



✓ KOM

September 12, 2018

Delaware County Council
100 W Main St
Muncie, Indiana 47304

Re: Des. No.: 1298228
Intersection Improvement Project
State Road (SR) 332 and County Road (CR) 600 W, 3.36 miles east of Interstate 69 (I-69)
Yorktown, Delaware County, Indiana

Dear Sir or Madam:

The Federal Highway Administration (FHWA) and the Indiana Department of Transportation (INDOT)-Greenfield District, propose to proceed with an intersection improvement project at SR 332 and CR 600 W, 3.36 miles east of I-69 (Des. No. 1298228).

This letter is part of the early coordination phase of the environmental review process requesting comments associated with these projects. Please use the above Des. No. and project description in your reply, and your comments will be incorporated into the formal environmental study. Your cooperation in this endeavor is appreciated.

Project Location and Existing Conditions

The proposed project is located along SR 332 and CR 600 W in Yorktown, Delaware County, Indiana, approximately 3.36 miles east of I-69. Specifically, the project is located in Sections 33 and 34, Township 21 North, Range 9 East of Harrison Township and Sections 3 and 4, Township 20 North, Range 9 East of Mount Pleasant Township as depicted on the Gilman and Muncie West U.S. Geological Survey (USGS) 1:24,000 scale Quadrangles.

SR 332 is classified as a rural major collector within the project area and consists of four, 12-foot asphalt travel lanes (2 eastbound, 2 westbound) with a 5-foot paved shoulder on both the inside and outside lanes. Additionally, there is one right turn lane and one left turn lane that are both 12 feet wide; both turn lanes begin approximately 500 feet from the intersection with CR 600 W. The eastbound and westbound travel lanes are separated by a 40-foot grass median. CR 600 W is classified as a rural major collector north of SR 332 and an urban minor arterial south of SR 332. CR 600 W consists of two, 10-foot to 11-foot asphalt travel lanes (1 northbound, 1 southbound). Adjacent land use consists of agricultural and residential areas. Please see the attached maps and photographs of the proposed project area.

Purpose and Need

The need for the project stems from significant traffic delays during peak travel times along CR 600 W and the high frequency of personal injury crashes. Since traffic along CR 600 W has to stop and traffic along SR 332 is free flowing, congestion occurs along CR 600 W. The purpose of the

project is to reduce traffic delays and reduce personal injury crash frequency along SR 332 and CR 600 W.

Proposed Project

The proposed project will construct a restricted crossing U-turn, or J-turn, at the intersection of SR 332 and CR 600 W. Travel along CR 600 W at SR 332 will be restricted by a new center curb. Motorists will be required to turn right onto SR 332 and perform a U-turn approximately 750 feet from the intersection to access CR 600 W. The pavement at each turn-around will be widened by 36.6 feet along westbound SR 332 and by 36.8 feet along eastbound SR 332. Traffic along SR 332 will be unimpeded and the new curbs will allow left turns onto CR 600 W in both directions. Also, two pipe culverts beneath SR 332 will be extended. One culvert is a 30-inch inner diameter pipe which will be extended by 11 linear feet. The other culvert is a 24-inch inner diameter pipe which will be extended by 12 linear feet. Additionally, 3 driveways along CR 600 W within the project area will be replaced as a part of this project. The total length of the project is 1697 feet along SR 332 and 600 feet along CR 600 W.

The maintenance of traffic (MOT) plan will include multiple phases to limit the impact to emergency vehicles. The MOT involves lane closures along SR 332 and closing CR 600 W at the intersection. A detour for CR 600 W, utilizing CR 200 N, CR 700 W, and CR 300 N, will be established for motorists. Access will be maintained for property owners during construction of the project. The MOT will be implemented per the *Indiana Design Manual* guidelines.

Construction is anticipated to begin in Fiscal Year (FY) 2020. The estimated construction cost associated with this project is \$1,334,167.00.

Right-of-Way (ROW)

This project will require the acquisition of approximately 0.636 acre of permanent right-of-way to widen SR 332 at the location of the two turnarounds.

Environmental Resources

A Red Flag Investigation (RFI) was performed for a 0.5-mile radius for the project area. No "Red Flags" were identified within the project area but due to the proximity of water resources in the project area, a full wetland and stream delineation will be conducted and a *Waters of the U.S. Determination Report* will be completed as a part of the project. This project is outside of the Karst Memorandum of Understanding Potential Karst Features Region.

Lochmueller Group conducted a field investigation of the project area on October 27, 2017. The field investigation identified several wetlands within the project area and a *Waters of the U.S. Determination Report* will be prepared for this project.

Section 106

The National Register of Historic Places (National Register) and the Indiana Register of Historic Sites and Structures (State Register) were reviewed using the State Historic Architectural and Archaeological Research Database (SHAARD) and SHAARD Geographic Information System (GIS)

data published online. No above-ground historical resources on either list are within the project area. The 1985 *Delaware County Interim Report: Indiana Historic Sites and Structures Inventory* (IHSSI) data was also examined; no surveyed resources from this inventory were located within the project area. No resources listed in the Interim Report are near the project area. The *Indiana Historic Bridge Inventory Volume 2: Listing of Historic and Non-Historic Bridges* by Mead & Hunt (2009) was reviewed. No bridges eligible for listing in the National Register are within the project area.

Range-wide Informal Programmatic Consultation

Land use in the vicinity of the project is primarily rural with agricultural and residential areas surrounding the project area. Delaware County is within the range of the federally endangered Indiana bat (*Myotis sodalis*) and the federally threatened northern long-eared bat (*Myotis septentrionalis*). The project appears to fall under the Range-wide Programmatic Informal Consultation process. Completion of the appropriate determination key through the U.S. Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPaC) portal will occur. If a likely determination of "Not Likely to Adversely Affect," or "Likely to Adversely Affect" is reached then additional consultation with the USFWS will occur through INDOT.

Early Coordination

This letter is part of the early coordination review process. You are asked to review this information and provide any comments you may have relative to anticipated impacts of the project on areas in which you have jurisdiction or special expertise. We will incorporate your comments into a study of the project's environmental impacts. To facilitate the development of this project, you are asked to reply within **30 days** of receipt of this letter. If no response is received by that date, it will be assumed you have no comments at the present time.

If you have any questions regarding this project, please feel free to contact me at (317) 222-3880 or at ckunkel@lochgroup.com. Additionally, should you want to contact the sponsor of this project, INDOT-Greenfield District please contact the Project Manager, Mr. Mark Blake, at (317) 467-3982 or at mblake@indot.in.gov.

Thank you in advance for your input.

Sincerely,



Chris Kunkel
Environmental Biologist
Lochmueller Group, Inc.

Attachments:

- Red Flag Investigation Maps
- Photographs
- Preliminary Design Plans

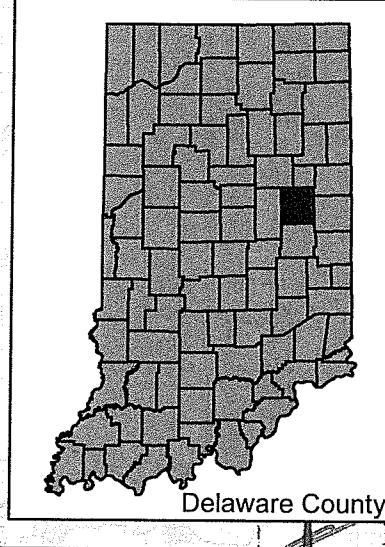
Distribution List:

- USFWS, Bloomington Field Office (electronic submission)
- Natural Resources Conservation Service, Indianapolis Office
- U.S. Army Corps of Engineers, Louisville District
- U.S. Housing and Urban Development
- National Park Service
- FHWA – Indiana Division (electronic submission)
- Indiana Department of Natural Resources (IDNR), Division of Fish and Wildlife (electronic submission)
- Indiana Department of Environmental Management (IDEM) (electronic submission)
- INDOT, Office of Public Involvement (electronic submission)
- INDOT, Office of Aviation (electronic submission)
- INDOT, Environmental Services (electronic submission)
- INDOT, Greenfield District (electronic submission)
- Indiana Geological Survey (electronic submission)
- Delaware County Board of Commissioners
- Delaware County Council
- Delaware County Highway Department
- Delaware County Surveyor's Office
- Delaware County Emergency Management Agency
- Delaware County Sheriff's Department
- Delaware County, Mount Pleasant Township Trustee
- Delaware County, Harrison Township Trustee
- Wes-Del Community Schools
- Yorktown Community Schools
- Yorktown Fire Department
- Bureau of Water Quality MSD
- Delaware-Muncie Metropolitan Planning Commission

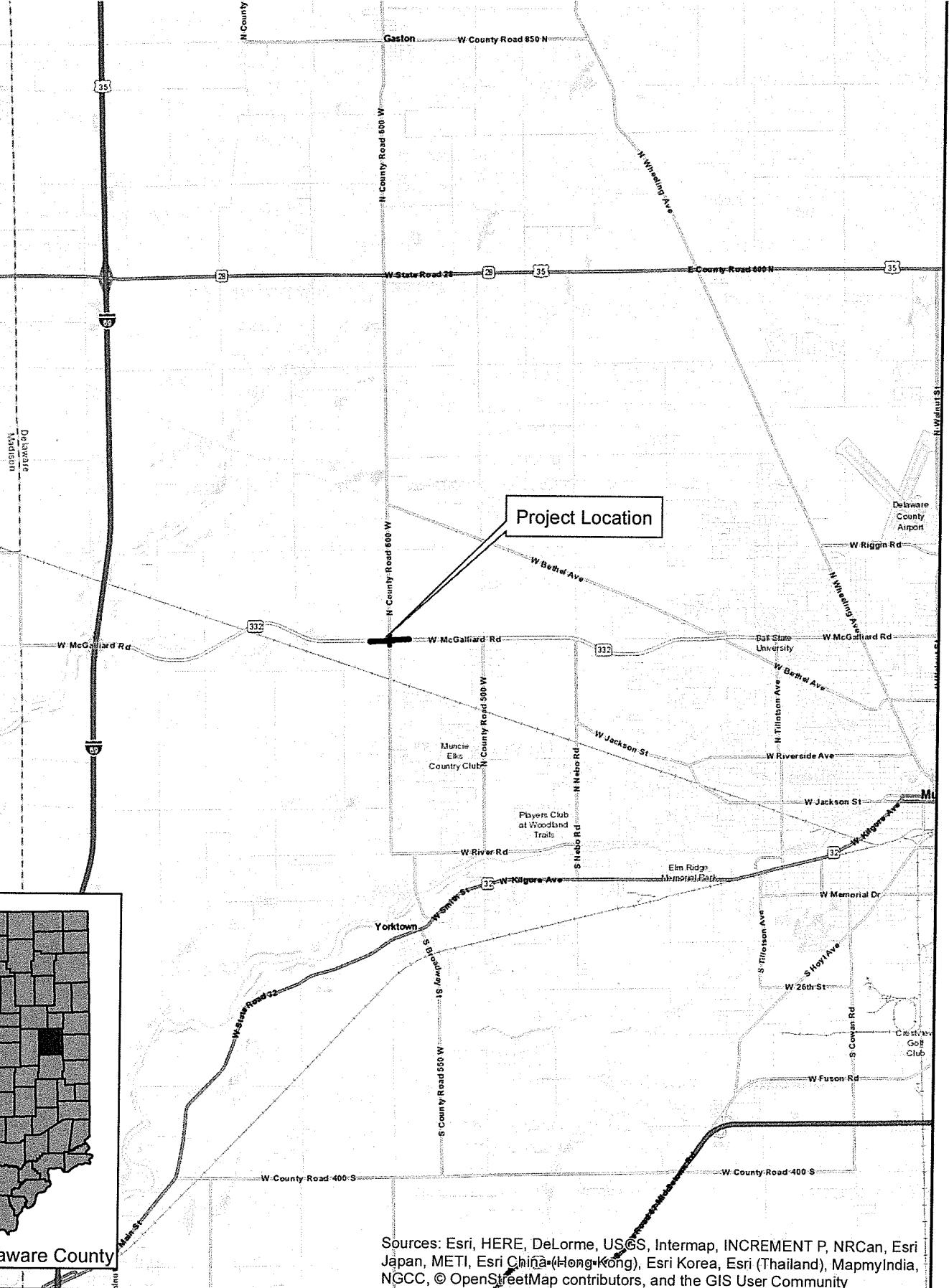
Early Coordination

Attachment A

Red Flag Investigation Maps



Walker
mometry



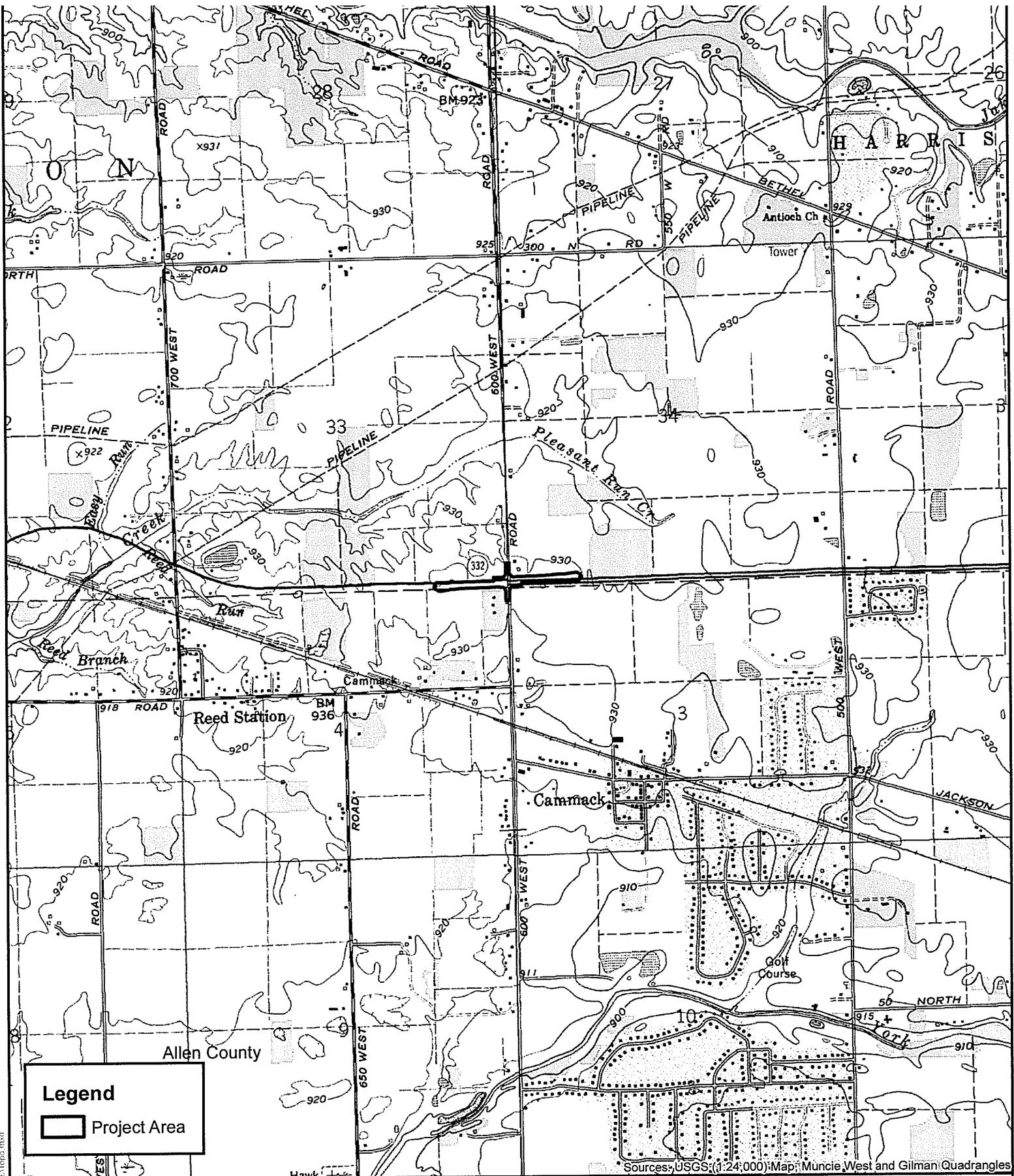
General Location Map

Des. # 1298228

0 1 2 Miles

County: Delaware
Township: Mt. Pleasant & Harrison
State: Indiana

SR 332 Intersection Improvement Project
SR 332, 3.36 miles east of I-69
Created: 5/23/2018, CKunkel



