

JOINT
PUBLIC NOTICE

CHARLESTON DISTRICT, CORPS OF ENGINEERS
69A Hagood Avenue
Charleston, South Carolina 29403-5107

and

THE S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL
Office of Environmental Quality Control
Water Quality Certification and Wetlands Programs Section
2600 Bull Street
Columbia, South Carolina 29201

REGULATORY DIVISION
Refer to: P/N #2004-1G-138-C

28 MAY 2004

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

TRIVEN PROPERTIES, LLC
C/O TOBY RADENBAUGH
TRICO ENGINEERING CONSULTANTS, INC.
4425 BELLE OAKS DRIVE
NORTH CAHRLESTON, SOUTH CAROLINA 29405

for a permit to place fill material in wetlands adjacent to

BRICKBOUND SWAMP

at a location, Liberty Hall Plantation, Tract E2, located east of the City of Goose Creek, in Berkeley County, South Carolina. (Latitude 33°00'28"— Longitude 80°00'18")

Directions to the site: Take US 52 to Goose Creek. Take a right onto Liberty Hall Road and go until it intersects with North Rhett Avenue, the site is on the left side of the intersection. Please contact Toby Radenbaugh at 843-7700 to visit the site.

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 both of the above mentioned offices until

12 O'CLOCK NOON, MONDAY, JUNE 28, 2004

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

The proposed work consists of placing fill material in 4.15 acres of jurisdictional wetlands for road crossings and backfill and bedding in 1.24 acres of jurisdictional wetlands for installation of sewer lines. The applicant also proposes to place fill material in 2.80 acres of non-jurisdictional wetlands for development of the site. As mitigation for the proposed work, the applicant proposes to preserve and buffer the remaining 268.26 acres of wetlands onsite with 27.88 acres of upland buffers. In addition, the applicant proposes to purchase approximately 22 restoration credits from the Pigeon Pond Mitigation Bank. The purpose of the proposed work

as stated by the applicant is "to develop the site into a mixed-use development to include single and multi-family residential, commercial and parkland."

NOTE: Plans depicting the work described in this notice are available and will be provided, upon receipt of a written request, to anyone that is interested in obtaining a copy of the plans for the specific project. The request must identify the project of interest by public notice number and a self-addressed stamped envelope must also be provided for mailing the drawings to you. Your request for drawings should be addressed to the

**U.S. Army Corps of Engineers
ATTN: REGULATORY DIVISION
69A Hagood Avenue
Charleston, South Carolina 29403-5107.**

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 South Carolina Coastal Zone Management Act (15 CFR 930). 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. Persons wishing to comment or object to State certification must submit all comments in writing to the S.C. Department of Health and Environmental Control at the above address within thirty (30) days of the date of this notice.

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 8.19 acres of freshwater substrates inland of estuarine substrates and emergent wetlands utilized by various life stages of species comprising the red drum, shrimp, and snapper-grouper management complexes. Our 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). Our final determination relative to project impacts and the need for mitigation measures is subject to review by and coordination with the NMFS.

Pursuant to Section 7(c) 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. Based upon this report, 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.

The District Engineer has consulted the latest published version of the National Register of Historic Places for the presence or absence of registered properties, or properties listed as being eligible for inclusion therein, and this worksite is not included as a registered property or property listed as being eligible for inclusion in the Register. Consultation of the National Register constitutes the extent of cultural resource investigations by the District Engineer, and he is otherwise unaware of the presence of such resources. Presently unknown archaeological, scientific, prehistorical, or historical data may be lost or destroyed by the work to be accomplished under the requested permit.

28 MAY 2004

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.

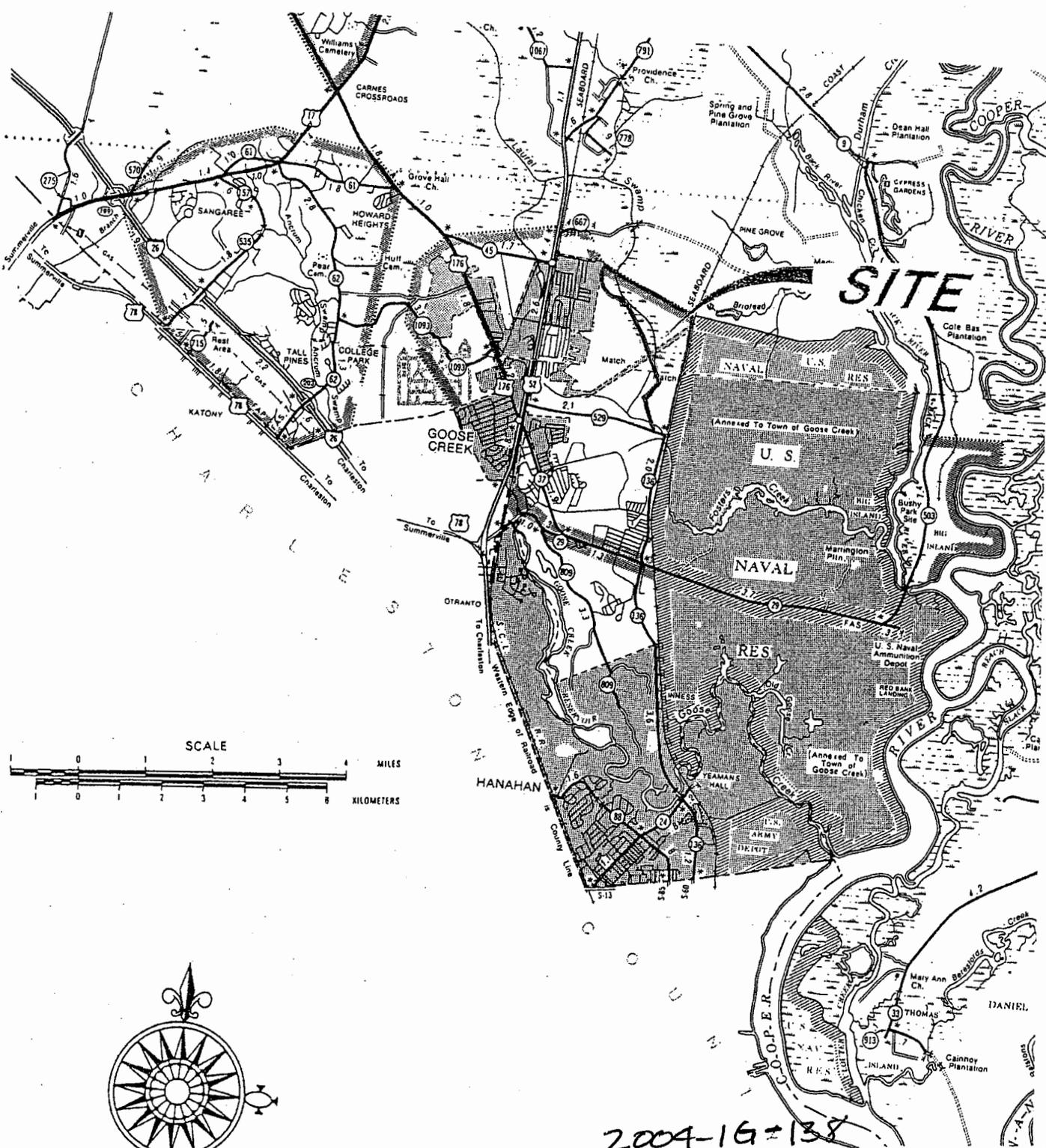
The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the activity on the public interest and will include application of the guidelines promulgated by the Administrator, Environmental Protection Agency (EPA), under authority of Section 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 of Engineers cannot undertake to adjudicate rival claims.

The Corps of Engineers 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 of Engineers 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.

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

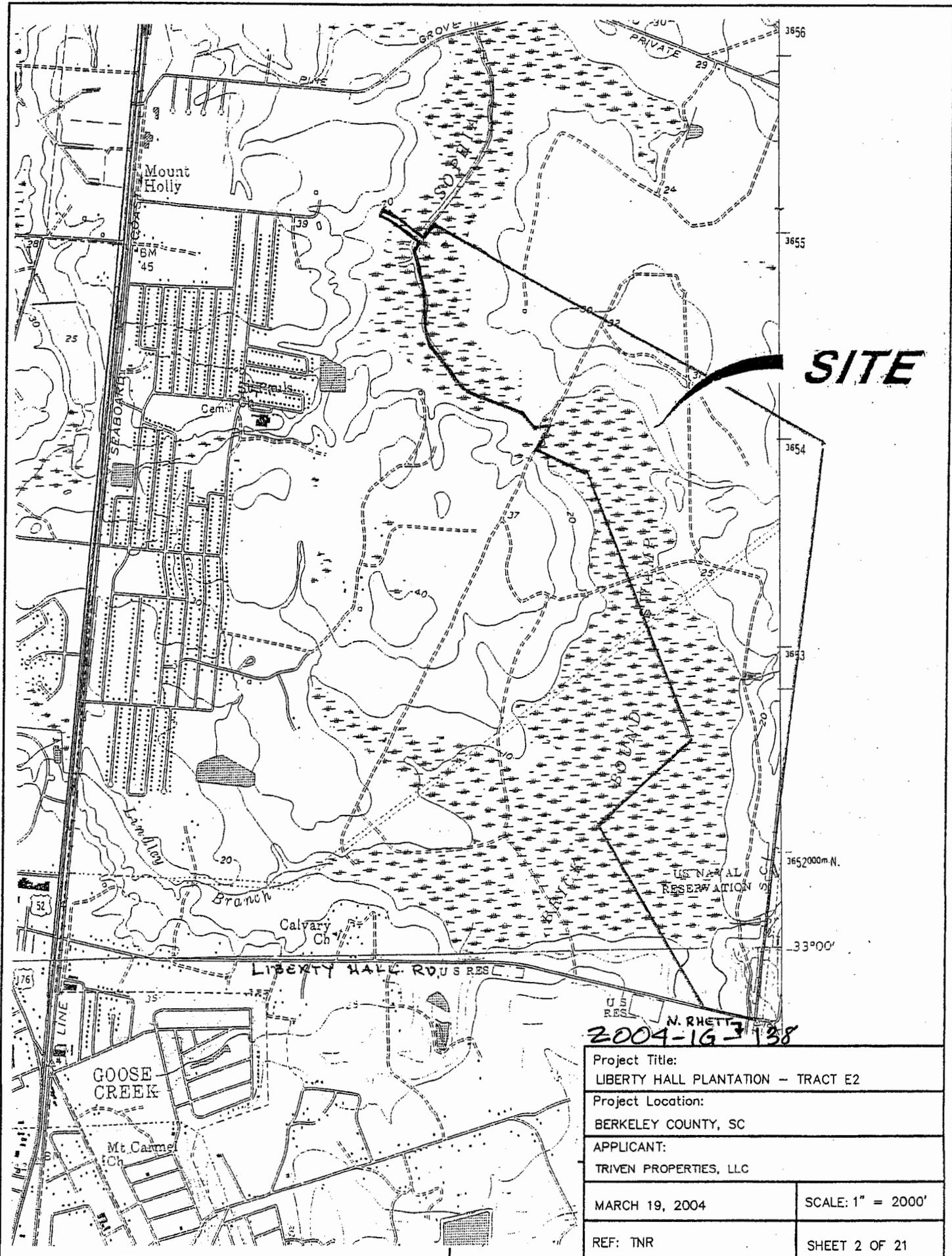


Mary Hope Glenn
Project Manager
Regulatory Division
U.S. Army Corps of Engineers



Berkeley County

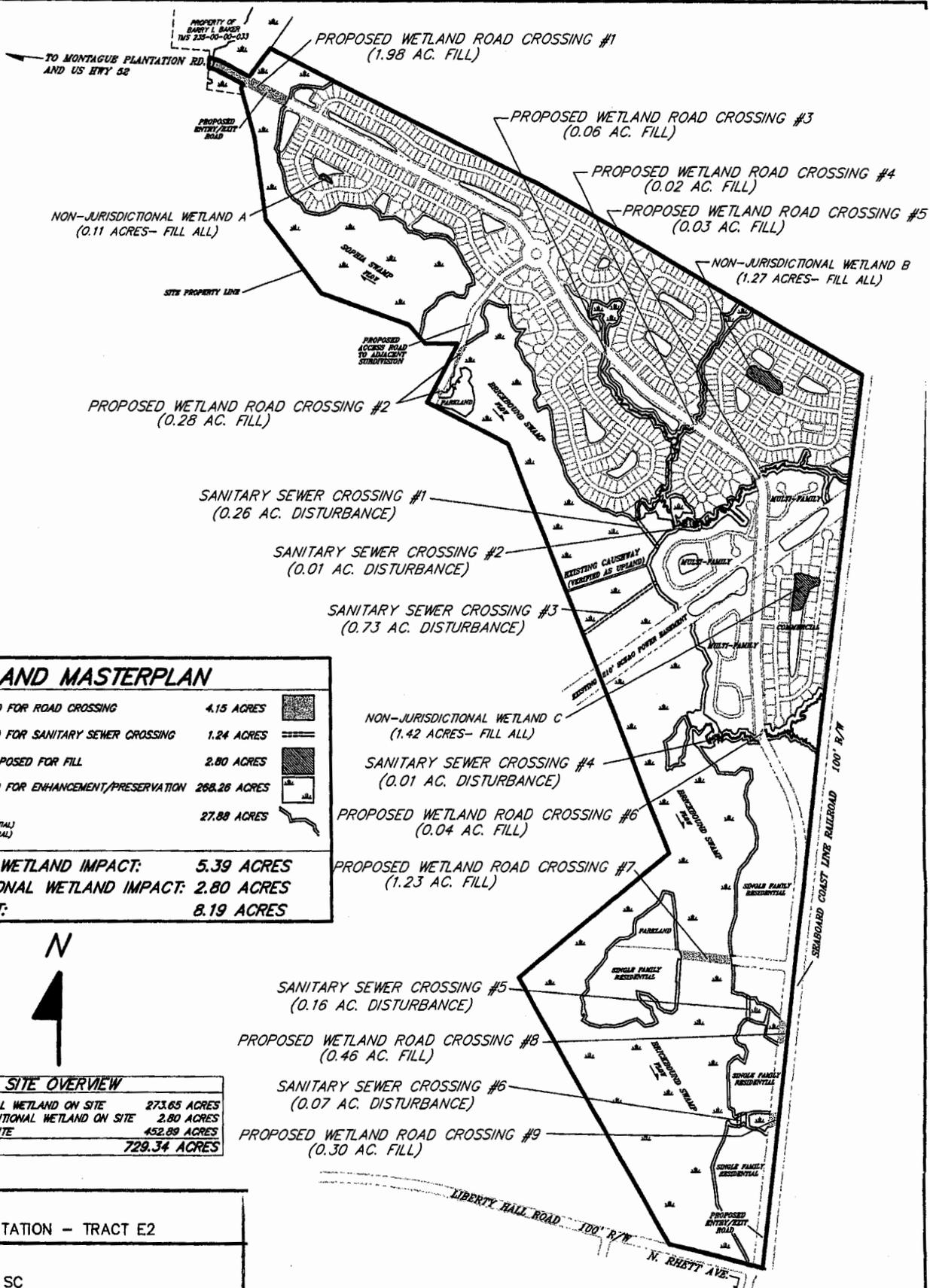
Project Title: LIBERTY HALL PLANTATION - TRACT E2	
Project Location: BERKELEY COUNTY, SC	
APPLICANT: TRIVEN PROPERTIES, LLC	
MARCH 19, 2004	SCALE: AS SHOWN
REF: TNR	SHEET 1 OF 21



