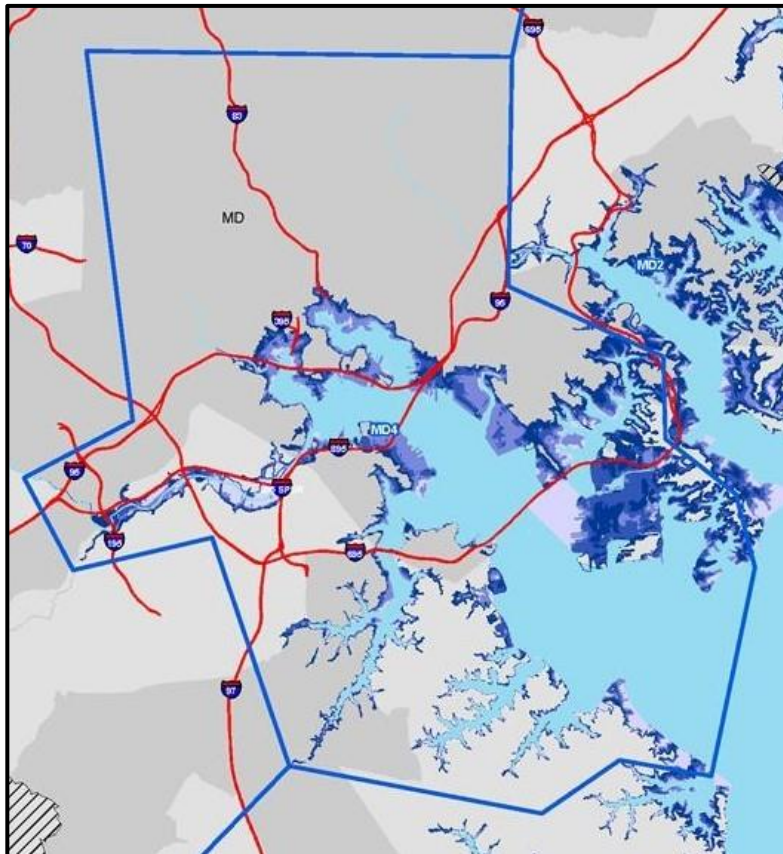


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# Baltimore Coastal Storm Risk Management Feasibility Study

## Appendix F: Real Estate Plan



**City of Baltimore, Anne Arundel and Baltimore Counties**  
**July 2022**

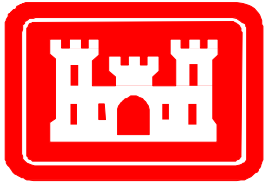


**US Army Corps  
of Engineers**

Baltimore District  
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Baltimore, MD 21201  
410-962-3511



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

## **Baltimore Coastal Storm Risk Management Feasibility Study**

**Baltimore, MD-Metropolitan Area**

### **APPENDIX F**

**To Draft Feasibility Report**

**REAL ESTATE PLAN**

**at approximately 10% design level**

**DRAFT REPORT**

**June 2022**

REAL ESTATE PLAN  
for the  
Baltimore Coastal Storm Risk Management Feasibility Study  
Baltimore, Anne Arundel and Baltimore City, MD

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- Section 4- Lands owned by the Non-Federal Sponsor
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- Section 19- Attitudes of Landowners and Project Support
- Section 20- Risk Letter Notification to Non-Federal Sponsor
- Section 21- Real Estate Risk Analysis

Exhibits and Attachments

- Exhibit A – Real Estate Maps
- Exhibit B – Standard Estates proposed
- Exhibit C – Non-Federal Sponsor Capability Assessment

## **Section 1: Purpose of this Real Estate Plan**

This Real Estate Plan (REP) is provided in support of the Baltimore Coastal Storm Risk Management Feasibility Study and is at a design level of approximately 10%.

The purpose of this REP is to describe the minimum requirements for the construction, operation, and maintenance of the Study's TSP which is also known as Alternative 5A. The Study reviewed multiple alternatives and the other alternatives were ultimately eliminated from consideration for various reasons as described in the main report.

These other alternatives included Alternative 4 which contained structural measures at the two tunnels, their ventilation facilities and some nonstructural treatments near Ft. McHenry and at the Patapsco Wastewater treatment plant. Alternative Plan 5 included all measures in Alternative Plan 4 and added nonstructural measures in the Inner Harbor and Canton areas. Alternative Plan 6 included all measures in Alternative Plan 5 but also added structural measures to the Seagirt Terminal. Finally, Alternative Plan 7 included all of the structural measures of Alternative Plan 6 and added structural measures near the Inner Harbor and Canton, replacing the nonstructural treatments in these areas.

This REP describes the estimated Land, Easements, and Right-of-Ways, Relocations and Disposal areas (hereinafter LERRD or LER) values, costs to acquire the LER, the types of real property interests (i.e., "estates") required, and other pertinent information relative to the real estate acquisition process and acquisition schedule for the TSP. This report identifies and describes the facility and utility relocations that may be necessary to complete prior to constructing the TSP. This REP is the first prepared for this Study and is an appendix to its Integrated Feasibility Report and Environmental Impact Statement (the "main report").

All property lines, estimates of cost and value, rights required for project construction, and operation and maintenance are subject to change even after approval of this Real Estate Plan.

## **Section 2: Project Summary**

a. Study Authority: Baltimore Metropolitan Water Resources authority. Committee on Public Works and Transportation of the United States House of Representatives adopted a House resolution on April 30, 1992:

*Resolved by the Committee on Public Works and Transportation of the United States House of Representatives, That the Board of Engineers for Rivers and Harbors, is requested to review the report of the Chief of Engineers on the Baltimore Metropolitan Area, Maryland, published as House Document 589, Eighty-seventh Congress, Second Session, and the reports of the Chief of Engineers on Baltimore Harbor and Channels, Maryland, and Virginia, published*

*as House Document 181, Ninety-fourth Congress, First Session, and House Document 86, Eighty-fifth Congress, First Session, and other pertinent reports, to determine whether modifications of the recommendations contained therein are advisable at the present time, in the interest of flood control, hurricane protection, navigation, erosion, sedimentation, fish and wildlife, water quality, environmental restoration, recreation, and other related purposes.*

b. Non-federal Sponsor: The non-Federal sponsor for this feasibility study is the Maryland Department of Transportation (MDOT). It is likely that MdTA, a business unit within MDOT will serve as the non-Federal sponsor for the construction of the proposed structural measures of the Recommended Plan at a 65% (Federal) and 35% (non-Federal) cost-share. Currently, there is no confirmed nonfederal sponsor for the nonstructural portion of the Recommended Plan but it is hoped that the City of Baltimore will agree to do this. The future Project Partnership Agreement (PPA) between USACE and the nonfederal sponsors, will require the nonfederal sponsors to be responsible for performing or ensuring the acquisition of the LER requirements for the Study's Recommended Plan as outlined in this Real Estate Plan (REP).

c. The TSP

The TSP is Alternative Plan 5A and contains both structural and non-structural elements.

Based on the cost estimate performed by an in-house appraiser, the Estimated Value of all easements for the structural measures is **\$5,110,000**.

The structural portion of the TSP includes floodwalls protecting the Fort McHenry Tunnel and Harbor Tunnel as well as their ventilation structures. In all, the TSP includes the construction of 9,625 linear feet of fixed floodwall with 10 closing structures where access is needed for driving and sidewalks (Modeled Areas- MA 19 + MA 18 + MA24+ MA8).

The structural portion of the TSP has 22 impacts to eight (8) different tax account parcels, including the temporary work area easements which are on parcels where we also need the permanent easements. Of these 8 parcels, 4 are privately owned. The remaining properties are state owned or in a presumed public right of way.

