

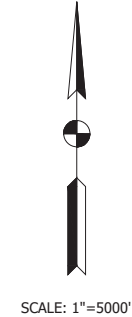
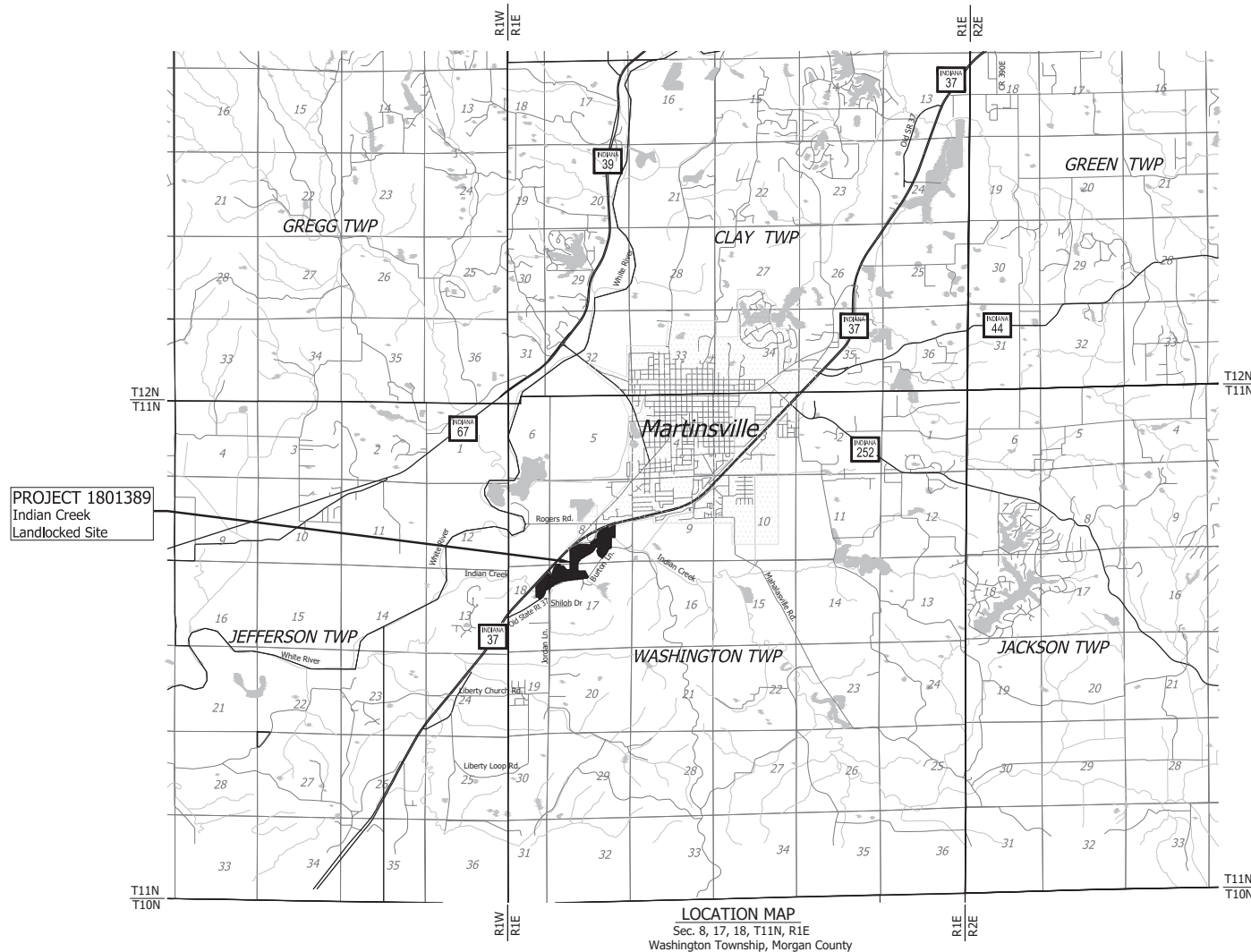
PROJECT	DESIGNATION
1801389	1801389
CONTRACT	BRIDGE FILE

INDIANA DEPARTMENT OF TRANSPORTATION

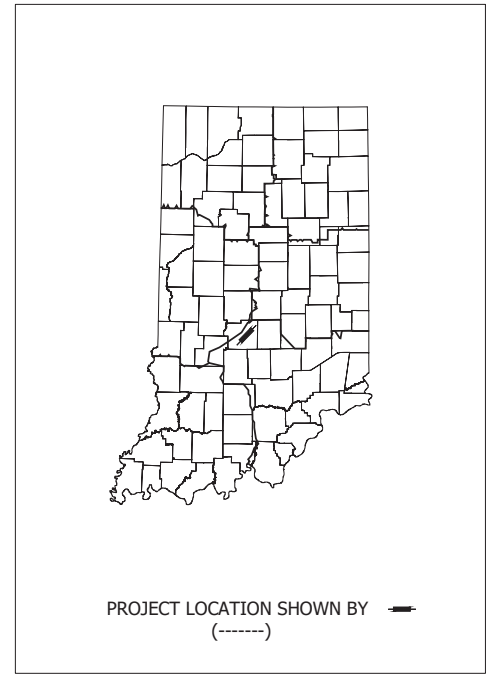


MITIGATION PLANS INDIAN CREEK LANDLOCKED SITE PROJECT NO. 1801389 P.E., R/W & CONSTR.

Project Site Located adjacent to the south side of the SR 37/SR 39 interchange on Martinsville in between SR 37 and Burton Lane.



