

SEC. 1, T-10-N., R-9E.
WASHINGTON TOWNSHIP
DECATUR COUNTY

SEC. 12, T-10-N., R-9E.
WASHINGTON TOWNSHIP
DECATUR COUNTY

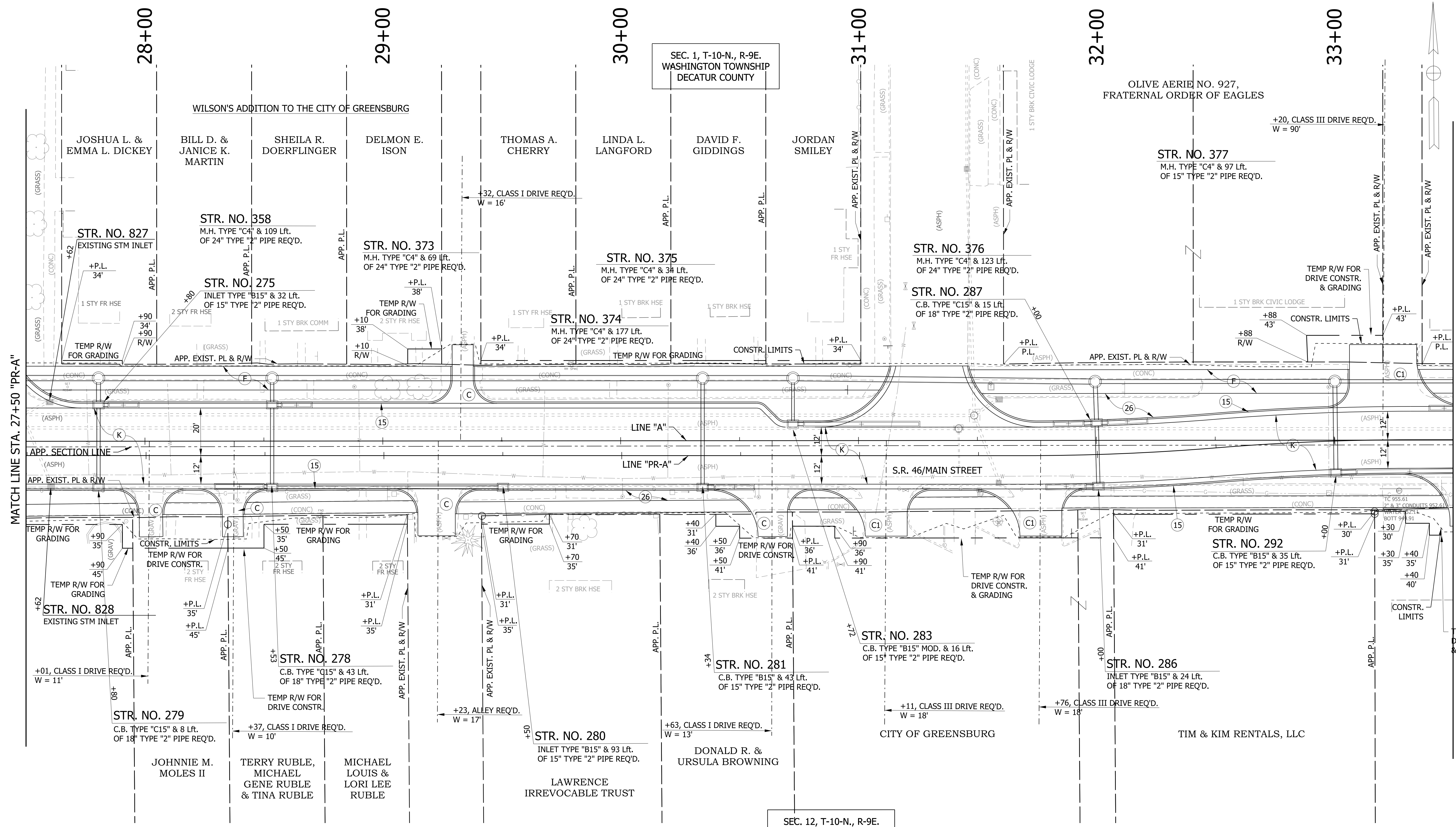
NOTES:
1. SEE GEOMETRIC TIE-UP DETAILS FOR ALIGNMENT DATA.

LEGEND			
(K)	HMA, FULL DEPTH RECONSTRUCTION: 165 LB/SYD QC/QA HMA, 3, 70 SURFACE, 9.5 MM, ON 275 LB/SYD QC/QA HMA, 3, 70 INTERMEDIATE, 19 MM, ON 550 LB/SYD QC/QA HMA, 3, 64 BASE, 25 MM, ON 300 LB/SYD QC/QA HMA, 4, 76, INTERMEDIATE, OG, 19 MM, ON 4 IN. COMPACTED AGGREGATE, NO. 53 BASE	(C)	6 IN. PCCP FOR DRIVEWAYS
(C1)	9 IN. PCCP FOR DRIVEWAYS	(26)	SODDING, NURSERY
(F)	CONCRETE SIDEWALK, 4"	(15)	MOD. COMBINED CONCRETE CURB & GUTTER
(13)	CONCRETE CURB	XXX.XX	= PROPOSED ELEVATION
(26)	SODDING, NURSERY	(XXX.XX)	= EXISTING ELEVATION

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: WRC	DRAWN: JEC	
CHECKED: MAE	CHECKED: WRC	

INDIANA DEPARTMENT OF TRANSPORTATION	
CONSTRUCTION DETAIL	

HORIZONTAL SCALE	BRIDGE FILE
1"=20'	
VERTICAL SCALE	DESIGNATION
1"=20'	1800256
SURVEY BOOK	SHEETS
	52 of 131
CONTRACT	PROJECT
R-41463	1800256



NOTES:
 1. SEE GEOMETRIC TIE-UP DETAILS FOR ALIGNMENT DATA.

LEGEND

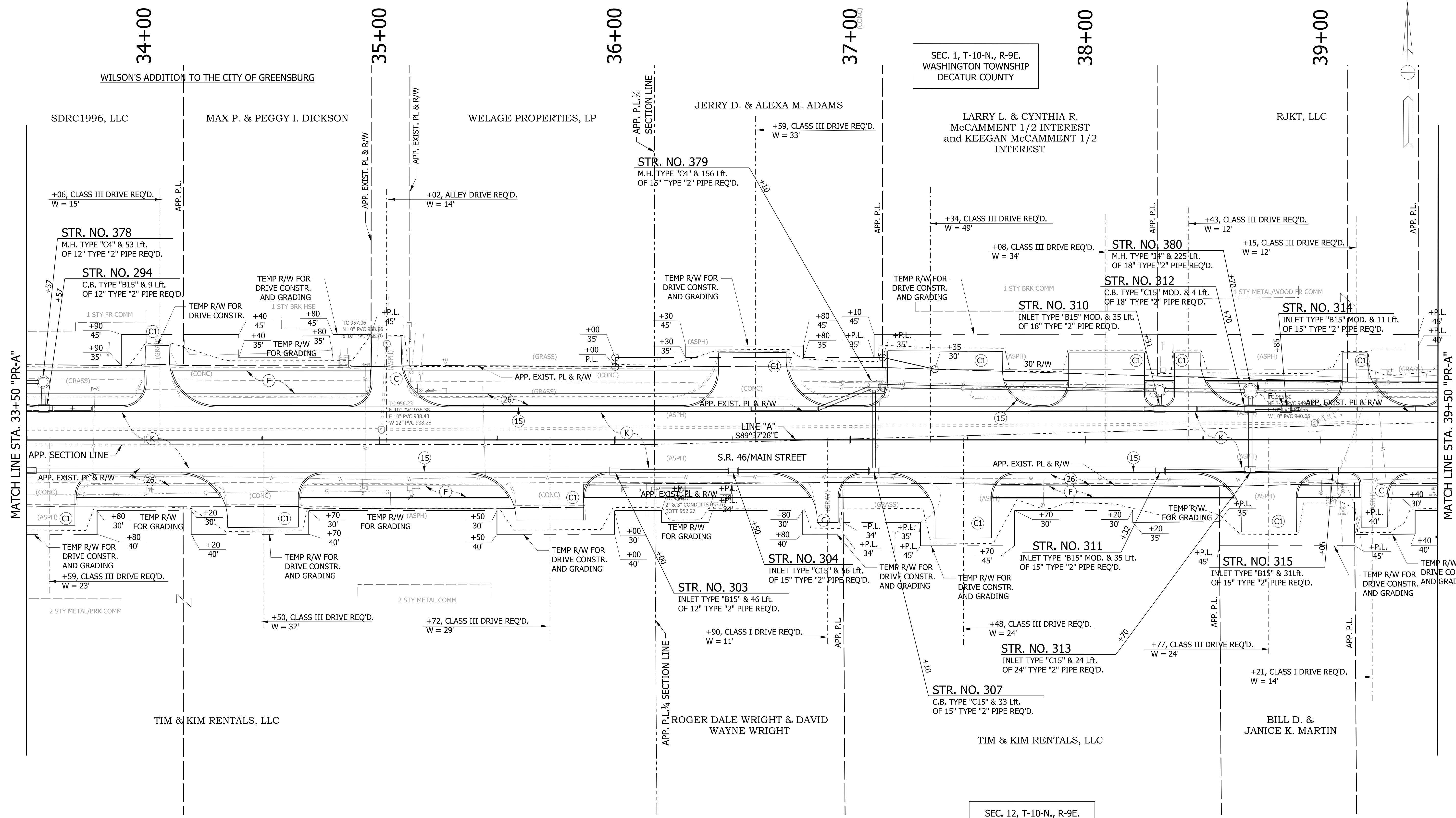
(K) HMA, FULL DEPTH RECONSTRUCTION: 165 LB/SYD QC/QA HMA, 3, 70 SURFACE, 9.5 MM, ON 275 LB/SYD QC/QA HMA, 3, 70 INTERMEDIATE, 19 MM, ON 550 LB/SYD QC/QA HMA, 3, 64 BASE, 25 MM, ON 300 LB/SYD QC/QA HMA, 4, 76, INTERMEDIATE, OG, 19 MM, ON 4 IN. COMPACTED AGGREGATE. NO. 53 BASE	(C) 6 IN. PCCP FOR DRIVEWAYS	(13) CONCRETE CURB	XXX.XX = PROPOSED ELEVATION
(C1) 9 IN. PCCP FOR DRIVEWAYS	(26) SODDING, NURSERY	(15) MOD. COMBINED CONCRETE CURB & GUTTER	(XXX.XX) = EXISTING ELEVATION
(F) CONCRETE SIDEWALK, 4"			

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
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CHECKED: MAE	CHECKED: WRC	

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAIL

HORIZONTAL SCALE	BRIDGE FILE
1"=20'	
VERTICAL SCALE	DESIGNATION
1"=20'	1800256
SURVEY BOOK	SHEETS
	53 of 131
CONTRACT	PROJECT
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SEC. 1, T-10-N., R-9E.
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DECATUR COUNTY

SEC. 12, T-10-N., R-9E.
WASHINGTON TOWNSHIP
DECATUR COUNTY

NOTES:
1. SEE PLAN & PROFILES FOR LINE "A" ALIGNMENT DATA.

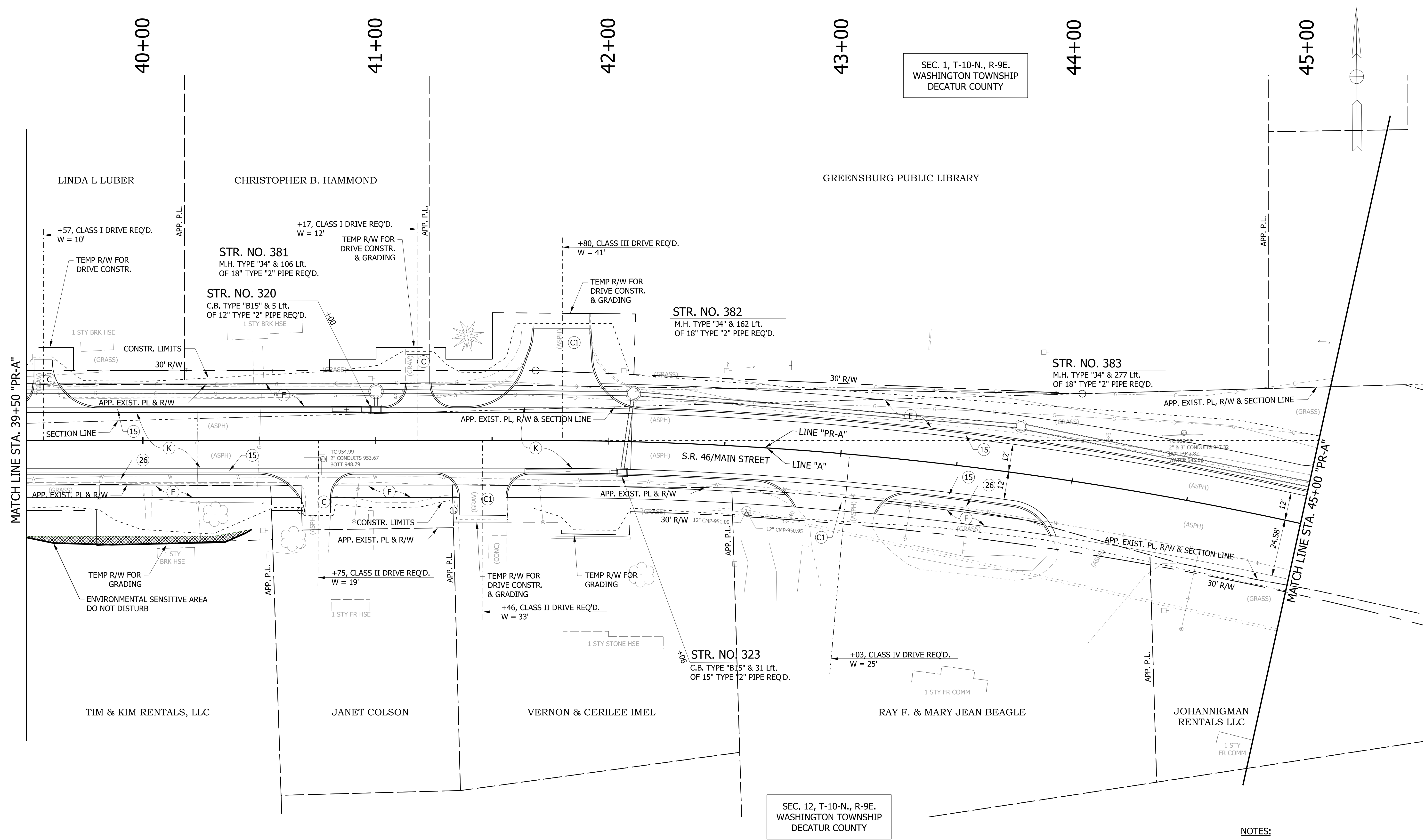
LEGEND			
(K)	HMA, FULL DEPTH RECONSTRUCTION: 165 LB/SYD QC/QA HMA, 3, 70 SURFACE, 9.5 MM, ON 275 LB/SYD QC/QA HMA, 3, 70 INTERMEDIATE, 19 MM, ON 550 LB/SYD QC/QA HMA, 3, 64 BASE, 25 MM, ON 300 LB/SYD QC/QA HMA, 4, 76, INTERMEDIATE, OG, 19 MM, ON 4 IN. COMPACTED AGGREGATE, NO. 53 RASB	(C)	6 IN. PCCP FOR DRIVEWAYS
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(F)	CONCRETE SIDEWALK, 4"	(26)	SODDING, NURSERY
		(15)	MOD. COMBINED CONCRETE CURB & GUTTER
			XXX.XX = PROPOSED ELEVATION
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INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAIL

HORIZONTAL SCALE	BRIDGE FILE
1"=20'	
VERTICAL SCALE	DESIGNATION
1"=20'	1800256
SURVEY BOOK	SHEETS
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CONTRACT	PROJECT
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NOTES:
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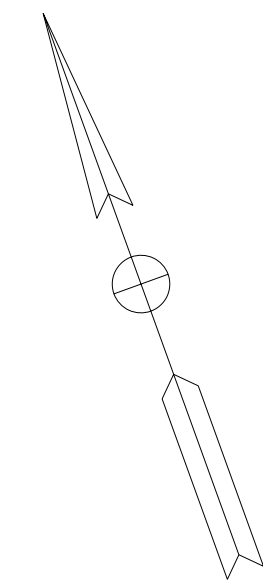
LEGEND			
(K)	HMA, FULL DEPTH RECONSTRUCTION: 165 LB/SYD QC/QA HMA, 3, 70 SURFACE, 9.5 MM, ON 275 LB/SYD QC/QA HMA, 3, 70 INTERMEDIATE, 19 MM, ON 550 LB/SYD QC/QA HMA, 3, 64 BASE, 25 MM, ON 300 LB/SYD QC/QA HMA, 4, 76, INTERMEDIATE, OG, 19 MM, ON 4 IN. COMPACTED AGGREGATE, NO. 53 BASE	(C)	6 IN. PCCP FOR DRIVEWAYS
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		(F)	CONCRETE SIDEWALK, 4"
		(13)	CONCRETE CURB
		(26)	SODDING, NURSERY
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			XXX.XX = PROPOSED ELEVATION
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DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAIL

HORIZONTAL SCALE	BRIDGE FILE
1"=20'	
VERTICAL SCALE	DESIGNATION
1"=20'	1800256
SURVEY BOOK	SHEETS
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CONTRACT	PROJECT
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SEC. 1, T-10-N., R-9E.
WASHINGTON TOWNSHIP
DECATUR COUNTY

46+00

47+00

48+00

49+00

50+00

GREENSBURG PUBLIC LIBRARY

DECATUR COUNTY
COMMISSIONERS

STR. NO. 384
M.H. TYPE "J4" & 63 Lft.
OF 18" TYPE "2" PIPE REQ'D.

(ASPH) S.R. 46/MAIN STREET

END PROJECT NO. 1800256
PREVENTATIVE MAINTENANCE
STA. 47+00.00 "PR-A"

SEC. 12, T-10-N., R-9E.
WASHINGTON TOWNSHIP
DECATUR COUNTY

JOHANNIGMAN RENTALS LLC

MATCH LINE STA. 45+00 "PR-A"

APP. EXIST. PL, R/W
& SECTION LINE

APP. EXIST. PL, R/W & SECTION LINE

APP. P.L. & EXIST. R/W

APP. P.L. & EXIST. R/W

APP. EXIST. PL, R/W
& SECTION LINE

APP. P.L.

30' R/W

CONSTR. LIMITS

+50
30'

+75
30'

+50
45'

+75
45'

CONSTR. LIMITS

LINE "PR-A"
LINE "A"

(CONC)

36"x24" Culv-929.37

12" CMP-946.84

12" CMP-946.09

24" CMP-935.16

TC 946.65
CONDUIT ON
BOT 941.15

TC 941.23
NW 24" CMP 931.43
NW 12" PVC 935.98
NW 6" PVC 935.83
SE 0" PVC 936.13
SW 36"x24" BOX 931.28

NOTES:

- 1. SEE GEOMETRIC TIE-UP DETAILS FOR ALIGNMENT DATA.

LEGEND

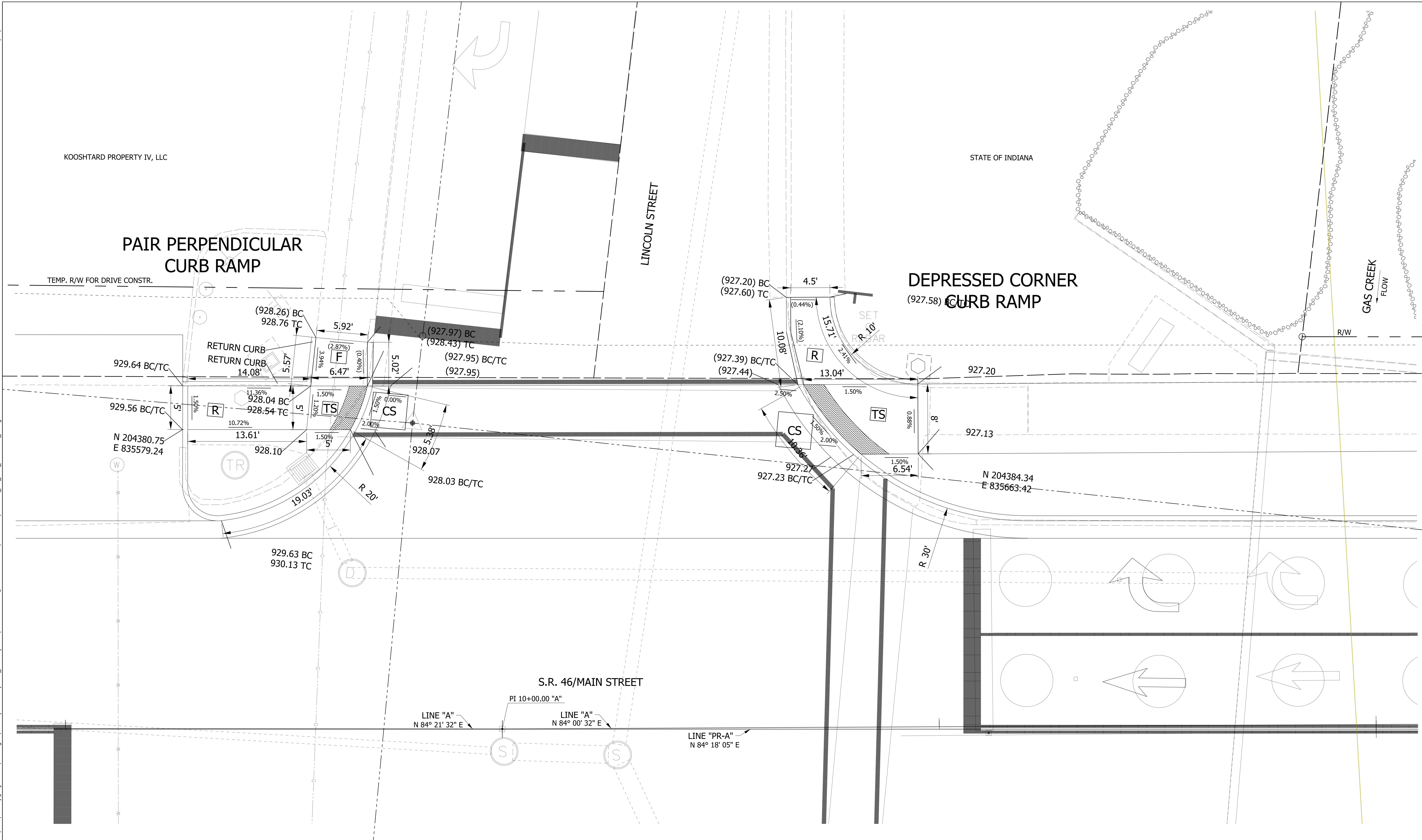
- (K) HMA, FULL DEPTH RECONSTRUCTION:
165 LB/SYD QC/QA HMA, 3, 70 SURFACE, 9.5 MM, ON
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4 IN. COMPACTED AGGREGATE, NO. 53 BASE
- (C) 6 IN. PCCP FOR DRIVEWAYS
- (C1) 9 IN. PCCP FOR DRIVEWAYS
- (F) CONCRETE SIDEWALK, 4"
- (13) CONCRETE CURB
- (26) SODDING, NURSERY
- (15) MOD. COMBINED CONCRETE CURB & GUTTER
- XXX.XX = PROPOSED ELEVATION
- (XX.XX) = EXISTING ELEVATION

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CHECKED: MAE	CHECKED: WRC	

**INDIANA
DEPARTMENT OF TRANSPORTATION**

CONSTRUCTION DETAIL

HORIZONTAL SCALE 1"=20'	BRIDGE FILE
VERTICAL SCALE 1"=20'	DESIGNATION 1800256
SURVEY BOOK	SHEETS 56 of 131
CONTRACT R-41463	PROJECT 1800256



LEGEND

(15)	COMBINED CONC. CURB & GUTTER	EP	EDGE OF PAVEMENT	DETECTABLE WARNING SURFACE
(R)	RAMP	FL	FLOW LINE	SODDING
(F)	SIDEWALK	TC	TOP OF CURB	
XXX.XX	PROPOSED ELEVATION	TW	TOP OF WALL	
(XXX.XX)	EXISTING ELEVATION	BC	BOTTOM OF CURB	
		R	RADIUS	

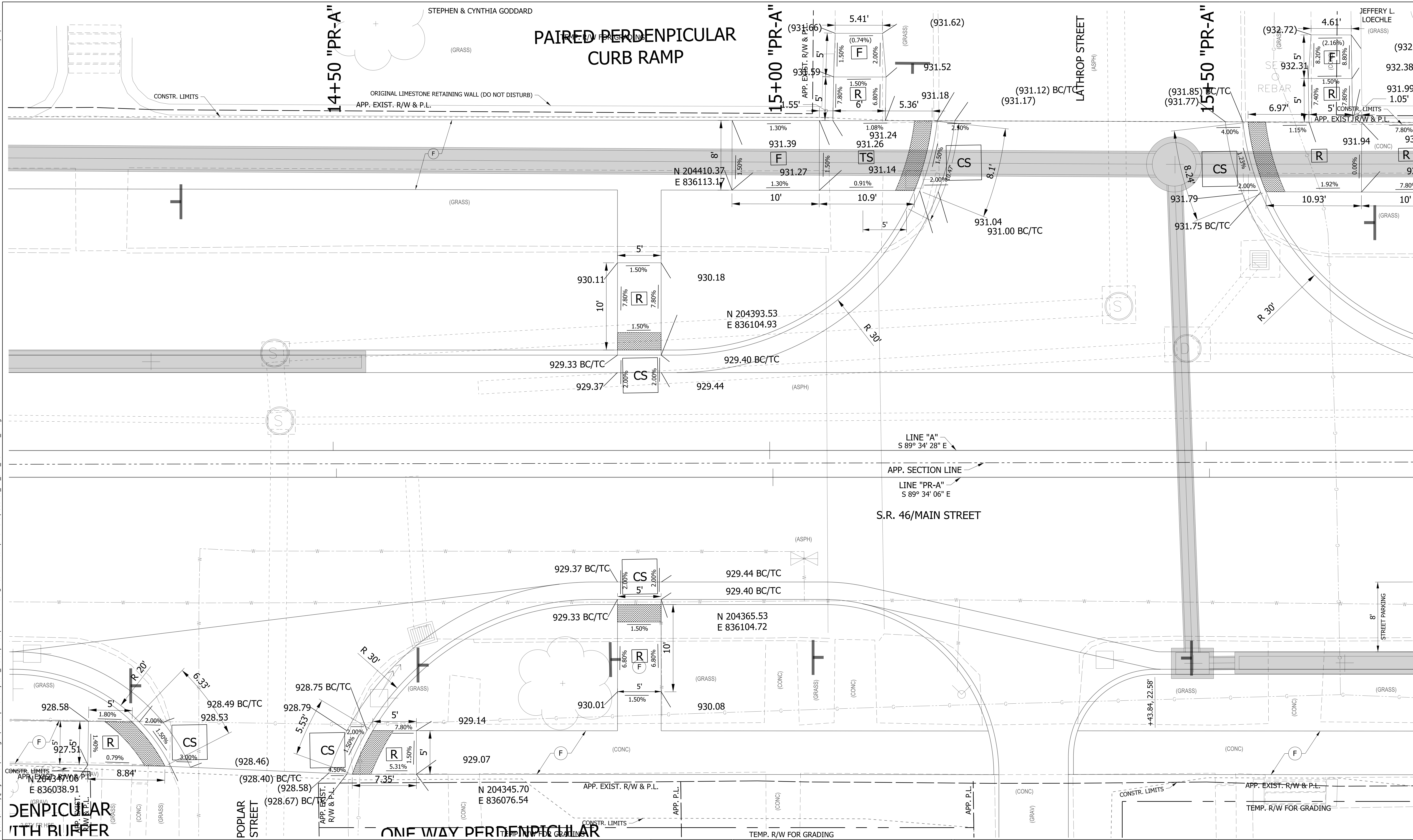
NOTES

ALL STATION CALLOUTS TAKEN FROM LINE "PR-A"

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: WRC	DRAWN: JEC	
CHECKED: MAE	CHECKED: WRC	

INDIANA DEPARTMENT OF TRANSPORTATION

HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION
	1800256
SURVEY BOOK	SHEETS
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CONTRACT	PROJECT
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LEGEND

(15)	COMBINED CONC. CURB & GUTTER	EP	EDGE OF PAVEMENT
(R)	RAMP	FL	FLOW LINE
(F)	SIDEWALK	TC	TOP OF CURB
XXX.XX	PROPOSED ELEVATION	TW	TOP OF WALL
(XXX.XX)	EXISTING ELEVATION	BC	BOTTOM OF CURB
		R	RADIUS
		[CS symbol]	DETECTABLE WARNING SURFACE
		[SODDING symbol]	SODDING
		[TS symbol]	TURNING SPACE

NOTES

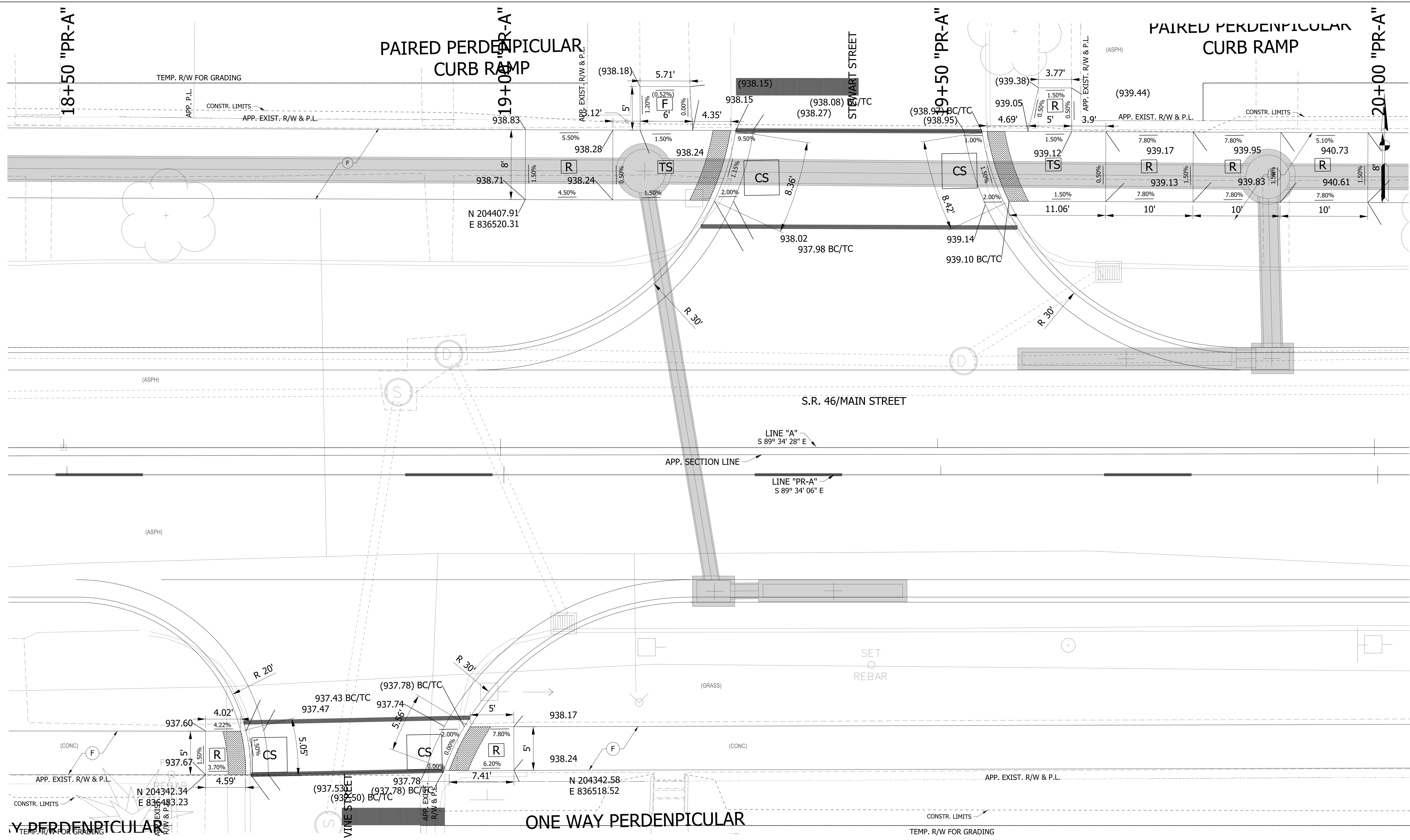
ALL STATION CALLOUTS TAKEN FROM LINE "PR-A"

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CHECKED: MAE	CHECKED: WRC	

INDIANA DEPARTMENT OF TRANSPORTATION

CURB RAMP DETAILS - LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1"=5'	
VERTICAL SCALE	DESIGNATION
1"=5'	1800256
SURVEY BOOK	SHEETS
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CONTRACT	PROJECT
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LEGEND

(15)	COMBINED CONC. CURB & GUTTER	EP	EDGE OF PAVEMENT	[Pattern]	DETECTABLE WARNING SURFACE
(R)	RAMP	FL	FLOW LINE	[Pattern]	SODDING
(F)	SIDEWALK	TC	TOP OF CURB		
XXX.XX	PROPOSED ELEVATION	TW	TOP OF WALL		
(XXX.XX)	EXISTING ELEVATION	BC	BOTTOM OF CURB		
		R	RADIUS		

NOTES

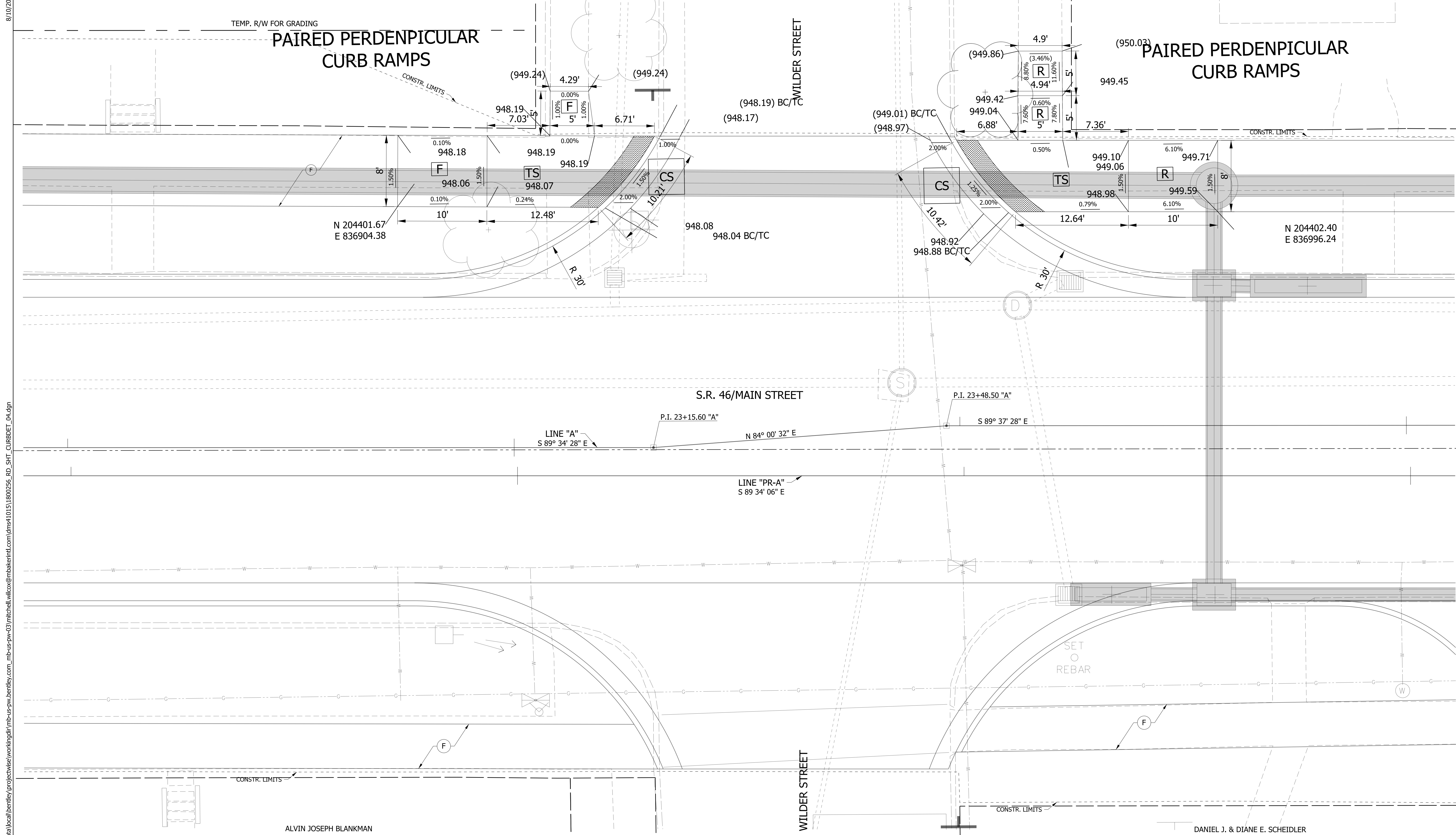
ALL STATION CALLOUTS TAKEN FROM LINE "PR-A"

