Chapter 7: Airport Layout Plan

Drawings

This chapter contains the drawings prepared for Rapid City Regional Airport. These drawings are collectively called the Airport Layout Plan (ALP). The ALP is composed of several drawing sheets, each presenting a different facet of Rapid City Regional Airport. The drawings prepared for the airport are listed as follows:

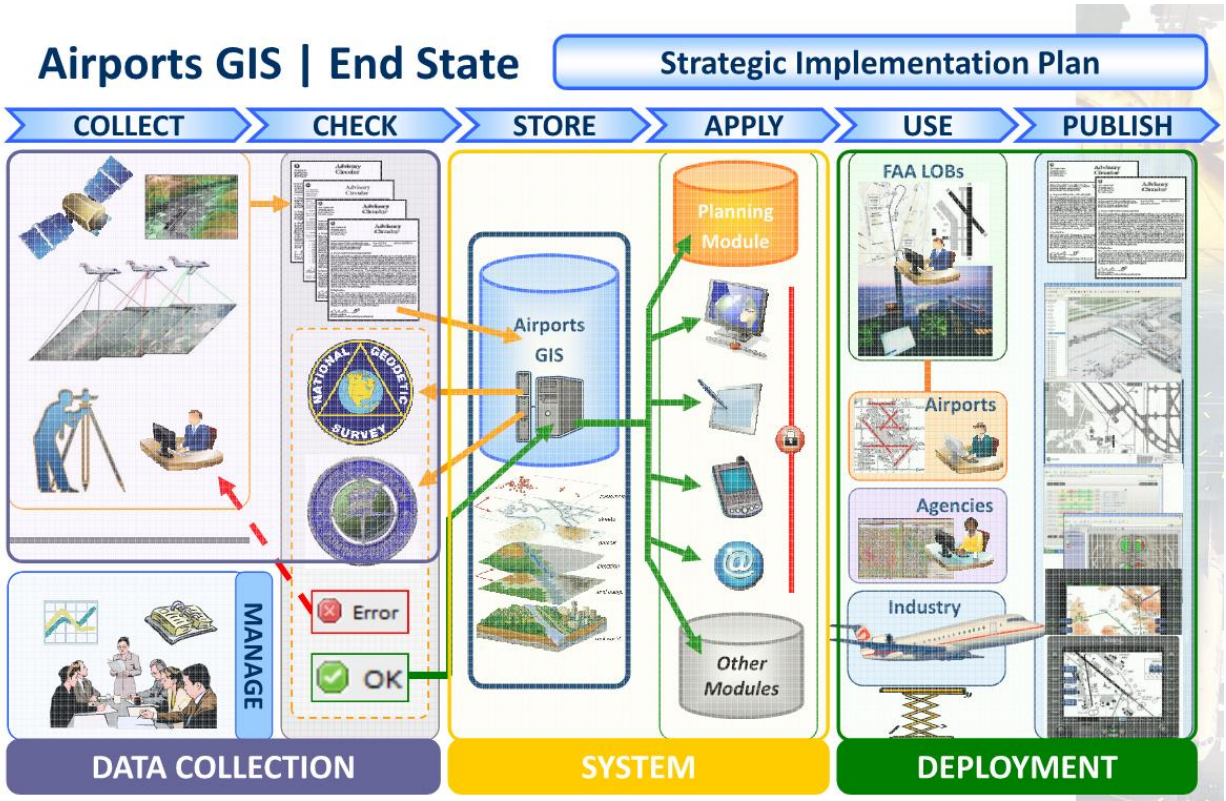
A-1 Title Sheet
A-2 Airport Data Sheet
A-3 Airport Layout Plan (Existing)
A-4 Airport Layout Plan (Future & Ultimate)
A-5 North General Aviation Apron (Existing)
A-6 North General Aviation Apron (Future & Ultimate)
A-7 Terminal Area (Existing & Ultimate)
A-8 Forest Service Area (Existing & Ultimate)
A-9 East General Aviation Apron (Ultimate)
A-10 FAR Part 77 Airspace (Ultimate)
A-11 Extended Part 77 Airspace – 14 End (Ultimate)
A-12 Extended Part 77 Airspace – 32 End (Ultimate)
A-13 Departure Surface
A-14 Inner Approach Surface – Runway 14 End
A-15 Inner Approach Surface – Runway 14-32
A-16 Inner Approach Surface – Runway 14-32
A-17 Inner Approach Surface – Runway 32 End
A-18 Inner Approach Surface – Runway 5 End
A-19 Inner Approach Surface – Runway 23 End
A-20 Land Use Plan
A-21 Airport Property Map

The ALP serves as a public record of the airport's requirements and is referred to by the FAA in its review of proposed development projects. Airport development not shown on the ALP is generally ineligible for federal funding. For this reason, it is important that the ALP be kept current, reflecting all significant changes made to airport facilities or navigational airspace around the airport.

Electronic Airport Layout Plan (eALP)

Recently the FAA initiated a requirement that all Airport Layout Plans be completed as an eALP which will then be integrated into the FAA's Airport's Geographic Information System

(AGIS). AGIS will be an FAA managed system collecting information in a prescribed manner to then be deployed and used by the FAA, Airports and others in the Aviation Industry.



Source: Federal Aviation Administration

Aeronautical Survey and Aerial Imagery

The aerial imagery, in accordance with AC 150/5300-17C, was collected by Fugro Horizons with flights flown on October 15, 2014. Aerial Imagery is required when an ALP is developed or when Instrument Approach Procedures are being developed.

The Aeronautical Survey was completed in accordance with AC 150/5300-18B for AGIS. The aeronautical survey, which is used to geographically locate all feature classes defined in AC 150/5300-18B, was initiated in 2014 and included the aerial survey conducted on October 15, 2014 and additional ground surveys conducted by KLJ through February 11, 2015. Aeronautical surveys are required after the completion of any airport development in order to update the AGIS with the most current information.

LOCATION MAP

AIRPORT LAYOUT PLAN

FOR

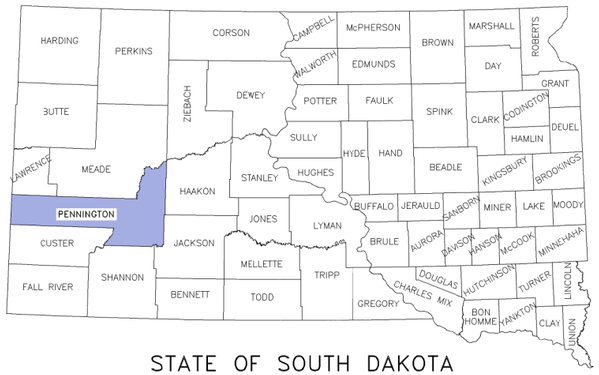
RAPID CITY REGIONAL AIRPORT

RAPID CITY, PENNINGTON COUNTY, SOUTH DAKOTA

CITY OF RAPID CITY (OWNER)

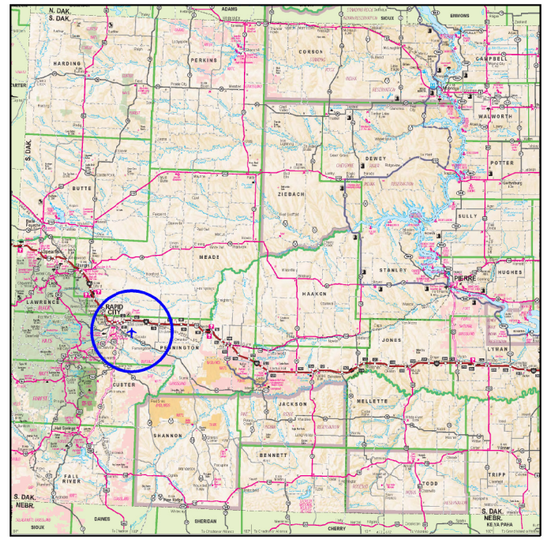
August 2015

ON BEHALF OF THE CITY OF RAPID CITY SOUTH DAKOTA, THIS AIRPORT LAYOUT PLAN (ALP) WAS PREPARED BY KLJ ACCORDING TO THE APPLICABLE ADVISORY CIRCULARS AT THE TIME OF SCOPING THE PROJECT, THE CURRENT VERSION OF THE (CHECKLIST USED) ALP CHECKLIST, AND ACCURATELY DEPICTS THE PROPOSED USE OF AIRSPACE AT THE TIME OF DATA COLLECTION. THE ALP CONFORMS WITH FAA DESIGN STANDARDS, EXCEPT AS NOTED.