TRAFFIC DATA	
A.A.D.T.	(---) --- V.P.D.
A.A.D.T.	(---) --- V.P.D.
D.H.V.	(---) --- V.P.H.
DIRECTIONAL DISTRIBUTION	---
TRUCKS	--- A.A.D.T.
	--- D.H.V.
DESIGN DATA	
DESIGN SPEED	--- M.P.H.
PROJECT DESIGN CRITERIA	N/A
FUNCTIONAL CLASSIFICATION	N/A
RURAL/URBAN	N/A
TERRAIN	N/A
ACCESS CONTROL	N/A



LATITUDE: 39°23'57" N LONGITUDE: 86°26'57" W

BRIDGE LENGTH:	----	MI.
ROADWAY LENGTH:	----	MI.
TOTAL LENGTH:	----	MI.
MAX. GRADE:	----	%

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

BRIDGE FILE	
DESIGNATION	1801389
SURVEY BOOK	SHEETS
CONTRACT	PROJECT
	1801389

Plans Prepared By:
LOCHMUELLER GROUP
6200 Vogel Road
Evansville, Indiana 47715
Phone: 812.479.6200
Toll Free: 800.423.7411

Preliminary

PLANS PREPARED BY: _____ (---) -----
PHONE NUMBER
CERTIFIED BY: _____ -/-/-/ DATE
APPROVED FOR LETTING: _____ DATE
INDIANA DEPARTMENT OF TRANSPORTATION

Date: Jan 14, 2019, 3:20pm User Name: rap File: S:\EN\PROJECTS\1801389\1801389\Mitigation Errors Section 6\Indian Creek Landlocked Site\Design\Call Plans\TITLE-INDIAN-CREEK.dwg

Date: Sep 05, 2019, 10:29am User Name: ntp
 File: S:\ENR\RD\1103-0001\Mitigation Errors\Section 6\Indian Creek Landlocked Site\Design\Civil\Plans\IC-Aerial.dwg

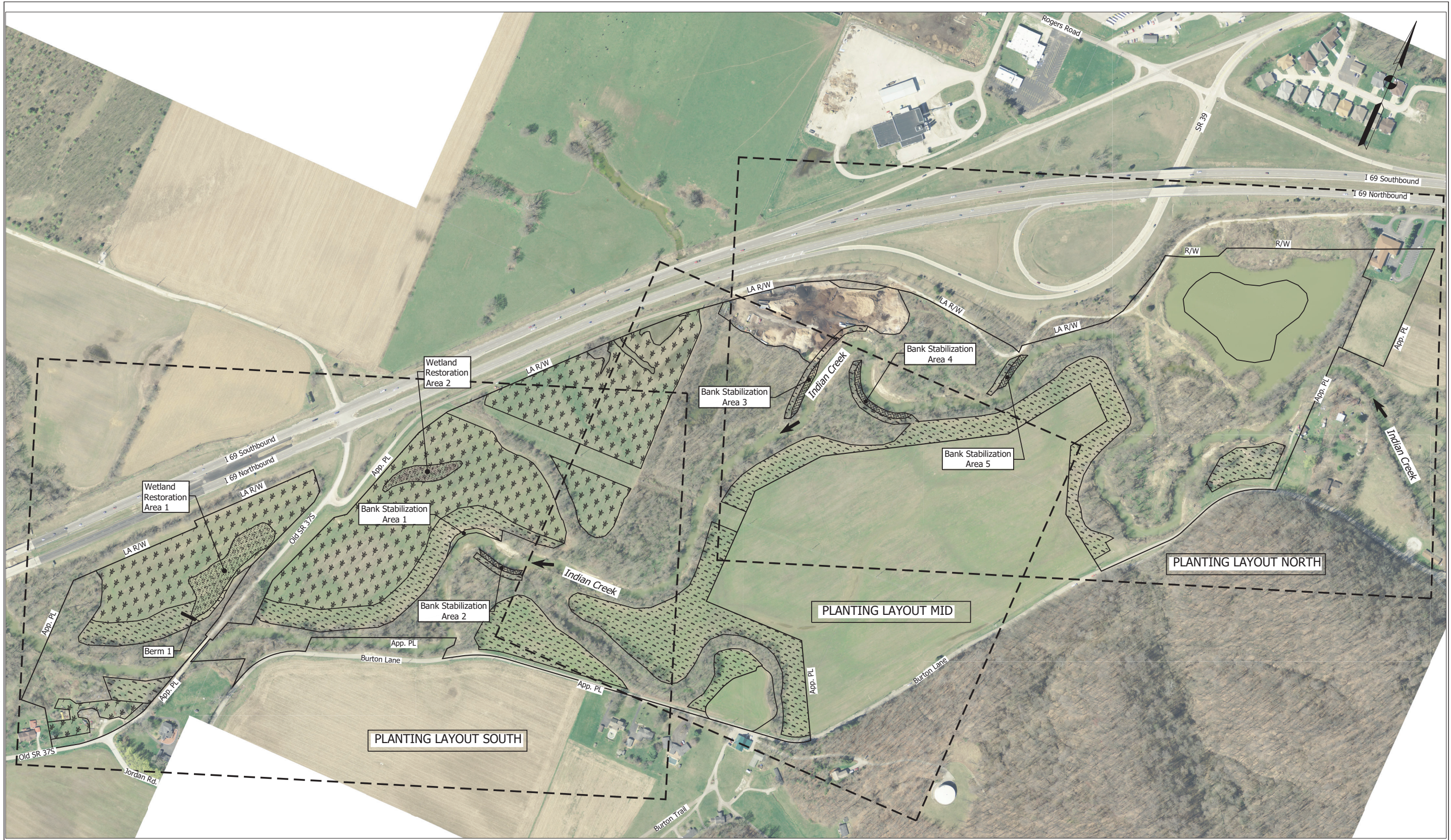


Preliminary

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE ____/____/____
DESIGNED: M.T.R.	DRAWN: R.A.P.	
CHECKED: J.A.D.	CHECKED: M.T.R.	

INDIANA DEPARTMENT OF TRANSPORTATION	
OVERALL MITIGATION SITE LAYOUT	

HORIZONTAL SCALE	BRIDGE FILE
1"=300'	-
VERTICAL SCALE	DESIGNATION
-	1801389
SURVEY BOOK	SHEETS
	3 of 11
CONTRACT	PROJECT
R-41136	1801389



Date: Sep 05, 2019, 10:20am User Name: nmp
 File: S:\ENR\2019\10-30001\Mitigation_Efforts\Section 6\Indian_Creek_Landlocked_Site\Design\Civil\Plans\IC-Aerial.dwg

NOTE
See Sheets 5-7 For Planting Layouts South, Mid and North.

ZONE LEGEND	
	ZONE IC1 - Riparian Reforestation
	ZONE IC3 - Emergent Wetland Restoration
	ZONE IC2 - Non-Wetland Reforestation
	ZONE IC4 - Stream Bank Stabilization
	MW Monitoring Well

Preliminary

RECOMMENDED FOR APPROVAL: _____	DESIGN ENGINEER: _____	DATE: ____/____/____
DESIGNED: M.T.R.	DRAWN: R.A.P.	
CHECKED: J.A.D.	CHECKED: M.T.R.	

