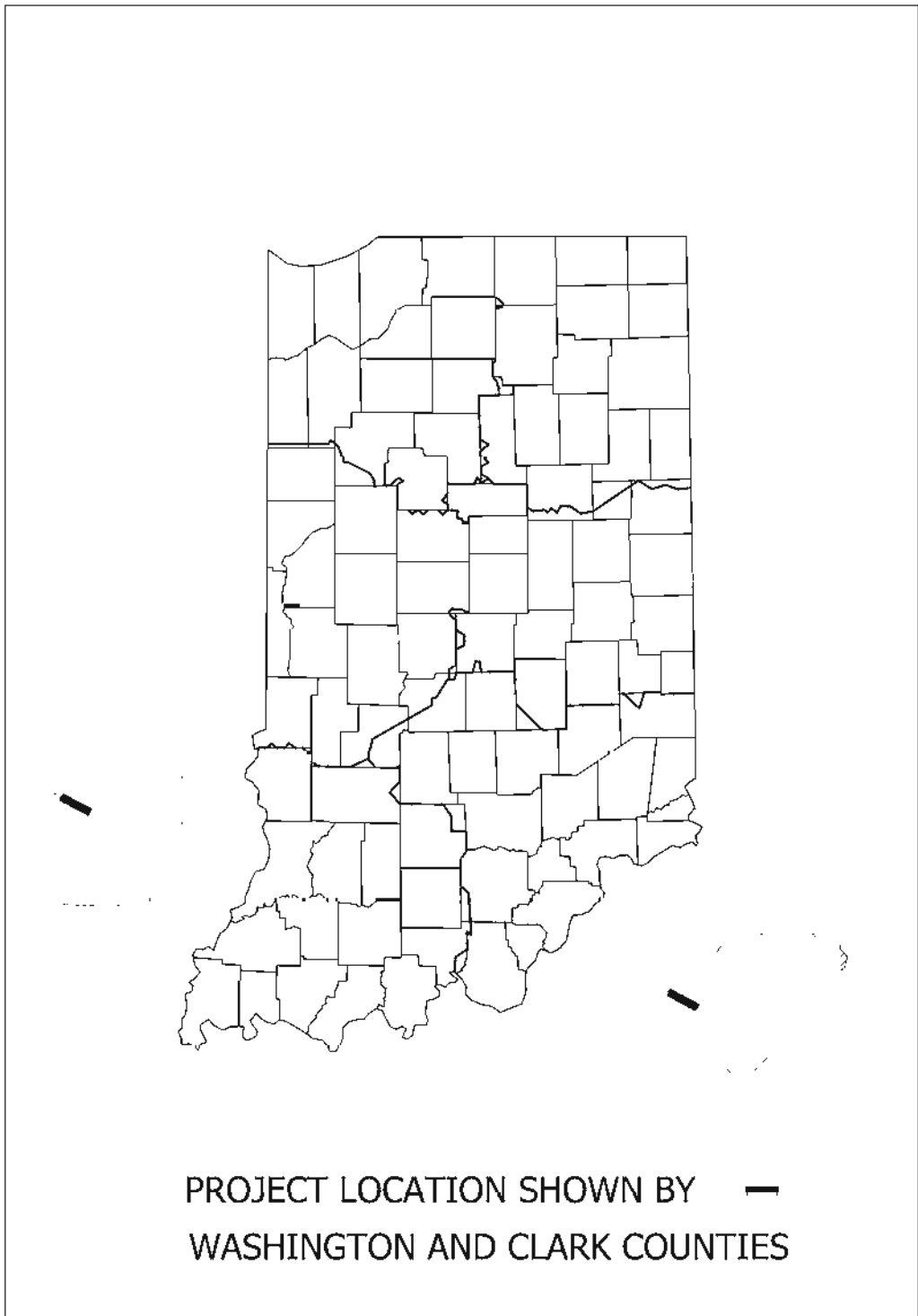
ROUTE: S.R. 60 AT: RP 22+80, 29+20, 46+30, 47+10, 58+65

PROJECT NO. 0800197 P.E.

 0800197 R/W

 0800197 CONST.

TRAFFIC DATA	
A.A.D.T.	() V.P.D.
A.A.D.T.	() V.P.D.
D.H.V	() V.P.H.
DIRECTIONAL DISTRIBUTION	50 %
TRUCKS	% A.A.D.T.
	% D.H.V.
DESIGN DATA	
DESIGN SPEED	M.P.H.
PROJECT DESIGN CRITERIA	3R (NON-FREEWAY)
FUNCTIONAL CLASSIFICATION	
RURAL/URBAN	RURAL
TERRAIN	LEVEL
ACCESS CONTROL	NONE



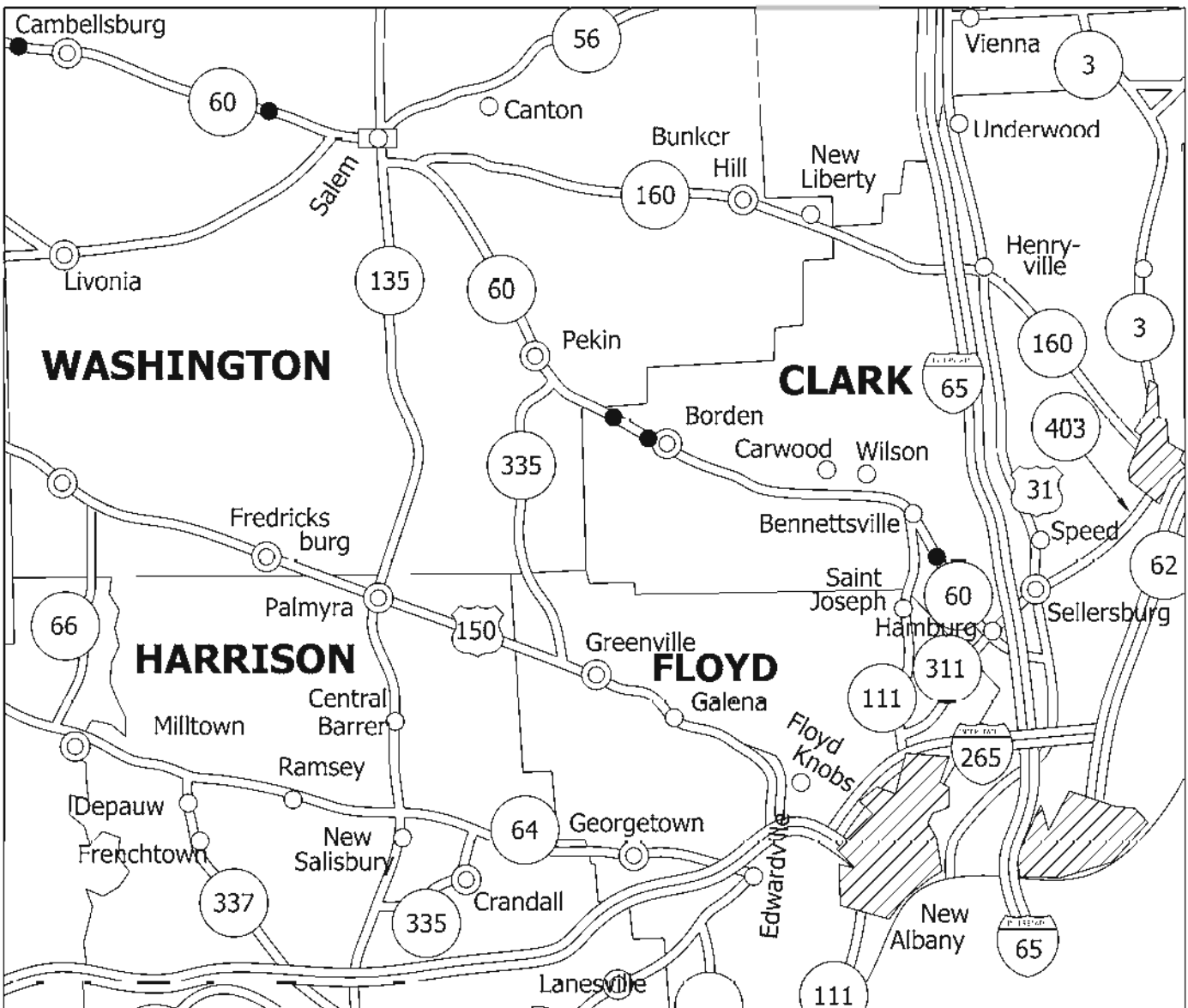
PIPE LINING PROJECT ON S.R. 60 AT VARIOUS LOCATIONS

PROJECT LOCATION
STR. "A" @ RP 22+80

PROJECT LOCATION
STR. "B" @ RP 29+20

PROJECT LOCATION
STR. "C" @ RP 46+30

PROJECT LOCATION
STR. "D" @ RP 47+10



PROJECT LOCATION
STR. "E" @ RP 58+65

CULVERT LOCATION	LAT.	LONG.
RP 22+80	38°39'5.06"N	86°16'17.68"W
RP 29+20	38°37'5.76"N	86° 9'53.08"W
RP 46+30	38°28'21.22"N	85°57'47.60"W
RP 47+10	38°28'2.30"N	85°56'53.83"W
RP 58+65	38°23'40.31"N	85°46'40.07"W

INDIANA DEPARTMENT OF TRANSPORTATION
STANDARD SPECIFICATIONS DATED 2010
TO BE USED WITH THESE PLANS

PLANS PREPARED BY: JOSEPH BELL	812-524-3707 PHONE NUMBER
CERTIFIED BY:	\$SIG_DATE\$ DATE
APPROVED FOR LETTING:	DATE

	DESIGNATION 0800197
SURVEY BOOK 0800197	SHEETS of 22
CONTRACT R- 30822	PROJECT 0800197

UTILITIES

STRUCTURE "A"

Campbellsburg Water
P.O. Box 219
Campbellsburg, Indiana 47108
Chris Boulet
812-620-8718 cell
812-755-4878

Indiana Department of Transportation
185 Agrico Lane
Seymour, Indiana 47274
Attn: Jon Monies, Utilities-Railroad
812-524-3972
jmonies@indot.in.gov

Duke Energy Indiana, Inc.
1619 West Deffenbaugh Street
Kokomo, IN 46902
Attn: Jim Shields c/o Connie Maus
317-402-2745 cell
jim.shields@duke-energy.com
connie.maus@duke-energy.com
1-765-454-6180 - work
1-765-432-6010 - cell

Insight Communications
4701 Commerce Crossings Drive
Louisville, KY 40229
Danny Campbell 502-817-4928 cell
502-357-4387
campbell.danny@insightcom.com
AND Also:
Nathen Howerton
502-357-4318
howerton.n@insightcom.com

Midwest Natural Gas Corporation
P.O. Box 707
1652 West McClain Avenue
Scottsburg, IN. 47170
Attn: Terry Shafer
812-752-2230
Tshafer@midnatgas.com

Verizon North, Inc.
8001 West Jefferson Blvd.
IFIFA01
Fort Wayne, IN 46804
Attn: Ms. Joan Timm
260-461-2258
Mark Weichman
812-525-1655 cell
812-522-0313

STRUCTURE "C" & "D"

Borden Tri County Water
P.O. Box 40
Borden, IN 47106
Attn: Daryl Naville
812-967-2226
btwater@yahoo.com

Borden Town Manager
Re: Sanitary Sewers
P.O. Box 125
Borden, IN 47106
Attn: Pat Kelly 812-670-0567 cell
812-967-2234
townofborden@insightbb.com

Clark County REMC
P.O. Box L
Sellersburg, IN 47172
Attn: Larry Edwards
812-248-7504
ledwards@theremc.net

Duke Energy Indiana, Inc.
1619 West Deffenbaugh Street
Kokomo, IN 46902
Attn: Jim Shields c/o Connie Maus
317-402-2745 cell
jim.shields@duke-energy.com
connie.maus@duke-energy.com
1-765-454-6180 - work
1-765-432-6010 - cell

Insight Communications
4701 Commerce Crossings Drive
Louisville, KY 40229
Danny Campbell 502-817-4928 cell
502-357-4387
campbell.danny@insightcom.com

AND Also:
Nathen Howerton
502-357-4318
howerton.n@insightcom.com

Washington County Rural
Telephone Cooperative, Inc
(Tele-media Solutions)
105 East Railroad Street
Pekin, IN 47165
Paul Nelson
812-967-5531
nelson@tele-mediasolutions.coop
812-967-3171

STRUCTURE "B"

East Washington Rural Water Corporation
209 West Walnut Street
Salem, IN 47167
Attn: Mike Bowling
812-883-6429
ewrw@blueriver.net

Jackson County REMC
P.O. Box K
Brownstown, IN 47220
Attn: Brad Pritchett 812-521-0212 cell
812-358-4458
bpritchett@jacksonremc.com

Verizon North, Inc.
8001 West Jefferson Blvd.
IFIFA01
Fort Wayne, IN 46804
Attn: Ms. Joan Timm
260 461 2258
Mark Weichman
812-525-1655 cell
812-522-0313

STRUCTURE "E"

AT&T Indiana
P.O. Box 1405
New Albany, Indiana 47150
Attn: Mark Humphrey
812-948-7181

Sellersburg Water Company
103 South New Albany Street
Sellersburg, IN 47172
Clark Henson or
Lana McCutchen
812-246-7039

Insight Communications
4701 Commerce Crossings Drive
Louisville, KY 40229
Danny Campbell 502-817-4928 cell
502-357-4387
campbell.danny@insightcom.com

AND Also:
Nathen Howerton
502-357-4318
howerton.n@insightcom.com

Insight Communications
4701 Commerce Crossings Drive
Louisville, KY 40229
Danny Campbell
502-817-4928 cell
502-357-4387
campbell.danny@insightcom.com
Nathen Howerton
502-357-4318
Howerton.n@insightcom.com

Midwest Natural Gas Corporation
P.O. Box 707
1652 West McClain Avenue
Scottsburg, IN 47170
Terry Shafer
812-752-2230
Tshafer@midnatgas.com

Silver Creek Water Corporation
P.O. Box 102
Sellersburg, IN 47172
Attn: Jason Lewis
812-246-2889
jason@silvercreekwater.org

Duke Energy Indiana, Inc.
1619 West Deffenbaugh Street
Kokomo, IN 46902
Attn: Jim Shields c/o Connie Maus
317-402-2745 cell
jim.shields@duke-energy.com
connie.maus@duke-energy.com
1-765-454-6180 - work
1-765-432-6010 - cell

Vectren Energy
1 North Main Street
PO Box 209
Evansville, IN 47702-0209
Attn: Marty Frederick
812-491-4765
mfredrick@vectren.com

INDEX

SHEET NO.

DRAWING INDEX

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4	STRUCTURE "A" - PLAN AND PROFILE
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6	STRUCTURE "A" - PIPE PROFILE AND CHANNEL CROSS SECTIONS
7	STRUCTURE "B" - PLAT NO. 1
8	STRUCTURE "B" - PLAN AND PROFILE
9	STRUCTURE "B" - LAYOUT
10	STRUCTURE "B" - PIPE PROFILE AND CHANNEL CROSS SECTIONS
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19	STRUCTURE "E" - PLAT NO. 1
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21	STRUCTURE "E" - LAYOUT
22	STRUCTURE "E" - PIPE PROFILE AND CHANNEL CROSS SECTIONS

INDIANA UNDERGROUND PLANT PROTECTION SERVICE, INC.



Know what's below.
Call before you dig.

Per Indiana State Law IC-8-1-26-16, It is against the law to excavate without notifying the underground location service two (2) full working days before commencing work.