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INDIANA DEPARTMENT OF TRANSPORTATION

CURB RAMP DETAILS - LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1"=5'	
VERTICAL SCALE	DESIGNATION
1"=5'	1800256
SURVEY BOOK	SHEETS
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CONTRACT	PROJECT
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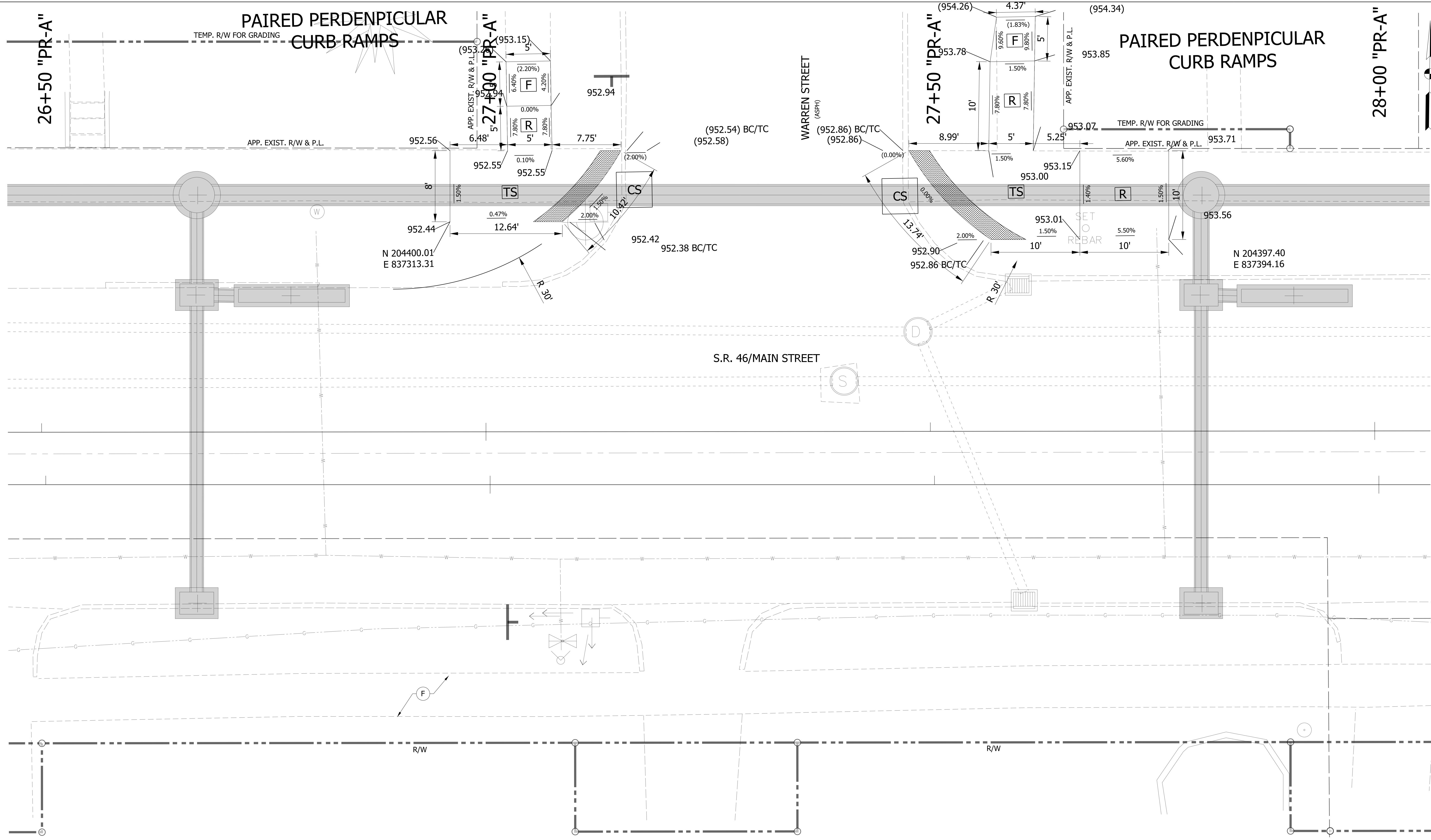
LEGEND	
(15)	COMBINED CONC. CURB & GUTTER
(R)	RAMP
(F)	SIDEWALK
XXX.XX	PROPOSED ELEVATION
(XXX.XX)	EXISTING ELEVATION
EP	EDGE OF PAVEMENT
FL	FLOW LINE
TC	TOP OF CURB
TW	TOP OF WALL
BC	BOTTOM OF CURB
R	RADIUS
(D)	DETECTABLE WARNING SURFACE
(S)	SODDING

NOTES
ALL STATION CALLOUTS TAKEN FROM LINE "PR-A"

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DESIGNED: WRC	DRAWN: JEC	
CHECKED: MAE	CHECKED: WRC	

INDIANA
DEPARTMENT OF TRANSPORTATION

HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION 1800256
SURVEY BOOK	SHEETS 60 of 131
CONTRACT R-41463	PROJECT 1800256



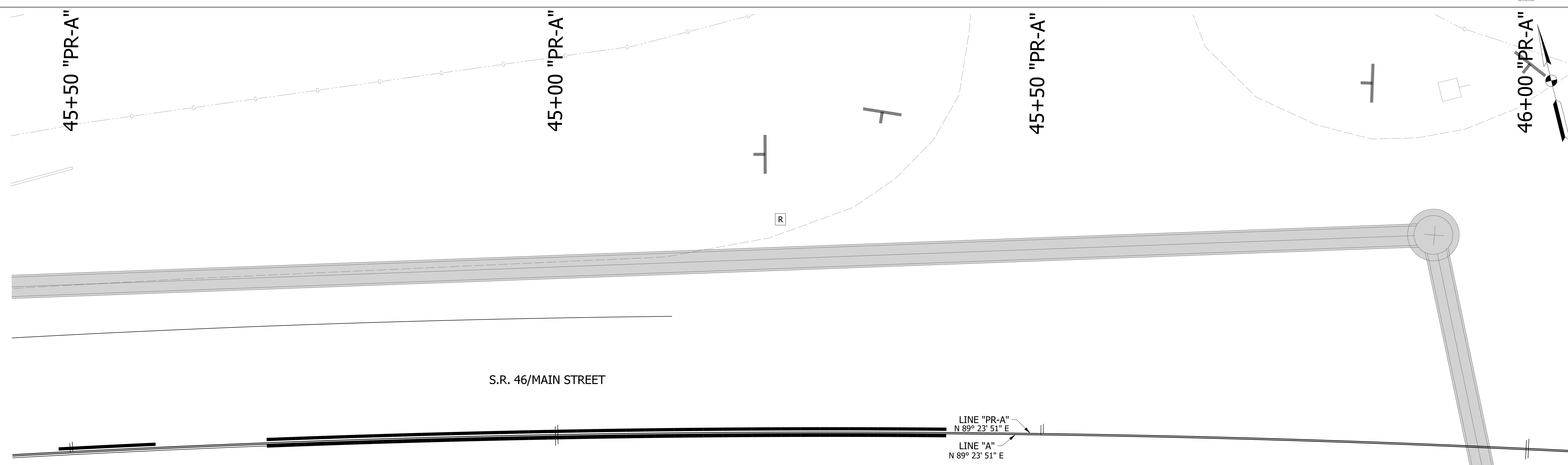
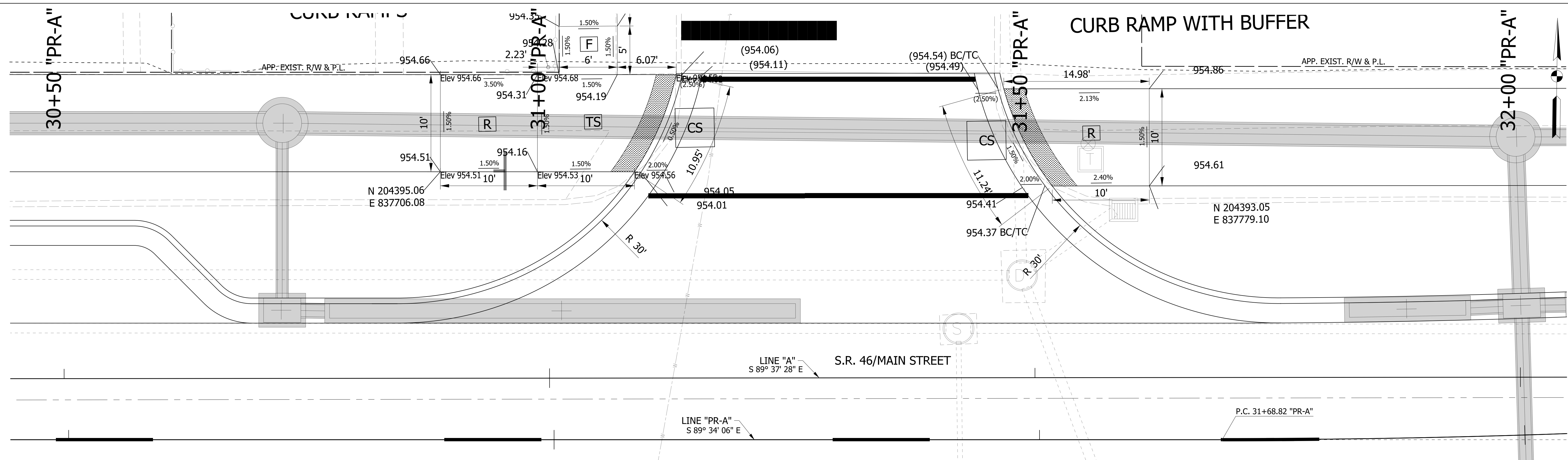
NOTES
ALL STATION CALLOUTS TAKEN FROM LINE "PR-A"

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: WRC	DRAWN: JEC	
CHECKED: MAE	CHECKED: WRC	

INDIANA DEPARTMENT OF TRANSPORTATION

CURB RAMP DETAILS - LINE "PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1"=5'	
VERTICAL SCALE	DESIGNATION
1"=5'	1800256
SURVEY BOOK	SHEETS
	61 of 131
CONTRACT	PROJECT
R-41463	1800256



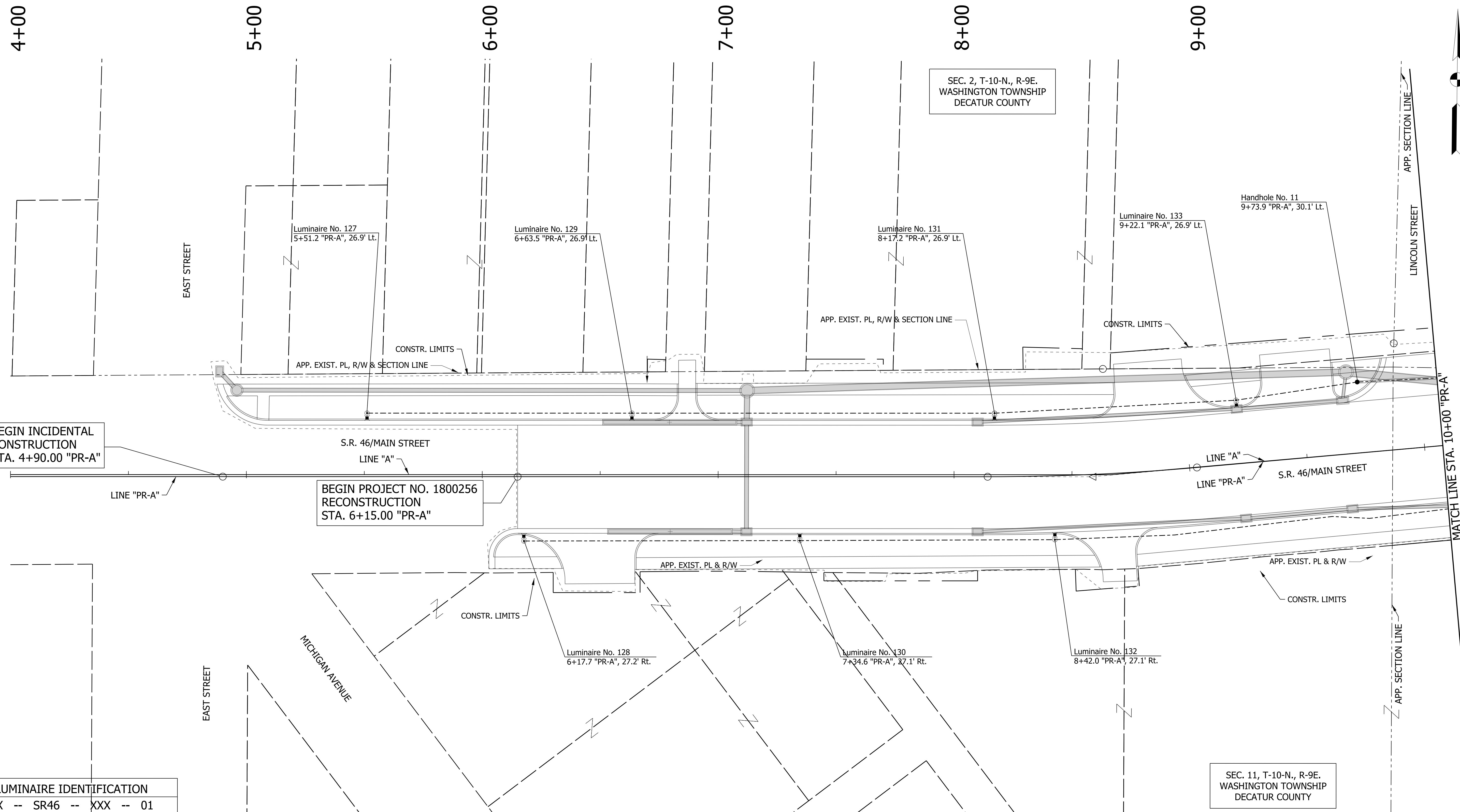
LEGEND	
	COMBINED CONC. CURB & GUTTER
	RAMP
	SIDEWALK
XXX.XX	PROPOSED ELEVATION
(XXX.XX)	EXISTING ELEVATION
EP	EDGE OF PAVEMENT
FL	FLOW LINE
TC	TOP OF CURB
TW	TOP OF WALL
BC	BOTTOM OF CURB
R	RADIUS
	DETECTABLE WARNING SURFACE
	SODDING

NOTES	
ALL STATION CALLOUTS TAKEN FROM LINE "PR-A"	

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DESIGNED: WRC	DRAWN: JEC	
CHECKED: MAE	CHECKED: WRC	

INDIANA DEPARTMENT OF TRANSPORTATION	
CURB RAMP DETAILS - LINE "PR-A"	

HORIZONTAL SCALE 1"=5'	BRIDGE FILE
VERTICAL SCALE 1"=5'	DESIGNATION 1800256
SURVEY BOOK	SHEETS 62 of 131
CONTRACT R-41463	PROJECT 1800256



BEGIN INCIDENTAL CONSTRUCTION STA. 4+90.00 "PR-A"

BEGIN PROJECT NO. 1800256 RECONSTRUCTION STA. 6+15.00 "PR-A"

SEC. 11, T-10-N., R-9E. WASHINGTON TOWNSHIP DECATUR COUNTY

SEC. 2, T-10-N., R-9E. WASHINGTON TOWNSHIP DECATUR COUNTY

LUMINAIRE IDENTIFICATION

XX	--	SR46	--	XXX	--	01
						LUMINAIRE NO.
						CROSS ROAD NO. (XXX)
						MAINLINE (SR46)
						COUNTY NO.

NOTES:
1. SEE GEOMETRIC TIE-UP DETAILS FOR ALIGNMENT DATA.

LEGEND

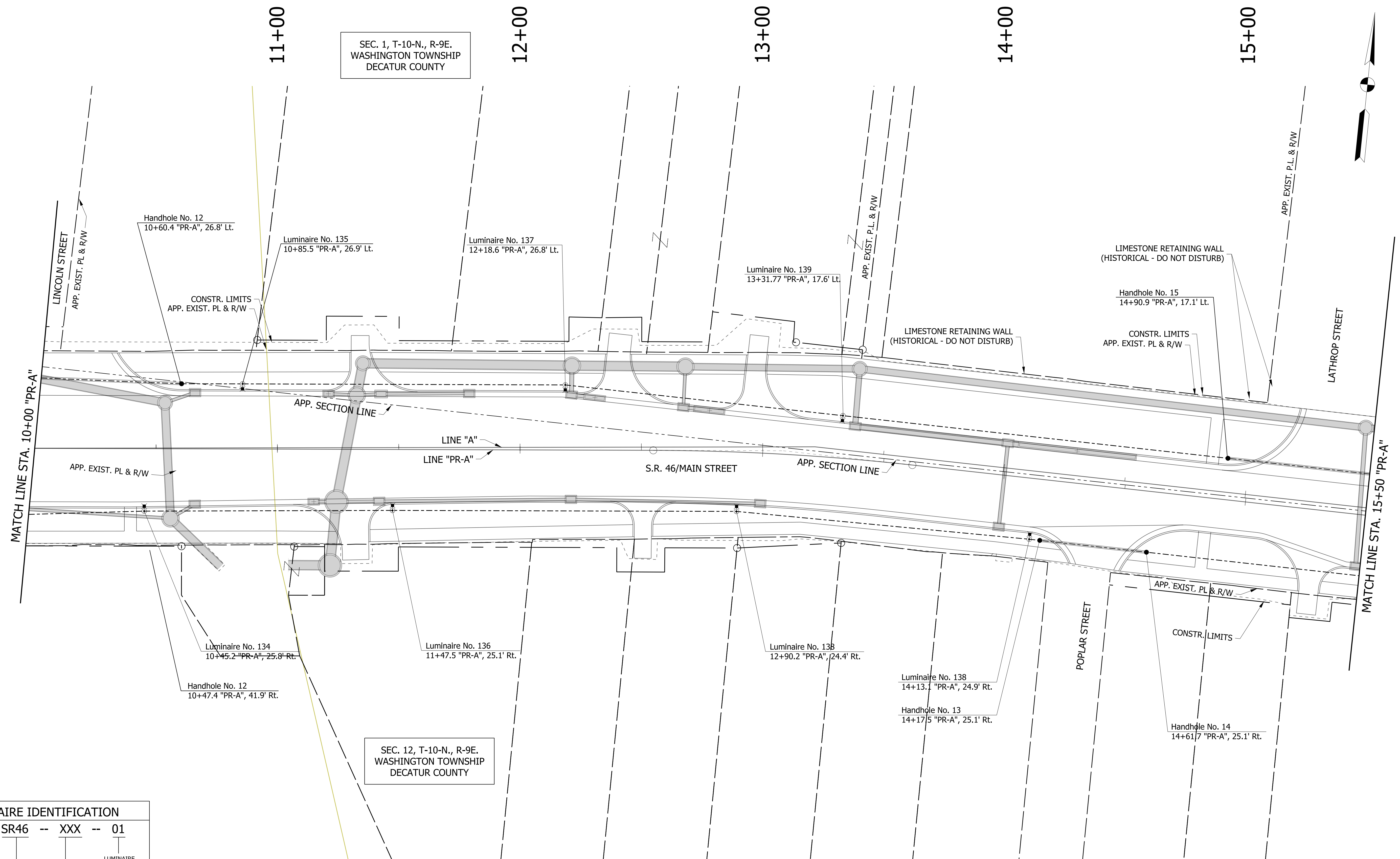
	EXISTING LIGHTING POLE, BREAK AWAY		EXISTING SERVICE POINT I		PROPOSED LIGHTING POLE, BREAK AWAY		PROPOSED CABLE MARKER
	EXISTING LIGHTING POLE, NON-BREAK AWAY		EXISTING SERVICE POINT II		PROPOSED LIGHTING POLE, NON-BREAK AWAY		PROPOSED LIGHTING HANDHOLE
	EXISTING LUMINAIRE		EXISTING CABLE MARKER		PROPOSED LUMINAIRE		PROPOSED UNDERPASS LUMINAIRE
	EXISTING UNDERPASS LUMINAIRE		EXISTING LIGHTING HANDHOLE				

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
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CHECKED: MAE	CHECKED: WRC	

INDIANA DEPARTMENT OF TRANSPORTATION

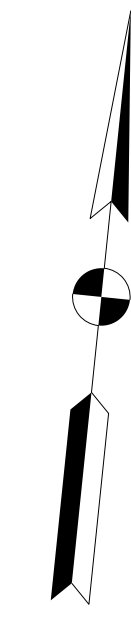
PROPOSED LIGHTING

HORIZONTAL SCALE	BRIDGE FILE
1"=20'	
VERTICAL SCALE	DESIGNATION
1"=20'	1800256
SURVEY BOOK	SHEETS
	65 of 131
CONTRACT	PROJECT
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SEC. 1, T-10-N., R-9E.
WASHINGTON TOWNSHIP
DECATUR COUNTY

SEC. 12, T-10-N., R-9E.
WASHINGTON TOWNSHIP
DECATUR COUNTY



LUMINAIRE IDENTIFICATION			
XX	--	SR46	-- XXX -- 01
			LUMINAIRE NO.
			CROSS ROAD NO. (XXX)
			MAINLINE (SR46)
			COUNTY NO.

NOTES:
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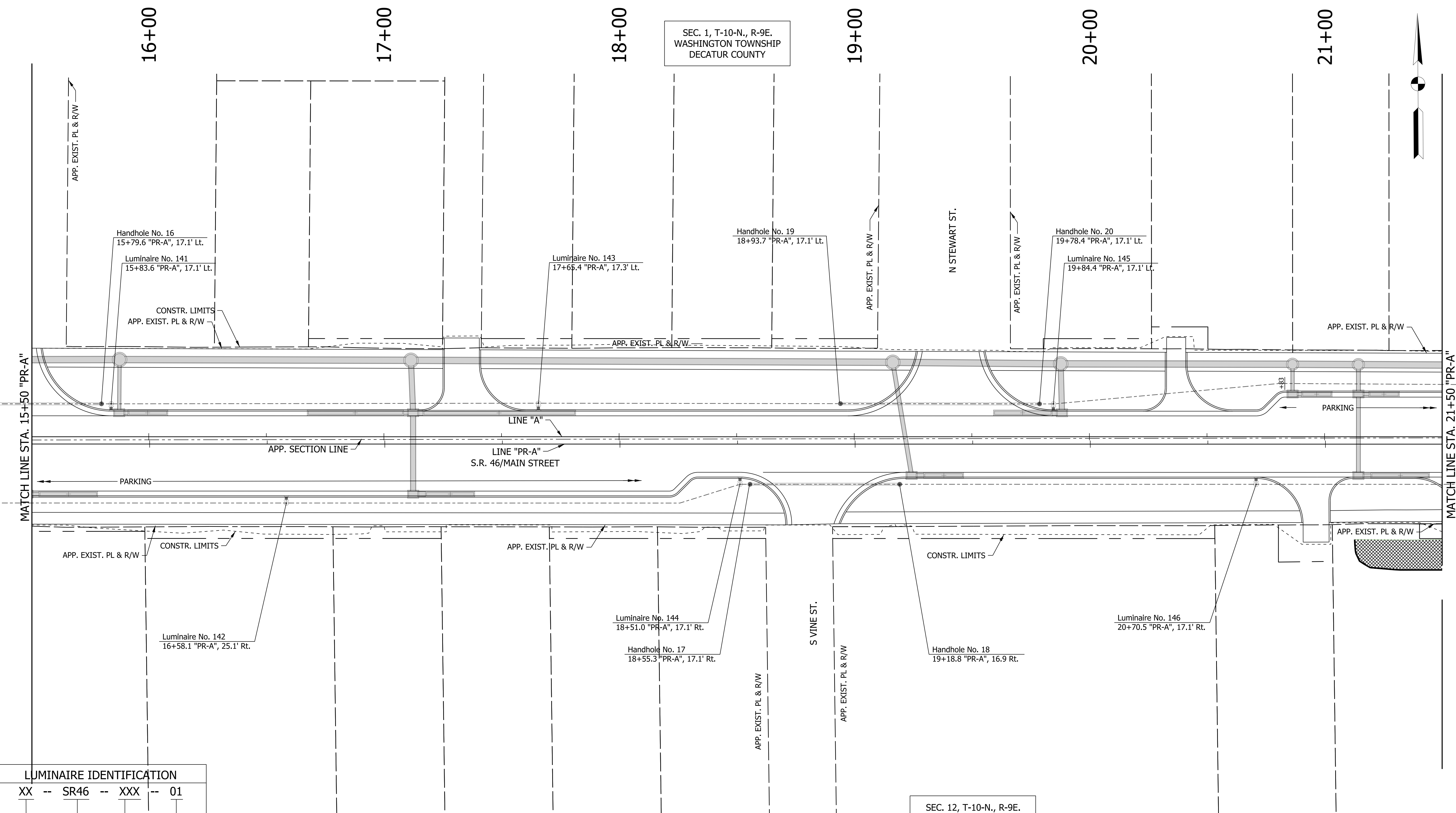
	EXISTING LIGHTING POLE, BREAK AWAY		EXISTING SERVICE POINT I		PROPOSED LIGHTING POLE, BREAK AWAY		PROPOSED CABLE MARKER
	EXISTING LIGHTING POLE, NON-BREAK AWAY		EXISTING SERVICE POINT II		PROPOSED LIGHTING POLE, NON-BREAK AWAY		PROPOSED LIGHTING HANDHOLE
	EXISTING LUMINAIRE		EXISTING CABLE MARKER		PROPOSED LUMINAIRE		
	EXISTING UNDERPASS LUMINAIRE		EXISTING LIGHTING HANDHOLE		PROPOSED UNDERPASS LUMINAIRE		

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INDIANA
DEPARTMENT OF TRANSPORTATION

PROPOSED LIGHTING

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1"=20'	
VERTICAL SCALE	DESIGNATION
1"=20'	1800256
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LUMINAIRE IDENTIFICATION

XX	--	SR46	--	XXX	--	01
						LUMINAIRE NO.
						CROSS ROAD NO. (XXX)
						MAINLINE (SR46)
						COUNTY NO.

SEC. 12, T-10-N., R-9E.
WASHINGTON TOWNSHIP
DECATUR COUNTY

- NOTES:**
- SEE PLAN & PROFILES FOR LINE "A" ALIGNMENT DATA.
 - OFFSETS CALLED OFF LINE "PR-A"

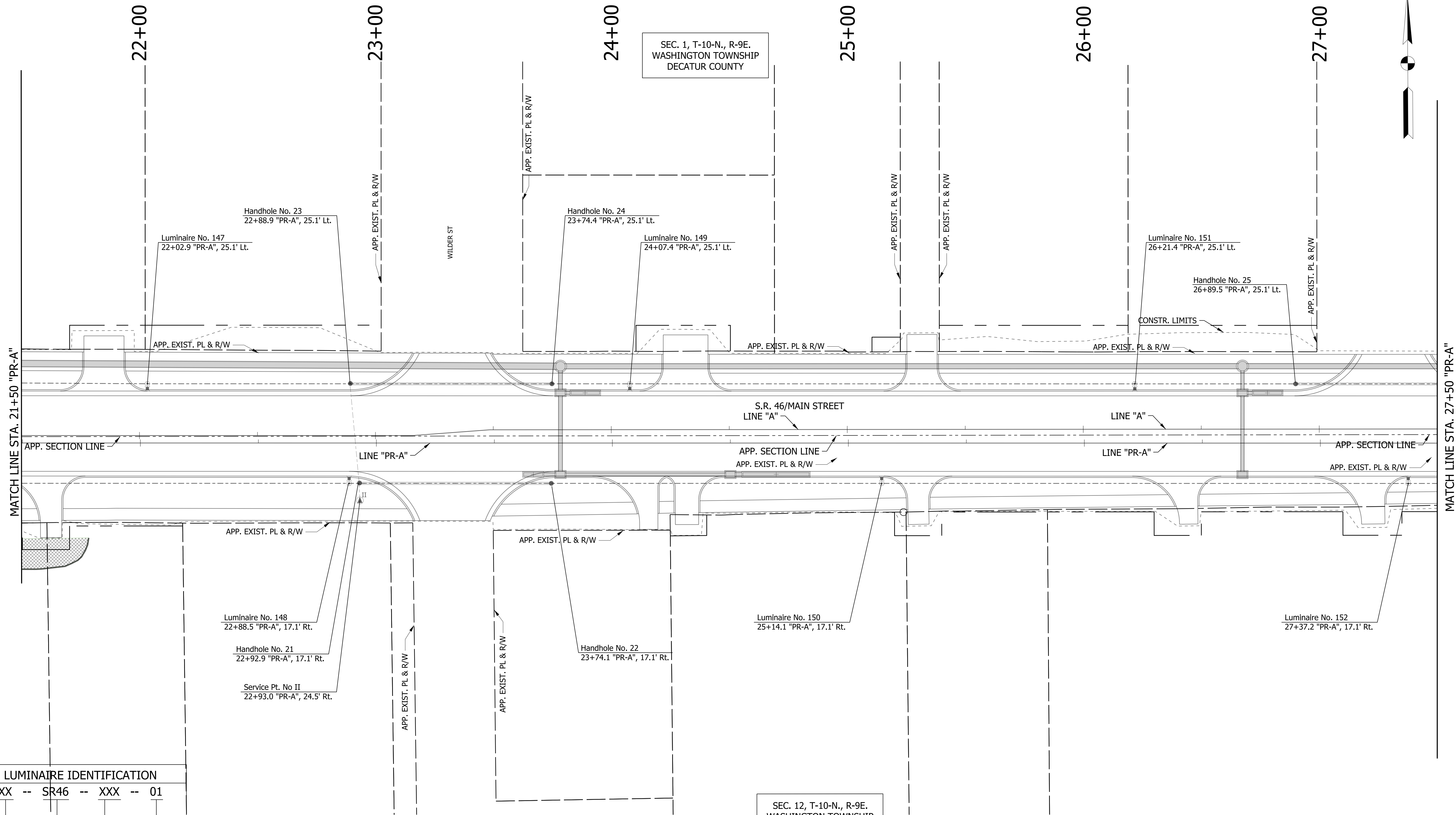
	EXISTING LIGHTING POLE, BREAK AWAY		EXISTING SERVICE POINT I		PROPOSED LIGHTING POLE, BREAK AWAY		PROPOSED CABLE MARKER
	EXISTING LIGHTING POLE, NON-BREAK AWAY		EXISTING SERVICE POINT II		PROPOSED LIGHTING POLE, NON-BREAK AWAY		PROPOSED LIGHTING HANDHOLE
	EXISTING LUMINAIRE		EXISTING CABLE MARKER		PROPOSED LUMINAIRE		
	EXISTING UNDERPASS LUMINAIRE		EXISTING LIGHTING HANDHOLE		PROPOSED UNDERPASS LUMINAIRE		

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**INDIANA
DEPARTMENT OF TRANSPORTATION**

PROPOSED LIGHTING

HORIZONTAL SCALE	BRIDGE FILE
1"=20'	
VERTICAL SCALE	DESIGNATION
1"=20'	1800256
SURVEY BOOK	SHEETS
	67 of 131
CONTRACT	PROJECT
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XXX	--	01	
			LUMINAIRE NO.
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			MAINLINE (SR46)
			COUNTY NO.

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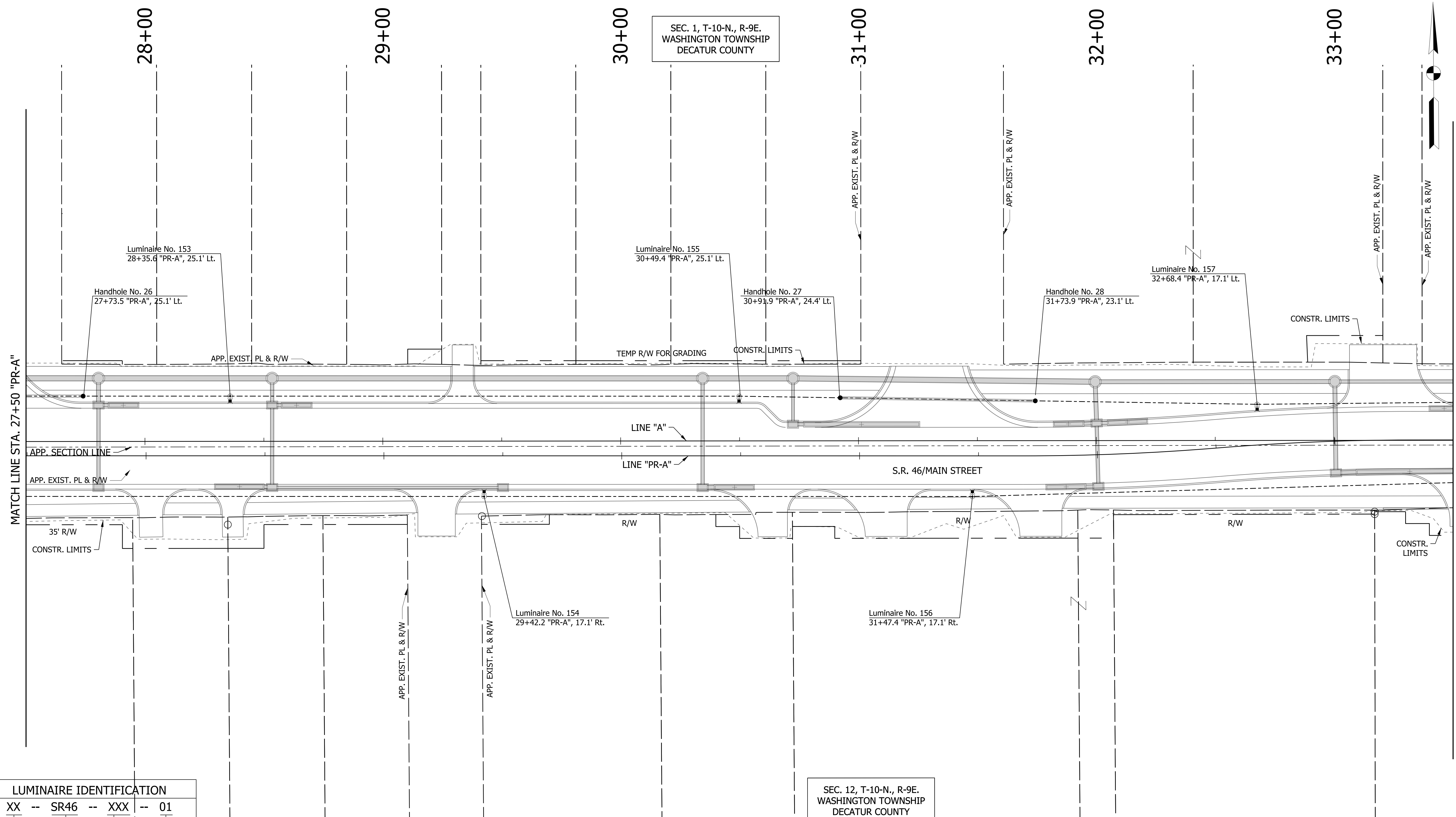
- | | | | | | | | |
|--|--|--|----------------------------|--|--|--|----------------------------|
| | EXISTING LIGHTING POLE, BREAK AWAY | | EXISTING SERVICE POINT I | | PROPOSED LIGHTING POLE, BREAK AWAY | | PROPOSED CABLE MARKER |
| | EXISTING LIGHTING POLE, NON-BREAK AWAY | | EXISTING SERVICE POINT II | | PROPOSED LIGHTING POLE, NON-BREAK AWAY | | PROPOSED LIGHTING HANDHOLE |
| | EXISTING LUMINAIRE | | EXISTING CABLE MARKER | | PROPOSED LUMINAIRE | | |
| | EXISTING UNDERPASS LUMINAIRE | | EXISTING LIGHTING HANDHOLE | | PROPOSED UNDERPASS LUMINAIRE | | |

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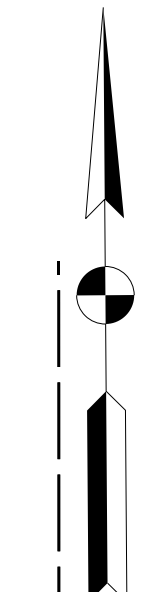
PROPOSED LIGHTING

HORIZONTAL SCALE	BRIDGE FILE
1"=20'	
VERTICAL SCALE	DESIGNATION
1"=20'	1800256
SURVEY BOOK	SHEETS
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CONTRACT	PROJECT
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SEC. 1, T-10-N., R-9E.
WASHINGTON TOWNSHIP
DECATUR COUNTY

SEC. 12, T-10-N., R-9E.
WASHINGTON TOWNSHIP
DECATUR COUNTY



LUMINAIRE IDENTIFICATION			
XX	--	SR46	--
XXX	--	01	
			LUMINAIRE NO.
			CROSS ROAD NO. (XXX)
			MAINLINE (SR46)
			COUNTY NO.

