



Legend

- Project Area
- FEMA 100-YR Floodplain
- Aquatic Resource Type**
- Drainage Ditch
- PEM Wetland
- PFO Wetland
- Water of the US

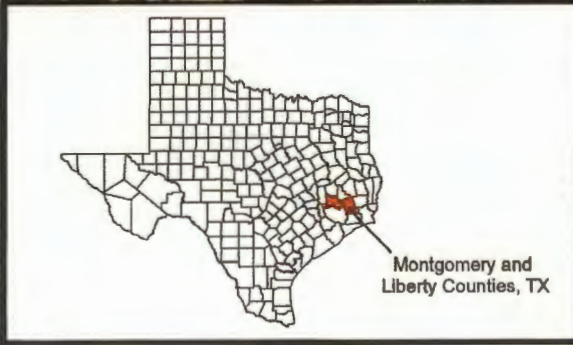
**US 59 (CSJ 0177-03-096)
 PERMIT DRAWING OVERVIEW
 TEXAS DEPARTMENT OF
 TRANSPORTATION
 MONTGOMERY AND LIBERTY
 COUNTIES, TEXAS**



20465 State Highway 249, Suite 300
 Houston, TX 77070


Drawing No.:
Date: 2/21/2019
Project No.: 17465.00N
Drawn By: JSmolik
Revision No.: 1

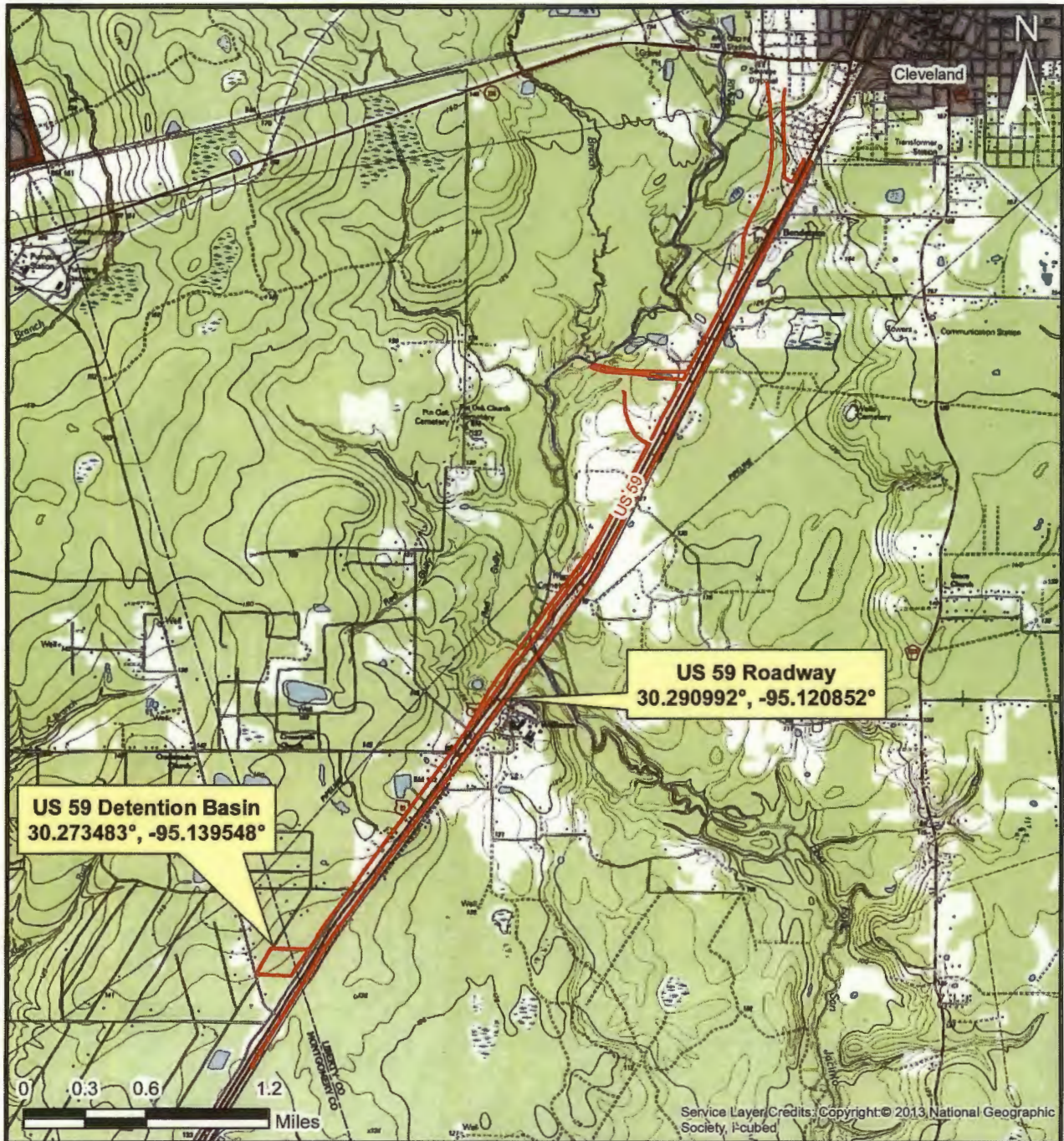
Note: This is not a Property Boundary Survey
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**US 59 FROM FOSTORIA RD
 TO STATE LOOP 573
 AERIAL MAP
 TEXAS DEPARTMENT OF
 TRANSPORTATION
 MONTGOMERY AND LIBERTY
 COUNTIES, TEXAS**

SPIRIT ENVIRONMENTAL
 20465 State Highway 249, Suite 300
 Houston, TX 77070

Figure No.: 2
Date: 12/5/2018
Project No.: 17465.00N
Drawn By: JPrescott
Revision No.: 1
<i>Note: This is not a Property Boundary Survey</i>
 Proposed Project Area



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**US 59 FROM FOSTORIA RD
 TO STATE LOOP 573
 TOPOGRAPHIC MAP
 TEXAS DEPARTMENT OF
 TRANSPORTATION
 MONTGOMERY AND LIBERTY
 COUNTIES, TEXAS**

SPiRiT
 ENVIRONMENTAL
 20485 State Highway 249, Suite 300
 Houston, TX 77070


Figure No.: 3
Date: 12/5/2018
Project No.: 17465.00N
Drawn By: JPrescott
Revision No.: 1
<i>Note: This is not a Property Boundary Survey</i>
 Proposed Project Area

Table of Waters of the U.S. Impacted by the Proposed Project

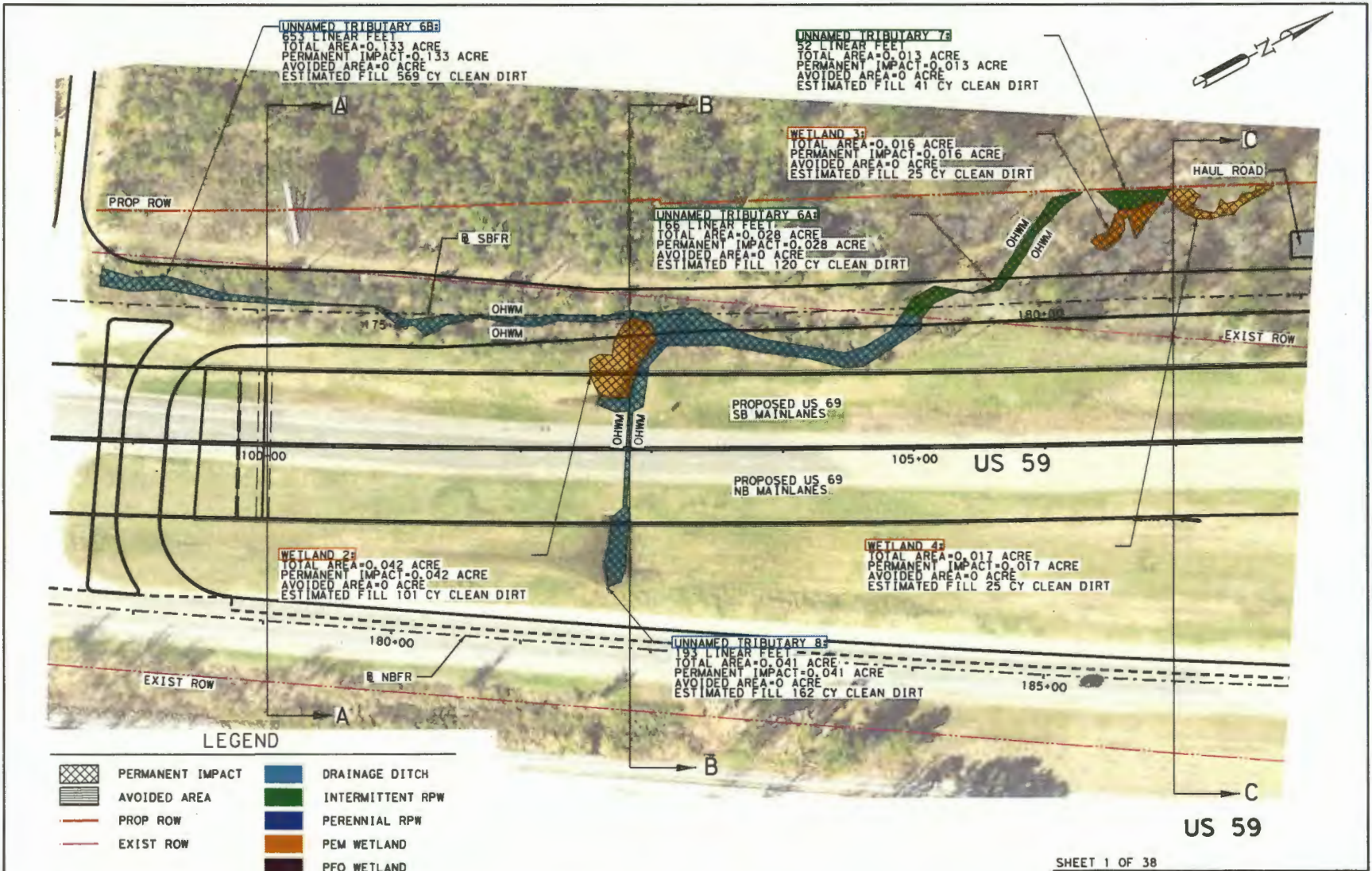
Aquatic Resource ID	Aquatic Resource Type	Latitude	Longitude	Acreage in Project Area	Linear Feet in Project Area	Impact Type	Total Impacted Acreage	Impacted Linear Feet	CY of Excavation	CY of Clean Dirt Fill Material	CY of Concrete Fill Material	Potential Jurisdiction
Roadway (AJD)												
Wetland 1	PEM	30.26968*	-95.13881*	0.050	-	Avoided	0.000	-	0	0	0	Potentially Non-Jurisdictional
Wetland 2	PEM	30.28998*	-95.12283*	0.042	-	Permanent	0.042	-	0	162	0	Potentially Non-Jurisdictional
Wetland 3	PEM	30.29103*	-95.12249*	0.016	-	Permanent	0.016	-	0	25	0	Potentially Jurisdictional
Wetland 4	PEM	30.29121*	-95.12243*	0.017	-	Permanent	0.017	-	0	25	0	Potentially Jurisdictional
Wetland 5	PFO	30.29158*	-95.12193*	0.229	-	Permanent	0.229	-	0	178	0	Potentially Jurisdictional
Wetland 6	PEM	30.29169*	-95.12215*	0.003	-	Permanent	0.003	-	0	8	0	Potentially Jurisdictional
Wetland 7	PEM	30.29181*	-95.12164*	0.012	-	Permanent	0.012	-	0	8	0	Potentially Jurisdictional
Wetland 8	PFO	30.29289*	-95.12098*	1.918	-	Permanent	1.918	-	0	15,049	0.68	Potentially Jurisdictional
Wetland 9	PFO	30.29440*	-95.11980*	0.070	-	Permanent	0.070	-	0	139	0.13	Potentially Jurisdictional
Wetland 10	PFO	30.29516*	-95.11934*	0.076	-	Permanent	0.076	-	0	309	0	Potentially Jurisdictional
Wetland 11	PEM	30.29594*	-95.11833*	0.008	-	Permanent	0.008	-	0	10	0	Potentially Jurisdictional
Wetland 12	PEM	30.29610*	-95.11811*	0.010	-	Permanent	0.010	-	0	12	0	Potentially Jurisdictional
Wetland 13	PFO	30.29701*	-95.11725*	0.299	-	Permanent	0.299	-	0	452	1.10	Potentially Jurisdictional
Wetland 14	PEM	30.29729*	-95.11715*	0.016	-	Permanent	0.016	-	0	23	0	Potentially Jurisdictional
Wetland 15	PEM	30.29904*	-95.11620*	0.016	-	Permanent	0.016	-	0	23	0	Potentially Jurisdictional
Wetland 16	PEM	30.29956*	-95.11552*	0.007	-	Permanent	0.007	-	0	15	0	Potentially Jurisdictional
Wetland 17	PEM	30.29972*	-95.11554*	0.010	-	Permanent	0.010	-	0	15	0	Potentially Jurisdictional
Wetland 18	PEM	30.31416*	-95.11085*	0.036	-	Permanent	0.036	-	172	0	0	Potentially Non-Jurisdictional
Unnamed Tributary 1	Drainage Ditch	30.30092*	-95.11452*	0.016	110	Permanent	0.016	110	0	41	0	Potentially Non-Jurisdictional
Unnamed Tributary 2	RPW (Intermittent)	30.29932*	-95.11593*	0.044	241	Permanent	0.044	241	0	70	0	Potentially Jurisdictional
Unnamed Tributary 3	RPW (Intermittent)	30.29482*	-95.11918*	0.073	394	Permanent	0.001	14	0	0	2.94	Potentially Jurisdictional
Unnamed Tributary 4	RPW (Intermittent)	30.29413*	-95.11966*	0.098	450	Permanent	0.001	7	0	0	0.52	Potentially Jurisdictional
Unnamed Tributary 5	RPW (Intermittent)	30.29369*	-95.11984*	0.076	494	Avoided	0.000	0	0	0	0	Potentially Jurisdictional
Unnamed Tributary 6a	RPW (Intermittent)	30.29076*	-95.12258*	0.028	166	Permanent	0.028	166	0	120	0	Potentially Jurisdictional
Unnamed Tributary 6b	Drainage Ditch	30.28996*	-95.12295*	0.133	653	Permanent	0.133	653	0	569	0	Potentially Non-Jurisdictional
Unnamed Tributary 7	RPW (Intermittent)	30.29108*	-95.12254*	0.013	52	Permanent	0.013	52	0	41	0	Potentially Jurisdictional
Unnamed Tributary 8	Drainage Ditch	30.28987*	-95.12260*	0.041	193	Permanent	0.041	193	0	162	0	Potentially Non-Jurisdictional
East Fork Downstream	RPW (Perennial)	30.29501*	-95.11865*	0.621	762	Permanent	0.001	3	0	0	2.05	Potentially Jurisdictional
East Fork Middle	RPW (Perennial)	30.29685*	-95.11813*	0.157	235	Avoided	0.000	0	0	0	0	Potentially Jurisdictional
East Fork Upstream	RPW (Perennial)	30.29800*	-95.11684*	0.352	425	Permanent	0.002	30	0	0	9.90	Potentially Jurisdictional
Drainage Ditch 1	Drainage Ditch	30.32399*	-95.10133*	1.182	1,603	Permanent	0.464	762	0	268	165	Potentially Non-Jurisdictional
Drainage Ditch 2	Drainage Ditch	30.30974*	-95.10940*	0.135	715	Permanent	0.135	715	0	75	0	Potentially Non-Jurisdictional
Drainage Ditch 3	Drainage Ditch	30.32609*	-95.10002*	1.125	2,205	Permanent	0.790	1,509	0	857	378	Potentially Non-Jurisdictional
Drainage Ditch 4	Drainage Ditch	30.31416*	-95.11070*	0.204	1,644	Permanent	0.204	1,644	985	0	0	Potentially Non-Jurisdictional

Table of Waters of the U.S. Impacted by the Proposed Project

Aquatic Resource ID	Aquatic Resource Type	Latitude	Longitude	Acreage in Project Area	Impact Type	Total Impacted Acreage	Acreage of Fill Area	Acreage of Excavated Area	Acreage of Drained Area	CY of Excavation	CY of Clean Dirt Fill	Potential Jurisdiction
Detention Basin (PJD)												
Detention Pond Wetland 1	PFO	30.27241°	-95.13771°	0.455	Permanent	0.455	0.144	0.140	0.171	913	395	Potentially Jurisdictional
Detention Pond Wetland 2	PFO	30.27185°	-95.13968°	0.413	Permanent	0.413	0.000	0.000	0.413	0	0	Potentially Jurisdictional
Detention Pond Wetland 3	PFO	30.27190°	-95.13831°	0.884	Permanent	0.884	0.323	0.161	0.400	675	1,259	Potentially Jurisdictional
Detention Pond Wetland A	PFO	30.27307°	-95.13733°	1.409	Permanent	1.409	0.407	0.416	0.586	669	1,136	Potentially Jurisdictional
Detention Pond Wetland B	PFO	30.27335°	-95.13877°	0.324	Permanent	0.324	0.000	0.000	0.324	0	0	Potentially Jurisdictional
Detention Pond Wetland C	PFO	30.27205°	-95.14011°	1.052	Permanent	1.052	0.326	0.268	0.458	1,140	1,138	Potentially Jurisdictional