Sources: USGS (1:24,000) Map; Muncie West and Gilman Quadrangles



3502 Woodview Trace, Suite 150
Indianapolis, IN 46268
Phone: (317) 222-3880
Fax: (317) 222-3881

USGS Topographic Map

Des. # 1298228

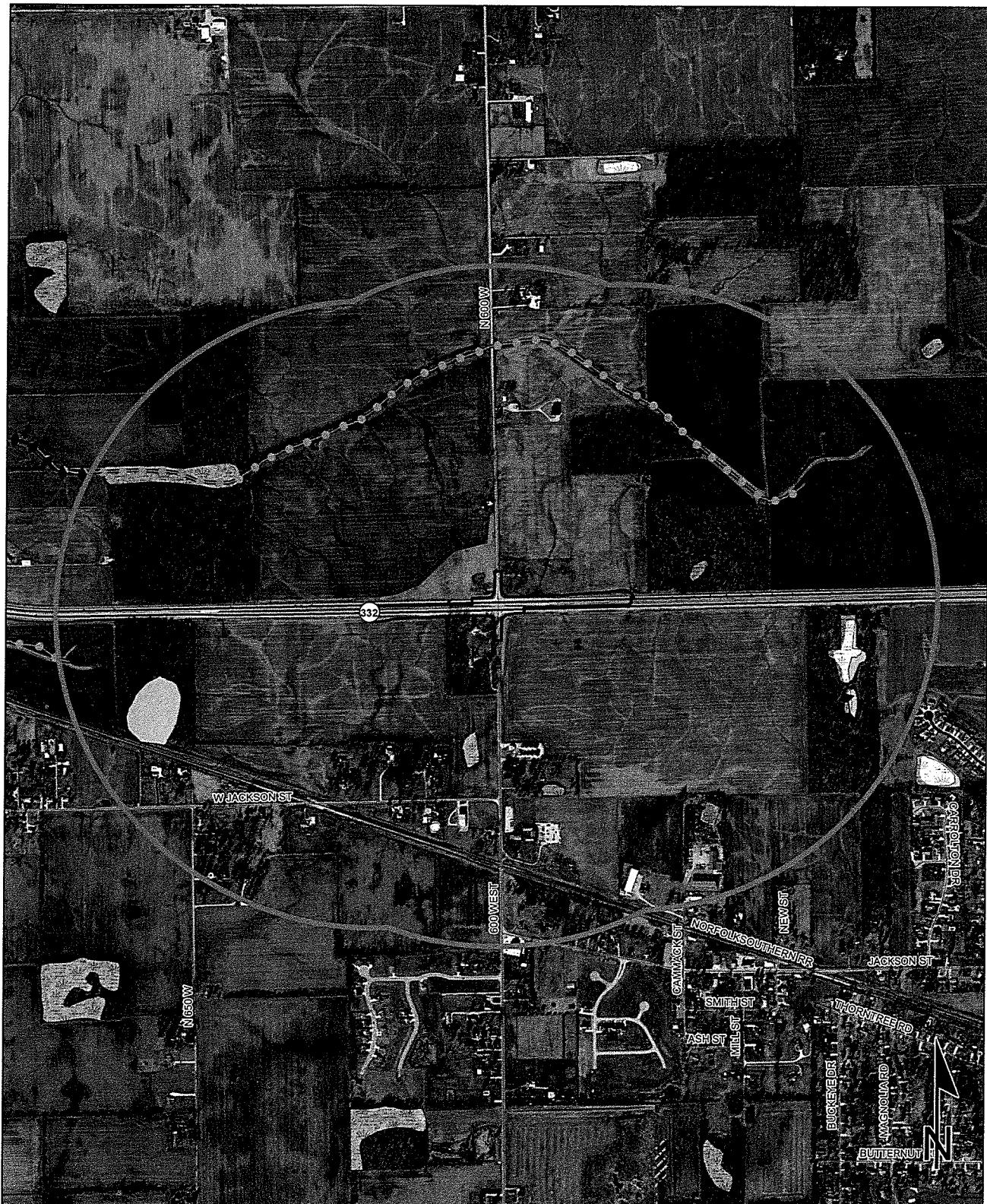
0 0.25 0.5
Miles



County: Delaware
Township: Mt. Pleasant & Harrison
State: Indiana

SR 332 Intersection Improvement Project
SR 332, 3.36 miles east of I-69
Created: 5/7/2018, CKunkel

**SR 332 at CR 600 W, 3.36 miles east of I-69
Des. No. 1298228, Intersection Improvement
Delaware County, Indiana**



Sources: 0.2 0.1 0 0.2 Miles
Non Orthophotography

Data - Obtained from the State of Indiana Geographical Information Office Library

Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)

Map Projection: UTM Zone 16 N **Map Datum:** NAD83

This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

NWI - Point	Wetlands	Project Area
Karst Spring	Lake	Half Mile Radius
NWI - Line	Floodplain - DFIRM	Toll
Impaired_Stream_Lake	Cave Entrance Density	Interstate
NPS NRI listed	Sinkhole Area	State Route
River	Sinking-Stream Basin	US Route
Canal Structure - Historic		Local Road
Canal Route - Historic		

SR 332 at CR 600 W, 3.36 miles east of I-69
Des. No. 1298228, Intersection Improvement
Delaware County, Indiana



Sources: 0.2 0.1 0 0.2 Miles
Non Orthophotography

Data - Obtained from the State of Indiana Geographical Information Office Library

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Map Projection: UTM Zone 16 N Map Datum: NAD83

This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

	Religious Facility		Recreation Facility		Project Area
	Airport		Pipeline		Half Mile Radius
	Cemeteries		Railroad		Toll
	Hospital		Trails		Interstate
	School		Managed Lands		State Route
			County Boundary		US Route
					Local Road

SR 332 at CR 600 W, 3.36 miles east of I-69
Des. No. 1298228, Intersection Improvement
County, Indiana



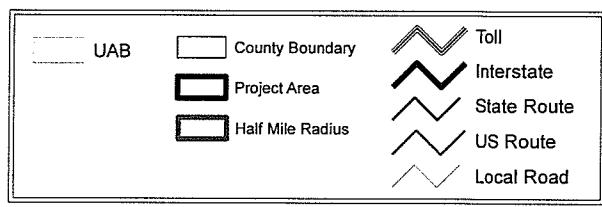
Sources: 0.2 0.1 0 0.2 Miles
Non Orthophotography

Data - Obtained from the State of Indiana Geographical Information Office Library

Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)

Map Projection: UTM Zone 16 N Map Datum: NAD83

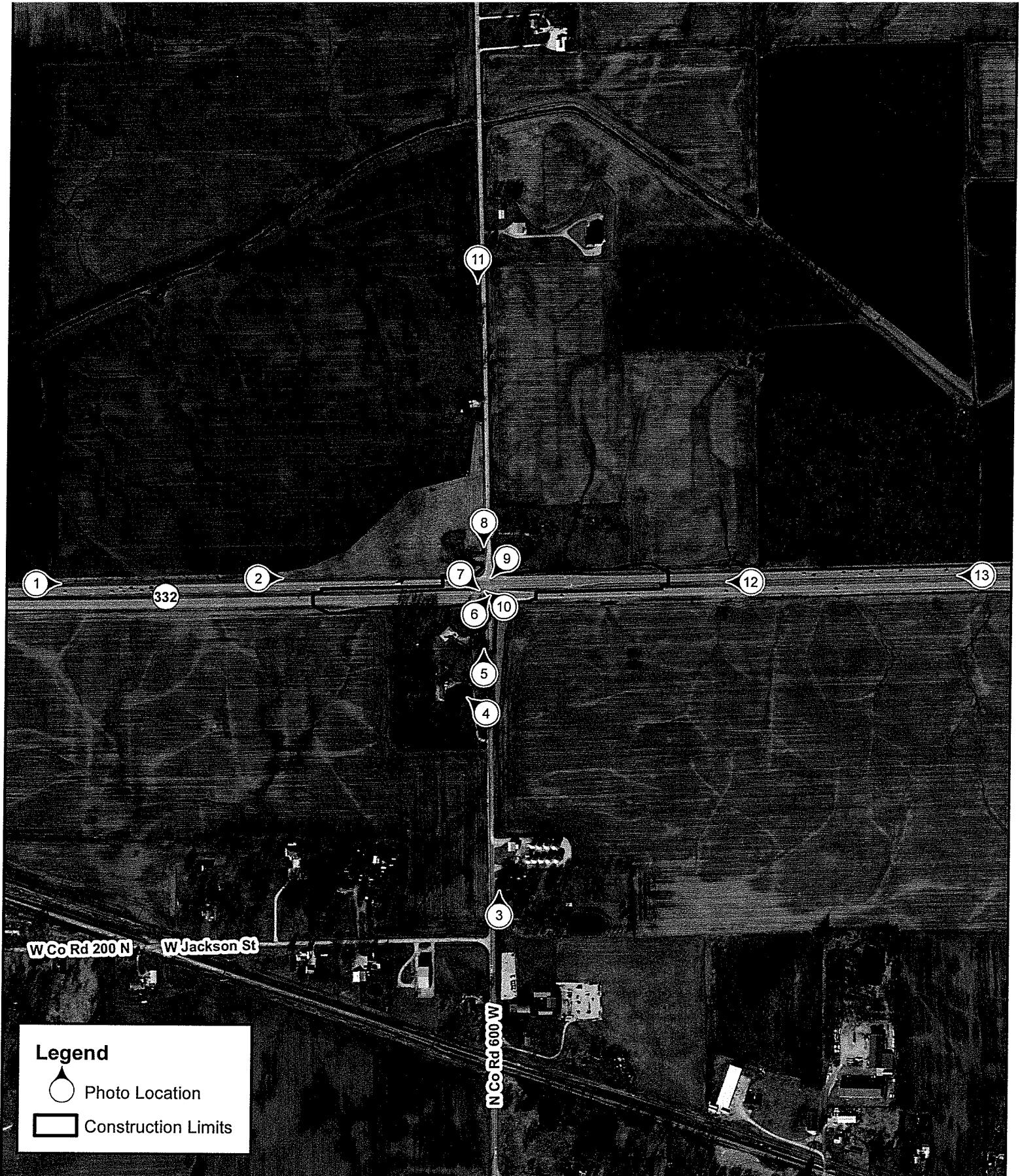
This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.



Early Coordination

Attachment B

Photographs

**Legend**

- Photo Location
- Construction Limits

Photo Location Map

Des. No. 1298228

County: Delaware
Township: Mt. Pleasant & Harrison
State: Indiana

0 425 850
Feet



3502 Woodview Trace, Suite 150
Indianapolis, IN 46268
Phone: (317) 222-3880
Fax: (317) 222-3881

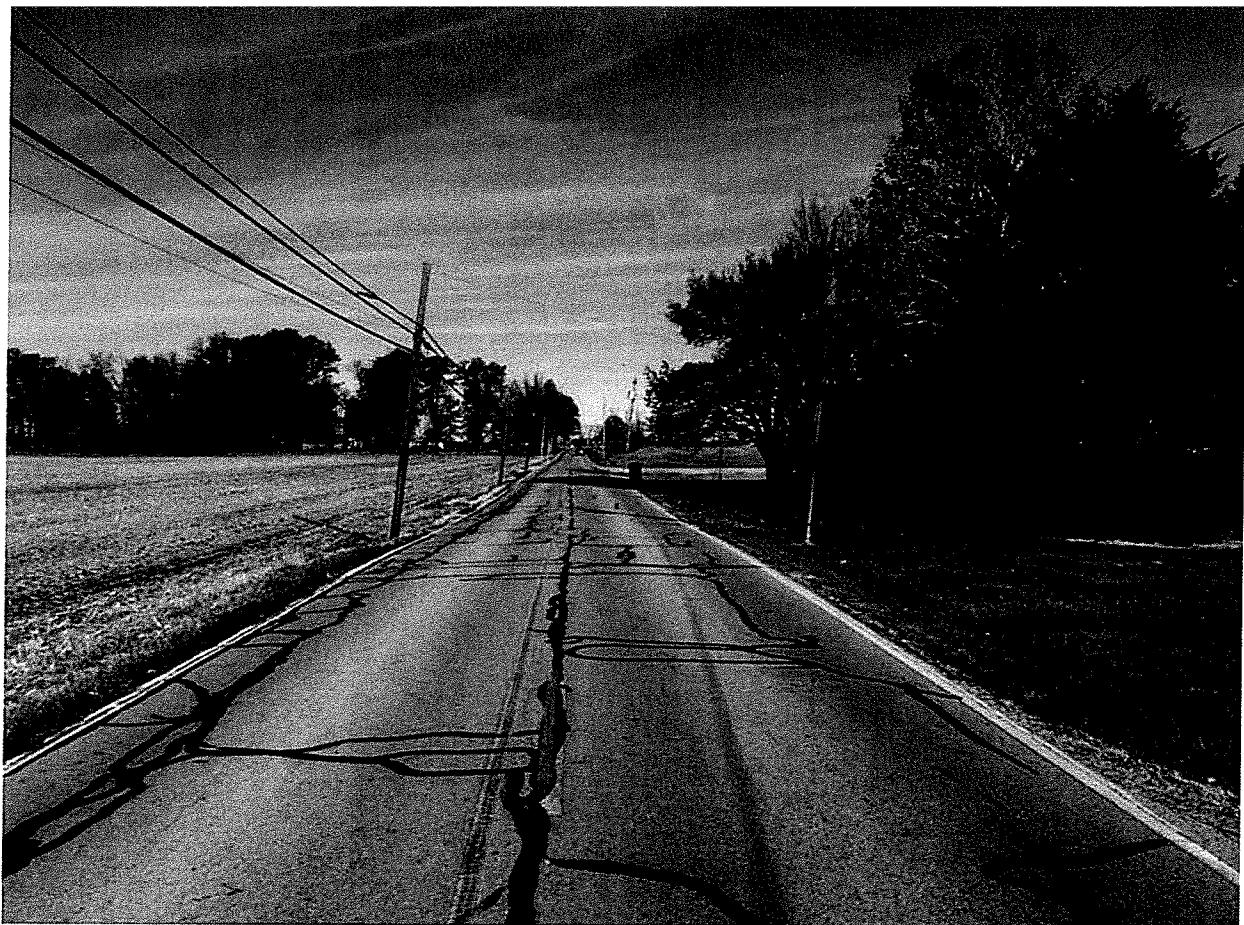
SR 332 Intersection Improvement Project
SR 332, 3.36 miles east of I-69
Created: 8/6/2018, CKunkel