The structural portion of the TSP includes approximately 250,041 square feet of land or 5.74 acres of perpetual Flood Protection Levee Easement and includes approximately 29,233 square feet of land or 0.67 acres of Temporary Work Area Easements on 3 parcels, 1 of which is privately owned. (For specific parcel impacts, ownership, and acreages, see Exhibit A).

The TSP also includes a non-structural component where **293** structures are to receive either wet or dry floodproofing to various level of protections (See Table 1 below). At the current level of design, it has not yet been determined which structures will receive dry floodproofing treatments and which will be wet floodproofed.

At its current level of design, the TSP does not include structural elevations and does not include any involuntary non-structural measures such as mandatory buyouts. Finally, at the current level of design, there are no proposed natural and nature-based features (NNBF) as part of the Recommended Plan.

Table 1- number of structures affected

<b>Inundation water levels</b>	<b>Modeled Area (MA)</b>	<b># of structures impacted</b>
100-year	MA 14	20
50-year	MA 11	29
	MA 12	2
20-year	MA 9	40
	MA 10	197
	MA 15	5
<b>TOTAL</b>		<b>293</b>

The non-structural portion of the TSP calls for flood proofing for 293 structures. A breakdown of the inundation levels and property type is below in Table 2:

Table 2- number and type of impacted structures

<b>Inundation Level</b>	<b>residential</b>	<b>nonresidential</b>
100-year	0	20
50-year	0	31
20- year	197	45

### Floodproofing- Non-structural Measures

Section 73 of the 1974 Water Resources Development Act requires consideration of non-structural alternatives in flood damage reduction studies. They can be considered independently or in combination with structural measures. Non-structural measures focus on reducing consequences from flooding, not reducing flooding probability. These measures reduce damages without significantly altering the nature or extent of flooding. They do this by changing the use made of the flood plains or by accommodating existing uses to the flood hazard. Examples are flood proofing, relocation of structures, flood warning preparedness systems, evacuation, and

regulation of flood plain uses (ER 1105-2-100). 33 USC 2213 requires the same LERRD and OMRR&R requirements for nonstructural features as exist for structural project components.

Dry proofing consists of constructing or installing features designed to allow flood waters to reach a structure but diminish the flood threat by preventing flood waters from entering a structure. Examples include attaching watertight sealants on windows and doors, and relocating utilities and sump pumps.

Wet-flood-proofing consists of constructing or installing features designed to allow water to flow in and out of a structure, but prevent the contact of water to essential utilities or mechanicals of the structure. Examples include filling a basement and elevating or protecting the HVAC system.

Wet and dry floodproofing are each considered a voluntary non-structural measure and cannot be mandatory according to Planning Bulletin 2019-03 issued December 18, 2018. If an owner elects to not participate or does not qualify for participation, eminent domain will not be pursued.

Additional coordination will be required to determine how USACE will approach the issue of temporary relocation benefits if they are necessary for some of the properties. The Project must comply with the Uniform Relocation Act, which ordinarily does not provide such benefits for participants in a voluntary program. However, URA benefits must be provided to tenants who would be displaced. Furthermore, if it is determined that the failure to offer temporary relocation benefits has a significant impact on participation in the project, or if the failure to offer the benefit has a disproportionate Environmental Justice impact, they may be considered.

### **Section 3: Real Estate Requirements for the TSP**

#### **a. Description of Land, Easements, Rights of Way,(LER) Requirements for the Project**

This TSP will require various “estates” for the structural and non-structural components of the project. ER-405-1-12, 12-9(c) states that for floodwalls, permanent easements are sufficient. The non-federal sponsor for the structural components of the plan, will be responsible for obtaining all of the required real estate interests on the affected parcels. For acreages of the easements, see Table 3 below.

#### **Standard Estates:**

The TSP will require use of Flood Protection Levee Easements and Temporary Work Area Easements both of which are considered “standard” estates. Copies of the standard estates to be used are contained in Exhibit B attached hereto.



Table 3 summary of Standard Estates

Flood Protection Levee Easement	Permanent	5.74 acres +/-
Temporary Work Area Easements	Temporary	0.67 acres +/-
Total		6.41 acres +/-

### Non-Standard Estate

A nonstandard estate should be used to implement the non-structural portion of the TSP because no currently approved USACE standard estate adequately addresses the implementation of voluntary non-structural measures. See Section 5 for more information about the nonstandard estate.

### Mitigation

At the current level of design, we do not expect significant environmental impact that would require mitigation. Also, at the current level of design, there are no temporary easements required for the borrowing or disposal of dredged or excavated material. Any excavated material requiring disposal will be the responsibility of the selected construction contractor to dispose of at an authorized disposal site.

### b. Land Value Estimate/Appraisal

In accordance with USACE Real Estate Policy Guidance Letter No. 31, CEMP-CR, 11 Jan 2019, subject: Real Estate Policy Guidance Letter No. 31-Real Estate Support to Civil Works Planning (hereinafter referred to as “PGL 31”), a land appraisal “cost estimate”, or a “rough order of magnitude” estimate, was completed for the structural elements of the TSP since the value of real estate (land, improvements and severance damages) was not expected to exceed fifteen percent of the total costs of the TSP. A cost estimate is not a full appraisal. To establish a more accurate land valuation for the required real estate, a full land appraisal based on surveyed boundaries of the TSP’s final design plans is required.

The appraisal cost estimate represents the estimated market value of the real estate required for the structural portion of the TSP. It also serves to identify the estimated compensation amount paid to land owners for the purchase of the required real estate interests. The appraisal cost estimate does not include the incidental costs (e.g., appraisals, surveys, title, attorney fees, etc.) that would be incurred to facilitate and complete the acquisition of real estate. The appraisal cost estimate is an item of the TSP’s 01-Lands & Damages cost account. It is incorporated into the Base Line Cost Estimate for Real Estate (BCERE) under the “Land Payments” and “Land Payments under PL 91-646” line items. See Section 11 for the BCERE and the TSP’s overall estimated real estate costs.

An appraisal cost estimate was completed by a licensed USACE staff appraiser who concluded, as of March 2022, that the market value (i.e., property owner’s compensation amount) for the TSP’s required real estate for structural measures is approximately **\$5,110,000**. Table-4 provides a summary of the estimated market value for the real estate required.

Table-4: Estimated Market Value of the Required Real Estate for structural measures

Estate Type	Estimated Market Value
Fee	\$0
Permanent Easements	\$4,152,479
Temporary Easements	\$957,521
<i>Total:</i>	<i>\$5,110,000</i>

**Parcels impacted**

Block	Parcel	Zoning	Acres	type
6607k	008	MI	0.097	perpet
6607k	008	MI	0.338	perpet
6607k	016	MI	0.096	perpet
6607k	017	MI	0.008	perpet
2040	011	MI	0.936	perpet
7323B	002	MI	0.047	perpet
7323B	002	MI	0.110	perpet
Public ROW		MI	1.622	perpet
1958	002	MI	0.030	perpet
2040	011	MI	0.331	perpet
Presumed public ROW		MI	0.963	perpet
Presumed public ROW		MI	0.019	perpet
2040	016	MI	0.072	perpet
PSC0	010	MI	0.105	perpet
2040	016	MI	0.173	perpet
PSC0	010	MI	0.086	perpet
Presumed public ROW		MI	0.599	perpet

Presumed public ROW		MI	0.016	perpet
Presumed public ROW		MI	0.001	perpet
Presumed public ROW		MI	0.002	temp
1958	002	MI	0.310	temp
7323B	002	MI	0.359	temp

There is no appraisal cost estimate for the property interests that would need to be acquired to implement the nonstructural components of the TSP. For the purposes of the REP at this stage project planning, it is assumed that the market value (due to the property owners) of those interests in this voluntary program would be zero. However, the administrative costs to obtain those interests could be quite significant, though they will vary greatly among the hundreds of properties that may be eligible to participate and they have been estimated.

