

Sec. 4, T-3-S, R-5-W  
Patoka Township  
Dubois County

**CONSTRUCTION SEQUENCE**

**PHASE 1**

1. Install maintenance of traffic signs and layout as shown in the plans. Close Southbound lane.
2. Construct proposed ditch improvements and shoulder widening adjacent to the Southbound lane.

**PHASE 2**

1. Install maintenance of traffic signs and layout as shown in the plans. Close Northbound lane.
2. Construct proposed driveway culvert and full depth shoulder widening adjacent to the Northbound lane.

**PHASE 3**

1. Install maintenance of traffic signs and traffic control devices for short term road closure in accordance with Std. Dwg. E-801-TCDV-07.
2. Construct proposed crossing structure and proposed pavement up to intermediate layer.
3. Perform all milling operations under short term road closure.
4. Install surface layer on all travel lanes.

TOTAL MAINTENANCE OF TRAFFIC QUANTITIES		
ITEM	UNIT	QUANTITY
Construction Sign, Type A	Each	31
Construction Sign, Type B	Each	6
Barricade, III-B	Lft	56

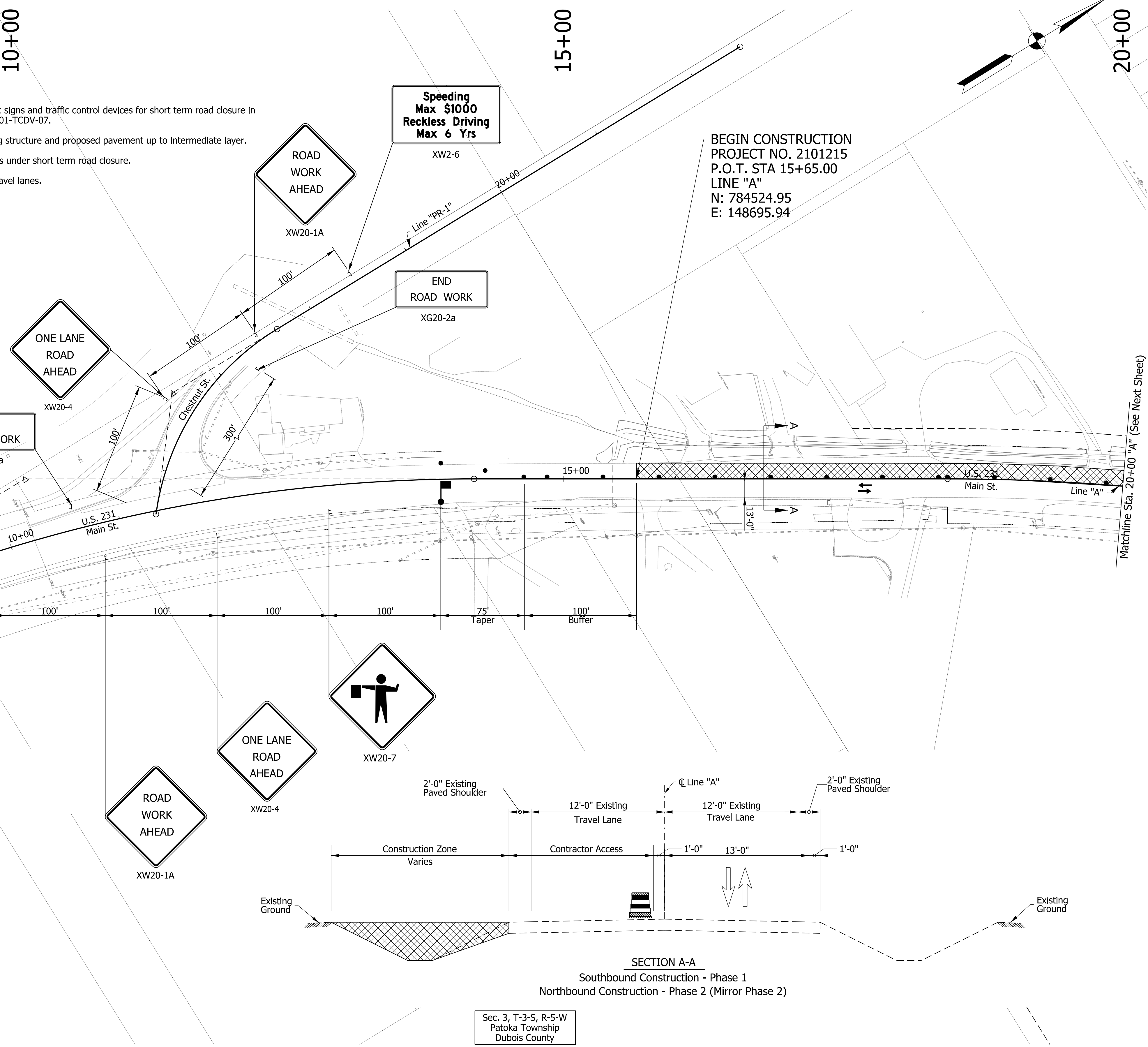
CONSTRUCTION SIGN SUMMARY TABLE			
SIGN DESCRIPTION/SIGN MESSAGE	SIGN TYPE	SIGN SIZE	QUANTITY
ROAD WORK AHEAD (XW20-1A)	A	48 x 48	6
ROAD CLOSED AHEAD (XW20-3)	A	48 x 48	6
ONE LANE ROAD AHEAD (XW20-4)	A	48 x 48	6
FLAGGER (XW20-7)	A	48 x 48	5
ADDED WORKSITE PENALTY (XW20-6)	A	60 x 36	6
END ROAD WORK (XW20-2A)	B	60 x 24	6
ROAD CLOSED TO THRU TRAFFIC (R11-2)	A	48 x 30	2

- LEGEND**
- Flagger
  - Construction Sign
  - Standard Drum
  - 25' Spa. Taper
  - 50' Spa. Tangent
  - 50' Spa. Horizontal Curve
  - Direction of Traffic
  - Construction Area

Construction Zone Design Speed Limit 40 mph  
Construction Clear Zone: 13'-0"

**Notes:**  
1. For Phase 2 Northbound Construction Mirror the Layout of Phase 1.  
2. Restore normal traffic operations during nighttime hours.

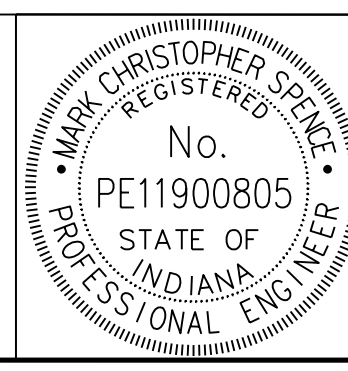
**Speeding  
Max \$1000  
Reckless Driving  
Max 6 Yrs**  
XW2-6



**SECTION A-A**  
Southbound Construction - Phase 1  
Northbound Construction - Phase 2 (Mirror Phase 1)

Sec. 3, T-3-S, R-5-W  
Patoka Township  
Dubois County

jshemanski  
 6/15/2022 10:57:18 am  
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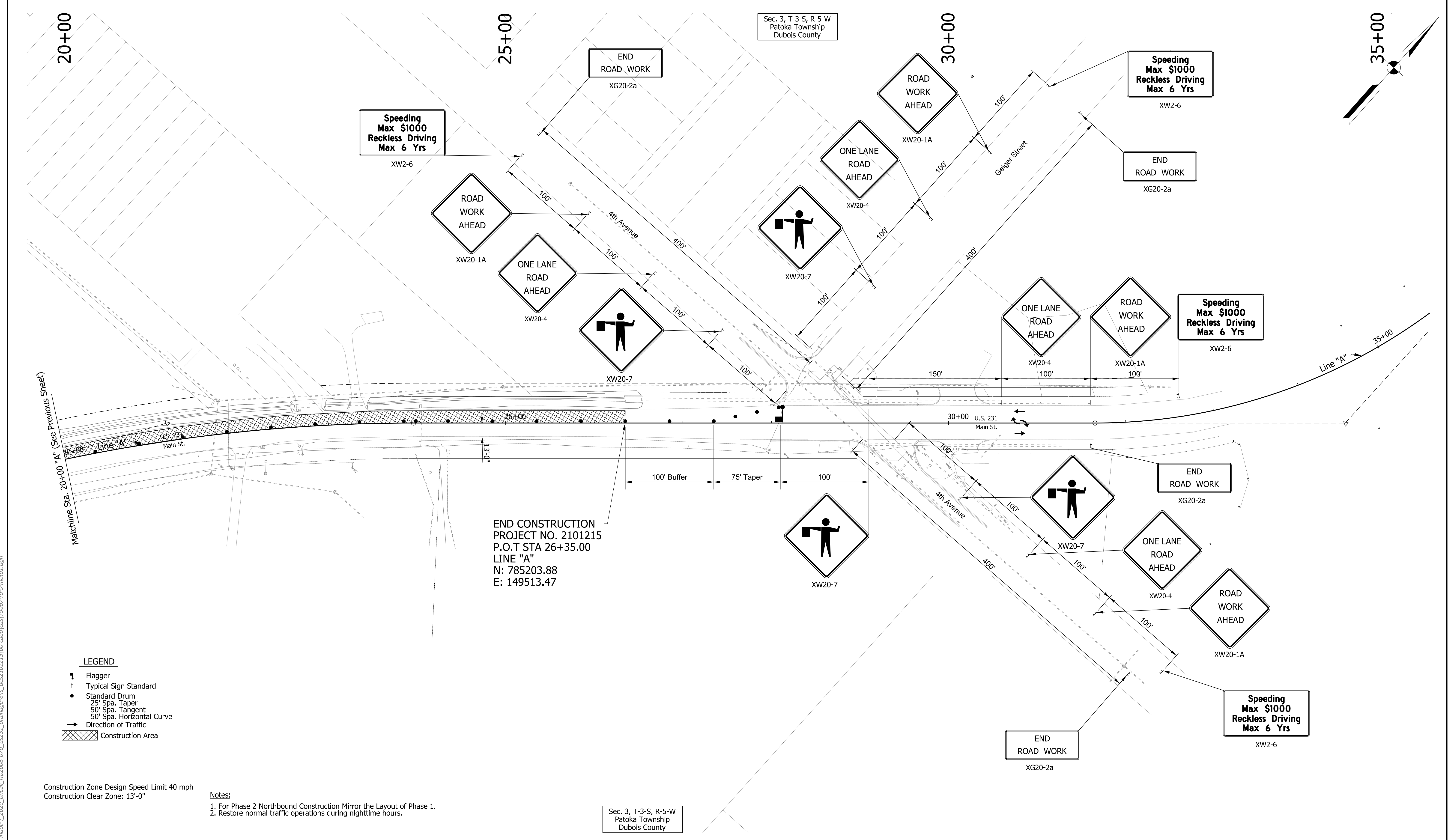


RECOMMENDED FOR APPROVAL	<i>Mark Spink</i>	DESIGN ENGINEER	DATE
			06-14-2022
DESIGNED:	JMB	DRAWN:	JMB
CHECKED:	MCS	CHECKED:	MCS

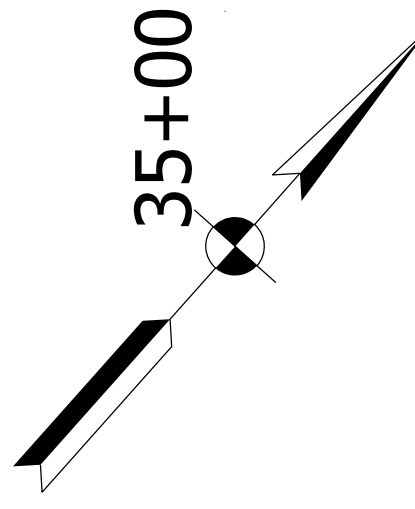
INDIANA  
DEPARTMENT OF TRANSPORTATION

**MAINTENANCE OF TRAFFIC  
PHASE 1 & 2**

HORIZONTAL SCALE	BRIDGE FILE
1"=50'	N/A
VERTICAL SCALE	DESIGNATION
N/A	2101215
SURVEY BOOK	SHEETS
ELECTRONIC	6 of 34
CONTRACT	PROJECT
R-4035	2101215



Sec. 3, T-3-S, R-5-W  
Patoka Township  
Dubois County



Matchline Sta. 20+00 "A" (See Previous Sheet)

END CONSTRUCTION  
PROJECT NO. 2101215  
P.O.T STA 26+35.00  
LINE "A"  
N: 785203.88  
E: 149513.47

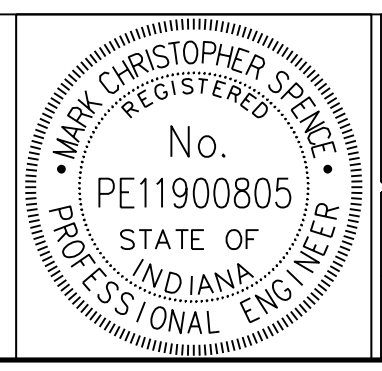
- LEGEND**
- Flagger
  - Typical Sign Standard
  - Standard Drum
  - ▬ 25' Spa. Taper
  - ▬ 50' Spa. Tangent
  - ▬ 50' Spa. Horizontal Curve
  - Direction of Traffic
  - ▨ Construction Area

Construction Zone Design Speed Limit 40 mph  
Construction Clear Zone: 13'-0"

- Notes:**
1. For Phase 2 Northbound Construction Mirror the Layout of Phase 1.
  2. Restore normal traffic operations during nighttime hours.

Sec. 3, T-3-S, R-5-W  
Patoka Township  
Dubois County

jshemanski  
6/15/2022 10:57:21 am  
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RECOMMENDED FOR APPROVAL	<i>Mark Spink</i>	DESIGN ENGINEER	06-14-2022	DATE
DESIGNED:	JMB	DRAWN:	JMB	
CHECKED:	MCS	CHECKED:	MCS	

INDIANA  
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC  
PHASE 1 & 2

HORIZONTAL SCALE	BRIDGE FILE
1"=50'	N/A
VERTICAL SCALE	DESIGNATION
N/A	2101215
SURVEY BOOK	SHEETS MOT-02
ELECTRONIC	7 of 34
CONTRACT	PROJECT
R-44035	2101215

Sec. 4, T-3-S, R-5-W  
Patoka Township  
Dubois County

**CONSTRUCTION SEQUENCE**

**PHASE 1**

1. Install maintenance of traffic signs and layout as shown in the plans. Close Southbound lane.
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2. Construct proposed crossing structure and proposed pavement up to intermediate layer.
3. Perform all milling operations under short term road closure.
4. Install surface layer on all travel lanes.

BEGIN CONSTRUCTION  
PROJECT NO. 2101215  
P.O.T. STA 15+65.00  
LINE "A"  
N: 784524.95  
E: 148695.94

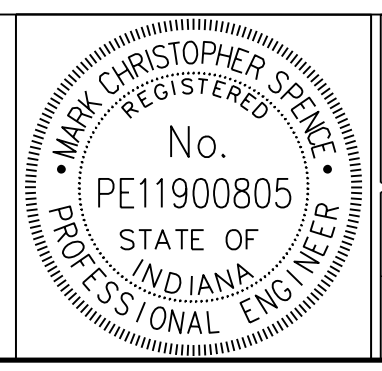
- LEGEND**
- ▬ Flagger
  - ▬ Construction Sign
  - ▬ Barricade, III-B
  - Standard Drum
  - 25' Spa. Taper
  - 50' Spa. Tangent
  - 50' Spa. Horizontal Curve
  - Direction of Traffic
  - ▨ Construction Area

Construction Zone Design Speed Limit 40 mph  
Construction Clear Zone: 13'-0"

- Notes:**
1. Maintain access to all driveways during road closure.
  2. US 231 shall be closed for a maximum of 2 days during weekend hours only.

