

Danielson Airport Master Plan



AIP No. 3-09-0007 & State Project No 68-204

Executive Summary

Prepared for:



**Connecticut Department
of Transportation
(ConnDOT)**

Prepared by:



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EXECUTIVE SUMMARY

The Danielson Airport Master Plan provides long-range recommendations for the safety, improvement and development of the Airport. The Master Plan includes a detailed report and set of drawings that identify, schedule, and illustrate the projects recommended for Danielson Airport over a 20-year planning period. This Executive Summary provides an overview of the Airport's activity forecasts, facility requirements, and future development recommendations.

Public involvement activities were conducted as part of the Master Plan process, including Advisory Committee (AC) meetings and a Public Information Meeting. A website (www.DanielsonAirportPlan.com) was also developed to provide public access to meeting notices and study materials, and to enable the submission of comments and questions.

Airport Overview

Danielson Airport is one of the six airports owned by the Connecticut Department of Transportation (ConnDOT), and is located in the Town of Killingly, along the Quinebaug River in eastern Windham County. The 257-acre property was opened in 1963 to serve the local community and the aviation program at the adjacent Harvard H. Ellis Technical. Since that time, the Airport has exclusively served small general aviation (GA) aircraft (i.e., no scheduled airline service). Although there is activity by light charter and corporate aircraft, most Danielson Airport users are Windham County residents flying for recreation, instruction, or personal transportation.



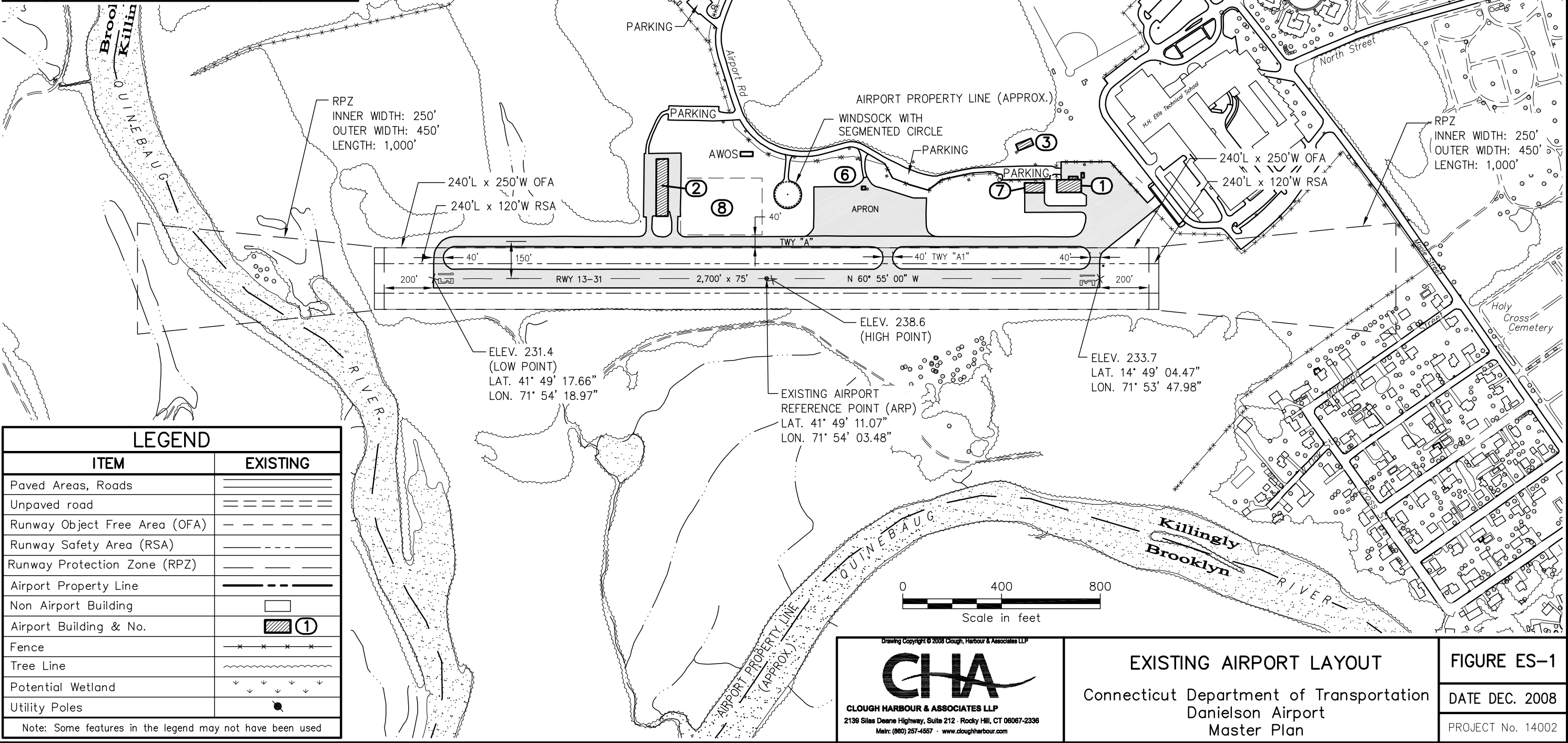
The airfield facilities at Danielson Airport include a 2,700-foot long paved runway (Runway 13-31), full-parallel taxiway, and associated lighting and visual aids (e.g., wind sock). An Automated Weather Observing System (AWOS) was recently installed that provides surface weather conditions to pilots via a radio frequency.

