
EXECUTIVE SUMMARY

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EXECUTIVE SUMMARY

The Maryland Department of Transportation Maryland Aviation Administration (MDOT MAA), owner and operator of Martin State Airport (MTN) located in Middle River, Maryland, is preparing an Environmental Assessment (EA) to assist the Federal Aviation Administration (FAA) in evaluating potential environmental effects resulting from proposed improvements at MTN. This EA is being completed in accordance with the *National Environmental Policy Act of 1969* (NEPA), which requires environmental review of proposed federal actions.

ES.1 Background and Proposed Action

MDOT MAA is proposing improvements at MTN that would be eligible for federal funding and would require unconditional approval of the Airport Layout Plan (ALP) for MTN, both of which are considered federal actions. In addition to NEPA, the EA is being prepared in accordance with the Council on Environmental Quality implementing regulations [(CEQ); 40 Code of Federal Regulations (CFR) 1500-1508]; FAA Order 1050.1F, *Policies and Procedures for Considering Environmental Impacts*; and FAA Order 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions*.

ES.1.1 Background

MTN is a general aviation (GA) reliever airport located on approximately 775 acres adjacent to the Chesapeake Bay. The northwest portion of the Airport is bordered by Eastern Boulevard (MD 150) and the Amtrak/Maryland Area Regional Commuter

(MARC) railroad line, while Wilson Point Road (MD 587) provides access to the terminal and Strawberry Point Complex on the southwest. Frog Mortar Creek borders the Airport to the northeast, east, and southeast. Access to the Maryland Air National Guard (MANG) 175th Wing, which is located on the northeast quadrant of the Airport, is provided from Lynbrook Road.

Civilian and military aircraft operate at MTN. Civilian aircraft and helicopter operations operate on the west side of MTN. MTN's largest tenant, the MANG, is located to the northeast of Runway 15-33, and military activity is generally conducted on the east side of the Airport.

MTN has one runway (Runway 15-33) with a physical length of 8,100 ft. and a width of 180 ft. MTN has one partial-length parallel taxiway (Taxiway F) serving the GA (west) side of the Airport, and one full-length parallel taxiway (Taxiway T) located to the east of Runway 15-33, serving the MANG side of the Airport. Numerous taxiways provide connections from Taxiway F to Runway 15-33, and from Taxiway T to Runway 15-33. A paved circular helipad is in the Central Terminal Area south of the Airport Traffic Control Tower (ATCT).

MTN has a number of navigational aids (NAVAIDs) that assist pilots in operating aircraft at MTN. The Airport's GA facilities include aircraft hangars, tie-down areas and aprons; there are numerous locations for aircraft storage and parking at MTN. Corporate hangars, community hangars and T-hangars are in the Central Terminal Area and the Strawberry Point Complex. Support

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facilities include the terminal building; the ATCT; equipment storage and maintenance buildings; fuel facilities and utilities. Landside facilities include vehicle parking and access roads.

ES.1.2 Proposed Action

The Proposed Action consists of the projects identified in **Table ES.1.1**, and as shown on Figure 1.2-1 of the Draft EA. Many connected actions are required to implement the various components of the Proposed Action and are identified by basic component in Table ES.1.1.

It should be noted that a Marking & Lighting (M&L) Plan was developed as part of the Proposed Action to minimize vegetation clearing within Part 77 surfaces at MTN. See *Appendix E (Attachment 6)* of the Draft EA for the FAA-approved M&L Plan.

ES.1.3 Requested Federal Action

The Requested Federal Action is the unconditional approval of the Phase I Improvements portion of the June 2020 ALP, and approval of use of federal funds for these projects at MTN, as applicable. Additional information on the background and Proposed Action for the proposed improvements are included in *Chapter 1, Background and Proposed Action* of the EA.

MDOT MAA submitted an updated MTN ALP to the FAA in June 2020 with improvements recommended for phased implementation based on projected future demand and are identified as Phase I, Phase II and Phase III on the ALP. The proposed improvements under consideration in the EA are identified as Phase I Improvements on the June 2020 ALP, with the exception of the Phase I improvements noted in *Chapter 1, Background and Proposed Action*, which

have received environmental approval under separate NEPA review.

