

Burlington International Airport Airport Master Plan Update

Regional Advisory Committee Meeting # 5

October 13, 2020

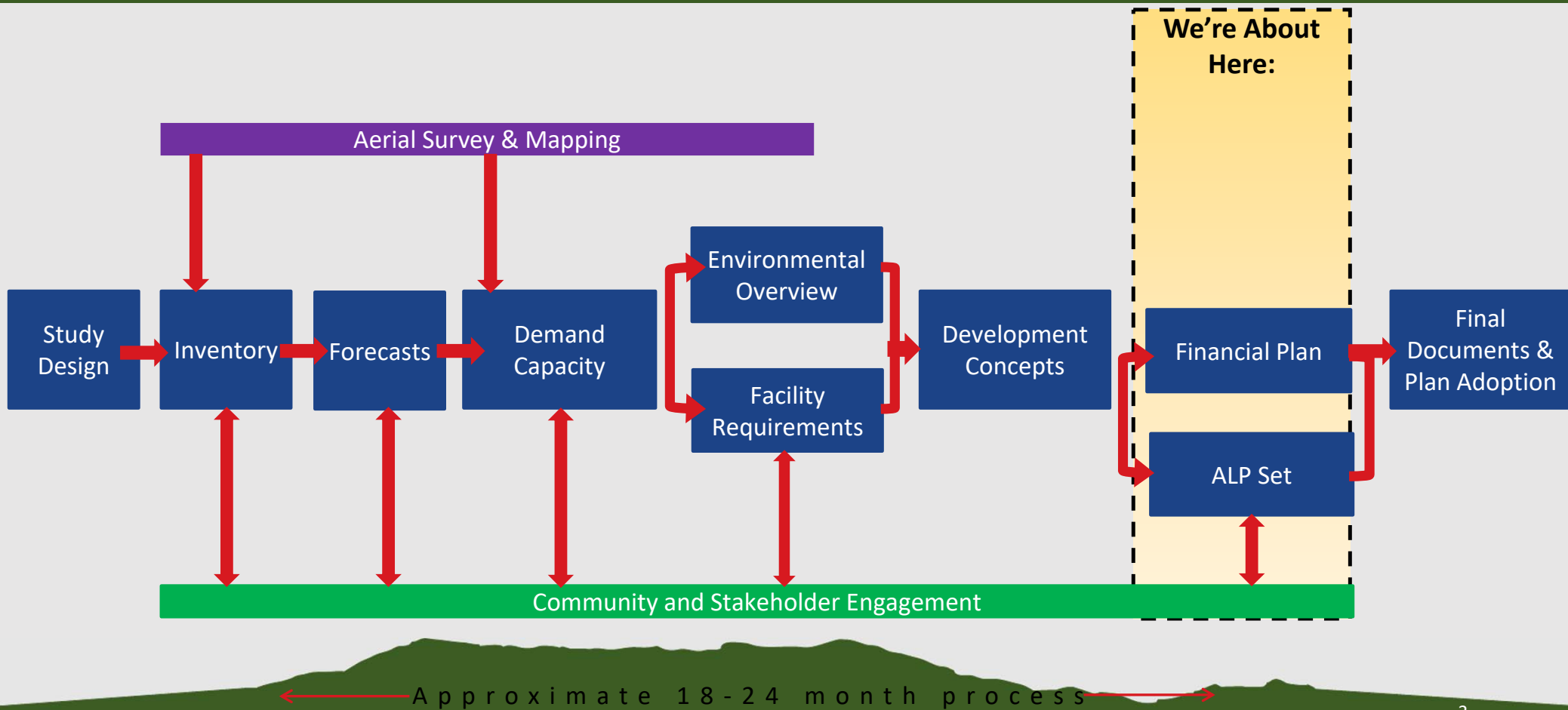


AGENDA

- Introductions
- Master Plan Update Status
- Facility Review
- Airport Layout Plan
 - Terminal Building
 - Hotel
 - Ground Support
- Environmental Impacts



STATUS OF AIRPORT MASTER PLAN



AIRPORT FACILITY SUMMARY

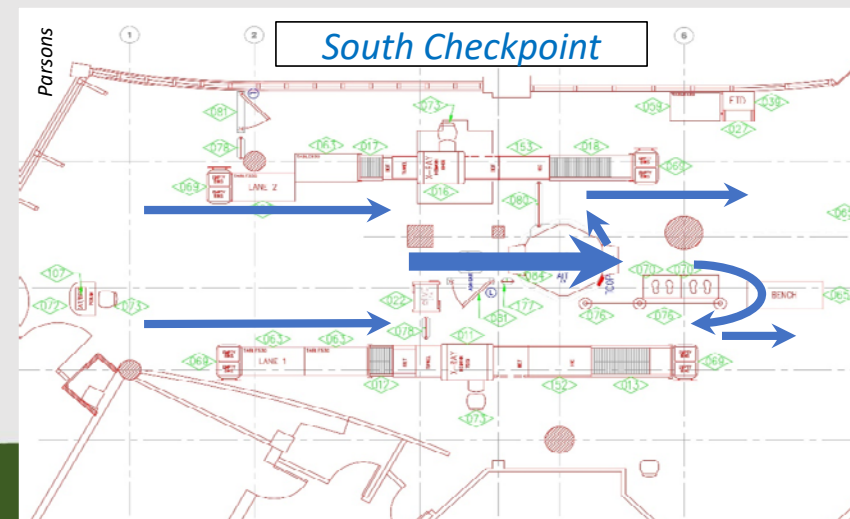
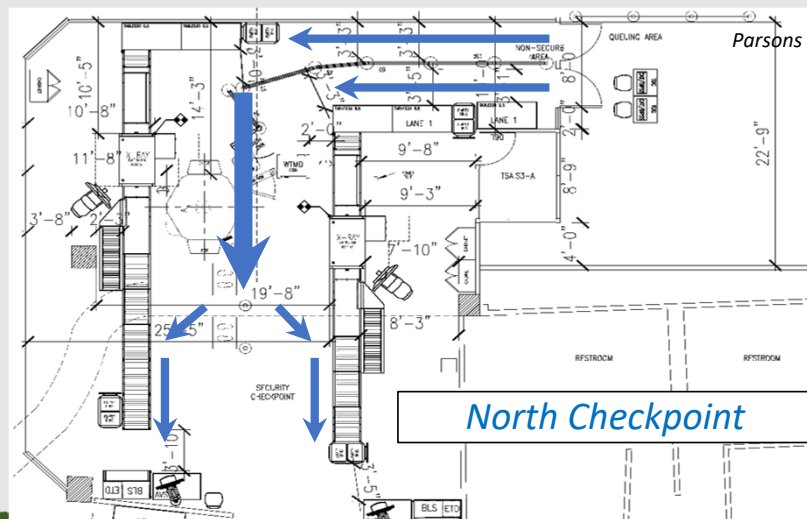


