



**U.S. Army Corps
of Engineers**

Baltimore District
PN-23-07

Public Notice

**In Reply to Application Number
NAB-2021-61204-M49 (DRI TCC Elkton I, LLC/Logistics
Center at Southfields - Bldg 2 & 3/Warehouse, SWM Pond)**

Comment Period: March 2, 2023 to April 1, 2023

THE PURPOSE OF THIS PUBLIC NOTICE IS TO INFORM INTERESTED PARTIES OF THE PROPOSED ACTIVITY AND TO SOLICIT COMMENTS. NO DECISION HAS BEEN MADE AS TO WHETHER OR NOT A PERMIT WILL BE ISSUED AT THIS TIME.

This District has received an application for a Department of the Army permit pursuant to Section 404 of the Clean Water Act (33 USC 1344), as described below:

APPLICANT:

Mr. Tom Rathburn
DRI/TCC Elkton I, LLC
1055 Thomas Jefferson Street NW, Suite 600
Washington, D.C. 20007

WATERWAY AND LOCATION OF THE PROPOSED WORK:

The proposed warehouse development and associated infrastructure are located in wetlands and an unnamed tributary to Perch Creek, north of Frenchtown Road, south of Pulaski Highway (US Route 40), and west of Maloney Road in Elkton, Cecil County, Maryland. (39.590225, -75.803612). Mitigation for wetland impacts associated with the warehouse development will be satisfied by creation of new forested and emergent nontidal wetlands at three on-site locations.

OVERALL PROJECT PURPOSE:

The purpose of the project is to construct a two-building commercial warehouse distribution center at a central location along the Interstate 95 corridor in Cecil County to organize, store, and distribute products from the Port of Baltimore and Port of Philadelphia throughout the Mid-Atlantic region.

PROJECT DESCRIPTION:

The project proposes construction of the Logistics Center at Southfields of Elkton commercial warehouse facility, in accordance with the attached plans. The facility will include two warehouse distribution centers, referred to as 'Building 2' and 'Building 3' which will encompass 1,096,200 square feet and 924,000 square feet, respectively. The

project will construct the necessary attendant infrastructure associated with the warehouses, including parking and trailer storage, utility lines, stormwater management facilities, and staging & stockpiling areas. The project will extend Commerce Center Drive, an existing road servicing the Elkton Commerce Center warehouse, to the south to provide a single point of commercial vehicle ingress and egress to the proposed facility. The access road will terminate at a roundabout with spur entrances to both warehouse buildings. The vehicle entrance at the southwest corner of Building 2 proposes to cross a forested wetland area with a pipe underdrain. A maintenance road for a proposed stormwater management facility will cross an intermittent tributary to Perch Creek in a reinforced concrete pipe culvert. The work includes vegetative clearing, grading, excavation, and filling.

The project will permanently impact 53,188 square feet (1.22 acres) of forested nontidal wetlands, 11,778 square feet (0.27 acres) of emergent nontidal wetlands, and 77 linear feet (154 square feet) of intermittent stream.

EFFECTS ON AQUATIC RESOURCES:

Activity	Stream Impact (lf)	Stream Impact (Sq. Ft.)	Wetland Impact (Sq. Ft.)	Authority (Section 10/404/408)
Permanent Impacts associated with warehouse construction and site development (clearing, grading, excavation, and fill)	77 (intermittent)	154 (intermittent)	53,188 (PFO) 11,778 (PEM)	Section 404

LEAD FEDERAL AGENCY:

The United States Army Corps of Engineers, as the lead federal agency, is responsible for all coordination pursuant to applicable federal authorities.

APPLICANT'S PROPOSED AVOIDANCE, MINIMIZATION, AND COMPENSATORY MITIGATION:

Avoidance and minimization:

As part of the planning process for development of the Logistics Center at Southfields of Elkton site, steps were taken to ensure avoidance and minimization of impacts to

aquatic resources to the maximum extent practicable based on the existing site conditions. The warehouse buildings were oriented to utilize the footprint of two large flat agricultural fields, minimizing the amount of grading and the extent of contiguous forest clearing required. Vehicular access to the site will utilize Commerce Center Drive, an existing warehouse road entrance from US Route 40, as the sole point of ingress and egress for commercial vehicle access to the facility. The access road will follow the alignment of an area previously impacted by erosion and sediment controls for the existing Elkton Commerce Center facility. Buildings were resized and reconfigured in order to minimize impacts while maintaining the size specification requirements of future tenants.

The applicant initially proposed a 1,116,000-square-foot warehouse and a 1,110,000-square-foot warehouse on the site; after review of the associated wetland impacts, these buildings were reduced to the currently proposed 1,096,200 and 924,000 square-foot sizes. The larger warehouses would have resulted in greater parking and stormwater management requirements, more site grading, and increased wetland impacts. The design of Building 3 was modified to utilize retaining walls at its southeast and northeast ends, resulting in a reduction of 6,056 square feet of forested wetland impacts. Stream impacts were limited to a single culvert crossing of an intermittent stream associated with maintenance access to stormwater management pond 2B, a facility proposed in the southern portion of the site.

Bioretention facilities are proposed around the periphery of parking areas and warehouses to minimize the required number of stormwater management ponds. The three proposed stormwater management ponds were reconfigured to be located entirely in upland areas. Reconfiguration of stormwater management facility 2B-1, located in the northwest corner of the project site, resulted in a reduction of approximately 6,378 square feet of permanent forested wetland impacts. Stormwater management pond 1 was initially proposed in a forested area at the eastern edge of the project site. The pond was relocated to the west, resulting in avoidance of 1,962 square feet of forested nontidal wetland impacts. Stormwater outfalls were designed to maintain hydrology to undisturbed wetland areas along the periphery of the site. Proposed employee parking areas east of Building 2 were reduced and reconfigured to impact only uplands, resulting in avoidance of an additional 18,426 square feet of forested nontidal wetland impacts.

Compensatory Mitigation:

Mitigation for unavoidable wetland impacts associated with this project are proposed to be satisfied through on-site permittee responsible mitigation. No mitigation banks currently have a service area in the impacted watershed. Compensatory wetland mitigation requirements will be satisfied through the creation of new forested and

emergent wetlands at a 2:1 ratio. The project proposes to create 3.14 acres of forested wetlands in former agricultural areas abutting existing forested wetland to the west of the development site. Wetland Mitigation Area #1 proposes to create 1.50 acres of forested nontidal wetlands in an upland area in the northeast quadrant of the project site, located west of Commerce Center Drive and an existing forested wetland area to the west (39.593413, -75.806180). Wetland Mitigation Area #2 proposes to create 1.64 acres of forested wetland area in the southeast corner of the project site, between of Building 3 to the northwest and an area of existing forested nontidal wetlands to the east (39.584881, -75.810166). Both forested wetland mitigation sites will create wetland area by grading to existing wetland elevations, creating microtopographic features, adding woody debris, and planting native trees and shrubs. A variable-width buffer area will be planted between the forested wetland creation areas and adjacent infrastructure. The project proposes to create 0.38 acres of emergent wetlands within the footprint of a former farm pond at the south end of the project site, between a large contiguous wetland area and Frenchtown Road (39.586162, -75.802696). The project will dewater the pond, add soil amendments, create microtopography, and plant a variety of emergent vegetation. A 25-foot buffer area will be planted with shrubs between the emergent wetland area and Frenchtown Road. Compensatory wetland mitigation activities will temporarily impact 1,081 square feet of existing forested nontidal wetlands.

CORPS EVALUATION REQUIREMENTS:

This project will be evaluated pursuant to Corps Regulatory Program Regulations (33 CFR Parts 320-332). The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit, which reasonable may be expected to accrue from the proposal, must be balanced against its reasonably foreseeable detriments. All factors, which may be relevant to the proposal will be considered, including the cumulative effects thereof; among those are conservation, economic, aesthetics, general environmental concerns, wetlands, cultural values, 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, mineral needs, and consideration of property ownership and in general, the needs and welfare of the people. The evaluation of the impact of this project will also include application of the Clean Water Act Section 404(b)(1) Guidelines promulgated by the Administrator, United States Environmental Protection Agency.

ENDANGERED SPECIES:

A preliminary review of this application indicates that the proposed work may affect federally listed rare, threatened, or endangered species or their critical habitat, pursuant to Section 7 of the Endangered Species Act, as amended. As the evaluation of this

application continues, additional information may become available which could modify this preliminary determination.

ESSENTIAL FISH HABITAT:

The Magnuson-Stevens Fishery Conservation and Management Act, as amended by the Sustainable Fisheries Act of 1996 (Public Law 04-267), requires all federal agencies to consult with the National Marine Fisheries Service on all actions, or proposed actions, permitted, funded, or undertaken by the agency that may adversely affect Essential Fish Habitat (EFH), including species of concern, life cycle habitat, or Habitat Areas of Particular Concern. The Baltimore District has made a preliminary determination that the project is not within EFH. The Baltimore District has made a preliminary determination that mitigative measures are not required to minimize adverse effects on EFH at this time. This determination may be modified if additional information indicates otherwise.

HISTORIC RESOURCES:

Pursuant to Section 106 of the National Historic Preservation Act of 1966 and applicable guidance, the Corps has reviewed the latest published version of the National Register of Historic Places and initially determined that no registered properties listed as eligible for inclusion, therein, are located at the site of the proposed work. The Corps has made the preliminary determination that the proposed project would have no adverse effect on historic properties. The Corps final eligibility and effect determination will be based on coordination with the State Historic Preservation Office 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.

TRIBAL RESOURCES:

Section 106 of the National Historic Preservation Act also requires federal agencies to consult with federally recognized American Indian tribes that attach religious and cultural significance to historic properties that may be affected by the agency's undertaking. Corps Tribal Consultation Policy mandates an open, timely, meaningful, collaborative, and effective deliberative communication process that emphasizes trust, respect, and shared responsibility. The policy further emphasizes that, to the extent practicable and permitted by law, consultation works toward mutual consensus and begins at the earliest planning stages, before decisions are made and actions taken. The Corps final eligibility and effect determination will be based on coordination with interested tribes, in accordance with the Corps current tribal standard operating procedures as appropriate and required, and with full consideration given to the proposed undertaking's potential direct and indirect effects on tribal resources.

MODIFICATION OF CIVIL WORKS PROJECTS: 33 USC 408 (SECTION 408):

All Section 408 proposals will be coordinated internally at United States Army Corps of Engineers. The Section 408 decision will be issued along with the Section 404 and/or Section 10 decision. Please see the following link for more information regarding Section 408: <https://www.nab.usace.army.mil/section408/>.

WATER QUALITY CERTIFICATION:

The applicant is required to obtain a water quality certification in accordance with Section 401 of the Clean Water Act.

COASTAL ZONE MANAGEMENT PROGRAMS:

Where applicable, the applicant has certified in this application that the proposed activity complies with and will be conducted in a manner consistent with the approved Coastal Zone Management Program. By this public notice, we are requesting the state concurrence or objection to the applicant's consistency statement. The applicant must obtain any state or local government permits which may be required.

SUBMISSION OF COMMENTS:

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 proposed 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 proposal. 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 provided will become part of the public record for this action and are subject to release to the public through the Freedom of Information Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Written comments concerning the work described above related to the factors listed above or other pertinent factors must be received by the United States Army Corps of Engineers, Baltimore District within the comment period specified above through postal mail at the address below or electronic submission to the project manager email address below. Written comments should reference the Application Number (NAB-2021-61204-M49).

PUBLIC HEARING REQUESTS:

Any person who has an interest which may be adversely affected by the issuance of this permit may request a public hearing. The request, which must be in writing, must be received within the comment period as specified above to receive consideration. Also, it must clearly set forth the interest which may be adversely affected by this activity and the manner in which the interest may be adversely affected. The public hearing request may be submitted by electronic mail or mailed to the following address:

Matt Hynson
Matthew.Hynson@usace.army.mil
U.S. Army Corps of Engineers, Baltimore District
Regulatory Branch
2 Hopkins Plaza
Baltimore, Maryland 21201

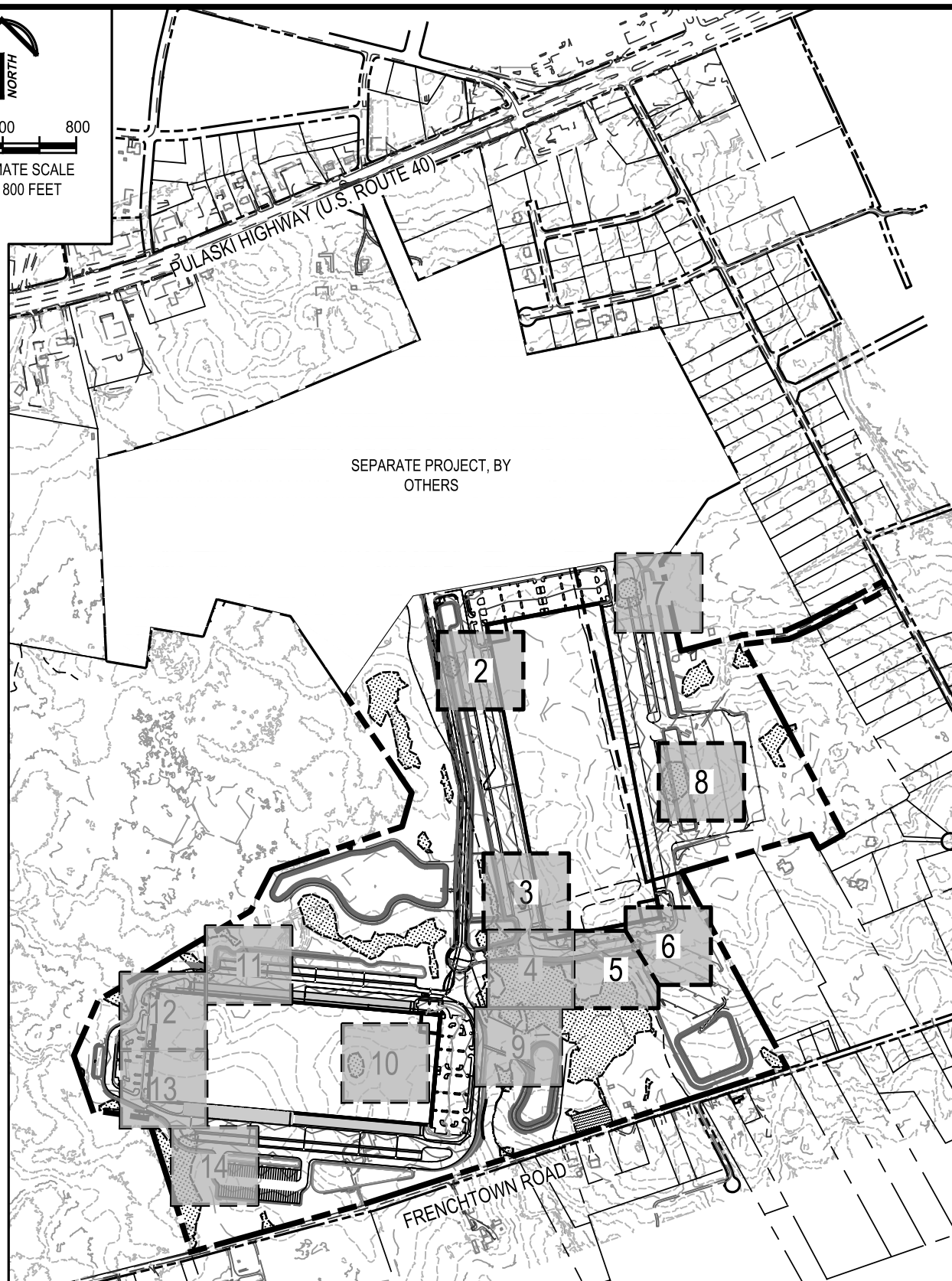
It is requested that you communicate this information concerning the proposed work to any persons known by you to be interested, who did not receive a copy of this notice.

General information regarding the Corps' permitting process can be found on our website at <https://www.nab.usace.army.mil/Missions/Regulatory.aspx>. This public notice has been prepared in accordance with Corps implementing regulations at 33 CFR 325.3. If you have any questions concerning this specific project or would like to request a paper copy of this public notice, please contact Matt Hynson at Matthew.Hynson@usace.army.mil or (410) 689-9532. This public notice is issued by the Chief, Regulatory Branch.



0 400 800

APPROXIMATE SCALE
1 INCH = 800 FEET



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WETLAND/WATERWAY IMPACT KEY LOGISTICS CENTER AT SOUTHFIELDS - BUILDING '2' AND '3'

TOWN OF ELKTON, CECIL COUNTY, MARYLAND

JOB NO.	31190945x2	SCALE:	1" = 800'	DATE:	NOVEMBER 1, 2021	DRAWN BY:	MDP	REVIEW BY:	TAS	FIGURE:	1
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0 30 60

APPROXIMATE SCALE
1 INCH = 60 FEET

PR. STORMWATER
MANAGEMENT
FACILITY

ISOLATED PEM
WETLAND

LEGEND

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PR. LIMIT OF DISTURBANCE

PR. RIGHT OF WAY

PR. 2' CONTOURS

PR. 5' CONTOURS

PR. CURB

PR. BUILDING

↓ NW ↓ NW

EX. NONTIDAL WETLAND

↓ NW ↓ NW

EX. 25' WETLAND BUFFER

WB WB

PROPOSED IMPACTS



PERMANENT ISOLATED PEM WETLAND IMPACTS
7,927 SF (0.18 AC)



PERMANENT 25' WETLAND BUFFER IMPACTS
10,138 SF (0.23 AC)



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WETLAND/WATERWAY IMPACT PLATES LOGISTICS CENTER AT SOUTHFIELDS - BUILDING '2' AND '3'

TOWN OF ELKTON, CECIL COUNTY, MARYLAND

JOB NO. 31190945x2

SCALE:

1" = 60'

DATE:

NOVEMBER 1, 2021

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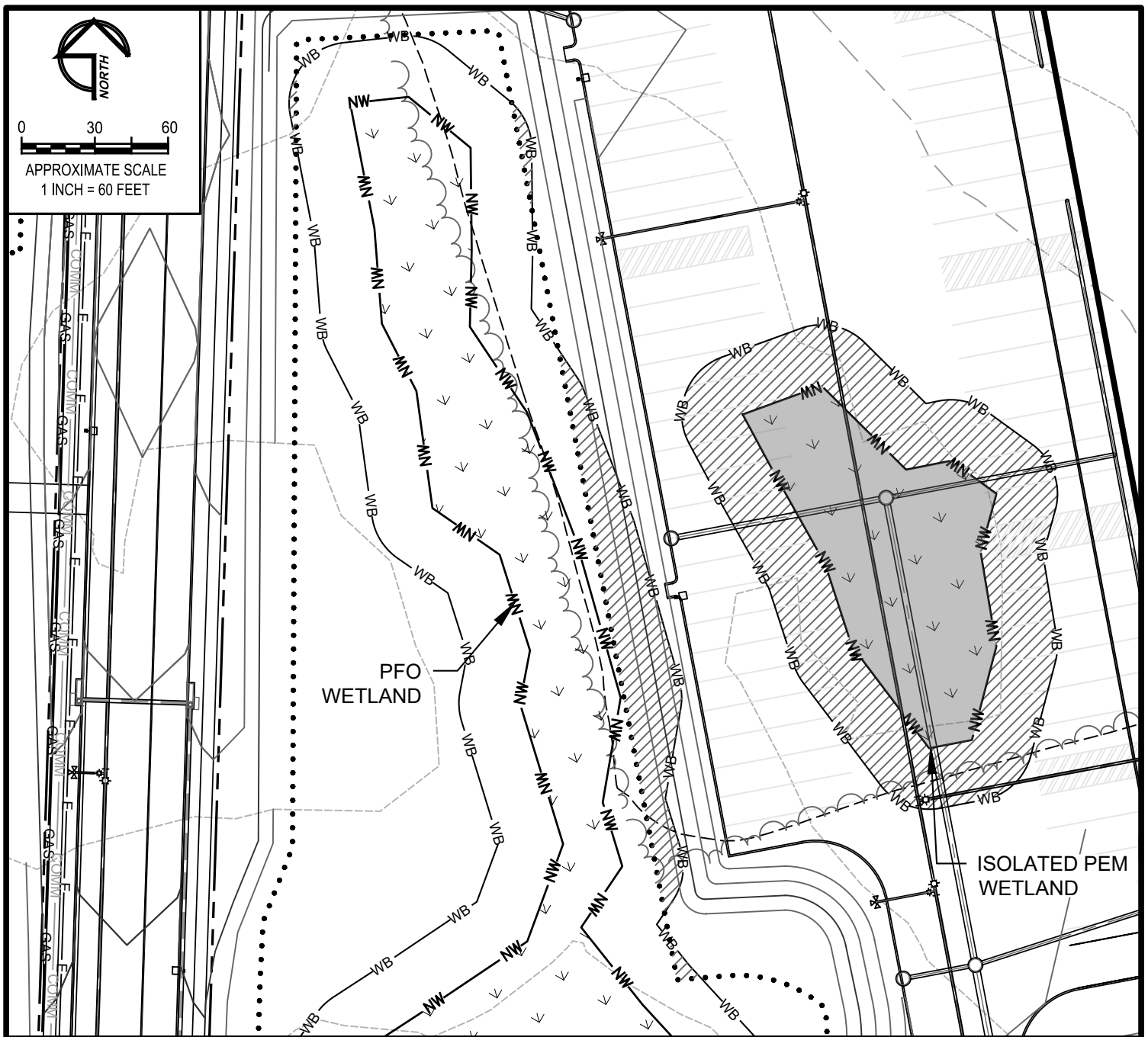
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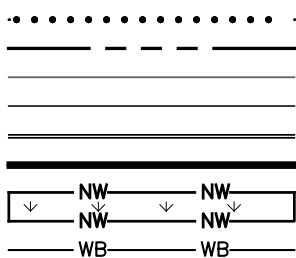
TAS

FIGURE:

2



LEGEND



PR. LIMIT OF DISTURBANCE
PR. RIGHT OF WAY
PR. 2' CONTOURS
PR. 5' CONTOURS
PR. CURB
PR. BUILDING
EX. NONTIDAL WETLAND
EX. 25' WETLAND BUFFER

PROPOSED IMPACTS

PERMANENT ISOLATED PEM WETLAND IMPACTS
8,013 SF (0.18 AC)
PERMANENT 25' WETLAND BUFFER IMPACTS
15,675 SF (0.36 AC)



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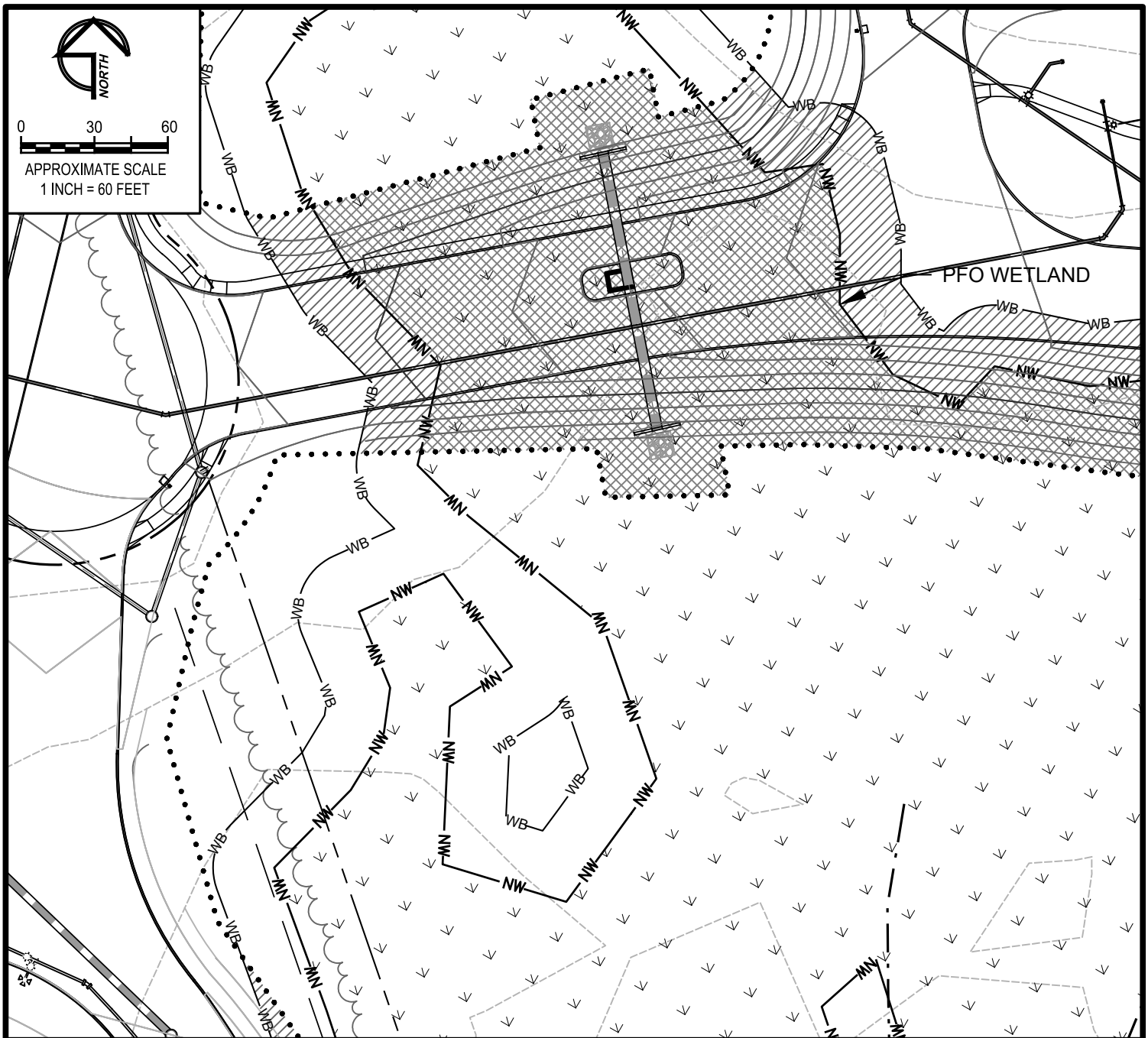
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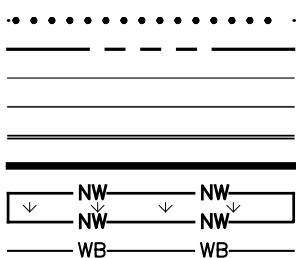
WETLAND/WATERWAY IMPACT PLATES LOGISTICS CENTER AT SOUTHFIELDS - BUILDING '2' AND '3'

TOWN OF ELKTON, CECIL COUNTY, MARYLAND

JOB NO. 31190945x2 SCALE: 1" = 60' DATE: REVISED DEC. 6, 2022 DRAWN BY: KRM REVIEW BY: TAS FIGURE: 3



LEGEND



PR. LIMIT OF DISTURBANCE
PR. RIGHT OF WAY
PR. 2' CONTOURS
PR. 5' CONTOURS
PR. CURB
PR. BUILDING
EX. NONTIDAL WETLAND
EX. 25' WETLAND BUFFER

PROPOSED IMPACTS

PERMANENT PFO WETLAND IMPACTS
28,769 SF (0.66 AC)
 PERMANENT 25' WETLAND BUFFER IMPACTS
9,404 SF (0.22 AC)



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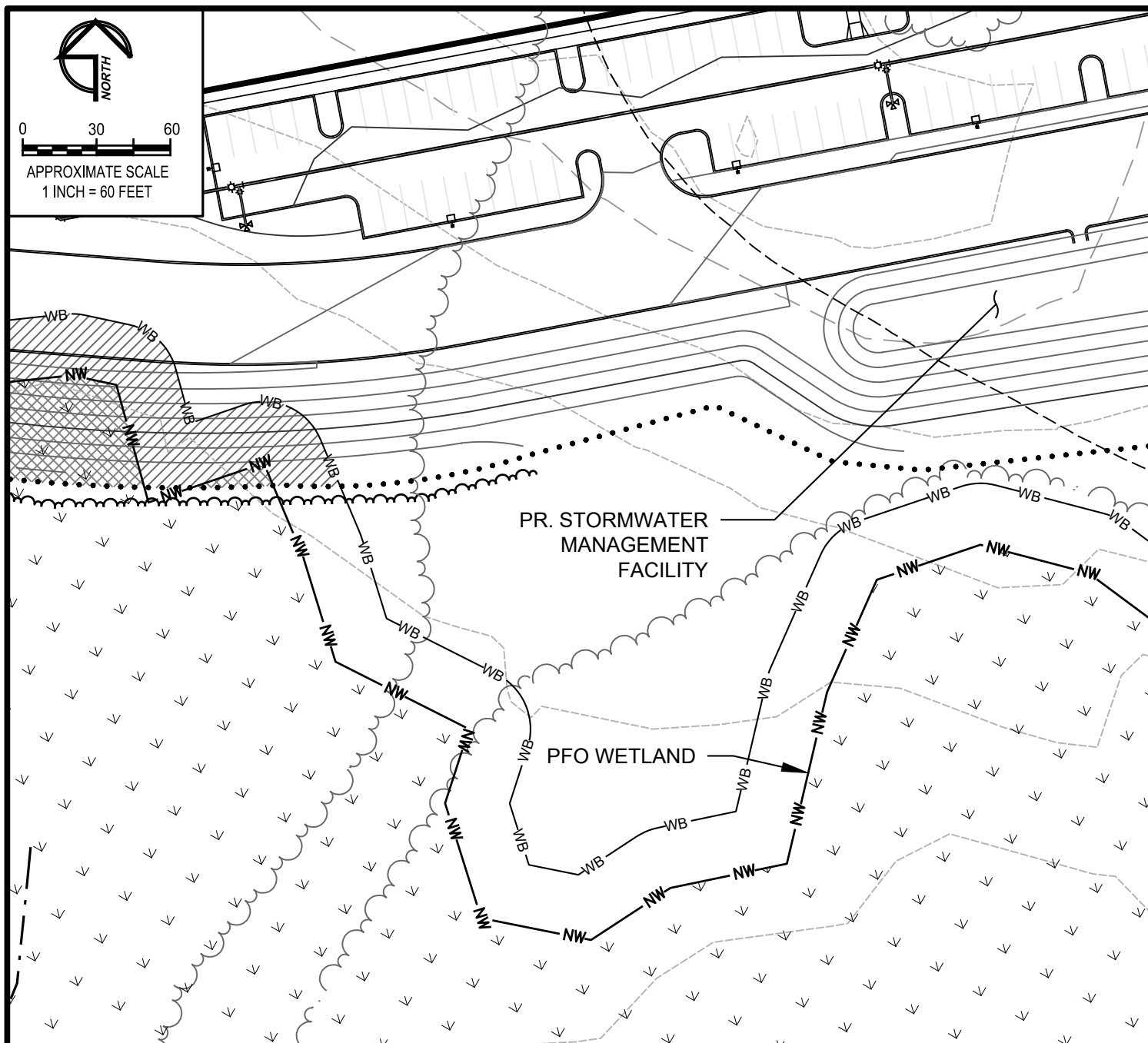
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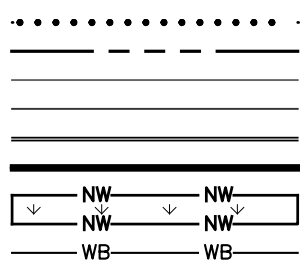
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TOWN OF ELKTON, CECIL COUNTY, MARYLAND

JOB NO.	31190945x2	SCALE:	1" = 60'	DATE:	NOVEMBER 1, 2021	DRAWN BY:	MDP	REVIEW BY:	TAS	FIGURE:	4
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LEGEND



PR. LIMIT OF DISTURBANCE
PR. RIGHT OF WAY
PR. 2' CONTOURS
PR. 5' CONTOURS
PR. CURB
PR. BUILDING
EX. NONTIDAL WETLAND
EX. 25' WETLAND BUFFER

PROPOSED IMPACTS

PERMANENT PFO WETLAND IMPACTS
2,267 SF (0.05 AC)
 PERMANENT 25' WETLAND BUFFER IMPACTS
4,133 SF (0.09 AC)



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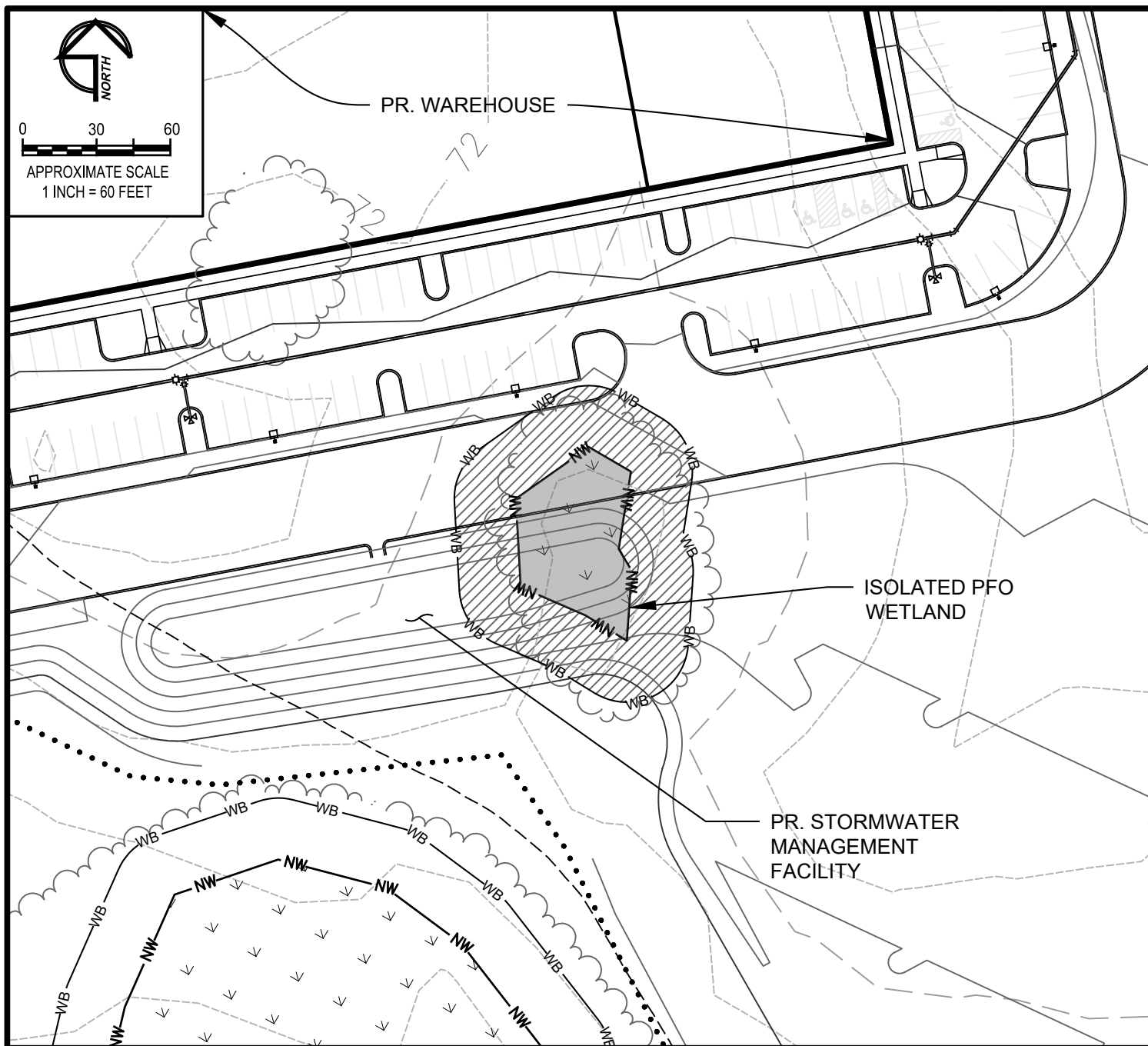
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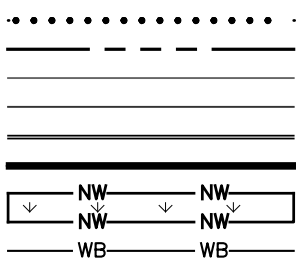
WETLAND/WATERWAY IMPACT PLATES LOGISTICS CENTER AT SOUTHFIELDS - BUILDING '2' AND '3'

TOWN OF ELKTON, CECIL COUNTY, MARYLAND

JOB NO.	31190945x2	SCALE:	1" = 60'	DATE:	NOVEMBER 1, 2021	DRAWN BY:	MDP	REVIEW BY:	TAS	FIGURE:	5
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LEGEND