SITE

N. RHETT
2004-1G-3138

Project Title: LIBERTY HALL PLANTATION - TRACT E2	
Project Location: BERKELEY COUNTY, SC	
APPLICANT: TRIVEN PROPERTIES, LLC	
MARCH 19, 2004	SCALE: 1" = 2000'
REF: TNR	SHEET 2 OF 21



WETLAND MASTERPLAN

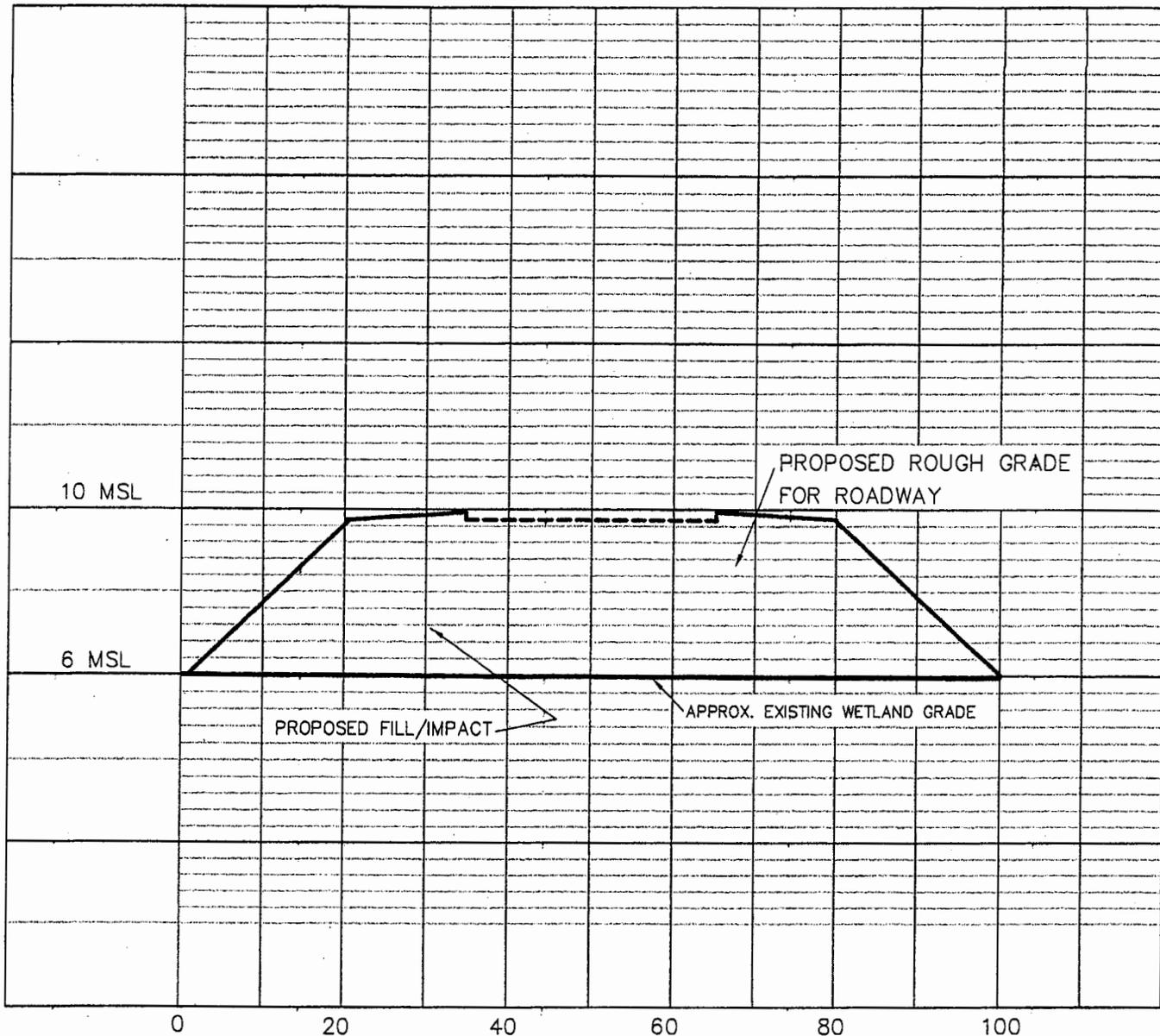
NON-JURISDICTIONAL WETLAND PROPOSED FOR ROAD CROSSING	4.15 ACRES	
NON-JURISDICTIONAL WETLAND PROPOSED FOR SANITARY SEWER CROSSING	1.24 ACRES	
NON-JURISDICTIONAL WETLAND PROPOSED FOR FILL	2.80 ACRES	
NON-JURISDICTIONAL WETLAND PROPOSED FOR ENHANCEMENT/PRESERVATION	288.26 ACRES	
WETLAND PROPOSED FOR BUFFERING MIN. WIDTH ADJ. TO SINGLE FAMILY RESIDENTIAL MIN. WIDTH ADJ. TO MULTI-FAMILY RESIDENTIAL MIN. WIDTH ADJ. TO COMMERCIAL	27.88 ACRES	
TOTAL JURISDICTIONAL WETLAND IMPACT:	5.39 ACRES	
TOTAL NON-JURISDICTIONAL WETLAND IMPACT:	2.80 ACRES	
TOTAL WETLAND IMPACT:	8.19 ACRES	



SITE OVERVIEW	
TOTAL JURISDICTIONAL WETLAND ON SITE	273.65 ACRES
TOTAL NON-JURISDICTIONAL WETLAND ON SITE	2.80 ACRES
TOTAL UPLAND ON SITE	452.89 ACRES
TOTAL SITE	729.34 ACRES

Project Title: LIBERTY HALL PLANTATION - TRACT E2	
Project Location: BERKELEY COUNTY, SC	
APPLICANT: TRIVEN PROPERTIES, LLC	
MARCH 19, 2004	SCALE: 1" = 1500'
DRAWN BY: TNR	SHEET 3 OF 21

2004-1G-138



HORIZONTAL SCALE: 1" = 20'
 VERTICAL SCALE: 1" = 4'

PROPOSED ROAD CROSSING #1 - 100' R.O.W.

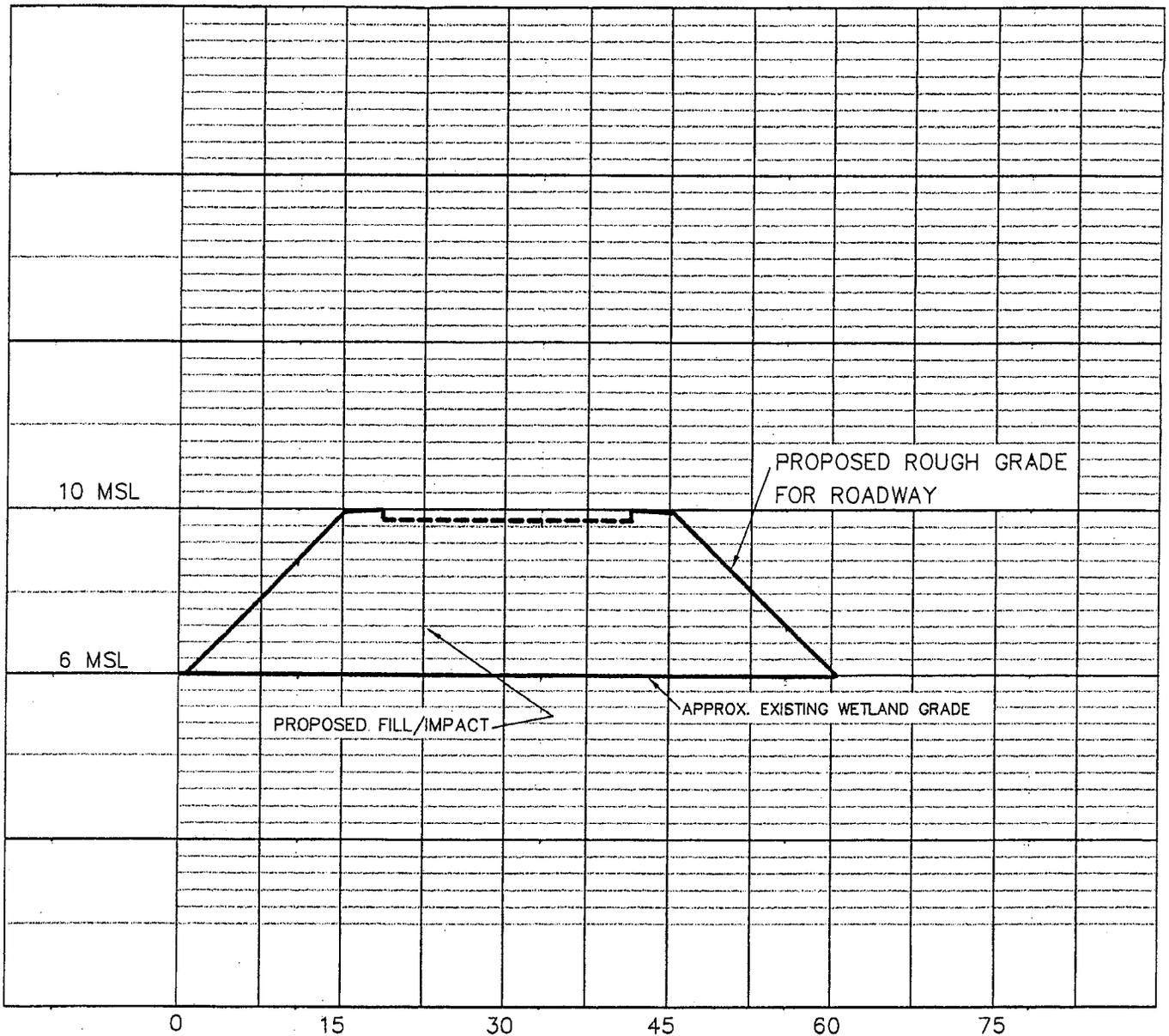
TOTAL EST. VOLUME OF WETLAND FILL: (1.98 ACRES/13,000 CU.YD.)

AT EXISTING WETLAND GRADE, INSTALL 2-BOX CULVERTS AT CANAL CROSSING AND 6-24" RCP'S 100' O.C.

2004-16-138

Project Title: LIBERTY HALL PLANTATION - TRACT E2	
Project Location: BERKELEY COUNTY, SC	
APPLICANT: TRIVEN PROPERTIES, LLC	
MARCH 19, 2004	SCALE: AS SHOWN
REF: TNR	SHEET 4 OF 21

Revisions	
Date	Initials



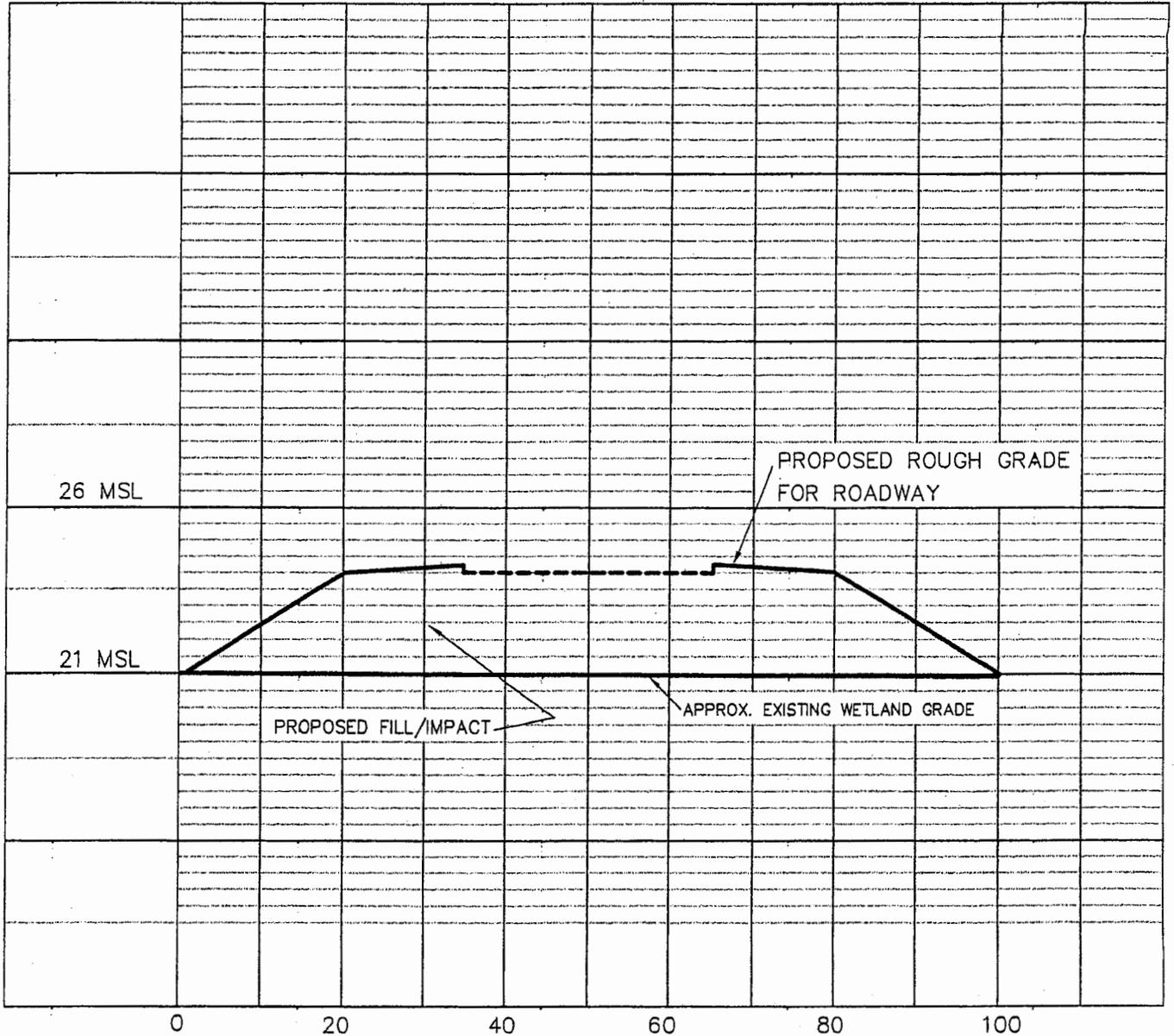
HORIZONTAL SCALE: 1" = 15'
 VERTICAL SCALE: 1" = 4'