	Acreage in Project Area	Linear Feet in Project Area	Total Impacted Acreage	Total Impacted Linear Feet	Impacted Acreage of JD Features	Impacted Linear Feet of JD Features	Avoided Acreage	Avoided Linear Feet
PEM Subtotal	0.243	-	0.193	-	0.115	-	0.050	-
PFO Subtotal	7.129	-	7.129	-	7.129	-	0.000	-
Drainage Ditch Subtotal	2.836	7,123	1.783	5,586	-	-	1.053	1,537
Stream Subtotal	1.462	3,219	0.090	513	0.090	513	1.372	2,706
Total	11.670	10,342	9.195	6,099	7.334	513	2.475	4,243

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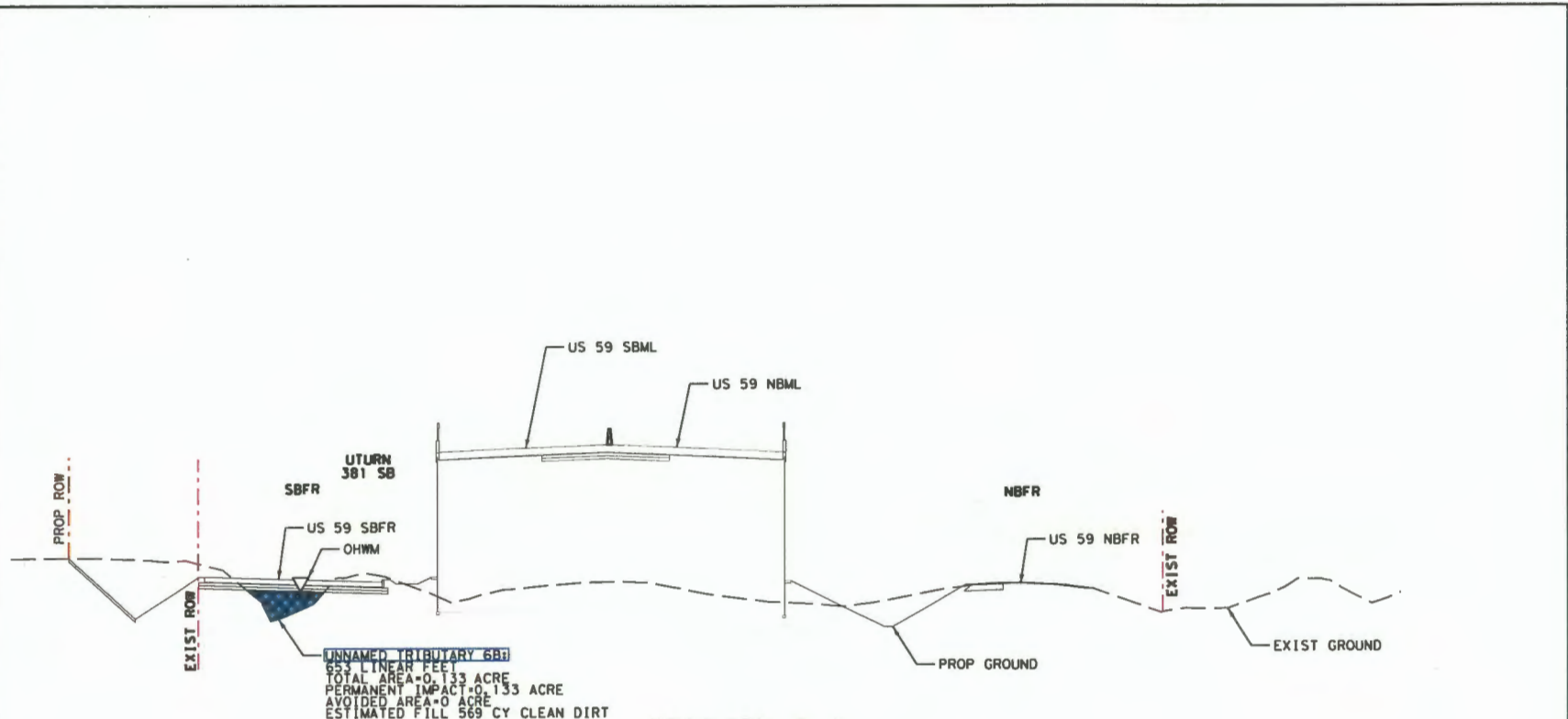
SHEET 1 OF 38

0' 25' 50' 100'
 SCALE: 1"=100'

**US 59 FROM FOSTORIA ROAD
 AT THE MONTGOMERY/LIBERTY
 COUNTY LINE TO SL 573
 CSJ 0177-03-096
 WATERS OF THE U.S. IMPACTS**

SWG-2018-00221

Impact to Waters of the U.S.					
Aquatic Resource ID	Aquatic Resource Type	Impact Type		Total Impacted Acreage	Est. Impact Volume (CY)
Wetland 2	PEM	Permanent	Fill dirt for new roadway	0.042	101
Wetland 3	PEM	Permanent	Fill dirt for new roadway	0.016	25
Wetland 4	PEM	Permanent	Fill dirt for new roadway	0.017	25
Unnamed Tributary 6A	RPW (Intermittent)	Permanent	Fill dirt for new roadway	0.028	120
Unnamed Tributary 6B	Drainage Ditch	Permanent	Fill dirt for new roadway	0.133	569
Unnamed Tributary 7	RPW (Intermittent)	Permanent	Fill dirt for new roadway	0.013	41
Unnamed Tributary 8	Drainage Ditch	Permanent	Fill dirt for new roadway	0.041	162



SECTION A-A
 (UNNAMED TRIBUTARY 6B)

LEGEND

	PERMANENT IMPACT		DRAINAGE DITCH
	AVOIDED AREA		INTERMITTENT RPW
	PROP ROW		PERENNIAL RPW
	EXIST ROW		PEM WETLAND
	PROP GROUND		PFO WETLAND
	EXIST GROUND		

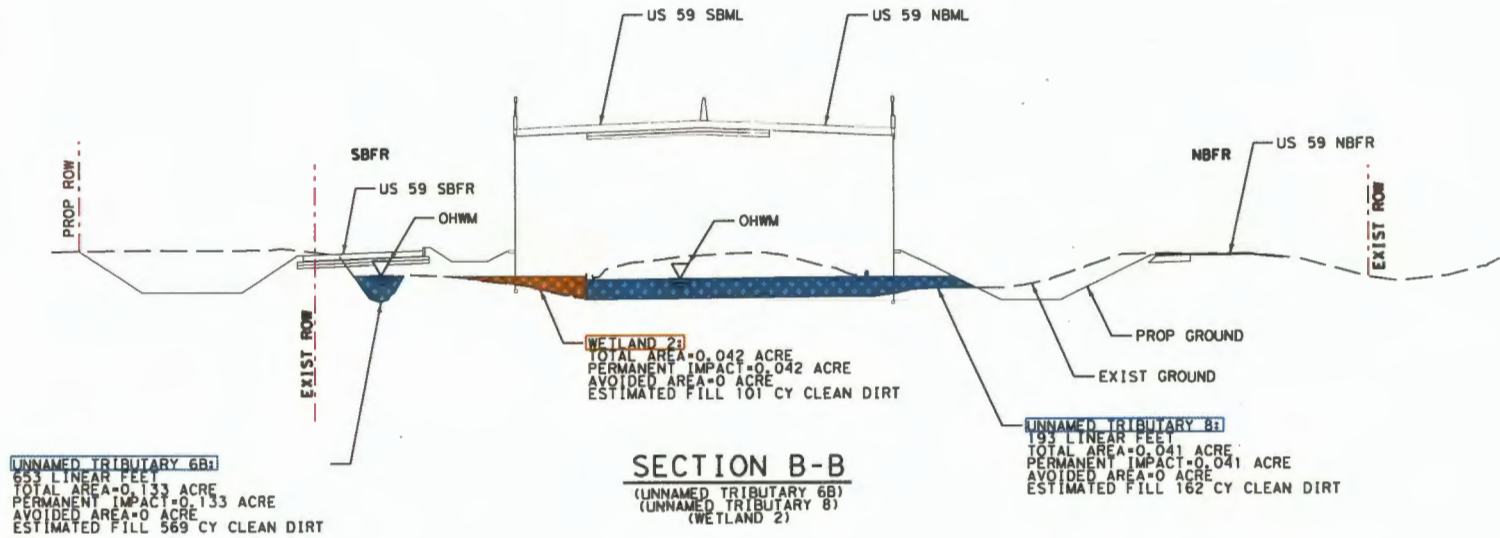
US 59

SHEET 2 OF 38

NOT TO SCALE

US 59 FROM FOSTORIA ROAD
 AT THE MONTGOMERY/LIBERTY
 COUNTY LINE TO SL 573
 CSJ 0177-03-096
 WATERS OF THE U.S. IMPACTS

SWG-2018-00221



LEGEND

	PERMANENT IMPACT		DRAINAGE DITCH
	AVOIDED AREA		INTERMITTENT RPW
	PROP ROW		PERENNIAL RPW
	EXIST ROW		PEM WETLAND
	PROP GROUND		PFO WETLAND
	EXIST GROUND		

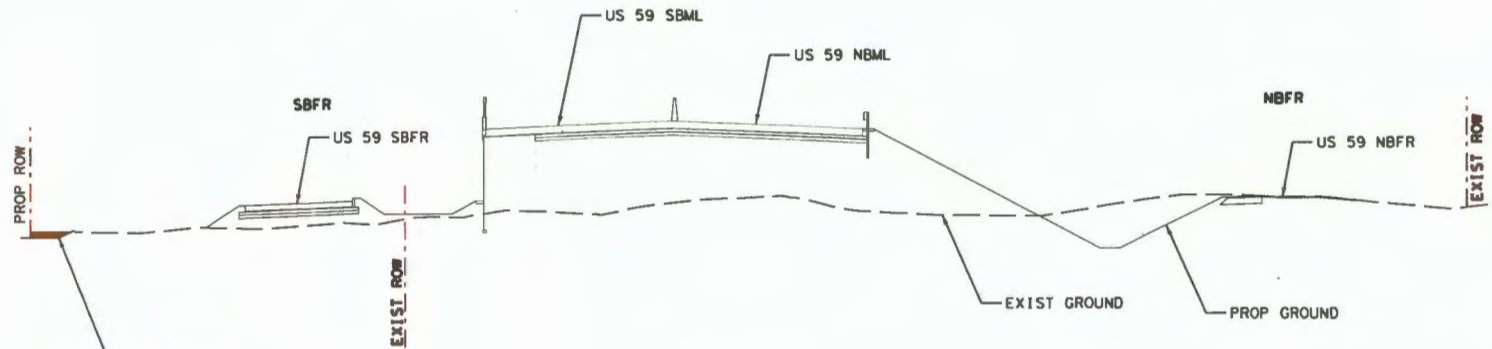
US 59

SHEET 3 OF 38

NOT TO SCALE

US 59 FROM FOSTORIA ROAD
 AT THE MONTGOMERY/LIBERTY
 COUNTY LINE TO SL 573
 CSJ 0177-03-096
 WATERS OF THE U.S. IMPACTS

SWG-2018-00221



WETLAND 4
 TOTAL AREA=0.017 ACRE
 PERMANENT IMPACT=0.017 ACRE
 AVOIDED AREA=0 ACRE
 ESTIMATED FILL 25 CY CLEAN DIRT

SECTION C-C
 (WETLAND 4)

LEGEND

	PERMANENT IMPACT		DRAINAGE DITCH
	AVOIDED AREA		INTERMITTENT RPW
	PROP ROW		PERENNIAL RPW
	EXIST ROW		PEM WETLAND
	PROP GROUND		PFO WETLAND
	EXIST GROUND		

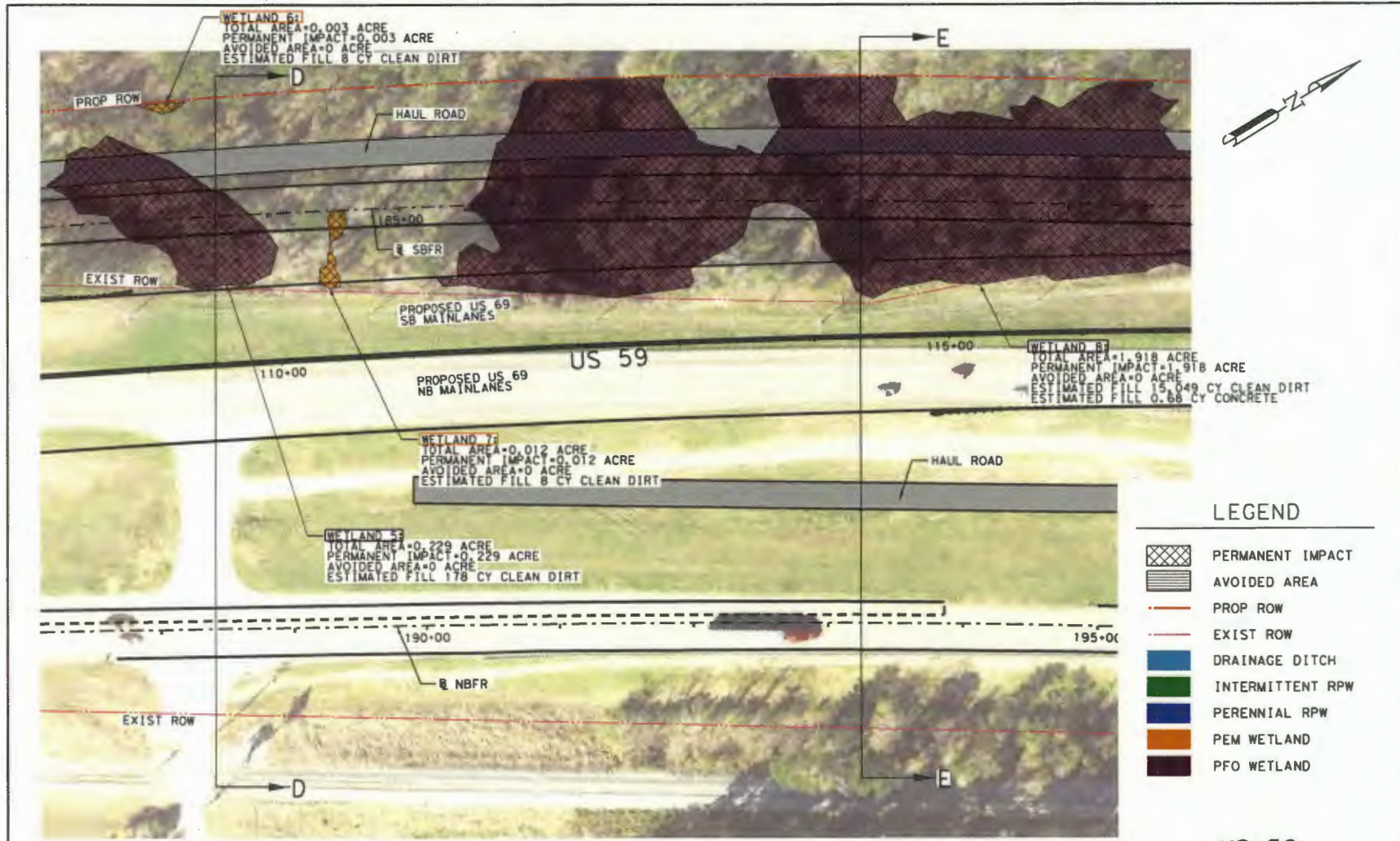
US 59

SHEET 4 OF 38

NOT TO SCALE

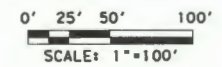
US 59 FROM FOSTORIA ROAD
 AT THE MONTGOMERY/LIBERTY
 COUNTY LINE TO SL 573
 CSJ 0177-03-096
 WATERS OF THE U.S. IMPACTS

