

JOINT
PUBLIC NOTICE

CHARLESTON DISTRICT, CORPS OF ENGINEERS
69A Hagood Avenue
Charleston, South Carolina 29403
and
THE S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL
Office of Ocean and Coastal Resource Management
1362 McMillan Avenue, Suite 400
Charleston, South Carolina 29405

REGULATORY DIVISION
Refer to: SAC 2015-0807

May 16, 2018

Pursuant to Sections 401 and 404 of the Clean Water Act (33 U.S.C. 1344), and the South Carolina Coastal Zone Management Act (48-39-10 et seq.), an application has been submitted to the Department of the Army and the S.C. Department of Health and Environmental Control by

South Carolina Department of Transportation
Post Office Box 191
Columbia, South Carolina 29202

for a permit to place fill material in waters and wetlands adjacent and contiguous to

SAWMILL BRANCH

at locations of the proposed Phase 3 of the Berlin Myers Parkway between SC 165 (East Carolina Avenue) and US 17A in Summerville, in Dorchester County, South Carolina (Lat/Long Start: 33.006406°N, -80.181449°W; Lat/Long End: 32.980934°N, -80.231736°W).

In addition, pursuant to Section 14 of the Rivers and Harbors Act of 1899, amended and codified at 33 USC 408 (Section 408), an application has also been received for Department of the Army Section 408 permission for alteration of the federally-authorized Sawmill Branch small flood control project. The request to alter the Sawmill Branch project will be reviewed as outlined below in order to determine whether the alteration proposed will be injurious to the public interest or impair the usefulness of the project.

In order to give all interested parties an opportunity to express their views

NOTICE

is hereby given that written statements regarding the proposed work will be received by the above mentioned offices until

30 Days from the Date of this Notice

from those interested in the activity and whose interests may be affected by the proposed work.

Proposed Project

The proposed work consists of the construction of approximately 3.25 miles of new roadway on new location between US 17A and SC 165 (East Carolina Avenue), referred to as Phase 3 of the Berlin Myers Parkway. The design for the major portion of Phase 3 of Berlin Myers Parkway will consist of two travel lanes in each direction (12-foot wide outer lane and 12.5 foot wide inner lane), with curb and gutter. The median will be 14 feet wide, consisting of 2-foot curb and gutter on each side and 10-foot wide planted section in the middle. The project will also include a single point urban interchange (SPUI) at the intersection of Berlin Myers Parkway and East Carolina Avenue. The project includes a relocation of a portion of the Sawmill Branch Walk/ Bike Trail between East Carolina and Luden Drive. A new segment of trail would be constructed between Greenwave Boulevard and Luden Drive that connects to a sidewalk adjacent to the proposed roadway. Because the project is being proposed in a floodplain and in the vicinity of a Civil Works project, the proposed work also includes various floodplain mitigation efforts which directly impact the Civil Works flood risk management project (Sawmill Branch). Specifically, these efforts include the excavation along and in wetlands and benching a portion of the north side of Sawmill Branch to increase its hydraulic capacity. Areas of the floodplain will be excavated to a lower elevation, resulting in "excavation" impacts to waters of the United States.

In detail, the proposed project will result in a total of 53.42 acres of impacts to waters of the United States. Specifically, impacts will include 42.76 acres of fill and rip-rap, 5.57 acres of excavation, and 4.05 acres of clearing, including 247 linear feet of culverts and/or pipe, 347 linear feet of armoring and 212 linear feet of morphologic changes, in accordance with the proposed drawings (attached).

Avoidance and Minimization Measures

According to the applicant, avoidance and minimization measures were incorporated into the final design for the preferred alternative. The Department of the Army (DA) application states that the roadway typical section has been reduced to the minimum width required to accommodate the purpose and need while complying with the current SCDOT and FHWA design standards. The roadway embankment slopes were reduced from 6:1 to 2:1 through the use of guardrail and curb and gutter was utilized throughout the project instead of roadside ditches to further reduce the footprint. Clearing impacts were minimized by reducing areas needed for BMP maintenance to the minimum width allowed by SCDOT standards. Finally, slight alignment modifications have been incorporated as an effort to minimize impacts.

Compensatory Mitigation for Impacts to Waters of the United States

The applicant has determined that, in accordance with the 2010 Guidelines for preparing a Compensatory Mitigation Plan, a total of 741 wetland mitigation credits and 1,761 stream mitigation credits will be required. The applicant states that the mitigation credit need cannot be met by a single mitigation bank and therefore they propose to mitigate for impacts to wetlands and/or waters of the United States by purchasing 371 wetland mitigation credits from Pigeon Pond Mitigation Bank and 881 stream restoration credits from the Caton Creek Mitigation Bank. In addition, the applicant will conduct permittee-responsible mitigation (PRM) on a 600-acre site adjacent to the Cooper River, known as Lewisfield Plantation. According to the applicant, the Lewisfield Plantation site will provide a total of 9,379 stream preservation credits by preserving approximately 17,793 linear feet of first and third order unnamed tributaries to the Cooper River (see location map enclosed following the proposed plan drawings).

Project Purpose

The applicant states that Phase 3 will be the final phase of the parkway and will link Phases 1 and 2 to US 17A southwest of Summerville. This will complete the “loop” south of Summerville and will provide system linkage, reduce congestion and improve safety on surrounding roadways, including 17A and Bacons Bridge Road (SC 165).

NOTE: This public notice and associated plans are available on the Corps’ website at:
<http://www.sac.usace.army.mil/Missions/Regulatory/PublicNotices> .

The District Engineer has concluded that the discharges associated with this project, both direct and indirect, should be reviewed by the South Carolina Department of Health and Environmental Control in accordance with provisions of Section 401 of the Clean Water Act. As such, this notice constitutes a request, on behalf of the applicant, for certification that this project will comply with applicable effluent limitations and water quality standards. The work shown on this application must also be certified as consistent with applicable provisions of the Coastal Zone Management Program (15 CFR 930). This activity may also require evaluation for compliance with the S. C. Construction in Navigable Waters Permit Program. State review, permitting and certification is conducted by the S. C. Department of Health and Environmental Control. The District Engineer will not process this application to a conclusion until such certifications are received. The applicant is hereby advised that supplemental information may be required by the State to facilitate the review.

This notice initiates the Essential Fish Habitat (EFH) consultation requirements of the Magnuson-Stevens Fishery Conservation and Management Act. Implementation of the proposed project would impact approximately 53 acres upstream of estuarine substrates and emergent wetlands utilized by various life stages of species comprising the shrimp, and snapper-grouper management complexes. The District Engineer’s initial determination is that the proposed action would not have a substantial individual or cumulative adverse impact on EFH or fisheries managed by the South Atlantic Fishery Management Council and the National Marine Fisheries Service (NMFS). The District Engineer’s final determination relative to project impacts and the need for mitigation measures is subject to review by and coordination with the NMFS.

Pursuant to the Section 7 of the Endangered Species Act of 1973 (as amended), the applicant has provided a protected species survey for the property associated with the activity described above. This report concluded that the proposed project would have no effect to Americian chaffseed, Atlantic sturgeon, Canby’s dropwort, pondberry, red-cockaded woodpecker, and shotnose sturgeon and the proposed project would not likely adversely affect the wood stork. In addition, the Corps has recently reviewed the proposed project’s potential impact to the northern long-eared bat (NLEB), as the NLEB was added to the list of federally threatened and endangered (T&E) species in Berkeley County on July 17, 2017. Based upon all available information, the District Engineer has determined that the project is not likely to adversely affect any Federally endangered, threatened, or proposed species or result in the destruction or adverse modification of designated or proposed critical habitat. This public notice serves as a

request for written concurrence from the U.S. Fish and Wildlife Service and/or the National Marine Fisheries Service on this determination.

Pursuant to Section 106 of the National Historic Preservation Act (NHPA), this public notice also constitutes a request to Indian Tribes to notify the District Engineer of any historic properties of religious and cultural significance to them that may be affected by the proposed undertaking.

In accordance with Section 106 of the NHPA, the District Engineer has designated FHWA as the lead federal agency (as defined in 36 C.F.R. 800.2 (a)(2)). The DA application indicated that several cultural resource surveys were conducted for the proposed project as the design has been developed. The project is located within proximity to the Summerville Historic District and as such, Federal Highway Administration (FHWA) determined that the undertaking would have no adverse impact on historic properties. On behalf of FHWA, SCDOT coordinated with SHPO and they received concurrence on this determination; however in order to ensure that the project would have no adverse effect on the historic district, SCDOT, FHWA, and SHPO entered into a Memorandum of Understanding in March of 2006. To ensure that other historic properties that the District Engineer is not aware of are not overlooked, this public notice also serves as a request to the State Historic Preservation Office, Tribal Historic Preservation Office and other interested parties to provide any information they may have with regard to additional historic properties.

The District Engineer's final eligibility and effect determination will be based upon coordination with the SHPO and/or THPO, as appropriate and required and with full consideration given to the proposed undertaking's potential direct and indirect effects on historic properties within the Corps-identified permit area.

Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for a public hearing shall state, with particularity, the reasons for holding a public hearing.

The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the activity on the public interest and will include application of the guidelines promulgated by the Administrator, Environmental Protection Agency (EPA), under authority of Section 404(b) of the Clean Water Act and, as appropriate, the criteria established under authority of Section 102 of the Marine Protection, Research and Sanctuaries Act of 1972, as amended. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the project must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the project will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, flood plain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production and, in general, the needs and welfare of the people. A permit will be granted unless the District Engineer determines that it would be contrary to the public interest. In cases of conflicting property rights, the Corps cannot undertake to adjudicate rival claims.

The Corps is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this activity. Any comments received will be considered by the Corps to determine whether to issue, modify, condition or deny a permit for this project. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental

effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the activity. **Please submit comments in writing, identifying the project of interest by public notice number, to the following address:**

**U.S. Army Corps of Engineers
ATTN: REGULATORY DIVISION
69A Hagood Avenue
Charleston SC 29403**

Section 408 Compliance Review

In addition, the decision whether to grant the requested permission for project modification under Section 408 is based on several factors which are outlined in Engineering Circular (EC) 1165-2-216. Review of the requests for modification will be reviewed by a USACE technical review team considering the following factors:

1. Impair the Usefulness of the Project Determination. The review team will determine if the proposed alteration would limit the ability of the federally authorized project to function as authorized, or would compromise or change any authorized project conditions, purposes or outputs. All appropriate technical analyses including geotechnical, structural, hydraulic and hydrologic, real estate, and operations and maintenance requirements, must be conducted and the technical adequacy of the design must be reviewed. The Charleston District is working closely with the requestor to ensure that all required technical plans, maps, drawings, and specifications necessary for these analyses are provided and complete. In order to approve a request for modification, it must be determined that the usefulness of the authorized project will not be negatively impacted.

2. Injurious to the Public Interest Determination. Proposed alterations will be reviewed to determine the probable impacts, including cumulative impacts, on the public interest. Evaluation of the probable impacts that the proposed alteration to the USACE project may have on the public interest requires a careful weighing of all those factors that are relevant in each particular case. Factors that may be relevant to the public interest depend upon the type of USACE project being altered and may include, but are not limited to, such things as conservation, economic development, historic properties, cultural resources, environmental impacts, water supply, water quality, flood hazards, floodplains, residual risk, induced damages, navigation, shore erosion or accretion, and recreation. The decision whether to approve an alteration will be determined by the consideration of whether benefits are commensurate with risks. If the potential detriments are found to outweigh the potential benefits, then it may be determined that the proposed alteration is injurious to the public interest. This determination is not the same as the "contrary to the public interest determination" that is undertaken pursuant to Sections 10/404/103.

3. Legal and Policy Compliance. A determination will be made as to whether the proposal meets all legal and policy requirements. This includes the National Environmental Policy Act (NEPA) and other environmental compliance requirements, as well as USACE policy. While ensuring compliance is the responsibility of USACE, the requester is required to provide all information that the Charleston District identifies as necessary to satisfy all applicable federal

laws, executive orders, regulations, policies, and ordinances. The compliance determination for any Section 10/404/103 permit decision associated with the proposed alteration is separate from and will not be included in this 408 compliance determination.

If there are any questions concerning this public notice, please contact Elizabeth Williams at 843-329-8044 or toll free at 1-866-329-8187.

Table 1. Wetland impacts including fill, excavation, and clearing

Wetland impact site number (location)	Type of impact and area of impact						Purpose of impact	Wetland type
	Permanent fill		Excavation		Clearing			
	SF	Acre	SF	Acre	SF	Acre		
Wetland U (Sheet 13)	11,047	0.25			1,597	0.04	roadway	freshwater forested
Wetland T (Sheet 14)	9,022	0.21	321	0.01	838	0.02	roadway	freshwater forested
Wetland S (Sheet 15)	1,913	0.04	48	0.00	39	0.00	roadway & pipe	freshwater forested
Wetland P (Sheet 16)	15,288	0.35	4,190	0.09	17	0.00	roadway	freshwater forested
Wetland AU (Sheet 16)			941	0.02			roadway	freshwater forested
Wetland P (Sheet 17)	98,020	2.25	32,259	0.74			roadway	freshwater forested
Wetland P (Sheet 18)	24,750	0.57	10,471	0.24			roadway & access road	freshwater forested
Wetland V (Sheet 18)	67,082	1.54	8,559	0.20	39,122	0.89	roadway & bridge	freshwater forested
Wetland V (Sheet 19)	13,996	0.32	4,381	0.11	376	0.01	roadway	freshwater forested
Wetland X (Sheet 19)	175,649	4.03	5,630	0.13	6,281	0.14	roadway & flood mitigation	freshwater forested
Wetland X (Sheet 20)	178,887	4.11	15,045	0.35	11,995	0.28	roadway & flood mitigation	freshwater forested
Wetland X (Sheet 21)	90,170	2.07	3,859	0.09	8,048	0.18	roadway & flood mitigation	freshwater forested
Wetland X (Sheet 22)	43,390	1.00	1,391	0.03	4,176	0.10	roadway & flood mitigation	freshwater forested

Wetland impact site number (location)	Type of impact and area of impact						Purpose of impact	Wetland type
	Permanent fill		Excavation		Clearing			
	SF	Acre	SF	Acre	SF	Acre		
Wetland Y (Sheet 22)	81,488	1.87	1,356	0.04	7,199	0.17	roadway & flood mitigation	freshwater forested
Wetland Y (Sheet 23)	94,739	2.17	1,941	0.04	11,566	0.27	roadway & flood mitigation	freshwater forested
Wetland Y (Sheet 24)	99,224	2.28	1,078	0.03	14,412	0.33	roadway & flood mitigation	freshwater forested
Wetland Y (Sheet 25)	94,477	2.17	17,051	0.39	11,439	0.27	roadway, bridge & flood mitigation	freshwater forested
Wetland Y (Sheet 26)	42,729	0.98	19,547	0.45	983	0.02	roadway & flood mitigation	freshwater forested
Wetland Z (Sheet 26)	47,764	1.09	24,638	0.56	1,275	0.03	roadway & flood mitigation	freshwater forested
Wetland Z (Sheet 27)	66,203	1.52	4,833	0.11	4,874	0.11	roadway & flood mitigation	freshwater forested
Wetland Z (Sheet 28)	38,444	0.88	10,400	0.24	9,056	0.21	roadway & bridge	freshwater forested
Wetland AA (Sheet 28)	44,859	1.03	1,754	0.04	3,166	0.07	roadway & flood mitigation	freshwater forested
Wetland AA (Sheet 29)	5,239	0.12	471	0.01	755	0.02	roadway & flood mitigation	freshwater forested
Wetland AB (Sheet 29)	117,915	2.71	12,763	0.30	5,943	0.14	roadway & flood mitigation	freshwater forested
Wetland AB (Sheet 30)	128,670	2.95	10,766	0.25	2,109	0.05	roadway & flood mitigation	freshwater forested
Wetland AB (Sheet 31)	51,920	1.20	2,453	0.06	788	0.02	roadway & flood mitigation	freshwater forested
Wetland AC (Sheet 31)	36,165	0.83			1,346	0.03	roadway	freshwater forested

Wetland impact site number (location)	Type of impact and area of impact						Purpose of impact	Wetland type
	Permanent fill		Excavation		Clearing			
	SF	Acre	SF	Acre	SF	Acre		
Wetland AD (Sheet 31)	11,614	0.27			3,958	0.09	roadway	freshwater forested
Wetland AC (Sheet 32)	12,175	0.28			720	0.02	roadway	freshwater forested
Wetland AD (Sheet 32)	9,786	0.23			706	0.02	roadway	freshwater forested
Wetland AE (Sheet 32)	30,466	0.70			1,790	0.04	roadway	freshwater forested
Wetland AF (Sheet 32)	22,826	0.52			7,186	0.16	roadway	freshwater forested
Wetland AE (Sheet 33)	8,683	0.20			716	0.02	roadway	freshwater forested
Wetland AF (Sheet 33)	6,191	0.14			2,847	0.07	roadway	freshwater forested
Wetland AG (Sheet 33)	22,033	0.51	2,419	0.06	1,534	0.04	roadway	freshwater forested
Wetland AH (Sheet 33)	972	0.02					roadway	freshwater forested
Wetland AG (Sheet 34)	8,177	0.18	1,961	0.05			roadway	freshwater forested
Wetland W (Sheet 35)	11,178	0.25	8,127	0.19	518	0.01	roadway, bridge, & flood mitigation	freshwater forested
Wetland X (Sheet 35)	3,010	0.07	16,903	0.39			roadway, bridge, & flood mitigation	freshwater forested
Wetland W (Sheet 36)	44,113	1.01	9,958	0.23	2,575	0.06	roadway	freshwater forested
Wetland V (Sheet 36)	7,193	0.16					roadway	freshwater forested

Wetland impact site number (location)	Type of impact and area of impact						Purpose of impact	Wetland type
	Permanent fill		Excavation		Clearing			
	SF	Acre	SF	Acre	SF	Acre		
Wetland D (Sheet 37)	6,929	0.15			1,921	0.04	roadway	freshwater forested
Wetland Y (Sheet 38)	14,634	0.34	2,670	0.06	3,185	0.07	roadway & bridge	freshwater forested
Wetland AU (Sheet 39)	4,865	0.11	2,227	0.06	603	0.01	roadway	freshwater forested
Wetland impact totals	1,903,895	43.68	240,411	5.57	175,659	4.05		
Total wetland impact (acres)	53.30							

Table 2. Seasonal and perennial stream impacts

Stream impact site number (location)	Type of impact and LF/area										Purpose of impact	Seasonal or perennial flow
	Pipe			Culvert			Armoring			Morpho- logic LF		
	LF	SF	Acre	LF	SF	Acre	LF	SF	Acre			
Tributary V (Sheet 18)										212	Relocation of access road	Perennial
Tributary Y (Sheet 20)				14	17	0.00					Rip-rap outfall along channel bank	Perennial
Tributary Y (Sheet 22)				186	793	0.02					Rip-rap outfall along channel bank	Perennial
Tributary Y (Sheet 23)				32	99	0.00					Rip-rap outfall along channel bank	Perennial
Tributary N (Sheet 24)	56	280	0.01	19	95	0.00					Pipe; Rip-rap pad	Seasonal
Tributary Y (Sheet 24)				16	36	0.00					Rip-rap outfall along channel bank	Perennial
Tributary M (Sheet 25)				45	135	0.00	14	42	0.00		Culvert; Rip-rap pad	Seasonal
Tributary Y (Sheet 25)				21	125	0.00					Rip-rap outfall along channel bank	Perennial
Tributary J (Sheet 26)				40	200	0.00					Culvert; Rip-rap pad	Seasonal
Tributary L (Sheet 26)				51	255	0.01					Culvert; Rip-rap pad	Perennial
Tributary Y (Sheet 27)				20	136	0.00					Rip-rap outfall along channel bank	Perennial
Tributary F (Sheet 28)				26	104	0.00					Culvert	Seasonal
Tributary D (Sheet 29)				13	117	0.00	11	99	0.00		Culvert; Rip-rap pad	Perennial

Stream impact site number (location)	Type of impact and LF/area								Purpose of impact	Seasonal or perennial flow	
	Pipe				Culvert		Armoring				Morpho- logic LF
	LF	SF	Acre	LF	SF	Acre	LF	SF			
Tributary W (Sheet 39)				16	150	0.00	14	70	0.00	Culvert; Rip-rap pad	Seasonal
Stream impact Totals	56	280	0.01	191	961	0.01	347	1,512	0.02	212	
Total stream impact (LF)	806										

Table 3. Open water impacts including lakes, ponds, estuaries, sounds and any other WoUS

Open Water impact site ID (location)	Type of impact and area of impact	Name of waterbody (if applicable)	Type of waterbody
Pond AO (Sheet 25)	Permanent fill		
	SF	Acre	
	3,318	0.08	n/a
			pond

1. Stream assessment forms can be found in Appendix D.
2. Proposed impact drawings can be found in Appendix G.

III. Alternatives Analysis

An alternative analysis was initially conducted by SCDOT/FHWA during the NEPA phase of the project, which ultimately documented the selection of the preferred alternative based on the ability to meet the purpose and need while minimizing impacts to the human and natural environment. This process required the identification and evaluation of a range of alternatives, including the “no-build” alternative, all reasonable “build” alternatives under consideration, and other alternatives that were eliminated from detailed study due to not meeting the purpose and need of the project. This analysis was conducted as part of the original EA for the project, which was approved by FHWA in 2006, with a subsequent FONSI also issued in 2006. The EA/FONSI was reevaluated in 2009 to document changes in wetland mitigation, water quality impacts, and floodplain impacts.

The alternatives were reevaluated in 2017 primarily to document the new project information regarding the revised JD and the floodplain mitigation activities. In addition, the recent analysis incorporated various review factors in support of the Section 404(b)(1) guidelines of the Clean Water Act. The following is a summary of the alternative analysis which is also documented in detail in the EA/FONSI/reevaluation(s) in Appendix B.

The alternative analysis included evaluation of the no-build alternative and six build alternatives (Figure 3). Alternatives 1, 2, and 3 would construct a roadway on new alignment; corridor alignments were developed utilizing aerial photography and USGS topographic maps. Alternatives 4 and 5 would widen existing roadways. Alternative 6 would bridge wetlands associated with Sawmill Branch.

Each alternative was first evaluated in terms of its ability to meet the stated purpose and need. Those alternatives that were judged to be acceptable in meeting this criterion were further evaluated with regards to their impacts to environmental features, impacts to communities and neighborhoods, and relocations of businesses and residences.

No-Build Alternative

The no-build alternative, which consists of making no improvements in the study area, was considered as a baseline for comparison. The no-build alternative would not meet the purpose and need for the project because this alternative would not provide system linkage or another access to and from I-26 through Summerville. The no-build alternative would also not address the anticipated traffic demand resulting from growth in the area and the need to provide the public with safer and improved traffic movements. Therefore, the no-build alternative was not considered acceptable because it does not meet the purpose and need for the project.

Build Alternatives

Build alternatives that were considered included several that would widen existing roadways as well as several alternate routes along new alignments. Each alternative was evaluated based on its ability to meet the stated purpose and need for the project. If the alternative could not satisfactorily meet this purpose and need, it was eliminated from further evaluation.

Alternatives Considered But Eliminated

Alternative 4 included the widening of SC Route 642 (SC 642/Dorchester Road) beginning at Fisher Road and continuing to SC 165 (Bacons Bridge Road) from two lanes to five lanes, and widening SC 165 from SC 642 to approximately 1,000 feet south of Stallsville Road (S-9) from

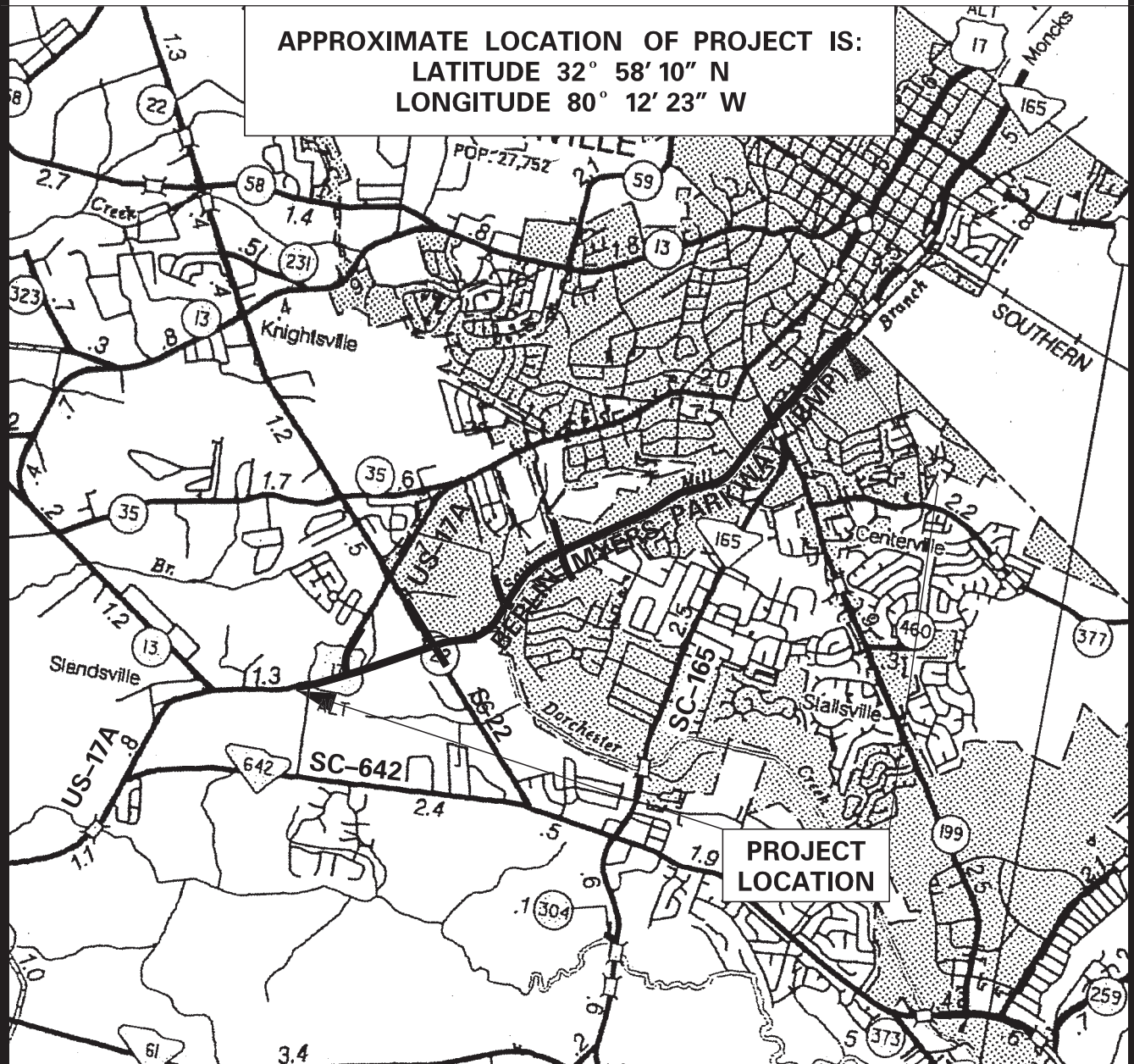
VICINITY MAP

FROM: DORCHESTER COUNTY MAP 1969

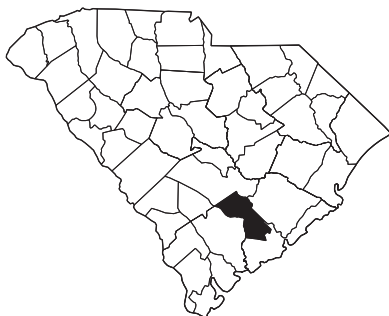
APPROXIMATE LOCATION OF PROJECT IS:

LATITUDE 32° 58' 10" N

LONGITUDE 80° 12' 23" W



SHADED AREA INDICATES
COUNTY LOCATION IN SC



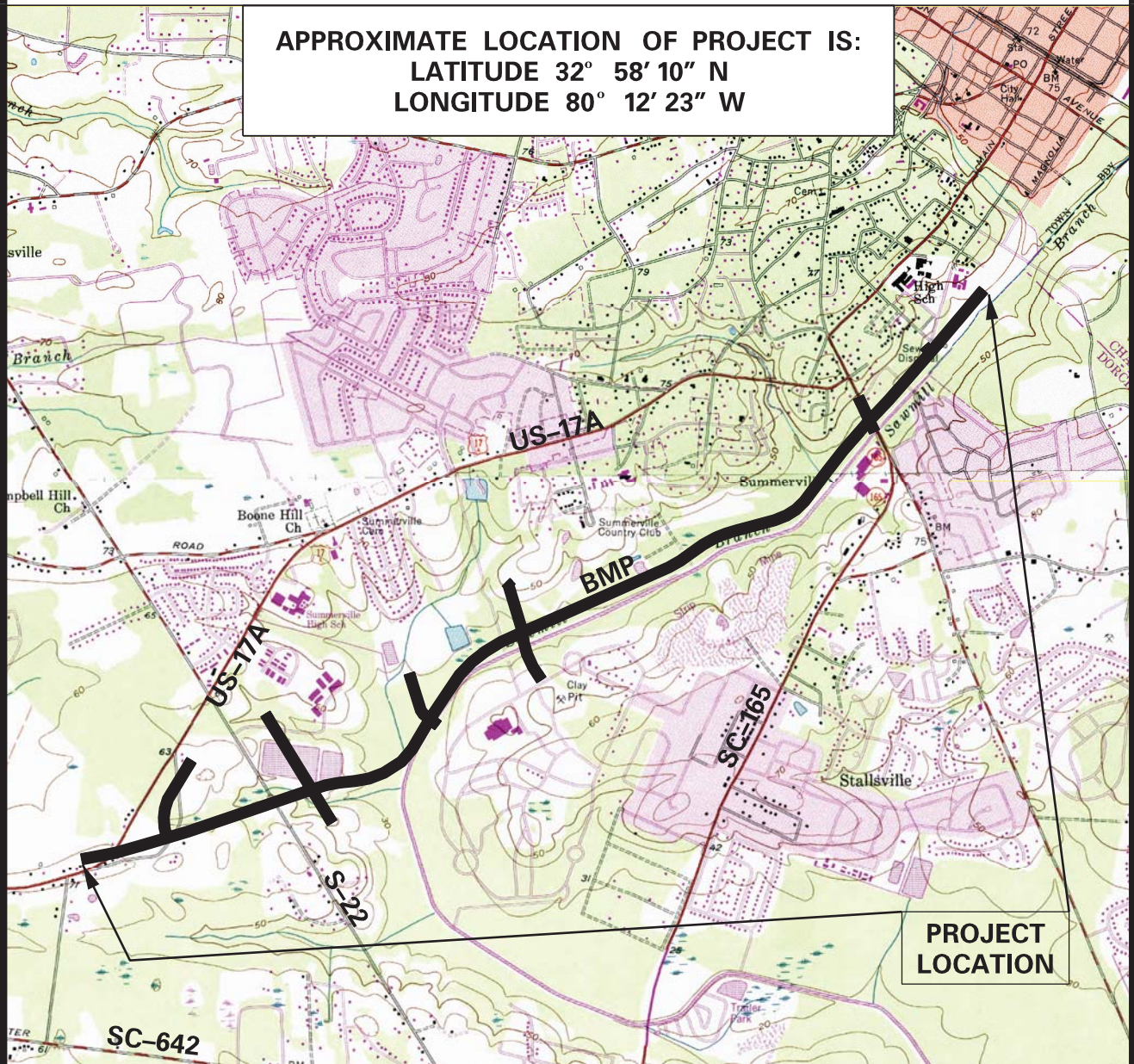
0 5000
SCALE  FEET

BERLIN MYERS PARKWAY (PHASE 3)
PIN 23351
DORCHESTER COUNTY, SC
APPLICATION BY SCDOT
ELIGIBLE FOR FEDERAL FUNDS
DEC. 20, 2017
SHEET 1 OF 59