..... PR. LIMIT OF DISTURBANCE
 - - - - - PR. RIGHT OF WAY
 - - - - - PR. 2' CONTOURS
 - - - - - PR. 5' CONTOURS
 - - - - - PR. CURB
 - - - - - PR. BUILDING
 NW NW
 NW NW
 WB WB
 EX. NONTIDAL WETLAND
 EX. 25' WETLAND BUFFER

PROPOSED IMPACTS

[Solid Gray Box] PERMANENT ISOLATED PFO WETLAND IMPACTS
 2,576 SF (0.06 AC)
 [Hatched Box] PERMANENT 25' WETLAND BUFFER IMPACTS
 7,231 SF (0.17 AC)



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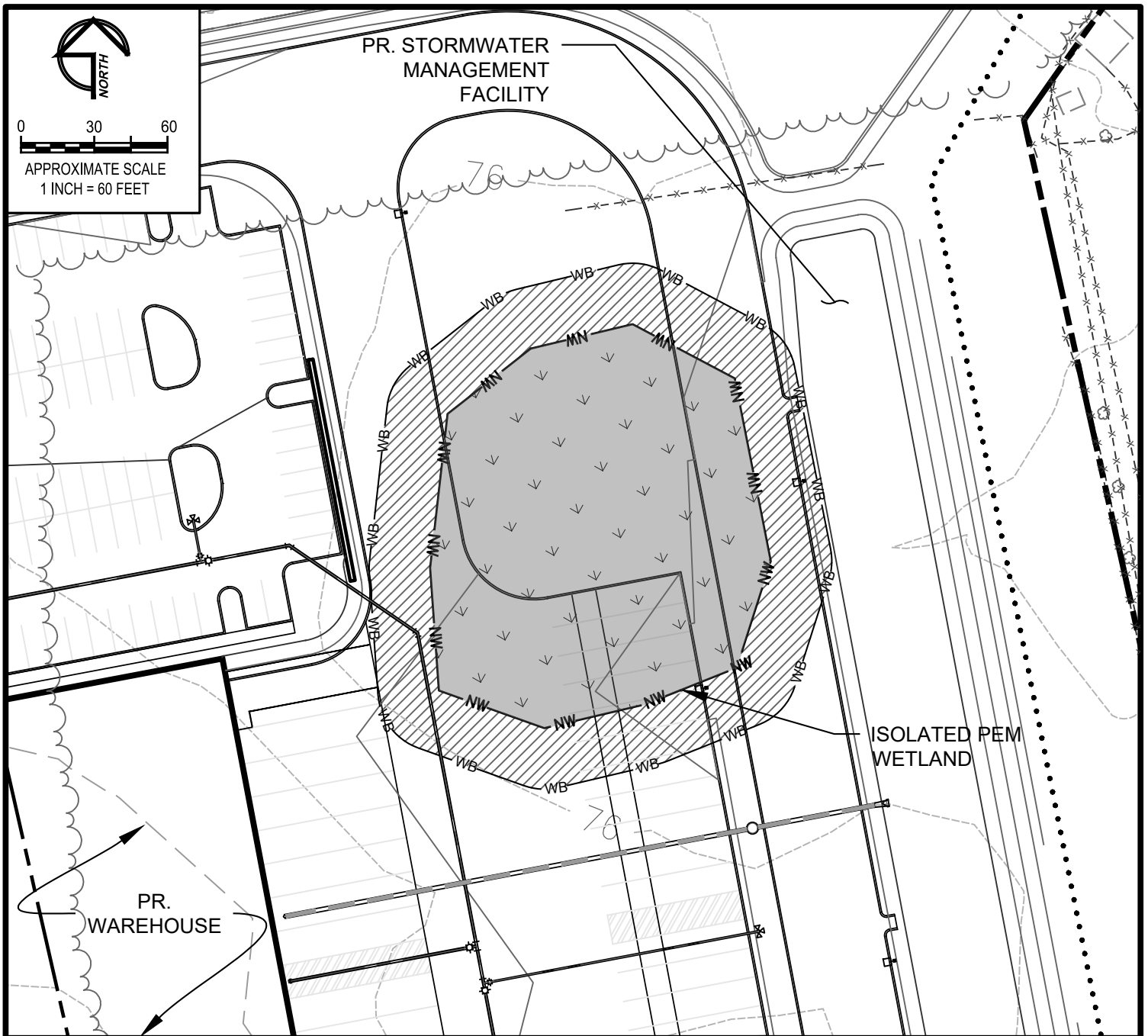
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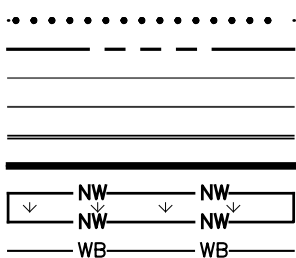
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TOWN OF ELKTON, CECIL COUNTY, MARYLAND

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LEGEND



PR. LIMIT OF DISTURBANCE
PR. RIGHT OF WAY
PR. 2' CONTOURS
PR. 5' CONTOURS
PR. CURB
PR. BUILDING
EX. NONTIDAL WETLAND
EX. 25' WETLAND BUFFER

PROPOSED IMPACTS

PERMANENT ISOLATED PEM WETLAND IMPACTS
18,272 SF (0.42 AC)
PERMANENT 25' WETLAND BUFFER IMPACTS
14,418 SF (0.33 AC)



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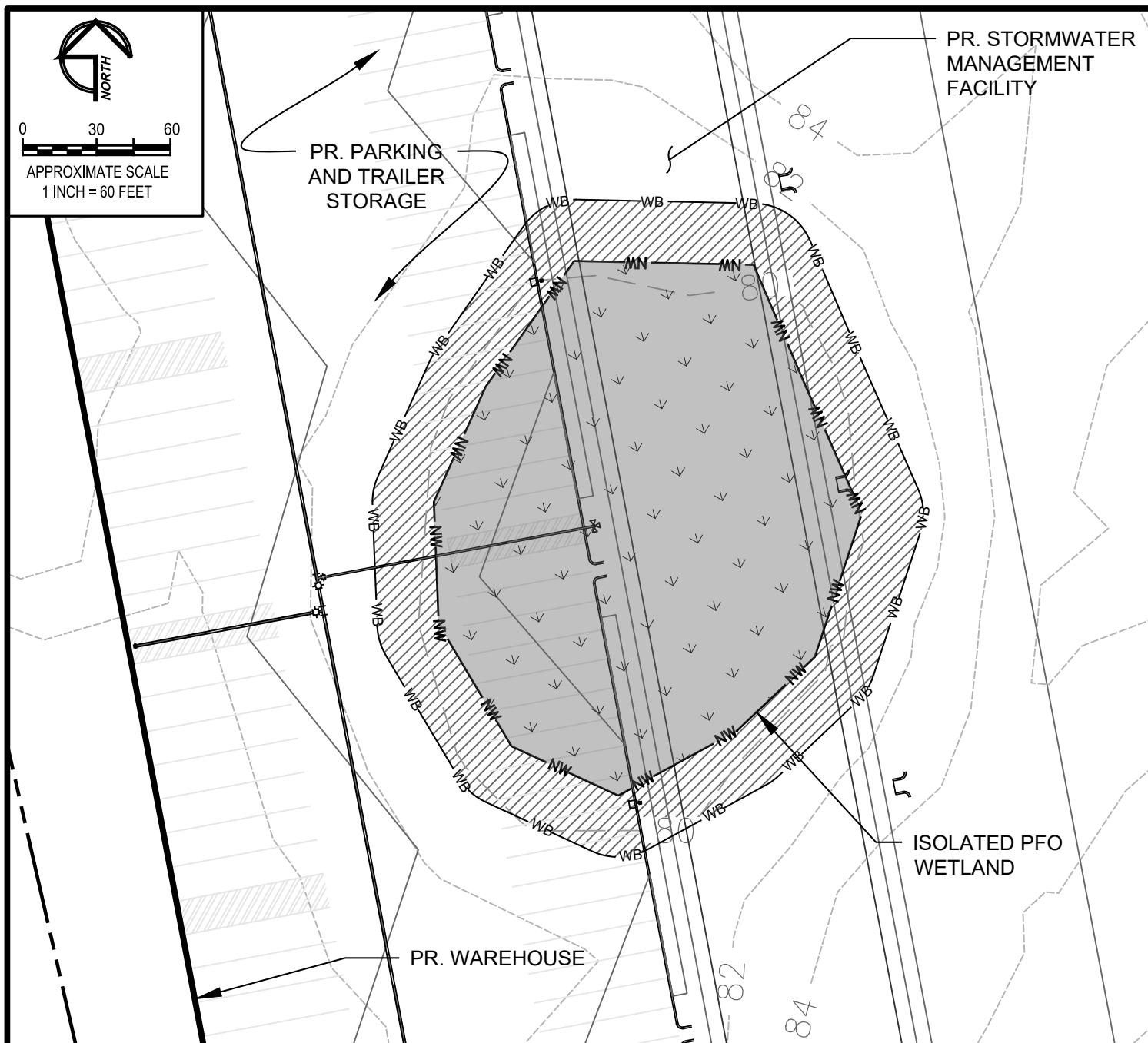
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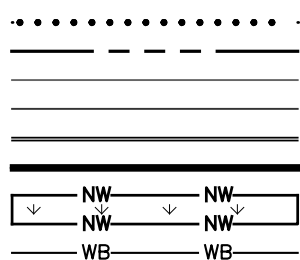
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TOWN OF ELKTON, CECIL COUNTY, MARYLAND

JOB NO. 31190945x2 SCALE: 1" = 60' DATE: NOVEMBER 1, 2021 DRAWN BY: MDP REVIEW BY: TAS FIGURE: 7



LEGEND



PR. LIMIT OF DISTURBANCE
PR. RIGHT OF WAY
PR. 2' CONTOURS
PR. 5' CONTOURS
PR. CURB
PR. BUILDING
EX. NONTIDAL WETLAND
EX. 25' WETLAND BUFFER

PROPOSED IMPACTS

PERMANENT ISOLATED PFO WETLAND IMPACTS
27,407 SF (0.63 AC)
PERMANENT 25' WETLAND BUFFER IMPACTS
17,267 SF (0.40 AC)



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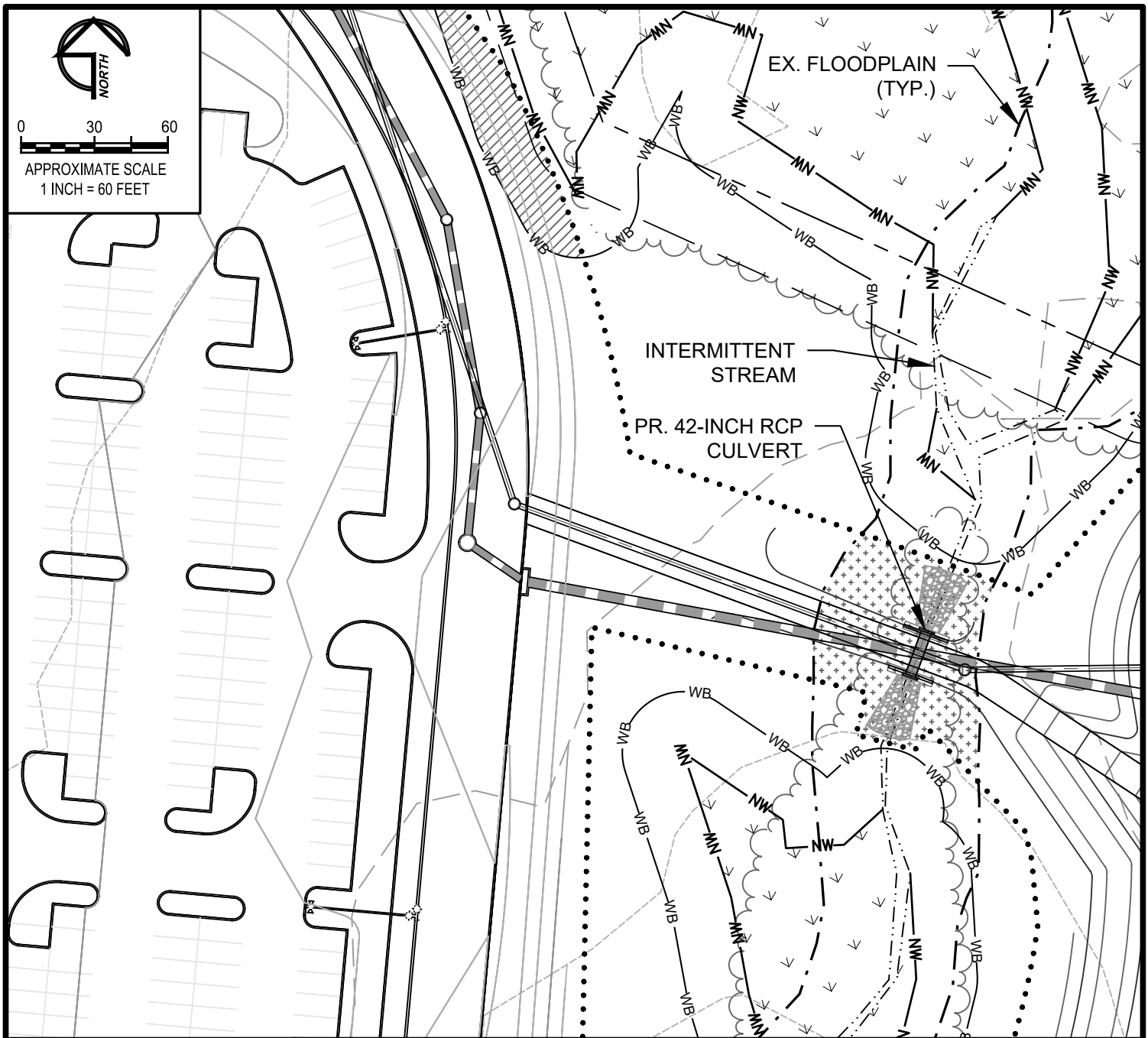
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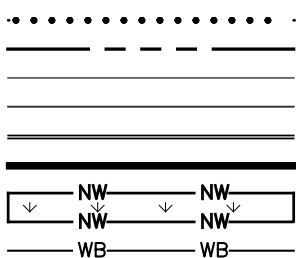
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TOWN OF ELKTON, CECIL COUNTY, MARYLAND

