

# SANFORD SEACOAST REGIONAL AIRPORT SANFORD, MAINE

## AIRPORT MASTER PLAN UPDATE

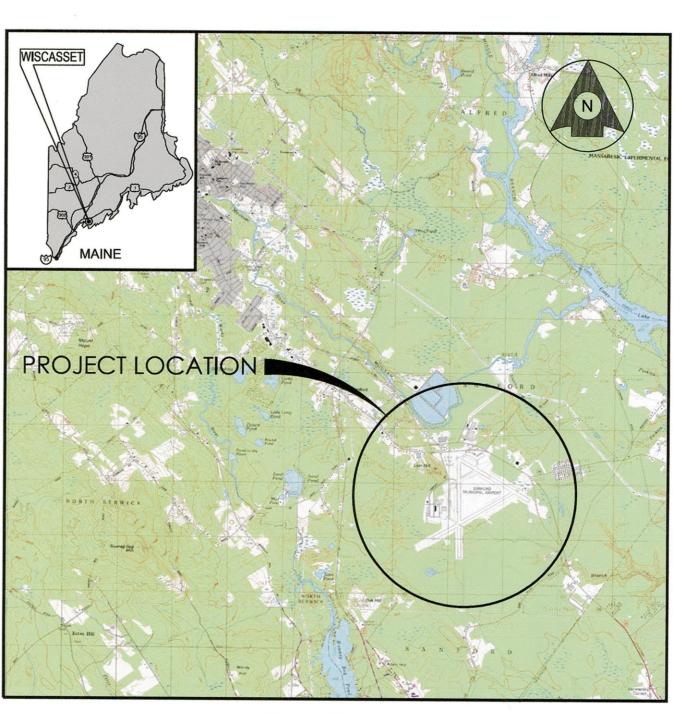
### MARCH 2017

#### AIRPORT OWNERSHIP AND MANAGEMENT

THE SANFORD SEACOAST REGIONAL AIRPORT IS OWNED BY THE CITY OF SANFORD MAINE AND OPERATED UNDER THE MANAGEMENT OF THE CITY OF SANFORD, AIRPORT MANAGER, M. ALLISON ROGERS