The landside facilities at Danielson Airport include the hangars, aprons, and roadways. These facilities support the Airport's 66 based aircraft, which include a mix of single and multi engine pistons, as well as gliders. New England Flight Services (NEFS) is the fixed base operator at the Airport, and provides aircraft fueling, maintenance, charter and rentals, and flight instruction services. Danielson Airport is also home to a skydiving business (Way Up Skydiving, LLC) and a chapter of the Civil Air Patrol.

The existing facilities at Danielson Airport are illustrated on Figure ES-1.

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FACILITIES TABLE		
#	FACILITY NAME	TOP ELEVATION
1	FBO/Maintenance Hangar	254.7
2	T-Hangar	255.0
3	Civil Air Patrol	255.3
4	Skydiving Trailer 1	307.4
5	Skydiving Trailer 2	302.5
6	Electrical Vault	242.9
7	Storage Hangar	-
8	Temporary Tiedown Apron	-
Note: Elevations Are Rooftop Elevations		



Forecasts of Aviation Demand

Aviation forecasts represent a key component in the master planning process. Based aircraft forecasts largely establish the need for aircraft storage space (e.g., hangars and tiedowns). Operations forecasts determine whether existing airfield systems (e.g., runways and taxiways) can safely sustain future activity levels. The forecasts for Danielson Airport were developed with a base year of 2005, and extend through the year 2025.

As Danielson Airport does not have an Air Traffic Control Tower (ATCT), no formal record of operations is maintained. The recommended forecasts, which have been approved by the Federal Aviation Administration (FAA) and ConnDOT, are based on estimations of annual use and various forecasting methodologies. As summarized in Table ES-1, total based aircraft are forecast to increase from 66 in year 2005 to 80 by year 2025. Total operations are forecast to increase from about 24,000 to 30,000 by 2025.