**Section 4: Lands owned by the Non-Federal Sponsor**

The likely nonfederal Sponsor for the structural portion of the Recommended Plan does own land required for the structural components of the TSP. Ownership is detailed above and on Exhibit A.

**Section 5: Non-standard estate**

Non-standard estates are necessary when there is no corresponding USACE approved standard estate for the real property interest required, or when material changes to a corresponding standard estate (or previously approved non-standard estate) are desired. Planning Guidance Letter No. 31, dated 11 Jan 2019, instructs that a non-standard estate can no longer be approved solely by its inclusion in a feasibility report.

A non-standard estate is proposed to be used for the non-structural measures (wet and dry floodproofing) that are part of the TSP because no currently approved USACE standard estate adequately addresses the implementation of these voluntary non-structural measures.

Approval of a non-standard estate for this TSP is in the best interest of USACE as it will help to provide adequate protection for the taxpayer and federal investment made in the project in carrying out the TSP.

The approved non-standard estate will need to be incorporated into an easement agreement between the non-federal sponsor (yet to be identified) and property owner(s)

to be recorded in the land records of the appropriate jurisdiction. This easement will be perpetual and will impose restrictions on the property. Once recorded, the easement agreement will provide subsequent owners of the property adequate notice of the restrictions associated with the participating property. This recorded easement will help current and future owners understand their rights, limitations, and responsibilities related to the project and the subject property. The easement agreement will contain conditions the owner must agree to and comply with to ensure the long-term effectiveness of the treatment performed on the structure and the easement agreement will contain the nonstandard estate once it has been approved by USACE HQ.

The nonstandard estate will require the owner to give up certain rights regarding their property and will establish restrictions in, on, over, and across the land of the owner. Examples of these rights may include, but are not limited to the following:

- Estate will establish a perpetual and assignable easement for the right, power and privilege to install, construct, operate, maintain, repair, rehabilitate and replace nonstructural measures for flood risk management;
- Measures for this specific study include wet and dry floodproofing of structures, including modification of mechanical systems and utilities;
- Estate will allow for the right to inspect at reasonable times and with reasonable notice as well as enforcement of the terms and conditions of the recorded easement;
- Estate will prohibit human habitation below the target elevation;
- Estate will prohibit new structures, or additions, or renovations to existing structures below the target elevation;
- Estate will prohibit mechanical systems from being installed below the target elevation;
- Estate will prohibit grading or removal of material that would result in alteration of existing topography and will prohibit changes to the land that may impact existing drainage characteristics, sedimentation patterns, flow patterns, or flood retention characteristics;
- Estate will allow ingress and egress over and across the land for the purpose of exercising the rights of the NFS for operation and maintenance of the project;
- Estate will be subject to existing easements for public roads and highways [public utilities, railroads and pipelines] as applicable;
- Estate will require owner to agree to submit a written request in accordance with procedures in effect at the time of the request using the Section 408 process, in order to alter measures constructed as part of the project that may impair the easement.

The proposed non-standard estate and proposed easement agreement will be submitted for approval separately from this REP and will be submitted once the Chief's report is signed and the project moved to the PED phase.

**NOTE:** It is suggested that the TSP not proceed to the PED phase until HQUSACE approves the non-standard estate and the proposed easement document. If the TSP is approved before the non-standard estate and proposed easement are approved, it is recommended that the PDT wait for approval of the non-standard estate and easement agreement before proceeding to the PED phase.

In the event that HQ does not approve the proposed non-standard estate, the risk to the project is great because it will prevent implementation of the non-structural measures of the TSP. Approval of the non-standard estate by HQ will allow all components of the TSP to proceed.

#### **Section 6: Existing Federal Projects within LER for the TSP**

There are a number of other federal projects within the study area including Warner Street-Middle Branch (2006), Hanover Street Wetland Project (2004), and Baltimore Harbor and Channels Projects, but there is no overlap between these projects and the LER needed for the TSP.

#### **Section 7: Existing Federally Owned Lands within the LER for the TSP**

There are a number of Federal assets that lie either partially or fully within the study area. Within the study area are Fort McHenry (NPS), which is under National Park Service jurisdiction, a USACE facility in Locust Point and a Naval Reserve property, which is also in Locust Point and is next to the USACE Facility. No real estate interests for structural measures are required from these parcels. However, the Naval Reserve building identified for floodproofing is owned by another federal agency and we are not permitted to spend project dollars on floodproofing buildings owned by a different federal agency.

#### **Section 8: Navigational Servitude**

Navigational servitude is the dominant right of the Government under the Commerce Clause of the U.S. Constitution to use, control and regulate the navigable waters of the United States and submerged lands thereunder for various commerce-related purposes. Generally, the Federal government does not acquire interests in real property that it already possesses or over which its use or control is or can be legally exercised. If navigational servitude is found to be available, then the Federal Government will generally exercise its right thereunder and, to the extent of such rights, will not acquire a real property interest in the land to which the navigational servitude applies. Navigational Servitude does not apply to a Non-federal sponsor.

Navigational servitude is not expected to be asserted for any features of the TSP.

#### **Section 9: RE Mapping**

Preliminary real estate maps are provided in the attached Exhibit “A”. The GIS tax parcel data and ownership was obtained from the Baltimore City GIS data in March 2022. More detailed mapping will be developed with plan optimization.

The parcel boundaries shown on the enclosed maps are not survey data and should not be used as such. There may be boundary discrepancies between what is shown on these real estate maps and the property’s actual deeded boundary. The data obtained is intended for planning purposes only to provide a reasonable representation of parcel boundaries and project features. Surveys will be needed to determine the floodwall’s precise location on properties based on the property’s deeded legal description. Finally, the parcel boundaries delineated in the real estate maps should not be used to provide a legal determination of land ownership. Title Searches will be necessary to determine accurate ownership information for the properties included in the TSP.

**Section 10: Induced Flooding**

At the current level of design, induced flooding is not expected but the hydrologic analysis has not yet been completed.

As the TSP is optimized, induced flooding calculations will be made and refinements to the current plan are expected. Induced flooding issues could potentially require 91-646 relocations or additional land acquisition. A physical taking analysis by Office of Counsel will be completed at a future time as necessary.

In addition, a policy decision related to potential acquisitions as a means of mitigation for any induced flooding will be revisited once the hydraulic analysis is completed.

**Section 11: BCRE summary**

Estimated financial costs that are attributed to the TSP’s real estate requirements are shown in Tables 5 and 6 below:

Table 5- Structural

Acquisition Administrative costs	\$512,000
PL-91-646 Administrative costs	\$0
PL-91-646 benefit costs	\$0
Estimated damages	\$ 5,110,000 (includes incremental cost assigned by appraiser)
Contingency	40%- as to admin costs only
Total	\$5,826,800

Table 6-Non-structural components

Acquisition Administrative costs	\$6,006,500
----------------------------------	-------------

PL-91-646 Administrative costs	\$0
PL-91-646 benefit costs	\$0
Contingency	40%
Cost of easement	Assumed to be \$0
Total	\$8,409,100

**The estimated total costs for both structural and non-structural implementation is expected to be \$14,235,900 in 2022 dollars.**

The above costs include funds for the LER and relocation of displaced persons, if applicable. Incidental acquisition costs are also included and include costs for title work, appraisals, appraisal review, coordination meetings, review of documents, legal support (including but not limited to approval of the NSE and easement drafting), crediting, project close out, and other costs incidental to the acquisitions and the project.