INDIANA UNDERGROUND
1-800-382-5544 OR CALL 811
24 HOURS A DAY 7 DAYS A WEEK

Note: Utility Locations are shown based upon information (maps and paint marks) supplied by others, and there is no guarantee of the accuracy or completeness of said locations

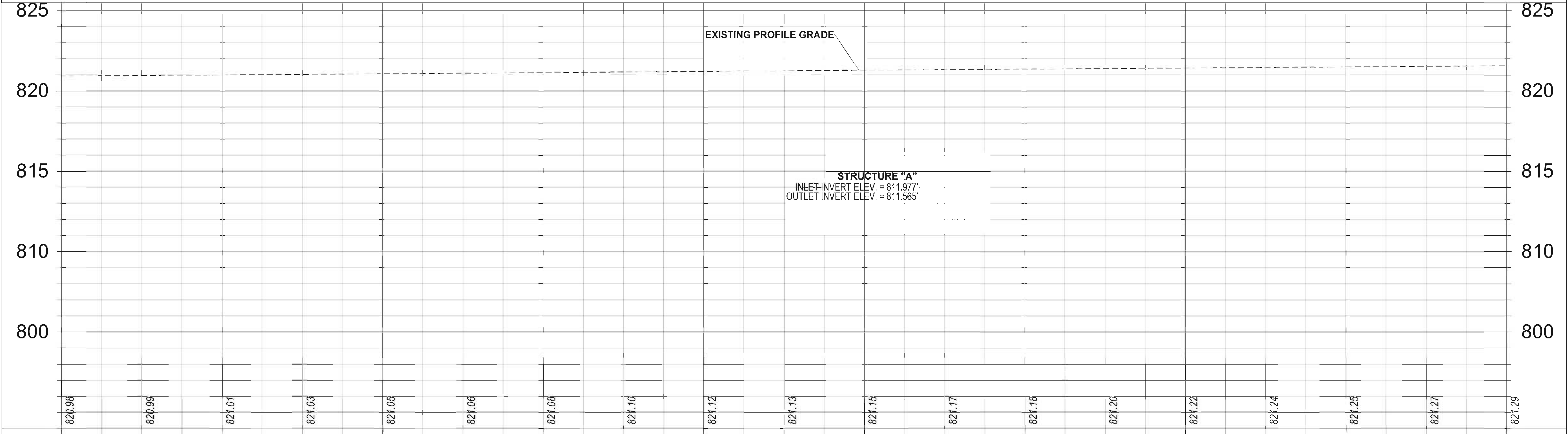
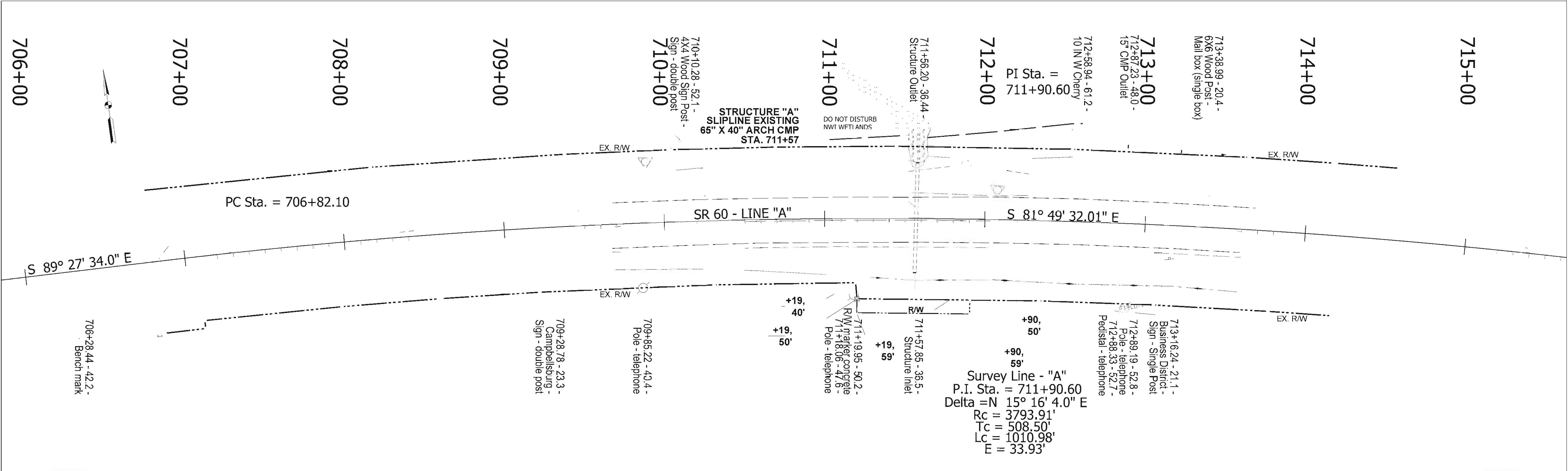
GENERAL NOTES

1. ANY EXCAVATION WITHIN 5 FT. OF AN EXISTING UTILITY SHALL BE HAND DUG.
2. PAY ITEM DIMENSIONS FOR THE PIPE LINERS REPRESENT EXISTING DIAMETERS OR CROSS SECTIONS OF THE PIPE ENDS. IT IS THE INTENT OF THE CONTRACT THAT THE INSERTED PIPE LINER HAVE THE LARGEST DIAMETER THAT CAN BE SUCCESSFULLY INSTALLED

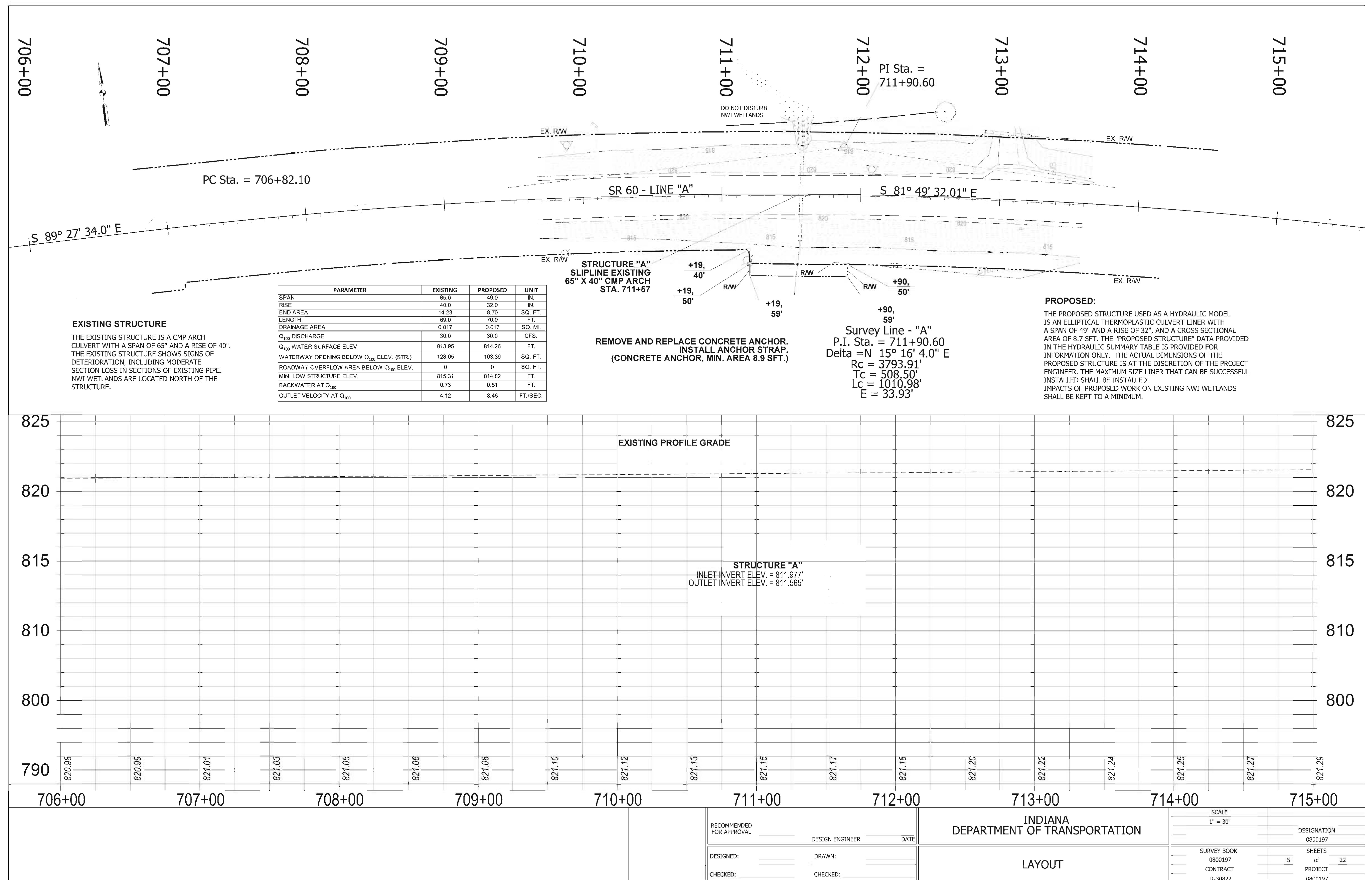
REVISIONS

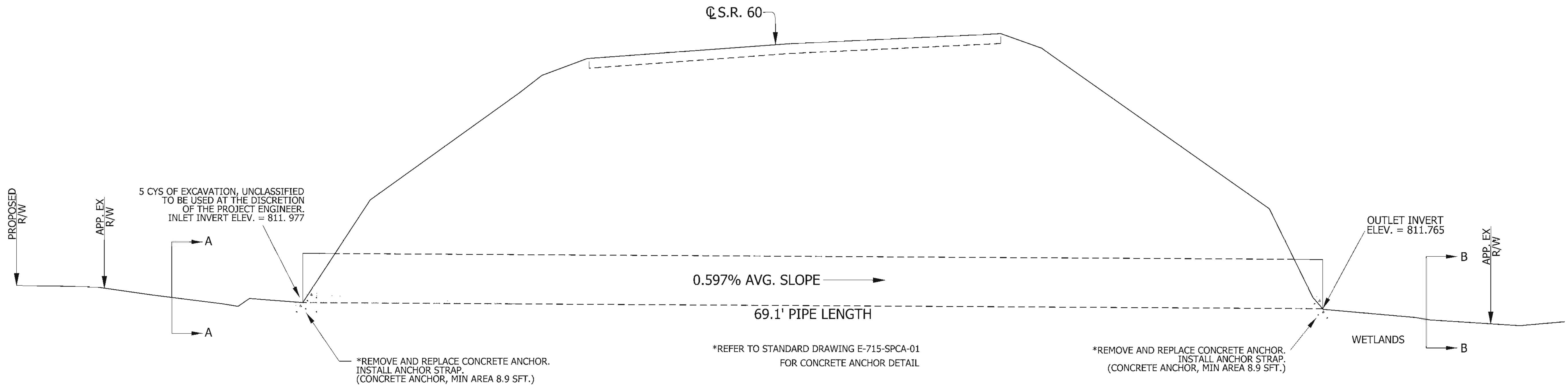
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RECOMMENDED FOR APPROVAL				INDIANA DEPARTMENT OF TRANSPORTATION				SCALE N/A			
DESIGN ENGINEER _____ DATE _____								DESIGNATION 0800197			
DESIGNED: J.E.B. 8/23/10 DRAWN: J.E.B. 8/23/10				INDEX SHEET				SURVEY BOOK 0800197 2			
CHECKED: S.A.G. 8/30/10 CHECKED: S.A.G. 8/30/10								CONTRACT R-30822 PROJECT 0800197			

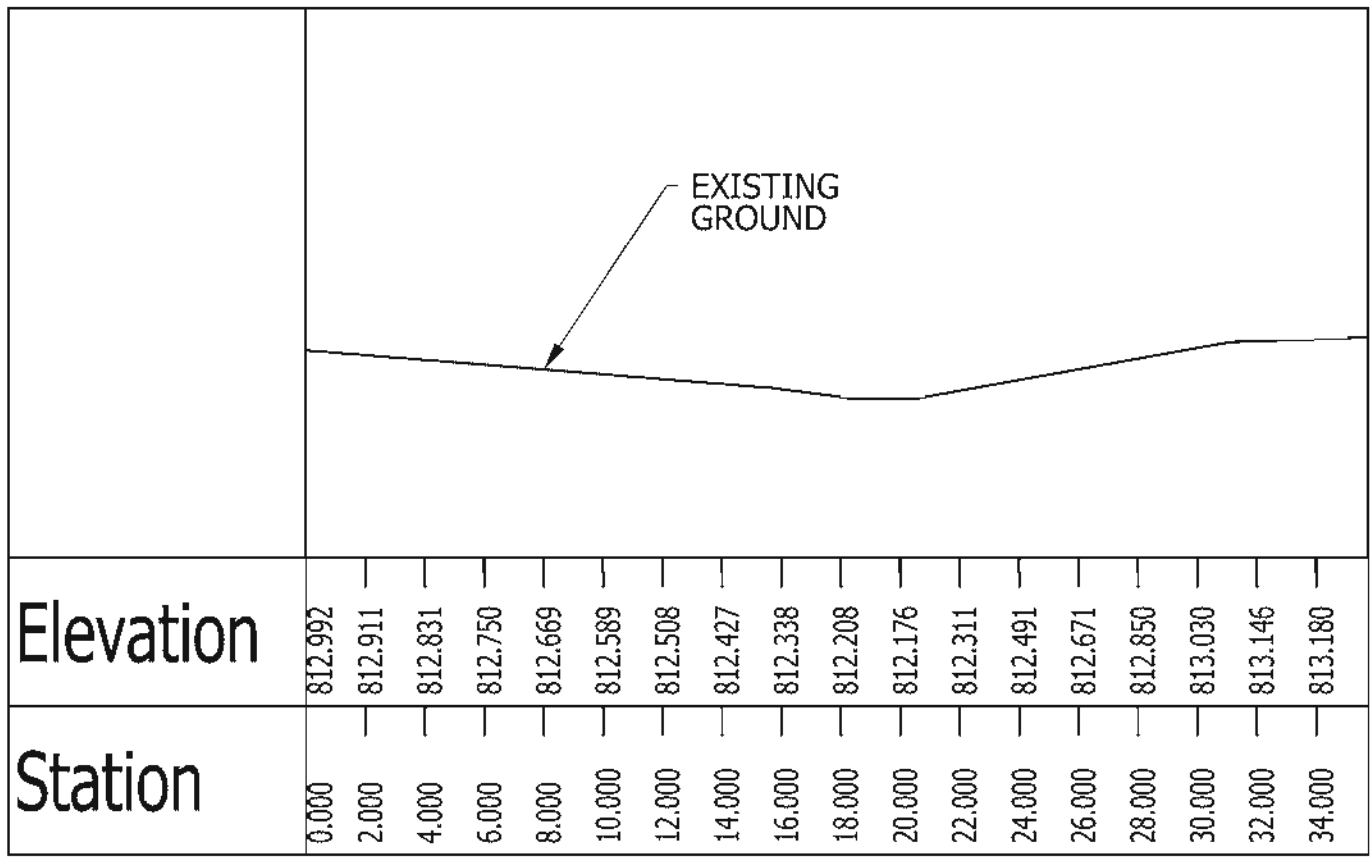


706+00	707+00	708+00	709+00	710+00	711+00	712+00	713+00	714+00	715+00
RECOMMENDED FOR APPROVAL _____					DESIGN ENGINEER _____ DATE _____				
DESIGNED: _____					DRAWN: _____				
CHECKED: _____					CHECKED: _____				
					INDIANA DEPARTMENT OF TRANSPORTATION				
					PLAN & PROFILE				
					SCALE 1" = 30'				
					DESIGNATION 0800197				
					SURVEY BOOK 0800197 SHEETS 4 of 22				
					CONTRACT R-30822 PROJECT 0800197				

