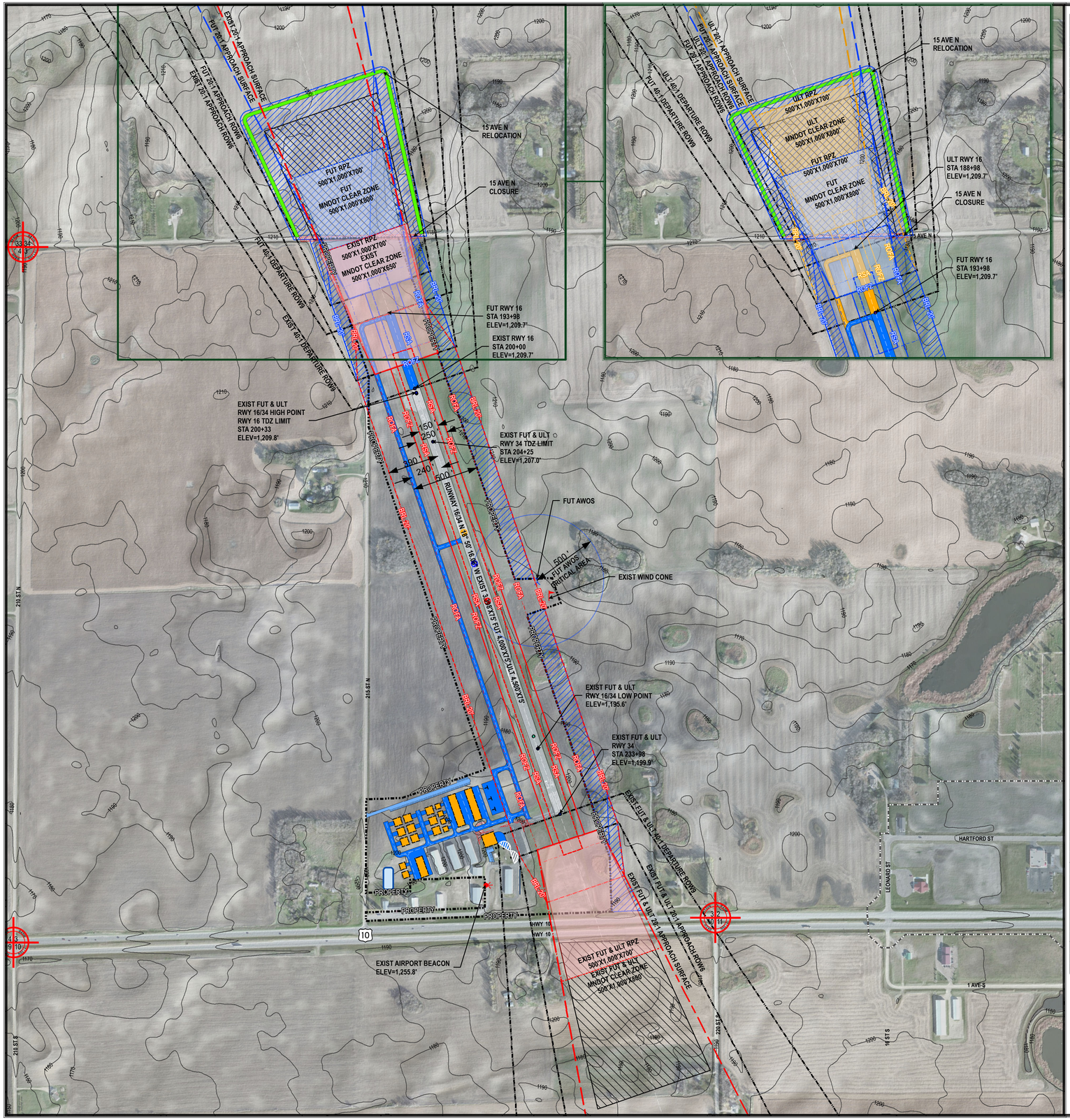

FEET
0 400 800 1,200

MAGNETIC DECLINATION 2° 42' 0" E CHANGING BY 7.3° W/YR OCTOBER 13, 2014 SOURCE: NGDC DECLINATION EPOCH YEAR=2010

N E S W

RUNWAY DATA TABLE

	RUNWAY 16/34		
	EXISTING	FUTURE	ULTIMATE
RUNWAY LENGTH & WIDTH	3,398 X 75'	4,000' X 75'	4,500' X 75'
RUNWAY GRADIENT	0.50%	0.50%	0.50%
RUNWAY TYPE	UTILITY	SAME	SAME
PAVEMENT TYPE	ASHPALT	SAME	SAME
PAVEMENT STRENGTH	12,500 LBS	12,500 LBS	12,500 LBS
RUNWAY LIGHTING	MIRL	SAME	SAME
RUNWAY MARKING	NON-PRECISION	SAME	SAME
14 CFR PART 77 APPROACH CATEGORY	20:1	SAME	SAME
APPROACH TYPE	NON-PRECISION	SAME	SAME
RUNWAY DESIGN CODE (RDC)/RUNWAY REFERENCE CODE (RRC)	A-I-5000	SAME	SAME
RUNWAY NAVAIDS	PAPI	PAPI, REILs	SAME
TYPE OF AERONAUTICAL SURVEY			
VISIBILITY MINIMUMS	≥ 1 MILE	≥ 1 MILE	≥ 1 MILE
WIND COVERAGE	95.02%	95.02%	95.02%

FAA RUNWAY PROTECTION ZONE (RPZ) DIMENSIONS

APPROACH & DEPARTURE RPZ

	RUNWAY	BASE	LENGTH	OUTER WIDTH
EXISTING FUTURE & ULTIMATE	16	500'	1000'	700'
	34	500'	1000'	700'

MNDOT CLEAR ZONE DIMENSIONS

	RUNWAY	BASE	LENGTH	OUTER WIDTH
EXISTING	16	500'	1000'	650'
	34	500'	1000'	800'
FUTURE & ULTIMATE	16	500'	1000'	800'
	34	500'	1000'	800'

RUNWAY SAFETY AREA (RSA)

EXISTING FUTURE & ULTIMATE

