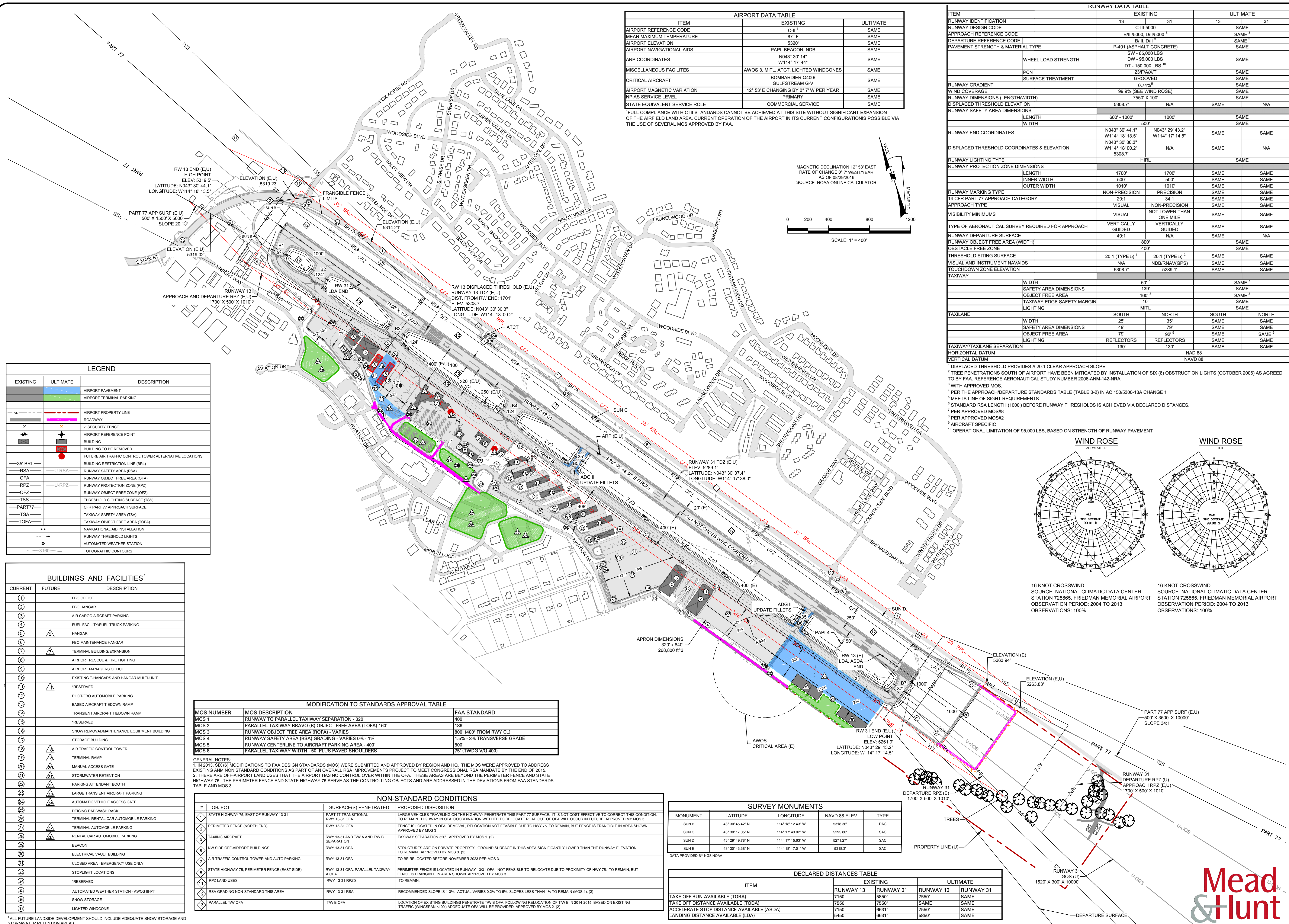


Friedman Memorial Airport Airport Layout Plan (ALP)