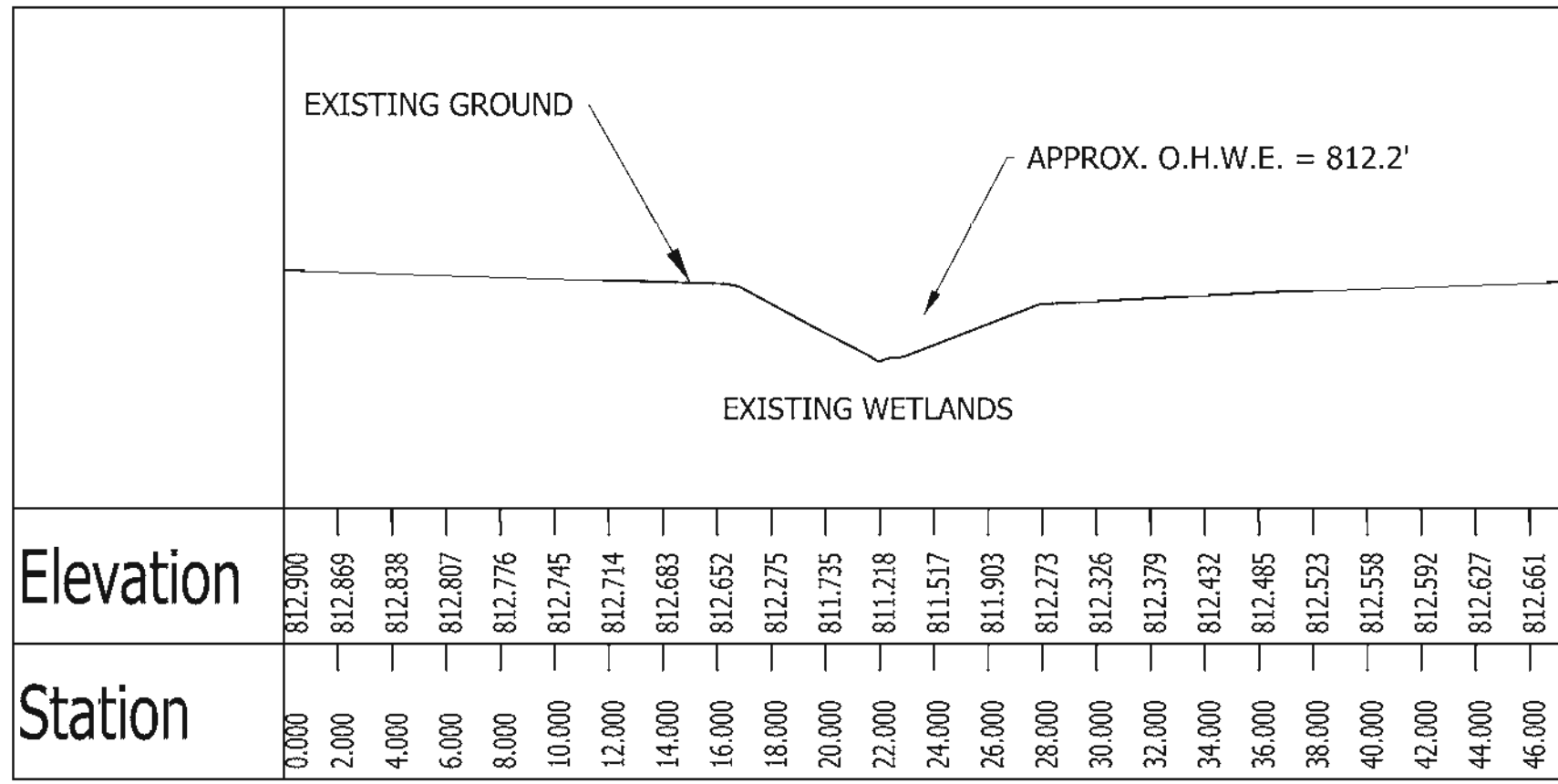




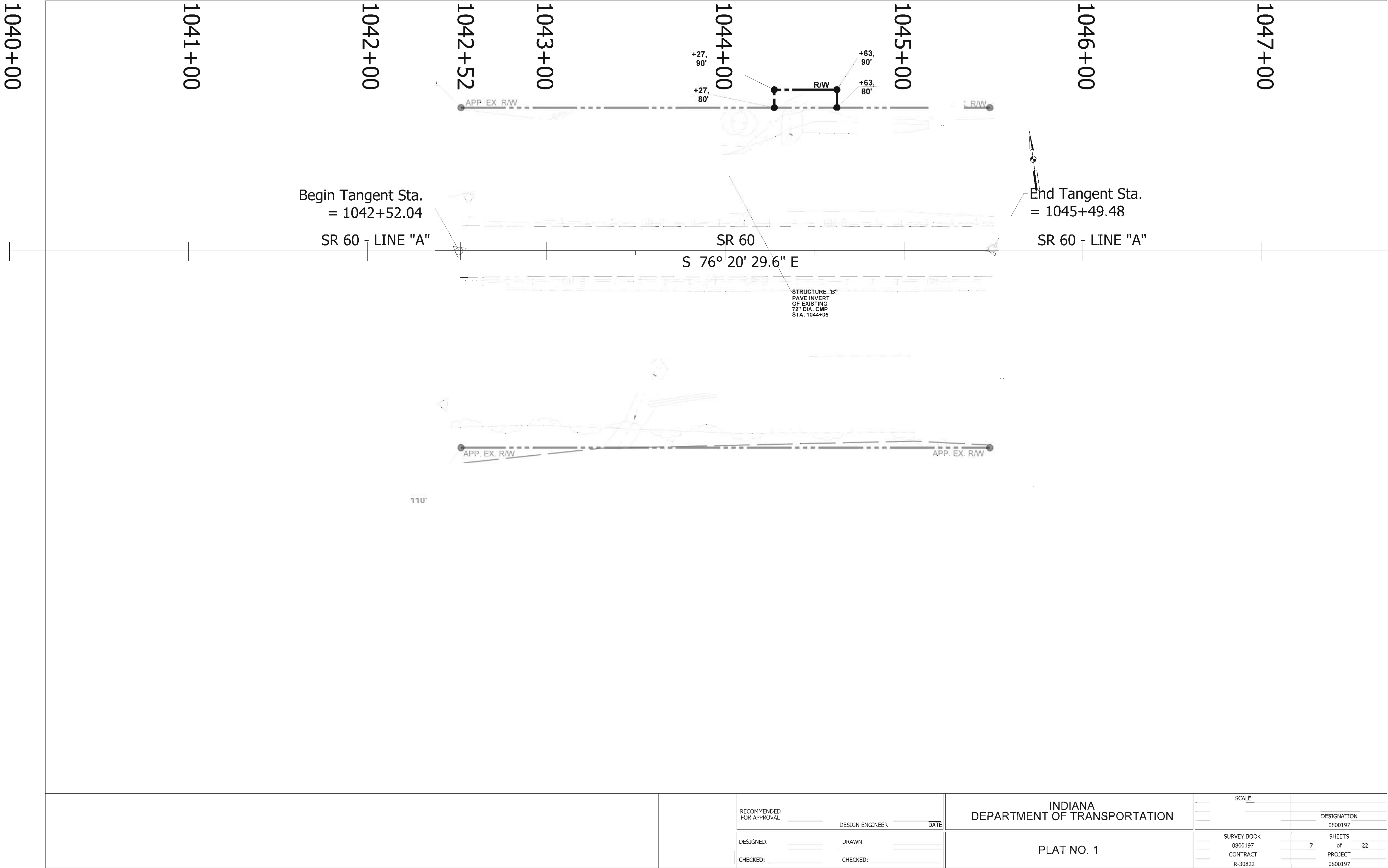
PROFILE VIEW



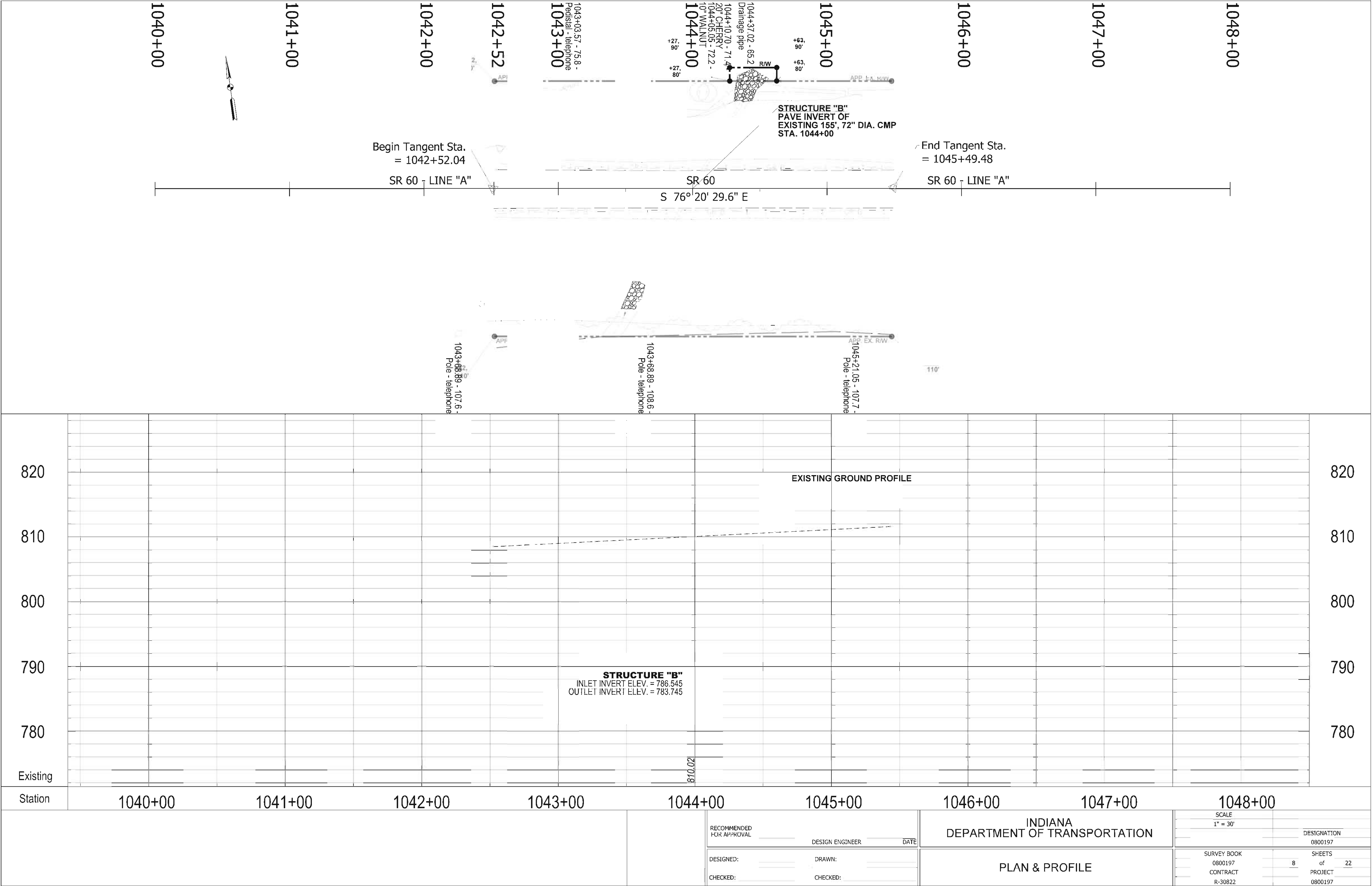
SECTION A-A
TYPICAL UPSTREAM CROSS SECTION
APPROX. 9' UPSTREAM

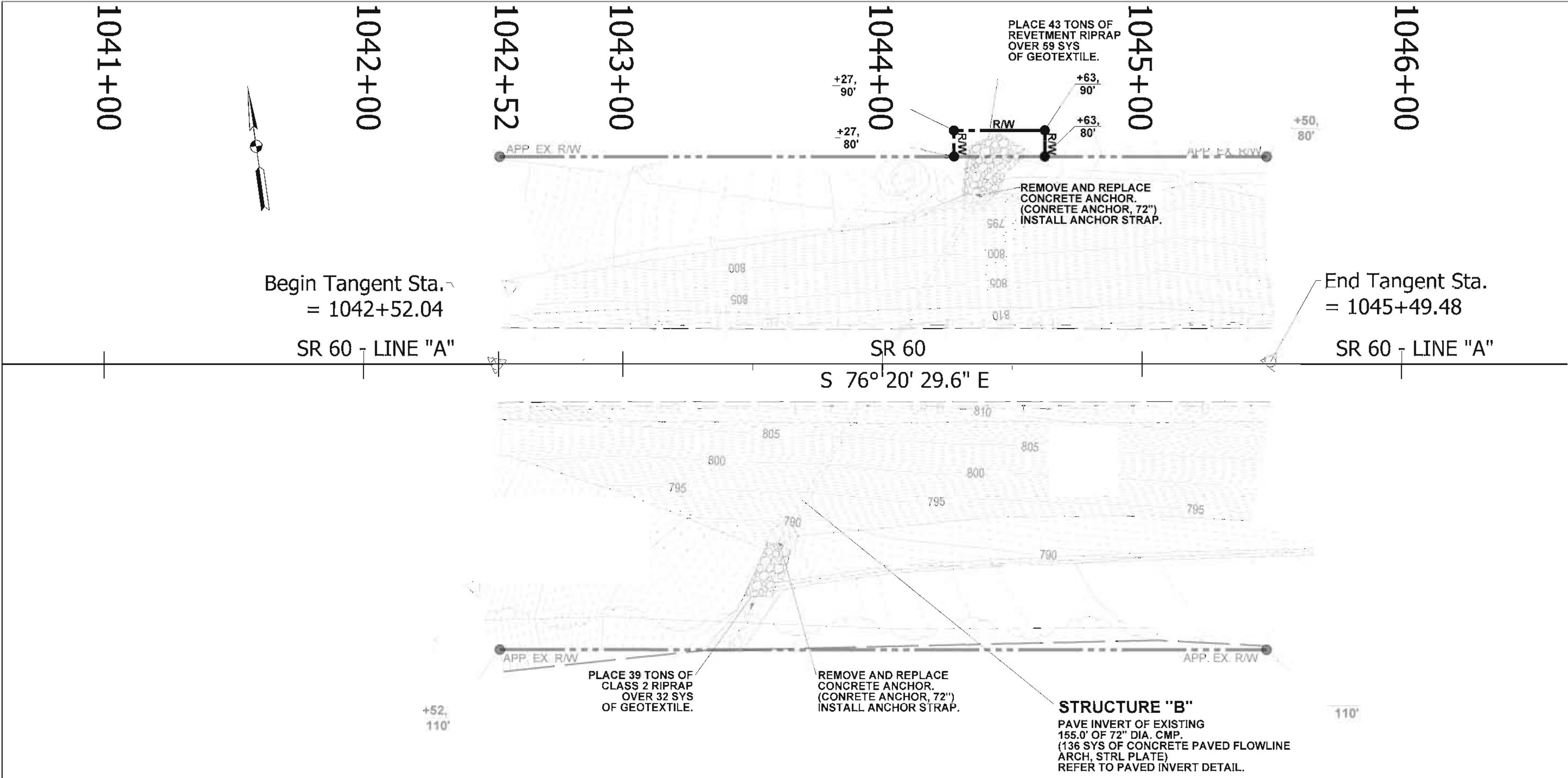


SECTION B-B
TYPICAL DOWNSTREAM CROSS SECTION
APPROX. 7' DOWNSTREAM (EXISTING WETLANDS)



RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE	INDIANA DEPARTMENT OF TRANSPORTATION		SCALE	
						DESIGNATION 0800197
DESIGNED:	DRAWN:		PLAT NO. 1		SURVEY BOOK 0800197	SHEETS of 22
CHECKED:	CHECKED:				CONTRACT R-30822	PROJECT 0800197

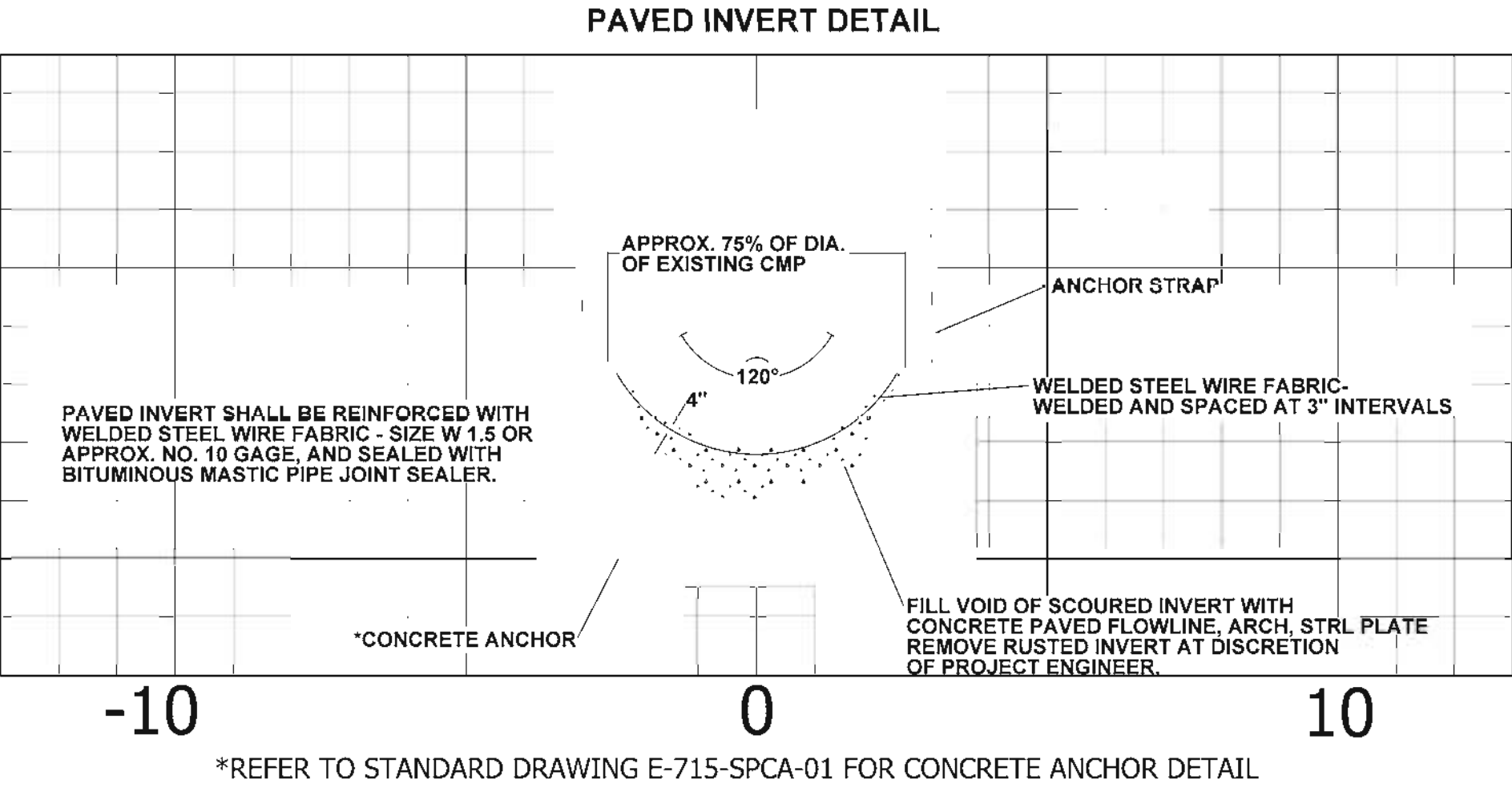




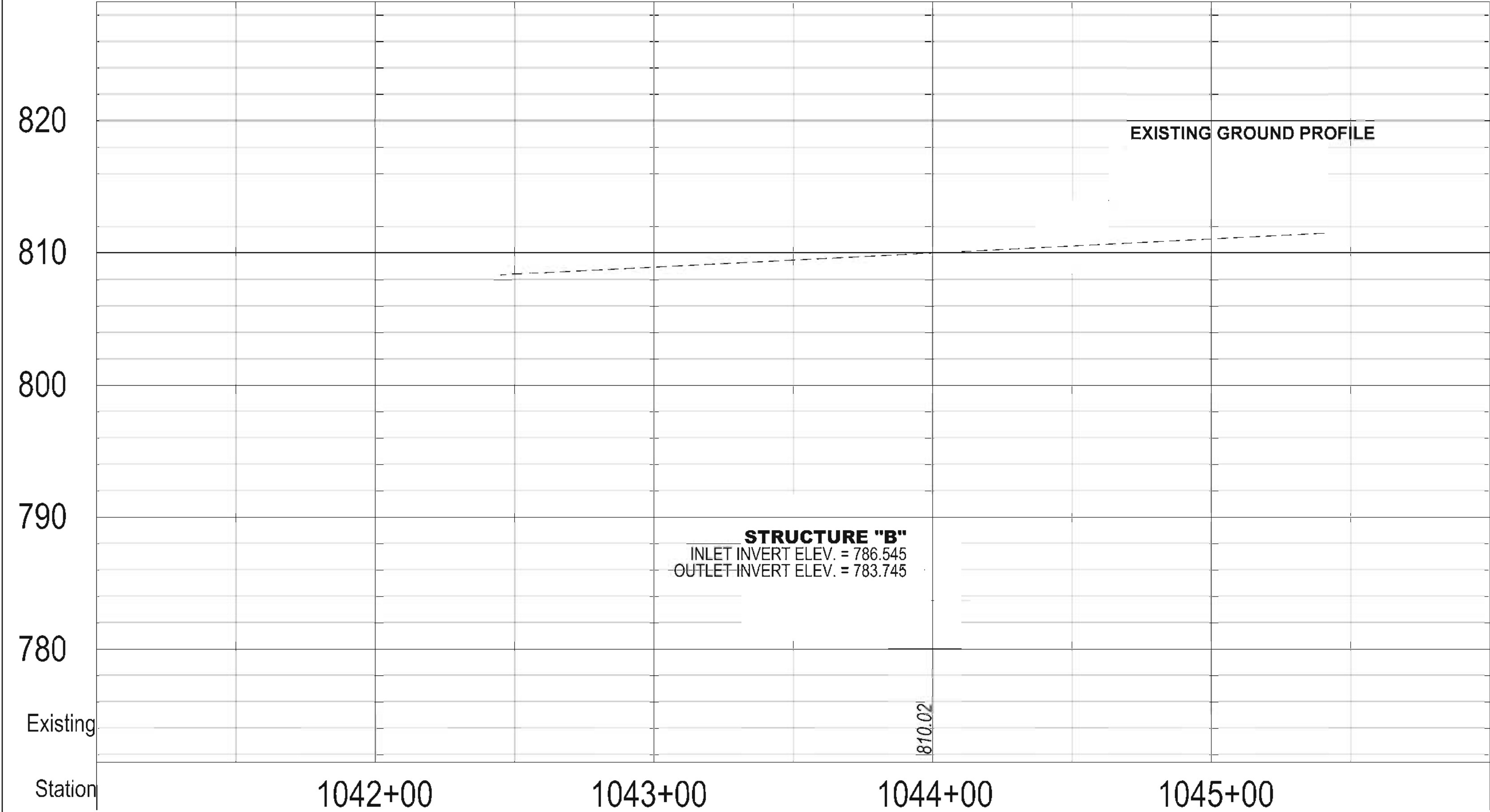
HYDRAULIC SUMMARY TABLE			
PARAMETER	EXISTING	PROPOSED	UNIT
SPAN	72.0	72.0	IN.
RISE	72.0	68.0	IN.
END AREA	28.30	26.00	SQ. FT.
LENGTH	155.0	156.0	FT.
DRAINAGE AREA	0.209	0.209	SQ. MI.
Q ₁₀₀ DISCHARGE	135.0	135.0	CFS.
Q ₁₀₀ WATER SURFACE ELEV.	791.49	791.62	FT.
WATERWAY OPENING BELOW Q ₁₀₀ ELEV. (STR.)	356.4	342	SQ. FT.
ROADWAY OVERFLOW AREA BELOW Q ₁₀₀ ELEV.	0	0	SQ. FT.
MIN. LOW STRUCTURE ELEV.	792.54	792.54	FT.
BACKWATER AT Q ₁₀₀	2.71	2.51	FT.
OUTLET VELOCITY AT Q ₁₀₀	10.52	16.70	FT./SEC.

PROPOSED STRUCTURE

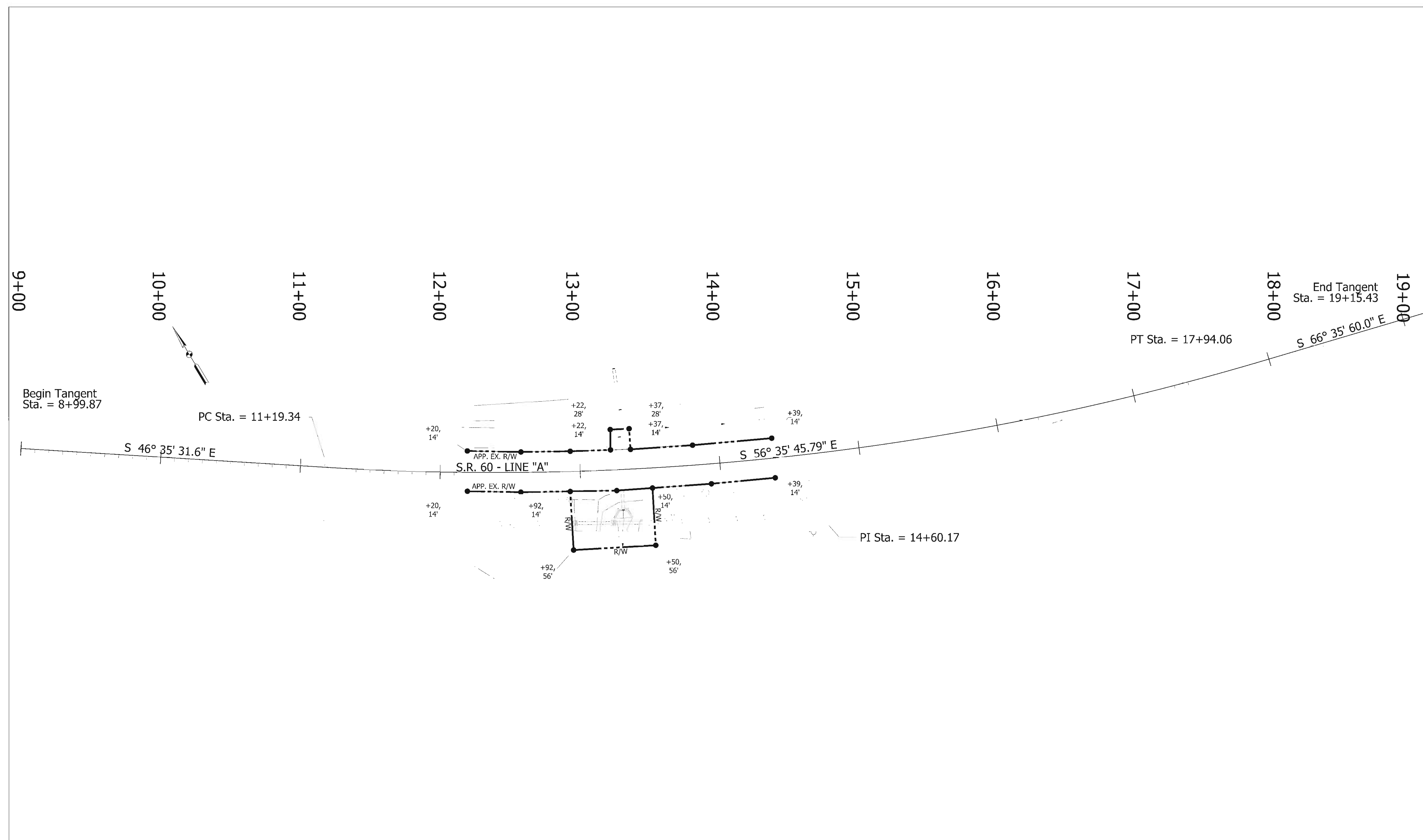
THE PROPOSED STRUCTURE USED AS A HYDRAULIC MODEL IS A ROUND THERMOPLASTIC CULVERT LINER WITH A DIAMETER OF 72". THE "PROPOSED STRUCTURE" DATA PROVIDED IN THE HYDRAULIC SUMMARY TABLE IS PROVIDED FOR INFORMATION ONLY. THE MAXIMUM SIZE LINER THAT CAN BE SUCCESSFUL INSTALLED SHALL BE INSTALLED.