Terminal Summary – Baseline Requirements

Terminal Functional Area	Existing Terminal Area	Ultimate Requirement	Surplus (Deficit)	%
Passenger Boarding Gates	10	11	(1)	-11%
Check-In / Ticketing	7,460	9,544	(2,084)	-28%
Outbound Baggage Screening & Makeup	1,099	8,611	(7,512)	-684%
Passenger Screening Checkpoint	5,714	10,289	(4,575)	-56%
Passenger Lounges / Holdrooms				
Hold Rooms	10,298	10,999	(701)	-7%
Concessions	9,891	14,934	(5,043)	-51%
Core Terminal Areas Subtotal	47,118	64,743	(17,625)	-37%
Other Functions/Tenants	92,482	25,648	66,834	72%
Total Passenger Terminal Area	139,600	90,391	49,209	35.3%

Terminal - Security Checkpoint

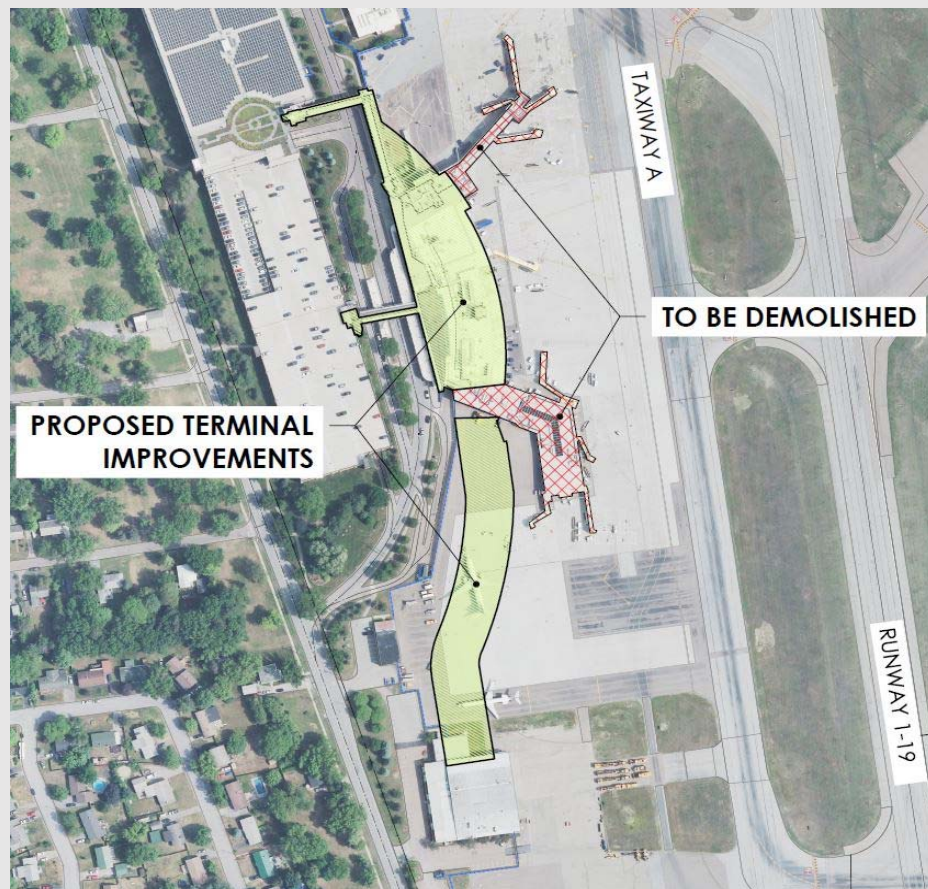
Passenger Screening Area	Existing Terminal Area	Ultimate Requirement	Surplus (Deficit)	%
Existing Screening Lanes (both checkpoints)	4 Lanes	6 Lanes (with consolidation)	(2)	-50%
Checkpoint Area (SF) - Combined	5,714 SF	10,289 SF	(4,575) SF	-56%