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LEGEND



..... PR. LIMIT OF DISTURBANCE
 ----- PR. RIGHT OF WAY
 _____ PR. 2' CONTOURS
 _____ PR. 5' CONTOURS
 ----- PR. CURB
 ----- PR. BUILDING
 ~~~~~ EX. NONTIDAL WETLAND  
 ----- EX. 25' WETLAND BUFFER

## PROPOSED IMPACTS

 PERMANENT INTERMITTENT STREAM IMPACTS  
 154 SF (0.003 AC); 77 LINEAR FEET  
 PERMANENT 25' WETLAND BUFFER IMPACTS  
 2,079 SF (0.05 AC)  
 PERMANENT 100-YEAR FLOODPLAIN IMPACTS  
 4,791 SF (0.11 AC)



## GEO-TECHNOLOGY ASSOCIATES, INC.

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## WETLAND/WATERWAY IMPACT PLATES LOGISTICS CENTER AT SOUTHFIELDS - BUILDING '2' AND '3'

TOWN OF ELKTON, CECIL COUNTY, MARYLAND

JOB NO. 31190945x2 SCALE: 1" = 60' DATE: NOVEMBER 1, 2021 DRAWN BY: MDP REVIEW BY: TAS FIGURE: 9



0 30 60

APPROXIMATE SCALE  
1 INCH = 60 FEET

PR. WAREHOUSE

ISOLATED PEM  
WETLAND

PR. WAREHOUSE

## LEGEND

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PR. LIMIT OF DISTURBANCE

PR. RIGHT OF WAY

PR. 2' CONTOURS

PR. 5' CONTOURS

PR. CURB

PR. BUILDING

EX. NONTIDAL WETLAND

EX. 25' WETLAND BUFFER

## PROPOSED IMPACTS



PERMANENT ISOLATED PEM WETLAND IMPACTS  
8,616 SF (0.20 AC)



PERMANENT 25' WETLAND BUFFER IMPACTS  
10,764 SF (0.25 AC)



## GEO-TECHNOLOGY ASSOCIATES, INC.

GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

3445-A BOX HILL CORPORATE CENTER DRIVE

ABINGDON, MARYLAND 21009

410-515-9446

FAX: 410-515-4895

WWW.GTAENG.COM

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## WETLAND/WATERWAY IMPACT PLATES LOGISTICS CENTER AT SOUTHFIELDS - BUILDING '2' AND '3'

TOWN OF ELKTON, CECIL COUNTY, MARYLAND

JOB NO. 31190945x2

SCALE:

1" = 60'

DATE:

NOVEMBER 1, 2021

DRAWN BY:

MDP

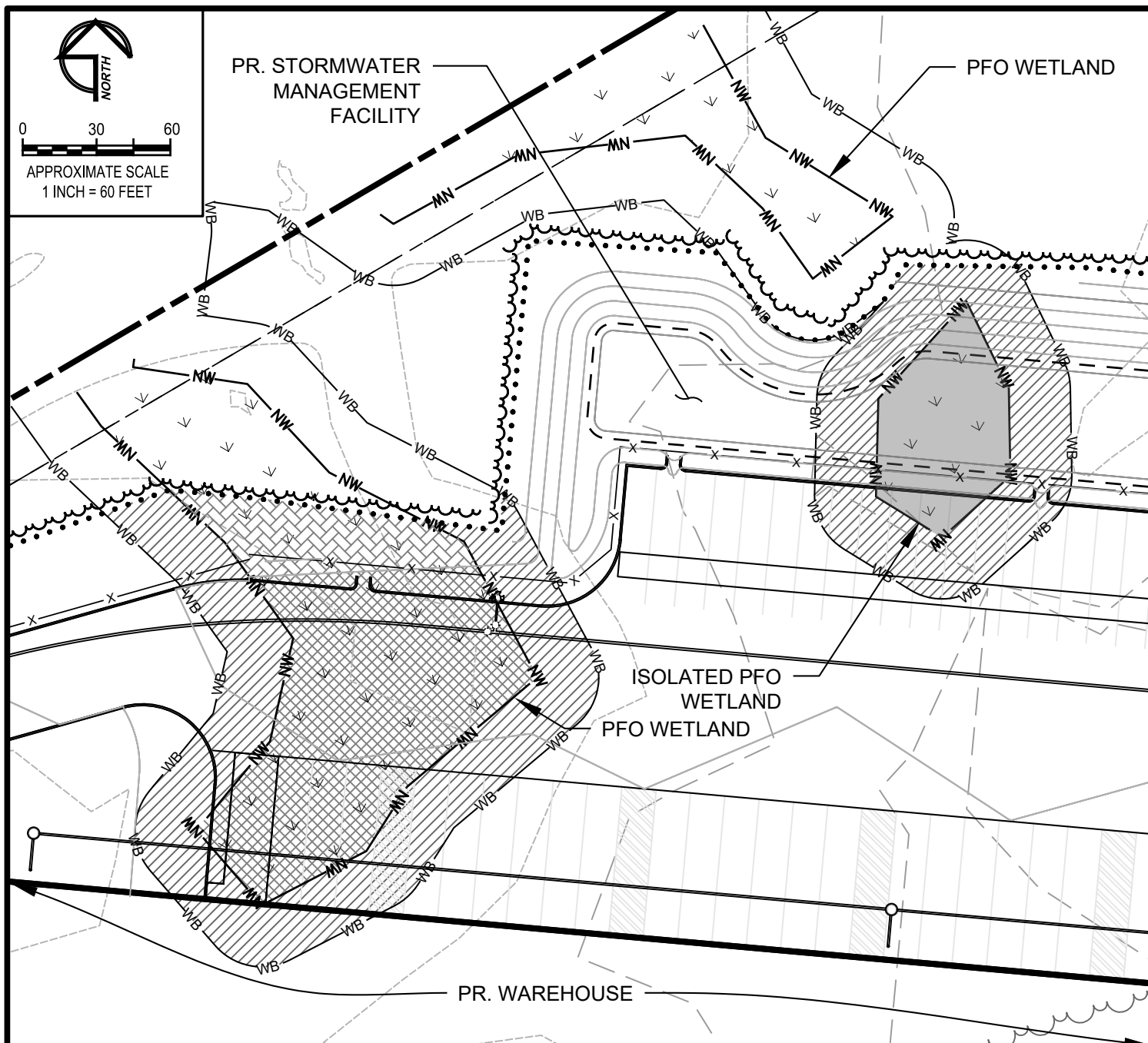
REVIEW BY:

TAS

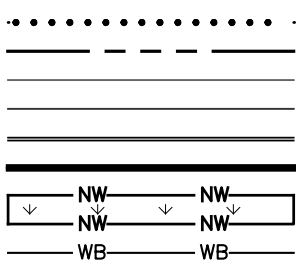
FIGURE:

10





## LEGEND



PR. LIMIT OF DISTURBANCE  
PR. RIGHT OF WAY  
PR. 2' CONTOURS  
PR. 5' CONTOURS  
PR. CURB  
PR. BUILDING  
EX. NONTIDAL WETLAND  
EX. 25' WETLAND BUFFER

## PROPOSED IMPACTS

PERMANENT ISOLATED PFO WETLAND IMPACTS  
3,561 SF (0.08 AC)  
PERMANENT PFO WETLAND IMPACTS  
10,318 SF (0.24 AC)  
PFO TO PEM CONVERSION WETLAND IMPACTS  
2,580 SF (0.06 AC)  
PERMANENT 25' WETLAND BUFFER IMPACTS  
19,257 SF (0.44 AC)



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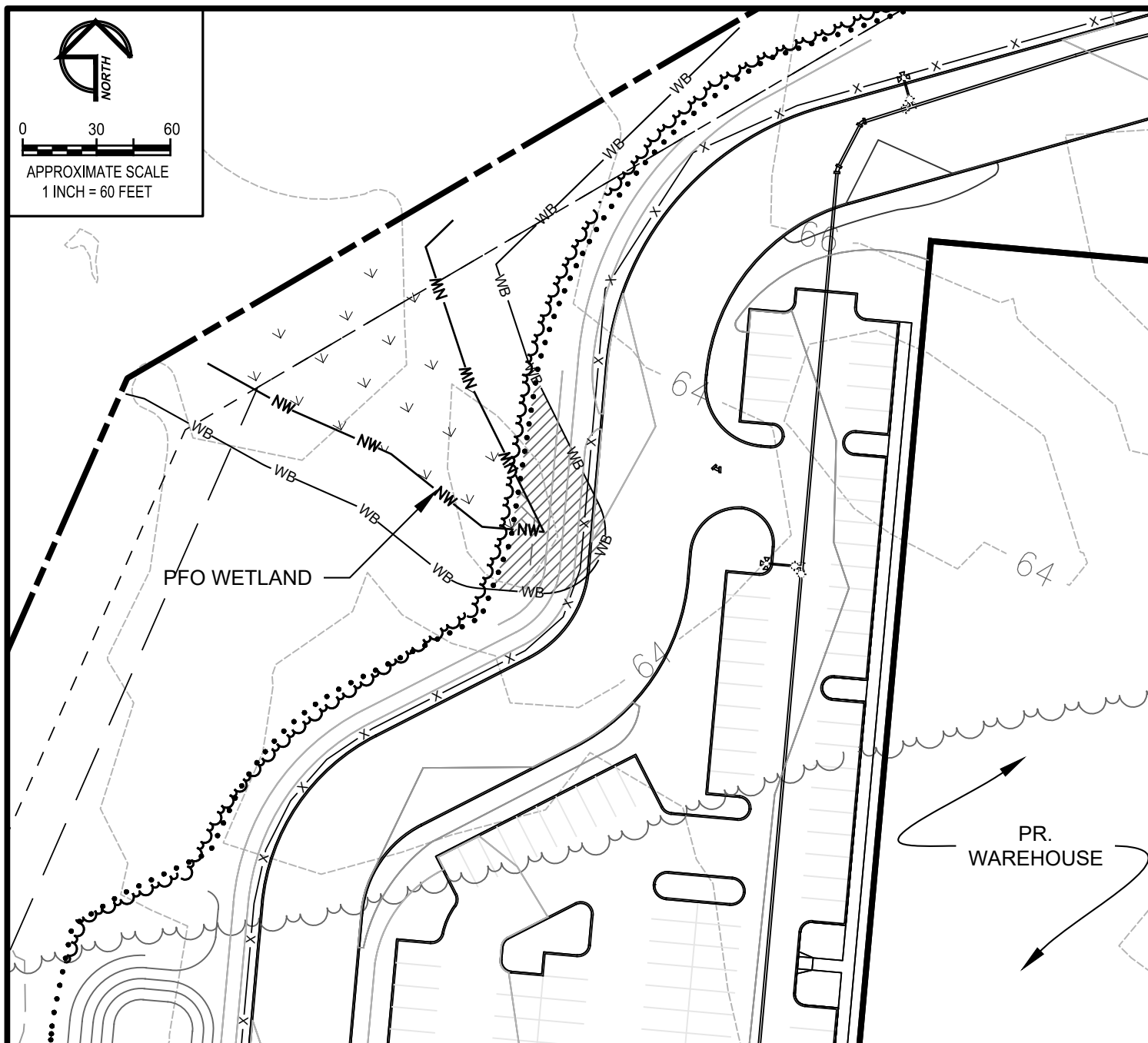
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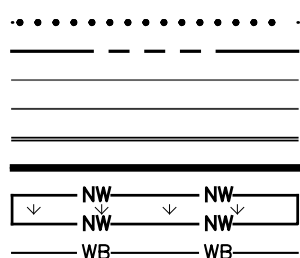
## WETLAND/WATERWAY IMPACT PLATES LOGISTICS CENTER AT SOUTHFIELDS - BUILDING '2' AND '3'

TOWN OF ELKTON, CECIL COUNTY, MARYLAND

JOB NO. 31190945x2 SCALE: 1" = 60' DATE: NOVEMBER 1, 2021 DRAWN BY: MDP REVIEW BY: TAS FIGURE: 11

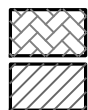


## LEGEND



PR. LIMIT OF DISTURBANCE  
PR. RIGHT OF WAY  
PR. 2' CONTOURS  
PR. 5' CONTOURS  
PR. CURB  
PR. BUILDING  
EX. NONTIDAL WETLAND  
EX. 25' WETLAND BUFFER

## PROPOSED IMPACTS



PFO TO PEM CONVERSION WETLAND IMPACTS  
122 SF (0.003 AC)  
PERMANENT 25' WETLAND BUFFER IMPACTS  
2,043 SF (0.05 AC)



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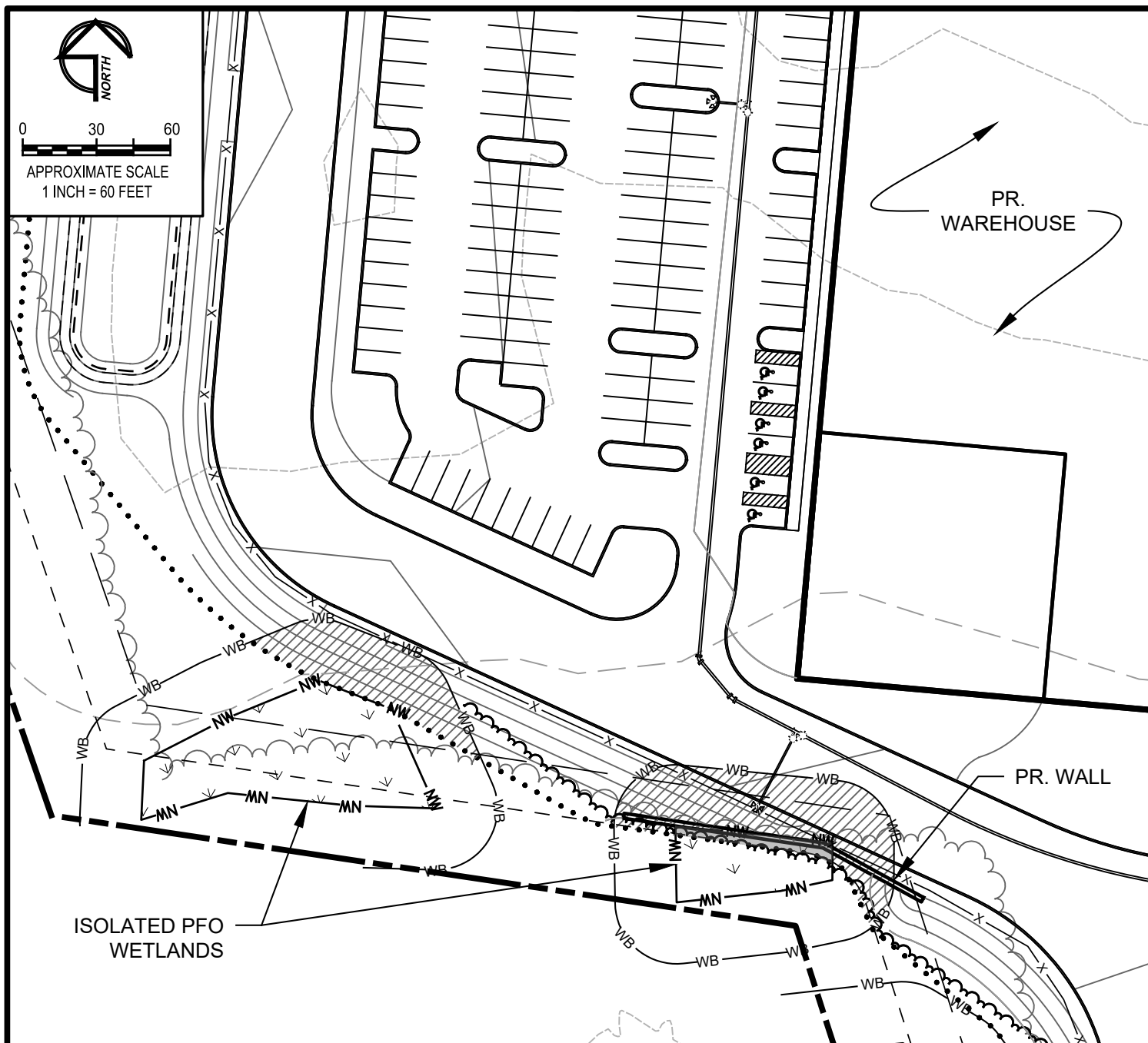
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## WETLAND/WATERWAY IMPACT PLATES LOGISTICS CENTER AT SOUTHFIELDS - BUILDING '2' AND '3'

TOWN OF ELKTON, CECIL COUNTY, MARYLAND

JOB NO. 31190945x2 SCALE: 1" = 60' DATE: NOVEMBER 1, 2021 DRAWN BY: MDP REVIEW BY: TAS FIGURE: 12



## LEGEND

|       |                          |
|-------|--------------------------|
| ..... | PR. LIMIT OF DISTURBANCE |
| ----  | PR. RIGHT OF WAY         |
| ----  | PR. 2' CONTOURS          |
| ----  | PR. 5' CONTOURS          |
| ----  | PR. CURB                 |
| ----  | PR. BUILDING             |
| NW NW | EX. NONTIDAL WETLAND     |
| WB WB | EX. 25' WETLAND BUFFER   |

## PROPOSED IMPACTS

|   |                                                             |
|---|-------------------------------------------------------------|
| ■ | PERMANENT ISOLATED PFO WETLAND IMPACTS<br>316 SF (0.007 AC) |
| ▨ | PERMANENT 25' WETLAND BUFFER IMPACTS<br>5,163 SF (0.12 AC)  |



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410-515-9446  
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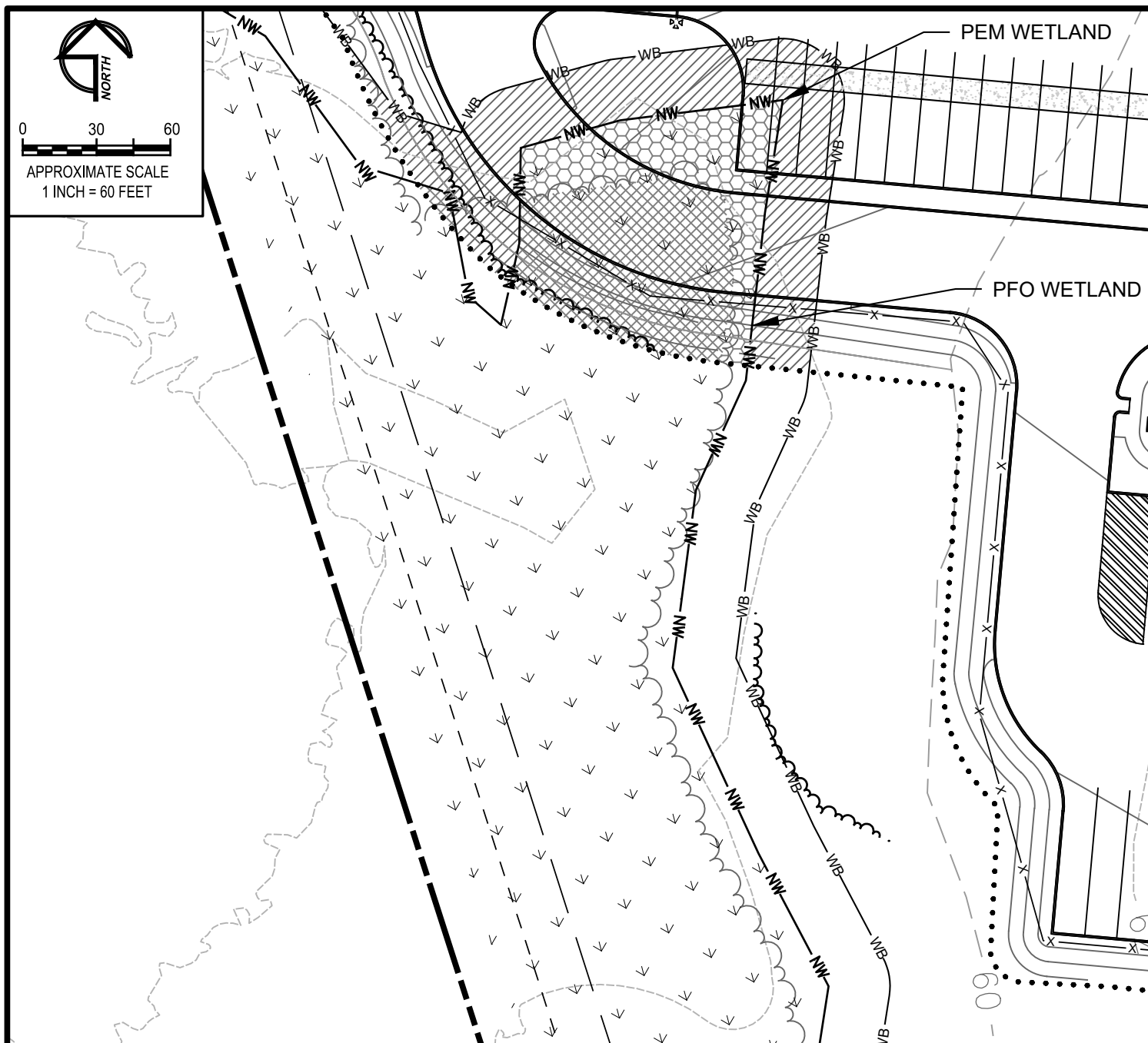
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## WETLAND/WATERWAY IMPACT PLATES LOGISTICS CENTER AT SOUTHFIELDS - BUILDING '2' AND '3'

TOWN OF ELKTON, CECIL COUNTY, MARYLAND

|         |            |        |          |       |                  |           |     |            |     |         |    |
|---------|------------|--------|----------|-------|------------------|-----------|-----|------------|-----|---------|----|
| JOB NO. | 31190945x2 | SCALE: | 1" = 60' | DATE: | NOVEMBER 1, 2021 | DRAWN BY: | MDP | REVIEW BY: | TAS | FIGURE: | 13 |
|---------|------------|--------|----------|-------|------------------|-----------|-----|------------|-----|---------|----|





## LEGEND

|       |                          |
|-------|--------------------------|
| ..... | PR. LIMIT OF DISTURBANCE |
| ----  | PR. RIGHT OF WAY         |
| ----  | PR. 2' CONTOURS          |
| ----  | PR. 5' CONTOURS          |
| ----  | PR. CURB                 |
| ----  | PR. BUILDING             |
|       | EX. NONTIDAL WETLAND     |
|       | EX. 25' WETLAND BUFFER   |

## PROPOSED IMPACTS

|  |                                                            |
|--|------------------------------------------------------------|
|  | PERMANENT PFO WETLAND IMPACTS<br>5,255 SF (0.12 AC)        |
|  | PERMANENT PEM WETLAND IMPACTS<br>3,765 SF (0.09 AC)        |
|  | PERMANENT 25' WETLAND BUFFER IMPACTS<br>8,386 SF (0.19 AC) |



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## WETLAND/WATERWAY IMPACT PLATES LOGISTICS CENTER AT SOUTHFIELDS - BUILDING '2' AND '3'

TOWN OF ELKTON, CECIL COUNTY, MARYLAND

|         |            |        |          |       |                  |           |     |            |     |         |    |
|---------|------------|--------|----------|-------|------------------|-----------|-----|------------|-----|---------|----|
| JOB NO. | 31190945x2 | SCALE: | 1" = 60' | DATE: | NOVEMBER 1, 2021 | DRAWN BY: | MDP | REVIEW BY: | TAS | FIGURE: | 14 |
|---------|------------|--------|----------|-------|------------------|-----------|-----|------------|-----|---------|----|

# SUMMARY OF IMPACTS

## ISOLATED NONTIDAL WETLANDS

|                                           |                        |
|-------------------------------------------|------------------------|
| PERMANENT ISOLATED PEM WETLANDS =         | 42,828 SF (0.98 ACRES) |
| PERMANENT ISOLATED PFO WETLANDS =         | 33,860 SF (0.78 ACRES) |
| TOTAL ISOLATED NONTIDAL WETLAND IMPACTS = | 76,688 SF (1.76 ACRES) |

## CONNECTED NONTIDAL WETLANDS

|                                            |                        |
|--------------------------------------------|------------------------|
| PERMANENT PEM WETLANDS =                   | 3,765 SF (0.09 ACRES)  |
| WETLAND CONVERSION =                       | 2,702 (0.06 ACRES)     |
| PERMANENT PFO WETLANDS =                   | 46,609 SF (1.07 ACRES) |
| TOTAL CONNECTED NONTIDAL WETLAND IMPACTS = | 53,076 SF (1.22 ACRES) |

## NONTIDAL WETLAND BUFFERS

|                                    |                         |
|------------------------------------|-------------------------|
| PERMANENT WETLAND BUFFER IMPACTS = | 125,958 SF (2.89 ACRES) |
|------------------------------------|-------------------------|

## INTERMITTENT STREAMS

|                                         |                                         |
|-----------------------------------------|-----------------------------------------|
| PERMANENT INTERMITTENT STREAM IMPACTS = | 154 SF (0.003 ACRES);<br>77 LINEAR FEET |
|-----------------------------------------|-----------------------------------------|

## 100-YEAR FLOODPLAIN

|                                         |                       |
|-----------------------------------------|-----------------------|
| PERMANENT 100-YEAR FLOODPLAIN IMPACTS = | 4,791 SF (0.11 ACRES) |
|-----------------------------------------|-----------------------|



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## WETLAND/WATERWAY IMPACT SUMMARY LOGISTICS CENTER AT SOUTHFIELDS - BUILDING '2' AND '3'

TOWN OF ELKTON, CECIL COUNTY, MARYLAND



# PHASE II ON-SITE WETLAND MITIGATION PLAN

## LOGISTICS CENTER AT SOUTHFIELDS

### CECIL COUNTY, MARYLAND

#### GENERAL NOTES

1. APPLICANT: DRI/TCO ELKTON LAND, LLC  
888 16th STREET NW, SUITE 555  
WASHINGTON, DC 20006  
ATTN: MR. TOM RATHBURN
2. PLAN PREPARER: GEO-TECHNOLOGY ASSOCIATES, INC. (GTA)  
3445 BOX HILL CORPORATE CENTER DRIVE, SUITE A  
ABINGDON, MARYLAND 21009  
CONTACT: MR. DANIEL SYNORACKI  
PHONE: (410) 515-9446  
EMAIL: DSYNORACKI@GTAENG.COM
3. THE LOGISTICS CENTER AT SOUTHFIELDS ON-SITE WETLAND MITIGATION PROJECT IS PROPOSED TO SATISFY THE REQUIREMENTS OF THE MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) AND U.S. ARMY CORPS OF ENGINEERS (USACE) PERMIT #21-NY-0419/202161204 FOR 83,171 SQ FT (1.91 ACRES) OF PERMANENT FORESTED WETLAND IMPACTS AND 46,617 SQ FT (1.07) OF EMERGENT WETLAND IMPACTS. OF THE TOTAL PROJECT IMPACTS, APPROXIMATELY 1.16 ACRES OF IMPACT ARE REGULATED BY ONLY THE USACE, AND 2.98 ACRES ARE REGULATED BY MDE.
4. THIS PLAN WAS PREPARED ON A TOPOGRAPHIC AND EXISTING CONDITIONS BASE PROVIDED BY MORRIS & RITCHIE ASSOCIATES, INC. (MRA). PROPOSED LAND DEVELOPMENT CONDITIONS SHOWN IN THE VICINITY OF THE WETLAND MITIGATION AREA WERE PROVIDED BY MRA.
5. A WETLAND DELINEATION OF THE SUBJECT SITE WAS PERFORMED BY GTA IN DECEMBER 2019. WETLAND FLAG LOCATIONS WITHIN THE SUBJECT SITE WERE LOCATED BY GTA USING A GLOBAL POSITIONING SYSTEM (GPS) UNIT RATED WITH SUBMETER ACCURACY.
6. THE SUBJECT SITE DRAINS TOWARDS OFF-SITE UNNAMED PERENNIAL TRIBUTARIES TO PERCH CREEK AND BIG ELK CREEK. PERCH CREEK AND BIG ELK CREEK CONTRIBUTE TO THE ELK RIVER. IN THE VICINITY OF THE SUBJECT SITE, NONTIDAL TRIBUTARIES OF THE ELK RIVER ARE CLASSIFIED IN THE CODE OF MARYLAND REGULATIONS (COMAR) 26.08.02.08 AS DESIGNATED USE "CLASS 1: WATER CONTACT RECREATION, AND PROTECTION OF NONTIDAL WARMWATER AQUATIC LIFE."
7. EARTHMOVING CONTRACTOR MUST CONTACT MISS UTILITY (CALL BEFORE YOU DIG) AT 1-800-257-7777 TO GET UNDERGROUND UTILITIES MARKED PRIOR TO BEGINNING CONSTRUCTION.
8. DRI/TCO ELKTON LAND, LLC (THE PERMITTEE) AND THE SELECTED CONTRACTOR(S) ARE THE RESPONSIBLE PARTIES FOR THIS PROJECT.
9. A QUALIFIED WETLAND MITIGATION SPECIALIST SHOULD PROVIDE CONSTRUCTION OVERSIGHT FOR THIS WETLAND MITIGATION PROJECT.
10. MAJOR PLAN REVISIONS DUE TO UNFORESEEN SITE CONDITIONS MUST BE APPROVED BY MDE, THE USACE, AND THE CECIL COUNTY SOIL CONSERVATION DISTRICT PRIOR TO THOSE CHANGES BEING CONSTRUCTED. HOWEVER, CORRECTIVE ACTION NECESSARY TO AVOID IMMEDIATELY POSED SEDIMENTATION AND/OR OTHER ENVIRONMENTAL THREATS MUST BE TAKEN.
11. A COPY OF THE APPROVED PLANS AND PERMIT(S) MUST BE ON-SITE DURING CONSTRUCTION.
12. ALL EXCESS SOIL AND ROCK MATERIAL MUST BE DISPOSED OF IN APPROVED UPLAND LOCATIONS OUTSIDE WETLANDS, 25-FOOT WETLAND BUFFERS, AND THE 100-YEAR FLOODPLAIN. NO WETLANDS ARE PROPOSED TO BE PERMANENTLY IMPACTED BY THIS PROJECT. MINOR TEMPORARY IMPACTS DUE TO GRADING TIE-IN NEEDS WILL PROMPTLY BE RESTORED DURING CONSTRUCTION.
13. THIS PLAN WAS PREPARED BY GTA FOR THE SOLE AND EXCLUSIVE USE OF DRI/TCO ELKTON LAND, LLC, ANY REPRODUCTION OF THIS PLAN BY ANY OTHER PERSON WITHOUT THE EXPRESSED WRITTEN PERMISSION OF GTA AND DRI/TCO ELKTON LAND, LLC IS UNAUTHORIZED, AND SUCH USE IS AT THE SOLE RISK OF THE USER.
14. THIS WETLAND MITIGATION PLAN WAS PREPARED IN GENERAL ACCORDANCE WITH INDUSTRY STANDARD PRACTICE. GTA IS NOT RESPONSIBLE FOR REVISIONS TO THE WORK, DESIGN CHANGES, OR DETERIORATION OF THE WETLAND RESULTING FROM WILDLIFE, VANDALISM, OR UNFORESEEN CIRCUMSTANCES.

#### NOTIFICATIONS PRIOR TO CONSTRUCTION

1. CONTACT THE APPLICANT REPRESENTATIVE - MR. TOM RATHBURN TEN (10) DAYS PRIOR TO CONSTRUCTION.
2. CONTACT CECIL COUNTY SOIL CONSERVATION DISTRICT AT (410)-399-4411 TEN (10) DAYS PRIOR TO BEGINNING CONSTRUCTION.
3. CONTACT MR. MATTHEW HYNSON OF THE USACE AT (410)-362-4503 TEN (10) DAYS PRIOR TO BEGINNING CONSTRUCTION.
4. CONTACT MR. DAVE WALBECK OF THE MDE AT (410)-537-3831 TEN (10) DAYS PRIOR TO BEGINNING CONSTRUCTION.
5. CONTACT THE MARYLAND DEPARTMENT OF THE ENVIRONMENT'S WATER AND SCIENCE ADMINISTRATION COMPLIANCE PROGRAM AT (410) 537-3510 TEN (10) DAYS PRIOR TO BEGINNING CONSTRUCTION FOR START OF WORK NOTIFICATION.
6. CONTACT MR. DANIEL SYNORACKI OF GTA AT (410) 515-9446 TEN (10) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.

#### STANDARD NOTES FOR UTILITY NOTIFICATION

1. CONTRACTOR SHALL CALL "MISS UTILITY" AT 1-800-257-7777 48 HOURS PRIOR TO THE START OF WORK.
2. DESIGNER TICKET REQUEST NUMBER 21968320 (MITIGATION AREA 1), 21968439 (MITIGATION AREA 2), 21968452 (MITIGATION AREA 3).
3. CONTACT MADE BY GTA ON DECEMBER 9, 2021.



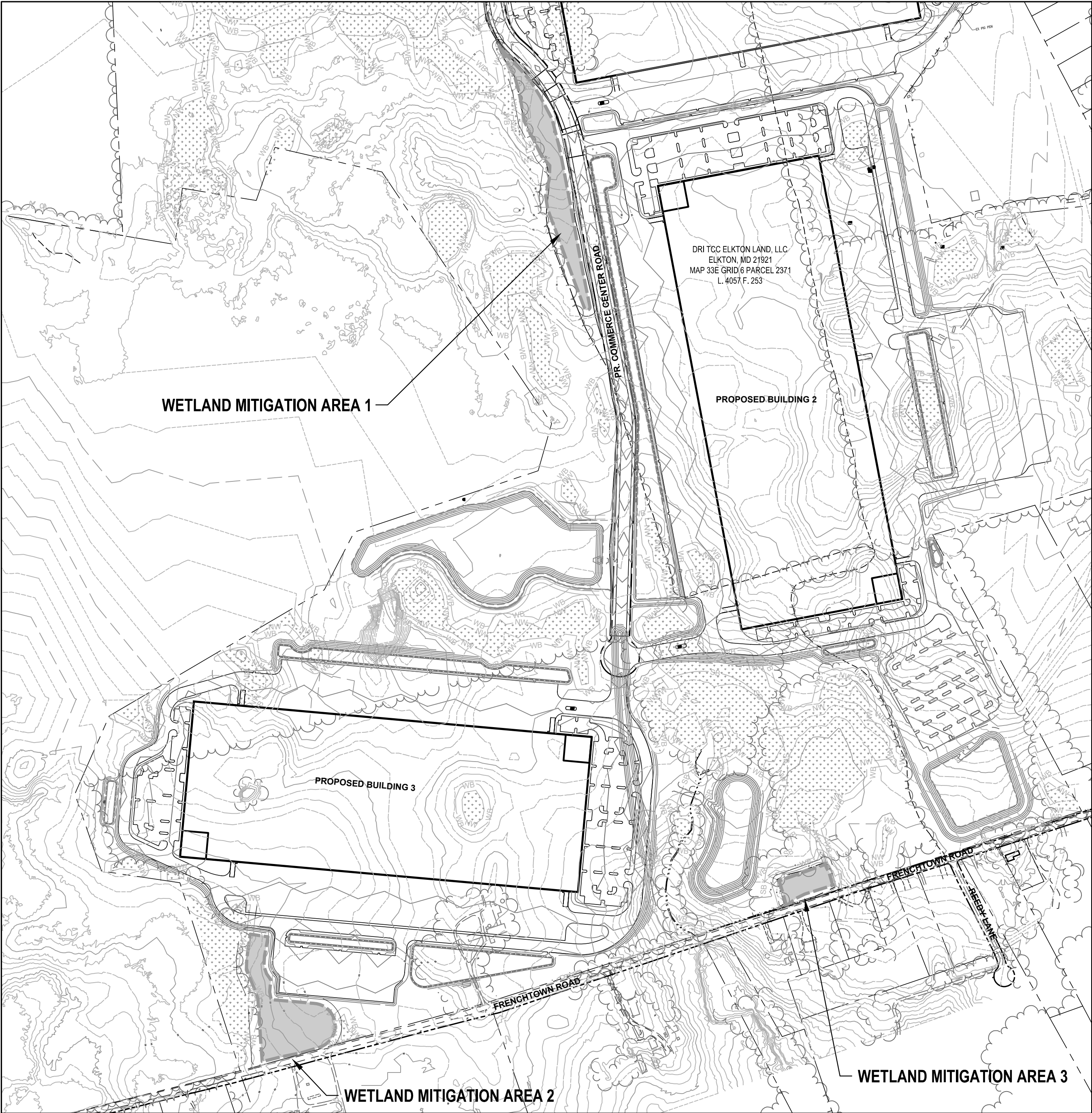
#### CONSTRUCTION SEQUENCE PROVISIONS

1. CONSTRUCTION TO TAKE PLACE WHEN NO SNOW IS ON THE GROUND AND WHEN DRIER CONDITIONS ARE FAVORABLE.
2. PLANTING OF CONTAINERIZED TREES, SHRUBS IN THE MITIGATION AREAS SHOULD BE COMPLETED DURING THE SPRING OR FALL FOLLOWING CONSTRUCTION.

#### CONSTRUCTION SEQUENCE

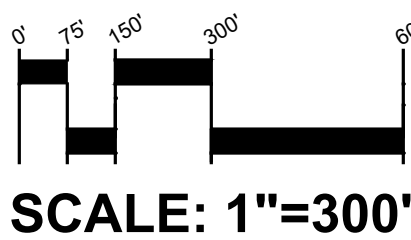
##### PHASE I (MITIGATION AREAS 1 AND 3) - TO BE CONSTRUCTED WITH SOUTHFIELDS PROPOSED BUILDING 2

1. ESTABLISH TRAFFIC SAFETY PROTOCOLS FOR WORK FROM THE FUTURE COMMERCE CENTER ROAD (MITIGATION AREA 1) AND FRENCHTOWN ROAD THROUGH PROPER "WORK AHEAD" SIGNAGE AND PROPER TRAFFIC FLAGGING PERSONNEL WHEN LARGE TRUCKS AND CONSTRUCTION EQUIPMENT ARE ENTERING AND LEAVING THE SITE. CHECK WITH THE CECIL COUNTY DEPARTMENT OF PUBLIC WORKS FOR ANY SPECIAL LOCAL REQUIREMENTS AND OBTAIN TEMPORARY ACCESS ROAD PERMITS AS REQUIRED.
2. ENTER THE MITIGATION AREA 1 PROJECT SITE FROM THE PROPOSED COMMERCE CENTER ROAD VIA LAND OWNED BY DRI TCO ELKTON LAND, LLC WITH THE CONSTRUCTION ENTRANCE LOCATED APPROXIMATELY 0.30 MILES SOUTH OF U.S. ROUTE 40 (PULASKI HIGHWAY). THE STABILIZED ROCK CONSTRUCTION ENTRANCE SHOULD BE CONSTRUCTED AS SHOWN ON THE EROSION AND SEDIMENT (E&S) CONTROL PLAN SHEET. IF PROPOSED UNDERGROUND GAS AND UTILITY LINES HAVE BEEN INSTALLED PRIOR TO OR AT THE TIME OF CONSTRUCTION, THE STABILIZED CONSTRUCTION ENTRANCE SHALL ONLY RECEIVE GEOTEXTILE AND STONE. NO EXCAVATION SHALL OCCUR NEAR UTILITIES AND PROTECTIVE CONSTRUCTION TIMBER MATS CAN BE USED AS NEEDED TO PROTECT UTILITIES. ESTABLISH THE TEMPORARY STAGING AND STOCKPILE AREA AS SHOWN. SHOULD THE ACCESS ROAD AND/OR THE PROPOSED MITIGATION AREA DIFFER, OR NEED TO BE CHANGED AT THE TIME OF MITIGATION CONSTRUCTION, RELOCATION OF THE STABILIZED ROCK CONSTRUCTION ENTRANCE SHOULD BE CONSIDERED AS APPROPRIATE AND REPORTED TO THE CECIL COUNTY SOIL CONSERVATION DISTRICT. INSTALL FILTER LOGS AND SILT FENCE AS SHOWN ON THE E&S PLANS.
3. WORKING FROM NORTH TO SOUTH, STRIP AND STOCKPILE THE TOP 12 INCHES OF TOPSOIL (WITHOUT STONE OR DEBRIS). CONTINUE EXCAVATING THE WETLAND CREATION AREA BY REMOVING SUBSOILS AND TRANSPORTING EXCAVATED MATERIAL TO THE TEMPORARY STOCKPILE AREA DEPICTED ON THIS PLAN. CARE SHOULD BE TAKEN TO SEPARATE TOPSOIL FROM BEING MIXED WITH SUBSOILS.
4. OVER-EXCAVATE THE PROPOSED WETLAND MITIGATION FLOOR BY 12 INCHES. EXCAVATE THE CUTOFF TRENCH WHERE INDICATED ON THE PROPOSED GRADING PLAN (SHEET 5) AND CROSS SECTIONS (SHEET 6). BACKFILL THE CUTOFF TRENCH WITH IMPERVIOUS MATERIALS AS SPECIFIED ON THE GRADING PLAN.
5. BACKFILL THE PROPOSED MITIGATION AREA WITH 12 INCHES OF STOCKPILED TOPSOIL TO FINAL SPECIFIED GRADES ON THE GRADING PLAN (SHEETS 5-7). CREATE AREAS OF MICROTOPOGRAPHIC VARIATION OF 0.25 TO 0.50 FEET FROM DESIGN ELEVATIONS WITH NO MORE THAN 25% OF THE WETLAND FLOOR REMAINING AT DESIGN ELEVATIONS (SEE DETAIL ON SHEETS 14-16).
6. ADD ORGANIC MATTER TO THE WETLAND FLOOR AT THE RATE OF 60 CUBIC YARDS PER ACRE. FOR THIS PROJECT, ADD A MINIMUM OF 0.5- TO 1-INCH DEEP COVER OF SPENT MUSHROOM COMPOST SOIL (OR EQUIVALENT) TO THE FINAL GRADES. FOR WETLAND MITIGATION AREA 1, A MINIMUM OF 90 CUBIC YARDS OF ORGANIC MATTER IS NEEDED. FOR WETLAND MITIGATION AREA 2, A MINIMUM OF 100 CUBIC YARDS IS NEEDED. FOR WETLAND MITIGATION AREA 3, A MINIMUM OF 23 CUBIC YARDS IS NEEDED.
7. DISK THE COMPLETED FLOOR AND SLOPES OF THE PROPOSED WETLAND MITIGATION AREA TO AERATE AND PREPARE THE SOIL MEDIUM FOR PLANTING.
8. ADD DEAD FALL SNAGS AND TREE STUMPS TO THE WETLAND MITIGATION AREA, AS SPECIFIED ON THE PLANTING PLANS (SHEETS 13-15), FOR ADDITIONAL WILDLIFE HABITAT AND NATURALIZED APPEARANCE. SUPPLEMENTAL LARGE WOODY DEBRIS SHOULD BE ADDED AT A RATE OF THREE (3) DUMP TRUCK LOADS PER ACRE AND SHALL INCLUDE LOGS, BRUSH PILES, OVERTURNED STUMPS, ETC.



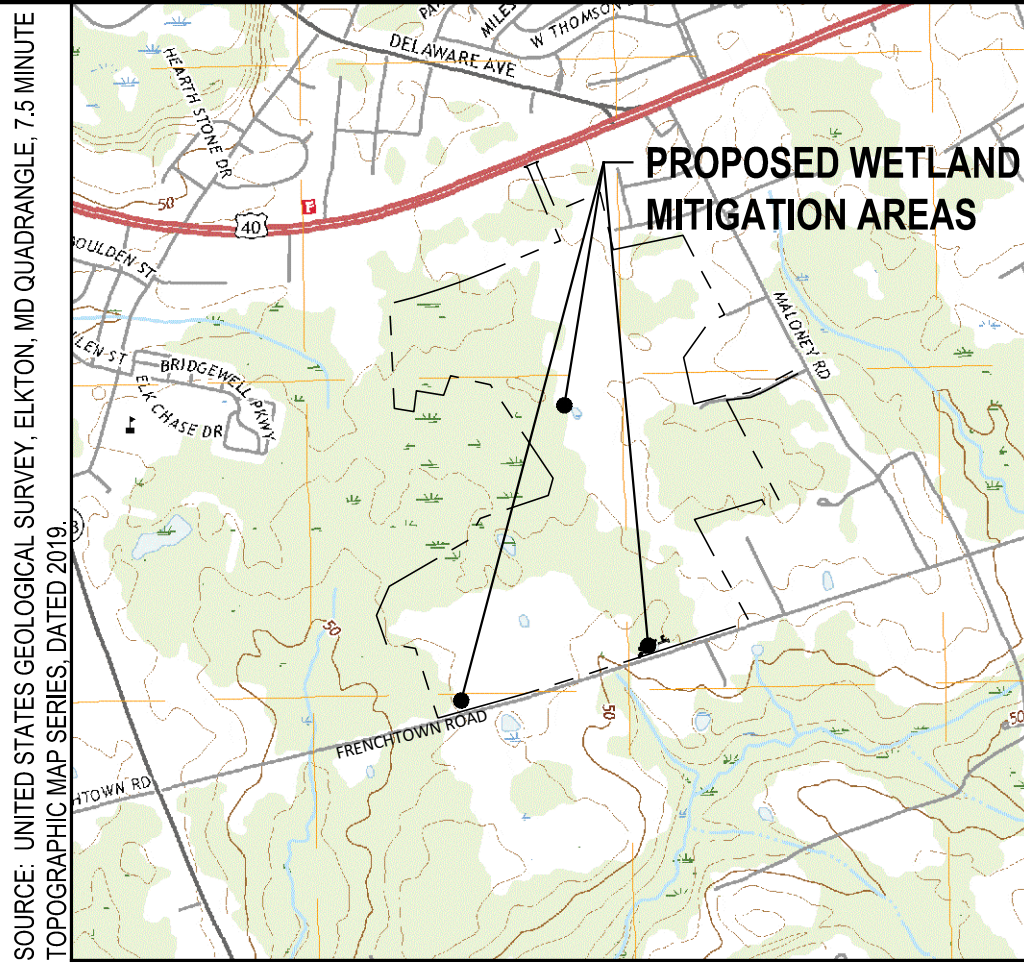
#### INDEX OF SHEETS

|              |                                              |
|--------------|----------------------------------------------|
| SHEET 1      | COVER SHEET                                  |
| SHEETS 2-4   | EXISTING CONDITIONS                          |
| SHEETS 5-7   | GRADING PLANS                                |
| SHEETS 8-9   | CROSS SECTIONS                               |
| SHEETS 10-12 | EROSION & SEDIMENT CONTROL PLAN              |
| SHEET 13     | EROSION & SEDIMENT CONTROL NOTES AND DETAILS |
| SHEETS 14-16 | PLANTING PLANS                               |
| SHEET 17     | PLANTING SCHEDULE AND DETAILS                |



#### MITIGATION SUMMARY TABLE

| MITIGATION LOCATION                                | MITIGATION AREA ID | MITIGATION TYPE           | MITIGATION ACREAGE |
|----------------------------------------------------|--------------------|---------------------------|--------------------|