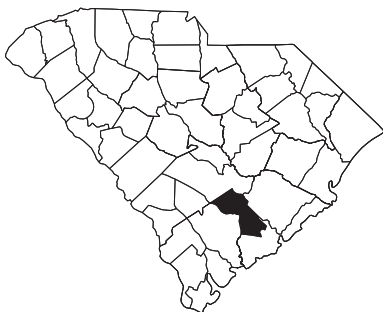
USGS MAP

FROM: USGS QUAD MAPS
STALL (1979), SUMMV (1990)

APPROXIMATE LOCATION OF PROJECT IS:
LATITUDE 32° 58' 10" N
LONGITUDE 80° 12' 23" W



SHADED AREA INDICATES
COUNTY LOCATION IN SC



0 3000
SCALE FEET

BERLIN MYERS PARKWAY (PHASE 3)
PIN 23351
DORCHESTER COUNTY, SC
APPLICATION BY SCDOT
ELIGIBLE FOR FEDERAL FUNDS
DEC. 20, 2017
SHEET 2 OF 59

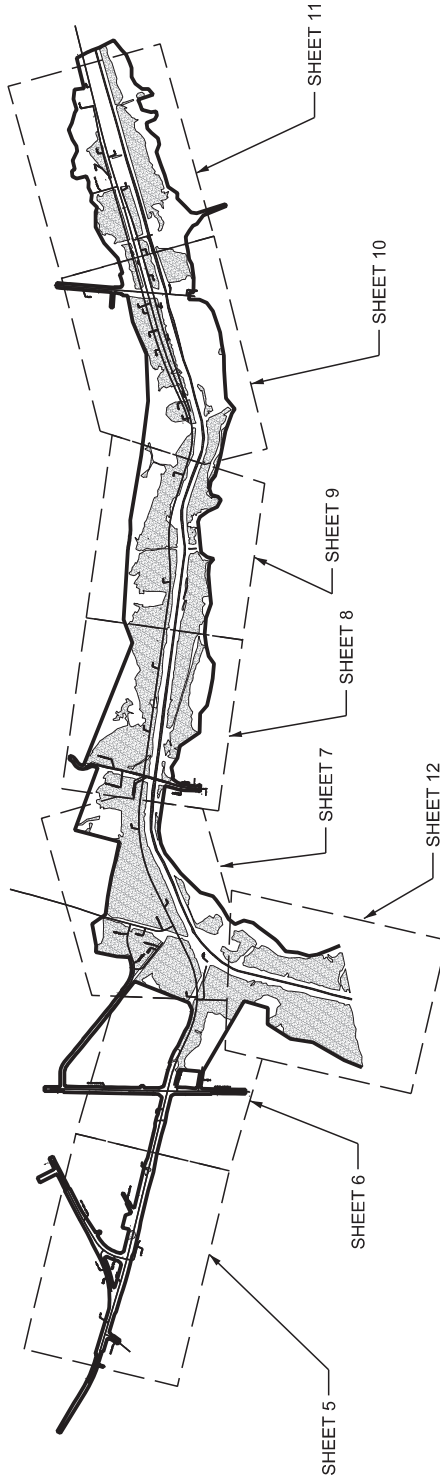
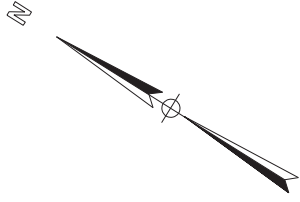
Project Impacts to Waters of the U.S.				
	Jurisdictional Wetland (Acres)	Open Water (Acres)	Jurisdictional Tributary (LF)	Jurisdictional Tributary (Acres)
Permanent Fill	43.68	0.08		
Excavation	5.57			
Clearing	4.05			
Culvert			191	0.01
Pipe			56	0.01
Armoring			347	0.02
Morphologic			212	
Totals	53.30	0.08	806	0.04
Jurisdictional Barrier Fence	61,677 LF			

BERLIN MYERS PARKWAY (PHASE 3)
 PIN 23351
 DORCHESTER COUNTY, SC
 APPLICATION BY SCDOT
 ELIGIBLE FOR FEDERAL FUNDS
 DEC. 20, 2017

SCDOT

IMPACT SUMMARY

SHEET 3 OF 59



LEGEND

- EXISTING PAVEMENT
- WETLAND
- TRIBUTARY Y
- SAWMILL BRANCH
- JD BOUNDARY

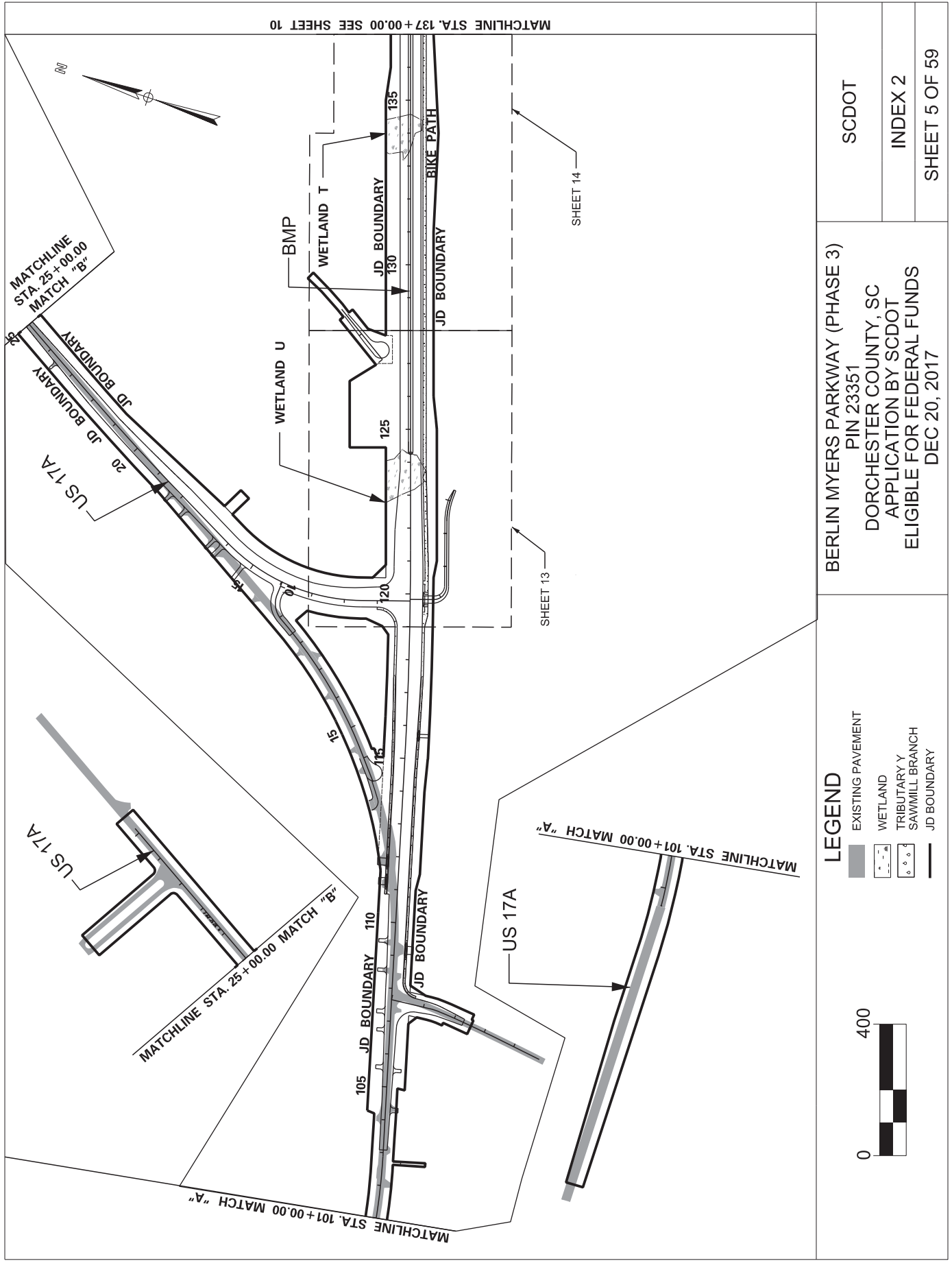


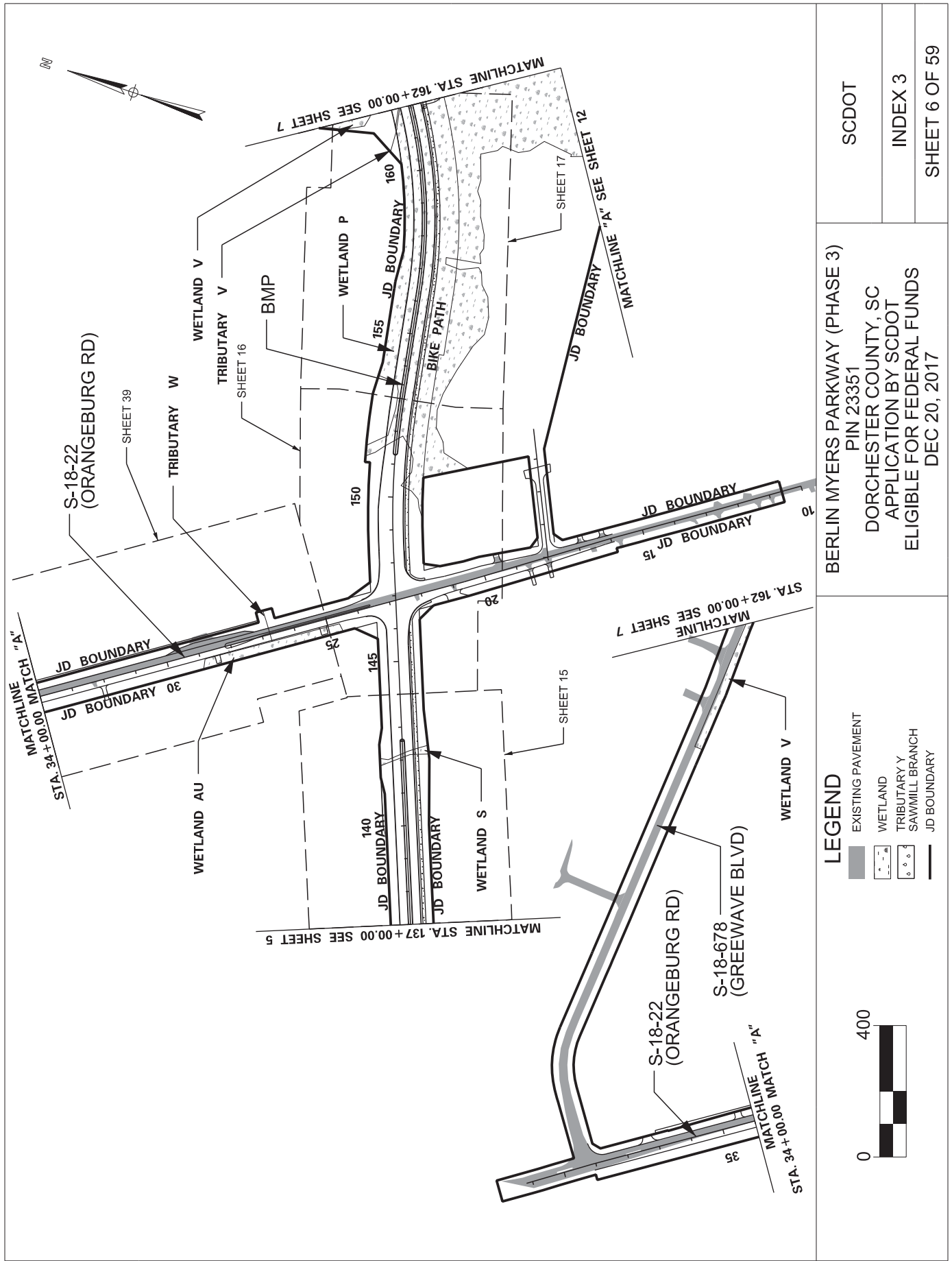
BERLIN MYERS PARKWAY (PHASE 3)
 PIN 23351
 DORCHESTER COUNTY, SC
 APPLICATION BY SCDOT
 ELIGIBLE FOR FEDERAL FUNDS
 DEC 20, 2017

SCDOT

INDEX 1

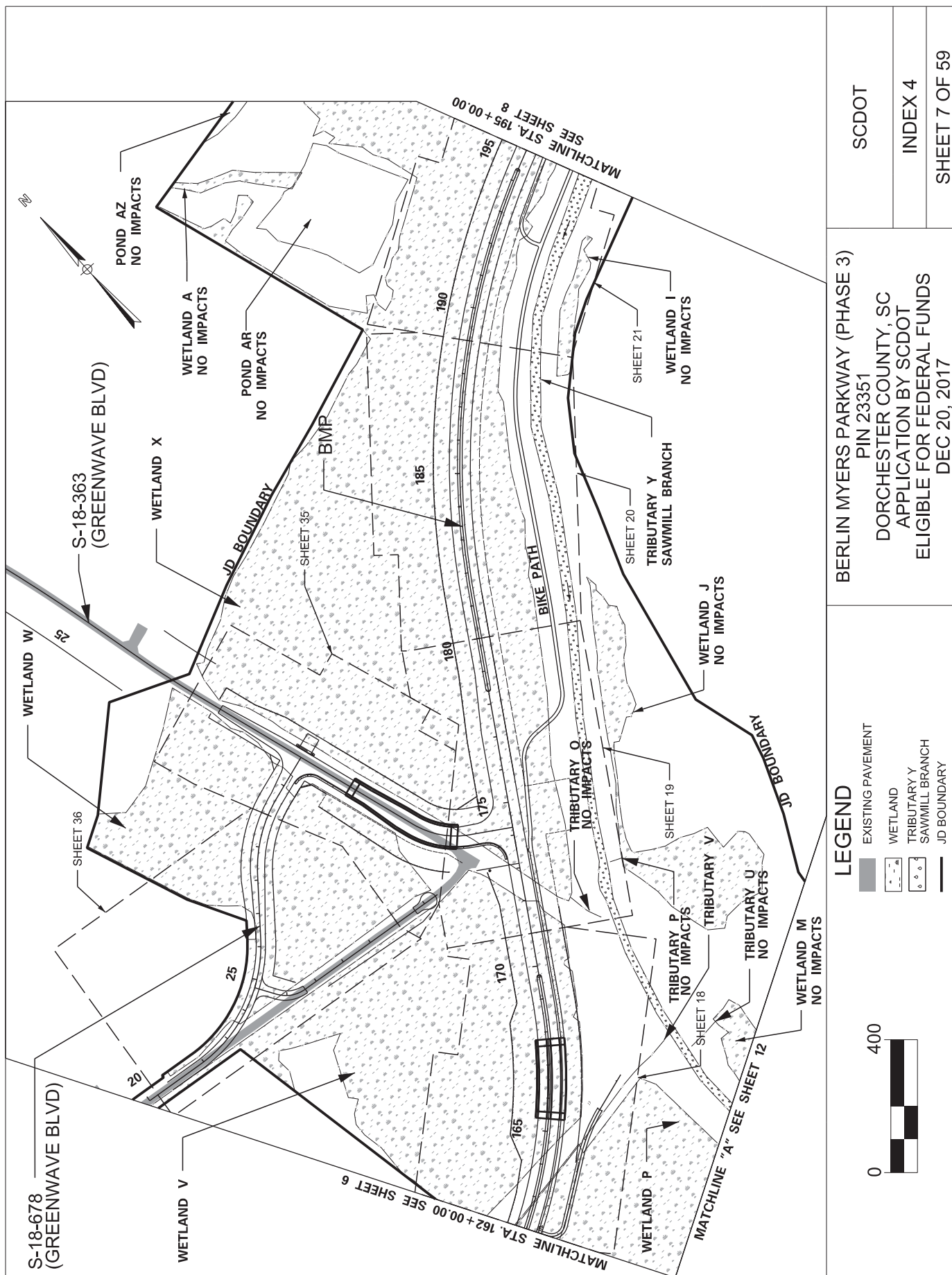
SHEET 4 OF 59

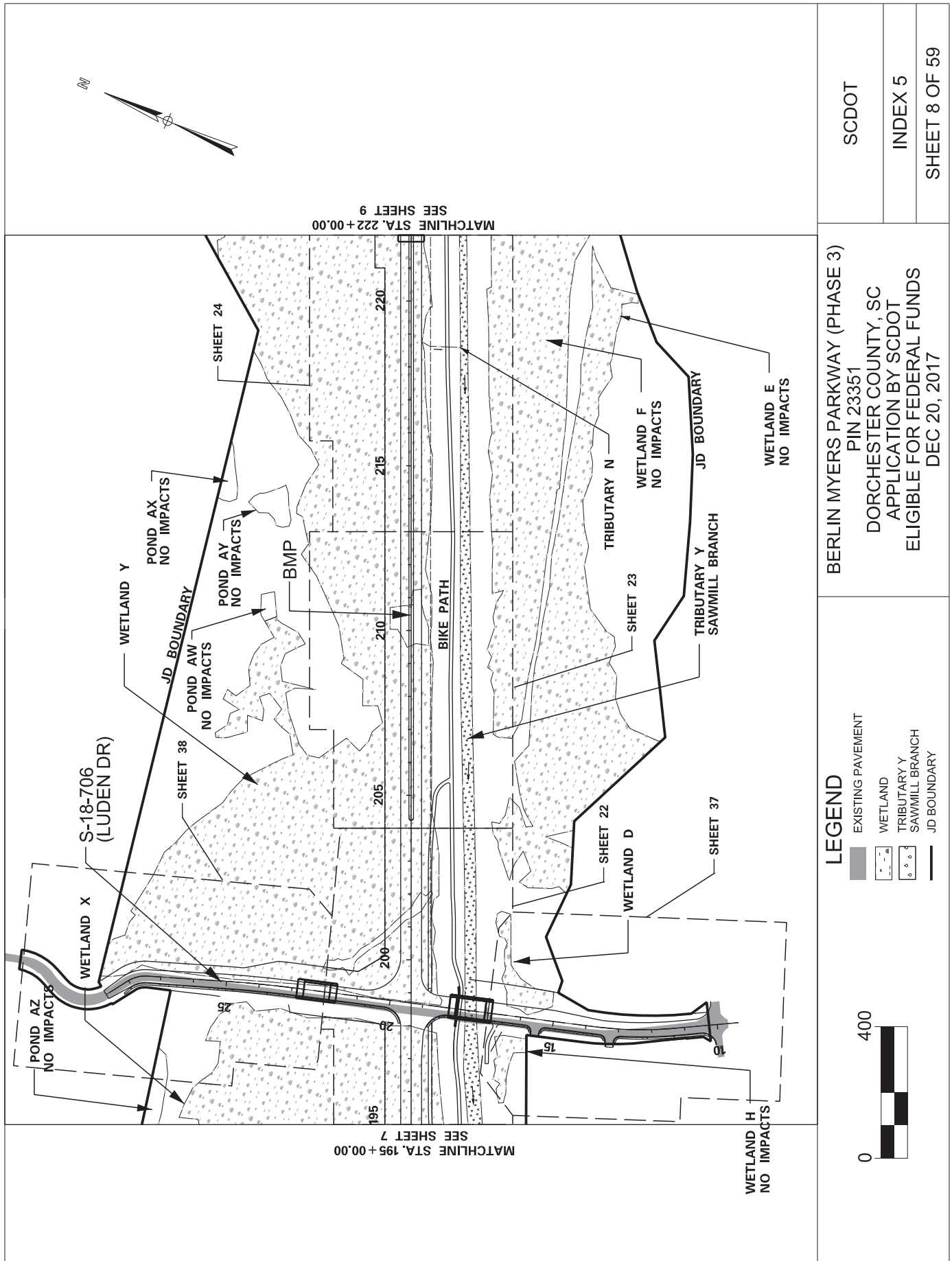




BERLIN MYERS PARKWAY (PHASE 3)
 PIN 23351
 DORCHESTER COUNTY, SC
 APPLICATION BY SCDOT
 ELIGIBLE FOR FEDERAL FUNDS
 DEC 20, 2017

SCDOT
 INDEX 3
 SHEET 6 OF 59





LEGEND

- EXISTING PAVEMENT
- WETLAND
- TRIBUTARY Y
- SAWMILL BRANCH
- JD BOUNDARY



BERLIN MYERS PARKWAY (PHASE 3)

PIN 23351

DORCHESTER COUNTY, SC

APPLICATION BY SCDOT

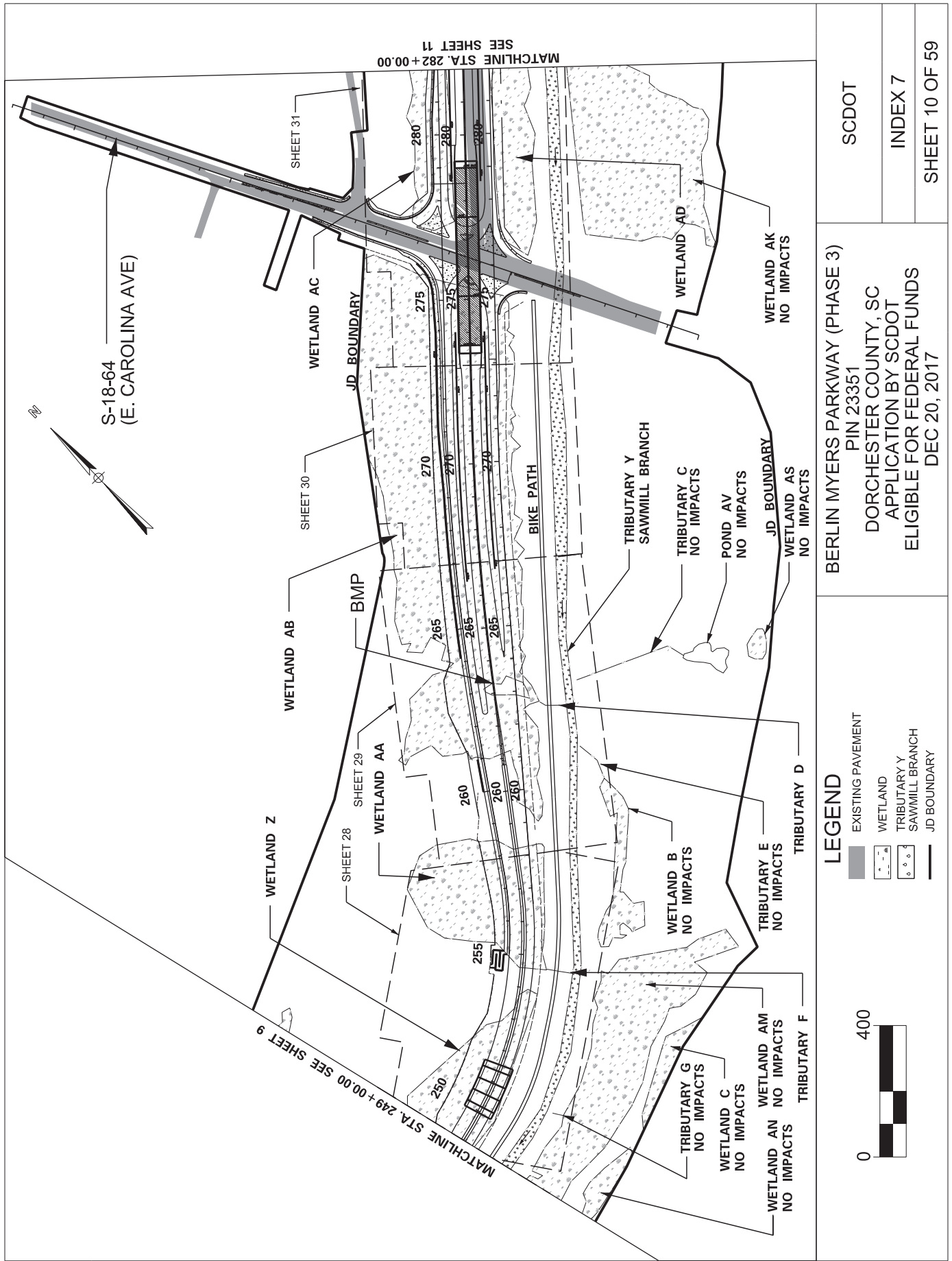
ELIGIBLE FOR FEDERAL FUNDS

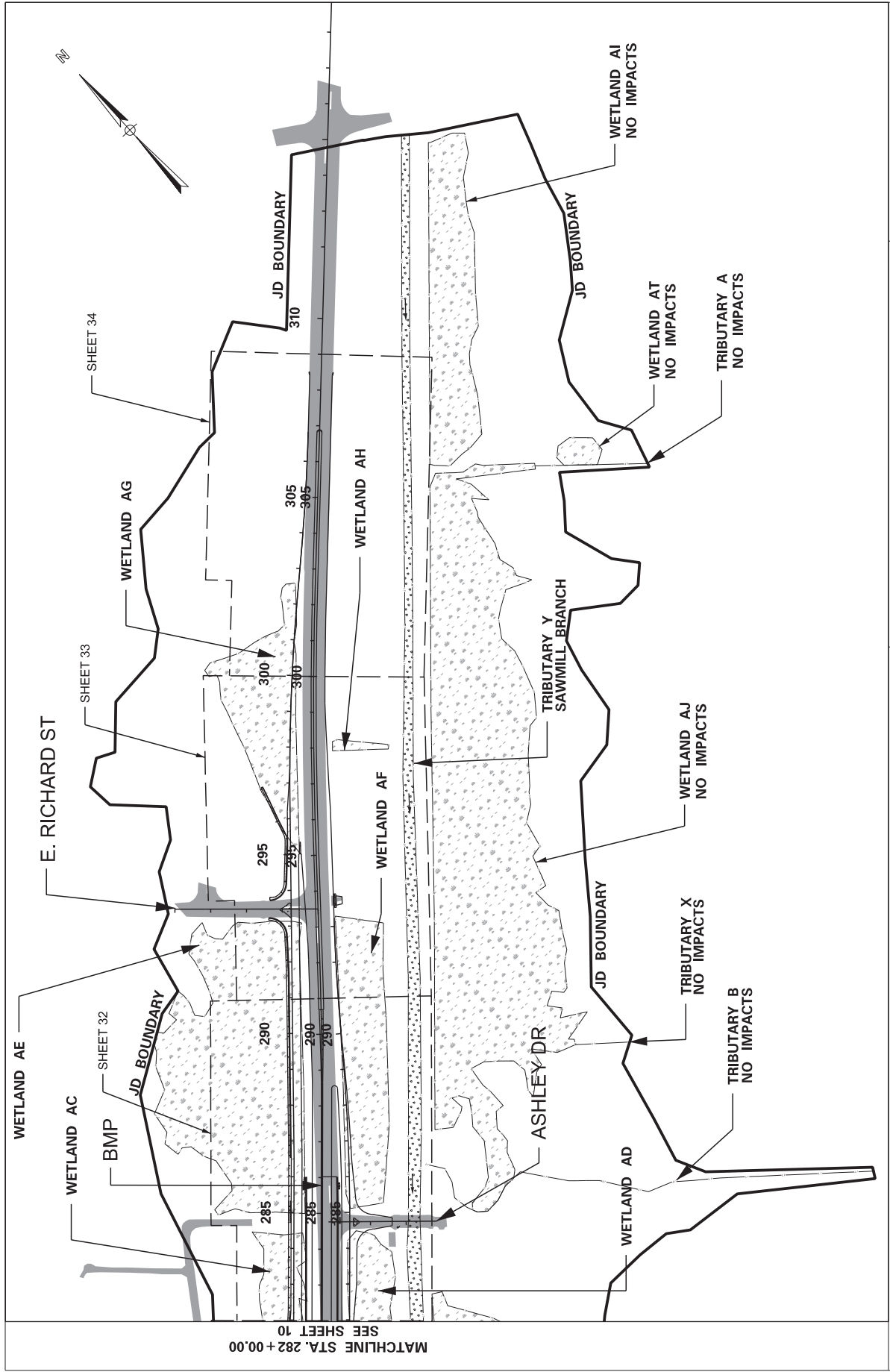
DEC 20, 2017

SCDOT

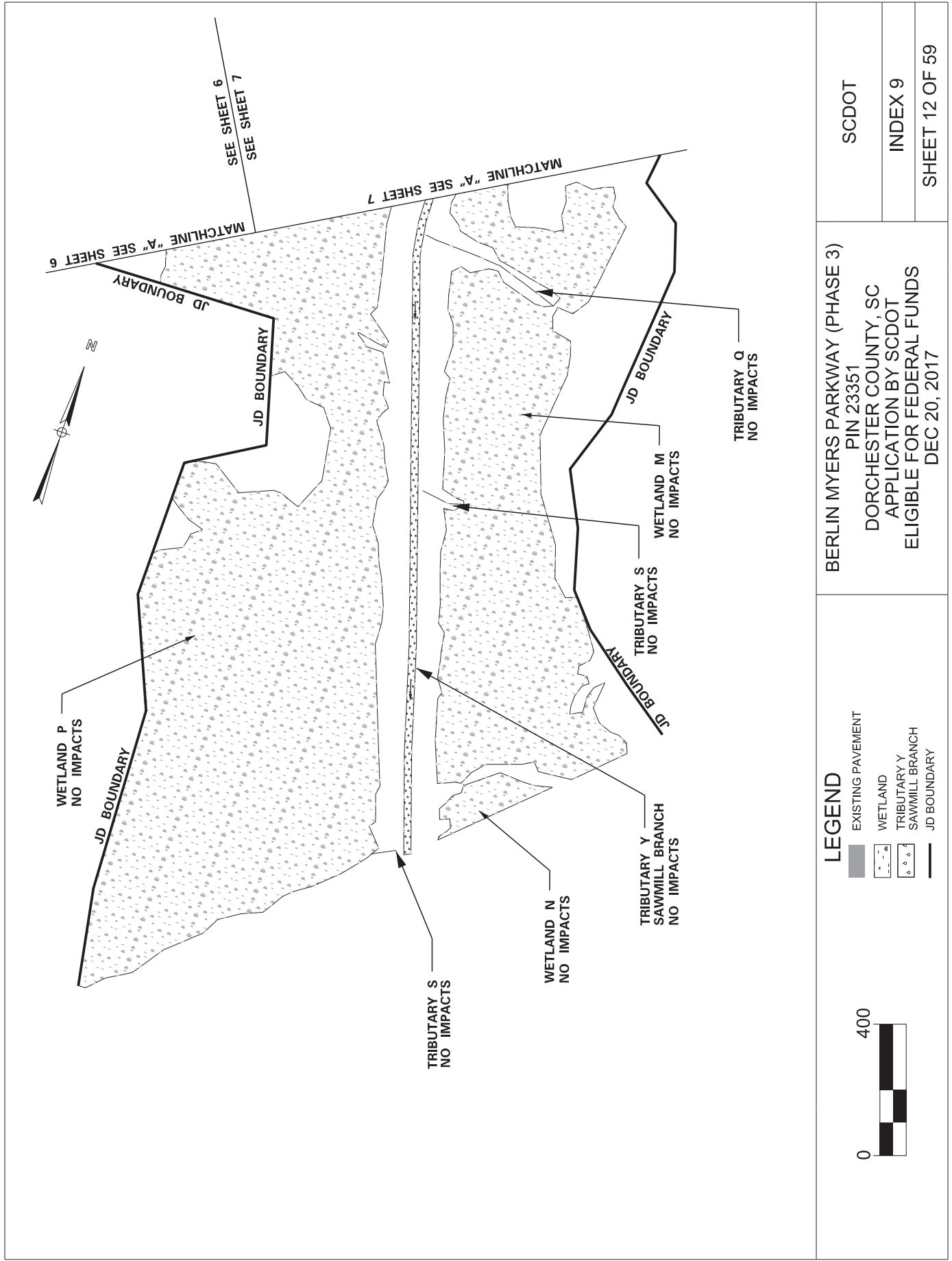
INDEX 5

SHEET 8 OF 59



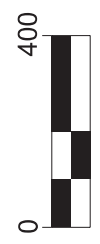


<p>LEGEND</p> <ul style="list-style-type: none"> EXISTING PAVEMENT WETLAND TRIBUTARY Y SAWMILL BRANCH JD BOUNDARY 	<p>BERLIN MYERS PARKWAY (PHASE 3)</p> <p>PIN 23351</p> <p>DORCHESTER COUNTY, SC</p> <p>APPLICATION BY SCDOT</p> <p>ELIGIBLE FOR FEDERAL FUNDS</p> <p>DEC 20, 2017</p>	<p>SCDOT</p> <p>INDEX 8</p> <p>SHEET 11 OF 59</p>
--	---	---