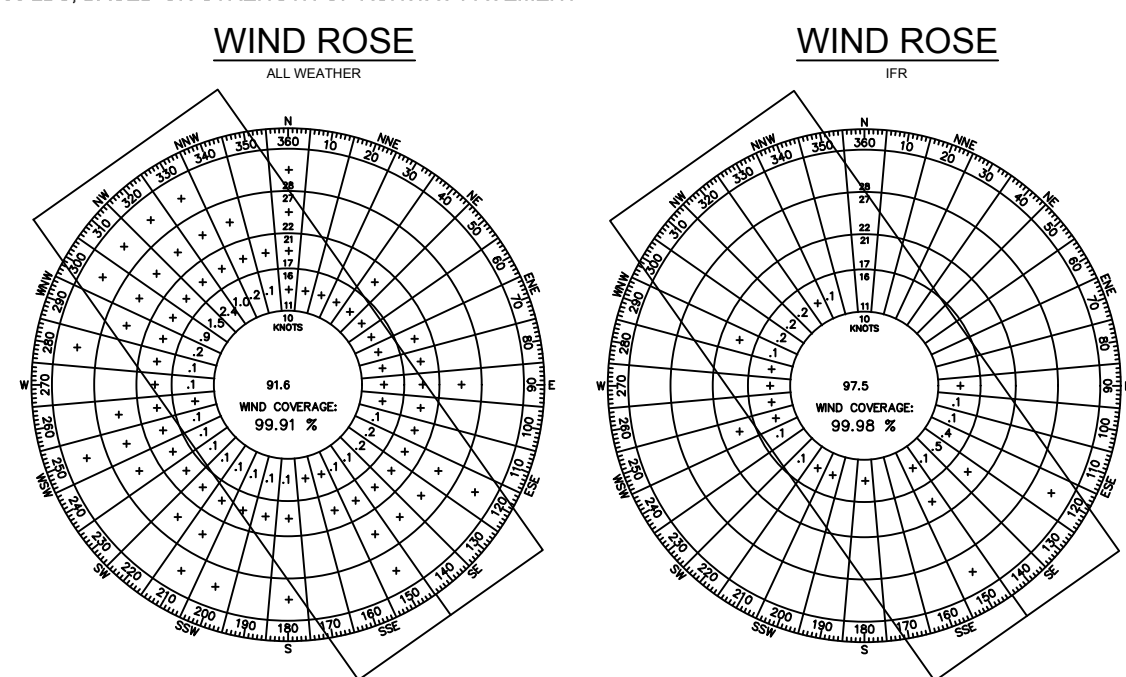


Friedman Memorial Airport
Environmental Assessment



RUNWAY DATA TABLE					
ITEM	EXISTING			ULTIMATE	
RUNWAY IDENTIFICATION	13	31		13	31
RUNWAY DESIGN CODE	C-III-5000			SAME	
APPROACH REFERENCE CODE	B/III/5000, D/II/5000 ³			SAME ³	
DEPARTURE REFERENCE CODE	B/III, D/II ¹			SAME ³	
PAVEMENT STRENGTH & MATERIAL TYPE	P-401 (ASPHALT CONCRETE)			SAME	
	WHEEL LOAD STRENGTH	SW - 65,000 LBS DW - 95,000 LBS DT - 150,000 LBS ¹⁰		SAME	
	PCN	23/F/A/X/T		SAME	
	SURFACE TREATMENT	GROOVED		SAME	
RUNWAY GRADIENT	0.74% ³			SAME	
WIND COVERAGE	99.9% (SEE WIND ROSE)			SAME	
RUNWAY DIMENSIONS (LENGTH/WIDTH)	7550' X 100'			SAME	
DISPLACED THRESHOLD ELEVATION	5308.7'	N/A		SAME	N/A
RUNWAY SAFETY AREA DIMENSIONS					
	LENGTH	600' - 1000'	1000'	SAME	
	WIDTH	500'		SAME	
RUNWAY END COORDINATES	N043° 30' 44.1" W114° 18' 13.5"		N043° 29' 43.2" W114° 17' 14.5"	SAME	SAME
DISPLACED THRESHOLD COORDINATES & ELEVATION	N043° 30' 30.3" W114° 18' 00.2" 5308.7'		N/A	SAME	N/A
RUNWAY LIGHTING TYPE	HIRL			SAME	
RUNWAY PROTECTION ZONE DIMENSIONS					
	LENGTH	1700'	1700'	SAME	SAME
	INNER WIDTH	500'	500'	SAME	SAME
	OUTER WIDTH	1010'	1010'	SAME	SAME
RUNWAY MARKING TYPE	NON-PRECISION	PRECISION		SAME	SAME
14 CFR PART 77 APPROACH CATEGORY	20:1	34:1		SAME	SAME
APPROACH TYPE	VISUAL	NON-PRECISION		SAME	SAME
VISIBILITY MINIMUMS	VISUAL	NOT LOWER THAN ONE MILE		SAME	SAME
TYPE OF AERONAUTICAL SURVEY REQUIRED FOR APPROACH	VERTICALLY GUIDED	VERTICALLY GUIDED		SAME	SAME
RUNWAY DEPARTURE SURFACE	40:1	N/A		SAME	N/A
RUNWAY OBJECT FREE AREA (WIDTH)	800'			SAME	
OBSTACLE FREE ZONE	400'			SAME	
THRESHOLD SITING SURFACE	20:1 (TYPE B) ¹	20:1 (TYPE B) ²		SAME	SAME
VISUAL AND INSTRUMENT NAV AIDS	N/A	NDB/RNAV(GPS)		SAME	SAME
TOUCHDOWN ZONE ELEVATION	5308.7'	5289.1'		SAME	SAME
TAXIWAY					
	WIDTH	50' ⁷		SAME ⁷	
	SAFETY AREA DIMENSIONS	139'		SAME	
	OBJECT FREE AREA	160' ⁸		SAME	
	TAXIWAY EDGE SAFETY MARGIN	10'		SAME	
	LIGHTING	MITL		SAME	
TAXILANE	SOUTH	NORTH		SOUTH	NORTH
	WIDTH	25'	35'	SAME	SAME
	SAFETY AREA DIMENSIONS	49'	79'	SAME	SAME
	OBJECT FREE AREA	79'	92' ⁹	SAME	SAME ⁹
	LIGHTING	REFLECTORS	REFLECTORS	SAME	SAME
TAXIWAY/TAXILANE SEPARATION	130'	130'		SAME	SAME
HORIZONTAL DATUM	NAD 83				
VERTICAL DATUM	NAVD 88				