Sec. 3, T-3-S, R-5-W  
Patoka Township  
Dubois County

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6/15/2022 10:57:30 am  
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file: \\indw001\289\projects\29067\ndot-v\_2020\_omcall\_rfp\2006\070\_us231\_drainage-64s\_des2101215100\_cadd\cadd\79067-nd-s-mod02.dgn



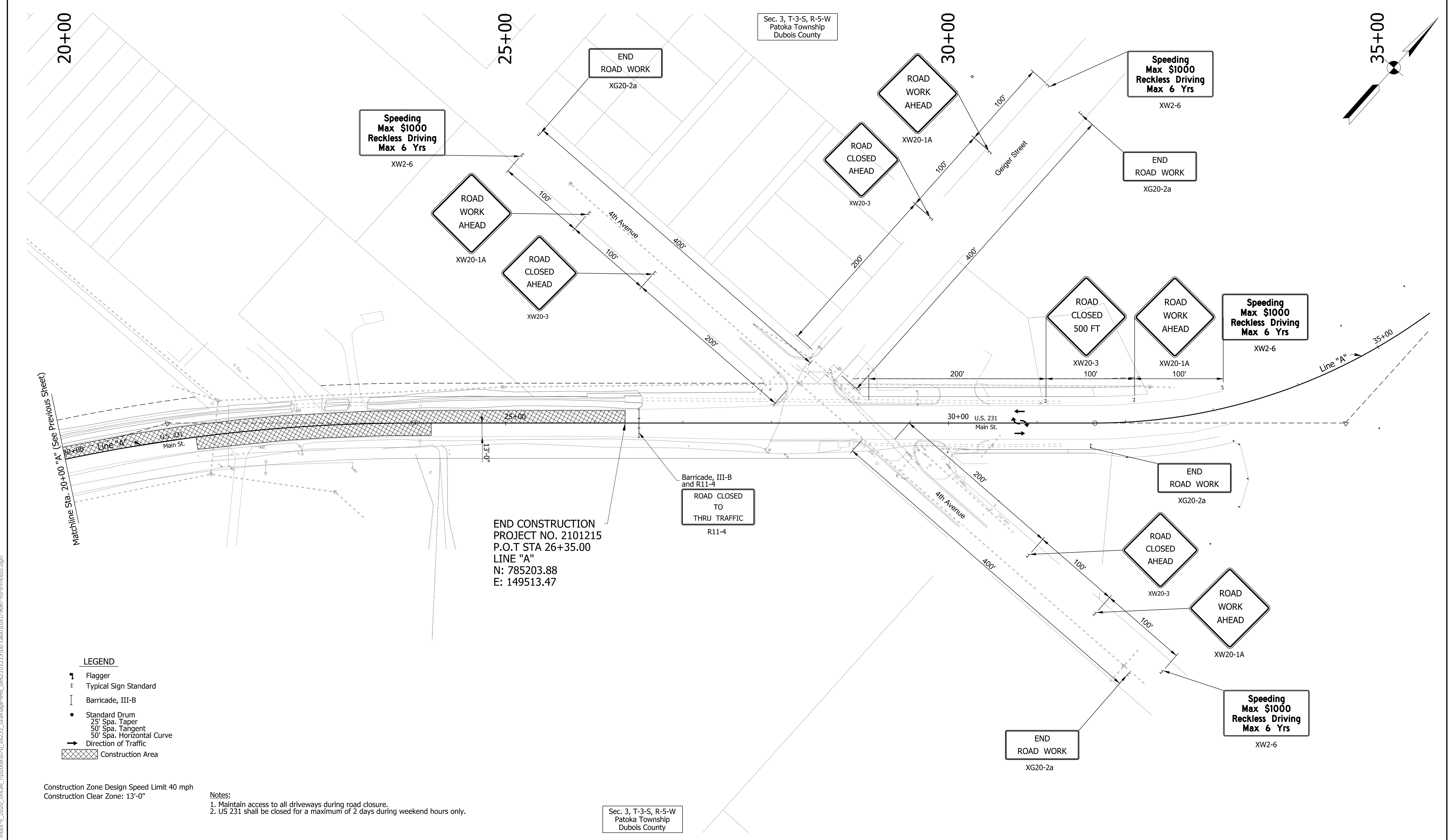
RECOMMENDED FOR APPROVAL	<i>Mark Spink</i>	DESIGN ENGINEER	DATE
DESIGNED:	JMS	DRAWN:	JMS
CHECKED:	MCS	CHECKED:	MCS

INDIANA  
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC  
PHASE 3

HORIZONTAL SCALE	BRIDGE FILE
1"-50"	N/A
VERTICAL SCALE	DESIGNATION
N/A	2101215
SURVEY BOOK	SHEETS MOT-03
ELECTRONIC	8 of 34
CONTRACT	PROJECT
R-44035	2101215





Sec. 3, T-3-S, R-5-W  
Patoka Township  
Dubois County

Sec. 3, T-3-S, R-5-W  
Patoka Township  
Dubois County

END CONSTRUCTION  
PROJECT NO. 2101215  
P.O.T STA 26+35.00  
LINE "A"  
N: 785203.88  
E: 149513.47

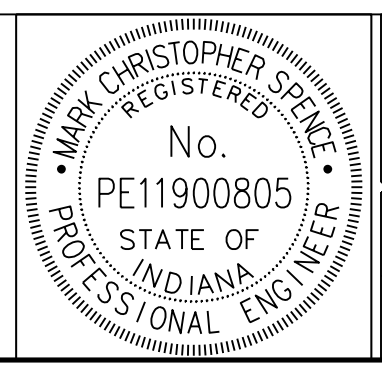
**LEGEND**

- Flagger
- Typical Sign Standard
- Barricade, III-B
- Standard Drum
  - 25' Spa. Taper
  - 50' Spa. Tangent
  - 50' Spa. Horizontal Curve
- Direction of Traffic
- ▨ Construction Area

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Construction Clear Zone: 13'-0"

- Notes:**
- Maintain access to all driveways during road closure.
  - US 231 shall be closed for a maximum of 2 days during weekend hours only.

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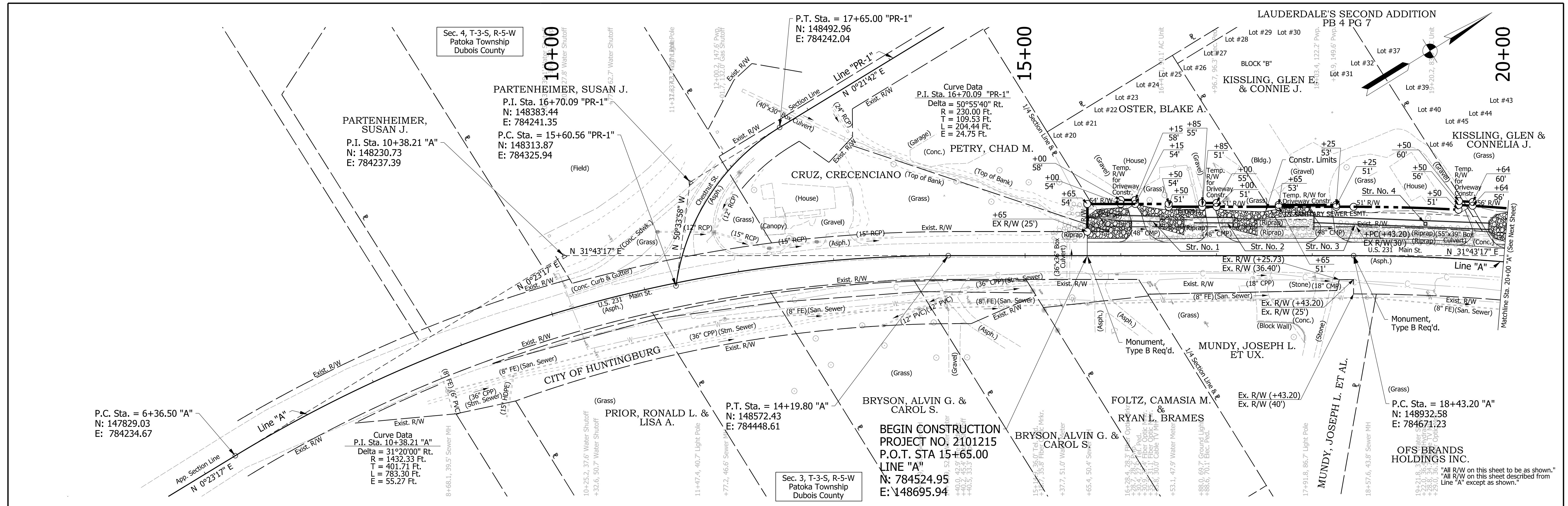
RECOMMENDED FOR APPROVAL	<i>Mark Spink</i>	DESIGN ENGINEER	DATE
			06-14-2022
DESIGNED:	JMS	DRAWN:	JMS
CHECKED:	MCS	CHECKED:	MCS

INDIANA  
DEPARTMENT OF TRANSPORTATION

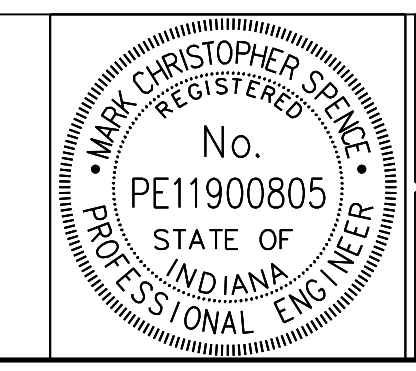
MAINTENANCE OF TRAFFIC  
PHASE 3

HORIZONTAL SCALE	BRIDGE FILE	
1"=50'	N/A	
VERTICAL SCALE	DESIGNATION	
N/A	2101215	
SURVEY BOOK	SHEETS	MOT-04
ELECTRONIC	9	of 34
CONTRACT	PROJECT	
R-44035	2101215	





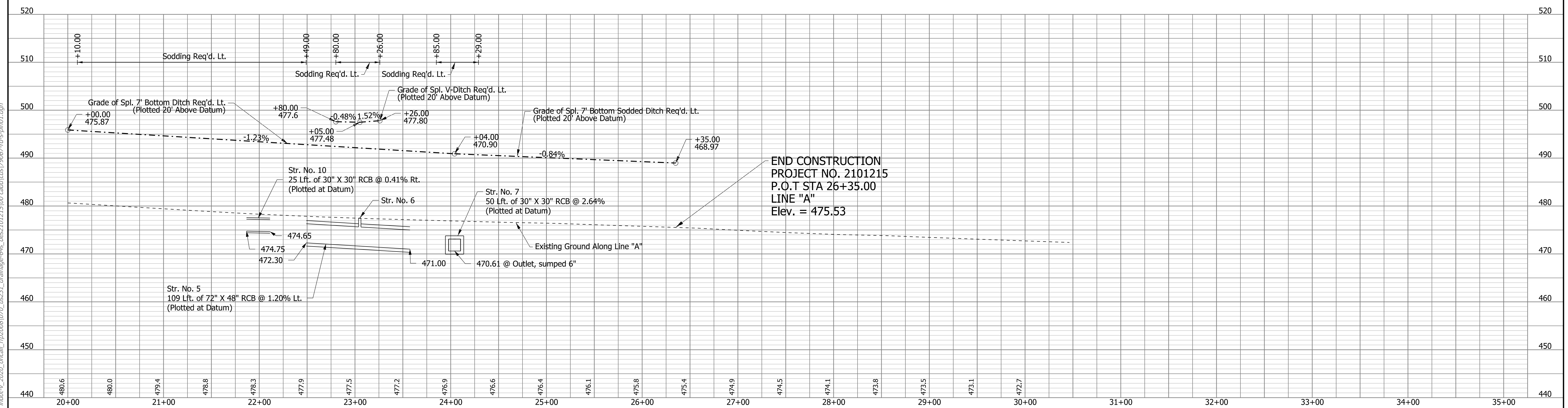
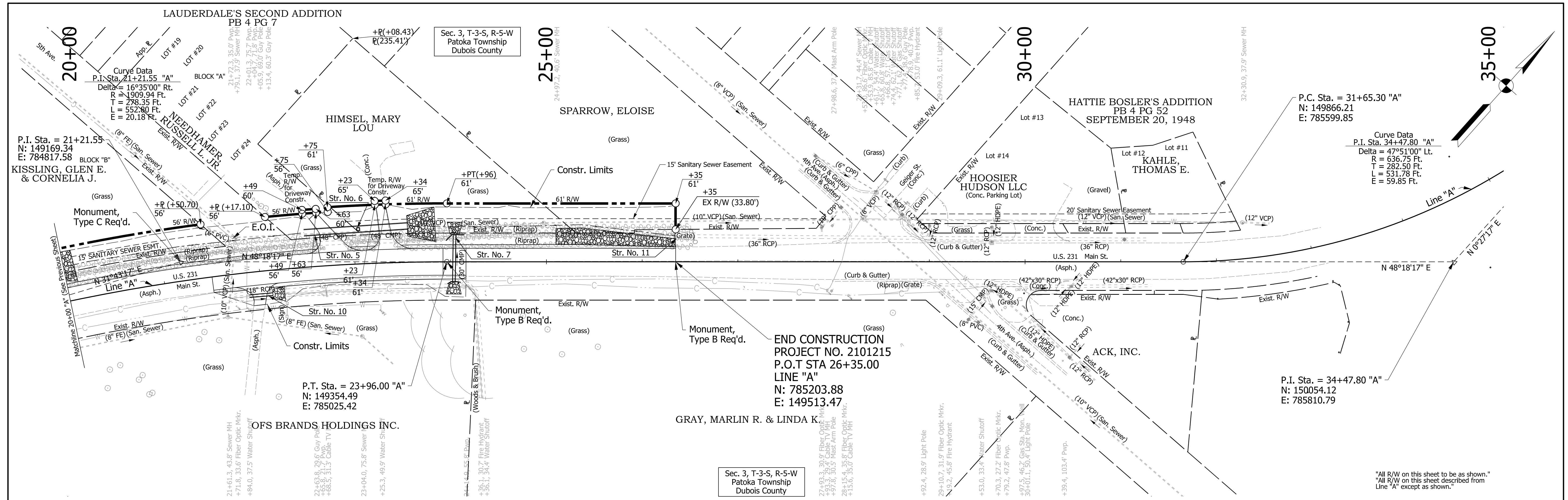
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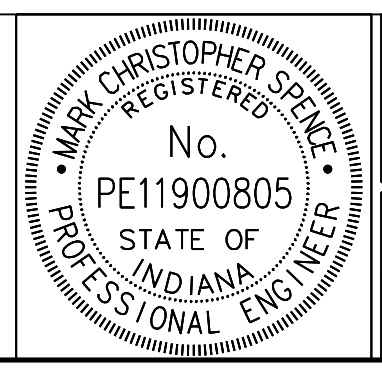
RECOMMENDED FOR APPROVAL	<i>Mark Spink</i>	DESIGN ENGINEER	06-14-2022	DATE
DESIGNED:	RPW	DRAWN:	RPW	
CHECKED:	JMB	CHECKED:	JMB	

**INDIANA DEPARTMENT OF TRANSPORTATION**  
**PLAN AND PROFILE**  
**LINE "A"**

SCALE	BRIDGE FILE	
1"=50'	N/A	
VERTICAL SCALE	DESIGNATION	
1"=10'	2101215	
SURVEY BOOK	SHEETS	PLN-01
ELECTRONIC	10	of 34
CONTRACT	R-44035	PROJECT
		2101215



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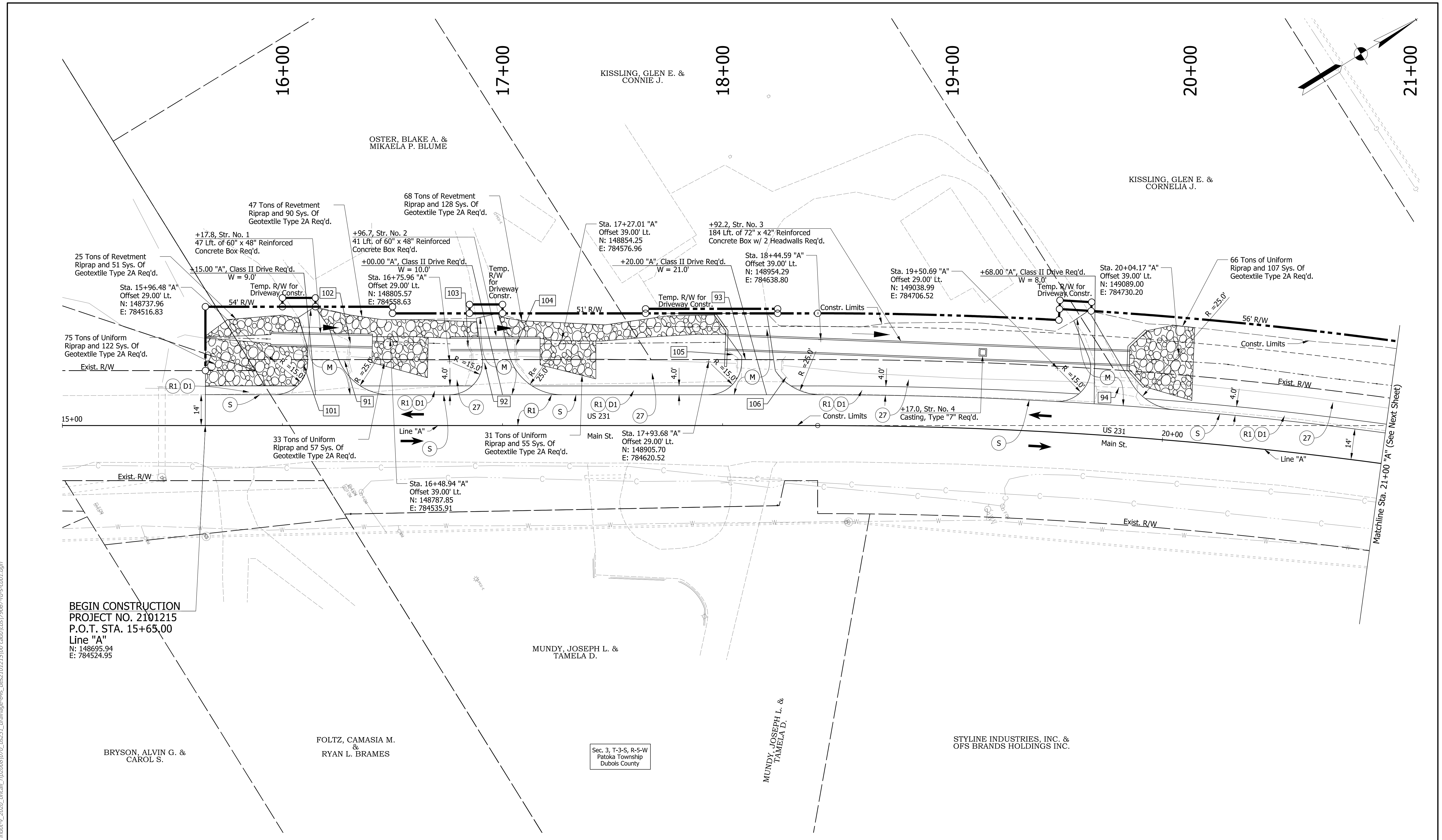
RECOMMENDED FOR APPROVAL	<i>Mark Spink</i>	DESIGN ENGINEER	06-14-2022
DESIGNED:	RPW	DRAWN:	RPW
CHECKED:	JMB	CHECKED:	JMB