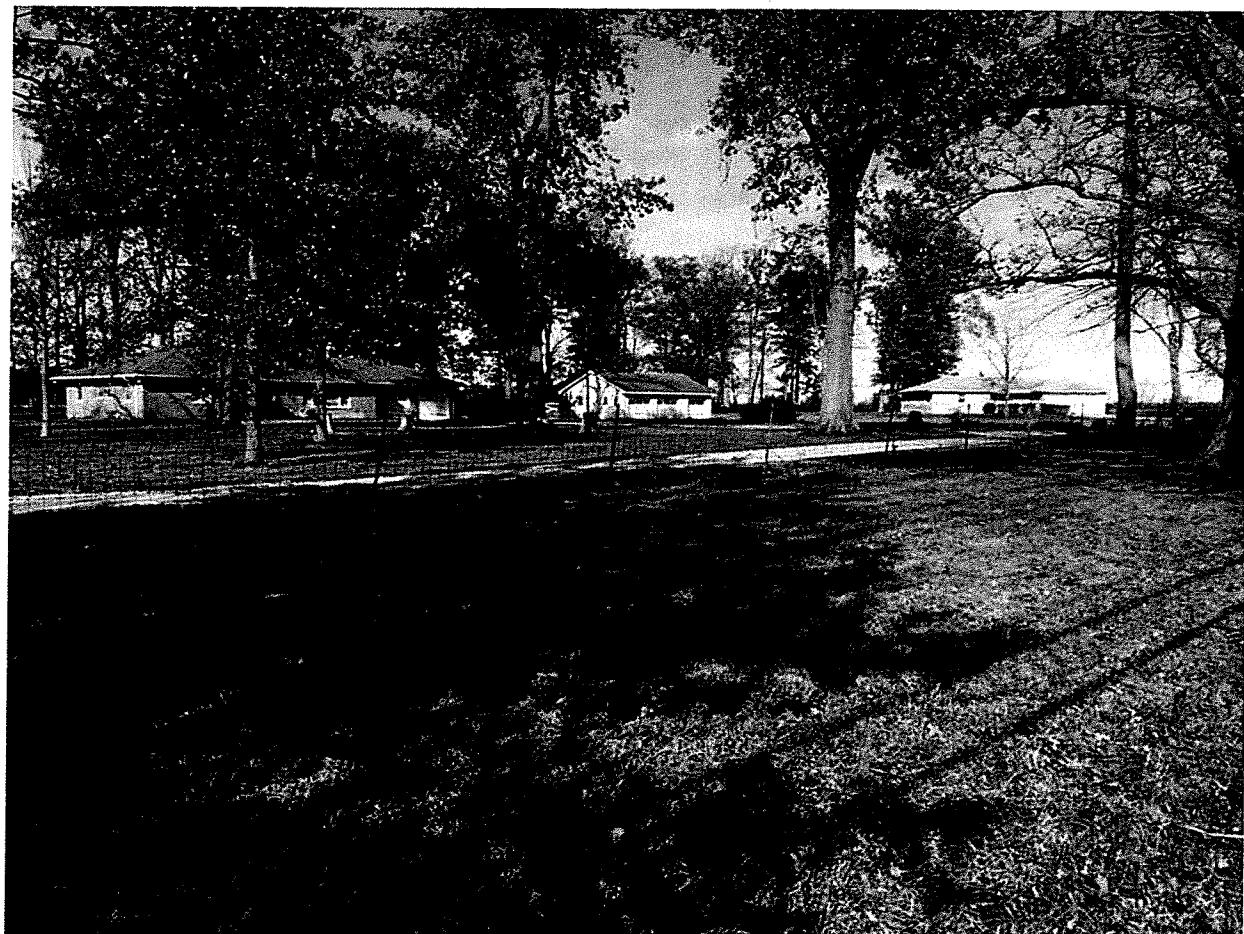
1. Looking east along State Road 332



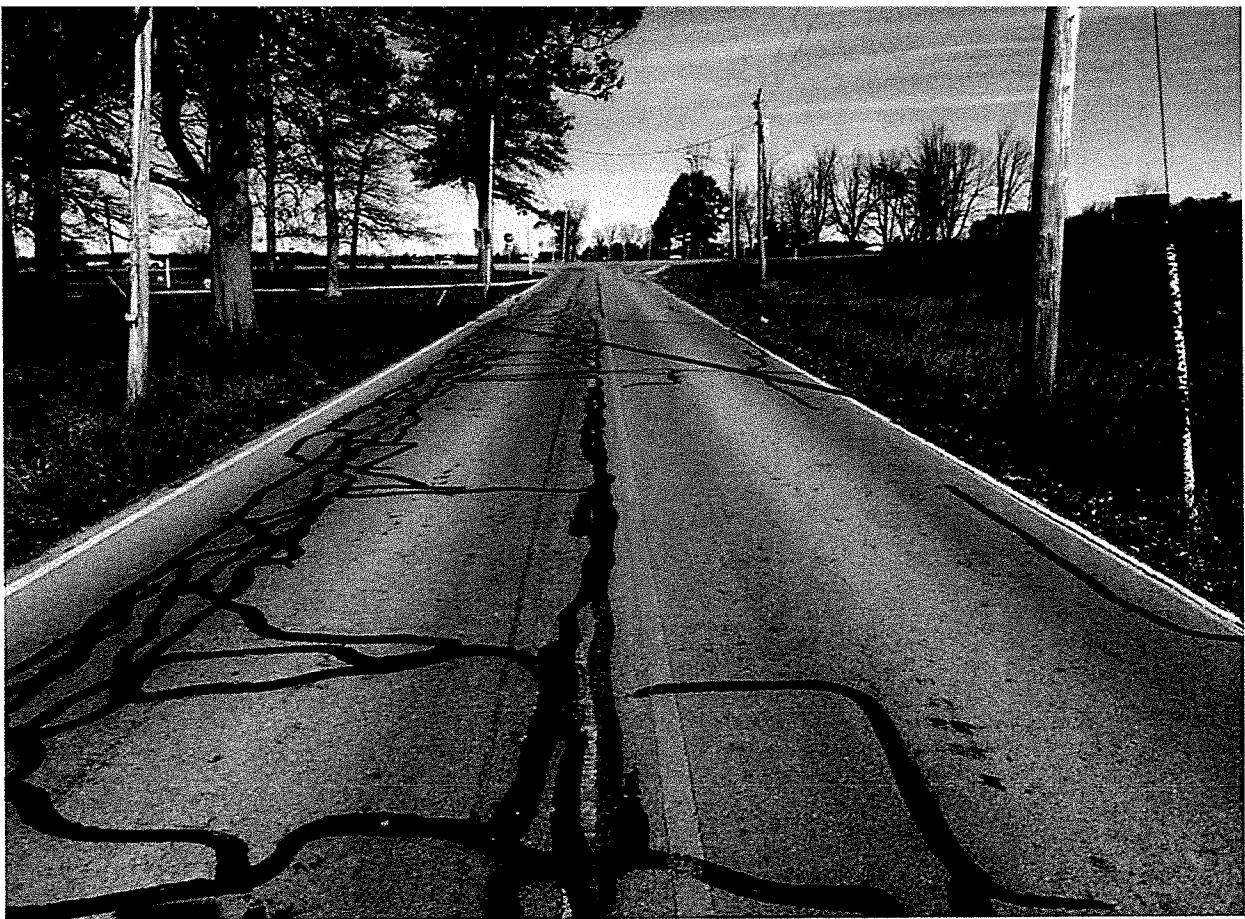
2. Looking east along SR 332 toward intersection with CR 600 W



3. Looking north along CR 600 W



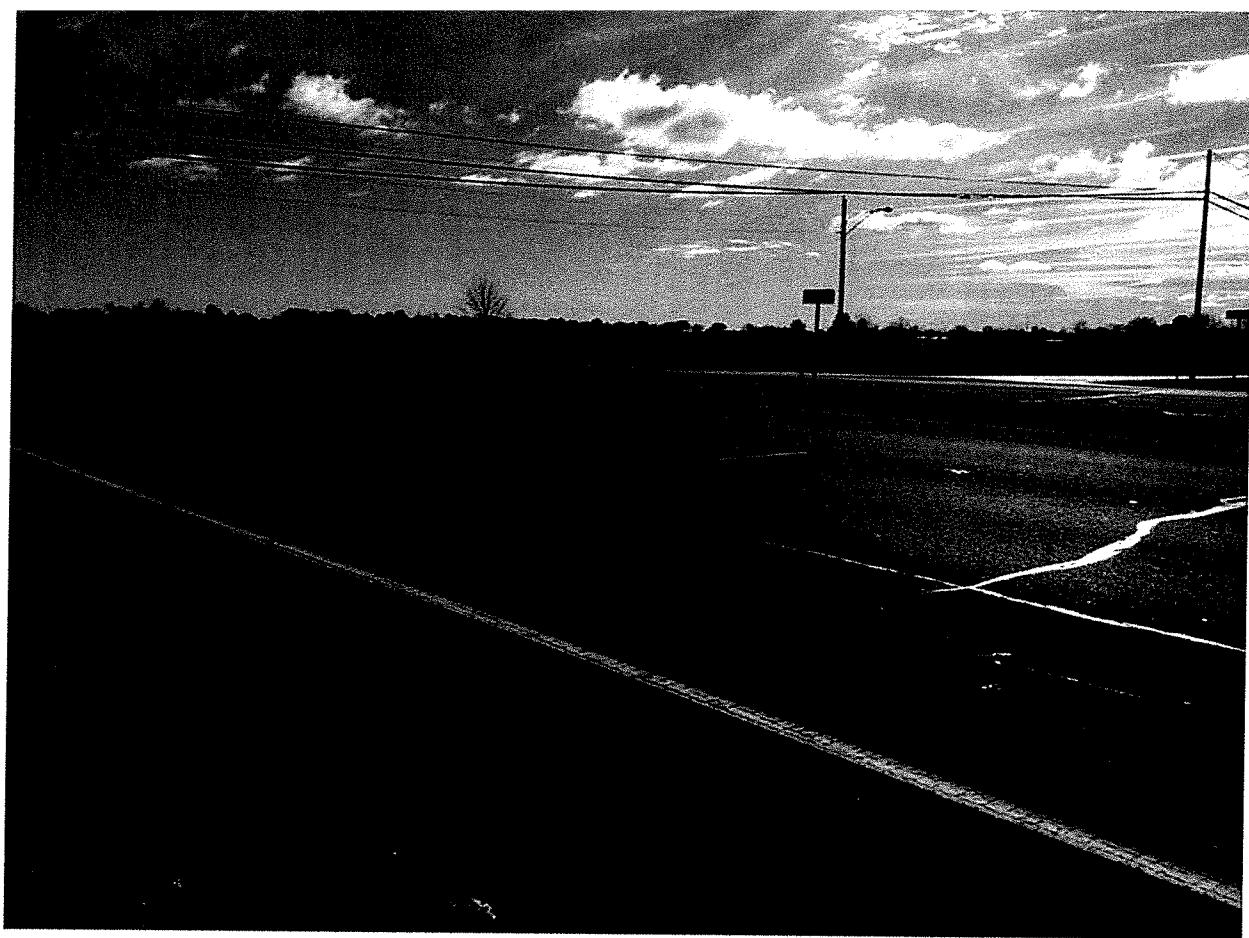
4. Looking northwest at ranch houses southwest quadrant of SR 332 and CR600 W



5. Looking north along CR 600 W toward intersection with SR 332



6. Looking northeast at intersection of SR 332 and CR 600 W



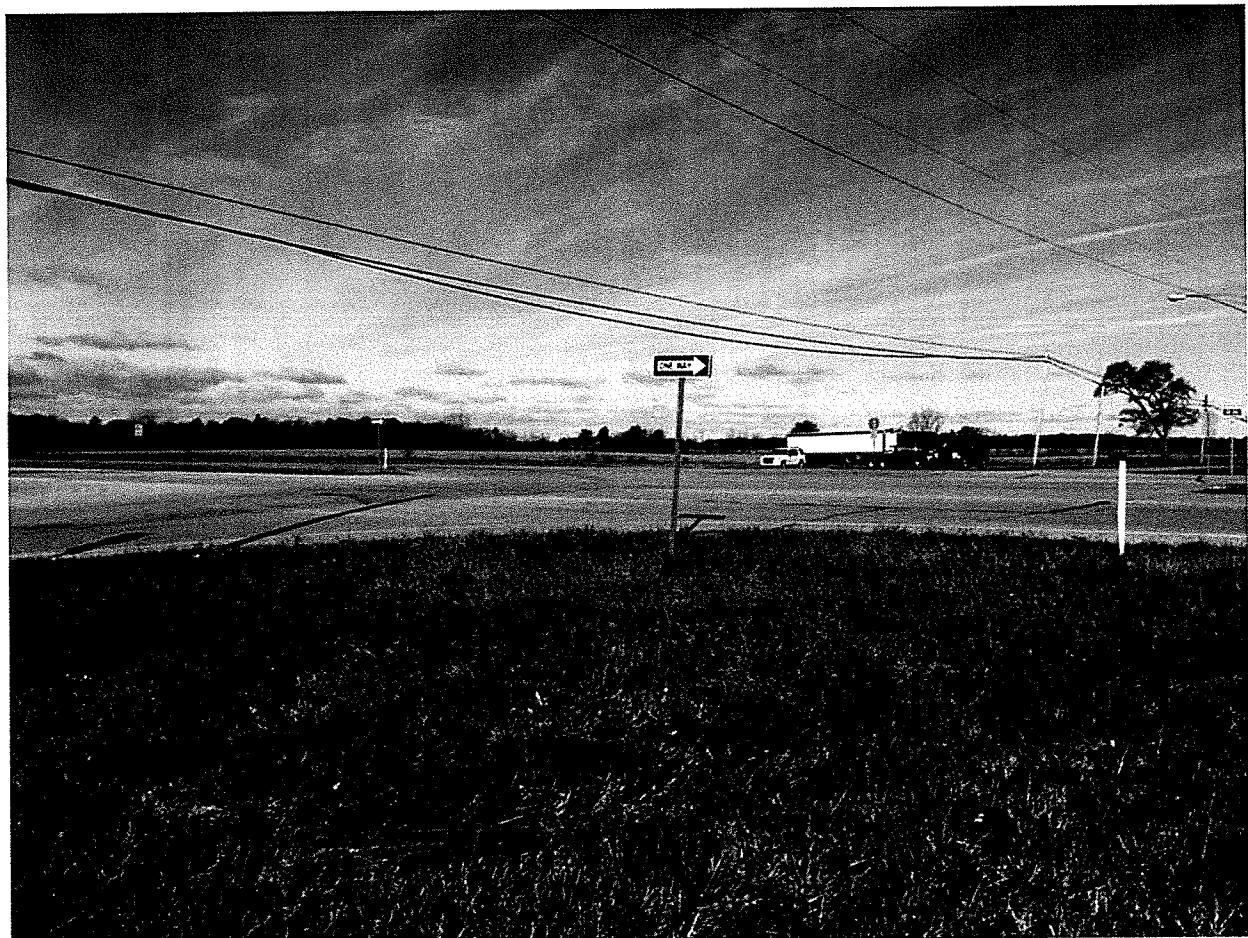
7. Looking southeast at SR 332 and CR 600 W