SANFORD SEACOAST REGIONAL AIRPORT 167 AIRPORT ROAD, SUITE D SANFORD, ME 04073





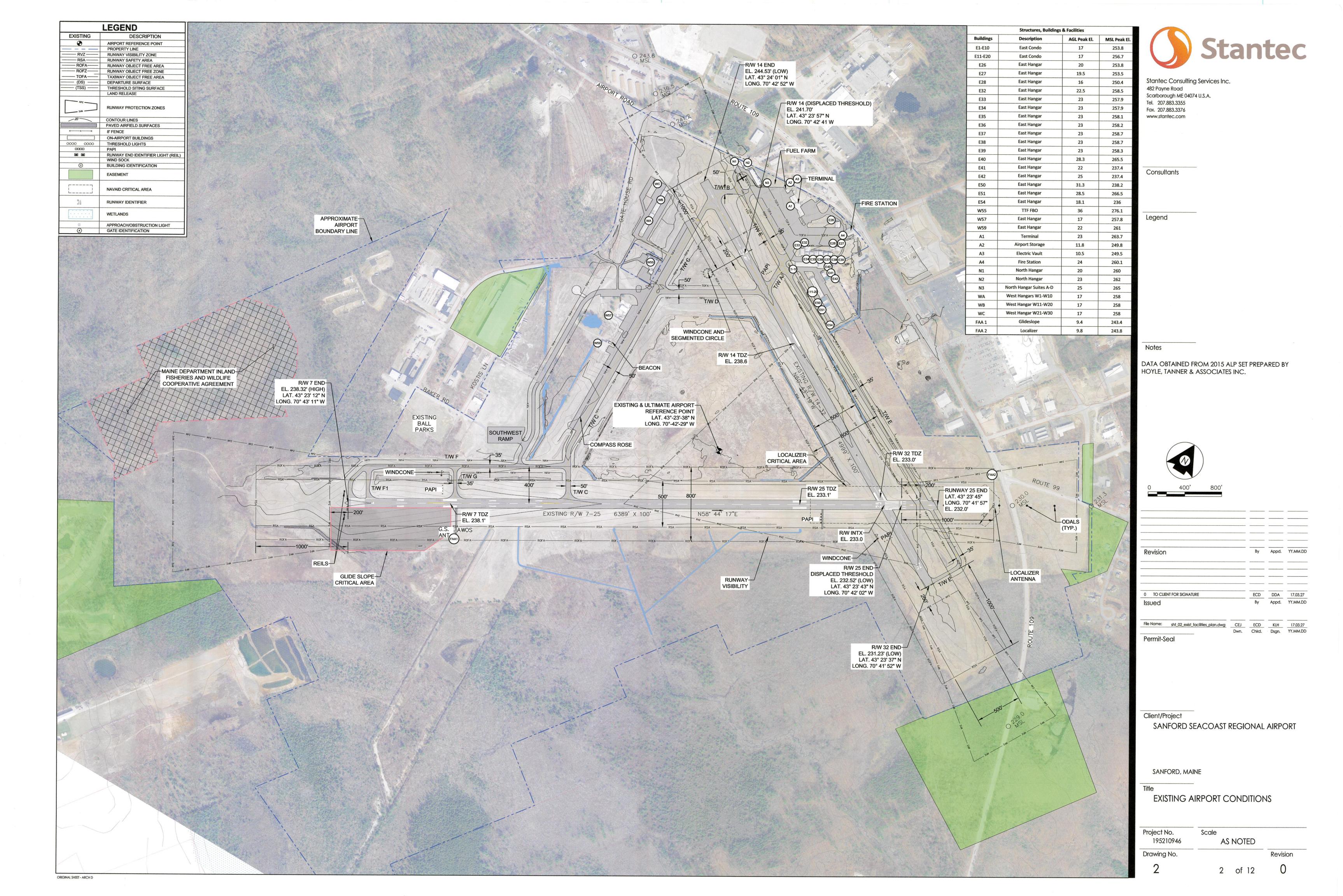
VICINITY MAP

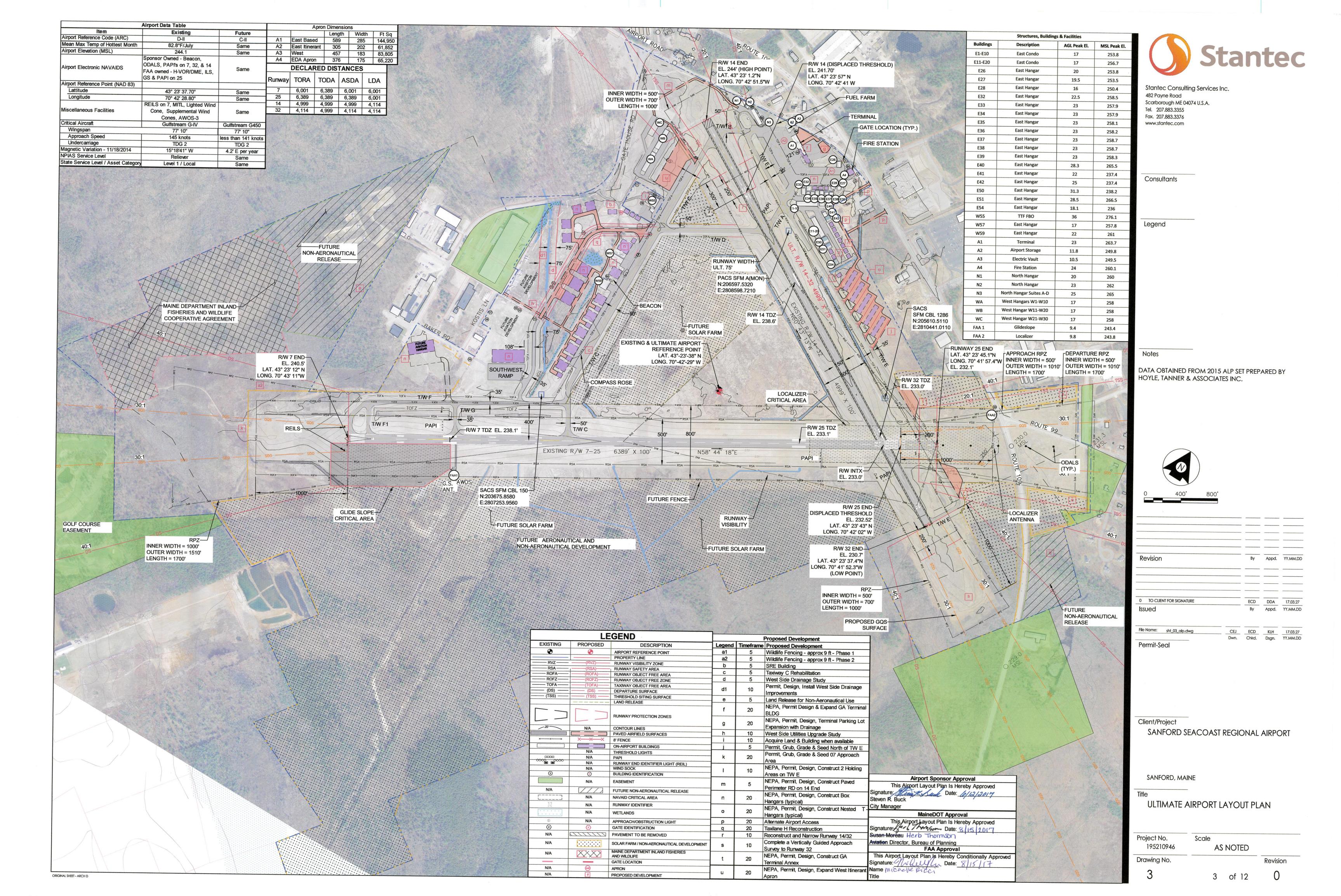


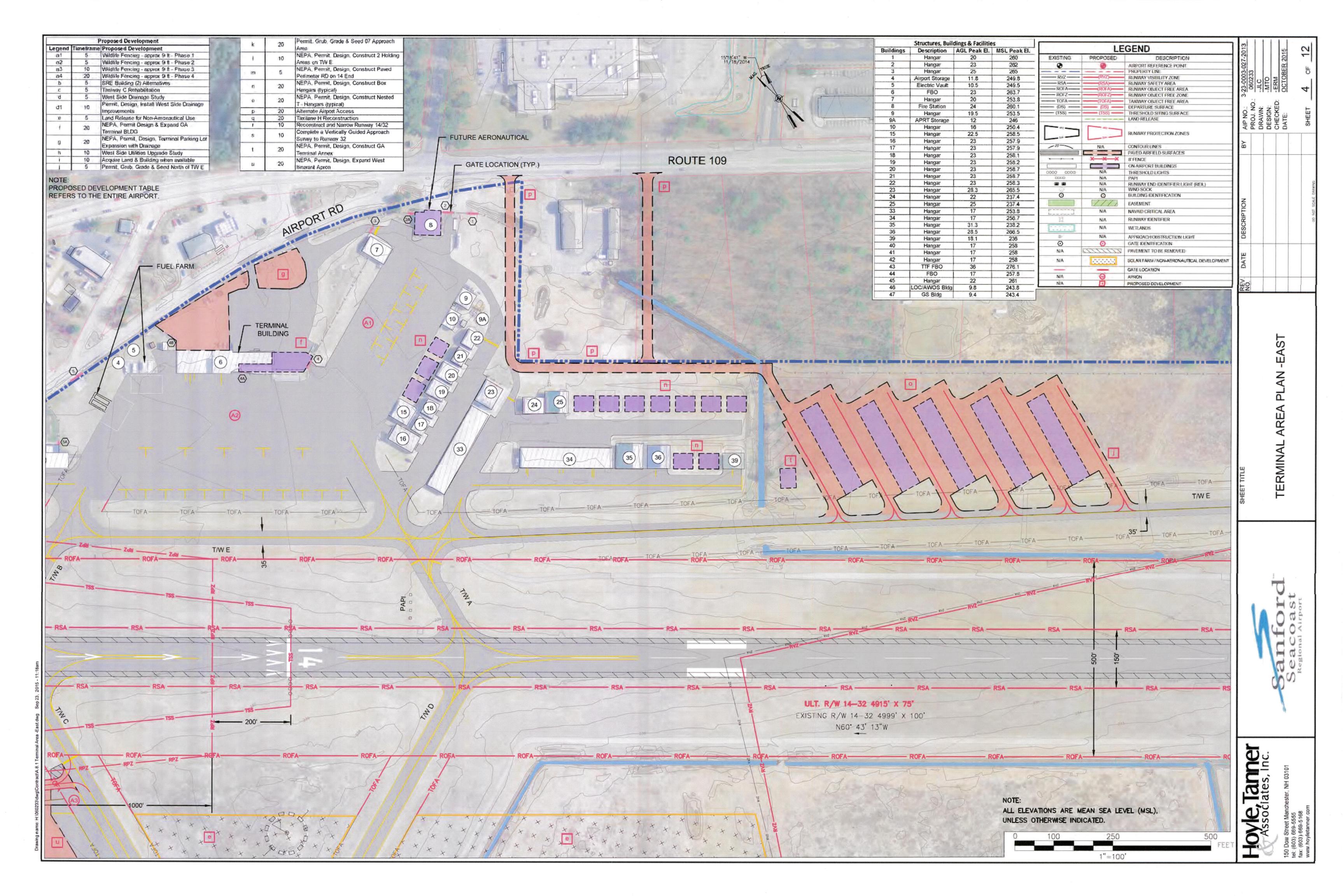
#### **INDEX OF SHEETS**

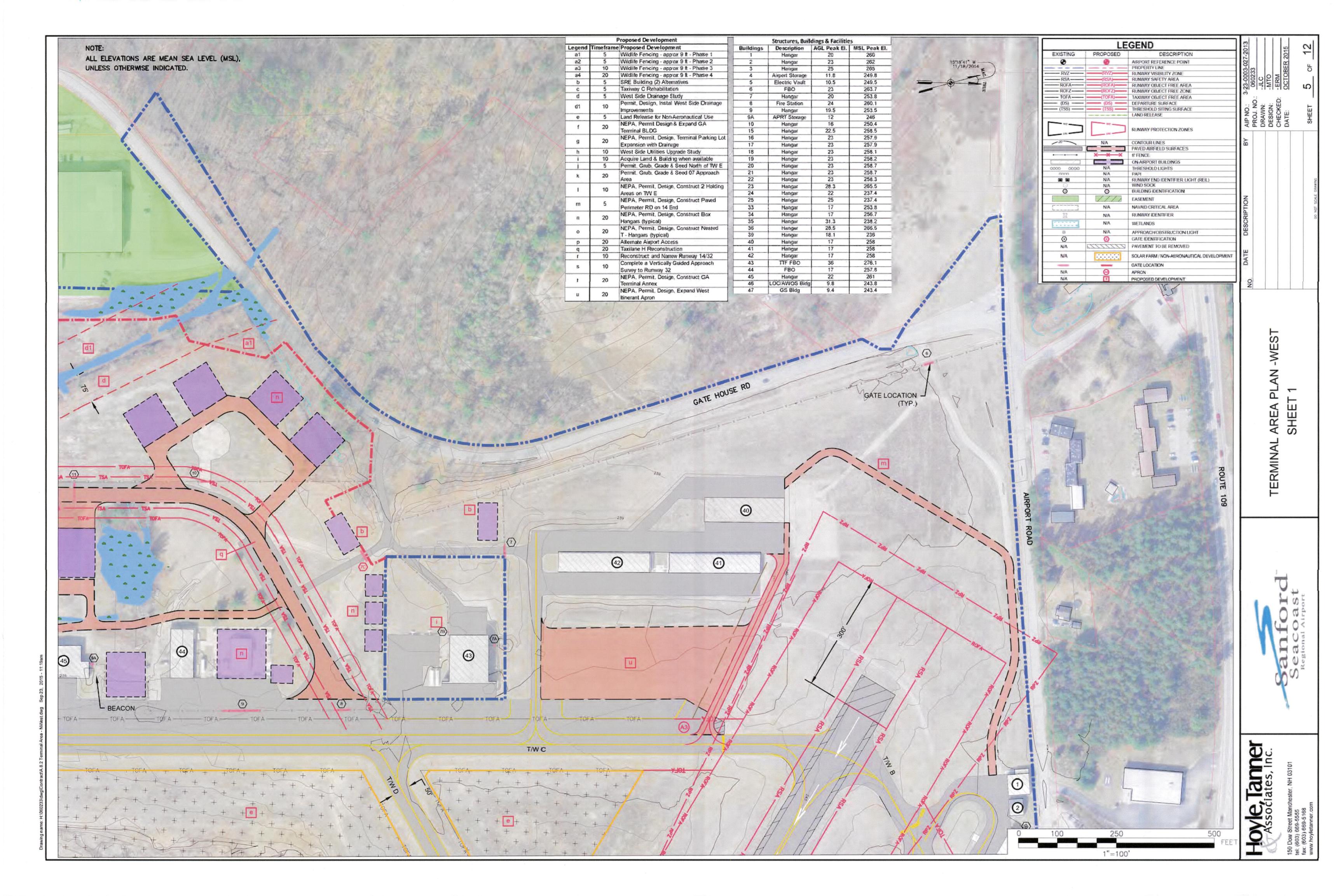
SHEET NO.	TITLE	DEVELOPED BY
1.	COVER SHEET	STANTEC
2.	EXISTING AIRPORT CONDITIONS	STANTEC
3.	ULTIMATE AIRPORT LAYOUT PLAN	STANTEC
4.	TERMINAL AREA PLAN - EAST	HOYLE, TANNER *
5.	TERMINAL AREA PLAN - WEST SHEET 1	HOYLE, TANNER *
6.	TERMINAL AREA PLAN - WEST SHEET 2	HOYLE, TANNER *
7.	PLAN AND PROFILE RUNWAY 14-32	STANTEC
8.	PLAN AND PROFILE RUNWAY 7-25	STANTEC
9.	CFR PART 77 SURFACE DRAWING	HOYLE, TANNER *
10.	AIRPORT DATA SHEET	STANTEC
11.	LAND USE DRAWING	HOYLE, TANNER *
12.	EXHIBIT-A	STANTEC
	n.t.	