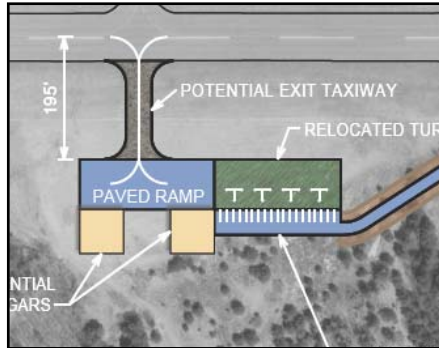
TABLE ES-1 – RECOMMENDED FORECASTS					
Aircraft Type	2005	2010	2015	2020	2025
BASED AIRCRAFT					
Single-Engine	62	65	68	71	75
Multi-Engine	1	1	2	2	2
Glider	3	3	3	3	3
Total	66	69	73	76	80
OPERATIONS BY FLEET MIX					
Single-Engine	23,324	24,580	25,580	27,350	28,930
Multi-Engine	400	420	630	660	700
Glider	400	420	450	470	500
Total	24,124	25,420	26,920	28,480	30,130

Airport design standards are based on the identified “design aircraft,” which the FAA defines as the largest aircraft to conduct at least 500 annual operations. Danielson Airport’s existing and forecast design aircraft is a small single or multi engine piston aircraft, such as a Piper Saratoga. The Master Plan does not recommend any change in airport design standards or enhancements to accommodate a larger aircraft class. This philosophy is expressed in the following vision statement for the Danielson Airport Master Plan:



As modest growth in the population and economy of eastern Connecticut continues, improvements at Danielson Airport will be needed to adequately accommodate regional general aviation demand. Danielson Airport will provide the facilities and services necessary to ensure a safe, efficient, and convenient operating environment for small aircraft users.

Facility Requirements and Development Alternatives

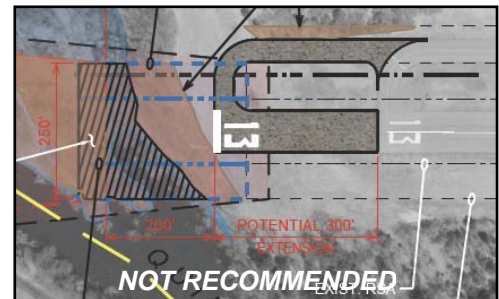


Based on the forecasts of aviation demand, the Master Plan identified facility requirements for the 20-year planning period. The identified airfield facility requirements included tree obstruction removal, additional runway length, a potential turf runway, lighting and instrumentation, and an exit taxiway. The identified landside facility requirements included additional T-hangar and conventional hangar storage, fueling facilities, and improved parking and roadway access.

The Master Plan presents various development alternatives to address the facility requirements. Each alternative was evaluated against a set of criteria, including potential environmental impacts, operational efficiency, safety, and cost. Several of the alternatives were recommended for Danielson Airport, while others were dismissed, as discussed below.