| ON-SITE                                            | AREA 1             | PALUSTRINE FORESTED (PFO) | 1.50               |
|                                                    | AREA 2             |                           | 1.64               |
|                                                    | AREA 3             | PALUSTRINE EMERGENT (PEM) | 0.38               |
| OFF-SITE - J. EVANS MCKINNEY<br>COMMEMORATIVE PARK | N/A                | PALUSTRINE FORESTED (PFO) | 0.61               |
|                                                    |                    | PALUSTRINE EMERGENT (PEM) | 0.69               |
|                                                    |                    | TOTAL                     | 4.82               |



#### VICINITY MAP

SCALE: 1"=200'



#### CONSTRUCTION SEQUENCE

9. SEED AND MULCH THE WETLAND MITIGATION AREAS WITH SPECIFIED SEED MIXES. SEED AND MULCH UPLAND AREAS WITH SPECIFIED SEED MIXES, AND INSTALL EROSION CONTROL MATTING WHERE INDICATED ON THE E&S PLANS (SHEETS 10-12).
10. ENTER THE MITIGATION AREA 3 PROJECT SITE FROM FRENCHTOWN ROAD. ESTABLISH THE STABILIZED CONSTRUCTION ENTRANCE, TEMPORARY STAGING AND STOCKPILE AREA, AND INSTALL FILTER LOGS AS SHOWN ON THE E&S PLANS. SHOULD THE ACCESS ROAD AND/OR THE PROPOSED MITIGATION AREA DIFFER OR NEED TO BE CHANGED AT THE TIME OF MITIGATION CONSTRUCTION, RELOCATION OF THE STABILIZED ROCK CONSTRUCTION ENTRANCE SHOULD BE CONSIDERED AS APPROPRIATE AND REPORTED TO THE CECIL COUNTY SOIL CONSERVATION DISTRICT.
11. DEWATER THE EXISTING POND USING PUMP AROUND PRACTICES SHOWN IN THE E&S DETAILS. THE POND SHOULD BE AS DRY AS POSSIBLE PRIOR TO BACKFILLING THE PROPOSED MITIGATION AREA.
12. BACKFILL THE PROPOSED MITIGATION AREA USING SUITABLE SILT LOAM AND/OR CLAY LOAM FILL MATERIAL SALVAGED FROM MITIGATION AREA 1 OR FURNISH SUITABLE SILT LOAM AND OR CLAY LOAM FROM AN OFF-SITE SOURCE (NO ROCK OR RUBBLE SHOULD BE USED AS BACKFILL). FILL THE MITIGATION AREA FOOTPRINT TO WITHIN 12 INCHES OF THE FINAL GRADE. CARE SHOULD BE TAKEN TO NOT OVERCOMPACT SUBGRADE SOILS.
13. REPEAT STEPS 5-9 WITHIN MITIGATION AREA 3. THE FINAL TOP 12 INCHES OF SUBSTRATE SHOULD BE FERTILE TOPSOIL. IF NO SUITABLE FERTILE TOPSOIL IS AVAILABLE FROM PREVIOUSLY STOCKPILED SOILS, FERTILE TOPSOIL SHALL BE FURNISHED FROM AN OFF-SITE SOURCE.
14. RESTORE ALL EQUIPMENT TRACK OR TIRE RUTS TO ORIGINAL GRADES AND SEED AN MULCH DISTURBED SOILS ACCORDING TO THE E&S PLANS.
15. PLANT SHRUBS AND TREES IN THE SPRING OR FALL FOLLOWING CONSTRUCTION WHERE INDICATED ON THE PLANTING PLANS (SHEETS 14-16) AND PLANTING SPECIFICATIONS (SHEET16). REMOVE FILTER LOGS, AND STABILIZED CONSTRUCTION ENTRANCE WHEN WETLAND MITIGATION AREAS AND ADJACENT SLOPES HAVE ACHIEVED AT LEAST APPROXIMATELY 65% STABILIZATION IN GRADED AREA.
16. AS-BUILT PLANS SHALL BE SUBMITTED WITHIN 60 DAYS OF THE COMPLETION OF THE MITIGATION PROJECT.

##### PHASE II (MITIGATION AREA 2) - TO BE CONSTRUCTED WITH SOUTHFIELDS PROPOSED BUILDING 3

17. ESTABLISH TRAFFIC SAFETY PROTOCOLS FOR WORK FROM FRENCHTOWN ROAD THROUGH PROPER "WORK AHEAD" SIGNAGE AND PROPER TRAFFIC FLAGGING PERSONNEL WHEN LARGE TRUCKS AND CONSTRUCTION EQUIPMENT ARE ENTERING AND LEAVING THE SITE. CHECK WITH THE CECIL COUNTY DEPARTMENT OF PUBLIC WORKS FOR ANY SPECIAL LOCAL REQUIREMENTS AND OBTAIN TEMPORARY ACCESS ROAD PERMITS AS REQUIRED.
18. ENTER THE MITIGATION AREA 2 PROJECT SITE FROM FRENCHTOWN ROAD. ESTABLISH THE STABILIZED CONSTRUCTION ENTRANCE, TEMPORARY STAGING AND STOCKPILE AREA, AND INSTALL FILTER LOGS AS SHOWN ON THE E&S PLANS. SHOULD THE ACCESS ROAD AND/OR THE PROPOSED MITIGATION AREA DIFFER OR NEED TO BE CHANGED AT THE TIME OF MITIGATION CONSTRUCTION, RELOCATION OF THE STABILIZED ROCK CONSTRUCTION ENTRANCE SHOULD BE CONSIDERED AS APPROPRIATE AND REPORTED TO THE CECIL COUNTY SOIL CONSERVATION DISTRICT.
19. REPEAT STEPS 3-9 WITHIN MITIGATION AREA 2.
20. RESTORE ALL EQUIPMENT TRACK OR TIRE RUTS TO ORIGINAL GRADES AND SEED AN MULCH DISTURBED SOILS ACCORDING TO THE E&S PLANS.
21. PLANT SHRUBS AND TREES IN ALL MITIGATION AREAS THE SPRING OR FALL FOLLOWING CONSTRUCTION WHERE INDICATED ON THE PLANTING PLANS (SHEETS 14-16) AND PLANTING SPECIFICATIONS (SHEET16). REMOVE FILTER LOGS, AND STABILIZED CONSTRUCTION ENTRANCE WHEN WETLAND MITIGATION AREAS AND ADJACENT SLOPES HAVE ACHIEVED AT LEAST APPROXIMATELY 65% STABILIZATION IN GRADED AREA.
22. AS-BUILT PLANS SHALL BE SUBMITTED WITHIN 60 DAYS OF THE COMPLETION OF THE MITIGATION PROJECT.

#### MITIGATION NARRATIVE

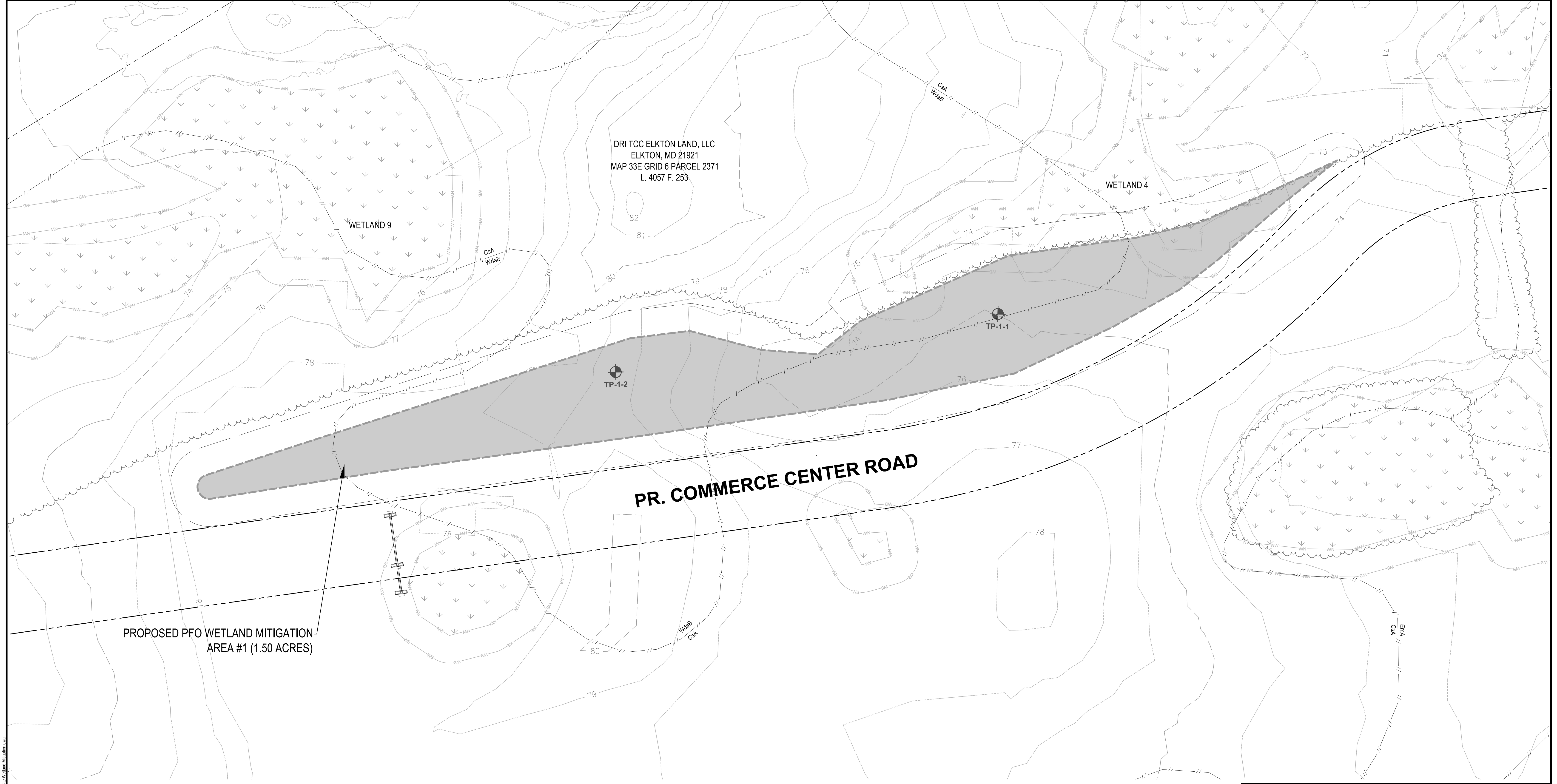
TO COMPENSATE FOR UNAVOIDABLE IMPACTS TO 1.91 ACRES OF PALUSTRINE FORESTED (PFO) WETLANDS AND 1.07 ACRES OF PALUSTRINE EMERGENT (PEM) WETLANDS ASSOCIATED WITH CONSTRUCTING THE LOGISTICS CENTER AT SOUTHFIELDS DEVELOPMENT, GEO-TECHNOLOGY ASSOCIATES, INC. PROPOSES TO CREATE APPROXIMATELY 3.75 ACRES OF PFO WETLANDS AT A 2:1 REPLACEMENT RATIO AND 1.07 ACRES OF PEM WETLANDS AT A 1:1 REPLACEMENT RATIO. OF THE 4.82 ACRES OF COMPENSATORY WETLAND MITIGATION NEEDED, APPROXIMATELY 3.14 ACRES OF PFO WETLANDS AND 0.38 ACRES OF PEM WETLANDS ARE PROPOSED TO BE CREATED ON THE SOUTHFIELDS PROJECT SITE. THE REMAINING 0.61 ACRES OF PFO WETLAND AND 0.69 ACRES PEM WETLAND WILL BE CREATED OFF-SITE AT THE J. EVANS MCKINNEY COMMEMORATIVE PARK - MITIGATION SITE. REFER TO THE PHASE II OFF-SITE WETLAND PLAN FOR DETAILED PLANS OF THE J. EVANS MCKINNEY COMMEMORATIVE PARK PHASE II WETLAND MITIGATION PLAN.

THE PROPOSED ON-SITE WETLAND CREATION AREAS WILL BE CONSTRUCTED WITHIN FORMER AGRICULTURAL LAND THAT IS IN THE VICINITY OF EXISTING PFO AND PEM WETLANDS. THE WETLAND CREATION AREAS WILL UTILIZE SHALLOW GROUNDWATER TO PROVIDE HYDROLOGY TO THE PROPOSED WETLANDS AT TARGETED GRADING DEPTHS. TARGETED GRADING DEPTHS ARE BASED ON EXISTING SOIL AND GROUNDWATER CONDITIONS OBSERVED DURING TEST PIT INVESTIGATIONS COMPLETED IN JUNE 2021. PFO WETLAND CREATION AREAS WILL BE PLANTED WITH NATIVE TREES AND SHRUBS. PEM WETLAND CREATION AREAS WILL BE PLANTED WITH NATIVE HERBACEOUS WETLAND SPECIES. DEADFALL SNAGS AND STUMPS WILL BE ADDED TO EACH WETLAND MITIGATION AREA TO ENHANCE WILDLIFE HABITAT.

WETLAND MITIGATION CONSTRUCTION IS ESTIMATED TO TAKE APPROXIMATELY SIX (6) WEEKS WITH SUBSEQUENT PLANTINGS REQUIRING TWO (2) WEEKS. DEPENDING ON THE FINAL CONSTRUCTION SCHEDULE, WOODY PLANTINGS WILL EITHER BE INSTALLED IN LATE-SEPTEMBER/OCTOBER OR LATE-MARCH/APRIL FOLLOWING COMPLETION OF WETLAND MITIGATION CONSTRUCTION.

|             |           |                                                                                                                                                                                                                                                                |                   |
|-------------|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
|             |           | <b>GEO-TECHNOLOGY ASSOCIATES, INC.</b><br>GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS<br><br>3445-A BOX HILL CORPORATE CENTER DRIVE<br>ABINGDON, MARYLAND 21009<br>410-515-9446<br>FAX: 410-515-4895<br>WWW.GTAENG.COM<br><br>© GEO-TECHNOLOGY ASSOCIATES, INC. |                   |
| COVER SHEET |           | LOGISTICS CENTER AT SOUTHFIELDS<br>PHASE II WETLAND MITIGATION PLAN<br><br>TOWN OF ELKTON, CECIL COUNTY, MARYLAND                                                                                                                                              |                   |
| DATE        | REVISIONS | JOB NO:                                                                                                                                                                                                                                                        | 31190945X3        |
|             |           | SCALE:                                                                                                                                                                                                                                                         | 1"=300'           |
|             |           | DATE:                                                                                                                                                                                                                                                          | FEBRUARY 23, 2022 |
|             |           | DRAWN BY:                                                                                                                                                                                                                                                      | KRM               |
|             |           | DESIGN BY:                                                                                                                                                                                                                                                     | KRM/DPS           |
|             |           | REVIEW BY:                                                                                                                                                                                                                                                     | DPS/TAS           |
|             |           | SHEET:                                                                                                                                                                                                                                                         | 1 OF 17           |





LEGEND

- EX. PROPERTY LINE
- EX. 2-FOOT CONTOUR
- EX. 10-FOOT CONTOUR
- EX. TREELINE
- LIMITS OF INTERMITTENT STREAM
- EX. WETLAND BUFFER
- EX. NONTIDAL WETLAND
- EX. SOIL BOUNDARY
- SOIL TEST PIT LOCATION
- PR. WETLAND MITIGATION BOUNDARY
- PR. 25' WETLAND MITIGATION BUFFER
- PR. ROAD RIGHT-OF-WAY (BY OTHERS)

SOILS TABLE

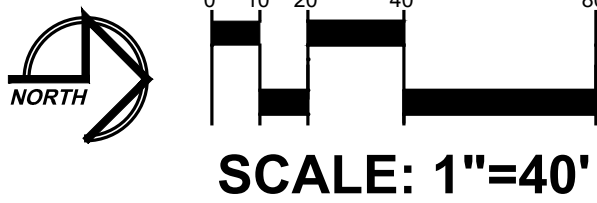
| SYMBOL | NAME/DESCRIPTION                                                    | HYDRIC SOIL | HYDRIC COMPONENT       | PERCENTAGE OF MAPPING UNIT | POSITION IN LANDSCAPE                    |
|--------|---------------------------------------------------------------------|-------------|------------------------|----------------------------|------------------------------------------|
| CsA    | CROSIADORE SILT LOAM, 0 TO 2 PERCENT SLOPES                         | YES         | KENTUCK                | 5                          | DEPRESSIONS                              |
|        |                                                                     |             | ELKTON                 | 5                          | DEPRESSIONS, FLATS, SWALES               |
|        |                                                                     |             | OTHELLO                | 5                          | DRAINAGEWAYS, DEPRESSIONS, FLATS, SWALES |
| WdaB   | WOODSTOWN SANDY LOAM, 2 TO 5 PERCENT SLOPES, NORTHERN COASTAL PLAIN | YES         | ZEKIAH                 | 75                         | FLOOD PLAINS                             |
|        |                                                                     |             | LONGMARSH              | 10                         | FLOOD PLAINS                             |
|        |                                                                     |             | ASKECKSY, UNDRAINED    | 5                          | FLATS, DRAINAGEWAYS, DEPRESSIONS, SWALES |
|        |                                                                     |             | FALLSINGTON, UNDRAINED | 5                          | SWALES, DRAINAGEWAYS, DEPRESSIONS, FLATS |

1. UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCE CONSERVATION SERVICE, CECIL COUNTY, MARYLAND SOIL SURVEY DATA VERSION 18, DATED JUNE 11, 2020.  
2. UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCE CONSERVATION SERVICE, HYDRIC SOILS LIST BY STATE, AVAILABLE AT <HTTPS://WWW.NRCS.USDA.GOV/INTERNET/FS\_DOCUMENTS/NRCSERPD1316618/HTML/REPORTREF>, AND ACCESSED ON AUGUST 17, 2021.

SOIL TEST PIT PROFILES

| TEST PIT # | DEPTH (INCHES) | COLOR    | REDOX     | TEXTURE        | NOTES                       |
|------------|----------------|----------|-----------|----------------|-----------------------------|
| TP-1-1     | 0-9            | 10YR 5/3 | -         | SILT LOAM      | GROUNDWATER OBSERVED AT 40" |
|            | 9-18           | 10YR 5/6 | 10YR 6/4  | CLAY SILT LOAM |                             |
|            | 18-50+         | 10YR 6/1 | 7.5YR 4/6 | SANDY LOAM     |                             |
| TP-1-2     | 0-9            | 10YR 5/3 | -         | SILT LOAM      | GROUNDWATER OBSERVED AT 61" |
|            | 9-19           | 10YR 4/4 | -         | CLAYEY LOAM    |                             |
|            | 19-62+         | 10YR 4/6 | 10YR 5/4  | SANDY LOAM     |                             |

NOTES:  
TEST PITS EXCAVATED AND CHARACTERIZED BY GTA ON JUNE 9, 2021.

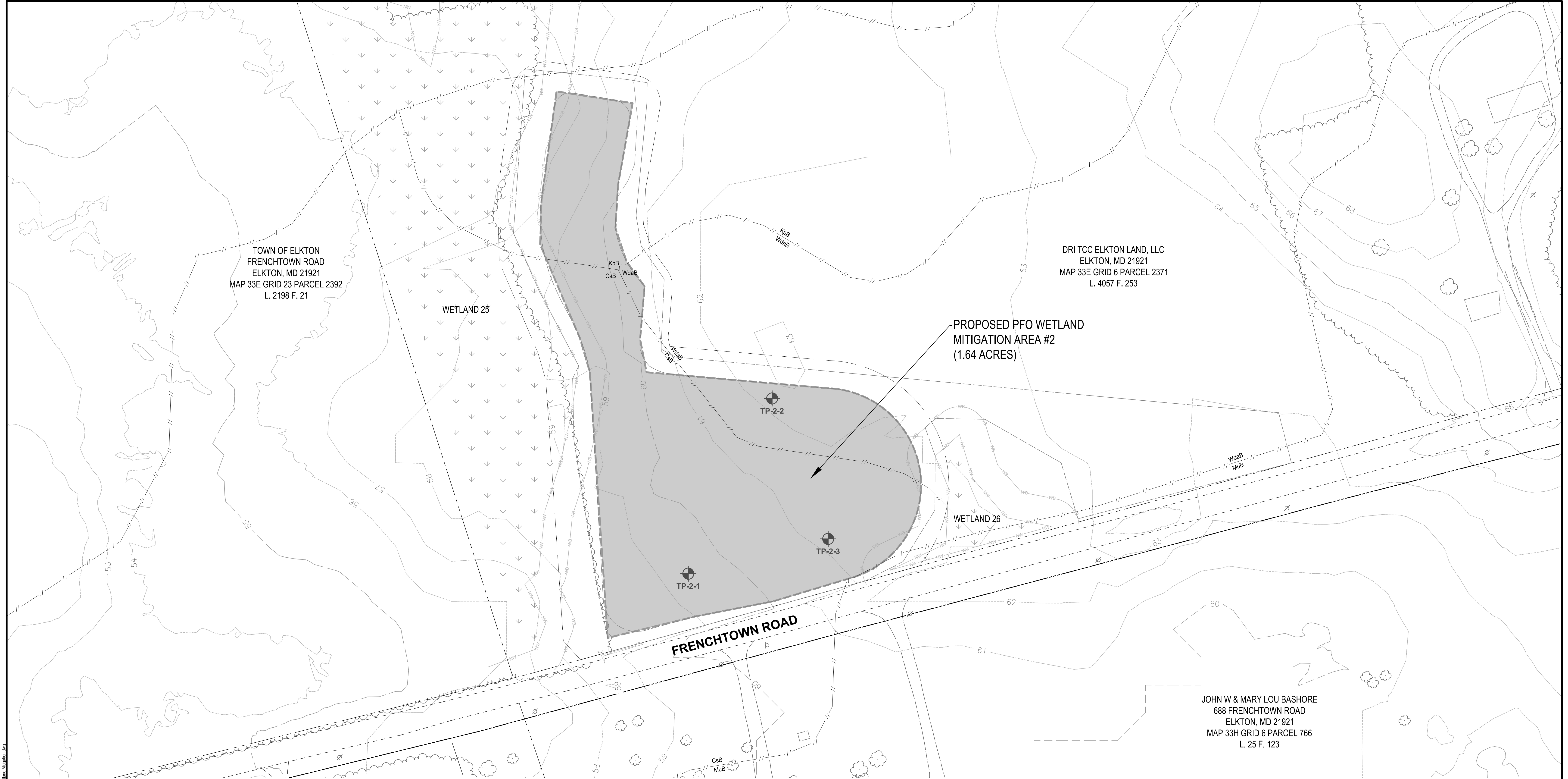


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GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS  
3445-A BOX HILL CORPORATE CENTER DRIVE  
ABINGDON, MARYLAND 21009  
410-515-9446  
FAX: 410-515-4895  
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EXISTING CONDITIONS  
WETLAND MITIGATION AREA 1  
**LOGISTICS CENTER AT SOUTHFIELDS  
PHASE II WETLAND MITIGATION PLAN**  
TOWN OF ELKTON, CECIL COUNTY, MARYLAND

| DATE | REVISIONS | JOB NO:    | 31190945X3        |
|------|-----------|------------|-------------------|
|      |           | SCALE:     | 1"=40'            |
|      |           | DATE:      | FEBRUARY 23, 2022 |
|      |           | DRAWN BY:  | KRM               |
|      |           | DESIGN BY: | KRM/DPS           |
|      |           | REVIEW BY: | DPS/TAS           |
|      |           | SHEET:     | 2 OF 17           |





LEGEND

- EX. PROPERTY LINE
- EX. 2-FOOT CONTOUR
- EX. 10-FOOT CONTOUR
- EX. TREELINE
- LIMITS OF INTERMITTENT STREAM
- EX. WETLAND BUFFER
- EX. NONTIDAL WETLAND
- EX. SOIL BOUNDARY
- EX. ROAD
- EX. DRIVEWAY
- EX. ROAD RIGHT-OF-WAY
- SOIL TEST PIT LOCATION
- EX. BUILDING
- PR. WETLAND MITIGATION BOUNDARY
- PR. WETLAND MITIGATION BUFFER (VARIABLE WIDTH)

SOILS TABLE

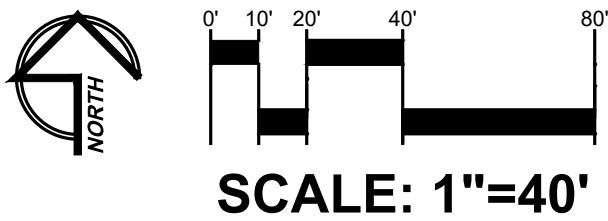
| SYMBOL | NAME/DESCRIPTION                                                    | HYDRIC SOIL | HYDRIC COMPONENT       | PERCENTAGE OF MAPPING UNIT | POSITION IN LANDSCAPE                    |
|--------|---------------------------------------------------------------------|-------------|------------------------|----------------------------|------------------------------------------|
| CsB    | CROSIADORE SILT LOAM, 2 TO 5 PERCENT SLOPES                         | YES         | OTHELLO                | 5                          | SWALES, DRAINAGEWAYS, DEPRESSIONS, FLATS |
| KpB    | KEYPORT SILT LOAM, 2 TO 5 PERCENT SLOPES                            | YES         | LENNI                  | 3                          | FLATS, DEPRESSIONS, DRAINAGEWAYS, SWALES |
|        |                                                                     |             | ELKTON                 | 2                          | DEPRESSIONS, FLATS                       |
| MuB    | MATTAPEX-URBAN LAND COMPLEX, 0 TO 5 PERCENT SLOPES                  | NO          | -                      | -                          | -                                        |
| WqB    | WOODSTOWN SANDY LOAM, 2 TO 5 PERCENT SLOPES, NORTHERN COASTAL PLAIN | YES         | ZEKIAH                 | 75                         | FLOOD PLAINS                             |
|        |                                                                     |             | LONGMARSH              | 10                         | FLOOD PLAINS                             |
|        |                                                                     |             | ASKECKSY, UNDRAINED    | 5                          | FLATS, DRAINAGEWAYS, DEPRESSIONS, SWALES |
|        |                                                                     |             | FALLSINGTON, UNDRAINED | 5                          | SWALES, DRAINAGEWAYS, DEPRESSIONS, FLATS |


1. UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCE CONSERVATION SERVICE, CECIL COUNTY, MARYLAND SOIL SURVEY DATA VERSION 18, DATED JUNE 11, 2020.  
2. UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCE CONSERVATION SERVICE, HYDRIC SOILS LIST BY STATE, AVAILABLE AT <HTTPS://WWW.NRCS.USDA.GOV/INTERNET/FSSE\_DOCUMENTS/NRCSSEPRD13166191HTMLR/REPORTREF>, AND ACCESSED ON AUGUST 17, 2021.

SOIL TEST PIT PROFILES

| TEST PIT # | DEPTH (INCHES) | COLOR     | REDOX    | TEXTURE     | NOTES                       |
|------------|----------------|-----------|----------|-------------|-----------------------------|
| TP-2-1     | 0-10           | 10YR 4/3  | -        | SILT LOAM   | GROUNDWATER OBSERVED AT 50" |
|            | 10-28          | 10YR 6/1  | 10YR 6/8 | CLAYEY LOAM |                             |
|            | 28-60          | 10YR 5/6  | 10YR 6/1 | SANDY LOAM  |                             |
| TP-2-2     | 0-9            | 10YR 4/3  | -        | SILT LOAM   | GROUNDWATER OBSERVED AT 50" |
|            | 9-29           | 10YR 5/1  | 10YR 5/8 | CLAY LOAM   |                             |
|            | 29-60          | 10YR 5/8  | 10YR 6/1 | SANDY LOAM  |                             |
| TP-2-3     | 0-7            | 10YR 5/3  | -        | SILT LOAM   | GROUNDWATER OBSERVED AT 48" |
|            | 7-38           | 10YR 6/1  | 10YR 5/8 | CLAY LOAM   |                             |
|            | 38-60          | 7.5YR 4/4 | 10YR 6/1 | SANDY LOAM  |                             |

NOTES:  
TEST PITS EXCAVATED AND CHARACTERIZED BY GTA ON JUNE 9, 2021.