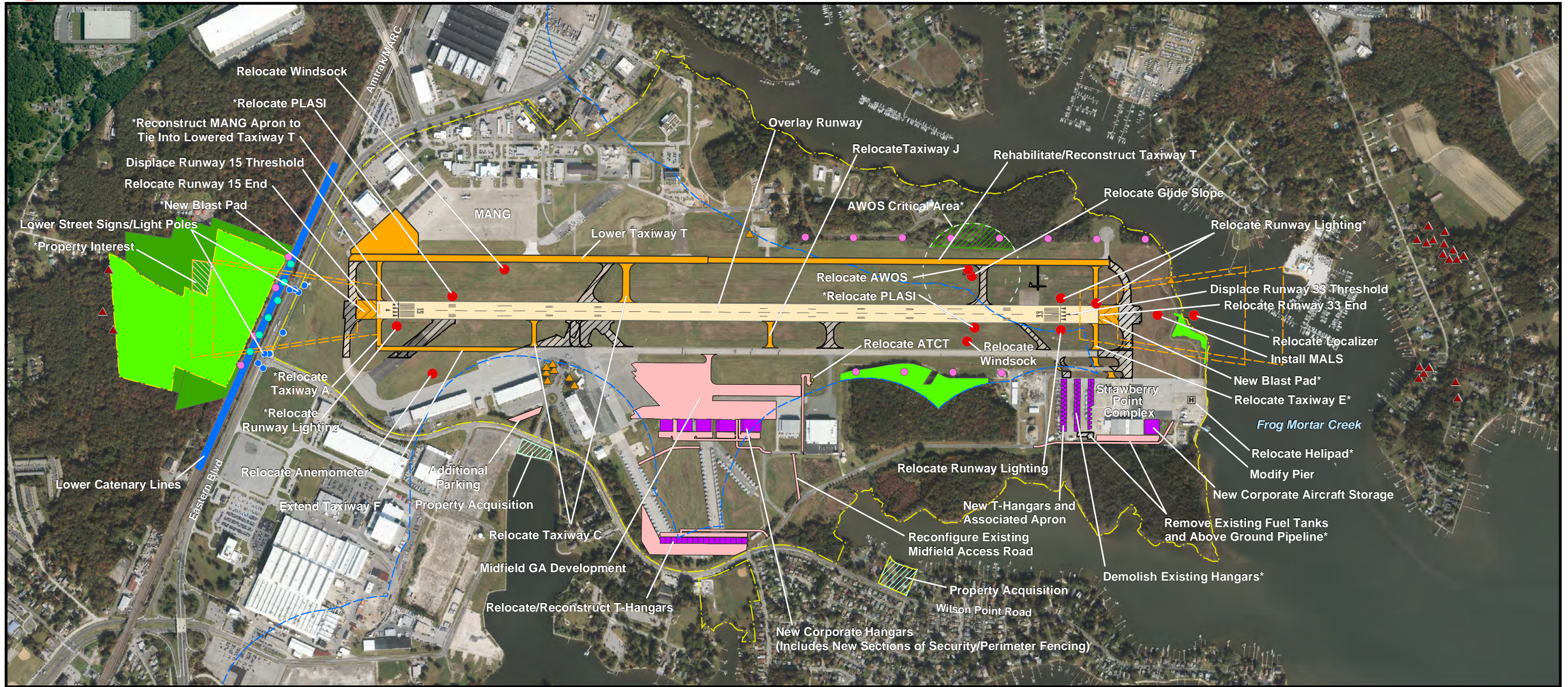
ES.2 Purpose and Need

Defining the Purpose and Need is essential in providing a sound justification for the Proposed Action. In addition, the Purpose and Need is used as the primary foundation to develop reasonable alternatives to the proposed action.

The purpose of implementing the Proposed Action is to:

- Meet FAA standards;
- Enhance airfield safety;
- Improve airfield efficiency;
- Accommodate existing and anticipated demand at MTN; and
- Environmental review for property acquisition.

The specific needs for the Proposed Action projects are discussed in detail in *Chapter 2, Purpose and Need* of the EA.



LEGEND

RUNWAY 15-33 IMPROVEMENTS

- RUNWAY THRESHOLD DISPLACEMENT (SEE MARKINGS)
- RUNWAY END RELOCATION (SEE MARKINGS)
- FULL-LENGTH REHABILITATION

TAXIWAY IMPROVEMENTS

- NEW/REHABILITATED/RECONSTRUCTED PAVEMENT
- PAVEMENT REMOVAL

NAVAIDS

- RELOCATION

LANDSIDE FACILITIES

- NEW PAVEMENT

GENERAL AVIATION FACILITIES

- NEW STRUCTURE
- NEW PAVEMENT

OBSTRUCTIONS

- ON-AIRPORT VEGETATION REMOVAL
- OFF-AIRPORT VEGETATION REMOVAL
- MAN-MADE OBSTACLE MITIGATION
- ON-AIRPORT ISOLATED TREE REMOVAL
- OFF-AIRPORT ISOLATED TREE REMOVAL
- AWOS VEGETATION REMOVAL

CONNECTED ACTION

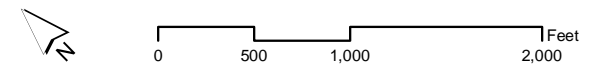
- AIRPORT PROPERTY LINE
- FUTURE RPZ
- PROPERTY INTEREST
- PIER MODIFICATION
- PROPERTY ACQUISITION
- CHESAPEAKE BAY CRITICAL AREA

MARKING & LIGHTING PLAN

- OBSTRUCTION LIGHT
- LIGHTED SPHERICAL MARKER BALL

**Figure 1.2-1
Proposed Action**

Sources: MDOT MAA (Aerials - 2018, June 2020 ALP)



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**Table ES.1.1
Proposed Action**

Basic Component	Actions	Connected Actions
Shift Runway 15-33 to the northwest (Provide compliant RSA and ROFA)	Relocate existing Runway 15 end approximately 291 feet from the existing landing threshold. Displace the Runway 15 landing threshold by approximately 225 feet from the proposed runway end.	Construct a blast pad. Relocate the PLASI or install a Precision Approach Path Indicator (PAPI). Relocate the REILs. Relocate Taxiway A to align with the relocated Runway 15 end and remove the existing Taxiway A pavement. Acquire Runway 15 Runway Protection Zone (RPZ) property interest (easements).
	Relocate the Runway 33 end approximately 380 feet from the existing landing threshold. Displace the Runway 33 landing threshold by approximately 390 feet from the proposed runway end.	Construct a blast pad. Relocate the PLASI or install a PAPI. Relocate the REILs. Relocate Taxiway E to align with the relocated Runway 33 end and remove the existing Taxiway E pavement. Construct two new short Taxiway segments to provide access to the Strawberry Point Complex.
	Revise LDA RWY 33, RNAV (GPS) RWY 33, RNAV (GPS) RWY 15, LOC RWY 15, and VOR OR TACAN RWY 15 procedures as needed to account for the runway shift.	
	Re-mark runway and taxiway pavement.	
	Relocate runway lighting.	
Modify the Runway 15-33 grade	Overlay Runway 15-33 to provide 150-foot-wide runway with 15-foot-wide paved shoulders.	
Relocate NAVAIDs outside of the proposed RSA and ROFA	Relocate Runway 33 Glide Slope and AWOS.	Remove trees within a 500-foot radius of the AWOS. Remove Taxiway D. Remove pavement associated with access road to existing Runway 33 Glide Slope and AWOS locations.
	Relocate Runway 15 offset localizer.	Construct a raised platform in Frog Mortar Creek to support localizer antenna. Install pilings for the localizer critical area debris shield. Grade/fill the localizer critical area to meet clearance standards and signal requirements. Remove pavement associated with access road to existing Runway 15 offset localizer.
	Relocate the windsocks for both runway ends.	

