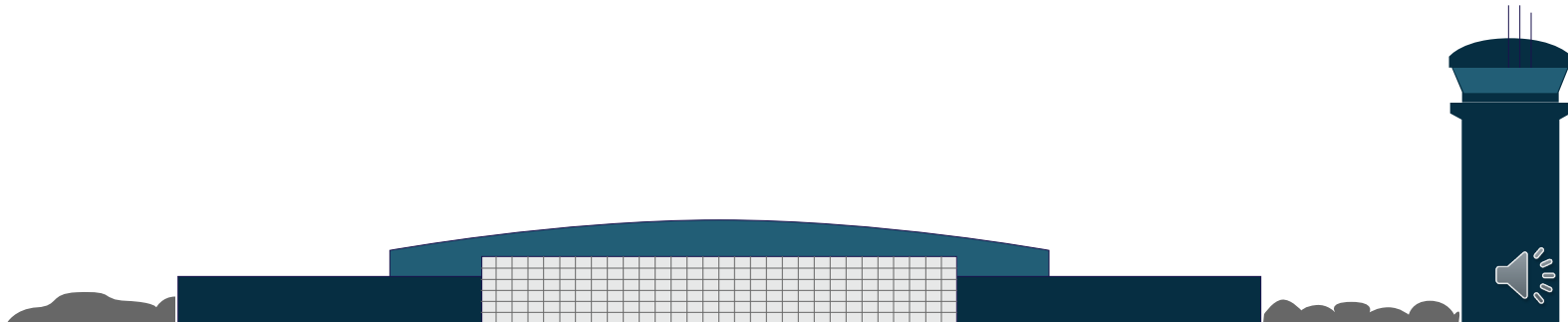


# Airport Community Working Group Meeting

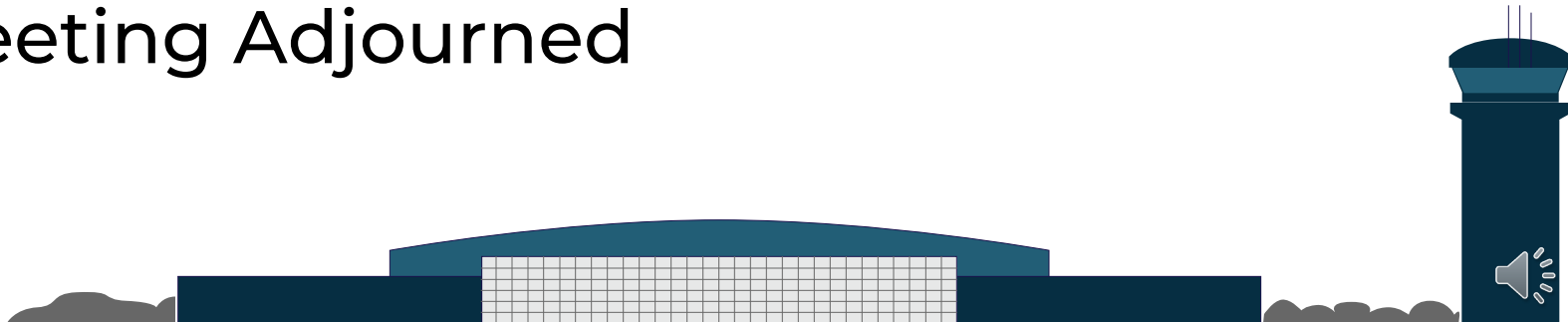
September 13, 2022

4PM Airport



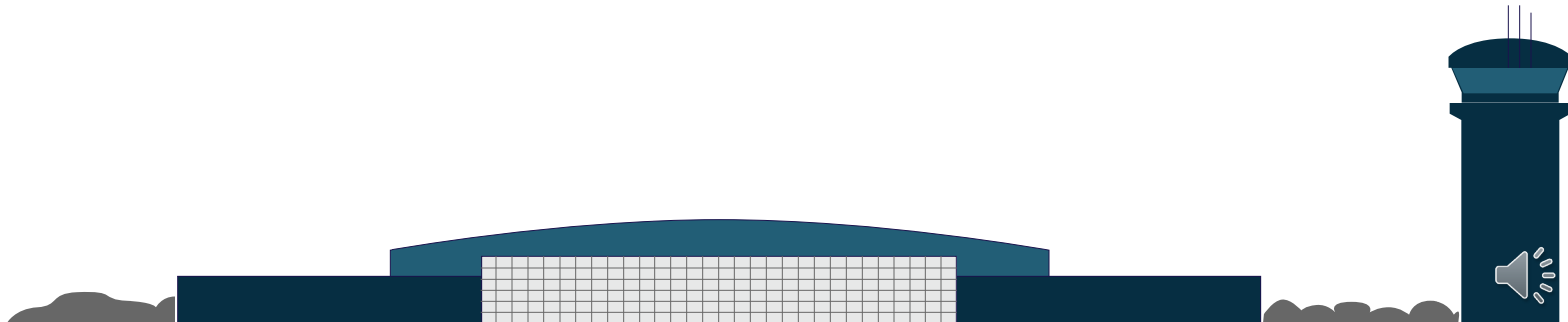
# Agenda

- Welcome & Introductions
- Meeting Guidelines
- Upcoming Airport Construction
  - Runway 6/24 Rehabilitation
- The Airport, PFAS and Our Response
- Planning Project Status Update
  - Airport Master Plan Update (AMPU)
  - Airport Environmental Assessment
- Next Steps
- Meeting Adjourned



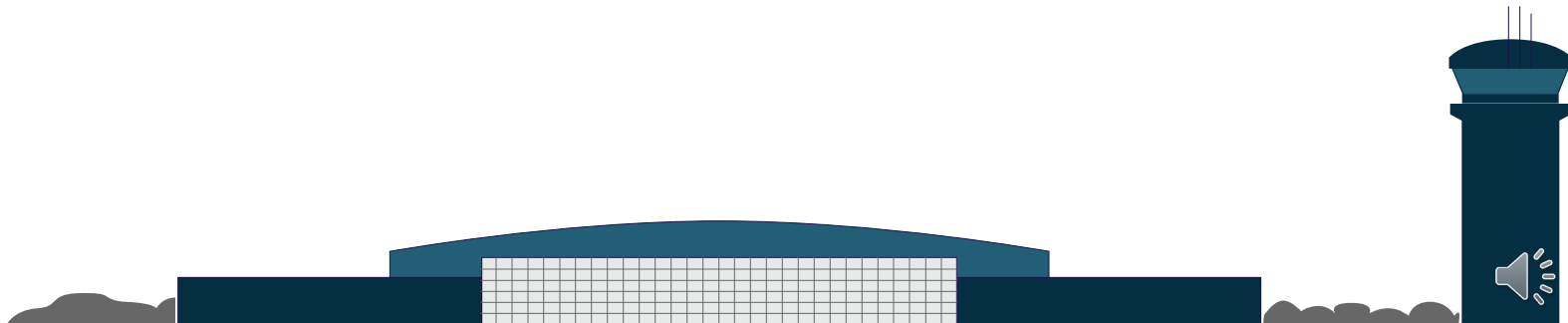
# Meeting Guidelines

- Brief 3 min Q&A between each agenda item
- Please state your name and your relationship to the project before your question
- Please share only 1 question or comment at a time, to allow others to participate
- All questions and comments are welcome and appreciated, however, we do request that you refrain from any disrespectful comments.



# Upcoming Airport Construction

Runway 06/24 Reconstruction



# Reconstruct Runway 6-24

## Replace RW24 Departure

### EMAS

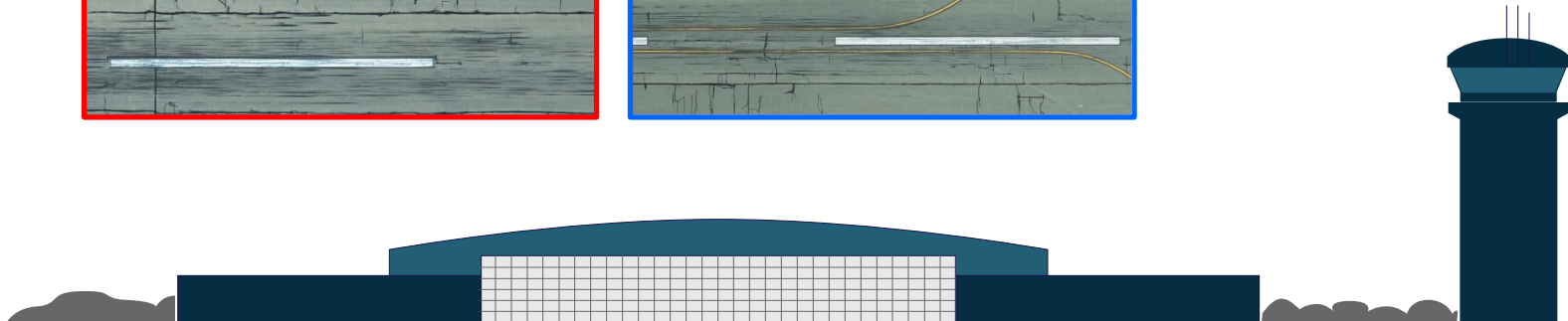




# Reconstruct Runway 6-24

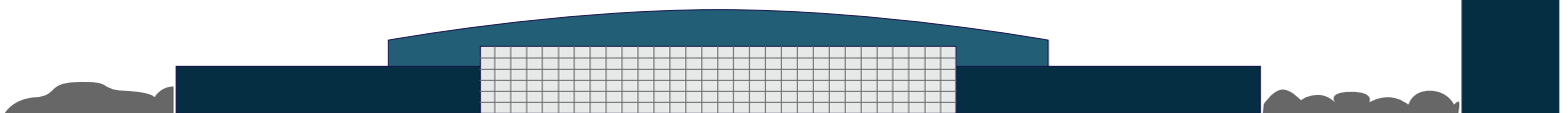
## Replace RW24 Departure EMAS

←2017 | 1989→





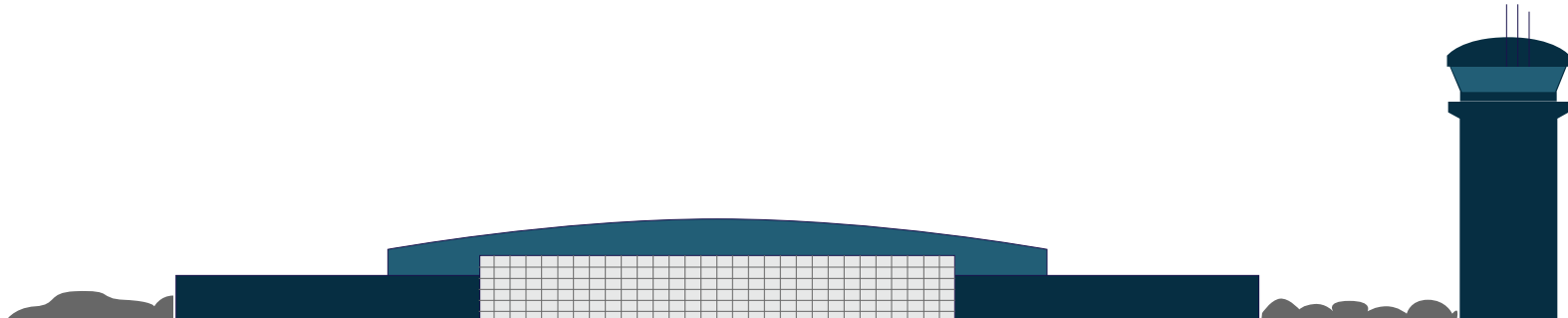
This aerial map illustrates the construction site for the taxiway project. The primary focus is on Taxiway A (TWY A), which is highlighted in green. Taxiway B (TWY B) is highlighted in blue, and Taxiway C (TWY C) is highlighted in red. The map also shows other taxiways (TWY D, TWY E, TWY F, TWY G, TWY H, TWY I, TWY J, TWY K, TWY L, TWY M, TWY N, TWY O, TWY P, TWY Q, TWY R, TWY S, TWY T, TWY U, TWY V, TWY W, TWY X, TWY Y, TWY Z) and the runway. Key locations are marked with text boxes: 'CONTRACTOR'S STAGING AREA' in the top left, 'CONTRACTOR AND ENGINEER'S TRAILER LOCATION' in the top right, and 'TAXIWAY B' in the bottom right. A north arrow is positioned in the top right corner.