8. Looking south along CR 600 W toward intersection with SR 332



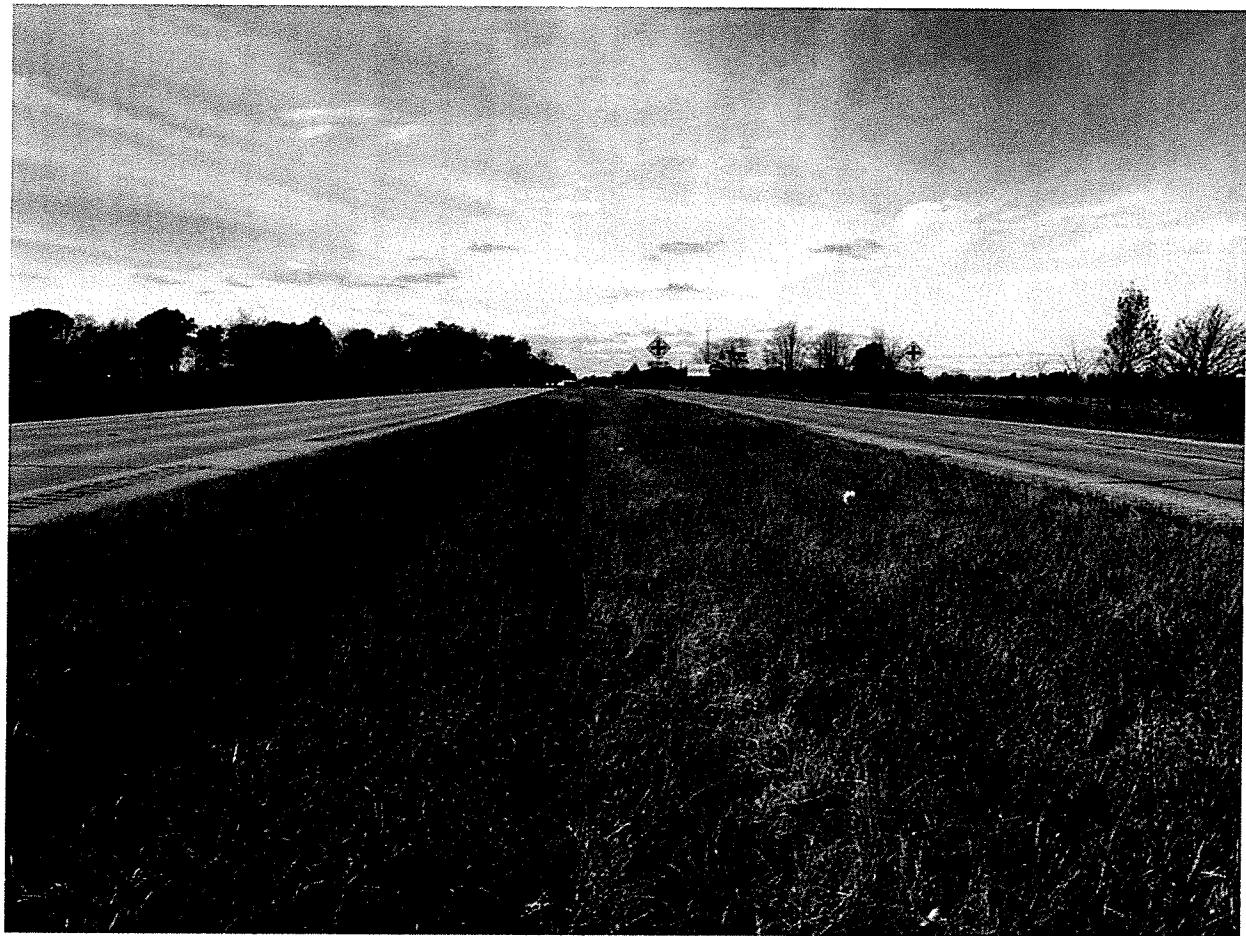
9. Looking south at intersection of SR 332 and CR 600 W



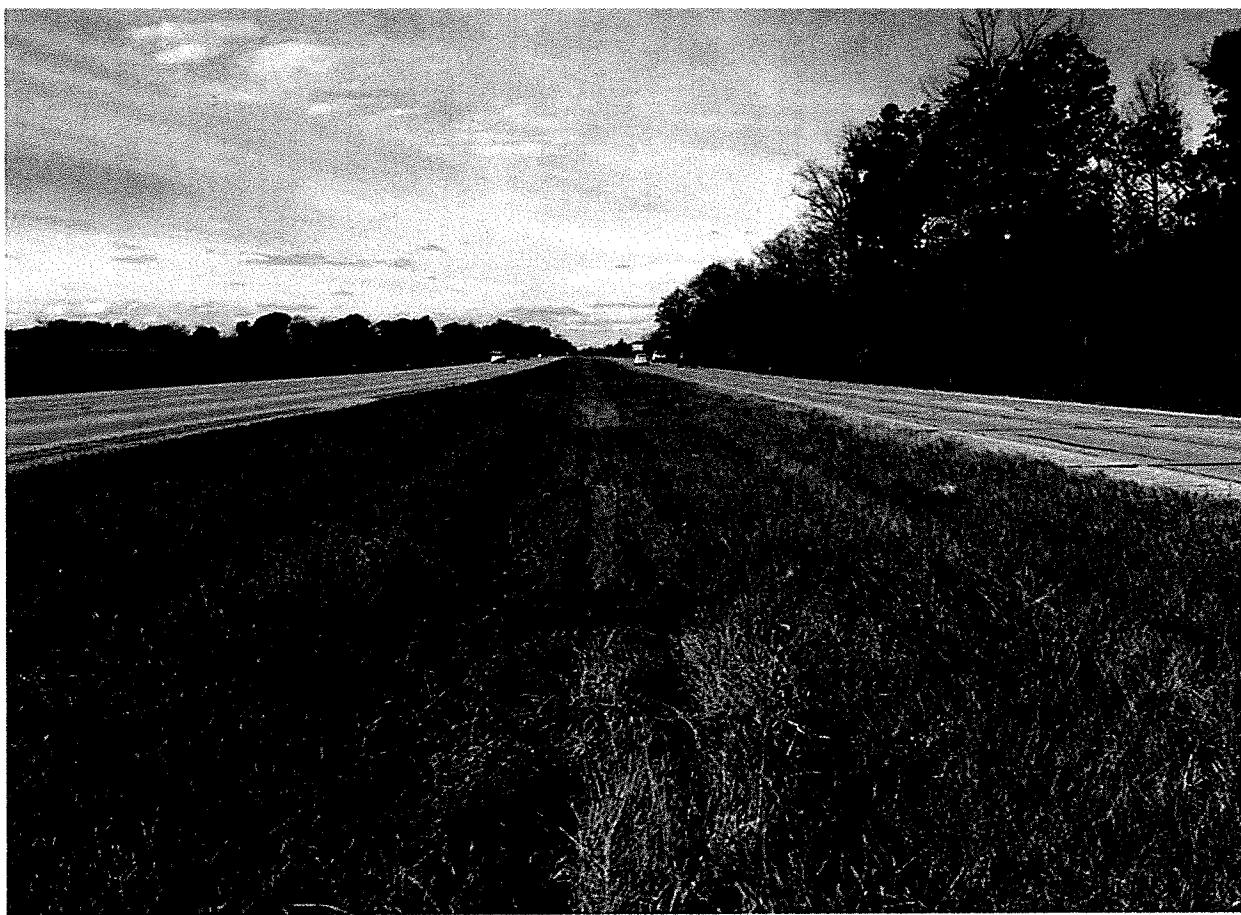
10. Looking northwest at intersection of SR 332 and CR 600 W



11. Looking south along CR 600 W



12. Looking west along SR 332 toward intersection with CR 600 W



13. Looking west along SR 332

Early Coordination

Attachment C

Preliminary Plans

PROJECT	SECTION NUMBER
129828	SR 332
CONTACT	N/A
REF ID:	R-3622

INDIANA DEPARTMENT OF TRANSPORTATION



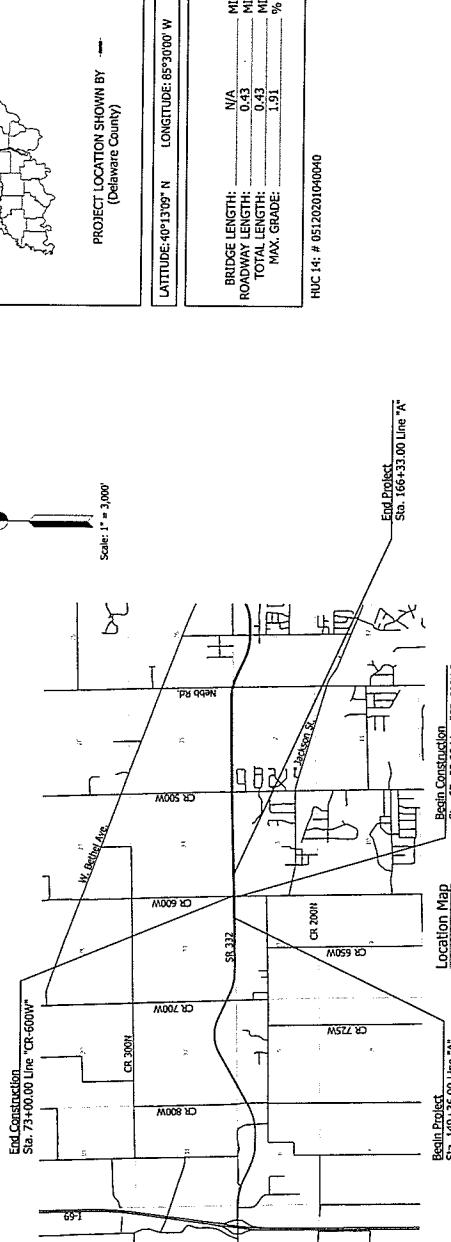
ROAD PLANS

ROUTE: SR 332 FROM: RP 3+17 TO: RP 3+57
 PROJECT NO. 1298228 P.E.
 1298228 R/W
 1298228 CONST.

Stage 2 Plans
 July 26, 2018

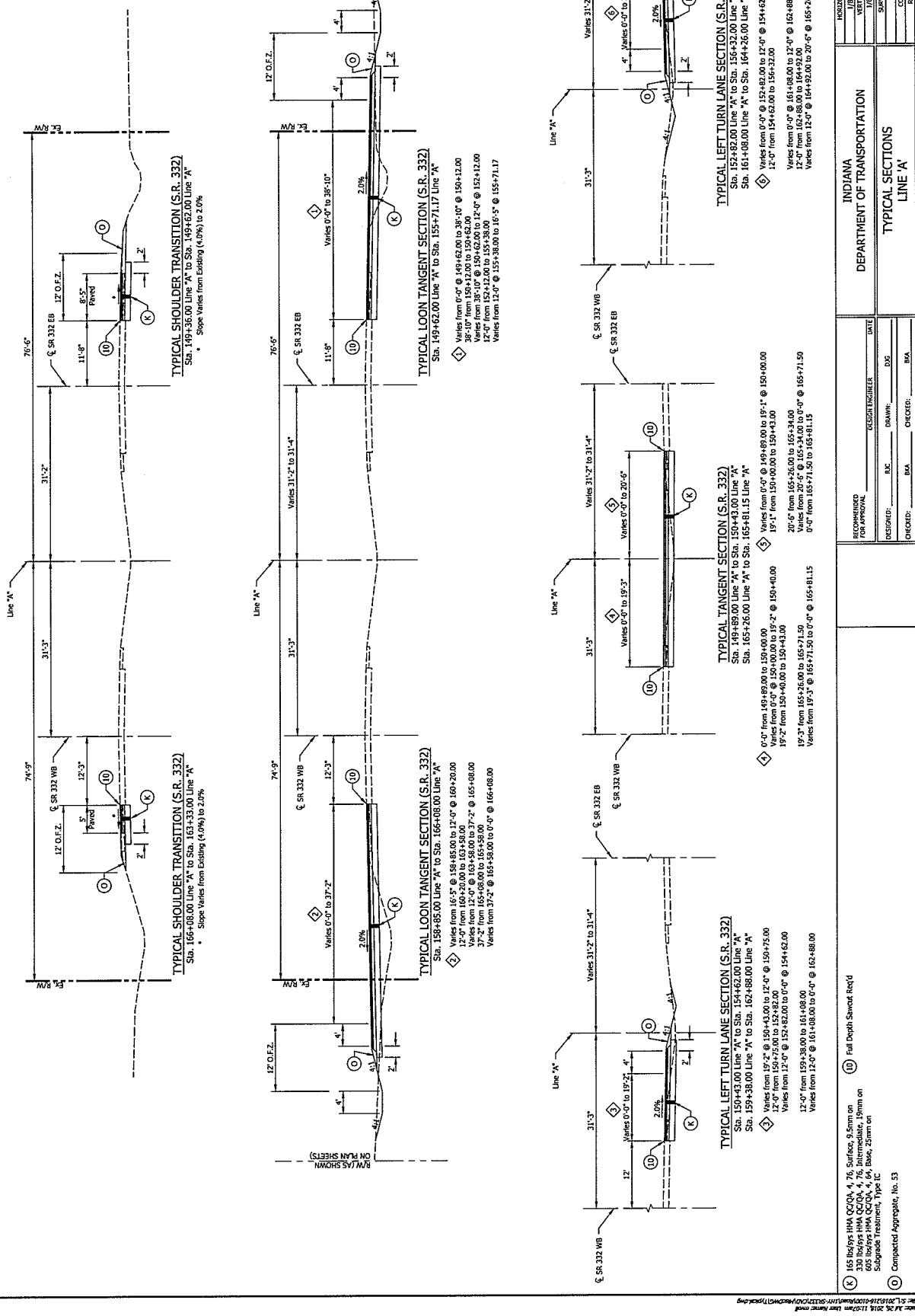
ADDITIONAL RIGHT-OF-WAY REQUIRED
 FOR THIS PROJECT