PROPOSED ROAD CROSSING #2 - 60' R.O.W.
 TOTAL EST. VOLUME OF WETLAND FILL: (0.28 ACRES/1800 CU.YD.)
 AT EXISTING WETLAND GRADE, INSTALL 2-24" RCP'S AT CROSSING MIDPOINT

2004-1G-138

Project Title: LIBERTY HALL PLANTATION - TRACT E2	
Project Location: BERKELEY COUNTY, SC	
APPLICANT: TRIVEN PROPERTIES, LLC	
MARCH 19, 2004	SCALE: AS SHOWN
REF: TNR	SHEET 5 OF 21

Revisions	
Date	Initials



HORIZONTAL SCALE: 1" = 20'
 VERTICAL SCALE: 1" = 5'

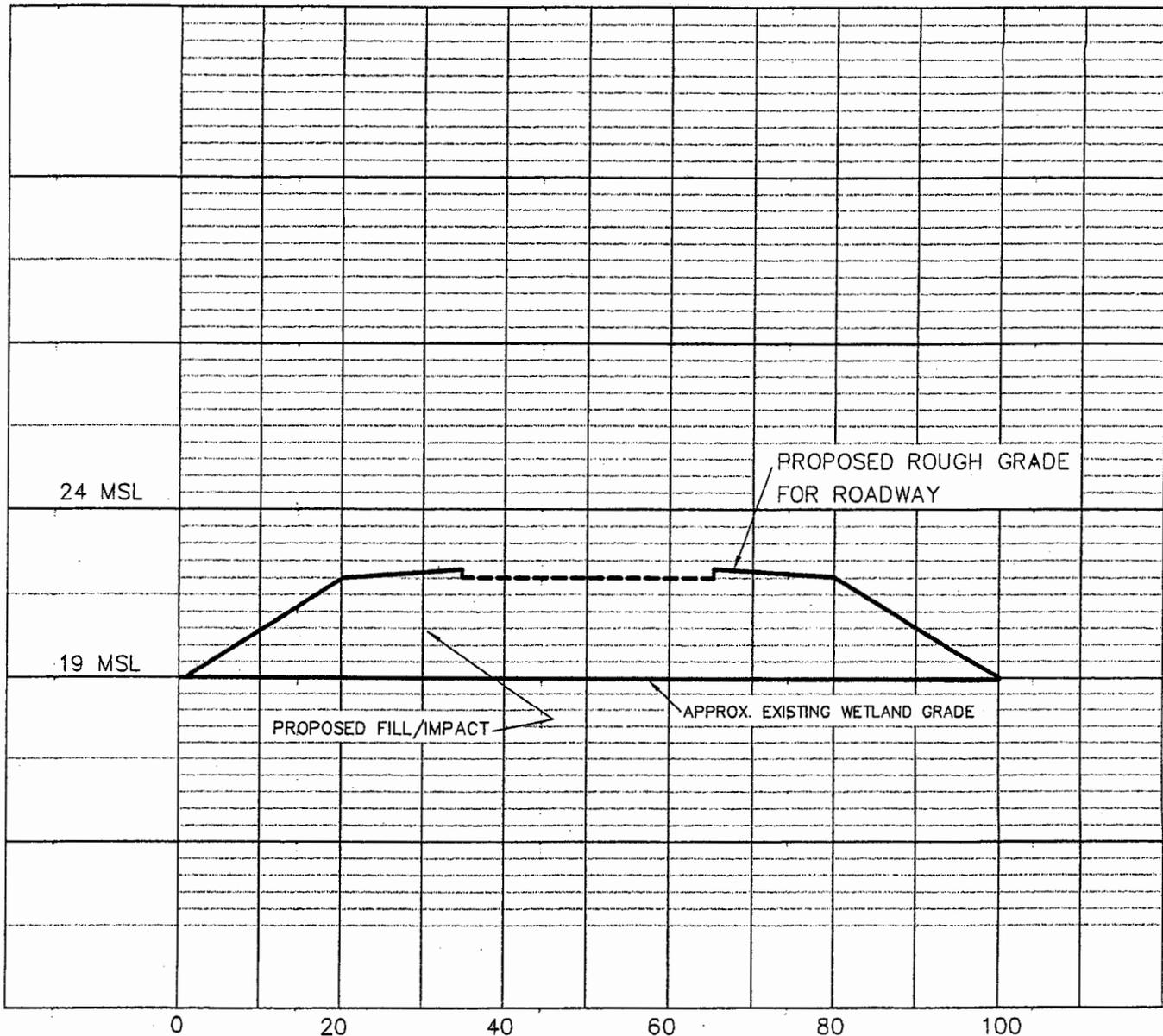
PROPOSED ROAD CROSSING #3 - 100' R.O.W.
 TOTAL EST. VOLUME OF WETLAND FILL: (0.06 ACRES/300 CU.YD.)

INSTALL 2 - 24" RCP'S @ CROSSING MIDPOINT AT EXISTING WETLAND GRADE

2004-1G-138

Project Title: LIBERTY HALL PLANTATION - TRACT E2	
Project Location: BERKELEY COUNTY, SC	
APPLICANT: TRIVEN PROPERTIES, LLC	
MARCH 19, 2004	SCALE: AS SHOWN
REF: TNR	SHEET 6 OF 21

Revisions	
Date	Initials



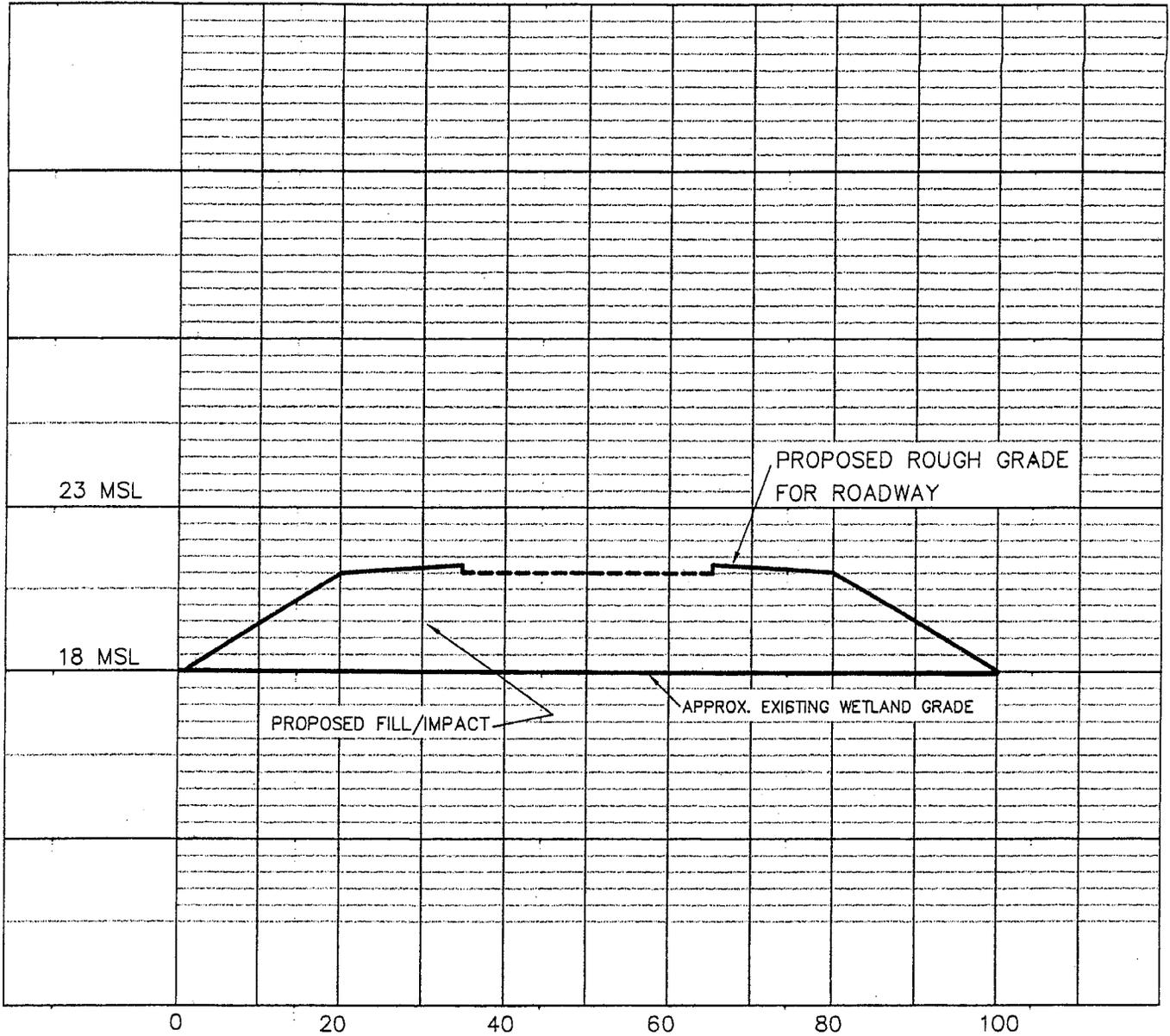
HORIZONTAL SCALE: 1" = 20'
 VERTICAL SCALE: 1" = 5'

PROPOSED ROAD CROSSING #4 - 100' R.O.W.
TOTAL EST. VOLUME OF WETLAND FILL: (0.02 ACRES/100 CU.YD.)
 INSTALL 2 - 24" RCP'S @ CROSSING MIDPOINT AT EXISTING WETLAND GRADE

2004-1G-138

Revisions	
Date	Initials

Project Title: LIBERTY HALL PLANTATION - TRACT E2	
Project Location: BERKELEY COUNTY, SC	
APPLICANT: TRIVEN PROPERTIES, LLC	
MARCH 19, 2004	SCALE: AS SHOWN
REF: TNR	SHEET 7 OF 21



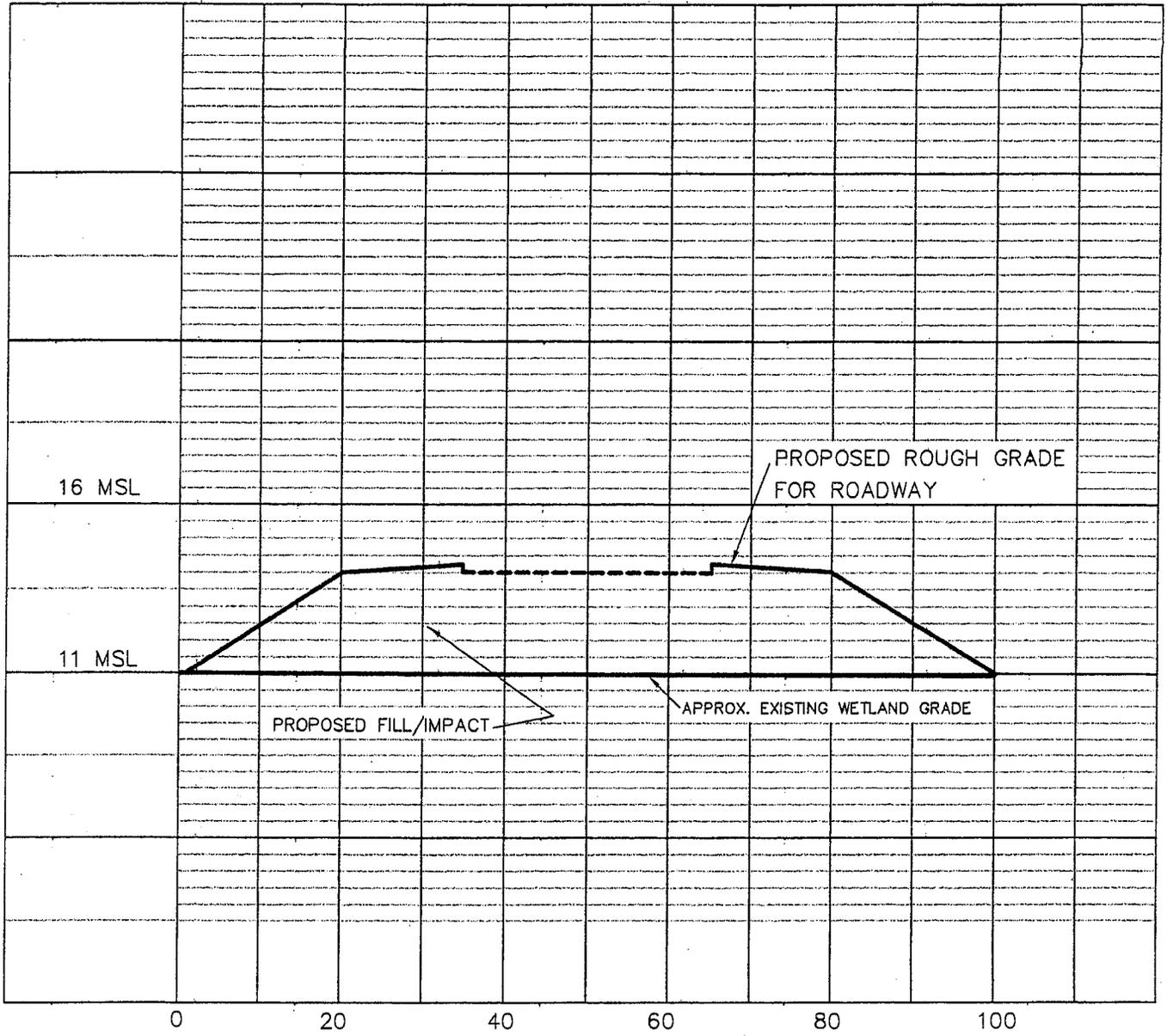
HORIZONTAL SCALE: 1" = 20'
 VERTICAL SCALE: 1" = 5'