# Reconstruct Runway 6-24

## Replace RW24 Departure EMAS

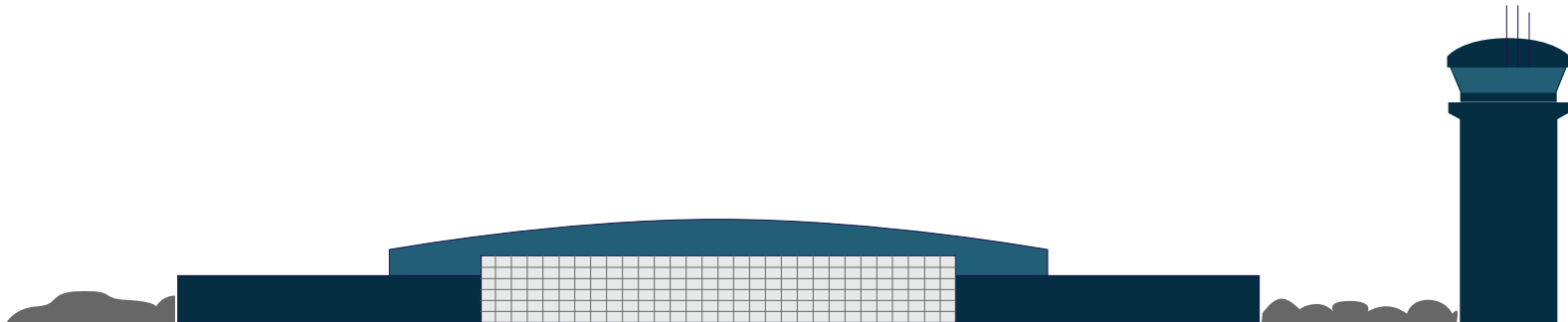
Calendar Year 2023						Calendar Year 2023					
January	February	March	April	May	June	July	August	September	October	November	December
No Construction	over winter										
No Construction	over winter										





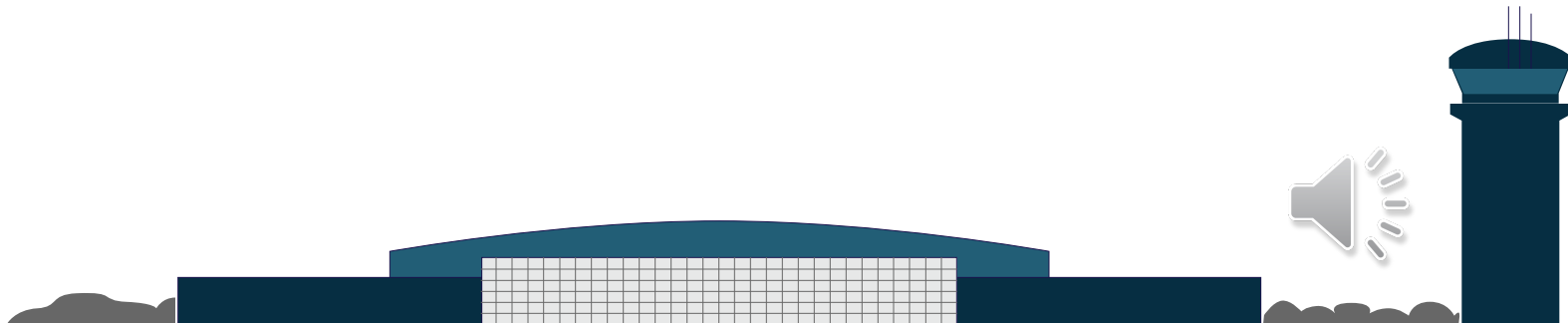
# Questions?

Runway 06/24 Reconstruction



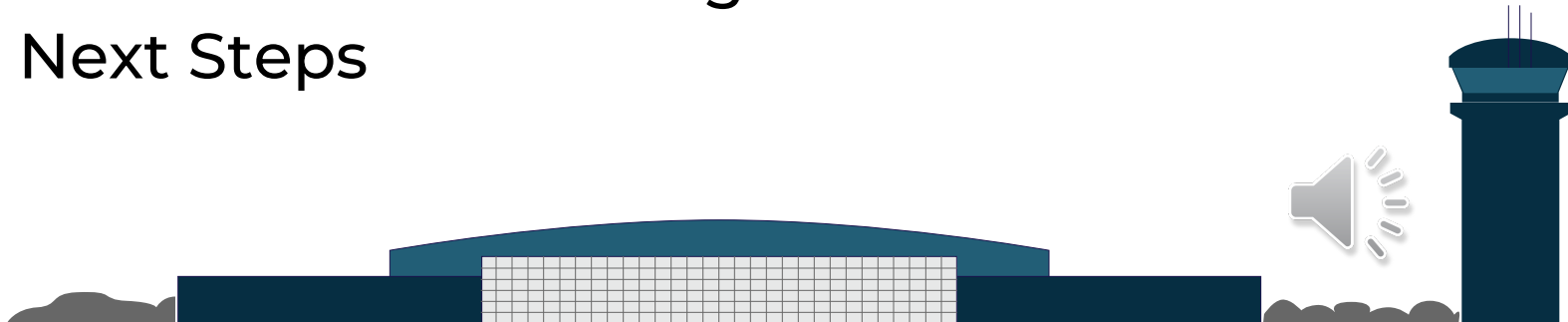
# The Airport, PFAS and Our Response

Summary & Overview of Airport's  
Response to PFAS



# Today's Discussion...

- What are Per and Poly Fluoroalkyl Substances (PFAS)
- Aqueous Film Forming Foam (PFAS Containing Fire Fighting Foam) Use at the Airport
- Airport PFAS Timeline and Investigation
  - Completion of Protective Caps in Areas where PFAS was Used
  - PFAS Plume Modeling
  - Next Steps

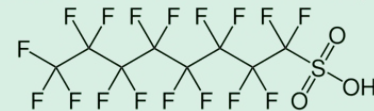


# Per- and Polyfluoroalkyl Substances (PFAS)

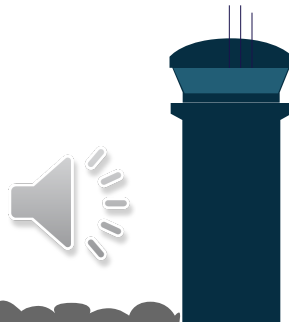
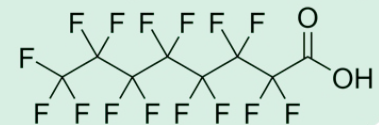
- An emerging contaminant
- Man-made fluorine-containing chemicals
- Water, grease, and stain resistant
- Resistant to breakdown, migrate easily, and bioaccumulate

## PFAS

PFOS (Perfluorooctanesulfonic acid)

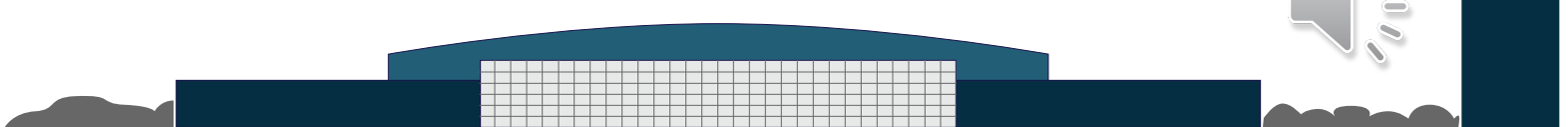


PFOA (Perfluorooctanoic acid)



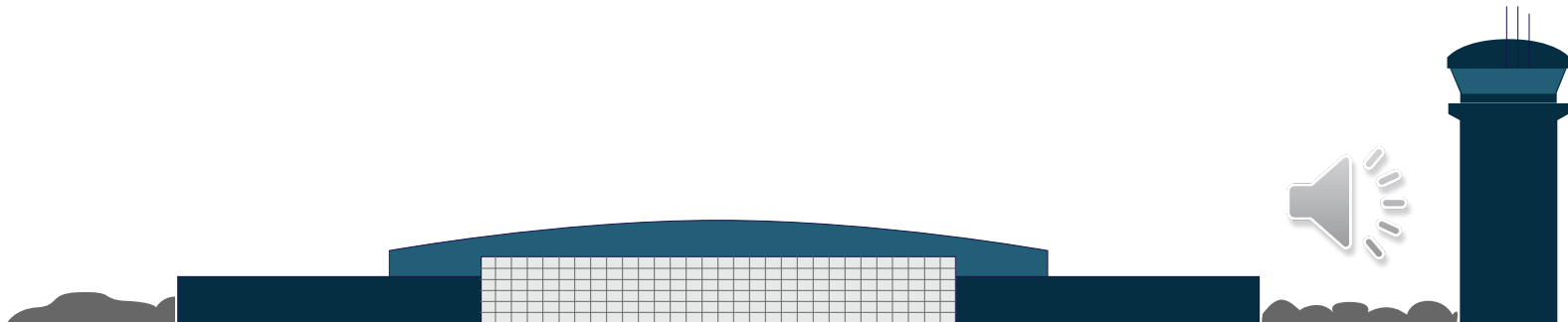


# Sources of PFAS



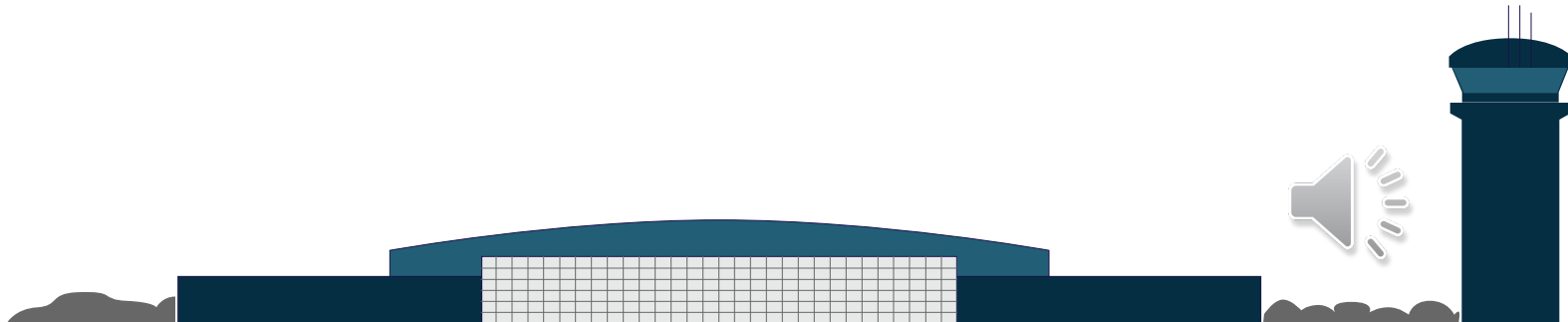
# Use of Aqueous Film Forming Foam (AFFF) at the Airport

- Aqueous Film Forming Foam (AFFF) which contains PFAS- Used for emergency responses when fires are possible.
- Required by the FAA.
- No other options allowed by the FAA exist at present



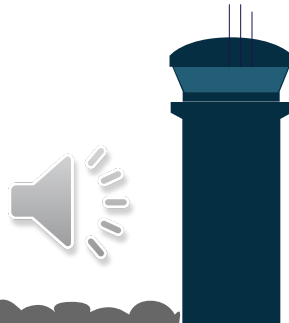
# Use of Aqueous Film Forming Foam (AFFF) at the Airport (Continued)

- ➔ Historically, AFFF used during:
- Triannual training exercises
  - Annual testing of fire fighting equipment as required by the FAA
  - Responses to emergencies



# Recent Use of AFFF at the Airport

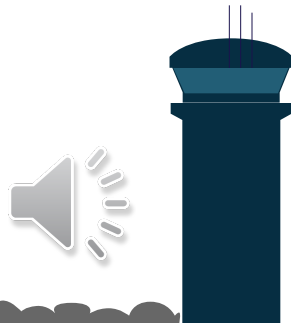
- ➔ Since 2016 AFFF has not been used for training or testing at the Airport
- ➔ AFFF used in 2016 to respond to aircraft accident
  - 10 gallons of foam applied at the site of the accident
  - All captured in an enclosed catch basin, vacuumed out and removed from site.