STATE OF SOUTH DAKOTA

VICINITY MAP



SHEET INDEX

A.L.P. APPROVALS

FEDERAL AVIATION ADMINISTRATION

CONDITIONALLY APPROVED SUBJECT TO LETTER BY:

SIGNATURE:_____

NAME:_____

TITLE:_____

DATE: _____

AIRSPACE APPROVAL

A.L.P. AIRSPACE APPROVAL DATE: _____

CASE #:_____

CITY OF RAPID CITY

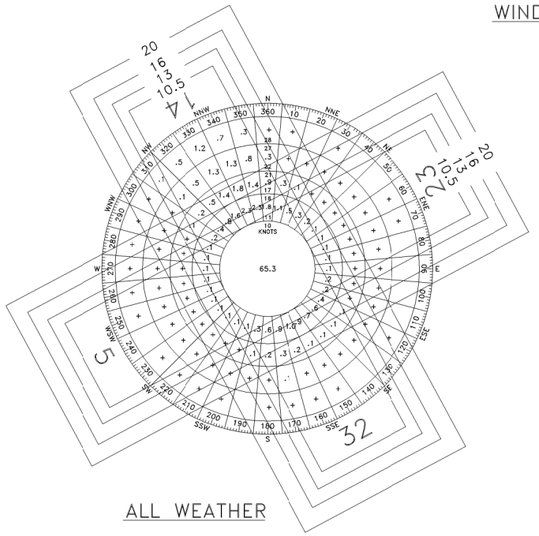
SIGNATURE:_____

NAME:_____

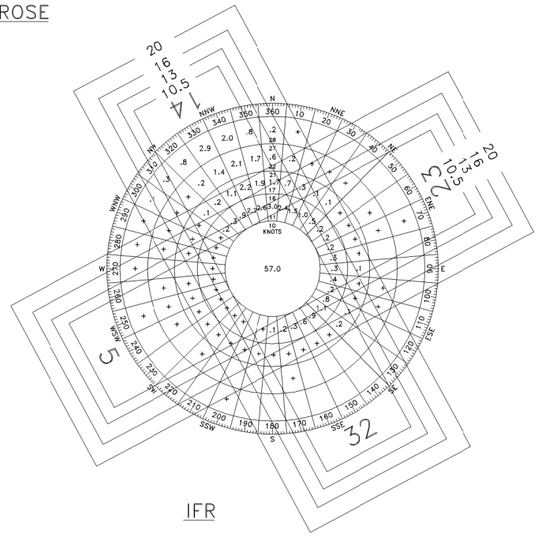
TITLE:_____

DATE: _____

WINDROSE



ALL WEATHER



IFR

Rapid City Wind Data				
All Weather				
Runway	10.5 Kts	13.0 Kts	16.0 Kts	20.0 Kts
14/32	95.97%	98.16%	99.40%	99.82%
5/23	70.18%	77.24%	85.32%	91.35%
Combined	98.22%	99.47%	99.88%	99.98%
IFR				
Runway	10.5 Kts	13.0 Kts	16.0 Kts	20.0 Kts
14/32	93.06%	97.00%	99.16%	99.77%
5/23	64.33%	71.65%	79.26%	85.69%
Combined	96.58%	98.81%	99.66%	99.95%
Source: National Climatic Data Center data				
Rapid City Regional Airport (2004-2014)				
All Weather Observations: 135,043				
IFR Observations: 18,002				

Rev.	Date	Description

PRELIMINARY NOT FOR CONSTRUCTION

PROJ. #10512113

RAPID CITY REGIONAL AIRPORT

CITY OF RAPID CITY (OWNER)

RAPID CITY, SOUTH DAKOTA

TO BE USED AS A COMPLETE DRAWING SET FOR PLANNING PURPOSES ONLY, NOT FOR CONSTRUCTION

RAPID CITY REGIONAL AIRPORT

TITLE SHEET

DRAFTED MTK

REVIEWED KP

PROJECT NUMBER 10512113

LAST REVISED DATE 08/20/2015

SHEET A-1

LEGEND

EXISTING (E)	ITEM
	SECTION LINE WITH RIGHT-OF-WAY
BRL	BUILDING RESTRICTION LINE (BRL)
OFA	RUNWAY OBJECT FREE AREA (OFA)
RSA	RUNWAY SAFETY AREA (RSA)
TOFA	TAXIWAY OBJECT FREE AREA (TOFA)
	BUILDING
	BITUMINOUS/CONCRETE SURFACE
	UNPAVED SURFACE (GRAVEL)
	DECIDUOUS/EVERGREEN TREE
	TREE ROWS, BUSHES
	BARBED WIRE FENCE
	CHAIN-LINK FENCE
	WILDLIFE FENCE
	POWER POLE/STREET LIGHT
	AIRPLANE TIEDOWN
	RUNWAY/THRESHOLD LIGHT
	TAXIWAY LIGHT/TAXIWAY REFLECTOR
	PAPI/VASI
	REIL/MALS
	AIRPORT/DISTANCE TO GO SIGN
	CULVERT WITH END SECTION

COORDINATE SUMMARY TABLE

Point	Primary Rwy Station	Crosswind Rwy Station	Latitude (DD-MM-SS)	Longitude (DD-MM-SS)
ARP (E, F & U)	46+79.7	20+58.3	N 44° 02' 43.180"	W 103° 03' 26.530"
Runway Intersection (E, F & U)	30+82.8	17+51.2	N 44° 02' 55.825"	W 103° 03' 40.688"

Point	Elev.	Station	Latitude (DD-MM-SS)	Longitude (DD-MM-SS)
Rwy 14 End (E, F & U)	3161.2	10+00	N 44° 03' 13.784"	W 103° 03' 54.024"
Rwy 14 TDZE (E, F & U)	3161.2	10+00	N 44° 03' 13.784"	W 103° 03' 54.024"
Rwy 32 End (E, F & U)	3142.8	96+99	N 44° 01' 58.050"	W 103° 02' 57.800"
Rwy 32 TDZE (E, F & U)	3159.8	66+99	N 44° 02' 24.170"	W 103° 03' 17.186"
Rwy 5 End (E, F & U)	3173.0	10+00	N 44° 02' 52.323"	W 103° 03' 49.755"
Rwy 5 TDZE (E, F & U)	3169.4	40+00	N 44° 03' 06.309"	W 103° 03' 13.541"
Rwy 23 End (E, F & U)	3203.5	46+00	N 44° 03' 09.106"	W 103° 03' 06.297"
Rwy 23 TDZE (E, F & U)	3203.5	46+00	N 44° 03' 09.106"	W 103° 03' 06.297"

TDZE = Touchdown Zone Elevation ARP = Airport Reference Point APT ELEV = 23 END (E, F & U)

RUNWAY DATA TABLE

ITEM	(E)		(E & F)	
RUNWAY DESIGNATION	14	32	5	23
RUNWAY DIMENSIONS	8701' x 150'		3601' x 75'	
PAVEMENT TYPE	CONCRETE		BITUMINOUS	
RSA	10701' x 500'		4081' x 120'	
ROFA	10701' x 800'		4081' x 250'	
ROFZ	9101' x 400'		4001' x 250'	
AZIMUTH (TRUE)	152.1°	332.1°	61.5°	241.5°
TORA	8701'	8701'	3601'	3601'
TODA	8701'	8701'	3601'	3601'
ASDA	8701'	8701'	3601'	3601'
LDA	8701'	8701'	3601'	3601'

NOTES:
1. SEE SHEET A-1 FOR AIRPORT & RUNWAY DATA TABLES.
2. SEE INNER APPROACH SHEETS FOR OBSTACLE DATA.
3. ASOS WIND SENSOR ELEVATION = 3199.2'
4. MAX ALLOWABLE ELEV OF OBJECTS 0-500' OF WIND SENSOR = 3184.2'
5. MAX ALLOWABLE ELEV OF OBSTACLE 500-1000' OF WIND SENSOR = 3209.2'