INDIANA
DEPARTMENT OF TRANSPORTATION

OVERALL PLANTING LAYOUT

HORIZONTAL SCALE	BRIDGE FILE
1"=200'	-
VERTICAL SCALE	DESIGNATION
-	1801389
SURVEY BOOK	SHEETS
	4 of 11
CONTRACT	PROJECT
R-41136	1801389



Date: Jul 27, 2019 9:48am User Name: rnp
 File: S:\ENR\2019\1103-0001\Mitigation Errors Section 6\Indian Creek Landlocked Site\Design\Civil\Plans\IC-Aerial.dwg

ZONE LEGEND

-  ZONE IC1 - Riparian Reforestation
-  ZONE IC2 - Non-Wetland Reforestation
-  ZONE IC3 - Emergent Wetland Restoration
-  ZONE IC4 - Stream Bank Stabilization
-  Monitoring Well

Preliminary

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: M.T.R.	DRAWN: R.A.P.	
CHECKED: J.A.D.	CHECKED: M.T.R.	

INDIANA DEPARTMENT OF TRANSPORTATION




PLANTING LAYOUT SOUTH

HORIZONTAL SCALE	BRIDGE FILE
1"=100'	-
VERTICAL SCALE	DESIGNATION
-	1801389
SURVEY BOOK	SHEETS
CONTRACT	5 of 11
R-41136	PROJECT
	1801389

Date: Sep 05, 2019, 10:41am User Name: nmp
 File: S:\ENR\2019\1109-0001\Mitigation Efforts\Section 6\Indian Creek Landlocked Site\Design\Civil\Plans\IC-Aerial.dwg



ZONE LEGEND

-  ZONE IC1 - Riparian Reforestation
-  ZONE IC2 - Non-Wetland Reforestation
-  ZONE IC4 - Stream Bank Stabilization

Preliminary

RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: M.T.R.	DRAWN: R.A.P.	
CHECKED: J.A.D.	CHECKED: M.T.R.	

INDIANA
DEPARTMENT OF TRANSPORTATION

PLANTING LAYOUT MID

HORIZONTAL SCALE	BRIDGE FILE
1"=100'	-
VERTICAL SCALE	DESIGNATION
-	1800935 & 1800937
SURVEY BOOK	SHEETS
	6 of 11
CONTRACT	PROJECT
R-41136	R-41136



Date: Jul 29, 2019, 9:50am User Name: rnp
 File: S:\ENR\2019\1103-0001\Mitigation Errors Section 6\Indian Creek Landlocked Site\Design\Civil\Plans\IC-Aerial.dwg

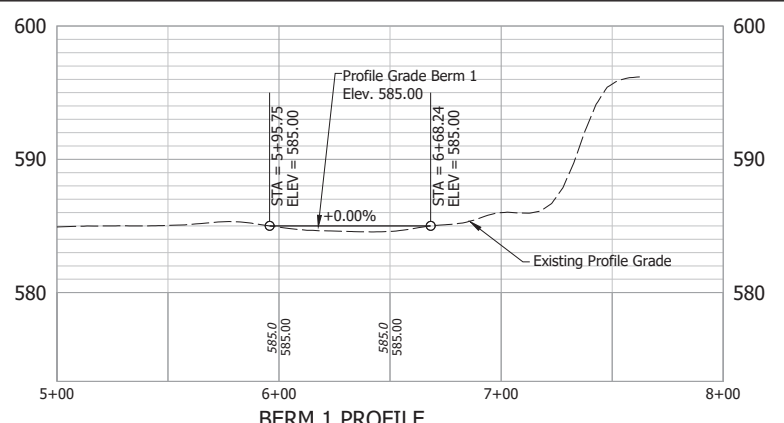
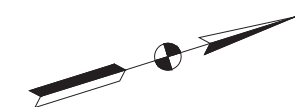
ZONE LEGEND	
	ZONE IC1 - Riparian Reforestation
	ZONE IC2 - Non-Wetland Reforestation
	ZONE IC4 - Stream Bank Stabilization

Preliminary

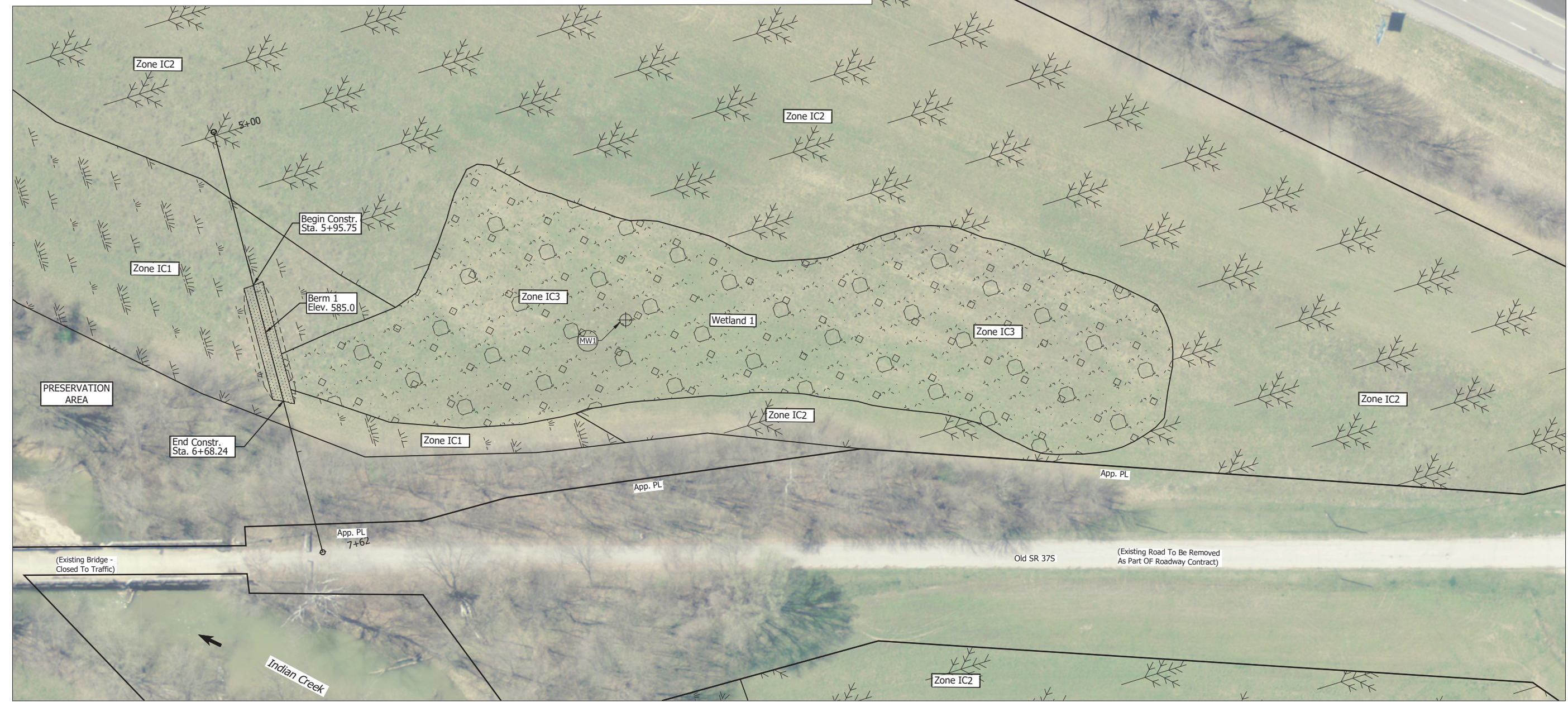
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: M.T.R.	DRAWN: R.A.P.	
CHECKED: J.A.D.	CHECKED: M.T.R.	

