PROJECT INTRODUCTION:

The Windom Municipal Airport's Master Plan serves as the Airport's roadmap for the next 20-years. The Master Plan represents a snapshot in time and is typically updated every 10-15 years. This Master Plan was funded by the Federal Aviation Administration (FAA) (90% funding), Minnesota Department of Transportation (MnDOT) Office of Aeronautics (5% funding) and the City of Windom (5% funding).

The Master Plan includes an Airport Layout Plan (ALP) which is a graphic representation of the recommendations in the Master Plan. Depicting a project on an ALP or in a Master Plan does not obligate the City to complete that project or indicate a commitment of funding; however, a project must be shown in these documents to be constructed or to be eligible for federal and state funding.

As part of this study, the City of Windom and Airport Management provided feedback at various points throughout the project. In addition, several project meetings were held with the FAA and MnDOT Office of Aeronautics.

ACTIVITY FORECASTS

As part of this study, aviation activity forecasts were prepared based on responses to user surveys, the airport's service area, and an analysis of local and national general aviation trends and socioeconomic data. The Master Plan includes activity forecasts for based aircraft and aircraft operations (takeoffs and landings).

The number of based aircraft are forecasted to increase from 17 in 2018 to 23 by 2038. Aircraft operations (takeoffs and landings) are expected to increase at an annual average growth rate of 0.52%, from 9,383 in 2018 to 10,417 in 2038.

FACILITY RECOMMENDATIONS OVERVIEW

The Master Plan evaluates each facility on the airfield and makes recommendations for any improvements or development within the 20-year planning period. Projects identified in the plan will ultimately be implemented as the need arises and funding is secured.

FAA funding (90%) is available for many of the projects on the included in the Master Plan. Additional funding from MnDOT is available to cover up to 5% of the remaining portion of federally eligible projects. Projects not eligible for federal funding are typically eligible for state funding at rates varying from 50% to 80%.

The following are future development recommendations as outlined in the Master Plan:

Runway 17/35

- Update Runway 17/35's designation to Runway 18/36, as well as all corresponding airport marking, signage, and navigation documentation (**Sections 4.2.2** and **4.2.11**).
- Update Runway 17/35's published pavement strength to 12,500 SWG (**Section 4.2.3.1**).
- Routine maintenance, such as joint and cracking sealing, and slurry seal, should continue to be performed on a scheduled basis to extend the life of the pavement (**Section 4.2.3.2**).
- Plan for improved instrument approach weather minimums from 1 mile to 7/8 mile (greater than ¾ mile) for both Runway 17 and 35 (**Section 4.2.6)**.
- Install precision approach path indicators (PAPI's) on both Runway 17 and 35 **(Section 4.2.10**).
- Upgrade the existing medium intensity runway lighting (MIRLs) and threshold lights to non-precision runway standards (**Section 4.2.10**).
- Acquire all land, through easement or fee within the existing and future RPZs and MnDOT Clear Zones, as well as the 20-foot BRL (**Section 4.2.7** and **4.2.7.2**).

- Plan for an ultimate extension to 4,400 feet towards the north for Runway 17/35 (Alternative 1C, **Section 5.1.3**).

Future Runway 12/30:

- Construct turf crosswind Runway 12/30 at length of 2,500 feet by 60 feet wide (**Sections 4.2.8 and 5.2**).

Taxiway System:

- Routine maintenance, such as joint and cracking sealing, and slurry seal, should continue to be performed on a scheduled basis to extend the life of the pavement (**Section 4.2.9.1**).
- Update taxiway system to TDG 2 design and marking standards at the next reconstruction (**Section 4.2.9.2**).
- Construct a parallel taxiway to Runway 17/35 (**Section 4.2.9.1**), and mitigate/minimize direct apron to runway access when possible as part of the design (**Section 4.2.9.3**).
- Install Medium Intensity Taxiway Lights (MITLs) on all taxiways, and retroreflector markers in the apron area (**Section 4.2.10**).

Building Area

- Construct additional hangar space to accommodate 95% of the forecasted 23 based aircraft by 2038 (Alternative 3C, **Section 5.3.2**).
- Plan to relocate the A/D Building and Automobile Parking lot outside of the Departure Surface when they have reached the end of their useful life (**Section 4.3.2 and 4.3.4.1**).
- Install fiber optic communication cable to improve telecommunications at the Airport (**Section 4.3.2**).
- Construct a snow removal equipment (SRE)/Maintenance building to house future equipment (**Section 4.3.5**).