GQS SURFACE (E) 275'x1,520'x10,000'@30:1
LONG VIEW ROAD
THRESHOLD SURFACE (E, F & U) 400'x3,800'x10,000'@20:1
PT 77 APPROACH SURFACE (E, F & U) 500'x2,000'x5,000'@20:1
DEPARTURE SURFACE (E, F & U) 1,000'x6,466'x10,200'@40:1
RPZ (E, F & U) 250'x450'x1,000'
APT ELEV & 5 TDZE (E, F & U)
23 END (E, F & U)
AIRPORT PROPERTY
WIND CONE
WIND CONE & SEGMENTED CIRCLE
ASOS
NOTE #3
NOTE #4
NOTE #5
RVZ (E, F & U)
ARP (E, F & U)
RWY INTERSECTION (E, F & U)
32 TDZE (E, F & U)
5 TDZE (E, F & U)
5 END (E, F & U)
14 END (E, F & U)
LOCALIZER
GLIDE SLOPE ANTENNA
ROTATING BEACON
AIRPORT EASEMENT
AIRPORT PROPERTY
32 END (E, F & U)
GQS SURFACE (E, F & U) 350'x1,520'x10,000'@30:1
RPZ (E, F & U) 1,000'x1,750'x2,500'
THRESHOLD SURFACE (E, F & U) 800'x3,800'x10,000'@34:1
PT 77 APPROACH SURFACE (E, F & U) 1,000'x4,000'x10,000'@50:1 & 4,000'x16,000x40,000'@40:1
DEPARTURE SURFACE (E, F & U) 1,000'x6,466'x10,200'@40:1
154'x200' BLASTPAD
200'x200' BLASTPAD
660'x200' POFZ
MALSR
SOUTH DAKOTA ARMY NATIONAL GUARD APRON
AIR CARRIER APRON
GENERAL AVIATION APRON
ATCT
AIRPORT ROAD
RPZ (E) 500'x1,010'x1,700'
PT 77 APPROACH SURFACE (E) 1000'X5,500'X10,000'@34:1
THRESHOLD SURFACE (E) 800'x3,800'x10,000'@20:1
DEPARTURE SURFACE (E, F & U) 1,000'x6,466'x10,200'@40:1
MAGNETIC DECLINATION 8°E (2010)
TRUE NORTH
scale 400 0 400 800 feet

FAA APPROVAL STAMP

Rev.	Date	Description

PRELIMINARY NOT FOR CONSTRUCTION

RAPID CITY REGIONAL AIRPORT

CITY OF RAPID CITY (OWNER)

RAPID CITY, SOUTH DAKOTA

TO BE USED AS A COMPLETE DRAWING SET FOR PLANNING PURPOSES ONLY, NOT FOR CONSTRUCTION

AIRPORT LAYOUT PLAN (EXISTING)

DRAFTED	MTK
REVIEWED	KP
PROJECT NUMBER	10512113
LAST REVISED DATE	08/20/2015
SHEET	A-3

RUNWAY DATA TABLE								
	PRIMARY RUNWAY 14/32				CROSSWIND RUNWAY 5/23			
ITEM	EXISTING (E)		FUTURE (F) & ULTIMATE (U)		EXISTING (E) & FUTURE (F)		ULTIMATE (U)	
RUNWAY DESIGNATION	14	32	14	32	5	23	5	23
RUNWAY DESIGN CODE (RDC)	C-III-5000	C-III-2400	C-III-2400	C-III-2400	B-I(S)-5000	B-I(S)-5000	B-I(S)-5000	B-I(S)-5000
APPROACH REFERENCE CODE (APRC)	D-IV-5000 D-V-5000	D-IV-2400 D-V-2400	D-IV-2400 D-V-2400	D-IV-2400 D-V-2400	B-II-5000	B-II-5000	B-II-5000	B-II-5000
DEPARTURE REFERENCE CODE (DPRC)	D-IV D-V	D-IV D-V	D-IV D-V	D-IV D-V	B-II	B-II	B-II	B-II
RUNWAY DIMENSIONS	8701' x 150'		8701' x 150'		3601' x 75'		3601' x 60'	
RUNWAY DIMENSIONS - STATE PLANE MEASUREMENT	8699' x 150'		8699' x 150'		3600' x 75'		3600' x 60'	
RUNWAY LENGTH CRITERIA	LARGE, <60,000 LBS (75% FLEET & 90% USEFUL LOAD)		LARGE, <60,000 LBS (75% FLEET & 90% USEFUL LOAD)		SMALL, <10 PX (95% FLEET)		SMALL, <10 PX (95% FLEET)	
CRITICAL AIRCRAFT (TYPE)	A319		A319		Single Piston		Single Piston	
CRITICAL AIRCRAFT (WINGSPAN)	117.4'		117.4'		49'		49'	
CRITICAL AIRCRAFT (TAIL HEIGHT)	38.6'		38.6'		20'		20'	
CRITICAL AIRCRAFT (APPROACH SPEED)	138 (Kts.)		138 (Kts.)		91 (Kts.)		91 (Kts.)	
MAXIMUM TAKEOFF WEIGHT (MTOW)	166000 (LBS.)		166000 LBS.		12500 LBS.		12500 LBS.	
RUNWAY END ELEVATION	3191.2'	3142.8'	3191.2'	3142.8'	3173'	3203.5'	3173'	3203.5'
TOUCHDOWN ZONE ELEVATION (TDZE)	3191.2'	3159.8'	3191.2'	3159.8'	3199.4'	3203.5'	3199.4'	3203.5'
RUNWAY GRADIENT	0.556%		0.556%		0.847%		0.847%	
MAX GRADE WITHIN RUNWAY LENGTH (%)	0.980%		0.980%		1.240%		1.240%	
RUNWAY LIGHTING	HIRL		HIRL		MIRL		MIRL	
PAVEMENT TYPE	CONCRETE		CONCRETE		BITUMINOUS		BITUMINOUS	
RUNWAY CATEGORY	OTHER-THAN-UTILITY		OTHER-THAN-UTILITY		UTILITY		UTILITY	
PAVEMENT STRENGTH (WHEEL-LOAD)	300000 LBS (DTW)		300000 LBS (DTW)		12500 LBS (SW)		12500 LBS (SW)	
PAVEMENT CLASSIFICATION NUMBER (PCN)	65/R/C/W/T		65/R/C/W/T		15/F/C/X/T		15/F/C/X/T	
PAVEMENT MARKINGS	PRECISION	PRECISION	PRECISION	PRECISION	NON-PRECISION	NON-PRECISION	NON-PRECISION	NON-PRECISION
SURFACE TREATMENT	GROOVED		GROOVED		NONE		NONE	
RUNWAY SAFETY AREA (RSA)	10701' x 500'		10701' x 500'		4081' x 120'		4081' x 120'	
RUNWAY OBJECT FREE AREA (OFA)	10701' x 800'		10701' x 800'		4081' x 250'		4081' x 250'	
RUNWAY OBSTACLE FREE ZONE (OFZ)	9101' x 400'		9101' x 400'		4001' x 250'		4001' x 250'	
14 CFR PART 77 APPROACH TYPE	NON-PRECISION	PRECISION	PRECISION	PRECISION	NON-PRECISION	NON-PRECISION	NON-PRECISION	NON-PRECISION
14 CFR PART 77 APPROACH SLOPE	34:1	50:1/40:1	50:1/40:1	50:1/40:1	20:1	20:1	20:1	20:1
14 CFR PART 77 APPROACH DIMENSIONS	1000 X 3500 X 10000	1000 X 16000 X 50000	1000 X 16000 X 50000	1000 X 16000 X 50000	500 X 2000 X 5000	500 X 2000 X 5000	500 X 2000 X 5000	500 X 2000 X 5000
VISIBILITY MINIMUMS	1 MILE	1/2 MILE	1/2 MILE	1/2 MILE	1 MILE	1 MILE	1 MILE	1 MILE
THRESHOLD SITING SURFACE (TSS) CATEGORY	5	7	7	7	4	4	4	4
THRESHOLD SITING SURFACE (TSS) SLOPE	20:1	34:1	34:1	34:1	20:1	20:1	20:1	20:1
THRESHOLD SITING SURFACE (TSS) DIMENSIONS	STARTS 200' FROM THRESHOLD, 800' X 3800' X 10000'	STARTS 200' FROM THRESHOLD, 800' X 3800' X 10000'	STARTS 200' FROM THRESHOLD, 800' X 3800' X 10000'	STARTS 200' FROM THRESHOLD, 800' X 3800' X 10000'	STARTS 200' FROM THRESHOLD, 400' X 3800' X 10000'	STARTS 200' FROM THRESHOLD, 400' X 3800' X 10000'	STARTS 200' FROM THRESHOLD, 400' X 3800' X 10000'	STARTS 200' FROM THRESHOLD, 400' X 3800' X 10000'
GLIDEPATH QUALIFICATION SURFACE (GQS)	30:1	30:1	30:1	30:1	30:1	30:1	30:1	30:1
GLIDEPATH QUALIFICATION SURFACE (GQS) DIMENSIONS	350' X 1520' X 10000'	350' X 1520' X 10000'	350' X 1520' X 10000'	350' X 1520' X 10000'	275' X 1520' X 10000'	275' X 1520' X 10000'	260' X 1520' X 10000'	260' X 1520' X 10000'
DEPARTURE SURFACE	40:1	40:1	40:1	40:1	40:1	40:1	40:1	40:1
DEPARTURE SURFACE DIMENSIONS	1000' X 6466' X 10200'	1000' X 6466' X 10200'	1000' X 6466' X 10200'	1000' X 6466' X 10200'	1000' X 6466' X 10200'	1000' X 6466' X 10200'	1000' X 6466' X 10200'	1000' X 6466' X 10200'
AERONAUTICAL SURVEY-TYPE REQUIRED	VERTICALLY-GUIDED	VERTICALLY-GUIDED	VERTICALLY-GUIDED	VERTICALLY-GUIDED	VERTICALLY-GUIDED	VERTICALLY-GUIDED	VERTICALLY-GUIDED	VERTICALLY-GUIDED
RUNWAY ORIENTATION (TRUE)	152.1°	332.1°	152.1°	332.1°	61.5°	241.5°	61.5°	241.5°
MAGNETIC VARIATION (2010)	8° (E)	8° (E)	8° (E)	8° (E)	8° (E)	8° (E)	8° (E)	8° (E)
RUNWAY ORIENTATION (MAGNETIC)	144.1°	324.1°	144.1°	324.1°	53.5°	233.5°	53.5°	233.5°
VISUAL AND INSTRUMENT NAVAIDS (NAVAIDs)	PAPI, REIL	PAPI, MALSR, GS, LOC	PAPI, MALSR, GS, LOC	PAPI, MALSR, GS, LOC	PAPI	PAPI	PAPI	PAPI
DISPLACED THRESHOLD	0'	0'	0'	0'	0'	0'	0'	0'
TAKEOFF RUNWAY AVAILABLE (TORA)	8701'	8701'	8701'	8701'	3601'	3601'	3601'	3601'
TAKEOFF DISTANCE AVAILABLE (TODA)	8701'	8701'	8701'	8701'	3601'	3601'	3601'	3601'
ACCELERATED STOP DISTANCE AVAILABLE (ASDA)	8701'	8701'	8701'	8701'	3601'	3601'	3601'	3601'
LANDING DISTANCE AVAILABLE (LDA)	8701'	8701'	8701'	8701'	3601'	3601'	3601'	3601'
RPZ DIMENSIONS - APPROACH	500' X 1010' X 1700'	1000' X 1750' X 2500'	1000' X 1750' X 2500'	1000' X 1750' X 2500'	250' X 450' X 1000'	250' X 450' X 1000'	250' X 450' X 1000'	250' X 450' X 1000'
RPZ DIMENSIONS - DEPARTURE	500' X 1010' X 1700'	500' X 1010' X 1700'	500' X 1010' X 1700'	500' X 1010' X 1700'	250' X 450' X 1000'	250' X 450' X 1000'	250' X 450' X 1000'	250' X 450' X 1000'