INDIANA DEPARTMENT OF TRANSPORTATION
PLANTING LAYOUT NORTH

HORIZONTAL SCALE	BRIDGE FILE
1"=100'	-
VERTICAL SCALE	DESIGNATION
-	1801389
SURVEY BOOK	SHEETS
	7 of 11
CONTRACT	PROJECT
R-41136	1801389



BERM 1 PROFILE



PRESERVATION AREA

Zone IC2

Zone IC1

Begin Constr. Sta. 5+95.75

Berm 1 Elev. 585.0

Zone IC3

Wetland 1

Zone IC3

Zone IC2

Zone IC2

End Constr. Sta. 6+68.24

App. PL

App. PL

App. PL 7+62

(Existing Bridge - Closed To Traffic)

Old SR 375

(Existing Road To Be Removed As Part Of Roadway Contract)

Indian Creek

Zone IC2

ZONE LEGEND



ZONE IC1 - Riparian Reforestation



ZONE IC3 - Emergent Wetland Restoration



ZONE IC2 - Non-Wetland Reforestation



MW Monitoring Well

Preliminary

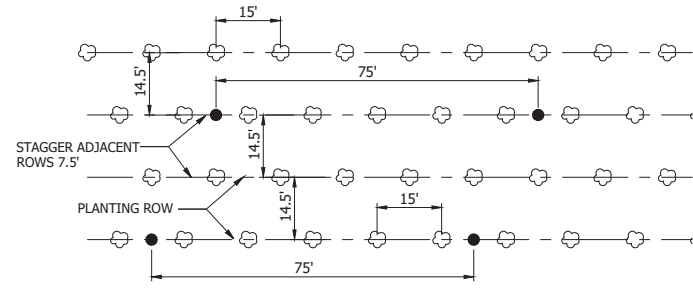
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: M.T.R.	DRAWN: R.A.P.	
CHECKED: J.A.D.	CHECKED: M.T.R.	

INDIANA DEPARTMENT OF TRANSPORTATION

BERM LAYOUT

HORIZONTAL SCALE	BRIDGE FILE
1"=30'	-
VERTICAL SCALE	DESIGNATION
-	1801389
SURVEY BOOK	SHEET
	8 of 11
CONTRACT	PROJECT
R-39970	1801389

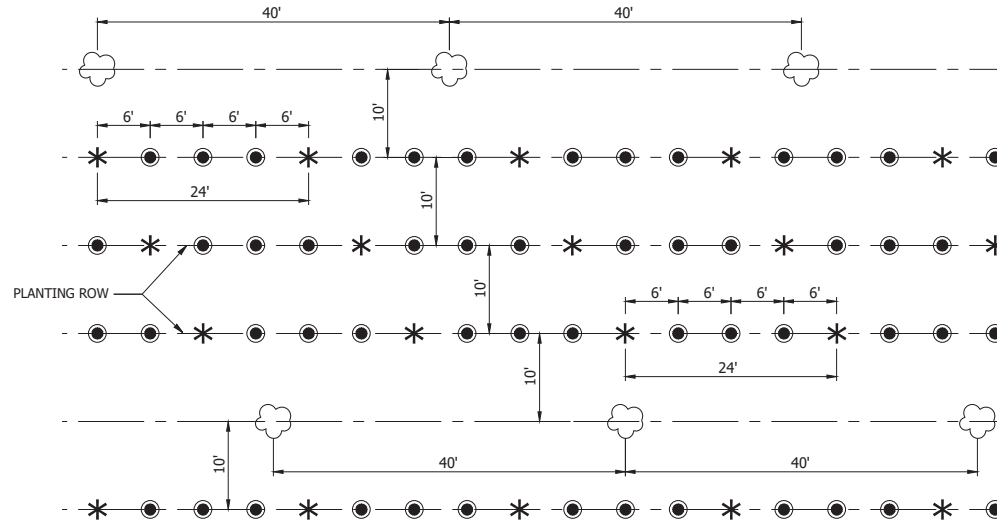
Date: May 10, 2019, 12:24pm User: Name: rap File: S:\E\W\PRJ\103-0001\Mitigation Efforts\Section 6\Indian Creek_Landlocked Site\Design\Cad\Plans\IC-Bank Wetland Berm.dwg