LEGEND

- EXISTING PAVEMENT
- WETLAND
- TRIBUTARY Y
- SAWMILL BRANCH
- JD BOUNDARY



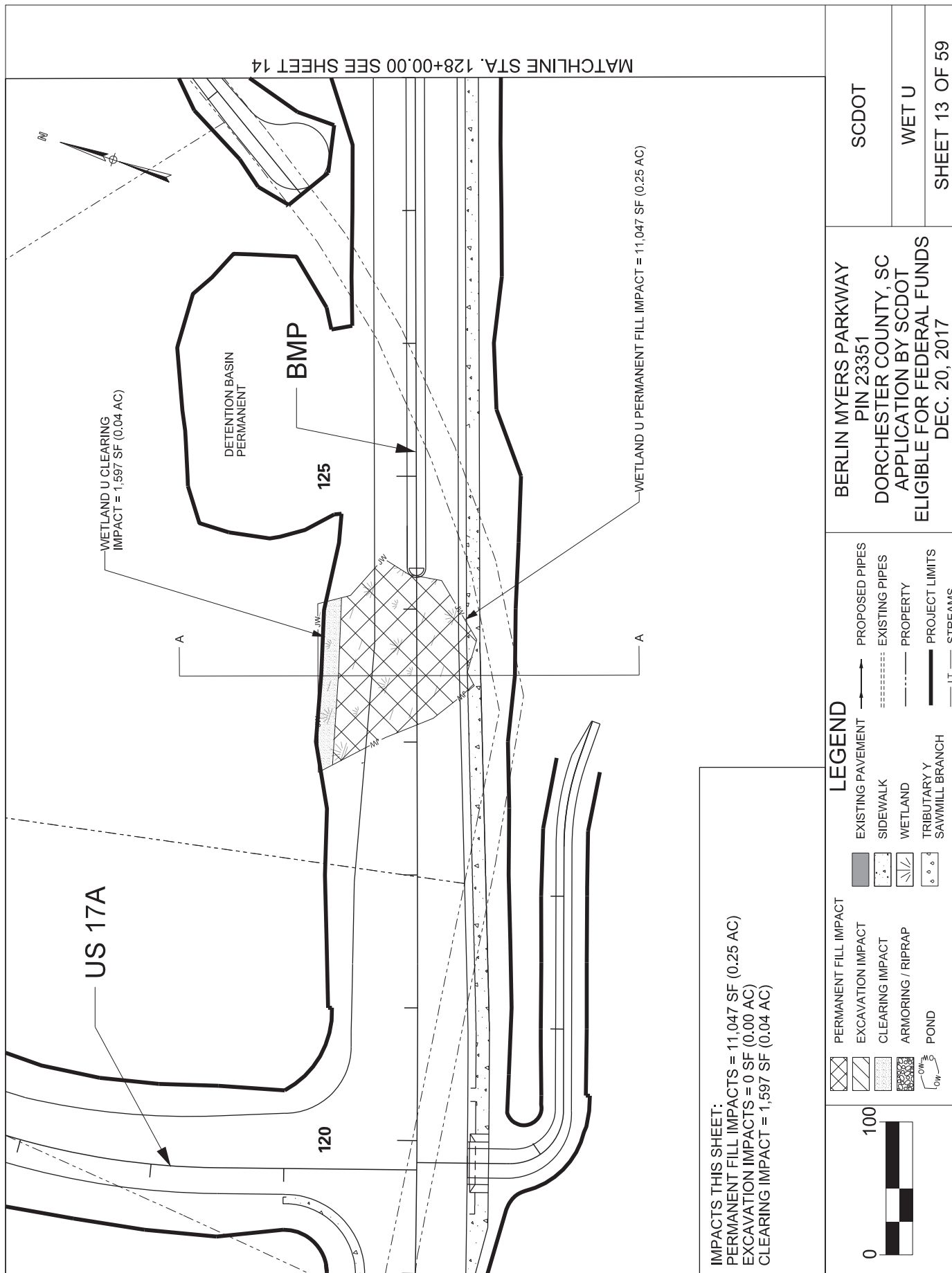
BERLIN MYERS PARKWAY (PHASE 3)
PIN 23351

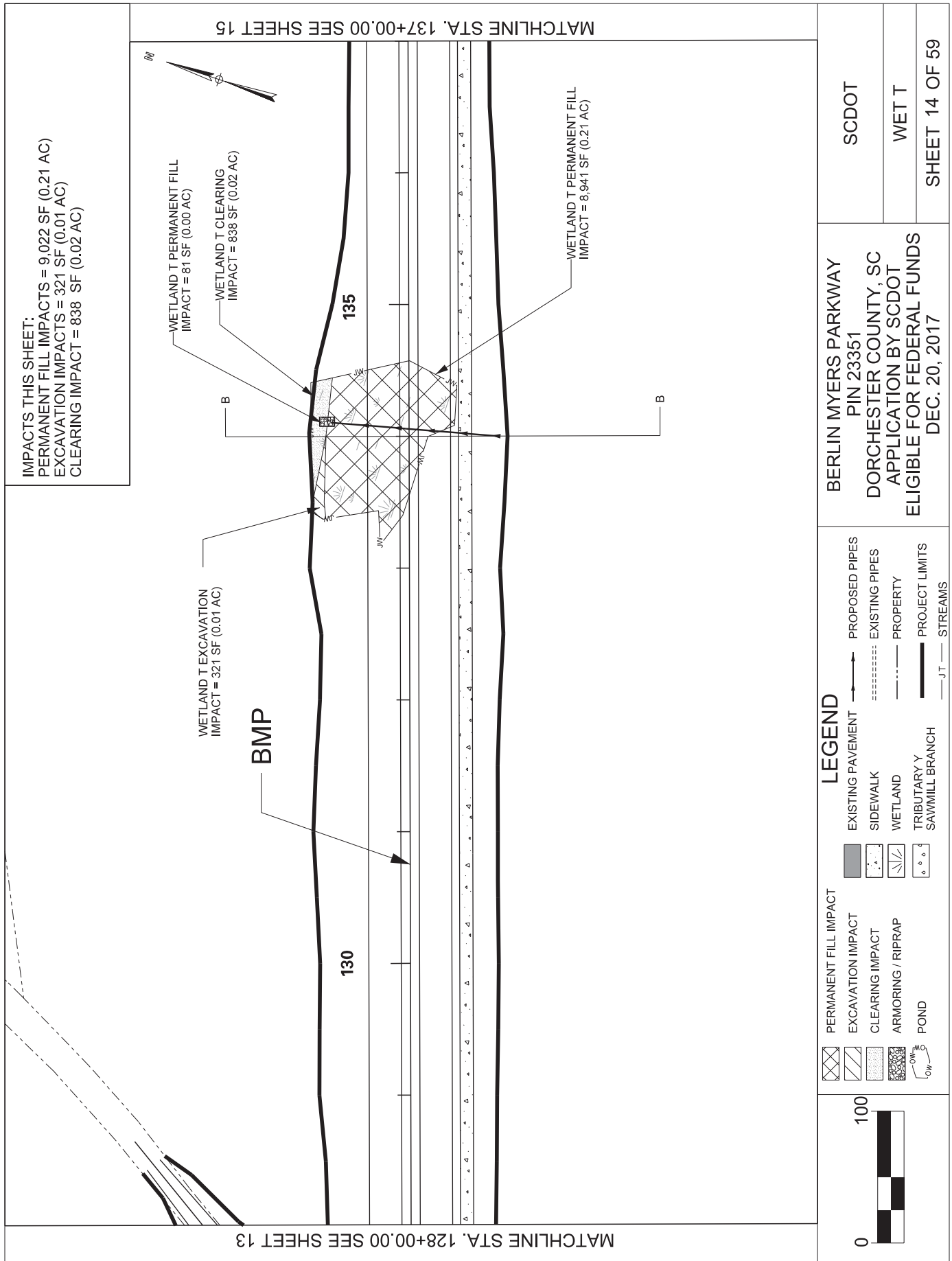
DORCHESTER COUNTY, SC
APPLICATION BY SCDOT
ELIGIBLE FOR FEDERAL FUNDS
DEC 20, 2017

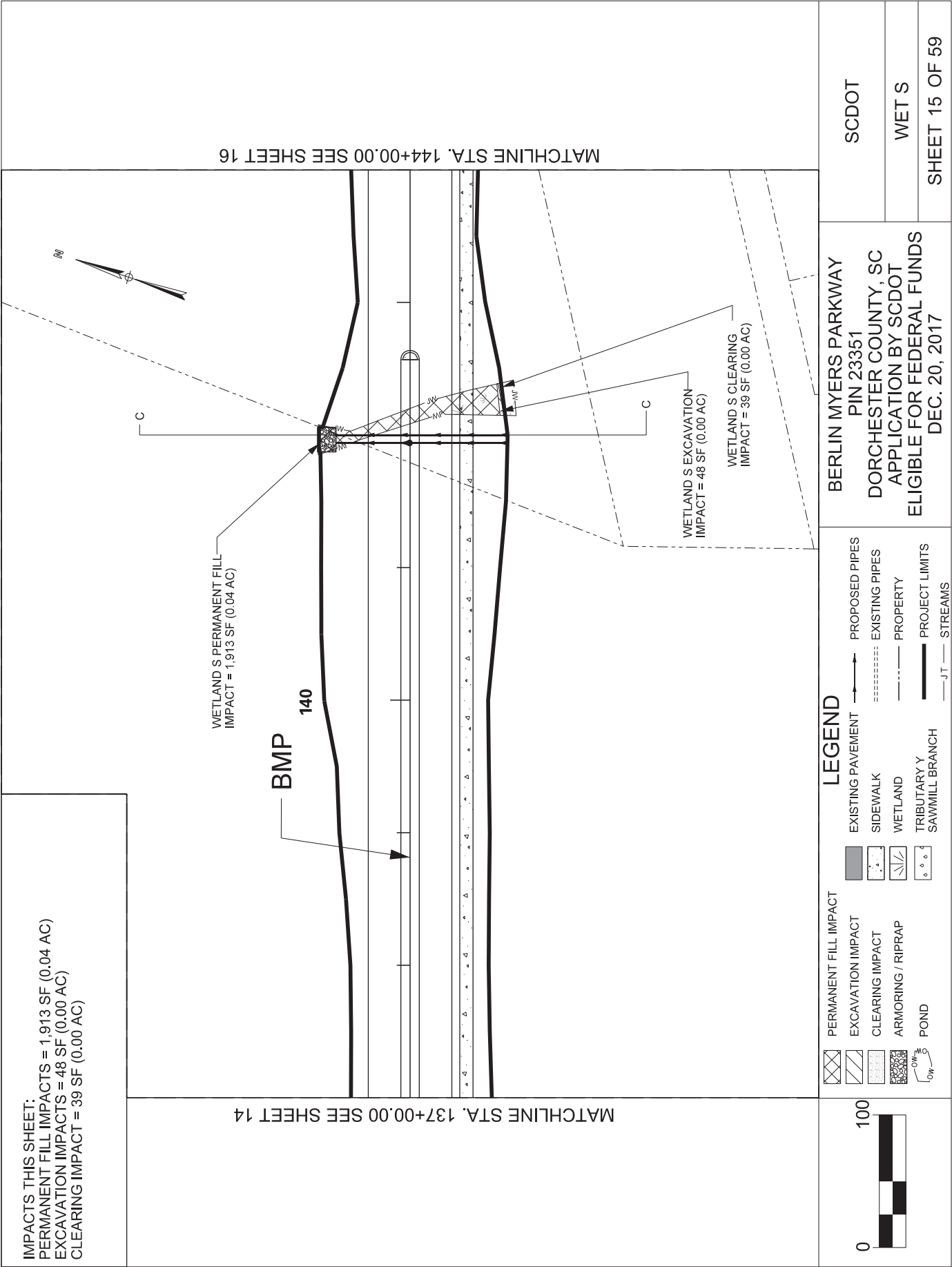
SCDOT

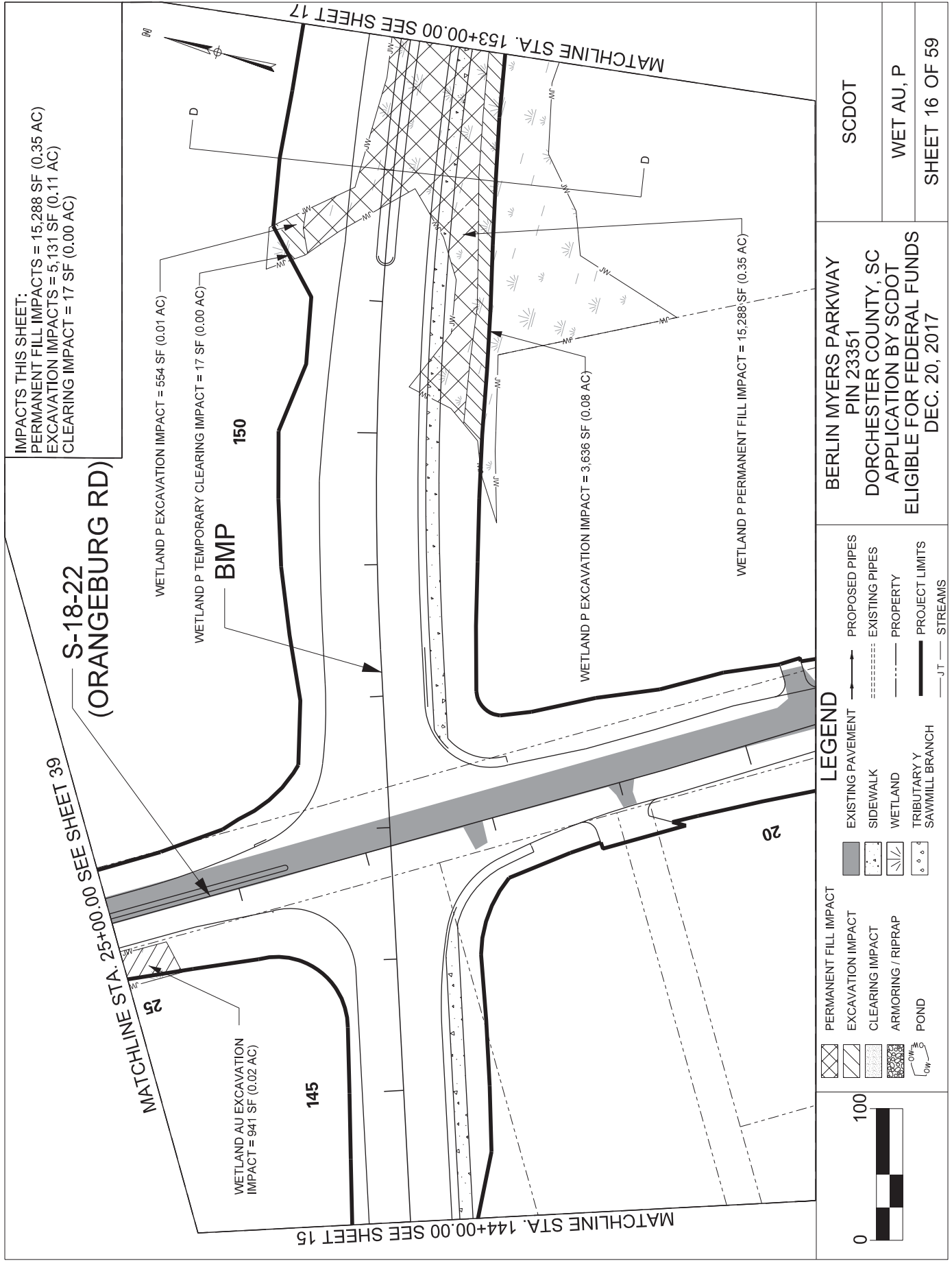
INDEX 9

SHEET 12 OF 59







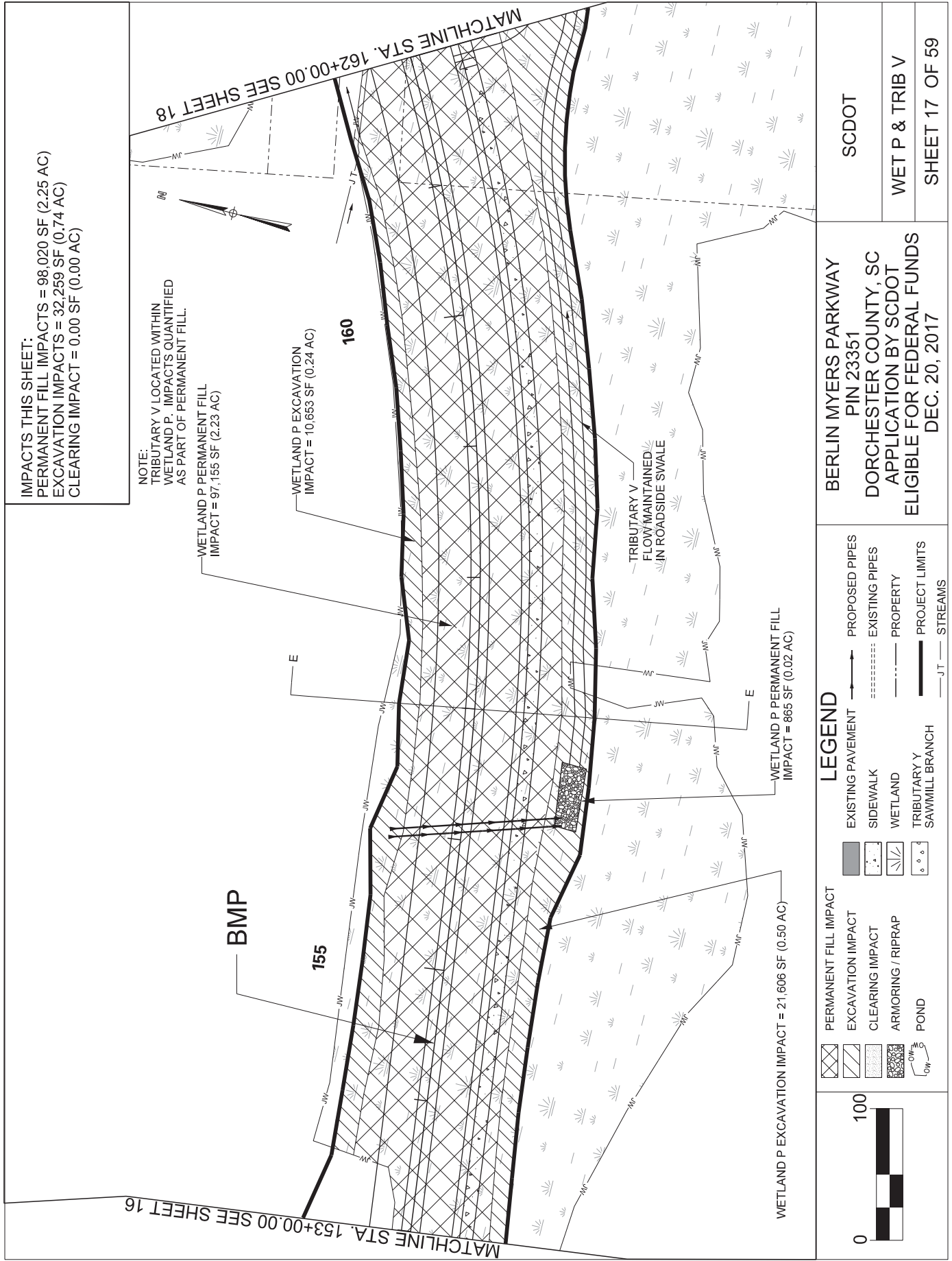


SCDOT

BERLIN MYERS PARKWAY
PIN 23351
DORCHESTER COUNTY, SC
APPLICATION BY SCDOT
ELIGIBLE FOR FEDERAL FUNDS
DEC. 20, 2017

WET AU, P

SHEET 16 OF 59

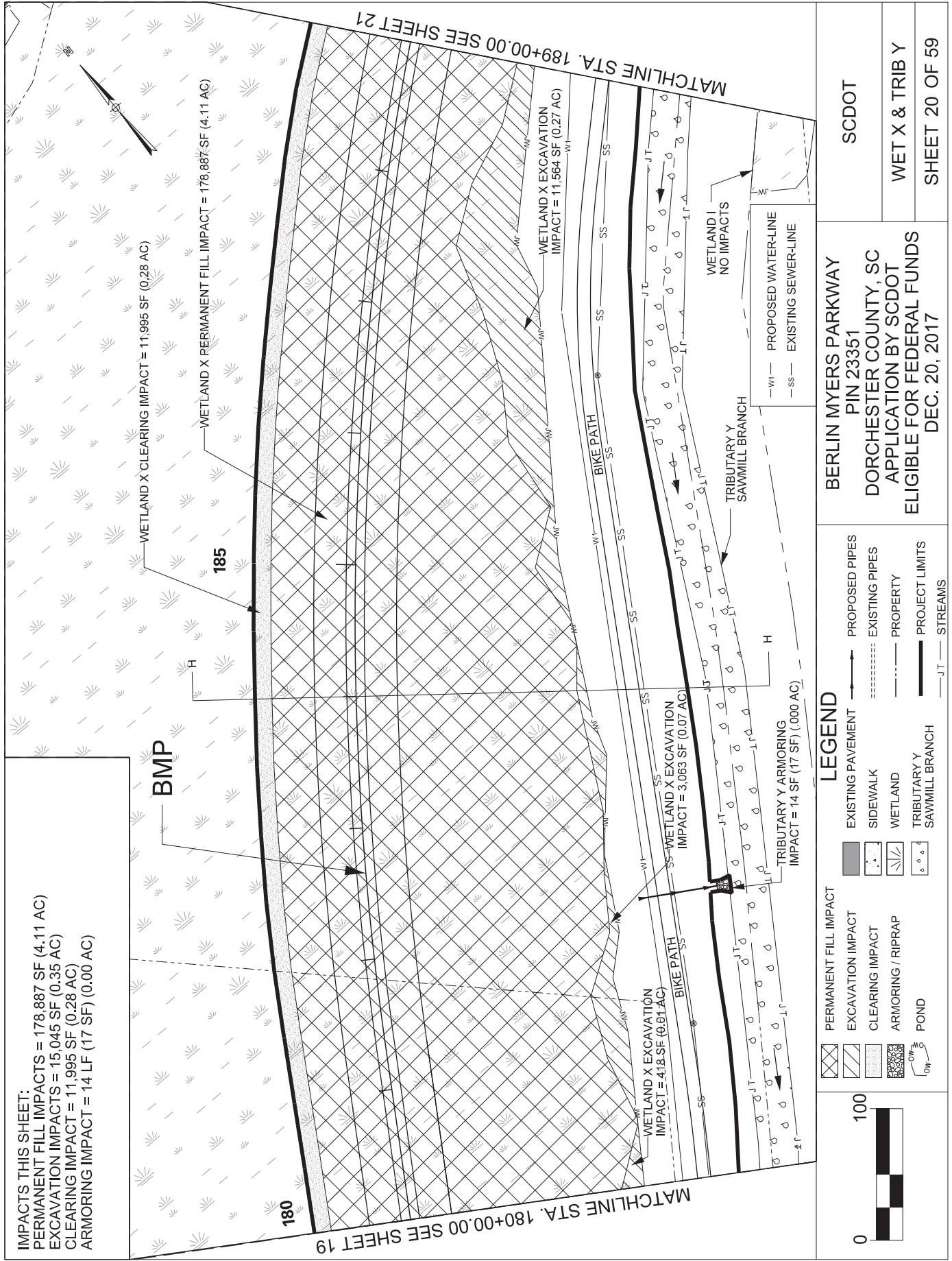


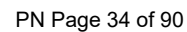
BERLIN MYERS PARKWAY
 PIN 23351
 DORCHESTER COUNTY, SC
 APPLICATION BY SCDOT
 ELIGIBLE FOR FEDERAL FUNDS
 DEC. 20, 2017

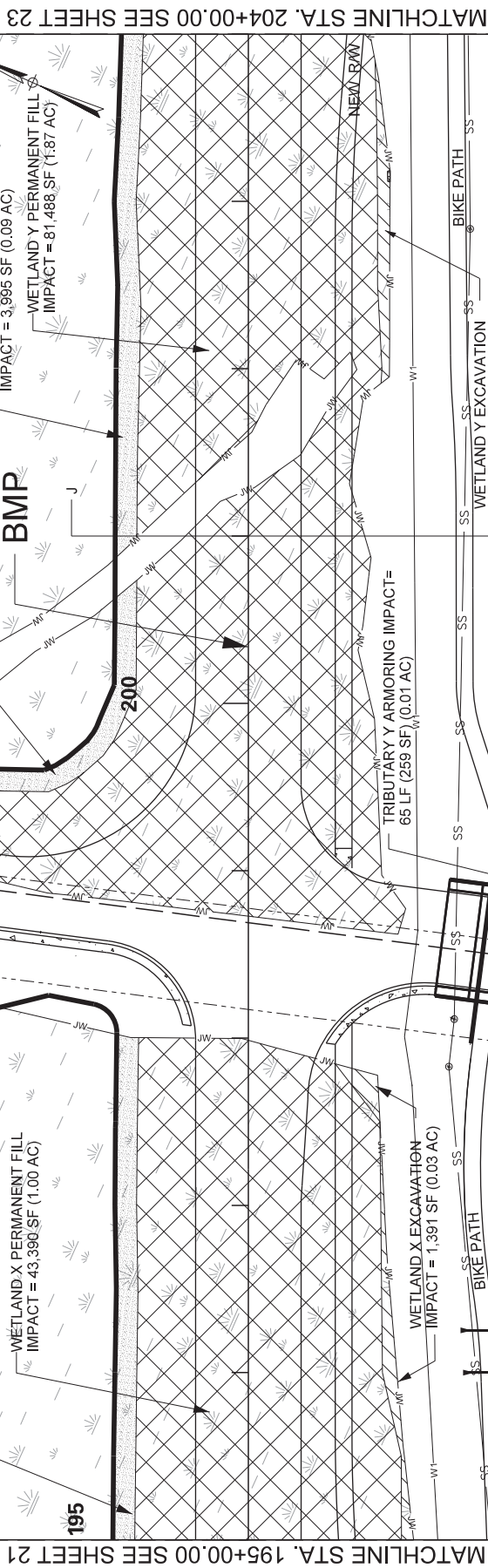
SCDOT

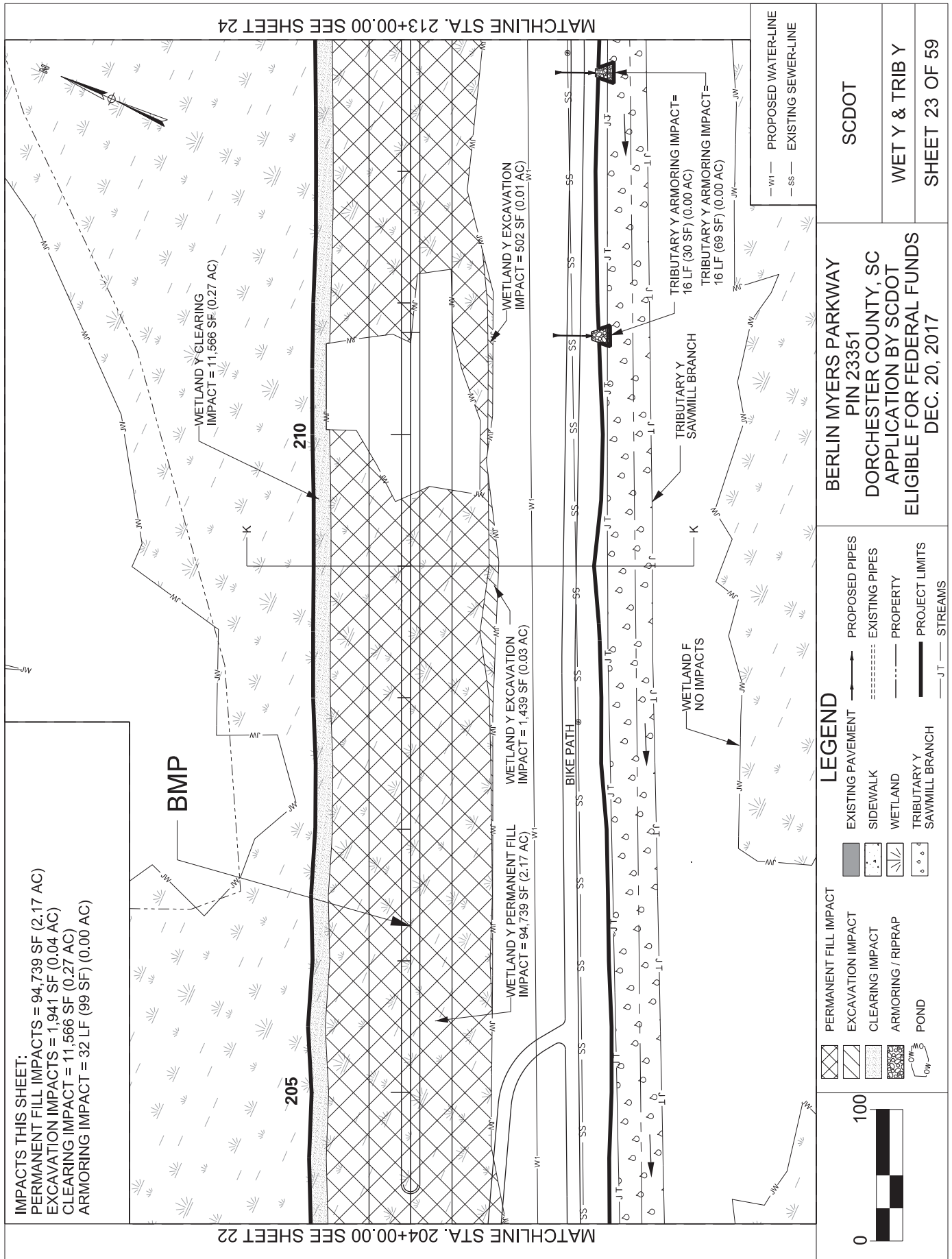
WET P & TRIB V

SHEET 17 OF 59



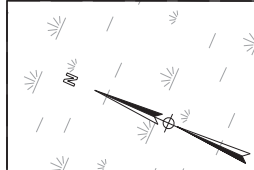






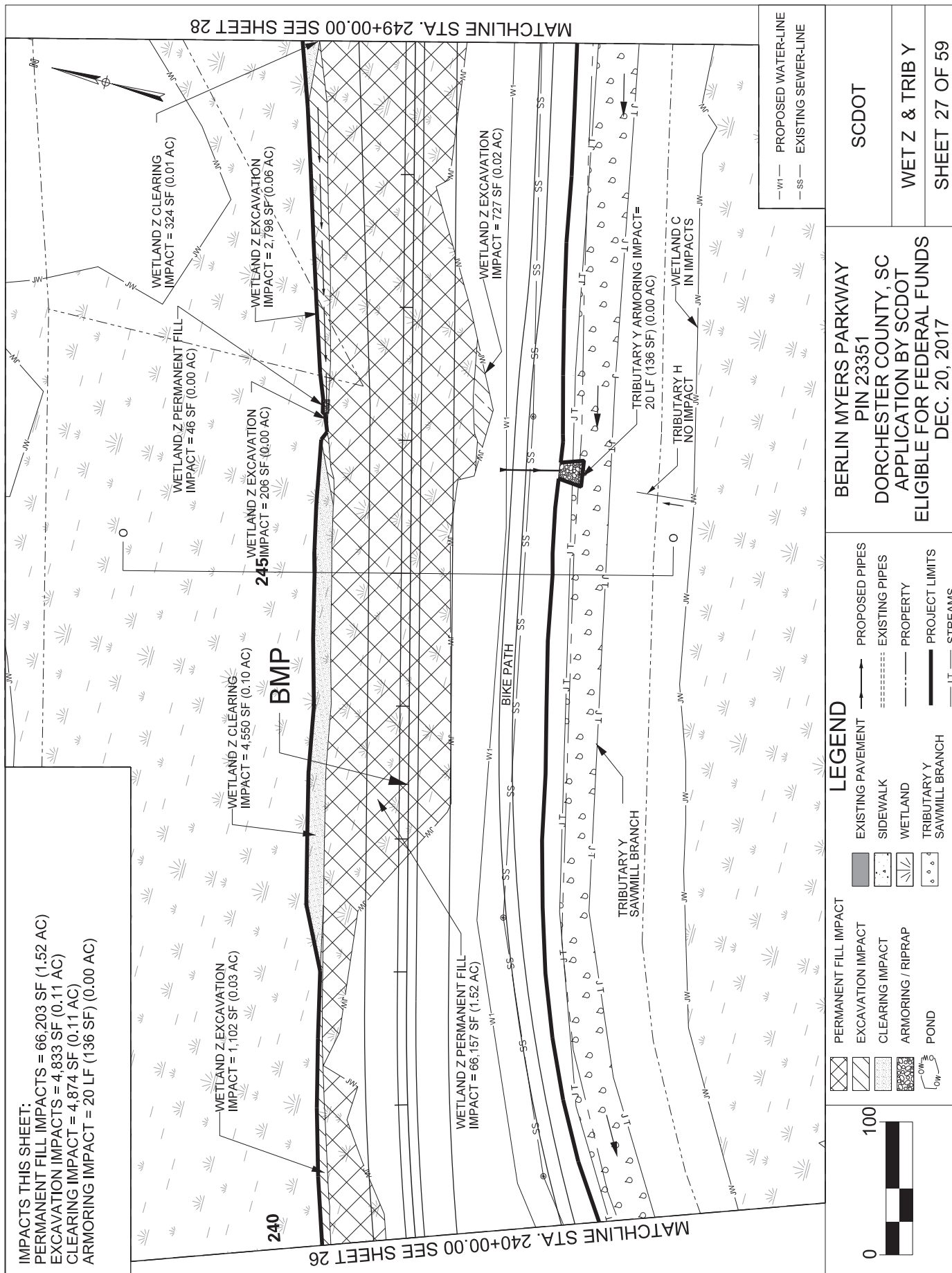
IMPACTS THIS SHEET:

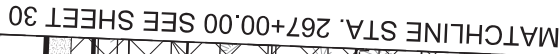
MATCHLINE STA. 222+00.00 SEE SHEET 25

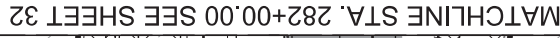


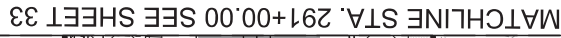
— w1 — PROPOSED WATER-LINE
— ss — EXISTING SEWER-LINE

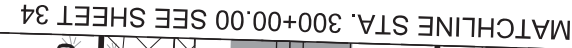


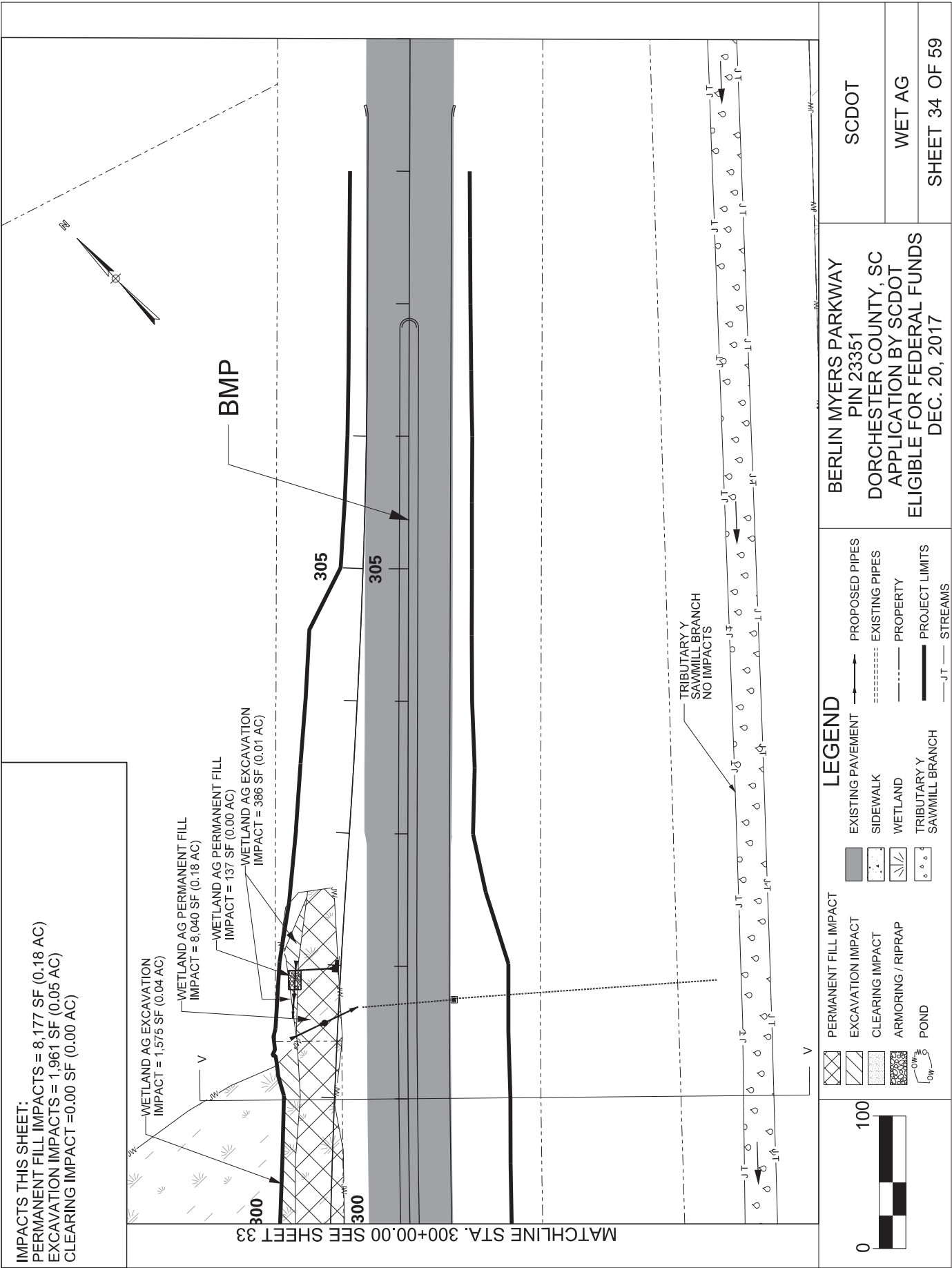


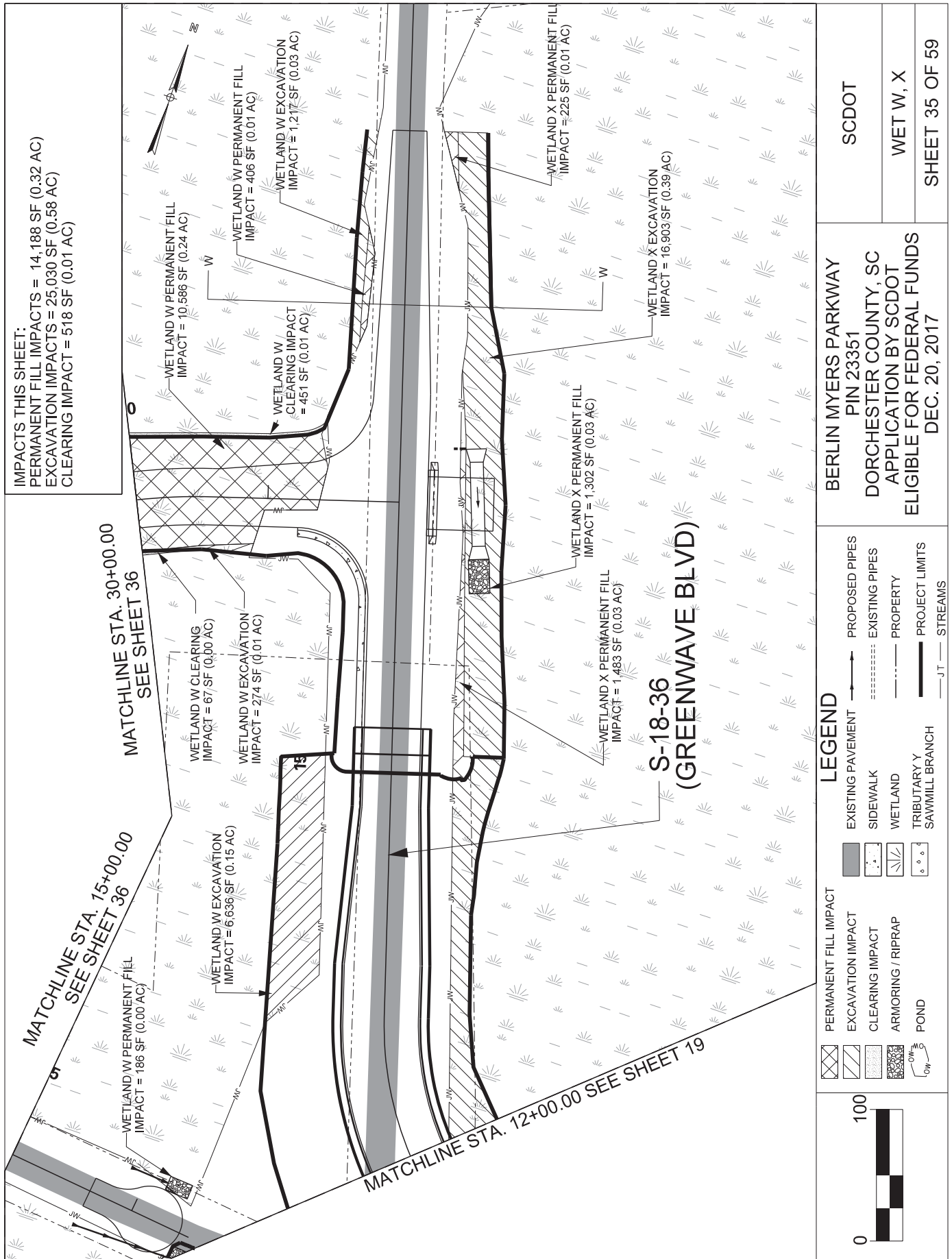


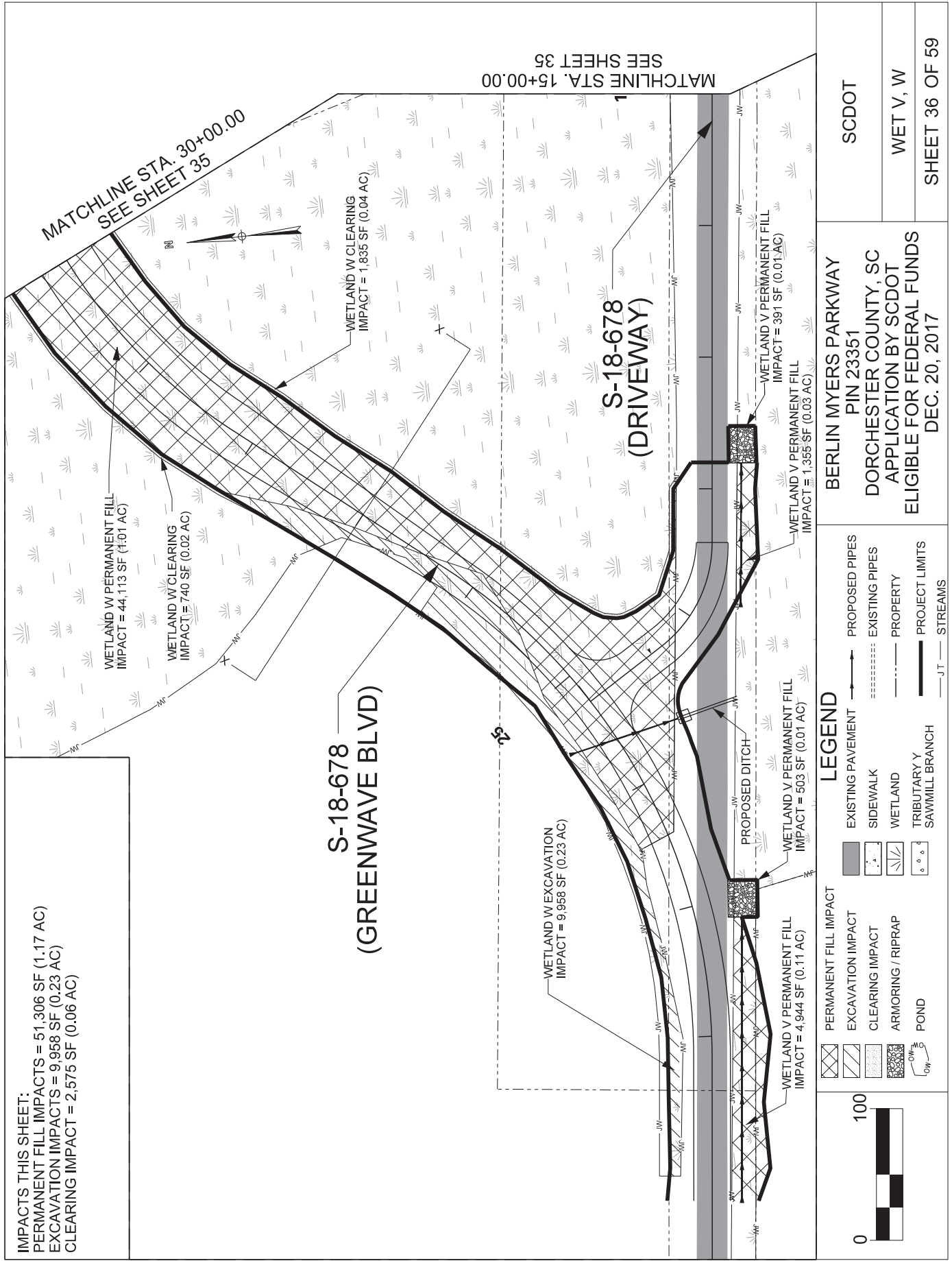


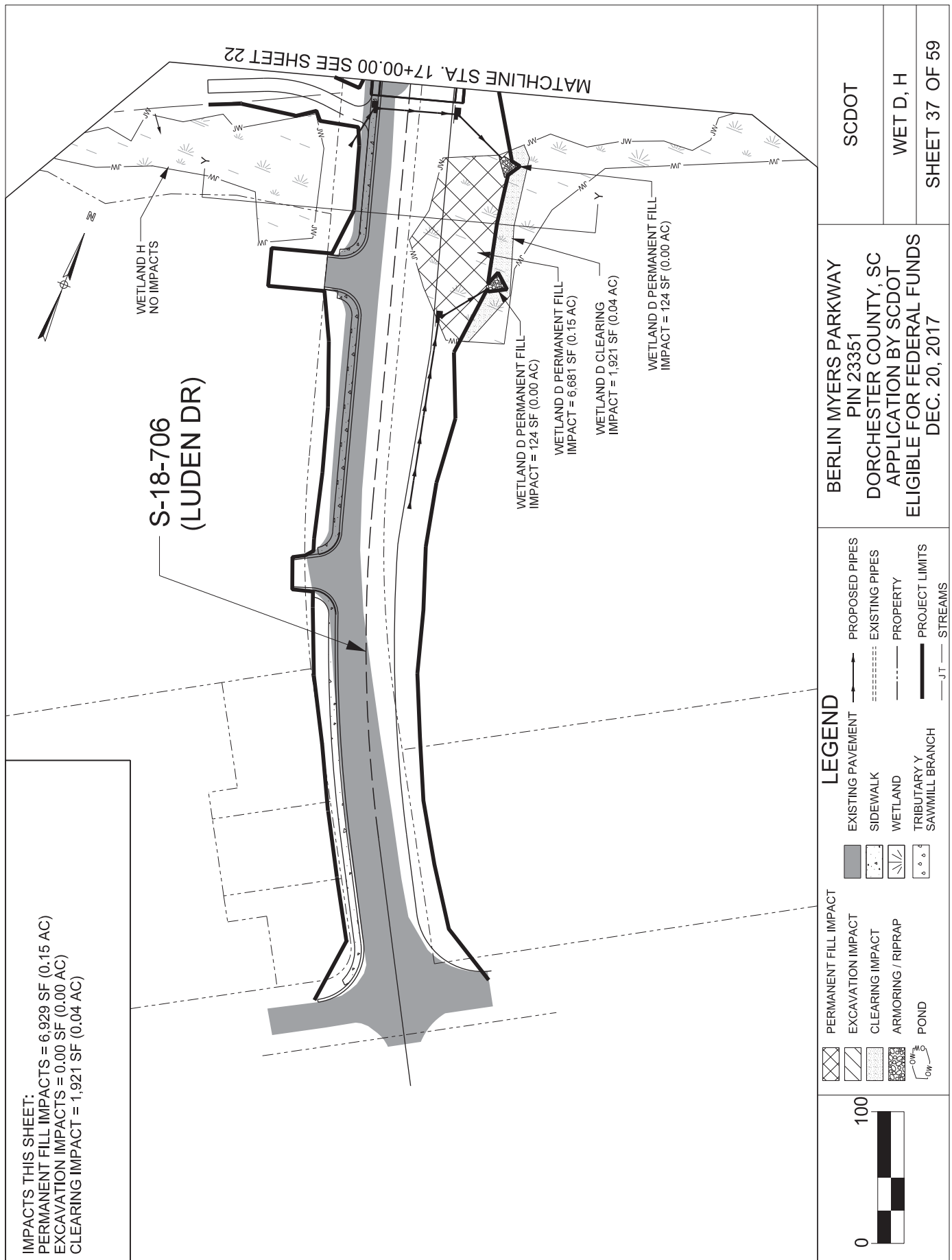


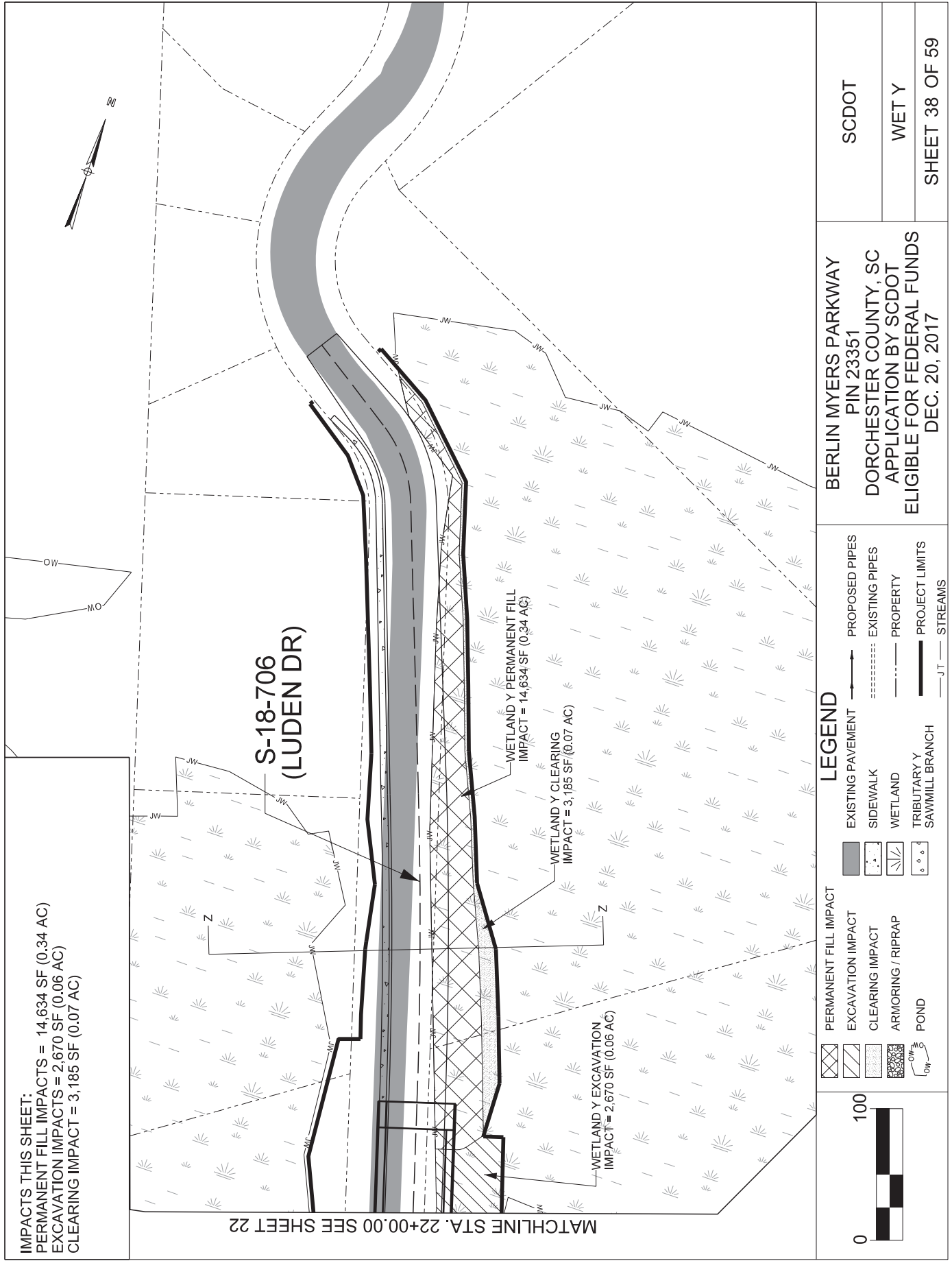










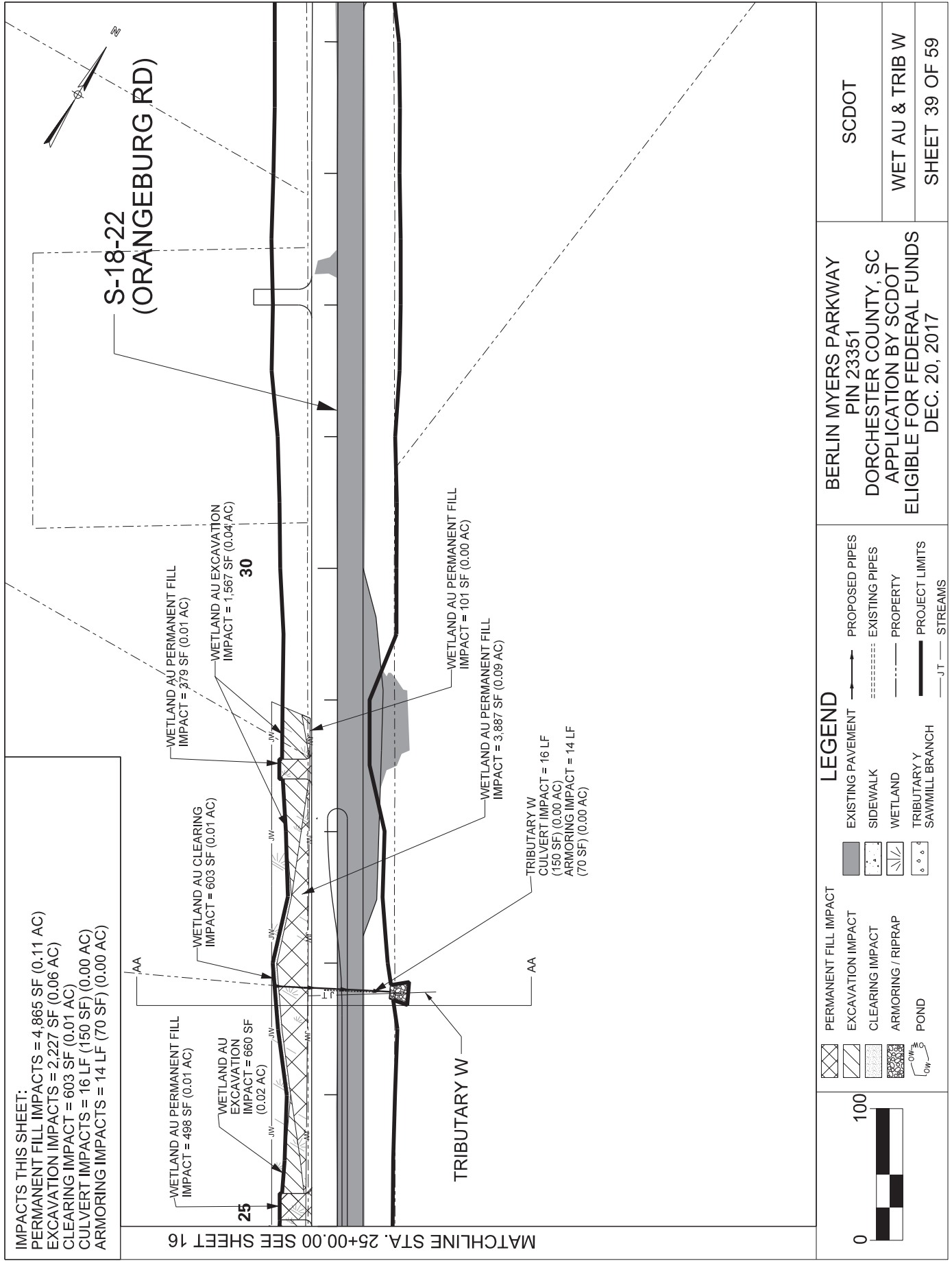


BERLIN MYERS PARKWAY
 PIN 23351
 DORCHESTER COUNTY, SC
 APPLICATION BY SCDOT
 ELIGIBLE FOR FEDERAL FUNDS
 DEC. 20, 2017

SCDOT

WET Y

SHEET 38 OF 59

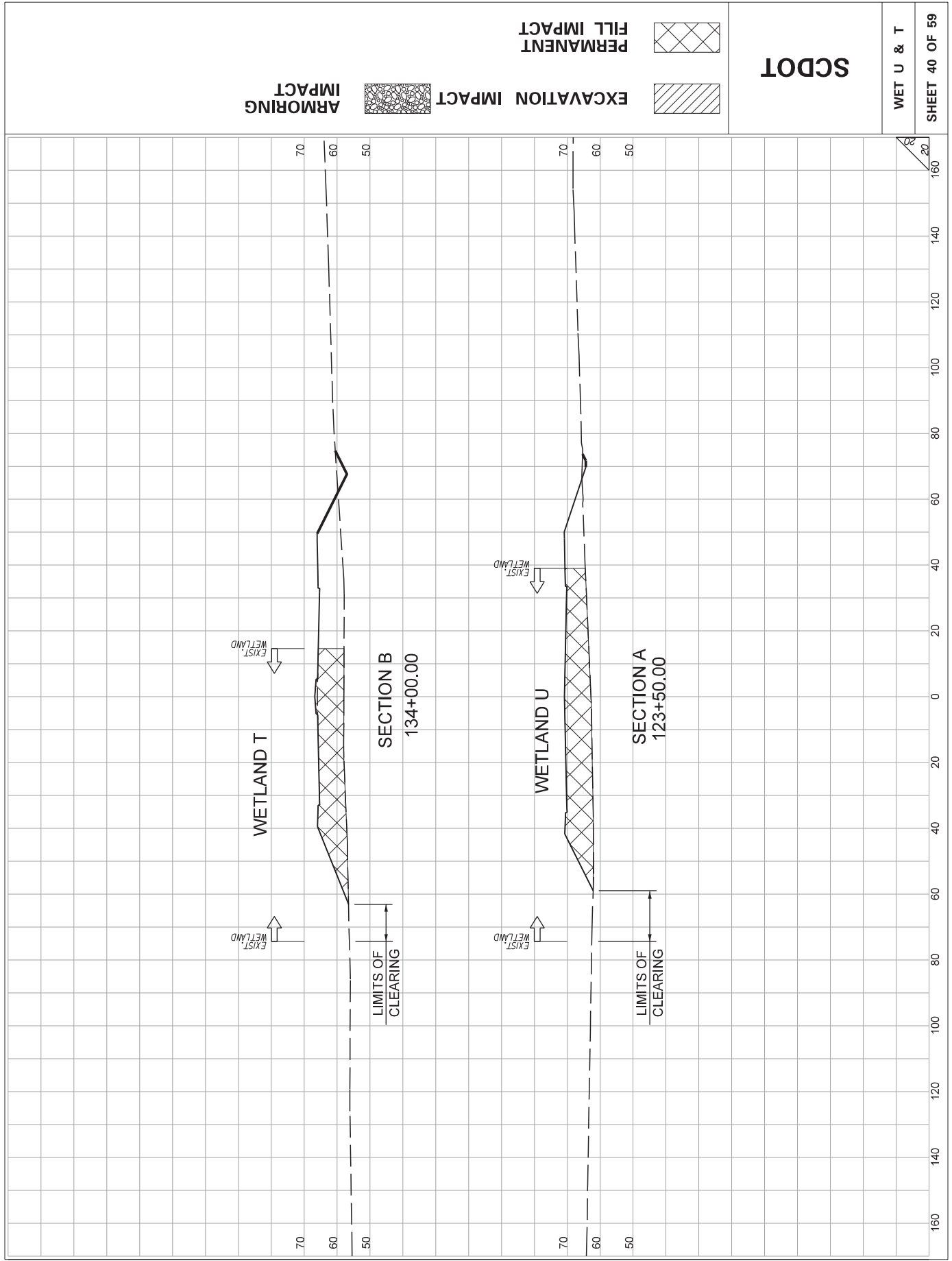


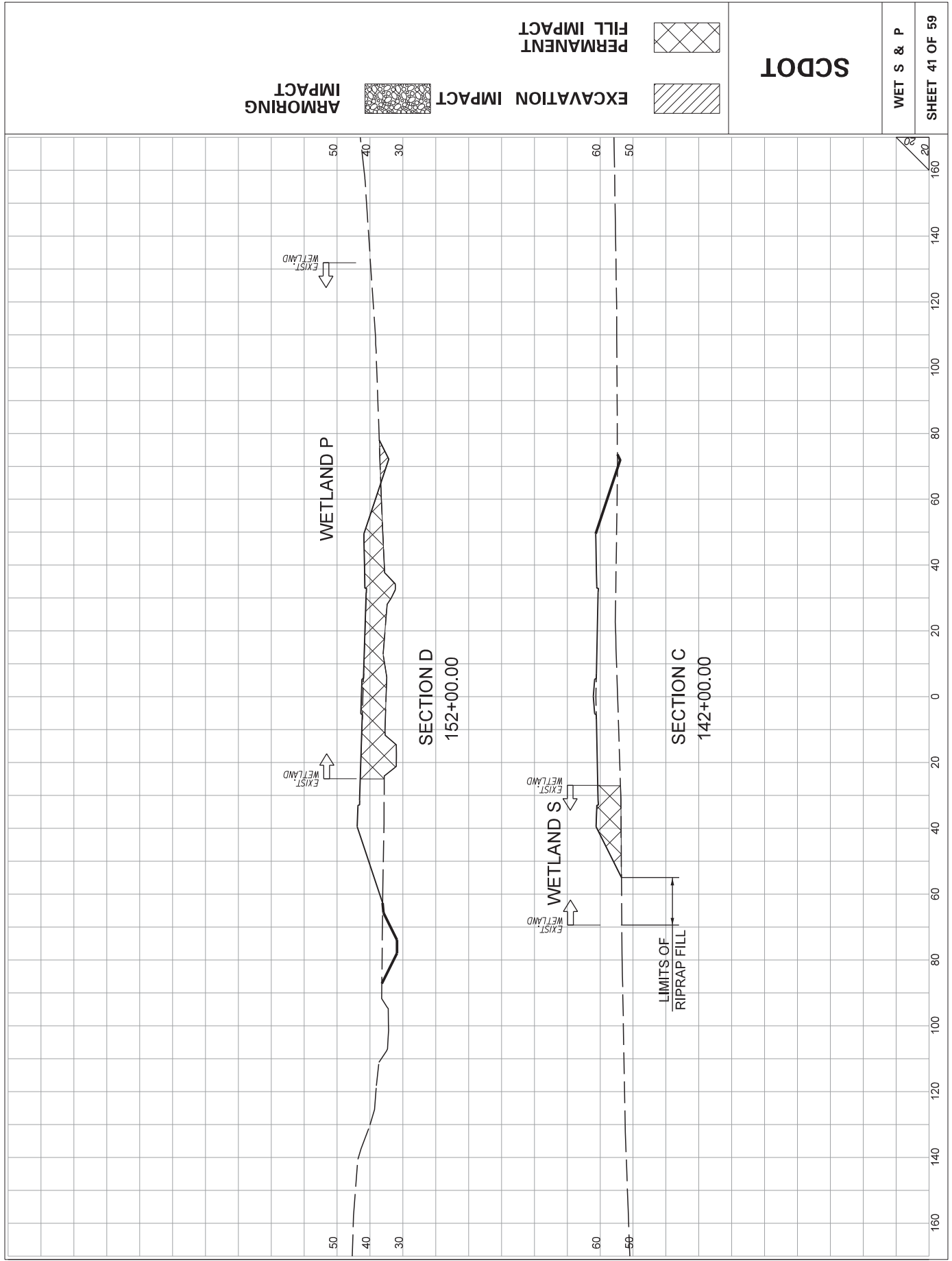
BERLIN MYERS PARKWAY
 PIN 23351
 DORCHESTER COUNTY, SC
 APPLICATION BY SCDOT
 ELIGIBLE FOR FEDERAL FUNDS
 DEC. 20, 2017