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**Table ES.1.1
Proposed Action**

Basic Component	Actions	Connected Actions
	Remove on-airport vegetative obstructions to clear Part 77 surfaces.	
	Address on-airport manmade objects that penetrate Part 77 surfaces in accordance with the ALP.	
Lower/Remove obstructions	Remove off-airport Runway 15 obstructions.	<p>Remove off-airport vegetative obstructions to clear the 20:1 threshold siting surface (TSS) and the 18:1 departure obstacle clearance surface (OCS). Any tree replacement will be completed with low growth species.</p> <p>Clear off-airport non-vegetative obstructions such that all will be clear of the 20:1 TSS and the 18:1 departure OCS. Some non-vegetative objects will remain penetrations to the Part 77 34:1 approach surface. See the ALP for the disposition on each obstruction.</p> <p>Lower the Amtrak catenary lines/poles to approximately 30 feet above ground level; Clear of 20:1 TSS and 18:1 Departure OCS.</p> <p>Remove or lower all other non-vegetative obstructions south of Amtrak to be clear of the 20:1 approach TSS.</p> <p>Relocate or lower street lights and signs as specified in Sheet 9 of the ALP set to clear Part 77 (34:1) where possible, and if unachievable, lower to clear the 20:1 approach TSS.</p> <p>Acquire easements for vegetative and non-vegetative obstruction removal.</p>
	Remove off-airport Runway 33 obstructions.	<p>Remove off-airport vegetative obstructions to clear the 34:1 approach TSS. Any tree replacement will be completed with low growth species.</p> <p>Acquire easements for vegetative obstruction removal.</p>
	Lower portion of Taxiway T and MANG Apron	Remove ground obstruction on the Runway 15 end by lowering portions of Taxiway T and MANG Apron to tie into the proposed lowered grade.
Relocate Taxiways C and J and remove the existing taxiway pavement		
Remove Taxiways B and S pavement		
Rehabilitate/Reconstruct portion of Taxiway T		
Add taxiway fillets		
Extend Taxiway F	Relocate the anemometer.	
Install MALS for the Runway 33 Approach	Install a pier structure in Frog Mortar Creek to support a light bar.	

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**Table ES.1.1
Proposed Action**

Basic Component	Actions	Connected Actions
Implement elements of the WHMP	Reduce wildlife hazards airport-wide.	Replace the existing perimeter fence with an eleven-foot-high fence. This may occur in phases in response to funding. Phase 1 will begin near the terminal buildings, and proceed east along Strawberry Point Road, around the Runway 33 approach and stop beyond the recently constructed Lockheed Martin treatment facility off Lynbrook Road. Eliminate ponding areas by improving stormwater design and/or grading.
	Reduce wildlife hazards in the wooded block south of the runway between Central Terminal Areas and Strawberry Point Complex.	Remove trees outside the Chesapeake Bay Critical Area and fill exposed wetlands. Manage the remaining trees as an "old growth" forest (do not encourage new growth). Remove roosting locations adjacent to the newly created edge.
	Reduce wildlife hazards in wooded block north of the runway between Frog Mortar Creek and Taxiway T.	Install fence around the trees between the existing perimeter fence and Taxiway T.
Relocate the ATCT	Construct a new ATCT on the civilian side of the airfield.	
	Construct an ATCT access road.	
Provide GA and landside facilities	Develop five corporate hangars, associated apron, connector taxilane and vehicular access/parking in the midfield area.	Demolish existing pavement and 48 existing T-hangars from the midfield area. Relocate/reconstruct 16 T-hangars in the midfield area located southwest of the proposed midfield corporate development. Discontinue use of helipad near midfield aircraft tiedown area and relocate the existing helipad in the Strawberry Point Complex ramp to better accommodate flight paths into and out of MTN.
	Develop additional T-hangars, associated apron and corporate aircraft storage area in the Strawberry Point Complex.	Remove existing fuel tanks and aboveground pipeline and demolish 30 existing hangars and aircraft storage in the Strawberry Point Complex to accommodate future T-hangars.
	Modify the pier located at the Strawberry Point Complex.	
	Construct additional parking to accommodate existing hangar buildings 1-3.	
NEPA review for property acquisition	Review two parcels for MAA acquisition located along Wilson Point Road adjacent to Airport property for drainage improvements and future mitigation.	

Source: ALP and HNTB analysis, 2019.

ES.3 Alternatives

The examination of alternatives is a critical component of the environmental review process. Various potential alternatives were identified to meet the needs at MTN. These alternatives were screened and either eliminated from further consideration or carried forward for environmental evaluation. While it is typical to consider off-site alternatives, off-site alternatives would not meet the needs identified for MTN. Therefore only on-site alternatives were considered.

Retained components of alternatives were combined to form three overall airport alternatives; the Minimum Action Alternative, the Sponsor's Preferred Alternative, (collectively referred to in this summary as the "Proposed Action Alternatives") and the No Action Alternative.

Minimum Action Alternative

The Minimum Action Alternative includes the actions required to meet FAA standards and to maintain the maximum runway pavement determined eligible for FAA funding. The NEPA review of two parcels is also included in this alternative as it is needed to allow MDOT MAA to potentially seek FAA reimbursement at a later date for acquisition of these parcels.

Sponsor's Preferred Alternative

The Sponsor's Preferred Alternative includes the Phase I development identified on the MTN ALP. The Sponsor's Preferred Alternative includes those actions under the Minimum Action Alternative as well as actions needed to accommodate existing and anticipated demand. The MDOT MAA identified this alternative as their preferred alternative because it addresses all of the

existing and anticipated near-term needs at MTN.

No Action Alternative

The No Action Alternative represents MTN in its current state without any proposed project action(s). The Airport would remain as is and none of the improvements included in the Sponsor's Preferred Alternative would be implemented. Additional information on the identification and evaluation of alternative is included in *Chapter 3, Alternatives* of the EA.