SWG-2018-00221



US 59

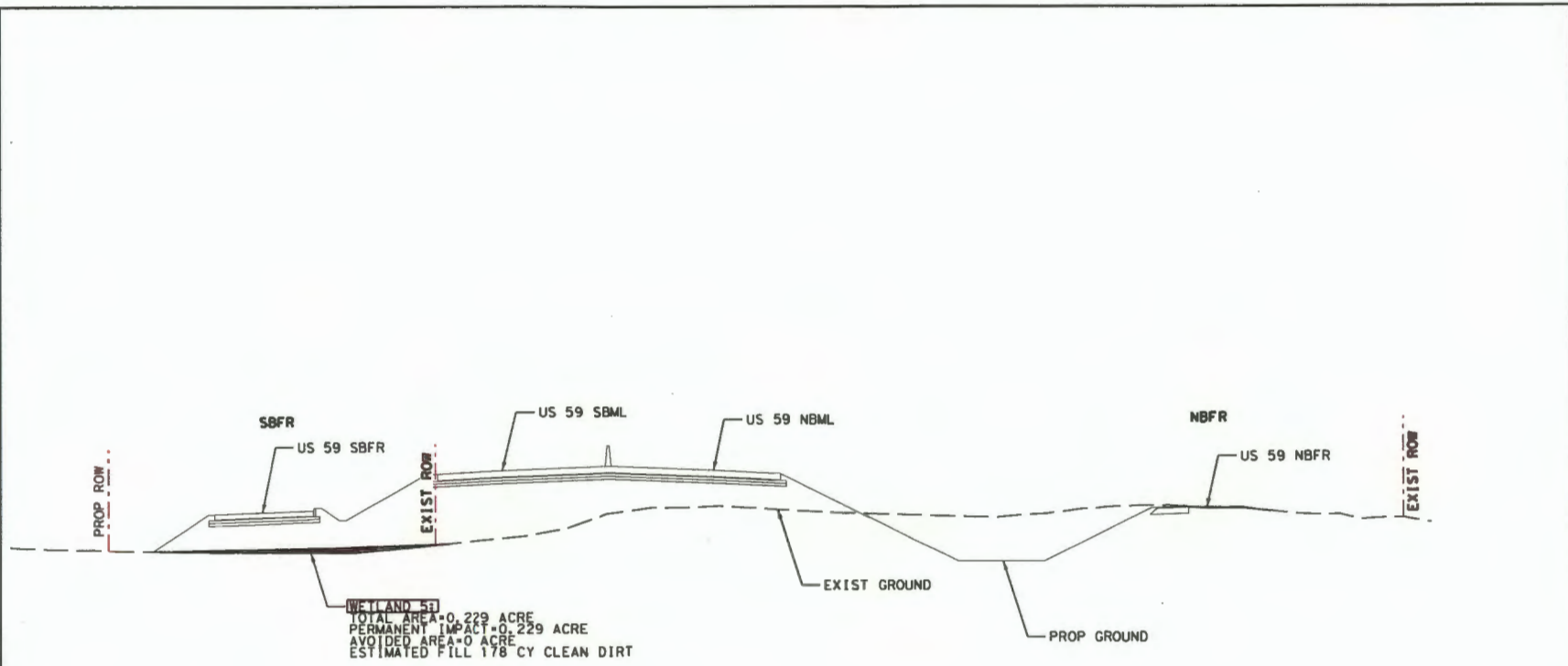
SHEET 5 OF 38



Impact to Waters of the U.S.					
Aquatic Resource ID	Aquatic Resource Type	Impact Type		Total Impacted Acreage	Est. Impact Volume (CY)
Wetland 5	PFO	Permanent	Fill dirt for new roadway	0.229	178
Wetland 6	PEM	Permanent	Fill dirt for new roadway	0.003	8
Wetland 7	PEM	Permanent	Fill dirt for new roadway	0.012	8
Wetland 8	PFO	Permanent	Fill dirt for new roadway and concrete drilled shafts	1.918	15050

SWG-2018-00221

US 59 FROM FOSTORIA ROAD
 AT THE MONTGOMERY/LIBERTY
 COUNTY LINE TO SL 573
 CSJ 0177-03-096
 WATERS OF THE U.S. IMPACTS



SECTION D-D
 (WETLAND 5)

LEGEND

	PERMANENT IMPACT		DRAINAGE DITCH
	AVOIDED AREA		INTERMITTENT RPW
	PROP ROW		PERENNIAL RPW
	EXIST ROW		PEM WETLAND
	PROP GROUND		PFO WETLAND
	EXIST GROUND		

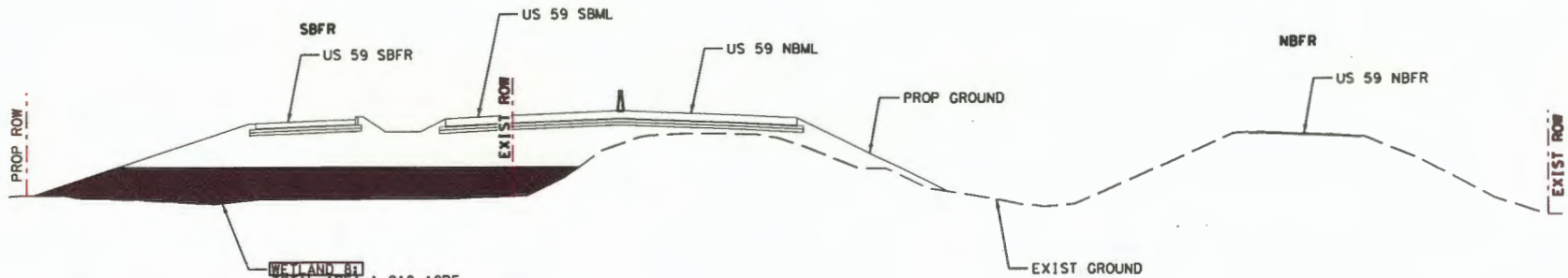
US 59

SHEET 6 OF 38

NOT TO SCALE

US 59 FROM FOSTORIA ROAD
 AT THE MONTGOMERY/LIBERTY
 COUNTY LINE TO SL 573
 CSJ 0177-03-096
 WATERS OF THE U.S. IMPACTS


SWG-2018-00221



WETLAND 8
 TOTAL AREA=1.918 ACRE
 PERMANENT IMPACT=1.918 ACRE
 AVOIDED AREA=0 ACRE
 ESTIMATED FILL 15,049 CY CLEAN DIRT
 ESTIMATED FILL 0.68 CY CONCRETE

SECTION E-E
 (WETLAND 8)

LEGEND

- | | | | |
|---|------------------|---|------------------|
|  | PERMANENT IMPACT |  | DRAINAGE DITCH |
|  | AVOIDED AREA |  | INTERMITTENT RPW |
|  | PROP ROW |  | PERENNIAL RPW |
|  | EXIST ROW |  | PEM WETLAND |
|  | PROP GROUND |  | PFO WETLAND |
|  | EXIST GROUND | | |

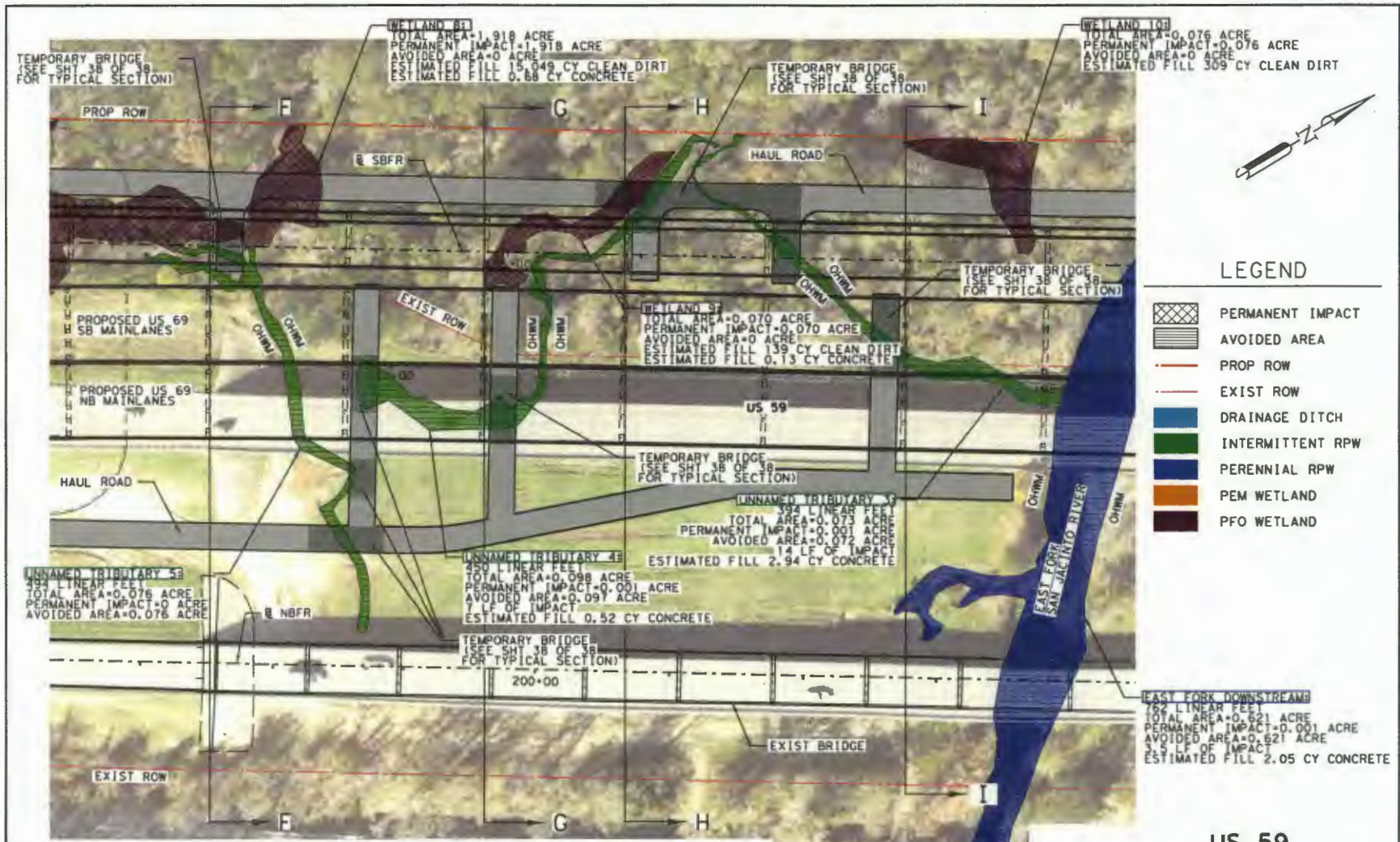
US 59

SHEET 7 OF 38

NOT TO SCALE

US 59 FROM FOSTORIA ROAD
 AT THE MONTGOMERY/LIBERTY
 COUNTY LINE TO SL 573
 CSJ 0177-03-096
 WATERS OF THE U.S. IMPACTS

SWG-2018-00221



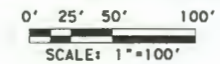
LEGEND

- PERMANENT IMPACT
- AVOIDED AREA
- PROP ROW
- EXIST ROW
- DRAINAGE DITCH
- INTERMITTENT RPW
- PERENNIAL RPW
- PEM WETLAND
- PFO WETLAND

EAST FORK DOWNSTREAM
 752 LINEAR FEET
 TOTAL AREA=0.621 ACRE
 PERMANENT IMPACT=0.001 ACRE
 AVOIDED AREA=0.621 ACRE
 3.5 LF OF IMPACT
 ESTIMATED FILL 2.05 CY CONCRETE

US 59

SHEET 8 OF 38

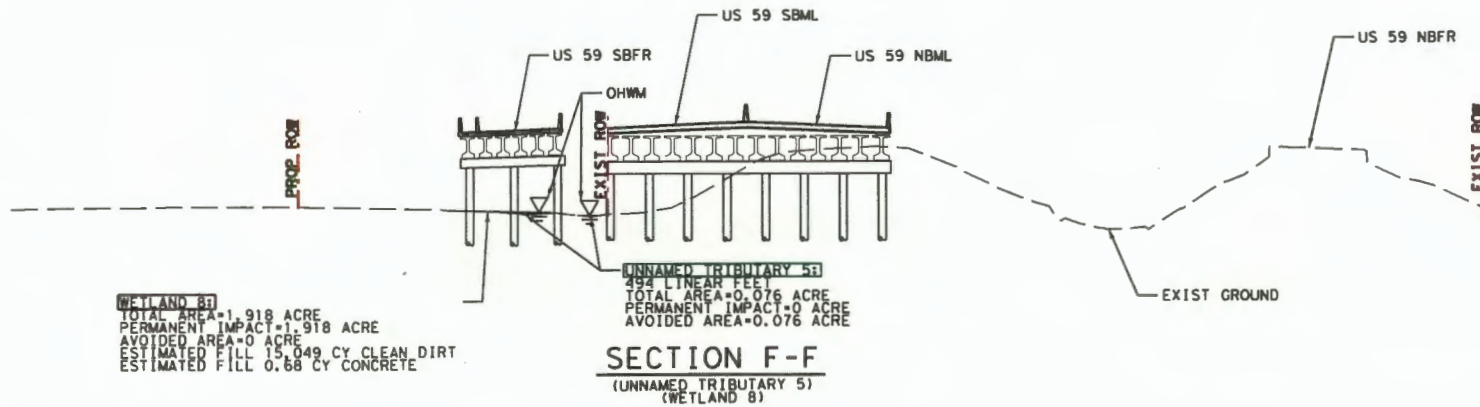


US 59 FROM FOSTORIA ROAD
 AT THE MONTGOMERY/LIBERTY
 COUNTY LINE TO SL 573
 CSJ 0177-03-096
 WATERS OF THE U.S. IMPACTS

SWG-2018-00221

Impact to Waters of the U.S.

Aquatic Resource ID	Aquatic Resource Type	Impact Type	Total Impacted Acreage	Est. Impact Volume (CY)	
Wetland 8	PFO	Permanent	Fill dirt for new roadway and concrete drilled shafts	1.918	15050
Wetland 9	PFO	Permanent	Fill dirt for new roadway and concrete drilled shafts	0.070	139
Wetland 10	PFO	Permanent	Fill dirt for new roadway	0.076	309
Unnamed Tributary 3	RPW (Intermittent)	Permanent	Concrete drilled shafts	0.001	2.94
Unnamed Tributary 4	RPW (Intermittent)	Permanent	Concrete drilled shafts	0.001	0.52
Unnamed Tributary 5	RPW (Intermittent)	Permanent	Area avoided	0.000	0
East Fork Downstream	RPW (Perennial)	Permanent	Concrete drilled shafts	0.001	2.05



LEGEND

	PERMANENT IMPACT		DRAINAGE DITCH
	AVOIDED AREA		INTERMITTENT RPW
	PROP ROW		PERENNIAL RPW
	EXIST ROW		PEM WETLAND
	PROP GROUND		PFO WETLAND
	EXIST GROUND		

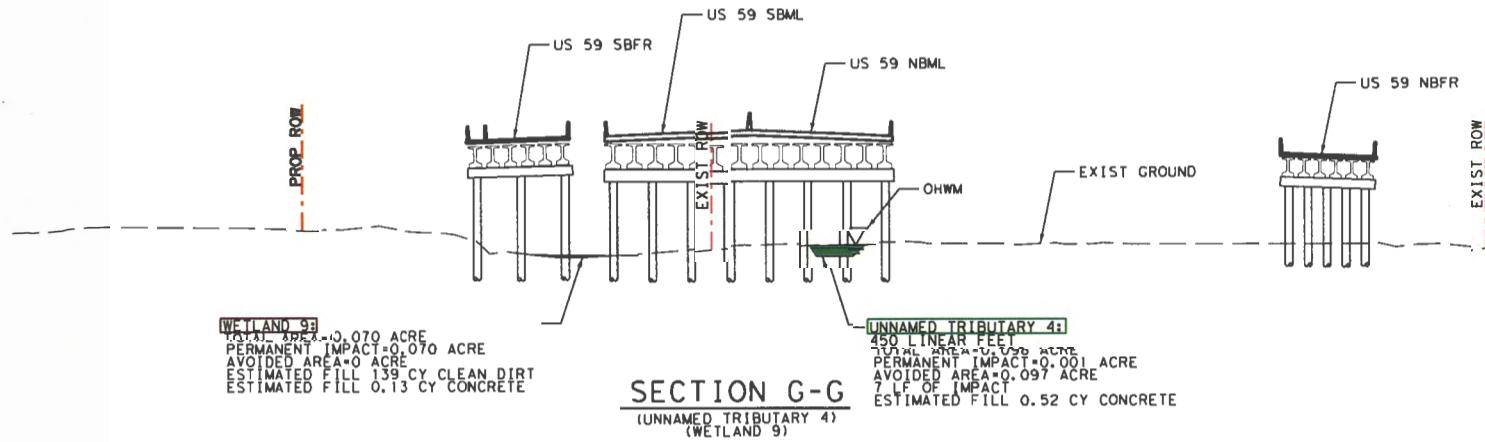
US 59

SHEET 9 OF 38












NOT TO SCALE

US 59 FROM FOSTORIA ROAD
 AT THE MONTGOMERY/LIBERTY
 COUNTY LINE TO SL 573
 CSJ 0177-03-096
 WATERS OF THE U. S. IMPACTS

SWG-2018-00221



LEGEND

	PERMANENT IMPACT		DRAINAGE DITCH
	AVOIDED AREA		INTERMITTENT RPW
	PROP ROW		PERENNIAL RPW
	EXIST ROW		PEM WETLAND
	PROP GROUND		PFO WETLAND
	EXIST GROUND		