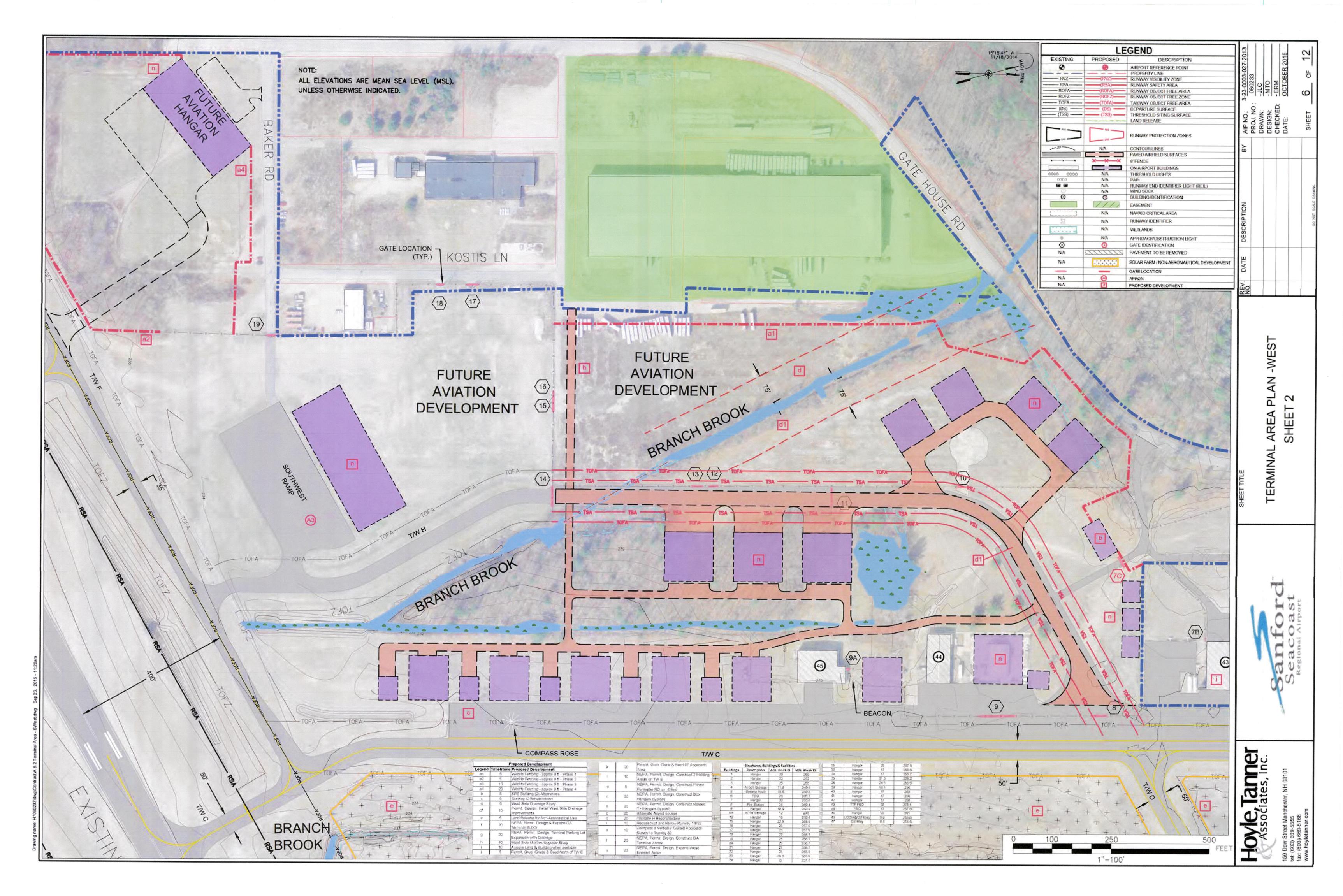
FAA AIP# 3-23-044-30-2014

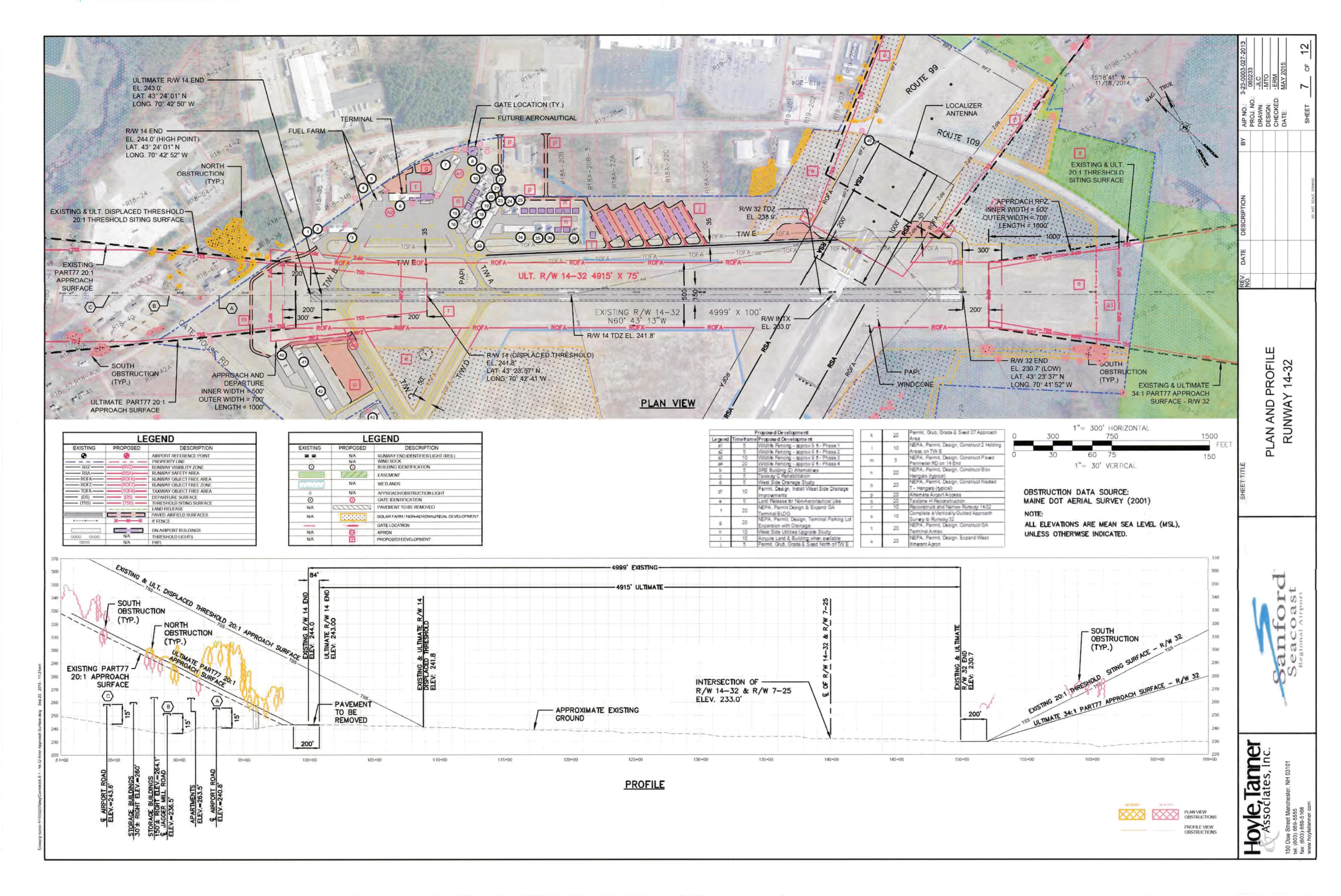


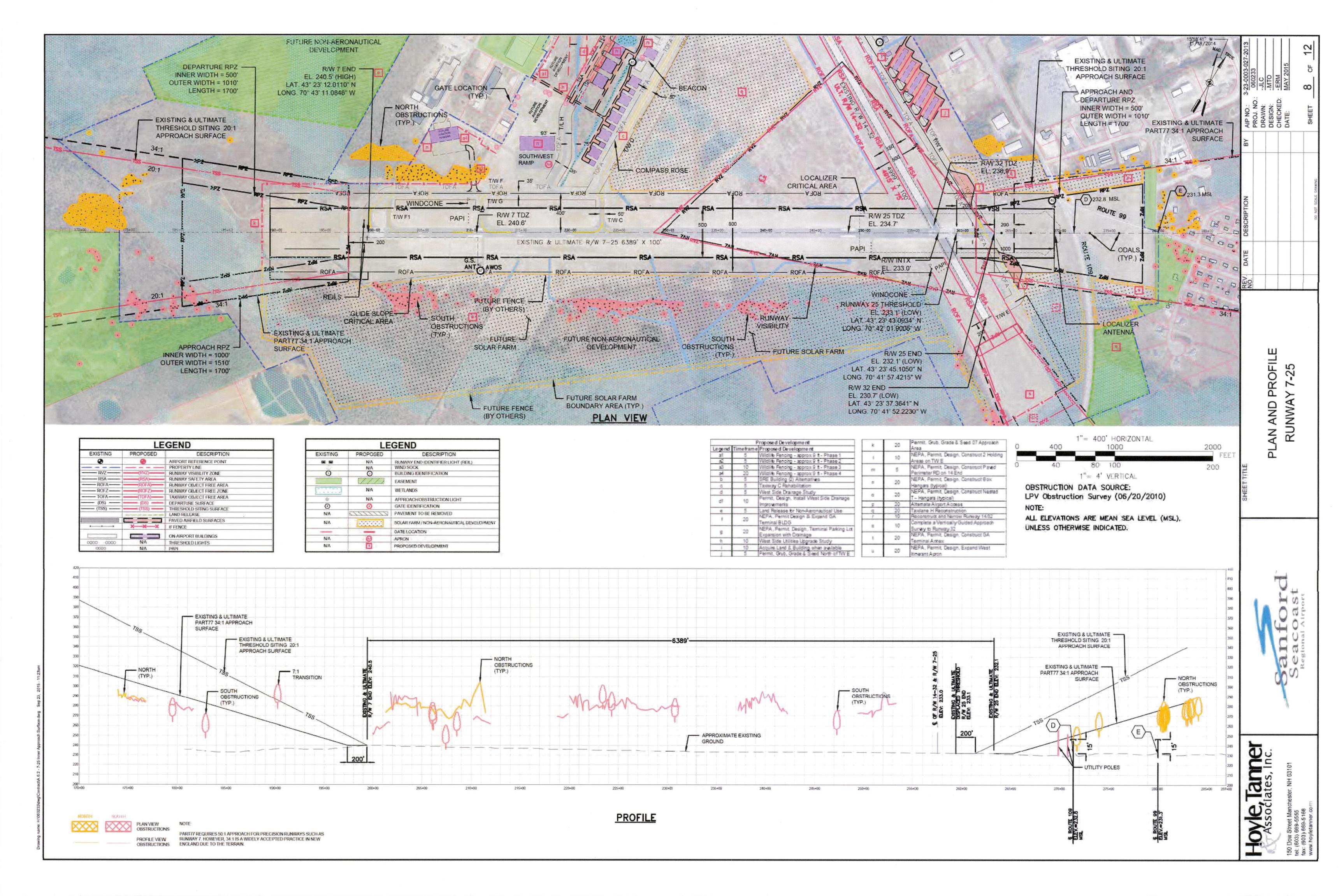


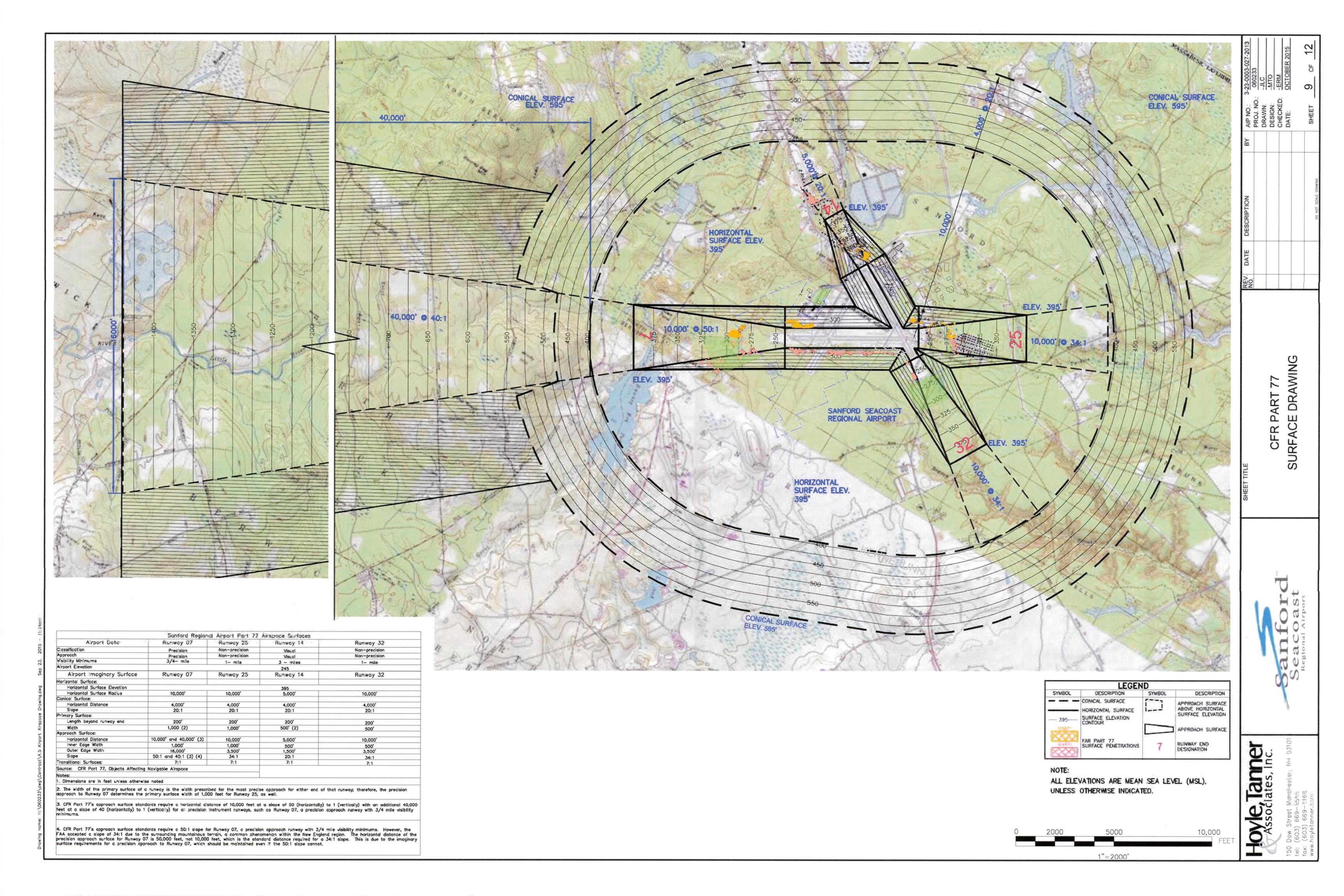










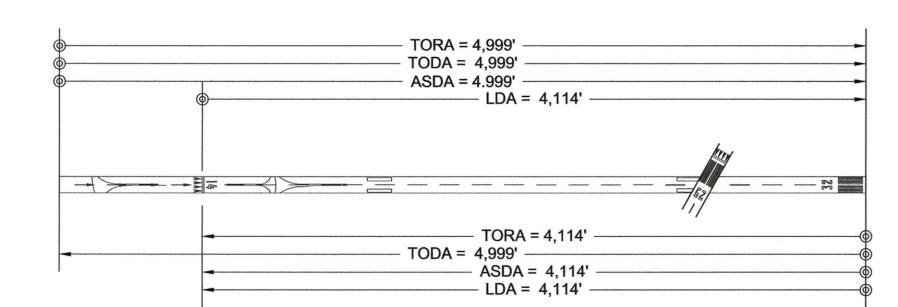


			Runway	Data			
		Existing a	nd Ultimate	Exi	sting	Ulti	mate
Runway Identification		<del></del>	ay 7/25	Runway 14/32		Runway 14/32	
Runway Design Code (RDC)			-4000		-5000	B-II-5000	
Approach Reference Code (APRC )		D/IV/4000	D/IV/5000		II/VIS	B/III/5000	
Departure Reference Code (DPRC)			)/IV		3/111		3/11
Pavement Strength & Material Type		Hot Mi	x Asphalt	Hot Mi	x Asphalt	Hot Mix Asphalt	
Pavement Strength (x 1,000 LBS Wheel Loadi	ng.)	Single Wheel 65.0	/ Dual Wheel 100.0	Dual W	/heel 72.0		/heel 72.0
Pavement Strength (PCN)		insufficient fleet n	nix data to determine	insufficient fleet n	nix data to determine	insufficient fleet n	nix data to determine
Pavement Strength Surface Treatment		Gro	oved	n	one	Gro	poved
Effective Runway Gradient (%)		0.	80%	0.	27%	0.	27%
Percent (%) Wind Coverage		95.93% - 98	.36% - 99.66%	95.09% - 97	.34% - 99.34%	95.09% - 97	.34% - 99.34%
Runway Dimensions (L x W)		6389	x 100	4999	9 x 100	499	9 x 75
	,	Runway 7	Runway 25	Runway 14	Runway 32	Runway 14	Runway 32
Displaced Threshold Elevation			232.52 msl	241.7 msl	N/A	241.7 msl	N/A
Runway Safety Area Dimensions		8389 x 500	8389 x 500	5714 x 500	5714 x 500	4714 x 150	4714 x 150