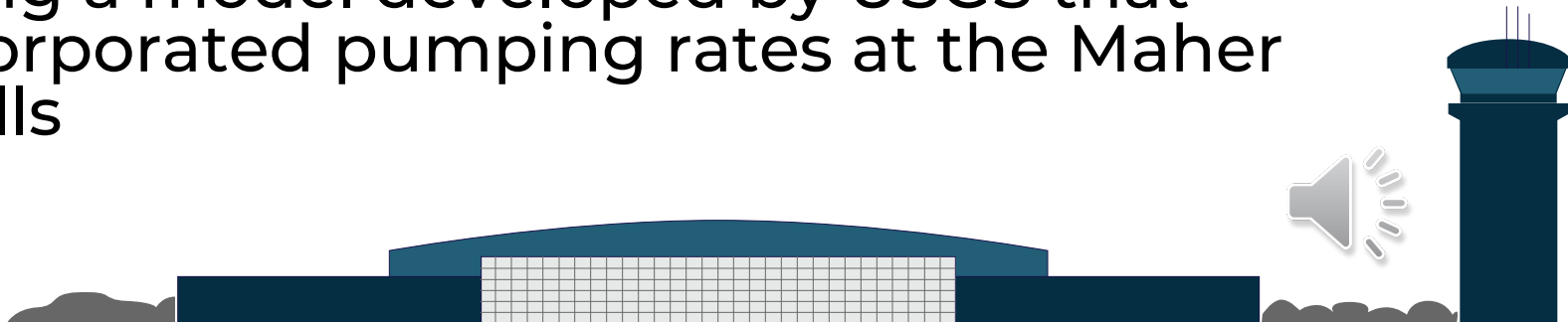
# Ecological Cart

- ➔ First airport in Massachusetts to purchase the ecologic unit
- ➔ Unit purchased before receipt of FAA approvals for use
- ➔ Eliminates the need to use foam during annual fire fighting equipment testing



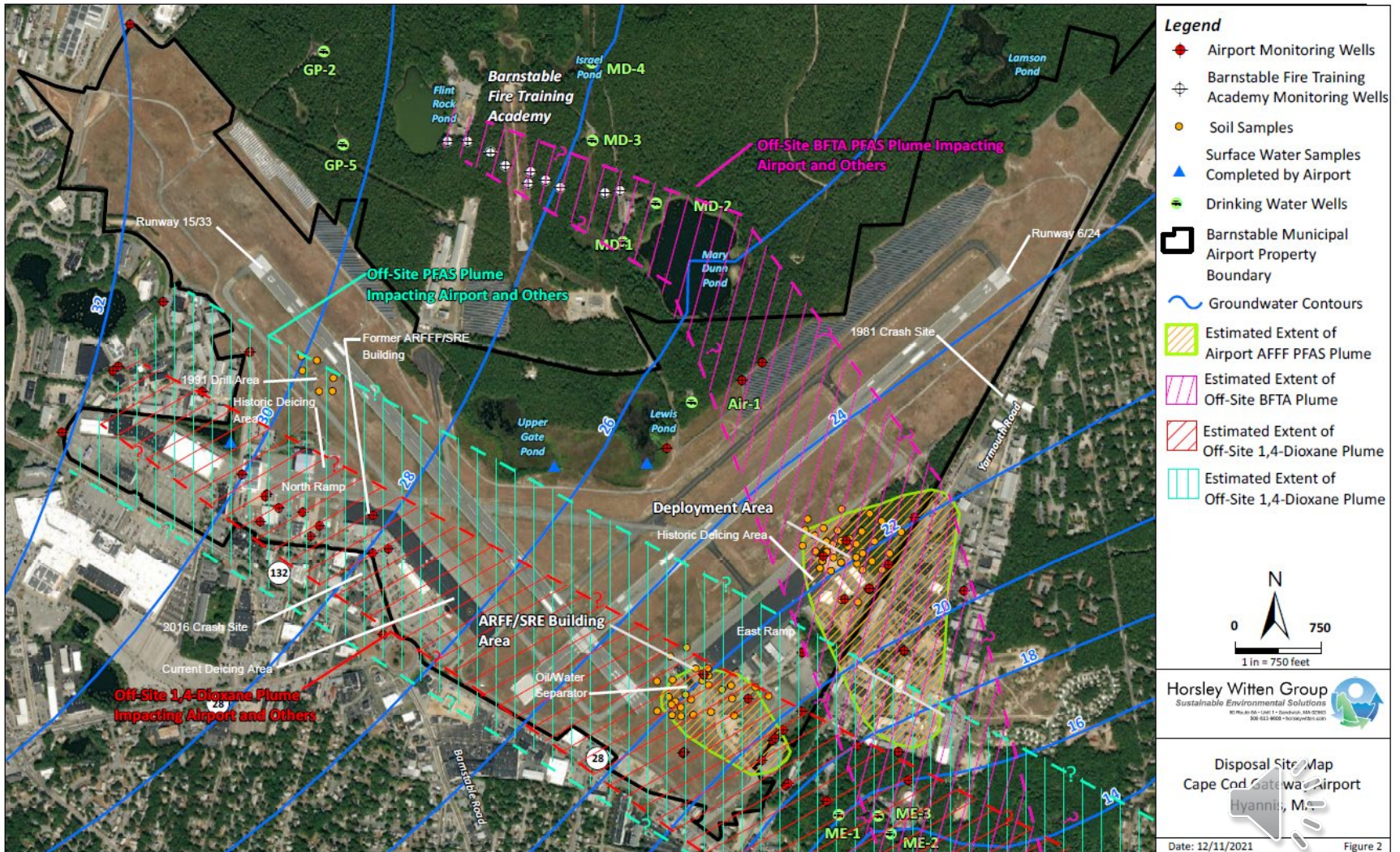
# Airport Forensic Evaluation

- Airport has collected over 125 soil samples and 187 groundwater samples for PFAS analysis.
- Forensic analysis used to determine extent of PFAS plumes relating to:
  - Airport source
  - BFTA
  - Others
- Airport plume extent is also being estimated using a model developed by USGS that incorporated pumping rates at the Maher Wells



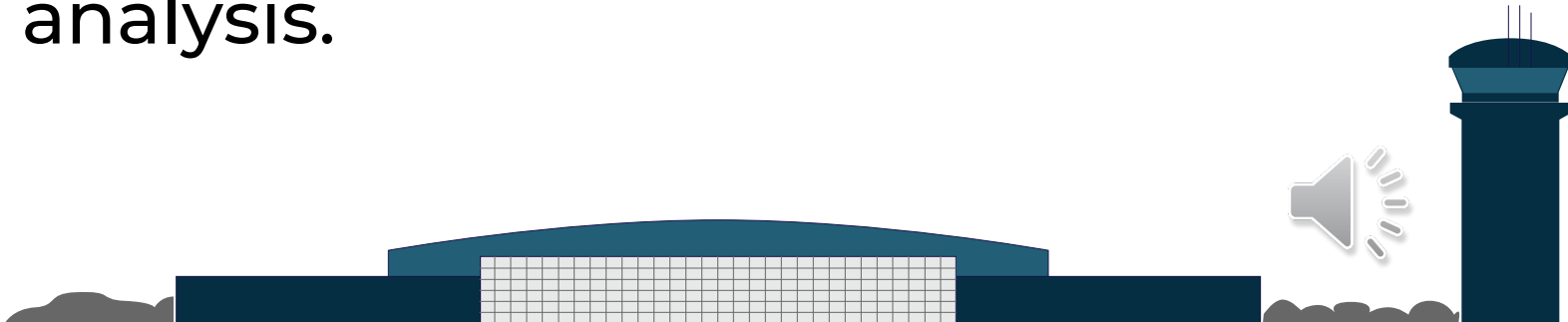


# Extent of PFAS Plume



# Airport Timeline and Investigation

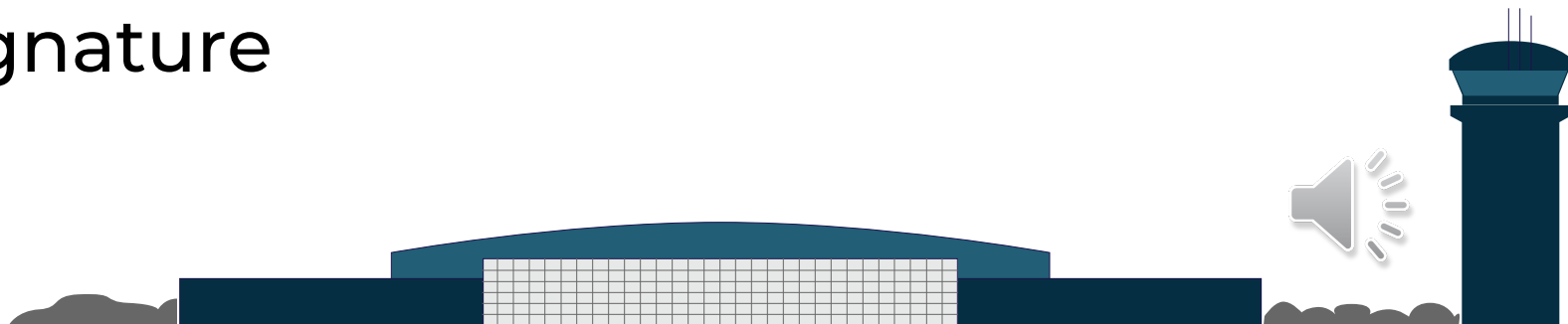
- The airport began investigating PFAS in 2016 at the request of MassDEP.
- Between 2016 and 2022, the
  - Airport has collected over 125 soil samples,
  - 187 groundwater samples,
  - eight fire truck spray samples, and three surface water samples for PFAS analysis.





# Airport Timeline and Investigation (Continued)

- Overview of Site Investigations
  - Mapping of PFAS in Soil
  - Mapping of PFAS in Groundwater
  - Regulated PFAS concentration in Groundwater less than Method 1 GW-3 (Protective of Surface Water)
- Airport Releases Versus Offsite Sources
  - Can Be Identified Based On Chemical Signature