PLANTING LAYOUT ZONE IC1 (RIPARIAN REFORESTATION)
NOT TO SCALE

LEGEND

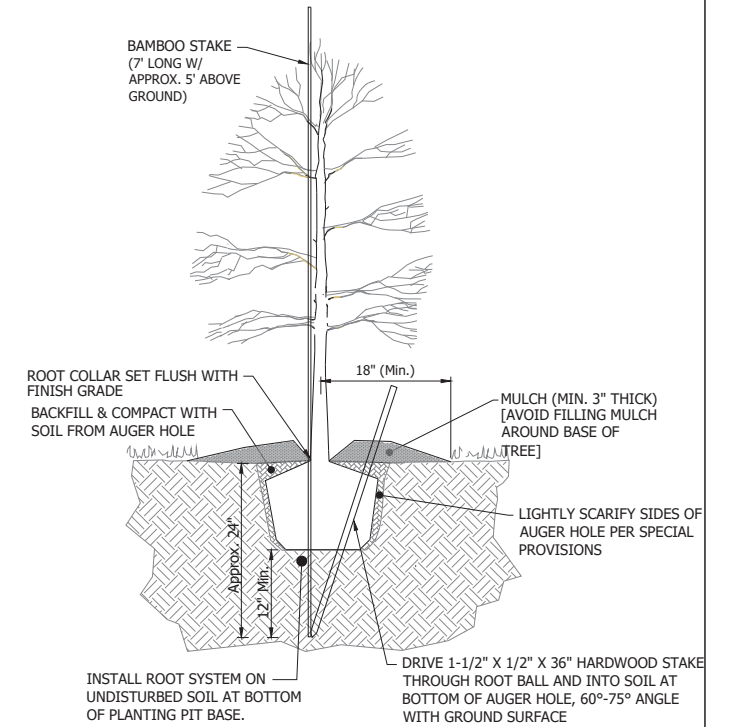
- ☁ CONTAINER GROWN CANOPY TREE
- CONTAINER GROWN UNDERSTORY SHRUB



PLANTING LAYOUT ZONE IC2 (BOTTOMLAND REFORESTATION)
NOT TO SCALE

LEGEND

- ☁ CONTAINER GROWN CANOPY TREE
- * BARE ROOT UNDERSTORY SEEDLING
- BARE ROOT CANOPY SEEDLING



CONTAINER GROWN TREE PLANTING DETAIL
NOT TO SCALE

TREE AND SHRUB PLANTING SUMMARY								
Planting Zone	Description	IC1		IC2		IC4		Project Total
		Riparian	Bottomland	Bank Stabilization	Bank Stabilization	Bank Stabilization	Bank Stabilization	
Acreage/Length	22.3	28.5	0.7 (1,430 Ft)					
Planting Density	200 st/ac	408 st/ac	27 st/ac					
Canopy Species	Common Name	CG	BR	CG	LS (3')	BR	CG	LS (3')
<i>Acer rubrum</i>	Red Maple	--	1292	77	--	1,292	77	--
<i>Acer saccharinum</i>	Silver Maple	--	646	77	--	646	77	--
<i>Carya cordiformis</i>	Bitternut Hickory	558	1292	77	--	1,292	635	--
<i>Carya laciniosa</i>	Shellbark Hickory	--	1292	77	--	1,292	77	--
<i>Juglans nigra</i>	Black Walnut	558	--	--	--	--	558	--
<i>Liquidambar styraciflua</i>	Sweetgum	--	1292	77	--	1,292	77	--
<i>Quercus bicolor</i>	Swamp White Oak	558	1292	77	--	1,292	635	--
<i>Quercus imbricaria</i>	Shingle Oak	558	--	--	--	--	558	--
<i>Quercus macrocarpa</i>	Bur Oak	557	1292	77	--	1,292	634	--
<i>Quercus palustris</i>	Pin Oak	557	1292	77	--	1,292	634	--
<i>Quercus shumardii</i>	Shumard Oak	557	--	--	--	--	557	--
<i>Platanus occidentalis</i>	Sycamore	557	1292	77	536	1,292	634	536
<i>Populus deltoides</i>	Cottonwood	--	646	77	--	646	77	--
Totals		4,460	11,628	770	536	11,628	5,230	536
Understory Species	Common Name	Planting Density	40 st/ac	136 st/ac	N/A	varies**	Project Total	
<i>Aronia melanocarpa</i>	Black Chokeberry	--	--	969	--	--	969	--
<i>Cornus amomum</i>	Silky dogwood	223	--	--	1,341	--	223	1,341
<i>Cornus drummondii</i>	Roughleaf Dogwood	223	969	--	--	--	969	223
<i>Cornus racemosa</i>	Gray Dogwood	223	969	--	--	--	969	223
<i>Physocarpus opulifolius</i>	Common Ninebark	223	969	--	--	--	969	223
<i>Salix sp.*</i>	Willow Species	--	--	--	1,340	--	--	1,340
Totals		892	3,876	0	2,681	3,876	892	2,681
Planting Totals		BR	CG	LS (3')				
BR: Seedling, Bare Root (EACH)		15,504	--	--				
CG: Plant, Deciduous Tree, Single Stem, 1.25 Inch or Under (EACH)		--	5,230	--				
CG: Plant, Deciduous Shrub, Single Stem, 24 to 36 Inch (EACH)		--	892	--				
LS (4'): Live Stake Planting, 3-Foot (EACH)		--	--	3,217				

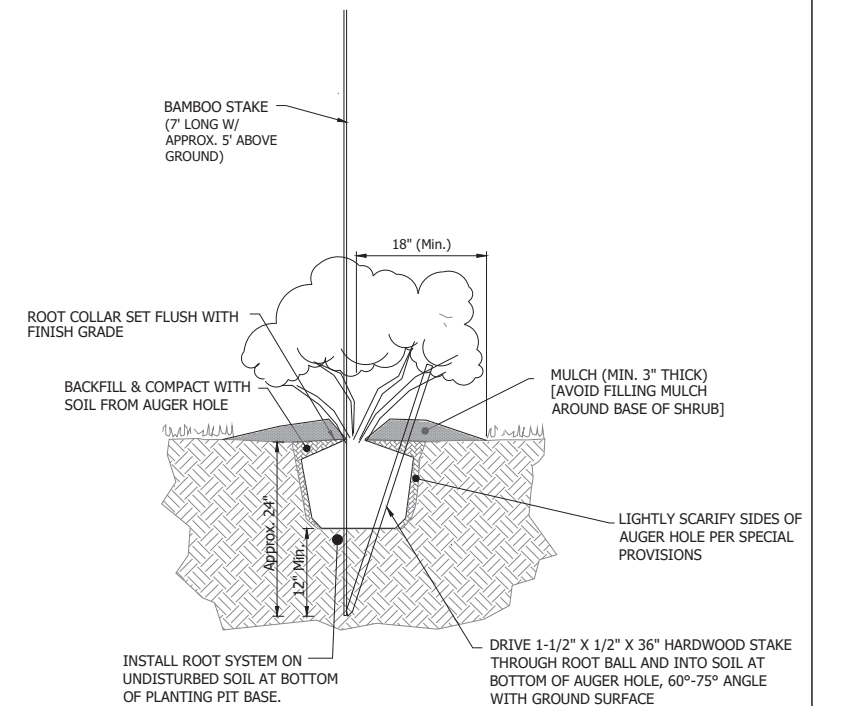
*Species shall be per the Special Provisions.