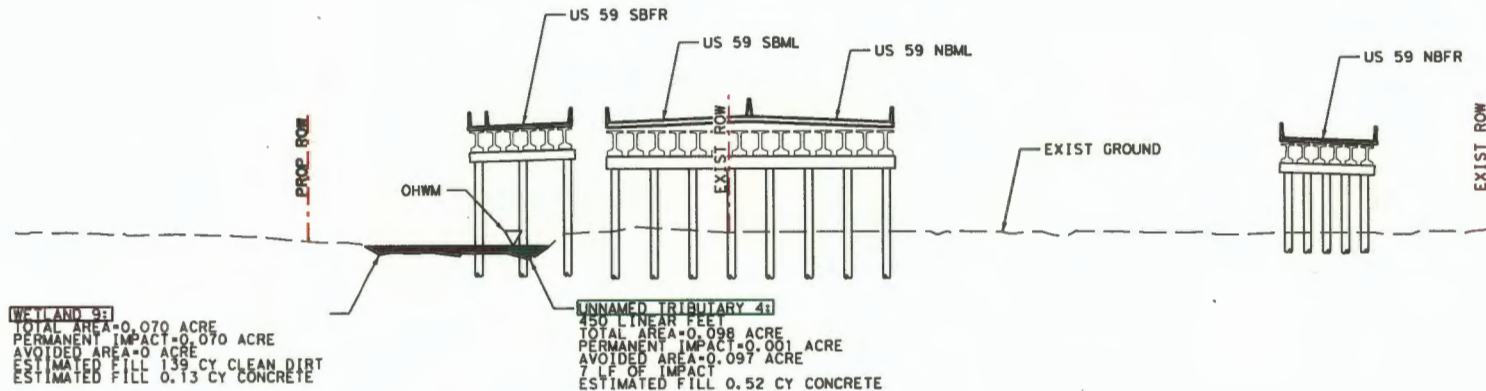
US 59

SHEET 10 OF 38

NOT TO SCALE

US 59 FROM FOSTORIA ROAD
 AT THE MONTGOMERY/LIBERTY
 COUNTY LINE TO SL 573
 CSJ 0177-03-096
 WATERS OF THE U.S. IMPACTS

SWG-2018-00221



WETLAND 9:
 TOTAL AREA=0.070 ACRE
 PERMANENT IMPACT=0.070 ACRE
 AVOIDED AREA=0 ACRE
 ESTIMATED FILL 139 CY CLEAN DIRT
 ESTIMATED FILL 0.13 CY CONCRETE

UNNAMED TRIBUTARY 4:
 450 LINEAR FEET
 TOTAL AREA=0.098 ACRE
 PERMANENT IMPACT=0.001 ACRE
 AVOIDED AREA=0.097 ACRE
 7 LF OF IMPACT
 ESTIMATED FILL 0.52 CY CONCRETE

SECTION H-H
 (UNNAMED TRIBUTARY 4)
 (WETLAND 9)

LEGEND

- | | | | |
|--|------------------|--|------------------|
| | PERMANENT IMPACT | | DRAINAGE DITCH |
| | AVOIDED AREA | | INTERMITTENT RPW |
| | PROP ROW | | PERENNIAL RPW |
| | EXIST ROW | | PEM WETLAND |
| | PROP GROUND | | PFO WETLAND |
| | EXIST GROUND | | |

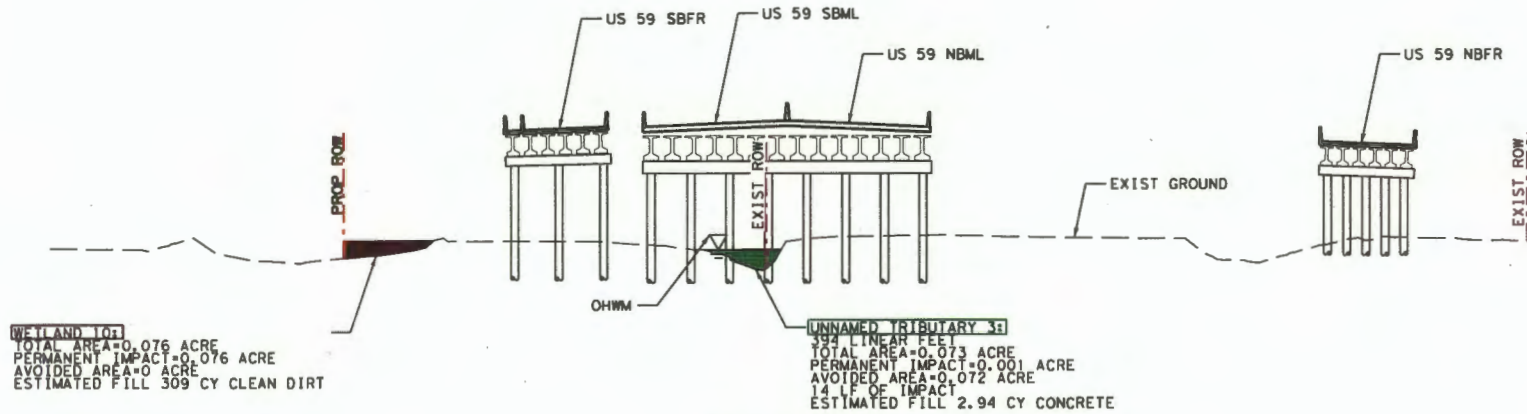
US 59

SHEET 11 OF 38

NOT TO SCALE

US 59 FROM FOSTORIA ROAD
 AT THE MONTGOMERY/LIBERTY
 COUNTY LINE TO SL 573
 CSJ 0177-03-096
 WATERS OF THE U.S. IMPACTS

SWG-2018-00221



SECTION I-I
 (UNNAMED TRIBUTARY 3)
 (WETLAND 10)

LEGEND

	PERMANENT IMPACT		DRAINAGE DITCH
	AVOIDED AREA		INTERMITTENT RPW
	PROP ROW		PERENNIAL RPW
	EXIST ROW		PEM WETLAND
	PROP GROUND		PFO WETLAND
	EXIST GROUND		

US 59

SHEET 12 OF 38

NOT TO SCALE

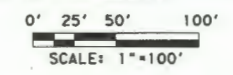
US 59 FROM FOSTORIA ROAD
 AT THE MONTGOMERY/LIBERTY
 COUNTY LINE TO SL 573
 CSJ 0177-03-096
 WATERS OF THE U.S. IMPACTS

SWG-2018-00221



US 59

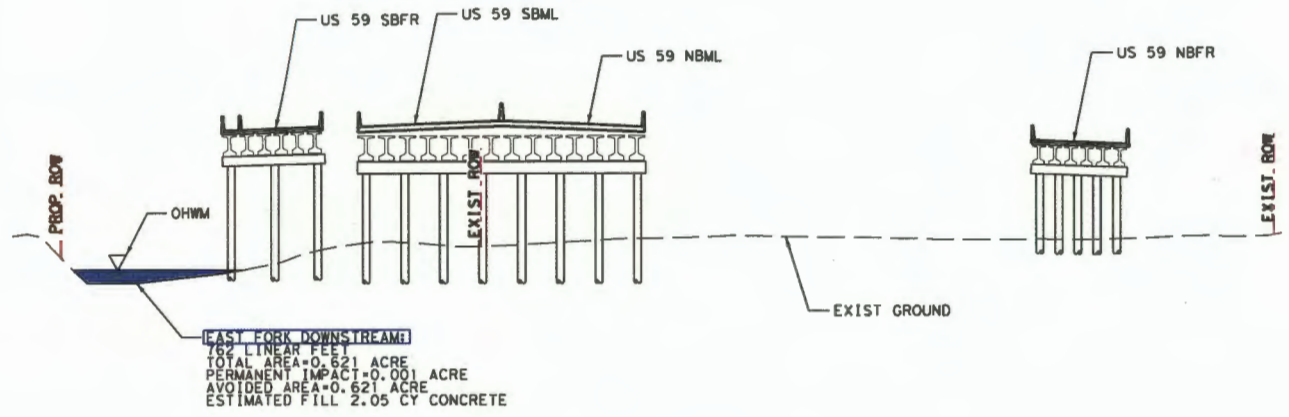
SHEET 13 OF 38



Impact to Waters of the U.S.					
Aquatic Resource ID	Aquatic Resource Type	Impact Type		Total Impacted Acreage	Est. Impact Volume (CY)
Wetland 11	PEM	Permanent	Fill dirt for new roadway	0.008	10
Wetland 12	PEM	Permanent	Fill dirt for new roadway	0.010	12
Wetland 13	PFO	Permanent	Fill dirt for new roadway and concrete drilled shafts	0.299	453
East Fork Downstream	RPW (Perennial)	Permanent	Concrete drilled shafts	0.001	2.05
East Fork Middle	RPW (Perennial)	Permanent	Area avoided	0.000	0

SWG-2018-00221

US 59 FROM FOSTORIA ROAD
 AT THE MONTGOMERY/LIBERTY
 COUNTY LINE TO SL 573
 CSJ 0177-03-096
 WATERS OF THE U.S. IMPACTS



SECTION J-J
 (EAST FORK DOWNSTREAM)

LEGEND

	PERMANENT IMPACT		DRAINAGE DITCH
	AVOIDED AREA		INTERMITTENT RPW
	PROP ROW		PERENNIAL RPW
	EXIST ROW		PEM WETLAND
	PROP GROUND		PFO WETLAND
	EXIST GROUND		

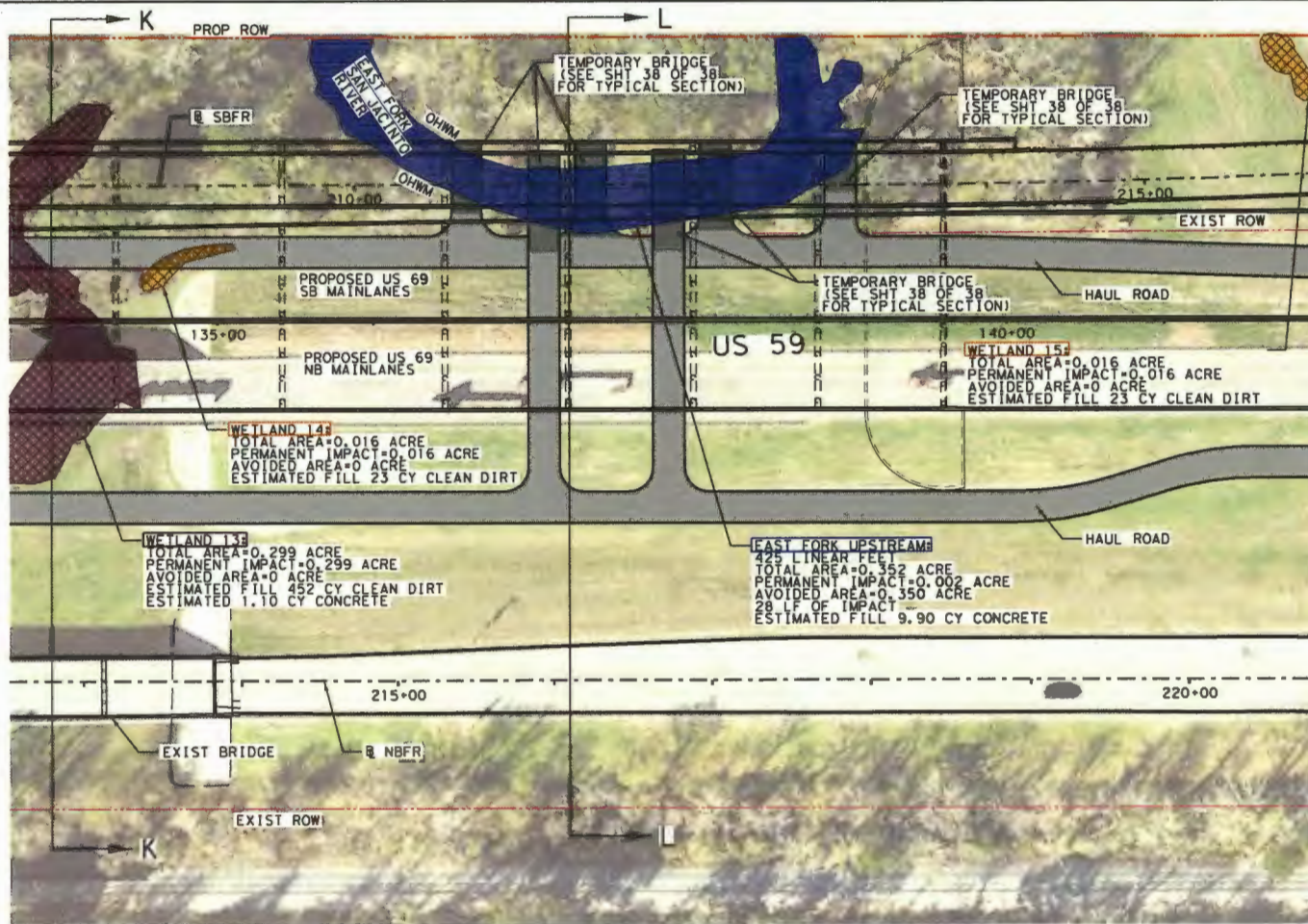
US 59

SHEET 14 OF 38

NOT TO SCALE

SWG-2018-00221

US 59 FROM FOSTORIA ROAD
 AT THE MONTGOMERY/LIBERTY
 COUNTY LINE TO SL 573
 CSJ 0177-03-096
 WATERS OF THE U.S. IMPACTS

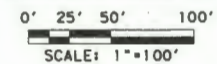


LEGEND

- PERMANENT IMPACT
- AVOIDED AREA
- PROP ROW
- EXIST ROW
- DRAINAGE DITCH
- INTERMITTENT RPW
- PERENNIAL RPW
- PEM WETLAND
- PFO WETLAND

US 59

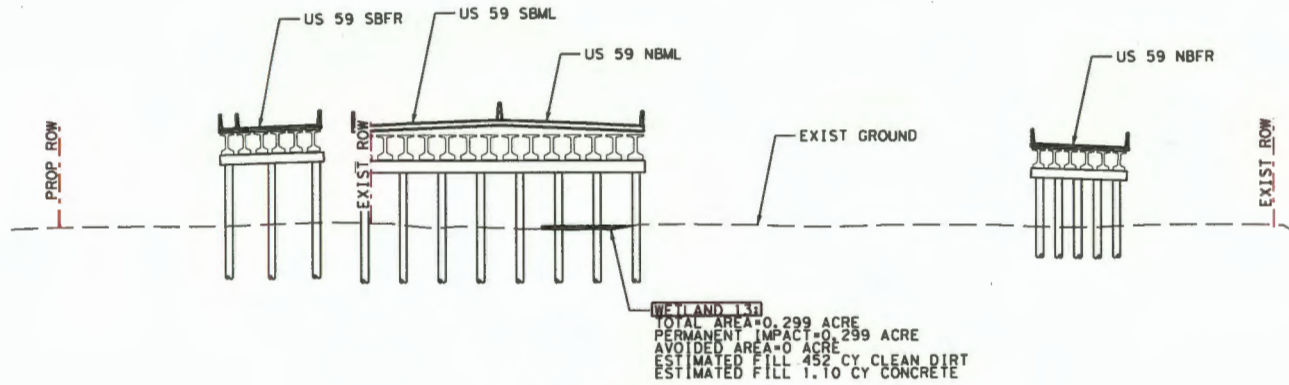
SHEET 15 OF 38



Impact to Waters of the U.S.					
Aquatic Resource ID	Aquatic Resource Type	Impact Type		Total Impacted Acreage	Est. Impact Volume (CY)
Wetland 13	PFO	Permanent	Fill dirt for new roadway and concrete drilled shafts	0.299	453
Wetland 14	PEM	Permanent	Fill dirt for new roadway	0.016	23
Wetland 15	PEM	Permanent	Fill dirt for new roadway	0.016	23
East Fork Upstream	RPW (Perennial)	Permanent	Concrete drilled shafts	0.002	9.9




SWG-2018-00221

US 59 FROM FOSTORIA ROAD
 AT THE MONTGOMERY/LIBERTY
 COUNTY LINE TO SL 573
 CSJ 0177-03-096
 WATERS OF THE U.S. IMPACTS



SECTION K-K
 (WETLAND 13)

LEGEND

	PERMANENT IMPACT		DRAINAGE DITCH
	AVOIDED AREA		INTERMITTENT RPW
	PROP ROW		PERENNIAL RPW
	EXIST ROW		PEM WETLAND
	PROP GROUND		PFO WETLAND
	EXIST GROUND		