AIRFIELD LAYOUT PLANS

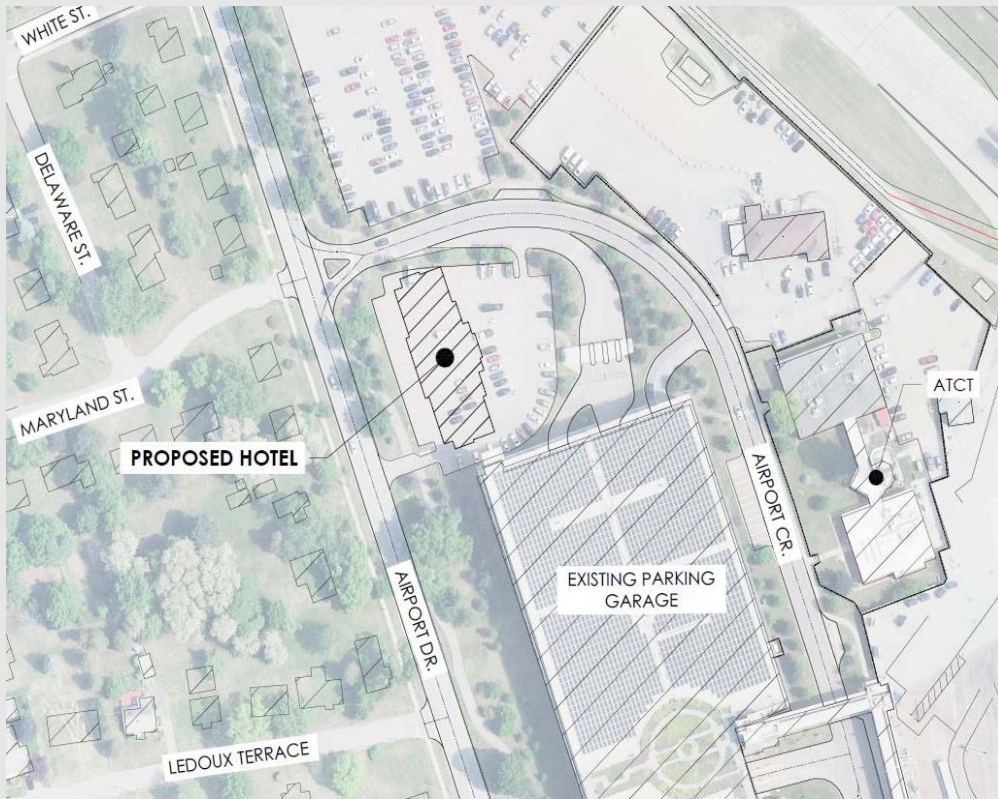


TERMINAL BUILDING



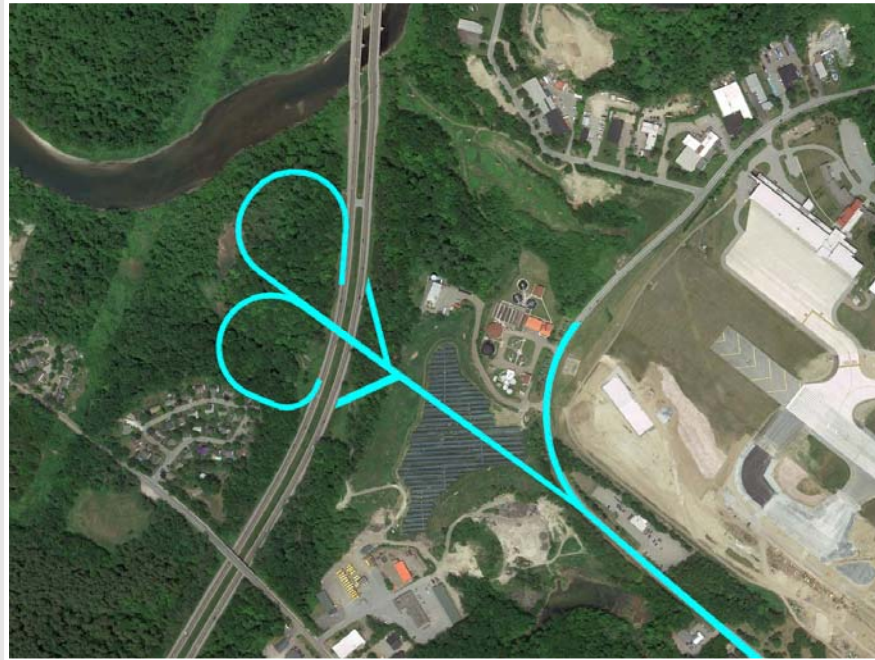
- Expand terminal building
 - Multiphase, linear approach
 - New integrated TSA
 - New outgoing and inbound baggage system
 - New holdrooms/gates
 - Demolish old concourses
 - Open up terminal apron

HOTEL



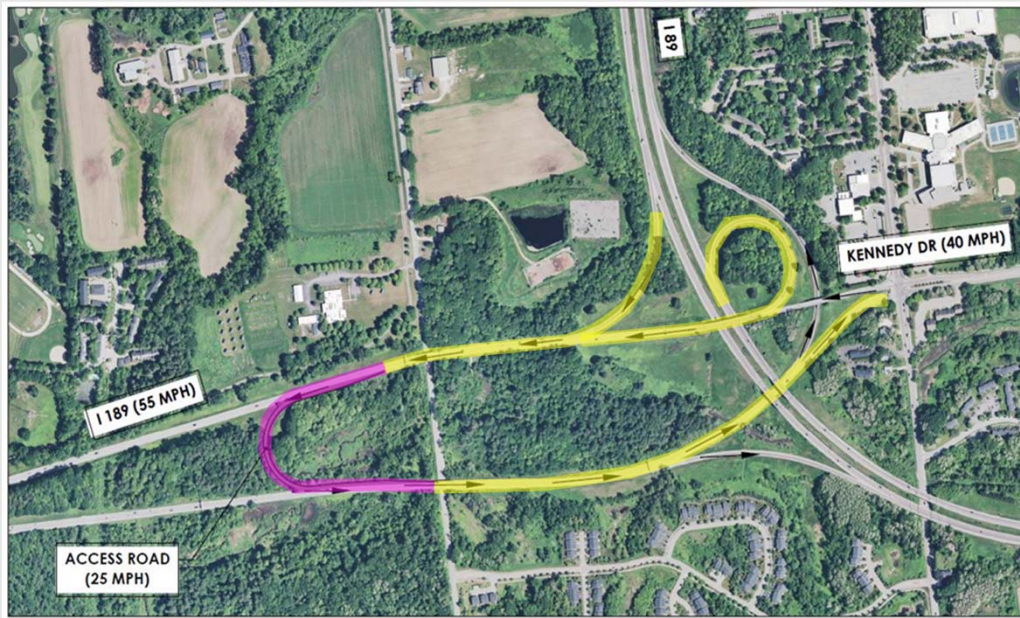
- Construct New Hotel
 - On airport property
 - Across from Terminal Building
 - Adjacent to the parking garage