¹ DISPLACED THRESHOLD PROVIDES A 20:1 CLEAR APPROACH SLOPE.
² TREE PENETRATIONS SOUTH OF AIRPORT HAVE BEEN MITIGATED BY INSTALLATION OF SIX (6) OBSTRUCTION LIGHTS (OCTOBER 2006) AS AGREED TO BY FAA. REFERENCE AERONAUTICAL STUDY NUMBER 2006-ANM-142/NA.
³ WITH APPROVED MOS.
⁴ BY THE APPROACH/DEPARTURE STANDARDS TABLE (TABLE 3-2 IN AC 150/5300-13A CHANGE 1
⁵ MEETS LINE OF SIGHT REQUIREMENTS.
⁶ STANDARD RSA LENGTH (1000') BEFORE RUNWAY THRESHOLDS IS ACHIEVED VIA DECLARED DISTANCES.
⁷ BY APPROVED MOS#8
⁸ BY APPROVED MOS#2
⁹ AIRCRAFT SPECIFIC
¹⁰ OPERATIONAL LIMITATION OF 95,000 LBS. BASED ON STRENGTH OF RUNWAY PAVEMENT



16 KNOT CROSSWIND SOURCE: NATIONAL CLIMATIC DATA CENTER STATION 725865, FRIEDMAN MEMORIAL AIRPORT OBSERVATION PERIOD: 2004 TO 2013 OBSERVATIONS: 100%	16 KNOT CROSSWIND SOURCE: NATIONAL CLIMATIC DATA CENTER STATION 725865, FRIEDMAN MEMORIAL AIRPORT OBSERVATION PERIOD: 2004 TO 2013 OBSERVATIONS: 100%
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SURVEY MONUMENTS				
MONUMENT	LATITUDE	LONGITUDE	NAVD 88 ELEV	TYPE
SUN B	43° 30' 45.42" N	114° 18' 12.43" W	5318.36'	PAC
SUN C	43° 30' 17.05" N	114° 17' 43.02" W	5295.80'	SAC
SUN D	43° 29' 49.78" N	114° 17' 15.63" W	5271.27'	SAC
SUN E	43° 30' 43.78" N	114° 18' 17.01" W	5318.3'	SAC