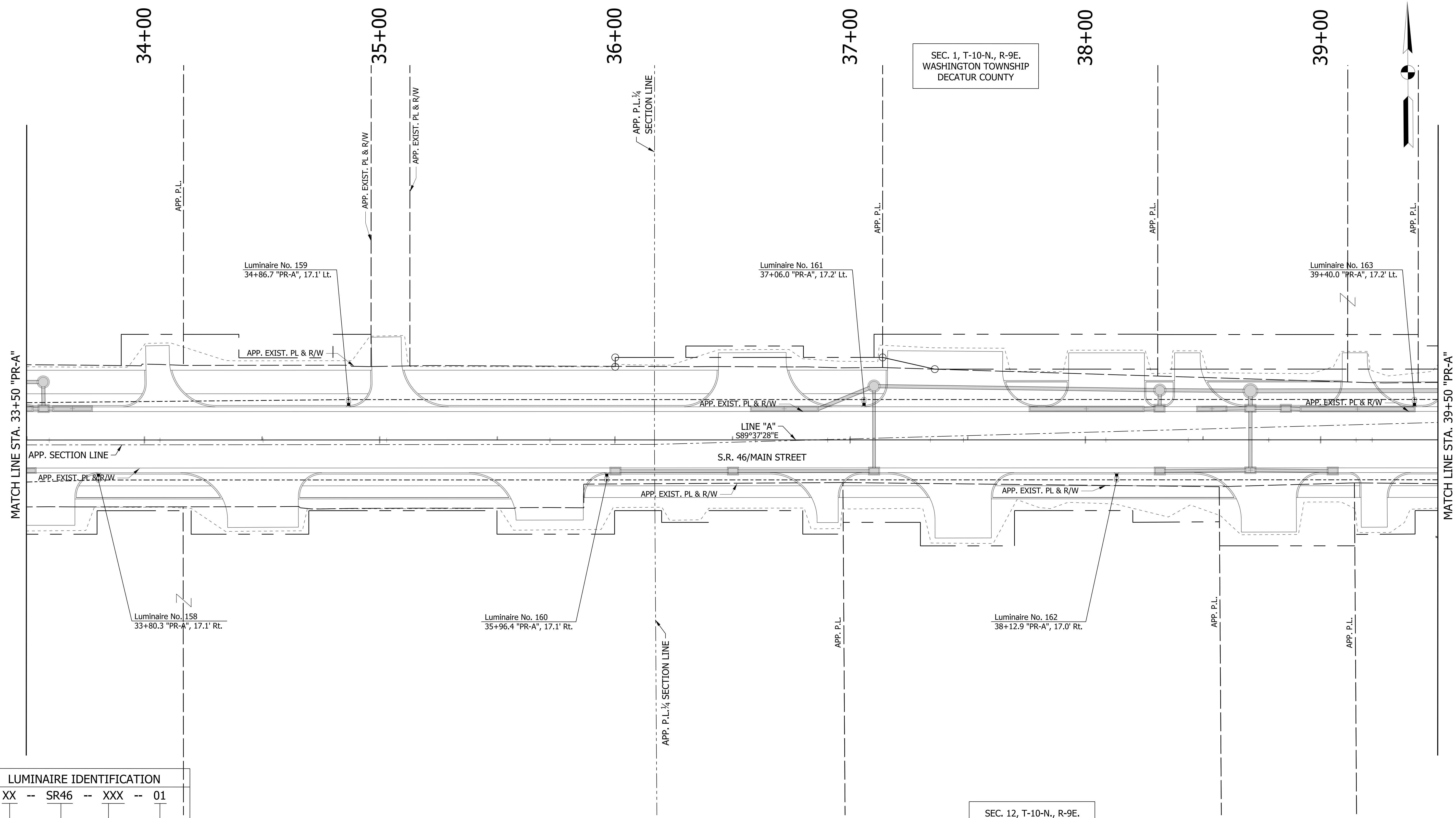
NOTES:
1. SEE GEOMETRIC TIE-UP DETAILS FOR ALIGNMENT DATA.

	EXISTING LIGHTING POLE, BREAK AWAY		EXISTING SERVICE POINT I		PROPOSED LIGHTING POLE, BREAK AWAY		PROPOSED CABLE MARKER
	EXISTING LIGHTING POLE, NON-BREAK AWAY		EXISTING SERVICE POINT II		PROPOSED LIGHTING POLE, NON-BREAK AWAY		PROPOSED LIGHTING HANDHOLE
	EXISTING LUMINAIRE		EXISTING CABLE MARKER		PROPOSED LUMINAIRE		
	EXISTING UNDERPASS LUMINAIRE		EXISTING LIGHTING HANDHOLE		PROPOSED UNDERPASS LUMINAIRE		

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: WRC	DRAWN: JEC	
CHECKED: MAE	CHECKED: WRC	

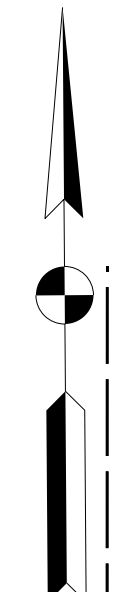
INDIANA DEPARTMENT OF TRANSPORTATION	
PROPOSED LIGHTING	

HORIZONTAL SCALE	BRIDGE FILE
1"=20'	
VERTICAL SCALE	DESIGNATION
1"=20'	1800256
SURVEY BOOK	SHEETS
	69 of 131
CONTRACT	PROJECT
R-41463	1800256



SEC. 1, T-10-N., R-9E.
WASHINGTON TOWNSHIP
DECATUR COUNTY

SEC. 12, T-10-N., R-9E.
WASHINGTON TOWNSHIP
DECATUR COUNTY



LUMINAIRE IDENTIFICATION			
XX	--	SR46	-- XXX -- 01
			LUMINAIRE NO.
			CROSS ROAD NO. (XXX)
			MAINLINE (SR46)
			COUNTY NO.

NOTES:
1. SEE PLAN & PROFILES FOR LINE "A" ALIGNMENT DATA.

EXISTING LIGHTING POLE, BREAK AWAY	EXISTING SERVICE POINT I	PROPOSED LIGHTING POLE, BREAK AWAY	PROPOSED CABLE MARKER
EXISTING LIGHTING POLE, NON-BREAK AWAY	EXISTING SERVICE POINT II	PROPOSED LIGHTING POLE, NON-BREAK AWAY	PROPOSED LIGHTING HANDHOLE
EXISTING LUMINAIRE	EXISTING CABLE MARKER	PROPOSED LUMINAIRE	
EXISTING UNDERPASS LUMINAIRE	EXISTING LIGHTING HANDHOLE	PROPOSED UNDERPASS LUMINAIRE	


RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: WRC	DRAWN: JEC	
CHECKED: MAE	CHECKED: WRC	

INDIANA DEPARTMENT OF TRANSPORTATION	
PROPOSED LIGHTING	

HORIZONTAL SCALE	BRIDGE FILE
1"=20'	
VERTICAL SCALE	DESIGNATION
1"=20'	1800256
SURVEY BOOK	SHEETS
	70 of 131
CONTRACT	PROJECT
R-41463	1800256

Submitted by ESL-Spectrum

ESL/SPECTRUM <small>EST. 1951 (MICHIGAN)</small>	Job Name: City of Greensburg - Lincoln Street Rehab Contractor: Gustaf Electric, Inc. (Rushville)	Catalog Number: 1A-1914LED-RLM431-33L45T3- MDL10-A-HSHS-BK	Type: 82 <small>(INDY)S-5683</small>
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1914LED LIBERTYVILLE SERIES

LED

EPA 135 (FT)
WEIGHT 58 LBS (4 LBS)
58 LBS (5 LBS)

1 YEAR WARRANTY

LUMEN MANS 4,025 lm
44-602

LIFE SPAN L75 100,000 HOURS

UL LISTED

CLASSIFIED FOR FACTORY

DATE OF ISSUE

JOB NAME

FUTURE TYPE

MEMO

BUILD A PART NUMBER

ORDERING EXAMPLE: 2A-1914LED-3L40T5-MDL07-A-PEC-HSHS/CA6/6420SRIS/RPBP/BK*F

Mounting Config	Fixture	Shade	LED	CCT	Type	Driver	Lens	Optional Control receptacle	Optional Control	Optional Fin	Optional Ring-arrange	Optional Remote dim.	Optional Pole Size	Arm	Pole	Finish
-----------------	---------	-------	-----	-----	------	--------	------	-----------------------------	------------------	--------------	-----------------------	----------------------	--------------------	-----	------	--------

Mounting Configuration

(Click here for mounting configuration specifications page)

- 1W -2A -4A -CAT

- 2A -3A -3AM

- 3A -3AD -3AM

Fixture

- 1914 LED

Shade

- (H) ANSI - (L) MZH - (R) MSLB

LED

- 1L - 3L - 4L

CCT - Color Temperature (K)

- 2700 - 3000 - 4000 - 5000

Type

- T2 - T3 - T4 - T5

Driver

- MDL06 (120v-277v, 600mA) (IL or SL system)

- MDH04 (147v-480v, 600mA)

- MDL07 (120v-277v, 700mA)

- MDH07 (147v-480v, 700mA) (SL system)

- MDL08 (120v-277v, 800mA)

- MDH08 (147v-480v, 800mA) (SL system)

- MDL09 (120v-277v, 900mA)

- MDH09 (147v-480v, 900mA) (SL or SL system)

- MDL10 (120v-277v, 1050mA)

- MDH10 (147v-480v, 1050mA)

- MDL12 (120v-277v, 1200mA)

- MDH12 (147v-480v, 1200mA) (IL or SL system)

- MDL16 (120v-277v, 1600mA) (IL system)

- MDH16 (147v-480v, 1600mA)

Lens

- SG (Fog Glass)

- PSC (Frosted Sag Glass)

- A (Polished Acrylic Tensolux)

- C (Class I Prismatic Tensolux)

- SVISA (Soft Vue Light Diffused Acrylic Sag)

Finish

- BK Black Textured*

- PWT White Textured

- PCT Pink Green Textured

- DOT Dull Bronze Textured

Options

- 3 Pin control receptacle only

- 3 Pin control receptacle only

- 2 Pin control receptacle only

- PE Twist-Lock Photocontrol (120V/277V)

- PC Twist-Lock Photocontrol (147V)

- PE Twist-Lock Photocontrol (148V)

- SC Sheeting Cap

- PEC Electronic Button Photocontrol (120V-277V)

- PECA Electronic Button Photocontrol (148V)

- RHD Double Flare and Holder (148V)

- HSH Standard Horizontal Hangstraight, Splice Final

- HSH Standard Horizontal Hangstraight, No Flare

- HSH Standard Horizontal Hangstraight, Ball Flare

- HSHB Standard Horizontal Hangstraight, Ball Flare

- HSCB Clamp Style Horizontal Hangstraight, Ball Flare

- HSCS Clamp Style Horizontal Hangstraight, Splice Final

- HSCN Clamp Style Horizontal Hangstraight, No Flare

- EZ Vertical Hangstraight, Large "EZ" Mount

- HV Vertical Hangstraight, Standard

- TB Terminal Block

- HSD 120" Heavy Side Shield

Arm

See Arm & Wall Brackets, specifications sheets.

- 32" - 34" - 36" - 38" - 40" - 42" - 44" - 46" - 48" - 50"

- 32" - 34" - 36" - 38" - 40" - 42" - 44" - 46" - 48" - 50"

Pole

See Pole specifications sheets.

City of Greensburg, IN
Engineering Department
August 3, 2018

Submitted by ESL-Spectrum

ESL/SPECTRUM <small>EST. 1951 (MICHIGAN)</small>	Job Name: City of Greensburg - Lincoln Street Rehab Contractor: Gustaf Electric, Inc. (Rushville)	Catalog Number: 1A-1914LED-RLM431-33L45T3- MDL10-A-HSHS-BK	Type: 82 <small>(INDY)S-5683</small>
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1914LED LIBERTYVILLE SERIES

LED

LED components and COB holder frame. The LED's and printed circuit boards shall be 100% recyclable; they shall also be protected from moisture and corrosion by a conformal coating of 1 to 3 mils. They shall not contain lead, mercury or any other hazardous substances and shall be RoHS compliant. The LED life rating data shall be determined in accordance with IESNA LM-80. The High Performance White LED's will have a life expectancy of approximately 100,000 hours with less than 70% of original brightness (lumen maintenance), tested at 25°C. The High Brightness, High Output LED's shall be 4000K (700K, 3000K or 5000K) optical color temperature with a minimum of 70 CRI. Conformal coating for custom color CCT. The luminaire shall have a minimum _____ (see table) delivered initial lumens rating when operated at steady state with an average ambient temperature of 25°C (77°F).

Light Distribution

The light distribution per the IESNA classifications. Testing shall be done in accordance with IESNA LM-79.

Electronic Drivers

The LED driver shall be UL Recognized. It shall be securely mounted inside the fixture, for optimized performance and longevity. It shall be supplied with a quick disconnect electrical connector on the power supply, providing easy power connections and future installation. It shall have overload, overheat and short circuit protection, and have a DC voltage output, constant current design, 50/60Hz. It shall be supplied with line-ground, line-neutral and neutral-ground electrical surge protection in accordance with IEEE/ANSI C62.41.2 guidelines. It shall be high efficiency driver with a THD less than 20% and a high power factor greater than 0.9. It shall be dimming capable using a 0-10V signal consist factory for more information.

Photocontrol Options

Button Style: On a single assembly the photocontrol shall be mounted on the fixture and pre-wired to driver. On multiple head assembly's the photocontrol shall be mounted in the pole shaft on an access plate. The electronic button type photocontrol is instant on with a 1/10 second turn off, and shall turn on at 15 footcandles with a turn-off at 2-3 footcandles. Photocontrol is 120-277 volt and warranted for 6 years.

Twist-Lock Style: A 3-Pin Receptacle shall be mounted inside the body of the fixture and pre-wired to driver. A clear window allows for a standard photocontrol to evaluate external light conditions. A 5-Pin/7-Pin Receptacle shall be mounted on the hung straight and pre-wired to driver. The twist lock type photocontrol is instant on with a 1/6 second turn-off, and shall turn on at 15 footcandles with turn-off at 2-3 footcandles. Photocontrol is 120-277 volt and warranted for 6 years.

Warranty

Seven-year limited warranty. See product and finish warranty guide for details.

Finish

Refer to website for details.

Lens

Materials include DR Acrylic (A), Acrylic (DVA), SV2SA, SV5SA or Glass (G, SG & FSG). An injection, molding process for the(A) lens top lens adds secured ribs to the surface for glare mitigation and even wall thickness for impact resistance.

Opics

The luminaire shall be prepackaged with individual, molded silicone refractor type optics applied to each COB (Chip On Board) LED assembly. The optic shall be at least 92% efficient while providing superior thermal, UV and impact resistance for the COB assembly. The optic ensures precise light control while providing equal control that limits or contains uplight. The luminaire shall provide type _____, (2, 3, 4 or

Fixture Examples

City of Greensburg, IN
Engineering Department
August 3, 2018

Submitted by ESL-Spectrum

ESL/SPECTRUM <small>EST. 1951 (MICHIGAN)</small>	Job Name: City of Greensburg - Lincoln Street Rehab Contractor: Gustaf Electric, Inc. (Rushville)	Catalog Number: 1A-1914LED-RLM431-33L45T3- MDL10-A-HSHS-BK	Type: 82 <small>(INDY)S-5683</small>
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1914LED LIBERTYVILLE SERIES

LED

Performance

Initial Lumen Data (*A* Lens)

Light Source	T8 DELIVERED LUMENS	EFFICIENCY (LPW)	T8 DELIVERED LUMENS	EFFICIENCY (LPW)	T5 DELIVERED LUMENS	EFFICIENCY (LPW)	WATTAGE
4.27T_MDL12	38283	111.0	30093	118.5	29090	114.5	254
4.30T_MDL12	31915	125.2	32340	136.9	32455	131.2	254
4.40T_MDL12	32900	129.0	34345	135.2	34490	135.3	254
4.27T_MDL10	25023	113.9	27040	130.7	26700	119.2	224
4.30T_MDL10	28785	128.5	28803	131.3	30115	134.4	224
4.40T_MDL10	28673	132.5	30953	137.7	31045	134.6	224
4.27T_MDL09	22415	116.7	23895	123.4	23490	122.0	182
4.30T_MDL09	25285	131.7	26170	136.3	26425	137.5	182
4.40T_MDL09	26985	135.8	27040	149.6	27245	141.8	182
3.27T_MDL10	20343	118.3	20033	120.0	21190	121.1	172
3.30T_MDL10	22949	133.4	22790	132.5	23885	139.9	172
3.40T_MDL10	23949	137.8	23945	136.9	24625	143.2	172
3.27T_MDL09	17730	121.0	18175	123.8	18485	125.8	147
3.30T_MDL09	20985	136.5	20070	136.5	20825	141.7	147
3.40T_MDL09	20885	140.7	20740	141.1	21420	146.1	147
3.27T_MDL06	16145	122.3	16425	125.4	16790	127.0	131
3.30T_MDL06	18210	138.0	18145	138.5	18905	143.2	131
3.40T_MDL06	18775	124.2	18740	143.1	19490	147.7	131
3.27T_MDL07	14075	124.6	14020	127.9	14670	128.9	113
3.30T_MDL07	15875	140.5	15815	141.2	16490	146.4	113
3.40T_MDL07	16370	144.9	16340	146.0	16940	149.6	113
3.27T_MDL06	12280	128.6	12465	128.5	12745	131.4	87
3.30T_MDL06	13890	142.8	13770	142.0	14375	148.2	87
3.40T_MDL06	14280	147.2	14225	146.6	14820	151.8	87
11.27T_MDL16	8460	97.9	9635	101.4	9555	102.0	87
11.30T_MDL16	10670	110.0	10980	112.0	11230	115.8	87
11.40T_MDL16	11030	113.4	11220	115.7	11573	119.0	87
11.27T_MDL12	7420	101.8	7725	107.3	7825	107.2	72
11.30T_MDL12	8560	114.8	8530	118.5	8830	121.0	72
11.40T_MDL12	8640	118.4	8615	122.4	9100	124.7	72
11.27T_MDL09	5870	108.7	6060	114.7	6180	114.4	53
11.30T_MDL09	6620	123.6	6715	126.7	6870	129.1	53
11.40T_MDL09	6625	128.4	6665	130.9	7185	131.1	53
11.27T_MDL06	4625	112.1	4195	119.9	4240	117.8	39
11.30T_MDL06	4550	128.4	4635	132.4	4780	132.8	39
11.40T_MDL06	4690	136.3	4790	136.9	4980	136.9	39

**City of Greensburg, IN
Engineering Department
August 3, 2018**

<p>RECOMMENDED FOR APPROVAL _____</p> <p style="text-align: right;">DESIGN ENGINEER DATE</p> <hr/> <p>DESIGNED: _____ DC DRAWN: _____ JEC</p> <hr/> <p>CHECKED: _____ WRC CHECKED: _____ WRC</p>	<p>INDIANA DEPARTMENT OF TRANSPORTATION</p> <p>LIGHTING DETAILS</p>
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HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION
SURVEY BOOK	SHEETS
CONTRACT	71 of 131
R-41463	PROJECT
	1800256

Submitted by ESL - Spectrum	Job Name: City of Greensburg - Lincoln Street Rehab Contractor: Custor Electric, Inc. (Rushville)	Catalog Number: RTA20C8B4-M-ARM43700-BA	Type: 83
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D	Top Dia.	Base Dia.	Butt Dia.	Arm Dia.	Bolt Size
5	4.5	9 - 10	9.75	2.75	1/2 x 3/8 x 4
7	4.5	10 - 11	10.5	2.75	1/2 x 3/8 x 4
8	4.5	11 - 12	11.25	2.75	1/2 x 3/8 x 4

Pole
Shaft and arm will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B271. The shaft assembly shall be full length heat treated after base weld to produce a T8 temper.

Base Style
4 Bolt Cast Aluminum Base Flange of Alloy 356-T6 with Aluminum Bolt Covers (Alloy 300-7) and Stainless Steel Hex Nut Attaching Screws.

Handhole
6" Butt Diameter - Reinforced 3" x 5" curved Cast Aluminum Flange (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. A grounding provision incorporating a 3/8" diameter hole is provided opposite the handhole.
7" x 8" Butt Diameter - Reinforced 4" x 6" curved Cast Aluminum Flange (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. Reinforced Flange will contain an tapered 3/8" hole. Grounding provision.

Anchorage
Anchorage kit will include four (4) L-shaped Steel Anchor Bolts conforming to ASTM A307-A 50 (Ball Size: 1 1/2") mounted and set in an aluminum cast per ASTM A142.

Vibration Damper
When determined necessary by Hesco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

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WARNING: Do not hold light pole without restraint.

Submitted by ESL - Spectrum	Job Name: City of Greensburg - Lincoln Street Rehab Contractor: Custor Electric, Inc. (Rushville)	Catalog Number: RTA20C8B4-M-ARM43700-BA	Type: 83
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A	B	C	J	Min. W. G.P.A.	N.A. Cir. Mess.	Notes				
ft.	in.	in.	ft.	90	100	110	120	130	150	
20	0.150*	6	4	90	11.0	8.0	6.2	6.5	5.2	21-882
20	0.150*	6	6	90	8.0	7.2	6.6	6.7	4.4	21-885
20	0.150*	6	8	90	6.8	6.2	4.8	4.0	3.7	21-889
20	0.150*	6	4	90	11.0	8.8	8.2	8.8	5.6	21-900
20	0.188*	6	6	90	9.0	7.2	6.6	5.4	4.6	21-905
20	0.188*	6	8	90	6.8	6.2	4.8	4.0	3.2	21-907
25	0.150*	6	6	90	8.8	4.5	3.8	2.5	1.7	21-24183
25	0.188*	6	4	90	8.8	8.8	6.2	4.8	3.6	21-282
25	0.188*	6	6	90	8.8	6.2	5.4	4.0	2.9	21-285
25	0.188*	6	8	90	6.2	6.0	4.7	3.2	2.2	21-287
25	0.150* 7	4	6	90	10.4	6.2	7.0	6.3	5.0	21-902
25	0.150* 7	8	6	90	8.8	6.8	6.2	5.2	4.2	21-905
25	0.150* 7	8	8	90	6.4	5.0	4.6	3.8	3.0	21-909
25	0.188* 7	4	6	90	10.4	8.2	7.8	6.4	5.4	21-290
25	0.188* 7	6	6	90	8.8	6.8	6.2	5.2	4.4	21-290
25	0.188* 7	6	8	90	6.4	5.0	4.6	3.8	3.0	21-291
30	0.150* 7	4	6	90	7.8	3.1	4.4	3.1	2.2	21-692
30	0.150* 7	6	6	90	7.8	4.6	3.0	2.6	1.7	21-695
30	0.150* 7	6	8	90	6.1	3.8	2.1	1.8	0.9	21-697
30	0.150* 8	4	6	90	10.0	7.8	7.4	6.0	4.8	21-642
30	0.150* 8	6	6	90	8.2	8.4	6.0	5.0	4.2	21-645
30	0.150* 8	6	8	90	6.0	4.8	4.4	3.0	2.3	21-647
30	0.188* 8	4	6	90	10.0	7.8	7.4	6.0	5.0	21-282
30	0.188* 8	6	6	90	8.2	8.4	6.0	5.0	4.2	21-285
30	0.188* 8	6	8	90	6.0	4.8	4.4	3.0	2.3	21-287
30	0.188* 8	8	6	90	8.0	4.8	4.4	3.4	2.3	21-290
35	0.150* 8	4	6	90	8.0	5.5	4.8	3.2	2.2	21-623
35	0.150* 8	6	6	90	7.4	4.7	4.1	2.7	1.7	21-625
35	0.150* 8	6	8	90	5.8	3.0	3.3	1.0	0.0	21-627
35	0.188* 8	4	6	90	8.6	7.8	7.0	6.2	5.9	21-880
35	0.188* 8	6	6	90	7.8	6.2	6.2	4.5	3.3	21-885
35	0.188* 8	6	8	90	5.8	4.6	4.2	3.4	2.6	21-887
35	0.188* 8	6	8	90	5.8	4.6	4.2	3.4	2.8	21-897
35	0.250* 8	4	6	90	9.8	7.8	7.0	6.8	5.0	21-882
35	0.250* 8	6	6	90	7.8	6.2	5.8	4.8	4.0	21-885
35	0.250* 8	6	8	90	6.8	4.6	4.2	3.4	2.8	21-887
40	0.188* 8	4	6	90	7.0	4.4	3.8	2.2	1.5	50700-041
40	0.188* 8	6	6	90	6.4	3.8	3.2	1.8	1.0	50700-041
40	0.188* 8	6	8	90	5.8	3.1	2.5	1.1	-	50700-002
40	0.219* 8	6	6	90	7.6	5.8	5.0	3.4	2.2	50700-005
40	0.219* 8	6	8	90	5.8	4.4	4.2	2.8	1.6	50700-006
40	0.250* 8	4	6	90	9.2	7.4	6.6	5.4	4.1	50700-045
40	0.250* 8	6	6	90	7.8	6.0	5.8	4.8	3.5	50700-009
40	0.250* 8	6	8	90	5.8	4.4	4.0	3.2	2.0	50700-024

RTA20C8B4 M-ARM43700-BA Catalog Number System
The catalog number for HESCO poles utilizes the following identification system:

RTA: 20 (MOUNTING HEIGHT) C: 8 (CIR. MESS.) B: 4 (ARM DIA.) M: (ARM STYLE) 4 (ARM QTY.) 3 (ARM LENGTH) 7 (FINISH) 0 (EPA) 0 (TYPE) 0 (BOLT SIZE) 0 (VIBR. DAMPER) 0 (ANCHOR)

Catalog Number Example - RTA 30 D 8 B 4 M 16 - 01
Round Tapered Aluminum, 30' Mounting Height, 168" Bolt Thickness, 8" Bolt Diameter, 4.5" Top Diameter, 4 Bolt Base, Mast Arm, Single, 6" Arm Length, Satin Aluminum Finish.

Wall Thickness:
C = .158"
D = .188"
E = .219"
F = .250"

Butt Diameter:
6 = 6"
7 = 7"
8 = 8"

Top Diameter:
B = 4.5"
L = 6"

Base Style:
4 - 4 Bolt Base

Arm Style:
M - Mast

Arm Quantity:
1 - Single

Arm Length:
4 = 4'
6 = 6'
8 = 8'
A = 10'

Finish:
01 - Satin Aluminum
BA - Black Powder Coat
BH - White Powder Coat
BM - Dark Bronze Powder Coat
BG - Dark Green Powder Coat
GC - Gray Powder Coat
** - Specify Finish

EPA Notes:
Effective Pole Wind Area (EPA) in square feet (ft²) calculated using wind velocity (mph) adjusted in accordance with 2008 ASCE 7-10. During a 120 mph design life, Maximum EPA is based on the pole's weight when increased lattice weight may reduce the maximum EPA. If weight is increased or if other design factors are required, please consult the factory.

www.hesco.com **ESL/SPECTRUM** 29

Submitted by ESL - Spectrum	Job Name: City of Greensburg - Lincoln Street Rehab Contractor: Custor Electric, Inc. (Rushville)	Catalog Number: ARM 43700	Type: 83
-----------------------------	--	-------------------------------------	--------------------

Light Pole Arms:
ARM43700
Style: Curved Pole with Scoop
Quantity: 1/each
BA = BLACK FINISH

Customer Service
800-368-7171
276-628-7171
STAFF: BURGUNDY

Need a quote or have a question?
An expert is ready to help you.
Our engineers are happy to meet with you on-site or in our office to discuss your project, then design to budgeting to find the best solution.

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http://hesco.com/products.php?user-access=www.hesco.com/2022/11/14/157861

RECOMMENDED FOR APPROVAL _____	INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE	BRIDGE FILE
DESIGNED: DC	LIGHTING DETAILS	VERTICAL SCALE	DESIGNATION 1800255
DRAWN: JEC	CONTRACT R-41463	SURVEY BOOK	SHEETS 72 of 131
CHECKED: WRC	DESIGN ENGINEER _____ DATE _____	CONTRACT	PROJECT 1800256
DRAWN: JEC	CHECKED: WRC		

LUMINAIRE SCHEDULE

LUMINAIRE NO.	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147
CONNECTION TYPE	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
POLE HEIGHT	20-ft	20-ft	20-ft	20-ft	20-ft	20-ft	20-ft	20-ft	20-ft	20-ft	20-ft	20-ft	20-ft	20-ft	20-ft	20-ft	20-ft	20-ft	20-ft	20-ft	20-ft
MAST ARM LENGTH	4-ft	4-ft	4-ft	4-ft	4-ft	4-ft	4-ft	4-ft	4-ft	4-ft	4-ft	4-ft	4-ft	4-ft	4-ft	4-ft	4-ft	4-ft	4-ft	4-ft	4-ft

LUMINAIRE SCHEDULE

LUMINAIRE NO.	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168
CONNECTION TYPE	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	2	1
POLE HEIGHT	20-ft	20-ft	20-ft	20-ft	20-ft	20-ft	20-ft	20-ft	20-ft	20-ft	20-ft	20-ft	20-ft	20-ft	20-ft	20-ft	20-ft	20-ft	20-ft	20-ft	20-ft
MAST ARM LENGTH	4-ft	4-ft	4-ft	4-ft	4-ft	4-ft	4-ft	4-ft	4-ft	4-ft	4-ft	4-ft	4-ft	4-ft	4-ft	4-ft	4-ft	4-ft	4-ft	4-ft	4-ft

HANDHOLE SCHEDULE

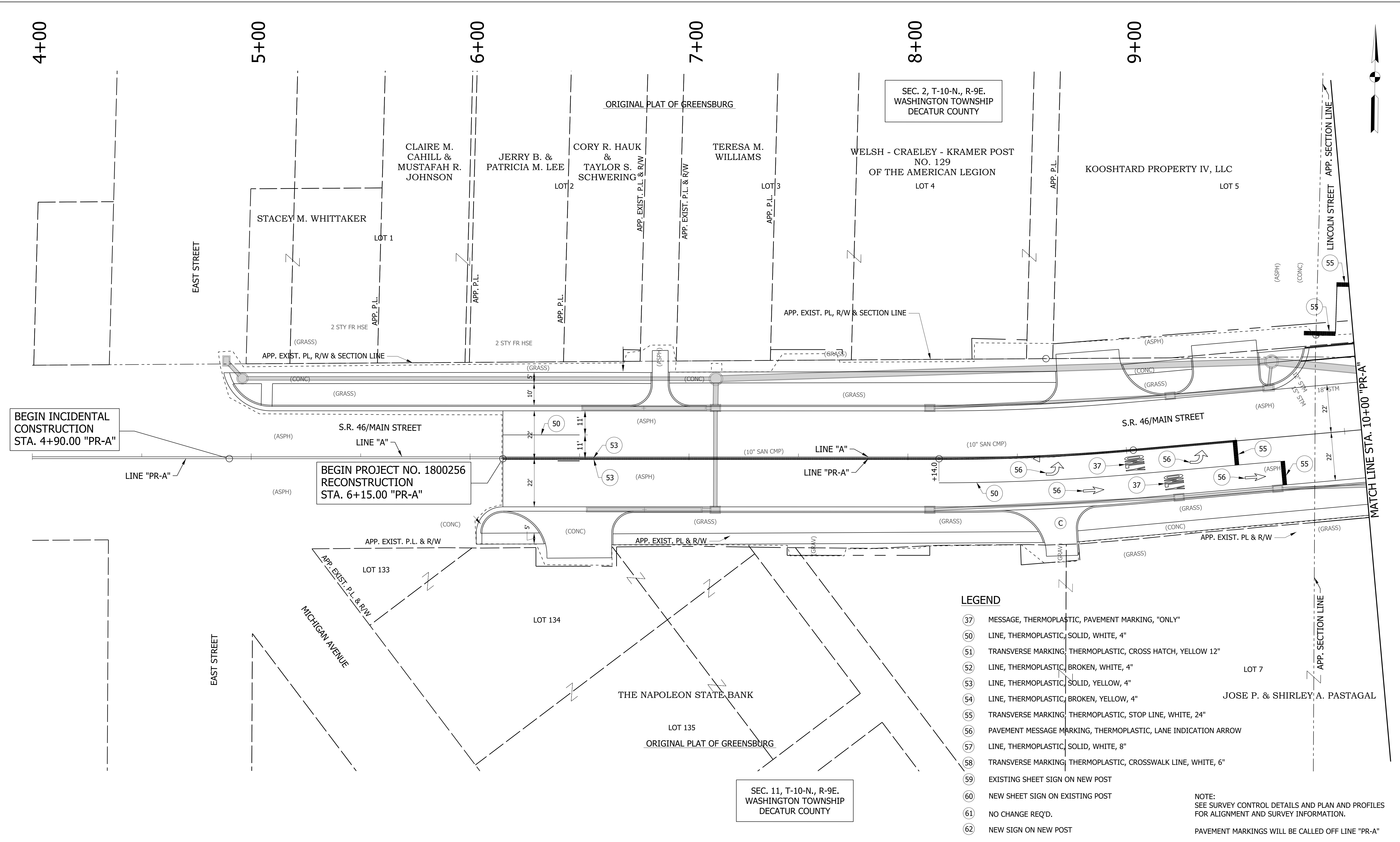
HANDHOLE NO.	H11	H12	H13	H14	H15	H16	H17	H18	H19	H20	H21	H22	H23	H24	H25	H26	H27	H28
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RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: _____ WRC _____	DRAWN: _____ JEC _____	
CHECKED: _____ MAE _____	CHECKED: _____ WRC _____	

INDIANA
DEPARTMENT OF TRANSPORTATION

LIGHTING TABLES

HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION 1800256
SURVEY BOOK	SHEETS 73 of 131
CONTRACT R-41463	PROJECT 1800256



BEGIN INCIDENTAL CONSTRUCTION STA. 4+90.00 "PR-A"

BEGIN PROJECT NO. 1800256 RECONSTRUCTION STA. 6+15.00 "PR-A"

LEGEND

- (37) MESSAGE, THERMOPLASTIC, PAVEMENT MARKING, "ONLY"
- (50) LINE, THERMOPLASTIC, SOLID, WHITE, 4"
- (51) TRANSVERSE MARKING, THERMOPLASTIC, CROSS HATCH, YELLOW 12"
- (52) LINE, THERMOPLASTIC, BROKEN, WHITE, 4"
- (53) LINE, THERMOPLASTIC, SOLID, YELLOW, 4"
- (54) LINE, THERMOPLASTIC, BROKEN, YELLOW, 4"
- (55) TRANSVERSE MARKING, THERMOPLASTIC, STOP LINE, WHITE, 24"
- (56) PAVEMENT MESSAGE MARKING, THERMOPLASTIC, LANE INDICATION ARROW
- (57) LINE, THERMOPLASTIC, SOLID, WHITE, 8"
- (58) TRANSVERSE MARKING, THERMOPLASTIC, CROSSWALK LINE, WHITE, 6"
- (59) EXISTING SHEET SIGN ON NEW POST
- (60) NEW SHEET SIGN ON EXISTING POST
- (61) NO CHANGE REQ'D.
- (62) NEW SIGN ON NEW POST

NOTE: SEE SURVEY CONTROL DETAILS AND PLAN AND PROFILES FOR ALIGNMENT AND SURVEY INFORMATION.