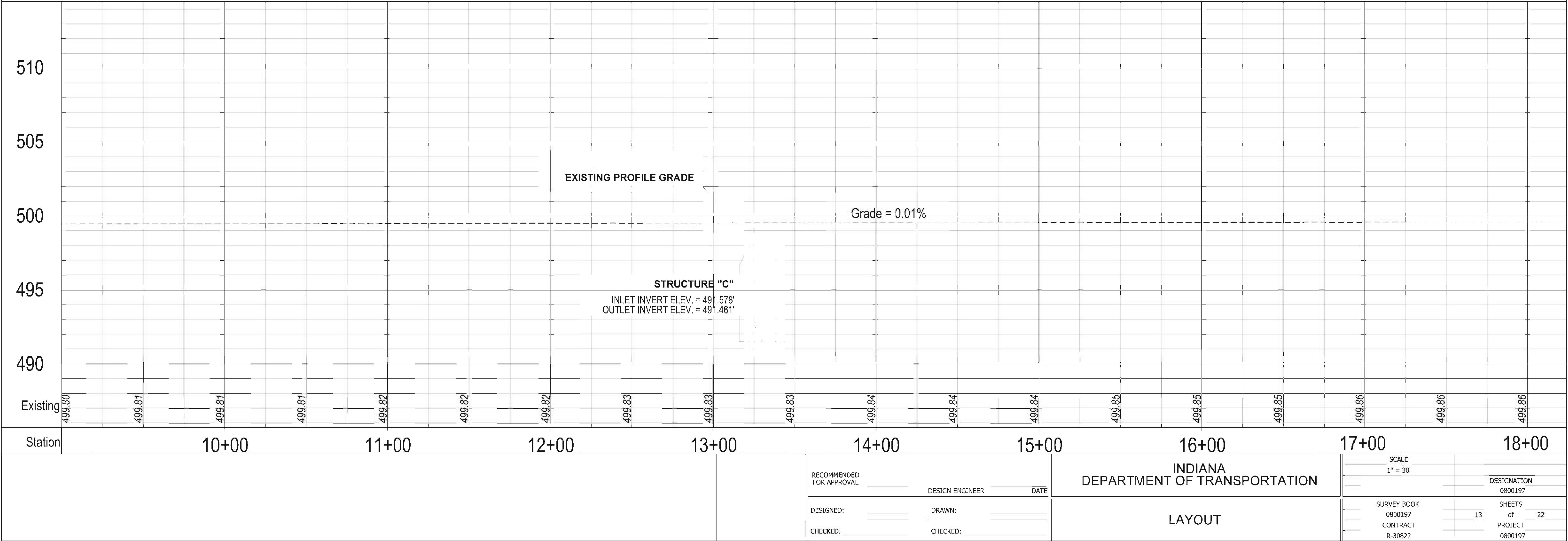
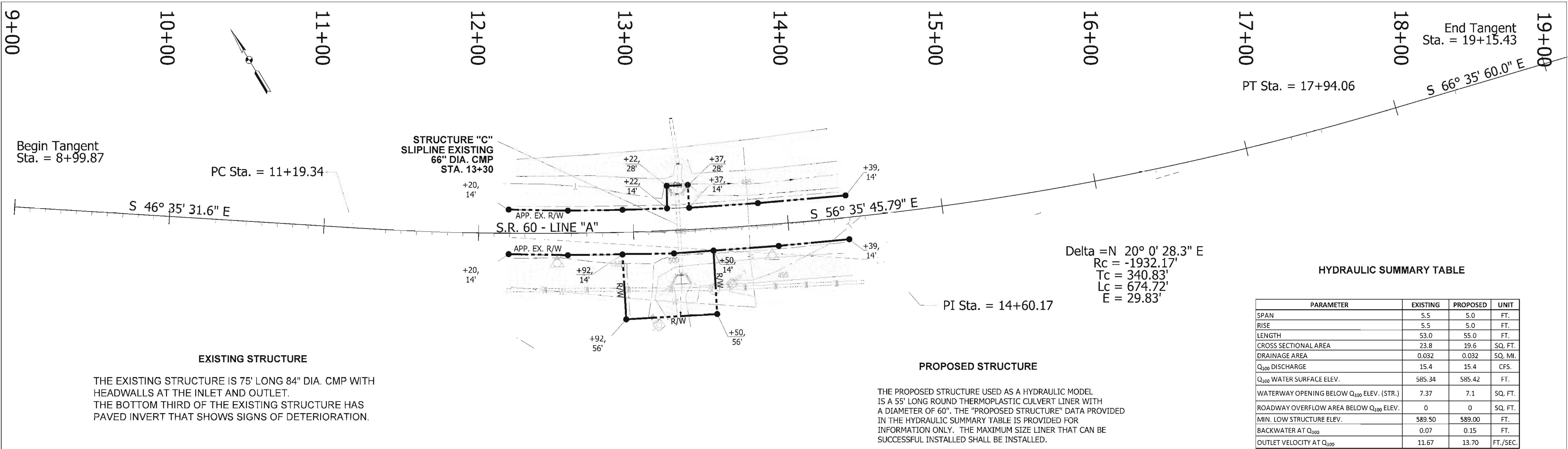
*REFER TO STANDARD DRAWING E-715-SPCA-01 FOR CONCRETE ANCHOR DETAIL

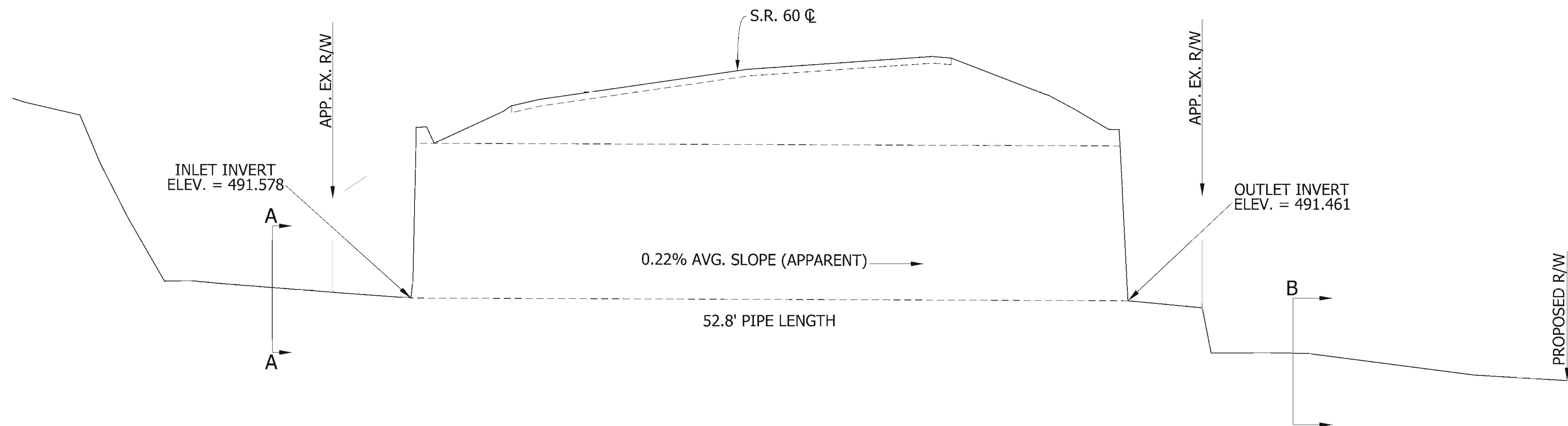


		INDIANA DEPARTMENT OF TRANSPORTATION		SCALE	
RECOMMENDED FOR APPROVAL		DESIGN ENGINEER	DATE	DESIGNATION 0800197	
DESIGNED:		DRAWN:		SURVEY BOOK 0800197	SHEETS of 22
CHECKED:		CHECKED:		CONTRACT R-30822	PROJECT 0800197
LAYOUT					

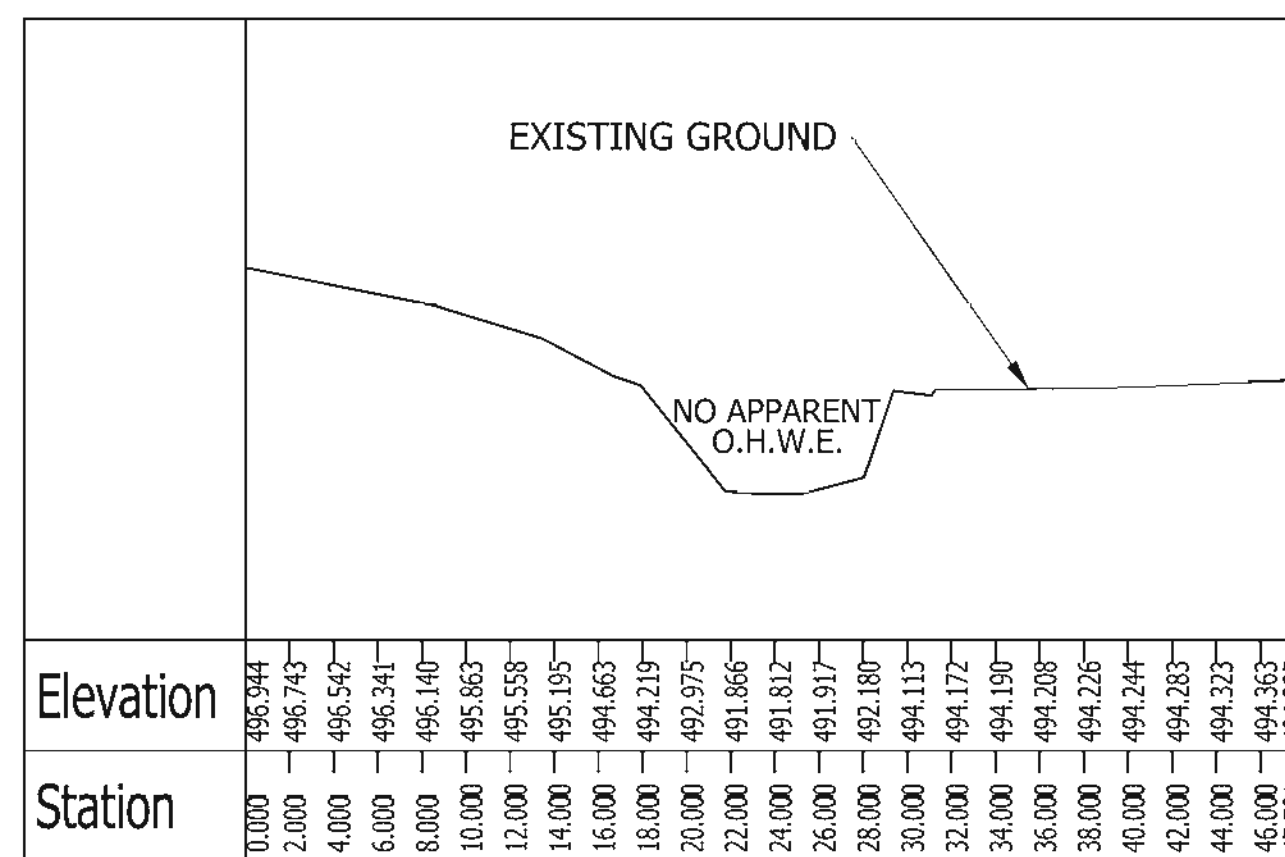


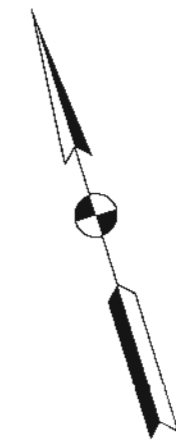
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		DESIGNED: _____		DRAWN: _____		CHECKED: _____		PLAT NO. 1		DESIGNATION 0800197	
		CHECKED: _____		CHECKED: _____						SURVEY BOOK 0800197	
										SHEETS 11 of 22	
										CONTRACT R-30822	
										PROJECT 0800197	





PROFILE VIEW

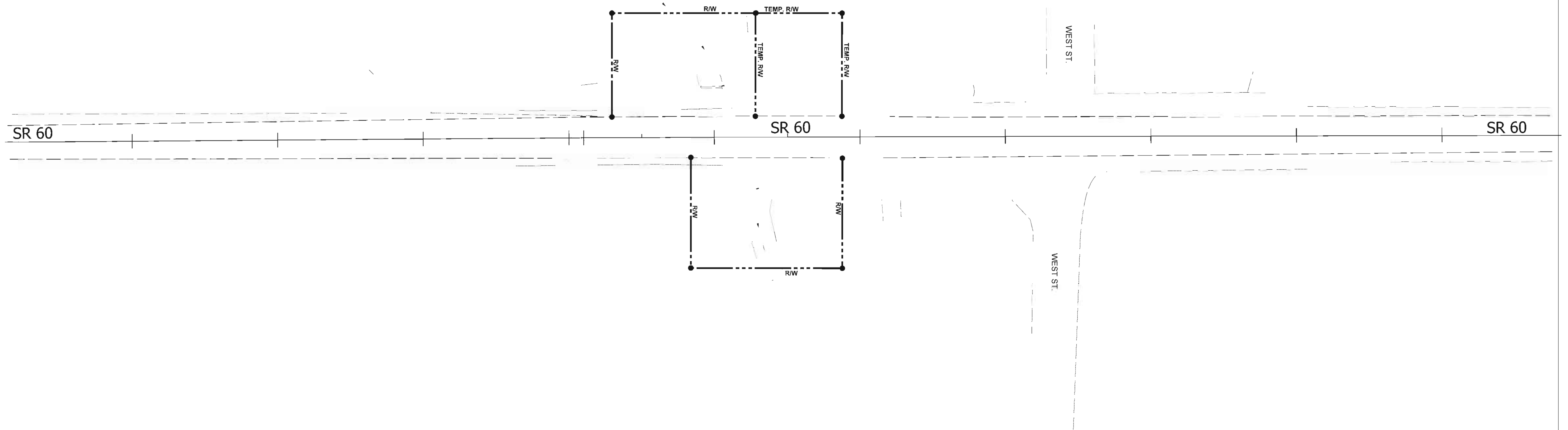




SEC. 7, 7-7-7, 7-7-7
? TOWNSHIP
WASHINGTON COUNTY

SEC. 7, 7-7-7, 7-7-7
? TOWNSHIP
WASHINGTON COUNTY

59+10
60+00
61+00



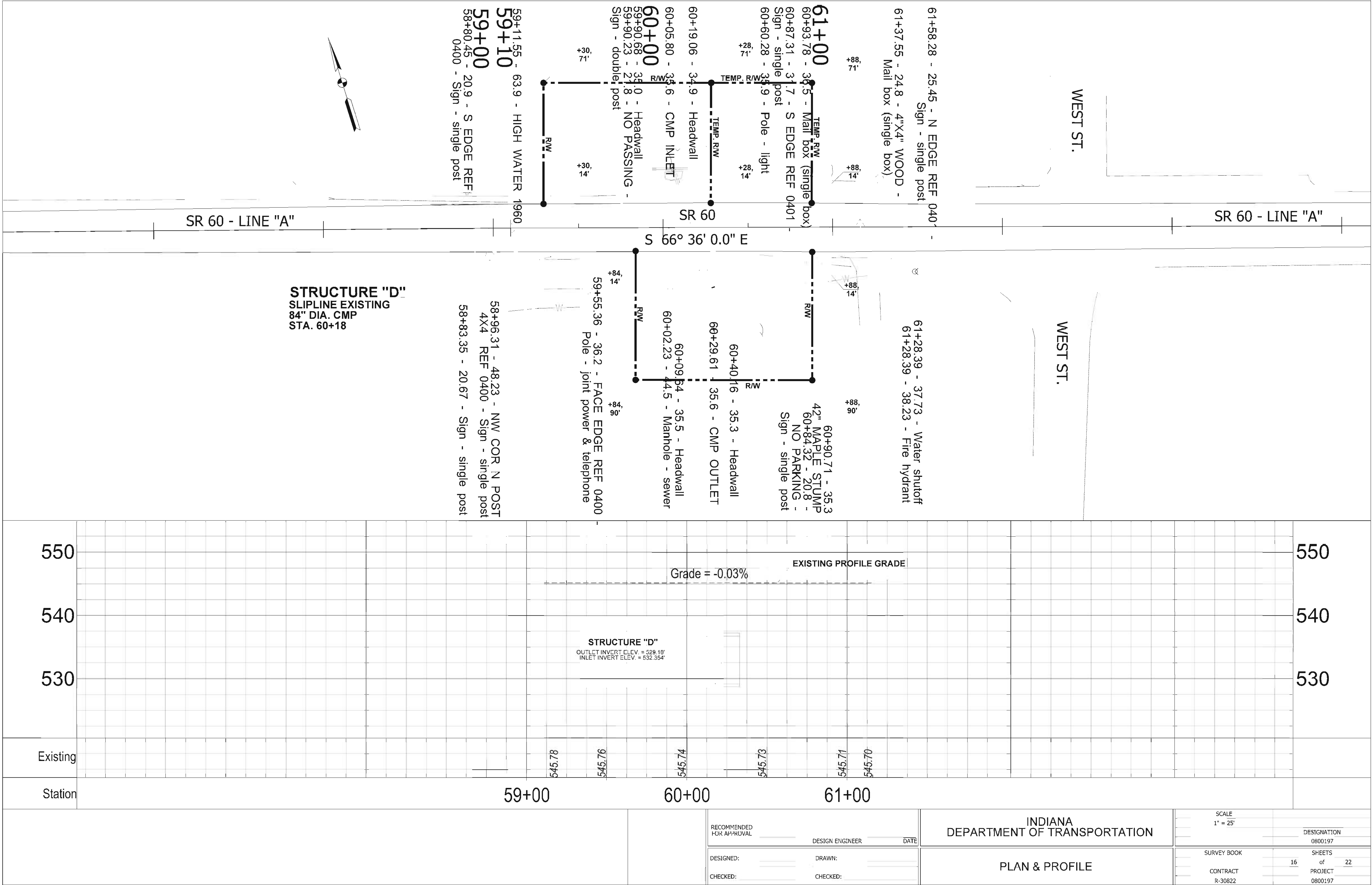
SEC. 7, 7-7-7, 7-7-7
? TOWNSHIP
WASHINGTON COUNTY