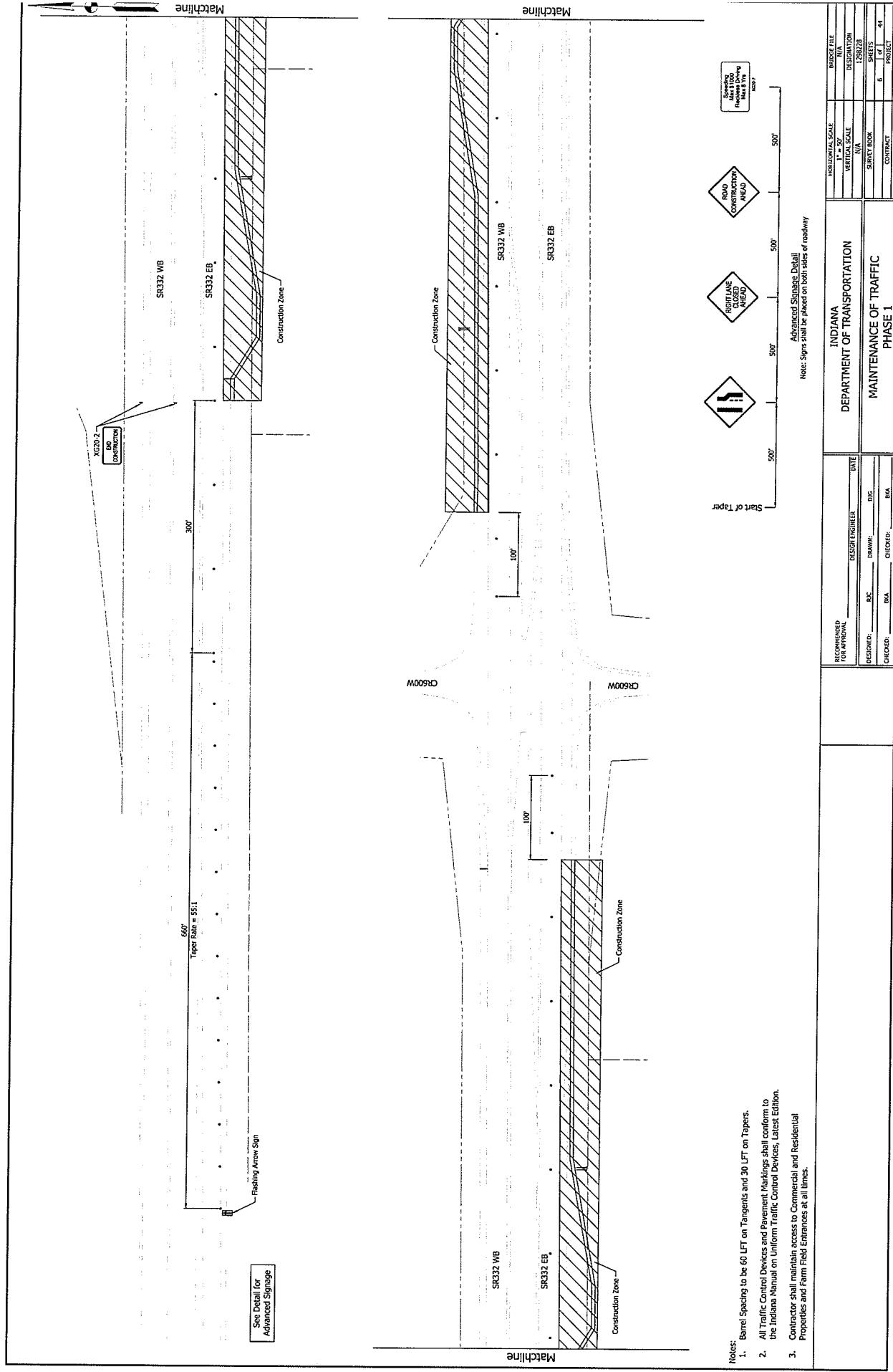
Project Description:
 Intersection Improvement at the intersection of SR 332 and CR 600 W, located in Sections 33 & 34, T21N, R9E,
 Harrison Township and Sections 3 & 4, T20N, R8E, in Pleasant Township, Delaware County, Indiana

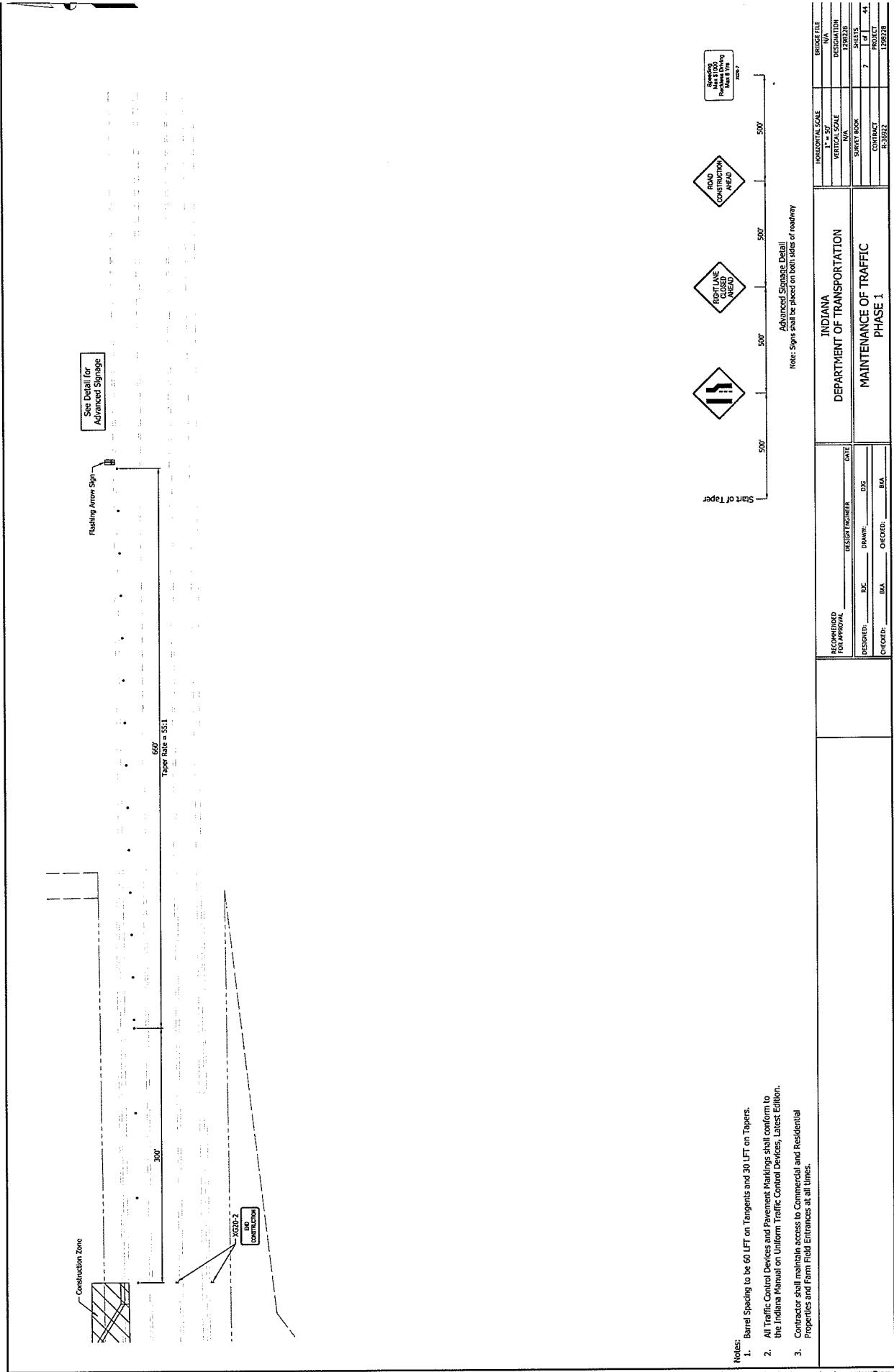


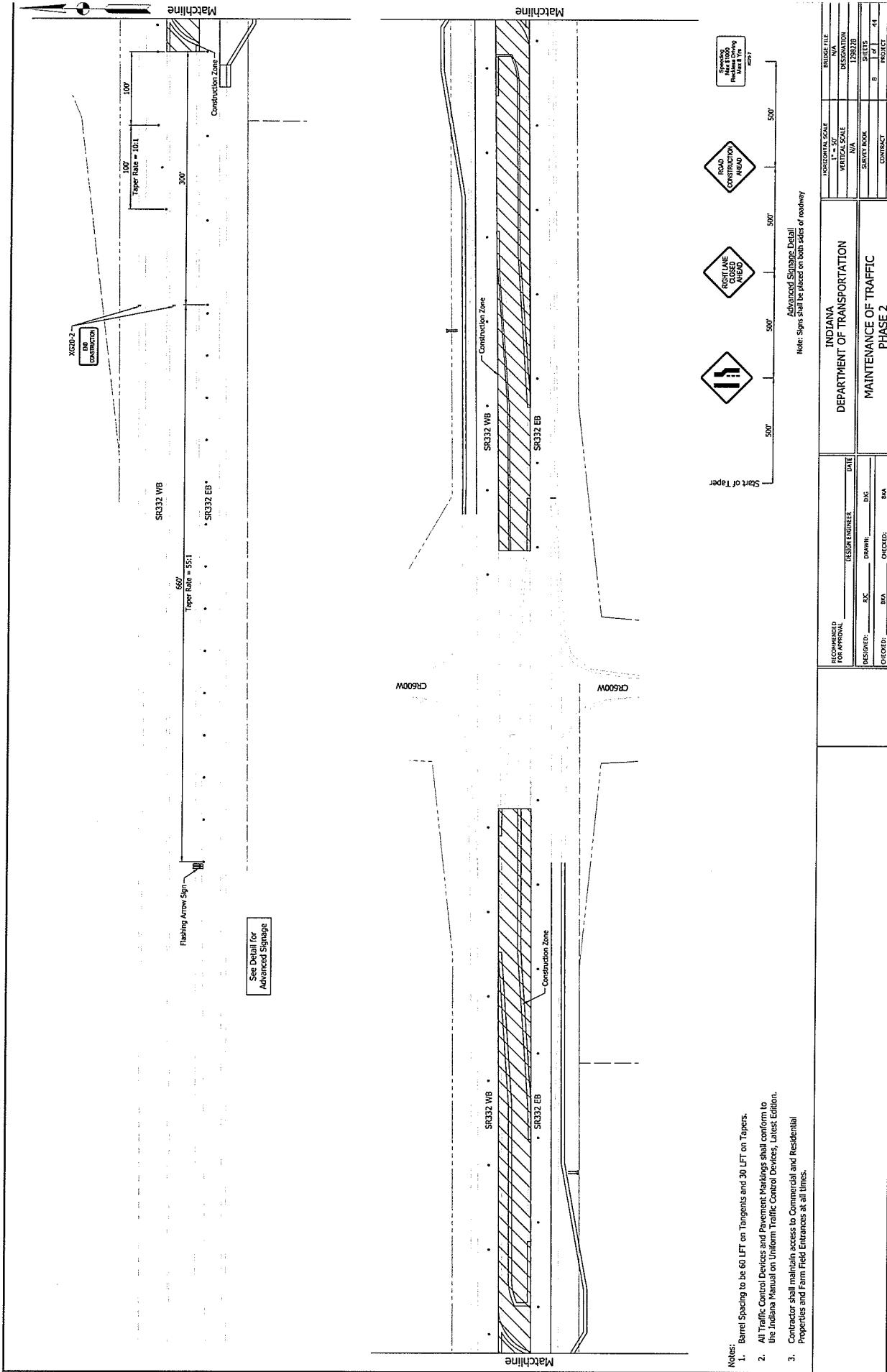
INDIANA DEPARTMENT OF TRANSPORTATION
 STANDARD SPECIFICATIONS DATED 2018
 TO BE USED WITH THESE PLANS

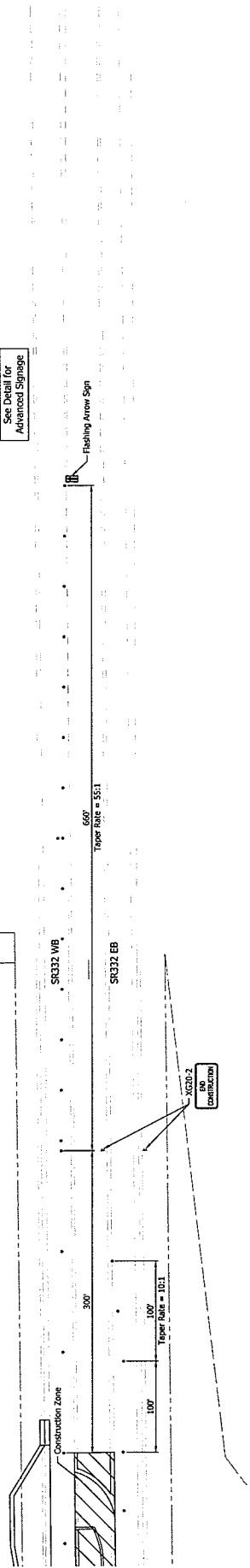
SURVEY FILE	
DESIGNATION	WA
DATE	12/02/2018
SHEETS	44
PROJECT	1
CONTRACT	1
DATE	12/02/2018









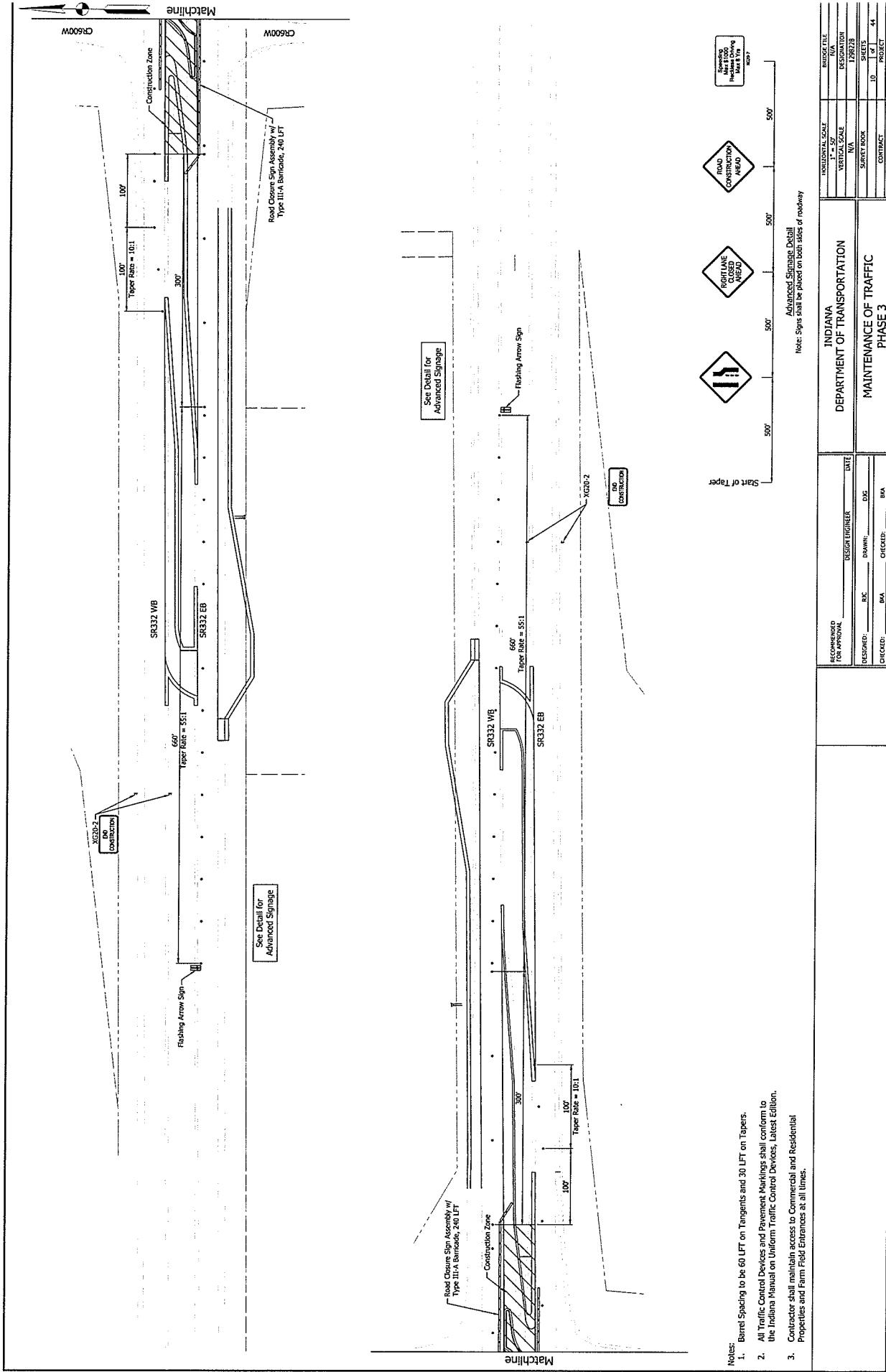


- Notes:
1. Barrel Spacing to be 60 LF on Tangents and 30 LF on Tapers.
 2. All Traffic Control Devices and Pavement Markings shall conform to the Indiana Manual on Uniform Traffic Control Devices, Latest Edition.
 3. Contractor shall maintain access to Commercial and Residential Properties and Farm Field Entrances at all times.