Miscellaneous:

- Install airfield signage (**Section 4.2.11**).
- Relocate AWOS (automated weather observation station) to remove hangar obstructions from the 500-foot Critical Area (**Section 4.2.12**).
- Continue to monitor the FAA's and EPA's progress for updated regulations and replacements for AvGas (leaded aviation fuel) (**Section 4.3.3.1**)
- Install a Chip Credit Card Reader prior to October 2020 (**Section 4.3.3.2**).
- Acquire a carrier vehicle and associated snow removal equipment attachments (**Section 4.3.5**).
- Install a wildlife perimeter fence at least 8-feet tall with 3-strand barbed wire on top (**Section 4.3.6**).
- Acquire all land within the existing and future RPZs and 20-foot BRLs (in fee or easement) to ensure these areas are kept clear of incompatible land uses (**Sections 4.2.7, 5.1.3,** and **5.3.2**).
- Mitigate obstructions to the existing and ultimate Part 77 and TERPS airspace surfaces (**Sections 4.4** and **5.4**).
- Update zoning ordinance to reflect the ultimate extension of Runway 17/35 to 4,400 feet and future crosswind Runway 12/30 location at a length of 2,500 feet (**Section 5.5**). Existing zoning ordinance reflects Runway 17/35 at 3,600 feet and a crosswind runway of 10/28 at a length of 4,200 feet in a slightly different location. MnDOT requires airports to zone for the planned ultimate condition.

5-Year Capital Improvement Plan (2019-2023)

Recommended projects within the first five years (2019-2023) include hangar development (City and privately owned), an update of the zoning ordinance to reflect an ultimate length of 4,400 for Runway 17/35

and a future turf crosswind Runway 12/30 (see **Figure 4**), improvements to airfield lighting and navigational aids, acquisitions of a mower and snow blower for airfield maintenance, and pavement maintenance of Runway 17/35 and Taxiways. See **Figure 1**.

10-Year Capital Improvement Plan (2024-2028)

Recommended projects within the 5-10 year (2024-2028) timeframe include the rehabilitation of the bituminous pavements (apron, taxilanes, and access road), installation of taxiway lighting and retroreflector markers in the apron area, and pavement maintenance of Runway 17/35 and Taxiways. See **Figure 2**.

20-Year Capital Improvement Plan (2029-2039)

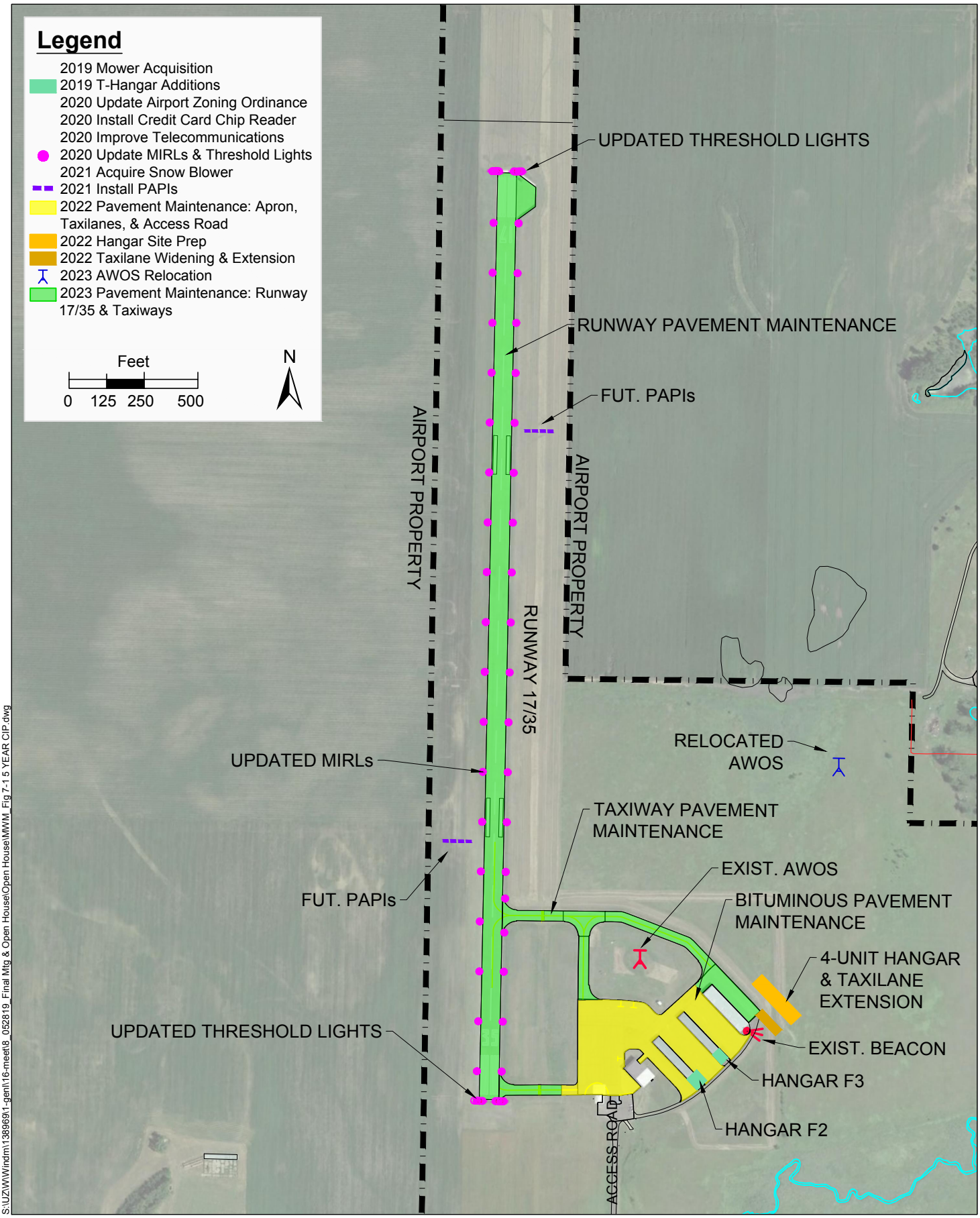
The recommended projects in the 10-20-year (2029-2039) Capital Improvement Plan include an Environmental Assessment (EA), land acquisition, and construction for the proposed turf crosswind Runway 12/30, maintenance of all airfield pavements, and an update to the Airport Master Plan. See **Figure 3**.