RUNWAY	WIDTH	LENGTH BEYOND RUNWAY END
16/34	150'	300'

RUNWAY OBJECT FREE AREA (ROFA)

EXISTING FUTURE & ULTIMATE

RUNWAY	WIDTH	LENGTH BEYOND RUNWAY END
16/34	500'	300'

RUNWAY OBSTACLE FREE ZONE (ROFZ)

EXISTING FUTURE & ULTIMATE

RUNWAY	WIDTH	LENGTH BEYOND RUNWAY END
16/34	250'	200'

TERPS DEPARTURE SURFACE

	RUNWAY	BASE	LENGTH	OUTER WIDTH
EXISTING FUTURE & ULTIMATE	16	1,000'	10,200'	6,466'
	34	1,000'	10,200'	6,466'

RUNWAY END COORDINATES

EXISTING

RUNWAY	LATITUDE	LONGITUDE
16	46° 53' 17.52" N	96° 21' 09.98" W

EXISTING FUTURE & ULTIMATE

34	46° 52' 45.73" N	96° 20' 54.39" W

FUTURE

RUNWAY	LATITUDE	LONGITUDE
16	46° 53' 23.15" N	96° 21' 12.74" W

ULTIMATE

RUNWAY	LATITUDE	LONGITUDE
16	46° 53' 27.83" N	96° 21' 15.04" W

RUNWAY END STATION AND ELEVATION

EXISTING

RUNWAY	STATION	ELEVATION
16	200+00	1,209.7'

EXISTING FUTURE & ULTIMATE

34	233+98	1,199.9'

FUTURE

RUNWAY	STATION	ELEVATION
16	193+98	1,209.7'

ULTIMATE

RUNWAY	STATION	ELEVATION
16	188+98	1,209.7'

TOUCHDOWN ZONE (TDZ) LIMITS

EXISTING FUTURE & ULTIMATE

RUNWAY	TDZ LIMITS	STATION LOCATION	ELEVATION
16	200+00 TO 230+00	200+33	1,209.8'

EXISTING FUTURE & ULTIMATE

34	233+98 TO 203+98	204+25	1,207.0'

AIRPORT REFERENCE POINT (ARP)

