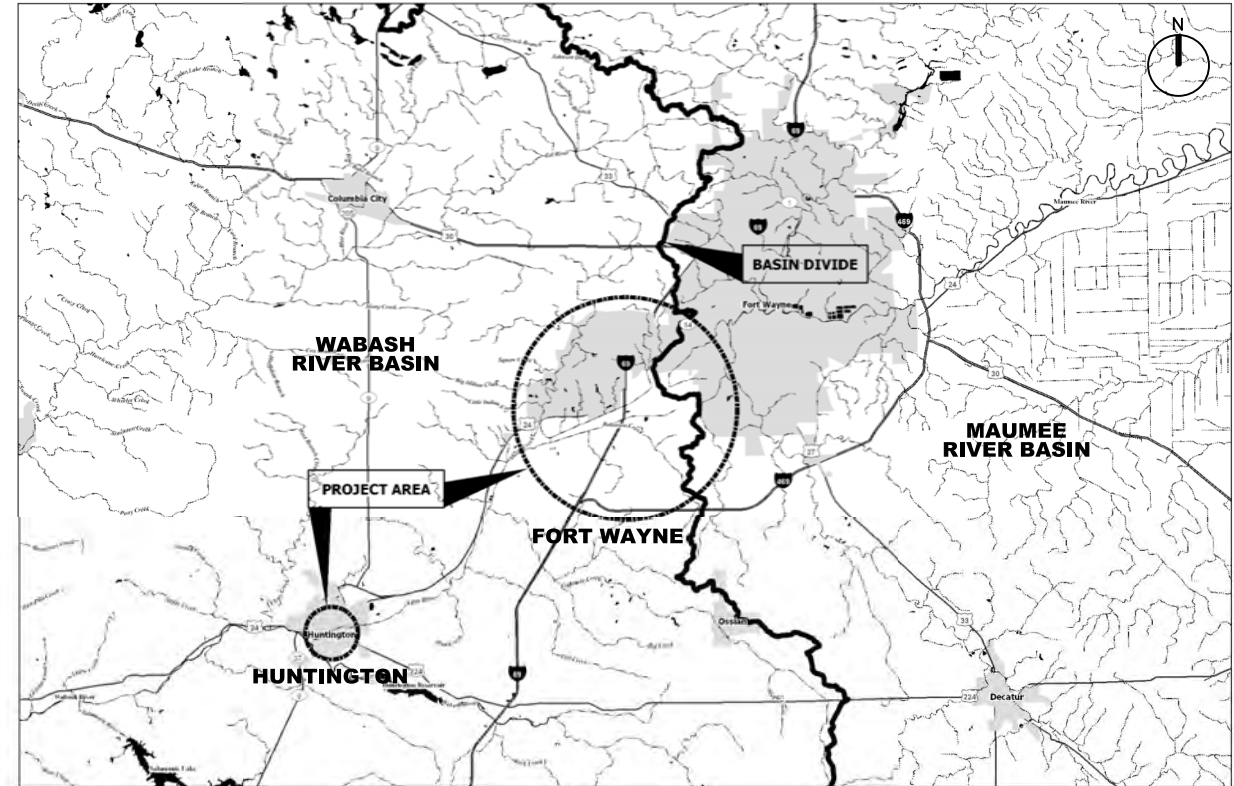




US ARMY CORPS  
OF ENGINEERS  
LOUISVILLE DISTRICT

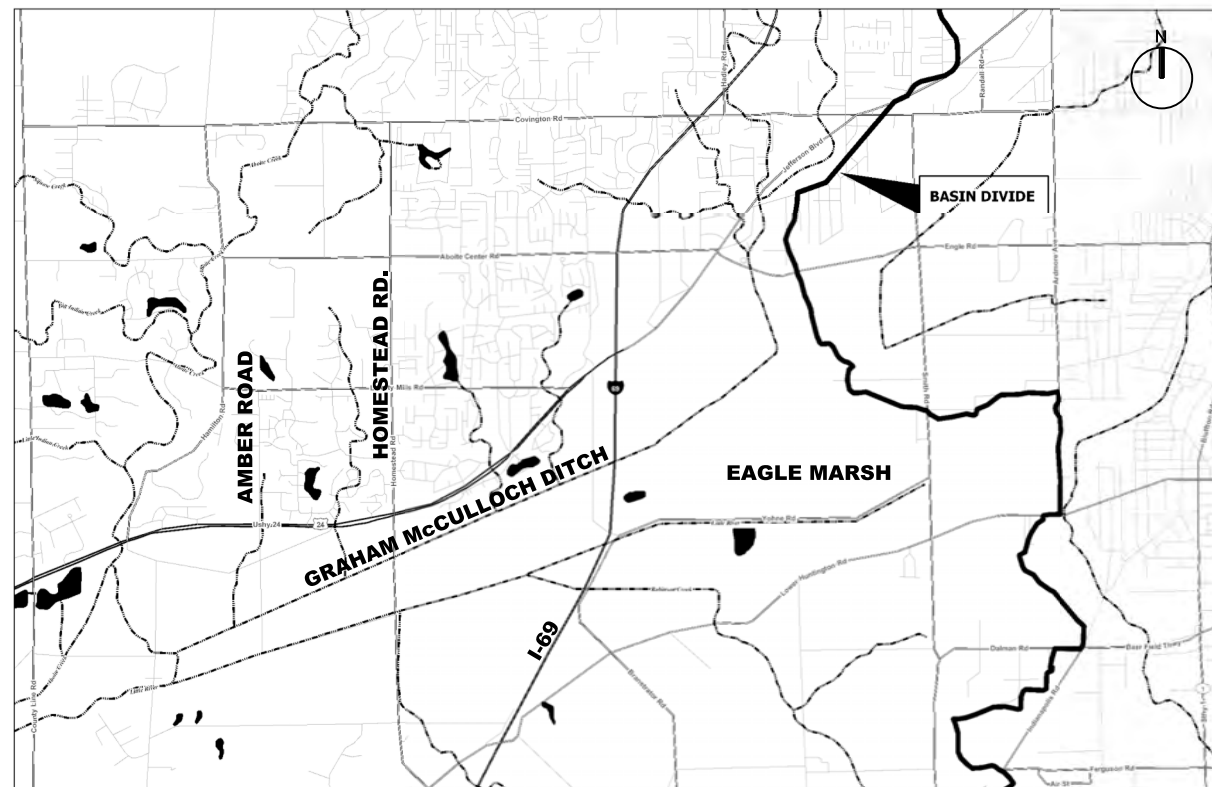
# AQUATIC NUISANCE SPECIES CONTROL REPORT WABASH-MAUMEE BASIN FORT WAYNE, INDIANA

## APPENDIX G



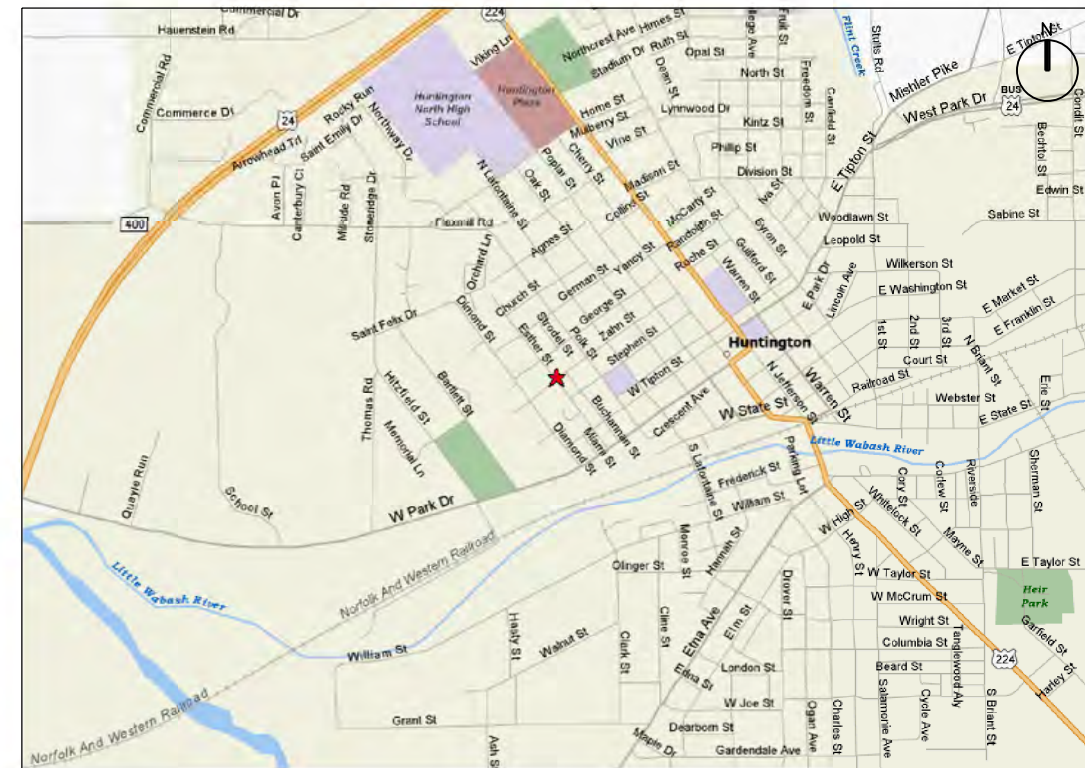
**VICINITY MAP**

NO SCALE



**FORT WAYNE LOCATION MAP**

NO SCALE



**HUNTINGTON LOCATION MAP**

NO SCALE



US ARMY CORPS  
OF ENGINEERS  
LOUISVILLE DISTRICT

SYMBOL	REVISIONS	DATE	APPR.
	DESCRIPTION		

DESIGNED BY: B. JENNINGS	DATE: FEBRUARY 2012
DRAWN BY: C. ROBINSON	SCALE: AS SHOWN
CHECKED BY: B. DORSCH	DRAWING CODE: LR 5.6-42.1
B. JENNINGS, P.E. PROJECT ENGINEER/ARCHITECT	DATE

AQUATIC NUISANCE SPECIES  
CONTROL REPORT  
WABASH-MAUMEE BASIN  
FORT WAYNE, INDIANA

COVER SHEET

SHEET  
REFERENCE  
NUMBER:  
GI001

SHEET 1 OF 38

FINAL SUBMITTAL

SH. NO.	SH. REF.NO.	DESCRIPTION	FILENAME
<b>GENERAL</b>			
1	GI001	COVER SHEET	114597GI001.DGN
2	GI002	INDEX OF DRAWINGS	114597GI002.DGN
<b>CIVIL</b>			
3	CS100	OVERALL MAP	114597CS100.DGN
4	CS101	ALTERNATIVE A SITE PLAN	114597CS101.DGN
5	CS102	ALTERNATIVE B SITE PLAN	114597CS102.DGN
6	CS103	ALTERNATIVE C SITE PLAN	114597CS103.DGN
7	CS104	ALTERNATIVE C ENLARGED SITE PLAN	114597CS104.DGN
8	CS105	ALTERNATIVE D SITE PLAN	114597CS105.DGN
9	CS106	ALTERNATIVE D ENLARGED SITE PLAN	114597CS106.DGN
10	CS107	ALTERNATIVE E SITE PLAN	114597CS107.DGN
11	CS108	ALTERNATIVE F SITE PLAN	114597CS108.DGN
12	CS109	ALTERNATIVE G SITE PLAN	114597CS109.DGN
13	CS110	ALTERNATIVE G ENLARGED SITE PLAN	114597CS110.DGN
14	CS111	ALTERNATIVE H SITE PLAN (SH. 1 OF 2)	114597CS111.DGN
15	CS112	ALTERNATIVE H SITE PLAN (SH. 2 OF 2)	114597CS112.DGN
16	CS113	ALTERNATIVE I SITE PLAN (SH. 1 OF 2)	114597CS113.DGN
17	CS114	ALTERNATIVE I SITE PLAN (SH. 2 OF 2)	114597CS115.DGN
18	CZ001	MISCELLANEOUS DETAILS	114597CZ001.DGN
19	CZ002	FENCE DETAILS	114597CZ002.DGN
20	CZ003	FENCE DETAILS	114597CZ003.DGN
21	CZ004	CONCRETE PIER AND BAR SCREEN BARRIER DETAIL	114597CZ004.DGN
22	CZ005	PUMP STATION DETAILS	114597CZ005.DGN
23	CZ006	VERTICAL DROP STRUCTURE DETAILS	114597CZ006.DGN
24	CZ007	PIPE CULVERT HEADWALL DETAILS	114597CZ007.DGN
<b>RIGHT OF WAY</b>			
25	RW101	ALTERNATIVE A RIGHT OF WAY PLAN	114597RW107.DGN
26	RW102	ALTERNATIVE B RIGHT OF WAY PLAN	114597RW108.DGN
27	RW103	ALTERNATIVE C RIGHT OF WAY PLAN	114597RW109.DGN
28	RW104	ALTERNATIVE C ENLARGED RIGHT OF WAY PLAN	114597RW110.DGN
29	RW105	ALTERNATIVE D RIGHT OF WAY PLAN	114597RW111.DGN
30	RW106	ALTERNATIVE D ENLARGED RIGHT OF WAY PLAN	114597RW112.DGN
31	RW107	ALTERNATIVE E RIGHT OF WAY PLAN	114597RW113.DGN
32	RW108	ALTERNATIVE F RIGHT OF WAY PLAN	114597RW114.DGN
33	RW109	ALTERNATIVE G RIGHT OF WAY PLAN	114597RW115.DGN
34	RW110	ALTERNATIVE G ENLARGED RIGHT OF WAY PLAN	114597RW116.DGN
35	RW111	ALTERNATIVE H RIGHT OF WAY PLAN (SH. 1 OF 2)	114597RW117.DGN
36	RW112	ALTERNATIVE H RIGHT OF WAY PLAN (SH. 2 OF 2)	114597RW118.DGN
37	RW113	ALTERNATIVE I RIGHT OF WAY PLAN (SH. 1 OF 2)	114597RW119.DGN
38	RW114	ALTERNATIVE I RIGHT OF WAY PLAN (SH. 2 OF 2)	114597RW120.DGN



SYMBOL	REVISIONS	DATE	APPR.
	DESCRIPTION		

DESIGNED BY: B. JENNINGS	DATE: FEBRUARY 2012
DRAWN BY: C. ROBINSON	SCALE: NONE
CHECKED BY: B. DORSCH	DRAWING CODE: LR 5.6-12.1
B. JENNINGS, P.E. PROJECT ENGINEER/ARCHITECT	DATE: _____

AAALITIC NUISANCE SPECIES CONTROL REPORT WAB AND WAD FORT WAYNE, INDIANA	
<b>INDEX OF DRAWINGS</b>	

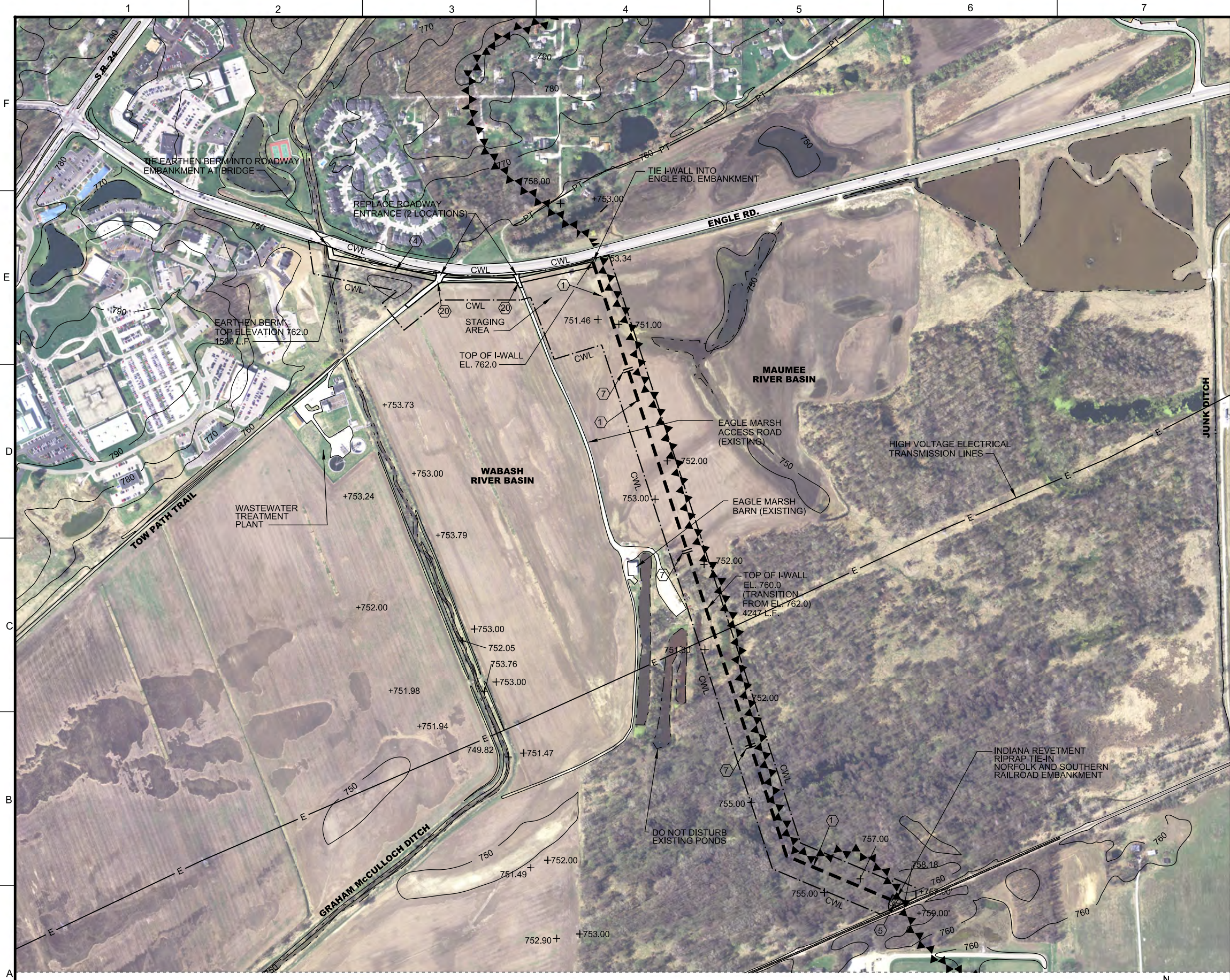
SHEET REFERENCE NUMBER: <b>GI002</b>
SHEET <u>2</u> OF <u>38</u>

FINAL SUBMITTAL









GENERAL SHEET NOTES

SHEET KEYNOTES

- 1 I-WALL, SEE DETAIL, SH. CZ001
- 2 FENCE, SEE DETAIL, SH. CZ002 & CZ003
- 3 DEMOLISH LEFT DESCENDING GRAHAM McCULLOCH DITCH BERM
- 4 EARTHEN BERM, SEE DETAIL, SH. CZ001
- 5 INDIANA REVETMENT RIPRAP
- 6 PUMP STATION (30' X 25'), SEE DETAILS, SH. CZ005
- 7 TERRESTRIAL ANIMAL CROSSING, SEE DETAIL SH. CZ001
- 8 GATEWELL/SLUICE GATE
- 9 PERMEABLE BERM, SEE DETAIL, SH. CZ001
- 10 DEBRIS FENCE, SEE DETAIL, SH. CZ003
- 11 FENCE / EARTHEN BERM, SEE DETAIL, SH. CZ001
- 12 METAL GATE, 15' WIDTH, SEE DETAIL, SH. CZ001
- 13 EQUIPMENT GATE STRUCTURE, SEE DETAIL SH. CZ002
- 14 FLAP GATE, SEE DETAIL, SH. CZ007
- 15 48" CMP
- 16 CONCRETE HEADWALL, SEE DETAIL, SH. CZ007
- 17 TRAPEZOIDAL DITCH, SEE DETAIL, SH. CZ001
- 18 TELEMETRY CONTROL STRUCTURE
- 19 HEAVY DUTY DEBRIS BOOM
- 20 ACCESS ROAD, SEE DETAIL, SH. CZ006
- 21 CONCRETE PIER AND BAR SCREEN BARRIER, SEE DETAIL, SH. CZ004
- 22 DEMOLISH RIGHT DESCENDING GRAHAM McCULLOCH DITCH BERM
- 23 MULTI-CELL WETLAND AREA (1800' x 100')
- 24 VERTICAL DROP STRUCTURE, SEE DETAIL SH. CZ006
- 25 VEGETATION FILTER STRIP (NATIVE TREES AND SHRUBS)
- 26 OUTLET PIPES, SEE DETAIL CZ006
- 27 RELOCATE EAGLE MARSH ACCESS ROAD, SEE DETAIL, SH. CZ006
- 28 DISCHARGE WELL (52' x 15')
- 29 PUMP STATION SUMP (101' x 47'), SEE DETAIL, SH. CZ005
- 30 SILT FENCE, SEE DETAIL, SH. CZ001

LEGEND

- I-WALL
- ▲▲▲▲ BASIN DIVIDE
- x- FENCE
- DEBRIS BOOM
- ===== EARTHEN BERM
- ==x== FENCE/EARTHEN BERM
- ○ ○ ○ INDIANA REVETMENT RIPRAP
- CWL — CONTRACTOR WORK LIMITS
- ////// DEMOLISH STRUCTURE
- PT — POWER & TELEPHONE UTILITY LINES
- P — ELECTRIC UTILITY LINES

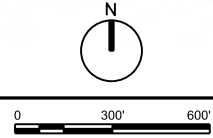


REVISIONS	DATE	APPR.