ACCESS ROAD SUPPORT: I-89 INTERCHANGE



- Airport supports community development to improved automobile circulation
 - Consider New I-89 Interchange
 - Provides new east/west access to airport
 - Connects into Airport Parkway, to Terminal Building
 - Avoids Route 2 and Kennedy Drive

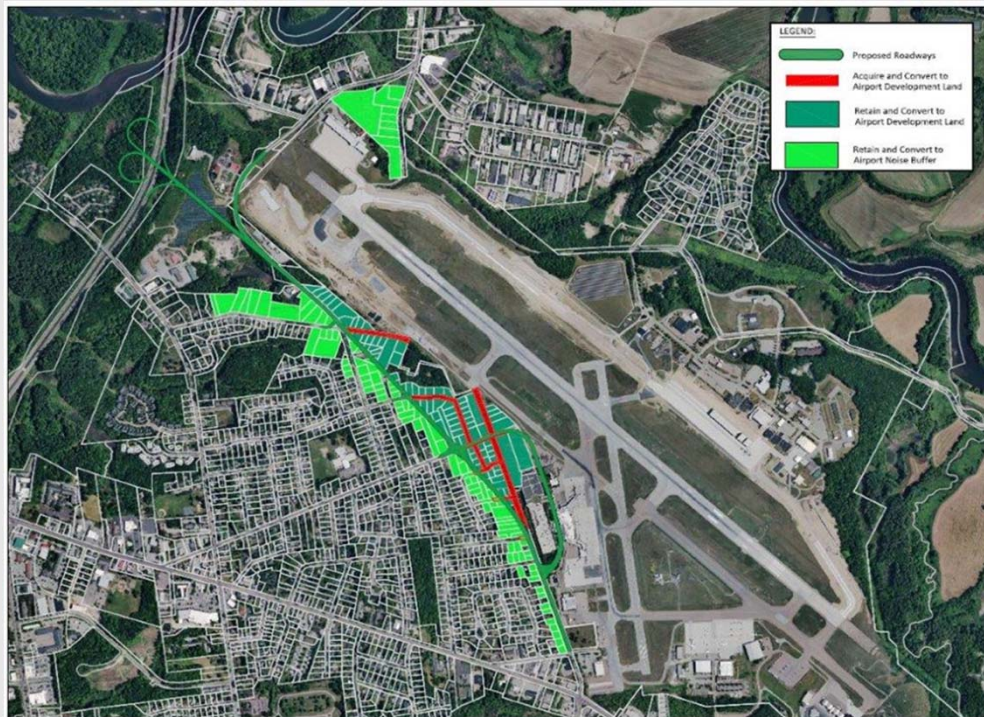
ACCESS ROAD SUPPORT: I-189 TURNAROUND



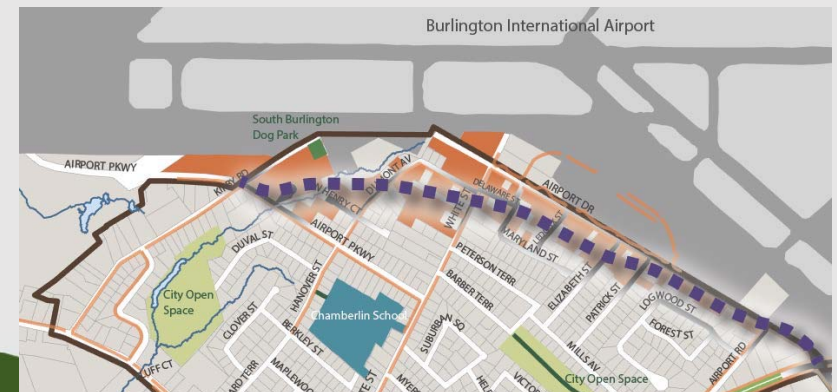
- Airport supports community development to improved automobile circulation
 - Consider new I-189 U-turn ramp
 - Provides east/west connection to I-89 N/S
 - Tie into Kennedy Drive for direct access to Airport