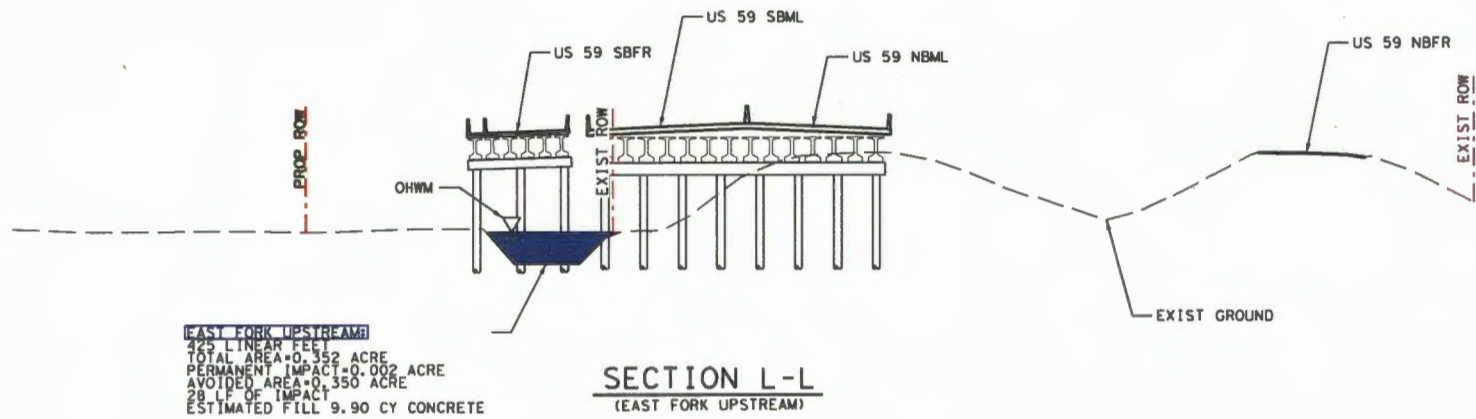
US 59

SHEET 16 OF 38

NOT TO SCALE

US 59 FROM FOSTORIA ROAD
 AT THE MONTGOMERY/LIBERTY
 COUNTY LINE TO SL 573
 CSJ 0177-03-096
 WATERS OF THE U.S. IMPACTS

SWG-2018-00221



LEGEND

	PERMANENT IMPACT		DRAINAGE DITCH
	AVOIDED AREA		INTERMITTENT RPW
	PROP ROW		PERENNIAL RPW
	EXIST ROW		PEM WETLAND
	PROP GROUND		PFO WETLAND
	EXIST GROUND		

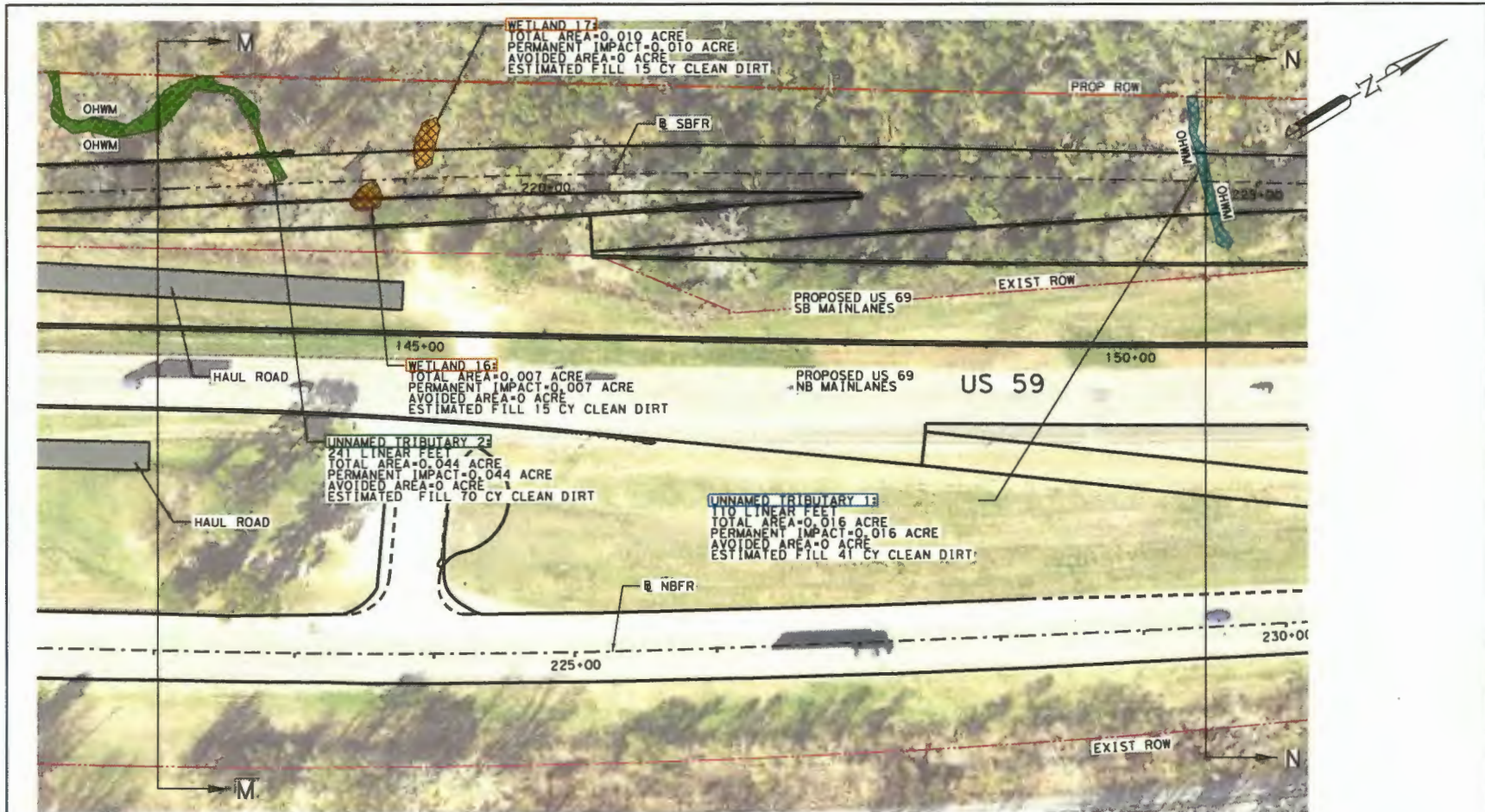
US 59

SHEET 17 OF 38

NOT TO SCALE

US 59 FROM FOSTORIA ROAD
 AT THE MONTGOMERY/LIBERTY
 COUNTY LINE TO SL 573
 CSJ 0177-03-096
 WATERS OF THE U.S. IMPACTS

SWG-2018-00221



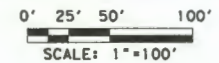
LEGEND

- PERMANENT IMPACT
- AVOIDED AREA
- PROP ROW
- EXIST ROW
- DRAINAGE DITCH
- INTERMITTENT RPW
- PERENNIAL RPW
- PEM WETLAND
- PFO WETLAND

Impact to Waters of the U. S.					
Aquatic Resource ID	Aquatic Resource Type	Impact Type		Total Impacted Acreage	Est. Impact Volume (CY)
Wetland 16	PEM	Permanent	Fill dirt for new roadway	0.007	15
Wetland 17	PEM	Permanent	Fill dirt for new roadway	0.010	15
Unnamed Tributary 1	Drainage Ditch	Permanent	Fill dirt for new roadway	0.016	41
Unnamed Tributary 2	RPW (Intermittent)	Permanent	Fill dirt for new roadway	0.044	70

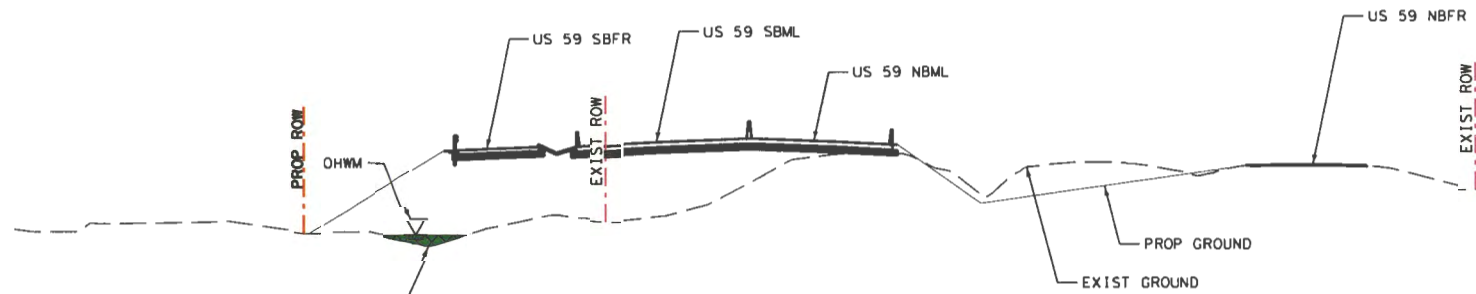
US 59

SHEET 18 OF 38



SWG-2018-00221

US 59 FROM FOSTORIA ROAD
 AT THE MONTGOMERY/LIBERTY
 COUNTY LINE TO SL 573
 CSJ 0177-03-096
 WATERS OF THE U. S. IMPACTS



UNNAMED TRIBUTARY 2:
 241 LINEAR FEET
 TOTAL AREA=0.044 ACRE
 PERMANENT IMPACT=0.044 ACRE
 AVOIDED AREA=0 ACRE
 ESTIMATED FILL 70 CY CLEAN DIRT

SECTION M-M
 (UNNAMED TRIBUTARY 2)

LEGEND

- | | | | |
|--|------------------|--|------------------|
| | PERMANENT IMPACT | | DRAINAGE DITCH |
| | AVOIDED AREA | | INTERMITTENT RPW |
| | PROP ROW | | PERENNIAL RPW |
| | EXIST ROW | | PEM WETLAND |
| | PROP GROUND | | PFO WETLAND |
| | EXIST GROUND | | |

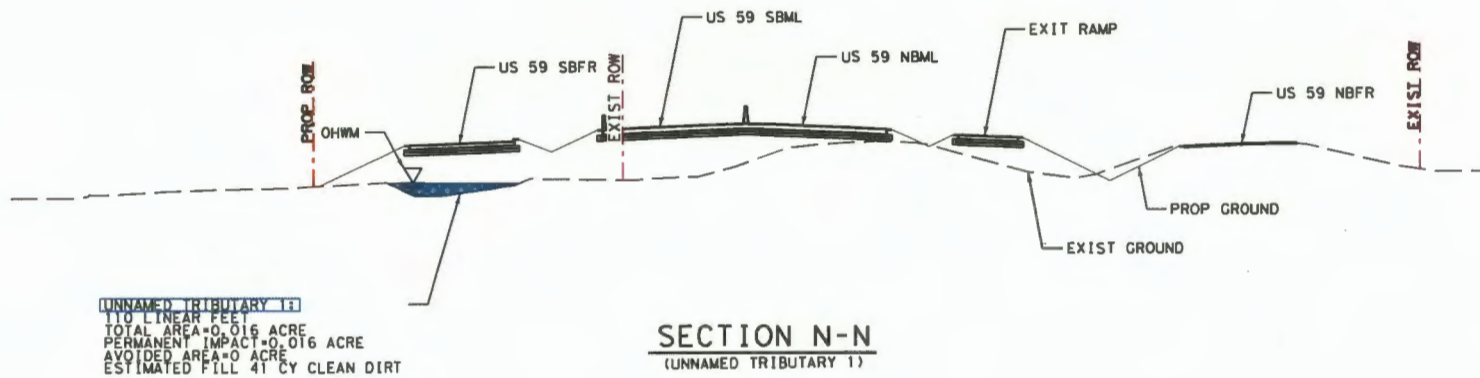
US 59

SHEET 19 OF 38

NOT TO SCALE

US 59 FROM FOSTORIA ROAD
 AT THE MONTGOMERY/LIBERTY
 COUNTY LINE TO SL 573
 CSJ 0177-03-096
 WATERS OF THE U.S. IMPACTS

SWG-2018-00221



LEGEND

	PERMANENT IMPACT		DRAINAGE DITCH
	AVOIDED AREA		INTERMITTENT RPW
	PROP ROW		PERENNIAL RPW
	EXIST ROW		PEM WETLAND
	PROP GROUND		PFO WETLAND
	EXIST GROUND		

US 59

SHEET 20 OF 38

NOT TO SCALE

US 59 FROM FOSTORIA ROAD
 AT THE MONTGOMERY/LIBERTY
 COUNTY LINE TO SL 573
 CSJ 0177-03-096
 WATERS OF THE U.S. IMPACTS

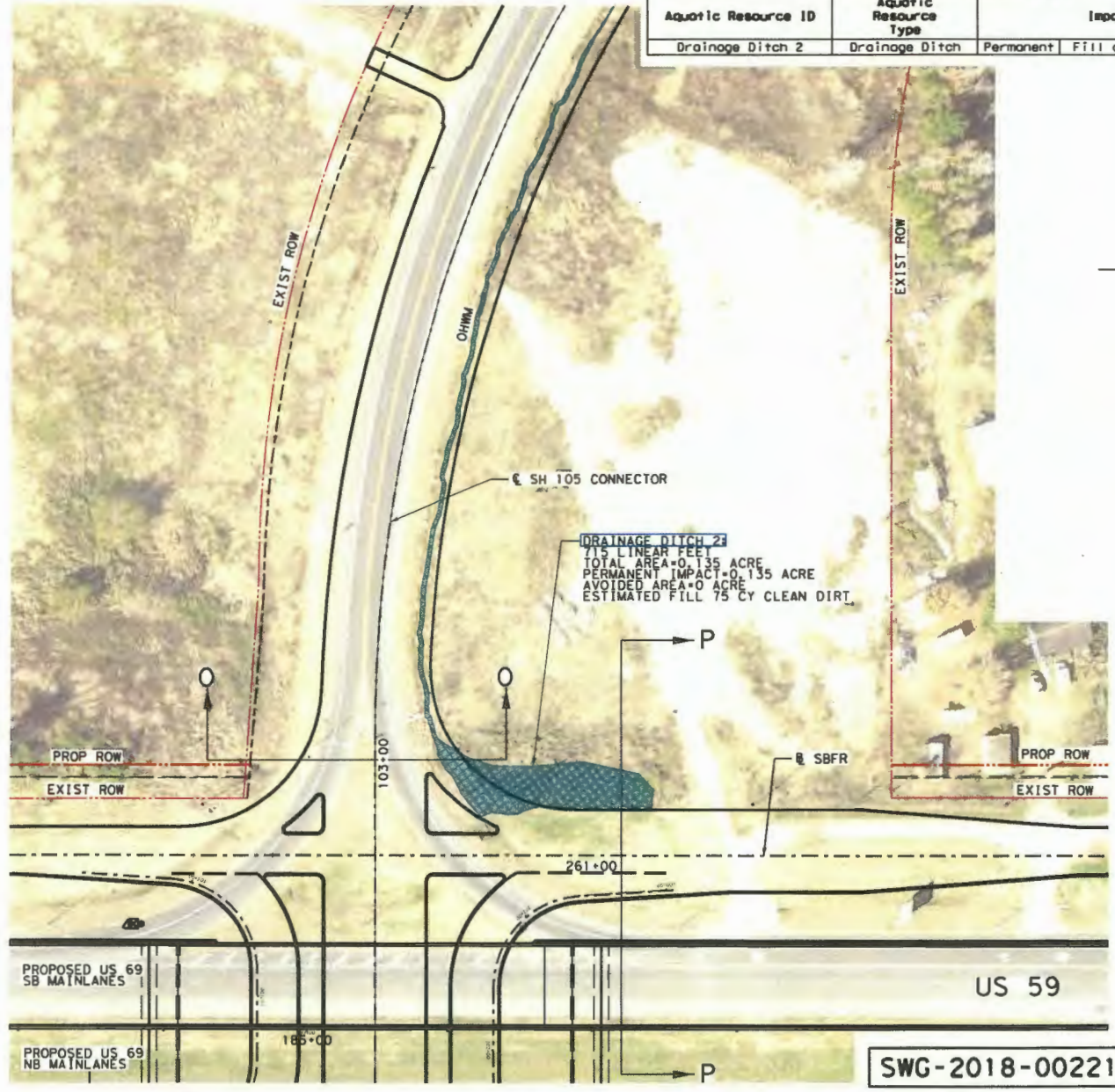
SWG-2018-00221

Impact to Waters of the U. S.					
Agentic Resource ID	Agentic Resource Type	Impact Type		Total Impacted Acreage	Est. Impact Volume (CY)
Drainage Ditch 2	Drainage Ditch	Permanent	Fill dirt for new roadway	0.135	75



LEGEND

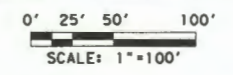
-  PERMANENT IMPACT
-  AVOIDED AREA
-  PROP ROW
-  EXIST ROW
-  DRAINAGE DITCH
-  INTERMITTENT RPW
-  PERENNIAL RPW
-  PEM WETLAND
-  PFO WETLAND



DRAINAGE DITCH 2
 715 LINEAR FEET
 TOTAL AREA=0.135 ACRE
 PERMANENT IMPACT=0.135 ACRE
 AVOIDED AREA=0 ACRE
 ESTIMATED FILL 75 CY CLEAN DIRT.