COORDINATE SUMMARY TABLE																					
Point	Primary Rwy Station	Crosswind Rwy Station	Latitude (DD-MM-SS)							Longitude (DD-MM-SS)											
ARP (E, F & U)	46+79.7	20+58.3	N	44	°	02	'	43.180	"	W	103	°	03	'	26.530	"					
Runway Intersection (E, F & U)	30+62.8	17+51.2	N	44	°	02	'	55.825	"	W	103	°	03	'	40.688	"					
Point	Elev.	Station	Latitude (DD-MM-SS)							Longitude (DD-MM-SS)											
Rwy 14 End (E, F & U)	3191.2	10+00	N	44	°	03	'	13.784	"	W	103	°	03	'	54.024	"					
Rwy 14 TDZE (E, F & U)	3191.2	10+00	N	44	°	03	'	13.784	"	W	103	°	03	'	54.024	"					
Rwy 32 End (E, F & U)	3142.8	96+99	N	44	°	01	'	58.050	"	W	103	°	02	'	57.800	"					
Rwy 32 TDZE (E, F & U)	3159.8	66+99	N	44	°	02	'	24.170	"	W	103	°	03	'	17.186	"					
Rwy 5 End (E, F & U)	3173.0	10+00	N	44	°	02	'	52.323	"	W	103	°	03	'	49.755	"					
Rwy 5 TDZE (E, F & U)	3199.4	40+00	N	44	°	03	'	06.309	"	W	103	°	03	'	13.541	"					
Rwy 23 End (E, F & U)	3203.5	46+00	N	44	°	03	'	09.106	"	W	103	°	03	'	06.297	"					
Rwy 23 TDZE (E, F & U)	3203.5	46+00	N	44	°	03	'	09.106	"	W	103	°	03	'	06.297	"					
TDZE = Touchdown Zone Elevation			ARP = Airport Reference Point							APT ELEV = 23 END (E, F & U)											

TAXIWAY DATA TABLE	
	EXISTING & ULTIMATE
HIGHEST TAXIWAY DESIGN GROUP (TDG)	5
TAXIWAY WIDTH	75'
TAXIWAY SAFETY AREA WIDTH	118'
TAXIWAY OBJECT FREE AREA WIDTH	186'
TAXILANE WIDTH	75'
TAXILANE OBJECT FREE AREA WIDTH	162'
TAXIWAY LIGHTING	MITL
TAXILANE LIGHTING	NONE

AIRPORT DATA TABLE			
ITEM	EXISTING	FUTURE	ULTIMATE
AIRPORT REFERENCE CODE (ARC)	C-III	C-III	C-III
AIRPORT OWNERSHIP	PUBLIC	PUBLIC	PUBLIC
NPIAS SERVICE LEVEL	COMMERCIAL SERVICE - PRIMARY	COMMERCIAL SERVICE - PRIMARY	COMMERCIAL SERVICE - PRIMARY
NPIAS ASSET CLASSIFICATION	-	-	-
STATE SYSTEM PLAN SERVICE LEVEL	Commercial	Commercial	Commercial
AIRPORT ELEVATION (MSL)	3203.5'	3203.5'	3203.5'
AIRPORT REFERENCE POINT (ARP)	(N) 44° 02' 43.183"	(N) 44° 02' 43.183"	(N) 44° 02' 43.183"
	(W) 103° 03' 26.531"	(W) 103° 03' 26.531"	(W) 103° 03' 26.531"
MEAN MAX TEMPERATURE (MONTH)	86.9° (JUL.)		
AIRPORT NAVAIDS (FAA-OWNED)	ASOS, ILS, VORTAC, DME, NDB	ASOS, ILS, VORTAC, DME, NDB	ASOS, ILS, VORTAC, DME, NDB
AIRPORT NAVAIDS (SPONSOR-OWNED)	Airport Beacon, Lighted Windcone	Airport Beacon, Lighted Windcone	Airport Beacon, Lighted Windcone
MISCELLANEOUS FACILITIES	-	-	-
FAA MAGNETIC VARIATION OF RECORD	8° (E)	8° (E)	8° (E)
FAA MAGNETIC VARIATION DATE	2010	2010	2010