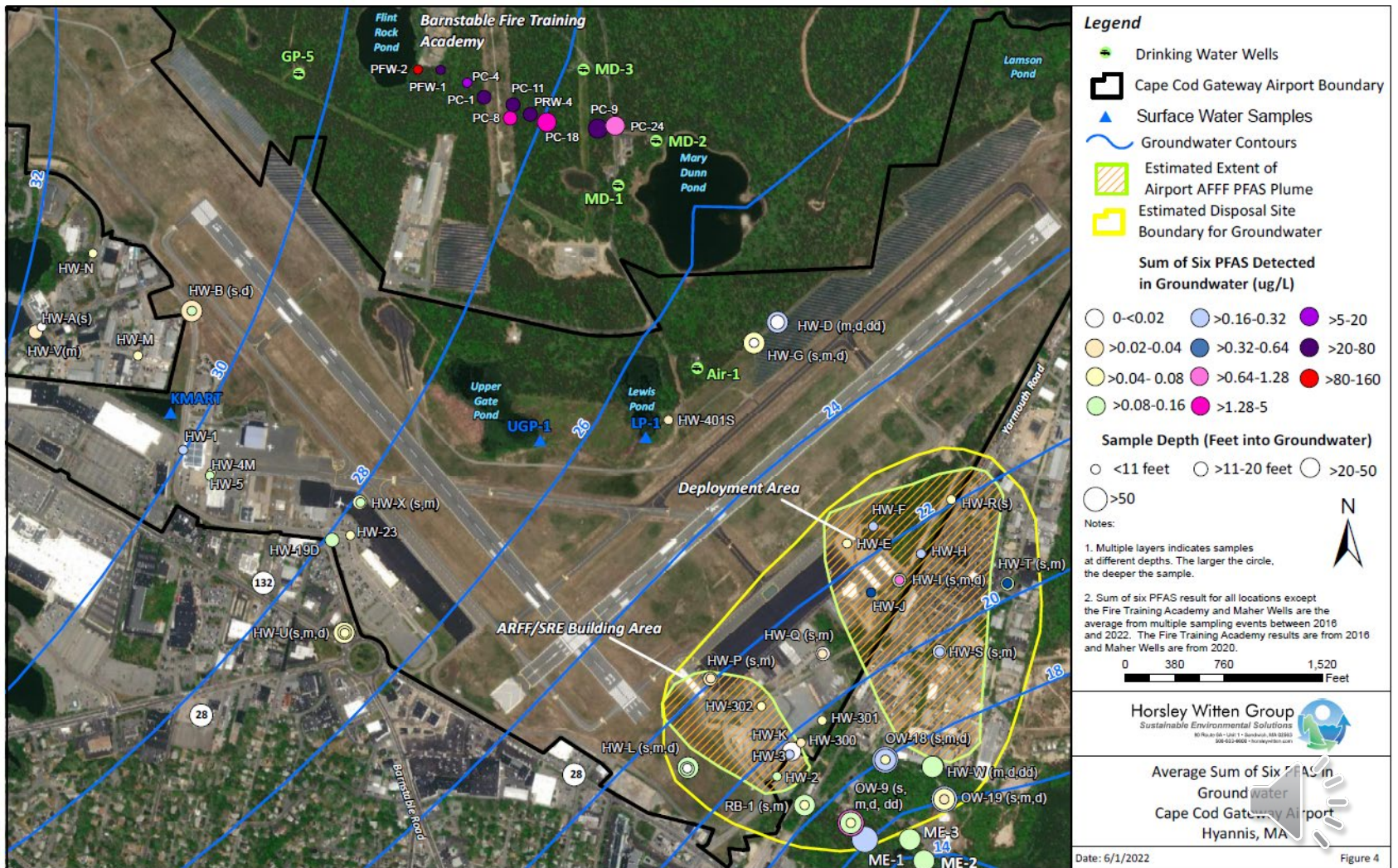


# Soil Sample Locations & Extent of PFAS in Soil at Airport



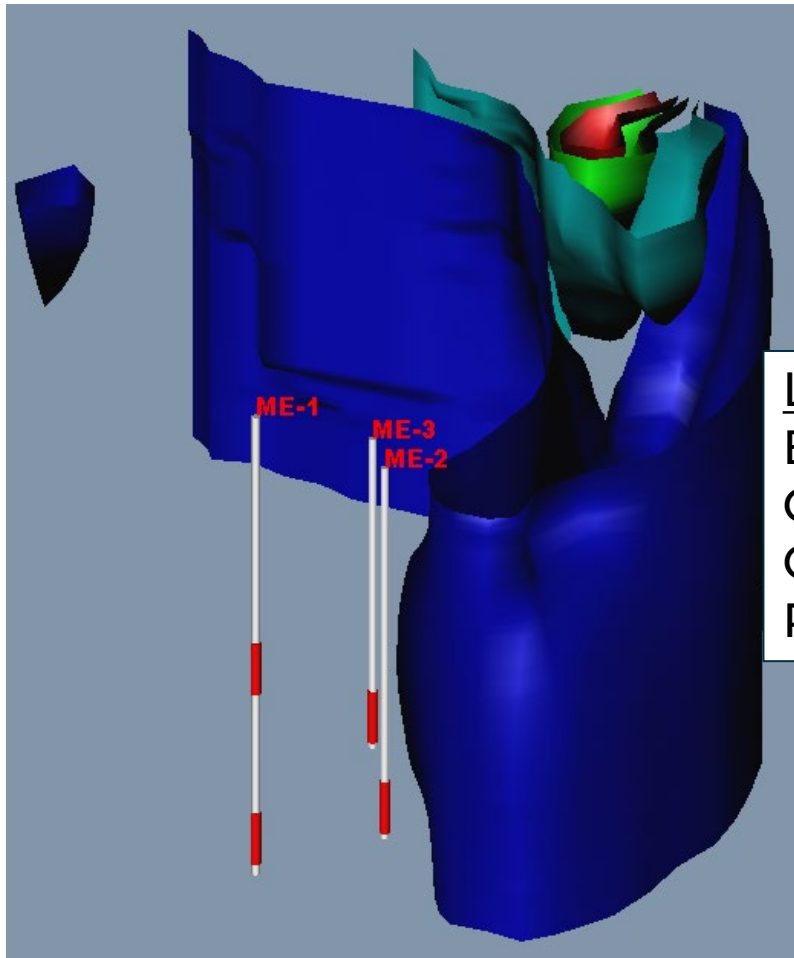


# PFAS Groundwater Sampling Locations



# Airport PFAS in Groundwater Modeling

## (Airport Plume Only)



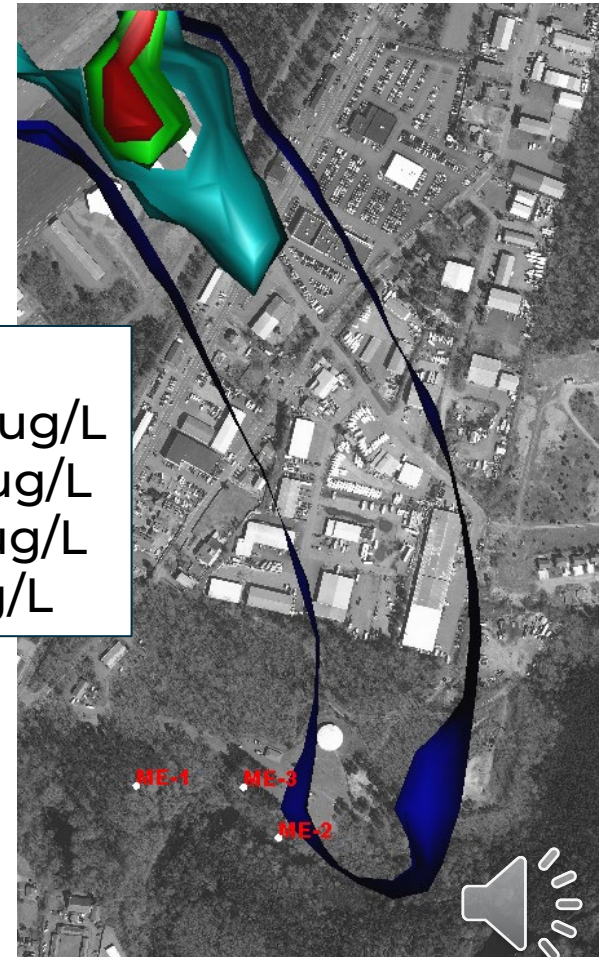
### Legend

Blue: <0.02 ug/L

Cyan: 0.06 ug/L

Green: 0.12ug/L

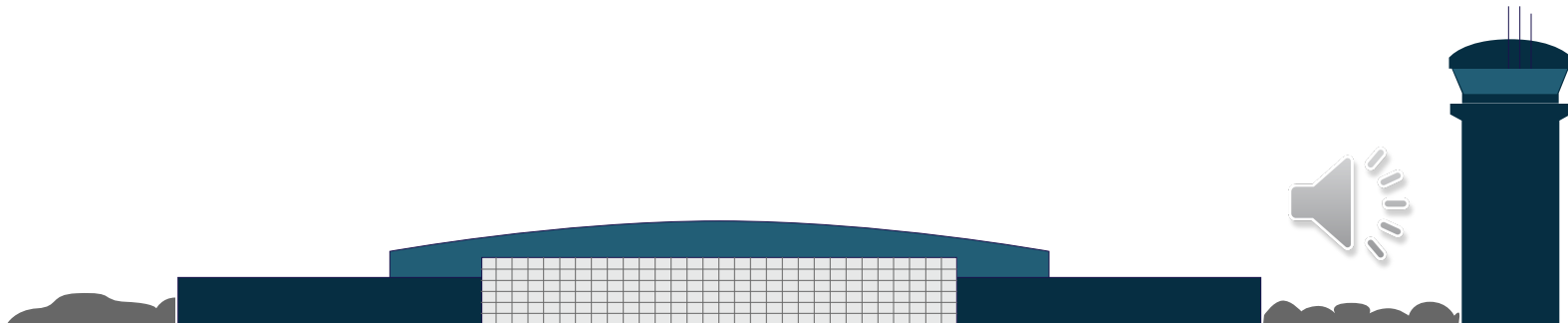
Red: 0.18 ug/L





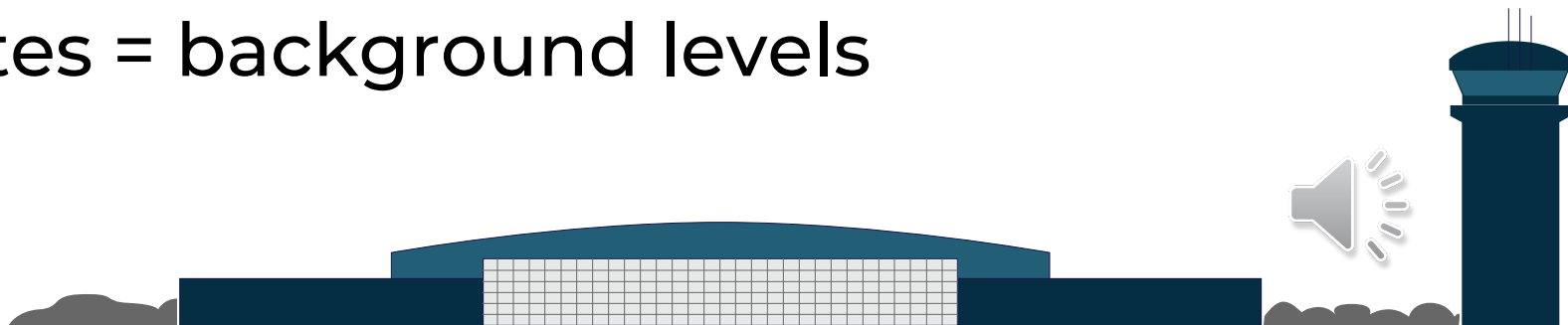
# Background PFAS in Soils

- Background study of soils off-Airport property found PFAS compounds in a majority of the samples collected.
- Off Airport property concentrations for Total PFAS ranged from < the laboratory reporting limit to 6.79 ug/kg.



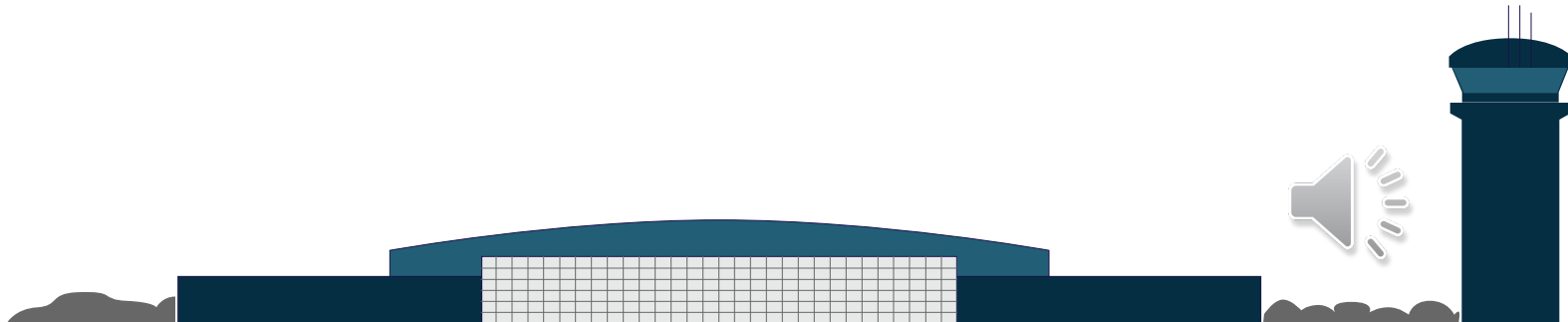
# Background PFAS in Soils (Continued)

- 8 of the samples collected off-Airport exceeded the Method 1 S-1 soil standards for various PFAS.
  - Samples were collected in wooded and non-industrial/commercial use areas.
- Airport background samples collected
  - Consistent with the samples collected from non-industrial/commercial use areas and only one location exceeded the Method 1 S-1 soil standard
- PFAS is in areas that are non-industrial sites = background levels

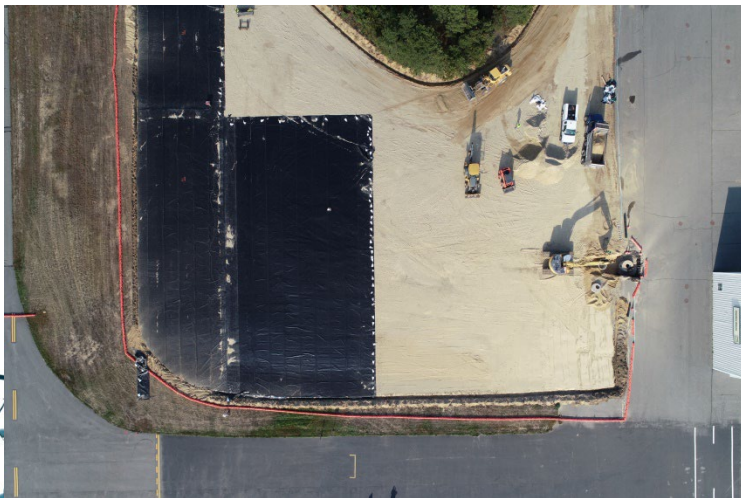


# PFAS Caps Installed

- PFAS impacted soil in the Deployment Area and at the ARFF/SRE Building Area has been capped to prevent further groundwater impacts
  - ARFF/SRE Building Area – Pavement used to create the cap
  - Deployment Area – Geomembrane (30 mil Plastic liner), covered by topsoil and grass
- Both prevent rain from leaching through the soils and entering groundwater