In arriving at these figures, certain risks are noted, and certain assumptions were made. For the non-structural components of the TSP (wet and dry floodproofing), one significant assumption we made is that the consideration for the recorded easement will be the work performed and that no additional consideration will be necessary. However, we are including in our MCACES estimate, the costs of appraising the value of the easement as that will still be necessary. If the appraisal results in a damages figure that exceeds the cost of the work performed, additional consideration will be due to the property owner.

Additional risks and assumptions are discussed in more detail in Section 21 of this report. In addition to those risks and assumptions discussed here and in Section 21, the appraiser also assigned separate risk factors which are outlined below in Table 7.

Table 7- Risk factors noted by Appraiser

<b>Risk Factors noted by Appraiser</b>
Potential uneconomic remnants
Unknowns consistent with limited parcel by parcel analysis, including damages to the remainder
Relatively small-scale mapping, consistent with a low level of design
Unforeseen aspects due to inaccessibility
Cost / Value increases from potential development pressures and/or zoning changes
Negotiation latitude above estimated market value
Potential for excessive condemnation costs/awards
Potential for unknown natural resources or minerals
Potential for relocation costs
Potential changes in the project footprint real estate impact
Potential for unknown environmental issues

Cost estimates are based on expected costs in March 2022 and will change over time so will need to be continuously updated during plan optimization.

## **Section 12: Uniform Relocation Assistance Act- Public Law 91-646**

The availability of relocation assistance benefits for persons affected by this project will be determined pursuant to the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (“Uniform Act”), and its implementing regulations at 49 C.F.R. Part 24 (“Uniform Relocation Assistance and Real Property Acquisition for Federal and Federally-Assisted Programs”).

There are no proposed mandatory buyouts, mandatory relocations or structure elevations included in the TSP. Generally speaking, a resident should not need to vacate a structure for wet or dry floodproofing so therefore, no 91-646 relocations should be required as part of the TSP. NNC’s BPD 2020-02 addresses temporary relocation and in pgh 5.b.iv discusses the ability of an owner to afford to temporarily relocate at their own expense and states that this factor only applies to structures being elevated. Therefore, it implies that no relocation is necessary for wet or dry floodproofing.

However, as the level of design and optimization of this TSP increases, and as discussed in paragraph 2 above, this issue will be revisited.

## **Section 13: Mineral and Timber Activity**

There are no known present or anticipated mineral extraction or timber harvesting activities within the LER required for the TSP.

## **Section 14: Assessment of Non-Federal Sponsor Acquisition Capability**

The assessment of the non-federal sponsor related to their real estate acquisition capabilities is provided in Exhibit C. The Sponsor has been identified as highly capable of performing or ensuring the performance of its real estate responsibilities. They possess the professional capability to acquire the real estate for the TSP and have sufficient general and legal authority to do so.

## **Section 15: Land Use and Zoning**

There will be no application or enactment of zoning ordinances in lieu of, or to facilitate, the non-structural features of this project. The non-structural measures are voluntary in nature and would be available only to existing eligible structures using the general process outlined below in Section 16 that will be further developed before implementation of this real estate plan.



During PED, planning and zoning regulations should be further reviewed, and discussions should be conducted with the NFS and local jurisdictions regarding the development and adoption of land use regulations for future activities within the project area. The NFS would be required to coordinate these matters with local planning commissions.

**Section 16: Schedule of Real Estate Acquisition and Implementation**

The NFS has reviewed the below schedule of acquisitions and has indicated that it looks reasonable to them.

Forecasted Real Estate Acquisition Schedule for non-structural acquisitions:

Milestone	Date
Execution of Project Partnership Agreement with Sponsor	
Notice to Proceed with Real Estate Acquisition furnished to Sponsor and forward mapping to Sponsor (assumes NSE and Easement approved in advance)	Within 2 weeks of PPA
Sponsor determines ownership and notifies eligible owners to determine participation level for non-structural treatment	9 months from PPA
Interested owners apply and submit supporting documentation	6 months after notification
Sponsor conducts field inspections of structure	12 months after applications
Sponsor performs title work, conducts safety inspection/abatement and obtains subordinations for participating owners	12 months from inspections
Owner obtains subordinations and partial releases as necessary	12 months from inspection
Sponsor conducts valuation necessary to determine whether consideration for easement is due	12 months from inspection
Sponsor negotiates offer and drafts applicable documents	6-12 months after valuation
USACE review of prior steps	12 months from offer
Closing takes place and recordation of appropriate documents	12 months from USACE review

USACE review of all easements, title work and subordination agreements and certifies Real Estate	3 months after receipt of each package from NFS
USACE commences with Advertising for Construction Contracts	3 months after cert. of RE

Forecasted Real Estate Acquisition Schedule for structural acquisitions:

Milestone	Date
Execution of Project Partnership Agreement with Sponsor	
Notice to Proceed with Real Estate Acquisition furnished to Sponsor	Within 2 weeks of PPA
USACE receives Authorization for Entry from Sponsor	12 months from PPA
USACE Certifies the Real Estate for the TSP	24 months after ROE
USACE commences with Advertising for Construction Contracts	90 days after RE certification

### **Section 17: Relocation of Facilities or Public Utilities**

For flood control projects, the Sponsor is required to relocate affected facilities and utilities necessary for the construction, operation, and maintenance of a project. A relocation may take the form of an alteration, lowering, raising, or replacement (and attendant removal) of the affected facility/utility or part thereof.

At the current level of design, this TSP is not expected to result in any relocation of public utilities or facilities, but this issue will need to be revisited as the design is optimized. Please also see Section 21 for additional assumptions.

### **Section 18: Hazardous, Toxic and Radioactive Waste (HTRW) Concerns**

According to the Environmental Appendix to the main report, any ground disturbance would need to take into consideration the location of waste generators and any possible contamination in the path of construction. In addition, it states that any alternative that requires anchoring could pose an issue depending on the placement. According to that Appendix, the search range of EDR records identified 1 National Priority List (NPL) site,

3 Superfund Enterprise Management System (SEMS) sites, 55 properties on the SEMS-archive list, 14 properties on the Federal RCRA Corrective Action Report Facilities List, and 11 properties listed as Federal RCRA non-CORRACTS Treatment, Storage and Disposal facilities list. Numerous waste generators. Brownfields, underground storage tanks and FUDS were also identified within the search area. For more specific and detailed information, please review that Appendix.

No flood-proofing will occur to structures with asbestos and/or asbestos-containing materials if the proposed actions may affect the asbestos and/or asbestos-containing material. The USACE National Nonstructural Committee Best Practice Guide 2020-02 states that in order to participate in a USACE project, property owners must correct existing violations of state and local health, sanitary and safety codes. Prior to any actions being commenced, the asbestos and/or asbestos containing material that may be disturbed by the flood-proofing activity must be removed by the property owner at their sole cost and expense and in compliance with all applicable local, state, and federal laws and regulations. Asbestos and asbestos-containing materials that would not be affected when carrying out the non-structural flood risk management treatment would not need to be removed prior to commencing such work. .

### **Section 19: Attitudes of Landowners and Project Support**

At the time this report was drafted, there has only been one public meeting which was an open house/kickoff meeting and took place several years ago before the project was canceled due to a lack of funding. It was not well-attended by the public, so it is not yet clear how affected property owners feel about this project.