DESIGNED BY: B. JENNINGS	DATE: FEBRUARY 2012
DRAWN BY: C. ROBINSON	SCALE: AS SHOWN
CHECKED BY: B. DORSCH	DRAWING CODE: LR 5.6-42.1
B. JENNINGS, P.E.	PROJECT ENGINEER/ARCHITECT
	DATE

ALTERNATIVE A  
SITE PLAN

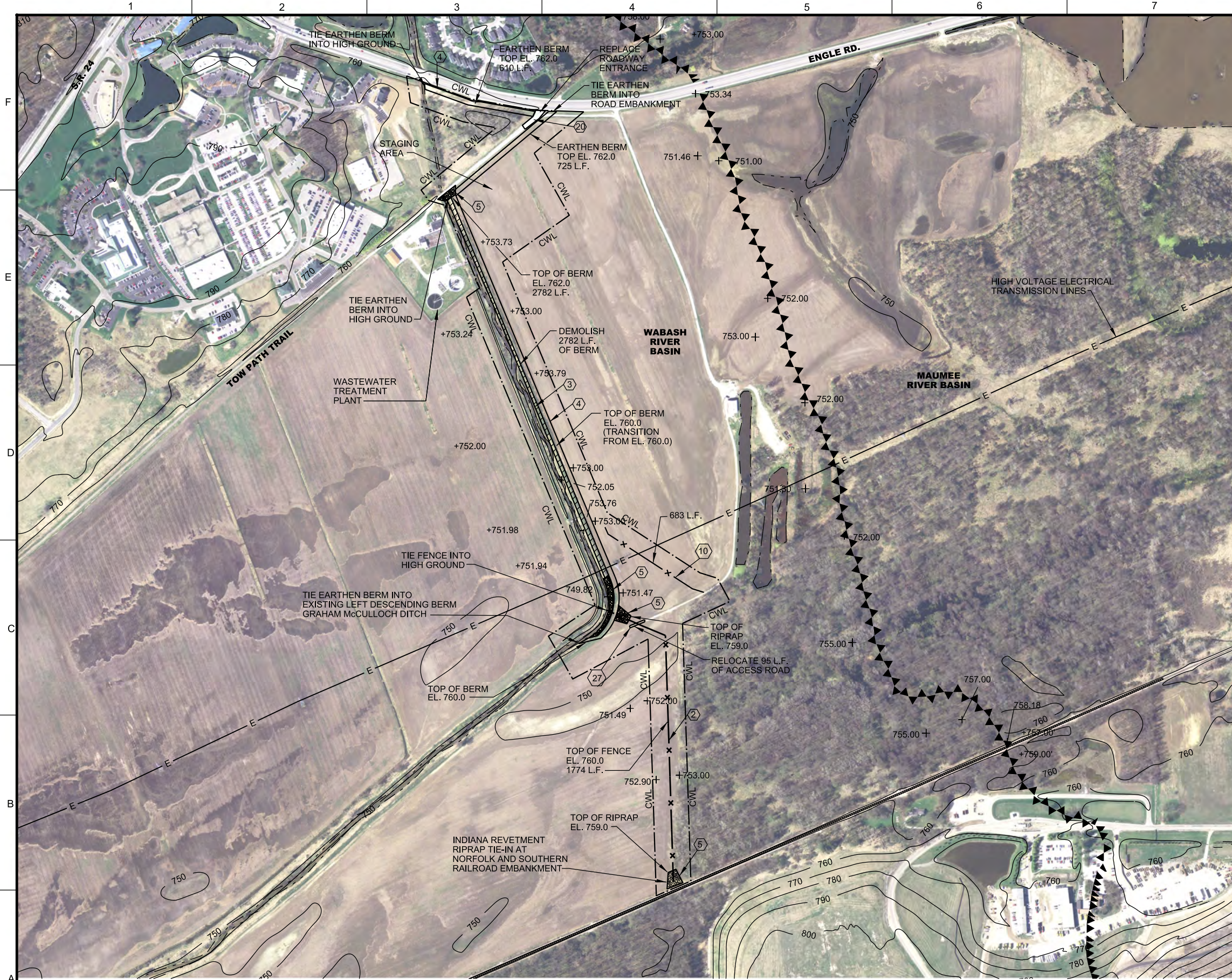
(A1) ALTERNATIVE A CONSTRUCT I-WALL SITE PLAN  
1"=300'



AAQUATIC NUISANCE SPECIES  
CONTROL REPORT FOR  
FORT WAYNE, INDIANA

SHEET  
REFERENCE  
NUMBER:  
CS101  
SHEET 4 OF 38





GENERAL SHEET NOTES

REVISIONS: DATE | APPR. SYMBOL | DESCRIPTION

NO.	DATE	APPROVED	DESCRIPTION

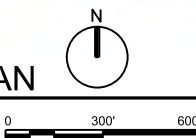
SHEET KEYNOTES

- 1 I-WALL, SEE DETAIL, SH. CZ001
- 2 FENCE, SEE DETAIL, SH. CZ002 & CZ003
- 3 DEMOLISH LEFT DESCENDING GRAHAM McCULLOCH DITCH BERM
- 4 EARTHEN BERM, SEE DETAIL, SH. CZ001
- 5 INDIANA REVETMENT RIPRAP
- 6 PUMP STATION (30' X 25'), SEE DETAILS, SH. CZ005
- 7 TERRESTRIAL ANIMAL CROSSING, SEE DETAIL SH. CZ001
- 8 GATEWELL/SLUICE GATE
- 9 PERMEABLE BERM, SEE DETAIL, SH. CZ001
- 10 DEBRIS FENCE, SEE DETAIL, SH. CZ003
- 11 FENCE / EARTHEN BERM, SEE DETAIL, SH. CZ001
- 12 METAL GATE, 15' WIDTH, SEE DETAIL, SH. CZ001
- 13 EQUIPMENT GATE STRUCTURE, SEE DETAIL SH. CZ002
- 14 FLAP GATE, SEE DETAIL, SH. CZ007
- 15 48" CMP
- 16 CONCRETE HEADWALL, SEE DETAIL, SH. CZ007
- 17 TRAPEZOIDAL DITCH, SEE DETAIL, SH. CZ001
- 18 TELEMETRY CONTROL STRUCTURE
- 19 HEAVY DUTY DEBRIS BOOM
- 20 ACCESS ROAD, SEE DETAIL, SH. CZ006
- 21 CONCRETE PIER AND BAR SCREEN BARRIER, SEE DETAIL, SH. CZ004
- 22 DEMOLISH RIGHT DESCENDING GRAHAM McCULLOCH DITCH BERM
- 23 MULTI-CELL WETLAND AREA (1800' x 100')
- 24 VERTICAL DROP STRUCTURE, SEE DETAIL SH. CZ006
- 25 VEGETATION FILTER STRIP (NATIVE TREES AND SHRUBS)
- 26 OUTLET PIPES, SEE DETAIL CZ006
- 27 RELOCATE EAGLE MARSH ACCESS ROAD, SEE DETAIL, SH. CZ006
- 28 DISCHARGE WELL (52' x 15')
- 29 PUMP STATION SUMP (101' x 47'), SEE DETAIL, SH. CZ005
- 30 SILT FENCE, SEE DETAIL, SH. CZ001

LEGEND

- I-WALL
- BASIN DIVIDE
- FENCE
- DEBRIS BOOM
- EARTHEN BERM
- FENCE/EARTHEN BERM
- INDIANA REVETMENT RIPRAP
- CONTRACTOR WORK LIMITS
- DEMOLISH STRUCTURE
- POWER & TELEPHONE UTILITY LINES
- ELECTRIC UTILITY LINES

**A1** ALTERNATIVE B CONSTRUCT FENCE AND RECONSTRUCT LEFT DESCENDING GRAHAM McCULLOCH BERM SITE PLAN  
 1"=300'



US ARMY CORPS OF ENGINEERS  
LOUISVILLE DISTRICT

DESIGNED BY: B. JENNINGS  
 DRAWN BY: C. ROBINSON  
 CHECKED BY: B. DORSCH  
 B. JENNINGS, P.E.  
 PROJECT ENGINEER/ARCHITECT

DATE: FEBRUARY 2012  
 SCALE: AS SHOWN  
 DRAWING CODE: LR 5.8-12.1

DESIGNED BY: B. JENNINGS  
 DRAWN BY: C. ROBINSON  
 CHECKED BY: B. DORSCH  
 B. JENNINGS, P.E.  
 PROJECT ENGINEER/ARCHITECT

DATE: FEBRUARY 2012  
 SCALE: AS SHOWN  
 DRAWING CODE: LR 5.8-12.1

ALTERNATIVE B  
 SITE PLAN

SHIELD CONTROL REPORT FOR FORT WAYNE, INDIANA

ALTERNATIVE B  
 SITE PLAN

SHEET REFERENCE NUMBER: CS102  
 SHEET 5 OF 38





SEE SHEET CS104 FOR ENLARGED SITE PLAN

GENERAL SHEET NOTES

SHEET KEYNOTES

- 1 I-WALL, SEE DETAIL, SH. CZ001
- 2 FENCE, SEE DETAIL, SH. CZ002 & CZ003
- 3 DEMOLISH LEFT DESCENDING GRAHAM McCULLOCH DITCH BERM
- 4 EARTHEN BERM, SEE DETAIL, SH. CZ001
- 5 INDIANA REVETMENT RIPRAP
- 6 PUMP STATION (30' X 25'), SEE DETAILS, SH. CZ005
- 7 TERRESTRIAL ANIMAL CROSSING, SEE DETAIL SH. CZ001
- 8 GATEWELL/SLUICE GATE
- 9 PERMEABLE BERM, SEE DETAIL, SH. CZ001
- 10 DEBRIS FENCE, SEE DETAIL, SH. CZ003
- 11 FENCE / EARTHEN BERM, SEE DETAIL, SH. CZ001
- 12 METAL GATE, 15' WIDTH, SEE DETAIL, SH. CZ001
- 13 EQUIPMENT GATE STRUCTURE, SEE DETAIL SH. CZ002
- 14 FLAP GATE, SEE DETAIL, SH. CZ007
- 15 48" CMP
- 16 CONCRETE HEADWALL, SEE DETAIL, SH. CZ007
- 17 TRAPEZOIDAL DITCH, SEE DETAIL, SH. CZ001
- 18 TELEMETRY CONTROL STRUCTURE
- 19 HEAVY DUTY DEBRIS BOOM
- 20 ACCESS ROAD, SEE DETAIL, SH. CZ006
- 21 CONCRETE PIER AND BAR SCREEN BARRIER, SEE DETAIL, SH. CZ004
- 22 DEMOLISH RIGHT DESCENDING GRAHAM McCULLOCH DITCH BERM
- 23 MULTI-CELL WETLAND AREA (1800' x 100')
- 24 VERTICAL DROP STRUCTURE, SEE DETAIL SH. CZ006
- 25 VEGETATION FILTER STRIP (NATIVE TREES AND SHRUBS)
- 26 OUTLET PIPES, SEE DETAIL CZ006
- 27 RELOCATE EAGLE MARSH ACCESS ROAD, SEE DETAIL, SH. CZ006
- 28 DISCHARGE WELL (52' x 15')
- 29 PUMP STATION SUMP (101' x 47'), SEE DETAIL, SH. CZ005
- 30 SILT FENCE, SEE DETAIL, SH. CZ001

LEGEND

- I-WALL
- ▲▲▲▲▲ BASIN DIVIDE
- x— FENCE
- DEBRIS BOOM
- ===== EARTHEN BERM
- x— FENCE/EARTHEN BERM
- INDIANA REVETMENT RIPRAP
- CWL --- CONTRACTOR WORK LIMITS
- ////// DEMOLISH STRUCTURE
- PT— POWER & TELEPHONE UTILITY LINES
- P— ELECTRIC UTILITY LINES

US ARMY CORPS OF ENGINEERS  
LOUISVILLE DISTRICT

REVISIONS SYMBOL	DESCRIPTION	DATE	APPR.

DESIGNED BY: B. JENNINGS	DATE: FEBRUARY 2012
DRAWN BY: C. ROBINSON	SCALE: AS SHOWN
CHECKED BY: B. DORSCH	DRAWING CODE: LR 5.6-12.1
B. JENNINGS, P.E.	DATE: _____
PROJECT ENGINEER/ARCHITECT	

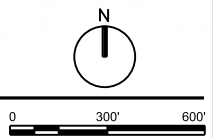
AQUATIC NUISANCE SPECIES CONTROL REPORT FOR FORT WAYNE, INDIANA

ALTERNATIVE C SITE PLAN

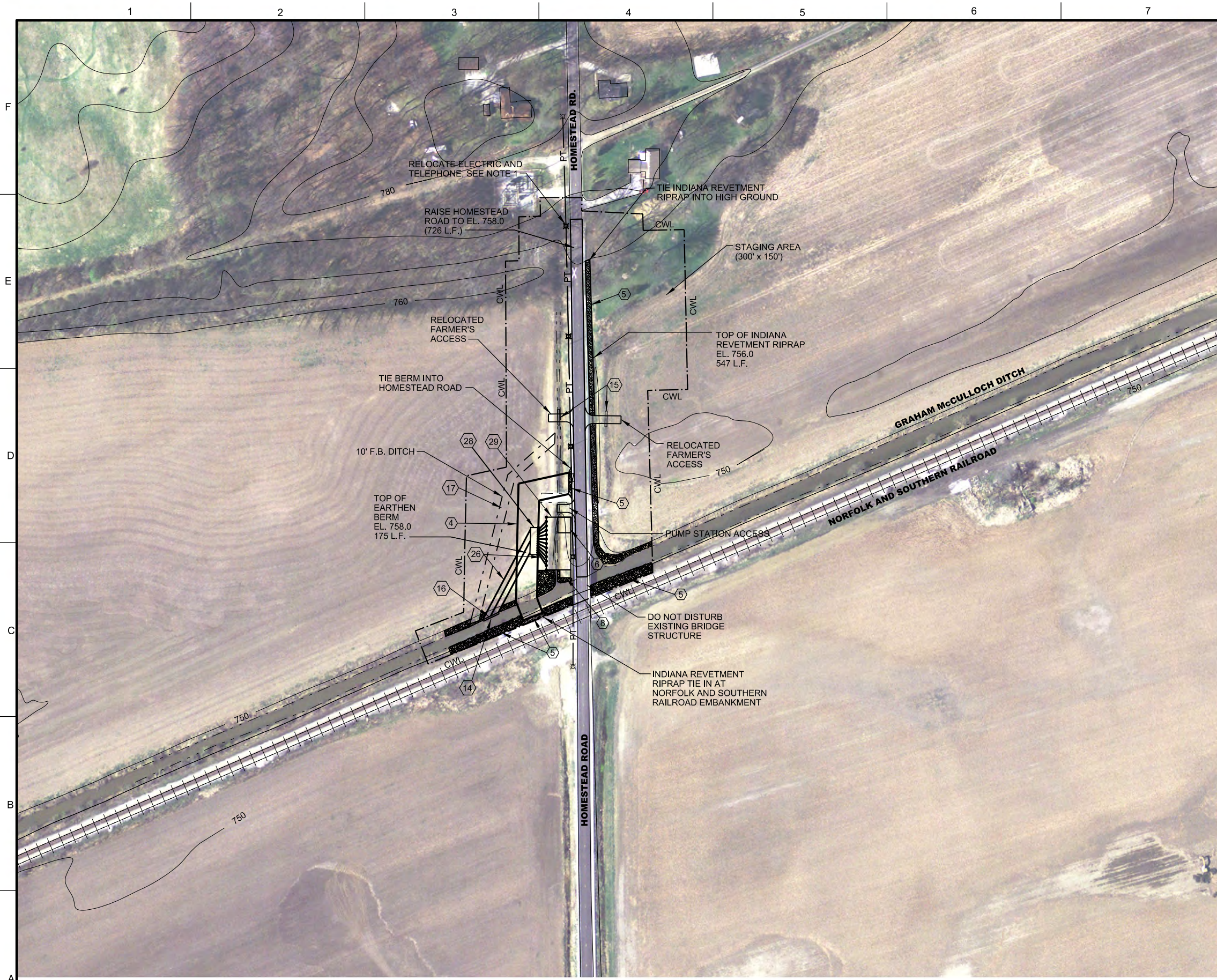
SHEET REFERENCE NUMBER:  
**CS103**  
SHEET 6 OF 38

**A1** ALTERNATIVE C CONSTRUCT EARTHEN BERM AND PUMP STATION SITE PLAN

1"=300'







**GENERAL SHEET NOTES**

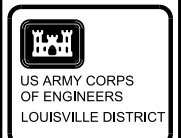
1. RELOCATE APPROXIMATELY 1055 L.F. OF POWER AND TELEPHONE AND 4 JOINT-USE UTILITY POLES.
2. BURIED FIBER OPTIC CABLE NOT TO BE DISTURBED.
3. REMOVE EXISTING 18" CMP UNDER FARMER'S ACCESS.
4. PUMP STATION STRUCTURE TO BE 30' x 25'.
5. PUMP DISCHARGE PIPES WILL BE 48" (8) ANFD 30" (3) IN DIAMETER. EACH WILL HAVE FLAP GATE (11 TOTAL).

**SHEET KEYNOTES**

- 1 I-WALL, SEE DETAIL, SH. CZ001
- 2 FENCE, SEE DETAIL, SH. CZ002 & CZ003
- 3 DEMOLISH LEFT DESCENDING GRAHAM McCULLOCH DITCH BERM
- 4 EARTHEN BERM, SEE DETAIL, SH. CZ001
- 5 INDIANA REVETMENT RIPRAP
- 6 PUMP STATION (30' X 25'), SEE DETAILS, SH. CZ005
- 7 TERRESTRIAL ANIMAL CROSSING, SEE DETAIL SH. CZ001
- 8 GATEWELL/SLUICE GATE
- 9 PERMEABLE BERM, SEE DETAIL, SH. CZ001
- 10 DEBRIS FENCE, SEE DETAIL, SH. CZ003
- 11 FENCE / EARTHEN BERM, SEE DETAIL, SH. CZ001
- 12 METAL GATE, 15' WIDTH, SEE DETAIL, SH. CZ001
- 13 EQUIPMENT GATE STRUCTURE, SEE DETAIL SH. CZ002
- 14 FLAP GATE, SEE DETAIL, SH. CZ007
- 15 48" CMP
- 16 CONCRETE HEADWALL, SEE DETAIL, SH. CZ007
- 17 TRAPEZOIDAL DITCH, SEE DETAIL, SH. CZ001
- 18 TELEMETRY CONTROL STRUCTURE
- 19 HEAVY DUTY DEBRIS BOOM
- 20 ACCESS ROAD, SEE DETAIL, SH. CZ006
- 21 CONCRETE PIER AND BAR SCREEN BARRIER, SEE DETAIL, SH. CZ004
- 22 DEMOLISH RIGHT DESCENDING GRAHAM McCULLOCH DITCH BERM
- 23 MULTI-CELL WETLAND AREA (1800' x 100')
- 24 VERTICAL DROP STRUCTURE, SEE DETAIL SH. CZ006
- 25 VEGETATION FILTER STRIP (NATIVE TREES AND SHRUBS)
- 26 OUTLET PIPES, SEE DETAIL CZ006
- 27 RELOCATE EAGLE MARSH ACCESS ROAD, SEE DETAIL, SH. CZ006
- 28 DISCHARGE WELL (52' x 15')
- 29 PUMP STATION SUMP (101' x 47'), SEE DETAIL, SH. CZ005
- 30 SILT FENCE, SEE DETAIL, SH. CZ001

**LEGEND**

- I-WALL
- BASIN DIVIDE
- FENCE
- DEBRIS BOOM
- EARTHEN BERM
- FENCE/EARTHEN BERM
- INDIANA REVETMENT RIPRAP
- CONTRACTOR WORK LIMITS
- DEMOLISH STRUCTURE
- POWER & TELEPHONE UTILITY LINES
- ELECTRIC UTILITY LINES



REVISIONS	DATE	APPR.

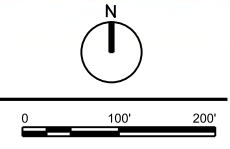
DESIGNED BY: B. JENNINGS	DATE: FEBRUARY 2012
DRAWN BY: C. ROBINSON	SCALE: AS SHOWN
CHECKED BY: B. DORSCH	DRAWING CODE: LR 5.6-12.1
B. JENNINGS, P.E.	DATE
PROJECT ENGINEER/ARCHITECT	

ALTERNATIVE C  
ENLARGED SITE PLAN

AAALITIC NUISANCE SPECIES CONTROL REPORT FOR WATERSHED IN FORT WAYNE, INDIANA

SHEET REFERENCE NUMBER:  
CS104  
SHEET 7 OF 38

**(A1) ALTERNATIVE C CONSTRUCT EARTHEN BERM AND PUMP STATION ENLARGED SITE PLAN**  
1"=100'







GENERAL SHEET NOTES

1. THE PROPOSED SLUICE GATE ON GRAHAM MULLOCH DITCH WILL OPEN/CLOSE BASED ON THE USGS STREAM GAGES AS SHOWN ON THE MAP INSERT AT THE TOP OF SHEET CS106.
2. BURIED FIBER OPTIC CABLE NOT TO BE DISTURBED.

SHEET KEYNOTES

- 1 I-WALL, SEE DETAIL, SH. CZ001
- 2 FENCE, SEE DETAIL, SH. CZ002 & CZ003
- 3 DEMOLISH LEFT DESCENDING GRAHAM McCULLOCH DITCH BERM
- 4 EARTHEN BERM, SEE DETAIL, SH. CZ001
- 5 INDIANA REVETMENT RIPRAP
- 6 PUMP STATION (30' X 25'), SEE DETAILS, SH. CZ005
- 7 TERRESTRIAL ANIMAL CROSSING, SEE DETAIL SH. CZ001
- 8 GATEWELL/SLUICE GATE
- 9 PERMEABLE BERM, SEE DETAIL, SH. CZ001
- 10 DEBRIS FENCE, SEE DETAIL, SH. CZ003
- 11 FENCE / EARTHEN BERM, SEE DETAIL, SH. CZ001
- 12 METAL GATE, 15' WIDTH, SEE DETAIL, SH. CZ001
- 13 EQUIPMENT GATE STRUCTURE, SEE DETAIL SH. CZ002
- 14 FLAP GATE, SEE DETAIL, SH. CZ007
- 15 48" CMP
- 16 CONCRETE HEADWALL, SEE DETAIL, SH. CZ007
- 17 TRAPEZOIDAL DITCH, SEE DETAIL, SH. CZ001
- 18 TELEMETRY CONTROL STRUCTURE
- 19 HEAVY DUTY DEBRIS BOOM
- 20 ACCESS ROAD, SEE DETAIL, SH. CZ006
- 21 CONCRETE PIER AND BAR SCREEN BARRIER, SEE DETAIL, SH. CZ004
- 22 DEMOLISH RIGHT DESCENDING GRAHAM McCULLOCH DITCH BERM
- 23 MULTI-CELL WETLAND AREA (1800' x 100')
- 24 VERTICAL DROP STRUCTURE, SEE DETAIL SH. CZ006
- 25 VEGETATION FILTER STRIP (NATIVE TREES AND SHRUBS)
- 26 OUTLET PIPES, SEE DETAIL CZ006
- 27 RELOCATE EAGLE MARSH ACCESS ROAD, SEE DETAIL, SH. CZ006
- 28 DISCHARGE WELL (52' x 15')
- 29 PUMP STATION SUMP (101' x 47'), SEE DETAIL, SH. CZ005
- 30 SILT FENCE, SEE DETAIL, SH. CZ001

LEGEND

- I-WALL
- BASIN DIVIDE
- FENCE
- DEBRIS BOOM
- EARTHEN BERM
- FENCE/EARTHEN BERM
- INDIANA REVETMENT RIPRAP
- CONTRACTOR WORK LIMITS
- DEMOLISH STRUCTURE
- POWER & TELEPHONE UTILITY LINES
- ELECTRIC UTILITY LINES



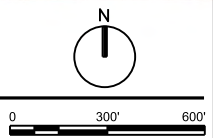
REVISIONS	DATE	APPR.

