

Public Notice

U.S. Army Corps
of Engineers
Baltimore District

In Reply to Application Number
NAB-2021-60470 (Baltimore County DPW/Gunpowder
Sewershed/Sewer Line)

PN 21-20

Comment Period: June 4, 2021 to July 4, 2021

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. David A. Bayer, P.E.
Baltimore County Department of Public Works
111 West Chesapeake Avenue
Towson, Maryland 21204

WATERWAY AND LOCATION OF THE PROPOSED WORK: The proposed project is located within the Gunpowder sewershed, originating east of Harford Road and extending generally northeast to Northwind Road, Parkville, Baltimore County, Maryland.

OVERALL PROJECT PURPOSE: To construct a new 15" diameter relief sewer line in the Gunpowder sewershed to eliminate sanitary sewer overflows and correct identified deficiencies.

PROJECT DESCRIPTION: To construct a new 15" diameter relief sewer line in the Gunpowder sewershed, originating east of Harford Road and extending generally northeast, where it ties in with an existing sewer line north of Northwind Road, Parkville, Baltimore County, Maryland. This project is part of a USEPA Consent Decree. The project would result in permanent impacts to approximately 137 linear feet (1,964 square feet) of stream channel as a result of streambed and bank stabilization to protect sewer infrastructure at stream crossings. The project would temporarily impact approximately 487 linear feet of stream channel and 45,672 square feet of non-tidal wetlands for temporary construction and placement of the proposed sewer line. A 20-foot wide portion of the easement will be permanently maintained, with plantings proposed on each side of the easement in wetlands and buffers. There will be no permanent wetland conversion, wetland loss, or stream loss associated with this project. All work is to be completed in accordance with the attached plan(s).

EFFECTS ON AQUATIC RESOURCES:

Activity	Effect Duration	Resource Type/ Amount (sq.ft/lf)	Authority
Stream Diversion	Temporary Fill	Perennial Stream/ 90 linear feet	Section 404
Stream	Temporary Fill	Intermittent Stream/397 linear	Section 404

Diversion		feet	
Bank Stabilization	Permanent Fill	Perennial Stream/55 linear feet	Section 404
Bank Stabilization	Permanent Fill	Intermittent Stream/82 linear feet	Section 404
Construction	Temporary Fill	Non-tidal wetlands/45,672 square feet	Section 404

LEAD FEDERAL AGENCY: The U.S. 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: As part of the planning process for the proposed project, steps were taken to ensure avoidance and minimization of impacts to waters of the United States (WOTUS) to the maximum extent practicable. Except for approximately 137 linear feet of stream channel, all other impacts are temporary in duration. The permanent impacts to stream channel are necessary to stabilize and protect sewer infrastructure and will result in no permanent stream loss. The applicant proposes to re-plant approximately 24,473 square feet of non-tidal wetlands outside of the 20-foot wide easement in wetlands and buffers, which once at full maturity, will provide a closed canopy over the easement. No permanent wetland loss or conversion is anticipated. Existing access roads would be utilized to the greatest extent possible and new temporary access roads will be constructed in uplands.

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, U.S. Environmental Protection Agency.

ENDANGERED SPECIES: The lead federal agency is responsible for Endangered Species Act coordination. A preliminary review of this application indicates that the proposed work will have no effect Federally-listed 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 lead federal agency is responsible for Essential Fish Habitat coordination. The Magnuson-Stevens Fishery Conservation and Management Act

(MSFCMA), 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 (NMFS) 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 project site lies in or adjacent to EFH as described under MSFCMA for managed species under the MSFCMA. The Baltimore District has made a preliminary determination that the project will not have a substantial adverse effect on 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: The lead federal agency is responsible for historic resources coordination. Pursuant to Section 106 of the National Historic Preservation Act (NHPA) 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 NHPA 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. The lead federal agency is responsible for tribal coordination. 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 USACE. 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 (CZM) 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.

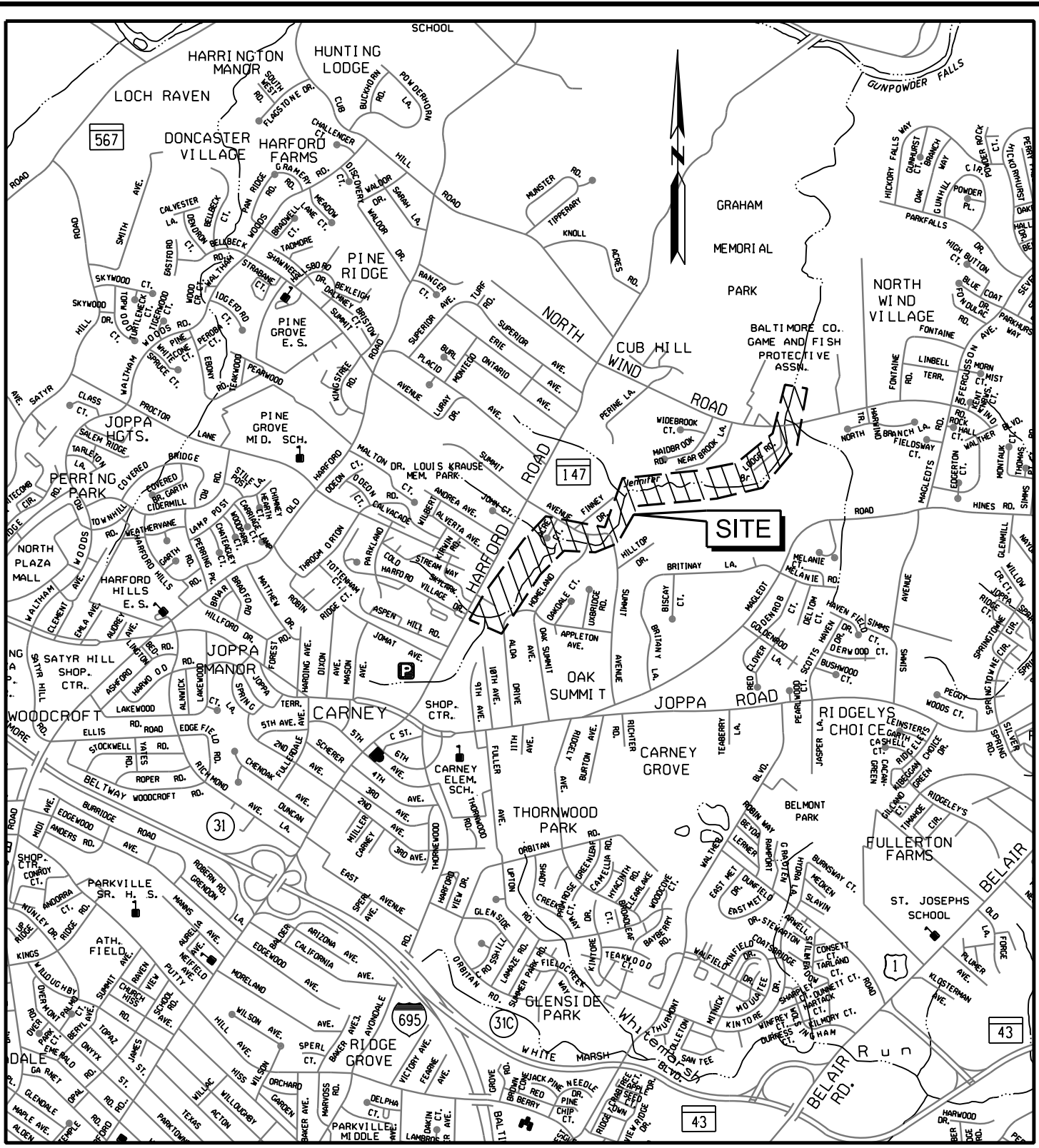
Written comments concerning the work described above related to the factors listed above or other pertinent factors must be received by the U.S. Army Corps of Engineers, Baltimore District within the comment period specified above through postal mail at the address below or electronic submission to the project manager email address below. Written comments should reference the Application Number: NAB-2021-60470-M43.

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, need to be received within the comment period as specified above in order to receive consideration. Also, the public hearing request(s) must clearly set forth the interest which may be adversely affected by this activity and the way the interest may be adversely affected. The public hearing request may be submitted by email or mailed to the following address:

Mrs. April E. Sparkman
(Email: April.E.Sparkman@usace.army.mil)
U.S. Army Corps of Engineers, Baltimore District
Attn: Regulatory Branch
2 Hopkins Plaza
Baltimore, MD 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 Mrs. April E. Sparkman at 410-962-0148 or by email at April.E.Sparkman@usace.army.mil. This public notice is issued by the Chief, Regulatory Branch.



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ENGINEERS
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CONSTRUCTION MANAGERS

936 RIDGEBROOK ROAD
 SPARKS, MARYLAND 21152
 TELEPHONE: (410) 316-7800
 FAX: (410) 316-7818

DATE: MAY 2021
SCALE: 1" = 2000'
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BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS
GUNPOWDER SEWERSHED
JENNIFER BRANCH RELIEF SEWER
 BALTIMORE COUNTY, MARYLAND
VICINITY MAP

LEGEND

----- 360 -----	EX. CONTOUR		LIMIT OF DISTURBANCE
— SD — SD —	EX. STORM DRAIN	— SF —	SILT FENCE
— S — S —	EX. SANITARY SEWER	— SSF —	SUPER SILT FENCE
	EX. MANHOLE		DEWATERING PUMP AND HOSE
— UE — UE —	EX. UNDERGROUND ELECTRIC		FILTER BAG
— OH — OH —	EX. OVERHEAD ELECTRIC		SAND BAG DAM
— G — G —	EX. GAS LINE		MOUNTABLE BERM
— W — W —	EX. WATER LINE		TEMPORARY ACCESS BRIDGE
— X // — X //	EX. FENCE		TEMPORARY ACCESS CULVERT
	EX. TRAFFIC BARRIER		PROPOSED SANITARY SEWER
	EX. WOODS LINE		STABILIZED CONSTRUCTION ENTRANCE
	EX. TREE		
	EX. UTILITY POLE		
-----	EX. EASEMENT		
-----	PROPERTY LINE		
— WUS —	WATERS OF THE U.S.		
— WL —	EX. NON-TIDAL WETLAND		
— WB — WB —	25' WETLAND BUFFER		
	SPECIMEN TREE		
— FP — FP —	EX. 100 YR. FLOODPLAIN		

LEGEND FOR IMPACT TYPES

	PERMANENT WATERS OF U.S. IMPACT		TEMPORARY NON-TIDAL PEM WETLAND IMPACT
	TEMPORARY WATERS OF U.S. IMPACT		TEMPORARY NON-TIDAL PFO WETLAND IMPACT
			TEMPORARY NON-TIDAL PSS WETLAND IMPACT
			TEMPORARY 25' NON-TIDAL WETLAND BUFFER IMPACT

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936 RIDGEBROOK ROAD
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TELEPHONE: (410) 316-7800
FAX: (410) 316-7818

DATE:
MAY 2021

SCALE:
AS SHOWN

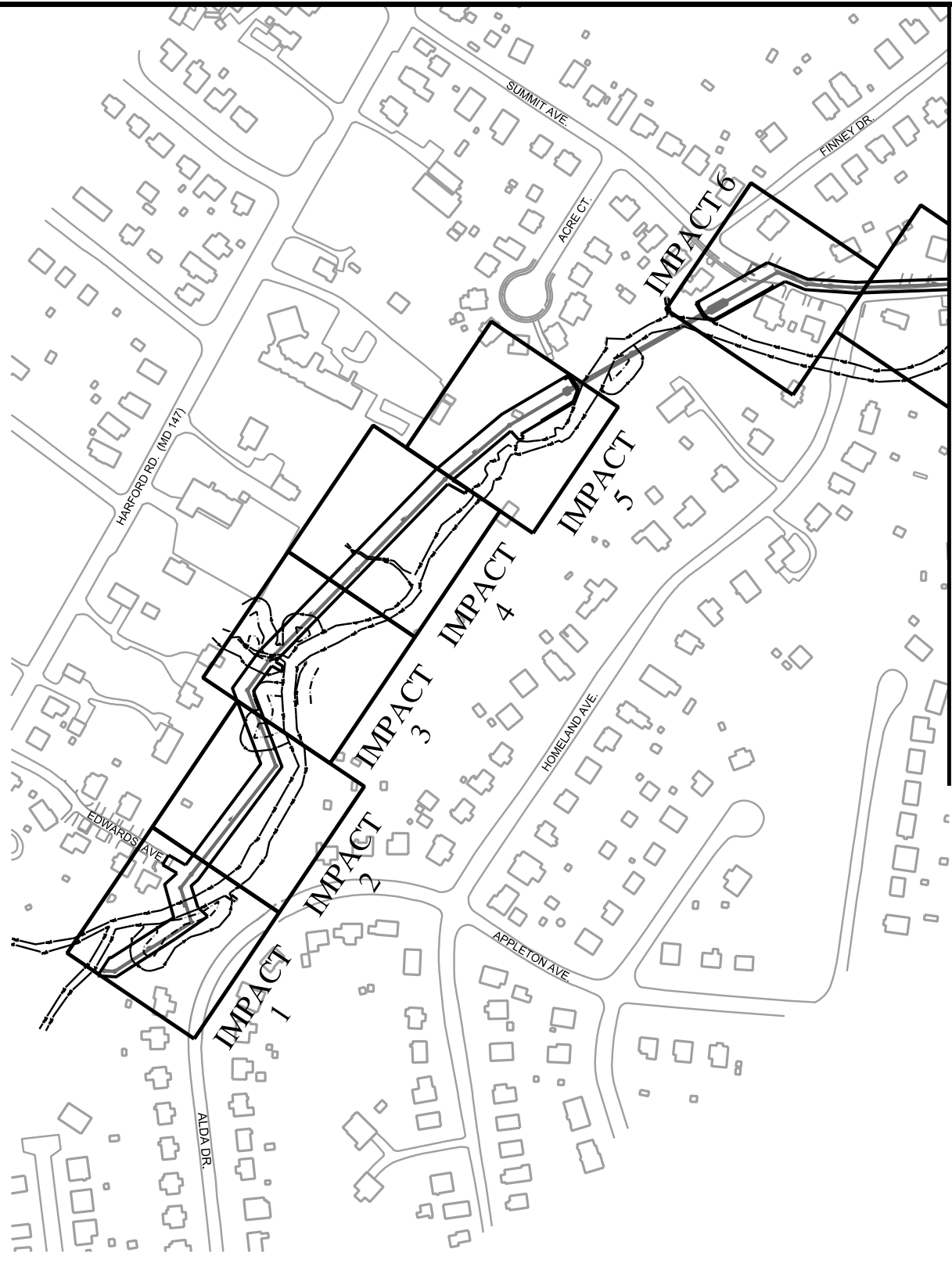
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CSD

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS

GUNPOWDER SEWERSHED
JENNIFER BRANCH RELIEF SEWER
BALTIMORE COUNTY, MARYLAND

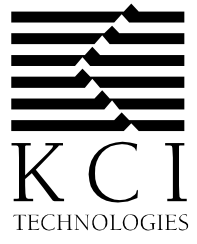
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MATCH LINE - SEE LOCATION MAP-2

SHEET 3 OF 35



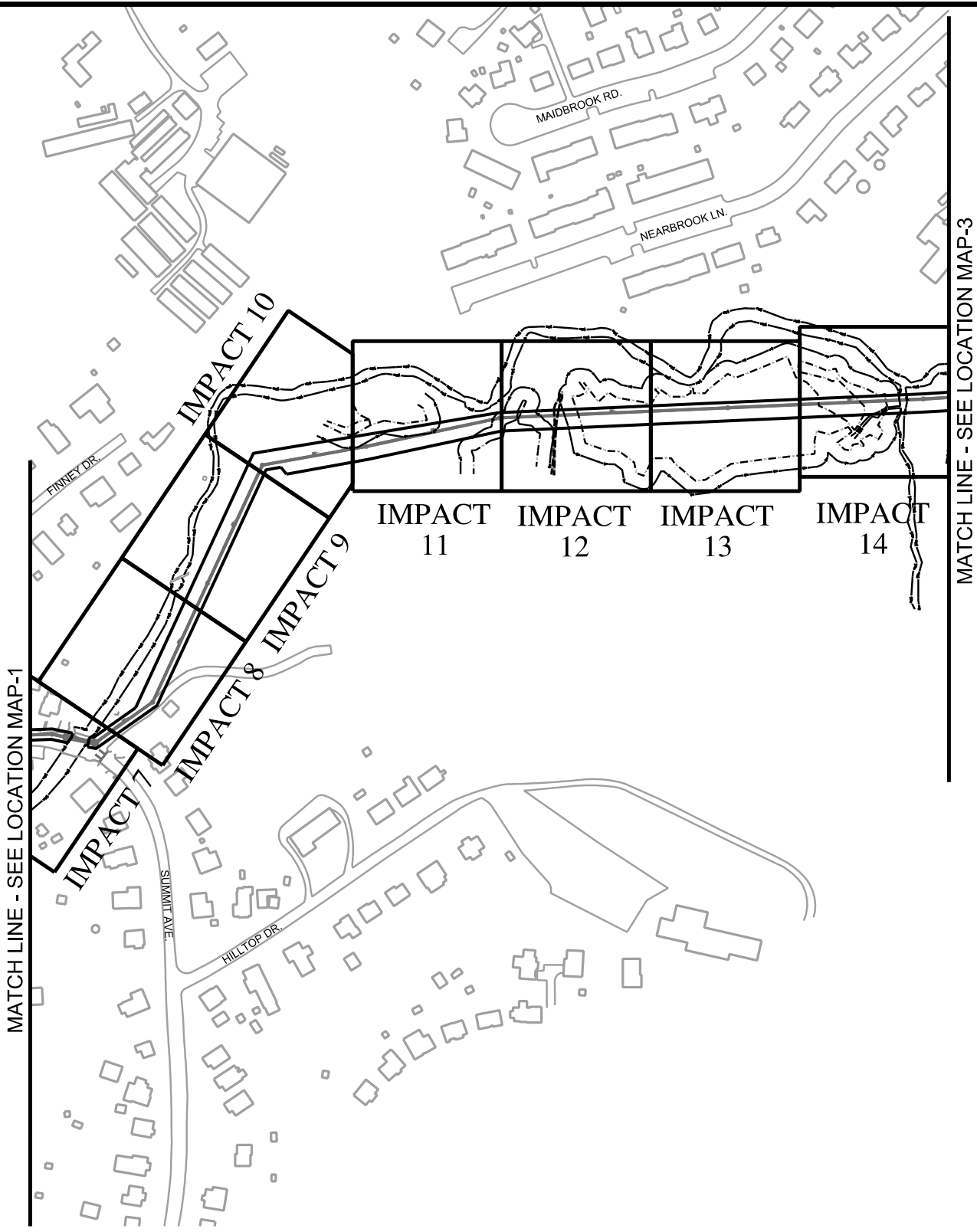
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MAY 2021
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BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS
GUNPOWDER SEWERSHED
JENNIFER BRANCH RELIEF SEWER
BALTIMORE COUNTY, MARYLAND