### **Section 20: Risk Letter Notification to Non-Federal Sponsor**

The Non-Federal Sponsor for the feasibility study, the Maryland Department of Transportation (MDOT) was notified in writing by letter dated April 1, 2022, about the risks associated with the acquisition of land prior to the execution of the PPA. As noted above, no nonfederal sponsor has yet been identified for the nonstructural components of the Recommended Plan so no similar notification has been given at this time.

### **Section 21: Real Estate Risk Analysis**

1. At the current level of design, we do not have locations for buried utilities so we are unable to determine whether this project will be impacted by this issue.
2. The gas farms in the Patapsco South Reach are not being further protected which may increase risk of environmental accidents.

3. Environmental justice issues. The non-structural measures in the TSP are voluntary and as such, an owner may need to make improvements to the structure in order to participate or expend their own funds in other ways such as obtaining partial releases or subordination agreements from existing lienholders. This may cause a hardship for some owners causing them to decline to participate in the project. If a property owner wants to participate, Best Practice Guide 2020-02 from the National Non-structural Committee advises that property owners must first correct existing violations of state and local health, sanitary and safety codes which have been identified by a local code enforcement official and which are the minimum necessary to ensure decent, safe, and sanitary (DSS) living conditions. Some examples expected to be encountered are lead-based paint and asbestos. While the Best Practice Guide is not official policy, if it is followed, there should be a pre-construction assessment of each property that desires to participate in the non-structural program to determine if any corrections need to be made before project construction. The fact that the property owner will need to self-fund these repairs before participating in the project is expected to affect participation rates for the project.

EO 12898 dated February 11, 1994, Sec. 2–2. Federal Agency Responsibilities for Federal Programs states that each federal agency shall conduct its programs, policies, and activities that substantially affect human health or the environment, in a manner that ensures that such programs, policies, and activities do not have the effect of excluding persons (including populations) from participation in, denying persons (including populations) the benefits of, or subjecting persons (including populations) to discrimination under, such programs, policies, and activities because of their race, color, or national origin.

4. There is a risk that utilities serving a particular eligible property may need to be separately floodproofed which would require a separate agreement with the utility. This determination will be on a case-by-case basis and at the current level of design we do not know enough information about each property to make this determination. We will need to revisit this issue for each structure as the design level increases and we have specifics about each structure or property.

5. There is risk in assuming that the cost of the floodproofing will exceed the value of the easements given by participating owners. If this turns out to not be the case, consideration will be due. An appraisal or similar product will need to be completed on each participating property to determine whether damages are due.

6. There is risk that structures eligible for floodproofing will require additional work to make them handicap accessible. NNC BPD 2020-07 discussed this issue and states in pgh 5.b. that a PDT should follow best practices for ensuring accessibility of elevated or floodproofed structures and that ramps and elevators may be considered eligible projects costs for those structures inhabited by people with disabilities. A letter from a licensed physician is sufficient to document this need.

7. Historic Structures. At this level of design, we do not know how many historic structures are impacted by this plan. There are potential impacts and any building 50 years or older may need to be evaluated for the National Register of Historic Places (NRHP) before floodproofing can occur. For the Structural measures, the I-895 tunnel entrance and ventilation building are eligible for the NRHP, and the I-95 tunnel entrance may be eligible. It is hoped that a floodwall can be designed that does not adversely impact the characteristics that make these structures significant.

8. Participation rates for non-structural portion of the TSP are assumed to be 100% for the purposes of the BCRE so that we can obtain the maximum cost exposure to NFS for the project.

9. It is assumed that all impacted properties have legal access by way of public streets or existing public rights-of-way.

10. It is assumed that residential and commercial properties participating in the non-structural portion of the project would have sufficiently large sites to accommodate staging of material and equipment.

11. For some structures, the cost of the proposed floodproofing treatment may be close to or exceed the value of the property. If, and when, this project is funded, this issue should be revisited to determine whether it makes economic sense to floodproof the property.

12. The PDT did not look at issues related to homeowner's insurance, so if, and when, the project is funded, it makes sense to consider whether the property owner's insurance policy contains a full replacement value provision and whether the insurance company would rebuild the structure with the installed flood-proofing features or whether doing so would require a substantial increase in policy premiums. Any increase in policy premiums could affect participation in the project.

13. The LER requirements are subject to change with plan optimization during the TSP's Pre-construction, Engineering, and Design (PED) phase when final plans, specifications, and detailed drawings are prepared.

14. If non-structural participating properties are subject to perfected liens against the property, such as mortgages, the lien holders/mortgage holders will need to be contacted by each owner so that appropriate partial releases or subordination agreements can be obtained. These partial releases /subordination agreements typically involve a fee charged by a lender for review so the homeowner will need to be prepared to pay these costs out of pocket. Payment of these fees could potentially affect the participation rate. In addition, it will take time to acquire these partial releases or subordination agreements and it will need to be determined who pays to record them in the land records.

15. Care should be taken during the final drafting process to ensure that any easement is in a legally sufficient form to be recorded in the various land record offices for each jurisdiction affected by the TSP.

16. The easement agreement document should be drafted to survive any future foreclosure action or tax sale, if possible, so that a subsequent owner acquiring under these circumstances is still bound by the terms and conditions of the recorded document.

17. It is important to note that there is currently no national USACE policy related to how to implement a non-structural plan and different approaches to non-structural plans are being used in different Districts within USACE. Implementation of non-structural plans is being reviewed at various levels of USACE and so it is possible that by the time this project moves to the PED phase, a national policy will have been established that could require use of different methods than described within this Real Estate Plan.

18. We assumed that no phase 1 environmental evaluation was necessary for properties participating in the non-structural measures. If it is later determined that one is necessary, it may have a significant impact on the total cost of this project.

19. For the non-structural treatments, if the initial inspection determines an owner needs to make repairs or address certain items before the structure can be considered eligible to participate, a second inspection may be required to ensure the repair was made. This cost was not included in the BCRE.

20. Dry and wet flood-proofing of structures is designed to protect the structure to a 100-year flood level, plus 1 foot.

21. This real estate plan does not address possible issues related to leasehold/ground rent properties and whether these ground rents will need to be redeemed for a property owner to participate in this project. Leasehold properties are quite common in the Baltimore, MD area.

22. At this stage of design, we cannot tell whether the value of the easements significantly de-value a property to the point that it becomes an uneconomic remnant requiring an outright purchase.

23. At this level of design, we do not know precisely where pump stations will be installed so they will impact the real estate needs of the project.

24. This real estate plan does not address whether a loss of view is compensable.

25. Care should be taken to consider what happens of a subsequent owner of a participating property desires to raze a structure in the future. Can the 408 review process release the easement restrictions if a new structure is built at elevation?
26. Negotiated acquisitions are typically in lieu of condemnation which usually means these transactions are exempt from transfer taxes. There is some question as to whether a voluntary transaction such as floodproofing would be considered an exempt transaction by a recording clerk, especially if compensation is paid for the value of the easement. If not exempt, transfer and/or recordation taxes may be imposed if there is consideration paid for the easement which would increase the costs of this project.
27. It is noted that google earth maps appear to show that a certain number of unprotected buildings. It is thought that they were built more recently and should be able to withstand flooding, but further investigation will be necessary as the TSP is optimized.
28. An assumption was made for cost estimation purposes that all floodproofing would cost the same amount per structure. This assumption will be addressed and changed as the plan is optimized.
29. For the issue of condemnation of Railroad property, MDOT had indicated that a State may exercise eminent domain so long as it is consistent with the enabling statute. We will need additional information from the NFS related to this issue and further legal review.
31. If the Naval Reserve building in Locust Point is slated for non-structural treatment- we cannot do work for another federal or DoD agency. Further investigation is needed.
32. As previously noted in the body of this Real Estate Plan, we assumed that for the non-structural components of the TSP (wet and dry floodproofing), the consideration for the recorded easement will be the work performed and that no additional consideration will be necessary. This assumes that the value of the easement is less than the cost to floodproof a structure. Appraisals will be done for participating each structure and if the value of the easement exceeds the cost to floodproof, additional consideration will be due to the property owner.
33. There may also be schedule and cost risks related to affected properties subject to a homeowner association, subordination or partial releases for lienholders, and for any renters who may be residing in the basement of an affected structure as a roommate of an owner occupant. Finally, there may be situations where participation is impacted by a structure being owned by multiple owners who disagree about whether they would like to participate in the project.