PROPOSED ROAD CROSSING #5 - 100' R.O.W,
 TOTAL EST. VOLUME OF WETLAND FILL: (0.03 ACRES/150 CU.YD.)
 INSTALL 2 - 24" RCP'S @ CROSSING MIDPOINT AT EXISTING WETLAND GRADE

2004-1G-138

Revisions	
Date	Initials

Project Title: LIBERTY HALL PLANTATION - TRACT E2	
Project Location: BERKELEY COUNTY, SC	
APPLICANT: TRIVEN PROPERTIES, LLC	
MARCH 19, 2004	SCALE: AS SHOWN
REF: TNR	SHEET 8 OF 21



HORIZONTAL SCALE: 1" = 20'
 VERTICAL SCALE: 1" = 5'

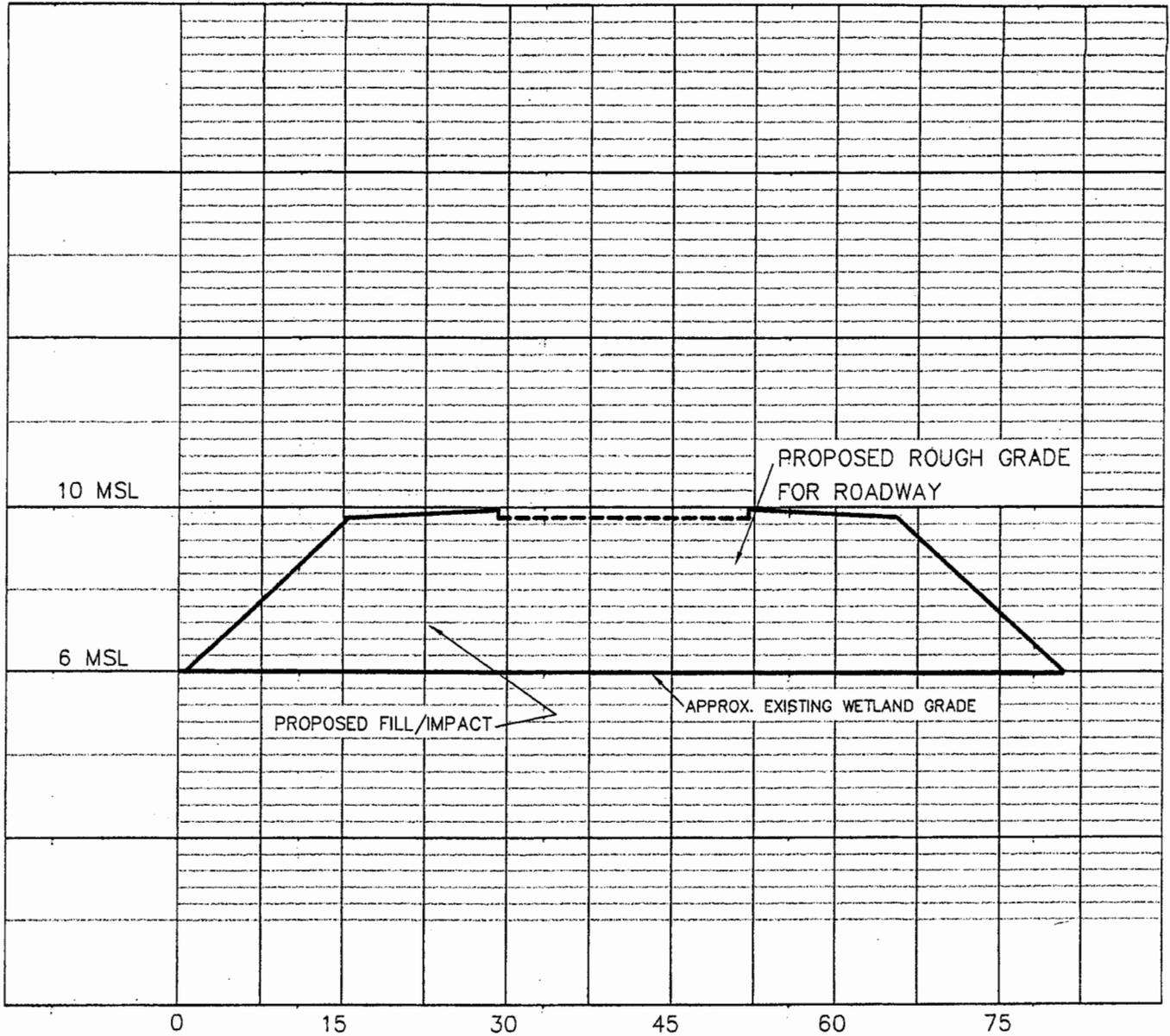
PROPOSED ROAD CROSSING #6 – 100' R.O.W.,
TOTAL EST. VOLUME OF WETLAND FILL: (0.04 ACRES/200 CU.YD.)

INSTALL 2 – 24" RCP'S @ CROSSING MIDPOINT AT EXISTING WETLAND GRADE

2004-19-138

Project Title: LIBERTY HALL PLANTATION – TRACT E2	
Project Location: BERKELEY COUNTY, SC	
APPLICANT: TRIVEN PROPERTIES, LLC	
MARCH 19, 2004	SCALE: AS SHOWN
REF: TNR	SHEET 9 OF 21

Revisions	
Date	Initials



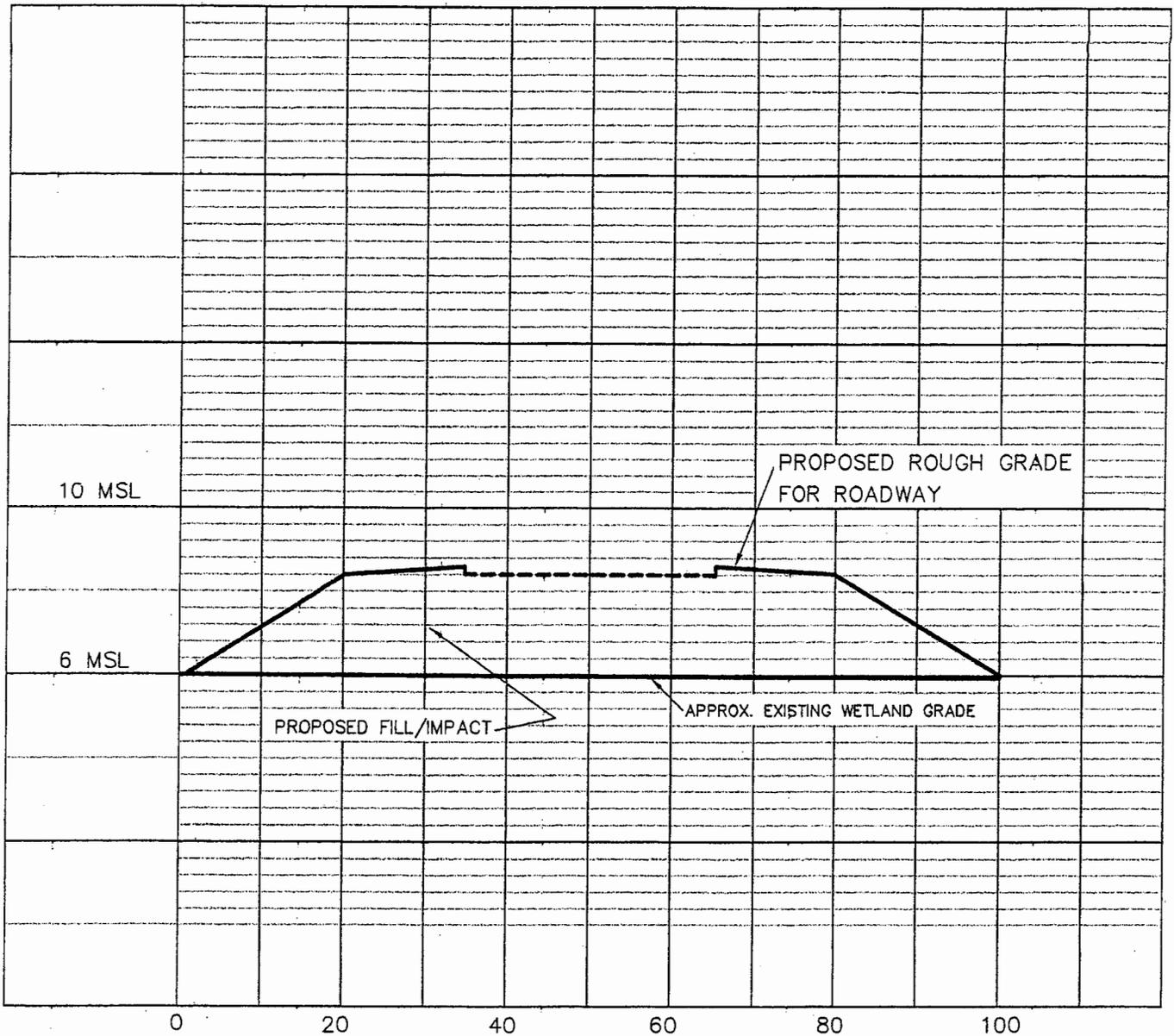
HORIZONTAL SCALE: 1" = 15'
 VERTICAL SCALE: 1" = 4'

PROPOSED ROAD CROSSING #7 - 80' R.O.W.
TOTAL EST. VOLUME OF WETLAND FILL: (1.23 ACRES/8,000 CU.YD.)
 AT EXISTING WETLAND GRADE, INSTALL 5-24" RCP'S 100' O.C.

2004-1G-138

Project Title: LIBERTY HALL PLANTATION - TRACT E2	
Project Location: BERKELEY COUNTY, SC	
APPLICANT: TRIVEN PROPERTIES, LLC	
MARCH 19, 2004	SCALE: AS SHOWN
REF: TNR	SHEET 10 OF 21

Revisions	
Date	Initials



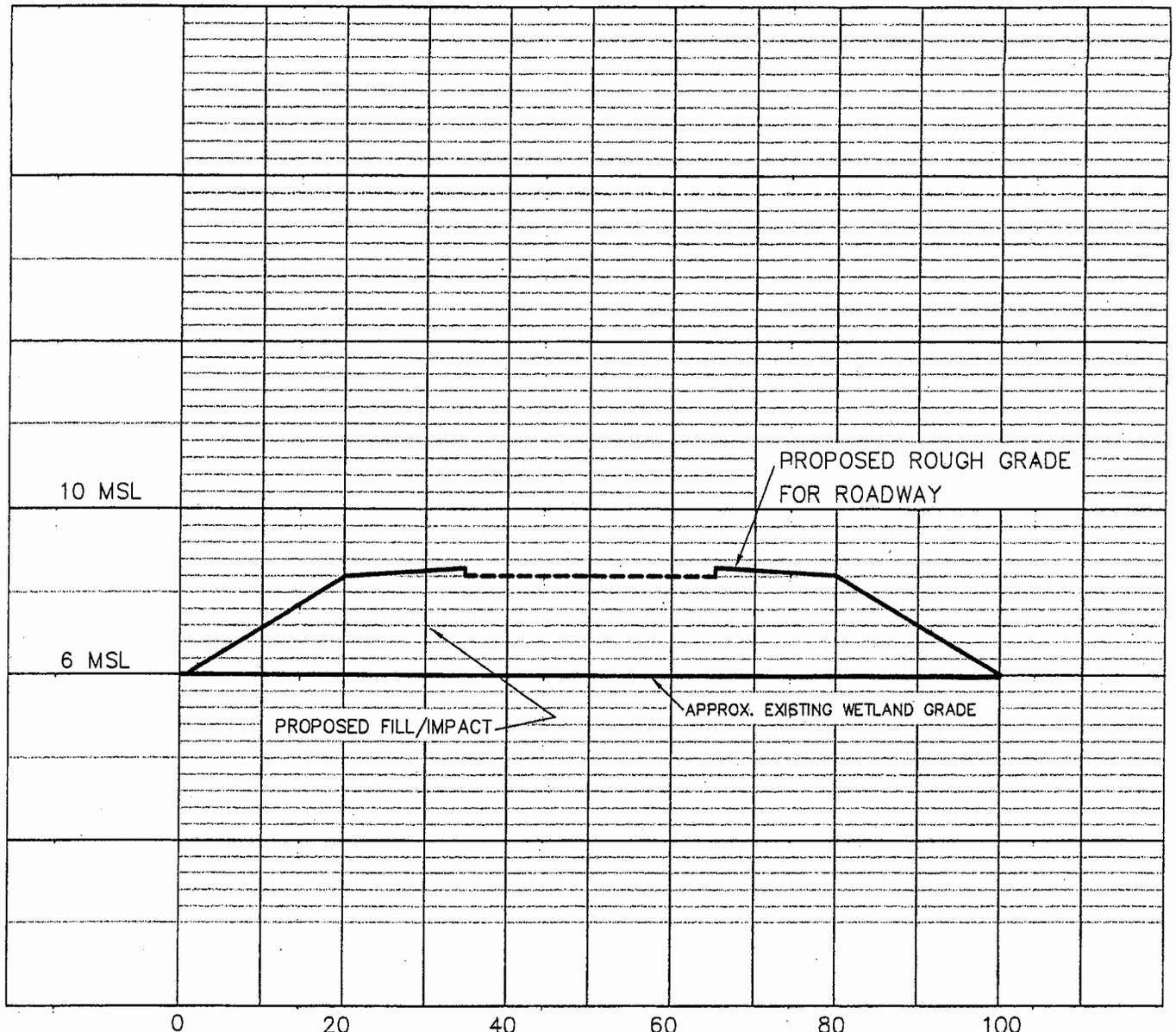
HORIZONTAL SCALE: 1" = 20'
 VERTICAL SCALE: 1" = 4'