Airfield Recommendations

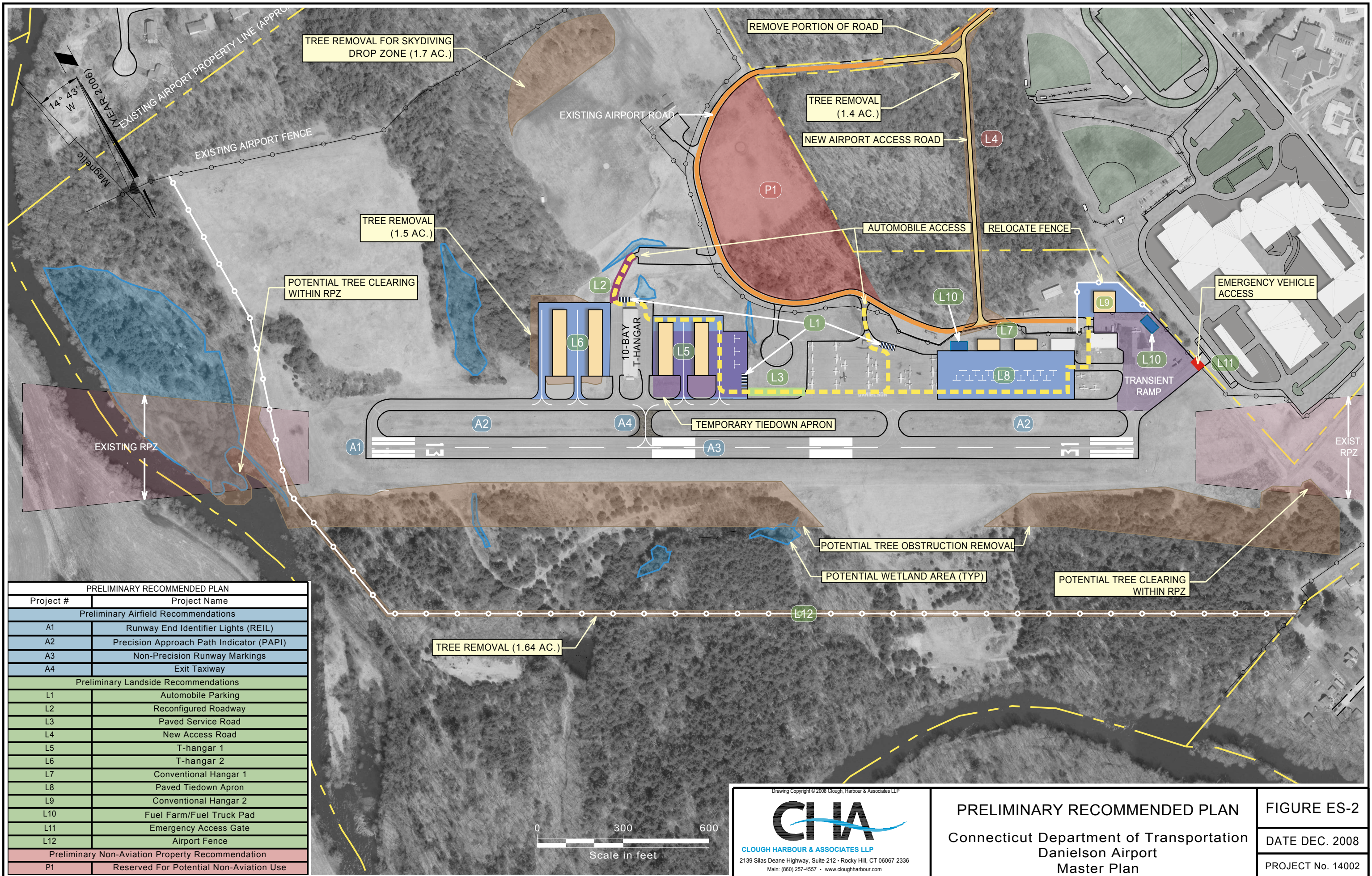
Tree obstruction removal is considered the highest priority airfield recommendation. The other recommendations focus on providing improved aircraft approach capability (e.g., runway lighting, visual slope indicators, and an instrument approach) and more efficient access to the landside facilities. Due to the potential impacts, the Master Plan does not recommend a runway extension or a new turf runway for Danielson Airport. The recommended airfield facilities are illustrated on Figure ES-2.



Landside Recommendations

As illustrated on Figure ES-2, the landside recommendations include new T-hangars and conventional hangars, apron development, security improvements (e.g., fencing and gates), an aboveground fuel farm, and parking and roadway improvements. While there are many recommended landside facilities for Danielson Airport, their ultimate development depends on funding availability, demand, and environmental approvals.

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Airport Capital Improvement Plan

The Airport Capital Improvement Plan (ACIP) lists the recommended projects and associated cost estimates for the 20-year planning period. Since Danielson Airport is part of the National Plan of Integrated Airport Systems (NPIAS), grant-eligible projects may receive 95 percent federal funding, with ConnDOT responsible for the remaining 5 percent.

In addition to potential new developments, Danielson Airport must also continually rehabilitate existing airfield and other paved facilities, which are included in the ACIP. Although these items are not considered new capital developments, the associated costs can comprise the majority of an airport's annual capital investment.