LOCATION MAP-1

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SHEET 4 OF 35



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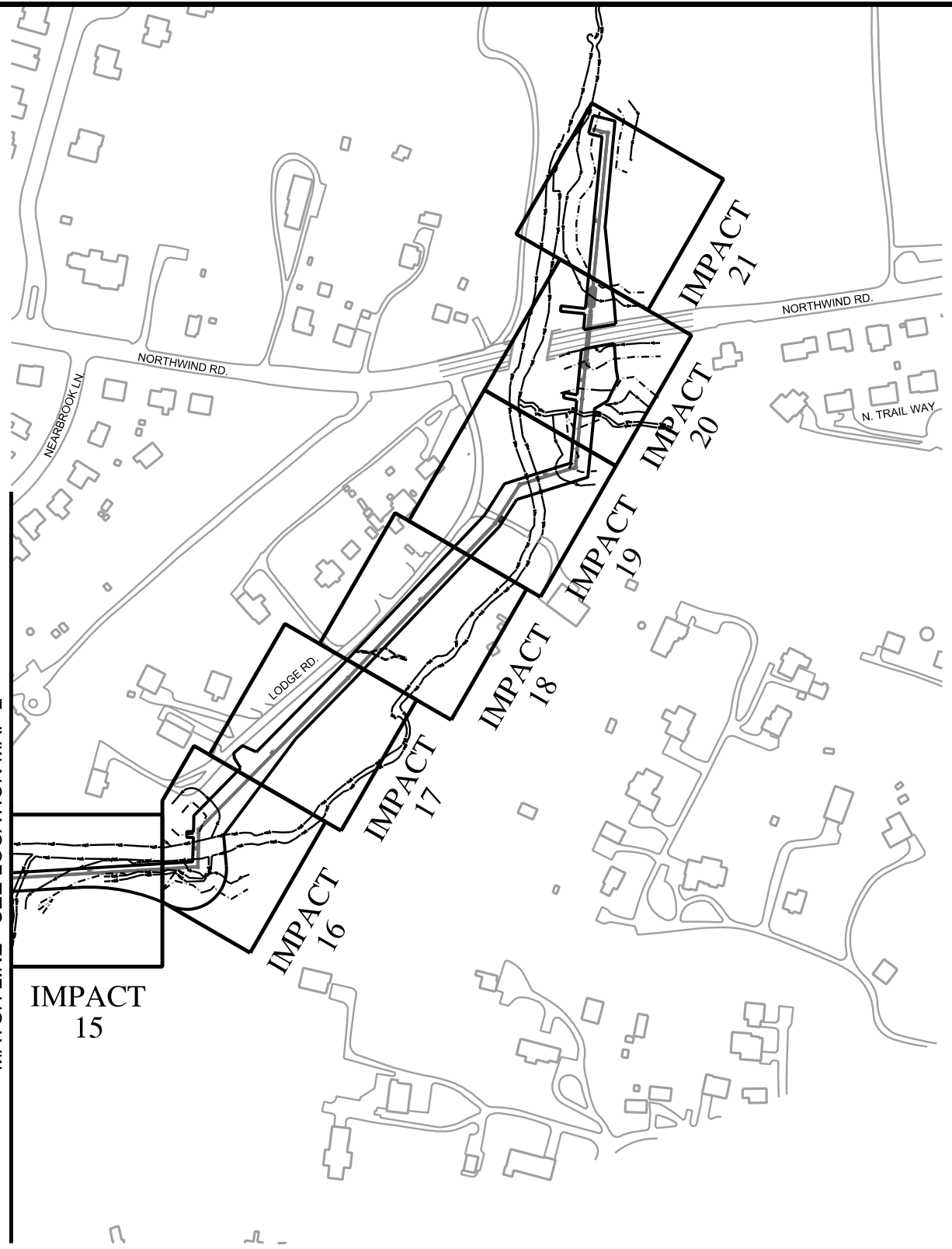
DATE:
MAY 2021
SCALE:
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CSD

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS
GUNPOWDER SEWERSHED
JENNIFER BRANCH RELIEF SEWER
BALTIMORE COUNTY, MARYLAND
LOCATION MAP-2

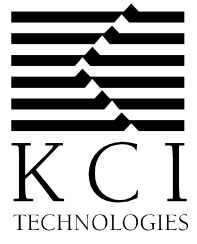
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MATCH LINE - SEE LOCATION MAP-2



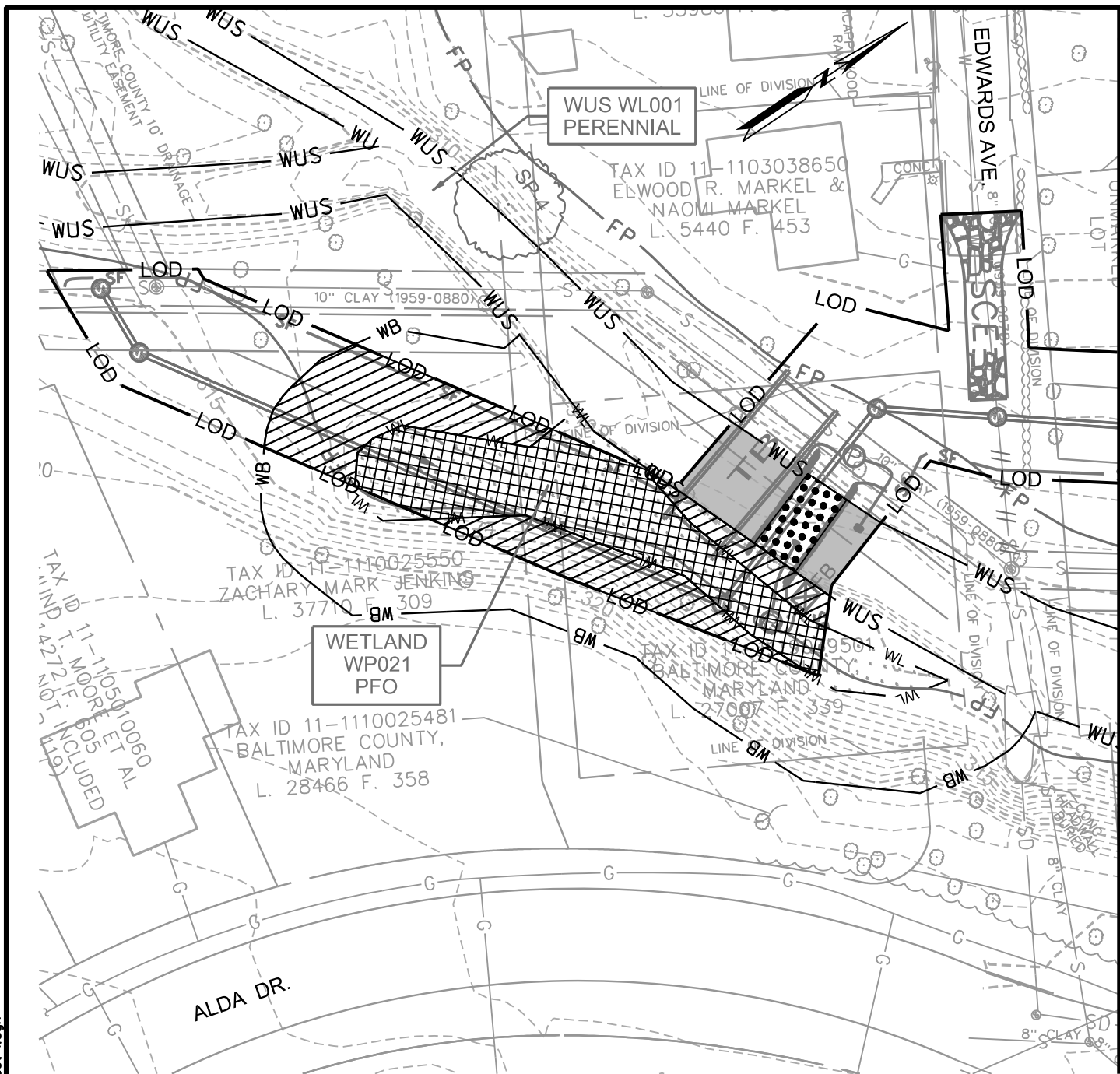
SHEET 5 OF 35



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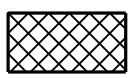
BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS
GUNPOWDER SEWERSHED
JENNIFER BRANCH RELIEF SEWER
BALTIMORE COUNTY, MARYLAND
LOCATION MAP-3



MATCHLINE (SEE IMPACT 2)



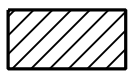
PERMANENT WATERS OF U.S. IMPACT - PERENNIAL
305 SF./ 0.01 AC./ 13 LF.



TEMPORARY NON-TIDAL PFO WETLAND IMPACT
2,472 SF./ 0.05 AC.



TEMPORARY WATERS OF U.S. IMPACT - PERENNIAL
843 SF./ 0.02 AC./ 36 LF.



TEMPORARY 25' NON-TIDAL WETLAND BUFFER IMPACT
2,533 SF./ 0.06 AC.

NOTE:
IMPACTS WITHIN THE KCI LOD INCLUDE IMPACTS ASSOCIATED WITH JMT'S JENNIFER BRANCH SANITARY SEWER REHABILITATION PROJECT ON THIS IMPACT PLATE. THE JMT DESIGNED JENNIFER BRANCH SANITARY SEWER REHABILITATION PROJECT, SUBMITTED TO MDE IN FEBRUARY 2021, WILL REFER TO THIS JENNIFER BRANCH RELIEF SEWER PROJECT.

SHEET 6 OF 35

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DATE:
MAY 2021

SCALE:
1" = 40'

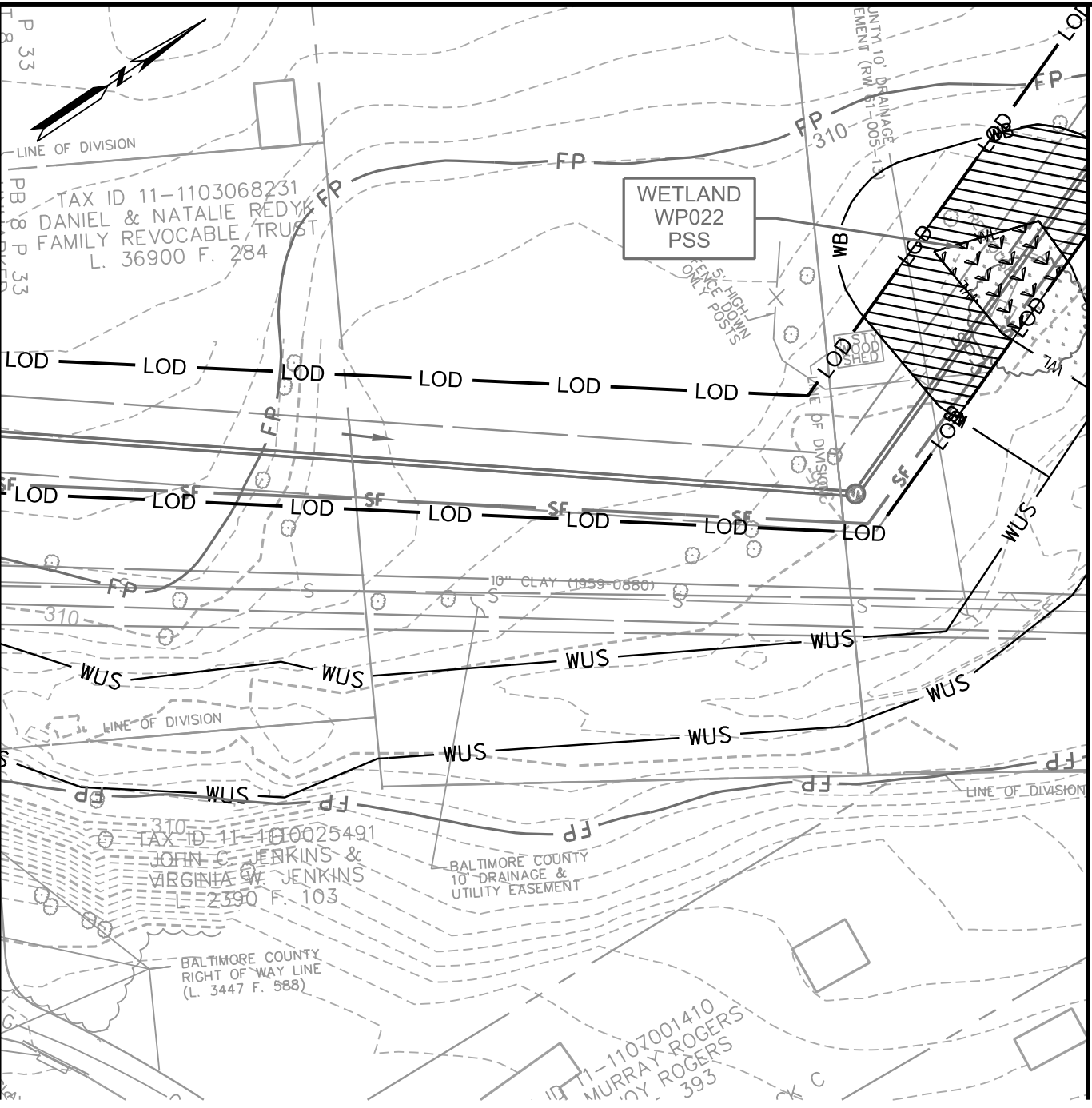
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BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS
GUNPOWDER SEWERSHED
JENNIFER BRANCH RELIEF SEWER
BALTIMORE COUNTY, MARYLAND

IMPACT 1

MATCHLINE (SEE IMPACT 1)

MATCHLINE (SEE IMPACT 3)

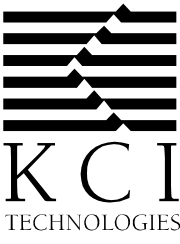


 TEMPORARY NON-TIDAL PSS WETLAND IMPACT
564 SF./ 0.01 AC.

 TEMPORARY 25' NON-TIDAL WETLAND BUFFER IMPACT
1,863 SF./ 0.04 AC.