**Section 21:** Review and Approval

This Real Estate Plan was prepared by Real Estate Project Delivery Team member Eric Lamb who may be reached at (410) 962-5101 or by email: [eric.n.lamb@usace.army.mil](mailto:eric.n.lamb@usace.army.mil).

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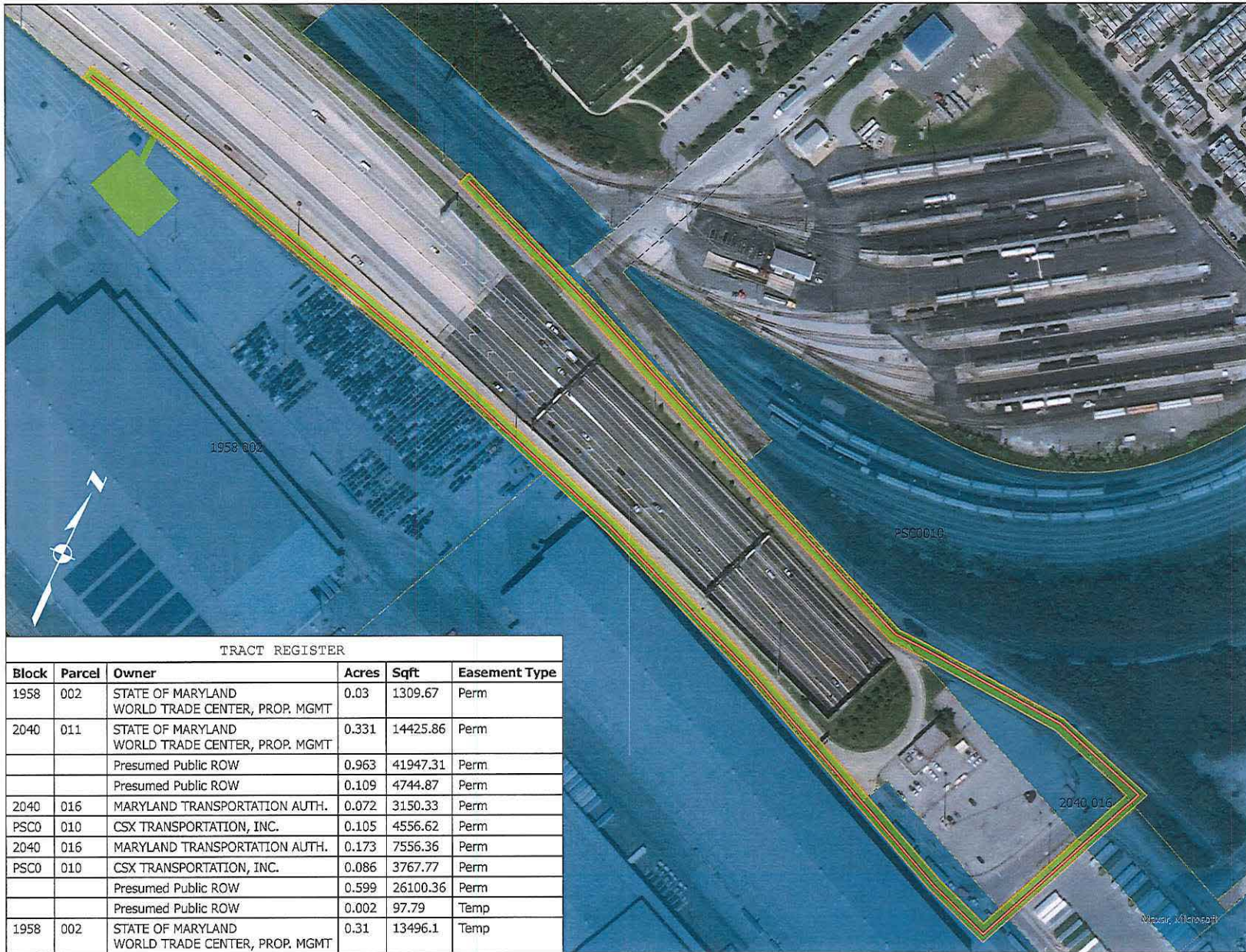
Eric Lamb  
Realty Specialist

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Stan H. Graham  
Acting Chief, Real Estate Division  
USACE-Baltimore District



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**REAL ESTATE PROJECT  
PLANNING MAP**

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**BALTIMORE COASTAL STORM  
RISK MANAGEMENT**

**FLOODWALL 12.2**

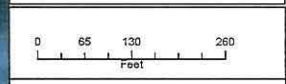
**MAP 1**

**TUNNEL ACCESS 1**

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Parcels
  Impacted Parcels  
 Easement
  Floodwall  
 LOD Boundary