ES.4 Environmental Effects and Mitigation

In accordance with FAA guidance, impacts were evaluated for the year of implementation, 2021, and five years thereafter, 2026. The year 2026 was included to adequately disclose potential impacts after implementation of the proposed projects. Potential cumulative impacts resulting from the incremental effects of the alternatives when added to the effects of past, present, and reasonably foreseeable future actions are also analyzed. Where necessary, potential mitigation measures are discussed that would reduce or eliminate anticipated environmental impacts for each of the alternatives.

In accordance with FAA Orders 1050.1F and 5050.4B, Wild and Scenic Rivers (Water Resources) are not discussed, as there are none present, and thus would not be affected by any of the alternatives.

Table ES.4.1 provides an overview of the environmental impacts associated with the Minimum Action Alternative, Sponsor's Preferred Alternative, and the No Action Alternative. Additional information regarding the assessment of environmental impacts is provided following Table ES.4.1.

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Table ES.4.1
Summary of Environmental Impacts

Environmental Impact Category	No Action Alternative	Minimum Action Alternative	Sponsor's Preferred Alternative
Air Quality	No impact.	<ul style="list-style-type: none"> Operational and construction-related emissions do not exceed <i>de minimis</i> levels. 	
Biological Resources			
<i>Forests</i> ^a	No impact.	<ul style="list-style-type: none"> On-Airport - 51.1 ac.^b (and 9 trees) Off-Airport - Runway 15: 17.6 ac. (and 3 trees); Runway 33: 17 trees Total: 68.7 ac. (and 29 trees) 	
<i>FIDS</i>	No impact.	<ul style="list-style-type: none"> On-Airport - 28.5 ac. Off-Airport - Runway 15: 12.0 ac.; Runway 33: none Total: 40.5 ac. 	
<i>Forest Conservation Easement</i>	No impact.	<ul style="list-style-type: none"> On-Airport - none Off-Airport - Runway 15: 2.0 ac.; Runway 33: none Total: 2.0 ac. 	
<i>Vernal Pools</i>	No impact.	<ul style="list-style-type: none"> On-Airport - 1.0 ac. Off-Airport - Runway 15: none; Runway 33: none Total: 1.0 ac. 	
<i>EFH (temporary)</i> ^c	No impact.	<ul style="list-style-type: none"> 69,464 sq. ft. (1.59 ac.) 	<ul style="list-style-type: none"> 76,632 sq. ft. (1.76 ac.)
<i>EFH (permanent)</i> ^c	No impact.	<ul style="list-style-type: none"> 282 sq. ft. (0.01 ac.) 	<ul style="list-style-type: none"> 333 sq. ft. (0.01 ac.)
<i>HAPC/SAV (temporary)</i> ^c	No impact.	<ul style="list-style-type: none"> 34,569 sq. ft. (0.79 ac.) 	
<i>HAPC/SAV (permanent)</i> ^c	No impact.	<ul style="list-style-type: none"> 5,979 sq. ft. (0.14 ac.) 	
Climate	No impact.	No long-term impacts to CO ₂ e emissions. No federal standard for impact.	
Coastal Resources			
<i>Tree Clearing Impacts</i>	No impact.	<u>Critical Area</u> <ul style="list-style-type: none"> IDA: 4.68 ac.; 8 trees LDA: 17 trees <u>Habitat Protection Area</u> <ul style="list-style-type: none"> Critical Area Buffer: 1.1 ac. Nontidal Wetlands: 1.13 ac. 	
<i>Development Impacts</i>	No impact.	<u>Critical Area</u> <ul style="list-style-type: none"> IDA: 36.26 ac. LDA: N/A <u>Habitat Protection Area</u> <ul style="list-style-type: none"> Critical Area Buffer: 1.41 ac. Nontidal Wetlands: 0.23 ac. 	<u>Critical Area</u> <ul style="list-style-type: none"> IDA: 63.66 ac. LDA: N/A <u>Habitat Protection Area</u> <ul style="list-style-type: none"> Critical Area Buffer: 1.61 ac. Nontidal Wetlands: 0.25 ac.

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Table ES.4.1
Summary of Environmental Impacts

Environmental Impact Category	No Action Alternative	Minimum Action Alternative	Sponsor's Preferred Alternative
<i>Total Impacts</i>	No impact.	<u>Critical Area</u> <ul style="list-style-type: none"> • IDA: 40.94 ac.; 8 trees • LDA: 17 trees <u>Habitat Protection Area</u> <ul style="list-style-type: none"> • Critical Area Buffer: 2.34 ac. • Nontidal Wetlands: 1.24 ac. 	<u>Critical Area</u> <ul style="list-style-type: none"> • IDA: 68.34 ac.; 8 trees • LDA: 17 trees <u>Habitat Protection Area</u> <ul style="list-style-type: none"> • Critical Area Buffer: 2.56 ac. • Nontidal Wetlands: 1.26 ac.
Department of Transportation Act: Section 4(f)	No impact.	Presumed to be <i>de minimis</i> .	
Farmlands	No impact.	No conversion of agricultural to non-agricultural uses.	
Hazardous Materials, Solid Waste and Pollution Prevention	No impact.	If contaminated soils are encountered, materials would be handled in accordance with all applicable local, state, and federal regulations and would follow applicable mitigation measures. No significant impact.	
Historical, Architectural, Archaeological and Cultural Resources	No impact.	No adverse effect on National Register of Historic Places (NHRP) eligible (or potentially eligible) resources.	
Land Use	No impact.	Consistent with existing and future land use. No significant impact.	
Natural Resources and Energy Supply	No impact.	No substantial increase in demand or strain on supply of resources. No significant impact.	
Noise and Noise-Compatible Land Use	No impact.	Due to the relocated runway ends and displaced thresholds, the Proposed Action Alternatives' noise contours shift towards the northwest and extend slightly beyond the Amtrak/MARC train line compared with the No Action Alternative. There are no noise sensitive sites, including residential areas, within the 2021 or 2026 contours for any of the alternatives. Therefore, the threshold for significant noise impact was not exceeded for any of the alternatives considered, and no mitigation would be required.	
Socioeconomics, Environmental Justice, and Children's Env. Health and Safety Risks	No impact.	No significant impacts related to socioeconomics, environmental justice, or children's environmental health and safety risks are expected and no mitigation would be required	
Visual Effects	No impact.	Consistent with existing visual character of Airport. Lighting for the projects would be designed to comply with FAA and airport lighting standards. No significant impact.	
Water Resources			
<i>Wetlands</i>	No impact.	<ul style="list-style-type: none"> • On-Airport Wetlands: 11.1 ac. • On-Airport Wetland Buffers: 7.0 ac. • Off-Airport Wetlands: 17.8 ac. ^d 	<ul style="list-style-type: none"> • On-Airport Wetlands: 11.6 ac. • On-Airport Wetland Buffers: 7.6 ac. • Off-Airport Wetlands: 17.8 ac. ^d