NOTE:
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SHEET 7 OF 35



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SPARKS, MARYLAND 21152
TELEPHONE: (410) 316-7800
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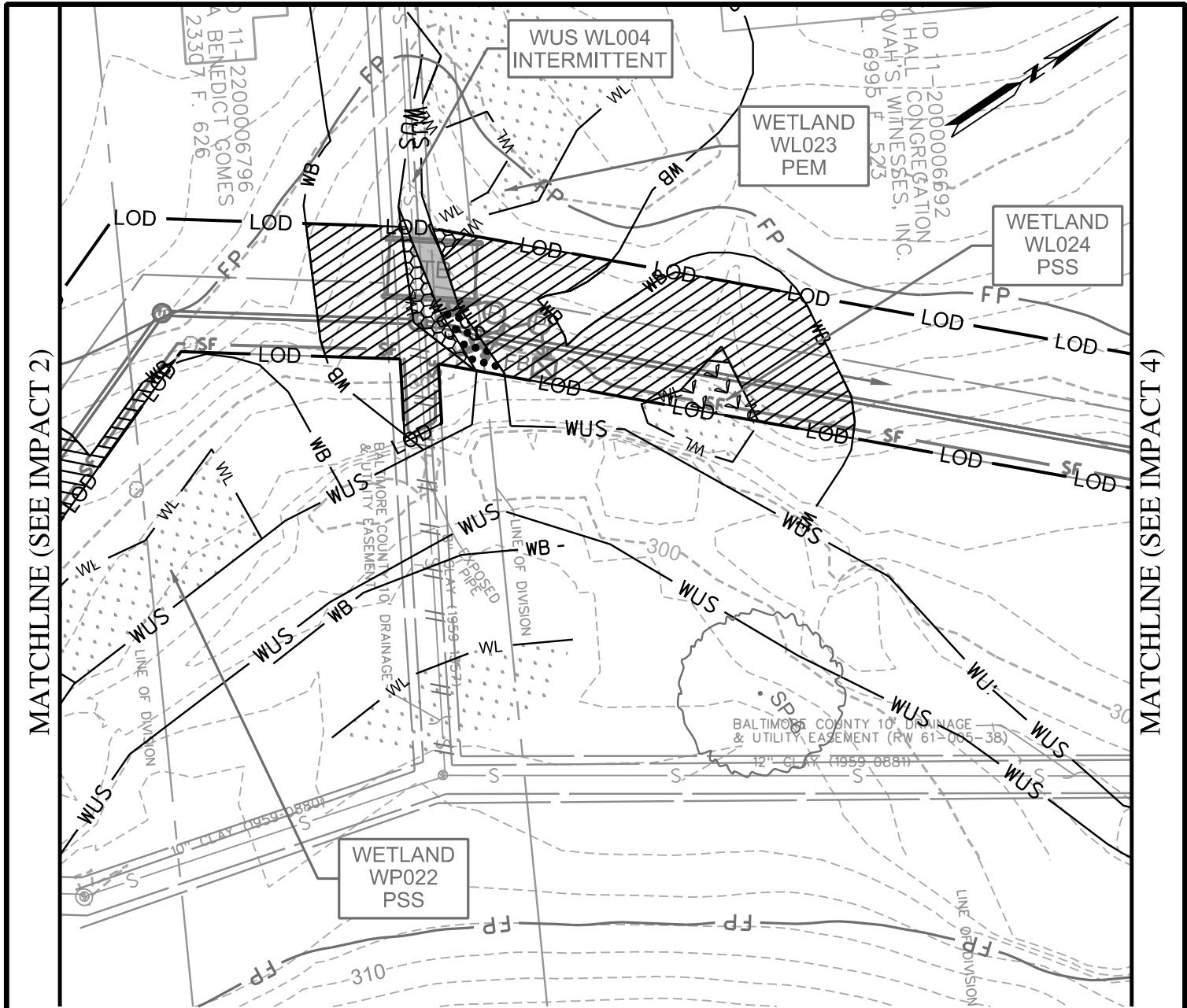
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BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS
GUNPOWDER SEWERSHED
JENNIFER BRANCH RELIEF SEWER
BALTIMORE COUNTY, MARYLAND

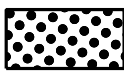
IMPACT 2

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MATCHLINE (SEE IMPACT 2)

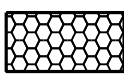
MATCHLINE (SEE IMPACT 4)



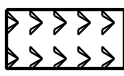
PERMANENT WATERS OF U.S. IMPACT - INTERMITTENT
107 SF./ 0.002 AC./ 19 LF.



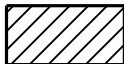
TEMPORARY WATERS OF U.S. IMPACT - INTERMITTENT
136 SF./ 0.003 AC./ 23 LF.



TEMPORARY NON-TIDAL PEM WETLAND IMPACT
209 SF./ 0.004 AC.



TEMPORARY NON-TIDAL PSS WETLAND IMPACT
218 SF./ 0.005 AC.



TEMPORARY 25' NON-TIDAL WETLAND BUFFER IMPACT
4,339 SF./ 0.09 AC.

NOTE:
IMPACTS WITHIN THE KCI LOD INCLUDE IMPACTS ASSOCIATED WITH JMT'S JENNIFER BRANCH SANITARY SEWER REHABILITATION PROJECT ON THIS IMPACT PLATE. THE JMT DESIGNED JENNIFER BRANCH SANITARY SEWER REHABILITATION PROJECT, SUBMITTED TO MDE IN FEBRUARY 2021, WILL REFER TO THIS JENNIFER BRANCH RELIEF SEWER PROJECT.

SHEET 8 OF 35



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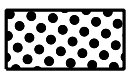
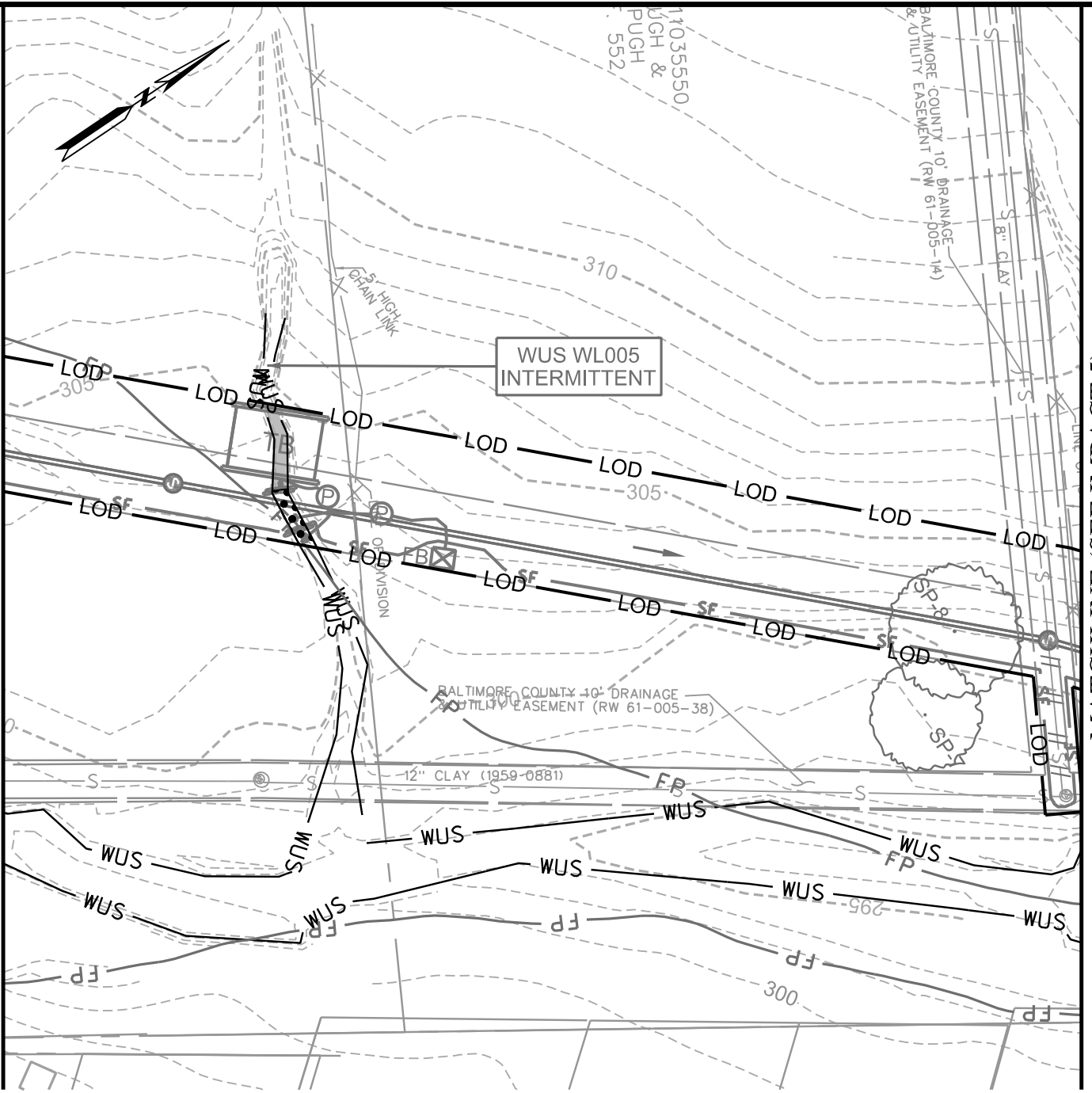
BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS
GUNPOWDER SEWERSHED
JENNIFER BRANCH RELIEF SEWER
BALTIMORE COUNTY, MARYLAND

IMPACT 3

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MATCHLINE (SEE IMPACT 3)

MATCHLINE (SEE IMPACT 5)



PERMANENT WATERS
OF U.S. IMPACT - INTERMITTENT
63 SF./ 0.001 AC./ 17 LF.



TEMPORARY WATERS
OF U.S. IMPACT - INTERMITTENT
81 SF./ 0.002 AC./ 23 LF.

NOTE:
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SHEET 9 OF 35



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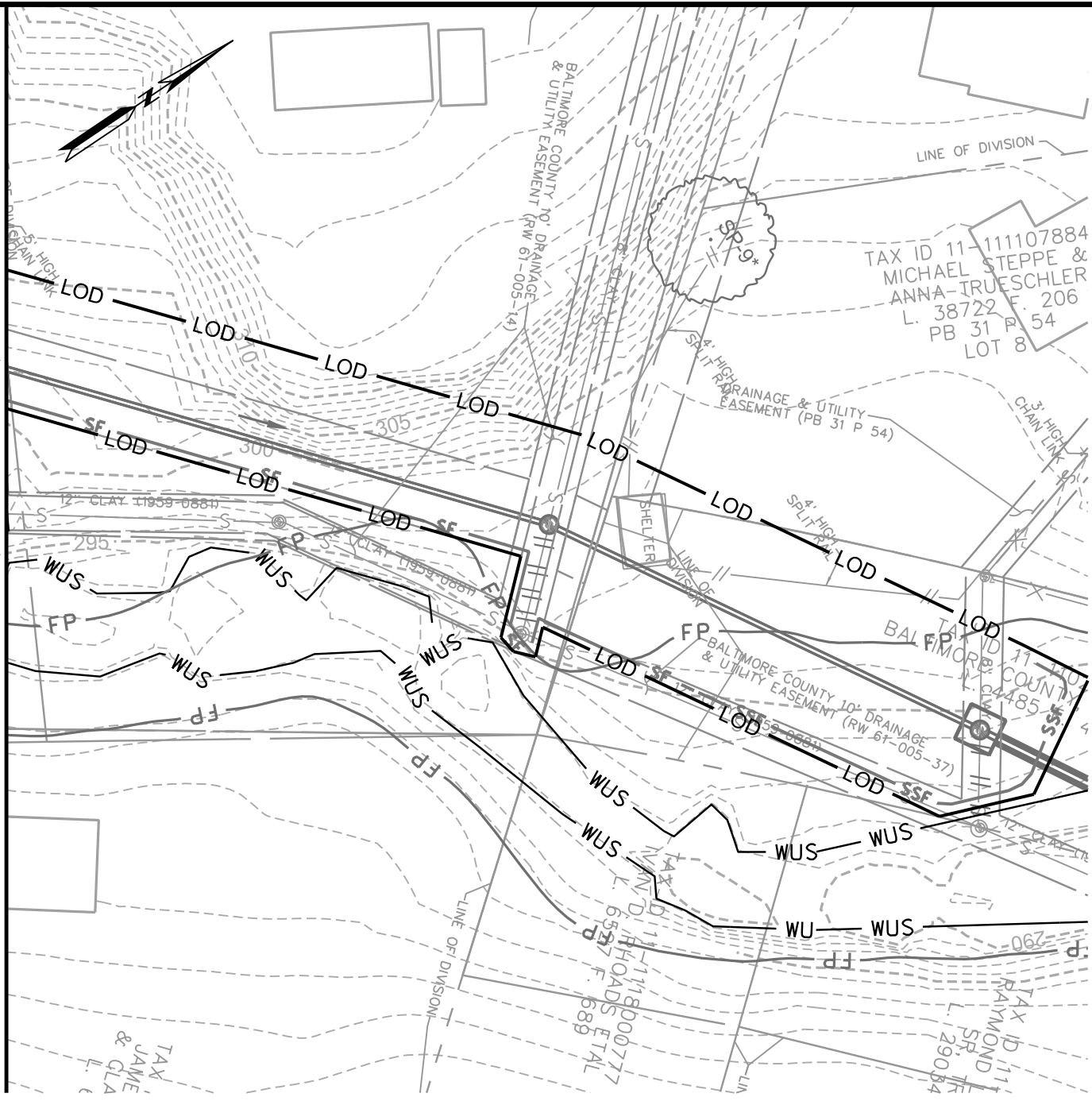
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BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS
GUNPOWDER SEWERSHED
JENNIFER BRANCH RELIEF SEWER
BALTIMORE COUNTY, MARYLAND

IMPACT 4

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MATCHLINE (SEE IMPACT 4)



FLOODPLAIN IMPACTS ONLY THIS SHEET

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SHEET 10 OF 35



**ENGINEERS
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 TELEPHONE: (410) 316-7800
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DATE:
 MAY 2021

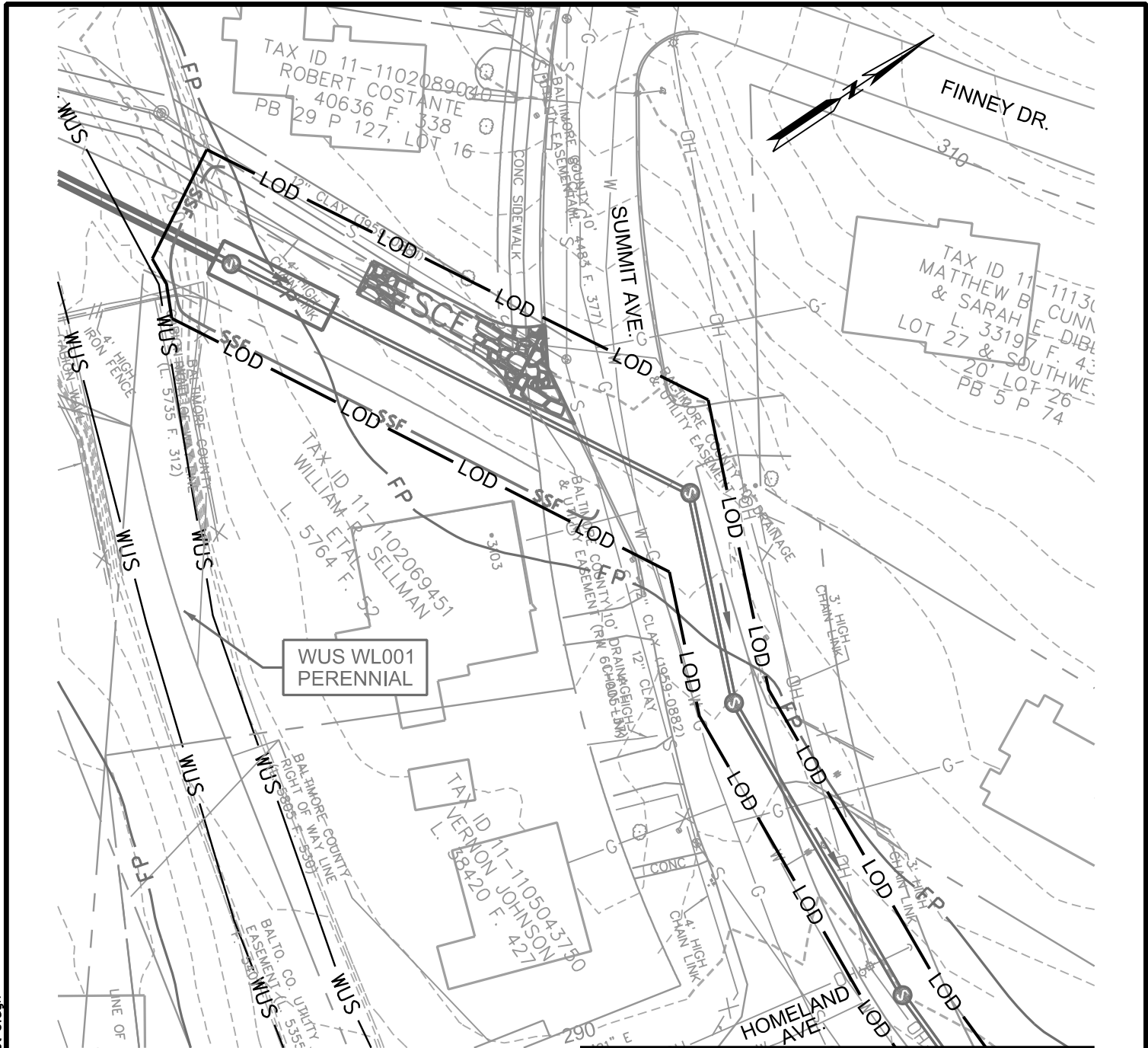
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BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS
 GUNPOWDER SEWERSHED
 JENNIFER BRANCH RELIEF SEWER
 BALTIMORE COUNTY, MARYLAND

IMPACT 5

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MATCHLINE (SEE IMPACT 7)