DESIGNED BY: B. JENNINGS	DATE: FEBRUARY 2012
DRAWN BY: C. ROBINSON	SCALE: AS SHOWN
CHECKED BY: B. DORSCH	DRAWING CODE: LR 5.6-12.1
B. JENNINGS, P.E.	DATE:
PROJECT ENGINEER/ARCHITECT	

ALTERNATIVE D  
SITE PLAN

**A1** ALTERNATIVE D CONSTRUCT PERMEABLE BERM WITH TELEMETERED SLUICE GATES SITE PLAN

1"=300'

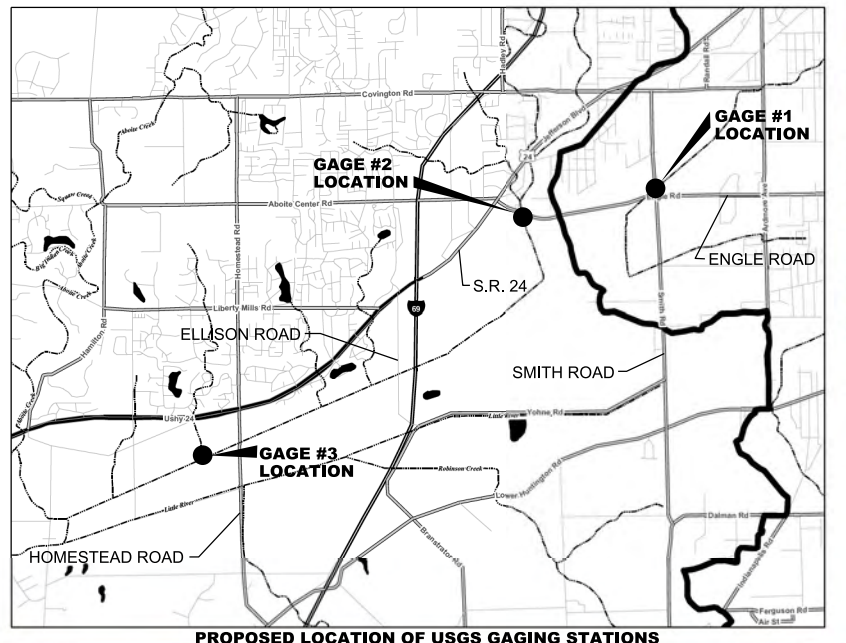


AAQUATIC NUISANCE SPECIES CONTROL REPORT FOR FORT WAYNE, INDIANA

SHEET REFERENCE NUMBER: CS105

SHEET 8 OF 38





### GENERAL SHEET NOTES

1. THE PROPOSED SLUICE GATE ON GRAHAM-MULLOCH DITCH WILL OPEN/CLOSE BASED ON THE USGS STREAM GAGES AS SHOWN ON THE MAP INSERT AT THE TOP OF THE PAGE.
2. BURIED FIBER OPTIC CABLE NOT TO BE DISTURBED.

### SHEET KEYNOTES

- 1 I-WALL, SEE DETAIL, SH. CZ001
- 2 FENCE, SEE DETAIL, SH. CZ002 & CZ003
- 3 DEMOLISH LEFT DESCENDING GRAHAM McCULLOCH DITCH BERM
- 4 EARTHEN BERM, SEE DETAIL, SH. CZ001
- 5 INDIANA REVETMENT RIPRAP
- 6 PUMP STATION (30' X 25'), SEE DETAILS, SH. CZ005
- 7 TERRESTRIAL ANIMAL CROSSING, SEE DETAIL SH. CZ001
- 8 GATEWELL/SLUICE GATE
- 9 PERMEABLE BERM, SEE DETAIL, SH. CZ001
- 10 DEBRIS FENCE, SEE DETAIL, SH. CZ003
- 11 FENCE / EARTHEN BERM, SEE DETAIL, SH. CZ001
- 12 METAL GATE, 15' WIDTH, SEE DETAIL, SH. CZ001
- 13 EQUIPMENT GATE STRUCTURE, SEE DETAIL SH. CZ002
- 14 FLAP GATE, SEE DETAIL, SH. CZ007
- 15 48" CMP
- 16 CONCRETE HEADWALL, SEE DETAIL, SH. CZ007
- 17 TRAPEZOIDAL DITCH, SEE DETAIL, SH. CZ001
- 18 TELEMETRY CONTROL STRUCTURE
- 19 HEAVY DUTY DEBRIS BOOM
- 20 ACCESS ROAD, SEE DETAIL, SH. CZ006
- 21 CONCRETE PIER AND BAR SCREEN BARRIER, SEE DETAIL, SH. CZ004
- 22 DEMOLISH RIGHT DESCENDING GRAHAM McCULLOCH DITCH BERM
- 23 MULTI-CELL WETLAND AREA (1800' x 100')
- 24 VERTICAL DROP STRUCTURE, SEE DETAIL SH. CZ006
- 25 VEGETATION FILTER STRIP (NATIVE TREES AND SHRUBS)
- 26 OUTLET PIPES, SEE DETAIL CZ006
- 27 RELOCATE EAGLE MARSH ACCESS ROAD, SEE DETAIL, SH. CZ006
- 28 DISCHARGE WELL (52' x 15')
- 29 PUMP STATION SUMP (101' x 47'), SEE DETAIL, SH. CZ005
- 30 SILT FENCE, SEE DETAIL, SH. CZ001

### LEGEND

- I-WALL
- ▲▲▲▲ BASIN DIVIDE
- x — FENCE
- □ — DEBRIS BOOM
- EARTHEN BERM
- x — FENCE/EARTHEN BERM
- INDIANA REVETMENT RIPRAP
- CWL --- CONTRACTOR WORK LIMITS
- ////// DEMOLISH STRUCTURE
- PT — POWER & TELEPHONE UTILITY LINES
- P — ELECTRIC UTILITY LINES



REVISIONS	DATE	APPR.	DESCRIPTION

DESIGNED BY:	B. JENNINGS	DATE:	FEBRUARY 2012
DRAWN BY:	C. ROBINSON	SCALE:	AS SHOWN
CHECKED BY:	B. DORSCH	DRAWING CODE:	LR 5.8-42.1
PROJECT ENGINEER/ARCHITECT:	B. JENNINGS, P.E.	DATE:	

AAALITIC NUISANCE SPECIES CONTROL REPORT FOR FORT WAYNE, INDIANA	
ALTERNATIVE D ENLARGED SITE PLAN	

SHEET REFERENCE NUMBER: <b>CS106</b>
SHEET 9 OF 38

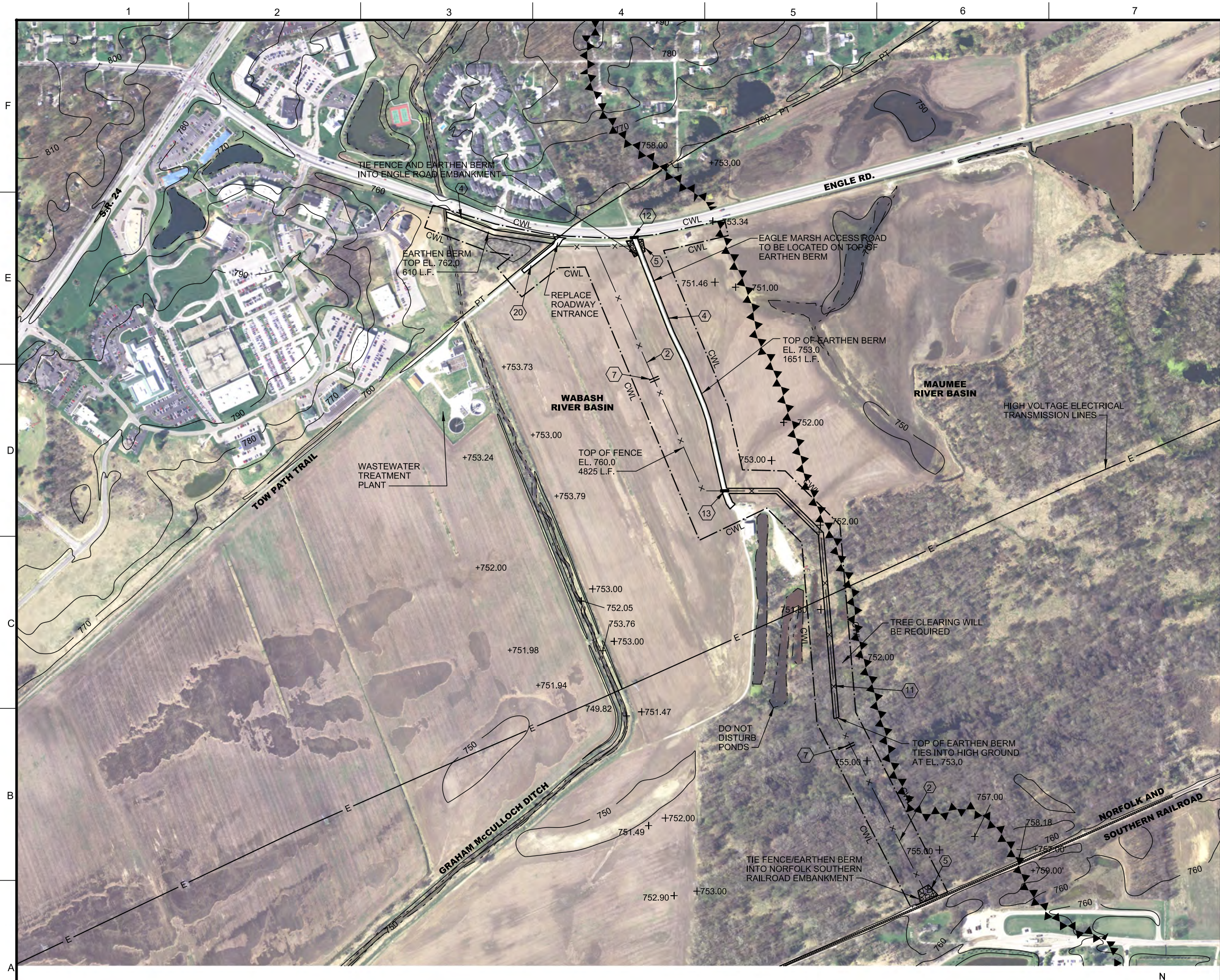


**A1 ALTERNATIVE D CONSTRUCT PERMEABLE BERM WITH TELEMETERED SLUICE GATES ENLARGED SITE PLAN**  
1"=100'

FINAL SUBMITTAL



\*\*\* SAFETY PAYS \*\*\*



GENERAL SHEET NOTES

Table with columns for REVISIONS, SYMBOL, DATE, and APPR. It contains several empty rows for recording changes.

SHEET KEYNOTES

- 1 I-WALL, SEE DETAIL, SH. CZ001
2 FENCE, SEE DETAIL, SH. CZ002 & CZ003
3 DEMOLISH LEFT DESCENDING GRAHAM McCULLOCH DITCH BERM
4 EARTHEN BERM, SEE DETAIL, SH. CZ001
5 INDIANA REVETMENT RIPRAP
6 PUMP STATION (30' X 25'), SEE DETAILS, SH. CZ005
7 TERRESTRIAL ANIMAL CROSSING, SEE DETAIL SH. CZ001
8 GATEWELL/SLUICE GATE
9 PERMEABLE BERM, SEE DETAIL, SH. CZ001
10 DEBRIS FENCE, SEE DETAIL, SH. CZ003
11 FENCE / EARTHEN BERM, SEE DETAIL, SH. CZ001
12 METAL GATE, 15' WIDTH, SEE DETAIL, SH. CZ001
13 EQUIPMENT GATE STRUCTURE, SEE DETAIL SH. CZ002
14 FLAP GATE, SEE DETAIL, SH. CZ007
15 48" CMP
16 CONCRETE HEADWALL, SEE DETAIL, SH. CZ007
17 TRAPEZOIDAL DITCH, SEE DETAIL, SH. CZ001
18 TELEMETRY CONTROL STRUCTURE
19 HEAVY DUTY DEBRIS BOOM
20 ACCESS ROAD, SEE DETAIL, SH. CZ006
21 CONCRETE PIER AND BAR SCREEN BARRIER, SEE DETAIL, SH. CZ004
22 DEMOLISH RIGHT DESCENDING GRAHAM McCULLOCH DITCH BERM
23 MULTI-CELL WETLAND AREA (1800' x 100')
24 VERTICAL DROP STRUCTURE, SEE DETAIL SH. CZ006
25 VEGETATION FILTER STRIP (NATIVE TREES AND SHRUBS)
26 OUTLET PIPES, SEE DETAIL CZ006
27 RELOCATE EAGLE MARSH ACCESS ROAD, SEE DETAIL, SH. CZ006
28 DISCHARGE WELL (52' x 15')
29 PUMP STATION SUMP (101' x 47'), SEE DETAIL, SH. CZ005
30 SILT FENCE, SEE DETAIL, SH. CZ001

LEGEND

- I-WALL
BASIN DIVIDE
FENCE
DEBRIS BOOM
EARTHEN BERM
FENCE/EARTHEN BERM
INDIANA REVETMENT RIPRAP
CONTRACTOR WORK LIMITS
DEMOLISH STRUCTURE
POWER & TELEPHONE UTILITY LINES
ELECTRIC UTILITY LINES

A1 ALTERNATIVE E CONSTRUCT FENCE / EARTHEN BERM COMBINATION SITE PLAN

1"=300'

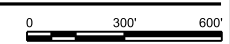
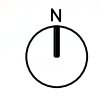


Table with columns for REVISIONS, SYMBOL, DATE, and DESCRIPTION. It contains several empty rows for recording changes.

Table with columns for DESIGNED BY, DRAWN BY, CHECKED BY, PROJECT ENGINEER/ARCHITECT, DATE, SCALE, and DRAWING CODE. It contains specific project information.

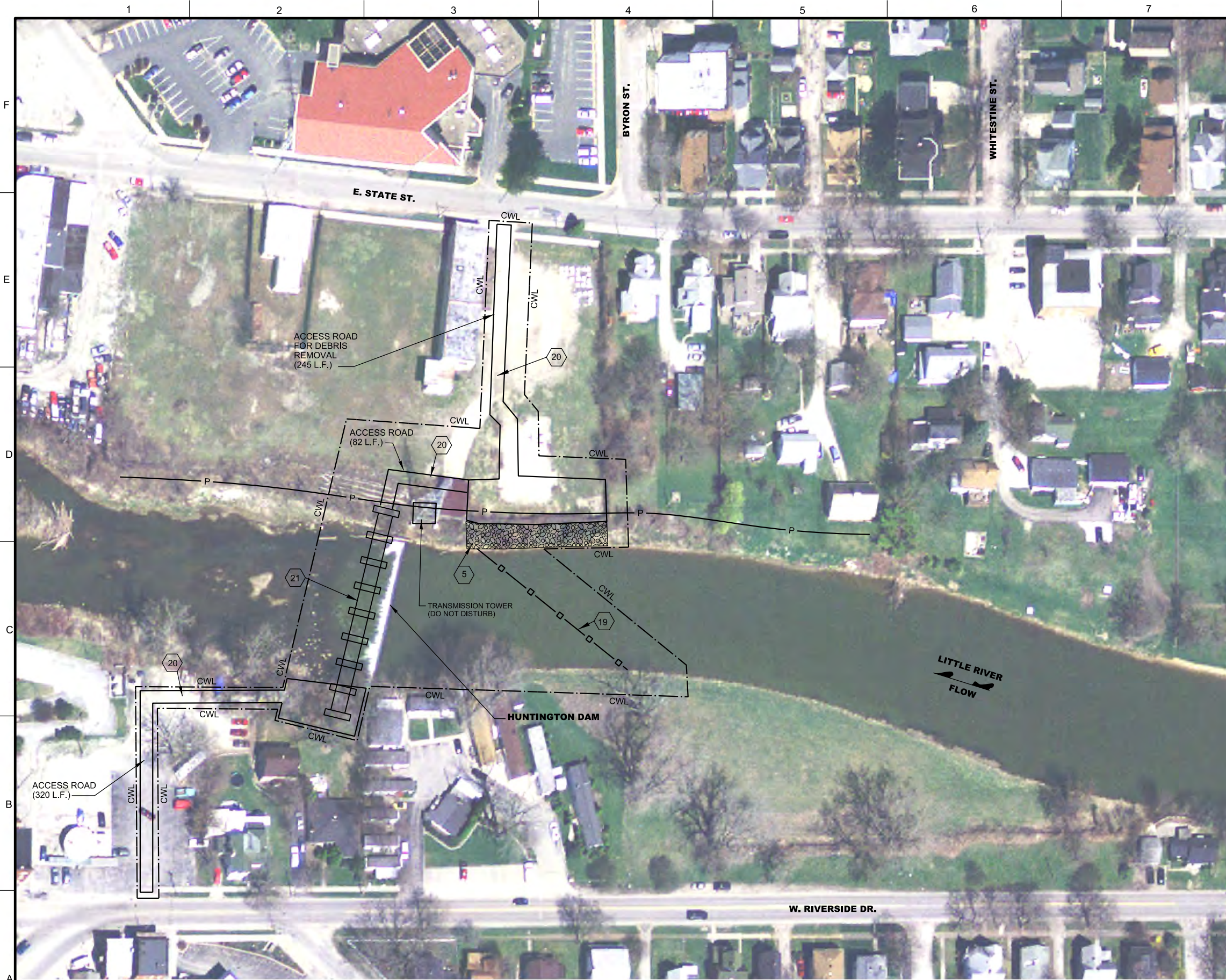
ALTERNATIVE E SITE PLAN

SHEET REFERENCE NUMBER: CS107

SHEET 10 OF 38

FINAL SUBMITTAL





**GENERAL SHEET NOTES**

1. HUNTINGTON DAM IS A FIXED CREST WEIR WHICH PROVIDES A VERTICAL DROP OF APPROXIMATELY 6'.



DATE	APPR.

**SHEET KEYNOTES**

- 1 I-WALL, SEE DETAIL, SH. CZ001
- 2 FENCE , SEE DETAIL, SH. CZ002 & CZ003
- 3 DEMOLISH LEFT DESCENDING GRAHAM McCULLOCH DITCH BERM
- 4 EARTHEN BERM, SEE DETAIL, SH. CZ001
- 5 INDIANA REVETMENT RIPRAP
- 6 PUMP STATION (30' X 25'), SEE DETAILS, SH. CZ005
- 7 TERRESTRIAL ANIMAL CROSSING, SEE DETAIL SH. CZ001
- 8 GATEWELL/SLUICE GATE
- 9 PERMEABLE BERM, SEE DETAIL, SH. CZ001
- 10 DEBRIS FENCE, SEE DETAIL, SH. CZ003
- 11 FENCE / EARTHEN BERM, SEE DETAIL, SH. CZ001
- 12 METAL GATE, 15' WIDTH, SEE DETAIL, SH. CZ001
- 13 EQUIPMENT GATE STRUCTURE, SEE DETAIL SH. CZ002
- 14 FLAP GATE, SEE DETAIL, SH. CZ007
- 15 48" CMP
- 16 CONCRETE HEADWALL, SEE DETAIL, SH. CZ007
- 17 TRAPEZOIDAL DITCH, SEE DETAIL, SH. CZ001
- 18 TELEMETRY CONTROL STRUCTURE
- 19 HEAVY DUTY DEBRIS BOOM
- 20 ACCESS ROAD , SEE DETAIL, SH. CZ006
- 21 CONCRETE PIER AND BAR SCREEN BARRIER, SEE DETAIL, SH. CZ004
- 22 DEMOLISH RIGHT DESCENDING GRAHAM McCULLOCH DITCH BERM
- 23 MULTI-CELL WETLAND AREA (1800' x 100')
- 24 VERTICAL DROP STRUCTURE, SEE DETAIL SH. CZ006
- 25 VEGETATION FILTER STRIP (NATIVE TREES AND SHRUBS)
- 26 OUTLET PIPES, SEE DETAIL CZ006
- 27 RELOCATE EAGLE MARSH ACCESS ROAD, SEE DETAIL, SH. CZ006
- 28 DISCHARGE WELL (52' x 15')
- 29 PUMP STATION SUMP (101' x 47'), SEE DETAIL, SH. CZ005
- 30 SILT FENCE, SEE DETAIL, SH. CZ001

REVISIONS	SYMBOL	DESCRIPTION

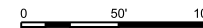
DESIGNED BY: B. JENNINGS	DATE: FEBRUARY 2012
DRAWN BY: C. ROBINSON	SCALE: 1"=50'
CHECKED BY: B. DORSCH	DRAWING CODE: LR 5.6-12.1
B. JENNINGS, P.E.	PROJECT ENGINEER/ARCHITECT
	DATE

**LEGEND**

- I-WALL
- BASIN DIVIDE
- FENCE
- DEBRIS BOOM
- EARTHEN BERM
- FENCE/EARTHEN BERM
- INDIANA REVETMENT RIPRAP
- CONTRACTOR WORK LIMITS
- DEMOLISH STRUCTURE
- POWER & TELEPHONE UTILITY LINES
- ELECTRIC UTILITY LINES

**A1 ALTERNATIVE F CONSTRUCT BAR SCREEN BARRIER AT EXISTING WEIR**

1"=50'



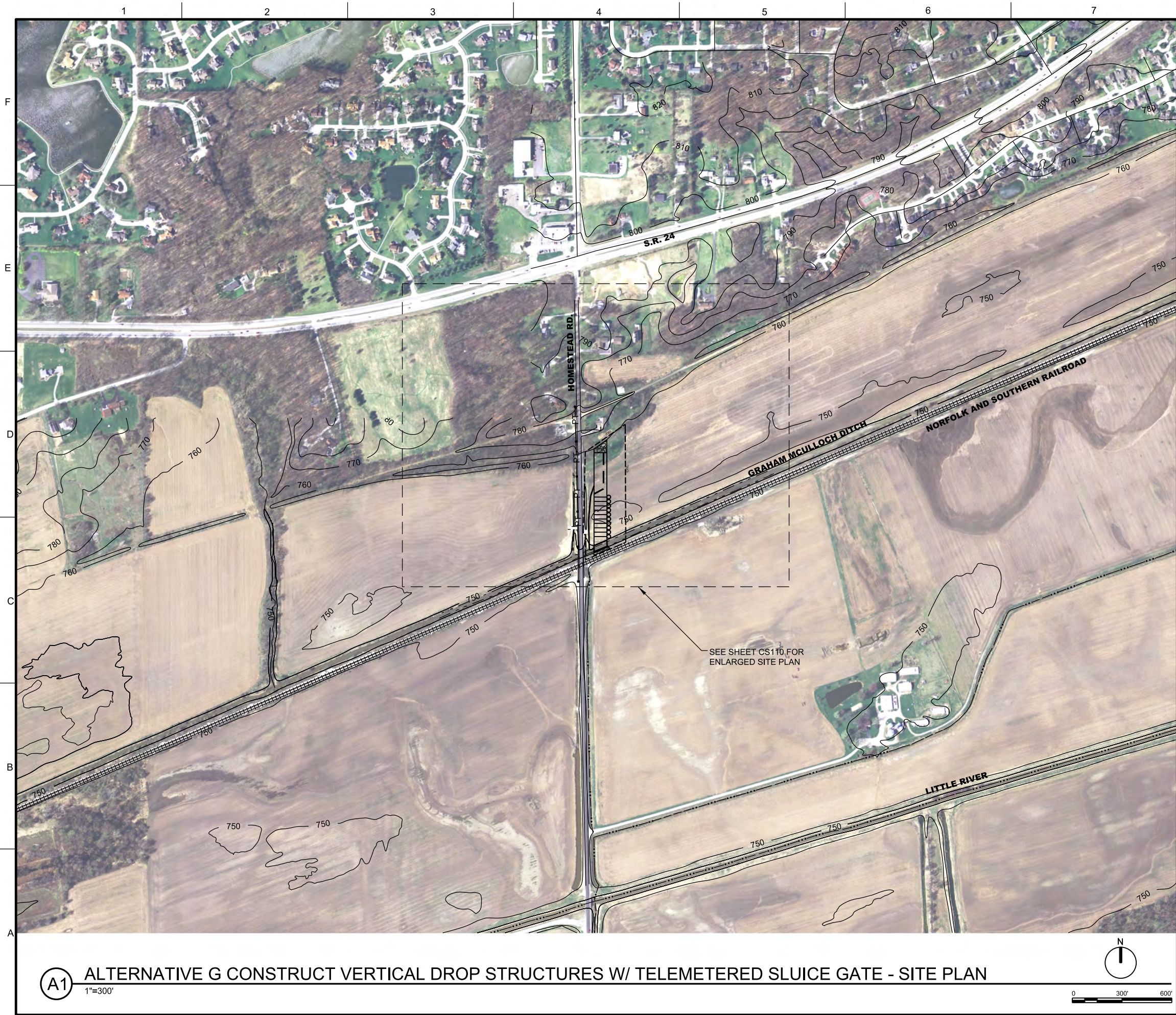
AQUATIC NUISANCE SPECIES CONTROL REPORT FOR INDIANA FORT WAYNE, INDIANA

**ALTERNATIVE F SITE PLAN**

SHEET REFERENCE NUMBER: CS108

SHEET 11 OF 38





### GENERAL SHEET NOTES

1. THE PROPOSED SLUICE GATE ON GRAHAM-MULLOCH DITCH WILL OPEN/CLOSE BASED ON THE USGS STREAM GAGES AS SHOWN ON THE MAP INSERT AT THE TOP OF THE PAGE.
2. BURIED FIBER OPTIC CABLE NOT TO BE DISTURBED.