**INDIANA**  
**DEPARTMENT OF TRANSPORTATION**  
  
**PLAN AND PROFILE**  
**LINE "A"**

SCALE	BRIDGE FILE	
1"=50'	N/A	
VERTICAL SCALE	DESIGNATION	
1"=10'	2101215	
SURVEY BOOK	SHEETS	PLN-02
ELECTRONIC	11	of 34
CONTRACT	PROJECT	
R-44035	2101215	

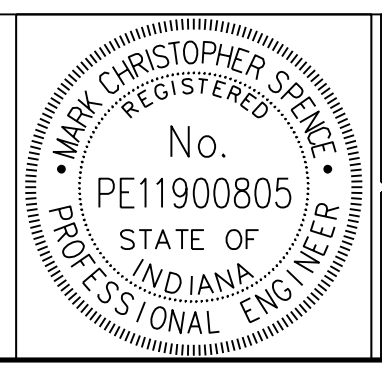


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**BEGIN CONSTRUCTION**  
**PROJECT NO. 2101215**  
**P.O.T. STA. 15+65.00**  
**Line "A"**  
 N: 148695.94  
 E: 784524.95

Legend	
(R1)	165 #/Syd. QC/QA-HMA, 4, 76, Surface, 9.5 mm, on Milling, Asphalt, 1/2 In.
(D1)	Widening with HMA, Type D, consisting of: 440#/Syd. HMA Intermediate, Type D, on 1265#/Syd. HMA Base, Type D, on Subgrade Treatment, Type IC, on Geotextile for Pavement, Type 1A
(M)	HMA for Approaches, Type B, 165#/Syd. HMA Surface, Type B, on 275#/Syd. HMA Intermediate, Type B on 6' Compacted Aggregate No. 53, on Subgrade Treatment Type II
(D2)	440#/Syd. QC/QA-HMA, 3, 70, Intermediate, 19.0 mm, on 880#/Syd. QC/QA-HMA, 3, 64, Base, 25.00 mm, on Subgrade Treatment, Type IC, on Geotextile for Pavement, Type 1A
(26)	Mulched Seeding, U, on Plant Growth Layer
(27)	Sodding, on Plant Growth Layer
(S)	Sawcut (No Direct Pay)
XXXX	Existing Structure

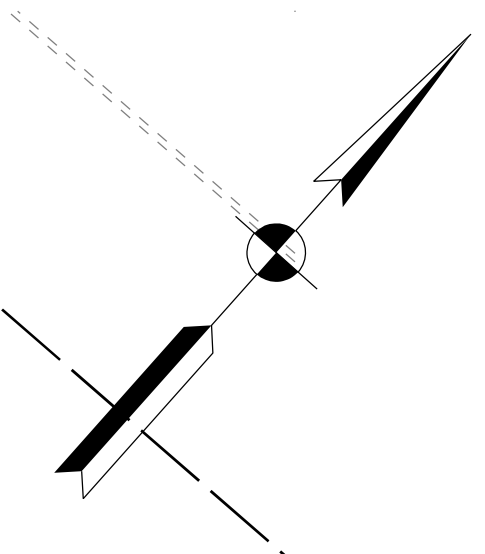
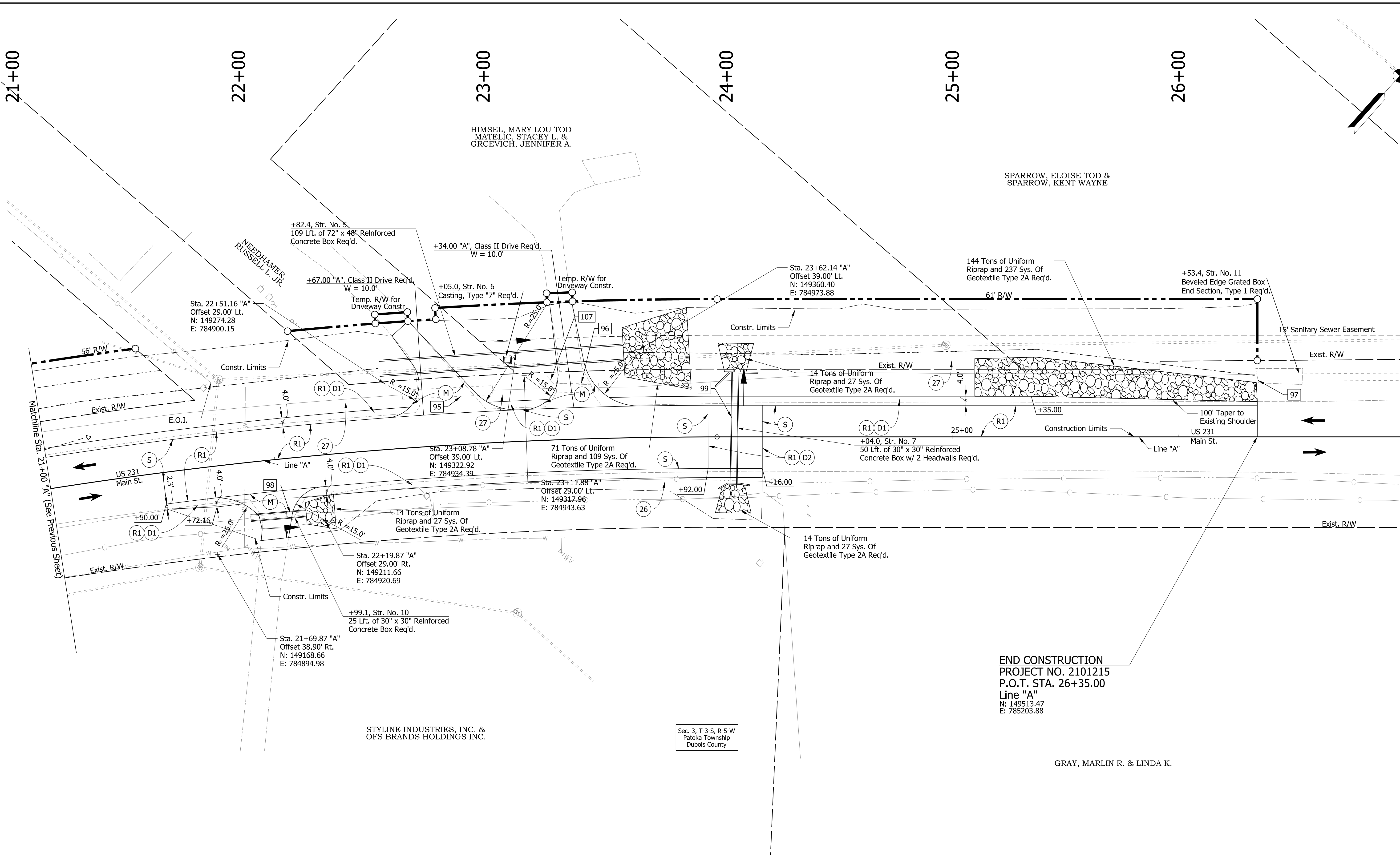


RECOMMENDED FOR APPROVAL	<i>Mark Spink</i>	DESIGN ENGINEER	DATE
DESIGNED:	RPW	DRAWN:	RPW
CHECKED:	JMB	CHECKED:	JMB

INDIANA  
 DEPARTMENT OF TRANSPORTATION  
**CONSTRUCTION DETAILS**  
**LINE "A"**

HORIZONTAL SCALE	BRIDGE FILE	
1"=20'	N/A	
VERTICAL SCALE	DESIGNATION	
N/A	2101215	
SURVEY BOOK	SHEETS	CD-01
ELECTRONIC	12	of 34
CONTRACT	PROJECT	
R-44035	2101215	





END CONSTRUCTION  
 PROJECT NO. 2101215  
 P.O.T. STA. 26+35.00  
 Line "A"  
 N: 149513.47  
 E: 785203.88

Sec. 3, T-3-S, R-5-W  
 Patoka Township  
 Dubois County

Legend			
(R1)	165 #/Syd. QC/QA-HMA, 4, 76, Surface, 9.5 mm, on Milling, Asphalt, 1/2 In.	(M)	HMA for Approaches, Type B, 165#/Syd. HMA Surface, Type B, on 275#/Syd. HMA Intermediate, Type B on 6" Compacted Aggregate No. 53, on Subgrade Treatment Type II
(D1)	Widening with HMA, Type D, consisting of: 440#/Syd. HMA Intermediate, Type D, on 1265#/Syd. HMA Base, Type D, on Subgrade Treatment, Type IC, on Geotextile for Pavement, Type 1A	(26)	Mulched Seeding, U, on Plant Growth Layer
		(27)	Sodding, on Plant Growth Layer
		(S)	Sawcut (No Direct Pay)
		(D2)	440#/Syd. QC/QA-HMA, 3, 70, Intermediate, 19.0 mm, on 880#/Syd. QC/QA-HMA, 3, 64, Base, 25.00 mm, on Subgrade Treatment, Type IC, on Geotextile for Pavement, Type 1A
		(XXXX)	Existing Structure

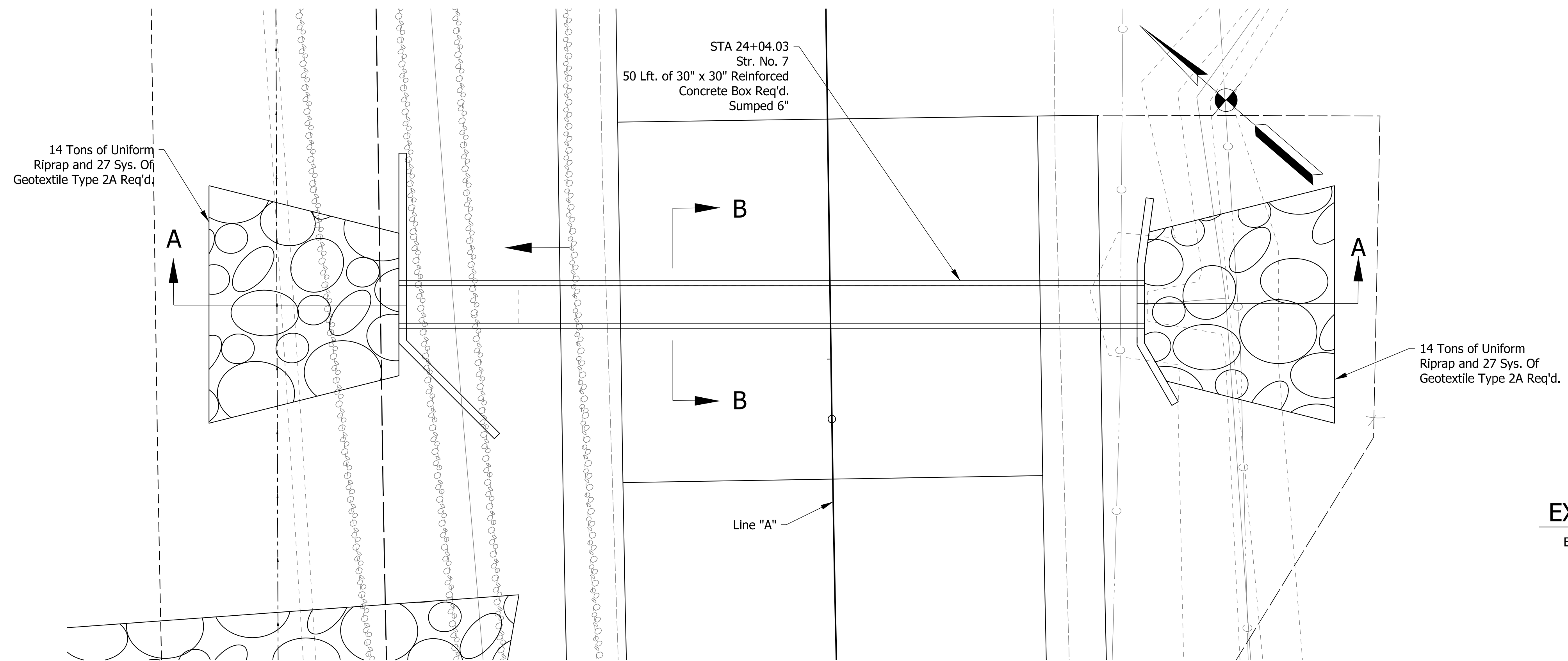


RECOMMENDED FOR APPROVAL	<i>Mark Spink</i>	DESIGN ENGINEER	DATE
			06-14-2022
DESIGNED:	RPW	DRAWN:	RPW
CHECKED:	JMB	CHECKED:	JMB

INDIANA  
 DEPARTMENT OF TRANSPORTATION  
 CONSTRUCTION DETAILS  
 LINE "A"

HORIZONTAL SCALE		BRIDGE FILE	
1"=20'		N/A	
VERTICAL SCALE		DESIGNATION	
N/A		2101215	
SURVEY BOOK		SHEETS	
ELECTRONIC	13	of	34
CONTRACT		PROJECT	
R-44035		2101215	

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 6/15/2022 10:58:07 am  
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**PLAN**

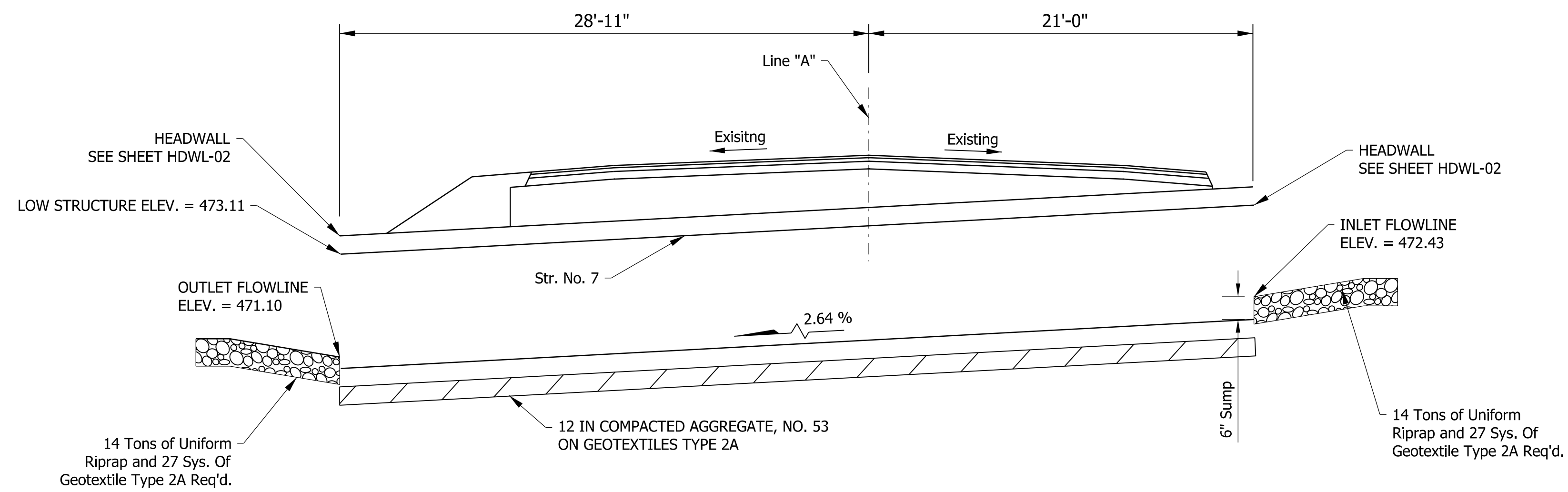
SCALE: 1" = 5'