FLOODPLAIN IMPACTS ONLY THIS SHEET

SHEET 11 OF 35

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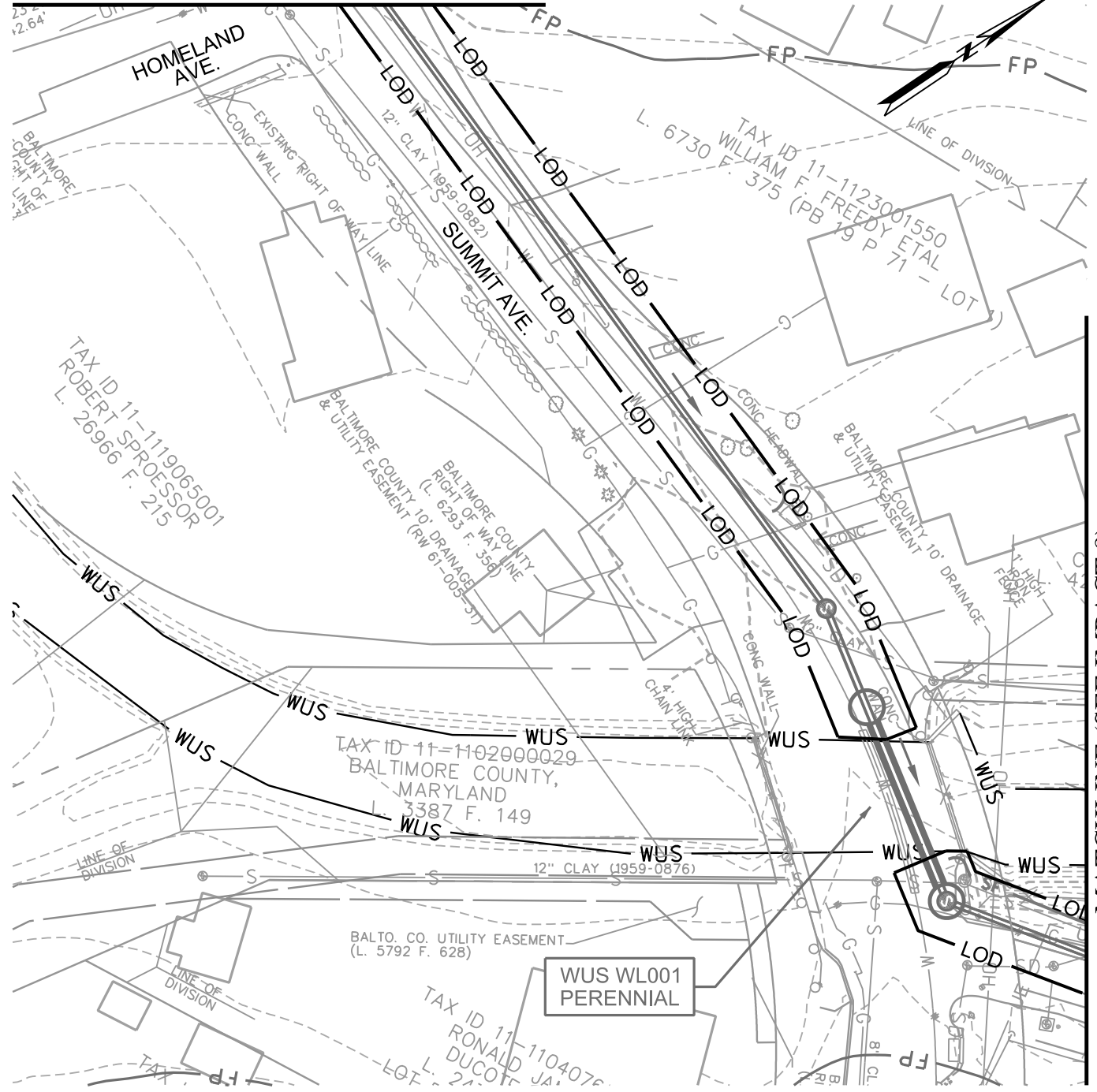
	ENGINEERS
	PLANNERS
	SCIENTISTS
	CONSTRUCTION MANAGERS
936 RIDGEBROOK ROAD SPARKS, MARYLAND 21152 TELEPHONE: (410) 316-7800 FAX: (410) 316-7818	

DATE: MAY 2021
SCALE: 1" = 40'
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BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS
 GUNPOWDER SEWERSHED
 JENNIFER BRANCH RELIEF SEWER
 BALTIMORE COUNTY, MARYLAND

IMPACT 6

MATCHLINE (SEE IMPACT 6)



MATCHLINE (SEE IMPACT 8)

FLOODPLAIN IMPACTS ONLY THIS SHEET

NOTE:
 IMPACTS WITHIN THE KCI LOD INCLUDE IMPACTS ASSOCIATED WITH JMT'S JENNIFER BRANCH SANITARY SEWER REHABILITATION PROJECT ON THIS IMPACT PLATE. THE JMT DESIGNED JENNIFER BRANCH SANITARY SEWER REHABILITATION PROJECT, SUBMITTED TO MDE IN FEBRUARY 2021, WILL REFER TO THIS JENNIFER BRANCH RELIEF SEWER PROJECT.

SHEET 12 OF 35

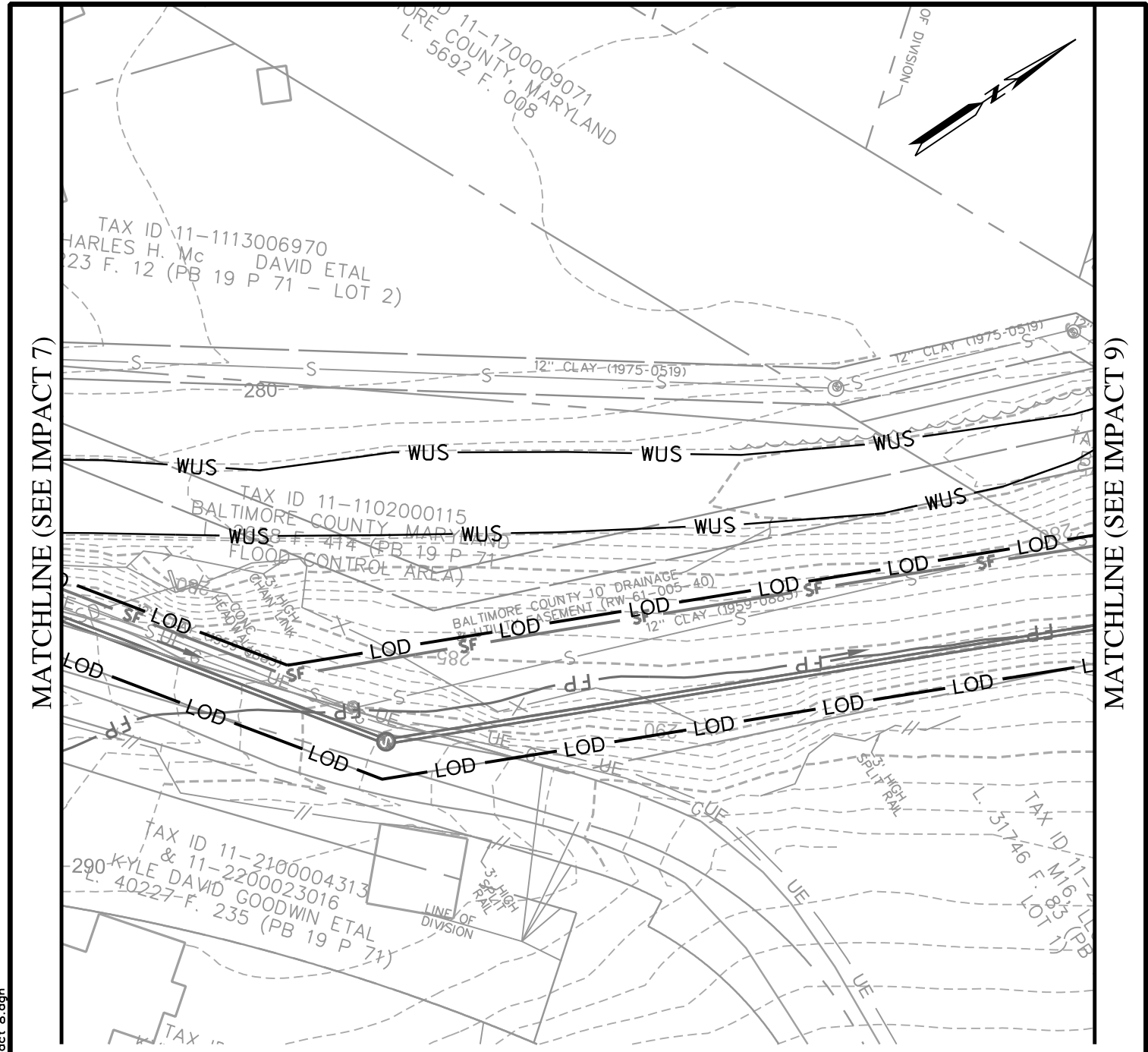
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SCALE: 1" = 40'
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 GUNPOWDER SEWERSHED
 JENNIFER BRANCH RELIEF SEWER
 BALTIMORE COUNTY, MARYLAND

IMPACT 7



MATCHLINE (SEE IMPACT 7)

MATCHLINE (SEE IMPACT 9)

FLOODPLAIN IMPACTS ONLY THIS SHEET

NOTE:
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SHEET 13 OF 35

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 FILE: M:\2014\13144992.05\Drawings\Impact-Plates\13_Plate_Impact 8.dgn



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 SPARKS, MARYLAND 21152
 TELEPHONE: (410) 316-7800
 FAX: (410) 316-7818

DATE:
 MAY 2021

SCALE:
 1" = 40'

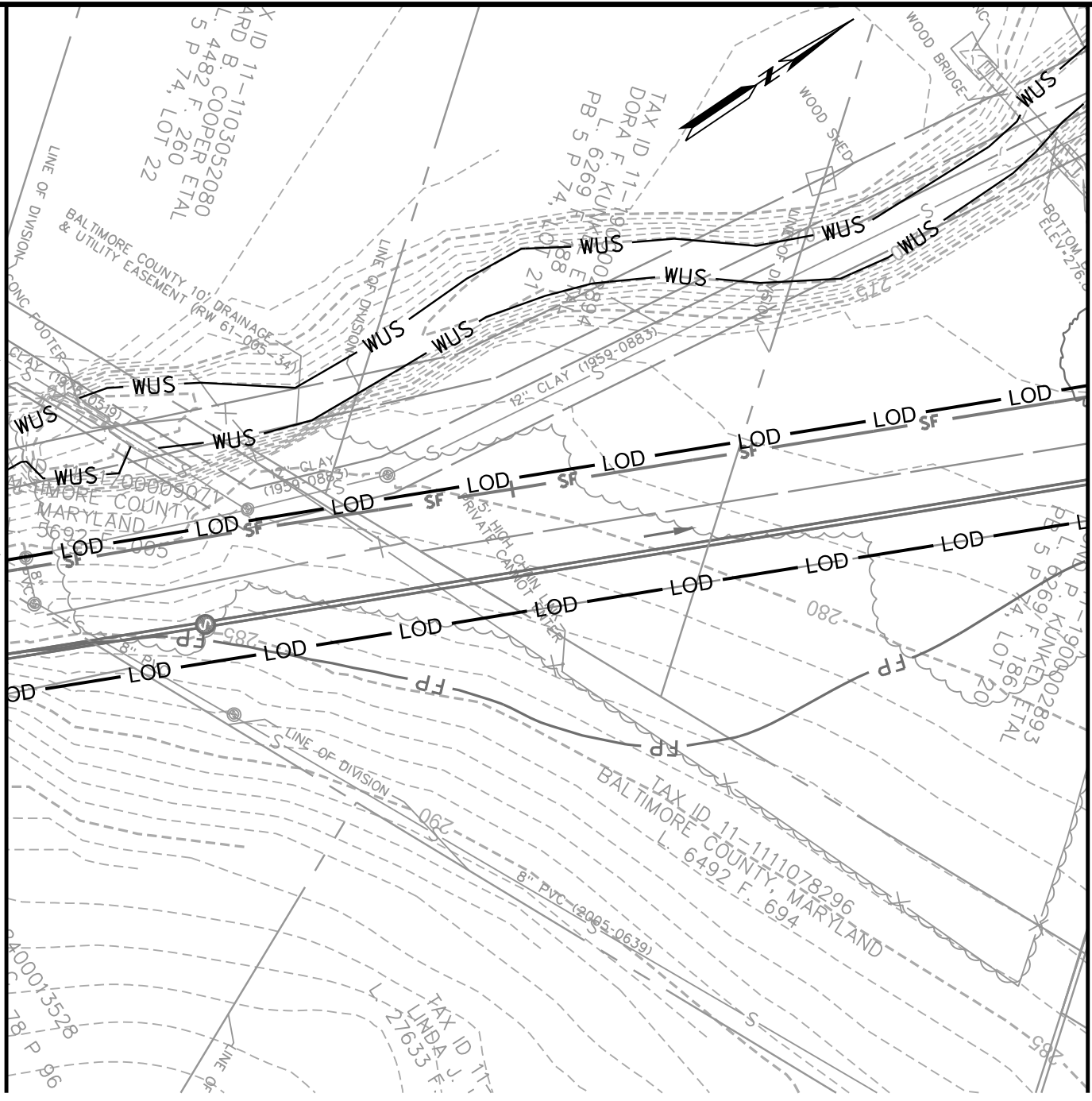
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BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS
 GUNPOWDER SEWERSHED
 JENNIFER BRANCH RELIEF SEWER
 BALTIMORE COUNTY, MARYLAND

IMPACT 8

MATCHLINE (SEE IMPACT 8)

MATCHLINE (SEE IMPACT 10)



FLOODPLAIN IMPACTS ONLY THIS SHEET

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SHEET 14 OF 35



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DATE:
MAY 2021

SCALE:
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BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS
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 JENNIFER BRANCH RELIEF SEWER
 BALTIMORE COUNTY, MARYLAND

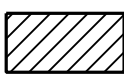
IMPACT 9

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MATCHLINE (SEE IMPACT 9)

MATCHLINE (SEE IMPACT 11)

WETLAND
WL020
PEM

 TEMPORARY 25' NON-TIDAL
WETLAND BUFFER IMPACT
611 SF./ 0.01 AC.

SHEET 15 OF 35



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SPARKS, MARYLAND 21152
TELEPHONE: (410) 316-7800
FAX: (410) 316-7818

DATE:
MAY 2021
SCALE:
1" = 40'
DRAWN BY:
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BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS
GUNPOWDER SEWERSHED
JENNIFER BRANCH RELIEF SEWER
BALTIMORE COUNTY, MARYLAND

IMPACT 10

PLOTTED: 03:50 PM on Thursday, May 06, 2021
FILE: M:\2014\13144992.05\Drawings\Impact-Plates\15_Plate_Impact 10.dgn

0008492
MARYLAND
666

WETLAND
WL020
PEM

WETLAND
WL019
PUB

WETLAND
WL030
PFO

TAX ID 11-
N/F
E.L.S. ENTERPRISES, INC.
L. 5956 F. 451
(FUTURE COLLECTOR ROAD)

TAX ID 11-1800008495
BALTIMORE COUNTY, MARYLAND
L. 6682 F. 297

MATCHLINE (SEE IMPACT 10)

MATCHLINE (SEE IMPACT 12)



BALTIMORE COUNTY 10' DRAINAGE
& UTILITY EASEMENT (RW 6-098-3)

LINE OF DIVISION

15" RCP (1962-0025)

SP-15

 TEMPORARY 25' NON-TIDAL
WETLAND BUFFER IMPACT
3,175 SF./ 0.07 AC.

SHEET 16 OF 35



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TELEPHONE: (410) 316-7800
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MAY 2021
SCALE:
1" = 40'
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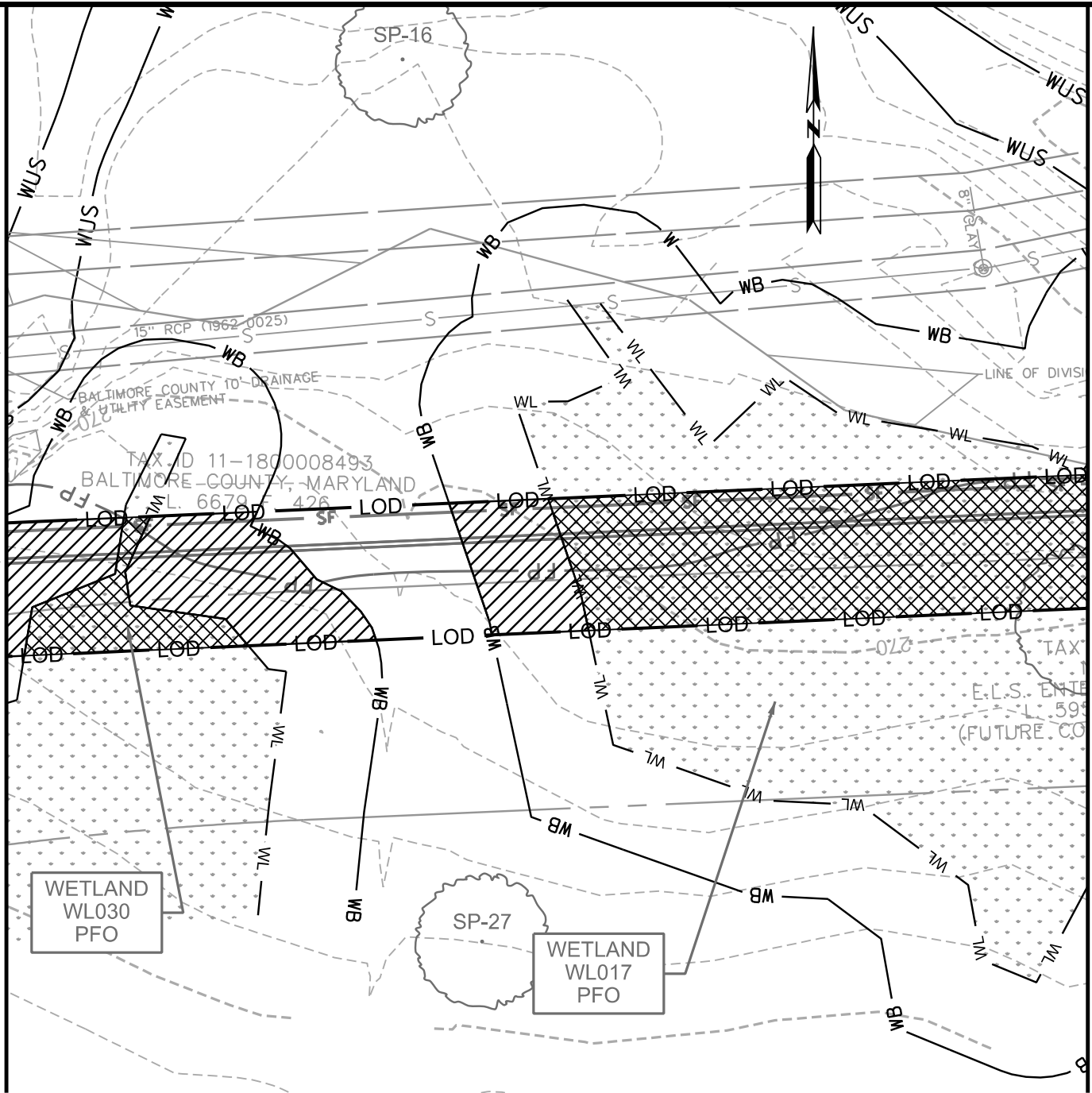
BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS
GUNPOWDER SEWERSHED
JENNIFER BRANCH RELIEF SEWER
BALTIMORE COUNTY, MARYLAND

IMPACT 11

PLOTTED: 03:50 PM on Thursday, May 06, 2021
FILE: M:\2014\13144992.05\Drawings\Impact-Plates\16_Plate_Impact 11.dgn

MATCHLINE (SEE IMPACT 11)

MATCHLINE (SEE IMPACT 13)



WETLAND
WL030
PFO

WETLAND
WL017
PFO

 TEMPORARY NON-TIDAL
PFO WETLAND IMPACT
5,539 SF./ 0.12 AC.