PROPOSED ROAD CROSSING #8 – 100' R.O.W.
TOTAL EST. VOLUME OF WETLAND FILL: (0.46 ACRES/1800 CU.YD.)
 INSTALL 3 – 18" RCP'S @ CROSSING MIDPOINT AT EXISTING WETLAND GRADE

2004-16-138

Project Title: LIBERTY HALL PLANTATION – TRACT E2	
Project Location: BERKELEY COUNTY, SC	
APPLICANT: TRIVEN PROPERTIES, LLC	
MARCH 19, 2004	SCALE: AS SHOWN
REF: TNR	SHEET 11 OF 21

Revisions	
Date	Initials



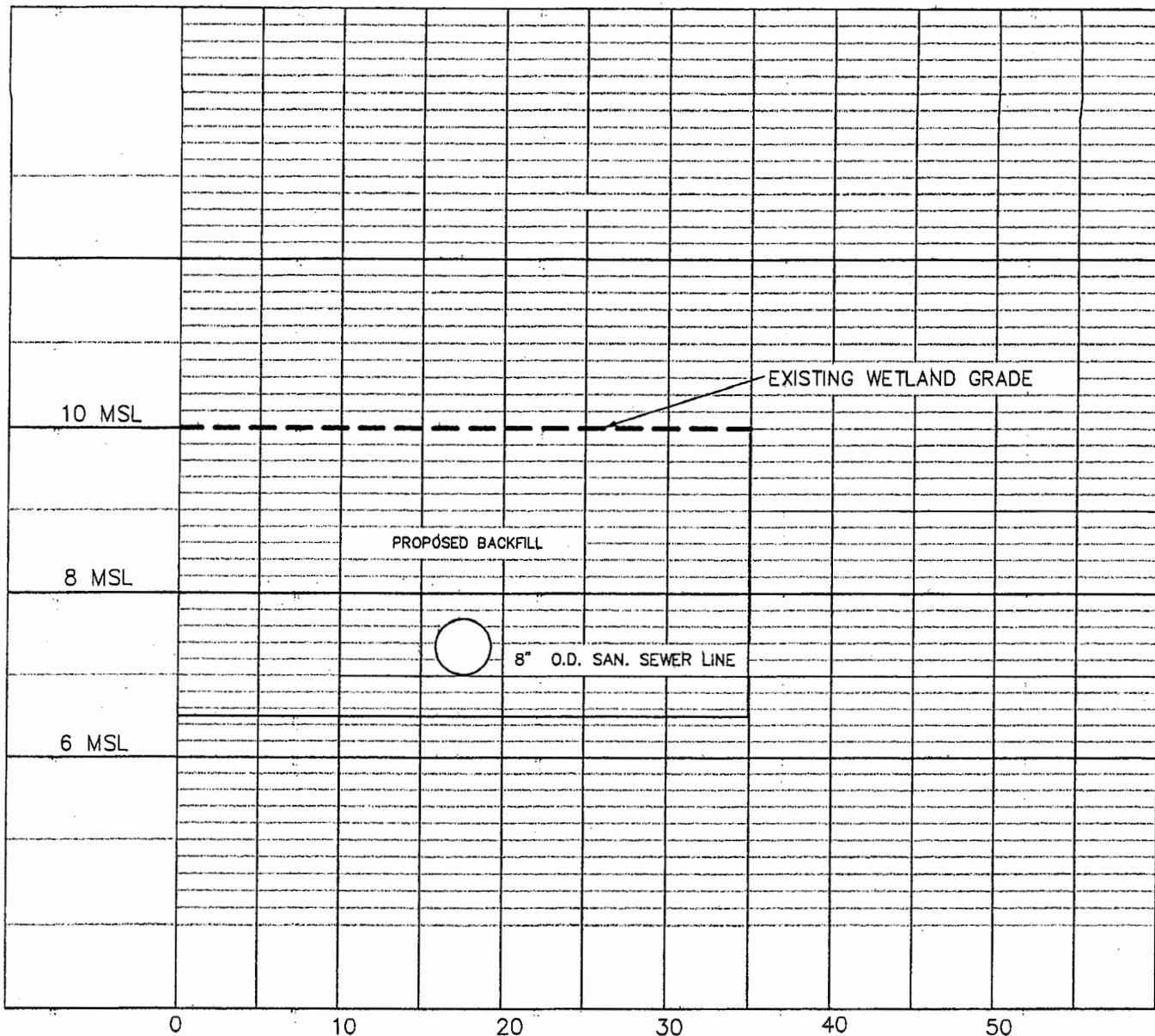
HORIZONTAL SCALE: 1" = 20'
 VERTICAL SCALE: 1" = 4'

PROPOSED ROAD CROSSING #9 - 100' R.O.W,
 TOTAL EST. VOLUME OF WETLAND FILL: (0.30 ACRES/1200 CU.YD.)
 INSTALL 3 - 18" RCP'S @ CROSSING MIDPOINT AT EXISTING WETLAND GRADE

2004-19-138

Project Title: LIBERTY HALL PLANTATION - TRACT E2	
Project Location: BERKELEY COUNTY, SC	
APPLICANT: TRIVEN PROPERTIES, LLC	
MARCH 19, 2004	SCALE: AS SHOWN
REF: TNR	SHEET 12 OF 21

Revisions	
Date	Initials



HORIZONTAL SCALE: 1" = 10'
 VERTICAL SCALE: 1" = 2'

SANITARY SEWER CROSSING #1

PROPOSED ZONE OF VEGETATION/GRADE DISTURBANCE: 35 FT. WIDTH

-TOTAL EST. L.F. OF WETLAND IMPACTED: 325 L.F.

-TOTAL EST. VOLUME OF BACKFILL AND/OR GRADE DISTURBANCE: 1475 CU. YD.

2004-19-138

Revisions

Date	Initials

Project Title:

LIBERTY HALL PLANTATION - TRACT E2

Project Location:

BERKELEY COUNTY, SC

APPLICANT:

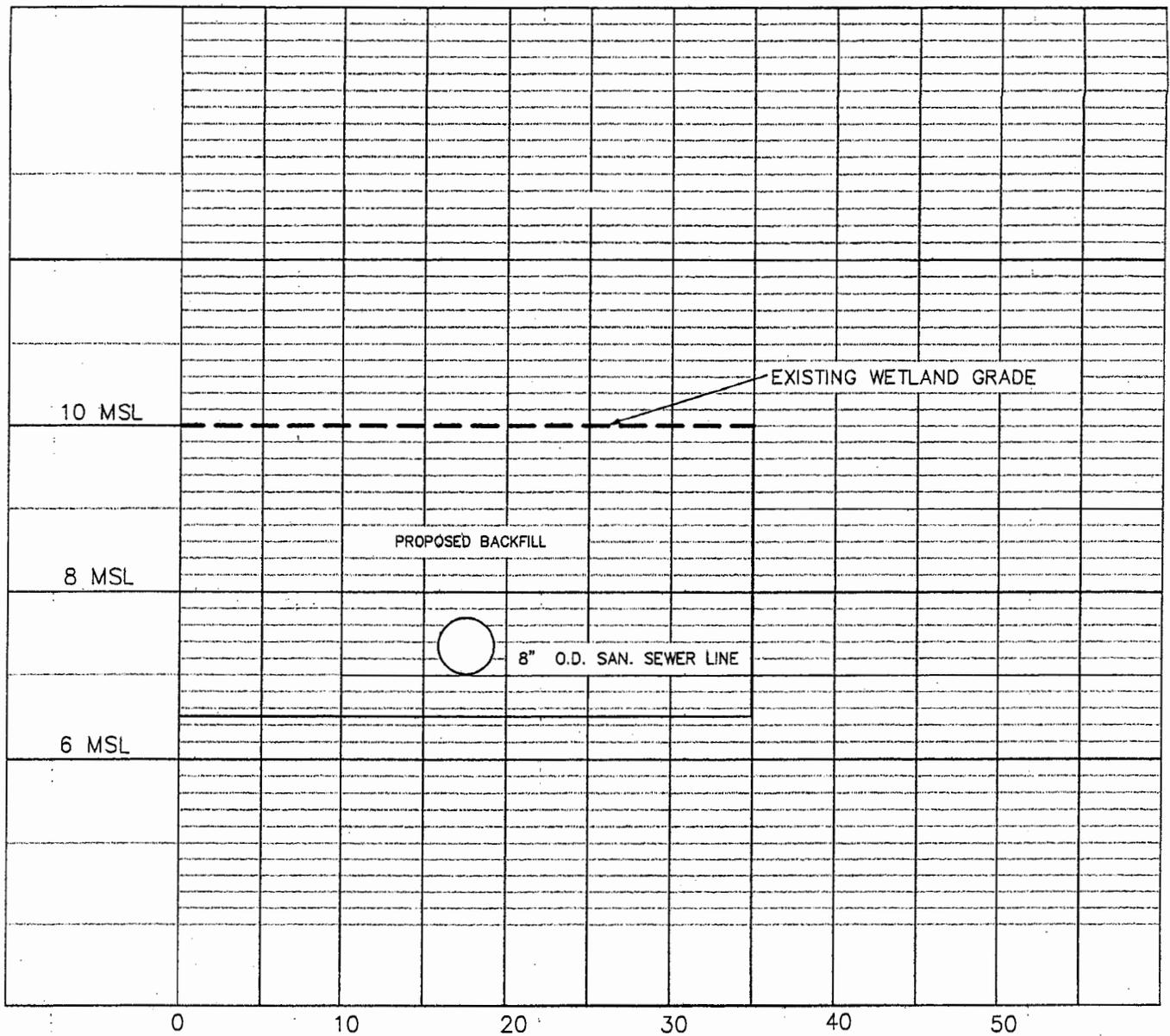
TRIVEN PROPERTIES, LLC

MARCH 19, 2004

SCALE: AS SHOWN

REF: TNR

SHEET 13 OF 21



HORIZONTAL SCALE: 1" = 10'
 VERTICAL SCALE: 1" = 2'

SANITARY SEWER CROSSING #2

PROPOSED ZONE OF VEGETATION/GRADE DISTURBANCE: 35 FT. WIDTH

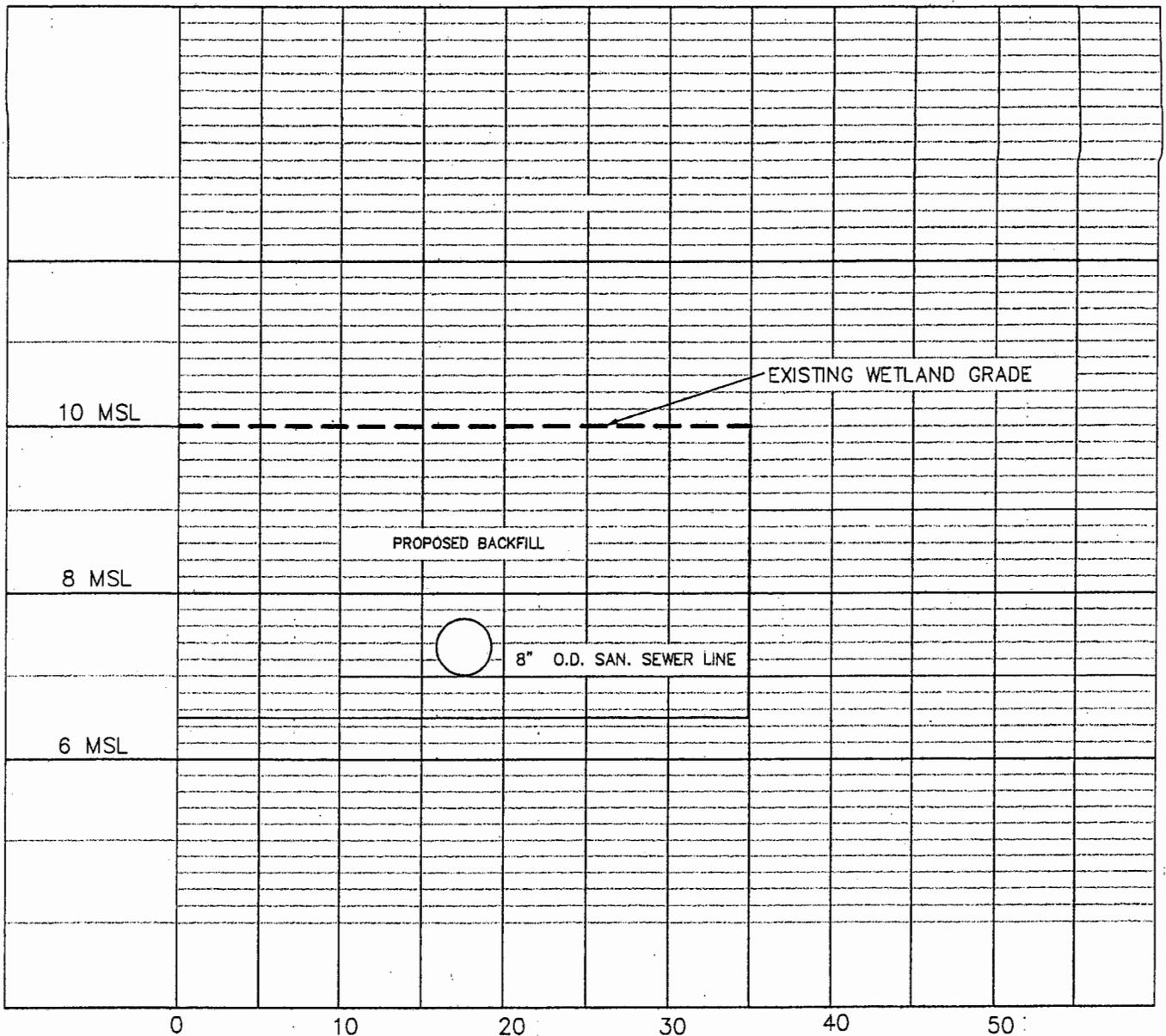
- TOTAL EST. L.F. OF WETLAND IMPACTED: 15 L.F.
- TOTAL EST. VOLUME OF BACKFILL AND/OR GRADE DISTURBANCE: 75 CU. YD.