# Deployment Area Cap





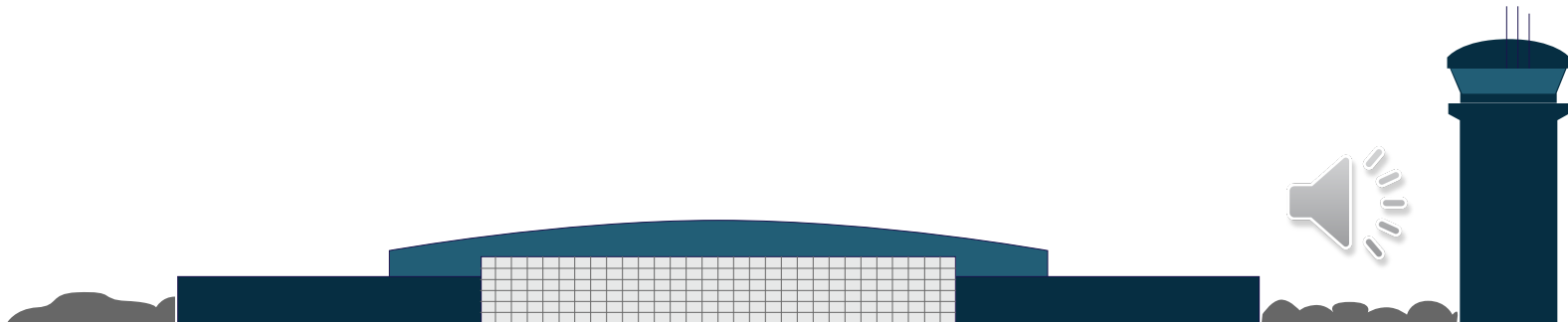
# ARFF Area Cap





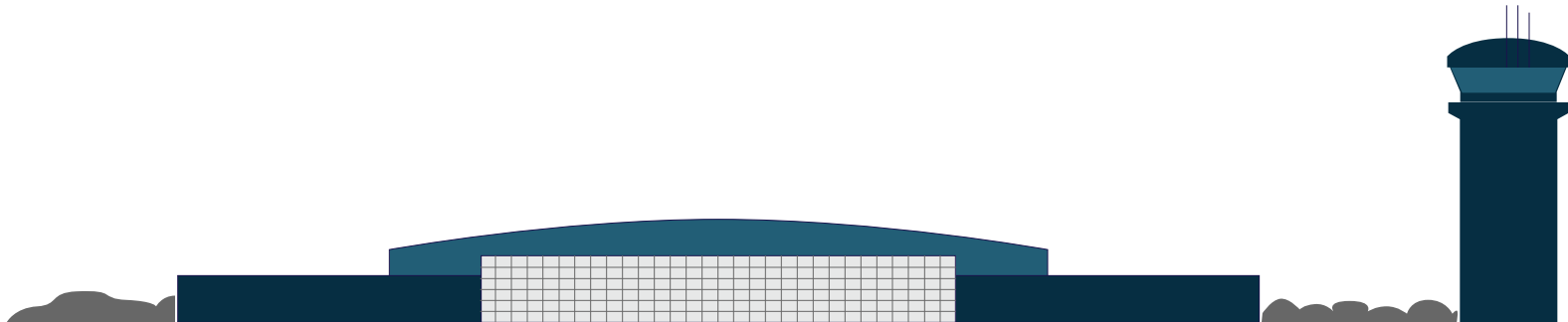
# Next Steps

- Continue Monitoring PFAS in Groundwater to Evaluate the Performance of the Caps
  - Monitoring Funds Included in Airport Capital Improvement Plan Budget (CIP).
- Final resolution to include financial contribution to support ongoing PFAS treatment at Maher Wells.



# Questions?

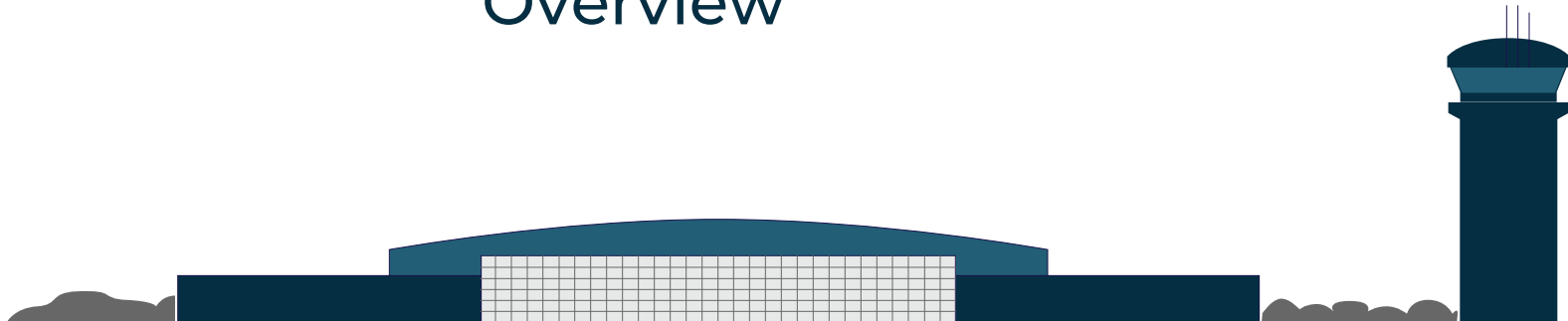
Airport's Response to PFAS



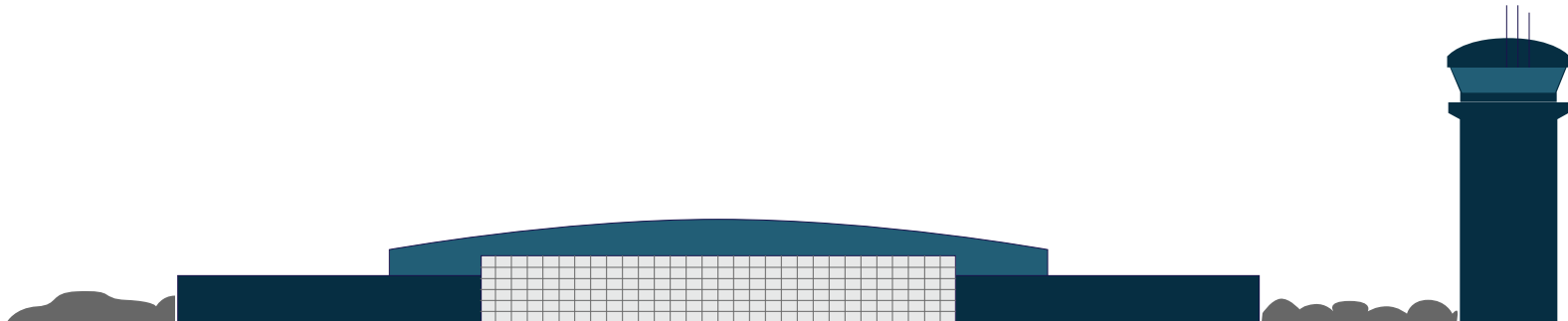
# Planning Project Status Update

Airport Master Plan Update (AMPU)  
Summary

Airport Environmental Assessment  
Overview

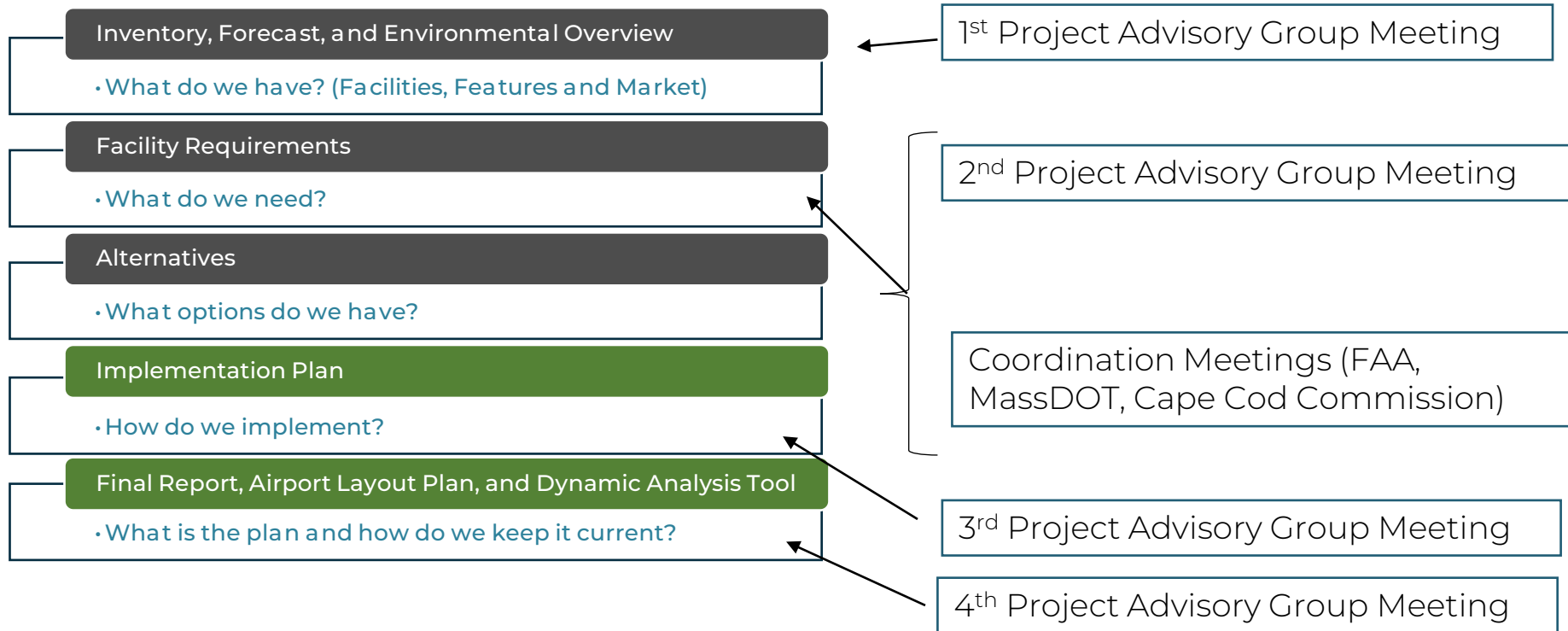


# **Airport Master Plan Update (AMPU) Summary**

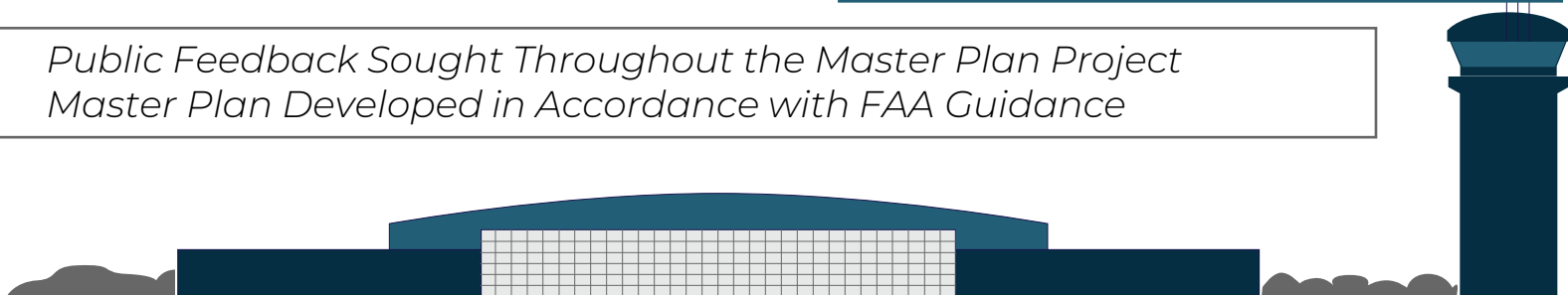




# Airport Master Plan Process



- *Public Feedback Sought Throughout the Master Plan Project*
- *Master Plan Developed in Accordance with FAA Guidance*



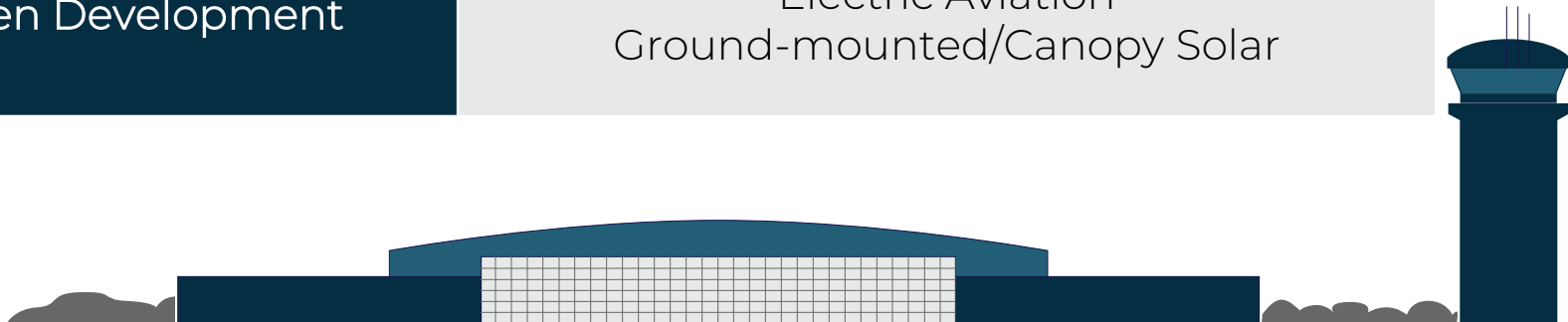
# Airport Advisory Group

- Town Council
- Town of Barnstable - Town Manager
- Town of Barnstable – Department Heads
- Town of Yarmouth - Town Administrator
- Hyannis Park Civic Association
- Greater Hyannis Civic Association
- Barnstable Municipal Airport Commissioners
- FAA & MassDOT Aeronautics Division
- Hyannis Air Traffic Control
- Airport Staff
- Airport Tenants
- WS Development
- Cape Cod Commission
- Cape Cod Chamber of Commerce
- Hyannis Chamber of Commerce
- Yarmouth Chamber of Commerce
- Woods Hole Oceanographic Institution
- Cape Cod Young Professionals
- Cape Cod Regional Transit Authority
- MassDOT Highway District 5
- Steamship Authority - General Manager



# Master Plan Outcome & Recommendations

Item/Facility	Demand
Runway Length	6,000' – 6,400'
FAA Design Updates	Approach & Other Safety Zone Improvements Runway Visual Aids Improvements Taxiway Improvements Airfield Lighting Improvements
Tenant/Facility Improvements	Demand Based Hangar Development Roadway Improvements SRE/ARFF/Maintenance Demand Based GA Ramps Demand Based Fuel Facilities
Green Development	Electric Aviation Ground-mounted/Canopy Solar



# Runway Length Analysis

- Based on FAA runway length requirements guidance
  - General aviation fleet (12,500-60,000 lbs. - OR -
  - Individual aircraft over 60,000 lbs.
    - Embraer 190, Airbus 220, Gulfstream IV/V, Global Express/5000
  - HYA Master Plan used BOTH and all aircraft types over 60,000 Lbs
    - Also adjusted for HYA missions, rather than use maximum takeoff weight
- Analysis using FAA AC 150/5325
  - General aviation fleet 6,200-6,700
  - Embraer 190 5,850-6,115
  - Airbus 220 5,865-6,200
  - Gulfstream IV/V 5,265-6,585
  - Global Express/Global 5000 5,265-5,510

C-III Family of Aircraft (60,000+ lbs.)