	EXISTING	FUTURE	ULTIMATE
LATITUDE	46° 53' 01.63" N	46° 53' 04.44" N	46° 53' 06.78" N
LONGITUDE	96° 21' 02.19" W	96° 21' 03.57" W	96° 21' 04.72" W

DEVIATION FROM FAA DESIGN STANDARDS

APPROVAL DATE	CASE NUMBER	MODIFICATION	DESCRIPTION
NONE REQUIRED			

OBSTACLE FREE ZONE (OFZ) OBJECT PENETRATIONS

KEY	DESCRIPTION	PENETRATION	ELEVATION
NONE			

TAXIWAY/TAXILANE DATA TABLE

	EXISTING	FUTURE	ULTIMATE
TAXIWAY WIDTH	40'	35'	35'
TAXIWAY SAFETY AREA WIDTH	79'	79'	79'
TAXIWAY OBJECT FREE AREA WIDTH	131'	131'	131'
TAXIWAY EDGE SAFETY MARGIN	7.5'	7.5'	7.5'
TAXIWAY SHOULDER WIDTH	15'	15'	15'
TAXILANE WIDTH	20'	35'	35'
TAXILANE OBJECT FREE AREA WIDTH	79'	115'	115'

CRITICAL AIRCRAFT DATA TABLE

RUNWAY 16/34 EXISTING FUTURE & ULTIMATE

ARC	A-I
RUNWAY STRENGTH	12,500 LBS. SINGLE WHEEL GEAR (SWG)
APPROACH SPEED	< 91 KNOTS
WINGSPAN	< 49'
TAIL HEIGHT	< 20'

DECLARED DISTANCES

	RUNWAY 16/34		
	EXISTING	FUTURE	ULTIMATE
TAKEOFF RUN AVAILABLE (TORA)	3,398'	4,000'	4,500'
TAKEOFF DISTANCE AVAILABLE (TODA)	3,398'	4,000'	4,500'
ACCELERATE STOP DISTANCE AVAILABLE (ASDA)	3,398'	4,000'	4,500'
LANDING DISTANCE AVAILABLE (LDA)	3,398'	4,000'	4,500'

EXISTING LEGEND:

- AIRPORT PROPERTY
- EASEMENTS
- CITY OF HAWLEY
- RUNWAY SAFETY AREA (RSA)
- RUNAY PROTECTION ZONE (RPZ)
- OBJECT FREE AREA (OFA)
- OBSTACLE FREE ZONE (OFZ)
- MNDOT CLEAR ZONE
- BUILDING RESTRICTION LINE (BRL)
- APPROACH SURFACE
- BEACON
- WIND CONE
- AIRPORT REFERENCE POINT (ARP)

FUTURE LEGEND:

- PROPERTY ACQUISITION
- RUNWAY SAFETY AREA (RSA)
- RUNWAY PROTECTION ZONE (RPZ)
- OBJECT FREE AREA (OFA)
- OBSTACLE FREE ZONE (OFZ)
- MNDOT CLEAR ZONE
- BUILDING RESTRICTION LINE (BRL)
- APPROACH SURFACE
- AIRPORT REFERENCE POINT (ARP)
- AWOS
- BUILDING
- STORMWATER POND
- PARKING LOT
- PAVEMENT
- ROAD RELOCATION
- REMOVAL

ULTIMATE LEGEND:

- RUNWAY SAFETY AREA (RSA)
- RUNWAY PROTECTION ZONE (RPZ)
- OBJECT FREE AREA (OFA)
- OBJECT FREE ZONE (OFZ)
- MNDOT CLEAR ZONE
- BUILDING RESTRICTION LINE (BRL)
- APPROACH SURFACE
- AIRPORT REFERENCE POINT (ARP)
- PAVEMENT

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

RONALD A. ROETZEL — DATE

REG NO. 18960

BOLTON & MENK, INC.
Consulting Engineers & Surveyors

REVISIONS

DATE	BY	CHANGE

BOLTON & MENK, INC.
PROJECT NO.: 151.106663
DATE: OCTOBER 31, 2014
DESIGNED BY: MRU

AIRPORT LAYOUT PLAN

SHEET 2 OF 8