NOTES:
1. DATA USED WITHIN THIS AIRPORT LAYOUT PLAN SET IS BASED ON:
   1. AIRPORT AERONAUTICAL SURVEY – AIRPORT GEOGRAPHIC INFORMATION SYSTEM (AGIS) AC150/5300-18B COMPLETED BY KLJ ON FEBRUARY 11, 2015.
   2. AERIAL IMAGERY BY FUGRO – FLOWN ON OCTOBER 15, 2014.
   3. USGS NATIONAL ELEVATION DATASET AT 1 ARC SECOND.
   4. NOAA NATIONAL FLIGHT DATA CENTER DIGITAL OBSTACLE FILE FROM 03/29/2015.
   5. QUADRANGLE MAPS FROM USGS.
      (DATA IS ONLY AS ACCURATE AS THE SOURCES LISTED. ANY TOWERS, STRUCTURES, OR OBJECTS CONSTRUCTED AFTER THESE DATES ARE NOT REPRESENTED IN THIS AIRPORT LAYOUT PLAN SET.)
2. HORIZONTAL DATUM = (GRID) STATE PLANE, NAD 83/2011, SD SOUTH – FIPS 4002, U.S. SURVEY FEET
3. VERTICAL DATUM = NAVD 88, U.S. SURVEY FEET
4. LATITUDE & LONGITUDE CALCULATED USING CORPSCON VERSION 6.0.1

MODIFICATION TO DESIGN STANDARDS				
APPROVAL DATE	AIRSPACE CASE #	LOCATION	STANDARD MODIFIED	DESCRIPTION
9/18/1996	96-AGL-1902-NRA	Runway 14-32	Edge Light Spacing	Edge light spacing greater than 200' at the intersection of Runway 14-32 with Taxiway B, A3, A4 & A5

KLJ

RAPID CITY REGIONAL AIRPORT

CITY OF RAPID CITY (OWNER)

RAPID CITY, SOUTH DAKOTA

TO BE USED AS A COMPLETE DRAWING SET FOR PLANNING PURPOSES ONLY, NOT FOR CONSTRUCTION

AIRPORT DATA SHEET

Rev.	Date	Description

PRELIMINARY NOT FOR CONSTRUCTION

DRAFTED MTK
REVIEWED KP
PROJECT NUMBER 10512113
LAST REVISED DATE 08/20/2015

SHEET A-2

NOTES:
1. SEE SHEET A-2 FOR AIRPORT & RUNWAY DATA TABLES.
2. SEE INNER APPROACH SHEETS FOR OBSTACLE DATA.
3. OBJECTS WITHIN 500' NOT TO EXCEED (ASOS WIND SENSOR ELEV – 15').
4. OBJECTS 500'-1000' NOT TO EXCEED (ASOS WIND SENSOR ELEV + 10').

COORDINATE SUMMARY TABLE

Point	Primary Rwy Station	Crosswind Rwy Station	Latitude (DD-MM-SS)	Longitude (DD-MM-SS)
ARP (E, F & U)	46+79.7	20+58.3	N 44° 02' 43.180"	W 103° 03' 26.530"
Runway Intersection (E, F & U)	30+62.8	17+51.2	N 44° 02' 55.825"	W 103° 03' 40.688"

Point	Elev.	Station	Latitude (DD-MM-SS)	Longitude (DD-MM-SS)
Rwy 14 End (E, F & U)	3191.2	10+00	N 44° 03' 13.784"	W 103° 03' 54.024"
Rwy 14 TDZE (E, F & U)	3191.2	10+00	N 44° 03' 13.784"	W 103° 03' 54.024"
Rwy 32 End (E, F & U)	3142.8	96+99	N 44° 01' 58.050"	W 103° 02' 57.800"
Rwy 32 TDZE (E, F & U)	3159.8	66+99	N 44° 02' 24.170"	W 103° 03' 17.186"
Rwy 5 End (E, F & U)	3173.0	10+00	N 44° 02' 52.323"	W 103° 03' 49.755"
Rwy 5 TDZE (E, F & U)	3199.4	40+00	N 44° 03' 06.309"	W 103° 03' 13.541"
Rwy 23 End (E, F & U)	3203.5	46+00	N 44° 03' 09.106"	W 103° 03' 06.297"
Rwy 23 TDZE (E, F & U)	3203.5	46+00	N 44° 03' 09.106"	W 103° 03' 06.297"

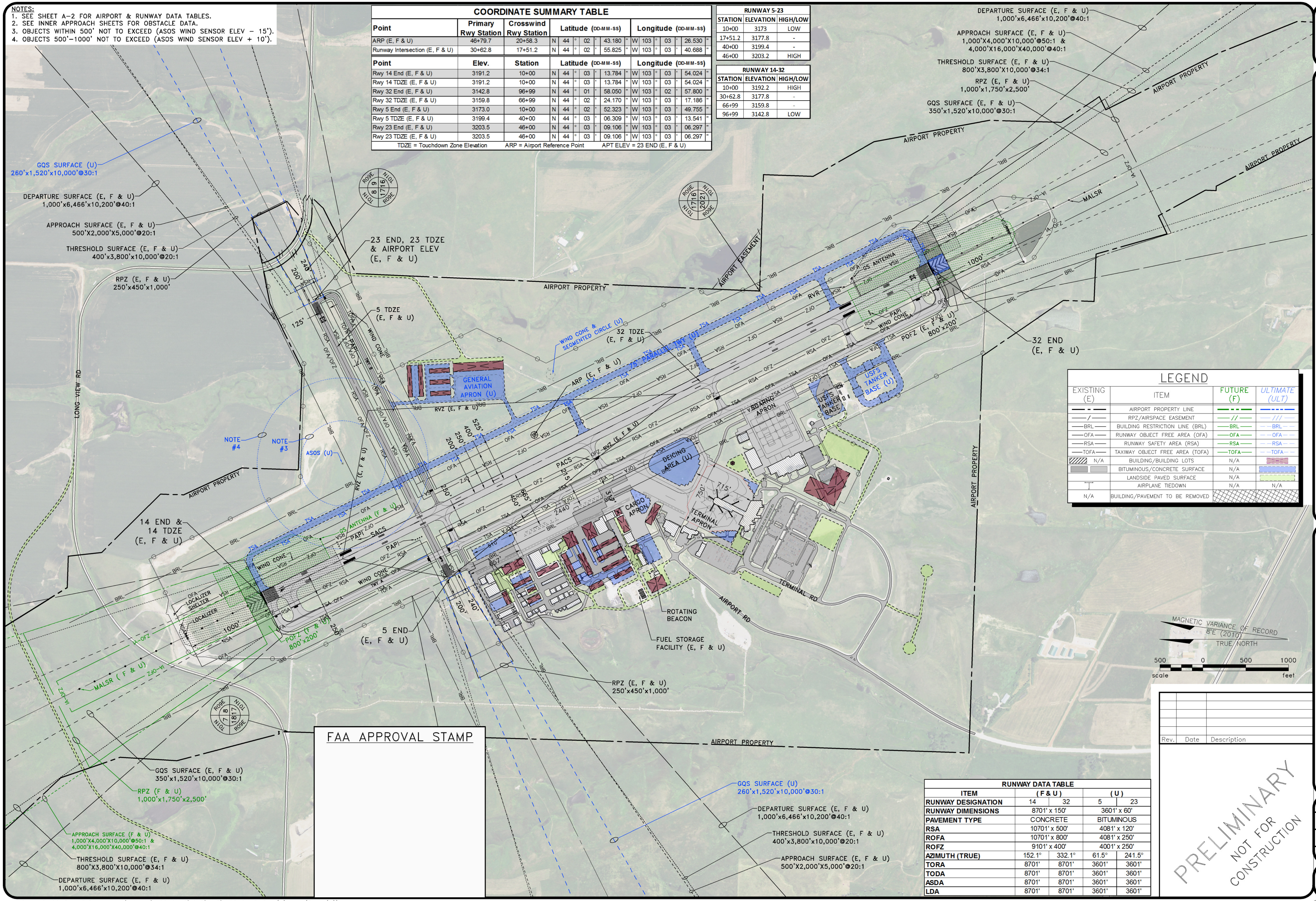
TDZE = Touchdown Zone Elevation   ARP = Airport Reference Point   APT ELEV = 23 END (E, F & U)