### SHEET KEYNOTES

- 1 I-WALL, SEE DETAIL, SH. CZ001
- 2 FENCE, SEE DETAIL, SH. CZ002 & CZ003
- 3 DEMOLISH LEFT DESCENDING GRAHAM McCULLOCH DITCH BERM
- 4 EARTHEN BERM, SEE DETAIL, SH. CZ001
- 5 INDIANA REVETMENT RIPRAP
- 6 PUMP STATION (30' X 25'), SEE DETAILS, SH. CZ005
- 7 TERRESTRIAL ANIMAL CROSSING, SEE DETAIL SH. CZ001
- 8 GATEWELL/SLUICE GATE
- 9 PERMEABLE BERM, SEE DETAIL, SH. CZ001
- 10 DEBRIS FENCE, SEE DETAIL, SH. CZ003
- 11 FENCE / EARTHEN BERM, SEE DETAIL, SH. CZ001
- 12 METAL GATE, 15' WIDTH, SEE DETAIL, SH. CZ001
- 13 EQUIPMENT GATE STRUCTURE, SEE DETAIL SH. CZ002
- 14 FLAP GATE, SEE DETAIL, SH. CZ007
- 15 48" CMP
- 16 CONCRETE HEADWALL, SEE DETAIL, SH. CZ007
- 17 TRAPEZOIDAL DITCH, SEE DETAIL, SH. CZ001
- 18 TELEMETRY CONTROL STRUCTURE
- 19 HEAVY DUTY DEBRIS BOOM
- 20 ACCESS ROAD, SEE DETAIL, SH. CZ006
- 21 CONCRETE PIER AND BAR SCREEN BARRIER, SEE DETAIL, SH. CZ004
- 22 DEMOLISH RIGHT DESCENDING GRAHAM McCULLOCH DITCH BERM
- 23 MULTI-CELL WETLAND AREA (1800' x 100')
- 24 VERTICAL DROP STRUCTURE, SEE DETAIL SH. CZ006
- 25 VEGETATION FILTER STRIP (NATIVE TREES AND SHRUBS)
- 26 OUTLET PIPES, SEE DETAIL CZ006
- 27 RELOCATE EAGLE MARSH ACCESS ROAD, SEE DETAIL, SH. CZ006
- 28 DISCHARGE WELL (52' x 15')
- 29 PUMP STATION SUMP (101' x 47'), SEE DETAIL, SH. CZ005
- 30 SILT FENCE, SEE DETAIL, SH. CZ001

### LEGEND

- I-WALL
- BASIN DIVIDE
- FENCE
- DEBRIS BOOM
- EARTHEN BERM
- FENCE/EARTHEN BERM
- INDIANA REVETMENT RIPRAP
- CONTRACTOR WORK LIMITS
- DEMOLISH STRUCTURE
- POWER & TELEPHONE UTILITY LINES
- ELECTRIC UTILITY LINES



REVISIONS	DATE	APPR.

DESIGNED BY: B. JENNINGS	DATE: FEBRUARY 2012
DRAWN BY: C. ROBINSON	SCALE: AS SHOWN
CHECKED BY: B. DORSCH	DRAWING CODE: LR 5.6-12.1
B. JENNINGS, P.E. PROJECT ENGINEER/ARCHITECT	DATE: _____

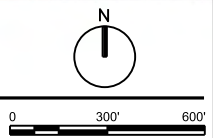
ALTERNATIVE G  
SITE PLAN

ALTERNATIVE G  
SITE PLAN

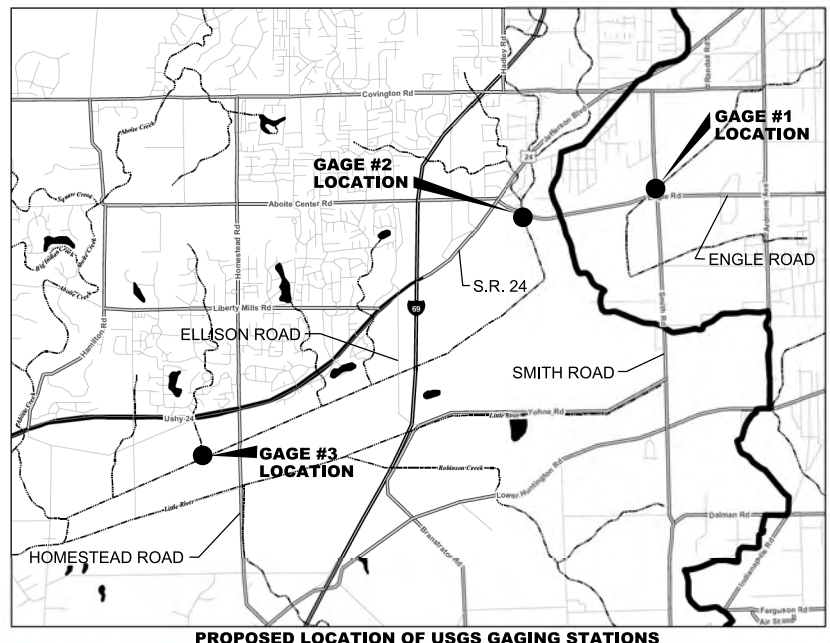
SHEET REFERENCE NUMBER:  
CS109  
SHEET 12 OF 38

## A1 ALTERNATIVE G CONSTRUCT VERTICAL DROP STRUCTURES W/ TELEMETERED SLUICE GATE - SITE PLAN

1"=300'







PROPOSED LOCATION OF USGS GAGING STATIONS



### GENERAL SHEET NOTES

1. THE PROPOSED SLUICE GATE ON GRAHAM-MULLOCH DITCH WILL OPEN/CLOSE BASED ON THE USGS STREAM GAGES AS SHOWN ON THE MAP INSERT AT THE TOP OF THE PAGE.
2. BURIED FIBER OPTIC CABLE NOT TO BE DISTURBED.

### SHEET KEYNOTES

- 1 I-WALL, SEE DETAIL, SH. CZ001
- 2 FENCE, SEE DETAIL, SH. CZ002 & CZ003
- 3 DEMOLISH LEFT DESCENDING GRAHAM McCULLOCH DITCH BERM
- 4 EARTHEN BERM, SEE DETAIL, SH. CZ001
- 5 INDIANA REVETMENT RIPRAP
- 6 PUMP STATION (30' X 25'), SEE DETAILS, SH. CZ005
- 7 TERRESTRIAL ANIMAL CROSSING, SEE DETAIL SH. CZ001
- 8 GATEWELL/SLUICE GATE
- 9 PERMEABLE BERM, SEE DETAIL, SH. CZ001
- 10 DEBRIS FENCE, SEE DETAIL, SH. CZ003
- 11 FENCE / EARTHEN BERM, SEE DETAIL, SH. CZ001
- 12 METAL GATE, 15' WIDTH, SEE DETAIL, SH. CZ001
- 13 EQUIPMENT GATE STRUCTURE, SEE DETAIL SH. CZ002
- 14 FLAP GATE, SEE DETAIL, SH. CZ007
- 15 48" CMP
- 16 CONCRETE HEADWALL, SEE DETAIL, SH. CZ007
- 17 TRAPEZOIDAL DITCH, SEE DETAIL, SH. CZ001
- 18 TELEMETRY CONTROL STRUCTURE
- 19 HEAVY DUTY DEBRIS BOOM
- 20 ACCESS ROAD, SEE DETAIL, SH. CZ006
- 21 CONCRETE PIER AND BAR SCREEN BARRIER, SEE DETAIL, SH. CZ004
- 22 DEMOLISH RIGHT DESCENDING GRAHAM McCULLOCH DITCH BERM
- 23 MULTI-CELL WETLAND AREA (1800' x 100')
- 24 VERTICAL DROP STRUCTURE, SEE DETAIL SH. CZ006
- 25 VEGETATION FILTER STRIP (NATIVE TREES AND SHRUBS)
- 26 OUTLET PIPES, SEE DETAIL CZ006
- 27 RELOCATE EAGLE MARSH ACCESS ROAD, SEE DETAIL, SH. CZ006
- 28 DISCHARGE WELL (52' x 15')
- 29 PUMP STATION SUMP (101' x 47'), SEE DETAIL, SH. CZ005
- 30 SILT FENCE, SEE DETAIL, SH. CZ001

### LEGEND

- I-WALL
- ▲▲▲▲▲ BASIN DIVIDE
- x --- FENCE
- □ --- DEBRIS BOOM
- ===== EARTHEN BERM
- x --- FENCE/EARTHEN BERM
- INDIANA REVETMENT RIPRAP
- CWL --- CONTRACTOR WORK LIMITS
- ////// DEMOLISH STRUCTURE
- PT --- POWER & TELEPHONE UTILITY LINES
- P --- ELECTRIC UTILITY LINES



REVISIONS	DATE	APPR.

DESIGNED BY: B. JENNINGS	DATE: FEBRUARY 2012
DRAWN BY: C. ROBINSON	SCALE: AS SHOWN
CHECKED BY: B. DORSCH	DRAWING CODE: LR 5.8-12.1
B. JENNINGS, P.E. PROJECT ENGINEER/ARCHITECT	DATE:

ALTERNATIVE G  
ENLARGED SITE PLAN

AQUATIC NUISANCE SPECIES  
CONTROL REPORT FOR  
FORT WAYNE, INDIANA

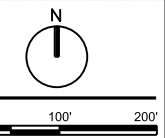
SHEET REFERENCE NUMBER:  
CS110

SHEET 13 OF 38

A1

## ALTERNATIVE G CONSTRUCT VERTICAL DROP STRUCTURES W/ TELEMETERED SLUICE GATE - ENLARGED SITE PLAN

1"=100'







### GENERAL SHEET NOTES

1. THE PROPOSED GRAHAM McCULLOCH BERM IS TO BE LOCATED APPROX. ON ITS EXISTING ALIGNMENT AS SHOWN ON THE PLANS.
2. THE GRAHAM McCULLOCH DITCH TOP OF BERM HEIGHT DECREASES FROM EL. 761.0 (UPSTREAM) TO EL. 759.0 (DOWNSTREAM).

### SHEET KEYNOTES

- 1 I-WALL, SEE DETAIL, SH. CZ001
- 2 FENCE, SEE DETAIL, SH. CZ002 & CZ003
- 3 DEMOLISH LEFT DESCENDING GRAHAM McCULLOCH DITCH BERM
- 4 EARTHEN BERM, SEE DETAIL, SH. CZ001
- 5 INDIANA REVETMENT RIPRAP
- 6 PUMP STATION (30' X 25'), SEE DETAILS, SH. CZ005
- 7 TERRESTRIAL ANIMAL CROSSING, SEE DETAIL SH. CZ001
- 8 GATEWELL/SLUICE GATE
- 9 PERMEABLE BERM, SEE DETAIL, SH. CZ001
- 10 DEBRIS FENCE, SEE DETAIL, SH. CZ003
- 11 FENCE / EARTHEN BERM, SEE DETAIL, SH. CZ001
- 12 METAL GATE, 15' WIDTH, SEE DETAIL, SH. CZ001
- 13 EQUIPMENT GATE STRUCTURE, SEE DETAIL SH. CZ002
- 14 FLAP GATE, SEE DETAIL, SH. CZ007
- 15 48" CMP
- 16 CONCRETE HEADWALL, SEE DETAIL, SH. CZ007
- 17 TRAPEZOIDAL DITCH, SEE DETAIL, SH. CZ001
- 18 TELEMETRY CONTROL STRUCTURE
- 19 HEAVY DUTY DEBRIS BOOM
- 20 ACCESS ROAD, SEE DETAIL, SH. CZ006
- 21 CONCRETE PIER AND BAR SCREEN BARRIER, SEE DETAIL, SH. CZ004
- 22 DEMOLISH RIGHT DESCENDING GRAHAM McCULLOCH DITCH BERM
- 23 MULTI-CELL WETLAND AREA (1800' x 100')
- 24 VERTICAL DROP STRUCTURE, SEE DETAIL SH. CZ006
- 25 VEGETATION FILTER STRIP (NATIVE TREES AND SHRUBS)
- 26 OUTLET PIPES, SEE DETAIL CZ006
- 27 RELOCATE EAGLE MARSH ACCESS ROAD, SEE DETAIL, SH. CZ006
- 28 DISCHARGE WELL (52' x 15')
- 29 PUMP STATION SUMP (101' x 47'), SEE DETAIL, SH. CZ005
- 30 SILT FENCE, SEE DETAIL, SH. CZ001

### LEGEND

- I-WALL
- ▲▲▲▲▲ BASIN DIVIDE
- x— FENCE
- DEBRIS BOOM
- ===== EARTHEN BERM
- ====x==== FENCE/EARTHEN BERM
- INDIANA REVETMENT RIPRAP
- - - - - CWL CONTRACTOR WORK LIMITS
- ////// DEMOLISH STRUCTURE
- PT — POWER & TELEPHONE UTILITY LINES
- P — ELECTRIC UTILITY LINES



REVISIONS	DATE	APPR.

DESIGNED BY: B. JENNINGS	DATE: FEBRUARY 2012	SCALE: AS SHOWN
DRAWN BY: C. ROBINSON		DRAWING CODE: LR 5.6-12.1
CHECKED BY: B. DORSCH		DATE:
B. JENNINGS, P.E. PROJECT ENGINEER/ARCHITECT		

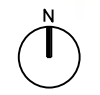
ALTERNATIVE H  
SITE PLAN  
(SH. 1 OF 2)

AQUATIC NUISANCE SPECIES CONTROL REPORT FOR FORT WAYNE, INDIANA

SHEET REFERENCE NUMBER: CS111  
SHEET 14 OF 38

**(A1) ALTERNATIVE H RECONSTRUCT LEFT DESCENDING GRAHAM McCULLOCH DITCH BERM - SITE PLAN**

1"=300'







**GENERAL SHEET NOTES**

1. THE PROPOSED GRAHAM McCULLOCH BERM IS TO BE LOCATED APPROX. ON ITS EXISTING ALIGNMENT AS SHOWN ON THE PLANS.
2. THE GRAHAM McCULLOCH DITCH TOP OF BERM HEIGHT DECREASES FROM EL. 761.0 (UPSTREAM) TO EL. 759.0 (DOWNSTREAM).

**SHEET KEYNOTES**

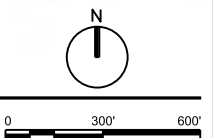
- 1 I-WALL, SEE DETAIL, SH. CZ001
- 2 FENCE, SEE DETAIL, SH. CZ002 & CZ003
- 3 DEMOLISH LEFT DESCENDING GRAHAM McCULLOCH DITCH BERM
- 4 EARTHEN BERM, SEE DETAIL, SH. CZ001
- 5 INDIANA REVETMENT RIPRAP
- 6 PUMP STATION (30' X 25'), SEE DETAILS, SH. CZ005
- 7 TERRESTRIAL ANIMAL CROSSING, SEE DETAIL SH. CZ001
- 8 GATEWELL/SLUICE GATE
- 9 PERMEABLE BERM, SEE DETAIL, SH. CZ001
- 10 DEBRIS FENCE, SEE DETAIL, SH. CZ003
- 11 FENCE / EARTHEN BERM, SEE DETAIL, SH. CZ001
- 12 METAL GATE, 15' WIDTH, SEE DETAIL, SH. CZ001
- 13 EQUIPMENT GATE STRUCTURE, SEE DETAIL SH. CZ002
- 14 FLAP GATE, SEE DETAIL, SH. CZ007
- 15 48" CMP
- 16 CONCRETE HEADWALL, SEE DETAIL, SH. CZ007
- 17 TRAPEZOIDAL DITCH, SEE DETAIL, SH. CZ001
- 18 TELEMETRY CONTROL STRUCTURE
- 19 HEAVY DUTY DEBRIS BOOM
- 20 ACCESS ROAD, SEE DETAIL, SH. CZ006
- 21 CONCRETE PIER AND BAR SCREEN BARRIER, SEE DETAIL, SH. CZ004
- 22 DEMOLISH RIGHT DESCENDING GRAHAM McCULLOCH DITCH BERM
- 23 MULTI-CELL WETLAND AREA (1800' x 100')
- 24 VERTICAL DROP STRUCTURE, SEE DETAIL SH. CZ006
- 25 VEGETATION FILTER STRIP (NATIVE TREES AND SHRUBS)
- 26 OUTLET PIPES, SEE DETAIL CZ006
- 27 RELOCATE EAGLE MARSH ACCESS ROAD, SEE DETAIL, SH. CZ006
- 28 DISCHARGE WELL (52' x 15')
- 29 PUMP STATION SUMP (101' x 47'), SEE DETAIL, SH. CZ005
- 30 SILT FENCE, SEE DETAIL, SH. CZ001

**LEGEND**

- I-WALL
- ▲▲▲▲▲ BASIN DIVIDE
- x--- FENCE
- DEBRIS BOOM
- ===== EARTHEN BERM
- x--- FENCE/EARTHEN BERM
- INDIANA REVETMENT RIPRAP
- CWL--- CONTRACTOR WORK LIMITS
- ////// DEMOLISH STRUCTURE
- PT--- POWER & TELEPHONE UTILITY LINES
- P--- ELECTRIC UTILITY LINES

**(A1) ALTERNATIVE H RECONSTRUCT LEFT DESCENDING GRAHAM McCULLOCH DITCH BERM - SITE PLAN**

1"=300'



REVISIONS	DATE	APPR.

DESIGNED BY: B. JENNINGS	DATE: FEBRUARY 2012
DRAWN BY: C. ROBINSON	SCALE: AS SHOWN
CHECKED BY: B. DORSCH	DRAWING CODE: LR 5.6-42.1
B. JENNINGS, P.E.	PROJECT ENGINEER/ARCHITECT
	DATE

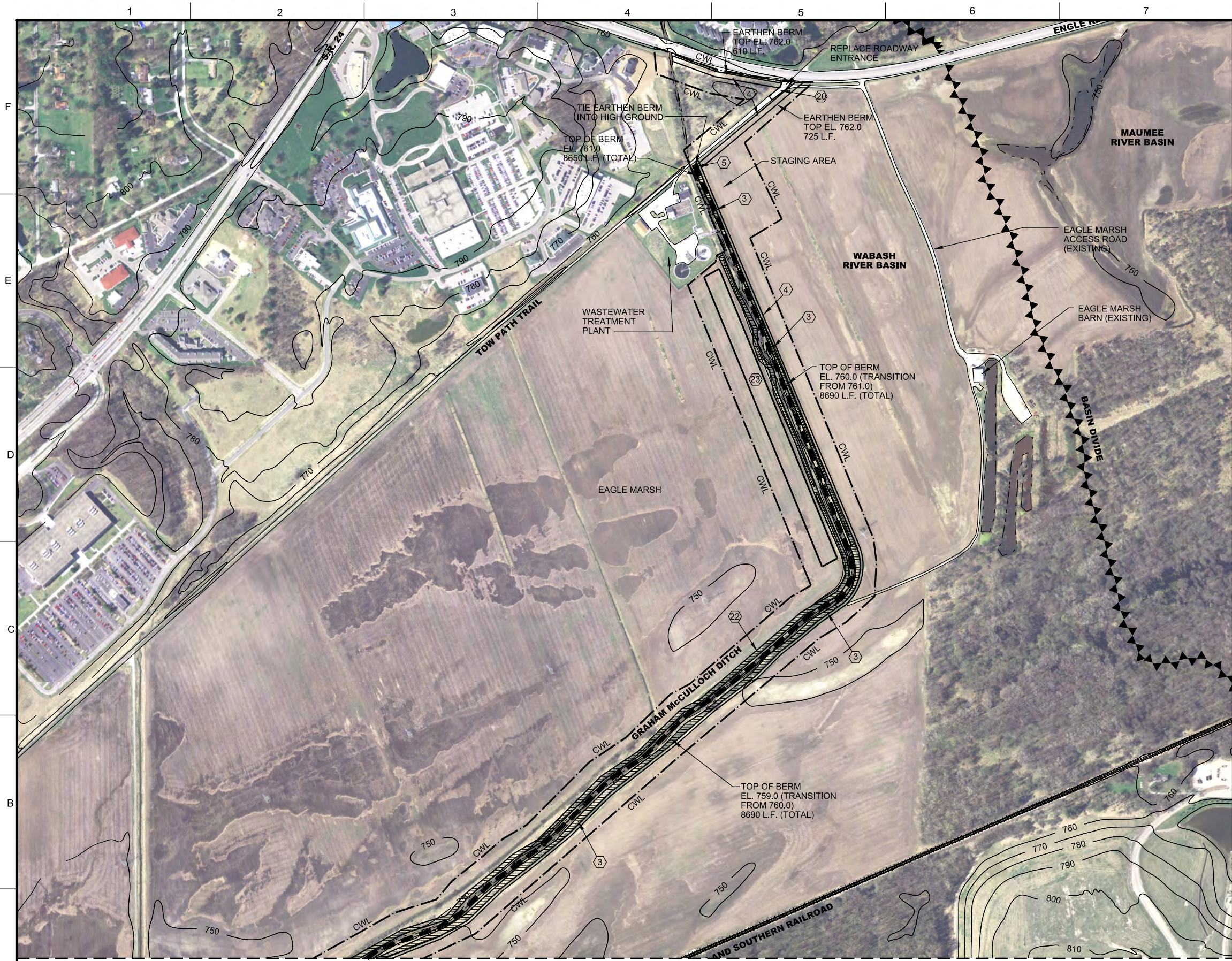
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ALTERNATIVE H  
SITE PLAN  
(SH. 2 OF 2)

SHEET REFERENCE NUMBER:  
**CS112**  
SHEET 15 OF 38



\*\*\* SAFETY PAYS \*\*\*



### GENERAL SHEET NOTES

1. THE PROPOSED GRAHAM McCULLOCH BERM IS TO BE LOCATED APPROX. ON ITS EXISTING ALIGNMENT AS SHOWN ON THE PLANS.
2. THE GRAHAM McCULLOCH DITCH TOP OF BERM HEIGHT DECREASES FROM EL. 761.0 (UPSTREAM) TO EL. 759.0 (DOWNSTREAM).