	Latitude:	N 43° 23' 12"	N 43° 23' 45.1"	N 43° 23' 1.2"	N 43° 23' 37.4"	N 43° 24' 01.24"	N 43° 23' 37.37"
Runway End Coordinates	Longitude:	W 070° 43' 11"	W 070° 41' 57.4"	W 070° 42' 51.5"	W 070° 41' 52.3"	W 070° 42' 51.51"	W 070° 41' 52.23"
	Elevation:	240.5'	232.1'	244'	230.7'	244.0	230.7
	Latitude:	N/A	N 43° 23' 43"	N 43° 23' 57"	N/A	N 43° 23' 57.00"	N/A
Displaced Threshold Coordinates	Longitude:	N/A	W 070° 42' 02"	W 070° 42' 41"	N/A	W 070° 42' 41.00"	N/A
	Elevation:	N/A	233.1	241.8	N/A	241.8	N/A
	Distance:	N/A	388	885	N/A	885	N/A
Runway Lighting Type			IRL		IIRL		IIRL
Runway Protection Zone (RPZ) Dimensions	Approach:	1700 x 1000 x 1510	1700 x 500 x 1010	1700 x 500 x 1010	1,700 x 500 x 1,010	1000 x 500 x 700	1000 x 500 x 700
	Departure:	1700 x 500 x 1010	1700 x 500 x 1010	1700 x 500 x 1010	1,700 x 500 x 1,010	1000 x 500 x 700	1000 x 500 x 700
Runway Marking Type		Precision	Non-Precision	Basic	Non-Precision	Basic	Non-Precision
14 CFR Part 77 Approach Category	-	50:1 & 40:1	34:1	20:1	34:1	20:1	34:1
Approach Type		Precision	Non-Precision	Visual	Non-Precision	Visual	Non-Precision
Visibility Minimums		4000	5000	Visual	5000	Visual	5000
Type of Aeronautical Survey Required for App	roach	Vertically Guided	Vertically Guided	Visual	NVGS	Visual	NVGS**
Runway Departure Surface		Yes	Yes	Yes	No	Yes	No
Runway Object Free Area		7,601 x 800	7,389 x 800	5714 x 800	5714 x 800	4714 x 500	4714 x 500
Obstacle Free Zone	T	6789 x 400	6789 x 400	5399 x 400	5399 x 400	5399 x 400	5399 x 400