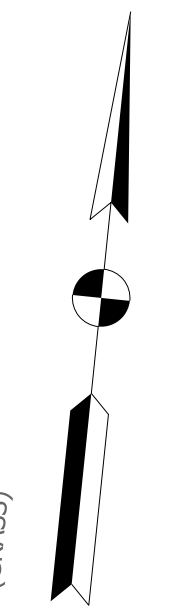
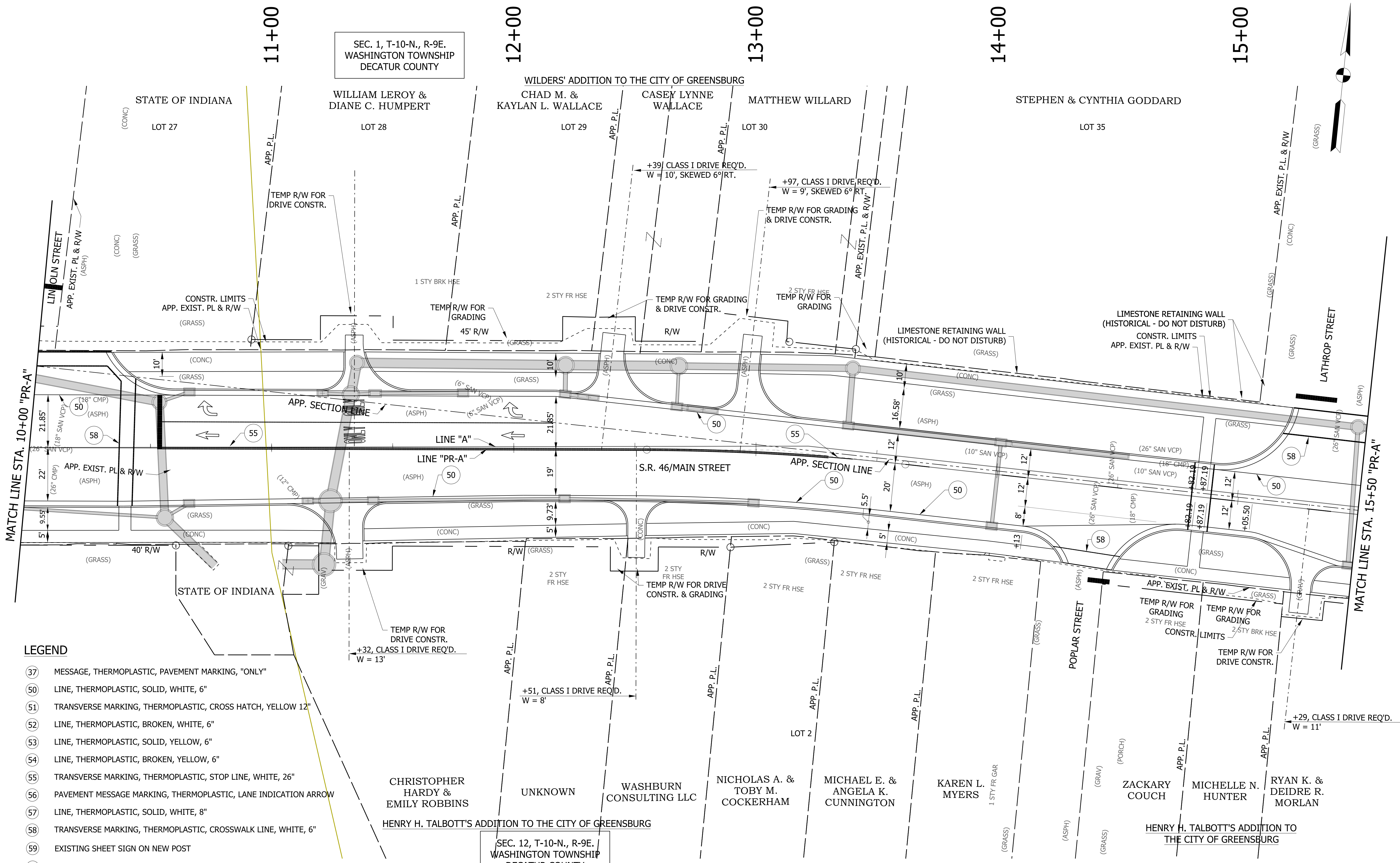
PAVEMENT MARKINGS WILL BE CALLED OFF LINE "PR-A"

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: WRC	DRAWN: JEC	
CHECKED: MAE	CHECKED: WRC	

INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS & SIGNAGE
LINE "A"

HORIZONTAL SCALE 1"=20'	BRIDGE FILE
VERTICAL SCALE 1"=20'	DESIGNATION 1800256
SURVEY BOOK	SHEETS 74 of 131
CONTRACT R-41463	PROJECT 1800256



LEGEND

- (37) MESSAGE, THERMOPLASTIC, PAVEMENT MARKING, "ONLY"
- (50) LINE, THERMOPLASTIC, SOLID, WHITE, 6"
- (51) TRANSVERSE MARKING, THERMOPLASTIC, CROSS HATCH, YELLOW 12"
- (52) LINE, THERMOPLASTIC, BROKEN, WHITE, 6"
- (53) LINE, THERMOPLASTIC, SOLID, YELLOW, 6"
- (54) LINE, THERMOPLASTIC, BROKEN, YELLOW, 6"
- (55) TRANSVERSE MARKING, THERMOPLASTIC, STOP LINE, WHITE, 26"
- (56) PAVEMENT MESSAGE MARKING, THERMOPLASTIC, LANE INDICATION ARROW
- (57) LINE, THERMOPLASTIC, SOLID, WHITE, 8"
- (58) TRANSVERSE MARKING, THERMOPLASTIC, CROSSWALK LINE, WHITE, 6"
- (59) EXISTING SHEET SIGN ON NEW POST
- (60) NEW SHEET SIGN ON EXISTING POST
- (61) NO CHANGE REQ'D.
- (62) NEW SIGN ON NEW POST

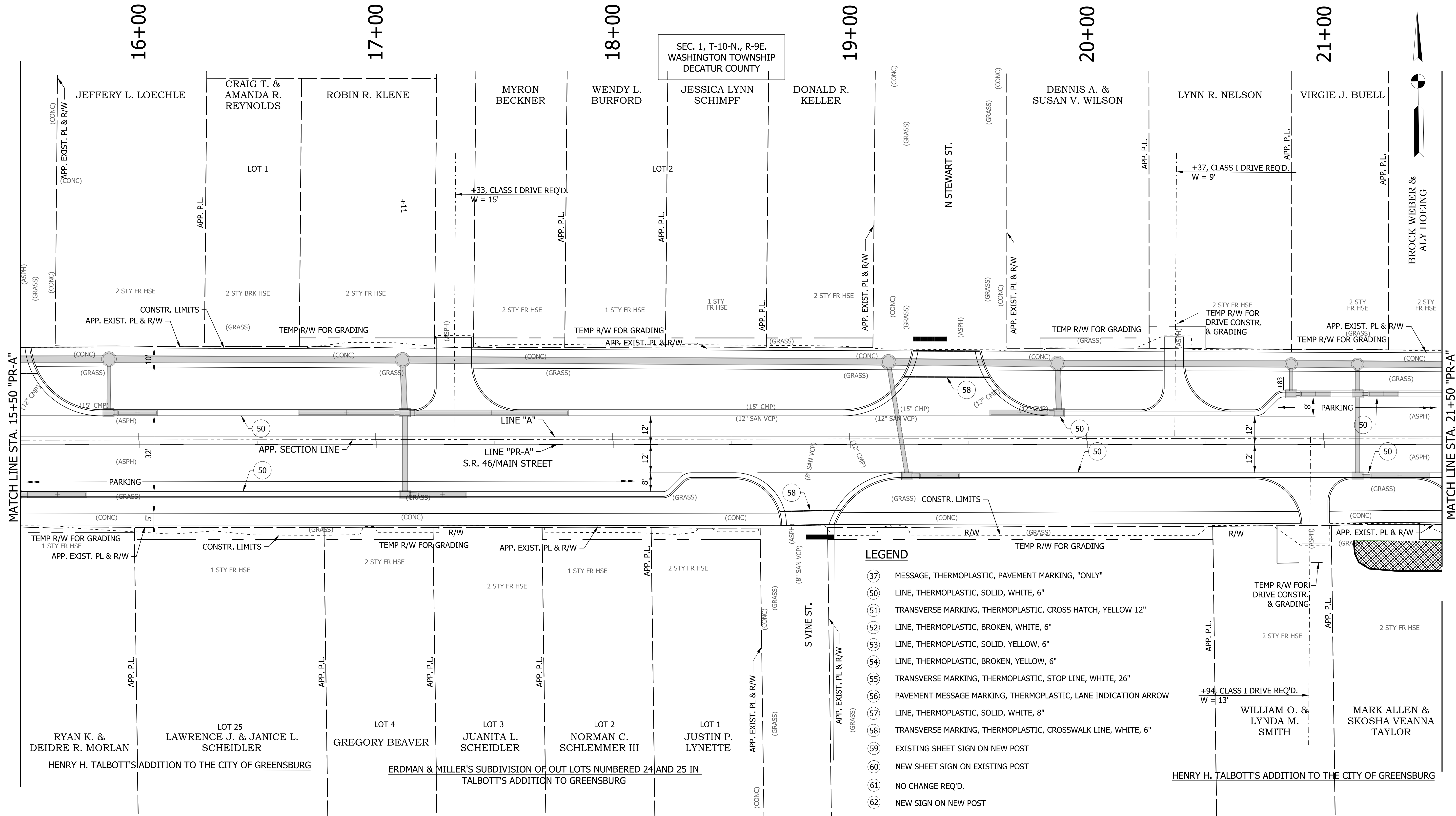
NOTES:
1. SEE GEOMETRIC TIE-UP DETAILS FOR ALIGNMENT DATA.

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: WRC	DRAWN: JEC	
CHECKED: MAE	CHECKED: WRC	

**INDIANA
DEPARTMENT OF TRANSPORTATION**

PAVEMENT MARKINGS AND SIGNAGE

HORIZONTAL SCALE	BRIDGE FILE
1"=20'	
VERTICAL SCALE	DESIGNATION
1"=20'	1800256
SURVEY BOOK	SHEETS
	75 of 131
CONTRACT	PROJECT
R-41463	1800256



LEGEND

- (37) MESSAGE, THERMOPLASTIC, PAVEMENT MARKING, "ONLY"
- (50) LINE, THERMOPLASTIC, SOLID, WHITE, 6"
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- (57) LINE, THERMOPLASTIC, SOLID, WHITE, 8"
- (58) TRANSVERSE MARKING, THERMOPLASTIC, CROSSWALK LINE, WHITE, 6"
- (59) EXISTING SHEET SIGN ON NEW POST
- (60) NEW SHEET SIGN ON EXISTING POST
- (61) NO CHANGE REQ'D.
- (62) NEW SIGN ON NEW POST

NOTES:

1. SEE PLAN & PROFILES FOR LINE "A" ALIGNMENT DATA.
2. OFFSETS CALLED OFF LINE "PR-A"

SEC. 12, T-10-N., R-9E.
WASHINGTON TOWNSHIP
DECATUR COUNTY

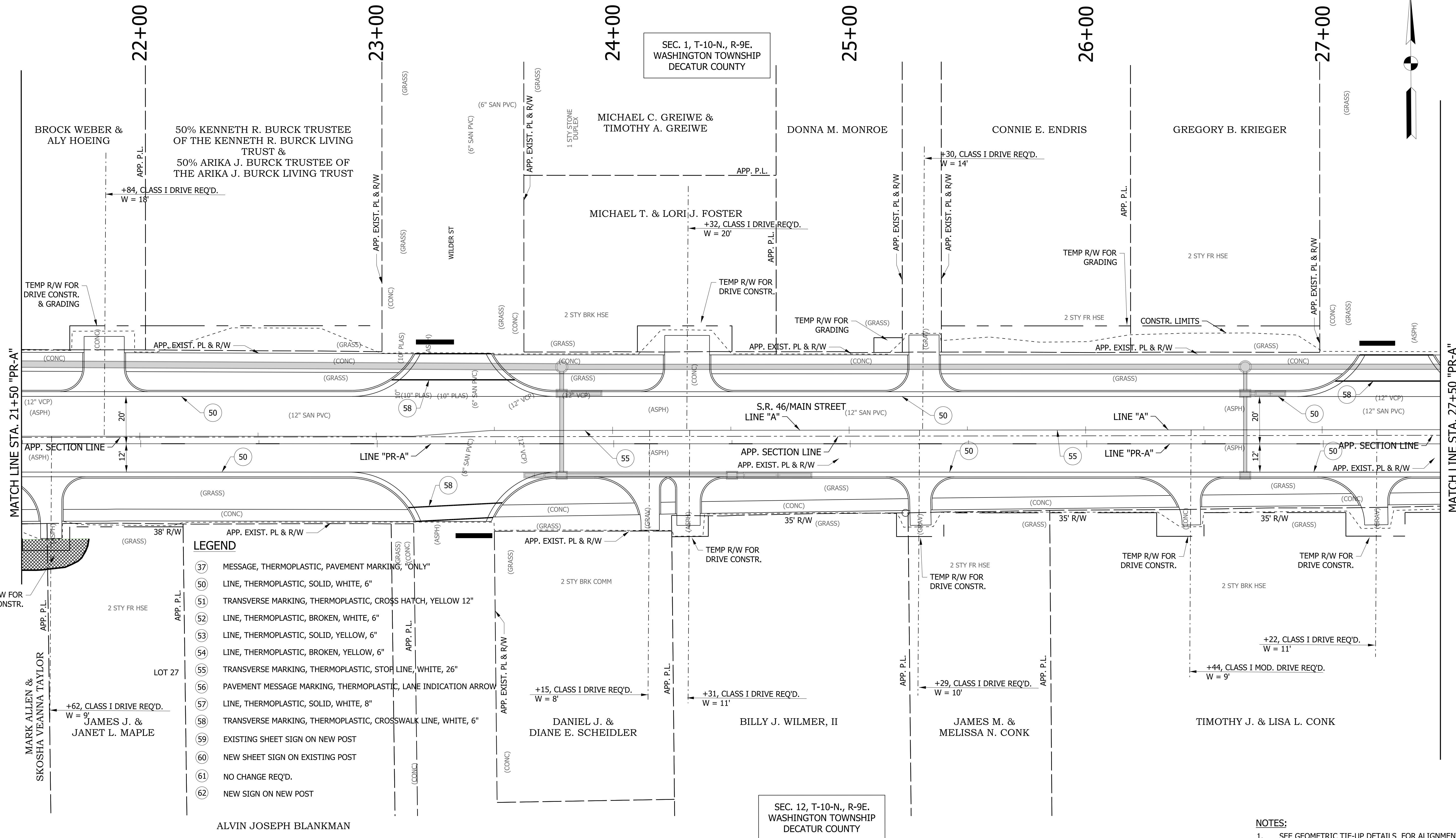
LOT 26
VICTOR & JANET DANCE

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: WRC	DRAWN: JEC	
CHECKED: MAE	CHECKED: WRC	

**INDIANA
DEPARTMENT OF TRANSPORTATION**

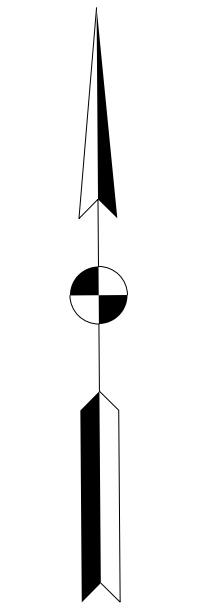
PAVEMENT MARKINGS AND SIGNAGE

HORIZONTAL SCALE 1"=20'	BRIDGE FILE
VERTICAL SCALE 1"=20'	DESIGNATION 1800256
SURVEY BOOK	SHEETS 76 of 131
CONTRACT R-41463	PROJECT 1800256



SEC. 1, T-10-N., R-9E.
WASHINGTON TOWNSHIP
DECATUR COUNTY

SEC. 12, T-10-N., R-9E.
WASHINGTON TOWNSHIP
DECATUR COUNTY



LEGEND

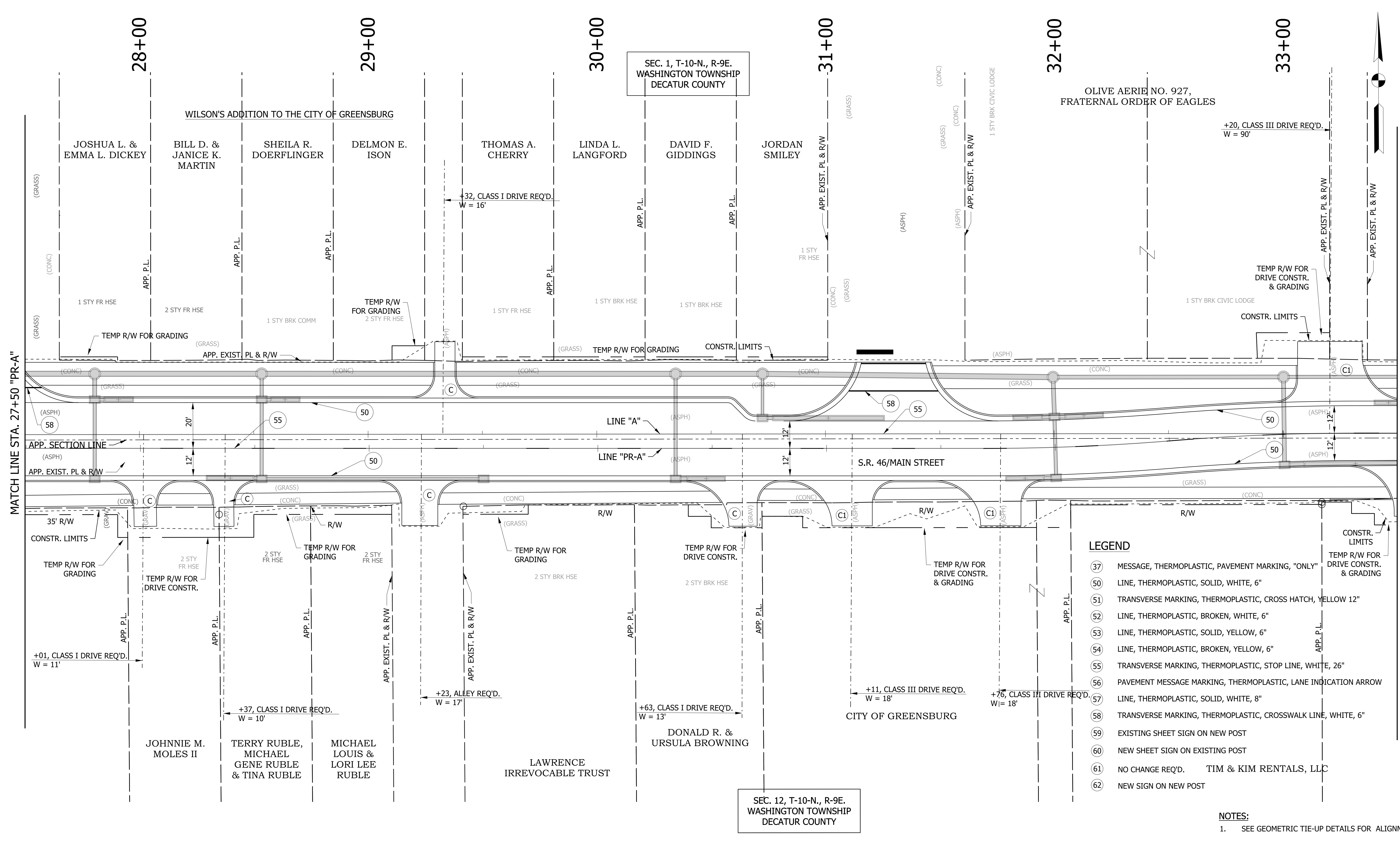
- 37 MESSAGE, THERMOPLASTIC, PAVEMENT MARKING, "ONLY"
- 50 LINE, THERMOPLASTIC, SOLID, WHITE, 6"
- 51 TRANSVERSE MARKING, THERMOPLASTIC, CROSS HATCH, YELLOW 12"
- 52 LINE, THERMOPLASTIC, BROKEN, WHITE, 6"
- 53 LINE, THERMOPLASTIC, SOLID, YELLOW, 6"
- 54 LINE, THERMOPLASTIC, BROKEN, YELLOW, 6"
- 55 TRANSVERSE MARKING, THERMOPLASTIC, STOP LINE, WHITE, 26"
- 56 PAVEMENT MESSAGE MARKING, THERMOPLASTIC, LANE INDICATION ARROW
- 57 LINE, THERMOPLASTIC, SOLID, WHITE, 8"
- 58 TRANSVERSE MARKING, THERMOPLASTIC, CROSSWALK LINE, WHITE, 6"
- 59 EXISTING SHEET SIGN ON NEW POST
- 60 NEW SHEET SIGN ON EXISTING POST
- 61 NO CHANGE REQ'D.
- 62 NEW SIGN ON NEW POST

NOTES:
1. SEE GEOMETRIC TIE-UP DETAILS FOR ALIGNMENT DATA.

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: WRC	DRAWN: JEC	
CHECKED: MAE	CHECKED: WRC	

INDIANA DEPARTMENT OF TRANSPORTATION	
PAVEMENT MARKINGS AND SIGNAGE	

HORIZONTAL SCALE 1"=20'	BRIDGE FILE
VERTICAL SCALE 1"=20'	DESIGNATION 1800256
SURVEY BOOK	SHEETS 77 of 131
CONTRACT R-41463	PROJECT 1800256



LEGEND

37	MESSAGE, THERMOPLASTIC, PAVEMENT MARKING, "ONLY"
50	LINE, THERMOPLASTIC, SOLID, WHITE, 6"
51	TRANSVERSE MARKING, THERMOPLASTIC, CROSS HATCH, YELLOW 12"
52	LINE, THERMOPLASTIC, BROKEN, WHITE, 6"
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56	PAVEMENT MESSAGE MARKING, THERMOPLASTIC, LANE INDICATION ARROW
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58	TRANSVERSE MARKING, THERMOPLASTIC, CROSSWALK LINE, WHITE, 6"
59	EXISTING SHEET SIGN ON NEW POST
60	NEW SHEET SIGN ON EXISTING POST
61	NO CHANGE REQ'D. TIM & KIM RENTALS, LLC
62	NEW SIGN ON NEW POST

NOTES:
 1. SEE GEOMETRIC TIE-UP DETAILS FOR ALIGNMENT DATA.

LEGEND

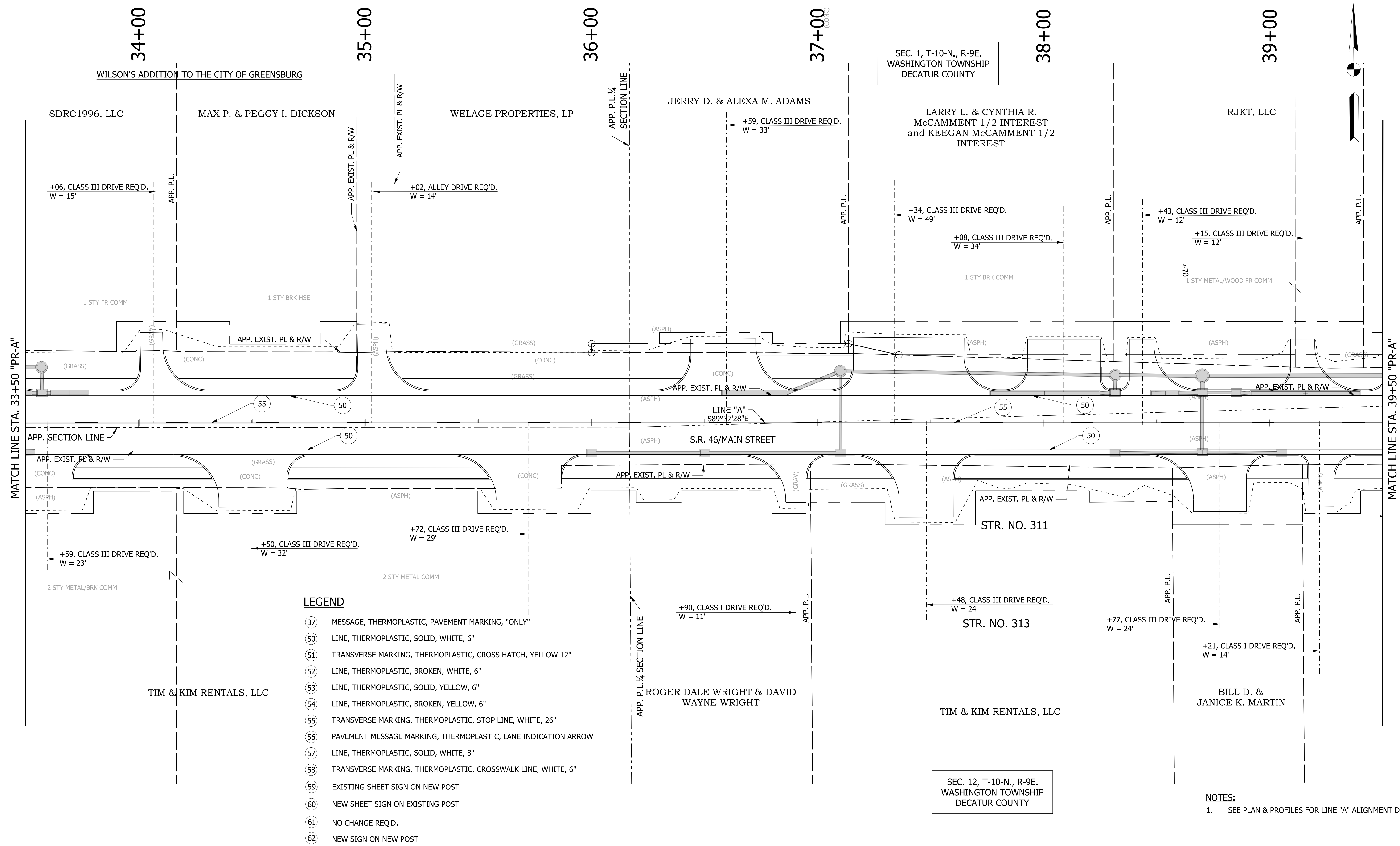
(K) HMA, FULL DEPTH RECONSTRUCTION: 165 LB/SYD QC/QA HMA, 3, 70 SURFACE, 9.5 MM, ON 275 LB/SYD QC/QA HMA, 3, 70 INTERMEDIATE, 19 MM, ON 550 LB/SYD QC/QA HMA, 3, 64 BASE, 25 MM, ON 300 LB/SYD QC/QA HMA, 4, 76, INTERMEDIATE, OG, 19 MM, ON 4 IN. COMPACTED AGGREGATE. NO. 53 BASE	(C) 6 IN. PCCP FOR DRIVEWAYS (C1) 9 IN. PCCP FOR DRIVEWAYS (F) CONCRETE SIDEWALK, 4"	(13) CONCRETE CURB (26) SODDING, NURSERY (15) MOD. COMBINED CONCRETE CURB & GUTTER	XXX.XX = PROPOSED ELEVATION (XXX.XX) = EXISTING ELEVATION
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RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: WRC	DRAWN: JEC	
CHECKED: MAE	CHECKED: WRC	

INDIANA
 DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS AND SIGNAGE

HORIZONTAL SCALE 1"=20'	BRIDGE FILE
VERTICAL SCALE 1"=20'	DESIGNATION 1800256
SURVEY BOOK	SHEETS 78 of 131
CONTRACT R-41463	PROJECT 1800256



SEC. 1, T-10-N., R-9E.
WASHINGTON TOWNSHIP
DECATUR COUNTY

LARRY L. & CYNTHIA R.
McCAMMENT 1/2 INTEREST
and KEEGAN McCAMMENT 1/2
INTEREST

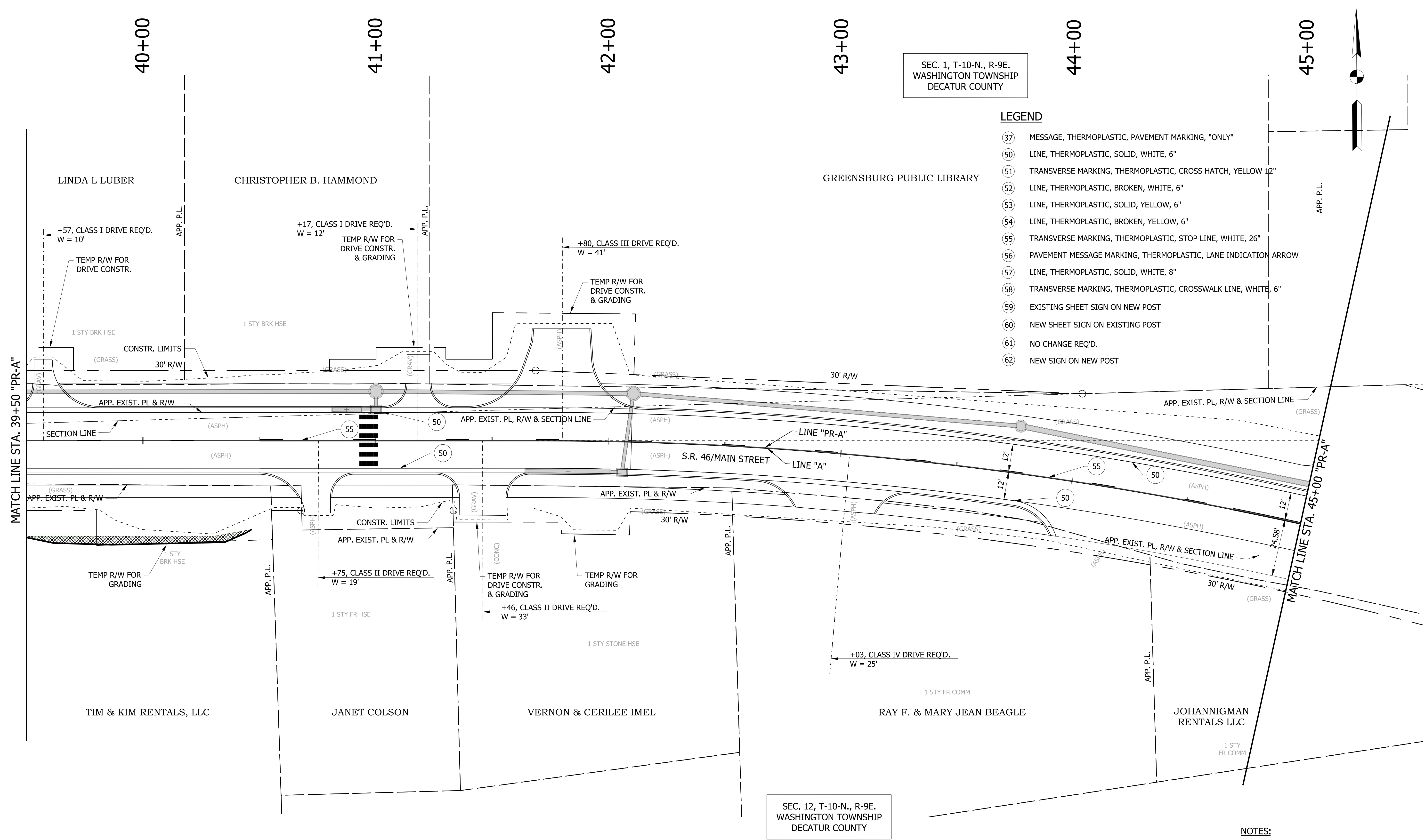
SEC. 12, T-10-N., R-9E.
WASHINGTON TOWNSHIP
DECATUR COUNTY

NOTES:
1. SEE PLAN & PROFILES FOR LINE "A" ALIGNMENT DATA.

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: WRC	DRAWN: JEC	
CHECKED: MAE	CHECKED: WRC	

INDIANA DEPARTMENT OF TRANSPORTATION	
PAVEMENT MARKINGS AND SIGNAGE	

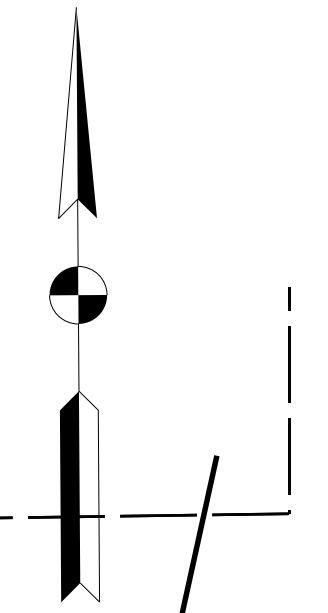
HORIZONTAL SCALE 1"=20'	BRIDGE FILE
VERTICAL SCALE 1"=20'	DESIGNATION 1800256
SURVEY BOOK	SHEETS 79 of 131
CONTRACT R-41463	PROJECT 1800256



SEC. 1, T-10-N., R-9E.
WASHINGTON TOWNSHIP
DECATUR COUNTY

LEGEND

- 37 MESSAGE, THERMOPLASTIC, PAVEMENT MARKING, "ONLY"
- 50 LINE, THERMOPLASTIC, SOLID, WHITE, 6"
- 51 TRANSVERSE MARKING, THERMOPLASTIC, CROSS HATCH, YELLOW 12"
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- 62 NEW SIGN ON NEW POST



SEC. 12, T-10-N., R-9E.
WASHINGTON TOWNSHIP
DECATUR COUNTY

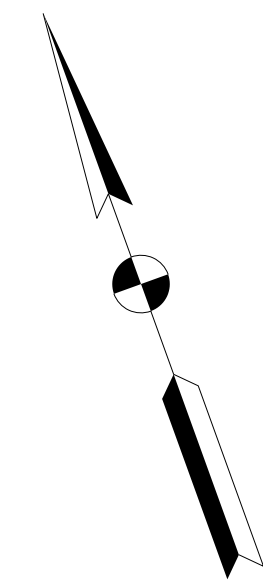
NOTES:
1. SEE GEOMETRIC TIE-UP DETAILS FOR ALIGNMENT DATA.