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Table ES.4.1
Summary of Environmental Impacts

Environmental Impact Category	No Action Alternative	Minimum Action Alternative	Sponsor's Preferred Alternative
<i>Floodplains</i>	No impact.	3.4 ac.	4.3 ac.
<i>Stream</i>	No impact.	85 linear feet	85 linear feet
<i>Water Quality</i>	No impact.	No structural best management practices (BMPs) would be required to manage stormwater with this alternative; water quality requirements would be met through the use of non-structural BMPs, including of Non-Rooftop Disconnects (NRDs) and the use of overtreatment (credit) in one drainage basin to offset a shortage in another drainage basin located within the same watershed (to be determined upon final design). Quantity control could be met through a reduction in impervious surface or the use of SWM waivers for discharge to a tidally influenced stream.	Structural BMPs would be required to manage stormwater quality with this alternative. Water quality requirements would be met through the use of NRDs, sheet flow to conservation areas (SCA), bioretention facilities and the use of overtreatment (credit) in one drainage basin to offset a shortage in another drainage basin located within the same watershed (to be determined upon final design). Quantity control could be met through a reduction in impervious surface, use of underground detention facilities, or the use of SWM waivers for discharge to a tidally influenced stream.
<i>Groundwater</i>	No impact.	Projects would not introduce new ASTs or USTs, or new aircraft deicing areas, and therefore the Minimum Action Alternative would not increase the potential to contaminate groundwater.	Potential for the projects to include ASTs or USTs, notably the T-hangars, and associated GA storage facilities. However, all storage tanks would be designed to meet regulations for spill containment measures and therefore would not impact groundwater.
Cumulative Impact	No impact.	Based on the types of cumulative projects planned for the area surrounding MTN, MDOT MAA has concluded that the implementation of the Proposed Action Alternatives, along with the cumulative projects would not result in a significant cumulative impact.	

Notes:

^a The forest totals account for the FIDS and Forest Conservation Easement areas impacted.

^b The limits of disturbance (LOD) for the obstruction light poles on the civilian and MANG sides of the airfield would include an additional 6,250 square feet (0.14 ac.) of forest impact. This is based on an assumption that installing obstruction light pole foundations will require clearing a 20-foot radius around the light pole, and that five of the proposed obstruction lights are located in forested areas not already proposed for obstruction removal. Additionally, the LODs would include utility trenches to bring power to the lights. It is anticipated that utility trenches would run parallel to the row of lights and, to the extent possible, design would avoid additional impact to forested and environmentally sensitive areas.

^c Essential Fish Habitat (EFH) and Habitat Areas of Particular Concern (HAPC)/Submerged Aquatic Vegetation (SAV) impacts are all within Frog Mortar Creek.

^d Off-Airport wetland impacts for Part 77 include both direct (3.28 ac.) and indirect (14.47 ac.) impacts associated with ditching and draining wetlands within the Runway 15 end.

ES.4.1 Air Quality

Emissions inventories were prepared for the two primary sources that would be affected by the improvements – aircraft and construction activities.

None of the pollutants/precursors for which there are *de minimis* levels (NO_x, VOC, and SO₂) would exceed the threshold levels in any year for the Proposed Action Alternatives, even when combining the project-related Airport operations emissions and construction emissions in 2021. As a result, the General Conformity regulations do not require a conformity determination and it can be presumed that the emissions would not cause or contribute to a violation of or exceed the NAAQS for O₃ (precursors NO_x and VOC) or SO₂ and therefore would not result in a significant impact.

Because the project-related emissions would not exceed the CAA/General Conformity *de minimis* levels for O₃ (NO_x and VOC) or SO₂, there are no mitigation measures required for the project.

ES.4.2 Biological Resources

Table ES.4.1 details the potential impacts to biological resources for the Proposed Action Alternatives. The following projects would potentially impact biological resources: Part 77 Obstruction Removal, Relocate AWOS, Relocate Localizer and MALS lights into Frog Mortar Creek, and the Strawberry Point Pier Modification. Note that implementation of the M&L Plan reduces the total vegetation removal required from approximately 111 acres to 69 acres for both Proposed Action Alternatives. This minimizes impacts to nontidal forested wetlands as well as forest resources within the Chesapeake Bay Critical Area (CBCA).

Early coordination with National Oceanic and Atmospheric Administration (NOAA) Fisheries was conducted to determine potential impacts to Essential Fish Habitat (EFH) and Habitat Areas of Particular Concern (HAPC) (i.e., Submerged Aquatic Vegetation/SAV beds). Impacts to EFH and HAPC/SAV are presented as an estimate of the area of aquatic habitats to be impacted both permanently and temporarily in Table ES.4.1.

Preliminary consultation with US Fish and Wildlife Service (USFWS) Chesapeake Bay Field Office (CBFO), via the IPaC Official Species List, indicated that there were no critical habitats or national wildlife refuges or fish hatcheries within the project area; however the federally threatened northern long-eared bat (NLEB) (*Helonias bullata*) should be considered. FAA consulted with USFWS through the NLEB 4(d) Rule Streamlined Consultation process and received a “no effect” determination on April 14, 2020 (*Appendix E, Attachment 10* of the Draft EA). The results of all consultation are included within the Draft EA.