Threshold Siting Surface (TSS)	Approach:	30:1 No TSS Penetrations	30:1 No TSS Penetrations	20:1 No TSS Penetrations	20:1 No TSS Penetrations	20:1 No TSS Penetrations	30:1 No TSS Penetrations
Threshold Siting Surface (TSS)	Departure:	40:1 No Penetrations	40:1 No Penetrations	40:1 No Penetrations	Numerous 40:1 Penetrations***	40:1 No Penetrations	Numerous 40:1 Penetrations*
Visual and Instrument NAVAIDS		ILS /GPS / VOR(DME) / PAPI-4	GPS/VOR(DME)/PAPI-4/ODALS	PAPI-4	GPS / PAPI-4	PAPI-4	LPV /GPS / PAPI-4
Touchdown Zone Elevation		240.6	234.7	241.8	238.9	241.8	238.9
Taxiway and Taxilane Width		50* & 35	35	35		35	
Taxiway and Taxilane Safety Area Dimensions Taxiway and Taxilane Object Free Area		118*	79		79		79
Taxiway and Taxilane Object Free Area  Taxiway and Taxilane Separation		186* 93*	131 &115		& 115 5.5		&115 5.5
Taxiway and Taxilane Separation Taxiway / Taxilane Lighting		MITL	65.5 MITL		5.5 NTL		5.5 IITL
Tanway / Taniane Lighting	T	NAD 83 / NAVD 88	NAD 83 / NAVD 88		/ NAVD 88		/ NAVD 88
Vertical and Horizontal Datum	Horizontal	NAD 83	NAD 83		D 83		D 83
voi toti and nonzoniai Datum	Vertical	NAVD 88	NAVD 88				·
* TWY C and F were designed and built to accommodate do				NAVD 88		NAVD 88	

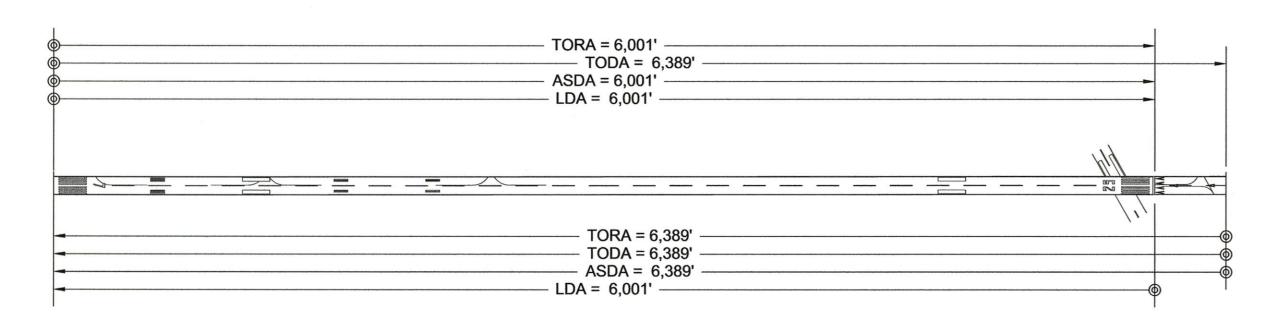
\* TWY C and F were designed and built to accommodate documented itinerant use by C-III aircraft taxing to/from West Ramp parking to Runway 7-25

\*\* for future APV the NVGS must be supplemented with the first 10,200 ft of the VGA surface.