2004-16-138

Revisions

Date	Initials

Project Title: LIBERTY HALL PLANTATION - TRACT E2	
Project Location: BERKELEY COUNTY, SC	
APPLICANT: TRIVEN PROPERTIES, LLC	
MARCH 19, 2004	SCALE: AS SHOWN
REF: TNR	SHEET 14 OF 21



HORIZONTAL SCALE: 1" = 10'
 VERTICAL SCALE: 1" = 2'

SANITARY SEWER CROSSING #3

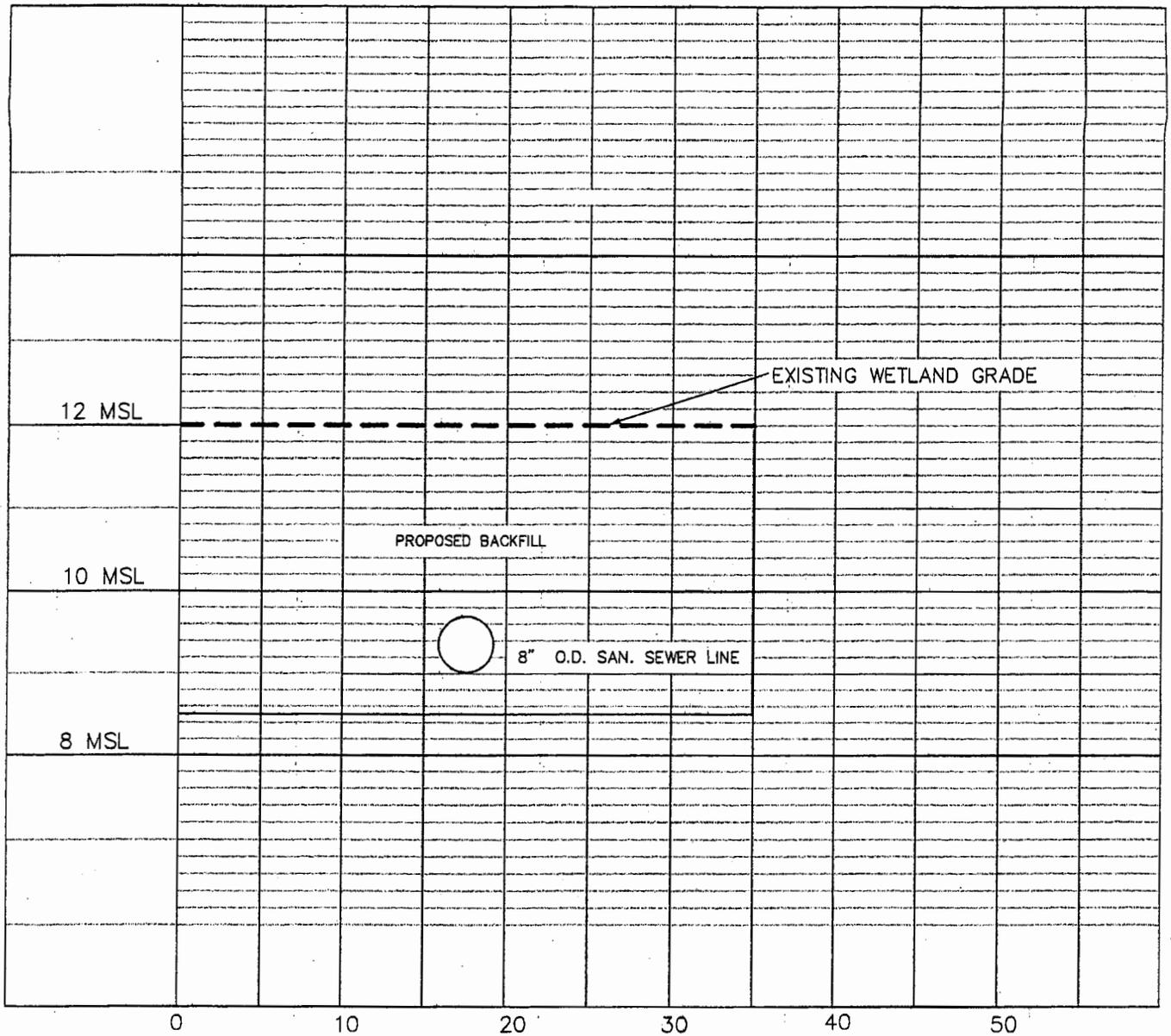
PROPOSED ZONE OF VEGETATION/GRADE DISTURBANCE: 35 FT. WIDTH.

- TOTAL EST. L.F. OF WETLAND IMPACTED: 910 L.F.
- TOTAL EST. VOLUME OF BACKFILL AND/OR GRADE DISTURBANCE: 4125 CU. YD.

2004-1G-138

Revisions	
Date	Initials

Project Title: LIBERTY HALL PLANTATION - TRACT E2	
Project Location: BERKELEY COUNTY, SC	
APPLICANT: TRIVEN PROPERTIES, LLC	
MARCH 19, 2004	SCALE: AS SHOWN
REF: TNR	SHEET 15 OF 21



HORIZONTAL SCALE: 1" = 10'
 VERTICAL SCALE: 1" = 2'

SANITARY SEWER CROSSING #4

PROPOSED ZONE OF VEGETATION/GRADE DISTURBANCE: 35 FT. WIDTH

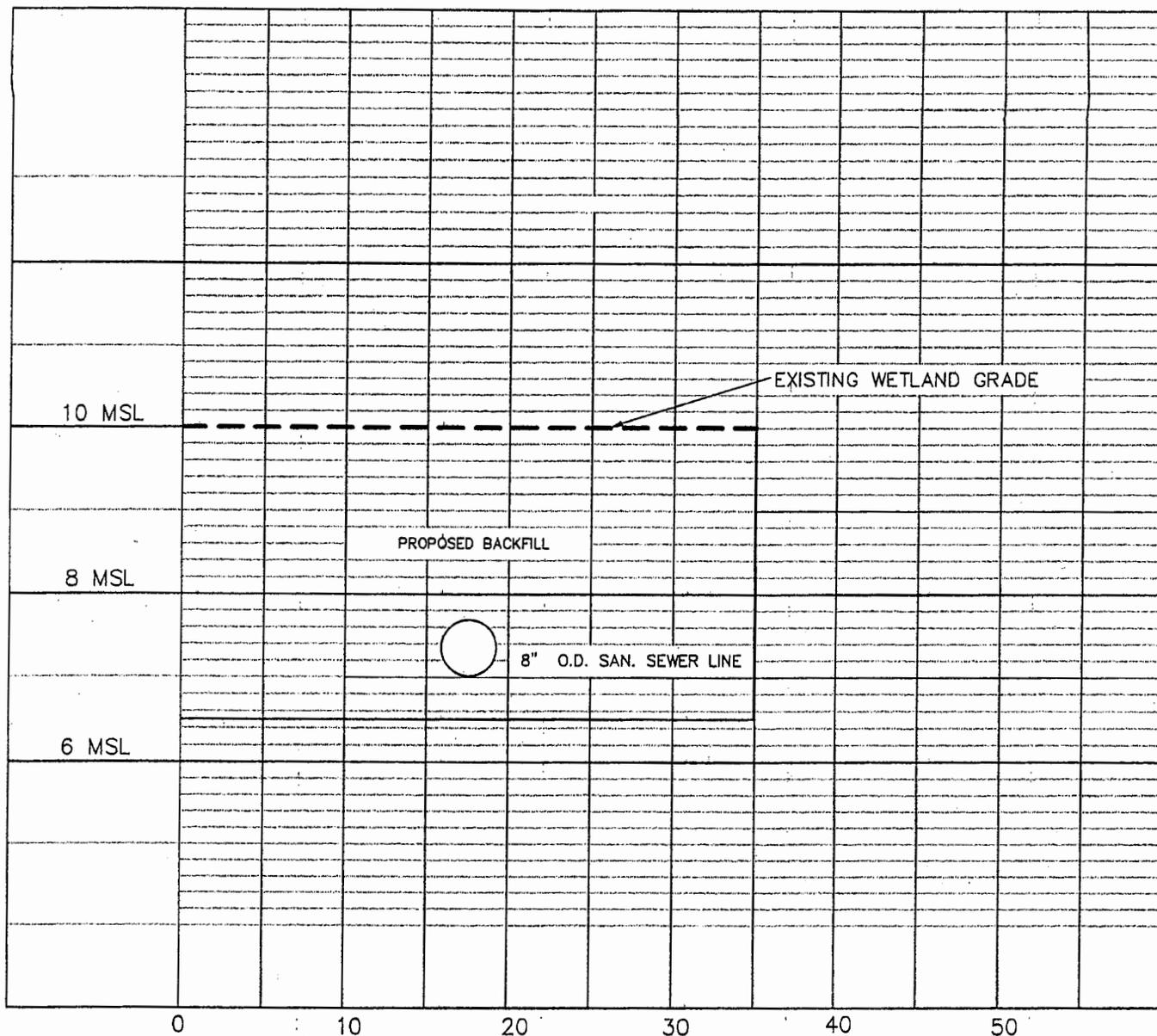
-TOTAL EST. L.F. OF WETLAND IMPACTED: 15 L.F.

-TOTAL EST. VOLUME OF BACKFILL AND/OR GRADE DISTURBANCE: 75 CU. YD.

2004-1G-138
 Revisions

Date	Initials

Project Title: LIBERTY HALL PLANTATION - TRACT E2	
Project Location: BERKELEY COUNTY, SC	
APPLICANT: TRIVEN PROPERTIES, LLC	
MARCH 19, 2004	SCALE: AS SHOWN
REF: TNR	SHEET 16 OF 21



HORIZONTAL SCALE: 1" = 10'
 VERTICAL SCALE: 1" = 2'

SANITARY SEWER CROSSING #5

PROPOSED ZONE OF VEGETATION/GRADE DISTURBANCE: 35 FT. WIDTH

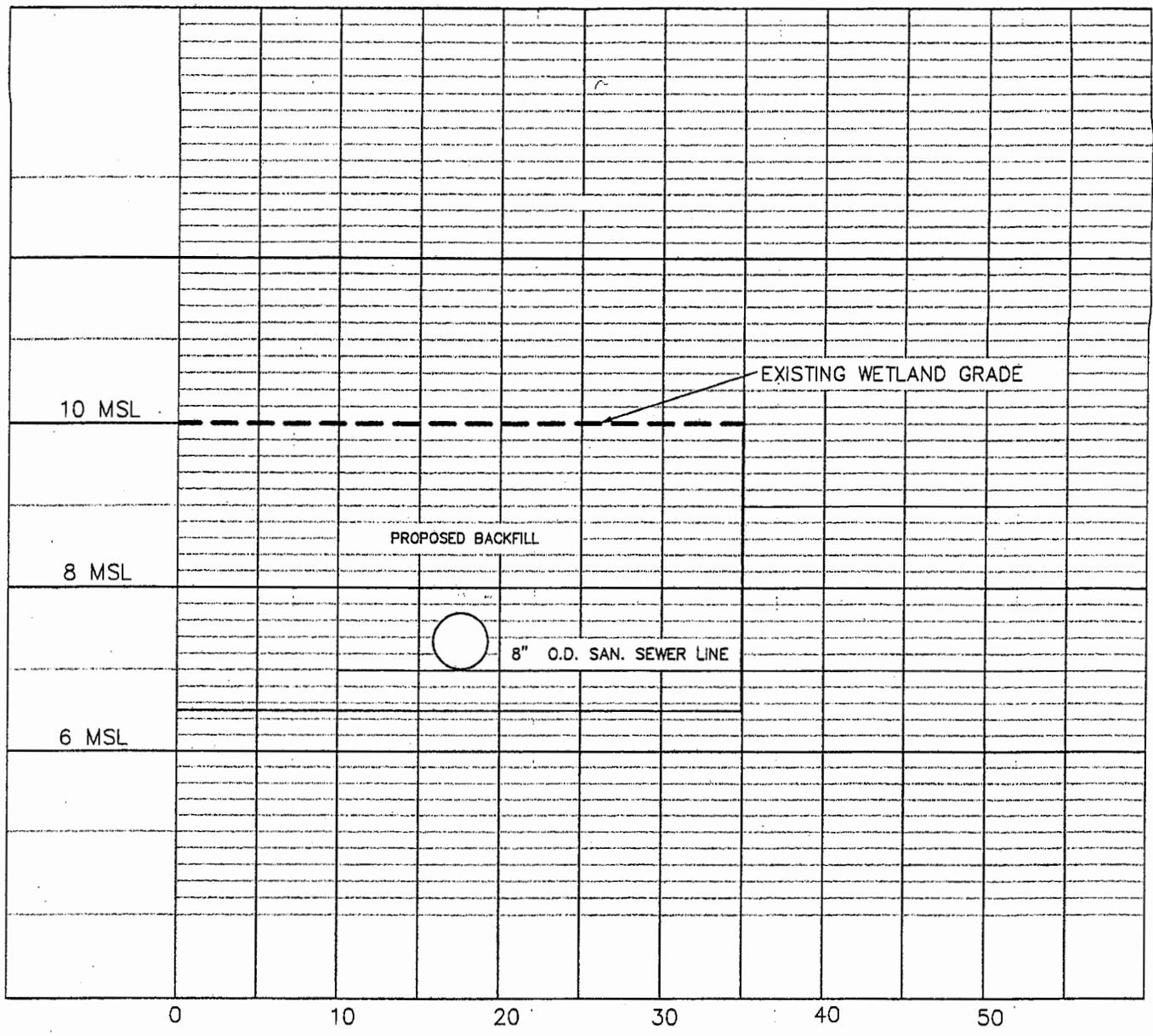
- TOTAL EST. L.F. OF WETLAND IMPACTED: 200 L.F.
- TOTAL EST. VOLUME OF BACKFILL AND/OR GRADE DISTURBANCE: 900 CU. YD.