AIRPORT DRIVE DEVELOPMENT CONCEPT

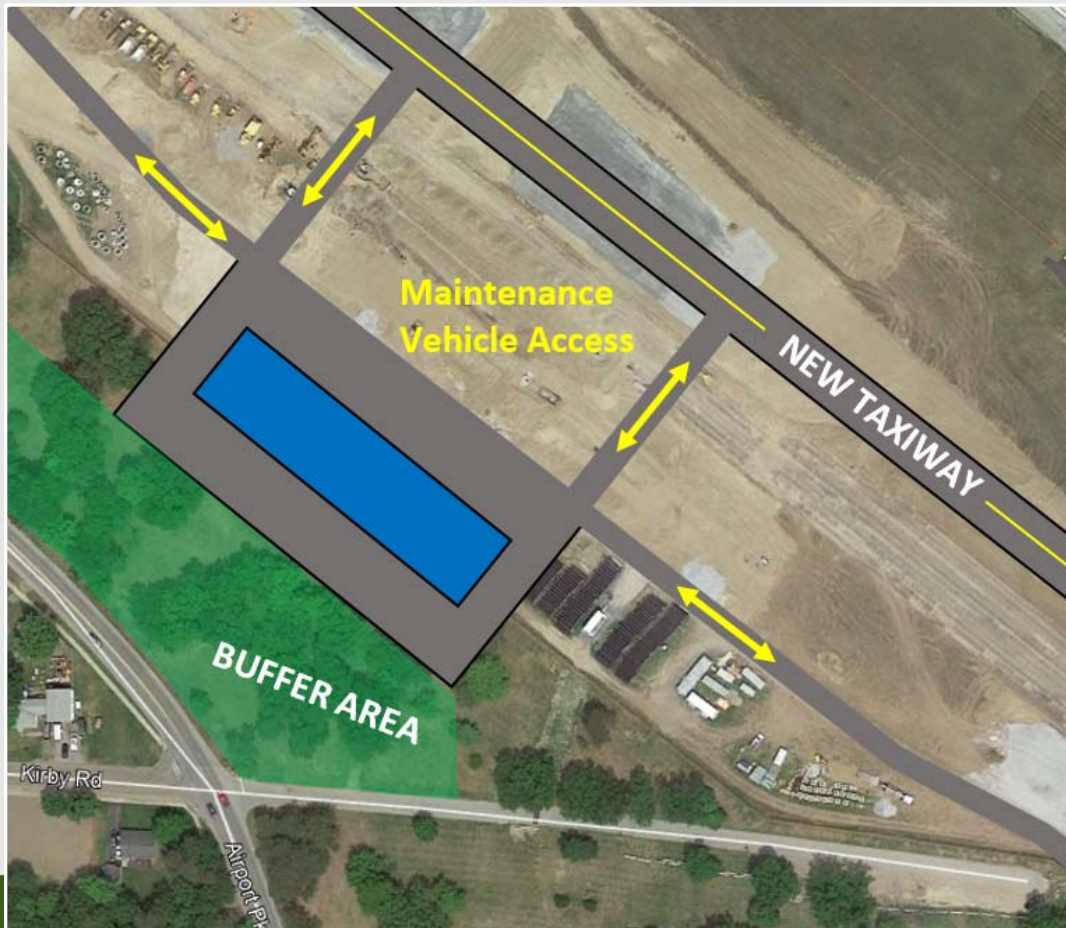


- Improve & Relocate Airport Drive
- Create a “Boulevard Type” Roadway with Landscaping
- Use property acquired through airport noise program
- Retain a buffer area between Chamberlin Neighborhood



South Burlington's Chamberlin Neighborhood
Credit: RSG

AIRPORT MAINTENANCE FACILITY RELOCATION



- Proposed Facility with direct access to new Taxiway G
- Unconstrained site for all maintenance equipment
- Retain **Buffer Area** between Airport Parkway & Chamberlin Neighborhood
- Note: Airport vehicles do **not** use public roads

AIRPORT LAYOUT PLAN

- Graphic depiction of overall development
- Requires approval from the FAA
- **Mechanism to provide future funding**
- Divided into three planning periods – Short-term, Mid-term, Long-Term



AIRPORT LAYOUT PLAN PROJECTS

• Short-Term Projects

- Airside improvements to address geometry and rehabilitate aprons, runways
- Shorten Runway 1-19
- Relocate support facilities
- Improve on airport deicing infrastructure
- Terminal Expansion – security and outgoing baggage improvements
- Construct hotel
- Land/Easement Acquisition for obstruction removal to support clear approaches
- Update the noise use and re-use plan

• Intermediate-Term Projects

- Airside improvements to address geometry and rehabilitate existing runways, internal access roads, and aprons
- Terminal expansion – linear development to the south
- Parking garage maintenance
- Land Acquisition for Runway 33 Safety Area improvements
- Redevelopment of general aviation area
- Roadway closures within noise acquired property close to the airport to support airport related development

AIRPORT LAYOUT PLAN PROJECTS

- Long-Term Projects

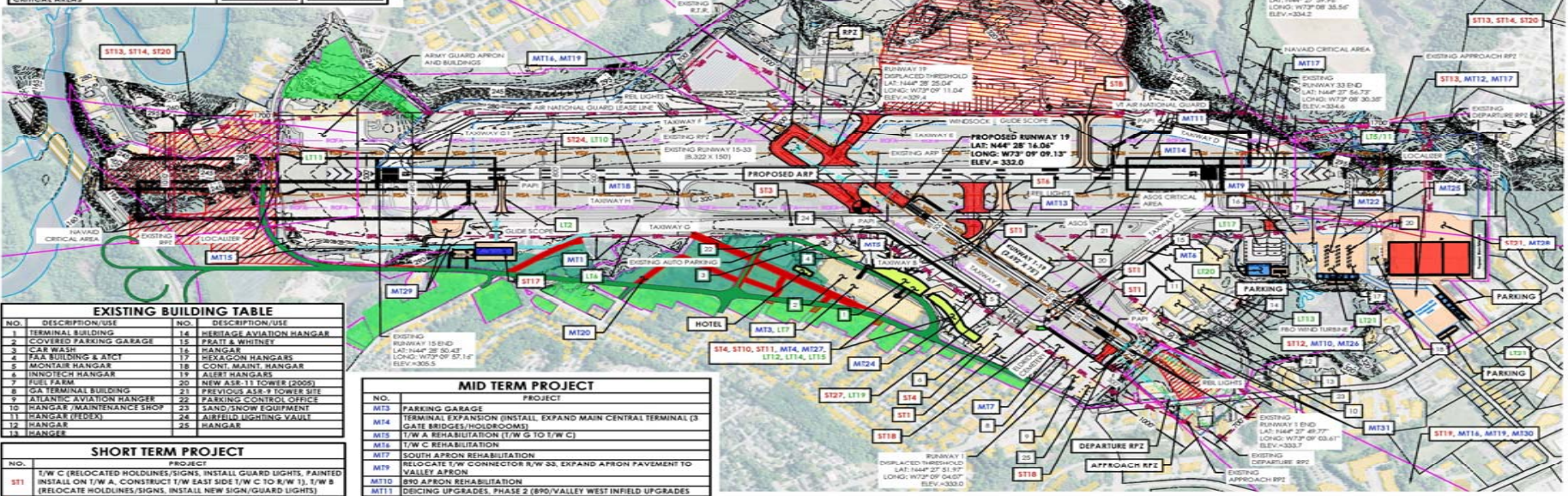
- Airside improvements to maintain pavement
- Relocate support facilities
- Improve on airport deicing infrastructure
- Terminal Expansion – linear to the south and north, expand inbound baggage
- Parking garage maintenance
- Redevelopment of general aviation area

- 2021 Projects

- Install guard lights/signs Taxiway C and B
- Expand the south terminal apron
- Deicing system upgrades
- Rehabilitate 890 apron
- Relocate Taxiway E, close excess pavement at Runway 19
- Terminal Expansion – TIP and outgoing baggage system
- Land/Easement Acquisition for obstruction removal to support clear approaches