\*\*\* Penetrations to DS are on the departure end of RWY 32



DECLARED DISTANCES RUNWAY 14-32



DECLARED DISTANCES RUNWAY 14-32

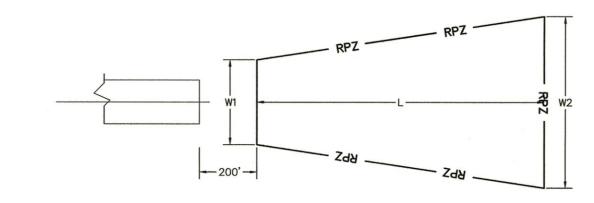
Runway End	Approach Category	Approach Slope
7	Precision	34:1 (a)
25	Non-precision	34:1
14	Visual	20:1
32	Non-precision	34:1

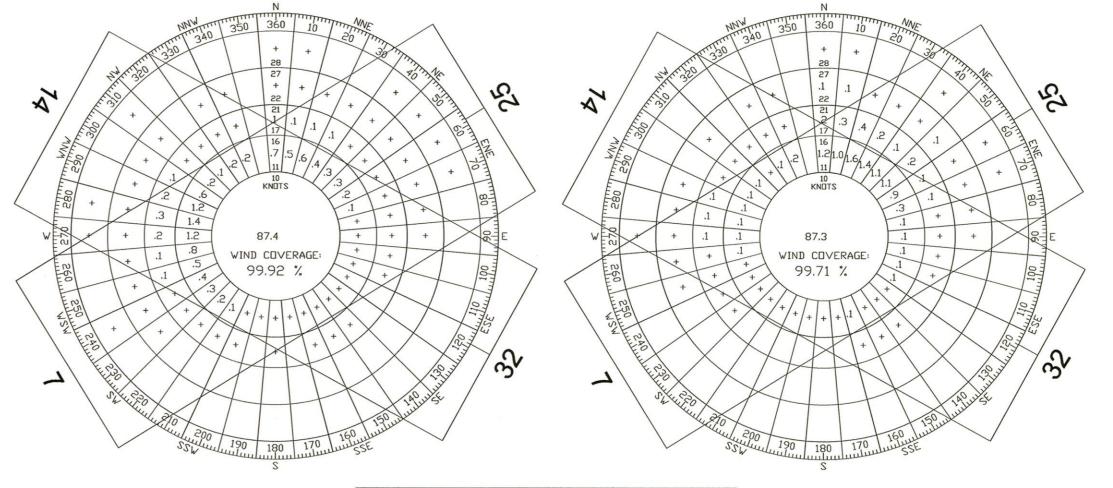
Note (a) 49 CFR PART 77 approach surface standards require an obstruction identification imaginary approach slope of 50:1 for a precision approach runway. Source: http://www.ngs.noaa.gov/AERO/oisspec.html. The FAA accepts a slope of 34:1 in mountainous terrain. The horizontal distance of the precision approach surface for runway 07 is 50,000 feet. (the first 10,00 feet at 50:1 and the remaining 40,000 ft at 40:1) This is the standard distance for a precision approach imaginary surface, which should be maintained even if the obstruction slope cannot.

	Approach Runw	ay Prot	ection Z	one Dim	ensions		
Runway		Existing					
End	Approach Category	L	W1	W2	L	W1	W2
07(a)	Precision NLT 3/4 Vis	1700	1000	1510	1700	1000	151
25(a)	NPI 1 mile Vis	1700	500	1010	1700	500	101
14(b)	Visual	1700	500	1010	1000	500	700
32(b)	NPI 1 mile Vis	1700	500	1010	1000	500	700

(a) Runway 07/25 is aircraft approach category C-II and will remain C-II
(b) Runway 14/32 is proposed to be changed from C-II to B-II aircraft approach category

Existing Pavement Dimensions						
Runway	Length	Width	Ft Sq			
14/32	5000	100	500,000			
07/25	6388	100	638,840			
Taxiway						
Α	256	50	23,883			
В	390	35	24,350			
С	3615	50	190,549			
D	1085	35	58,655			
E	5163	35	186,074			
F	2565	35	103,521			
F1	300	35	15,295			
G	332	35	17,348			
Taxilanes - H	931	35	34,131			
East taxilanes (2)	1503	50	79,542			
Aprons						
a1 - East Based	589	285	144,950			
a2 - East Itinerant	305	202	61,852			
a3 - West Itinerant	457	183	83,805			
a4 - EDA Apron	376	175	65,220			





AIRPORT REFERENCE CODE ARC C-II

ALL WEATHER

IMC WEATHER

Meteorological Condition	Observations	Dunway	Wind Coverage Crosswind			
Meteorological Condition	Observations	Runway	10.5	13	16	
		07/25	95.93%	98.36%	99.66%	
All-Weather	268,041	14/32	95.09%	97.34%	99.34%	
		Combined	98.82%	99.63%	99.92%	
	226,482	07/25	95.86%	98.36%	99.68%	
Visual Meteorological Conditions (VMC)		14/32	96.03%	98.00%	99.59%	
		Combined	99.08%	99.74%	99.96%	
Instrument Meteorological Conditions		07/25	96.31%	98.34%	99.54%	
Instrument Meteorological Conditions	41,559	14/32	89.97%	93.76%	97.98%	
(IMC)		Combined	97.42%	99.03%	99.71%	
Source: NCDC. SFM Airport (726064), 200 Mind Analysis	4 to 2014. FAA					

Runway End	Existing IFP	<b>Existing Minimums</b>	Future IFP	Future Minimums
14	None	N/A	N/A	N/A
32	GPS(LNAV)	660-1	GPS(LPV)	450-1*
7	ILS	441-3/4	SAME	SAME
	GPS(LPV)	441-3/4	SAME	SAME
	VOR	1240-1&1/4	SAME	SAME
25	GPS(LPV)	496-1	SAME	SAME
	VOR	640-1	SAME	SAME



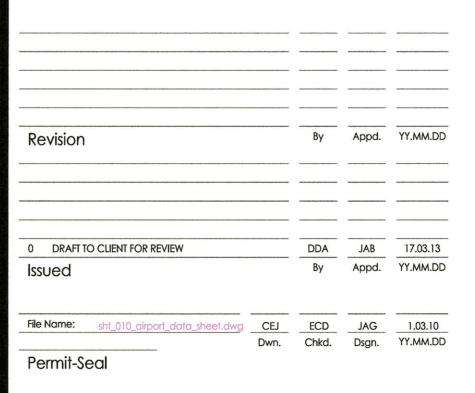
Stantec Consulting Services Inc. 482 Payne Road Scarborough ME 04074 U.S.A. Tel. 207.883.3355 Fax. 207.883.3376 www.stantec.com

Consultants

Legend

No.

DATA OBTAINED FROM 2015 ALP SET PREPARED BY HOYLE, TANNER & ASSOCIATES INC.