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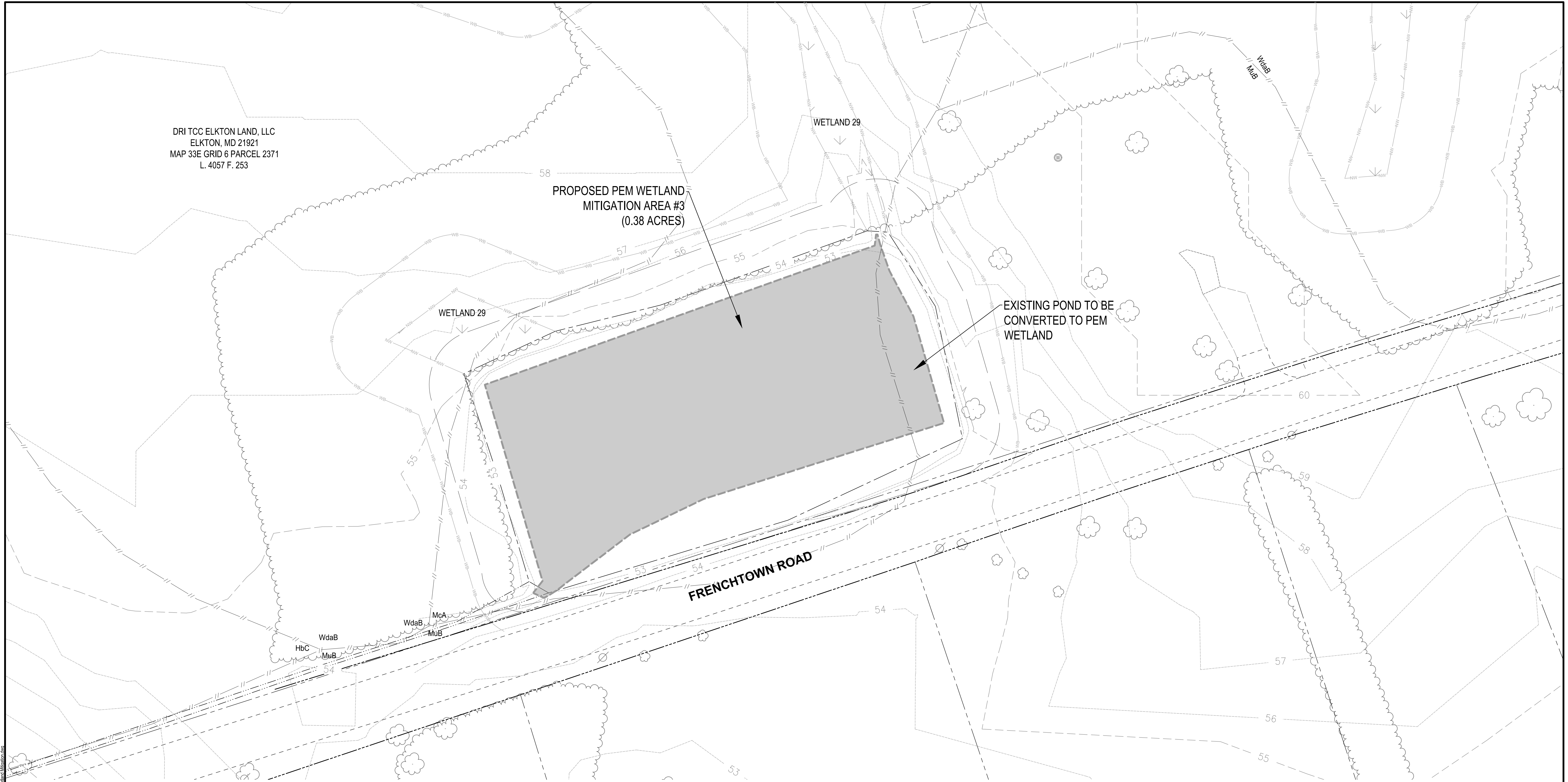
EXISTING CONDITIONS  
WETLAND MITIGATION AREA 2

LOGISTICS CENTER AT SOUTHFIELDS  
PHASE II WETLAND MITIGATION PLAN

TOWN OF ELKTON, CECIL COUNTY, MARYLAND

| DATE | REVISIONS | JOB NO:    | 31190945X3        |
|------|-----------|------------|-------------------|
|      |           | SCALE:     | 1"=30'            |
|      |           | DATE:      | FEBRUARY 23, 2022 |
|      |           | DRAWN BY:  | KRM               |
|      |           | DESIGN BY: | KRM/DPS           |
|      |           | REVIEW BY: | DPS/TAS           |
|      |           | SHEET:     | 3 OF 17           |





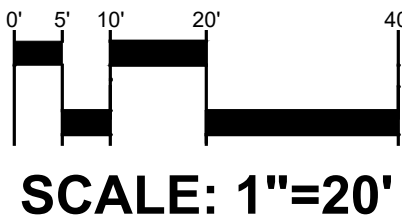
\\s:\land\proj\elkton\190945x3 - Logistics Center at Southfields - Ballroom 2 and 3\WET\Drawings\190945x3 Phase I Co-Site Wetland Mitigation.dwg

LEGEND

- EX. PROPERTY LINE
- EX. 2-FOOT CONTOUR
- EX. 10-FOOT CONTOUR
- EX. TREELINE
- LIMITS OF INTERMITTENT STREAM
- EX. EDGE OF POND
- EX. WETLAND BUFFER
- EX. NONTIDAL WETLAND
- EX. SOIL BOUNDARY
- EX. ROAD
- EX. DRIVEWAY
- EX. ROAD RIGHT-OF-WAY
- SOIL TEST PIT LOCATION
- PR. WETLAND MITIGATION BOUNDARY
- PR. 25' WETLAND MITIGATION BUFFER

SOILS TABLE

| SYMBOL | NAME/DESCRIPTION                                                    | HYDRIC SOIL | HYDRIC COMPONENT       | PERCENTAGE OF MAPPING UNIT | POSITION IN LANDSCAPE                    |
|--------|---------------------------------------------------------------------|-------------|------------------------|----------------------------|------------------------------------------|
| McA    | MARSHYHOPE LOAM, 0 TO 2 PERCENT SLOPES                              | YES         | FALLSINGTON            | 5                          | FLATS                                    |
| MuB    | MATTAPEX-URBAN LAND COMPLEX, 0 TO 5 PERCENT SLOPES                  | NO          | -                      | -                          | -                                        |
| WdaB   | WOODSTOWN SANDY LOAM, 2 TO 5 PERCENT SLOPES, NORTHERN COASTAL PLAIN | YES         | ZEKIAH                 | 75                         | FLOOD PLAINS                             |
|        |                                                                     |             | LONGMARSH              | 10                         | FLOOD PLAINS                             |
|        |                                                                     |             | ASKECKSY, UNDRAINED    | 5                          | FLATS, DRAINAGEWAYS, DEPRESSIONS, SWALES |
|        |                                                                     |             | FALLSINGTON, UNDRAINED | 5                          | SWALES, DRAINAGEWAYS, DEPRSSIONS, FLATS  |



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3445-A BOX HILL CORPORATE CENTER DRIVE  
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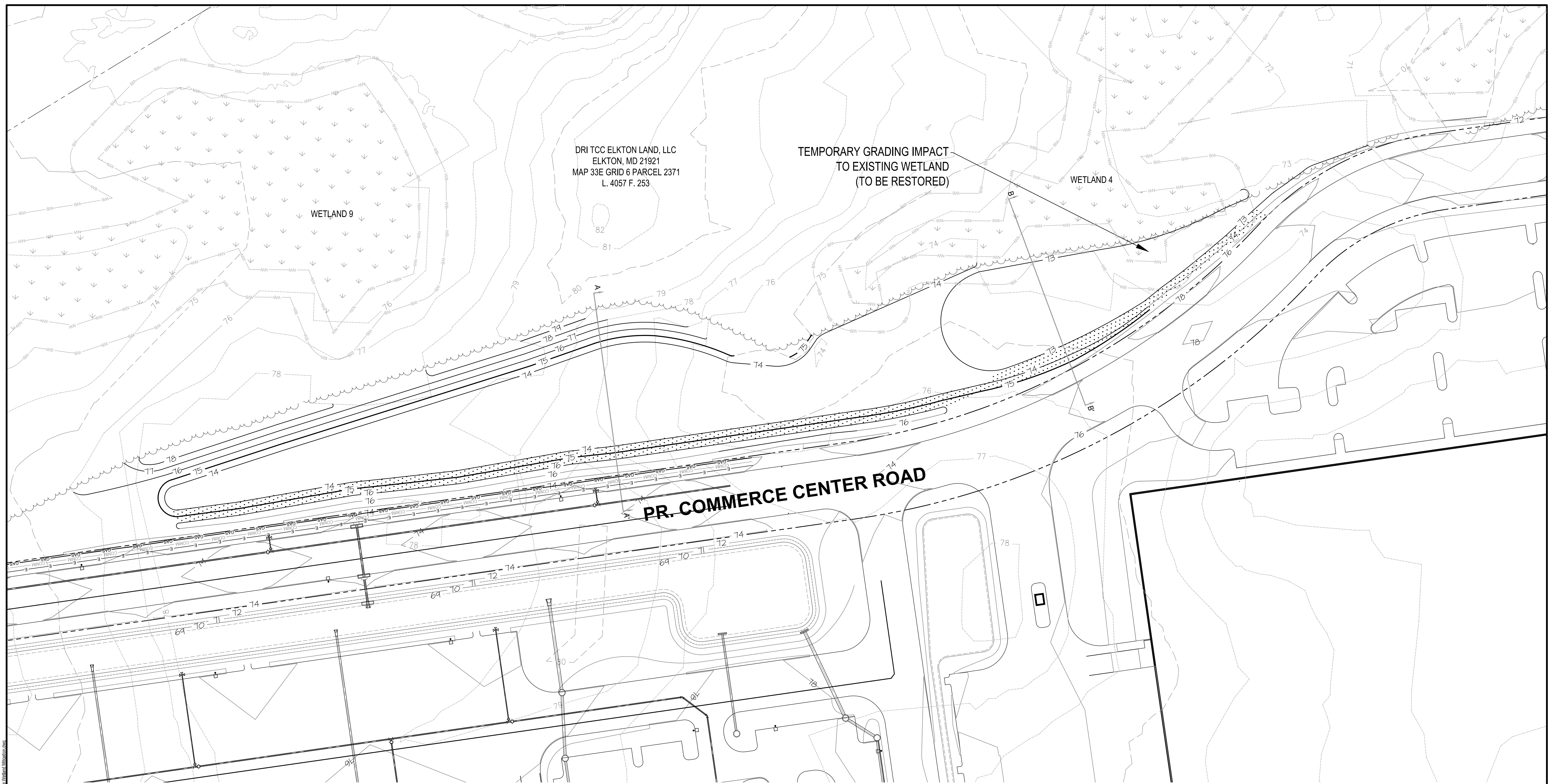
EXISTING CONDITIONS  
WETLAND MITIGATION AREA 3

LOGISTICS CENTER AT SOUTHFIELDS  
PHASE II WETLAND MITIGATION PLAN

TOWN OF ELKTON, CECIL COUNTY, MARYLAND

| DATE | REVISIONS | JOB NO:    | 31190945X3        |
|------|-----------|------------|-------------------|
|      |           | SCALE:     | 1"=20'            |
|      |           | DATE:      | FEBRUARY 23, 2022 |
|      |           | DRAWN BY:  | KRM               |
|      |           | DESIGN BY: | KRM/DPS           |
|      |           | REVIEW BY: | DPS/TAS           |
|      |           | SHEET:     | 4 OF 17           |

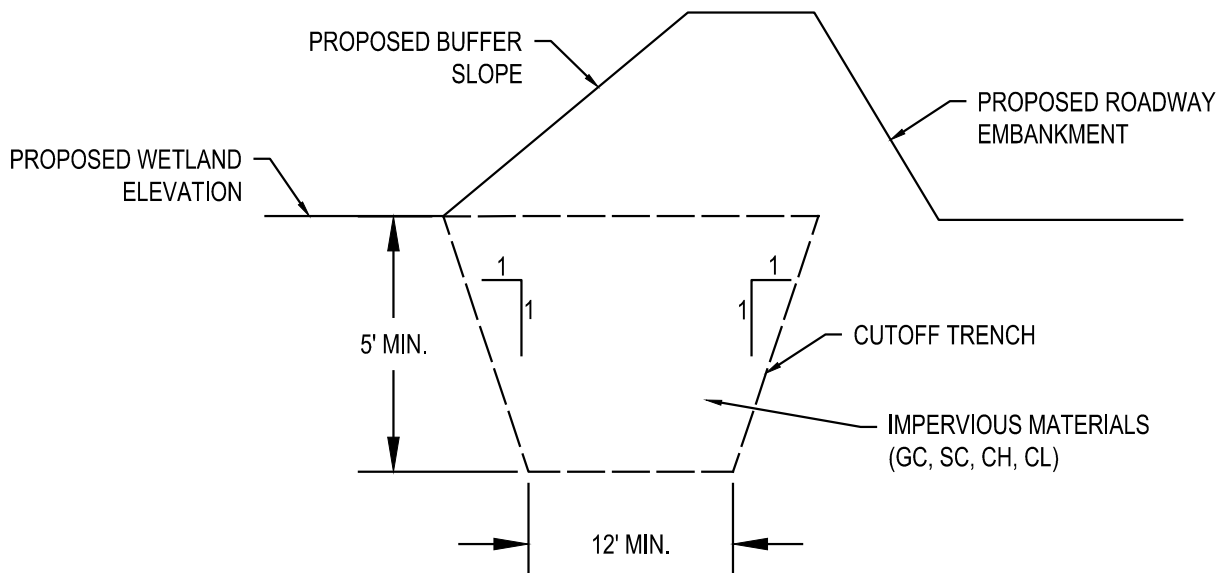




LEGEND

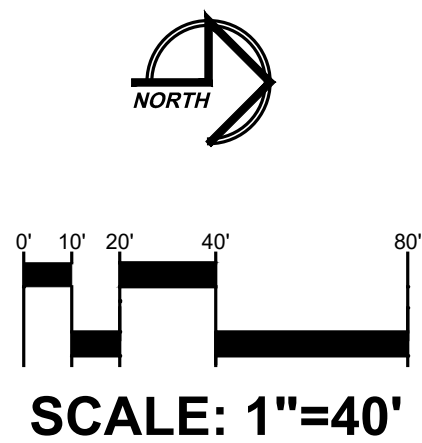
|  |                               |  |                                                    |
|--|-------------------------------|--|----------------------------------------------------|
|  | EX. PROPERTY LINE             |  | PR. ROAD RIGHT-OF-WAY (BY OTHERS)                  |
|  | EX. 2-FOOT CONTOUR            |  | PR. 0.5-FOOT CONTOUR (BY OTHERS)                   |
|  | EX. 10-FOOT CONTOUR           |  | PR. 2-FOOT CONTOUR (BY OTHERS)                     |
|  | EX. TREELINE                  |  | PR. 10-FOOT CONTOUR (BY OTHERS)                    |
|  | LIMITS OF INTERMITTENT STREAM |  | PR. STORMWATER PONDING ELEVATION (BY OTHERS)       |
|  | EX. WETLAND BUFFER            |  | PR. EDGE OF PAVEMENT (BY OTHERS)                   |
|  | EX. NONTIDAL WETLAND          |  | PR. BUILDING (BY OTHERS)                           |
|  | PR. 1-FOOT CONTOUR            |  | PR. UNDERGROUND GAS UTILITY LINE (BY OTHERS)       |
|  | PR. 5-FOOT CONTOUR            |  | PR. UNDERGROUND TELECOMMUNICATION LINE (BY OTHERS) |
|  | CROSS SECTION (SEE SHEET 8)   |  | PR. UNDERGROUND ELECTRIC LINE (BY OTHERS)          |
|  |                               |  | PR. CUTOFF TRENCH                                  |

CUTOFF TRENCH  
N.T.S.



NOTES:

- THE CUTOFF TRENCH SHALL BE EXCAVATED PARALLEL TO THE TOE OF THE PROPOSED BUFFER SLOPE AS SHOWN ON THE PLANS. THE DEPTH SHALL EXTEND FROM THE PROPOSED WETLAND ELEVATION DOWN TO 69'.
- IMPERVIOUS FILL MATERIAL FOR THE CUTOFF TRENCH SHALL CONFORM TO UNIFIED SOIL CLASSIFICATION CLAYEY GRAVELS (GC), CLAYEY SANDS (SC), INORGANIC CLAYS WITH HIGH PLASTICITY (CH), OR INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY (CL) AND MUST HAVE AT LEAST 30% PASSING THE #200 SIEVE. IMPERVIOUS FILL MATERIAL SHALL BE FREE OF ROOTS, STUMPS, WOOD, RUBBISH, STONES GREATER THAN 6", FROZEN, OR OTHER OBJECTIONABLE MATERIALS.
- IMPERVIOUS MATERIALS SHALL BE COMPACTED WITH CONSTRUCTION EQUIPMENT, ROLLERS, OR HAND TAMPERS TO ASSURE MAXIMUM DENSITY AND MINIMUM PERMEABILITY.



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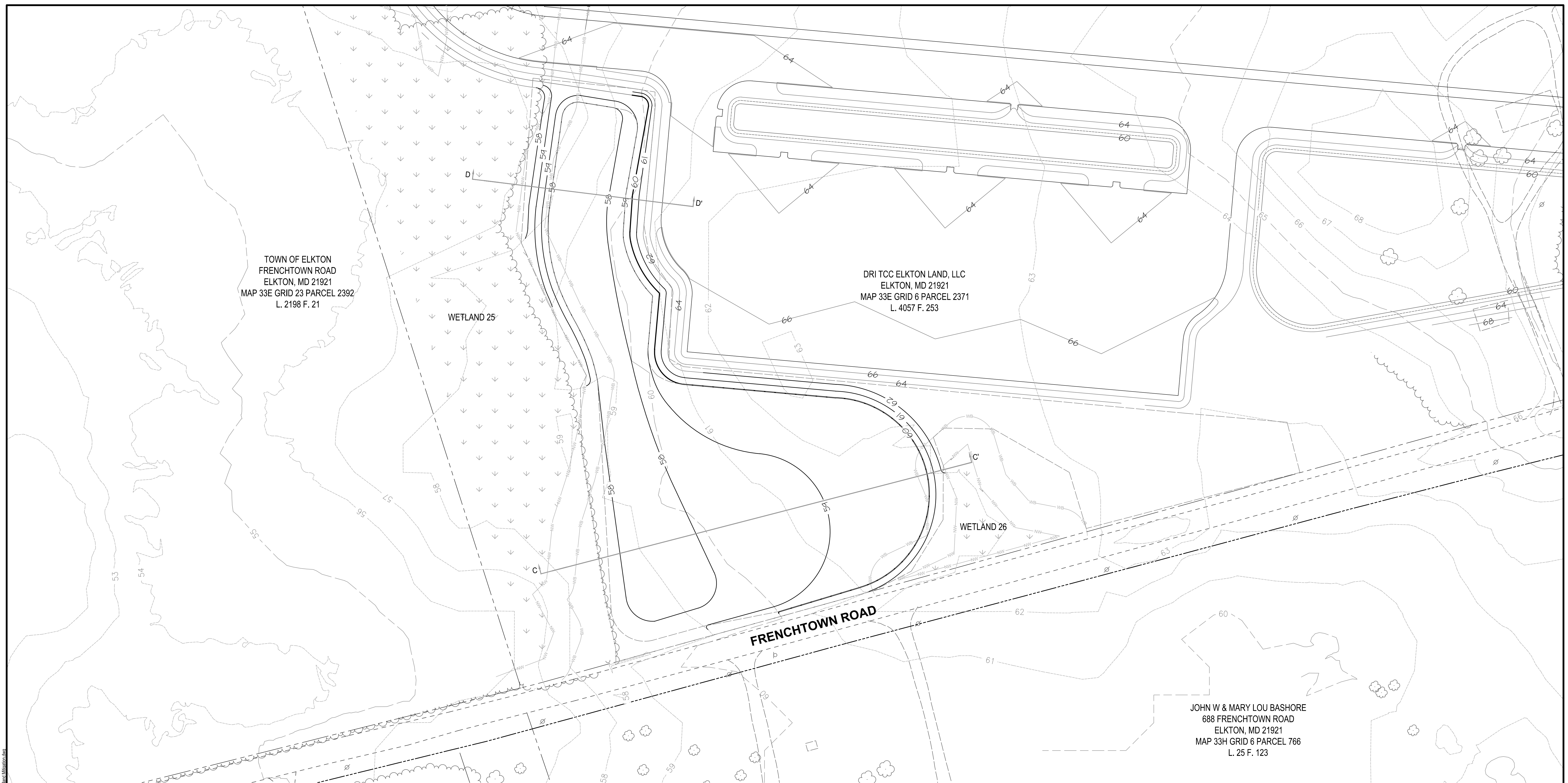
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GRADING PLAN  
WETLAND MITIGATION AREA 1  
LOGISTICS CENTER AT SOUTHFIELDS  
PHASE II WETLAND MITIGATION PLAN

TOWN OF ELKTON, CECIL COUNTY, MARYLAND

| DATE | REVISIONS | JOB NO:    | 31190945X3        |
|------|-----------|------------|-------------------|
|      |           | SCALE:     | 1"=40'            |
|      |           | DATE:      | FEBRUARY 23, 2022 |
|      |           | DRAWN BY:  | KRM               |
|      |           | DESIGN BY: | KRM/DPS           |
|      |           | REVIEW BY: | DPS/TAS           |
|      |           | SHEET:     | 5 OF 17           |





## LEGEND



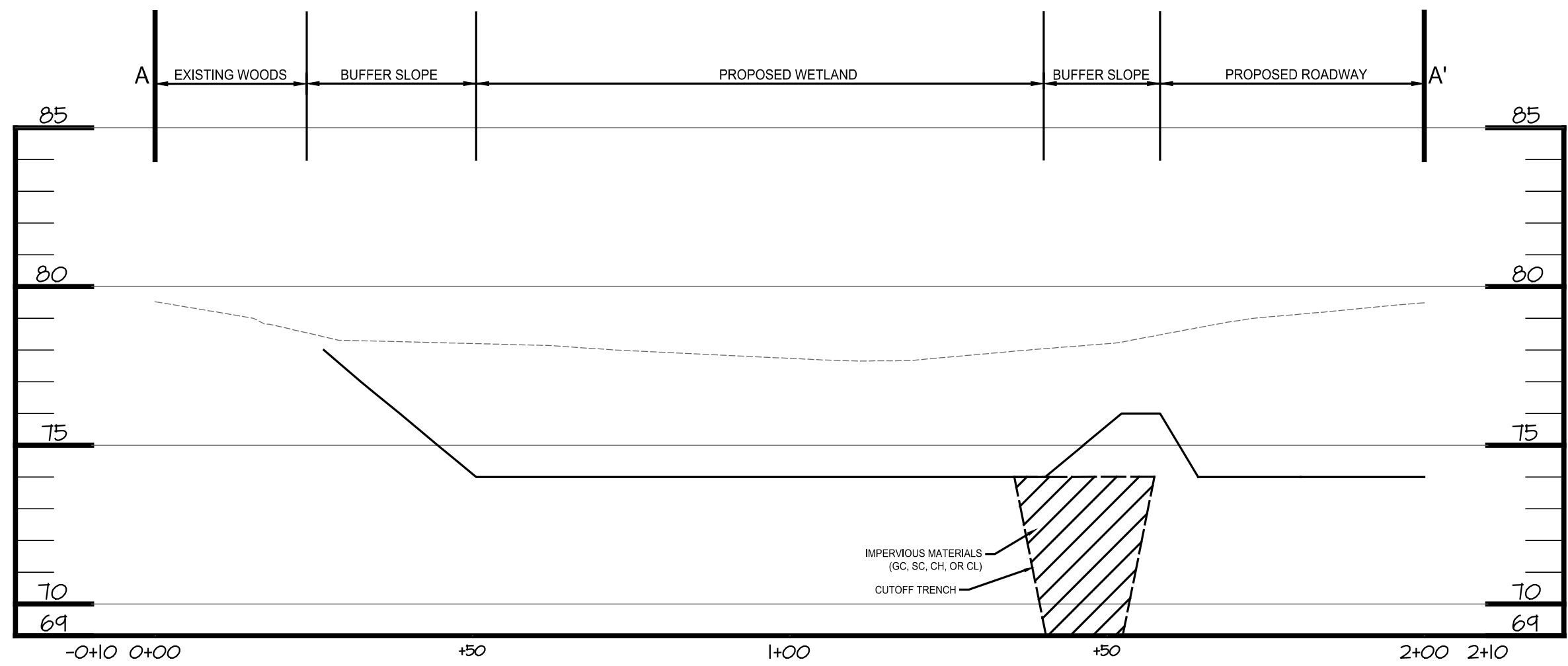
GRADING PLAN  
WETLAND MITIGATION AREA 2

LOGISTICS CENTER AT SOUTHFIELDS  
PHASE II WETLAND MITIGATION PLAN

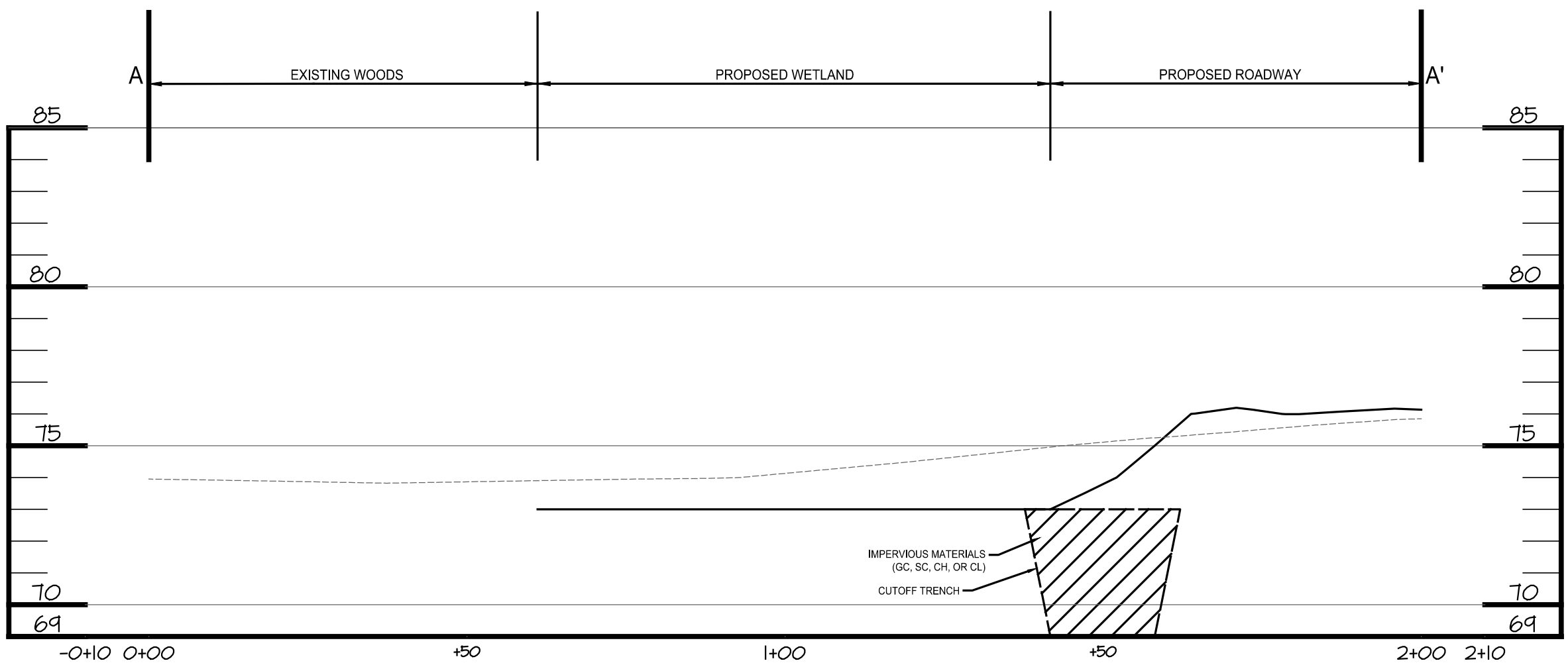
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|------|-----------|-------------------------|
| DATE | REVISIONS | JOB NO: 31190945X3      |
|      |           | SCALE: 1"=40'           |
|      |           | DATE: FEBRUARY 23, 2022 |
|      |           | DRAWN BY: KRM           |
|      |           | DESIGN BY: KRM/DPS      |
|      |           | REVIEW BY: DPS/TAS      |
|      |           | SHEET: 6 OF 17          |



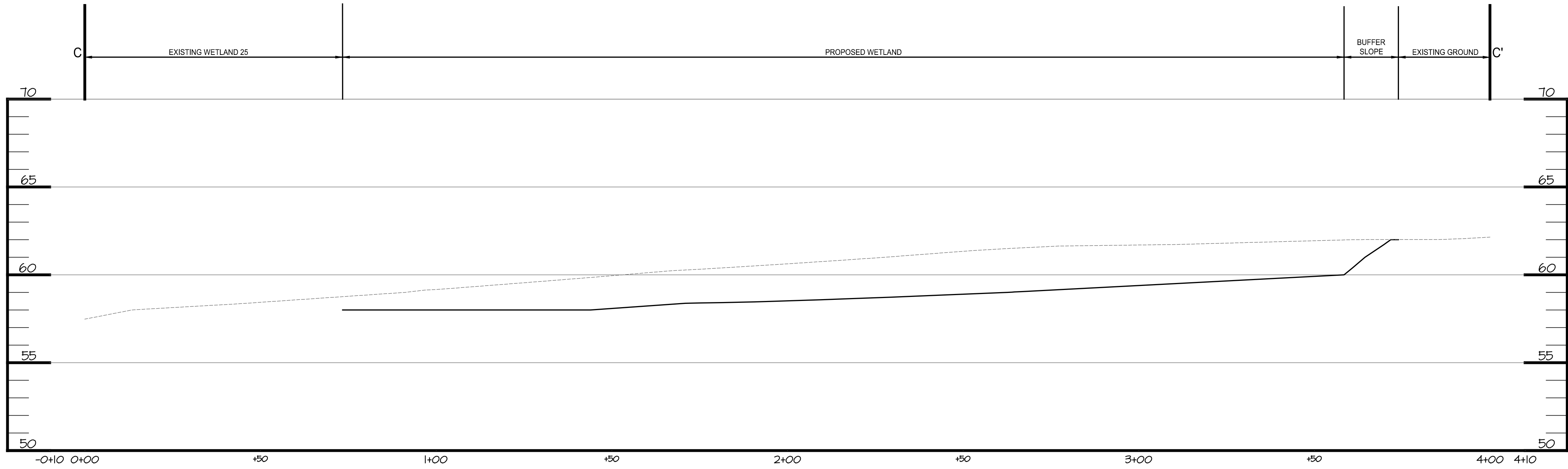




**CROSS SECTION A-A'**  
SCALE: H: 1"=20'  
V: 1"=4'



**CROSS SECTION B-B'**  
SCALE: H: 1"=20'  
V: 1"=4'



**CROSS SECTION C-C'**  
SCALE: H: 1"=20'  
V: 1"=4'

**LEGEND**

- PROPOSED GRADE  
- - - EXISTING GRADE



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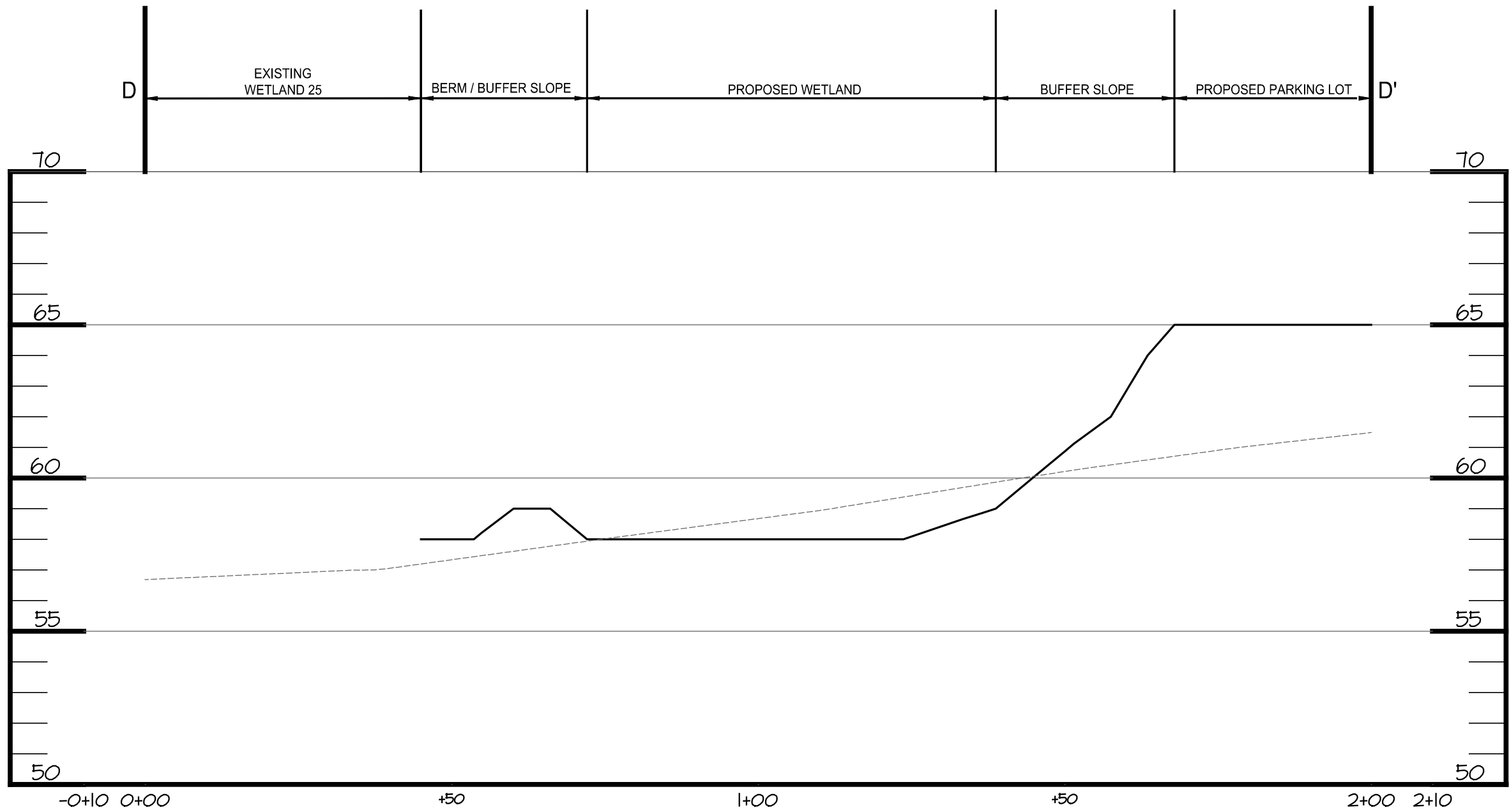
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**CROSS SECTIONS**

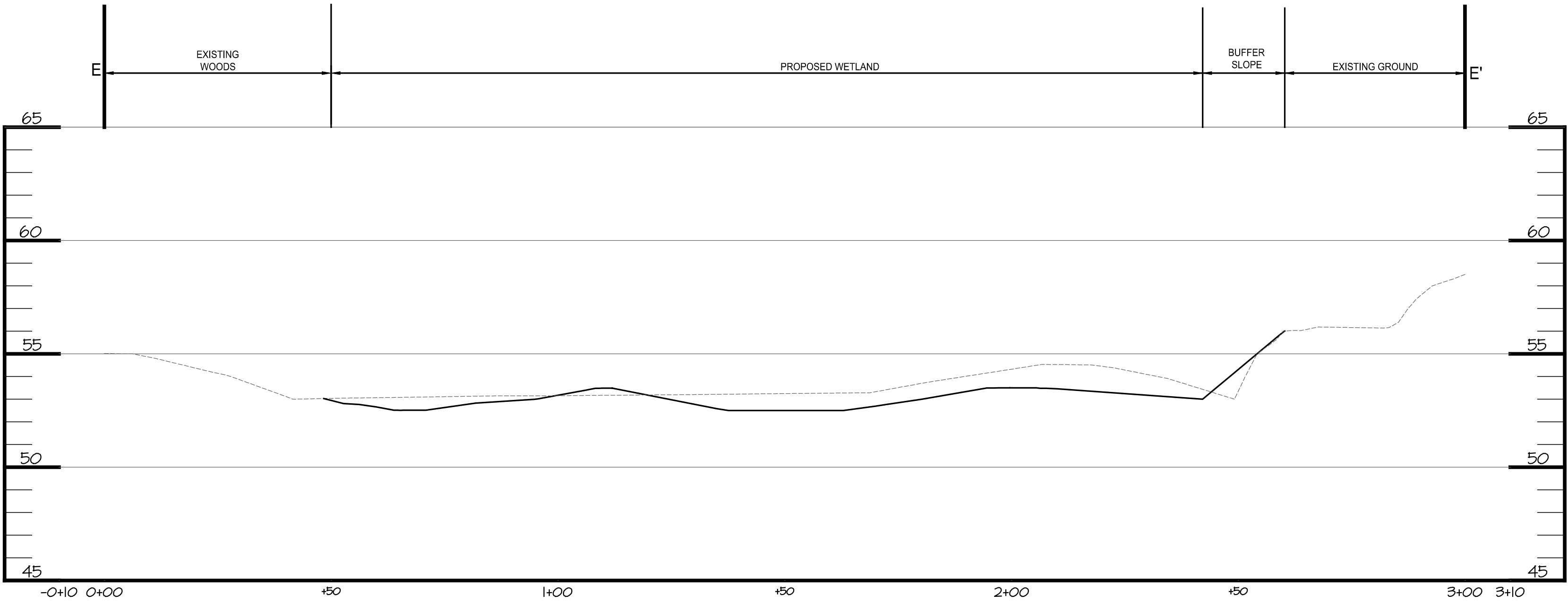
**LOGISTICS CENTER AT SOUTHFIELDS  
PHASE II WETLAND MITIGATION PLAN**

TOWN OF ELKTON, CECIL COUNTY, MARYLAND

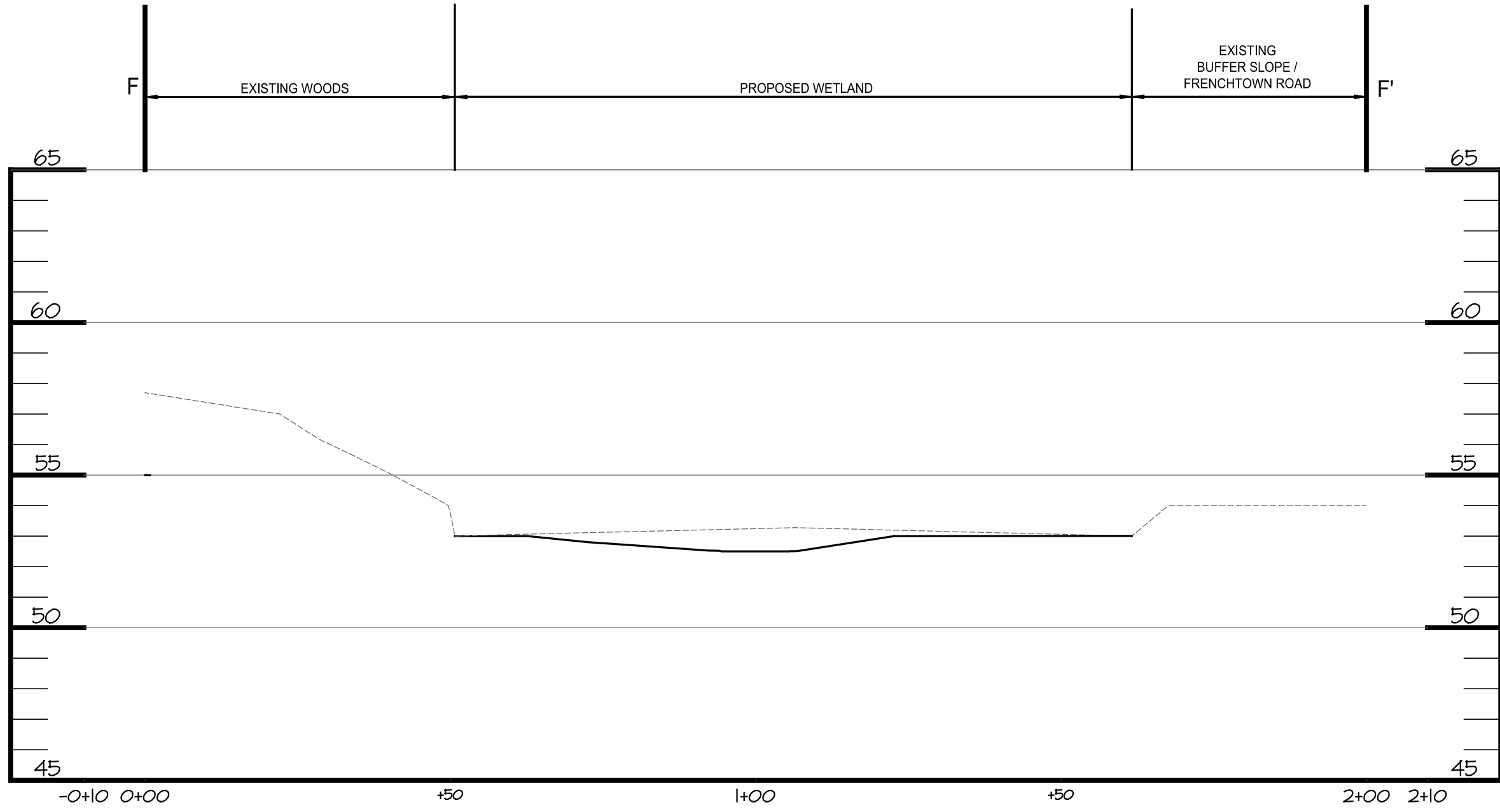
| DATE | REVISIONS | JOB NO:    | 31190945X3        |
|------|-----------|------------|-------------------|
|      |           | SCALE:     | AS SHOWN          |
|      |           | DATE:      | FEBRUARY 23, 2022 |
|      |           | DRAWN BY:  | KRM               |
|      |           | DESIGN BY: | KRM/DPS           |
|      |           | REVIEW BY: | DPS/TAS           |
|      |           | SHEET:     | 8 OF 17           |



**CROSS SECTION D-D'**  
SCALE: H: 1"=20'  
V: 1"=4'




**CROSS SECTION E-E'**  
SCALE: H: 1"=20'  
V: 1"=4'



**CROSS SECTION F-F'**  
SCALE: H: 1"=20'  
V: 1"=4'

**LEGEND**

- PROPOSED GRADE
- EXISTING GRADE



**GEO-TECHNOLOGY ASSOCIATES, INC.**  
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

3445-A BOX HILL CORPORATE CENTER DRIVE  
ABINGDON, MARYLAND 21009  
410-515-9446  
FAX: 410-515-4895  
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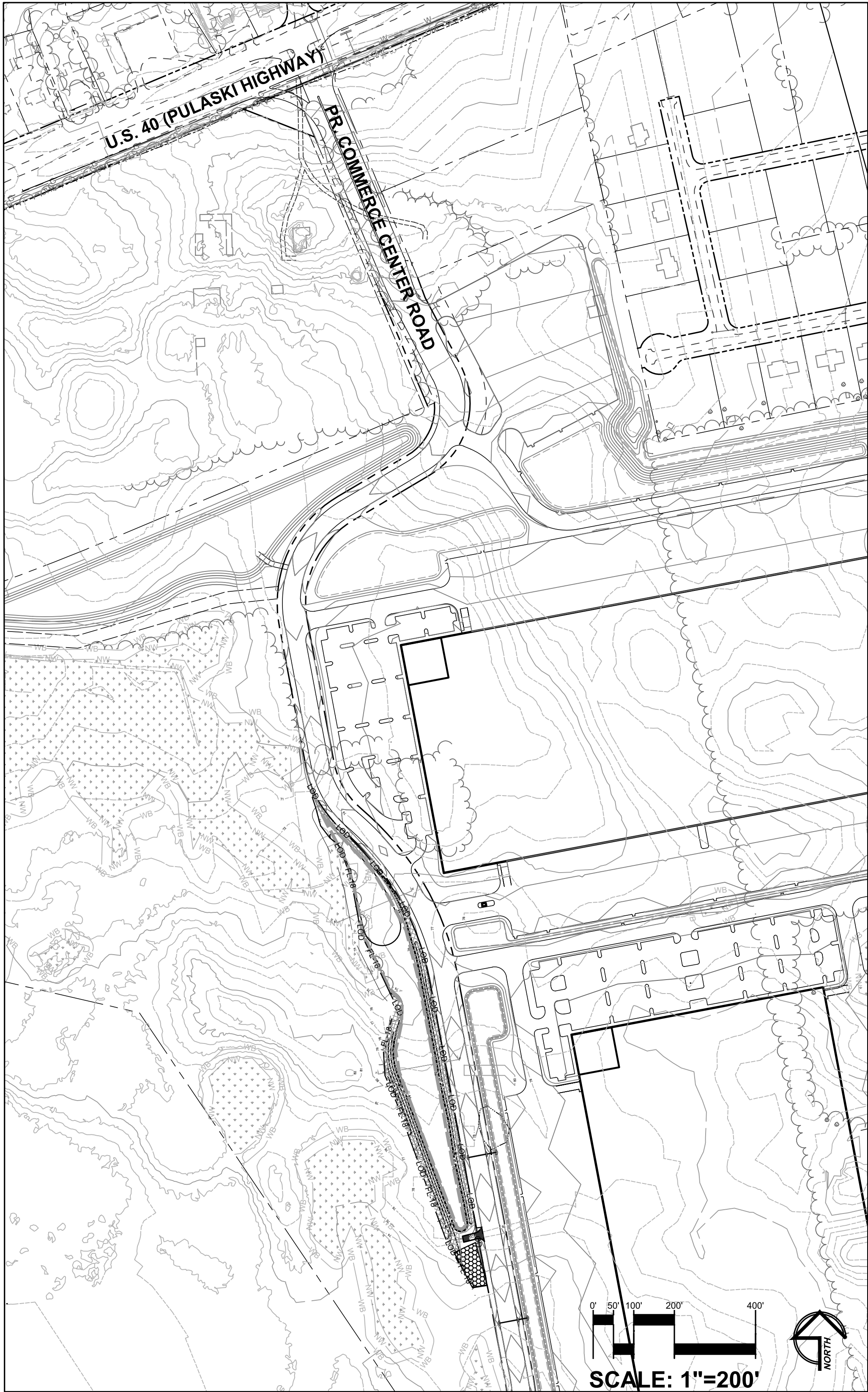
CROSS SECTIONS

**LOGISTICS CENTER AT SOUTHFIELDS  
PHASE II WETLAND MITIGATION PLAN**

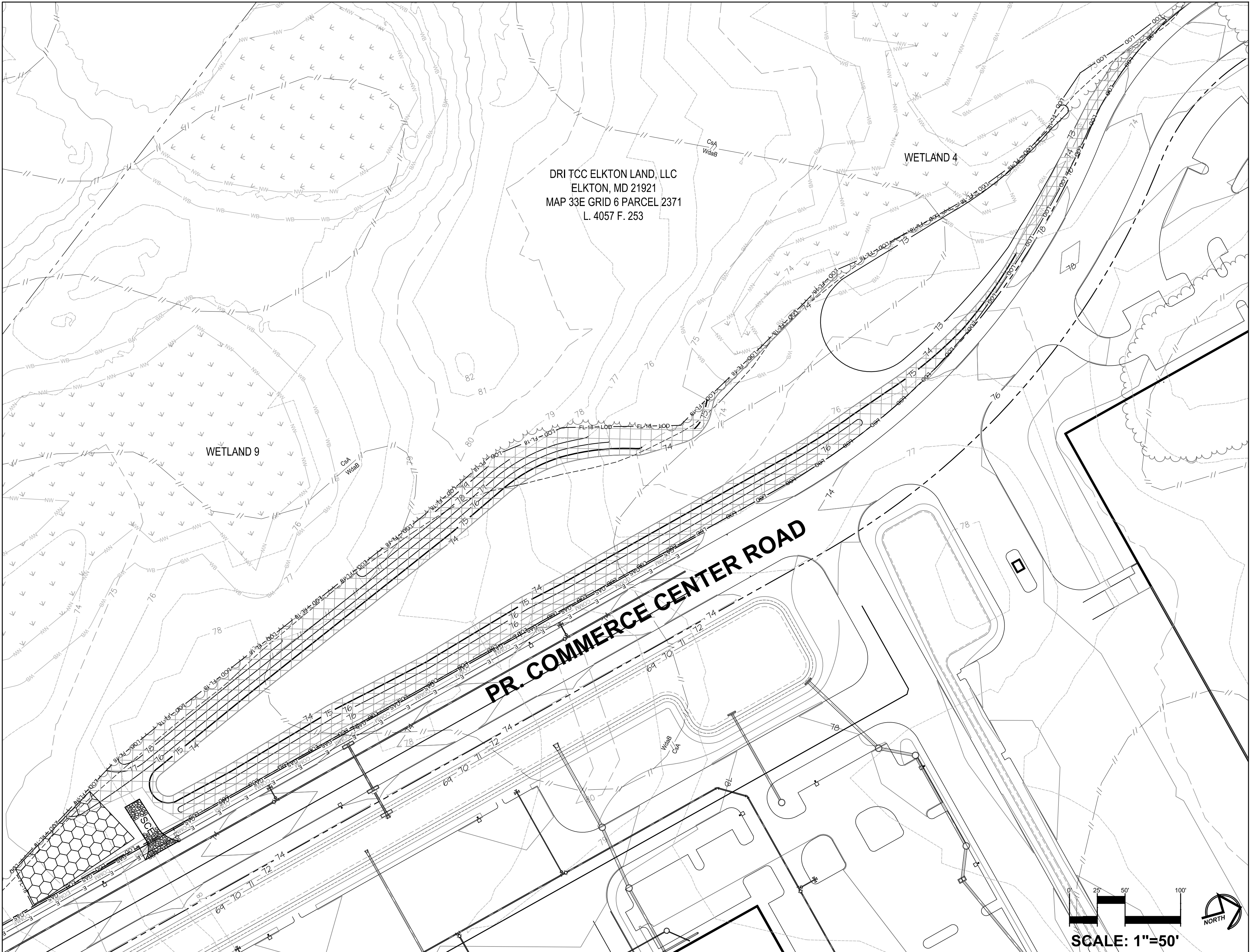
TOWN OF ELKTON, CECIL COUNTY, MARYLAND

| DATE | REVISIONS | JOB NO:                 |
|------|-----------|-------------------------|
|      |           | 31190945X3              |
|      |           | SCALE: AS SHOWN         |
|      |           | DATE: FEBRUARY 23, 2022 |
|      |           | DRAWN BY: KRM           |
|      |           | DESIGN BY: KRM/DPS      |
|      |           | REVIEW BY: DPS/TAS      |
|      |           | SHEET: 9 OF 17          |





WETLAND MITIGATION AREA 1 - SITE ACCESS OVERVIEW



WETLAND MITIGATION AREA 1 - EROSION AND SEDIMENT CONTROL OVERLAY PLAN

LEGEND

|  |                                     |  |                                                    |
|--|-------------------------------------|--|----------------------------------------------------|
|  | EX. PROPERTY LINE                   |  | PR. EROSION CONTROL MATTING                        |
|  | EX. 2-FOOT CONTOUR                  |  | PR. 1-FOOT CONTOUR                                 |
|  | EX. 10-FOOT CONTOUR                 |  | PR. 5-FOOT CONTOUR                                 |
|  | EX. TREELINE                        |  | PR. ROAD RIGHT-OF-WAY (BY OTHERS)                  |
|  | LIMITS OF INTERMITTENT STREAM       |  | PR. 0.5-FOOT CONTOUR (BY OTHERS)                   |
|  | EX. WETLAND BUFFER                  |  | PR. 2-FOOT CONTOUR (BY OTHERS)                     |
|  | EX. NONTIDAL WETLAND                |  | PR. 10-FOOT CONTOUR (BY OTHERS)                    |
|  | EX. SOIL BOUNDARY                   |  | PR. STORMWATER PONDING ELEVATION (BY OTHERS)       |
|  | STABILIZED CONSTRUCTION ENTRANCE    |  | PR. EDGE OF PAVEMENT (BY OTHERS)                   |
|  | PR. TEMPORARY SOIL STOCKPILE AREA   |  | PR. BUILDING (BY OTHERS)                           |
|  | PR. LIMIT OF DISTURBANCE            |  | PR. UNDERGROUND GAS UTILITY LINE (BY OTHERS)       |
|  | PR. LIMIT OF DISTURBANCE AND 18\"/> |  | PR. UNDERGROUND TELECOMMUNICATION LINE (BY OTHERS) |
|  |                                     |  | PR. UNDERGROUND ELECTRIC LINE (BY OTHERS)          |

SOILS TABLE

| SYMBOL | NAME/DESCRIPTION                                                    | HYDRIC SOIL | HYDRIC COMPONENT       | PERCENTAGE OF MAPPING UNIT | POSITION IN LANDSCAPE                    |
|--------|---------------------------------------------------------------------|-------------|------------------------|----------------------------|------------------------------------------|
| CsA    | CROSIADORE SILT LOAM, 0 TO 2 PERCENT SLOPES                         | YES         | KENTUCK                | 5                          | DEPRESSIONS                              |
|        |                                                                     |             | ELKTON                 | 5                          | DEPRESSIONS, FLATS, SWALES               |
|        |                                                                     |             | OTHELLO                | 5                          | DRAINAGeways, DEPRESSIONS, FLATS, SWALES |
|        |                                                                     |             | ZEKIAH                 | 75                         | FLOOD PLAINS                             |
| WdB    | WOODSTOWN SANDY LOAM, 2 TO 5 PERCENT SLOPES, NORTHERN COASTAL PLAIN | YES         | LONGMARSH              | 10                         | FLOOD PLAINS                             |
|        |                                                                     |             | ASKECKSY, UNDRAINED    | 5                          | FLATS, DRAINAGeways, DEPRESSIONS, SWALES |
|        |                                                                     |             | FALLSINGTON, UNDRAINED | 5                          | SWALES, DRAINAGeways, SWPRSSIONS, FLATS  |
|        |                                                                     |             |                        |                            |                                          |

1. UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCE CONSERVATION SERVICE, CECIL COUNTY, MARYLAND SOIL SURVEY DATA VERSION 18, DATED JUNE 11, 2020.  
2. UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCE CONSERVATION SERVICE, HYDRIC SOILS LIST BY STATE, AVAILABLE AT <HTTPS://WWW.NRCS.USDA.GOV/INTERNET/FS\_DOCUMENTS/NRCSSEPRD1316619.HTML#REPORTREF>, AND ACCESSED ON AUGUST 17, 2021.



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EROSION AND SEDIMENT CONTROL OVERLAY PLAN  
WETLAND MITIGATION AREA 1

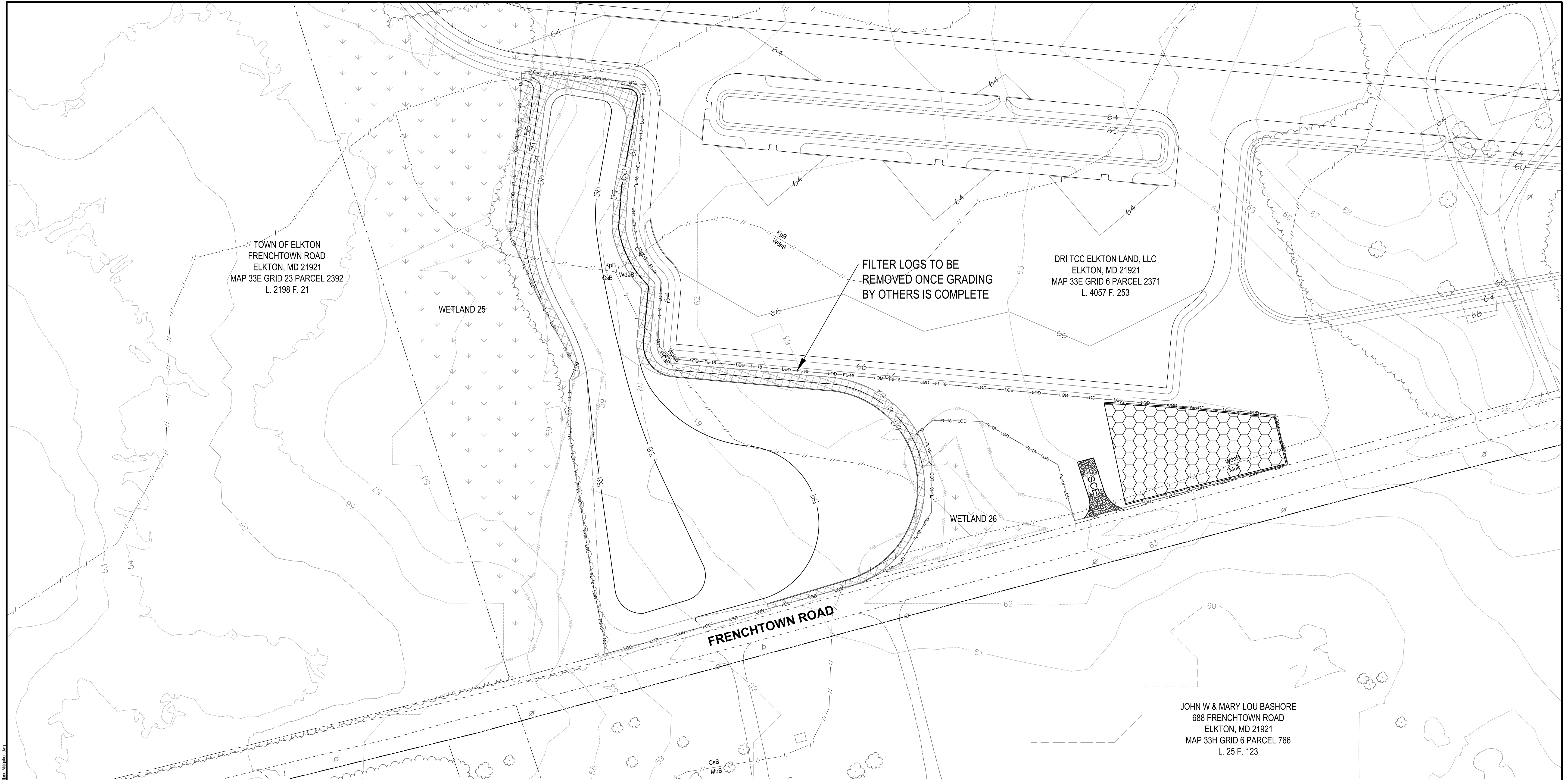
LOGISTICS CENTER AT SOUTHFIELDS  
PHASE II WETLAND MITIGATION PLAN

TOWN OF ELKTON, CECIL COUNTY, MARYLAND

| DATE | REVISIONS | JOB NO.    | 31190945X3        |
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|      |           | DATE:      | FEBRUARY 23, 2022 |
|      |           | DRAWN BY:  | KRM               |
|      |           | DESIGN BY: | KRM/DPS           |
|      |           | REVIEW BY: | DPS/TAS           |
|      |           | SHEET:     | 10 OF 17          |



Standard Project Plans 201311201454 - Logistics Center at Southfields - Baltimore 2 and 3 WETLANDS 11/20/2022 Final 1 On-Site Wetland Mitigation Plan



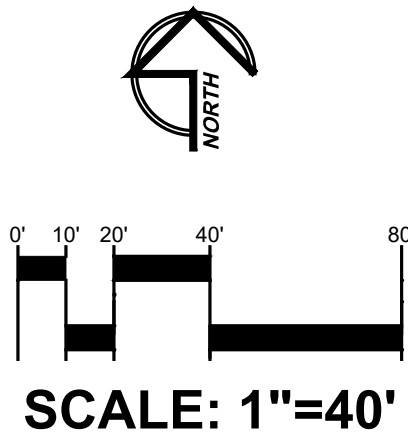
LEGEND

|  |                               |  |                                              |
|--|-------------------------------|--|----------------------------------------------|
|  | EX. PROPERTY LINE             |  | STABILIZED CONSTRUCTION ENTRANCE             |
|  | EX. 2-FOOT CONTOUR            |  | PR. TEMPORARY SOIL STOCKPILE AREA            |
|  | EX. 10-FOOT CONTOUR           |  | PR. EROSION CONTROL MATTING                  |
|  | EX. TREELINE                  |  | PR. LIMIT OF DISTURBANCE                     |
|  | LIMITS OF INTERMITTENT STREAM |  | PR. LIMIT OF DISTURBANCE AND 18" FILTER LOG  |
|  | EX. WETLAND BUFFER            |  | PR. SILT FENCE                               |
|  | EX. NONTIDAL WETLAND          |  | PR. 2-FOOT CONTOUR (BY OTHERS)               |
|  | EX. SOIL BOUNDARY             |  | PR. 10-FOOT CONTOUR (BY OTHERS)              |
|  | EX. ROAD                      |  | PR. STORMWATER PONDING ELEVATION (BY OTHERS) |
|  | EX. DRIVEWAY                  |  | PR. EDGE OF PAVEMENT (BY OTHERS)             |
|  | EX. ROAD RIGHT-OF-WAY         |  |                                              |
|  | EX. BUILDING                  |  |                                              |
|  | PR. 1-FOOT CONTOUR            |  |                                              |
|  | PR. 5-FOOT CONTOUR            |  |                                              |

SOILS TABLE

| SYMBOL | NAME/DESCRIPTION                                                    | HYDRIC SOIL | HYDRIC COMPONENT       | PERCENTAGE OF MAPPING UNIT | POSITION IN LANDSCAPE                    |
|--------|---------------------------------------------------------------------|-------------|------------------------|----------------------------|------------------------------------------|
| CsB    | CROSIADORE SILT LOAM, 2 TO 5 PERCENT SLOPES                         | YES         | OTHELLO                | 5                          | SWALES, DRAINAGEWAYS, DEPRESSIONS, FLATS |
| KpB    | KEYPORT SILT LOAM, 2 TO 5 PERCENT SLOPES                            | YES         | LENNI                  | 3                          | FLATS, DEPRESSIONS, DRAINAGEWAYS, SWALES |
|        |                                                                     |             | ELKTON                 | 2                          | DEPRESSIONS, FLATS                       |
| MuB    | MATTAPEX-URBAN LAND COMPLEX, 0 TO 5 PERCENT SLOPES                  | NO          | -                      | -                          | -                                        |
| WdaB   | WOODSTOWN SANDY LOAM, 2 TO 5 PERCENT SLOPES, NORTHERN COASTAL PLAIN | YES         | ZEKIAH                 | 75                         | FLOOD PLAINS                             |
|        |                                                                     |             | LONGMARSH              | 10                         | FLOOD PLAINS                             |
|        |                                                                     |             | ASKECKSY, UNDRAINED    | 5                          | FLATS, DRAINAGEWAYS, DEPRESSIONS, SWALES |
|        |                                                                     |             | FALLSINGTON, UNDRAINED | 5                          | SWALES, DRAINAGEWAYS, DEPRESSIONS, FLATS |

1. UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCE CONSERVATION SERVICE, CECIL COUNTY, MARYLAND SOIL SURVEY DATA VERSION 18, DATED JUNE 11, 2020.  
2. UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCE CONSERVATION SERVICE, HYDRIC SOILS LIST BY STATE, AVAILABLE AT <HTTPS://WWW.NRCS.USDA.GOV/INTERNET/FSE\_DOCUMENTS/NRCSERPD/316819.HTML#REPORTREF>, AND ACCESSED ON AUGUST 17, 2021.