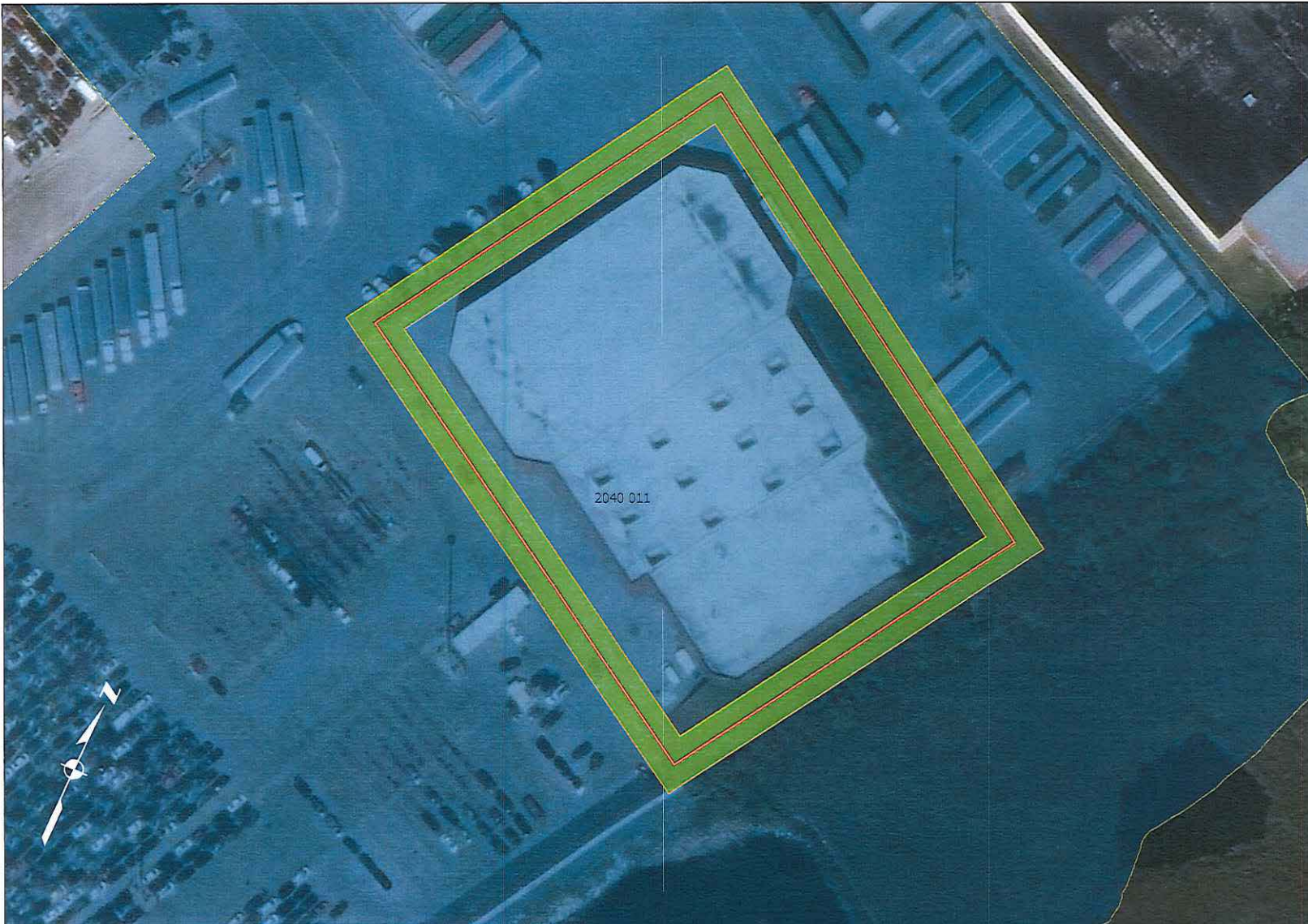
REVISION HISTORY		
DATE	REVISION	BY



TRACT REGISTER					
Block	Parcel	Owner	Acres	Sqft	Easement Type
1958	002	STATE OF MARYLAND WORLD TRADE CENTER, PROP. MGMT	0.03	1309.67	Perm
2040	011	STATE OF MARYLAND WORLD TRADE CENTER, PROP. MGMT	0.331	14425.86	Perm
		Presumed Public ROW	0.963	41947.31	Perm
		Presumed Public ROW	0.109	4744.87	Perm
2040	016	MARYLAND TRANSPORTATION AUTH.	0.072	3150.33	Perm
PSC0	010	CSX TRANSPORTATION, INC.	0.105	4556.62	Perm
2040	016	MARYLAND TRANSPORTATION AUTH.	0.173	7556.36	Perm
PSC0	010	CSX TRANSPORTATION, INC.	0.086	3767.77	Perm
		Presumed Public ROW	0.599	26100.36	Perm
		Presumed Public ROW	0.002	97.79	Temp
1958	002	STATE OF MARYLAND WORLD TRADE CENTER, PROP. MGMT	0.31	13496.1	Temp

**U.S. ARMY CORPS OF ENGINEERS**  
BALTIMORE DISTRICT  
REAL ESTATE DIVISION  
BALTIMORE, MARYLAND

PROJECT FILE:  
Baltimore CSRMAprx  
CREATED BY: RCK  
DATE: 23 February 2022  
SCALE: AS SHOWN  
PLATE: **R-1**



REAL ESTATE PROJECT  
PLANNING MAP

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BALTIMORE COASTAL STORM  
RISK MANAGEMENT

FLOODWALL 12.2

MAP 2

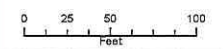
TUNNEL ACCESS 2

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- Parcels
- Impacted Parcels
- Easement
- Floodwall
- LOD Boundary

REVISION HISTORY

DATE	REVISION	BY

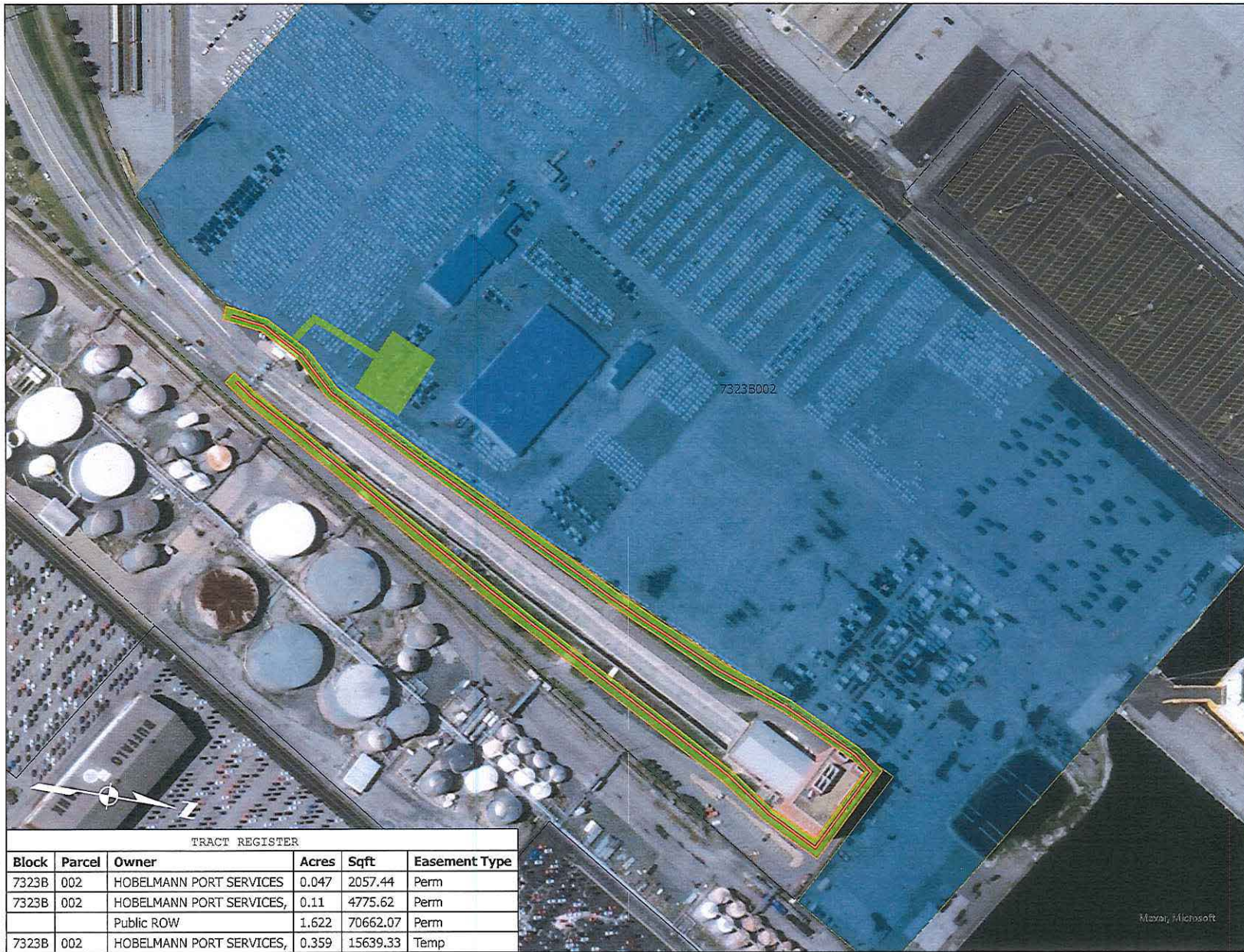


U.S. ARMY CORPS OF ENGINEERS  
BALTIMORE DISTRICT  
REAL ESTATE DIVISION  
BALTIMORE, MARYLAND

PROJECT FILE:  
Baltimore CSR.M.aprx  
CREATED BY: RCK  
DATE: 23 February 2022  
SCALE: AS SHOWN