Next Steps

Once the Master Plan and Airport Layout Plan are approved by City Council, SEH will submit the final draft of the Master Plan and ALP to the FAA and MnDOT for final review and comment.

Windom Municipal Airport
Windom, Minnesota

Figure 1
05/2019; WINDM 138969



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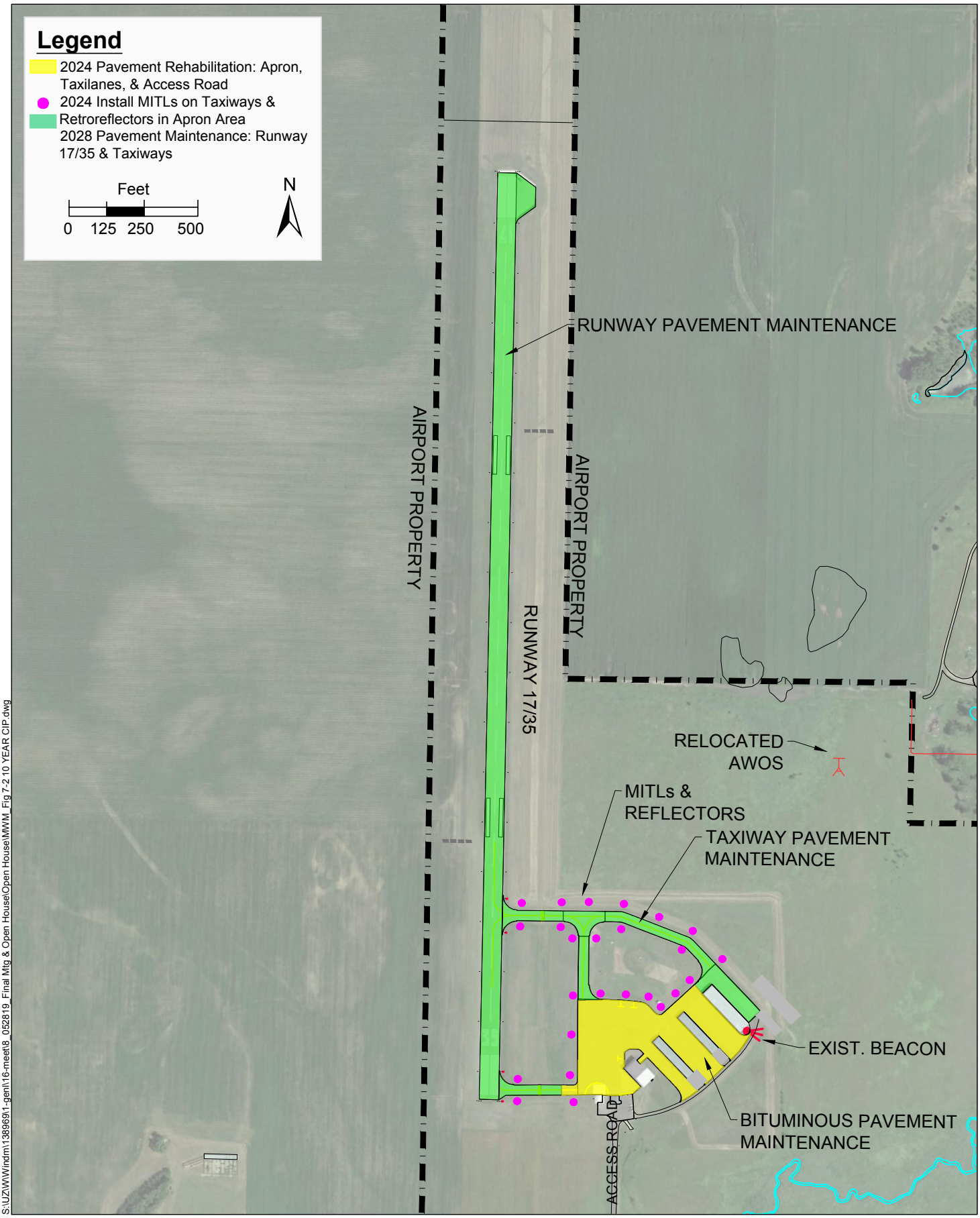
Windom Municipal Airport
Windom, Minnesota