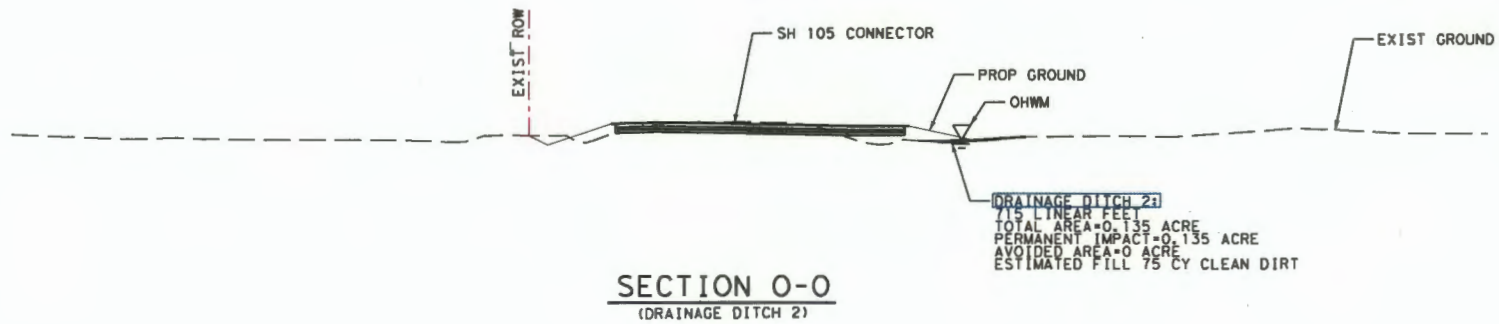
US 59

SHEET 21 OF 38



US 59 FROM FOSTORIA ROAD
 AT THE MONTGOMERY/LIBERTY
 COUNTY LINE TO SL 573
 CSJ 0177-03-096
 WATERS OF THE U. S. IMPACTS

SWG-2018-00221



LEGEND

	PERMANENT IMPACT		DRAINAGE DITCH
	AVOIDED AREA		INTERMITTENT RPW
	PROP ROW		PERENNIAL RPW
	EXIST ROW		PEM WETLAND
	PROP GROUND		PFO WETLAND
	EXIST GROUND		

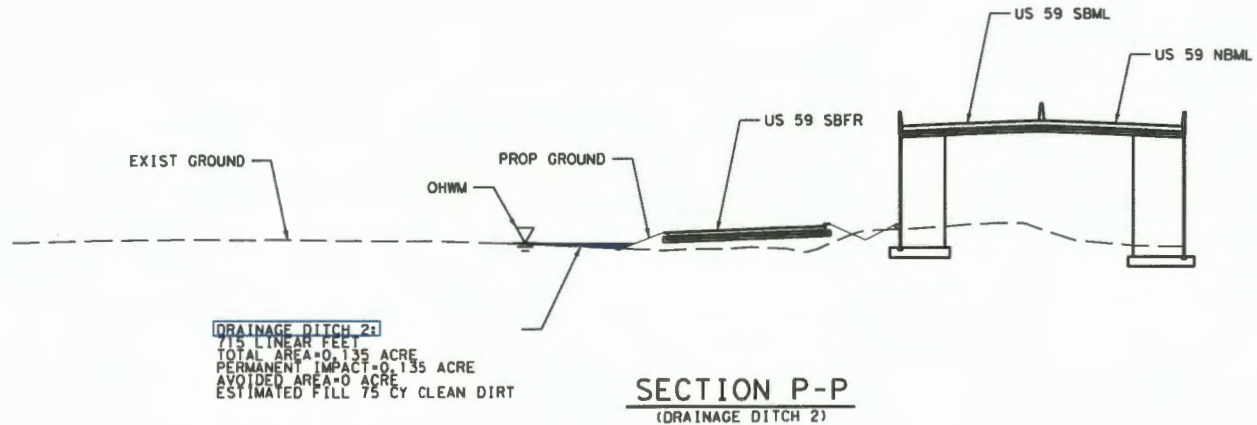
US 59

SHEET 22 OF 38

NOT TO SCALE

SWG-2018-00221

US 59 FROM FOSTORIA ROAD
 AT THE MONTGOMERY/LIBERTY
 COUNTY LINE TO SL 573
 CSJ 0177-03-096
 WATERS OF THE U.S. IMPACTS



SECTION P-P
 (DRAINAGE DITCH 2)

LEGEND

	PERMANENT IMPACT		DRAINAGE DITCH
	AVOIDED AREA		INTERMITTENT RPW
	PROP ROW		PERENNIAL RPW
	EXIST ROW		PEM WETLAND
	PROP GROUND		PFO WETLAND
	EXIST GROUND		

US 59

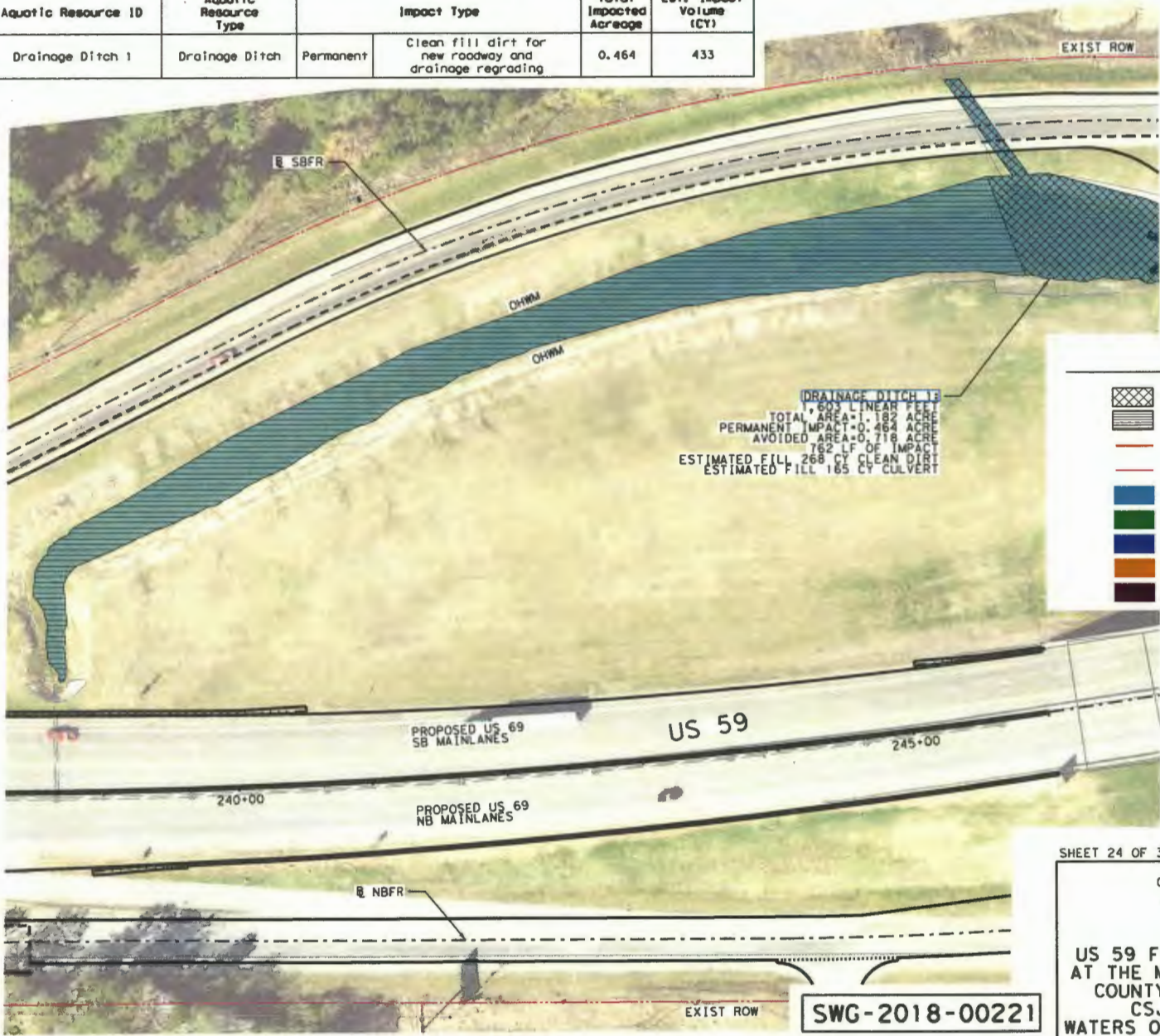
SHEET 23 OF 38

NOT TO SCALE

US 59 FROM FOSTORIA ROAD
 AT THE MONTGOMERY/LIBERTY
 COUNTY LINE TO SL 573
 CSJ 0177-03-096
 WATERS OF THE U.S. IMPACTS

SWG-2018-00221

Impact to Waters of the U.S.					
Aquatic Resource ID	Aquatic Resource Type	Impact Type		Total Impacted Acreage	Est. Impact Volume (CY)
Drainage Ditch 1	Drainage Ditch	Permanent	Clean fill dirt for new roadway and drainage regrading	0.464	433

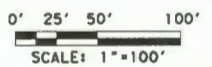


DRAINAGE DITCH 1
 1,603 LINEAR FEET
 TOTAL AREA=1.182 ACRE
 PERMANENT IMPACT=0.464 ACRE
 AVOIDED AREA=0.718 ACRE
 752 LF OF IMPACT
 ESTIMATED FILL 266 CY CLEAN DIRT
 ESTIMATED FILL 165 CY CULVERT

LEGEND

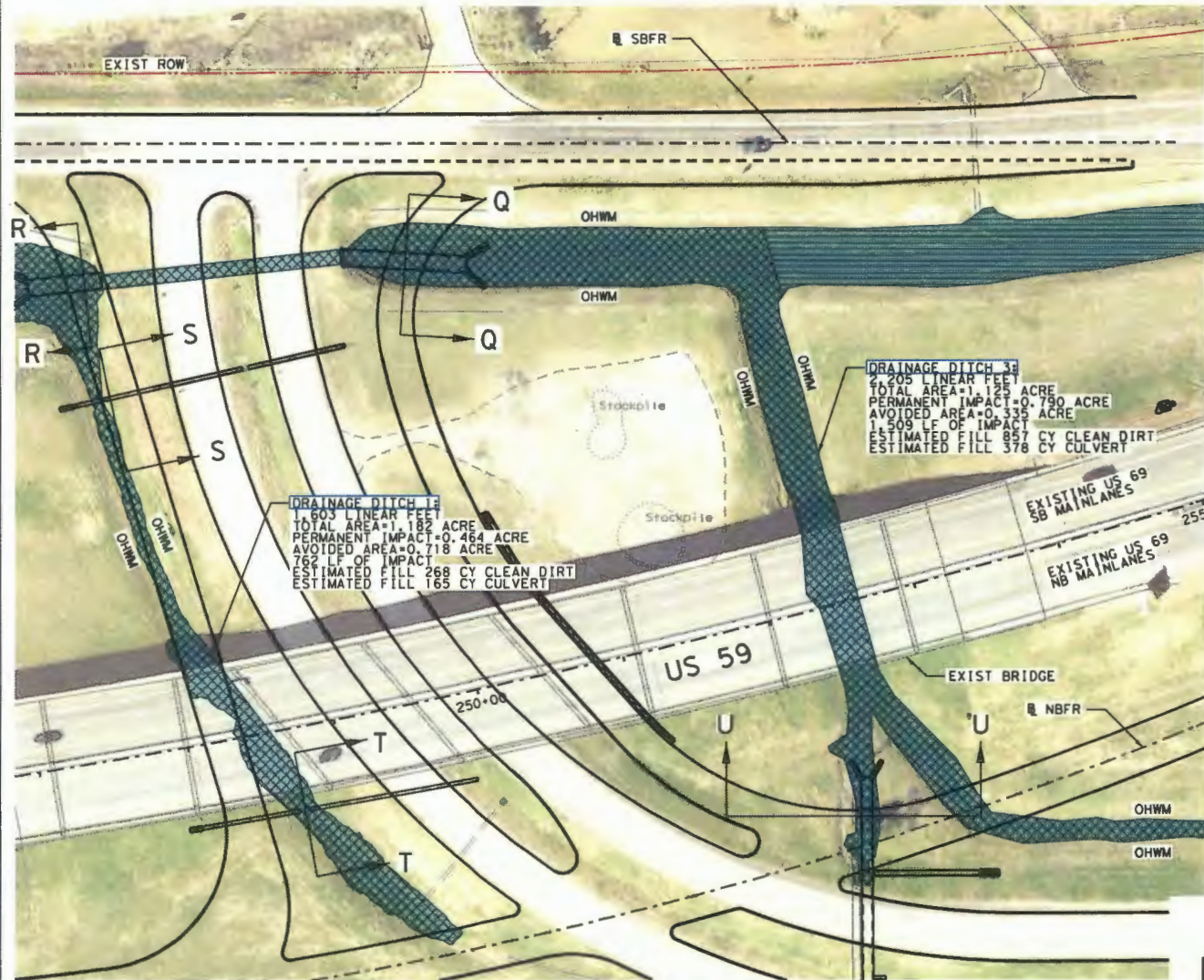
- PERMANENT IMPACT
- AVOIDED AREA
- PROP ROW
- EXIST ROW
- DRAINAGE DITCH
- INTERMITTENT RPW
- PERENNIAL RPW
- PEM WETLAND
- PFO WETLAND

SHEET 24 OF 38



US 59 FROM FOSTORIA ROAD
 AT THE MONTGOMERY/LIBERTY
 COUNTY LINE TO SL 573
 CSJ 0177-03-096
 WATERS OF THE U.S. IMPACTS

SWG-2018-00221



LEGEND

- PERMANENT IMPACT
- AVOIDED AREA
- PROP ROW
- EXIST ROW
- DRAINAGE DITCH
- INTERMITTENT RPW
- PERENNIAL RPW
- PEM WETLAND
- PFO WETLAND

DRAINAGE DITCH 1
 1,603 LINEAR FEET
 TOTAL AREA=1.182 ACRE
 PERMANENT IMPACT=0.464 ACRE
 AVOIDED AREA=0.718 ACRE
 782 LF OF IMPACT
 ESTIMATED FILL 268 CY CLEAN DIRT
 ESTIMATED FILL 165 CY CULVERT

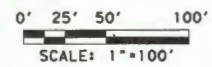
DRAINAGE DITCH 3
 1,205 LINEAR FEET
 TOTAL AREA=1.125 ACRE
 PERMANENT IMPACT=0.790 ACRE
 AVOIDED AREA=0.335 ACRE
 1,509 LF OF IMPACT
 ESTIMATED FILL 857 CY CLEAN DIRT
 ESTIMATED FILL 378 CY CULVERT

Impact to Waters of the U.S.