**Live stake spacing and totals may be revised upon final design of river bank stabilization.

SEEDING SUMMARY							
Seed Mixtures	Rate (lbs/ac)	Zone (Acres)					Totals
		IC1	IC2	IC3	IC4	Berm	
Seed Mixture, Woodland (LBS)	45.00	1,003.5	--	--	--	--	1,003.5
Seed Mixture, Wild Rye (LBS)	48.00	--	1368.0	--	--	--	1368.0
Seed Mixture, Emergent Wetland (LBS)	31.75	--	--	54.0	--	--	54.0
Seed Mixture, Soil Stabilization (LBS)	73.00	--	--	--	51.1	1.5	52.6

Zone Descriptions:

- Zone IC1 - Riparian Reforestation
- Zone IC2 - Bottomland Reforestation
- Zone IC3 - Emergent Wetland Restoration (PEM)
- Zone IC4 - Open Water Wetland Preservation (PUB)
- Berm

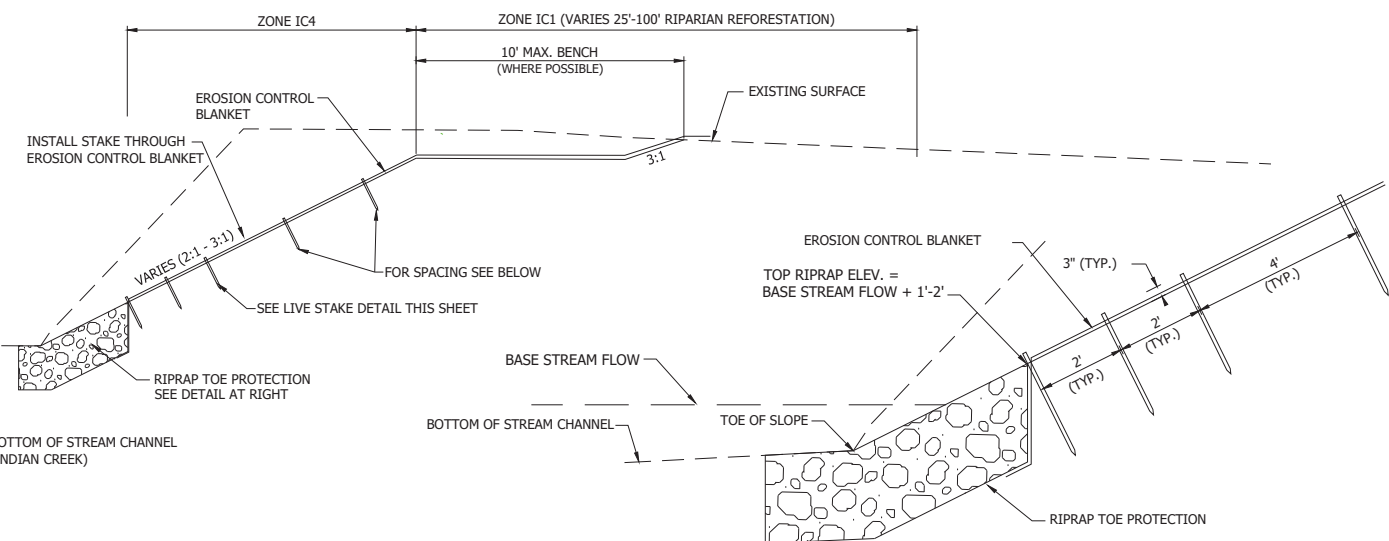


CONTAINER GROWN SHRUB PLANTING DETAIL
Not To Scale

Date: Oct 15, 2019, 10:28am User Name: rmp File: S:\ENR\RP\110-0001\Mitigation_Efforts\Section 6\Indian Creek Landlocked Site\Design\Cad\Plans\IC-MIT-DET\LS.dwg

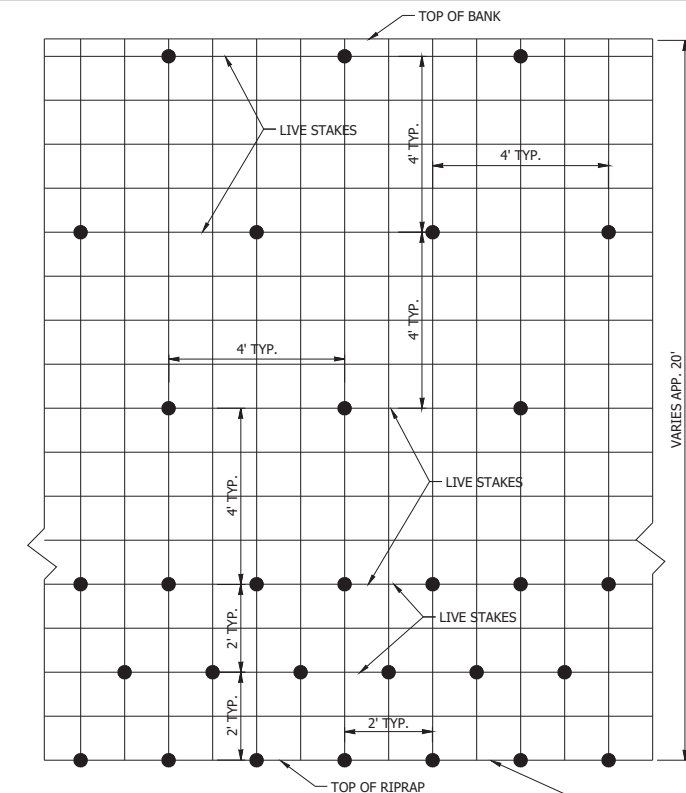
Preliminary

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE _____	INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE AS SHOWN	BRIDGE FILE
DESIGNED: M.T.R. DRAWN: R.A.P.	DETAILS & TABLES	VERTICAL SCALE AS SHOWN	DESIGNATION 1801389
CHECKED: J.A.D. CHECKED: M.T.R.		SURVEY BOOK	SHEETS 9 of 11
		CONTRACT R-41136	PROJECT 1801389