Note: Signs shall be placed on both sides of roadway

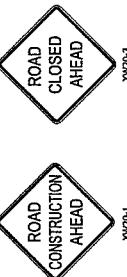
Advanced Signage Detail		INDIANA DEPARTMENT OF TRANSPORTATION		MAINTENANCE OF TRAFFIC PHASE 2	
SPANNING LANE & SHOULDER FOR 1000 FT. NET & TYP #22?		RECOMMENDED FOR APPROVAL DATE		CONTRACT #3-1892	BRIDGE FILE #IA
DESIGNER: D.C.	DRAWR: S.G.	DESIGNER APPROVED DATE		PROJECT #44	REVISION #1
CHECKED: BSA		CHECKED: BSA		CONTRACT #129828	



CONSTRUCTION SIGN SCHEDULE						
SIGN NO.	DESCRIPTION	SIZE (IN.)	TYPE	EST. QTY		
XW20-2	DETOUR AHEAD SIGN	36 x 36	A	2		
XW20-3	ROAD CLOSED AHEAD SIGN	36 x 36	B	2		
XG20-2	END CONSTRUCTION SIGN	36 x 18	C	2		
					TOTAL TYPE A SIGNS	4
					TOTAL TYPE B SIGNS	2
					TOTAL TYPE C SIGNS	

DETOUR ROUTE MARKER ASSEMBLIES:
ROAD CLOSE SIGN ASSEMBLY:
TYPE III-A BARRICADE,
TYPE III-B BARRICADES

LEGEND

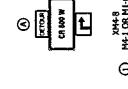


ROAD CLOSED TO THRU TRAFFIC

XW20-3



XW20-1

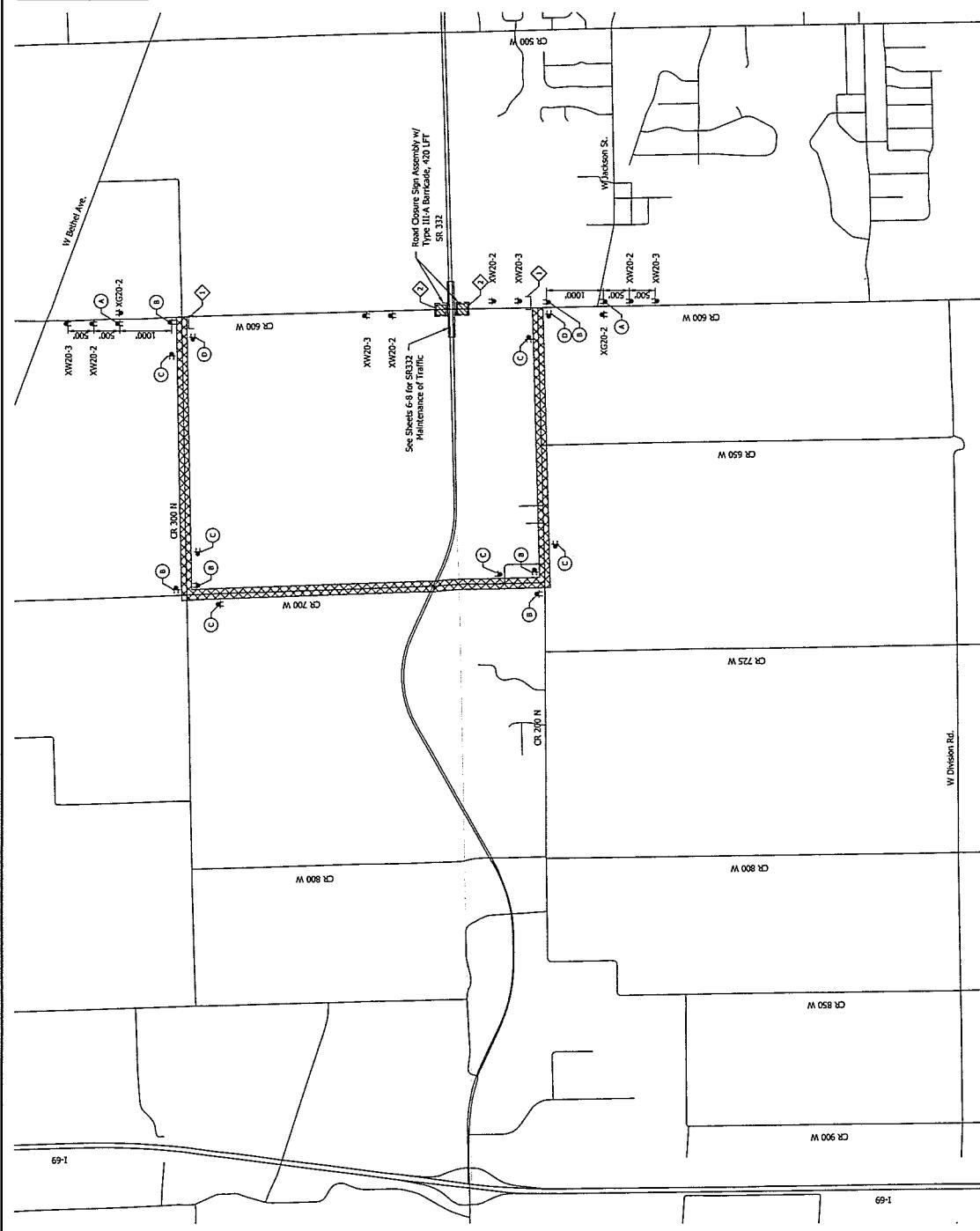


XG20-2



GENERAL NOTES

- SR332 TO REMAIN OPEN AT ALL TIMES.
- ALL MAINTENANCE OF TRAFFIC DEVICES, SIGNS AND PAINTED MARKINGS SHALL BE CONSTRUCTED TO THE LATEST EDITION OF THE INDIANA CODE.
- SEE INDOT STD DWG B01-1CDT-01 FOR SIGN SPACING REQUIREMENTS AND ADDITIONAL NOTES.
- SEE INDOT STD DWG B01-1CTC-01 FOR STANDARD NOTES.
- THE COST OF R11-2, R11-4 AND PHM-10 (R OR L) IS TO BE INCLUDED IN THE COST OF THE ROAD CLOSURE SIGN ASSEMBLY.
- TYPE B CONSTRUCTION WARNING LIGHTS SHALL BE USED WITH ALL SIGNS LOCATED ON BARRICADES. TYPE A CONSTRUCTION WARNING LIGHTS SHALL BE USED ON ALL OTHER CONSTRUCTION SIGNS.
- ACCESS SHALL BE MAINTAINED FOR LOCAL RESIDENTS AT ALL TIMES.



INDIANA		DEPARTMENT OF TRANSPORTATION	
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE	
DESIGNER: _____	DRAWN: _____	DXC: _____	Maintenance of Traffic
checked: _____	checked: _____	checked: _____	CR600W DETOUR ROUTE
HORIZONTAL SCALE		BRIDGE FILE	
1" = 100'		NO. / DATE	
VERTICAL SCALE		DESCRIPTION	
DESIGNER: _____		SHEET BOOK	SET NO. / DATE
DRAWN: _____		11	44 / 12/2025
DXC: _____		COMMITTEE	PER MIT
checked: _____		CR600W	12/2025

155+00

154+00

153+00

152+00

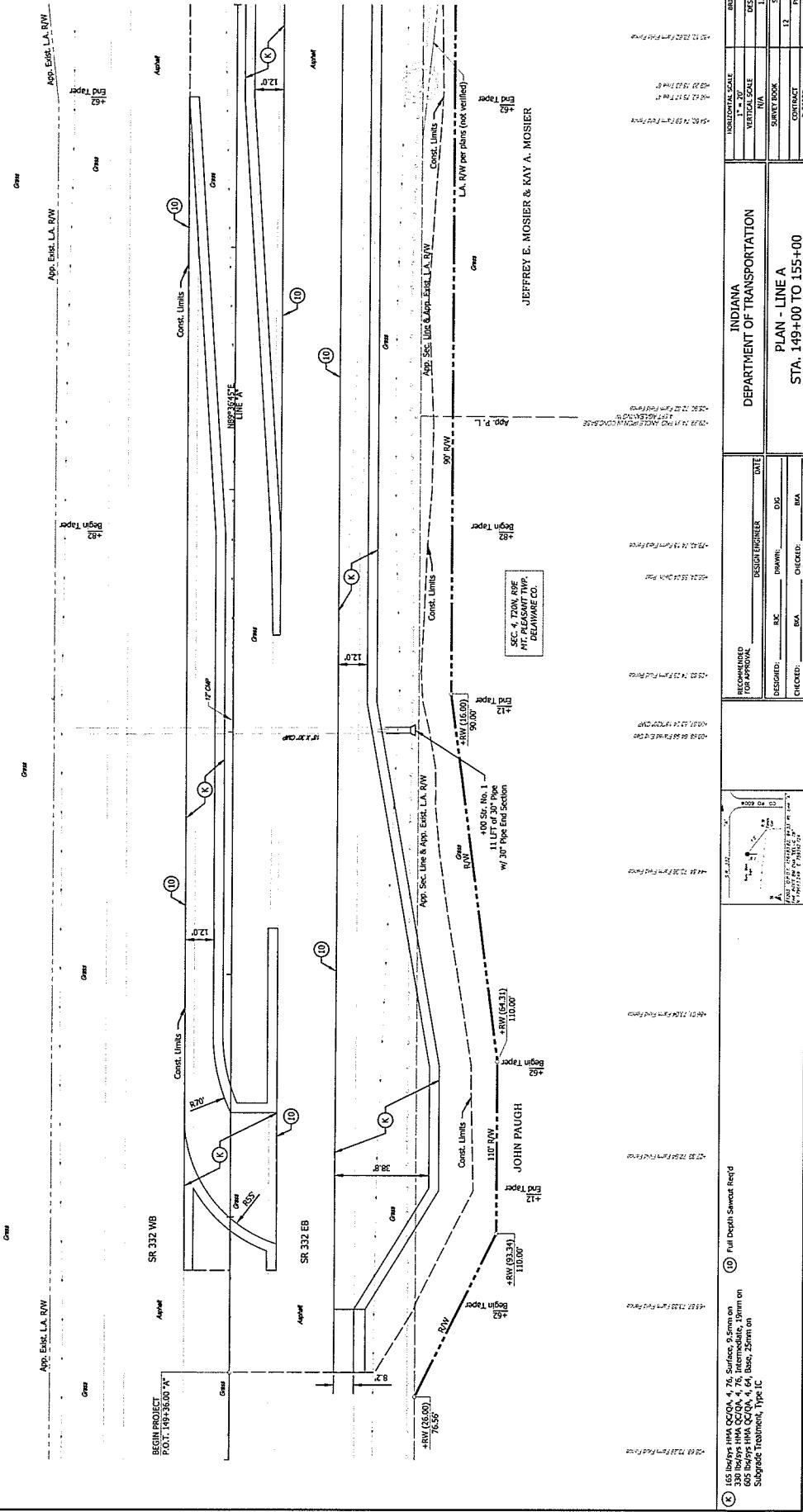
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150+00