### SHEET KEYNOTES

- 1 I-WALL, SEE DETAIL, SH. CZ001
- 2 FENCE, SEE DETAIL, SH. CZ002 & CZ003
- 3 DEMOLISH LEFT DESCENDING GRAHAM McCULLOCH DITCH BERM
- 4 EARTHEN BERM, SEE DETAIL, SH. CZ001
- 5 INDIANA REVETMENT RIPRAP
- 6 PUMP STATION (30' X 25'), SEE DETAILS, SH. CZ005
- 7 TERRESTRIAL ANIMAL CROSSING, SEE DETAIL SH. CZ001
- 8 GATEWELL/SLUICE GATE
- 9 PERMEABLE BERM, SEE DETAIL, SH. CZ001
- 10 DEBRIS FENCE, SEE DETAIL, SH. CZ003
- 11 FENCE / EARTHEN BERM, SEE DETAIL, SH. CZ001
- 12 METAL GATE, 15' WIDTH, SEE DETAIL, SH. CZ001
- 13 EQUIPMENT GATE STRUCTURE, SEE DETAIL SH. CZ002
- 14 FLAP GATE, SEE DETAIL, SH. CZ007
- 15 48" CMP
- 16 CONCRETE HEADWALL, SEE DETAIL, SH. CZ007
- 17 TRAPEZOIDAL DITCH, SEE DETAIL, SH. CZ001
- 18 TELEMETRY CONTROL STRUCTURE
- 19 HEAVY DUTY DEBRIS BOOM
- 20 ACCESS ROAD, SEE DETAIL, SH. CZ006
- 21 CONCRETE PIER AND BAR SCREEN BARRIER, SEE DETAIL, SH. CZ004
- 22 DEMOLISH RIGHT DESCENDING GRAHAM McCULLOCH DITCH BERM
- 23 MULTI-CELL WETLAND AREA (1800' x 100')
- 24 VERTICAL DROP STRUCTURE, SEE DETAIL SH. CZ006
- 25 VEGETATION FILTER STRIP (NATIVE TREES AND SHRUBS)
- 26 OUTLET PIPES, SEE DETAIL CZ006
- 27 RELOCATE EAGLE MARSH ACCESS ROAD, SEE DETAIL, SH. CZ006
- 28 DISCHARGE WELL (52' x 15')
- 29 PUMP STATION SUMP (101' x 47'), SEE DETAIL, SH. CZ005
- 30 SILT FENCE, SEE DETAIL, SH. CZ001

### LEGEND

- I-WALL
- BASIN DIVIDE
- FENCE
- DEBRIS BOOM
- EARTHEN BERM
- FENCE/EARTHEN BERM
- INDIANA REVETMENT RIPRAP
- CONTRACTOR WORK LIMITS
- DEMOLISH STRUCTURE
- POWER & TELEPHONE UTILITY LINES
- ELECTRIC UTILITY LINES



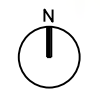
REVISIONS	DATE	APPR.

DESIGNED BY:	B. JENNINGS	DATE:	FEBRUARY 2012
DRAWN BY:	C. ROBINSON	SCALE:	AS SHOWN
CHECKED BY:	B. DORSCH	DRAWING CODE:	LR 5.6-12.1
PROJECT ENGINEER/ARCHITECT:	B. JENNINGS, P.E.	DATE:	

ALTERNATIVE I  
SITE PLAN  
(SH. 1 OF 2)

**(A1) ALTERNATIVE I RECONSTRUCT LEFT DESCENDING GRAHAM McCULLOCH DITCH BERM,  
DEMOLISH RIGHT DESCENDING BERM AND CONSTRUCT MULTI-CELL WETLAND AREA - SITE PLAN**

1"=300'



FINAL SUBMITTAL





### GENERAL SHEET NOTES

1. THE PROPOSED GRAHAM McCULLOCH BERM IS TO BE LOCATED APPROX. ON ITS EXISTING ALIGNMENT AS SHOWN ON THE PLANS.
2. THE GRAHAM McCULLOCH DITCH TOP OF BERM HEIGHT DECREASES FROM 761.0 EL. (UPSTREAM) TO EL. 759.0 (DOWNSTREAM).

### SHEET KEYNOTES

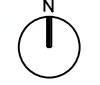
- 1 I-WALL, SEE DETAIL, SH. CZ001
- 2 FENCE, SEE DETAIL, SH. CZ002 & CZ003
- 3 DEMOLISH LEFT DESCENDING GRAHAM McCULLOCH DITCH BERM
- 4 EARTHEN BERM, SEE DETAIL, SH. CZ001
- 5 INDIANA REVETMENT RIPRAP
- 6 PUMP STATION (30' X 25'), SEE DETAILS, SH. CZ005
- 7 TERRESTRIAL ANIMAL CROSSING, SEE DETAIL SH. CZ001
- 8 GATEWELL/SLUICE GATE
- 9 PERMEABLE BERM, SEE DETAIL, SH. CZ001
- 10 DEBRIS FENCE, SEE DETAIL, SH. CZ003
- 11 FENCE / EARTHEN BERM, SEE DETAIL, SH. CZ001
- 12 METAL GATE, 15' WIDTH, SEE DETAIL, SH. CZ001
- 13 EQUIPMENT GATE STRUCTURE, SEE DETAIL SH. CZ002
- 14 FLAP GATE, SEE DETAIL, SH. CZ007
- 15 48" CMP
- 16 CONCRETE HEADWALL, SEE DETAIL, SH. CZ007
- 17 TRAPEZOIDAL DITCH, SEE DETAIL, SH. CZ001
- 18 TELEMETRY CONTROL STRUCTURE
- 19 HEAVY DUTY DEBRIS BOOM
- 20 ACCESS ROAD, SEE DETAIL, SH. CZ006
- 21 CONCRETE PIER AND BAR SCREEN BARRIER, SEE DETAIL, SH. CZ004
- 22 DEMOLISH RIGHT DESCENDING GRAHAM McCULLOCH DITCH BERM
- 23 MULTI-CELL WETLAND AREA (1800' x 100')
- 24 VERTICAL DROP STRUCTURE, SEE DETAIL SH. CZ006
- 25 VEGETATION FILTER STRIP (NATIVE TREES AND SHRUBS)
- 26 OUTLET PIPES, SEE DETAIL CZ006
- 27 RELOCATE EAGLE MARSH ACCESS ROAD, SEE DETAIL, SH. CZ006
- 28 DISCHARGE WELL (52' x 15')
- 29 PUMP STATION SUMP (101' x 47'), SEE DETAIL, SH. CZ005
- 30 SILT FENCE, SEE DETAIL, SH. CZ001

### LEGEND

- I-WALL
- ▲▲▲▲▲ BASIN DIVIDE
- x — FENCE
- □ — DEBRIS BOOM
- ===== EARTHEN BERM
- x — FENCE/EARTHEN BERM
- INDIANA REVETMENT RIPRAP
- CWL --- CONTRACTOR WORK LIMITS
- ////// DEMOLISH STRUCTURE
- PT — POWER & TELEPHONE UTILITY LINES
- P — ELECTRIC UTILITY LINES

**(A1) ALTERNATIVE I RECONSTRUCT LEFT DESCENDING GRAHAM McCULLOCH DITCH BERM, DEMOLISH RIGHT DESCENDING BERM AND CONSTRUCT VEGETATION FILTER STRIP - SITE PLAN**

1"=300'



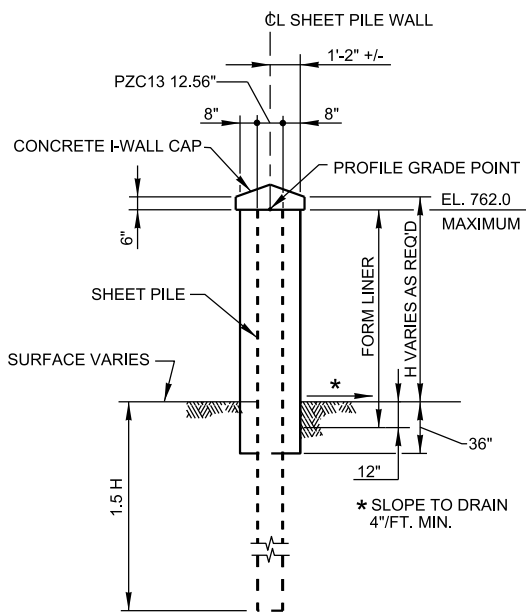
REVISIONS	DATE	APPR.

DESIGNED BY: B. JENNINGS	DATE: FEBRUARY 2012
DRAWN BY: C. ROBINSON	SCALE: AS SHOWN
CHECKED BY: B. DORSCH	DRAWING CODE: LR 5.6-42.1
B. JENNINGS, P.E. PROJECT ENGINEER/ARCHITECT	DATE:

ALTERNATIVE I  
SITE PLAN  
(SH. 2 OF 2)

SHEET REFERENCE NUMBER:  
**CS114**  
SHEET 17 OF 38



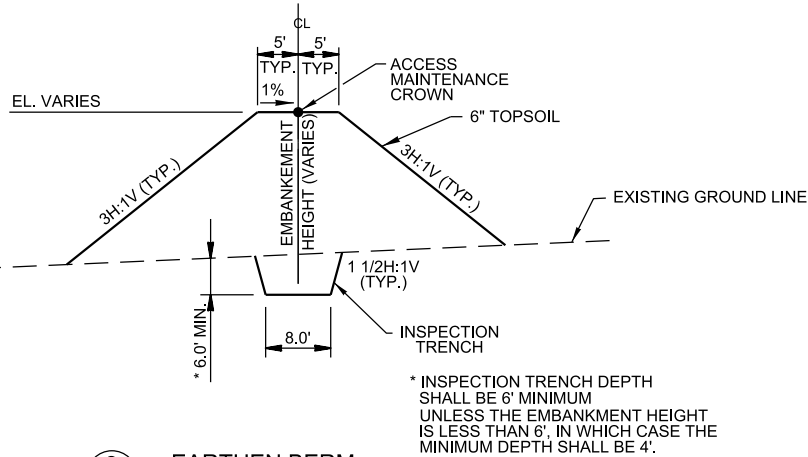


**1** I-WALL  
CS101 | CZ001 NTS

- NOTES:**
- CROSSING SHALL BE 15' WIDE LONGITUDINALLY ALONG I-WALL AT CREST.
  - I-WALL CAP, FORM LINER & CONCRETE FACING NOT CONSTRUCTED WHERE HIDDEN BY FILL MATERIAL (15' WIDTH) AT ANIMAL CROSSING AREAS.

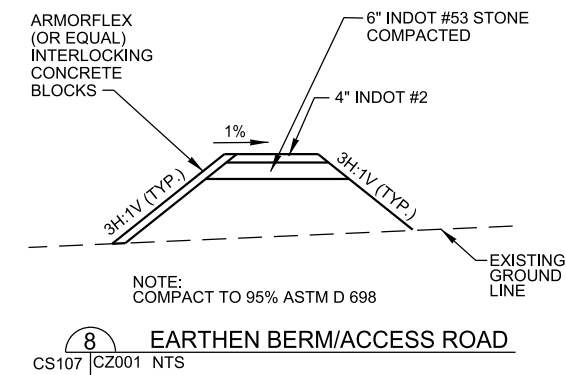
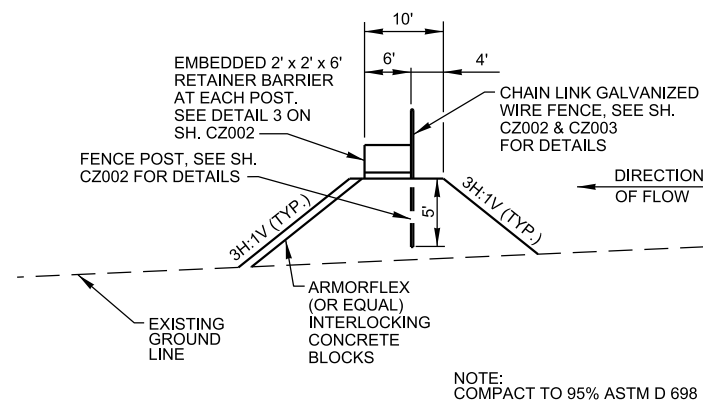
**4** TERRESTRIAL ANIMAL CROSSING  
CS101 | CZ001 NTS  
CS107

**2** EARTHEN BERM  
CS101 | CZ001 NTS  
CS102  
CS103  
CS104  
CS107  
CS111  
CS112  
CS113  
CS114

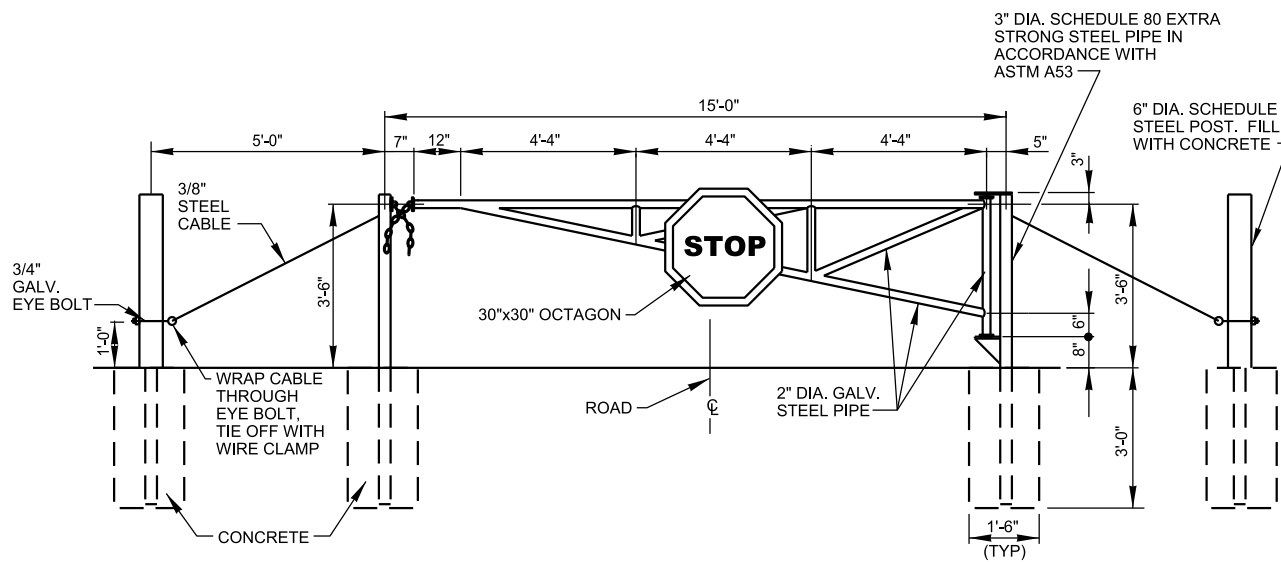


\* INSPECTION TRENCH DEPTH SHALL BE 6' MINIMUM UNLESS THE EMBANKMENT HEIGHT IS LESS THAN 6', IN WHICH CASE THE MINIMUM DEPTH SHALL BE 4'.  
NOTE: COMPACT TO 95% ASTM D 698

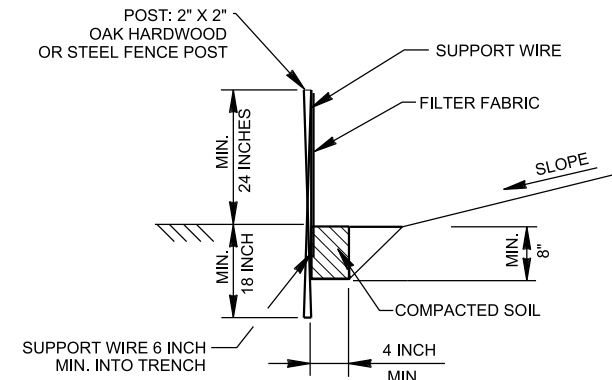
**3** FENCE / EARTHEN BERM  
CS107 | CZ001 NTS



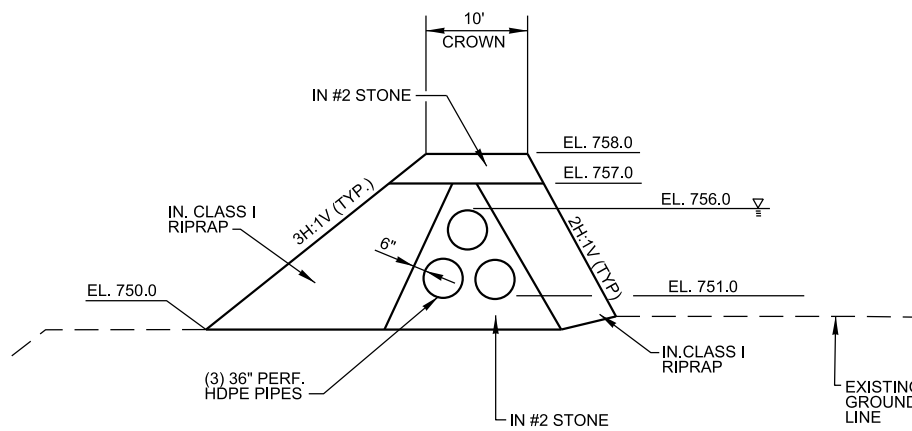
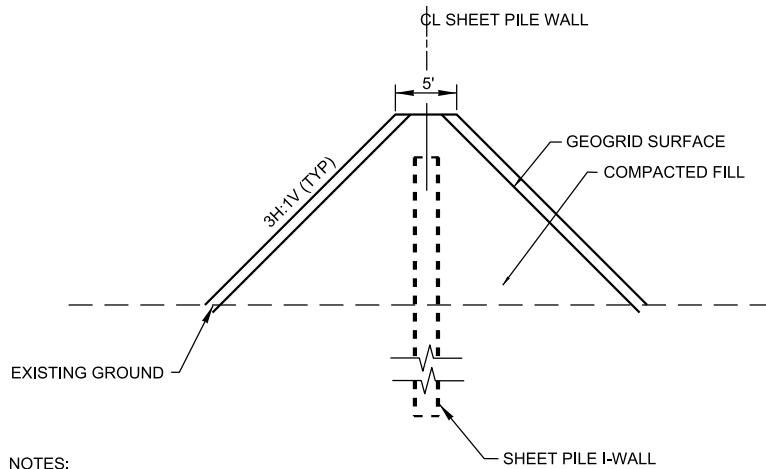
**8** EARTHEN BERM/ACCESS ROAD  
CS107 | CZ001 NTS  
NOTE: COMPACT TO 95% ASTM D 698



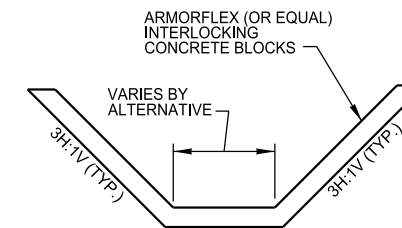
**5** METAL GATE  
CS107 | CZ001 NTS



**9** SILT FENCE  
CS106 | CZ001 NTS



**6** PERMEABLE BERM  
CS105 | CZ001 NTS  
CS106  
CS109  
CS110



**7** TRAPEZOIDAL DITCH  
CS103 | CZ001 NTS  
CS104  
CS105  
CS106  
CS109  
CS110

**A1** MISCELLANEOUS DETAILS  
NTS

CS107



REVISIONS	DATE	APPR.