DECLARED DISTANCES TABLE				
ITEM	EXISTING		ULTIMATE	
	RUNWAY 13	RUNWAY 31	RUNWAY 13	RUNWAY 31
TAKE OFF RUN AVAILABLE (TORA)	7150'	5850'	7550'	SAME
TAKE OFF DISTANCE AVAILABLE (TODA)	7550'	7550'	SAME	SAME
ACCELERATE STOP DISTANCE AVAILABLE (ASDA)	7150'	6631'	7550'	SAME
LANDING DISTANCE AVAILABLE (LDA)	5450'	6631'	5850'	SAME

MODIFICATION TO STANDARDS APPROVAL TABLE		
MOS NUMBER	MOS DESCRIPTION	FAA STANDARD
MOS 1	RUNWAY TO PARALLEL TAXIWAY SEPARATION - 320'	400'
MOS 2	PARALLEL TAXIWAY BRAVO (B) OBJECT FREE AREA (TOFA) 160'	180'
MOS 3	RUNWAY OBJECT FREE AREA (ROFA) - VARIES	800' (400' FROM RWY CL)
MOS 4	RUNWAY SAFETY AREA (RSA) GRADING - VARIES 0% - 1%	1.5% - 3% TRANSVERSE GRADE
MOS 5	RUNWAY CENTERLINE TO AIRCRAFT PARKING AREA - 400'	500'
MOS 8	PARALLEL TAXIWAY WIDTH - 50' PLUS PAVED SHOULDERS	75' (TWDG V/O 400)

GENERAL NOTES:

1. IN 2013, SIX (6) MODIFICATIONS TO FAA DESIGN STANDARDS (MOS) WERE SUBMITTED AND APPROVED BY REGION AND HQ. THE MOS WERE APPROVED TO ADDRESS EXISTING AND NON STANDARD CONDITIONS AS PART OF AN OVERALL RSA IMPROVEMENTS PROJECT TO MEET CONGRESSIONAL RSA MANDATE BY THE END OF 2015.

2. THERE ARE OFF-AIRPORT LAND USES THAT THE AIRPORT HAS NO CONTROL OVER WITHIN THE OFA. THESE AREAS ARE BEYOND THE PERIMETER FENCE AND STATE HIGHWAY 75. THE PERIMETER FENCE AND STATE HIGHWAY 75 SERVE AS THE CONTROLLING OBJECTS AND ARE ADDRESSED IN THE DEVIATIONS FROM FAA STANDARDS TABLE AND MOS 3.

NON-STANDARD CONDITIONS			
#	OBJECT	SURFACE(S) PENETRATED	PROPOSED DISPOSITION
1	STATE HIGHWAY 75, EAST OF RUNWAY 13-31	PART 77 TRANSITIONAL RWY 13-31 OFA	LARGE VEHICLES TRAVELING ON THE HIGHWAY PENETRATE THIS PART 77 SURFACE. IT IS NOT COST EFFECTIVE TO CORRECT THIS CONDITION. REMAIN. HIGHWAY IN OFA. COORDINATION WITH TID TO RELOCATE ROAD OUT OF OFA WILL OCCUR IN FUTURE. APPROVED BY MOS 3.
2	PERIMETER FENCE (NORTH END)	RWY 13-31 OFA	FENCE IS LOCATED IN OFA. REMOVAL, RELOCATION NOT FEASIBLE DUE TO HWY 75. TO REMAIN, BUT FUTURE IS FRANGIBLE IN AREA SHOWN. APPROVED BY MOS 3.
3	TAXIWAY AIRCRAFT	RWY 13-31 AND T/W A AND T/W B SEPARATION	TAXIWAY SEPARATION 320'. APPROVED BY MOS 1. (2)
4	NW SIDE OFF-AIRPORT BUILDINGS	RWY 13-31 OFA	STRUCTURES ARE ON PRIVATE PROPERTY. GROUND SURFACE IN THIS AREA SIGNIFICANTLY LOWER THAN THE RUNWAY ELEVATION. TO REMAIN. APPROVED BY MOS 3. (2)
5	AIR TRAFFIC CONTROL TOWER AND AUTO PARKING	RWY 13-31 OFA	TO BE RELOCATED BEFORE NOVEMBER 2023 PER MOS 3.
6	STATE HIGHWAY 75, PERIMETER FENCE (EAST SIDE)	RWY 13-31 OFA, PARALLEL, TAXIWAY A OFA	PERIMETER FENCE IS LOCATED IN RUNWAY 13-31 OFA. NOT FEASIBLE TO RELOCATE DUE TO PROXIMITY OF HWY 75. TO REMAIN, BUT FENCE IS FRANGIBLE IN AREA SHOWN. APPROVED BY MOS 3.
7	RPZ LAND USES	RWY 13-31 RPZ'S	TO REMAIN.
8	RSA GRADING NON-STANDARD THIS AREA	RWY 13-31 RSA	RECOMMENDED SLOPE IS 1-3%. ACTUAL VARIES 0.2% TO 5%. SLOPES LESS THAN 1% TO REMAIN (MOS 4). (2)
9	PARALLEL T/W OFA	T/W B OFA	LOCATION OF EXISTING BUILDINGS PENETRATES T/W B OFA. FOLLOWING RELOCATION OF T/W B IN 2014-2015, BASED ON EXISTING TRAFFIC VOLUMES (100) ADEQUATE OFA WILL BE PROVIDED. APPROVED BY MOS 2. (2)