More year-round traffic will boost GA runway requirements due to winter operations (Wet/Slippery)

With turboprop aircraft removed from regional airline fleets, commercial airline aircraft options to effectively serve HYA is extremely limited

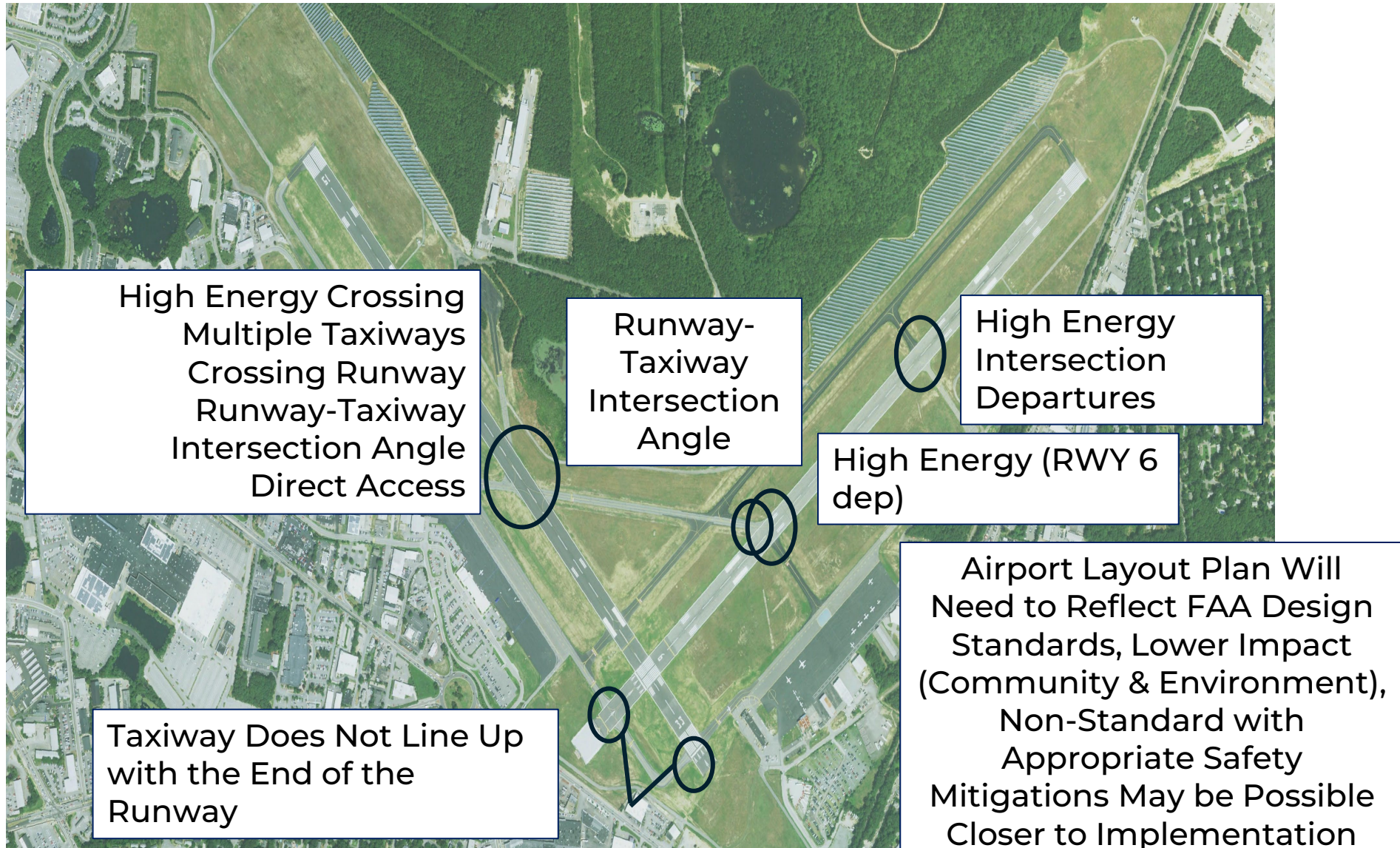
Both runways at HYA are the shortest used by commercial jet aircraft in the entire Northeast



# Runway Length/Potential Operations

		Takeoff (Feet)	Landing (Feet)	
Commercial	CRJ-700 – ex. Atlanta	5,915	5,980	Larger aircraft does not correlate to longer runway required
	CRJ-700 – ex. DC	5,215	5,980	
	Embraer 175 – ex. Atlanta	7,615	5,290	
	Embraer 175 – ex. DC	5,515	5,290	
	Embraer 190 – ex. Atlanta	7,665	5,175	
	Embraer 190 – ex. DC	6,315	5,175	
	Airbus A220 – ex. Atlanta	6,365	5,578	Smaller aircraft on more demanding missions require more than short missions for large aircraft
	Airbus A220 – ex. DC	5,965	5,578	
	Airbus A320 – ex. Orlando	6,015	6,325	
	Airbus A320 – ex. Ft. Myers	6,115	6,383	
	Boeing 737-800	5,915	6,600	
Gen. Aviation	Gulfstream IV <sup>1</sup>	5,395	3,865	
	Gulfstream V/G500 <sup>1</sup>	6,225/5,265	2,553	
	Global 5000 <sup>1</sup>	5,115	2,517	
	Global Express <sup>1</sup>	5,935	2,519	
	Dassault Falcon 900 <sup>1</sup>	5,415'	2,645	

# Facility Standards



# Screening Criteria

Level 1 Screening: Immediate Vicinity  
Community and Infrastructure  
Constraints

Level 2 Screening: Meets  
Requirements and Standards

Level 3 Screening:  
Environmental  
Impacts

Level 4 Screening:  
Broader Community  
Impacts

Level 5  
Screening:  
Cost

Master  
Plan  
Focus

EA  
Focus

Striking a Balance Between Community Impacts and Operational Needs

Master Plans: Focus on Airport  
Facility Needs and Users  
Environmental Assessments:  
Considers Full Range of Impacts  
(On & Off Airport)  
*THIS* Master Plan Identifies Key  
Community Impacts for Focus  
in the EA



# Balanced Approach

- Existing runway supports limited number of commercial aircraft in the fleet
- Longer runway allows for modern, quieter, more efficient aircraft
- Growing off-season requires planning for winter ops for both GA & commercial

Community & Environmental Impacts

- Continue to lead the region in airport environmental stewardship
- Minimize and fully mitigate for environmental impacts
- Seek “Green Opportunities” in future projects

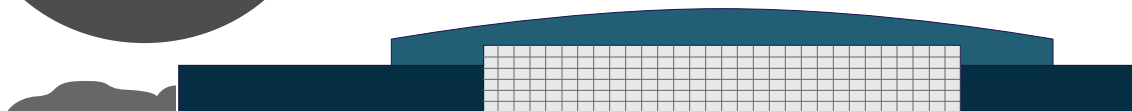
Recommended Plan

Community and Regional Benefits

- Cape-resident and business focused approach
- Proven Cape-originating need for air service
- Upcoming bridge replacement will highlight needs for additional transportation links
- Only jet-capable gateway for Cape business and residents