**EXISTING STRUCTURE**

EXISTING 30" CIRCULAR CORRUGATED METAL PIPE, APPROXIMATELY 42' TO BE REMOVED

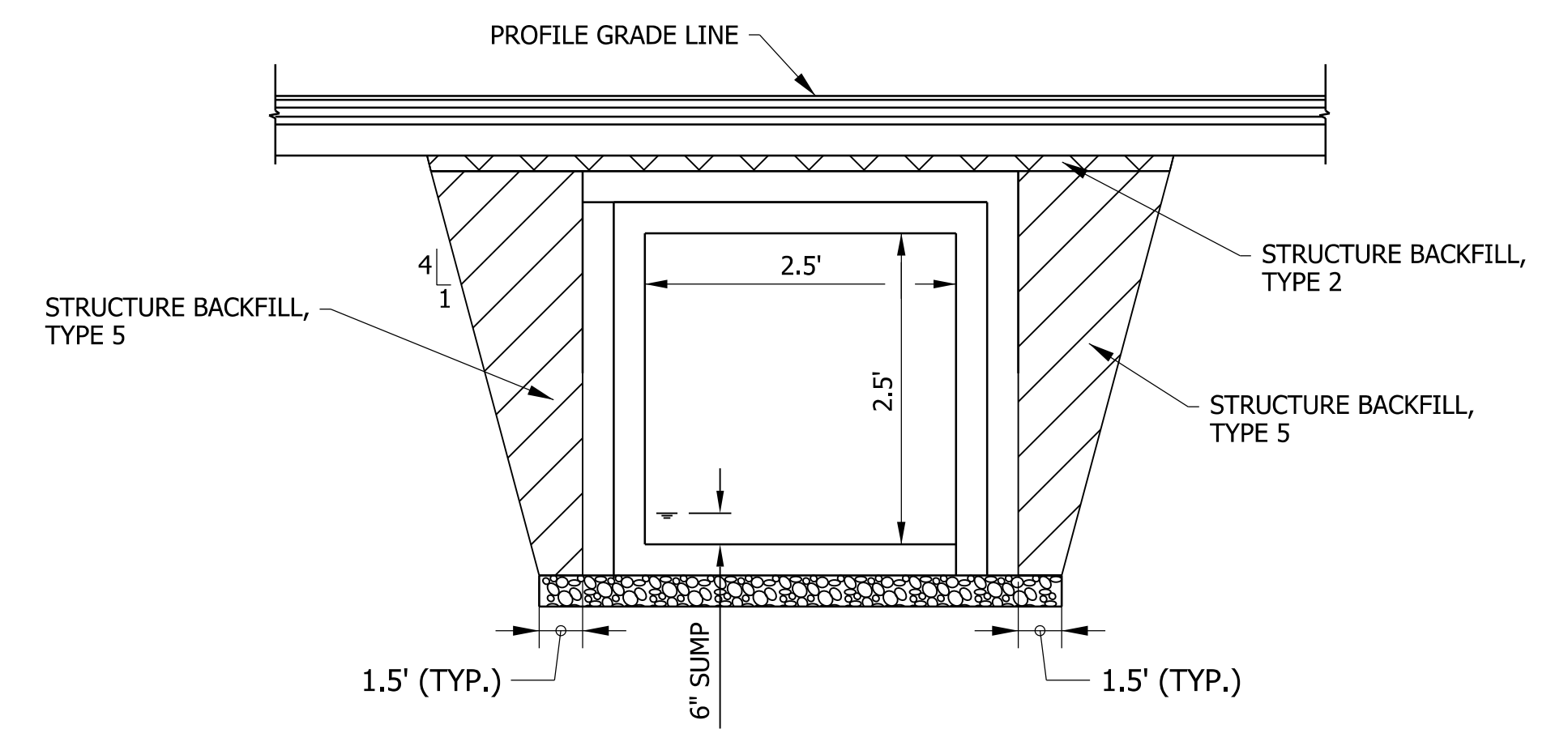
**HYDRAULIC DATA**

DRAINAGE AREA	31.8 ACRES
Q100 DISCHARGE	38.8 CFS
Q100 ELEVATION	475.78 FT
Q100 HEADWATER BACKWATER	476.01 FT
10% EP OUTPUT VELOCITY	0.23 FPS
	4.3 FPS



**SECTION A-A**

SCALE: 1" = 2.5' V  
SCALE: 1" = 5' H

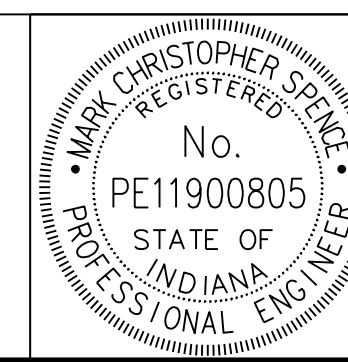


**SECTION B-B**

SCALE: 1" = 5'

INDOT CULVERT ID: CLV-56076

jshemanski  
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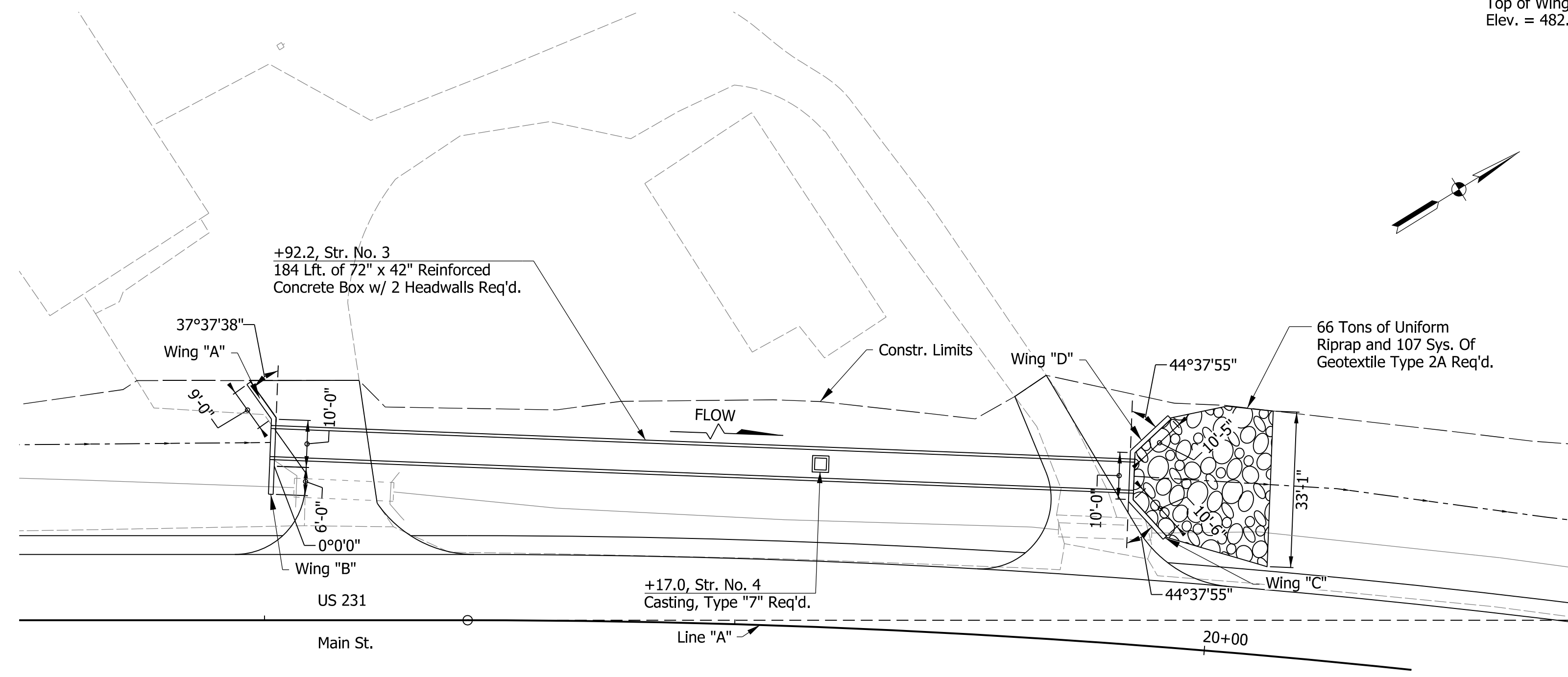


RECOMMENDED FOR APPROVAL	<i>Mark Spick</i>	DESIGN ENGINEER	06-14-2022	DATE
DESIGNED:	MCS	DRAWN:	JMS	
CHECKED:	MDC	CHECKED:	MDC	

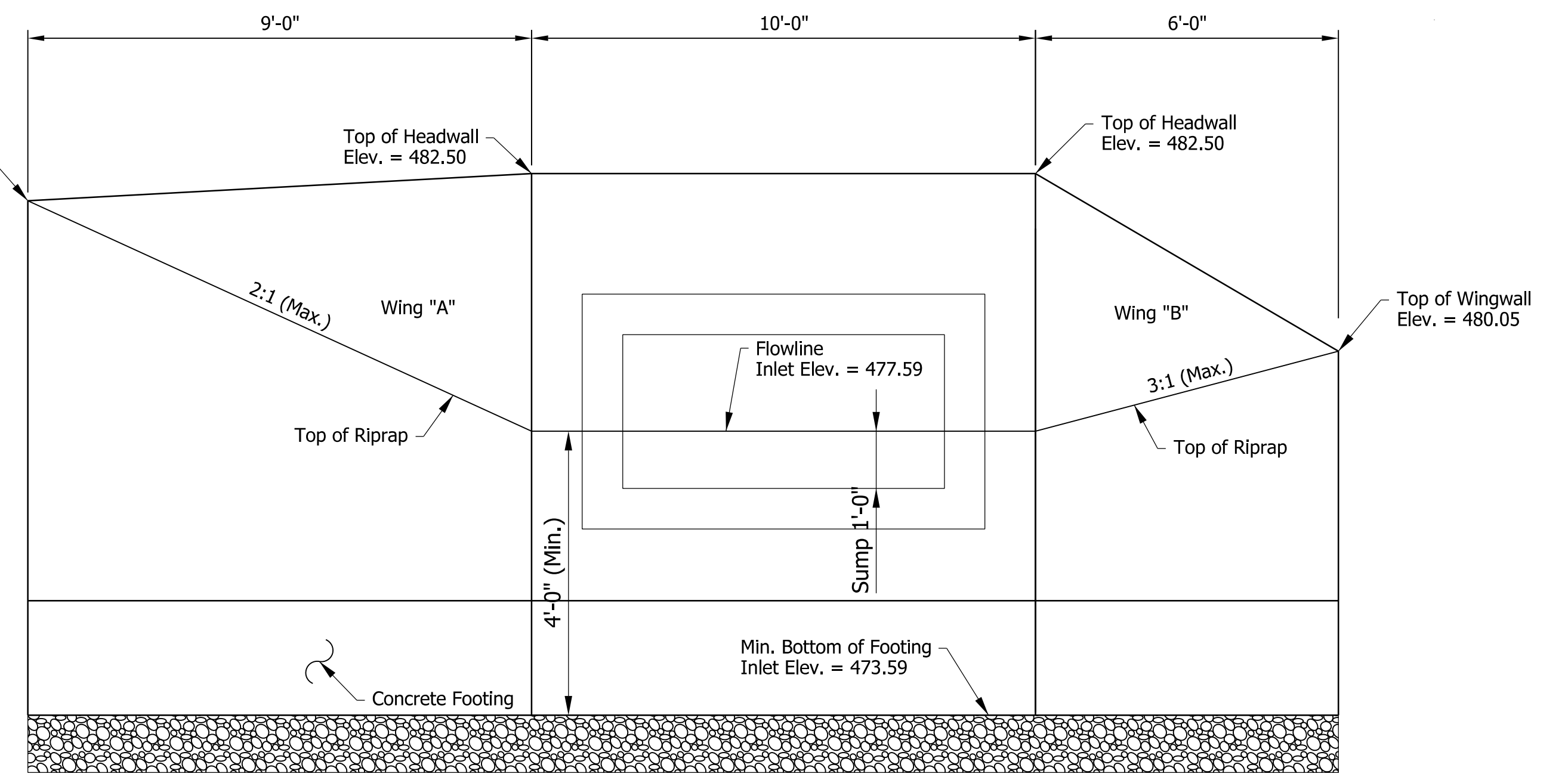
INDIANA DEPARTMENT OF TRANSPORTATION

STRUCTURE DETAILS  
STRUCTURE NO. 7

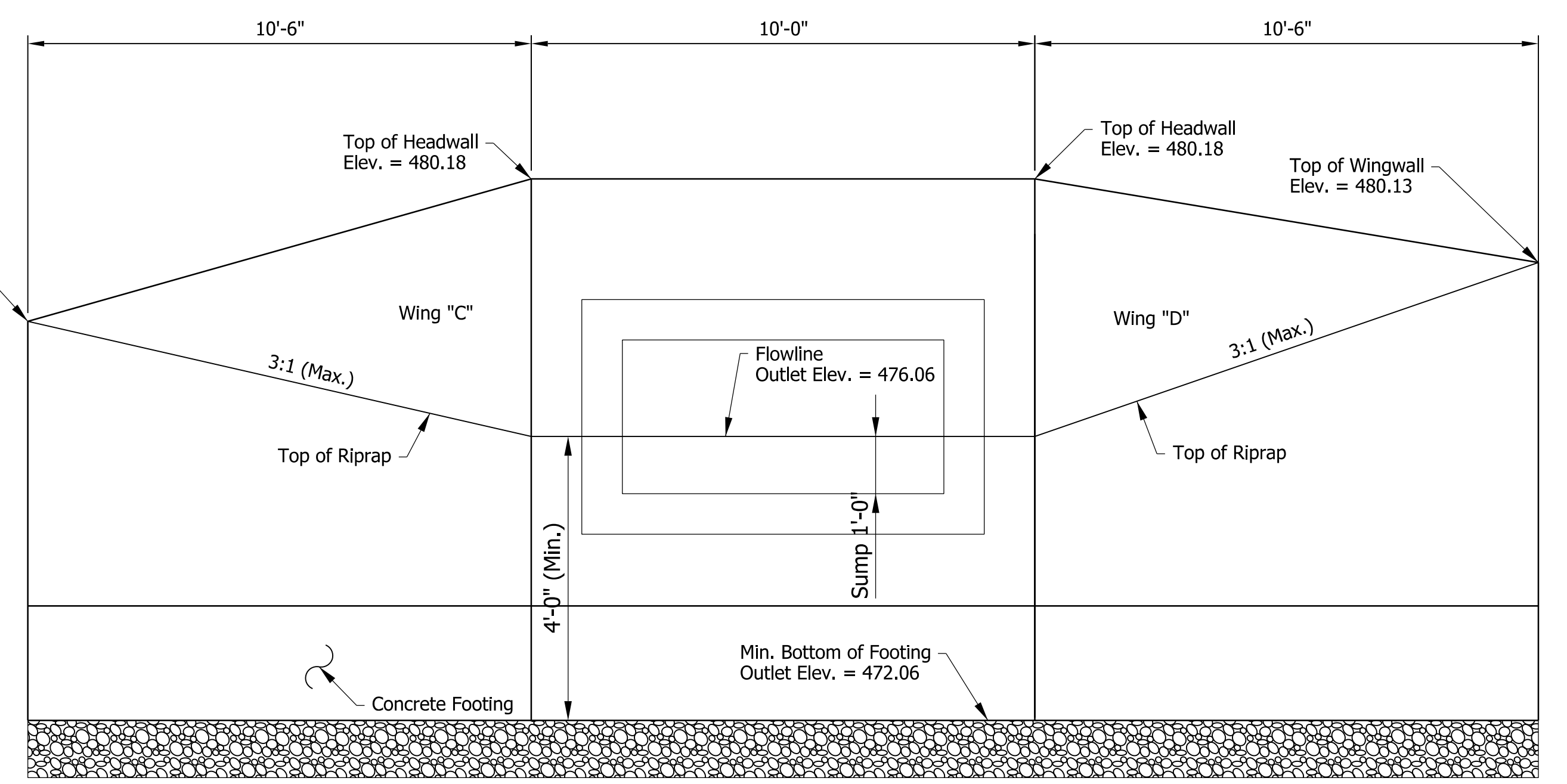
HORIZONTAL SCALE	BRIDGE FILE	
1"=5'	N/A	
VERTICAL SCALE	DESIGNATION	
N/A	2101215	
SURVEY BOOK	SHEETS	SSD-01
ELECTRONIC	14	of 34
CONTRACT	PROJECT	
R-44035	2101215	