The Proposed Action Alternatives would not cause long-term or permanent loss of state or federally-listed plant or wildlife species. No critical habitat supporting either state- or federally-listed threatened or endangered species occurs within the areas for proposed obstruction removal, therefore, the Proposed Action Alternatives would not jeopardize the continued existence of any listed species in the project area. While there will be some loss of habitat, it is unlikely that these

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impacts would be considered a significant impact to biological resources. This is mainly due to the avoidance, minimization, and mitigation efforts proposed by MDOT MAA, as follows:

Mitigation

The Forest Conservation Act (FCA) applies to any project over 40,000 square feet (regardless of whether forest resources are present), mitigation requirements were calculated for all projects over 40,000 square feet for the Proposed Action Alternatives. It should be noted that forest mitigation is required by MDNR per the FCA, and mitigation is not necessarily an effort to mitigate for a significant impact.

MDOT MAA proposes to meet the mitigation requirements for individual projects through use of any mitigation credits available from the Reforestation Master Plan at the time of the individual project design and construction. Compensatory mitigation, through land acquisition, or purchase of mitigation bank credits may also be used, as needed.

All impacts to forest resources would be a result of Part 77 obstruction removal. No mitigation under Maryland's FCA is required for removal of forested areas or individual tree obstructions that occur within FAR Part 77 primary, approach, departure, and transitional surfaces (COMAR 5-1602(b)(11)).

MDOT MAA must also provide compensatory mitigation for any unavoidable permanent impacts to nontidal wetlands and vernal pool habitats. See Section ES.4.14, Water Resources for wetland mitigation requirements.

Further coordination with NOAA Fisheries would be conducted regarding any impacts to areas designated as EFH and HAPC/SAV within Frog Mortar Creek. This coordination will result in conservation recommendations likely to include appropriate best management practices (BMPs) and time of year restrictions both for SAV and anadromous fish species.

ES.4.3 Climate

Potential impacts to climate related to airport operations and construction emissions of Greenhouse Gases (GHGs) were identified and evaluated for the Proposed Action Alternatives. The level of CO_{2e} airport operation emissions increases between 2021 and 2026, but decreases between the No Action and Proposed Action Alternatives due to improved airfield efficiencies (decreases in taxi times and distances). Emissions of CO_{2e} would increase slightly due to construction activities in 2021.

The Chesapeake Bay and its shorelines experience the direct effects of climate change, most notably from rising sea levels and warming water temperatures. Resilient design techniques should be utilized for proposed development within known floodplains or adjacent areas, particularly at the Strawberry Point Complex and proposed piers in Frog Mortar Creek. While MDOT MAA does not have specific climate change design standards, potential climate related impacts are considered in the overall facility planning and in project design. In addition, MDOT MAA completed a sea level rise study at MTN which informed the developable limits reflected on the ALP.

ES.4.4 Coastal Resources

The Proposed Action Alternatives' proposed improvements are within the Maryland Coastal Zone and the CBCA, including designated Habitat Protection Areas – Critical Area Buffer and nontidal wetlands.

Table ES.4.1 summarizes the impacts to the Critical Area by land classification and Habitat Protection Areas: Critical Area Buffer and nontidal wetlands, associated with the Minimum Action and Sponsor's Preferred Alternative projects.

Mitigation

MDOT MAA is coordinating directly with the Critical Area Commission (CAC) to determine mitigation requirements for potential adverse impacts to the Critical Area and Critical Area Buffer. The CAC will allow 1:1 mitigation for CBCA impacts related to Public Safety (obstruction removal). MDOT MAA is committed to meeting CAC mitigation requirements and is currently performing searches for potential mitigation sites in addition to using mitigation banks.

A large portion of the impacts to the Critical Area is due to the Part 77 obstruction removal. The removal of forested areas would be minimized through selective tree clearing and lighting of obstructions. See *Biological Resources*, for details on potential mitigation for tree clearing.

ES.4.5 Department of Transportation Act: Section 4(f) Resources

Section 4(f) resources within or adjacent to the Visual Area of Potential Effects (APE) include two parks, Turkey Point Park and Wilson Point Park, and four historic resources: the Glenn L. Martin Airport; Glenn L. Martin Company Plant No. 2; Planter's Paradise; and Stansbury Estates, Aero Acres, and southern Victory Villa subdivisions.

The Proposed Action Alternatives' would not have a significant impact on Section 4(f) resources. In accordance with guidance specified in 23 CFR §§ 774.3 and 774.17 and the FAA Order 1050.1F Desk Reference on *de minimis* impact determinations, after considering any measures to minimize harm and Maryland Historical Trust's concurrence that the proposed projects will not adversely affect historic resources, and recognizing that the project would not adversely affect the activities, features, or attributes qualifying a park, recreation area, or wildlife or waterfowl refuge for protection under Section 4(f), the FAA intends to make a *de minimis* impact determination.

The FAA will make a final determination on potential impacts to 4(f) resources after public review and comment on the Draft EA. See *Appendix G, Attachment 5* of the Draft EA for correspondence between the MDOT MAA and MHT regarding the *de minimis* determination.

ES.4.6 Farmlands

There would be no conversion of existing farmland or other agricultural uses to non-agricultural uses; therefore, the Proposed Action Alternatives would not have a significant impact on farmland. No mitigation would be required.

ES.4.7 Hazardous Materials, Solid Waste, and Pollution Prevention

Several sites on or near the Airport were identified that are known, or have the potential, to involve hazardous materials, hazardous waste, environmental contamination and/or other regulated substances. The generation of hazardous materials with the Proposed Action Alternatives would likely be limited to solvents and their waste products.

No significant environmental impacts related to hazardous materials and solid waste would be expected with either of the Proposed Action Alternatives, however if any soils suspected of containing hazardous materials are encountered, the materials would be handled in accordance with all applicable local, state, and federal regulations and would follow applicable mitigation measures.