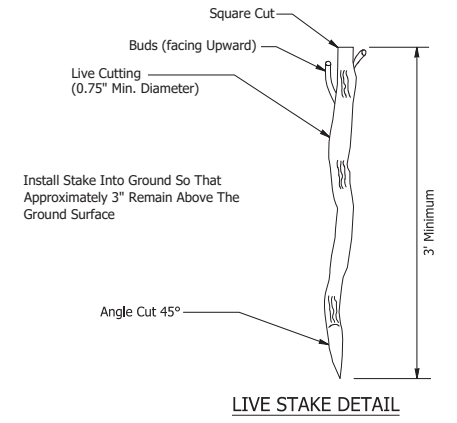
INDIAN CREEK STREAM BANK STABILIZATION ZONE IC4
Not To Scale

BANK STABILIZATION OPTION 1

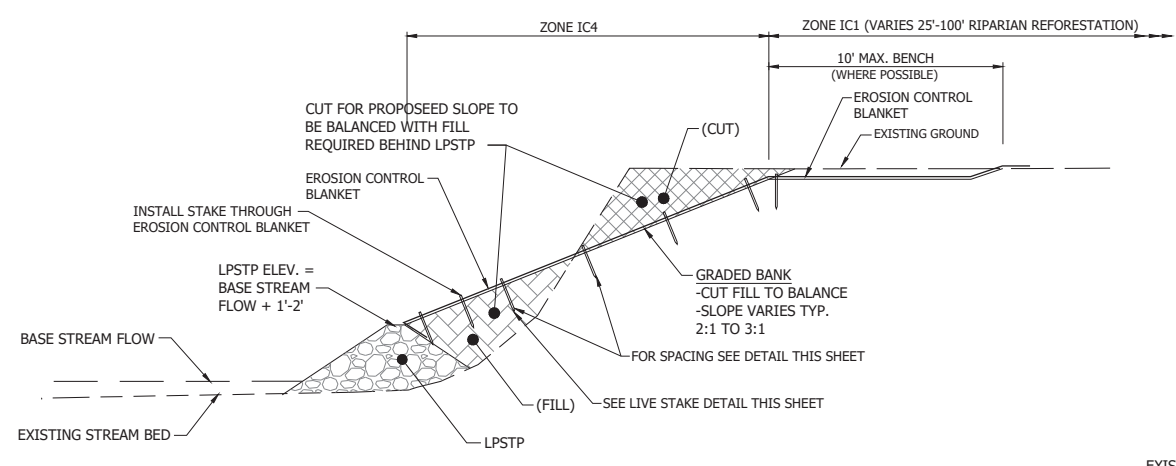


LIVE STAKE INSTALLATION DETAIL ZONE IC4

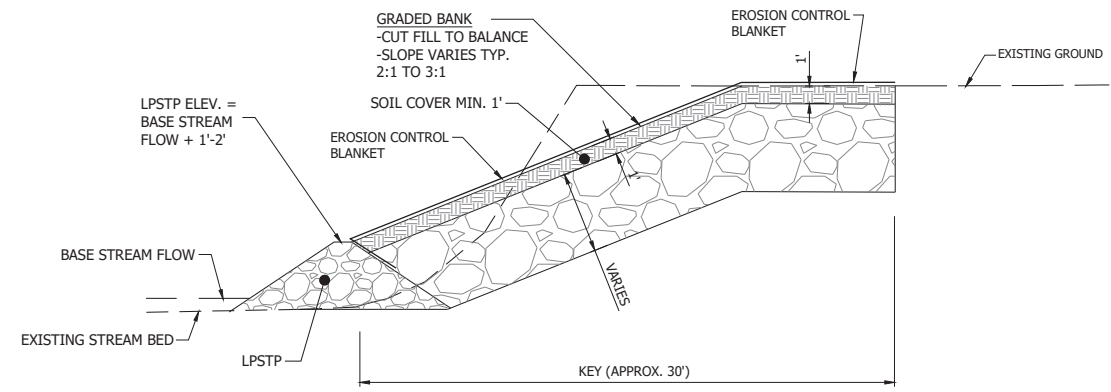
BEGIN LIVE STAKE INSTALLATION AT THE TOP OF RIPRAP WITH 2' SPACING BETWEEN STAKES. INSTALL STAKES THROUGH EROSION CONTROL BLANKET



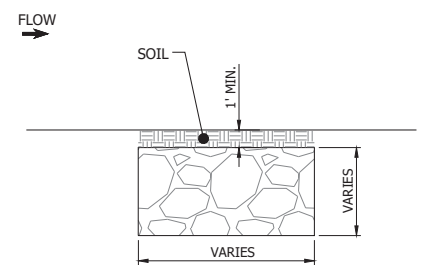
LIVE STAKE DETAIL



LPSTP TYPICAL SECTION
STREAM BANK STABILIZATION
Scale: 1"=5'



LPSTP KEYWAY DETAIL
STREAM BANK STABILIZATION
Scale: 1"=5'



LPSTP KEY TYPICAL SECTION
STREAM BANK STABILIZATION
Scale: 1"=5'

BANK STABILIZATION OPTION 2

NOTE:
LPSTP DENOTES LONGITUDINAL PEAK STONE TOE PROTECTION.

FINAL DESIGN OF BANK STABILIZATION MEASURES WILL BE DETERMINED FOLLOWING TOPOGRAPHIC SURVEY AND HYDRAULIC ANALYSIS. STABILIZATION MEASURES ARE ANTICIPATED TO BE IN ACCORDANCE WITH OPTION 1 AND/OR 2 AS SHOWN, OR MAY INVOLVE A COMBINATION OF BOTH OPTIONS.