|      |           |                                                                                                                                                                                                                                                        |                   |
|------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
|      |           | <b>GEO-TECHNOLOGY ASSOCIATES, INC.</b><br>GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS<br>3445-A BOX HILL CORPORATE CENTER DRIVE<br>ABINGDON, MARYLAND 21009<br>410-515-9446<br>FAX: 410-515-4895<br>WWW.GTAENG.COM<br>© GEO-TECHNOLOGY ASSOCIATES, INC. |                   |
|      |           | EROSION AND SEDIMENT CONTROL OVERLAY PLAN<br>WETLAND MITIGATION AREA 2<br><b>LOGISTICS CENTER AT SOUTHFIELDS<br/>PHASE II WETLAND MITIGATION PLAN</b><br><br>TOWN OF ELKTON, CECIL COUNTY, MARYLAND                                                    |                   |
| DATE | REVISIONS | JOB NO:                                                                                                                                                                                                                                                | 31190945X3        |
|      |           | SCALE:                                                                                                                                                                                                                                                 | 1"=40'            |
|      |           | DATE:                                                                                                                                                                                                                                                  | FEBRUARY 23, 2022 |
|      |           | DRAWN BY:                                                                                                                                                                                                                                              | KRM               |
|      |           | DESIGN BY:                                                                                                                                                                                                                                             | KRM/DPS           |
|      |           | REVIEW BY:                                                                                                                                                                                                                                             | DPS/TAS           |
|      |           | SHEET:                                                                                                                                                                                                                                                 | 11 OF 17          |







#### A. GENERAL EROSION AND SEDIMENT CONTROL GUIDELINES:

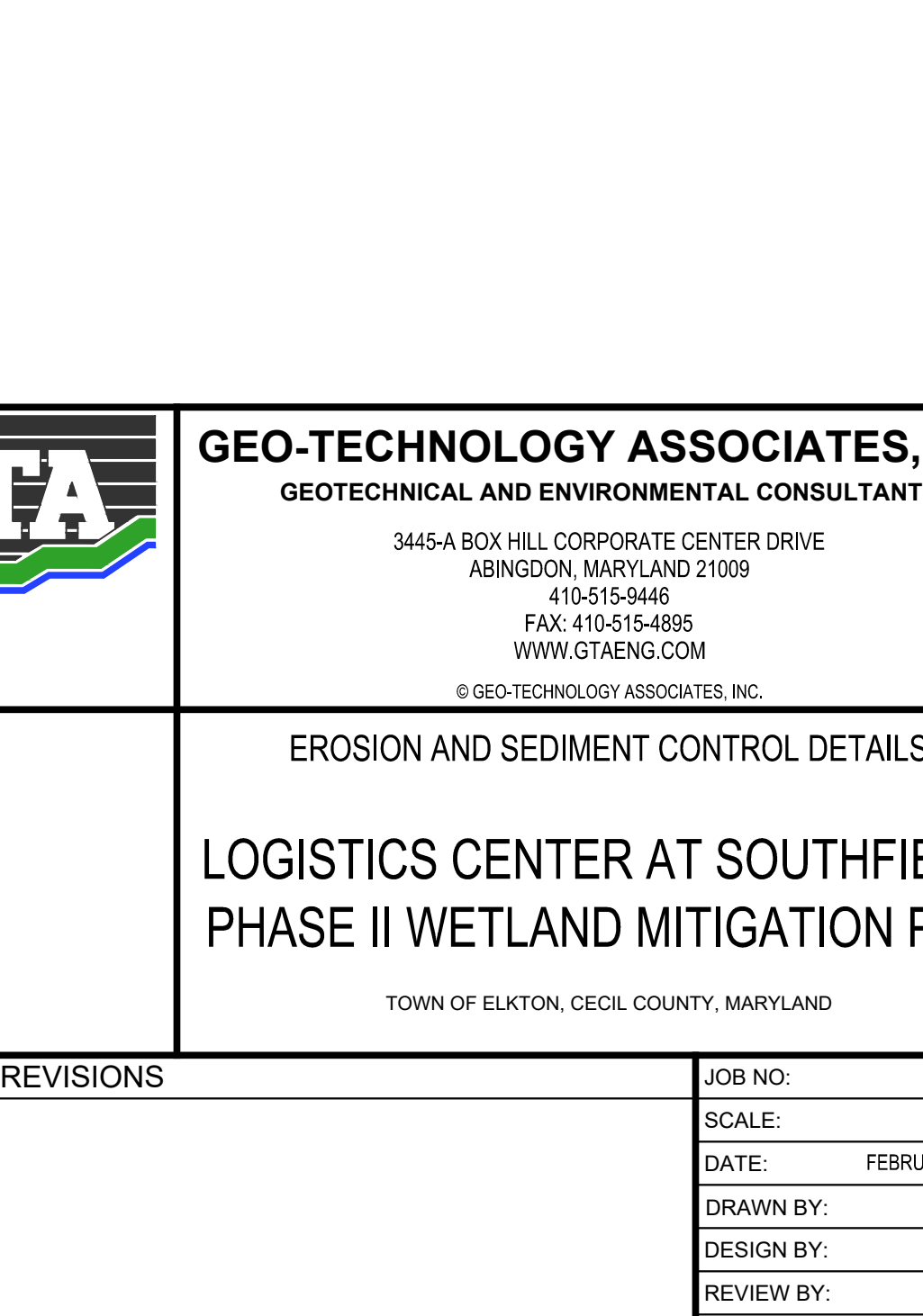
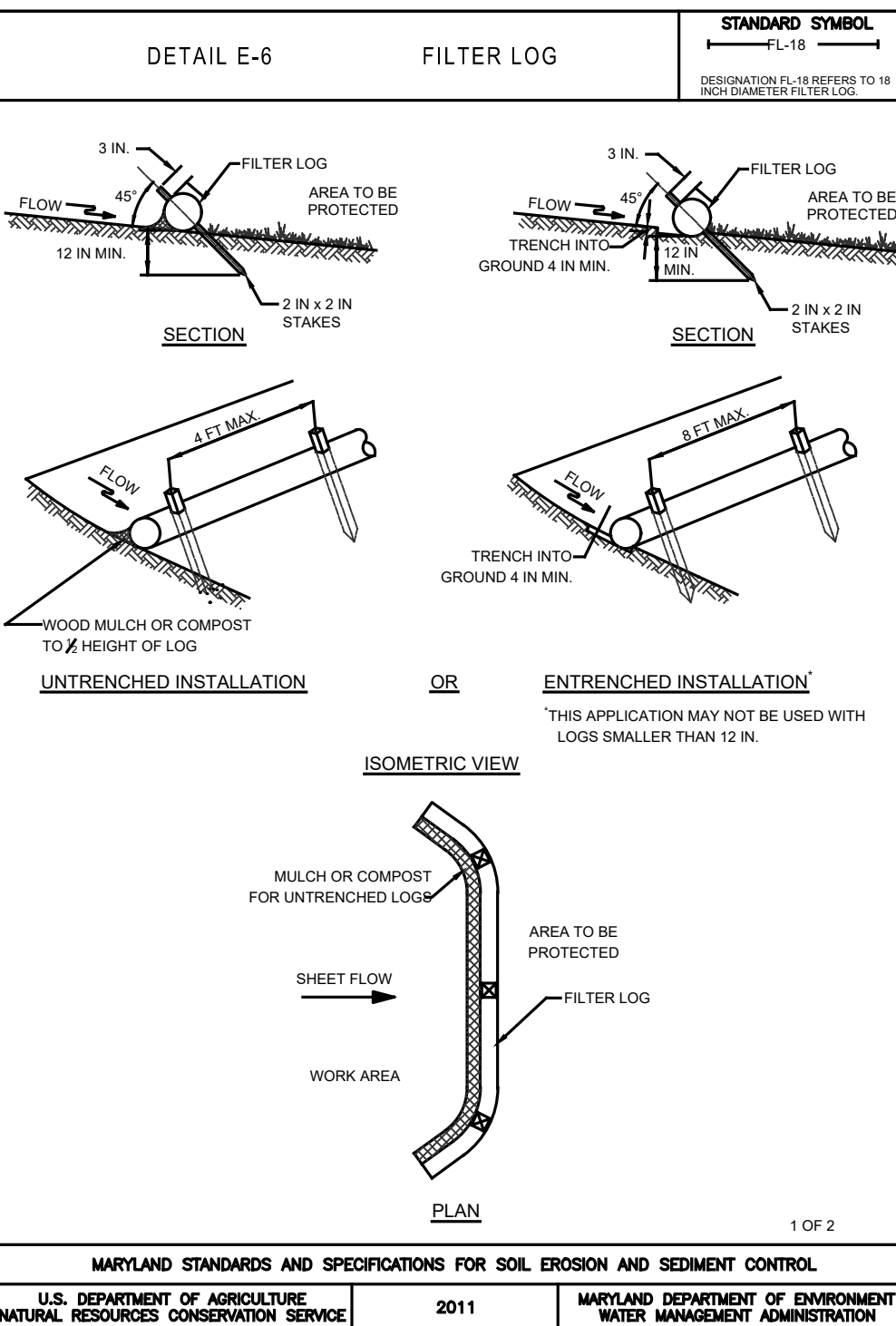
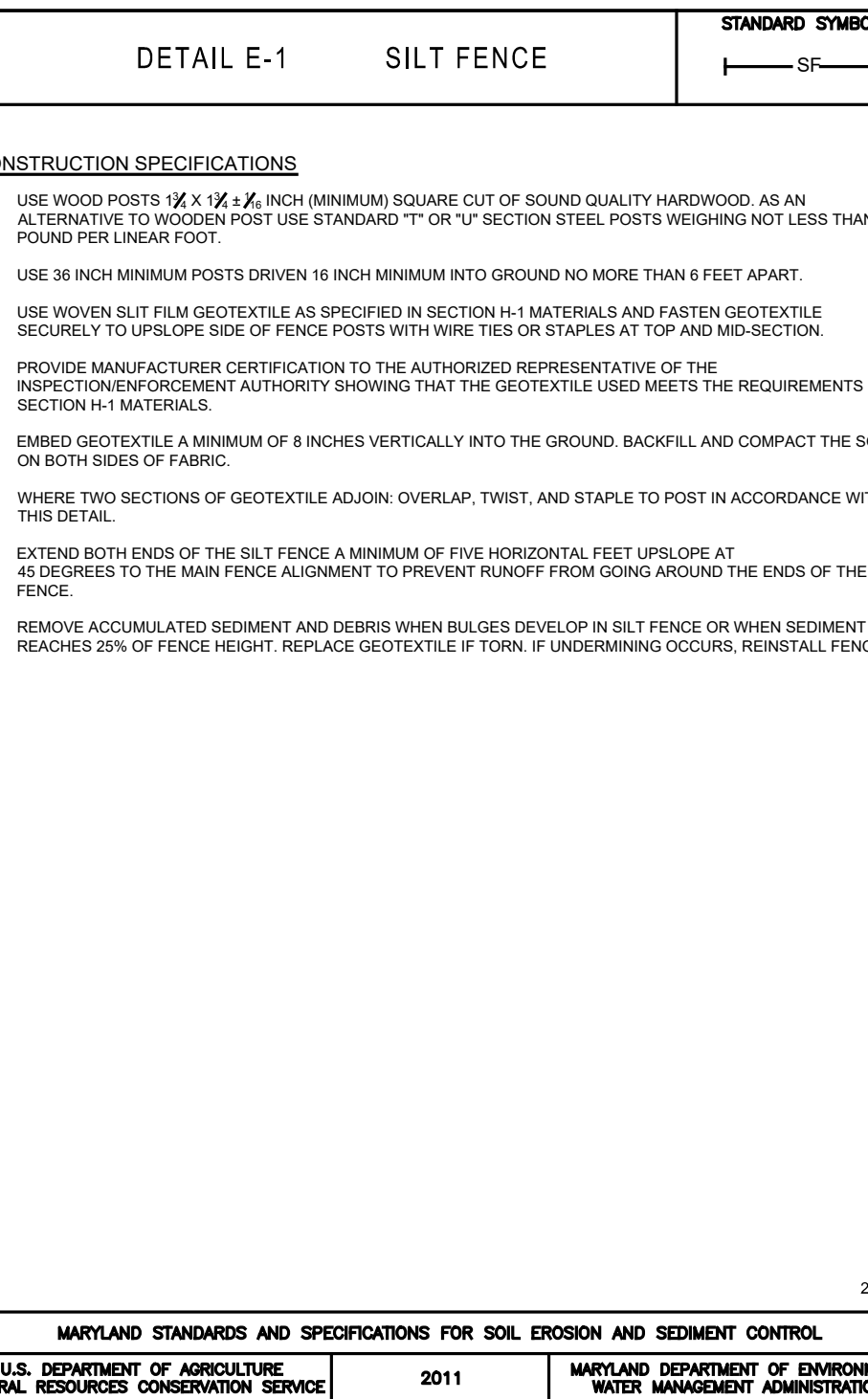
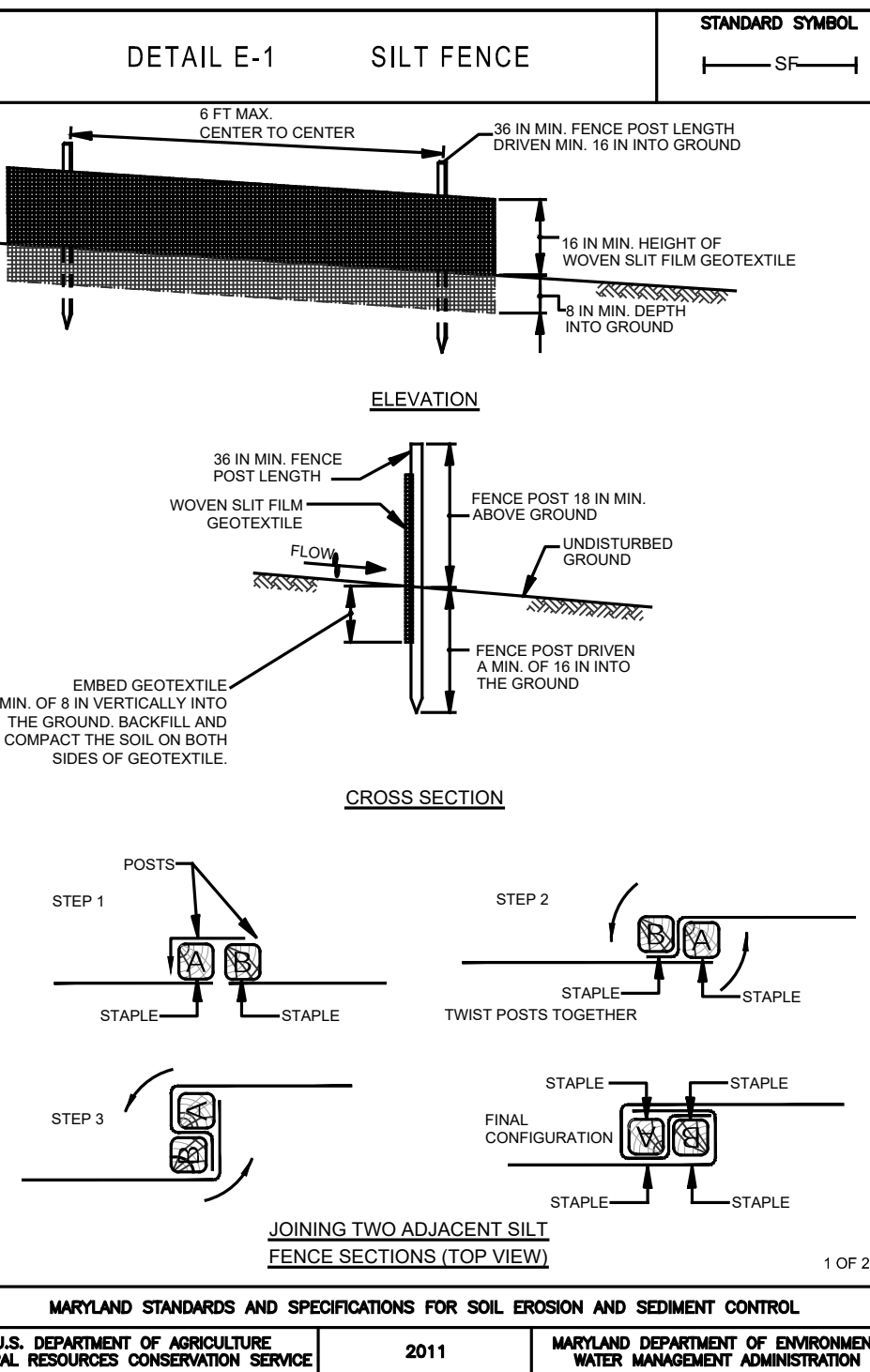
- B. GENERAL EROSION AND SEDIMENT CONTROL METHODS/PROCEDURES:

- C. SEQUENCE OF CONSTRUCTION:

1. REFER TO SHEET 1.

#### D. SEEDING AND MULCHING SPECIFICATIONS

1. REFER TO SHEET 17.



## 100-YEAR FLOODPLAINS

1. NO EXCESS FILL, CONSTRUCTION MATERIAL, OR DEBRIS SHALL BE STOCKPILED OR STORED IN NONTIDAL WETLANDS, NONTIDAL WETLAND BUFFERS, WATERWAYS, OR THE 100-YEAR FLOODPLAIN.
2. PLACE MATERIALS IN A LOCATION AND MANNER WHICH DOES NOT ADVERSELY IMPACT SURFACE OR SUBSURFACE WATER FLOW INTO OR OUT OF NONTIDAL WETLANDS, NONTIDAL WETLAND BUFFERS, WATERWAYS, OR THE 100-YEAR FLOODPLAIN.
3. DO NOT USE THE EXCAVATED MATERIAL AS BACKFILL IF IT CONTAINS WASTE MATERIAL PRODUCTS, UNSIGHTLY DEBRIS, TOXIC MATERIALS, OR ANY OTHER DEleterious SUBSTANCE. IF ADDITIONAL BACKFILL IS REQUIRED, USE CLEAN MATERIAL FREE OF WASTE MATERIAL PRODUCTS, TOXIC MATERIALS, OR ANY OTHER DEleterious SUBSTANCE.
4. PLACE HEAVY EQUIPMENT ON MATS OR SUITABLE OR EQUIPMENT TO PREVENT DAMAGE TO NONTIDAL WETLANDS, NONTIDAL WETLAND BUFFERS, WATERWAYS, OR THE 100-YEAR FLOODPLAIN.
5. REPAIR AND MAINTAIN ANY SERVICEABLE STRUCTURE OR FILL SO THERE IS NO PERMANENT LOSS OF NONTIDAL WETLANDS, NONTIDAL WETLAND BUFFERS, OR WATERWAYS, OR PERMANENT MODIFICATION OF THE 100-YEAR FLOODPLAIN IN EXCESS OF THAT LOSS UNDER THE ORIGINALLY AUTHORIZED STRUCTURE OR FILL.
6. RECTIFY ANY NONTIDAL WETLANDS, WETLAND BUFFERS, OR 100-YEAR FLOODPLAIN TEMPORARILY IMPACTED BY ANY CONSTRUCTION.
7. ALL STABILIZATION IN THE NONTIDAL WETLAND AND NONTIDAL WETLAND BUFFER SHALL CONSIST OF THE FOLLOWING SPECIES: ANNUAL RYEGRASS (*LOLIUM MULTIFLORUM*), MILLET (*SETERIA ITALICA*), BARLEY (*HORDEUM SP.*), OATS (*UNOLA SP.*), AND/OR RYE (*SECALE CEREALE*). THESE SPECIES WILL ALLOW FOR THE STABILIZATION OF THE SITE WHILE ALSO ALLOWING FOR THE VOLUNTARY REVEGETATION OF NATURAL VEGETATION. OTHER NON-PERISPERIVE VEGETATION MAY BE ACCEPTABLE, BUT MUST BE APPROVED BY THE NONTIDAL WETLANDS AND WATERWAYS DIVISION. KENTUCKY 31 FESCUE SHALL NOT BE UTILIZED IN WETLAND OR BUFFER AREAS. THE AREA SHALL BE SEEDDED AND MULCHED TO REDUCE EROSION AFTER CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED.
8. PROTECT EXISTING TREES AND POST-CONSTRUCTION GRADES AND ELEVATIONS. THE ORIGINAL GRADES AND ELEVATIONS IN TEMPORARILY IMPACTED AREAS.
9. TO PROTECT EXISTING TREES, INSTREAM WORK IS PROHIBITED BY THE CLASSIFICATION OF THE STREAM:
  - A. USE I WATERS: IN-STREAM WORK SHALL NOT BE CONDUCTED DURING THE PERIOD MARCH 1 THROUGH JUNE 15, INCLUSIVE, DURING ANY YEAR.
  - B. USE II WATERS: IN-STREAM WORK SHALL NOT BE CONDUCTED DURING THE PERIOD OCTOBER 1 THROUGH APRIL 30, INCLUSIVE, DURING ANY YEAR.
  - C. USE IV WATERS: IN-STREAM WORK SHALL NOT BE CONDUCTED DURING THE PERIOD MARCH 1 THROUGH MAY 31, INCLUSIVE, DURING ANY YEAR.
10. STORM RUNOFF FROM IMPROVED SURFACES SHALL BE CONTROLLED TO PREVENT THE WASHING OF DEBRIS INTO THE WATERWAY.
11. CULVERTS SHALL BE CONSTRUCTED AND ANY RIPRAP PLACED SO AS NOT TO OBSTRUCT THE MOVEMENT OF AQUATIC SPECIES, UNLESS THE PURPOSE OF THE ACTIVITY IS TO IMPOUND WATER.

## EROSION AND SEDIMENT CONTROL DETAILS

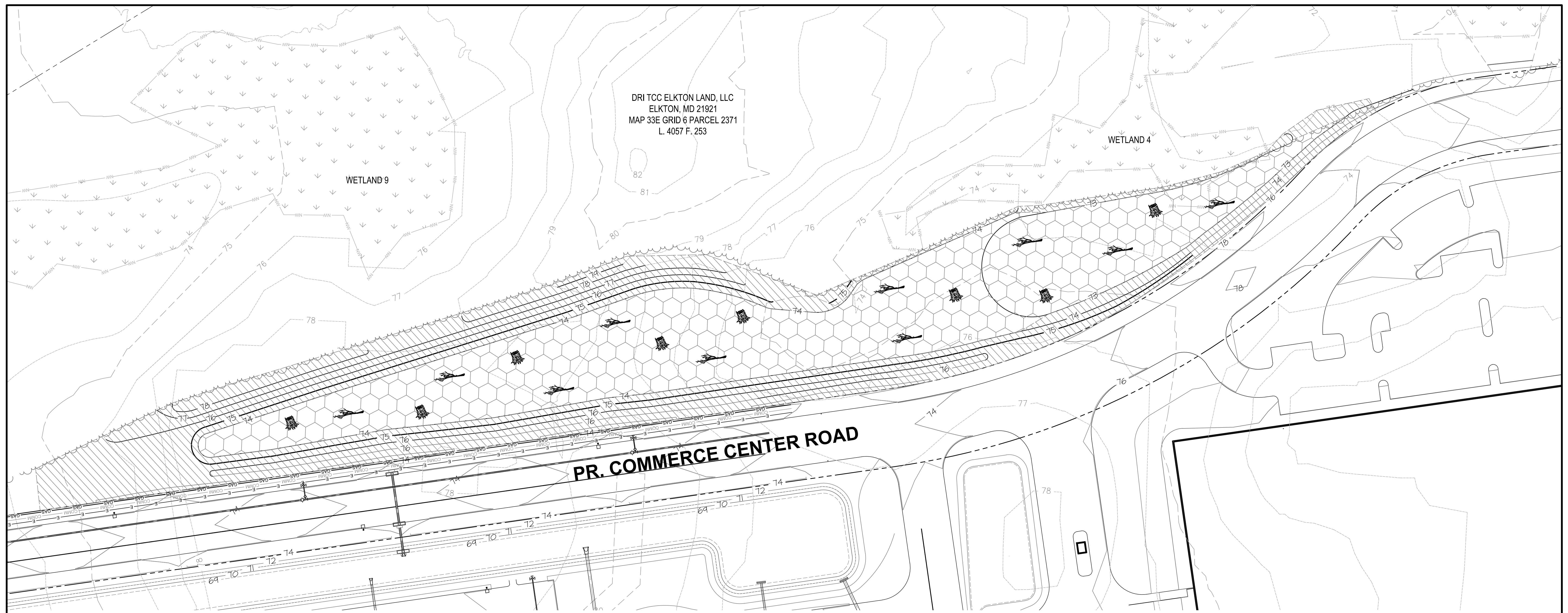
EROSION AND SEDIMENT CONTROL DETAILS

LOGISTICS CENTER AT SOUTHFIELDS  
PHASE II WETLAND MITIGATION PLAN

TOWN OF ELKTON, CECIL COUNTY, MARYLAND

|      |           |                         |
|------|-----------|-------------------------|
| DATE | REVISIONS | JOB NO: 31190945X       |
|      |           | SCALE: N/A              |
|      |           | DATE: FEBRUARY 23, 2022 |
|      |           | DRAWN BY: KRM           |
|      |           | DESIGN BY: KRMDPS       |
|      |           | REVIEW BY: DPS/TAS      |
|      |           | SHEET: 13 OF 1          |

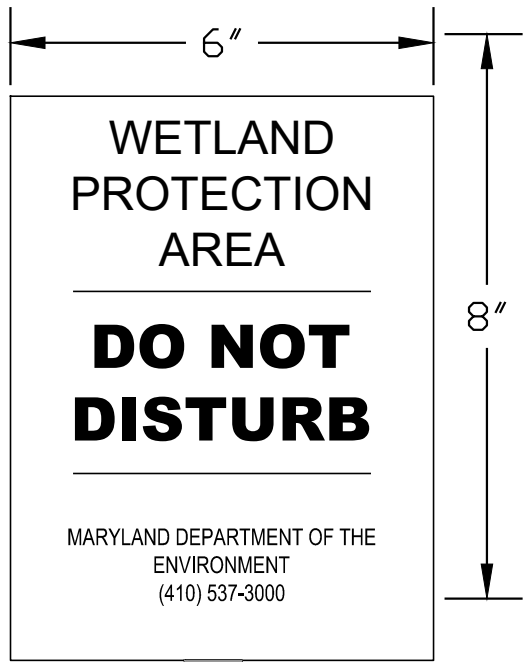




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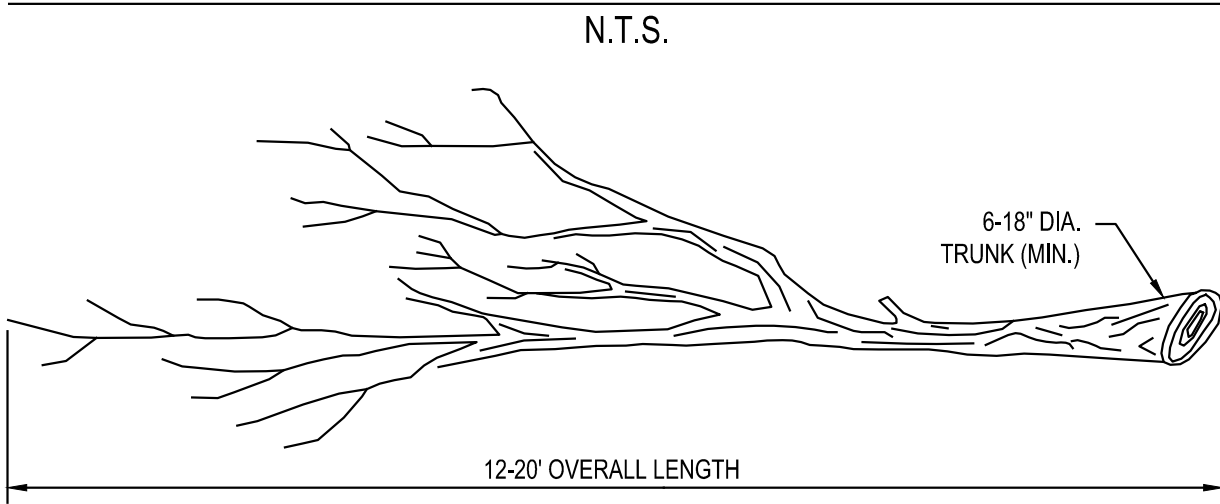
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|--|---------------------------------------------------------------|--|----------------------------------------------------|
|  | EX. PROPERTY LINE                                             |  | PR. ROAD RIGHT-OF-WAY (BY OTHERS)                  |
|  | EX. 2-FOOT CONTOUR                                            |  | PR. 0.5-FOOT CONTOUR (BY OTHERS)                   |
|  | EX. 10-FOOT CONTOUR                                           |  | PR. 2-FOOT CONTOUR (BY OTHERS)                     |
|  | EX. TREELINE                                                  |  | PR. 10-FOOT CONTOUR (BY OTHERS)                    |
|  | LIMITS OF INTERMITTENT STREAM                                 |  | PR. STORMWATER PONDING ELEVATION (BY OTHERS)       |
|  | EX. WETLAND BUFFER                                            |  | PR. EDGE OF PAVEMENT (BY OTHERS)                   |
|  | EX. NONTIDAL WETLAND                                          |  | PR. BUILDING (BY OTHERS)                           |
|  | PR. 1-FOOT CONTOUR                                            |  | PR. UNDERGROUND GAS UTILITY LINE (BY OTHERS)       |
|  | PR. 5-FOOT CONTOUR                                            |  | PR. UNDERGROUND TELECOMMUNICATION LINE (BY OTHERS) |
|  | PR. WETLAND TREE AND SHRUB PLANTINGS AND WETLAND SEEDING ZONE |  | PR. UNDERGROUND ELECTRIC LINE (BY OTHERS)          |
|  | PR. BUFFER/UPLAND SEEDING ZONE                                |  |                                                    |

SIGNAGE



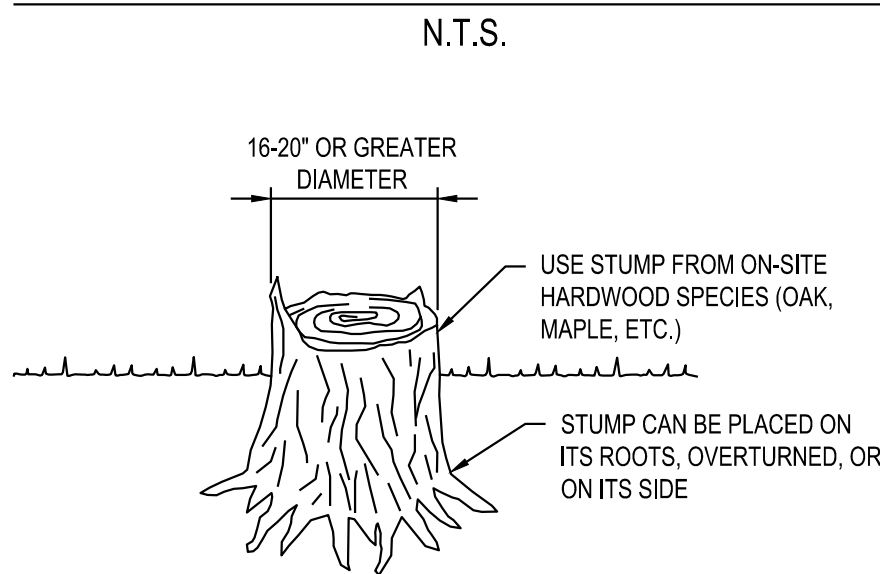
NOTES:  
SIGNAGE SHOULD BE INSTALLED EVERY 50 FEET (AS SHOWN) WITH THE TEXT FACING AWAY FROM THE WETLAND MITIGATION AREA.

DEAD FALL SNAG DETAIL

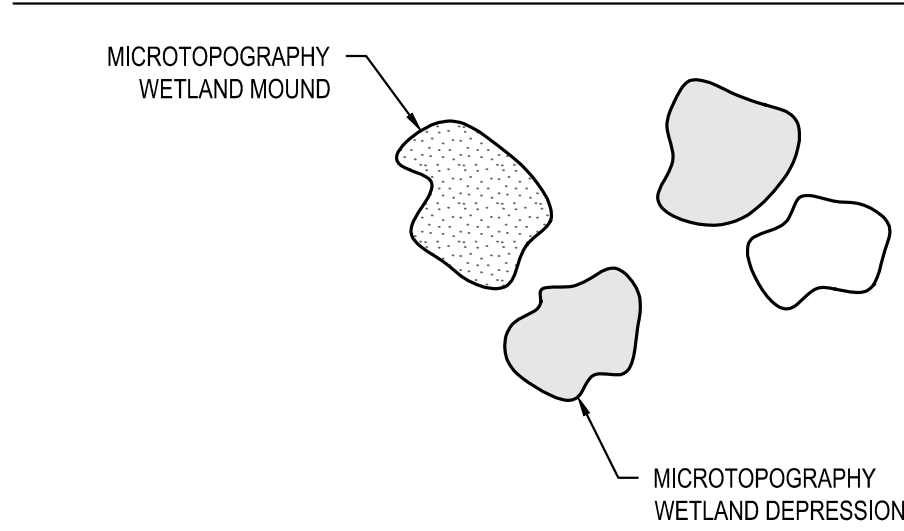


NOTES:  
1. DEAD FALL SNAG SHALL HAVE CANOPY LIMBS INTACT.  
2. DEAD FALL SNAGS SHALL BE SELECTED FROM HARDWOOD SPECIES.  
3. DEAD FALL SNAGS SHALL BE PLACED IN DESIGNATED AREAS SOON AFTER FINAL GRADING BUT BEFORE SEEDING OR PLANTING OF WETLAND PLANTS.

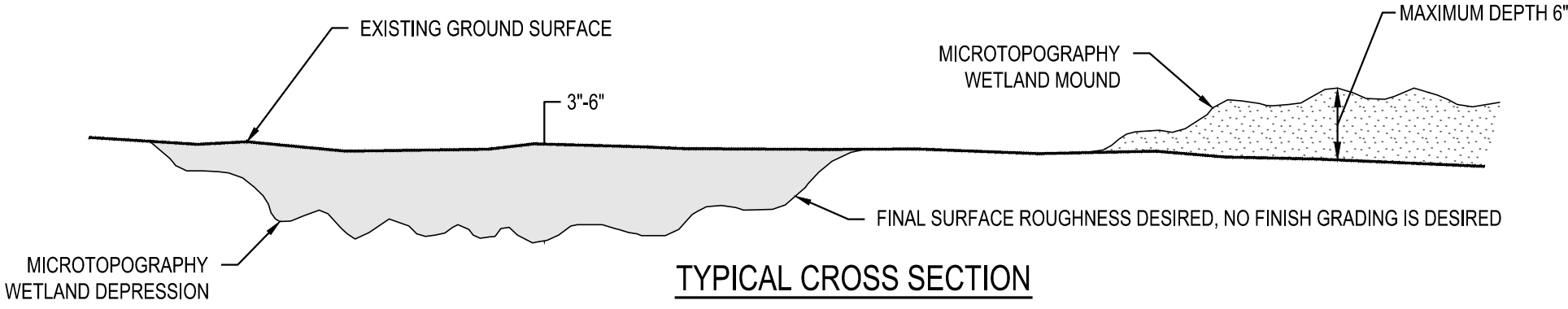
TREE STUMP DETAIL



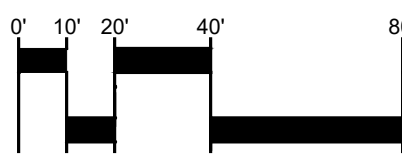
MICROTOPOGRAPHY DETAIL



SAMPLE LAYOUT



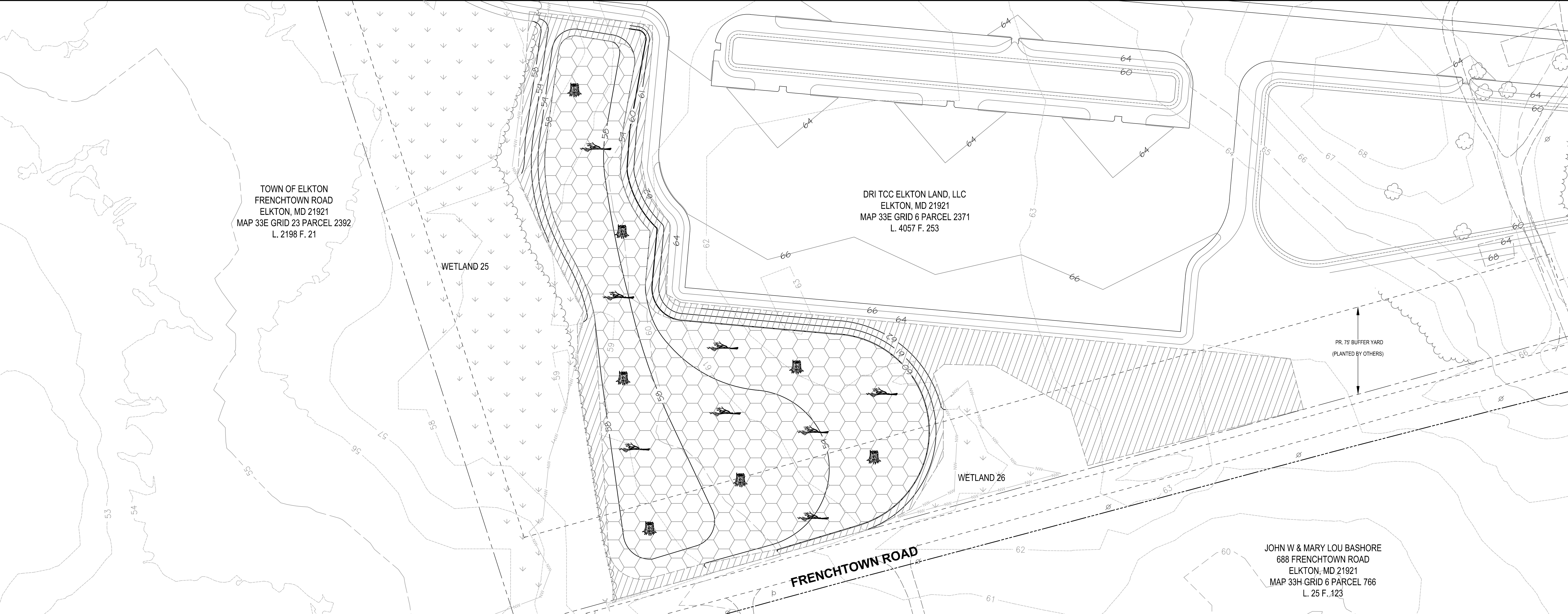
NOTES:  
1. CUSTOMIZE SHAPES TO FIT EXISTING LANDSCAPE CONDITIONS IN A RANDOM ORDER. EXCAVATION AND MOUND AREAS ARE TO BE IRREGULAR IN SHAPE AND VARY IN DEPTH (SEE SAMPLE LAYOUT AND TYPICAL CROSS SECTION FOR EXAMPLE). LENGTH TO WIDTH RATIO OF DEPRESSION AND MOUND SHAPES SHALL NOT EXCEED 2:1.  
2. THE MICROTOPOGRAPHY DEPRESSIONS SHALL BE BETWEEN 100 AND 500 SQUARE FEET, RANDOMLY DISTRIBUTED THROUGHOUT THE WETLAND MITIGATION AREA. THE MAXIMUM WETLAND DEPRESSION DEPTH SHALL VARY FROM 3 TO 6 INCHES, 6 INCHES BEING THE MAXIMUM DEPTH ALLOWED.  
3. MOUNDS SHALL BE PLACED ON THE DOWN SLOPE SIDE OF THE DEPRESSION WHEN POSSIBLE. THE MAXIMUM HEIGHT ALLOWED IS 6 INCHES. NO MORE THAN 25 PERCENT OF THE WETLAND SHOULD BE AT THE DESIGN ELEVATION.



SCALE: 1"=40'

|      |           |                                                                                                                                                                                                                                                        |                   |
|------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
|      |           | <b>GEO-TECHNOLOGY ASSOCIATES, INC.</b><br>GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS<br>3445-A BOX HILL CORPORATE CENTER DRIVE<br>ABINGDON, MARYLAND 21009<br>410-515-9446<br>FAX: 410-515-4895<br>WWW.GTAENG.COM<br>© GEO-TECHNOLOGY ASSOCIATES, INC. |                   |
|      |           | PLANTING PLAN<br>WETLAND MITIGATION AREA 1<br>LOGISTICS CENTER AT SOUTHFIELDS<br>PHASE II WETLAND MITIGATION PLAN<br>TOWN OF ELKTON, CECIL COUNTY, MARYLAND                                                                                            |                   |
| DATE | REVISIONS | JOB NO:                                                                                                                                                                                                                                                | 31190945X3        |
|      |           | SCALE:                                                                                                                                                                                                                                                 | 1"=40'            |
|      |           | DATE:                                                                                                                                                                                                                                                  | FEBRUARY 23, 2022 |
|      |           | DRAWN BY:                                                                                                                                                                                                                                              | KRM               |
|      |           | DESIGN BY:                                                                                                                                                                                                                                             | KRM/DPS           |
|      |           | REVIEW BY:                                                                                                                                                                                                                                             | DPS/TAS           |
|      |           | SHEET:                                                                                                                                                                                                                                                 | 14 OF 17          |

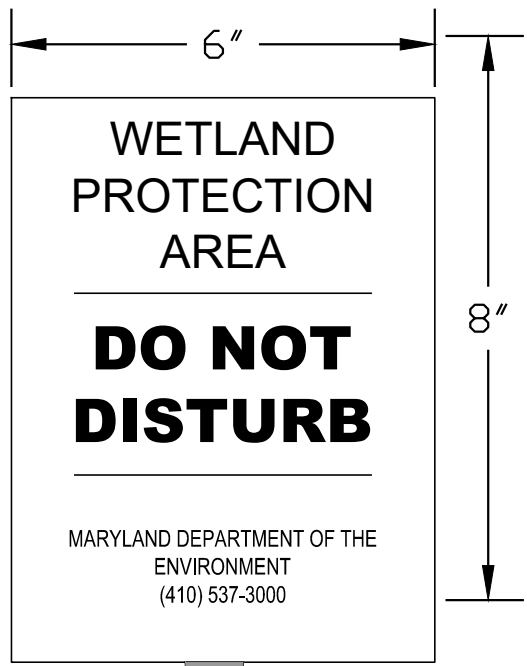




LEGEND

|  |                               |  |                                                               |
|--|-------------------------------|--|---------------------------------------------------------------|
|  | EX. PROPERTY LINE             |  | PR. 1-FOOT CONTOUR                                            |
|  | EX. 2-FOOT CONTOUR            |  | PR. 5-FOOT CONTOUR                                            |
|  | EX. 10-FOOT CONTOUR           |  | PR. 2-FOOT CONTOUR (BY OTHERS)                                |
|  | EX. TREELINE                  |  | PR. 10-FOOT CONTOUR (BY OTHERS)                               |
|  | LIMITS OF INTERMITTENT STREAM |  | PR. STORMWATER PONDING ELEVATION (BY OTHERS)                  |
|  | EX. WETLAND BUFFER            |  | PR. EDGE OF PAVEMENT (BY OTHERS)                              |
|  | EX. NONTIDAL WETLAND          |  | PR. 75' BUFFER YARD (BY OTHERS)                               |
|  | EX. ROAD                      |  | PR. WETLAND TREE AND SHRUB PLANTINGS AND WETLAND SEEDING ZONE |
|  | EX. DRIVEWAY                  |  | PR. BUFFER/UPLAND SEEDING ZONE                                |
|  | EX. ROAD RIGHT-OF-WAY         |  |                                                               |
|  | EX. BUILDING                  |  |                                                               |

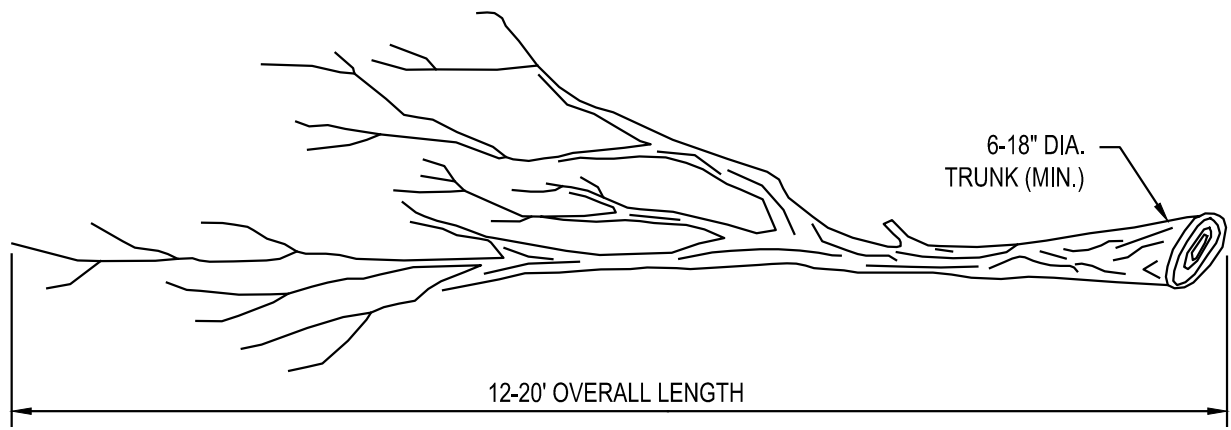
SIGNAGE



NOTES:  
SIGNAGE SHOULD BE INSTALLED EVERY 30 FEET (AS SHOWN) WITH THE TEXT FACING AWAY FROM THE WETLAND MITIGATION AREA.

DEAD FALL SNAG DETAIL

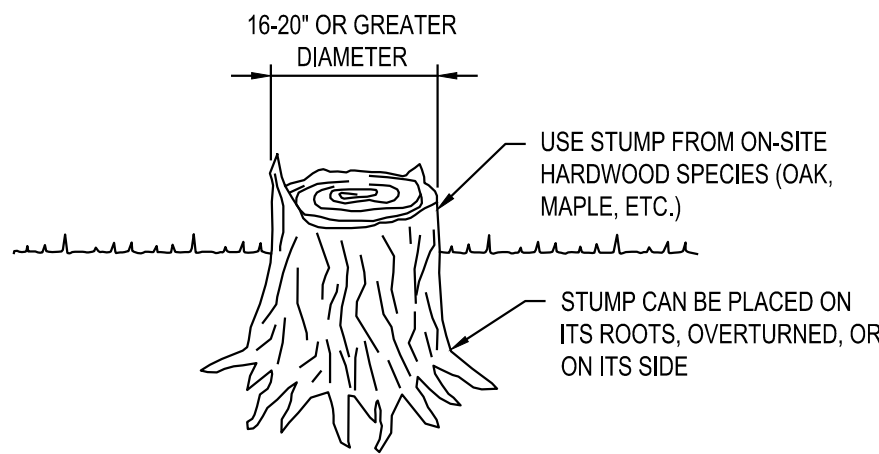
N.T.S.



- NOTES:
1. DEAD FALL SNAG SHALL HAVE CANOPY LIMBS INTACT.
  2. DEAD FALL SNAGS SHALL BE SELECTED FROM HARDWOOD SPECIES.
  3. DEAD FALL SNAGS SHALL BE PLACED IN DESIGNATED AREAS SOON AFTER FINAL GRADING BUT BEFORE SEEDING OR PLANTING OF WETLAND PLANTS.

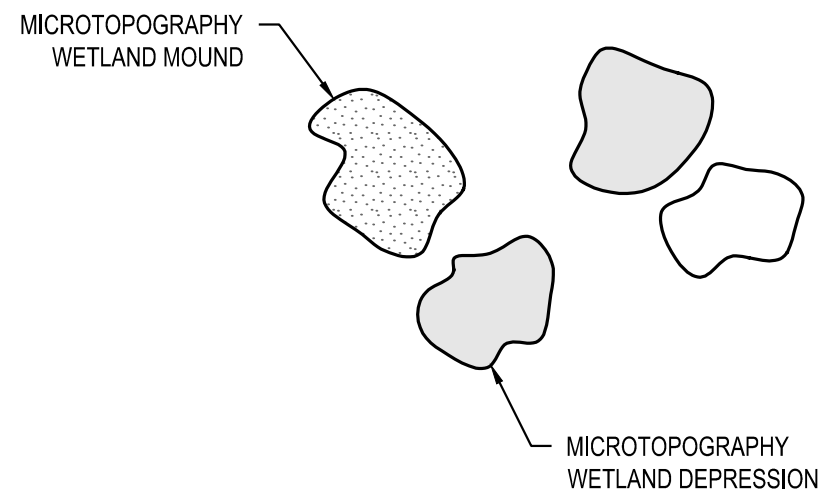
TREE STUMP DETAIL

N.T.S.



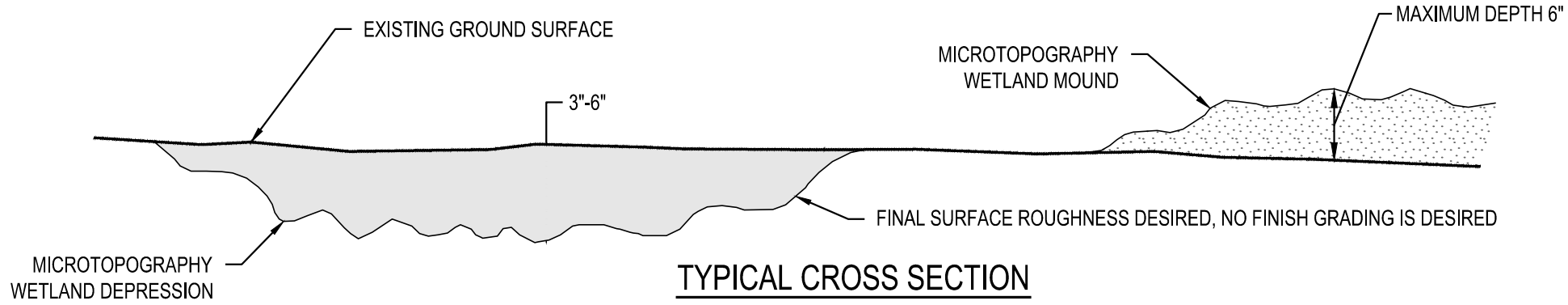
MICROTOPOGRAPHY DETAIL

N.T.S.

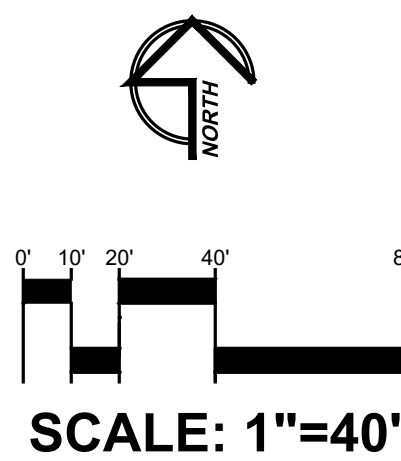


SAMPLE LAYOUT

- NOTES:
1. CUSTOMIZE SHAPES TO FIT EXISTING LANDSCAPE CONDITIONS IN A RANDOM ORDER. EXCAVATION AND MOUND AREAS ARE TO BE IRREGULAR IN SHAPE AND VARY IN DEPTH (SEE SAMPLE LAYOUT AND TYPICAL CROSS SECTION FOR EXAMPLE). LENGTH TO WIDTH RATIO OF DEPRESSION AND MOUND SHAPES SHALL NOT EXCEED 2:1.
  2. THE MICROTOPOGRAPHY DEPRESSIONS SHALL BE BETWEEN 100 AND 500 SQUARE FEET, RANDOMLY DISTRIBUTED THROUGHOUT THE WETLAND MITIGATION AREA. THE MAXIMUM WETLAND DEPRESSION DEPTH SHALL VARY FROM 3 TO 6 INCHES, 6 INCHES BEING THE MAXIMUM DEPTH ALLOWED.
  3. MOUNDS SHALL BE PLACED ON THE DOWN SLOPE SIDE OF THE DEPRESSION WHEN POSSIBLE. THE MAXIMUM HEIGHT ALLOWED IS 6 INCHES. NO MORE THAN 25 PERCENT OF THE WETLAND SHOULD BE AT THE DESIGN ELEVATION.

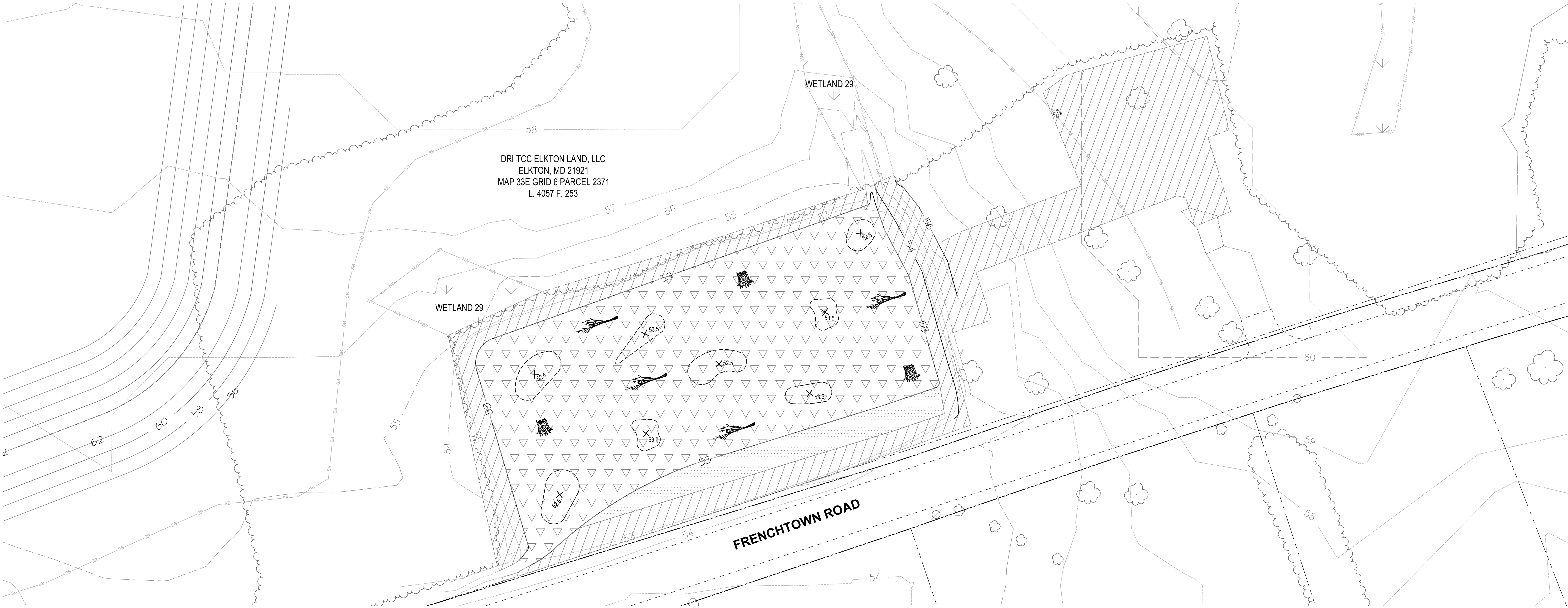


TYPICAL CROSS SECTION



|      |           |                                                                                                                                                                                                                                                        |                   |
|------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
|      |           | <b>GEO-TECHNOLOGY ASSOCIATES, INC.</b><br>GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS<br>3445-A BOX HILL CORPORATE CENTER DRIVE<br>ABINGDON, MARYLAND 21009<br>410-515-9446<br>FAX: 410-515-4895<br>WWW.GTAENG.COM<br>© GEO-TECHNOLOGY ASSOCIATES, INC. |                   |
|      |           | PLANTING PLAN<br>WETLAND MITIGATION AREA 2<br><b>LOGISTICS CENTER AT SOUTHFIELDS</b><br>PHASE II WETLAND MITIGATION PLAN<br>TOWN OF ELKTON, CECIL COUNTY, MARYLAND                                                                                     |                   |
| DATE | REVISIONS | JOB NO:                                                                                                                                                                                                                                                | 31190945X3        |
|      |           | SCALE:                                                                                                                                                                                                                                                 | 1"=30'            |
|      |           | DATE:                                                                                                                                                                                                                                                  | FEBRUARY 23, 2022 |