 TEMPORARY 25' NON-TIDAL
WETLAND BUFFER IMPACT
2,985 SF./ 0.06 AC.

SHEET 17 OF 35



ENGINEERS
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DATE:
MAY 2021

SCALE:
1" = 40'

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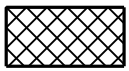
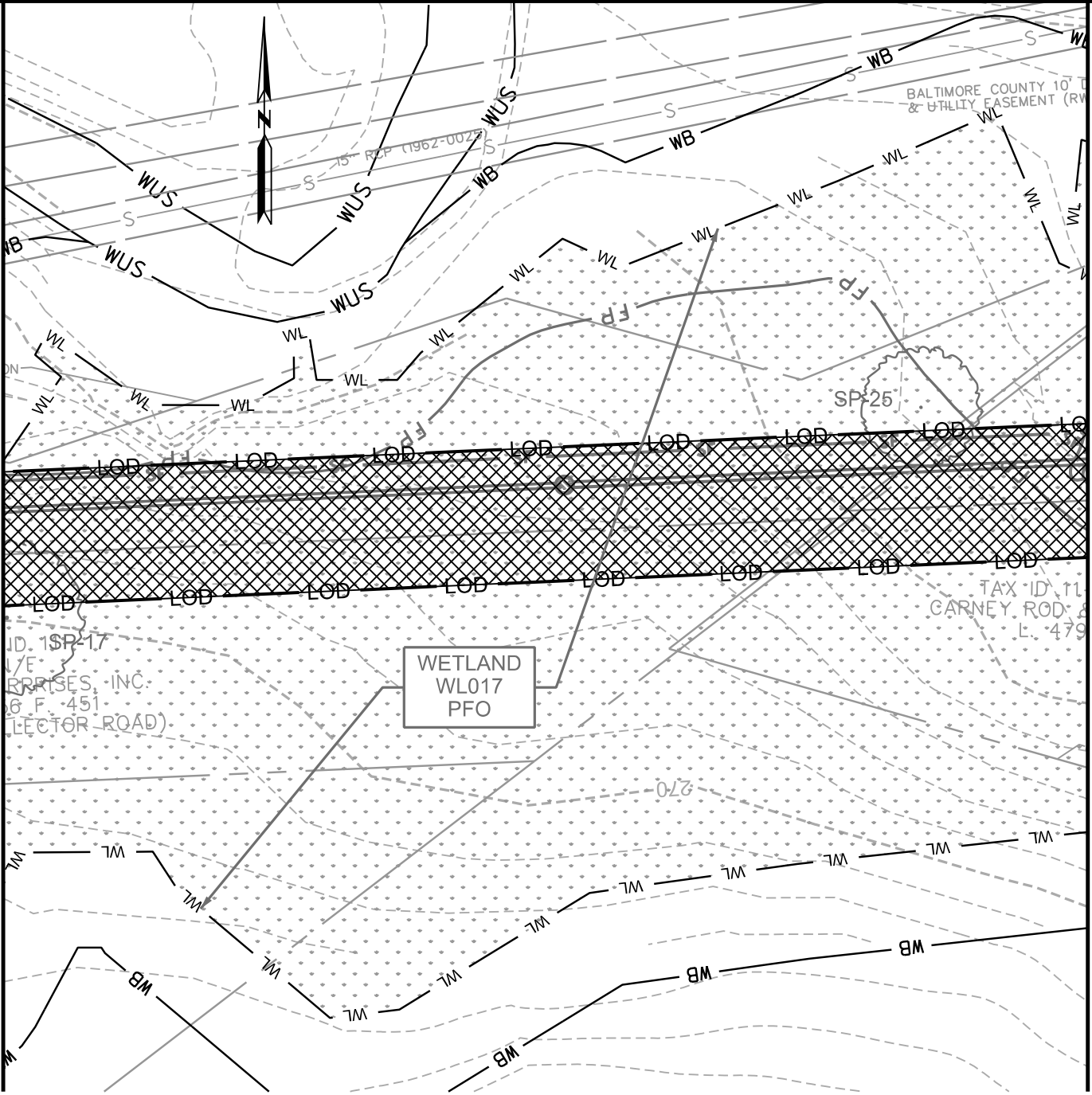
BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS
GUNPOWDER SEWERSHED
JENNIFER BRANCH RELIEF SEWER
BALTIMORE COUNTY, MARYLAND

IMPACT 12

PLOTTED: 03:50 PM on Thursday, May 06, 2021
FILE: M:\2014\13144992.05\Drawings\Impact-Plates\17_Plate_Impact 12.dgn

MATCHLINE (SEE IMPACT 12)

MATCHLINE (SEE IMPACT 14)



TEMPORARY NON-TIDAL
PFO WETLAND IMPACT
9,940 SF./ 0.23 AC.

SHEET 18 OF 35



ENGINEERS
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DATE:
MAY 2021

SCALE:
1" = 40'

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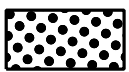
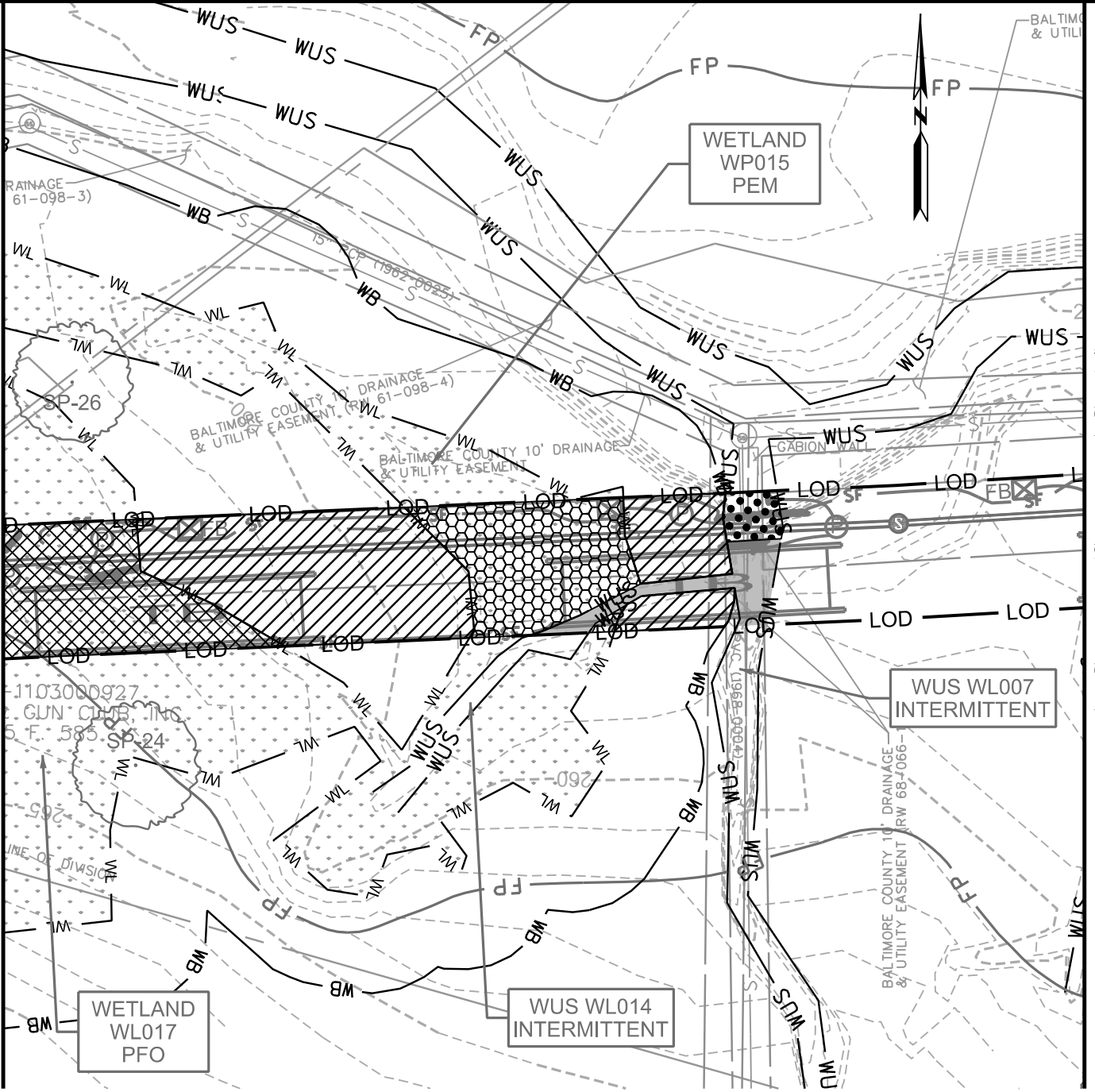
BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS
GUNPOWDER SEWERSHED
JENNIFER BRANCH RELIEF SEWER
BALTIMORE COUNTY, MARYLAND

IMPACT 13

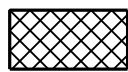
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MATCHLINE (SEE IMPACT 13)

MATCHLINE (SEE IMPACT 15)



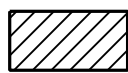
PERMANENT WATERS
OF U.S. IMPACT - INTERMITTENT
188 SF./ 0.01 AC./ 13 LF.



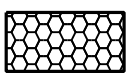
TEMPORARY NON-TIDAL
PFO WETLAND IMPACT
1,684 SF./ 0.03 AC.



TEMPORARY WATERS
OF U.S. IMPACT - INTERMITTENT
412 SF./ 0.01 AC./ 68 LF.



TEMPORARY 25' NON-TIDAL
WETLAND BUFFER IMPACT
3,296 SF./ 0.08 AC.



TEMPORARY NON-TIDAL
PEM WETLAND IMPACT
1,511 SF./ 0.03 AC.

SHEET 19 OF 35



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DATE:
MAY 2021

SCALE:
1" = 40'

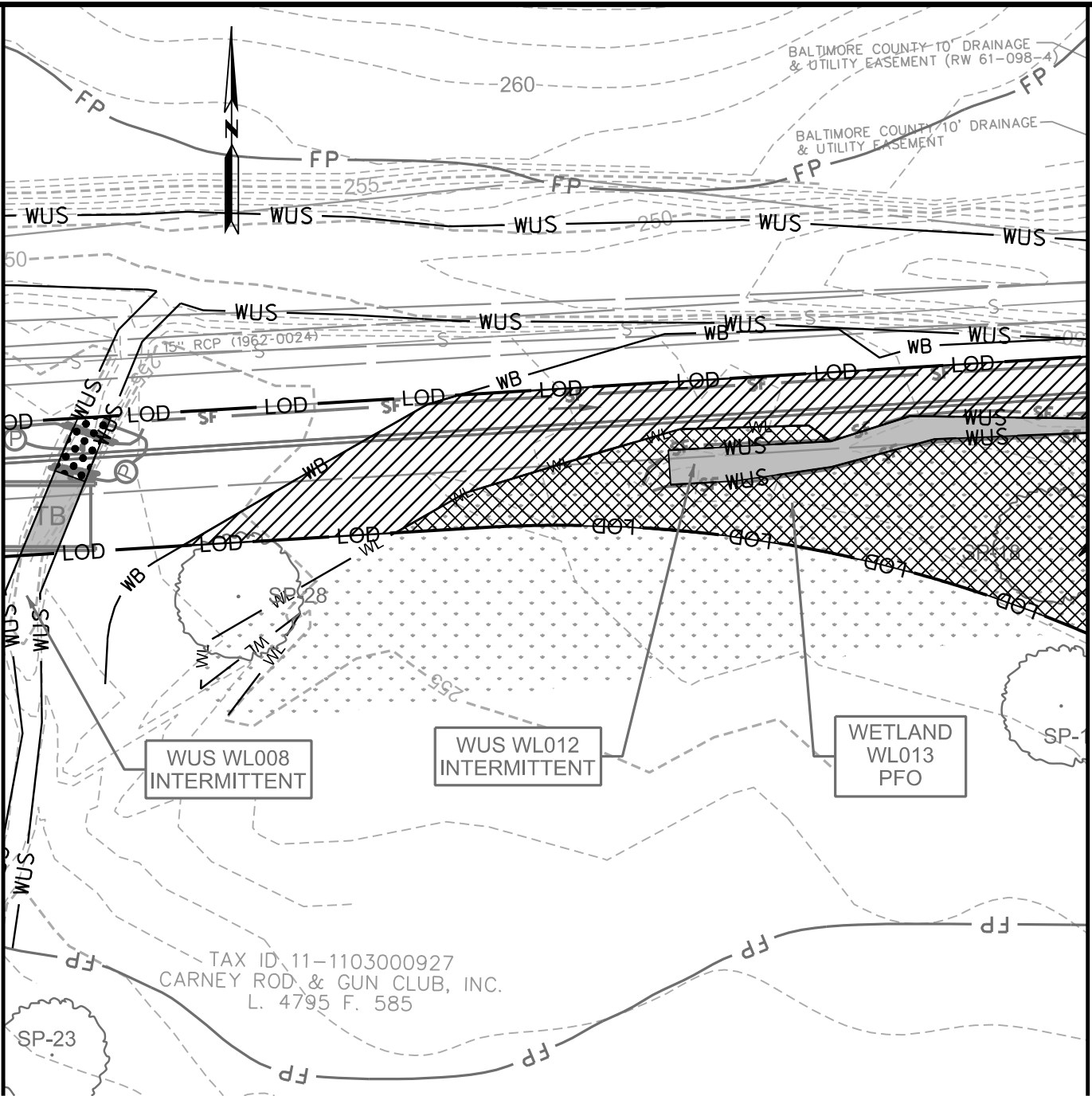
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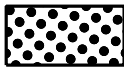

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS
GUNPOWDER SEWERSHED
JENNIFER BRANCH RELIEF SEWER
BALTIMORE COUNTY, MARYLAND

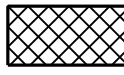
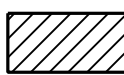
IMPACT 14

MATCHLINE (SEE IMPACT 14)

MATCHLINE (SEE IMPACT 16)



-  PERMANENT WATERS OF U.S. IMPACT - INTERMITTENT
136 SF./ 0.003 AC./ 17 LF.
-  TEMPORARY WATERS OF U.S. IMPACT - INTERMITTENT
928 SF./ 0.02 AC./ 133 LF.

-  TEMPORARY NON-TIDAL PFO WETLAND IMPACT
4,429 SF./ 0.10 AC.
-  TEMPORARY 25' NON-TIDAL WETLAND BUFFER IMPACT
3,906 SF./ 0.09 AC.