AIRPORT LAYOUT PLAN

LEGEND			LEGEND		
DESCRIPTION	EXISTING	PROPOSED	DESCRIPTION	EXISTING	PROPOSED
RUNWAY SAFETY AREA (RSA)			EXISTING EASEMENT		
RUNWAY OBJECT FREE AREA (ROFA)			FAIR		
RUNWAY PROTECTION ZONE (RPZ) - APPROACH			AIRPORT BEACON		
RUNWAY PROTECTION ZONE (RPZ) - DEPARTURE			AUTOMATED SURFACE OBSERVING SYSTEM		
BUILDING RESTRICTION LINE (BRL)			THRESHOLD LIGHTS		
AIR NATIONAL GUARD FENCE LINE			WINDLOCK		
AIRPORT REFERENCE POINT			PROPOSED ROADWAYS		
EXISTING BUILDINGS			ACQUIRE AND CONVERT TO AIRPORT DEVELOPMENT LAND		
AIRPORT PROPERTY LINE / EASEMENTS			RETAIN AND CONVERT TO AIRPORT DEVELOPMENT LAND		
EXISTING FENCE			RETAIN AND CONVERT TO AIRPORT NOISE BUFFER		
EXISTING PAVEMENT			PAVEMENT		
GROUND ELEVATION CONTOURS					
CRITICAL AREAS					



EXISTING BUILDING TABLE			
NO.	DESCRIPTION/USE	NO.	DESCRIPTION/USE
1	TERMINAL BUILDING	14	HERITAGE AVIATION HANGAR
2	COVERED PARKING GARAGE	15	FRUIT & VEGETABLE
3	CAR WASH	16	HANGAR
4	FAA BUILDING & ATCT	17	HEXAGON HANGAR
5	MONTAIR HANGAR	18	CONT. MAINT. HANGAR
6	MINUTECH HANGAR	19	ALBERT HANGAR
7	FUEL TANK	20	NEW ASR-11 TOWER (2009)
8	GA TERMINAL BUILDING	21	PREVIOUS ASR-9 TOWER SITE
9	ATLANTIC AVIATION HANGAR	22	PARKING CONTROL OFFICE
10	HANGAR / MAINTENANCE SHOP	23	SAND/SNOW EQUIPMENT
11	HANGAR (DECK)	24	AIRFIELD LIGHTING VAULT
12	HANGAR	25	HANGAR
13	HANGAR		

SHORT TERM PROJECT	
NO.	PROJECT
ST1	T/W C (RELOCATED HOLDLINES/SIGNS, INSTALL GUARD LIGHTS, PAINTED INSTALL ON T/W A, CONSTRUCT T/W EAST SIDE T/W C TO R/W 1), T/W B (RELOCATE HOLDLINES/SIGNS, INSTALL NEW SIGN/GUARD LIGHTS)
ST2	SOUTH APRON EXPANSION (TO CEMENTERY), PHASE 2)
ST3/9	NEW GUY/COL TREATMENT SYSTEM
ST4	TERMINAL EXPANSION TO SOUTH (TIF)
ST5/12	REHABILITATE CUSTOMS/ CARGO APRON
ST7	AVIATION EASEMENT/ACQUISITION (OBSTRUCTION AREAS)
ST8	RELOCATE T/W E, REMEDIATE HOT SPOT
ST10	TERMINAL EXPANSION SOUTH
ST11	IN LINE BAGGAGE MAKEUP
ST12	AVIATION EASEMENT/ACQUISITION (OBSTRUCTION AREAS) R/W 15.33
ST14	OBSTRUCTION REMOVAL (R/W 15.33)
ST16	RELOCATE T/W B
ST17	NEW/EXPAND SRE FACILITY
ST18	EXPAND APRON FROM T/W C TO T/W I, RELOCATE T/W I
ST19	AVIATION EASEMENT/ACQUISITION R/W 1
ST20	OBSTRUCTION REMOVAL (R/W 15.33)
ST21	DEVELOP NEW CARGO AREA IN SED
ST24	R/W 15-33 MILL AND OVERLAY
ST27	R/W 1-19 MILL AND OVERLAY

MID TERM PROJECT	
NO.	PROJECT
MT3	PARKING GARAGE
MT4	TERMINAL EXPANSION (INSTALL, EXPAND MAIN CENTRAL TERMINAL (3 GATE BRIDGES/HOLDROOMS)
MT5	T/W A REHABILITATION (T/W G TO T/W C)
MT6	T/W C REHABILITATION
MT7	SOUTH APRON REHABILITATION
MT9	RELOCATE T/W CONNECTOR R/W 33, EXPAND APRON PAVEMENT TO VALLEY APRON
MT10	BFO APRON REHABILITATION
MT11	DECING UPGRADES, PHASE 2 (BFO/VALLEY WEST INFIELD UPGRADES)
MT12	LAND ACQUISITION (R/W 33)
MT13	T/W X ("G" EAST) REHABILITATION
MT14	T/W J REHABILITATION
MT15	PERIMETER ROAD REHABILITATION & FENCE REPLACEMENT (SECT 05)
MT16	EASEMENT ACQUISITION (R/W 1, 19)
MT17	R/W 33 SAFETY AREA IMPROVEMENT
MT18	T/W H REHABILITATION
MT19/30	OBSTRUCTION REMOVAL (R/W 1, 19)
MT20	ROADWAY CLOSURES INTO AIRPORT PROPERTY
MT21	PERIMETER ROAD REHABILITATION & FENCE REPLACEMENT (SECT 10.20)
MT22	REMOVE READY HANGAR, OCTAGON HANGARS
MT24	CURBSIDE IMPROVEMENTS
MT25	REHABILITATE GA APRON
MT26	BFO APRON REHABILITATION
MT27	TERMINAL EXPANSION (SOUTH GATE AREA)
MT28	CONSTRUCT CARGO APRON, PHASE 2
MT29	DECING UPGRADE, PHASE 3 (PAD - R/W 15) WITH BLAST FENCE
MT31	PERIMETER ROAD REHABILITATION & FENCE REPLACEMENTS (SECT 30.4D)