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

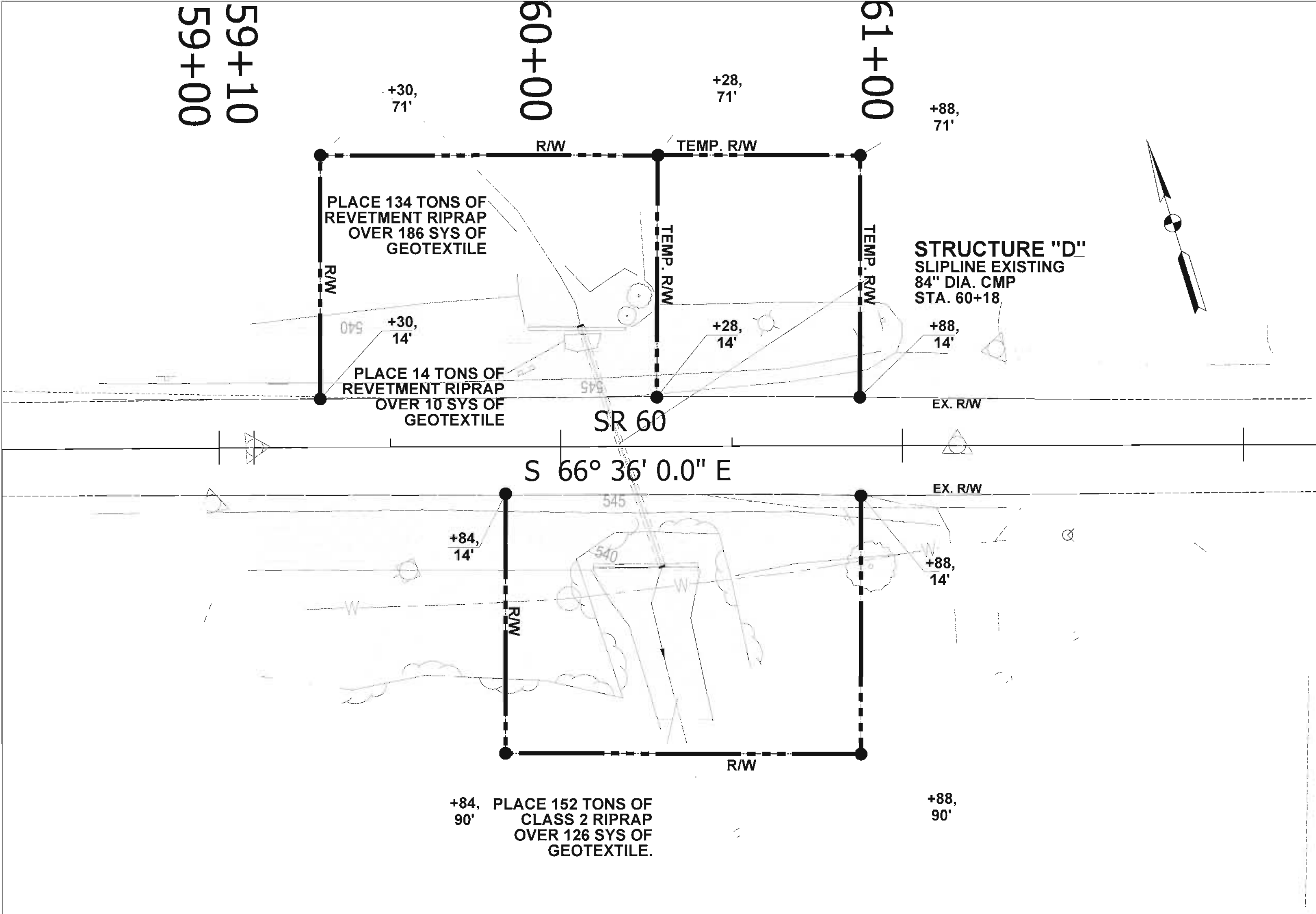
INDIANA
DEPARTMENT OF TRANSPORTATION

PLAT NO. 1

SCALE	
DESIGNATION	0800197
SURVEY BOOK	SHEETS
0800197	15 of 22
CONTRACT	PROJECT
R-30822	0800197



RECOMMENDED FOR APPROVAL _____ DESIGNED: _____ CHECKED: _____	DESIGN ENGINEER _____ DATE _____ DRAWN: _____ CHECKED: _____	INDIANA DEPARTMENT OF TRANSPORTATION PLAN & PROFILE	SCALE 1" = 25'	DESIGNATION 0800197
			SURVEY BOOK	SHEETS 16 of 22
			CONTRACT R-30822	PROJECT 0800197



EXISTING STRUCTURE

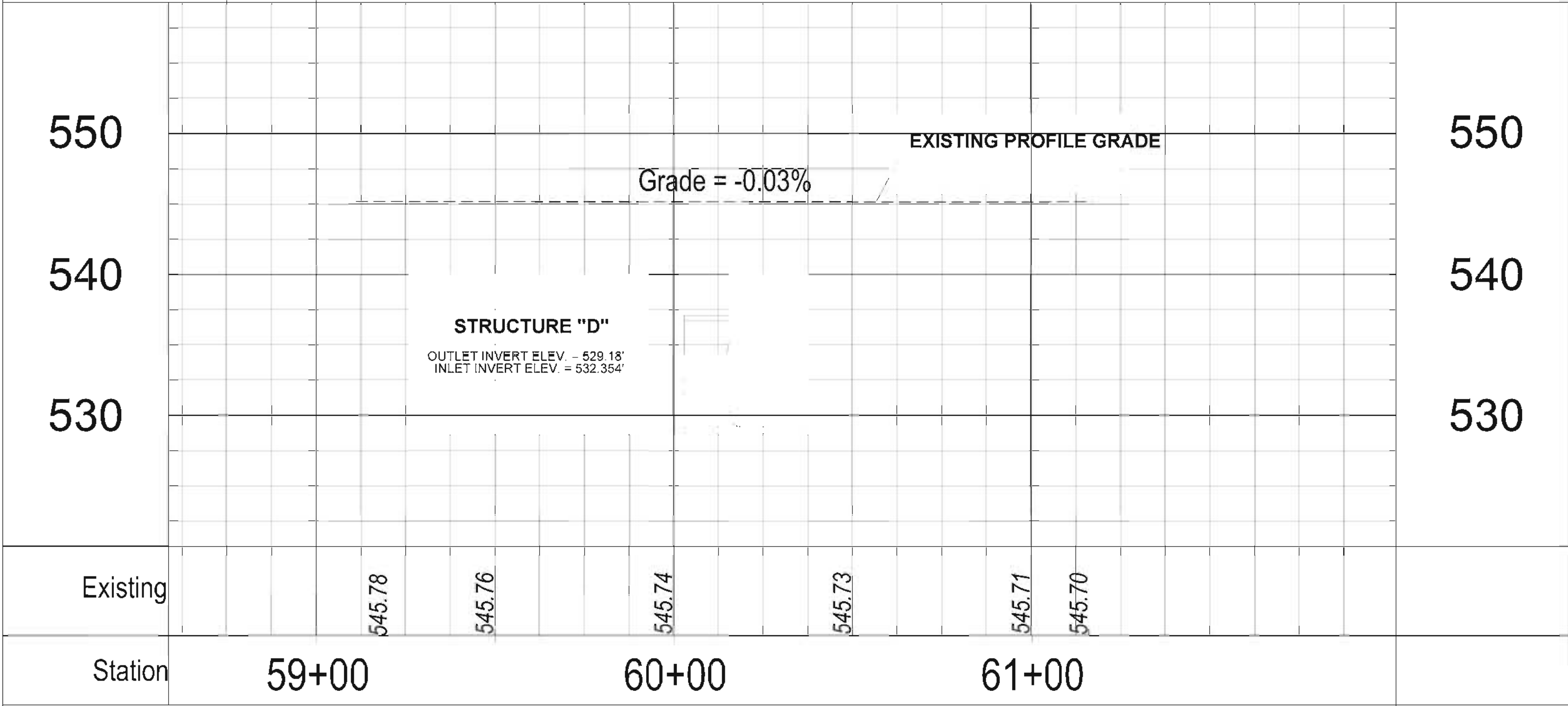
THE EXISTING STRUCTURE IS A 75' LONG 84" DIA. CMP WITH HEADWALLS AT THE INLET AND OUTLET. THE BOTTOM THIRD OF THE EXISTING STRUCTURE SHOWS SIGNS OF SEVERE SECTION LOSS WHICH LIKELY HAS CONTRIBUTED TO THE LOSS OF FINES ABOVE THE STRUCTURE AT THE INLET END OF THE STRUCTURE.

HYDRAULIC SUMMARY TABLE

PARAMETER	EXISTING	PROPOSED	UNIT
SPAN	75.000	75.000	FT.
RISE	7.000	8.500	FT.
LENGTH	75.000	76.000	FT.
CROSS SECTIONAL AREA	38.480	33.180	SQ. FT.
DRAINAGE AREA	0.192	0.192	SQ. MI.
Q ₁₀₀ DISCHARGE	97.3	97.3	CFS.
Q ₁₀₀ WATER SURFACE ELEV.	535.73	535.88	FT.
WATERWAY OPENING BELOW Q ₁₀₀ ELEV. (STR.)	23.66	22.945	SQ. FT.
ROADWAY OVERFLOW AREA BELOW Q ₁₀₀ ELEV.	0	0	SQ. FT.
MIN. LOW STRUCTURE ELEV.	539.35	538.85	FT.
BACKWATER AT Q ₁₀₀	0.95	1.10	FT.
OUTLET VELOCITY AT Q ₁₀₀	13.01	17.30	FT./SEC.

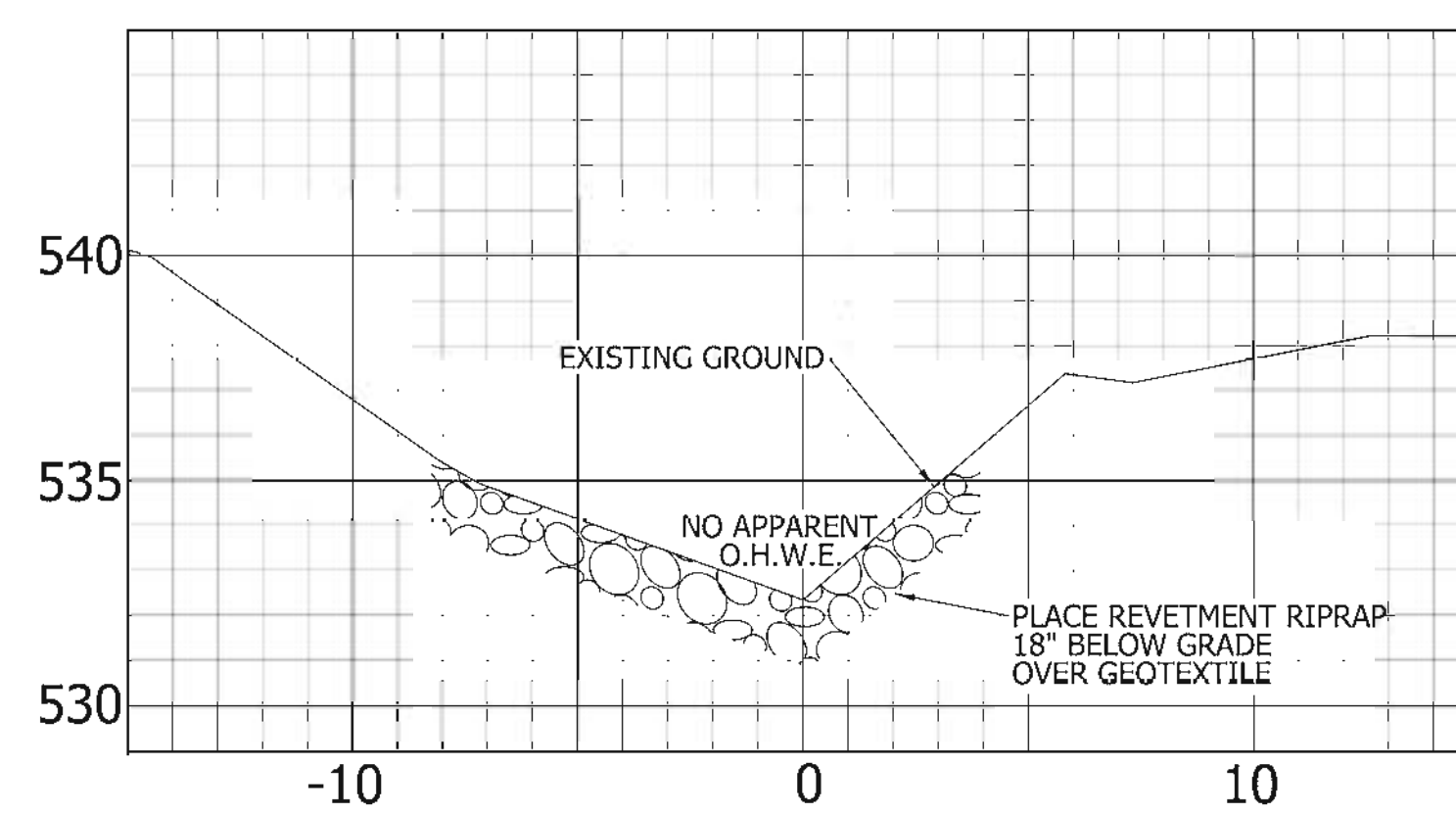
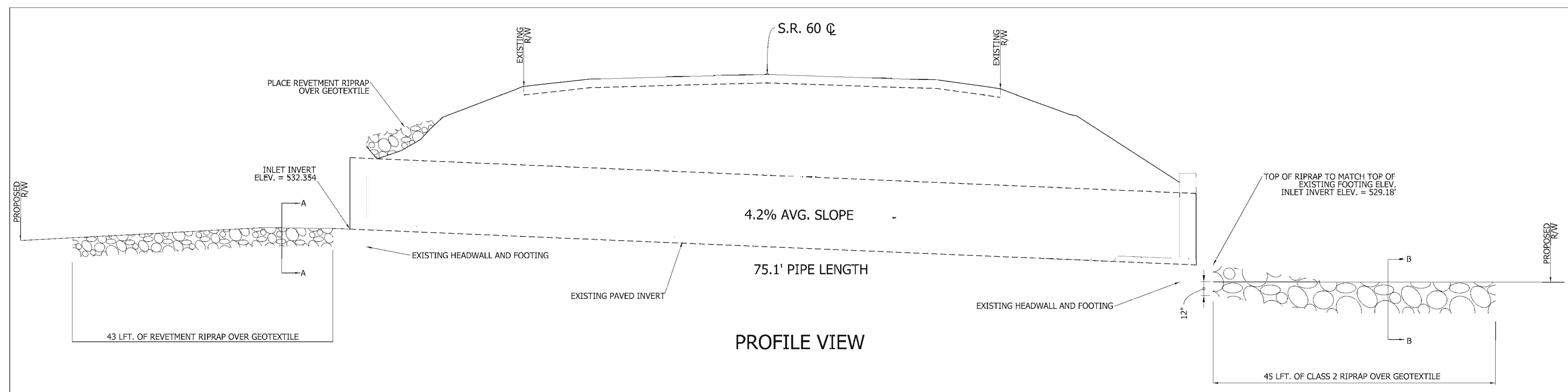
PROPOSED STRUCTURE

THE PROPOSED CONSTRUCTION ACTIVITIES INCLUDE:
INSTALL 77" LFT. OF THERMOPLASTIC PIPE LINER WITHIN THE EXISTING 84" DIA. CMP.
PLACE 152 TONS OF CLASS 2 RIPRAP OVER 126 SYS OF GEOTEXTILE AT THE DOWNSTREAM SIDE OF THE STRUCTURE (SOUTH OF SR 60). REFER TO PIPE PROFILE AND CHANNEL CROSS SECTIONS FOR ADDITIONAL INFORMATION.
PLACE 134 TONS OF REVETMENT RIPRAP OVER 186 SYS OF GEOTEXTILE AT THE UPSTREAM SIDE OF THE STRUCTURE (NORTH OF SR 60).
PLACE 14 TONS OF REVETMENT RIPRAP OVER 10 SYS OF GEOTEXTILE ABOVE THE STRUCTURE ON THE INLET SIDE (NORTH OF SR 60).