RUNWAY 5-23

STATION	ELEVATION	HIGH/LOW
10+00	3173	LOW
17+51.2	3177.8	-
40+00	3199.4	-
46+00	3203.2	HIGH

RUNWAY 14-32

STATION	ELEVATION	HIGH/LOW
10+00	3192.2	HIGH
30+62.8	3177.8	-
66+99	3159.8	-
96+99	3142.8	LOW



DEPARTURE SURFACE (E, F & U)
1,000'x6,466'x10,200'@40:1
APPROACH SURFACE (E, F & U)
1,000'X4,000'X10,000'@50:1 &
4,000'X16,000'X40,000'@40:1
THRESHOLD SURFACE (E, F & U)
800'X3,800'X10,000'@34:1
RPZ (E, F & U)
1,000'x1,750'x2,500'
GQS SURFACE (E, F & U)
350'x1,520'x10,000'@30:1
GQS SURFACE (U)
260'x1,520'x10,000'@30:1
DEPARTURE SURFACE (E, F & U)
1,000'x6,466'x10,200'@40:1
APPROACH SURFACE (E, F & U)
500'X2,000'X5,000'@20:1
THRESHOLD SURFACE (E, F & U)
400'x3,800'x10,000'@20:1
RPZ (E, F & U)
250'x450'x1,000'
23 END, 23 TDZE
& AIRPORT ELEV
(E, F & U)
5 TDZE
(E, F & U)
32 TDZE
(E, F & U)
ARP (E, F & U)
WIND CONE & SEGMENTED CIRCLE (U)
GENERAL AVIATION APRON (U)
AIRPORT PROPERTY
AIRPORT EASEMENT
MALSR
GS ANTENNA
RVR
PAPI
WIND CONE
32 END
(E, F & U)
POFZ (E, F & U)
800'x200'
USFS TANKER BASE (U)
USFS TANKER BASE
SRE
DEICING AREA (U)
CARGO APRON
TERMINAL APRON
PACS
SACS
ASOS (U)
NOTE #4
NOTE #3
LONG VIEW RD
14 END &
14 TDZE
(E, F & U)
LOCALIZER SHELTER
LOCALIZER
1000'
POFZ (F & U)
800'x200'
MALSR (F & U)
5 END
(E, F & U)
ROTATING BEACON
FUEL STORAGE FACILITY (E, F & U)
AIRPORT RD
TERMINAL RD
RPZ (E, F & U)
250'x450'x1,000'
GQS SURFACE (E, F & U)
350'x1,520'x10,000'@30:1
RPZ (F & U)
1,000'x1,750'x2,500'
APPROACH SURFACE (F & U)
1,000'X4,000'X10,000'@50:1 &
4,000'X16,000'X40,000'@40:1
THRESHOLD SURFACE (E, F & U)
800'X3,800'X10,000'@34:1
DEPARTURE SURFACE (E, F & U)
1,000'x6,466'x10,200'@40:1
GQS SURFACE (U)
260'x1,520'x10,000'@30:1
DEPARTURE SURFACE (E, F & U)
1,000'x6,466'x10,200'@40:1
THRESHOLD SURFACE (E, F & U)
400'x3,800'x10,000'@20:1
APPROACH SURFACE (E, F & U)
500'X2,000'X5,000'@20:1
MAGNETIC VARIANCE OF RECORD
8°E (2010)
TRUE NORTH
500 0 500 1000
scale feet

LEGEND

EXISTING (E)	ITEM	FUTURE (F)	ULTIMATE (ULT)
— - —	AIRPORT PROPERTY LINE	— - —	— - - —
—/—	RPZ/AIRSPACE EASEMENT	—//—	—///—
—BRL—	BUILDING RESTRICTION LINE (BRL)	—BRL—	– –BRL– –
—OFA—	RUNWAY OBJECT FREE AREA (OFA)	—OFA—	– –OFA– –
—RSA—	RUNWAY SAFETY AREA (RSA)	—RSA—	– –RSA– –
—TOFA—	TAXIWAY OBJECT FREE AREA (TOFA)	—TOFA—	– –TOFA– –
N/A	BUILDING/BUILDING LOTS	N/A	
	BITUMINOUS/CONCRETE SURFACE	N/A	
	LANDSIDE PAVED SURFACE	N/A	
	AIRPLANE TIEDOWN	N/A	N/A
N/A	BUILDING/PAVEMENT TO BE REMOVED		

FAA APPROVAL STAMP

RUNWAY DATA TABLE

ITEM	(F & U)		(U)	
RUNWAY DESIGNATION	14	32	5	23
RUNWAY DIMENSIONS	8701' x 150'		3601' x 60'	
PAVEMENT TYPE	CONCRETE		BITUMINOUS	
RSA	10701' x 500'		4081' x 120'	
ROFA	10701' x 800'		4081' x 250'	
ROFZ	9101' x 400'		4001' x 250'	
AZIMUTH (TRUE)	152.1°	332.1°	61.5°	241.5°
TORA	8701'	8701'	3601'	3601'
TODA	8701'	8701'	3601'	3601'
ASDA	8701'	8701'	3601'	3601'
LDA	8701'	8701'	3601'	3601'