The ACIP does not constitute a commitment on behalf of the FAA or ConnDOT to fund any of the projects. In addition, the ACIP does not imply that the projects would receive environmental approvals. Thus, the ACIP serves as a planning document that must remain flexible, and should undergo regular updates as project priorities and demands indicate. The projects included in the ACIP are organized into the following three implementation phases:

Phase I (Implementation in 0 to 5 years)

- 1A** - Tree obstruction removal from runway approach surfaces
- 1B** - Airport perimeter fencing and emergency access gate through high school
- 1C** - Paved airfield service road and reconfigured roadway to T-hangars
- 1D** - Fuel farm/fuel truck parking pad
- 1E** - Runway End Identifier Lights (beyond Runway 13) and Precision Approach Path Indicators (both runway ends)
- 1F** - GPS instrument approach (for Runway 13) and non-precision runway markings
- 1G** - Exit taxiway development near existing T-hangars
- 1H** - Tree clearing/grubbing for skydiving drop zone
- 1I** - T-hangar development east of existing T-hangars
- 1J** - Rehabilitation of existing Airport Road and parking areas

Phase II (Implementation in 6 to 10 years)

- 2A** - Rehabilitation of existing paved Tiedown Apron
- 2B** - Paved tiedown apron development adjacent to existing paved Tiedown Apron
- 2C** - Conventional hangar development west of the FBO hangar

Phase III (Implementation in 11 to 20 years)

- 3A** - Rehabilitation of existing runway
- 3B** - Rehabilitation of existing taxiway
- 3C** - Airport Road reconfiguration
- 3D** - T-hangar development west of existing T-hangars
- 3E** - Conventional hangar development north of the FBO hangar

Table ES-2 summarizes the 20-year ACIP for Danielson Airport.

TABLE ES-2 – AIRPORT CAPITAL IMPROVEMENT PLAN				
Project	Total Estimated Cost	Anticipated Funding Source		
		FAA	State	Private
Phase I (0 to 5 years)				
1A - Tree obstruction removal	\$250,000	\$237,500	\$12,500	
1B - Airport fencing and emergency gate	\$300,000	\$285,000	\$15,000	
1C - Paved airfield service road	\$125,000	\$118,750	\$6,250	
1D - Fuel farm/fuel truck parking pad	Undetermined	Undetermined		
1E - REILs and PAPIs	\$150,000	\$142,500	\$7,500	
1F - GPS approach, upgrade runway markings	\$75,000	\$71,250	\$3,750	
1G - Exit taxiway development	\$100,000	\$95,000	\$5,000	
1H - Tree clearing for skydiving drop zone	\$50,000			\$50,000
1J - T-hangar development (east)	\$1,100,000			\$1,100,000
1K - Rehab Airport Road and parking areas	\$150,000	\$142,500	\$7,500	
Phase I Subtotal	\$2,300,000	\$1,092,500	\$57,500	\$1,150,000
Phase II (6 to 10 years)				
2A - Rehab existing Paved Tiedown Apron	\$250,000	\$237,500	\$12,500	
2B - Paved tiedown apron development	\$1,400,000	\$1,330,000	\$70,000	
2C - Conventional hangar development (west)	\$750,000			\$750,000
Phase II Subtotal	\$2,400,000	\$1,567,500	\$82,500	\$750,000
Phase III (11 to 20 years)				
3A - Rehabilitation of existing runway	\$1,000,000	\$950,000	\$50,000	
3B - Rehabilitation of existing taxiway	\$500,000	\$475,000	\$25,000	
3C - Airport Road reconfiguration	\$275,000	\$475,000	\$25,000	
3D - T-hangar development (west)	\$2,200,000			\$2,200,000
3E - Conventional hangar development (north)	\$800,000			\$800,000
Phase II Subtotal	\$4,775,000	\$1,686,250	\$88,750	\$3,000,000
GRAND TOTAL	\$9,475,000	\$4,346,250	\$228,750	\$4,900,000