Mitigation

The design and use of the proposed improvement projects will adhere to federal and state regulations as well as BMPs pertaining to the use of hazardous materials, petroleum storage and waste disposal. This includes the preparation of a Materials Management Plan that includes the specific precautionary measures that will be taken to prevent and minimize impacts to surface and ground waters, soil and air.

ES.4.8 Historical, Architectural, Archaeological and Cultural Resources

Architectural Resources – Potential impacts to four affected historic resources which are eligible or assumed eligible for listing on the National Register of Historic Places (NRHP) were considered: Glenn L. Martin Airport and Plant (BA-2081), Glenn L. Martin Company Plant No. 2 (BA-2824), Planter's Paradise (BA-263), and Stansbury Estates, Aero Acres, southern Victory Villa subdivisions (BA-3286). It was determined that the Proposed Action Alternatives would have no adverse effects on these historic properties. The MHT concurred with this determination of no adverse effect on August 4, 2020. No mitigation would be required.

Archaeological Resources – No NRHP-eligible archaeological resources are present within the APE-Direct Impact.

Cultural Resources – No additional historic or cultural resources are present within the APE beyond those identified as architectural or archaeological resources.

ES.4.9 Land Use

The majority of the Proposed Action Alternative projects are located within existing MTN property, with the exception of obstruction removal located off-airport property north and south of the Airport, off Runway 15-33 ends, acquisition of easements off-airport property north of the Airport, and the acquisition of two parcels along Wilson Point Road. The Proposed Action Alternatives are consistent with the MTN ALP, as well as local land use plans.

No significant impacts related to land use are expected with the Proposed Action Alternatives and no mitigation would be required.

ES.4.10 Natural Resources and Energy Supply

The anticipated increase in additional resources and energy consumption required by the Proposed Action Alternatives would not amount to a significant percentage of the total Airport use. The proposed improvements would not create a substantial increase in demand for local resources and utilities or strain the capacity/supply of these resources/ utilities to the meet the additional demand. The proposed projects would not involve the use of any unusual or scarce resources nor cause a demand for the use of any unusual or scarce resources that are in short supply.

No significant impacts related to natural resources or energy supply are expected with the Proposed Action Alternatives and no mitigation would be required.

ES.4.11 Noise and Noise-Compatible Land Use

Noise contours for 2021 and 2026 were modeled using fleet mixes developed as part of the Draft EA. From an operational perspective, the future fleet mixes are identical among all alternatives for a given year. The variation between the alternatives does not influence the aircraft's capability of arriving, departing or performing training operations at MTN. From a noise modeling perspective, the relocated runway ends and displaced thresholds in the Proposed Action Alternatives would introduce a shift of noise contour locations because aircraft are expected to arrive, depart, and perform touch-and-go operations at different locations. Changes in the helicopter operations in the Sponsor's Preferred Alternative would contribute to changes in the noise contour as well. The new areas within the 65+ Day-Night Average Sound Level (DNL)¹ to the northwest are comprised of wooded area along the centerline extension of Runway 15-33. The area within the 65+ DNL in the Proposed Action Alternatives' would be slightly smaller in 2021 and 2026 as compared with the No Action Alternative contours.

There are no noise sensitive sites, including residential areas, within the 2021 or 2026 contours for any of the alternatives. The majority of the land use within the 65+ DNL noise contour is MTN property for all alternatives. Neither of the Proposed Action Alternatives are anticipated to produce significant impacts with respect to noise and, accordingly, no mitigation is required.

ES.4.12 Socioeconomics, Environmental Justice and Children's Environmental Health and Safety Risks

The Proposed Action Alternatives would not shift any business or economic activity or population movement or shifts in a community. None of the improvements would change traffic volumes or traffic patterns in the vicinity of MTN, therefore no traffic analysis was needed. No significant impacts related to socioeconomics, environmental justice, or children's environmental health and safety risks are expected with the Proposed Action Alternatives and no mitigation would be required.

¹ Federal guidelines in 14 CFR Part 150 establish the DNL 65 decibel (dB) as the threshold of non-compatibility for noise sensitive land uses (e.g., homes, schools, places of worship, etc.).

ES.4.13 Visual Effects

No significant impacts related to light emissions or visual resources / visual character are expected with the Proposed Action Alternatives. Additional light from the proposed improvements would not significantly change the light emissions from MTN or adversely impact the surrounding community. These projects would be consistent with the visual character of the MTN campus. No significant impacts to visual character and visual resources are expected with either Action Alternative.

Mitigation

Although there is no expected impact from either alternative, lighting for the Proposed Action Alternatives' projects would be designed to comply with FAA and airport lighting standards in order to ensure there would be no negative impacts to runway operations or aircraft safety.

ES.4.14 Water Resources

Table ES.4.1 summarizes the impacts to wetlands, wetland buffers, streams, the 100-year floodplain, water quality, and groundwater associated with the Proposed Action Alternatives. Five of the Minimum Action Alternative projects and ten of the Sponsor's Preferred Alternative projects could potentially impact wetlands, wetland buffers, streams or 100-year floodplains, as detailed in Section 5.14.4 of the Draft EA.

Wetlands located within the Part 77 transitional surface and immediately off the Runway 33 end where vegetation is proposed to be removed, would be filled to prevent wildlife attractants near the airfield as recommended by the U.S. Department of Agriculture (USDA)-Wildlife Services (WS). For wetlands located off the Runway 15 end on the north side of Eastern Blvd, MDOT MAA and other participating agencies are researching the viability of different clearing options that would minimize wetland impacts while maintaining the safest possible scenario for flight operations.

It is important to note that wetland impacts may be reduced from the totals provided in Table ES.4.1 through conversion of wetlands from forested to scrub/shrub or emergent rather than permanently impacting wetlands and wetland buffers through filling and draining; however, compaction of wetland soils is still a concern. To help avoid compaction issues, individual trees are expected to be selectively removed by hand in many cases. In areas where several trees must be removed, compaction could be minimized through use of load-bearing mats in conjunction with hand clearing.