Aquatic Resource ID	Aquatic Resource Type	Impact Type	Total Impacted Acreage	Est. Impact Volume (CY)
Drainage Ditch 1	Drainage Ditch	Permanent	0.464	433
Drainage Ditch 3	Drainage Ditch	Permanent	0.790	1235

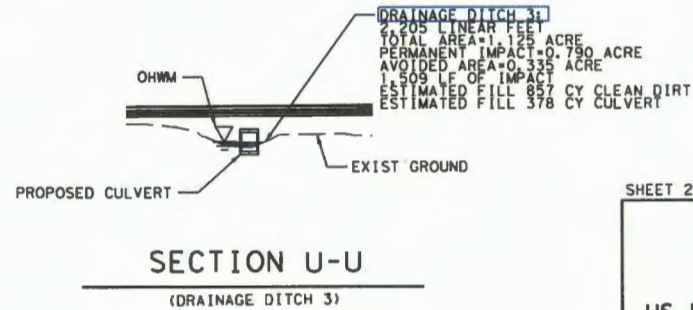
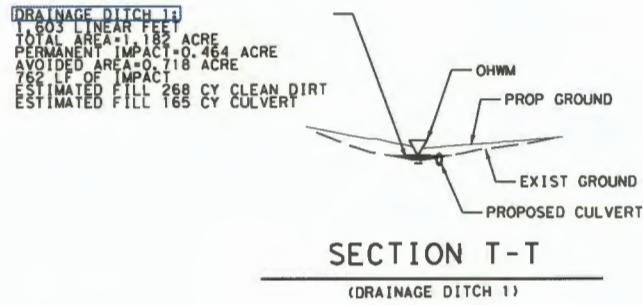
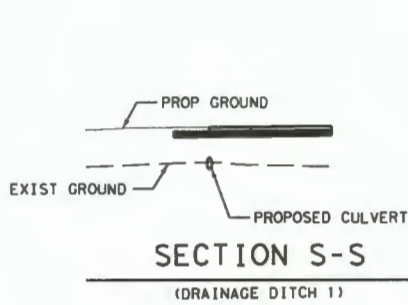
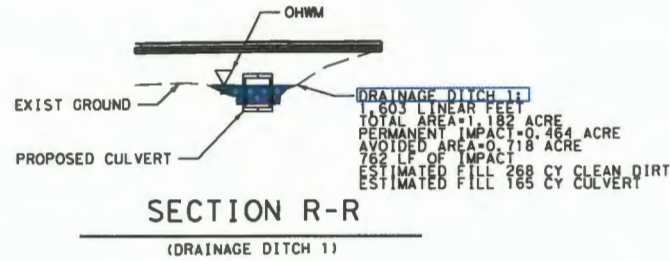
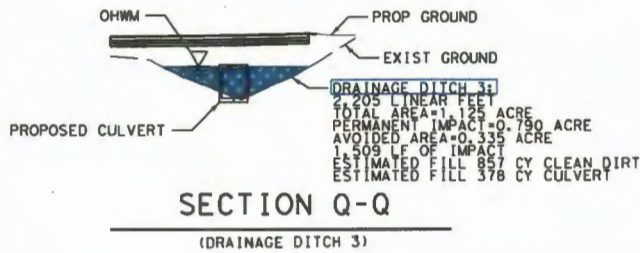
US 59

SHEET 25 OF 38



SWG-2018-00221

**US 59 FROM FOSTORIA ROAD
 AT THE MONTGOMERY/LIBERTY
 COUNTY LINE TO SL 573
 CSJ 0177-03-096
 WATERS OF THE U.S. IMPACTS**



LEGEND

- | | | | |
|--|------------------|--|------------------|
| | PERMANENT IMPACT | | DRAINAGE DITCH |
| | AVOIDED AREA | | INTERMITTENT RPW |
| | PROP ROW | | PERENNIAL RPW |
| | EXIST ROW | | PEM WETLAND |
| | PROP GROUND | | PFO WETLAND |
| | EXIST GROUND | | |

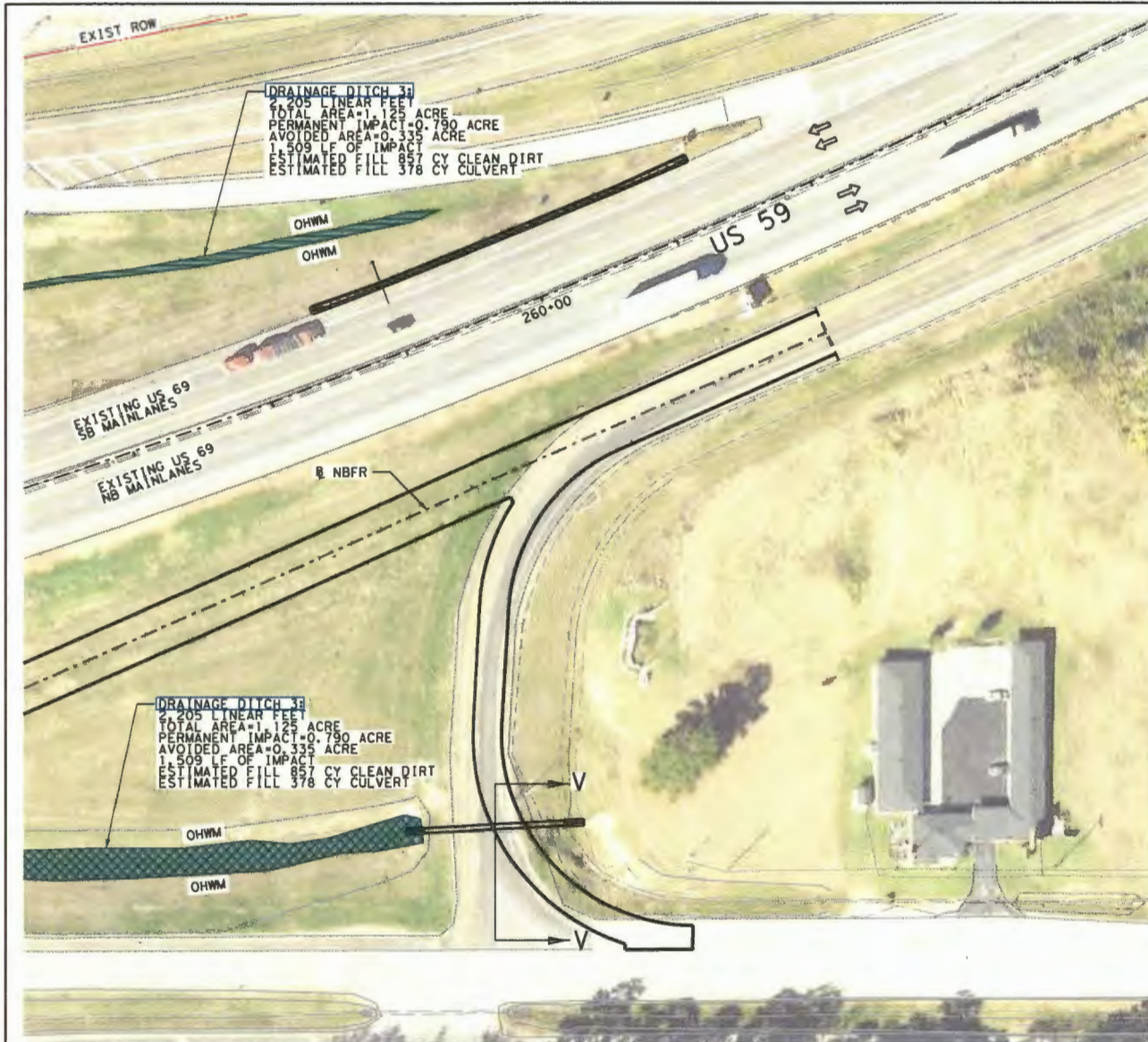
US 59

SHEET 26 OF 38

NOT TO SCALE

US 59 FROM FOSTORIA ROAD
 AT THE MONTGOMERY/LIBERTY
 COUNTY LINE TO SL 573
 CSJ 0177-03-096
 WATERS OF THE U.S. IMPACTS

SWG-2018-00221

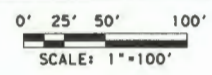


LEGEND

-  PERMANENT IMPACT
-  AVOIDED AREA
-  PROP ROW
-  EXIST ROW
-  DRAINAGE DITCH
-  INTERMITTENT RPW
-  PERENNIAL RPW
-  PEM WETLAND
-  PFO WETLAND

US 59

SHEET 27 OF 38



Impact to Waters of the U.S.					
Aquatic Resource ID	Aquatic Resource Type	Impact Type	Total Impacted Acreage	Est. Impact Volume (CY)	
Drainage Ditch 3	Drainage Ditch	Permanent	Clean fill dirt for new roadway and drainage regrading	0.790	1235

SWG-2018-00221

US 59 FROM FOSTORIA ROAD
 AT THE MONTGOMERY/LIBERTY
 COUNTY LINE TO SL 573
 CSJ 0177-03-096
 WATERS OF THE U.S. IMPACTS



SECTION V-V
 (DRAINAGE DITCH 3)

LEGEND

	PERMANENT IMPACT		DRAINAGE DITCH
	AVOIDED AREA		INTERMITTENT RPW
	PROP ROW		PERENNIAL RPW
	EXIST ROW		PEM WETLAND
	PROP GROUND		PFO WETLAND
	EXIST GROUND		

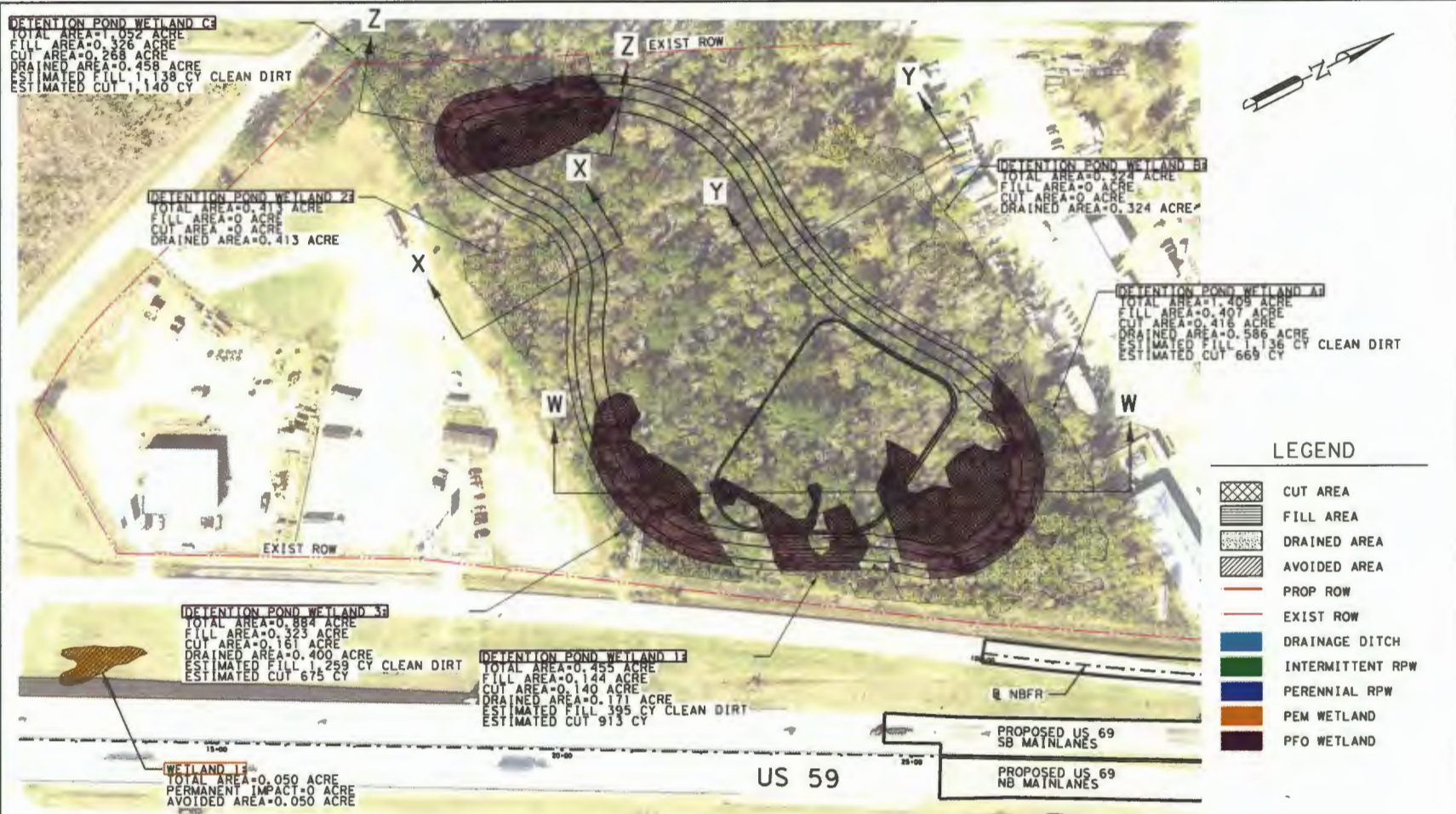
US 59

SHEET 28 OF 38

NOT TO SCALE

US 59 FROM FOSTORIA ROAD
 AT THE MONTGOMERY/LIBERTY
 COUNTY LINE TO SL 573
 CSJ 0177-03-096
 WATERS OF THE U.S. IMPACTS

SWG-2018-00221



LEGEND

- CUT AREA
- FILL AREA
- DRAINED AREA
- AVOIDED AREA
- PROP ROW
- EXIST ROW
- DRAINAGE DITCH
- INTERMITTENT RPW
- PERENNIAL RPW
- PEM WETLAND
- PFO WETLAND

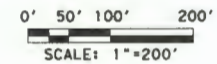
Impact to Waters of the U.S.

Aquatic Resource ID	Aquatic Resource Type	Impact Type	Total Impacted Acreage	Est. Impact Volume (CY)
Wetland 1	PEM	Area avoided	0.000	0
Detention Pond Wetland 1	PFO	Clean fill dirt for berm and excavation for detention pond	0.455	1308
Detention Pond Wetland 2	PFO	Drained due to regrading	0.413	0
Detention Pond Wetland 3	PFO	Clean fill dirt for berm and excavation for detention pond	0.884	1934
Detention Pond Wetland A	PFO	Clean fill dirt for berm and excavation for detention pond	1.409	1805
Detention Pond Wetland B	PFO	Drained due to regrading	0.324	0
Detention Pond Wetland C	PFO	Clean fill dirt for berm and excavation for detention pond	1.052	2278

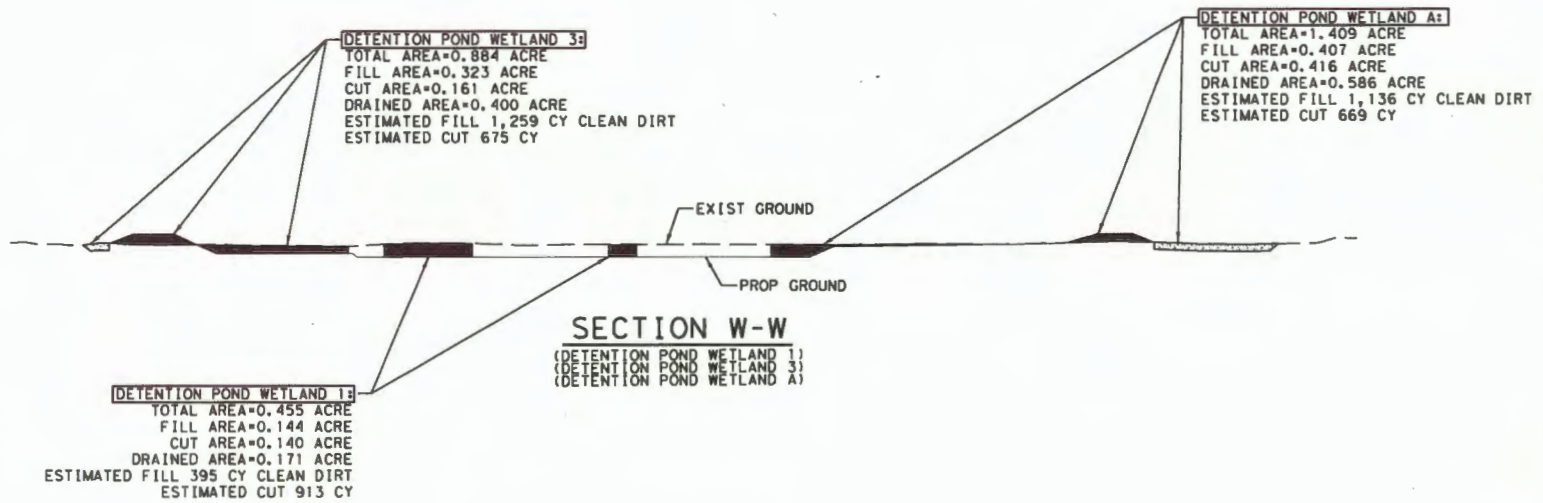
SWG-2018-00221

US 59

SHEET 29 OF 38



**US 59 FROM FOSTORIA ROAD
 AT THE MONTGOMERY/LIBERTY
 COUNTY LINE TO SL 573
 CSJ 0177-03-096
 WATERS OF THE U.S. IMPACTS**



LEGEND

	CUT AREA		DRAINAGE DITCH
	FILL AREA		INTERMITTENT RPW
	DRAINED AREA		PERENNIAL RPW
	AVOIDED AREA		PEM WETLAND
	PROP ROW		PFO WETLAND
	EXIST ROW		
	PROP GROUND		
	EXIST GROUND		

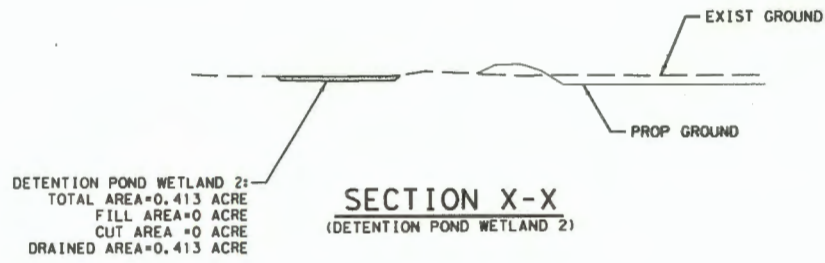
US 59

SHEET 30 OF 38














NOT TO SCALE

US 59 FROM FOSTORIA ROAD
 AT THE MONTGOMERY/LIBERTY
 COUNTY LINE TO SL 573
 CSJ 0177-03-096
 WATERS OF THE U. S. IMPACTS

SWG-2018-00221



LEGEND

	CUT AREA		DRAINAGE DITCH
	FILL AREA		INTERMITTENT RPW
	DRAINED AREA		PERENNIAL RPW
	AVOIDED AREA		PEM WETLAND
	PROP ROW		PFO WETLAND
	EXIST ROW		
	PROP GROUND		
	EXIST GROUND		