2004-19-138

Revisions

Date	Initials

Project Title: LIBERTY HALL PLANTATION - TRACT E2	
Project Location: BERKELEY COUNTY, SC	
APPLICANT: TRIVEN PROPERTIES, LLC	
MARCH 19, 2004	SCALE: AS SHOWN
REF: TNR	SHEET 17 OF 21



HORIZONTAL SCALE: 1" = 10'
 VERTICAL SCALE: 1" = 2'

SANITARY SEWER CROSSING #6

PROPOSED ZONE OF VEGETATION/GRADE DISTURBANCE: 35 FT. WIDTH

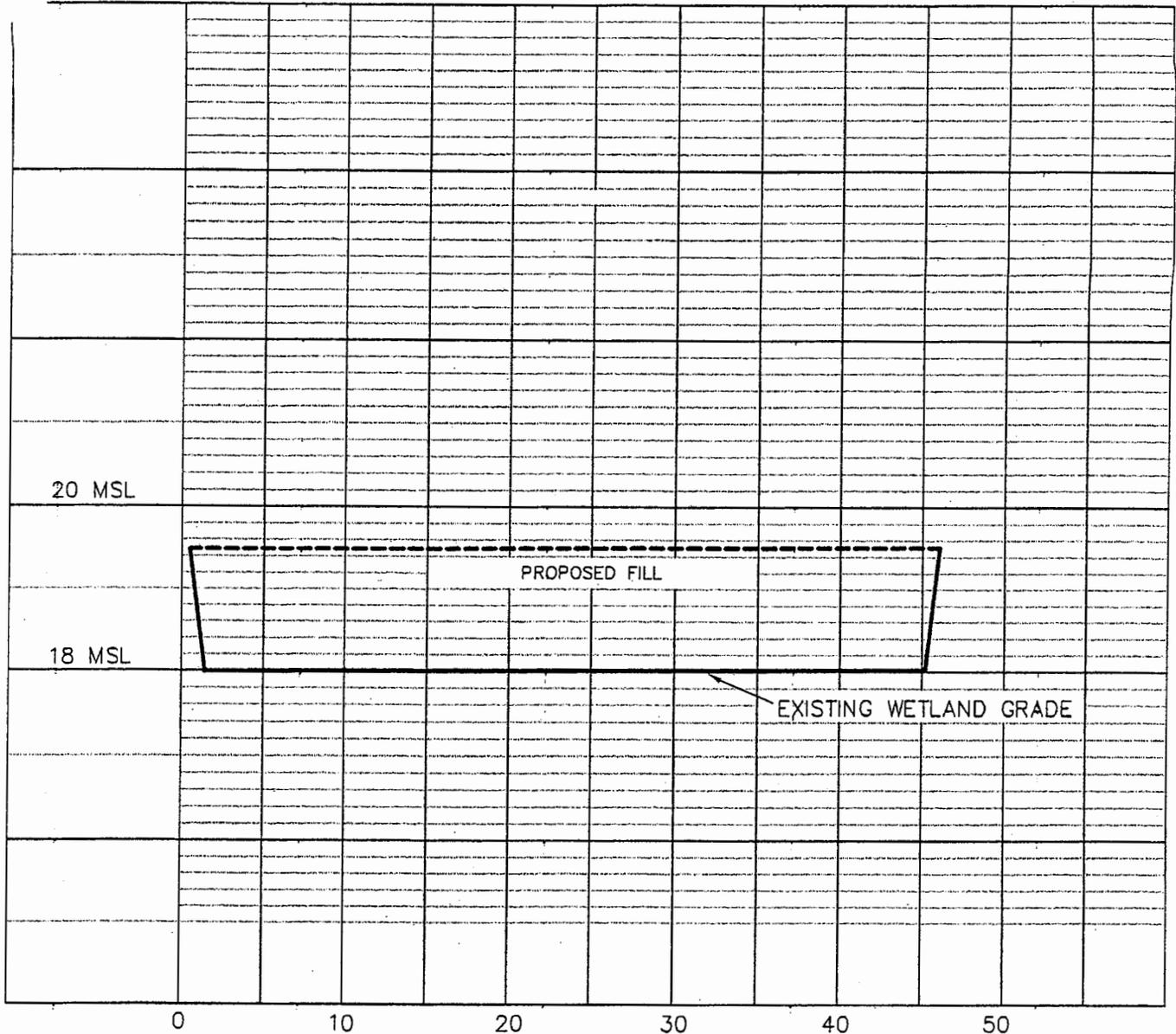
- TOTAL EST. L.F. OF WETLAND IMPACTED: 90 L.F.
- TOTAL EST. VOLUME OF BACKFILL AND/OR GRADE DISTURBANCE: 400 CU. YD.

2004-1G-138

Revisions

Date	Initials

Project Title: LIBERTY HALL PLANTATION - TRACT E2	
Project Location: BERKELEY COUNTY, SC	
APPLICANT: TRIVEN PROPERTIES, LLC	
MARCH 19, 2004	SCALE: AS SHOWN
REF: TNR	SHEET 18 OF 21

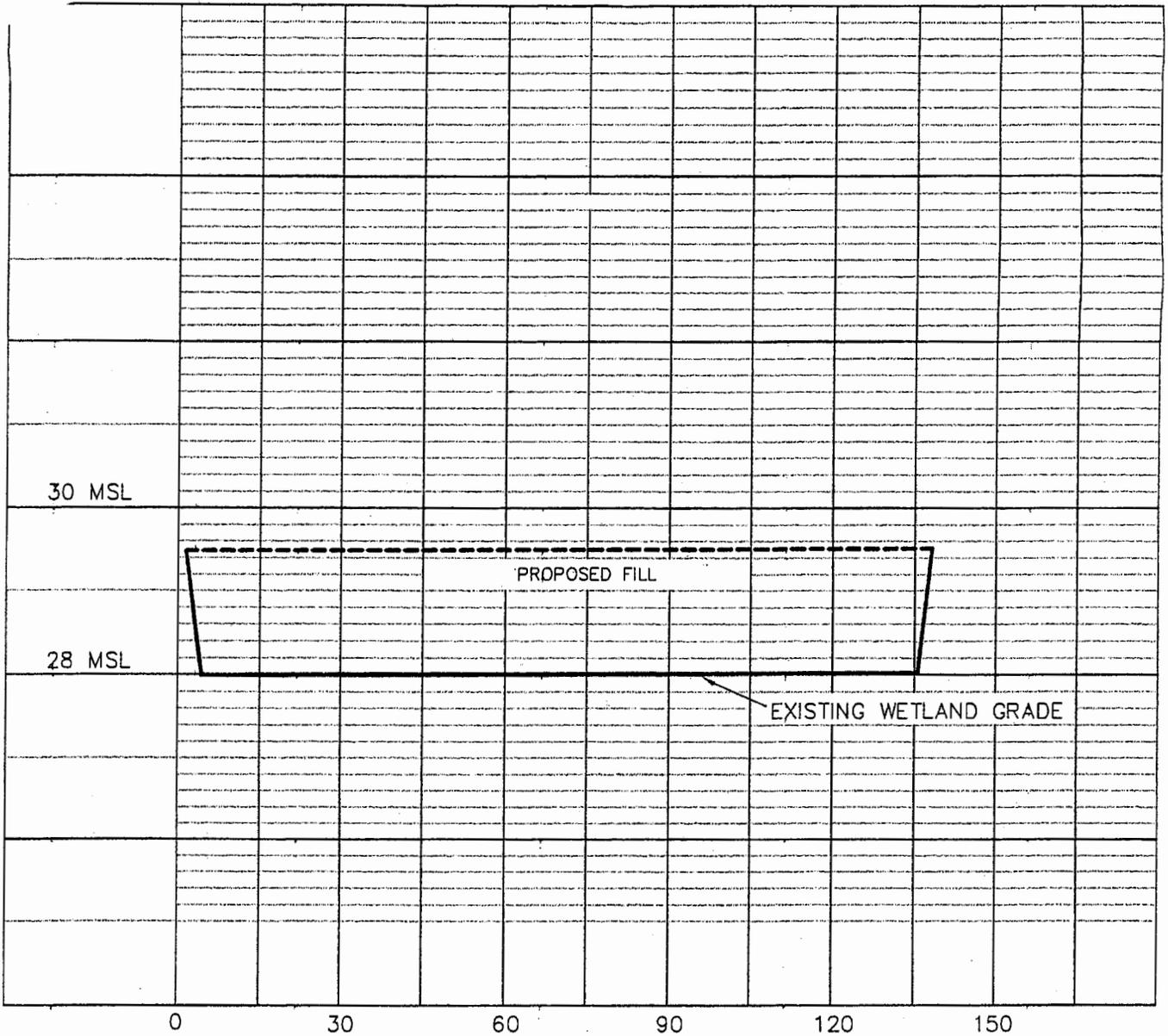


HORIZONTAL SCALE: 1" = 10'
 VERTICAL SCALE: 1" = 2'

NON-JURISDICTIONAL WETLAND A FILL
 TOTAL ESTIMATED VOLUME OF WETLAND FILL: (0,11 ACRES/275 CU.YD.)

2004-1G-13

Project Title:		LIBERTY HALL PLANTATION - TRACT E2	
Project Location:		BERKELEY COUNTY, SC	
APPLICANT:		TRIVEN PROPERTIES, LLC	
Date		MARCH 19, 2004	SCALE: AS SHOWN
Initials		REF: TNR	SHEET 19 OF 21



HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 2'

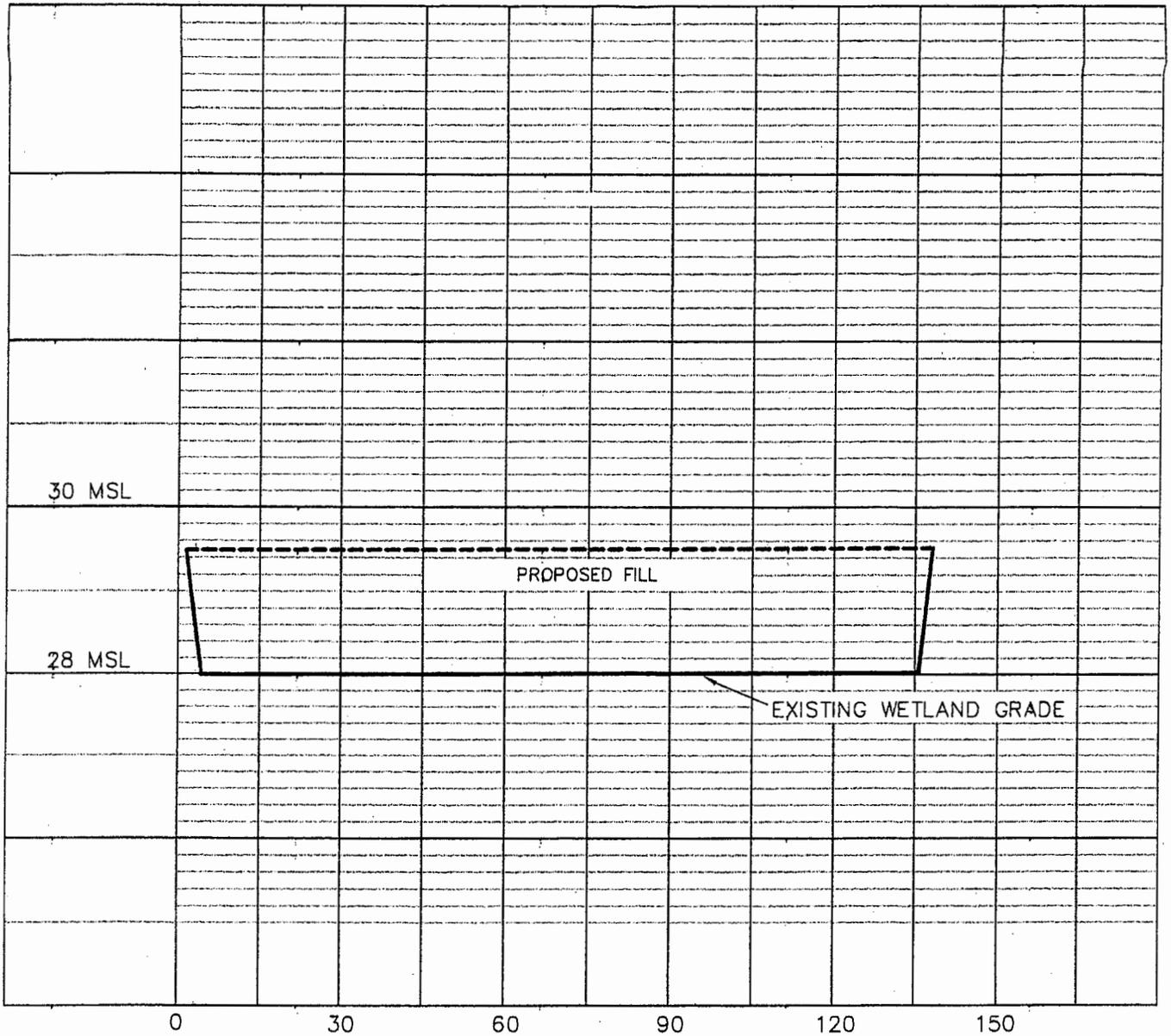
NON-JURISDICTIONAL WETLAND B FILL

TOTAL ESTIMATED VOLUME OF WETLAND FILL: (1.27 ACRES/3075 CU.YD.)

2004-1G-138

Revisions	
Date	Initials

Project Title: LIBERTY HALL PLANTATION - TRACT E2	
Project Location: BERKELEY COUNTY, SC	
APPLICANT: TRIVEN PROPERTIES, LLC	
MARCH 19, 2004	SCALE: AS SHOWN
REF: TNR	SHEET 20 OF 21



HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 2'

NON-JURISDICTIONAL WETLAND C FILL

TOTAL ESTIMATED VOLUME OF WETLAND FILL: (1.42 ACRES/3450 CU.YD.)