SHEET 20 OF 35

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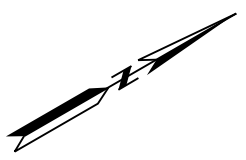
DATE:
MAY 2021

SCALE:
1" = 40'

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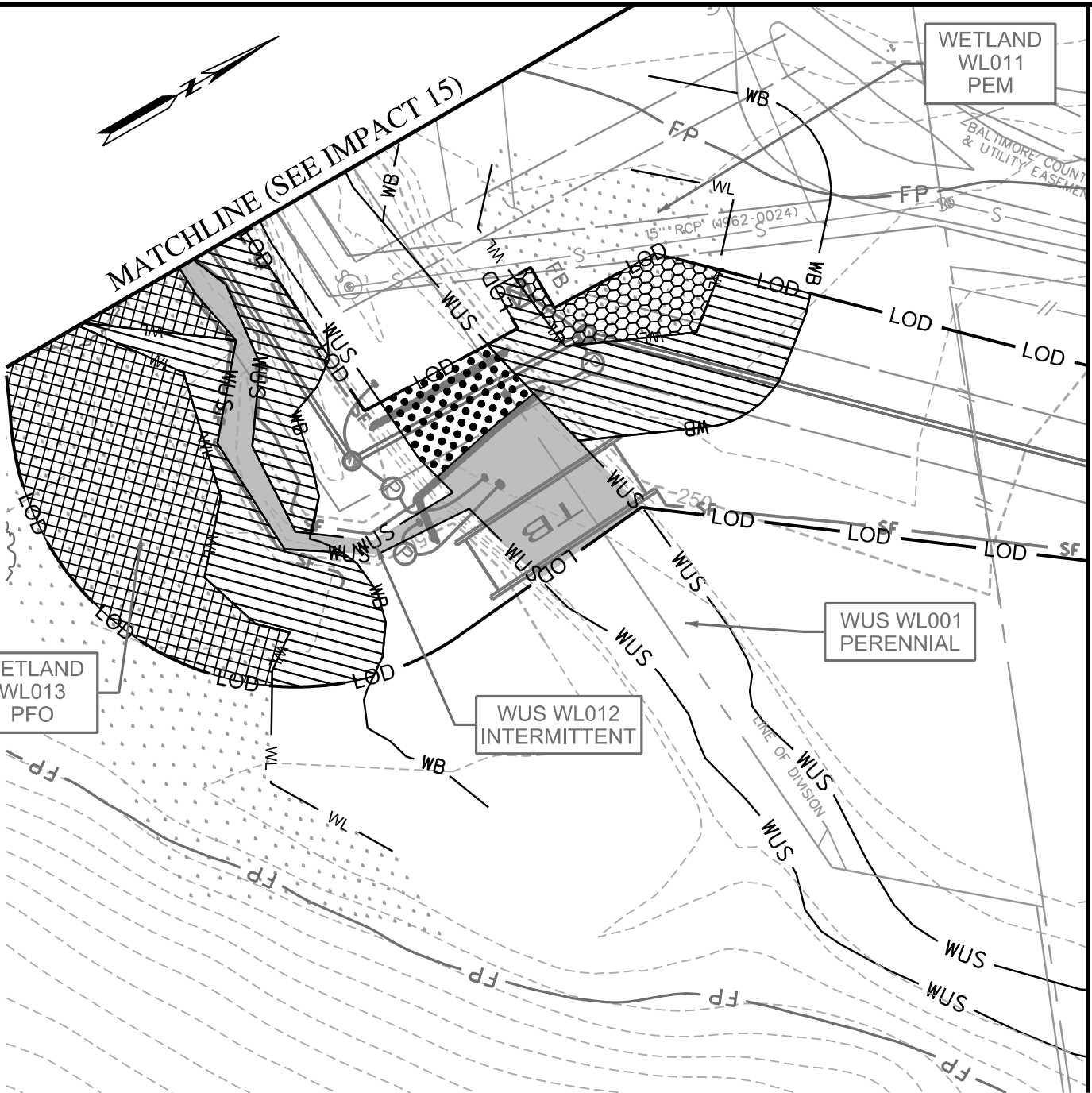
BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS
GUNPOWDER SEWERSHED
JENNIFER BRANCH RELIEF SEWER
BALTIMORE COUNTY, MARYLAND

IMPACT 15



MATCHLINE (SEE IMPACT 15)

WETLAND WL011 PEM

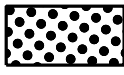




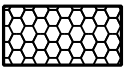
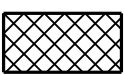
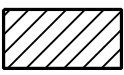
MATCHLINE (SEE IMPACT 17)

WETLAND WL013 PFO

WUS WL012 INTERMITTENT

WUS WL001 PERENNIAL

-  PERMANENT WATERS OF U.S. IMPACT - PERENNIAL
689 SF./ 0.02 AC./ 21 LF.
-  TEMPORARY WATERS OF U.S. IMPACT - PERENNIAL
1,305 SF./ 0.03 AC./ 40 LF.
-  TEMPORARY WATERS OF U.S. IMPACT - INTERMITTENT
751 SF./ 0.02 AC./ 129 LF.

-  TEMPORARY NON-TIDAL PEM WETLAND IMPACT
760 SF./ 0.02 AC.
-  TEMPORARY NON-TIDAL PFO WETLAND IMPACT
4,061 SF./ 0.09 AC.
-  TEMPORARY 25' NON-TIDAL WETLAND BUFFER IMPACT
5,014 SF./ 0.12 AC.

SHEET 21 OF 35

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DATE:
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SCALE:
1" = 40'

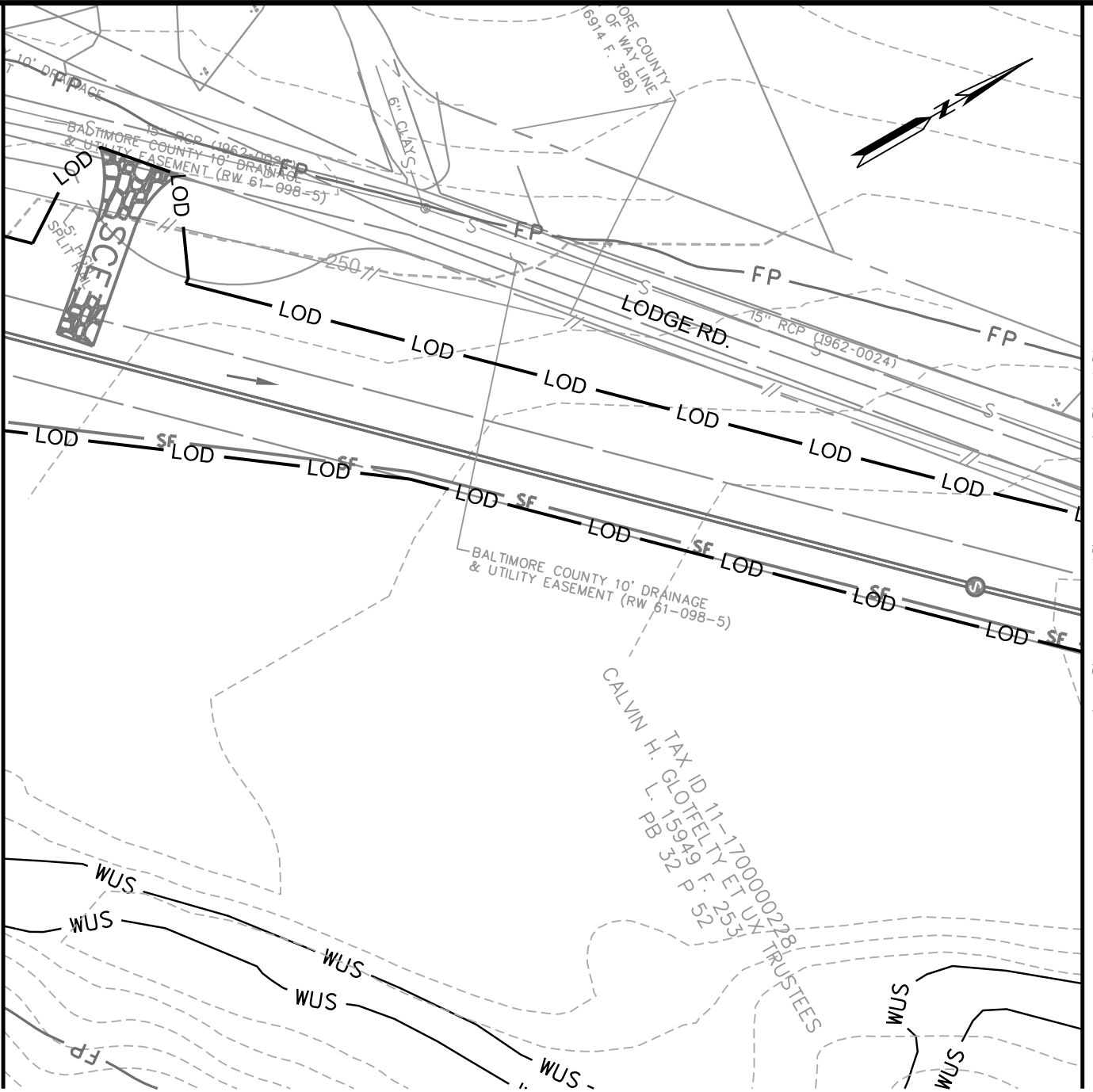
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BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS
GUNPOWDER SEWERSHED
JENNIFER BRANCH RELIEF SEWER
BALTIMORE COUNTY, MARYLAND

IMPACT 16

MATCHLINE (SEE IMPACT 16)

MATCHLINE (SEE IMPACT 18)



FLOODPLAIN IMPACTS ONLY THIS SHEET

SHEET 22 OF 35

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FAX: (410) 316-7818

DATE:
MAY 2021

SCALE:
1" = 40'

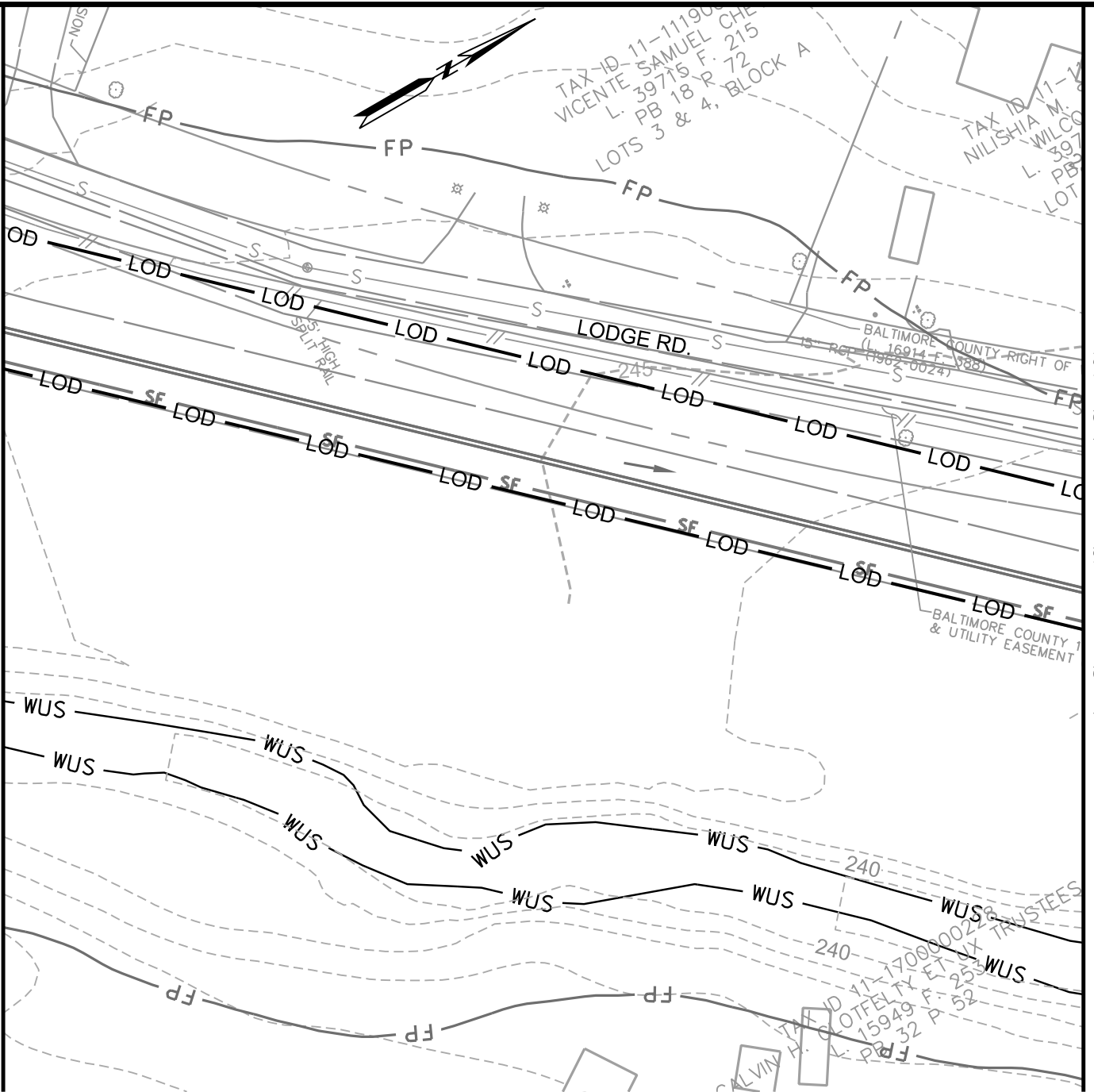
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BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS
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BALTIMORE COUNTY, MARYLAND

IMPACT 17

MATCHLINE (SEE IMPACT 17)

MATCHLINE (SEE IMPACT 19)



FLOODPLAIN IMPACTS ONLY THIS SHEET

SHEET 23 OF 35

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SPARKS, MARYLAND 21152
TELEPHONE: (410) 316-7800
FAX: (410) 316-7818

DATE:
MAY 2021

SCALE:
1" = 40'

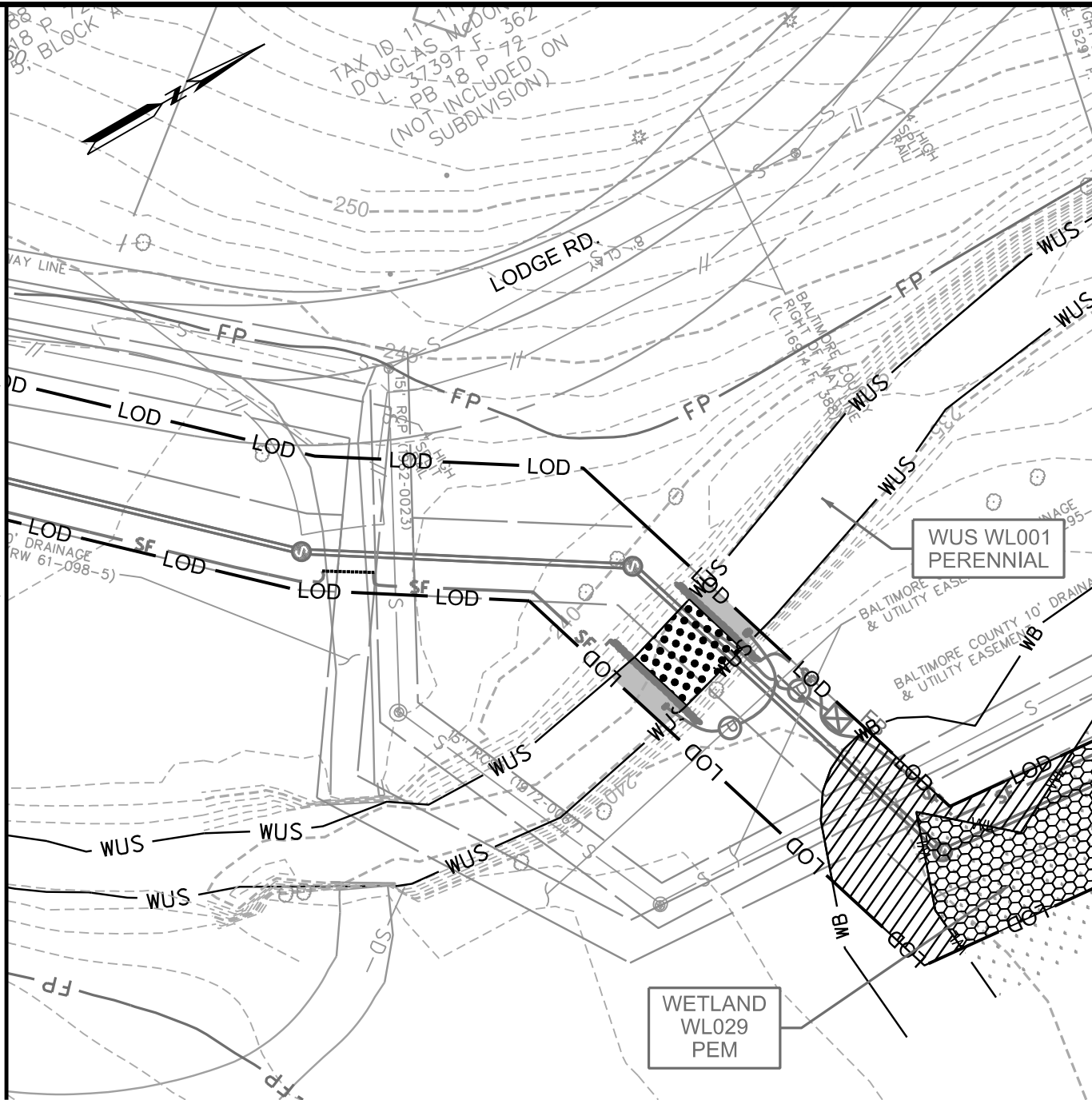
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BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS
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BALTIMORE COUNTY, MARYLAND

IMPACT 18

MATCHLINE (SEE IMPACT 18)

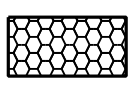
MATCHLINE (SEE IMPACT 20)



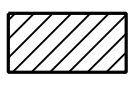
PERMANENT WATERS
OF U.S. IMPACT - PERENNIAL
388 SF./ 0.01 AC./ 21 LF.



TEMPORARY WATERS
OF U.S. IMPACT - PERENNIAL
269 SF./ 0.01 AC./ 14 LF.



TEMPORARY NON-TIDAL
PEM WETLAND IMPACT
1,333 SF./ 0.03 AC.



TEMPORARY 25' NON-TIDAL
WETLAND BUFFER IMPACT
1,530 SF./ 0.04 AC.