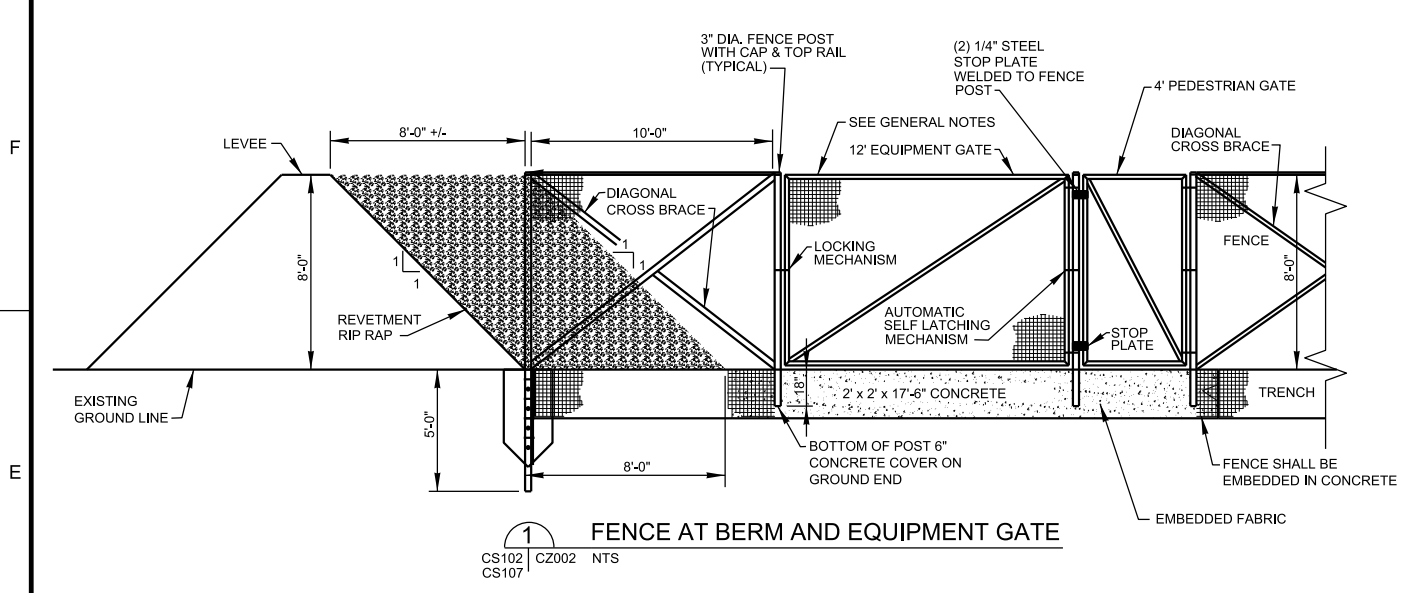
DESIGNED BY: B. JENNINGS	DATE: FEBRUARY 2012
DRAWN BY: C. ROBINSON	SCALE: NONE
CHECKED BY: B. DORSCH	DRAWING CODE: LR-5.6-12.1
B. JENNINGS, P.E.	PROJECT ENGINEER/ARCHITECT
	DATE

AQUATIC NUISANCE SPECIES CONTROL REPORT FOR FORT WAYNE, INDIANA  
**MISCELLANEOUS DETAILS**

SHEET REFERENCE NUMBER: CZ001  
SHEET 18 OF 38

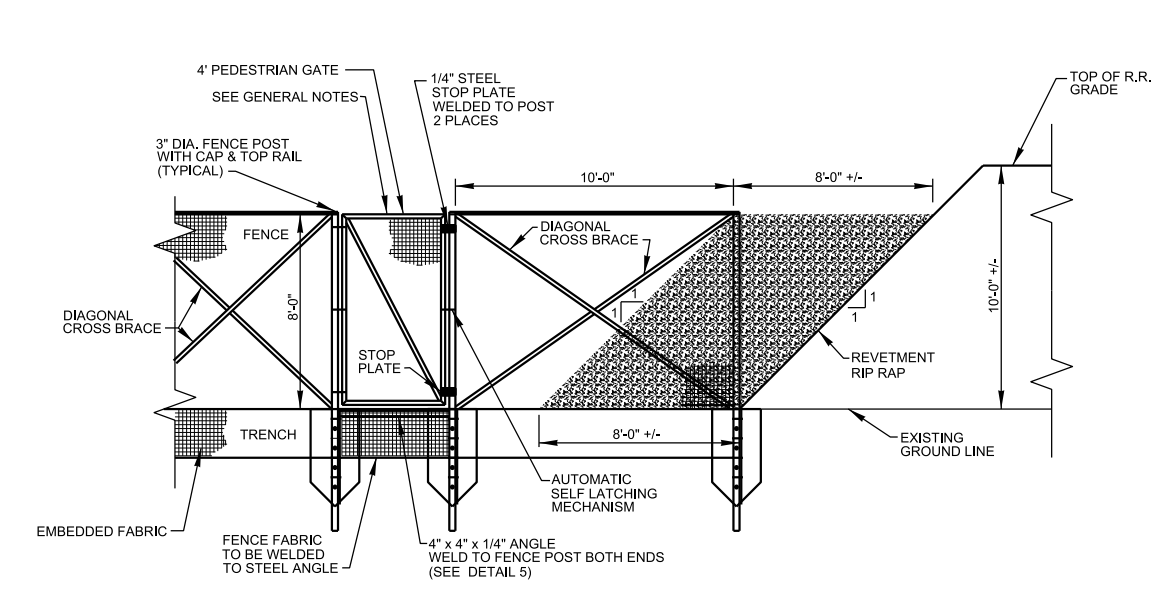
FINAL SUBMITTAL



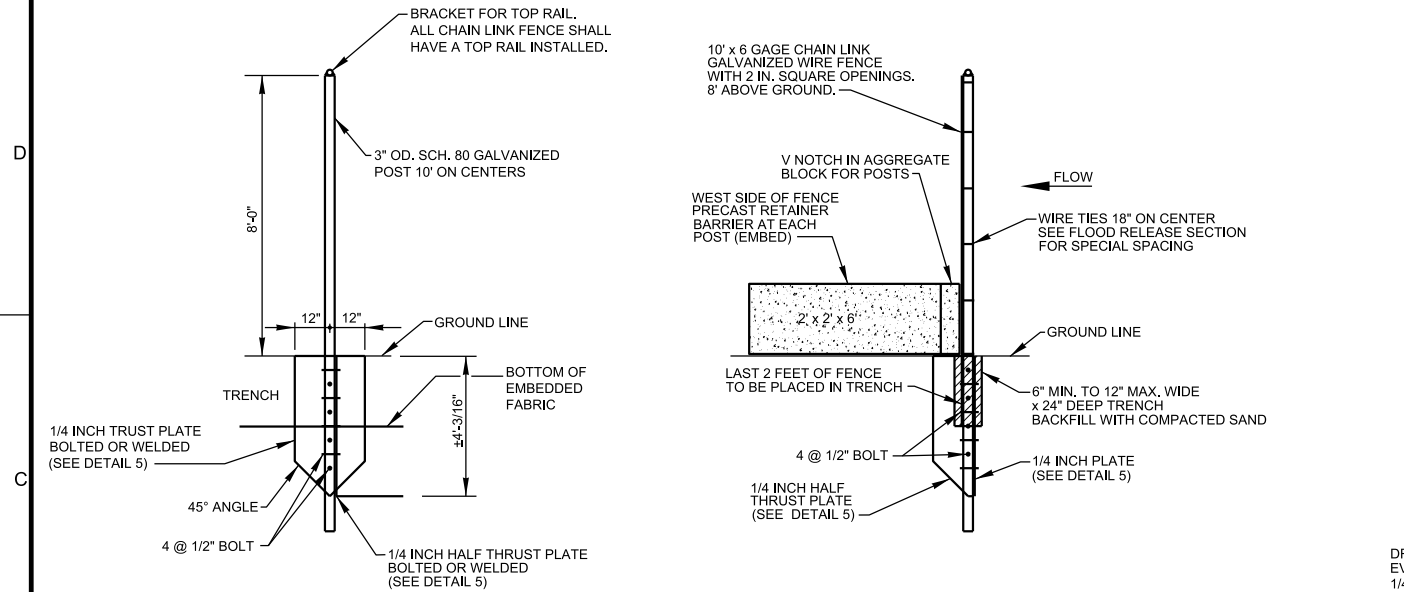


FENCE AT BERM AND EQUIPMENT GATE

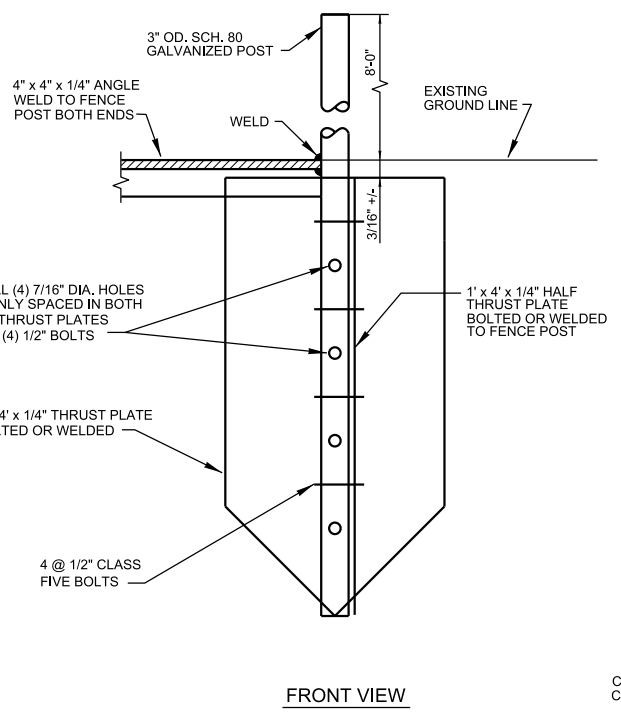
**GENERAL NOTES:**  
 ALL GAPS BETWEEN GATES, FENCE POSTS, CONCRETE AND STEEL CHANNEL SHALL BE 1/2" OR LESS.  
 ALL FENCE TOPS AT MIN. ELEV. OF 760.0.  
 ALL GATES OPEN WITH SWING TO UPSTREAM (MAUMEE RIVER) SIDE OF FENCE (N.E. SIDE OF FENCE)  
 MAXIMUM SWING OPENING ON PEDESTRIAN GATES TO BE 60".  
 PEDESTRIAN GATE CLOSER TO BE AUTOMATIC SPRING LOADED.



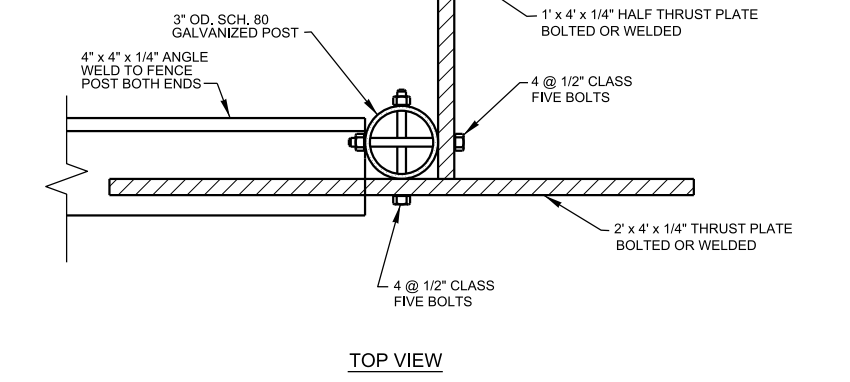
FENCE AT RAILROAD



FENCE POST

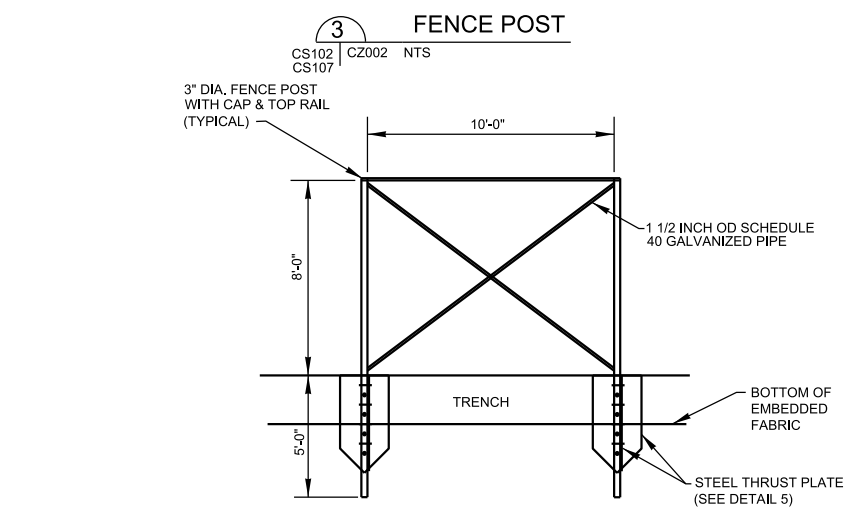


FRONT VIEW



TOP VIEW

1/4" THRUST PLATES



END PANEL POSTS

 **US ARMY CORPS OF ENGINEERS**  
LOUISVILLE DISTRICT

REVISIONS	DATE	APPR.
SYMBOL		

DESIGNED BY:	B. JENNINGS	DATE:	FEBRUARY 2012
DRAWN BY:	C. ROBINSON	SCALE:	NONE
CHECKED BY:	B. DORSCH	DRAWING CODE:	LR-5.8-12.1
PROJECT ENGINEER/ARCHITECT:	B. JENNINGS, P.E.	DATE:	

AQUATIC NUISANCE SPECIES CONTROL REPORT IN FORT WAYNE, INDIANA

**FENCE DETAILS**

SHEET REFERENCE NUMBER: **CZ002**  
SHEET 19 OF 38

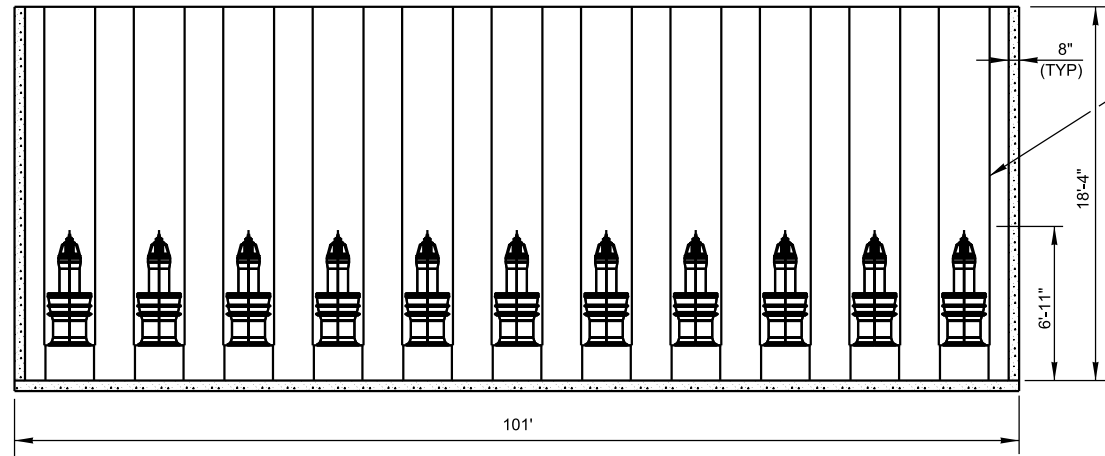






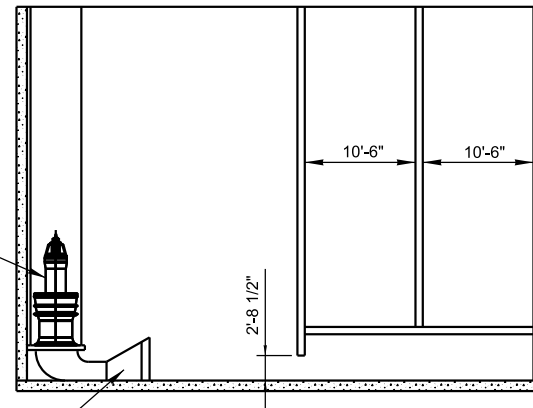






STEEL TUBE SANDBLASTED AND PAINTED WITH COAL TAR EPOXY (TYP.) (11 TOTAL)

SUBMERSIBLE PUMP (8 @ 130 CFS, 3 @ 50 CFS) (11 TOTAL)

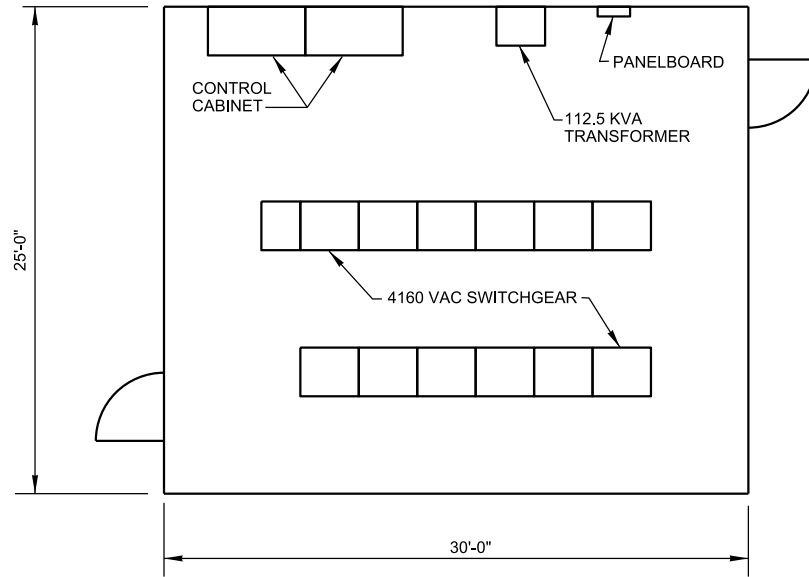


FSI "FORCED SUCTION INTAKE" (TYP.) (11 TOTAL)

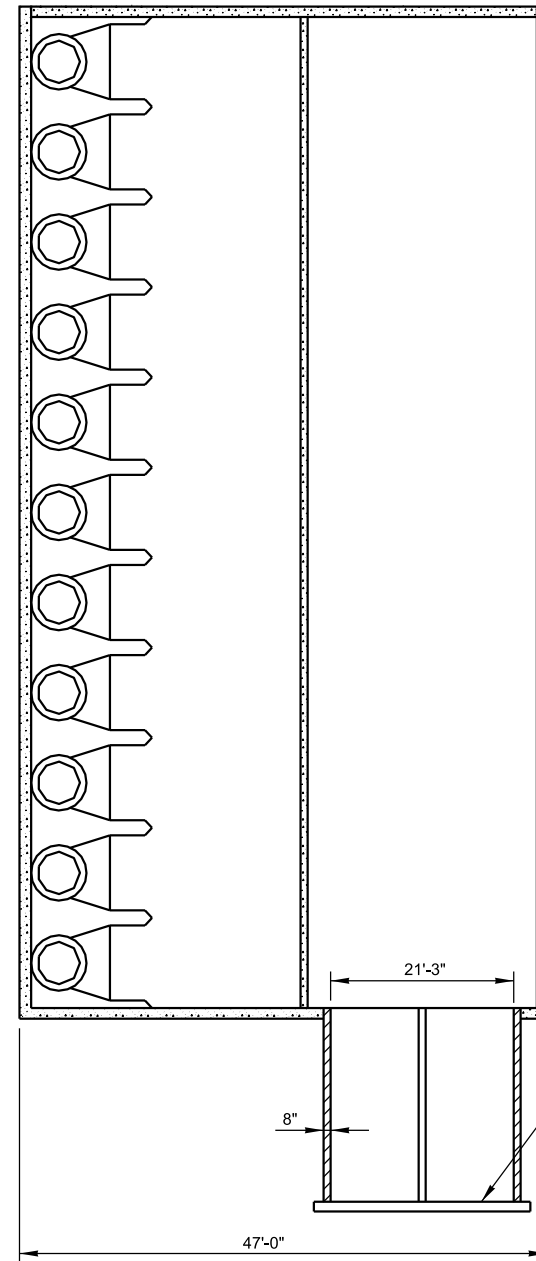
2 SIDE VIEW

CS103 CZ005 NTS  
CS104

1 PROFILE VIEW  
CS103 CZ005 NTS  
CS104



3 PLAN VIEW  
CS103 CZ005 NTS  
CS104



4 PLAN VIEW

CS103 CZ005 NTS  
CS104

NOTE: DISCHARGE PIPES WILL BE 48" (8 TOTAL) & 30" (3 TOTAL)

**PUMP STATION DETAILS**

A1 NTS

 US ARMY CORPS OF ENGINEERS LOUISVILLE DISTRICT	
REVISIONS	DATE / APPR.
SYMBOL	

DESIGNED BY: B. SMITH	DATE: FEBRUARY 2012
DRAWN BY: C. ROBINSON	SCALE: NONE
CHECKED BY: M. ROBERTSON	DRAWING CODE: LR 5.8-12.1
B. JENNINGS, P.E.	PROJECT ENGINEER/ARCHITECT
	DATE

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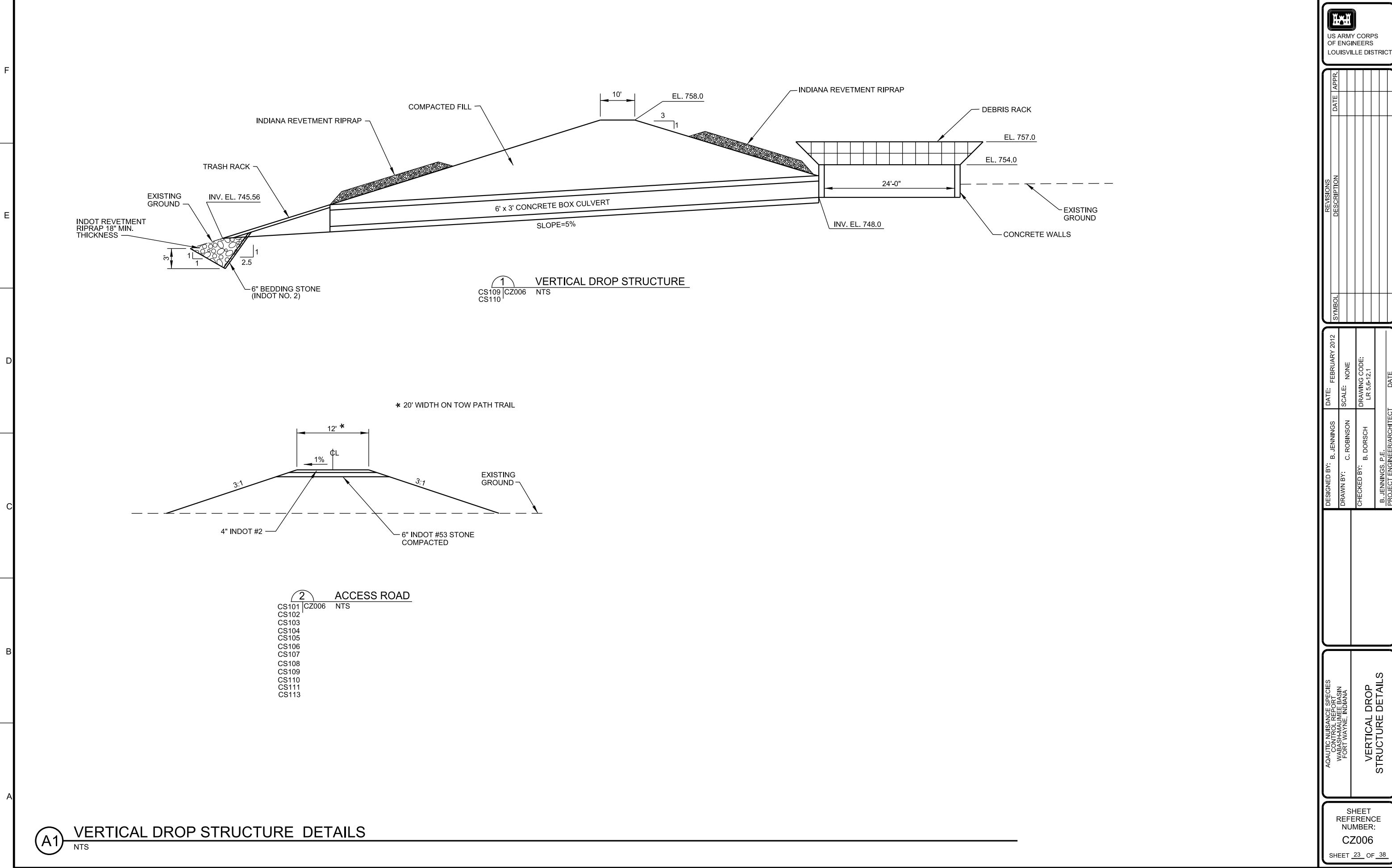
AQUATIC NUISANCE SPECIES CONTROL REPORT FOR FORT WAYNE, INDIANA	<b>PUMP STATION DETAILS</b>
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SHEET REFERENCE NUMBER: <b>CZ005</b>	SHEET 22 OF 38
---	----------------

FINAL SUBMITTAL



1      2      3      4      5      6      7      8      9



REVISIONS	DATE	APPR.