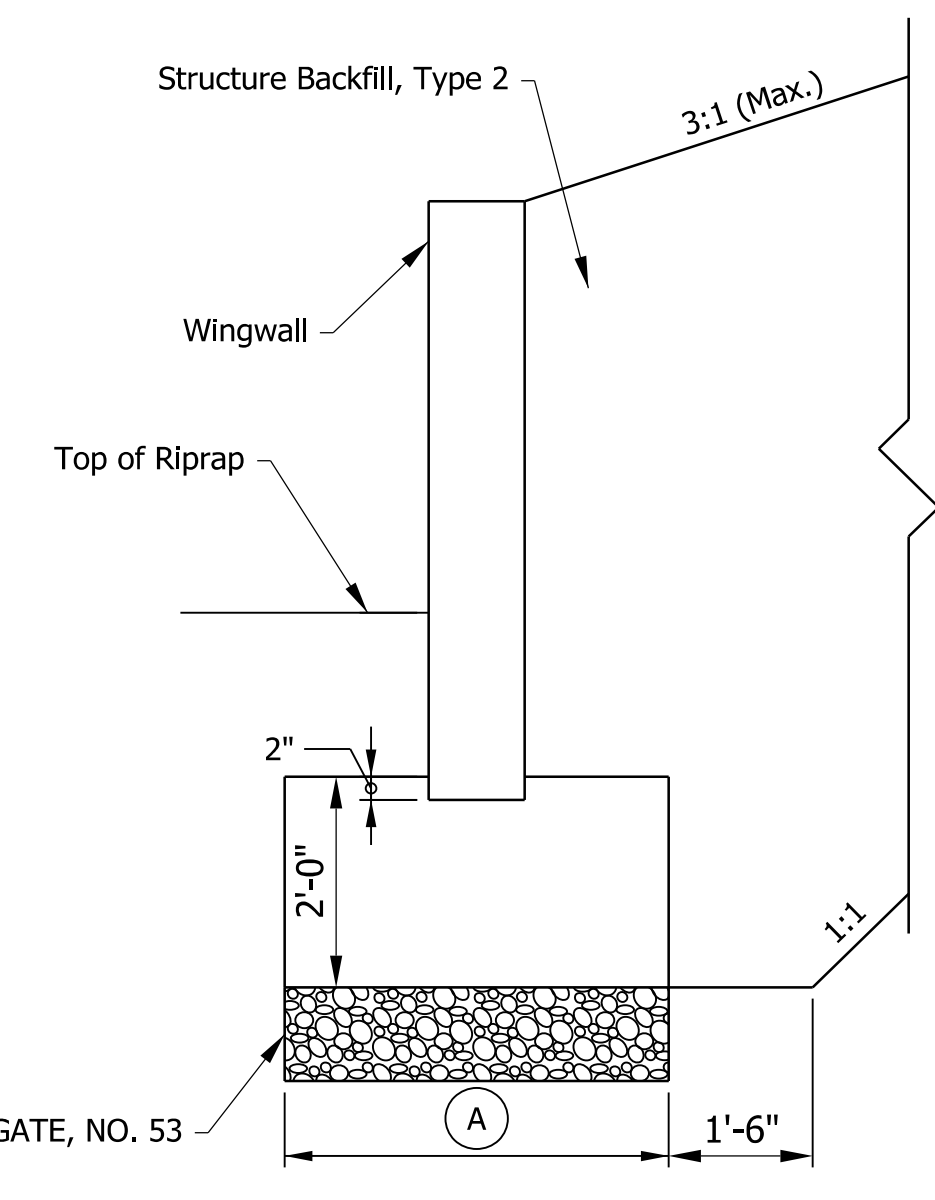
**PLAN**  
Scale 1" = 20'



**INLET HEADWALL**  
Scale: N.T.S.



**OUTLET HEADWALL**  
Scale N.T.S.



**WINGWALL SECTION**  
SCALE: N.T.S.

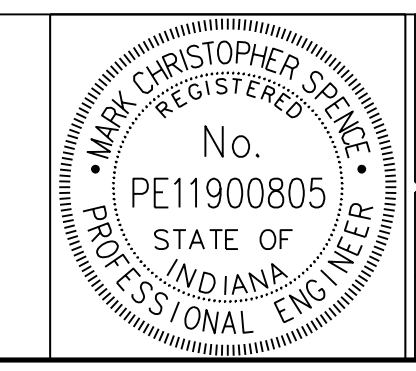
HEADWALL ELEVATIONS				
	Wing "A"	Wing "B"	Wing "C"	Wing "D"
Top of Headwall	482.50	482.50	480.18	480.18
Top of Wingwall	482.41	480.05	479.16	480.13
Length (ft)	10.00	6.00	10.50	10.50
Flare Angle	37°37'38"	0°0'0"	44°37'55"	44°37'55"
Area (sft)	90	47	80	85

SOIL PARAMETERS	
PARAMETER	Wing "A" and "B" / Wing "C" and "D"
Angle of Friction between Wingwall Footing and Foundation Soil,	
Nominal Friction Factor, tan	
Foundation Soil Internal Friction Angle,	
Nominal Adhesion between Foundation Soil and Concrete, Ca (psf)	
Nominal Cohesion of Foundation Soil, C (psf)	
Nominal Bearing Resistance (psf)	
Bearing Resistance Factor	
Factored Bearing Resistance (psf)	

\*Assumed Footing Width of 4'; For other widths see the Geotechnical Report

**GENERAL NOTES:**  
Riprap is to be Placed per Std. Drwg. 714-BCSP-01  
A Per Manufacturer's Design

jshemanski  
 6/15/2022 10:58:30 am  
 model-Sheet1  
 file: \\india\01\289\projects\29067\ndot-v\_2021\_oncall\_rfp\2006\070\_us231\_drainage-64s\_des2\01215\00\_cadd\cbs\79067-rd-shdw01.dgn



RECOMMENDED FOR APPROVAL *Mark Spick* DESIGN ENGINEER DATE 06-14-2022

DESIGNED: MCS DRAWN: MCS

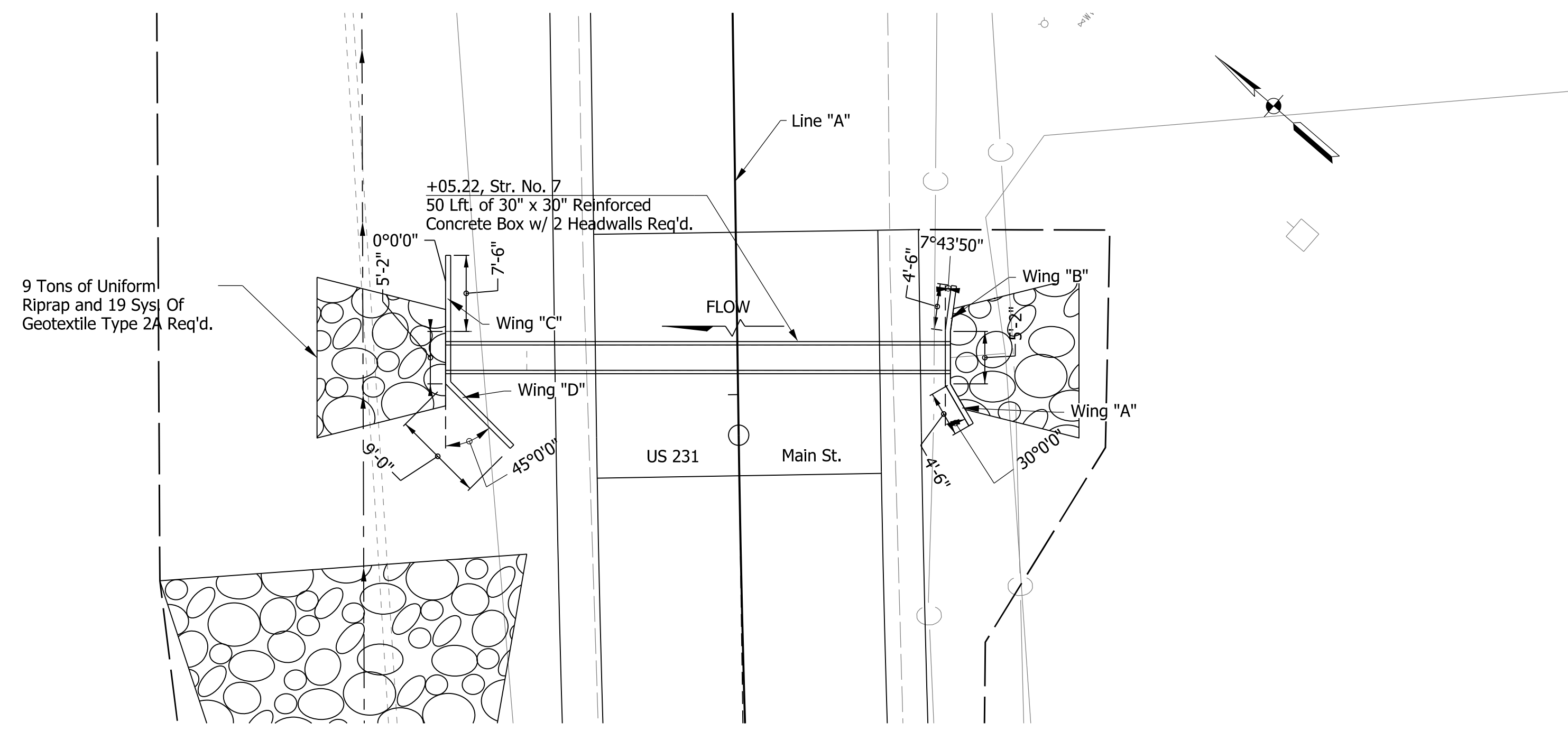
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INDIANA DEPARTMENT OF TRANSPORTATION

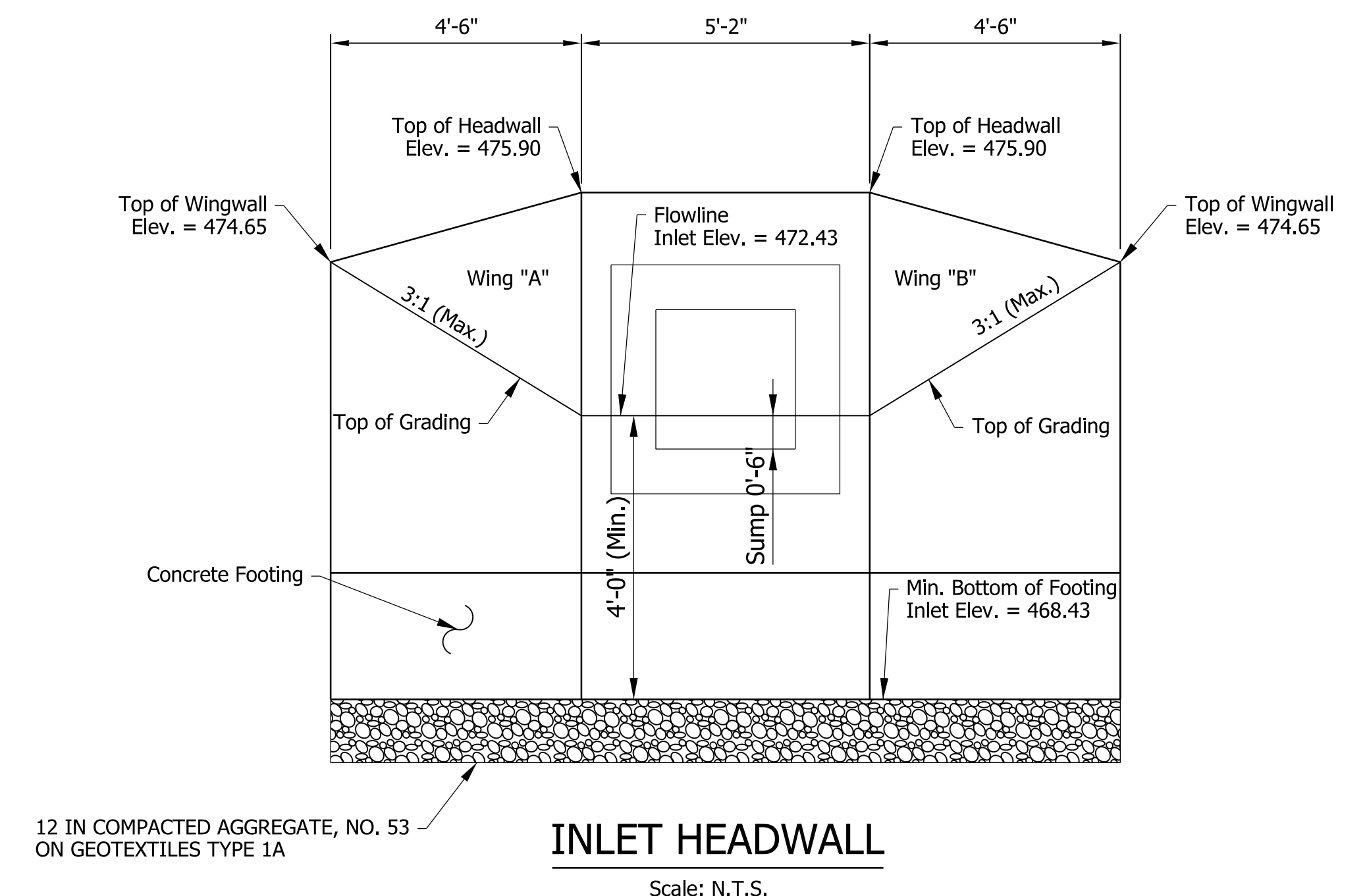
HEADWALL DETAILS STR. NO. 3

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1"=20'	N/A
VERTICAL SCALE	DESIGNATION
N/A	2101215
SURVEY BOOK	SHEETS HDWL-01
ELECTRONIC	15 of 34
CONTRACT	PROJECT
R-44035	2101215