SHEET 24 OF 35

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DATE:
MAY 2021

SCALE:
1" = 40'

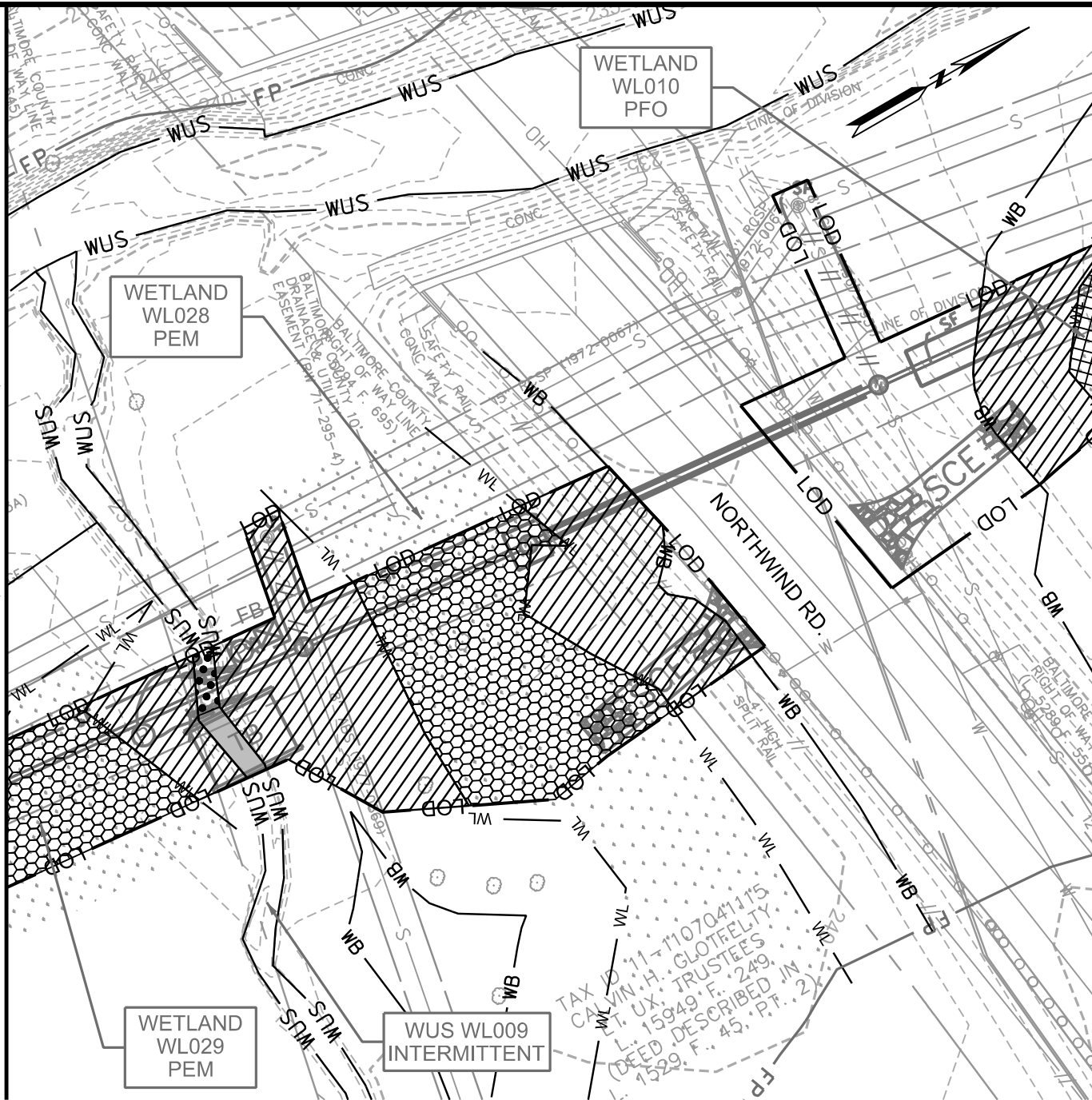
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CSD

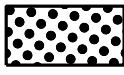

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS
GUNPOWDER SEWERSHED
JENNIFER BRANCH RELIEF SEWER
BALTIMORE COUNTY, MARYLAND

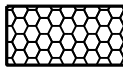
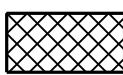
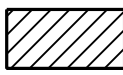
IMPACT 19

MATCHLINE (SEE IMPACT 19)

MATCHLINE (SEE IMPACT 21)



-  PERMANENT WATERS OF U.S. IMPACT - INTERMITTENT
88 SF./ 0.002 AC./ 16 LF.
-  TEMPORARY WATERS OF U.S. IMPACT - INTERMITTENT
125 SF./ 0.003 AC./ 21 LF.

-  TEMPORARY NON-TIDAL PEM WETLAND IMPACT
4,686 SF./ 0.10 AC.
-  TEMPORARY NON-TIDAL PFO WETLAND IMPACT
157 SF./ 0.004 AC.
-  TEMPORARY 25' NON-TIDAL WETLAND BUFFER IMPACT
6,390 SF./ 0.15 AC.

SHEET 25 OF 35

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SPARKS, MARYLAND 21152
TELEPHONE: (410) 316-7800
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DATE:
MAY 2021

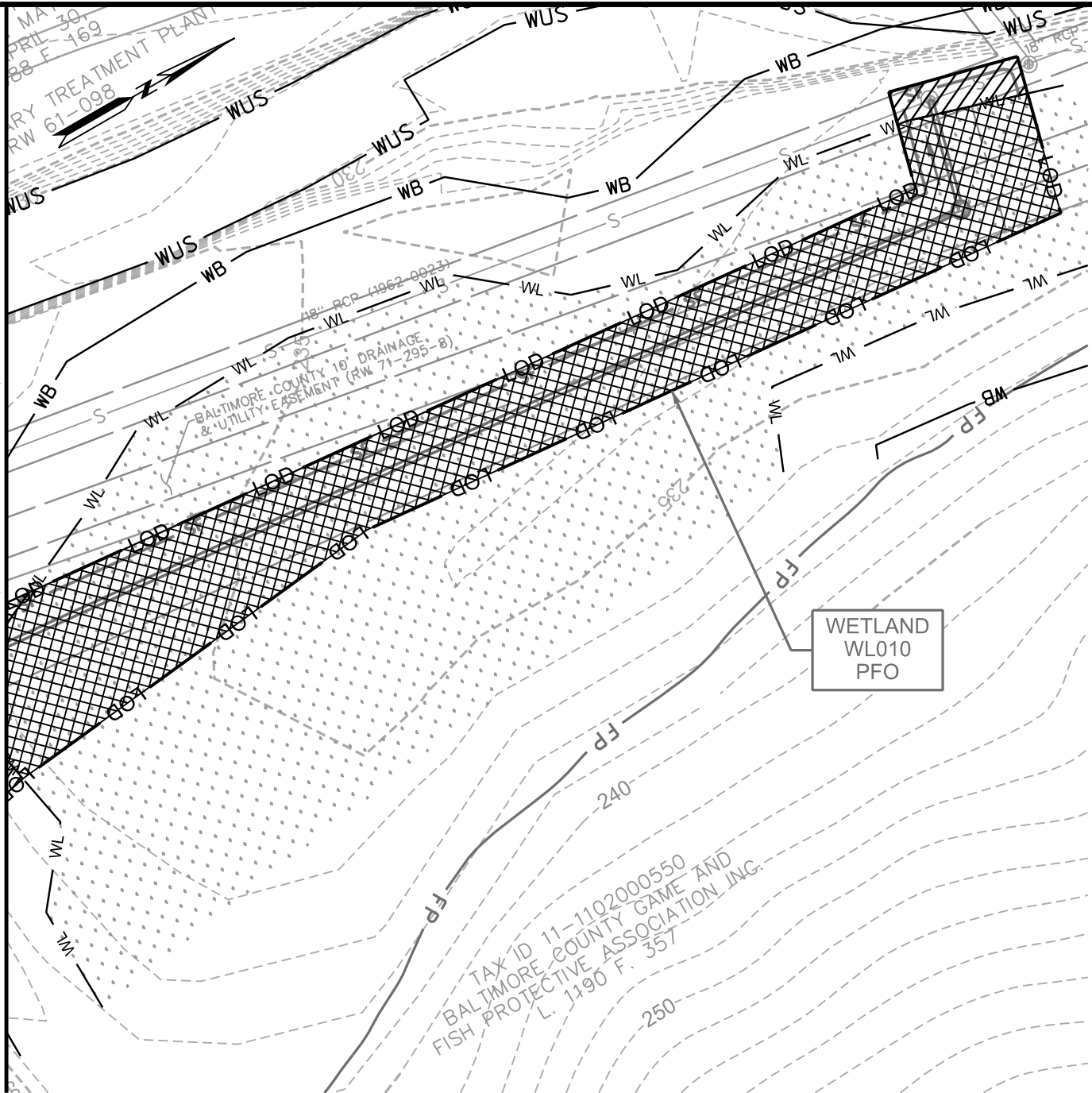
SCALE:
1" = 40'

DRAWN BY:
CSD

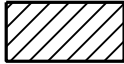
BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS
GUNPOWDER SEWERSHED
JENNIFER BRANCH RELIEF SEWER
BALTIMORE COUNTY, MARYLAND

IMPACT 20

MATCHLINE (SEE IMPACT 20)



 TEMPORARY NON-TIDAL PFO WETLAND IMPACT
8,206 SF./ 0.18 AC.

 TEMPORARY 25' NON-TIDAL WETLAND BUFFER IMPACT
361 SF./ 0.01 AC.

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**ENGINEERS
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DATE: MAY 2021
SCALE: 1" = 40'
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BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS
GUNPOWDER SEWERSHED
JENNIFER BRANCH RELIEF SEWER
BALTIMORE COUNTY, MARYLAND

IMPACT 21

	PERMANENT WATERS OF U.S. IMPACT	TEMPORARY WATERS OF U.S. IMPACT	TEMPORARY PEM WETLAND IMPACT	TEMPORARY PFO WETLAND IMPACT	TEMPORARY PSS WETLAND IMPACT	TEMPORARY 25' NON-TIDAL WETLAND BUFFER IMPACT
IMPACT 1	305 SF. 0.01 AC. 13 LF. **	843 SF. 0.02 AC. 36 LF. **	_____	2,472 SF. 0.05 AC.	_____	2,533 SF. 0.06 AC.
IMPACT 2	_____	_____	_____	_____	564 SF. 0.01 AC.	1,863 SF. 0.04 AC.
IMPACT 3	107 SF. 0.002 AC. 19 LF. *	136 SF. 0.003 AC. 23 LF. *	209 SF. 0.004 AC.	_____	218 SF. 0.005 AC.	4,339 SF. 0.09 AC.
IMPACT 4	63 SF. 0.001 AC. 17 LF. *	81 SF. 0.002 AC. 23 LF. *	_____	_____	_____	_____
IMPACT 5	_____	_____	_____	_____	_____	_____
IMPACT 6	_____	_____	_____	_____	_____	_____
IMPACT 7	_____	_____	_____	_____	_____	_____
IMPACT 8	_____	_____	_____	_____	_____	_____
IMPACT 9	_____	_____	_____	_____	_____	_____
IMPACT 10	_____	_____	_____	_____	_____	611 SF. 0.01 AC.
IMPACT 11	_____	_____	_____	_____	_____	3,175 SF. 0.07 AC.
IMPACT 12	_____	_____	_____	5,539 SF. 0.12 AC.	_____	2,985 SF. 0.06 AC.
IMPACT 13	_____	_____	_____	9,940 SF. 0.23 AC.	_____	_____

** : PERENNIAL WATERS OF THE U.S.
* : INTERMITTENT WATERS OF THE U.S.

SHEET 27 OF 35



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BALTIMORE COUNTY, MARYLAND

IMPACT TOTALS

	PERMANENT WATERS OF U.S. IMPACT	TEMPORARY WATERS OF U.S. IMPACT	TEMPORARY PEM WETLAND IMPACT	TEMPORARY PFO WETLAND IMPACT	TEMPORARY PSS WETLAND IMPACT	TEMPORARY 25' NON-TIDAL WETLAND BUFFER IMPACT
IMPACT 14	188 SF. 0.01 AC. 13 LF. *	412 SF. 0.01 AC. 68 LF. *	1,511 SF. 0.03 AC.	1,684 SF. 0.03 AC.	—————	3,296 SF. 0.08 AC.
IMPACT 15	136 0.003 AC. 17 LF. *	928 0.02 AC. 133 LF. *	—————	4,429 SF. 0.10 AC.	—————	3,906 SF. 0.09 AC.
IMPACT 16	689 SF. 0.02 AC. 21 LF. **	1,305 0.05 AC. 40 LF. **	760 SF. 0.02 AC.	4,061 SF. 0.09 AC.	—————	5,014 SF. 0.12 AC.
IMPACT 16 CONT.	—————	751 SF. 0.02 AC. 129 LF. *	—————	—————	—————	—————
IMPACT 17	—————	—————	—————	—————	—————	—————
IMPACT 18	—————	—————	—————	—————	—————	—————
IMPACT 19	388 SF. 0.01 AC. 21 LF. **	269 SF. 0.01 AC. 14 LF. **	1,333 SF. 0.03 AC.	—————	—————	1,530 SF. 0.04 AC.
IMPACT 20	88 SF. 0.002 AC. 16 LF. *	125 SF. 0.003 AC. 21 LF. *	4,686 SF. 0.10 AC.	157 SF. 0.004 AC.	—————	6,390 SF. 0.15 AC.
IMPACT 21	—————	—————	—————	8,206 SF. 0.18 AC.	—————	361 SF. 0.01 AC.
TOTALS	1,964 SF. 0.04 AC. 137 LF.	4,850 SF. 0.11 AC. 487 LF.	8,499 SF. 0.19 AC.	36,488 SF. 0.83 AC.	782 SF. 0.01 AC.	36,003 SF. 0.82 AC.

NOTES:

1. TEMPORARY 100-YR. FLOODPLAIN IMPACT: 153,483 SF. / 3.52 AC.
2. ALL WETLAND AND BUFFER IMPACTS ARE TEMPORARY AS THE MAINTAINED WIDTH OF THE SEWER EASEMENT IS 20 FEET, ALLOWING THE TREE CANOPY TO CLOSE.
3. PERMANENT WATERS OF THE US IMPACTS ARE A RESULT OF STREAMBED AND BANK STABILIZATION AT THE SEWER CROSSINGS.

PERMANENT WATERS OF U.S. IMPACT

** PERENNIAL IMPACTS: 1,382 SF. / 55 LF.
 * INTERMITTENT IMPACTS: 582 SF. / 82 LF.
 TOTALS: 2,122 SF. / 137 LF.

TEMPORARY WATERS OF U.S. IMPACT

** PERENNIAL IMPACTS: 2,417 SF. / 90 LF.
 * INTERMITTENT IMPACTS: 2,433 SF. / 397 LF.
 TOTALS: 5,098 SF. / 487 LF.

** : PERENNIAL WATERS OF THE U.S.

* : INTERMITTENT WATERS OF THE U.S.

SHEET 28 OF 35



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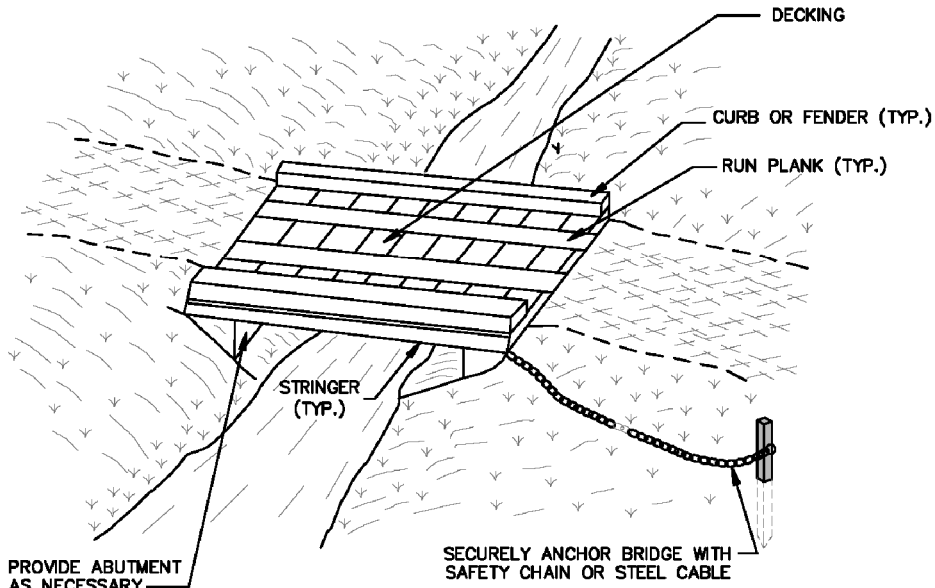
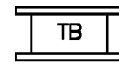
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IMPACT TOTALS

DETAIL H-4-1 TEMPORARY ACCESS BRIDGE

STANDARD SYMBOL



LOCATION PLAN

NOTE:
 TIME OF YEAR RESTRICTIONS DO NOT APPLY TO THE CONSTRUCTION OR REMOVAL OF A TEMPORARY ACCESS BRIDGE UNLESS THERE IS DISTURBANCE TO THE STREAM CHANNEL.