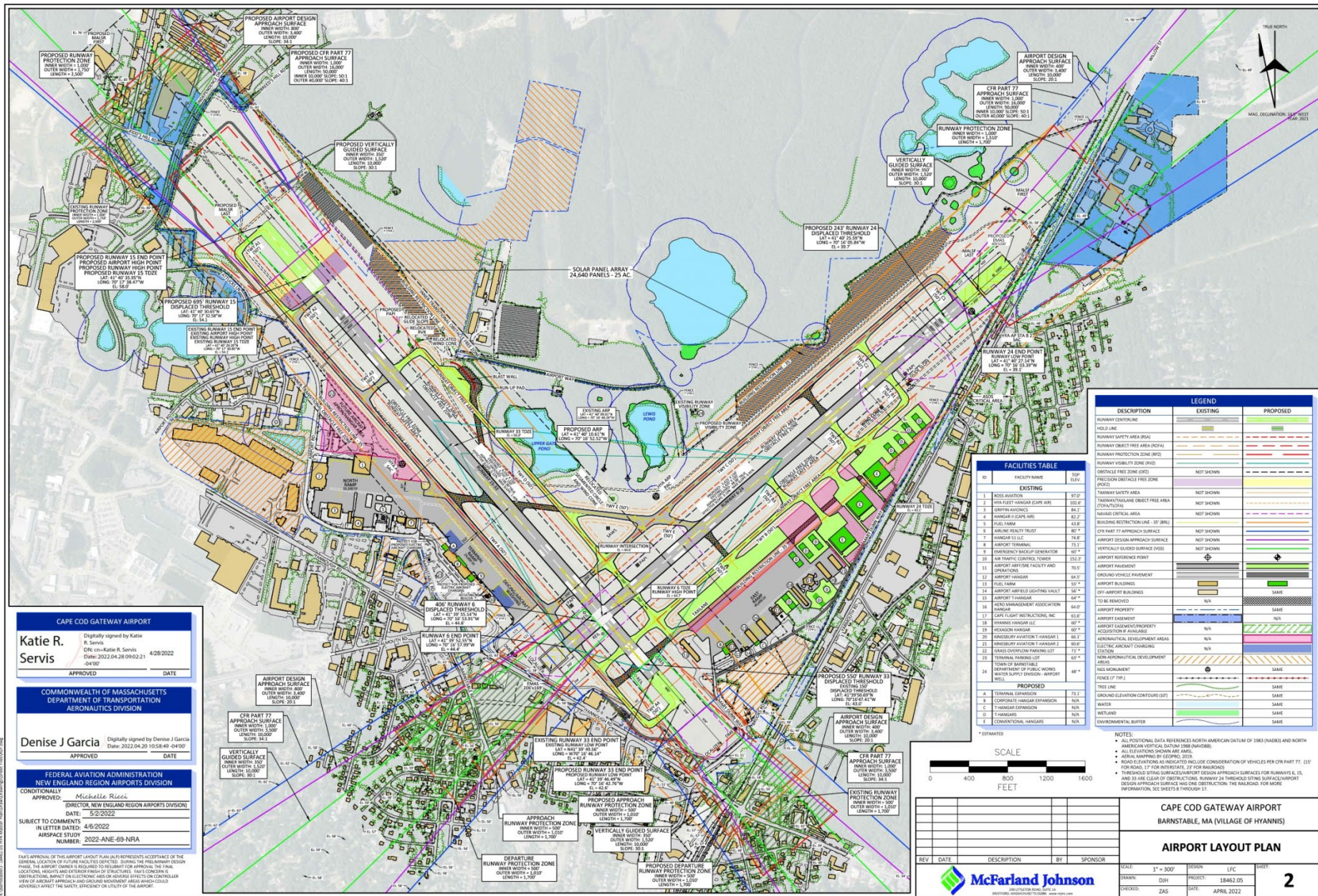
Operational Safety and Flexibility

Costs and Funding





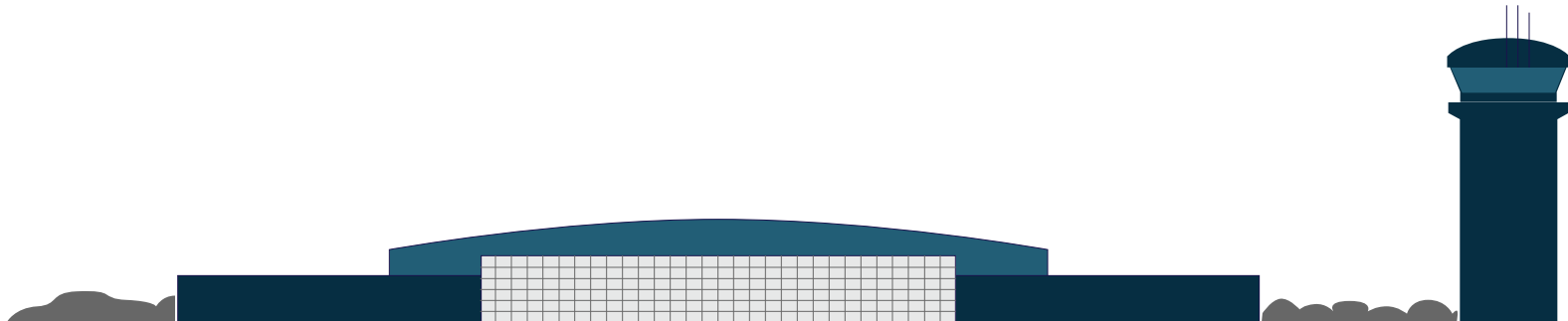
# Proposed Airport Improvements



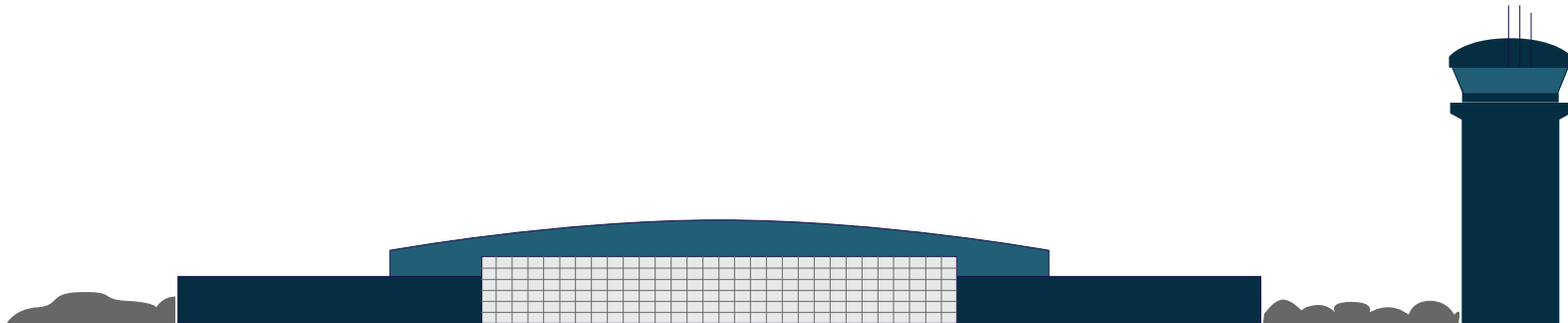


# MASTER PLAN TO EA TRANSITION

- Incorporate Comments (Complete)
- FAA/MassDOT Approval (Received)
- Environmental Assessment Scope Development
- Commence Environmental Review (Environmental Assessment)



# **Airport Environmental Assessment Overview**



# ENVIRONMENTAL REVIEW PROCESS & TIMELINE

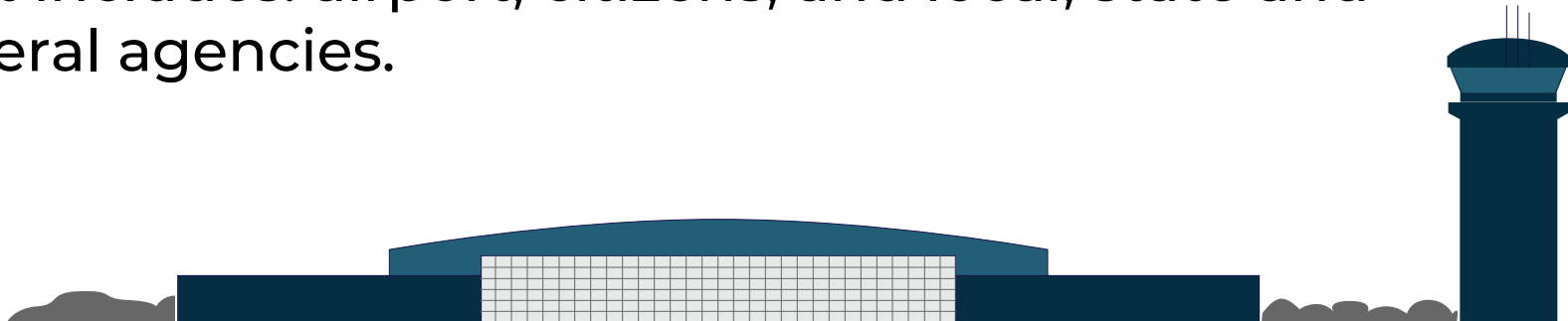
## → Airport Master Plan:

- Plans for the safety/efficiency needs of the airport
- Evaluates growth needs of the airport, its users and surrounding communities.

## → Environmental Review:

- Analysis of the environmental impacts associated with the master plan projects
- Reviews alternatives and seeks minimization of impacts.

→ Both processes implement a public review process that includes: airport, citizens, and local, state and federal agencies.





# Airport Project Team



Epsilon Associates

- Epsilon is serving as the lead environmental consultant for the Project. Epsilon will be responsible for all document preparation and coordination with the Airport



Airport Solutions Group

- ASG is serving as Airport planners, engineers, designers, and will provide constructability assessments



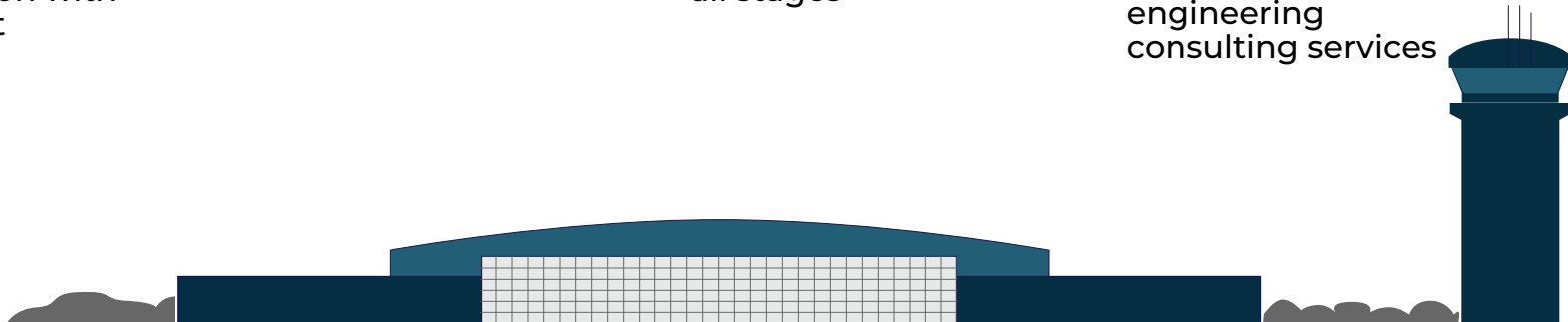
Howard Stein Hudson

- HSH is the project's public involvement team providing community engagement, consensus-building, and public outreach at all stages



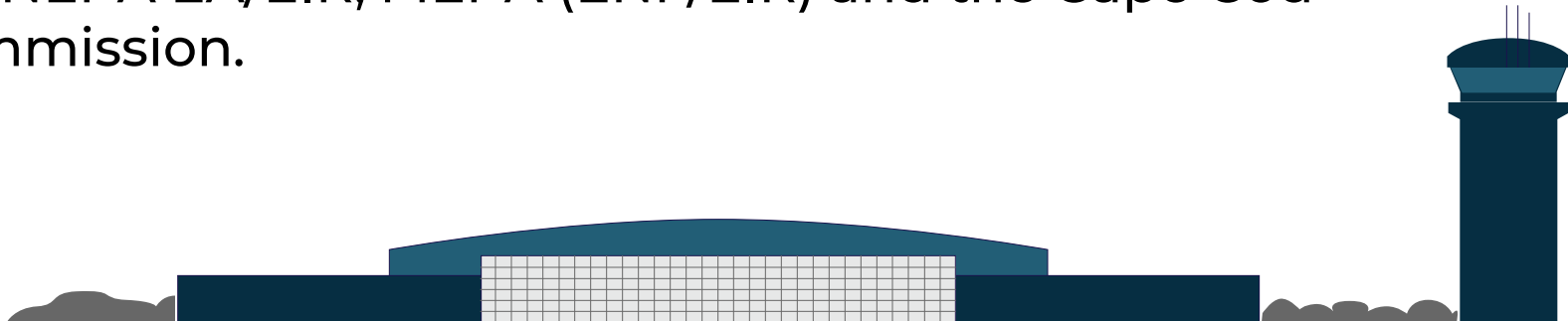
Commonwealth Heritage Group & GEI Inc.

- CHG is providing cultural resource management, and historic preservation planning services
- GEI is providing environmental and geotechnical engineering consulting services



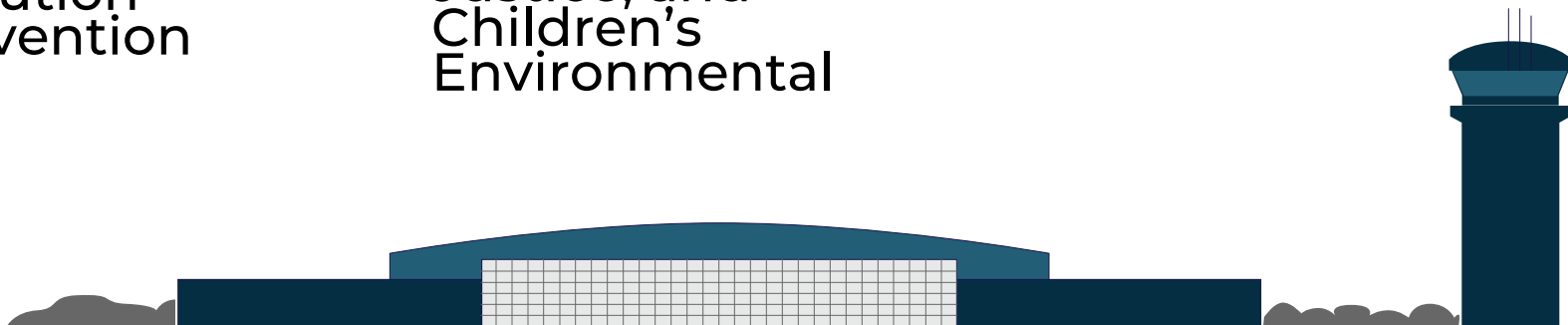
# ENVIRONMENTAL REVIEW PROCESS - REGULATORY

- Airports are required under federal law to evaluate impacts of proposed airport improvements on the environment.
- FAA defines impact categories which must be addressed in the NEPA, EA/EIR review processes.
  - Those categories are outlined on the next slide.
- Projects also trigger state review under MEPA and local review under the Cape Cod Regional Policy Plan
- Airport will seek a joint report filings and review with the NEPA EA/EIR, MEPA (ENF/EIR) and the Cape Cod Commission.