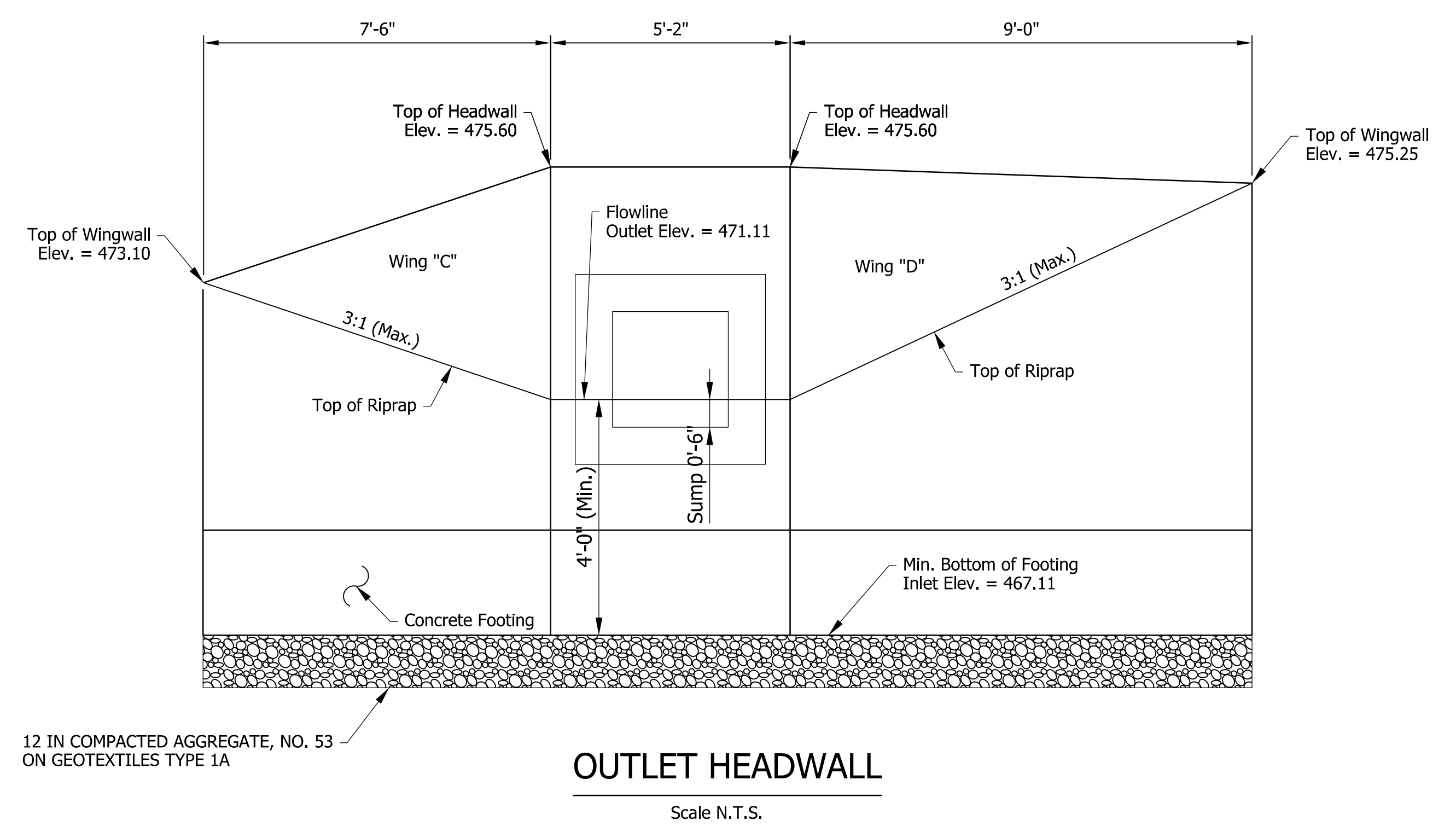




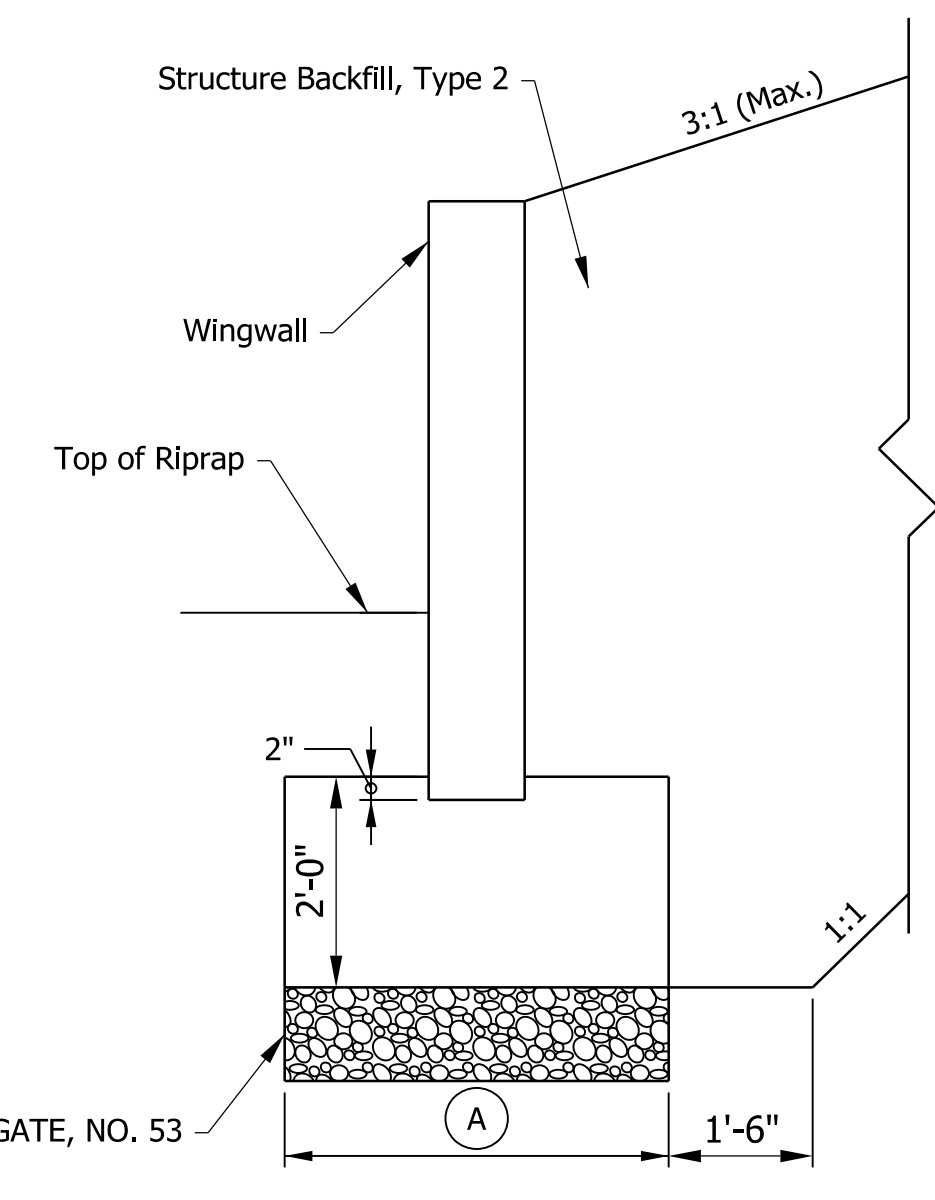
**PLAN**  
Scale 1" = 10'



**INLET HEADWALL**  
Scale: N.T.S.



**OUTLET HEADWALL**  
Scale N.T.S.



**WINGWALL SECTION**  
SCALE: N.T.S.

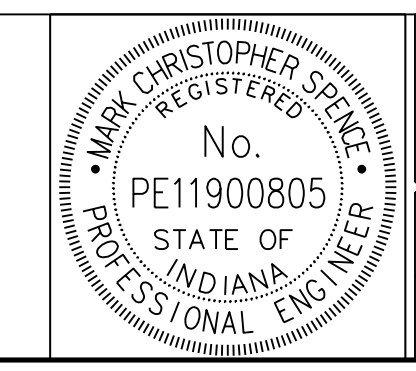
HEADWALL ELEVATIONS				
	Wing "A"	Wing "B"	Wing "C"	Wing "D"
Top of Headwall	475.90	475.90	475.60	475.60
Top of Wingwall	474.65	474.65	473.10	475.25
Length (ft)	4.50	4.50	7.50	9.00
Flare Angle	30°0'0"	7°43'50"	0°0'00"	45°0'0"
Area (sft)	31	31	55	75

SOIL PARAMETERS	
PARAMETER	Wing "A" and "B" Wing "C" and "D"
Angle of Friction between Wingwall Footing and Foundation Soil,	
Nominal Friction Factor, tan	
Foundation Soil Internal Friction Angle,	
Nominal Adhesion between Foundation Soil and Concrete, Ca (psf)	
Nominal Cohesion of Foundation Soil, C (psf)	
Nominal Bearing Resistance (psf)	
Bearing Resistance Factor	
Factored Bearing Resistance (psf)	

\*Assumed Footing Width of 4'. For other widths see the Geotechnical Report

**GENERAL NOTES:**  
Aggregate is to be Placed per Std. Drwg. 714-BCSP-01  
A Per Manufacturer's Design

jshemanski  
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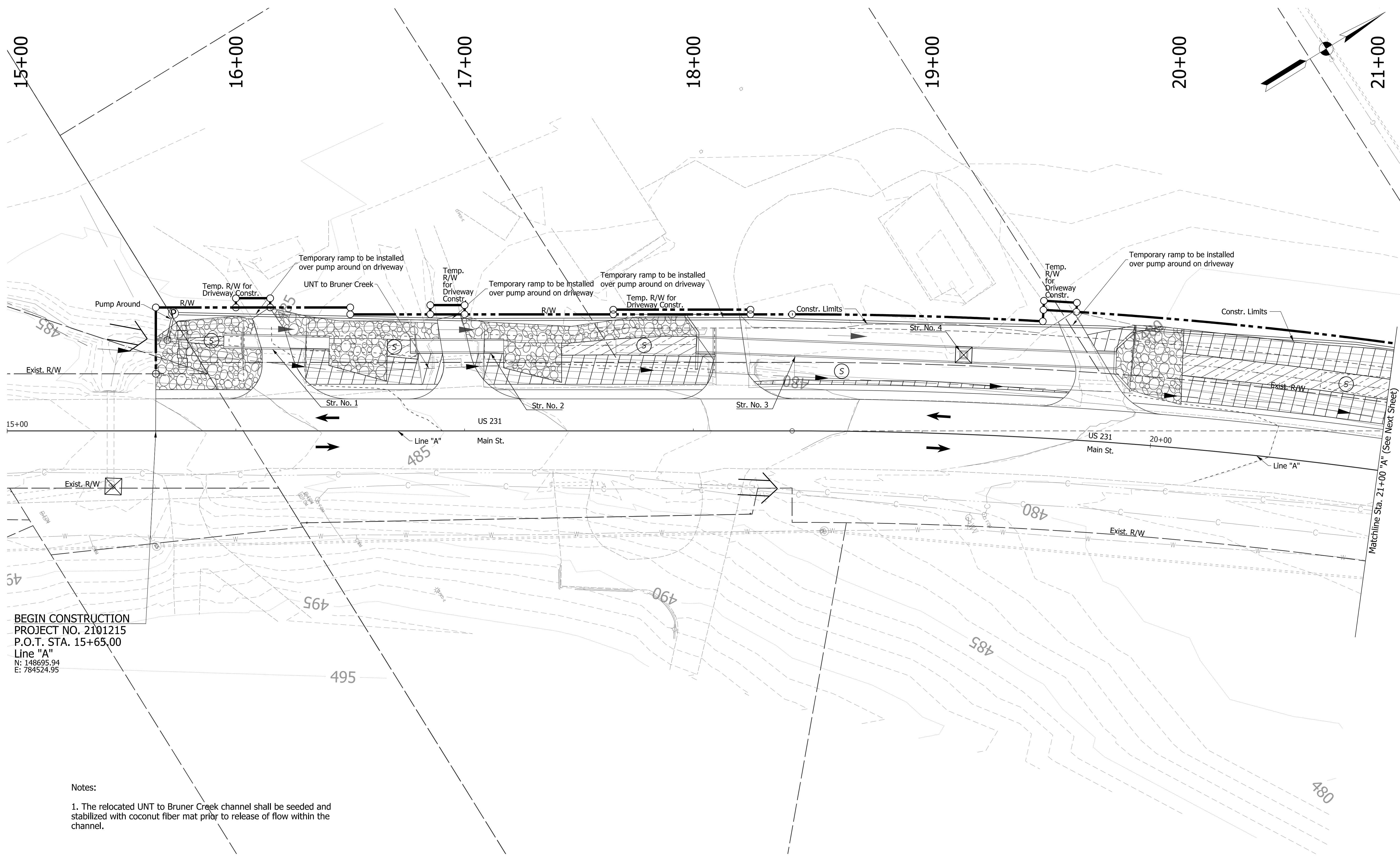
RECOMMENDED FOR APPROVAL *Mark Spink* DESIGN ENGINEER 06-14-2022 DATE

DESIGNED: MCS DRAWN: JMS  
 CHECKED: MDC CHECKED: MDC

INDIANA DEPARTMENT OF TRANSPORTATION

HEADWALL DETAILS  
STR. NO. 7

HORIZONTAL SCALE	BRIDGE FILE
1"=10'	N/A
VERTICAL SCALE	DESIGNATION
N/A	2101215
SURVEY BOOK	SHEETS HDWL-02
ELECTRONIC	16 of 34
CONTRACT	PROJECT
R-44035	2101215



15+00

16+00

17+00

18+00

19+00

20+00

21+00

Exist. R/W

15+00

US 231

Main St.

Line "A"

US 231

Main St.

20+00

Line "A"

Exist. R/W

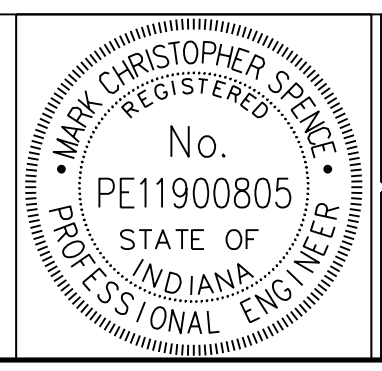
Matchline Sta. 21+00 "A" (See Next Sheet)

BEGIN CONSTRUCTION  
PROJECT NO. 2101215  
P.O.T. STA. 15+65.00  
Line "A"  
N: 148695.94  
E: 784524.95

Notes:

- The relocated UNT to Bruner Creek channel shall be seeded and stabilized with coconut fiber mat prior to release of flow within the channel.

EROSION CONTROL LEGEND			
	Coconut Fiber Mat		Erosion Control Blanket
	Temporary Seeding		Permanent Riprap
	Cofferdam		Inlet Protection
	Existing Jurisdictional Stream		Water Leaving the Site
	Offsite Drainage Entering The Site		



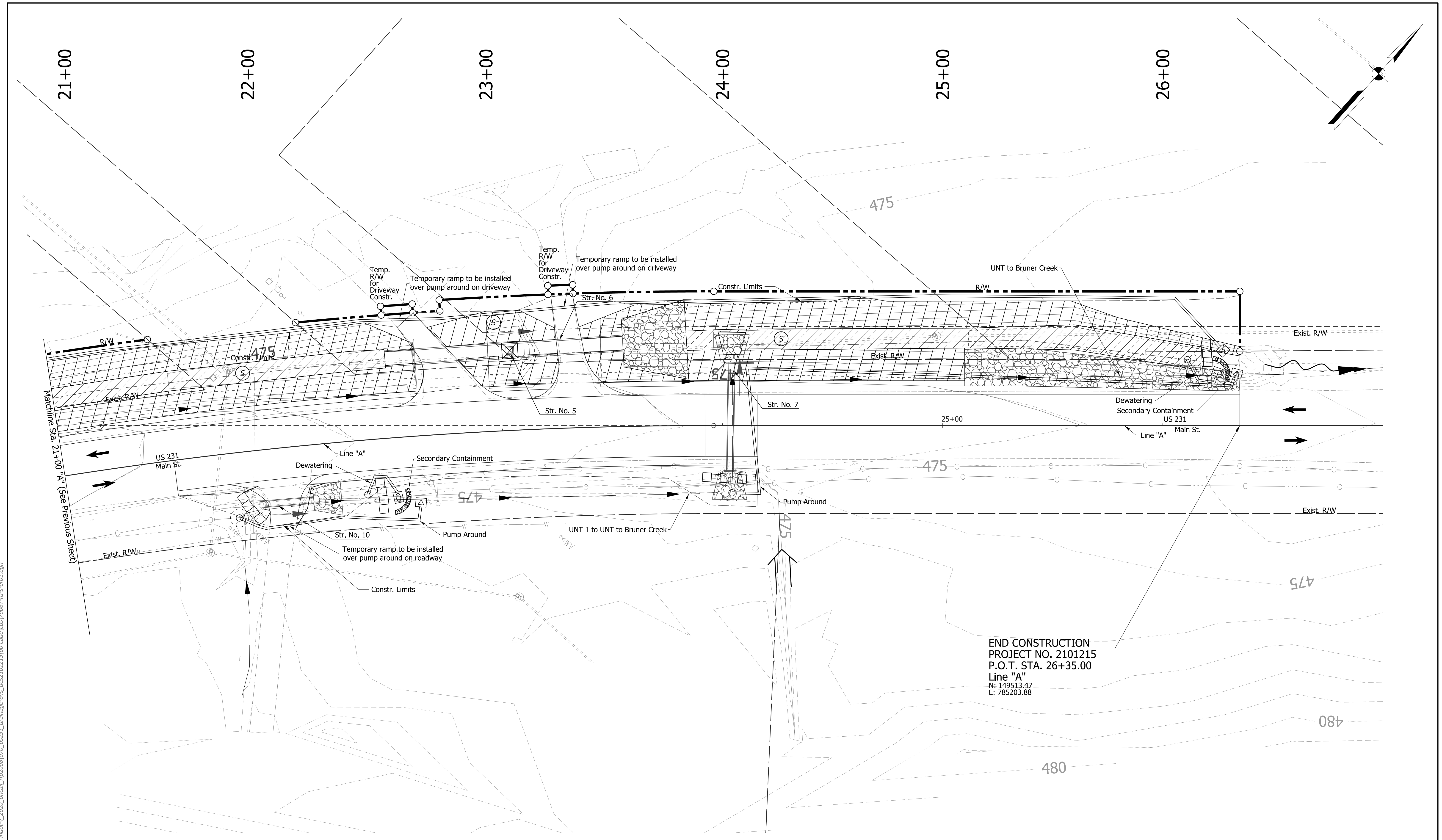
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			06-14-2022
DESIGNED:	RPW	DRAWN:	RPW
CHECKED:	MCS	CHECKED:	MCS