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: WRC	DRAWN: JEC	
CHECKED: MAE	CHECKED: WRC	

INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS AND SIGNAGE

HORIZONTAL SCALE 1"=20'	BRIDGE FILE
VERTICAL SCALE 1"=20'	DESIGNATION 1800256
SURVEY BOOK	SHEETS 80 of 131
CONTRACT R-41463	PROJECT 1800256



SEC. 1, T-10-N., R-9E.
WASHINGTON TOWNSHIP
DECATUR COUNTY

46+00

47+00

48+00

49+00

50+00

GREENSBURG PUBLIC LIBRARY

DECATUR COUNTY
COMMISSIONERS

APP. EXIST. PL, R/W & SECTION LINE
(GRASS)

END PROJECT NO. 1800256
PREVENTATIVE MAINTENANCE
STA. 47+00.00 "PR-A"

MATCH LINE STA. 45+00 "PR-A"

(ASPH) S.R. 46/MAIN STREET

LINE "PR-A"

LINE "A"

APP. EXIST. PL, R/W & SECTION LINE

30' R/W

CONSTR. LIMITS

APP. P.L. & EXIST. R/W

(CONC)

SEC. 12, T-10-N., R-9E.
WASHINGTON TOWNSHIP
DECATUR COUNTY

JOHANNIGMAN RENTALS LLC

LEGEND

- 37 MESSAGE, THERMOPLASTIC, PAVEMENT MARKING, "ONLY"
- 50 LINE, THERMOPLASTIC, SOLID, WHITE, 6"
- 51 TRANSVERSE MARKING, THERMOPLASTIC, CROSS HATCH, YELLOW 12"
- 52 LINE, THERMOPLASTIC, BROKEN, WHITE, 6"
- 53 LINE, THERMOPLASTIC, SOLID, YELLOW, 6"
- 54 LINE, THERMOPLASTIC, BROKEN, YELLOW, 6"
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- 59 EXISTING SHEET SIGN ON NEW POST
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NOTES:

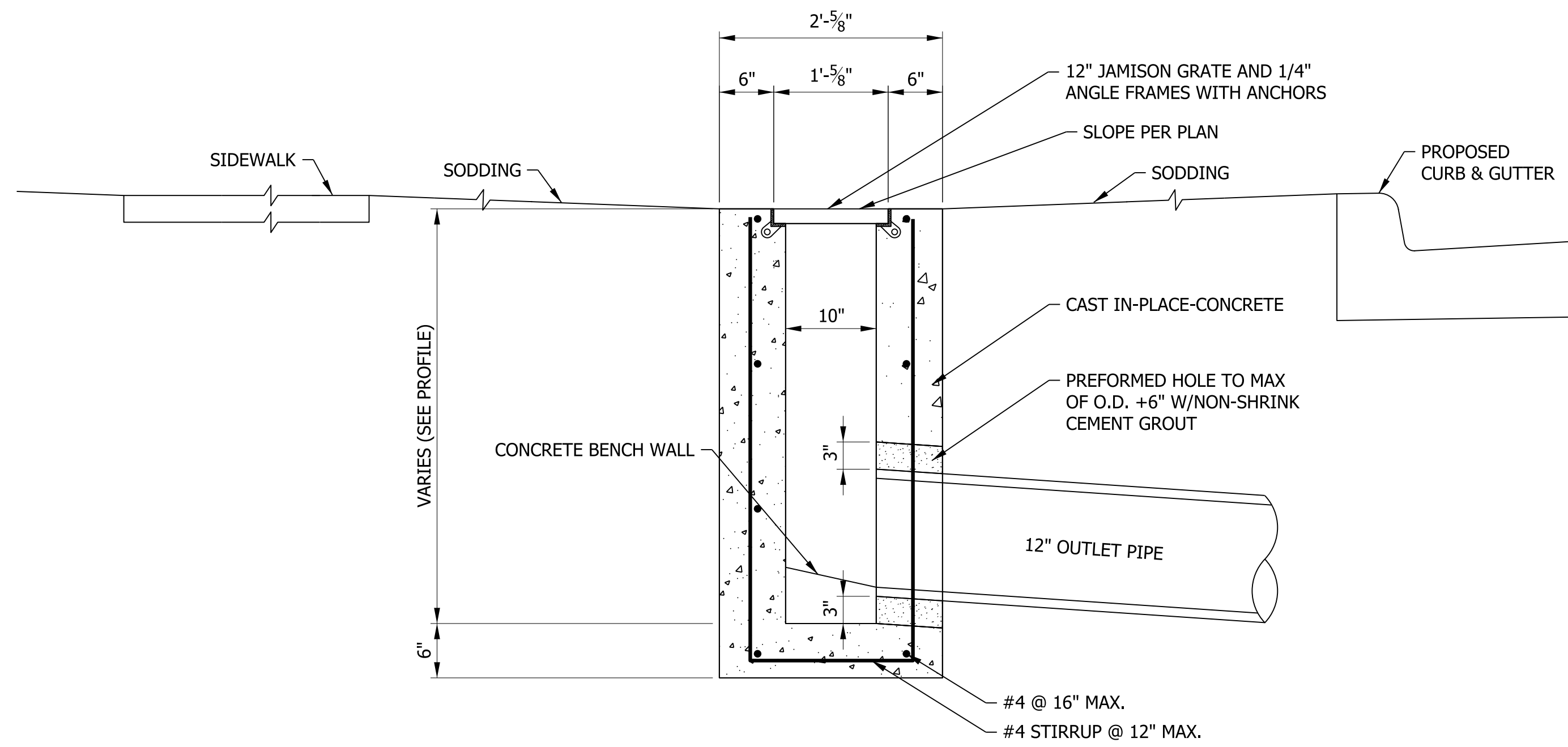
- 1. SEE GEOMETRIC TIE-UP DETAILS FOR ALIGNMENT DATA.

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: WRC	DRAWN: JEC	
CHECKED: MAE	CHECKED: WRC	

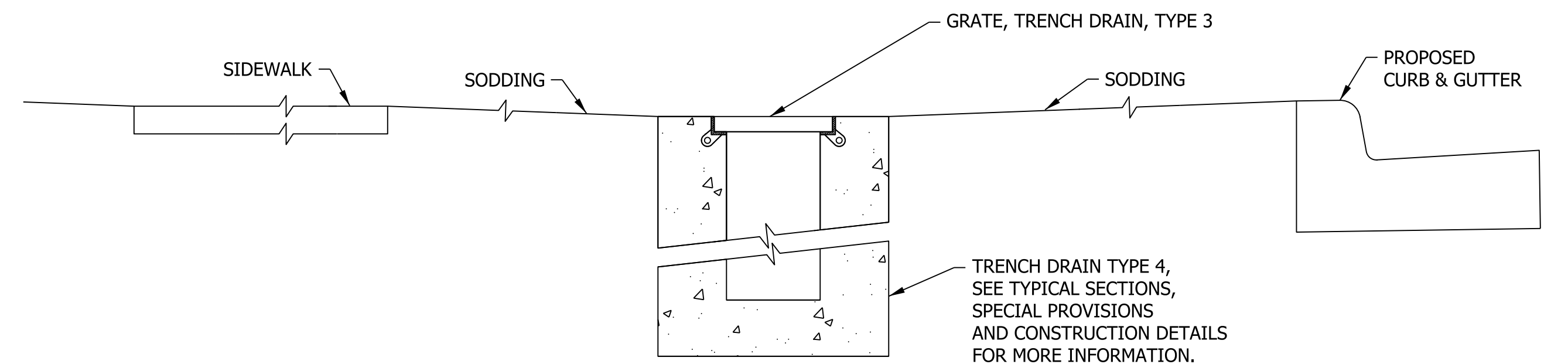
INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAIL

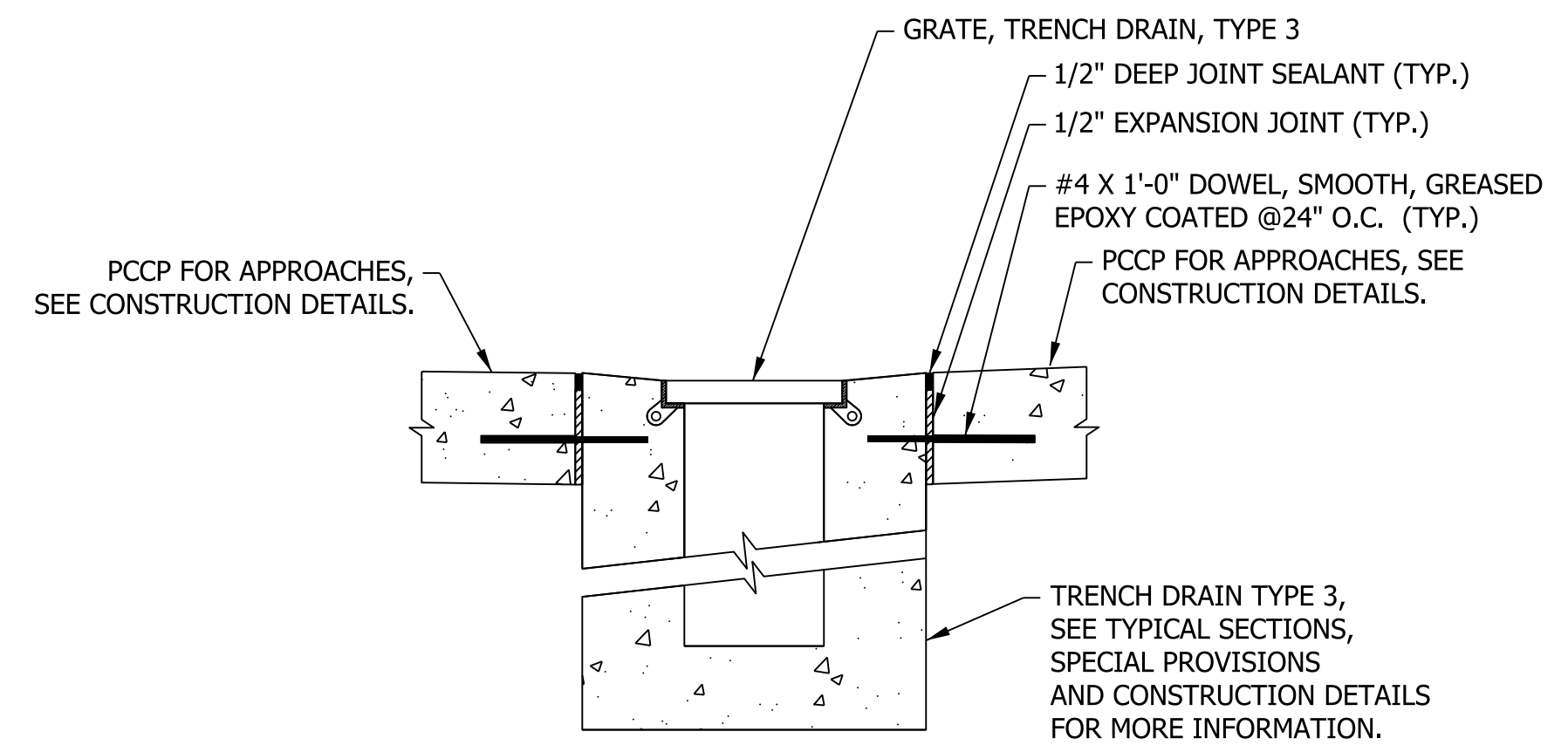
HORIZONTAL SCALE 1"=20'	BRIDGE FILE
VERTICAL SCALE 1"=20'	DESIGNATION 1800256
SURVEY BOOK	SHEETS 81 of 131
CONTRACT R-41463	PROJECT 1800256



TRENCH DRAIN - TYPES 3 & 4
NOT TO SCALE
NOTE: 2" COVER FOR REINFORCING STEEL (TYP.)



TRENCH DRAIN - TYPE 4
NOT TO SCALE



TRENCH DRAIN - TYPE 3
NOT TO SCALE

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: _____ WRC _____	DRAWN: _____ JEC _____	
CHECKED: _____ MAE _____	CHECKED: _____ WRC _____	

INDIANA
DEPARTMENT OF TRANSPORTATION

MISCELLANEOUS DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	
VERTICAL SCALE	DESIGNATION
N/A	1800256
SURVEY BOOK	SHEETS
	82 of 131
CONTRACT	PROJECT
R-41463	1800256

Categorical Exclusion
Appendix C
Early Coordination



INDIANA DEPARTMENT OF TRANSPORTATION

Seymour District
185 Agrico Lane
Seymour, Indiana 47274

PHONE: (855) 463-6848
FAX: (812) 522-7658

Eric Holcomb, Governor
Joe McGuinness, Commissioner

September 13, 2021

Example Early Coordination Letter

Re: Agencies Early Coordination
Des No's 1800255 & 1800256
SR 46: Pavement Improvement Project
Decatur County, Indiana

Dear «Position»,

The Federal Highway Administration (FHWA) and the Indiana Department of Transportation (INDOT) Seymour District propose to proceed with a pavement improvement project located on State Road (SR) 46 in Decatur County, Indiana. The FHWA is providing funds and is designated as the lead Federal agency. 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 Des. Number and project description in your reply.** We will incorporate your comments into a study of the project's environmental impacts.

The project is located on State Road (SR) 46 and is divided into two sections with two separate Des No's. Des No. 1800255 encompasses the western portion of the project area, while Des No. 1800256 encompasses the eastern portion of the project area. The project limits for Des No. 1800255 are from SR 3 to the west junction with United States Highway (US) 421, totaling approximately 1.8 miles in length. The project limits of Des. No. 1800256 are from the east junction with US 421 to Base Road, totaling approximately 0.8 miles in length. This project can be further describe as being in Washington Township within Sections 1, 2, 3, 9, 10, 11, 12 of Township 10 North and Range 9 East. This project is located within the Forest Hill and Greensburg U.S. Geological Survey (USGS) Quadrangles. The primary land use within the project area consists of urban commercial and residential land. Although there are some adjacent agricultural fields in the eastern portion of the project area (Des No. 1800255). See Appendix A for project area maps and photographs.

SR 46 is classified as a Principal Arterial roadway and is not part of the of the National Highway System (NHS) but the north and east legs of the intersection of the west junction of US 421 (Ireland Rd) and SR 46 are part of the National Truck Network (NTN). From the western project limits (Des No. 1800255) at SR 3 to Sunset Drive, SR 46 has a posted speed limit of 45 mph, which is reduced to 30 mph east of the Sunset Drive intersection. SR 46 consists mainly of two 12-foot travel lanes with paved shoulders varying in width from 8-feet west of the Central Railroad of Indiana railroad tracks, to 4-feet east of the railroad tracks. From N. West St to the eastern project limits at the west Junction US 421, SR 46 is predominately in a residential area. The roadway widens to a 3-lane section with a parking lane on the north side (46-foot total width) approaching the west Junction US 421 intersection. Curbs are present from the Anderson St intersection to the west Junction US 421; the curb has experienced major deterioration and exhibits minimal curb exposure due to prior resurfacing projects. Curb is not present from the N West St intersection to the Anderson St intersection, which allows stormwater runoff to flow directly onto the residential properties on the southside of the roadway.

Throughout the eastern project limits (Des No. 1800256), SR 46 is predominately in a residential area and runs west-east with a posted speed limit of 30 mph. From the western project limits to Wilder St, the total paved width of SR 46 varies from 40 to 47.5 feet bounded by concrete curb on both sides, and consists of 1-travel lane in each direction, eastbound left turn lane and westbound right turn lane at the N. Lincoln St intersection and parking lanes east of N. Lincoln St. From Wilder St to a point approximately 500 feet west of Base Road, SR 46 consists mainly of two 11-foot travel lanes with a 7-foot parking lane bounded by concrete curb on both sides (36-foot total pavement width); east of this location, SR 46 consists of 12-foot travel lanes with 6-foot paved shoulders.

www.in.gov/dot/
An Equal Opportunity Employer



All existing curb within the project limits has experienced major deterioration and exhibits minimal curb exposure due to prior resurfacing projects.

The preferred alternative within the limits of Des No. 1800255 consists of the following:

- From the SR 3 intersection to the Central Railroad Company of Indiana (CIND) railroad crossing proposes milling and applying a Hot Mix Asphalt (HMA) preventative maintenance overlay (including shoulders), with partial and full depth pavement patching at various locations. No drainage improvements are anticipated in this section.
- From the CIND railroad crossing to the west junction with US 421, the proposed project recommends full depth pavement replacement along with replacement and/or construction of a stormwater sewer system, sanitary sewer system, water main installation, and curb and gutter. In addition, new street lighting will be installed along this portion of the project.
- Sidewalk construction/reconstruction will occur from the Needler's parking lot to the intersection of SR 46 and Ireland St. on both the north and south sides. In addition, from the Needler's parking lot, heading west to the CIND railroad crossing, there will be a sidewalk added to the north side only.
- The intersections of West Street, Carver Street, Anderson Street, and US 421 (Ireland St.) are proposed to be reconstructed to meet current Americans with Disabilities Act (ADA) and Public Right of Way Accessibility Guidelines (PROWAG) standards.
- The project will include reconstructing the intersection at the west junction of SR 46 and US 421 (locally known as Main Street and Ireland Street). In addition to the pavement reconstruction at this location the scope of work includes new storm sewer and inlets, improved turning radii in the northeast quadrant (moving the new curb to roughly the back of the existing sidewalk), adjusting the signal pole locations, and replacing curb ramps to meet current ADA standards.
- Removal of trees/tree trimming will likely be necessary, but exact locations and amounts are not known at this time.

The preferred alternative within the limits of Des No. 1800256 consists of the following:

- Full depth pavement replacement, and reconstruction/construction of sidewalks along SR 46 from the east junction of US 421 to the drive to the Greensburg Public Library (approximately 0.09 mile west of the Base Road intersection).
- Along the north side of SR 46, it is proposed that the existing sidewalk will be replaced with a 10 ft. multi-use path. Additionally, the south side of SR 46 will have 5 ft. sidewalks and a 5 ft. grass buffer.
- The replacement and/or construction of a stormwater sewer system, water main installation, street lighting, and curb and gutter is proposed for this portion of the project.
- The existing travel lane and parking configuration will be changed but one travel lane in each direction will remain. On street parking areas along the south side of SR 46 will be from Lincoln St. to Vine St. and parking on the north side between Stewart St. and Davidson St.
- As part of the proposed pavement sidewalk reconstruction. The intersection at Wilder St. will include "bump outs" at the west side of the intersection to improve pedestrian access and promote decreased traffic speed.
- As part of the proposed pavement replacement, the intersection at N. Lincoln St. will include 12-foot lane widths for both eastbound and westbound SR 46 travel lanes at the intersection (sidewalk buffer widths will be reduced to 5 feet to allow the wider lanes to be provided within the existing right-of-way) and the pavement markings for the eastbound left turn lane should be extended an additional 200 feet (currently 110 ft.) to provide for some additional deceleration time. The traffic signals will also be replaced at this location.
- From the drive to the Greensburg Public Library to the eastern project termini, an HMA preventative maintenance overlay is anticipated.
- Removal of trees/tree trimming will likely be necessary, but exact locations and amounts are not known at this time.

The existing right-of-way (ROW) varies through the project area from the centerline of the roadway up to 40+ ft. from the edge of pavement. Additional ROW is anticipated to be required for this project. Further investigation is needed on the exact amount of permanent and temporary ROW, but it is anticipated that up to 0.80 acre of permanent and 0.70 acre of temporary ROW is anticipated to be needed for Des No. 1800255 and up to 0.95 acre of permanent and 0.30 acre of temporary ROW is anticipated for Des No. 1800256.

The draft need for this project is based on the existing pavement deterioration, insufficient drainage, and lack of Americans with Disabilities Act (ADA)-compliant pedestrian facilities. The pavement failure is exhibited by traverse cracking, rutting, wheel path fatigue cracking, previous patching, and isolated areas with potholes. Water regularly ponds along the project area and contributes to the poor pavement conditions. The pedestrian facilities do not meet current ADA standards.

The draft purpose of this project is to add service life to the pavement, improve the overall pavement condition, remove ponding water to further improve pavement life, and upgrade pedestrian facilities to current ADA compliance standards.

The Maintenance of Traffic (MOT) plan for this project will consist of a road closure with a detour route. For Des No. 1800255, the detour route will use SR 3 and US 421. For Des No. 1800256, the detour route will utilize I-74 (New Point Exit), SR 3, and US 421. Access to individual properties will be maintained at all times. Pedestrian MOT and Local detour routes will be determined later in the design phase. Construction is expected to begin in the Spring of 2024.

To identify potential environmental concerns within the project vicinity, a Red Flag Investigation (RFI) for both Des No's. 1800255 and 1800256 was prepared by RQAW and concurred with by INDOT on March 26, 2021. In addition, an addendum for each Des No. was concurred with by INDOT on September 10, 2021. Coordination with all applicable agencies/owners is occurring via this letter.

RQAW performed site visits on June 14, 2021 to identify any ecological resources present. Streams and wetlands exist within/adjacent to the project area. RQAW is currently preparing a *Waters of the U.S. Report* documenting these resources. Wetland and stream impacts are anticipated, but impacts are unknown at this time.

The project is expected to qualify for the application of the U.S. Fish and Wildlife Service (USFWS) range-wide programmatic informal consultation process for the Indiana bat and northern long-eared bat. Project information will be submitted through the USFWS Information for Planning and Consultation (IPaC) separately.

In regards to Section 106, coordination with INDOT Cultural Resource Office (CRO) will occur to evaluate the project area for archaeological and historic resources and for Section 106 compliance. The results of this investigation will be forwarded to the State Historic Preservation Officer (SHPO) for review and concurrence as appropriate.

If we do not receive your **response within 30 calendar days** from the date of this letter, it will be assumed your agency feels there will be no adverse effects incurred because of the project. However, if you feel an extension to the response time is necessary, a reasonable amount may be granted upon request. If a questionnaire follows this letter, please complete. If you have any questions regarding this matter, please contact Harlan Ford of the Environmental Department at RQAW, at 317.588.1798 or hford@rqaw.com, or the INDOT Project Manager, Terry Summers at 812-524-3749 or tsummers@indot.in.gov.

In an effort to reduce the file size of this letter, preliminary plans are not attached. Please contact Harlan Ford (contact information above) to request a copy of preliminary plans if desired.

Sincerely,



Harlan Ford
Environmental Scientist
RQAW Corporation

Appendices:

- ~~Appendix A: Project Maps and Photographs~~

Project maps and photographs have been removed and included in Appendix B to avoid duplication.

Cc:

- INDOT Seymour District (electronic coordination)
- Federal Highway Administration (electronic coordination)
- Natural Resources Conservation Service (electronic coordination)
- Indiana Geological Survey (electronic coordination)
- IDNR Division of Fish and Wildlife (electronic coordination)
- IDEM (electronic coordination)
- USFWS (electronic coordination)
- USACE (electronic coordination)
- INDOT Aviation (electronic coordination)
- Local Floodplain Administrator (electronic coordination)
- MS4 Coordinator (electronic coordination)
- U.S. Department of Housing and Urban Development (electronic coordination)
- National Park Service, Midwest Regional Office (electronic coordination)
- Mayor of Greensburg (electronic coordination)
- Greensburg Plan Commission/City Council (electronic coordination)
- Greensburg Board of Works (electronic coordination)
- Greensburg Board of Water (electronic coordination)
- Greensburg Board of Aviation (electronic coordination)
- Greensburg Fire Department
- Greensburg Police Department
- Decatur County Memorial Hospital
- Decatur County Sherriff's Department
- Decatur County Area Plan Commission (electronic coordination)
- Decatur County Highway Department (electronic coordination)
- Decatur County Council (electronic coordination)
- Decatur County Surveyor (electronic coordination)
- Decatur County Parks and Recreation (electronic coordination)
- St. Marry School
- Good Shepherd Christian Academy
- Billing Elementary School ←
- Greensburg Junior High School
- Greensburg High School
- Greensburg Community Learning Center
- Greensburg Elementary School
- Greensburg Country Club (electronic coordination)
- IDEM, Groundwater Section (electronic coordination)
- IDNR, Oil and Gas Division (electronic coordination)

Please note that the Billing Elementary School is closed and no longer operable.



Indiana Department of Environmental Management

We Protect Hoosiers and Our Environment.

100 North Senate Avenue - Indianapolis, IN 46204
(800) 451-6027 - (317) 232-8603 - www.idem.IN.gov

INDOT Seymour District
Terry Summers
185 Agrico Lane
Seymour , IN 47274
Date

RQAW
Harlan Ford
8770 North St., Suite 110
Fishers , IN 46038

To Engineers and Consultants Proposing Roadway Construction Projects:

RE: The project is located on State Road (SR) 46 and is divided into two sections with two separate Des No's. Des No. 1800255 encompasses the western portion of the project area, while Des No. 1800256 encompasses the eastern portion of the project area. The project limits for Des No. 1800255 are from SR 3 to the west junction with United States Highway (US) 421, totaling approximately 1.8 miles in length. The project limits of Des. No. 1800256 are from the east junction with US 421 to Base Road, totaling approximately 0.8 miles in length. The preferred alternative within the limits of Des No. 1800255 consists of the following: • From the SR 3 intersection to the Central Railroad Company of Indiana (CIND) railroad crossing proposes milling and applying a Hot Mix Asphalt (HMA) preventative maintenance overlay (including shoulders), with partial and full depth pavement patching at various locations. No drainage improvements are anticipated in this section. • From the CIND railroad crossing to the west junction with US 421, the proposed project recommends full depth pavement replacement along with replacement and/or construction of a stormwater sewer system, sanitary sewer system, water main installation, and curb and gutter. In addition, new street lighting will be installed along this portion of the project. • Sidewalk construction/reconstruction will occur from the Needler's parking lot to the intersection of SR 46 and Ireland St. on both the north and south sides. In addition, from the Needler's parking lot, heading west to the CIND railroad crossing, there will be a sidewalk added to the north side only. • The intersections of West Street, Carver Street, Anderson Street, and US 421 (Ireland St.) are proposed to be reconstructed to meet current Americans with Disabilities Act (ADA) and Public Right of Way Accessibility Guidelines (PROWAG) standards. • The project will include reconstructing the intersection at the west junction of SR 46 and US 421 (locally known as Main Street and Ireland Street). In addition to the pavement reconstruction at this location the scope of work includes new storm sewer and inlets, improved turning radii in the northeast quadrant (moving the new curb to roughly the back of the existing sidewalk), adjusting the signal pole locations, and replacing curb ramps to meet current ADA standards. • Removal of trees/tree trimming will likely be necessary, but exact locations and amounts are not known at this time. The preferred alternative within the limits of Des No. 1800256 consists of the following: • Full depth pavement replacement, and reconstruction/construction of sidewalks along SR 46 from the east junction of US 421 to the drive to the Greensburg Public Library (approximately 0.09 mile west of the Base Road intersection). • Along the north side of SR 46, it is proposed that the existing sidewalk will be replaced with a 10 ft. multi-use path. Additionally, the south side of SR 46 will have 5 ft. sidewalks and a 5 ft. grass buffer. The replacement and/or construction of a stormwater sewer system, water main installation, street lighting, and curb and gutter is proposed for this portion of the project. • The existing travel lane and parking configuration will be changed but one travel lane in each direction will remain. On street parking areas along the south side of SR 46 will be from Lincoln St. to Vine St. and parking on the north side between Stewart St. and Davidson St. • As part of the proposed pavement sidewalk reconstruction. The intersection at Wilder St. will include "bump outs" at the west side of the intersection to improve pedestrian access and promote decreased traffic speed. • As part of the proposed pavement replacement, the intersection at N. Lincoln St. will include 12-foot lane widths for both eastbound and westbound SR 46 travel lanes at the intersection (sidewalk buffer widths will be reduced to 5 feet to allow the wider lanes to be provided within the existing right-of-way) and the pavement markings for the eastbound left turn lane should be extended an additional 200 feet (currently 110 ft.) to provide for some additional deceleration time. The traffic signals will also be replaced at this location. • From the drive to the Greensburg Public Library to the eastern project termini, an HMA preventative maintenance overlay is anticipated. • Removal of trees/tree trimming will likely be necessary, but exact locations and amounts are not known at this time. The existing right-of-way (ROW) varies through the project area from the centerline of the roadway up to 40+ ft. from the edge of pavement. Additional ROW is anticipated to be required for this project. Further investigation is needed on the exact amount of permanent and temporary ROW, but it is anticipated that up to 0.80 acre of permanent and 0.70 acre of temporary ROW is anticipated to be needed for Des No. 1800255 and up to 0.95 acre of permanent and 0.30 acre of temporary ROW is anticipated for Des No. 1800256. The draft need for this project is based on the existing pavement deterioration, insufficient drainage, and lack of Americans with Disabilities Act (ADA)-compliant pedestrian facilities. The pavement failure is exhibited by traverse cracking, rutting, wheel path fatigue cracking, previous patching, and isolated areas with potholes. Water regularly ponds along the project area and contributes to the poor pavement conditions. The pedestrian facilities do not meet current ADA standards. The draft purpose of this project is to add service life to the pavement, improve the overall pavement condition, remove ponding water to further improve pavement life, and upgrade pedestrian facilities to current ADA compliance standards. The Maintenance of Traffic (MOT) plan for this project will consist of a road closure with a detour route. For Des No. 1800255, the detour route will use SR 3 and US 421. For Des No. 1800256, the detour route will utilize I-74 (New Point Exit), SR 3, and US 421. Access to individual properties will be maintained at all times. Pedestrian MOT and Local detour routes will be determined later in the design phase. Construction is expected to begin in the Spring of 2024.

This letter from the Indiana Department of Environmental Management (IDEM) serves as a standardized response to enquiries inviting IDEM comments on roadway construction, reconstruction, or other improvement projects within existing roadway corridors when the proposed scope of the project is beneath the threshold requiring a formal National Environmental Policy Act-mandated Environmental Assessment or Environmental Impact Statement. As the letter attempts to address all roadway-related environmental topics of potential concern, it is possible that not every topic addressed in the letter will be applicable to your particular roadway project.

For additional information on specific roadway-related topics of interest, please visit the appropriate Web pages cited below, many of which provide contact information for persons within the various program areas who can answer questions not fully addressed in this letter. Also please be mindful that some environmental requirements may be subject to change and so each person intending to include a copy of this letter in their project documentation packet is advised to download the most recently revised version of the letter; found at: <http://www.in.gov/idem/5283.htm> (<http://www.in.gov/idem/5283.htm>).

To ensure that all environmentally-related issues are adequately addressed, IDEM recommends that you read this letter in its entirety, and consider each of the following issues as you move forward with the planning of your proposed roadway construction, reconstruction, or improvement project:

WATER AND BIOTIC QUALITY

1. Section 404 of the Clean Water Act requires that you obtain a permit from the U.S. Army Corps of Engineers (USACE) before discharging dredged or fill materials into any wetlands or other waters, such as rivers, lakes, streams, and ditches. Other activities regulated include the relocation, channelization, widening, or other such alteration of a stream, and the mechanical clearing (use of heavy construction equipment) of wetlands. Thus, as a project owner or sponsor, it is your responsibility to ensure that no wetlands are disturbed without the proper permit. Although you may initially refer to the U.S. Fish and Wildlife Service National Wetland Inventory maps as a means of identifying potential areas of concern, please be mindful that those maps do not depict jurisdictional wetlands regulated by the USACE or the Department of Environmental Management. A valid jurisdictional wetlands determination can only be made by the USACE, using the 1987 Wetland Delineation Manual.

USACE recommends that you have a consultant check to determine whether your project will abut, or lie within, a wetland area. To view a list of consultants that have requested to be included on a list posted by the USACE on their Web site, see USACE Permits and Public Notices (<http://www.lrl.usace.army.mil/orf/default.asp>) (<http://www.lrl.usace.army.mil/orf/default.asp>) and then click on "Information" from the menu on the right-hand side of that page. Their "Consultant List" is the fourth entry down on the "Information" page. Please note that the USACE posts all consultants that request to appear on the list, and that inclusion of any particular consultant on the list does not represent an endorsement of that consultant by the USACE, or by IDEM.

Much of northern Indiana (Newton, Lake, Porter, LaPorte, St. Joseph, Elkhart, LaGrange, Steuben, and Dekalb counties; large portions of Jasper, Starke, Marshall, Noble, Allen, and Adams counties; and lesser portions of Benton, White, Pulaski, Kosciusko, and Wells counties) is served by the USACE District Office in Detroit (313-226-6812). The central and southern portions of the state (large portions of Benton, White, Pulaski, Kosciusko, and Wells counties; smaller portions of Jasper, Starke, Marshall, Noble, Allen, and Adams counties; and all other Indiana counties located in north-central, central, and southern Indiana) are served by the USACE Louisville District Office (502-315-6733).

Additional information on contacting these U.S. Army Corps of Engineers (USACE) District Offices, government agencies with jurisdiction over wetlands, and other water quality issues, can be found at <http://www.in.gov/idem/4396.htm> (<http://www.in.gov/idem/4396.htm>). IDEM recommends that impacts to wetlands and other water resources be avoided to the fullest extent.

2. In the event a Section 404 wetlands permit is required from the USACE, you also must obtain a Section 401 Water Quality Certification from the IDEM Office of Water Quality Wetlands Program. To learn more about the Wetlands Program, visit: <http://www.in.gov/idem/4384.htm> (<http://www.in.gov/idem/4384.htm>).
3. If the USACE determines that a wetland or other water body is isolated and not subject to Clean Water Act regulation, it is still regulated by the state of Indiana. A State Isolated Wetland permit from IDEM's Office of Water Quality (OWQ) is required for any activity that results in the discharge of dredged or fill materials into isolated wetlands. To learn more about isolated wetlands, contact the OWQ Wetlands Program at 317-233-8488.
4. If your project will involve over a 0.5 acre of wetland impact, stream relocation, or other large-scale alterations to water bodies such as the creation of a dam or a water diversion, you should seek additional input from the OWQ Wetlands Program staff. Consult the Web at: <http://www.in.gov/idem/4384.htm> (<http://www.in.gov/idem/4384.htm>) for the appropriate staff contact to further discuss your project.
5. Work within the one-hundred year floodway of a given water body is regulated by the Department of Natural Resources, Division of Water. The Division issues permits for activities regulated under the follow statutes:
 - o IC 14-26-2 Lakes Preservation Act 312 IAC 11
 - o IC 14-26-5 Lowering of Ten Acre Lakes Act No related code
 - o IC 14-28-1 Flood Control Act 310 IAC 6-1
 - o IC 14-29-1 Navigable Waterways Act 312 IAC 6
 - o IC 14-29-3 Sand and Gravel Permits Act 312 IAC 6
 - o IC 14-29-4 Construction of Channels Act No related code

For information on these Indiana (statutory) Code and Indiana Administrative Code citations, see the DNR Web site at: <http://www.in.gov/dnr/water/9451.htm> (<http://www.in.gov/dnr/water/9451.htm>). Contact the DNR Division of Water at 317-232-4160 for further information.

The physical disturbance of the stream and riparian vegetation, especially large trees overhanging any affected water bodies should be limited to only that which is absolutely necessary to complete the project. The shade provided by the large overhanging trees helps maintain proper stream temperatures and dissolved oxygen for aquatic life.

6. For projects involving construction activity (which includes clearing, grading, excavation and other land disturbing activities) that result in the disturbance of one (1), or more, acres of total land area, contact the Office of Water Quality – Watershed Planning Branch (317/233-1864) regarding the need for of a Rule 5 Storm Water Runoff Permit. Visit the following Web page
- <http://www.in.gov/idem/4902.htm> (<http://www.in.gov/idem/4902.htm>)

To obtain, and operate under, a Rule 5 permit you will first need to develop a Construction Plan (<http://www.in.gov/idem/4917.htm#constreq> (<http://www.in.gov/idem/4917.htm#constreq>)), and as described in 327 IAC 15-5-6.5 (<http://www.in.gov/legislative/iac/T03270/A00150> [PDF] (<http://www.in.gov/legislative/iac/T03270/A00150.PDF>), pages 16 through 19). Before you may apply for a Rule 5 Permit, or begin construction, you must submit your Construction Plan to your county Soil and Water Conservation District (SWCD) (<http://www.in.gov/isda/soil/contacts/map.html> (<http://www.in.gov/isda/soil/contacts/map.html>)).