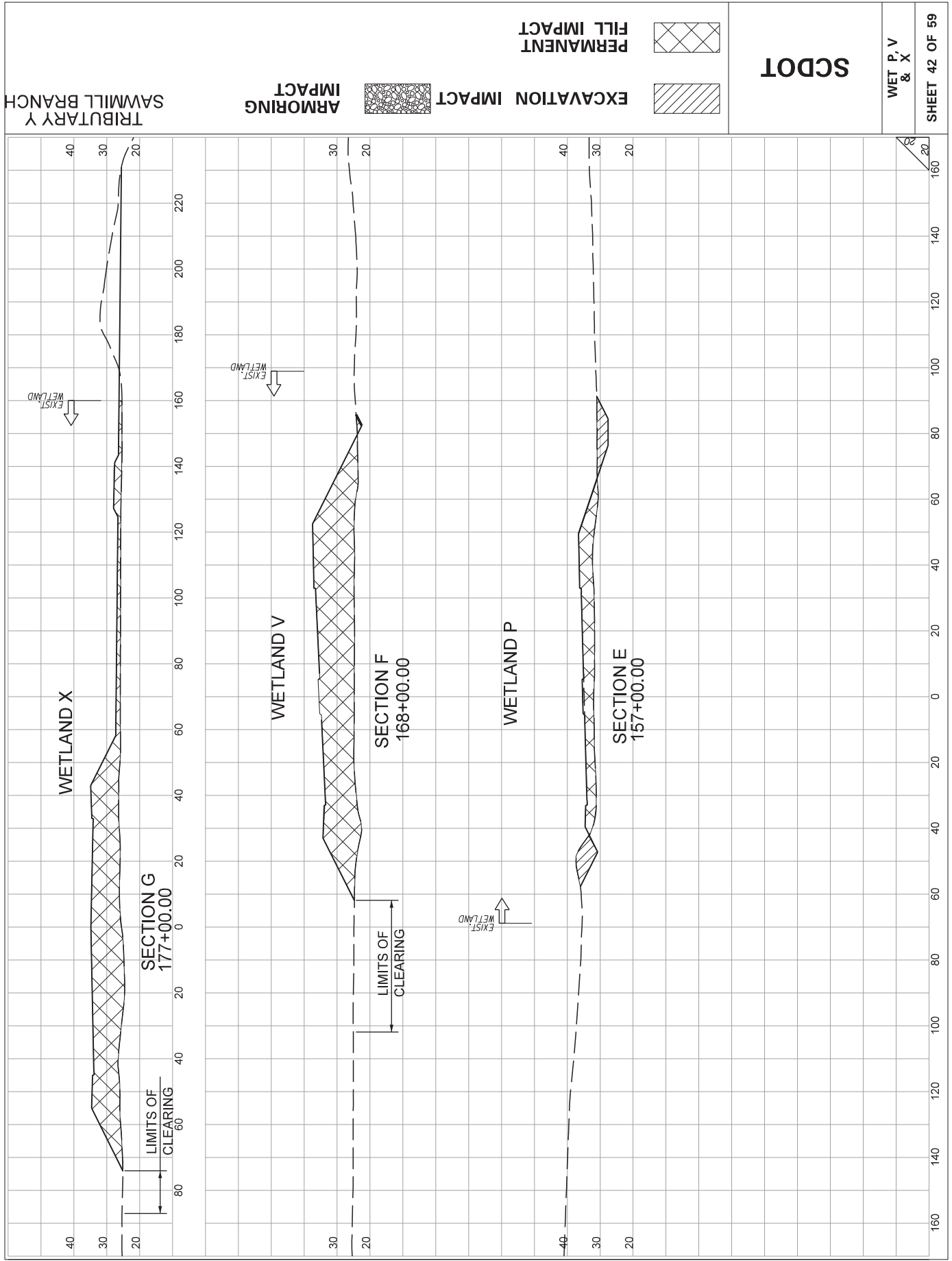
SCDOT

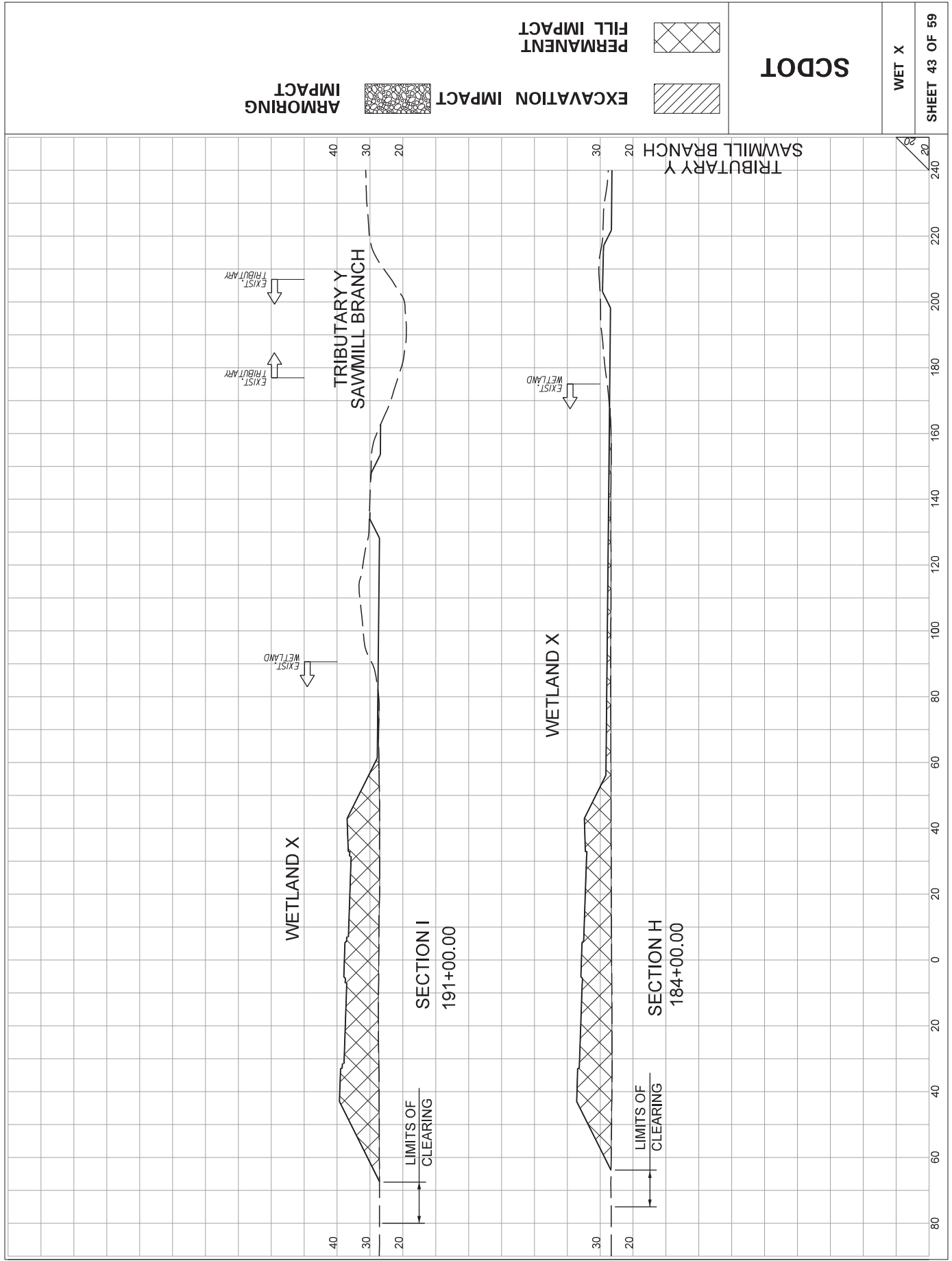
WET AU & TRIB W

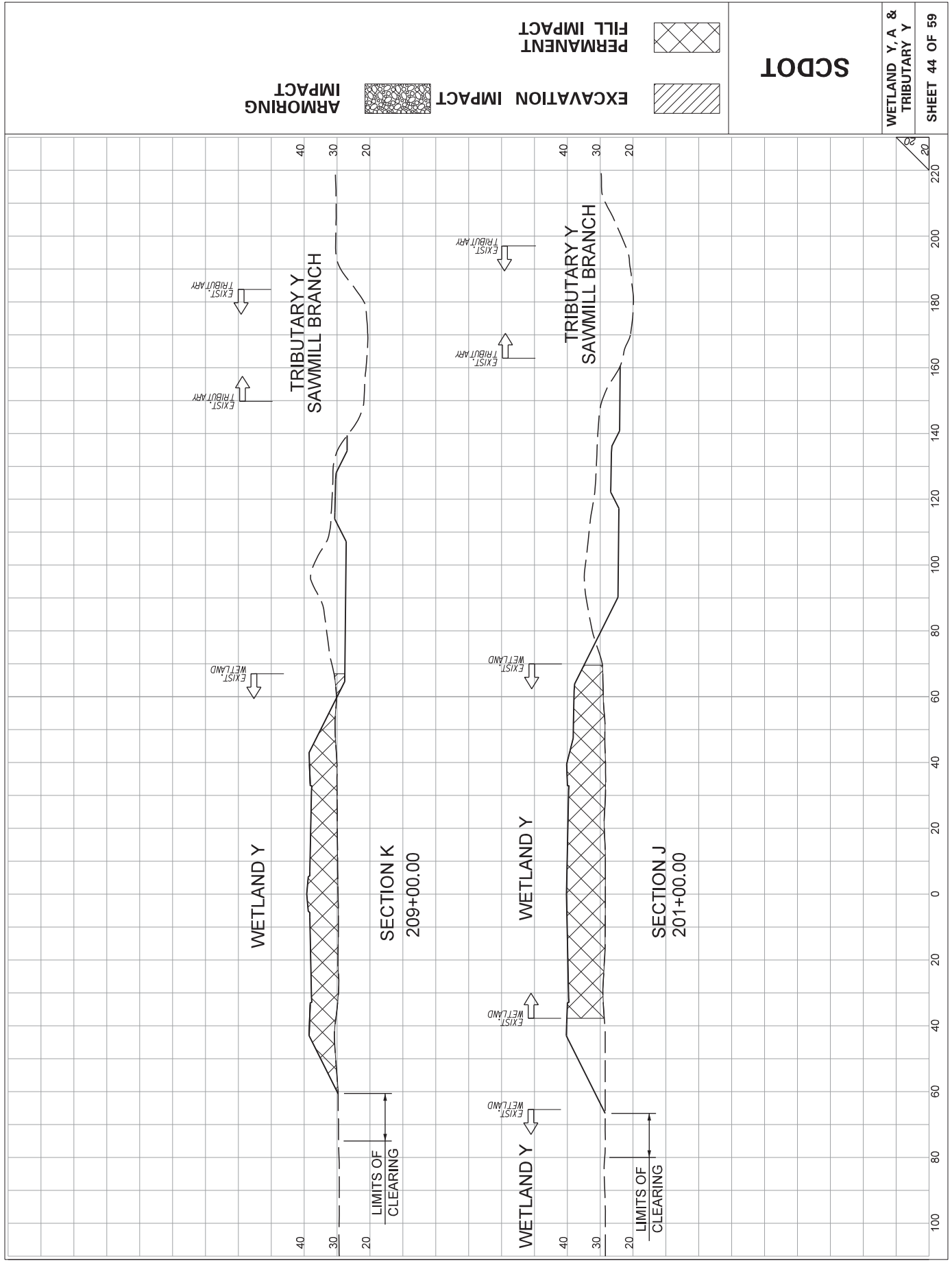
SHEET 39 OF 59

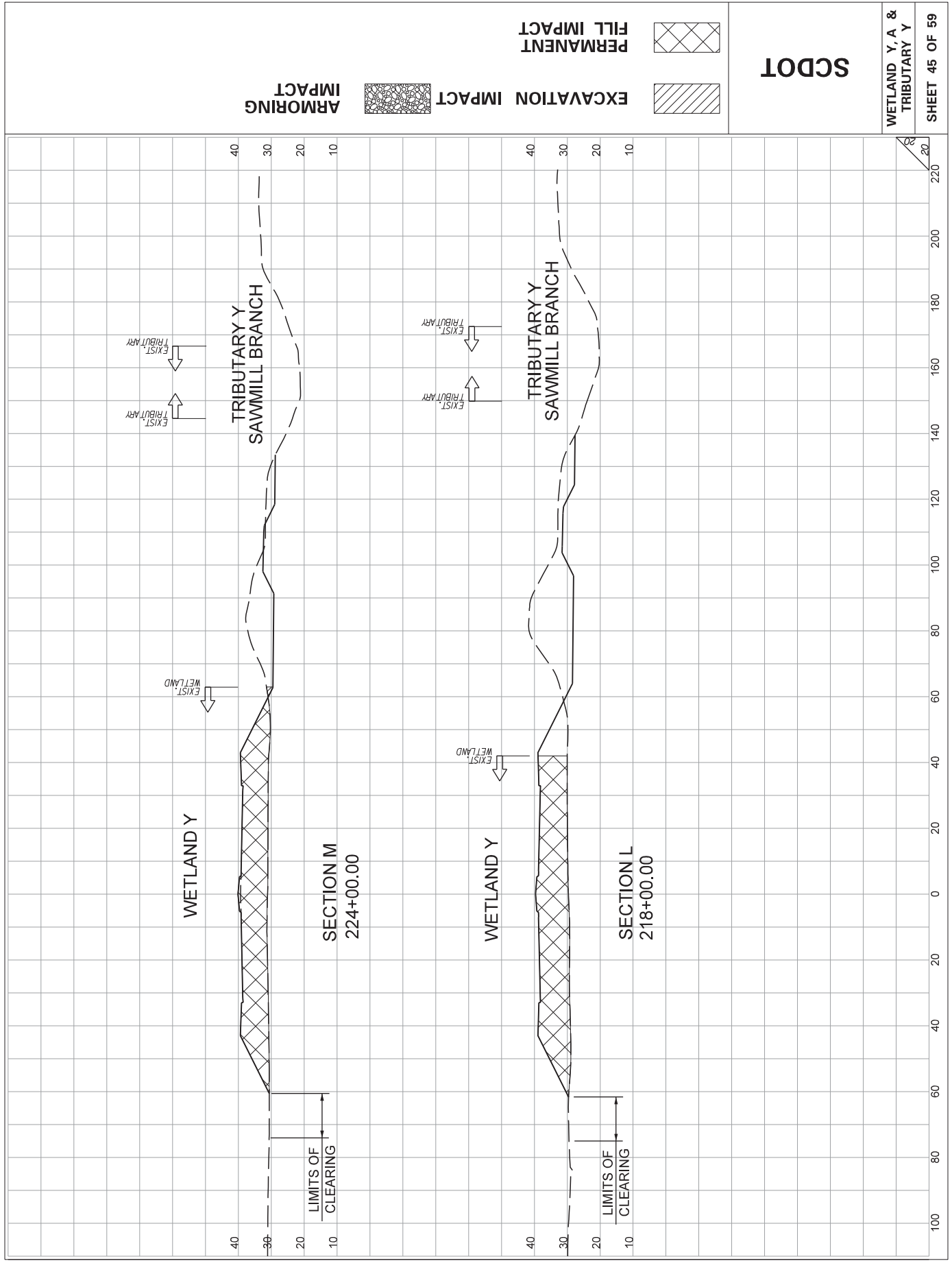


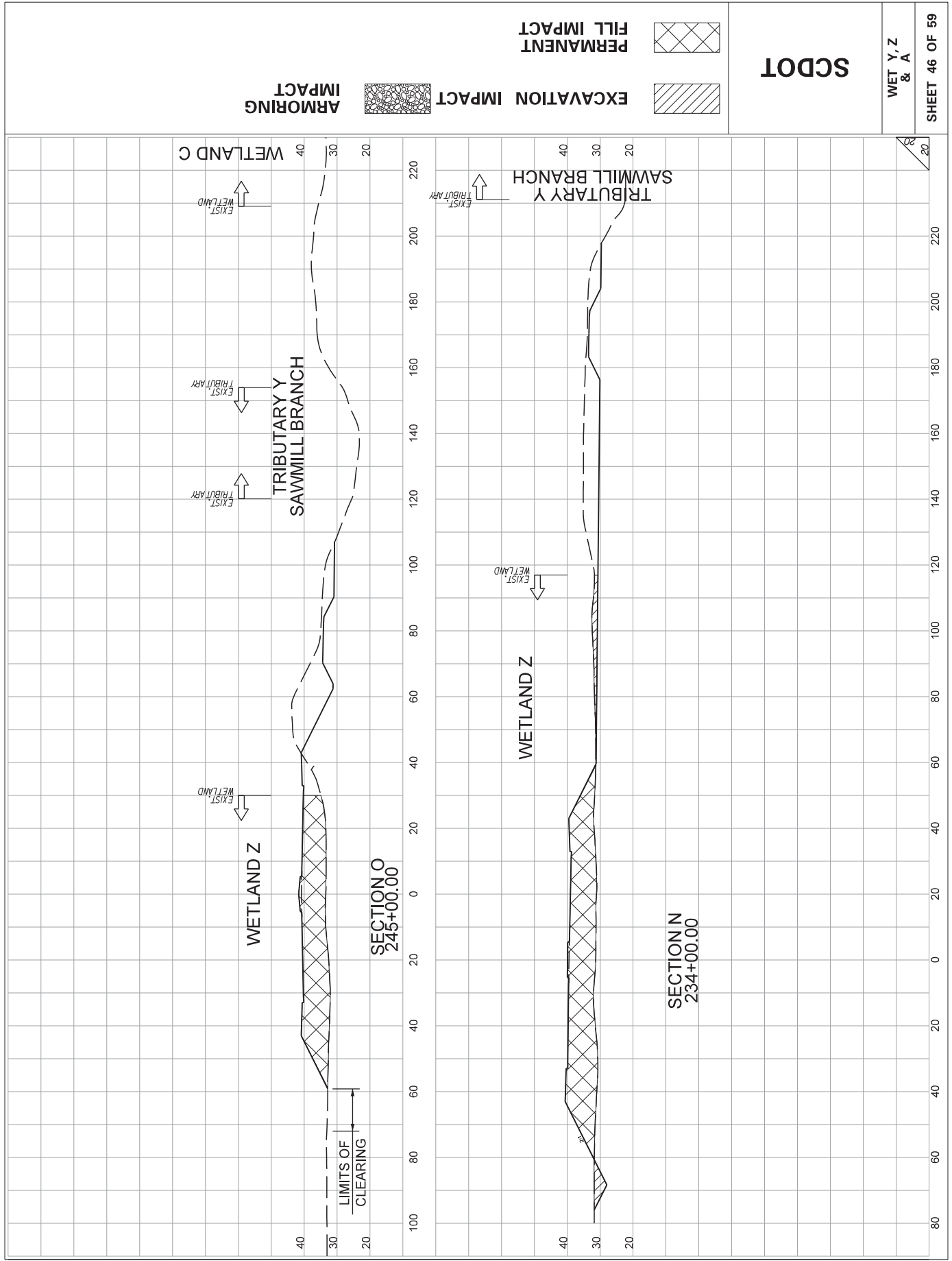




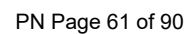


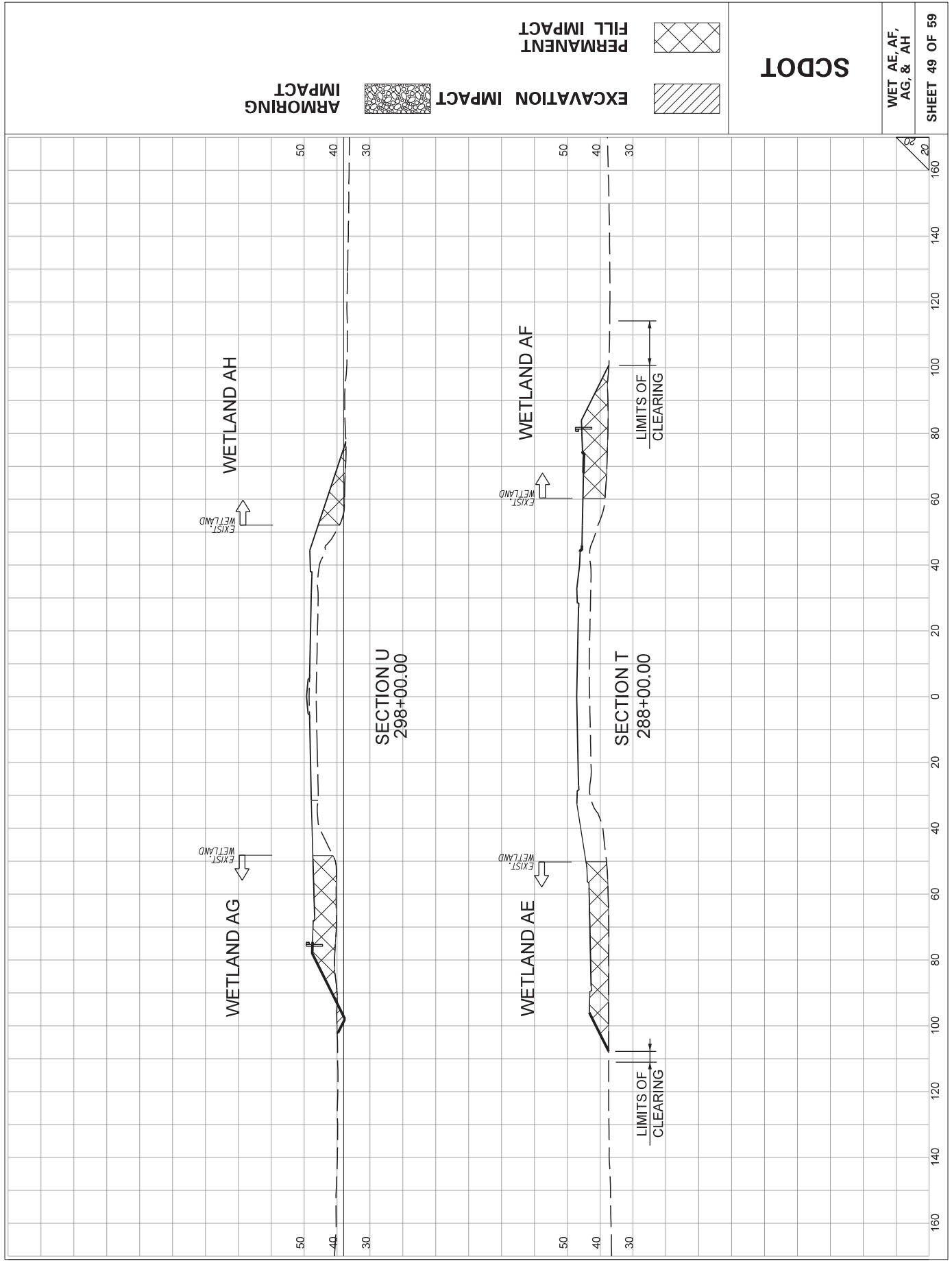


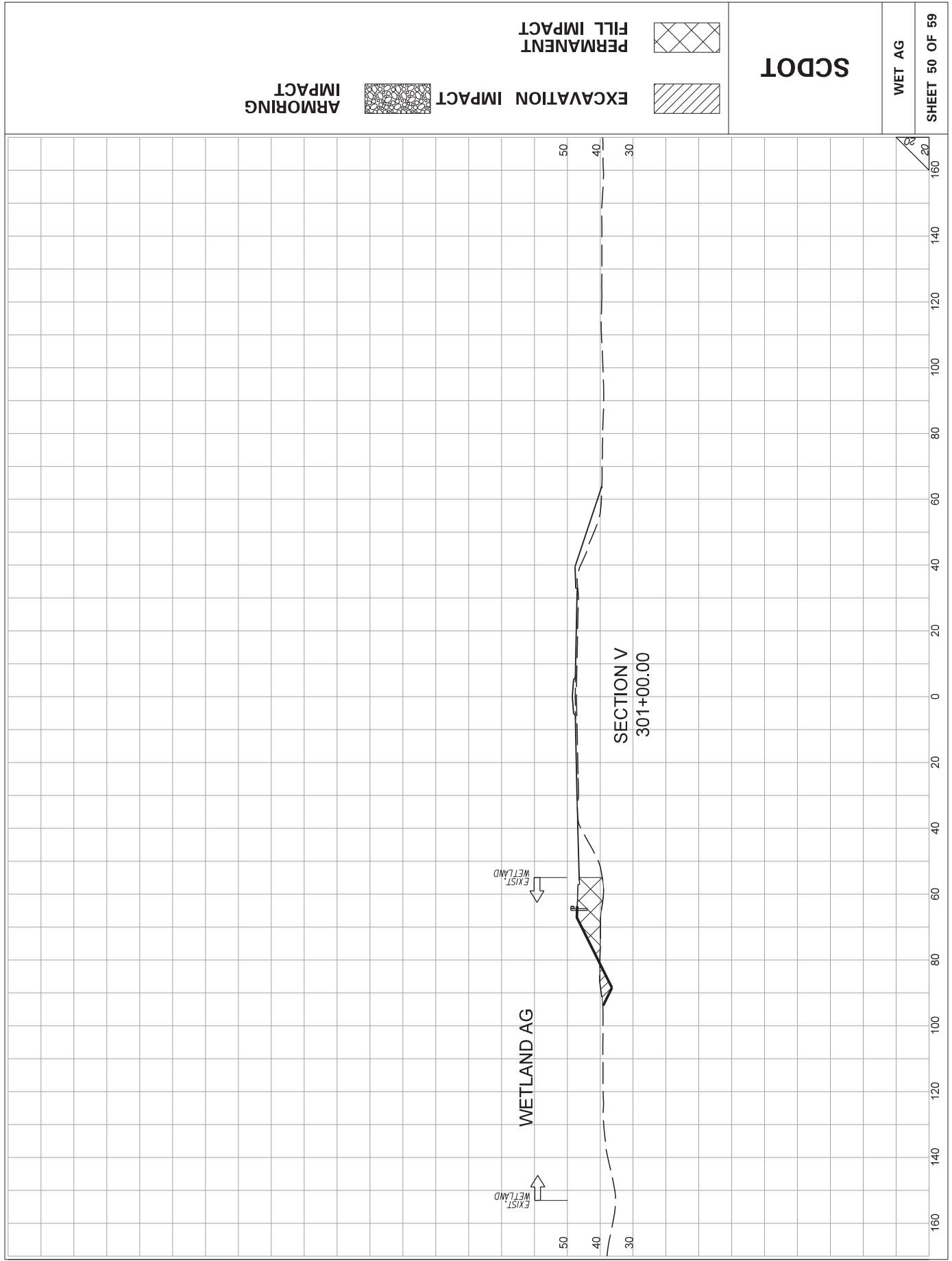


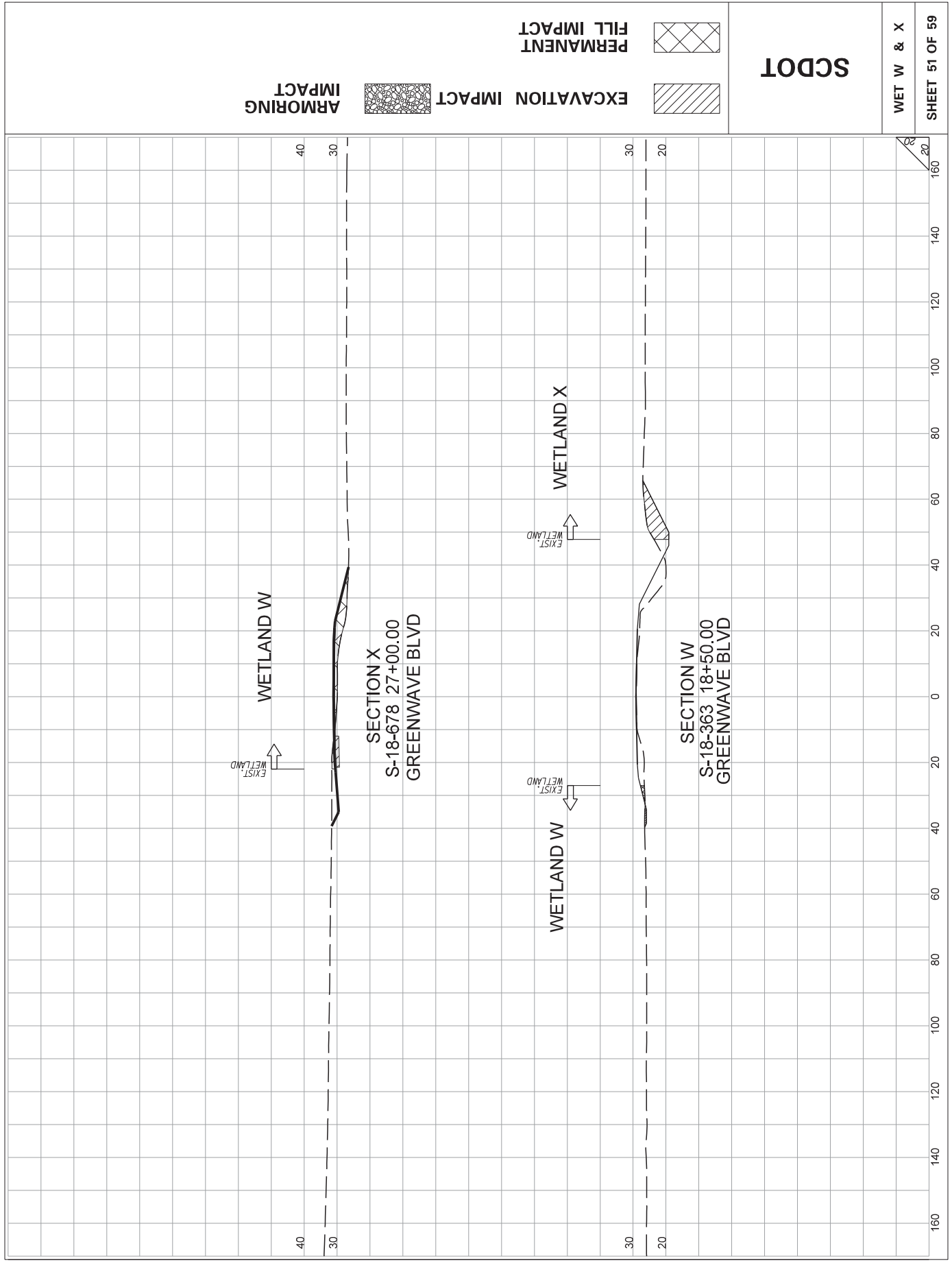


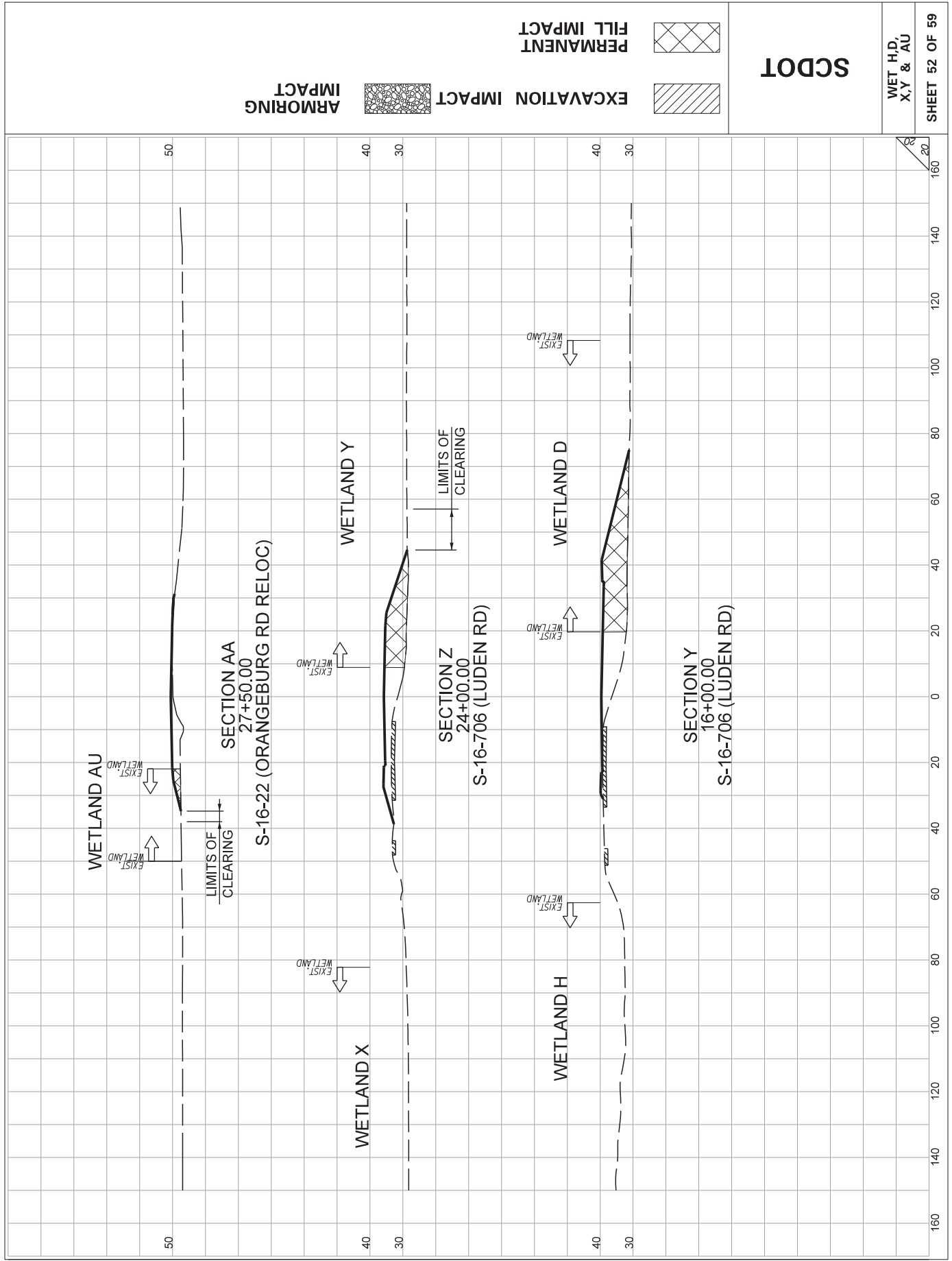


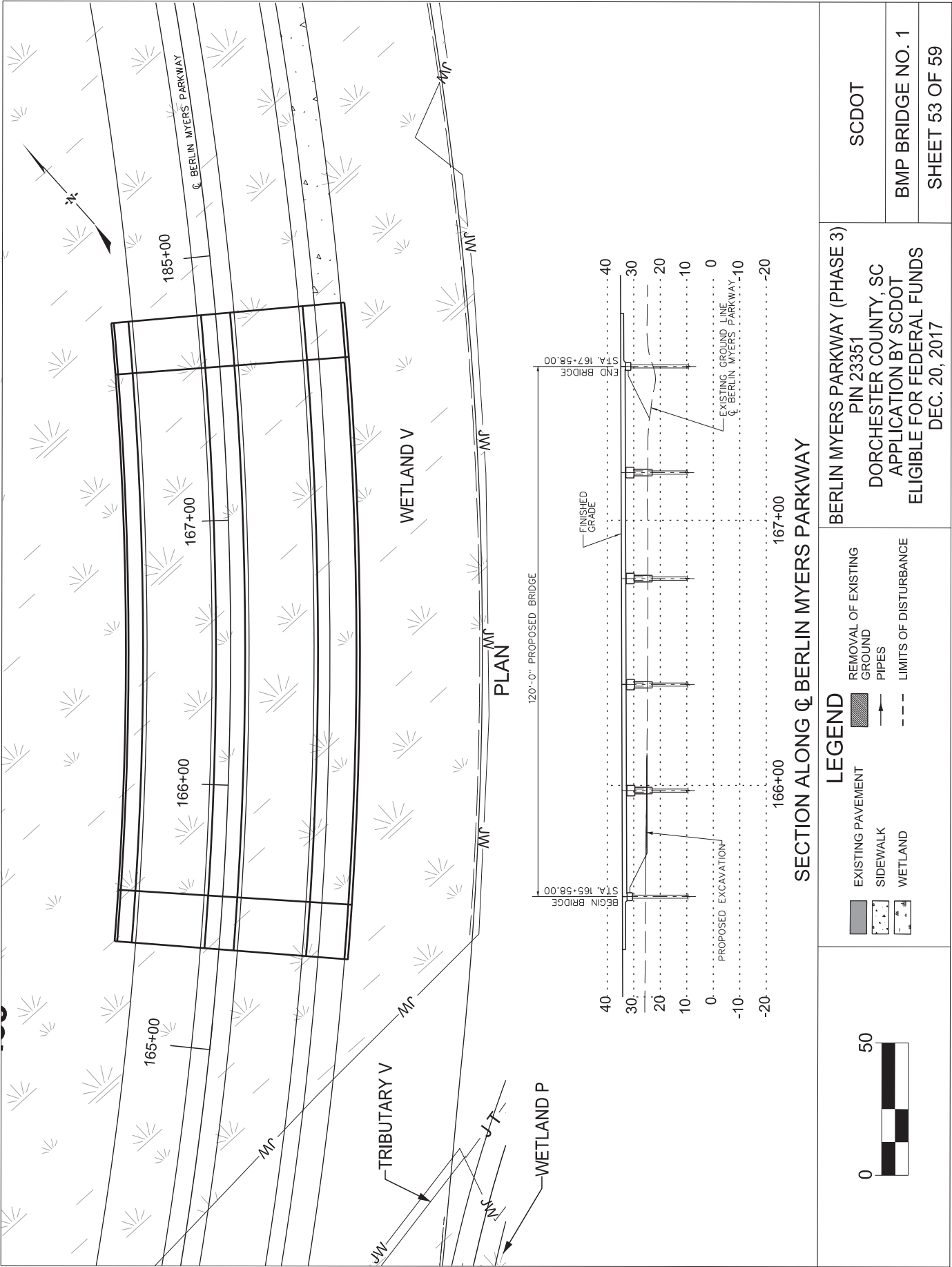


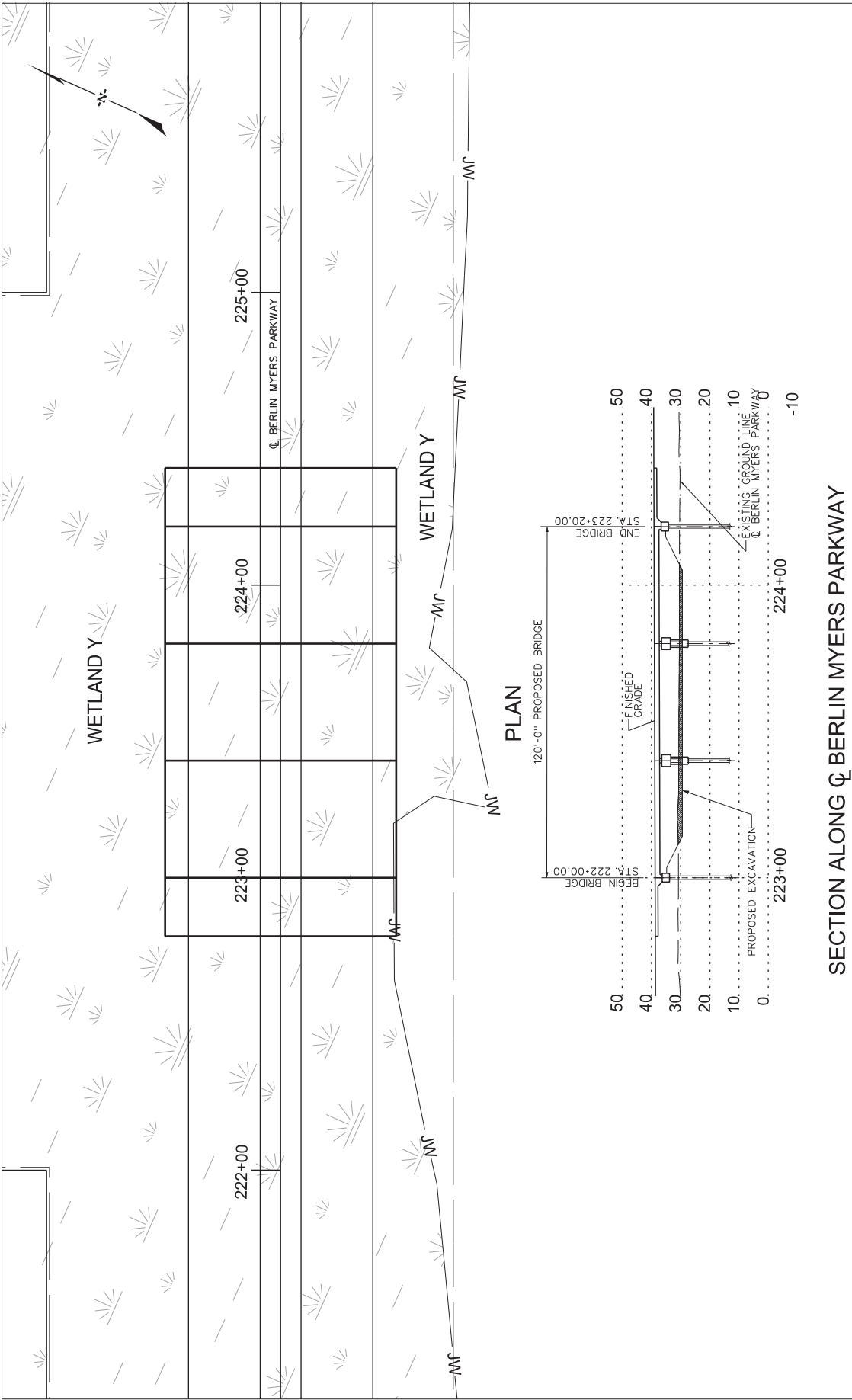












LEGEND

- EXISTING PAVEMENT
- SIDEWALK
- WETLAND
- REMOVAL OF EXISTING GROUND
- PIPES
- LIMITS OF DISTURBANCE

BERLIN MYERS PARKWAY (PHASE 3)

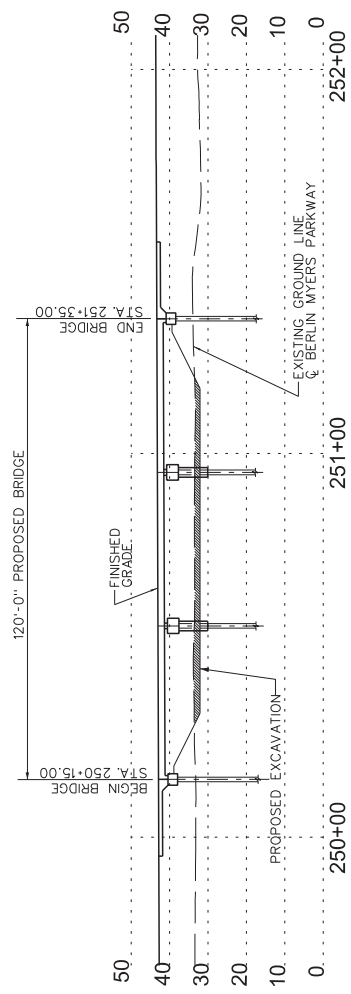
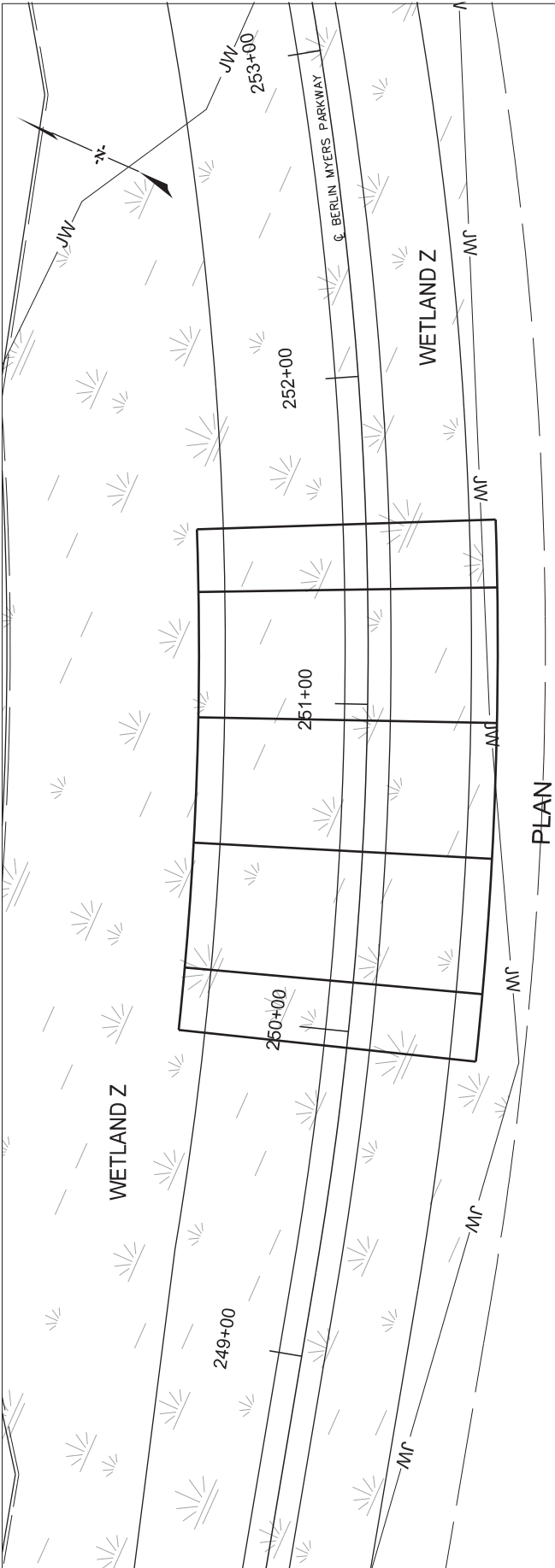