2009-1G-138

Project Title: LIBERTY HALL PLANTATION -- TRACT E2	
Project Location: BERKELEY COUNTY, SC	
APPLICANT: TRIVEN PROPERTIES, LLC	
MARCH 19, 2004	SCALE: AS SHOWN
REF: TNR	SHEET 21 OF 21

Revisions	
Date	Initials

Mitigation for Wetlands

14. Tables and Worksheets.
14.1. Adverse Impacts Table.

ADVERSE IMPACT FACTORS FOR WETLANDS AND OTHER WATERS OF THE U.S. EXCLUDING STREAMS

FACTORS	OPTIONS					
	Lost Type	Type C 0.2		Type B 2.0		Type A 3.0
Priority Category	Tertiary 0.5		Secondary 1.5		Primary 2.0	
Existing Condition	Very Impaired 0.1	Impaired 1.0		Slightly Impaired 2.0	Fully Functional 2.5	
Duration	Seasonal 0.1	0 to 1 0.2	1 to 3 0.5	3 to 5 1.0	5 to 10 1.5	Over 10 2.0
Dominant Impact	Shade 0.2	Clear 1.0	Dredge 1.5	Drain 2.0	Impound 2.5	Fill 3.0
Cumulative Impact	$0.05 \times \sum AA_i$					

Note: For the Cumulative Impact factor, $\sum AA_i$ stands for the sum of the acres of adverse impacts to aquatic areas for the overall project. When computing this factor, round to the nearest tenth decimal place using even number rounding. Thus 0.01 and 0.050 are rounded down to give a value of zero while 0.051 and 0.09 are rounded up to give 0.1 as the value for the cumulative impact factor. The cumulative impact factor for the overall project must be used in each area column on the Required Mitigation Credits Worksheet below.

Required Mitigation Credits Sample Worksheet

Factor	ROAD CROSSING #1	ROAD CROSSING #2	ROAD CROSSING #3	ROAD CROSSING #4	ROAD CROSSING #5	ROAD CROSSING #6
Lost Type	3.0	3.0	3.0	3.0	3.0	3.0
Priority Category	.5	.5	.5	.5	.5	.5
Existing Condition	2.5	2.5	2.5	2.5	2.5	2.5
Duration	2.0	2.0	2.0	2.0	2.0	2.0
Dominant Impact	3.0	3.0	3.0	3.0	3.0	3.0
Cumulative Impact	.1	0	0	0	0	0
Sum of r Factors	$R_1 = 11.1$	$R_2 = 11.0$	$R_3 = 11.0$	$R_4 = 11.0$	$R_5 = 11.0$	$R_6 = 11.0$
Impacted Area	$AA_1 = 1.98$	$AA_2 = .28$	$AA_3 = .06$	$AA_4 = .02$	$AA_5 = .03$	$AA_6 = .04$
$R \times AA =$	21.98	3.08	.66	.22	.33	.44

Total Required Credits = $\sum (R \times AA) =$

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2004-16-138

Mitigation for Wetlands

14. Tables and Worksheets.
14.1. Adverse Impacts Table.

ADVERSE IMPACT FACTORS FOR WETLANDS AND OTHER WATERS OF THE U.S. EXCLUDING STREAMS

FACTORS	OPTIONS					
	Lost Type	Type C 0.2		Type B 2.0		Type A 3.0
Priority Category	Tertiary 0.5		Secondary 1.5		Primary 2.0	
Existing Condition	Very Impaired 0.1	Impaired 1.0		Slightly Impaired 2.0	Fully Functional 2.5	
Duration	Seasonal 0.1	0 to 1 0.2	1 to 3 0.5	3 to 5 1.0	5 to 10 1.5	Over 10 2.0
Dominant Impact	Shade 0.2	Clear 1.0	Dredge 1.5	Drain 2.0	Impound 2.5	Fill 3.0
Cumulative Impact	$0.05 \times \sum AA_i$					

Note: For the Cumulative Impact factor, $\sum AA_i$ stands for the sum of the acres of adverse impacts to aquatic areas for the overall project. When computing this factor, round to the nearest tenth decimal place using even number rounding. Thus 0.01 and 0.050 are rounded down to give a value of zero while 0.051 and 0.09 are rounded up to give 0.1 as the value for the cumulative impact factor. The cumulative impact factor for the overall project must be used in each area column on the Required Mitigation Credits Worksheet below.

Required Mitigation Credits Sample Worksheet

Factor	ROAD CROSSING #7	ROAD CROSSING #8	ROAD CROSSING #9	SEWER CROSSING #1	SEWER CROSSING #2	SEWER CROSSING #3
Lost Type	3.0	3.0	3.0	3.0	3.0	3.0
Priority Category	.5	.5	.5	.5	.5	.5
Existing Condition	2.5	2.5	2.5	2.5	2.5	2.5
Duration	2.0	2.0	2.0	.5	.5	.5
Dominant Impact	3.0	3.0	3.0	1.5	1.5	1.5
Cumulative Impact	.1	0	0	0	0	0
Sum of r Factors	$R_1 = 11.1$	$R_2 = 11.0$	$R_3 = 11.0$	$R_4 = 8.0$	$R_5 = 8.0$	$R_6 = 8.0$
Impacted Area	$AA_1 = 1.23$	$AA_2 = .46$	$AA_3 = .30$	$AA_4 = .26$	$AA_5 = .01$	$AA_6 = .73$
$R \times AA =$	13.65	5.06	3.30	2.08	.08	5.84

Total Required Credits = $\sum (R \times AA) =$

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2004-1G-138

Mitigation for Wetlands

14. Tables and Worksheets.

14.1. Adverse Impacts Table.

ADVERSE IMPACT FACTORS FOR WETLANDS AND OTHER WATERS OF THE U.S. EXCLUDING STREAMS

FACTORS	OPTIONS					
	Lost Type	Type C 0.2		Type B 2.0		Type A 3.0
Priority Category	Tertiary 0.5		Secondary 1.5		Primary 2.0	
Existing Condition	Very Impaired 0.1	Impaired 1.0		Slightly Impaired 2.0		Fully Functional 2.5
Duration	Seasonal 0.1	0 to 1 0.2	1 to 3 0.5	3 to 5 1.0	5 to 10 1.5	Over 10 2.0
Dominant Impact	Shade 0.2	Clear 1.0	Dredge 1.5	Drain 2.0	Impound 2.5	Fill 3.0
Cumulative Impact	$0.05 \times \sum AA_i$					

Note: For the Cumulative Impact factor, $\sum AA_i$ stands for the sum of the acres of adverse impacts to aquatic areas for the overall project. When computing this factor, round to the nearest tenth decimal place using even number rounding. Thus 0.01 and 0.050 are rounded down to give a value of zero while 0.051 and 0.09 are rounded up to give 0.1 as the value for the cumulative impact factor. The cumulative impact factor for the overall project must be used in each area column on the Required Mitigation Credits Worksheet below.

Required Mitigation Credits Sample Worksheet

Factor	SEWER CROSSING #4	SEWER CROSSING #5	SEWER CROSSING #6	NON JURIS WETLAND A	NON JURIS WETLAND B	NON JURIS WETLAND C
Lost Type	3.0	3.0	3.0	2.0	2.0	2.0
Priority Category	.5	.5	.5	.5	.5	.5
Existing Condition	2.5	2.5	2.5	2.5	2.5	2.5
Duration	.5	.5	.5	2.0	2.0	2.0
Dominant Impact	1.5	1.5	1.5	3.0	3.0	3.0
Cumulative Impact	0	0	0	0	.1	.1
Sum of r Factors	$R_1 = 8.0$	$R_2 = 8.0$	$R_3 = 8.0$	$R_4 = 10.0$	$R_5 = 10.1$	$R_6 = 10.1$
Impacted Area	$AA_1 = .01$	$AA_2 = .16$	$AA_3 = .07$	$AA_4 = .11$	$AA_5 = 1.27$	$AA_6 = 1.42$
$R \times AA =$.08	1.28	.56	1.1	12.83	14.34

Total Required Credits = $\sum (R \times AA) =$

86.91

Mitigation for Wetlands

14.3. Restoration and Enhancement Table.

RESTORATION AND ENHANCEMENT MITIGATION FACTORS FOR WETLANDS AND OTHER WATERS OF THE U.S. EXCLUDING STREAMS

Factors	Options				
	Minimal Enhancement -----to----- Excellent Restoration				
Net Improvement	0.1 ----- 4.0				
Control	N. A. 0	Covenant Private 0.1	Covenant POA 0.2	Conservation Easement 0.4	Transfer Fee Title Conservancy 0.6
Temporal Lag	N.A.* 0	Over 20 - 0.3	10 to 20 - 0.2	5 to 10 - 0.1	0 to 5 0
Credit Schedule	Schedule 5* 0	Schedule 4 0.1	Schedule 3 0.2	Schedule 2 0.3	Schedule 1 0.4
Kind	Category 5 - 0.1	Category 4 0	Category 3 0.2	Category 2 0.3	Category 1 0.4
Location	Zone 5 - 0.1	Zone 4 0	Zone 3 0.2	Zone 2 0.3	Zone 1 0.4

N. A. = Not Applicable

*Use this option to calculate credits for enhancement by buffering

Proposed Restoration or Enhancement Mitigation Sample Worksheet

Factor	PROPOSED UPLAND BUFFER	Area 2	Area 3	Area 4	Area 5
Net Improvement	1.9				
Control	.2				
Temporal Lag	- .3				
Credit Schedule	.4				
Kind	.4				
Location	.4				
Sum of m Factors	M ₁ = 3.0	M ₂ =	M ₃ =	M ₄ =	M ₅ =
Mitigation Area	A ₁ = 27.88	A ₂ =	A ₃ =	A ₄ =	A ₅ =
M × A =	83.64				

Total Restoration/Enhancement Credits = $\sum (M \times A) =$ 83.64

Mitigation for Wetlands

14.4. Preservation Table.

PRESERVATION MITIGATION FACTORS FOR WETLANDS AND OTHER WATERS OF THE U.S.
EXCLUDING STREAMS

Factors	Options				
	Priority Category	Tertiary 0.1	Secondary 0.2	Primary 0.4	
Existing Condition	Impaired -0.1	Slightly Impaired 0		Fully Functional 0.1	
Degree of Threat	Low -0.1	Moderate 0.1		High 0.2	
Control	Covenant Private 0	Covenant POA 0.1	Conservation Easement 0.4	Transfer Fee Title Conservancy 0.6	
Kind	Category 5 -0.1	Category 4 0	Category 3 0.1	Category 2 0.2	Category 1 0.3
Location	Zone 5 -0.1	Zone 4 0	Zone 3 0.1	Zone 2 0.2	Zone 1 0.3

Note: Preservation credit should generally be limited to those areas that qualify as Fully Functional or Slightly Impaired. Impaired sites should be candidates for enhancement or restoration credit, not preservation credit. In special circumstances when Impaired sites are allowed preservation credit (e.g. within the scope of some OCRM wetland master planned projects), a negative factor will be used to calculate credits as per the matrix table.

Proposed Preservation Mitigation Sample Worksheet

Factor	REMAINING WETLAND	Area 2	Area 3	Area 4	Area 5
Priority Category	.1				
Existing Condition	.1				
Degree of Threat	-.1				
Control	.1				
Kind	.3				
Location	.3				
Sum of m Factors	M ₁ = 1.0	M ₂ =	M ₃ =	M ₄ =	M ₅ =
Mitigation Area	A ₁ = 240.38	A ₂ =	A ₃ =	A ₄ =	A ₅ =
M × A =	240.38				

Total Preservation Credits = $\sum (M \times A) = 240.38$

Mitigation for Wetlands

14.6. Mitigation Summary Worksheet.

WETLANDS AND OTHER WATERS OF THE U.S. EXCLUDING STREAMS
Mitigation Summary Worksheet For Permit Application # _____

I. Required Mitigation

A. Total Required Mitigation Credits =	86.91
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II. Non-Banking Mitigation Credit Summary

	Credits	Acres
B. Creation		
C. Restoration and/or Enhancement (Non-Buffer Enhancement)		
D. Restoration and/or Enhancement (Buffer Enhancement)	83.64	27.88
E. Total No Net Loss Non-Bank Mitigation = B + C + D	83.64	27.88
F. Preservation	240.38	240.38
G. Total Proposed Non-Bank Mitigation = E + F	324.02	268.26

III. Banking Mitigation Credit Summary

	Credits	Acres
H. Creation		
I. Restoration and/or Enhancement (Non-Buffer Enhancement)	22.0	N/A
J. Restoration and/or Enhancement (Buffer Enhancement)		
K. Total No Net Loss Bank Mitigation = H + I + J	22.0	N/A
L. Preservation		
M. Total Proposed Bank Mitigation = K + L	22.0	N/A

IV. Grand Totals

	Credits	Acres
N. Total Preservation Mitigation = F + L	240.38	N/A
O. Total Non-Preservation Mitigation = E + K	105.64	N/A
P. Total Creation = B + H		
Q. Total Restoration and/or Enhancement (Non-Buffer Enhancement) = C + I	22.0	N/A
R. Total Proposed Mitigation = G + M	346.02	N/A

Mitigation for Wetlands

The Total Mitigation Credits (Row R) should be equal to or greater than the total Required Mitigation Credits (Row A) for the proposed mitigation to be acceptable. The other requirements given in the SOP must also be satisfied, e.g., in the credits column, Row O must equal at least 50% of Row A and the addition of Row P and Row Q must equal at least 25% of Row A. If the answer to any of the questions below is no, then the proposed mix and/or quantity of mitigation is not in compliance with the policy and the plan should be revised or rejected, unless a variance is approved.

	Yes	No
$PMC \geq RMC$ or in words Are the credits in Row R greater than or equal to Row A ?	✓	
$PMC_{Non-Preservation} \geq \frac{1}{2} RMC$ or in words Are the credits in Row O greater than or equal to 50% of Row A ?	✓	
$PMC_{Creation + Restoration/Enhancement (Non-Buffer Enhancement)} \geq \frac{1}{4} RMC$ or in words Are the credits in Row P plus the credits in Row Q greater than or equal to 25% of Row A ?	✓	

2004-1G-138