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DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN  
LINE "A"

HORIZONTAL SCALE	BRIDGE FILE	
1"=20'	N/A	
VERTICAL SCALE	DESIGNATION	
N/A	2101215	
SURVEY BOOK	SHEETS	ER-01
ELECTRONIC	17	of 34
CONTRACT	PROJECT	
R=44035	2101215	

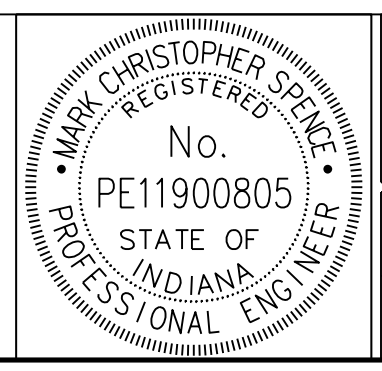
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END CONSTRUCTION  
 PROJECT NO. 2101215  
 P.O.T. STA. 26+35.00  
 Line "A"  
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 E: 785203.88

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EROSION CONTROL LEGEND			
	Coconut Fiber Mat		Erosion Control Blanket
	Temporary Seeding		Permanent Riprap
	Cofferdam		Inlet Protection
	Existing Jurisdictional Stream		Water Leaving the Site
	Offsite Drainage Entering The Site		



RECOMMENDED FOR APPROVAL		DESIGN ENGINEER	DATE
			06-14-2022
DESIGNED:	RPW	DRAWN:	RPW
CHECKED:	MCS	CHECKED:	MCS

INDIANA  
 DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN  
 LINE "A"

HORIZONTAL SCALE	BRIDGE FILE	
1"=20'	N/A	
VERTICAL SCALE	DESIGNATION	
N/A	2101215	
SURVEY BOOK	SHEETS	ER-02
ELECTRONIC	18	of 34
CONTRACT	PROJECT	
R-44035	2101215	



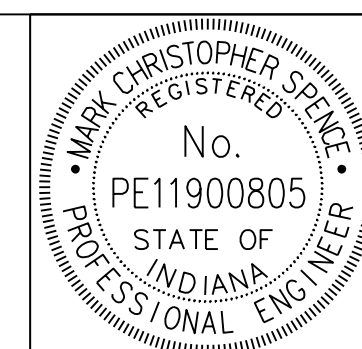
APPROACH TABLE U.S. 231										
Station	Side	Type	Width	Throat	Depth	Avg. Lay Rate	Compacted Aggregate, No. 53	Subgrade Treatment, Type II	HMA for Approach, Type B	Remarks
			(FT)	(FT)	(FT)	(LBS/SYS)	(CYS)	(SYS)	(TON)	
Line "A"										
16+15	LT	Private Drive	9	53	40	440	11.9	71.5	15.7	Class II
17+00	LT	Private Drive	10	51	36	440	10.9	65.3	14.4	Class II
18+20	LT	Private Drive	23	51	37	440	13.9	83.1	18.3	Class II
19+68	LT	Private Drive	8	54	46	440	12.6	75.4	16.6	Class II
22+00	RT	Private Drive	12	47	21	440	7.3	43.7	9.6	Class II
22+67	LT	Private Drive	10	58	45	440	14.8	88.8	19.5	Class II
23+34	LT	Private Drive	10	51	47	440	12.9	77.1	17.0	Class II
TOTALS							85	505	112	

RESURFACING, MILLING, AND PAVEMENT TABLE																		
Start Station	End Station	Description	D1 Area		D2 Area		R1 Area		QC/QA-HMA, 4, 76, Surface 9.5mm, 165 lb/sys	QC/QA-HMA, 3, 70, Intermediate 19.0mm, 440 lb/sys	QC/QA-HMA, 3, 64, Base 25mm, 880 lb/sys	Widening with HMA, Type D		Joint Adhesive, Surface	Joint Adhesive, Intermediate	Asphalt for Tack Coat	Compacted Aggregate, No. 53	Subgrade Treatment Type IC on Geotextile for Pavement, Type 1A
			Mainline	Shoulder	Mainline	Shoulder	Mainline	Shoulder				HMA Intermediate, Type D, 440 lb/sys	HMA Base, Type D, 1265 lb/sys	(LFT)	(LFT)	(TON)	(TON)	(SYS)
			(SYS)	(SYS)	(SYS)	(SYS)	(SYS)	(SYS)	(TON)	(TON)	(TON)	(TON)	(TON)	(LFT)	(LFT)	(TON)	(TON)	(SYS)
Line "A"																		
15+65	23+92	Resurfacing					1290		107.1					827.0		0.6		
21+50	23+92	Resurfacing					375		31.1							0.2		74.7
23+92	24+16	Full Depth Pavement			75		75		6.2	16.5	33.0			24.0		0.1		
24+16	26+35	Resurfacing					341		28.3					219.0		0.2		
15+65	26+35	Shoulder Widening		367					367	30.5			85.4	294.7	1,070.0	1,070.0	0.2	579.6
21+50	24+16	Shoulder Widening		101					101	8.4			23.8	79.4	266.0	266.0	0.1	154.0
TOTALS				468	75		2,081	468	213	17	33	110	375	2,406	1,336	2	339	809

PAVEMENT MARKINGS SUMMARY TABLE										
Lines & SRPMs										
Start Station	End Station	Southbound		Centerline	Northbound		Line, Paint,		Snowplowable Raised Pavement Marker, Remove	Snowplowable Raised Pavement Marker
		Edge Line	Lane Lines		Lane Lines	Edge Line	Solid, Yellow, 6 in.	Solid, White, 6 in.		
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	EACH	EACH	
15+65	26+35	Yes		Yes				27	29	
15+65	26+35					2,140	1,074			
21+50	24+16				Yes		254			
TOTALS							2,140	1,328	27	29

TEMPORARY EROSION CONTROL TABLE																
STATION	LOCATION			Sediment Removal	Coconut Fiber Mat	Temporary Seed	Temporary Mulch	Filter Sock	Temporary Mulch Stabilization	Fertilizer	Temporary Inlet Protection	Temporary Slope Drain	Pump Around	Temporary Filter Stone	Erosion Control Blanket	Temporary Check Dam, Traversable
	LEFT	MEDIAN	RIGHT													
			CYS	SYS	LBS	TON	LFT	SYS	TON	EACH	LFT	EACH	TON	SYS	LFT	
Line "A"																
15+46			X		556	117	2		1553	0.16					1,553	
15+70 to 26+28	X												1			
19+17	X															
21+77 to 22+61			X										1			
21+80 to 21+87			X	1				7								
21+89 to 21+91			X	1				5								
22+02 to 22+18			X	1				27								
23+05	X										1					
24+04 to 28+26			X										1			
TOTAL				3	556	117	2	39	1553	0.16	3	0	3	0	1553	0

MAILBOX TABLE					
LT./RT.	CL BOX STATION	DESCRIPTION	WIDTH, W (FT)	ASSEMBLY REQ'D.	
				SINGLE	DOUBLE
LINE "A"					
LT.	16+84	Paved Shoulder, Mailbox Before Drive	4.00	1	
LT.	18+05	Paved Shoulder, Mailbox Before Drive	4.00	1	
RT.	22+21	Paved Shoulder, Mailbox After Drive	4.00	5	
LT.	22+63	Paved Shoulder, Mailbox Before Drive	4.00	1	
TOTAL				8	0



RECOMMENDED FOR APPROVAL *Mark Spick* 06-14-2022  
DESIGN ENGINEER DATE  
DESIGNED: \_\_\_\_\_ RPW DRAWN: \_\_\_\_\_ RPW  
CHECKED: \_\_\_\_\_ JMB CHECKED: \_\_\_\_\_ JMB

INDIANA DEPARTMENT OF TRANSPORTATION  
SUMMARY TABLES

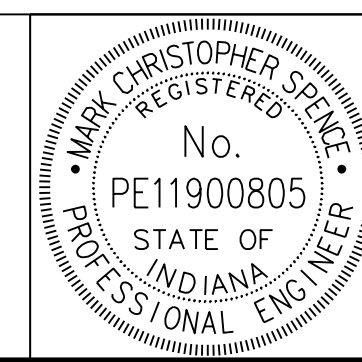
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VERTICAL SCALE	DESIGNATION
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SURVEY BOOK	SHEETS SUM-01
ELECTRONIC	22 of 34
CONTRACT	PROJECT
R-44035	2101215

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MONUMENT TABLE												
STATION	TYPE OF POINT	OFFSET (FT.)		NORTHING	EASTING	TYPE				SECTION CORNER		
						A	B	C	D			
DES. NO. 2101216												
Line "A"												
15+65.00	Begin Construction	0.00	CL	148695.94	784524.95		X					
18+43.20	PC	0.00	CL	148932.58	784671.23		X					
21+21.55	PI	20.18	LT	149169.34	784817.58			X				
23+96.00	PT	0.00	CL	149354.49	785025.42		X					
26+35.00	End Construction	0.00	CL	149523.47	785203.88		X					
TOTAL									4	1	0	0

STRUCTURE DATA																																																
STRUCTURE NUMBER	LOCATION					SIZE	DESCRIPTION	LENGTH	SKEW	RIM ELEVATION	FLOW LINE			SERVICE LIFE	SITE DESIGNATION	pH	BACKFILL METHOD	STRUCTURE BACKFILL	TYPE	SLOTTED DRAIN	GEOTEXTILES	TYPE	REVESTMENT RIPRAP	RIPRAP CLASS 1	RIPRAP CLASS 2	UNIFORM RIPRAP	VIDEO INSPECTION	PIPE END SECTION	GRATED BOX END SECTION		SAFETY METAL END SECTION		CONNECT TO STR.	REMARKS														
	STATION	LEFT	RIGHT	CROSS	OFFSET						PIPE TYPE	MANHOLE, INLET, CATCH BASIN, OR SPECIALTY STRUCTURE	LFT																ELEV.	UP STREAM	DOWN STREAM	YRS.			CYS	LFT	SYS	TON	TON	TON	TON	LFT	EA.	TYPE	SLOPE	EA.	SLOPE	EA.
	Line "A"																																															
	15+65 to 16+11	X																																														
	16+15 to 16+88	X																																														
1	16+17.80	X			38.83	60 X 48	3	Reinforced Concrete Box	47		0.73	479.53	478.98	75	N	6.5	2	27	2						33	47										36 CYS of Structure Backfill Type 5 Req'd.												
2	16+96.68	X			37.09	60 X 48	3	Reinforced Concrete Box	41		0.34	478.56	478.08	75	N	6.5	2	26	2						31	41										33 CYS of Structure Backfill Type 5 Req'd.												
	16+98 to 18+00	X						Riprap Slope																																								
3	18+92.21	X			34.87	72 X 42	3	Reinforced Concrete Box	184		1.02	476.59	475.06	75	N	6.5	2	166	2						66	184										127 CYS of Structure Backfill Type 5 w/ 2 Headwalls Req'd.												
4	19+17.00	X			34.69	N/A		Casting, Type 7						75	N	6.5	N/A	N/A	N/A																	CV-3												
5	22+82.38	X			39.19	72 X 48	3	Reinforced Concrete Box	109		1.38	472.30	471.00	75	N	6.5	2	161	2						71	109										86 CYS of Structure Backfill Type 5 Req'd.												
6	23+05.00	X			36.30	N/A		Casting, Type 7						75	N	6.5	N/A	N/A	N/A																	CV-5												
7	24+04.03			X		30 x 30	3	Reinforced Concrete Box	50		2.04	471.30	471.00	75	N	6.5	2	12	2						28	54	2									23 CYS of Structure Backfill Type 5 w/ 2 Headwalls Req'd.												
10	21+99.07			X		30 X 30	3	Reinforced Concrete Box	25		0.32	474.75	474.65	75	N	6.5	2	5	2						14	25	2									12 CYS of Structure Backfill Type 5 Req'd.												
11	26+53.41	X			26.73	N/A		Grated Box End Section, Type 1																												Beveled Edge Req'd.												
	25+10 to 26+35	X						Riprap Slope																																								

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RECOMMENDED FOR APPROVAL: *Mark Spick*  
 DESIGN ENGINEER  
 DATE: 06-14-2022  
 DESIGNED: JMS  
 DRAWN: JMS  
 CHECKED: MCS  
 CHECKED: MCS

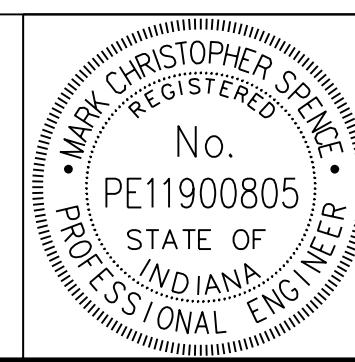
INDIANA DEPARTMENT OF TRANSPORTATION  
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VERTICAL SCALE	DESIGNATION
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SURVEY BOOK	SHEETS SUM-02
ELECTRONIC	23 of 34
CONTRACT	PROJECT
R-44035	2101215

STRUCTURE DATA REMOVALS

STRUCTURE NUMBER	LOCATION				SIZE PIPE TYPE	DESCRIPTION MANHOLE, INLET, CATCH BASIN, OR SPECIALTY STRUCTURE	LENGTH LFT	SKEW	RIM ELEVATION ELEV.	FLOW LINE			SERVICE LIFE YRS.	SITE DESIGNATION	PH	BACKFILL METHOD	STRUCTURE BACKFILL CYS	TYPE	SLOTTED DRAIN LFT	GEOTEXTILES SYS	TYPE	REVETMENT RIPRAP TON	RIPRAP CLASS 1 TON	RIPRAP CLASS 2 TON	UNIFORM RIPRAP TON	VIDEO INSPECTION LFT	PIPE END SECTION EA.	GRATED BOX END SECTION			SAFETY METAL END SECTION		CONNECT TO STR.	REMARKS			
	STATION	LEFT	RIGHT	CROSS						OFFSET FT	INCHES	COVER FT																UP STREAM ELEV.	DOWN STREAM ELEV.	EA.	SLOPE	EA.			SLOPE	EA.	
																																					TYPE
	Line "A"																																				
91	16+10 to 16+31	X				48																															
92	16+85 to 17+07	X				48																															
93	18+06 to 18+27	X				48																															
94	19+67 to 19+87	X				39 X 55																															
95	22+58 to 22+98	X				48																															
96	23+24 to 23+44	X				48																															
97	26+35	X			27.30																																
98	21+87 to 22+12		X			18																															
99	23+03.50			x		30																															
101	16+11	X			32.27																																
102	16+30	X			31.66																																
103	16+86	X			30.37																																
104	17+06	X			31.16																																
105	18+07	X			27.72																																
106	18+27	X			27.00																																
107	23+24	X			22.84																																

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RECOMMENDED FOR APPROVAL: *Mark Spick*  
 DESIGN ENGINEER DATE: 06-14-2022

DESIGNED: RPW DRAWN: RPW

CHECKED: MCS CHECKED: MCS

INDIANA DEPARTMENT OF TRANSPORTATION

SUMMARY TABLES

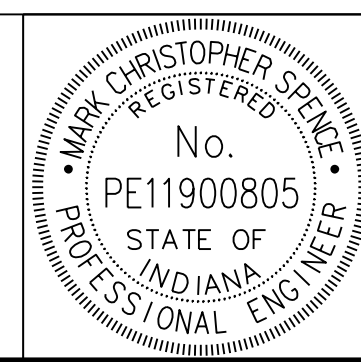
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VERTICAL SCALE	DESIGNATION
N/A	2101215
SURVEY BOOK	SHEETS SUM-03
ELECTRONIC	24 of 34
CONTRACT	PROJECT
R-44035	2101215