DESIGNED BY: B. JENNINGS	DATE: FEBRUARY 2012
DRAWN BY: C. ROBINSON	SCALE: NONE
CHECKED BY: B. DORSCH	DRAWING CODE: LR 5.6-12.1
B. JENNINGS, P.E.	DATE: _____
PROJECT ENGINEER/ARCHITECT	DATE: _____

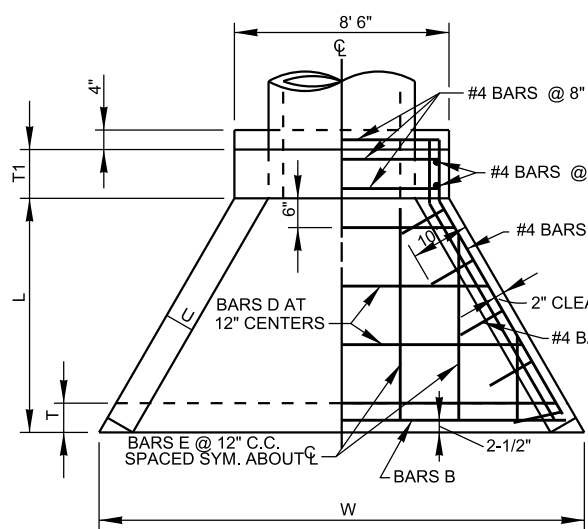
AGALITIC NUISANCE SPECIES CONTROL REPORT FOR FORT WAYNE, INDIANA

VERTICAL DROP STRUCTURE DETAILS

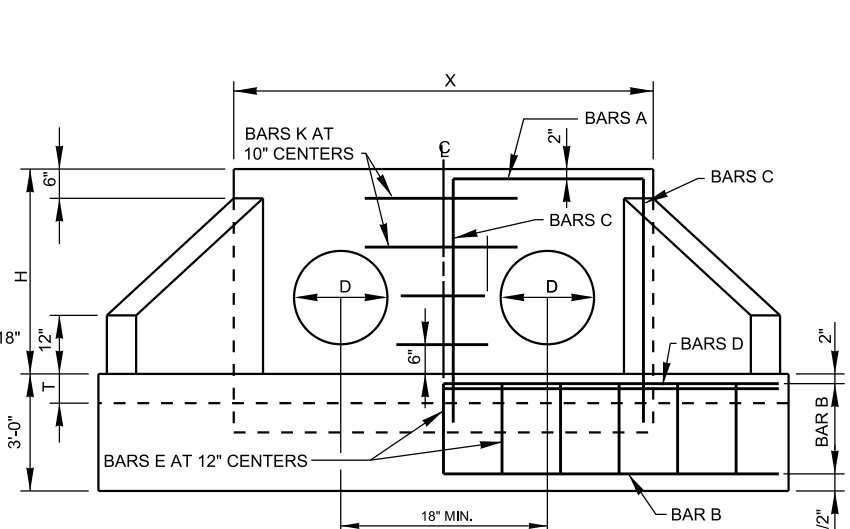
SHEET REFERENCE NUMBER: <b>CZ006</b>
SHEET <u>23</u> OF <u>38</u>

**(A1) VERTICAL DROP STRUCTURE DETAILS**  
NTS

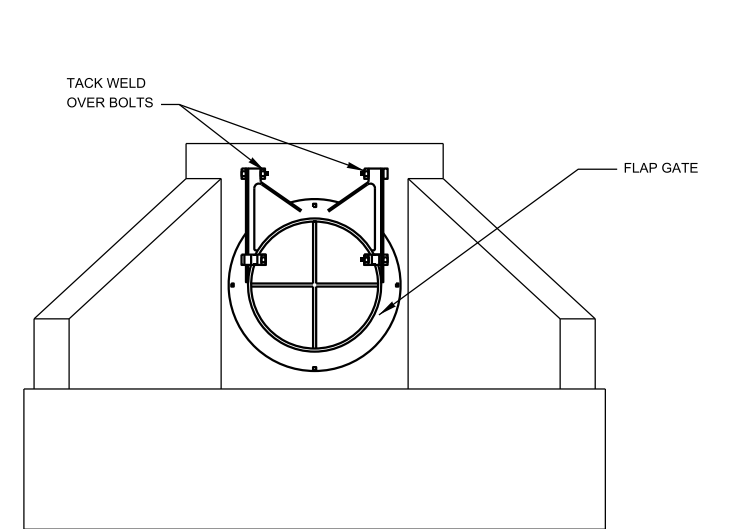




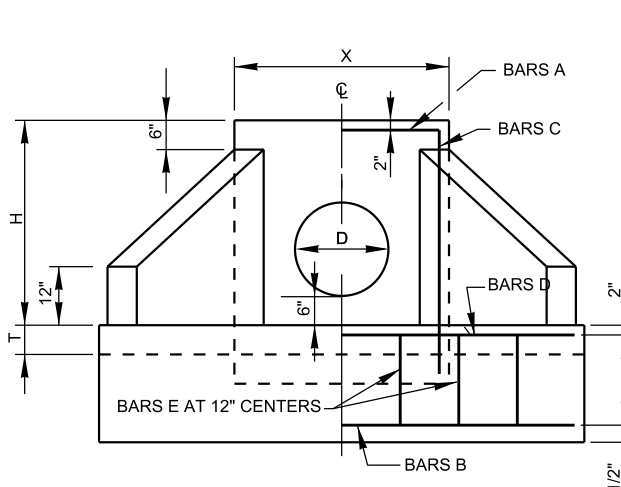
PLAN



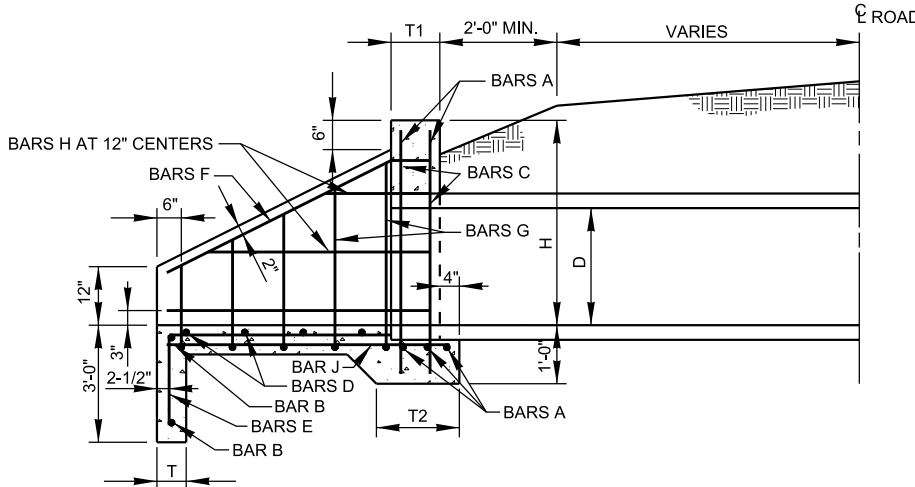
ELEVATION - MULTIPLE INSTALLATION



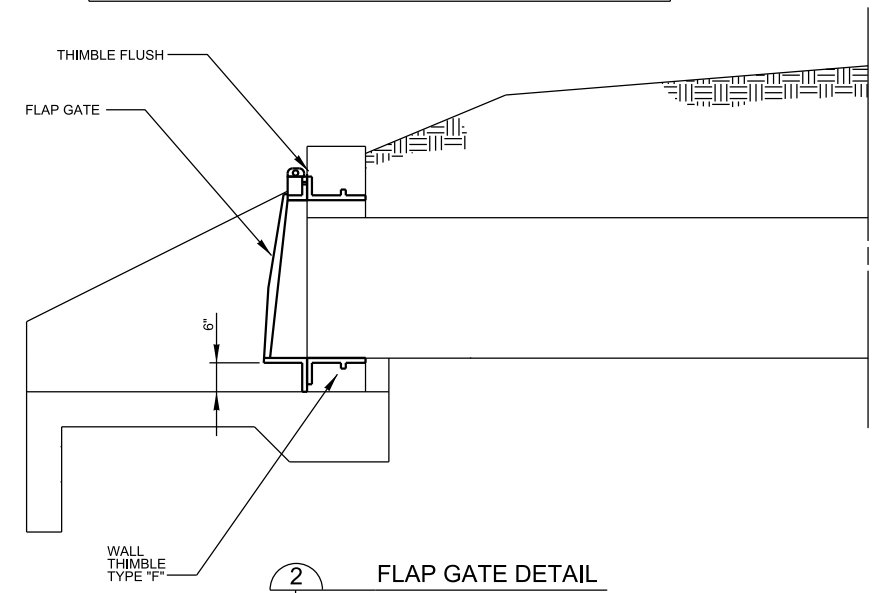
FLAP GATE DETAIL



ELEVATION



SECTION ON PIPE CL



1 PIPE CULVERT AND PUMP DISCHARGE HEADWALL DETAILS  
CS110|CZ007 NTS

- NOTES:
1. REINFORCING STEEL FY = 60 KSI.
  2. ALL BARS AND L'S SHALL BE STRUCTURAL GRADE STEEL.
  3. ANCHOR BOLTS SHALL BE STAINLESS STEEL EPOXY COATED OR APPROVED EQUAL.

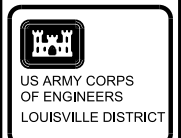
- NOTES:
1. FLAP GATES SHALL HAVE POSITIVE STOPS OR BUMPERS TO PREVENT THE FLAP FROM OVER OPENING, SO FLAP GATE CAN CLOSE BY WAY OF GRAVITY ALONE.

TABLE OF VARIABLE DIMENSIONS

PIPE SIZE	NUMBER OF PIPE*	H	L	W	X	T	T1	T2	U	BARS A		BARS B		BARS C		BARS D		BARS E		BARS F		BARS G				BARS H		BARS J		BARS K	
										NO.	SIZE	NO.	SIZE	NO.	SIZE	NO.	SIZE	NO.	SIZE	NO.	SIZE	NO.	SIZE	NO.	SIZE	NO.	SIZE	NO.	SIZE	NO.	SIZE
30"	1	4'-0"	5'-0"	9'-11 1/4"	4'-2"	6"	10"	1'-5"	6"	5	4	2	4	4	4	5	4	10	4	4	4	12	4	12"	6	4	2	4	-	-	
30"	2	4'-0"	5'-0"	14'-3 3/4"	8'-6 1/2"	6"	10"	1'-5"	6"	5	4	2	4	8	4	5	4	13	4	4	4	12	4	12"	6	4	2	4	4	4	
36"	1	4'-6"	6'-0"	11'-7 1/8"	4'-8"	6"	12"	1'-7"	6"	5	4	2	4	4	4	6	4	11	4	4	4	14	4	12"	8	4	2	4	-	-	
36"	2	4'-6"	6'-0"	16'-10 1/8"	9'-11"	6"	12"	1'-7"	6"	5	4	2	4	8	4	6	4	16	4	4	4	14	4	12"	8	4	2	4	4	4	
48"	1	5'-6"	8'-0"	15'-7/8"	5'-10"	6"	12"	1'-7"	6"	5	4	2	4	4	4	8	4	14	4	4	4	20	4	2@8", 4@10", 4@12"	10	4	2	4	-	-	
48"	2	5'-6"	8'-0"	22'-7/8"	12'-10"	6"	12"	1'-7"	6"	5	4	2	4	10	4	8	4	21	4	4	4	20	4	2@8", 4@10", 4@12"	10	4	2	4	6	4	

\* FOR MULTIPLE INSTALLATIONS HAVING MORE THAN TWO PIPES THE DIMENSION "X" IS TO BE INCREASED BY THE VALUE  $D + \frac{30}{4}$  FOR EACH ADDITIONAL PIPE. ADDITIONAL BARS C & E ARE TO BE PROVIDED AND SPACED AS SHOWN.

A1 PIPE CULVERT HEADWALL DETAILS  
NTS



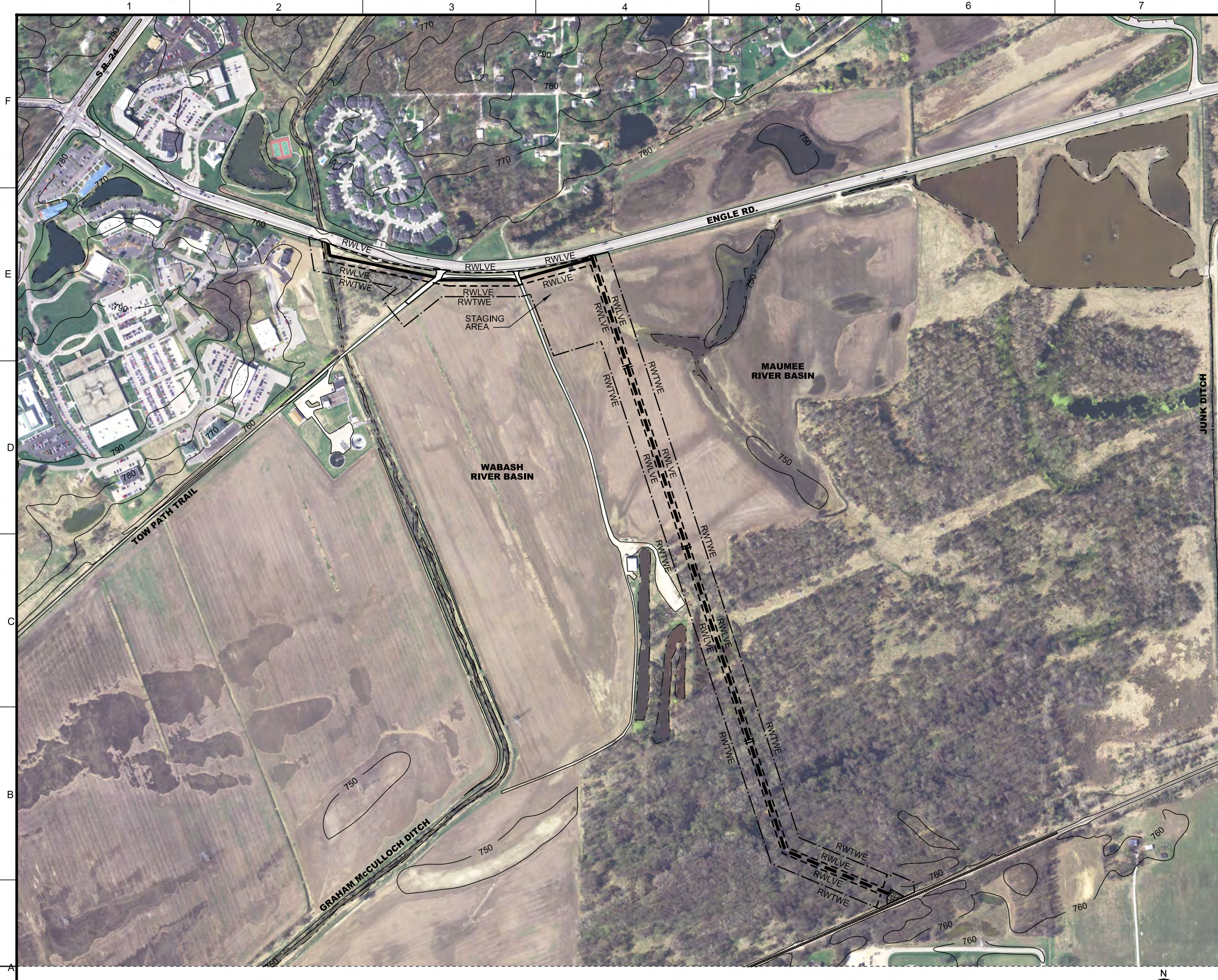
REVISIONS	DATE	APPR.	DESCRIPTION

DESIGNED BY: B. JENNINGS	DATE: FEBRUARY 2012
DRAWN BY: C. ROBINSON	SCALE: NONE
CHECKED BY: B. DORSCH	DRAWING CODE: LR 5.6-12.1
B. JENNINGS, P.E.	DATE:
PROJECT ENGINEER/ARCHITECT	


PIPE CULVERT HEADWALL DETAILS

SHEET REFERENCE NUMBER: CZ007  
SHEET 24 OF 38





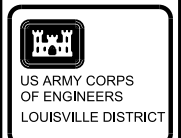
**GENERAL SHEET NOTES**

1. FOR REFERENCE ONLY.  
 RWLVE = 6.53 ACRES  
 RWTWE = 21.26 ACRES

**SHEET KEYNOTES**

**LEGEND**

- RWTWE TEMPORARY WORK EASEMENT
- RWLVE LEVEE RIGHT OF WAY



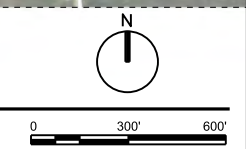
SYMBOL	REVISIONS	DATE	APPR.
	DESCRIPTION		

DESIGNED BY: B. JENNINGS	DATE: FEBRUARY 2012
DRAWN BY: C. ROBINSON	SCALE: AS SHOWN
CHECKED BY: B. DORSCH	DRAWING CODE: LR 5.6-42.1
B. JENNINGS, P.E. PROJECT ENGINEER/ARCHITECT	DATE

ALTERNATIVE A  
 RIGHT OF WAY PLAN

SHEET REFERENCE NUMBER:  
 RW101  
 SHEET 25 OF 38

**(A1) ALTERNATIVE A CONSTRUCT I-WALL RIGHT OF WAY PLAN**  
 1"=300'







### GENERAL SHEET NOTES

1. FOR REFERENCE ONLY.

RWLVE = 12.76 ACRES  
 RWTWE = 26.64 ACRES

### ◇ SHEET KEYNOTES

 US ARMY CORPS OF ENGINEERS LOUISVILLE DISTRICT		DATE	APPR.
		REVISIONS	DESCRIPTION
SYMBOL			

DESIGNED BY:	B. JENNINGS	DATE:	FEBRUARY 2012
DRAWN BY:	C. ROBINSON	SCALE:	AS SHOWN
CHECKED BY:	B. DORSCH	DRAWING CODE:	LR 5.6-12.1
PROJECT ENGINEER/ARCHITECT	B. JENNINGS, P.E.	DATE	

### LEGEND

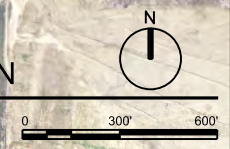
- RWTWE --- TEMPORARY WORK EASEMENT
- RWLVE --- LEVEE RIGHT OF WAY

AQUATIC NUISANCE SPECIES CONTROL REPORT FOR WABSH RIVER BASIN FORT WAYNE, INDIANA  
**ALTERNATIVE B RIGHT OF WAY PLAN**

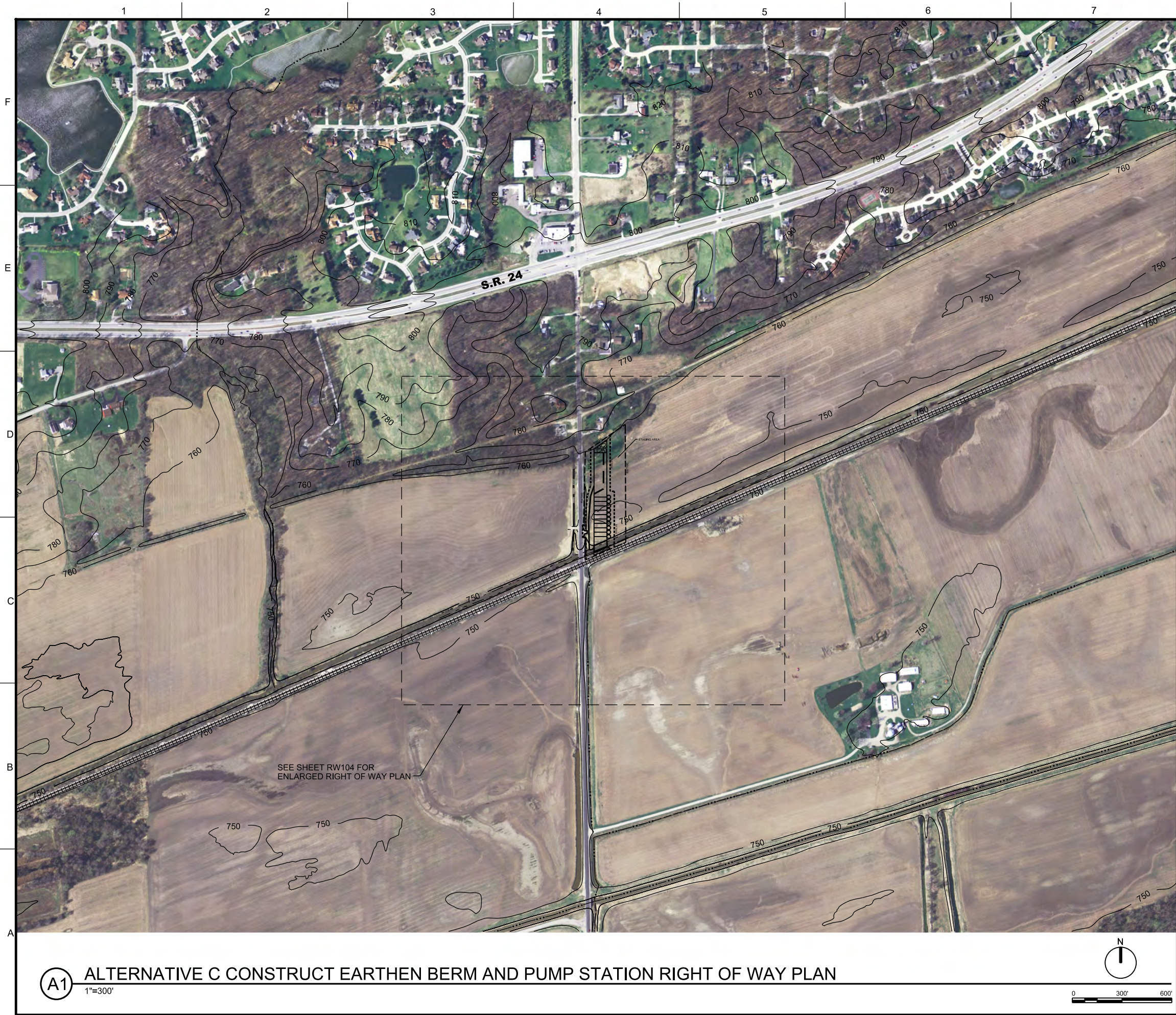
(A1)

## ALTERNATIVE B CONSTRUCT FENCE AND RECONSTRUCT LEFT DESCENDING GRAHAM McCULLOCH BERM RIGHT OF WAY PLAN

1"=300'







**GENERAL SHEET NOTES**

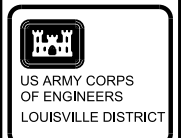
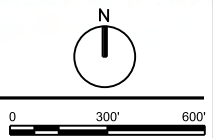
1. FOR REFERENCE ONLY.

**SHEET KEYNOTES**

**LEGEND**

- RWTWE --- TEMPORARY WORK EASEMENT
- - - - - RWLVE - - - - - LEVEE RIGHT OF WAY

**(A1) ALTERNATIVE C CONSTRUCT EARTHEN BERM AND PUMP STATION RIGHT OF WAY PLAN**  
1"=300'



REVISIONS	DATE	APPR.