Preliminary

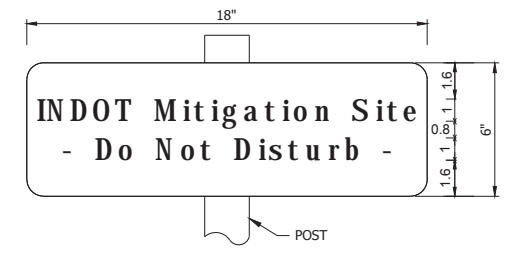
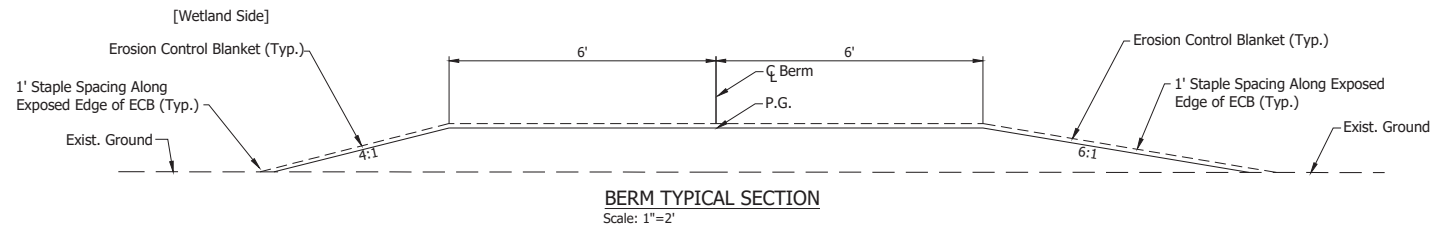
RECOMMENDED FOR APPROVAL _____	DESIGN ENGINEER _____	DATE _____
DESIGNED: M.T.R.	DRAWN: R.A.P.	
CHECKED: J.A.D.	CHECKED: M.T.R.	

INDIANA
DEPARTMENT OF TRANSPORTATION

DETAILS & TABLES

HORIZONTAL SCALE	BRIDGE FILE
AS SHOWN	-
VERTICAL SCALE	DESIGNATION
AS SHOWN	1801389
SURVEY BOOK	SHEETS
	10 of 11
CONTRACT	PROJECT
R-41136	1801389

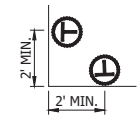
Date: Oct 15, 2019, 10:22am User Name: rap File: S:\ENR\RP\110-0001\Mitigation\Erosion\Section 6\Indian Creek Landlocked Site\Design\Cad\Plans\IC-MTF-DET\LS.dwg



SIGN, "DO NOT DISTURB"
NOT TO SCALE
EACH SIGN ASSEMBLY SHALL INCLUDE SIGN W/ POST

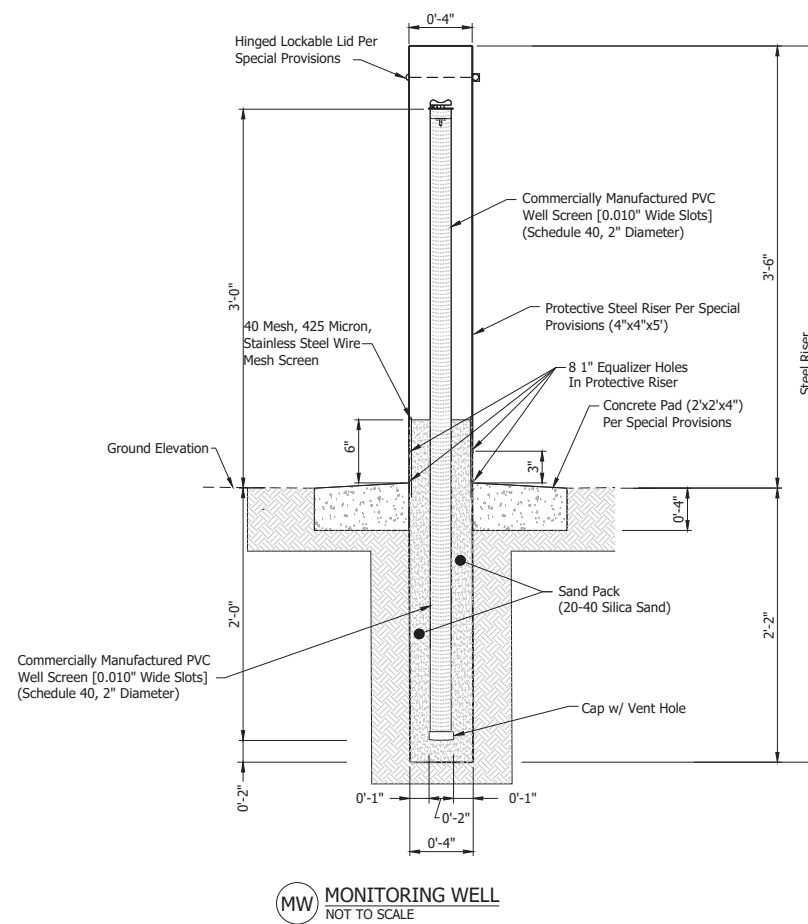
NOTES

- SIGNS ARE SHOWN OFFSET FROM THE PROPERTY/MITIGATION BOUNDARY LINES FOR GRAPHICAL PURPOSES. THE SIGNS SHALL BE PLACED DIRECTLY ON THE PROPERTY LINE .
- SIGNS WILL BE PLACED ALONG THE PROPERTY BOUNDARY FACING THE ADJACENT PROPERTIES. LOCATIONS TO BE DETERMINED DURING FINAL DESIGN AND SURVEY.



SIGNS AT CORNER (TYP.)

- 2 SIGNS SHALL BE PLACED AT EACH CORNER OF THE PROPERTY LINE. EACH SIGN SHALL BE A MAXIMUM OF 2 FEET FROM THE CORNER.



Date: Jan 14, 2019, 3:36pm User Name: rap
File: S:\E\1801389\103-0001\Mitigation Efforts\Section 6\Indian Creek Landlocked Site\Drawings\UC-MIT-DETAILS.dwg

Preliminary

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE _____	INDIANA DEPARTMENT OF TRANSPORTATION		HORIZONTAL SCALE	BRIDGE FILE
			AS SHOWN	-
DESIGNED: M.T.R. DRAWN: R.A.P. CHECKED: J.A.D. CHECKED: M.T.R.	DETAILS & TABLES		VERTICAL SCALE	DESIGNATION
			AS SHOWN	1801389
			SURVEY BOOK	SHEETS
			CONTRACT	11 of 11
			-	PROJECT
				1801389