|      |           | DRAWN BY:                                                                                                                                                                                                                                              | KRM               |
|      |           | DESIGN BY:                                                                                                                                                                                                                                             | KRM/DPS           |
|      |           | REVIEW BY:                                                                                                                                                                                                                                             | DPS/TAS           |
|      |           | SHEET:                                                                                                                                                                                                                                                 | 15 OF 17          |

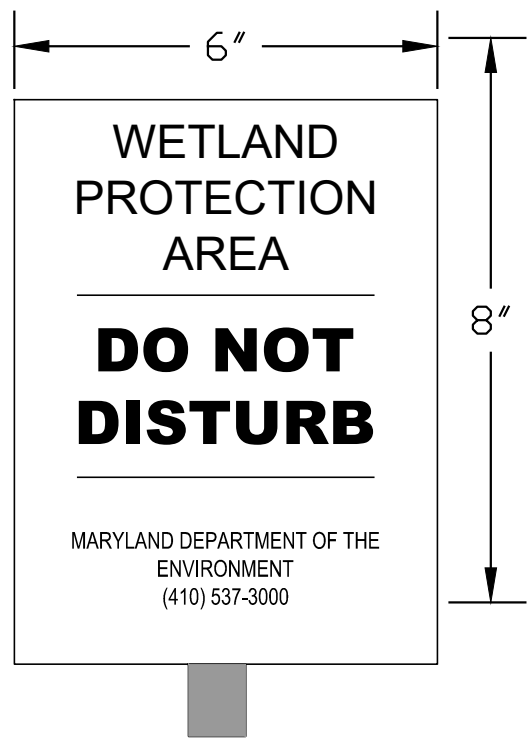




LEGEND

|  |                               |  |                                   |
|--|-------------------------------|--|-----------------------------------|
|  | EX. PROPERTY LINE             |  | PR. 0.5-FOOT CONTOUR              |
|  | EX. 2-FOOT CONTOUR            |  | PR. 1-FOOT CONTOUR                |
|  | EX. 10-FOOT CONTOUR           |  | PR. 5-FOOT CONTOUR                |
|  | EX. TREELINE                  |  | PR. 2-FOOT CONTOUR (BY OTHERS)    |
|  | LIMITS OF INTERMITTENT STREAM |  | PR. 10-FOOT CONTOUR (BY OTHERS)   |
|  | EX. WETLAND BUFFER            |  | PR. EMERGENT WETLAND SEEDING ZONE |
|  | EX. NONTIDAL WETLAND          |  | PR. BUFFER/UPLAND SEEDING ZONE    |
|  | EX. ROAD                      |  | PR. UPLAND SHRUB ZONE             |
|  | EX. DRIVEWAY                  |  |                                   |
|  | EX. ROAD RIGHT-OF-WAY         |  |                                   |

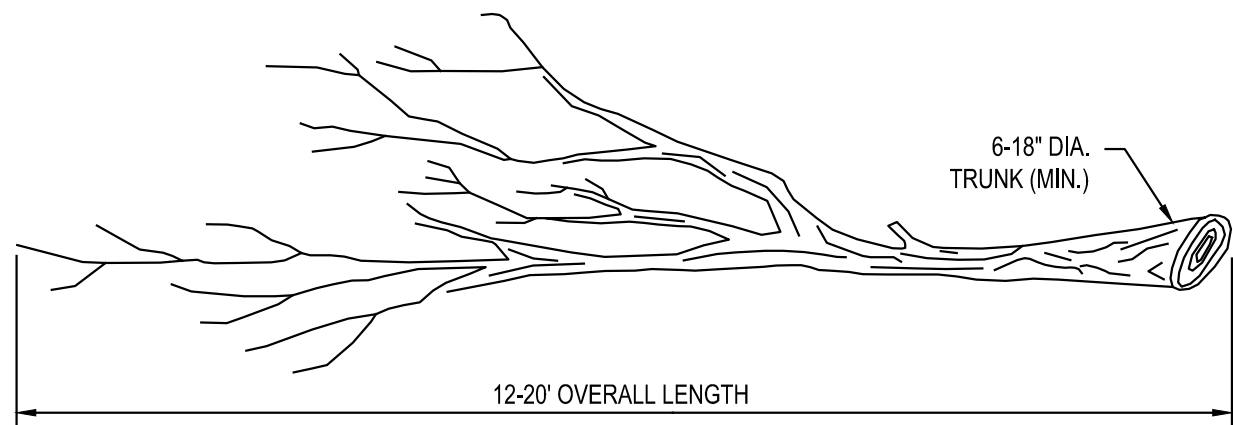
SIGNAGE



NOTES:  
SIGNAGE SHOULD BE INSTALLED EVERY 50 FEET (AS SHOWN) WITH THE TEXT FACING AWAY FROM THE WETLAND MITIGATION AREA.

DEAD FALL SNAG DETAIL

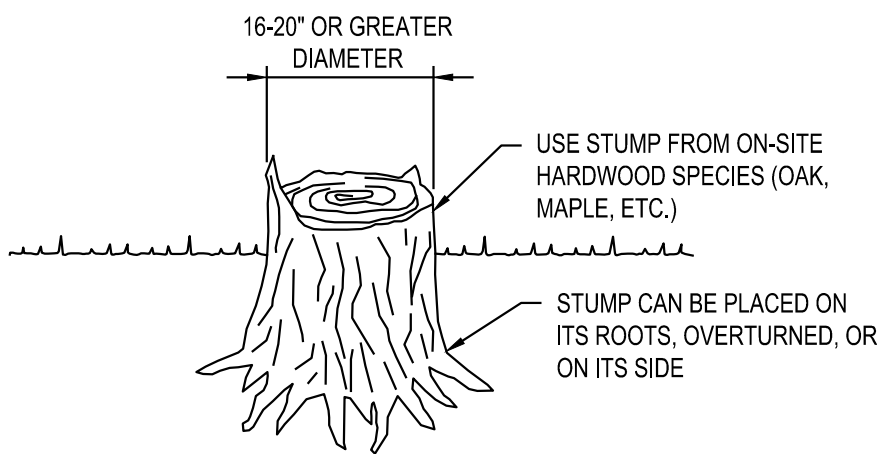
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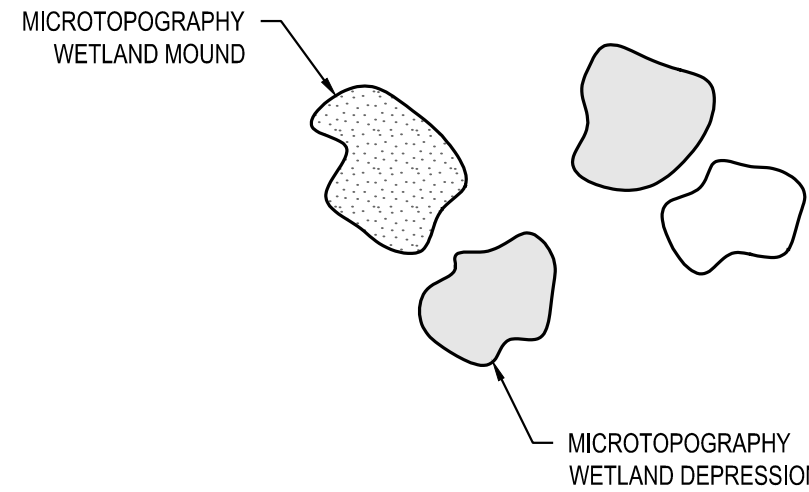
TREE STUMP DETAIL

N.T.S.

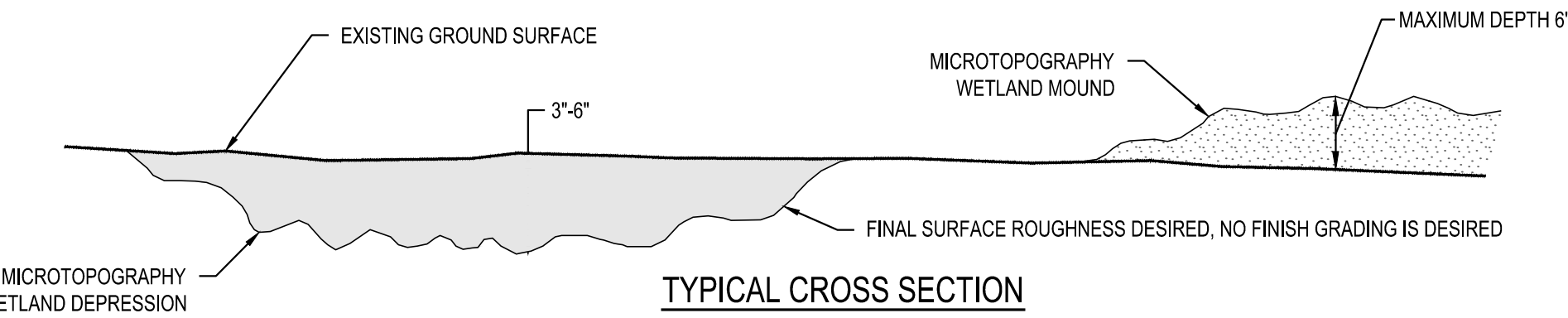


MICROTOPOGRAPHY DETAIL

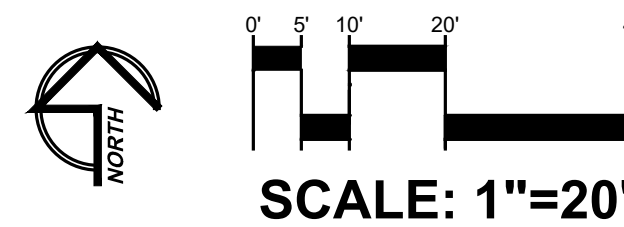
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SAMPLE LAYOUT



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|      |           |                                                                                                                                                                                                                                                        |                   |
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|      |           | PLANTING PLAN<br>WETLAND MITIGATION AREA 3<br>LOGISTICS CENTER AT SOUTHFIELDS<br>PHASE II WETLAND MITIGATION PLAN<br>TOWN OF ELKTON, CECIL COUNTY, MARYLAND                                                                                            |                   |
| DATE | REVISIONS | JOB NO:                                                                                                                                                                                                                                                | 31190945X3        |
|      |           | SCALE:                                                                                                                                                                                                                                                 | 1"=20'            |
|      |           | DATE:                                                                                                                                                                                                                                                  | FEBRUARY 23, 2022 |
|      |           | DRAWN BY:                                                                                                                                                                                                                                              | KRM               |
|      |           | DESIGN BY:                                                                                                                                                                                                                                             | KRM/DPS           |
|      |           | REVIEW BY:                                                                                                                                                                                                                                             | DPS/TAS           |
|      |           | SHEET:                                                                                                                                                                                                                                                 | 16 OF 17          |



**TREE PLANTINGS - STANDARDS AND SPECIFICATIONS**

1. PLANT MATERIAL SELECTION

A. ALL PLANT MATERIALS GREATER THAN 1" CALIPER SHALL MEET OR EXCEED THE REQUIREMENTS OF THE AMERICAN NURSERYMENS ASSOCIATION STANDARDS. ALL PLANTS SHALL BE TYPICAL OF THE SPECIES AND VARIETY, SHALL HAVE A NORMAL HABIT OF GROWTH, AND SHALL BE FIRST QUALITY, SOUND, VIGOROUS, WELL-BRANCHED, AND WITH HEALTHY, WELL-FURNISHED ROOT SYSTEMS. THEY SHALL BE FREE OF DISEASE, INSECT PESTS, AND MECHANICAL INJURIES.

B. PLANTING STOCK LESS THAN 1" CALIPER SHALL MEET THE FOLLOWING MINIMUM STANDARDS.

SEEDLINGS/WHIPS

HARDWOODS -  $\frac{1}{4}$ " TO  $\frac{3}{4}$ " CALIPER WITH ROOTS NOT LESS THAN 8" LONG

CONIFERS -  $\frac{1}{8}$ " TO  $\frac{1}{2}$ " CALIPER WITH ROOTS NOT LESS THAN 6" LONG AND TOP HEIGHT OF 6" OR MORE

SHRUBS  $\frac{1}{2}$ " OR LARGER CALIPER WITH 8" ROOT SYSTEM

C. THE COUNTY HAS THE RIGHT TO REQUIRE ALTERNATIVE SPECIES OR SIZE OF REPLACEMENT TREE STOCK.
2. PLANTING SITE PREPARATION

A. UNDISTURBED SITES

DISTURBANCE OF SOILS SHOULD BE LIMITED TO THE PLANTING FIELD FOR EACH PLANT. FOR PLANTINGS WHERE LARGE STOCK (BALLED AND BURLAPPED STOCK GREATER THAN 2" CALIPER) IS CHOSEN, THE PLANTING FIELD OF RADIUS OF 5 TIMES THE DIAMETER OF THE ROOT BALL IS RECOMMENDED.

IN AREAS OF STEEP SLOPES OR ERODIBLE SOILS, SOIL DISTURBANCE SHALL BE LIMITED TO THE PLANTING FIELD WHOSE RADIUS IS EQUAL TO 2.5 X DIAMETER OF THE ROOT BALL.

B. DISTURBED AREAS

SOILS SHOULD BE TREATED BY INCORPORATING NATURAL MULCH WITHIN THE TOP 12 INCHES, OR AMENDMENTS AS DETERMINED BY A SOILS ANALYSIS. NATURAL AMENDMENTS, SUCH AS ORGANIC MULCH OR LEAF MOLD COMPOST, ARE PREFERRED.

IF FILL MATERIAL IS USED AT THE PLANTING SITE, IT SHALL BE CLEAN FILL MIX WITH 12 INCHES OF NATIVE SOIL. STOCKPILING OF NATIVE TOPSOILS MUST BE DONE IN SUCH A WAY THAT THE HEIGHT OF THE PILE DOES NOT DAMAGE THE SEED BANK.

3. PLANTING PERIOD

DEPENDING ON THE SIZE STOCK BEING USED, THE RECOMMENDED PLANTING WINDOWS DIFFER (SEE PLANTING AND MAINTENANCE CALENDAR ON THIS SHEET).

4. PLANT MATERIAL STORAGE

IT IS RECOMMENDED THAT PLANTING OCCUR WITHIN 24 HOURS OF DELIVERY TO THE SITE. PLANT MATERIALS WHICH ARE LEFT UNPLANTED FOR MORE THAN 24 HOURS SHALL BE PROTECTED FROM DIRECT SUN AND WEATHER AND KEPT MOIST. BARE ROOT STOCK, WHICH ARE UNPLANTED FOR MORE THAN 24 HOURS, SHALL BE HEeled IN. NURSERY STOCK SHALL NOT BE LEFT UNPLANTED FOR MORE THAN 2 WEEKS. ON-SITE OR LOCAL TRANSPLANTED MATERIALS SHALL BE STORED IN TREE BANKS IF UNPLANTED FOR MORE THAN 24 HOURS.

5. ON-SITE INSPECTION

PRIOR TO PLANTING, PLANTING STOCK SHALL BE INSPECTED. PLANTS NOT CONFORMING TO STANDARD NURSERYMAN SPECIFICATIONS FOR SIZE, FORM, VIGOR, ROOTS, TRUNK WOUNDS, INSECTS, AND DISEASE SHALL BE REPLACED.

6. PLANTING SPECIFICATIONS

A. SEEDLINGS/WHIPS

PLANTING SMALL STOCK, SUCH AS SEEDLINGS AND WHIPS, AND BALLED AND BURLAPPED STOCK UP TO 2" CALIPER, CAN BE ACCOMPLISHED USING MANUAL METHODS OF PLANTING. SATISFACTORY EQUIPMENT INCLUDES SHOVELS, PLANTING OR DIBBLE BARS, AND MATTOCKS. FOR LARGER AREAS, PLANTING MACHINES MAY BE USED, BUT LINEAR, PLANTATION-TYPE PLANTINGS SHALL BE AVOIDED.

EXTREME CARE SHOULD BE TAKEN TO INSURE RETAINED MOISTURE OF THE ROOTS. WHILE PLANTING SEEDLINGS AND WHIPS, A MOIST CARRYING CONTAINER SHALL BE USED TO FURTHER PREVENT DESICCATION. FOR GREATER PROTECTION, SEEDLINGS MAY BE PLANTED WITH TREE SHELTERS.

AREAS PLANTED WITH SEEDLINGS OR WHIPS SHALL BE MULCHED AFTER PLANTING.

B. CONTAINER-GROWN STOCK

SUCCESSFUL PLANTING OF CONTAINER-GROWN STOCK REQUIRES CAREFUL SITE PREPARATION AND INSPECTION OF THE PLANT MATERIAL ROOT SYSTEM. CAUTION IS RECOMMENDED WHEN SELECTING PLANTS GROWN IN A SOILS MEDIUM DIFFERENT FROM THAT OF THE PLANTING SITE. THE PLANT SHOULD BE REMOVED FROM THE CONTAINER AND THE ROOTS GENTLY LOOSEENED FROM THE SOILS. IF THE ROOTS ENIRCLE THE ROOT BALL, SUBSTITUTION IS STRONGLY RECOMMENDED. J-SHAPED OR KINKED ROOT SYSTEMS SHOULD ALSO BE NOTED AND SUBSTITUTED IF NECESSARY. ROOTS MAY NOT BE TRIMMED ON-SITE DUE TO THE INCREASED CHANCES OF SOIL BORNE DISEASES.

THE PLANTING FIELD SHOULD BE PREPARED AS SPECIFIED. NATIVE STOCKPILED SOILS SHALL BE USED TO BACKFILL PLANTING FIELD. RAKE SOILS EVENLY OVER THE PLANTING FIELD AND COVER WITH 2 TO 4 INCHES OF MULCH.

C. BALLED AND BURLAPPED TREES

TREE SPADES ARE USUALLY EMPLOYED TO PLANT LARGER TREE STOCK (BALLED AND BURLAPPED STOCK GREATER THAN 2" CALIPER). THIS TECHNIQUE IS PARTICULARLY USEFUL WHEN TRANSPLANTING ON-SITE OR WITH LOCAL PLANT MATERIALS. FOR TREES LARGER THAN 6" DIAMETER AT BREAST HEIGHT (DBH), SPECIALIZED EQUIPMENT IS RECOMMENDED.

BALLED AND BURLAPPED TREES MUST BE HANDLED WITH CARE WHILE PLANTING. TREES SHALL NOT BE PICKED UP BY THE TRUNK OR DROPPED, AS BOTH PRACTICES WILL TEND TO SEPARATE THE TRUNK FROM THE ROOT BALL. PRIOR TO PLANTING, ROOT BALLS SHALL BE KEPT MOIST.

7. PLANTING METHODS

PLANTING FIELDS SHOULD BE CREATED. USE WATERING TO SETTLE SOIL BACKFILLED AROUND TREES. STOCKPILED NATIVE TOPSOILS, IF AVAILABLE, SHALL BE USED TO BACKFILL THE PLANTING FIELD. AMENDMENTS ARE NOT RECOMMENDED IN THE PLANTING FIELD, AS STUDIES HAVE SHOWN THAT ROOTS WILL BE ENCOURAGED TO STAY WITHIN THE AMENDED SOILS. SOILS SHOULD BE RAKED EVENLY OVER THE PLANTING FIELD AND COVERED WITH 2 TO 4 INCHES OF MULCH.

STAKING OF TREES IS NOT RECOMMENDED EXCEPT IN AREAS OF HIGH WINDS. STAKINGS MAY BE USED FOR TREES LARGER THAN 8 FEET IN HEIGHT. MOVEMENT IS NECESSARY TO STRENGTHEN THE TRUNK OF THE PLANTED TREE. IF STAKES ARE USED, THEY SHALL BE REMOVED AFTER THE FIRST GROWING SEASON. WRAPPING IS ALSO NOT RECOMMENDED DUE TO THE INCREASED OPPORTUNITIES FOR INSECT INFESTATION AND DISEASE.

8. POST CONSIDERATIONS

A. SOIL STABILIZATION

FOR AREAS OF LARGE-SCALE DISTURBANCE, SOILS MUST BE STABILIZED USING A NON-GROUND COVER OR ENGINEERING FABRIC.

B. PROTECTION DEVICES

TO PREVENT DAMAGE OF PLANTED AREAS, ALL REFORESTATION AND AFFORESTATION SITES MUST BE POSTED WITH APPROPRIATE SIGNS AND FENCED. CONSTRUCTION EQUIPMENT SHALL BE PROHIBITED IN THESE AREAS.

C. WATERING

HOW OFTEN?

ANY WATERING PLAN SHOULD COMPENSATE FOR RECENT RAINFALL PATTERNS. TREES CAN DIE FROM TOO MUCH WATER, AS WELL AS TOO LITTLE. NEWLY PLANTED TREES MAY NEED WATER AS MUCH AS ONCE A WEEK FOR THE ENTIRE GROWING SEASON. THE NEXT TWO YEARS MAY REQUIRE WATERING ONLY A FEW TIMES A YEAR, EVERY MONTH DURING JULY AND AUGUST. AFTER THAT PERIOD, TREES SHOULD ONLY NEED WATER IN SEVERE DROUGHTS. BARE ROOT TRANSPLANTS, AS OPPOSED TO BALLED AND BURLAP MATERIAL, IF THEY WERE SUFFICIENTLY WATERED DURING PLANTING, MAY NOT NEED WATER FOR ALMOST 2-4 WEEKS AFTER GROWTH BEGINS.

SOIL AND WATERING

SOIL TEXTURE INFLUENCES THE DOWNWARD FLOW OF WATER. SOILS WITH MORE CLAY TEND TO HOLD ON TO THE WATER MORE AND CAN BE WATERED LESS OFTEN. SOILS WITH MORE SAND DRAIN MORE QUICKLY AND NEED TO BE WATERED MORE OFTEN.

IF THE SOIL WAS WELL PREPARED BEFORE PLANTING, THEN THERE SHOULD NOT BE MANY DRAINAGE PROBLEMS. IF THERE IS RESTRICTED DOWNWARD FLOW OF WATER, THEN THE SOIL MAY HAVE BEEN COMPACTED DURING CONSTRUCTION AND NOT AERATED BEFORE PLANTING, OR THERE MAY BE A CLAY HARDPAN.

HOW TO WATER

THE BEST WAY TO WATER IS DEEPLY AND SLOWLY, USING A REGULAR HOSE, A SOAKER HOSE, OR DRIP IRRIGATION. ON LARGER TREES, START BY WATERING THE ROOT BALL THOROUGHLY AND THEN EXPAND THE WATERED AREA TO INCLUDE THE WHOLE ROOT ZONE AFTER THE TREE BECOMES MORE ESTABLISHED. MULCHING AROUND THE BASE OF NEWLY TRANSPLANTED TREES INSULATES ROOTS FROM DRYING TOO QUICKLY WHILE STILL PROVIDING AIR MOVEMENT TO THE ROOTS.

D. FERTILIZING

WHAT NUTRIENTS TO APPLY

TREES DEPEND ON THREE MAJOR NUTRIENTS: NITROGEN, PHOSPHORUS, AND POTASSIUM, AND A HOST OF OTHER MINOR ONES (OR MICRONUTRIENTS), SUCH AS CALCIUM, MAGNESIUM, AND IRON. IN MOST SOILS, MOST OF THE MICRONUTRIENTS ARE AVAILABLE IN ABUNDANCE. OF THE MAJOR NUTRIENTS, NITROGEN IS USUALLY THE LIMITED ONE. NOTHING SHOULD BE ADDED TO THE SOIL WITHOUT TESTING IT FIRST TO DETERMINE ITS NEEDS.

WHEN TO FERTILIZE

IN GENERAL, WHILE SOILS MAY BE DEFICIENT IN NITROGEN, IT IS NOT RECOMMENDED TO FERTILIZE A TREE WITHIN THE FIRST GROWING SEASON AFTER PLANTING. TOO MUCH NITROGEN MAY CAUSE A SPURT OF CANOPY GROWTH, WHICH THE ROOTS CANNOT SUPPORT. IT IS BEST TO WAIT UNTIL AFTER THE END OF THE FIRST GROWING SEASON, EITHER IN THE LATE FALL OR EARLY SPRING.

WHAT TYPE OF FERTILIZER

WHEN IT IS TIME TO FERTILIZE, ORGANIC FERTILIZERS ARE PREFERRED TO SYNTHETIC FERTILIZERS. BONE MEAL OR SEAWEED PRODUCTS ARE AVAILABLE COMMERCIALY. THEIR EFFECTIVENESS IS BASED ON THEIR ABILITY TO SUPPLY NUTRIENTS TO THE PLANT AS NEEDED WHILE MINIMIZING THE RISK OF EXCESS NUTRIENTS ENTERING THE FOREST SYSTEM AND THE WATER SUPPLY. SOME SYNTHETIC FERTILIZERS CAN MIMIC THIS SLOW ACTION AND MAY BE APPROPRIATE FOR USE.

E. CONTROL OF COMPETING VEGETATION

IN SOME CASES, UNWANTED VEGETATION GROWING NEAR NEWLY PLANTED TREES CAN TAKE OVER THE SITE. THE EXTENT TO WHICH THIS PROBLEM IS CONTROLLED DEPENDS ON THE ABILITY OF THE PLANTED MATERIAL TO WITHSTAND THE INTRUSION. SMALLER TREES NEED MORE CARE, ALTHOUGH SOME SEEDLINGS SURVIVE ALONG THE OVERGROWTH AND SHADE IT OUT WHEN THEY REACH A GREATER HEIGHT. AS A PREVENTIVE MEASURE, CONSIDER THE POTENTIAL FOR GROWTH OF INVASIVE SPECIES WHILE CHOOSING A REFORESTATION OR AFFORESTATION AREA. UNFORTUNATELY, GOOD SITES FOR REFORESTATION AND AFFORESTATION ARE GENERALLY GOOD SITES FOR UNWANTED VEGETATION AS WELL.

MULCH IS ONE OF THE BEST DETERRENTS TO WEEDS. SPREAD A 2-4" LAYER OF MULCH OVER THE ROOT AREA OF THE NEWLY PLANTED TREES AVOIDING DIRECT CONTACT WITH THE TRUNK. A PRIME SPOT FOR FUNGAL GROWTH. MULCH HELPS MAINTAIN THE SOIL MOISTURE LEVEL AND MAY PROVIDE A BUFFER FOR ANY EQUIPMENT, SUCH AS MOWERS, THAT MAY BE BROUGHT THROUGH THE AREA. MULCHING AND MANUAL CONTROL OF COMPETING VEGETATION IS MORE COMPATIBLE WITH THE LONG-TERM FOREST HEALTH THAN THE USE OF HERBICIDES.

F. PROTECTION: PESTS, DISEASES AND MECHANICAL INJURY

AN INTEGRATED PEST MANAGEMENT (IPM) PROGRAM IS ONE OF THE MOST EFFECTIVE AND SAFE APPROACHES FOR MAINTAINING A HEALTHY FOREST. THE BASICS OF IPM INCLUDE PROPER SPECIES SELECTION FOR THE SITE, GOOD PRUNING, MULCHING AND FERTILIZING PRACTICES, REGULAR MONITORING, AND PROPER TIMING OF NECESSARY SPRAYS. GOOD CULTURAL PRACTICES WILL MINIMIZE THE AMOUNT OF SPRAYING. PROFESSIONAL IPM PROGRAMS HAVE REDUCED PESTICIDE USE BY 90%. SOME ASPECTS OF A FULL IPM PROGRAM INCLUDE:

1) ELIMINATION OF SOME LOW VEGETATION BEFORE PLANTING. THIS WILL HELP CONTROL THE RODENT POPULATION, WHICH THRIVES IN BRUSHY ENVIRONMENTS.

2) USE OF TREE SHELTERS TO PROTECT THE TRUNKS OF SEEDLINGS OR WHIPS FROM ANIMAL DAMAGE. THE SHELTERS ACT AS MINI GREENHOUSES TO SPEED GROWTH. THESE TREES NEED MORE WATER THAN THOSE PLANTED WITHOUT TREE SHELTERS.

3) MULCHING AROUND THE TREES TO MINIMIZE INVASION BY EXOTIC PLANT SPECIES.

4) PRUNING DEAD AND DISEASED BRANCHES WITH A CLEAN CUT TO PREVENT SPREADING OF DISEASE.

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SUNSCALD IS A PROBLEM, WHICH THIN, YOUNG TREES ENCOUNTER. TREE WRAP IS COMMONLY USED TO PROTECT THESE TREES FROM SUNSCALD, BUT IS NOT RECOMMENDED DUE TO THE INCREASED OPPORTUNITIES FOR INSECT INFESTATION AND DISEASE. AN ALTERNATIVE IS TO ALLOW SMALL NONCOMPETITIVE BRANCHES, COMMONLY PRUNED, TO GROW ALONG THE SUNNY SIDE OF THE TRUNK TO HELP SHADE THE TRUNK.

NEWLY PLANTED TREES USUALLY DO NOT HAVE THE STRUCTURAL ROOTS TO SUPPORT THEM DURING HIGH WINDS. STAKES AND GUY WIRES, APPROPRIATE ONLY IN LOCATIONS WITH HIGH WINDS, SHOULD BE USED, BUT MUST BE REMOVED AFTER ONE GROWING SEASON OR THEY MAY CAUSE DAMAGE TO THE TREE AS IT GROWS

**TREE/SHRUB PLANTING SPECIFICATIONS**

| ZONE NAME                  | COMMON NAME                       | SCIENTIFIC NAME         | INDICATOR STATUS | QUANTITY | HEIGHT AT MATURITY (FEET) | SPACING (FEET) | PLANTING SPECIFICATIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |
|----------------------------|-----------------------------------|-------------------------|------------------|----------|---------------------------|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| WETLAND PLANTING ZONE      | TREES (3-GALLON CONTAINER STOCK)  |                         |                  |          |                           |                | PLANTING HOLE SHOULD BE AT LEAST TWICE DIAMETER OF THE PLANT'S CONTAINER. SET PLANT SO THAT THE TOP OF THE ROOT MASS IS LEVEL WITH THE SURROUNDING SOIL. DIG HOLE 4-6" DEEPER THAN THE CONTAINER, THEN BACKFILL TO PROPER DEPTH. FIRM BOTTOM SOIL BEFORE SETTING PLANT. CONTAINERS WITH SLANTED SIDES MAY BE INVERTED AND TAPPED TO REMOVE THE PLANT. STRAIGHT-SIDED CONTAINERS SHOULD BE SLIT OR CUT TO ALLOW PLANT REMOVAL. DO NOT PULL THE PLANT FREE FROM ITS CONTAINER. PRUNE ANY BOUND ROOTS FROM THE OUTSIDE OF THE ROOT MASS. GENTLY SCARIFY SIDES OF ROOT MASS WITH HANDS, BUT KEEP ROOT MASS INTACT. PLACE 3 TABLETS (10 GRAMS) OF AGRIFORM 20-10-5 FERTILIZER OR APPROVED SUBSTITUTE UNIFORMLY AROUND THE HOLE'S PERIMETER AT ONE HALF THE HOLE'S DEPTH WHILE BACKFILLING WITH SOIL. SET THE PLANT SO THAT THE TOP OF THE ROOT MASS IS LEVEL WITH THE SURROUNDING SOIL. BACKFILL WITH QUALITY SOIL FREE OF ROCK AND STONE. PACK FIRMLY WITH FEET. DO NOT "MOUND" THE PLANT. WATER THE PLANT GENEROUSLY. ADD ADDITIONAL SOIL IF BACKFILL SETTLES AFTER WATERING. |  |
|                            | RED MAPLE                         | ACER RUBRUM             | FAC              | 190      | 60                        | 12             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |
|                            | PIN OAK                           | QUERCUS PALUSTRIS       | FACW             | 190      | 80                        | 12             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |
|                            | SWAMP WHITE OAK                   | QUERCUS BICOLOR         | FACW             | 190      | 70                        | 12             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |
|                            | SWEETGUM                          | LIQUIDAMBAR STYRACIFLUA | FAC              | 190      | 80                        | 12             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |
|                            | RIVER BIRCH                       | BETULA NIGRA            | OBL              | 190      | 60                        | 12             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |
|                            | TOTAL:                            |                         |                  | 950      |                           |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |
|                            | SHRUBS (3-GALLON CONTAINER STOCK) |                         |                  |          |                           |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |
|                            | SILKY DOGWOOD                     | CORNUS AMOMUM           | FACW             | 143      | 10                        | 8              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |
|                            | SOUTHERN ARROWWOOD                | VIBURNUM DENTATUM       | FAC              | 143      | 10                        | 8              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |
| UPLAND SHRUB PLANTING ZONE | COMMON WINTERBERRY                | ILEX VERTICILLATA       | FAC              | 143      | 12                        | 8              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |
|                            | TOTAL:                            |                         |                  | 429      |                           |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |
|                            | SHRUBS (3-GALLON CONTAINER STOCK) |                         |                  |          |                           |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |
|                            | SOUTHERN ARROWWOOD                | VIBURNUM DENTATUM       | FAC              | 14       | 10                        | 8              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |
|                            | COMMON WINTERBERRY                | ILEX VERTICILLATA       | FAC              | 14       | 12                        | 8              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |
|                            | TOTAL:                            |                         |                  | 28       |                           |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |
|                            | OVERALL PLANTING TOTAL:           |                         |                  | 1,407    |                           |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |
|                            |                                   |                         |                  |          |                           |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |
|                            |                                   |                         |                  |          |                           |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |
|                            |                                   |                         |                  |          |                           |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |

**SEEDING SPECIFICATIONS FOR WETLAND PLANTING ZONES**

| MARYLAND COASTAL PLAIN FACW MIX (ERNMX-733; OR EQUIVALENT)                                                                              |                             |                         |                  |                           |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-------------------------|------------------|---------------------------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ZONE NAME                                                                                                                               | COMMON NAME                 | SCIENTIFIC NAME         | INDICATOR STATUS | HEIGHT AT MATURITY (FEET) | PERCENT IN MIX | PLANTING SPECIFICATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| WETLAND TREE AND SHRUB                                                                                                                  | FOX SEDGE                   | CAREX VULPINOIDEA       | FACW             | 3                         | 20.0%          | SEEDING RATE: 20 LB/ACRE SEED THIS MIX WITH OATS (Avena sativa) AS A COMPANION CROP AND FOR EROSION CONTROL AT 30 LB/ACRE. SEEDING METHOD: WEATHER AND SUB-CONTRACTOR DEPENDENT. METHOD TO BE APPROVED BY OVERSEEING BIOLOGIST PRIOR TO COMMENCEMENT OF SEEDING ACTIVITIES. BROADCAST SEEDING AND STRAW MULCHING BY HAND IS ENCOURAGED, EXCEPT WHERE EROSION CONTROL MATTING IS SPECIFIED. SEED SHALL BE PROVIDED IN SEALED CONTAINERS CLEARLY LABELED WITH SEED NAME, WEIGHT, AND PERCENTAGES OF SEED MIXTURE. THE CONTRACTOR SHALL PROVIDE A SIGNED COPY OF A SEED CERTIFICATION STATEMENT PROVIDED BY THE VENDOR. THIS STATEMENT SHALL INCLUDE THE NAME AND ADDRESS OF THE VENDOR AND STATEMENT OF CERTIFICATION. PRIOR TO SEEDING, ALL PROPOSED SEEDING AREAS SHALL BE RAKED OR DISKED TO MAXIMIZE SOIL-SEED CONTACT AND TO CLEAR SOILS OF STONES, DEBRIS, WEEDS, PRIOR PLANT GROWTH, STICKS, STUMPS, AND OTHER DEBRIS OR IRREGULARITIES WHICH MIGHT INTERFERE WITH THE SEEDING OPERATION. GROWTH OF PLANT SPECIES, OR SUBSEQUENT MAINTENANCE OF THE GRASS COVERED AREAS. MULCHING: STRAW MULCH TO BE APPLIED AT 3 TONS PER ACRE (OR 140 LBS PER 1,000 SQ. FT.) TO SEEDED AREAS WHEN NON-TACKIFIER SEEDING METHOD IS IMPLEMENTED. HAND APPLICATION OF MULCH IS ENCOURAGED. |
|                                                                                                                                         | VIRGINIA WILDRYE            | ELYMUS VIRGINICUS       | FAC              | 3                         | 18.0%          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                         | REDTOP PANICGRASS           | PANICUM RIGIDULUM       | FACW             | 4                         | 17.0%          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                         | LURID SEDGE                 | CAREX LURIDA            | OBL              | 3                         | 11.7%          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                         | HOP SEDGE                   | CAREX LUPULINA          | OBL              | 3                         | 10.0%          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                         | BLUNT BROOM SEDGE           | CAREX SCOPARIA          | FACW             | 3                         | 10.0%          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                         | FRINGED SEDGE               | CAREX CRINITA           | FACW             | 4                         | 3.0%           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                         | SOFT RUSH                   | JUNCUS EFFUSUS          | OBL              | 4                         | 3.0%           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                         | SWAMP MILKWEED              | ASCLEPIAS INCARNATA     | OBL              | 3                         | 2.0%           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                         | BONESET                     | EUPATORIUM PERFOOLIATUM | FACW             | 4                         | 1.0%           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                         | COMMON SNEEZEWEED           | HELENIUM AUTUMNALE      | FACW             | 4                         | 1.0%           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                         | PATH RUSH                   | JUNCUS TENUIS           | FAC              | 3                         | 1.0%           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                         | NEW YORK IRONWEED           | VERNONIA NOVEBORACENSIS | FACW             | 7                         | 1.0%           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                         | WRINKLELEAF GOLDENROD       | SOLIDAGO RUGOSA         | FAC              | 5                         | 0.7%           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                         | SQUARE STEMMED MONKEYFLOWER | MIMULUS RINGENS         | OBL              | 4                         | 0.3%           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                         | WOOLGRASS                   | SCIRPUS CYPERINUS       | OBL              | 5                         | 0.3%           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                         | TOTAL LBS OF SEED NEEDED    |                         |                  |                           | 71             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| NOTE: SEED MIXES ARE AVAILABLE FROM ERNST CONSERVATION SEEDS, 8884 MERCER PIKE, MEADVILLE, PA 16335. EQUIVALENT SEED MIX IS ACCEPTABLE. |                             |                         |                  |                           |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

**SEEDING SPECIFICATIONS FOR BUFFER/UPLAND ZONES**

| RIGHT-OF-WAY WOODS MIX W/ ANNUAL RYEGRASS (ERNMX-132-1; OR EQUIVALENT)                                                                  |                     |                          |                  |                           |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------------------------|------------------|---------------------------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ZONE NAME                                                                                                                               | COMMON NAME         | SCIENTIFIC NAME          | INDICATOR STATUS | HEIGHT AT MATURITY (FEET) | PERCENT IN MIX | PLANTING SPECIFICATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| BUFFER/UPLAND ZONE                                                                                                                      | DEERTONGUE          | PANICUM CLANDESTINUM     | FACW             | 4                         | 29.0%          | SEEDING RATE: 30 LB/ACRE SEED THIS MIX WITH OATS (Avena sativa) AS A COMPANION CROP AND FOR EROSION CONTROL AT 15 LB/ACRE. SEEDING METHOD: WEATHER AND SUB-CONTRACTOR DEPENDENT. METHOD TO BE APPROVED BY OVERSEEING BIOLOGIST PRIOR TO COMMENCEMENT OF SEEDING ACTIVITIES. BROADCAST SEEDING AND STRAW MULCHING BY HAND IS ENCOURAGED, EXCEPT WHERE EROSION CONTROL MATTING IS SPECIFIED. SEED SHALL BE PROVIDED IN SEALED CONTAINERS CLEARLY LABELED WITH SEED NAME, WEIGHT, AND PERCENTAGES OF SEED MIXTURE. THE CONTRACTOR SHALL PROVIDE A SIGNED COPY OF A SEED CERTIFICATION STATEMENT PROVIDED BY THE VENDOR. THIS STATEMENT SHALL INCLUDE THE NAME AND ADDRESS OF THE VENDOR AND STATEMENT OF CERTIFICATION. PRIOR TO SEEDING, ALL PROPOSED SEEDING AREAS SHALL BE RAKED OR DISKED TO MAXIMIZE SOIL-SEED CONTACT AND TO CLEAR SOILS OF STONES, DEBRIS, WEEDS, PRIOR PLANT GROWTH, STICKS, STUMPS, AND OTHER DEBRIS OR IRREGULARITIES WHICH MIGHT INTERFERE WITH THE SEEDING OPERATION. GROWTH OF PLANT SPECIES, OR SUBSEQUENT MAINTENANCE OF THE GRASS COVERED AREAS. MULCHING: STRAW MULCH TO BE APPLIED AT 3 TONS PER ACRE (OR 140 LBS PER 1,000 SQ. FT.) TO SEEDED AREAS WHEN NON-TACKIFIER SEEDING METHOD IS IMPLEMENTED. HAND APPLICATION OF MULCH IS ENCOURAGED. |
|                                                                                                                                         | ANNUAL RYEGRASS     | LOLIUM MULTIFLORUM       | NI               | 3                         | 29.0%          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                         | VIRGINIA WILDRYE    | ELYMUS VIRGINICUS        | FAC              | 3                         | 15.0%          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                         | SWITCHGRASS         | PANICUM VIRGATUM         | FAC              | 4                         | 15.0%          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                         | CREEPING RED FESCUE | FESTUCA RUBRA            | FACU             | 3                         | 10.0%          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                         | AUTUMN BENTGRASS    | AGROSTIS PERENNANS       | FACU             | 3                         | 5.0%           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                         | FOX SEDGE           | CAREX VULPINOIDEA        | FACW             | 3                         | 3.0%           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                         | PARTRIDGE PEA       | CHAMAECRISTA FASCICULATA | FACU             | 3                         | 3.0%           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| TOTAL LBS OF SEED NEEDED                                                                                                                |                     |                          |                  |                           | 54             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| NOTE: SEED MIXES ARE AVAILABLE FROM ERNST CONSERVATION SEEDS, 8884 MERCER PIKE, MEADVILLE, PA 16335. EQUIVALENT SEED MIX IS ACCEPTABLE. |                     |                          |                  |                           |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

**CONTAINER STOCK TREE AND SHRUB PLANTING DETAIL**

**TREE AND SHRUB PLANTING NOTES:**

1. PLANTING HOLE SHOULD BE AT LEAST TWICE DIAMETER OF THE PLANT'S CONTAINER.
  2. DIG HOLE 2" DEEPER THAN THE DEPTH OF CONTAINER. THEN BACKFILL TO PROPER DEPTH. FIRM BOTTOM SOIL BEFORE SETTING PLANT.
  3. CONTAINERS WITH SLANTED SIDES MAY BE INVERTED AND TAPPED TO REMOVE THE PLANT. STRAIGHT-SIDED CONTAINERS SHOULD BE SLIT OR CUT TO ALLOW PLANT REMOVAL. DO NOT PULL THE PLANT FREE FROM ITS CONTAINER!
  4. PRUNE ANY BOUND ROOTS FROM THE OUTSIDE OF THE ROOT MASS. GENTLY SCARIFY SIDES OF ROOT MASS WITH HANDS, BUT KEEP ROOT MASS INTACT.
  5. PLACE SLOW RELEASE FERTILIZER UNIFORMLY AROUND THE HOLE'S PERIMETER AT ONE HALF THE HOLE'S DEPTH WHILE BACKFILLING WITH SOIL.
  6. SET PLANT SO THAT THE TOP OF THE ROOT MASS IS LEVEL WITH THE SURROUNDING SOIL.
  7. BACKFILL WITH QUALITY SOIL FREE OF ROCK AND STONE. PACK FIRMLY WITH FEET.
  8. DO NOT "MOUND" THE PLANT.
  9. WATER PLANT GENEROUSLY. ADD ADDITIONAL SOIL IF BACKFILL SETTLES AFTER WATERING.
  10. INSTALL DEER PROTECTION SHELTERS AROUND ALL TREES AND SHRUBS.

**PLANTING AND MAINTENANCE CALENDAR**

| TASKS                           | MONTHS |      |     |     |     |      |      |     |      |     |      |      |
|---------------------------------|--------|------|-----|-----|-----|------|------|-----|------|-----|------|------|
|                                 | *JAN   | *FEB | MAR | APR | MAY | JUNE | JULY | AUG | SEPT | OCT | NOV* | DEC* |
| TRANSPLANT OF 2" DBH OR GREATER |        |      |     |     |     |      |      |     |      |     |      |      |
| PLANTING SEEDLINGS, WHIPS       |        |      |     |     |     |      |      |     |      |     |      |      |
| MINIMUM MONITORING              |        |      |     |     |     |      |      |     |      |     |      |      |
| FERTILIZER (IF NEEDED)*         |        |      |     |     |     |      |      |     |      |     |      |      |
| WATER**                         |        |      |     |     |     |      |      |     |      |     |      |      |
| WATER**                         |        |      |     |     |     |      |      |     |      |     |      |      |

RECOMMENDED, OPTIMAL TIME

RECOMMENDED, WITH ADDITIONAL CARE

RECOMMENDED

\*

DEPENDENT UPON SITE CONDITIONS

\*\*

DEPENDENT UPON SITE CONDITIONS: WEEKLY WATERING IS STRONGLY RECOMMENDED FROM MAY THROUGH OCTOBER 1ST UNLESS WEEKLY RAINFALL EQUALS 1.

NOTES:

  1. ACTIVITIES DURING NOVEMBER THROUGH FEBRUARY DEPEND ON GROUND CONDITIONS.
  2. THE PLANTING AND CARE OF TREES IS MOST SUCCESSFUL WHEN COORDINATED WITH LOCAL CONDITIONS. THIS CALENDAR SUMMARIZES SOME OF THE RECOMMENDED TIME FRAMES FOR BASIC REFORESTATION AND STRESS REDUCTION ACTIVITIES.

**TYPICAL PLANTING LAYOUT DETAIL**

**DEER PROTECTION - TREE DETAIL**

**DEER PROTECTION - SHRUB DETAIL**