1 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE
 NATURAL RESOURCES CONSERVATION SERVICE

2011

MARYLAND DEPARTMENT OF ENVIRONMENT
 WATER MANAGEMENT ADMINISTRATION

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CROSSING DETAIL

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DETAIL H-4-1 TEMPORARY ACCESS BRIDGE

STANDARD SYMBOL



CONSTRUCTION SPECIFICATIONS

1. CONSTRUCT TEMPORARY BRIDGE STRUCTURE AT OR ABOVE THE BANK ELEVATION TO PREVENT IMPACTS FROM FLOATING MATERIALS AND DEBRIS.
2. PLACE ABUTMENTS PARALLEL TO, AND ON, STABLE BANKS.
3. CONSTRUCT BRIDGE TO SPAN ENTIRE CHANNEL UNLESS OTHERWISE INDICATED ON APPROVED PLAN.
4. USE STRINGERS CONSISTING OF LOGS, SAWN TIMBER, PRESTRESSED CONCRETE BEAMS, METAL BEAMS, OR OTHER APPROVED MATERIALS.
5. SELECT DECKING MATERIALS TO PROVIDE SUFFICIENT STRENGTH TO SUPPORT THE ANTICIPATED LOAD. PLACE ALL DECKING MEMBERS PERPENDICULAR TO THE STRINGERS, BUTT TIGHTLY, AND SECURELY FASTEN. DECKING MATERIALS MUST BE BUTTED TIGHTLY TO PREVENT ANY SOIL MATERIAL TRACKED ONTO THE BRIDGE FROM FALLING INTO THE WATERWAY BELOW.
6. SECURELY FASTEN OPTIONAL RUN PLANKING FOR THE LENGTH OF THE SPAN. PROVIDE A RUN PLANK FOR EACH TRACK OF THE EQUIPMENT WHEELS. ALTHOUGH RUN PLANKS ARE OPTIONAL, THEY MAY BE NECESSARY TO PROPERLY DISTRIBUTE LOADS.
7. INSTALL CURBS THE ENTIRE LENGTH OF THE OUTER SIDES OF THE DECK TO PREVENT SEDIMENT FROM ENTERING THE STREAM CHANNEL.
8. ANCHOR BRIDGE SECURELY AT ONLY ONE END USING STEEL CABLE OR CHAIN. ANCHORING AT ONLY ONE END WILL PREVENT CHANNEL OBSTRUCTION IN THE EVENT THAT FLOODWATERS FLOAT THE BRIDGE. ACCEPTABLE ANCHORS ARE LARGE TREES, LARGE BOULDERS, OR DRIVEN STEEL POSTS. ANCHOR MUST BE SUFFICIENT TO PREVENT THE BRIDGE FROM FLOATING DOWNSTREAM.
9. AREAS DISTURBED DURING BRIDGE INSTALLATION AND/OR REMOVAL MUST NOT BE LEFT UNSTABILIZED OVERNIGHT UNLESS THE RUNOFF IS DIRECTED TO AN APPROVED SEDIMENT CONTROL DEVICE.
10. STABILIZE APPROACH TO BRIDGE AND KEEP FREE OF EROSION. CLEAN SEDIMENT FROM DECKING AND CURBS DAILY BY SCRAPING, SWEEPING, AND/OR VACUUMING. ENSURE THAT DECKING AND CURBS REMAIN TIGHTLY BUTTED WITHOUT GAPS. REMOVE DEBRIS TRAPPED BY BRIDGE. MAINTAIN AREAS ADJACENT TO CROSSING TO CONTINUOUSLY MEET REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.
11. AFTER THE TEMPORARY CROSSING IS NO LONGER NEEDED, REMOVE IT WITHIN 14 CALENDAR DAYS. IF SUBJECT TO THE USE DESIGNATION CLOSURE, REMOVE AT THE END OF CLOSURE PERIOD. PROTECT STREAM BANKS DURING BRIDGE REMOVAL AND STABILIZE ALL DISTURBED AREAS WITH EROSION CONTROL MATTING. ACCOMPLISH REMOVAL OF THE BRIDGE AND CLEAN UP OF THE AREA WITHOUT CONSTRUCTION EQUIPMENT WORKING IN THE WATERWAY CHANNEL. STORE ALL REMOVED MATERIALS IN AN APPROVED STAGING AREA.

2 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

2011

MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

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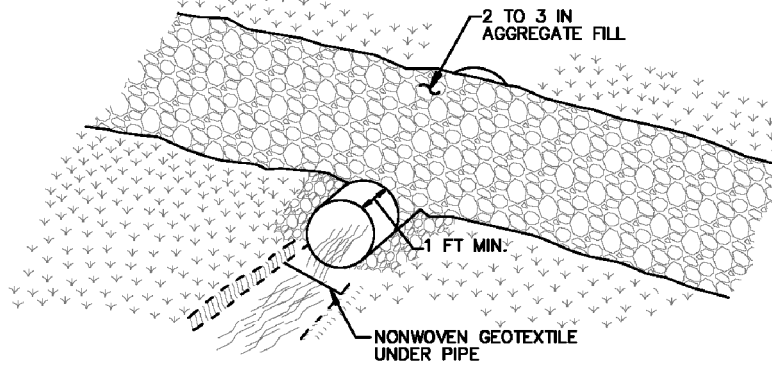
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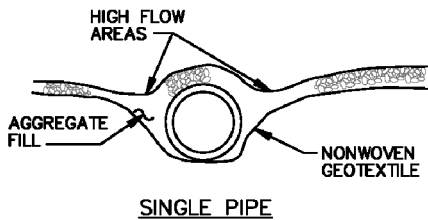
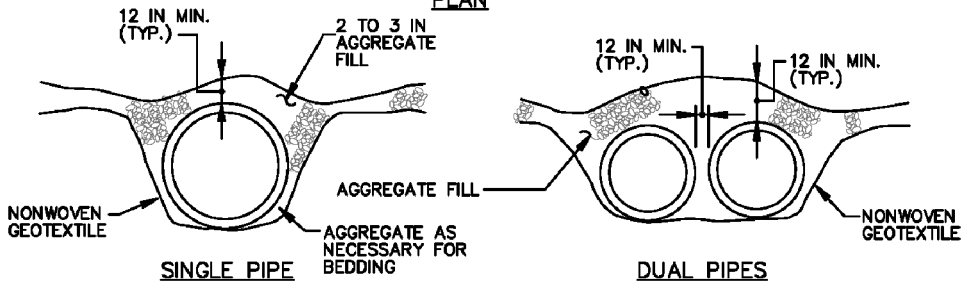
CROSSING DETAIL

DETAIL H-4-2 TEMPORARY ACCESS CULVERT

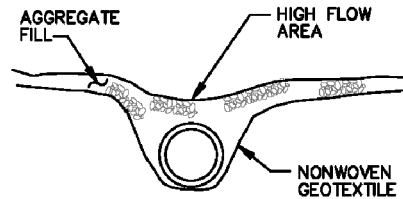
STANDARD SYMBOL



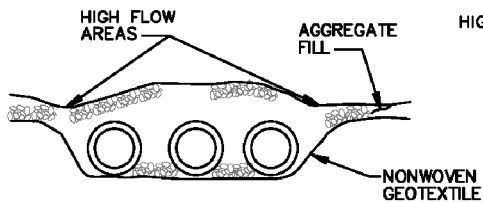
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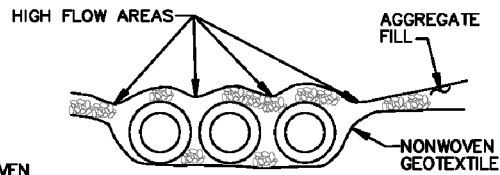
SINGLE PIPE



SINGLE PIPE



MULTIPLE PIPES



MULTIPLE PIPES

1 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

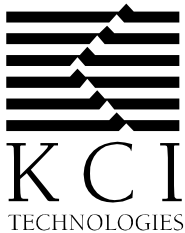
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CROSSING DETAIL

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DETAIL H-4-2 TEMPORARY ACCESS CULVERT

STANDARD SYMBOL



CONSTRUCTION SPECIFICATIONS

1. CONSTRUCTION OR REMOVAL OF A TEMPORARY ACCESS CULVERT WILL NOT BE PERMITTED DURING THE FOLLOWING PERIODS:

USE I AND IP	MARCH 1 – JUNE 15
USE II	JUNE 1 – SEPTEMBER 30 AND DECEMBER 16 – MARCH 14
USE III AND IIIP	OCTOBER 1 – APRIL 30
USE IV	MARCH 1 – MAY 31
SAV* (ALL FLOWING STREAMS)	APRIL 15 – OCTOBER 15
*SUBMERGED AQUATIC VEGETATION	

2. EXTEND THE CULVERT(S) A MINIMUM OF ONE FOOT BEYOND THE UPSTREAM AND DOWNSTREAM TOE OF THE AGGREGATE PLACED AROUND THE CULVERT.
3. PLACE NONWOVEN GEOTEXTILE ON THE STREAM BED AND STREAM BANKS PRIOR TO PLACEMENT OF THE PIPE CULVERT(S) AND AGGREGATE. COVER THE STREAM BED WITH THE GEOTEXTILE AND EXTEND IT A MINIMUM SIX INCHES AND A MAXIMUM OF ONE FOOT BEYOND THE END OF THE CULVERT AND BEDDING MATERIAL. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS. GEOTEXTILE REDUCES SETTLEMENT AND IMPROVES CROSSING STABILITY.
4. PLACE CULVERT(S) ON THE NATURAL STREAM BED GRADE TO MINIMIZE INTERFERENCE WITH FISH PASSAGE.
5. COVER THE CULVERT WITH A MINIMUM OF ONE FOOT OF WASHED AGGREGATE. FOR MULTIPLE CULVERTS PROVIDE AT LEAST 12 INCHES OF COMPACTED AGGREGATE FILL BETWEEN CULVERTS.
6. STABILIZE ALL AREAS DISTURBED DURING CULVERT INSTALLATION WITHIN 24 HOURS OF THE DISTURBANCE IN ACCORDANCE WITH STANDARDS FOR PERMANENT STABILIZATION, SECTION B-4-5, OR TEMPORARY STABILIZATION, SECTION B-4-4, AS APPLICABLE.
7. STABILIZE APPROACH TO CROSSING AND KEEP FREE OF EROSION. REPLACE DISPLACED STONE, AND MAINTAIN HIGH FLOW AREAS. REMOVE DEBRIS TRAPPED BY CULVERT. REPLACE DAMAGED PIPE(S). MAINTAIN AREAS ADJACENT TO CROSSING TO CONTINUOUSLY MEET REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.
8. AFTER THE TEMPORARY CROSSING IS NO LONGER NEEDED, REMOVE IT WITHIN 14 CALENDAR DAYS. IF SUBJECT TO THE USE DESIGNATION CLOSURE, REMOVE AT THE END OF CLOSURE PERIOD. PROTECT STREAM BANKS DURING CULVERT REMOVAL AND STABILIZE ALL DISTURBED AREAS WITH EROSION CONTROL MATTING. ACCOMPLISH REMOVAL OF THE CULVERT AND CLEAN UP OF THE AREA WITHOUT CONSTRUCTION EQUIPMENT WORKING IN THE WATERWAY CHANNEL. STORE ALL REMOVED MATERIALS IN AN APPROVED STAGING AREA.

2 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

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MARYLAND DEPARTMENT OF ENVIRONMENT
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CROSSING DETAIL

MGWC 4.2: UTILITY CROSSING

Temporary in-stream construction

DESCRIPTION

The work should consist of installing erosion control devices in and adjacent to the construction of utility crossings.

INSTALLATION GUIDELINES

All erosion and sediment control devices, including dewatering basins, should be implemented as the first order of business according to a plan approved by the WMA or local authority. (See *the 1994 Maryland Standards and Specifications for Soil Erosion and Sediment Control*.) The proposed construction sequence is as follows (refer to [Detail 4.2](#)):

1. The contractor should insure that a continuous perimeter control barrier is in place to minimize the amount of pollutants entering the flow. A diversion pipe as shown in [MGWC 1.4: Diversion Pipe](#) or other measure should be installed and sandbag or stone barriers as shown in [MGWC 1.5: Sandbag/Stone Diversion](#) should be constructed according to specifications to divert the streamflow.
2. Excavated topsoil and subsoil should be kept separate, placed on the upland side of the excavation, and replaced in their natural order.
3. All construction should take place during stream low flows. The length of construction time should be limited to a maximum of 5 consecutive days for each crossing.
4. All utility crossings should be placed a minimum of 3 feet (1 meter) beneath the stream bed unless an alternative section is specifically approved by the WMA. For instances where a 3-foot cover is not viable, two alternate stabilization options are given in the [Detail 4.2](#). A low flow channel shall be constructed through all riprap placements across the stream bed.
5. The stream should be diverted by an approved temporary stream diversion, the construction area should be dewatered, and any disturbed banks should be stabilized. The contractor may elect to construct the utility crossing in two stages. In this case, a WMA approved flow barrier may be constructed to keep the construction area dry.
6. Once the crossing is completed, the diversion should be removed from upstream to downstream. Sediment control devices, including perimeter erosion controls, are to remain in place until all disturbed areas are stabilized in accordance with an approved sediment and erosion control plan and the inspection authority approves their removal.

STREAM CROSSINGS

MARYLAND DEPARTMENT OF THE ENVIRONMENT
WATERWAY CONSTRUCTION GUIDELINES
REVISED NOVEMBER 2000

PAGE 4.2 - 1

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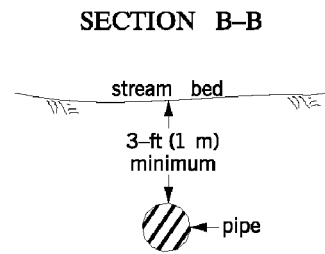
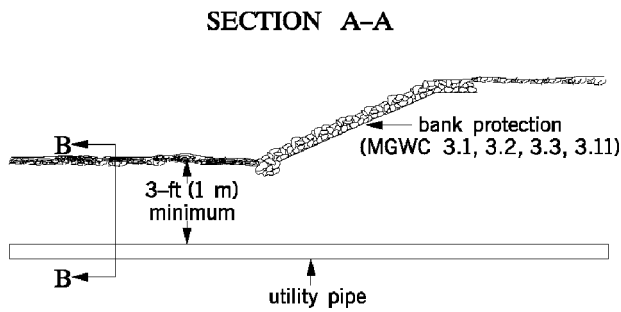
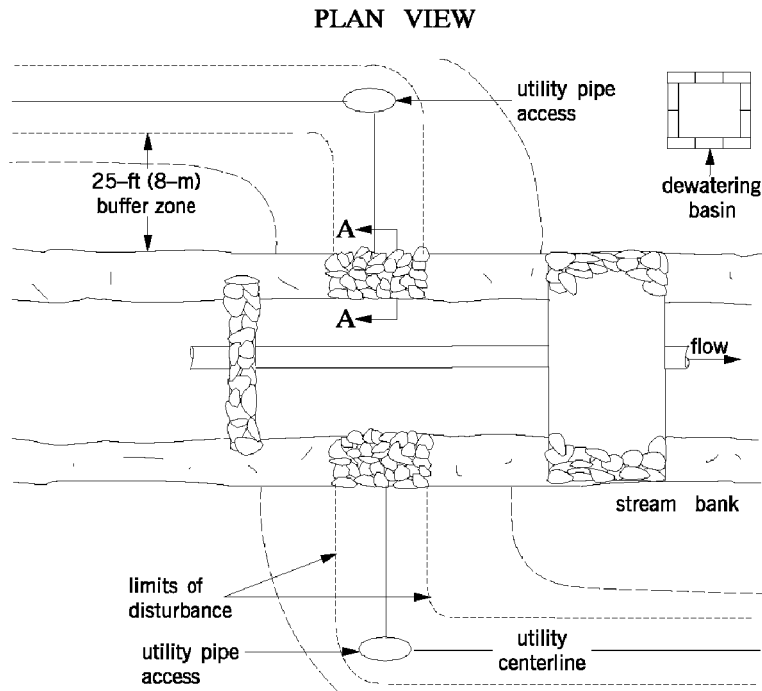
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CROSSING DETAIL

Maryland's Guidelines To Waterway Construction

DETAIL 4.2(a): UTILITY CROSSING



STREAM CROSSINGS

PAGE 4.2 - 2

MARYLAND DEPARTMENT OF THE ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

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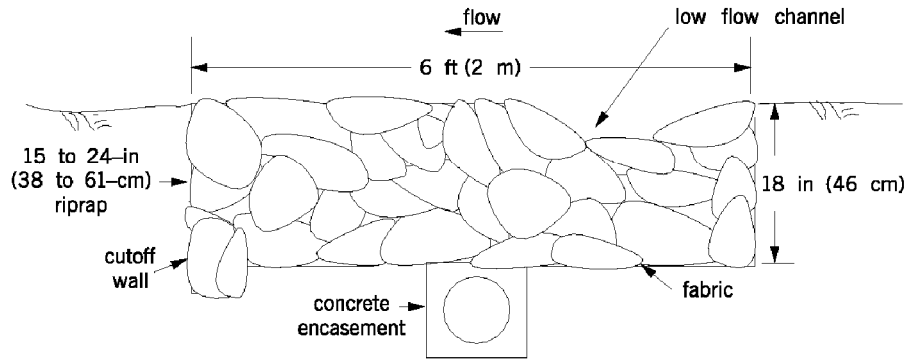
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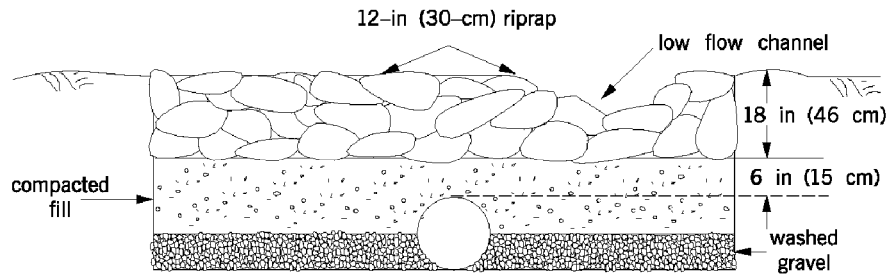
Maryland's Guidelines To Waterway Construction

DETAIL 4.2(b): UTILITY CROSSING

SECTION VIEW:
ALTERNATE OPTION 1



SECTION VIEW:
ALTERNATE OPTION 2



STREAM CROSSINGS

REVISED NOVEMBER 2000
PAGE 4.2 - 3

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