Rev.	Date	Description

PRELIMINARY
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KLJ

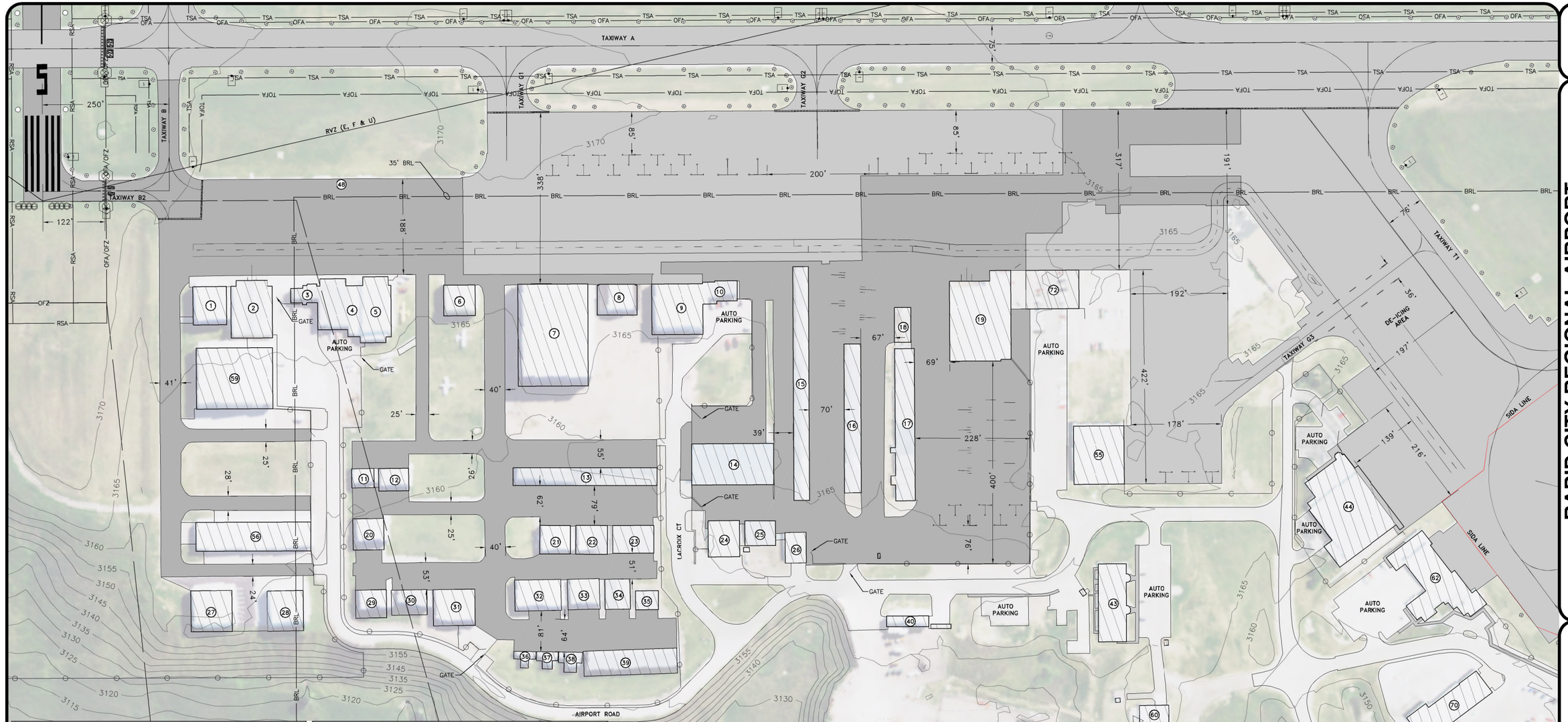
RAPID CITY REGIONAL AIRPORT

CITY OF RAPID CITY (OWNER)
RAPID CITY, SOUTH DAKOTA

TO BE USED AS A COMPLETE DRAWING SET FOR PLANNING PURPOSES ONLY, NOT FOR CONSTRUCTION

AIRPORT LAYOUT PLAN (ULTIMATE)

DRAFTED: MTK
REVIEWED: KP
PROJECT NUMBER: 10512113
LAST REVISED DATE: 08/20/2015
SHEET: A-4



BUILDING IDENTIFICATION TABLE (E)

#	DESCRIPTION	TOP ELEV.	OBSTRUCTION LIGHTING/MARKING	DISPOSITION
1	Private Hangar	3190.8	None	To Remain
2	SASO Hangar	3191.6	None	To Remain
3	SASO Office	3189.9	None	To Be Removed
4	SASO Hangar	3189.9	None	To Be Removed
5	SASO Hangar	3189.9	None	To Be Removed
6	Private Hangar	3189.2	None	To Be Removed
7	FBO Hangar	3204.2	None	To Remain
8	FBO Hangar	3187.6	None	To Remain
9	SASO Hangar	3190.8	None	To Remain
10	SASO Office	3190.8	None	To Remain
11	Private Hangar	3179.1	None	To Remain
12	Private Hangar	3180.9	None	To Remain
13	T-Hangar (SASO)	3180.1	None	To Remain
14	Airport Maintenance Shop	3185.7	None	To Be Removed
15	T-Hangar (FBO)	3180.4	None	To Be Removed
16	T-Hangar (Condo)	3179.7	None	To Be Removed
17	T-Hangar (FBO)	3186.2	None	To Be Removed
18	T-Hangar (FBO)	3181.1	None	To Be Removed
19	FBO Hangar and Terminal	3190.6	None	To Remain
20	SASO Hangar	3180.1	None	To Remain
21	SASO Hangar	3179.2	None	To Remain
22	Private Hangar	3179.3	None	To Remain
23	Private Hangar	3178.8	None	To Remain
24	Airport Maintenance Shop	3177.9	None	To Be Removed
25	Airport Cold Storage Bld	3180.4	None	To Be Removed
26	Airport Sand Storage Bld	3187.1	None	To Be Removed
27	Private Hangar	3185.0	None	To Remain
28	Private Hangar	3186.1	None	To Remain
29	Private Hangar	3179.7	None	To Remain

BUILDING IDENTIFICATION TABLE (E)

#	DESCRIPTION	TOP ELEV.	OBSTRUCTION LIGHTING/MARKING	DISPOSITION
30	Private Hangar	3180.8	None	To Remain
31	SASO Hangar	3177.9	None	To Remain
32	Private Hangar	3177.1	None	To Remain
33	Private Hangar	3180.9	None	To Remain
34	Private Hangar	3176.2	None	To Remain
35	Private Hangar	3175.8	None	To Remain
36	T-Hangar (Private)	3169.1	None	To Remain
37	T-Hangar (Private)	3168.7	None	To Remain
38	T-Hangar (Private)	3171.7	None	To Remain
39	T-Hangar (Condo)	3174.5	None	To Remain
40	Vacant	3182.8	None	To Be Removed
43	TSA	3182.5	None	To Remain
44	SASO Hangar	3199.0	None	To Remain
48	Aviation Fuel	3179.0	None	To Remain
49	Fuel Farm	3166.0	None	To Remain
50	Air Tanker Base	3175.0	None	To Remain
51	Air Traffic Control	3221.9	None	To Remain
52	National Guard	3206.6	None	To Remain
53	National Guard	3191.4	None	To Remain
54	National Guard	3189.3	None	To Remain
55	Private Hangar	3193.1	None	To Remain
56	T-Hangar (Condo)	3177.8	None	To Remain
59	SASO Hangar	3192.1	None	To Remain
60	Electrical Vault	3181.5	None	To Remain
62	Fire Department	3196.2	None	To Remain
70	Car Rental QTA	3182.1	None	To Remain
71	Terminal Building	3221.8	None	To Remain
72	GA Terminal Building		None	To Remain

LEGEND

EXISTING (E)	ITEM
—BRL—	35' BUILDING RESTRICTION LINE (BRL)
—OFA—	RUNWAY OBJECT FREE AREA (OFA)
—RSA—	RUNWAY SAFETY AREA (RSA)
—TOFA—	TAXIWAY OBJECT FREE AREA (TOFA)
	BUILDING
	BITUMINOUS/CONCRETE SURFACE
	UNPAVED SURFACE (GRAVEL)
	DECIDUOUS/EVERGREEN TREE
	TREE ROWS, BUSHES
	BARBED WIRE FENCE
	CHAIN-LINK FENCE
	POWER POLE/STREET LIGHT
	AIRPLANE TIEDOWN/PARKING
	RUNWAY/THRESHOLD LIGHT
	TAXIWAY LIGHT/TAXIWAY REFLECTOR
	PAPI/VASI
	REIL/MALS
	AIRPORT SIGN
	CULVERT WITH END SECTION

Rev.	Date	Description

PRELIMINARY
NOT FOR CONSTRUCTION

RAPID CITY REGIONAL AIRPORT

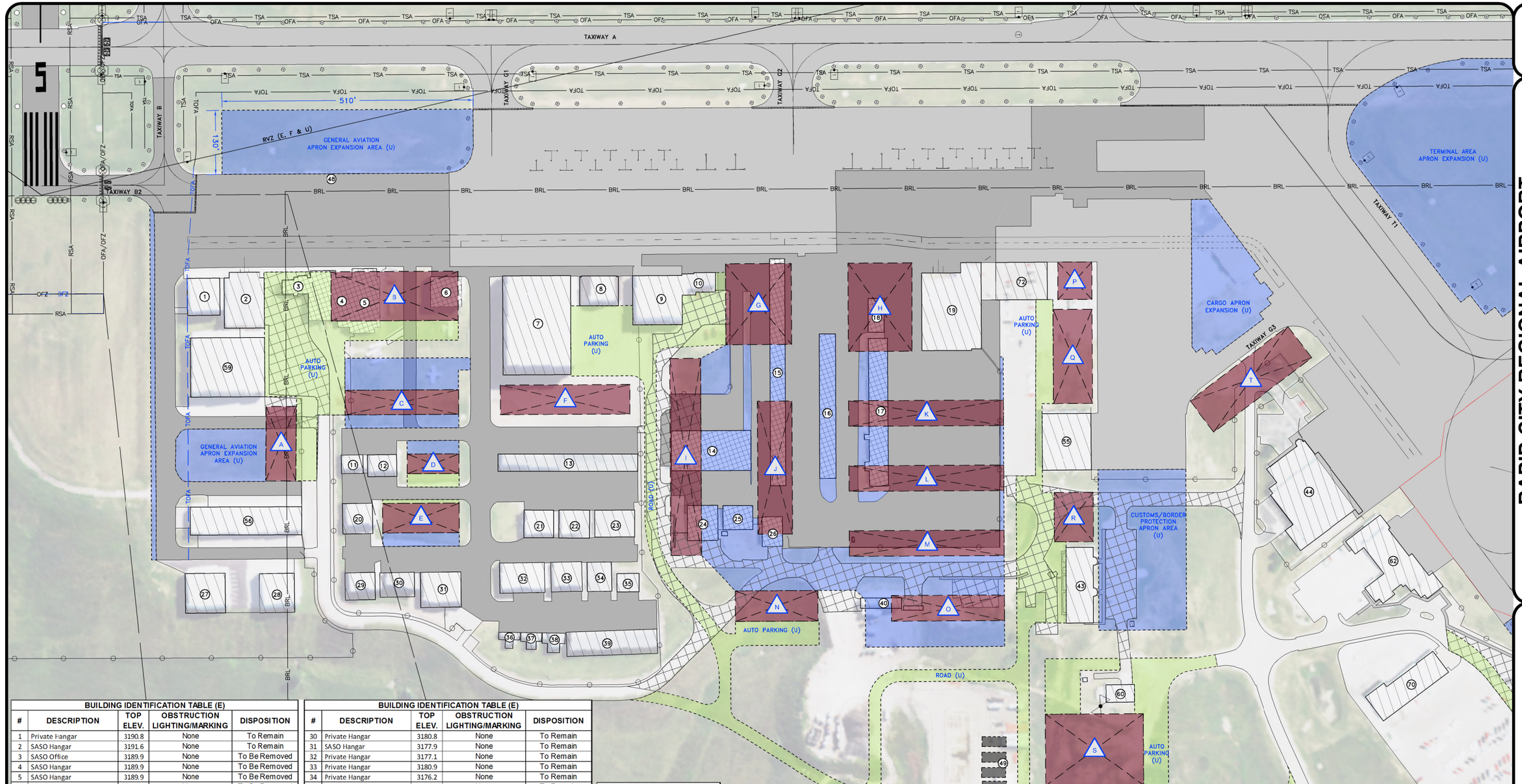
CITY OF RAPID CITY (OWNER)