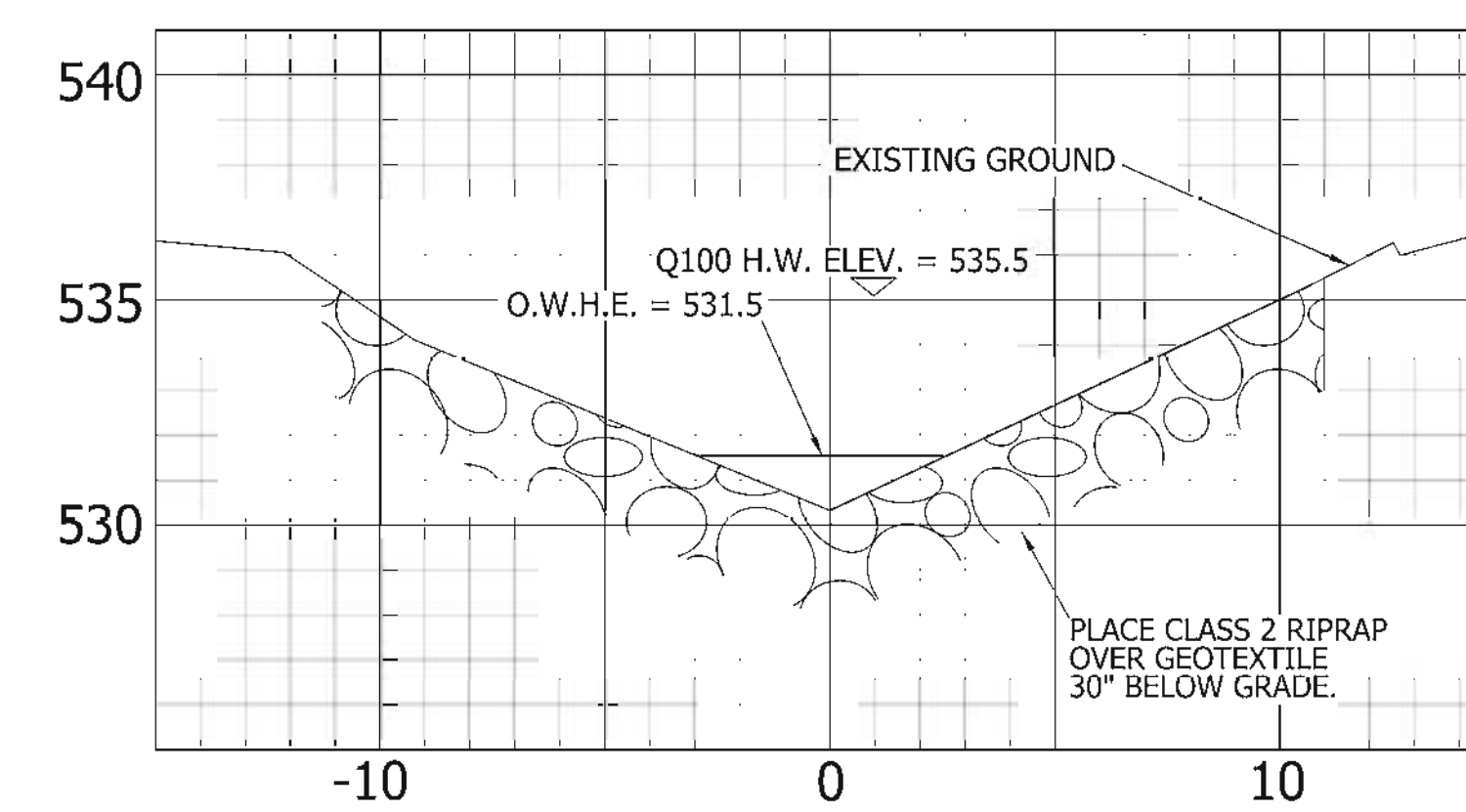


RECOMMENDED FOR APPROVAL _____ DESIGNED: _____ CHECKED: _____	DESIGN ENGINEER _____ DATE _____ DRAWN: _____ CHECKED: _____	INDIANA DEPARTMENT OF TRANSPORTATION LAYOUT	SCALE 1" = 25'	DESIGNATION 0800197
			SURVEY BOOK 0800197 CONTRACT R-30822	

SHEETS 17 of 22	PROJECT 0800197

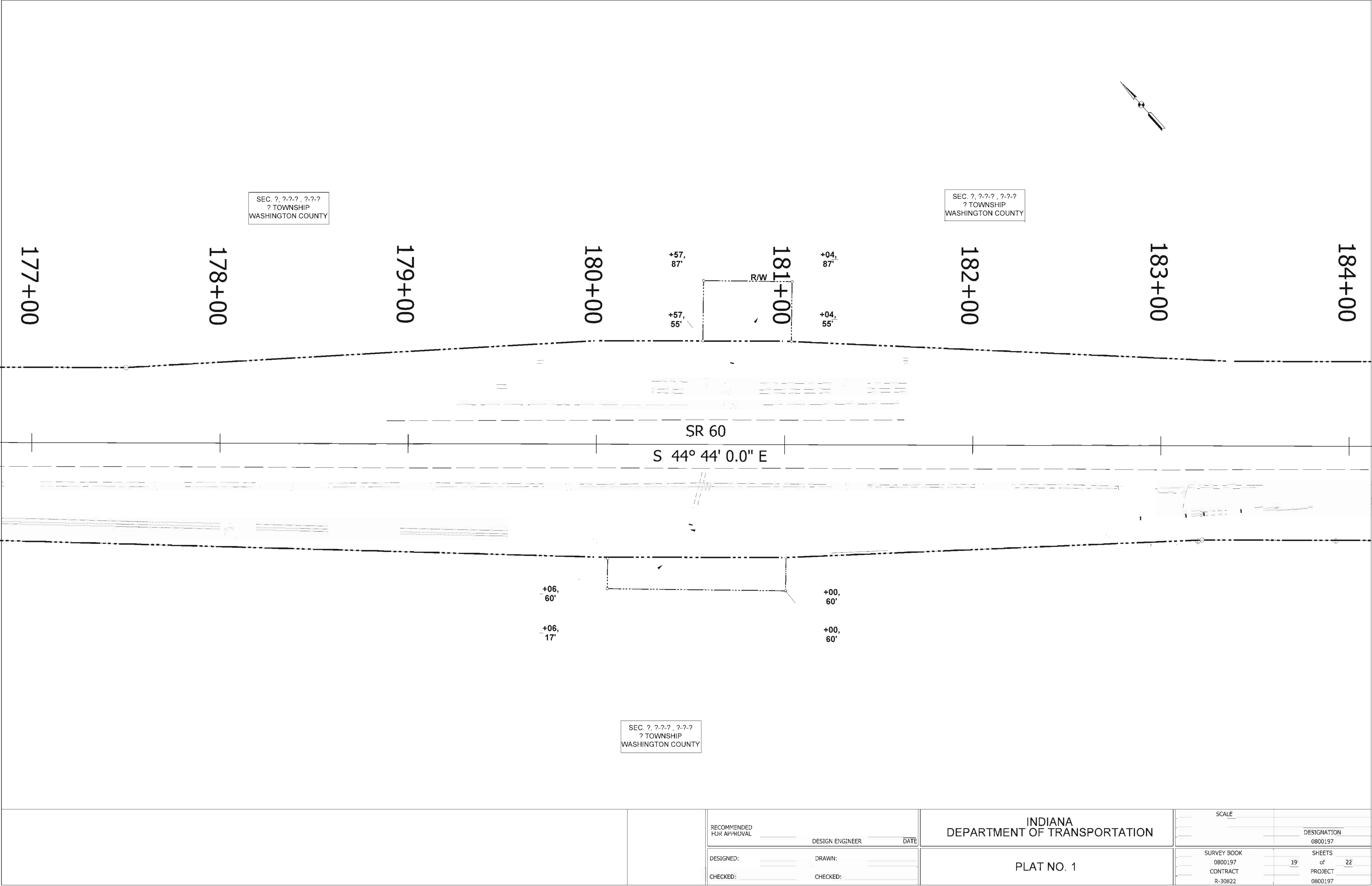


SECTION A-A
TYPICAL CROSS SECTION
5' UPSTREAM

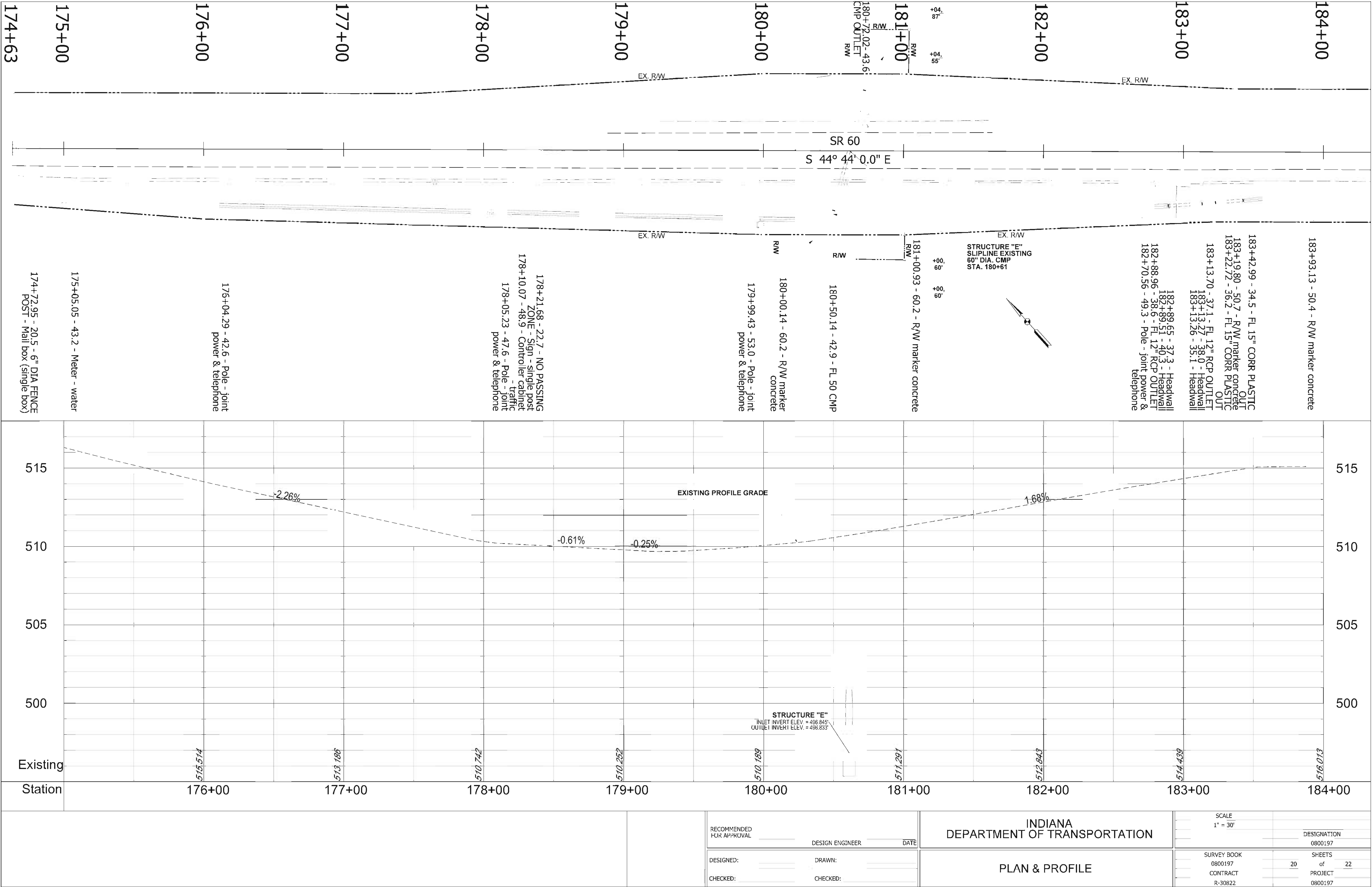


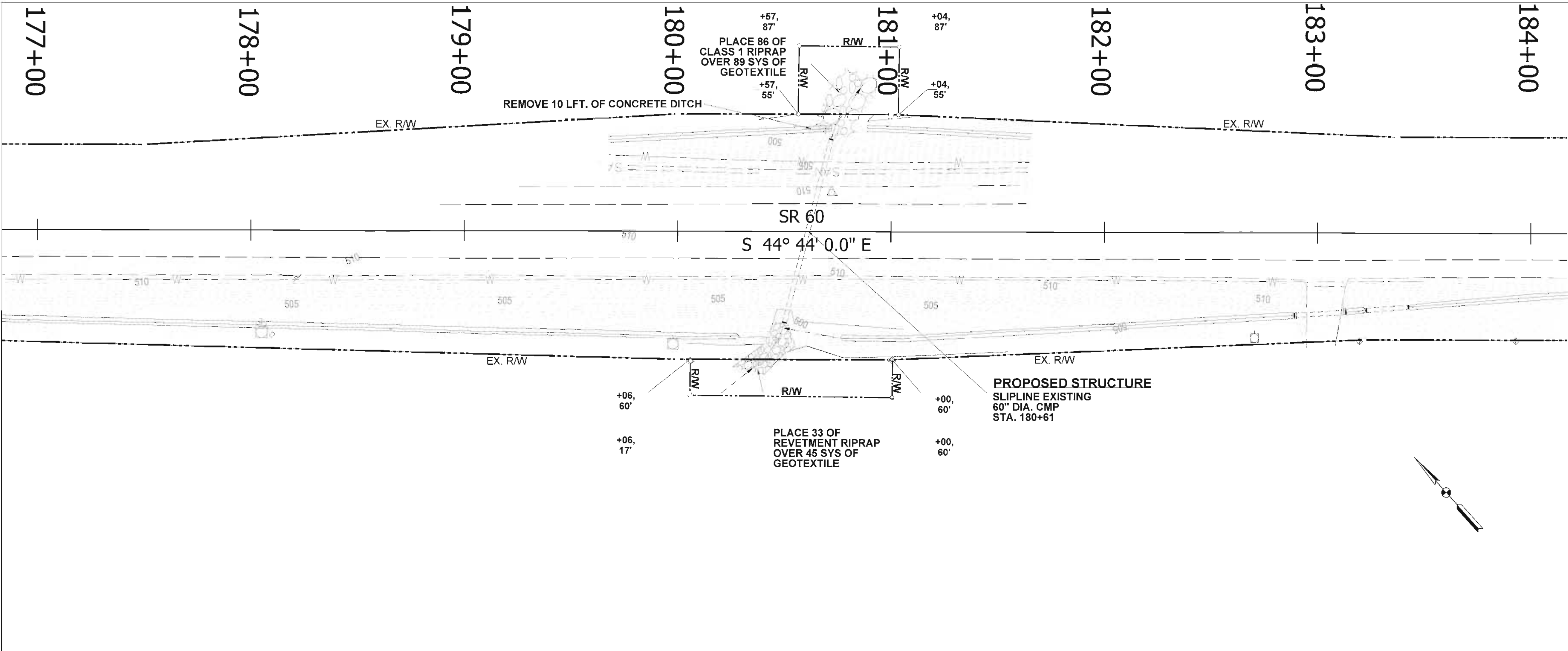
SECTION B-B
TYPICAL CROSS SECTION
5' DOWNSTREAM