Upon receipt of the construction plan, personnel of the SWCD or the Indiana Department of Environmental Management will review the plan to determine if it meets the requirements of 327 IAC 15-5. Plans that are deemed deficient will require re-submittal. If the plan is sufficient you will be notified and instructed to submit the verification to IDEM as part of the Rule 5 Notice of Intent (NOI) submittal. Once construction begins, staff of the SWCD or Indiana Department of Environmental Management will perform inspections of activities at the site for compliance with the regulation.

Please be mindful that approximately 149 Municipal Separate Storm Sewer System (MS4) areas are now being established by various local governmental entities throughout the state as part of the implementation of Phase II federal storm water requirements. All of these MS4 areas will eventually take responsibility for Construction Plan review, inspection, and enforcement. As these MS4 areas obtain program approval from IDEM, they will be added to a list of MS4 areas posted on the IDEM Website at: <http://www.in.gov/idem/4900.htm> (<http://www.in.gov/idem/4900.htm>).

If your project is located in an IDEM-approved MS4 area, please contact the local MS4 program about meeting their storm water requirements. Once the MS4 approves the plan, the NOI can be submitted to IDEM.

Regardless of the size of your project, or which agency you work with to meet storm water requirements, IDEM recommends that appropriate structures and techniques be utilized both during the construction phase, and after completion of the project, to minimize the impacts associated with storm water runoff. The use of appropriate planning and site development and appropriate storm water quality measures are recommended to prevent soil from leaving the construction site during active land disturbance and for post construction water quality concerns. Information and assistance regarding storm water related to construction activities are available from the Soil and Water Conservation District (SWCD) offices in each county or from IDEM.

7. For projects involving impacts to fish and botanical resources, contact the Department of Natural Resources - Division of Fish and Wildlife (317/232-4080) for addition project input.
8. For projects involving water main construction, water main extensions, and new public water supplies, contact the Office of Water Quality - Drinking Water Branch (317-308-3299) regarding the need for permits.
9. For projects involving effluent discharges to waters of the State of Indiana , contact the Office of Water Quality - Permits Branch (317-233-0468) regarding the need for a National Pollutant Discharge Elimination System (NPDES) permit.
10. For projects involving the construction of wastewater facilities and sewer lines, contact the Office of Water Quality - Permits Branch (317-232-8675) regarding the need for permits.

AIR QUALITY

The above-noted project should be designed to minimize any impact on ambient air quality in, or near, the project area. The project must comply with all federal and state air pollution regulations. Consideration should be given to the following:

1. Regarding open burning, and disposing of organic debris generated by land clearing activities; some types of open burning are allowed (<http://www.in.gov/idem/4148.htm> (<http://www.in.gov/idem/4148.htm>)) under specific conditions. You also can seek an open burning variance from IDEM.

However, IDEM generally recommends that you take vegetative wastes to a registered yard waste composting facility or that the waste be chipped or shredded with composting on site (you must register with IDEM if more than 2,000 pounds is to be composted; contact 317/232-0066). The finished compost can then be used as a mulch or soil amendment. You also may bury any vegetative wastes (such as leaves, twigs, branches, limbs, tree trunks and stumps) onsite, although burying large quantities of such material can lead to subsidence problems, later on.

Reasonable precautions must be taken to minimize fugitive dust emissions from construction and demolition activities. For example, wetting the area with water, constructing wind barriers, or treating dusty areas with

chemical stabilizers (such as calcium chloride or several other commercial products). Dirt tracked onto paved roads from unpaved areas should be minimized.

Additionally, if construction or demolition is conducted in a wooded area where blackbirds have roosted or abandoned buildings or building sections in which pigeons or bats have roosted for 3-5 years precautionary measures should be taken to avoid an outbreak of histoplasmosis. This disease is caused by the fungus *Histoplasma capsulatum*, which stems from bird or bat droppings that have accumulated in one area for 3-5 years. The spores from this fungus become airborne when the area is disturbed and can cause infections over an entire community downwind of the site. The area should be wetted down prior to cleanup or demolition of the project site. For more detailed information on histoplasmosis prevention and control, please contact the Acute Disease Control Division of the Indiana State Department of Health at (317) 233-7272.

2. The U.S. EPA and the Surgeon General recommend that people not have long-term exposure to radon at levels above 4 pCi/L. (For a county-by-county map of predicted radon levels in Indiana, visit: <http://www.in.gov/idem/4145.htm> (<http://www.in.gov/idem/4145.htm>).

The U.S. EPA further recommends that all homes (and apartments within three stories of ground level) be tested for radon. If in-home radon levels are determined to be 4 pCi/L, or higher, EPA recommends a follow-up test. If the second test confirms that radon levels are 4 pCi/L, or higher, EPA recommends the installation of radon-reduction measures. (For a list of qualified radon testers and radon mitigation (or reduction) specialists visit: http://www.in.gov/isdh/regsvcs/radhealth/pdfs/radon_testers_mitigators_list.pdf (http://www.in.gov/isdh/regsvcs/radhealth/pdfs/radon_testers_mitigators_list.pdf)). It also is recommended that radon reduction measures be built into all new homes, particularly in areas like Indiana that have moderate to high predicted radon levels.

To learn more about radon, radon risks, and ways to reduce exposure visit:

<http://www.in.gov/isdh/regsvcs/radhealth/radon.htm> (<http://www.in.gov/isdh/regsvcs/radhealth/radon.htm>), <http://www.in.gov/idem/4145.htm> (<http://www.in.gov/idem/4145.htm>), or <http://www.epa.gov/radon/index.html> (<http://www.epa.gov/radon/index.html>).

3. With respect to asbestos removal: all facilities slated for renovation or demolition (except residential buildings that have (4) four or fewer dwelling units and which will not be used for commercial purposes) must be inspected by an Indiana-licensed asbestos inspector prior to the commencement of any renovation or demolition activities. If regulated asbestos-containing material (RACM) that may become airborne is found, any subsequent demolition, renovation, or asbestos removal activities must be performed in accordance with the proper notification and emission control requirements.

If no asbestos is found where a renovation activity will occur, or if the renovation involves removal of less than 260 linear feet of RACM off of pipes, less than 160 square feet of RACM off of other facility components, or less than 35 cubic feet of RACM off of all facility components, the owner or operator of the project does not need to notify IDEM before beginning the renovation activity.

For questions on asbestos demolition and renovation activities, you can also call IDEM's Lead/Asbestos section at 1-888-574-8150.

However, in all cases where a demolition activity will occur (even if no asbestos is found), the owner or operator must still notify IDEM 10 working days prior to the demolition, using the form found at <http://www.in.gov/icpr/webfile/formsdiv/44593.pdf> (<http://www.in.gov/icpr/webfile/formsdiv/44593.pdf>).

Anyone submitting a renovation/demolition notification form will be billed a notification fee based upon the amount of friable asbestos containing material to be removed or demolished. Projects that involve the removal of more than 2,600 linear feet of friable asbestos containing materials on pipes, or 1,600 square feet or 400 cubic feet of friable asbestos containing material on other facility components, will be billed a fee of \$150 per project; projects below these amounts will be billed a fee of \$50 per project. All notification remitters will be billed on a quarterly basis.

For more information about IDEM policy regarding asbestos removal and disposal, visit:

<http://www.in.gov/idem/4983.htm> (<http://www.in.gov/idem/4983.htm>).

4. With respect to lead-based paint removal: IDEM encourages all efforts to minimize human exposure to lead-based paint chips and dust. IDEM is particularly concerned that young children exposed to lead can suffer from learning disabilities. Although lead-based paint abatement efforts are not mandatory, any abatement that is conducted within housing built before January 1, 1978, or a child-occupied facility is required to comply with all lead-based paint work practice standards, licensing and notification requirements. For more information about lead-based paint removal visit: <http://www.in.gov/isdh/19131.htm> (<http://www.in.gov/isdh/19131.htm>).
5. Ensure that asphalt paving plants are permitted and operate properly. The use of cutback asphalt, or asphalt emulsion containing more than seven percent (7%) oil distillate, is prohibited during the months April through October. See 326 IAC 8-5-2, Asphalt Paving Rule (<http://www.ai.org/legislative/iac/T03260/A00080.PDF>) (<http://www.ai.org/legislative/iac/T03260/A00080.PDF>)).

6. If your project involves the construction of a new source of air emissions or the modification of an existing source of air emissions or air pollution control equipment, it will need to be reviewed by the IDEM Office of Air Quality (OAQ). A registration or permit may be required under 326 IAC 2 (View at: www.ai.org/legislative/iac/t03260/a00020.pdf (<http://www.ai.org/legislative/iac/t03260/a00020.pdf>)). New sources that use or emit hazardous air pollutants may be subject to Section 112 of the Clean Air Act and corresponding state air regulations governing hazardous air pollutants.
7. For more information on air permits visit: <http://www.in.gov/idem/4223.htm> (<http://www.in.gov/idem/4223.htm>), or to initiate the IDEM air permitting process, please contact the Office of Air Quality Permit Reviewer of the Day at (317) 233-0178 or OAMPROD atdem.state.in.us.

LAND QUALITY

In order to maintain compliance with all applicable laws regarding contamination and/or proper waste disposal, IDEM recommends that:

1. If the site is found to contain any areas used to dispose of solid or hazardous waste, you need to contact the Office of Land Quality (OLQ) at 317-308-3103.
2. All solid wastes generated by the project, or removed from the project site, need to be taken to a properly permitted solid waste processing or disposal facility. For more information, visit <http://www.in.gov/idem/4998.htm> (<http://www.in.gov/idem/4998.htm>).
3. If any contaminated soils are discovered during this project, they may be subject to disposal as hazardous waste. Please contact the OLQ at 317-308-3103 to obtain information on proper disposal procedures.
4. If PCBs are found at this site, please contact the Industrial Waste Section of OLQ at 317-308-3103 for information regarding management of any PCB wastes from this site.
5. If there are any asbestos disposal issues related to this site, please contact the Industrial Waste Section of OLQ at 317-308-3103 for information regarding the management of asbestos wastes (Asbestos removal is addressed above, under Air Quality).
6. If the project involves the installation or removal of an underground storage tank, or involves contamination from an underground storage tank, you must contact the IDEM Underground Storage Tank program at 317/308-3039. See: <http://www.in.gov/idem/4999.htm> (<http://www.in.gov/idem/4999.htm>).

FINAL REMARKS

Should you need to obtain any environmental permits in association with this proposed project, please be mindful that IC 13-15-8 requires that you notify all adjoining property owners and/or occupants within ten days your submittal of each permit application. However, if you are seeking multiple permits, you can still meet the notification requirement with a single notice if all required permit applications are submitted with the same ten day period.

Should the scope of the proposed project be expanded to the extent that a National Environmental Policy Act Environmental Assessment (EA) or Environmental Impact Statement (EIS) is required, IDEM will actively participate in any early interagency coordination review of the project.

Meanwhile, please note that this letter does not constitute a permit, license, endorsement or any other form of approval on the part of the Indiana Department of Environmental Management regarding any project for which a copy of this letter is used. Also note that it is the responsibility of the project engineer or consultant using this letter to ensure that the most current draft of this document, which is located at <http://www.in.gov/idem/5284.htm> (<http://www.in.gov/idem/5284.htm>), is used.

Signature(s) of the Applicant

I acknowledge that the following proposed roadway project will be financed in part, or in whole, by public monies.

Project Description

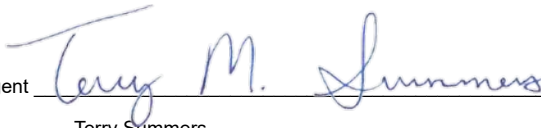
The project is located on State Road (SR) 46 and is divided into two sections with two separate Des No's. Des No. 1800255 encompasses the western portion of the project area, while Des No. 1800256 encompasses the eastern portion of the project area. The project limits for Des No. 1800255 are from SR 3 to the west junction with United States Highway (US) 421, totaling approximately 1.8 miles in length. The project limits of Des. No. 1800256 are from the east junction with US 421 to Base Road, totaling approximately 0.8 miles in length. The preferred alternative within the limits of Des No. 1800255 consists of the following: • From the SR 3 intersection to the Central Railroad Company of Indiana (CIND) railroad crossing proposes milling and applying a Hot Mix Asphalt (HMA) preventative maintenance overlay (including shoulders), with partial and full depth pavement patching at various locations. No drainage improvements are anticipated in this section. • From the CIND railroad crossing to the west junction with US 421, the proposed project recommends full depth pavement replacement along with replacement and/or construction of a stormwater sewer system, sanitary sewer system, water main installation, and curb and gutter. In

addition, new street lighting will be installed along this portion of the project. • Sidewalk construction/reconstruction will occur from the Needler's parking lot to the intersection of SR 46 and Ireland St. on both the north and south sides. In addition, from the Needler's parking lot, heading west to the CIND railroad crossing, there will be a sidewalk added to the north side only. • The intersections of West Street, Carver Street, Anderson Street, and US 421 (Ireland St.) are proposed to be reconstructed to meet current Americans with Disabilities Act (ADA) and Public Right of Way Accessibility Guidelines (PROWAG) standards. • The project will include reconstructing the intersection at the west junction of SR 46 and US 421 (locally known as Main Street and Ireland Street). In addition to the pavement reconstruction at this location the scope of work includes new storm sewer and inlets, improved turning radii in the northeast quadrant (moving the new curb to roughly the back of the existing sidewalk), adjusting the signal pole locations, and replacing curb ramps to meet current ADA standards. • Removal of trees/tree trimming will likely be necessary, but exact locations and amounts are not known at this time. The preferred alternative within the limits of Des No. 1800256 consists of the following: • Full depth pavement replacement, and reconstruction/construction of sidewalks along SR 46 from the east junction of US 421 to the drive to the Greensburg Public Library (approximately 0.09 mile west of the Base Road intersection). • Along the north side of SR 46, it is proposed that the existing sidewalk will be replaced with a 10 ft. multi-use path. Additionally, the south side of SR 46 will have 5 ft. sidewalks and a 5 ft. grass buffer. The replacement and/or construction of a stormwater sewer system, water main installation, street lighting, and curb and gutter is proposed for this portion of the project. • The existing travel lane and parking configuration will be changed but one travel lane in each direction will remain. On street parking areas along the south side of SR 46 will be from Lincoln St. to Vine St. and parking on the north side between Stewart St. and Davidson St. • As part of the proposed pavement sidewalk reconstruction. The intersection at Wilder St. will include "bump outs" at the west side of the intersection to improve pedestrian access and promote decreased traffic speed. • As part of the proposed pavement replacement, the intersection at N. Lincoln St. will include 12-foot lane widths for both eastbound and westbound SR 46 travel lanes at the intersection (sidewalk buffer widths will be reduced to 5 feet to allow the wider lanes to be provided within the existing right-of-way) and the pavement markings for the eastbound left turn lane should be extended an additional 200 feet (currently 110 ft.) to provide for some additional deceleration time. The traffic signals will also be replaced at this location. • From the drive to the Greensburg Public Library to the eastern project termini, an HMA preventative maintenance overlay is anticipated. • Removal of trees/tree trimming will likely be necessary, but exact locations and amounts are not known at this time. The existing right-of-way (ROW) varies through the project area from the centerline of the roadway up to 40+ ft. from the edge of pavement. Additional ROW is anticipated to be required for this project. Further investigation is needed on the exact amount of permanent and temporary ROW, but it is anticipated that up to 0.80 acre of permanent and 0.70 acre of temporary ROW is anticipated to be needed for Des No. 1800255 and up to 0.95 acre of permanent and 0.30 acre of temporary ROW is anticipated for Des No. 1800256. The draft need for this project is based on the existing pavement deterioration, insufficient drainage, and lack of Americans with Disabilities Act (ADA)-compliant pedestrian facilities. The pavement failure is exhibited by traverse cracking, rutting, wheel path fatigue cracking, previous patching, and isolated areas with potholes. Water regularly ponds along the project area and contributes to the poor pavement conditions. The pedestrian facilities do not meet current ADA standards. The draft purpose of this project is to add service life to the pavement, improve the overall pavement condition, remove ponding water to further improve pavement life, and upgrade pedestrian facilities to current ADA compliance standards. The Maintenance of Traffic (MOT) plan for this project will consist of a road closure with a detour route. For Des No. 1800255, the detour route will use SR 3 and US 421. For Des No. 1800256, the detour route will utilize I-74 (New Point Exit), SR 3, and US 421. Access to individual properties will be maintained at all times. Pedestrian MOT and Local detour routes will be determined later in the design phase. Construction is expected to begin in the Spring of 2024.

With my signature, I do hereby affirm that I have read the letter from the Indiana Department of Environment that appears directly above. In addition, I understand that in order to complete that project in which I am interested, with a minimum of impact to the environment, I must consider all the issues addressed in the aforementioned letter, and further, that I must obtain any required permits.

Date: 10/18/21

Signature of the INDOT
Project Engineer or Other Responsible Agent



Terry Summers

Date: 9-13-21

Signature of the
For Hire Consultant



Harlan Ford

From: [Turnbow, Alisha](#)
To: [Harlan Ford](#)
Subject: [EXT] RE: Early Coordination Letter for Des No's 1800255 & 1800256
Date: Friday, September 17, 2021 4:13:53 PM
Attachments: [image012.png](#)
[image013.png](#)
[image014.png](#)
[image015.png](#)
[image016.png](#)
[image017.png](#)
[image018.png](#)
[image020.png](#)
[image022.png](#)
[image024.png](#)
[image026.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)

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Hi Harlan,

The project Des No's 1800255 & 1800256 is located in Westport Water Company's Source Water Assessment Area. The contact for Westport Water Company is Mark Taylor and they can be reached at westportwater@comcast.net and 812-591-3500.

The sites are not located in a Wellhead Protection Area. However they are located within 2,000 feet of the City of Greensburg's Wellhead Protection Area. The contact for the City of Greensburg is Rick Denney and they can be reached at rdenney@greensburg.in.gov and 812-663-2641.

Let me know what questions you have.

Sincerely,



Alisha Turnbow
Environmental Manager
Office of Water Quality
Drinking Water Branch, Groundwater Section
(317) 233-9158 • aturnbow@idem.IN.gov

Indiana Department of Environmental Management



IDEM values your feedback.

Please take two minutes and complete this brief survey.



COVID-19 Resources:

- **Indiana State Dept. of Health (ISDH) COVID-19 Call Center:** Call 877-826-0011 (available 8:00 am-5:00 pm daily).
- **Anthem NurseLine:** Call 800-337-4770 or visit the [Anthem NurseLine](#) online for a FREE symptom screening. Available to anyone with an Anthem health plan (this includes State of IN employees)
- **Anthem Employee Assistance Program (EAP):** Available to full-time state employees and their household members regardless of health plan participation. Call 800-223-7723 or



Organization and Project Information

Project ID: 1800255 & 1800256
Des. ID: 1800255 & 1800256
Project Title: SR 46: Pavement Improvement Project
Name of Organization: RQAW
Requested by: Harlan Ford

Environmental Assessment Report

1. Geological Hazards:

- High liquefaction potential
- Floodway

2. Mineral Resources:

- Bedrock Resource: High Potential
- Sand and Gravel Resource: Low Potential

3. Active or abandoned mineral resources extraction sites:

- Petroleum Exploration Wells
- Abandoned Industrial Minerals Quarries

*All map layers from Indiana Map (maps.indiana.edu)

DISCLAIMER:

This document was compiled by Indiana University, Indiana Geological Survey, using data believed to be accurate; however, a degree of error is inherent in all data. This product is distributed "AS-IS" without warranties of any kind, either expressed or implied, including but not limited to warranties of suitability to a particular purpose or use. No attempt has been made in either the design or production of these data and document to define the limits or jurisdiction of any federal, state, or local government. The data used to assemble this document are intended for use only at the published scale of the source data or smaller (see the metadata links below) and are for reference purposes only. They are not to be construed as a legal document or survey instrument. A detailed on-the-ground survey and historical analysis of a single site may differ from these data and this document.

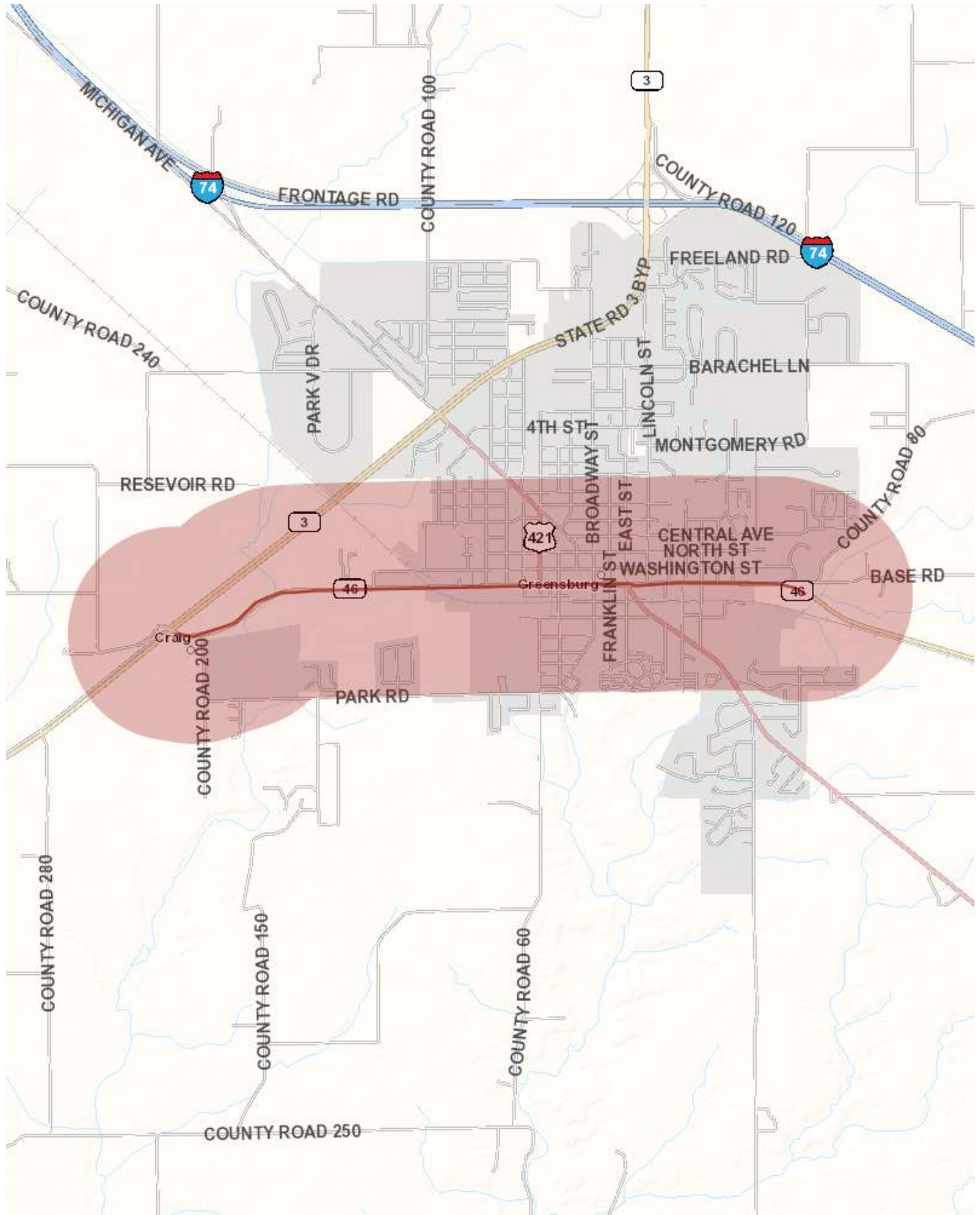
This information was furnished by Indiana Geological Survey

Address: 420 N. Walnut St., Bloomington, IN 47404

Email: IGSEnvir@indiana.edu

Phone: 812 855-7428

Date: September 13, 2021



Metadata:

- https://maps.indiana.edu/metadata/Geology/Petroleum_Wells.html
- https://maps.indiana.edu/metadata/Geology/Industrial_Minerals_Quarries_Abandoned.html
- https://maps.indiana.edu/metadata/Geology/Seismic_Earthquake_Liquefaction_Potential.html
- https://maps.indiana.edu/metadata/Geology/Industrial_Minerals_Sand_Gravel_Resources.html
- https://maps.indiana.edu/metadata/Hydrology/Floodplains_FIRM.html
- https://maps.indiana.edu/metadata/Geology/Bedrock_Geology.html

From: Courtade, Julian <JCourtade@indot.IN.gov>
Sent: Tuesday, October 5, 2021 8:15 AM
To: Harlan Ford
Subject: [EXT] RE: [EXT] RE: [EXT] RE: Early Coordination Letter for Des No's 1800255 & 1800256

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Thank you for the attached maps! When our office evaluates early coordination letters, we're going off of Part 77 regulations set forth by the FAA. This project is unique in that its very close proximity to the airport and there are several elevation changes along the SR where the project is occurring. Using google earth, I will use the measure tool to take a straight line measurements from the displaced threshold of Greensburg Airport to multiple points along the project boundaries, taking into account the ground elevation of each and a 100:1 approach slope. All SR have 17ft of protection regardless of location. However the further away from a point on the runway you get, the greater the height becomes because of that 100:1 slope.

On the diagram you sent, it looks like once you reach the Delta Faucet building on that road, the height will allow for 28 ft. As you go further east and reach the Wallpe's Keg restaurant, the height then allows for 38 ft. At the railroad crossing, a height of 42 ft would be allowed. So on and so forth. I can provide more measurements if need be! Hope that helps.

Best,

Julian L. Courtade
Chief Airport Inspector
100 North Senate Ave, N758-MM
Indianapolis, IN 46204
Cell: (317) 954-7385
Email: jcourtade@indot.in.gov



From: Harlan Ford <hford@rqaw.com>
Sent: Monday, October 4, 2021 11:41 AM
To: Courtade, Julian <JCourtade@indot.IN.gov>
Subject: RE: [EXT] RE: [EXT] RE: Early Coordination Letter for Des No's 1800255 & 1800256

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Mr. Courtade,

Thank you for your additional response. We may still run into some snags with the 17ft. restriction regarding Des No. 1800255. The railroad tracks within Des No. 1800255 is a crucial point for this project. This is the area where the scope of work for the project transitions from an HMA overlay to full depth replacement with street lighting and utility pole work. Based on the attached maps, and the scope of work within Des No. 1800255 can the 17ft. height restriction be eased up east of the railroad tracks? From the SR 3 intersection to the railroad tracks we can manage the 17ft. height restriction as it is just an HMA overlay. It is just for the work occurring east of the railroad tracks that we will likely have issues with the 17ft. height restriction associated with Des No. 1800255.

Sorry for all the back and forth on this. If we need to file anything for tall structures with your office and the FAA then we certainly will as the project advances, just thought the attached maps may help explain things better.

Thanks for your time!

Harlan Ford
Environmental Scientist

O: 423.458.5979

www.rqaw.com

From: Courtade, Julian <JCourtade@indot.IN.gov>

Sent: Monday, October 4, 2021 8:40 AM

To: Harlan Ford <hford@rqaw.com>

Subject: [EXT] RE: [EXT] RE: Early Coordination Letter for Des No's 1800255 & 1800256

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Harlan –

Your explanation helps a lot! For Des 1800256 at the western most limit, a height of 75 ft can be achieved without having to file anything for tall structures. For Des 1800255, the 17 ft limit still stands but it seems like that will be manageable for the project at hand. Hope this clarification helps!

Best,

Julian L. Courtade

Chief Airport Inspector

100 North Senate Ave, N758-MM

Indianapolis, IN 46204

Cell: (317) 954-7385

Email: jcourtade@indot.in.gov



From: Harlan Ford <hford@rqaw.com>
Sent: Friday, October 1, 2021 9:07 AM
To: Courtade, Julian <JCourtade@indot.IN.gov>
Subject: RE: [EXT] RE: Early Coordination Letter for Des No's 1800255 & 1800256

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Mr. Courtade,

Thank you for your response concerning this proposed project. I did want to follow up with you on this project though just to verify a few things.

Work west of the railroad tracks (entirely within the Des No. 1800255) to the SR 3 intersection will just consist of an HMA overlay with some full depth patching. This is the section of roadway where the Greensburg Airport resides. Equipment to be used along the section of roadway from the start of the project (SR 3 intersection) up to the railroad tracks will only consist of roadway equipment such as paving machines, milling machines, dump trucks etc. so the 17ft. height restriction can likely be managed in this area.

However, work east of the railroad tracks will include installing/replacing some utility poles and street lighting but the utility poles and street lighting will match the existing height of the currently installed poles and lighting. At this time we are not sure what equipment (or the height of equipment) that will be used to replace the existing utility poles/street lighting. I just wanted to check in with you to see if the 17ft. height restriction applied to the entire project area (Both Des No's 1800255 or 1800256) or if the height restriction can be adjusted east of the railroad tracks where there are multiple two story houses, building etc. Even just slightly west of the railroad tracks there are large grain silos belonging to Greensburg Soy Processors and the IMI concrete facility, both of which have permanent structures that well exceed 17ft. in height.

If the 17ft. height restriction stands applies to the entire project area we will work the designer more to try and figure out what equipment (and the height of said equipment) will be used to install the utility poles and street lighting.

Thanks in advance for your time and consideration,

Harlan Ford
Environmental Scientist

O: 423.458.5979

www.rqaw.com

From: Courtade, Julian <JCourtade@indot.IN.gov>
Sent: Wednesday, September 15, 2021 10:30 AM
To: Harlan Ford <hford@rqaw.com>
Subject: [EXT] RE: Early Coordination Letter for Des No's 1800255 & 1800256

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Harlan –

After reviewing the Early Coordination Letter, I have determined that if any object, obstruction, or equipment will exceed 17 ft. in height, further coordination will be required with our office and the FAA. This is due to the close proximity of Greensburg Airport and the need for any obstructions within 5 miles to meet a 100:1 glideslope to the nearest runway according to 14 CFR Part 77 standards. You can find these standards and information on filing at the website below:

<https://oeaaa.faa.gov/oeaaa/external/portal.jsp>

Please let me know if you have any questions!

Best,

Julian L. Courtade
Chief Airport Inspector
100 North Senate Ave, N758-MM
Indianapolis, IN 46204
Cell: (317) 954-7385
Email: jcourtade@indot.in.gov



From: Harlan Ford <hford@rqaw.com>
Sent: Monday, September 13, 2021 4:10 PM
To: Courtade, Julian <JCourtade@indot.IN.gov>
Subject: Early Coordination Letter for Des No's 1800255 & 1800256

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Hello,

From: Royer, Brian <BRoyer@dnr.IN.gov>
Sent: Tuesday, October 19, 2021 2:14 PM
To: Harlan Ford
Subject: [EXT] RE: Early Coordination Letter for Des No's 1800255 & 1800256

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There is one well in this area within the project area. IGS# 134956 is in the project area just south of 46 about 40' and about 120' West of the railroad tracks. This location is probably approximated based on an old map. No real data known on this well as it looks to have been drilled around 1900. It may be plugged and buried it may have even had all of the casing pulled on it and not be findable. There are also some cases where these wells are still there at surface being used or just abandoned. I do not think this is the case with this well as our inspector tried to locate it on 3/7/16 and determined it was presumed plugged and could not be found. If this well is encountered during this project it will need to be plugged properly.

Thanks,

Brian Royer
Orphan Well Manager
Indiana Department of Natural Resources
Division of Oil & Gas
Cell- 317-417-6556
www.dnr.IN.gov

** Please let us know about the quality of our service by taking this [brief customer survey](#).*

From: Retherford, Russell L <RRetherford@dnr.IN.gov>
Sent: Monday, September 13, 2021 4:12 PM
To: Royer, Brian <BRoyer@dnr.IN.gov>
Subject: FW: Early Coordination Letter for Des No's 1800255 & 1800256

From: Harlan Ford <hford@rqaw.com>
Sent: Monday, September 13, 2021 4:09 PM
To: Retherford, Russell L <RRetherford@dnr.IN.gov>
Subject: Early Coordination Letter for Des No's 1800255 & 1800256

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Hello,

September 15, 2021

Harlan Ford
RQAW Corporation
8770 North Street, Suite 110
Fishers, Indiana 46038

Dear Mr. Ford:

The proposed project to proceed with pavement improvements along State Road 46 in Decatur County, Indiana (Des No. 1800256), as referred to in your letter received on September 13, 2021, will not cause a conversion of prime farmland.

The proposed project to proceed with pavement improvements along State Road 46 from State Road 3 to Sunset Drive in Decatur County, Indiana (Des No. 1800255), as referred to in your letter received on September 13, 2021, will cause a conversion of prime farmland

The attached packet of information is for your use competing Parts VI and VII of the AD-1006. After completion, the federal funding agency needs to forward one copy to NRCS for our records.

If you need additional information, please contact John Allen at 317-295-5859.

Sincerely,

RICHARD Digitally signed by
RICHARD NEILSON
NEILSON Date: 2021.09.16
07:04:18 -04'00'

RICK NEILSON
State Soil Scientist

Enclosures



October 14, 2021

Harlan Ford
RQAW Corporation
8770 North Street, Suite 110
Fishers, Indiana 46038

Dear Mr. Ford:

The revised project to proceed with pavement improvements along State Road 46 in Decatur County, Indiana (Des No. 1800255 and 1800256), as referred to in your letter received on October 1, 2021, will not cause a conversion of prime farmland.

If you need additional information, please contact John Allen at 317-295-5859.

Sincerely,

RICHARD Digitally signed by
RICHARD NEILSON
NEILSON Date: 2021.10.20
14:58:51 -04'00'

RICK NEILSON
State Soil Scientist

Helping People Help the Land.



USDA is an equal opportunity provider, employer and lender.

State of Indiana
DEPARTMENT OF NATURAL RESOURCES
Division of Fish and Wildlife
Early Coordination/Environmental Assessment

DNR #: ER-24048

Request Received: September 13, 2021

Requestor: RQAW Environmental
Harlan Ford
8770 North Street, Suite 110
Fishers, IN 46038

Project: SR 46 roadway improvements from SR 3 to US 421 west junction, Greensburg; Des #1800255 & 1800256

County/Site info: Decatur

The Indiana Department of Natural Resources has reviewed the above referenced project per your request. Our agency offers the following comments for your information and in accordance with the National Environmental Policy Act of 1969.

If our agency has regulatory jurisdiction over the project, the recommendations contained in this letter may become requirements of any permit issued. If we do not have permitting authority, all recommendations are voluntary.

Regulatory Assessment: This proposal may require the formal approval of our agency pursuant to the Flood Control Act (IC 14-28-1) for any proposal to construct, excavate, or fill in or on the floodway of Muddy Fork Sand Creek or UNT Sand Creek, unless it qualifies for a bridge exemption (see enclosure) or qualifies under the INDOT and IDNR Memorandum of Understanding for Maintenance Activity Exemption, dated March 1997. Please include a copy of this letter with the permit application, if required.

Natural Heritage Database: The Natural Heritage Program's data have been checked. To date, no plant or animal species listed as state or federally threatened, endangered, or rare have been reported to occur in the project vicinity. However, Greensburg City Park (Decatur County Parks & Rec) is located within 1/2 mile of the western portion of the project area.

Fish & Wildlife Comments: No information was provided on any possible work on the bridges over Muddy Fork Sand Creek or the UNT Sand Creek or impacts to those streams otherwise. Once more details are available on any impacts to these stream crossing locations, we recommend further coordination.

Avoid and minimize impacts to fish, wildlife, and botanical resources to the greatest extent possible, and compensate for impacts. The following are recommendations that address potential impacts identified in the proposed project area:

1) Riparian & Urban Tree Habitat:

The Division of Fish & Wildlife recommends avoiding removing urban trees to the greatest extent possible and replacing trees that must be removed. Street trees are important to fish and wildlife resources in urban areas. Indiana's street trees also provide millions of dollars of tangible benefits to Indiana communities by their presence in the urban environment. Their shade and beauty contribute to the quality of life. They provide significant increases in real estate values, create attractive settings for commercial businesses, and improve community neighborhood appeal. Trees decrease energy consumption by providing shade and acting as windbreaks. They reduce water treatment costs and impede soil erosion by slowing the runoff of stormwater. Trees also cool the air temperature, cleanse pollutants from the air, and produce oxygen while absorbing carbon dioxide. Trees are an integral component of the urban environment. Proactively managing and maintaining a street tree population will ultimately maximize

Attachments: A - Bridge Exemption Criteria

State of Indiana
DEPARTMENT OF NATURAL RESOURCES
Division of Fish and Wildlife
Early Coordination/Environmental Assessment

the benefits afforded by their aesthetic and ecological functions. The following links give a good overview of the benefits of a street tree program and how to select the right species to avoid the negative impacts of non-native invasive species such as the common and popular Bradford pear: <https://www.in.gov/dnr/forestry/3605.htm> > Community & Urban Forestry > Tree Species Lists.