# IMPACT CATEGORIES

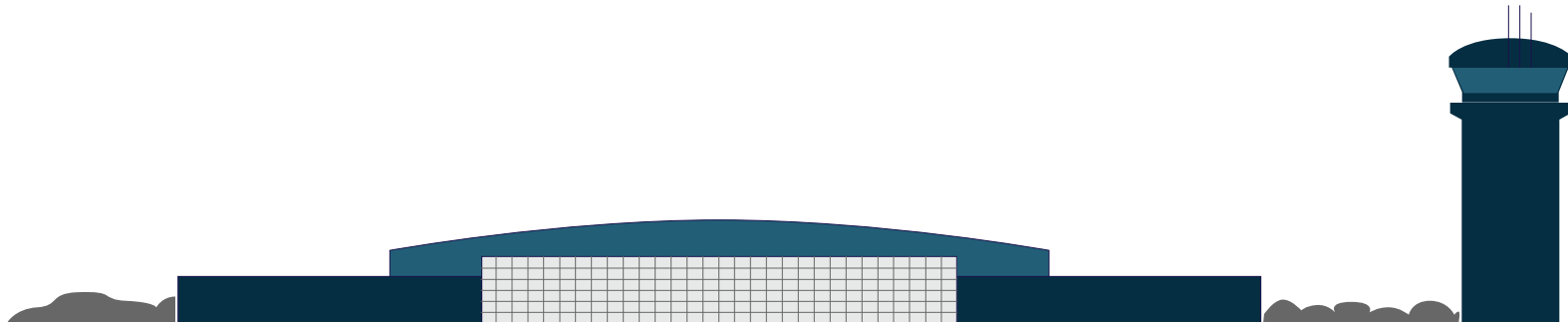
- Air Quality
- Biological Resources
- Climate
- Coastal Resources
- Department of Transportation Act, Section 4(f)
- Farmlands
- Hazardous Materials, Solid Waste, and Pollution Prevention
- Historical, Architectural, Archeological, and Cultural Resources
- Land Use
- Natural Resources and Energy Supply
- Noise and Noise-Compatible Land Use
- Socioeconomics, Environmental Justice, and Children's Environmental
- Health and Safety Risks
- Visual Effects
- Water Resources
- Cumulative Impacts
- Irreversible and Irretrievable Commitment of Resources
- Specific Guidance on use of FAA Categorical Exclusions



# ENVIRONMENTAL REVIEW PROCESS - FEDERAL

## → National Environmental Policy Act (NEPA)

- Requires review under federal law to evaluate impacts of proposed airport improvements on the environment.
- Necessitates environmental impact analyses of proposed airport actions that are subject to FAA decision and/or funding.
  - The process must be completed before permitting.
- Submits documents in the form of an Environmental Assessment

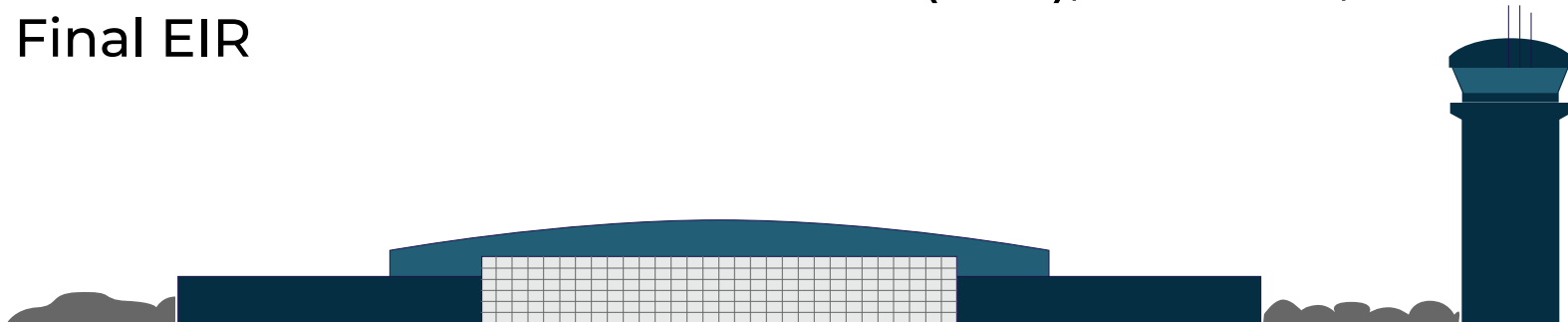




# ENVIRONMENTAL REVIEW PROCESS - STATE

## → Massachusetts Environmental Policy Act (MEPA)

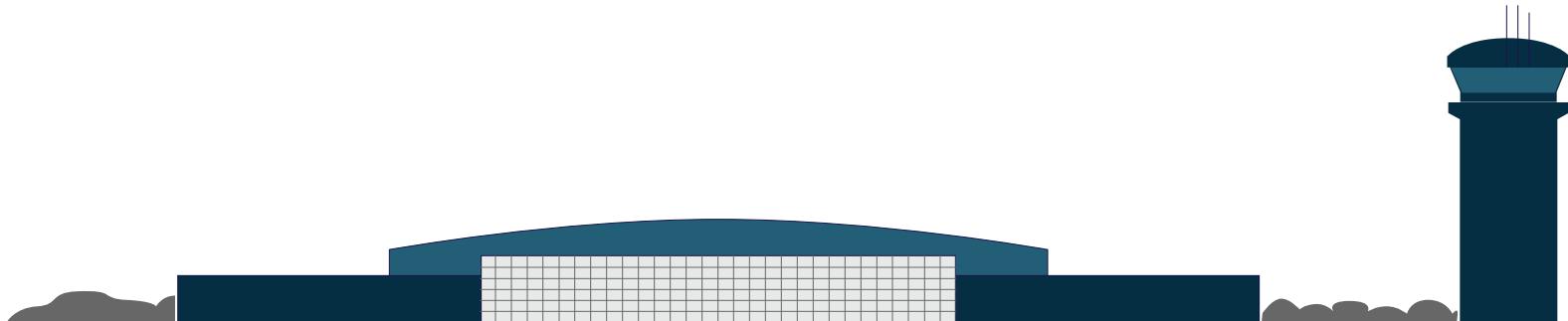
- Reviews potential environmental impacts and analyses measures to avoid, minimize, and mitigate damage to the environment.
- Implements meetings and citizen/agency comment
- Analyzes Environmental Justice components (screening of impacts) with outreach/meetings, and Climate and Resiliency analysis.
- Submits documents in the form of an Environmental Notification Form (ENF), Draft EIR, & Final EIR



# ENVIRONMENTAL REVIEW PROCESS - LOCAL

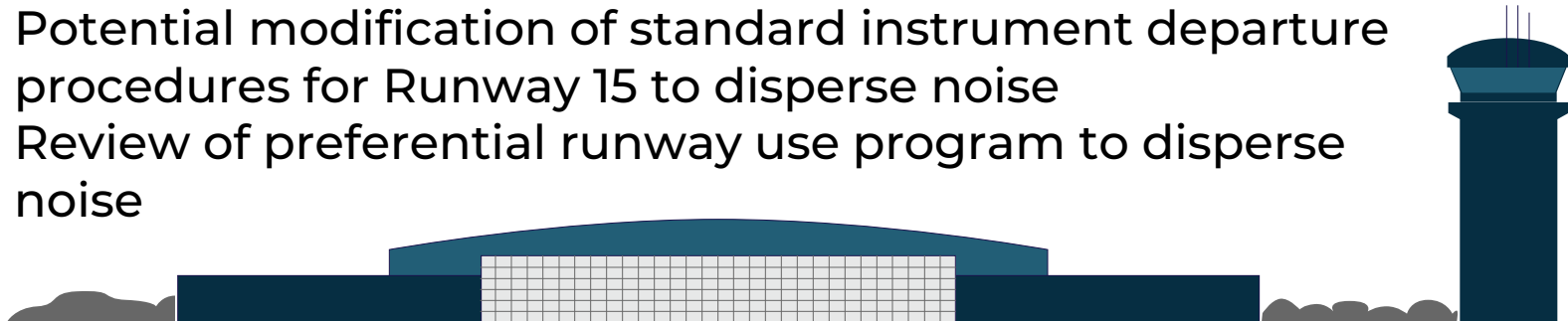
## → Cape Cod Regional Policy Plan

- Analysis to determine the comparative benefits and detriments of a project and its consistency with the Cape Cod Regional Policy Plan (RPP) and local comprehensive plans and goals.
- Submits documents in the form of a Development of Regional Impact (DRI)



# ENVIRONMENTAL REVIEW PROCESS – LOCAL REQUEST FOR ANALYSIS

- ➔ Hyannis Park Civic Association raised questions in the Master Plan review process
- ➔ Elements will either be addressed in the EA/EIR processes or through these regularly scheduled meetings.
  - Additional evaluation of Runway 15-33 length and JetBlue aircraft (potential) requirements
  - Further evaluation of Runway Protection Zones design standards.
  - Additional evaluation of the balanced runway approach and location of proposed extension on Runway 15/33
  - Potential modification of standard instrument departure procedures for Runway 15 to disperse noise
  - Review of preferential runway use program to disperse noise



# ENVIRONMENTAL REVIEW TIMELINE



Project Team Data Collection



MEPA ENF

Summer 2022 with Filing November 2022



Combined NEPA Draft EA, MEPA Draft  
EIR, and CCC DRI

December 2022 – August 2023



Combined NEPA Final EA & FONSI,  
MEPA Final EIR, and CCC DRI Decision

July 2023 - March 2024



Permitting

2024

1st Project Public Meeting  
October 27 @ Airport

2<sup>nd</sup> & 3<sup>rd</sup> Meetings  
Pre-ENF filing EJ meeting,  
Post ENF filing site  
visit/meeting with MEPA  
staff and public

4<sup>th</sup> & 5<sup>th</sup> Meetings  
Public comments part of  
Draft EA/EIR, Cape Cod  
Commission meetings

Public/agency comments  
included in Final EA/EIR.  
Cape Cod Commission  
full-commission meeting  
to vote on project.

During the entire process,  
there will be at least 5  
public meetings plus  
opportunity to respond to  
various Federal, State and  
Local reports





# PUBLIC MEETINGS/COORDINATION

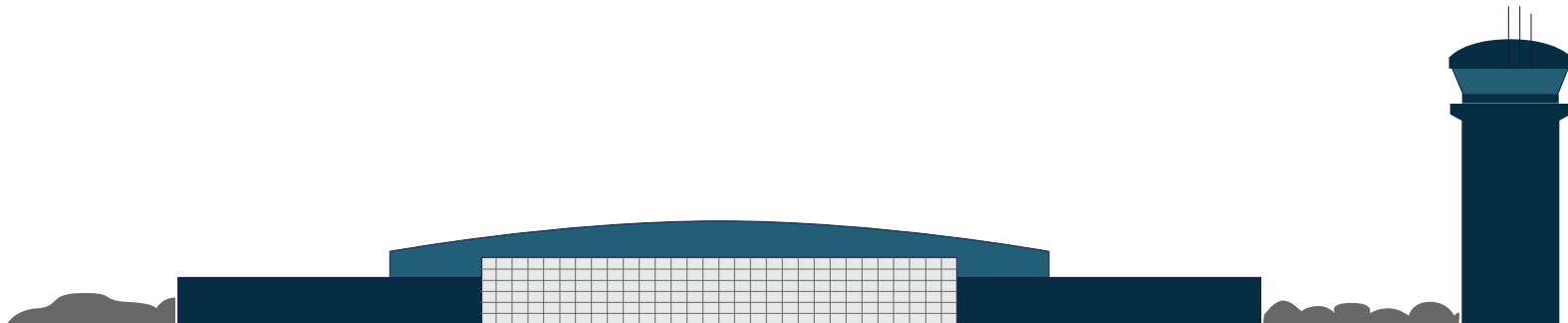
→ 5 general public meetings planned

- These are in addition to several required public meetings during the regulatory review process (MEPA/CCC).

→ Public/agency comments under MEPA, NEPA and local review.

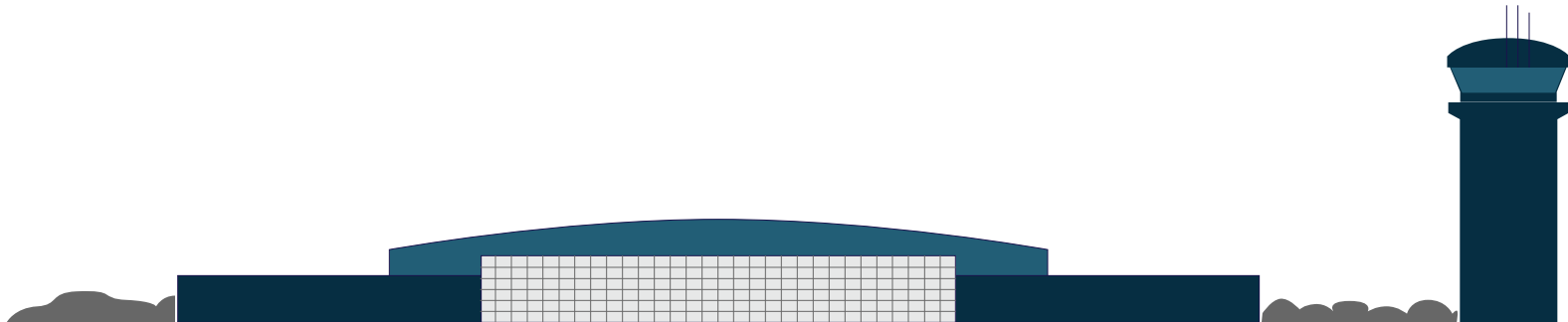
- Public will be notified of these periods via public notice in local papers, postcards, social media and the airport website;
  - Dedicated EA Page on the Airport Website ([https://flyhya.com/environmental\\_assessment/](https://flyhya.com/environmental_assessment/)); and
- Via email if you provide your contact.

→ First general meeting at Airport = October 27, 2022



# Questions?

Planning Project Status Update



# Next Steps