149+00

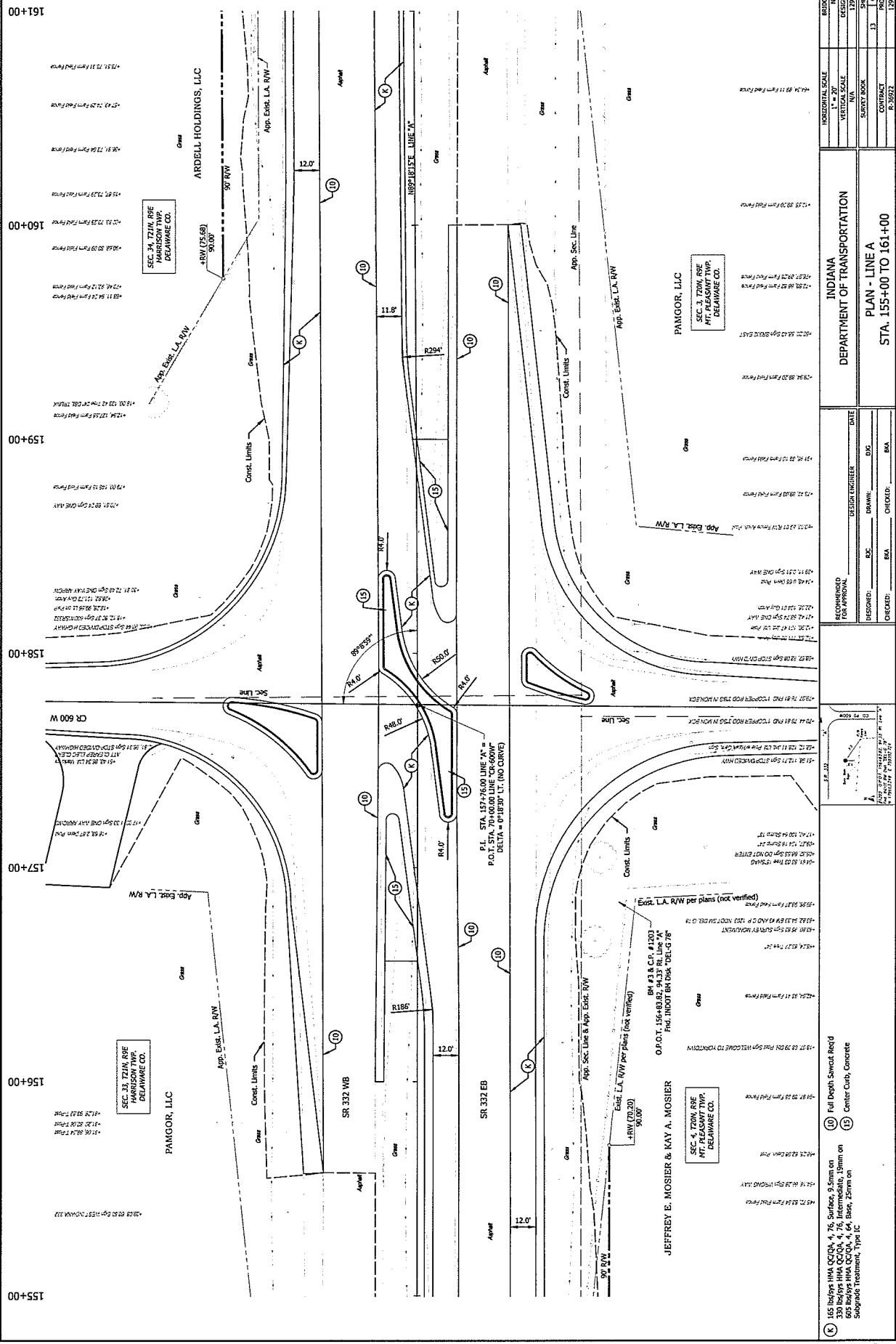
PANGOR, IJC

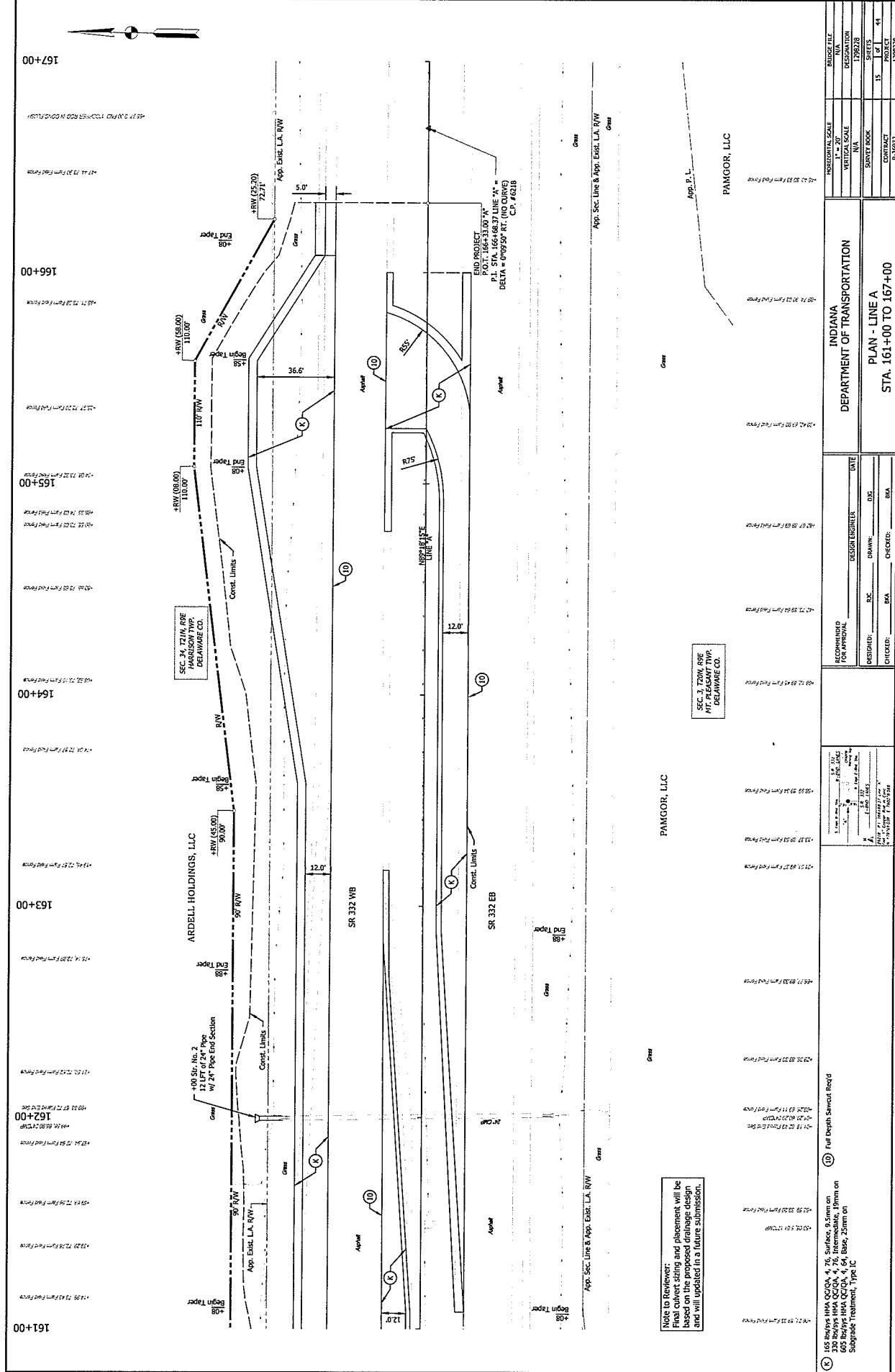
SEC. 33, T2N, R1E
WILMINGTON,
DELAWARE CO.

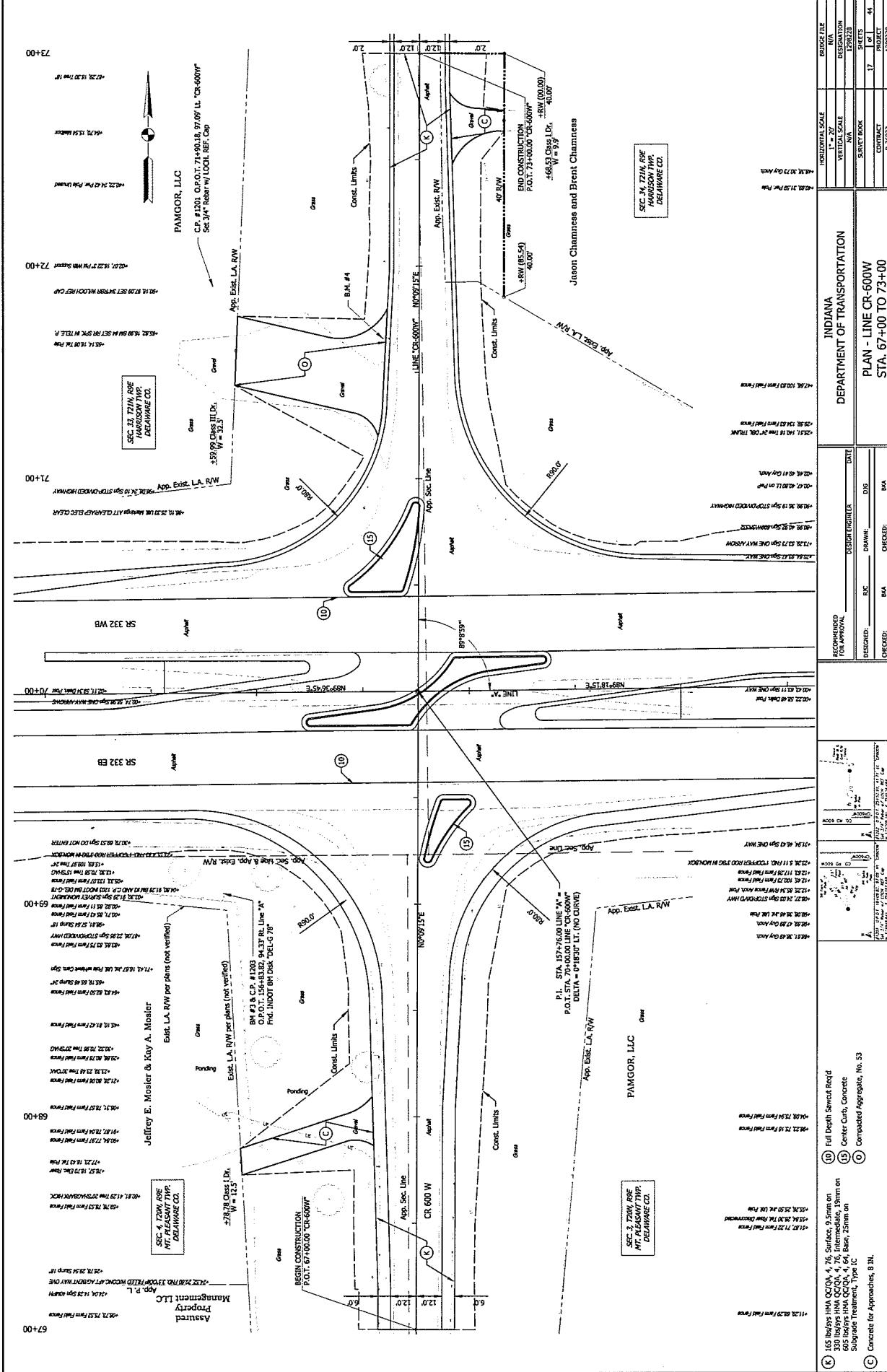


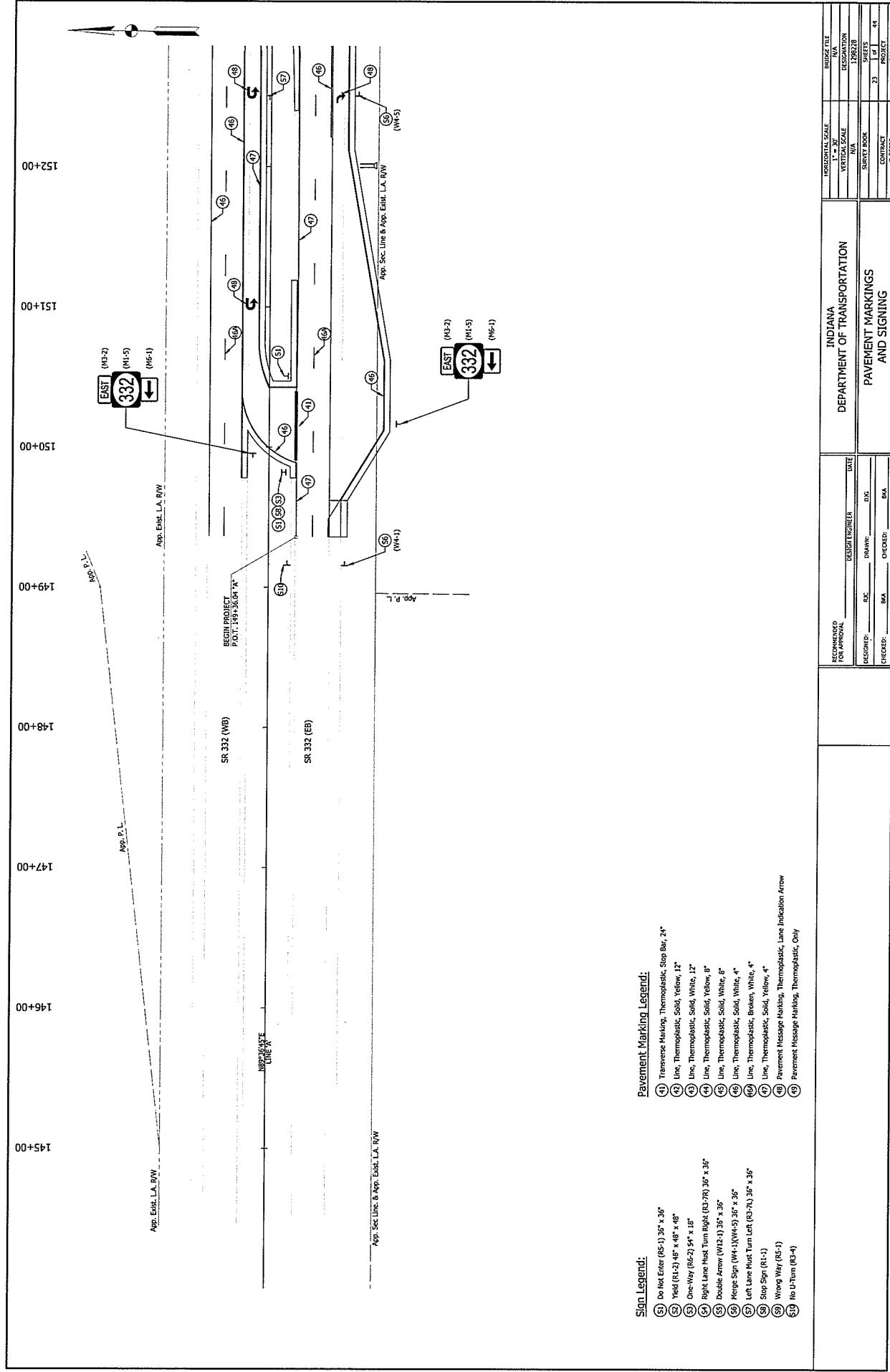
JEFFREY E. MOSIER & KAY A. MOSIER

INDIANA		DEPARTMENT OF TRANSPORTATION	
DESIGN ENGINEER	DATE	DESIGN:	DRAWN:
CREATED:	REDACTED	REMAINS:	EXPIRED:
STA. 149+00 TO 155+00	R-36922	12/20/2012	12/20/2012









162+00

161+00

160+00

159+00

158+00

157+00

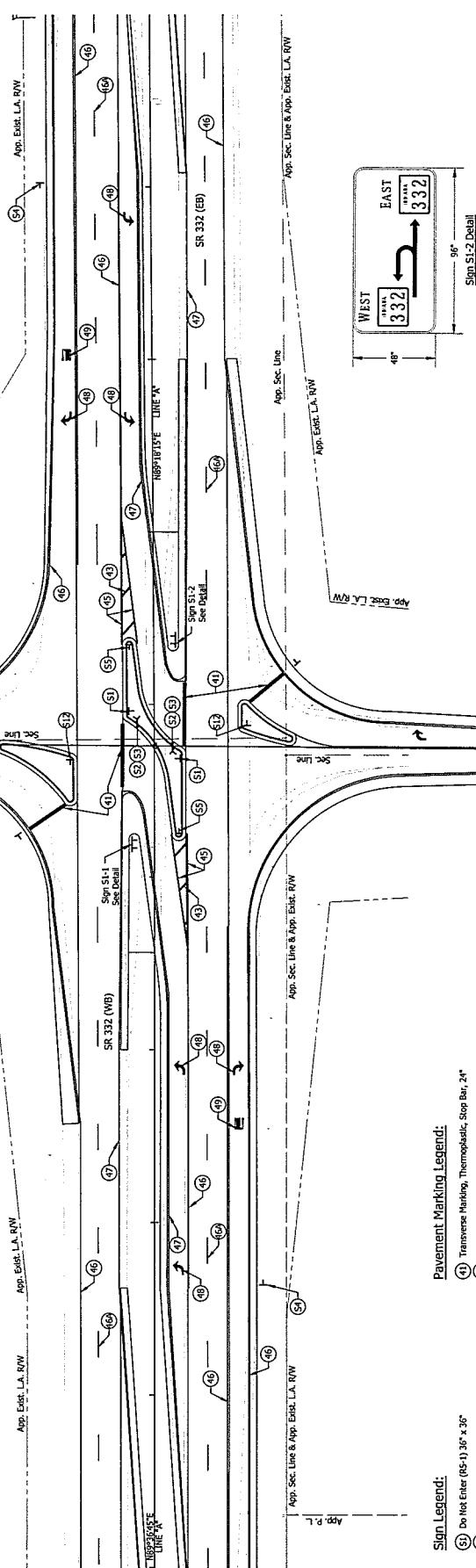
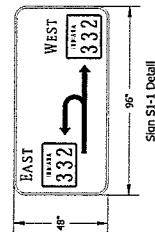
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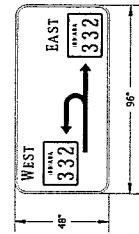
See Sheet 26 for CR600W
Pavement Markings and Signs