We recommend a mitigation plan be developed (and submitted with the permit application, if required) for any unavoidable habitat impacts that will occur. The DNR's Habitat Mitigation guidelines (and plant lists) can be found online at: <http://iac.iga.in.gov/iac/20200527-IR-312200284NRA.xml.pdf>.

Impacts to non-wetland forest of one (1) acre or more should be mitigated at a minimum 2:1 ratio. If less than one acre of non-wetland forest is removed in a rural setting, replacement should be at a 1:1 ratio based on area. Impacts to non-wetland forest under one (1) acre in an urban setting should be mitigated by planting five trees, at least 2 inches in diameter-at-breast height (dbh), for each tree which is removed that is 10" dbh or greater (5:1 mitigation based on the number of large trees) or by using the 1:1 replacement ratio based on area depending on the type of habitat impacted (individual canopy tree removal in an urban streetscape or park-like environment versus removal of habitat supporting a tree canopy, woody understory, and herbaceous layer). Impacts under 0.10 acre in an urban area may still involve the replacement of large diameter trees but typically do not require any additional mitigation or additional plantings beyond seeding and stabilizing disturbed areas. There are exceptions for high quality habitat sites however.

2) Wetland Habitat:

Due to the presence or potential presence of wetland habitat on site, we recommend contacting and coordinating with the Indiana Department of Environmental Management (IDEM) 401 program and also the US Army Corps of Engineers (USACE) 404 program. Impacts to wetland habitat should be mitigated at the appropriate ratio according to the 1991 INDOT/IDNR/USFWS Memorandum of Understanding.

The additional measures listed below should be implemented to avoid, minimize, or compensate for impacts to fish, wildlife, and botanical resources:

1. Revegetate all bare and disturbed areas with a mixture of native grasses, sedges, wildflowers, and also native hardwood trees and shrubs if any woody plants are disturbed during construction as soon as possible upon completion. Do not use any varieties of Tall Fescue or other non-native plants, including prohibited invasive species (see 312 IAC 18-3-25).
2. Minimize and contain within the project limits inchannel disturbance and the clearing of trees and brush.
3. Do not work in the waterway from April 1 through June 30 without the prior written approval of the Division of Fish and Wildlife.
4. Do not cut any trees suitable for Indiana bat or Northern Long-eared bat roosting (greater than 5 inches dbh, living or dead, with loose hanging bark, or with cracks, crevices, or cavities) from April 1 through September 30.
5. Appropriately designed measures for controlling erosion and sediment must be implemented to prevent sediment from entering the stream or leaving the construction site; maintain these measures until construction is complete and all disturbed areas are stabilized.
6. Seed and protect all disturbed streambanks and slopes not protected by other methods that are 3:1 or steeper with erosion control blankets that are heavy-duty, biodegradable, and net free or that use loose-woven / Leno-woven netting to minimize the entrapment and snaring of small-bodied wildlife such as snakes and turtles (follow manufacturer's recommendations for selection and installation); seed and apply mulch on all other disturbed areas.

Attachments: A - Bridge Exemption Criteria

THIS IS NOT A PERMIT

State of Indiana
DEPARTMENT OF NATURAL RESOURCES
Division of Fish and Wildlife
Early Coordination/Environmental Assessment

Contact Staff:

Christie L. Stanifer, Environ. Coordinator, Fish & Wildlife
Our agency appreciates this opportunity to be of service. Please contact the above staff member at (317) 232-4080 if we can be of further assistance.

Christie L. Stanifer

Date: October 13, 2021

Christie L. Stanifer
Environ. Coordinator
Division of Fish and Wildlife

Attachments: A - Bridge Exemption Criteria

From: Stanifer, Christie <cstanifer@dnr.IN.gov>
Sent: Wednesday, April 6, 2022 1:05 PM
To: Harlan Ford
Subject: [EXT] RE: [EXT] RE: Early Coordination Letter for Des No's 1800255 & 1800256; ER-24048

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Hi Harlan. Thank you for the additional information. I'll add this to our file. We don't have any additional information to provide since there will not be any work on the bridges or the streams.

Thank you,

Christie L. Stanifer
Environmental Coordinator
Indiana Department of Natural Resources
Division of Fish & Wildlife
402 West Washington St, Room W273
Indianapolis, IN 46204
cstanifer@dnr.in.gov
Direct: (317) 232-8163
www.dnr.IN.gov

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From: Harlan Ford <hford@rqaw.com>
Sent: Tuesday, April 05, 2022 3:24 PM
To: Stanifer, Christie <cstanifer@dnr.IN.gov>
Subject: FW: [EXT] RE: Early Coordination Letter for Des No's 1800255 & 1800256; ER-24048

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Hey Christie,

This email is to serve as further coordination your agency requested in the attached Early Coordination/Environmental Assessment (DNR # ER-24048) dated October 13, 2021. At that time, your agency stated that "No information was provided on any possible work on the bridges over Muddy Fork Sand Creek or the UNT Sand Creek or impacts to those streams otherwise. Once more details are available on any impacts to these stream crossing locations, we recommend further coordination."

It has been determined that there will be no stream impacts associated with this project. Additionally, this project does not include work on the bridges/culverts located at Muddy Fork Sand Creek or the UNT to Sand Creek (locally known as Gas Creek).

Please let me know if you have any additional questions/concerns or need additional information.

Thank you,

HARLAN FORD | ENVIRONMENTAL SCIENTIST

O: 423.458.5979

www.rqaw.com

From: DNR Environmental Review <environmentalreview@dnr.IN.gov>

Sent: Wednesday, October 13, 2021 12:12 PM

To: Harlan Ford <hford@rqaw.com>

Subject: [EXT] RE: Early Coordination Letter for Des No's 1800255 & 1800256; ER-24048

****** Please use caution this is an externally originating email. ******

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Dear Harlan:

In an effort to promote a more efficient and faster service, the Division of Fish and Wildlife's Environmental Unit is utilizing electronic mail service whenever possible to send out and receive correspondence, rather than using US Postal Service mail. On any future correspondence, please provide a valid email address for this purpose. If any response letter sent via e-mail is returned as undeliverable, we will mail the hard copy by US Postal Service.

Future submittals:

Future environmental review requests can be submitted electronically to Christie Stanifer at: environmentalreview@dnr.in.gov. This is only FYI if you are not already doing so.

Sincerely,

Christie L. Stanifer
Environmental Coordinator
Indiana Department of Natural Resources
Division of Fish & Wildlife
402 West Washington St, Room W273
Indianapolis, IN 46204
cstanifer@dnr.in.gov
Direct: (317) 232-8163
www.dnr.IN.gov

**** Please let us know about the quality of our service by taking this brief [customer survey](#).***

From: [McWilliams, Robin](#)
To: [Harlan Ford](#)
Subject: [EXT] Re: [EXTERNAL] Early Coordination Letter for Des No's 1800255 & 1800256
Date: Monday, September 20, 2021 3:52:19 PM
Attachments: [image012.png](#)
[image013.png](#)
[image014.png](#)
[image015.png](#)
[image016.png](#)
[image017.png](#)

****** Please use caution this is an externally originating email. ******
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Dear Harlan,

This responds to your recent letter requesting our comments on the aforementioned project.

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (16 U.S.C. 661 et. seq.) and are consistent with the intent of the National Environmental Policy Act of 1969, the Endangered Species Act of 1973, and the U. S. Fish and Wildlife Service's Mitigation Policy.

The project is within the range of the Indiana bat (*Myotis sodalis*) and northern long-eared bat (*Myotis septentrionalis*) and should follow the new Indiana bat/northern long-eared bat programmatic consultation process, if applicable (*i.e.* a federal transportation nexus is established). The Service has 14 days after a “Not Likely to Adversely Affect” determination letter is generated to review the project and provide additional comments or request additional information; if you do not receive a response from us within 14 days, we have no additional comments.

Wetland and stream impacts may require permits from the U.S. Army Corps of Engineers, the Indiana Department of Environmental Management’s Water Quality Certification program, and the Indiana Department of Natural Resources. Wetland impacts should be avoided, and any unavoidable impacts should be compensated for in accordance with agency mitigation guidelines.

Based on a review of the information you provided, the U.S. Fish and Wildlife Service has no other comments on the project as currently proposed. However, should new information arise pertaining to project plans or a revised species list be published, it will be necessary for the Federal agency to reinstate consultation. Standard recommendations are provided below.

We appreciate the opportunity to comment at this early stage of project planning. If you have any questions about our recommendations, please contact me at robin_mcwilliams@fws.gov or you may call 812-334-4261 x. 207.

Sincerely,

Robin McWilliams Munson

Standard Recommendations:

1. Do not clear trees or understory vegetation outside the construction zone boundaries. **(This restriction is not related to the “tree clearing” restriction for potential Indiana Bat habitat.)**
2. Restrict below low-water work in streams to placement of culverts, piers, pilings and/or footings, shaping of the spill slopes around the bridge abutments, and placement of riprap. Culverts should span the active stream channel, should be either embedded or a 3-sided or open-arch culvert, and be installed where practicable on an essentially flat slope. When an open-bottom culvert or arch is used in a stream, which has a good natural bottom substrate, such as gravel, cobbles and boulders, the existing substrate should be left undisturbed beneath the culvert to provide natural habitat for the aquatic community.
3. Restrict channel work and vegetation clearing to the minimum necessary for installation of the stream crossing structure.
4. Minimize the extent of hard armor (riprap) in bank stabilization by using bioengineering techniques whenever possible. If riprap is utilized for bank stabilization, extend it below low-water elevation to provide aquatic habitat.
5. Implement temporary erosion and sediment control methods within areas of disturbed soil. All disturbed soil areas upon project completion will be vegetated following INDOT’s standard specifications.
6. Avoid all work within the inundated part of the stream channel (in perennial streams and larger intermittent streams) during the fish spawning season (April 1 through June 30), except for work within sealed structures such as caissons or cofferdams that were installed prior to the spawning season. No equipment shall be operated below Ordinary High-Water Mark during this time unless the machinery is within the caissons or on the cofferdams.
7. Evaluate wildlife crossings under bridge/culverts projects in appropriate situations. Suitable crossings include flat areas below bridge abutments with suitable ground cover, high water shelves in culverts, amphibian tunnels and diversion fencing

Robin McWilliams Munson
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
620 South Walker Street
Bloomington, IN 46142
812-334-4261

[Mon-Tues 8-3:30p](#)

[Wed-Thurs 8:30-3p Telework](#)

From: Harlan Ford <hford@rqaw.com>

From: [Baker, Mindy](#)
To: [Benjamin DeMaria](#)
Cc: [Dye, David](#)
Subject: RE: Indiana and Northern Long-eared Bat Check for the SR 46 Pavement Replacement Project located in Decatur County (Des. Nos. 1800255 & 1800256)
Date: Friday, January 24, 2020 11:35:16 AM
Attachments: [image001.png](#)
[image002.png](#)
[image007.png](#)
[image008.png](#)
[image014.png](#)
[image015.png](#)
[image016.png](#)
[image017.png](#)
[image018.png](#)
[image019.png](#)
[image020.png](#)
[image021.png](#)
[image022.emz](#)
[image023.png](#)

Ben,

I have conducted a check of the USFWS confidential bat database for Des Nos. 1800255 and 1800256 and the results are stated below.

A review of the USFWS database did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. Additional investigation to confirm the presence or absence of bats in or on any culverts, bridges or structures affected by the project will be necessary. The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to the most recent "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects".

Also, although I am the contact for USFWS bat database checks, David Dye will be the contact for your IPAC review.

Mindy Baker

Environmental Manager

185 Agrico Lane
Seymour, IN 47274

Office: (812) 524-3746

Email: mbaker2@indot.in.gov



From: Benjamin DeMaria [mailto:bdemaria@rqaw.com]

Sent: Friday, January 24, 2020 9:44 AM

To: Baker, Mindy <MBaker2@indot.IN.gov>



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Indiana Ecological Services Field Office
620 South Walker Street
Bloomington, IN 47403-2121
Phone: (812) 334-4261 Fax: (812) 334-4273

In Reply Refer To:

August 11, 2022

Project Code: 2022-0073677

Project Name: SR 46: Pavement Improvement Project (Des No's 1800255 & 1800256)

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

Please use the species list provided and visit the U.S. Fish and Wildlife Service's Region 3 Section 7 Technical Assistance website at - <http://www.fws.gov/midwest/endangered/section7/s7process/index.html>. This website contains step-by-step instructions which will help you

determine if your project will have an adverse effect on listed species and will help lead you through the Section 7 process. For all **wind energy projects and projects that include installing towers that use guy wires or are over 200 feet in height**, please contact this field office directly for assistance, even if no federally listed plants, animals or critical habitat are present within your proposed project or may be affected by your proposed project.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see <https://www.fws.gov/birds/policies-and-regulations.php>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see <https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of

Executive Order 13186, please visit <https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. **Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.**

Attachment(s):

- Official Species List
- Migratory Birds
- Wetlands

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Indiana Ecological Services Field Office

620 South Walker Street

Bloomington, IN 47403-2121

(812) 334-4261

Project Summary

Project Code: 2022-0073677

Project Name: SR 46: Pavement Improvement Project (Des No's 1800255 & 1800256)

Project Type: Road/Hwy - Maintenance/Modification

Project Description: The project is located in Decatur County on State Road (SR) 46 and extends through the City of Greensburg. The project limits for Des No. 1800255 are from SR 3 to the west junction with United States Highway (US) 421, totaling approximately 1.8 miles in length. The project limits of Des. No. 1800256 are from the east junction with US 421 to Base Road, totaling approximately 0.8 miles in length. The primary land use within the project area consists of urban commercial and residential land. Although there are some adjacent agricultural fields in the eastern portion of the project area (Des No. 1800255). The scope of work for this project will include HMA overlay, partial and full depth patching, full depth pavement replacement, construction/reconstruction of sidewalks, construction of a stormwater sewer system, water main installation, construction of a sanitary sewer system, replacing/construction of curb and gutter, installing street lighting, parking lane reconfiguration, and reconstructing existing curb ramps. In addition, the removal of trees/tree trimming will likely be required. It is anticipated that up to 0.16 acre of tree trimming/clearing will be required for the project. Dominant tree species consisted of silver maple (*Acer saccharinum*) which are planted along SR 46. Tree clearing will be completed during the bat inactive season (October 1 through March 31) and no tree clearing/trimming will occur beyond 100 feet from the existing roadway. The existing right-of-way (ROW) varies through the project area from the centerline of the roadway up to 40+ ft. from the edge of pavement. Additional ROW is anticipated to be required for this project. Further investigation is needed on the exact amount of permanent and temporary ROW, but it is anticipated that up to 0.80 acre of permanent and 0.70 acre of temporary ROW is anticipated to be needed for Des No. 1800255 and up to 0.95 acre of permanent and 0.30 acre of temporary ROW is anticipated for Des No. 1800256. A review of the USFWS Database by INDOT Seymour District on January 24, 2020 did not indicate the presence of endangered bat species in or within the 0.5 mile search radius of the project area. Temporary lighting may be utilized during construction and the project will also include the installation of new permanent street lighting. Construction is expected to begin in the Spring of 2024.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@39.33652485,-85.467031073941,14z>



Counties: Decatur County, Indiana

Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Indiana Bat <i>Myotis sodalis</i> There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: <ul style="list-style-type: none"> ▪ Incidental take of the NLEB is not prohibited here. Federal agencies may consult using the 4(d) rule streamlined process. Transportation projects may consult using the programmatic process. See www.fws.gov/midwest/endangered/mammals/nleb/index.html Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

-
1. The [Migratory Birds Treaty Act](#) of 1918.
 2. The [Bald and Golden Eagle Protection Act](#) of 1940.
 3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern \(BCC\) list](#) or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Oct 15 to Aug 31
Bobolink <i>Dolichonyx oryzivorus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Jul 31
Chimney Swift <i>Chaetura pelagica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 25

NAME	BREEDING SEASON
Lesser Yellowlegs <i>Tringa flavipes</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Prothonotary Warbler <i>Protonotaria citrea</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 1 to Jul 31
Red-headed Woodpecker <i>Melanerpes erythrocephalus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10
Wood Thrush <i>Hylocichla mustelina</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31

Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.

- The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

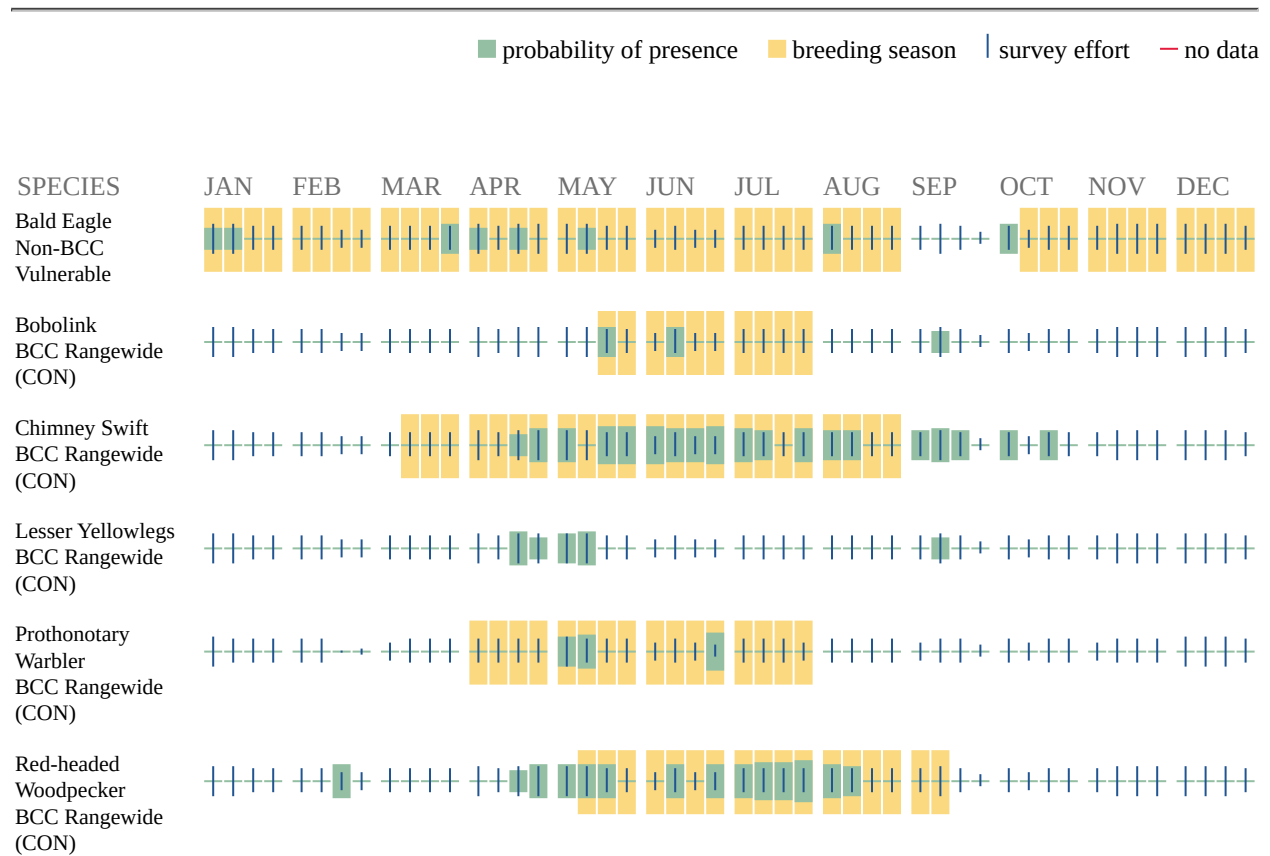
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (-)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Wood Thrush
BCC Rangewide
(CON)



Additional information can be found using the following links:

- Birds of Conservation Concern <https://www.fws.gov/program/migratory-birds/species>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>

Migratory Birds FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Wetlands

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

RIVERINE

- [R2UBH](#)

IPaC User Contact Information

Agency: RQAW

Name: Harlan Ford

Address: 8770 North St., Suite 110

City: Fishers

State: IN

Zip: 46038

Email: hford@rqaw.com

Phone: 4234585979

Harlan Ford

From: Dye, David <DDYE@indot.IN.gov>
Sent: Monday, October 18, 2021 4:31 PM
To: Harlan Ford
Subject: [EXT] RE: [EXT] RE: IPaC Review for Des No's 1800255 and 1800256

****** Please use caution this is an externally originating email. ******
Do not click on links or open attachments unless you recognize the sender and know the contents is safe.

Thanks. I have reviewed and submitted this determination to USFWS for their 14-day review period.

Let me know if you have any additional questions.

David Dye

Environmental Section Manager

185 Agrico Lane

Seymour, IN 47274

Office: (812) 524-3723

Email: ddye@indot.in.gov



From: Harlan Ford <hford@rqaw.com>
Sent: Thursday, October 14, 2021 7:46 AM
To: Dye, David <DDYE@indot.IN.gov>
Subject: RE: [EXT] RE: IPaC Review for Des No's 1800255 and 1800256

****** This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email. ******

Mr. Dye,

Thank you for your review and I have made the revisions to your comments. I generated a new Official Species List and Consistency Letter that reflects the changes in the project description.

Please let me know if you need anything further. The new consistency letter is attached for your convenience.

Thank you for your time,

Harlan Ford

Environmental Scientist

O: 423.458.5979

www.rqaw.com

From: Dye, David <DDYE@indot.IN.gov>
Sent: Wednesday, October 13, 2021 11:36 AM



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Indiana Ecological Services Field Office

620 South Walker Street

Bloomington, IN 47403-2121

Phone: (812) 334-4261 Fax: (812) 334-4273

<http://www.fws.gov/midwest/Endangered/section7/s7process/step1.html>

In Reply Refer To:

October 18, 2021

Consultation code: 03E12000-2021-I-2046

Event Code: 03E12000-2022-E-00518

Project Name: SR 46: Pavement Improvement Project (Des No's 1800255 & 1800256)

Subject: Concurrence verification letter for the 'SR 46: Pavement Improvement Project (Des No's 1800255 & 1800256)' project under the revised February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat.

To whom it may concern:

The U.S. Fish and Wildlife Service (Service) has received your request to verify that the **SR 46: Pavement Improvement Project (Des No's 1800255 & 1800256)** (Proposed Action) may rely on the concurrence provided in the February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat (PBO) to satisfy requirements under Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C 1531 *et seq.*).

Based on the information you provided (Project Description shown below), you have determined that the Proposed Action is within the scope and adheres to the criteria of the PBO, including the adoption of applicable avoidance and minimization measures, and may affect, but is not likely to adversely affect (NLAA) the endangered Indiana bat (*Myotis sodalis*) and/or the threatened Northern long-eared bat (*Myotis septentrionalis*).

The Service has 14 calendar days to notify the lead Federal action agency or designated non-federal representative if we determine that the Proposed Action does not meet the criteria for a NLAA determination under the PBO. If we do not notify the lead Federal action agency or designated non-federal representative within that timeframe, you may proceed with the Proposed Action under the terms of the NLAA concurrence provided in the PBO. This verification period allows Service Field Offices to apply local knowledge to implementation of the PBO, as we may identify a small subset of actions having impacts that were unanticipated. In such instances, Service Field Offices may request additional information that is necessary to verify inclusion of the proposed action under the PBO.

For Proposed Actions that include bridge/structure removal, replacement, and/or maintenance activities: If your initial bridge/structure assessments failed to detect Indiana bats, but you later detect bats during construction, please submit the Post Assessment Discovery of Bats at Bridge/Structure Form (User Guide Appendix E) to this Service Office. In these instances, potential incidental take of Indiana bats may be exempted provided that the take is reported to the Service.

If the Proposed Action is modified, or new information reveals that it may affect the Indiana bat and/or Northern long-eared bat in a manner or to an extent not considered in the PBO, further review to conclude the requirements of ESA Section 7(a)(2) may be required. If the Proposed Action may affect any other federally-listed or proposed species, and/or any designated critical habitat, additional consultation between the lead Federal action agency and this Service Office is required. If the proposed action has the potential to take bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act may also be required. In either of these circumstances, please contact this Service Office.

The following species may occur in your project area and **are not** covered by this determination:

- Monarch Butterfly *Danaus plexippus* Candidate

Project Description

The following project name and description was collected in IPaC as part of the endangered species review process.

Name

SR 46: Pavement Improvement Project (Des No's 1800255 & 1800256)

Description

The project is located in Decatur County on State Road (SR) 46 and extends through the City of Greensburg. The project limits for Des No. 1800255 are from SR 3 to the west junction with United States Highway (US) 421, totaling approximately 1.8 miles in length. The project limits of Des. No. 1800256 are from the east junction with US 421 to Base Road, totaling approximately 0.8 miles in length. The primary land use within the project area consists of urban commercial and residential land. Although there are some adjacent agricultural fields in the eastern portion of the project area (Des No. 1800255). The scope of work for this project will include HMA overlay, partial and full depth patching, full depth pavement replacement, construction/reconstruction of sidewalks, construction of a stormwater sewer system, water main installation, construction of a sanitary sewer system, replacing/construction of curb and gutter, installing street lighting, parking lane reconfiguration, and reconstructing existing curb ramps. In addition, the removal of trees/tree trimming will likely be required. It is anticipated that up to 0.16 acre of tree trimming/clearing will be required for the project. Dominant tree species consisted of silver maple (*Acer saccharinum*) which are planted along SR 46. Tree clearing will be completed during the bat inactive season (October 1 through March 31) and no tree clearing/trimming will occur beyond 100 feet from the existing roadway. The existing right-of-way (ROW) varies through the project area from the centerline of the roadway up to 40+ ft. from the edge of pavement. Additional ROW is anticipated to be required for this project. Further investigation is needed on the exact amount of permanent and temporary ROW, but it is anticipated that up to 0.80 acre of permanent and 0.70 acre of temporary ROW is anticipated to be needed for Des No. 1800255 and up to 0.95 acre of permanent and 0.30 acre of temporary ROW is anticipated for Des No. 1800256. A review of the USFWS Database by INDOT Seymour District on January 24, 2020 did not indicate the presence of endangered bat species in or within the 0.5 mile search radius of the project area. Temporary lighting may be utilized during construction and the project will also include the installation of new permanent street lighting. Construction is expected to begin in the Spring of 2024.

Determination Key Result

Based on your answers provided, this project(s) may affect, but is not likely to adversely affect the endangered Indiana bat and/or the threatened Northern long-eared bat, therefore, consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required. However, also based on your answers provided, this project may rely on the concurrence provided in the revised February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat.

Qualification Interview

1. Is the project within the range of the Indiana bat^[1]?

[1] See [Indiana bat species profile](#)

Automatically answered

Yes

2. Is the project within the range of the Northern long-eared bat^[1]?

[1] See [Northern long-eared bat species profile](#)

Automatically answered

Yes

3. Which Federal Agency is the lead for the action?

A) *Federal Highway Administration (FHWA)*

4. Are *all* project activities limited to non-construction^[1] activities only? (examples of non-construction activities include: bridge/abandoned structure assessments, surveys, planning and technical studies, property inspections, and property sales)

[1] Construction refers to activities involving ground disturbance, percussive noise, and/or lighting.

No

5. Does the project include *any* activities that are **greater than** 300 feet from existing road/rail surfaces^[1]?

[1] Road surface is defined as the actively used [e.g. motorized vehicles] driving surface and shoulders [may be pavement, gravel, etc.] and rail surface is defined as the edge of the actively used rail ballast.

No

6. Does the project include *any* activities **within** 0.5 miles of a known Indiana bat and/or NLEB hibernaculum^[1]?

[1] For the purpose of this consultation, a hibernaculum is a site, most often a cave or mine, where bats hibernate during the winter (see suitable habitat), but could also include bridges and structures if bats are found to be hibernating there during the winter.

No

7. Is the project located **within** a karst area?

No

8. Is there *any* suitable^[1] summer habitat for Indiana Bat or NLEB **within** the project action area^[2]? (includes any trees suitable for maternity, roosting, foraging, or travelling habitat)

[1] See the Service's [summer survey guidance](#) for our current definitions of suitable habitat.

[2] The action area is defined as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 CFR Section 402.02). Further clarification is provided by the [national consultation FAQs](#).

Yes

9. Will the project remove *any* suitable summer habitat^[1] and/or remove/trim any existing trees **within** suitable summer habitat?

[1] See the Service's [summer survey guidance](#) for our current definitions of suitable habitat.

Yes

10. Will the project clear more than 20 acres of suitable habitat per 5-mile section of road/rail?
No

11. Have presence/probable absence (P/A) summer surveys^{[1][2]} been conducted^{[3][4]} **within** the suitable habitat located within your project action area?

[1] See the Service's [summer survey guidance](#) for our current definitions of suitable habitat.

[2] Presence/probable absence summer surveys conducted within the fall swarming/spring emergence home range of a documented Indiana bat hibernaculum (contact local Service Field Office for appropriate distance from hibernacula) that result in a negative finding requires additional consultation with the local Service Field Office to determine if clearing of forested habitat is appropriate and/or if seasonal clearing restrictions are needed to avoid and minimize potential adverse effects on fall swarming and spring emerging Indiana bats.

[3] For projects within the range of either the Indiana bat or NLEB in which suitable habitat is present, and no bat surveys have been conducted, the transportation agency will assume presence of the appropriate species. This assumption of presence should be based upon the presence of suitable habitat and the capability of bats to occupy it because of their mobility.

[4] Negative presence/probable absence survey results obtained using the [summer survey guidance](#) are valid for a minimum of two years from the completion of the survey unless new information (e.g., other nearby surveys) suggest otherwise.

No

12. Does the project include activities **within documented Indiana bat habitat**^{[1][2]}?

[1] Documented roosting or foraging habitat – for the purposes of this consultation, we are considering documented habitat as that where Indiana bats and/or NLEB have actually been captured and tracked using (1) radio telemetry to roosts; (2) radio telemetry triangulation/triangulation to estimate foraging areas; or (3) foraging areas with repeated use documented using acoustics. Documented roosting habitat is also considered as suitable summer habitat within 0.25 miles of documented roosts.)

[2] For the purposes of this key, we are considering documented corridors as that where Indiana bats and/or NLEB have actually been captured and tracked to using (1) radio telemetry; or (2) treed corridors located directly between documented roosting and foraging habitat.

No

13. Will the removal or trimming of habitat or trees occur **within** suitable but **undocumented Indiana bat** roosting/foraging habitat or travel corridors?

Yes

14. What time of year will the removal or trimming of habitat or trees **within** suitable but **undocumented Indiana bat** roosting/foraging habitat or travel corridors occur^[1]?

[1] Coordinate with the local Service Field Office for appropriate dates.

B) During the inactive season

15. Does the project include activities **within documented NLEB habitat**^{[1][2]}?

[1] Documented roosting or foraging habitat – for the purposes of this consultation, we are considering documented habitat as that where Indiana bats and/or NLEB have actually been captured and tracked using (1) radio telemetry to roosts; (2) radio telemetry triangulation/triangulation to estimate foraging areas; or (3) foraging areas with repeated use documented using acoustics. Documented roosting habitat is also considered as suitable summer habitat within 0.25 miles of documented roosts.)

[2] For the purposes of this key, we are considering documented corridors as that where Indiana bats and/or NLEB have actually been captured and tracked to using (1) radio telemetry; or (2) treed corridors located directly between documented roosting and foraging habitat.

No

16. Will the removal or trimming of habitat or trees occur **within** suitable but **undocumented NLEB** roosting/foraging habitat or travel corridors?

Yes

17. What time of year will the removal or trimming of habitat or trees **within** suitable but **undocumented NLEB** roosting/foraging habitat or travel corridors occur?

B) During the inactive season

18. Will *any* tree trimming or removal occur **within** 100 feet of existing road/rail surfaces?

Yes

19. Will *any* tree trimming or removal occur **between** 100-300 feet of existing road/rail surfaces?

No

20. Are *all* trees that are being removed clearly demarcated?
Yes
21. Will the removal of habitat or the removal/trimming of trees include installing new or replacing existing **permanent** lighting?
Yes
22. Does the project include wetland or stream protection activities associated with compensatory wetland mitigation?
No
23. Does the project include slash pile burning?
No
24. Does the project include *any* bridge removal, replacement, and/or maintenance activities (e.g., any bridge repair, retrofit, maintenance, and/or rehabilitation work)?
No
25. Does the project include the removal, replacement, and/or maintenance of *any* structure other than a bridge? (e.g., rest areas, offices, sheds, outbuildings, barns, parking garages, etc.)
No
26. Will the project involve the use of **temporary** lighting *during* the active season?
Yes
27. Is there *any* suitable habitat **within** 1,000 feet of the location(s) where **temporary** lighting will be used?
Yes
28. Will the project install *any* new or replace any existing **permanent** lighting in addition to the lighting already indicated for habitat removal (including the removal or trimming of trees) or bridge/structure removal, replacement or maintenance activities?
Yes
29. Is there *any* suitable habitat **within** 1,000 feet of the location(s) where **permanent** lighting (other than the lighting already indicated for habitat removal (including the removal or trimming of trees) or bridge/structure removal, replacement or maintenance activities) will be installed or replaced?
Yes
30. Does the project include percussives or other activities (**not including tree removal/trimming or bridge/structure work**) that will increase noise levels above existing traffic/background levels?
Yes

31. Will the activities that use percussives (**not including tree removal/trimming or bridge/structure work**) and/or increase noise levels above existing traffic/background levels be conducted *during* the active season^[1]?

[1] Coordinate with the local Service Field Office for appropriate dates.

Yes

32. Will *any* activities that use percussives (**not including tree removal/trimming or bridge/structure work**) and/or increase noise levels above existing traffic/background levels be conducted *during* the inactive season^[1]?

[1] Coordinate with the local Service Field Office for appropriate dates.

Yes

33. Are *all* project activities that are **not associated with** habitat removal, tree removal/trimming, bridge and/or structure activities, temporary or permanent lighting, or use of percussives, limited to actions that DO NOT cause any additional stressors to the bat species?

Examples: lining roadways, unlighted signage, rail road crossing signals, signal lighting, and minor road repair such as asphalt fill of potholes, etc.

Yes

34. Will the project raise the road profile **above the tree canopy**?

No

35. Are the project activities that use percussives (not including tree removal/trimming or bridge/structure work) consistent with a Not Likely to Adversely Affect determination in this key?

Automatically answered

Yes, because the activities are within 300 feet of the existing road/rail surface, greater than 0.5 miles from a hibernacula, and conducted during the active season within undocumented habitat.

36. Are the project activities that use percussives (not including tree removal/trimming or bridge/structure work) and/or increase noise levels above existing traffic/background levels consistent with a No Effect determination in this key?

Automatically answered

Yes, because the activities are within 300 feet of the existing road/rail surface, greater than 0.5 miles from a hibernacula, and conducted during the inactive season

37. Is the habitat removal portion of this project consistent with a Not Likely to Adversely Affect determination in this key?

Automatically answered

Yes, because the tree removal/trimming that occurs outside of the Indiana bat's active season occurs greater than 0.5 miles from the nearest hibernaculum, is less than 100 feet from the existing road/rail surface, includes clear demarcation of the trees that are to be removed, and does not alter documented roosts and/or surrounding summer habitat within 0.25 miles of a documented roost.

38. Is the habitat removal portion of this project consistent with a Not Likely to Adversely Affect determination in this key?