DESIGNED BY: B. JENNINGS	DATE: FEBRUARY 2012
DRAWN BY: C. ROBINSON	SCALE: AS SHOWN
CHECKED BY: B. DORSCH	DRAWING CODE: LR 5.6-42.1
B. JENNINGS, P.E. PROJECT ENGINEER/ARCHITECT	DATE:

AAQUATIC NUISANCE SPECIES  
CONTROL REPORT FOR  
WATERWAY IN  
FORT WAYNE, INDIANA

**ALTERNATIVE C  
RIGHT OF WAY PLAN**

SHEET REFERENCE NUMBER:  
**RW103**  
SHEET 27 OF 38





**GENERAL SHEET NOTES**

1. FOR REFERENCE ONLY.

RWLVE = 2.8 ACRES  
RWTWE = 3.1 ACRES

◻ **SHEET KEYNOTES**



SYMBOL	REVISIONS	DATE	APPR.
	DESCRIPTION		

DESIGNED BY: B. JENNINGS	DATE: FEBRUARY 2012
DRAWN BY: C. ROBINSON	SCALE: AS SHOWN
CHECKED BY: B. DORSCH	DRAWING CODE: LR 5.8-12.1
B. JENNINGS, P.E. PROJECT ENGINEER/ARCHITECT	DATE

**LEGEND**

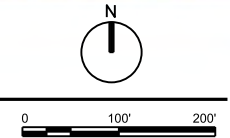
- RWTWE --- TEMPORARY WORK EASEMENT
- RWLVE ----- LEVEE RIGHT OF WAY

AQUATIC NUISANCE SPECIES CONTROL REPORT FOR FORT WAYNE, INDIANA

**ALTERNATIVE C ENLARGED RIGHT OF WAY PLAN**

**(A1) ALTERNATIVE C CONSTRUCT EARTHEN BERM AND PUMP STATION ENLARGED RIGHT OF WAY PLAN**

1"=100'







### GENERAL SHEET NOTES

1. FOR REFERENCE ONLY.

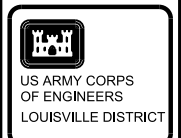
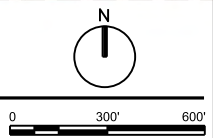
### ◇ SHEET KEYNOTES

### LEGEND

- RWTWE --- TEMPORARY WORK EASEMENT
- RWLVE --- LEVEE RIGHT OF WAY

## A1 ALTERNATIVE D CONSTRUCT PERMEABLE BERM WITH TELEMETERED SLUICE GATES RIGHT OF WAY PLAN

1"=300'



SYMBOL	REVISIONS	DATE	APPR.
	DESCRIPTION		

DESIGNED BY: B. JENNINGS	DATE: FEBRUARY 2012
DRAWN BY: C. ROBINSON	SCALE: AS SHOWN
CHECKED BY: B. DORSCH	DRAWING CODE: LR 5.6-42.1
B. JENNINGS, P.E. PROJECT ENGINEER/ARCHITECT	DATE

AAALITIC NUISANCE SPECIES  
CONTROL REPORT FOR  
WATERWAY IN  
FORT WAYNE, INDIANA

ALTERNATIVE D  
RIGHT OF WAY PLAN

SHEET REFERENCE NUMBER:  
RW105  
SHEET 29 OF 38





### GENERAL SHEET NOTES

1. FOR REFERENCE ONLY.

RWLVE = 14.9 ACRES  
 RWRDE = 0.2 ACRES  
 RWTWE = 7.4 ACRES

### ◇ SHEET KEYNOTES

### LEGEND

- RWTWE --- TEMPORARY WORK EASEMENT
- RWLVE --- LEVEE RIGHT OF WAY



SYMBOL	REVISIONS	DATE	APPR.
	DESCRIPTION		

DESIGNED BY: B. JENNINGS	DATE: FEBRUARY 2012
DRAWN BY: C. ROBINSON	SCALE: AS SHOWN
CHECKED BY: B. DORSCH	DRAWING CODE: LR 5.8-42.1
B. JENNINGS, P.E. PROJECT ENGINEER/ARCHITECT	DATE

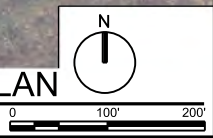
AQUATIC NUISANCE SPECIES CONTROL REPORT FOR FORT WAYNE, INDIANA  
 ALTERNATIVE D ENLARGED RIGHT OF WAY PLAN

SHEET REFERENCE NUMBER:  
 RW106  
 SHEET 30 OF 38

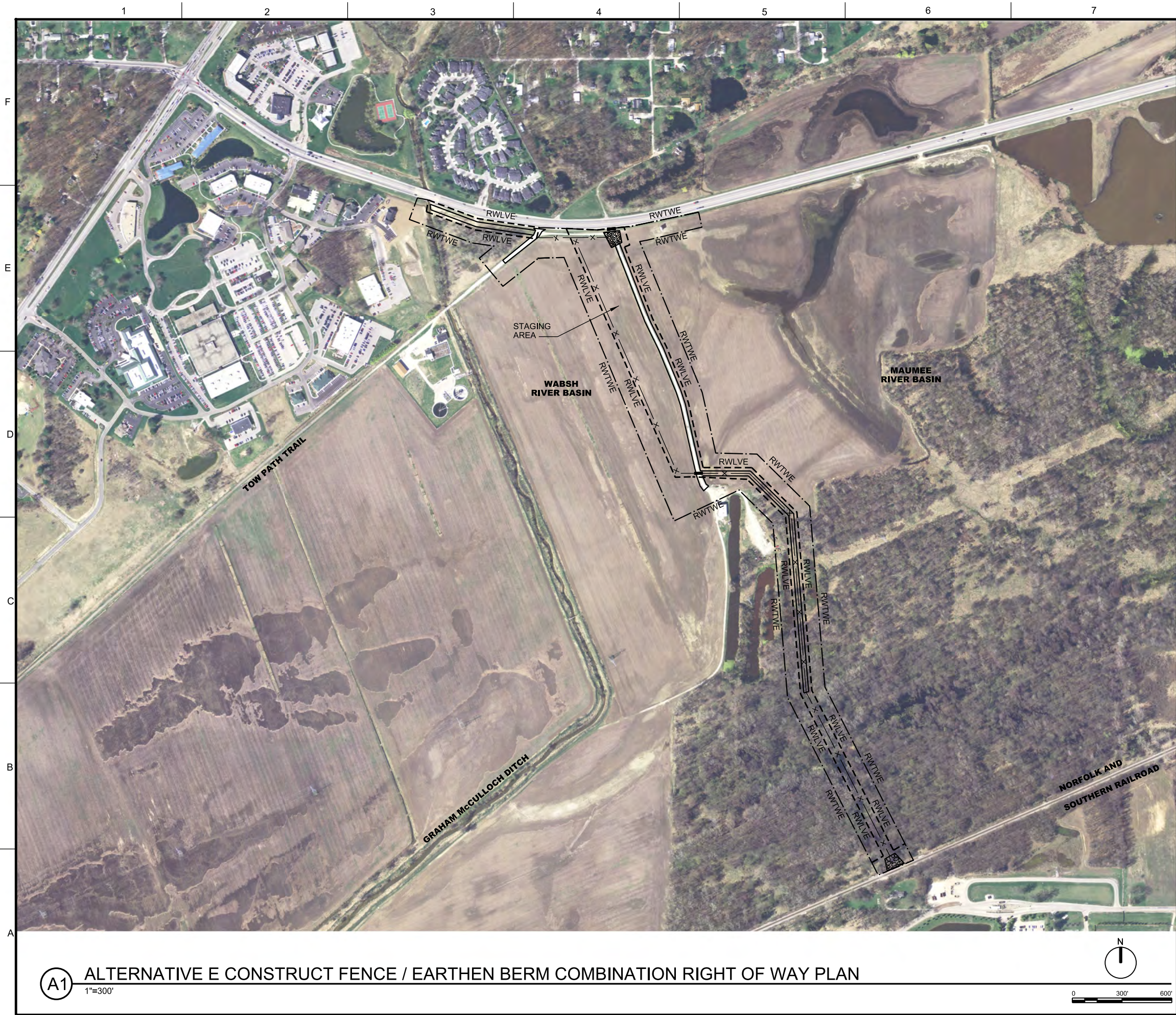
A1

## ALTERNATIVE D CONSTRUCT PERMEABLE BERM WITH TELEMETERED SLUICE GATES ENLARGED RIGHT OF WAY PLAN

1"=100'







**GENERAL SHEET NOTES**

1. FOR REFERENCE ONLY.  
 RWLVE = 15.51 ACRES  
 RWTWE = 22.15 ACRES

**SHEET KEYNOTES**

**US ARMY CORPS OF ENGINEERS**  
 LOUISVILLE DISTRICT

SYMBOL	REVISIONS	DATE	APPR.
	DESCRIPTION		

DESIGNED BY: B. JENNINGS	DATE: FEBRUARY 2012
DRAWN BY: C. ROBINSON	SCALE: AS SHOWN
CHECKED BY: B. DORSCH	DRAWING CODE: LR 5.6-42.1
B. JENNINGS, P.E. PROJECT ENGINEER/ARCHITECT	DATE

**LEGEND**

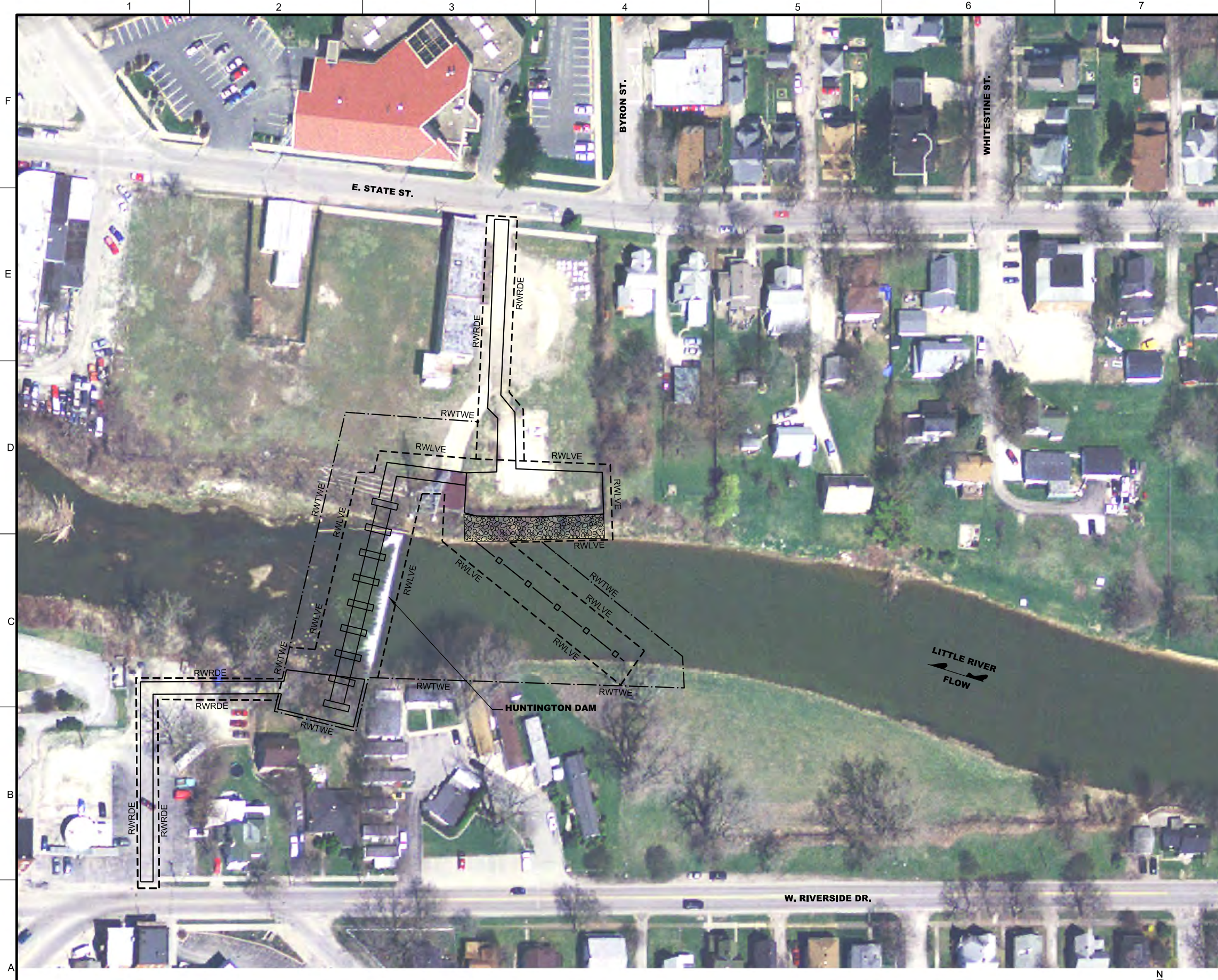
- RWTWE TEMPORARY WORK EASEMENT
- RWLVE LEVEE RIGHT OF WAY

**(A1) ALTERNATIVE E CONSTRUCT FENCE / EARTHEN BERM COMBINATION RIGHT OF WAY PLAN**  
 1"=300'

AQUATIC NUISANCE SPECIES CONTROL REPORT FOR WABSH RIVER BASIN FORT WAYNE, INDIANA  
**ALTERNATIVE E RIGHT OF WAY PLAN**

SHEET REFERENCE NUMBER:  
**RW107**  
 SHEET 31 OF 38





**GENERAL SHEET NOTES**

1. FOR REFERENCE ONLY.  
  
 RWLVE = 0.9 ACRES  
 RWTWE = 0.7 ACRES  
 RWRDE = 0.3 ACRES

**◇ SHEET KEYNOTES**

<p>US ARMY CORPS OF ENGINEERS LOUISVILLE DISTRICT</p>	
SYMBOL	DATE / APPR.

DESIGNED BY: B. JENNINGS	DATE: FEBRUARY 2012
DRAWN BY: C. ROBINSON	SCALE: 1"=50'
CHECKED BY: B. DORSCH	DRAWING CODE: LR 5.6-12.1
B. JENNINGS, P.E. PROJECT ENGINEER/ARCHITECT	DATE:

**LEGEND**

- - - RWTWE - - - TEMPORARY WORK EASEMENT
- RWLVE — LEVEE RIGHT OF WAY

**(A1) ALTERNATIVE F CONSTRUCT BAR SCREEN BARRIER AT EXISTING WEIR RIGHT OF WAY PLAN**  
1"=50'

AQUATIC NUISANCE SPECIES CONTROL REPORT FOR W. RIVERSIDE DR. FORT WAYNE, INDIANA  
  
**ALTERNATIVE F RIGHT OF WAY PLAN**

SHEET REFERENCE NUMBER:  
**RW108**  
 SHEET 32 OF 38

FINAL SUBMITTAL





GENERAL SHEET NOTES

1. FOR REFERENCE ONLY.

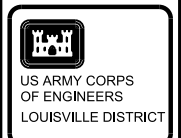
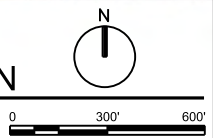
◇ SHEET KEYNOTES

LEGEND

- RWTWE --- TEMPORARY WORK EASEMENT
- - - - - RWLVE - - - - - LEVEE RIGHT OF WAY

**(A1) ALTERNATIVE G CONSTRUCT VERTICAL DROP STRUCTURES W/ TELEMETERED SLUICE GATE - RIGHT OF WAY PLAN**

1"=300'



SYMBOL	REVISIONS	DATE	APPR.
	DESCRIPTION		

DESIGNED BY: B. JENNINGS	DATE: FEBRUARY 2012
DRAWN BY: C. ROBINSON	SCALE: AS SHOWN
CHECKED BY: B. DORSCH	DRAWING CODE: LR 5.6-12.1
B. JENNINGS, P.E. PROJECT ENGINEER/ARCHITECT	DATE

AQUATIC NUISANCE SPECIES CONTROL REPORT FOR FORT WAYNE, INDIANA  
**ALTERNATIVE G  
RIGHT OF WAY PLAN**

SHEET REFERENCE NUMBER:  
**RW109**  
SHEET 33 OF 38





**GENERAL SHEET NOTES**

1. FOR REFERENCE ONLY.  
  
RWLVE = 2.3 ACRES  
RWTWE = 1.5 ACRES

**SHEET KEYNOTES**

**LEGEND**

- - - RWTWE - - - TEMPORARY WORK EASEMENT
- - - RWLVE - - - LEVEE RIGHT OF WAY



SYMBOL	REVISIONS DESCRIPTION	DATE	APPR.

DESIGNED BY: B. JENNINGS	DATE: FEBRUARY 2012
DRAWN BY: C. ROBINSON	SCALE: AS SHOWN
CHECKED BY: B. DORSCH	DRAWING CODE: LR 5.8-42.1
B. JENNINGS, P.E. PROJECT ENGINEER/ARCHITECT	DATE

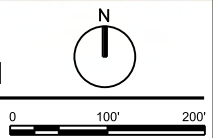
AQUATIC NUISANCE SPECIES CONTROL REPORT FOR FORT WAYNE, INDIANA  
  
**ALTERNATIVE G ENLARGED RIGHT OF WAY PLAN**

SHEET REFERENCE NUMBER:  
**RW110**  
 SHEET 34 OF 38

**A1**

**ALTERNATIVE G CONSTRUCT VERTICAL DROP STRUCTURES W/ TELEMETERED SLUICE GATE - ENLARGED RIGHT OF WAY PLAN**

1"=100'







**GENERAL SHEET NOTES**

1. FOR REFERENCE ONLY.  
 RWLVE = 16.29 ACRES (TOTAL SH. RW111 & RW 112)  
 RWTWE = 30.23 ACRES (TOTAL SH. RW111 & RW 112)

**SHEET KEYNOTES**

**LEGEND**

- RWTWE --- TEMPORARY WORK EASEMENT
- RWLVE --- LEVEE RIGHT OF WAY



SYMBOL	REVISIONS	DATE	APPR.
	DESCRIPTION		

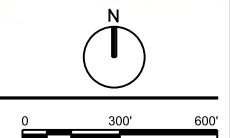
DESIGNED BY: B. JENNINGS	DATE: FEBRUARY 2012
DRAWN BY: C. ROBINSON	SCALE: AS SHOWN
CHECKED BY: B. DORSCH	DRAWING CODE: LR 5.6-42.1
B. JENNINGS, P.E.	PROJECT ENGINEER/ARCHITECT
	DATE

ALTERNATIVE H  
 RIGHT OF WAY PLAN  
 (SH. 1 OF 2)

SHEET REFERENCE NUMBER:  
 RW111  
 SHEET 35 OF 38

**(A1) ALTERNATIVE H RECONSTRUCT LEFT DESCENDING GRAHAM McCULLOCH DITCH BERM - RIGHT OF WAY PLAN**

1"=300'







### GENERAL SHEET NOTES

1. FOR REFERENCE ONLY.

### SHEET KEYNOTES



SYMBOL	REVISIONS	DATE	APPR.
	DESCRIPTION		

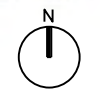
DESIGNED BY: B. JENNINGS	DATE: FEBRUARY 2012
DRAWN BY: C. ROBINSON	SCALE: AS SHOWN
CHECKED BY: B. DORSCH	DRAWING CODE: LR 5.6-42.1
B. JENNINGS, P.E. PROJECT ENGINEER/ARCHITECT	DATE

### LEGEND

- RWTWE --- TEMPORARY WORK EASEMENT
- RWLVE --- LEVEE RIGHT OF WAY

**(A1) ALTERNATIVE H RECONSTRUCT LEFT DESCENDING GRAHAM McCULLOCH DITCH BERM - RIGHT OF WAY PLAN**

1"=300'



AQUATIC NUISANCE SPECIES  
CONTROL REPORT FOR  
WATERWAY IN  
FORT WAYNE, INDIANA

**ALTERNATIVE H  
RIGHT OF WAY PLAN  
(SH. 2 OF 2)**

SHEET REFERENCE NUMBER:  
**RW112**

SHEET 36 OF 38

FINAL SUBMITTAL





**GENERAL SHEET NOTES**

1. FOR REFERENCE ONLY.  
 RWLVE = 24.31 ACRES (TOTAL SH. RW113 & RW114)  
 RWTWE = 32.95 ACRES (TOTAL SH. RW113 & RW114)

**SHEET KEYNOTES**



SYMBOL	REVISIONS	DATE	APPR.
	DESCRIPTION		

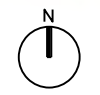
DESIGNED BY: B. JENNINGS	DATE: FEBRUARY 2012
DRAWN BY: C. ROBINSON	SCALE: AS SHOWN
CHECKED BY: B. DORSCH	DRAWING CODE: LR 5.6-12.1
B. JENNINGS, P.E.	PROJECT ENGINEER/ARCHITECT
	DATE

**LEGEND**

- RWTWE --- TEMPORARY WORK EASEMENT
- RWLVE --- LEVEE RIGHT OF WAY

**A1** ALTERNATIVE I RECONSTRUCT LEFT DESCENDING GRAHAM McCULLOCH DITCH BERM, DEMOLISH RIGHT DESCENDING BERM AND CONSTRUCT MULTI-CELL WETLAND AREA - RIGHT OF WAY PLAN

1"=300'



ALTERNATIVE I  
 RIGHT OF WAY PLAN  
 (SH. 1 OF 2)

SHEET REFERENCE NUMBER:  
**RW113**  
 SHEET 37 OF 38

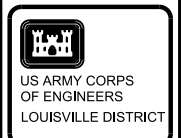




### GENERAL SHEET NOTES

1. FOR REFERENCE ONLY.

### ◇ SHEET KEYNOTES



SYMBOL	REVISIONS	DATE	APPR.
	DESCRIPTION		

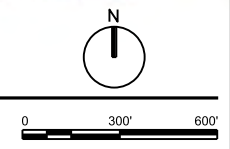
DESIGNED BY: B. JENNINGS	DATE: FEBRUARY 2012
DRAWN BY: C. ROBINSON	SCALE: AS SHOWN
CHECKED BY: B. DORSCH	DRAWING CODE: LR 5.6-12.1
B. JENNINGS, P.E. PROJECT ENGINEER/ARCHITECT	DATE

### LEGEND

- RWTWE --- TEMPORARY WORK EASEMENT
- RWLVE --- LEVEE RIGHT OF WAY

**(A1)** ALTERNATIVE I RECONSTRUCT LEFT DESCENDING GRAHAM McCULLOCH DITCH BERM,  
DEMOLISH RIGHT DESCENDING BERM AND CONSTRUCT VEGETATION FILTER STRIP - RIGHT OF WAY PLAN

1"=300'



AQUATIC NUISANCE SPECIES  
CONTROL REPORT FOR  
WATERWAY IN  
FORT WAYNE, INDIANA

**ALTERNATIVE I  
RIGHT OF WAY PLAN  
(SH. 2 OF 2)**

SHEET REFERENCE NUMBER:  
**RW114**

SHEET 38 OF 38

FINAL SUBMITTAL