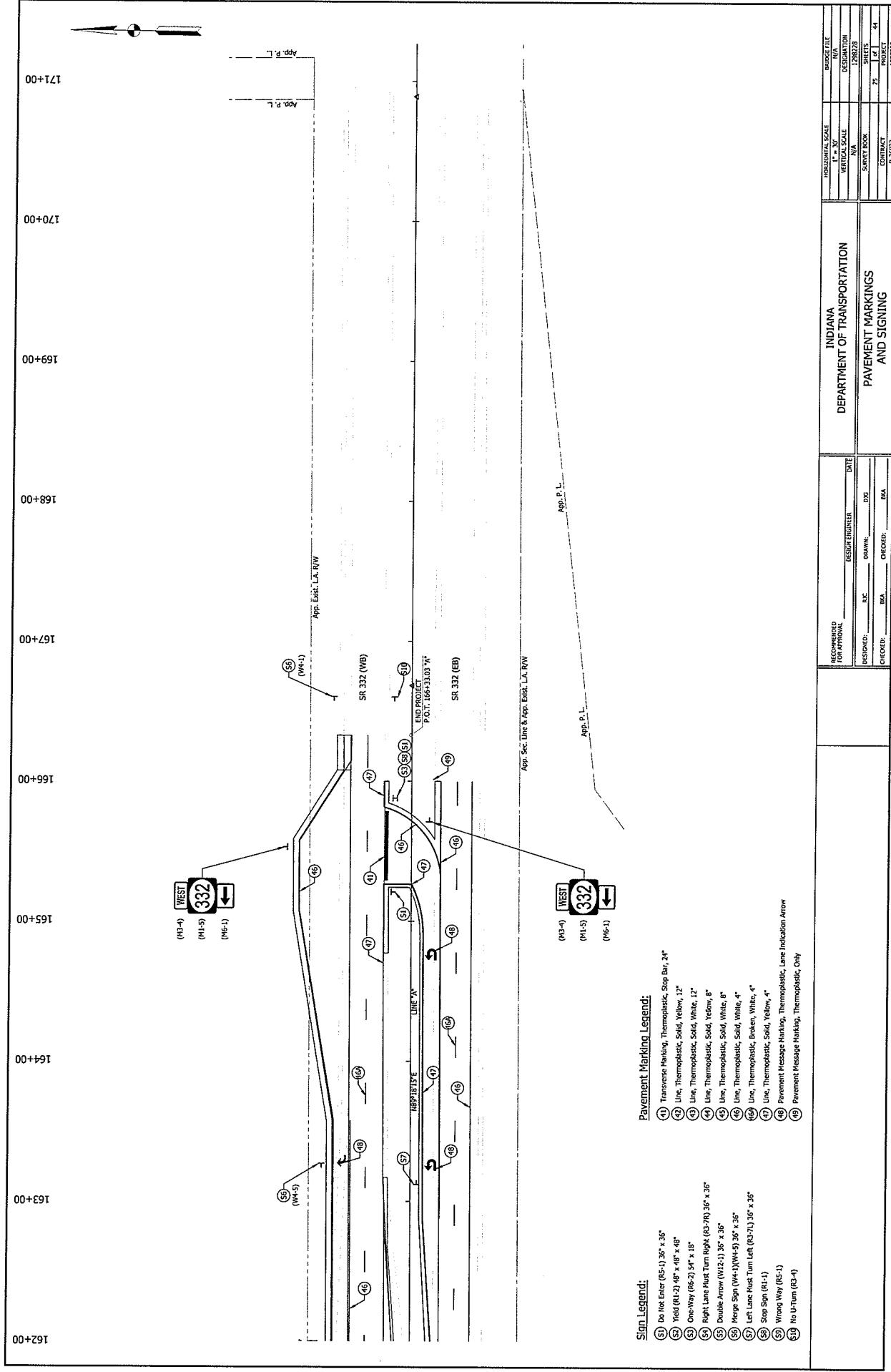
Sign Legend:

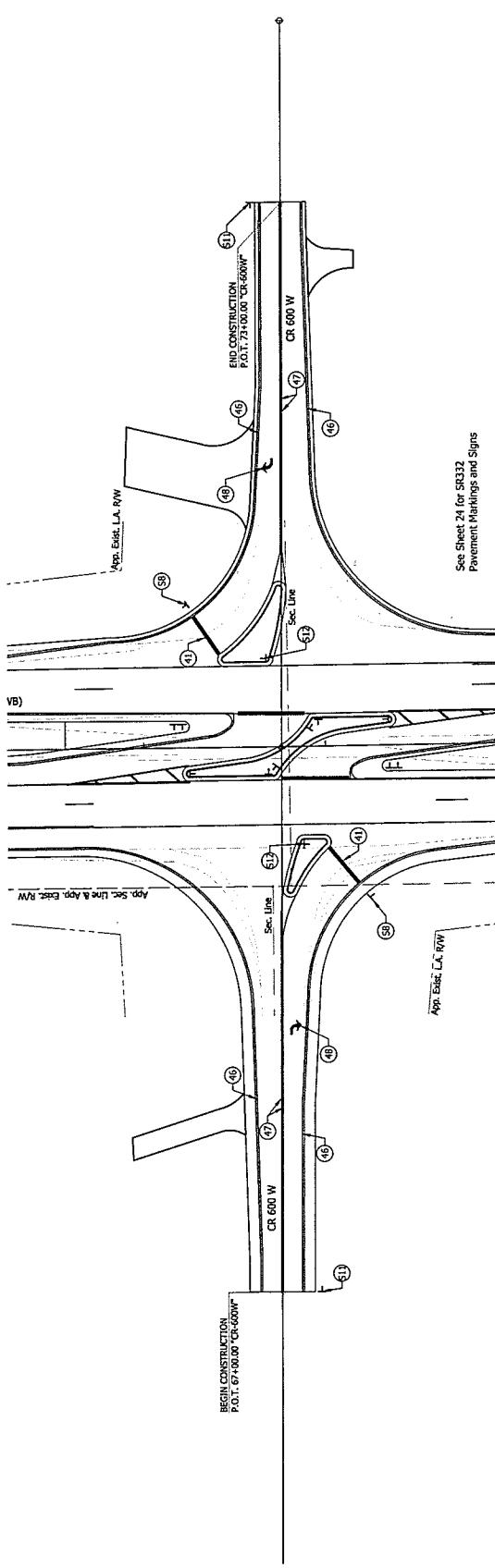
- (1) Do Not Enter (R-1) 36" x 36"
- (2) Yield (R-2) 48" x 48" x 18"
- (3) One-Way (R-6/2) 54" x 18"
- (4) Right Lane Must Turn Right (R-37R) 36" x 36"
- (5) Double Arrow (W-12-1) 36" x 36"
- (6) Merge Sign (W-4-1)(W-5) 36" x 36"
- (7) Left Lane Must Turn Left (R-37L) 36" x 36"
- (8) Stop Sign (R-1)
- (9) Wrong Way (R-5-1)
- (10) Object Marker (OM-2-2V)
- (11) Transverse Marking, Thermoplastic, Solid, White, 12"
- (12) Line, Thermoplastic, Solid, Yellow, 12"
- (13) Line, Thermoplastic, Solid, White, 12"
- (14) Line, Thermoplastic, Solid, Yellow, 8"
- (15) Line, Thermoplastic, Solid, White, 8"
- (16) Line, Thermoplastic, Solid, White, 4"
- (17) Line, Thermoplastic, Broken, White, 4"
- (18) Line, Thermoplastic, Solid, Yellow, 4"
- (19) Pavement Message Marking, Thermoplastic, Lane Indication Arrow
- (20) Pavement Message Marking, Thermoplastic, Only

See Sheet 26 for CR600W
Pavement Markings and Signs



RECOMMENDED FOR APPROVAL		DEPARTMENT OF TRANSPORTATION		INDIANA		INDIANA DEPARTMENT OF TRANSPORTATION		BRIDGE SITE	
DESIGNER:	DATE	DESIGNER:	DATE	VERTICAL SCALE	HORIZONTAL SCALE	NAVA	NAVA	DESIGNATION	BRIDGE SITE
R.C.	DRWNC	DIG		1" = 30'	1" = 30'			1282728	1282728
SHEETS:		SHEETS:		1 of	44			24	
CONTRACT:		CONTRACT:						R-39972	
CHIEFED:		CHIEFED:							
BDA:		BDA:							





See Sheet 24 for 50332
Pavement Markings and Signs

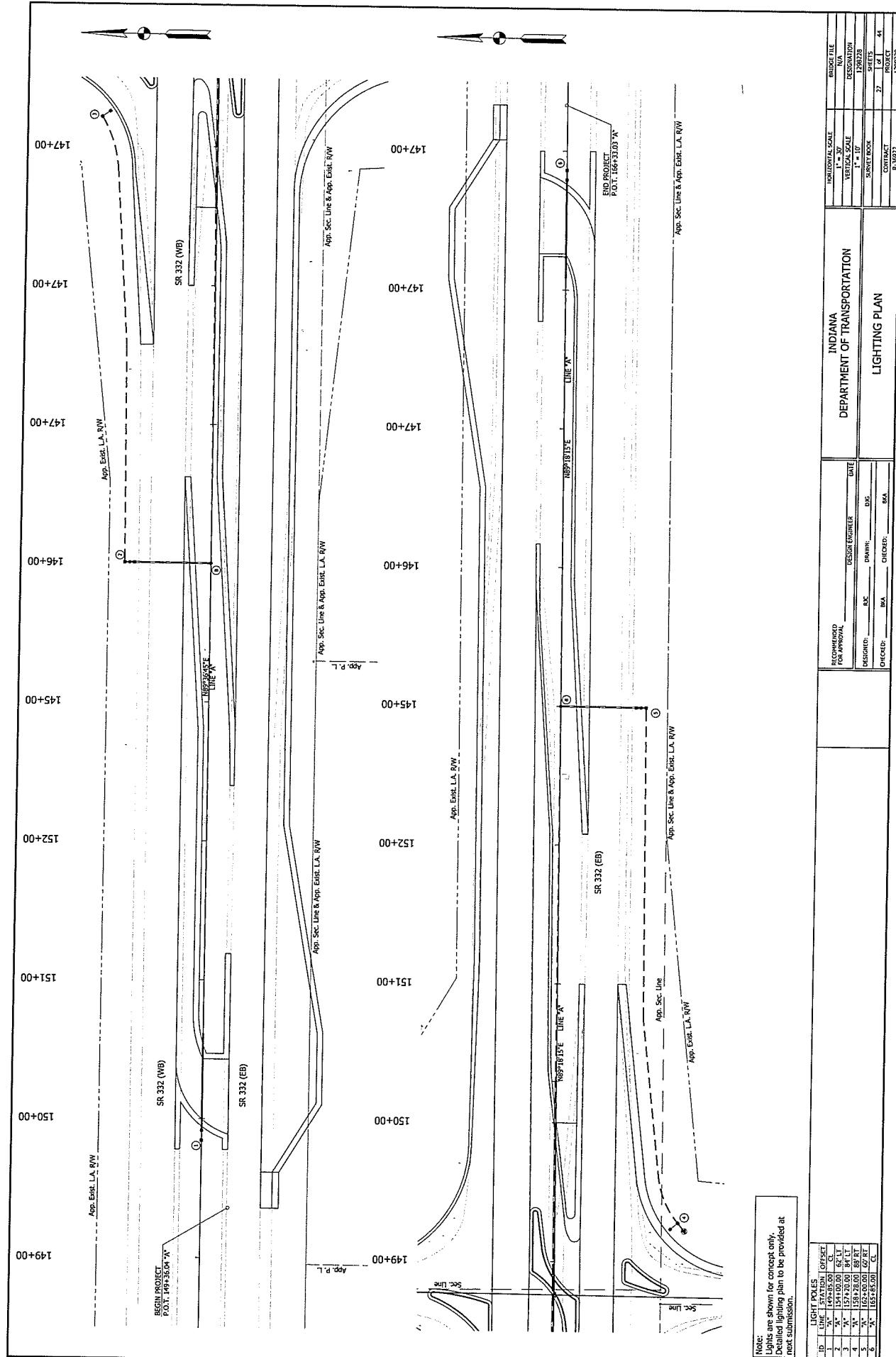
Pavement Marking Legend:

- (1) Transverse Marking, Thermoplastic, Stop Bar, 24"
- (2) Line, Thermoplastic, Solid, Yellow, 12"
- (3) Line, Thermoplastic, Solid, White, 12"
- (4) Line, Thermoplastic, Solid, White, 12"
- (5) Line, Thermoplastic, Solid, Yellow, 8"
- (6) Line, Thermoplastic, Solid, White, 8"
- (7) Line, Thermoplastic, Solid, White, 4"
- (8) Line, Thermoplastic, Broken, White, 4"
- (9) Line, Thermoplastic, Solid, Yellow, 4"
- (10) Pavement Message Marking, Thermoplastic, Lane Indication Arrow
- (11) Pavement Message Marking, Thermoplastic, Only

Sign Legend:

- (5) Do Not Enter (R5-1) 36" x 36"
- (6) Field (R1-2) 48" x 48" x 48"
- (7) One-Way (R5-2) 34" x 18"
- (8) Right Lane Must Turn Right (R3-3/R) 36" x 36"
- (9) Double Arrow (W12-1) 36" x 36"
- (10) Hinge Sign (W4-2/W4-5) 36" x 36"
- (11) Left Lane Must Turn Left (R3-7L) 36" x 36"
- (12) Stop Sign (R1-1)
- (13) Wrong Way (R5-1)
- (14) Stop Ahead (W3-1)
- (15) Object Marker (OM2-2V)

INDIANA		DEPARTMENT OF TRANSPORTATION		INDIANA STATE ROAD AND HIGHWAY DEPARTMENT	
RECOMMENDED FOR APPROVAL		DESIGN ENGINEER		BRIDGE SECTION	
DATE		DRAWING NO.		SECTION SCALE	
DESIGNED: R.C. DRAWN: D.G.		SHEET NO.		VERTICAL SCALE	
CHECKED: B.G.		SIGN OFF		PROJECT	
CROSSED: _____		CONTRACT		PROJECT NO.	
INITIALS: _____		DATE: _____		NO.	



LIGHT POLES		INDIANA		DEPARTMENT OF TRANSPORTATION	
DESIGNED:	RC	DRAWN:	DG	LIGHTING PLAN	
CHECKED:	BA	CHIEF:	MA	CONTRACT	27
				FORMAT	44
				R-50922	128238