RIPRAP DITCH, PAVED SIDE DITCH, SEEDING AND SODDING SUMMARY TABLE

LOCATION				ACTUAL LENGTH	SEEDING					PAVED SIDE DITCH					RIPRAP					SODDING										
FROM STATION	TO STATION	LEFT	CENTER		RIGHT	MULCHING MATERIAL	WATER	FERTILIZER	SEED MIXTURE R	SEED MIXTURE U	MULCHED SEEDING, U	CUT OFF WALLS (8' EQUIVAL. LENGTH EACH)	LUGS (8' EQUIVAL. LENGTH EACH)	TOTAL EQUIVALENT PAY LENGTHS				CLASS 1	CLASS 2	RIPRAP, UNIFORM	RIPRAP, REVETMENT	GEOTEXTILES FOR RIPRAP, TYPE 2A	FOR SPECIAL SIDE DITCHES	FOR DITCH BOTTOMS	INSIDE CONSTRUCTION LIMITS	FOR SIDE SLOPE BREAKS	SODDING AT BRIDGE CONE	NEXT TO PAVED DITCH	TOTAL SODDING	
														TYPE																
														TYPE H	TYPE A	TYPE L														LFT
Line "A"																														
15+65	15+95	X				0.1											75	25	173				14						14	
16+66	16+76	X				0.4											33	47	147				8	92					100	
17+42	18+01	X				1.5											31	68	127				46	336					382	
18+25	19+62	X				3.3											66		55				122	695					817	
20+10	22+49	X				4.5											85		221				266	857					1123	
21+50	24+16			X						197							14		54											
22+80	23+26	X				0.9											14		27				41	172					213	
23+85	24+29	X				0.5											144		237				49	87					136	
TOTAL						11				197							462	140	1041				546	2239					2785	

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RECOMMENDED FOR APPROVAL: *Mark Spick*  
 DESIGN ENGINEER  
 DATE: 06-14-2022  
 DESIGNED: RPW DRAWN: RPW  
 CHECKED: MCS CHECKED: MCS

INDIANA DEPARTMENT OF TRANSPORTATION  
 SUMMARY TABLES

HORIZONTAL SCALE	BRIDGE FILE
N/A	N/A
VERTICAL SCALE	DESIGNATION
N/A	2101215
SURVEY BOOK	SHEETS SUM-04
ELECTRONIC	25 of 34
CONTRACT	PROJECT
R-44035	2101215

US 231 Drainage Improvements  
Dubois County, Indiana  
Des. No. 2101215

**Appendix C: Early Coordination**



# INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue  
Room N758-ES  
Indianapolis, Indiana 46204

PHONE: (317)233-0800

**Eric J. Holcomb, Governor**  
**Joe McGuinness, Commissioner**

October 8, 2021

## Example Early Coordination Letter

Via Email to Early Coordination List:

Re: Early Coordination Letter, Des. No.: 2101215, US 231 HMA Overlay and Drainage Improvements,  
From 1.20 Miles South of State Road (SR) 64 to 0.88 Mile south of SR 64, Dubois County, Indiana

To Whom it May Concern:

The Indiana Department of Transportation (INDOT), with federal funding, intends to proceed with a drainage improvement project along US 231 in Dubois County, Indiana. This letter is part of the early coordination phase of the environmental review process. We are requesting comments from your area of expertise regarding any possible environmental effects associated with this project. **Please use the above designation number and description in your reply.** We will incorporate your comments into a study of the project's environmental impacts.

**Project Location:** This project is located on US 231, from 1.20 miles south of SR 64 to 0.88 mile south of SR 64 in Dubois County. More specifically, this project is located in Sections 3 and 4, Township 3 South, Range 5 West of Patoka Township in the City of Huntingburg, Indiana.

**Existing Conditions:** This section of US 231 is a two-lane rural *Principal Arterial* with a speed limit of 40 miles per hour. The typical section of US 231 in this area has two 12-foot travel lanes. Paved sidewalks are present on west side of the roadway, starting south of the US 231 and South Chestnut Street intersection. An open stream runs along the west side of the roadway for approximately 1,200 feet.

**Preliminary Purpose and Need:** The need for the project is the overtopping of the roadway during heavy storm events and erosion of stream bank slopes. The purpose of the project is to minimize the potential for roadway overtopping, address the erosion issues on the bank slopes, and potentially make improvements to roadside safety along the stream.

**Proposed Project:** The proposed project is anticipated to include drainage improvements which are expected to include an increase in the cross section of the stream / roadside ditch and driveway culvert capacities as well as potentially add areas for water detention. The project is anticipated to begin construction in fall 2022.

**Right-of-Way:** The project will require the acquisition of temporary and permanent right of way; however, the specific locations are still being evaluated.

**Maintenance of Traffic:** During construction, traffic will likely be maintained on US 231 using flagging operations. Temporary road closures are possible for this section of roadway to install or replace crossing pipes. Temporary closures of driveways along the west side will be needed to replace drive culverts.

**Surrounding Resources:** Land use in the vicinity of the project is primarily residential. The project is anticipated to qualify for the Rangewide Programmatic Agreement for the Indiana bat and northern long-eared bat. The U.S. Fish and Wildlife Service Information for Planning and Consultation (IPaC) will be utilized to determine the projects potential to affect to the Indiana bat and northern long-eared bat. Coordination will occur with INDOT Cultural Resources Office (CRO) 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.

**Comments Request:** You are asked to review this information and provide comments you may have relative to the anticipated effects of the project on areas which you have jurisdiction or special expertise. Please send your comments to Dan Logsdon, of HNTB Corporation, at [dlogsdon@hntb.com](mailto:dlogsdon@hntb.com) or 317-917-5336. Please provide your response within thirty (30) calendar days from the date of this letter. However, should you find that an extension to the response time is necessary, a reasonable amount may be granted upon request.

If you have any questions regarding this matter, please feel free to contact Dan Logsdon, of HNTB Corporation, at [dlogsdon@hntb.com](mailto:dlogsdon@hntb.com) or 317-917-5336; or Kent Davis, INDOT Project Manager, at [aldavis@indot.in.gov](mailto:aldavis@indot.in.gov) or 812-895-7385. Thank you in advance for your input.

Sincerely,



Dan Logsdon  
HNTB CORPORATION

Attachments: Project Location Map  
Project Area Aerial  
USGS 7.5 Minute Topographic Quad Map  
Photo Location Map  
Project Location Photographs

Attachments have been removed to avoid duplication. Attachments can be found in Appendix B.

Cc: Indiana Geological and Water Survey, via webform  
Indiana Department of Environmental Management, via webform  
Ryan Falls, INDOT Vincennes District  
Julian Courtade, INDOT Office of Aviation  
Christie Stanifer, Indiana Department of Natural Resources  
Rick Neilson, Natural Resources Conservation Service  
Deborah Snyder, US Army Corps of Engineers  
Kari Carmany-George, Federal Highway Administration  
Robin McWilliams-Munson, US Fish and Wildlife Service  
Alisha Turnbow, IDEM Groundwater Section Chief



Erik Sandstedt, US Department of Housing and Urban Development  
Kevin Amick, Hoosier National Forest  
Chad Mundy, Dubois County MS4 Coordinator  
Kenneth Brosmer, Dubois County Surveyor  
Tom Kleinhelter, Dubois County Sheriff  
Steven Berg, Dubois County Highway Superintendent  
Alex Hohl, Dubois County Council  
Tim LaGrange, Southwest Dubois County Schools  
Tamara Humbert, Dubois County Emergency Management  
Chad Blessinger, Dubois County Board of Commissioners  
City of Huntingburg Water Utilities  
Steve Schwinghammer, City of Huntingburg Mayor

## Dan Logsdon

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**From:** Falls, Ryan G <RFalls@indot.IN.gov>  
**Sent:** Wednesday, October 13, 2021 9:34 AM  
**To:** Dan Logsdon  
**Cc:** Richard Connolly; Wright, Kristy  
**Subject:** RE: US 231 Drainage Improvements (Des. No. 2101215) - Early Coordination Letter

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Dan Logsdon,

I noticed you coordinated with USFWS. USFWS has asked that if a project falls under the interim policy, there is no need to coordinate with them, note this in the CE, and to include recommendations from the policy. If the project does not fall under the policy, please disregard. This is only guidance for future EC letters. Please feel free to share this within your firm.

Thank you for the opportunity to respond to early coordination.

### Ryan Falls

#### **Capital Program Management-Senior Environmental Manager Supervisor**

Indiana Department of Transportation

3650 South US Highway 41

Vincennes, IN 47591

**Email:** [rfalls@indot.IN.gov](mailto:rfalls@indot.IN.gov)

**Cell:** 812-582-1387



855-463-6848

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**From:** Dan Logsdon <dlogsdon@HNTB.com>  
**Sent:** Friday, October 8, 2021 5:13 PM  
**To:** Royer, Brian <BRoyer@dnr.IN.gov>; Falls, Ryan G <RFalls@indot.IN.gov>; DNR Environmental Review <environmentalreview@dnr.IN.gov>; Neilson, Rick - NRCS, Indianapolis, IN <rick.neilson@in.usda.gov>; RegulatoryApplicationsLRL@usace.army.mil; Carmany-George, Karstin (FHWA) <k.carmanygeorge@dot.gov>; McWilliams, Robin <robin\_mcwilliams@fws.gov>; Mwro\_Compliance@nps.gov; Turnbow, Alisha <ATurnbow@idem.IN.gov>; Amick, Kevin R -FS <kamick@fs.fed.us>; stormwater@jasperindiana.gov; krbrosmer@duboiscountyin.org; slberg@duboiscountyin.org; gbuechlein@gjcs.k12.in.us; lagranget@swdubois.k12.in.us; sschwinghamer@huntingburg-in.gov; Erik.r.sandstedt@hud.gov  
**Cc:** Richard Connolly <rconnolly@HNTB.com>; Wright, Kristy <KWright@indot.IN.gov>; Shelby.Ruffner@in.nacdn.net; Allen, Michelle (FHWA) <michelle.allen@dot.gov>  
**Subject:** US 231 Drainage Improvements (Des. No. 2101215) - Early Coordination Letter

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

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The Indiana Department of Transportation (INDOT) and Federal Highway Administration (FHWA) intend to proceed with a project involving US 231 in Dubois County, Indiana. Please see the attached early coordination letter as part of the

## Dan Logsdon

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**From:** McWilliams, Robin <robin\_mcwilliams@fws.gov>  
**Sent:** Wednesday, October 20, 2021 10:38 AM  
**To:** Dan Logsdon  
**Subject:** Re: [EXTERNAL] US 231 Drainage Improvements (Des. No. 2101215) - Early Coordination Letter

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Dear Dan,

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 reinitiate 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

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**From:** Dan Logsdon <dlogsdon@HNTB.com>  
**Sent:** Friday, October 8, 2021 5:12 PM  
**To:** broyer@dnr.IN.gov <broyer@dnr.IN.gov>; rfalls@indot.in.gov <rfalls@indot.in.gov>; environmentalreview@dnr.in.gov <environmentalreview@dnr.in.gov>; rick.neilson@in.usda.gov <rick.neilson@in.usda.gov>; RegulatoryApplicationsLRL@usace.army.mil <RegulatoryApplicationsLRL@usace.army.mil>; k.carmanygeorge@dot.gov <k.carmanygeorge@dot.gov>; McWilliams, Robin <robin\_mcwilliams@fws.gov>; MWRO Compliance, NPS <MWRO\_Compliance@nps.gov>; Aturnbow@idem.IN.gov <Aturnbow@idem.IN.gov>; kamick@fs.fed.us <kamick@fs.fed.us>; stormwater@jasperindiana.gov <stormwater@jasperindiana.gov>; krbrosmer@duboiscountyin.org <krbrosmer@duboiscountyin.org>; slberg@duboiscountyin.org <slberg@duboiscountyin.org>; gbuechlein@gjcs.k12.in.us <gbuechlein@gjcs.k12.in.us>; lagranget@swdubois.k12.in.us <lagranget@swdubois.k12.in.us>; ssschwinghamer@huntingburg-in.gov <ssschwinghamer@huntingburg-in.gov>; Erik.r.sandstedt@hud.gov <Erik.r.sandstedt@hud.gov>  
**Cc:** Richard Connolly <rconnolly@HNTB.com>; kwright@indot.in.gov <kwright@indot.in.gov>;



November 9, 2021

Dan Logsdon  
HNTB Corporation  
111 Monument Circle, Suite 1200  
Indianapolis, Indiana 46204  
[dlogston@hntb.com](mailto:dlogston@hntb.com)

Dear Mr. Logsdon:

The proposed project to proceed with drainage improvements along US 231 in DuBois County, Indiana, (Des No 2101215), as referred to in your letter received October 8, 2021, will not cause a conversion of prime farmland.

If you need additional information, please contact John Allen at 317-295-5859 or [john.allen@usda.gov](mailto:john.allen@usda.gov).

Sincerely,

**RICHARD** Digitally signed by  
RICHARD NEILSON  
**NEILSON** Date: 2021.11.12  
09:41:59 -05'00'

RICK NEILSON  
State Soil Scientist



## Dan Logsdon

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**From:** Royer, Brian <BRoyer@dnr.IN.gov>  
**Sent:** Tuesday, October 19, 2021 2:54 PM  
**To:** Dan Logsdon  
**Subject:** RE: US 231 Drainage Improvements (Des. No. 2101215) - Early Coordination Letter

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

There are no records of any oil and gas related issues that will be encountered near this project area.

Thanks,

**Brian Royer**  
Orphan Well Manager  
Indiana Department of Natural Resources  
Division of Oil & Gas  
Cell- 317-417-6556  
[www.dnr.IN.gov](http://www.dnr.IN.gov)

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

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**From:** Dan Logsdon <dlogsdon@HNTB.com>  
**Sent:** Friday, October 08, 2021 5:13 PM  
**To:** Royer, Brian <BRoyer@dnr.IN.gov>; Falls, Ryan G <RFalls@indot.IN.gov>; DNR Environmental Review <environmentalreview@dnr.IN.gov>; Neilson, Rick - NRCS, Indianapolis, IN <rick.neilson@in.usda.gov>; RegulatoryApplicationsLRL@usace.army.mil; Carmany-George, Karstin (FHWA) <k.carmanygeorge@dot.gov>; McWilliams, Robin <robin\_mcwilliams@fws.gov>; Mwro\_Compliance@nps.gov; Turnbow, Alisha <ATurnbow@idem.IN.gov>; Amick, Kevin R -FS <kamick@fs.fed.us>; stormwater@jasperindiana.gov; krbrosmer@duboiscountyin.org; slberg@duboiscountyin.org; gbuechlein@gjcs.k12.in.us; lagranget@swdubois.k12.in.us; sschwinghamer@huntingburg-in.gov; Erik.r.sandstedt@hud.gov  
**Cc:** Richard Connolly <rconnolly@HNTB.com>; Wright, Kristy <KWright@indot.IN.gov>; Shelby.Ruffner@in.nacdn.net; Allen, Michelle (FHWA) <michelle.allen@dot.gov>  
**Subject:** US 231 Drainage Improvements (Des. No. 2101215) - Early Coordination Letter

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The Indiana Department of Transportation (INDOT) and Federal Highway Administration (FHWA) intend to proceed with a project involving US 231 in Dubois County, Indiana. Please see the attached early coordination letter as part of the early coordination phase of the environmental review process. We request comments from you within your area of expertise regarding any potential environmental or community effects associated with this proposed project. Please use the above designation number and description in your reply. We will incorporate your comments into a study of the project's environmental effects.

This study will be conducted in accordance with the National Environmental Policy Act (NEPA). INDOT and FHWA have not yet determined the NEPA class of action for the project (i.e., Categorical Exclusion, Environmental Assessment, or Environmental Impact Statement). This determination will be made once more details about the proposed action are defined.

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

**DNR #:** ER-24127

**Request Received:** October 8, 2021

**Requestor:** HNTB Corporation  
Dan Logsdon  
111 Monument Circle, Suite 1200  
Indianapolis, IN 46204-5178

**Project:** US 231 HMA overlay and drainage improvements, from 1.20 miles to 0.88 mile south of SR 64, Huntingburg; Des #2101215

**County/Site info:** Dubois

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:** Formal approval by the Department of Natural Resources under the regulatory programs administered by the Division of Water is not required for this project.

**Natural Heritage Database:** The Natural Heritage Program's data have been checked. The federally protected Bald Eagle (*Haliaeetus leucocephalus*) has been documented within 1/2 mile of the project area.

**Fish & Wildlife Comments:** 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) Bald Eagle:

The Bald Eagle is no longer a state species of special concern. However, this species is still federally protected (see <https://www.fws.gov/midwest/eagle/history/protectations.html>). The recommended buffer between any disturbance and an active eagle nest is 660 feet. To minimize impacts to Bald Eagles, follow the National Bald Eagle Management Guidelines found at <http://www.fws.gov/midwest/eagle/pdf/NationalBaldEagleManagementGuidelines.pdf>. Please contact the US Fish and Wildlife Service if further consultation is needed regarding Bald Eagles.

2) Riparian Habitat:

We recommend a mitigation plan be developed 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, 1 inch to 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

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

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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.

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 grasses (excluding all varieties of tall fescue), legumes, and native shrub and hardwood tree species as soon as possible upon completion.
2. Minimize and contain within the project limits inchannel disturbance and the clearing of trees and brush.
3. 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.
4. 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.
5. 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.

**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:** November 5, 2021

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