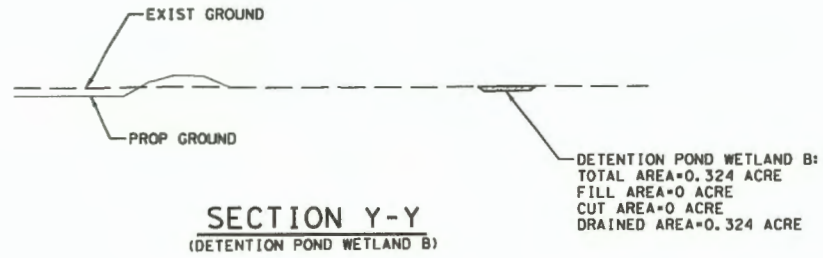
US 59

SHEET 31 OF 38

NOT TO SCALE

US 59 FROM FOSTORIA ROAD
 AT THE MONTGOMERY/LIBERTY
 COUNTY LINE TO SL 573
 CSJ 0177-03-096
 WATERS OF THE U.S. IMPACTS

SWG-2018-00221



LEGEND

	CUT AREA		DRAINAGE DITCH
	FILL AREA		INTERMITTENT RPW
	DRAINED AREA		PERENNIAL RPW
	AVOIDED AREA		PEM WETLAND
	PROP ROW		PFO WETLAND
	EXIST ROW		
	PROP GROUND		
	EXIST GROUND		

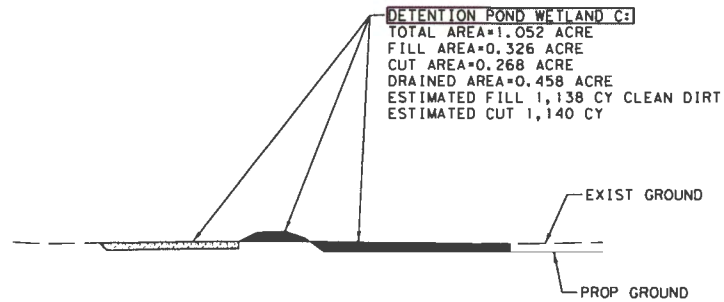
US 59

SHEET 32 OF 38

NOT TO SCALE

US 59 FROM FOSTORIA ROAD
 AT THE MONTGOMERY/LIBERTY
 COUNTY LINE TO SL 573
 CSJ 0177-03-096
 WATERS OF THE U.S. IMPACTS

SWG-2018-00221



SECTION Z-Z
 (DETENTION POND WETLAND C)

LEGEND

	CUT AREA		DRAINAGE DITCH
	FILL AREA		INTERMITTENT RPW
	DRAINED AREA		PERENNIAL RPW
	AVOIDED AREA		PEM WETLAND
	PROP ROW		PFO WETLAND
	EXIST ROW		
	PROP GROUND		
	EXIST GROUND		

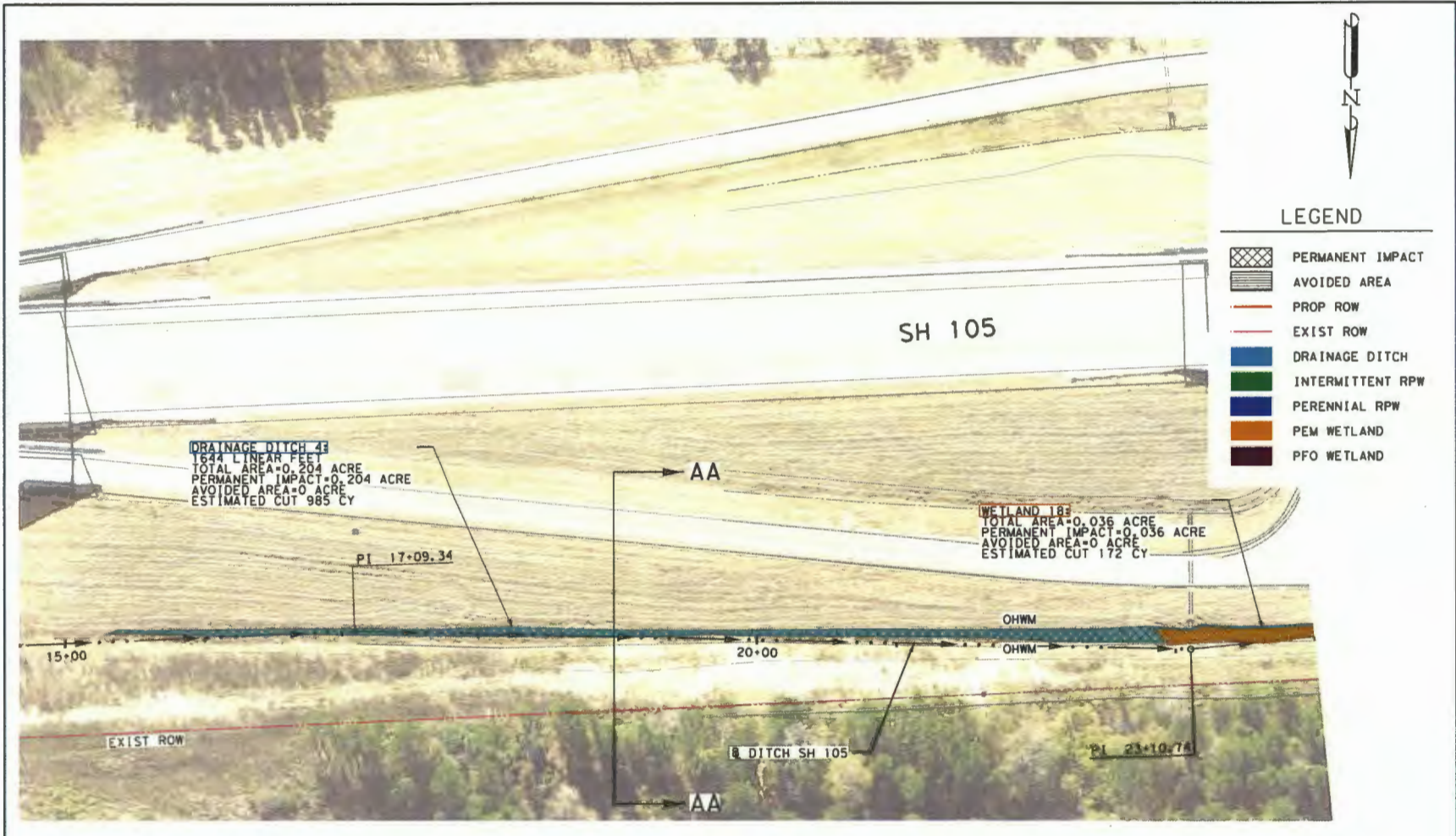
US 59

SHEET 33 OF 38

NOT TO SCALE

US 59 FROM FOSTORIA ROAD
 AT THE MONTGOMERY/LIBERTY
 COUNTY LINE TO SL 573
 CSJ 0177-03-096
 WATERS OF THE U.S. IMPACTS

SWG-2018-00221



LEGEND

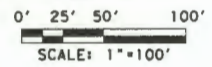
- PERMANENT IMPACT
- AVOIDED AREA
- PROP ROW
- EXIST ROW
- DRAINAGE DITCH
- INTERMITTENT RPW
- PERENNIAL RPW
- PEM WETLAND
- PFO WETLAND

DRAINAGE DITCH 4
 1644 LINEAR FEET
 TOTAL AREA=0.204 ACRE
 PERMANENT IMPACT=0.204 ACRE
 AVOIDED AREA=0 ACRE
 ESTIMATED CUT 985 CY

WETLAND 18
 TOTAL AREA=0.036 ACRE
 PERMANENT IMPACT=0.036 ACRE
 AVOIDED AREA=0 ACRE
 ESTIMATED CUT 172 CY

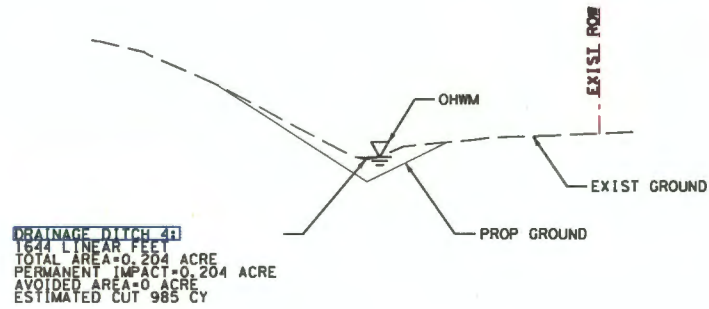
Impact to Waters of the U.S.					
Aquatic Resource ID	Aquatic Resource Type	Impact Type		Total Impacted Acreage	Est. Impact Volume (CY)
Wetland 18	PEM	Permanent	Excavated for ditch channelization	0.036	172
Drainage Ditch 4	Drainage Ditch	Permanent	Excavated for ditch channelization	0.204	985

SHEET 34 OF 38



US 59 FROM FOSTORIA ROAD
 AT THE MONTGOMERY/LIBERTY
 COUNTY LINE TO SL 573
 CSJ 0177-03-096
 WATERS OF THE U.S. IMPACTS

SWG-2018-00221



SECTION AA-AA
 (DRAINAGE DITCH 4)

LEGEND

	PERMANENT IMPACT		DRAINAGE DITCH
	AVOIDED AREA		INTERMITTENT RPW
	PROP ROW		PERENNIAL RPW
	EXIST ROW		PEM WETLAND
	PROP GROUND		PFO WETLAND
	EXIST GROUND		

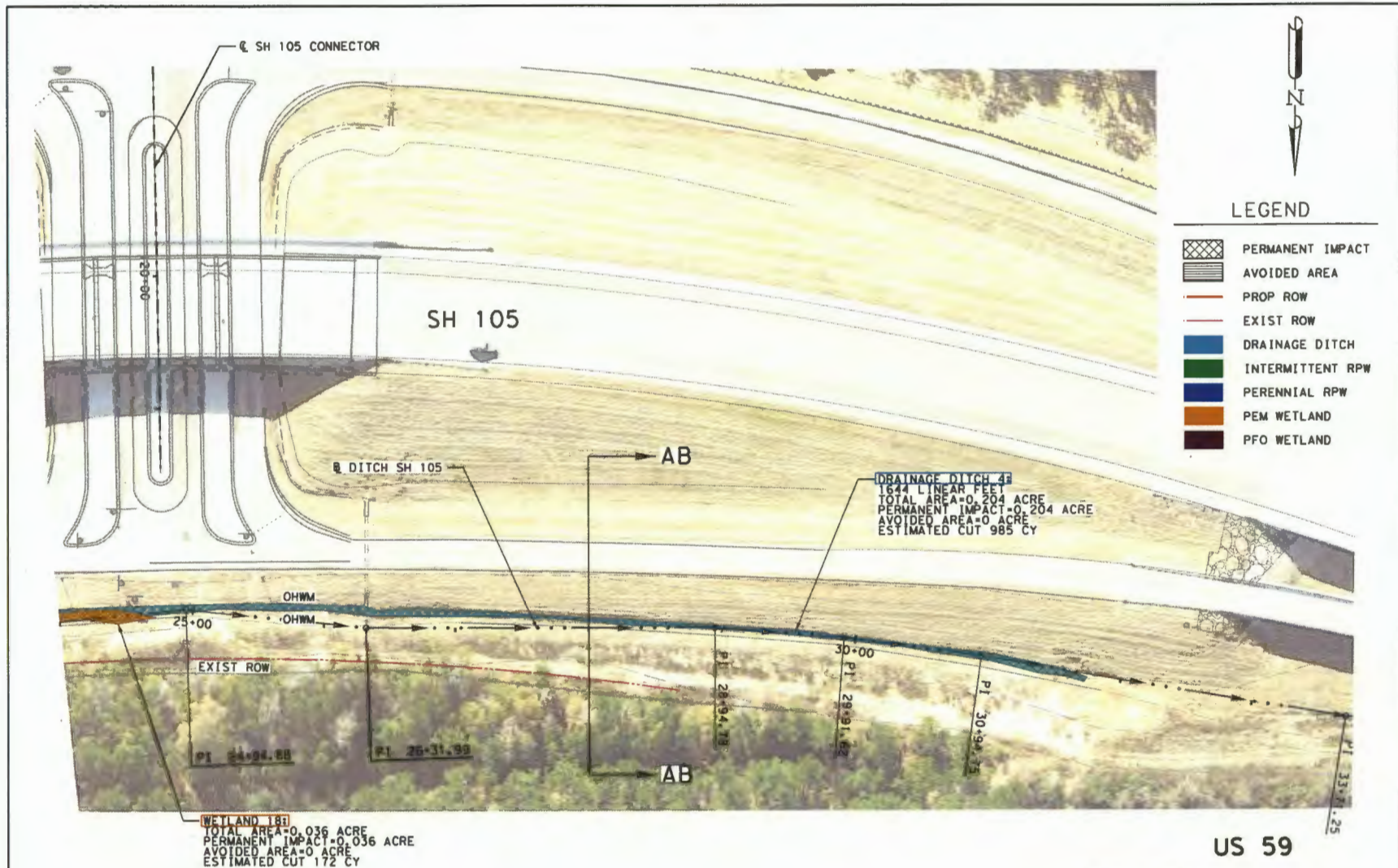
US 59

SHEET 35 OF 38

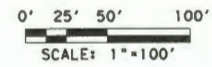
NOT TO SCALE

US 59 FROM FOSTORIA ROAD
 AT THE MONTGOMERY/LIBERTY
 COUNTY LINE TO SL 573
 CSJ 0177-03-096
 WATERS OF THE U.S. IMPACTS

SWG-2018-00221



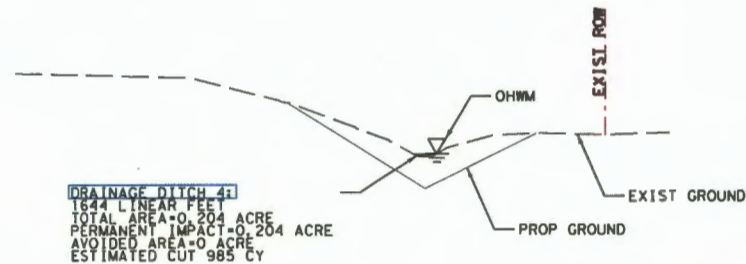
SHEET 36 OF 38



Impact to Waters of the U.S.					
Aquatic Resource ID	Aquatic Resource Type	Impact Type		Total Impacted Acreage	Est. Impact Volume (CY)
Wetland 18	PEM	Permanent	Excavated for ditch channelization	0.036	172
Drainage Ditch 4	Drainage Ditch	Permanent	Excavated for ditch channelization	0.204	985

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SECTION AB-AB
 (DRAINAGE DITCH 4)

LEGEND

	PERMANENT IMPACT		DRAINAGE DITCH
	AVOIDED AREA		INTERMITTENT RPW
	PROP ROW		PERENNIAL RPW
	EXIST ROW		PEM WETLAND
	PROP GROUND		PFO WETLAND
	EXIST GROUND		

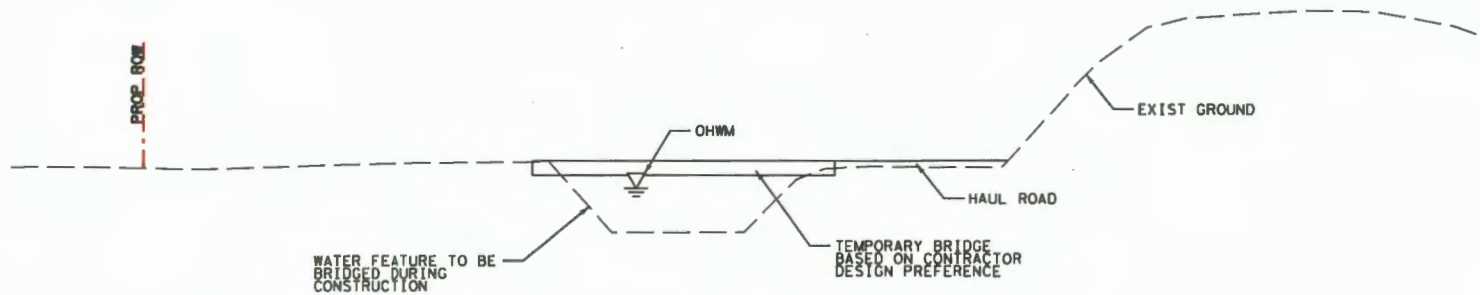
US 59

SHEET 37 OF 38

NOT TO SCALE

US 59 FROM FOSTORIA ROAD
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WATER FEATURE TO BE
BRIDGED DURING
CONSTRUCTION

OHWM

EXIST GROUND

HAUL ROAD

TEMPORARY BRIDGE
BASED ON CONTRACTOR
DESIGN PREFERENCE

TYPICAL SECTION
TEMPORARY BRIDGE CROSSING

US 59

SHEET 38 OF 38

NOT TO SCALE

US 59 FROM FOSTORIA ROAD
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