LONG TERM PROJECT	
NO.	PROJECT
L72	RELOCATE T/W M
L74	TERMINAL EXPANSION (SOUTH, WITH 2 JET BRIDGES)
L75/11	REHABILITATE OVERRUN
L76	T/W G (WEST) MILL & OVERLAY
L77/20	PARKING GARAGE IMPROVEMENTS
L79	REMOVE EXISTING SOUTH CONCOURSE (INSTALL 3 NEW JET BRIDGES)
L112	TERMINAL EXPANSION TO THE NORTH
L113	FUEL FARM UPGRADES
L114	REMOVE EXISTING NORTH TERMINAL. CONSTRUCT 3 JET BRIDGES
L115	EXPAND BAGGAGE CLAIM
L117	REHABILITATE VALLEY WEST APRON
L118	R/W 15-33 MILL AND OVERLAY
L119	R/W 1-19 MILL AND OVERLAY
L120	CONSTRUCT HANGARS (VALLEY APRON)
L121	CONSTRUCT HANGARS (EAST VALLEY)

ENVIRONMENTAL OVERVIEW



Environmental Overview – Summary

- Biological Resources
 - Threatened/Endangered Species: 3 bat species, migratory birds
 - Ecological Communities: White Pine-Red Oak-Black Forest Northeast portion of National Guard property
 - Flora/Fauna
- Water Resources
 - Wetland: Three Class II wetlands
 - Surface Waters: Winooski River, Muddy, Centennial and Potash Brooks
- Climate/Resilience



Northern Long-Eared Bat (Myotis septentrionalis)
Credit: USFWS

Environmental Overview – Summary

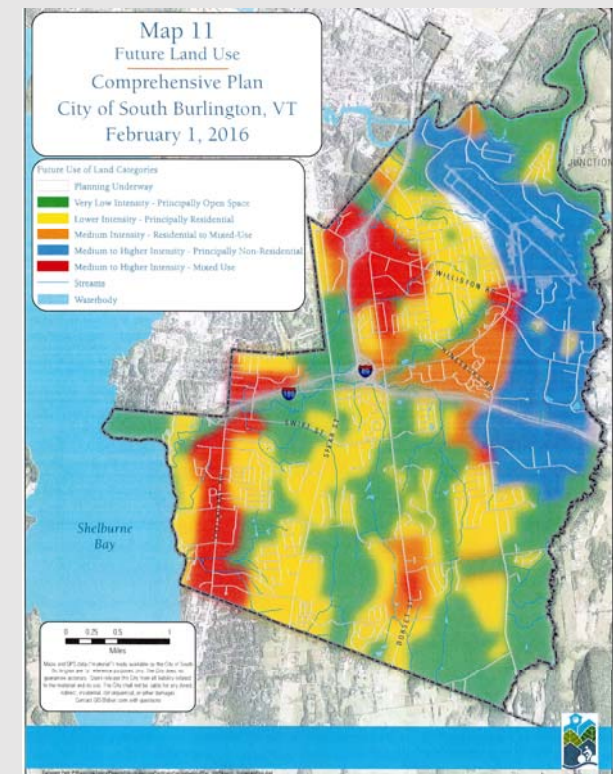
- Air Quality
 - Attainment
 - Permit from Vermont Air Pollution Control Division
- Energy
 - Roof mounted solar
 - Net energy reduction
- Hazardous Materials/Pollution Prevention
 - Three existing oil and hazardous materials facilities
 - UIC Permits for underground deicing fluid interceptions



Solar Photovoltaic System at BTV
Credit: Vermont ANG

Environmental Overview – Summary

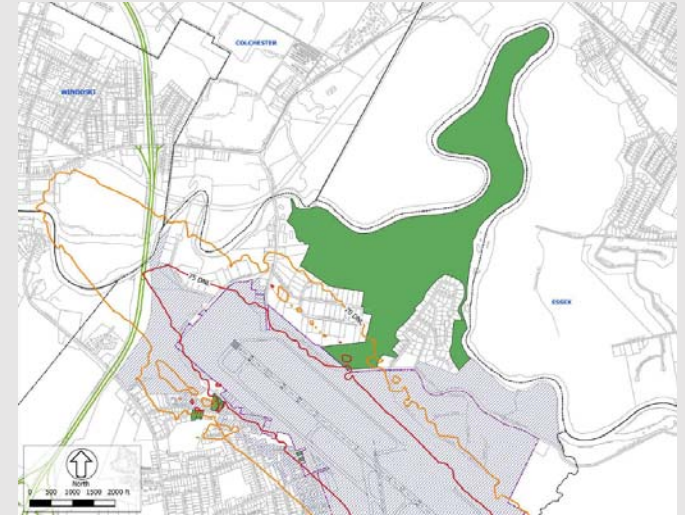
- Land Use
 - South Burlington’s “Airport District” facilitates the development and operation of BTV and associated facilities
 - Noise Land Inventory and Reuse Plan Update (2017) evaluates use of property acquired with AIP funds
 - South Burlington Comprehensive Plan (2016) call for:
 - Create a transition between BTV and parcels that are vacant in the Chamberlin neighborhood
 - Transportation and roadway projects to address mobility issues due to existing and projected increased roadway traffic



Land Use Map
Credit: City of South Burlington Comprehensive
Plan (2016)

Environmental Overview – Summary

- Noise and Compatible Land Use
 - Newly updated 2018 and forecast 2023 Noise Exposure Maps prepared approved in 2020
 - The area within the DNL 65 dB contour is expected to increase in all directions for the 2023 forecast year
 - The Noise Compatibility Program (NCP) is a list of actions BTV proposed to undertake to minimize existing and future noise/land use incompatibilities,
 - Focusing on community-based, voluntary noise mitigation program



2023 Forecast Condition, 75 DNL Properties
Credit: HMMH

Environmental Overview – Summary

- Light Emissions
 - Examples of lighting at BTV include runway and taxiway lighting, an airport beacon, approach lighting, and obstruction lighting, as well as street and facility lighting
 - No new airfield lighting are proposed
- Visual Character
 - The Chamberlin neighborhood, is “one of the City’s historic neighborhoods”
 - BTV sits against the backdrop of, but does not block views of, the Green Mountains
- Visual effects would be determined in consultation with jurisdictional agencies and the public