PIN 23351
DORCHESTER COUNTY, SC

APPLICATION BY SCDOT
ELIGIBLE FOR FEDERAL FUNDS
DEC. 20, 2017

SCDOT

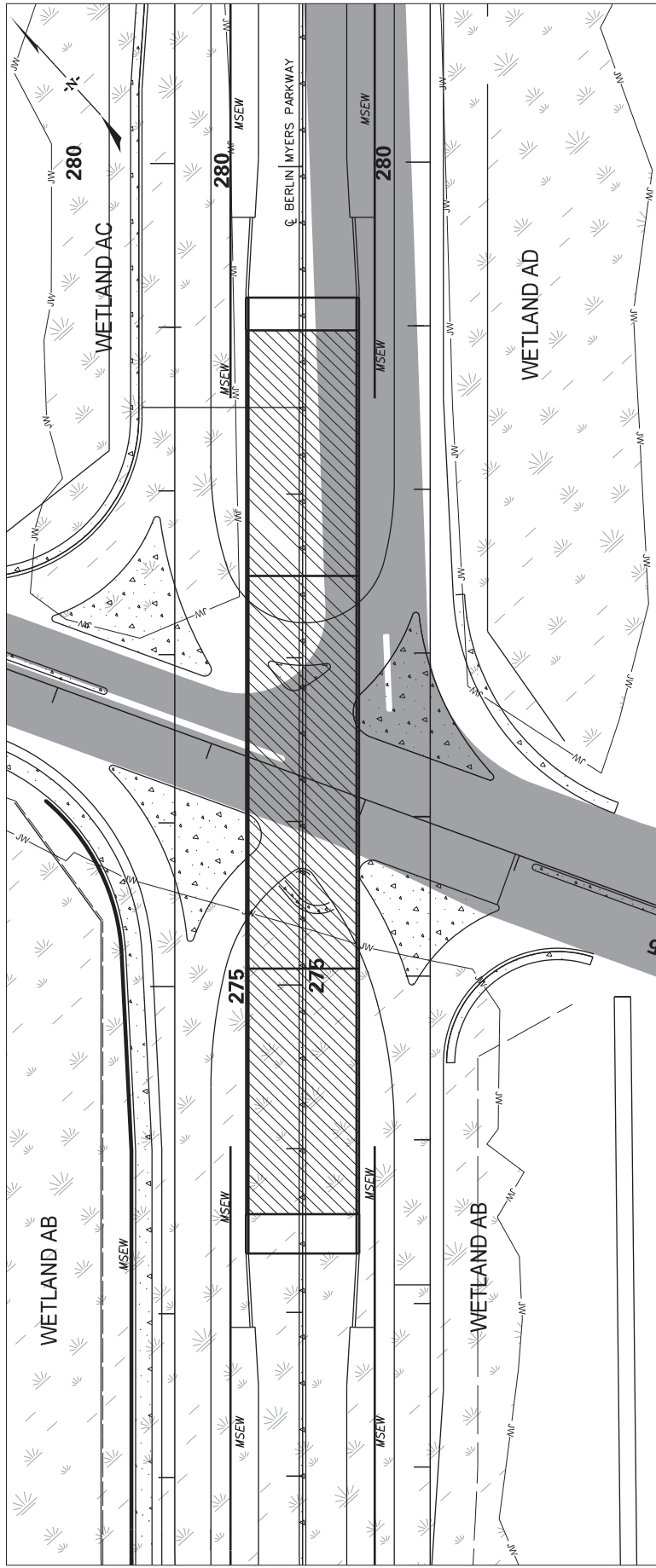
BMP BRIDGE NO. 2

SHEET 54 OF 59

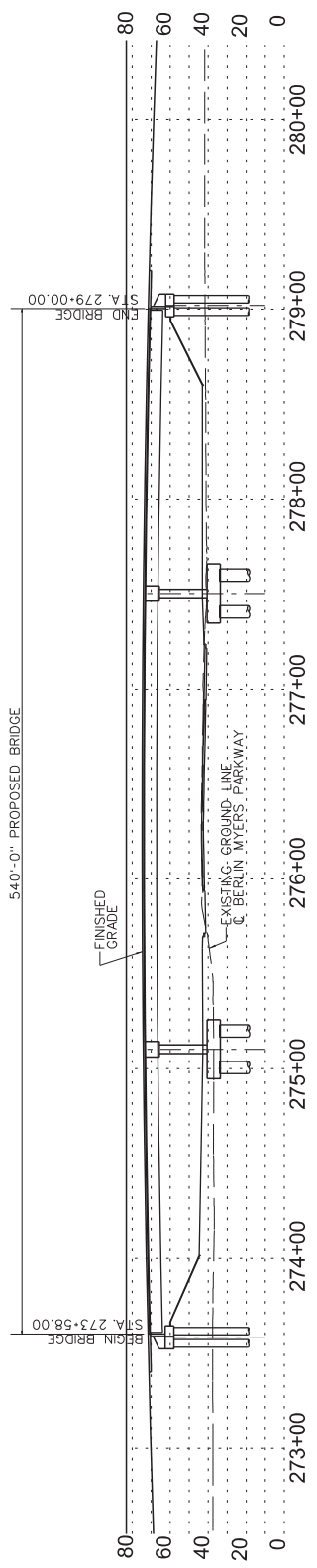


SECTION ALONG CL BERLIN MYERS PARKWAY

	<p>LEGEND</p> <p>EXISTING PAVEMENT</p> <p>SIDEWALK</p> <p>WETLAND</p> <p>REMOVAL OF EXISTING GROUND</p> <p>PIPES</p> <p>LIMITS OF DISTURBANCE</p>	<p>BERLIN MYERS PARKWAY (PHASE 3)</p> <p>PIN 23351</p> <p>DORCHESTER COUNTY, SC</p> <p>APPLICATION BY SCDOT</p> <p>ELIGIBLE FOR FEDERAL FUNDS</p> <p>DEC. 20, 2017</p>	<p>SCDOT</p> <p>BMP BRIDGE NO. 3</p> <p>SHEET 55 OF 59</p>
--	--	--	--

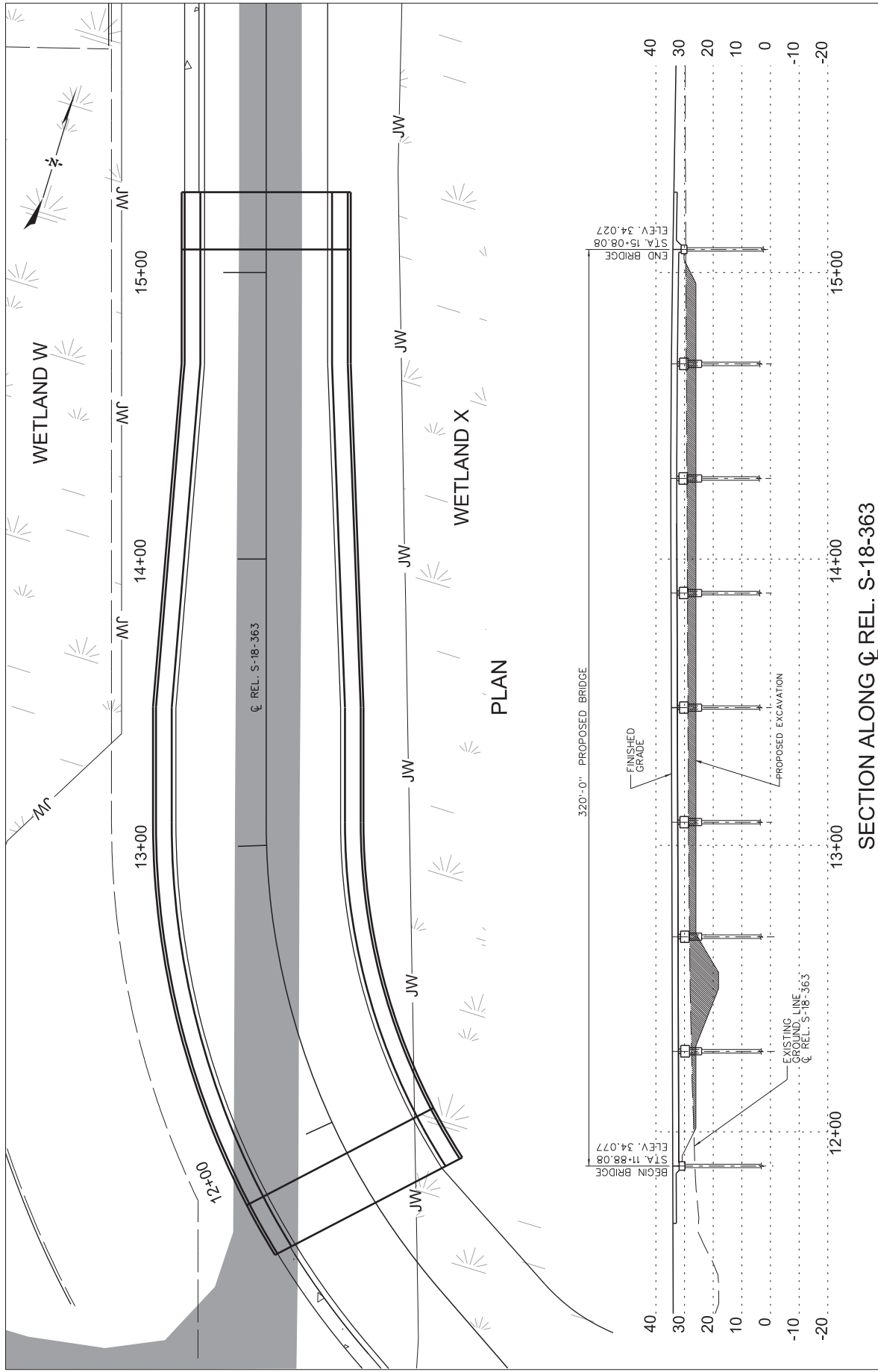


PLAN

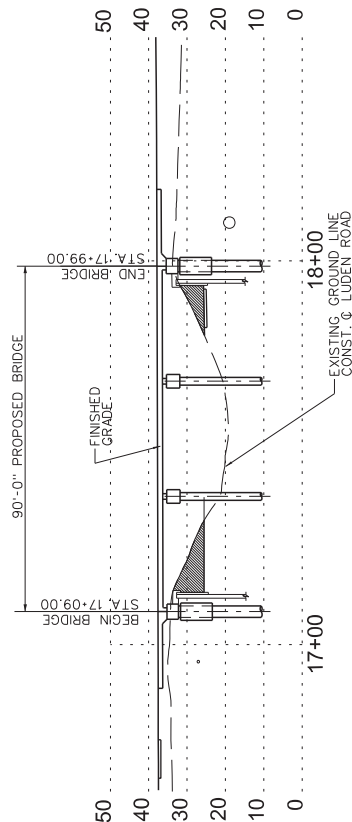
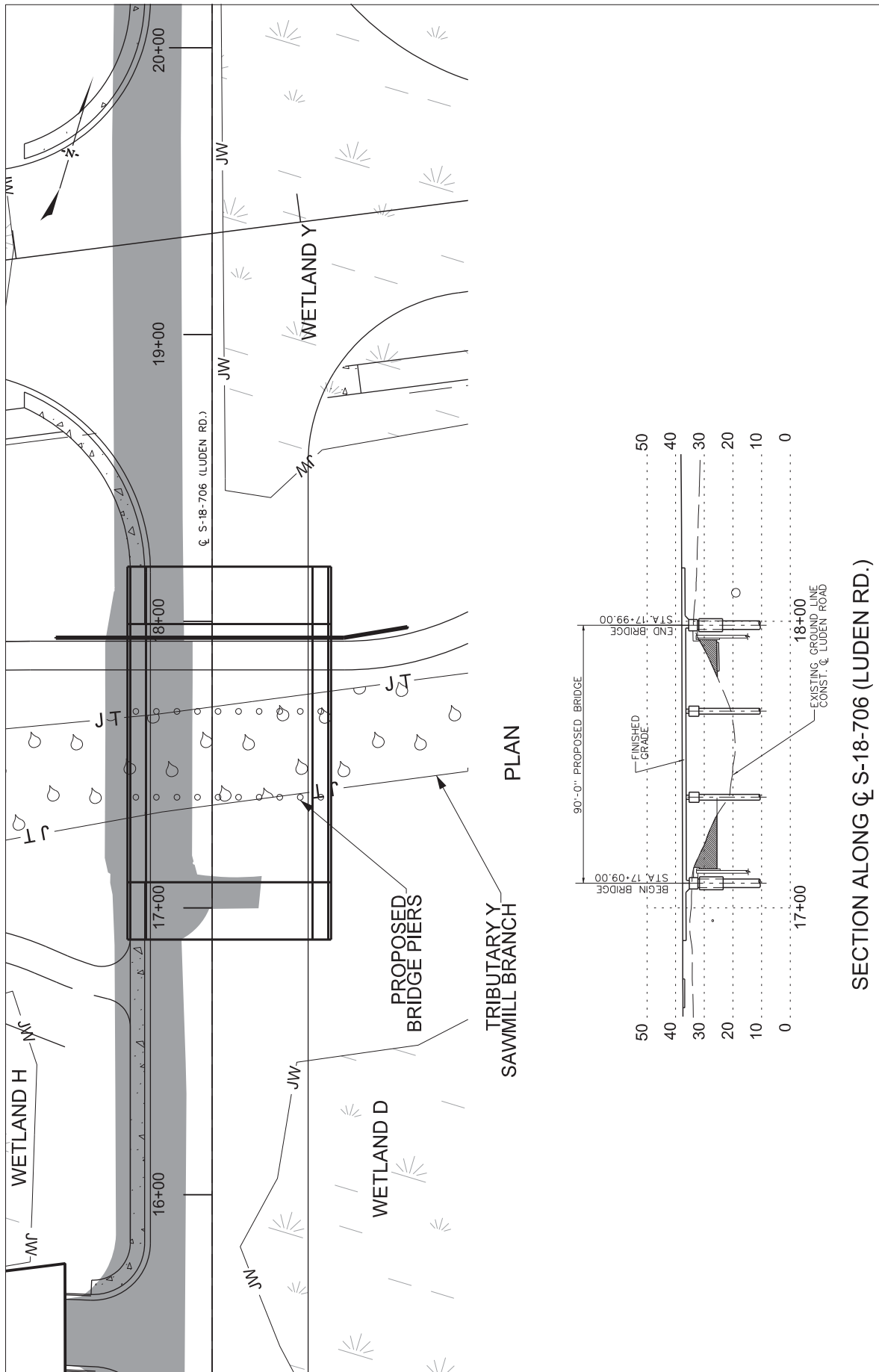