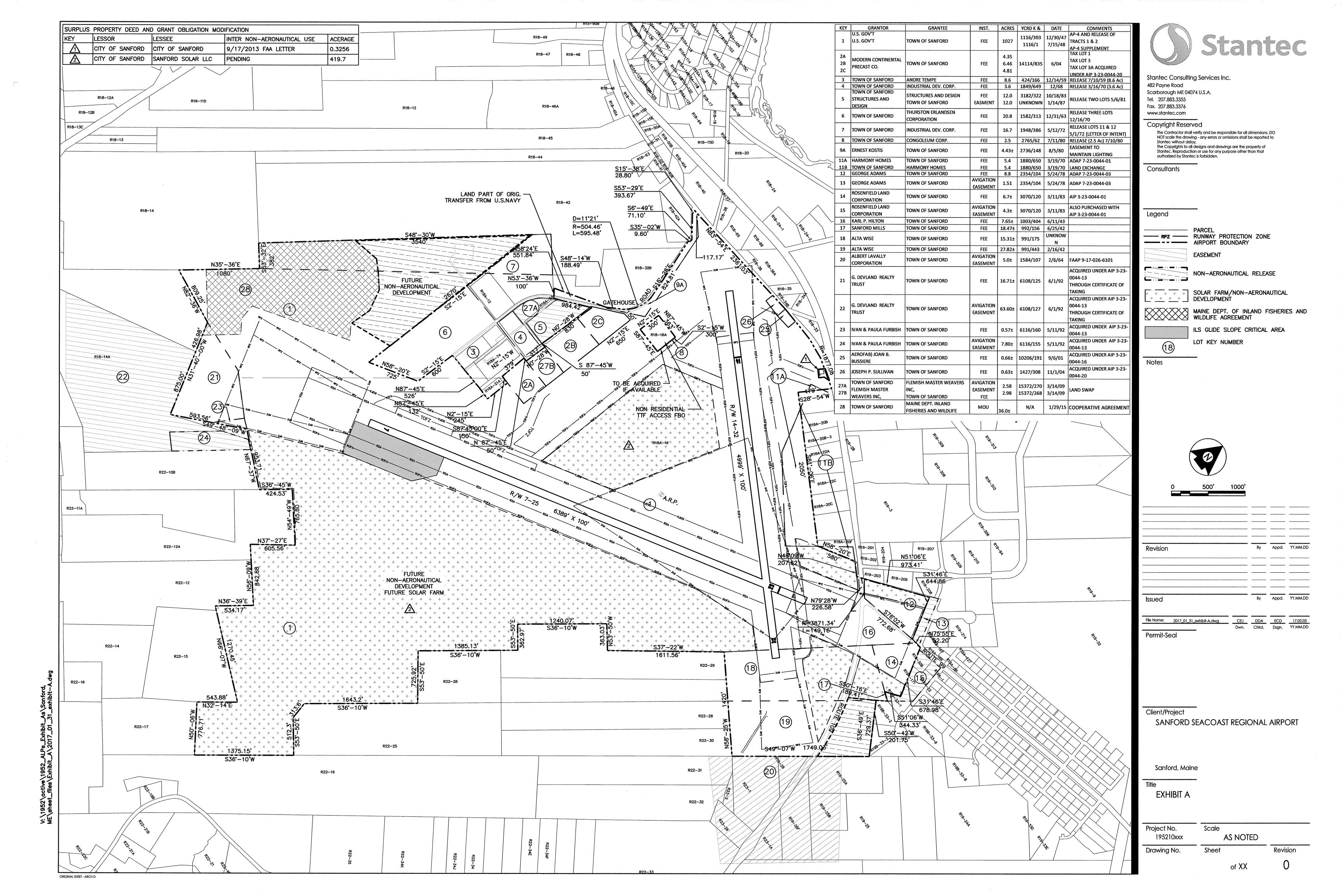
Client/Project
SANFORD SEACOAST REGIONAL AIRPORT

SANFORD, MAINE

Title
AIRPORT DATA SHEET

Project No.	Scale		
195210	AS	NOTED	
Drawing No.			Revision
10	10	of 12	0





#### **Federal Aviation Administration**



August 14, 2017

TO:

Sanford Regional Airport Attn: M. Allison Rogers 167 Airport Rd, Suite D Sanford, ME 04073 marogers@sanfordmaine.org CC:

CITY OF SANFORD 919 MAIN STREET SANFORD, ME 04073 marogers@sanfordmaine.org

RE: (See attached Table 1 for referenced case(s))
ALP 7460 No Objection Letter
\*\*FINAL DETERMINATION\*\*

Table 1 - Letter Referenced Case(s)

ASN	Prior ASN	Location	Latitude (NAD83)	Longitude (NAD83)	AGL (Feet)	AMSL (Feet)
2017-ANE-399-NRA		SANFORD, ME	43-23-37.70N	70-42-28.80W	1	245

Description: ALP Update

The proposed change to your currently approved Airport Layout Plan (ALP) submitted, has been reviewed under the authority of Part 77 and under the requirements of the Terms and Conditions of Accepting Airport Improvement Program Grants dated September 1, 1999. This review has considered the safety and utility of aircraft operations and planned navigational aids as related to this proposal.

The proposal does not exceed any federal obstruction standard, however the following conditions need to be met for the Federal Aviation Administration (FAA) to have no objections to the proposed development. Airport Layout Plans (ALPs) are long term planning initiatives and limited in scope, therefore conceptual in nature. ALP approval does not constitute blanket approval of new structures given the absence of detailed structure information required for comprehensive review.

All new structures require separate aeronautical study submissions with detailed building plans for independent study. Ensure appropriate Notice of Construction/Alteration, FAA 7460-1, is filed for review of all permanent and temporary structures.

VISAIDS: Missing Runway Data Table: Provide full Runway Data Table with appropriate listing of existing and proposed runways along with their respective VISAIDS, physical dimensions, lat/long coordinates & elevations for the runway ends and displaced thresholds.

Ultimate RWY 14-32 Width Reduction from 100' to 75': Potential Impact on RWY 14-32 PAPIs If RWY 14-32 width will be reduced from the published 100' to 75', then a determination will need to be made as to whether or not the RWY 14-32 PAPIs will remain compliant with the FAA mandated LHA1-to runway edge distance requirement, in accordance with FAA Order JO6850.2B, par 505a or AC 150/5340-30H, par 7.5d(7).

Future Fence in ODALS approach light plane: ALP drawing shows part of the future fence crossing the ODALS approach light plane. Please ensure that the fence does not penetrate the approach light plane.

Future Solar Farm Future Non-Aeronautical Development: Potential VISAIDS Impact ALP drawing shows future solar farm and other non-aeronautical development in the RW 25 approach area. The proposed solar farm boundaries must be verified and accurately captured on the SFM ALP. Future solar farm will need to be evaluated for potential impact. Future submission of the 7460 Form will be required.

Proposed Buildings & Hangars: Line-of-sight restriction to airfield VISAIDS and antennae Please ensure that there is no line-of-sight restriction to airfield VISAIDS and antennae from their controlling point.

RW 25 ODALS Approach Line Plane Clearance: Please ensure that no object penetrates the approach light plane for the ODALS. Route 109 is shown crossing the ODALS' approach light plane. Please ensure that vehicles on Route 109 remain below the light plane and do not obstruct the visibility to the ODALS lights from approaching aircraft.

It should be noted that this study did not consider the height of construction equipment. This information needs to be coordinated with this office via an "Airspace Study Checklist" before construction begins.

This study did not evaluate the plans for operational safety during construction. Those plans should be submitted to this office for coordination and review prior to construction.

This determination does not include any environmental analysis or environmental approval for this proposal. All local and state requirements and/or permits must be obtained to prior to construction of this proposal.

This determination does not include approval of any lease, does not release any surplus or grant agreement acquired airport property, nor does it relieve the airport owner or the proponent of compliance with Part 155, or any other law, ordinance, or regulation of federal, state, or local government body or organization. Furthermore, the design and location of any stormwater retention/detention facilities on or near the airport must comply with FAA Advisory Circular 150/5200-33 "Hazardous Wildlife Attractants on or Near Airports", and must be approved on the ALP prior to construction.

We look forward to working with you in the continued development of your airport. If you have any questions, please contact me at (781)238-7631 michelle.ricci@faa.gov.

Michelle Ricci

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