South Burlington’s Chamberlin Neighborhood
Credit: RSG

Environmental Overview – Summary

- Socioeconomic
 - Principal impacts to consider:
 - Residential or commercial displacements
 - Changes to neighborhood characteristic
 - Disruption to local traffic patterns
 - Changes to local employment and the community tax base
 - Proposed Airport developments likely to have the benefit of increasing employment opportunities in the region and supporting state-wide economic development initiatives by attracting new businesses as well as allowing existing businesses to expand operations

Environmental Overview – Summary

- Environmental Justice
 - No anticipated impact to minority population, HHS poverty guidelines, or linguistically isolated households within 0.5 miles of BTV
- Children's Health & Safety Risks
 - No anticipated impact to 3,116 children in the 0.5 miles of BTV

Schools and Daycare Centers

- The Chamberlin School
- Loveworks Child Care Center
- Children's School
- International Children's School
- Rick Marcotte Central School
- Frederick H. Tuttle Middle School
- South Burlington High School
- Trinity Children's Center
- EJ's Kids Klub
- Children's Unlimited
- The Williston Enrichment Center
- Hiawatha School

Environmental Overview – Overview

- Historic & Cultural Resources
 - There are no above-ground properties surveyed by Vermont Historic Sites and Structures Survey or listed in the State or National Registers within any of the Airport Development Areas
 - Certain structures of 50 years of age may be potentially historic
 - There are no recorded archaeological resources within the Airport property, though there are Precontact sensitivities
 - Potential historic district in Chamberlin neighborhood



Alert Hangar at BTV
Credit: VHB

Environmental Overview – Overview

- Department of Transportation Act, Section 4(f)
 - There are no Section 4(f) public parks, recreation areas, or wildlife or waterfowl refuges in any of the Airport Development Areas
 - Section 4(f) resources in the Airport Development Areas would include the to-be-determined resources (i.e., structures over or are approaching 50 years of age)
- Farmlands
 - There are no “Important Farmlands” within the Airport Development Areas subject to the FPPA
 - It is unlikely that the Airport Development Areas would be considered primary agricultural soils under Act 250 given the degree of development that has occurred

Alternatives Analysis – Federal Environmental Review and Permitting

- National Environmental Policy Act (NEPA)
 - Categorical Exclusion (CATEX), Environmental Assessment, or Environmental Impact Statement
 - Depending on scale and phasing, all on-Airport projects - when taken individually - are anticipated to require a CATEX; project groupings may elevate reviews to an Environmental Assessment
 - I-89 projects are likely to involve an Environmental Assessment depending on US Army Corps of Engineering (USACE) permitting

ARP SOP No. 5.1 Effective Date: June 2, 2017

APPENDIX A. DOCUMENTED CATEX

Airport sponsors may use this form for projects eligible for a categorical exclusion (CATEX) that have greater potential for extraordinary circumstances or that otherwise require additional documentation, as described in the Environmental Orders (FAA Order 1050.1F and FAA Order 5050.4B).

To request a CATEX determination from the FAA, the sponsor should review potentially affected environmental resources, review the requirements of the applicable special purpose laws, and consult with the Airports District Office or Regional Airports Division Office staff about the type of information needed. The form and supporting documentation should be completed in accordance with the provisions of FAA Order 5050.4B, paragraph 302b, and submitted to the appropriate FAA Airports District Division Office. The CATEX cannot be approved until all information/documentation is received and all requirements have been fulfilled.

Name of Airport, LOC ID, and location

Project Title

Give a brief, but complete description of the proposed project, including all project components, justification, estimated start date, and duration of the project. Include connected actions necessary to implement the proposed project (including but not limited to moving NAVAIDs, change in flight procedures, haul routes, new material or expanded material sources, staging or disposal areas). Attach a sketch or plan of the proposed project. Photos can also be helpful.

Give a brief, but complete, description of the proposed project area. Include any unique or natural features within or surrounding airport property.

Identify the appropriate CATEX paragraph(s) from Order 1050.1F (paragraph 5-6.1 through 5-6.6) or 5050.4B (Tables 6-1 and 6-2) that apply to the project. Describe if the project differs in any way from the specific language of the CATEX or examples given as described in the Order.

The circumstances one must consider when documenting a CATEX are listed below along with each of the impact categories related to the circumstance. Use FAA Environmental Orders 1050.1F, 5050.4B, and the Desk Reference for Airports Actions, as well as other guidance documents to assist you in determining what information needs to be provided about these resource topics to address potential impacts. Keep in mind that both construction and operational impacts must be included. Indicate whether or not there would be any effects under the particular resource topic and, **if needed**, cite available references to support these conclusions. Additional analyses and inventories can be attached or cited as needed.

A-1

Alternatives Analysis – Federal Environmental Review and Permitting

- Other Permits or Approvals
 - Section 106 of the NHPA (potential for all projects)
 - Section 4(f) of the Department of Transportation Act (potential for all projects)
 - Section 404 review for unavoidable impacts to waters of the U.S. (potential for I-89 projects)
 - FHWA approval required for break in control of access (potential for I-89 projects)
 - Operational Stormwater Discharge Permit for expansion or redevelopment of new impervious surfaces beyond jurisdictional thresholds
 - Construction Stormwater Discharge Permit for land disturbance over 1 acre
 - Act 250: Land Use Permits/Permit amendment(s)
 - May require site characterization and DEC-approved Soil Management Plan or other plan depending on proposed soil disturbance and findings
 - Vermont Agency of Transportation Section 1111 Permit
 - Coordination with the Vermont Fish and Wildlife Department regarding protected bat species (potential for tree clearing)

QUESTIONS/COMMENTS

Any questions or comments regarding the Airport Master Plan or any of the information discussed today?

Submit comments by Oct 23, 2020

Available for contact anytime:

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