SECTION ALONG CL BERLIN MYERS PARKWAY

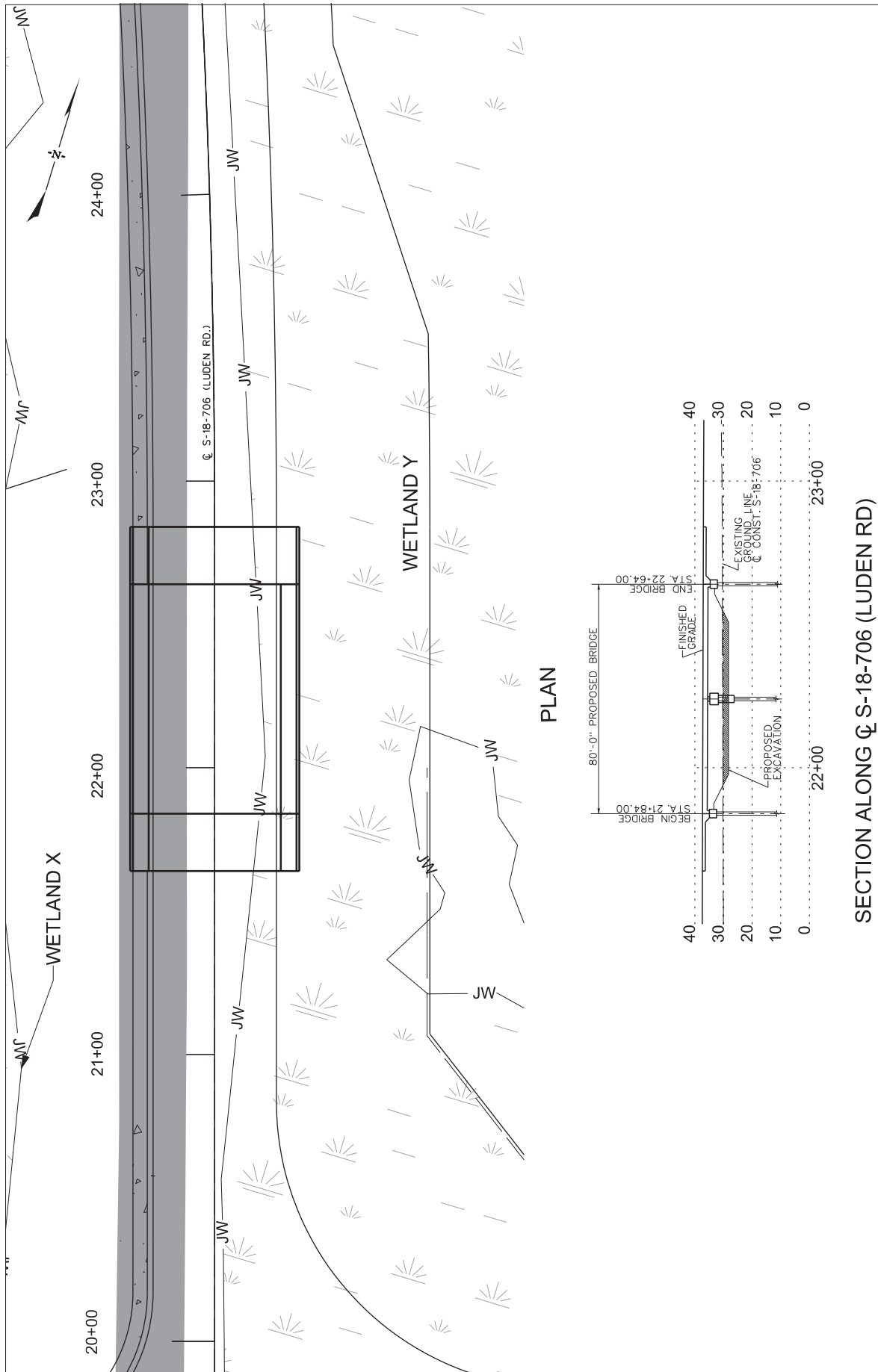
	<p>LEGEND</p> <ul style="list-style-type: none"> EXISTING PAVEMENT SIDEWALK WETLAND RIP RAP PAD REMOVAL OF EXISTING GROUND PIPES LIMITS OF DISTURBANCE 	<p>BERLIN MYERS PARKWAY (PHASE 3) PIN 23351 DORCHESTER COUNTY, SC APPLICATION BY SCDOT ELIGIBLE FOR FEDERAL FUNDS DEC. 20, 2017</p>	<p>SCDOT</p> <p>BRIDGE OVER EAST CAROLINA AVE.</p> <p>SHEET 56 OF 59</p>
--	---	---	--



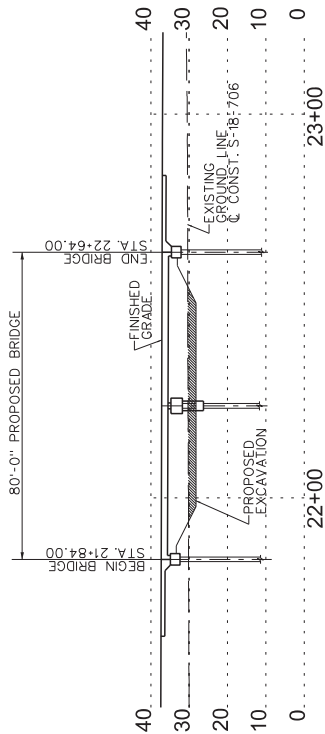
	LEGEND EXISTING PAVEMENT SIDEWALK WETLAND REMOVAL OF EXISTING GROUND PIPES LIMITS OF DISTURBANCE	BERLIN MYERS PARKWAY (PHASE 3) PIN 23351 DORCHESTER COUNTY, SC APPLICATION BY SCDOT ELIGIBLE FOR FEDERAL FUNDS DEC. 20, 2017	
		SCDOT	
		GREENWAVE BRIDGE	



	LEGEND  EXISTING PAVEMENT  SIDEWALK  WETLAND  REMOVAL OF EXISTING GROUND  PIPES  LIMITS OF DISTURBANCE	BERLIN MYERS PARKWAY (PHASE 3) PIN 23351 DORCHESTER COUNTY, SC APPLICATION BY SCDOT ELIGIBLE FOR FEDERAL FUNDS DEC. 20, 2017	
		SCDOT	
		LUDEN BRIDGE OVER SAWMILL BRANCH SHEET 58 OF 59	

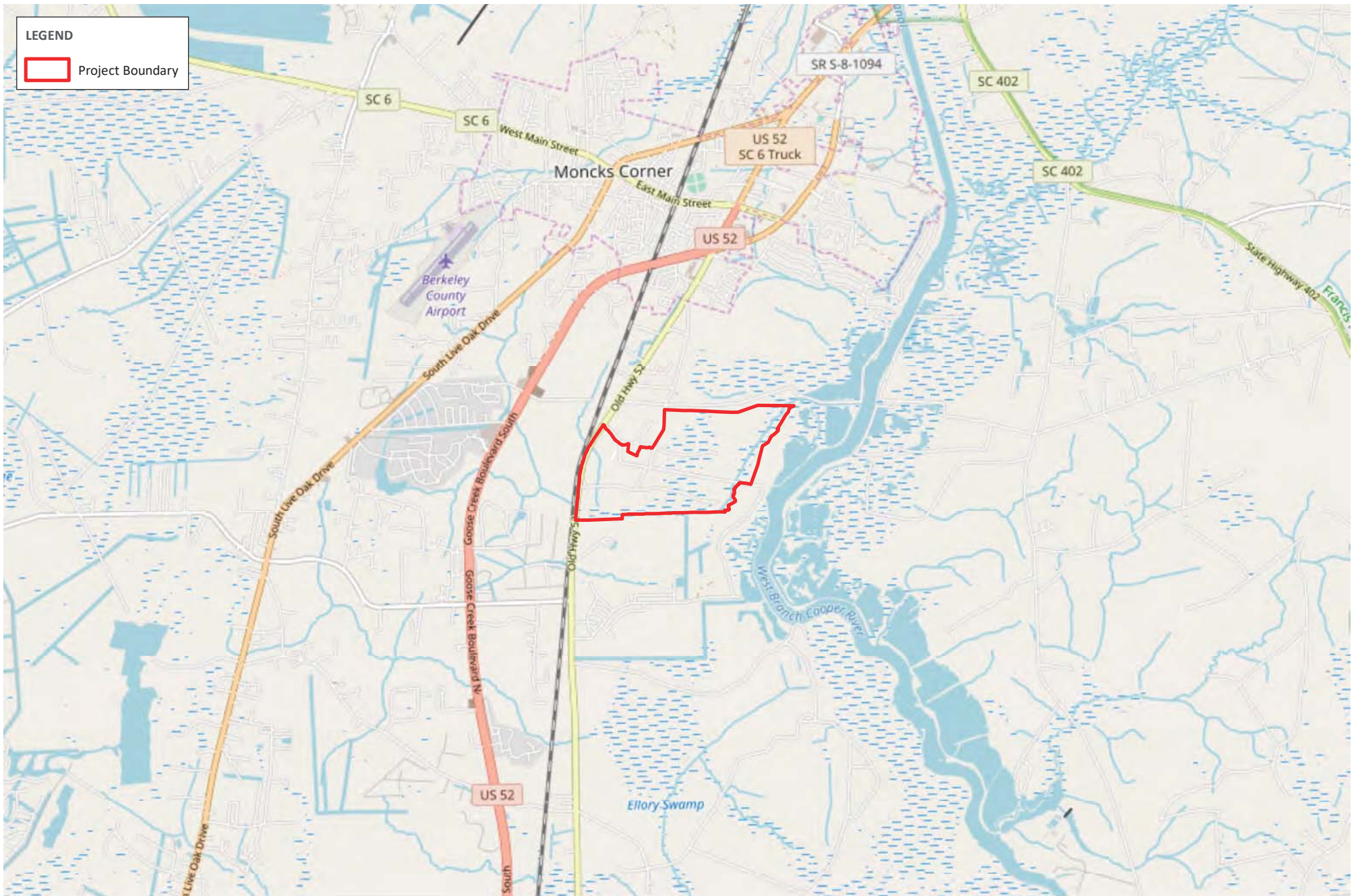


PLAN



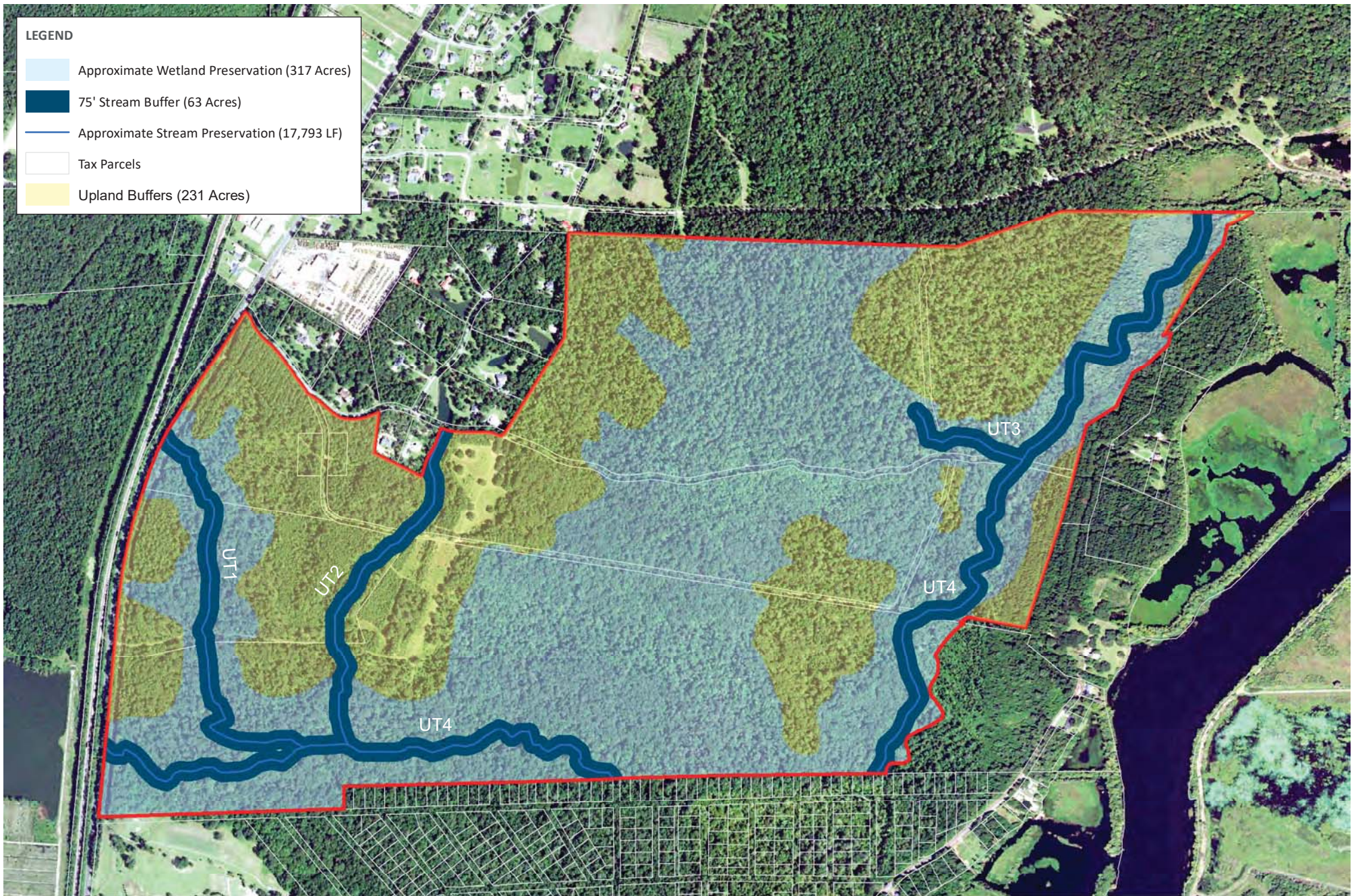
SECTION ALONG Q S-18-706 (LUDEN RD)

	LEGEND 	BERLIN MYERS PARKWAY (PHASE 3) PIN 23351 DORCHESTER COUNTY, SC APPLICATION BY SCDOT ELIGIBLE FOR FEDERAL FUNDS DEC. 20, 2017	SCDOT
			LUDEN ROAD BRIDGE OVER FLOODPLAIN
			SHEET 59 OF 59



**FIGURE 1 - LOCATION MAP
LEWISFIELD PLANTATION**





**FIGURE 7 - MITIGATION COMPONENTS MAP
LEWISFIELD PLANTATION**



Alterations to the Sawmill Branch Small Flood Control Project Resulting from Proposed Project

Extensive efforts have been made throughout the design process to mitigate any impacts to the function of the existing Federal Project as a result of this Proposed Project. The primary alteration resulting from the Proposed Project is the physical construction of the roadway within the floodplain / floodway associated with Sawmill Branch. The construction of the embankment in and of itself creates a loss of conveyance for the floodwaters carried by Sawmill Branch and its natural floodplain. To offset this loss of conveyance, the project also includes additional excavation, bridges, and hydraulic structures to mitigate the potential impacts to floodplain conveyance along the project. These proposed alterations / modifications to the existing Sawmill Branch floodplain are located both inside and outside of the federal right-of-way.

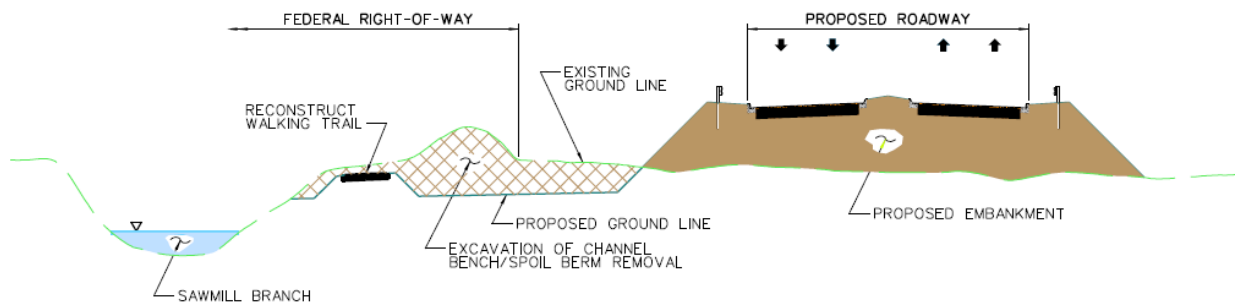
The Proposed Project includes the following proposed alterations resulting from construction activities within the existing federal right-of-way / easements:

- *Excavation Adjacent to the Sawmill Branch Channel* – This is necessary to offset the existing conveyance area impacted as a result of the roadway fills in the floodplain outside of the federal right-of-way. The excavation increases the overall conveyance area between the main channel and new roadway embankment within the construction area of the roadway project.
- *Reconstruction of the Luden Road Bridge over Sawmill Branch* – This bridge is proposed to be replaced as required by the improved roadway geometry and to provide additional conveyance area under the bridge.
- *Reconstruction of the Existing Sawmill Branch Walking Trail* – The excavation adjacent to the Branch will require that the trail be reconstructed. The new trail will be at a slightly lower elevation than the existing trail and will overtop during some flood events and flood both the trail and the excavated area.
- *Stormwater Improvements* – Various improvements to stormwater conveyance are proposed associated with the construction of the roadway project and reconstruction of the walking trail.
- *Utility Improvements*
 - o The existing waterline will need to be lowered within the excavation area in order to maintain cover over the line. No negative impacts are anticipated as a result of this change.
 - o Sanitary sewer alterations will be limited to modifications to the existing manholes to match the new ground surface in the channel excavation area. No negative impacts are anticipated as a result of this change.

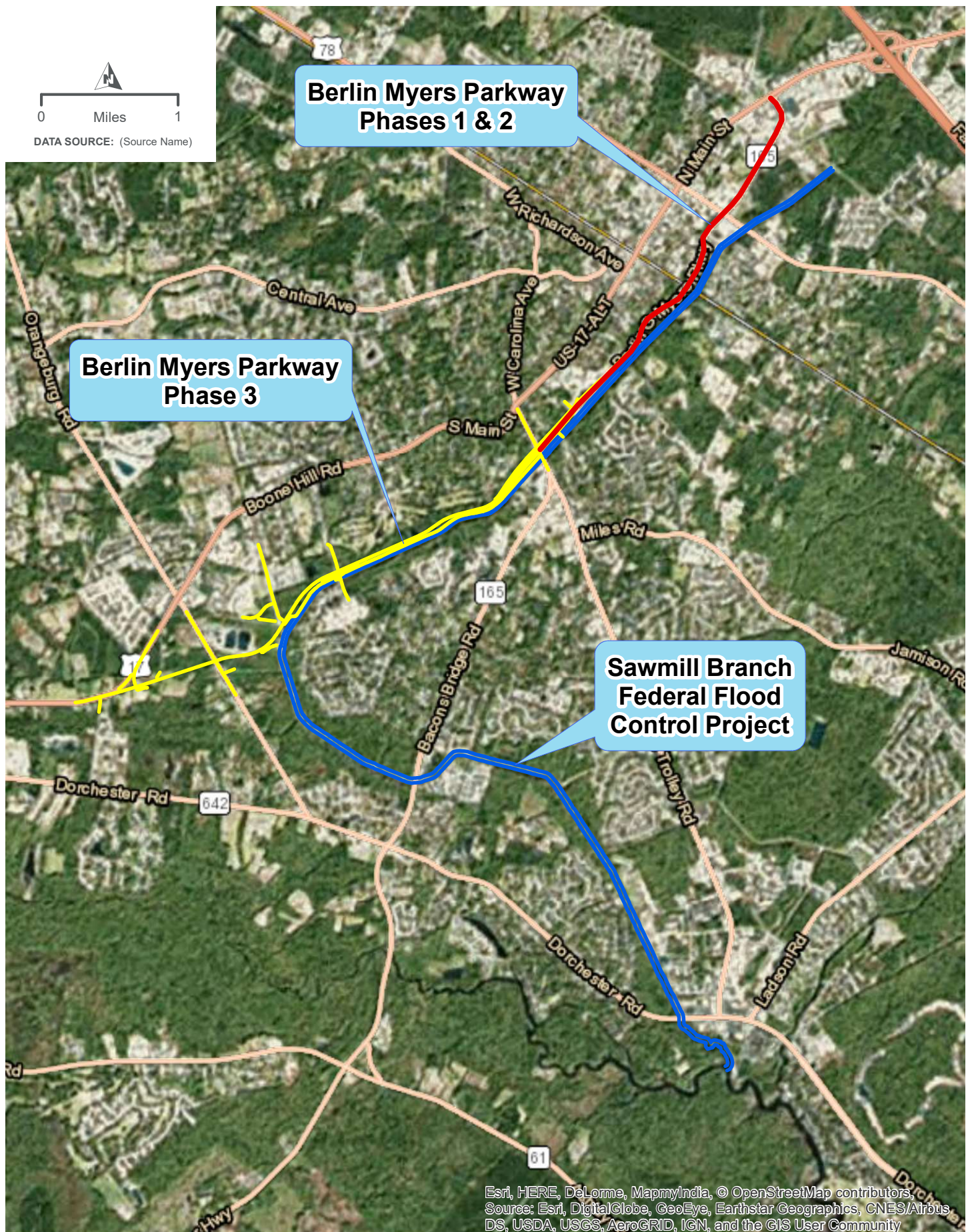
Outside of the existing federal right-of-way / easement, proposed project construction includes the following:

- *Roadway Embankment Construction* – Placement of fill material for construction of proposed roadway within floodplain/floodway and associated stormwater improvements and cross-line structures.
- *Bridges along Berlin Myers Parkway and Side Roads* – Project includes five (5) bridges designed specifically to maintain conveyance along Sawmill Branch by allowing flows on both sides of the proposed embankment.
- *Retaining Walls* – Roadway retaining walls are proposed in several areas to reduce wetland and right-of-way impacts and to maximize conveyance.

A representative cross section depicting the nature of the proposed alterations are shown in the figure below. Note the excavation area varies along the proposed embankment. See plan views to estimate distances.



Representative Cross Section of Proposed Project (2V:1H Exaggeration)



Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors,
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus
DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



PROJECT LOCATION MAP SAWMILL BRANCH FEDERAL PROJECT AREA



WETLANDS

SAWMILL
BRANCH

MATCHLINE
FIGURE 3-5

HEC-RAS
CROSS
SECTION

22500

22000

SAWMILL BRANCH PRESENT TO R/W
P.L.S. CROSS TO 2160

21784.3

21875.5

21966.6

22057.3

22149.0

22238.8

22328.5

22418.5

22508.1

22598.1

22688.0

22775.8

22863.6

LEGEND

- WETLANDS
- PROPOSED ROADWAY
& SAWMILL BRANCH TRAIL
- SAWMILL BRANCH
- CHANNEL BENCHING AREA
- PROPOSED BRIDGE
- PROPOSED SIDEWALK
- SIGNAL

PUBLIC NOTICE (PN) SAC 2015-0807

PN DATE: MAY 16, 2018

SAWMILL BRANCH

SECTION 205 FLOOD
CONTROL PROJECT

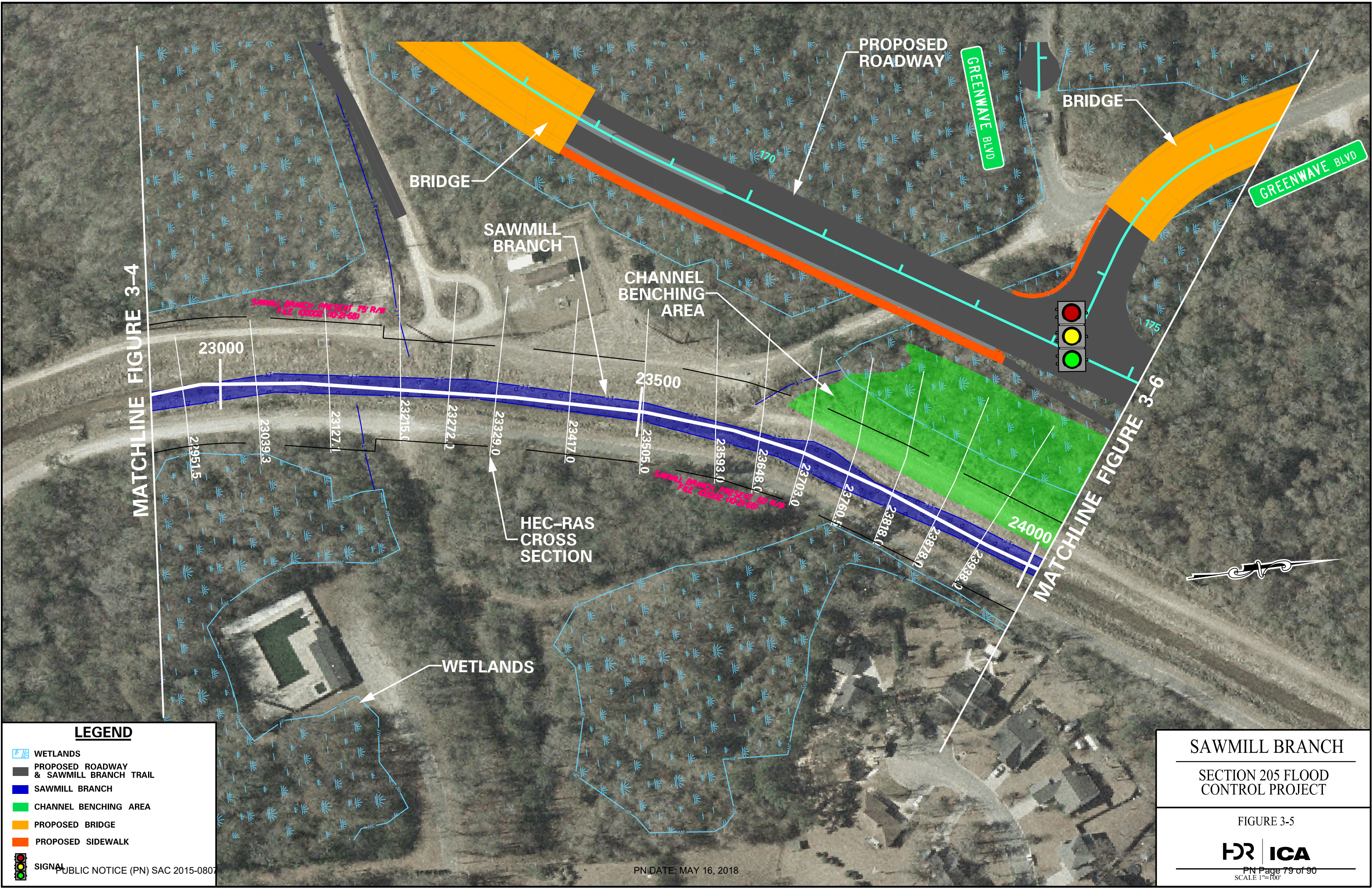
FIGURE 3-4

HR ICA

PN Page 78 of 90
SCALE 1"=100'

MATCHLINE FIGURE 3-4

MATCHLINE FIGURE 3-6



PROPOSED
ROADWAY

GREENWAVE BLVD

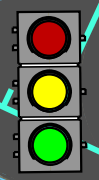
BRIDGE

GREENWAVE BLVD

BRIDGE

SAWMILL
BRANCH

CHANNEL
BENCHING
AREA



HEC-RAS
CROSS
SECTION

WETLANDS

LEGEND

- WETLANDS
- PROPOSED ROADWAY
& SAWMILL BRANCH TRAIL
- SAWMILL BRANCH
- CHANNEL BENCHING AREA
- PROPOSED BRIDGE
- PROPOSED SIDEWALK
- SIGNAL

SAWMILL BRANCH
SECTION 205 FLOOD
CONTROL PROJECT

FIGURE 3-5



GREENWAVE BLVD

PROPOSED ROADWAY

CHANNEL BENCHING AREA

MATCHLINE FIGURE 3-5

MATCHLINE FIGURE 3-7

WETLANDS

HEC-RAS CROSS SECTION

SAWMILL BRANCH

LEGEND

- WETLANDS
- PROPOSED ROADWAY & SAWMILL BRANCH TRAIL
- SAWMILL BRANCH
- CHANNEL BENCHING AREA
- PROPOSED BRIDGE
- PROPOSED SIDEWALK
- SIGNAL