Automatically answered

Yes, because the tree removal/trimming that occurs outside of the NLEB's active season occurs greater than 0.5 miles from the nearest hibernaculum, is less than 100 feet from the existing road/rail surface, includes clear demarcation of the trees that are to be removed, and does not alter documented roosts and/or surrounding summer habitat within 0.25 miles of a documented roost.

39. **General AMM 1**

Will the project ensure *all* operators, employees, and contractors working in areas of known or presumed bat habitat are aware of *all* FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable Avoidance and Minimization Measures?

Yes

40. **Tree Removal AMM 1**

Can *all* phases/aspects of the project (e.g., temporary work areas, alignments) be modified, to the extent practicable, to avoid tree removal^[1] in excess of what is required to implement the project safely?

Note: Tree Removal AMM 1 is a minimization measure, the full implementation of which may not always be practicable. Projects may still be NLAA as long as Tree Removal AMMs 2, 3, and 4 are implemented and LAA as long as Tree Removal AMMs 3, 5, 6, and 7 are implemented.

[1] The word "trees" as used in the AMMs refers to trees that are suitable habitat for each species within their range. See the USFWS' current summer survey guidance for our latest definitions of suitable habitat.

Yes

41. **Tree Removal AMM 3**

Can tree removal be limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits)?

Yes

42. Tree Removal AMM 4

Can the project avoid cutting down/removal of *all* (1) **documented**^[1] Indiana bat or NLEB roosts^[2] (that are still suitable for roosting), (2) trees **within** 0.25 miles of roosts, and (3) documented foraging habitat any time of year?

[1] The word documented means habitat where bats have actually been captured and/or tracked.

[2] Documented roosting or foraging habitat – for the purposes of this consultation, we are considering documented habitat as that where Indiana bats and/or NLEB have actually been captured and tracked using (1) radio telemetry to roosts; (2) radio telemetry biangulation/triangulation to estimate foraging areas; or (3) foraging areas with repeated use documented using acoustics. Documented roosting habitat is also considered as suitable summer habitat within 0.25 miles of documented roosts.)

Yes

43. Lighting AMM 2

Does the lead agency use the BUG (Backlight, Uplight, and Glare) system developed by the Illuminating Engineering Society^{[1][2]} to rate the amount of light emitted in unwanted directions?

[1] Refer to [Fundamentals of Lighting - BUG Ratings](#)

[2] Refer to [The BUG System—A New Way To Control Stray Light](#)

Yes

44. Lighting AMM 2

Will the **permanent** lighting used during removal of suitable habitat and/or the removal/trimming of trees within suitable habitat be designed to be as close to 0 for all three BUG ratings as possible, with a priority of "uplight" of 0 and "backlight" as low as practicable?

Yes

45. Lighting AMM 1

Will *all* **temporary** lighting be directed away from suitable habitat during the active season?

Yes

46. Lighting AMM 2

Does the lead agency use the BUG (Backlight, Uplight, and Glare) system developed by the Illuminating Engineering Society^{[1][2]} to rate the amount of light emitted in unwanted directions?

[1] Refer to [Fundamentals of Lighting - BUG Ratings](#)

[2] Refer to [The BUG System—A New Way To Control Stray Light](#)

Yes

47. **Lighting AMM 2**

Will the **permanent** lighting (other than any lighting already indicated for tree clearing or bridge/structure removal, replacement or maintenance activities) be designed to be as close to 0 for all three BUG ratings as possible, with a priority of "uplight" of 0 and "backlight" as low as practicable?

Yes

Project Questionnaire

1. Have you made a No Effect determination for *all* other species indicated on the FWS IPaC generated species list?

No

2. Have you made a May Affect determination for *any* other species on the FWS IPaC generated species list?

Yes

3. How many acres^[1] of trees are proposed for removal between 0-100 feet of the existing road/rail surface?

[1] If described as number of trees, multiply by 0.09 to convert to acreage and enter that number.

0.16

Avoidance And Minimization Measures (AMMs)

This determination key result includes the commitment to implement the following Avoidance and Minimization Measures (AMMs):

LIGHTING AMM 1

Direct temporary lighting away from suitable habitat during the active season.

TREE REMOVAL AMM 2

Apply time of year restrictions for tree removal when bats are not likely to be present, or limit tree removal to 10 or fewer trees per project at any time of year within 100 feet of existing road/rail surface and **outside of documented** roosting/foraging habitat or travel corridors; visual emergence survey must be conducted with no bats observed.

LIGHTING AMM 2

When installing new or replacing existing permanent lights, use downward-facing, full cut-off lens lights (with same intensity or less for replacement lighting); or for those transportation agencies using the BUG system developed by the Illuminating Engineering Society, be as close to 0 for all three ratings with a priority of "uplight" of 0 and "backlight" as low as practicable.

TREE REMOVAL AMM 3

Ensure tree removal is limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits).

TREE REMOVAL AMM 4

Do not remove **documented** Indiana bat or NLEB roosts that are still suitable for roosting, or trees within 0.25 miles of roosts, or **documented** foraging habitat any time of year.

GENERAL AMM 1

Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable AMMs.

TREE REMOVAL AMM 1

Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to avoid tree removal.

Determination Key Description: FHWA, FRA, FTA Programmatic Consultation For Transportation Projects Affecting NLEB Or Indiana Bat

This key was last updated in IPaC on April 22, 2021. Keys are subject to periodic revision.

This decision key is intended for projects/activities funded or authorized by the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), and/or Federal Transit Administration (FTA), which may require consultation with the U.S. Fish and Wildlife Service (Service) under Section 7 of the Endangered Species Act (ESA) for the endangered **Indiana bat** (*Myotis sodalis*) and the threatened **Northern long-eared bat** (NLEB) (*Myotis septentrionalis*).

This decision key should only be used to verify project applicability with the Service's [February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects](#). The programmatic biological opinion covers limited transportation activities that may affect either bat species, and addresses situations that are both likely and not likely to adversely affect either bat species. This decision key will assist in identifying the effect of a specific project/activity and applicability of the programmatic consultation. The programmatic biological opinion is not intended to cover all types of transportation actions. Activities outside the scope of the programmatic biological opinion, or that may affect ESA-listed species other than the Indiana bat or NLEB, or any designated critical habitat, may require additional ESA Section 7 consultation.

Categorical Exclusion

Appendix D

**Section 106 of the National Historic
Preservation Act (NHPA)**

SR 46 Pavement Replacement Project

Greensburg, Decatur County, Indiana

INDOT Des. Nos.: 1800255 and 1800256

Indiana DHPA No.: 25043



06/18/2022

Section 106, 800.11(e) Documentation

Prepared for:

The Federal Highway Administration
and Seymour District, Indiana
Department of Transportation

Prepared by:

Handwritten signature of Kyle J. Boot in black ink.

Kyle J. Boot
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**FEDERAL HIGHWAY ADMINISTRATION'S
SECTION 4(F) COMPLIANCE REQUIREMENTS (for historic properties) AND
SECTION 106 FINDINGS AND DETERMINATIONS
AREA OF POTENTIAL EFFECT
ELIGIBILITY DETERMINATIONS
EFFECT FINDING
SR 46 Pavement Replacement Project
DES. NOS.: 1800255 and 1800256
DHPA NO.: 25043**

**AREA OF POTENTIAL EFFECTS
(Pursuant to 36 CFR Section 800.4(a)(1))**

The Area of Potential Effects (APE) for this project is a discontinuous, irregular polygon. The APE extends one property from the project area (approximately 200 feet from either side of the road centerline). Please see Appendix A for maps of the APE. The Archaeological APE is defined by the approximately 21 acres of new, temporary, and existing right-of-way investigated for the presence of archaeological deposits.

**ELIGIBILITY DETERMINATIONS
(Pursuant to 36 CFR 800.4(c)(2))**

As a result of the identification and evaluation efforts for this project, three properties are identified as listed in, eligible for, or potentially eligible for listing in the National Register of Historic Places (NRHP) within the APE for this undertaking.

Greensburg Downtown Historic District (NR # 1261)

The Greensburg Downtown Historic District is centered on the Decatur County Courthouse square and extends approximately one block north, south, and east, and one-half block west in the City of Greensburg, Indiana. The Greensburg Downtown Historic District was listed in the NRHP in 1995 for significance under Criterion A in the areas of Commerce and Politics/Government and under Criterion C for Architecture.

Charles Zoller House (NR # 0308)

The Charles Zoller House is located south of SR 46 (Main Street) and west of Gas Creek in the City of Greensburg, Indiana; it occupies approximately 2.5 acres. The Neo-Jacobean style house was listed in the Indiana Register of Historic Sites and Structures (State Register) in 1980 for significance under Criterion A in the area of Exploration/Settlement and under Criterion C for Architecture.

Greensburg Eastside Residential Historic District (IHSSI # 031-252-23001 - 068)

The Greensburg Eastside Residential Historic District incorporates the houses along SR 46 (Main Street) and Washington Street from Lincoln Street east to Stewart Street, and continues east along Main Street and the south side of Washington Street to Warren Street in the City of Greensburg, Indiana. The Greensburg Residential Historic District is eligible for listing in the NRHP for significance under Criterion A in the area of Community Planning and Development and under Criterion C for Architecture.

EFFECT FINDING

(Pursuant to 36 CFR Section 800.5(c))

Greensburg Downtown Historic District - No Adverse Effect

Charles Zoller House - No Adverse Effect

Greensburg Eastside Residential Historic District - Adverse Effect

The Federal Highway Administration (FHWA) has determined an “Adverse Effect” finding is appropriate for this undertaking.

FHWA respectfully requests the Indiana State Historic Preservation Officer provide written concurrence with the Section 106 determination of effect for each property and the project’s overall effect finding.

SECTION 4(F) COMPLIANCE REQUIREMENTS (for historic properties)

Greensburg Downtown Historic District (NR # 1261) – This undertaking will not convert property from the Greensburg Downtown Historic District, a Section 4(f) historic property, to a transportation use; FHWA has determined the appropriate Section 106 finding is “No Adverse

Effect"; therefore, no Section 4(f) evaluation is required for the Greensburg Downtown Historic District.

Charles Zoller House (NR # 0308) – This undertaking will temporarily occupy land from the Charles Zoller House, a Section 4(f) historic property. FHWA has determined the appropriate Section 106 finding is "No Adverse Effect". FHWA believes that the temporary occupancy will not constitute a Section 4(f) use because all of the conditions listed in 23 CFR 774.13(d) are satisfied:

1. Duration must be temporary, i.e., less than the time needed for construction of the project, and there should be no change in ownership of the land;
2. Scope of the work must be minor, i.e., both the nature and the magnitude of the changes to the Section 4(f) property are minimal;
3. There are no anticipated permanent adverse physical impacts, nor will there be interference with the protected activities, features, or attributes of the property, on either a temporary or permanent basis;
4. The land being used must be fully restored, i.e., the property must be returned to a condition which is at least as good as that which existed prior to the project; and
5. There must be documented agreement of the official(s) with jurisdiction over the Section 4(f) resource regarding the above conditions.

The fulfillment of conditions 1-4 are detailed in Section 4 of the attached documentation, "Describe the Undertaking's Effects on Historic Properties." With regard to condition 5, FHWA respectfully requests the Indiana State Historic Preservation Officer provide written concurrence that they are in agreement that the above criteria have been met and that the impacts to the Charles Zoller House constitute a temporary occupancy.

Greensburg Eastside Residential Historic District (IHSSI # 031-252-23001 - 068) – This undertaking will temporarily occupy land from the Greensburg Eastside Residential Historic District, a Section 4(f) historic property. FHWA has determined the appropriate Section 106 finding is "Adverse Effect". FHWA believes that the temporary occupancy will not constitute a Section 4(f) use because all of the conditions listed in 23 CFR 774.13(d) are satisfied:

1. Duration must be temporary, i.e., less than the time needed for construction of the project, and there should be no change in ownership of the land;
2. Scope of the work must be minor, i.e., both the nature and the magnitude of the changes to the Section 4(f) property are minimal;
3. There are no anticipated permanent adverse physical impacts, nor will there be interference with the protected activities, features, or attributes of the property, on either a temporary or permanent basis;
4. The land being used must be fully restored, i.e., the property must be returned to a condition which is at least as good as that which existed prior to the project; and
5. There must be documented agreement of the official(s) with jurisdiction over the Section 4(f) resource regarding the above conditions.

The fulfillment of conditions 1-4 are detailed in Section 4 of the attached documentation, “Describe the Undertaking’s Effects on Historic Properties.” With regard to condition 5, FHWA respectfully requests the Indiana State Historic Preservation Officer provide written concurrence that they are in agreement that the above criteria have been met and that the impacts to the Greensburg Eastside Residential Historic District constitute a temporary occupancy.

Erica
Tait

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by Erica Tait
Date: 2022.07.20
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For: Jermaine R. Hannon
Division Administrator
FHWA-IN Division

July 20, 2022

Approved Date

**FEDERAL HIGHWAY ADMINISTRATION
DOCUMENTATION OF SECTION 106 FINDING OF
ADVERSE EFFECT
SUBMITTED TO THE STATE HISTORIC PRESERVATION OFFICER
PURSUANT TO 36 CFR Section 800.6(a)(3)
SR 46 Pavement Replacement Project
DES. NOS.: 1800255 & 1800256
DHPA NO.: 25043**

1. DESCRIPTION OF THE UNDERTAKING

The Indiana Department of Transportation (INDOT), with funding from the Federal Highway Administration (FHWA), proposes to proceed with the SR 46 Pavement Replacement project, Des. Nos. 1800255 & 1800256 in Greensburg, Decatur County, Indiana. Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effects of their undertakings on historic properties.

The proposed undertaking is on SR 46 from the east junction with SR 3 through the west junction with US 421, approximately 1.8 miles in length; and from the east junction with US 421 to approximately 0.8 mile east of the east junction with US 421 in Greensburg, Decatur County, Indiana. It is within Washington Township, on the *Forest Hill, IN* and *Greenburg, IN* USGS topographic quadrangles, in Township 10 North, Range 9 East, sections 1-3, 9-12. Overall, the project area setting is urban; land use adjacent to the project is residential and commercial. Please see project graphics in Appendices A, B, and F.

The need for these projects is based on the existing pavement deterioration, insufficient drainage, and lack of Americans with Disabilities Act (ADA)-compliant pedestrian facilities. The pavement failure is exhibited by traverse cracking, rutting, wheel path fatigue cracking, previous patching, and isolated areas with potholes. Water regularly ponds along the project area and contributes to the poor pavement conditions. The pedestrian facilities do not meet current ADA standards. The purpose of these projects is to add service life to the pavement, improve the overall pavement condition, remove ponding water to further improve pavement life, and upgrade pedestrian facilities to current ADA compliance standards.

The proposed alternative for these projects would involve replacing the existing pavement, replacing the curbs and gutters, installing new storm sewer inlets and lines, and replacing/extending pedestrian facilities. The proposed alternative meets the purpose and the need because it extends the service life of the roadway, addresses water ponding issues, and provides ADA-compliant pedestrian facilities. Please see maps of the project area in Appendix A and preliminary plans in Appendix F.

Des. No. 1800255 (West of US 421): The proposed alternative from the western limits (SR 3) to the railroad crossing, approximately 1.3 miles, recommends hot mix asphalt (HMA) preventative maintenance milling (1.5 inches) and overlay (including shoulders), with partial and full-depth patching at selected locations. From the railroad crossing through the west junction with US 421—

approximately 0.5 mile – the recommended alternative involves full-depth reconstruction at or near the existing grade. The recommended typical section is two (2) 12-foot lanes with a curb and gutter. Additional work will include: 1) replacing the curb and gutters (moving in slightly to reduce the overall pavement width); 2) replacing the storm sewer and installing new inlets; 3) replacing all curb ramps to current ADA standards; 4) replacing existing sidewalks and adding sidewalks to current gaps; 5) regrading and reconstructing driveway approaches as necessary; 6) removing four trees in the grass buffer (lawn between the back of curb and sidewalk, the trees are not adjacent to any historic resources); and 7) installing streetlights and replacing the water main (funded by the City of Greensburg). Additionally, the intersection at the west junction of SR 46 and US 421 (locally known as Main Street and Ireland Street) will be reconstructed. The intersection work includes new storm sewer and inlets, improved turning radii of the northeast quadrant (moving the new curb to roughly the back of the existing sidewalk), adjusting the signal pole locations, and replacing curb ramps to current ADA standards.

Des. No. 1800256 (East of US 421): The proposed alternative from the western limits (east junction with US 421) to the Greensburg Public Library recommends a full-depth pavement replacement and some reduction to the pavement widths. From the library to the eastern project limits, HMA preventative maintenance overlay is recommended. The recommended typical section is two (2) 12-foot-wide travel lanes (and some 8-foot-wide parking lanes) with a curb and gutter. Additional work will include: 1) replacing the curb and gutters; 2) replacing the storm sewer and installing new inlets; 3) reconstructing curb ramps to current ADA standards; 4) reconstructing sidewalks along the south side (perpetuating 5-foot-wide concrete sidewalks) and expanding sidewalks to a multi-use path along the north side (8-foot-wide concrete path between Lincoln St. and Warren St., and 10-foot-wide asphalt path east of Warren St.); 5) extending the sidewalk (on the northside) in front of the Greensburg Public Library to Washington Street; 6) replacing walkway approaches between the sidewalk and curb line; 7) regrading driveway approaches; 8) removing trees in the grass buffer (lawn between the back of curb and sidewalk); 9) replanting trees between the road and multi-use path; and 10) installing new streetlights (matching those recently installed on Lincoln Street), funded by the City of Greensburg.

The project is anticipated to be let in 2024. Approximately 2.16 acres of permanent and 2.15 acres of temporary right-of-way is anticipated (including reacquisition). Access to residences and businesses along SR 46 will be continuously maintained during construction. At this time, it is anticipated that the road will need to be closed due to the extent of watermain, sanitary, and storm sewer being replaced in the project area.

Per 36 CFR 800.16(d), the Area of Potential Effects (APE) is “the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties. The APE is influenced by the scale and nature of an undertaking...” The APE encompasses the entire project site, including all locations where the project may result in disturbance of the ground, all locations from which ground-disturbing elements of the project may be visible or audible, all locations where ground-disturbing activity may result in changes in traffic patterns, land use, or public access, and all areas where there may be direct or indirect effects due to the ground-disturbing elements of the project. The APE for this project is a discontinuous, irregular polygon. The APE boundaries were established using the guidance in the *INDOT Cultural Resources Manual*. The APE extends one property from the project area (approximately 200 feet

from either side of the road centerline). Please see Appendix A for maps of the APE. The Archaeological APE is defined by the approximately 21 acres of new, temporary, and existing right-of-way investigated for the presence of archaeological deposits.

2. EFFORTS TO IDENTIFY HISTORIC PROPERTIES

The National Register of Historic Places (NRHP) and the Indiana Register of Historic Sites and Structures (State Register) were checked using the State Historic Architectural and Archaeological Research Database (SHAARD) and the Indiana Historic Buildings, Bridges, and Cemeteries Map (IHBBCM). One resource within the APE is listed in the NRHP: Greensburg Downtown Historic District (NR-1261). Within the APE, one resource is listed on the State Register: Charles Zoller House (NR-0308). The Indiana Historic Sites and Structures Inventory (IHSSI) *Decatur County Interim Report* (1999) identifies 60 previously-surveyed properties within the APE, including the Greensburg Eastside Residential Historic District (IHSSI # 031-252-23001 – 068). The *Indiana Historic Bridge Inventory Volume 2: Listing of Historic and Non-Historic Bridges* (Mead and Hunt, 2009) lists one bridge (Bridge No. 046-16-00945; NBI 17400) within the project area, and recommends it as not eligible for listing in the NRHP. The cemetery registry was also consulted using SHAARD and IHBBCM. No cemeteries were identified within the APE.

Early coordination for this project was initiated on February 12, 2020. The agencies/individuals/Tribes listed below were sent an email with an early coordination letter inviting them to become Section 106 consulting parties. All consulting parties were invited to view the early coordination letter on IN SCOPE (INDOT's online portal for public viewing Section 106 documents at http://erms.indot.in.gov/Section_106Documents/). In addition, a hard copy of the early coordination letter was mailed to the Indiana State Historic Preservation Office (SHPO). The organizations identified in bold responded and agreed to be consulting parties during the Section 106 process. Please see Appendix C for a table of consulting parties and Appendix D for correspondence.

1. **Chad Slider, for Indiana State Historic Preservation Officer (SHPO)**
2. **Michael Flowers (and later Brittany Miller), Indiana Landmarks Eastern Regional Office**
3. Judy Rust, Decatur County Alliance for Preservation
4. Terrah Nunley, Main Street Greensburg
5. Russell Wilhoit, Decatur County Historian
6. Charity Mitchell, Greensburg-Decatur County Public Library / Decatur County History Blog
7. Carrie Shumaker, Historical Society of Decatur County
8. Jerome Buening, Decatur County Commissioner
9. Rick Nobbe and Chuck Emsweller, Decatur County Commissioner
10. Mark Koors, Decatur County Commissioner
11. Andrew Scholle, Decatur County Surveyor
12. Mark Mohr and Andrew Scholle, Decatur County Surveyor
13. Ronald L. May, P.E., Greensburg City Engineer
14. **Joshua Marsh, Greensburg Mayor**

15. Mark Klosterkemper, Greensburg Street Commissioner
16. Kathy Reynolds, Greensburg Historic Preservation Commission
17. Kevin Fleetwood, Greensburg City Council
18. Vietta McKenzie, Greensburg City Council
19. Jaime Cain, Greensburg City Council
20. Darrell Poling, Greensburg City Council
21. Darren Covington, Greensburg City Council
22. Jose & Shirley Pastagal, Property Owners of the Charles Zoller House, 345 E Main Street, Greensburg, IN 47240
- 23. Eastern Shawnee Tribe of Oklahoma**
- 24. Miami Tribe of Oklahoma**
- 25. Peoria Tribe of Indians of Oklahoma**
26. Pokagon Band of Potawatomi Indians
27. Delaware Tribe of Indians, Oklahoma

In an email dated February 14, 2020, Joshua Marsh, the Mayor of The City of Greensburg, accepted the consulting party invitation. Additionally, Mayor Marsh requested the inclusion of Sarah Hamer, the Building Commissioner, and the Historical Preservation Committee Chair, in future coordination regarding this project. Ms. Hamer was added to the list of consulting parties during with the report distribution letter dated February 18, 2021.

In a letter dated March 12, 2020, Diane Hunter, on behalf of the Miami Tribe of Oklahoma, accepted the consulting party invitation.

In a letter dated March 13, 2020, the Indiana SHPO staff indicated that if right-of-way is likely to be taken from a potentially historic property, they advised inviting the owner of that property as soon as possible. Therefore, the property owners of the Charles Zoller House were mailed the coordination letter and the HPR on February 18, 2021. They were asked to review the early coordination letter on IN SCOPE and invited to become a consulting party. Additionally, the SHPO staff noted the SR 46 Pavement Replacement Project (Des. Nos. 1800255 & 1800256) overlaps with the current SR 46 over Gas Creek Culvert Project (Des. No. 1400150) and requested that any limestone curbs within a listed or eligible historic district be evaluated in the HPR.

A HPR (Boot/ Moscato, February 17, 2021) was completed for this project. Please see Appendix E for an excerpt from the HPR. The full HPR can be downloaded from IN SCOPE. On February 11, 2020, the Qualified Professional (QP) staff at RQAW Corporation performed a site inspection of the APE. The QP architectural historians walked and drove through the project area within the APE and photographed all resources that will be 50 years of age or older at the anticipated letting date (2024). As a result of this field survey and associated documentary research, RQAW's historians recommended one (1) resource as eligible for listing in the NRHP: Greensburg Eastside Residential Historic District (IHSSI # 031-252-23001 – 068). Additionally, the HPR identified the Greensburg Downtown Historic District (NRHP-listed, NR-1261) and the Charles Zoller House (Indiana Register of Historic Sites and Structures-listed and previously determined NRHP-eligible, NR-0308), resulting in three (3) NRHP-listed/eligible resources within the APE.

An archaeology report (Phase Ia Archaeological Reconnaissance) was completed by Cultural Resource Analysts, Inc. (CRA) (Harth, 12/18/2020). The tribes (listed above) were invited to review the report via IN SCOPE while a hard copy was sent to the Indiana SHPO on February 18, 2021. Please see Appendix E for an excerpt from the archaeology report.

On February 18, 2021, a hard copy of the report distribution letter and the HPR were mailed to the Indiana SHPO and the property owners of the Charles Zoller House, while other consulting parties were informed via email that the coordination letter, HPR, and archaeology report (Tribes only) could be viewed electronically by accessing IN SCOPE. Furthermore, the report distribution letter invited additional consulting parties to participate in the Section 106 process. These agencies/individuals/Tribes include Sarah Hamer (Building Commissioner and former Greensburg Historic Preservation Commission), Jim Grey (Historic Michigan Road), and the Shawnee Tribe.

In a letter dated March 22, 2021, the Indiana SHPO concurred with the APE and RQAW's assessment of properties listed in and eligible for listing in the NRHP within the APE stating,

For the purposes of the Section 106 review of this federal undertaking, we agree with the conclusions of the HPR that the Greensburg Downtown Historic District (NR-1261) is listed in the NRHP; the Charles Zoller House is listed in the Indiana Register of Historic Sites and Structures, and it is eligible for inclusion in the NRHP; and the Greensburg Eastside Residential Historic District is eligible for inclusion in the NRHP.

We note that the pavement portion of the undertaking is anticipated to overlap the Gas Creek Culvert Project (Des. No. 1400150), and limestone curbs that are a contributing feature to the Greensburg East Residential Historic District are within the project area... We would be particularly concerned with the protection and avoidance of impacts to the historic landscape features, such as mature trees, stone retaining walls, limestone curbs and brick sidewalks.

In the same letter dated March 22, 2021, the Indiana SHPO concurred with the archaeology review stating,

In regard to archaeology resources, based upon the submitted information and the documentation available to the staff of the Indiana SHPO, there is insufficient information regarding archaeological sites 12-Dec-1001, 12-Dec-1012, and 12-Dec-1013 . . . to determine whether they are eligible for inclusion in the NRHP. However, we concur with the opinion of the archaeologist, . . . that the portions of these sites that lie within the proposed project area do not appear to contain significant archaeological deposits, and that no further archaeological investigations appear necessary at the proposed project area. The portions of these sites that lie outside the proposed project area must either be avoided or subject to further archaeological investigations.

No other consulting parties provided comments/questions regarding the identification of historic properties. Please see Appendix D for all correspondence.

3. DESCRIBE AFFECTED HISTORIC PROPERTIES

A. Greensburg Downtown Historic District (NR # 1261)

The Greensburg Downtown Historic District is roughly bounded by W. North Street, Railroad Street, the alley between N. East and N. Lincoln streets, and the alley between N. Broadway and N. Jackson streets in the City of Greensburg. The Greensburg Downtown Historic District was listed in the NRHP in September 1995 for significance under Criterion A in the areas of Commerce and Politics/Government and Criterion C in the area of Architecture. The district is centered on the courthouse square and extends approximately one block north, south, and east, and one-half block west. It is primarily composed of one to three-story commercial and government buildings constructed between about 1854 and 1945. The district is representative of Greensburg's commercial development since the 1850s through its Italianate, Queen Anne, and Classical Revival architectural styles. While there are some gaps in the architectural fabric due to a fire in the mid-1950s and demolitions since the NRHP listing, the characteristics of the district that make it eligible remain intact.

B. Charles Zoller House (NR # 0308)

This property is located at 345 E. Main Street in the City of Greensburg. The NRHP nomination process was initiated in the 1970s for the 1883 Charles Zoller House but was not completed. After the NRHP nomination process was initiated, the property was listed in the State Register in 1980, for its significance under Criterion A in the area of Exploration/Settlement and Criterion C in the area of Architecture. The two-and-one-half-story Neo-Jacobean style house features locally made red brick construction with horizontal bands and blocks of grey limestone. A glazed tile pattern is set flush in the outer wall of the entry porch on the first floor. The house features an asymmetrical plan with gables, dormers, balconies. The form incorporates an irregular rectangle with projecting sections and bays. Several of the original porches and a balcony are missing. The original slate roof has also been replaced with asphalt shingles; however, the ornamental wood crestings over the gables, dormers, and balconies were retained. The property occupies approximately 2.5 acres located on the west side of Gas Creek, and 1.5 blocks from the Greensburg Downtown Historic District. The Charles Zoller House retains two contributing outbuildings: a carriage house and a spring house. Both buildings sit south of the house and retain original features such as wood windows and doors. In addition, landscape features include sections of limestone walls separated by two sets of limestone steps that lead up to the main entrance. Wrought iron handrails are set into the steps. These features contribute to the overall aesthetic of the historic property.

C. Greensburg Eastside Residential Historic District (IHSSI # 031-252-23001 - 068)

The Greensburg Eastside Residential Historic District is located east of downtown Greensburg. It incorporates the houses along Main Street and Washington Street from Lincoln Street east to Stewart Street and continues east along Main Street and the south

side of Washington Street to Warren Street. The district contains some of the earliest homes in Greensburg and is generally composed of residences constructed between c. 1860 and the 1940s. The district portrays stylistic change over time and exhibits both high-style architecture of Greensburg's wealthy citizens and middle-class vernacular styles that fill in the now-subdivided lots, accounting for Greensburg's continued growth. The district once featured a small stone arch structure that was previously surveyed through the analysis and documentation process for the *SR 46 Small Structure Replacement Project over Gas Creek* (Des. No. 1400150). The structure was extant in February 2020 during the field investigation but was removed during the construction of Des. No. 1400150. A stone bench and informational sign were constructed to mitigate the impacts of the structure's removal. In addition, there are noncontinuous sections of limestone curbs within the project area that likely date to the time when the road was originally paved during the late nineteenth century or early twentieth century. See the location of limestone features on the Photo Location Map in Appendix B. The limestone curbs are a character defining feature of the district and contribute to its overall aesthetic. Since the time of its initial survey through the IHSSI, the district's historic integrity has remained high.

4. DESCRIBE THE UNDERTAKING'S EFFECTS ON HISTORIC PROPERTIES

The three (3) above-mentioned properties listed in or eligible for listing in the NRHP within the APE are located along SR 46 (Main Street). Within the viewshed of these properties, the project is anticipated to include:

- Full-depth pavement replacement and some reduction to pavement widths with a recommended typical section of two (2) 12-foot wide travel lanes (and some 8-foot wide parking lanes) with a curb and gutter.
- Replacing the curb and gutters, storm sewer, and inlets.
- Reconstructing all curb ramps to current ADA standards and reconstructing sidewalks along the south side (perpetuating 5-foot-wide concrete sidewalks) and expanding sidewalks to a multi-use path along the north side (8-foot-wide concrete path between Lincoln St. and Warren St., and 10-foot-wide asphalt path east of Warren St.)
- Relacing walkway approaches between the sidewalk and curb line as well as regrading driveway approaches.
- Removing trees in the grass buffer (lawn between the back of curb and sidewalk).
- Replacing and installing additional streetlights (matching those recently installed on Lincoln Street).

Please see Appendix A for maps and Appendix F for relevant sheets from the current plan set with the NRHP-eligible resources highlighted.

A. Greensburg Downtown Historic District (NR # 1261)

Project impacts are limited to the southeast corner of the Greensburg Downtown Historic District historic property boundary. Near the Greensburg Downtown Historic District, the traffic signals at the intersection of SR 46 (Main Street) and East Street will be upgraded.

Additionally, the curb ramps, 5-foot-wide sidewalk, and curb and gutters in the northeast quadrant of that intersection will be replaced. The project will not require temporary or permanent right-of-way from the Greensburg Downtown Historic District.

The alterations adjacent to the historic resource boundary and visible changes (as described above) are not anticipated to reduce the property's significance or impact any of the characteristics that qualify the Greensburg Downtown Historic District for inclusion in the NRHP in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Therefore, the project is anticipated to have "No Adverse Effect" to the Greensburg Downtown Historic District.

B. Charles Zoller House (NR # 0308)

Project impacts are limited to the northern portion of the Charles Zoller House historic property boundary. Approximately 0.02 acre of temporary and 0.03 acre of permanent (reacquisition) right-of-way are anticipated from the Charles Zoller House historic property boundary for this project. Permanent right-of-way will be needed where the apparent/existing right-of-way extends into the SR 46 (Main Street) roadway so there will be no permanent conversion of the historic property to a transportation use. Temporary right-of-way will be needed for construction activities associated with sidewalk reconstruction, drive reconstruction, and grading. Specifically, within and adjacent to the Charles Zoller House boundaries, the project will include:

- Replacing the pavement at full depth on the existing alignment;
- Salvaging and resetting limestone curbs;
- Replacing storm sewer and installing new inlets;
- Replacing in-kind the sidewalk in its current location and maintaining landscape features behind the back of the sidewalk, such as the retaining walls and the steps; and
- Installing decorative light poles in the northwest and northeast corners of the historic property.

The alterations adjacent to the historic resource boundary and neighboring visible changes (as described above) are not anticipated to reduce the property's significance or impact any of the characteristics that qualify the Charles Zoller House for inclusion in the NRHP in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Therefore, the project is anticipated to have "No Adverse Effect" to the Charles Zoller House.

C. Greensburg Eastside Residential Historic District (IHSSI # 031-252-23001 - 068)

Project impacts are limited to the portions of the Greensburg Eastside Residential Historic District along SR 46 (Main Street) between Lincoln Street and Warren Street. Approximately 0.29 acre of temporary and 0.19 acre of permanent (reacquisition) right-of-way are anticipated from the Greensburg Eastside Residential Historic District boundary for this project. Permanent right-of-way will be needed where the apparent/existing right-

of-way extends into the SR 46 (Main Street) roadway so there will be no permanent conversion of the historic property to a transportation use. Temporary right-of-way will be needed for construction activities associated with drive reconstruction, sidewalk reconstruction, curb ramp replacement, and grading. Specifically, within the Greensburg Eastside Residential Historic District boundaries, the project will include:

- Replacing the pavement at full depth between Lincoln Street and Warren Street and reducing the pavement width in areas between Lincoln Street and approximately 150 feet east of Stewart Street. The following describes the pavement widths between Lincoln Street and Warren Street.
 - Between Lincoln Street and Lathrop Street, the westbound pavement will taper from approximately 22-feet wide to a single 12-foot-wide travel lane.
 - Between Lincoln Street and Lathrop Street, the eastbound pavement will be approximately 20-feet wide west of Poplar Street (allowing for an 8-foot-wide parking lane), and only 12-feet wide between Poplar Street and Lathrop Street (i.e. no parking lane which creates a bump out for a pedestrian crossing).
 - Between Lathrop Street and approximately 150 feet east of Stewart Street, the westbound pavement will be reduced to 12-feet wide (the curb line brought in approximately 10 feet).
 - Between Lathrop Street and approximately 40 feet west of Vine Street, the eastbound pavement will be 20-feet wide consisting of a 12-foot-wide travel lane and an 8-foot-wide parking lane.
 - Between approximately 40 feet west of Vine Street through Warren Street, the eastbound pavement will be 12-feet wide with the south curb line in approximately the same location as the existing.
 - From approximately 150 feet east of Stewart Street to Warren Street, the westbound pavement width will be 20-feet wide consisting of a 12-foot-wide travel lane and an 8-foot-wide parking lane.
- Removing limestone curbs and replacing them with concrete curb and gutter (except in front of the Wilderwood House (446 East Main Street) where salvaged limestone curbs will be reset;
- Replacing storm sewer and installing new inlets;
- Replacing the curb ramps;
- Replacing the sidewalk along the south side in its current location and with the same width (5 feet);
- Replacing the sidewalk along the north side with an 8-foot-wide concrete path. The north edge of the sidewalk will be perpetuated as the north edge of the path and will not move closer to the houses;
- Replacing walkway approaches between the sidewalk and curb line;
- Removing approximately 17 mature trees (consisting primarily of maples, a ginkgo, ornamental pears, and other species) and approximately eight (8) small hardwood and ornamental trees in the grass buffer along SR 46 (Main Street). Street trees will be replanted;