PLATE: **R-2**

TRACT REGISTER					
Block	Parcel	Owner	Acres	Sqft	Easement Type
2040	011	STATE OF MARYLAND WORLD TRADE CENTER, PROP. MGMT	0.936	40779.54	Perm



**REAL ESTATE PROJECT  
PLANNING MAP**

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**BALTIMORE COASTAL STORM  
RISK MANAGEMENT**

**FLOODWALL 12.2**

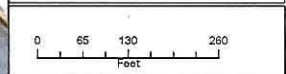
**MAP 3**

**PATAPSCO TUNNEL**

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- Parcels
- Impacted Parcels
- Easement
- Floodwall
- LOD Boundary

REVISION HISTORY		
DATE	REVISION	BY



**U.S. ARMY CORPS OF ENGINEERS**  
**BALTIMORE DISTRICT**  
**REAL ESTATE DIVISION**  
**BALTIMORE, MARYLAND**

**PROJECT FILE:**  
 Baltimore CSR.M.aprx  
**CREATED BY:** RCK  
**DATE:** 24 February 2022  
**SCALE:** AS SHOWN

**PLATE:** **R-3**

TRACT REGISTER					
Block	Parcel	Owner	Acres	Sqft	Easement Type
7323B	002	HOBELMANN PORT SERVICES	0.047	2057.44	Perm
7323B	002	HOBELMANN PORT SERVICES,	0.11	4775.62	Perm
		Public ROW	1.622	70662.07	Perm
7323B	002	HOBELMANN PORT SERVICES,	0.359	15639.33	Temp

Mapxai, Microsoft



**REAL ESTATE PROJECT  
PLANNING MAP**

**BALTIMORE COASTAL STORM  
RISK MANAGEMENT**

**FLOODWALL 12.2**

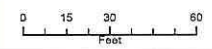
**MAP 4**

**Patapsco North 1**

- Parcels
- Impacted Parcels
- Easement
- Floodwall
- LOD Boundary

**REVISION HISTORY**

DATE	REVISION	BY



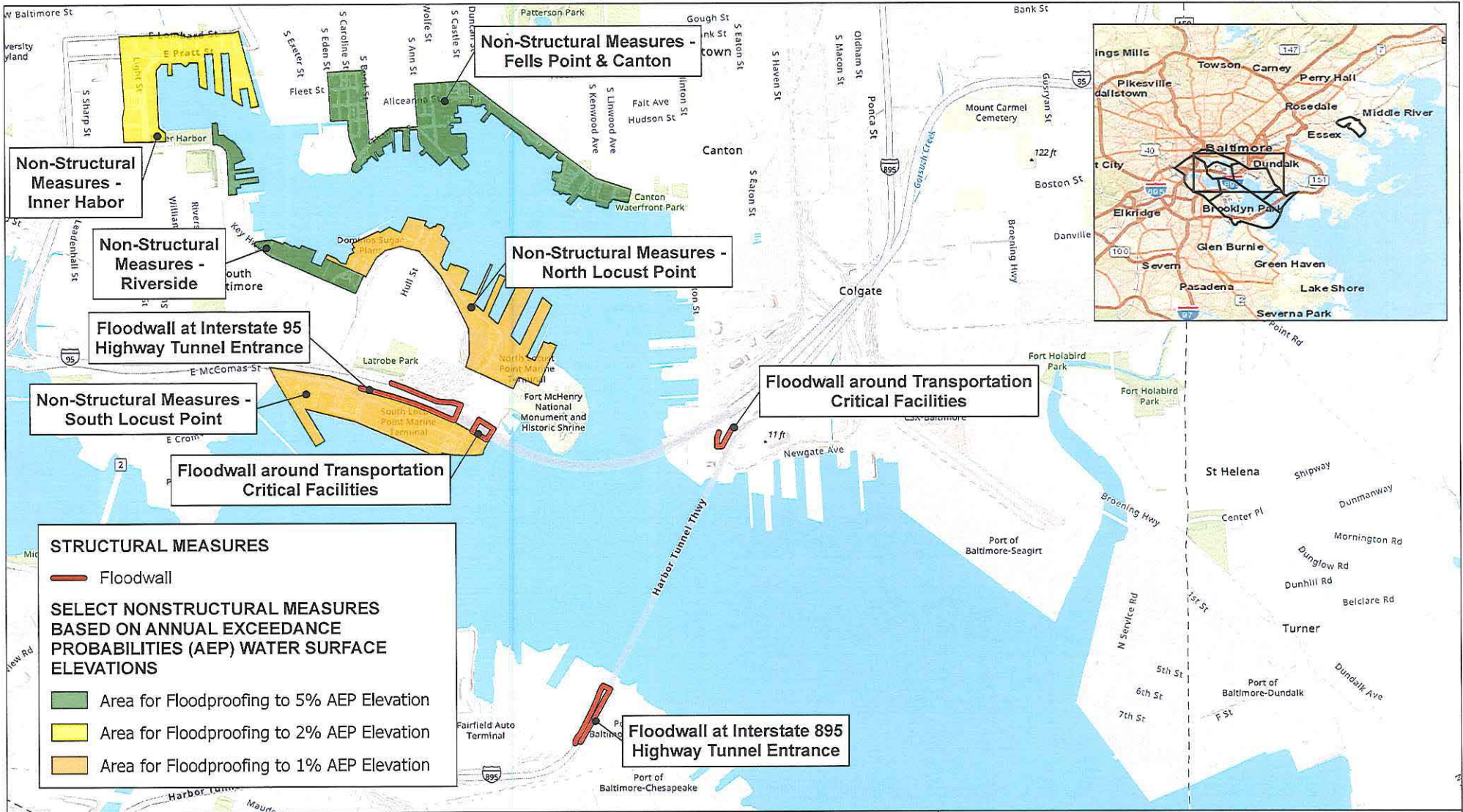
**U.S. ARMY CORPS OF ENGINEERS  
BALTIMORE DISTRICT  
REAL ESTATE DIVISION  
BALTIMORE, MARYLAND**

PROJECT FILE:  
Baltimore CSR.M.aprx  
CREATED BY: RCK  
DATE: 24 February 2022  
SCALE: AS SHOWN

PLATE: **R-4**

**TRACT REGISTER**

Block	Parcel	Owner	Acres	Sqft	Easement Type
6607K	008	CONSOL MARINE TERMINALS LLC	0.097	4226.58	Permanent
6607K	008	CONSOL MARINE TERMINALS LLC	0.338	14744.55	Permanent
6607K	016	STATE OF MARYLAND SPRINT NEXTEL PROP SERVICES	0.096	4176	Permanent
6607K	017	ROCK, LLC	0.008	329.46	Permanent
		Presumed Public ROW	0.016	696.11	Permanent
		Presumed Public ROW	0.001	35.06	Permanent



**STRUCTURAL MEASURES**

- Floodwall

**SELECT NONSTRUCTURAL MEASURES BASED ON ANNUAL EXCEEDANCE PROBABILITIES (AEP) WATER SURFACE ELEVATIONS**

- Area for Floodproofing to 5% AEP Elevation
- Area for Floodproofing to 2% AEP Elevation
- Area for Floodproofing to 1% AEP Elevation

Floodwall at Interstate 895 Highway Tunnel Entrance



**Tentatively Selected Plan - Alternative Plan 5A**  
**Critical Infrastructure with Select Non-Structural Measures Plan**  
**Baltimore, Maryland**



Map: Critical Infrastructure with Select NonStructural Plan.mxd  
 Developed by: USACE Baltimore  
 Date: 4/1/2022