Figure 2
05/2019; WINDM 138969



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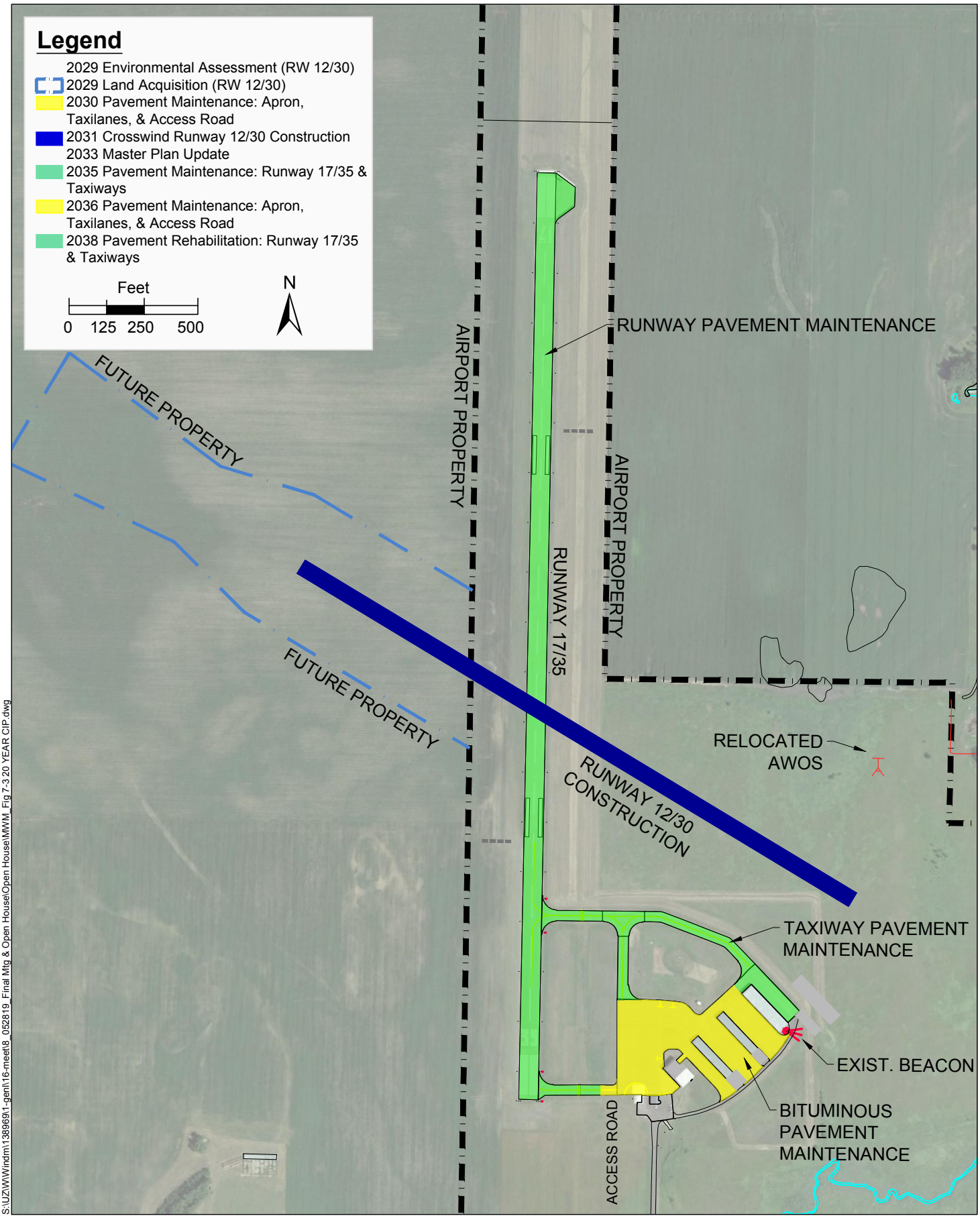
Windom Municipal Airport
Windom, Minnesota