RAPID CITY, SOUTH DAKOTA

TO BE USED AS A COMPLETE DRAWING SET FOR PLANNING PURPOSES ONLY, NOT FOR CONSTRUCTION

NORTH GENERAL AVIATION APRON (EXISTING)

DRAFTED	MTK
REVIEWED	KP
PROJECT NUMBER	10512113
LAST REVISED DATE	08/20/2015
SHEET	A-5



BUILDING IDENTIFICATION TABLE (E)

#	DESCRIPTION	TOP ELEV.	OBSTRUCTION LIGHTING/MARKING	DISPOSITION
1	Private Hangar	3190.8	None	To Remain
2	SASO Hangar	3191.6	None	To Remain
3	SASO Office	3189.9	None	To Be Removed
4	SASO Hangar	3189.9	None	To Be Removed
5	SASO Hangar	3189.9	None	To Be Removed
6	Private Hangar	3189.2	None	To Be Removed
7	FBO Hangar	3204.2	None	To Remain
8	FBO Hangar	3187.6	None	To Remain
9	SASO Hangar	3190.8	None	To Remain
10	SASO Office	3190.8	None	To Remain
11	Private Hangar	3179.1	None	To Remain
12	Private Hangar	3180.9	None	To Remain
13	T-Hangar (SASO)	3180.1	None	To Remain
14	Airport Maintenance Shop	3185.7	None	To Be Removed
15	T-Hangar (FBO)	3180.4	None	To Be Removed
16	T-Hangar (Condo)	3179.7	None	To Be Removed
17	T-Hangar (FBO)	3186.2	None	To Be Removed
18	T-Hangar (FBO)	3181.1	None	To Be Removed
19	FBO Hangar and Terminal	3190.6	None	To Remain
20	SASO Hangar	3180.1	None	To Remain
21	SASO Hangar	3179.2	None	To Remain
22	Private Hangar	3179.3	None	To Remain
23	Private Hangar	3178.8	None	To Remain
24	Airport Maintenance Shop	3177.9	None	To Be Removed
25	Airport Cold Storage Bld	3180.4	None	To Be Removed
26	Airport Sand Storage Bld	3187.1	None	To Be Removed
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28	Private Hangar	3186.1	None	To Remain
29	Private Hangar	3179.7	None	To Remain

BUILDING IDENTIFICATION TABLE (E)

#	DESCRIPTION	TOP ELEV.	OBSTRUCTION LIGHTING/MARKING	DISPOSITION
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32	Private Hangar	3177.1	None	To Remain
33	Private Hangar	3180.9	None	To Remain
34	Private Hangar	3176.2	None	To Remain
35	Private Hangar	3175.8	None	To Remain
36	T-Hangar (Private)	3169.1	None	To Remain
37	T-Hangar (Private)	3168.7	None	To Remain
38	T-Hangar (Private)	3171.7	None	To Remain
39	T-Hangar (Condo)	3174.5	None	To Remain
40	Vacant	3182.8	None	To Remain
43	TSA	3182.5	None	To Remain
44	SASO Hangar	3199.0	None	To Remain
48	Aviation Fuel	3179.0	None	To Remain
49	Fuel Farm	3166.0	None	To Remain
50	Air Tanker Base	3175.0	None	To Remain
51	Air Traffic Control	3221.9	None	To Remain
52	National Guard	3206.6	None	To Remain
53	National Guard	3191.4	None	To Remain
54	National Guard	3189.3	None	To Remain
55	Private Hangar	3193.1	None	To Remain
56	T-Hangar (Condo)	3177.8	None	To Remain
59	SASO Hangar	3192.1	None	To Remain
60	Electrical Vault	3181.5	None	To Remain
62	Fire Department	3196.2	None	To Remain
70	Car Rental QTA	3182.1	None	To Remain
71	Terminal Building	3221.8	None	To Remain
72	GA Terminal Building		None	To Remain

LOT TABLE (F & U)

#	DESCRIPTION
A	150' x 60' HANGAR LOT
B	257' x 100' HANGAR LOT
C	230' x 50' T-HANGAR LOT
D	104' x 40' HANGAR LOT
E	155' x 40' HANGAR LOT
F	263' x 60' HANGAR LOT
G	164' x 134' HANGAR LOT
H	180' x 130' HANGAR LOT
I	400' x 62' HANGAR LOT
J	270' x 70' T-HANGAR LOT
K	315' x 52' T-HANGAR LOT
L	315' x 52' T-HANGAR LOT
M	315' x 52' T-HANGAR LOT
N	168' x 62' HANGAR LOT
O	230' x 52' T-HANGAR LOT
P	76' x 70' HANGAR LOT
Q	192' x 80' HANGAR LOT
R	100' x 80' HANGAR LOT
S	200' x 145' SRE LOT
T	250' x 80' CARGO LOT

LEGEND

EXISTING (E)	ITEM	ULTIMATE (ULT)
	AIRPORT PROPERTY LINE	
	RPZ/AIRSPACE EASEMENT	
BRL	BUILDING RESTRICTION LINE (BRL)	BRL
OFA	RUNWAY OBJECT FREE AREA (OFA)	OFA
RSA	RUNWAY SAFETY AREA (RSA)	RSA
TOFA	TAXIWAY OBJECT FREE AREA (TOFA)	TOFA
N/A	BUILDING/BUILDING LOTS	
	BITUMINOUS/CONCRETE SURFACE	
	LANDSIDE PAVED SURFACE	
	AIRPLANE TIEDOWN	N/A
N/A	BUILDING/PAVEMENT TO BE REMOVED	

MAGNETIC DECLINATION 8°E (2010)
TRUE NORTH

100 0 100 200
200 feet

Rev.	Date	Description

PRELIMINARY
NOT FOR CONSTRUCTION

RAPID CITY REGIONAL AIRPORT

CITY OF RAPID CITY (OWNER)

RAPID CITY, SOUTH DAKOTA

NORTH GENERAL AVIATION APRON (ULTIMATE)

DRAFTED MTK
REVIEWED KP
PROJECT NUMBER 10512113
LAST REVISED DATE 08/20/2015
SHEET A-6

TO BE USED AS A COMPLETE DRAWING SET FOR PLANNING PURPOSES ONLY, NOT FOR CONSTRUCTION

Sep 16, 2015 – 5:40pm – J:\airport\10512113\CAD\ALP\10512113_Terminal.dwg (GA-North(U))