LEGEND		
EXISTING	ULTIMATE	DESCRIPTION
		AIRPORT PAVEMENT
		AIRPORT TERMINAL PARKING
		AIRPORT PROPERTY LINE
		ROADWAY
		7 SECURITY FENCE
		AIRPORT REFERENCE POINT
		BUILDING
		BUILDING TO BE REMOVED
		FUTURE AIR TRAFFIC CONTROL TOWER ALTERNATIVE LOCATIONS
		BUILDING RESTRICTION LINE (BRL)
		RUNWAY SAFETY AREA (RSA)
		RUNWAY OBJECT FREE AREA (OFA)
		RUNWAY PROTECTION ZONE (RPZ)
		RUNWAY OBJECT FREE ZONE (OFZ)
		THRESHOLD SIGHTING SURFACE (TSS)
		CFR PART 77 APPROACH SURFACE
		TAXIWAY SAFETY AREA (TSA)
		TAXIWAY OBJECT FREE AREA (TOFA)
		NAVIGATIONAL AID INSTALLATION
		RUNWAY THRESHOLD LIGHTS
		AUTOMATED WEATHER STATION
		TOPOGRAPHIC CONTOURS

BUILDINGS AND FACILITIES ¹		
CURRENT	FUTURE	DESCRIPTION
①		FBO OFFICE
②		FBO HANGAR
③		AIR CARGO AIRCRAFT PARKING
④		FUEL FACILITY/FUEL TRUCK PARKING
⑤		HANGAR
⑥		FBO MAINTENANCE HANGAR
⑦		TERMINAL BUILDING/EXPANSION
⑧		AIRCRAFT RESCUE & FIRE FIGHTING
⑨		AIRCRAFT MANAGERS OFFICE
⑩		EXISTING T-HANGARS AND HANGAR MULTI-UNIT
⑪		*RESERVED
⑫		PILOT/FBO AUTOMOBILE PARKING
⑬		BASED AIRCRAFT TIEDOWN RAMP
⑭		TRANSIENT AIRCRAFT TIEDOWN RAMP
⑮		*RESERVED
⑯		SNOW REMOVAL/MAINTENANCE EQUIPMENT BUILDING
⑰		STORAGE BUILDING
⑱		AIR TRAFFIC CONTROL TOWER
⑲		TERMINAL RAMP
㉔		MANUAL ACCESS GATE
㉕		STORMWATER RETENTION
㉖		PARKING ATTENDANT BOOTH
㉗		LARGE TRANSIENT AIRCRAFT PARKING
㉘		AUTOMATED VEHICLE ACCESS GATE
㉙		DECING PAD/WALKWAY RACK
㉚		TERMINAL RENTAL CAR AUTOMOBILE PARKING
㉛		TERMINAL AUTOMOBILE PARKING
㉜		RENTAL CAR AUTOMOBILE PARKING
㉝		BEACON
㉞		ELECTRICAL VAULT BUILDING
㉟		CLOSED AREA - EMERGENCY USE ONLY
㊱		STOP/LIGHT LOCATIONS
㊲		*RESERVED
㊳		AUTOMATED WEATHER STATION - AWS0 88 FT
㊴		SNOW STORAGE
㊵		LIGHTED WINDCONE

¹ ALL FUTURE LANDSIDE DEVELOPMENT SHOULD INCLUDE ADEQUATE SNOW STORAGE AND STORMWATER RETENTION AREAS