Figure 3
05/2019; WINDM 138969



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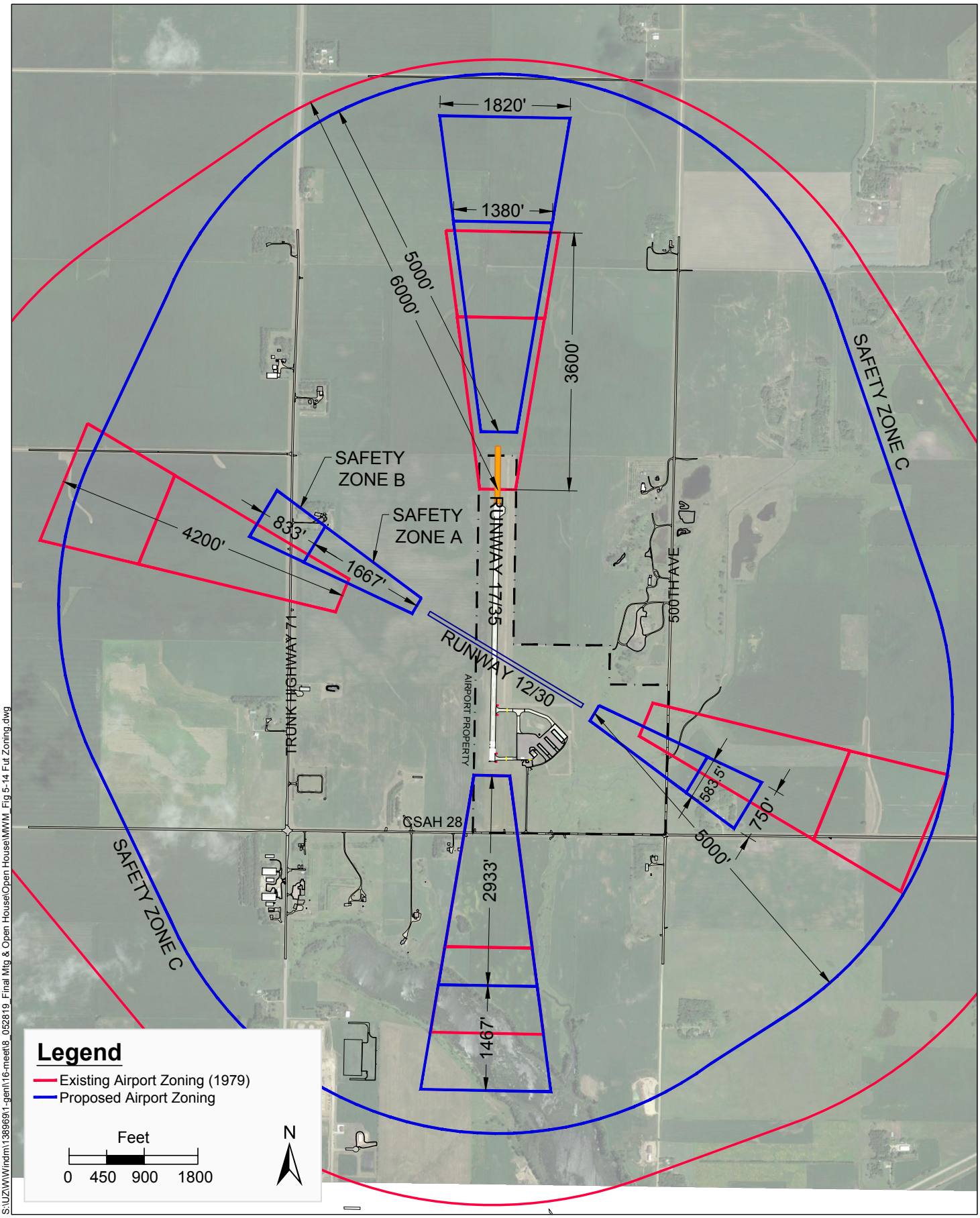
Future Airport Zoning

Figure 4
05/2019; WINDM 138969



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