Mitigation – Wetlands and Streams

Mitigation requirements are determined on a case-by-case basis by the Maryland Department of the Environment (MDE) and the U.S. Army Corps of Engineers (USACE), and therefore cannot be accurately presented at this time; however, an absolute worst-case scenario for mitigation was calculated. The current Sponsor's Preferred Alternative would require 50 acres or more of wetland mitigation for the impacts, however, a requirement this high is not expected by MDOT MAA. MDOT MAA proposes to meet mitigation requirements through purchase of wetland

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mitigation credits from an MDE/USACE approved mitigation bank in the Gunpowder-Patapsco River watershed or an adjacent watershed that lies within the Northern Coastal Plain.

Several options exist to mitigate the impact of clearing the obstructions to Part 77 surfaces off the end of Runway 15, including:

- Clearing of obstructions and subsequent filling of exposed wetlands so that resulting open water will not attract potentially hazardous wildlife;
- Clearing of obstructions and subsequent installation of a grid system over exposed wetlands to deter potentially hazardous wildlife from imprinting on the open water areas; and
- Clearing of obstructions and draining of exposed wetlands to render the area unattractive to potentially hazardous wildlife.

Mitigation - Water Quality

Impacts to water quality resulting from an increase in impervious surface would be avoided and mitigated using both structural and non-structural stormwater management techniques. Preliminary stormwater treatment requirements for the proposed projects were determined in accordance with MDE's Stormwater Management Guidelines for State and Federal Projects. See *Appendix K* of the Draft EA for details on stormwater treatment requirements by watershed.

Mitigation - Floodplains

Mitigation measures to minimize potential impacts to surface waters and floodplains include: designing facilities above the base flood elevation; minimizing fill placed in floodplains and wetlands; construction controls to minimize erosion and sedimentation; restoring vegetation on disturbed areas to prevent soil erosion following project completion; designing facilities to allow adequate flow circulation and preserve free, natural drainage; comply with special flood-related design criteria; controlling run off, while ensuring the run-off control measures does not attract wildlife hazardous to aviation; controlling waste and spoils disposal to prevent contamination of ground and surface water; and Section 404 and 401 of the Clean Water Act permit terms and conditions for minimizing and compensating for impacts to surface waters. An Erosion and Sediment Control Plan would be developed in accordance with MDE guidelines.

Permitting

MDOT MAA must receive authorization from both MDE and USACE for temporary and permanent impacts to wetlands and other waters of the U.S., and MDE for temporary and permanent alterations to 25-foot wetland buffers. Conditional authorization is anticipated to be granted for all projects with final authorization issued at the final design stage for individual projects; permit modifications would then be issued for individual projects based on final design impacts.

ES.4.15 Cumulative Impacts

Through the use of BMPs and mitigation measures, the potential impacts of the Proposed Action Alternatives would be in accordance with all Federal, state, and local laws and regulations and

therefore not result in a significant impact. The government agency responsible for the development of each cumulative project within the area surrounding MTN would be responsible for obtaining all necessary approvals and permits to minimize impacts. Based on the types of cumulative projects planned for the area surrounding MTN, MDOT MAA has concluded that the implementation of the Proposed Action Alternatives, along with the cumulative projects would not result in a significant cumulative impact.

ES.5 Public and Agency Involvement

MDOT MAA considers an open public process to be an important component of preparing the EA and therefore has engaged with the public and agencies with jurisdiction or special knowledge in the environmental review process.

ES.5.1 Scoping

MDOT MAA conducted scoping with agency and public stakeholders as the first step in preparing the EA. An Agency Scoping Meeting was held on October 24th, 2013. Agencies were sent scoping packages and were invited to attend the agency scoping meeting.

A public scoping meeting was also held on October 24th, 2013 in an “open house” format with representatives from the MDOT MAA and its Project Team available to answer questions throughout the meeting. Twenty (20) people attended the scoping meeting, with 11 members from the public.

In addition to the scoping process, MDOT MAA presented at two community meetings (Bowley's Quarters Improvement Association - November 14th, 2013 and Middle River Roundtable – June 26th, 2014) to discuss the project with citizens and organizations.

MTN EA progress “slowed” starting in early 2015 to conduct further planning and agency coordination necessary for vegetative obstruction removal and continued consideration of specific components of the Proposed Action. After the necessary planning was conducted, an Agency Re-Scoping Meeting was held on January 24th, 2017 to formally re-start agency coordination for the EA.

ES.5.2 Agency Coordination Meetings

Other agency meetings were held as needed to discuss ongoing plans and projects. MDOT MAA coordinated with pertinent agencies throughout the Draft EA development process to ensure that all state and federal requirements were being adhered to and that the appropriate measures were taken to reduce impacts to the natural environment and surrounding communities.

Six additional agency Coordination Meetings were held throughout the Draft EA development. As impacts to water quality, forested areas and other natural and critical habitat due to the proposed tree and vegetation removal were the focus of the majority of comments, representatives from USFWS, USACE, MDE, MDNR, USDA –WS, the CAC, Baltimore County, and the NOAA. were invited to attend.

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Agency scoping comments focused on air quality, stormwater management, Critical Area, cultural resources, and wildlife and habitat. Resident and community organization comments focused on stormwater management, noise, the project purpose and need, the proposed action, the project cost, the potential for commercial flights, and MANG operations.

ES.5.3 Notice of Draft EA Availability and Public Workshop

The Draft EA must be made available to the public via a Notice of Availability (NOA) for a minimum 30-day review period. The public and agencies will be provided an opportunity to review and comment on the Draft EA from Thursday, February 11th, 2021 through March 29th, 2021. An NOA will be published in *The Baltimore Sun*, *The Dundalk Eagle*, *The Avenue* and *Essex-Middle River Patch* on February 11th, 2021, and again in *The Baltimore Sun* on Sunday, February 14th, 2021. Notice of availability of the draft and links to the Draft EA document are available on the MDOT MAA website.