PUBLIC NOTICE (PN) SAC 2015-0807

PN DATE: MAY 16, 2018

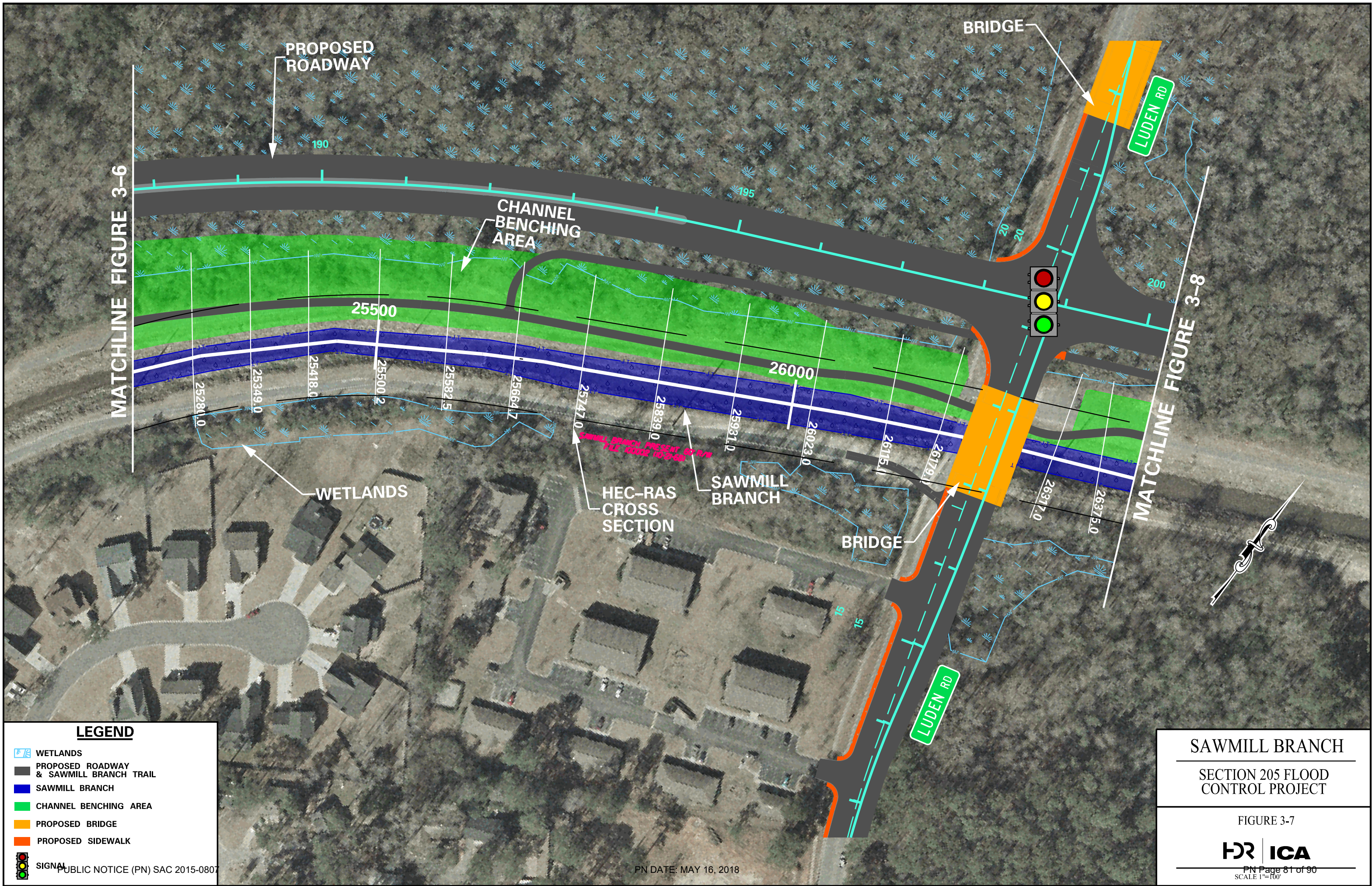
SAWMILL BRANCH

SECTION 205 FLOOD CONTROL PROJECT

FIGURE 3-6

HR ICA

PN Page 80 of 90
SCALE 1"=100'



MATCHLINE FIGURE 3-7

MATCHLINE FIGURE 3-9

PROPOSED ROADWAY

205

210

26500

27000

27500

26465.0

26553.2

26641.5

26729.7

26818.0

26911.4

27004.8

27098.2

27191.6

27285.0

27378.2

27471.4








WETLANDS

HEC-RAS
CROSS
SECTION

CHANNEL
BENCHING
AREA

SAWMILL
BRANCH

LEGEND

-  WETLANDS
-  PROPOSED ROADWAY
& SAWMILL BRANCH TRAIL
-  SAWMILL BRANCH
-  CHANNEL BENCHING AREA
-  PROPOSED BRIDGE
-  PROPOSED SIDEWALK
-  SIGNAL

PUBLIC NOTICE (PN) SAC 2015-0807

PN DATE: MAY 16, 2018

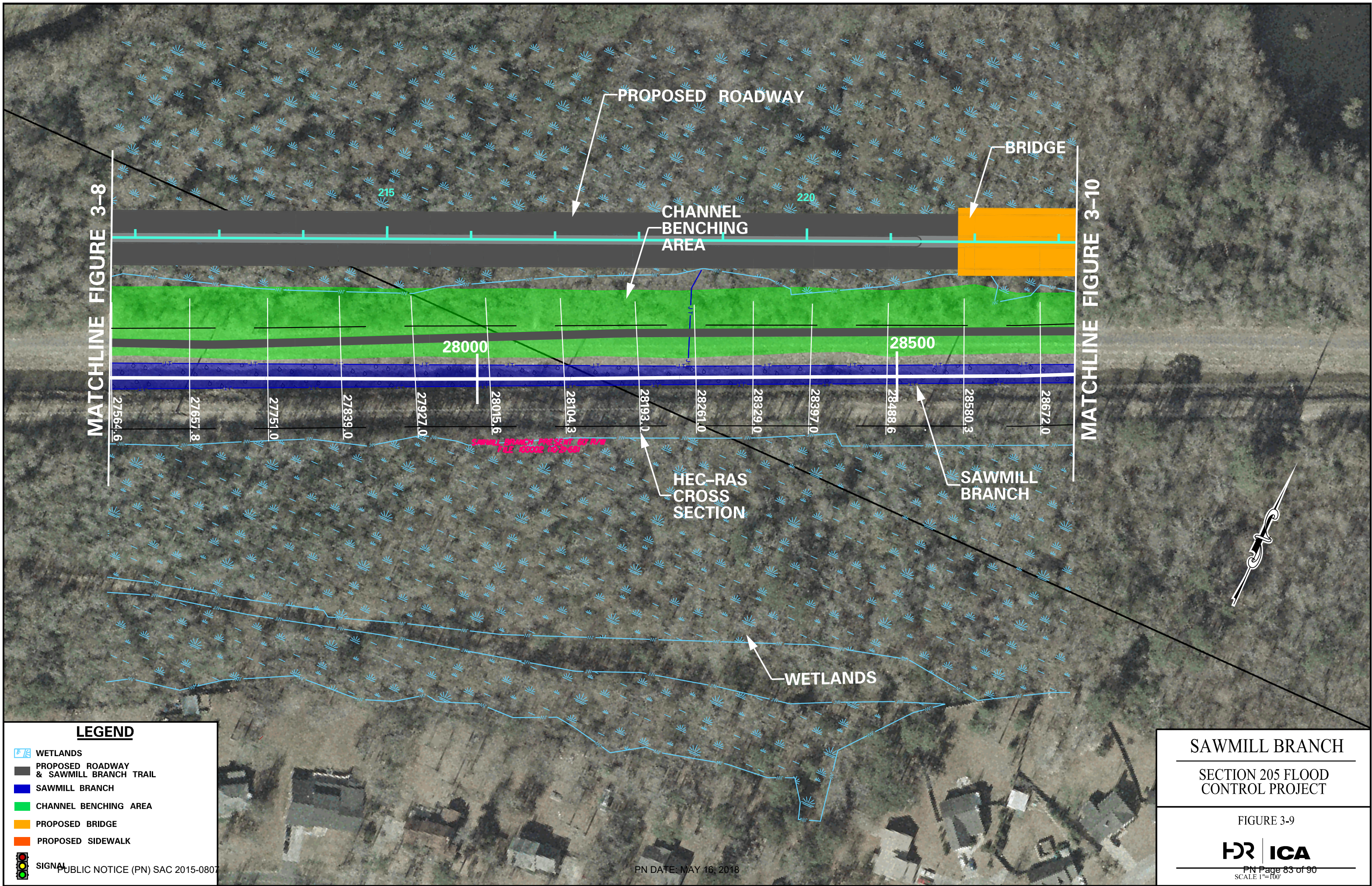
SAWMILL BRANCH

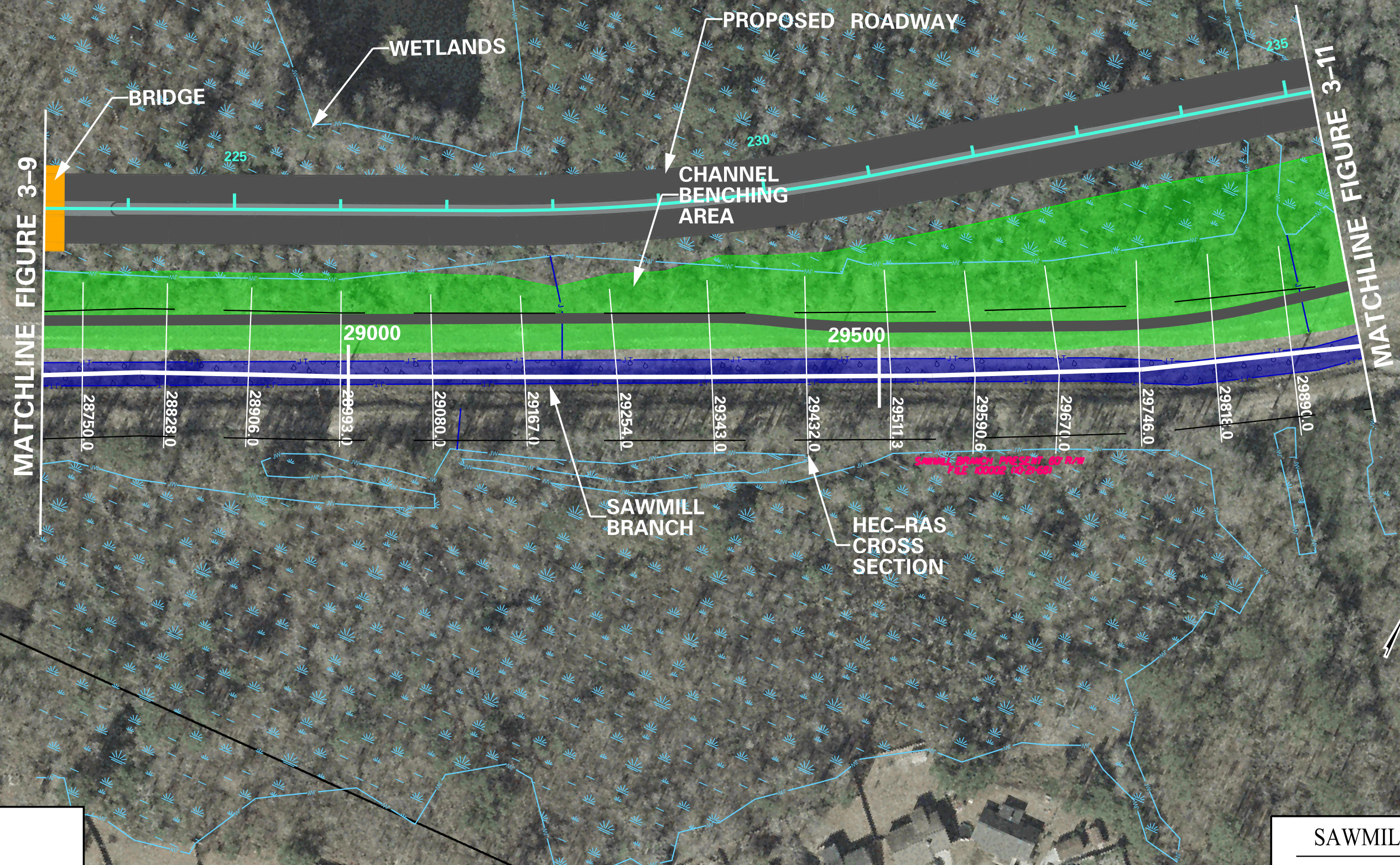
**SECTION 205 FLOOD
CONTROL PROJECT**

FIGURE 3-8

HR ICA

PN Page 82 of 90
SCALE 1"=100'





LEGEND

- WETLANDS
- PROPOSED ROADWAY & SAWMILL BRANCH TRAIL
- SAWMILL BRANCH
- CHANNEL BENCHING AREA
- PROPOSED BRIDGE
- PROPOSED SIDEWALK
- SIGNAL

PUBLIC NOTICE (PN) SAC 2015-0807

PN DATE: MAY 16, 2018

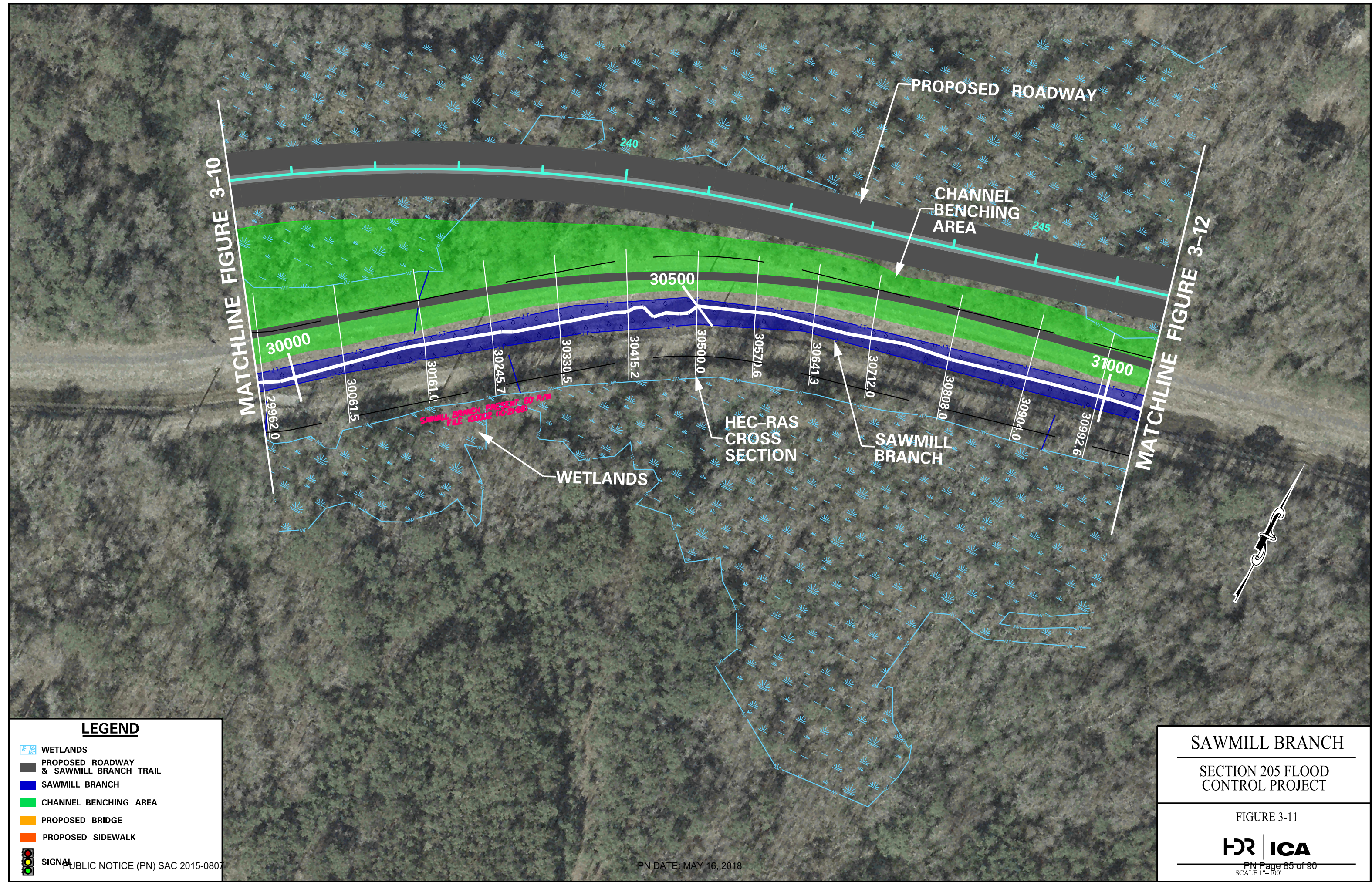
SAWMILL BRANCH

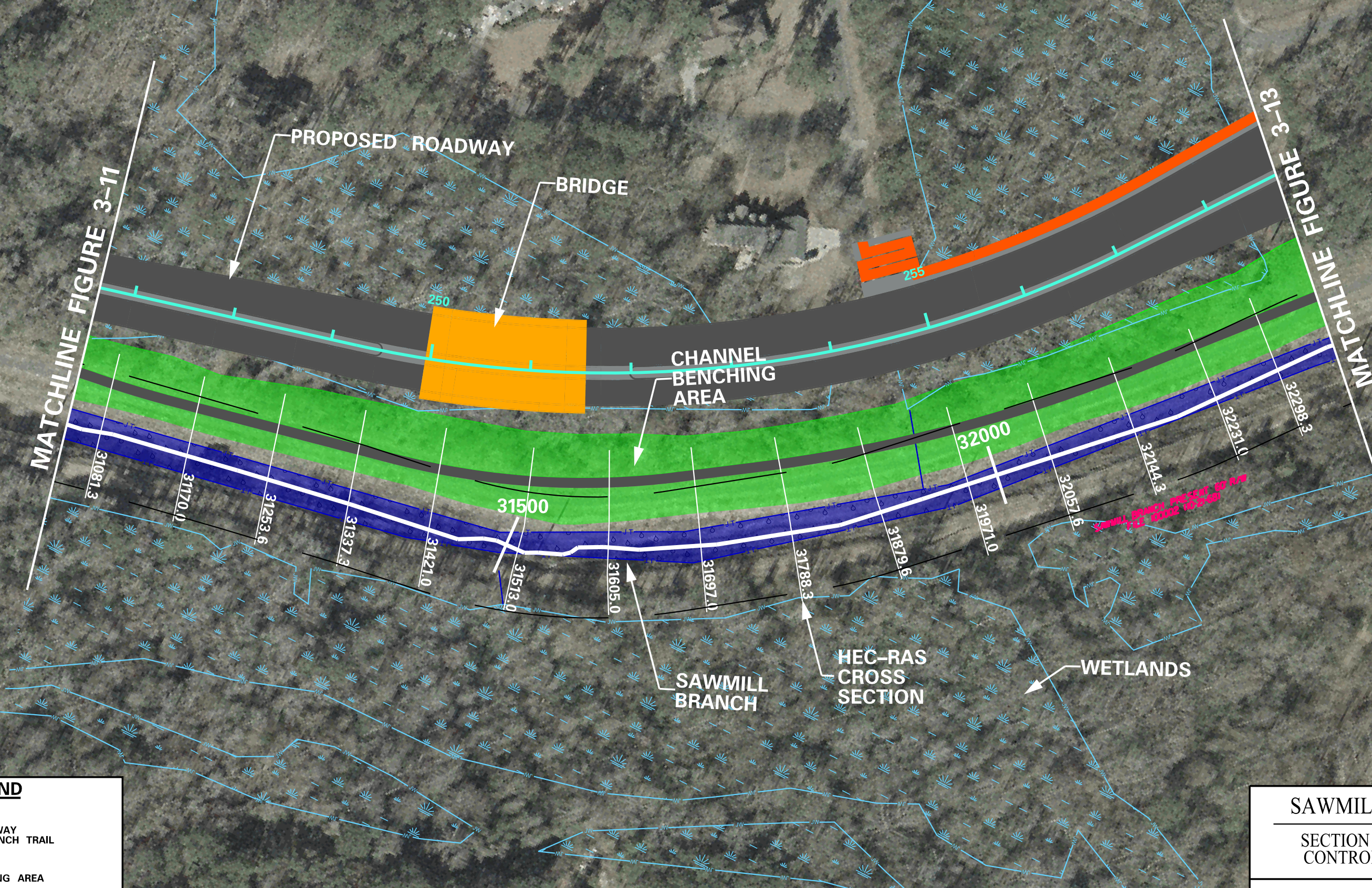
SECTION 205 FLOOD
CONTROL PROJECT

FIGURE 3-10

HR ICA

PN Page 84 of 90
SCALE 1"=100'





MATCHLINE FIGURE 3-11

MATCHLINE FIGURE 3-13

PROPOSED ROADWAY

BRIDGE

CHANNEL
BENCHING
AREA

31500

32000

SAWMILL
BRANCH

HEC-RAS
CROSS
SECTION

WETLANDS

SAWMILL BRANCH PROPOSED R/W
+ 10' EXISTING 10' EXISTING

LEGEND

- WETLANDS
- PROPOSED ROADWAY & SAWMILL BRANCH TRAIL
- SAWMILL BRANCH
- CHANNEL BENCHING AREA
- PROPOSED BRIDGE
- PROPOSED SIDEWALK
- SIGNAL

PUBLIC NOTICE (PN) SAC 2015-0807

SAWMILL BRANCH

SECTION 205 FLOOD
CONTROL PROJECT

FIGURE 3-12

HR ICA

PN Page 86 of 90
SCALE 1"=100'

MATCHLINE FIGURE 3-12

MATCHLINE FIGURE 3-14

WETLANDS

PROPOSED ROADWAY

260

265

270

32500

33000

33500

32365.6

32433.0

32525.0

32617.0

32704.0

32778.1

32852.0

33016.0

33081.5

33147.0

33219.5

33292.0

33351.0

33410.0

33496.0

33571.0

33635.0

CHANNEL
BENCHING
AREA

SAWMILL
BRANCH

HEC-RAS
CROSS
SECTION

SAWMILL BRANCH PRESENT, 80 R/W
FILE 00002 10-2-401

LEGEND

-  WETLANDS
-  PROPOSED ROADWAY
& SAWMILL BRANCH TRAIL
-  SAWMILL BRANCH
-  CHANNEL BENCHING AREA
-  PROPOSED BRIDGE
-  PROPOSED SIDEWALK



PUBLIC NOTICE (PN) SAC 2015-0807

PN DATE: MAY 16, 2018

SAWMILL BRANCH

SECTION 205 FLOOD
CONTROL PROJECT

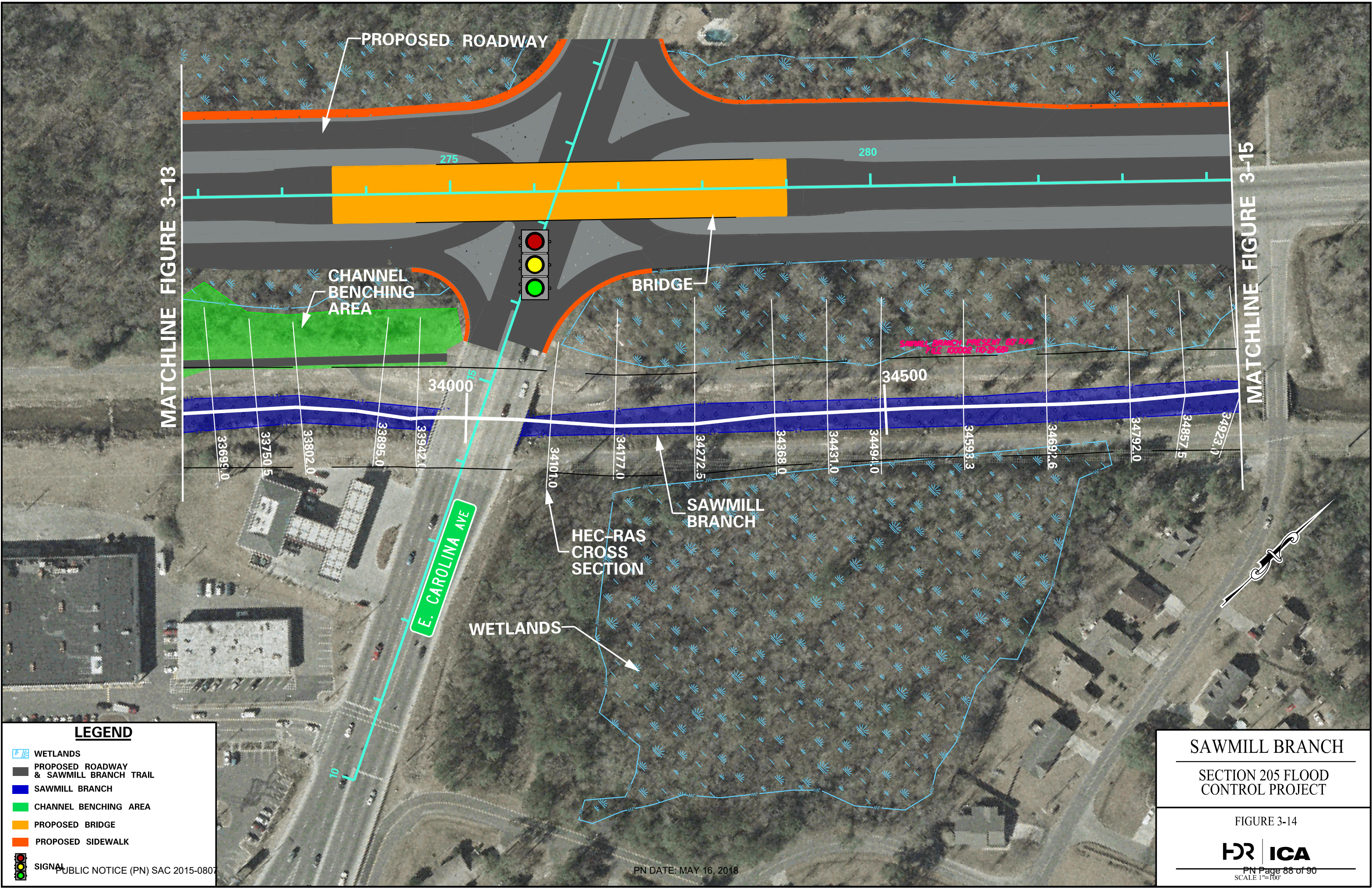
FIGURE 3-13

HR ICA

PN Page 87 of 90
SCALE 1"=100'

MATCHLINE FIGURE 3-13

MATCHLINE FIGURE 3-15



LEGEND

- WETLANDS
- PROPOSED ROADWAY & SAWMILL BRANCH TRAIL
- SAWMILL BRANCH
- CHANNEL BENCHING AREA
- PROPOSED BRIDGE
- PROPOSED SIDEWALK
- SIGNAL

PUBLIC NOTICE (PN) SAC 2015-0807

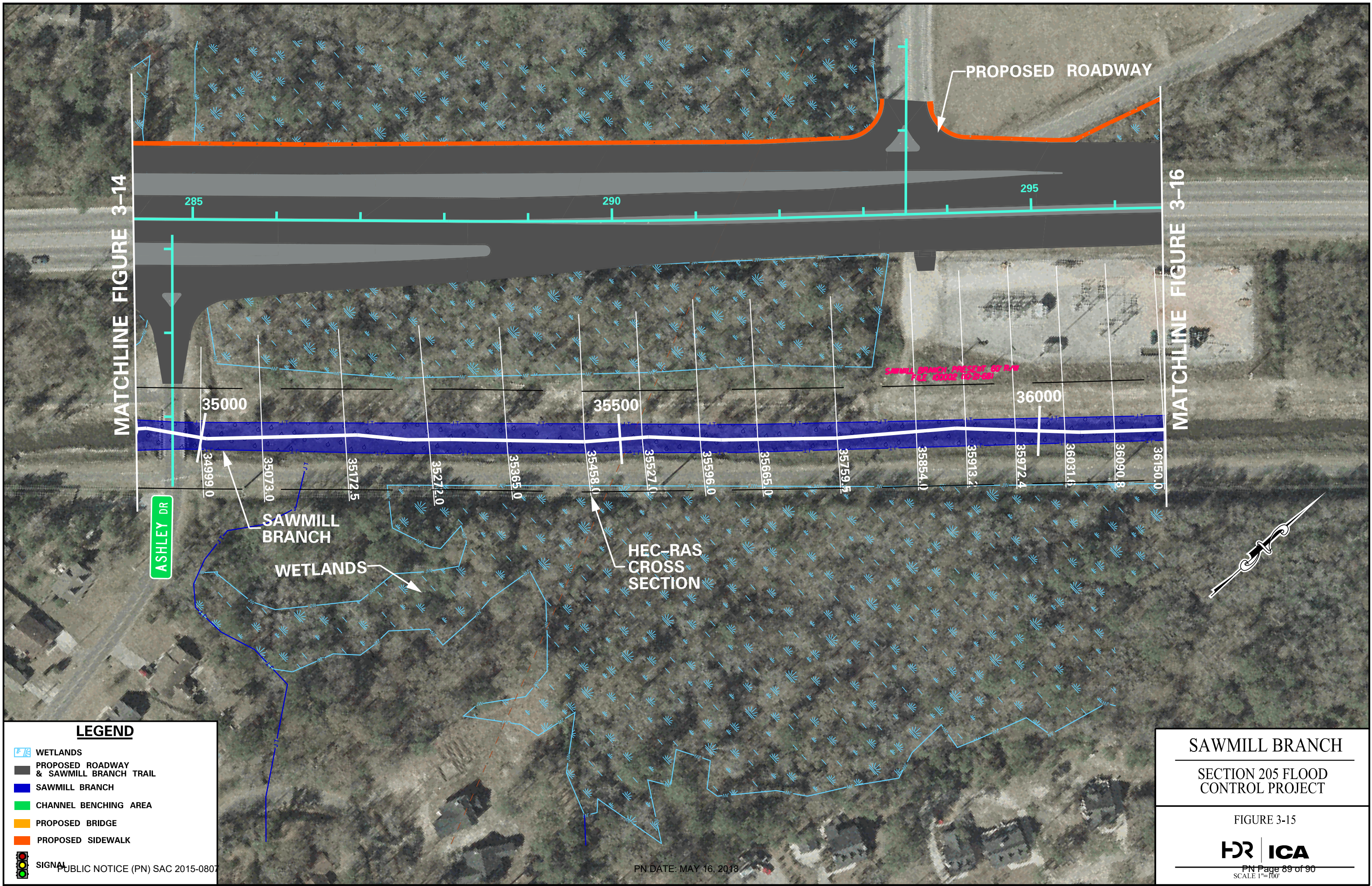
SAWMILL BRANCH

SECTION 205 FLOOD CONTROL PROJECT

FIGURE 3-14

HR ICA

PN Page 88 of 90
SCALE 1"=100'



MATCHLINE FIGURE 3-15

PROPOSED ROADWAY

300

305

310

36500

37000

37500

HEC-RAS
CROSS
SECTION

SAWMILL
BRANCH

WETLANDS

SAWMILL BRANCH PRESENT 60' R/W
FILE 100002 10-2-68

36206.5 36263.0 36325.0 36387.0 36469.5 36552.0 36640.5 36729.0 36817.5 36906.0 36995.0 37092.0 37185.0 37271.5 37310.0 37389.5 37479.0 37546.3

LEGEND

- WETLANDS
- PROPOSED ROADWAY & SAWMILL BRANCH TRAIL
- SAWMILL BRANCH
- CHANNEL BENCHING AREA
- PROPOSED BRIDGE
- PROPOSED SIDEWALK
- SIGNAL

SAWMILL BRANCH
SECTION 205 FLOOD
CONTROL PROJECT

FIGURE 3-16