		RECOMMENDED FOR APPROVAL _____		DESIGN ENGINEER _____ DATE _____		INDIANA DEPARTMENT OF TRANSPORTATION		SCALE VARIOUS _____	
		DESIGNED: _____		DRAWN: _____		PIPE PROFILE AND CHANNEL CROSS SECTIONS		SURVEY BOOK 0800197 _____	SHEETS 18 of 22
		CHECKED: _____		CHECKED: _____				CONTRACT R-30822 _____	PROJECT 0800197



RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____	INDIANA DEPARTMENT OF TRANSPORTATION		SCALE _____	DESIGNATION 0800197
					SURVEY BOOK 0800197	
DESIGNED: _____	DRAWN: _____		PLAT NO. 1		19	SHEETS of 22
CHECKED: _____	CHECKED: _____				CONTRACT R-30822	PROJECT 0800197

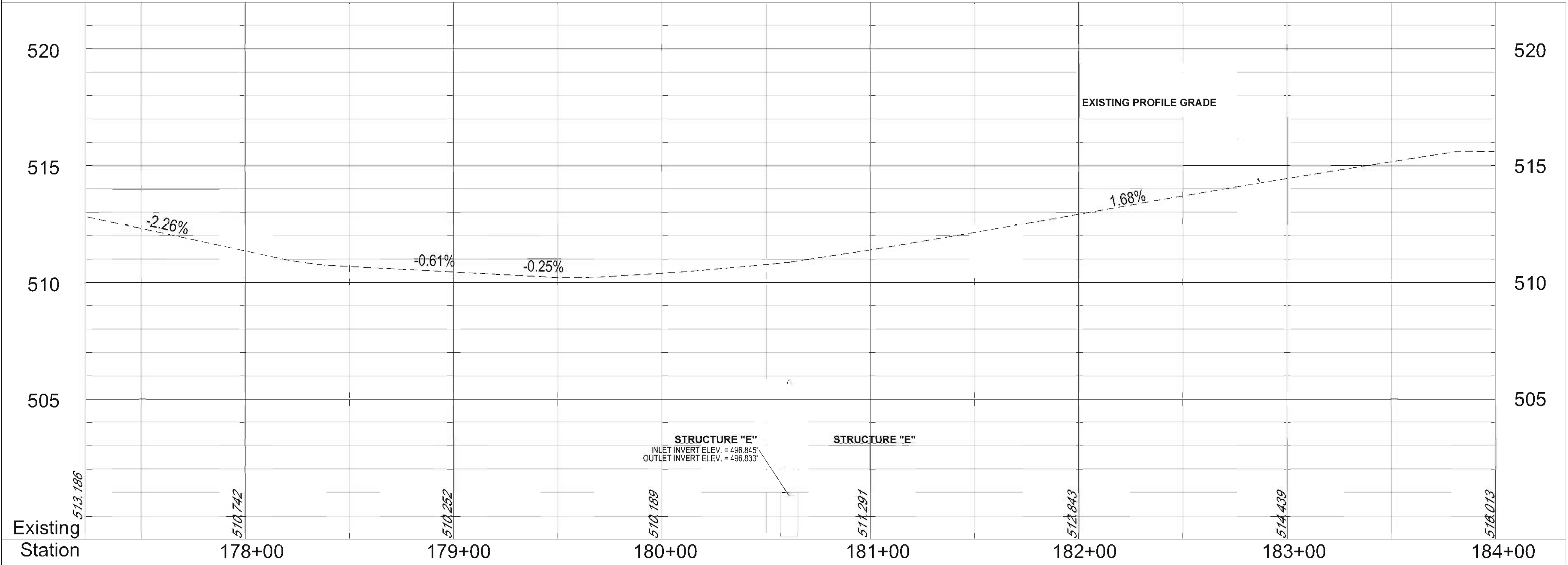




EXISTING STRUCTURE

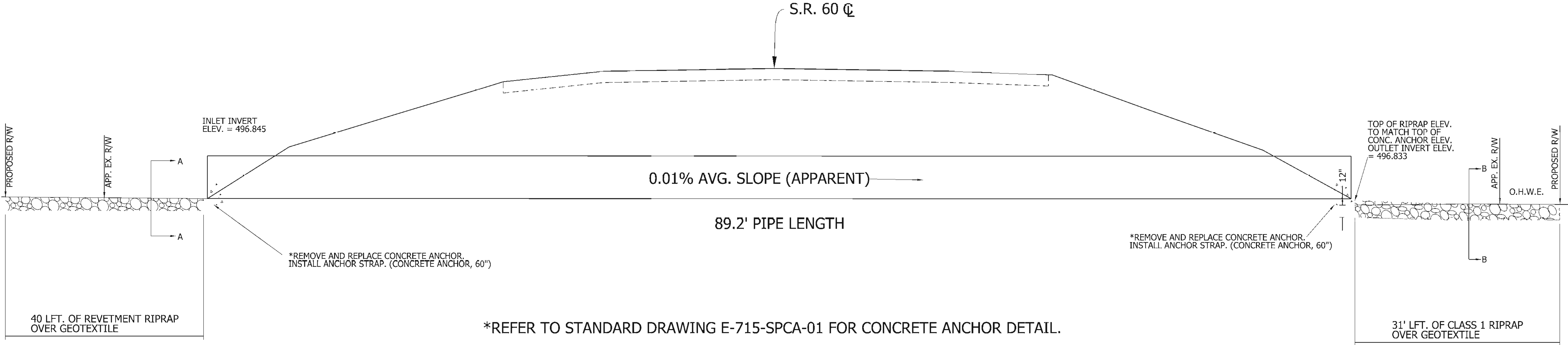
HYDRAULIC SUMMARY

PARAMETER	EXISTING	PROPOSED	UNIT
SPAN	5.0	4.50	FT.
RISE	5.0	4.50	FT.
LENGTH	89.0	91.0	FT.
CROSS SECTIONAL AREA	19.03	15.9	SQ. FT.
DRAINAGE AREA	0.032	0.032	SQ. MI.
Q ₁₀₀ DISCHARGE	48.4	48.4	CFS.
Q ₁₀₀ WATER SURFACE ELEV.	500.18	499.82	FT.
WATERWAY OPENING BELOW Q ₁₀₀ ELEV. (STR.)	16.85	13.365	SQ. FT.
ROADWAY OVERFLOW AREA BELOW Q ₁₀₀ ELEV.	0	0	SQ. FT.
MIN. LOW STRUCTURE ELEV.	501.85	501.35	FT.
BACKWATER AT Q ₁₀₀	1.24	0.88	FT.
OUTLET VELOCITY AT Q ₁₀₀	6.84	7.04	FT./SEC.

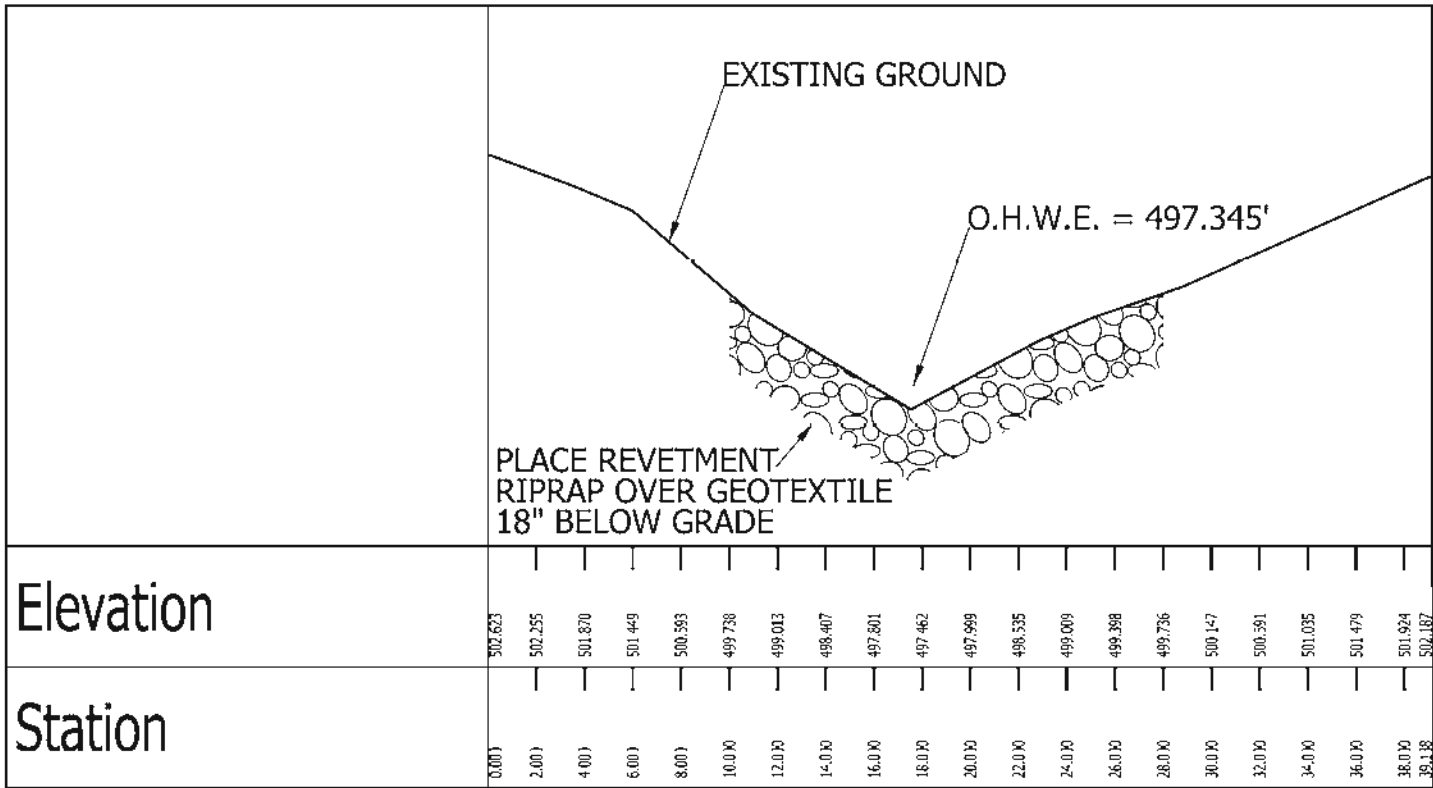


PROPOSED STRUCTURE

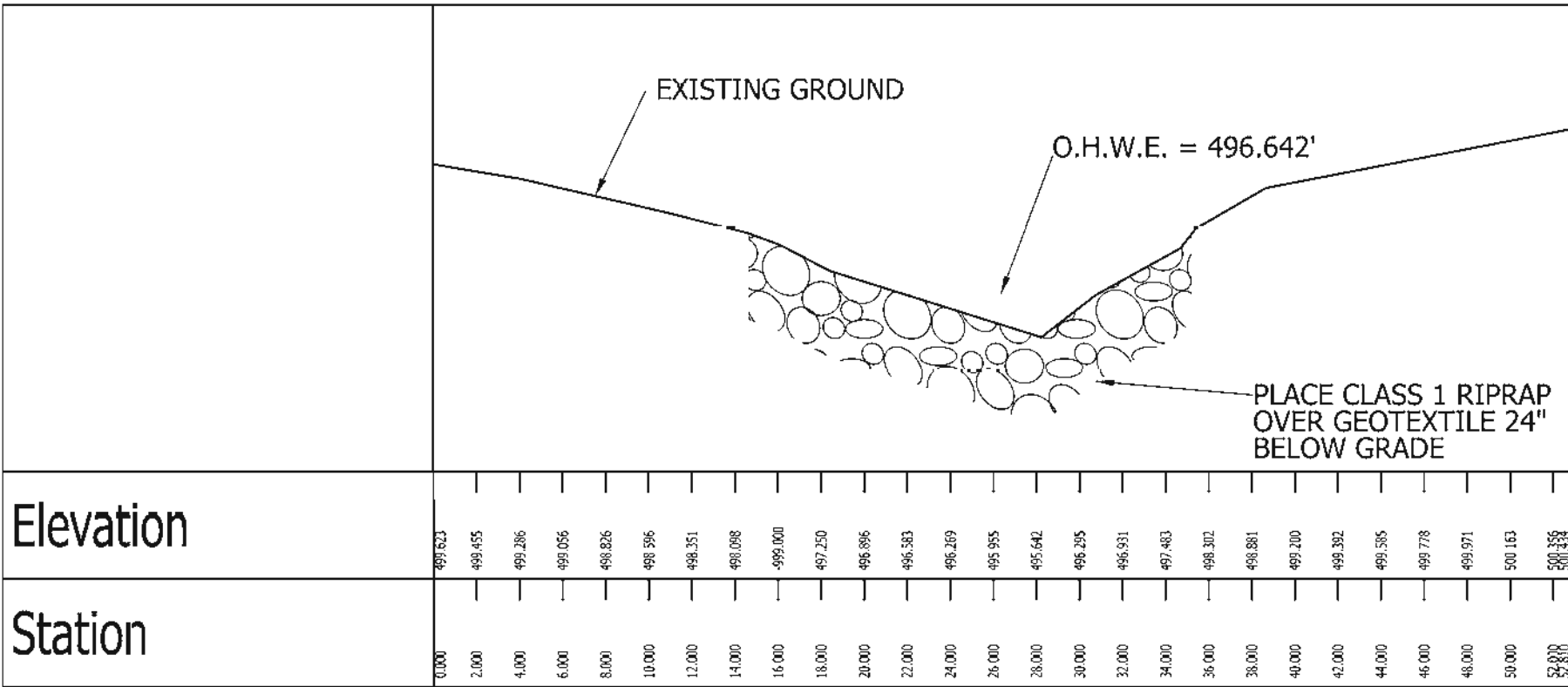
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DESIGNED: _____		DRAWN: _____		LAYOUT		DESIGNATION 0800197	
CHECKED: _____		CHECKED: _____				SHEETS 21 of 22	
						CONTRACT R-30822	
						PROJECT 0800197	



PROFILE VIEW



SECTION A-A
TYPICAL CROSS SECTION
APPROX. 5' UPSTREAM



SECTION B-B
TYPICAL CROSS SECTION
APPROX. 10' DOWNSTREAM

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE _____		INDIANA DEPARTMENT OF TRANSPORTATION	SCALE VARIOUS _____ DESIGNATION 0800197	
DESIGNED: _____ DRAWN: _____ CHECKED: _____ CHECKED: _____			SURVEY BOOK 0800197 _____ 22 CONTRACT R-30822 _____ PROJECT 0800197 _____ 22	